SAR Test Report

Product Name ： Mobile Phone

Model No. ： WT8000, WT8001, WT8002

FCC ID ： YNFWT8000

Applicant ： Newport Wholesale

Address ： 11037 Warner AVE#201, Fountain Valley,

CA92708, USA

Date of Receipt ： 24. Sep, 2010

Date of Test ： 26. Sep, 2010 ~ 29. Sep, 2010

Issued Date ： 15. Oct, 2010

Report No. ： 109S086R-HP-US-P03V01

Report Version ： V1.1

Test Report Certification

QuieTek

Product Name	:	Mobile Phone
Applicant	:	Newport Wholesale
Address	:	11037 Warner AVE#201, Fountain Valley, CA92708, USA
Manufacturer	:	Newport Wholesale
Address	:	11037 Warner AVE#201, Fountain Valley, CA92708, USA
FCC ID	:	YNFWT8000
Model No.	:	WT8000, WT8001, WT8002
Trade Name	:	MAXWEST
EUT Voltage	:	DC 3.7V
Applicable Standard	:	FCC OET65 Supplement C June 2001
		IEEE Std. 1528-2003, 47CFR § 2.1093
Test Result	:	Max. SAR Measurement (1g)
		Head: 0.302 W/kg
		Body: 1.110 W/kg
Performed Location	:	SuZhou EMC Laboratory
		No.99 Hongye Rd., Suzhou Industrial Park Loufeng
		Hi-Tech Development Zone., SuZhou, China
		TEL: +86-512-6251-5088 / FAX: +86-512-6251-5098
		FCC Registration Number: 800392

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QuieTek

Laboratory Information

We , **QuieTek Corporation**, are an independent EMC and safety consultancy that was established the whole facility in our laboratories. The test facility has been accredited by the following accreditation Bodies in compliance with ISO 17025, EN 45001 and Guide 25:

Taiwan R.O.C.	**:**	**BSMI, NCC, TAF**
Germany	**:**	**TUV Rheinland**
Norway	**:**	**Nemko, DNV**
USA	**:**	**FCC, NVLAP**
Japan	**:**	**VCCI**

The related certificate for our laboratories about the test site and management system can be downloaded from QuieTek Corporation's Web Site : http://tw.quietek.com/modules/myalbum/
The address and introduction of QuieTek Corporation's laboratories can be founded in our Web site : http://www.quietek.com/
If you have any comments, Please don't hesitate to contact us. Our contact information is as below:

HsinChu Testing Laboratory :
No.75-2, 3rd Lin, Wangye Keng, Yonghxing Tsuen, Qionglin Shiang, Hsinchu County 307, Taiwan, R.O.C.
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NVLAP Lab Code : 200347-0   ilac-MRA   TAF Testing Laboratory 1313

LinKou Testing Laboratory :
No. 5-22, Ruei-Shu Valley, Ruei-Ping Tsuen, Lin-Kou Shiang, Taipei, Taiwan, R.O.C.
TEL : 886-2-8601-3788 / FAX : 886-2-8601-3789   E-Mail : service@quietek.com

NVLAP Lab Code: 200533-0   ilac-MRA   TAF Testing Laboratory 0914

Suzhou (China) Testing Laboratory :
No. 99 Hongye Rd., Suzhou Industrial Park Loufeng Hi-Tech Development Zone., Suzhou,China.
TEL : +86-512-6251-5088 / FAX : +86-512-6251-5098   E-Mail : service@quietek.com

NVLAP Lab Code : 200743-0   ilac-MRA   TAF Testing Laboratory 1596

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1. General Information

1.1. EUT Description

|	
Product Name	Mobile Phone
FCC ID	YNFWT8000
Trade Name	MAXWEST
Model No.	WT8000,WT8001, WT8002
Hardware Version	V1.0.1
Software Version	V2.0.6
Tx Frequency Range	GSM 850: 824~849MHz; PCS 1900: 1850~1910MHz
Rx Frequency Range	GSM 850: 869~894MHz; PCS 1900: 1930~1990MHz
WiFi Operation Frequency Range	2412~2462MHz
Bluetooth Operation Frequency Range	2402~2480MHz
Antenna Type	Internal
GPRS Class	Class 12
Type of Modulation	GMSK
Device Category	Portable
Peak Antenna Gain	GSM850: -2.3dBi PCS1900: -3.5dBi WiFi: -1.0dBi
Max. Output Power (Conducted)	GSM850: 32.65dBm <SIM 1> PCS1900: 29.61dBm <SIM 1> WiFi: 11.38dBm
Max. Output Power (Radiated)	GSM850: 30.12 - ERP <SIM 1> PCS1900: 25.46 - EIRP <SIM 1> WiFi: 10.14dBm - EIRP
Battery	Manufacturer: Shenzhen Zhaoliya Electronic Co.,Ltd. Address: Room 813,Tower 2 Tongjian Bldg,Futian District,Shenzhen M/N: WT8000 Capacity: 800mAh
Headset	Manufactuer: Newport Wholesale M/N: WT8000

1.2. Test Environment

Ambient conditions in the laboratory:

Items	Required	Actual
Temperature (°C)	18-25	21.3± 2
Humidity (%RH)	30-70	52

2. SAR Measurement System

2.1. DASY5 System Description
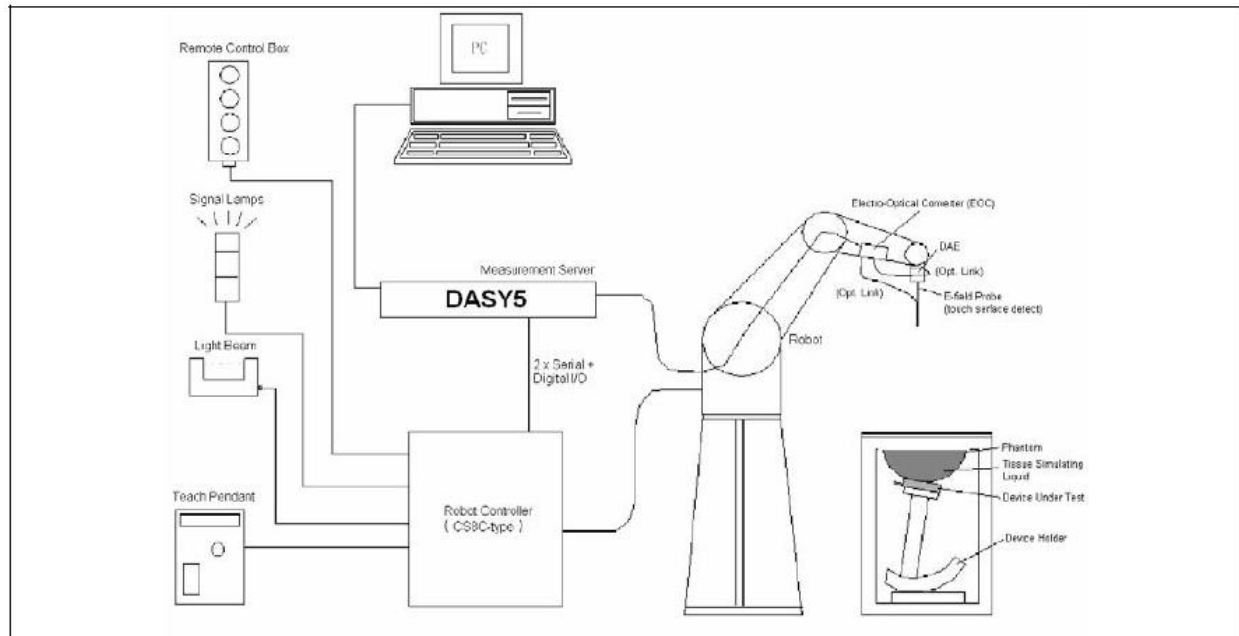
The DASY5 system for performing compliance tests consists of the following items:

➢ A standard high precision 6-axis robot with controller, teach pendant and software. An arm extension for accommodating the data acquisition electronics (DAE).

➢ 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.

➢ The Electro-optical converter (EOC) performs the conversion from optical to electrical signals for the digital communication to the DAE. To use optical surface detection, a special version of the EOC is required. The EOC signal is transmitted to the measurement server.

➢ The Light Beam used is for probe alignment. This improves the (absolute) accuracy of the probe positioning.

➢ A computer running WinXP and the DASY5 software.

➢ Remote control and teach pendant as well as additional circuitry for robot safety such as warning lamps, etc.

➢ The phantom, the device holder and other accessories according to the targeted measurement.

2.1.1. Applications

Predefined procedures and evaluations for automated compliance testing with all worldwide standards, e.g., IEEE 1528, OET 65, IEC 62209-1, IEC 62209-2, EN 50360, EN 50383 and others.

2.1.2. Area Scans

Area scans are defined prior to the measurement process being executed with a user defined variable spacing between each measurement point (integral) allowing low uncertainty measurements to be conducted. Scans defined for FCC applications utilize a $10mm^2$ step integral, with 1mm interpolation used to locate the peak SAR area used for zoom scan assessments.

When an Area Scan has measured all reachable points, it computes the field maxima found in the scanned area, within a range of the global maximum. The range (in dB) is specified in the standards for compliance testing. For example, a 2 dB range is required in IEEE 1528-2003, EN 50361 and IEC 62209 standards, whereby 3 dB is a requirement when compliance is assessed in accordance with the ARIB standard (Japan).

2.1.3. Zoom Scan (Cube Scan Averaging)

Zoom Scans are used to assess the peak spatial SAR values within a cubic averaging volume containing 1 g and 10 g of simulated tissue. A density of 1000 kg/m^3 is used to represent the head and body tissue density and not the phantom liquid density, in order to be consistent with the definition of the liquid dielectric properties, i.e. the side length of the 1 g cube is 10mm, with the side length of the 10 g cube 21,5mm.

The zoom scan integer steps can be user defined so as to reduce uncertainty, but normal practice for typical test applications utilize a physical step of 7x7x7 (5mmx5mmx5mm) providing a volume of 30mm in the X & Y axis, and 30mm in the Z axis.

2.1.4. Uncertainty of Inter-/Extrapolation and Averaging

In order to evaluate the uncertainty of the interpolation, extrapolation and averaged SAR calculation algorithms of the Postprocessor, DASY5 allows the generation of measurement grids which are artificially predefined by analytically based test functions. Therefore, the grids of area scans and zoom scans can be filled with uncertainty test data, according to the SAR benchmark functions of IEEE 1528.The three analytical functions shown in equations as below are used to describe the possible range of the expected SAR distributions for the tested handsets. The field gradients are covered by the spatially flat distribution f1, the spatially steep distribution f3 and f2 accounts for H-field cancellation on the phantom/tissue surface.

$$f_1(x, y, z) = A e^{-\frac{z}{2a}} \cos^2\left(\frac{\pi}{2} \frac{\sqrt{x'^2 + y'^2}}{5a}\right)$$

$$f_2(x, y, z) = A e^{-\frac{z}{a}} \frac{a^2}{a^2 + x'^2} \left(3 - e^{-\frac{2z}{a}}\right) \cos^2\left(\frac{\pi}{2} \frac{y'}{3a}\right)$$

$$f_3(x, y, z) = A \frac{a^2}{\frac{a^2}{4} + x'^2 + y'^2} \left(e^{-\frac{2z}{a}} + \frac{a^2}{2(a + 2z)^2}\right)$$

2.2. DASY5 E-Field Probe

The SAR measurement is conducted with the dosimetric probe manufactured by SPEAG. The probe is specially designed and calibrated for use in liquid with high permittivity. The dosimetric probe has special calibration in liquid at different frequency.

SPEAG conducts the probe calibration in compliance with international and national standards (e.g. IEEE 1528, EN 62209-1, IEC 62209, etc.) under ISO 17025. The calibration data are in Appendix D**.**

2.2.1. Isotropic E-Field Probe Specification

Model	EX3DV4
Construction	Symmetrical design with triangular core Built-in shielding against static charges PEEK enclosure material (resistant to organic solvents, e.g., DGBE)
Frequency	10 MHz to 6 GHz Linearity: ± 0.2 dB (30 MHz to 6 GHz)
Directivity	± 0.3 dB in HSL (rotation around probe axis) ± 0.5 dB in tissue material (rotation normal to probe axis)
Dynamic Range	10 µW/g to 100 mW/g Linearity: ± 0.2 dB (noise: typically < 1 µW/g)
Dimensions	Overall length: 330 mm (Tip: 20 mm) Tip diameter: 2.5 mm (Body: 12 mm) Typical distance from probe tip to dipole centers: 1 mm
Application	High precision dosimetric measurements in any exposure scenario (e.g., very strong gradient fields). Only probe which enables compliance testing for frequencies up to 6 GHz with precision of better 30%.

2.3. Boundary Detection Unit and Probe Mounting Device

The DASY probes use a precise connector and an additional holder for the probe, consisting of a plastic tube and a flexible silicon ring to center the probe. The connector at the DAE is flexibly mounted and held in the default position with magnets and springs. Two switching systems in the connector mount detect frontal and lateral probe collisions and trigger the necessary software response.

2.4. DATA Acquisition Electronics (DAE) and Measurement Server

The data acquisition electronics (DAE) consists of a highly sensitive electrometer-grade preamplifier with auto-zeroing, a channel and gain-switching multiplexer, a fast 16 bit AD-converter and a command decoder and control logic unit.

Transmission to the measurement server is accomplished through an optical downlink for data and status information as well as an optical uplink for commands and the clock.

The input impedance of the DAE4 is 200M Ohm; the inputs are symmetrical and floating. Common mode rejection is above 80dB.

The DASY5 measurement server is based on a PC/104 CPU board with a 400MHz intel ULV Celeron, 128MB chipdisk and 128MB RAM. The necessary circuits for communication with the DAE electronics box, as well as the 16 bit AD converter system for optical detection and digital I/O interface are contained on the DASY5 I/O board, which is directly connected to the PC/104 bus of the CPU board.

2.5. Robot

The DASY5 system uses the high precision robots TX90 XL type out of the newer series from Stäubli SA (France). For the 6-axis controller DASY5 system, the CS8C robot controller version from Stäubli is used.

The XL robot series have many features that are important for our application:

➢ High precision (repeatability 0.02 mm)
➢ High reliability (industrial design)
➢ Jerk-free straight movements
➢ Low ELF interference (the closed metallic construction shields against motor control fields)
➢ 6-axis controller

2.6. Light Beam Unit

The light beam switch allows automatic "tooling" of the probe. During the process, the actual position of the probe tip with respect to the robot arm is measured, as well as the probe length and the horizontal probe offset. The software then corrects all movements, such that the robot coordinates are valid for the probe tip.

The repeatability of this process is better than 0.1 mm. If a position has been taught with an aligned probe, the same position will be reached with another aligned probe within 0.1 mm, even if the other probe has different dimensions. During probe rotations, the probe tip will keep its actual position.

2.7. Device Holder

The DASY5 device holder is designed to cope with different positions given in the standard. It has two scales for the device rotation (with respect to the body axis) and the device inclination (with respect to the line between the ear reference points). The rotation center for both scales is the ear reference point (EPR).

Thus the device needs no repositioning when changing the angles.

The DASY5 device holder has been made out of low-loss POM material having the following dielectric parameters: relative permittivity εr =3 and loss tangent δ = 0.02. The amount of dielectric material has been reduced in the closest vicinity of the device, since measurements have suggested that the influence of the clamp on the test results could thus be lowered.

2.8. SAM Twin Phantom

The SAM twin phantom is a fiberglass shell phantom with 2mm shell thickness (except the ear region where shell thickness increases to 6mm). It has three measurement areas:

➢ Left head
➢ Right head
➢ Flat phantom

The bottom plate contains three pair of bolts for locking the device holder. The device holder positions are adjusted to the standard measurement positions in the three sections. A white cover is provided to tap the phantom during off-periods to prevent water evaporation and changes in the liquid parameters. On the phantom top, three reference markers are provided to identify the phantom position with respect to the robot.

3. Tissue Simulating Liquid

3.1. The composition of the tissue simulating liquid

INGREDIENT (% Weight)	835MHz Head	835MHz Body	1900MHz Head	1900MHz Body	2450MHz Body
Water	40.45	52.4	54.90	40.5	73.2
Salt	1.45	1.40	0.18	0.50	0.04
Sugar	57.6	45.0	0.00	58.0	0.00
HEC	0.40	1.00	0.00	0.50	0.00
Preventol	0.10	0.20	0.00	0.50	0.00
DGBE	0.00	0.00	44.92	0.00	26.7

3.2. Tissue Calibration Result

The dielectric parameters of the liquids were verified prior to the SAR evaluation using DASY5 Dielectric Probe Kit and Agilent Vector Network Analyzer E5071C

Head Tissue Simulant Measurement				
Frequency [MHz]	Description	Dielectric Parameters		Tissue Temp. [°C]
		ε_r	σ [s/m]	
835 MHz	Reference result ± 5% window	42.54 40.41 to 44.67	0.91 0.86 to 0.96	N/A
	26-Sep-2010	43.00	0.87	21.0

Body Tissue Simulant Measurement				
Frequency [MHz]	Description	Dielectric Parameters		Tissue Temp. [°C]
		ε_r	σ [s/m]	
835 MHz	Reference result ± 5% window	55.2 52.44 to 57.96	0.97 0.92 to 1.02	N/A
	26-Sep-2010	55.3	0.98	21.0

Head Tissue Simulant Measurement				
Frequency [MHz]	Description	Dielectric Parameters		Tissue Temp. [°C]
		ε_r	σ [s/m]	
1900 MHz	Reference result ± 5% window	39.9 37.91 to 41.90	1.42 1.35 to 1.49	N/A
	26-Sep-2010	40.1	1.44	21.2

Body Tissue Simulant Measurement				
Frequency [MHz]	Description	Dielectric Parameters		Tissue Temp. [°C]
		ε_r	σ [s/m]	
1900 MHz	Reference result ± 5% window	53.3 50.64 to 55.97	1.52 1.44 to 1.60	N/A
	26-Sep-2010	53.1	1.5	21.2

Body Tissue Simulant Measurement				
Frequency [MHz]	Description	Dielectric Parameters		Tissue Temp. [°C]
		ε_r	σ [s/m]	
2450 MHz	Reference result ± 5% window	52.7 50.07 to 55.34	1.95 1.85 to 2.05	N/A
	26-Sep-2010	52.7	1.97	21.2

3.3. Tissue Dielectric Parameters for Head and Body Phantoms

The head tissue dielectric parameters recommended by the IEEE SCC-34/SC-2 in P1528 have been incorporated in the following table. These head parameters are derived from planar layer models simulating the highest expected SAR for the dielectric properties and tissue thickness variations in a human head. Other head and body tissue parameters that have not been specified in P1528 are derived from the tissue dielectric parameters computed from the 4-Cole-Cole equations described in Reference [12] and extrapolated according to the head parameters specified in P1528.

Target Frequency	Head		Body	
(MHz)	ε_r	σ (S/m)	ε_r	σ (S/m)
150	52.3	0.76	61.9	0.80
300	45.3	0.87	58.2	0.92
450	43.5	0.87	56.7	0.94
835	**41.5**	**0.90**	**55.2**	**0.97**
900	41.5	0.97	55.0	1.05
915	41.5	0.98	55.0	1.06
1450	40.5	1.20	54.0	1.30
1610	40.3	1.29	53.8	1.40
1800 – 2000	**40.0**	**1.40**	**53.3**	**1.52**
2450	**39.2**	**1.80**	**52.7**	**1.95**
3000	38.5	2.40	52.0	2.73
5800	35.3	5.27	48.2	6.00

(ε_r = relative permittivity, σ = conductivity and ρ = 1000 kg/m^3)

4. SAR Measurement Procedure

4.1. SAR System Validation

4.1.1. Validation Dipoles
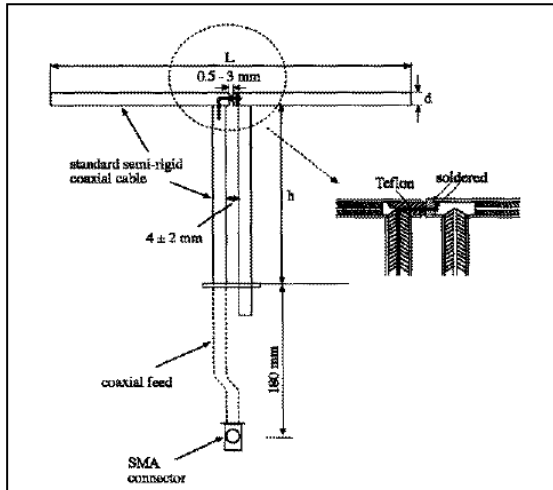
The dipoles used is based on the IEEE-1528 standard, and is complied with mechanical and electrical specifications in line with the requirements of both IEEE and FCC Supplement C. the table below provides details for the mechanical and electrical specifications for the dipoles.

Frequency	L (mm)	h (mm)	d (mm)
835MHz	165.0	900	3.6
1900MHz	68.0	39.5	3.6
2450MHz	53.5	30.4	3.6

4.1.2. Validation Result

System Performance Check at 835MHz &1900MHz for Head

Validation Kit: D835V2-SN 4d094

Frequency [MHz]	Description	SAR [w/kg] 1g	SAR [w/kg] 10g	Tissue Temp. [°C]
835 MHz	Reference result ± 10% window	9.70 8.73 to 10.67	6.30 5.67 to 6.93	N/A
	26-Sep-2010	10.16	6.64	21.0

Validation Kit: D1900V2-SN 5d121

Frequency [MHz]	Description	SAR [w/kg] 1g	SAR [w/kg] 10g	Tissue Temp. [°C]
1900 MHz	Reference result ± 10% window	39.8 35.82 to 43.78	21.1 18.99 to 23.21	N/A
	26-Sep-2010	41.2	20.92	21.0

Note: All SAR values are normalized to 1W forward power.

System Performance Check at 835MHz &1900MHz & 2450MHz for Body

Validation Kit: D835V2-SN 4d094

Frequency [MHz]	Description	SAR [w/kg] 1g	SAR [w/kg] 10g	Tissue Temp. [°C]
835 MHz	Reference result ± 10% window	9.90 8.91 to 10.89	6.53 5.88 to 7.18	N/A
	26-Sep-2010	10.24	6.64	21.0

Validation Kit: D1900V2-SN 5d121

Frequency [MHz]	Description	SAR [w/kg] 1g	SAR [w/kg] 10g	Tissue Temp. [°C]
1900 MHz	Reference result ± 10% window	41.4 37.26 to 45.54	22.3 20.07 to 24.53	N/A
	26-Sep-2010	40.00	20.52	21.0

Validation Kit: D2450V2-SN 839

Frequency [MHz]	Description	SAR [w/kg] 1g	SAR [w/kg] 10g	Tissue Temp. [°C]
2450 MHz	Reference result ± 10% window	51.6 46.44 to 56.76	24.2 21.78 to 26.62	N/A
	26-Sep-2010	52.40	24.24	20.1

Note: All SAR values are normalized to 1W forward power.

4.2. SAR Measurement Procedure

The ALSAS-10U calculates SAR using the following equation,

$$SAR = \frac{\sigma|E|^2}{\rho}$$

        σ: represents the simulated tissue conductivity

        ρ: represents the tissue density

The EUT is set to transmit at the required power in line with product specification, at each frequency relating to the LOW, MID, and HIGH channel settings.

Pre-scans are made on the device to establish the location for the transmitting antenna, using a large area scan in either air or tissue simulation fluid.

The EUT is placed against the Universal Phantom where the maximum area scan dimensions are larger than the physical size of the resonating antenna. When the scan size is not large enough to cover the peak SAR distribution, it is modified by either extending the area scan size in both the X and Y directions, or the device is shifted within the predefined area.

The area scan is then run to establish the peak SAR location (interpolated resolution set at 1mm^2) which is then used to orient the center of the zoom scan. The zoom scan is then executed and the 1g and 10g averages are derived from the zoom scan volume (interpolated resolution set at 1mm^3).

5. SAR Exposure Limits

SAR assessments have been made in line with the requirements of IEEE-1528, FCC Supplement C, and comply with ANSI/IEEE C95.1-1992 "Uncontrolled Environments" limits. These limits apply to a location which is deemed as "Uncontrolled Environment" which can be described as a situation where the general public may be exposed to an RF source with no prior knowledge or control over their exposure.

Limits for General Population/Uncontrolled Exposure (W/kg)

Type Exposure	Uncontrolled Environment Limit
Spatial Peak SAR (1g cube tissue for brain or body)	1.60 W/kg
Spatial Average SAR (whole body)	0.08 W/kg
Spatial Peak SAR (10g for hands, feet, ankles and wrist)	4.00 W/kg

6. Test Equipment List

Instrument	Manufacturer	Model No.	Serial No.	Last Calibration	Next Calibration
Stäubli Robot TX60L	Stäubli	TX60L	F10/5C90A1/A/01	Apr. 2010	only once
Controller	Stäubli	SP1	S-0034	Apr. 2010	only once
Dipole Validation Kits	Speag	D835V2	4d094	Apr. 2010	Apr. 2012
Dipole Validation Kits	Speag	D1900V2	5d121	Apr. 2010	Apr. 2012
Dipole Validation Kits	Speag	D2450V2	839	Apr. 2010	Apr. 2012
SAM Twin Phantom	Speag	SAM	TP-1561/1562	N/A	N/A
Device Holder	Speag	SD 000 H01 HA	N/A	N/A	N/A
Data Acquisition Electronic	Speag	DAE4	1220	Apr. 2010	Apr. 2011
E-Field Probe	Speag	EX3DV4	3710	Apr. 2010	Apr. 2011
SAR Software	Speag	DASY5	V5.2 Build 162	N/A	N/A
Power Amplifier	Mini-Circuit	ZVA-183-S+	N657400950	N/A	N/A
Directional Coupler	Agilent	778D	20160	N/A	N/A
Universal Radio Communication Tester	R&S	CMU 200	117088	Jul. 2010	Jul. 2011
Vector Network	Agilent	E5071C	MY48367267	Mar. 2010	Mar. 2011
Signal Generator	Agilent	E4438C	MY49070163	Apr. 2010	Apr. 2011
Power Meter	Anritsu	ML2495A	0905006	Jan. 2010	Jan. 2011
Wide Bandwidth Sensor	Anritsu	MA2411B	0846014	Jan. 2010	Jan. 2011

7. Measurement Uncertainty

Error Description	Uncert. value	Prob. Dist.	Div.	(c_i) 1g	(c_i) 10g	Std. Unc. (1g)	Std. Unc. (10g)	(v_i) Veff
DASY5 Uncertainty								
Measurement System								
Probe Calibration	±5.5%	N	1	1	1	±5.5%	±5.5%	∞
Axial Isotropy	±4.7%	R	$\sqrt{3}$	0.7	0.7	±1.9%	±1.9%	∞
Hemispherical Isotropy	±9.6%	R	$\sqrt{3}$	0.7	0.7	±3.9%	±3.9%	∞
Boundary Effects	±1.0%	R	$\sqrt{3}$	1	1	±0.6%	±0.6%	∞
Linearity	±4.7%	R	$\sqrt{3}$	1	1	±2.7%	±2.7%	∞
System Detection Limits	±1.0%	R	$\sqrt{3}$	1	1	±0.6%	±0.6%	∞
Readout Electronics	±0.3%	N	1	1	1	±0.3%	±0.3%	∞
Response Time	±0.8%	R	$\sqrt{3}$	1	1	±0.5%	±0.5%	∞
Integration Time	±2.6%	R	$\sqrt{3}$	1	1	±1.5%	±1.5%	∞
RF Ambient Noise	±3.0%	R	$\sqrt{3}$	1	1	±1.7%	±1.7%	∞
RF Ambient Reflections	±3.0%	R	$\sqrt{3}$	1	1	±1.7%	±1.7%	∞
Probe Positioner	±0.4%	R	$\sqrt{3}$	1	1	±0.2%	±0.2%	∞
Probe Positioning	±2.9%	R	$\sqrt{3}$	1	1	±1.7%	±1.7%	∞
Max. SAR Eval.	±1.0%	R	$\sqrt{3}$	1	1	±0.6%	±0.6%	∞
Test Sample Related								
Device Positioning	±2.9%	N	1	1	1	±2.9%	±2.9%	145
Device Holder	±3.6%	N	1	1	1	±3.6%	±3.6%	5
Power Drift	±5.0%	R	$\sqrt{3}$	1	1	±2.9%	±2.9%	∞
Phantom and Setup								
Phantom Uncertainty	±4.0%	R	$\sqrt{3}$	1	1	±2.3%	±2.3%	∞
Liquid Conductivity (target)	±5.0%	R	$\sqrt{3}$	0.64	0.43	±1.8%	±1.2%	∞
Liquid Conductivity (meas.)	±2.5%	N	1	0.64	0.43	±1.6%	±1.1%	∞
Liquid Permittivity (target)	±5.0%	R	$\sqrt{3}$	0.6	0.49	±1.7%	±1.4%	∞
Liquid Permittivity (meas.)	±2.5%	N	1	0.6	0.49	±1.5%	±1.2%	∞
Combined Std. Uncertainty						±10.7%	±10.5%	387
Expanded STD Uncertainty						±21.5%	±21.0%	

8. Conducted Power Measurement

Mode	Frequency (MHz)	Output Power (dBm)	Path Loss (dB)	Result (dBm)
Maximum Power (SIM 1)				
GSM850	824.2	31.72	0.7	32.42
	836.6	31.95	0.7	**32.65**
	848.8	31.88	0.7	32.58
PCS1900	1850.2	28.44	1.0	29.44
	1880.0	28.61	1.0	**29.61**
	1909.8	28.52	1.0	29.52
GPRS850 2slot	824.2	30.33	0.7	31.03
	836.6	30.44	0.7	31.14
	848.8	30.42	0.7	31.12
GPRS850 3slot	824.2	28.92	0.7	29.62
	836.6	29.15	0.7	29.85
	848.8	29.12	0.7	29.82
GRPS850 4slot	824.2	27.40	0.7	28.10
	836.6	27.54	0.7	28.24
	848.8	27.47	0.7	28.17
GPRS1900 2slot	1850.2	27.06	1.0	28.06
	1880.0	27.25	1.0	28.25
	1909.8	27.16	1.0	28.16
GPRS1900 3slot	1850.2	26.04	1.0	27.04
	1880.0	26.28	1.0	27.28
	1909.8	26.15	1.0	27.15
GPRS1900 4slot	1850.2	24.65	1.0	25.65
	1880.0	24.78	1.0	25.78
	1909.8	24.74	1.0	25.74
Maximum Power (SIM 2)				
GSM850	836.6	31.63	0.7	32.33
PCS1900	1880.0	28.24	1.0	29.24
GPRS850 2slot	836.6	30.37	0.7	31.07
GPRS850 3slot	836.6	28.98	0.7	29.68
GRPS850 4slot	836.6	27.36	0.7	28.06
GPRS1900 2slot	1880.0	27.17	1.0	28.17
GPRS1900 3slot	1880.0	26.22	1.0	27.22
GPRS1900 4slot	1880.0	24.69	1.0	25.69

Note: All SAR testing was done in SIM 1.

Mode	Frequency (MHz)	Average Output Power (dBm)
802.11b	2412	10.67
	2437	**11.38**
	2462	11.14
802.11g	2412	10.49
	2437	11.24
	2462	11.02

9. Test Results

9.1. SAR Test Results Summary

9.1.1. Test position and configuration

Head SAR was performed with the device configured in the positions according to IEEE1528, and Body SAR was performed with the device 15mm from the phantom. Body SAR was also performed with the headset attached and without.

9.1.2. Body SAR with Headset

Testing without the headset was performed at the position and channels that resulted in the highest body SAR. This testing was performed with GPRS transmitting with 2/3/4 uplink timeslots and with Wi-Fi. This operation mode represents the maximum SAR situation, when downloading data via GPRS and listening to music by headset. SAR without the headset attached was significantly higher than with the headset, and also was verified several times and confirmed, so the final test data shown were the worst case without headset.

In the Body SAR test result table, body-worn means back of device towards phantom, body-front means LCD panel of device towards phantom.

9.1.3. GPRS Operation Mode

This is a multislot class 12 device capable of 4 uplink timeslots. During the head SAR test, the device was transmitting with 1 uplink timeslot; during the body SAR test, it was transmitting with 2/3/4 uplink timeslots. Additionally, this device doesn't support dual transfer mode (DTM).

According to KDB 447498 and KDB 648474, this device doesn't support WiFi and GSM/GPRS simultaneous transmission, and also the output power of Bluetooth is extreme lower, so co-location SAR needn't be evaluated.

9.1.4. Test Result

SAR MEASUREMENT							
Ambient Temperature (°C) : 24.3 ±2				Relative Humidity (%): 54			
Liquid Temperature (°C) : 23.5 ±2				Depth of Liquid (cm):>15			
Product: Mobile Phone							
Test Mode: GSM850 <SIM 1>							
Test Position Head	Antenna Position	Frequency		Conducted Power (dBm)	Power Drift (<±0.2)	**SAR** 1g (W/kg)	Limit (W/kg)
		Channel	MHz				
Left-Cheek	Fixed	128	824.2	32.42	-0.079	0.128	1.6
Left-Cheek	Fixed	189	836.6	32.65	-0.006	0.175	1.6
Left-Cheek	Fixed	251	848.8	32.58	0.018	0.206	1.6
Left-Tilted	Fixed	189	836.6	32.65	-0.112	0.118	1.6
Right-Cheek	Fixed	128	824.2	32.42	0.102	0.132	1.6
Right-Cheek	Fixed	189	836.6	32.65	-0.046	**0.239**	1.6
Right-Cheek	Fixed	251	848.8	32.58	0.113	0.238	1.6
Right-Tilted	Fixed	189	836.6	32.65	0.132	0.126	1.6
Test Mode: GSM850 < SIM 2>							
Right-Cheek	Fixed	189	836.6	32.33	0.064	0.181	1.6

SAR MEASUREMENT

Ambient Temperature (°C) : 24.3 ±2	Relative Humidity (%): 54
Liquid Temperature (°C) : 23.5 ±2	Depth of Liquid (cm):>15

Product: Mobile Phone

Test Mode: GSM850 <SIM 1>

Test Position Body	Antenna Position	Frequency		Conducted Power (dBm)	Power Drift (<±0.2)	**SAR** 1g (W/kg)	Limit (W/kg)
		Channel	MHz				
Body-worn	Fixed	128	824.2	32.42	-0.102	0.229	1.6
Body-worn	Fixed	189	836.6	32.65	-0.102	0.326	1.6
Body-worn	Fixed	251	848.8	32.58	-0.032	0.414	1.6
Body-front	Fixed	189	836.6	32.65	0.032	0.070	1.6

Test Mode: GPRS850 2slot <SIM 1>

Body-worn	Fixed	189	836.6	31.14	-0.028	0.532	1.6

Test Mode: GPRS850 3slot <SIM 1>

Body-worn	Fixed	189	836.6	29.85	-0.109	0.841	1.6

Test Mode: GPRS850 4slot <SIM 1>

Body-worn	Fixed	128	824.2	28.10	-0.114	0.678	1.6
Body-worn	Fixed	189	836.6	28.24	-0.102	**1.110**	1.6
Body-worn	Fixed	251	848.8	28.17	-0.032	1.110	1.6
Body-front	Fixed	189	836.6	28.24	-0.042	0.353	1.6
Body-worn (With Headset)	Fixed	189	836.6	28.24	-0.015	0.905	1.6

SAR MEASUREMENT							
Ambient Temperature (°C) : 23.9 ±2				Relative Humidity (%): 52			
Liquid Temperature (°C) : 23.3 ±2				Depth of Liquid (cm):>15			
Product: Mobile Phone							
Test Mode: PCS1900 <SIM 1>							
Test Position Head	Antenna Position	Frequency		Conducted Power (dBm)	Power Drift (<±0.2)	SAR 1g (W/kg)	Limit (W/kg)
		Channel	MHz				
Left-Cheek	Fixed	512	1850.2	29.44	0.042	0.302	1.6
Left-Cheek	Fixed	661	1880.0	29.61	0.106	0.187	1.6
Left-Cheek	Fixed	810	1909.8	29.52	0.105	0.136	1.6
Left-Tilted	Fixed	661	1880.0	29.61	0.006	0.091	1.6
Right-Cheek	Fixed	512	1850.2	29.44	0.004	0.301	1.6
Right-Cheek	Fixed	661	1880.0	29.61	0.104	0.179	1.6
Right-Cheek	Fixed	810	1909.8	29.52	0.043	0.114	1.6
Right-Tilted	Fixed	661	1880.0	29.61	0.028	0.164	1.6
Test Mode: PCS1900 < SIM 2>							
Left-Cheek	Fixed	661	1880.0	29.24	-0.102	0.176	1.6

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SAR MEASUREMENT							
Ambient Temperature (°C) : 23.9 ±2				Relative Humidity (%): 52			
Liquid Temperature (°C) : 23.3 ±2				Depth of Liquid (cm):>15			
Product: Mobile Phone							
Test Mode: PCS1900 <SIM 1>							
Test Position Body	Antenna Position	Frequency		Conducted Power (dBm)	Power Drift (<±0.2)	1880.0	Limit (W/kg)
		Channel	MHz				
Body-worn	Fixed	512	1850.2	29.44	-0.104	0.335	1.6
Body-worn	Fixed	661	1880.0	29.61	-0.105	0.205	1.6
Body-worn	Fixed	810	1909.8	29.52	0.008	0.172	1.6
Body-front	Fixed	661	1880.0	29.61	-0.046	0.061	1.6
Test Mode: GPRS1900 2slot <SIM 1>							
Body-worn	Fixed	661	1880.0	28.25	0.122	0.429	1.6
Test Mode: GPRS1900 3slot <SIM 1>							
Body-worn	Fixed	661	1880.0	27.28	0.006	0.624	1.6
Test Mode: GPRS1900 4slot <SIM 1>							
Body-worn	Fixed	512	1850.2	25.65	-0.025	**1.050**	1.6
Body-worn	Fixed	661	1880.0	25.78	-0.012	0.857	1.6
Body-worn	Fixed	810	1909.8	25.74	0.014	0.680	1.6
Body-front	Fixed	661	1880.0	25.78	-0.035	0.134	1.6
Body-worn (with headset)	Fixed	661	1880.0	25.78	-0.046	0.359	1.6

SAR MEASUREMENT							
Ambient Temperature (°C) : 23.9 ±2				Relative Humidity (%): 52			
Liquid Temperature (°C) : 23.3 ±2				Depth of Liquid (cm):>15			
Product: Mobile Phone (Wi-Fi)							
Test Mode: 802.11b							
Test Position Body	Antenna Position	Frequency		Conducted Power (dBm)	Power Drift (<±0.2)	**SAR** 1g (W/kg)	Limit (W/kg)
		Channel	MHz				
Body-worn	Fixed	1	2412	10.67	-0.124	0.002	1.6
Body-worn	Fixed	6	2437	11.38	0.104	**0.006**	1.6
Body-worn	Fixed	11	2462	11.14	0.192	0.004	1.6
Body-front	Fixed	6	2437	11.38	-0.145	0.005	1.6
Test Mode: 802.11g							
Body-worn	Fixed	6	2437	11.24	-0.184	0.003	1.6

Appendix A. SAR System Validation Data

Date/Time: 26-Sep-2010

Test Laboratory: QuieTek Lab

System Check Head 835MHz

DUT: Dipole 835 MHz D835V2; Type: D835V2

Communication System: CW; Communication System Band: D835 (835.0 MHz); Duty Cycle: 1:1;

Frequency: 835 MHz; Medium parameters used: f = 835 MHz; σ = 0.87 mho/m; εr = 43; ρ = 1000 kg/m³;

Phantom section: Flat Section; Input Power=250mW

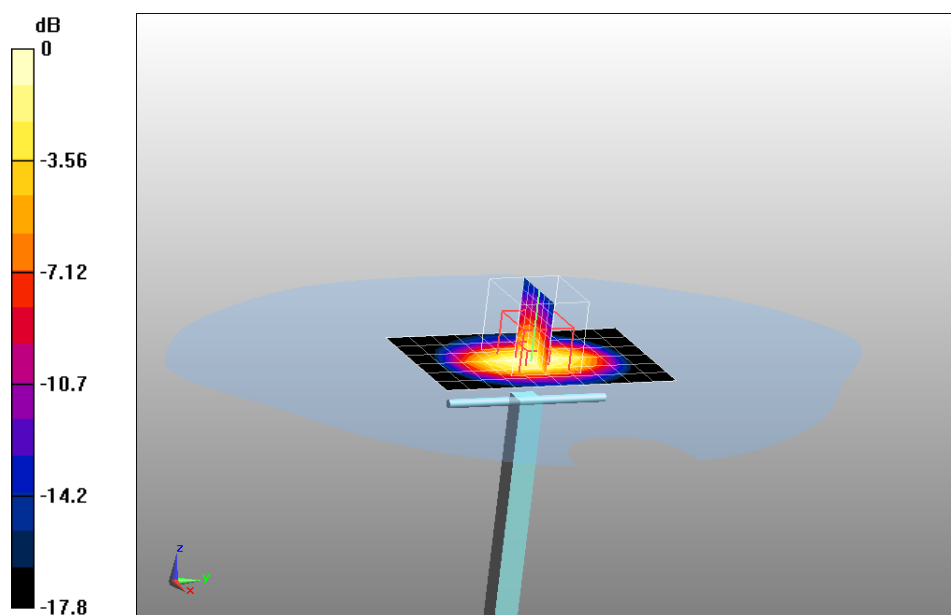Ambient temperature (℃): 21.5, Liquid temperature (℃): 21.0

DASY5 Configuration:

- Probe: EX3DV4 - SN3710; ConvF(8.83, 8.83, 8.83); Calibrated: 05/03/2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1220; Calibrated: 09/03/2010
- Phantom: SAM2; Type: SAM; Serial: TP1562
- Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Configuration/System Check GSM850 Head/Area Scan (6x19x1): Measurement grid: dx=10mm, dy=10mm Maximum value of SAR (measured) = 2.6 mW/g

Configuration/System Check GSM850 Head/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm, Reference Value = 56 V/m; Power Drift = 0.021 dB

Peak SAR (extrapolated) = 3.82 W/kg

SAR(1 g) = 2.54 mW/g; SAR(10 g) = 1.66 mW/g Maximum value of SAR (measured) = 2.73 mW/g
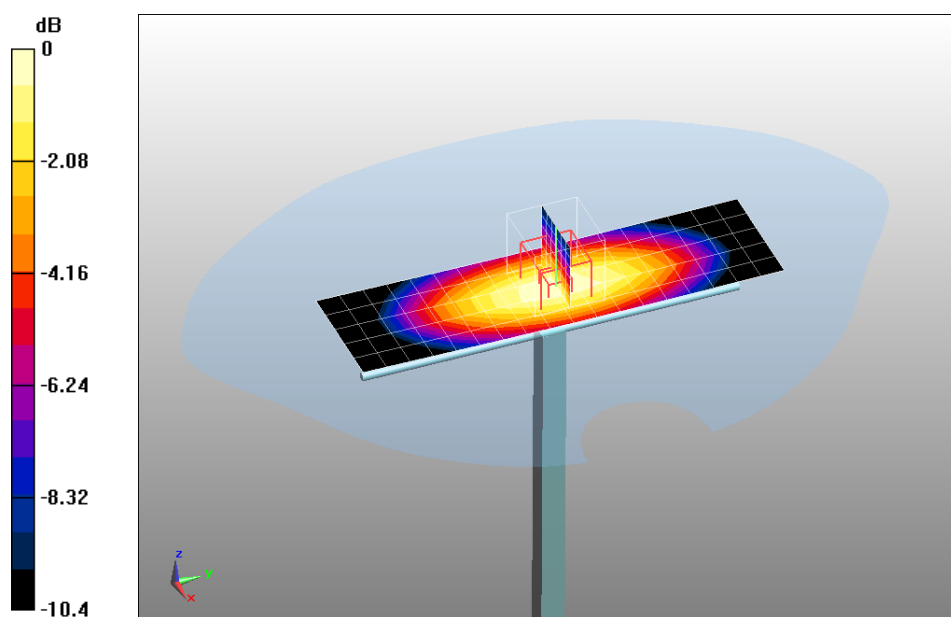
0 dB = 2.73mW/g

Date/Time: 26-Sep-2010

Test Laboratory: QuieTek Lab

System Check Body 835MHz

DUT: Dipole 835 MHz D835V2; Type: D835V2

Communication System: CW; Communication System Band: D835 (835.0 MHz); Duty Cycle: 1:1;

Frequency: 835 MHz; Medium parameters used: f = 835 MHz; σ = 0.98 mho/m; ε_r = 55.3; ρ = 1000 kg/m^3;

Phantom section: Flat Section; Input Power=250mW

Ambient temperature (℃): 21.5, Liquid temperature (℃): 21.0

DASY5 Configuration:

- Probe: EX3DV4 - SN3710; ConvF(8.95, 8.95, 8.95); Calibrated: 05/03/2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1220; Calibrated: 09/03/2010
- Phantom: SAM1; Type: SAM; Serial: TP1561
- Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Configuration/System Check GSM835 Body/Area Scan (8x16x1): Measurement grid: dx=10mm, dy=10mm. Maximum value of SAR (measured) = 2.65 mW/g

Configuration/System Check GSM835 Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm. Reference Value = 53.4 V/m; Power Drift = -0.001 dB

Peak SAR (extrapolated) = 3.9 W/kg

SAR(1 g) = 2.56 mW/g; SAR(10 g) = 1.66 mW/g Maximum value of SAR (measured) = 2.77 mW/g
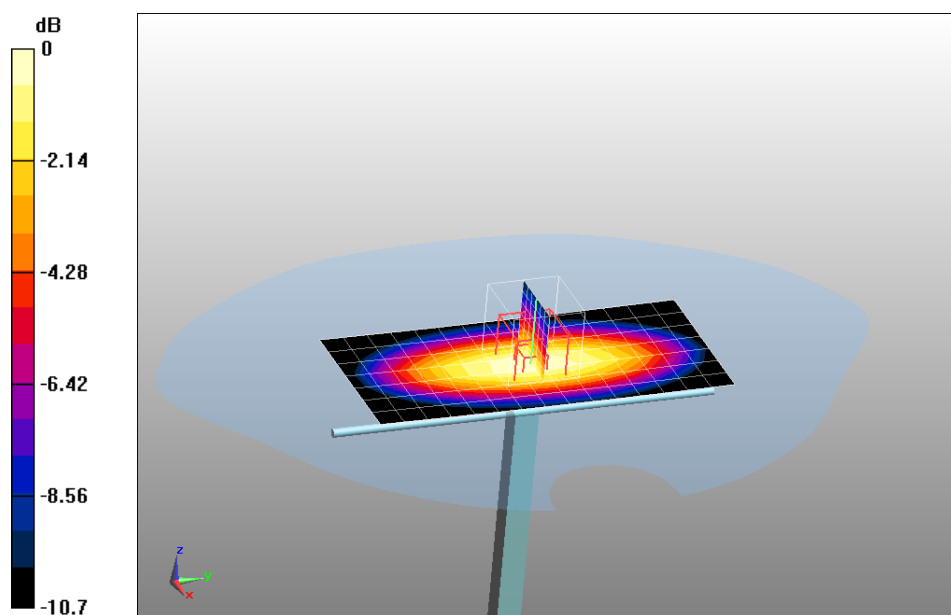
0 dB = 2.77mW/g

Date/Time: 26-Sep-2010

Test Laboratory: QuieTek Lab

System Check Head 1900MHz

DUT: Dipole 1900 MHz D1900V2; Type: D1900V2

Communication System: CW; Communication System Band: D1900 (1900.0 MHz); Duty Cycle: 1:1;

Frequency: 1900 MHz; Medium parameters used: f = 1900 MHz; σ = 1.44 mho/m; ε_r = 40.1; ρ = 1000 kg/m^3;

Phantom section: Flat Section; Input Power=250mW

Ambient temperature (℃): 21.5, Liquid temperature (℃): 21.0

DASY5 Configuration:

- Probe: EX3DV4 - SN3710; ConvF(7.69, 7.69, 7.69); Calibrated: 05/03/2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1220; Calibrated: 09/03/2010
- Phantom: SAM1; Type: SAM; Serial: TP1561
- Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Configuration/System Check PCS1900 Head/Area Scan (6x11x1): Measurement grid: dx=10mm,

dy=10mm. Maximum value of SAR (measured) = 10.2 mW/g

Configuration/System Check PCS1900 Head/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm,

dy=5mm, dz=5mm. Reference Value = 90.6 V/m; Power Drift = -0.007 dB

Peak SAR (extrapolated) = 19.8 W/kg

SAR(1 g) = 10.3 mW/g; SAR(10 g) = 5.23 mW/g Maximum value of SAR (measured) = 11.6 mW/g
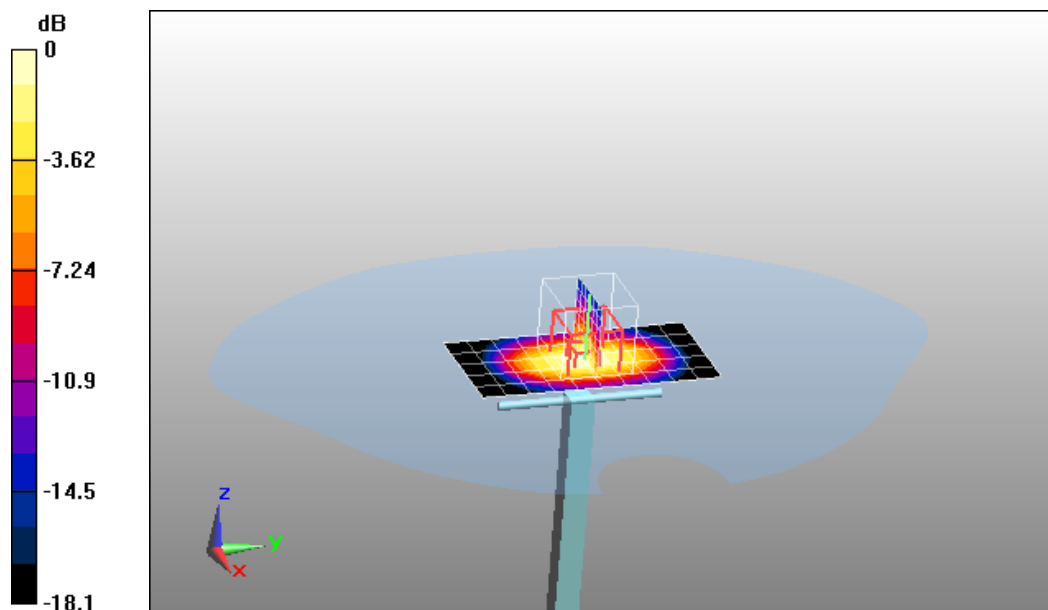
0 dB = 11.6mW/g

Date/Time: 26-Sep-2010

Test Laboratory: QuieTek Lab

System Check Body 1900MHz

DUT: Dipole 1900 MHz D1900V2; Type: D1900V2

Communication System: CW; Communication System Band: D1900 (1900.0 MHz); Duty Cycle: 1:1;

Frequency: 1900 MHz; Medium parameters used: f = 1900 MHz; σ = 1.5 mho/m; εr = 53.1; ρ = 1000 kg/m³;

Phantom section: Flat Section; Input Power=250mW

Ambient temperature (℃): 21.5, Liquid temperature (℃): 21.0

DASY5 Configuration:

- Probe: EX3DV4 - SN3710; ConvF(7.71, 7.71, 7.71); Calibrated: 05/03/2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1220; Calibrated: 09/03/2010
- Phantom: SAM2; Type: SAM; Serial: TP1562
- Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Configuration/System Check PCS1900 Body/Area Scan (7x11x1): Measurement grid: dx=10mm, dy=10mm, Maximum value of SAR (measured) = 11.2 mW/g

Configuration/System Check PCS1900 Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm, Reference Value = 84.4 V/m; Power Drift = -0.008 dB

Peak SAR (extrapolated) = 18.8 W/kg

SAR(1 g) = 10 mW/g; SAR(10 g) = 5.13 mW/g Maximum value of SAR (measured) = 11.4 mW/g

0 dB = 11.4mW/g

Date/Time: 26-Sep-2010

Test Laboratory: QuieTek Lab

System Check Body 2450MHz

DUT: Dipole 2450 MHz D2450V2; Type: D2450V2

Communication System: CW; Communication System Band: D2450 (2450.0 MHz); Duty Cycle: 1:1;

Frequency: 2450 MHz; Medium parameters used: f = 2450 MHz; σ = 1.97 mho/m; εr = 52.7; ρ = 1000 kg/m^3;

Phantom section: Flat Section; Input Power=250mW

Ambient temperature (℃): 21.5, Liquid temperature (℃): 21.0

DASY5 Configuration:

- Probe: EX3DV4 - SN3710; ConvF(7, 7, 7); Calibrated: 05/03/2010

- Sensor-Surface: 4mm (Mechanical Surface Detection)

- Electronics: DAE4 Sn1220; Calibrated: 09/03/2010

- Phantom: SAM1; Type: SAM; Serial: TP1561

- Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Configuration/Body 2450MHz/Area Scan (7x11x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 15.2 mW/g

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

dz=5mm, Reference Value = 87.6 V/m; Power Drift = -0.012 dB

Peak SAR (extrapolated) = 26.5 W/kg

SAR(1 g) = 13.1 mW/g; SAR(10 g) = 6.06 mW/g Maximum value of SAR (measured) = 15 mW/g
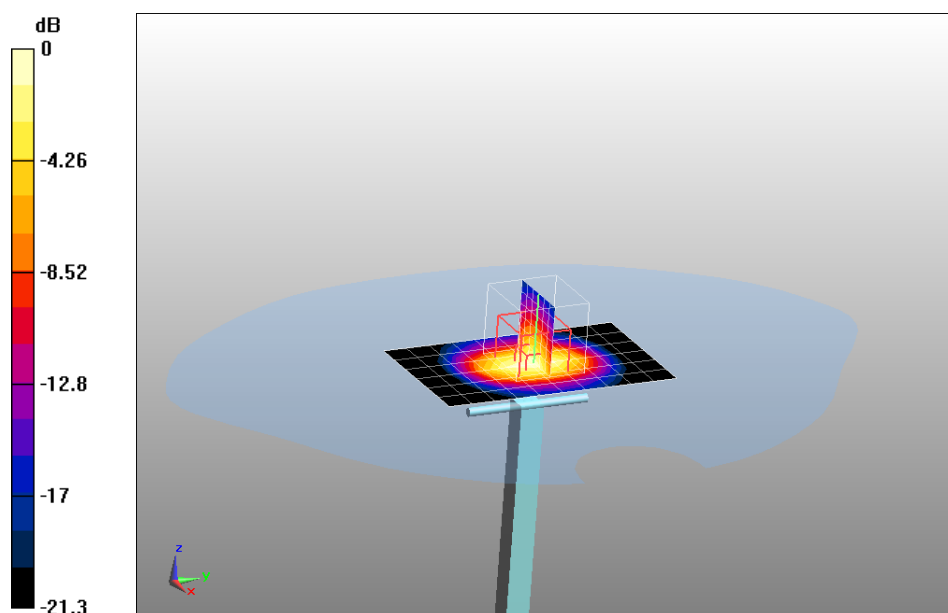
0 dB = 15mW/g

Appendix B. SAR measurement Data

Date/Time: 26-Sep-2010

Test Laboratory: QuieTek Lab

GSM850 Low Left-Touch

DUT: Mobile Phone; Type: WT8000

Communication System: Generic GSM; Communication System Band: GSM 850 (824.0 - 849.0 MHz); Duty Cycle: 1:8.3; Frequency: 824.2 MHz; Medium parameters used: f = 824.2 MHz; σ = 0.92 mho/m; ε_r = 41.7; ρ = 1000 kg/m³; Phantom section: Left Section

Ambient temperature (℃): 21.5, Liquid temperature (℃): 21.0

DASY5 Configuration:

- Probe: EX3DV4 - SN3710; ConvF(8.83, 8.83, 8.83); Calibrated: 05/03/2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1220; Calibrated: 09/03/2010
- Phantom: SAM2; Type: SAM; Serial: TP1562
- Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Configuration/GSM850 Low Left-Touch/Area Scan (9x14x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.142 mW/g

Configuration/GSM850 Low Left-Touch/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm. Reference Value = 3.64 V/m; Power Drift = -0.079 dB

Peak SAR (extrapolated) = 0.164 W/kg

SAR(1 g) = 0.128 mW/g; SAR(10 g) = 0.093 mW/g Maximum value of SAR (measured) = 0.138 mW/g
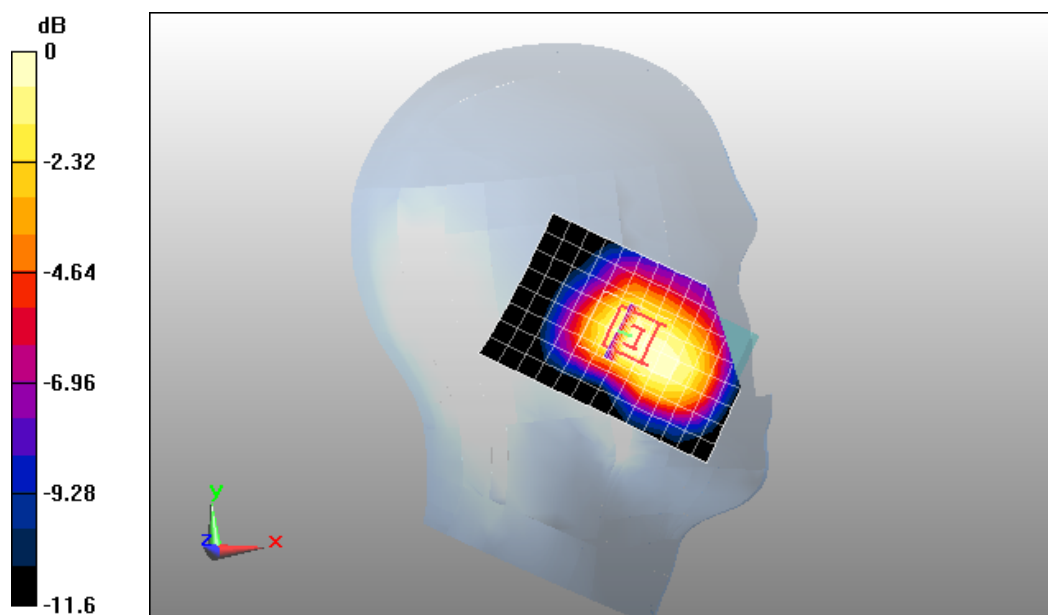
0 dB = 0.138mW/g

Date/Time: 26-Sep-2010

Test Laboratory: QuieTek Lab

GSM850 Mid Left-Touch

DUT: Mobile Phone; Type: WT8000

Communication System: Generic GSM; Communication System Band: GSM 850 (824.0 - 849.0 MHz); Duty Cycle: 1:8.3; Frequency: 836.6 MHz; Medium parameters used: f = 836.6 MHz; σ = 0.93 mho/m; ε_r = 41.6; ρ = 1000 kg/m^3; Phantom section: Left Section

Ambient temperature (℃): 21.5, Liquid temperature (℃): 21.0

DASY5 Configuration:

- Probe: EX3DV4 - SN3710; ConvF(8.83, 8.83, 8.83); Calibrated: 05/03/2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1220; Calibrated: 09/03/2010
- Phantom: SAM2; Type: SAM; Serial: TP1562
- Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Configuration/GSM850 Mid Left-Touch/Area Scan (9x14x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.188 mW/g

Configuration/GSM850 Mid Left-Touch/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm. Reference Value = 4.48 V/m; Power Drift = -0.006 dB

Peak SAR (extrapolated) = 0.224 W/kg

SAR(1 g) = 0.175 mW/g; SAR(10 g) = 0.126 mW/g Maximum value of SAR (measured) = 0.190 mW/g
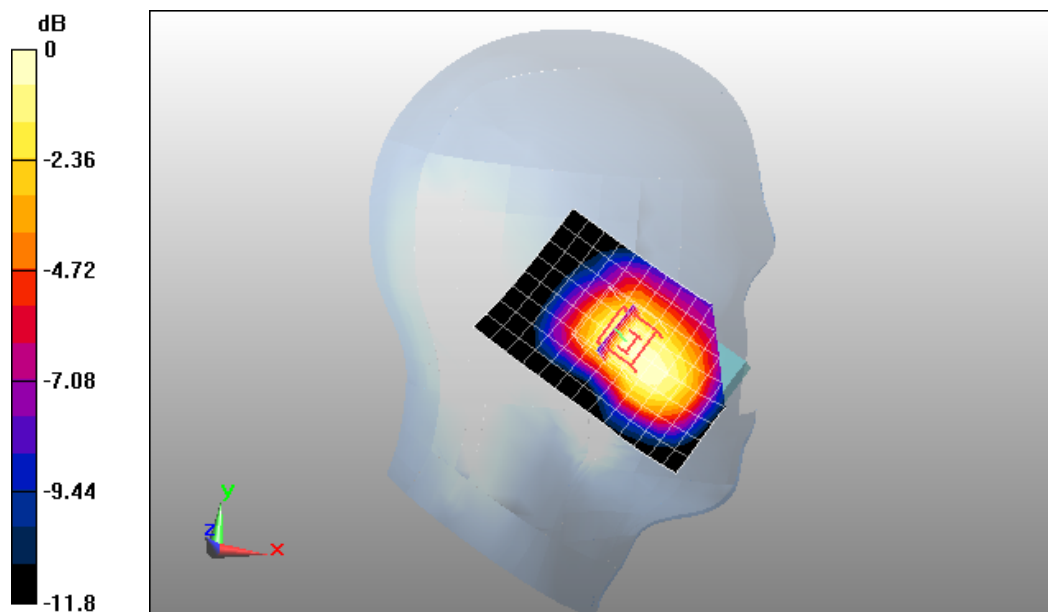
0 dB = 0.190mW/g

Date/Time: 26-Sep-2010

Test Laboratory: QuieTek Lab

GSM850 High Left-Touch

DUT: Mobile Phone; Type: WT8000

Communication System: Generic GSM; Communication System Band: GSM 850 (824.0 - 849.0 MHz); Duty Cycle: 1:8.3; Frequency: 848.6 MHz; Medium parameters used: f = 848.6 MHz; σ = 0.94 mho/m; ε_r = 41.5; ρ = 1000 kg/m^3; Phantom section: Left Section

Ambient temperature (℃): 21.5, Liquid temperature (℃): 21.0
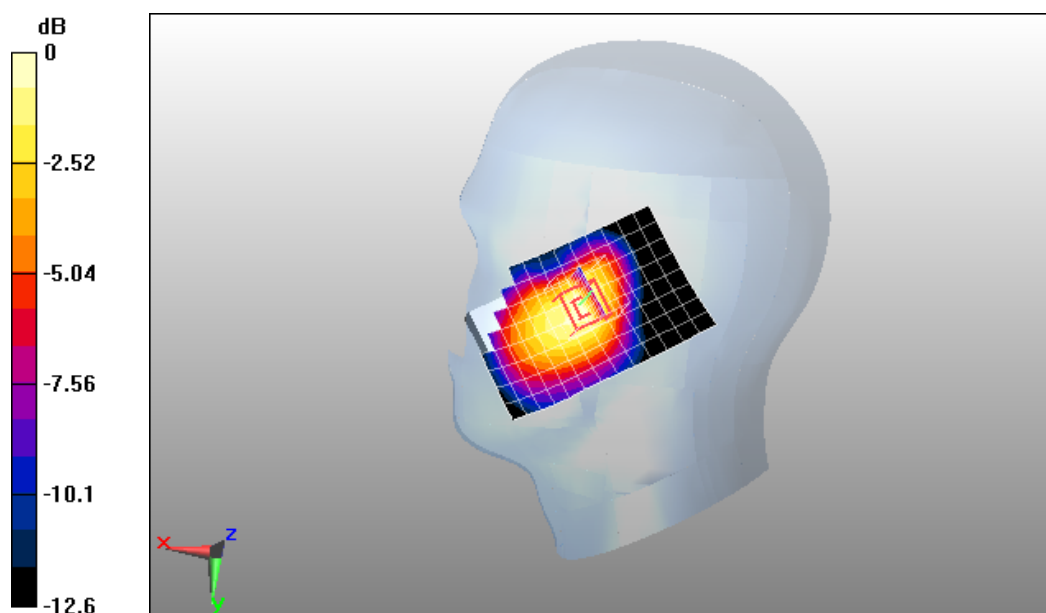
DASY5 Configuration:

- Probe: EX3DV4 - SN3710; ConvF(8.83, 8.83, 8.83); Calibrated: 05/03/2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1220; Calibrated: 09/03/2010
- Phantom: SAM2; Type: SAM; Serial: TP1562
- Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Configuration/GSM850 High Left-Touch/Area Scan (9x14x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.223 mW/g

Configuration/GSM850 High Left-Touch/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm. Reference Value = 4.86 V/m; Power Drift = 0.018 dB

Peak SAR (extrapolated) = 0.265 W/kg

SAR(1 g) = 0.206 mW/g; SAR(10 g) = 0.151 mW/g Maximum value of SAR (measured) = 0.224 mW/g
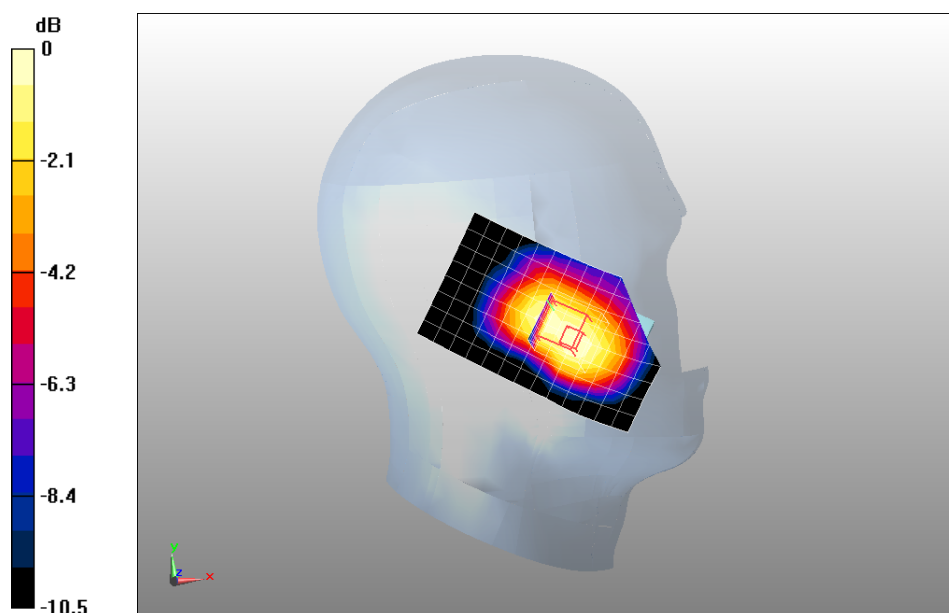
0 dB = 0.224mW/g

Date/Time: 26-Sep-2010

Test Laboratory: QuieTek Lab

GSM850 Mid Left-Tilt

DUT: Mobile Phone; Type: WT8000

Communication System: Generic GSM; Communication System Band: GSM 850 (824.0 - 849.0 MHz); Duty Cycle: 1:8.3; Frequency: 836.6 MHz; Medium parameters used: f = 836.6 MHz; σ = 0.93 mho/m; ε_r = 41.6; ρ = 1000 kg/m^3; Phantom section: Left Section

Ambient temperature (℃): 21.5, Liquid temperature (℃): 21.0

DASY5 Configuration:

- Probe: EX3DV4 - SN3710; ConvF(8.83, 8.83, 8.83); Calibrated: 05/03/2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1220; Calibrated: 09/03/2010
- Phantom: SAM2; Type: SAM; Serial: TP1562
- Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Configuration/GSM850 Mid Left-Tilt/Area Scan (9x14x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.125 mW/g

Configuration/GSM850 Mid Left-Tilt/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm. Reference Value = 6.42 V/m; Power Drift = -0.112 dB

Peak SAR (extrapolated) = 0.146 W/kg

SAR(1 g) = 0.118 mW/g; SAR(10 g) = 0.088 mW/g Maximum value of SAR (measured) = 0.125 mW/g
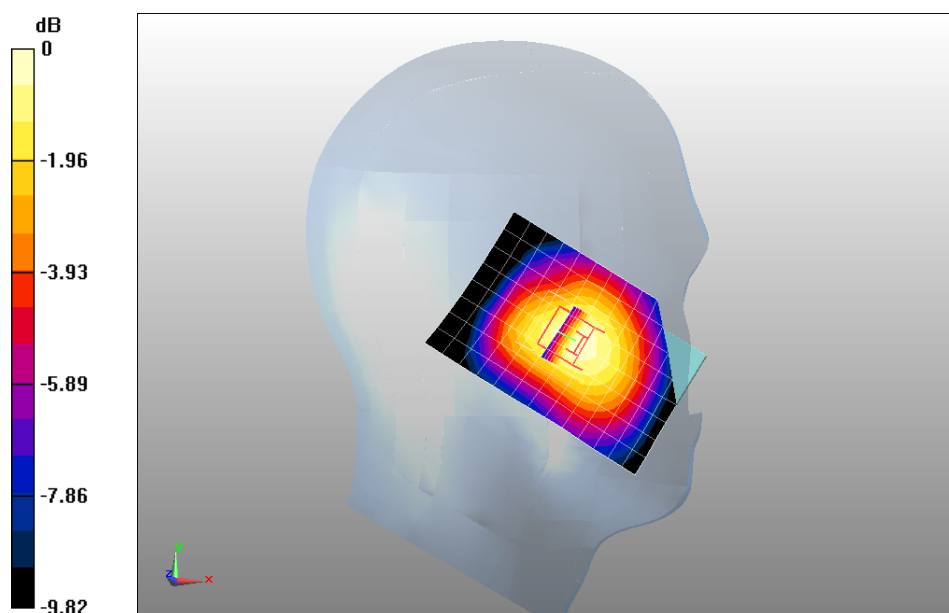
0 dB = 0.125mW/g

Date/Time: 26-Sep-2010

Test Laboratory: QuieTek Lab

GSM850 Low Right-Touch

DUT: Mobile Phone; Type: WT8000

Communication System: Generic GSM; Communication System Band: GSM 850 (824.0 - 849.0 MHz); Duty Cycle: 1:8.3; Frequency: 824.2 MHz; Medium parameters used: f = 824.2 MHz; σ = 0.92 mho/m; ε_r = 41.7; ρ = 1000 kg/m^3; Phantom section: Right Section

Ambient temperature (℃): 21.5, Liquid temperature (℃): 21.0

DASY5 Configuration:

- Probe: EX3DV4 - SN3710; ConvF(8.83, 8.83, 8.83); Calibrated: 05/03/2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1220; Calibrated: 09/03/2010
- Phantom: SAM2; Type: SAM; Serial: TP1562
- Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Configuration/GSM850 Low Right-Touch/Area Scan (9x14x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.142 mW/g

Configuration/GSM850 Low Right-Touch/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm. Reference Value = 2.64 V/m; Power Drift = 0.102 dB

Peak SAR (extrapolated) = 0.175 W/kg

SAR(1 g) = 0.132 mW/g; SAR(10 g) = 0.097 mW/g Maximum value of SAR (measured) = 0.144 mW/g
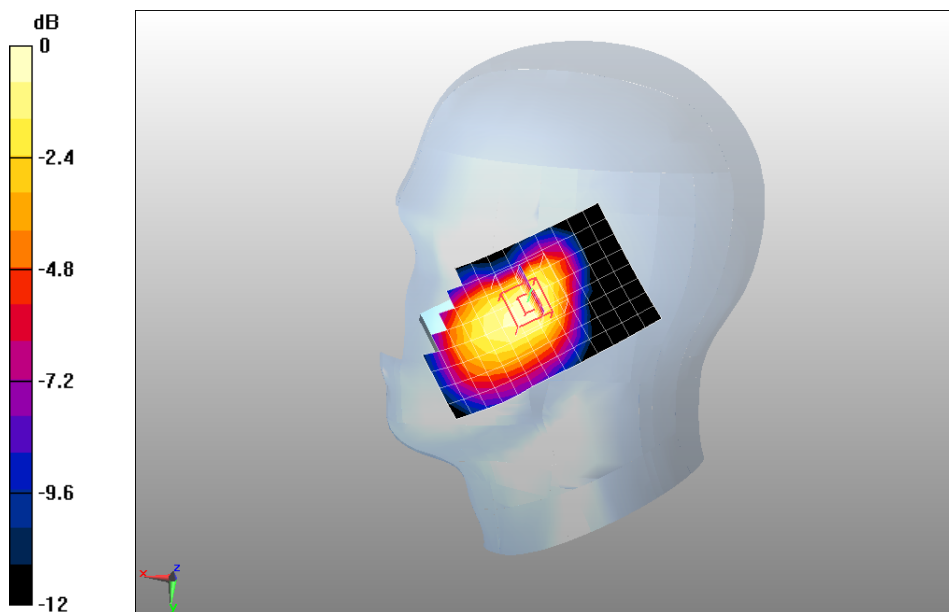
0 dB = 0.144mW/g

Date/Time: 26-Sep-2010

Test Laboratory: QuieTek Lab

GSM850 Mid Right-Touch

DUT: Mobile Phone; Type: WT8000

Communication System: Generic GSM; Communication System Band: GSM 850 (824.0 - 849.0 MHz); Duty Cycle: 1:8.3; Frequency: 836.6 MHz; Medium parameters used: f = 836.6 MHz; σ = 0.93 mho/m; ε_r = 41.6; ρ = 1000 kg/m^3; Phantom section: Right Section

Ambient temperature (℃): 21.5, Liquid temperature (℃): 21.0

DASY5 Configuration:

- Probe: EX3DV4 - SN3710; ConvF(8.83, 8.83, 8.83); Calibrated: 05/03/2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1220; Calibrated: 09/03/2010
- Phantom: SAM2; Type: SAM; Serial: TP1562
- Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Configuration/GSM850 Mid Right-Touch/Area Scan (9x14x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.244 mW/g

Configuration/GSM850 Mid Right-Touch/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm. Reference Value = 3.36 V/m; Power Drift = -0.046 dB

Peak SAR (extrapolated) = 0.313 W/kg

SAR(1 g) = 0.239 mW/g; SAR(10 g) = 0.168 mW/g Maximum value of SAR (measured) = 0.261 mW/g

0 dB = 0.261mW/g

Date/Time: 26-Sep-2010

Test Laboratory: QuieTek Lab

GSM850 High Right-Touch

DUT: Mobile Phone; Type: WT8000

Communication System: Generic GSM; Communication System Band: GSM 850 (824.0 - 849.0 MHz); Duty Cycle: 1:8.3; Frequency: 848.6 MHz; Medium parameters used: f = 848.6 MHz; σ = 0.94 mho/m; $ε_r$ = 41.5; ρ = 1000 kg/m^3; Phantom section: Right Section

Ambient temperature (℃): 21.5, Liquid temperature (℃): 21.0

DASY5 Configuration:

- Probe: EX3DV4 - SN3710; ConvF(8.83, 8.83, 8.83); Calibrated: 05/03/2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1220; Calibrated: 09/03/2010
- Phantom: SAM2; Type: SAM; Serial: TP1562
- Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Configuration/GSM850 High Right-Touch/Area Scan (9x14x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 0.257 mW/g

Configuration/GSM850 High Right-Touch/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm. Reference Value = 3.84 V/m; Power Drift = 0.113 dB

Peak SAR (extrapolated) = 0.314 W/kg

SAR(1 g) = 0.238 mW/g; SAR(10 g) = 0.172 mW/g Maximum value of SAR (measured) = 0.268 mW/g
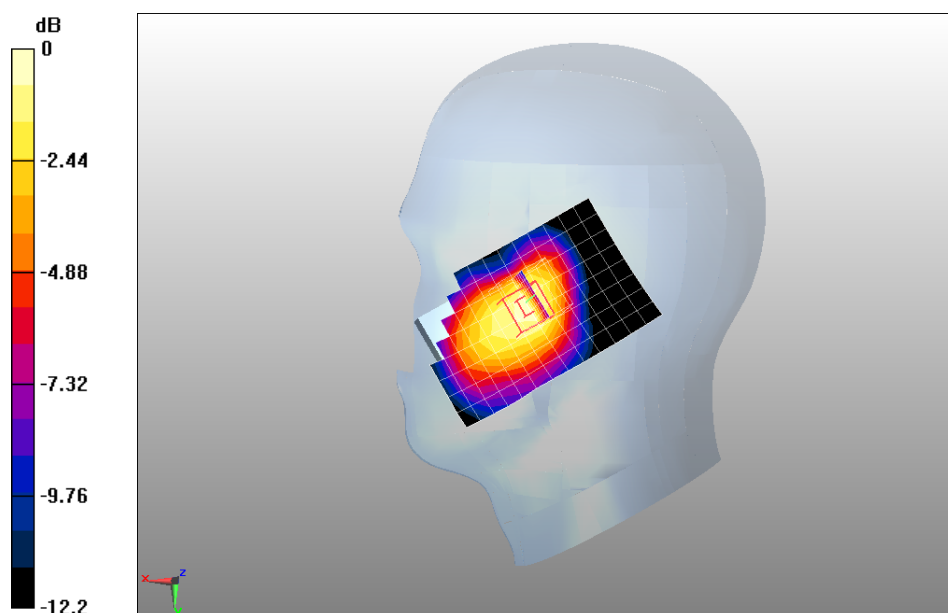
0 dB = 0.268mW/g

Date/Time: 26-Sep-2010

Test Laboratory: QuieTek Lab

GSM850 Mid Right-Tilt

DUT: Mobile Phone; Type: WT8000

Communication System: Generic GSM; Communication System Band: GSM 850 (824.0 - 849.0 MHz); Duty Cycle: 1:8.3; Frequency: 836.6 MHz; Medium parameters used: f = 836.6 MHz; σ = 0.93 mho/m; ε_r = 41.6; ρ = 1000 kg/m^3; Phantom section: Right Section

Ambient temperature (℃): 21.5, Liquid temperature (℃): 21.0

DASY5 Configuration:

- Probe: EX3DV4 - SN3710; ConvF(8.83, 8.83, 8.83); Calibrated: 05/03/2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1220; Calibrated: 09/03/2010
- Phantom: SAM2; Type: SAM; Serial: TP1562
- Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Configuration/GSM850 Mid Right-Tilt/Area Scan (9x14x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.130 mW/g

Configuration/GSM850 Mid Right-Tilt/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm. Reference Value = 6.24 V/m; Power Drift = 0.132 dB

Peak SAR (extrapolated) = 0.158 W/kg

SAR(1 g) = 0.126 mW/g; SAR(10 g) = 0.093 mW/g Maximum value of SAR (measured) = 0.134 mW/g
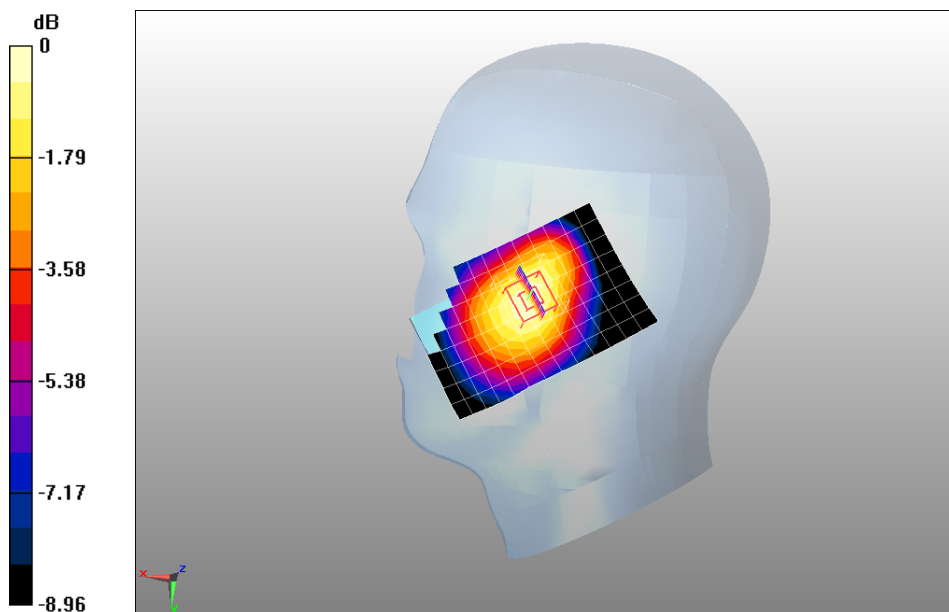
0 dB = 0.134mW/g

Date/Time: 26-Sep-2010

Test Laboratory: QuieTek Lab

GSM850 Mid Right-Touch <SIM 2>

DUT: Mobile Phone; Type: WT8000

Communication System: Generic GSM; Communication System Band: GSM 850 (824.0 - 849.0 MHz); Duty Cycle: 1:8.3; Frequency: 836.6 MHz; Medium parameters used: f = 836.6 MHz; σ = 0.93 mho/m; $ε_r$ = 41.6; ρ = 1000 kg/m^3; Phantom section: Right Section

Ambient temperature (℃): 21.5, Liquid temperature (℃): 21.0

DASY5 Configuration:

- Probe: EX3DV4 - SN3710; ConvF(8.83, 8.83, 8.83); Calibrated: 05/03/2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1220; Calibrated: 09/03/2010
- Phantom: SAM2; Type: SAM; Serial: TP1562
- Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Configuration/GSM850 Mid Right-Touch/Area Scan (9x14x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.204 mW/g

Configuration/GSM850 Mid Right-Touch/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm. Reference Value = 3.42 V/m; Power Drift = 0.064 dB

Peak SAR (extrapolated) = 0.236 W/kg

SAR(1 g) = 0.181 mW/g; SAR(10 g) = 0.135 mW/g Maximum value of SAR (measured) = 0.195 mW/g
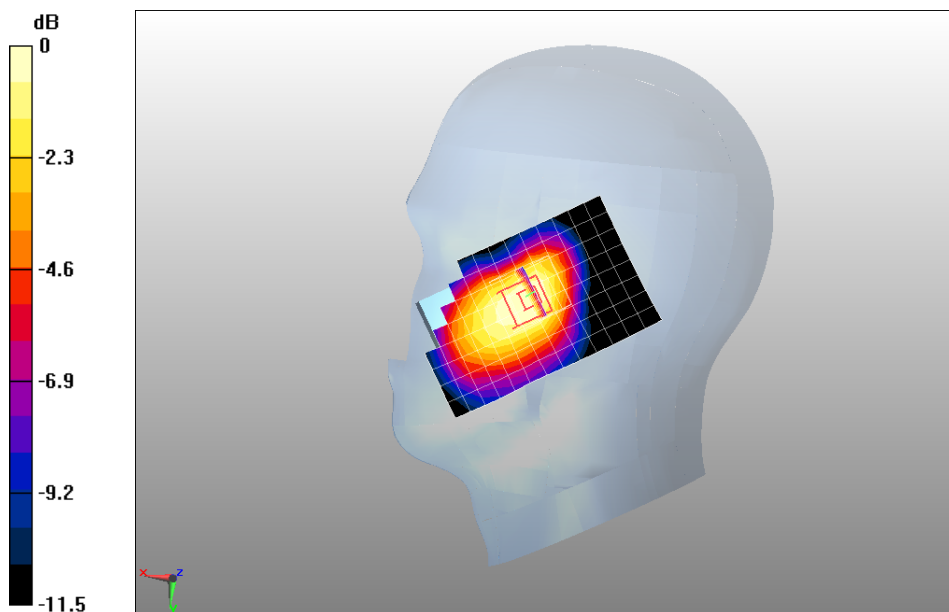
0 dB = 0.195mW/g

Date/Time: 26-Sep-2010

Test Laboratory: QuieTek Lab

GSM850 Low Body-Back

DUT: Mobile Phone; Type: WT8000

Communication System: Generic GSM; Communication System Band: GSM 850 (824.0 - 849.0 MHz); Duty Cycle: 1:8.3; Frequency: 824.2 MHz; Medium parameters used: f = 824.2 MHz; σ = 0.97 mho/m; ε_r = 55.3; ρ = 1000 kg/m^3; Phantom section: Flat Section

Ambient temperature (℃): 21.5, Liquid temperature (℃): 21.0

DASY5 Configuration:

- Probe: EX3DV4 - SN3710; ConvF(8.95, 8.95, 8.95); Calibrated: 05/03/2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1220; Calibrated: 09/03/2010
- Phantom: SAM2; Type: SAM; Serial: TP1562
- Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Configuration/GSM 850 Low Body-Back/Area Scan (9x14x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.243 mW/g

Configuration/GSM 850 Low Body-Back/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm. Reference Value = 7.6 V/m; Power Drift = -0.102 dB

Peak SAR (extrapolated) = 0.303 W/kg

SAR(1 g) = 0.229 mW/g; SAR(10 g) = 0.170 mW/g Maximum value of SAR (measured) = 0.241 mW/g
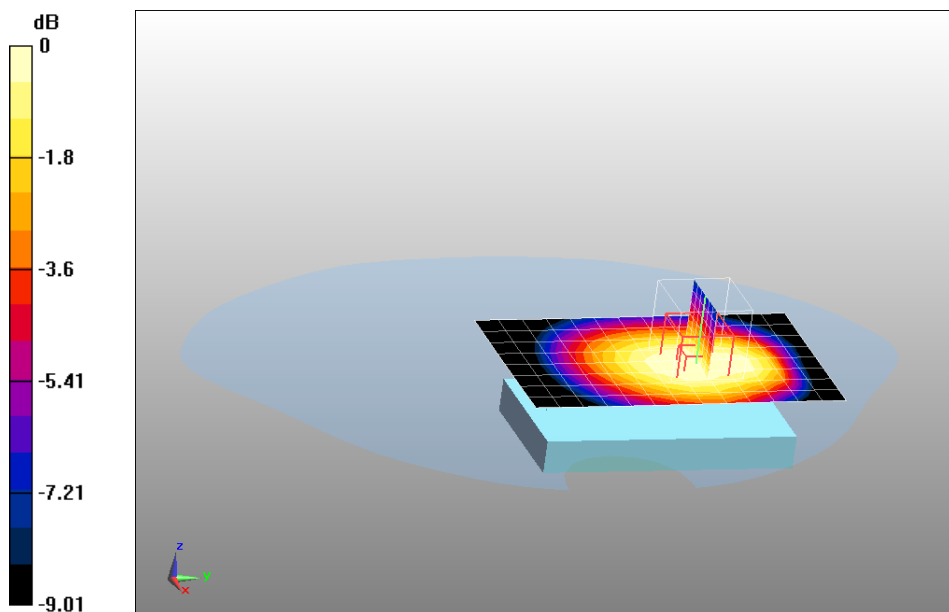
0 dB = 0.241mW/g

Date/Time: 26-Sep-2010

Test Laboratory: QuieTek Lab

GSM850 Mid Body-Back

DUT: Mobile Phone; Type: WT8000

Communication System: Generic GSM; Communication System Band: GSM 850 (824.0 - 849.0 MHz); Duty Cycle: 1:8.3; Frequency: 836.6 MHz; Medium parameters used: f = 836.6 MHz; σ = 0.98 mho/m; ε_r = 55.3; ρ = 1000 kg/m^3; Phantom section: Flat Section

Ambient temperature (℃): 21.5, Liquid temperature (℃): 21.0

DASY5 Configuration:

- Probe: EX3DV4 - SN3710; ConvF(8.95, 8.95, 8.95); Calibrated: 05/03/2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1220; Calibrated: 09/03/2010
- Phantom: SAM2; Type: SAM; Serial: TP1562
- Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Configuration/GSM 850 Mid Body-Back/Area Scan (9x14x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.341 mW/g

Configuration/GSM 850 Mid Body-Back/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm. Reference Value = 8.84 V/m; Power Drift = -0.102 dB

Peak SAR (extrapolated) = 0.431 W/kg

SAR(1 g) = 0.326 mW/g; SAR(10 g) = 0.240 mW/g Maximum value of SAR (measured) = 0.343 mW/g
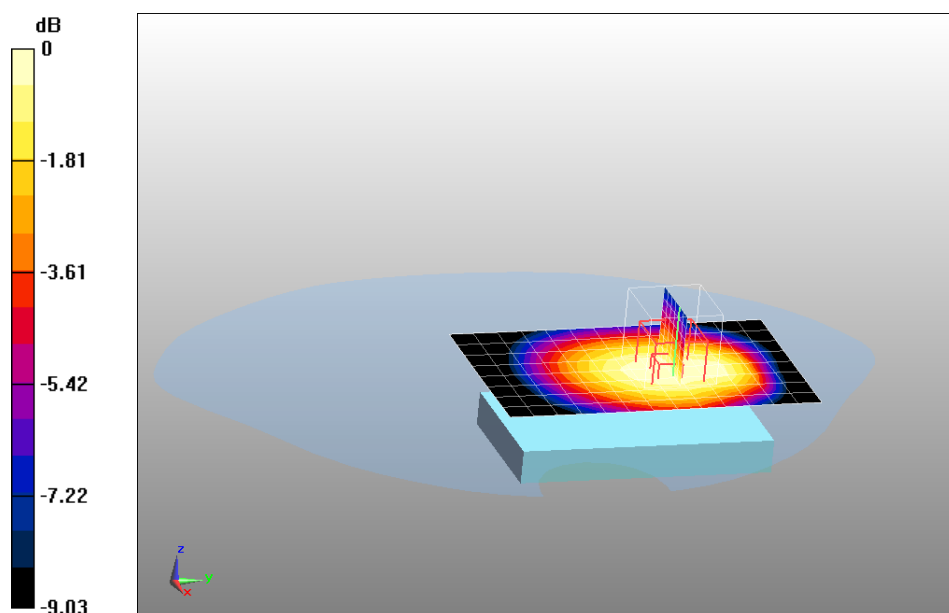
0 dB = 0.343mW/g

Date/Time: 26-Sep-2010

Test Laboratory: QuieTek Lab

GSM850 High Body-Back

DUT: Mobile Phone; Type: WT8000

Communication System: Generic GSM; Communication System Band: GSM 850 (824.0 - 849.0 MHz); Duty Cycle: 1:8.3; Frequency: 848.6 MHz; Medium parameters used: f = 848.6 MHz; σ = 0.99 mho/m; $ε_r$ = 55.3; ρ = 1000 kg/m^3; Phantom section: Flat Section

Ambient temperature (℃): 21.5, Liquid temperature (℃): 21.0

DASY5 Configuration:

- Probe: EX3DV4 - SN3710; ConvF(8.95, 8.95, 8.95); Calibrated: 05/03/2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1220; Calibrated: 09/03/2010
- Phantom: SAM2; Type: SAM; Serial: TP1562
- Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Configuration/GSM 850 High Body-Back/Area Scan (9x14x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.440 mW/g

Configuration/GSM 850 High Body-Back/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm. Reference Value = 9.59 V/m; Power Drift = -0.032 dB

Peak SAR (extrapolated) = 0.542 W/kg

SAR(1 g) = 0.414 mW/g; SAR(10 g) = 0.304 mW/g Maximum value of SAR (measured) = 0.435 mW/g
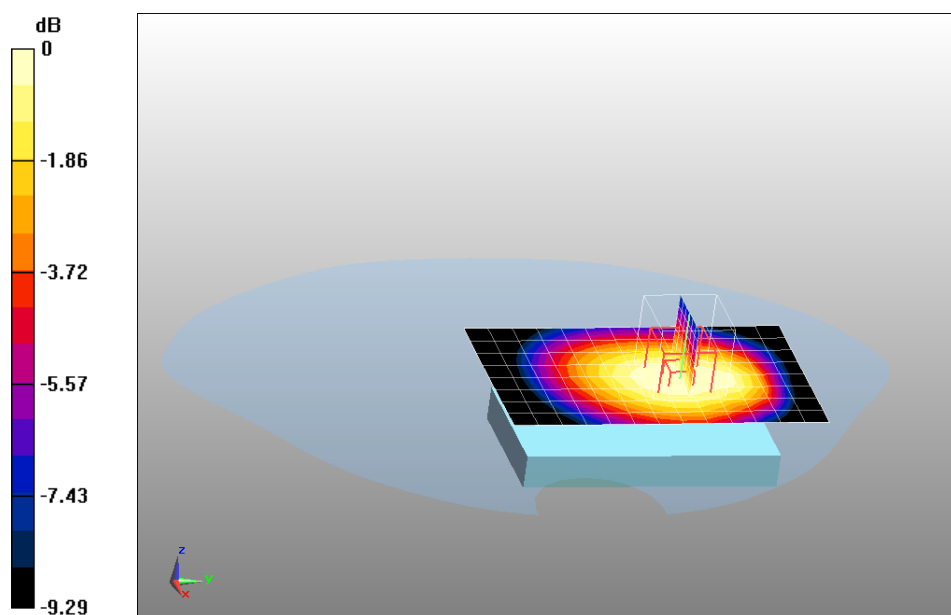
0 dB = 0.435mW/g

Date/Time: 26-Sep-2010

Test Laboratory: QuieTek Lab

GSM850 Mid Body-Front

DUT: Mobile Phone; Type: WT8000

Communication System: Generic GSM; Communication System Band: GSM 850 (824.0 - 849.0 MHz); Duty Cycle: 1:8.3; Frequency: 824.2 MHz; Medium parameters used: f = 824.2 MHz; σ = 0.97 mho/m; $ε_r$ = 55.3; ρ = 1000 kg/m^3; Phantom section: Flat Section

Ambient temperature (℃): 21.5, Liquid temperature (℃): 21.0

DASY5 Configuration:

- Probe: EX3DV4 - SN3710; ConvF(8.95, 8.95, 8.95); Calibrated: 05/03/2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1220; Calibrated: 09/03/2010
- Phantom: SAM2; Type: SAM; Serial: TP1562
- Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Configuration/GSM 850 Mid Body-Front/Area Scan (9x14x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.068 mW/g

Configuration/GSM 850 Mid Body-Front/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm. Reference Value = 3.76 V/m; Power Drift = 0.032 dB

Peak SAR (extrapolated) = 0.089 W/kg

SAR(1 g) = 0.070 mW/g; SAR(10 g) = 0.052 mW/g Maximum value of SAR (measured) = 0.074 mW/g
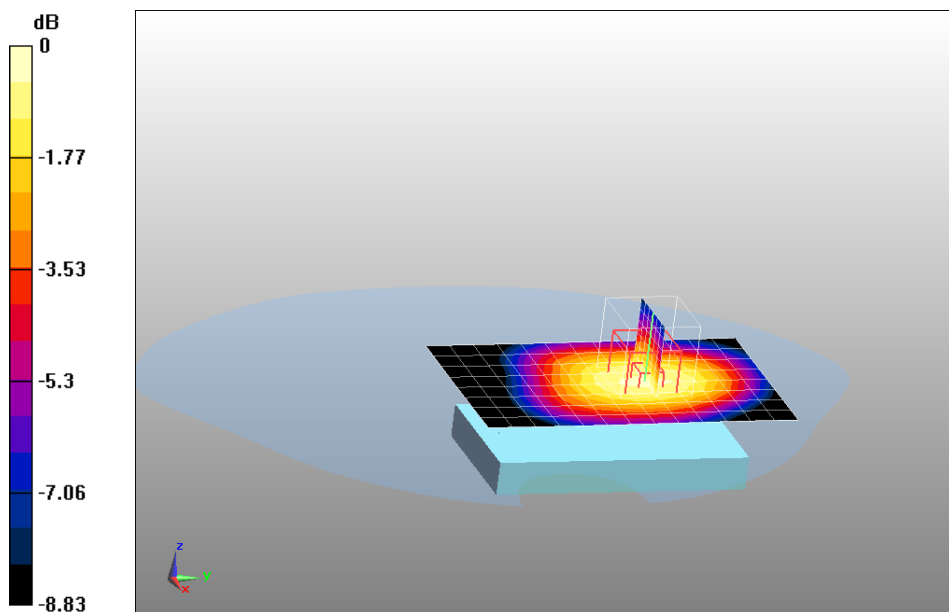
0 dB = 0.074mW/g

Date/Time: 26-Sep-2010

Test Laboratory: QuieTek Lab

GPRS 850 Mid Body-Back(2up)

DUT: Mobile Phone; Type: WT8000

Communication System: GPRS/EGPRS-2 Slot; Communication System Band: GSM850; Duty Cycle: 1:4.1;

Frequency: 836.6 MHz; Medium parameters used: f = 836.6 MHz; σ = 0.98 mho/m; ε_r = 55.3; ρ = 1000 kg/m^3;

Phantom section: Flat Section

Ambient temperature (℃): 21.5, Liquid temperature (℃): 21.0

DASY5 Configuration:

- Probe: EX3DV4 - SN3710; ConvF(8.95, 8.95, 8.95); Calibrated: 05/03/2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1220; Calibrated: 09/03/2010
- Phantom: SAM2; Type: SAM; Serial: TP1562
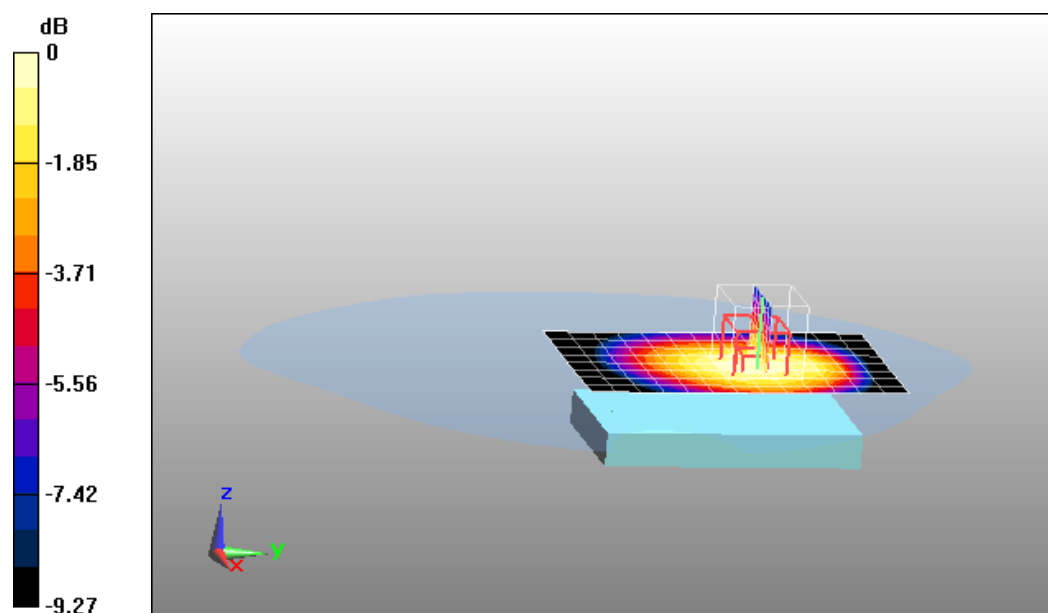- Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Configuration/GPRS 850 Mid Body-Back/Area Scan (9x14x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.534 mW/g

Configuration/GPRS 850 Mid Body-Back/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm,

dy=5mm, dz=5mm. Reference Value = 12.6 V/m; Power Drift = -0.028 dB

Peak SAR (extrapolated) = 0.703 W/kg

SAR(1 g) = 0.532 mW/g; SAR(10 g) = 0.392 mW/g Maximum value of SAR (measured) = 0.559 mW/g
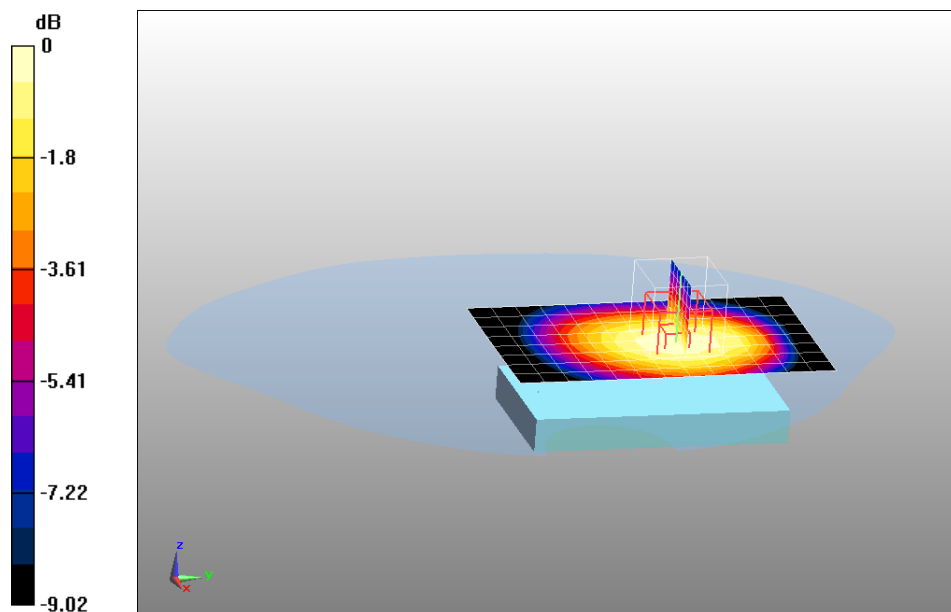
0 dB = 0.559mW/g

Date/Time: 26-Sep-2010

Test Laboratory: QuieTek Lab

GPRS 850 Mid Body-Back(3up)

DUT: Mobile Phone; Type: WT8000

Communication System: GPRS/EGPRS-3 Slot; Communication System Band: GSM 850; Duty Cycle: 1:2.0;

Frequency: 836.6 MHz; Medium parameters used: f = 836.6 MHz; σ = 0.98 mho/m; $ε_r$ = 55.3; ρ = 1000 kg/m³;

Phantom section: Flat Section

Ambient temperature (℃): 21.5, Liquid temperature (℃): 21.0

DASY5 Configuration:

- Probe: EX3DV4 - SN3710; ConvF(8.95, 8.95, 8.95); Calibrated: 05/03/2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1220; Calibrated: 09/03/2010
- Phantom: SAM2; Type: SAM; Serial: TP1562
- Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

**Configuration/GPRS 850 Mid Body-Back/Area Scan (9x14x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.863 mW/g

Configuration/GPRS 850 Mid Body-Back/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm,

dy=5mm, dz=5mm. Reference Value = 15.6 V/m; Power Drift = -0.109 dB

Peak SAR (extrapolated) = 1.11 W/kg

SAR(1 g) = 0.841 mW/g; SAR(10 g) = 0.620 mW/g Maximum value of SAR (measured) = 0.888 mW/g
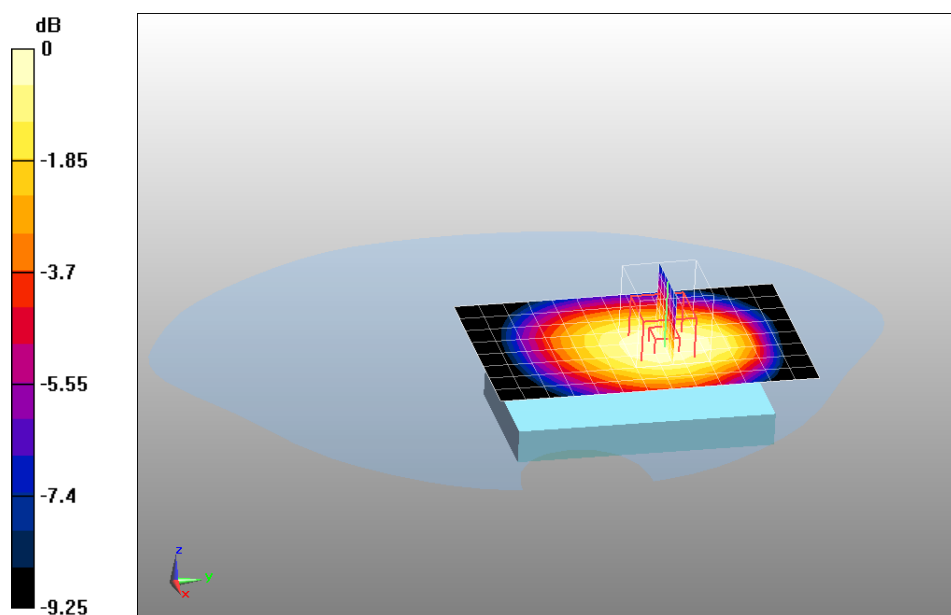
0 dB = 0.888mW/g

Date/Time: 26-Sep-2010

Test Laboratory: QuieTek Lab

GPRS 850 Low Body-Back (4up)

DUT: Mobile Phone; Type: WT8000

Communication System: GPRS/EGPRS-4 Slot; Communication System Band: GSM 850; Duty Cycle: 1:1.0;

Frequency: 824.2 MHz; Medium parameters used: f = 824.2 MHz; σ = 0.97 mho/m; ε_r = 55.3; ρ = 1000 kg/m^3;

Phantom section: Flat Section

Ambient temperature (℃): 21.5, Liquid temperature (℃): 21.0

DASY5 Configuration:

- Probe: EX3DV4 - SN3710; ConvF(8.95, 8.95, 8.95); Calibrated: 05/03/2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1220; Calibrated: 09/03/2010
- Phantom: SAM2; Type: SAM; Serial: TP1562
- Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Configuration/GPRS 850 Low Body-Back/Area Scan (9x14x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.680 mW/g

Configuration/GPRS 850 Low Body-Back/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm,

dy=5mm, dz=5mm. Reference Value = 13.6 V/m; Power Drift = -0.114 dB

Peak SAR (extrapolated) = 0.903 W/kg

SAR(1 g) = 0.678 mW/g; SAR(10 g) = 0.500 mW/g Maximum value of SAR (measured) = 0.720 mW/g

0 dB = 0.720mW/g

Date/Time: 26-Sep-2010

Test Laboratory: QuieTek Lab

GPRS 850 Mid Body-Back(4up)

DUT: Mobile Phone; Type: WT8000

Communication System: GPRS/EGPRS-4 Slot; Communication System Band: GSM 850; Duty Cycle: 1:1.0;

Frequency: 836.6 MHz; Medium parameters used: f = 836.6 MHz; σ = 0.98 mho/m; ε_r = 55.3; ρ = 1000 kg/m^3;

Phantom section: Flat Section

Ambient temperature (℃): 21.5, Liquid temperature (℃): 21.0

DASY5 Configuration:

- Probe: EX3DV4 - SN3710; ConvF(8.95, 8.95, 8.95); Calibrated: 05/03/2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1220; Calibrated: 09/03/2010
- Phantom: SAM2; Type: SAM; Serial: TP1562
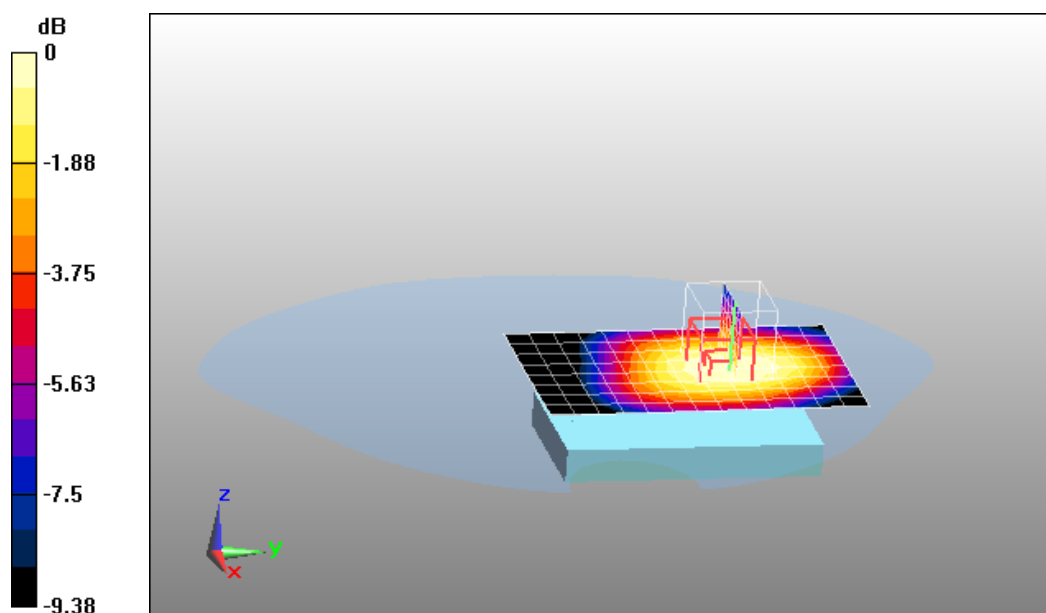- Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Configuration/GPRS 850 Mid Body-Back/Area Scan (9x14x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 1.13 mW/g

Configuration/GPRS 850 Mid Body-Back/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm,

dy=5mm, dz=5mm. Reference Value = 17.4 V/m; Power Drift = -0.102 dB

Peak SAR (extrapolated) = 1.46 W/kg

SAR(1 g) = 1.11 mW/g; SAR(10 g) = 0.819 mW/g Maximum value of SAR (measured) = 1.17 mW/g
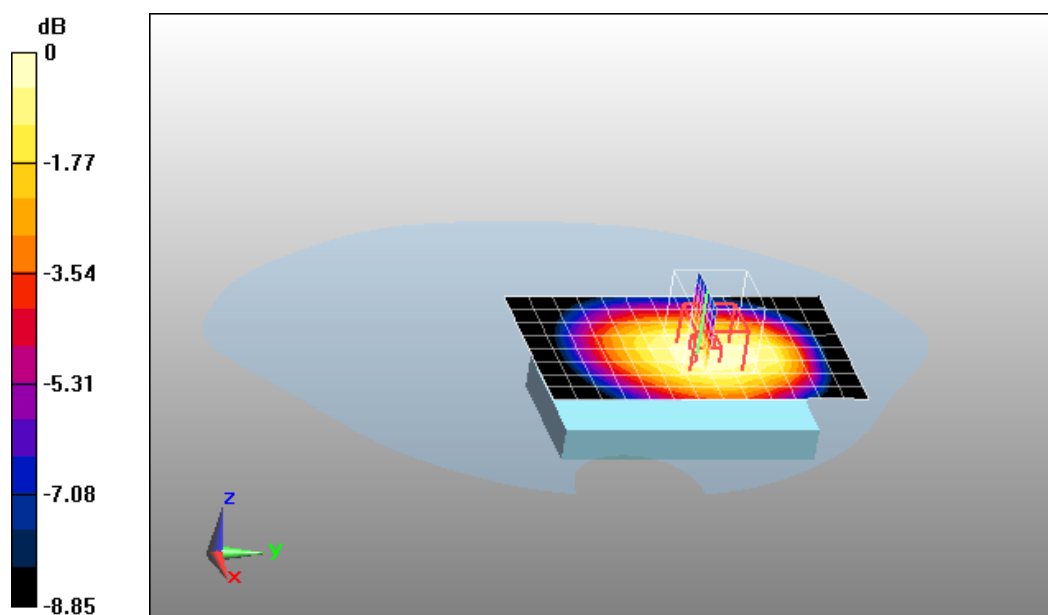
0 dB = 1.17mW/g

Z-axis Plot
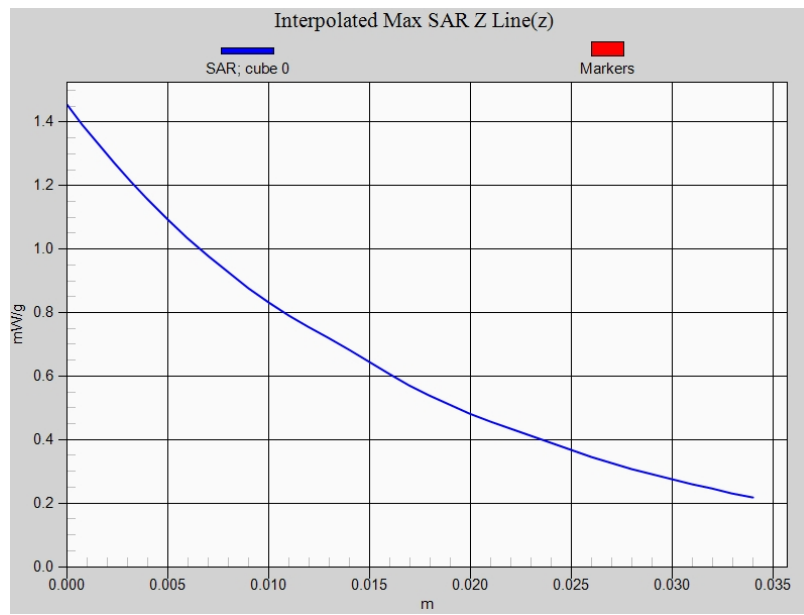
![QuieTek logo]

Date/Time: 26-Sep-2010

Test Laboratory: QuieTek Lab

GPRS 850 High Body-Back(4up)

DUT: Mobile Phone; Type: WT8000

Communication System: GPRS/EGPRS-4 Slot; Communication System Band: GSM 850; Duty Cycle: 1:1.0;

Frequency: 848.6 MHz; Medium parameters used: f = 848.6 MHz; σ = 0.99 mho/m; ε_r = 55.3; ρ = 1000 kg/m^3;

Phantom section: Flat Section

Ambient temperature (℃): 21.5, Liquid temperature (℃): 21.0

DASY5 Configuration:

- Probe: EX3DV4 - SN3710; ConvF(8.95, 8.95, 8.95); Calibrated: 05/03/2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1220; Calibrated: 09/03/2010
- Phantom: SAM2; Type: SAM; Serial: TP1562
- Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Configuration/GPRS 850 High Body-Back/Area Scan (9x14x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 1.24 mW/g

Configuration/GPRS 850 High Body-Back/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm,

dy=5mm, dz=5mm. Reference Value = 16.4 V/m; Power Drift = -0.032 dB

Peak SAR (extrapolated) = 1.45 W/kg

SAR(1 g) = 1.11 mW/g; SAR(10 g) = 0.820 mW/g Maximum value of SAR (measured) = 1.16 mW/g
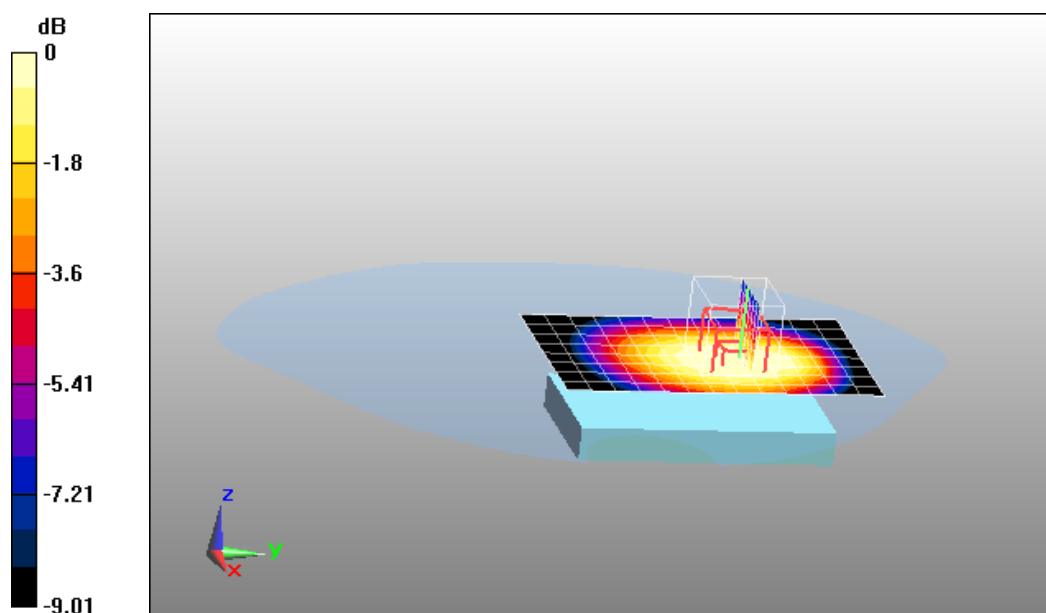
0 dB = 1.16mW/g

Date/Time: 26-Sep-2010

Test Laboratory: QuieTek Lab

GPRS 850 Mid Body-Front (4up)

DUT: Mobile Phone; Type: WT8000

Communication System: GPRS/EGPRS-4 Slot; Communication System Band: GSM 850; Duty Cycle: 1:1.0;

Frequency: 836.6 MHz; Medium parameters used: f = 836.6 MHz; σ = 0.98 mho/m; ε_r = 55.3; ρ = 1000 kg/m^3;

Phantom section: Flat Section

Ambient temperature (℃): 21.5, Liquid temperature (℃): 21.0

DASY5 Configuration:

- Probe: EX3DV4 - SN3710; ConvF(8.95, 8.95, 8.95); Calibrated: 05/03/2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1220; Calibrated: 09/03/2010
- Phantom: SAM2; Type: SAM; Serial: TP1562
- Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Configuration/GPRS 850 Low Body-Back/Area Scan (9x14x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.375 mW/g

Configuration/GPRS 850 Low Body-Back/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm,

dy=5mm, dz=5mm. Reference Value = 6.75 V/m; Power Drift = -0.042 dB

Peak SAR (extrapolated) = 0.454 W/kg

SAR(1 g) = 0.353 mW/g; SAR(10 g) = 0.265 mW/g Maximum value of SAR (measured) = 0.373 mW/g

0 dB = 0.373mW/g

Date/Time: 26-Sep-2010

Test Laboratory: QuieTek Lab

GPRS 850 Mid Body-Back (4up) with Headset

DUT: Mobile Phone; Type: WT8000

Communication System: GPRS/EGPRS-4 Slot; Communication System Band: GSM 850; Duty Cycle: 1:1.0;

Frequency: 836.6 MHz; Medium parameters used: f = 836.6 MHz; σ = 0.98 mho/m; ε_r = 55.3; ρ = 1000 kg/m^3;

Phantom section: Flat Section

Ambient temperature (℃): 21.5, Liquid temperature (℃): 21.0

DASY5 Configuration:

- Probe: EX3DV4 - SN3710; ConvF(8.95, 8.95, 8.95); Calibrated: 05/03/2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1220; Calibrated: 09/03/2010
- Phantom: SAM2; Type: SAM; Serial: TP1562
- Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

**Configuration/GPRS 850 Mid Body-Back/Area Scan (9x14x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.964 mW/g

Configuration/GPRS 850 Mid Body-Back/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm,

dy=5mm, dz=5mm. Reference Value = 14.2 V/m; Power Drift = -0.015 dB

Peak SAR (extrapolated) = 1.21 W/kg

SAR(1 g) = 0.905 mW/g; SAR(10 g) = 0.665 mW/g Maximum value of SAR (measured) = 0.967 mW/g
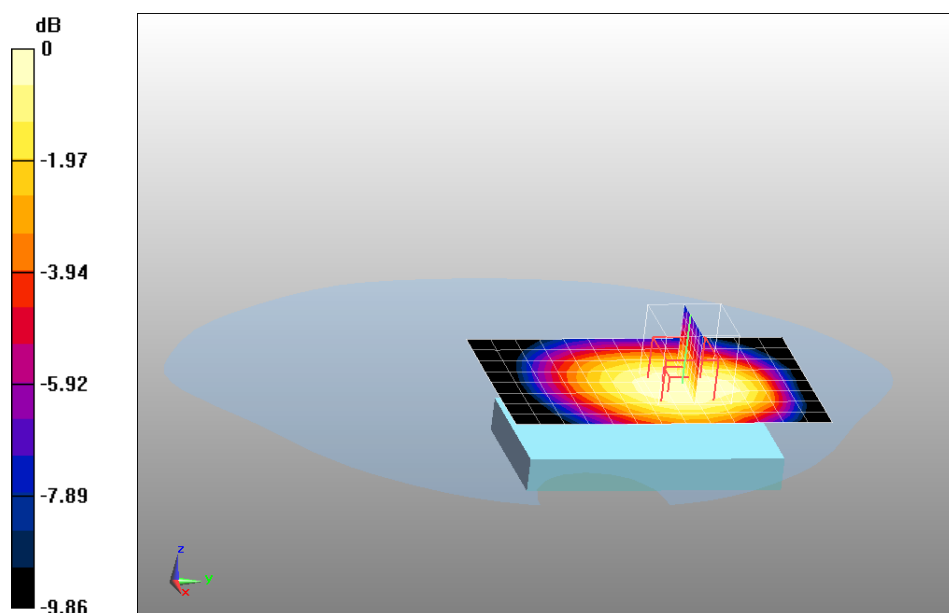
0 dB = 0.967mW/g

Date/Time: 26-Sep-2010

Test Laboratory: QuieTek Lab

PCS1900 Low Left-Touch

DUT: Mobile Phone; Type: WT8000

Communication System: Generic GSM; Communication System Band: PCS 1900 (1850.0 - 1910.0 MHz);

Duty Cycle: 1:8.3; Frequency: 1850.2 MHz; Medium parameters used: f = 1850.2 MHz; σ = 1.39 mho/m; ε_r = 40.3; ρ = 1000 kg/m^3; Phantom section: Left Section

Ambient temperature (℃): 21.5, Liquid temperature (℃): 21.0

DASY5 Configuration:

- Probe: EX3DV4 - SN3710; ConvF(7.69, 7.69, 7.69); Calibrated: 05/03/2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1220; Calibrated: 09/03/2010
- Phantom: SAM1; Type: SAM; Serial: TP1561
- Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Configuration/PCS 1900 Low Left-Touch/Area Scan (9x14x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.345 mW/g

Configuration/PCS 1900 Low Left-Touch/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm. Reference Value = 5.43 V/m; Power Drift = 0.042 dB

Peak SAR (extrapolated) = 0.455 W/kg

SAR(1 g) = 0.302 mW/g; SAR(10 g) = 0.182 mW/g Maximum value of SAR (measured) = 0.331 mW/g
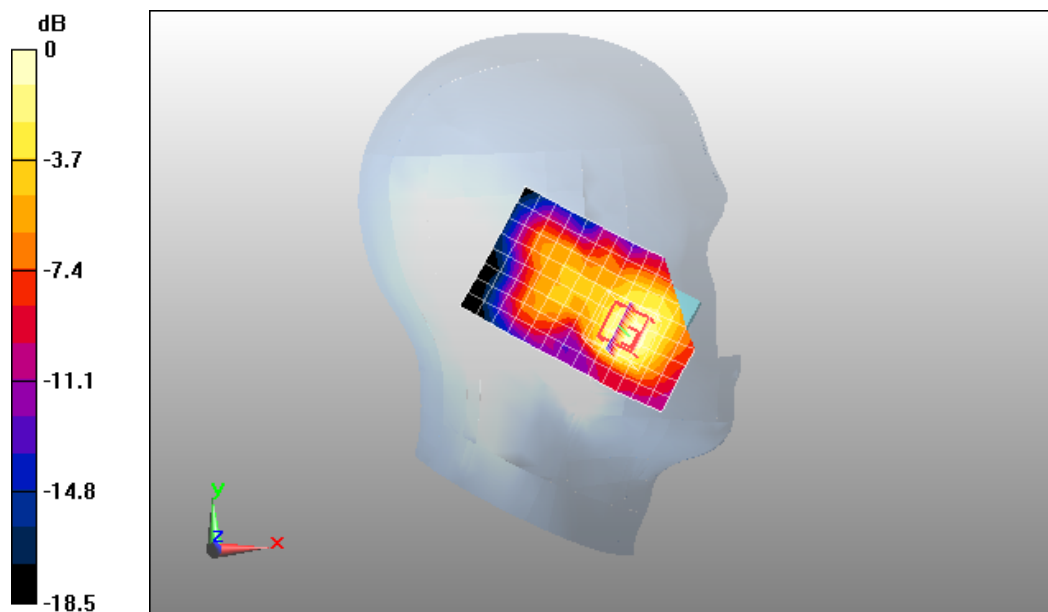
0 dB = 0.331mW/g

Date/Time: 26-Sep-2010

Test Laboratory: QuieTek Lab

PCS1900 Mid Left-Touch

DUT: Mobile Phone; Type: WT8000

Communication System: Generic GSM; Communication System Band: PCS 1900 (1850.0 - 1910.0 MHz);

Duty Cycle: 1:8.3; Frequency: 1880 MHz; Medium parameters used: f = 1880 MHz; σ = 1.42 mho/m; $ε_r$ =

40.2; ρ = 1000 kg/m^3; Phantom section: Left Section

Ambient temperature (℃): 21.5, Liquid temperature (℃): 21.0

DASY5 Configuration:

- Probe: EX3DV4 - SN3710; ConvF(7.69, 7.69, 7.69); Calibrated: 05/03/2010

- Sensor-Surface: 4mm (Mechanical Surface Detection)

- Electronics: DAE4 Sn1220; Calibrated: 09/03/2010

- Phantom: SAM1; Type: SAM; Serial: TP1561

- Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Configuration/PCS 1900 Mid Left-Touch/Area Scan (9x14x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.201 mW/g

Configuration/PCS 1900 Mid Left-Touch/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm,

dy=5mm, dz=5mm. Reference Value = 4.43 V/m; Power Drift = 0.106 dB

Peak SAR (extrapolated) = 0.283 W/kg

SAR(1 g) = 0.187 mW/g; SAR(10 g) = 0.110 mW/g Maximum value of SAR (measured) = 0.205 mW/g
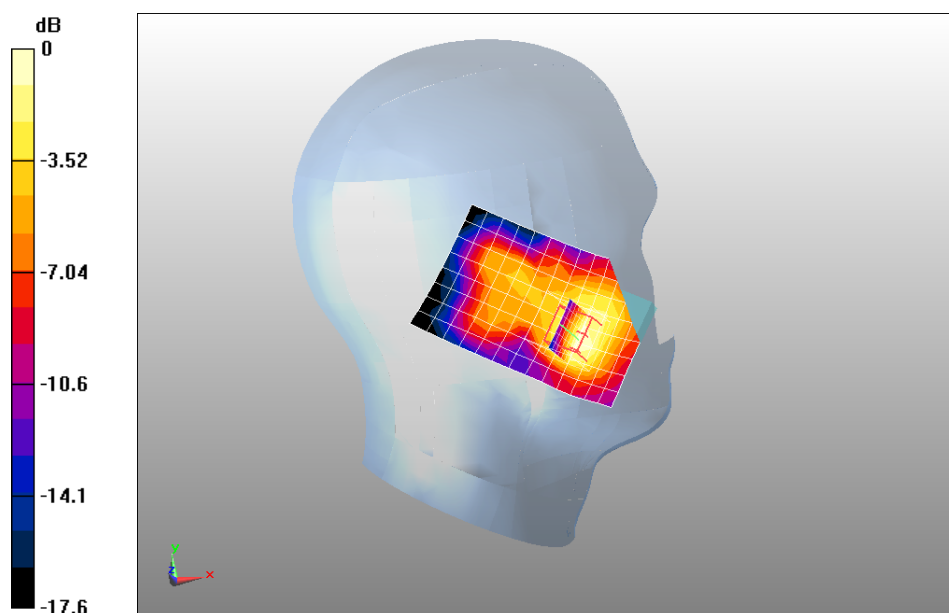
0 dB = 0.205mW/g

Date/Time: 26-Sep-2010

Test Laboratory: QuieTek Lab

PCS1900 High Left-Touch

DUT: Mobile Phone; Type: WT8000

Communication System: Generic GSM; Communication System Band: PCS 1900 (1850.0 - 1910.0 MHz);

Duty Cycle: 1:8.3; Frequency: 1909.8 MHz; Medium parameters used: f = 1909.8 MHz; σ = 1.45 mho/m; ε_r = 40; ρ = 1000 kg/m^3; Phantom section: Left Section

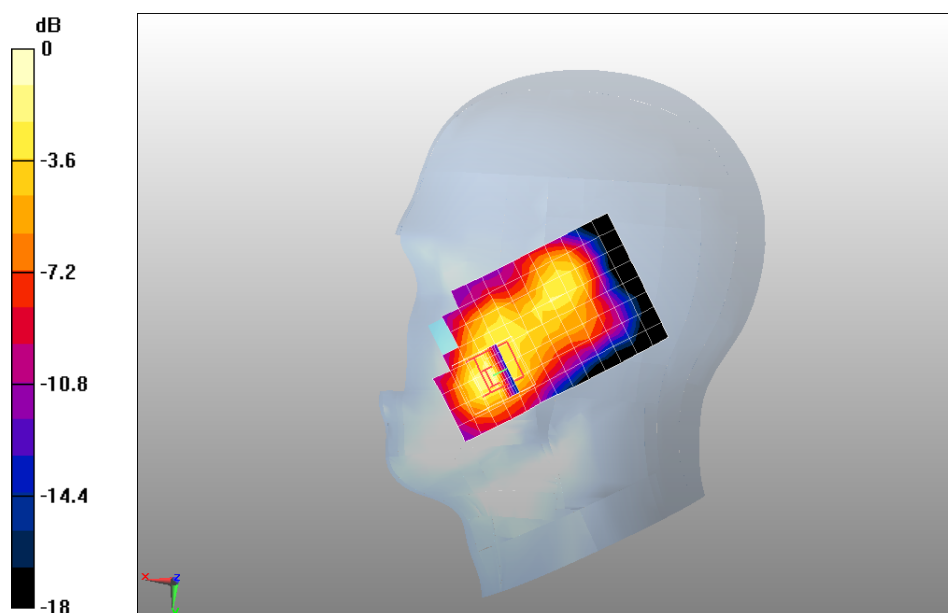Ambient temperature (℃): 21.5, Liquid temperature (℃): 21.0

DASY5 Configuration:

- Probe: EX3DV4 - SN3710; ConvF(7.69, 7.69, 7.69); Calibrated: 05/03/2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1220; Calibrated: 09/03/2010
- Phantom: SAM1; Type: SAM; Serial: TP1561
- Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Configuration/PCS 1900 High Left-Touch/Area Scan (9x14x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.150 mW/g

Configuration/PCS 1900 High Left-Touch/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm. Reference Value = 3.36 V/m; Power Drift = 0.105 dB

Peak SAR (extrapolated) = 0.214 W/kg

SAR(1 g) = 0.136 mW/g; SAR(10 g) = 0.077 mW/g Maximum value of SAR (measured) = 0.148 mW/g
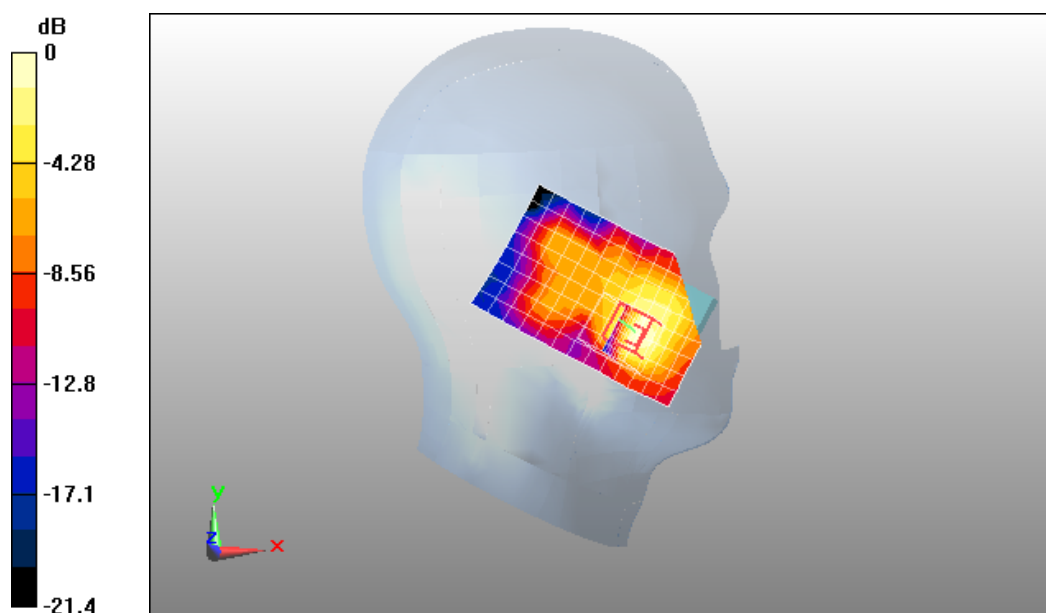
0 dB = 0.148mW/g

Date/Time: 26-Sep-2010

Test Laboratory: QuieTek Lab

PCS1900 Mid Left-Tilt

DUT: Mobile Phone; Type: WT8000

Communication System: Generic GSM; Communication System Band: PCS 1900 (1850.0 - 1910.0 MHz);

Duty Cycle: 1:8.3; Frequency: 1880 MHz; Medium parameters used: f = 1880 MHz; σ = 1.42 mho/m; ε_r = 40.2; ρ = 1000 kg/m^3; Phantom section: Left Section

Ambient temperature (℃): 21.5, Liquid temperature (℃): 21.0

DASY5 Configuration:

- Probe: EX3DV4 - SN3710; ConvF(7.69, 7.69, 7.69); Calibrated: 05/03/2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1220; Calibrated: 09/03/2010
- Phantom: SAM1; Type: SAM; Serial: TP1561
- Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Configuration/PCS 1900 Mid Left-Tilt/Area Scan (9x14x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.100 mW/g

Configuration/PCS 1900 Mid Left-Tilt/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm. Reference Value = 6.82 V/m; Power Drift = 0.006 dB

Peak SAR (extrapolated) = 0.153 W/kg

SAR(1 g) = 0.091 mW/g; SAR(10 g) = 0.052 mW/g Maximum value of SAR (measured) = 0.100 mW/g
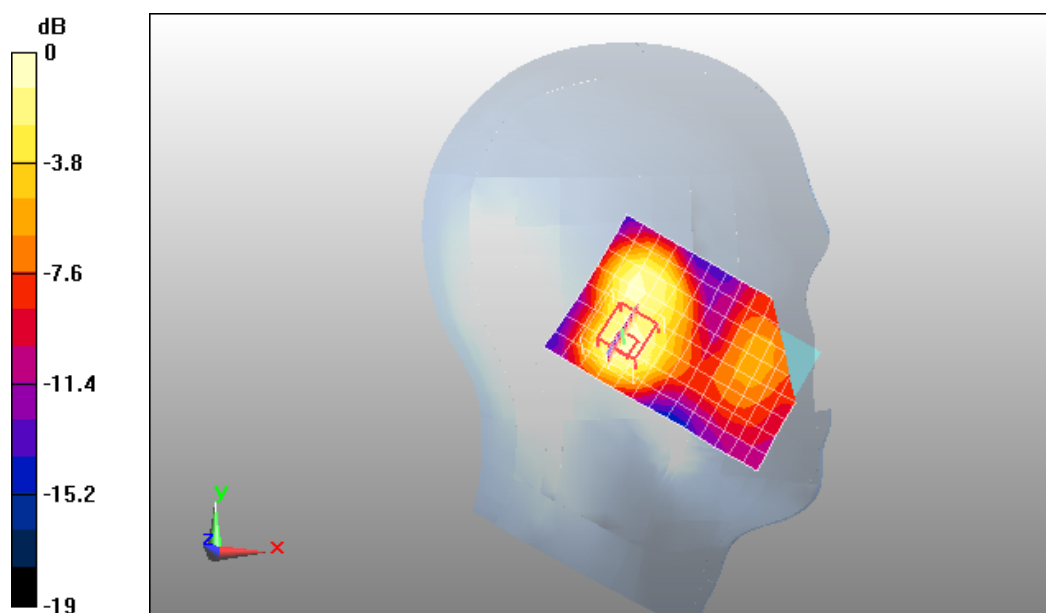
0 dB = 0.100mW/g

Date/Time: 26-Sep-2010

Test Laboratory: QuieTek Lab

PCS1900 Low Right-Touch

DUT: Mobile Phone; Type: WT8000

Communication System: Generic GSM; Communication System Band: PCS 1900 (1850.0 - 1910.0 MHz);

Duty Cycle: 1:8.3; Frequency: 1850.2 MHz; Medium parameters used: f = 1850.2 MHz; σ = 1.39 mho/m; ε_r = 40.3; ρ = 1000 kg/m^3; Phantom section: Right Section

Ambient temperature (℃): 21.5, Liquid temperature (℃): 21.0

DASY5 Configuration:

- Probe: EX3DV4 - SN3710; ConvF(7.69, 7.69, 7.69); Calibrated: 05/03/2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1220; Calibrated: 09/03/2010
- Phantom: SAM1; Type: SAM; Serial: TP1561
- Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

**Configuration/PCS 1900 Low Right-Touch/Area Scan (9x14x1):** Measurement grid: dx=10mm, dy=10mm. Maximum value of SAR (measured) = 0.286 mW/g

Configuration/PCS 1900 Low Right-Touch/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm. Reference Value = 5.32 V/m; Power Drift = 0.004 dB

Peak SAR (extrapolated) = 0.554 W/kg

SAR(1 g) = 0.301 mW/g; SAR(10 g) = 0.161 mW/g Maximum value of SAR (measured) = 0.378 mW/g

0 dB = 0.378mW/g

Date/Time: 26-Sep-2010

Test Laboratory: QuieTek Lab

PCS1900 Mid Right-Touch

DUT: Mobile Phone; Type: WT8000

Communication System: Generic GSM; Communication System Band: PCS 1900 (1850.0 - 1910.0 MHz);

Duty Cycle: 1:8.3; Frequency: 1880 MHz; Medium parameters used: f = 1880 MHz; σ = 1.42 mho/m; $ε_r$ = 40.2; ρ = 1000 kg/m^3; Phantom section: Right Section

Ambient temperature (℃): 21.5, Liquid temperature (℃): 21.0
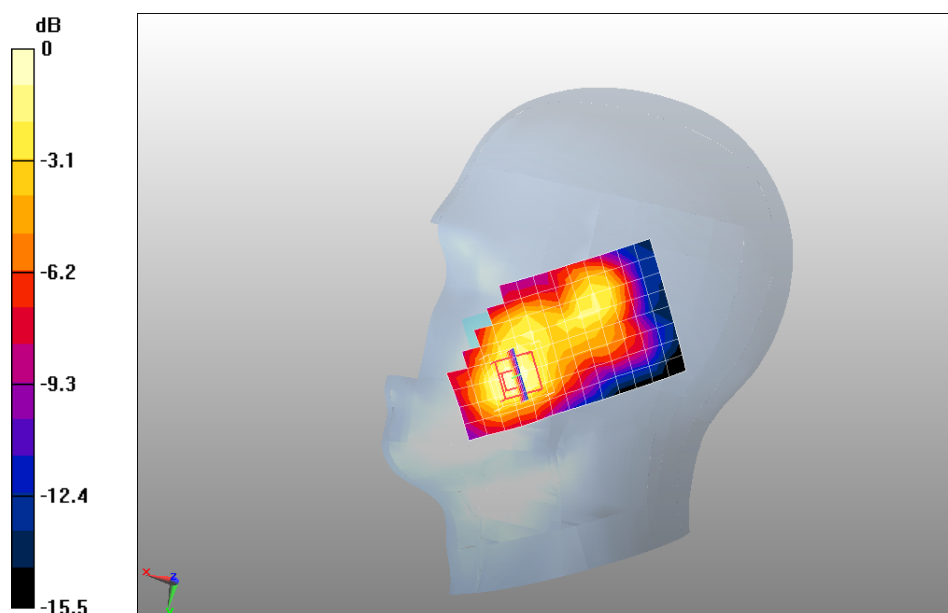
DASY5 Configuration:

- Probe: EX3DV4 - SN3710; ConvF(7.69, 7.69, 7.69); Calibrated: 05/03/2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1220; Calibrated: 09/03/2010
- Phantom: SAM1; Type: SAM; Serial: TP1561
- Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Configuration/PCS 1900 Mid Right-Touch/Area Scan (9x14x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.199 mW/g

Configuration/PCS 1900 Mid Right-Touch/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm. Reference Value = 3.76 V/m; Power Drift = 0.104 dB

Peak SAR (extrapolated) = 0.291 W/kg

SAR(1 g) = 0.179 mW/g; SAR(10 g) = 0.102 mW/g Maximum value of SAR (measured) = 0.199 mW/g
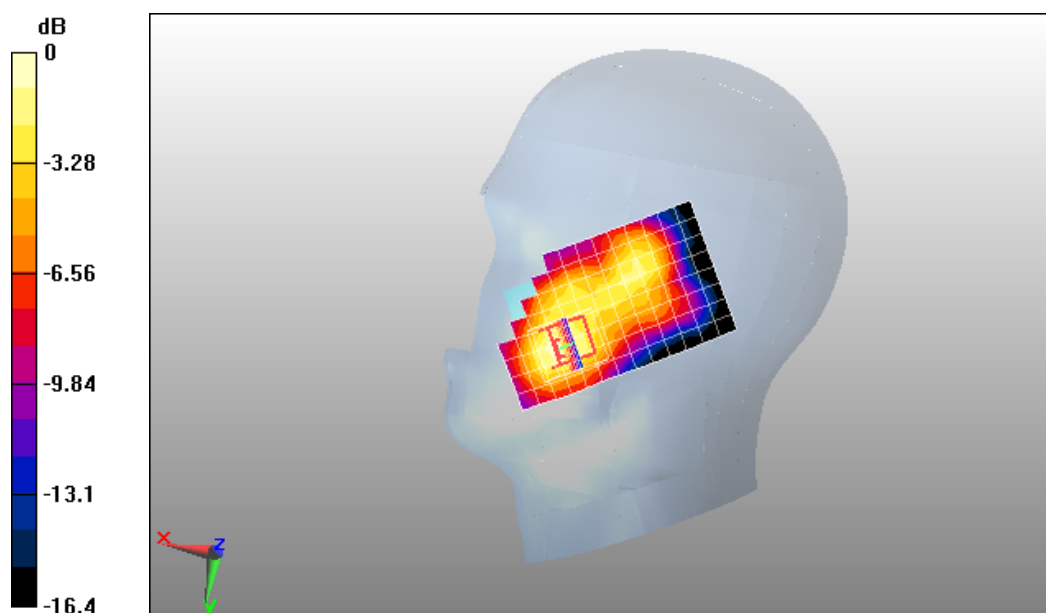
0 dB = 0.199mW/g

Date/Time: 26-Sep-2010

Test Laboratory: QuieTek Lab

PCS1900 High Right-Touch

DUT: Mobile Phone; Type: WT8000

Communication System: Generic GSM; Communication System Band: PCS 1900 (1850.0 - 1910.0 MHz);

Duty Cycle: 1:8.3; Frequency: 1909.8 MHz; Medium parameters used: f = 1909.8 MHz; σ = 1.45 mho/m; $ε_r$ = 40; ρ = 1000 kg/m^3; Phantom section: Right Section

Ambient temperature (℃): 21.5, Liquid temperature (℃): 21.0

DASY5 Configuration:

- Probe: EX3DV4 - SN3710; ConvF(7.69, 7.69, 7.69); Calibrated: 05/03/2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1220; Calibrated: 09/03/2010
- Phantom: SAM1; Type: SAM; Serial: TP1561
- Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

**Configuration/PCS 1900 High Right-Touch/Area Scan (9x14x1):** Measurement grid: dx=10mm, dy=10mm. Maximum value of SAR (measured) = 0.127 mW/g

Configuration/PCS 1900 High Right-Touch/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm. Reference Value = 3.42 V/m; Power Drift = 0.043 dB

Peak SAR (extrapolated) = 0.190 W/kg

SAR(1 g) = 0.114 mW/g; SAR(10 g) = 0.064 mW/g Maximum value of SAR (measured) = 0.127 mW/g

0 dB = 0.127mW/g

Date/Time: 26-Sep-2010

Test Laboratory: QuieTek Lab

PCS1900 Mid Right-Tilt

DUT: Mobile Phone; Type: WT8000

Communication System: Generic GSM; Communication System Band: PCS 1900 (1850.0 - 1910.0 MHz);

Duty Cycle: 1:8.3; Frequency: 1880 MHz; Medium parameters used: f = 1880 MHz; σ = 1.42 mho/m; ε_r = 40.2; ρ = 1000 kg/m^3; Phantom section: Right Section

Ambient temperature (℃): 21.5, Liquid temperature (℃): 21.0

DASY5 Configuration:

- Probe: EX3DV4 - SN3710; ConvF(7.69, 7.69, 7.69); Calibrated: 05/03/2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1220; Calibrated: 09/03/2010
- Phantom: SAM1; Type: SAM; Serial: TP1561
- Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

**Configuration/PCS 1900 Mid Right-Tilt/Area Scan (9x14x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.173 mW/g

Configuration/PCS 1900 Mid Right-Tilt/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm. Reference Value = 5.94 V/m; Power Drift = 0.028 dB

Peak SAR (extrapolated) = 0.310 W/kg

SAR(1 g) = 0.164 mW/g; SAR(10 g) = 0.086 mW/g Maximum value of SAR (measured) = 0.182 mW/g
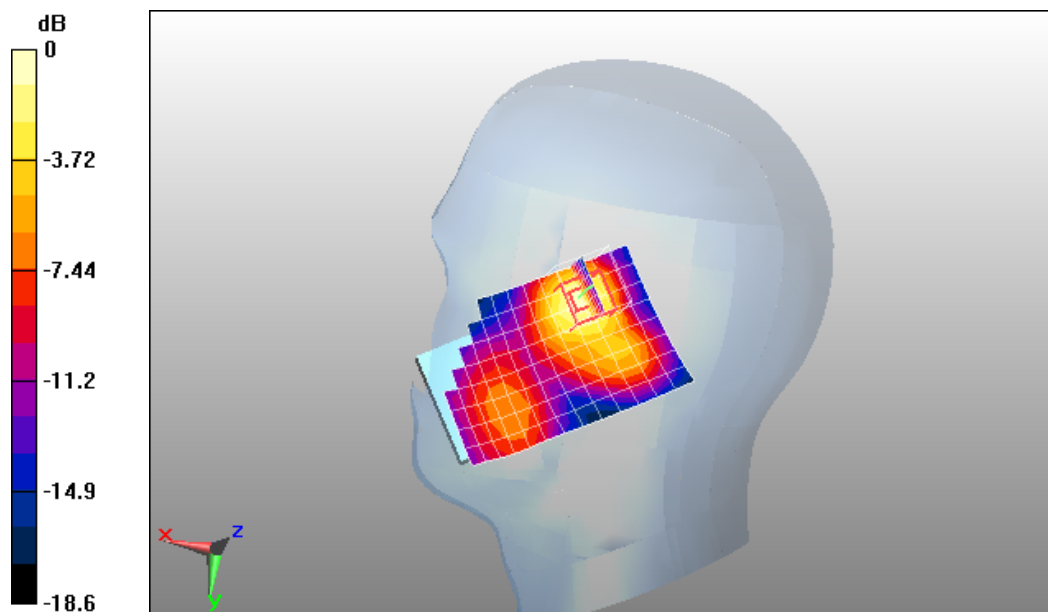
0 dB = 0.182mW/g

Date/Time: 26-Sep-2010

Test Laboratory: QuieTek Lab

PCS1900 Mid Left-Touch <SIM 2>

DUT: Mobile Phone; Type: WT8000

Communication System: Generic GSM; Communication System Band: PCS 1900 (1850.0 - 1910.0 MHz);

Duty Cycle: 1:8.3; Frequency: 1880 MHz; Medium parameters used: f = 1880 MHz; σ = 1.42 mho/m; ε_r = 40.2; ρ = 1000 kg/m^3; Phantom section: Left Section

Ambient temperature (℃): 21.5, Liquid temperature (℃): 21.0

DASY5 Configuration:

- Probe: EX3DV4 - SN3710; ConvF(7.69, 7.69, 7.69); Calibrated: 05/03/2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1220; Calibrated: 09/03/2010
- Phantom: SAM1; Type: SAM; Serial: TP1561
- Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Configuration/PCS 1900 Mid Left-Touch/Area Scan (9x14x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.199 mW/g

Configuration/PCS 1900 Mid Left-Touch/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm. Reference Value = 4.54 V/m; Power Drift = -0.102 dB

Peak SAR (extrapolated) = 0.266 W/kg

SAR(1 g) = 0.176 mW/g; SAR(10 g) = 0.111 mW/g Maximum value of SAR (measured) = 0.197 mW/g
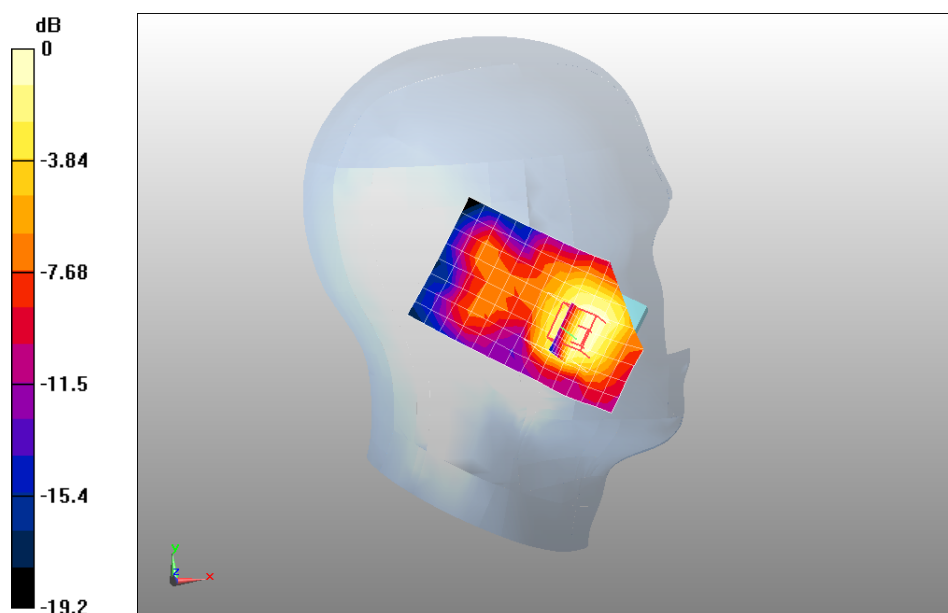
0 dB = 0.197mW/g

Date/Time: 26-Sep-2010

Test Laboratory: QuieTek Lab

PCS1900 Low Body-Back

DUT: Mobile Phone; Type: WT8000

Communication System: Generic GSM; Communication System Band: PCS 1900 (1850.0 - 1910.0 MHz);

Duty Cycle: 1:8.3; Frequency: 1850.2 MHz; Medium parameters used: f = 1850.2 MHz; σ = 1.44 mho/m; ε_r = 53.2; ρ = 1000 kg/m^3; Phantom section: Flat Section

Ambient temperature (℃): 21.5, Liquid temperature (℃): 21.0

DASY5 Configuration:

- Probe: EX3DV4 - SN3710; ConvF(7.71, 7.71, 7.71); Calibrated: 05/03/2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1220; Calibrated: 09/03/2010
- Phantom: SAM1; Type: SAM; Serial: TP1561
- Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

**Configuration/PCS1900 Low Body-Back/Area Scan (9x14x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.355 mW/g

Configuration/PCS1900 Low Body-Back/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm. Reference Value = 8.52 V/m; Power Drift = -0.104 dB

Peak SAR (extrapolated) = 0.563 W/kg

SAR(1 g) = 0.335 mW/g; SAR(10 g) = 0.193 mW/g Maximum value of SAR (measured) = 0.355 mW/g
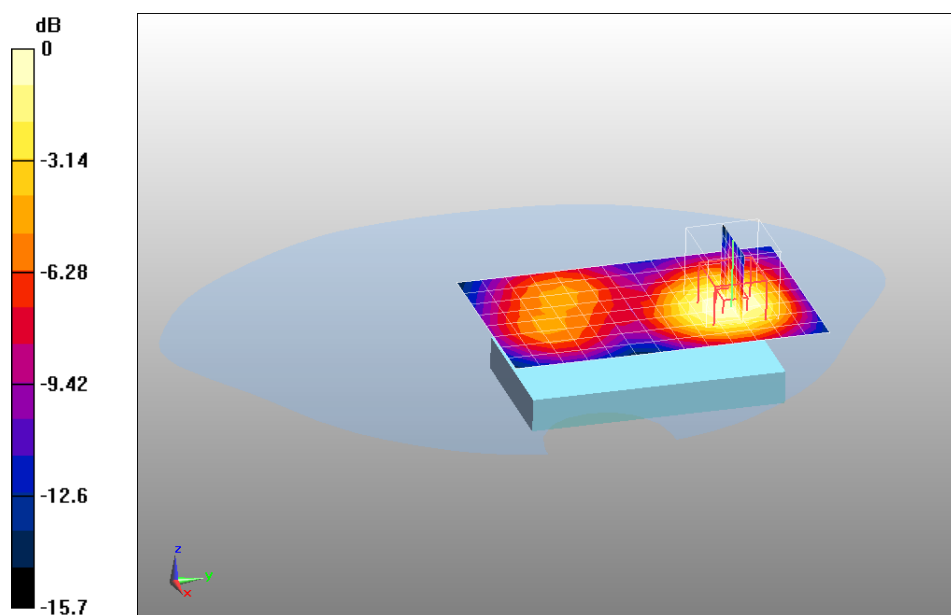
0 dB = 0.355mW/g

Date/Time: 26-Sep-2010

Test Laboratory: QuieTek Lab

PCS1900 Mid Body-Back

DUT: Mobile Phone; Type: WT8000

Communication System: Generic GSM; Communication System Band: PCS 1900 (1850.0 - 1910.0 MHz);

Duty Cycle: 1:8.3; Frequency: 1880 MHz; Medium parameters used: f = 1880 MHz; σ = 1.48 mho/m; ε_r = 53.2; ρ = 1000 kg/m^3; Phantom section: Flat Section

Ambient temperature (℃): 21.5, Liquid temperature (℃): 21.0

DASY5 Configuration:

- Probe: EX3DV4 - SN3710; ConvF(7.71, 7.71, 7.71); Calibrated: 05/03/2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1220; Calibrated: 09/03/2010
- Phantom: SAM1; Type: SAM; Serial: TP1561
- Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Configuration/PCS1900 Mid Body-Back/Area Scan (9x14x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.233 mW/g

Configuration/PCS1900 Mid Body-Back/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm. Reference Value = 6.92 V/m; Power Drift = -0.105 dB

Peak SAR (extrapolated) = 0.367 W/kg

SAR(1 g) = 0.205 mW/g; SAR(10 g) = 0.108 mW/g Maximum value of SAR (measured) = 0.235 mW/g
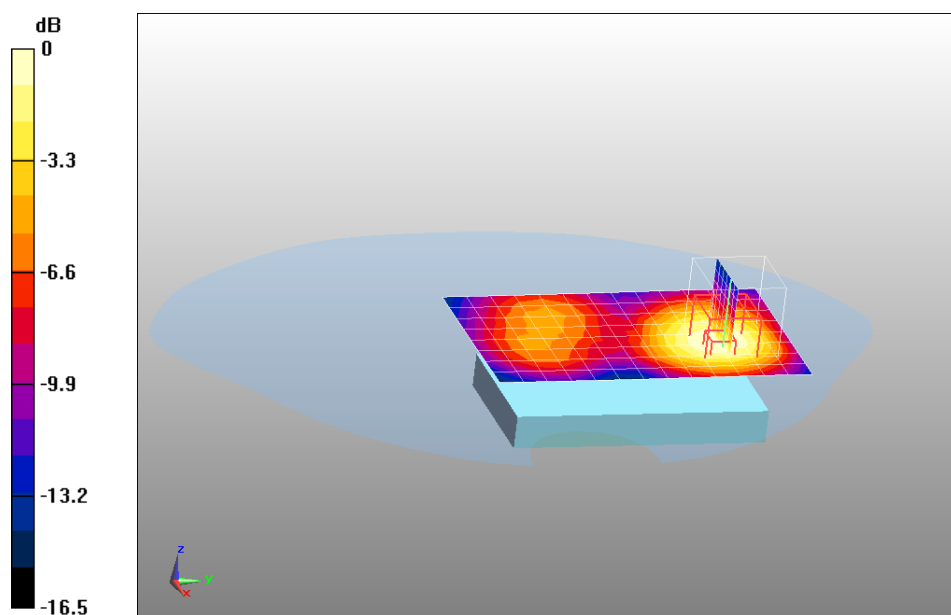
0 dB = 0.235mW/g

Date/Time: 26-Sep-2010

Test Laboratory: QuieTek Lab

PCS1900 High Body-Back

DUT: Mobile Phone; Type: WT8000

Communication System: Generic GSM; Communication System Band: PCS 1900 (1850.0 - 1910.0 MHz);

Duty Cycle: 1:8.3; Frequency: 1909.8 MHz; Medium parameters used: f = 1909.8 MHz; σ = 1.51 mho/m; ε_r = 53.1; ρ = 1000 kg/m^3; Phantom section: Flat Section

Ambient temperature (℃): 21.5, Liquid temperature (℃): 21.0

DASY5 Configuration:

- Probe: EX3DV4 - SN3710; ConvF(7.71, 7.71, 7.71); Calibrated: 05/03/2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1220; Calibrated: 09/03/2010
- Phantom: SAM1; Type: SAM; Serial: TP1561
- Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

**Configuration/PCS1900 High Body-Back/Area Scan (9x14x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.110 mW/g

Configuration/PCS1900 High Body-Back/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm. Reference Value = 4.32 V/m; Power Drift = 0.008 dB

Peak SAR (extrapolated) = 0.296 W/kg

SAR(1 g) = 0.172 mW/g; SAR(10 g) = 0.096 mW/g Maximum value of SAR (measured) = 0.184 mW/g
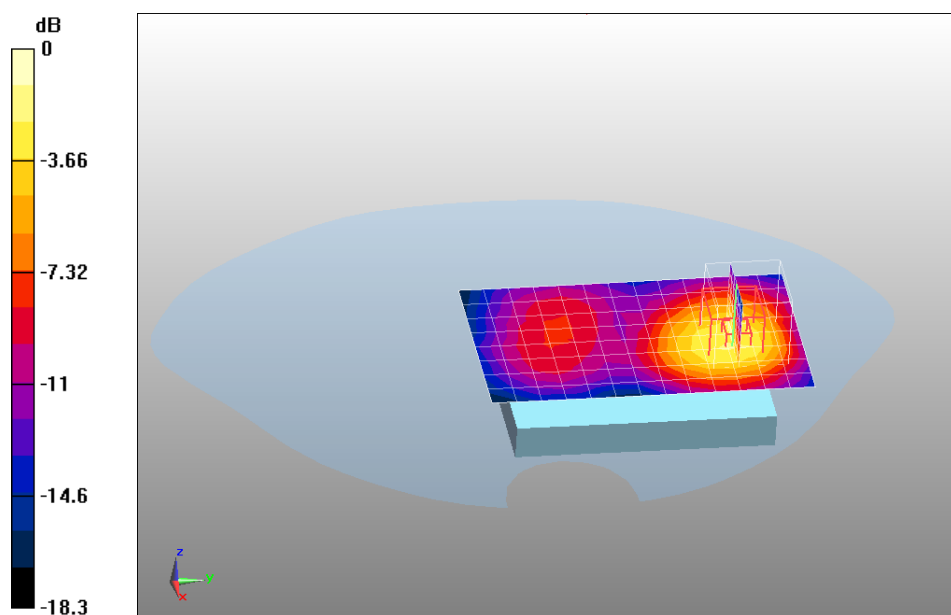
0 dB = 0.184mW/g

Date/Time: 26-Sep-2010

Test Laboratory: QuieTek Lab

PCS1900 Mid Body-Front

DUT: Mobile Phone; Type: WT8000

Communication System: Generic GSM; Communication System Band: PCS 1900 (1850.0 - 1910.0 MHz);

Duty Cycle: 1:8.3; Frequency: 1880 MHz; Medium parameters used: f = 1880 MHz; σ = 1.48 mho/m; $ε_r$ = 53.2; ρ = 1000 kg/m³; Phantom section: Flat Section

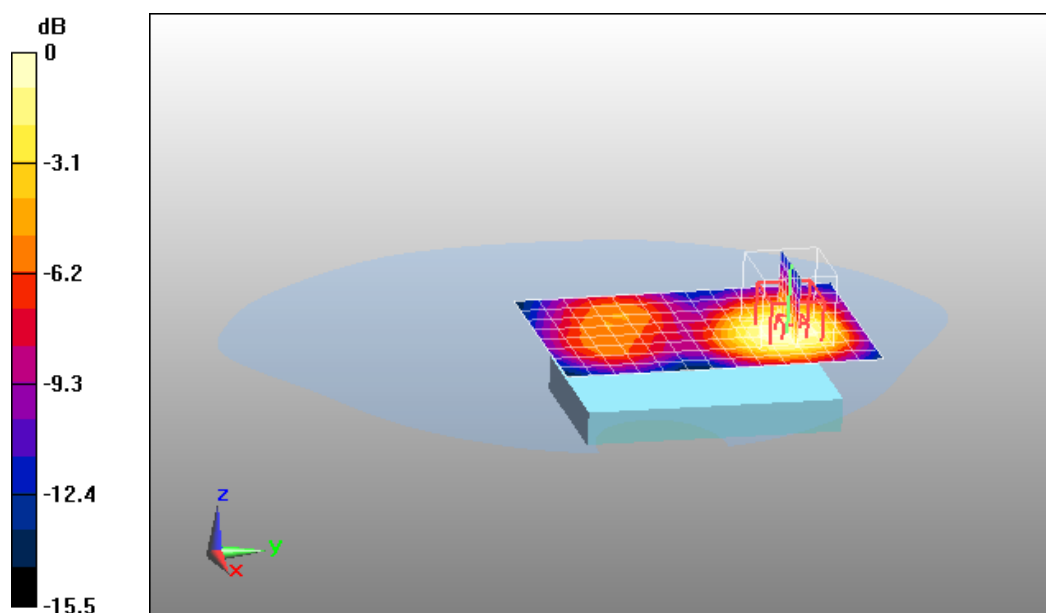Ambient temperature (℃): 21.5, Liquid temperature (℃): 21.0

DASY5 Configuration:

- Probe: EX3DV4 - SN3710; ConvF(7.71, 7.71, 7.71); Calibrated: 05/03/2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1220; Calibrated: 09/03/2010
- Phantom: SAM1; Type: SAM; Serial: TP1561
- Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Configuration/PCS1900 Mid Body-Front/Area Scan (9x14x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.064 mW/g

Configuration/PCS1900 Mid Body-Front/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm. Reference Value = 4.36 V/m; Power Drift = -0.046 dB

Peak SAR (extrapolated) = 0.100 W/kg

SAR(1 g) = 0.061 mW/g; SAR(10 g) = 0.036 mW/g Maximum value of SAR (measured) = 0.067 mW/g
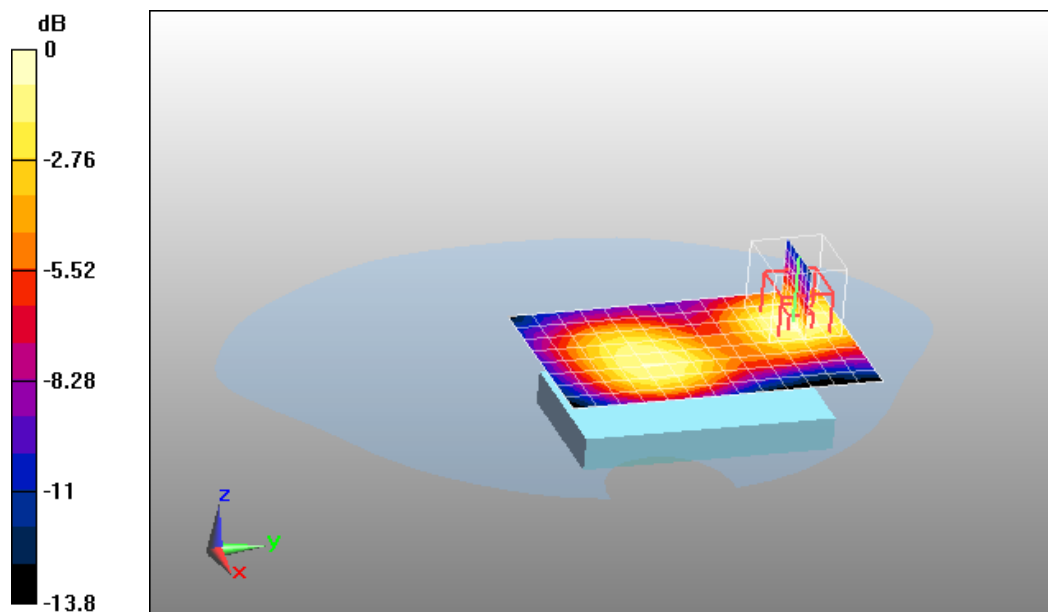
0 dB = 0.067mW/g

Date/Time: 26-Sep-2010

Test Laboratory: QuieTek Lab

GPRS1900 Mid Body-Back (2UP)

DUT: Mobile Phone; Type: WT8000

Communication System: GPRS/EGPRS-2 Slot; Communication System Band: PCS1900; Duty Cycle: 1:4.1;

Frequency: 1880 MHz; Medium parameters used: f = 1880 MHz; σ = 1.48 mho/m; ε_r = 53.2; ρ = 1000 kg/m^3 ;

Phantom section: Flat Section

Ambient temperature (℃): 21.5, Liquid temperature (℃): 21.0
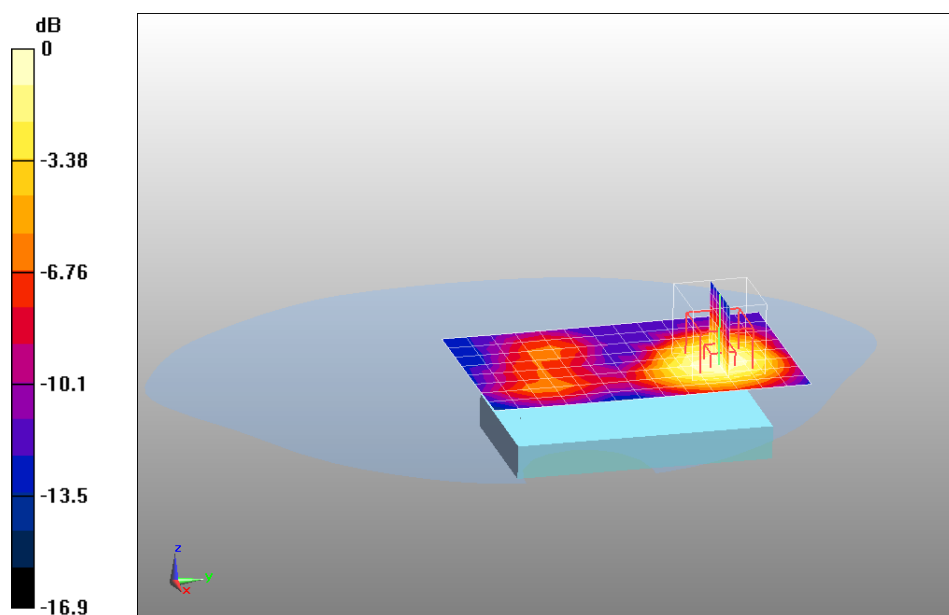
DASY5 Configuration:

- Probe: EX3DV4 - SN3710; ConvF(7.71, 7.71, 7.71); Calibrated: 05/03/2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1220; Calibrated: 09/03/2010
- Phantom: SAM1; Type: SAM; Serial: TP1561
- Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Configuration/GPRS 1900 Mid Body-Back/Area Scan (9x14x1): Measurement grid: dx=10mm,

dy=10mm. Maximum value of SAR (measured) = 0.471 mW/g

Configuration/GPRS 1900 Mid Body-Back/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm,

dy=5mm, dz=5mm. Reference Value = 9.52 V/m; Power Drift = 0.122 dB

Peak SAR (extrapolated) = 0.704 W/kg

SAR(1 g) = 0.429 mW/g; SAR(10 g) = 0.260 mW/g Maximum value of SAR (measured) = 0.463 mW/g

0 dB = 0.463mW/g

Date/Time: 26-Sep-2010

Test Laboratory: QuieTek Lab

GPRS1900 Mid Body-Back (3UP)

DUT: Mobile Phone; Type: WT8000

Communication System: GPRS/EGPRS-3 Slot; Communication System Band: PCS 1900; Duty Cycle: 1:2.0;

Frequency: 1880 MHz; Medium parameters used: f = 1880 MHz; σ = 1.48 mho/m; ε_r = 53.2; ρ = 1000 kg/m³ ;

Phantom section: Flat Section

Ambient temperature (℃): 21.5, Liquid temperature (℃): 21.0
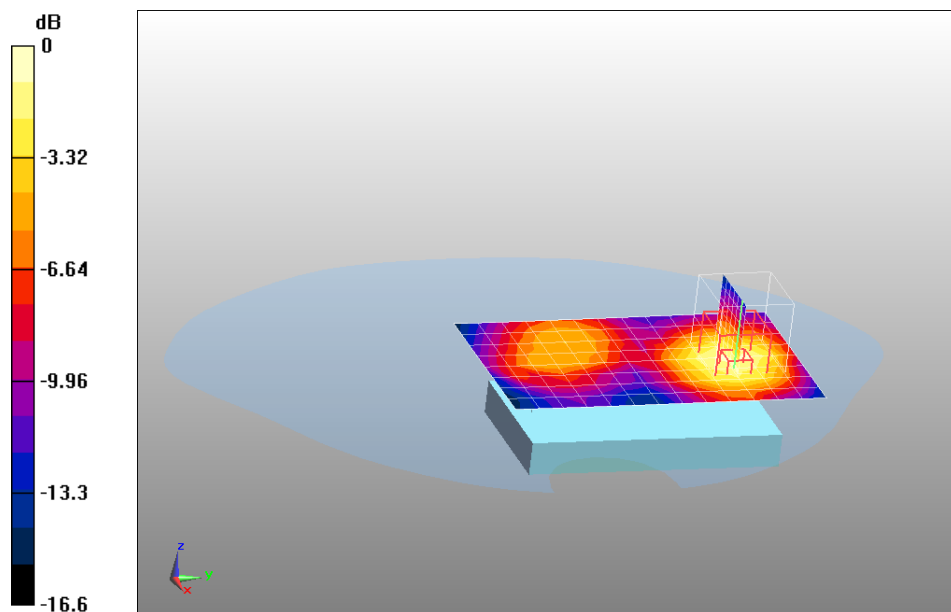
DASY5 Configuration:

- Probe: EX3DV4 - SN3710; ConvF(7.71, 7.71, 7.71); Calibrated: 05/03/2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1220; Calibrated: 09/03/2010
- Phantom: SAM1; Type: SAM; Serial: TP1561
- Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Configuration/GPRS 1900 Mid Body-Front/Area Scan (9x14x1): Measurement grid: dx=10mm, dy=10mm. Maximum value of SAR (measured) = 0.652 mW/g

Configuration/GPRS 1900 Mid Body-Front/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm. Reference Value = 12.4 V/m; Power Drift = 0.006 dB

Peak SAR (extrapolated) = 1.02 W/kg

SAR(1 g) = 0.624 mW/g; SAR(10 g) = 0.374 mW/g Maximum value of SAR (measured) = 0.673 mW/g

0 dB = 0.673mW/g

Date/Time: 26-Sep-2010

Test Laboratory: QuieTek Lab

GPRS1900 Low Body-Back (4UP)

DUT: Mobile Phone; Type: WT8000

Communication System: GPRS/EGPRS-4 Slot; Communication System Band: PCS 1900; Duty Cycle: 1:1.0;

Frequency: 1850.2 MHz; Medium parameters used: f = 1850.2 MHz; σ = 1.44 mho/m; ε_r = 53.2; ρ = 1000

kg/m^3; Phantom section: Flat Section

Ambient temperature (℃): 21.5, Liquid temperature (℃): 21.0

DASY5 Configuration:

- Probe: EX3DV4 - SN3710; ConvF(7.71, 7.71, 7.71); Calibrated: 05/03/2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1220; Calibrated: 09/03/2010
- Phantom: SAM1; Type: SAM; Serial: TP1561
- Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Configuration/GPRS 1900 Mid Body-Back/Area Scan (9x14x1): Measurement grid: dx=10mm,

dy=10mm. Maximum value of SAR (measured) = 0.984 mW/g

Configuration/GPRS 1900 Mid Body-Back/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm,

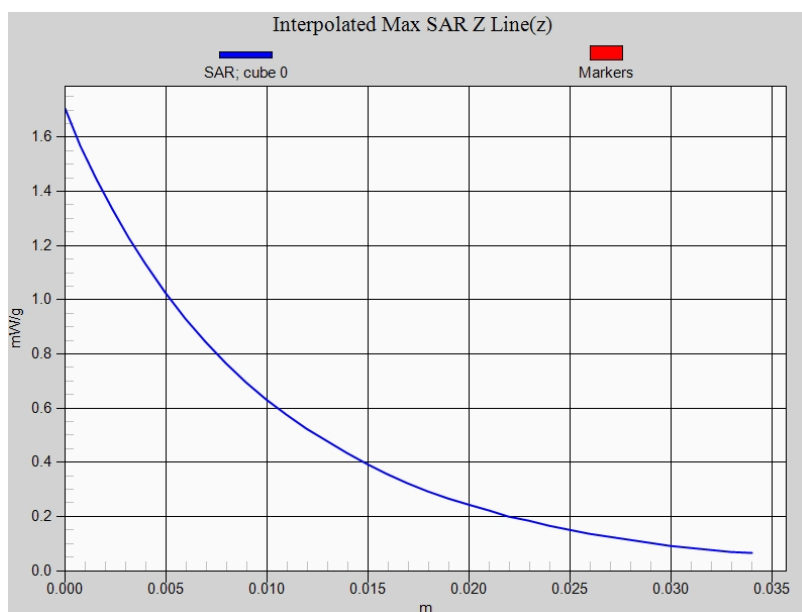dy=5mm, dz=5mm. Reference Value = 16.6 V/m; Power Drift = -0.025 dB

Peak SAR (extrapolated) = 1.7 W/kg

SAR(1 g) = 1.05 mW/g; SAR(10 g) = 0.621 mW/g Maximum value of SAR (measured) = 1.14 mW/g

0 dB = 1.14mW/g

Z-Axis Plot

Date/Time: 26-Sep-2010

Test Laboratory: QuieTek Lab

GPRS1900 Mid Body-Back (4UP)

DUT: Mobile Phone; Type: WT8000

Communication System: GPRS/EGPRS-4 Slot; Communication System Band: PCS 1900; Duty Cycle: 1:1.0;

Frequency: 1880 MHz; Medium parameters used: f = 1880 MHz; σ = 1.48 mho/m; ε_r = 53.2; ρ = 1000 kg/m^3 ;

Phantom section: Flat Section

Ambient temperature (℃): 21.5, Liquid temperature (℃): 21.0
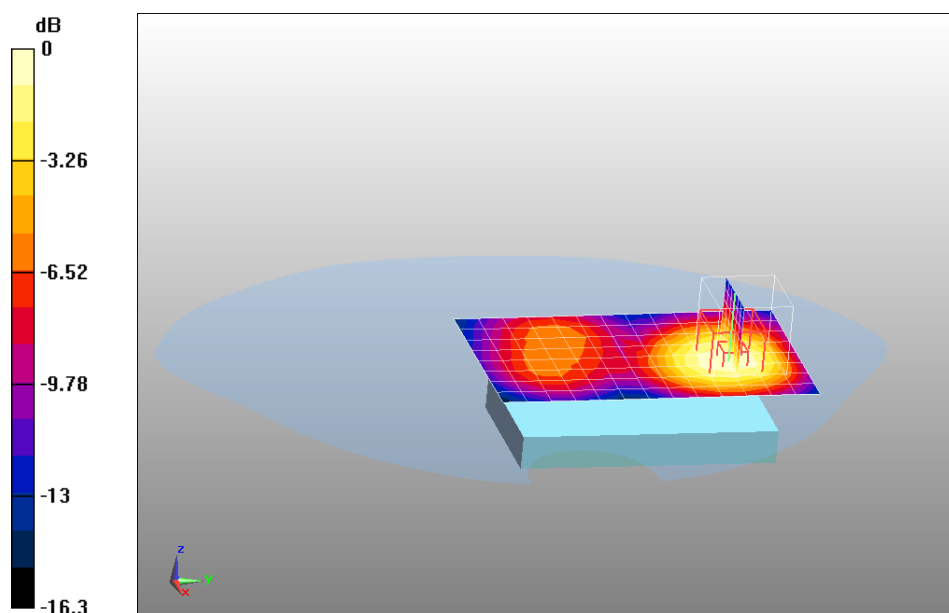
DASY5 Configuration:

- Probe: EX3DV4 - SN3710; ConvF(7.71, 7.71, 7.71); Calibrated: 05/03/2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1220; Calibrated: 09/03/2010
- Phantom: SAM1; Type: SAM; Serial: TP1561
- Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Configuration/GPRS 1900 Mid Body-Back/Area Scan (9x14x1): Measurement grid: dx=10mm,

dy=10mm. Maximum value of SAR (measured) = 0.905 mW/g

Configuration/GPRS 1900 Mid Body-Back/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm,

dy=5mm, dz=5mm. Reference Value = 13.6 V/m; Power Drift = -0.012 dB

Peak SAR (extrapolated) = 1.4 W/kg

SAR(1 g) = 0.857 mW/g; SAR(10 g) = 0.517 mW/g Maximum value of SAR (measured) = 0.922 mW/g
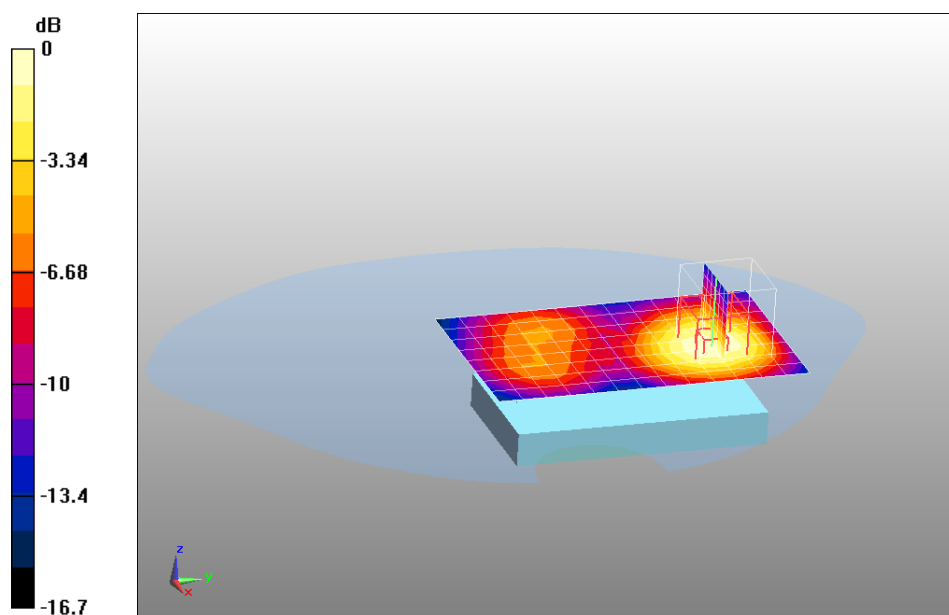
0 dB = 0.922mW/g

Date/Time: 26-Sep-2010

Test Laboratory: QuieTek Lab

GPRS1900 High Body-Back (4UP)

DUT: Mobile Phone; Type: WT8000

Communication System: GPRS/EGPRS-4 Slot; Communication System Band: PCS 1900; Duty Cycle: 1:1.0;

Frequency: 1909.8 MHz; Medium parameters used: f = 1909.8 MHz; σ = 1.51 mho/m; ε_r = 53.1; ρ = 1000

kg/m^3; Phantom section: Flat Section

Ambient temperature (℃): 21.5, Liquid temperature (℃): 21.0

DASY5 Configuration:

- Probe: EX3DV4 - SN3710; ConvF(7.71, 7.71, 7.71); Calibrated: 05/03/2010

- Sensor-Surface: 4mm (Mechanical Surface Detection)

- Electronics: DAE4 Sn1220; Calibrated: 09/03/2010

- Phantom: SAM1; Type: SAM; Serial: TP1561

- Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Configuration/GPRS 1900 Mid Body-Back/Area Scan (9x14x1): Measurement grid: dx=10mm,

dy=10mm. Maximum value of SAR (measured) = 0.706 mW/g

Configuration/GPRS 1900 Mid Body-Back/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm,

dy=5mm, dz=5mm. Reference Value = 10.4 V/m; Power Drift = 0.014 dB

Peak SAR (extrapolated) = 1.11 W/kg

SAR(1 g) = 0.680 mW/g; SAR(10 g) = 0.411 mW/g Maximum value of SAR (measured) = 0.732 mW/g

0 dB = 0.732mW/g

Date/Time: 26-Sep-2010

Test Laboratory: QuieTek Lab

GPRS1900 Mid Body-Front (4UP)

DUT: Mobile Phone; Type: WT8000

Communication System: GPRS/EGPRS-4 Slot; Communication System Band: PCS 1900; Duty Cycle: 1:1.0;

Frequency: 1880 MHz; Medium parameters used: f = 1880 MHz; σ = 1.48 mho/m; ε_r = 53.2; ρ = 1000 kg/m^3;

Phantom section: Flat Section

Ambient temperature (℃): 21.5, Liquid temperature (℃): 21.0
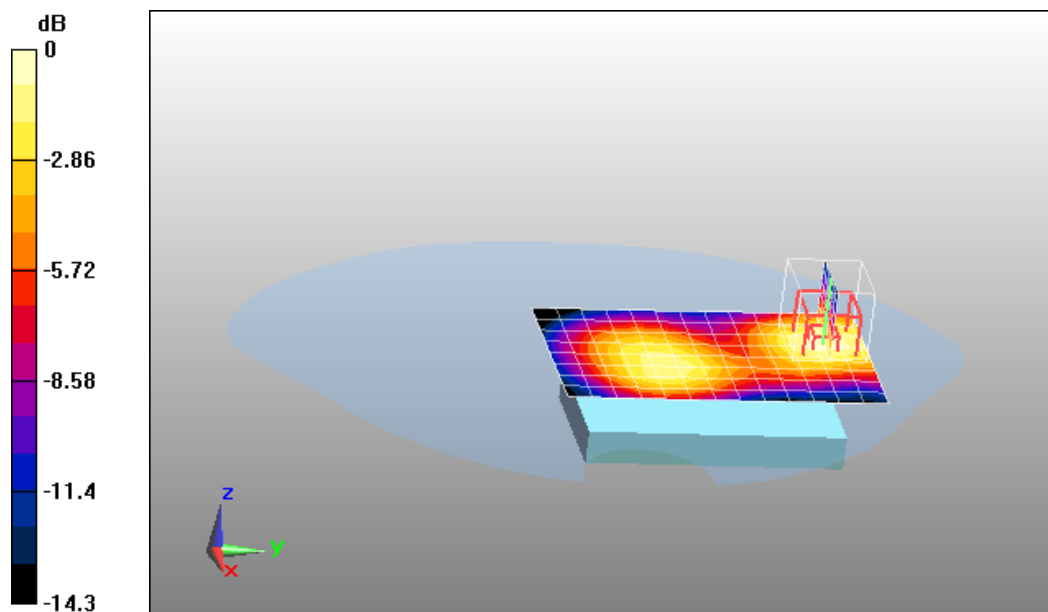
DASY5 Configuration:

- Probe: EX3DV4 - SN3710; ConvF(7.71, 7.71, 7.71); Calibrated: 05/03/2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1220; Calibrated: 09/03/2010
- Phantom: SAM1; Type: SAM; Serial: TP1561
- Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Configuration/GPRS 1900 Mid Body-Front/Area Scan (9x14x1): Measurement grid: dx=10mm,

dy=10mm. Maximum value of SAR (measured) = 0.137 mW/g

Configuration/GPRS 1900 Mid Body-Front/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm,

dy=5mm, dz=5mm. Reference Value = 6.86 V/m; Power Drift = -0.035 dB

Peak SAR (extrapolated) = 0.222 W/kg

SAR(1 g) = 0.134 mW/g; SAR(10 g) = 0.078 mW/g Maximum value of SAR (measured) = 0.146 mW/g

0 dB = 0.146mW/g

Date/Time: 26-Sep-2010

Test Laboratory: QuieTek Lab

GPRS1900 Mid Body-Back (4Up) with Headset

DUT: Mobile Phone; Type: WT8000

Communication System: GPRS/EGPRS-4 Slot; Communication System Band: PCS 1900; Duty Cycle: 1:1.0;

Frequency: 1880 MHz; Medium parameters used: f = 1880 MHz; σ = 1.48 mho/m; ε_r = 53.2; ρ = 1000 kg/m^3;

Phantom section: Flat Section

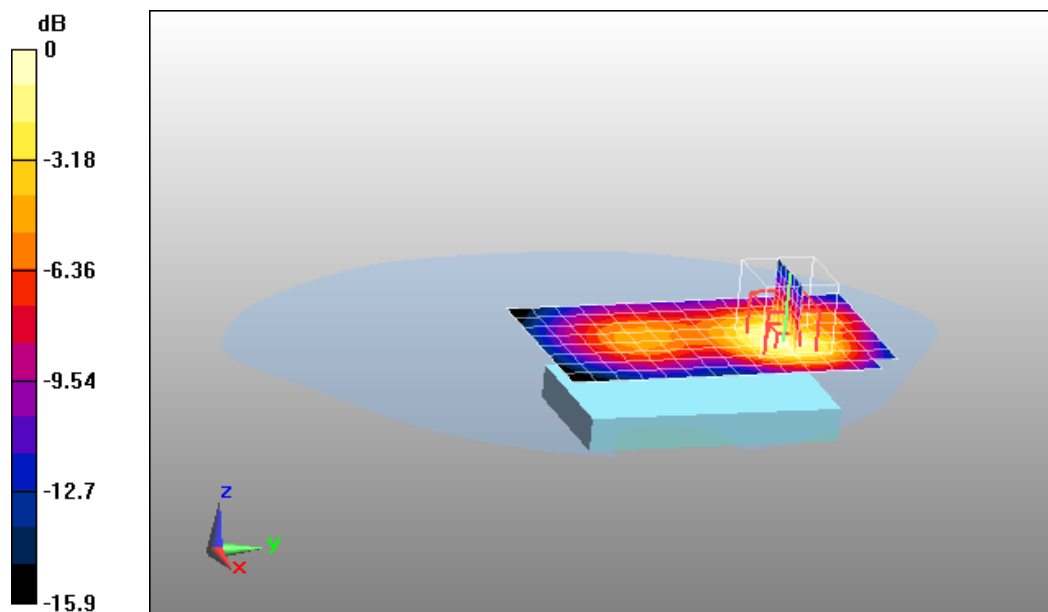Ambient temperature (℃): 21.5, Liquid temperature (℃): 21.0

DASY5 Configuration:

- Probe: EX3DV4 - SN3710; ConvF(7.71, 7.71, 7.71); Calibrated: 05/03/2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1220; Calibrated: 09/03/2010
- Phantom: SAM1; Type: SAM; Serial: TP1561
- Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Configuration/GPRS 1900 Mid Body-Back/Area Scan (9x15x1): Measurement grid: dx=10mm, dy=10mm. Maximum value of SAR (measured) = 0.387 mW/g

Configuration/GPRS 1900 Mid Body-Back/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm. Reference Value = 7.4 V/m; Power Drift = -0.046 dB

Peak SAR (extrapolated) = 0.594 W/kg

SAR(1 g) = 0.359 mW/g; SAR(10 g) = 0.203 mW/g Maximum value of SAR (measured) = 0.397 mW/g

0 dB = 0.397mW/g

Date/Time: 26-Sep-2010

Test Laboratory: QuieTek Lab

802.11b Low-Back

DUT: Mobile Phone; Type: WT8000

Communication System: CW; Communication System Band: Wi-Fi(2412-2462MHz); Duty Cycle: 1:1;

Frequency: 2412 MHz; Medium parameters used: f = 2412 MHz; σ = 1.92 mho/m; ε_r = 52.8; ρ = 1000 kg/m^3;

Phantom section: Flat Section

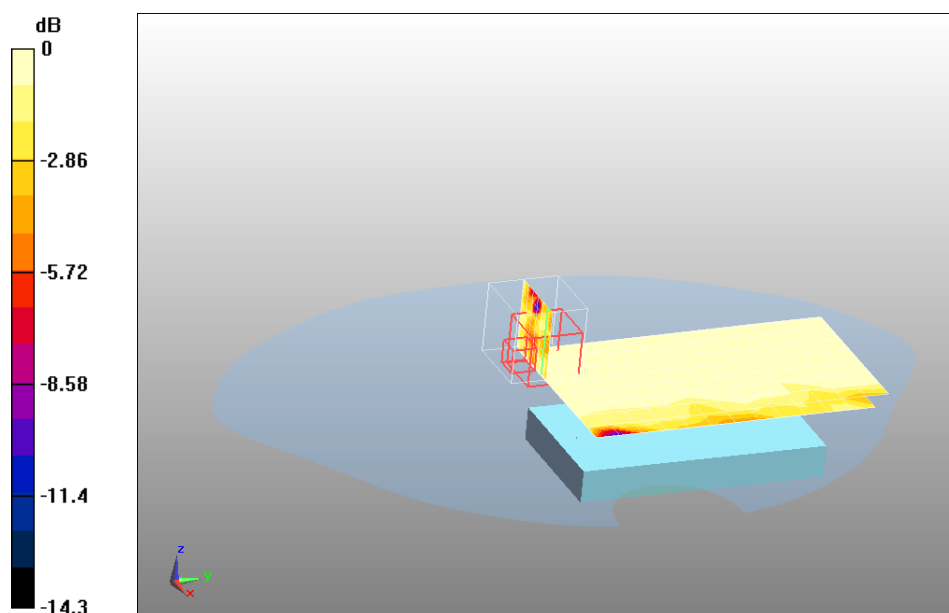Ambient temperature (℃): 21.5, Liquid temperature (℃): 21.0

DASY5 Configuration:

- Probe: EX3DV4 - SN3710; ConvF(7, 7, 7); Calibrated: 05/03/2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1220; Calibrated: 09/03/2010
- Phantom: SAM1; Type: SAM; Serial: TP1561
- Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Configuration/802.11b Low-Back/Area Scan (9x14x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.00627 mW/g

Configuration/802.11b Low-Back/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm. Reference Value = 1.16 V/m; Power Drift = -0.124 dB. Peak SAR (extrapolated) = 0.0043 W/kg

SAR(1 g) = 0.0022 mW/g; SAR(10 g) = 0.0014 mW/g Maximum value of SAR (measured) = 0.0032 mW/g

0 dB = 0.0032mW/g

Date/Time: 26-Sep-2010

Test Laboratory: QuieTek Lab

802.11b Mid-Back

DUT: Mobile Phone; Type: WT8000

Communication System: CW; Communication System Band: Wi-Fi(2412-2462MHz); Duty Cycle: 1:1;

Frequency: 2437 MHz; Medium parameters used: f = 2437 MHz; σ = 1.95 mho/m; ε_r = 52.7; ρ = 1000 kg/m^3;

Phantom section: Flat Section

Ambient temperature (℃): 21.5, Liquid temperature (℃): 21.0

DASY5 Configuration:

- Probe: EX3DV4 - SN3710; ConvF(7, 7, 7); Calibrated: 05/03/2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1220; Calibrated: 09/03/2010
- Phantom: SAM1; Type: SAM; Serial: TP1561
- Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Configuration/802.11b Mid-Back/Area Scan (9x14x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.00468 mW/g

Configuration/802.11b Mid-Back/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm. Reference Value = 0.892 V/m; Power Drift = 0.104 dB. Peak SAR (extrapolated) = 0.00813 W/kg

SAR(1 g) = 0.0058 mW/g; SAR(10 g) = 0.0045 mW/g Maximum value of SAR (measured) = 0.0069 mW/g
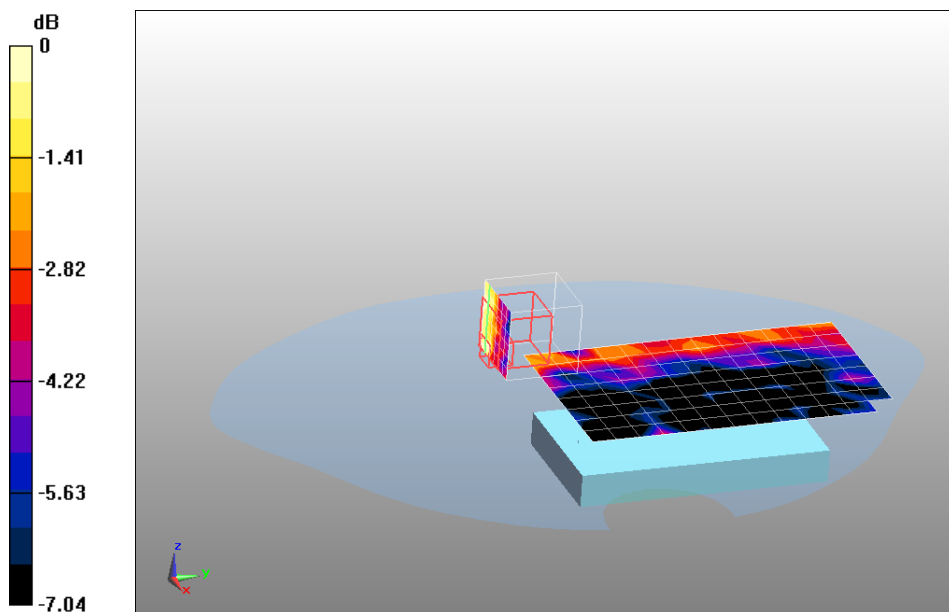
0 dB = 0.0069mW/g

Date/Time: 26-Sep-2010

Test Laboratory: QuieTek Lab

802.11b High-Back

DUT: Mobile Phone; Type: WT8000

Communication System: CW; Communication System Band: Wi-Fi(2412-2462MHz); Duty Cycle: 1:1;

Frequency: 2462 MHz; Medium parameters used: f = 2462 MHz; σ = 1.98 mho/m; ε_r = 52.6; ρ = 1000 kg/m^3;

Phantom section: Flat Section

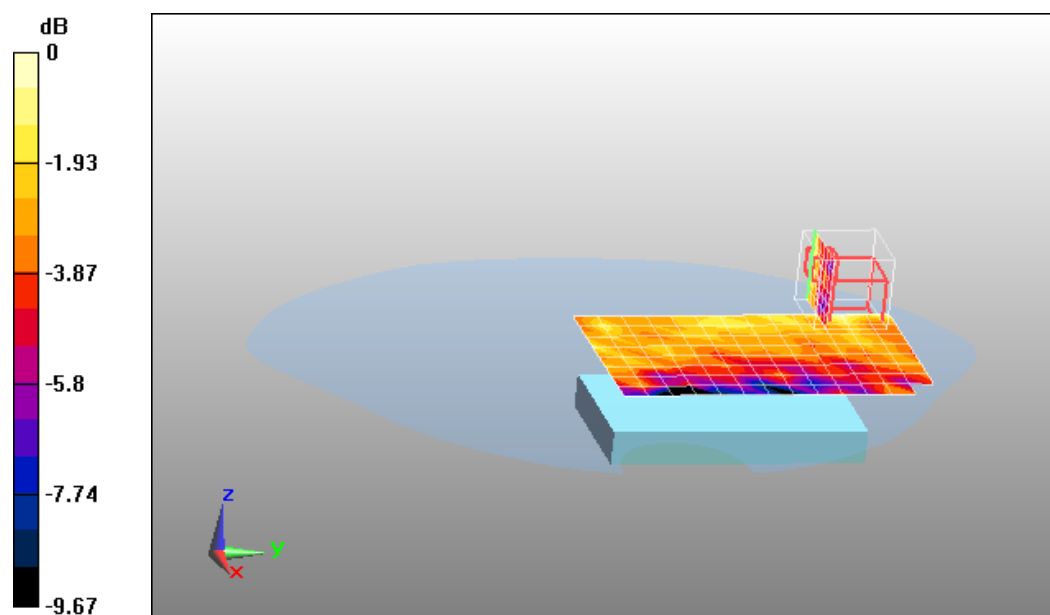Ambient temperature (℃): 21.5, Liquid temperature (℃): 21.0

DASY5 Configuration:

- Probe: EX3DV4 - SN3710; ConvF(7, 7, 7); Calibrated: 05/03/2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1220; Calibrated: 09/03/2010
- Phantom: SAM1; Type: SAM; Serial: TP1561
- Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Configuration/802.11b High-Back/Area Scan (9x14x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.00526 mW/g

Configuration/802.11b High-Back/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm,

dz=5mm. Reference Value = 0.832 V/m; Power Drift = 0.192 dB. Peak SAR (extrapolated) = 0.011 W/kg

SAR(1 g) = 0.0038 mW/g; SAR(10 g) = 0.0029 mW/g Maximum value of SAR (measured) = 0.0054 mW/g

0 dB = 0.0054mW/g

Date/Time: 26-Sep-2010

Test Laboratory: QuieTek Lab

802.11b Mid-Front

DUT: Mobile Phone; Type: WT8000

Communication System: CW; Communication System Band: Wi-Fi(2412-2462MHz); Duty Cycle: 1:1;

Frequency: 2437 MHz; Medium parameters used: f = 2437 MHz; σ = 1.95 mho/m; ε_r = 52.7; ρ = 1000 kg/m³;

Phantom section: Flat Section

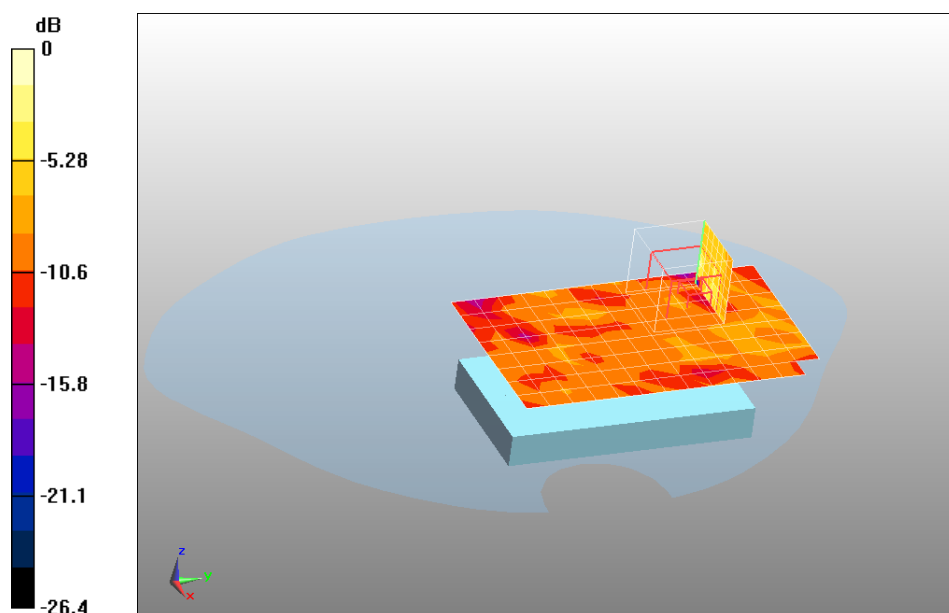Ambient temperature (℃): 21.5, Liquid temperature (℃): 21.0

DASY5 Configuration:

- Probe: EX3DV4 - SN3710; ConvF(7, 7, 7); Calibrated: 05/03/2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1220; Calibrated: 09/03/2010
- Phantom: SAM1; Type: SAM; Serial: TP1561
- Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Configuration/802.11b Mid-Front/Area Scan (9x14x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.00305 mW/g

Configuration/802.11b Mid-Front/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm. Reference Value = 1.23 V/m; Power Drift = -0.145 dB. Peak SAR (extrapolated) = 0.016 W/kg

SAR(1 g) = 0.0053 mW/g; SAR(10 g) = 0.0046 mW/g Maximum value of SAR (measured) = 0.016 mW/g

0 dB = 0.016mW/g

Date/Time: 26-Sep-2010

Test Laboratory: QuieTek Lab

802.11g Mid-Back

DUT: Mobile Phone; Type: WT8000

Communication System: CW; Communication System Band: Wi-Fi(2412-2462MHz); Duty Cycle: 1:1;

Frequency: 2437 MHz; Medium parameters used: f = 2437 MHz; σ = 1.95 mho/m; ε_r = 52.7; ρ = 1000 kg/m^3;

Phantom section: Flat Section

Ambient temperature (℃): 21.5, Liquid temperature (℃): 21.0

DASY5 Configuration:

- Probe: EX3DV4 - SN3710; ConvF(7, 7, 7); Calibrated: 05/03/2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1220; Calibrated: 09/03/2010
- Phantom: SAM1; Type: SAM; Serial: TP1561
- Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Configuration/802.11g Mid-Back/Area Scan (9x14x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.00437 mW/g

Configuration/802.11g Mid-Back/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm,

dz=5mm. Reference Value = 1.26 V/m; Power Drift = -0.184 dB. Peak SAR (extrapolated) = 0.017 W/kg

SAR(1 g) = 0.003 mW/g; SAR(10 g) = 0.0019 mW/g Maximum value of SAR (measured) = 0.0053 mW/g
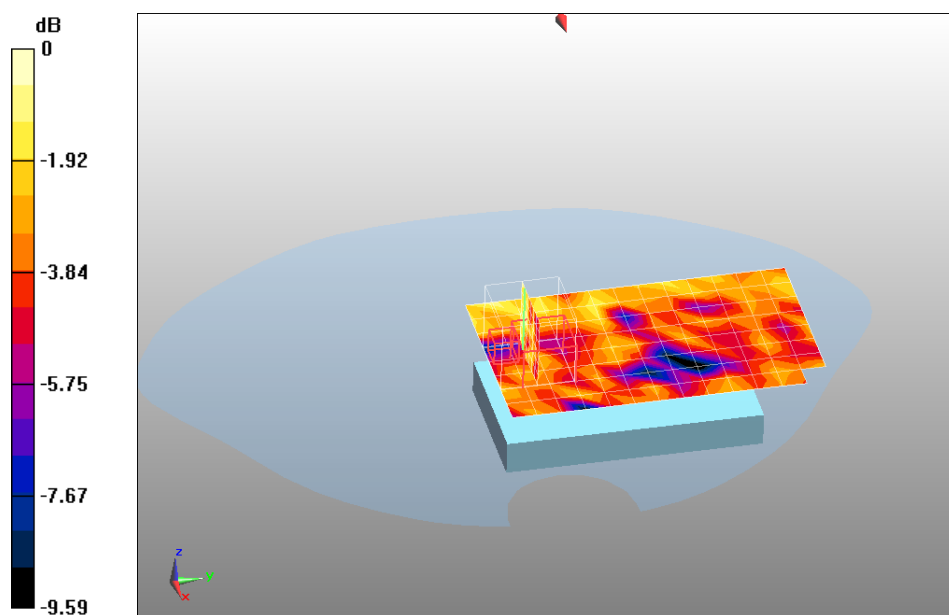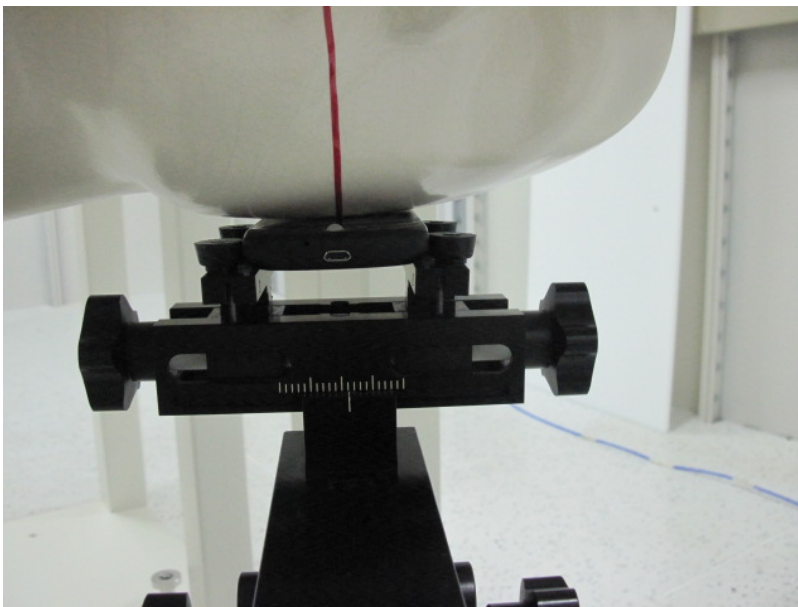

0 dB = 0.0053mW/g
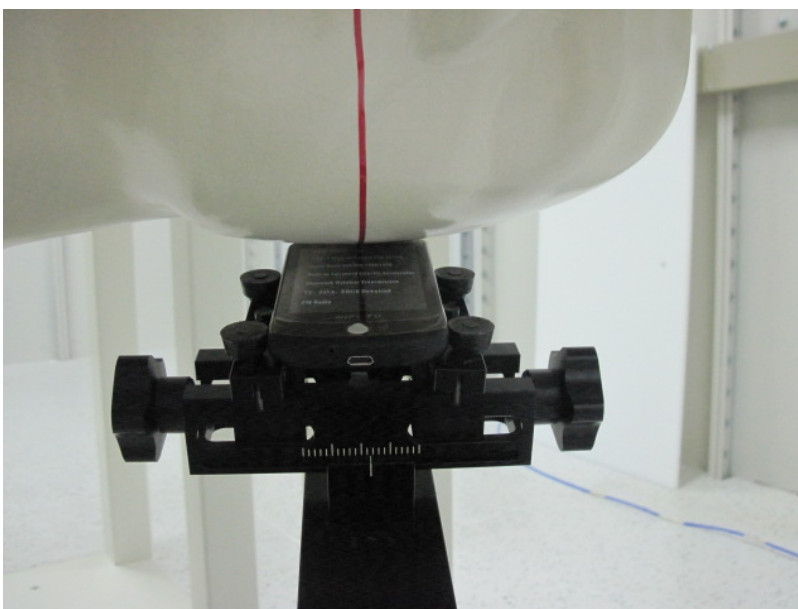
Appendix C. Test Setup Photographs & EUT Photographs

Test Setup Photographs
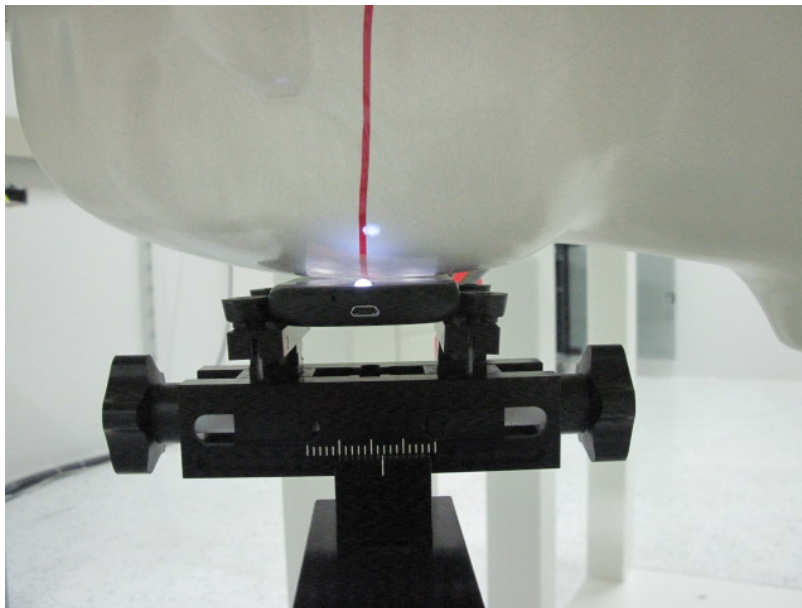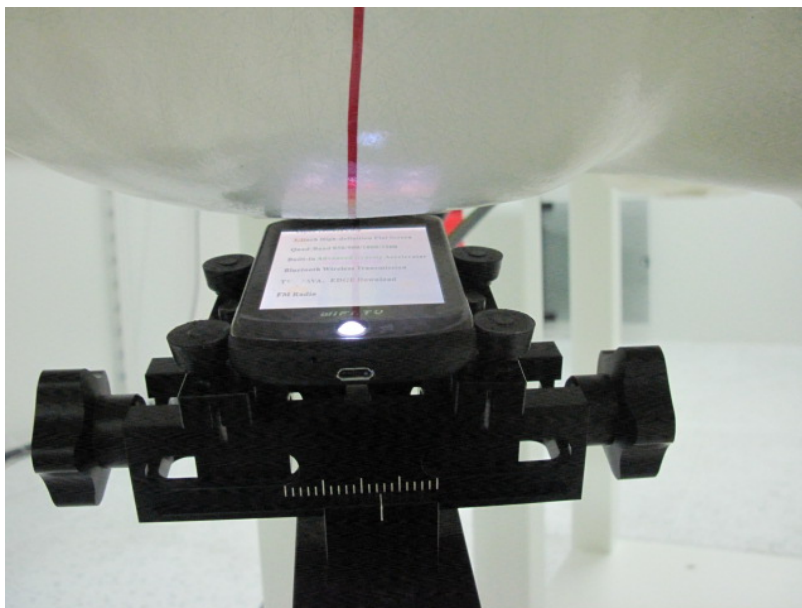
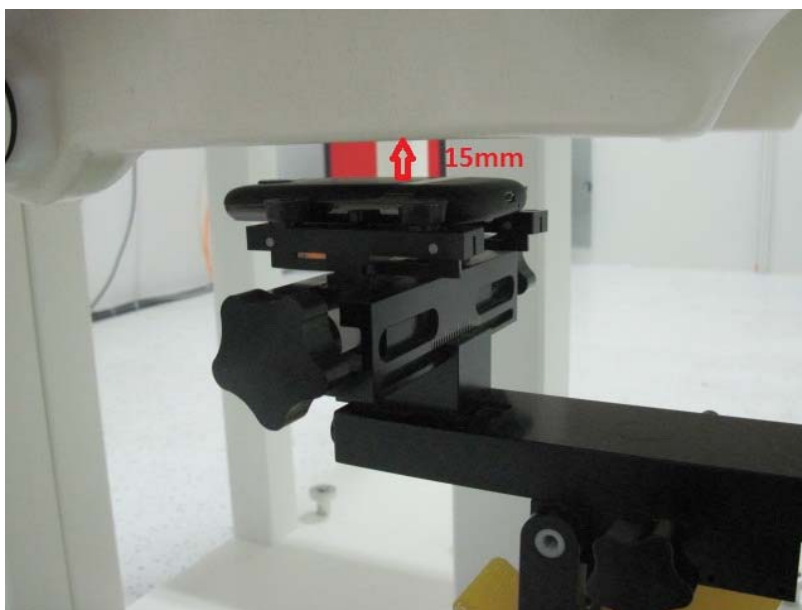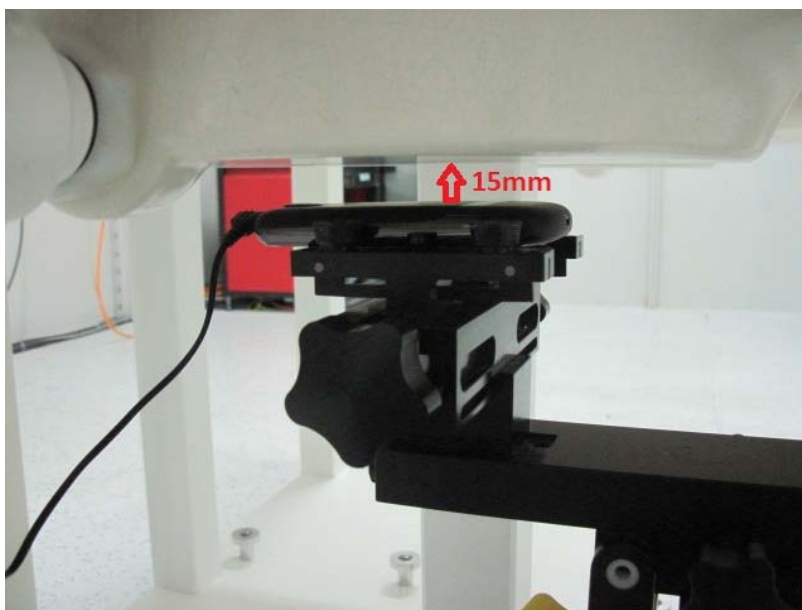Left-Cheek Touch

Left-Tilt 15°

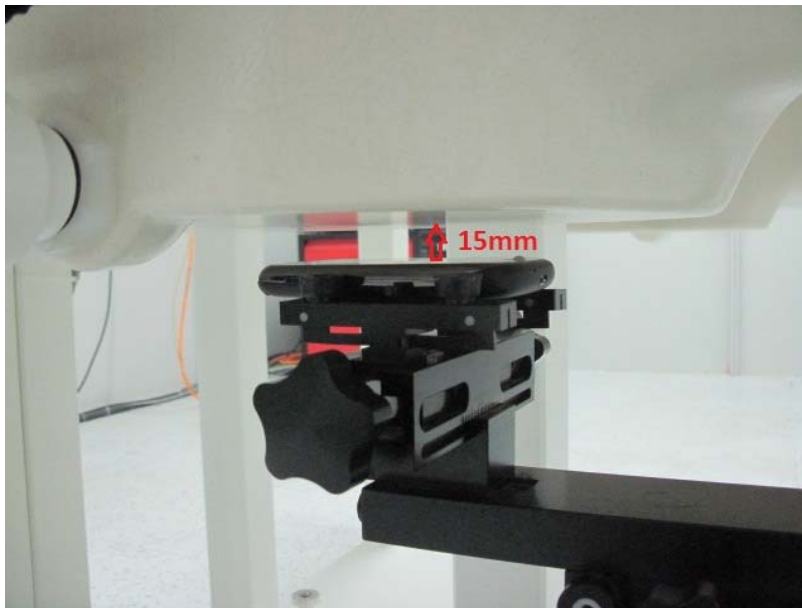Right-Cheek Touch

Right-Tilt 15°

Body Worn SAR back 15mm
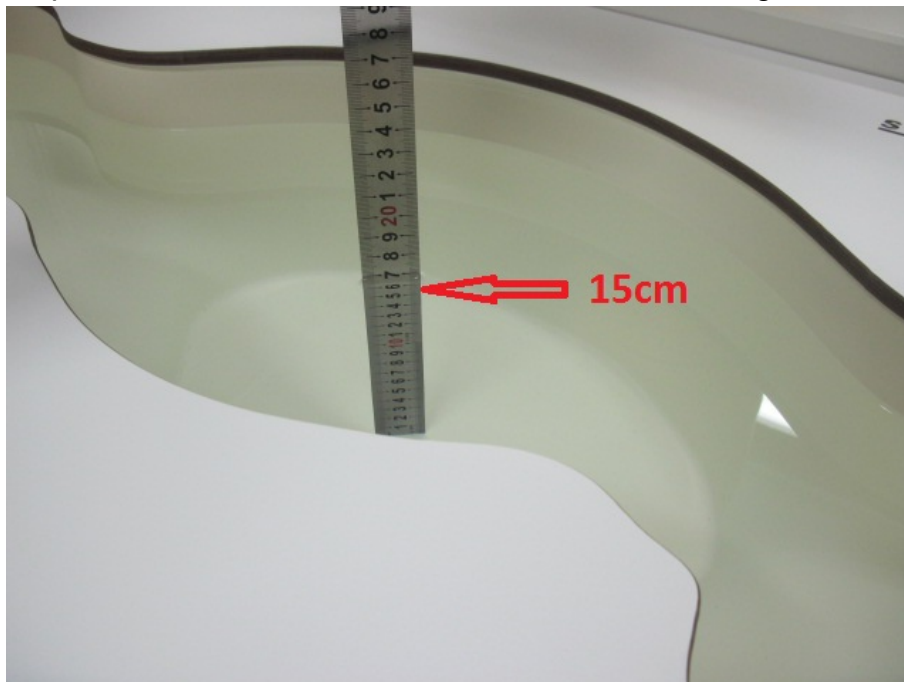

Body Worn SAR Back 15mm with Headset

Body Worn SAR Front 15mm

Depth of the liquid in the phantom – Zoom in

Note: The position used in the measurements were according to IEEE 1528 - 2003

EUT Photographs

Appendix D. Probe Calibration Data

Calibration Laboratory of
Schmid & Partner
Engineering AG
Zeughausstrasse 43, 8004 Zurich, Switzerland

ilac-MRA

SWISS CALIBRATION

S Schweizerischer Kalibrierdienst
C Service suisse d'étalonnage
S Servizio svizzero di taratura
  Swiss Calibration Service

Accredited by the Swiss Accreditation Service (SAS)
The Swiss Accreditation Service is one of the signatories to the EA
Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: **SCS 108**

Client   **Quietek (Auden)**

Certificate No: **EX3-3710_Mar10**

CALIBRATION CERTIFICATE

Object	EX3DV4 - SN:3710
Calibration procedure(s)	QA CAL-01.v6, QA CAL-14.v3, QA CAL-23.v3 and QA CAL-25.v2 Calibration procedure for dosimetric E-field probes
Calibration date:	March 5, 2010

This calibration certificate documents the traceability to national standards, which realize the physical units of measurements (SI).
The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.

All calibrations have been conducted in the closed laboratory facility: environment temperature (22 ± 3)°C and humidity < 70%.

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID #	Cal Date (Certificate No.)	Scheduled Calibration
Power meter E4419B	GB41293874	1-Apr-09 (No. 217-01030)	Apr-10
Power sensor E4412A	MY41495277	1-Apr-09 (No. 217-01030)	Apr-10
Power sensor E4412A	MY41498087	1-Apr-09 (No. 217-01030)	Apr-10
Reference 3 dB Attenuator	SN: S5054 (3c)	31-Mar-09 (No. 217-01026)	Mar-10
Reference 20 dB Attenuator	SN: S5086 (20b)	31-Mar-09 (No. 217-01028)	Mar-10
Reference 30 dB Attenuator	SN: S5129 (30b)	31-Mar-09 (No. 217-01027)	Mar-10
Reference Probe ES3DV2	SN: 3013	30-Dec-09 (No. ES3-3013_Dec09)	Dec-10
DAE4	SN: 660	29-Sep-09 (No. DAE4-660_Sep09)	Sep-10

Secondary Standards	ID #	Check Date (in house)	Scheduled Check
RF generator HP 8648C	US3642U01700	4-Aug-99 (in house check Oct-09)	In house check: Oct-11
Network Analyzer HP 8753E	US37390585	18-Oct-01 (in house check Oct-09)	In house check: Oct10

	Name	Function	Signature
Calibrated by:	Katja Pokovic	Technical Manager	
Approved by:	Niels Kuster	Quality Manager	

Issued: March 5, 2010

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QuieTek

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ilac-MRA

SWISS CALIBRATION

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Glossary:

TSL	tissue simulating liquid
NORMx,y,z	sensitivity in free space
ConvF	sensitivity in TSL / NORMx,y,z
DCP	diode compression point
CF	crest factor (1/duty_cycle) of the RF signal
A, B, C	modulation dependent linearization parameters
Polarization φ	φ rotation around probe axis
Polarization ϑ	ϑ rotation around an axis that is in the plane normal to probe axis (at measurement center), i.e., $\vartheta = 0$ is normal to probe axis

Calibration is Performed According to the Following Standards:

a) IEEE Std 1528-2003, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", December 2003
b) IEC 62209-1, "Procedure to measure the Specific Absorption Rate (SAR) for hand-held devices used in close proximity to the ear (frequency range of 300 MHz to 3 GHz)", February 2005

Methods Applied and Interpretation of Parameters:

- *NORMx,y,z:* Assessed for E-field polarization $\vartheta = 0$ (f ≤ 900 MHz in TEM-cell; f > 1800 MHz: R22 waveguide). NORMx,y,z are only intermediate values, i.e., the uncertainties of NORMx,y,z does not effect the E^2-field uncertainty inside TSL (see below *ConvF*).

- *NORM(f)x,z = NORMx,y,z * frequency_response* (see Frequency Response Chart). This linearization is implemented in DASY4 software versions later than 4.2. The uncertainty of the frequency response is included in the stated uncertainty of *ConvF*.

- *DCPx,z:* DCP are numerical linearization parameters assessed based on the data of power sweep with CW signal (no uncertainty required). DCP does not depend on frequency nor media.

- *Ax,y,z; Bx,y,z; Cx,y,z; VRx,y,z:* A, B, C are numerical linearization parameters assessed based on the data of power sweep for specific modulation signal. The parameters do not depend on frequency nor media. *VR* is the maximum calibration range expressed in RMS voltage across the diode.

- *ConvF and Boundary Effect Parameters:* Assessed in flat phantom using E-field (or Temperature Transfer Standard for f ≤ 800 MHz) and inside waveguide using analytical field distributions based on power measurements for f > 800 MHz. The same setups are used for assessment of the parameters applied for boundary compensation (alpha, depth) of which typical uncertainty values are given. These parameters are used in DASY4 software to improve probe accuracy close to the boundary. The sensitivity in TSL corresponds to *NORMx,y,z * ConvF* whereby the uncertainty corresponds to that given for *ConvF*. A frequency dependent *ConvF* is used in DASY version 4.4 and higher which allows extending the validity from ± 50 MHz to ± 100 MHz.

- *Spherical isotropy (3D deviation from isotropy):* in a field of low gradients realized using a flat phantom exposed by a patch antenna.

- *Sensor Offset:* The sensor offset corresponds to the offset of virtual measurement center from the probe tip (on probe axis). No tolerance required.

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Probe EX3DV4

SN:3710

Manufactured: July 21, 2009
Calibrated: March 5, 2010

Calibrated for DASY Systems

(Note: non-compatible with DASY2 system!)

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EX3DV4 SN:3710   March 5, 2010

DASY - Parameters of Probe: EX3DV4 SN:3710

Basic Calibration Parameters

	Sensor X	Sensor Y	Sensor Z	Unc (k=2)
Norm $(\mu V/(V/m)^2)^A$	0.48	0.58	0.60	± 10.1%
DCP $(mV)^B$	90.8	94.4	91.8	

Modulation Calibration Parameters

UID	Communication System Name	PAR		A dB	B dBuV	C	VR mV	Unc^E (k=2)
10000	CW	0.00	X	0.00	0.00	1.00	300	± 1.5%
			Y	0.00	0.00	1.00	300	
			Z	0.00	0.00	1.00	300	

> The reported uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k=2, which for a normal distribution corresponds to a coverage probability of approximately 95%.

^{A} The uncertainties of NormX,Y,Z do not affect the E^2-field uncertainty inside TSL (see Pages 5 and 6).

^{B} Numerical linearization parameter: uncertainty not required.

^{E} Uncertainty is determined using the maximum deviation from linear response applying recatangular distribution and is expressed for the square of the field value.

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EX3DV4 SN:3710   March 5, 2010

DASY - Parameters of Probe: EX3DV4 SN:3710

Calibration Parameter Determined in Head Tissue Simulating Media

f [MHz]	Validity [MHz]^C	Permittivity	Conductivity	ConvF X	ConvF Y	ConvF Z	Alpha	Depth Unc (k=2)
835	± 50 / ± 100	41.5 ± 5%	0.90 ± 5%	8.83	8.83	8.83	0.68	0.64 ± 11.0%
900	± 50 / ± 100	41.5 ± 5%	0.97 ± 5%	8.73	8.73	8.73	0.83	0.58 ± 11.0%
1810	± 50 / ± 100	40.0 ± 5%	1.40 ± 5%	7.69	7.69	7.69	0.62	0.63 ± 11.0%
1950	± 50 / ± 100	40.0 ± 5%	1.40 ± 5%	7.35	7.35	7.35	0.70	0.60 ± 11.0%
2450	± 50 / ± 100	39.2 ± 5%	1.80 ± 5%	6.96	6.96	6.96	0.46	0.75 ± 11.0%
2600	± 50 / ± 100	39.0 ± 5%	1.96 ± 5%	6.88	6.88	6.88	0.31	0.92 ± 11.0%
3500	± 50 / ± 100	37.9 ± 5%	2.91 ± 5%	6.64	6.64	6.64	0.33	1.18 ± 13.1%
5200	± 50 / ± 100	36.0 ± 5%	4.66 ± 5%	4.92	4.92	4.92	0.40	1.90 ± 13.1%
5300	± 50 / ± 100	35.9 ± 5%	4.76 ± 5%	4.60	4.60	4.60	0.40	1.90 ± 13.1%
5500	± 50 / ± 100	35.6 ± 5%	4.96 ± 5%	4.42	4.42	4.42	0.50	1.90 ± 13.1%
5600	± 50 / ± 100	35.5 ± 5%	5.07 ± 5%	4.42	4.42	4.42	0.40	1.90 ± 13.1%
5800	± 50 / ± 100	35.3 ± 5%	5.27 ± 5%	4.26	4.26	4.26	0.50	1.90 ± 13.1%

^{C} The validity of ± 100 MHz only applies for DASY v4.4 and higher (see Page 2). The uncertainty is the RSS of the ConvF uncertainty at calibration frequency

and the uncertainty for the indicated frequency band

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EX3DV4 SN:3710   March 5, 2010

DASY - Parameters of Probe: EX3DV4 SN:3710

Calibration Parameter Determined in Body Tissue Simulating Media

| f [MHz]	Validity [MHz]^C	Permittivity	Conductivity	ConvF X	ConvF Y	ConvF Z	Alpha	Depth Unc (k=2)
835	± 50 / ± 100	55.2 ± 5%	0.97 ± 5%	8.95	8.95	8.95	0.84	0.62 ± 11.0%
900	± 50 / ± 100	55.0 ± 5%	1.05 ± 5%	8.80	8.80	8.80	0.65	0.69 ± 11.0%
1810	± 50 / ± 100	53.3 ± 5%	1.52 ± 5%	7.71	7.71	7.71	0.57	0.72 ± 11.0%
1950	± 50 / ± 100	53.3 ± 5%	1.52 ± 5%	7.45	7.45	7.45	0.38	0.87 ± 11.0%
2450	± 50 / ± 100	52.7 ± 5%	1.95 ± 5%	7.00	7.00	7.00	0.32	0.95 ± 11.0%
2600	± 50 / ± 100	52.5 ± 5%	2.16 ± 5%	6.90	6.90	6.90	0.47	0.79 ± 11.0%
3500	± 50 / ± 100	51.3 ± 5%	3.31 ± 5%	6.19	6.19	6.19	0.31	1.44 ± 13.1%
5200	± 50 / ± 100	49.0 ± 5%	5.30 ± 5%	4.13	4.13	4.13	0.50	1.90 ± 13.1%
5300	± 50 / ± 100	48.5 ± 5%	5.42 ± 5%	3.91	3.91	3.91	0.55	1.90 ± 13.1%
5500	± 50 / ± 100	48.6 ± 5%	5.65 ± 5%	3.81	3.81	3.81	0.55	1.90 ± 13.1%
5600	± 50 / ± 100	48.5 ± 5%	5.77 ± 5%	3.58	3.58	3.58	0.60	1.90 ± 13.1%
5800	± 50 / ± 100	48.2 ± 5%	6.00 ± 5%	3.97	3.97	3.97	0.60	1.90 ± 13.1%

^{C} The validity of ± 100 MHz only applies for DASY v4 4 and higher (see Page 2) The uncertainty is the RSS of the ConvF uncertainty at calibration frequency

and the uncertainty for the indicated frequency band

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Frequency Response of E-Field
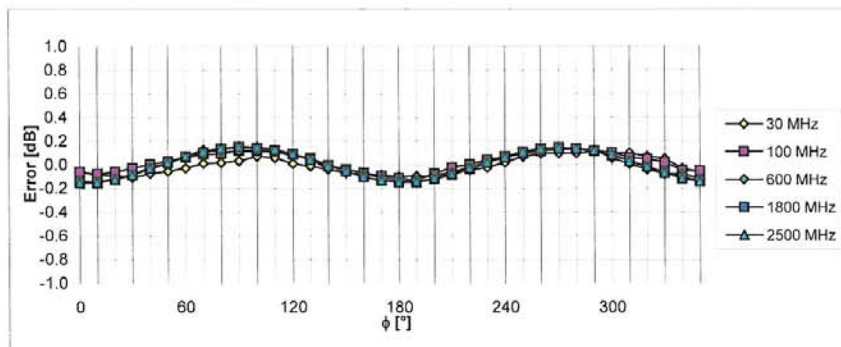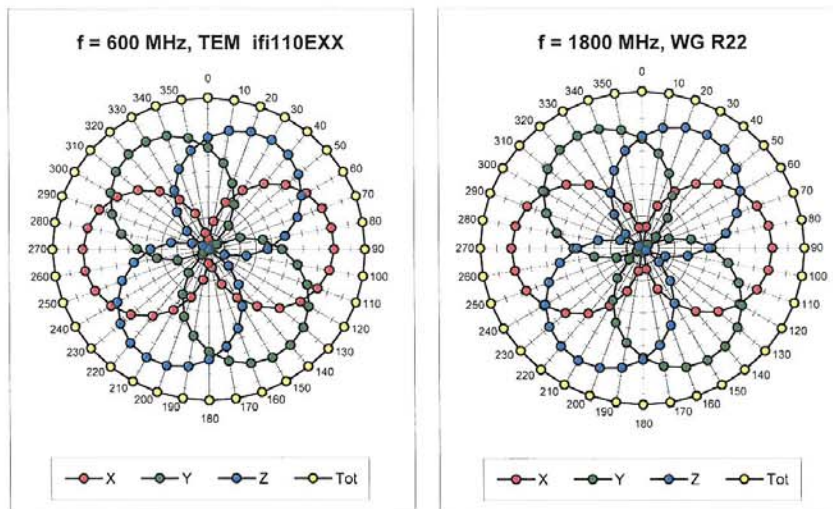
(TEM-Cell:ifi110 EXX, Waveguide: R22)
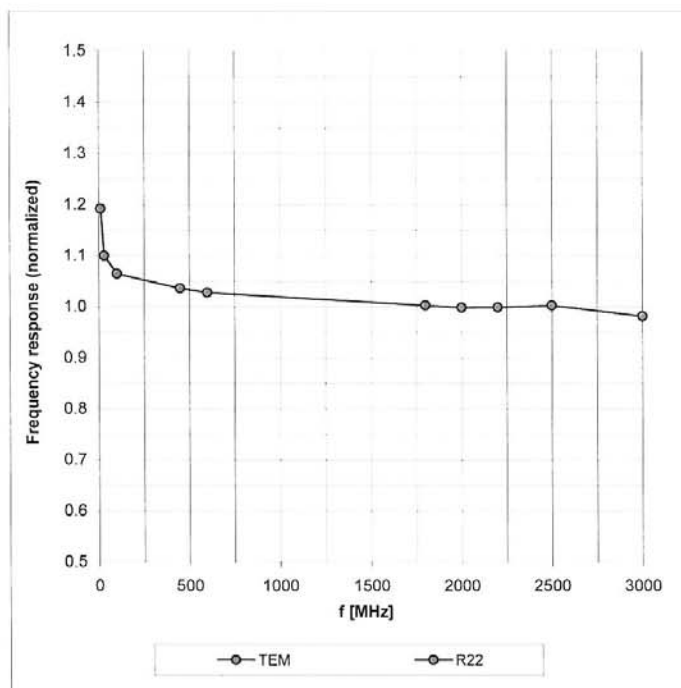
Uncertainty of Frequency Response of E-field: ± 6.3% (k=2)

March 5, 2010

Receiving Pattern (ϕ), $\vartheta = 0°$

f = 600 MHz, TEM ifi110EXX

f = 1800 MHz, WG R22

Uncertainty of Axial Isotropy Assessment: ± 0.5% (k=2)

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Dynamic Range f(SAR$_{head}$)

(Waveguide R22, f = 1800 MHz)
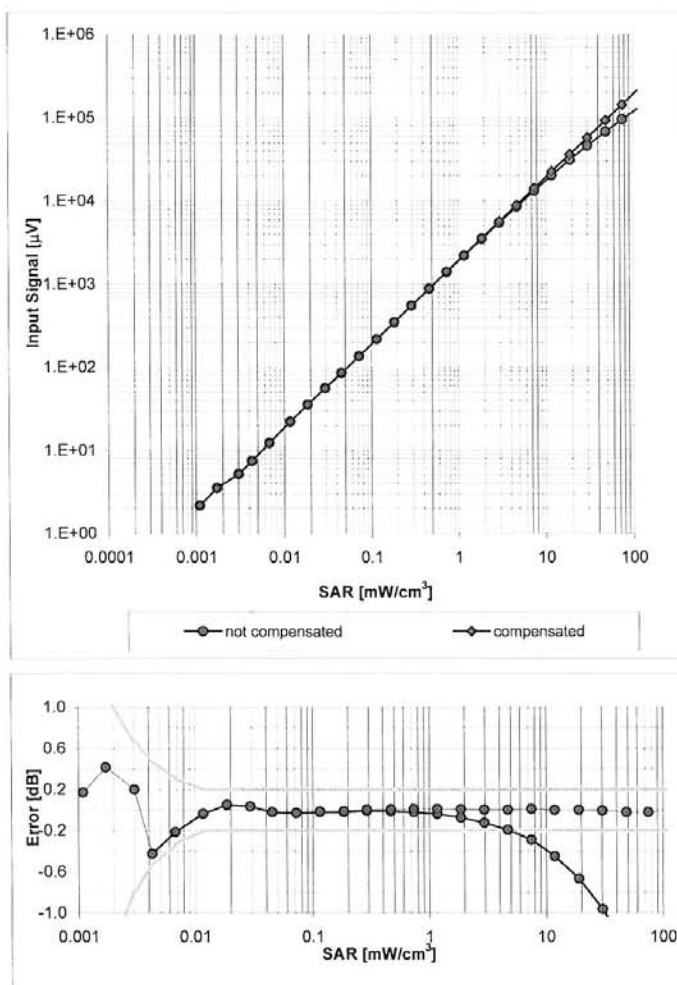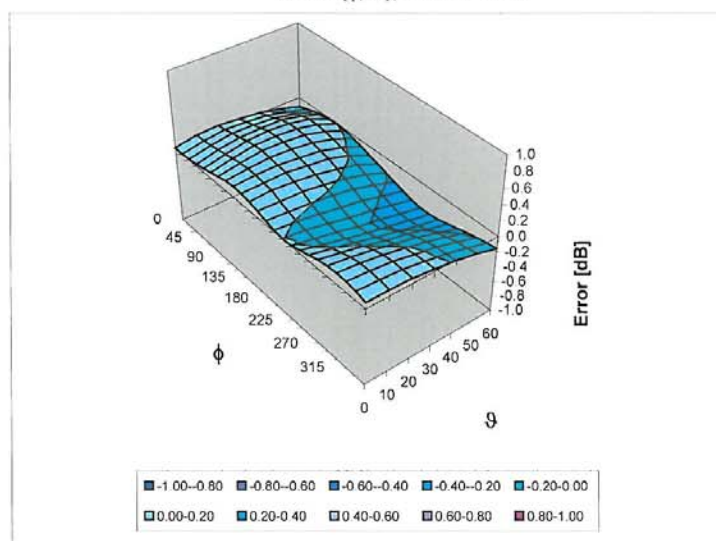

Uncertainty of Linearity Assessment: ± 0.6% (k=2)

Conversion Factor Assessment
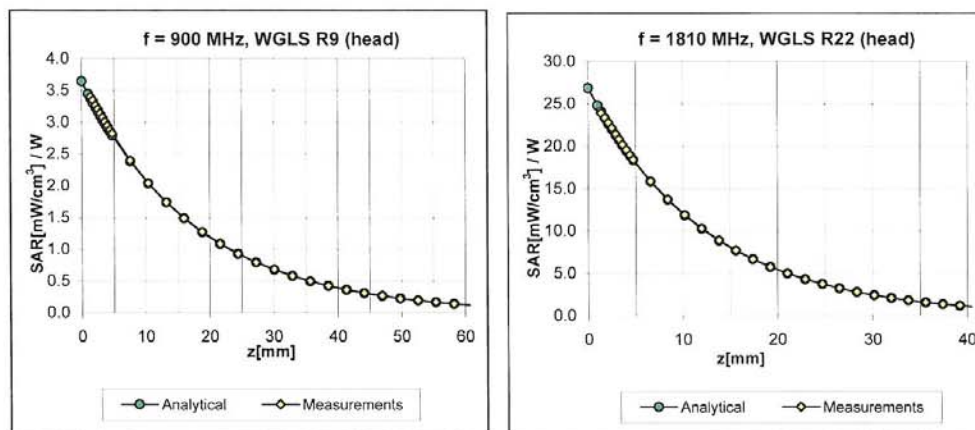
Deviation from Isotropy in HSL

Error (φ, θ), f = 900 MHz

Uncertainty of Spherical Isotropy Assessment: ± 2.6% (k=2)

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EX3DV4 SN:3710   March 5, 2010

Other Probe Parameters

Sensor Arrangement	Triangular
Connector Angle (°)	Not applicable
Mechanical Surface Detection Mode	enabled
Optical Surface Detection Mode	disabled
Probe Overall Length	337 mm
Probe Body Diameter	10 mm
Tip Length	9 mm
Tip Diameter	2.5 mm
Probe Tip to Sensor X Calibration Point	1 mm
Probe Tip to Sensor Y Calibration Point	1 mm
Probe Tip to Sensor Z Calibration Point	1 mm
Recommended Measurement Distance from Surface	2 mm