SAR Test Report

Product Name : Panel computer

Model No. : R800C

FCC ID : WA6R800

Applicant : Verykool USA Inc

Address : 4350 Executive Dr.#100, San Diego

Date of Receipt : 09/12/2011

Date of Test : 19/12/2011

Issued Date : 20/12/2011

Report No. : 11CS030R-HP-US-P03V01

Report Version : V1.3

Test Report Certification

Issued Date: 20/12/2011
Report No.: 11CS030R-HP-US-P03V01

QuieTek

Product Name	:	Panel computer
Applicant	:	Verykool USA Inc
Address	:	4350 Executive Dr.#100, San Diego
Manufacturer	:	Verykool Wireless Technology Ltd.
Address	:	Room 1701, Reward Building C, No.203, 2nd Section of WangJing, Li Ze Zhong Yuan, ChaoYang District, Beijing, P.R. of China 100102
Model No.	:	R800C
FCC ID	:	WA6R800
Brand Name	:	Verykool
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) 1.420W/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
Documented By	:	Alice Ni (Engineering ADM: Alice Ni)
Reviewed By	:	Robin Wu (Engineering Supervisor: Robin Wu)
Approved By	:	Marlin Chen (Engineering Manager: Marlin Chen)

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/accepted(audited or listed) by the following related bodies in compliance with ISO 17025, EN 45001 and specified testing scope:

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://www.quietek.com/tw/ctg/cts/accreditations.htm
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.
TEL:+886-3-592-8858 / FAX:+886-3-592-8859 E-Mail : service@quietek.com

NVLAP Lab Code : 200347-0

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

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

Testing Laboratory 1596

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1. General Information

1.1. EUT Description

Product Name	Panel computer
Model No.	R800C
Hardware Version	R800C-HW-P1
Software Version	R800C-V1.07-FCC
Device Category	Portable
2G	
Support Band	GSM850/PCS1900
GPRS Type	Class B
GPRS Class	Class 12
Tx Frequency Range	GSM 850: 824~849MHz PCS 1900: 1850~1910MHz
Rx Frequency Range	GSM 850: 869~894MHz PCS 1900: 1930~1990MHz
Release Version	R99
Type of modulation	GMSK for GSM/GPRS, 8PSK for EDGE
Antenna Gain	-2.79dBi for GSM850 -1.73 dBi for PCS1900
Max. Output Power (Conducted)	GSM850: 33.11 dBm PCS1900: 29.92 dBm
Max. Output Power (Radiated)	GSM850: 31.44 dBm- ERP PCS1900: 29.42 dBm- EIRP
3G	
Support Band	WCDMA Band V
Frequency Range Tx	WCDMA Band V: 824~849MHz
Frequency Range Rx	WCDMA Band V: 869~894MHz
Release Version	UMTS FDD: Rel-5
Type of modulation	QPSK for WCDMA; 16QAM for HSDPA
Antenna Gain	-2.79dBi
Max. Output Power (Conducted)	22.37dBm
Max. Output Power (Radiated)	21.60dBm - ERP
Wi-Fi	
Frequency Range	802.11b/g: 2412 - 2462 MHz

Hotspots Function	YES
Channel Number	802.11b/g: 11
Type of Modulation	802.11b: DSSS; 802.11g: OFDM
Data Rate	802.11b: 1/2/5.5/11 Mbps
	802.11g: 6/9/12/18/24/36/48/54 Mbps
Antenna Type	Internal
Peak Antenna Gain	-3.52dBi
Max. Output Power (Conducted)	802.11b: 15.52dBm 802.11g: 14.14dBm
Bluetooth	
Bluetooth Frequency	2402~2480MHz
Type of modulation	FHSS
Data Rate	1Mbps(GFSK), 2Mbps(Pi/4 DQPSK), 3Mbps (8DPSK)
Peak Antenna Gain	-3.52dBi
Components	
Headset Model Number	R800C
Battery	Model Name: JHY48739 Rated Voltage and Capacitance: 3.7V, 3500mAh
Adapter	Brand Name: Verykool Model Name: ASUC12A-050150 Input: AC 100-240V 50/60Hz, 0.3A Output: 5.0V, 1500mA

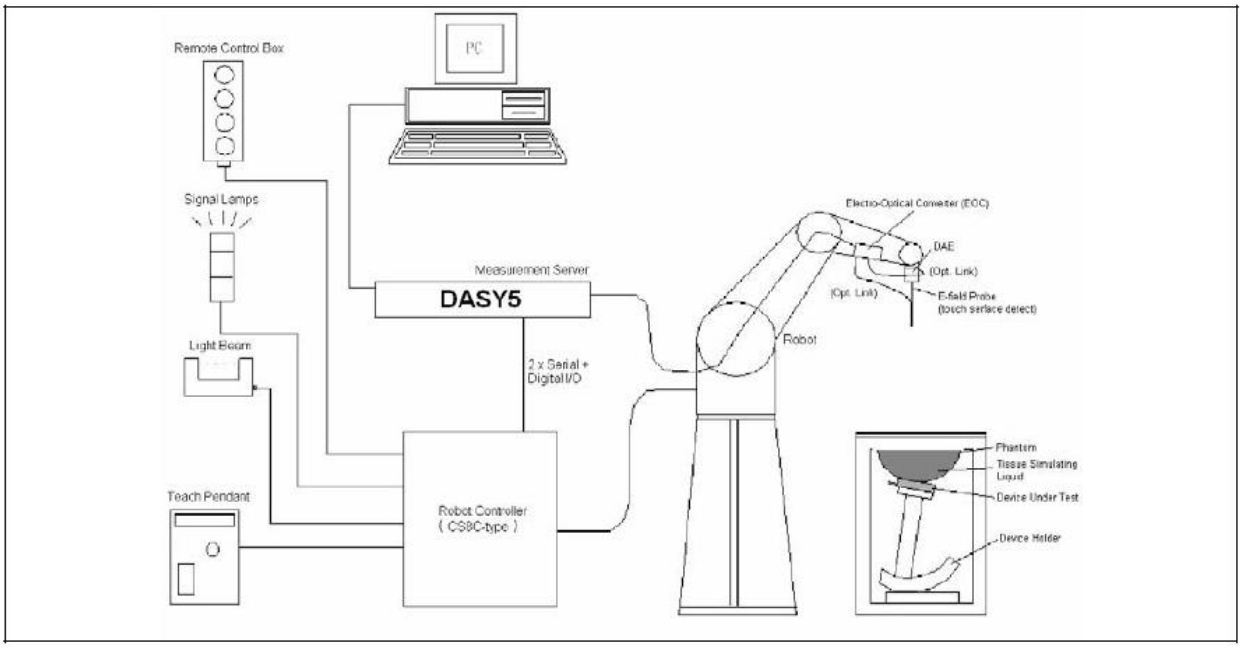
1.2. Test Environment

Ambient conditions in the laboratory:

Items	Required	Actual
Temperature (°C)	18-25	21.5± 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.

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

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

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

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

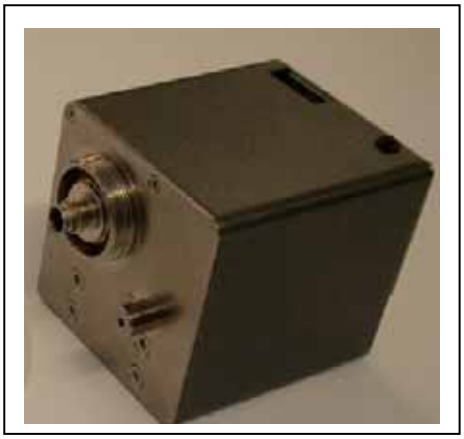
Model	EX3DV4	
Construction	Symmetrical design with triangular core Built-in shielding against static charges PEEK enclosure material (resistant to organic solvents, e.g., DGBE)	
Frequency	10 MHz to 6 GHz Linearity: ± 0.2 dB (30 MHz to 6 GHz)	
Directivity	± 0.3 dB in HSL (rotation around probe axis) ± 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

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
	19-12-2011	54.73	0.98	21.0

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
	19-12-2011	52.45	1.54	21.0

Body Tissue Simulant Measurement				
Frequency [MHz]	Description	Dielectric Parameters		Tissue Temp. [°C]
		ε_r	σ [s/m]	
2450MHz	Reference result ± 5% window	52.7 50.07 to 55.34	1.95 1.85 to 2.05	N/A
	19-12-2011	52.10	2.01	21.0

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.

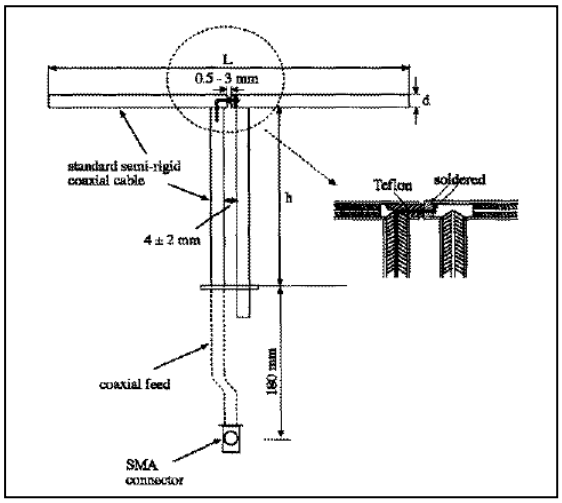
Target Frequency	Head		Body	
(MHz)	ε_r	σ (S/m)	ε_r	σ (S/m)
150	52.3	0.76	61.9	0.80
300	45.3	0.87	58.2	0.92
450	43.5	0.87	56.7	0.94
835	41.5	0.90	**55.2**	**0.97**
900	41.5	0.97	55.0	1.05
915	41.5	0.98	55.0	1.06
1450	40.5	1.20	54.0	1.30
1610	40.3	1.29	53.8	1.40
1800 – 2000	40.0	1.40	**53.3**	**1.52**
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	161.0	89.8	3.6
1900MHz	68.0	39.5	3.6
2450MHz	51.5	30.4	3.6

4.1.2. Validation Result

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
	19-12-2011	9.68	6.24	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
	19-12-2011	42.40	21.64	21.0

Validation Dipole: 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
	19-12-2011	51.20	23.80	21.0

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

4.2. SAR Measurement Procedure

The DASY5 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.	Cali. Due Date
Stäubli Robot TX60L	Stäubli	TX60L	F10/5C90A1/A/01	only once
Controller	Stäubli	SP1	S-0034	only once
Dipole Validation Kits	Speag	D835V2	4d094	2012.03.15
Dipole Validation Kits	Speag	D1900V2	5d121	2012.03.23
Dipole Validation Kits	Speag	D2450V2	839	2012.03.12
SAM Twin Phantom	Speag	SAM	TP-1561/1562	N/A
Device Holder	Speag	SD 000 H01 HA	N/A	N/A
Data Acquisition Electronic	Speag	DAE4	1291	2012.10.10
E-Field Probe	Speag	EX3DV4	3661	2012.01.24
SAR Software	Speag	DASY5	V5.2 Build 162	N/A
Power Amplifier	Mini-Circuit	ZVA-183-S+	N657400950	N/A
Directional Coupler	Agilent	778D	20160	N/A
Universal Radio Communication Tester	R&S	CMU 200	117088	2012.04.29
Vector Network	Agilent	E5071C	MY48367267	2012.04.10
Signal Generator	Agilent	E4438C	MY49070163	2012.04.23
Power Meter	Anritsu	ML2495A	0905006	2012.01.12
Wide Bandwidth Sensor	Anritsu	MA2411B	0846014	2012.01.12

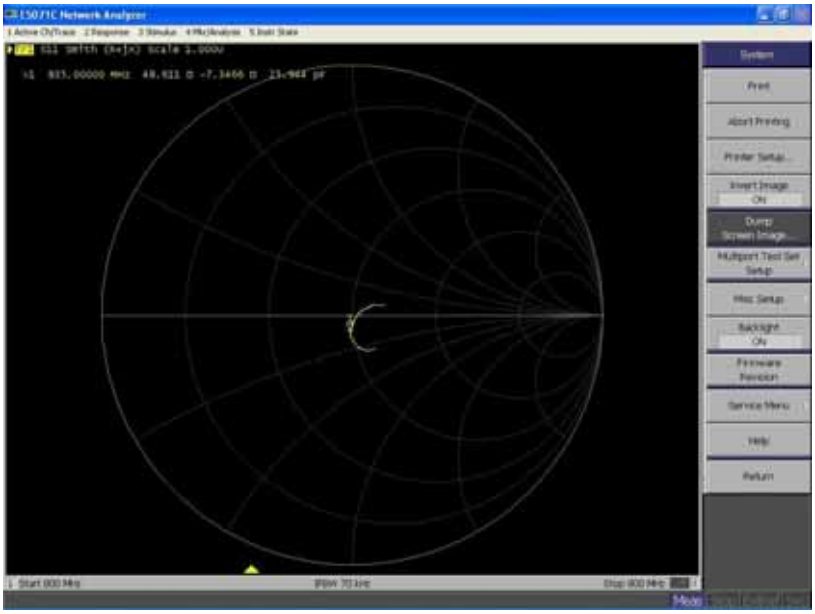
Note: Per KDB 450824 D02 requirements for dipole calibration, QuieTek Lab has adopted two years calibration intervals. On annual basis, every measurement dipole has been evaluated and is in compliance with the following criteria:

1. There is no physical damage on the dipole;
2. System validation with specific dipole is within 10% of calibrated value;
3. Return-loss is within 20% of calibrated measurement (Show below);
4. Impedance is within 5Ω of calibrated measurement (Show below).

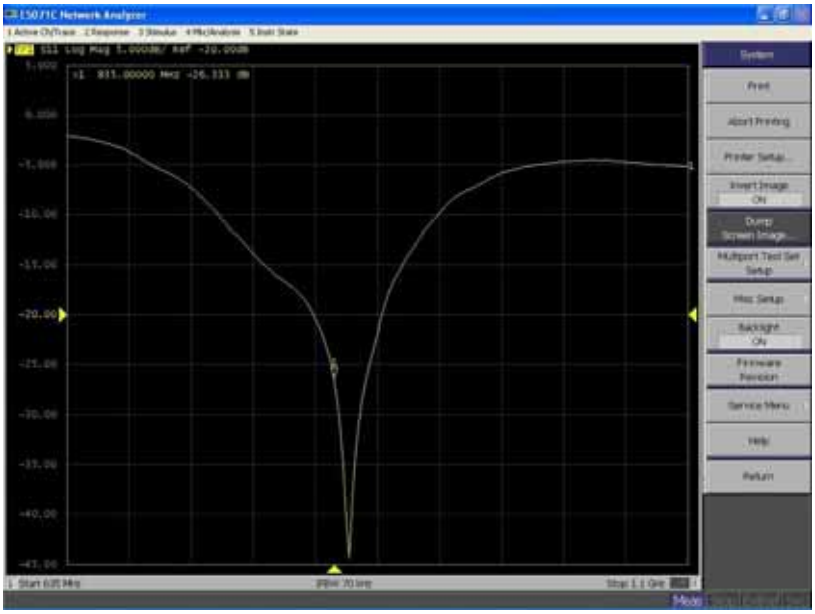
Impedance Plot for D835V2

835 Body

Calibrated impedance: 48.0 Ω; Measured impedance: 48.611 Ω (within 5Ω)



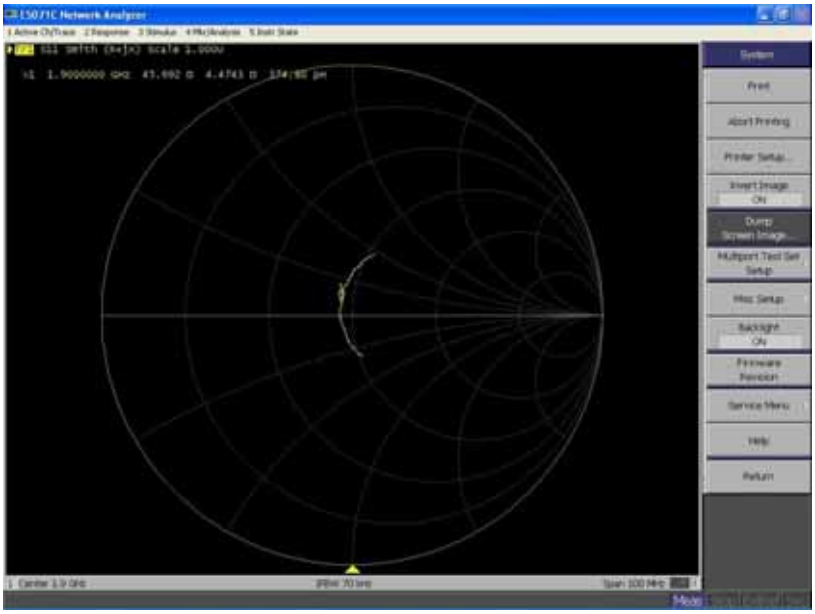
Calibrated return loss: -25.5 dB; Measured impedance: -26.333 dB (within 20%)



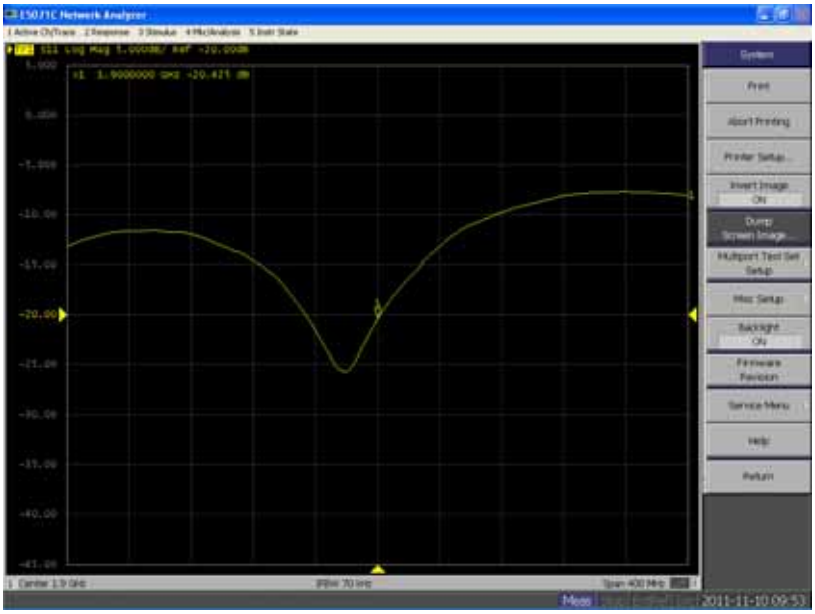
Impedance Plot for D1900V2

1900 Body

Calibrated impedance: 46.1 Ω; Measured impedance: 45.692 Ω (within 5Ω)



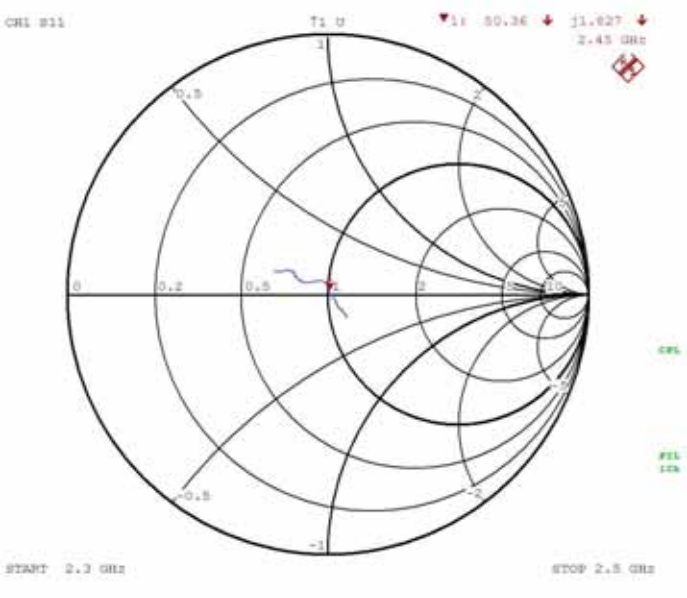
Calibrated return loss: -21.5 dB; Measured impedance: -20.425 dB (within 20%)



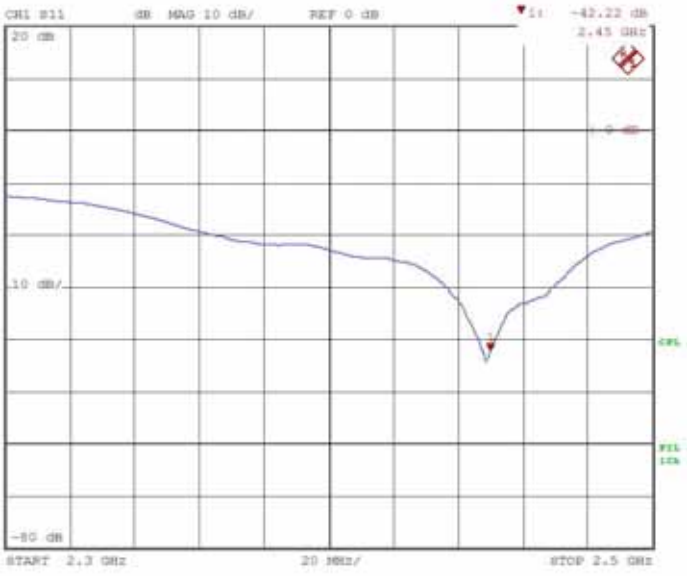
Impedance Plot for D2450V2

2450 Body

Calibrated impedance: 50.0 Ω; Measured impedance: 50.36 Ω (within 5Ω)



Calibrated return loss: -40.8 dB; Measured impedance: -42.22 dB (within 20%)



7. Measurement Uncertainty

DASY5 Uncertainty Measurement uncertainty for 300 MHz to 3 GHz averaged over 1 gram / 10 gram.								
Error Description	Uncert. value	Prob. Dist.	Div.	(c_i) 1g	(c_i) 10g	Std. Unc. (1g)	Std. Unc. (10g)	(v_i) v_{eff}
Measurement System								
Probe Calibration	±5.5%	N	1	1	1	±5.5%	±5.5%	∞
Axial Isotropy	±4.7%	R	√3	0.7	0.7	±1.9%	±1.9%	∞
Hemispherical Isotropy	±9.6%	R	√3	0.7	0.7	±3.9%	±3.9%	∞
Boundary Effects	±1.0%	R	√3	1	1	±0.6%	±0.6%	∞
Linearity	±4.7%	R	√3	1	1	±2.7%	±2.7%	∞
System Detection Limits	±1.0%	R	√3	1	1	±0.6%	±0.6%	∞
Readout Electronics	±0.3%	N	1	1	1	±0.3%	±0.3%	∞
Response Time	±0.8%	R	√3	1	1	±0.5%	±0.5%	∞
Integration Time	±2.6%	R	√3	1	1	±1.5%	±1.5%	∞
RF Ambient Noise	±3.0%	R	√3	1	1	±1.7%	±1.7%	∞
RF Ambient Reflections	±3.0%	R	√3	1	1	±1.7%	±1.7%	∞
Probe Positioner	±0.4%	R	√3	1	1	±0.2%	±0.2%	∞
Probe Positioning	±2.9%	R	√3	1	1	±1.7%	±1.7%	∞
Max. SAR Eval.	±1.0%	R	√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	√3	1	1	±2.9%	±2.9%	∞
Phantom and Setup								
Phantom Uncertainty	±4.0%	R	√3	1	1	±2.3%	±2.3%	∞
Liquid Conductivity (target)	±5.0%	R	√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	√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						±21.4%	±21.0%	

8. Conducted Power Measurement

Mode	Frequency (MHz)	Avg. Burst Power (dBm)	Duty Cycle Factor (dB)	Frame Power (dBm)
Maximum Power				
GSM850	824.2	32.92	-9	23.92
	836.4	33.06	-9	24.06
	848.6	**33.11**	-9	24.11
PCS1900	1850.2	**29.92**	-9	20.92
	1880.0	29.78	-9	20.78
	1909.8	29.44	-9	20.44
GPRS850(2 Slot)	824.2	29.42	-6	23.42
	836.4	29.51	-6	23.51
	848.6	29.58	-6	23.58
GPRS850(3 Slot)	824.2	28.06	-4.25	23.81
	836.4	28.14	-4.25	23.89
	848.6	28.21	-4.25	23.96
GPRS850(4 Slot)	824.2	26.47	-3	23.47
	836.4	26.53	-3	23.53
	848.6	26.53	-3	23.53
EDGE850(2 Slot)	824.2	24.67	-6	18.67
	836.4	24.71	-6	18.71
	848.6	24.73	-6	18.73
EDGE850(3 Slot)	824.2	22.72	-4.25	18.47
	836.4	22.75	-4.25	18.50
	848.6	22.79	-4.25	18.54
EDGE850(4 Slot)	824.2	20.65	-3	17.65
	836.4	20.66	-3	17.66
	848.6	20.64	-3	17.64
GPRS1900(2 Slot)	1850.2	27.87	-6	21.87
	1880.0	27.76	-6	21.76
	1909.8	27.42	-6	21.42
GPRS1900(3 Slot)	1850.2	25.89	-4.25	21.64
	1880.0	25.77	-4.25	21.52
	1909.8	25.45	-4.25	21.20
GPRS1900(4 Slot)	1850.2	23.88	-3	20.88
	1880.0	23.72	-3	20.72
	1909.8	23.37	-3	20.37

Mode	Frequency (MHz)	Avg. Burst Power (dBm)	Duty Cycle Factor (dB)	Frame Power (dBm)
EDGE1900(2 Slot)	1850.2	25.12	-6	19.12
	1880.0	24.99	-6	18.99
	1909.8	24.67	-6	18.67
EDGE1900(3 Slot)	1850.2	23.17	-4.25	18.92
	1880.0	23.03	-4.25	18.78
	1909.8	22.67	-4.25	18.42
EDGE1900(4 Slot)	1850.2	21.10	-3	18.10
	1880.0	21.00	-3	18.00
	1909.8	20.72	-3	17.72

Note: According to the output value listed above, the EDGE mode was not determined for SAR testing, refer to KDB 941225.

Mode	3GPP Subtest	Band V (850MHz) Channel Conducted Power (dBm)			MPR
		4132	4182	4233	
WCDMA R99	**1**	**22.22**	**22.37**	**22.30**	**N/A**
Rel5 HSDPA	**1**	**22.06**	**22.30**	**22.11**	**0**
	2	22.05	22.21	22.10	**0**
	3	21.70	21.82	21.73	**0.5**
	4	21.64	21.74	21.70	**0.5**

Note : According to the output value listed above, the HSDPA mode was not determined for SAR testing, refer to KDB 941225.

Wi-Fi output power

Test Mode	Data Rate (Mbps)	Channel No.	Frequency (MHz)	Average Power (dBm)
802.11b	11	01	2412	15.25
		06	2437	15.21
		11	2462	**15.52**
802.11g	54	01	2412	14.03
		06	2437	14.13
		11	2462	**14.14**

Note : According to the KDB 248227. SAR is not required for 802.11g channels when the maximum average output power is less than 1/4 dB higher than that measured on the corresponding 802.11b channels

9. Test Results

9.1. SAR Test Results Summary

9.1.1. Test position and configuration

Body SAR was performed with the device configured in the positions according to IEEE1528. SAR test was performed with the device 0mm (touch) from the phantom for the worst case due to antenna position.
Test Position: bottom, primary landscape, secondary landscape, primary portrait. Please refer to the test photograph for details.

9.1.2. 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).

9.1.3. Simultaneous Transmission Configure

Configure mode	Bluetooth	WWAN	WLAN
1	X	X	
2		X	X

Note : Bluetooth output power is 0.7dBm. Referring to KDB 648474

1, The power is less than Pref.

2, 4.5cm away from WWAN antenna.

3, Bluetooth shares the same antenna with WLAN, they cannot transmit simultaneously.

Therefore, standalone SAR and simultaneous SAR for Bluetooth is not required.

9.1.4. Simultaneous Transmission SAR Analysis

Reference document: KDB 447498 and KDB 648474, KDB 248227, KDB616217, KDB941225.

Body SAR value and the sum of the 1-g SAR for WLAN & WWAN.

Max 1-g SAR (W/kg)			∑1-g SAR (W/kg)
Position	WLAN	WWAN	
Bottom	0.539	1.42	1.959
Primary portrait	0.102	0.399	0.501

Conclusion:

Simultaneous Transmission	Require for Simultaneous Transmission SAR with Volume Scans
WLAN & WWAN(Bottom)	No (SPLSR ＜ 0.3)
WLAN & WWAN(Primary portrait)	No (The sum of the 1-g SAR is ＜ 1.6 W/kg)

Note: The calculation of SPLSR is as follows.

The calculation of SPLSR for (Bottom, WLAN + WWAN) is as below:

Coordinate of Peak SAR Location (X, Y, Z) : T1(-0.0052, 0.01, -0.21), T2(-0.0148, 0.0096, -0.206)

Peak Location Spacing = 7.64 cm

SPLSR (SAR to Peak Location Spacing Ratio) = (0.539 + 1.42) / 7.64 = 0.256

9.1.5. Reference document

KDB 447498 and KDB 648474, KDB 248227, KDB616217, KDB941225.

9.1.6. Test Result

SAR MEASUREMENT								
Ambient Temperature (°C) : 21.5 ±2				Relative Humidity (%): 52				
Liquid Temperature (°C) : 21.0 ±2				Depth of Liquid (cm):>15				
Product: Panel computer								
Test Mode: GSM850								
Test Position Body	Antenna Position	Frequency		Separation Distance (mm)	Frame Power (dBm)	Power Drift (<±0.2)	SAR 1g (W/kg)	Limit (W/kg)
		Channel	MHz					
Bottom	Fixed	128	824.2	0	23.92	0.016	1.180	1.6
Bottom	Fixed	189	836.4	0	24.06	0.036	1.340	1.6
Bottom	Fixed	251	848.6	0	24.11	-0.023	**1.410**	1.6
Primary landscape	Fixed	189	836.4	0	24.06	0.035	0.210	1.6
Primary portrait	Fixed	189	836.4	0	24.06	0.165	0.250	1.6
Test Mode: GPRS850-2Slot								
Bottom	Fixed	189	836.4	0	23.51	0.053	1.060	1.6
Test Mode: GPRS850-3Slot								
Bottom	Fixed	189	836.4	0	23.89	-0.011	1.330	1.6
Test Mode: GPRS850-4Slot								
Bottom	Fixed	189	836.4	0	23.53	0.026	1.100	1.6
Note: when the 1-g SAR is ≤ 0.8 W/kg, testing for low and high channel is optional, refer to KDB 941225.								

SAR MEASUREMENT								
Ambient Temperature (°C) : 21.5 ±2				Relative Humidity (%): 52				
Liquid Temperature (°C) : 21.0 ±2				Depth of Liquid (cm):>15				
Product: Panel computer								
Test Mode: PCS 1900								
Test Position Body	Antenna Position	Frequency		Separation Distance (mm)	Frame Power (dBm)	Power Drift (<±0.2)	SAR 1g (W/kg)	Limit (W/kg)
		Channel	MHz					
Bottom	Fixed	512	1850.2	0	20.92	--	--	1.6
Bottom	Fixed	661	1880.0	0	20.78	0.025	1.000	1.6
Bottom	Fixed	810	1909.8	0	20.44	--	--	1.6
Primary landscape	Fixed	661	1880.0	0	20.78	-0.022	0.102	1.6
Primary portrait	Fixed	661	1880.0	0	20.78	-0.091	0.399	1.6
Test Mode: GPRS1900-2Slot								
Bottom	Fixed	512	1850.2	0	21.87	0.046	1.120	1.6
Bottom	Fixed	661	1880.0	0	21.76	0.035	1.240	1.6
Bottom	Fixed	810	1909.8	0	21.42	-0.104	**1.420**	1.6
Test Mode: GPRS1900-3Slot								
Bottom	Fixed	661	1880.0	0	21.52	0.014	1.170	1.6
Test Mode: GPRS1900-4Slot								
Bottom	Fixed	661	1880.0	0	20.72	0.032	0.994	1.6
Note: when the 1-g SAR is ≤ 0.8 W/kg, testing for low and high channel is optional, refer to KDB 941225.								

SAR MEASUREMENT								
Ambient Temperature (°C) : 21.5 ±2				Relative Humidity (%): 52				
Liquid Temperature (°C) : 21.0 ±2				Depth of Liquid (cm):>15				
Product: Panel computer								
Test Mode: WCDMA Band V								
Test Position Body	Antenna Position	Frequency		Separation Distance (mm)	Frame Power (dBm)	Power Drift (<±0.2)	SAR 1g (W/kg)	Limit (W/kg)
		Channel	MHz					
Bottom	Fixed	4132	826.4	0	22.22	0.066	0.898	1.6
Bottom	Fixed	4180	836.0	0	22.37	-0.102	**0.916**	1.6
Bottom	Fixed	4233	846.6	0	22.30	-0.027	0.852	1.6
Primary landscape	Fixed	4180	836.0	0	22.37	-0.162	0.153	1.6
Primary portrait	Fixed	4180	836.0	0	22.37	0.043	0.183	1.6
Note: when the 1-g SAR is ≤ 0.8 W/kg, testing for low and high channel is optional, refer to KDB 941225.								

SAR MEASUREMENT								
Ambient Temperature (°C) : 21.5 ±2				Relative Humidity (%): 52				
Liquid Temperature (°C) : 21.0 ±2				Depth of Liquid (cm):>15				
Product: Panel computer								
Test Mode: 802.11b								
Test Position Body	Antenna Position	Frequency		Separation Distance (mm)	Average Power (dBm)	Power Drift (<±0.2)	SAR 1g (W/kg)	Limit (W/kg)
		Channel	MHz					
Bottom	Fixed	1	2412	0	15.25	--	--	1.6
Bottom	Fixed	6	2437	0	15.21	--	--	1.6
Bottom	Fixed	11	2462	0	15.52	-0.047	0.539	1.6
Primary portrait	Fixed	11	2462	0	15.52	0.074	0.102	1.6
Secondary landscape	Fixed	11	2462	0	15.52	0.115	0.044	1.6
Note: when the 1-g SAR is ≤ 0.8 W/kg, testing for low and high channel is optional, refer to KDB 941225.								

Appendix A. SAR System Validation Data

Date/Time: 19-12-2011

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; εr = 54.73; ρ = 1000 kg/m³ ;

Phantom section: Flat Section ; Input Power=250mW

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

DASY5 Configuration:

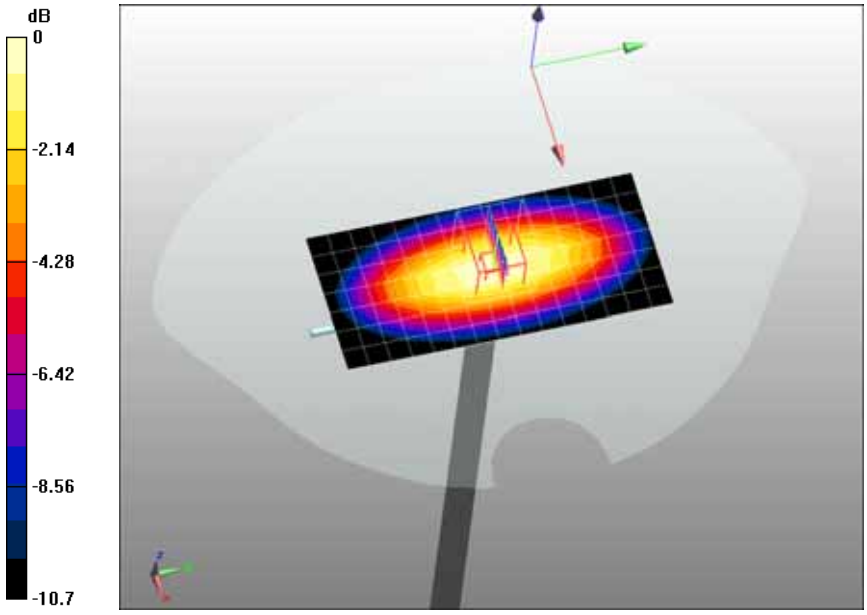
- Probe: EX3DV4 - SN3661; ConvF(9.58, 9.58, 9.58); Calibrated: 24/01/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1291; Calibrated: 10/10/2011
- Phantom: SAM1; Type: SAM; Serial: TP1561
- Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Configuration/System Check GSM835 Body/Area Scan (8x16x1): Measurement grid: dx=10mm, dy=10mm, Maximum value of SAR (measured) = 2.49 mW/g

Configuration/System Check GSM835 Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm, Reference Value = 52.1 V/m; Power Drift = 0.027 dB

Peak SAR (extrapolated) = 3.68 W/kg

SAR(1 g) = 2.42 mW/g; SAR(10 g) = 1.56 mW/g Maximum value of SAR (measured) = 2.61 mW/g



0 dB = 2.61mW/g

Date/Time: 19-12-2011

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 = 1.54 mho/m; εr = 52.5; ρ = 1000 kg/m³;

Phantom section: Flat Section ; Input Power=250mW

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

DASY5 Configuration:

- Probe: EX3DV4 - SN3661; ConvF(7.72, 7.72, 7.72); Calibrated: 24/01/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1291; Calibrated: 10/10/2011
- Phantom: SAM2; Type: SAM; Serial: TP1562
- Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

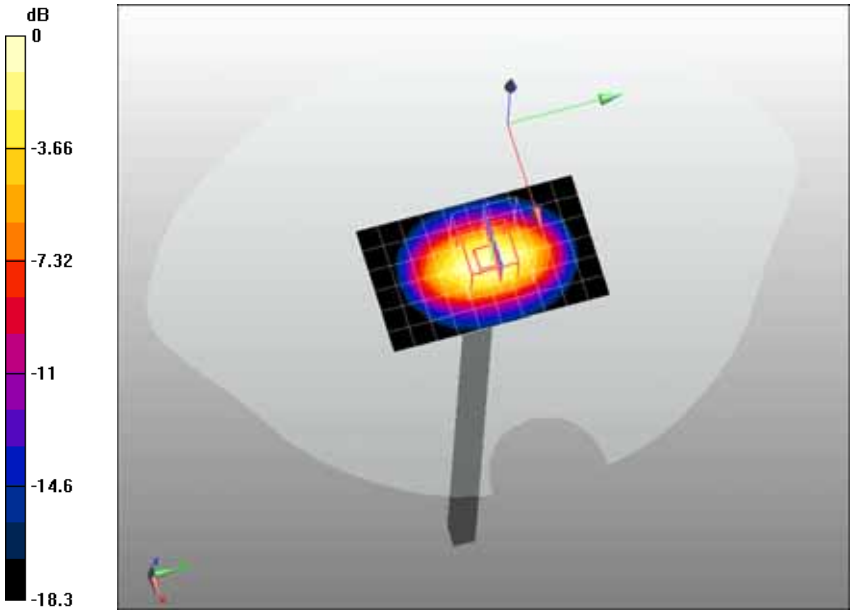
Configuration/System Check PCS1900 Body/Area Scan (7x11x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 11.9 mW/g

Configuration/System Check PCS1900 Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm, Reference Value = 87.6 V/m; Power Drift = 0.026 dB

Peak SAR (extrapolated) = 19.9 W/kg

SAR(1 g) = 10.6 mW/g; SAR(10 g) = 5.41 mW/g Maximum value of SAR (measured) = 11.9 mW/g



0 dB = 11.9mW/g

Date/Time: 19-12-2011

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 = 2 mho/m; εr = 52.1; ρ = 1000 kg/m^3;

Phantom section: Flat Section ; Input Power=250mW

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

DASY5 Configuration:

- Probe: EX3DV4 - SN3661; ConvF(7.55, 7.55, 7.55); Calibrated: 24/01/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1291; Calibrated: 10/10/2011
- Phantom: SAM1; Type: SAM; Serial: TP1561
- Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

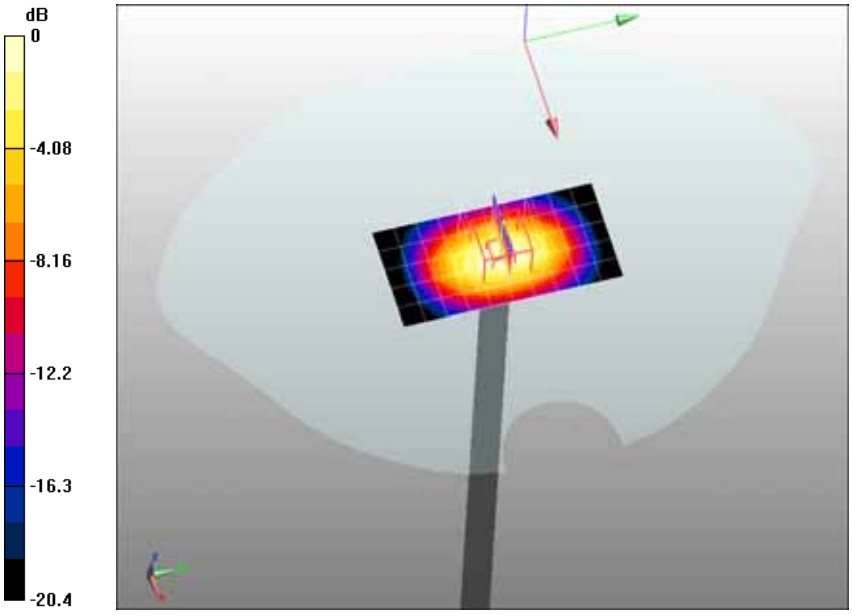
Configuration/Body 2450MHz/Area Scan (6x10x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 13 mW/g

Configuration/Body 2450MHz/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm, Reference Value = 85.6 V/m; Power Drift = -0.142 dB

Peak SAR (extrapolated) = 25.9 W/kg

SAR(1 g) = 12.8 mW/g; SAR(10 g) = 5.95 mW/g Maximum value of SAR (measured) = 14.8 mW/g



0 dB = 14.8mW/g

Appendix B. SAR measurement Data

Date/Time: 19-12-2011

Test Laboratory: QuieTek Lab

GSM850 Low-Bottom

DUT: Panel computer; Type: R800C

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 = 0.96 mho/m; εr = 54.8; ρ = 1000 kg/m³ ; Phantom section: Flat Section

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

DASY5 Configuration:

- Probe: EX3DV4 - SN3661; ConvF(9.58, 9.58, 9.58); Calibrated: 24/01/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1291; Calibrated: 10/10/2011
- Phantom: SAM1; Type: SAM; Serial: TP1561
- Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

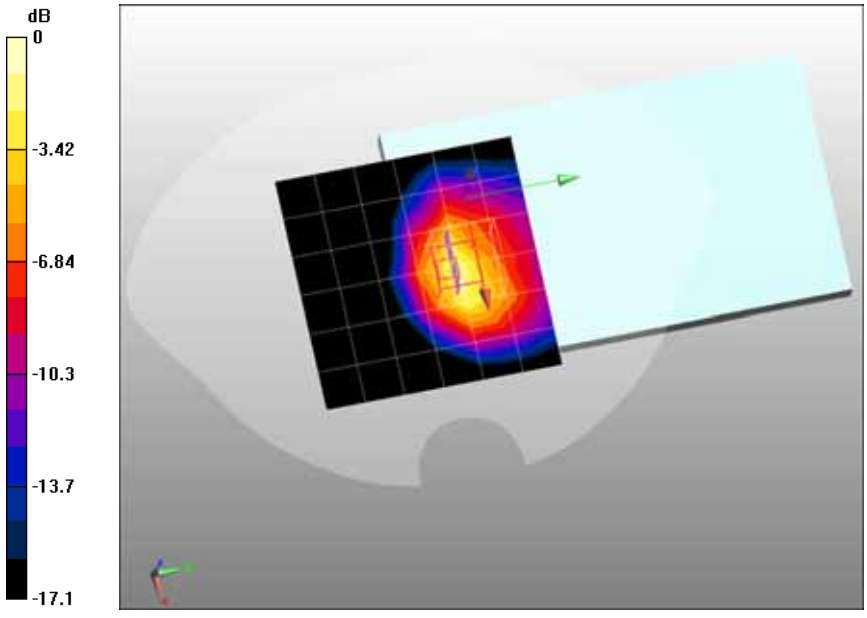
Configuration/GSM850 Low-Bottom/Area Scan (7x7x1): Measurement grid: dx=20mm, dy=20mm

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

Configuration/GSM850 Low-Bottom/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm, Reference Value = 25.3 V/m; Power Drift = 0.016 dB

Peak SAR (extrapolated) = 2.44 W/kg

SAR(1 g) = 1.18 mW/g; SAR(10 g) = 0.570 mW/g Maximum value of SAR (measured) = 1.43 mW/g



0 dB = 1.43mW/g

Date/Time: 19-12-2011

Test Laboratory: QuieTek Lab

GSM850 Mid-Bottom

DUT: Panel computer; Type: R800C

Communication System: Generic GSM; Communication System Band: GSM 850 (824.0 - 849.0 MHz); Duty Cycle: 1:8.3; Frequency: 836.4 MHz; Medium parameters used: f = 836.4 MHz; σ = 0.98 mho/m; εr = 54.7; ρ = 1000 kg/m^3 ; Phantom section: Flat Section

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

DASY5 Configuration:

- Probe: EX3DV4 - SN3661; ConvF(9.58, 9.58, 9.58); Calibrated: 24/01/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1291; Calibrated: 10/10/2011
- Phantom: SAM2; Type: SAM; Serial: TP1562
- Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

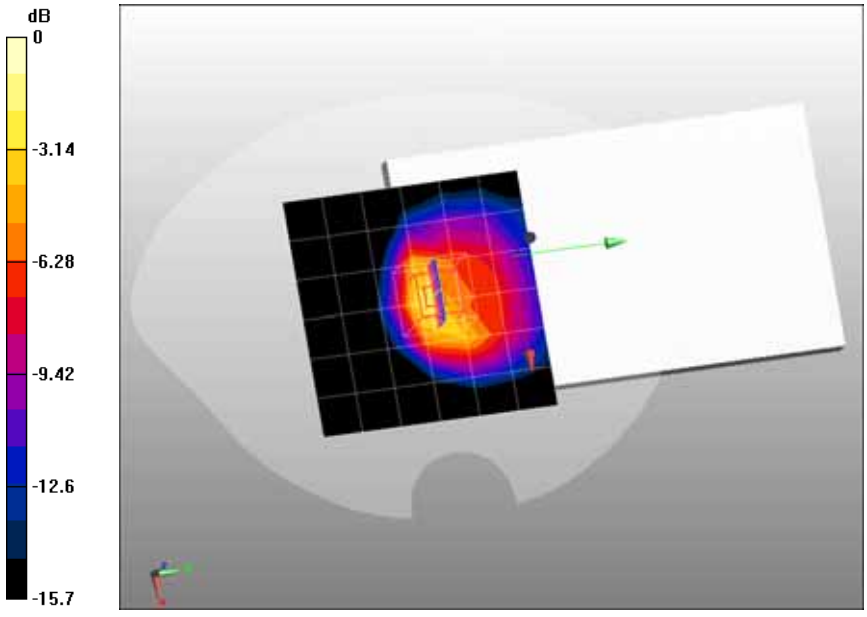
Configuration/GSM850 Mid-Bottom/Area Scan (7x7x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (measured) = 0.992 mW/g

Configuration/GSM850 Mid-Bottom/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm, Reference Value = 39.3 V/m; Power Drift = 0.036 dB

Peak SAR (extrapolated) = 2.71 W/kg

SAR(1 g) = 1.34 mW/g; SAR(10 g) = 0.663 mW/g Maximum value of SAR (measured) = 1.54 mW/g



0 dB = 1.54mW/g

Date/Time: 19-12-2011

Test Laboratory: QuieTek Lab

GSM850 High-Bottom

DUT: Panel computer; Type: R800C

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; εr = 54.6; ρ = 1000 kg/m^3 ; Phantom section: Flat Section

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

DASY5 Configuration:

- Probe: EX3DV4 - SN3661; ConvF(9.58, 9.58, 9.58); Calibrated: 24/01/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1291; Calibrated: 10/10/2011
- Phantom: SAM1; Type: SAM; Serial: TP1561
- Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

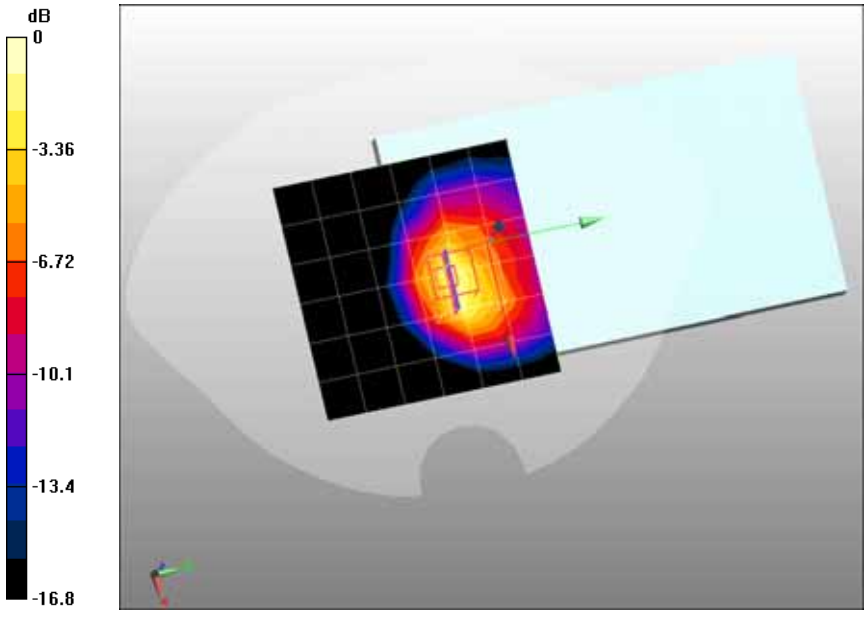
Configuration/GSM850 High-Bottom/Area Scan (7x7x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (measured) = 1.23 mW/g

Configuration/GSM850 High-Bottom/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm, Reference Value = 27.8 V/m; Power Drift = -0.023 dB

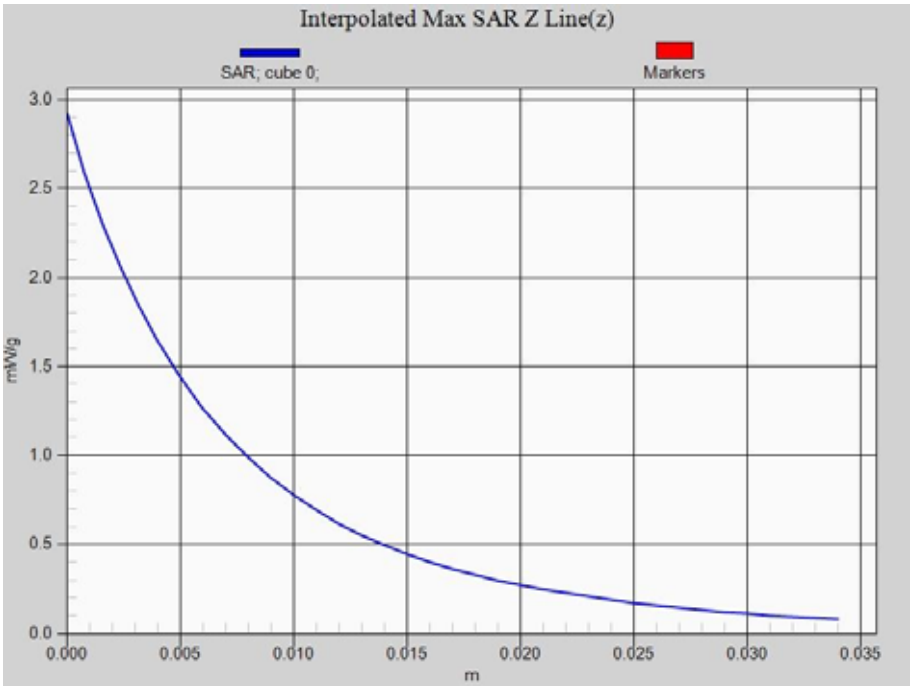
Peak SAR (extrapolated) = 2.92 W/kg

SAR(1 g) = 1.41 mW/g; SAR(10 g) = 0.688 mW/g Maximum value of SAR (measured) = 1.6 mW/g



0 dB = 1.6mW/g

Z-Axis Plot


Interpolated Max SAR Z Line(z)
SAR; cube 0;
Markers
3.0
2.5
2.0
1.5
1.0
0.5
0.0
mW/g
0.000
0.005
0.010
0.015
0.020
0.025
0.030
0.035
m

Date/Time: 19-12-2011

Test Laboratory: QuieTek Lab

GSM850 Mid-Primary landscape

DUT: Panel computer; Type: R800C

Communication System: Generic GSM; Communication System Band: GSM 850 (824.0 - 849.0 MHz); Duty Cycle: 1:8.3; Frequency: 836.4 MHz; Medium parameters used: f = 836.4 MHz; σ = 0.98 mho/m; εr = 54.7; ρ = 1000 kg/m^3 ; Phantom section: Flat Section

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

DASY5 Configuration:

- Probe: EX3DV4 - SN3661; ConvF(9.58, 9.58, 9.58); Calibrated: 24/01/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1291; Calibrated: 10/10/2011
- Phantom: SAM1; Type: SAM; Serial: TP1561
- Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

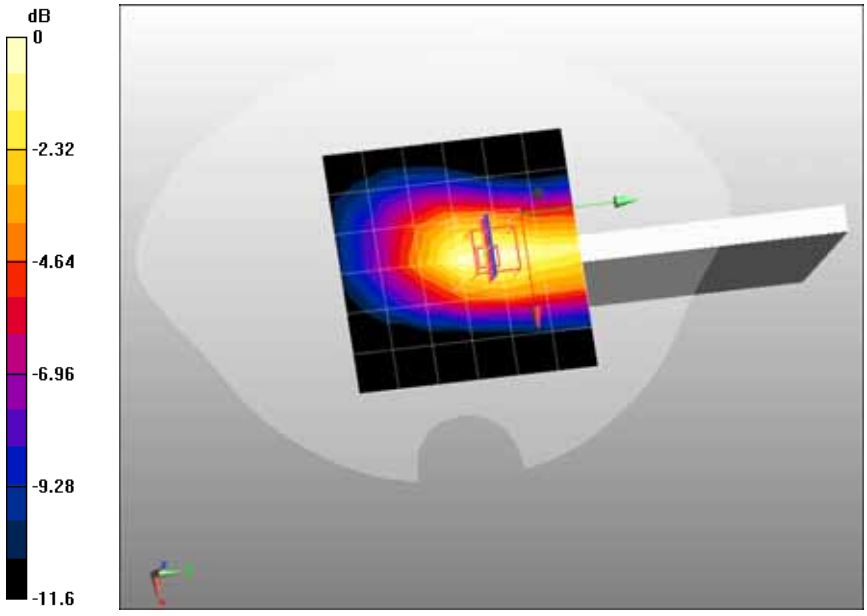
Configuration/GSM850 Mid-Primary landscape/Area Scan (7x7x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (measured) = 0.224 mW/g

Configuration/GSM850 Mid-Primary landscape/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm, Reference Value = 12.3 V/m; Power Drift = 0.035 dB

Peak SAR (extrapolated) = 0.315 W/kg

SAR(1 g) = 0.210 mW/g; SAR(10 g) = 0.137 mW/g Maximum value of SAR (measured) = 0.226 mW/g



0 dB = 0.226mW/g

Date/Time: 19-12-2011

Test Laboratory: QuieTek Lab

GSM850 Mid-Primary portrait

DUT: Panel computer; Type: R800C

Communication System: Generic GSM; Communication System Band: GSM 850 (824.0 - 849.0 MHz); Duty Cycle: 1:8.3; Frequency: 836.4 MHz; Medium parameters used: f = 836.4 MHz; σ = 0.98 mho/m; εr = 54.7; ρ = 1000 kg/m³ ; Phantom section: Flat Section

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

DASY5 Configuration:

- Probe: EX3DV4 - SN3661; ConvF(9.58, 9.58, 9.58); Calibrated: 24/01/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1291; Calibrated: 10/10/2011
- Phantom: SAM1; Type: SAM; Serial: TP1561
- Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

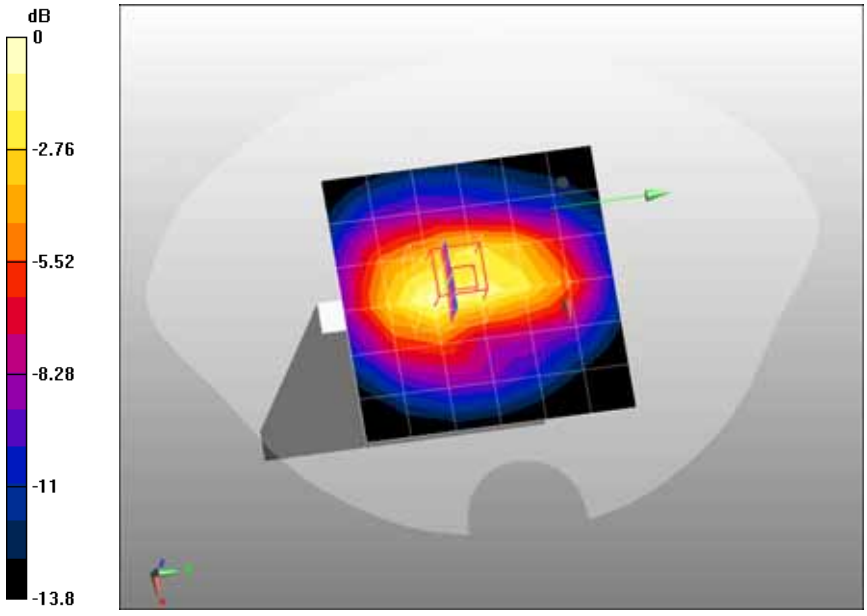
Configuration/GSM850 Mid-Primary portrait/Area Scan (7x7x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (measured) = 0.247 mW/g

Configuration/GSM850 Mid-Primary portrait/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm, Reference Value = 14 V/m; Power Drift = 0.165 dB

Peak SAR (extrapolated) = 0.416 W/kg

SAR(1 g) = 0.250 mW/g; SAR(10 g) = 0.152 mW/g Maximum value of SAR (measured) = 0.277 mW/g



0 dB = 0.277mW/g

Date/Time: 19-12-2011

Test Laboratory: QuieTek Lab

GPRS850 Mid(2up)-Bottom

DUT: Panel computer; Type: R800C

Communication System: GPRS/EGPRS-2 Slot; Communication System Band: GSM850; Duty Cycle: 1:4.2 ; Frequency: 836.4 MHz; Medium parameters used: f = 836.4 MHz; σ = 0.98 mho/m; εr = 54.7; ρ = 1000 kg/m³ ; Phantom section: Flat Section

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

DASY5 Configuration:

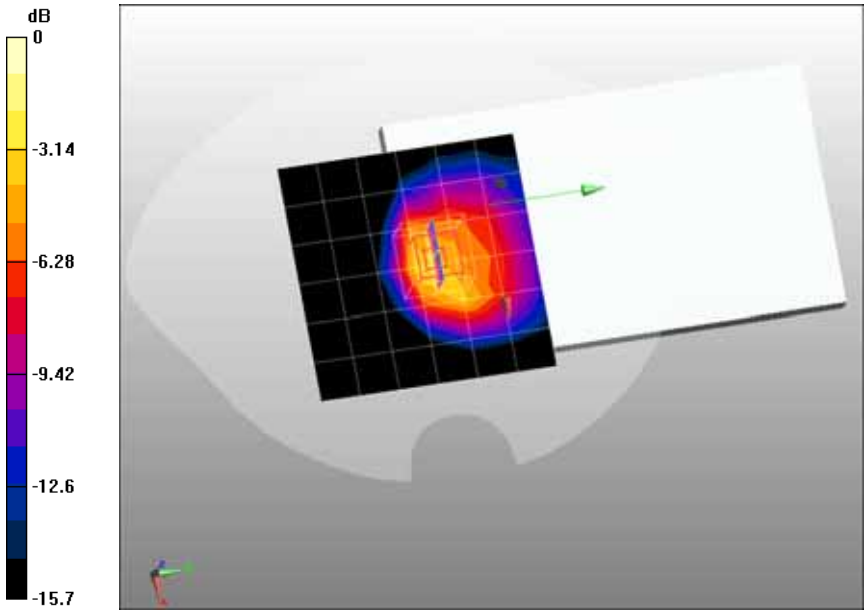
- Probe: EX3DV4 - SN3661; ConvF(9.58, 9.58, 9.58); Calibrated: 24/01/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1291; Calibrated: 10/10/2011
- Phantom: SAM2; Type: SAM; Serial: TP1562
- Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Configuration/GPRS850 Mid(2up)-Bottom/Area Scan (7x7x1): Measurement grid: dx=20mm, dy=20mm Maximum value of SAR (measured) = 0.615 mW/g

Configuration/GPRS850 Mid(2up)-Bottom/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm, Reference Value = 32.6 V/m; Power Drift = 0.053 dB

Peak SAR (extrapolated) = 2.16 W/kg

SAR(1 g) = 1.06 mW/g; SAR(10 g) = 0.526 mW/g Maximum value of SAR (measured) = 1.2 mW/g



0 dB = 1.2mW/g

Date/Time: 19-12-2011

Test Laboratory: QuieTek Lab

GPRS850 Mid(3up)-Bottom

DUT: Panel computer; Type: R800C

Communication System: GPRS/EGPRS-3 Slot; Communication System Band: GSM 850; Duty Cycle: 1:2.8 ; Frequency: 836.4 MHz; Medium parameters used: f = 836.4 MHz; σ = 0.98 mho/m; εr = 54.7; ρ = 1000 kg/m³ ; Phantom section: Flat Section

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

DASY5 Configuration:

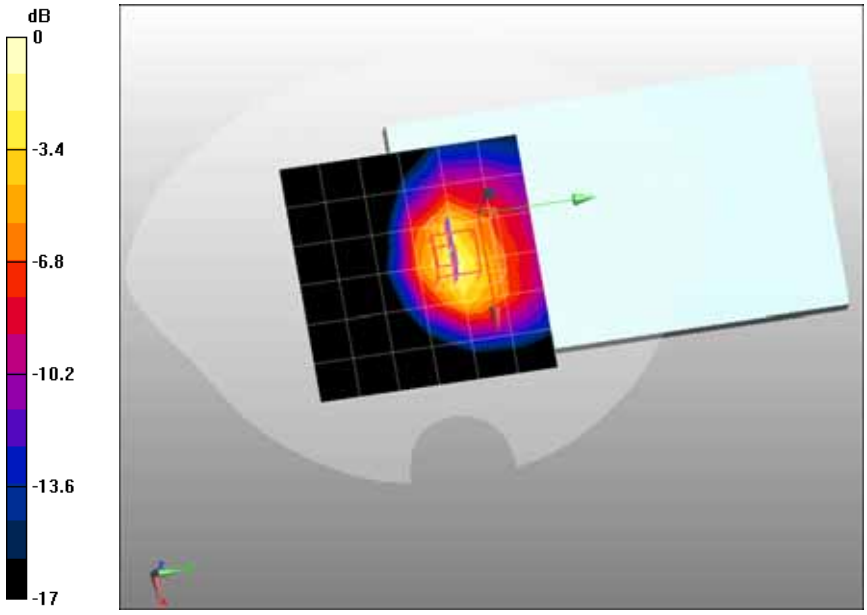
- Probe: EX3DV4 - SN3661; ConvF(9.58, 9.58, 9.58); Calibrated: 24/01/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1291; Calibrated: 10/10/2011
- Phantom: SAM1; Type: SAM; Serial: TP1561
- Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Configuration/GPRS850 Mid(3up)-Bottom/Area Scan (7x7x1): Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (measured) = 1.14 mW/g

Configuration/GPRS850 Mid(3up)-Bottom/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm, Reference Value = 27.9 V/m; Power Drift = -0.011 dB

Peak SAR (extrapolated) = 2.63 W/kg

SAR(1 g) = 1.33 mW/g; SAR(10 g) = 0.645 mW/g Maximum value of SAR (measured) = 1.59 mW/g



0 dB = 1.59mW/g

Date/Time: 19-12-2011

Test Laboratory: QuieTek Lab

GPRS850 Mid(4up)-Bottom

DUT: Panel computer; Type: R800C

Communication System: GPRS/EGPRS-4 Slot; Communication System Band: GSM 850; Duty Cycle: 1:2.1 ; Frequency: 836.4 MHz; Medium parameters used: f = 836.4 MHz; σ = 0.98 mho/m; εr = 54.7; ρ = 1000 kg/m³ ; Phantom section: Flat Section

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

DASY5 Configuration:

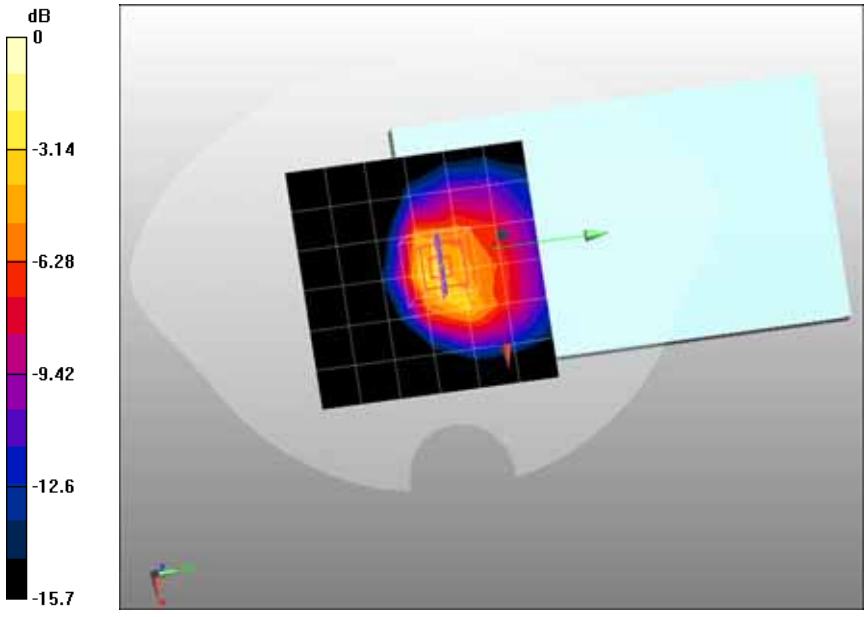
- Probe: EX3DV4 - SN3661; ConvF(9.58, 9.58, 9.58); Calibrated: 24/01/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1291; Calibrated: 10/10/2011
- Phantom: SAM2; Type: SAM; Serial: TP1562
- Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Configuration/GPRS850 Mid(4up)-Bottom/Area Scan (7x7x1): Measurement grid: dx=20mm, dy=20mm Maximum value of SAR (measured) = 0.635 mW/g

Configuration/GPRS850 Mid(4up)-Bottom/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm, Reference Value = 33.3 V/m; Power Drift = 0.026 dB

Peak SAR (extrapolated) = 2.22 W/kg

SAR(1 g) = 1.1 mW/g; SAR(10 g) = 0.543 mW/g Maximum value of SAR (measured) = 1.25 mW/g



0 dB = 1.25mW/g

Date/Time: 19-12-2011

Test Laboratory: QuieTek Lab

PCS1900 Mid-Bottom

DUT: Panel computer; Type: R800C

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 = 1.51 mho/m; εr = 52.5; ρ = 1000 kg/m³ ; Phantom section: Flat Section

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

DASY5 Configuration:

- Probe: EX3DV4 - SN3661; ConvF(7.72, 7.72, 7.72); Calibrated: 24/01/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1291; Calibrated: 10/10/2011
- Phantom: SAM2; Type: SAM; Serial: TP1562
- Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

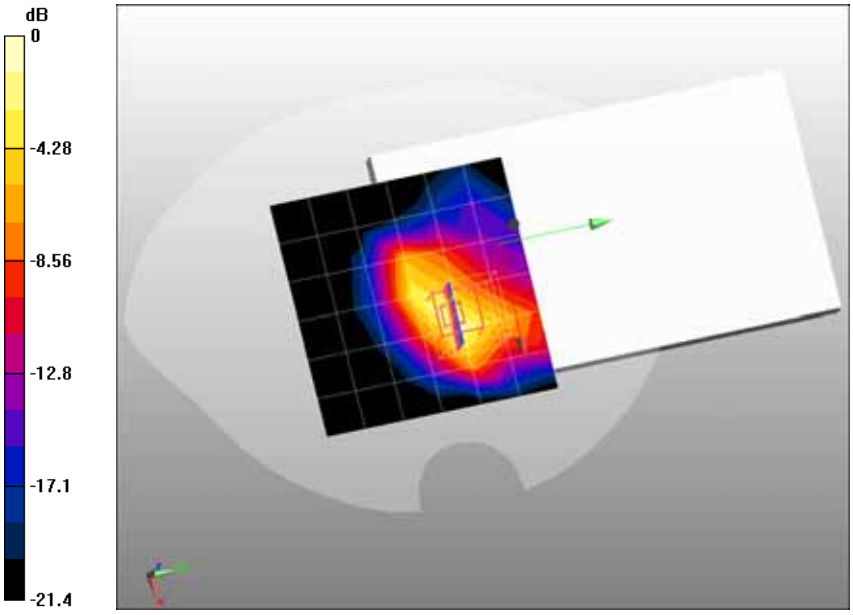
Configuration/PCS1900 Mid-Bottom/Area Scan (7x7x1): Measurement grid: dx=20mm, dy=20mm

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

Configuration/PCS1900 Mid-Bottom/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm, Reference Value = 25.6 V/m; Power Drift = 0.025 dB

Peak SAR (extrapolated) = 2.2 W/kg

SAR(1 g) = 1 mW/g; SAR(10 g) = 0.458 mW/g Maximum value of SAR (measured) = 1.08 mW/g



0 dB = 1.08mW/g

Date/Time: 19-12-2011

Test Laboratory: QuieTek Lab

PCS1900 Mid-Primary landscape

DUT: Panel computer; Type: R800C

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 = 1.51 mho/m; εr = 52.5; ρ = 1000 kg/m³ ; Phantom section: Flat Section

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

DASY5 Configuration:

- Probe: EX3DV4 - SN3661; ConvF(7.72, 7.72, 7.72); Calibrated: 24/01/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1291; Calibrated: 10/10/2011
- Phantom: SAM2; Type: SAM; Serial: TP1562
- Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

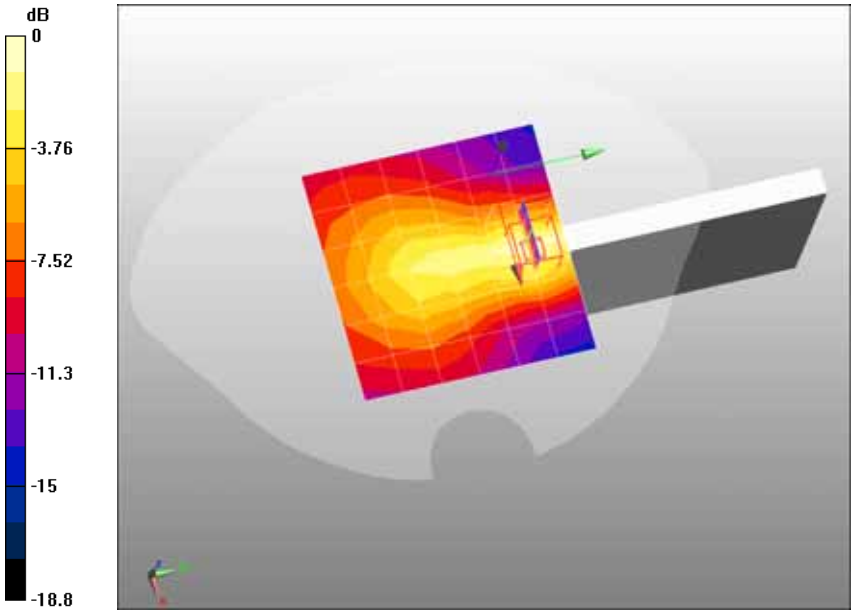
Configuration/PCS1900 Mid-Primary landscape/Area Scan (7x7x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (measured) = 0.105 mW/g

Configuration/PCS1900 Mid-Primary landscape/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm, Reference Value = 7.68 V/m; Power Drift = -0.022 dB

Peak SAR (extrapolated) = 0.179 W/kg

SAR(1 g) = 0.102 mW/g; SAR(10 g) = 0.054 mW/g Maximum value of SAR (measured) = 0.109 mW/g



0 dB = 0.109mW/g

Date/Time: 19-12-2011

Test Laboratory: QuieTek Lab

PCS1900 Mid-Primary portrait

DUT: Panel computer; Type: R800C

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 = 1.51 mho/m; εr = 52.5; ρ = 1000 kg/m³ ; Phantom section: Flat Section

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

DASY5 Configuration:

- Probe: EX3DV4 - SN3661; ConvF(7.72, 7.72, 7.72); Calibrated: 24/01/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1291; Calibrated: 10/10/2011
- Phantom: SAM2; Type: SAM; Serial: TP1562
- Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

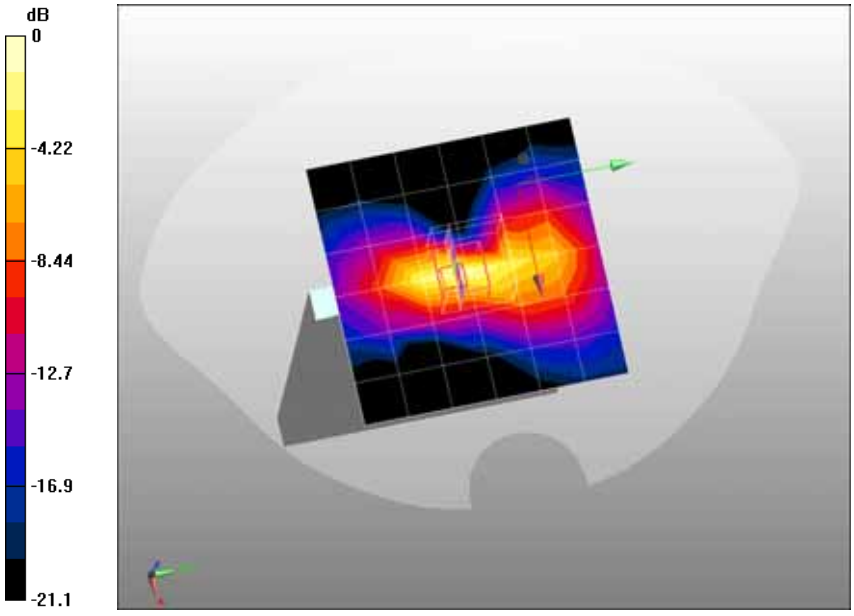
Configuration/PCS1900 Mid-Primary portrait/Area Scan (7x7x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (measured) = 0.362 mW/g

Configuration/PCS1900 Mid-Primary portrait/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm, Reference Value = 14.2 V/m; Power Drift = -0.091 dB

Peak SAR (extrapolated) = 0.848 W/kg

SAR(1 g) = 0.399 mW/g; SAR(10 g) = 0.175 mW/g Maximum value of SAR (measured) = 0.449 mW/g



0 dB = 0.449mW/g

Date/Time: 19-12-2011

Test Laboratory: QuieTek Lab

GPRS1900 Low(2up)-Bottom

DUT: Panel computer; Type: R800C

Communication System: GPRS/EGPRS-2 Slot; Communication System Band: PCS1900; Duty Cycle: 1:4.2 ; Frequency: 1850.2 MHz; Medium parameters used: f = 1850.2 MHz; σ = 1.48 mho/m; εr = 52.6; ρ = 1000 kg/m³ ; Phantom section: Flat Section

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

DASY5 Configuration:

- Probe: EX3DV4 - SN3661; ConvF(7.72, 7.72, 7.72); Calibrated: 24/01/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1291; Calibrated: 10/10/2011
- Phantom: SAM2; Type: SAM; Serial: TP1562
- Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

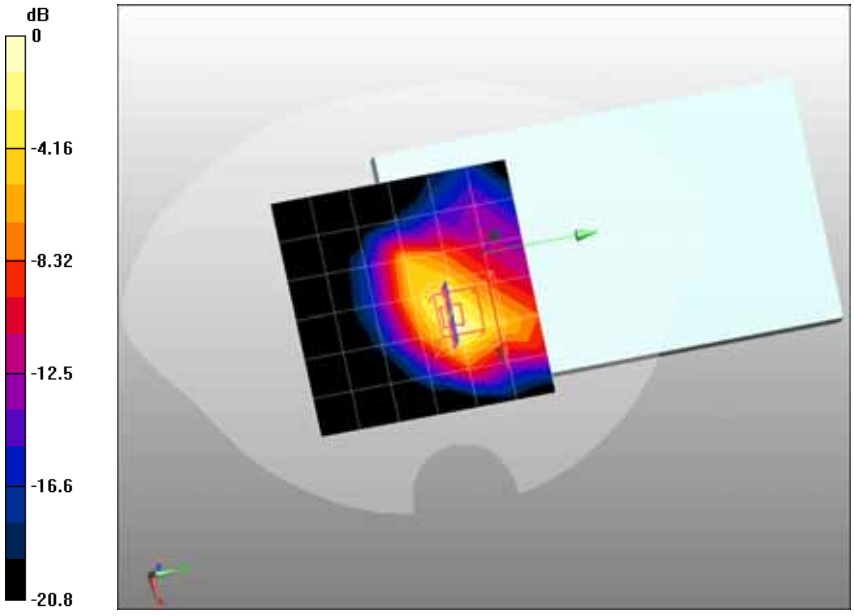
Configuration/GPRS1900 Low(2up)-Bottom/Area Scan (7x7x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (measured) = 0.972 mW/g

Configuration/GPRS1900 Low(2up)-Bottom/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm, Reference Value = 22.7 V/m; Power Drift = 0.046 dB

Peak SAR (extrapolated) = 2.51 W/kg

SAR(1 g) = 1.12 mW/g; SAR(10 g) = 0.519 mW/g Maximum value of SAR (measured) = 1.18 mW/g



0 dB = 1.18mW/g

Date/Time: 19-12-2011

Test Laboratory: QuieTek Lab

GPRS1900 Mid(2up)-Bottom

DUT: Panel computer; Type: R800C

Communication System: GPRS/EGPRS-2 Slot; Communication System Band: PCS1900; Duty Cycle: 1:4.2 ; Frequency: 1880 MHz; Medium parameters used: f = 1880 MHz; σ = 1.51 mho/m; εr = 52.5; ρ = 1000 kg/m^3 ; Phantom section: Flat Section

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

DASY5 Configuration:

- Probe: EX3DV4 - SN3661; ConvF(7.72, 7.72, 7.72); Calibrated: 24/01/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1291; Calibrated: 10/10/2011
- Phantom: SAM2; Type: SAM; Serial: TP1562
- Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

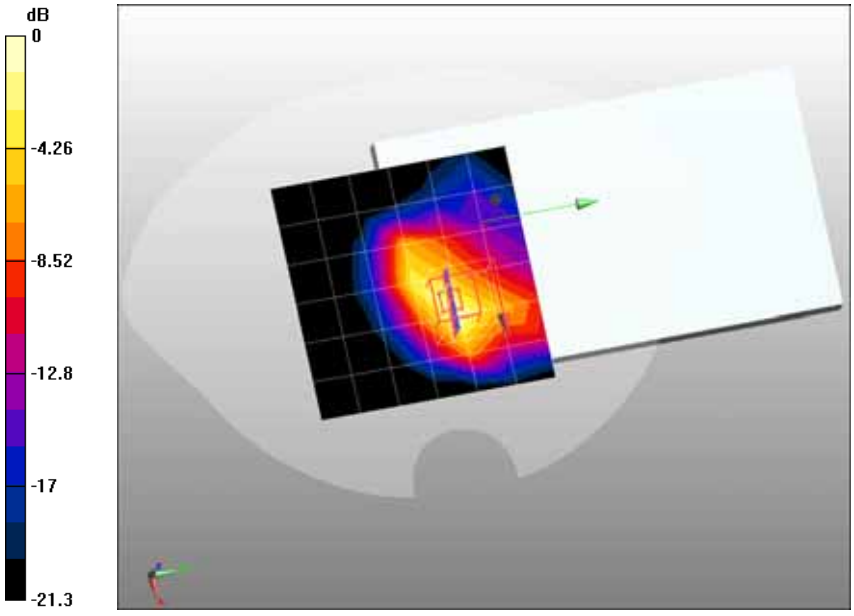
Configuration/GPRS1900 Mid(2up)-Bottom/Area Scan (7x7x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (measured) = 1.06 mW/g

Configuration/GPRS1900 Mid(2up)-Bottom/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm, Reference Value = 27.2 V/m; Power Drift = 0.035 dB

Peak SAR (extrapolated) = 2.79 W/kg

SAR(1 g) = 1.24 mW/g; SAR(10 g) = 0.562 mW/g Maximum value of SAR (measured) = 1.34 mW/g



0 dB = 1.34mW/g

Date/Time: 19-12-2011

Test Laboratory: QuieTek Lab

GPRS1900 High(2up)-Bottom

DUT: Panel computer; Type: R800C

Communication System: GPRS/EGPRS-2 Slot; Communication System Band: PCS1900; Duty Cycle: 1:4.2 ; Frequency: 1909.8 MHz; Medium parameters used: f = 1909.8 MHz; σ = 1.55 mho/m; εr = 52.4; ρ = 1000 kg/m³ ; Phantom section: Flat Section

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

DASY5 Configuration:

- Probe: EX3DV4 - SN3661; ConvF(7.72, 7.72, 7.72); Calibrated: 24/01/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1291; Calibrated: 10/10/2011
- Phantom: SAM2; Type: SAM; Serial: TP1562
- Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

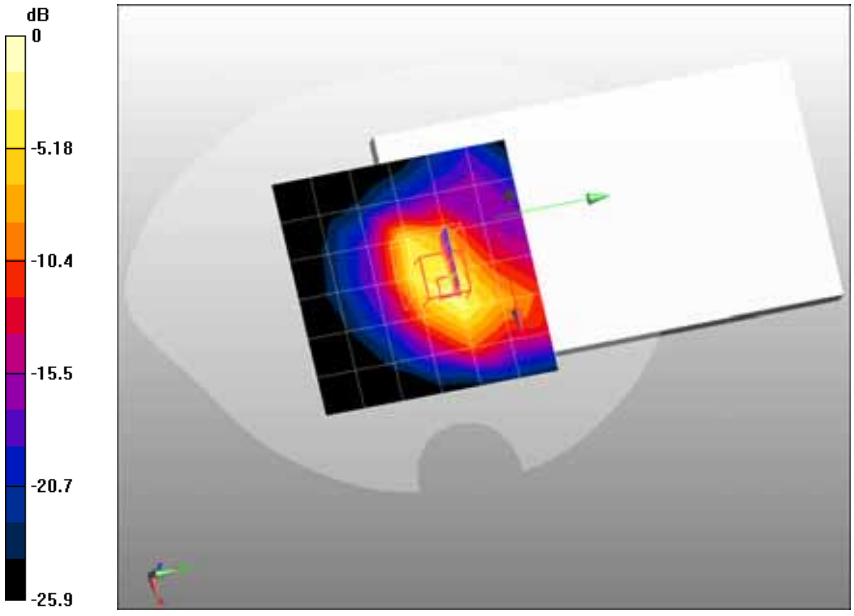
Configuration/GPRS1900 High(2up)-Bottom/Area Scan (7x7x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (measured) = 0.851 mW/g

Configuration/GPRS1900 High(2up)-Bottom/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm, Reference Value = 32.2 V/m; Power Drift = -0.104 dB

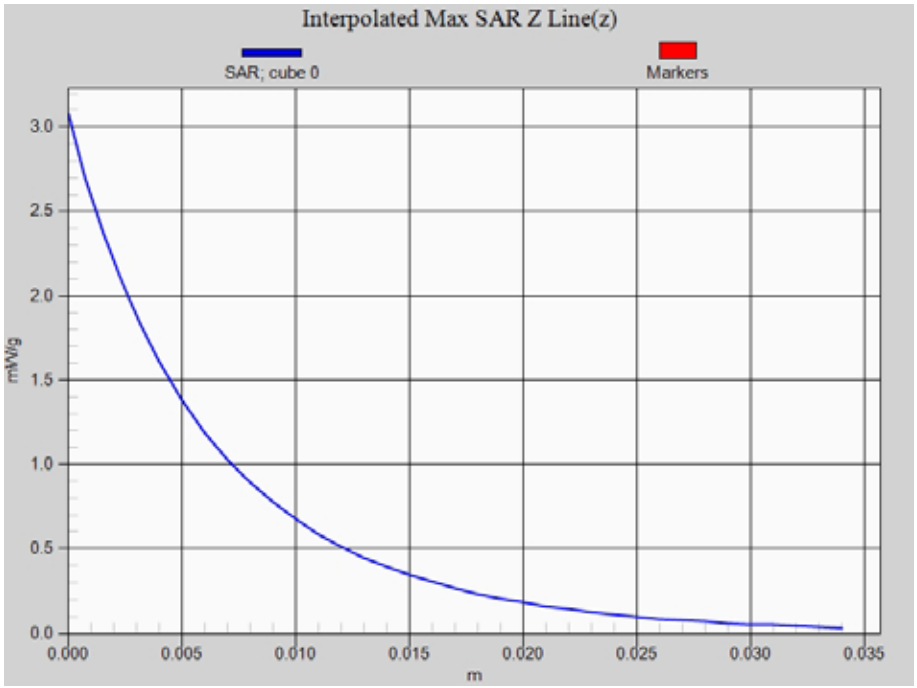
Peak SAR (extrapolated) = 3.08 W/kg

SAR(1 g) = 1.42 mW/g; SAR(10 g) = 0.629 mW/g Maximum value of SAR (measured) = 1.65 mW/g



0 dB = 1.65mW/g

Z-Axis Plot


Interpolated Max SAR Z Line(z)
SAR; cube 0
Markers
3.0
2.5
2.0
1.5
1.0
0.5
0.0
mW/g
0.000
0.005
0.010
0.015
0.020
0.025
0.030
0.035
m

Date/Time: 19-12-2011

Test Laboratory: QuieTek Lab

GPRS1900 Mid(3up)-Bottom-8DB

DUT: Panel computer; Type: R800C

Communication System: GPRS/EGPRS-3 Slot; Communication System Band: PCS 1900; Duty Cycle: 1:2.8 ; Frequency: 1880 MHz; Medium parameters used: f = 1880 MHz; σ = 1.51 mho/m; εr = 52.5; ρ = 1000 kg/m³ ; Phantom section: Flat Section

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

DASY5 Configuration:

- Probe: EX3DV4 - SN3661; ConvF(7.72, 7.72, 7.72); Calibrated: 24/01/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1291; Calibrated: 10/10/2011
- Phantom: SAM2; Type: SAM; Serial: TP1562
- Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

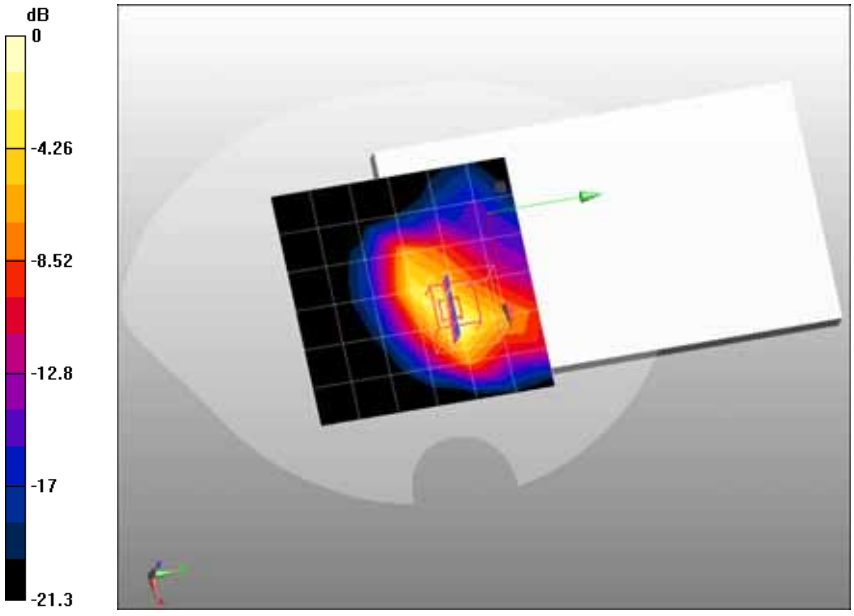
Configuration/GPRS1900 Mid(3up)-Bottom/Area Scan (7x7x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (measured) = 1.01 mW/g

Configuration/GPRS1900 Mid(3up)-Bottom/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm, Reference Value = 27.5 V/m; Power Drift = 0.014 dB

Peak SAR (extrapolated) = 2.61 W/kg

SAR(1 g) = 1.17 mW/g; SAR(10 g) = 0.532 mW/g Maximum value of SAR (measured) = 1.27 mW/g



0 dB = 1.27mW/g

Date/Time: 19-12-2011

Test Laboratory: QuieTek Lab

GPRS1900 Mid(4up)-Bottom

DUT: Panel computer; Type: R800C

Communication System: GPRS/EGPRS-4 Slot; Communication System Band: PCS 1900; Duty Cycle: 1:2.1 ; Frequency: 1880 MHz; Medium parameters used: f = 1880 MHz; σ = 1.51 mho/m; εr = 52.5; ρ = 1000 kg/m³ ; Phantom section: Flat Section

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

DASY5 Configuration:

- Probe: EX3DV4 - SN3661; ConvF(7.72, 7.72, 7.72); Calibrated: 24/01/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1291; Calibrated: 10/10/2011
- Phantom: SAM2; Type: SAM; Serial: TP1562
- Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

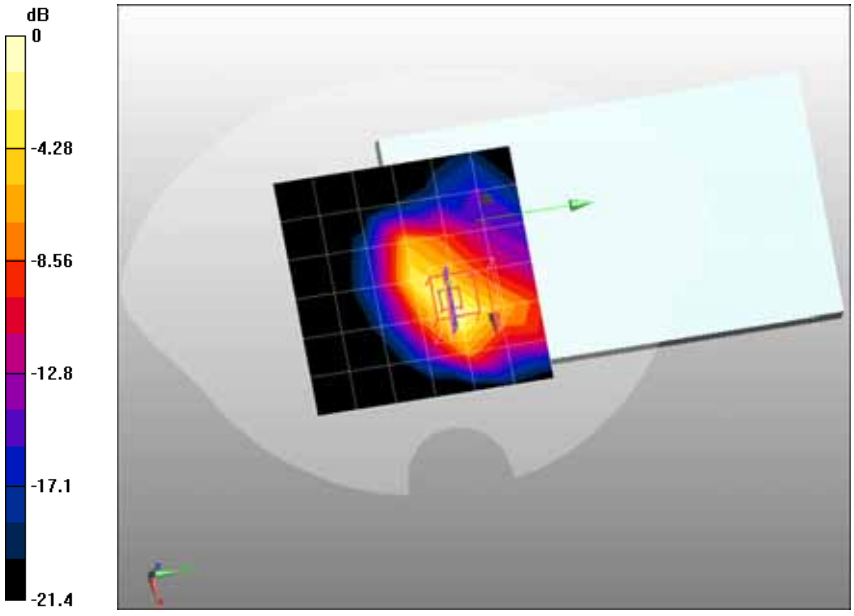
Configuration/GPRS1900 Mid(4up)-Bottom/Area Scan (7x7x1): Measurement grid: dx=20mm, dy=20mm

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

Configuration/GPRS1900 Mid(4up)-Bottom/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm, Reference Value = 25.5 V/m; Power Drift = 0.032 dB

Peak SAR (extrapolated) = 2.22 W/kg

SAR(1 g) = 0.994 mW/g; SAR(10 g) = 0.451 mW/g Maximum value of SAR (measured) = 1.07 mW/g



0 dB = 1.07mW/g

Date/Time: 19-12-2011

Test Laboratory: QuieTek Lab

WCDMA Band V Low-Bottom

DUT: Panel computer; Type: R800C

Communication System: UMTS; Communication System Band: Band V, UTRA/FDD (824.0-849.0MHz); Duty Cycle: 1:1; Frequency: 826.4 MHz; Medium parameters used: f = 826.4 MHz; σ = 0.96 mho/m; εr = 54.8; ρ = 1000 kg/m³ ; Phantom section: Flat Section

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

DASY5 Configuration:

- Probe: EX3DV4 - SN3661; ConvF(9.58, 9.58, 9.58); Calibrated: 24/01/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1291; Calibrated: 10/10/2011
- Phantom: SAM1; Type: SAM; Serial: TP1561
- Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

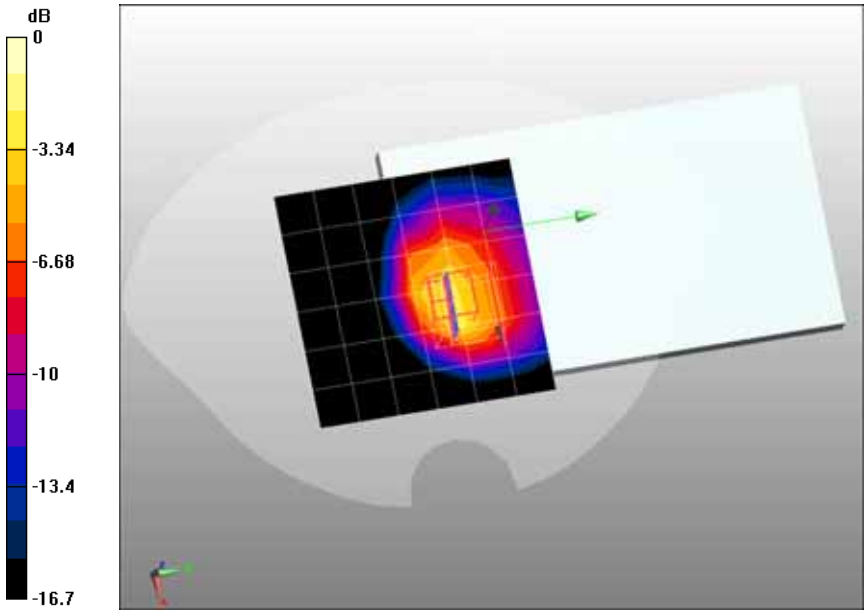
Configuration/WCDMA Band V Low-Bottom/Area Scan (7x7x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (measured) = 0.569 mW/g

Configuration/WCDMA Band V Low-Bottom/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm, Reference Value = 26.5 V/m; Power Drift = 0.066 dB

Peak SAR (extrapolated) = 1.9 W/kg

SAR(1 g) = 0.898 mW/g; SAR(10 g) = 0.417 mW/g Maximum value of SAR (measured) = 1.07 mW/g



0 dB = 1.07mW/g

Date/Time: 19-12-2011

Test Laboratory: QuieTek Lab

WCDMA Band V Mid-Bottom

DUT: Panel computer; Type: R800C

Communication System: UMTS; Communication System Band: Band V, UTRA/FDD (824.0-849.0MHz); Duty Cycle: 1:1; Frequency: 836 MHz; Medium parameters used: f = 836 MHz; σ = 0.98 mho/m; εr = 54.7; ρ = 1000 kg/m³ ; Phantom section: Flat Section

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

DASY5 Configuration:

- Probe: EX3DV4 - SN3661; ConvF(9.58, 9.58, 9.58); Calibrated: 24/01/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1291; Calibrated: 10/10/2011
- Phantom: SAM1; Type: SAM; Serial: TP1561
- Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

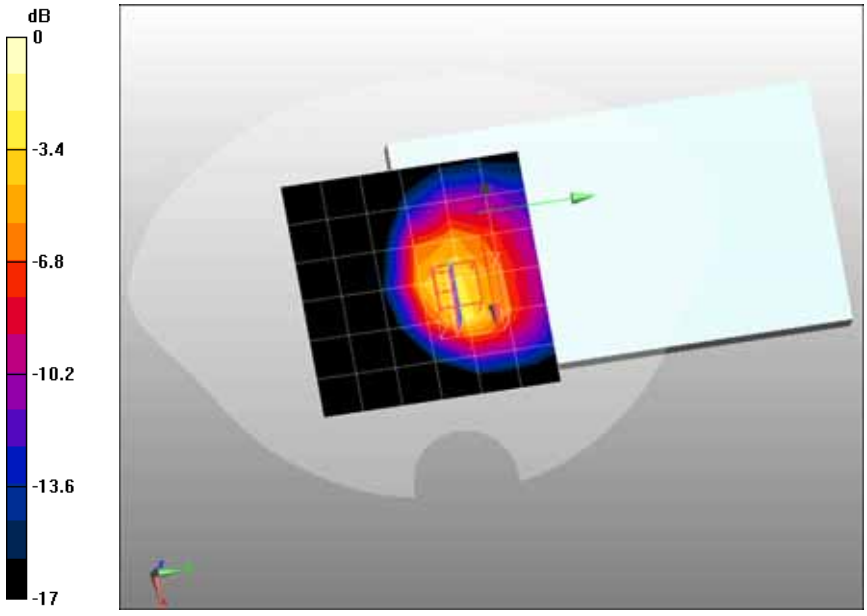
Configuration/WCDMA Band V Mid-Bottom/Area Scan (7x7x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (measured) = 0.580 mW/g

Configuration/WCDMA Band V Mid-Bottom/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm, Reference Value = 27.1 V/m; Power Drift = -0.102 dB

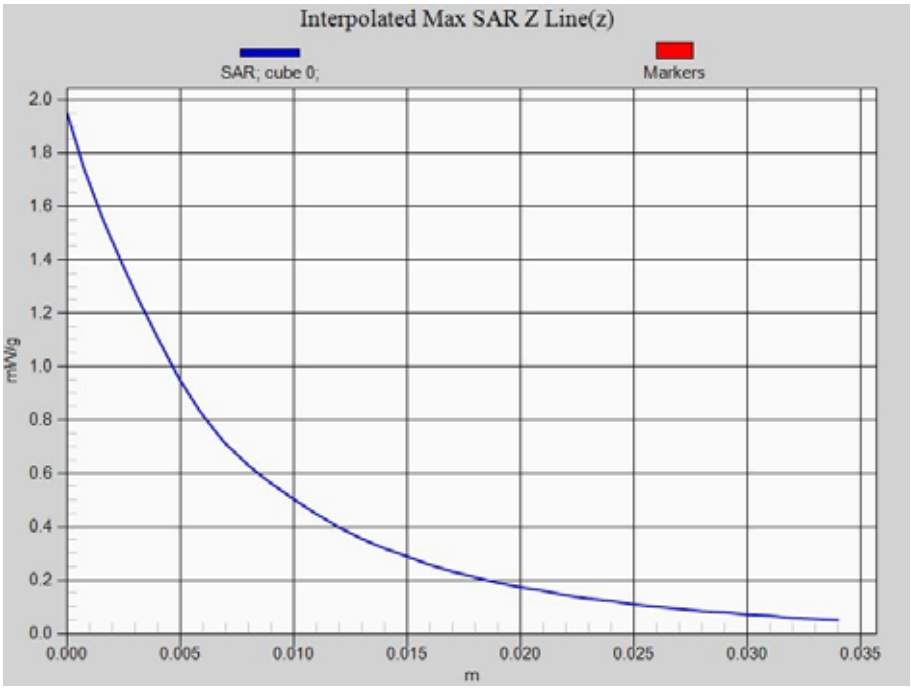
Peak SAR (extrapolated) = 1.95 W/kg

SAR(1 g) = 0.916 mW/g; SAR(10 g) = 0.421 mW/g Maximum value of SAR (measured) = 1.09 mW/g



0 dB = 1.09mW/g

Z-Axis Plot


Interpolated Max SAR Z Line(z)
SAR; cube 0;
Markers
2.0
1.8
1.6
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
mW/g
0.000
0.005
0.010
0.015
0.020
0.025
0.030
0.035
m

Date/Time: 19-12-2011

Test Laboratory: QuieTek Lab

WCDMA Band V High-Bottom

DUT: Panel computer; Type: R800C

Communication System: UMTS; Communication System Band: Band V, UTRA/FDD (824.0-849.0MHz); Duty Cycle: 1:1; Frequency: 846.6 MHz; Medium parameters used: f = 846.6 MHz; σ = 0.99 mho/m; εr = 54.6; ρ = 1000 kg/m^3 ; Phantom section: Flat Section

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

DASY5 Configuration:

- Probe: EX3DV4 - SN3661; ConvF(9.58, 9.58, 9.58); Calibrated: 24/01/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1291; Calibrated: 10/10/2011
- Phantom: SAM1; Type: SAM; Serial: TP1561
- Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

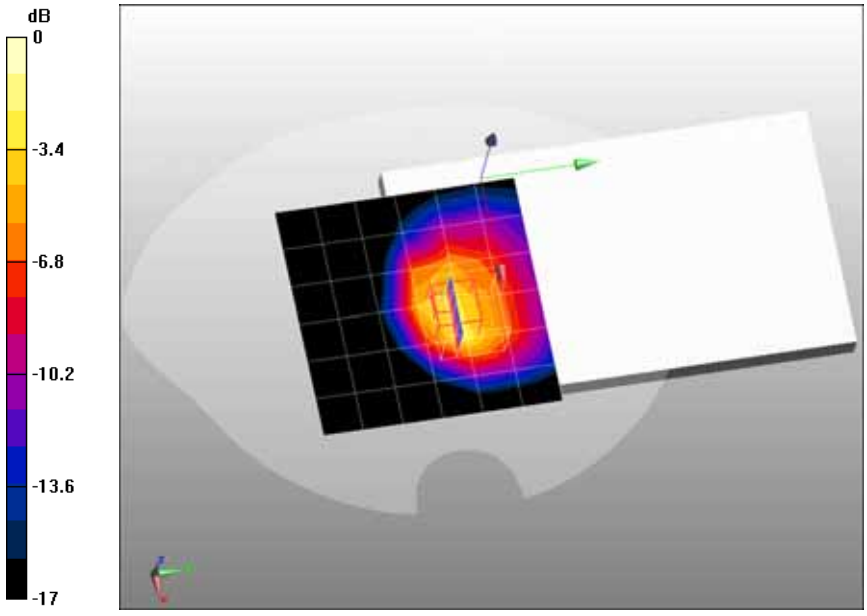
Configuration/WCDMA Band V High-Bottom/Area Scan (7x7x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (measured) = 0.540 mW/g

Configuration/WCDMA Band V High-Bottom/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm, Reference Value = 26 V/m; Power Drift = -0.027 dB

Peak SAR (extrapolated) = 1.79 W/kg

SAR(1 g) = 0.852 mW/g; SAR(10 g) = 0.389 mW/g Maximum value of SAR (measured) = 1.01 mW/g



0 dB = 1.01mW/g

Date/Time: 19-12-2011

Test Laboratory: QuieTek Lab

WCDMA Band V Mid-Primary landscape

DUT: Panel computer; Type: R800C

Communication System: UMTS; Communication System Band: Band V, UTRA/FDD (824.0-849.0MHz); Duty Cycle: 1:1; Frequency: 836 MHz; Medium parameters used: f = 836 MHz; σ = 0.98 mho/m; εr = 54.7; ρ = 1000 kg/m³ ; Phantom section: Flat Section

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

DASY5 Configuration:

- Probe: EX3DV4 - SN3661; ConvF(9.58, 9.58, 9.58); Calibrated: 24/01/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1291; Calibrated: 10/10/2011
- Phantom: SAM1; Type: SAM; Serial: TP1561
- Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

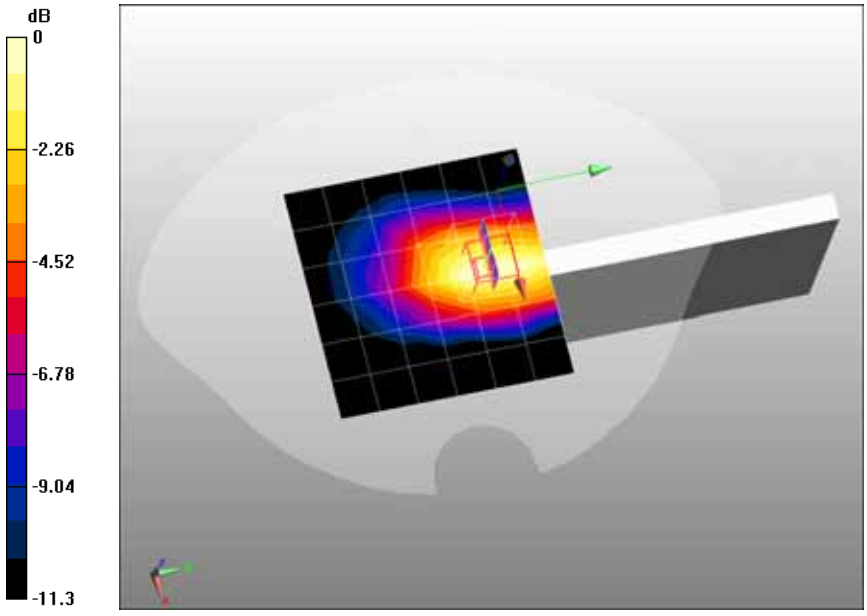
Configuration/WCDMA Band V Mid-Primary landscape/Area Scan (7x7x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (measured) = 0.163 mW/g

Configuration/WCDMA Band V Mid-Primary landscape/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm, Reference Value = 10.5 V/m; Power Drift = -0.162 dB

Peak SAR (extrapolated) = 0.229 W/kg

SAR(1 g) = 0.153 mW/g; SAR(10 g) = 0.099 mW/g Maximum value of SAR (measured) = 0.163 mW/g



0 dB = 0.163mW/g

Date/Time: 19-12-2011

Test Laboratory: QuieTek Lab

WCDMA Band V Mid-Primary portrait

DUT: Panel computer; Type: R800C

Communication System: UMTS; Communication System Band: Band V, UTRA/FDD (824.0-849.0MHz); Duty Cycle: 1:1; Frequency: 836 MHz; Medium parameters used: f = 836 MHz; σ = 0.98 mho/m; εr = 54.7; ρ = 1000 kg/m^3 ; Phantom section: Flat Section

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

DASY5 Configuration:

- Probe: EX3DV4 - SN3661; ConvF(9.58, 9.58, 9.58); Calibrated: 24/01/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1291; Calibrated: 10/10/2011
- Phantom: SAM1; Type: SAM; Serial: TP1561
- Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

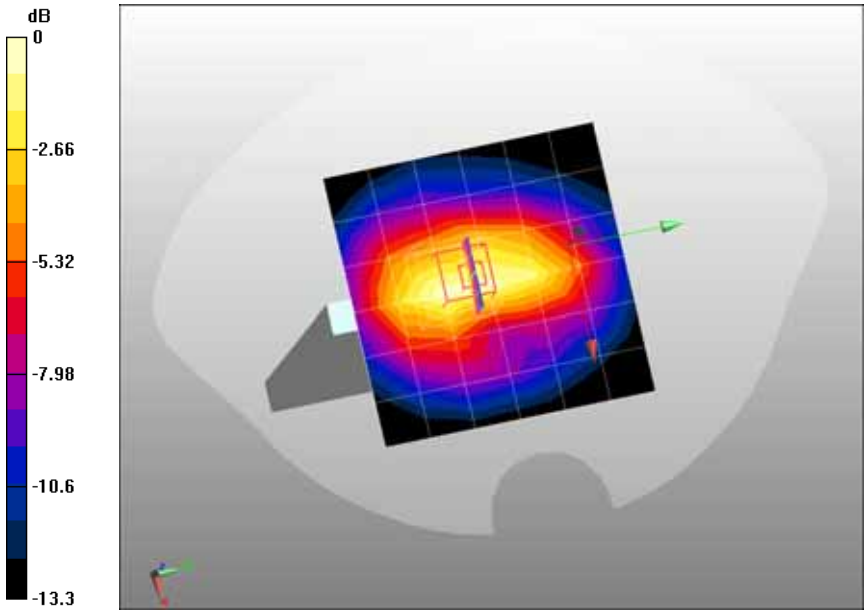
Configuration/WCDMA Band V Mid-Primary portrait/Area Scan (7x7x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (measured) = 0.195 mW/g

Configuration/WCDMA Band V Mid-Primary portrait/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm, Reference Value = 13.2 V/m; Power Drift = 0.043 dB

Peak SAR (extrapolated) = 0.301 W/kg

SAR(1 g) = 0.183 mW/g; SAR(10 g) = 0.111 mW/g Maximum value of SAR (measured) = 0.202 mW/g



0 dB = 0.202mW/g

Date/Time: 19-12-2011

Test Laboratory: QuieTek Lab

802.11b 2462MHz-Bottom

DUT: Panel computer; Type: R800C

Communication System: Wi-Fi; Communication System Band: 802.11b; Duty Cycle: 1:1; Frequency: 2462 MHz; Medium parameters used: f = 2462 MHz; σ = 2.02 mho/m; εr = 52.3; ρ = 1000 kg/m³ ; Phantom section: Flat Section

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

DASY5 Configuration:

- Probe: EX3DV4 - SN3661; ConvF(7.55, 7.55, 7.55); Calibrated: 24/01/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1291; Calibrated: 10/10/2011
- Phantom: SAM1; Type: SAM; Serial: TP1561
- Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

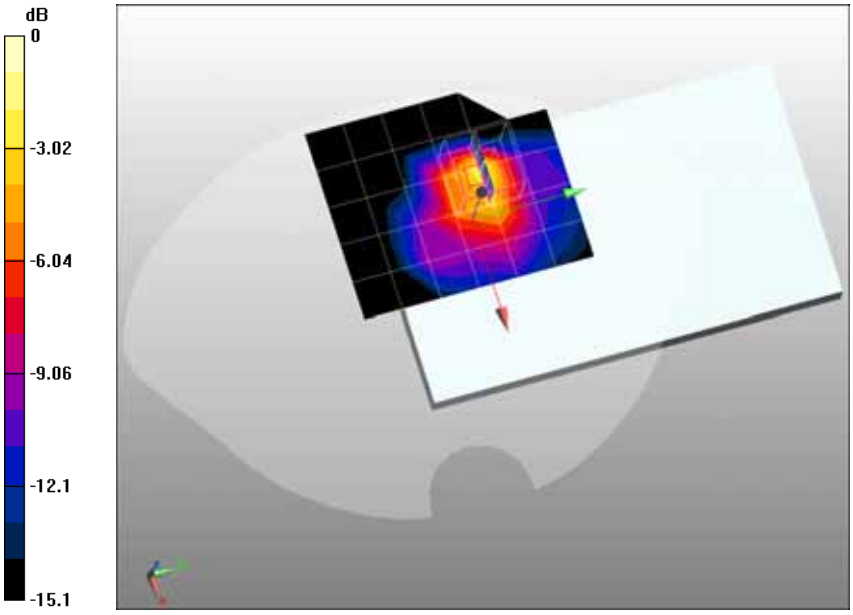
Configuration/802.11b High-Bottom/Area Scan (6x7x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (measured) = 0.395 mW/g

Configuration/802.11b High-Bottom/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm, Reference Value = 2.83 V/m; Power Drift = -0.047 dB

Peak SAR (extrapolated) = 1.61 W/kg

SAR(1 g) = 0.539 mW/g; SAR(10 g) = 0.222 mW/g Maximum value of SAR (measured) = 0.568 mW/g



0 dB = 0.568mW/g

Date/Time: 19-12-2011

Test Laboratory: QuieTek Lab

802.11b 2462MHz-Primary portrait

DUT: Panel computer; Type: R800C

Communication System: Wi-Fi; Communication System Band: 802.11b; Duty Cycle: 1:1; Frequency: 2462 MHz; Medium parameters used: f = 2462 MHz; σ = 2.02 mho/m; εr = 52.3; ρ = 1000 kg/m^3 ; Phantom section: Flat Section

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

DASY5 Configuration:

- Probe: EX3DV4 - SN3661; ConvF(7.55, 7.55, 7.55); Calibrated: 24/01/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1291; Calibrated: 10/10/2011
- Phantom: SAM1; Type: SAM; Serial: TP1561
- Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

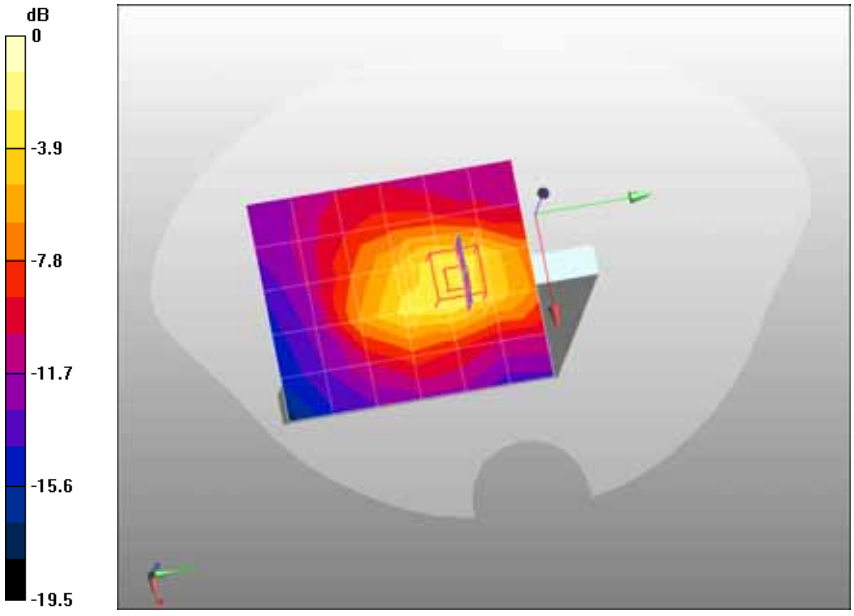
Configuration/802.11b High-Primary portrait/Area Scan (6x7x1): Measurement grid: dx=20mm, dy=20mm

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

Configuration/802.11b High-Primary portrait/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm, Reference Value = 6.04 V/m; Power Drift = 0.074 dB

Peak SAR (extrapolated) = 0.210 W/kg

SAR(1 g) = 0.102 mW/g; SAR(10 g) = 0.049 mW/g Maximum value of SAR (measured) = 0.115 mW/g



0 dB = 0.115mW/g

Date/Time: 19-12-2011

Test Laboratory: QuieTek Lab

802.11b 2462MHz-Secondary landscape

DUT: Panel computer; Type: R800C

Communication System: Wi-Fi; Communication System Band: 802.11b; Duty Cycle: 1:1; Frequency: 2462 MHz; Medium parameters used: f = 2462 MHz; σ = 2.02 mho/m; εr = 52.3; ρ = 1000 kg/m^3 ; Phantom section: Flat Section

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

DASY5 Configuration:

- Probe: EX3DV4 - SN3661; ConvF(7.55, 7.55, 7.55); Calibrated: 24/01/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1291; Calibrated: 10/10/2011
- Phantom: SAM1; Type: SAM; Serial: TP1561
- Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

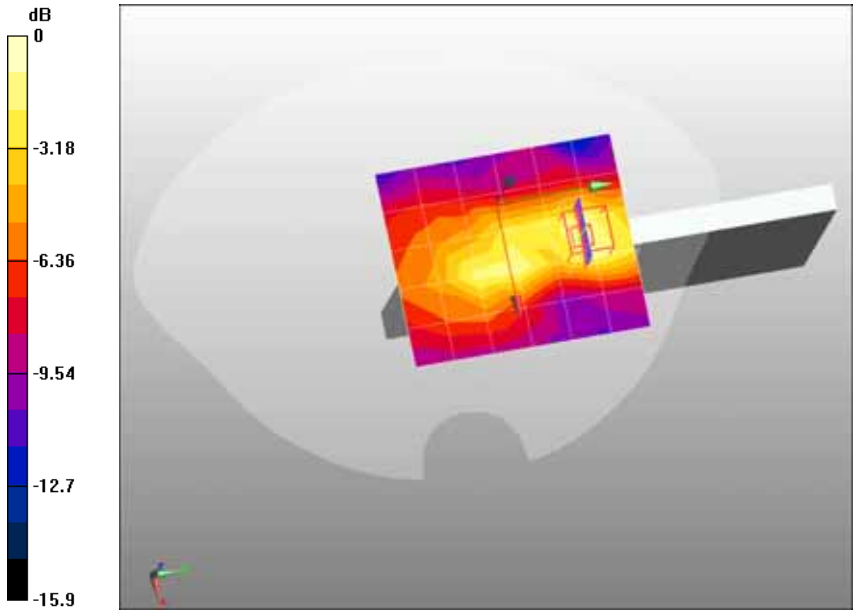
Configuration/802.11b High-Secondary landscape/Area Scan (6x7x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (measured) = 0.037 mW/g

Configuration/802.11b High-Secondary landscape/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm, Reference Value = 2.54 V/m; Power Drift = 0.115 dB

Peak SAR (extrapolated) = 0.085 W/kg

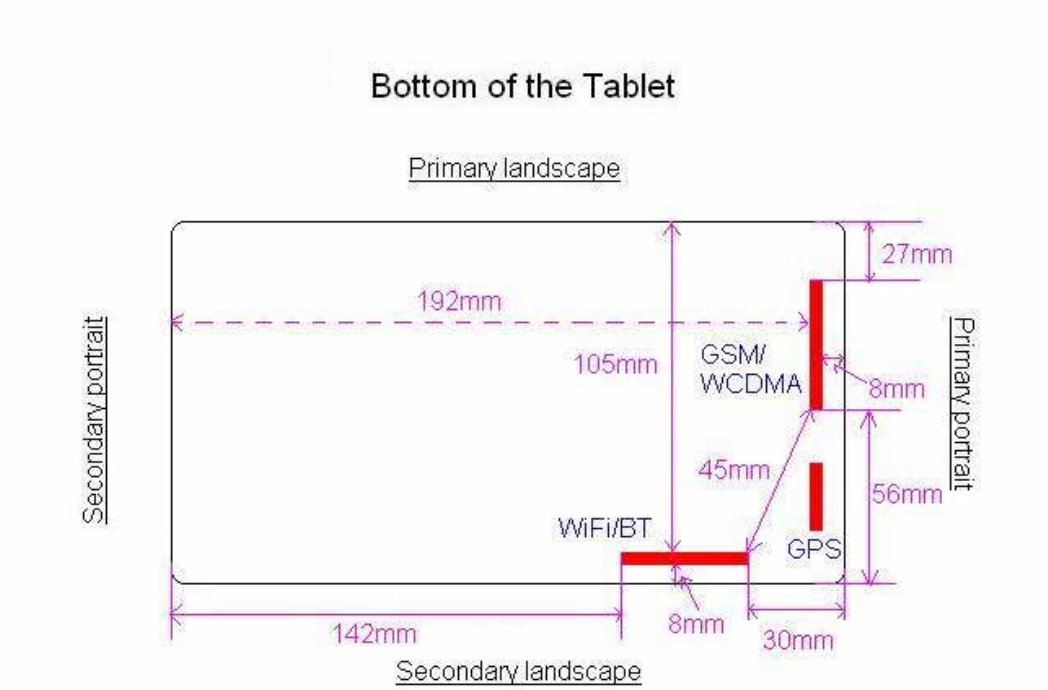
SAR(1 g) = 0.044 mW/g; SAR(10 g) = 0.024 mW/g Maximum value of SAR (measured) = 0.048 mW/g



0 dB = 0.048mW/g

Appendix C. Test Setup Photographs & EUT Photographs

Antenna to Antenna/User Separation Distances



Antenna-to-user separation distances:	**GSM/WCDMA Antenna** Tablet-Bottom face: 3mm from GSM/WCDMA Antenna-to-user Tablet-Edges with the following configurations ● Primary landscape: 27mm from GSM/WCDMA Antenna-to-user ● Secondary landscape: 56mm from GSM/WCDMA Antenna-to-user ● Primary portrait: 8mm from GSM/WCDMA Antenna-to-user ● Secondary portrait: 192mm from GSM/WCDMA Antenna-to-user **WiFi/BT Antenna** Tablet-Bottom face: 3mm from GSM/WCDMA Antenna-to-user Tablet-Edges with the following configurations ● Primary landscape: 105mm from WiFi/BT Antenna-to-user ● Secondary landscape: 8mm from WiFi/BT Antenna-to-user ● Primary portrait: 30mm from WiFi/BT Antenna-to-user ● Secondary portrait: 142mm from WiFi/BT Antenna-to-user
Antenna-to-antenna separation distances:	45mm from GSM/WCDMA Antenna-to-WiFi/BT Antenna

Test Setup Photographs

Bottom Touch

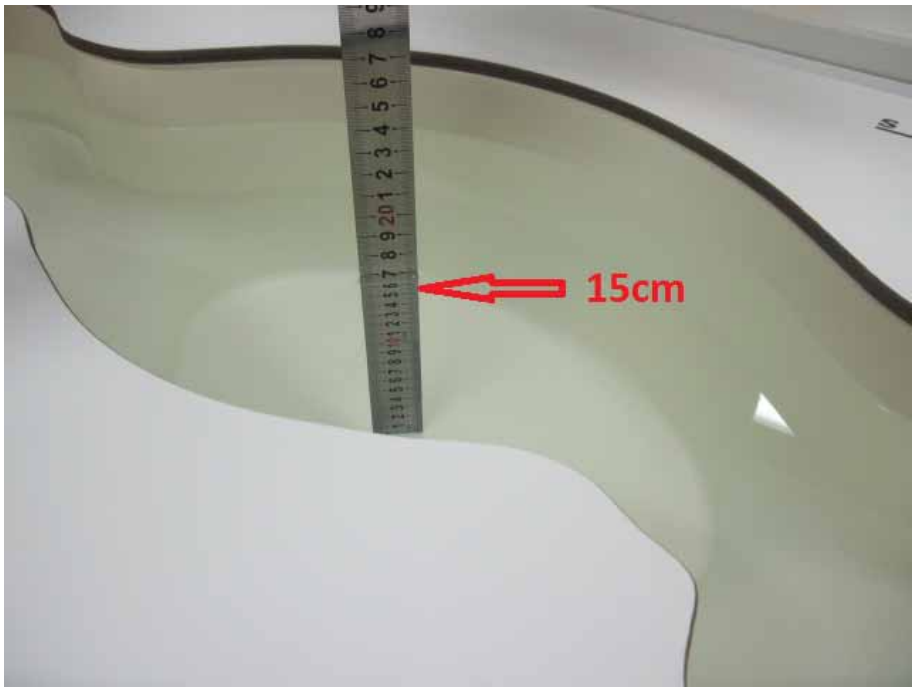
Primary landscape Touch

Primary portrait Touch

Secondary landscape Touch

Depth of the liquid in the phantom – Zoom in

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



EUT Photographs

(1) EUT Photo

(2) EUT Photo

(3) EUT Photo