SAR Test Report

Product Name	:	Mobile Data Terminal
Model No.	:	C4000
FCC ID	:	2AC6AC4000

Applicant :	Shenzhen Chainway Information Technology Co., Ltd.
Address :	6F, Building A, Tsinghua Information Harbor, Hi-tech & Industrial Park, Nanshan, Shenzhen, Guangdong, China

Date of Receipt	:	Aug. 26, 2014
Date of Test	:	Aug. 26, 2014
Issued Date	:	Oct. 08, 2014
Report No.	:	1490011R-HP-US-P03V01
Report Version	:	V1.1

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Test Report Certification

Issued Date: Oct. 08, 2014
Report No.: 1490011R-HP-US-P03V01

QuieTek

Product Name	:	Mobile Data Terminal
Applicant	:	Shenzhen Chainway Information Technology Co., Ltd.
Address	:	6F, Building A, Tsinghua Information Harbor, Hi-tech & Industrial Park, Nanshan, Shenzhen, Guangdong, China
Manufacturer	:	Shenzhen Chainway Information Technology Co., Ltd.
Address	:	6F, Building A, Tsinghua Information Harbor, Hi-tech & Industrial Park, Nanshan, Shenzhen, Guangdong, China
Model No.	:	C4000
FCC ID	:	2AC6AC4000
EUT Voltage	:	DC 3.7V
Brand Name	:	CHAINWAY
Applicable Standard	:	IEEE Std. 1528-2013, 47CFR § 2.1093 FCC KDB Publication 447498 D01v05r02 FCC KDB Publication 648474 D04v01r02 FCC KDB Publication 865664 D01v01r03 FCC KDB Publication 941225 D01~D06
Test Result	:	Max. SAR Measurement (1g) Head: 0.183 W/kg; Body-worn: 1.16 W/kg Hotspots: 1.48 W/kg; Simultaneous transmission 1.597 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
Documented By	:	
Reviewed By	:	
Approved By	:	

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**
Japan	**:**	**VCCI**
China	**:**	**CNAS**

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

LinKou Testing Laboratory :
No.5-22, Ruishukeng, Linkou Dist., New Taipei City 24451, Taiwan, R.O.C.
TEL : 886-2-8601-3788 / FAX : 886-2-8601-3789 E-Mail : service@quietek.com

Suzhou 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

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1490011R-HP-US-P03V01	V1.0	Initial Issued Report	Sep. 17, 2014
1490011R-HP-US-P03V01	V1.1	Modify some power for WCDMA Band V	Oct. 08, 2014

1. General Information

1.1. EUT Description

Product Name	Mobile Data Terminal
Model No.	C4000
Device Category	Portable
RF Exposure Environment	Uncontrolled
Antenna Type	Internal
GPS	
Class of SRD	Class 3
2G	
Support Band	GSM850/PCS1900
GPRS Class	Class 12
Uplink	GSM 850: 824~849MHz PCS 1900: 1850~1910MHz
Downlink	GSM 850: 869~894MHz PCS 1900: 1930~1990MHz
Release Version	R99
Type of modulation	GMSK for GSM/GPRS 8PSK for EDGE
Antenna Gain	GSM 850: 1.1dBi PCS1900: 1.8dBi
3G	
Support Band	WCDMA Band V
Uplink	WCDMA Band V: 826.4~846.4MHz
Downlink	WCDMA Band V: 871.4~891.6MHz
Release Version	Rel-6
Type of modulation	QPSK for Uplink
Antenna Gain	1.1dBi
Wi-Fi	
Wi-Fi Frequency	802.11b/g/n(20MHz): 2412 ~ 2462 MHz 802.11n(40MHz): 2422 ~ 2452 MHz;
Type of modulation	802.11b: DSSS; 802.11g/n: OFDM
Data Rate	802.11b: 1/2/5.5/11 Mbps
	802.11g: 6/9/12/18/24/36/48/54 Mbps
	802.11n: up to 135 Mbps
Peak Antenna Gain	0.9dBi

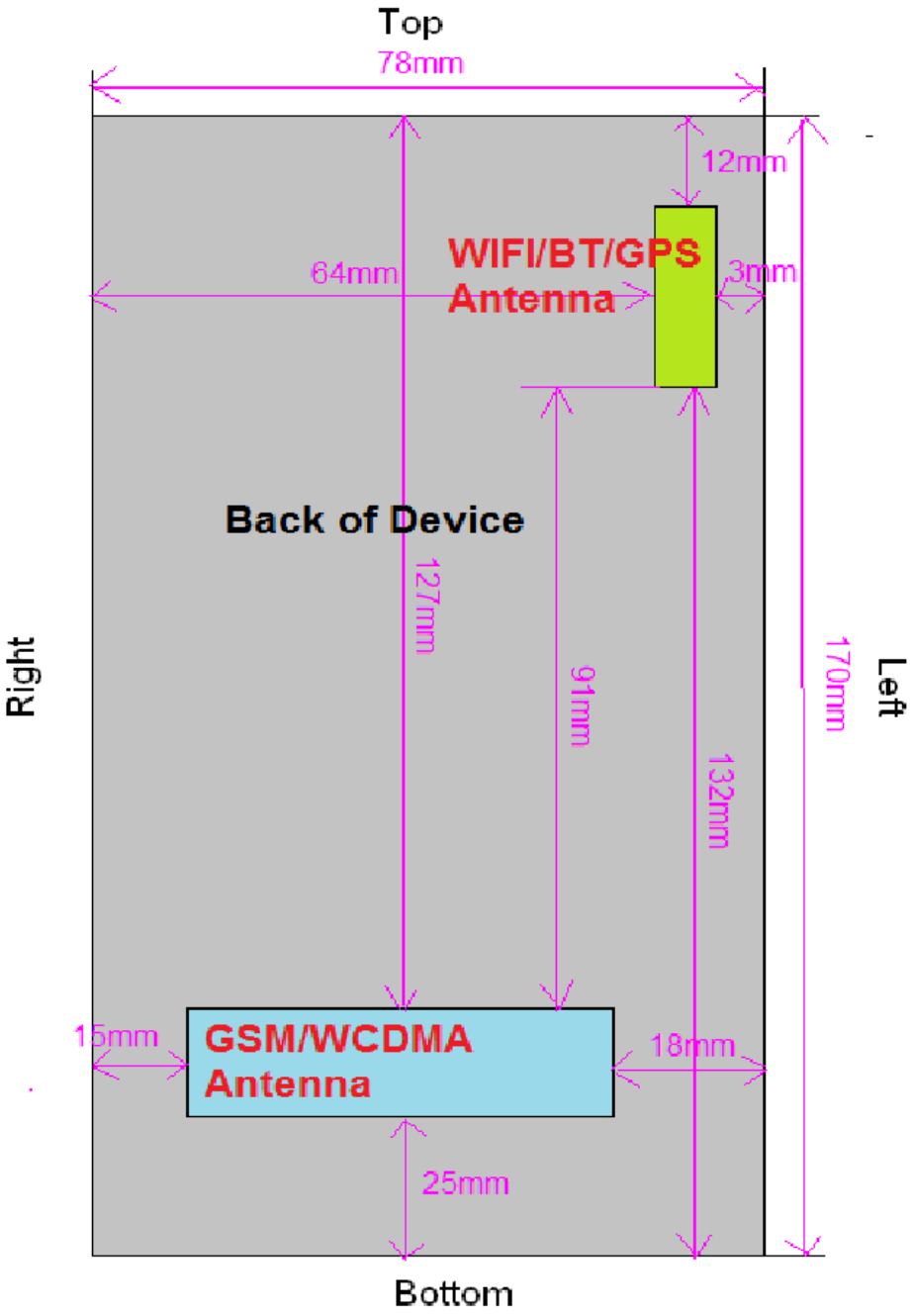
Bluetooth	
Bluetooth Frequency	2402~2480MHz
Bluetooth Version	V2.1+EDR
Type of modulation	GFSK, Pi/4 DQPSK, 8DPSK
Data Rate	1Mbps(GFSK), 2Mbps(Pi/4 DQPSK), 3Mbps (8DPSK)
Antenna Gain	0.9dBi

1.2. Test Environment

Ambient conditions in the laboratory:

Items	Required	Actual
Temperature (°C)	18-25	21.5± 2
Humidity (%RH)	30-70	52

1.3. EUT Antenna Locations



Mobile Test Positions for SAR Testing

Mode	Back	Front	Top	Bottom	Right	Left
GPRS850	Yes	Yes	No	Yes	Yes	Yes
GPRS1900	Yes	Yes	No	Yes	Yes	Yes
WCDMA Band V	Yes	Yes	No	Yes	Yes	Yes

Note: Particular DUT edges were not required to be evaluated for Wireless Router SAR if the edges were greater than 2.5 cm from the transmitting antenna according to FCC KDB Publication 941225 D06v01r01 guidance, page 2. The antenna photo shows the distances between the transmit antennas and the edges of the device. But it may use against to human directly, so 0mm test separation was used.

1.4. Simultaneous Transmission Configurations

According to FCC KDB Publication 447498 D01v05r02, transmitters are considered to be transmitting simultaneously when there is overlapping transmission, with the exception of transmissions during network hand-offs with maximum hand-off duration less than 30 seconds. This device contains multiple transmitters that may operate simultaneously, and therefore requires a simultaneously transmission analysis according to FCC KDB Publication 447498 D01v05r02 3) procedures.

Table 1-1

Simultaneous Transmission Scenarios

Ref.	Simultaneous Transmit Configurations	Head	Body-Worn Accessory	Hotspot	Note
		IEEE1528 Supp C	FCC KDB447498 D01v05r02	FCC KDB941225 D06v01r01	
1	GSM850 Voice + BT	Yes	Yes	No	
2	GPRS850 Data + BT	Yes	Yes	No	
3	PCS1900 Voice + BT	Yes	Yes	No	
4	GPRS1900 Data + BT	Yes	Yes	No	
5	WCDMA Band V Voice + BT	Yes	Yes	No	
6	WCDMA Band V Data + BT	Yes	Yes	No	
7	GSM850 Voice + 2.4GHz Wi-Fi	Yes	Yes	No	
8	PCS1900 Voice + 2.4GHz Wi-Fi	Yes	Yes	No	
9	GPRS850 Data + 2.4GHz Wi-Fi	No	No	Yes	GPRS + Wi-Fi Hotspot
10	GPRS1900 Data + 2.4GHz Wi-Fi	No	No	Yes	GPRS + Wi-Fi Hotspot
11	WCDMA Band V Voice + 2.4GHz Wi-Fi	Yes	Yes	No	
12	WCDMA Band V Data + 2.4GHz Wi-Fi	No	No	Yes	WCDMA + Wi-Fi Hotspot
Note: Bluetooth and Wi-Fi share the same antenna and cannot transmit simultaneously.					

1.5. SAR Test Exclusions Applied

(A) Bluetooth

Per FCC KDB 447498 D01v05R02, the SAR exclusion threshold for distances<50mm is defined by the following equation:

$$\frac{Max\ Power\ of\ Channel\ (mW)}{Test\ Separation\ Dist\ (mm)} * \sqrt{Frequency(GHz)} \leq 3.0$$

Based on the maximum output power of WIFI and the antenna to use separation distance, WIFI SAR was not required;

[(5.62mW/5)* √2.412]=1.75<3.0 for Head; [(5.62mW/10)* √2.412]=0.873<3.0 for Body.

Based on the maximum output power of Bluetooth and the antenna to use separation distance, Bluetooth SAR was not required;

[(1.58mW/5)* √2.480]=0.499<3.0 for Head; [(1.58mW/10)* √2.480]=0.250<3.0 for Body.

(B) Licensed Transmitter(s)

GSM/GPRS DTM is not supported for US bands. Therefore, the GSM Voice modes in this report do not transmit simultaneously with GPRS Data.

When the user utilizes multiple services in UMTS 3G mode it uses multi-Radio Access Bearer or multi-RAB. The power control is based on a physical control channel (Dedicated Physical Control Channel [DPCCH]) and power control will be adjusted to meet the needs of both services. Therefore, the UMTS+WLAN scenario also represents the UMTS Voice/DATA + WLAN Hotspot scenario.

1.6. Power Reduction for SAR

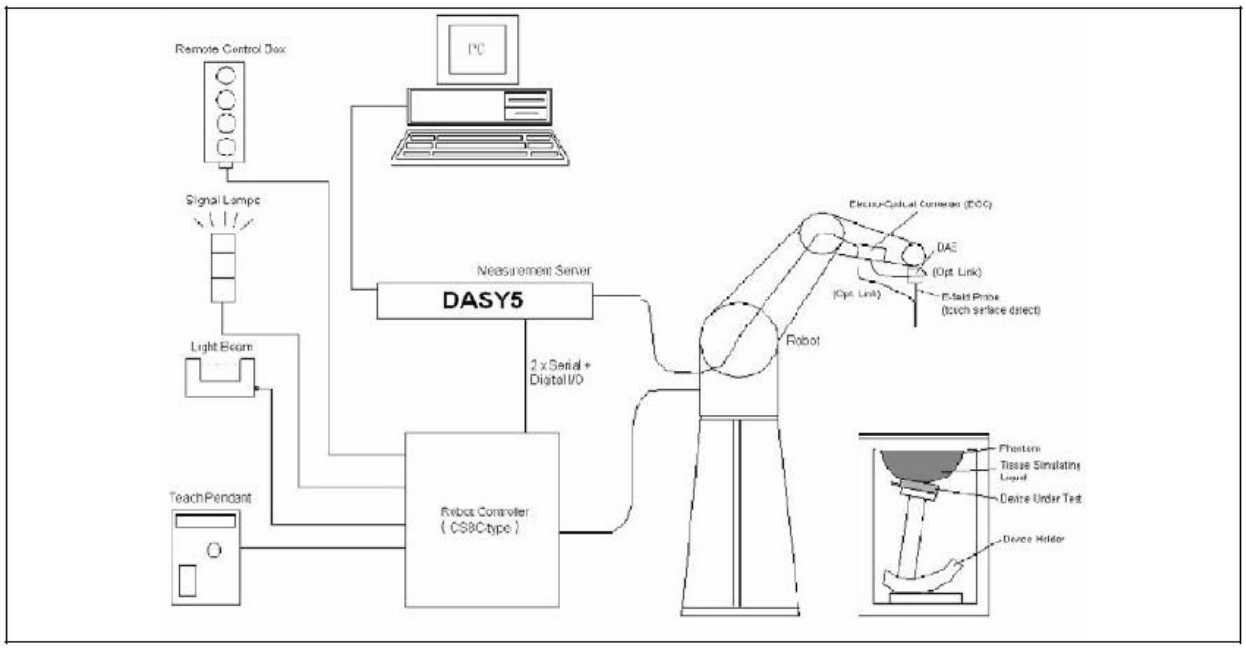
There is no power reduction used for any band/mode implemented in this device for SAR purposes.

1.7. Guidance Documents

1) FCC KDB Publication 941225 D01-D06 (2G, 3G and Hotspot)
2) FCC KDB Publication 447498 D01v05r02(General SAR Guidance)
3) FCC KDB Publication 865664 D01v01r03(SAR measurement 100 MHz to 6 GHz)
4) FCC KDB Publication 648474 D04v01r02(SAR Evaluation Considerations for Wireless Handsets)

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, 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 10mm² 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 1528-2013 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/m³ 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.

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

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

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

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 DASY5 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
Water	40.45	52.4	54.90	40.5
Salt	1.45	1.40	0.18	0.50
Sugar	57.6	45.0	0.00	58.0
HEC	0.40	1.00	0.00	0.50
Preventol	0.10	0.20	0.00	0.50
DGBE	0.00	0.00	44.92	0.00

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	41.50 39.43 to 43.58	0.90 0.86 to 0.95	N/A
	08-26-2014	41.26	0.89	21.0
1900 MHz	Reference result ± 5% window	40.00 38.00 to 42.00	1.40 1.33 to 1.47	N/A
	08-26-2014	38.72	1.44	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
	08-26-2014	53.84	0.98	21.0
1900 MHz	Reference result ± 5% window	53.3 50.64 to 55.97	1.52 1.44 to 1.60	N/A
	08-26-2014	52.02	1.50	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.

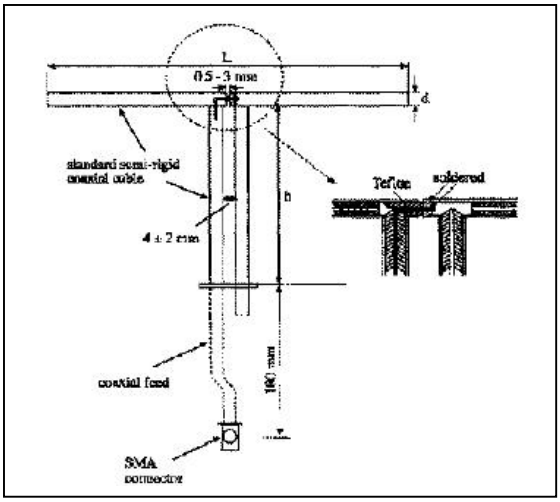
Target Frequency	Head		Body	
(MHz)	ε_r	σ (S/m)	ε_r	σ (S/m)
150	52.3	0.76	61.9	0.80
300	45.3	0.87	58.2	0.92
450	43.5	0.87	56.7	0.94
835	**41.5**	**0.90**	**55.2**	**0.97**
900	41.5	0.97	55.0	1.05
915	41.5	0.98	55.0	1.06
1450	40.5	1.20	54.0	1.30
1610	40.3	1.29	53.8	1.40
1800 – 2000	**40.0**	**1.40**	**53.3**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

4.1.2. Validation Result

System Performance Check at 835MHz and 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	9.59 8.63 to 10.55	6.21 5.59 to 6.83	N/A
	08-26-2014	10.00	6.44	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	41.1 36.99 to 45.21	21.3 19.17 to 23.43	N/A
	08-26-2014	39.04	19.88	21.0

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

System Performance Check at 835MHz and 1900MHz 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	9.42 8.48 to 10.36	6.15 5.54 to 6.77	N/A
	08-26-2014	10.00	6.52	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	39.7 35.73 to 43.67	20.9 18.81 to 22.99	N/A
	08-26-2014	41.60	21.48	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 1mm²) 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 1mm³).

4.3. Body-Worn Accessory Configurations

Body-worn operating configurations are tested with the belt-clips and holsters attached to the device and positioned against a flat phantom in a normal use configuration. Per FCC KDB Publication 648474 D04 v01r02, Body-worn accessory exposure is typically related to voice mode operations when handsets are carried in body-worn accessories. The body-worn accessory procedures in FCC KDB Publication 447498 D01 v05r02 should be used to test for body-worn accessory SAR compliance, without a headset connected to it. This enables the test results for such configuration to be compatible with that required for hotspot mode when the body-worn accessory test separation distance is greater than or equal to that required for hotspot mode, when applicable. When the reported SAR for a body-worn accessory, measured without a headset connected to the handset, is > 1.2 W/kg, the highest reported SAR configuration for that wireless mode and frequency band should be repeated for that body-worn accessory with a headset attached to the handset.

Accessories for Body-worn operation configurations are divided into two categories: those that do not contain metallic components and those that do contain metallic components. When multiple accessories that do not contain metallic components are supplied with the device, the device is tested with only the accessory that dictates the closest spacing to the body. Then multiple accessories that contain metallic components are tested with the device with each accessory. If multiple accessories share an identical metallic component (i.e. the same metallic belt-clip used with different holsters with no other metallic components) only the accessory that dictates the closest spacing to the body is tested.

Body-worn accessories may not always be supplied or available as options for some devices intended to be authorized for body-worn use. In this case, a test configuration with a separation distance between the back of the device and the flat phantom is used. Test position spacing was documented. Transmitters that are designed to operate in front of a person's face, as in push-to-talk configurations, are tested for SAR compliance with the front of the device positioned to face the flat phantom in head fluid. For devices that are carried next to the body such as a shoulder, waist or chest-worn transmitters, SAR compliance is tested with the accessories, including headsets and microphones, attached to the device and positioned against a flat phantom in a normal use configuration.

4.4. Wireless Router Configurations

Some battery-operated handsets have the capability to transmit and receive user data through simultaneous transmission of Wi-Fi simultaneously with a separate licensed transmitter. The FCC has provided guidance in FCC KDB Publication 941225 D06 v01r01 where SAR test considerations for handsets (L x W ≥ 9 cm x 5 cm) are based on a composite test separation distance of 10 mm from the front, back and edges of the device containing transmitting antennas within 2.5 cm of their edges, determined from general mixed use conditions for this type of devices. Since the hotspot SAR results may overlap with the body-worn accessory SAR requirements, the more conservative configurations can be considered, thus excluding some body-worn accessory SAR tests.

When the user enables the personal wireless router functions for the handset, actual operations include simultaneous transmission of both the Wi-Fi transmitter and another licensed transmitter. Both transmitters often do not transmit at the same transmitting frequency and thus cannot be evaluated for SAR under actual use conditions due to the limitations of the SAR assessment probes. Therefore, SAR must be evaluated for each frequency transmission and mode separately and spatially summed with the Wi-Fi transmitter according to FCC KDB Publication 447498 D01v05r02 publication procedures. The “Portable Hotspot” feature on the handset was NOT activated during SAR assessments, to ensure the SAR measurements were evaluated for a single transmission frequency RF signal at a time.

4.5. SAR Measurement Conditions for UMTS

4.5.1. Output Power Verification

Maximum output power is measured on the High, Middle and Low channels for each applicable transmission band according to the general descriptions in section 5.2 of 3GPP TS 34.121, using the appropriate RMC or AMR with TPC (transmit power control) set to all "1s".

Maximum output power is verified on the High, Middle and Low channels according to the general descriptions in section 5.2 of 3GPP TS 34.121 (release 5), using the appropriate RMC with TPC (transmit power control) set to all "1s" or applying the required inner loop power control procedures to maintain maximum output power while HSUPA is active. Results for all applicable physical channel configurations (DPCCH, DPDCHn and spreading codes, HS-DPCCH etc) are tabulated in this test report. All configurations that are not supported by the DUT or cannot be measured due to technical or equipment limitations are identified.

4.5.2. Head SAR Measurements for Handsets

SAR for head exposure configurations is measured using the 12.2 kbps RMC with TPC bits configured to all "1s". SAR in AMR configurations is not required when the maximum average output of each RF channel for 12.2 kbps AMR is less than 0.25 dB higher than that measured in 12.2 kbps RMC. Otherwise, SAR is measured on the maximum output channel in 12.2 AMR with a 3.4 kbps SRB (signaling radio bearer) using the exposure configuration that resulted in the highest SAR for that RF channel in the 12.2 kbps RMC mode.

4.5.3. Body SAR Measurements

SAR for body exposure configurations is measured using the 12.2 kbps RMC with the TPC bits all "1s".

4.5.4. SAR Measurements for Handsets with Rel 5 HSDPA

Body SAR for HSDPA is not required for handsets with HSDPA capabilities when the maximum average output power of each RF channel with HSDPA active is less than 0.25 dB higher than that measured without HSDPA using 12.2 kbps RMC and the maximum SAR for 12.2 kbps RMC is ≤ 75% of the SAR limit. Otherwise, SAR is measured for HSDPA, using an FRC with H-Set 1 in Sub-test 1 and a 12.2 kbps RMC configured in Test Loop Mode 1, using the highest body SAR configuration measured in 12.2 kbps RMC without HSDPA, on the maximum output channel with the body exposure configuration that resulted in the highest SAR in 12.2 kbps RMC mode for that RF channel.

The H-set used in FRC for HSDPA should be configured according to the UE category of a test device. The number of HS-DSCH/HSPDSCHs, HARQ processes, minimum inter-TTI interval, transport block sizes and RV coding sequence are defined by the applicable H-set. To maintain a consistent test configuration and stable transmission conditions, QPSK is used in the FRC for SAR testing. HS-DPCCH should be configured with a CQI feedback cycle of 2 ms to maintain a constant rate of active CQI slots. DPCCH and DPDCH gain factors of βc=9 and βd=15, and power offset parameters of ΔACK= ΔNACK =5 and ΔCQI=2 is used. The CQI value is determined by the UE category, transport block size, number of HS-PDSCHs and modulation used in the FRC.

4.5.5. SAR Measurements for Handsets with Rel 6 HSUPA

Body SAR for HSUPA is not required when the maximum average output of each RF channel with HSUPA/HSDPA active is less than 0.25 dB higher than as measured without HSUPA/HSDPA using 12.2 kbps RMC and maximum SAR for 12.2 kbps RMC is ≤ 75 % of the SAR limit. Otherwise SAR is measured on the maximum output channel for the body exposure configuration produced highest SAR in 12.2 kbps RMC for that RF channel, using the additional procedures under “Release 6 HSPA data devices”

Head SAR for VOIP operations under HSPA is not required when maximum average output of each RF channel with HSPA is less than 0.25 dB higher than as measured using 12.2 kbps RMC. Otherwise SAR is measured using same HSPA configuration as used for body SAR.

Sub-test	β_c	β_d	β_d (SF)	β_c/β_d	β_{hs}(1)	β_{ec}	β_{ed}	β_{ed} (SF)	β_{ed} (codes)	CM(2) (dB)	MPR (dB)	AG(4) Index	E-TFCI
1	11/15(3)	15/15(3)	64	11/15(3)	22/15	209/225	1039/225	4	1	1.0	0.0	20	75
2	6/15	15/15	64	6/15	12/15	12/15	94/75	4	1	3.0	2.0	12	67
3	15/15	9/15	64	15/9	30/15	30/15	β_{ed1}: 47/15 β_{ed2}: 47/15	4	2	2.0	1.0	15	92
4	2/15	15/15	64	2/15	4/15	2/15	56/75	4	1	3.0	2.0	17	71
5	15/15(4)	15/15(4)	64	15/15(4)	30/15	24/15	134/15	4	1	1.0	0.0	21	81

Note 1: Δ_{ACK}, Δ_{NACK} and Δ_{CQI} = 8 ⇔ A_{hs} = β_{hs}/β_c = 30/15 ⇔ β_{hs}= 30/15 *β_c.
Note 2: CM = 1 for β_c/β_d =12/15, β_{hs}/β_c=24/15. For all other combinations of DPDCH, DPCCH, HS- DPCCH, E-DPDCH and E-DPCCH the MPR is based on the relative CM difference.
Note 3: For subtest 1 the β_c/β_d ratio of 11/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signaled gain factors for the reference TFC (TF1, TF1) to β_c = 10/15 and β_d = 15/15.
Note 4: For subtest 5 the β_c/β_d ratio of 15/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signaled gain factors for the reference TFC (TF1, TF1) to β_c = 14/15 and β_d = 15/15.
Note 5: Testing UE using E-DPDCH Physical Layer category 1 Sub-test3 is not required according to TS 25.306 Table 5.1g.
Note 6: β_{ed} can not be set directly; it is set by Absolute Grant Value.

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	N/A
Controller	Stäubli	SP1	S-0034	N/A
Dipole Validation Kits	Speag	D835V2	4d094	2016.02.26
Dipole Validation Kits	Speag	D1900V2	5d121	2016.02.26
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	1220	2015.01.21
E-Field Probe	Speag	EX3DV4	3710	2015.03.03
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	2015.03.28
Vector Network	Agilent	E5071C	MY48367267	2015.03.28
Signal Generator	Agilent	E4438C	MY49070163	2015.03.28
Power Meter	Anritsu	ML2495A	0905006	2014.11.01
Wide Bandwidth Sensor	Anritsu	MA2411B	0846014	2014.11.01

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. nc. (10g)	(v_i) v_{eff}
Measurement System								
Probe Calibration	±6.0%	N	1	1	1	±6.0%	±6.0%	∞
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						±11.0%	±10.8%	387
Expanded STD Uncertainty						±22.0%	±21.5%	

8. Conducted Power Measurement

Mode	Frequency (MHz)	Avg. Burst Power (dBm)	Duty Cycle Factor (dB)	Frame Power (dBm)	Max. Power (dBm)	Scaling Factor
Max. Power						
GSM850	824.2	30.71	-9	21.71	31.5	1.199
	836.4	31.02	-9	22.02	31.5	1.117
	848.8	31.41	-9	22.41	31.5	1.021
GPRS850(1 Slot)	824.2	30.69	-9	21.69	31.5	1.205
	836.4	30.97	-9	21.97	31.5	1.130
	848.8	31.38	-9	22.38	31.5	1.028
GPRS850(2 Slot)	824.2	30.36	-6	24.36	31.0	1.159
	836.4	30.52	-6	24.52	31.0	1.117
	848.8	30.59	-6	24.59	31.0	1.099
GPRS850(3 Slot)	824.2	28.80	-4.25	24.55	29.0	1.047
	836.4	28.80	-4.25	24.55	29.0	1.047
	848.8	28.81	-4.25	24.56	29.0	1.045
GPRS850(4 Slot)	824.2	28.03	-3	25.03	28.5	1.114
	836.4	28.05	-3	25.05	28.5	1.109
	848.8	28.03	-3	25.03	28.5	1.114
EGPRS850(1 Slot)	824.2	24.99	-9	15.99	25.0	1.002
	836.4	24.90	-9	15.90	25.0	1.023
	848.8	24.80	-9	15.80	25.0	1.047
EGPRS850(2 Slot)	824.2	24.61	-6	18.61	25.0	1.094
	836.4	24.45	-6	18.45	25.0	1.135
	848.8	24.39	-6	18.39	25.0	1.151
EGPRS850(3 Slot)	824.2	23.46	-4.25	19.21	23.5	1.009
	836.4	23.24	-4.25	18.99	23.5	1.062
	848.8	23.12	-4.25	18.87	23.5	1.091
EGPRS850(4 Slot)	824.2	22.83	-3	19.83	23.0	1.040
	836.4	22.57	-3	19.57	23.0	1.104
	848.8	22.33	-3	19.33	23.0	1.167
PCS1900	1850.2	24.65	-9	15.65	25.5	1.216
	1880.0	25.26	-9	16.26	25.5	1.057
	1909.8	24.95	-9	15.95	25.5	1.135
GPRS1900(1 Slot)	1850.2	24.61	-9	15.61	25.5	1.227
	1880.0	25.23	-9	16.23	25.5	1.064
	1909.8	24.94	-9	15.94	25.5	1.138

GPRS1900(2 Slot)	1850.2	23.70	-6	17.70	24.5	1.202
	1880.0	24.32	-6	18.32	24.5	1.042
	1909.8	24.15	-6	18.15	24.5	1.084
GPRS1900(3 Slot)	1850.2	21.88	-4.25	17.63	22.5	1.153
	1880.0	22.48	-4.25	18.23	22.5	1.005
	1909.8	22.36	-4.25	18.11	22.5	1.033
GPRS1900(4 Slot)	1850.2	21.09	-3	18.09	21.5	1.099
	1880.0	21.48	-3	18.48	21.5	1.005
	1909.8	21.16	-3	18.16	21.5	1.081
EGPRS1900(1 Slot)	1850.2	21.42	-9	12.42	22.0	1.143
	1880.0	21.75	-9	12.75	22.0	1.059
	1909.8	20.33	-9	11.33	22.0	1.469
EGPRS1900(2 Slot)	1850.2	20.51	-6	14.51	21.0	1.119
	1880.0	20.77	-6	14.77	21.0	1.054
	1909.8	20.36	-6	14.36	21.0	1.159
EGPRS1900(3 Slot)	1850.2	19.44	-4.25	15.19	20.0	1.138
	1880.0	19.63	-4.25	15.38	20.0	1.089
	1909.8	19.21	-4.25	14.96	20.0	1.199
EGPRS1900(4 Slot)	1850.2	19.23	-3	16.23	19.5	1.064
	1880.0	19.41	-3	16.41	19.5	1.021
	1909.8	19.03	-3	16.03	19.5	1.114

Note 1: Scaling Factor = Max. Power(mW) / Avg. Burst Power(mW)

2: This device operates using the following maximum and nominal output power specifications. SAR values were scaled to the maximum allowed power to determine compliance per KDB Publication 447498 D01v05r02.

3: Both burst-averaged and calculated frame-averaged powers are included. Frame-averaged powers were calculated from the measured burst-averaged power by converting the slot powers into linear units and calculating the energy over 8 timeslots.

4: The bolded GPRS modes were selected for SAR testing according to the highest frame-averaged output power table per KDB 941225 D03v01.

5: GPRS(GMSK) output powers were measured with coding scheme setting of 1 (CS1) on the base station simulator. CS1 was configured to measure GPRS output power measurements and SAR to ensure GMSK modulation in the signal. Our Investigation has shown that CS1 - CS4 settings do not have any impact on the output levels or modulation in the GPRS modes.

6: EDGE (8-PSK) output powers were measured with MCS7 on the base station simulator. MCS7 coding scheme was used to measure the output powers for EDGE since investigation has shown that choosing MCS7 coding scheme will ensure 8-PSK modulation. It has been shown that MCS levels that produce 8PSK modulation do not have an impact on output power.

WCDMA/HSDPA/HSUPA

Mode	3GPP Subtest	Band V (850MHz) Channel Conducted Power (dBm)			MPR
		4132	4182	4233	
WCDMA R99	1	22.53	22.89	22.70	N/A
Rel5 HSDPA	1	21.18	21.98	21.57	0
	2	20.25	20.12	19.98	0
	3	20.18	20.09	19.83	0.5
	4	20.84	20.75	20.52	0.5
Rel6 HSUPA	1	21.20	21.67	21.05	0.0
	2	20.96	20.83	20.59	2.0
	3	20.91	20.81	20.66	1.0
	4	20.25	20.06	19.73	2.0
	5	20.36	20.25	20.01	0.0

Note: UMTS SAR was tested under RMC 12.2 kbps with HSPA Inactive per KDB Publication 941225 D01v02. HSPA SAR was not required since the average output power of the HSPA subtests was not more than 0.25 dB higher than the RMC level and SAR was less than 1.2 W/kg.

Mode	Band V (850MHz) Channel	Normal Power (dBm)	Max. Power (dBm)	Scaling Factor
WCDMA R99	4132	22.53	23.0	1.114
	4182	22.89	23.0	1.026
	4233	22.70	23.0	1.072

WLAN output power

Test Mode	Channel No.	Frequency (MHz)	Average Power (dBm)	Max. Power (dBm)
802.11b	01	2412	7.21	7.5
	06	2437	6.19	7.5
	11	2462	6.68	7.5
802.11g	01	2412	2.30	2.5
	06	2437	2.11	2.5
	11	2462	2.13	2.5
802.11n (20MHz)	01	2412	1.78	2.0
	06	2437	1.79	2.0
	11	2462	1.46	2.0
802.11n (40MHz)	03	2422	1.53	2.5
	06	2437	1.69	2.5
	09	2452	2.13	2.5

BT output power

Test Mode	Channel No.	Frequency (MHz)	Average Power (dBm)	Max. Power (dBm)
DH5	01	2402	1.76	2.0
	40	2441	1.67	2.0
	79	2480	1.71	2.0
2DH5	01	2402	1.65	2.0
	40	2441	1.71	2.0
	79	2480	1.85	2.0
3DH5	01	2402	1.51	2.0
	40	2441	1.56	2.0
	79	2480	1.61	2.0

9. Test Results

9.1. SAR Test Results Summary

SAR MEASUREMENT									
Ambient Temperature (°C) : 21.5 ± 2				Relative Humidity (%): 52					
Liquid Temperature (°C) : 21.0 ± 2				Depth of Liquid (cm):>15					
Product: Mobile Data Terminal									
Test Mode: GSM850									
Test Position Head	Antenna Position	Frequency		Frame Power (dBm)	Power Drift (<±0.2)	SAR 1g (W/kg)	Scaling Factor	Scaled SAR 1g (W/kg)	Limit (W/kg)
		Channel	MHz						
Left-Cheek	Fixed	128	824.2	21.71	--	--	1.199	--	1.6
Left-Cheek	Fixed	189	836.4	22.02	-0.16	0.154	1.117	0.172	1.6
Left-Cheek	Fixed	251	848.8	22.41	--	--	1.021	--	1.6
Left-Tilted	Fixed	189	836.4	22.02	0.20	0.100	1.117	0.112	1.6
Right-Cheek	Fixed	128	824.2	21.71	--	--	1.199	--	1.6
Right-Cheek	Fixed	189	836.4	22.02	-0.08	0.080	1.117	0.089	1.6
Right-Cheek	Fixed	251	848.8	22.41	--	--	1.021	--	1.6
Right-Tilted	Fixed	189	836.4	22.02	0.04	0.063	1.117	0.070	1.6
Note: when the 1-g SAR is ≤ 0.8 W/kg, testing for low and high channel is optional, refer to KDB 447498 D01 v05r02.									

SAR MEASUREMENT

Ambient Temperature (°C) : 21.5 ± 2 Relative Humidity (%): 52

Liquid Temperature (°C) : 21.0 ± 2 Depth of Liquid (cm):>15

Product: Mobile Data Terminal

Body-worn Accessory SAR Configurations

Test Mode: GSM850

Test Position Body (0mm gap)	Antenna Position	Frequency		Frame Power (dBm)	Power Drift (<±0.2)	SAR 1g (W/kg)	Scaling Factor	Scaled SAR 1g (W/kg)	Limit (W/kg)
		Channel	MHz						
Body-worn	Fixed	128	824.2	21.71	--	--	1.199	--	1.6
Body-worn	Fixed	189	836.4	22.02	-0.02	0.634	1.117	0.708	1.6
Body-worn	Fixed	251	848.8	22.41	--	--	1.021	--	1.6

Hotspot SAR Configurations

Test Mode: GPRS850-4slot

Test Position Body (0mm gap)	Antenna Position	Frequency		Frame Power (dBm)	Power Drift (<±0.2)	SAR 1g (W/kg)	Scaling Factor	Scaled SAR 1g (W/kg)	Limit (W/kg)
		Channel	MHz						
Back	Fixed	128	824.2	25.03	0.13	0.838	1.114	0.934	1.6
Back	Fixed	189	836.4	25.05	-0.04	1.05	1.109	1.16	1.6
Back	Fixed	251	848.8	25.03	-0.02	1.29	1.114	1.44	1.6
Back*	Fixed	251	848.8	25.03	0.01	**1.33**	1.114	**1.48**	1.6
Front	Fixed	189	836.4	25.05	0.07	0.043	1.109	0.048	1.6
Left side	Fixed	189	836.4	25.05	-0.20	0.082	1.109	0.091	1.6
Right side	Fixed	189	836.4	25.05	0.11	0.140	1.109	0.155	1.6
Bottom	Fixed	189	836.4	25.05	0.03	0.054	1.109	0.060	1.6

Note1: when the 1-g SAR is ≤ 0.8 W/kg, testing for low and high channel is optional, refer to KDB 447498 D01 v05r02.

2: SAR should be repeated if the maximum measured SAR is higher than 0.8 W/Kg according to KDB 865664 D01v01r03.

SAR MEASUREMENT

Ambient Temperature (°C) : 21.5 ± 2 Relative Humidity (%): 52

Liquid Temperature (°C) : 21.0 ± 2 Depth of Liquid (cm):>15

Product: Mobile Data Terminal

Test Mode: PCS1900

Test Position Head	Antenna Position	Frequency		Frame Power (dBm)	Power Drift (<±0.2)	SAR 1g (W/kg)	Scaling Factor	Scaled SAR 1g (W/kg)	Limit (W/kg)
		Channel	MHz						
Left-Cheek	Fixed	512	1850.2	15.65	--	--	1.216	--	1.6
Left-Cheek	Fixed	661	1880	16.26	0.05	0.046	1.057	0.049	1.6
Left-Cheek	Fixed	810	1909.8	15.95	--	--	1.135	--	1.6
Left-Tilted	Fixed	661	1880.0	16.26	0.17	0.017	1.057	0.018	1.6
Right-Cheek	Fixed	512	1850.2	15.65	--	--	1.216	--	1.6
Right-Cheek	Fixed	661	1880	16.26	0.06	0.027	1.057	0.029	1.6
Right-Cheek	Fixed	810	1909.8	15.95	--	--	1.135	--	1.6
Right-Tilted	Fixed	661	1880.0	16.26	0.20	0.016	1.057	0.017	1.6

Note: when the 1-g SAR is ≤ 0.8 W/kg, testing for low and high channel is optional, refer to KDB 447498 D01 v05r02.

SAR MEASUREMENT

Ambient Temperature (°C) : 21.5 ± 2 Relative Humidity (%): 52

Liquid Temperature (°C) : 21.0 ± 2 Depth of Liquid (cm):>15

Product: Mobile Data Terminal

Body-worn Accessory SAR Configurations

Test Mode: PCS1900

Test Position Body (0mm gap)	Antenna Position	Frequency		Frame Power (dBm)	Power Drift (<±0.2)	SAR 1g (W/kg)	Scaling Factor	Scaled SAR 1g (W/kg)	Limit (W/kg)
		Channel	MHz						
Body-worn	Fixed	512	1850.2	15.65	--	--	1.216	--	1.6
Body-worn	Fixed	661	1880	16.26	-0.04	0.190	1.057	0.201	1.6
Body-worn	Fixed	810	1909.8	15.95	--	--	1.135	--	1.6

Hotspot SAR Configurations

Test Mode: GPRS1900-4slot

Test Position Body (0mm gap)	Antenna Position	Frequency		Frame Power (dBm)	Power Drift (<±0.2)	SAR 1g (W/kg)	Scaling Factor	Scaled SAR 1g (W/kg)	Limit (W/kg)
		Channel	MHz						
Back	Fixed	512	1850.2	18.09	--	--	1.099	--	1.6
Back	Fixed	661	1880	18.48	-0.05	0.486	1.005	0.488	1.6
Back	Fixed	810	1909.8	18.16	--	--	1.081	--	1.6
Front	Fixed	661	1880	18.48	0.06	0.251	1.005	0.252	1.6
Left side	Fixed	661	1880	18.48	0.03	**0.551**	1.005	**0.554**	1.6
Right side	Fixed	661	1880	18.48	0.05	0.187	1.005	0.188	1.6
Bottom	Fixed	661	1880	18.48	-0.16	0.086	1.005	0.086	1.6

Note: when the 1-g SAR is ≤ 0.8 W/kg, testing for low and high channel is optional, refer to KDB 447498 D01 v05r02.

SAR MEASUREMENT

Ambient Temperature (°C) : 21.5 ± 2 Relative Humidity (%): 52

Liquid Temperature (°C) : 21.0 ± 2 Depth of Liquid (cm):>15

Product: Mobile Data Terminal

Test Mode: WCDMA Band V

Test Position Head	Antenna Position	Frequency		Conducted Power (dBm)	Power Drift (<±0.2)	SAR 1g (W/kg)	Scaling Factor	Scaled SAR 1g (W/kg)	Limit (W/kg)
		Channel	MHz						
Left-Cheek	Fixed	4132	826.4	22.53	--	--	1.114	--	1.6
Left-Cheek	Fixed	4182	836.4	22.89	-0.08	0.178	1.026	0.183	1.6
Left-Cheek	Fixed	4233	846.6	22.70	--	--	1.072	--	1.6
Left-Tilt	Fixed	4182	836.4	22.89	-0.18	0.102	1.026	0.105	1.6
Right-Cheek	Fixed	4132	826.4	22.53	--	--	1.114	--	1.6
Right-Cheek	Fixed	4182	836.4	22.89	-0.04	0.145	1.026	0.149	1.6
Right-Cheek	Fixed	4233	846.6	22.70	--	--	1.072	--	1.6
Right-Tilt	Fixed	4182	836.4	22.89	0.13	0.105	1.026	0.108	1.6

Note: when the 1-g SAR is ≤ 0.8 W/kg, testing for low and high channel is optional, refer to KDB 447498.

SAR MEASUREMENT	
Ambient Temperature (°C): 21.5 ± 2	Relative Humidity (%): 52
Liquid Temperature (°C): 21.0 ± 2	Depth of Liquid (cm):>15
Product: Mobile Data Terminal	

Body-worn Accessory SAR Configurations

Test Mode: WCDMA Band V

Test Position Body (0mm gap)	Antenna Position	Frequency		Conducted Power (dBm)	Power Drift (<±0.2)	SAR 1g (W/kg)	Scaling Factor	Scaled SAR 1g (W/kg)	Limit (W/kg)
		Channel	MHz						
Body-worn	Fixed	4132	826.4	22.53	0.01	1.01	1.114	1.13	1.6
Body-worn*	Fixed	4132	826.4	22.53	-0.03	**1.04**	1.114	**1.16**	1.6
Body-worn	Fixed	4182	836.4	22.89	0.00	0.958	1.026	0.983	1.6
Body-worn	Fixed	4233	846.6	22.70	0.02	0.847	1.072	0.908	1.6

Hotspot SAR Configurations

Test Mode: WCDMA Band V

Test Position Body (0mm gap)	Antenna Position	Frequency		Conducted Power (dBm)	Power Drift (<±0.2)	SAR 1g (W/kg)	Scaling Factor	Scaled SAR 1g (W/kg)	Limit (W/kg)
		Channel	MHz						
Body-worn	Fixed	4132	826.4	22.53	0.01	1.01	1.114	1.13	1.6
Body-worn*	Fixed	4132	826.4	22.53	-0.03	**1.04**	1.114	**1.16**	1.6
Body-worn	Fixed	4182	836.4	22.89	0.00	0.958	1.026	0.983	1.6
Body-worn	Fixed	4233	846.6	22.70	0.02	0.847	1.072	0.908	1.6
Body-front	Fixed	4182	836.4	22.89	0.07	0.041	1.026	0.042	1.6
Body-left side	Fixed	4182	836.4	22.89	0.04	0.091	1.026	0.093	1.6
Body-Right side	Fixed	4182	836.4	22.89	0.01	0.091	1.026	0.093	1.6
Body-bottom	Fixed	4182	836.4	22.89	0.07	0.061	1.026	0.063	1.6

Note1: when the 1-g SAR is ≤ 0.8 W/kg, testing for low and high channel is optional, refer to KDB 447498.

2: SAR should be repeated if the maximum measured SAR is higher than 0.8 W/Kg according to KDB 865664 D01v01r03.

9.2. SAR Test Notes

9.2.1. Test position and configuration

Head SAR was performed with the device configured in the positions according to IEEE1528. Device was tested using a fixed spacing for body-worn accessory testing. A separation distance of 0 mm was considered because the manufacturer has determined that there will be body-worn accessories available in the marketplace for users to support this separation distance.

9.2.2. Body SAR with Headset

Per FCC KDB Publication 648474 D04v01r02, SAR was evaluated without a headset connected to the device. Since the standalone reported SAR was ≤ 1.2 W/kg, no additional SAR evaluations using a headset cable were required.

9.2.3. Hotspot Operation Mode

During SAR Testing for the Wireless Router conditions per FCC KDB Publication 941225 D06v01r01, the actual Portable Hotspot operation (with actual simultaneous transmission of a transmitter with Wi-Fi) was not activated.

9.2.4. Simultaneous Transmission Procedures

This device contains transmitters that may operate simultaneously. Therefore simultaneous transmission analysis is required. Per FCC KDB 447498 D01v05r02 IV.C.1.iii,simultaneous transmission SAR test exclusion may be applied when the sum of the 1-g SAR for all the simultaneous transmitting antennas in a specific a physical test configuration is≤1.6W/kg. When standalone SAR is not required to be measured, per FCC KDB 447498 D01v05r02 4.3.2 2,the following equation must be used to estimate the standalone 1g SAR for simultaneous transmission assessment involving that transmitter.

$$\text{Estimated SAR} = \frac{\sqrt{f(GHz)}}{7.5} * \frac{(\text{Max Power of channel, mW})}{\text{Min. Separation Distance, mm}}$$

Estimated SAR for Bluetooth

Mode	Frequency	Maximum Allowed Power	Separation Distance (Head)	Estimated SAR (Held-to-Ear)	Separation Distance (Body)	Estimated SAR (Body)
	[MHz]	[dBm]	[mm]	[W/kg]	[mm]	[W/kg]
WIFI	2412	7.5	5	0.233	10	0.117

Bluetooth	2480	2.0	5	0.066	10	0.033

9.2.5. Simultaneous Transmission Analysis

Simultaneous Transmission Scenario with Wi-Fi

Configuration	Mode	Max. Scaled SAR (W/kg)	Wi-Fi SAR (W/kg)	∑ SAR (W/kg)
Head	GSM850	0.172	0.233	0.405
Head	PCS1900	0.049	0.233	0.282
Head	WCDMA Band V	0.183	0.233	0.416
Body-Worn	GSM850	0.708	0.117	0.825
Body-Worn	PCS1900	0.201	0.117	0.318
Body-Worn	WCDMA Band V	1.16	0.117	1.277

Note 1: Wi-Fi SAR was not required to be measured per FCC KDB 447498. Estimated SAR results were used in the above table to determine simultaneous transmission SAR test exclusion.

2: Body worn at 10mm.

Simultaneous Transmission Scenario with Bluetooth

Configuration	Mode	Max. Scaled SAR (W/kg)	Bluetooth SAR (W/kg)	∑ SAR (W/kg)
Head	GSM850	0.172	0.065	0.237
Head	PCS1900	0.049	0.065	0.114
Head	WCDMA Band V	0.183	0.065	0.248
Body-Worn	GSM850	0.708	0.033	0.741
Body-Worn	PCS1900	0.201	0.033	0.234
Body-Worn	WCDMA Band V	1.16	0.033	1.193

Note 1: Bluetooth SAR was not required to be measured per FCC KDB 447498. Estimated SAR results were used in the above table to determine simultaneous transmission SAR test exclusion.

2: Body worn at 10mm.

Simultaneous Transmission Scenario (Hotspot)

Simult Tx	Configuration	GPRS850 SAR (W/kg)	2.4G Wi-Fi SAR (W/kg)	∑ SAR (W/kg)
Body	Back	1.48	0.117	1.597
	Front	0.048	0.117	0.165
	Top	--	0.117	0.117
	Bottom	0.060	--	0.060
	Left	0.091	0.117	0.208
	Right	0.155	--	0.155
Simult Tx	Configuration	GPRS1900 SAR (W/kg)	2.4G Wi-Fi SAR (W/kg)	∑ SAR (W/kg)
Body	Back	0.488	0.117	0.605
	Front	0.252	0.117	0.369
	Top	--	0.117	0.117
	Bottom	0.086	--	0.086
	Left	0.554	0.117	0.671
	Right	0.188	--	0.188
Simult Tx	Configuration	WCDMA Band V SAR (W/kg)	2.4G Wi-Fi SAR (W/kg)	∑ SAR (W/kg)
Body	Back	1.16	0.117	1.277
	Front	0.042	0.117	0.159
	Top	--	0.117	0.117
	Bottom	0.063	--	0.063
	Left	0.093	0.117	0.210
	Right	0.093	--	0.093

9.2.6. Simultaneous Transmission Conclusion

The above numerical summed SAR results for all the worst-case simultaneous transmission conditions were below the SAR limit. Therefore, the above analysis is sufficient to determine that simultaneous transmission cases will not exceed the SAR limit and therefore no measured volumetric simultaneous SAR summation is required per FCC KDB Publication 447498 D01v05r02.

Appendix A. SAR System Validation Data

Date/Time: 08-26-2014

Test Laboratory: QuieTek Lab

System Check Head 835MHz

DUT: Dipole 835 MHz D835V2; Type: D835V2

Communication System: UID 0, CW; Communication System Band: D835(835.0MHz); Duty Cycle: 1:1;

Frequency: 835 MHz; Medium parameters used: f = 835 MHz; σ = 0.89 S/m; εr = 41.26; ρ = 1000 kg/m3 ;

Phantom section: Flat Section ; Input Power=250mW

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

DASY5 Configuration:

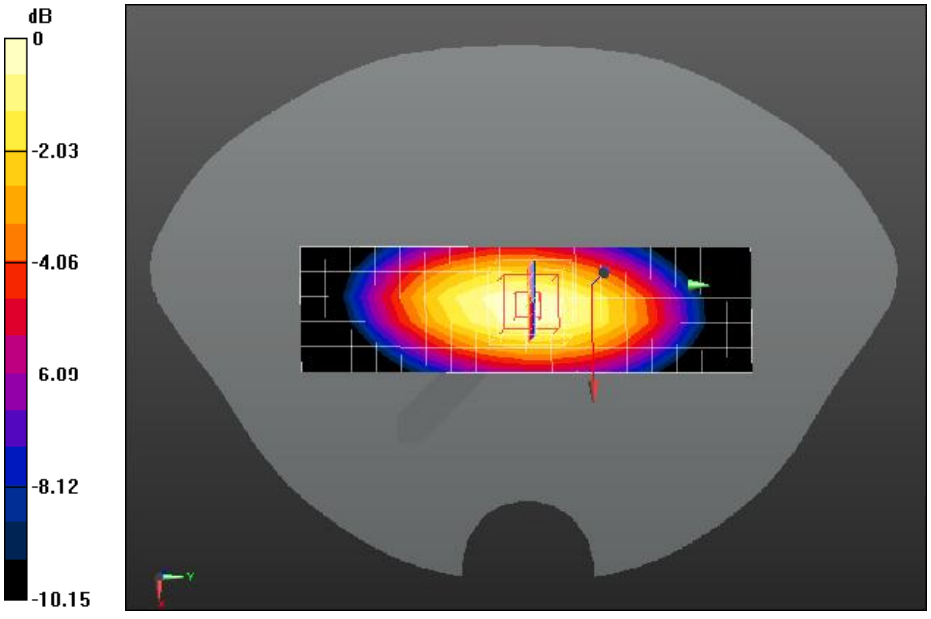
- Probe: EX3DV4 - SN3710; ConvF(9.56, 9.56, 9.56); Calibrated: 04/03/2014;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1220; Calibrated: 22/01/2014
- Phantom: SAM2; Type: SAM; Serial: TP1562
- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

Configuration/System Check Head 835MHz/Area Scan (6x19x1): Measurement grid: dx=10mm, dy=10mm, Maximum value of SAR (measured) = 2.52 W/kg

Configuration/System Check Head 835MHz/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm, Reference Value = 54.175 V/m; Power Drift = 0.12 dB

Peak SAR (extrapolated) = 3.68 W/kg

SAR(1 g) = 2.45 W/kg; SAR(10 g) = 1.61 W/kg Maximum value of SAR (measured) = 2.64 W/kg



0 dB = 2.64 W/kg = 4.22 dBW/kg

Date/Time: 08-26-2014

Test Laboratory: QuieTek Lab

System Check Head 1900MHz

DUT: Dipole 1900 MHz D1900V2; Type: D1900V2

Communication System: UID 10000, CW; Communication System Band: D1900 (1900.0 MHz); Duty Cycle: 1:1; Frequency: 1900 MHz; Medium parameters used: f = 1900 MHz; σ = 1.44 S/m; εr = 38.72; 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(7.72, 7.72, 7.72); Calibrated: 04/03/2014;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1220; Calibrated: 22/01/2014
- Phantom: SAM2; Type: SAM; Serial: TP1562
- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

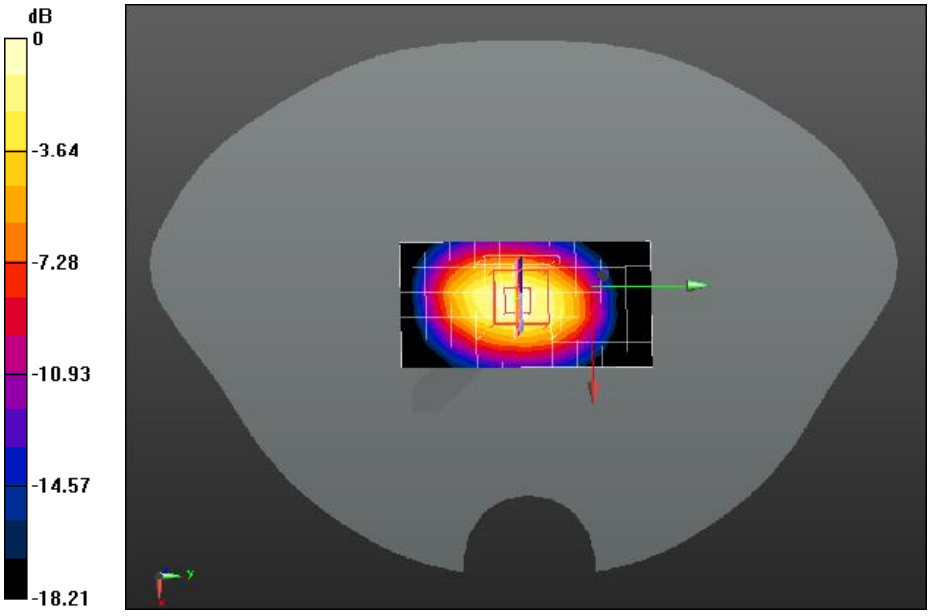
Configuration/System Check Head 1900MHz/Area Scan (6x11x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 9.63 W/kg

Configuration/System Check Head 1900MHz/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm, Reference Value = 85.802 V/m; Power Drift = 0.05 dB

Peak SAR (extrapolated) = 18.6 W/kg

SAR(1 g) = 9.76 W/kg; SAR(10 g) = 4.97 W/kg Maximum value of SAR (measured) = 11.0 W/kg



0 dB = 11.0 W/kg = 10.41 dBW/kg

Date/Time: 08-26-2014

Test Laboratory: QuieTek Lab

System Check Body 835MHz

DUT: Dipole 835 MHz D835V2; Type: D835V2

Communication System: UID 10000, CW; Communication System Band: D835 (835.0 MHz); Duty Cycle: 1:1; Frequency: 835 MHz; Medium parameters used: f = 835 MHz; σ = 0.98 S/m; εr = 53.84; 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(9.22, 9.22, 9.22); Calibrated: 04/03/2014;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1220; Calibrated: 22/01/2014
- Phantom: SAM2; Type: SAM; Serial: TP1562
- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

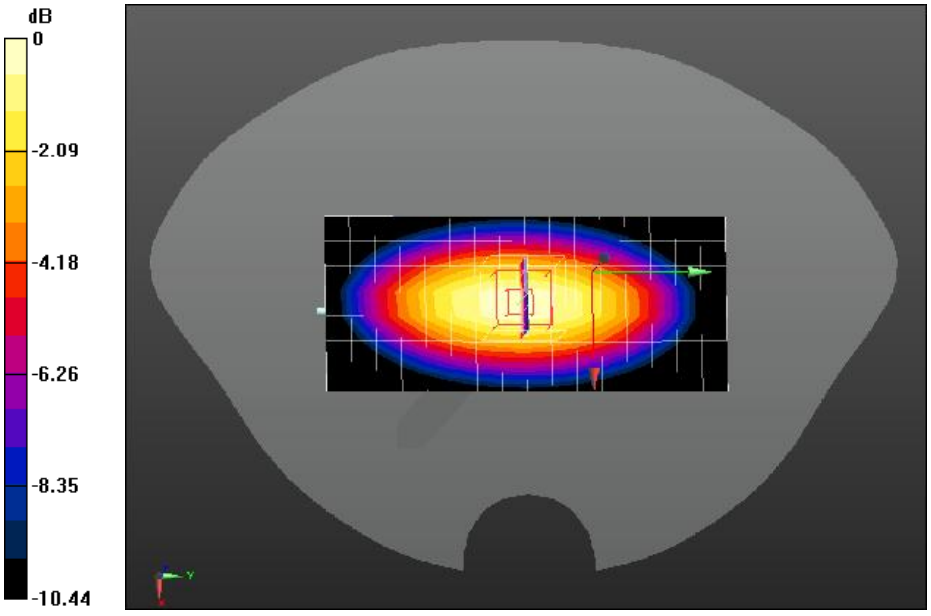
Configuration/System Check Body 835MHz/Area Scan (8x17x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 2.51 W/kg

Configuration/System Check Body 835MHz/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm, Reference Value = 52.328 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 3.78 W/kg

SAR(1 g) = 2.5 W/kg; SAR(10 g) = 1.63 W/kg Maximum value of SAR (measured) = 2.70 W/kg



0 dB = 2.70 W/kg = 4.31 dBW/kg

Date/Time: 08-26-2014

Test Laboratory: QuieTek Lab

System Check Body 1900MHz

DUT: Dipole 1900 MHz D1900V2; Type: D1900V2

Communication System: UID 0, CW; Communication System Band: D1900(1900MHz); Duty Cycle: 1:1;

Frequency: 1900 MHz; Medium parameters used: f = 1900 MHz; σ = 1.5 S/m; εr = 52.02; 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(7.25, 7.25, 7.25); Calibrated: 04/03/2014;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1220; Calibrated: 22/01/2014
- Phantom: SAM1; Type: SAM; Serial: TP1561
- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

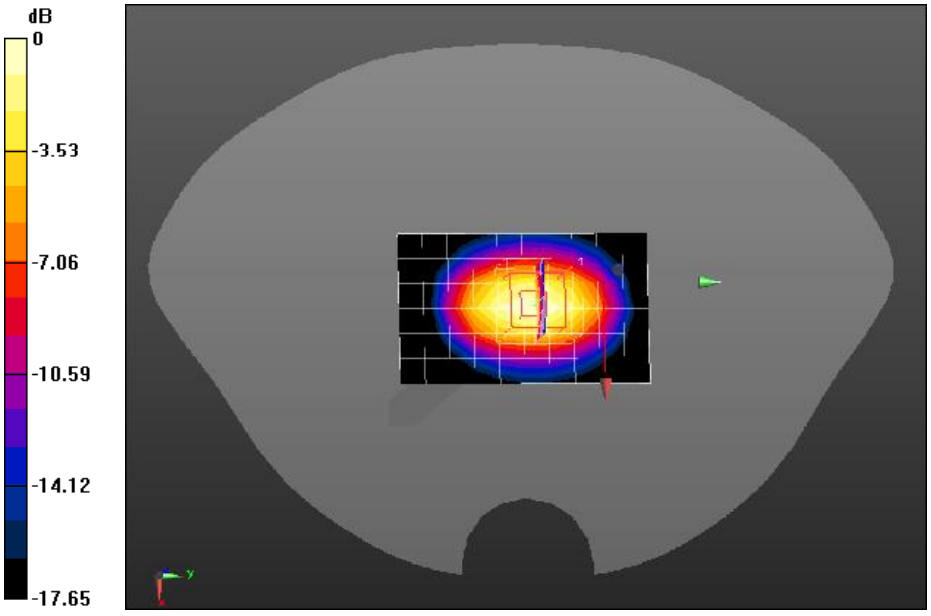
Configuration/System Check Body 1900MHz/Area Scan (7x11x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 11.5 W/kg

Configuration/System Check Body 1900MHz/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm, Reference Value = 87.706 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 19.3 W/kg

SAR(1 g) = 10.4 W/kg; SAR(10 g) = 5.37 W/kg Maximum value of SAR (measured) = 11.7 W/kg



0 dB = 11.7 W/kg = 10.68 dBW/kg

Appendix B. SAR measurement Data

Date/Time: 08-26-2014

Test Laboratory: QuieTek Lab

GSM850 Mid Touch-Left

DUT: Mobile Data Terminal; Type: C4000

Communication System: UID 0, Generic GSM; Communication System Band: GSM850; Duty Cycle: 1:8.3; Frequency: 836.4 MHz; Medium parameters used: f = 836.4 MHz; σ = 0.89 S/m; εr = 41.24; ρ = 1000 kg/m3 ; Phantom section: Left Section

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

DASY5 Configuration:

- Probe: EX3DV4 - SN3710; ConvF(9.56, 9.56, 9.56); Calibrated: 04/03/2014;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1220; Calibrated: 22/01/2014
- Phantom: SAM1; Type: SAM; Serial: TP1561
- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

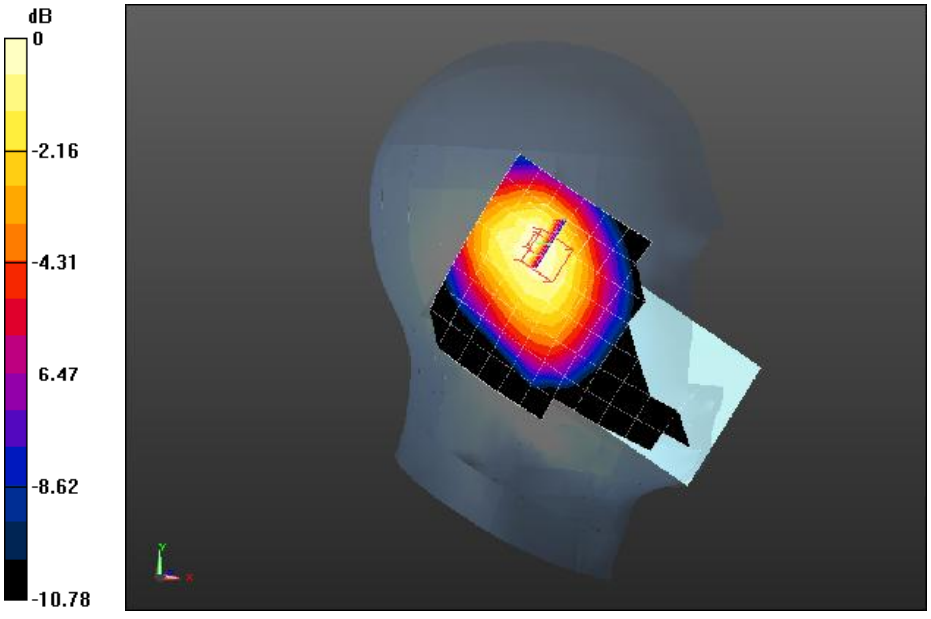
Configuration/GSM850 Mid Touch-Left/Area Scan (9x14x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.155 W/kg

Configuration/GSM850 Mid Touch-Left/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm, Reference Value = 10.474 V/m; Power Drift = -0.16 dB

Peak SAR (extrapolated) = 0.201 W/kg

SAR(1 g) = 0.154 W/kg; SAR(10 g) = 0.113 W/kg Maximum value of SAR (measured) = 0.163 W/kg



0 dB = 0.163 W/kg = -7.88 dBW/kg

Date/Time: 08-26-2014

Test Laboratory: QuieTek Lab

GSM850 Mid Tilt-Left

DUT: Mobile Data Terminal; Type: C4000

Communication System: UID 0, Generic GSM; Communication System Band: GSM850; Duty Cycle: 1:8.3;

Frequency: 836.4 MHz; Medium parameters used: f = 836.4 MHz; σ = 0.89 S/m; εr = 41.24; ρ = 1000 kg/m3 ;

Phantom section: Left Section

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

DASY5 Configuration:

- Probe: EX3DV4 - SN3710; ConvF(9.56, 9.56, 9.56); Calibrated: 04/03/2014;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1220; Calibrated: 22/01/2014
- Phantom: SAM1; Type: SAM; Serial: TP1561
- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

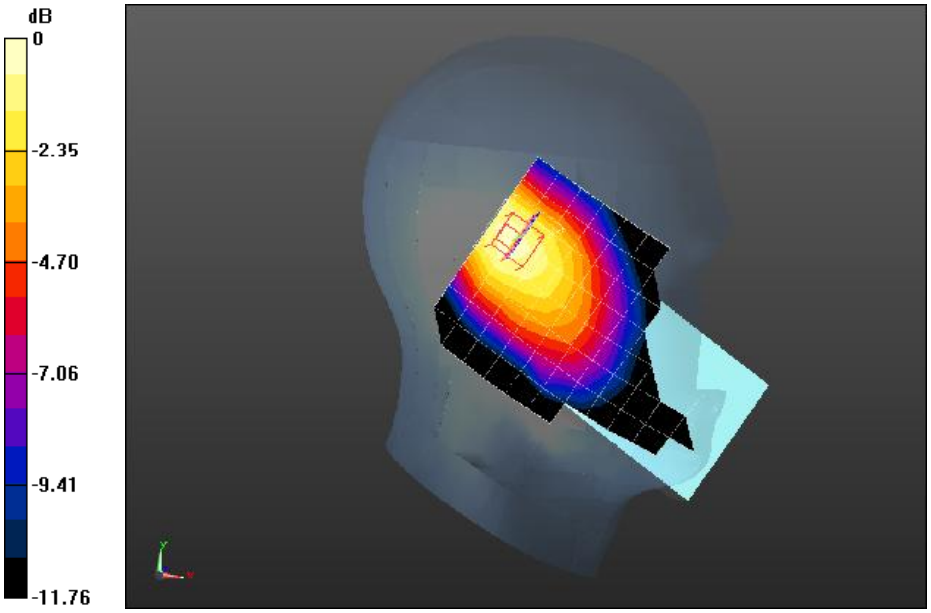
Configuration/GSM850 Mid Tilt-Left/Area Scan (9x14x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.106 W/kg

Configuration/GSM850 Mid Tilt-Left/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm, Reference Value = 9.293 V/m; Power Drift = 0.20 dB

Peak SAR (extrapolated) = 0.150 W/kg

SAR(1 g) = 0.100 W/kg; SAR(10 g) = 0.066 W/kg Maximum value of SAR (measured) = 0.105 W/kg



0 dB = 0.105 W/kg = -9.79 dBW/kg

Date/Time: 08-26-2014

Test Laboratory: QuieTek Lab

GSM850 Mid Touch-Right

DUT: Mobile Data Terminal; Type: C4000

Communication System: UID 0, Generic GSM; Communication System Band: GSM850; Duty Cycle: 1:8.3;

Frequency: 836.4 MHz; Medium parameters used: f = 836.4 MHz; σ = 0.89 S/m; εr = 41.24; ρ = 1000 kg/m3 ;

Phantom section: Right Section

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

DASY5 Configuration:

- Probe: EX3DV4 - SN3710; ConvF(9.56, 9.56, 9.56); Calibrated: 04/03/2014;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1220; Calibrated: 22/01/2014
- Phantom: SAM1; Type: SAM; Serial: TP1561
- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

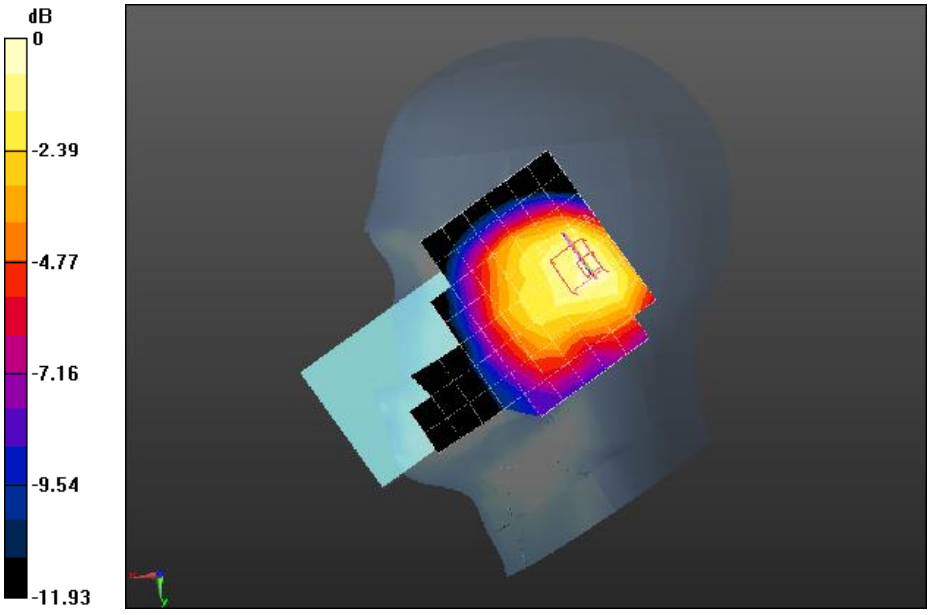
Configuration/GSM850 Mid Touch-Right/Area Scan (9x14x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.0783 W/kg

Configuration/GSM850 Mid Touch-Right/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm, Reference Value = 10.034 V/m; Power Drift = -0.08 dB

Peak SAR (extrapolated) = 0.120 W/kg

SAR(1 g) = 0.080 W/kg; SAR(10 g) = 0.055 W/kg Maximum value of SAR (measured) = 0.0855 W/kg



0 dB = 0.0855 W/kg = -10.68 dBW/kg

Date/Time: 08-26-2014

Test Laboratory: QuieTek Lab

GSM850 Mid Tilt-Right

DUT: Mobile Data Terminal; Type: C4000

Communication System: UID 0, Generic GSM; Communication System Band: GSM850; Duty Cycle: 1:8.3;

Frequency: 836.4 MHz; Medium parameters used: f = 836.4 MHz; σ = 0.89 S/m; εr = 41.24; ρ = 1000 kg/m3 ;

Phantom section: Right Section

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

DASY5 Configuration:

- Probe: EX3DV4 - SN3710; ConvF(9.56, 9.56, 9.56); Calibrated: 04/03/2014;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1220; Calibrated: 22/01/2014
- Phantom: SAM1; Type: SAM; Serial: TP1561
- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

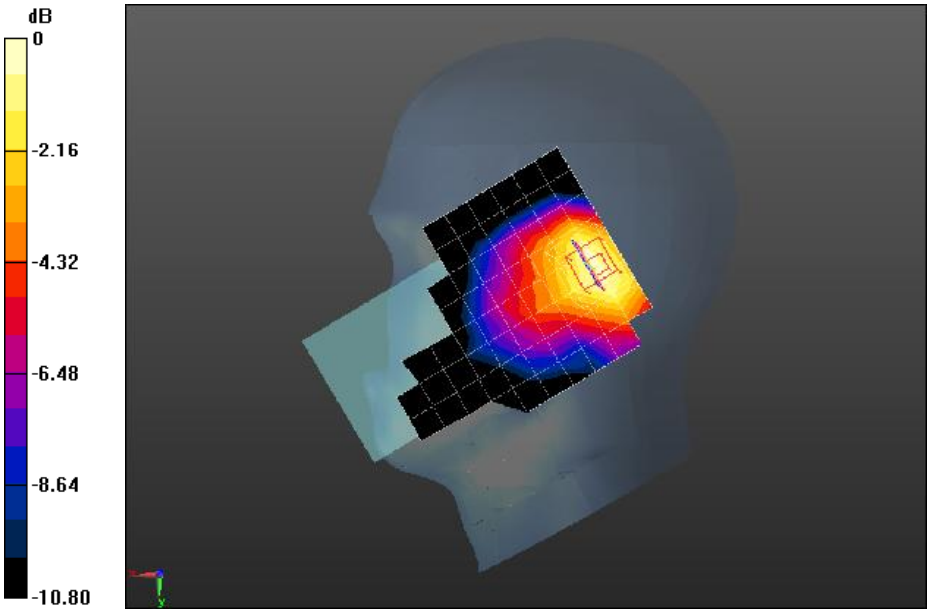
Configuration/GSM850 Mid Tilt-Right/Area Scan (9x14x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.0650 W/kg

Configuration/GSM850 Mid Tilt-Right/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm, Reference Value = 8.185 V/m; Power Drift = 0.04 dB

Peak SAR (extrapolated) = 0.0950 W/kg

SAR(1 g) = 0.063 W/kg; SAR(10 g) = 0.041 W/kg Maximum value of SAR (measured) = 0.0677 W/kg



0 dB = 0.0677 W/kg = -11.69 dBW/kg

Date/Time: 08-26-2014

Test Laboratory: QuieTek Lab

GSM850 Mid Body-Back

DUT: Mobile Data Terminal; Type: C4000

Communication System: UID 0, Generic GSM; Communication System Band: GSM850; Duty Cycle: 1:8.3;

Frequency: 836.4 MHz; Medium parameters used: f = 836.4 MHz; σ = 0.98 S/m; εr = 53.83; ρ = 1000 kg/m3 ;

Phantom section: Flat Section

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

DASY5 Configuration:

- Probe: EX3DV4 - SN3710; ConvF(9.22, 9.22, 9.22); Calibrated: 04/03/2014;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1220; Calibrated: 22/01/2014
- Phantom: SAM2; Type: SAM; Serial: TP1562
- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

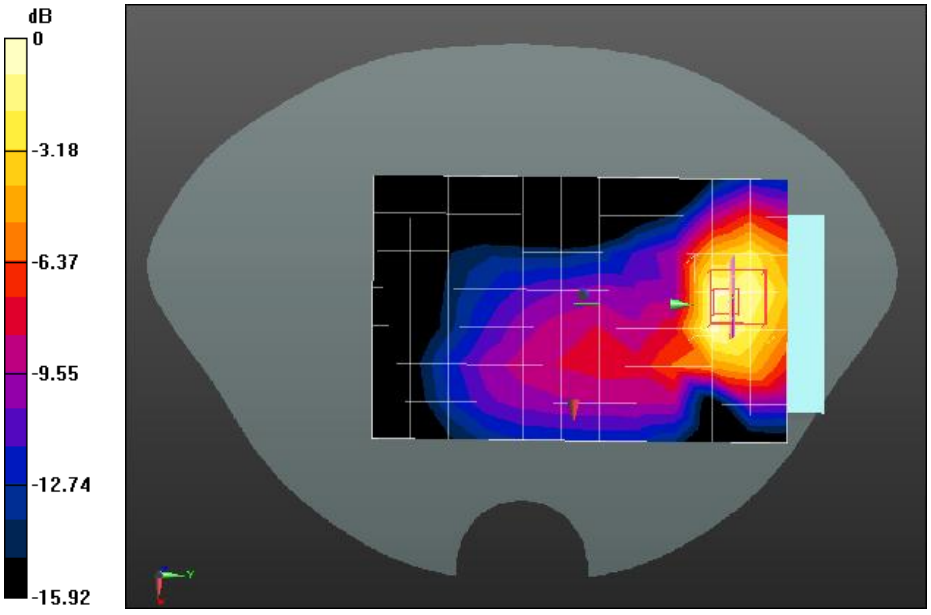
Configuration/GSM850 Mid Body-Back/Area Scan (8x12x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.581 W/kg

Configuration/GSM850 Mid Body-Back/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm, Reference Value = 8.274 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 1.12 W/kg

SAR(1 g) = 0.634 W/kg; SAR(10 g) = 0.376 W/kg Maximum value of SAR (measured) = 0.692 W/kg



0 dB = 0.692 W/kg = -1.60 dBW/kg

Date/Time: 08-26-2014

Test Laboratory: QuieTek Lab

GPRS850 Low Body-Back(4up)

DUT: Mobile Data Terminal; Type: C4000

Communication System: UID 0, GPRS/EGPRS-4 Slot (0); Communication System Band: GSM 850; Duty Cycle: 1:2.1 ; Frequency: 824.2 MHz; Medium parameters used: f = 824.2 MHz; σ = 0.97 S/m; εr = 53.92; ρ = 1000 kg/m3 ; Phantom section: Flat Section

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

DASY5 Configuration:

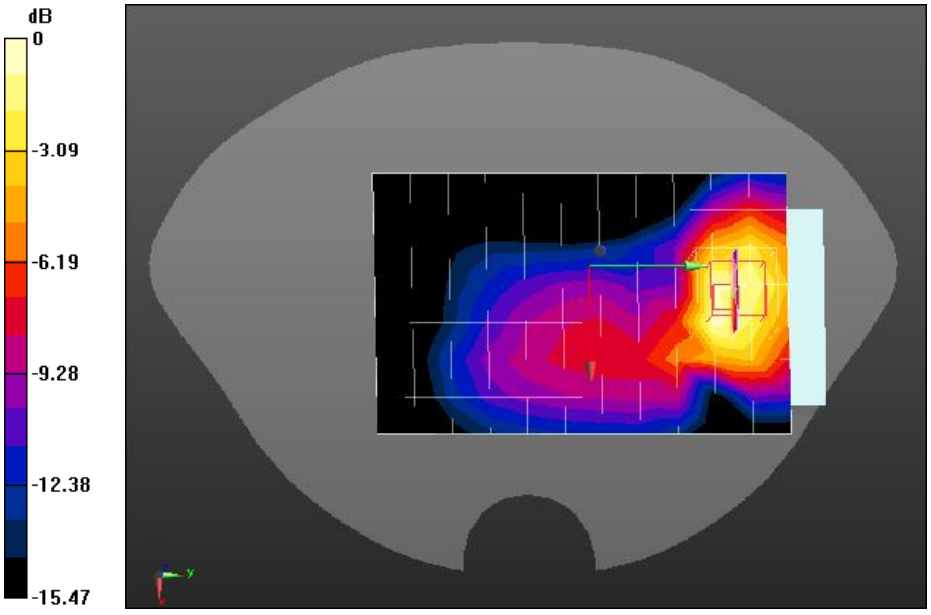
- Probe: EX3DV4 - SN3710; ConvF(9.22, 9.22, 9.22); Calibrated: 04/03/2014;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1220; Calibrated: 22/01/2014
- Phantom: SAM2; Type: SAM; Serial: TP1562
- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

Configuration/GPRS850 Low Body-Back/Area Scan (8x12x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (measured) = 0.812 W/kg

Configuration/GPRS850 Low Body-Back/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm, Reference Value = 9.555 V/m; Power Drift = 0.13 dB

Peak SAR (extrapolated) = 1.45 W/kg

SAR(1 g) = 0.838 W/kg; SAR(10 g) = 0.500 W/kg Maximum value of SAR (measured) = 0.903 W/kg



0 dB = 0.903 W/kg = -0.44 dBW/kg

Date/Time: 08-26-2014

Test Laboratory: QuieTek Lab

GPRS850 Mid Body-Back(4up)

DUT: Mobile Data Terminal; Type: C4000

Communication System: UID 0, GPRS/EGPRS-4 Slot (0); Communication System Band: GSM 850; Duty Cycle: 1:2.1 ; Frequency: 836.4 MHz; Medium parameters used: f = 836.4 MHz; σ = 0.98 S/m; εr = 53.83; ρ = 1000 kg/m3 ; Phantom section: Flat Section

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

DASY5 Configuration:

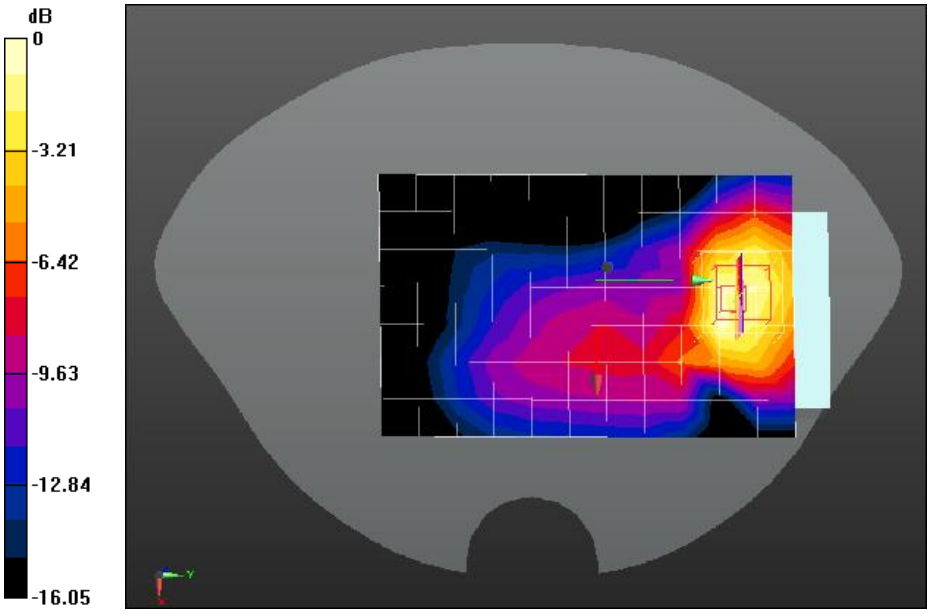
- Probe: EX3DV4 - SN3710; ConvF(9.22, 9.22, 9.22); Calibrated: 04/03/2014;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1220; Calibrated: 22/01/2014
- Phantom: SAM2; Type: SAM; Serial: TP1562
- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

Configuration/GPRS850 Mid Body-Back/Area Scan (8x12x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (measured) = 0.984 W/kg

Configuration/GPRS850 Mid Body-Back/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm, Reference Value = 10.074 V/m; Power Drift = -0.04 dB

Peak SAR (extrapolated) = 1.86 W/kg

SAR(1 g) = 1.05 W/kg; SAR(10 g) = 0.620 W/kg Maximum value of SAR (measured) = 1.13 W/kg



0 dB = 1.13 W/kg = 0.53 dBW/kg

Date/Time: 08-26-2014

Test Laboratory: QuieTek Lab

GPRS850 High Body-Back(4up)

DUT: Mobile Data Terminal; Type: C4000

Communication System: UID 0, GPRS/EGPRS-4 Slot (0); Communication System Band: GSM 850; Duty Cycle: 1:2.1 ; Frequency: 848.8 MHz; Medium parameters used: f = 848.8 MHz; σ = 0.99 S/m; εr = 53.63; ρ = 1000 kg/m3 ; Phantom section: Flat Section

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

DASY5 Configuration:

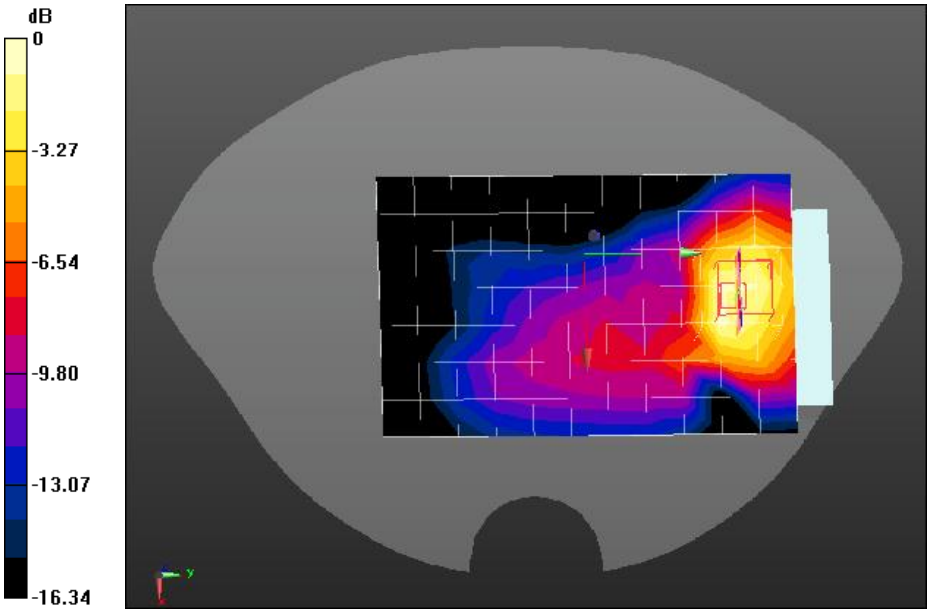
- Probe: EX3DV4 - SN3710; ConvF(9.22, 9.22, 9.22); Calibrated: 04/03/2014;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1220; Calibrated: 22/01/2014
- Phantom: SAM2; Type: SAM; Serial: TP1562
- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

Configuration/GPRS850 High Body-Back/Area Scan (8x12x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (measured) = 1.20 W/kg

Configuration/GPRS850 High Body-Back/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm, Reference Value = 10.525 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 2.27 W/kg

SAR(1 g) = 1.29 W/kg; SAR(10 g) = 0.765 W/kg Maximum value of SAR (measured) = 1.40 W/kg



0 dB = 1.40 W/kg = 1.46 dBW/kg

Date/Time: 08-26-2014

Test Laboratory: QuieTek Lab

GPRS850 High Body-Back(4up)*

DUT: Mobile Data Terminal; Type: C4000

Communication System: UID 0, GPRS/EGPRS-4 Slot (0); Communication System Band: GSM 850; Duty Cycle: 1:2.1 ; Frequency: 848.8 MHz; Medium parameters used: f = 848.8 MHz; σ = 0.99 S/m; εr = 53.63; ρ = 1000 kg/m3 ; Phantom section: Flat Section

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

DASY5 Configuration:

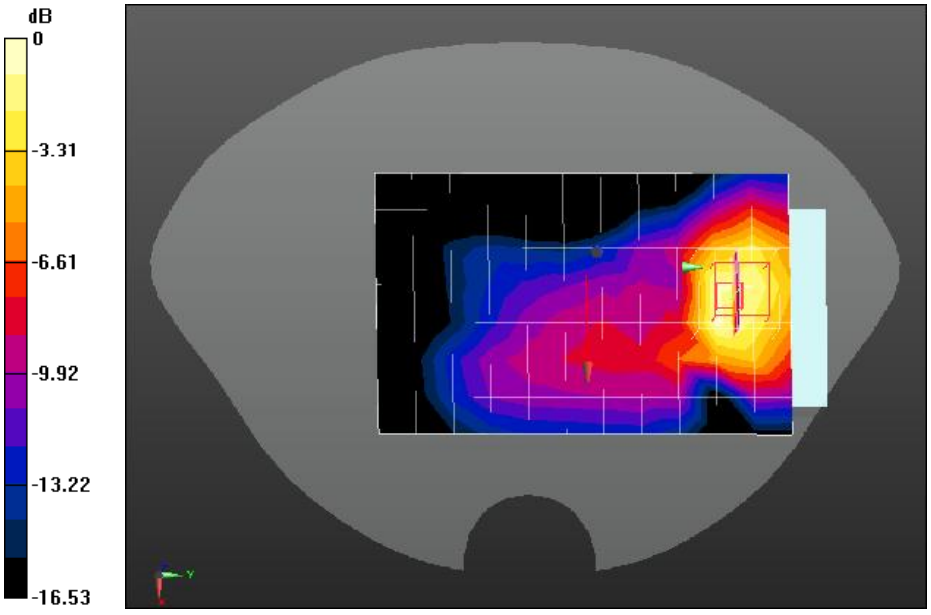
- Probe: EX3DV4 - SN3710; ConvF(9.22, 9.22, 9.22); Calibrated: 04/03/2014;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1220; Calibrated: 22/01/2014
- Phantom: SAM2; Type: SAM; Serial: TP1562
- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

Configuration/GPRS850 High Body-Back/Area Scan (8x12x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (measured) = 1.23 W/kg

Configuration/GPRS850 High Body-Back/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm, Reference Value = 10.687 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 2.38 W/kg

SAR(1 g) = 1.33 W/kg; SAR(10 g) = 0.779 W/kg Maximum value of SAR (measured) = 1.46 W/kg



0 dB = 1.46 W/kg = 1.64 dBW/kg

Z-Axis Plot


Interpolated Max SAR Z Line(z)
CPR5050 High Body-Back;Zoom Scan;SAR;cube 0
Markers
W/kg
2.4
2.2
2.0
1.8
1.6
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
0.000
0.005
0.010
0.015
0.020
0.025
0.030
0.035
m

Date/Time: 08-26-2014

Test Laboratory: QuieTek Lab

GPRS850 Mid Body-Left side(4up)

DUT: Mobile Data Terminal; Type: C4000

Communication System: UID 0, GPRS/EGPRS-4 Slot (0); Communication System Band: GSM 850; Duty Cycle: 1:2.1 ; Frequency: 836.4 MHz; Medium parameters used: f = 836.4 MHz; σ = 0.98 S/m; εr = 53.83; ρ = 1000 kg/m3 ; Phantom section: Flat Section

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

DASY5 Configuration:

- Probe: EX3DV4 - SN3710; ConvF(9.22, 9.22, 9.22); Calibrated: 04/03/2014;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1220; Calibrated: 22/01/2014
- Phantom: SAM2; Type: SAM; Serial: TP1562
- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

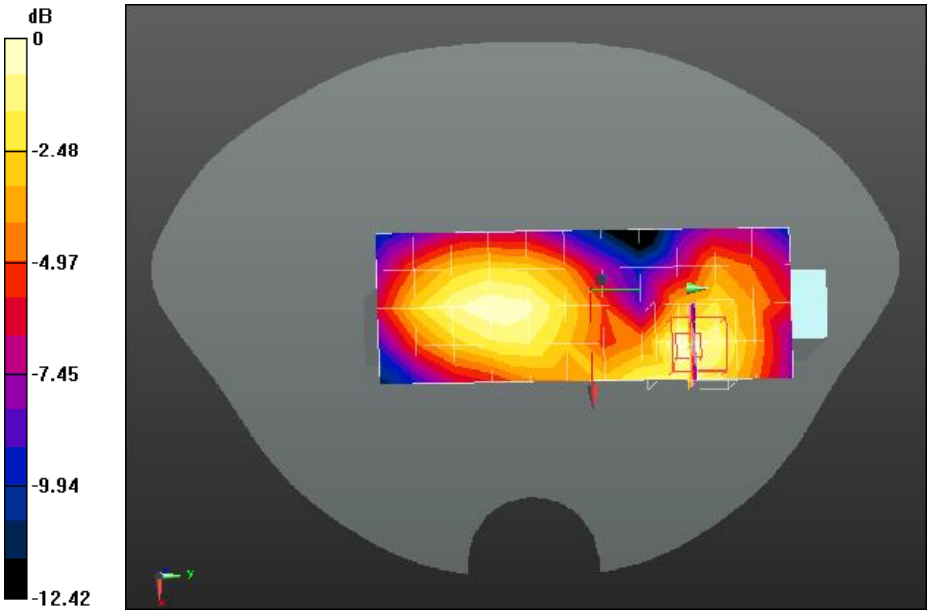
Configuration/GPRS850 Mid Body-Left side/Area Scan (5x12x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.0888 W/kg

Configuration/GPRS850 Mid Body-Left side/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm, Reference Value = 8.985 V/m; Power Drift = -0.20 dB

Peak SAR (extrapolated) = 0.125 W/kg

SAR(1 g) = 0.082 W/kg; SAR(10 g) = 0.053 W/kg Maximum value of SAR (measured) = 0.0901 W/kg



0 dB = 0.0901 W/kg = -10.45 dBW/kg

Date/Time: 08-26-2014

Test Laboratory: QuieTek Lab

GPRS850 Mid Body-Right side(4up)

DUT: Mobile Data Terminal; Type: C4000

Communication System: UID 0, GPRS/EGPRS-4 Slot (0); Communication System Band: GSM 850; Duty Cycle: 1:2.1 ; Frequency: 836.4 MHz; Medium parameters used: f = 836.4 MHz; σ = 0.98 S/m; εr = 53.83; ρ = 1000 kg/m3 ; Phantom section: Flat Section

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

DASY5 Configuration:

- Probe: EX3DV4 - SN3710; ConvF(9.22, 9.22, 9.22); Calibrated: 04/03/2014;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1220; Calibrated: 22/01/2014
- Phantom: SAM2; Type: SAM; Serial: TP1562
- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

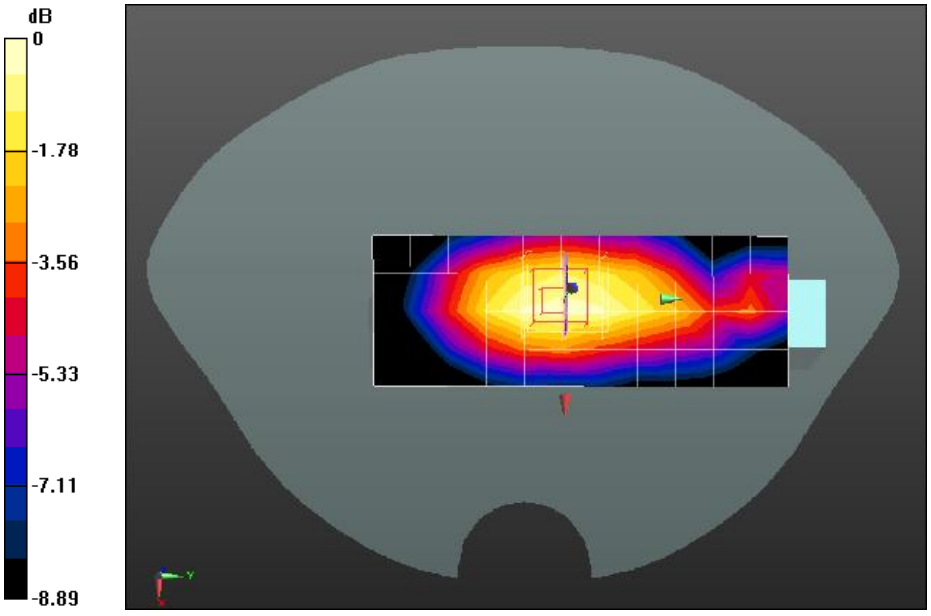
Configuration/GPRS850 Mid Body-Right side/Area Scan (5x12x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.141 W/kg

Configuration/GPRS850 Mid Body-Right side/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm, Reference Value = 11.695 V/m; Power Drift = 0.11 dB

Peak SAR (extrapolated) = 0.197 W/kg

SAR(1 g) = 0.140 W/kg; SAR(10 g) = 0.098 W/kg Maximum value of SAR (measured) = 0.148 W/kg



0 dB = 0.148 W/kg = -8.30 dBW/kg

Date/Time: 08-26-2014

Test Laboratory: QuieTek Lab

GPRS850 Mid Body-Bottom(4up)

DUT: Mobile Data Terminal; Type: C4000

Communication System: UID 0, GPRS/EGPRS-4 Slot (0); Communication System Band: GSM 850; Duty Cycle: 1:2.1 ; Frequency: 836.4 MHz; Medium parameters used: f = 836.4 MHz; σ = 0.98 S/m; εr = 53.83; ρ = 1000 kg/m3 ; Phantom section: Flat Section

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

DASY5 Configuration:

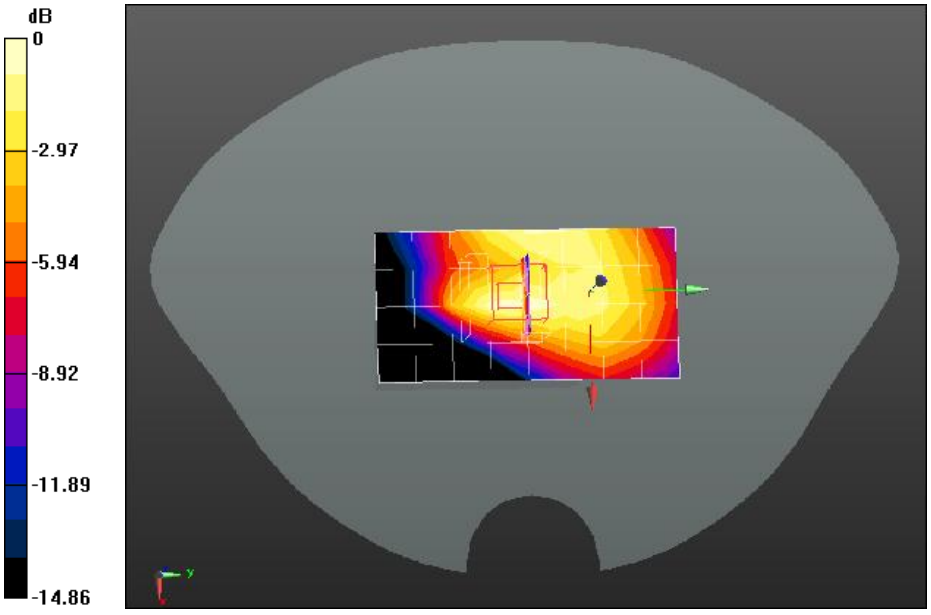
- Probe: EX3DV4 - SN3710; ConvF(9.22, 9.22, 9.22); Calibrated: 04/03/2014;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1220; Calibrated: 22/01/2014
- Phantom: SAM2; Type: SAM; Serial: TP1562
- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

Configuration/GPRS850 Mid Body-Bottom/Area Scan (5x9x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (measured) = 0.0557 W/kg

Configuration/GPRS850 Mid Body-Bottom/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm, Reference Value = 7.621 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 0.0910 W/kg

SAR(1 g) = 0.054 W/kg; SAR(10 g) = 0.031 W/kg Maximum value of SAR (measured) = 0.0602 W/kg



0 dB = 0.0602 W/kg = -12.20 dBW/kg

Date/Time: 08-26-2014

Test Laboratory: QuieTek Lab

PCS1900 Mid Touch-Left

DUT: Mobile Data Terminal; Type: C4000

Communication System: UID 0, Generic GSM; Communication System Band: PCS1900; Duty Cycle: 1:8.3; Frequency: 1880 MHz; Medium parameters used: f = 1880 MHz; σ = 1.42 S/m; εr = 38.85; ρ = 1000 kg/m3 ; Phantom section: Left Section

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

DASY5 Configuration:

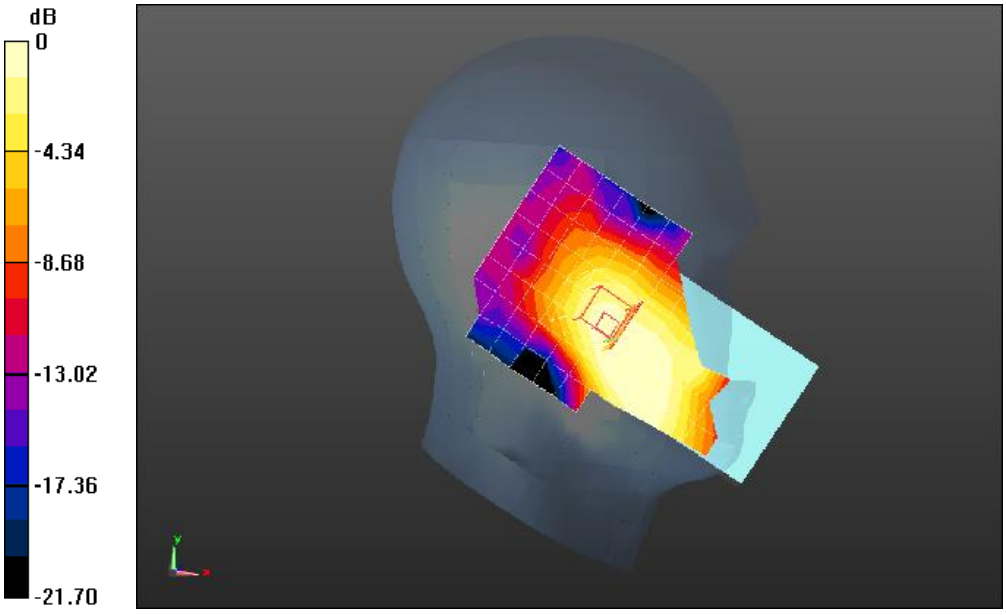
- Probe: EX3DV4 - SN3710; ConvF(7.72, 7.72, 7.72); Calibrated: 04/03/2014;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1220; Calibrated: 22/01/2014
- Phantom: SAM1; Type: SAM; Serial: TP1561
- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

Configuration/PCS1900 Mid Touch-Left/Area Scan (9x15x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (measured) = 0.0582 W/kg

Configuration/PCS1900 Mid Touch-Left/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm, Reference Value = 1.484 V/m; Power Drift = 0.05 dB

Peak SAR (extrapolated) = 0.0710 W/kg

SAR(1 g) = 0.046 W/kg; SAR(10 g) = 0.027 W/kg Maximum value of SAR (measured) = 0.0516 W/kg



0 dB = 0.0516 W/kg = -12.87 dBW/kg

Date/Time: 08-26-2014

Test Laboratory: QuieTek Lab

PCS1900 Mid Tilt-Left

DUT: Mobile Data Terminal; Type: C4000

Communication System: UID 0, Generic GSM; Communication System Band: PCS1900; Duty Cycle: 1:8.3; Frequency: 1880 MHz; Medium parameters used: f = 1880 MHz; σ = 1.42 S/m; εr = 38.85; ρ = 1000 kg/m3 ; Phantom section: Left Section

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

DASY5 Configuration:

- Probe: EX3DV4 - SN3710; ConvF(7.72, 7.72, 7.72); Calibrated: 04/03/2014;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1220; Calibrated: 22/01/2014
- Phantom: SAM1; Type: SAM; Serial: TP1561
- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

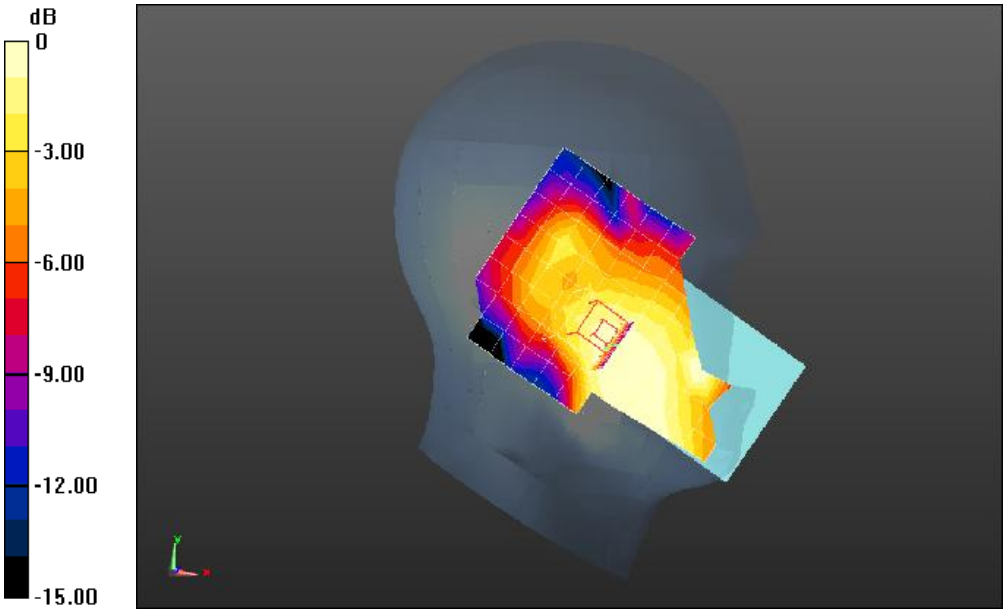
Configuration/PCS1900 Mid Tilt-Left/Area Scan (9x15x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.0237 W/kg

Configuration/PCS1900 Mid Tilt-Left/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm, Reference Value = 2.540 V/m; Power Drift = 0.17 dB

Peak SAR (extrapolated) = 0.0270 W/kg

SAR(1 g) = 0.017 W/kg; SAR(10 g) = 0.010 W/kg Maximum value of SAR (measured) = 0.0202 W/kg



0 dB = 0.0202 W/kg = -16.95 dBW/kg

Date/Time: 08-26-2014

Test Laboratory: QuieTek Lab

PCS1900 Mid Touch-Right

DUT: Mobile Data Terminal; Type: C4000

Communication System: UID 0, Generic GSM; Communication System Band: PCS1900; Duty Cycle: 1:8.3; Frequency: 1880 MHz; Medium parameters used: f = 1880 MHz; σ = 1.42 S/m; εr = 38.85; ρ = 1000 kg/m3 ; Phantom section: Right Section

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

DASY5 Configuration:

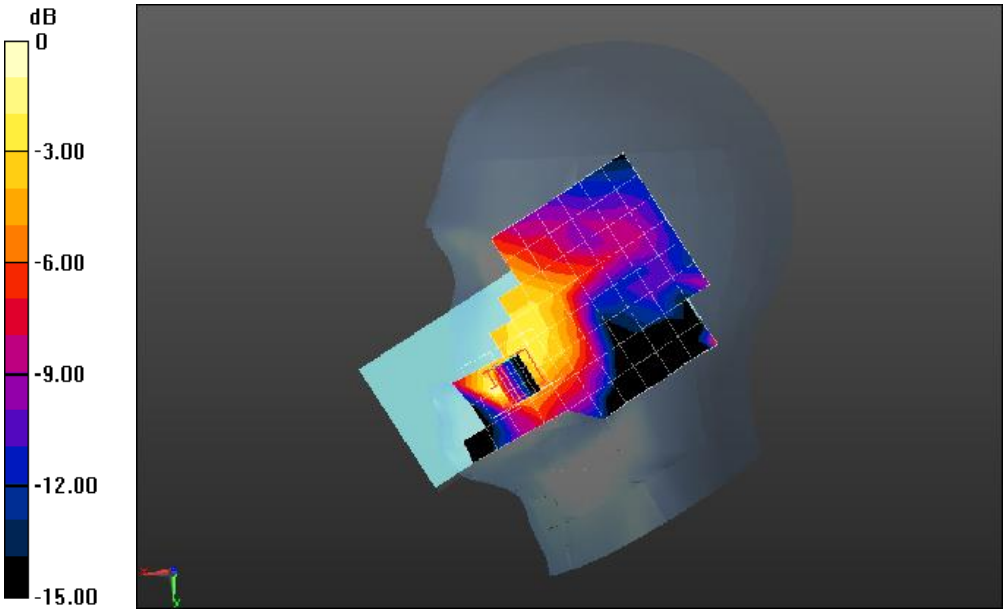
- Probe: EX3DV4 - SN3710; ConvF(7.72, 7.72, 7.72); Calibrated: 04/03/2014;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1220; Calibrated: 22/01/2014
- Phantom: SAM1; Type: SAM; Serial: TP1561
- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

Configuration/PCS1900 Mid Touch-Right/Area Scan (9x15x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (measured) = 0.0400 W/kg

Configuration/PCS1900 Mid Touch-Right/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm, Reference Value = 1.894 V/m; Power Drift = 0.06 dB

Peak SAR (extrapolated) = 0.0940 W/kg

SAR(1 g) = 0.027 W/kg; SAR(10 g) = 0.014 W/kg Maximum value of SAR (measured) = 0.0523 W/kg



0 dB = 0.0523 W/kg = -12.81 dBW/kg

Date/Time: 08-26-2014

Test Laboratory: QuieTek Lab

PCS1900 Mid Tilt-Right

DUT: Mobile Data Terminal; Type: C4000

Communication System: UID 0, Generic GSM; Communication System Band: PCS1900; Duty Cycle: 1:8.3; Frequency: 1880 MHz; Medium parameters used: f = 1880 MHz; σ = 1.42 S/m; εr = 38.85; ρ = 1000 kg/m3 ; Phantom section: Right Section

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

DASY5 Configuration:

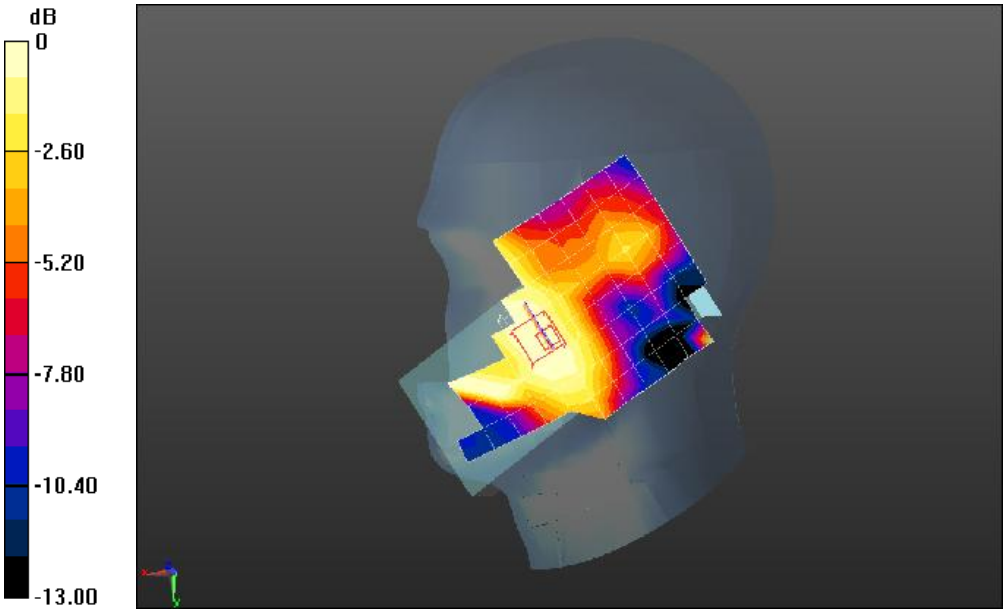
- Probe: EX3DV4 - SN3710; ConvF(7.72, 7.72, 7.72); Calibrated: 04/03/2014;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1220; Calibrated: 22/01/2014
- Phantom: SAM1; Type: SAM; Serial: TP1561
- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

Configuration/PCS1900 Mid Tilt-Right/Area Scan (9x15x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (measured) = 0.0175 W/kg

Configuration/PCS1900 Mid Tilt-Right/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm, Reference Value = 1.970 V/m; Power Drift = 0.20 dB

Peak SAR (extrapolated) = 0.0720 W/kg

SAR(1 g) = 0.016 W/kg; SAR(10 g) = 0.00671 W/kg Maximum value of SAR (measured) = 0.0144 W/kg



0 dB = 0.0144 W/kg = -18.42 dBW/kg

Date/Time: 08-26-2014

Test Laboratory: QuieTek Lab

PCS1900 Mid Body-Back

DUT: Mobile Data Terminal; Type: C4000

Communication System: UID 0, Generic GSM; Communication System Band: PCS1900; Duty Cycle: 1:8.3; Frequency: 1880 MHz; Medium parameters used: f = 1880 MHz; σ = 1.48 S/m; εr = 52.1; ρ = 1000 kg/m3 ; Phantom section: Flat Section

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

DASY5 Configuration:

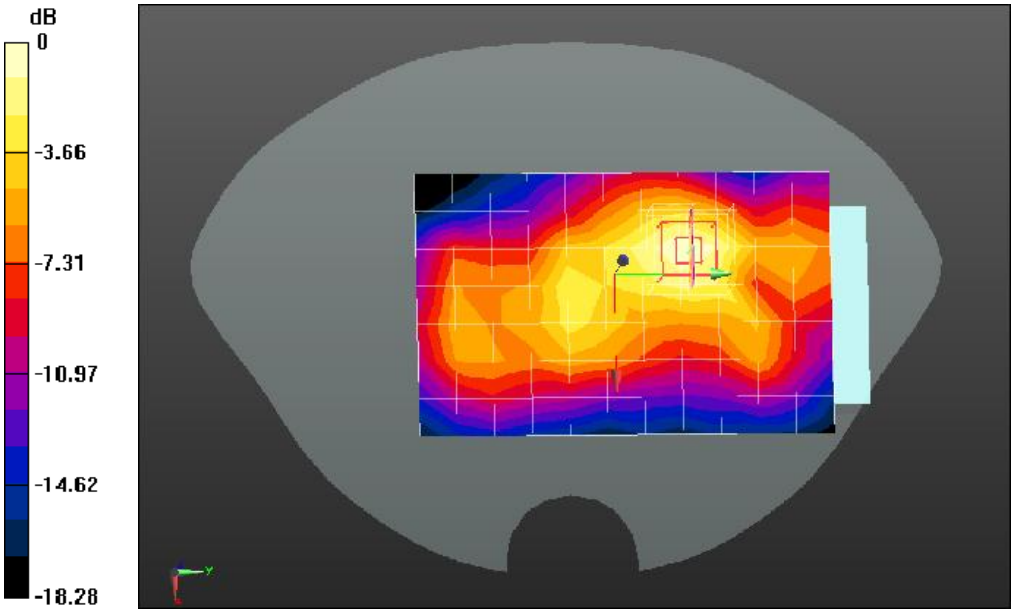
- Probe: EX3DV4 - SN3710; ConvF(7.25, 7.25, 7.25); Calibrated: 04/03/2014;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1220; Calibrated: 22/01/2014
- Phantom: SAM2; Type: SAM; Serial: TP1562
- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

Configuration/PCS1900 Mid Body-Back/Area Scan (8x12x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (measured) = 0.206 W/kg

Configuration/PCS1900 Mid Body-Back/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm, Reference Value = 8.749 V/m; Power Drift = -0.04 dB

Peak SAR (extrapolated) = 0.300 W/kg

SAR(1 g) = 0.190 W/kg; SAR(10 g) = 0.113 W/kg Maximum value of SAR (measured) = 0.210 W/kg



0 dB = 0.210 W/kg = -6.78 dBW/kg

Date/Time: 08-26-2014

Test Laboratory: QuieTek Lab

GPRS1900 Mid Body-Back(4up)

DUT: Mobile Data Terminal; Type: C4000

Communication System: UID 0, GPRS/EGPRS-4 Slot (0); Communication System Band: PCS 1900; Duty Cycle: 1:2.1 ; Frequency: 1880 MHz; Medium parameters used: f = 1880 MHz; σ = 1.48 S/m; εr = 52.1; ρ = 1000 kg/m3 ; Phantom section: Flat Section

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

DASY5 Configuration:

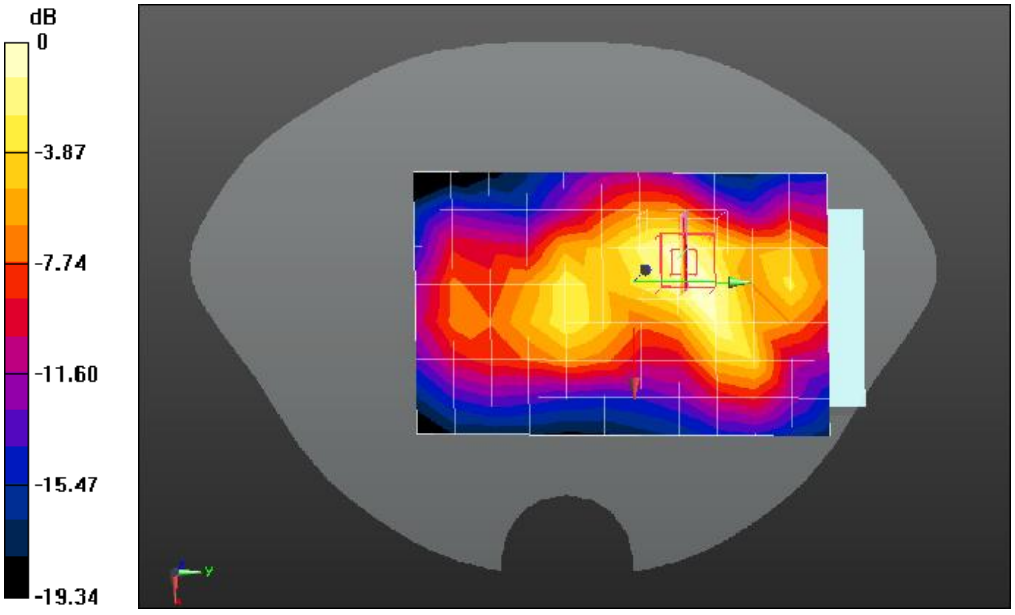
- Probe: EX3DV4 - SN3710; ConvF(7.25, 7.25, 7.25); Calibrated: 04/03/2014;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1220; Calibrated: 22/01/2014
- Phantom: SAM2; Type: SAM; Serial: TP1562
- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

Configuration/GPRS1900 Mid Body-Back/Area Scan (8x12x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (measured) = 0.468 W/kg

Configuration/GPRS1900 Mid Body-Back/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm, Reference Value = 14.428 V/m; Power Drift = -0.05 dB

Peak SAR (extrapolated) = 0.777 W/kg

SAR(1 g) = 0.486 W/kg; SAR(10 g) = 0.280 W/kg Maximum value of SAR (measured) = 0.532 W/kg



0 dB = 0.532 W/kg = -2.74 dBW/kg

Date/Time: 08-26-2014

Test Laboratory: QuieTek Lab

GPRS1900 Mid Body-Front(4up)

DUT: Mobile Data Terminal; Type: C4000

Communication System: UID 0, GPRS/EGPRS-4 Slot (0); Communication System Band: PCS 1900; Duty Cycle: 1:2.1 ; Frequency: 1880 MHz; Medium parameters used: f = 1880 MHz; σ = 1.48 S/m; εr = 52.1; ρ = 1000 kg/m3 ; Phantom section: Flat Section

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

DASY5 Configuration:

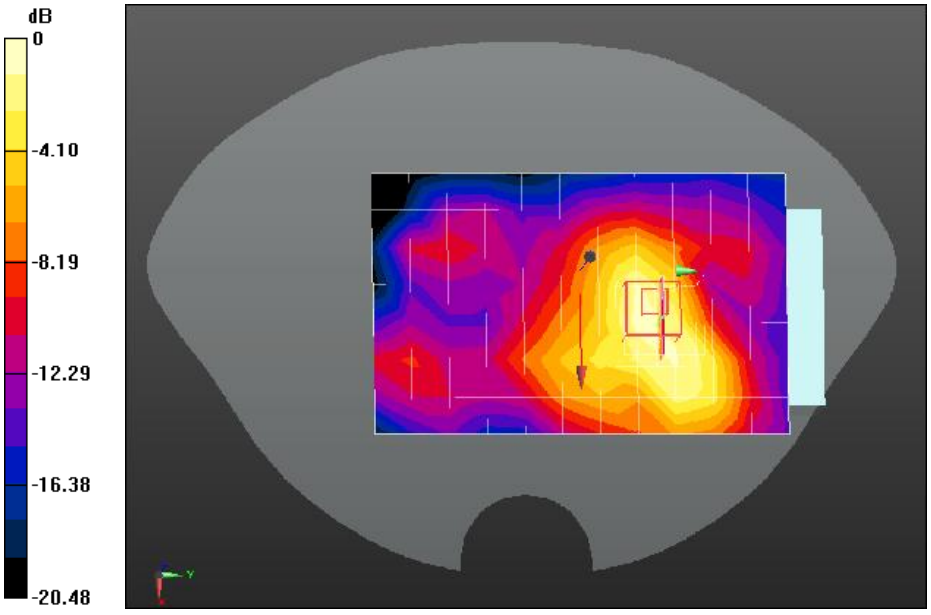
- Probe: EX3DV4 - SN3710; ConvF(7.25, 7.25, 7.25); Calibrated: 04/03/2014;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1220; Calibrated: 22/01/2014
- Phantom: SAM2; Type: SAM; Serial: TP1562
- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

Configuration/GPRS1900 Mid Body-Front/Area Scan (8x12x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (measured) = 0.226 W/kg

Configuration/GPRS1900 Mid Body-Front/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm, Reference Value = 3.631 V/m; Power Drift = 0.06 dB

Peak SAR (extrapolated) = 0.456 W/kg

SAR(1 g) = 0.251 W/kg; SAR(10 g) = 0.141 W/kg Maximum value of SAR (measured) = 0.274 W/kg



0 dB = 0.274 W/kg = -5.62 dBW/kg

Date/Time: 08-26-2014

Test Laboratory: QuieTek Lab

GPRS1900 Mid Body-Left side(4up)

DUT: Mobile Data Terminal; Type: C4000

Communication System: UID 0, GPRS/EGPRS-4 Slot (0); Communication System Band: PCS 1900; Duty Cycle: 1:2.1 ; Frequency: 1880 MHz; Medium parameters used: f = 1880 MHz; σ = 1.48 S/m; εr = 52.1; ρ = 1000 kg/m3 ; Phantom section: Flat Section

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

DASY5 Configuration:

- Probe: EX3DV4 - SN3710; ConvF(7.25, 7.25, 7.25); Calibrated: 04/03/2014;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1220; Calibrated: 22/01/2014
- Phantom: SAM2; Type: SAM; Serial: TP1562
- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

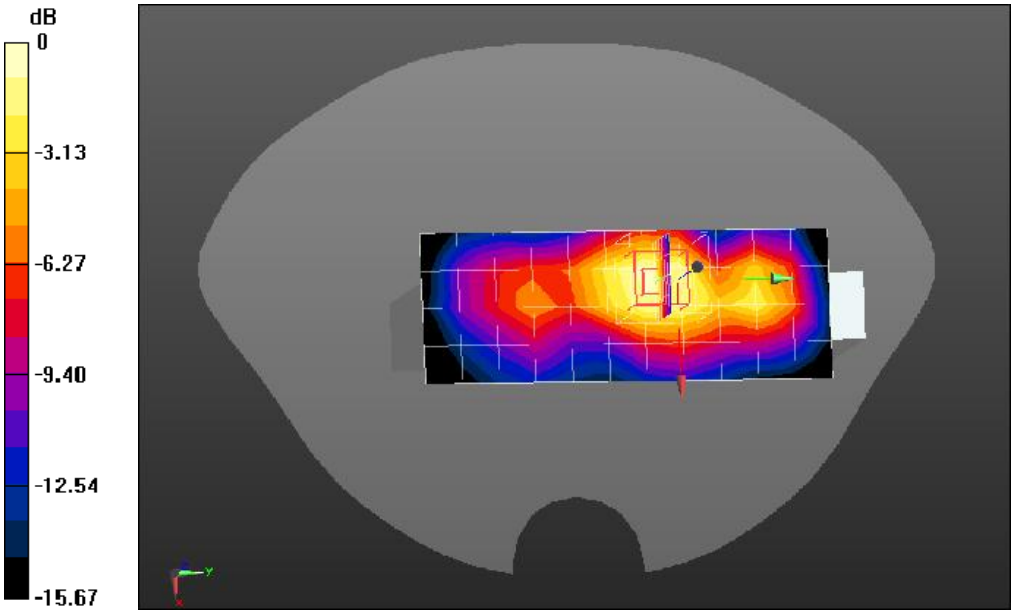
Configuration/GPRS1900 Mid Body-Left side/Area Scan (5x12x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.519 W/kg

Configuration/GPRS1900 Mid Body-Left side/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm, Reference Value = 9.216 V/m; Power Drift = 0.03 dB

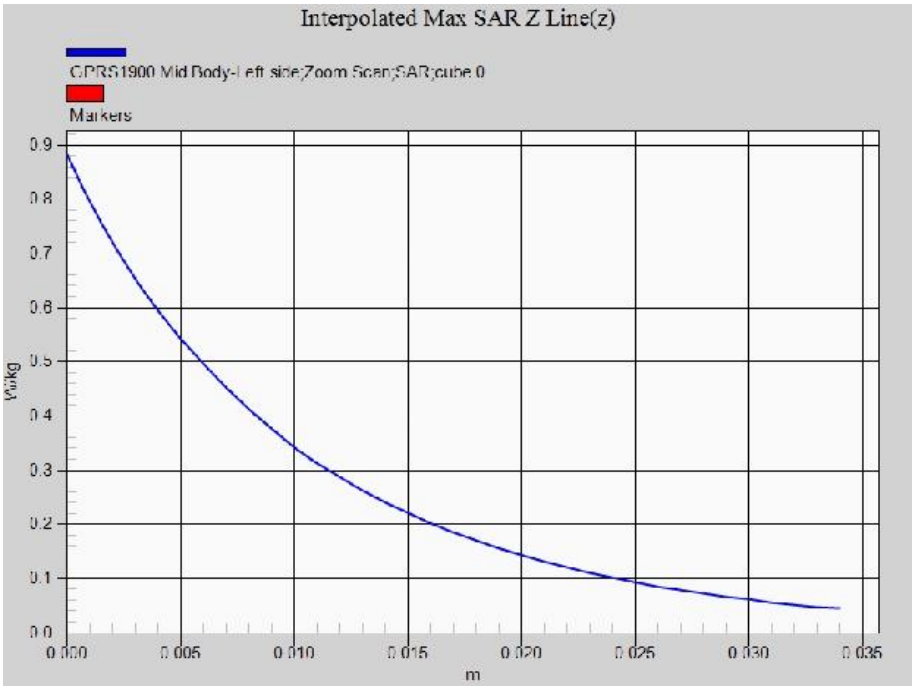
Peak SAR (extrapolated) = 0.883 W/kg

SAR(1 g) = 0.551 W/kg; SAR(10 g) = 0.327 W/kg Maximum value of SAR (measured) = 0.596 W/kg



0 dB = 0.596 W/kg = -2.25 dBW/kg

Z-Axis Plot


Interpolated Max SAR Z Line(z)
CPRS1900 Mid Body-Left side;Zoom Scan;SAR;cube 0
Markers
W/kg
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
0.000
0.005
0.010
0.015
0.020
0.025
0.030
0.035
m

Date/Time: 08-26-2014

Test Laboratory: QuieTek Lab

GPRS1900 Mid Body-Right side(4up)

DUT: Mobile Data Terminal; Type: C4000

Communication System: UID 0, GPRS/EGPRS-4 Slot (0); Communication System Band: PCS 1900; Duty Cycle: 1:2.1 ; Frequency: 1880 MHz; Medium parameters used: f = 1880 MHz; σ = 1.48 S/m; εr = 52.1; ρ = 1000 kg/m3 ; Phantom section: Flat Section

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

DASY5 Configuration:

- Probe: EX3DV4 - SN3710; ConvF(7.25, 7.25, 7.25); Calibrated: 04/03/2014;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1220; Calibrated: 22/01/2014
- Phantom: SAM2; Type: SAM; Serial: TP1562
- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

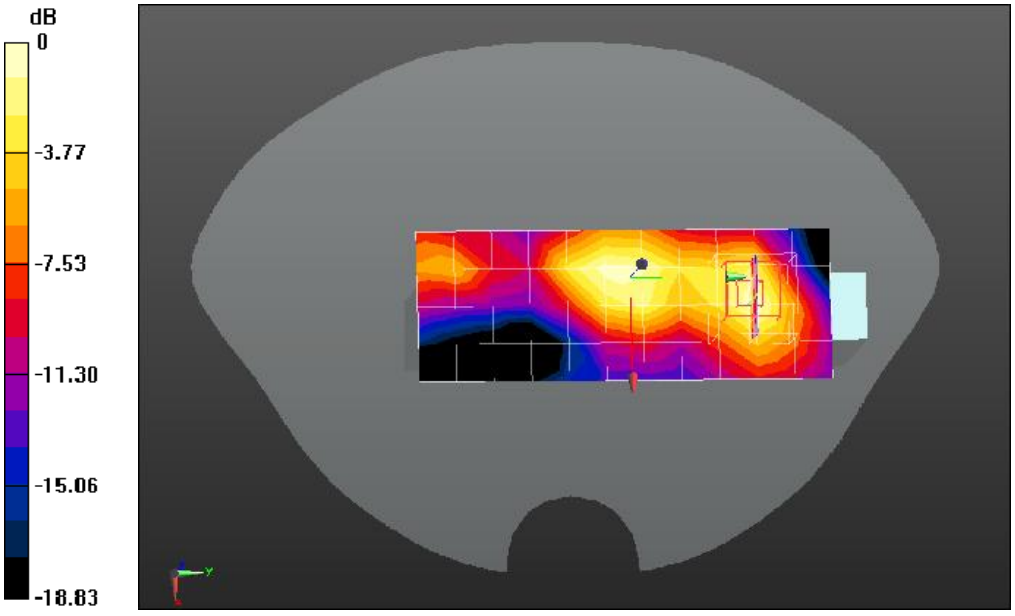
Configuration/GPRS1900 Mid Body-Right side/Area Scan (5x12x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.193 W/kg

Configuration/GPRS1900 Mid Body-Right side/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm, Reference Value = 4.048 V/m; Power Drift = 0.05 dB

Peak SAR (extrapolated) = 0.333 W/kg

SAR(1 g) = 0.187 W/kg; SAR(10 g) = 0.096 W/kg Maximum value of SAR (measured) = 0.198 W/kg



0 dB = 0.198 W/kg = -7.03 dBW/kg

Date/Time: 08-26-2014

Test Laboratory: QuieTek Lab

GPRS1900 Mid Body-Bottom(4up)

DUT: Mobile Data Terminal; Type: C4000

Communication System: UID 0, GPRS/EGPRS-4 Slot (0); Communication System Band: PCS 1900; Duty Cycle: 1:2.1 ; Frequency: 1880 MHz; Medium parameters used: f = 1880 MHz; σ = 1.48 S/m; εr = 52.1; ρ = 1000 kg/m3 ; Phantom section: Flat Section

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

DASY5 Configuration:

- Probe: EX3DV4 - SN3710; ConvF(7.25, 7.25, 7.25); Calibrated: 04/03/2014;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1220; Calibrated: 22/01/2014
- Phantom: SAM2; Type: SAM; Serial: TP1562
- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

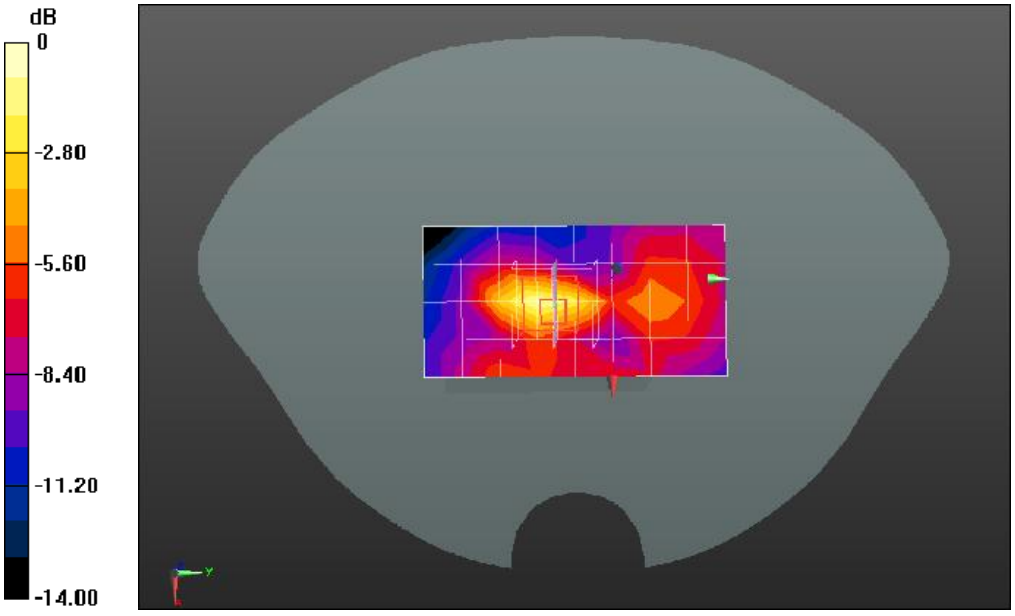
Configuration/GPRS1900 Mid Body-Bottom/Area Scan (5x9x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.0794 W/kg

Configuration/GPRS1900 Mid Body-Bottom/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm, Reference Value = 6.262 V/m; Power Drift = -0.16 dB

Peak SAR (extrapolated) = 0.164 W/kg

SAR(1 g) = 0.086 W/kg; SAR(10 g) = 0.039 W/kg Maximum value of SAR (measured) = 0.0948 W/kg



0 dB = 0.0948 W/kg = -10.23 dBW/kg

Date/Time: 08-26-2014

Test Laboratory: QuieTek Lab

WCDMA Band V Mid Touch-Left

DUT: Mobile Data Terminal; Type: C4000

Communication System: UID 0, UMTS; Communication System Band: Band V UTRA/FDD; Duty Cycle: 1:1.0; Frequency: 836.4 MHz; Medium parameters used: f = 836.4 MHz; σ = 0.91 S/m; εr = 42; ρ = 1000 kg/m3 ; Phantom section: Left Section

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

DASY5 Configuration:

- Probe: EX3DV4 - SN3710; ConvF(9.56, 9.56, 9.56); Calibrated: 04/03/2014;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1220; Calibrated: 22/01/2014
- Phantom: SAM2; Type: SAM; Serial: TP1562
- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

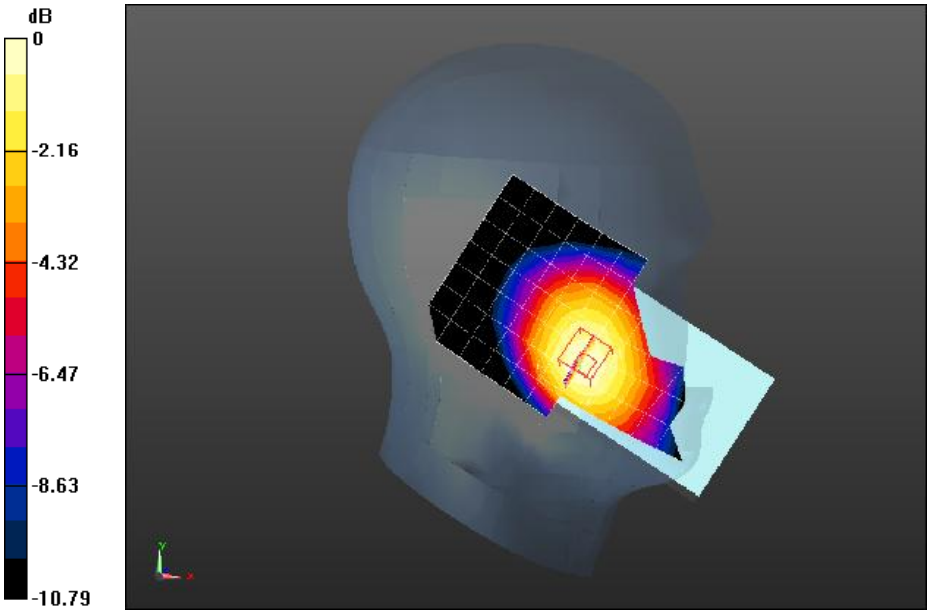
Configuration/WCDMA Band V Mid Touch-Left/Area Scan (8x12x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.182 W/kg

Configuration/WCDMA Band V Mid Touch-Left/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm, Reference Value = 4.261 V/m; Power Drift = -0.08 dB

Peak SAR (extrapolated) = 0.229 W/kg

SAR(1 g) = 0.178 W/kg; SAR(10 g) = 0.136 W/kg Maximum value of SAR (measured) = 0.187 W/kg



0 dB = 0.187 W/kg = -7.28 dBW/kg

Date/Time: 08-26-2014

Test Laboratory: QuieTek Lab

WCDMA Band V Mid Tilt-Left

DUT: Mobile Data Terminal; Type: C4000

Communication System: UID 0, UMTS; Communication System Band: Band V UTRA/FDD; Duty Cycle: 1:1.0; Frequency: 836.4 MHz; Medium parameters used: f = 836.4 MHz; σ = 0.91 S/m; εr = 42; ρ = 1000 kg/m3 ; Phantom section: Left Section

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

DASY5 Configuration:

- Probe: EX3DV4 - SN3710; ConvF(9.56, 9.56, 9.56); Calibrated: 04/03/2014;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1220; Calibrated: 22/01/2014
- Phantom: SAM2; Type: SAM; Serial: TP1562
- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

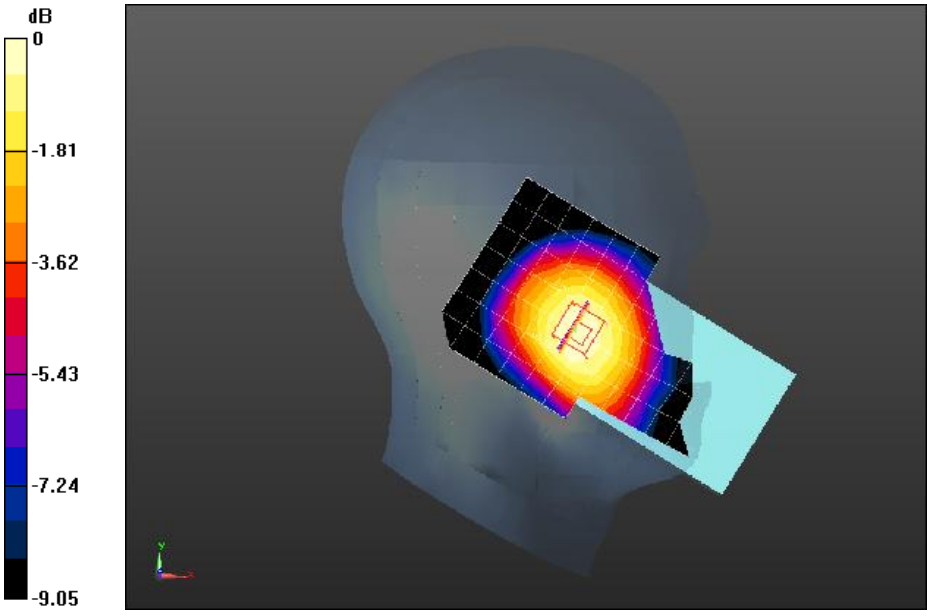
Configuration/WCDMA Band V Mid Tilt-Left/Area Scan (8x12x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.104 W/kg

Configuration/WCDMA Band V Mid Tilt-Left/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm, Reference Value = 5.692 V/m; Power Drift = -0.18 dB

Peak SAR (extrapolated) = 0.121 W/kg

SAR(1 g) = 0.102 W/kg; SAR(10 g) = 0.080 W/kg Maximum value of SAR (measured) = 0.106 W/kg



0 dB = 0.106 W/kg = -9.75 dBW/kg

Date/Time: 08-26-2014

Test Laboratory: QuieTek Lab

WCDMA Band V Mid Touch-Right

DUT: Mobile Data Terminal; Type: C4000

Communication System: UID 0, UMTS; Communication System Band: Band V UTRA/FDD; Duty Cycle: 1:1.0; Frequency: 836.4 MHz; Medium parameters used: f = 836.4 MHz; σ = 0.91 S/m; εr = 42; ρ = 1000 kg/m3 ; Phantom section: Right Section

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

DASY5 Configuration:

- Probe: EX3DV4 - SN3710; ConvF(9.56, 9.56, 9.56); Calibrated: 04/03/2014;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1220; Calibrated: 22/01/2014
- Phantom: SAM2; Type: SAM; Serial: TP1562
- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

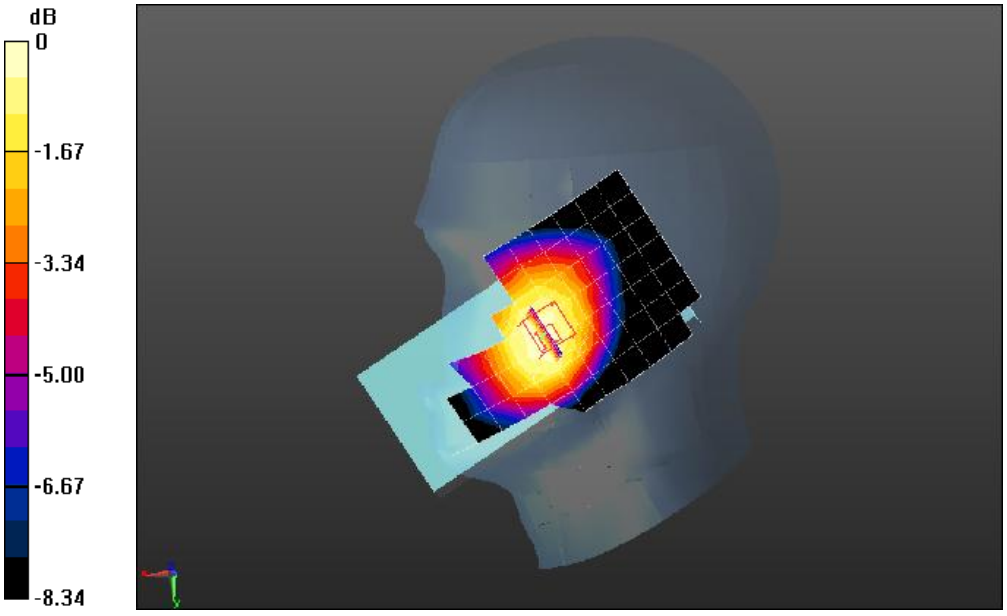
Configuration/WCDMA Band V Mid Touch-Right/Area Scan (8x12x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.151 W/kg

Configuration/WCDMA Band V Mid Touch-Right/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm, Reference Value = 4.575 V/m; Power Drift = -0.04 dB

Peak SAR (extrapolated) = 0.171 W/kg

SAR(1 g) = 0.145 W/kg; SAR(10 g) = 0.115 W/kg Maximum value of SAR (measured) = 0.150 W/kg



0 dB = 0.150 W/kg = -8.24 dBW/kg

Date/Time: 08-26-2014

Test Laboratory: QuieTek Lab

WCDMA Band V Mid Tilt-Right

DUT: Mobile Data Terminal; Type: C4000

Communication System: UID 0, UMTS; Communication System Band: Band V UTRA/FDD; Duty Cycle: 1:1.0; Frequency: 836.4 MHz; Medium parameters used: f = 836.4 MHz; σ = 0.91 S/m; εr = 42; ρ = 1000 kg/m3 ; Phantom section: Right Section

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

DASY5 Configuration:

- Probe: EX3DV4 - SN3710; ConvF(9.56, 9.56, 9.56); Calibrated: 04/03/2014;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1220; Calibrated: 22/01/2014
- Phantom: SAM2; Type: SAM; Serial: TP1562
- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

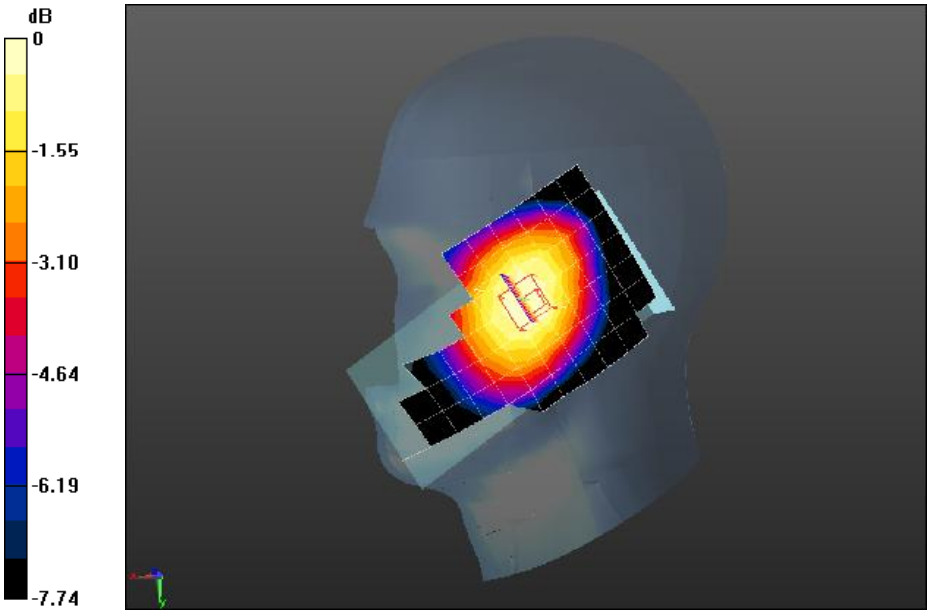
Configuration/WCDMA Band V Mid Tilt-Right/Area Scan (8x12x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.109 W/kg

Configuration/WCDMA Band V Mid Tilt-Right/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm, Reference Value = 6.402 V/m; Power Drift = 0.13 dB

Peak SAR (extrapolated) = 0.124 W/kg

SAR(1 g) = 0.105 W/kg; SAR(10 g) = 0.083 W/kg Maximum value of SAR (measured) = 0.108 W/kg



0 dB = 0.108 W/kg = -9.67 dBW/kg

Date/Time: 08-26-2014

Test Laboratory: QuieTek Lab

WCDMA Band V Low Body-Back

DUT: Mobile Data Terminal; Type: C4000

Communication System: UID 0, UMTS (0); Communication System Band: Band V UTRA/FDD; Duty Cycle: 1:1.0; Frequency: 826.4 MHz; Medium parameters used: f = 826.4 MHz; σ = 0.94 S/m; εr = 54.11; ρ = 1000 kg/m3 ; Phantom section: Flat Section

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

DASY5 Configuration:

- Probe: EX3DV4 - SN3710; ConvF(9.22, 9.22, 9.22); Calibrated: 04/03/2014;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1220; Calibrated: 22/01/2014
- Phantom: SAM2; Type: SAM; Serial: TP1562
- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

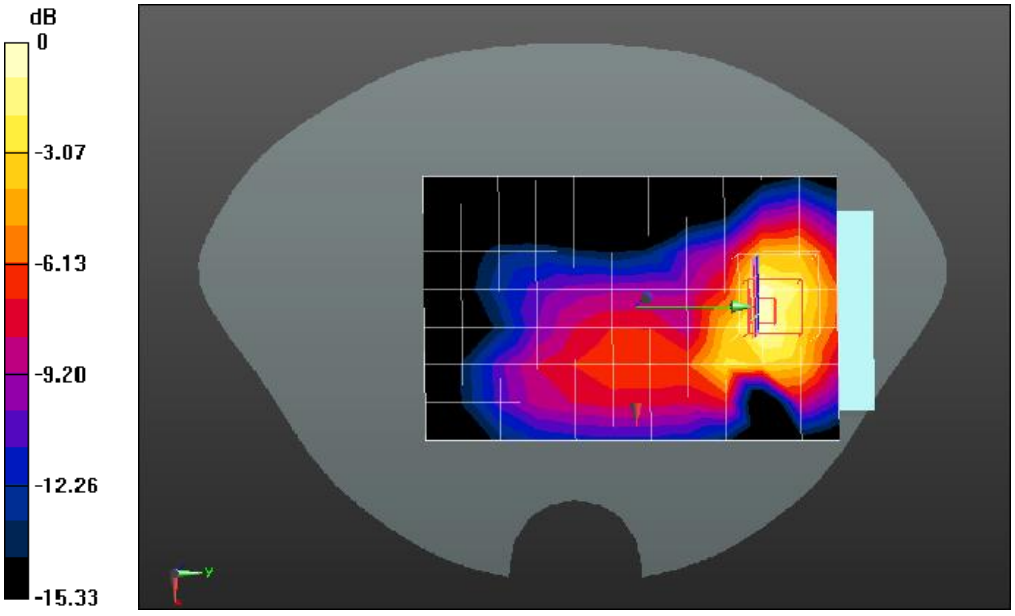
Configuration/WCDMA Band V Low Body-Back/Area Scan (8x12x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 1.01 W/kg

Configuration/WCDMA Band V Low Body-Back/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm, Reference Value = 12.271 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 1.89 W/kg

SAR(1 g) = 1.01 W/kg; SAR(10 g) = 0.575 W/kg Maximum value of SAR (measured) = 1.07 W/kg



0 dB = 1.07 W/kg = 0.29 dBW/kg

Date/Time: 08-26-2014

Test Laboratory: QuieTek Lab

WCDMA Band V Low Body-Back*

DUT: Mobile Data Terminal; Type: C4000

Communication System: UID 0, UMTS (0); Communication System Band: Band V UTRA/FDD; Duty Cycle: 1:1.0; Frequency: 826.4 MHz; Medium parameters used: f = 826.4 MHz; σ = 0.94 S/m; εr = 54.11; ρ = 1000 kg/m3 ; Phantom section: Flat Section

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

DASY5 Configuration:

- Probe: EX3DV4 - SN3710; ConvF(9.22, 9.22, 9.22); Calibrated: 04/03/2014;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1220; Calibrated: 22/01/2014
- Phantom: SAM2; Type: SAM; Serial: TP1562
- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

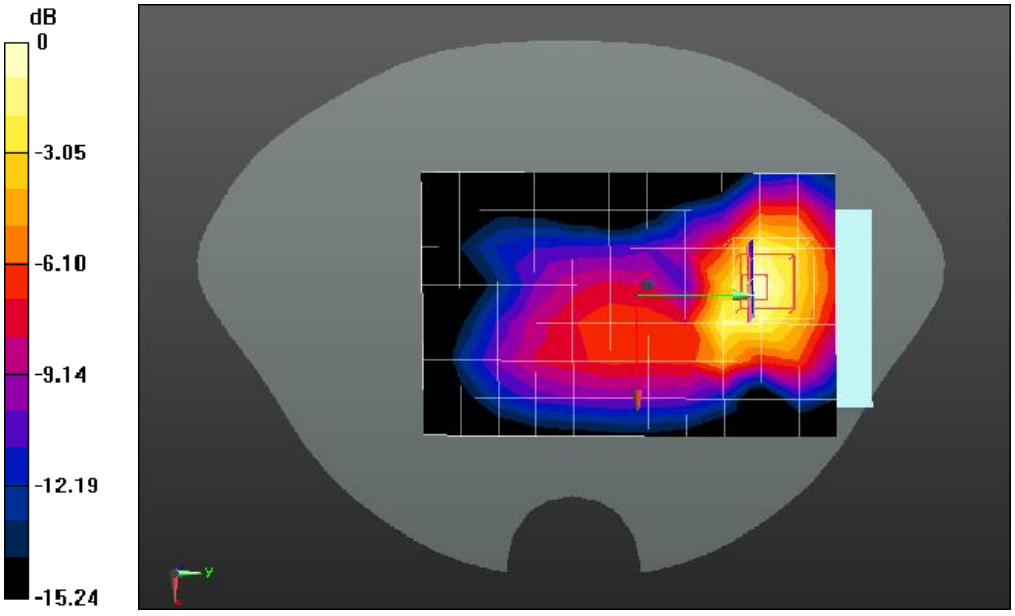
Configuration/WCDMA Band V Low Body-Back/Area Scan (8x12x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 1.09 W/kg

Configuration/WCDMA Band V Low Body-Back/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm, Reference Value = 14.179 V/m; Power Drift = -0.03 dB

Peak SAR (extrapolated) = 1.94 W/kg

SAR(1 g) = 1.04 W/kg; SAR(10 g) = 0.590 W/kg Maximum value of SAR (measured) = 1.10 W/kg



0 dB = 1.10 W/kg = 0.41 dBW/kg

Z-Axis Plot


Interpolated Max SAR Z Line(z)
WCDMA Band V Low Body-Back;Zoom Scan;SAR;cube 0
Markers
W/kg
2.0
1.8
1.6
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
0.000
0.005
0.010
0.015
0.020
0.025
0.030
0.035
m

Date/Time: 08-26-2014

Test Laboratory: QuieTek Lab

WCDMA Band V Mid Body-Back

DUT: Mobile Data Terminal; Type: C4000

Communication System: UID 0, UMTS (0); Communication System Band: Band V UTRA/FDD; Duty Cycle: 1:1.0; Frequency: 836.4 MHz; Medium parameters used: f = 836.4 MHz; σ = 0.98 S/m; εr = 53.83; ρ = 1000 kg/m3 ; Phantom section: Flat Section

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

DASY5 Configuration:

- Probe: EX3DV4 - SN3710; ConvF(9.22, 9.22, 9.22); Calibrated: 04/03/2014;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1220; Calibrated: 22/01/2014
- Phantom: SAM2; Type: SAM; Serial: TP1562
- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

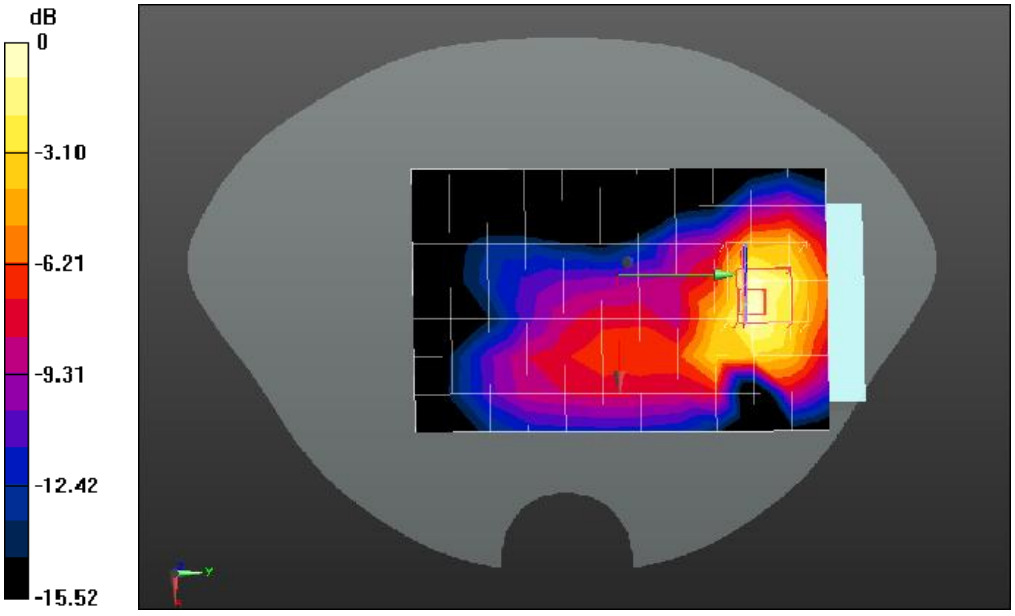
Configuration/WCDMA Band V Mid Body-Back/Area Scan (8x12x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.954 W/kg

Configuration/WCDMA Band V Mid Body-Back/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm, Reference Value = 11.137 V/m; Power Drift = 0.00 dB

Peak SAR (extrapolated) = 1.80 W/kg

SAR(1 g) = 0.958 W/kg; SAR(10 g) = 0.543 W/kg Maximum value of SAR (measured) = 1.02 W/kg



0 dB = 1.02 W/kg = 0.09 dBW/kg

Date/Time: 08-26-2014

Test Laboratory: QuieTek Lab

WCDMA Band V High Body-Back

DUT: Mobile Data Terminal; Type: C4000

Communication System: UID 0, UMTS (0); Communication System Band: Band V UTRA/FDD; Duty Cycle: 1:1.0; Frequency: 846.6 MHz; Medium parameters used: f = 846.6 MHz; σ = 0.96 S/m; εr = 53.87; ρ = 1000 kg/m3 ; Phantom section: Flat Section

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

DASY5 Configuration:

- Probe: EX3DV4 - SN3710; ConvF(9.22, 9.22, 9.22); Calibrated: 04/03/2014;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1220; Calibrated: 22/01/2014
- Phantom: SAM2; Type: SAM; Serial: TP1562
- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

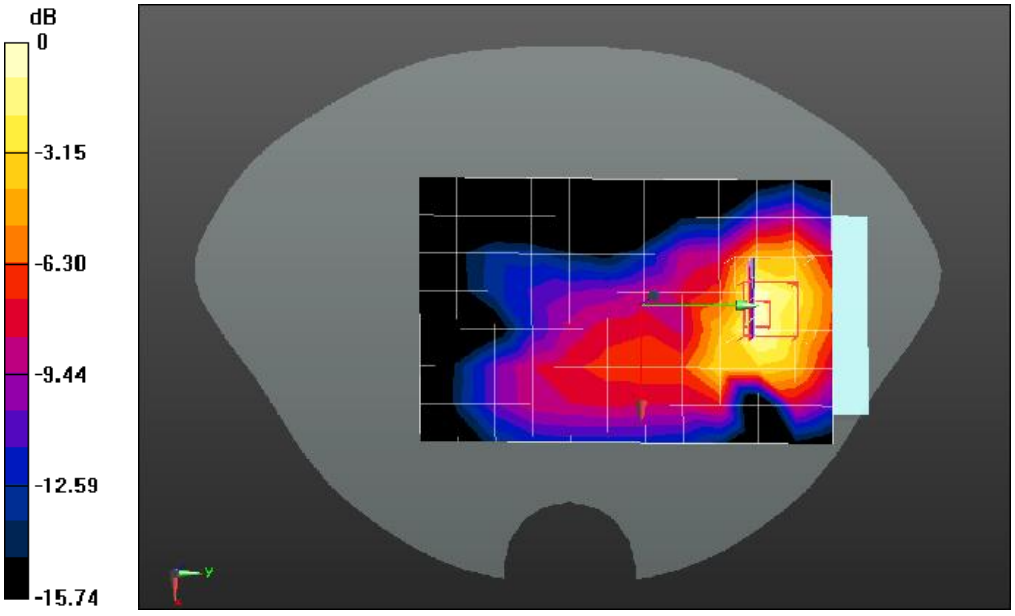
Configuration/WCDMA Band V High Body-Back/Area Scan (8x12x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.836 W/kg

Configuration/WCDMA Band V High Body-Back/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm, Reference Value = 10.043 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 1.59 W/kg

SAR(1 g) = 0.847 W/kg; SAR(10 g) = 0.477 W/kg Maximum value of SAR (measured) = 0.897 W/kg



0 dB = 0.897 W/kg = -0.47 dBW/kg

Date/Time: 08-26-2014

Test Laboratory: QuieTek Lab

WCDMA Band V Mid Body-Left side

DUT: Mobile Data Terminal; Type: C4000

Communication System: UID 0, UMTS (0); Communication System Band: Band V UTRA/FDD; Duty Cycle: 1:1.0; Frequency: 836.4 MHz; Medium parameters used: f = 836.4 MHz; σ = 0.98 S/m; εr = 53.83; ρ = 1000 kg/m3 ; Phantom section: Flat Section

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

DASY5 Configuration:

- Probe: EX3DV4 - SN3710; ConvF(9.22, 9.22, 9.22); Calibrated: 04/03/2014;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1220; Calibrated: 22/01/2014
- Phantom: SAM2; Type: SAM; Serial: TP1562
- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

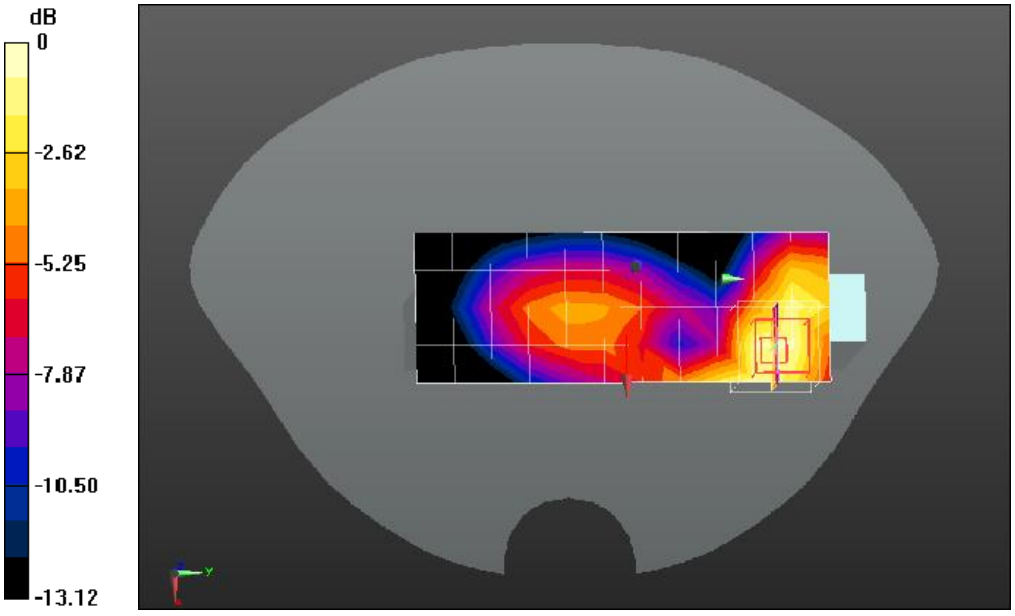
Configuration/WCDMA Band V Mid Body-Left side/Area Scan (5x12x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.0857 W/kg

Configuration/WCDMA Band V Mid Body-Left side/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm, Reference Value = 6.420 V/m; Power Drift = 0.04 dB

Peak SAR (extrapolated) = 0.143 W/kg

SAR(1 g) = 0.091 W/kg; SAR(10 g) = 0.058 W/kg Maximum value of SAR (measured) = 0.0992 W/kg



0 dB = 0.0992 W/kg = -10.03 dBW/kg

Date/Time: 08-26-2014

Test Laboratory: QuieTek Lab

WCDMA Band V Mid Body-Right side

DUT: Mobile Data Terminal; Type: C4000

Communication System: UID 0, UMTS (0); Communication System Band: Band V UTRA/FDD; Duty Cycle: 1:1.0; Frequency: 836.4 MHz; Medium parameters used: f = 836.4 MHz; σ = 0.98 S/m; εr = 53.83; ρ = 1000 kg/m3 ; Phantom section: Flat Section

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

DASY5 Configuration:

- Probe: EX3DV4 - SN3710; ConvF(9.22, 9.22, 9.22); Calibrated: 04/03/2014;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1220; Calibrated: 22/01/2014
- Phantom: SAM2; Type: SAM; Serial: TP1562
- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

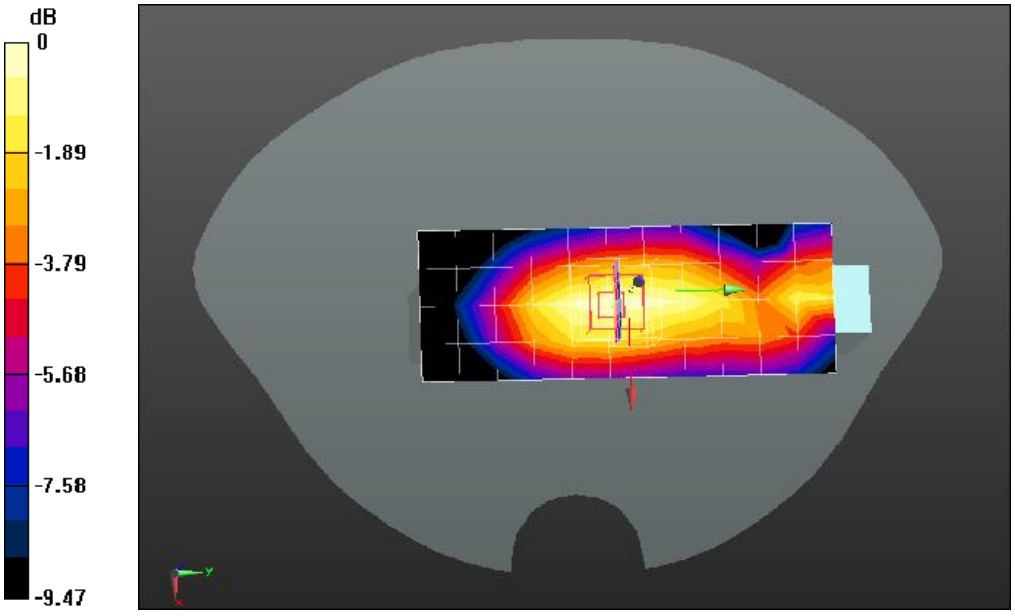
Configuration/WCDMA Band V Mid Body-Right side/Area Scan (5x12x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.0974 W/kg

Configuration/WCDMA Band V Mid Body-Right side/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm, Reference Value = 9.445 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 0.127 W/kg

SAR(1 g) = 0.091 W/kg; SAR(10 g) = 0.063 W/kg Maximum value of SAR (measured) = 0.0980 W/kg



0 dB = 0.0980 W/kg = -10.09 dBW/kg

Date/Time: 08-26-2014

Test Laboratory: QuieTek Lab

WCDMA Band V Mid Body-Bottom

DUT: Mobile Data Terminal; Type: C4000

Communication System: UID 0, UMTS (0); Communication System Band: Band V UTRA/FDD; Duty Cycle: 1:1.0; Frequency: 836.4 MHz; Medium parameters used: f = 836.4 MHz; σ = 0.98 S/m; εr = 53.83; ρ = 1000 kg/m3 ; Phantom section: Flat Section

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

DASY5 Configuration:

- Probe: EX3DV4 - SN3710; ConvF(9.22, 9.22, 9.22); Calibrated: 04/03/2014;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1220; Calibrated: 22/01/2014
- Phantom: SAM2; Type: SAM; Serial: TP1562
- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

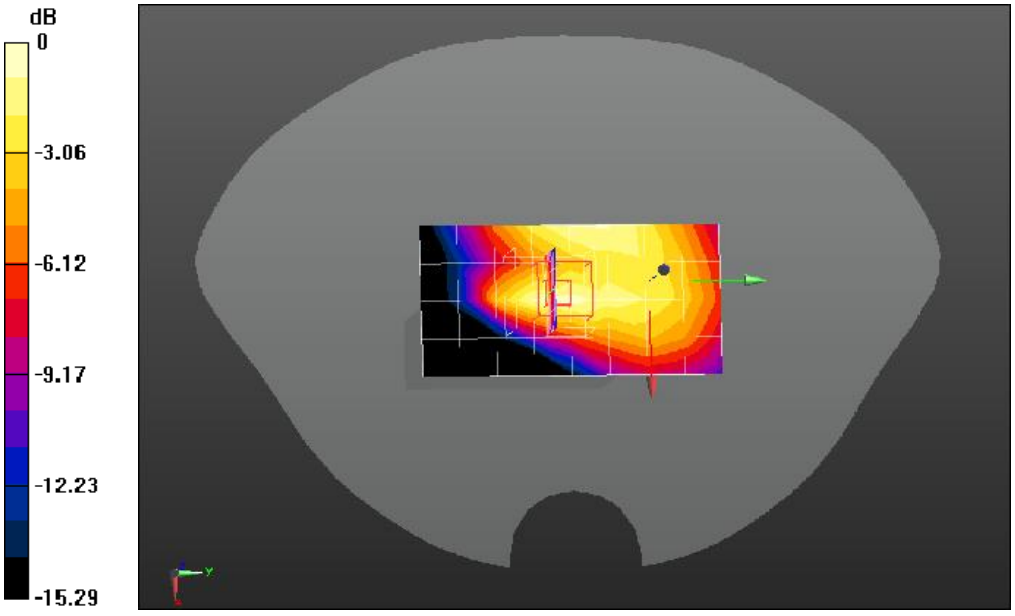
Configuration/WCDMA Band V Mid Body-Bottom/Area Scan (5x9x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.0621 W/kg

Configuration/WCDMA Band V Mid Body-Bottom/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm, Reference Value = 8.076 V/m; Power Drift = 0.07 dB

Peak SAR (extrapolated) = 0.102 W/kg

SAR(1 g) = 0.061 W/kg; SAR(10 g) = 0.035 W/kg Maximum value of SAR (measured) = 0.0689 W/kg



0 dB = 0.0689 W/kg = -11.62 dBW/kg