UL Apex Co., Ltd.

SAR EVALUATION REPORT

Report No. : 25IE0110-HO-3A

Applicant	:	**Panasonic Communications Co., Ltd.**
Type of Equipment	:	**Wireless USB Adaptor**
Model No.	:	**KX-THA14**
FCC ID	:	**ACJ96NKX-THA14**
Test standard	:	**FCC47CFR 2.1093** **FCC OET Bulletin 65, Supplement C**
Test Result	:	**Complied**
Max SAR Measured	:	**1.43 W/kg (Body, 2402MHz)**

1. This test report shall not be reproduced except full or partial, without the written approval of UL Apex Co., Ltd.
2. The results in this report apply only to the sample tested.
3. This equipment is in compliance with the above regulation. We hereby certify that the data contain a true representation of the SAR profile.
4. The test results in this test report are traceable to the national or international standards.

Date of test : May 18,19 and 20,2005

Tested by :

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Chapter 1 : Client information

Company Name	:	Panasonic Communications Co., Ltd.
Brand Name	:	Panasonic
Address	:	1-62, 4-chome, Minoshima, Hakata-ku, Fukuoka, 812-8531 Japan
Telephone Number	:	+81-92-477-1405
Facsimile Number	:	+81-92-477-1487
Contact Person	:	Kunihiko Nawata

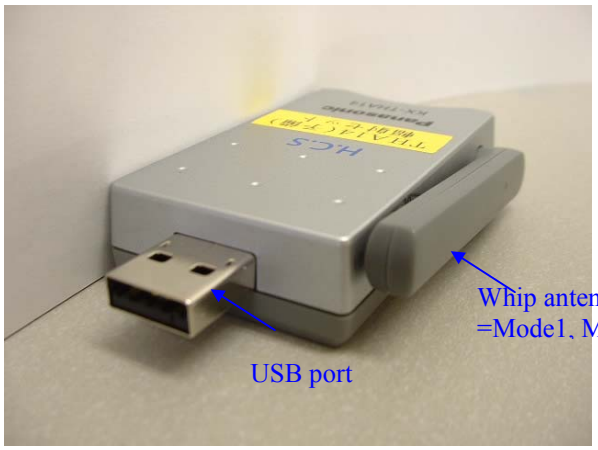
Chapter 2 : Equipment under test (E.U.T.)

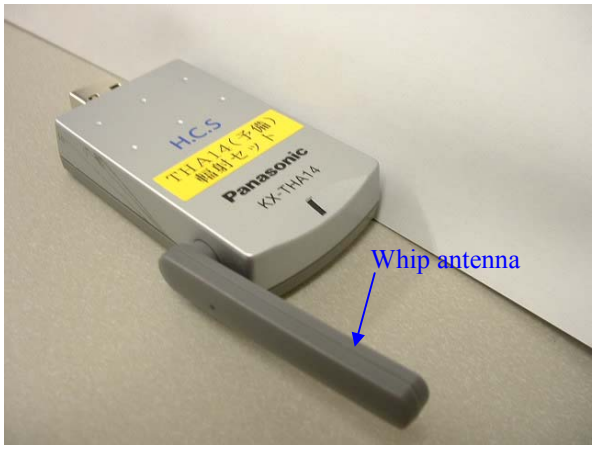
2.1 Identification of E.U.T.

Type of Equipment	:	Wireless USB Adaptor
Model No.	:	KX-THA14
Serial No.	:	0080F080132C
Country of Manufacture	:	Japan
Receipt Date of Sample	:	May 16, 2005
Condition of EUT	:	Engineering prototype (Not for sale: This sample is equivalent to mass-produced items.)
Rating	:	From PC (DC 5 V)
Size of EUT	:	65 * 147 * 35 mm (L*W*H) [Outside]
Category Identified	:	Portable device

2.2 Product Description of EUT

Tx Frequency	:	2402MHz~2480MHz
Modulation	:	FHSS
Rating (Inner)	:	DC 2.5V
Antenna Type	:	Whip antenna
Antenna Gain	:	2.14dBi
Position of Antenna	:	See photographs of the following





Chapter 3 : Requirements for compliance testing defined by the FCC

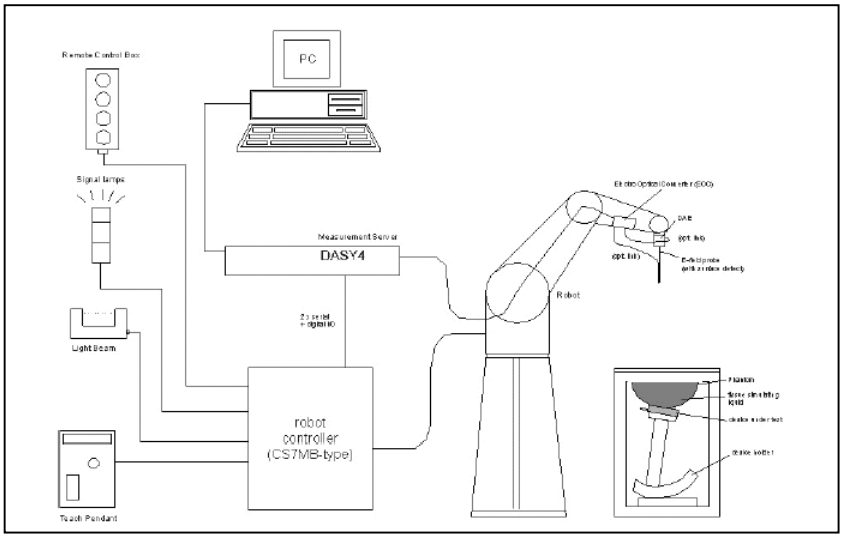
The US Federal Communications Commission has released the report and order "Guidelines for Evaluating the Environmental Effects of RF Radiation", ET Docket No. 93-62 in August 1996. The order requires routine SAR evaluation prior to equipment authorization of portable transmitter devices, including portable telephones. For consumer products, the applicable limit is 1.6 mW/g for an uncontrolled environment and 8.0 mW/g for an occupational/controlled environment as recommended by the ANSI/IEEE standard C95.1-1992. According to the Supplement C of OET Bulletin 65 "Evaluating Compliance with FCC Guide-lines for Human Exposure to Radio frequency Electromagnetic Fields", released on Jun 29, 2001 by the FCC, the device should be evaluated at maximum output power (radiated from the antenna) under "worst-case" conditions for normal or intended use, incorporating normal antenna operating positions, device peak performance frequencies and positions for maximum RF energy coupling.

1 Specific Absorption Rate (SAR) is a measure of the rate of energy absorption due to exposure to an RF transmitting source (wireless portable device).
2 IEEE/ANSI Std. C95.1-1992 limits are used to determine compliance with FCC ET Docket 93-62.

Chapter 4 : Dosimetry assessment setup

These measurements were performed with the automated near-field scanning system DASY4 from Schmid & Partner Engineering AG (SPEAG). The system is based on a high precision robot (working range greater than 0.9 m), which positions the probes with a positional repeatability of better than +/- 0.02 mm. Special E- and H-field probes have been developed for measurements close to material discontinuity, the sensors of which are directly loaded with a Schottky diode and connected via highly resistive lines to the data acquisition unit. The SAR measurements were conducted with the dosimetry probe ET3DV6, SN: 1684 (manufactured by SPEAG), designed in the classical triangular configuration and optimized for dosimetric evaluation. The probe has been calibrated according to the procedure described in [2] with accuracy of better than +/-10%. The spherical isotropy was evaluated with the procedure described in [3] and found to be better than +/-0.25 dB. The phantom used was the
SAM Twin Phantom as described in FCC supplement C, IEEE P1528 and CENELEC EN50361.

4.1 Configuration and peripherals



The DASY4 system for performing compliance tests consist of the following items:

1. A standard high precision 6-axis robot (Stäubli RX family) with controller and software.
   An arm extension for accommodating the data acquisition electronics (DAE).

2. A dosimetric probe, i.e., an isotropic E-field probe optimized and calibrated for usage in tissue simulating liquid. The probe is equipped with an optical surface detector system.

3. A data acquisition electronic (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.

4. The Electro-optical converter (EOC) performs the conversion between optical and electrical of the signals for the digital communication to the DAE and for the analog signal from the optical surface detection.
   The EOC is connected to the measurement server.

5. The function of the measurement server is to perform the time critical tasks such as signal filtering, control of the robot operation and fast movement interrupts.

6. A probe alignment unit which improves the (absolute) accuracy of the probe positioning.

7. A computer operating Windows 2000.

8. DASY4 software.

9. Remote control with teaches pendant and additional circuitry for robot safety such as warning lamps, etc.

10. The SAM twin phantom enabling testing left-hand and right-hand usage.

11. The device holder for handheld mobile phones.

12. Tissue simulating liquid mixed according to the given recipes.

13. Validation dipole kits allowing to validate the proper functioning of the system.

4.2 System components

4.2.1 ET3DV6 Probe Specification

Construction:
Symmetrical design with triangular core
Built-in optical fiber for surface detection System
Built-in shielding against static charges
PEEK enclosure material (resistant to organic solvents, e.g., glycol ether)

Calibration:
Basic Broad Band calibration in air from 10 MHz to 2.5 GHz
In brain and muscle simulating tissue at
Frequencies of 450 MHz, 900 MHz, 1.8 GHz and 2.45GHz (accuracy +/-8%)

Frequency:
10 MHz to 3GHz; Linearity: +/-0.2 dB

Directivity:
+/-0.2 dB in brain tissue (rotation around probe axis)
+/-0.4 dB in brain tissue (rotation normal probe axis)

Dynamic Range:
5 mW/g to > 100 mW/g;Linearity: +/-0.2 dB

Optical Surface Detection:
+/-0.2 mm repeatability in air and clear liquids over diffuse reflecting surfaces.

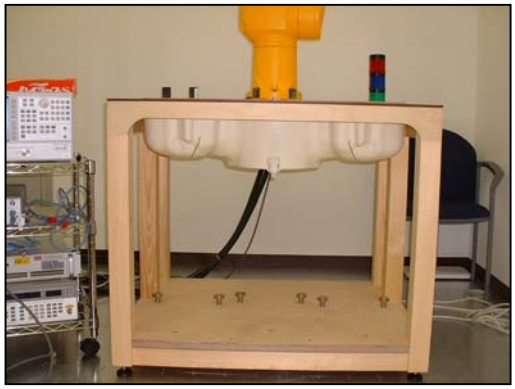
Inside view of ET3DV6 E-field Probe

Dimensions:
Overall length: 330 mm (Tip: 16 mm)
Tip length: 16 mm
Body diameter: 12 mm (Body: 12 mm)
Tip diameter: 6.8 mm
Distance from probe tip to dipole centers: 2.7 mm

Application:
General dosimetric up to 3 GHz
Compliance tests of mobile phones
Fast automatic scanning in arbitrary phantoms

4.2.2 SAM Phantom

Construction:
The shell corresponds to the specifications of the Specific Anthropomorphic Mannequin (SAM) phantom defined in IEEE 1528-200X, CENELEC EN 50361 and IEC 62209.
It enables the dosimetric evaluation of left and right hand phone usage as well as body mounted usage at the flat phantom region. A cover prevents evaporation of the liquid.
Reference markings on the phantom allow the complete setup of all predefined phantom positions and measurement grids by manually teaching three points with the robot.
Shell Thickness:
2 +/-0.2 mm
Filling Volume:
Approx. 25 liters
Dimensions:
(H x L x W): 810 x 1000 x 500 mm



SAM Phantom

4.2.3 Device Holder for Transmitters

In combination with the SAM Twin Phantom V4.0, the Mounting Device enables the rotation of the mounted transmitter
in spherical coordinates whereby the rotation points is the ear opening. The devices can be easily, accurately, and repeatedly positioned according to the FCC and CENELEC specifications.
The device holder can be locked at different phantom locations (left head, right head,flat phantom).
* Note: A simulating human hand is not used due to the complex anatomical and geometrical structure of the hand that may produced infinite number of configurations.
To produce the worst-case condition (the hand absorbs antenna output power), the hand is omitted during the tests.

Device holder couldn't be used at this SAR measurement.

Device Holder

Chapter 5 : Test system specifications

Robot RX60L

Number of Axes	:	6
Payload	:	1.6 kg
Reach	:	800mm
Repeatability	:	+/-0.025mm
Control Unit	:	CS7M
Programming Language	:	V+
Manuafacture	:	Stäubli Unimation Corp. Robot Model: RX60

DASY4 Measurement server

Features	:	166MHz low power Pentium MMX 32MB chipdisk and 64MB RAM Serial link to DAE (with watchdog supervision) 16 Bit A/D converter for surface detection system Two serial links to robot (one for real-time communication which is supervised by watchdog) Ethernet link to PC (with watchdog supervision) Emergency stop relay for robot safety chainTwo expansion slots for future applications
Manufacture	:	Schimid & Partner Engineering AG

Data Acquisition Electronic (DAE)

Features	:	Signal amplifier, multiplexer, A/D converter and control logic Serial optical link for communication with DASY4 embedded system (fully remote controlled) 2 step probe touch detector for mechanical surface detection and emergency robot stop (not in -R version)
Measurement Range	:	1 µV to > 200 mV (16 bit resolution and two range settings: 4mV, 400mV)
Input Offset voltage	:	< 1 µV (with auto zero)
Input Resistance	:	200 MΩ
Battery Power	:	> 10 h of operation (with two 9 V battery)
Dimension	:	60 x 60 x 68 mm
Manufacture	:	Schimid & Partner Engineering AG

Software

Item	:	Dosimetric Assesment System DASY4
Type No.	:	SD 000 401A, SD 000 402A
Software version No.	:	4.1
Manufacture / Origin	:	Schimid & Partner Engineering AG

E-Field Probe

Model	:	ET3DV6
Serial No.	:	1684
Construction	:	Triangular core fiber optic detection system
Frequency	:	10 MHz to 6 GHz
Linearity	:	+/-0.2 dB
Manufacture	:	Schimid & Partner Engineering AG

Phantom

Type	:	SAM Twin Phantom V4.0
Shell Material	:	Fiberglass
Thickness	:	2.0 +/-0.2 mm
Volume	:	Approx. 25 liters
Manufacture	:	Schimid & Partner Engineering AG

Chapter 6 : Measurement uncertainty

The uncertainty budget has been determined for the DASY4 measurement system according to the SPEAG documents [7] and is given in the following Table.

Error Description	Uncertainty value ± %	Probability distribution	divisor	(ci) 1g	Standard Uncertainty (1g)	vi or veff
Measurement System						
Probe calibration	±4.8	Normal	1	1	±4.8	∞
Axial isotropy of the probe	±4.7	Rectangular	√3	$(1-c_p)^{1/2}$	±1.9	∞
Spherical isotropy of the probe	±9.6	Rectangular	√3	$(c_p)^{1/2}$	±3.9	∞
Boundary effects	±1.0	Rectangular	√3	1	±0.6	∞
Probe linearity	±4.7	Rectangular	√3	1	±2.7	∞
Detection limit	±1.0	Rectangular	√3	1	±0.6	∞
Readout electronics	±1.0	Normal	1	1	±1.0	∞
Response time	±0.8	Rectangular	√3	1	±0.5	∞
Integration time	±2.6	Rectangular	√3	1	±1.5	∞
RF ambient conditions	±3.0	Rectangular	√3	1	±1.7	∞
Mech. constraints of robot	±0.4	Rectangular	√3	1	±0.2	∞
Probe positioning	±2.9	Rectangular	√3	1	±1.7	∞
Extrap. and integration	±1.0	Rectangular	√3	1	±0.6	∞
Test Sample Related						
Device positioning	±2.9	Rectangular	√3	1	±2.9	39
Device holder uncertainty	±3.6	Rectangular	√3	1	±3.6	3
Power drift	±10.0	Rectangular	√3	1	±5.8	∞
Phantom and Setup						
Phantom uncertainty	±4.0	Rectangular	√3	1	±2.3	∞
Liquid conductivity (target)	±5.0	Rectangular	√3	0.64	±1.8	∞
Liquid conductivity (meas.)	±5.0	Normal	1	0.64	±3.2	∞
Liquid permittivity (target)	±5.0	Rectangular	√3	0.6	±1.7	∞
Liquid permittivity (meas.)	±5.0	Normal	1	0.6	±3.0	∞
Combined Standard Uncertainty					**±12.075**	
Expanded Uncertainty (k=2)					**±24.1**	

The result of some test showed that the power drift has exceeded 5%. Therefore, the uncertainty of power drift expanded to 10%. However, the extended uncertainty (k= 2) of a test is less than 30%.

Chapter 7 : Evaluation procedure

The evaluation was performed with the following procedure:

Step 1: Measurement of the E-field at a fixed location above the ear point or central position of flat section was used as a reference value for assessing the power drop.

Step 2: The SAR distribution at the exposed side of head or body position was measured at a distance of each device from the inner surface of the shell. The area covered the entire dimension the antenna of the EUT and the horizontal grid spacing was 20 mm x 20 mm. Based on these data, the area of the maximum absorption was determined by spline interpolation.

Step 3: Around this point found in the Step 2 (area scan) , a volume of 32 mm x 32 mm x 30 mm was assessed by measuring 5 x5 x 7 points. And for any secondary peaks found in the Step2 which are within 2dB of maximum peak and not with this Step3 (Zoom scan) is repeated. On the basis of this data set, the spatial peak SAR value was evaluated under the following procedure:

1. The data at the surface were extrapolated, since the center of the dipoles is 2.7 mm away from the tip of the probe and the distance between the surface and the lowest measuring point is 1.3 mm. The extrapolation was based on a least square algorithm [4]. A polynomial of the fourth order was calculated through the points in z-axis.
This polynomial was then used to evaluate the points between the surface and the probe tip.

2. The maximum interpolated value was searched with a straightforward algorithm. Around this maximum the SAR values averaged over the spatial volumes (1 g or 10 g) were computed by the 3D-Spline interpolation algorithm. The 3D-Spline is composed of three one-dimensional splines with the “Not a knot"-condition (in x, y and z-directions) [4], [5]. The volume was integrated with the trapezoidal-algorithm. One thousand points (10 x 10 x 10) were interpolated to calculate the average.

3. All neighboring volumes were evaluated until no neighboring volume with a higher average value was found.

Step 4: Re-measurement of the E-field at the same location as in Step 1.

Chapter 8 : Exposure limit

(A) Limits for Occupational/Controlled Exposure (W/kg)

Spatial Average (averaged over the whole body)	Spatial Peak (averaged over any 1g of tissue)	Spatial Peak (hands/wrists/feet/ankles averaged over 10g)
0.4	8.0	20.0

(B) Limits for General population/Uncontrolled Exposure (W/kg)

Spatial Average (averaged over the whole body	Spatial Peak (averaged over any 1g of tissue)	Spatial Peak (hands/wrists/feet/ankles averaged over 10g)
0.08	1.6	4.0

Occupational/Controlled Environments: are defined as locations where there is exposure that may be incurred by people who are aware of the potential for exposure, (i.e. as a result of employment or occupation).

General Population/Uncontrolled Environments: are defined as locations where there is the exposure of individuals who have no knowledge or control of their exposure.

NOTE:GENERAL POPULATION/UNCONTROLLED EXPOSURE
SPATIAL PEAK(averaged over any 1g of tissue) LIMIT
1.6 W/kg

Chapter 9 : Measurement Outline

SECTION 9.1 : Outline of EUT

This EUT can be used for only USB port of Notebook PC.
The EUT was tested with three Note book PCs as reference, though the power of this EUT is less than 100mW.
The SAR data used Note PC of ('Fujitsu' and 'Panasonic') are the reference data.

SECTION 9.2 : EUT Tune-up procedure

This EUT has Mode1 and Mode2
The frequency range and the modulation in each mode were used are shown as the following.

Mode 1

Frequency band	: 2402-2480MHz
Channel	: Low ch(2402MHz),Mid ch(2441MHz),Highch(2480MHz)
Modulation	: FHSS
Packet size	: DH5(Max.)
Crest factor	: 1.2

Mode 2

Frequency band	: 2402-2480MHz
Channel	: Low ch(2402MHz),Mid ch(2440MHz),High ch(2480MHz)
Modulation	: FHSS
Packet size	: DH3(Max.)
Crest factor	: 1.3

SECTION 9.3 : Method of measurement

Step1. The searching for the worst position
This test was performed at the worst position of Step1.

Step2. The changing to the Low and High channels
The test was performed at positions that the result of Step1 was 2.0 dB lower than the SAR limit.

Chapter 10 : Output power Measurement results

[Mode1]						
Ch	Freq. [MHz]	P/M Reading [dBm]	Cable Loss [dB]	Atten. [dB]	Result [dBm]	Converted [mW]
Low	2402	-6.60	0.00	20.00	13.40	21.88
Mid	2441	-6.93	0.00	20.00	13.07	20.28
High	2480	-6.68	0.00	20.00	13.32	21.48
Inquiry		-6.74	0.00	20.00	13.26	21.18

[Mode2] Main Antenna						
Ch	Freq. [MHz]	P/M Reading [dBm]	Cable Loss [dB]	Atten. [dB]	Result [dBm]	Converted [mW]
Low	2402	-2.90	0.00	20.00	17.10	51.29
Mid	2440	-3.17	0.00	20.00	16.83	48.19
High	2480	-2.90	0.00	20.00	17.10	51.29

Sample Calculation:

Result = Reading + Cable Loss (supplied by customer)+ Attenuator

* In the above table, factor 0.0dB represents no use of Atten. and/or Filter.

Chapter 11 : SAR Measurement results (PC model 1)

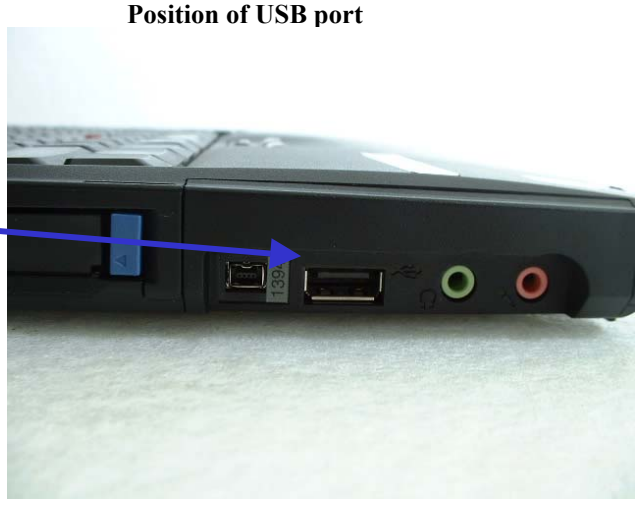
SECTION 11.1 : Information of NotePC

The details of host devices for SAR testing is shown in the following.

Manufacture	:	IBM Corporation
Model No.	:	2656-67J
Serial No.	:	AA-GDDVG
Computer	:	Intel(R) Pentium(R)III Mobile CPU 1133MHz AT/AT COMPATIBLE 253,296 KB RAM
System	:	Microsoft Windows 2000 5.00.2195 Service Pack 4
Battery	:	P/N 02K6835 9.6V 4.5AH

Left Side of Keyboard

Position of USB port



SECTION 11.2 : Test setup of EUT

Antenna position

EUT position	Set up position
Outside	**BOTTOM**
Upright	**BOTTOM**
Inside	**BOTTOM**
Outside	**SIDE**

Outside(PC BOTTOM)

Upright(PC BOTTOM)

Inside(PC BOTTOM)

Outside(PC SIDE)

SECTION 11.3 : Simulated tissue liquid parameter

11.3.1 Simulated Tissue Liquid Parameter confirmation

The dielectric parameters were checked prior to assessment using the HP85070D dielectric probe kit.
The dielectric parameters measurement are reported in each correspondent section.

11.3.2 Head 2450MHz

Type of liquid : **Head 2450 MHz**
Ambient temperature (deg.c.) : **25.0 (May 18 &19)**
Relative Humidity (%) : **50(May 18),47(May 19)**
Liquid depth (cm) : **15.2**

Measured By : Miyo Ikuta

DIELECTRIC PARAMETERS MEASUREMENT RESULTS							
Date	Liquid Temp [deg.c]		Parameters	Target Value	Measured	Deviation [%]	Limit [%]
	Before	After					
18-May	24.6	24.6	Relative Permittivity εr	39.2	38.1	-2.8	+/-5
			Coductivity σ [mho/m]	1.80	1.87	3.9	+/-5
19-May	24.3	24.3	Relative Permittivity εr	39.2	37.8	-3.6	+/-5
			Coductivity σ [mho/m]	1.80	1.87	3.9	+/-5

11.3.3 Muscle 2450MHz

Type of liquid : **Muscle 2450 MHz**
Ambient temperature (deg.c.) : **25.0 (May 18 &19)**
Relative Humidity (%) : **50(May 18),47(May 19)**
Liquid depth (cm) : **15.2**

Measured By : Miyo Ikuta

DIELECTRIC PARAMETERS MEASUREMENT RESULTS							
Date	Liquid Temp [deg.c]		Parameters	Target Value	Measured	Deviation [%]	Limit [%]
	Before	After					
18-May	24.3	24.3	Relative Permittivity εr	52.7	50.6	-4.0	+/-5
			Coductivity σ [mho/m]	1.95	1.99	2.1	+/-5
19-May	24.3	24.3	Relative Permittivity εr	52.7	50.2	-4.7	+/-5
			Coductivity σ [mho/m]	1.95	1.98	1.5	+/-5

11.3.4 Simulated Tissues

Ingredient	MIXTURE(%)	
	Head 2450MHz	Muscle 2450MHz
Water	45.0	69.83
DGMBE	55.0	30.17

Note:DGMBE(Diethylenglycol-monobuthyl ether)

SECTION 11.4 : System validation data

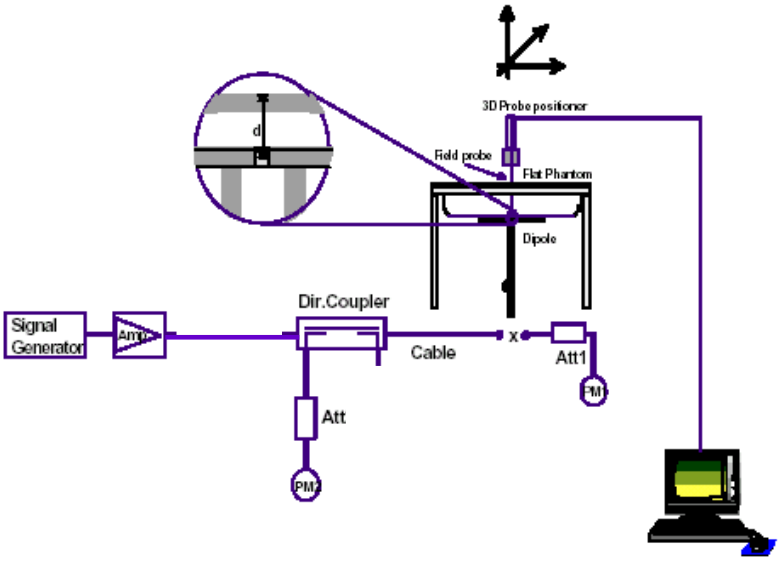
Prior to the assessment, the system validation kit was used to test whether the system was operating within its specifications of +/-10%. The validation results are in the table below. Please refer to APPENDIX 5.

Type of liquid	:	**HEAD 2450MHz**
Frequency	:	**2450MHz**
Dipole	:	**D2450V2 SN:713**
Liquid depth (cm)	:	**15.2**
Ambient temperature (deg.c.)	:	**25.0 (May 18 &19)**
Relative Humidity (%)	:	**50(May 18),47(May 19)**
Power	:	**250mW**

Measured By : Miyo Ikuta

SYSTEM PERFORMANCE CHECK										
Date	Liquid (HEAD 2450MHz)						System dipole validation target & measured			
	Liquid Temp [deg.c.]		Relative Permittivity εr		Conductivity σ [mho/m]		SAR 1g [W/kg]		Deviation [%]	Limit [%]
	Before	After	Target	Measured	Target	Measured	Target	Measured		
18-May	24.6	24.6	39.2	38.1	1.80	1.87	13.1	14.2	8.4	+/-10
19-May	24.3	24.3	39.2	37.8	1.80	1.87	13.1	14.2	8.4	+/-10

Note: Please refer to Attachment for the result representation in plot format



2450MHz System performance check setup

Test system for the system performance check setup diagram

SECTION 11.5 : Measurement results

11.5.1 Body 2450MHz SAR of Mode 1

Liquid Depth (cm)	:	**15.2**	Model	:	**KX-THA14**
Parameters	:	**εr =50.2, σ =1.98**	Serial No.	:	**0080F080132C**
Ambient Temperature[deg.c.]	:	**25.0**	Modulation	:	**FHSS**
Relative Humidity (%)	:	**47**	Crest factor	:	**1.2**

Date : May 19,2005
Measured By : Miyo Ikuta

BODY SAR MEASUREMENT RESULTS OF MODE 1										
Mode	Frequency				EUT Set-up Conditions			Liquid Temp.[deg.c]		SAR(1g) [W/kg]
	Channel	[MHz]	Packet	Phantom Section	Antenna position	PC position	Separation [mm]	Before	After	Maximum value of multi-peak
Mode 1	**Position Search**									
	Mid	2441	DH5	Flat	Outside	BOTTOM	0	24.3	24.3	**0.675**
	Mid	2441	DH5	Flat	Upright	BOTTOM	0	24.3	24.3	**0.031**
	Mid	2441	DH5	Flat	Inside	BOTTOM	0	24.3	24.3	**0.630**
	Mid	2441	DH5	Flat	Outside	SIDE	0	24.3	24.3	**0.044**
	Frequency Change									
	Low	2402	DH5	Flat	Outside	BOTTOM	0	24.3	24.3	**0.714**
	High	2480	DH5	Flat	Outside	BOTTOM	0	24.3	24.3	**0.588**
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure / General Population								**Body SAR: 1.6 W/kg (averaged over 1 gram)**		

11.5.2 Body 2450MHz SAR of Mode 2

Liquid Depth (cm)	:	**15.2**	Model	:	**KX-THA14**
Parameters	:	ε_r =**50.6**, σ =**1.99**	Serial No.	:	**0080F080132C**
Ambient Temperature[deg.c.]	:	**25.0**	Modulation	:	**FHSS**
Relative Humidity (%)	:	**50**	Crest factor	:	**1.3**

Date : May 18,2005
Measured By : Miyo Ikuta

BODY SAR MEASUREMENT RESULTS OF MODE 2										
Mode	Frequency				EUT Set-up Conditions			Liquid Temp.[deg.c]		SAR(1g) [W/kg]
	Channel	[MHz]	Packet	Phantom Section	Antenna position	PC position	Separation [mm]	Before	After	Maximum value of multi-peak
Mode 2	**Position Search**									
	Mid	2440	DH3	Flat	Outside	BOTTOM	0	24.3	24.3	**1.21**
	Mid	2440	DH3	Flat	Upright	BOTTOM	0	24.2	24.2	**0.065**
	Mid	2440	DH3	Flat	Inside	BOTTOM	0	24.3	24.3	**1.34**
	Mid	2440	DH3	Flat	Outside	SIDE	0	24.3	24.2	**0.095**
	Frequency Change									
	Low	2402	DH3	Flat	Outside	BOTTOM	0	24.3	24.3	**1.29**
	High	2480	DH3	Flat	Outside	BOTTOM	0	24.3	24.3	**0.994**
	Low	2402	DH3	Flat	Inside	BOTTOM	0	24.3	24.3	**1.43**
	High	2480	DH3	Flat	Inside	BOTTOM	0	24.3	24.3	**1.00**
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure / General Population								**Body SAR: 1.6 W/kg (averaged over 1 gram)**		

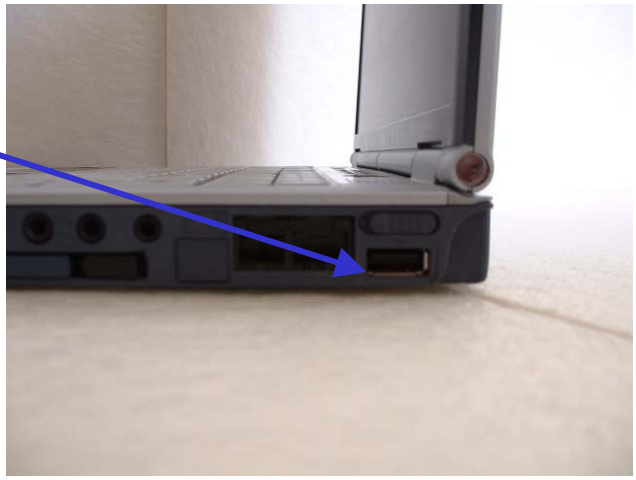
Chapter 12 : SAR Measurement results (PC model 2) Reference data 1

SECTION 12.1 : Information of NotePC

Manufacture	: Fujitsu
Model No.	: FMV2MG6L3
Serial No.	: R2801521
Computer	:Intel(R) Pentium(R) III Mobile CPU 1000MHz 996MHz,504MB RAM
System	:Microsoft Windows XP Professional Version 2002 Service Pack 2
Battery	:M/N FMVNBP114 10.8V 3400mAh

Right Side of keyboard

Position of USB port



SECTION 12.2 : Test setup of EUT

Outside(PC BOTTOM)

Upright(PC BOTTOM)

Inside(PC BOTTOM)

Outside(PC SIDE)

SECTION 12.3 : Simulated tissue liquid parameter

12.3.1 Simulated Tissue Liquid Parameter confirmation

The dielectric parameters were checked prior to assessment using the HP85070D dielectric probe kit.
The dielectric parameters measurement are reported in each correspondent section.

12.3.2 Head 2450MHz

Type of liquid : **Head 2450 MHz**
Ambient temperature (deg.c.) : **25.0 (May 18)**
Relative Humidity (%) : **50(May 18)**
Liquid depth (cm) : **15.2**

Measured By : Miyo Ikuta

DIELECTRIC PARAMETERS MEASUREMENT RESULTS							
Date	Liquid Temp [deg.c]		Parameters	Target Value	Measured	Deviation [%]	Limit [%]
	Before	After					
18-May	24.6	24.6	Relative Permittivity εr	39.2	38.1	-2.8	+/-5
			Coductivity σ [mho/m]	1.80	1.87	3.9	+/-5

12.3.3 Muscle 2450MHz

Type of liquid : **Muscle 2450 MHz**
Ambient temperature (deg.c.) : **25.0 (May 18)**
Relative Humidity (%) : **50(May 18)**
Liquid depth (cm) : **15.2**

Measured By : Miyo Ikuta

DIELECTRIC PARAMETERS MEASUREMENT RESULTS							
Date	Liquid Temp [deg.c]		Parameters	Target Value	Measured	Deviation [%]	Limit [%]
	Before	After					
18-May	24.3	24.3	Relative Permittivity εr	52.7	50.6	-4.0	+/-5
			Coductivity σ [mho/m]	1.95	1.99	2.1	+/-5

12.3.4 Simulated Tissues

Ingredient	MIXTURE(%)	
	Head 2450MHz	Muscle 2450MHz
Water	45.0	69.83
DGMBE	55.0	30.17

Note:DGMBE(Diethylenglycol-monobuthyl ether)

SECTION 12.4 : System validation data

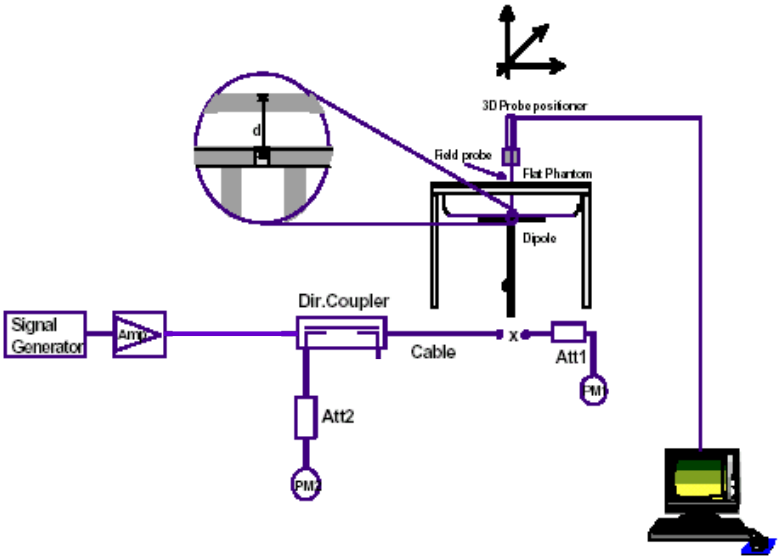
Prior to the assessment, the system validation kit was used to test whether the system was operating within its specifications of +/-10%. The validation results are in the table below. Please refer to APPENDIX 5.

Type of liquid	:	**HEAD 2450MHz**
Frequency	:	**2450MHz**
Dipole	:	**D2450V2 SN:713**
Liquid depth (cm)	:	**15.2**
Ambient temperature (deg.c.)	:	**25.0 (May 18)**
Relative Humidity (%)	:	**50(May 18)**
Power	:	**250mW**

Measured By : Miyo Ikuta

SYSTEM PERFORMANCE CHECK										
Date	Liquid (HEAD 2450MHz)						System dipole validation target & measured			
	Liquid Temp [deg.c.]		Relative Permittivity εr		Conductivity σ [mho/m]		SAR 1g [W/kg]		Deviation [%]	Limit [%]
	Before	After	Target	Measured	Target	Measured	Target	Measured		
18-May	24.6	24.6	39.2	38.1	1.80	1.87	13.1	14.2	8.4	+/-10

Note: Please refer to Attachment for the result representation in plot format



2450MHz System performance check setup

Test system for the system performance check setup diagram

SECTION 12.5 : Measurement results (Reference only)

12.5.1 Body 2450MHz SAR of Mode 1

Liquid Depth (cm)	:	**15.2**	Model	:	**KX-THA14**
Parameters	:	**εr =50.6, σ =1.99**	Serial No.	:	**0080F080132C**
Ambient Temperature[deg.c.]	:	**25.0**	Modulation	:	**FHSS**
Relative Humidity (%)	:	**50**	Crest factor	:	**1.2**

Date : May 19,2005
Measured By : Miyo Ikuta

BODY SAR MEASUREMENT RESULTS OF MODE 1										
Mode	Frequency		Packet	Phantom Section	EUT Set-up Conditions			Liquid Temp.[deg.c]		SAR(1g) [W/kg]
	Channel	[MHz]			Antenna position	PC position	Separation [mm]	Before	After	Maximum value of multi-peak
Mode 1	**Position Search**									
	Mid	2441	DH5	Flat	Outside	BOTTOM	0	23.8	23.8	**0.653**
	Mid	2441	DH5	Flat	Upright	BOTTOM	0	23.8	23.8	**0.027**
	Mid	2441	DH5	Flat	Inside	BOTTOM	0	23.8	23.8	**0.573**
	Mid	2441	DH5	Flat	Outside	SIDE	0	23.8	23.8	**0.046**
	Frequency Change									
	Low	2402	DH5	Flat	Outside	BOTTOM	0	23.8	23.8	**0.712**
	High	2480	DH5	Flat	Outside	BOTTOM	0	23.8	23.8	**0.569**
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure / General Population								**Body SAR: 1.6 W/kg (averaged over 1 gram)**		

12.5.2 Body 2450MHz SAR of Mode 2

Liquid Depth (cm)	:	**15.2**	Model	:	**KX-THA14**
Parameters	:	ε_r =**50.6**, σ =**1.99**	Serial No.	:	**0080F080132C**
Ambient Temperature[deg.c.]	:	**25.0**	Modulation	:	**FHSS**
Relative Humidity (%)	:	**50**	Crest factor	:	**1.3**

Date : May
Measured By : Miyo Ikuta

BODY SAR MEASUREMENT RESULTS OF MODE 2										
Mode	Frequency		Packet	Phantom Section	EUT Set-up Conditions			Liquid Temp.[deg.c]		SAR(1g) [W/kg]
	Channel	[MHz]			Antenna position	PC position	Separation [mm]	Before	After	Maximum value of multi-peak
Mode 2	**Position Search**									
	Mid	2440	DH3	Flat	Outside	BOTTOM	0	24.3	24.3	**1.35**
	Mid	2440	DH3	Flat	Upright	BOTTOM	0	23.6	23.6	**0.049**
	Mid	2440	DH3	Flat	Inside	BOTTOM	0	23.6	23.6	**1.32**
	Mid	2440	DH3	Flat	Outside	SIDE	0	23.8	23.8	**0.085**
	Frequency Change									
	Low	2402	DH3	Flat	Outside	BOTTOM	0	23.8	23.8	**1.34**
	High	2480	DH3	Flat	Outside	BOTTOM	0	23.8	23.9	**0.999**
	Low	2402	DH3	Flat	Inside	BOTTOM	0	23.8	23.8	**1.23**
	High	2480	DH3	Flat	Inside	BOTTOM	0	23.8	23.8	**0.883**
ANSI / IEEE C95.1 1992 - SAFETY LIMIT **Spatial Peak Uncontrolled Exposure / General Population**								**Body SAR: 1.6 W/kg** **(averaged over 1 gram)**		

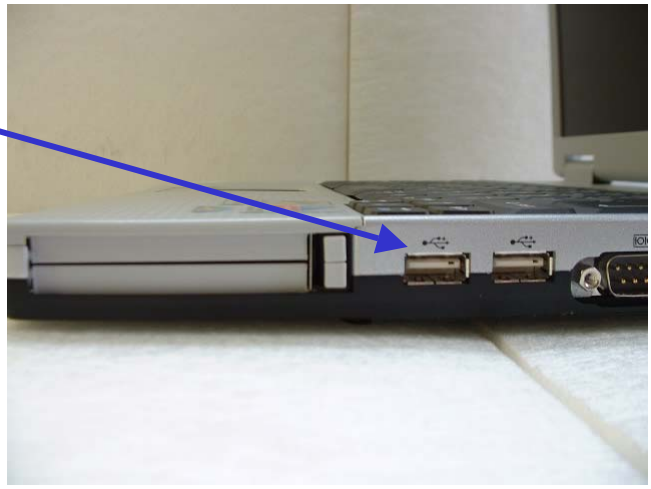
Chapter 13 : SAR Measurement results (PC model 3) Reference data 2

SECTION 13.1 : Information of NotePC

Manufacture	:	Panasonic
Model No.	:	CF-73
Serial No.	:	4CKSA43779
Computer	:	Intel(R) Pentium(R) M processor 1300MHz 598MHz,512MB RAM
System	:	Microsoft Windows XP Professional Version 2002 Service Pack 2
Battery	:	M/N CF-VASU26 11.6V 3.8AH

Right side of keyboard

USB port of position



SECTION 13.2 : Test setup of EUT

Outside(PC BOTTOM)

Upright(PC BOTTOM)

Inside(PC BOTTOM)

Outside(PC SIDE)

SECTION 13.3 : Simulated tissue liquid parameter

13.3.1 Simulated Tissue Liquid Parameter confirmation

The dielectric parameters were checked prior to assessment using the HP85070D dielectric probe kit.
The dielectric parameters measurement are reported in each correspondent section.

13.3.2 Head 2450MHz

Type of liquid : **Head 2450 MHz**
Ambient temperature (deg.c.) : **25.0 (May 20)**
Relative Humidity (%) : **45(May 20)**
Liquid depth (cm) : **15.2**

Measured By : Miyo Ikuta

DIELECTRIC PARAMETERS MEASUREMENT RESULTS							
Date	Liquid Temp [deg.c]		Parameters	Target Value	Measured	Deviation [%]	Limit [%]
	Before	After					
20-May	24.0	24.0	Relative Permittivity εr	39.2	37.8	-3.6	+/-5
			Coductivity σ [mho/m]	1.80	1.89	5.0	+/-5

13.3.3 Muscle 2450MHz

Type of liquid : **Muscle 2450 MHz**
Ambient temperature (deg.c.) : **25.0 (May 20)**
Relative Humidity (%) : **45 (May 20)**
Liquid depth (cm) : **15.2**

Measured By : Miyo Ikuta

DIELECTRIC PARAMETERS MEASUREMENT RESULTS							
Date	Liquid Temp [deg.c]		Parameters	Target Value	Measured	Deviation [%]	Limit [%]
	Before	After					
20-May	24.0	24.0	Relative Permittivity εr	52.7	50.7	-3.8	+/-5
			Coductivity σ [mho/m]	1.95	2	2.6	+/-5

13.3.4 Simulated Tissues

Ingredient	MIXTURE(%)	
	Head 2450MHz	Muscle 2450MHz
Water	45.0	69.83
DGMBE	55.0	30.17

Note:DGMBE(Diethylenglycol-monobuthyl ether)

SECTION 13.4 : System validation data

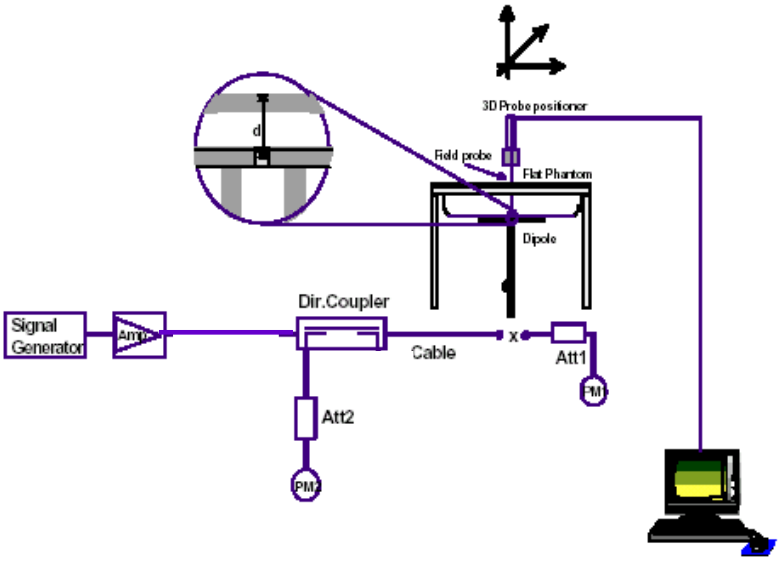
Prior to the assessment, the system validation kit was used to test whether the system was operating within its specifications of +/-10%. The validation results are in the table. Please refer to APPENDIX 5.

Type of liquid	:	**HEAD 2450MHz**
Frequency	:	**2450MHz**
Dipole	:	**D2450V2 SN:713**
Liquid depth (cm)	:	**15.2**
Ambient temperature (deg.c.)	:	**25.0 (May 20)**
Relative Humidity (%)	:	**45(May 20)**
Power	:	**250mW**

Measured By : Miyo Ikuta

SYSTEM PERFORMANCE CHECK										
Date	Liquid (HEAD 2450MHz)						System dipole validation target & measured			
	Liquid Temp [deg.c.]		Relative Permittivity εr		Conductivity σ [mho/m]		SAR 1g [W/kg]		Deviation [%]	Limit [%]
	Before	After	Target	Measured	Target	Measured	Target	Measured		
20-May	24.0	24.0	39.2	37.8	1.8	1.89	13.1	14.4	9.9	+/-10

Note: Please refer to Attachment for the result representation in plot format



2450MHz System performance check setup

Test system for the system performance check setup diagram

SECTION 13.5 : Measurement results (Reference only)

13.5.1 Body 2450MHz SAR of Mode 1

Liquid Depth (cm)	:	**15.2**	Model	:	**KX-THA14**
Parameters	:	**εr =50.7, σ =2.00**	Serial No.	:	**0080F080132C**
Ambient Temperature[deg.c.]	:	**25.0**	Modulation	:	**FHSS**
Relative Humidity (%)	:	**45**	Crest factor	:	**1.2**

Date : May 20,2005
Measured By : Miyo Ikuta

BODY SAR MEASUREMENT RESULTS OF MODE 1										
Mode	Frequency			Phantom Section	EUT Set-up Conditions			Liquid Temp.[deg.c]		SAR(1g) [W/kg]
	Channel	[MHz]	Packet		Antenna poaition	PC position	Separation [mm]	Before	After	Maximum value of multi-peak
Mode 1	**Position Search**									
	Mid	2441	DH5	Flat	Outside	BOTTOM	5	23.6	23.6	**0.223**
	Mid	2441	DH5	Flat	Upright	BOTTOM	5	24.0	24.0	**0.015**
	Mid	2441	DH5	Flat	Inside	BOTTOM	5	23.6	23.6	**0.184**
	Mid	2441	DH5	Flat	Outside	SIDE	0	24.0	24.0	**0.041**
	Frequency Change									
	Low	2402	DH5	Flat	Outside	BOTTOM	5	23.6	23.6	**0.482**
	High	2480	DH5	Flat	Outside	BOTTOM	5	23.7	23.7	**0.235**
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure / General Population								**Body SAR: 1.6 W/kg (averaged over 1 gram)**		

13.5.2 Body 2450MHz SAR of Mode 2

Liquid Depth (cm)	:	**15.2**	Model	:	**KX-THA14**
Parameters	:	ε_r =**50.7**, σ =**2.00**	Serial No.	:	**0080F080132C**
Ambient Temperature[deg.c.]	:	**25.0**	Modulation	:	**FHSS**
Relative Humidity (%)	:	**45**	Crest factor	:	**1.3**

Date : May 20,2005
Measured By : Miyo Ikuta

BODY SAR MEASUREMENT RESULTS OF MODE 2										
Mode	Frequency		Packet	Phantom Section	EUT Set-up Conditions			Liquid Temp.[deg.c]		SAR(1g) [W/kg]
	Channel	[MHz]			Antenna poaition	PC position	Separation [mm]	Before	After	Maximum value of multi-peak
Mode 2	**Position Search**									
	Mid	2440	DH3	Flat	Outside	BOTTOM	5	23.6	23.6	**0.585**
	Mid	2440	DH3	Flat	Upright	BOTTOM	5	24.0	24.0	**0.029**
	Mid	2440	DH3	Flat	Inside	BOTTOM	5	23.6	23.6	**0.377**
	Mid	2440	DH3	Flat	Outside	SIDE	0	23.7	23.7	**0.081**
	Frequency Change									
	Low	2402	DH3	Flat	Outside	BOTTOM	5	23.9	23.9	**0.855**
	High	2480	DH3	Flat	Outside	BOTTOM	5	24.0	24.0	**0.67**
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure / General Population								**Body SAR: 1.6 W/kg (averaged over 1 gram)**		

Chapter 14 : Equipment & calibration information

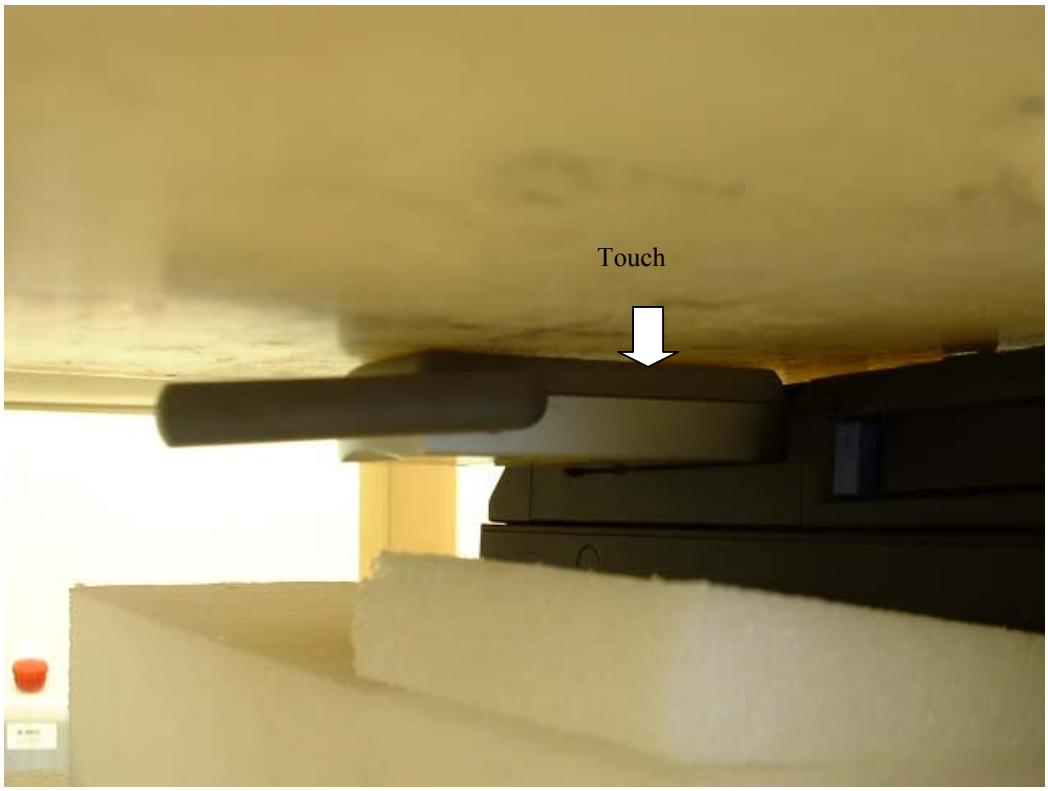
Name of Equipment	Manufacture	Model number	Serial number	Calibration	
				Last Cal	due date
Power Meter	Agilent	E4417A	GB41290639	2004/11/09	2005/11/08
Power Sensor	Agilent	E9300B	US40010300	2004/11/15	2005/11/14
Power Sensor	Agilent	E9327A	US40440576	2004/11/23	2005/11/22
S-Parameter Network Analyzer	Agilent	8753ES	US39174808	2003/10/23	2006/10/22
Signal Generator	Rohde&Schwarz	SML40	100023	2005/01/05	2006/01/04
RF Amplifier	OPHIR	5056F	1005	2005/05/20	2006/05/19
Dosimetric E-Field Probe	Schmid&Partner Engineering AG	ET3DV6	1684	2004/09/02	2005/09/01
Data Acquisition Electronics	Schmid&Partner Engineering AG	DAE3	516	2005/03/10	2006/03/09
Robot,SAM Phantom	Schmid&Partner Engineering AG	DASY4	I021834	N/A	N/A
Attenuator (20dB)	HIROSE ELECTRIC CO.,LTD.	AT-120	901247	2005/01/11	2006/01/10
Microwave Cable (Conducted cable)	Suhner	SUCOFLEX 104	233011/4	2005/02/03	2006/02/02
2450MHz System Validation Dipole	Schmid&Partner Engineering AG	D2450V2	713	2004/12/13	2006/12/12
Dual Directional Coupler	N/A	Narda	03702	N/A	N/A
Head 2450MHz	N/A	N/A	N/A	N/A	N/A
Body 2450MHz	N/A	N/A	N/A	N/A	N/A
Ambient Noise <0.012W/kg	SAR room	-	-	2005/5/18,19and20	-

Chapter 15 : References

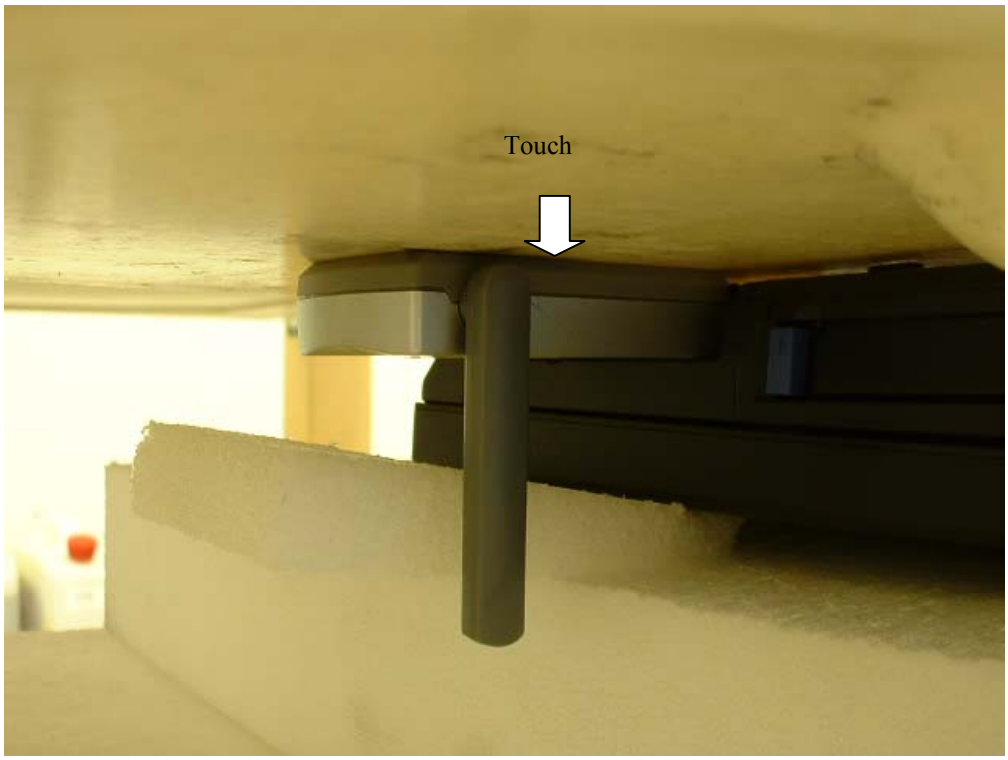
[1]ANSI, ANSI/IEEE C95.1-1992: IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz, The Institute of Electrical and Electronics Engineers, Inc., New York, NY 10017, 1992.
[2] Katja Pokovic, Thomas Schmid, and Niels Kuster, "Robust setup for precise calibration of E-field probes in tissue simulating liquids at mobile communications frequencies", in ICECOM '97, Dubrovnik, October 15-17, 1997, pp. 120-124.
[3] Katja Pokovic, Thomas Schmid, and Niels Kuster, "E-_field probe with improved isotropy in brain simulating liquids", in Proceedings of the ELMAR, Zadar, Croatia, 23-25 June, 1996, pp.172-175.
[4] W. Gander, Computermathematik, Birkhaeuser, Basel, 1992.
[5] W. H. Press, S. A. Teukolsky,W. T. Vetterling, and B. P. Flannery, Numerical Recepies in C, The Art of Scientific Computing, Second Edition, Cambridge University Press, 1992.
[6] Barry N. Taylor and Christ E. Kuyatt, "Guidelines for evaluating and expressing the uncertainty of NIST measurement results", Tech. Rep., National Institute of Standards and Technology,1994.
[7]SPEAG document Uncertainty document for DASY 4 System from SPEAG(Shimid & Partner Engineering AG).

APPENDIX 1 : Photographs of test setup

(A1-1 :PC model 1)
Outside (PC BOTTOM)

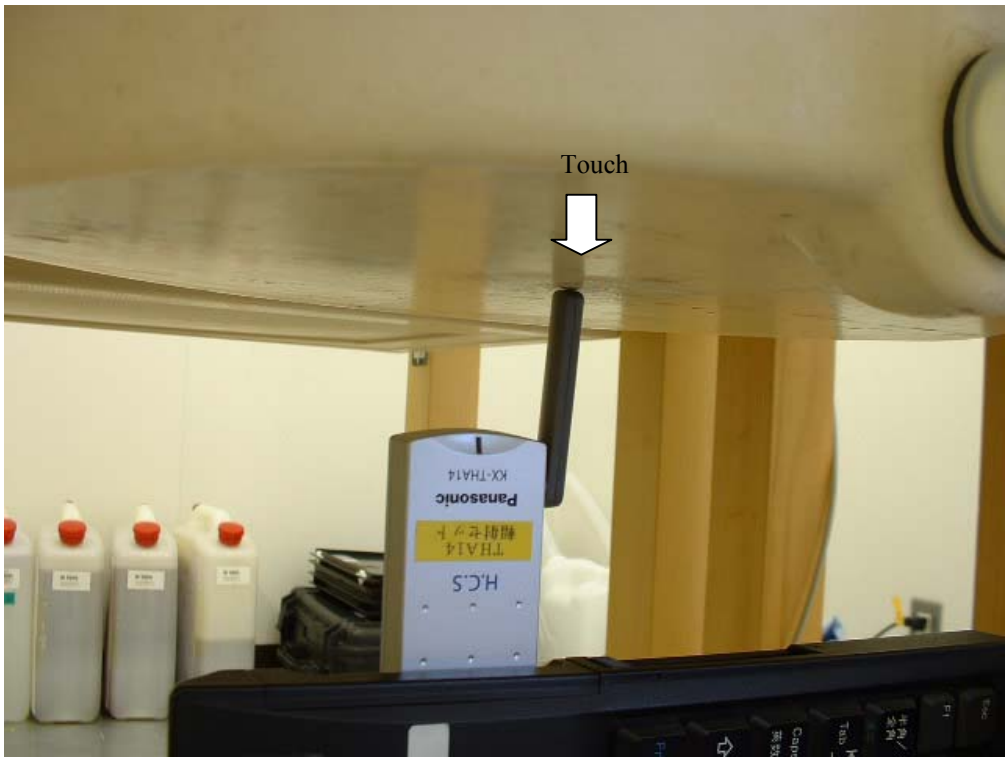


Upright (PC BOTTOM)



Inside (PC BOTTOM)

Outside (PC SIDE)



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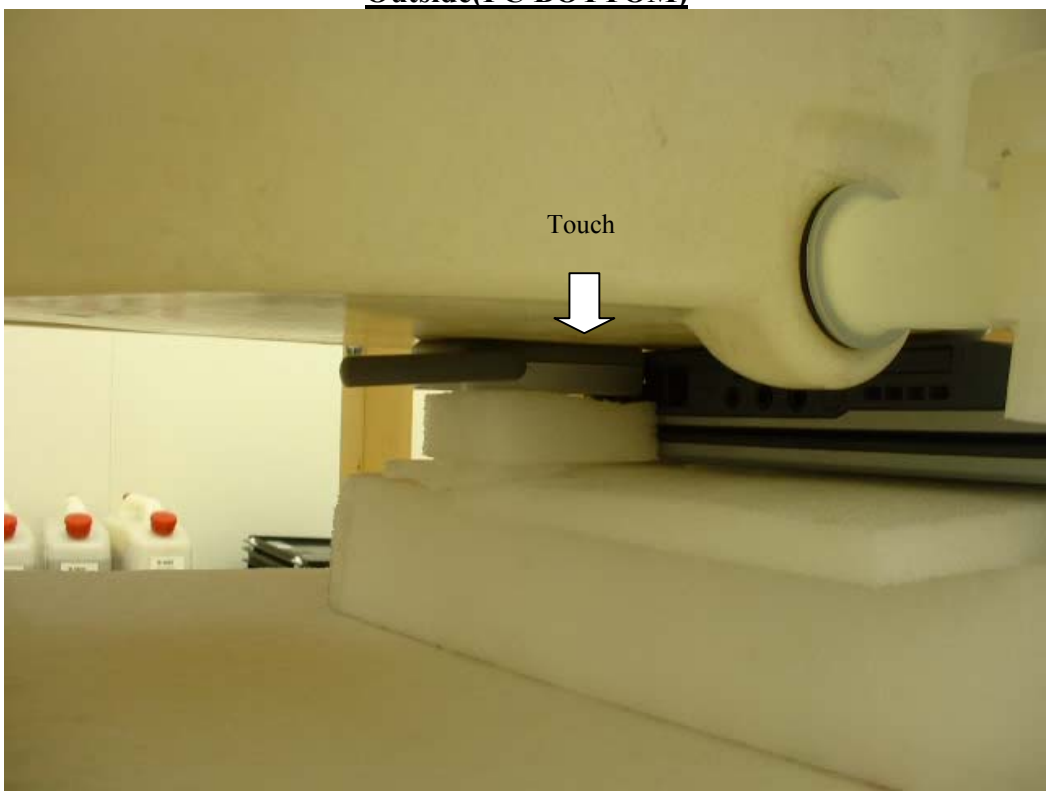
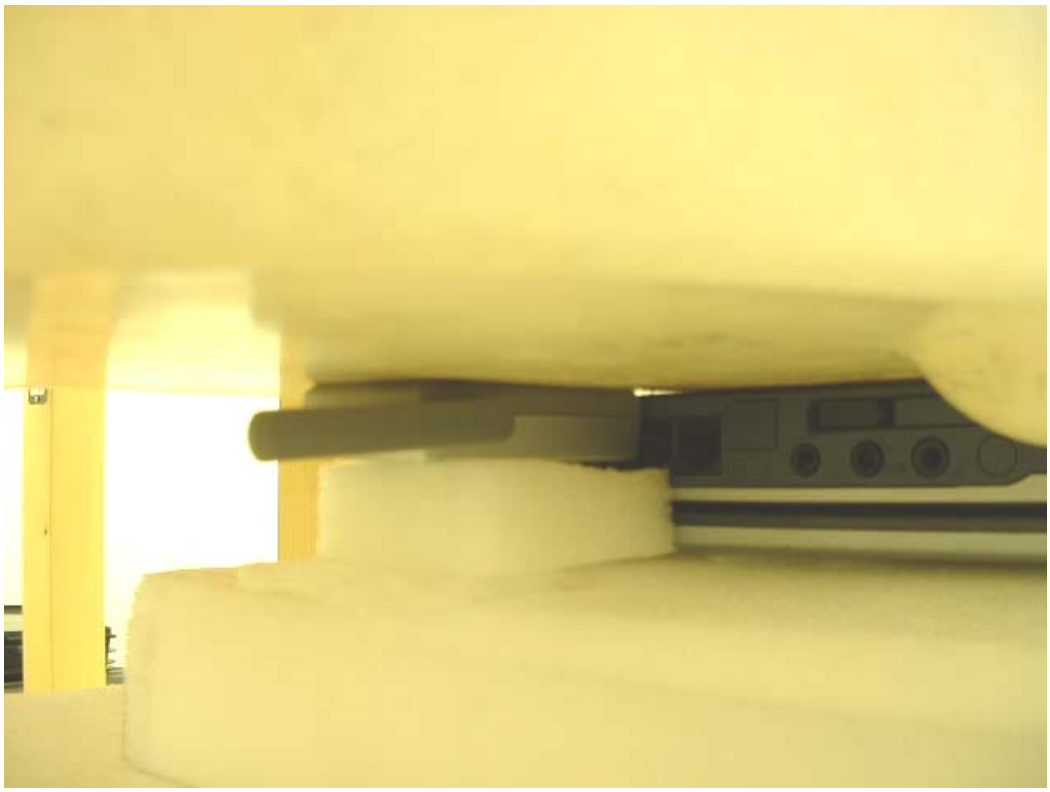
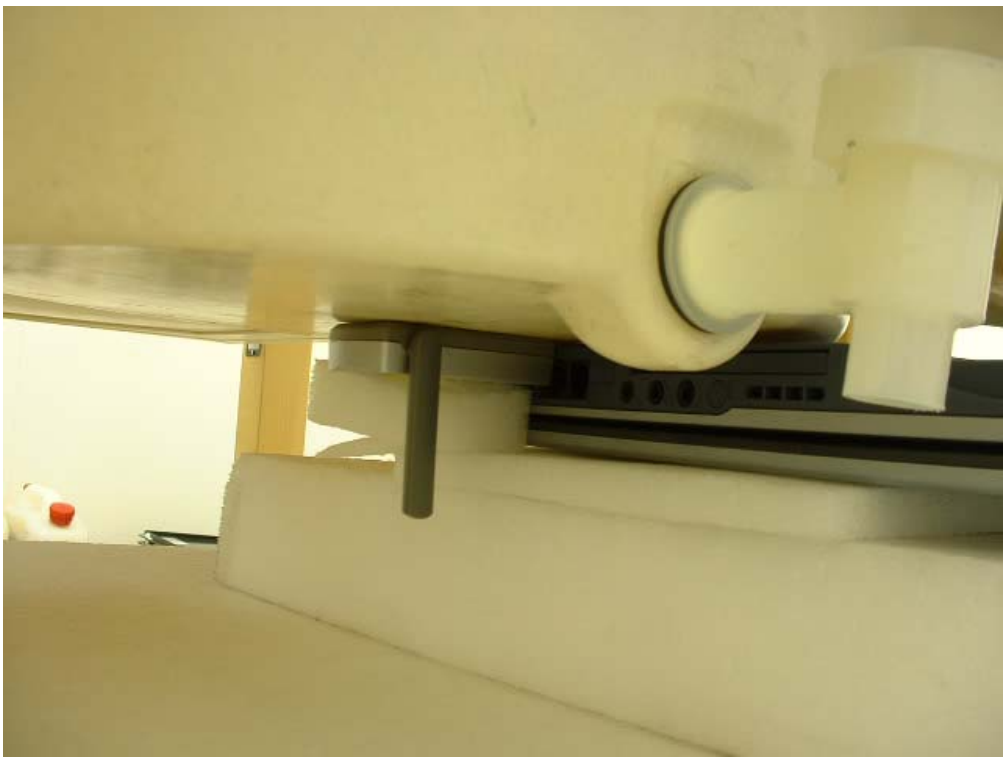
4383-326 Asama-cho, Ise-shi, Mie-ken 516-0021 JAPAN
Telephone: +81 596 24 8116
Facsimile: +81 596 24 8124

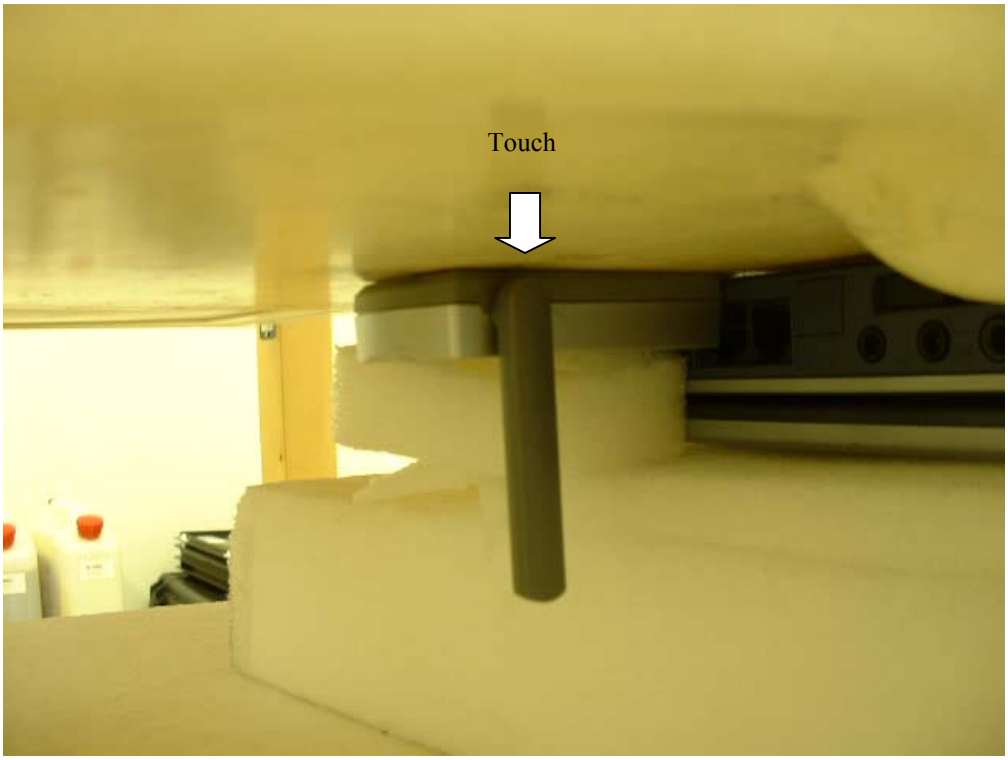
(A1-2 :PC model 2)
Outside(PC BOTTOM)



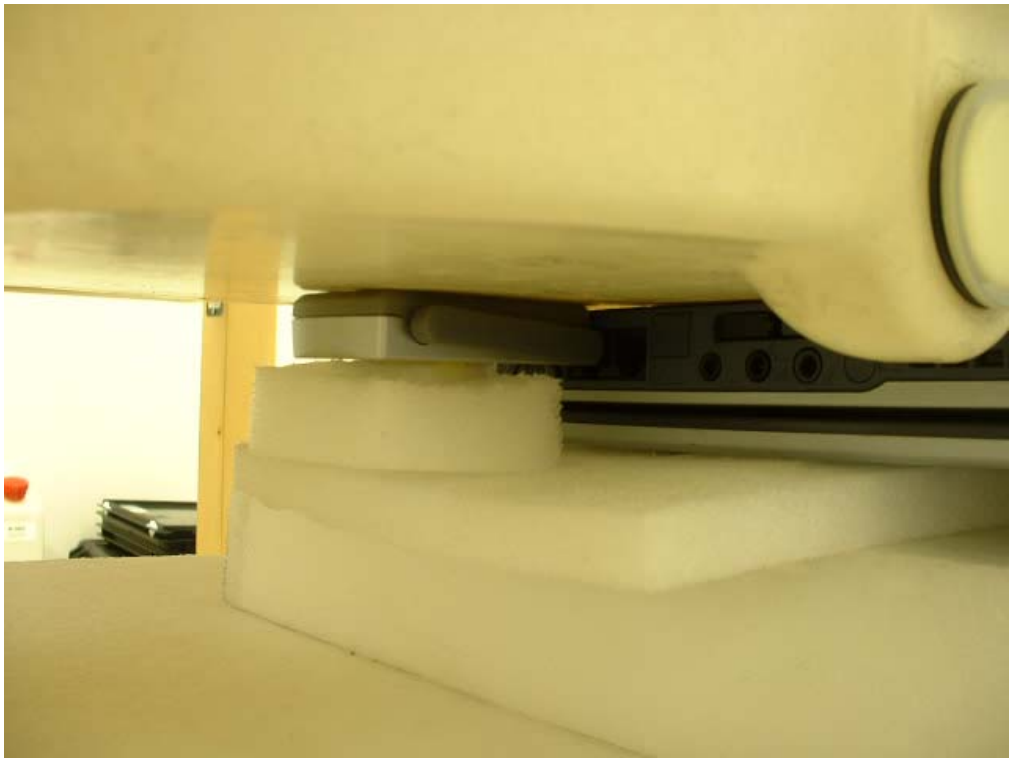


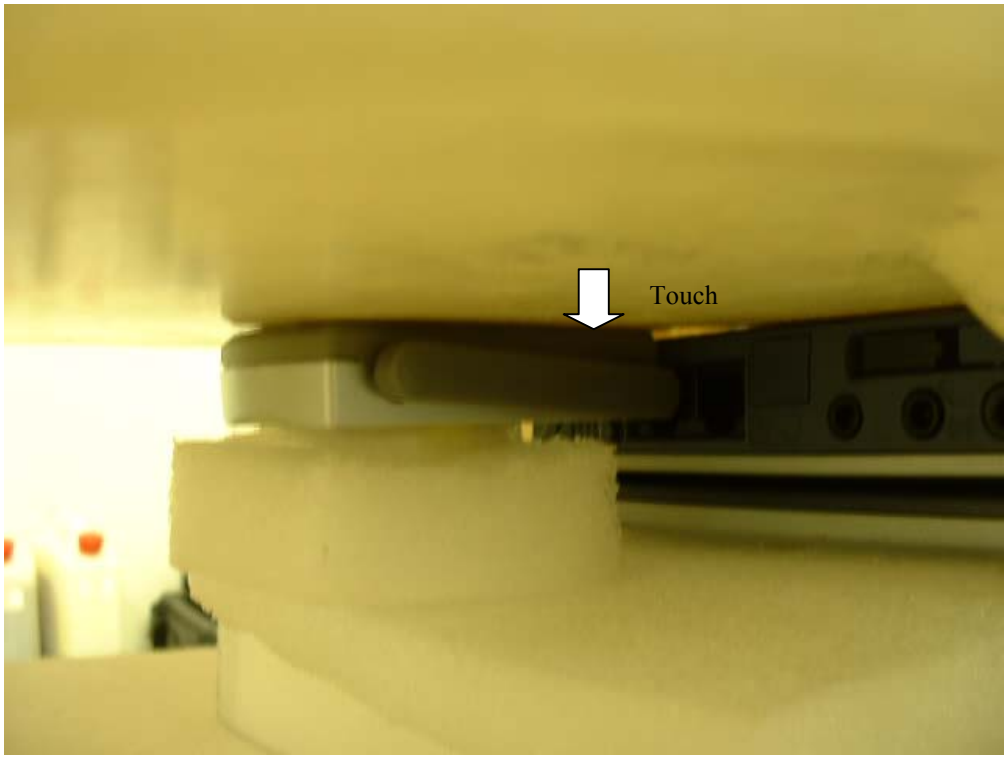
Upright(PC BOTTOM)



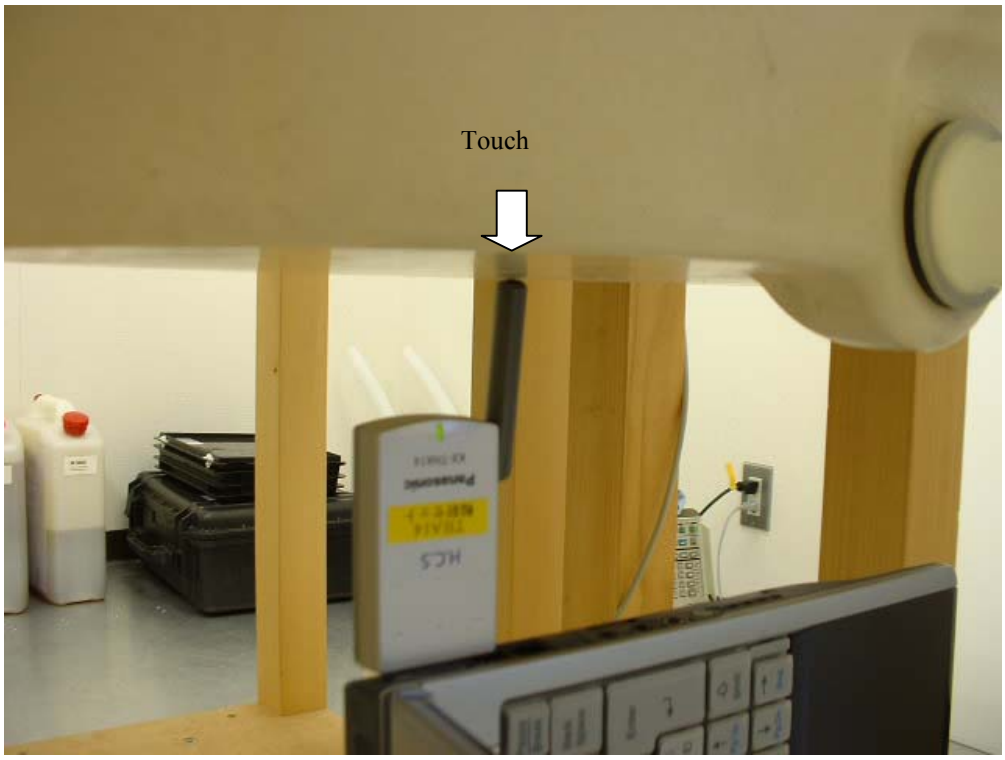


Inside (PC BOTTOM)

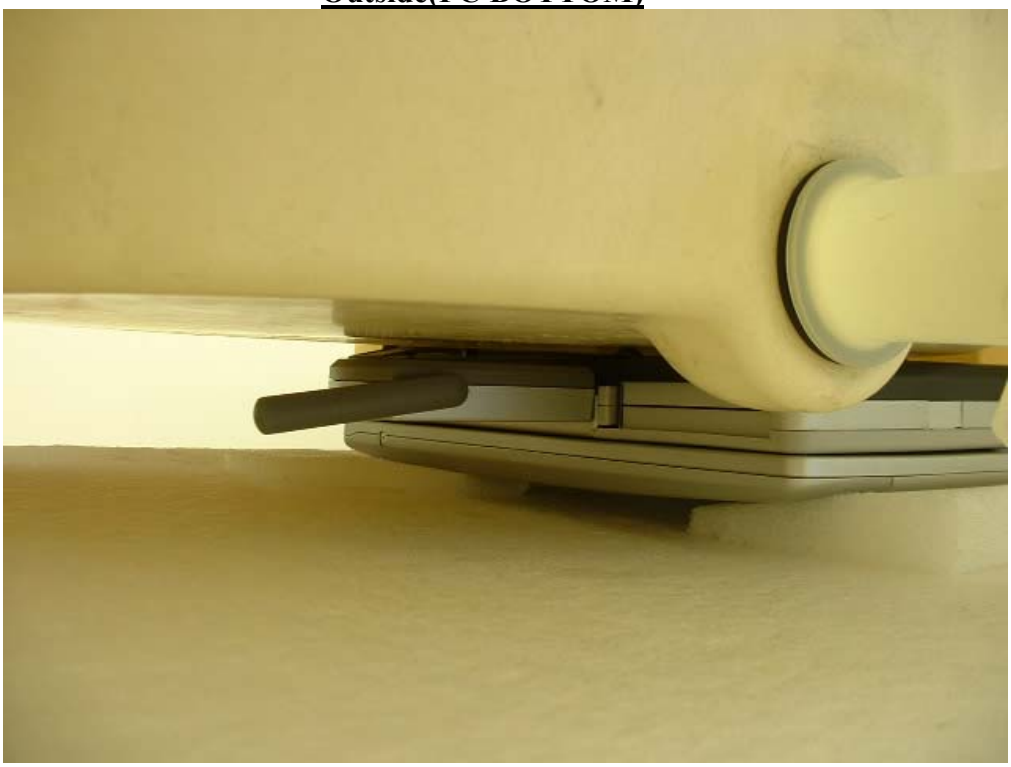


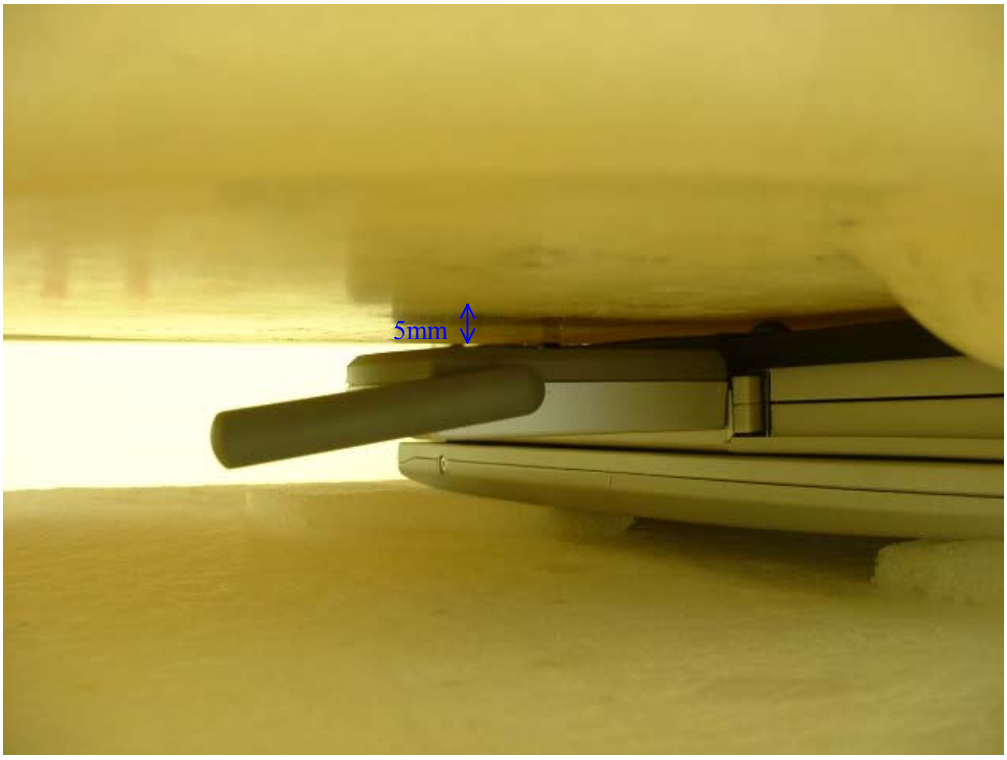


Outside (PC SIDE)

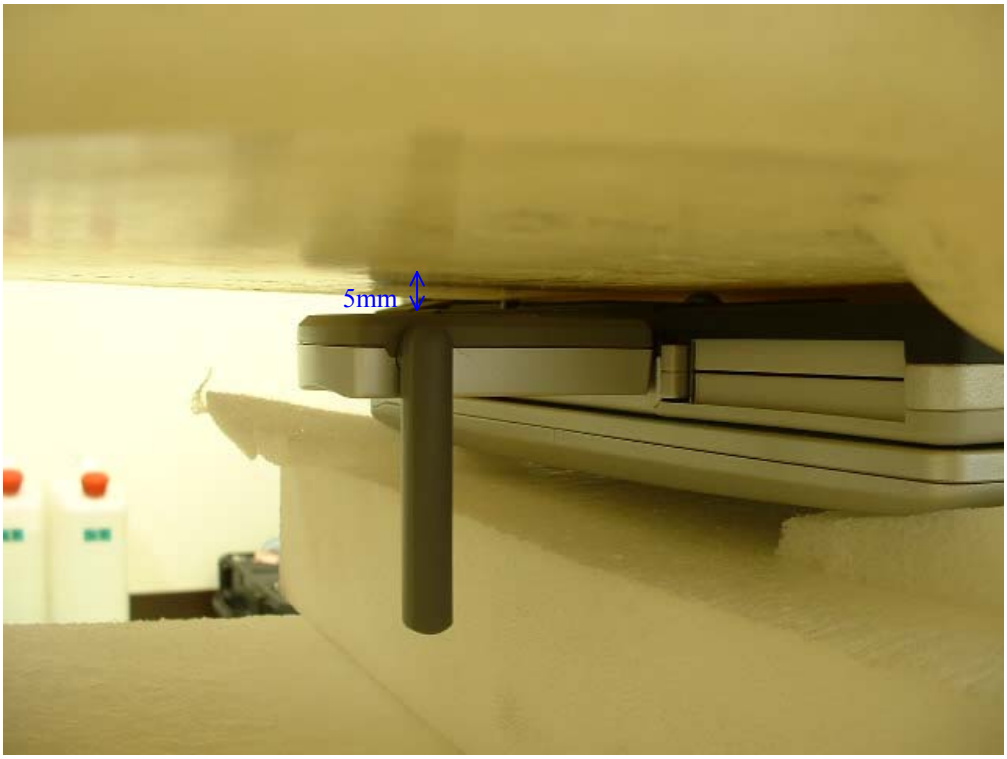


(A1-3 :PC model 3)
Outside(PC BOTTOM)

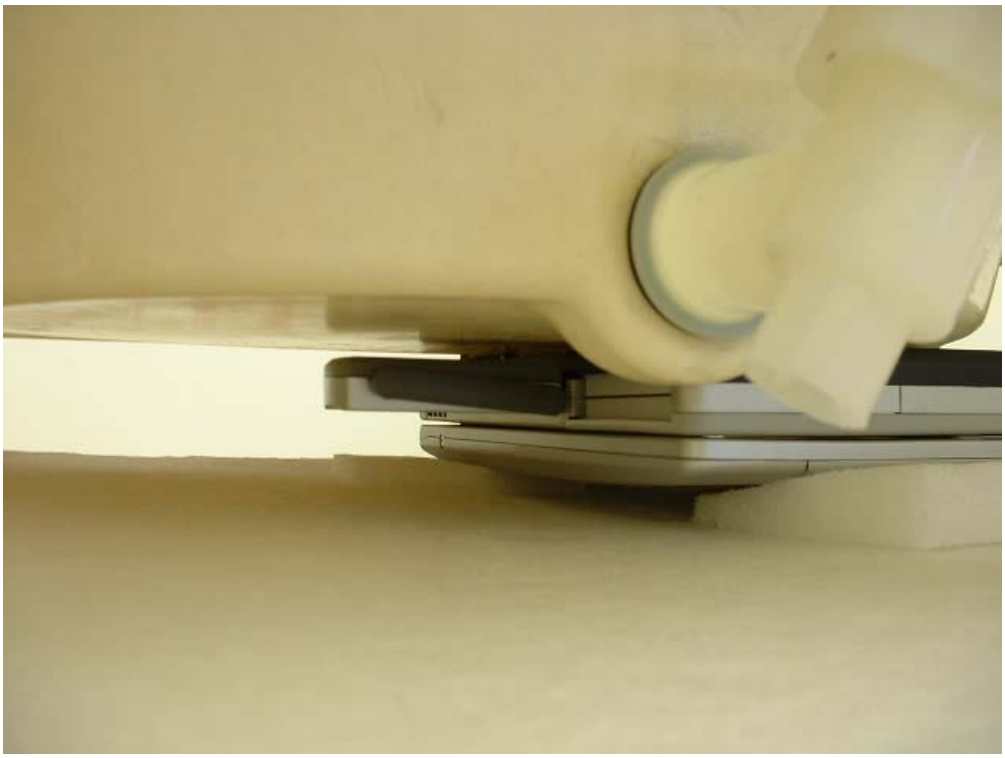


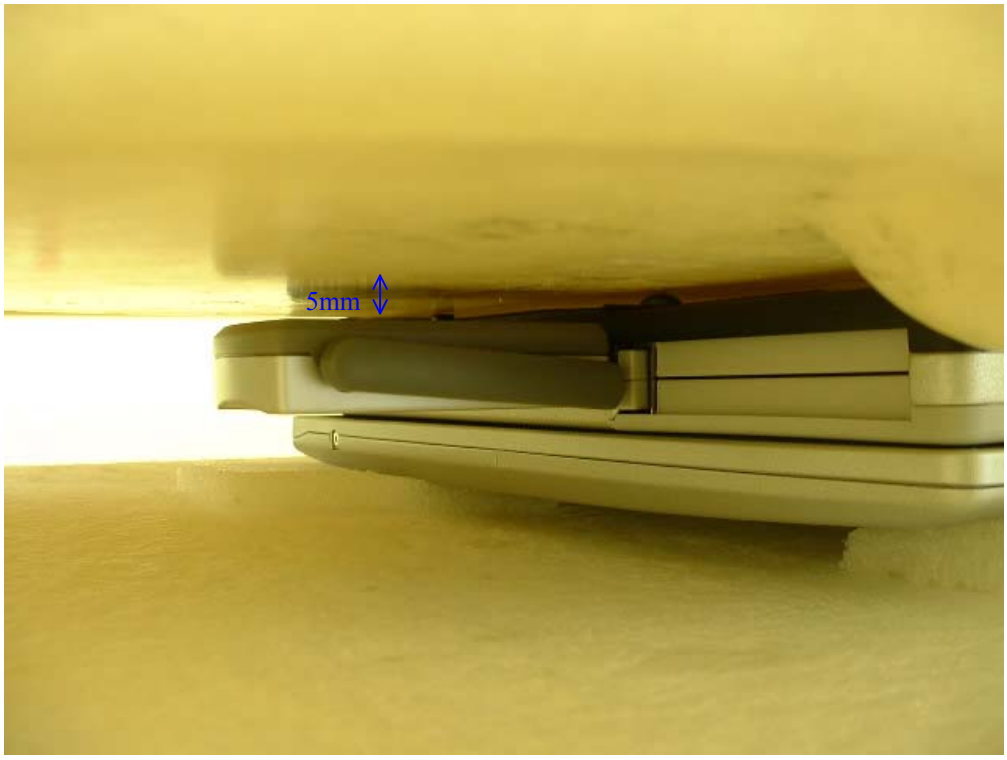


Upright(PC BOTTOM)



Inside(PC BOTTOM)





Outside(PC SIDE)

APPENDIX 2 : SAR Measurement data (PC model 1)

KX-THA14 / Mode 1 / Body / Outside(PC BOTTOM) / 2441MHz

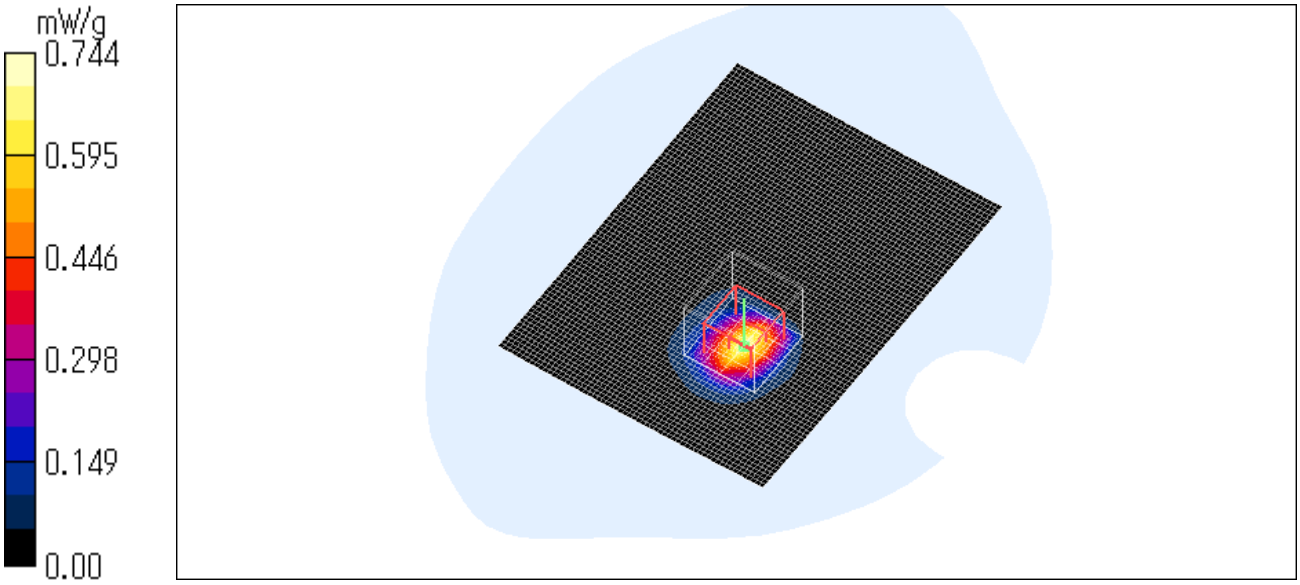
Duty Cycle: 1:1.2
Medium parameters used: f = 2450 MHz; σ = 1.98 mho/m; ε_r = 50.2; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:
Probe: ET3DV6 - SN1684; ConvF(4.14, 4.14, 4.14); Calibrated: 2004/09/02
Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
Electronics: DAE3 Sn516; Calibrated: 2005/03/10
Phantom: SAM 1196
Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 145

Area Scan (61x81x1): Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 0.845 mW/g

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 4.53 V/m; Power Drift = -0.111 dB
Peak SAR (extrapolated) = 1.48 W/kg
SAR(1 g) = 0.675 mW/g; SAR(10 g) = 0.314 mW/g
Maximum value of SAR (measured) = 0.744 mW/g

Test Date = 05/19/05
Ambient Temperature = 25.0degree C.
Liquid Temperature = Before 24.3 degree C. , After 24.3 degree C.



KX-THA14 / Mode 1 / Body / Upright(PC BOTTOM) / 2441MHz

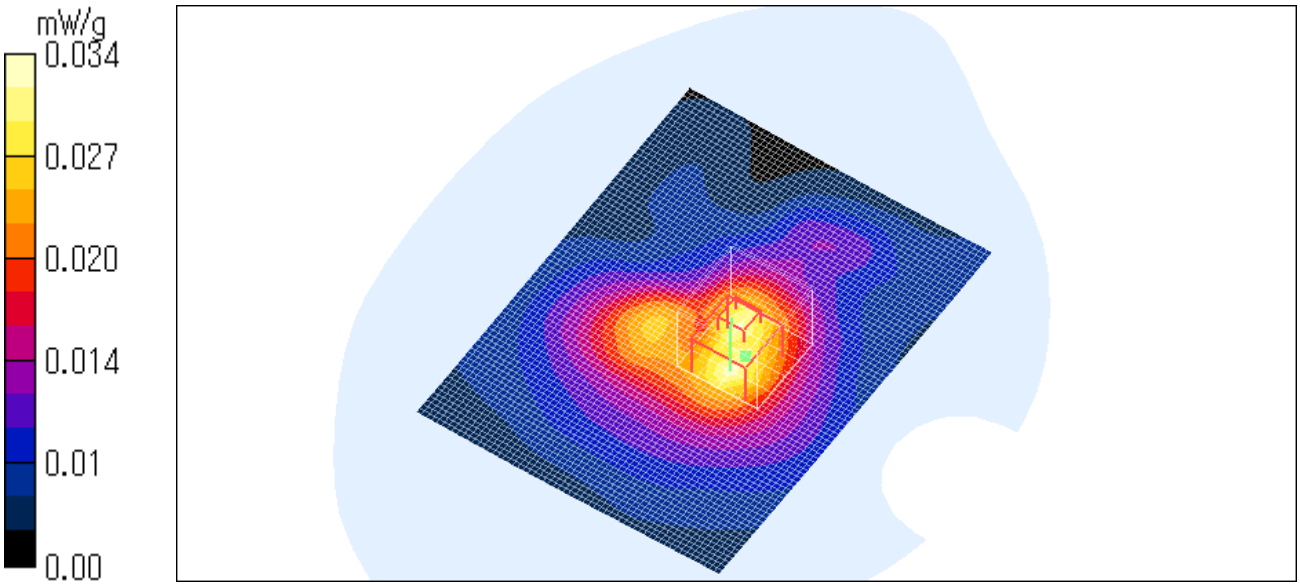
Duty Cycle: 1:1.2
Medium parameters used: f = 2450 MHz; σ = 1.98 mho/m; ε_r = 50.2; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:
Probe: ET3DV6 - SN1684; ConvF(4.14, 4.14, 4.14); Calibrated: 2004/09/02
Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
Electronics: DAE3 Sn516; Calibrated: 2005/03/10
Phantom: SAM 1196
Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 145

Area Scan (61x81x1): Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 0.029 mW/g

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 3.30 V/m; Power Drift = -0.00 dB
Peak SAR (extrapolated) = 0.080 W/kg
SAR(1 g) = 0.031 mW/g; SAR(10 g) = 0.017 mW/g
Maximum value of SAR (measured) = 0.034 mW/g

Test Date = 05/19/05
Ambient Temperature = 25.0degree C.
Liquid Temperature = Before 24.3 degree C. , After 24.3 degree C.



KX-THA14 / Mode 1 / Body / Inside(PC BOTTOM) / 2441MHz

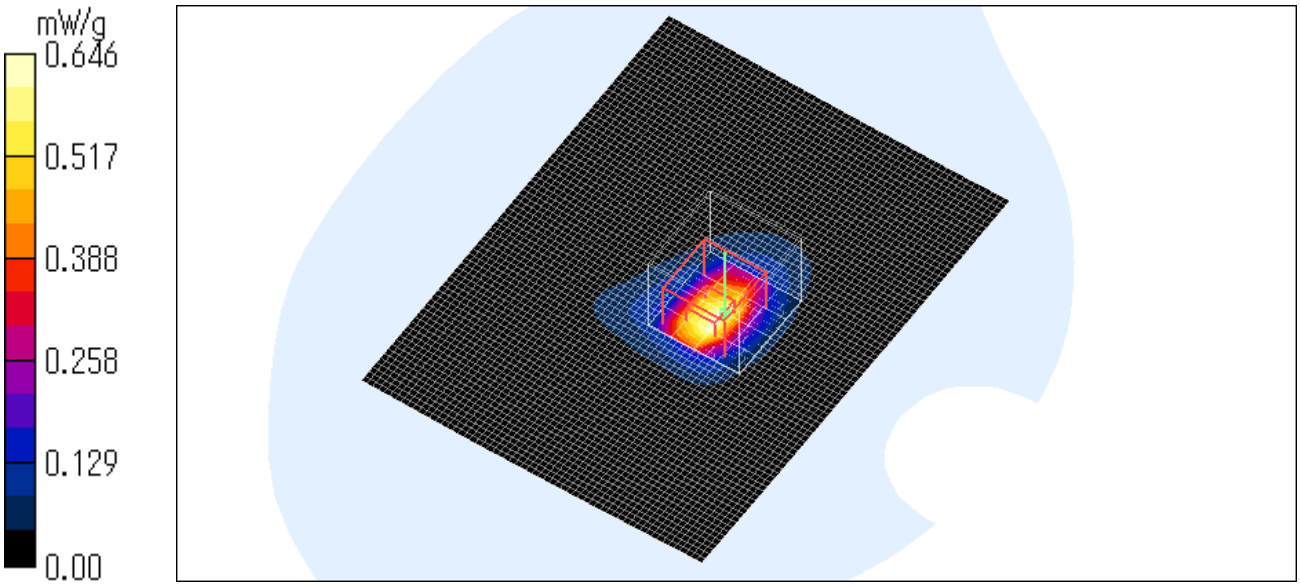
Duty Cycle: 1:1.2
Medium parameters used: f = 2450 MHz; σ = 1.98 mho/m; ε_r = 50.2; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:
Probe: ET3DV6 - SN1684; ConvF(4.14, 4.14, 4.14); Calibrated: 2004/09/02
Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
Electronics: DAE3 Sn516; Calibrated: 2005/03/10
Phantom: SAM 1196
Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 145

Area Scan (61x81x1): Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 0.424 mW/g

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 9.43 V/m; Power Drift = -0.137 dB
Peak SAR (extrapolated) = 1.48 W/kg
SAR(1 g) = 0.630 mW/g; SAR(10 g) = 0.271 mW/g
Maximum value of SAR (measured) = 0.646 mW/g

Test Date = 05/19/05
Ambient Temperature = 25.0degree C.
Liquid Temperature = Before 24.3 degree C. , After 24.3 degree C.



KX-THA14 / Mode 1 / Body / Outside(PC SIDE) / 2441MHz

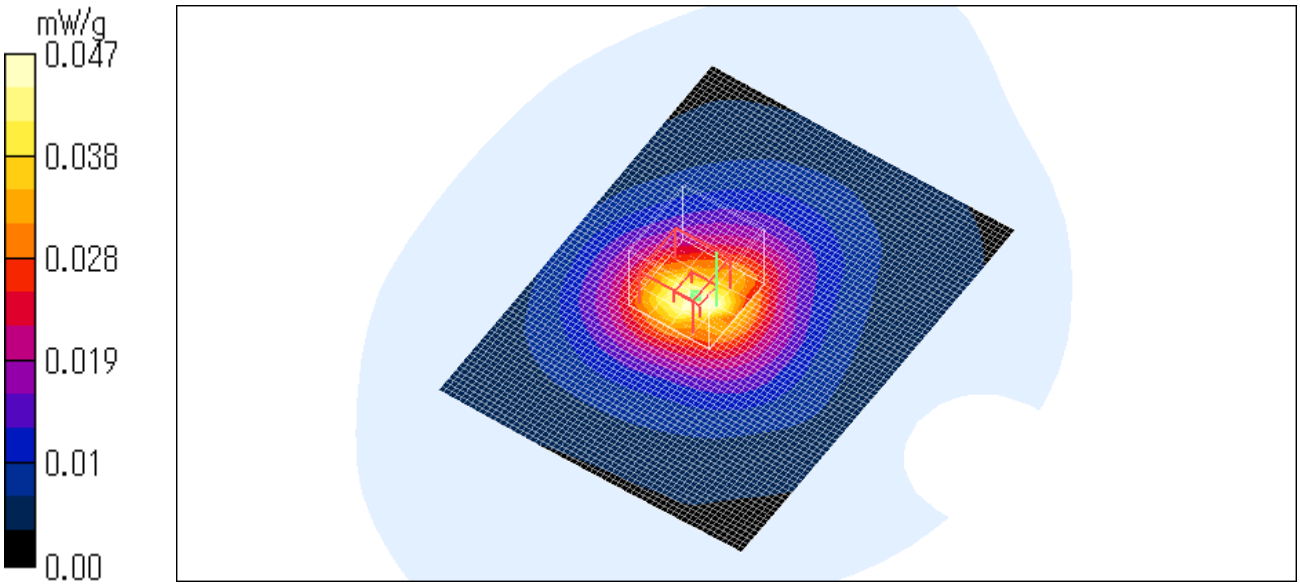
Duty Cycle: 1:1.2
Medium parameters used: f = 2450 MHz; σ = 1.98 mho/m; ε_r = 50.2; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:
Probe: ET3DV6 - SN1684; ConvF(4.14, 4.14, 4.14); Calibrated: 2004/09/02
Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
Electronics: DAE3 Sn516; Calibrated: 2005/03/10
Phantom: SAM 1196
Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 145

Area Scan (61x81x1): Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 0.046 mW/g

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 4.82 V/m; Power Drift = -0.229 dB
Peak SAR (extrapolated) = 0.122 W/kg
SAR(1 g) = 0.044 mW/g; SAR(10 g) = 0.024 mW/g
Maximum value of SAR (measured) = 0.047 mW/g

Test Date = 05/19/05
Ambient Temperature = 25.0degree C.
Liquid Temperature = Before 24.3 degree C. , After 24.3 degree C.



KX-THA14 / Mode 1 / Body / Outside (PC BOTTOM) / 2402MHz

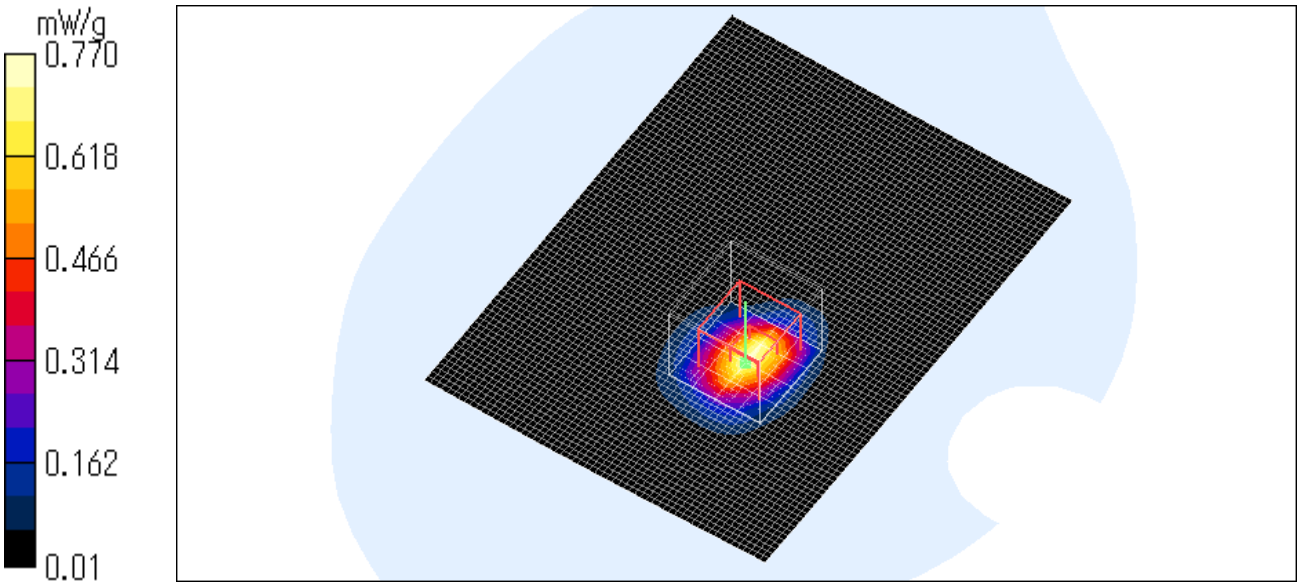
Duty Cycle: 1:1.2
Medium parameters used: f = 2450 MHz; σ = 1.98 mho/m; ε_r = 50.2; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:
Probe: ET3DV6 - SN1684; ConvF(4.14, 4.14, 4.14); Calibrated: 2004/09/02
Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
Electronics: DAE3 Sn516; Calibrated: 2005/03/10
Phantom: SAM 1196
Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 145

Area Scan (61x81x1): Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 0.735 mW/g

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 4.74 V/m; Power Drift = -0.081 dB
Peak SAR (extrapolated) = 1.55 W/kg
SAR(1 g) = 0.714 mW/g; SAR(10 g) = 0.333 mW/g
Maximum value of SAR (measured) = 0.770 mW/g

Test Date = 05/19/05
Ambient Temperature = 25.0degree C.
Liquid Temperature = Before 24.3 degree C. , After 24.3 degree C.



KX-THA14 / Mode 1 / Body / Outside (PC BOTTOM) / 2480MHz

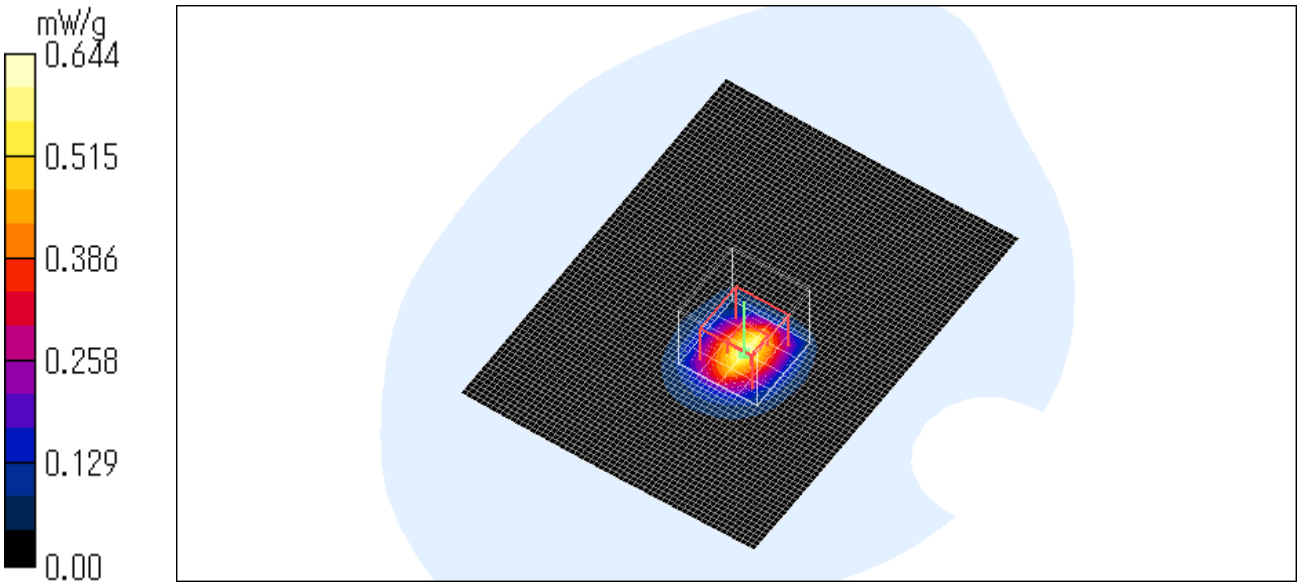
Duty Cycle: 1:1.2
Medium parameters used: f = 2450 MHz; σ = 1.98 mho/m; ε_r = 50.2; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:
Probe: ET3DV6 - SN1684; ConvF(4.14, 4.14, 4.14); Calibrated: 2004/09/02
Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
Electronics: DAE3 Sn516; Calibrated: 2005/03/10
Phantom: SAM 1196
Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 145

Area Scan (61x81x1): Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 0.634 mW/g

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 10.0 V/m; Power Drift = 0.141 dB
Peak SAR (extrapolated) = 1.35 W/kg
SAR(1 g) = 0.588 mW/g; SAR(10 g) = 0.270 mW/g
Maximum value of SAR (measured) = 0.644 mW/g

Test Date = 05/19/05
Ambient Temperature = 25.0 degree C.
Liquid Temperature = Before 24.3 degree C. , After 24.3 degree C.



KX-THA14 / Mode 2 / Body / Outside (PC BOTTOM) / 2440MHz

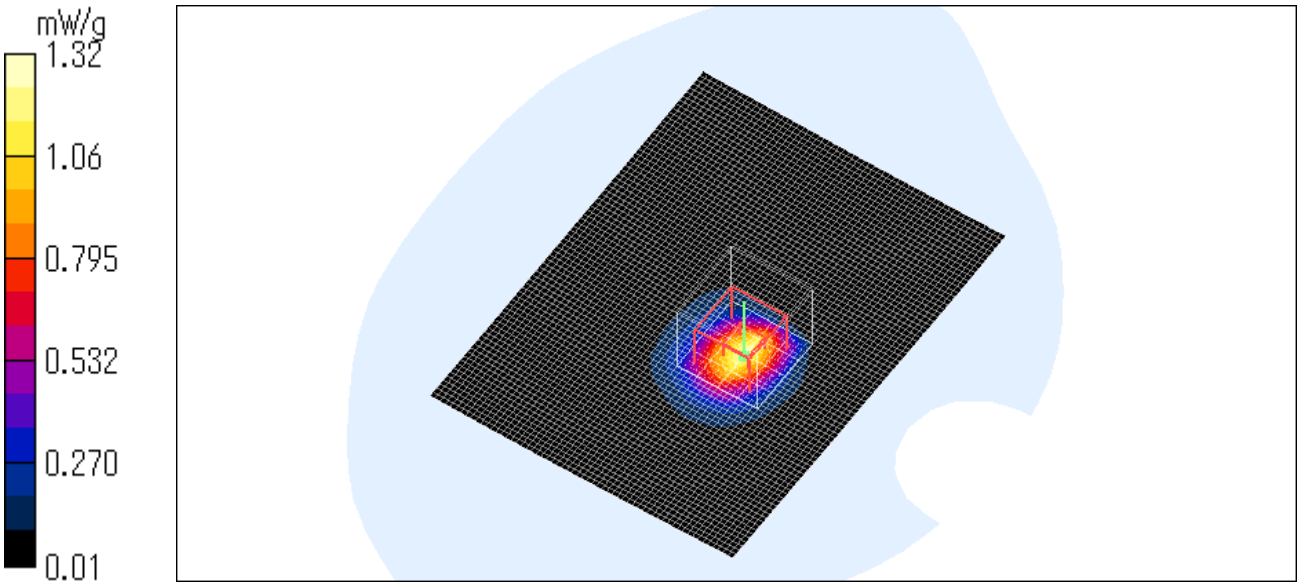
Duty Cycle: 1:1.3
Medium parameters used: f = 2450 MHz; σ = 1.99 mho/m; ε_r = 50.6; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:
Probe: ET3DV6 - SN1684; ConvF(4.14, 4.14, 4.14); Calibrated: 2004/09/02
Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
Electronics: DAE3 Sn516; Calibrated: 2005/03/10
Phantom: SAM 1196
Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 145

Area Scan (61x81x1): Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 1.51 mW/g

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 12.1 V/m; Power Drift = -0.193 dB
Peak SAR (extrapolated) = 2.70 W/kg
SAR(1 g) = 1.21 mW/g; SAR(10 g) = 0.569 mW/g
Maximum value of SAR (measured) = 1.32 mW/g

Test Date = 05/18/05
Ambient Temperature = 25.0degree C.
Liquid Temperature = Before 24.3 degree C. , After 24.3 degree C.



KX-THA14 / Mode 2 / Body / Upright (PC BOTTOM) / 2440MHz

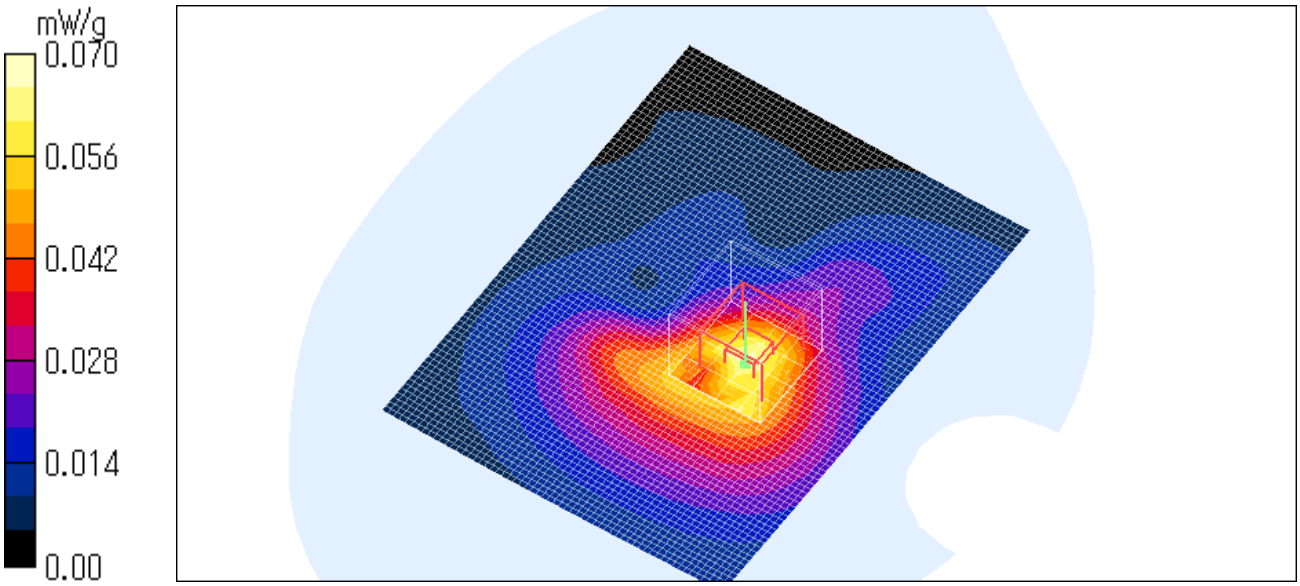
Duty Cycle: 1:1.3
Medium parameters used: f = 2450 MHz; σ = 1.99 mho/m; ε_r = 50.6; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:
Probe: ET3DV6 - SN1684; ConvF(4.14, 4.14, 4.14); Calibrated: 2004/09/02
Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
Electronics: DAE3 Sn516; Calibrated: 2005/03/10
Phantom: SAM 1196
Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 145

Area Scan (61x81x1): Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 0.070 mW/g

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 4.45 V/m; Power Drift = 0.228 dB
Peak SAR (extrapolated) = 0.155 W/kg
SAR(1 g) = 0.065 mW/g; SAR(10 g) = 0.035 mW/g
Maximum value of SAR (measured) = 0.070 mW/g

Test Date = 05/18/05
Ambient Temperature = 25.0degree C.
Liquid Temperature = Before 24.2 degree C. , After 24.2 degree C.



KX-THA14 / Mode 2 / Body / Inside (PC BOTTOM) / 2440MHz

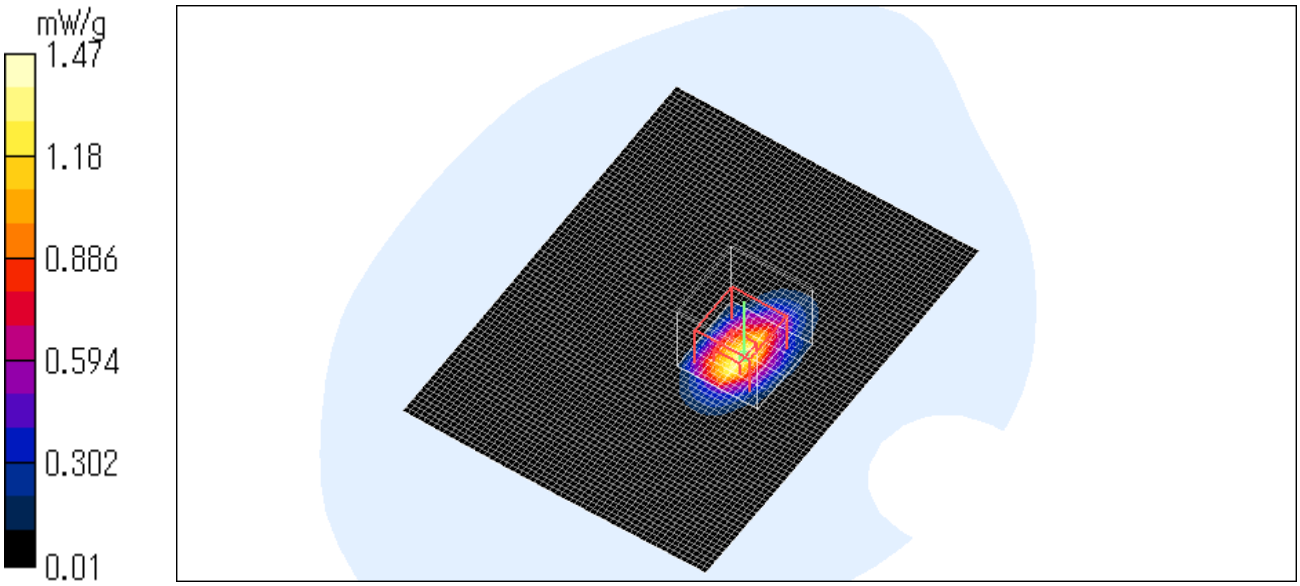
Duty Cycle: 1:1.3
Medium parameters used: f = 2450 MHz; σ = 1.99 mho/m; ε_r = 50.6; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:
Probe: ET3DV6 - SN1684; ConvF(4.14, 4.14, 4.14); Calibrated: 2004/09/02
Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
Electronics: DAE3 Sn516; Calibrated: 2005/03/10
Phantom: SAM 1196
Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 145

Area Scan (61x81x1): Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 1.56 mW/g

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 6.50 V/m; Power Drift = -0.283 dB
Peak SAR (extrapolated) = 3.16 W/kg
SAR(1 g) = 1.34 mW/g; SAR(10 g) = 0.578 mW/g
Maximum value of SAR (measured) = 1.47 mW/g

Test Date = 05/18/05
Ambient Temperature = 25.0degree C.
Liquid Temperature = Before 24.3 degree C. , After 24.3 degree C.



KX-THA14 / Mode 2 / Body / Outside (PC SIDE) / 2440MHz

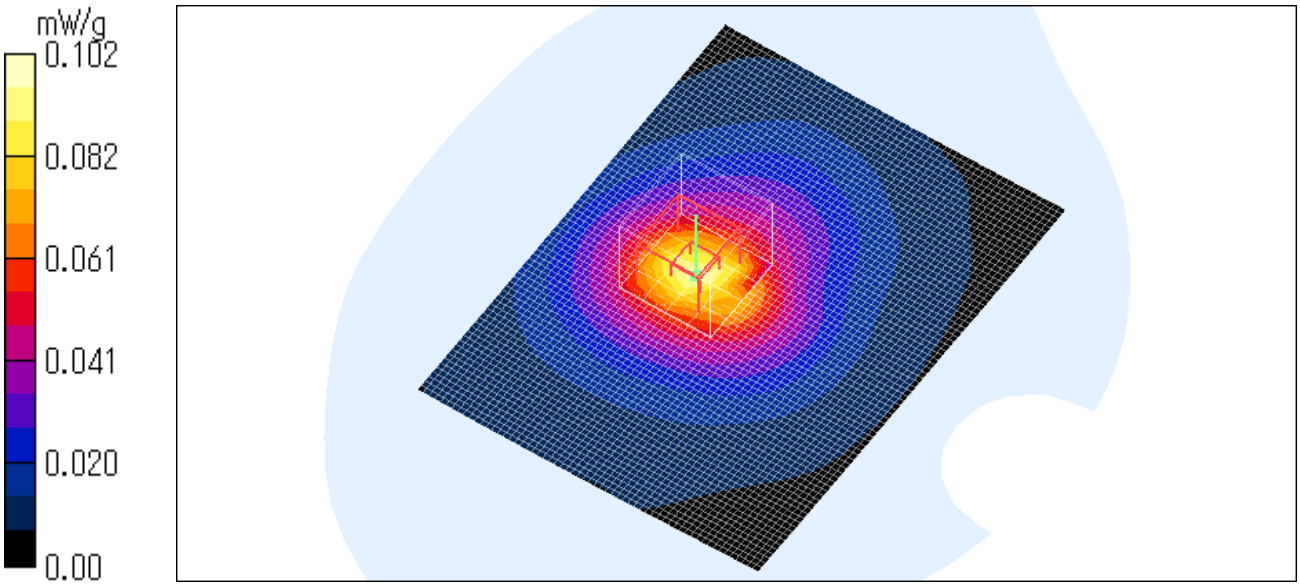
Duty Cycle: 1:1.3
Medium parameters used: f = 2450 MHz; σ = 1.99 mho/m; ε_r = 50.6; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:
Probe: ET3DV6 - SN1684; ConvF(4.14, 4.14, 4.14); Calibrated: 2004/09/02
Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
Electronics: DAE3 Sn516; Calibrated: 2005/03/10
Phantom: SAM 1196
Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 145

Area Scan (61x81x1): Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 0.106 mW/g

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 6.64 V/m; Power Drift = -0.237 dB
Peak SAR (extrapolated) = 0.251 W/kg
SAR(1 g) = 0.095 mW/g; SAR(10 g) = 0.050 mW/g
Maximum value of SAR (measured) = 0.102 mW/g

Test Date = 05/18/05
Ambient Temperature = 25.0degree C.
Liquid Temperature = Before 24.3 degree C. , After 24.2 degree C.



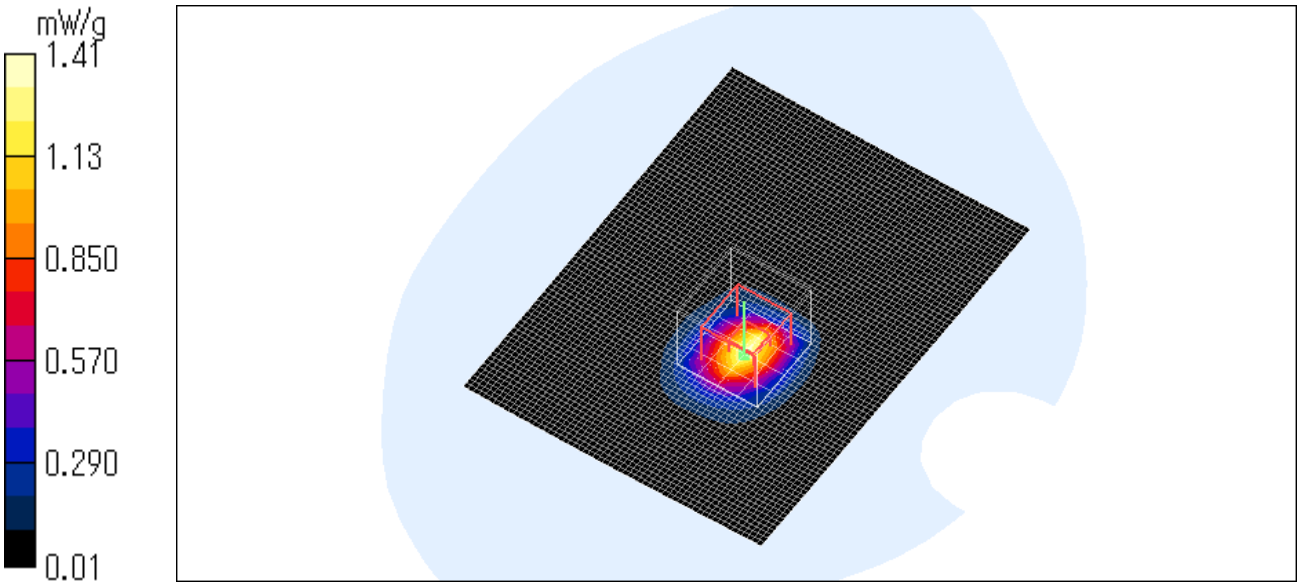
KX-THA14 / Mode 2 / Body / Outside (PC BOTTOM) / 2402MHz

Duty Cycle: 1:1.3
Medium parameters used: f = 2450 MHz; σ = 1.99 mho/m; ε_r = 50.6; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY4 (High Precision Assessment)
DASY4 Configuration:
Probe: ET3DV6 - SN1684; ConvF(4.14, 4.14, 4.14); Calibrated: 2004/09/02
Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
Electronics: DAE3 Sn516; Calibrated: 2005/03/10
Phantom: SAM 1196
Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 145

Area Scan (61x81x1): Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 1.31 mW/g

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 12.1 V/m; Power Drift = -0.201 dB
Peak SAR (extrapolated) = 2.85 W/kg
SAR(1 g) = 1.29 mW/g; SAR(10 g) = 0.607 mW/g
Maximum value of SAR (measured) = 1.41 mW/g

Test Date = 05/18/05
Ambient Temperature = 25.0 degree C.
Liquid Temperature = Before 24.3 degree C. , After 24.3degree C.



KX-THA14 / Mode 2 / Body / Outside (PC BOTTOM) / 2480MHz

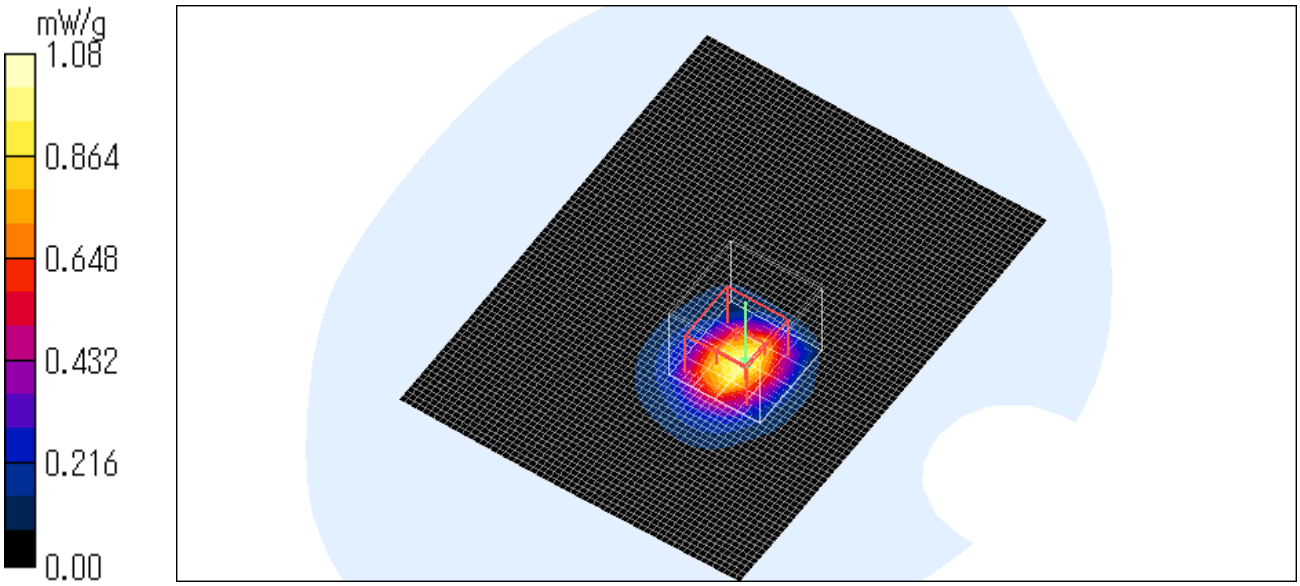
Duty Cycle: 1:1.3
Medium parameters used: f = 2450 MHz; σ = 1.99 mho/m; ε_r = 50.6; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:
Probe: ET3DV6 - SN1684; ConvF(4.14, 4.14, 4.14); Calibrated: 2004/09/02
Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
Electronics: DAE3 Sn516; Calibrated: 2005/03/10
Phantom: SAM 1196
Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 145

Area Scan (61x81x1): Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 0.998 mW/g

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 8.42 V/m; Power Drift = 0.073 dB
Peak SAR (extrapolated) = 2.27 W/kg
SAR(1 g) = 0.994 mW/g; SAR(10 g) = 0.464 mW/g
Maximum value of SAR (measured) = 1.08 mW/g

Test Date = 05/18/05
Ambient Temperature = 25.0degree C.
Liquid Temperature = Before 24.3 degree C. , After 24.3 degree C.



KX-THA14 / Mode 2 / Body / Inside (PC BOTTOM) / 2402MHz

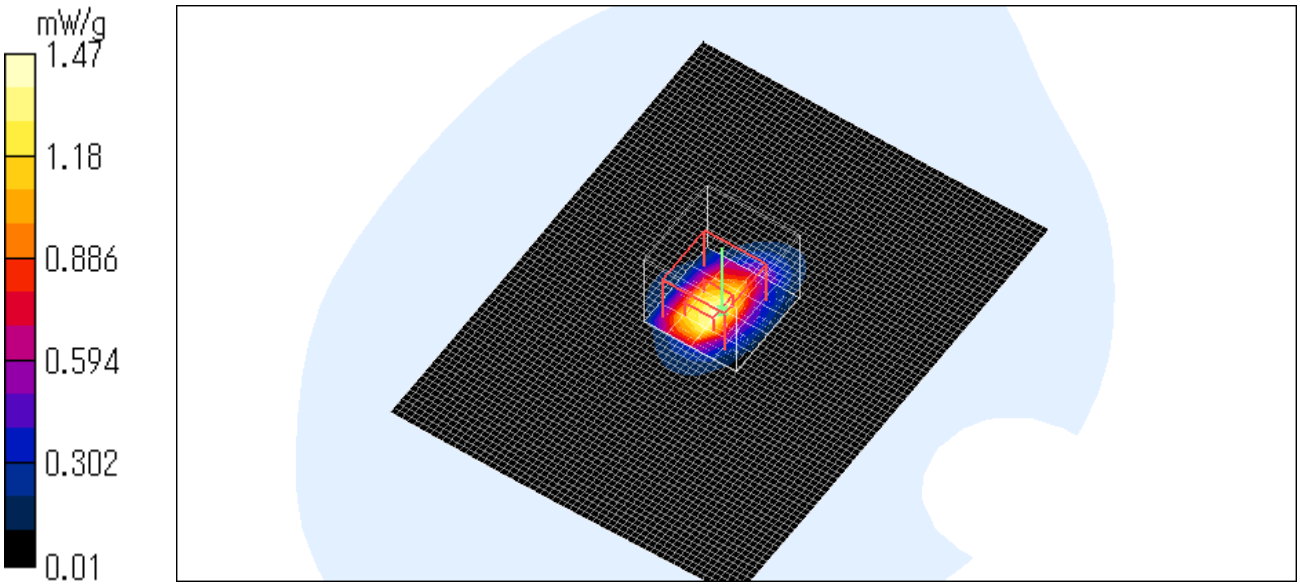
Duty Cycle: 1:1.3
Medium parameters used: f = 2450 MHz; σ = 1.99 mho/m; ε_r = 50.6; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:
Probe: ET3DV6 - SN1684; ConvF(4.14, 4.14, 4.14); Calibrated: 2004/09/02
Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
Electronics: DAE3 Sn516; Calibrated: 2005/03/10
Phantom: SAM 1196
Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 145

Area Scan (61x81x1): Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 1.39 mW/g

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 26.6 V/m; Power Drift = -0.012 dB
Peak SAR (extrapolated) = 3.36 W/kg
SAR(1 g) = 1.43 mW/g; SAR(10 g) = 0.611 mW/g
Maximum value of SAR (measured) = 1.47 mW/g

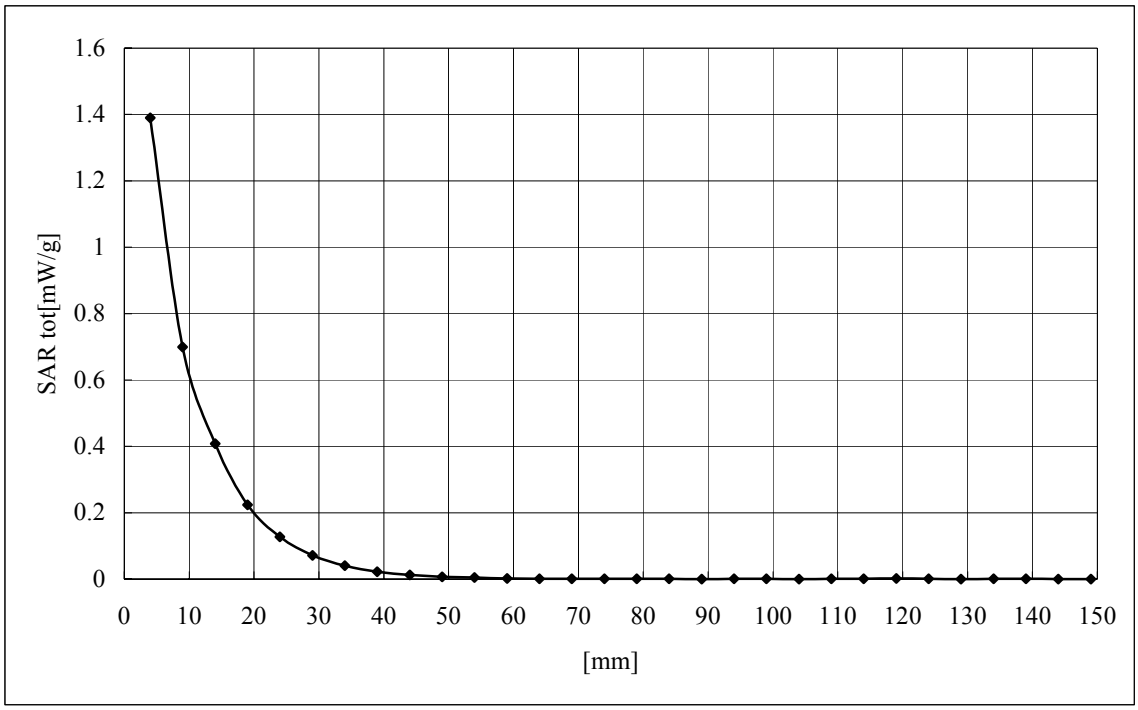
Test Date = 05/18/05
Ambient Temperature = 25.0degree C.
Liquid Temperature = Before 24.3 degree C. , After 24.3 degree C.



Z-axis scan at max SAR location

Duty Cycle: 1:1.3
Medium parameters used: f = 2450 MHz; σ = 1.99 mho/m; ε_r = 50.6; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:
Probe: ET3DV6 - SN1684; ConvF(4.14, 4.14, 4.14); Calibrated: 2004/09/02
Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
Electronics: DAE3 Sn516; Calibrated: 2005/03/10
Phantom: SAM 1196
Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 145



KX-THA14 / Mode 2 / Body / Inside (PC BOTTOM) / 2480MHz

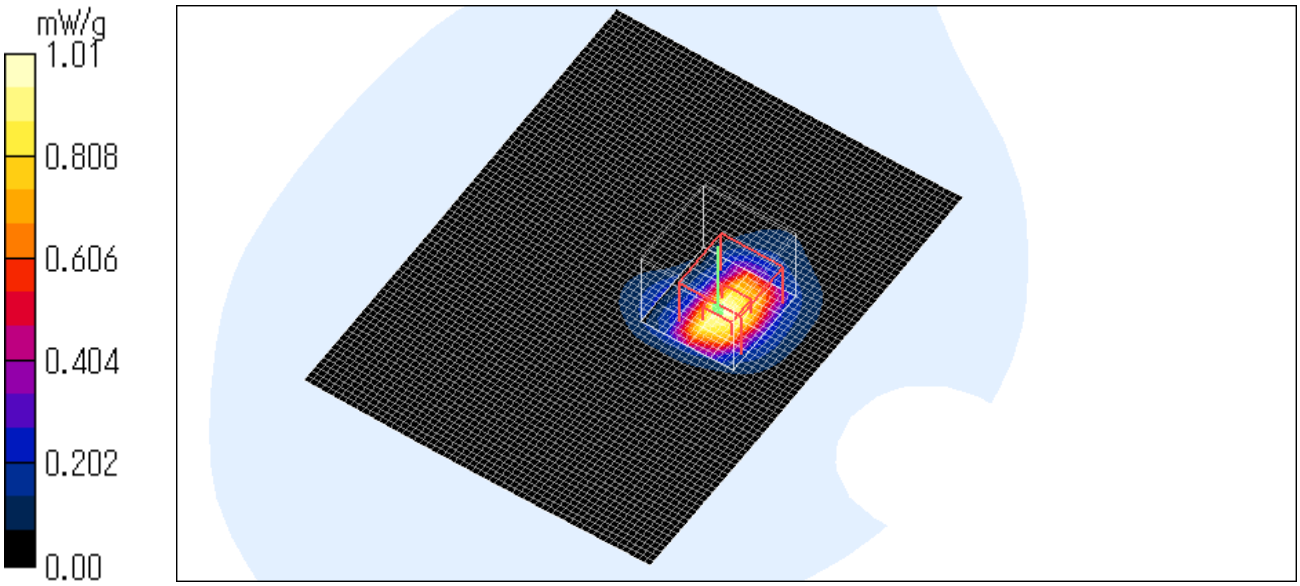
Duty Cycle: 1:1.3
Medium parameters used: f = 2450 MHz; σ = 1.99 mho/m; ε_r = 50.6; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:
Probe: ET3DV6 - SN1684; ConvF(4.14, 4.14, 4.14); Calibrated: 2004/09/02
Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
Electronics: DAE3 Sn516; Calibrated: 2005/03/10
Phantom: SAM 1196
Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 145

Area Scan (61x81x1): Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 0.883 mW/g

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 7.50 V/m; Power Drift = -0.274 dB
Peak SAR (extrapolated) = 2.45 W/kg
SAR(1 g) = 1.00 mW/g; SAR(10 g) = 0.423 mW/g
Maximum value of SAR (measured) = 1.01 mW/g

Test Date = 05/18/05
Ambient Temperature = 25.0degree C.
Liquid Temperature = Before 24.3 degree C. , After 24.3 degree C.



APPENDIX 3 : SAR Measurement for Reference data 1(PC model 2)

KX-THA14 / Mode 1 / Body / Outside(PC BOTTOM) / 2441MHz

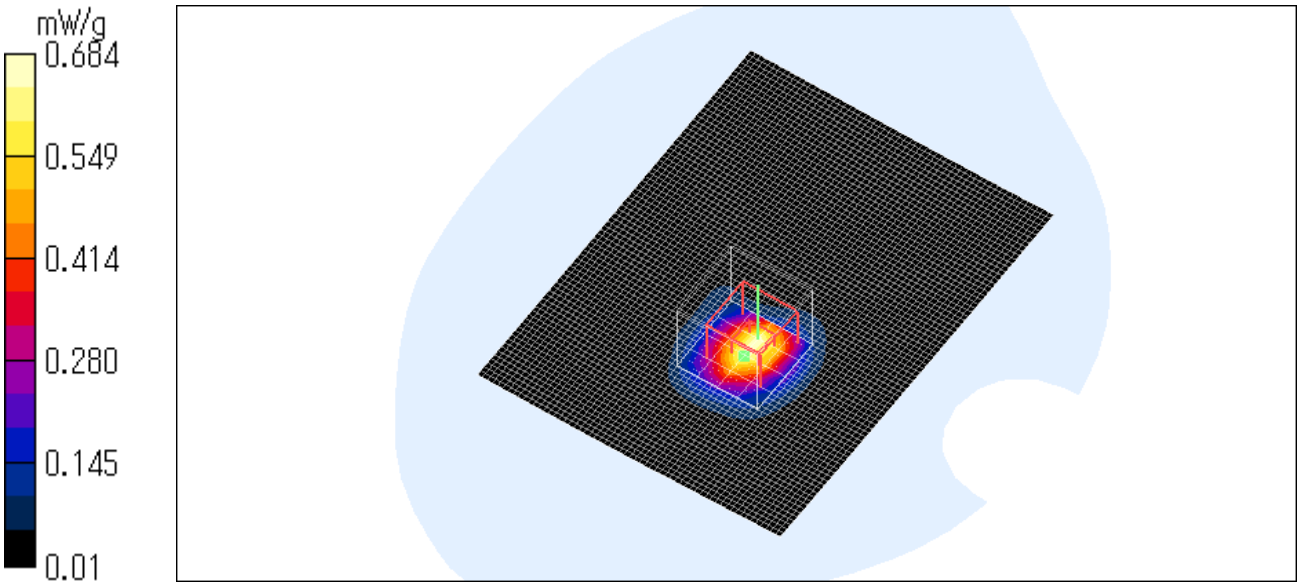
Duty Cycle: 1:1.2
Medium parameters used: f = 2450 MHz; σ = 1.99 mho/m; ε_r = 50.6; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:
Probe: ET3DV6 - SN1684; ConvF(4.14, 4.14, 4.14); Calibrated: 2004/09/02
Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
Electronics: DAE3 Sn516; Calibrated: 2005/03/10
Phantom: SAM 1196
Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 145

Area Scan (61x81x1): Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 0.690 mW/g

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 4.96 V/m; Power Drift = -0.225 dB
Peak SAR (extrapolated) = 1.44 W/kg
SAR(1 g) = 0.653 mW/g; SAR(10 g) = 0.304 mW/g
Maximum value of SAR (measured) = 0.684 mW/g

Test Date = 05/18/05
Ambient Temperature = 25.0 degree C.
Liquid Temperature = Before 23.8 degree C. , After 23.8 degree C.



KX-THA14 / Mode 1 / Body / Upright (PC BOTTOM) / 2441MHz

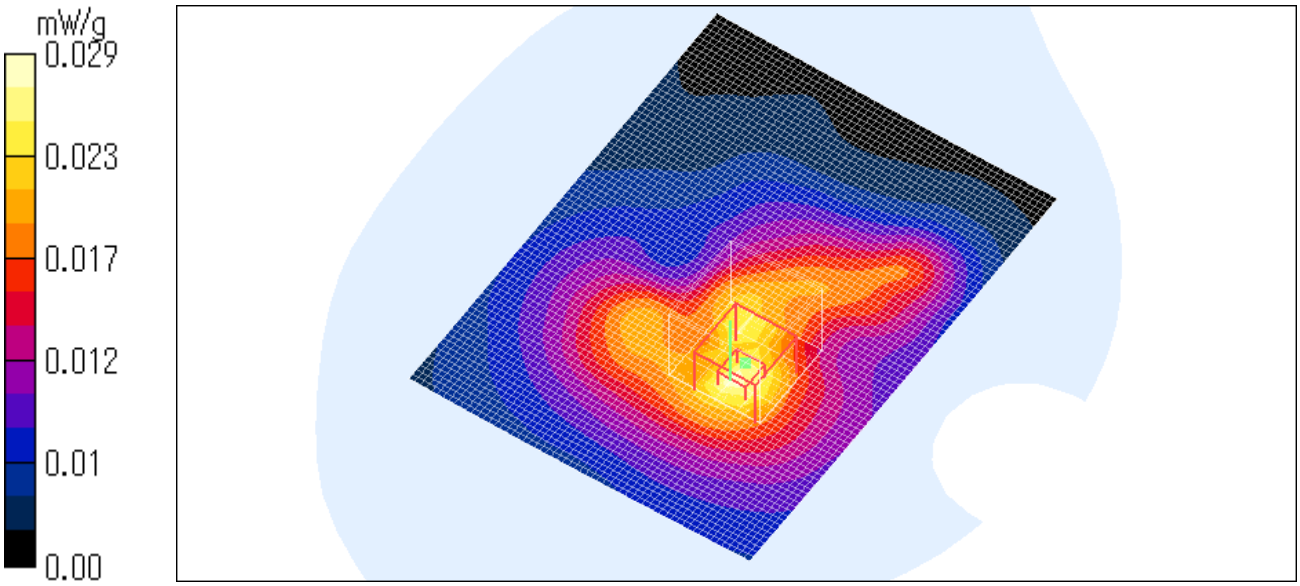
Duty Cycle: 1:1.2
Medium parameters used: f = 2450 MHz; σ = 1.99 mho/m; ε_r = 50.6; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:
Probe: ET3DV6 - SN1684; ConvF(4.14, 4.14, 4.14); Calibrated: 2004/09/02
Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
Electronics: DAE3 Sn516; Calibrated: 2005/03/10
Phantom: SAM 1196
Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 145

Area Scan (61x81x1): Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 0.026 mW/g

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 3.40 V/m; Power Drift = -0.171 dB
Peak SAR (extrapolated) = 0.058 W/kg
SAR(1 g) = 0.027 mW/g; SAR(10 g) = 0.015 mW/g
Maximum value of SAR (measured) = 0.029 mW/g

Test Date = 05/18/05
Ambient Temperature = 25.0degree C.
Liquid Temperature = Before 23.8 degree C. , After 23.8 degree C.



KX-THA14 / Mode 1 / Body / Inside(PC BOTTOM) / 2441MHz

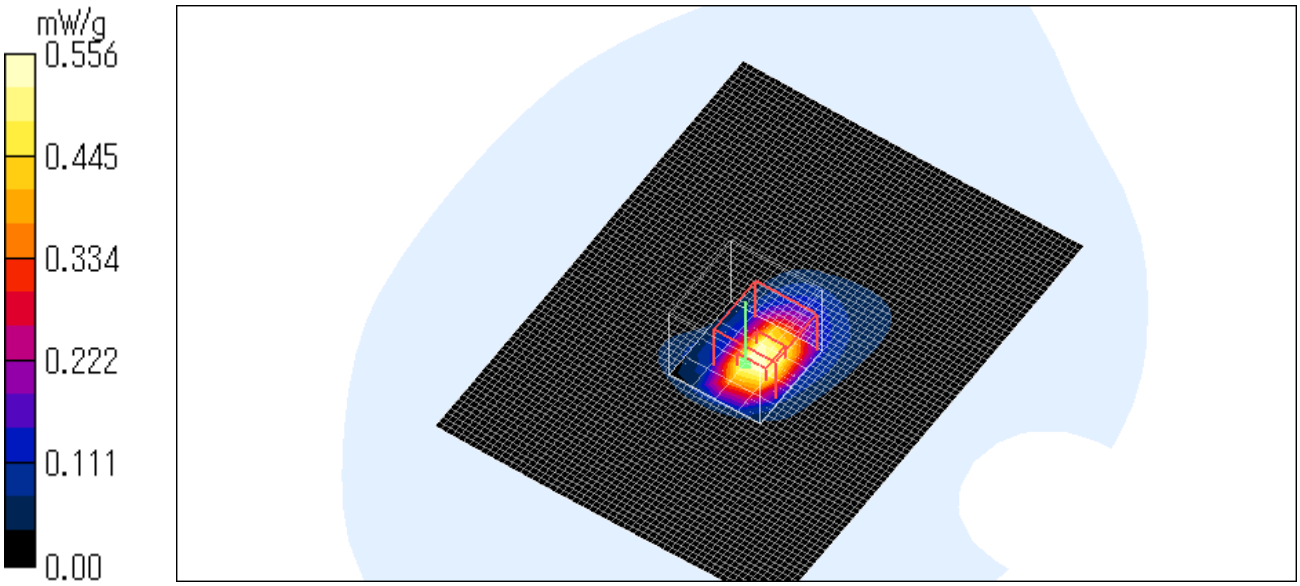
Duty Cycle: 1:1.2
Medium parameters used: f = 2450 MHz; σ = 1.99 mho/m; ε_r = 50.6; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:
Probe: ET3DV6 - SN1684; ConvF(4.14, 4.14, 4.14); Calibrated: 2004/09/02
Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
Electronics: DAE3 Sn516; Calibrated: 2005/03/10
Phantom: SAM 1196
Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 145

Area Scan (61x81x1): Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 0.512 mW/g

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 15.2 V/m; Power Drift = 0.067 dB
Peak SAR (extrapolated) = 1.40 W/kg
SAR(1 g) = 0.573 mW/g; SAR(10 g) = 0.245 mW/g
Maximum value of SAR (measured) = 0.556 mW/g

Test Date = 05/18/05
Ambient Temperature = 25.0degree C.
Liquid Temperature = Before 23.8 degree C. , After 23.8 degree C.



KX-THA14 / Mode 1 / Body / Outside(PC SIDE) / 2441MHz

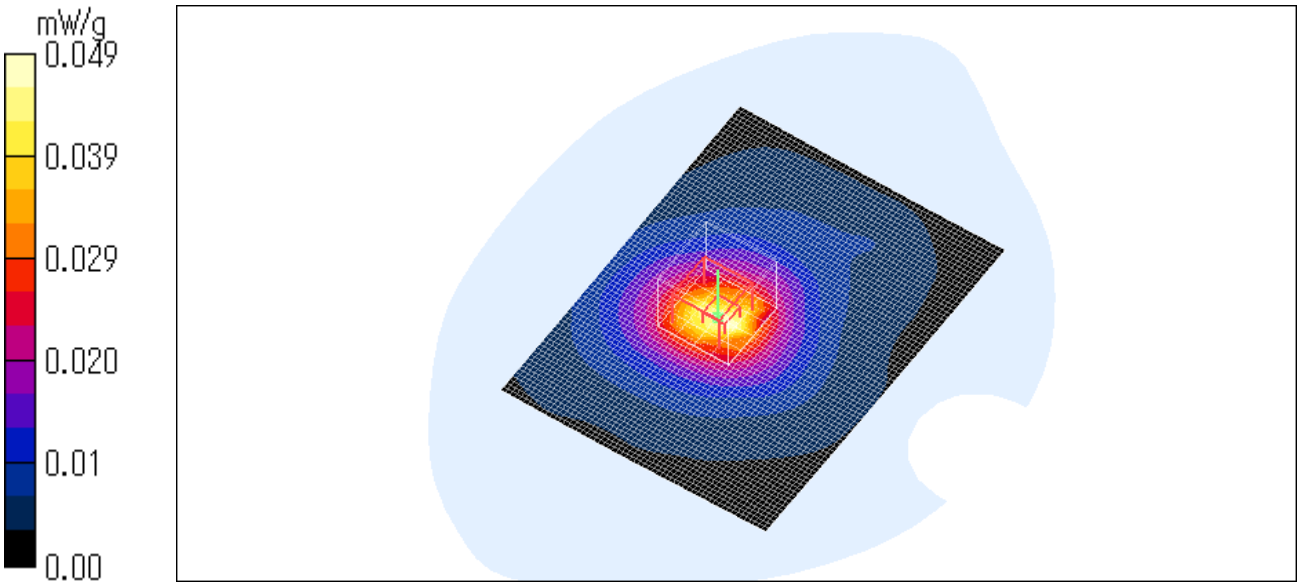
Duty Cycle: 1:1.2
Medium parameters used: f = 2450 MHz; σ = 1.99 mho/m; ε_r = 50.6; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:
Probe: ET3DV6 - SN1684; ConvF(4.14, 4.14, 4.14); Calibrated: 2004/09/02
Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
Electronics: DAE3 Sn516; Calibrated: 2005/03/10
Phantom: SAM 1196
Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 145

Area Scan (61x81x1): Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 0.043 mW/g

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 4.18 V/m; Power Drift = -0.220 dB
Peak SAR (extrapolated) = 0.138 W/kg
SAR(1 g) = 0.046 mW/g; SAR(10 g) = 0.024 mW/g
Maximum value of SAR (measured) = 0.049 mW/g

Test Date = 05/18/05
Ambient Temperature = 25.0 degree C.
Liquid Temperature = Before 23.8 degree C. , After 23.8 degree C.



KX-THA14 / Mode 1 / Body / Outside(PC BOTTOM) / 2402MHz

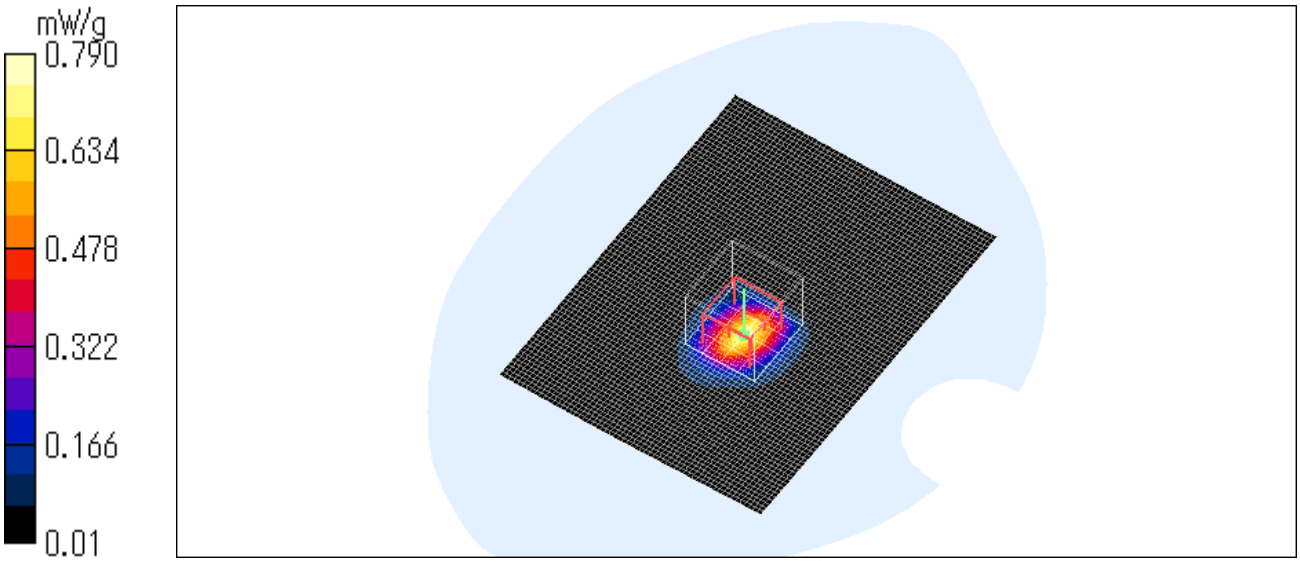
Duty Cycle: 1:1.2
Medium parameters used: f = 2450 MHz; σ = 1.99 mho/m; ε_r = 50.6; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:
Probe: ET3DV6 - SN1684; ConvF(4.14, 4.14, 4.14); Calibrated: 2004/09/02
Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
Electronics: DAE3 Sn516; Calibrated: 2005/03/10
Phantom: SAM 1196
Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 145

Area Scan (61x81x1): Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 0.732 mW/g

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 12.9 V/m; Power Drift = 0.092 dB
Peak SAR (extrapolated) = 1.58 W/kg
SAR(1 g) = 0.712 mW/g; SAR(10 g) = 0.328 mW/g
Maximum value of SAR (measured) = 0.790 mW/g

Test Date = 05/18/05
Ambient Temperature = 25.0degree C.
Liquid Temperature = Before 23.8 degree C. , After 23.8 degree C.



KX-THA14 / Mode 1 / Body / Outside(PC BOTTOM) / 2480MHz

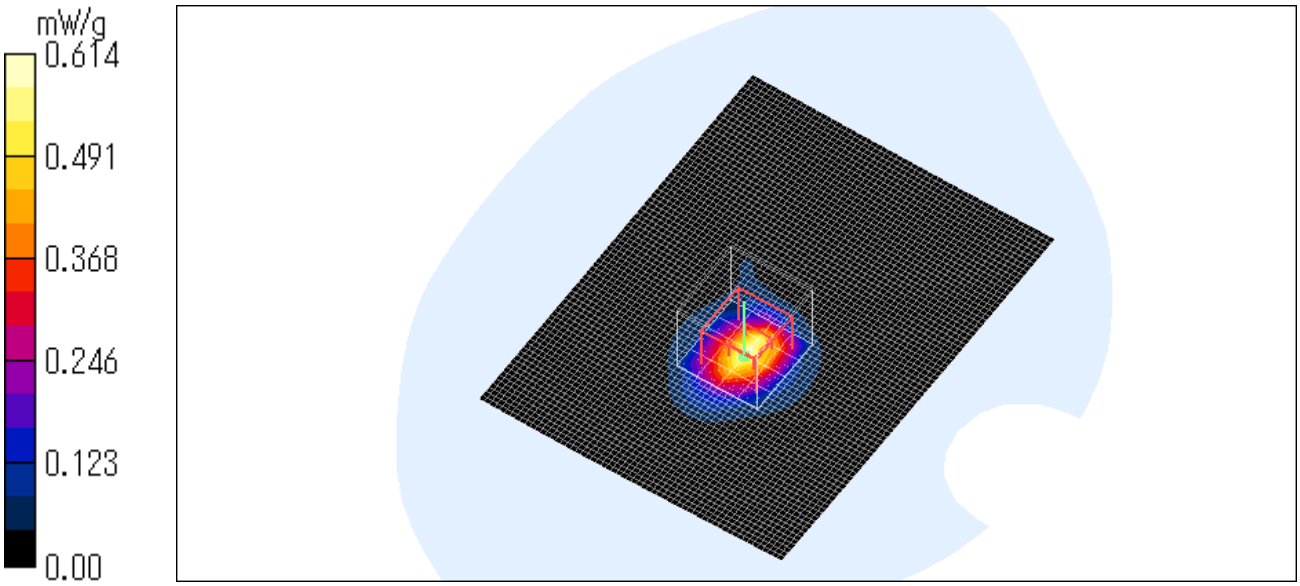
Duty Cycle: 1:1.2
Medium parameters used: f = 2450 MHz; σ = 1.99 mho/m; ε_r = 50.6; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:
Probe: ET3DV6 - SN1684; ConvF(4.14, 4.14, 4.14); Calibrated: 2004/09/02
Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
Electronics: DAE3 Sn516; Calibrated: 2005/03/10
Phantom: SAM 1196
Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 145

Area Scan (61x81x1): Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 0.561 mW/g

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 11.1 V/m; Power Drift = 0.057 dB
Peak SAR (extrapolated) = 1.31 W/kg
SAR(1 g) = 0.569 mW/g; SAR(10 g) = 0.258 mW/g
Maximum value of SAR (measured) = 0.614 mW/g

Test Date = 05/18/05
Ambient Temperature = 25.0degree C.
Liquid Temperature = Before 23.8 degree C. , After 23.8 degree C.



KX-THA14 / Mode 2 / Body / Outside(PC BOTTOM) / 2440MHz

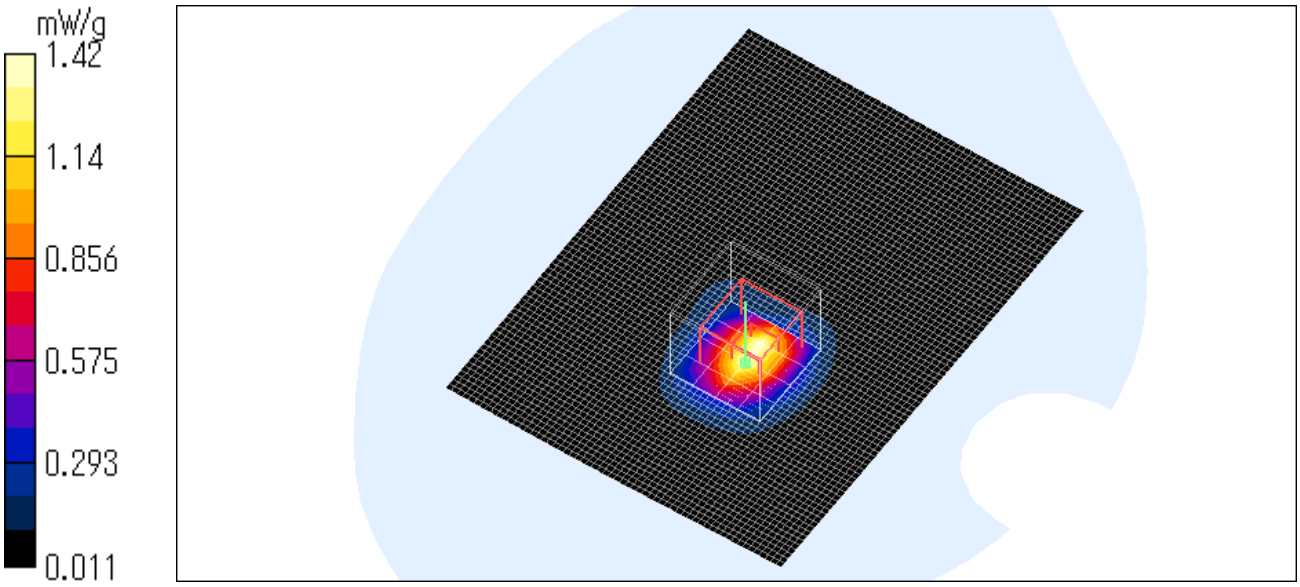
Duty Cycle: 1:1.3
Medium parameters used: f = 2450 MHz; σ = 1.99 mho/m; ε_r = 50.6; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:
Probe: ET3DV6 - SN1684; ConvF(4.14, 4.14, 4.14); Calibrated: 2004/09/02
Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
Electronics: DAE3 Sn516; Calibrated: 2005/03/10
Phantom: SAM 1196
Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 145

Area Scan (61x81x1): Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 1.24 mW/g

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 8.37 V/m; Power Drift = 0.234 dB
Peak SAR (extrapolated) = 2.97 W/kg
SAR(1 g) = 1.35 mW/g; SAR(10 g) = 0.623 mW/g
Maximum value of SAR (measured) = 1.42 mW/g

Test Date = 05/18/05
Ambient Temperature = 25.0degree C.
Liquid Temperature = Before 24.3 degree C. , After 24.3degree C.



KX-THA14 / Mode 2 / Body / Upright(PC BOTTOM) / 2440MHz

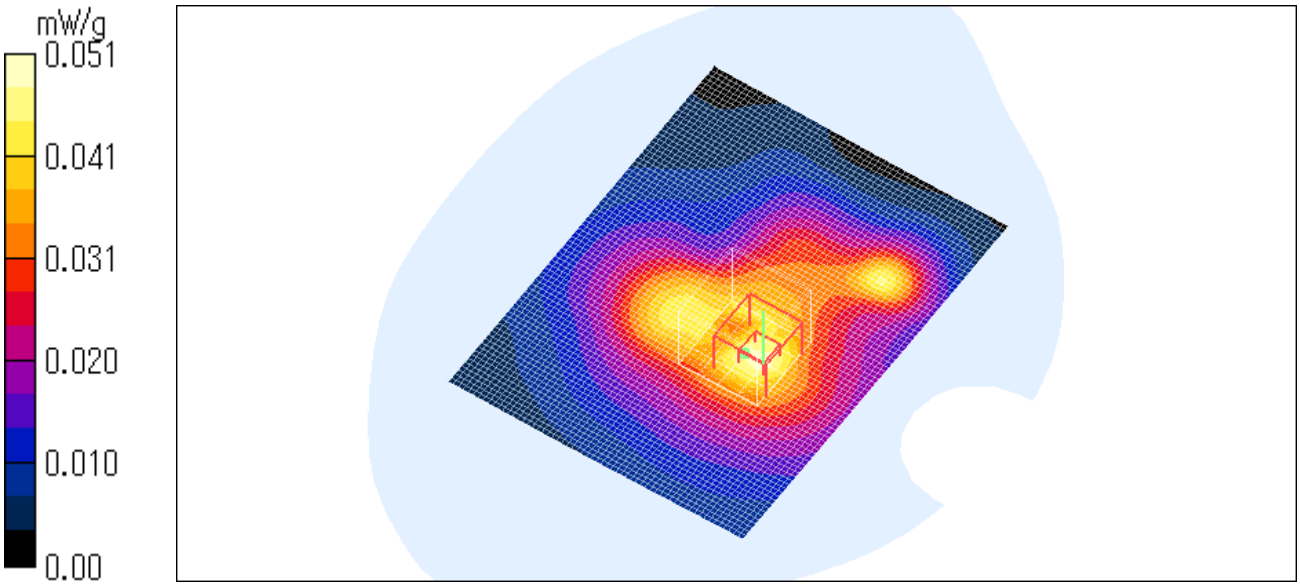
Duty Cycle: 1:1.3
Medium parameters used: f = 2450 MHz; σ = 1.99 mho/m; ε_r = 50.6; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:
Probe: ET3DV6 - SN1684; ConvF(4.14, 4.14, 4.14); Calibrated: 2004/09/02
Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
Electronics: DAE3 Sn516; Calibrated: 2005/03/10
Phantom: SAM 1196
Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 145

Area Scan (61x81x1): Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 0.049 mW/g

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 4.70 V/m; Power Drift = -0.016 dB
Peak SAR (extrapolated) = 0.106 W/kg
SAR(1 g) = 0.049 mW/g; SAR(10 g) = 0.027 mW/g
Maximum value of SAR (measured) = 0.051 mW/g

Test Date = 05/18/05
Ambient Temperature = 25.0degree C.
Liquid Temperature = Before 23.6 degree C. , After 23.6 degree C.



KX-THA14 / Mode 2 / Body / Inside(PC BOTTOM) / 2440MHz

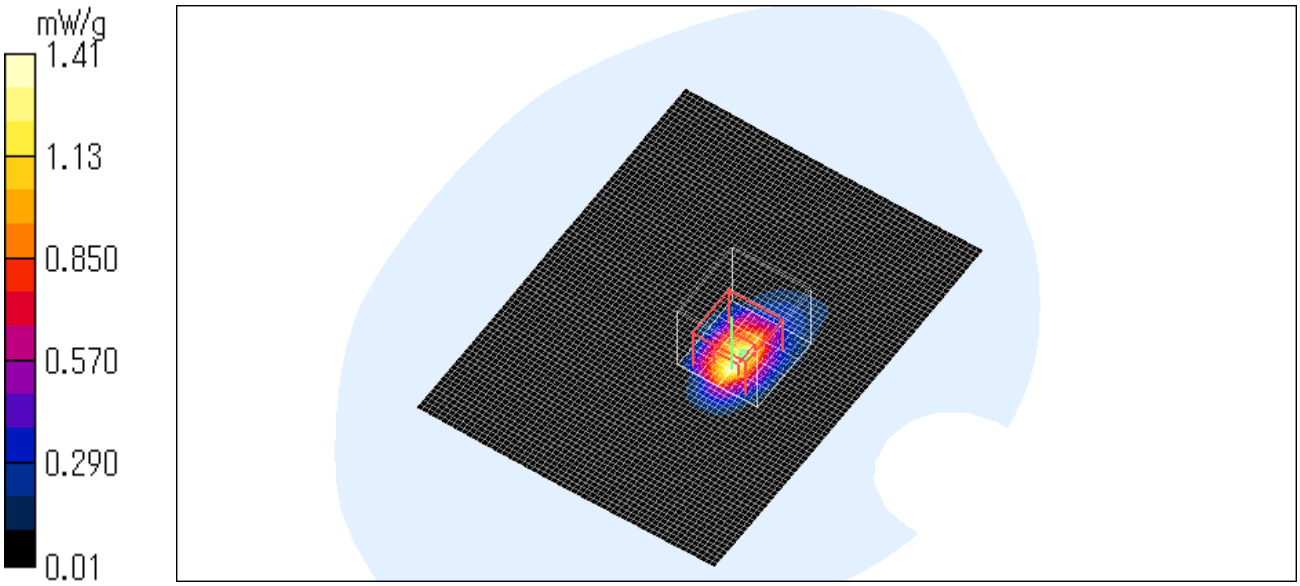
Duty Cycle: 1:1.3
Medium parameters used: f = 2450 MHz; σ = 1.99 mho/m; ε_r = 50.6; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:
Probe: ET3DV6 - SN1684; ConvF(4.14, 4.14, 4.14); Calibrated: 2004/09/02
Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
Electronics: DAE3 Sn516; Calibrated: 2005/03/10
Phantom: SAM 1196
Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 145

Area Scan (61x81x1): Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 1.29 mW/g

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 8.22 V/m; Power Drift = -0.297 dB
Peak SAR (extrapolated) = 3.20 W/kg
SAR(1 g) = 1.32 mW/g; SAR(10 g) = 0.558 mW/g
Maximum value of SAR (measured) = 1.41 mW/g

Test Date = 05/18/05
Ambient Temperature = 25.0degree C.
Liquid Temperature = Before 23.6 degree C. , After 23.6 degree C.



KX-THA14 / Mode 2 / Body / Outside(PC SIDE) / 2440MHz

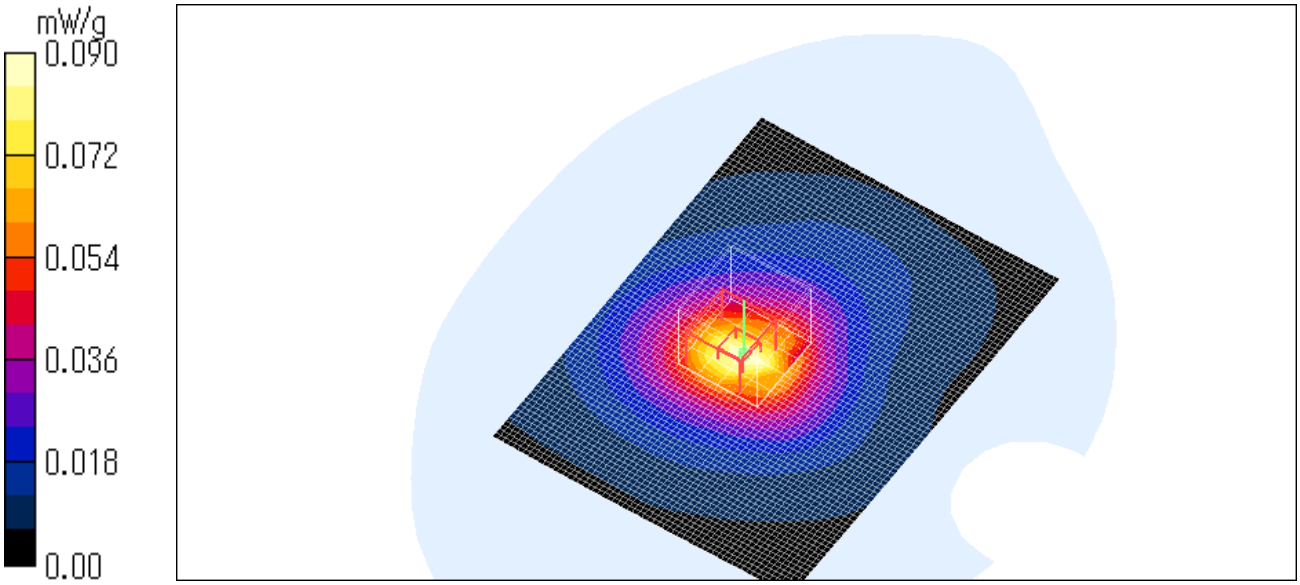
Duty Cycle: 1:1.3
Medium parameters used: f = 2450 MHz; σ = 1.99 mho/m; ε_r = 50.6; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:
Probe: ET3DV6 - SN1684; ConvF(4.14, 4.14, 4.14); Calibrated: 2004/09/02
Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
Electronics: DAE3 Sn516; Calibrated: 2005/03/10
Phantom: SAM 1196
Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 145

Area Scan (61x81x1): Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 0.086 mW/g

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 6.81 V/m; Power Drift = -0.293 dB
Peak SAR (extrapolated) = 0.228 W/kg
SAR(1 g) = 0.085 mW/g; SAR(10 g) = 0.045 mW/g
Maximum value of SAR (measured) = 0.090 mW/g

Test Date = 05/18/05
Ambient Temperature = 25.0degree C.
Liquid Temperature = Before 23.8 degree C. , After 23.8 degree C.



KX-THA14 / Mode 2 / Body / Outside(PC BOTTOM) / 2402MHz

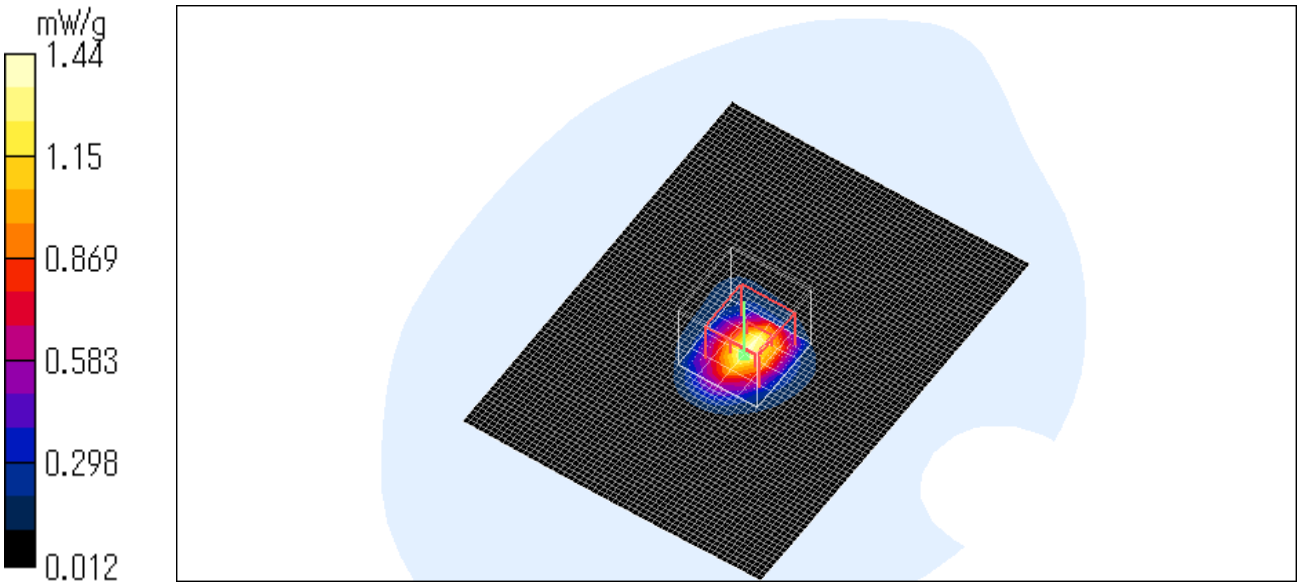
Duty Cycle: 1:1.3
Medium parameters used: f = 2450 MHz; σ = 1.99 mho/m; ε_r = 50.6; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:
Probe: ET3DV6 - SN1684; ConvF(4.14, 4.14, 4.14); Calibrated: 2004/09/02
Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
Electronics: DAE3 Sn516; Calibrated: 2005/03/10
Phantom: SAM 1196
Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 145

Area Scan (61x81x1): Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 1.53 mW/g

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 28.6 V/m; Power Drift = -0.198 dB
Peak SAR (extrapolated) = 2.94 W/kg
SAR(1 g) = 1.34 mW/g; SAR(10 g) = 0.619 mW/g
Maximum value of SAR (measured) = 1.44 mW/g

Test Date = 05/18/05
Ambient Temperature = 25.0degree C.
Liquid Temperature = Before 23.8 degree C. , After 23.8 degree C.



KX-THA14 / Mode 2 / Body / Outside(PC BOTTOM) / 2480MHz

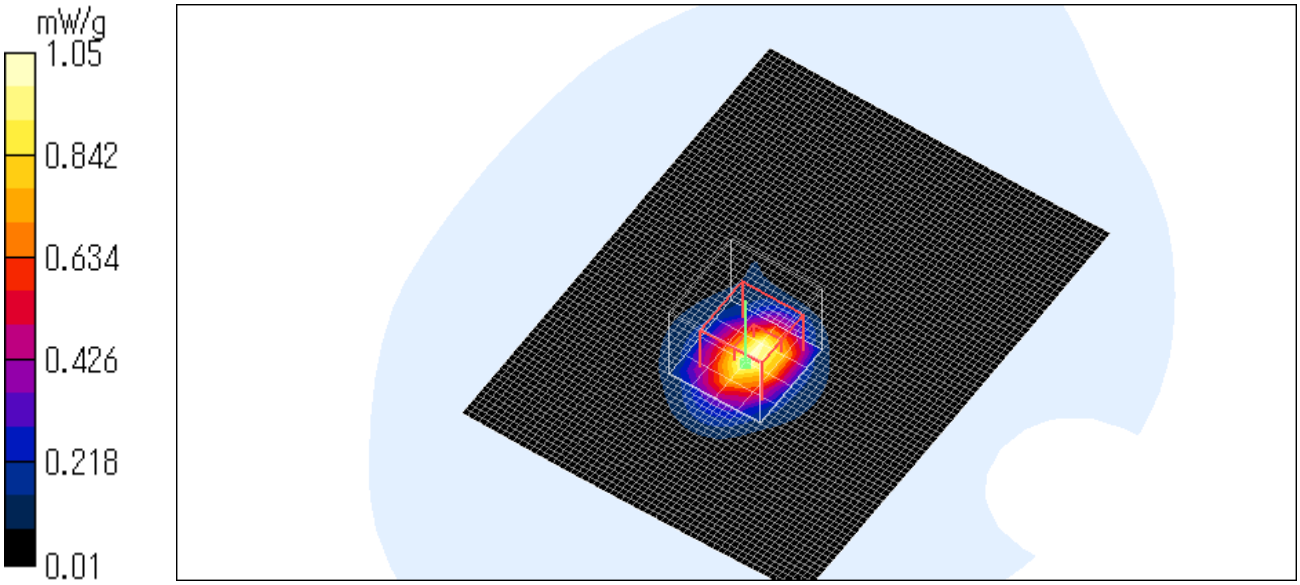
Duty Cycle: 1:1.3
Medium parameters used: f = 2450 MHz; σ = 1.99 mho/m; ε_r = 50.6; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:
Probe: ET3DV6 - SN1684; ConvF(4.14, 4.14, 4.14); Calibrated: 2004/09/02
Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
Electronics: DAE3 Sn516; Calibrated: 2005/03/10
Phantom: SAM 1196
Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 145

Area Scan (61x81x1): Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 1.03 mW/g

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 15.5 V/m; Power Drift = -0.076 dB
Peak SAR (extrapolated) = 2.29 W/kg
SAR(1 g) = 0.999 mW/g; SAR(10 g) = 0.460 mW/g
Maximum value of SAR (measured) = 1.05 mW/g

Test Date = 05/18/05
Ambient Temperature = 25.0degree C.
Liquid Temperature = Before 23.8 degree C. , After 23.9 degree C.



KX-THA14 / Mode 2 / Body / Inside(PC BOTTOM) / 2402MHz

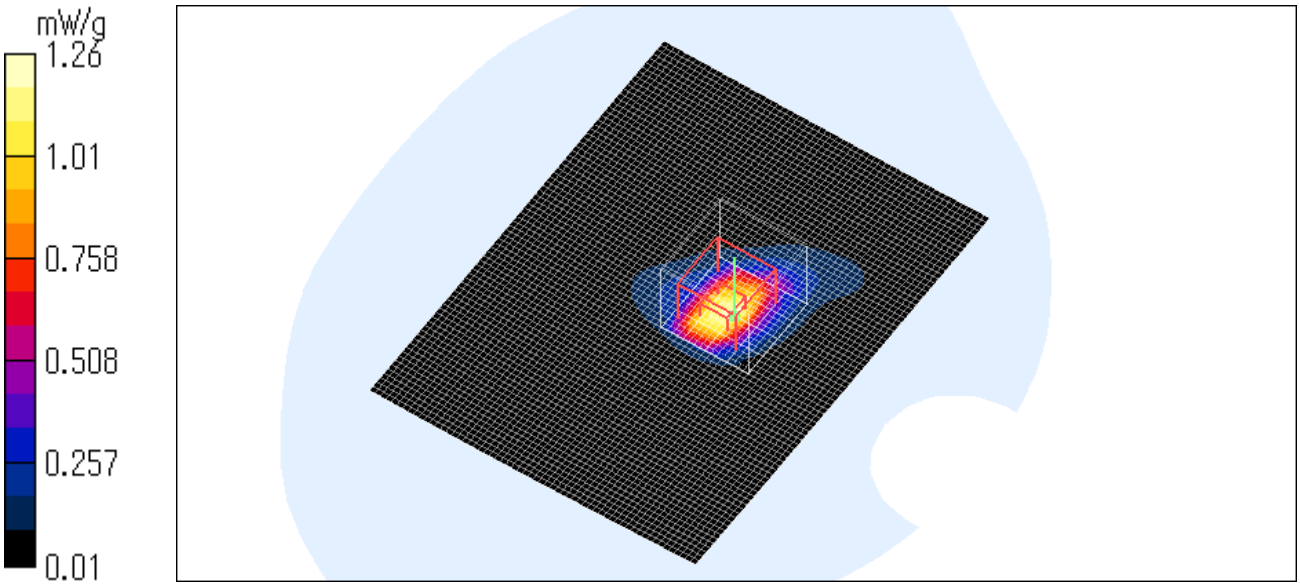
Duty Cycle: 1:1.3
Medium parameters used: f = 2450 MHz; σ = 1.99 mho/m; ε_r = 50.6; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:
Probe: ET3DV6 - SN1684; ConvF(4.14, 4.14, 4.14); Calibrated: 2004/09/02
Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
Electronics: DAE3 Sn516; Calibrated: 2005/03/10
Phantom: SAM 1196
Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 145

Area Scan (61x81x1): Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 1.10 mW/g

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 12.4 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 2.90 W/kg
SAR(1 g) = 1.23 mW/g; SAR(10 g) = 0.534 mW/g
Maximum value of SAR (measured) = 1.26 mW/g

Test Date = 05/18/05
Ambient Temperature = 25.0degree C.
Liquid Temperature = Before 23.8 degree C. , After 23.8 degree C.



KX-THA14 / Mode 2 / Body / Inside(PC BOTTOM) / 2480MHz

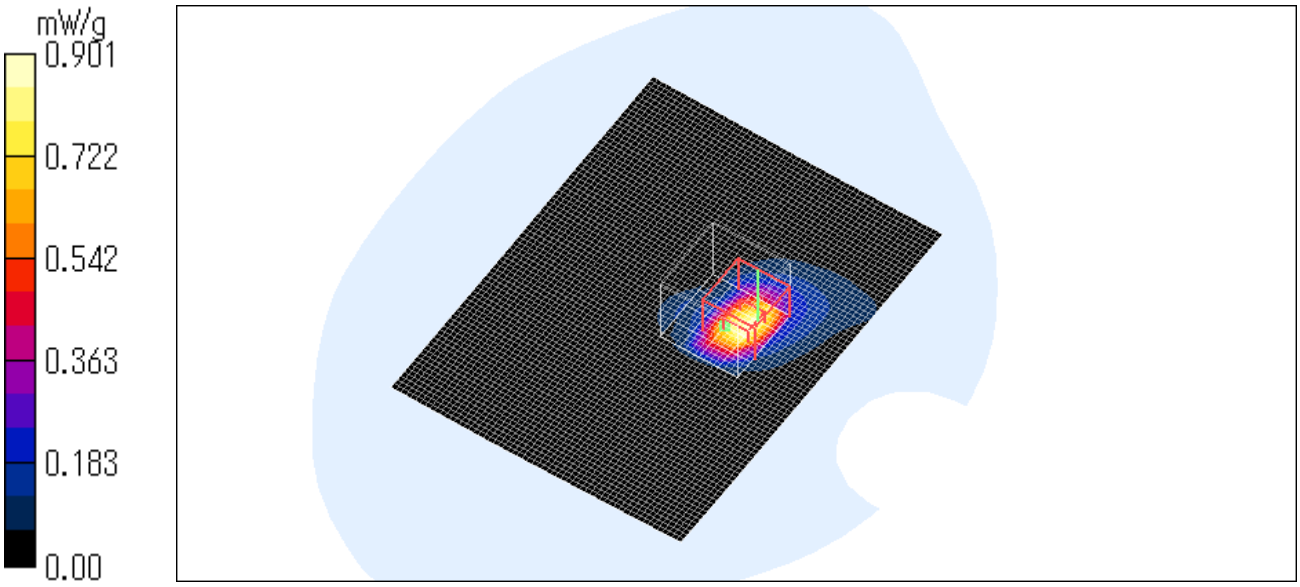
Duty Cycle: 1:1.3
Medium parameters used: f = 2450 MHz; σ = 1.99 mho/m; ε_r = 50.6; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:
Probe: ET3DV6 - SN1684; ConvF(4.14, 4.14, 4.14); Calibrated: 2004/09/02
Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
Electronics: DAE3 Sn516; Calibrated: 2005/03/10
Phantom: SAM 1196
Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 145

Area Scan (61x81x1): Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 0.904 mW/g

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 7.16 V/m; Power Drift = 0.104 dB
Peak SAR (extrapolated) = 2.21 W/kg
SAR(1 g) = 0.883 mW/g; SAR(10 g) = 0.374 mW/g
Maximum value of SAR (measured) = 0.901 mW/g

Test Date = 05/18/05
Ambient Temperature = 25.0degree C.
Liquid Temperature = Before 23.8 degree C. , After 23.8 degree C.



APPENDIX 4 : SAR Measurement for Reference data 2 (PC model 3)

KX-THA14 / Mode 1 / Body / Outside(PC BOTTOM) / 2441MHz

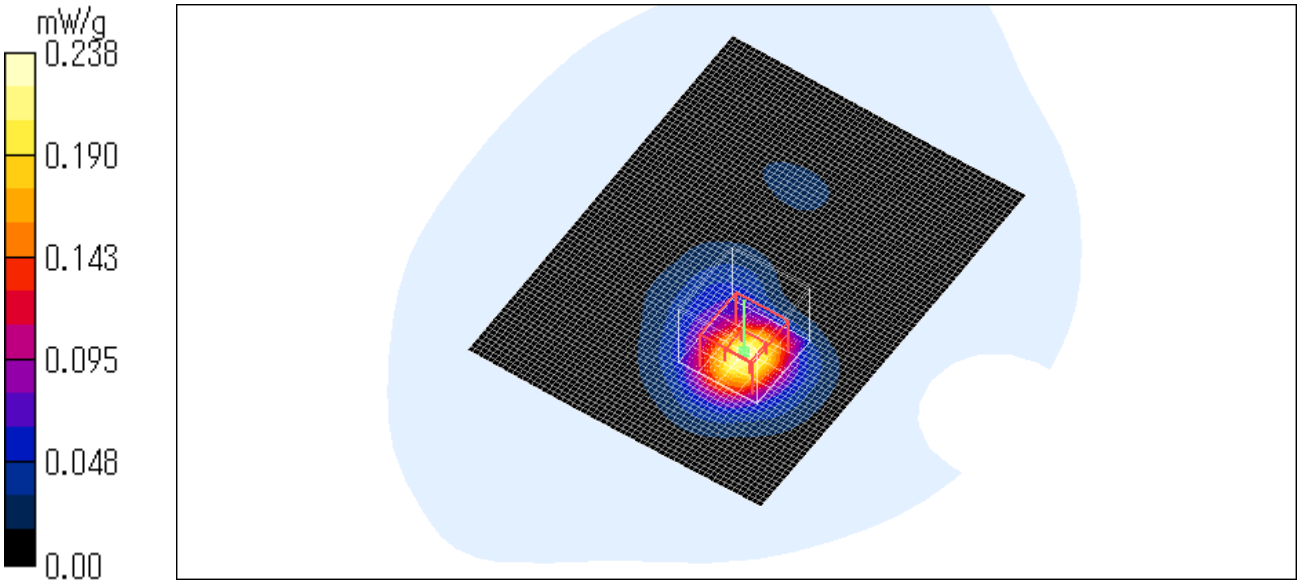
Duty Cycle: 1:1.2
Medium parameters used: f = 2450 MHz; σ = 2 mho/m; ε_r = 50.7; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:
Probe: ET3DV6 - SN1684; ConvF(4.14, 4.14, 4.14); Calibrated: 2004/09/02
Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
Electronics: DAE3 Sn516; Calibrated: 2005/03/10
Phantom: SAM 1196
Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 145

Area Scan (61x81x1): Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 0.268 mW/g

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 4.51 V/m; Power Drift = -0.137 dB
Peak SAR (extrapolated) = 0.470 W/kg
SAR(1 g) = 0.223 mW/g; SAR(10 g) = 0.112 mW/g
Maximum value of SAR (measured) = 0.238 mW/g

Test Date = 05/20/05
Ambient Temperature = 25.0degree C.
Liquid Temperature = Before 23.6 degree C. , After 23.6 degree C.



KX-THA14 / Mode 1 / Body / Upright (PC BOTTOM) / 2441MHz

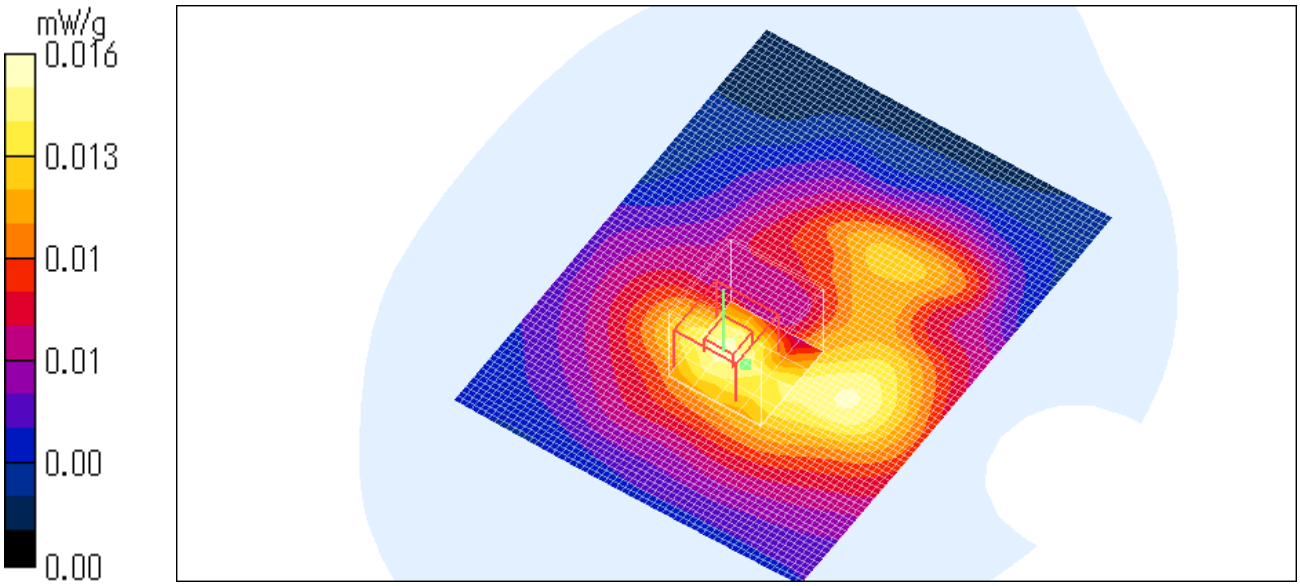
Duty Cycle: 1:1.2
Medium parameters used: f = 2450 MHz; σ = 2 mho/m; ε_r = 50.7; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:
Probe: ET3DV6 - SN1684; ConvF(4.14, 4.14, 4.14); Calibrated: 2004/09/02
Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
Electronics: DAE3 Sn516; Calibrated: 2005/03/10
Phantom: SAM 1196
Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 145

Area Scan (61x81x1): Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 0.016 mW/g

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 1.91 V/m; Power Drift = -0.328 dB
Peak SAR (extrapolated) = 0.025 W/kg
SAR(1 g) = 0.015 mW/g; SAR(10 g) = 0.00817 mW/g
Maximum value of SAR (measured) = 0.016 mW/g

Test Date = 05/20/05
Ambient Temperature = 25.0degree C.
Liquid Temperature = Before 24.0 degree C. , After 24.0 degree C.



KX-THA14 / Mode 1 / Body / Intside(PC BOTTOM) / 2441MHz

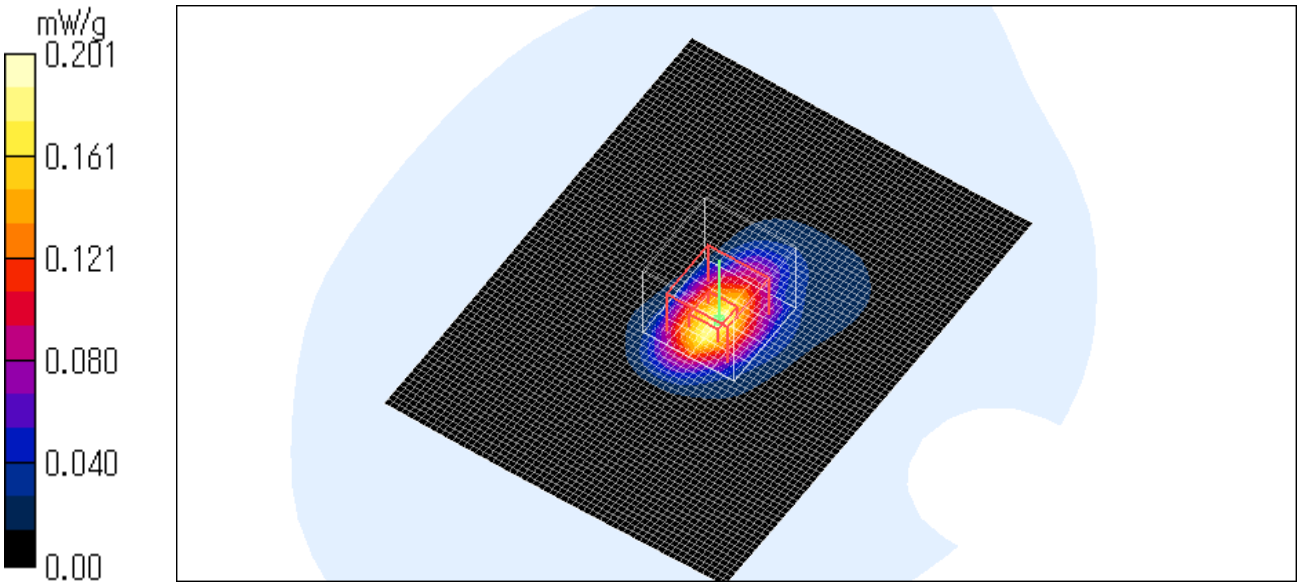
Duty Cycle: 1:1.2
Medium parameters used: f = 2450 MHz; σ = 2 mho/m; ε_r = 50.7; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:
Probe: ET3DV6 - SN1684; ConvF(4.14, 4.14, 4.14); Calibrated: 2004/09/02
Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
Electronics: DAE3 Sn516; Calibrated: 2005/03/10
Phantom: SAM 1196
Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 145

Area Scan (61x81x1): Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 0.203 mW/g

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 10.0 V/m; Power Drift = 0.123 dB
Peak SAR (extrapolated) = 0.407 W/kg
SAR(1 g) = 0.184 mW/g; SAR(10 g) = 0.087 mW/g
Maximum value of SAR (measured) = 0.201 mW/g

Test Date = 05/20/05
Ambient Temperature = 25.0degree C.
Liquid Temperature = Before 23.6 degree C. , After 23.6 degree C.



KX-THA14 / Mode 1 / Body / Outside(PC SIDE) / 2441MHz

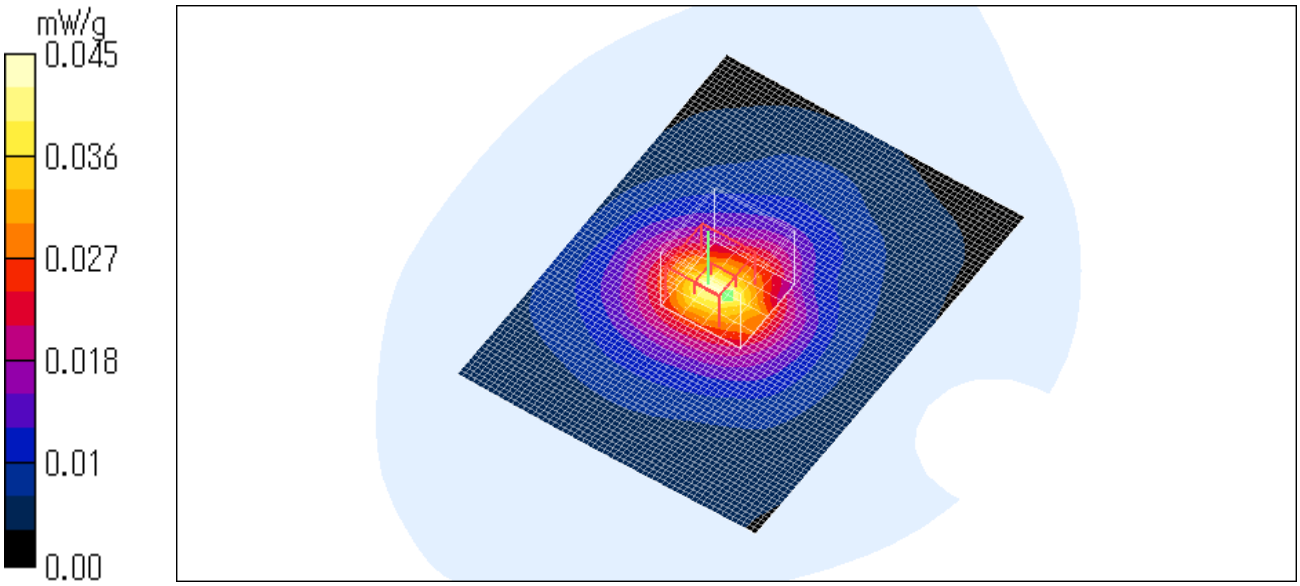
Duty Cycle: 1:1.2
Medium parameters used: f = 2450 MHz; σ = 2 mho/m; ε_r = 50.7; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:
Probe: ET3DV6 - SN1684; ConvF(4.14, 4.14, 4.14); Calibrated: 2004/09/02
Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
Electronics: DAE3 Sn516; Calibrated: 2005/03/10
Phantom: SAM 1196
Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 145

Area Scan (61x81x1): Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 0.046 mW/g

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 4.84 V/m; Power Drift = -0.00 dB
Peak SAR (extrapolated) = 0.089 W/kg
SAR(1 g) = 0.041 mW/g; SAR(10 g) = 0.021 mW/g
Maximum value of SAR (measured) = 0.045 mW/g

Test Date = 05/20/05
Ambient Temperature = 25.0degree C.
Liquid Temperature = Before 24.0 degree C. , After 24.0 degree C.



KX-THA14 / Mode 1 / Body / Outside(PC BOTTOM) / 2402MHz

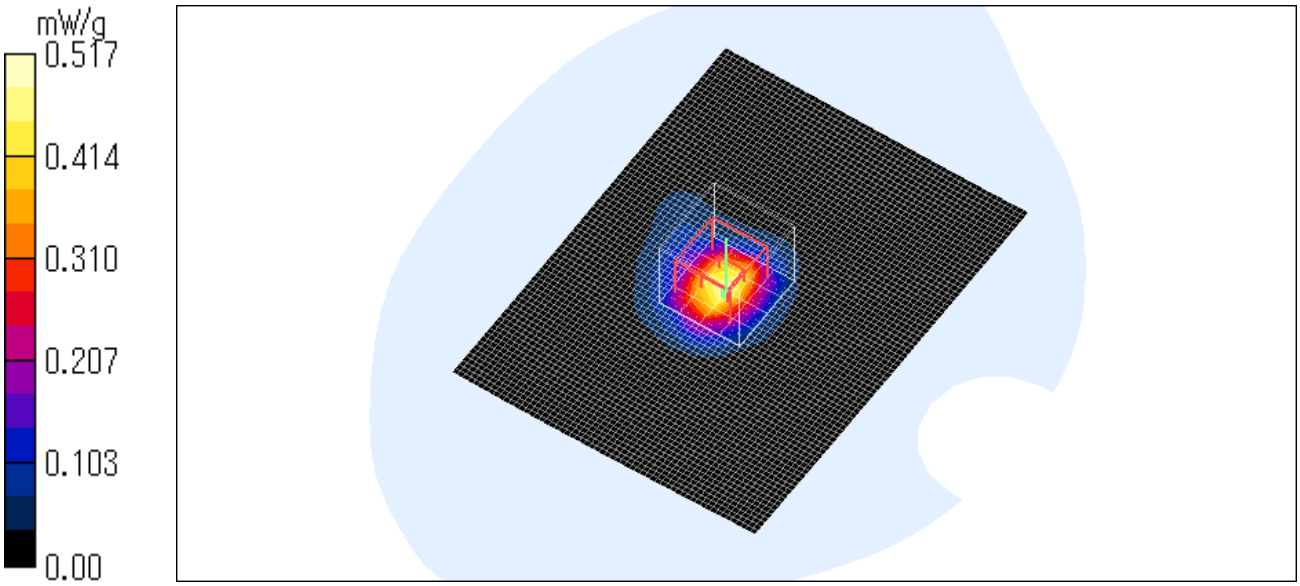
Duty Cycle: 1:1.2
Medium parameters used: f = 2450 MHz; σ = 2 mho/m; ε_r = 50.7; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:
Probe: ET3DV6 - SN1684; ConvF(4.14, 4.14, 4.14); Calibrated: 2004/09/02
Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
Electronics: DAE3 Sn516; Calibrated: 2005/03/10
Phantom: SAM 1196
Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 145

Area Scan (61x81x1): Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 0.487 mW/g

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 15.0 V/m; Power Drift = 0.111 dB
Peak SAR (extrapolated) = 1.03 W/kg
SAR(1 g) = 0.482 mW/g; SAR(10 g) = 0.231 mW/g
Maximum value of SAR (measured) = 0.517 mW/g

Test Date = 05/20/05
Ambient Temperature = 25.0degree C.
Liquid Temperature = Before 23.6 degree C. , After 23.6 degree C.



KX-THA14 / Mode 1 / Body / Outside(PC BOTTOM) / 2480MHz

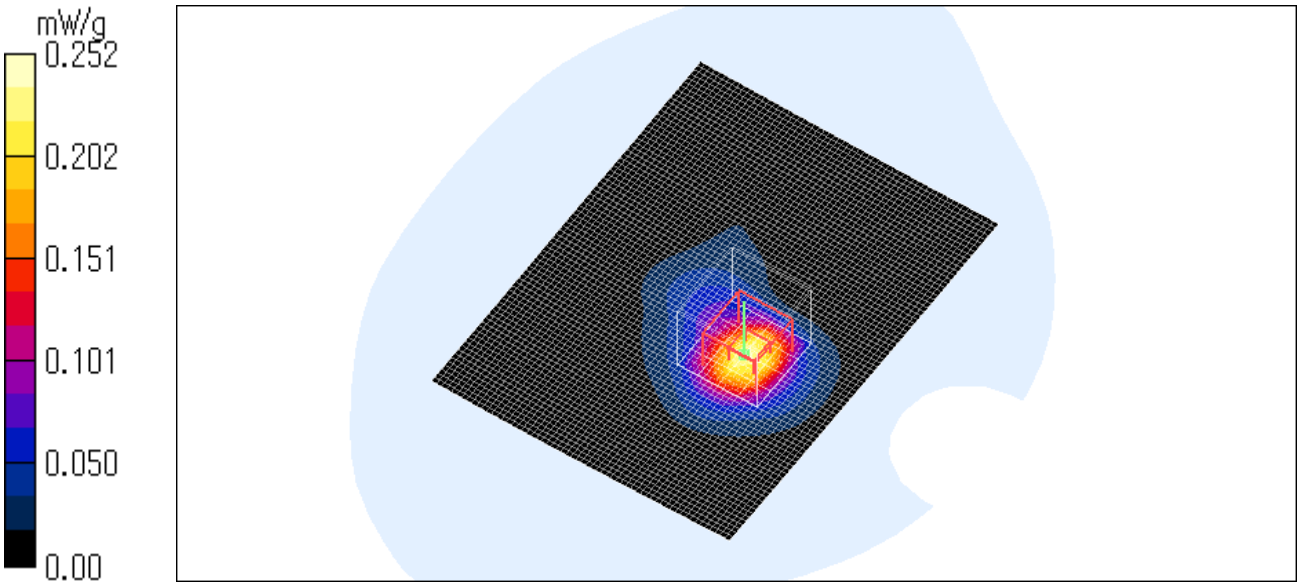
Duty Cycle: 1:1.2
Medium parameters used: f = 2450 MHz; σ = 2 mho/m; ε_r = 50.7; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:
Probe: ET3DV6 - SN1684; ConvF(4.14, 4.14, 4.14); Calibrated: 2004/09/02
Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
Electronics: DAE3 Sn516; Calibrated: 2005/03/10
Phantom: SAM 1196
Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 145

Area Scan (61x81x1): Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 0.258 mW/g

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 6.16 V/m; Power Drift = 0.056 dB
Peak SAR (extrapolated) = 0.512 W/kg
SAR(1 g) = 0.235 mW/g; SAR(10 g) = 0.115 mW/g
Maximum value of SAR (measured) = 0.252 mW/g

Test Date = 05/20/05
Ambient Temperature = 25.0 degree C.
Liquid Temperature = Before 23.7 degree C. , After 23.7 degree C.



KX-THA14 / Mode 2 / Body / Outside(PC BOTTOM) / 2440MHz

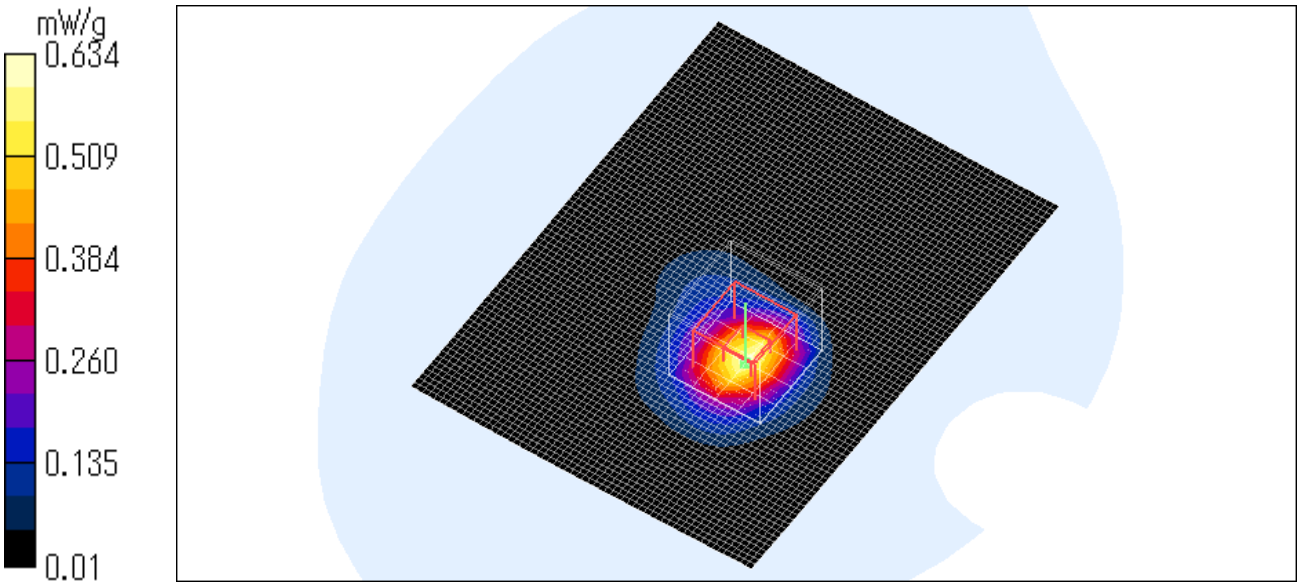
Duty Cycle: 1:1.3
Medium parameters used: f = 2450 MHz; σ = 2 mho/m; ε_r = 50.7; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:
Probe: ET3DV6 - SN1684; ConvF(4.14, 4.14, 4.14); Calibrated: 2004/09/02
Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
Electronics: DAE3 Sn516; Calibrated: 2005/03/10
Phantom: SAM 1196
Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 145

Area Scan (61x81x1): Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 0.618 mW/g

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 8.80 V/m; Power Drift = -0.162 dB
Peak SAR (extrapolated) = 1.26 W/kg
SAR(1 g) = 0.585 mW/g; SAR(10 g) = 0.287 mW/g
Maximum value of SAR (measured) = 0.634 mW/g

Test Date = 05/20/05
Ambient Temperature = 25.0degree C.
Liquid Temperature = Before 23.6 degree C. , After 23.6 degree C.



KX-THA14 / Mode 2 / Body / Upright(PC BOTTOM) / 2440MHz

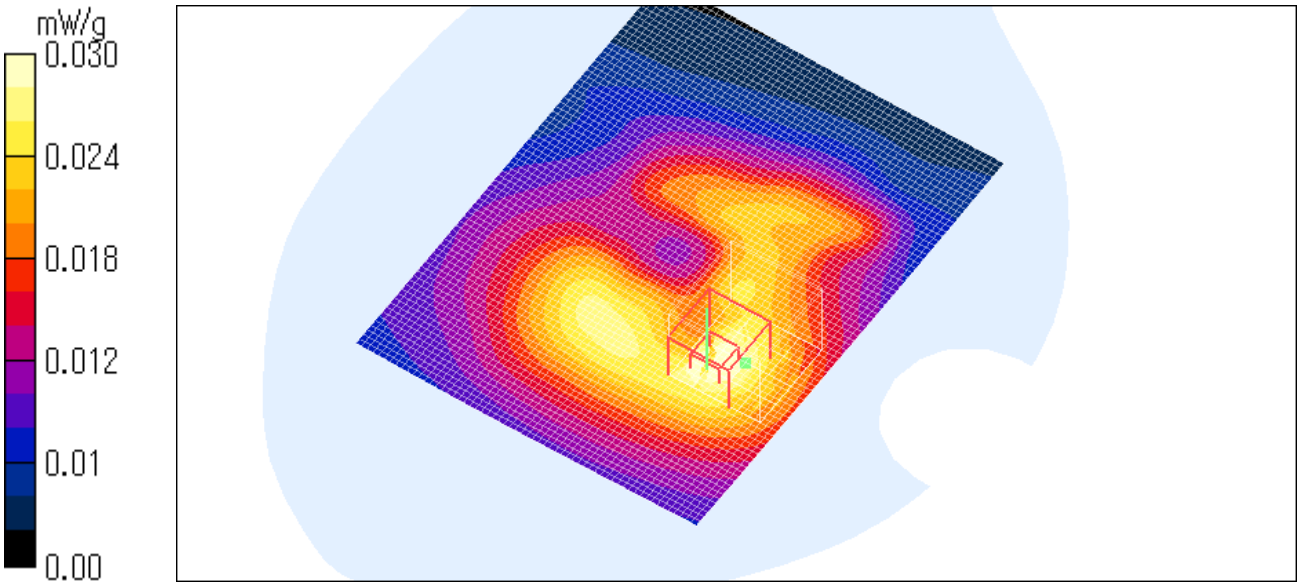
Duty Cycle: 1:1.3
Medium parameters used: f = 2450 MHz; σ = 2 mho/m; ε_r = 50.7; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:
Probe: ET3DV6 - SN1684; ConvF(4.14, 4.14, 4.14); Calibrated: 2004/09/02
Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
Electronics: DAE3 Sn516; Calibrated: 2005/03/10
Phantom: SAM 1196
Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 145

Area Scan (61x81x1): Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 0.028 mW/g

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 2.58 V/m; Power Drift = -0.204 dB
Peak SAR (extrapolated) = 0.059 W/kg
SAR(1 g) = 0.029 mW/g; SAR(10 g) = 0.017 mW/g
Maximum value of SAR (measured) = 0.030 mW/g

Test Date = 05/20/05
Ambient Temperature = 25.0degree C.
Liquid Temperature = Before 24.0 degree C. , After 24.0 degree C.



KX-THA14 / Mode 2 / Body / Inside(PC BOTTOM) / 2440MHz

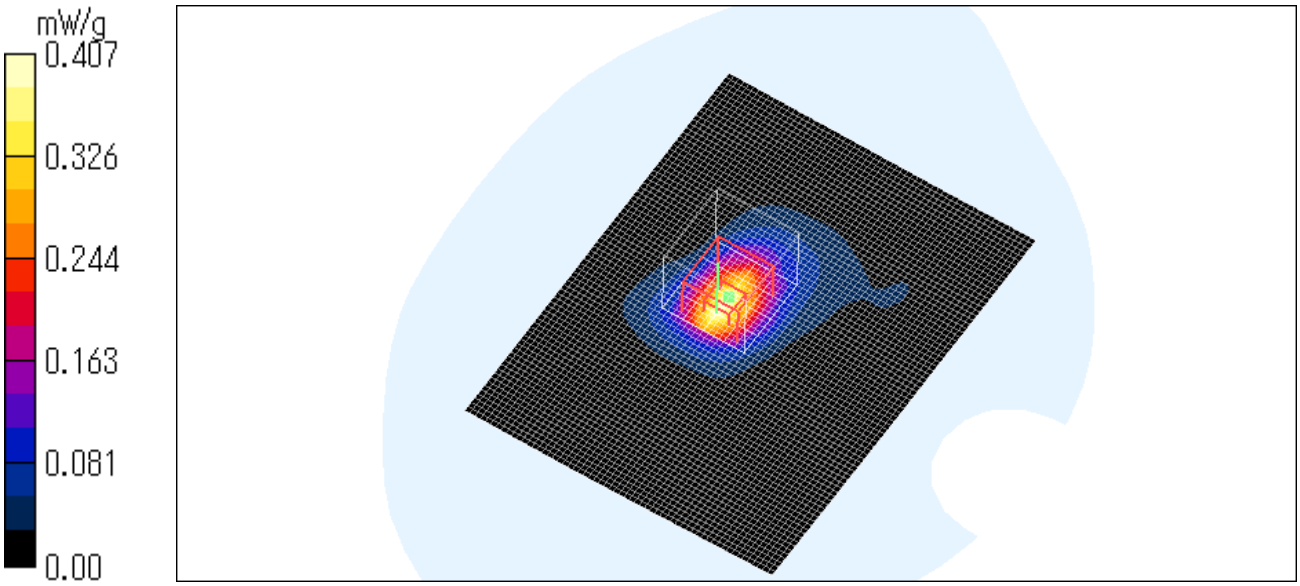
Duty Cycle: 1:1.3
Medium parameters used: f = 2450 MHz; σ = 2 mho/m; ε_r = 50.7; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:
Probe: ET3DV6 - SN1684; ConvF(4.14, 4.14, 4.14); Calibrated: 2004/09/02
Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
Electronics: DAE3 Sn516; Calibrated: 2005/03/10
Phantom: SAM 1196
Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 145

Area Scan (61x81x1): Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 0.360 mW/g

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 9.88 V/m; Power Drift = -0.038 dB
Peak SAR (extrapolated) = 0.847 W/kg
SAR(1 g) = 0.377 mW/g; SAR(10 g) = 0.179 mW/g
Maximum value of SAR (measured) = 0.407 mW/g

Test Date = 05/20/05
Ambient Temperature = 25.0 degree C.
Liquid Temperature = Before 23.6 degree C. , After 23.6 degree C.



KX-THA14 / Mode 2 / Body / Outside(PC SIDE) / 2440MHz

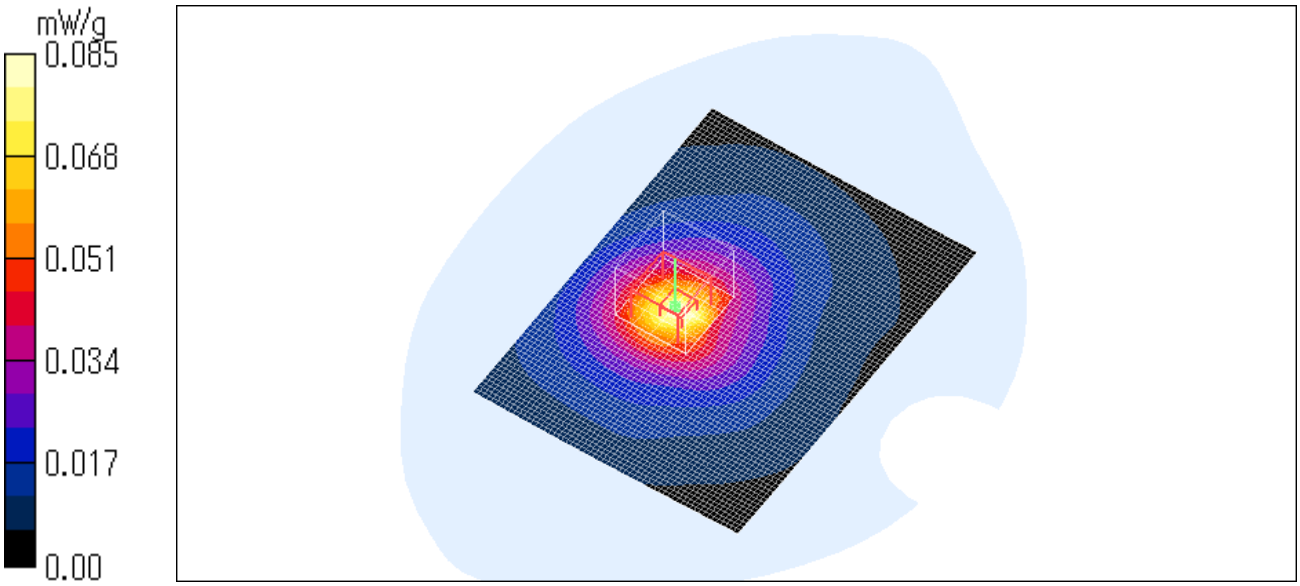
Duty Cycle: 1:1.3
Medium parameters used: f = 2450 MHz; σ = 2 mho/m; ε_r = 50.7; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:
Probe: ET3DV6 - SN1684; ConvF(4.14, 4.14, 4.14); Calibrated: 2004/09/02
Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
Electronics: DAE3 Sn516; Calibrated: 2005/03/10
Phantom: SAM 1196
Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 145

Area Scan (61x81x1): Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 0.078 mW/g

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 4.76 V/m; Power Drift = -0.341 dB
Peak SAR (extrapolated) = 0.201 W/kg
SAR(1 g) = 0.081 mW/g; SAR(10 g) = 0.042 mW/g
Maximum value of SAR (measured) = 0.085 mW/g

Test Date = 05/20/05
Ambient Temperature = 25.0degree C.
Liquid Temperature = Before 23.7 degree C. , After 23.7 degree C.



KX-THA14 / Mode 2 / Body / Outside(PC BOTTOM) / 2402MHz

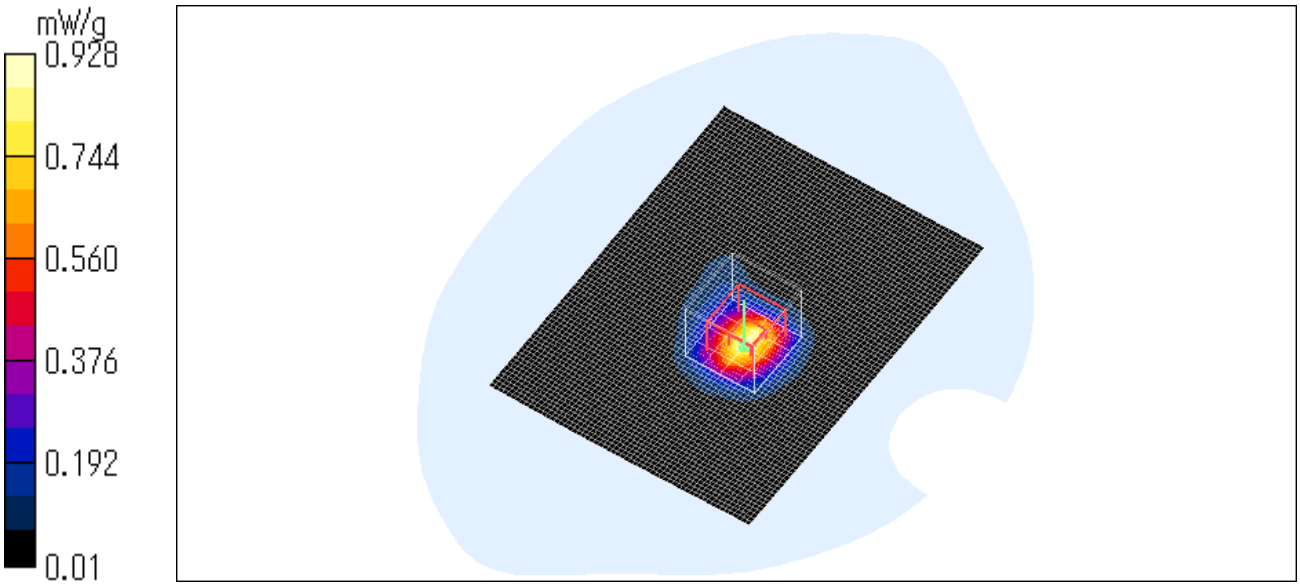
Duty Cycle: 1:1.3
Medium parameters used: f = 2450 MHz; σ = 2 mho/m; ε_r = 50.7; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:
Probe: ET3DV6 - SN1684; ConvF(4.14, 4.14, 4.14); Calibrated: 2004/09/02
Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
Electronics: DAE3 Sn516; Calibrated: 2005/03/10
Phantom: SAM 1196
Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 145

Area Scan (61x81x1): Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 1.00 mW/g

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 15.3 V/m; Power Drift = 0.238 dB
Peak SAR (extrapolated) = 1.82 W/kg
SAR(1 g) = 0.855 mW/g; SAR(10 g) = 0.415 mW/g
Maximum value of SAR (measured) = 0.928 mW/g

Test Date = 05/20/05
Ambient Temperature = 25.0degree C.
Liquid Temperature = Before 23.9 degree C. , After 23.9 degree C.



KX-THA14 / Mode 2 / Body / Outside(PC BOTTOM) / 2480MHz

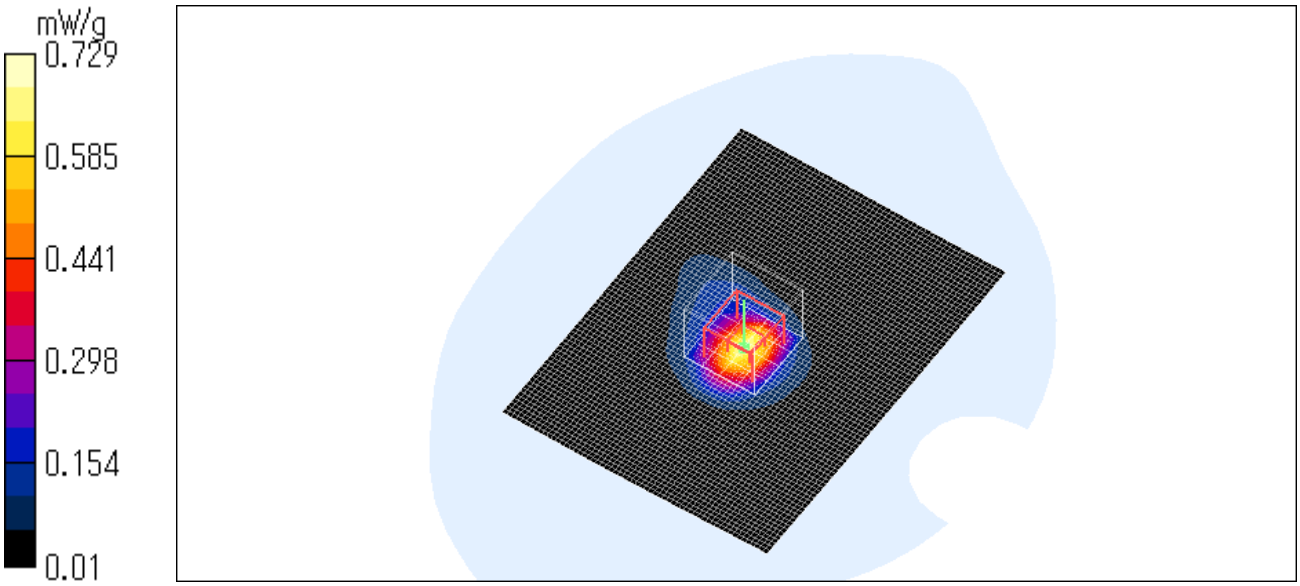
Duty Cycle: 1:1.3
Medium parameters used: f = 2450 MHz; σ = 2 mho/m; ε_r = 50.7; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:
Probe: ET3DV6 - SN1684; ConvF(4.14, 4.14, 4.14); Calibrated: 2004/09/02
Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
Electronics: DAE3 Sn516; Calibrated: 2005/03/10
Phantom: SAM 1196
Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 145

Area Scan (61x81x1): Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 0.780 mW/g

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 19.6 V/m; Power Drift = 0.061 dB
Peak SAR (extrapolated) = 1.50 W/kg
SAR(1 g) = 0.670 mW/g; SAR(10 g) = 0.320 mW/g
Maximum value of SAR (measured) = 0.729 mW/g

Test Date = 05/20/05
Ambient Temperature = 25.0degree C.
Liquid Temperature = Before 24.0 degree C. , After 24.0 degree C.



APPENDIX 5 : Validation Measurement data

System Validation / Dipole 2450 MHz / Forward Conducted Power : 250mW

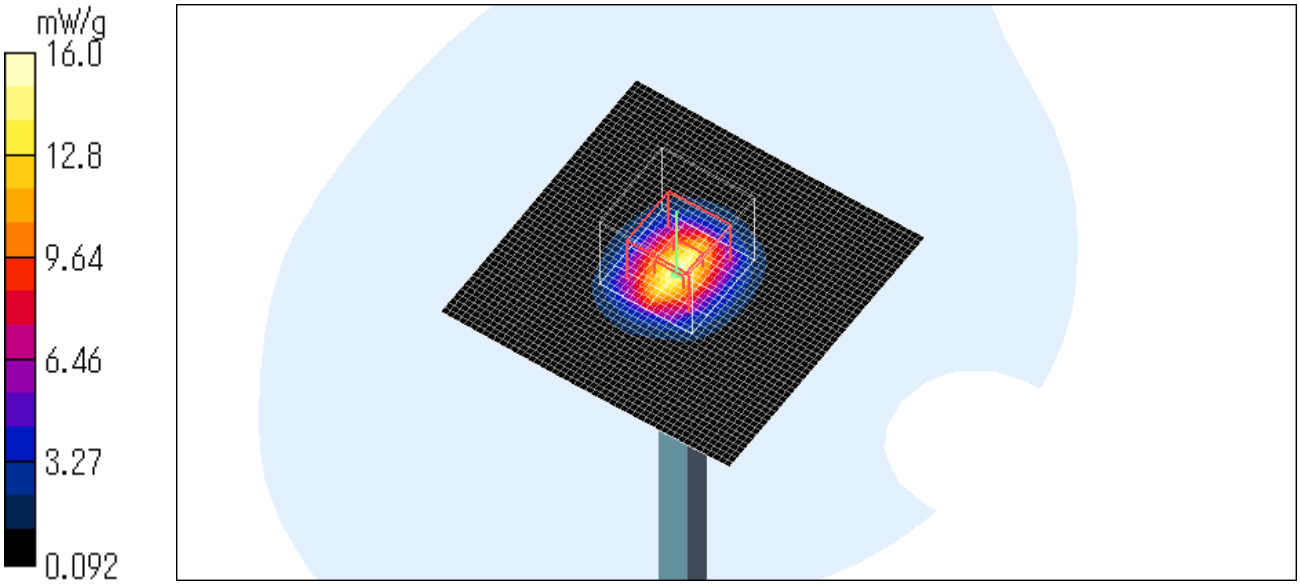
Dipole 2450 MHz; Type: D2450V2; Serial: SN:713
Communication System: CW; Frequency: 2450 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2450 MHz; σ = 1.87 mho/m; ε_r = 38.1; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:
Probe: ET3DV6 - SN1684; ConvF(4.39, 4.39, 4.39); Calibrated: 2004/09/02
Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
Electronics: DAE3 Sn516; Calibrated: 2005/03/10
Phantom: SAM 1196
Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 145

Unnamed procedure/Area Scan (51x51x1): Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 21.9 mW/g

Unnamed procedure/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 96.7 V/m; Power Drift = 0.014 dB
Peak SAR (extrapolated) = 29.1 W/kg
SAR(1 g) = 14.2 mW/g; SAR(10 g) = 6.61 mW/g
Maximum value of SAR (measured) = 16.0 mW/g

Test Date = 05/18/05
Ambient Temperature = 25.0 degree C.
Liquid Temperature = Before 24.6 degree C. , After 24.6 degree C.



System Validation / Dipole 2450 MHz / Forward Conducted Power : 250mW

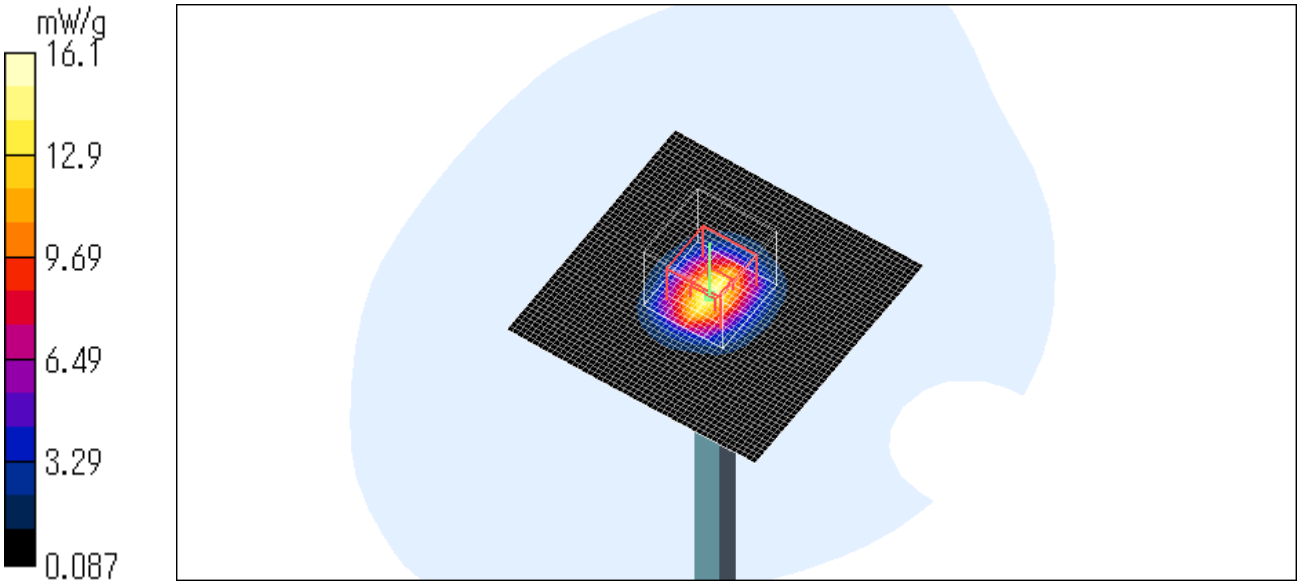
Dipole 2450 MHz; Type: D2450V2; Serial: SN:713
Communication System: CW; Frequency: 2450 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2450 MHz; σ = 1.87 mho/m; ε_r = 37.8; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:
Probe: ET3DV6 - SN1684; ConvF(4.39, 4.39, 4.39); Calibrated: 2004/09/02
Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
Electronics: DAE3 Sn516; Calibrated: 2005/03/10
Phantom: SAM 1196
Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 145

Area Scan (51x51x1): Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 21.8 mW/g

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 97.5 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 29.3 W/kg
SAR(1 g) = 14.2 mW/g; SAR(10 g) = 6.6 mW/g
Maximum value of SAR (measured) = 16.1 mW/g

Test Date = 05/19/05
Ambient Temperature = 25.0 degree C.
Liquid Temperature = Before 24.3 degree C. , After 24.3 degree C.

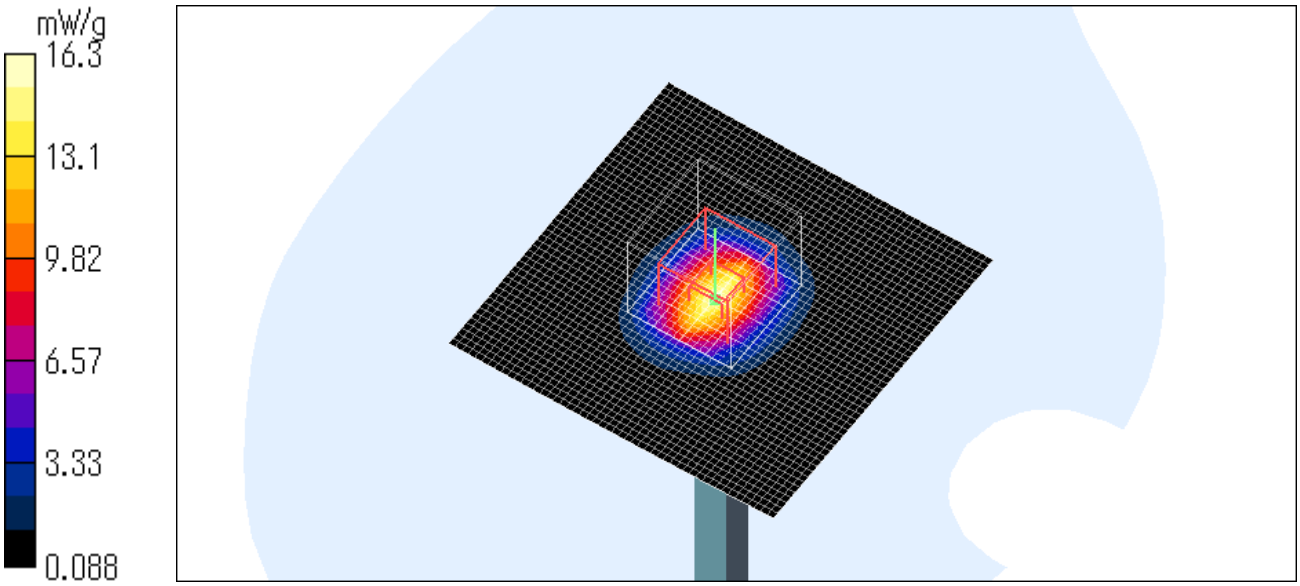


System Validation / Dipole 2450 MHz / Forward Conducted Power : 250mW

Dipole 2450 MHz; Type: D2450V2; Serial: SN:713
Communication System: CW; Frequency: 2450 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2450 MHz; σ = 1.89 mho/m; ε_r = 37.8; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:
Probe: ET3DV6 - SN1684; ConvF(4.39, 4.39, 4.39); Calibrated: 2004/09/02
Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
Electronics: DAE3 Sn516; Calibrated: 2005/03/10
Phantom: SAM 1196
Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 145

Area Scan (51x51x1): Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 21.7 mW/g

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 97.1 V/m; Power Drift = 0.021 dB
Peak SAR (extrapolated) = 29.6 W/kg
SAR(1 g) = 14.4 mW/g; SAR(10 g) = 6.68 mW/g
Maximum value of SAR (measured) = 16.3 mW/g

Test Date = 05/20/05
Ambient Temperature = 25.0 degree C.
Liquid Temperature = Before 24.0 degree C. , After 24.0 degree C.