Dosimetric Assessment
Test Report

for the

OQO Mini Computer
FCC ID: SHD-A7YWFS

Tested and Evaluated In Accordance With
FCC OET 65 Supplement C: 01-01

Prepared for

OQO
583 Shotwell Street
San Francisco, CA 94110-2011

Engineering Statement: The measurements shown in this report were made in accordance with the procedures specified in Supplement C to OET Bulletin 65 of the Federal Communications Commission (FCC) Guidelines [FCC 2001], IEEE Std. 1528-2003 and Industry Canada RSS-102 for uncontrolled exposure. I assume full responsibility for the accuracy and completeness of these measurements, and for the qualifications of all persons taking them. It is further stated that upon the basis of the measurements made, the equipment evaluated is capable of compliance for localized specific absorption rate (SAR) for uncontrolled environment/general population exposure limits specified in ANSI/IEEE Std. C95.1-2005.

SAR Evaluation
Certificate of Compliance

FCC ID: SHD-A7YWFS
APPLICANT: OQO

Applicant Name and Address: **OQO**
583 Shotwell Street
San Francisco, CA 94110-2011

Test Location: MET Laboratories, Inc.
4855 Patrick Henry Dr. Bldg #6
Santa Clara, CA 95054
USA

EUT:	Model 02 Mini Computer				
Date of Receipt:	December 26, 2006				
Device Category:	FCC Parts 22, 24, 15.247, and 15.407				
RF exposure environment:	Uncontrolled Exposure/General Population				
RF exposure category:	Portable				
Power supply:	3.7VDC 4500 and 9000mAh batteries and AC				
Antennas:	Internal and Whip				
Production/prototype:	Production				
Modulation:	CDMA, DSSS and OFDM				
Duty Cycle:	100%				
TX Range:	824-848MHz	1851-1910MHz	2412-2462MHz	5150-5250MHz	5745-5805MHz
Maximum RF Power Output	24.5dBm	24.5dBm	20.1dBm	17.0dBm	13.8dBm

Shawn McMillen
Senior Engineer

INTRODUCTION

This measurement report demonstrates that the OQO Model 02 Mini Computer FCC ID: SHD-A7YWFS described within this report complies with the Specific Absorption Rate (SAR) RF exposure requirements specified in ANSI/IEEE Std. C95.1-2005 and FCC 47 CFR §2.1093 for the Controlled Exposure/Occupational environment. The test procedures described in FCC OET Bulletin 65, Supplement C, Edition 01-01 and IEEE Std. 1528 - 2003 were employed.

A description of the device under test, device operating configuration and test conditions, measurement and site description, methodology and procedures used in the evaluation, equipment used, detailed summary of the test results and the various provisions of the rules are included in this dosimetric assessment test report.

SAR DEFINITION

Specific Absorption Rate (SAR) is defined as the time derivative (rate) of the incremental energy (*dU*) absorbed by (dissipated in) an incremental mass (*dm*) contained in a volume element (*dV*) of a given density (ρ). It is also defined as the rate of RF energy absorption per unit mass at a point in an absorbing body (see Fig. 1.1).

$$SAR = \frac{d}{dt}\left(\frac{dU}{dm}\right) = \frac{d}{dt}\left(\frac{dU}{\rho dv}\right)$$

Figure 1.1
SAR Mathematical Equation

SAR is expressed in units of Watts per Kilogram (W/kg).

$$SAR = \sigma E^2 / \rho$$

where:

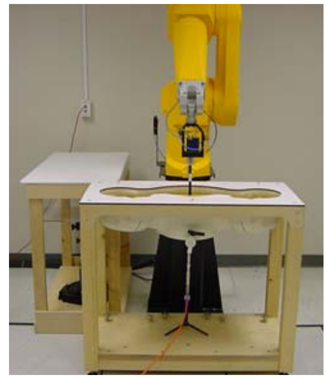
σ - conductivity of the tissue - simulant material (S/m)
ρ - mass density of the tissue - simulant material (kg/m3)
E - Total RMS electric field strength (V/m)

NOTE: The primary factors that control rate of energy absorption were found to be the wavelength of the incident field in relations to the dimensions and geometry of the irradiated organism, the orientation of the organism in relation to the polarity of field vectors, the presence of reflecting surfaces, and whether conductive contact is made by the organism with a ground plane.

DESCRIPTION OF DEVICE UNDER TEST (EUT)

<table>
<tr><td>Applicant:</td><td colspan="5">OQO</td></tr>
<tr><td>Description of Test Item:</td><td colspan="5">Model 02 Mini Computer</td></tr>
<tr><td>Supply Voltage:</td><td colspan="5">3.7VDC 4500 and 9000mAh batteries and AC</td></tr>
<tr><td>Antenna Type(s) Tested:</td><td colspan="5">Internal and Whip</td></tr>
<tr><td>Modes of Operation:</td><td colspan="5">CDMA, DSSS and OFDM</td></tr>
<tr><td>Duty Cycle Tested:</td><td colspan="5">100%</td></tr>
<tr><td rowspan="2">Frequency Tested (MHz)</td><td>800MHz Band</td><td>1900MHz Band</td><td>2450MHz Band</td><td>5200MHz Band</td><td>5800MHz Band</td></tr>
<tr><td>836.52</td><td>1851.25
1880.00
1909.75</td><td>2412.0
2437.0
2462.0</td><td>5180.0
5240.0</td><td>5745.0
5785.0
5825.0</td></tr>
<tr><td rowspan="5">Maximum SAR Measured</td><td colspan="2">824-848MHz</td><td colspan="3">0.094 mW/g</td></tr>
<tr><td colspan="2">1851-1910MHz</td><td colspan="3">0.249 mW/g</td></tr>
<tr><td colspan="2">2412-2462MHz</td><td colspan="3">0.351 mW/g</td></tr>
<tr><td colspan="2">5180-5240MHz</td><td colspan="3">0.180 mW/g</td></tr>
<tr><td colspan="2">5745-5805MHz</td><td colspan="3">0.043 mW/g</td></tr>
<tr><td>Application Type:</td><td colspan="5">Certification</td></tr>
<tr><td>Exposure Category:</td><td colspan="5">Uncontrolled Exposure/General Population</td></tr>
<tr><td>FCC and IC Rule Part(s):</td><td colspan="5">FCC 47 CFR §2.1093, RSS-210</td></tr>
<tr><td>Standards:</td><td colspan="5">IEEE Std. 1528-2003, FCC OET Bulletin 65, Supplement C, Edition 01-01</td></tr>
</table>

SAR MEASUREMENT SYSTEM



MET Laboratories, Inc SAR measurement facility utilizes the DASY4 Professional Dosimetric Assessment System (DASY™) manufactured by Schmid & Partner Engineering AG (SPEAG™) of Zurich, Switzerland for performing SAR compliance tests. The DASY4 measurement system is comprised of the measurement server, robot controller, computer, near-field probe, probe alignment sensor, specific anthropomorphic mannequin (SAM) phantom, and various planar phantoms for brain and/or body SAR evaluations. The robot is a six-axis industrial robot performing precise movements to position the probe to the location (points) of maximum electromagnetic field (EMF). The Cell controller system contain the power supply, robot controller, teach pendant (Joystick), and remote control, is used to drive the robot motors. The Staubli robot is connected to the cell controller to allow software manipulation of the robot. A data acquisition electronic (DAE) circuit performs the signal amplification, signal multiplexing, AD-conversion, offset measurements, mechanical surface detection, collision detection, etc. is connected to the Electro-optical coupler (EOC). The EOC performs the conversion from the optical into digital electric signal of the DAE and transfers data to the DASY4 measurement server. The DAE4 utilizes a highly sensitive electrometer-grade preamplifier with auto-zeroing, a channel and gain-switching multiplexer, a fast 16-bit AD-converter and a command decoder and control logic unit.

Transmission to the DASY4 measurement server is accomplished through an optical downlink for data and status information and an optical uplink for commands and clock lines. The mechanical probe-mounting device includes two different sensor systems for frontal and sidewise probe contacts. The sensor systems are also used for mechanical surface detection and probe collision detection. The robot uses its own controller with a built in VME-bus computer.

MEASUREMENT SUMMARY

BODY SAR MEASUREMENT RESULTS (824-848MHz) Band									
Freq (MHz)	**Chan**	**Test Mode**	**Cond Power Before (dBm)**	**Power Supply**	**Antenna**	**EUT Test Position and accessory**	**Phantom Section**	**Separation Distance (cm)**	**Measured SAR 1g (W/kg)**
836.52	384	CDMA	24.5	Standard Battery	Whip	Back Side	Planar	0.0	0.094
836.52	384	CDMA	24.5	Standard Battery	Internal	Back Side	Planar	0.0	0.00138
836.52	384	CDMA	24.5	Standard Battery	Whip	Back Side	Planar	0.0	0.093
ANSI/IEEE C95.1 1992 – SAFETY LIMIT **BODY: 1.6 W/kg (averaged over 1 gram)** **Spatial Peak – Uncontrolled Exposure/General Population**									

Measured Mixture Type	835 MHz Body		**Date Tested**	Jan 03,2007
Dielectric Constant εr	**IEEE Target**	**Measured**	**Duty Cycle**	100%
	55.2	54.9	**Ambient Temperature (C)**	23.1
Conductivity σ (mho/m)	**IEEE Target**	**Measured**	**Fluid Temperature (C)**	22.0
	0.97	0.97	**Fluid Depth**	≥15cm

Note: The measured SAR in the 800MHz band utilizing the internal antenna was at or near the noise floor of the SAR machine. Therefore, only the mid channel was investigated without any other accessories such as extended battery or holster.

BODY SAR MEASUREMENT RESULTS (1851-1910MHz) Band									
Freq (MHz)	**Chan**	**Test Mode**	**Cond Power Before (dBm)**	**Power Supply**	**Antenna**	**EUT Test Position and accessory**	**Phantom Section**	**Separation Distance (cm)**	**Measured SAR 1g (W/kg)**
1880.00	600	CDMA	24.5	Standard Battery	Whip	Back Side	Planar	0.0	0.249
1880.00	600	CDMA	24.5	Extended Battery	Whip	Back Side	Planar	0.0	0.055
1851.25	25	CDMA	24.5	Standard Battery	Whip	Back Side	Planar	0.0	0.106
1909.75	1175	CDMA	24.5	Standard Battery	Whip	Back Side	Planar	0.0	0.066
1880.00	600	CDMA	24.5	Standard Battery	Internal	Back Side	Planar	0.0	0.068
1880.00	600	CDMA	24.5	Standard Battery	Internal	Back Side Holster	Planar	0.0	0.00871
1880.00	600	CDMA	24.5	AC	Whip	Back Side	Planar	0.0	0.237

ANSI/IEEE C95.1 1992 – SAFETY LIMIT BODY: 1.6 W/kg (averaged over 1 gram) Spatial Peak – Uncontrolled Exposure/General Population				
Measured Mixture Type	1880 MHz Body		**Date Tested**	Jan 02, 2007
Dielectric Constant εr	**IEEE Target**	**Measured**	**Duty Cycle**	100%
	53.3	55.6	**Ambient Temperature (C)**	23.2
Conductivity σ (mho/m)	**IEEE Target**	**Measured**	**Fluid Temperature (C)**	21.7
	1.52	1.57	**Fluid Depth**	≥15cm

BODY SAR MEASUREMENT RESULTS (2412-2462MHz) Band									
Freq (MHz)	**Chan**	**Test Mode**	**Cond Power Before (dBm)**	**Power Supply**	**Antenna**	**EUT Test Position and accessory**	**Phantom Section**	**Separation Distance (cm)**	**Measured SAR 1g (W/kg)**
2437	Mid	DSSS	20.0	Standard Battery	Internal	Back Side	Planar	0.0	0.236
2412	Low	DSSS	19.5	Standard Battery	Internal	Back Side	Planar	0.0	0.351
2462	High	DSSS	20.1	Standard Battery	Internal	Back Side	Planar	0.0	0.174
2412	Low	DSSS	19.5	Extended Battery	Internal	Back Side	Planar	0.0	0.163
2412	Low	DSSS	19.5	Standard Battery	Internal	Back Side Holster	Planar	0.0	0.040
2412	Low	DSSS	19.5	AC	Internal	Back Side	Planar	0.0	0.348
ANSI/IEEE C95.1 1992 – SAFETY LIMIT BODY: 1.6 W/kg (averaged over 1 gram) Spatial Peak – Uncontrolled Exposure/General Population									

Measured Mixture Type	2450 MHz Body		**Date Tested**	Dec 28, 2006
Dielectric Constant εr	**IEEE Target**	**Measured**	**Duty Cycle**	100%
	52.7	55.7	**Ambient Temperature (C)**	23.2
Conductivity σ (mho/m)	**IEEE Target**	**Measured**	**Fluid Temperature (C)**	21.7
	1.95	2.03	**Fluid Depth**	≥15cm

BODY SAR MEASUREMENT RESULTS (5180-5240MHz) Band									
Freq (MHz)	**Chan**	**Test Mode**	**Cond Power Before (dBm)**	**Power Supply**	**Antenna**	**EUT Test Position and accessory**	**Phantom Section**	**Separation Distance (cm)**	**Measured SAR 1g (W/kg)**
5180	Low	OFDM	17.0	Standard Battery	Internal	Back Side	Planar	0.0	0.154
5240	High	OFDM	16.2	Standard Battery	Internal	Back Side	Planar	0.0	0.180
5240	High	OFDM	16.2	Extended Battery	Internal	Back Side	Planar	0.0	0.067
5240	High	OFDM	16.2	Standard Battery	Internal Holster	Back Side	Planar	0.0	0.045
5240	High	OFDM	16.2	AC	Internal	Back Side	Planar	0.0	0.179
ANSI/IEEE C95.1 1992 – SAFETY LIMIT BODY: 1.6 W/kg (averaged over 1 gram) Spatial Peak – Uncontrolled Exposure/General Population									

Measured Mixture Type	5200 MHz Body		**Date Tested**	Dec 28, 2006
Dielectric Constant εr	**IEEE Target**	**Measured**	**Duty Cycle**	100%
	49.0	48.2	**Ambient Temperature (C)**	22.0
Conductivity σ (mho/m)	**IEEE Target**	**Measured**	**Fluid Temperature (C)**	21.5
	5.30	5.60	**Fluid Depth**	≥15cm

BODY SAR MEASUREMENT RESULTS (5745-5805MHz) Band									
Freq (MHz)	**Chan**	**Test Mode**	**Cond Power Before (dBm)**	**Power Supply**	**Antenna**	**EUT Test Position and accessory**	**Phantom Section**	**Separation Distance (cm)**	**Measured SAR 1g (W/kg)**
5785	Mid	OFDM	13.8	Standard Battery	Internal	Back Side	Planar	0.0	0.032
5745	Low	OFDM	13.5	Standard Battery	Internal	Back Side	Planar	0.0	0.031
5825	High	OFDM	12.8	Standard Battery	Internal	Back Side	Planar	0.0	0.043
5825	High	OFDM	12.8	Extended Battery	Internal	Back Side	Planar	0.0	0.022
5825	High	OFDM	12.8	Extended Battery	Internal	Back Side	Planar	0.0	0.00206
5825	High	OFDM	12.8	Standard Battery	Internal	Back Side Holster	Planar	0.0	0.042
ANSI/IEEE C95.1 1992 – SAFETY LIMIT BODY: 1.6 W/kg (averaged over 1 gram) Spatial Peak – Uncontrolled Exposure/General Population									

Measured Mixture Type	5800 MHz Body		**Date Tested**	Dec 27, 2006
Dielectric Constant εr	**IEEE Target**	**Measured**	**Duty Cycle**	100%
	48.2	48.4	**Ambient Temperature (C)**	22.0
Conductivity σ (mho/m)	**IEEE Target**	**Measured**	**Fluid Temperature (C)**	21.6
	6.00	6.39	**Fluid Depth**	≥15cm

MULTI-BAND COMBIND BODY SAR MEASUREMENT RESULTS									
Freq (MHz)	**Freq (MHz)**	**Test Modes**	**Cond Power Before (dBm)**	**Power Supply**	**Antennas**	**EUT Test Position and accessory**	**Phantom Section**	**Separation Distance (cm)**	**Combined Measured SAR 1g (W/kg)**
2412	1880	DSSS and CDMA	19.5 and 24.5	Standard Battery	Whip and Internal	Back Side	Planar	0.0	0.210
5240	1880	OFDM and CDMA	16.2 and 24.5	Standard Battery	Whip and Internal	Back Side	Planar	0.0	0.355
ANSI/IEEE C95.1 1992 – SAFETY LIMIT **BODY: 1.6 W/kg (averaged over 1 gram)** **Spatial Peak – Uncontrolled Exposure/General Population**									

DETAILS OF SAR EVALUATION

The OQO Mini Computer was determined to be compliant for localized Specific Absorption Rate based on the test provisions and conditions described below.

1. The EUT was tested for body SAR with the back side of the EUT against the phantom surface. The EUT was tested with the whip antenna perpendicular to the phantom surface. The EUT was tested with both the standard and extended batteries as well as with external power. The EUT was also tested with the holster using the standard battery only since this is the only batter configuration that will fit the holster. Since the antennas are collocated within 20cm of each other and the EUT is capable of simultaneous transmission, a volumetric scan and summation was performed on the configurations which gave the highest SAR during independent evaluations.

2. The RF output power for the CDMA2000 was confirmed based on 3GPP2 C.S0011/TIA-98-E which is recommended by "SAR Measurement Procedures for 3G Devices", June 2006. Maximum output power was verified on the High, Middle and Low channels according to procedures in section 4.4.5.2 of 3GPP2 C.S0011/TIA-98-E. S055 tests were measured with power control bits in "All UP" condition.

   A call to the EUT was established based on the following conditions;

   1. If the mobile station (MS) supports Reverse TCH RC1 and Forward TCH RC1, a call is set up using the Fundamental Channel Test Mode (RC=1/1) with 9600 bps data rate only.
   2. If the MS supports the RC 3 Reverse FCH, RC3 Reverse SCH0 and demodulation of RC 3,4 or 5, a call was set using Supplemental Channel Test Mode 3 (RC 3/3) with 9600bps Fundamental Channel and 9600.
   3. FCHs were configured at full rate for maximum SAR with "All Up" power control bits.

3. For the 802.11a/b/g modulations, the EUT was placed into a test mode using ART protocol software at a data rate which produced the highest RF output power.

4. The RF output power in b-mode was ≥ 5dB than that of g-mode, therefore only b-mode was measured for SAR in the 2.4GHz band.

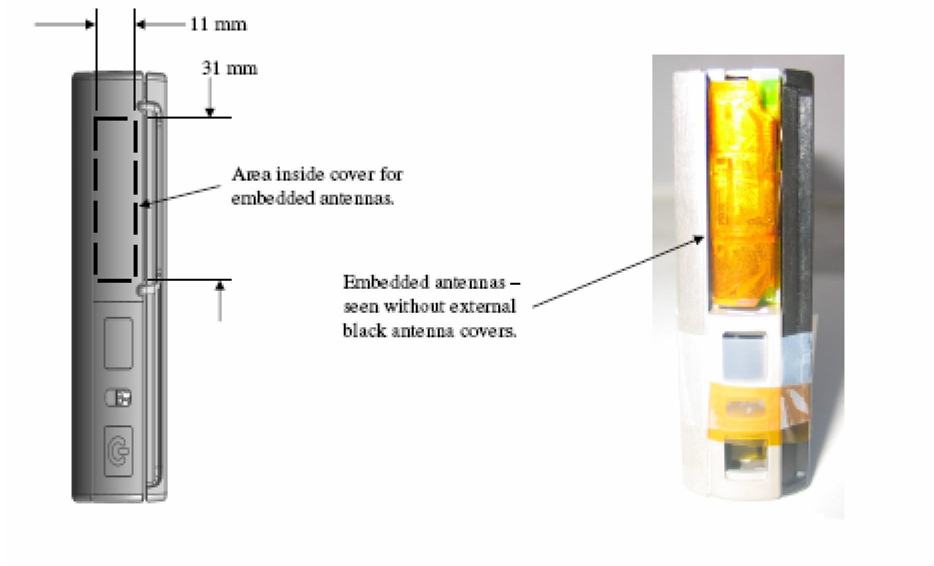
5. The SAR evaluations were performed with a fully charged battery.

6. The EUT was dismantled prior to the SAR evaluations in order to measure the conducted power. It was not practical to measure the output before and after each SAR evaluation. The EUT's RF output power was stable throughout the SAR evaluations.

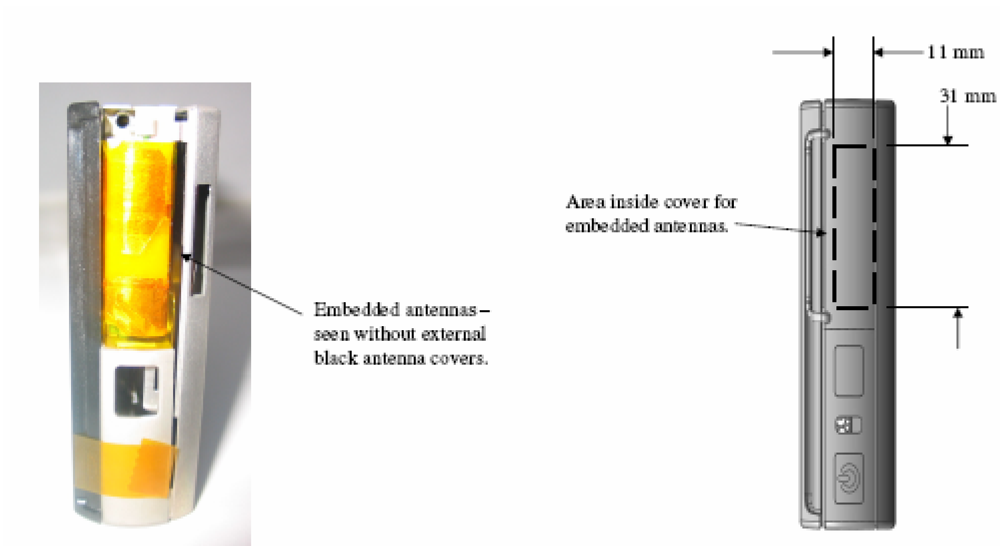
7. The dielectric parameters of the simulated body fluid were measured prior to the evaluation using an 85070D Dielectric Probe Kit and an 8722D Network Analyzer.

8. The fluid and air temperature was measured prior to and after each SAR evaluation to ensure the temperature remained within ±2 deg C of the temperature of the fluid when the dielectric properties were measured.

9. During the SAR evaluations if a distribution produced several hotspots over the course of the area scan, each hotspot was evaluated separately.

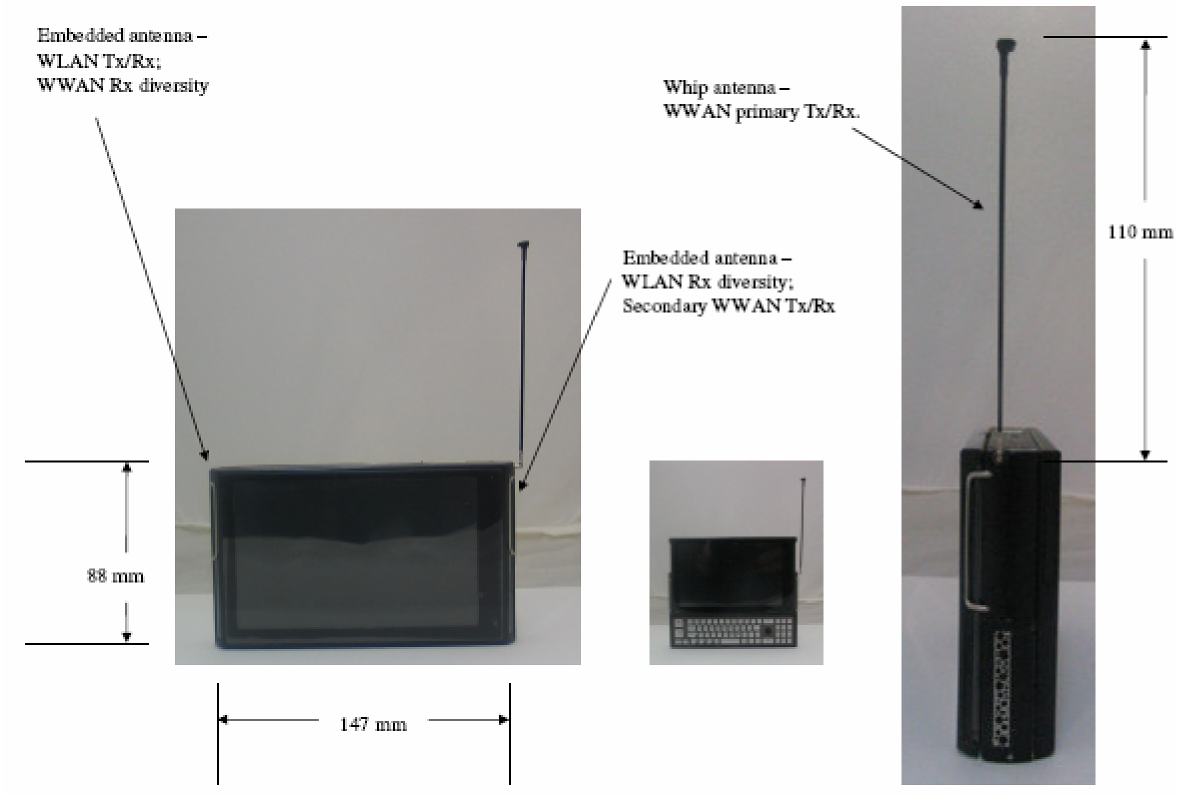


Left-hand side



Right-hand side

Locations of Internal antennas



External Whip Antenna

EVALUATION PROCEDURES

The evaluation was performed in the applicable area of the phantom depending on the type of device being tested.

(i) For devices held to the ear during normal operation, both the left and right ear positions were evaluated using the SAM phantom.
(ii) For body-worn and face-held devices a planar phantom was used.

The SAR was determined by a pre-defined procedure within the DASY4 software. Upon completion of a reference check, the exposed region of the phantom was scanned near the inner surface with a grid spacing of 10mm x 10mm.

An area scan was determined as follows:

Based on the defined area scan grid, a more detailed grid is created to increase the points by a factor of 10. The interpolation function then evaluates all field values between corresponding measurement points.

A linear search is applied to find all the candidate maxima. Subsequently, all maxima are removed that are >2 dB from the global maximum. The remaining maxima are then used to position the cube scans.

A 1g and 10g spatial peak SAR was determined as follows:

For carrier frequencies < 2GHz, a 32mm x 32mm x 34mm (7x7x7 data points) zoom scan was assessed at the position where the greatest V/m was detected. For carrier frequencies >2GHz but < 4.5GHz a 30mm x 30mm x 24mm (7x7x9 data points) zoom scan was assessed at the position where the greatest V/m was detected. For carrier frequencies >4.5GHz a 24mm x 24mm x 20mm (7x7x9 data points) zoom scan was assessed at the position where the greatest V/m was detected. A least squares fourth-order polynomial was used to generate points between the probe detector and the inner surface of the phantom.

Interpolated data is used to calculate the average SAR over 1g and 10g cubes by spatially discretizing the entire measured cube. The volume used to determine the averaged SAR is a 1mm grid (42875 interpolated points).

Z-Scan was determined as follows:

The Z-scan measures points along a vertical straight line. The line runs along a line normal to the inner surface of the phantom surface.

DATA EVALUATION PROCEDURES

The DASY4 post processing software (SEMCAD) automatically executes the following procedures to calculate the field units from the microvolt readings at the probe connector. The parameters used in the evaluation are stored in the configuration modules of the software:

Probe Parameters:	- Sensitivity	$Norm_i$, a_{i0}, a_{i1}, a_{i2}
	- Conversion Factor	$ConvF_i$
	- Dipole Compression Point	dcp_i
Device parameters:	- Frequency	f
	- Crest factor	cf
Media parameters:	- Conductivity	σ
	- Density	ρ

These parameters must be set correctly in the software. They can be found in the component documents or be imported into the software from the configuration files issued for the DASY components. In the direct measuring mode of the multimeter option, the parameters of the actual system setup are used. In the scan visualization and export modes, the parameters stored in the corresponding document files are used. The first step of the evaluation is a linearization of the filtered input signal to account for the compression characteristics of the detector diode. The compensation depends on the input signal, the diode type and the DC - transmission factor from the diode to the evaluation electronics. If the exciting field is pulsed, the crest factor of the signal must be known to correctly compensate for peak power. The formula for each channel can be given as:

$$V_i = U_i + U_i^2 \cdot \frac{cf}{dcp_i}$$

with V_i = Compensated signal of channel i (i = x, y, z)
U_i = Input signal of channel i (i = x, y, z)
cf = Crest factor of exciting field (DASY parameter)
dcp_i = Diode compression point (DASY parameter)

From the compensated input signals the primary field data for each channel can be evaluated:

$$\text{E} - \text{fieldprobes :} \qquad E_i = \sqrt{\frac{V_1}{Norm_i \cdot ConvF}}$$

$$\text{H} - \text{fieldprobes :} \qquad H_i = \sqrt{V_i} \cdot \frac{a_{i0} + a_{i1} f + a_{i2} f^2}{f}$$

with V_i = Compensated signal of channel i (i = x, y, z)
$Norm_i$ = Sensor sensitivity of channel i (i = x, y, z)
$\mu V/(V/m)^2$ for E-field probes
$ConvF$ = Sensitivity enhancement in solution
a_{ij} = Sensor sensitivity factors for H-field probes
f = Carrier frequency (GHz)
E_i = Electric field strength of channel i in V/m
H_i = Magnetic field strength of channel i in A/m

The RSS value of the field components gives the total field strength (Hermitian magnitude):

$$E_{tot} = \sqrt{E_x^2 + E_y^2 + E_z^2}$$

The primary field data are used to calculate the derived field units.

$$SAR = E_{tot}^2 \cdot \frac{\sigma}{\rho \cdot 1'000}$$

with SAR = local specific absorption rate in mW/g
E_{tot} = total field strength in V/m
σ = conductivity in [mho/m] or [Siemens/m]
ρ = equivalent tissue density in g/cm3

Note that the density is normally set to 1 (or 1.06), to account for actual brain density rather than the density of the simulation liquid.

The power flow density is calculated assuming the excitation field as a free space field.

$$P_{pwe} = \frac{E_{tot}^2}{3770} \qquad \text{or} \qquad P_{pwe} = H_{tot}^2 \cdot 37.7$$

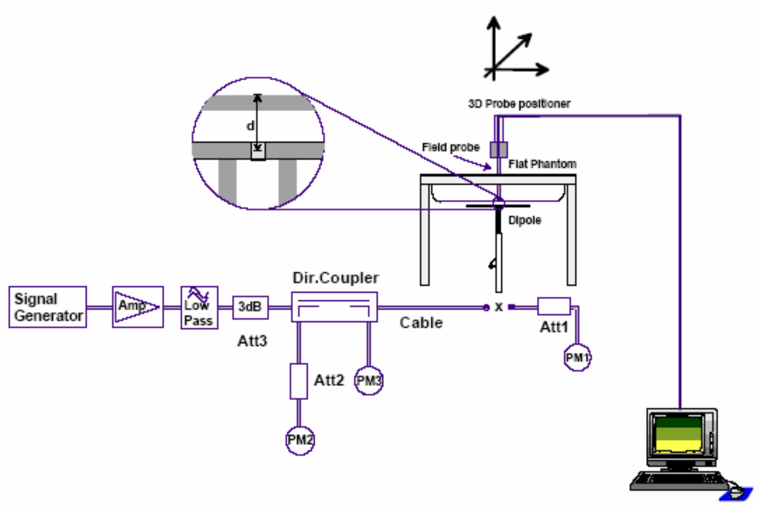
with P_{pwe} = Equivalent power density of a plane wave in mW/cm2
E_{tot} = total electric field strength in V/m
H_{tot} = total magnetic field strength in A/m

SYSTEM PERFORMANCE CHECK

Prior to the SAR evaluation a system check was performed in the planar section of the SAM phantom with an 835MHz, 1990MHz and a 5-6GHz dipole. The dielectric parameters of the simulated brain fluid were measured prior to the system performance check using an 85070D Dielectric Probe Kit and an 8722D Network Analyzer. A forward power of 250mW was applied to the dipole and the system was verified to a tolerance of +10%. All results were normalized to 1W.

Test Date	Equivalent Tissue	SAR 1g (W/kg)		Permittivity Constant εr		Conductivity σ (mho/m)		Ambient Temp. (C)	Fluid Temp. (C)	Fluid Depth (cm)
		Calibrated Target	Measured	IEEE Target	Measured	IEEE Target	Measured			
Dec 27, 2006	5800MHz Body	64.8	67.2	48.2	48.4	6.00	6.39	22.0	21.6	≥15
Dec 28, 2006	2450MHz Body	53.6	55.6	52.7	55.7	1.95	2.03	23.2	21.7	≥15
Dec 28, 2006	5200MHz Body	68.0	68.0	49.0	48.2	5.30	5.60	22.0	21.5	≥15
Jan 02, 2007	835MHz Body	10.9	10.64	55.2	54.9	0.97	0.97	23.1	22.0	≥15
Jan 03, 2007	1900MHz Body	42.0	43.6	53.3	55.6	1.52	1.57	23.0	21.6	≥15

Note: The ambient and fluid temperatures were measured prior to the fluid parameter check and the system performance check. The temperatures listed in the table above were consistent for all measurement periods.



SIMULATED EQUIVALENT TISSUES

Simulated Tissue Mixture (Proprietary)	
Ingredient	**5-6GHz Head and Body**
Water	60-78%
Salt	0.4-3.0%
Emulsifiers	0.5-15.0
Mineral Oil	11.0-36.0

Simulated Tissue Mixture	
Ingredient	**2450MHz Body**
Water	73.3%
DGMBE	26.7%

Simulated Tissue Mixture		
Ingredient	**835MHz Body**	**1900MHz Body**
Water	53.1%	68.8%
DGMBE	N/A	30.8%
Salt	0.9%	0.4%
HEC	1%	N/A
Sugar	44.9%	N/A
Dowicil 75	0.1%	N/A

SAR SAFETY LIMITS

EXPOSURE LIMITS	SAR (W/kg)	
	(General Population / Uncontrolled Exposure Environment)	(Occupational / Controlled Exposure Environment)
Spatial Average (averaged over the whole body)	0.08	0.4
Spatial Peak (averaged over any 1g of tissue)	1.60	8.0
Spatial Peak (hands/wrists/feet/ankles averaged over 10g)	4.0	20.0

Notes:

1. Uncontrolled exposure environments are locations where there is potential exposure of individuals who have no knowledge or control of their potential exposure.

2. Controlled exposure environments are locations where there is potential exposure of individuals who have knowledge of their potential exposure and can exercise control over their exposure.

ROBOT SYSTEM SPECIFICATIONS

1.1. SPECIFICATIONS

Positioner:

Robot:	Staubli Unimation Corp. Robot Model: RX90
Repeatability:	0.02 mm
No. of axis:	6

1.2. DATA ACQUISITION ELECTRONIC (DAE) SYSTEM:

Cell Controller

Processor:	Compaq Evo Clock Speed:2.4 GHz Operating System: Windows XP Professional

Data Converter

Features:	Signal Amplifier, multiplexer, A/D converter, and control logic
Software:	DASY4 software
Connecting Lines:	Optical downlink for data and status info. Optical uplink for commands and clock

Dasy4 Measurement Server

Function:	Real-time data evaluation for field measurements and surface detection
Hardware:	PC/104 166MHz Pentium CPU; 32 MB chipdisk; 64 MB RAM
Connections:	COM1, COM2, DAE, Robot, Ethernet, Service Interface

E-Field Probe

Model:	ET3DV6
Serial No.:	1793
Construction:	Triangular core fiber optic detection system
Frequency:	10 MHz to 6 GHz
Linearity:	± 0.2 dB (30 MHz to 3 GHz)

E-Field Probe

Model:	EX3DV3
Serial No.	3511
Construction:	Triangular core
Frequency:	10 MHz to > 6 GHz
Linearity:	± 0.2 dB (30 MHz to 6 GHz)

1.3. PHANTOM(S):

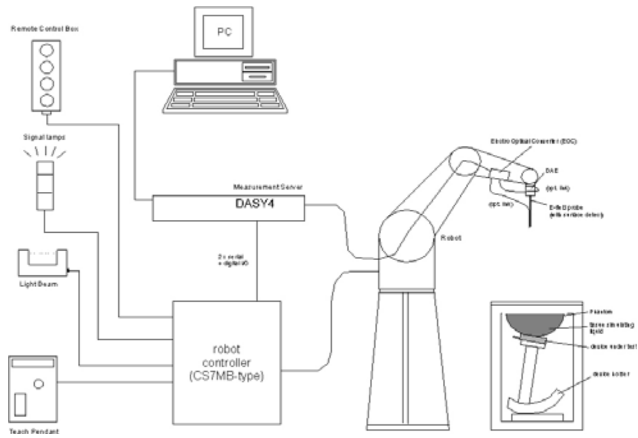
Validation & Evaluation Phantom

Type:	SAM V4.0C
Shell Material:	Fiberglass
Thickness:	2.0 ±0.1 mm
Volume:	Approx. 20 liters

PROBE SPECIFICATIONS EX3DV3

Construction:	Symmetrical design with triangular core Built-in shielding against static charges PEEK enclosure material (resistant to organic solvents, e.g., DGBE)
Calibration:	Basic Broad Band Calibration in air: 10-3000 MHz Conversion Factors (CF) for HSL 900 and HSL 1800 Additional CF for other liquids and frequencies upon request
Frequency:	10 MHz to 3 GHz; Linearity: ± 0.2 dB (30 MHz to 3 GHz)
Directivity:	± 0.3 dB in HSL (rotation around probe axis) ± 0.5 dB in tissue material (rotation normal to probe axis)
Dynamic Range:	10 μW/g to > 100 mW/g; Linearity: ± 0.2 dB (noise: typically < 1 μW/g)
Dimensions:	Overall length: 330 mm (Tip: 20 mm) Tip diameter: 2.5 mm (Body: 12 mm) Typical distance from probe tip to dipole centers: 1 mm
Application:	High precision dosimetric measurements in any exposure scenario (e.g., very strong gradient fields). Only probe which enables compliance testing for frequencies up to 6 GHz with precision of better 30%

SAR Measurement System



Measurement System Diagram

1.4. RX90BL ROBOT

The Stäubli RX90BL Robot is a standard high precision 6-axis robot with an arm extension for accommodating the data acquisition electronics (DAE).

1.5. ROBOT CONTROLLER

The CS7MB Robot Controller system drives the robot motors. The system consists of a power supply, robot controller, and remote control with teach pendant and additional circuitry for robot safety such as warning lamps, etc.

1.6. LIGHT BEAM SWITCH

The Light Beam Switch (Probe alignment tool) allows automatic ”tooling” of the probe. During the process, the actual position of the probe tip with respect to the robot arm is measured as well as the probe length and the horizontal probe offset. The software then corrects all movements, so that the robot coordinates are valid for the probe tip. The repeatability of this process is better than 0.1 mm. If a position has been taught with an aligned probe, the same position will be reached with another aligned probe within 0.1 mm, even if the other probe has different dimensions. During probe rotations, the probe tip will keep its actual position.

1.7. DATA ACQUISITION ELECTRONICS

The Data Acquisition Electronics consists of a highly sensitive electrometer grade preamplifier with auto-zeroing, a channel and gain switching multiplexer, a fast 16-bit A/D converter and a command decoder and control logic unit. Some of the task the DAE performs is signal amplification, signal multiplexing, A/D conversion, and offset measurements. The DAE also contains the mechanical probe-mounting device, which contains two different sensor systems for frontal and sideways probe contacts used for probe collision detection and mechanical surface detection for controlling the distance between the probe and the inner surface of the phantom shell. Transmission from the DAE to the measurement server, via the EOC, is through an optical downlink for data and status information as well as an optical uplink for commands and the clock.

1.8. ELECTO-OPTICAL CONVERTER (EOC)

The Electro-Optical Converter performs the conversion between the 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 connects to, and transfers data to, the DASY4 measurement server. The EOC also contains the fiber optical surface detection system for controlling the distance between the probe and the inner surface of the phantom shell.

1.9. MEASUREMENT SERVER

The Measurement Server performs time critical tasks such as signal filtering, all real-time data evaluation for field measurements and surface detection, controls robot movements, and handles safety operation. The PC-operating system cannot interfere with these time critical processes. A watchdog supervises all connections, and disconnection of any of the cables to the measurement server will automatically disarm the robot and disable all program-controlled robot movements.

1.10. DOSIMETRIC PROBE

Dosimetric Probe is a symmetrical design with triangular core that incorporates three 3 mm long dipoles arranged so that the overall response is close to isotropic. The probe sensors are covered by an outer protective shell, which is resistant to organic solvents i.e. glycol. The probe is equipped with an optical multi-fiber line, ending at the front of the probe tip, for optical surface detection. This line connects to the EOC box on the robot arm and provides automatic detection of the phantom surface. The optical surface detection works in transparent liquids and on diffuse reflecting surfaces with a repeatability of better than ±0.1mm.

1.11. SAM PHANTOM

The SAM (Specific Anthropomorphic Mannequin) twin phantom is a fiberglass shell phantom with 2mm shell thickness (except the ear region where shell thickness increases to 6mm) integrated into a wooden table. The shape of the shell corresponds to the phantom defined by SCC34-SC2. It enables the dosimetric evaluation of left hand, right hand phone usage as well as body mounted usage at the flat phantom region. The flat section is also used for system validation and the length and width of the flat section are at least 0.75 λO and 0.6 λO respectively at frequencies of 824 MHz and above (λO = wavelength in air).

Reference markings on the phantom top allow the complete setup of all predefined phantom positions and measurement grids by manually teaching three points in the robot. A white cover is provided to cover the phantom during off-periods preventing water evaporation and changes in the liquid parameters. Free space scans of devices on the cover are possible. The phantom is filled with a tissue simulating liquid to a depth of at least 15 cm at each ear reference point. The bottom plate of the wooden table contains three pair of bolts for locking the device holder.

1.12. PLANAR PHANTOM

The planar phantom is constructed of Plexiglas material with a 2.0 mm shell thickness for face-held and body-worn SAR evaluations of handheld radio transceivers. The planar phantom is mounted on the wooden table of the DASY4 system.

1.13. VALIDATION PLANAR PHANTOM

The validation planar phantom is constructed of Plexiglas material with a 6.0 mm shell thickness for system validations at 450MHz and below. The validation planar phantom is mounted on the wooden table of the DASY4 system.

1.14. DEVICE HOLDER

The device holder is designed to cope with the different measurement positions in the three sections of the SAM phantom given in the standard. It has two scales, one for device rotation (with respect to the body axis) and one for device inclination (with respect to the line between the ear openings). The rotation center for both scales is the ear opening, thus the device needs no repositioning when changing the angles. The plane between the ear openings and the mouth tip has a rotation angle of 65°.

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

The dielectric properties of the liquid conform to all the tabulated values [2-5]. Liquids are prepared according to Annex A and dielectric properties are measured according to Annex B.

1.15. SYSTEM VALIDATION KITS

Power Capability: > 100 W (f < 1GHz); > 40 W (f > 1GHz)

Construction: Symmetrical dipole with l/4 balun Enables measurement of feed point impedance with NWA Matched for use near flat phantoms filled with brain simulating solutions Includes distance holder and tripod adaptor.

Frequency: 300, 450, 835, 1900, 2450 MHz, 5-6GHz

Return loss: >20 dB at specified validation position

Dimensions:
300 MHz Dipole: Length: 396mm; Overall Height:430 mm; Diameter: 6 mm
450 MHz Dipole: Length: 270 mm; Overall Height: 347 mm; Diameter: 6 mm
835 MHz Dipole: Length: 161 mm; Overall Height: 270 mm; Diameter: 3.6 mm
1900 MHz Dipole: Length: 68 mm; Overall Height: 219 mm; Diameter: 3.6 mm
2450 MHz Dipole: Length: 51.5 mm; Overall Height: 300 mm; Diameter: 3.6 mm
5-6GHz Dipole: Length: 26.0 mm; Overall Height: 170 mm; Diameter: 3.6 mm

TEST EQUIPMENT LIST

Test Equipment	Serial Number	Calibration Date
DASY4 System		
Robot	FO3/SX19A1/A/01	N/A
ETVDV6	1793	Sept 2005
EX3DV3	3511	Jan 2006
DAE3	584	Sept 2005
300MHz Dipole	003	Dec 2005
450MHz Dipole	004	Dec 2005
835MHz Dipole	493	Oct 2005
1900MHz Dipole	001	Dec 2006
2450MHz Dipole	002	Mar 2006
5-6GHz Dipole	001	Aug 2006
SAM Phantom V4.0C	N/A	N/A
EUT Planar Phantom	N/A	N/A
Validation Phantom	N/A	N/A
85070D Dielectric Probe Kt	N/A	N/A
83650B Signal Generator	3844A00910	June 2006
E5515C Agilent Call Box	BG46160163	April 2006
HP E4418B Power Meter	GB40205140	June 2006
HP 8482A Power Sensor	2607A11286	June 2006
HP 8722D Vector Network Analyzer	3S36140188	March 2006
Anritsu Power Meter ML2488A	6K00001832	June 2006
Anritsu Power Sensor	030864	Jan 2006
Mini-Circuits Power Amplifier	D111903#8	N/A

MEASUREMENT UNCERTANTIES

UNCERTAINTY ASSESSMENT 300MHz-3GHz

Error Description	Tol. ±%	Prob. Dist.	Div.	c_i 1g	c_i 10g	Std Unc ±% (1g)	Std Unc ±% (10g)	v_i or v_{eff}
Measurement System								
Probe calibration	4.8	N	1	1	1	4.8	4.8	∞
Axial isotropy of the probe	4.7	R	√3	0.7	0.7	1.9	1.9	∞
Spherical isotropy of the probe	9.6	R	√3	0.7	0.7	3.9	3.9	∞
Boundary effects	1.0	R	√3	1	1	4.8	4.8	∞
Probe linearity	4.7	R	√3	1	1	2.7	2.7	∞
Detection limit	1.0	R	√3	1	1	0.6	0.6	∞
Readout electronics	1.0	N	1	1	1	1.0	1.0	∞
Response time	0.8	R	√3	1	1	0.5	0.5	∞
Integration time	2.6	R	√3	1	1	0.8	0.8	∞
RF ambient conditions	3.0	R	√3	1	1	0.43	0.43	∞
Mech. constraints of robot	0.4	R	√3	1	1	0.2	0.2	∞
Probe positioning	2.9	R	√3	1	1	1.7	1.7	∞
Extrapolation & integration	1.0	R	√3	1	1	2.3	2.3	∞
Test Sample Related								
Device positioning	2.9	N	1	1	1	2.23	2.23	145
Device holder uncertainty	3.6	N	1	1	1	5.0	5.0	5
Power drift	5.0	R	√3			2.9	2.9	∞
Phantom and Setup								
Phantom uncertainty	4.0	R	√3	1	1	2.3	2.3	∞
Liquid conductivity (target)	5.0	R	√3	0.64	0.43	1.8	1.2	∞
Liquid conductivity (measured)	2.5	N	1	0.64	0.43	1.6	1.1	∞
Liquid permittivity (target)	5.0	R	√3	0.6	0.5	1.7	1.4	∞
Liquid permittivity (measured)	2.5	N	1	0.6	0.5	1.5	1.2	∞
Combined Standard Uncertainty (k=1)		RSS				10.3	10.0	
Expanded Uncertainty (k=2) 95% Confidence Level						20.6	20.1	

Table: Worst-case uncertainty for DASY4 assessed according to IEEE P1528.
The budget is valid for the frequency range 300MHz to 3GHz and represents a worst-case analysis.

UNCERTAINTY ASSESSMENT 3-6GHz

Error Description	Tol. ±%	Prob. Dist.	Div.	c_i 1g	c_i 10g	Std Unc ±% (1g)	Std Unc ±% (10g)	v_i or v_{eff}
Measurement System								
Probe calibration	4.8	N	1	1	1	8.3	8.3	∞
Axial isotropy of the probe	4.7	R	√3	0.7	0.7	1.9	1.9	∞
Spherical isotropy of the probe	9.6	R	√3	0.7	0.7	3.9	3.9	∞
Boundary effects	1.0	R	√3	1	1	0.6	0.6	∞
Probe linearity	4.7	R	√3	1	1	2.7	2.7	∞
Detection limit	1.0	R	√3	1	1	0.6	0.6	∞
Readout electronics	1.0	N	1	1	1	1.0	1.0	∞
Response time	0.8	R	√3	1	1	0.5	0.5	∞
Integration time	2.6	R	√3	1	1	1.5	1.5	∞
RF ambient conditions	3.0	R	√3	1	1	1.7	1.7	∞
Mech. constraints of robot	0.4	R	√3	1	1	0.2	0.2	∞
Probe positioning	2.9	R	√3	1	1	1.7	1.7	∞
Extrapolation & integration	1.0	R	√3	1	1	0.6	0.6	∞
Test Sample Related								
Device positioning	2.9	N	1	1	1	2.9	2.9	145
Device holder uncertainty	3.6	N	1	1	1	3.6	3.6	5
Power drift	5.0	R	√3			2.9	2.9	∞
Phantom and Setup								
Phantom uncertainty	4.0	R	√3	1	1	2.3	2.3	∞
Liquid conductivity (target)	5.0	R	√3	0.64	0.43	1.8	1.2	∞
Liquid conductivity (measured)	2.5	N	1	0.64	0.43	1.6	1.1	∞
Liquid permittivity (target)	5.0	R	√3	0.6	0.5	1.7	1.4	∞
Liquid permittivity (measured)	2.5	N	1	0.6	0.5	1.5	1.2	∞
Combined Standard Uncertainty (k=1)		RSS				12.3	12.1	
Expanded Uncertainty (k=2) 95% Confidence Level						24.6	24.2	

Table: Worst-case uncertainty for DASY4 assessed according to IEEE P1528.
The budget is valid for the frequency range 3-6GHz and represents a worst-case analysis.

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EUT PHOTOS

Photograph 1. Keyboard side of EUT with whip extended

Photograph 2. Keyboard side of EUT with whip collapsed

Photograph 3. Back Side of EUT

Photograph 4. Back of EUT with Battery Removed

Photograph 5. 1X Standard Battery

Photograph 6. 2X Extended Battery

Photograph 7. Bottom of EUT

Photograph 8. Top of EUT

Photograph 9. Left Side of EUT

Photograph 10. Right Side of EUT

Photograph 11. Holster without EUT **Photograph 12. Holster with EUT**

Photograph 13. Back Side of Holster

TEST SET-UP

Photograph 14. EUT with Standard Battery and Whip Extended

Photograph 15. EUT with Standard Battery and Whip Extended

Photograph 16. EUT with Extended Battery and Whip Extended

Photograph 17. EUT with Extended Battery and Whip Extended

Photograph 18. EUT with Standard Battery and External Power

Photograph 19. EUT with Standard Battery and External Power

Photograph 20.   EUT in Holster with Standard Battery

Photograph 21. EUT in Holster with Standard Battery

APPENDIX A - SAR MEASUREMENT DATA

Mid Ch/836.52MHz/Whip Antenna/Standard Battery

Date/Time: 1/3/2007 10:14:36 AM

DUT: OQO Model 02; Type: Mini Computer; Serial:EVT3F065

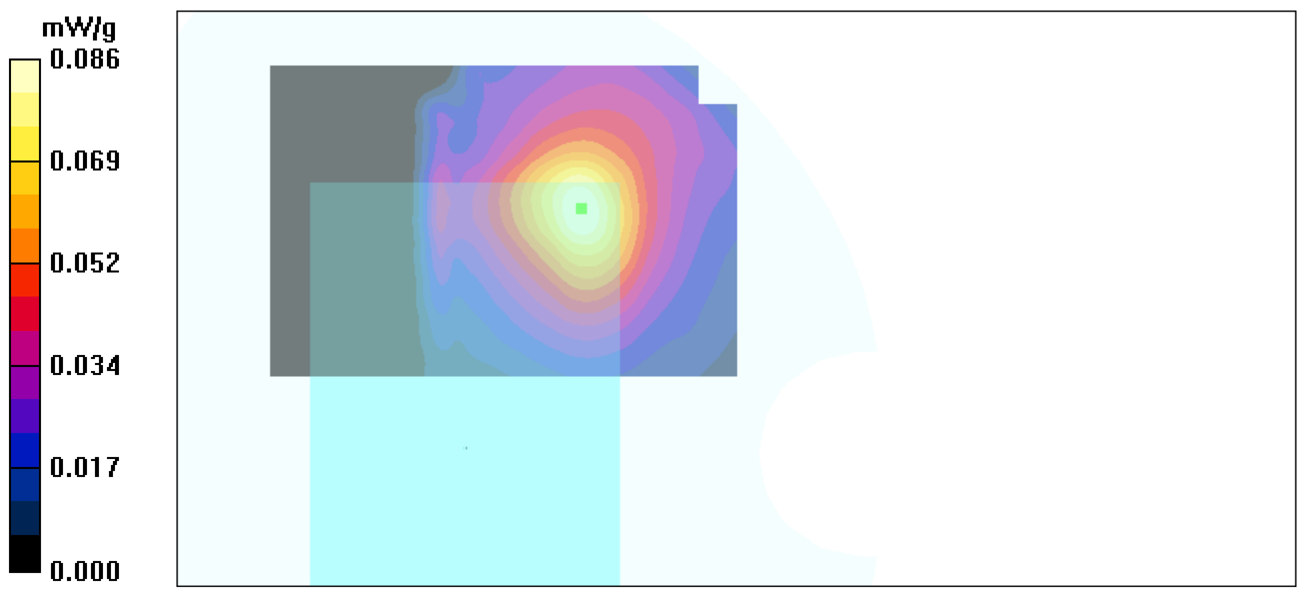
Medium Notes: Ambient Temp: 23.1 deg C; Fluid Temp: 22.0 deg C

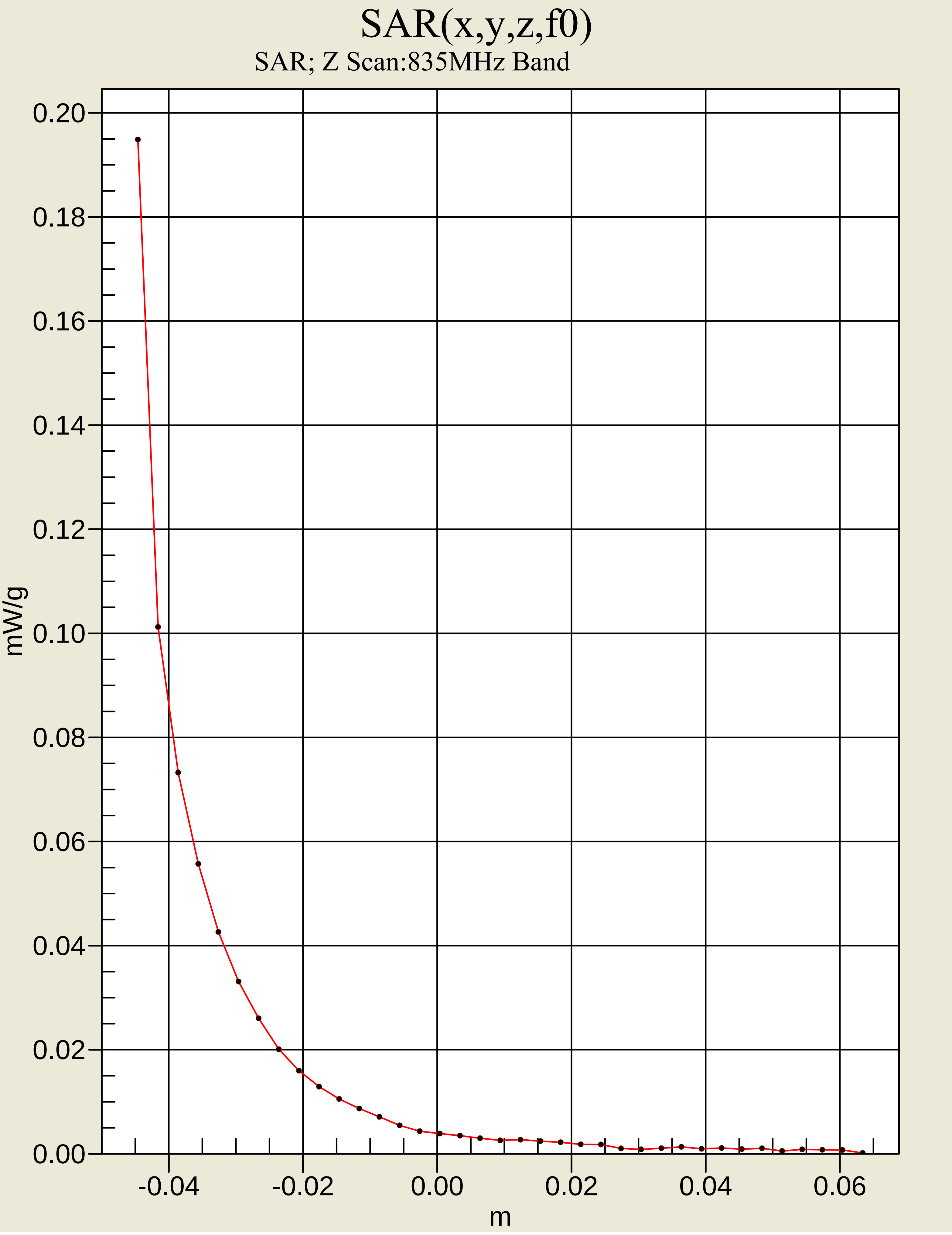
Communication System: CDMA; ; Frequency: 835 MHz;Duty Cycle: 1:1
Medium: M835 Medium parameters used: f = 835 MHz; σ = 0.97 mho/m; ε_r = 54.9; ρ = 1000 kg/m^3
Phantom section: Flat Section

Probe: EX3DV3 - SN3511; ConvF(9.55, 9.55, 9.55); Calibrated: 1/23/2006
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE3 Sn584; Calibrated: 9/22/2005
Phantom: SAM with CRP; Type: SAM; Serial: TP 1310
Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Area Scan (121x81x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.086 mW/g

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 1.67 V/m; Power Drift = 0.23 dB
Peak SAR (extrapolated) = 0.173 W/kg
SAR(1 g) = 0.094 mW/g; SAR(10 g) = 0.056 mW/g
Maximum value of SAR (measured) = 0.103 mW/g





SAR(x,y,z,f0)
SAR; Z Scan:835MHz Band
0.20
0.18
0.16
0.14
0.12
0.10
0.08
0.06
0.04
0.02
0.00
mW/g
-0.04
-0.02
0.00
0.02
0.04
0.06
m

Mid Ch/836.52MHz/internal antenna/Standard battery

Date/Time: 1/3/2007 9:29:49 AM

DUT: OQO Model 02; Type: Mini Computer; Serial:EVT3F065

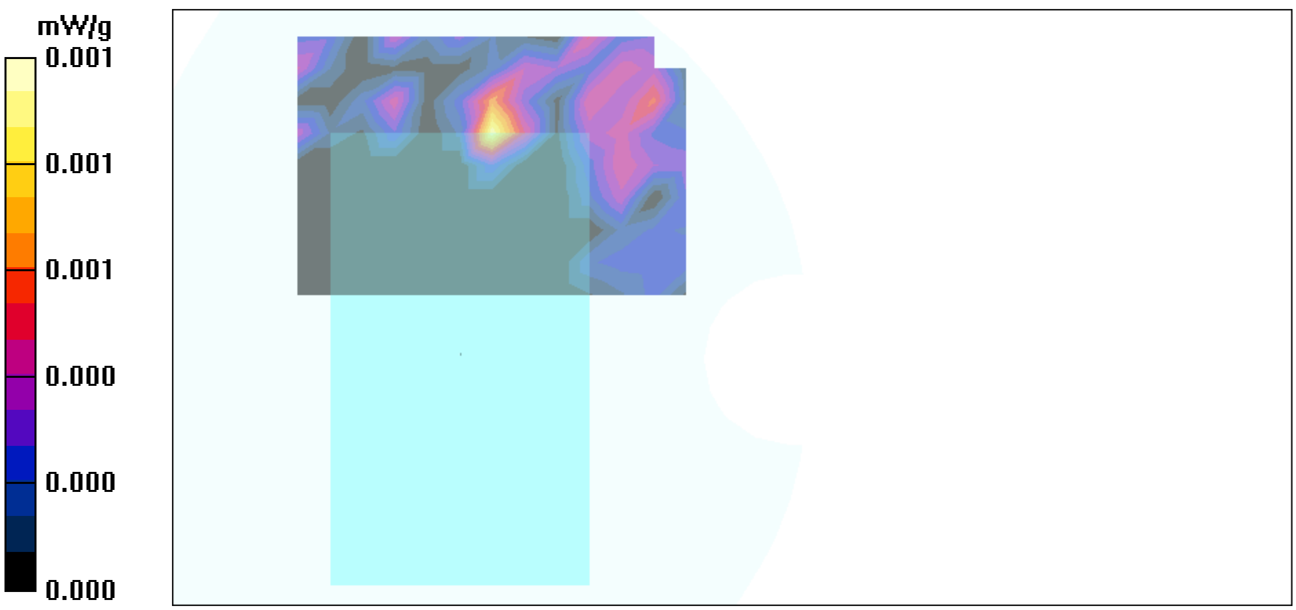
Medium Notes: Ambient Temp: 23.1 deg C; Fluid Temp: 22.0 deg C

Communication System: CDMA; ; Frequency: 835 MHz;Duty Cycle: 1:1
Medium: M835 Medium parameters used: f = 835 MHz; σ = 0.97 mho/m; ε_r = 54.9; ρ = 1000 kg/m^3
Phantom section: Flat Section

Probe: EX3DV3 - SN3511; ConvF(9.55, 9.55, 9.55); Calibrated: 1/23/2006
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE3 Sn584; Calibrated: 9/22/2005
Phantom: SAM with CRP; Type: SAM; Serial: TP 1310
Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Area Scan (13x9x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.001 mW/g

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 0.001 V/m; Power Drift = 0.1 dB
Peak SAR (extrapolated) = 0.005 W/kg
SAR(1 g) = 0.00138 mW/g; SAR(10 g) = 0.00036 mW/g
Maximum value of SAR (measured) = 0.002 mW/g



Mid Ch/836.52MHz/External Power/Standard Battery

Date/Time: 1/3/2007 11:04:36 AM

DUT: OQO Model 02; Type: Mini Computer; Serial: ETT3F065

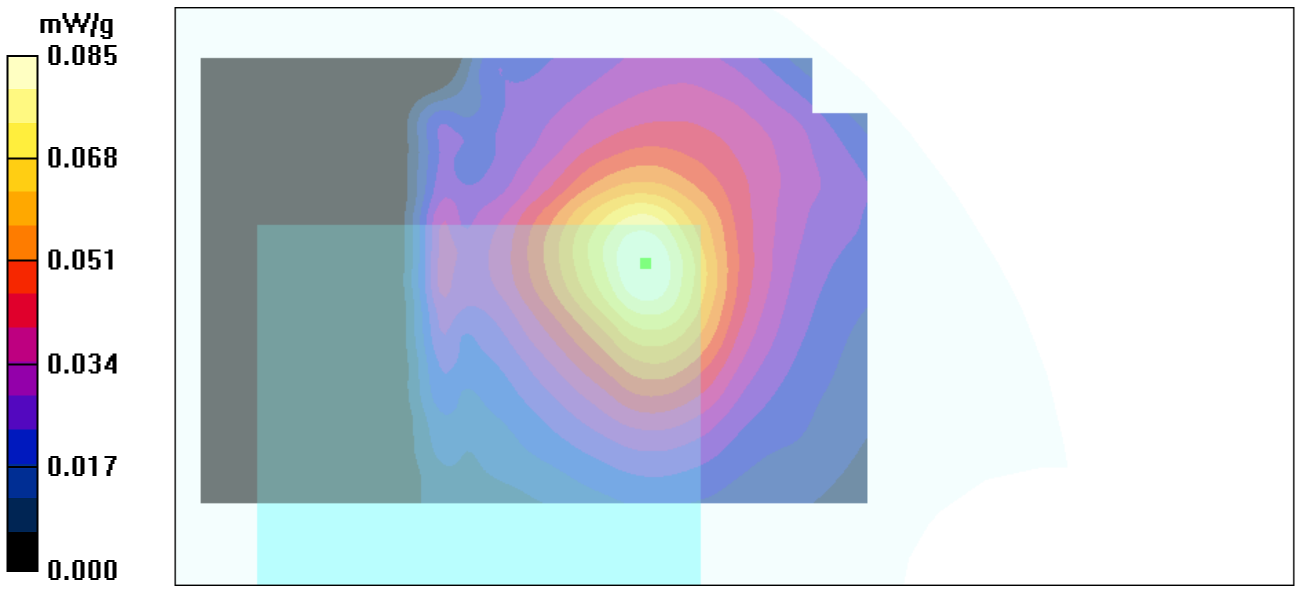
Medium Notes: Ambient Temp: 23.1 deg C; Fluid Temp: 22.0 deg C

Communication System: CDMA; ; Frequency: 835 MHz;Duty Cycle: 1:1
Medium: M835 Medium parameters used: f = 835 MHz; σ = 0.97 mho/m; ε_r = 54.9; ρ = 1000 kg/m^3
Phantom section: Flat Section

- Probe: EX3DV3 - SN3511; ConvF(9.55, 9.55, 9.55); Calibrated: 1/23/2006
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn584; Calibrated: 9/22/2005
- Phantom: SAM with CRP; Type: SAM; Serial: TP 1310
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

Area Scan (121x81x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.085 mW/g

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 1.67 V/m; Power Drift = -0.09 dB
Peak SAR (extrapolated) = 0.171 W/kg
SAR(1 g) = 0.093 mW/g; SAR(10 g) = 0.055 mW/g
Maximum value of SAR (measured) = 0.102 mW/g



Mid Ch/1880MHz/Whip Antenna/Standard Battery

Date/Time: 1/2/2007 8:24:15 AM

DUT: OQO Model 02; Type: Mini Computer; Serial:EVT3F065

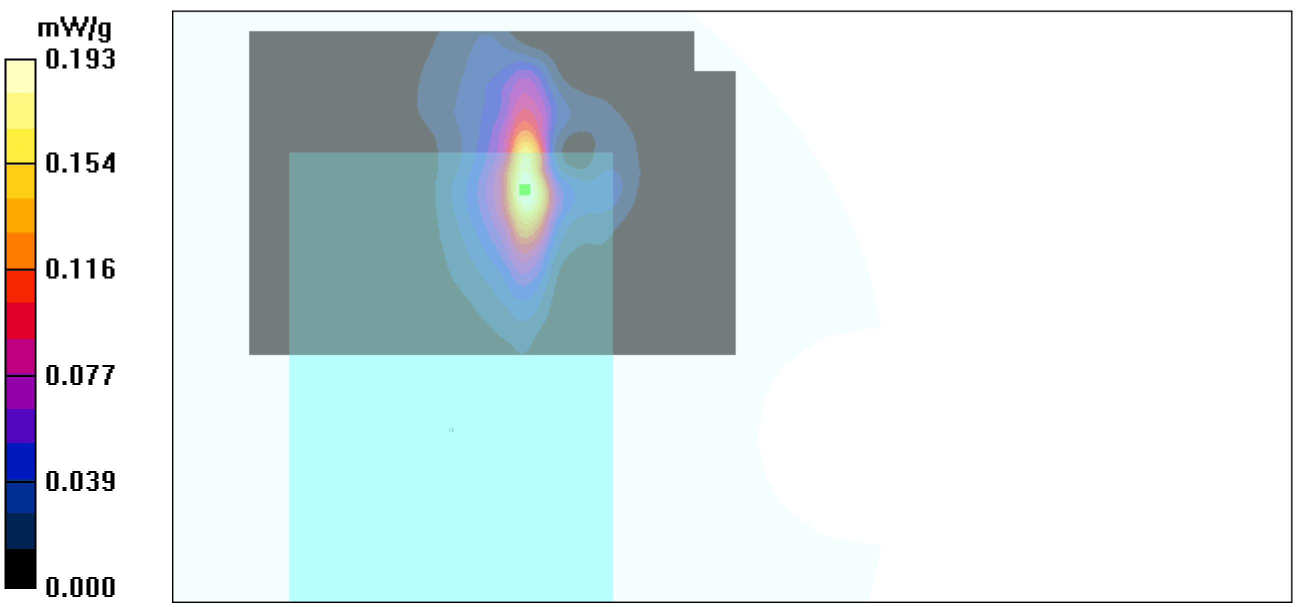
Medium Notes: Ambient Temp: 23.2 deg C; Fluid Temp: 21.7 deg C

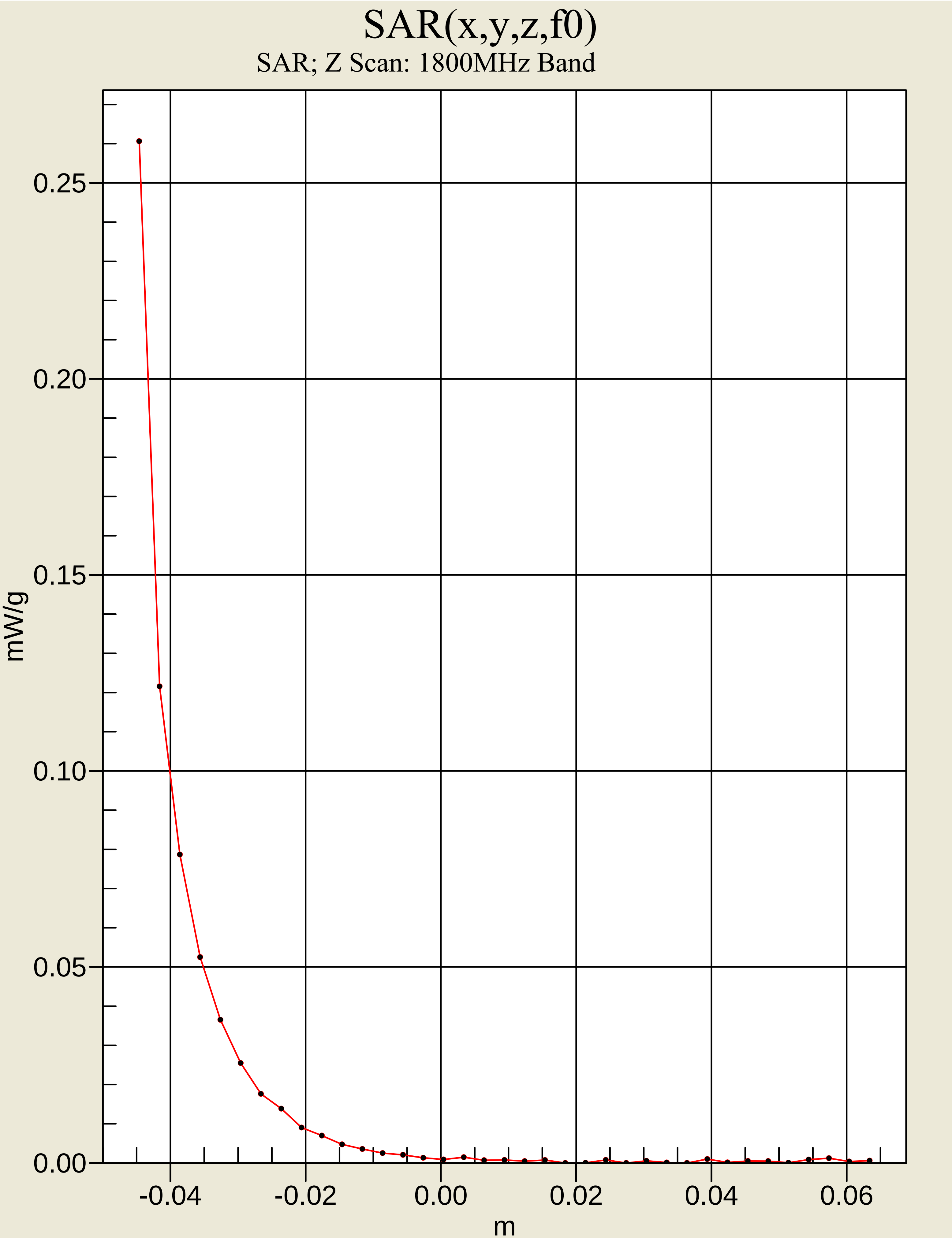
Communication System: CDMA; ; Frequency: 1800 MHz;Duty Cycle: 1:1
Medium: M1800 Medium parameters used: f = 1800 MHz; σ = 1.57 mho/m; ε_r = 55.6; ρ = 1000 kg/m^3
Phantom section: Flat Section

Probe: EX3DV3 - SN3511; ConvF(8.14, 8.14, 8.14); Calibrated: 1/23/2006
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE3 Sn584; Calibrated: 9/22/2005
Phantom: SAM with CRP; Type: SAM; Serial: TP 1310
Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Area Scan (121x81x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.193 mW/g

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 0.279 V/m; Power Drift = -0.12 dB
Peak SAR (extrapolated) = 0.512 W/kg
SAR(1 g) = 0.249 mW/g; SAR(10 g) = 0.111 mW/g
Maximum value of SAR (measured) = 0.277 mW/g




SAR(x,y,z,f0)
SAR; Z Scan: 1800MHz Band
mW/g
0.25
0.20
0.15
0.10
0.05
0.00
-0.04
-0.02
0.00
0.02
0.04
0.06
m

Mid CH/1880MHz/Whip Antenna/Extended Battery

Date/Time: 1/2/2007 8:59:41 AM

DUT: OQO Model 02; Type: Mini Computer; Serial: EVT3F065

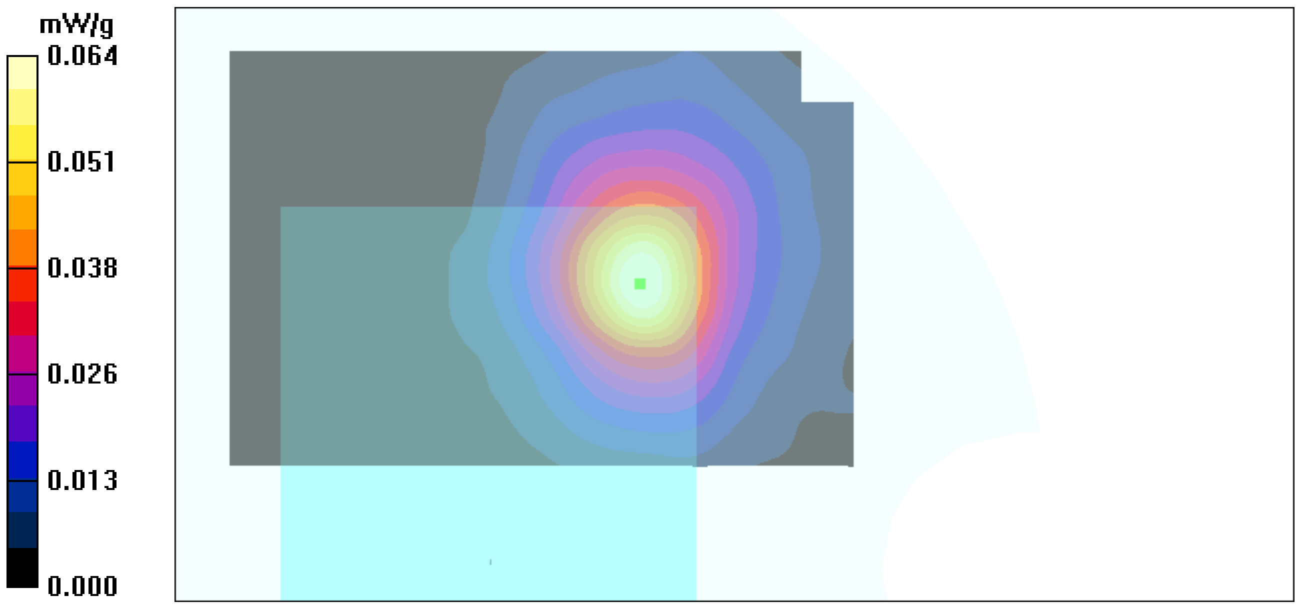
Medium Notes: Ambient Temp: 23.2 deg C; Fluid Temp: 21.7 deg C

Communication System: CDMA; ; Frequency: 1800 MHz;Duty Cycle: 1:1
Medium: M1800 Medium parameters used: f = 1800 MHz; σ = 1.57 mho/m; ε_r = 55.6; ρ = 1000 kg/m^3
Phantom section: Flat Section

- Probe: EX3DV3 - SN3511; ConvF(8.14, 8.14, 8.14); Calibrated: 1/23/2006
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn584; Calibrated: 9/22/2005
- Phantom: SAM with CRP; Type: SAM; Serial: TP 1310
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 172

Area Scan (121x81x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.064 mW/g

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 0.468 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 0.104 W/kg
SAR(1 g) = 0.055 mW/g; SAR(10 g) = 0.029 mW/g
Maximum value of SAR (measured) = 0.062 mW/g



Low Ch/1851.25MHz/Whip Antenna/Standard Battery

Date/Time: 1/2/2007 9:32:33 AM

DUT: OQO Model 02; Type: Mini Computer; Serial: EVT3F065

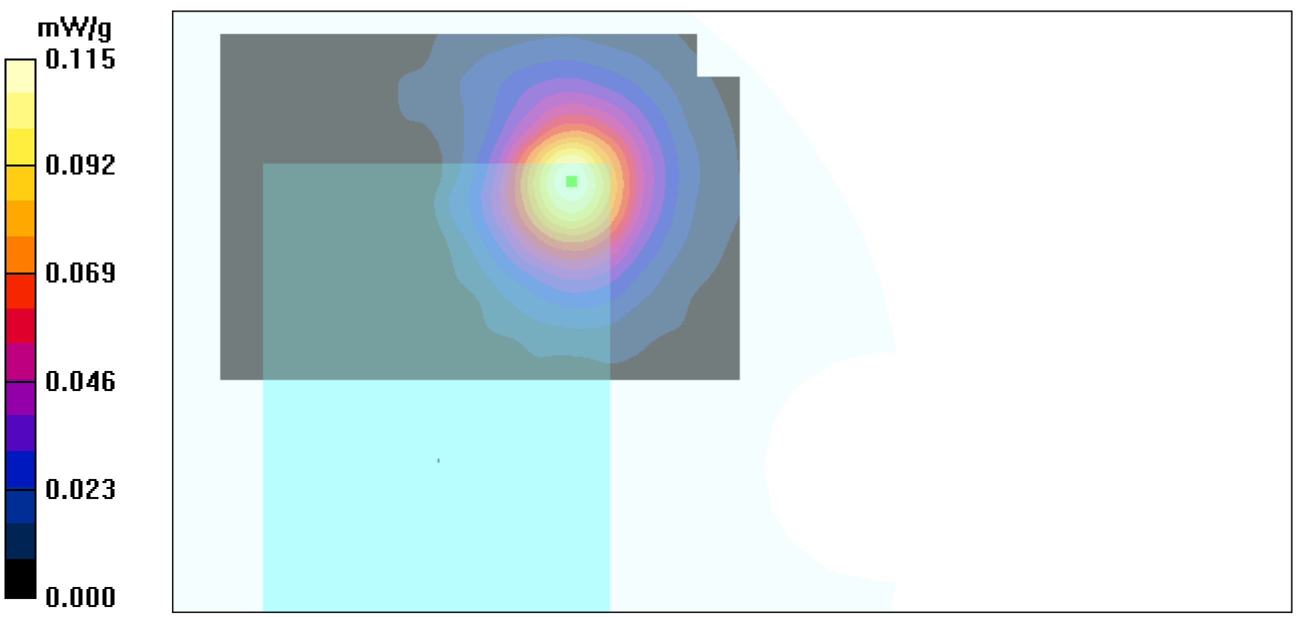
Medium Notes: Ambient Temp: 23.2 deg C; Fluid Temp: 21.7 deg C

Communication System: CDM Frequency: 1800 MHz;Duty Cycle: 1:1
Medium: M1800 Medium parameters used: f = 1800 MHz; σ = 1.57 mho/m; ε_r = 55.6; ρ = 1000 kg/m^3
Phantom section: Flat Section

Probe: EX3DV3 - SN3511; ConvF(8.14, 8.14, 8.14); Calibrated: 1/23/2006
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE3 Sn584; Calibrated: 9/22/2005
Phantom: SAM with CRP; Type: SAM; Serial: TP 1310
Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Area Scan (121x81x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.115 mW/g

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 0.437 V/m; Power Drift = 0.103 dB
Peak SAR (extrapolated) = 0.221 W/kg
SAR(1 g) = 0.106 mW/g; SAR(10 g) = 0.054 mW/g
Maximum value of SAR (measured) = 0.122 mW/g



High Ch/1909.75MHz/Whip Antenna/Standard Battery

Date/Time: 1/2/2007 10:19:41 AM

DUT: OQO Bottom Side; Type: WLAN Bottom; Serial: EVT3F065

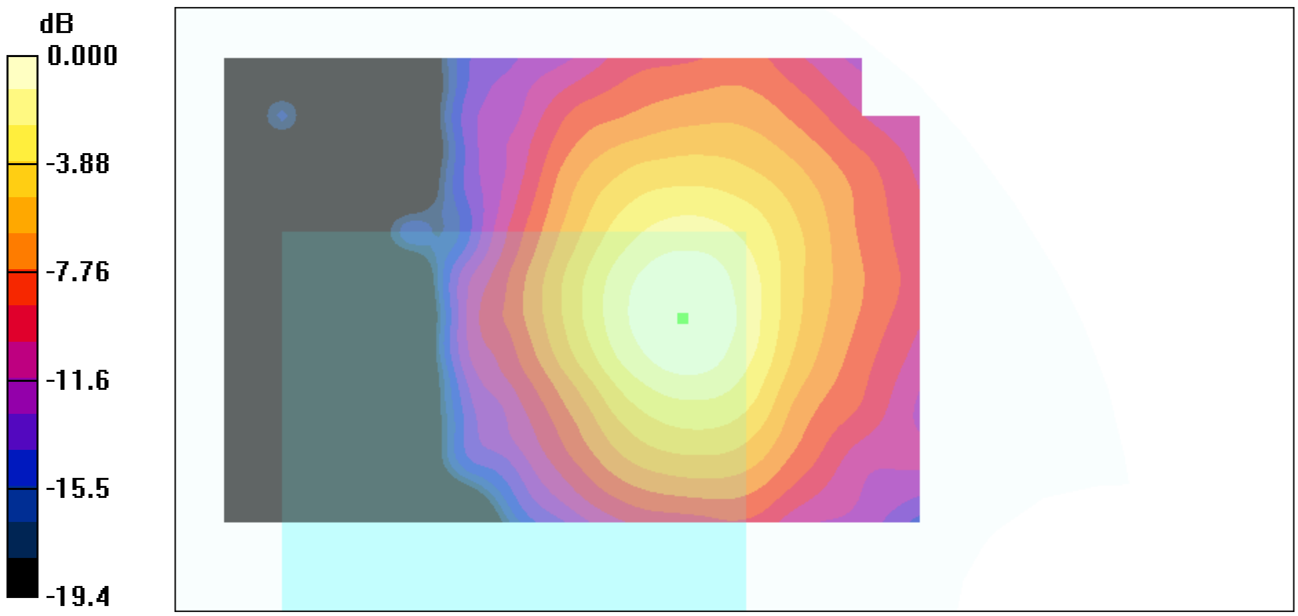
Medium Notes: Ambient Temp: 23.2 deg C; Fluid Temp: 21.7 deg C

Communication System: CDMA; ; Frequency: 1800 MHz;Duty Cycle: 1:1
Medium: M1800 Medium parameters used: f = 1800 MHz; σ = 1.57 mho/m; ε_r = 55.6; ρ = 1000 kg/m^3
Phantom section: Flat Section

- Probe: EX3DV3 - SN3511; ConvF(8.14, 8.14, 8.14); Calibrated: 1/23/2006
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn584; Calibrated: 9/22/2005
- Phantom: SAM with CRP; Type: SAM; Serial: TP 1310
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

Area Scan (121x81x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.069 mW/g

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 0.488 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 0.122 W/kg
SAR(1 g) = 0.066 mW/g; SAR(10 g) = 0.031 mW/g
Maximum value of SAR (measured) = 0.068 mW/g



0 dB = 0.068mW/g

Mid Ch/1880MHz/Internal Antenna/Standard Battery

Date/Time: 1/2/2007 10:48:35 AM

DUT: OQO Model 02; Type: Mini Computer; Serial: EVT3F065

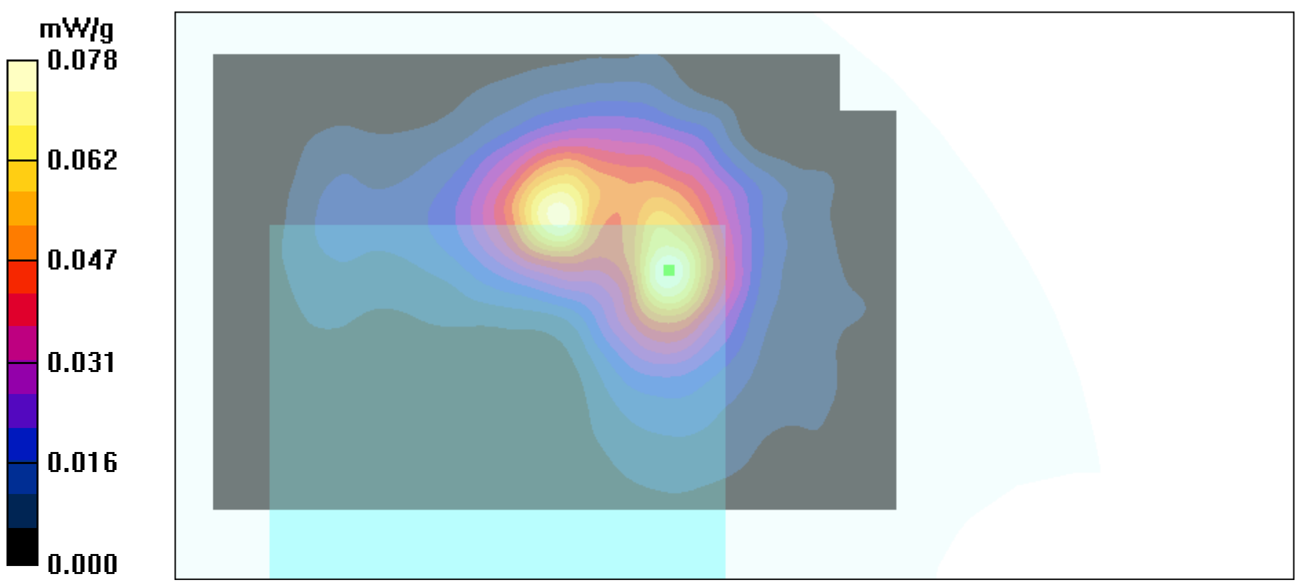
Medium Notes: Ambient Temp: 23.2 deg C; Fluid Temp: 21.7 deg C

Communication System: CDMA; Frequency: 1800 MHz;Duty Cycle: 1:1
Medium: M1800 Medium parameters used: f = 1800 MHz; σ = 1.57 mho/m; ε_r = 55.6; ρ = 1000 kg/m^3
Phantom section: Flat Section

- Probe: EX3DV3 - SN3511; ConvF(8.14, 8.14, 8.14); Calibrated: 1/23/2006
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn584; Calibrated: 9/22/2005
- Phantom: SAM with CRP; Type: SAM; Serial: TP 1310
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 172

Area Scan (121x81x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.078 mW/g

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 0.324 V/m; Power Drift = 0.22 dB
Peak SAR (extrapolated) = 0.169 W/kg
SAR(1 g) = 0.068 mW/g; SAR(10 g) = 0.032 mW/g
Maximum value of SAR (measured) = 0.082 mW/g



Mid Ch/1880MHz/Internal Antenna/Standard Battery/Holster

Date/Time: 1/2/2007 11:10:45 AM

DUT: OQO Model 02; Type: Mini Computer; Serial: EVT3F065

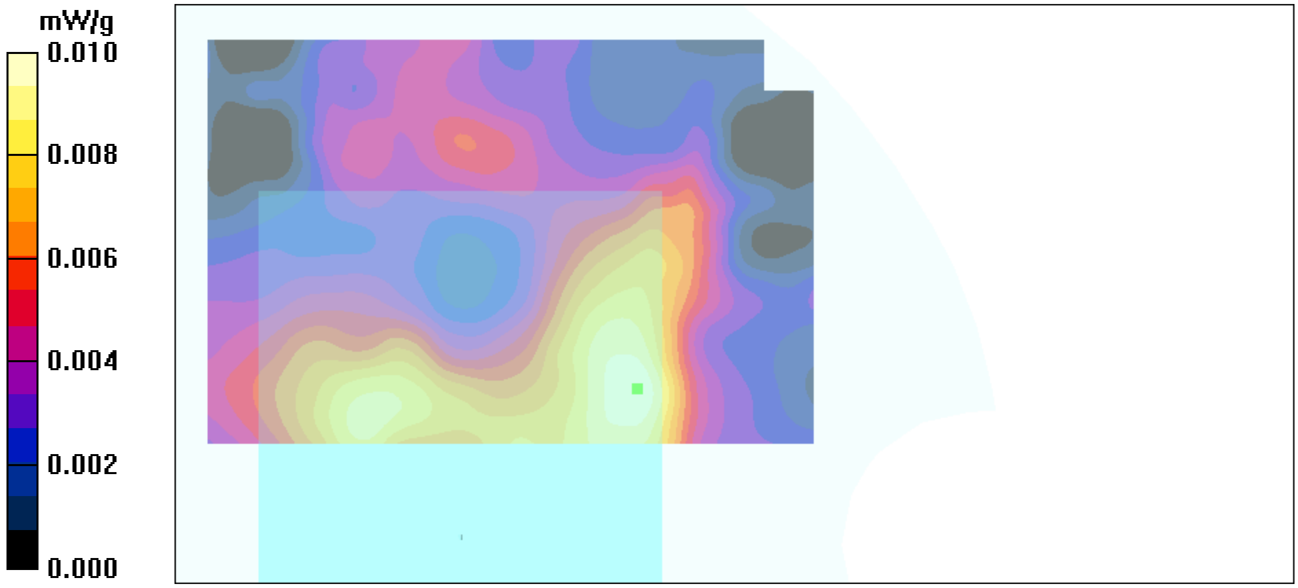
Medium Notes: Ambient Temp: 23.2 deg C; Fluid Temp: 21.7 deg C

Communication System: CDMA; Frequency: 1800 MHz;Duty Cycle: 1:1
Medium: M1800 Medium parameters used: f = 1800 MHz; σ = 1.57 mho/m; ε_r = 55.6; ρ = 1000 kg/m^3
Phantom section: Flat Section

- Probe: EX3DV3 - SN3511; ConvF(8.14, 8.14, 8.14); Calibrated: 1/23/2006
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn584; Calibrated: 9/22/2005
- Phantom: SAM with CRP; Type: SAM; Serial: TP 1310
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 172

Area Scan (121x81x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.010 mW/g

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 1.27 V/m; Power Drift = -0.19 dB
Peak SAR (extrapolated) = 0.015 W/kg
SAR(1 g) = 0.00871 mW/g; SAR(10 g) = 0.00542 mW/g
Maximum value of SAR (measured) = 0.010 mW/g



Mid Ch/1880MHz/Whip Antenna/External Power/Standard Battery

Date/Time: 1/2/2007 11:54:33 AM

DUT: OQO Model 02; Type: Mini Computer; Serial: EVT3F065

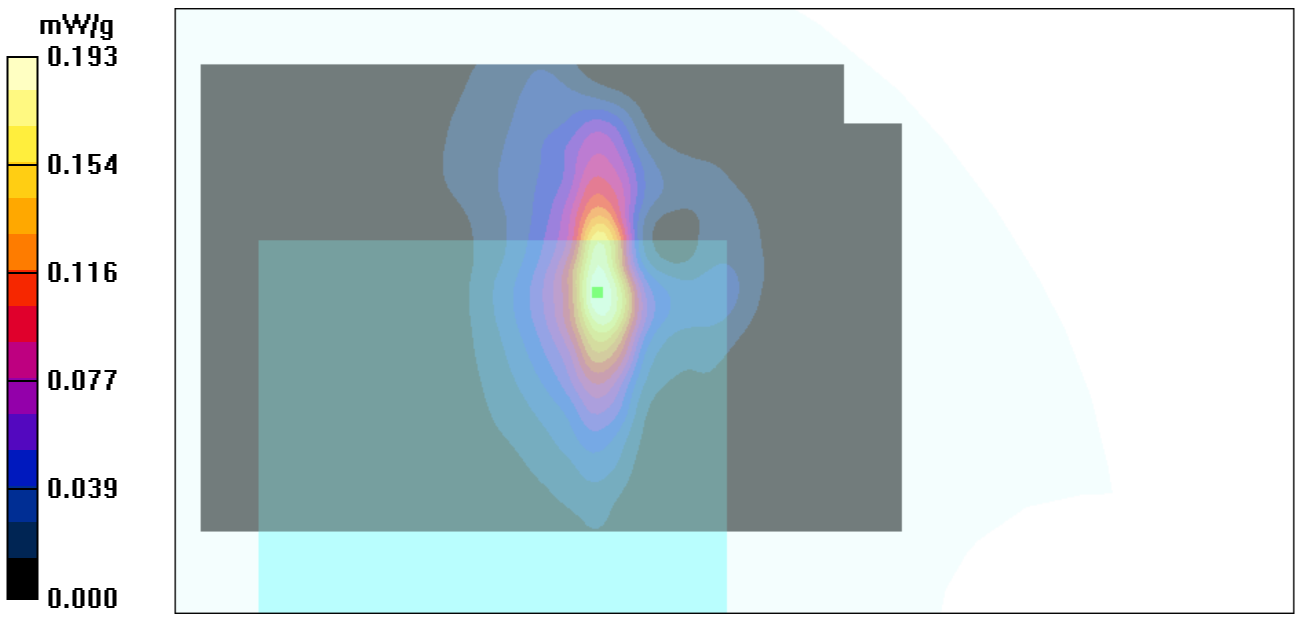
Medium Notes: Ambient Temp: 23.2 deg C; Fluid Temp: 21.7 deg C

Communication System: CDMA; ; Frequency: 1800 MHz;Duty Cycle: 1:1
Medium: M1800 Medium parameters used: f = 1800 MHz; σ = 1.57 mho/m; ε_r = 55.6; ρ = 1000 kg/m^3
Phantom section: Flat Section

- Probe: EX3DV3 - SN3511; ConvF(8.14, 8.14, 8.14); Calibrated: 1/23/2006
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn584; Calibrated: 9/22/2005
- Phantom: SAM with CRP; Type: SAM; Serial: TP 1310
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

Area Scan (121x81x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.188 mW/g

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 0.266 V/m; Power Drift = -0.19 dB
Peak SAR (extrapolated) = 0.507 W/kg
SAR(1 g) = 0.237 mW/g; SAR(10 g) = 0.109 mW/g
Maximum value of SAR (measured) = 0.267 mW/g



Mid Ch/2437MHz/Standard Battery/b-mode

Date/Time: 12/28/2006 2:31:29 PM

DUT: OQO Model 02; Type: Mini Computer; Serial: EVT3F065

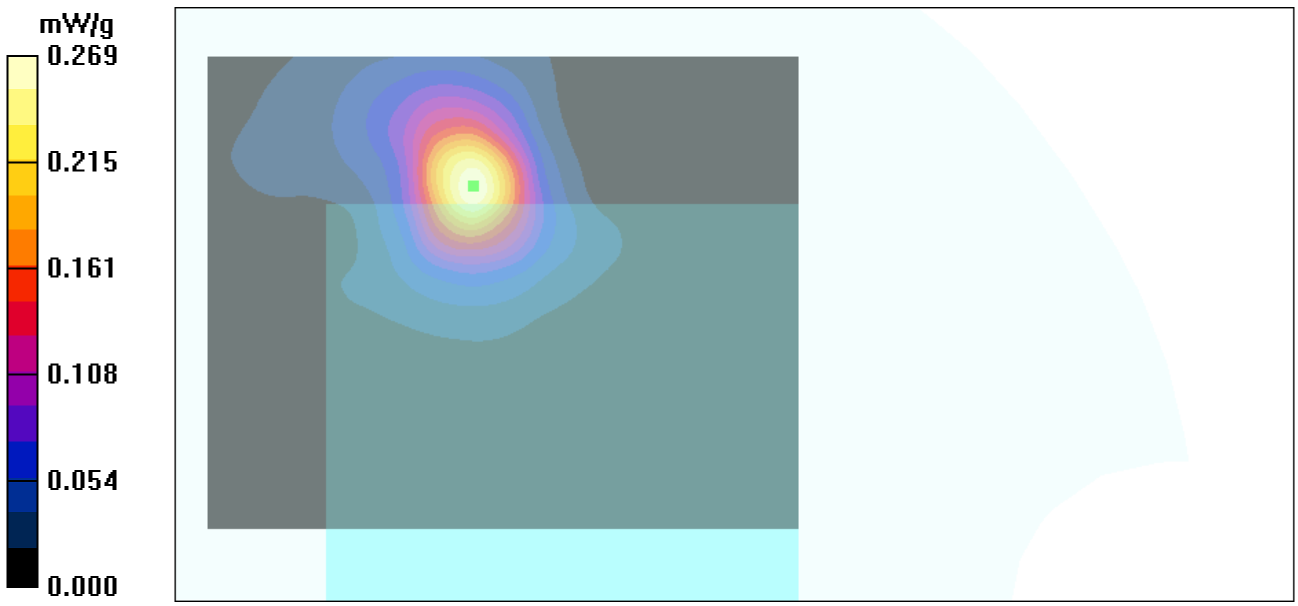
Medium Notes: Ambient Temp: 23.2 deg C; Fluid Temp: 21.7 deg C

Communication System: DSSS; Frequency: 2450 MHz;Duty Cycle: 1:1
Medium: M2450 Medium parameters used: f = 2450 MHz; σ = 2.03 mho/m; ε_r = 55.7; ρ = 1000 kg/m^3
Phantom section: Flat Section

- Probe: EX3DV3 - SN3511; ConvF(7.8, 7.8, 7.8); Calibrated: 1/23/2006
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn584; Calibrated: 9/22/2005
- Phantom: SAM with CRP; Type: SAM; Serial: TP 1310
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 172

Area Scan (101x81x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.269 mW/g

Zoom Scan (7x7x9)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=3mm
Reference Value = 0.221 V/m; Power Drift = 0.24 dB
Peak SAR (extrapolated) = 0.602 W/kg
SAR(1 g) = 0.236 mW/g; SAR(10 g) = 0.093 mW/g
Maximum value of SAR (measured) = 0.341 mW/g



Low Ch/2412MHz/Standard Battery

Date/Time: 12/28/2006 2:08:50 PM

DUT: OQO Model 02; Type: Mini Computer; Serial: EVT3F065

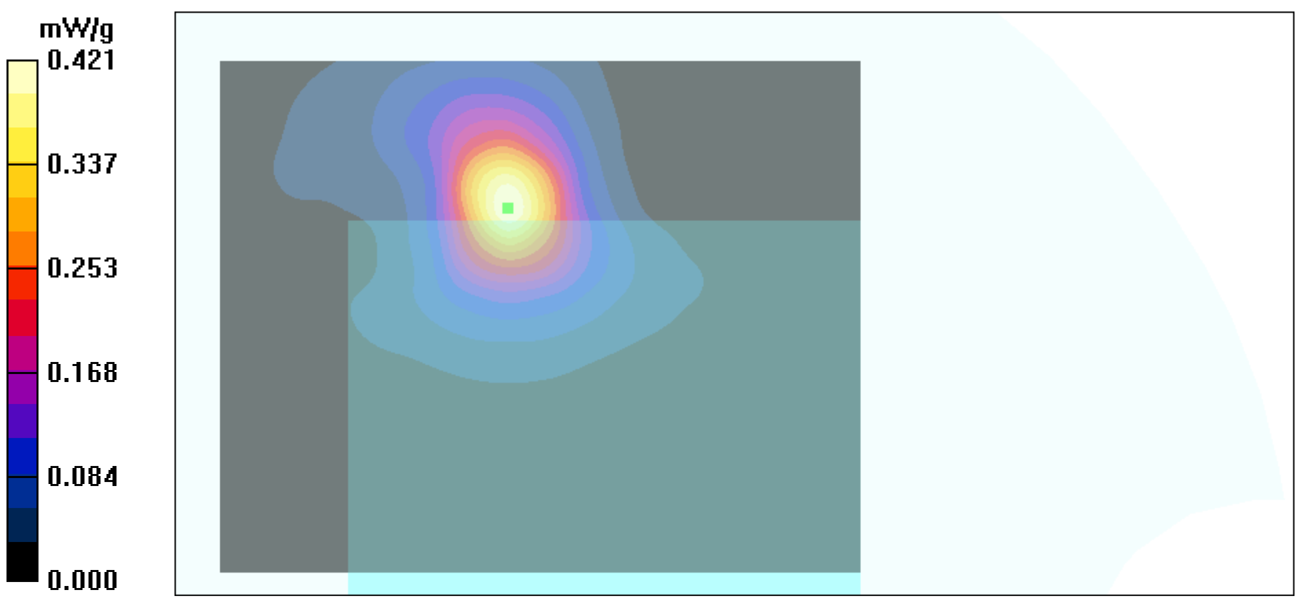
Medium Notes: Ambient Temp: 23.2 deg C; Fluid Temp: 21.7 deg C

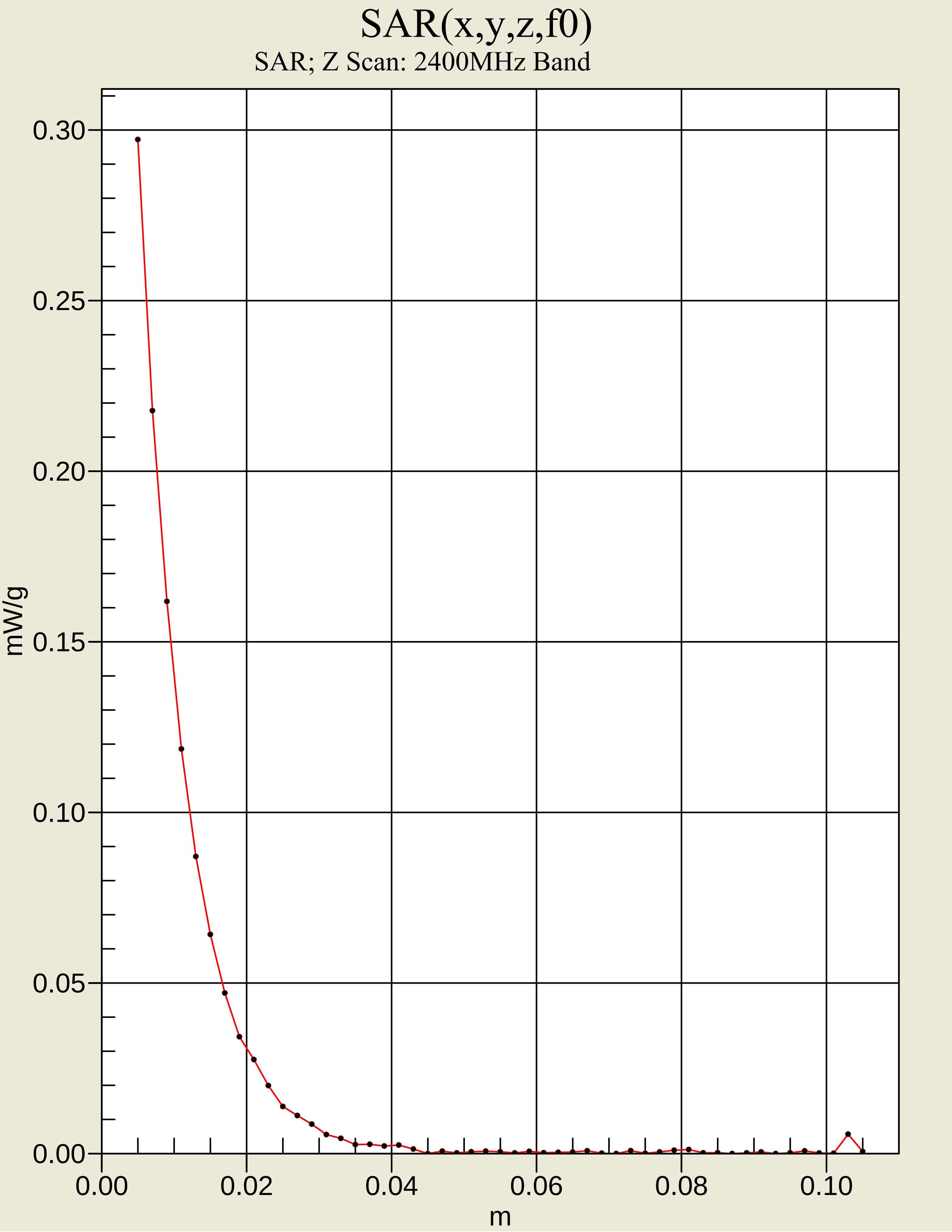
Communication System: DSSS; Frequency: 2450 MHz;Duty Cycle: 1:1
Medium: M2450 Medium parameters used: f = 2450 MHz; σ = 2.03 mho/m; ε_r = 55.7; ρ = 1000 kg/m^3
Phantom section: Flat Section

- Probe: EX3DV3 - SN3511; ConvF(7.8, 7.8, 7.8); Calibrated: 1/23/2006
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn584; Calibrated: 9/22/2005
- Phantom: SAM with CRP; Type: SAM; Serial: TP 1310
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 172

Area Scan (101x81x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.421 mW/g

Zoom Scan (7x7x9)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=3mm
Reference Value = 0.534 V/m; Power Drift = -0.16 dB
Peak SAR (extrapolated) = 0.857 W/kg
SAR(1 g) = 0.351 mW/g; SAR(10 g) = 0.140 mW/g
Maximum value of SAR (measured) = 0.495 mW/g





SAR(x,y,z,f0)
SAR; Z Scan: 2400MHz Band
0.30
0.25
0.20
0.15
0.10
0.05
0.00
mW/g
0.00
0.02
0.04
0.06
0.08
0.10
m

High Ch/2462MHz/Standard Battery/b-mode

Date/Time: 12/28/2006 3:06:41 PM

DUT: OQO Model 02; Type: Mini Computer; Serial: EVT3F065

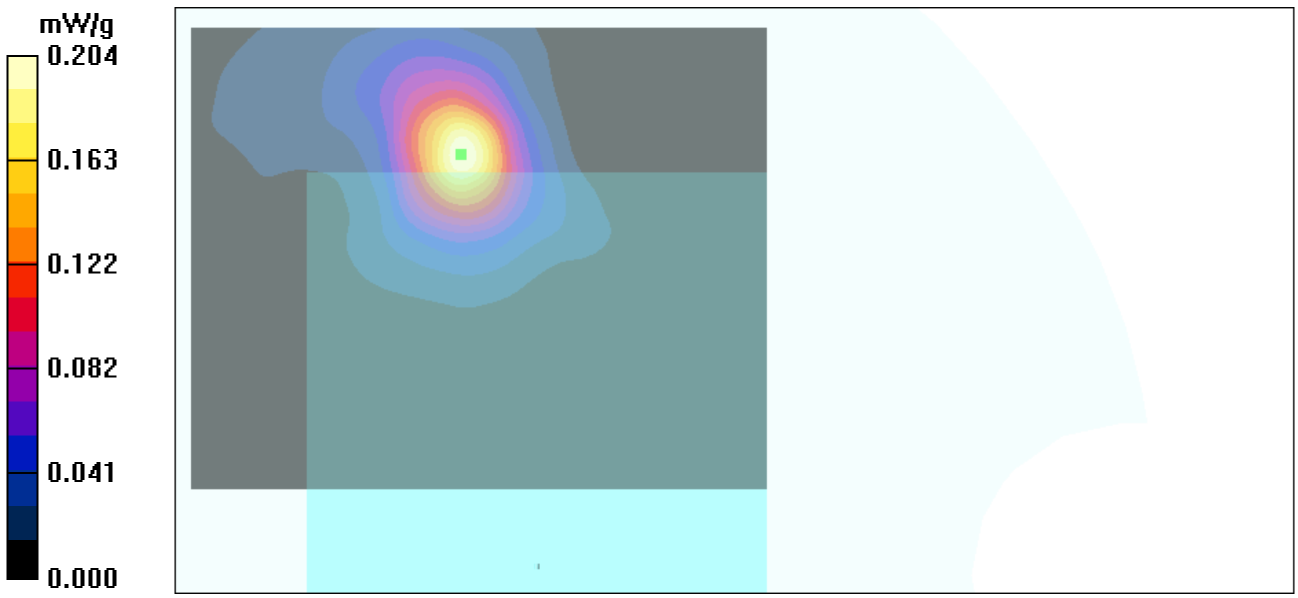
Medium Notes: Ambient Temp: 23.2 deg C; Fluid Temp: 21.7 deg C

Communication System: DSSS; Frequency: 2450 MHz;Duty Cycle: 1:1
Medium: M2450 Medium parameters used: f = 2450 MHz; σ = 2.03 mho/m; ε_r = 55.7; ρ = 1000 kg/m^3
Phantom section: Flat Section

- Probe: EX3DV3 - SN3511; ConvF(7.8, 7.8, 7.8); Calibrated: 1/23/2006
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn584; Calibrated: 9/22/2005
- Phantom: SAM with CRP; Type: SAM; Serial: TP 1310
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 172

Area Scan (101x81x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.204 mW/g

Zoom Scan (7x7x9)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=3mm
Reference Value = 0.000 V/m; Power Drift = -0.27dB
Peak SAR (extrapolated) = 0.454 W/kg
SAR(1 g) = 0.174 mW/g; SAR(10 g) = 0.069 mW/g
Maximum value of SAR (measured) = 0.249 mW/g



Low CH/2412MHz/Extended Battery/b-mode

Date/Time: 12/28/2006 3:30:15 PM

DUT: OQO Model 02; Type: Mini Computer; Serial: EVT3F065

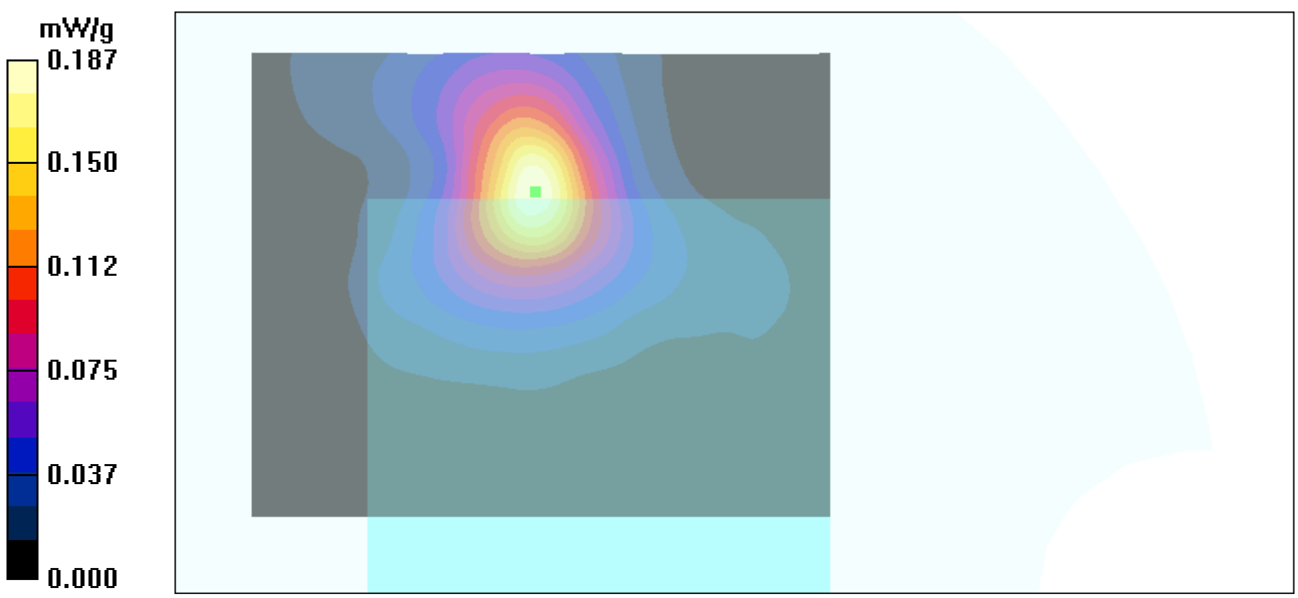
Medium Notes: Ambient Temp: 23.2 deg C; Fluid Temp: 21.7 deg C

Communication System: DSSS; Frequency: 2450 MHz;Duty Cycle: 1:1
Medium: M2450 Medium parameters used: f = 2450 MHz; σ = 2.03 mho/m; ε_r = 55.7; ρ = 1000 kg/m^3
Phantom section: Flat Section

- Probe: EX3DV3 - SN3511; ConvF(7.8, 7.8, 7.8); Calibrated: 1/23/2006
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn584; Calibrated: 9/22/2005
- Phantom: SAM with CRP; Type: SAM; Serial: TP 1310
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 172

Area Scan (101x81x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.187 mW/g

Zoom Scan (7x7x9)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=3mm
Reference Value = 0.151 V/m; Power Drift = -0.31dB
Peak SAR (extrapolated) = 0.362 W/kg
SAR(1 g) = 0.163 mW/g; SAR(10 g) = 0.077 mW/g
Maximum value of SAR (measured) = 0.214 mW/g



Low Ch/2412MHz/Standard Battery/Holster/b-mode

Date/Time: 12/28/2006 3:51:06 PM

DUT: OQO Model 02; Type: Mini Computer; Serial: EVT3F065

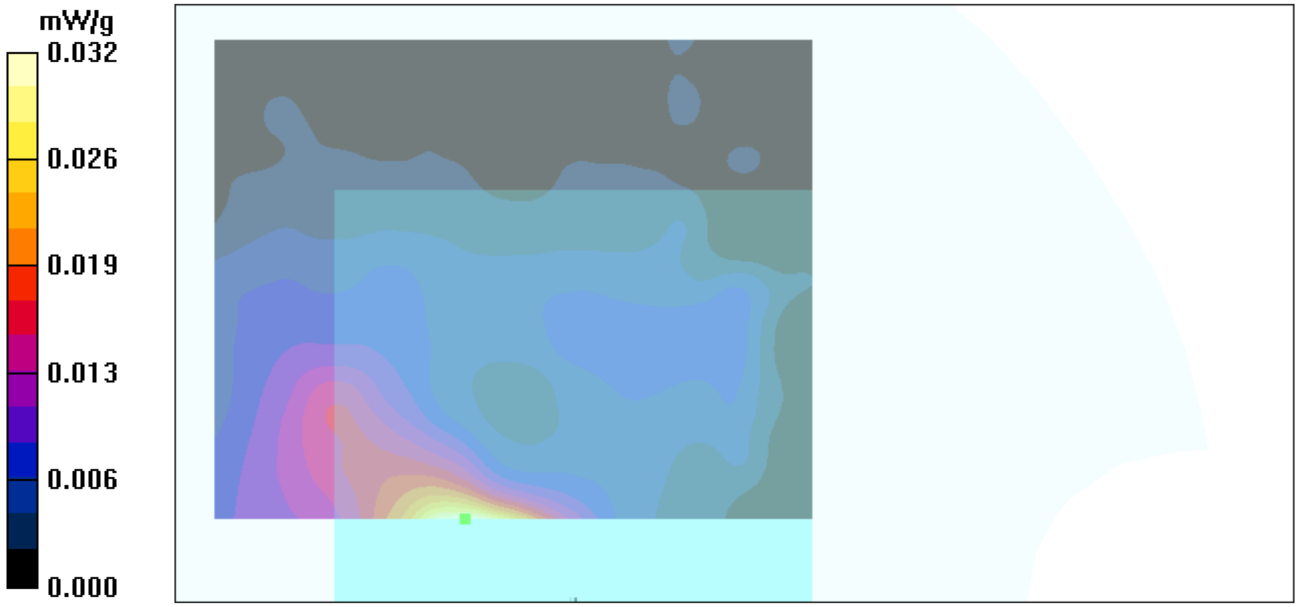
Medium Notes: Ambient Temp: 23.2 deg C; Fluid Temp: 21.7 deg C

Communication System: DSSS; Frequency: 2450 MHz;Duty Cycle: 1:1
Medium: M2450 Medium parameters used: f = 2450 MHz; σ = 2.03 mho/m; ε_r = 55.7; ρ = 1000 kg/m^3
Phantom section: Flat Section

- Probe: EX3DV3 - SN3511; ConvF(7.8, 7.8, 7.8); Calibrated: 1/23/2006
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn584; Calibrated: 9/22/2005
- Phantom: SAM with CRP; Type: SAM; Serial: TP 1310
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 172

Area Scan (101x81x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.032 mW/g

Zoom Scan (7x7x9)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=3mm
Reference Value = 2.44 V/m; Power Drift = -0.163 dB
Peak SAR (extrapolated) = 0.076 W/kg
SAR(1 g) = 0.040 mW/g; SAR(10 g) = 0.018 mW/g
Maximum value of SAR (measured) = 0.052 mW/g



Low Ch/2412MHz/External Power/Standard Battery/b-mode

Date/Time: 12/28/2006 4:18:50 PM

DUT: OQO Model 02; Type: Mini Computer; Serial: EVT3F065

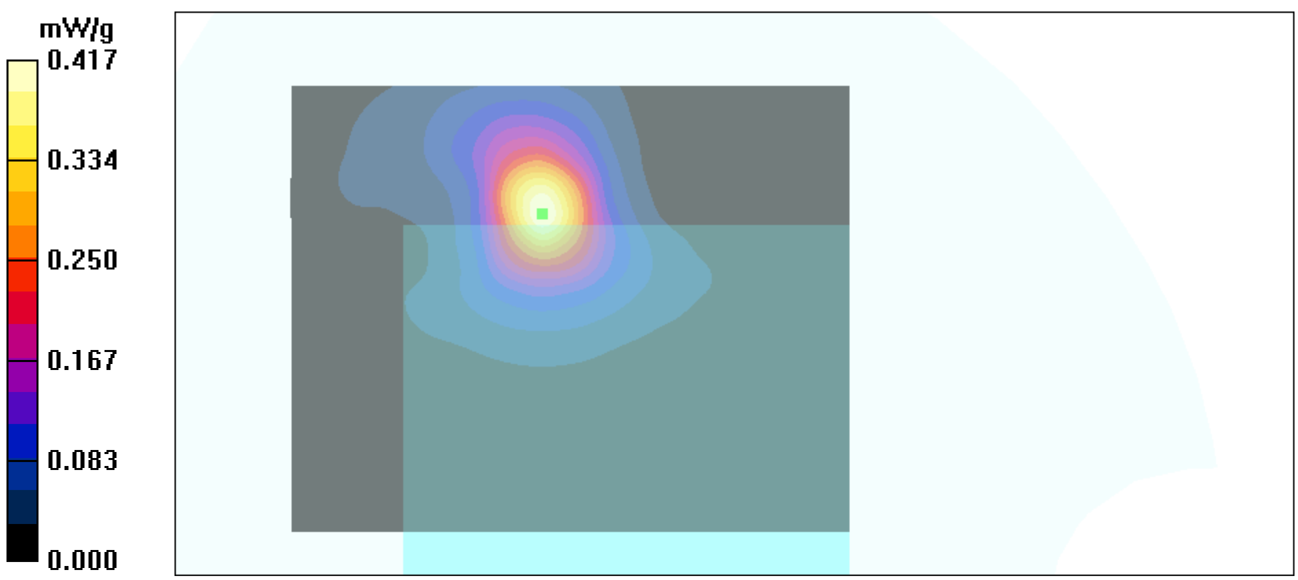
Medium Notes: Ambient Temp: 23.2 deg C; Fluid Temp: 21.7 deg C

Communication System: DSSS; Frequency: 2450 MHz;Duty Cycle: 1:1
Medium: M2450 Medium parameters used: f = 2450 MHz; σ = 2.03 mho/m; ε_r = 55.7; ρ = 1000 kg/m^3
Phantom section: Flat Section

- Probe: EX3DV3 - SN3511; ConvF(7.8, 7.8, 7.8); Calibrated: 1/23/2006
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn584; Calibrated: 9/22/2005
- Phantom: SAM with CRP; Type: SAM; Serial: TP 1310
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

Area Scan (101x81x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.417 mW/g

Zoom Scan (7x7x9)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=3mm
Reference Value = 0.534 V/m; Power Drift = -0.06 dB
Peak SAR (extrapolated) = 0.849 W/kg
SAR(1 g) = 0.348 mW/g; SAR(10 g) = 0.139 mW/g
Maximum value of SAR (measured) = 0.491 mW/g



Low Ch/5180MHz/Standard Battery

Date/Time: 12/28/2006 9:13:50 AM

DUT: OQO Model 02; Type: Mini Computer; Serial: EVT3F065

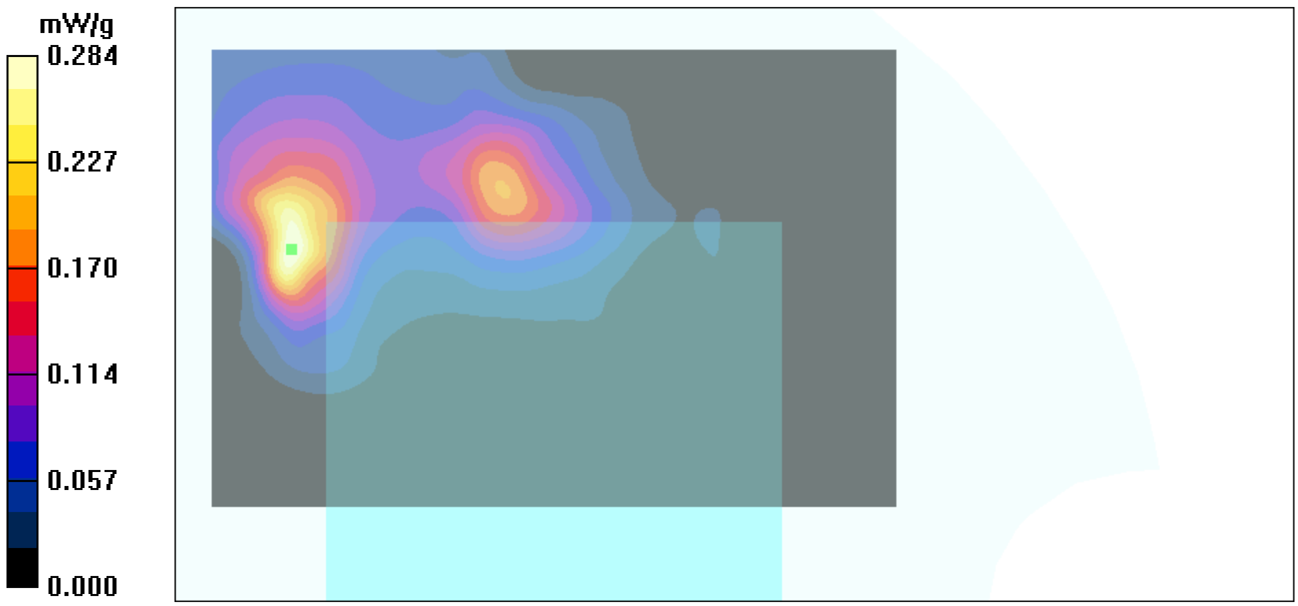
Medium Notes: Ambient Temp: 22.0 deg C; Fluid Temp: 21.5 deg C

Communication System: OFDM; Frequency: 5200 MHz;Duty Cycle: 1:1
Medium: 5200 MHz Body Medium parameters used: f = 5200 MHz; σ = 5.6 mho/m; ε_r = 48.2; ρ = 1000 kg/m^3
Phantom section: Flat Section

- Probe: EX3DV3 - SN3511; ConvF(4.68, 4.68, 4.68); Calibrated: 1/23/2006
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn584; Calibrated: 9/22/2005
- Phantom: SAM with CRP; Type: SAM; Serial: TP 1310
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 172

Area Scan (121x81x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.284 mW/g

Zoom Scan (7x7x9)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm
Reference Value = 0.000 V/m; Power Drift = 0.21 dB
Peak SAR (extrapolated) = 0.583 W/kg
SAR(1 g) = 0.154 mW/g; SAR(10 g) = 0.043 mW/g
Maximum value of SAR (measured) = 0.277 mW/g



High CH/5240MHz/Standard Battery

Date/Time: 12/28/2006 8:48:53 AM

DUT: OQO Model 02; Type: Mini Computer; Serial: EVT3F065

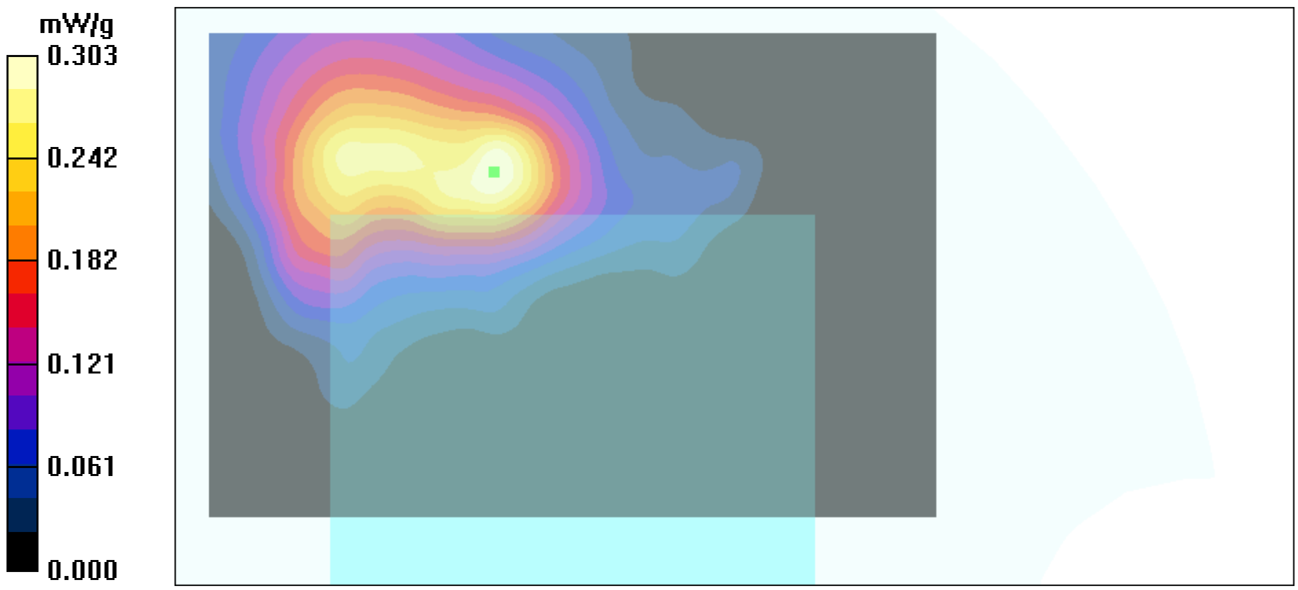
Medium Notes: Ambient Temp: 22.0 deg C; Fluid Temp: 21.5 deg C

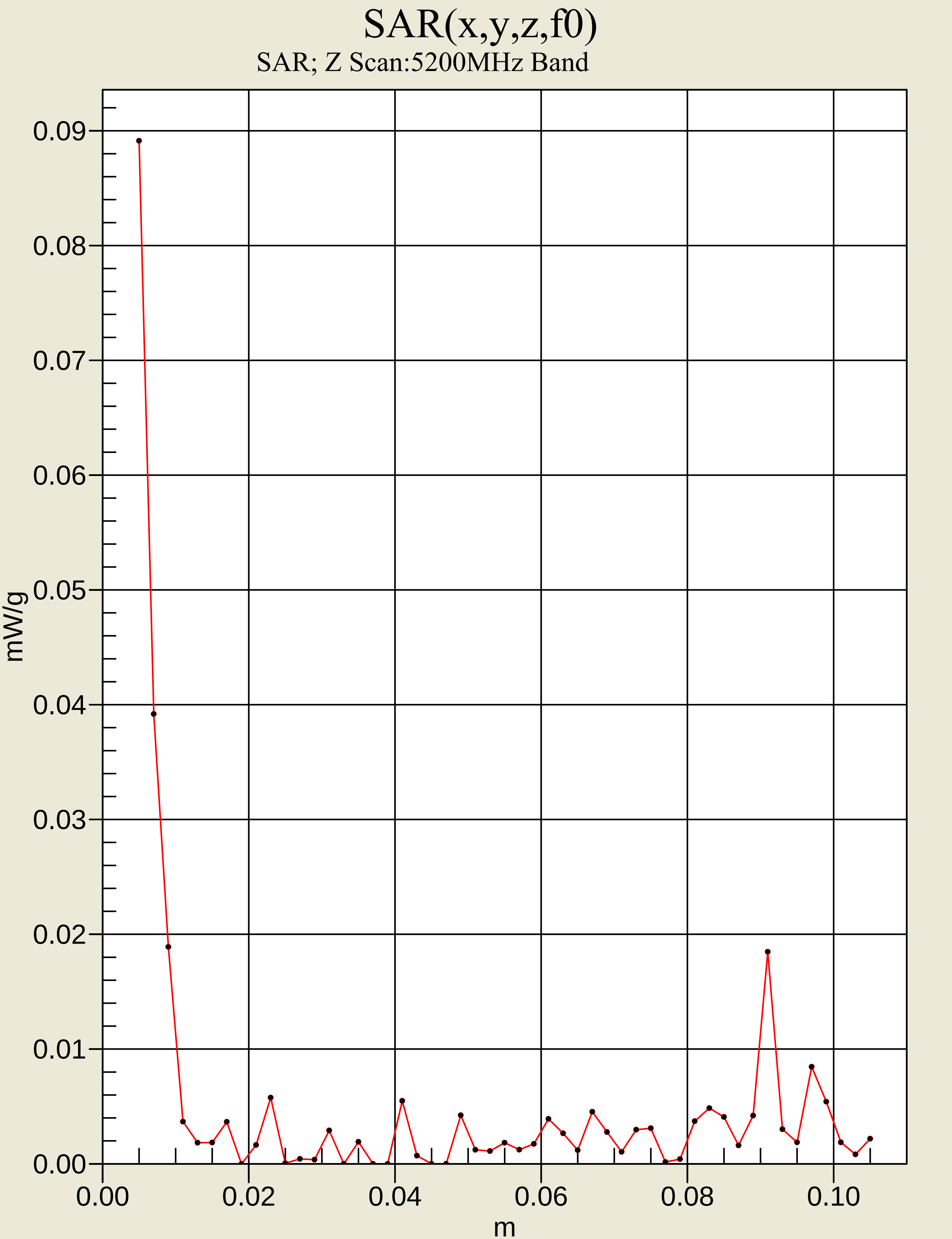
Communication System: OFDM; ; Frequency: 5200 MHz;Duty Cycle: 1:1
Medium: 5200 MHz Body Medium parameters used: f = 5200 MHz; σ = 5.6 mho/m; ε_r = 48.2; ρ = 1000 kg/m^3
Phantom section: Flat Section

- Probe: EX3DV3 - SN3511; ConvF(4.68, 4.68, 4.68); Calibrated: 1/23/2006
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn584; Calibrated: 9/22/2005
- Phantom: SAM with CRP; Type: SAM; Serial: TP 1310
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 172

Area Scan (121x81x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.303 mW/g

Zoom Scan (7x7x9)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm
Reference Value = 0.332 V/m; Power Drift = -0.29 dB
Peak SAR (extrapolated) = 0.667 W/kg
SAR(1 g) = 0.180 mW/g; SAR(10 g) = 0.065 mW/g
Maximum value of SAR (measured) = 0.302 mW/g





SAR(x,y,z,f0)
SAR; Z Scan:5200MHz Band
mW/g
m
0.00
0.01
0.02
0.03
0.04
0.05
0.06
0.07
0.08
0.09
0.00
0.02
0.04
0.06
0.08
0.10

High Ch/5240MHz/Extended Battery

Date/Time: 12/28/2006 9:38:24 AM

DUT: OQO Model 02; Type: Mini Computer; Serial: EVT3F065

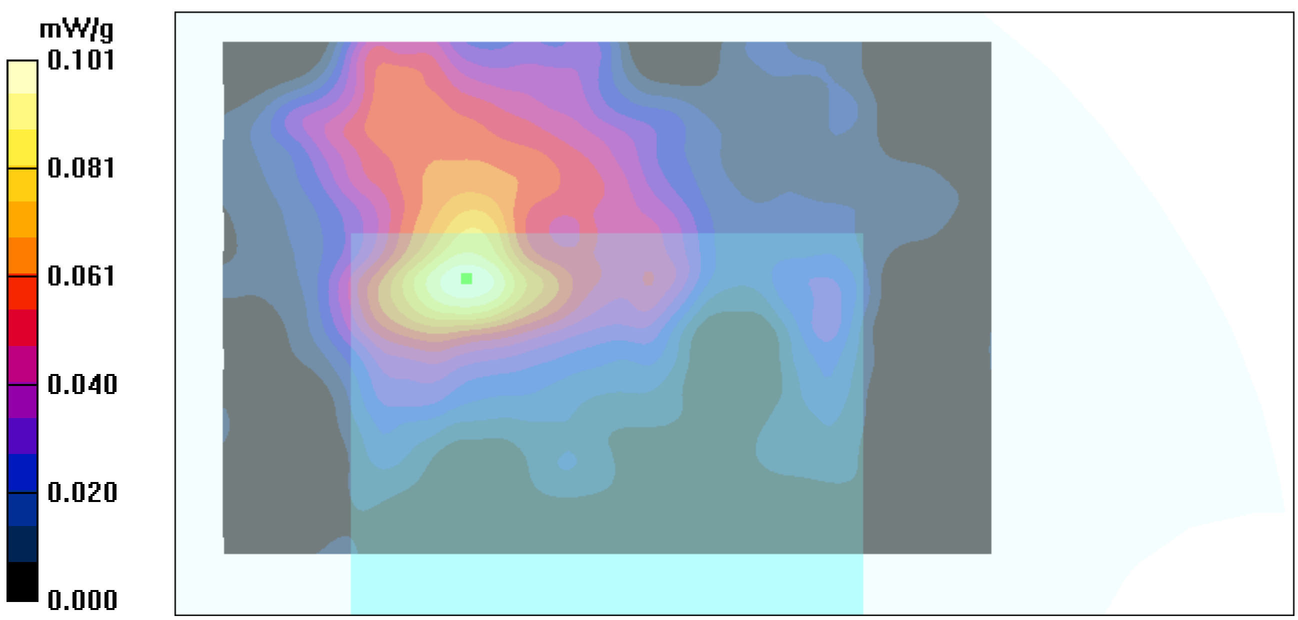
Medium Notes: Ambient Temp: 22.0 deg C; Fluid Temp: 21.5 deg C

Communication System: OFDM; Frequency: 5200 MHz;Duty Cycle: 1:1
Medium: 5200 MHz Body Medium parameters used: f = 5200 MHz; σ = 5.6 mho/m; ε_r = 48.2; ρ = 1000 kg/m^3
Phantom section: Flat Section

- Probe: EX3DV3 - SN3511; ConvF(4.68, 4.68, 4.68); Calibrated: 1/23/2006
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn584; Calibrated: 9/22/2005
- Phantom: SAM with CRP; Type: SAM; Serial: TP 1310
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 172

Area Scan (121x81x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.101 mW/g

Zoom Scan (7x7x9)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm
Reference Value = 0.738 V/m; Power Drift = -0.217 dB
Peak SAR (extrapolated) = 0.262 W/kg
SAR(1 g) = 0.067 mW/g; SAR(10 g) = 0.022 mW/g
Maximum value of SAR (measured) = 0.108 mW/g



High Ch/5240MHz/Standard Battery/Holster

Date/Time: 12/28/2006 10:02:54 AM

DUT: OQO Model 02; Type: Mini Computer; Serial: EVT3F065

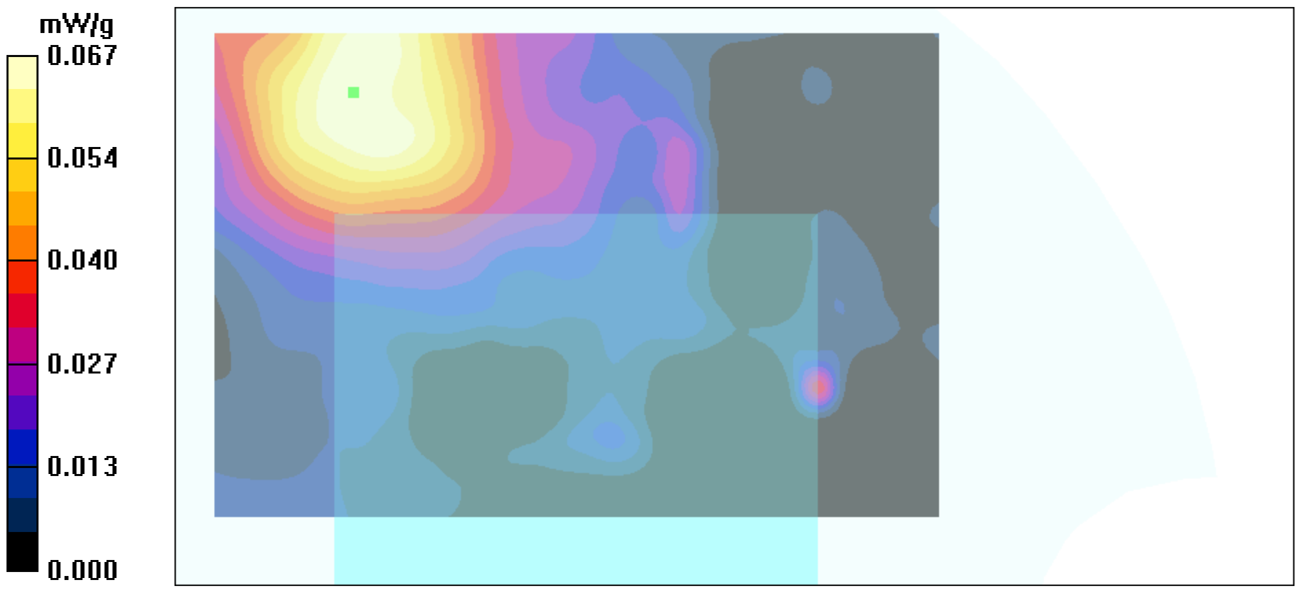
Medium Notes: Ambient Temp: 22.0 deg C; Fluid Temp: 21.5 deg C

Communication System: OFDM; Frequency: 5200 MHz;Duty Cycle: 1:1
Medium: 5200 MHz Body Medium parameters used: f = 5200 MHz; σ = 5.6 mho/m; ε_r = 48.2; ρ = 1000 kg/m^3
Phantom section: Flat Section

- Probe: EX3DV3 - SN3511; ConvF(4.68, 4.68, 4.68); Calibrated: 1/23/2006
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn584; Calibrated: 9/22/2005
- Phantom: SAM with CRP; Type: SAM; Serial: TP 1310
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 172

Area Scan (121x81x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.067 mW/g

Zoom Scan (7x7x9)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm
Reference Value = 0.919 V/m; Power Drift = -0.07 dB
Peak SAR (extrapolated) = 0.392 W/kg
SAR(1 g) = 0.045 mW/g; SAR(10 g) = 0.018 mW/g
Maximum value of SAR (measured) = 0.072 mW/g



High Ch/5240MHz/External Power/Standard Battery

Date/Time: 12/28/2006 10:18:23 AM

DUT: OQO Model 02; Type: Mini Computer; Serial: EVT3F065

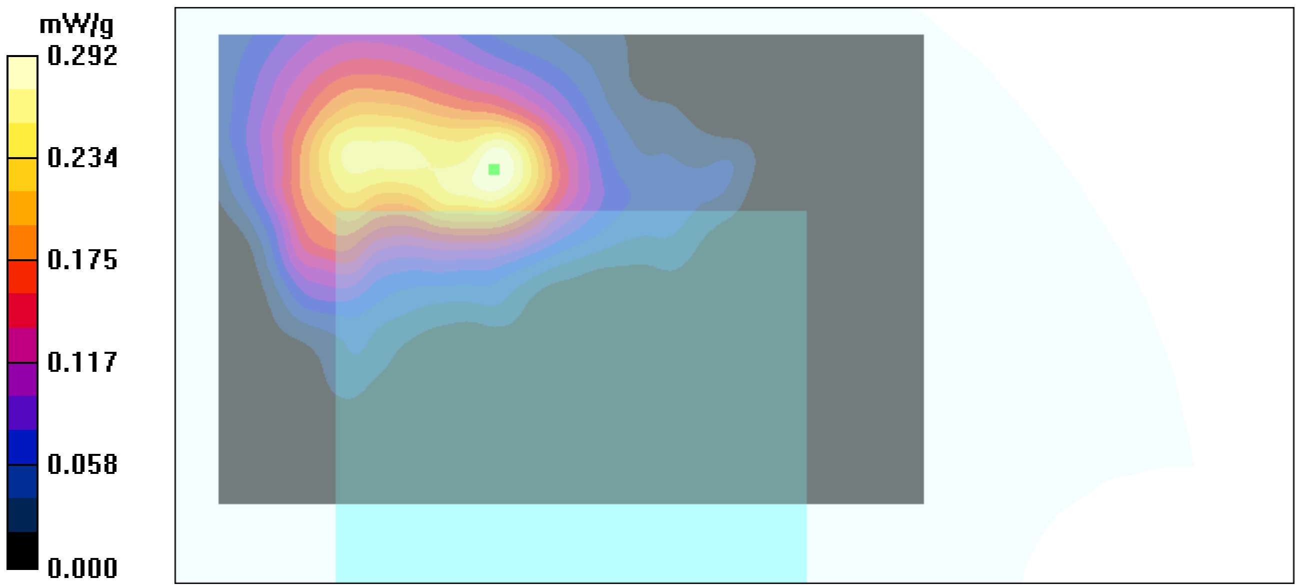
Medium Notes: Ambient Temp: 22.0 deg C; Fluid Temp: 21.5 deg C

Communication System: OFDM; Frequency: 5200 MHz;Duty Cycle: 1:1
Medium: 5200 MHz Body Medium parameters used: f = 5200 MHz; σ = 5.6 mho/m; ε_r = 48.2; ρ = 1000 kg/m^3
Phantom section: Flat Section

- Probe: EX3DV3 - SN3511; ConvF(4.68, 4.68, 4.68); Calibrated: 1/23/2006
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn584; Calibrated: 9/22/2005
- Phantom: SAM with CRP; Type: SAM; Serial: TP 1310
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

Area Scan (121x81x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.292 mW/g

Zoom Scan (7x7x9)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm
Reference Value = 0.318 V/m; Power Drift = -0.21 dB
Peak SAR (extrapolated) = 0.788 W/kg
SAR(1 g) = 0.179 mW/g; SAR(10 g) = 0.065 mW/g
Maximum value of SAR (measured) = 0.292 mW/g



Mid Ch/5785MHz/Standard Battery

Date/Time: 12/27/2006 3:14:56 PM

DUT: OQO Model 02; Type: Mini Computer; Serial: EVT3F065

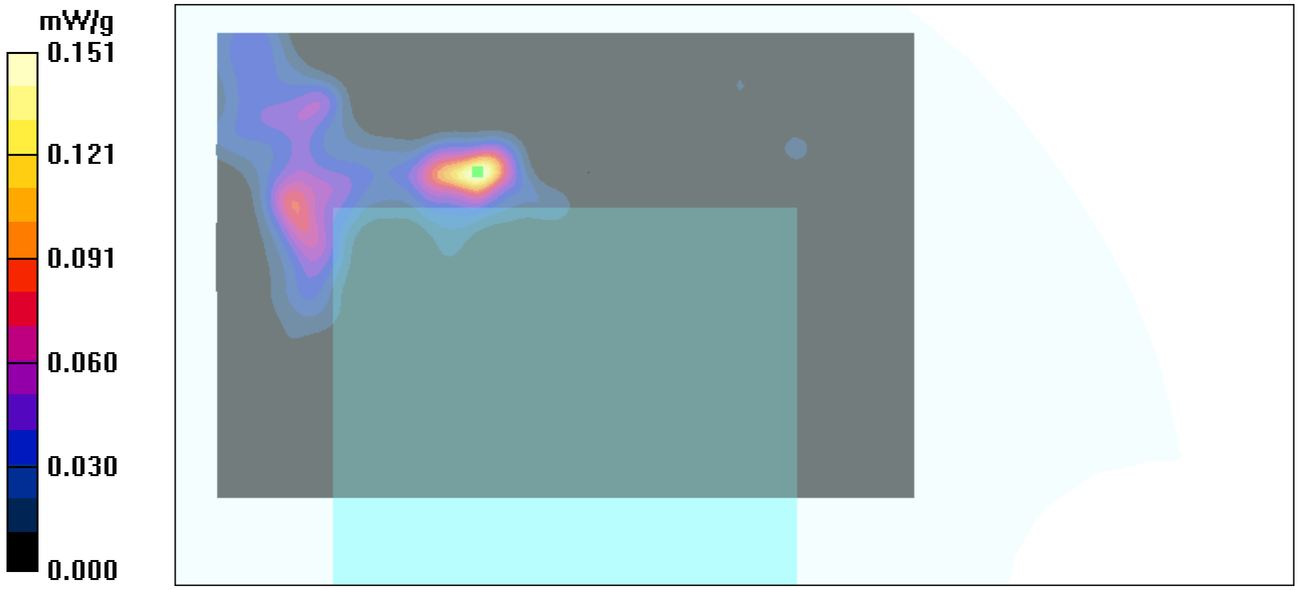
Medium Notes: Ambient Temp: 22.0 deg C; Fluid Temp: 21.6 deg C

Communication System: OFDM; Frequency: 5800 MHz;Duty Cycle: 1:1
Medium: 5800 MHz Body Medium parameters used: f = 5800 MHz; σ = 6.39 mho/m; ε_r = 48.4; ρ = 1000 kg/m^3
Phantom section: Flat Section

- Probe: EX3DV3 - SN3511; ConvF(4.1, 4.1, 4.1); Calibrated: 1/23/2006
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn584; Calibrated: 9/22/2005
- Phantom: SAM with CRP; Type: SAM; Serial: TP 1310
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 172

Area Scan (121x81x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.151 mW/g

Zoom Scan (7x7x9)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm
Reference Value = 0.333 V/m; Power Drift = -0.13 dB
Peak SAR (extrapolated) = 0.293 W/kg
SAR(1 g) = 0.032 mW/g; SAR(10 g) = 0.00924 mW/g
Maximum value of SAR (measured) = 0.055 mW/g



Low Ch/5745MHz/Standard Battery

Date/Time: 12/27/2006 2:44:04 PM

DUT: OQO Bottom Side; Type: WLAN Bottom; Serial: EVT3F065

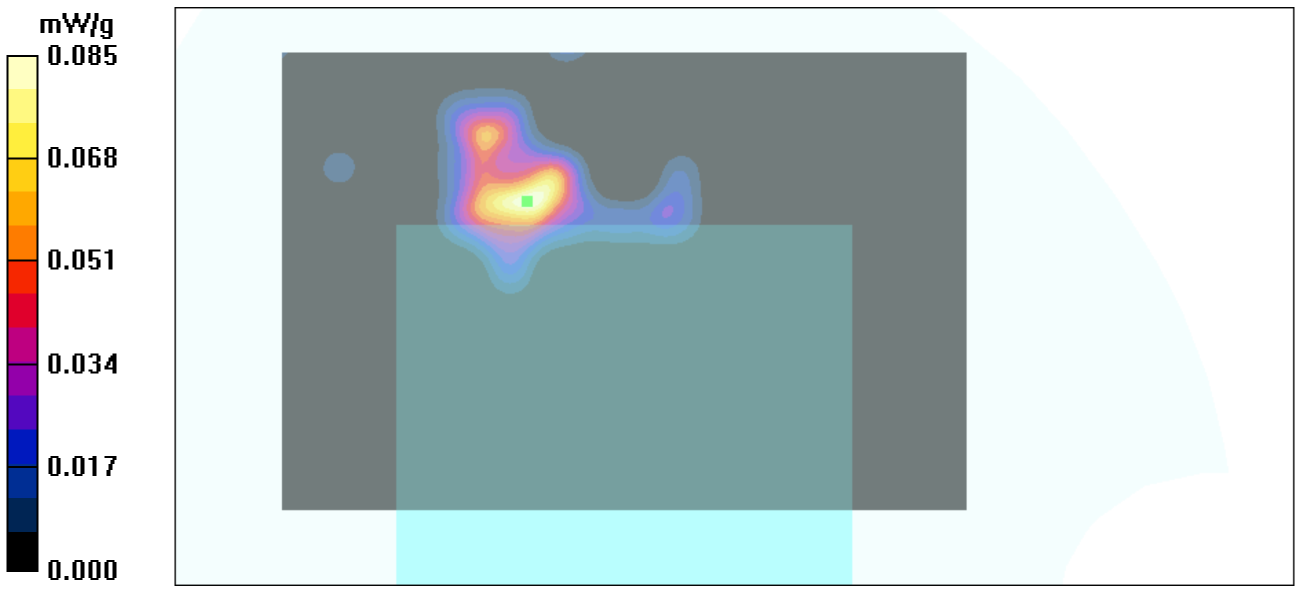
Medium Notes: Ambient Temp: 22.0 deg C; Fluid Temp: 21.6 deg C

Communication System: OFDM; Frequency: 5800 MHz;Duty Cycle: 1:1
Medium: 5800 MHz Body Medium parameters used: f = 5800 MHz; σ = 6.39 mho/m; ε_r = 48.4; ρ = 1000 kg/m^3
Phantom section: Flat Section

- Probe: EX3DV3 - SN3511; ConvF(4.1, 4.1, 4.1); Calibrated: 1/23/2006
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn584; Calibrated: 9/22/2005
- Phantom: SAM with CRP; Type: SAM; Serial: TP 1310
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 172

Area Scan (121x81x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.085 mW/g

Zoom Scan (7x7x9)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm
Reference Value = 0.641 V/m; Power Drift = 0.13 dB
Peak SAR (extrapolated) = 0.286 W/kg
SAR(1 g) = 0.031 mW/g; SAR(10 g) = 0.00928 mW/g
Maximum value of SAR (measured) = 0.049 mW/g



High Ch/5825MHz/Standard Battery

Date/Time: 12/27/2006 2:19:32 PM

DUT: OQO Model 02; Type: Mini Computer; Serial: EVT3F065

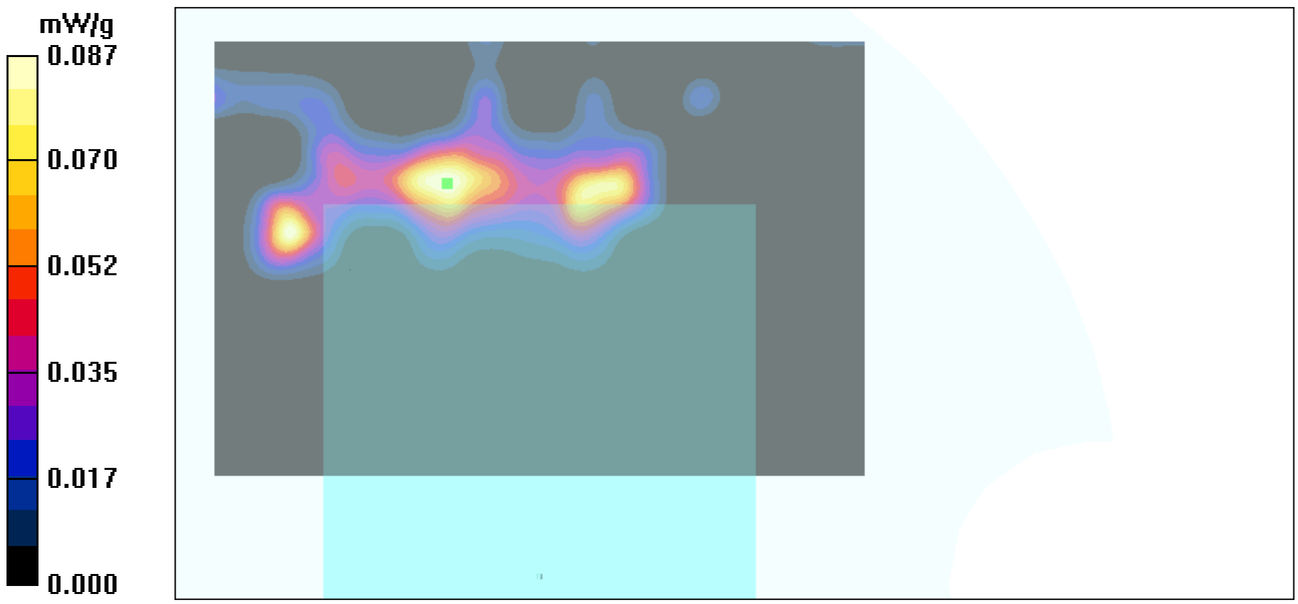
Medium Notes: Ambient Temp: 22.0 deg C; Fluid Temp: 21.6 deg C

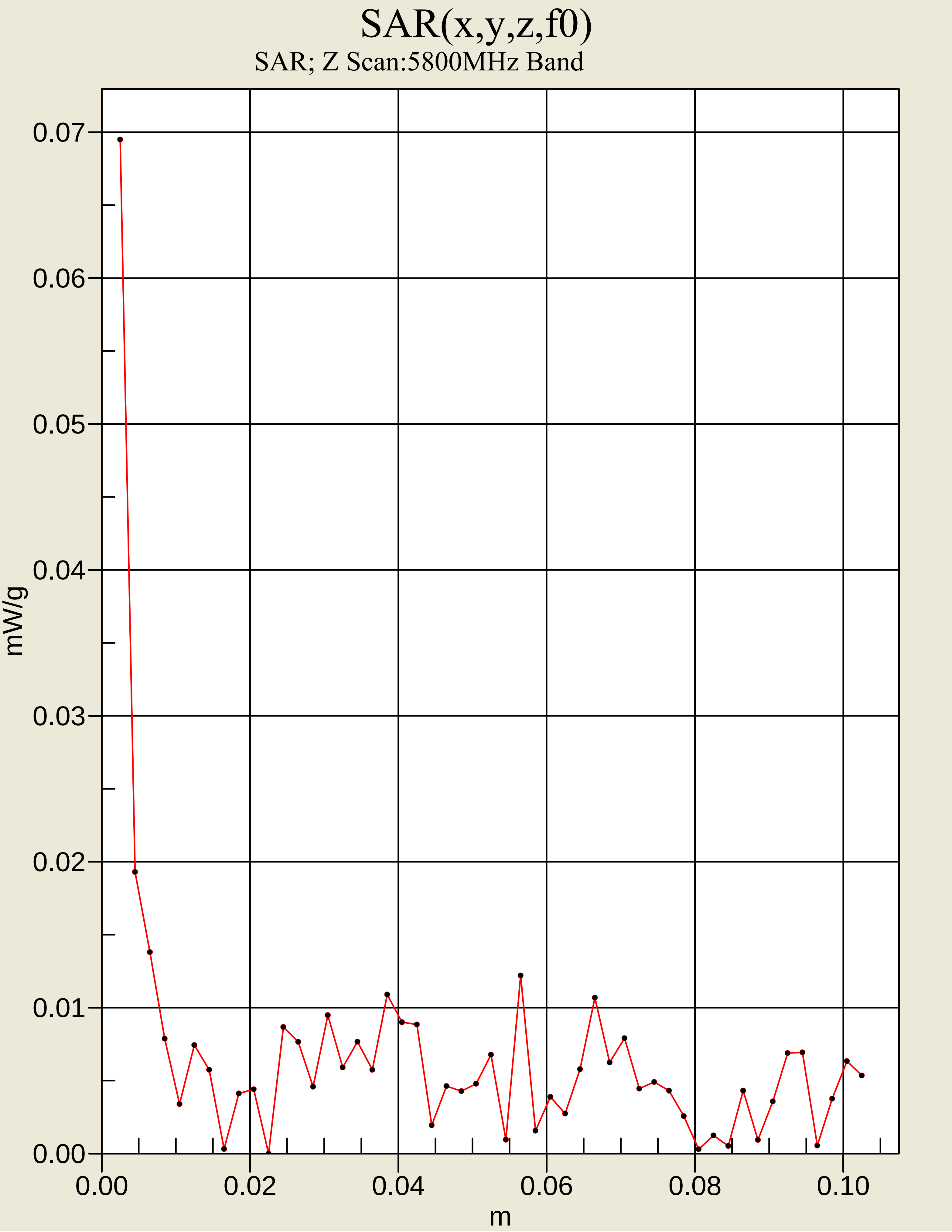
Communication System: OFDM; Frequency: 5800 MHz;Duty Cycle: 1:1
Medium: 5800 MHz Body Medium parameters used: f = 5800 MHz; σ = 6.39 mho/m; ε_r = 48.4; ρ = 1000 kg/m^3
Phantom section: Flat Section

- Probe: EX3DV3 - SN3511; ConvF(4.1, 4.1, 4.1); Calibrated: 1/23/2006
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn584; Calibrated: 9/22/2005
- Phantom: SAM with CRP; Type: SAM; Serial: TP 1310
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 172

Area Scan (121x81x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.087 mW/g

Zoom Scan (7x7x9)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm
Reference Value = 0.742 V/m; Power Drift = 0.23 dB
Peak SAR (extrapolated) = 0.463 W/kg
SAR(1 g) = 0.043 mW/g; SAR(10 g) = 0.011 mW/g
Maximum value of SAR (measured) = 0.092 mW/g





SAR(x,y,z,f0)
SAR; Z Scan:5800MHz Band
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0.00
mW/g
0.00
0.02
0.04
0.06
0.08
0.10
m

High Ch/5825MHz/Extended Battery

Date/Time: 12/27/2006 4:04:33 PM

DUT: OQO Model 02; Type: Mini Computer; Serial: EVT3F065

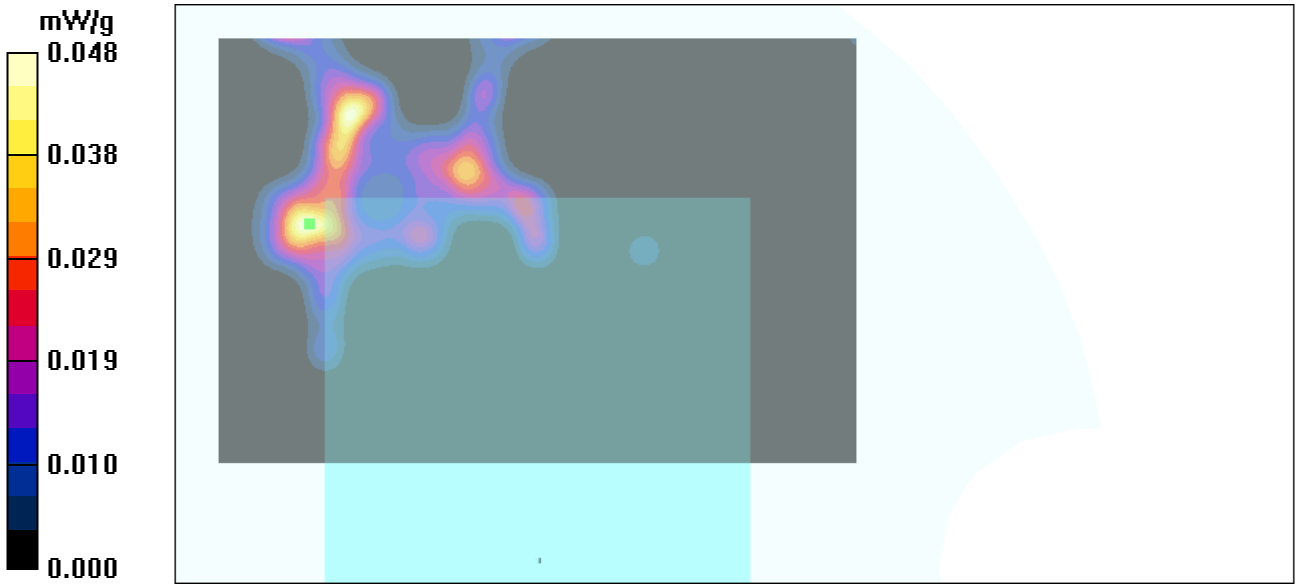
Medium Notes: Ambient Temp: 22.0 deg C; Fluid Temp: 21.6 deg C

Communication System: OFDM; Frequency: 5800 MHz;Duty Cycle: 1:1
Medium: 5800 MHz Body Medium parameters used: f = 5800 MHz; σ = 6.39 mho/m; ε_r = 48.4; ρ = 1000 kg/m^3
Phantom section: Flat Section

- Probe: EX3DV3 - SN3511; ConvF(4.1, 4.1, 4.1); Calibrated: 1/23/2006
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn584; Calibrated: 9/22/2005
- Phantom: SAM with CRP; Type: SAM; Serial: TP 1310
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 172

Area Scan (121x81x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.048 mW/g

Zoom Scan (7x7x9)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm
Reference Value = 0.664 V/m; Power Drift = -0.34 dB
Peak SAR (extrapolated) = 0.095 W/kg
SAR(1 g) = 0.022 mW/g; SAR(10 g) = 0.00622 mW/g
Maximum value of SAR (measured) = 0.050 mW/g



High Ch/5825MHz/Standard Battery/Holster

Date/Time: 12/27/2006 4:36:07 PM

DUT: OQO Model 02; Type: Mini Computer; Serial: EVT3F065

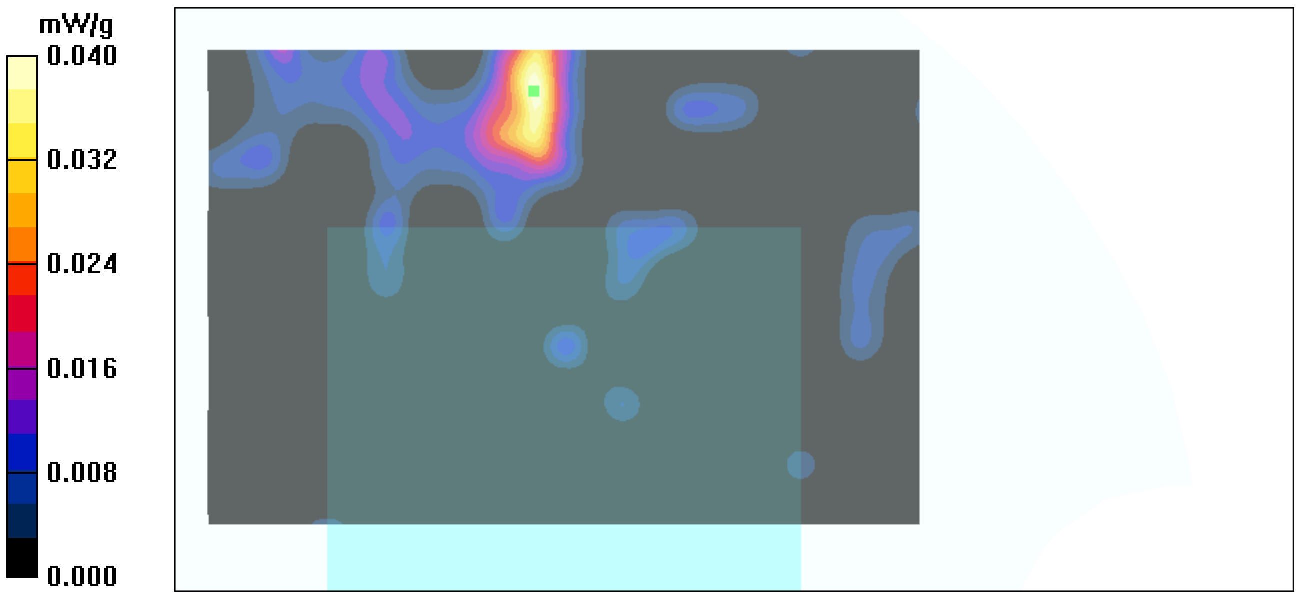
Medium Notes: Ambient Temp: 22.0 deg C; Fluid Temp: 21.6 deg C

Communication System: OFDM; Frequency: 5800 MHz;Duty Cycle: 1:1
Medium: 5800 MHz Body Medium parameters used: f = 5800 MHz; σ = 6.39 mho/m; ε_r = 48.4; ρ = 1000 kg/m^3
Phantom section: Flat Section

- Probe: EX3DV3 - SN3511; ConvF(4.1, 4.1, 4.1); Calibrated: 1/23/2006
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn584; Calibrated: 9/22/2005
- Phantom: SAM with CRP; Type: SAM; Serial: TP 1310
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 172

Area Scan (121x81x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.040 mW/g

Zoom Scan (7x7x9)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm
Reference Value = 0.688 V/m; Power Drift = -0.22dB
Peak SAR (extrapolated) = 0.038 W/kg
SAR(1 g) = 0.00206 mW/g; SAR(10 g) = 0.000374 mW/g
Maximum value of SAR (measured) = 0.021 mW/g



High Ch/5825MHz/External Power/Standard Battery

Date/Time: 12/27/2006 5:10:12 PM

DUT: OQO Model 02; Type: Mini Computer; Serial: EVT3F065

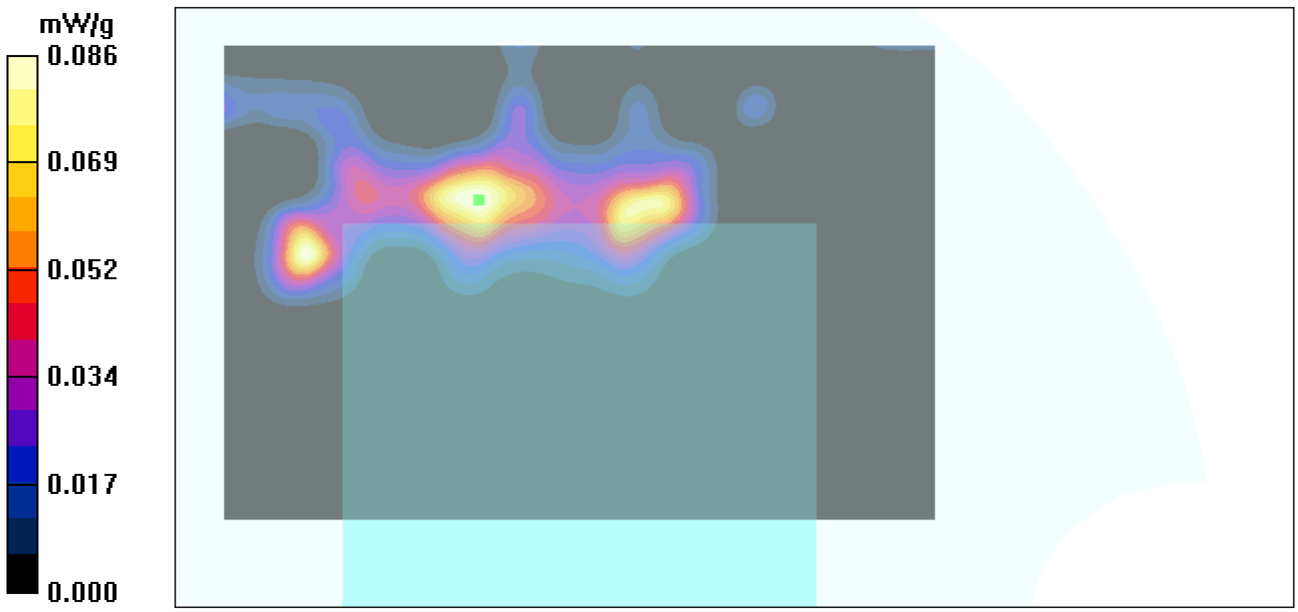
Medium Notes: Ambient Temp: 22.0 deg C; Fluid Temp: 21.6 deg C

Communication System: OFDM; ; Frequency: 5800 MHz;Duty Cycle: 1:1
Medium: 5800 MHz Body Medium parameters used: f = 5800 MHz; σ = 6.39 mho/m; ε_r = 48.4; ρ = 1000 kg/m^3
Phantom section: Flat Section

- Probe: EX3DV3 - SN3511; ConvF(4.1, 4.1, 4.1); Calibrated: 1/23/2006
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn584; Calibrated: 9/22/2005
- Phantom: SAM with CRP; Type: SAM; Serial: TP 1310
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

Area Scan (121x81x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.086 mW/g

Zoom Scan (7x7x9)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm
Reference Value = 0.741 V/m; Power Drift = 0.10 dB
Peak SAR (extrapolated) = 0.456 W/kg
SAR(1 g) = 0.042 mW/g; SAR(10 g) = 0.010 mW/g
Maximum value of SAR (measured) = 0.090 mW/g



Combined 2412MHz DSSS and 1880MHz CDMA

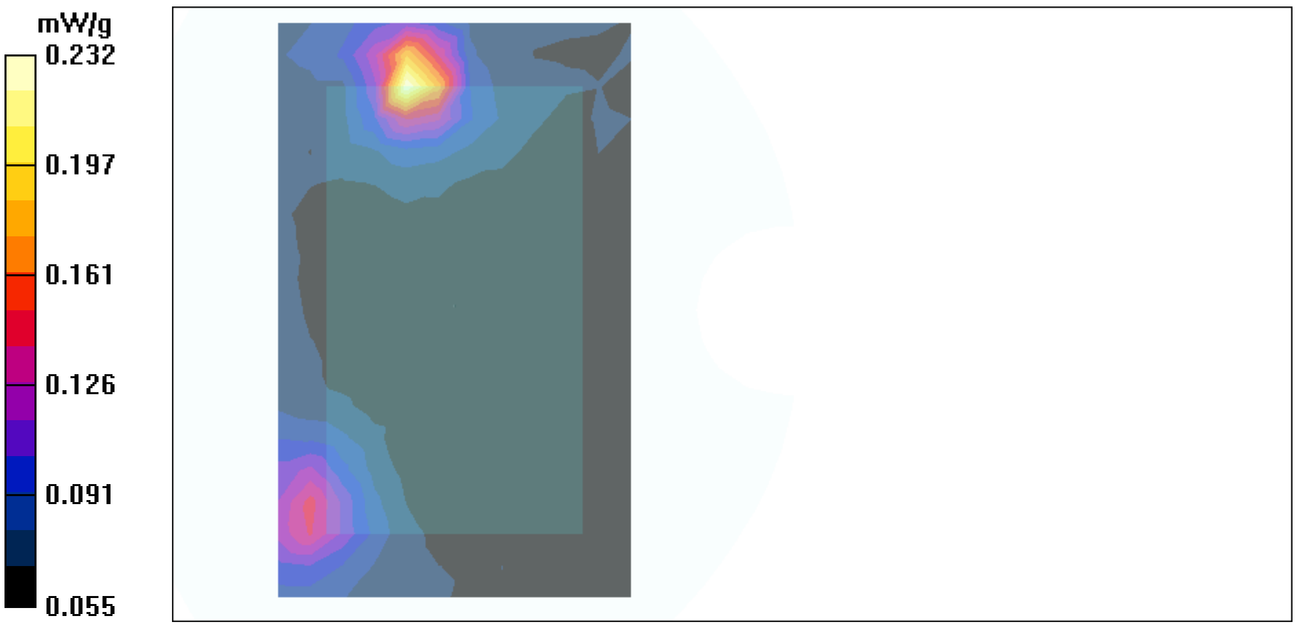
Date/Time: 12/28/2006 5:32:27 PM
DUT: OQO Model 02; Type: Mini Computer Bottom; Serial: EVT3F065
Communication System: DSSS; Frequency: 2450 MHz; Duty Cycle: 1:1
Medium: M2450 Medium parameters used: f = 2450 MHz; σ = 2.03 mho/m; ε_r = 55.7; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY4 (High Precision Assessment)

- Probe: EX3DV3 - SN3511; ConvF(7.8, 7.8, 7.8); Calibrated: 1/23/2006
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn584; Calibrated: 9/22/2005
- Phantom: SAM with CRP; Type: SAM; Serial: TP 1310
- Measurement SW: DASY4, V4.7 Build 44

Date/Time: 1/2/2007 12:34:42 PM
DUT: OQO Model 02; Type: Mini Computer Bottom; Serial: EVT3F065
Communication System: CDMA; Frequency: 1800 MHz; Duty Cycle: 1:1
Medium: M1800 Medium parameters used: f = 1800 MHz; σ = 1.57 mho/m; ε_r = 55.6; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY4 (High Precision Assessment)

- Probe: EX3DV3 - SN3511; ConvF(8.14, 8.14, 8.14); Calibrated: 1/23/2006
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn584; Calibrated: 9/22/2005
- Phantom: SAM with CRP; Type: SAM; Serial: TP 1310
- Measurement SW: DASY4, V4.7 Build 44

Multi Band Result:
SAR(1 g) = 0.210 mW/g; SAR(10 g) = 0.124 mW/g
Maximum value of SAR (measured) = 0.232 mW/g


mW/g
0.232
0.197
0.161
0.126
0.091
0.055

Combined 1880MHz CDMA and 5240MHz OFDM

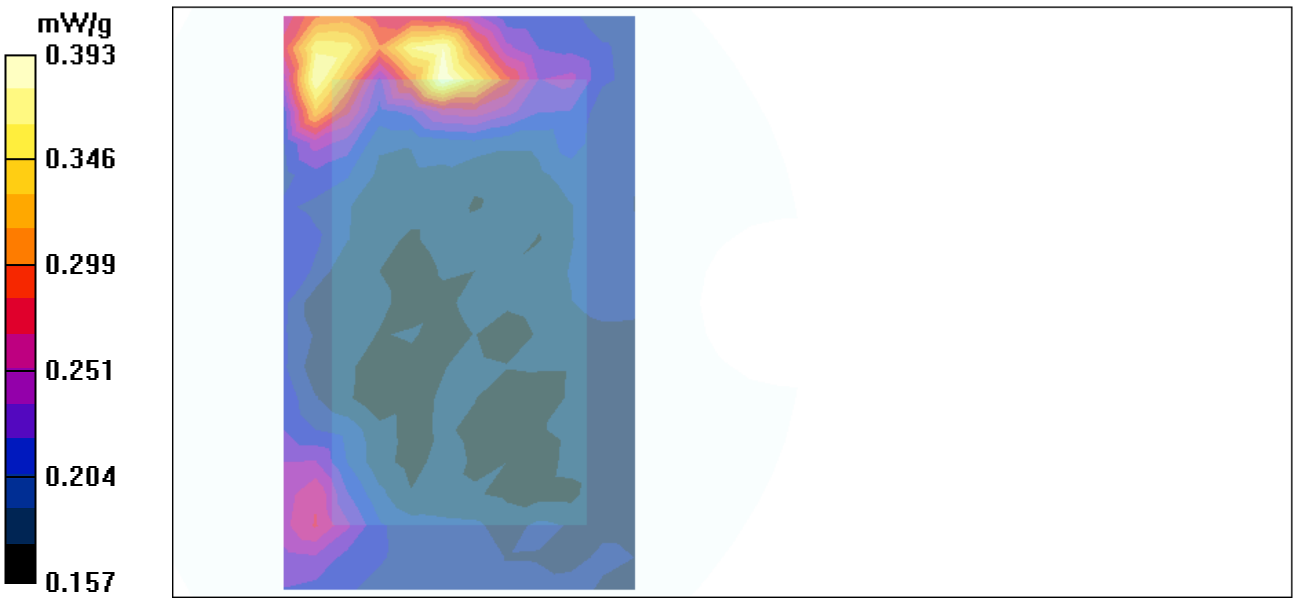
Date/Time: 12/28/2006 10:58:58 PM
DUT: OQO Model 02; Type: Mini Computer; Serial: EVT3F065
Communication System: OFDM; Frequency: 5200 MHz; Duty Cycle: 1:1
Medium: 5200 MHz Body Medium parameters used: f = 5200 MHz; $\sigma = 5.6$ mho/m; $\varepsilon_r = 48.2$; $\rho = 1000$ kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY4 (High Precision Assessment)

- Probe: EX3DV3 - SN3511; ConvF(4.68, 4.68, 4.68); Calibrated: 1/23/2006
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn584; Calibrated: 9/22/2005
- Phantom: SAM with CRP; Type: SAM; Serial: TP 1310
- Measurement SW: DASY4, V4.7 Build 44

Date/Time: 1/2/2007 12:34:42 PM
DUT: OQO Model 02; Type: Mini Computer; Serial: EVT3F065
Communication System: CDMA; Frequency: 1800 MHz; Duty Cycle: 1:1
Medium: M1800 Medium parameters used: f = 1800 MHz; $\sigma = 1.57$ mho/m; $\varepsilon_r = 55.6$; $\rho = 1000$ kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY4 (High Precision Assessment)

- Probe: EX3DV3 - SN3511; ConvF(8.14, 8.14, 8.14); Calibrated: 1/23/2006
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn584; Calibrated: 9/22/2005
- Phantom: SAM with CRP; Type: SAM; Serial: TP 1310
- Measurement SW: DASY4, V4.7 Build 44

Multi Band Result:
SAR(1 g) = 0.335 mW/g; SAR(10 g) = 0.263 mW/g
Maximum value of SAR (measured) = 0.393 mW/g


mW/g
0.393
0.346
0.299
0.251
0.204
0.157