

## **Appendix A:**

### **Validation Test Plots**

Test Laboratory: Kyocera

### 835MHz Validation, Probe#1713, DAE#530, Dipole#454, 08-08-05

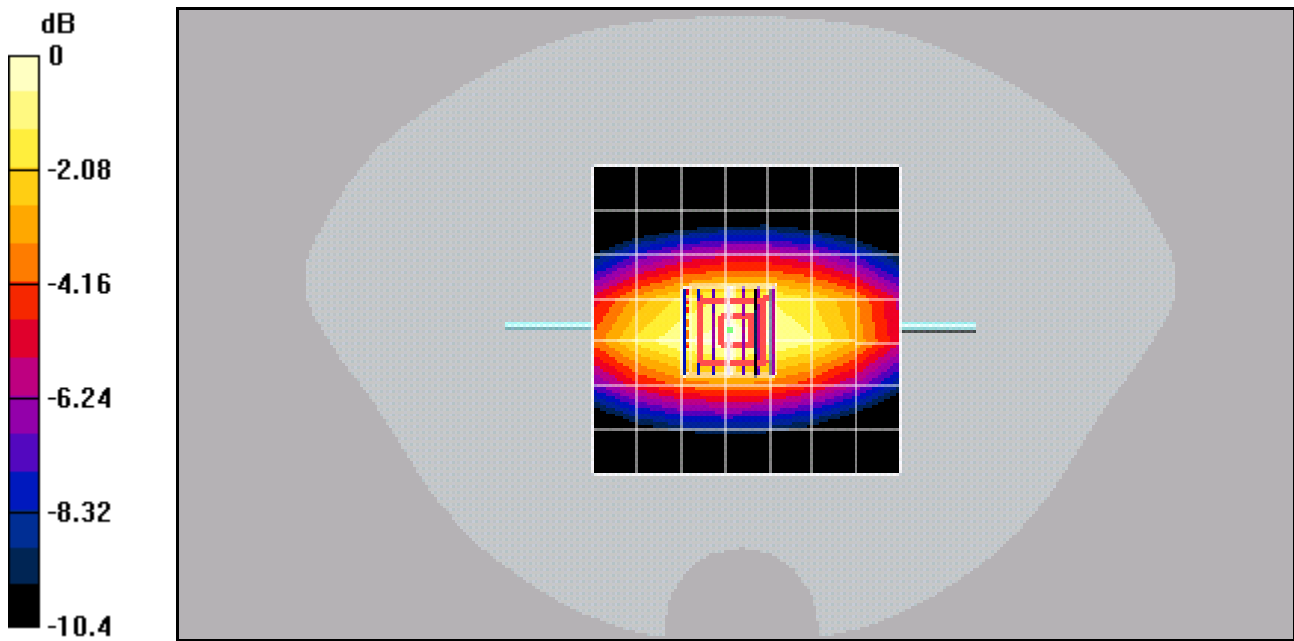
Communication System: CW, Frequency: 835 MHz, Duty Cycle: 1:1  
Medium: HSL900, Medium parameters used:  $f = 835 \text{ MHz}$ ;  $\sigma = 0.888 \text{ mho/m}$ ;  $\epsilon_r = 40.7$ ;  $\rho = 1000 \text{ kg/m}^3$   
Phantom: SAM 12, Phantom section: Flat Section

**DASY4 Configuration:**  
Probe: ET3DV6 - SN1713, ConvF(6.29, 6.29, 6.29), Calibrated: 5/19/2005  
Sensor-Surface: 4mm (Mechanical And Optical Surface Detection),  
Electronics: DAE4 Sn530, Calibrated: 1/4/2005  
Measurement SW: DASY4, V4.4 Build 3  
Postprocessing SW: SEMCAD, V1.8 Build 130

**Temperature:**  
Room T = 21.8 +/- 1 deg C, Liquid T = 22.0 +/- 1 deg C

#### Validation Flat/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 36.1 V/m; Power Drift = -0.0006 dB  
Peak SAR (extrapolated) = 1.47 W/kg  
**SAR(1 g) = 0.994 mW/g; SAR(10 g) = 0.649 mW/g**  
Maximum value of SAR (measured) = 1.08 mW/g



0 dB = 1.08mW/g

Test Laboratory: Kyocera

### 835MHz Validation, Probe#1713, DAE#530, Dipole#454, 08-09-05

Communication System: CW, Frequency: 835 MHz, Duty Cycle: 1:1

Medium: HSL900, Medium parameters used:  $f = 835 \text{ MHz}$ ;  $\sigma = 0.901 \text{ mho/m}$ ;  $\epsilon_r = 41.9$ ;  $\rho = 1000 \text{ kg/m}^3$

Phantom: SAM 12, Phantom section: Flat Section

#### DASY4 Configuration:

Probe: ET3DV6 - SN1713, ConvF(6.29, 6.29, 6.29), Calibrated: 5/19/2005

Sensor-Surface: 4mm (Mechanical And Optical Surface Detection),

Electronics: DAE4 Sn530, Calibrated: 1/4/2005

Measurement SW: DASY4, V4.4 Build 3

Postprocessing SW: SEMCAD, V1.8 Build 130

#### Temperature:

Room T = 21.8 +/- 1 deg C, Liquid T = 22.0 +/- 1 deg C

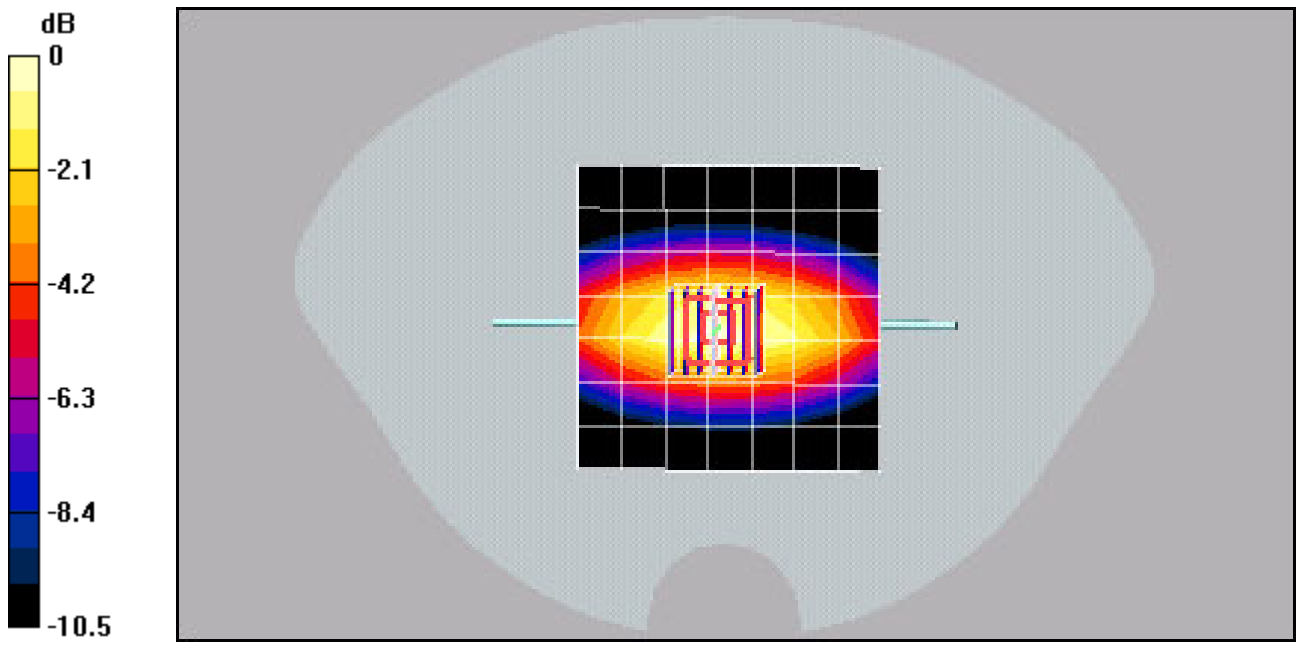
#### Validation Flat/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 36.3 V/m; Power Drift = -0.005 dB

Peak SAR (extrapolated) = 1.53 W/kg

SAR(1 g) = 1.02 mW/g; SAR(10 g) = 0.665 mW/g

Maximum value of SAR (measured) = 1.11 mW/g



0 dB = 1.11mW/g

Test Laboratory: Kyocera

### 835MHz Validation, Probe#1713, DAE#530, Dipole#454, 08-10-05

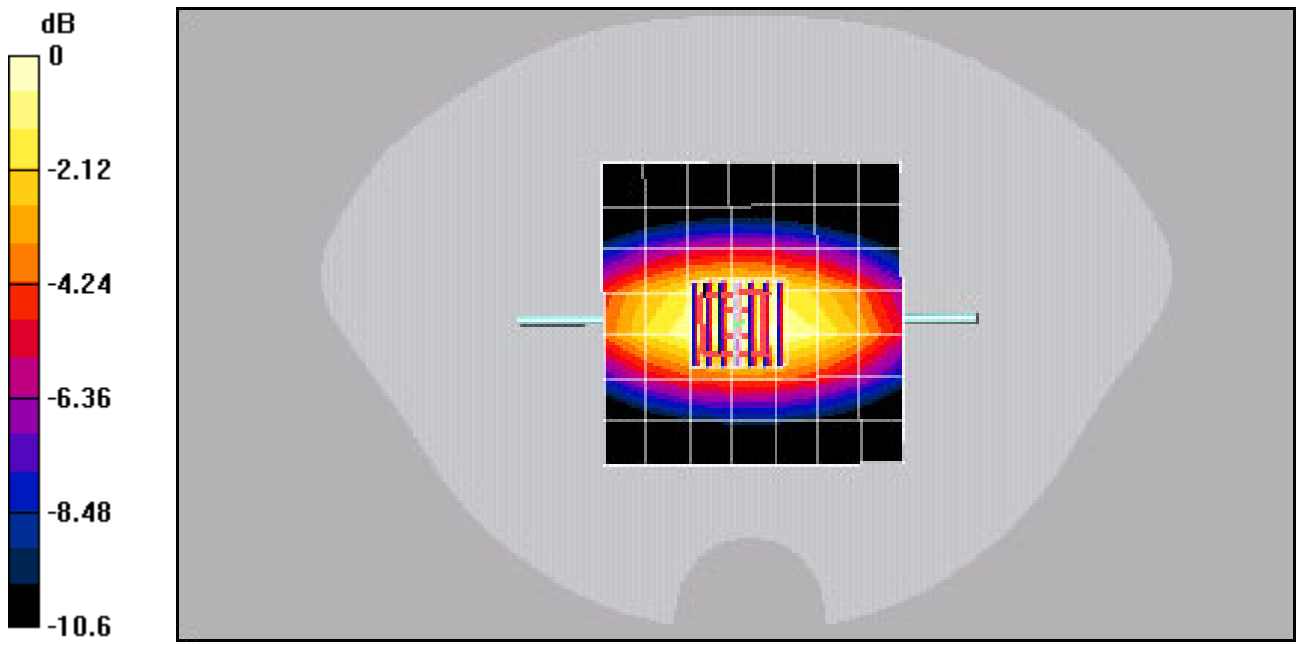
Communication System: CW, Frequency: 835 MHz, Duty Cycle: 1:1  
Medium: HSL900, Medium parameters used:  $f = 835$  MHz;  $\sigma = 0.895$  mho/m;  $\epsilon_r = 41.4$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom: SAM 12, Phantom section: Flat Section

**DASY4 Configuration:**  
Probe: ET3DV6 - SN1713, ConvF(6.29, 6.29, 6.29), Calibrated: 5/19/2005  
Sensor-Surface: 4mm (Mechanical And Optical Surface Detection),  
Electronics: DAE4 Sn530, Calibrated: 1/4/2005  
Measurement SW: DASY4, V4.4 Build 3  
Postprocessing SW: SEMCAD, V1.8 Build 130

**Temperature:**  
Room T = 21.8 +/- 1 deg C, Liquid T = 22.0 +/- 1 deg C

### Validation Flat/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 36.7 V/m; Power Drift = -0.1 dB  
Peak SAR (extrapolated) = 1.53 W/kg  
**SAR(1 g) = 1.02 mW/g; SAR(10 g) = 0.661 mW/g**  
Maximum value of SAR (measured) = 1.11 mW/g



0 dB = 1.11mW/g

Test Laboratory: Kyocera

### 835MHz Validation, Probe#1713, DAE#530, Dipole#454, 08-11-05

Communication System: CW, Frequency: 835 MHz, Duty Cycle: 1:1

Medium: HSL900, Medium parameters used:  $f = 835 \text{ MHz}$ ;  $\sigma = 0.904 \text{ mho/m}$ ;  $\epsilon_r = 41.7$ ;  $\rho = 1000 \text{ kg/m}^3$

Phantom: SAM 12, Phantom section: Flat Section

#### DASY4 Configuration:

Probe: ET3DV6 - SN1713, ConvF(6.29, 6.29, 6.29), Calibrated: 5/19/2005

Sensor-Surface: 4mm (Mechanical And Optical Surface Detection),

Electronics: DAE4 Sn530, Calibrated: 1/4/2005

Measurement SW: DASY4, V4.4 Build 3

Postprocessing SW: SEMCAD, V1.8 Build 130

#### Temperature:

Room T = 21.8 +/- 1 deg C, Liquid T = 22.0 +/- 1 deg C

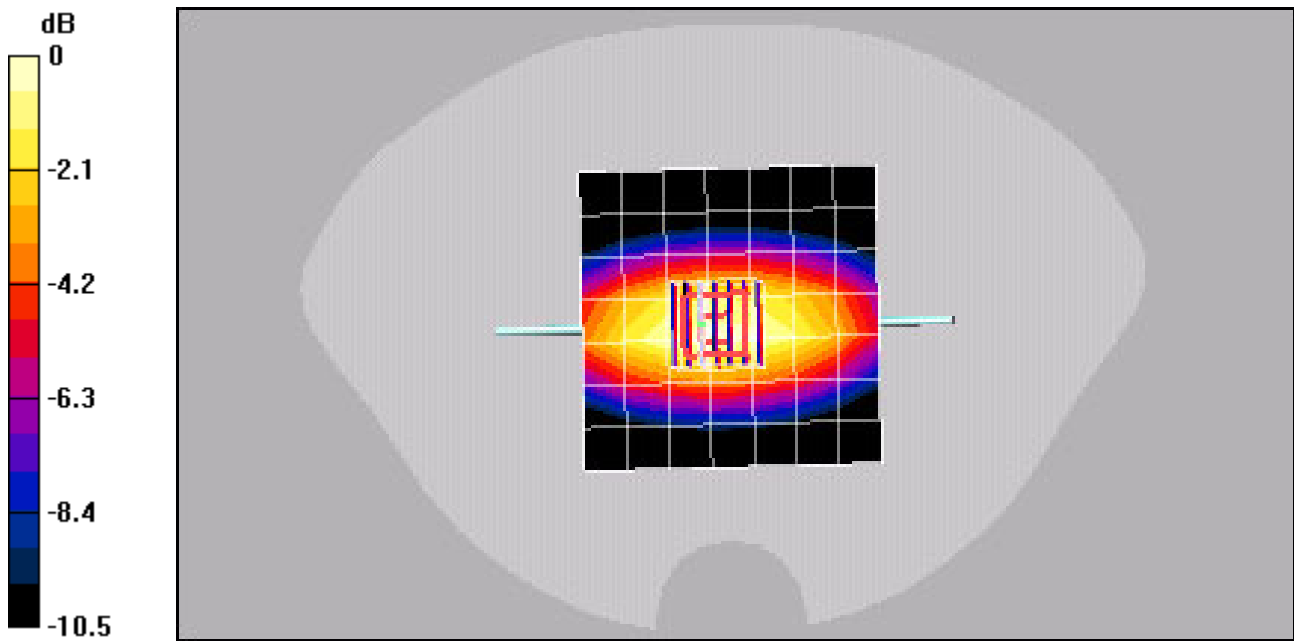
#### Validation Flat/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 36 V/m; Power Drift = 0.007 dB

Peak SAR (extrapolated) = 1.52 W/kg

SAR(1 g) = 1.01 mW/g; SAR(10 g) = 0.660 mW/g

Maximum value of SAR (measured) = 1.1 mW/g



0 dB = 1.1 mW/g

Test Laboratory: Kyocera

### 835MHz Validation, Probe#1713, DAE#530, Dipole#454, 08-12-05

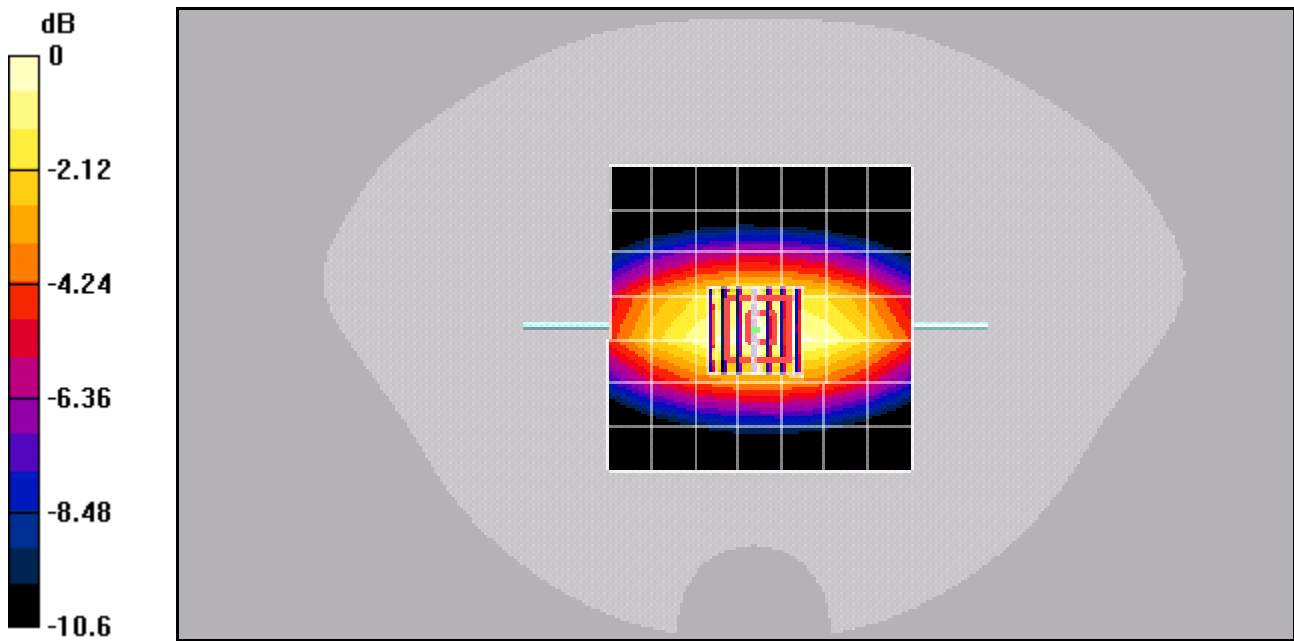
Communication System: CW, Frequency: 835 MHz, Duty Cycle: 1:1  
Medium: HSL900, Medium parameters used:  $f = 835 \text{ MHz}$ ;  $\sigma = 0.905 \text{ mho/m}$ ;  $\epsilon_r = 42$ ;  $\rho = 1000 \text{ kg/m}^3$   
Phantom: SAM 12, Phantom section: Flat Section

**DASY4 Configuration:**  
Probe: ET3DV6 - SN1713, ConvF(6.29, 6.29, 6.29), Calibrated: 5/19/2005  
Sensor-Surface: 4mm (Mechanical And Optical Surface Detection),  
Electronics: DAE4 Sn530, Calibrated: 1/4/2005  
Measurement SW: DASY4, V4.4 Build 3  
Postprocessing SW: SEMCAD, V1.8 Build 130

**Temperature:**  
Room T = 21.8 +/- 1 deg C, Liquid T = 22.0 +/- 1 deg C

### Validation Flat/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 36.1 V/m; Power Drift = 0.004 dB  
Peak SAR (extrapolated) = 1.53 W/kg  
**SAR(1 g) = 1.02 mW/g; SAR(10 g) = 0.662 mW/g**  
Maximum value of SAR (measured) = 1.1 mW/g



0 dB = 1.1 mW/g

Test Laboratory: Kyocera

### 1900MHz Validation @ 20dBm, Probe 1713, DAE 530, Dipole #5d005, 08-12-05

Communication System: CW 1900, Frequency: 1900 MHz, Duty Cycle: 1:1

Medium: HSL1800,Medium parameters used (interpolated):  $f = 1900$  MHz;  $\sigma = 1.39$  mho/m;  $\epsilon_r = 41.6$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom: SAM 12,Phantom section: Flat Section

#### DASY4 Configuration:

Probe: ET3DV6 - SN1713, ConvF(5.18, 5.18, 5.18), Calibrated: 5/19/2005

Sensor-Surface: 4mm (Mechanical And Optical Surface Detection),

Electronics: DAE4 Sn530,Calibrated: 1/4/2005

Measurement SW: DASY4, V4.4 Build 3

Postprocessing SW: SEMCAD, V1.8 Build 130

#### Temperature:

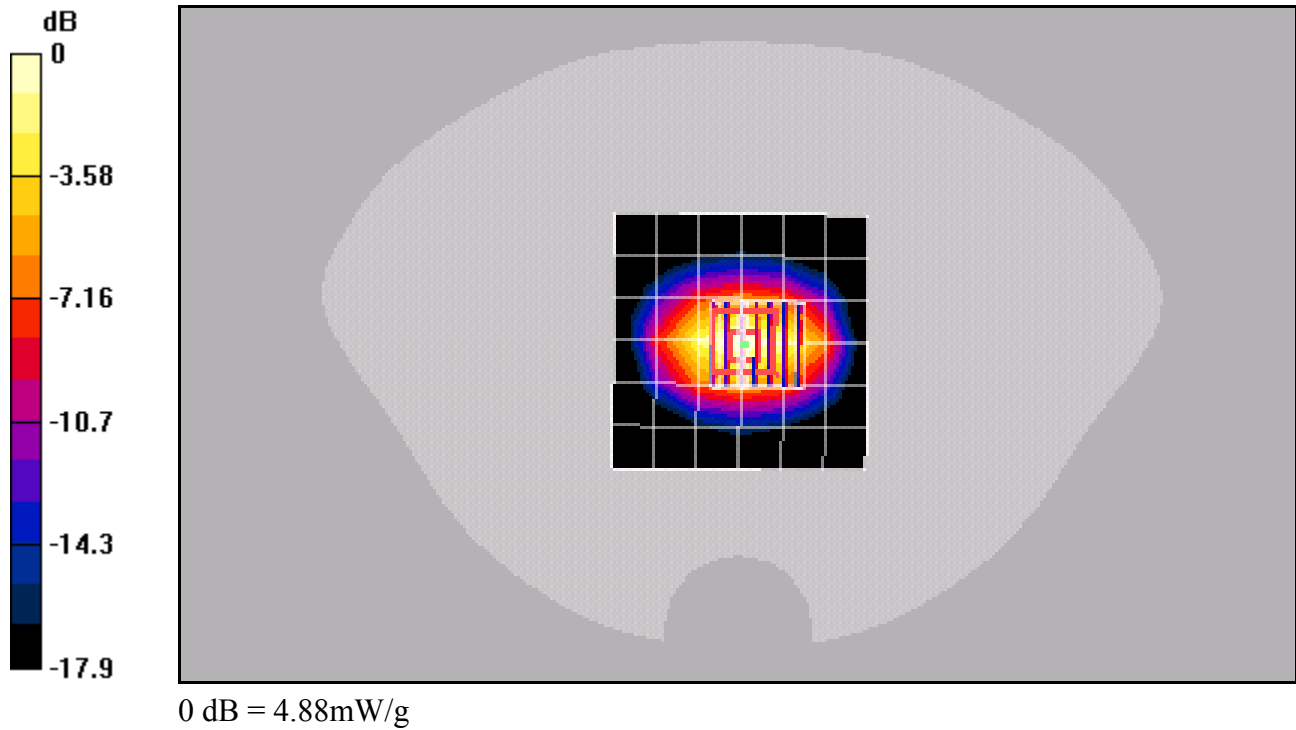
Room T = 21.8 +/- 1 deg C, Liquid T = 22.0 +/- 1 deg C

### 1900Mhz/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 61.8 V/m; Power Drift = -0.006 dB

Peak SAR (extrapolated) = 7.47 W/kg

SAR(1 g) = 4.28 mW/g; SAR(10 g) = 2.27 mW/g



Test Laboratory: Kyocera

### 1900MHz Validation, Probe 1713, DAE 530, Dipole #5d005, 08-13-05

Communication System: CW 1900, Frequency: 1900 MHz, Duty Cycle: 1:1

Medium: HSL1800,Medium parameters used (interpolated):  $f = 1900$  MHz;  $\sigma = 1.39$  mho/m;  $\epsilon_r = 41.6$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom: SAM 12,Phantom section: Flat Section

#### DASY4 Configuration:

Probe: ET3DV6 - SN1713, ConvF(5.18, 5.18, 5.18), Calibrated: 5/19/2005

Sensor-Surface: 4mm (Mechanical And Optical Surface Detection),

Electronics: DAE4 Sn530,Calibrated: 1/4/2005

Measurement SW: DASY4, V4.4 Build 3

Postprocessing SW: SEMCAD, V1.8 Build 130

#### Temperature:

Room T = 21.8 +/- 1 deg C, Liquid T = 22.0 +/- 1 deg C

#### 1900Mhz/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

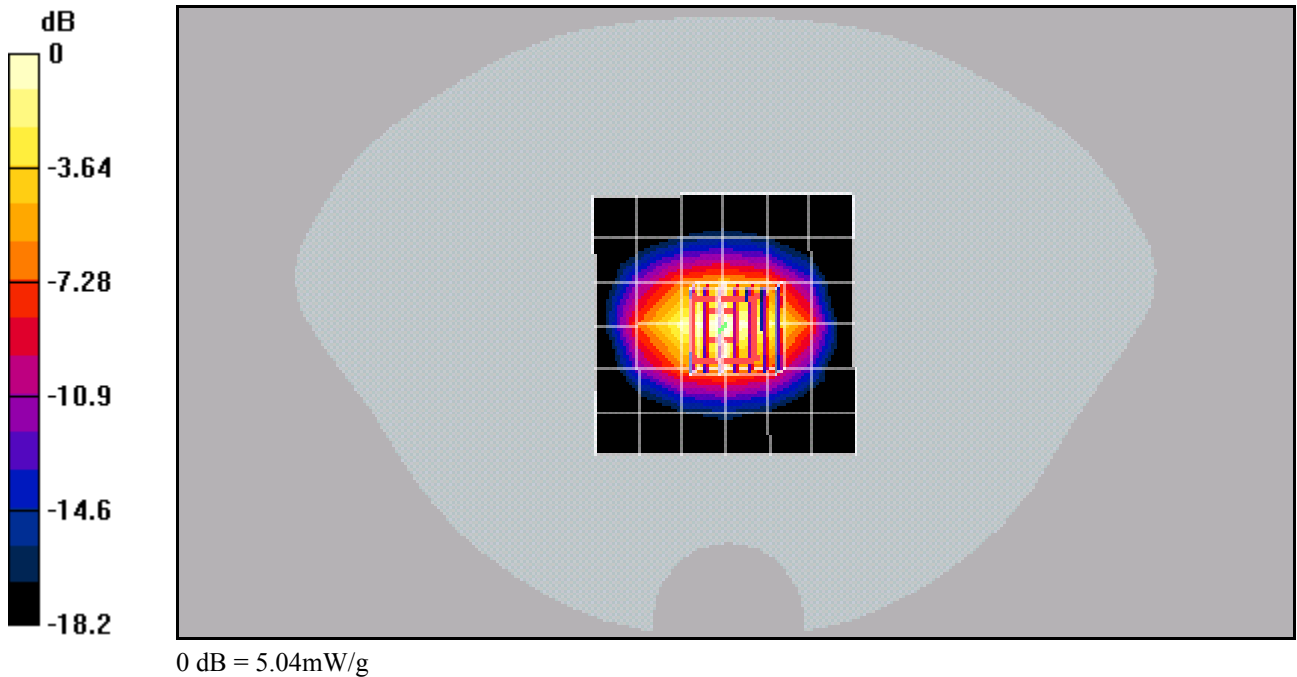
Reference Value = 63.5 V/m; Power Drift = 0.0 dB

Peak SAR (extrapolated) = 7.76 W/kg

SAR(1 g) = 4.44 mW/g; SAR(10 g) = 2.34 mW/g

Info: [Interpolated medium parameters used for SAR evaluation!](#)

Maximum value of SAR (measured) = 5.04 mW/g





Test Laboratory: Kyocera

### 1900MHz Validation, Probe 1713, DAE 530, Dipole #5d005, 08-15-05

Communication System: CW 1900, Frequency: 1900 MHz, Duty Cycle: 1:1

Medium: HSL1800,Medium parameters used (interpolated):  $f = 1900$  MHz;  $\sigma = 1.39$  mho/m;  $\epsilon_r = 41.5$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom: SAM 12,Phantom section: Flat Section

#### DASY4 Configuration:

Probe: ET3DV6 - SN1713, ConvF(5.18, 5.18, 5.18), Calibrated: 5/19/2005

Sensor-Surface: 4mm (Mechanical And Optical Surface Detection),

Electronics: DAE4 Sn530,Calibrated: 1/4/2005

Measurement SW: DASY4, V4.4 Build 3

Postprocessing SW: SEMCAD, V1.8 Build 130

#### Temperature:

Room T = 21.8 +/- 1 deg C, Liquid T = 22.0 +/- 1 deg C

#### 1900Mhz/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

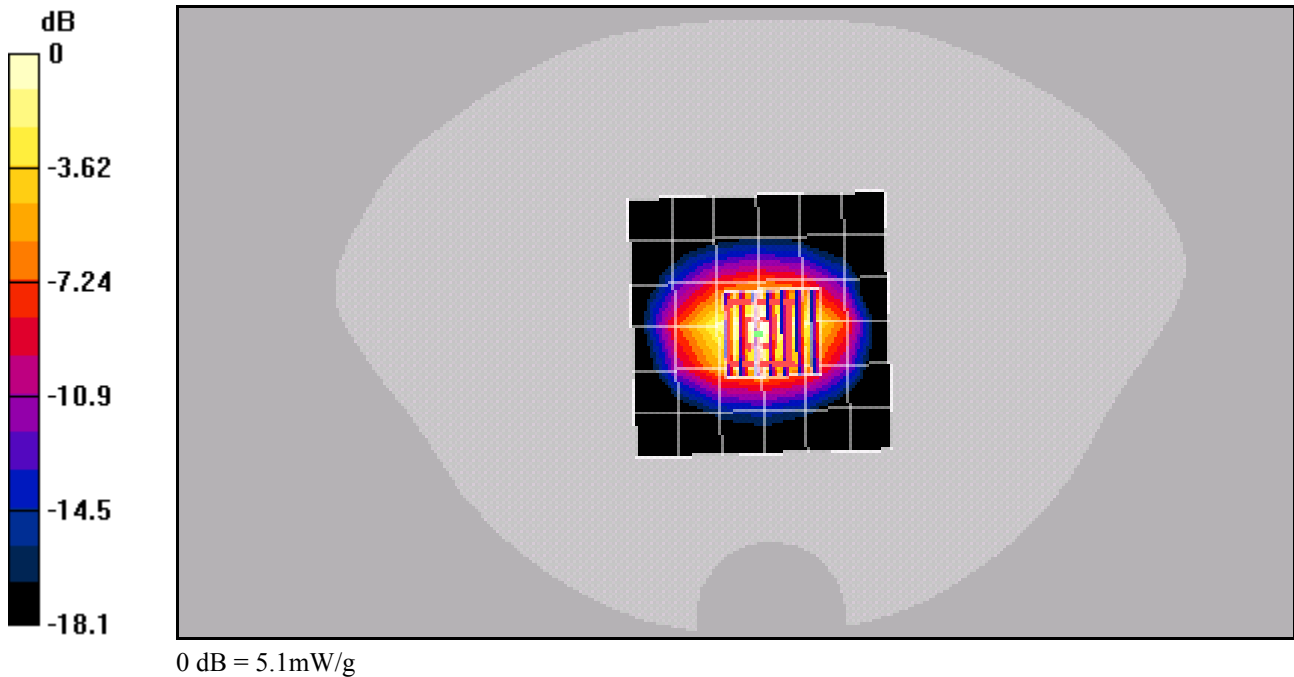
Reference Value = 62.3 V/m; Power Drift = 0.0 dB

Peak SAR (extrapolated) = 7.76 W/kg

SAR(1 g) = 4.46 mW/g; SAR(10 g) = 2.37 mW/g

Info: [Interpolated medium parameters used for SAR evaluation!](#)

Maximum value of SAR (measured) = 5.1 mW/g



Test Laboratory: Kyocera

### 1900MHz Validation @ 20dBm, Probe 1713, DAE 530, Dipole #5d005, 08-16-05

Communication System: CW 1900, Frequency: 1900 MHz, Duty Cycle: 1:1

Medium: HSL1800,Medium parameters used (interpolated):  $f = 1900$  MHz;  $\sigma = 1.4$  mho/m;  $\epsilon_r = 41.3$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom: SAM 12,Phantom section: Flat Section

#### DASY4 Configuration:

Probe: ET3DV6 - SN1713, ConvF(5.18, 5.18, 5.18), Calibrated: 5/19/2005

Sensor-Surface: 4mm (Mechanical And Optical Surface Detection),

Electronics: DAE4 Sn530,Calibrated: 1/4/2005

Measurement SW: DASY4, V4.4 Build 3

Postprocessing SW: SEMCAD, V1.8 Build 130

#### Temperature:

Room T = 21.8 +/- 1 deg C, Liquid T = 22.0 +/- 1 deg C

#### 1900Mhz/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 62.2 V/m; Power Drift = -0.0 dB

Peak SAR (extrapolated) = 7.38 W/kg

SAR(1 g) = 4.23 mW/g; SAR(10 g) = 2.23 mW/g

Info: [Interpolated medium parameters used for SAR evaluation!](#)

