

Appendix A:

Validation Test Plots

Date/Time: 04/07/05 09:17:54

Test Laboratory: Kyocera

835MHz Validation@20.00dBm, Probe#1664, DAE#602, Dipole#454, 04-07-05

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

Medium: HSL900, Medium parameters used: $f = 835 \text{ MHz}$, $\sigma = 0.896 \text{ mho/m}$, $\epsilon_r = 39.9$, $\rho = 1000 \text{ kg/m}^3$

Phantom: EAM 12, Phantom section: Flat Section

DASY4 Configuration:

Probe: ETSDV6 - SN1664, ConnF(6.56, 6.56, 6.56), Calibrated: 9/2/2004

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

Electronics: DAE4 Sn602, Calibrated: 8/27/2004

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

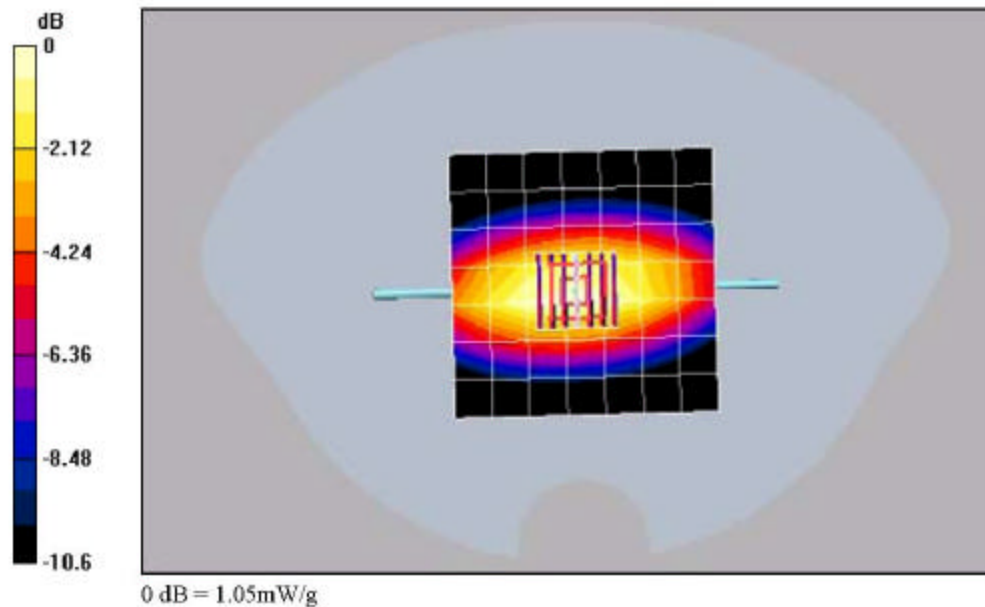
Validation Flat/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 35.6 V/m; Power Drift = -0.0 dB

Peak SAR (extrapolated) = 1.43 W/kg

SAR(1g) = 0.977 mW/g; SAR(10g) = 0.632 mW/g

Maximum value of SAR (measured) = 1.05 mW/g



Date/Time: 04/03/05 00:55:43

Test Laboratory: Kyocera

835MHz Validation@20.00dBm, Probe#1664, DAE#602, Dipole#454, 04-08-05

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

Medium: HSL900, Medium parameters used: $f = 835 \text{ MHz}$, $\sigma = 0.897 \text{ mho/m}$, $\epsilon_r = 40$, $\rho = 1000 \text{ kg/m}^3$

Phantom: EAM 12, Phantom section: Flat Section

DASY4 Configuration:

Probe: ETSDV6 - SN1664, ConnF(6.56, 6.56, 6.56), Calibrated: 9/2/2004

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

Electronics: DAE4 Sn602, Calibrated: 8/27/2004

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

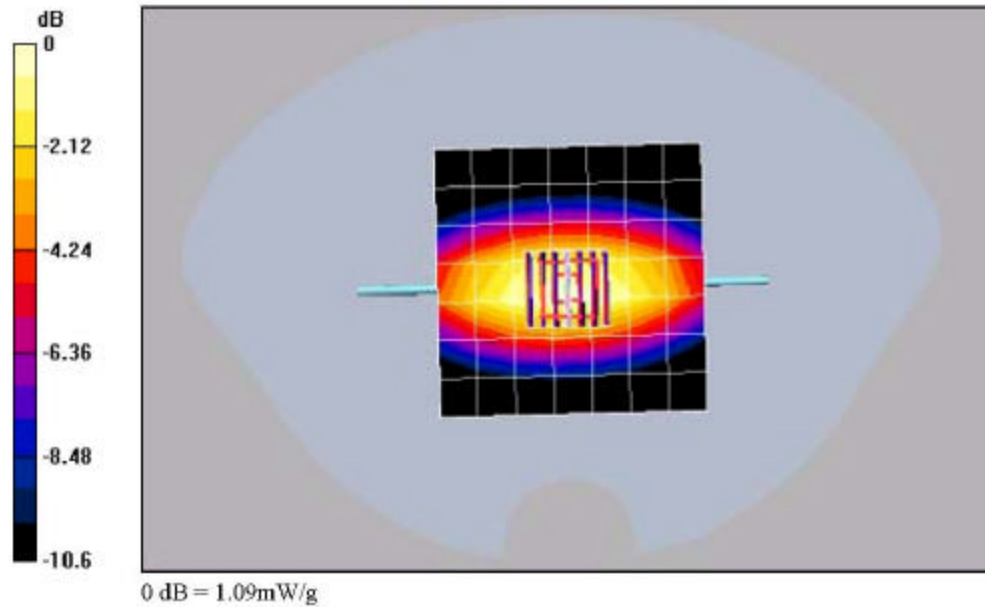
Validation Flat/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 36.2 V/m; Power Dens = -0.0 dB

Peak SAR (extrapolated) = 1.53 W/kg

SAR(1g) = 1.01 mW/g; SAR(10g) = 0.653 mW/g

Maximum value of SAR (measured) = 1.09 mW/g



Date/Time: 04/09/05 00:53:59

Test Laboratory: Kyocera

835MHz Validation@20.00dBm, Probe#1664, DAE#602, Dipole#454, 04-09-05

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

Medium: HSL900, Medium parameters used: $f = 835 \text{ MHz}$, $\sigma = 0.901 \text{ mho/m}$, $\epsilon_r = 40$, $\rho = 1000 \text{ kg/m}^3$

Phantom: SAM 12, Phantom section: Flat Section

DASY4 Configuration:

Probe: ET3DV6 - SN1664, ConvF(6.56, 6.56, 6.56), Calibrated: 9/2/2004

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

Electronics: DAE4 Sn602, Calibrated: 8/27/2004

Measurement SW: DASY4, V4.4 Build 3

Postprocessing SW: SEMCAD, V1.8 Build 130

Temperature

Room T = 21.6 +/- 1 deg C, Liquid T = 22.0 +/- 1 deg C

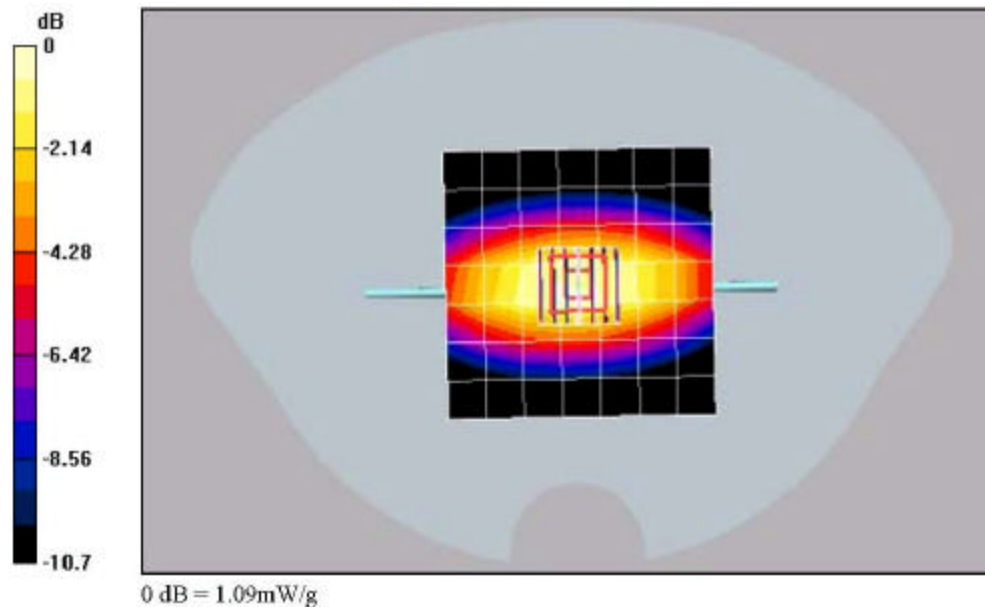
Validation Flat/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 36.1 V/m, Power Drift = -0.0 dB

Peak SAR (extrapolated) = 1.53 W/kg

SAR(1g) = 1.01 mW/g; SAR(10g) = 0.653 mW/g

Maximum value of SAR (measured) = 1.09 mW/g



Date/Time: 04/11/05 09:08:30

Test Laboratory: Kyocera

835MHz Validation@20.00dBm, Probe#1664, DAE#602, Dipole#454, 04-11-05

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

Medium: HSL900, Medium parameters used: $f = 835 \text{ MHz}$, $\sigma = 0.9 \text{ mho/m}$, $\epsilon_r = 40.1$, $\rho = 1000 \text{ kg/m}^3$

Phantom: SAM 12, Phantom section: Flat Section

DASY4 Configuration:

Probe: ET3DV6 - SN1664, ConvF(6.56, 6.56, 6.56), Calibrated: 9/2/2004

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

Electronics: DAE4 Sn602, Calibrated: 8/27/2004

Measurement SW: DASY4, V4.4 Build 3

Postprocessing SW: SEMCAD, V1.8 Build 130

Temperature

Room T = 21.6 +/- 1 deg C, Liquid T = 22.0 +/- 1 deg C

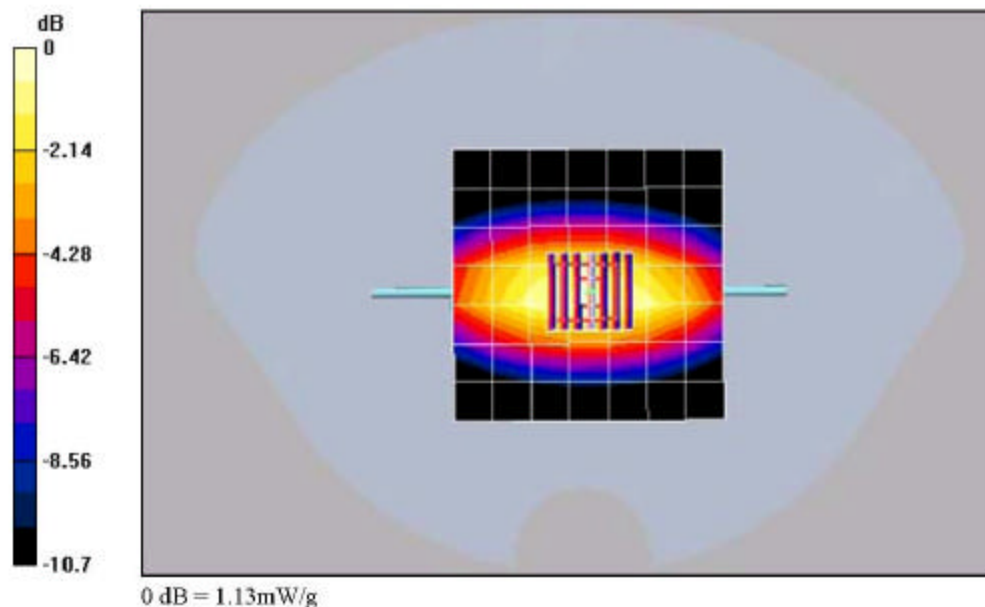
Validation Flat/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 36.7 V/m, Power Drift = 0.0004 dB

Peak SAR (extrapolated) = 1.6 W/kg

SAR(1g) = 1.05 mW/g; SAR(10g) = 0.675 mW/g

Maximum value of SAR (measured) = 1.13 mW/g



Date/Time: 04/12/05 00:43:59

Test Laboratory: Kyocera

835MHz Validation@20.00dBm, Probe#1664, DAE#602, Dipole#454, 04-12-05

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

Medium: HSL900, Medium parameters used: $f = 835 \text{ MHz}$, $\sigma = 0.92 \text{ mho/m}$, $\epsilon_r = 41.7$, $\rho = 1000 \text{ kg/m}^3$

Phantom: SAM 12, Phantom section: Flat Section

DASY4 Configuration:

Probe: ET3DV6 - SN1664, ConvF(6.56, 6.56, 6.56), Calibrated: 9/2/2004

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

Electronics: DAE4 Sn602, Calibrated: 8/27/2004

Measurement SW: DASY4, V4.4 Build 3

Postprocessing SW: SEMCAD, V1.8 Build 130

Temperature

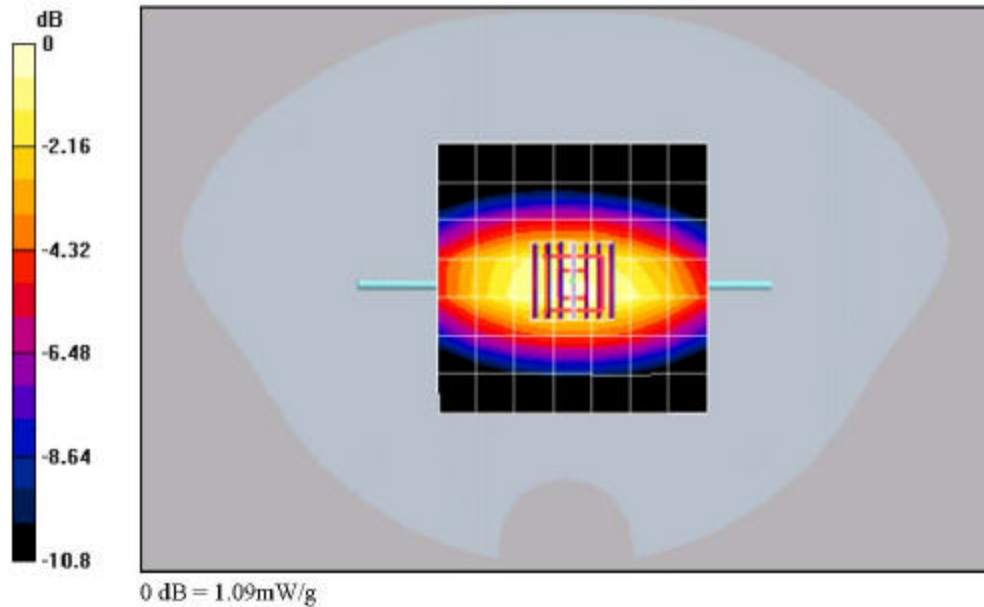
Room T = $21.6 \pm 1 \text{ deg C}$, Liquid T = $22.0 \pm 1 \text{ deg C}$

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

Reference Value = 35.8 V/m , Power Drift = -0.1 dB

Peak SAR (extrapolated) = 1.54 W/kg

SAR(1g) = 1.01 mW/g ; SAR(10g) = 0.640 mW/g

Maximum value of SAR (measured) = 1.09 mW/g


Date/Time: 04/16/05 00:26:47

Test Laboratory: Kyocera

FCC-835MHz Validation@20.00dBm, Probe#1664, DAE#602, Dipole#454, 04-16-05

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

Medium: HSL900, Medium parameters used: $f = 835 \text{ MHz}$, $\sigma = 0.924 \text{ mho/m}$, $\epsilon_r = 41.4$, $\rho = 1000 \text{ kg/m}^3$

Phantom: SAM 12, Phantom section: Flat Section

DASY4 Configuration:

Probe: ET3DV6 - SN1664, ConvF(6.56, 6.56, 6.56), Calibrated: 9/2/2004

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

Electronics: DAE4 Sn602, Calibrated: 8/27/2004

Measurement SW: DASY4, V4.4 Build 3

Postprocessing SW: SEMCAD, V1.8 Build 130

Temperature

Room T = 21.6 +/- 1 deg C, Liquid T = 22.0 +/- 1 deg C

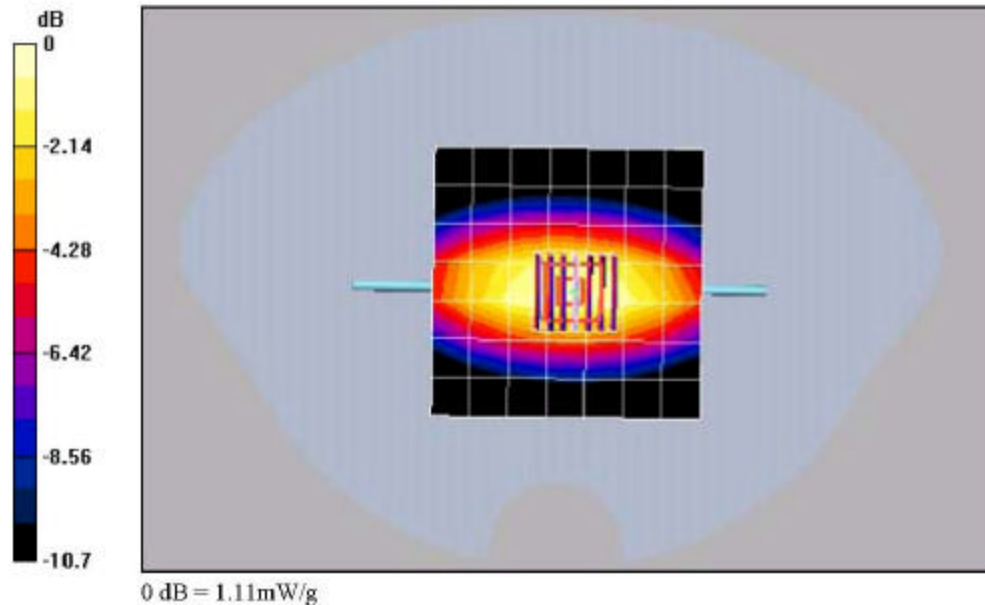
Validation Flat/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5mm$, $dy=5mm$, $dz=5mm$

Reference Value = 35.9 V/m, Power Drift = -0.007 dB

Peak SAR (extrapolated) = 1.56 W/kg

SAR(1g) = 1.03 mW/g; SAR(10g) = 0.663 mW/g

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



Date/Time: 04/17/05 11:05:29

Test Laboratory: Kyocera

FCC-835MHz Validation@20.00dBm, Probe#1664, DAE#602, Dipole#454, 04-17-05

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

Medium: HSL900, Medium parameters used: $f = 835 \text{ MHz}$, $\sigma = 0.91 \text{ mho/m}$, $\epsilon_r = 41.3$, $\rho = 1000 \text{ kg/m}^3$

Phantom: SAM 12, Phantom section: Flat Section

DASY4 Configuration:

Probe: ET3DV6 - SN1664, ConvF(6.56, 6.56, 6.56), Calibrated: 9/2/2004

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

Electronics: DAE4 Sn602, Calibrated: 8/27/2004

Measurement SW: DASY4, V4.4 Build 3

Postprocessing SW: SEMCAD, V1.8 Build 130

Temperature

Room T = 21.6 +/- 1 deg C, Liquid T = 22.0 +/- 1 deg C

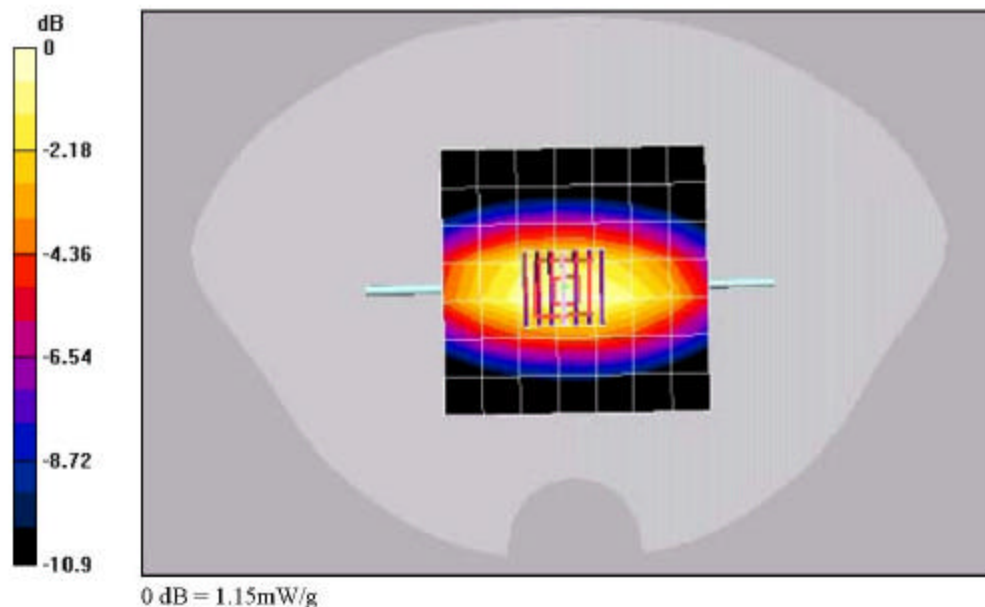
Validation Flat/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5mm$, $dy=5mm$, $dz=5mm$

Reference Value = 36.1 V/m; Power Drift = -0.1 dB

Peak SAR (extrapolated) = 1.67 W/kg

SAR(1g) = 1.05 mW/g; SAR(10g) = 0.664 mW/g

Maximum value of SAR (measured) = 1.15 mW/g



Date/Time: 04/18/05 07:47:38

Test Laboratory: Kyocera

835MHz Validation@20.00dBm, Probe#1664, DAE#602, Dipole#454, 04-18-05

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

Medium: HSL900, Medium parameters used: $f = 835 \text{ MHz}$, $\sigma = 0.927 \text{ mho/m}$, $\epsilon_r = 41.1$, $\rho = 1000 \text{ kg/m}^3$

Phantom: SAM 12, Phantom section: Flat Section

DASY4 Configuration:

Probe: ETSDV6 - SN1664, ConvF(6.56, 6.56, 6.56), Calibrated: 9/2/2004

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

Electronics: DAE4 Sn602, Calibrated: 8/27/2004

Measurement SW: DASY4, V4.4 Build 3

Postprocessing SW: SEMCAD, V1.8 Build 130

Temperature

Room T = 21.6 +/- 1 deg C, Liquid T = 22.0 +/- 1 deg C

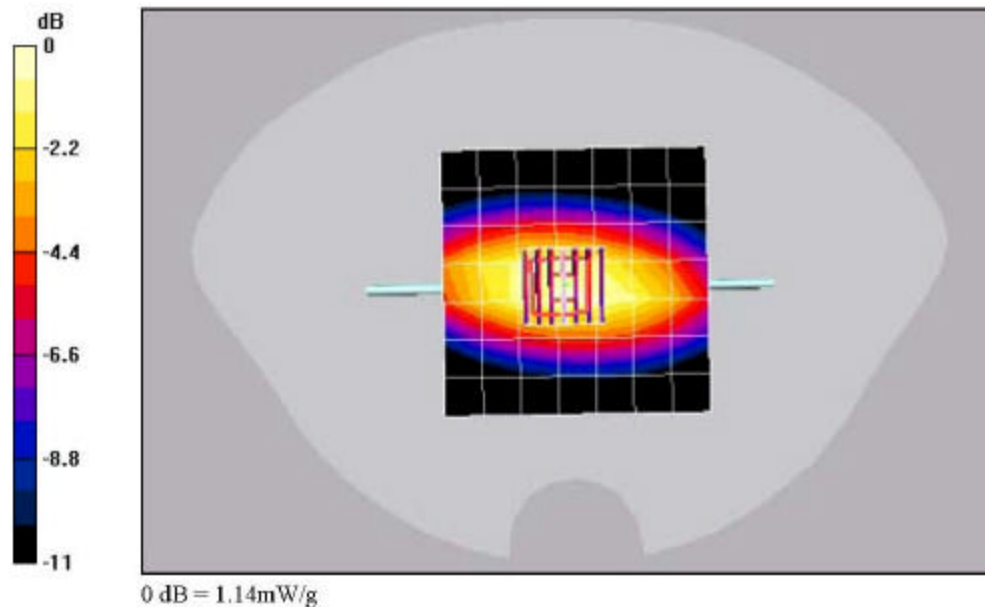
Validation Flat/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 35.8 V/m, Power Drift = -0.0 dB

Peak SAR (extrapolated) = 1.63 W/kg

SAR(1g) = 1.06 mW/g; SAR(10g) = 0.671 mW/g

Maximum value of SAR (measured) = 1.14 mW/g



Date/Time: 04/19/05 00:28:48

Test Laboratory: Kyocera

835MHz Validation@20.00dBm, Probe#1664, DAE#602, Dipole#454, 04-19-05

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

Medium: HSL900, Medium parameters used: $f = 835 \text{ MHz}$, $\sigma = 0.927 \text{ mho/m}$, $\epsilon_r = 41.5$, $\rho = 1000 \text{ kg/m}^3$

Phantom: SAM 12, Phantom section: Flat Section

DASY4 Configuration:

Probe: ET3DV6 - SN1664, ConvF(6.56, 6.56, 6.56), Calibrated: 9/2/2004

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

Electronics: DAE4 Sn602, Calibrated: 8/27/2004

Measurement SW: DASY4, V4.4 Build 3

Postprocessing SW: SEMCAD, V1.8 Build 130

Temperature

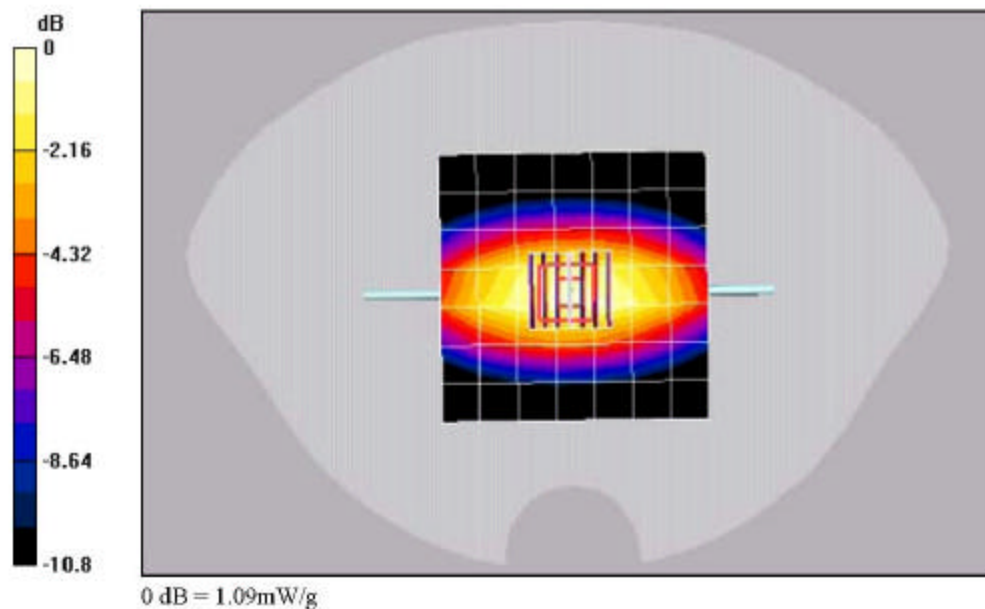
Room T = $21.6 \pm 1 \text{ deg C}$, Liquid T = $22.0 \pm 1 \text{ deg C}$

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

Reference Value = 36.1 V/m , Power Drift = -0.0 dB

Peak SAR (extrapolated) = 1.53 W/kg

SAR(1g) = 1.01 mW/g ; SAR(10g) = 0.054 mW/g

Maximum value of SAR (measured) = 1.09 mW/g


Date/Time: 04/13/05 00:29:26

Test Laboratory: Kyocera

FCC-1900MHz Validation, Probe 1664, DAE 602, Dipole #5d005, 04-13-05

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

Medium: HSL1800, Medium parameters used (interpolated): $f = 1900 \text{ MHz}$, $\sigma = 1.35 \text{ mho/m}$, $\epsilon_r = 41.1$, $\rho = 1000 \text{ kg/m}^3$

Phantom: SAM 12, Phantom section: Flat Section

DASY4 Configuration:

Probe: ET3DV6 - SN1664, ConvF(5.43, 5.43, 5.43), Calibrated: 9/2/2004

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

Electronics: DAE4 Sn602, Calibrated: 8/23/2004

Measurement SW: DASY4, V4.4 Build 3

Postprocessing SW: SEMCAD, V1.8 Build 130

Temperature

Room T = 21.6 +/- 1 deg C, Liquid T = 22.0 +/- 1 deg C

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

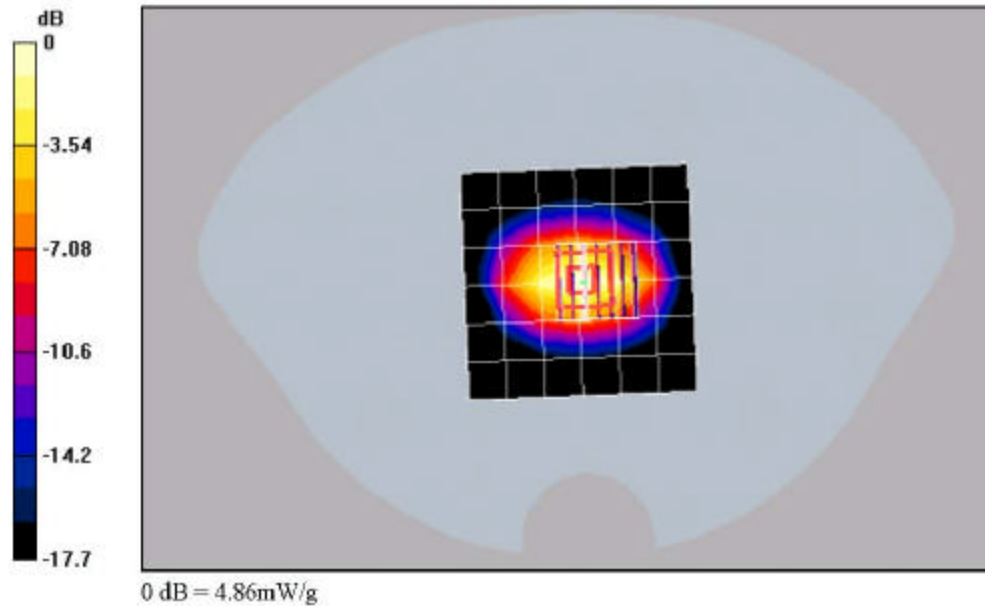
Reference Value = 613.2 V/m, Power Drift = 0.009 dB

Peak SAR (extrapolated) = 7.33 W/kg

SAR(1g) = 4.29 mW/g; SAR(10g) = 2.29 mW/g

Info: Interpolated medium parameters used for SAR evaluation!

Maximum value of SAR (measured) = 4.86 mW/g



Date/Time: 04/14/05 00:25:22

Test Laboratory: Kyocera

FCC-1900MHz Validation, Probe 1664, DAE 602, Dipole #5d005, 04-14-05

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

Medium: HSL1800, Medium parameters used (interpolated): $f = 1900 \text{ MHz}$, $\sigma = 1.37 \text{ mho/m}$, $\epsilon_r = 40.5$, $\rho = 1000 \text{ kg/m}^3$

Phantom: SAM 12, Phantom section: Flat Section

DASY4 Configuration:

Probe: ET3DV6 - SN1664, ConvF(5.43, 5.43, 5.43), Calibrated: 9/2/2004

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

Electronics: DAE4 Sn502, Calibrated: 8/23/2004

Measurement SW: DASY4, V4.4 Build 3

Postprocessing SW: SEMCAD, V1.8 Build 130

Temperature

Room T = 21.6 +/- 1 deg C, Liquid T = 22.0 +/- 1 deg C

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

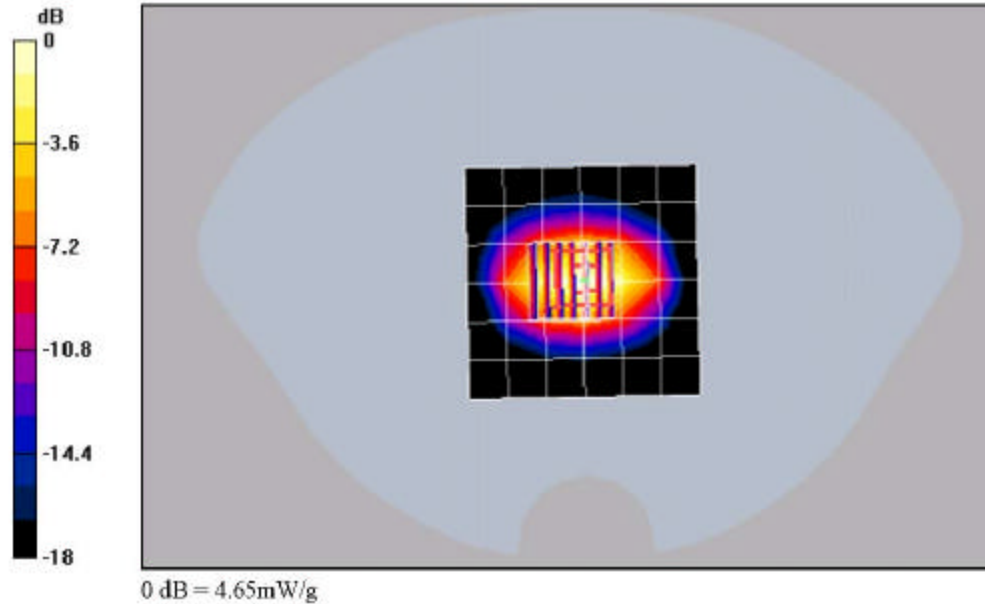
Reference Value = 61.8 V/m, Power Drift = -0.0 dB

Peak SAR (extrapolated) = 7.15 W/kg

SAR(1g) = 4.12 mW/g; SAR(10g) = 2.18 mW/g

Info: Interpolated medium parameter used for SAR evaluation!

Maximum value of SAR (measured) = 4.65 mW/g



Date/Time: 04/15/05 00:25:26

Test Laboratory: Kyocera

FCC-1900MHz Validation, Probe 1664, DAE 602, Dipole #5d005, 04-15-05

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

Medium: HSL1800, Medium parameters used (interpolated): $f = 1900 \text{ MHz}$, $\sigma = 1.36 \text{ mho/m}$, $\epsilon_r = 40.4$, $\rho = 1000 \text{ kg/m}^3$

Phantom: SAM 12, Phantom section: Flat Section

DASY4 Configuration:

Probe: ET3DV6 - SN1664, ConvF(5.43, 5.43, 5.43), Calibrated: 9/2/2004

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

Electronics: DAE4 Sn602, Calibrated: 8/27/2004

Measurement SW: DASY4, V4.4 Build 3

Postprocessing SW: SEMCAD, V1.8 Build 130

Temperature

Room T = 21.6 +/- 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 = 613.4 V/m, Power Drift = -0.0 dB

Peak SAR (extrapolated) = 7.54 W/kg

SAR(1g) = 4.29 mW/g; SAR(10g) = 2.26 mW/g

Info: Interpolated medium parameter used for SAR evaluation!

Maximum value of SAR (measured) = 4.84 mW/g

