

Appendix A:

Validation Test Plots

Date/Time: 04/14/05 14:35:22

Test Laboratory: Kyocera Wireless

FCC-1900MHZ Validation at 20dbm. Probe 1712 DAE 493 Dipole 5d003

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

Medium: HSL1900, Medium parameters used (interpolated): $f = 1900$ MHz; $\sigma = 1.38$ mho/m; $\epsilon_r = 39.3$; $\rho = 1000$ kg/m³

Phantom: SAM 12, Phantom section: Flat Section

DASY4 Configuration:

Probe: ET3DV6 - SN1712, ConvF(5.21, 5.21, 5.21), Calibrated: 9/29/2004

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

Electronics: DAE3 Sn493, Calibrated: 11/24/2004

Measurement SW: DASY4, V4.4 Build 3

Postprocessing SW: SEMCAD, V1.8 Build 130

Temperature

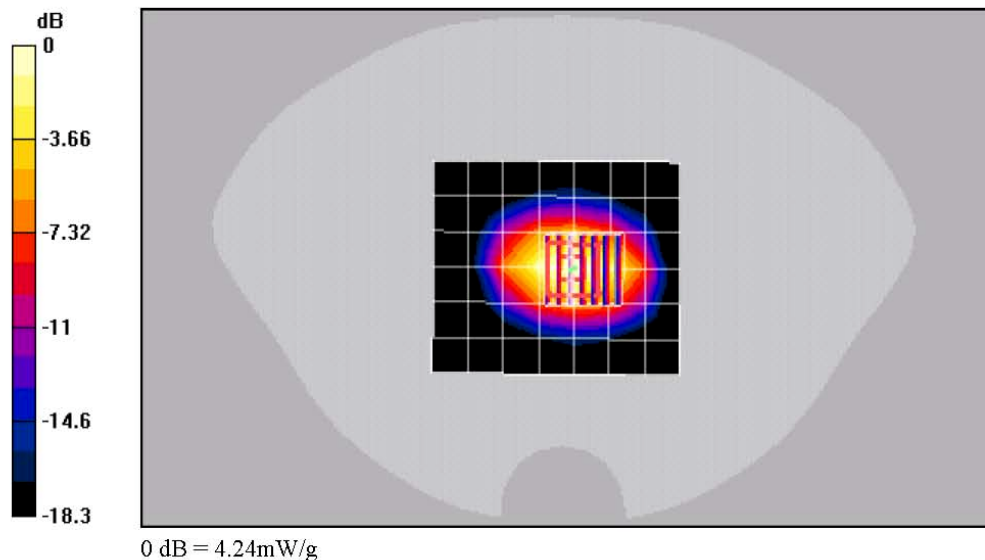
Room T = 21.8 +/- 1 deg C, Liquid T = 22.0 +/- 1 deg C

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

Reference Value = 57.4 V/m; Power Drift = -0.0 dB

Peak SAR (extrapolated) = 6.55 W/kg

SAR(1 g) = 3.75 mW/g; SAR(10 g) = 1.98 mW/g



Date/Time: 04/15/05 00:21:09

Test Laboratory: Kyocera Wireless

1900-MHZ Validation at 20dbm Probe 1712 DAE 493 Dipole 5d003

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

Medium: HSL1900, Medium parameters used (interpolated): $f = 1900$ MHz, $\sigma = 1.36$ mho/m, $\epsilon_r = 40.1$, $\rho = 1000$ kg/m³

Phantom: SAM 12, Phantom section: Flat Section

DASY4 Configuration:

Probe: ET3DV6 - SN1712, ConvF(5.21, 5.21, 5.21), Calibrated: 9/29/2004

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

Electronics: DAE3 Sn493, Calibrated: 11/24/2004

Measurement SW: DASY4, V4.4 Build 3

Postprocessing SW: SEMCAD, V1.8 Build 130

Temperature

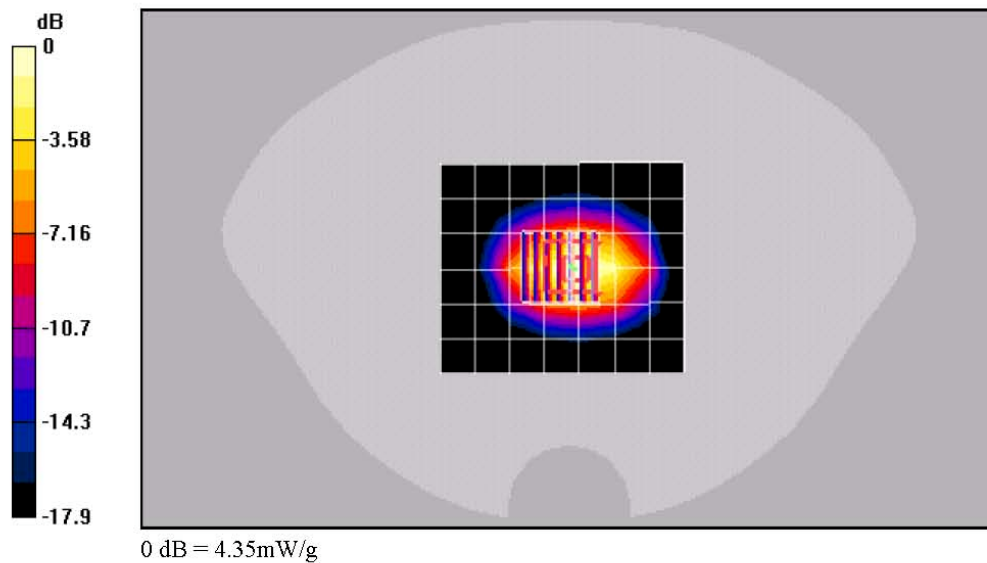
Room T = 21.8 +/- 1 deg C, Liquid T = 22.0 +/- 1 deg C

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

Reference Value = 59 V/m; Power Drift = -0.005 dB

Peak SAR (extrapolated) = 6.68 W/kg

SAR(1 g) = 3.83 mW/g; SAR(10 g) = 2.03 mW/g



Date/Time: 04/16/05 00:59:52

Test Laboratory: Kyocera Wireless

FCC-835Mhz Validation at 20dbm Probe 1712 DAE 493 Dipole 454

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

Medium: HSL900, Medium parameters used: $f = 835 \text{ MHz}$, $\sigma = 0.93 \text{ mho/m}$, $\epsilon_r = 41.6$, $\rho = 1000 \text{ kg/m}^3$

Phantom: SAM 12, Phantom section: Flat Section

DASY4 Configuration:

Probe: ET3DV6 - SN1712, ConvF(6.25, 6.25, 6.25), Calibrated: 9/29/2004

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

Electronics: DAE3 Sn493, Calibrated: 11/24/2004

Measurement SW: DASY4, V4.4 Build 3

Postprocessing SW: SEMCAD, V1.8 Build 130

Temperature

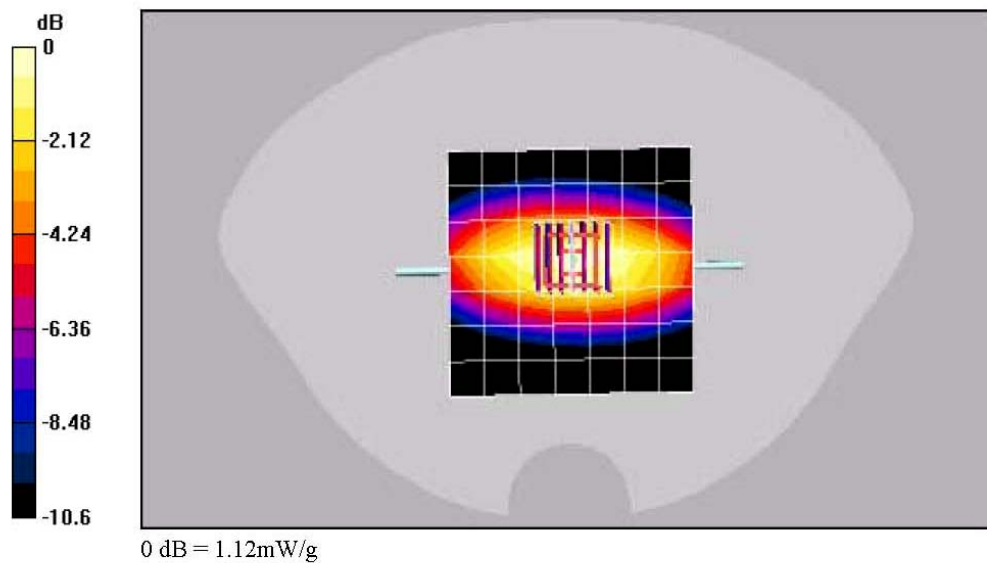
Room T = $21.8 \pm 1 \text{ deg C}$, Liquid T = $22.0 \pm 1 \text{ deg C}$

835Mhz Validation/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 Drift = -0.0 dB

Peak SAR (extrapolated) = 1.57 W/kg

SAR(1 g) = 1.04 mW/g ; SAR(10 g) = 0.678 mW/g

Maximum value of SAR (measured) = 1.12 mW/g


Date/Time: 04/18/05 07:31:52

Test Laboratory: Kyocera Wireless

FCC-835Mhz Validation at 20dbm Probe 1712 DAE 493 Dipole 454

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

Medium: HSL900, Medium parameters used: $f = 835 \text{ MHz}$, $\sigma = 0.923 \text{ mho/m}$, $\epsilon_r = 43.1$, $\rho = 1000 \text{ kg/m}^3$

Phantom: SAM 12, Phantom section: Flat Section

DASY4 Configuration:

Probe: ET3DV6 - SN1712, ConvF(6.25, 6.25, 6.25), Calibrated: 9/29/2004

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

Electronics: DAE3 Sn493, Calibrated: 11/24/2004

Measurement SW: DASY4, V4.4 Build 3

Postprocessing SW: SEMCAD, V1.8 Build 130

Temperature

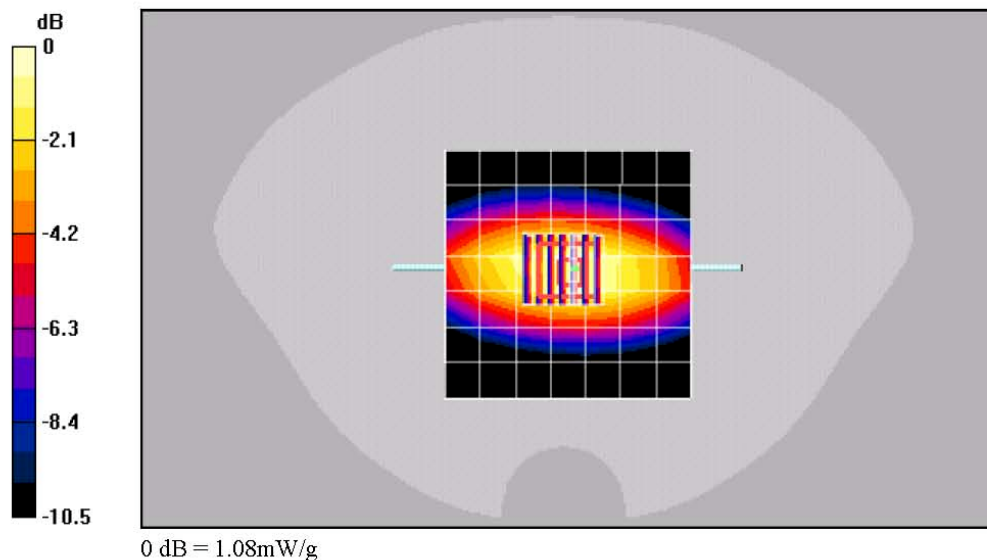
Room T = $21.8 \pm 1 \text{ deg C}$, Liquid T = $22.0 \pm 1 \text{ deg C}$

835Mhz Validation/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 35.5 V/m ; Power Drift = 0.0 dB

Peak SAR (extrapolated) = 1.51 W/kg

SAR(1 g) = 0.995 mW/g ; SAR(10 g) = 0.647 mW/g

Maximum value of SAR (measured) = 1.08 mW/g


Date/Time: 04/19/05 00:25:39

Test Laboratory: Kyocera Wireless

FCC-835Mhz Validation at 20dbm Probe 1712 DAE 493 Dipole 454

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

Medium: HSL900, Medium parameters used: $f = 835 \text{ MHz}$, $\sigma = 0.923 \text{ mho/m}$, $\epsilon_r = 43.1$, $\rho = 1000 \text{ kg/m}^3$

Phantom: SAM 12, Phantom section: Flat Section

DASY4 Configuration:

Probe: ET3DV6 - SN1712, ConvF(6.25, 6.25, 6.25), Calibrated: 9/29/2004

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

Electronics: DAE3 Sn493, Calibrated: 11/24/2004

Measurement SW: DASY4, V4.4 Build 3

Postprocessing SW: SEMCAD, V1.8 Build 130

Temperature

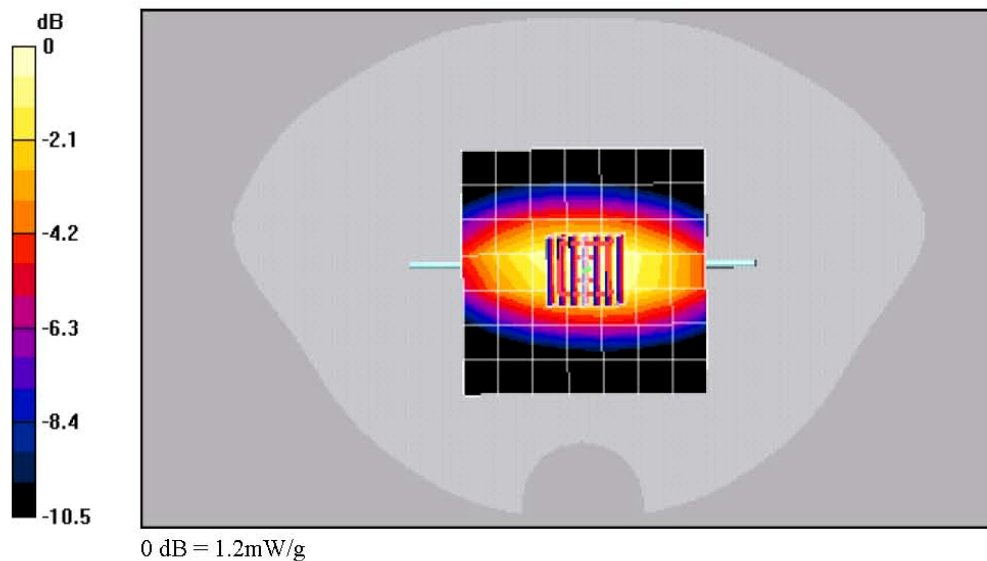
Room T = $21.8 \pm 1 \text{ deg C}$, Liquid T = $22.0 \pm 1 \text{ deg C}$

835Mhz Validation/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 36.9 V/m ; Power Drift = -0.0 dB

Peak SAR (extrapolated) = 1.65 W/kg

SAR(1 g) = 1.1 mW/g ; SAR(10 g) = 0.717 mW/g

Maximum value of SAR (measured) = 1.2 mW/g


Date/Time: 04/20/05 13:48:36

Test Laboratory: Kyocera Wireless

FCC-835 MHZ Validation at 20dbm Probe 1712 DAE 493 Dipole 454

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

Medium: HSL900, Medium parameters used: $f = 835 \text{ MHz}$, $\sigma = 0.894 \text{ mho/m}$, $\epsilon_r = 41.5$, $\rho = 1000 \text{ kg/m}^3$

Phantom: SAM 12, Phantom section: Flat Section

DASY4 Configuration:

Probe: ET3DV6 - SN1712, ConvF(6.25, 6.25, 6.25), Calibrated: 9/29/2004

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

Electronics: DAE3 Sn493, Calibrated: 11/24/2004

Measurement SW: DASY4, V4.4 Build 3

Postprocessing SW: SEMCAD, V1.8 Build 130

Temperature

Room T = $21.8 \pm 1 \text{ deg C}$, Liquid T = $22.0 \pm 1 \text{ deg C}$

835Mhz Validation/Area Scan (7x8x1): Measurement grid: dx=15mm, dy=15mm

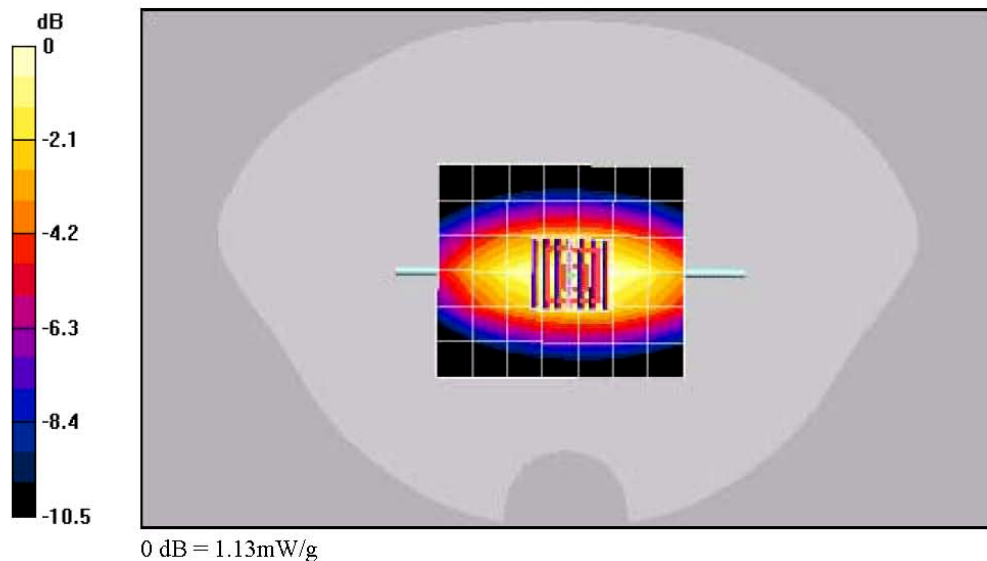
Maximum value of SAR (measured) = 1.13 mW/g

835Mhz Validation/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 36.5 V/m, Power Dn fit = -0.002 dB

Peak SAR (extrapolated) = 1.55 W/kg

SAR(1 g) = 1.04 mW/g; SAR(10 g) = 0.679 mW/g



Date/Time: 04/20/05 17:25:19

Test Laboratory: Kyocera Wireless

1900-MHZ Validation at 20dbm Probe 1712 DAE 493 Dipole 5d003

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

Medium: HSL1900, Medium parameters used (interpolated): $f = 1900$ MHz, $\sigma = 1.38$ mho/m, $\epsilon_r = 40.1$, $\rho = 1000$ kg/m³

Phantom: SAM 12, Phantom section: Flat Section

DASY4 Configuration:

Probe: ET3DV6 - SN1712, ConvF(5.21, 5.21, 5.21), Calibrated: 9/29/2004

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

Electronics: DAE3 Sn493, Calibrated: 11/24/2004

Measurement SW: DASY4, V4.4 Build 3

Postprocessing SW: SEMCAD, V1.8 Build 130

Temperature

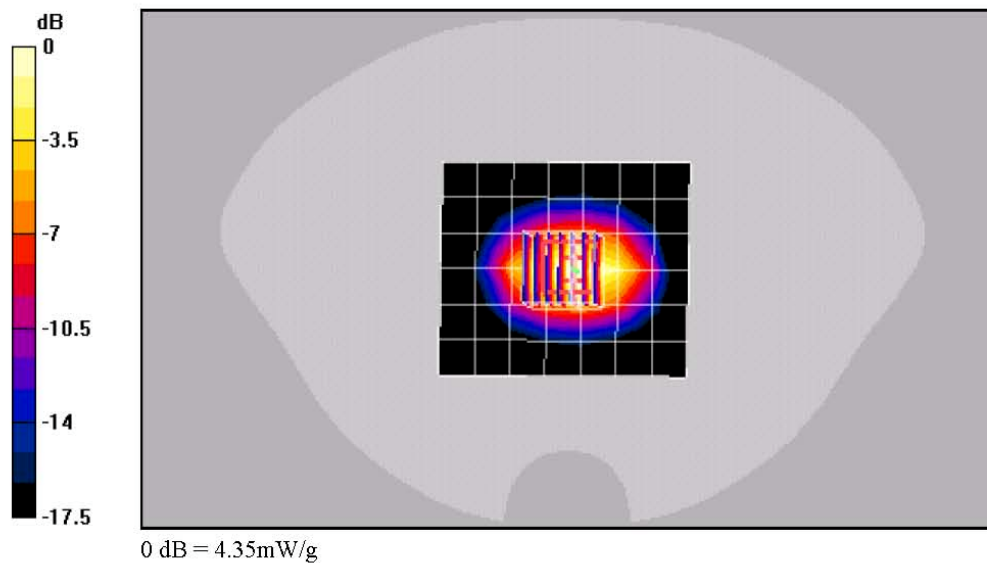
Room T = 21.8 +/- 1 deg C, Liquid T = 22.0 +/- 1 deg C

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

Reference Value = 59.9 V/m; Power Drift = -0.0 dB

Peak SAR (extrapolated) = 6.84 W/kg

SAR(1 g) = 3.9 mW/g; SAR(10 g) = 2.07 mW/g



Date/Time: 04/21/05 00:28:29

Test Laboratory: Kyocera Wireless

1900-MHz Validation at 20dbm Probe 1712 DAE 493 Dipole 5d003

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

Medium: HSL1900, Medium parameters used (interpolated): $f = 1900$ MHz, $\sigma = 1.39$ mho/m, $\epsilon_r = 40.1$, $\rho = 1000$ kg/m³

Phantom: SAM 12, Phantom section: Flat Section

DASY4 Configuration:

Probe: ET3DV6 - SN1712, ConvF(5.21, 5.21, 5.21), Calibrated: 9/29/2004

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

Electronics: DAE3 Sn493, Calibrated: 11/24/2004

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

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

Reference Value = 59.9 V/m; Power Drift = -0.007 dB

Peak SAR (extrapolated) = 7.01 W/kg

SAR(1 g) = 3.95 mW/g; SAR(10 g) = 2.09 mW/g

