

Appendix A:

Validation Test Plots

Test Laboratory: Kyocera-Wireless Corp.

835Mhz Validation @ 20dBm Probe 1664, DAE 527 and Dipole 454

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

Medium: HSL900, Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 0.91 \text{ mho/m}$; $\epsilon_r = 42.1$; $\rho = 1000 \text{ kg/m}^3$

Phantom: SAM 12, Phantom section: Flat Section

DASY4 Configuration:

Probe: ET3DV6 - SN1664, ConvF(6.73, 6.73, 6.73), Calibrated: 7/16/2007

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

Electronics: DAE4 Sn527, Calibrated: 9/14/2007

Measurement SW: DASY4, V4.7 Build 55

Postprocessing SW: SEMCAD, V1.8 Build 176

Temperature:

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

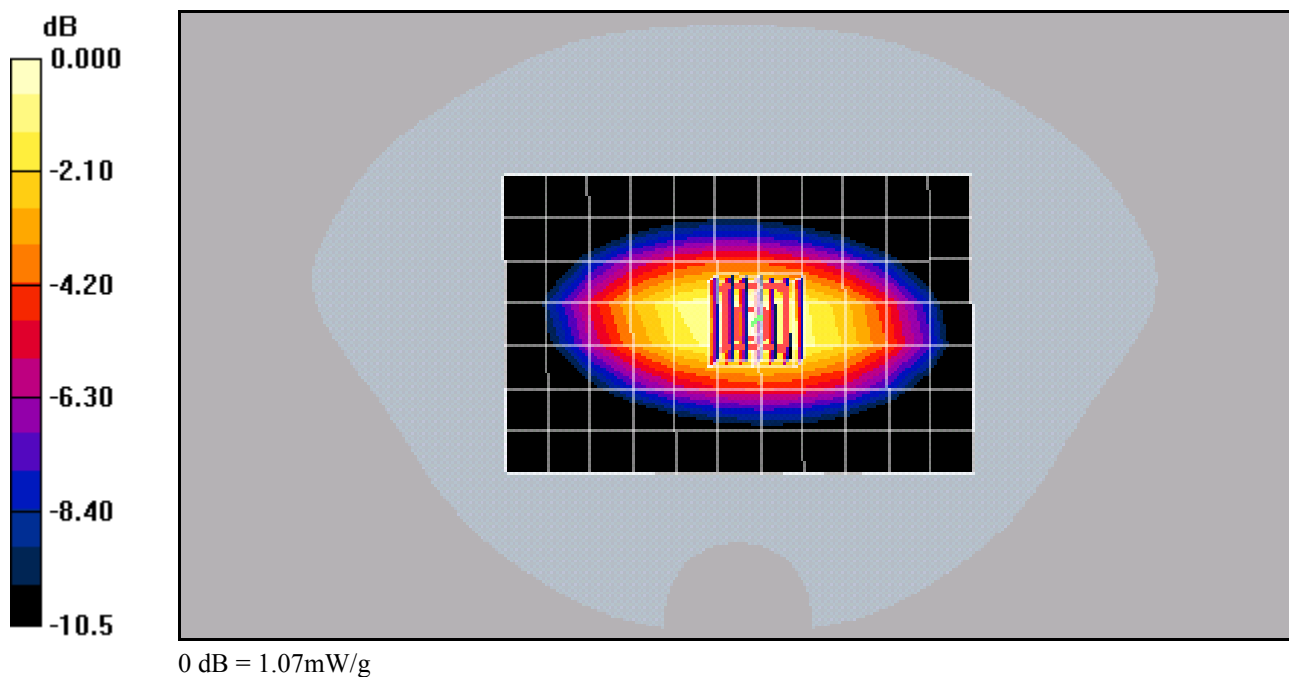
835MHz Validation @20dBm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 35.3 V/m; Power Drift = -0.021 dB

Peak SAR (extrapolated) = 1.41 W/kg

SAR(1 g) = 0.990 mW/g; SAR(10 g) = 0.651 mW/g

Maximum value of SAR (measured) = 1.07 mW/g



Test Laboratory: Kyocera-Wireless Corp.

835Mhz Validation (In Muscle) @ 20dBm Probe 1644, DAE 527, Dipole 454

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

Medium: M900,Medium parameters used: $f = 835$ MHz; $\sigma = 0.941$ mho/m; $\epsilon_r = 55.1$; $\rho = 1000$ kg/m³

Phantom: SAM 12,Phantom section: Flat Section

DASY4 Configuration:

Probe: ET3DV6 - SN1664, ConvF(6.49, 6.49, 6.49), Calibrated: 7/16/2007

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

Electronics: DAE4 Sn527,Calibrated: 9/14/2007

Measurement SW: DASY4, V4.7 Build 55

Postprocessing SW: SEMCAD, V1.8 Build 176

Temperature:

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

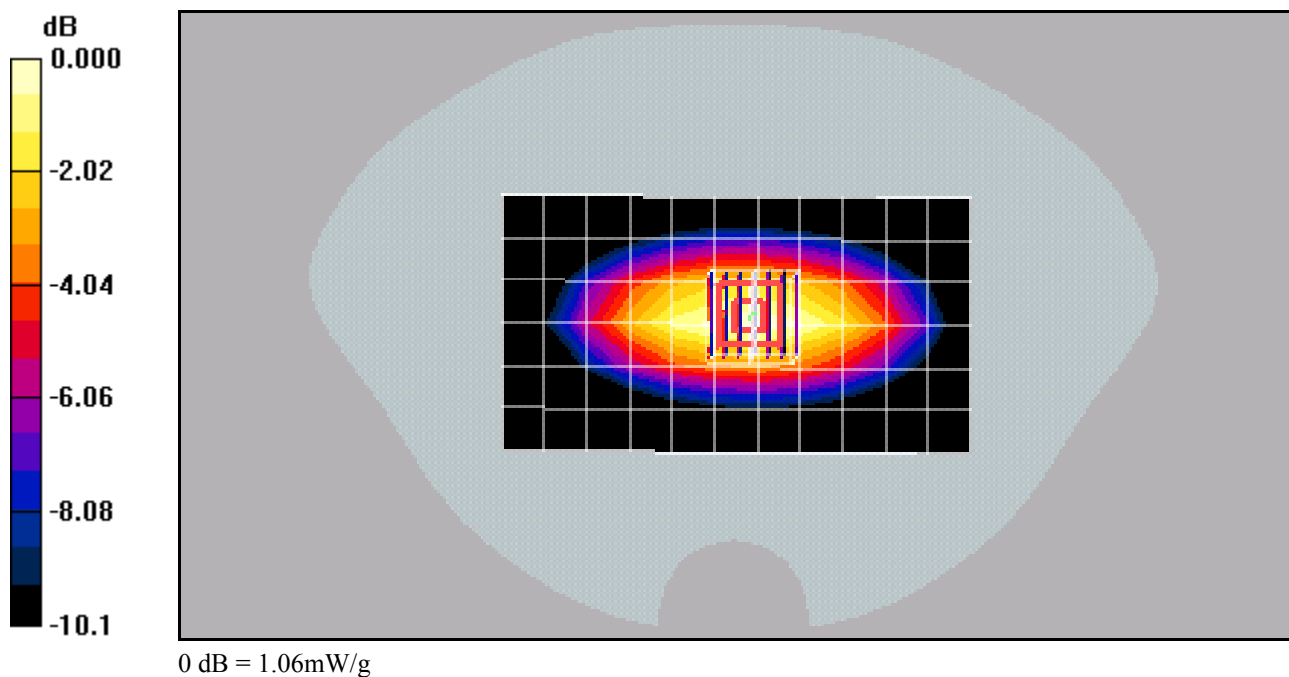
835MHz Validation (In Muscle) @20dBm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 34.2 V/m; Power Drift = -0.009 dB

Peak SAR (extrapolated) = 1.44 W/kg

SAR(1 g) = 0.980 mW/g; SAR(10 g) = 0.642 mW/g

Maximum value of SAR (measured) = 1.06 mW/g



Test Laboratory: Kyocera-Wireless Corp.

835Mhz Validation (In Muscle) @ 20dBm Probe 1644, DAE 527, Dipole 454

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

Medium: M900,Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 0.94 \text{ mho/m}$; $\epsilon_r = 55.3$; $\rho = 1000 \text{ kg/m}^3$

Phantom: SAM 12,Phantom section: Flat Section

DASY4 Configuration:

Probe: ET3DV6 - SN1664, ConvF(6.49, 6.49, 6.49), Calibrated: 7/16/2007

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

Electronics: DAE4 Sn527,Calibrated: 9/14/2007

Measurement SW: DASY4, V4.7 Build 55

Postprocessing SW: SEMCAD, V1.8 Build 176

Temperature:

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

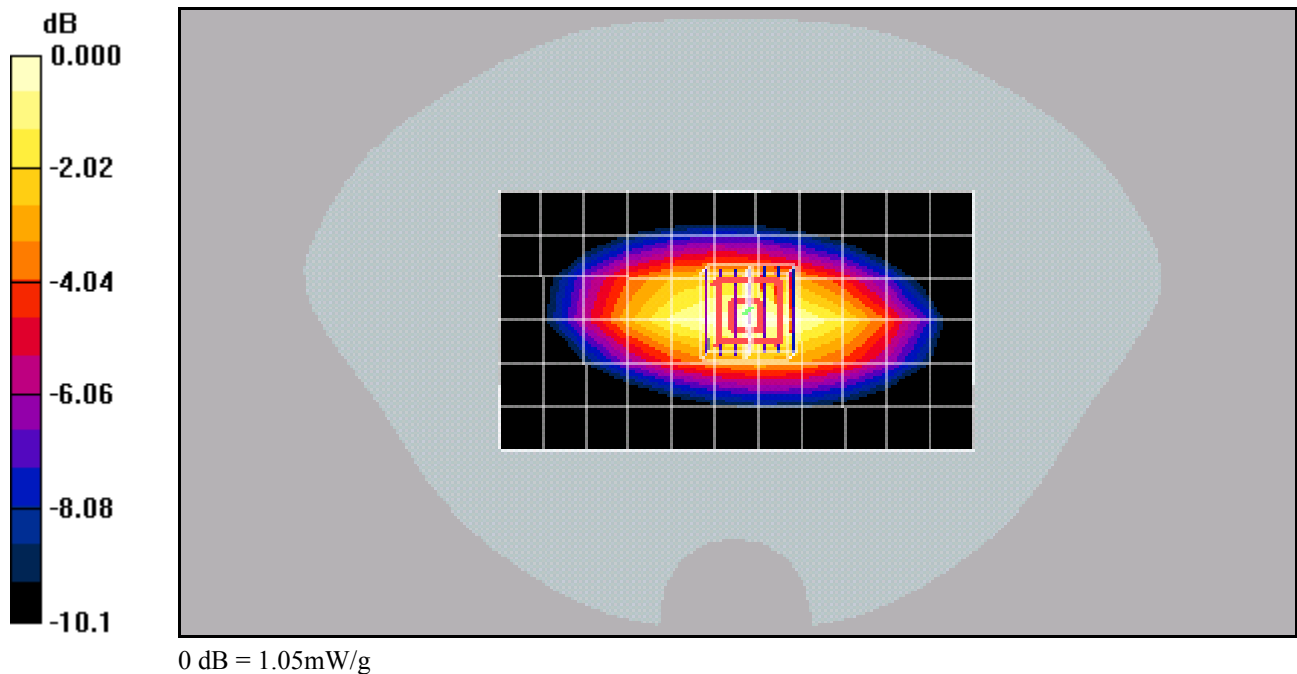
835MHz Validation (In Muscle) @20dBm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 34.2 V/m; Power Drift = -0.059 dB

Peak SAR (extrapolated) = 1.45 W/kg

SAR(1 g) = 0.962 mW/g; SAR(10 g) = 0.627 mW/g

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



Test Laboratory: Kyocera-Wireless Corp.

1800Mhz Validation @ 20dBm Probe 1664, DAE 527 and Dipole 220

Communication System: CW, Frequency: 1800 MHz, Duty Cycle: 1:1

Medium: HSL1800, Medium parameters used (extrapolated): $f = 1800 \text{ MHz}$; $\sigma = 1.42 \text{ mho/m}$; $\epsilon_r = 40.2$; $\rho = 1000 \text{ kg/m}^3$

Phantom: SAM 12, Phantom section: Flat Section

DASY4 Configuration:

Probe: ET3DV6 - SN1664, ConvF(5.3, 5.3, 5.3), Calibrated: 7/16/2007

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

Electronics: DAE4 Sn527, Calibrated: 9/14/2007

Measurement SW: DASY4, V4.7 Build 55

Postprocessing SW: SEMCAD, V1.8 Build 176

Temperature:

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

1800MHz Validation @20dBm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

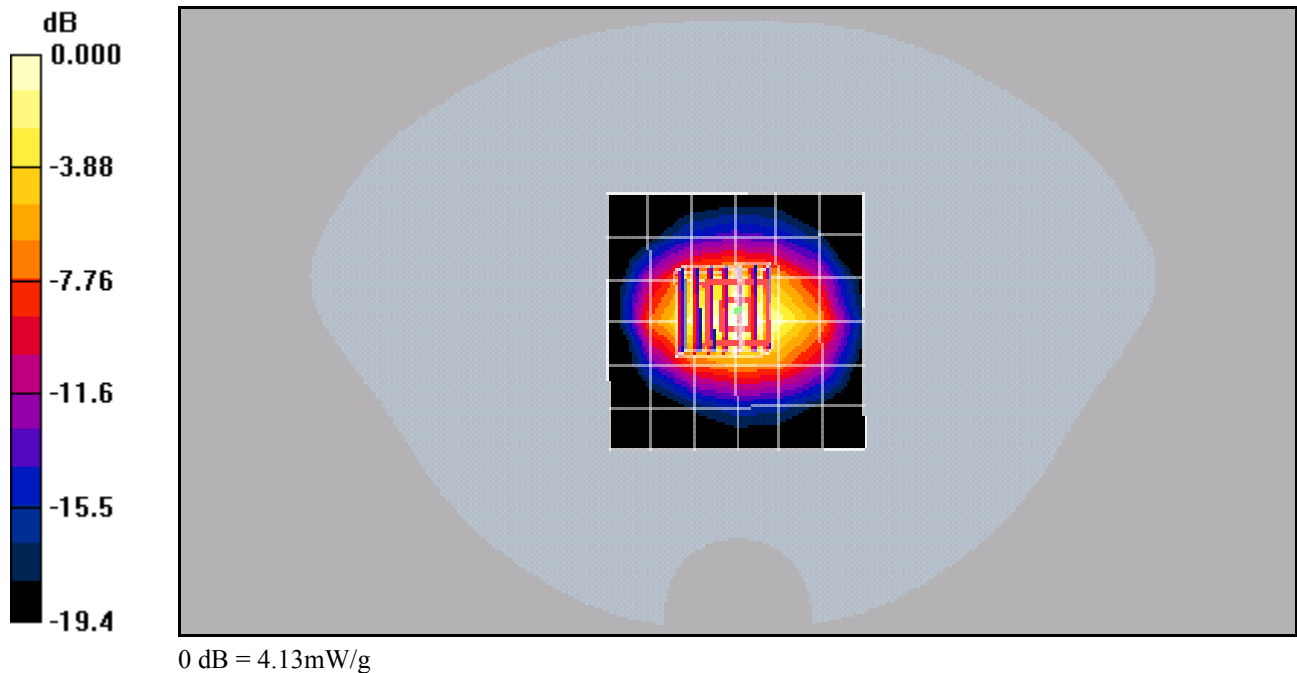
Reference Value = 56.8 V/m; Power Drift = 0.026 dB

Peak SAR (extrapolated) = 6.44 W/kg

SAR(1 g) = 3.67 mW/g; SAR(10 g) = 1.92 mW/g

Info: Extrapolated medium parameters used for SAR evaluation.

Maximum value of SAR (measured) = 4.13 mW/g



Test Laboratory: Kyocera-Wireless Corp.

1800Mhz Validation (In Muscle) @ 20dBm Probe 1664, DAE 527 and Dipole 220

Communication System: CW, Frequency: 1800 MHz, Duty Cycle: 1:1

Medium: M1700, Medium parameters used (extrapolated): $f = 1800 \text{ MHz}$; $\sigma = 1.53 \text{ mho/m}$; $\epsilon_r = 55.5$; $\rho = 1000 \text{ kg/m}^3$

Phantom: SAM 12, Phantom section: Flat Section

DASY4 Configuration:

Probe: ET3DV6 - SN1664, ConvF(4.88, 4.88, 4.88), Calibrated: 7/16/2007

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

Electronics: DAE4 Sn527, Calibrated: 9/14/2007

Measurement SW: DASY4, V4.7 Build 55

Postprocessing SW: SEMCAD, V1.8 Build 171

Temperature:

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

1800MHz Validation @20dBm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

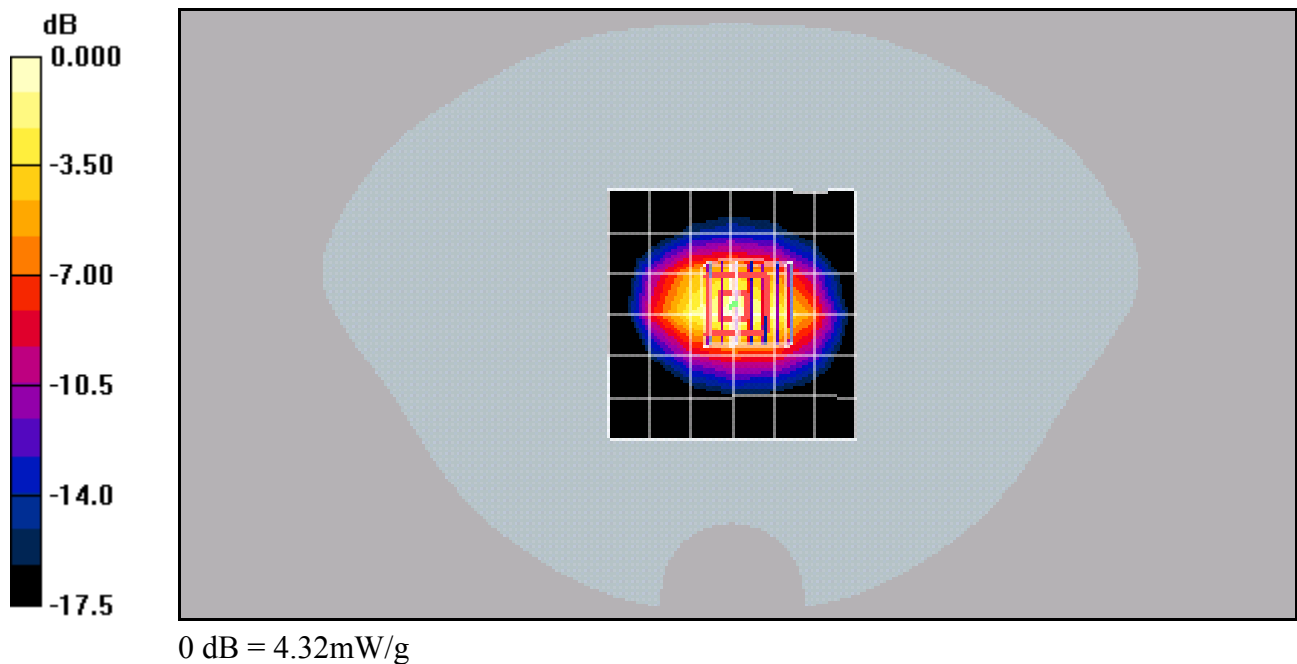
Reference Value = 55.1 V/m; Power Drift = -0.001 dB

Peak SAR (extrapolated) = 6.56 W/kg

SAR(1 g) = 3.82 mW/g; SAR(10 g) = 2.02 mW/g

[Info: Extrapolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 4.32 mW/g



Test Laboratory: Kyocera-Wireless Corp.

1800Mhz Validation (In Muscle) @ 20dBm Probe 1664, DAE 527 and Dipole 220

Communication System: CW, Frequency: 1800 MHz, Duty Cycle: 1:1

Medium: M1700,Medium parameters used (extrapolated): $f = 1800 \text{ MHz}$; $\sigma = 1.54 \text{ mho/m}$; $\epsilon_r = 55.7$; $\rho = 1000 \text{ kg/m}^3$

Phantom: SAM 12,Phantom section: Flat Section

DASY4 Configuration:

Probe: ET3DV6 - SN1664, ConvF(4.88, 4.88, 4.88), Calibrated: 7/16/2007

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

Electronics: DAE4 Sn527,Calibrated: 9/14/2007

Measurement SW: DASY4, V4.7 Build 55

Postprocessing SW: SEMCAD, V1.8 Build 171

Temperature:

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

1800MHz Validation @20dBm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

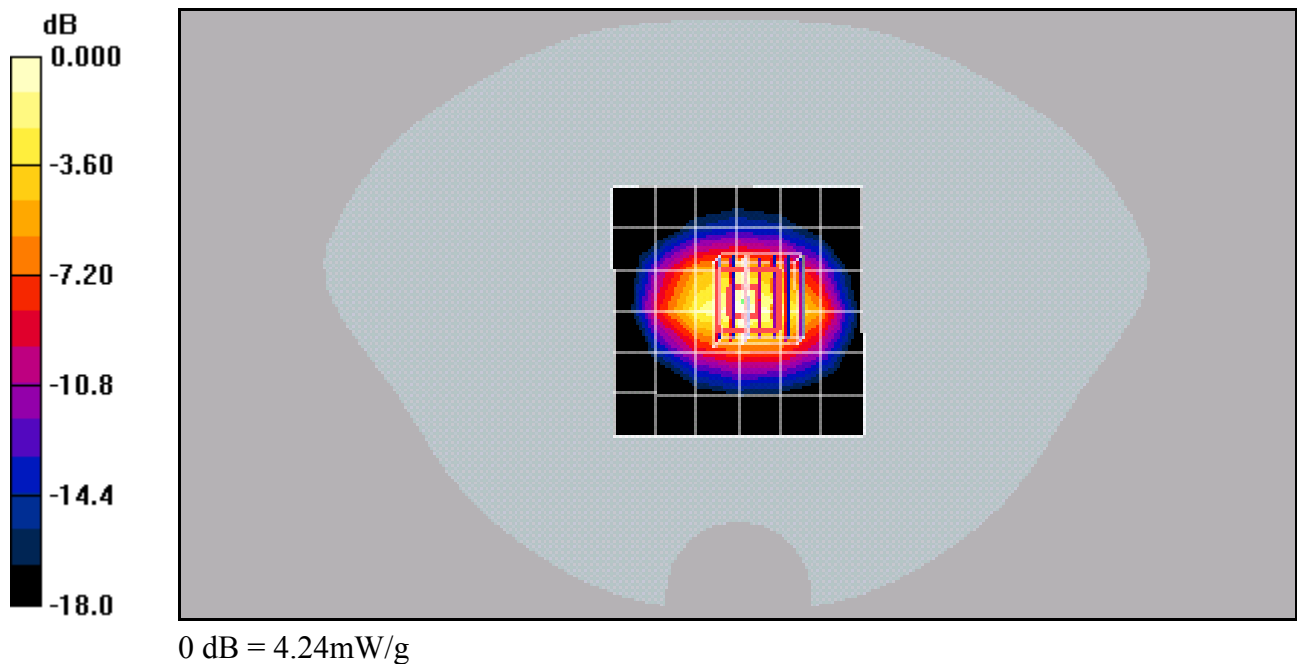
Reference Value = 55.1 V/m; Power Drift = -0.033 dB

Peak SAR (extrapolated) = 6.43 W/kg

SAR(1 g) = 3.76 mW/g; SAR(10 g) = 1.99 mW/g

[Info: Extrapolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 4.24 mW/g



Test Laboratory: Kyocera-Wireless Corp.

1900Mhz Validation @ 20dBm Probe 1664, DAE 527 and Dipole 5d003

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

Medium: HSL1800,Medium parameters used (interpolated): $f = 1900$ MHz; $\sigma = 1.42$ mho/m; $\epsilon_r = 39.4$; $\rho = 1000$ kg/m³

Phantom: SAM 12,Phantom section: Flat Section

DASY4 Configuration:

Probe: ET3DV6 - SN1664, ConvF(5.14, 5.14, 5.14), Calibrated: 7/16/2007

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

Electronics: DAE4 Sn527,Calibrated: 9/14/2007

Measurement SW: DASY4, V4.7 Build 55

Postprocessing SW: SEMCAD, V1.8 Build 176

Temperature:

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

1900MHz Validation @20dBm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

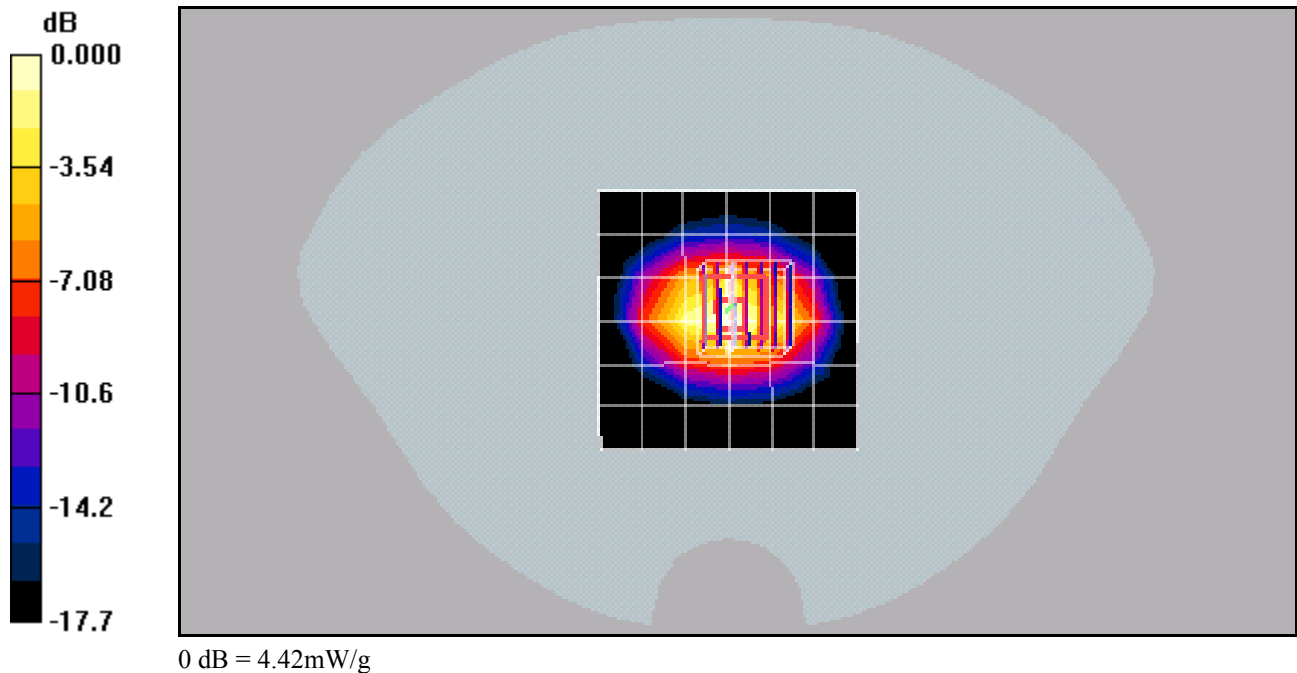
Reference Value = 58.4 V/m; Power Drift = -0.050 dB

Peak SAR (extrapolated) = 6.55 W/kg

SAR(1 g) = 3.9 mW/g; SAR(10 g) = 2.09 mW/g

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

Maximum value of SAR (measured) = 4.42 mW/g



Test Laboratory: Kyocera-Wireless Corp.

1900Mhz Validation (In Muscle) @ 20dBm Probe 1664, DAE 527 and Dipole 5d003

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

Medium: M1800,Medium parameters used (interpolated): $f = 1900$ MHz; $\sigma = 1.47$ mho/m; $\epsilon_r = 54.1$; $\rho = 1000$ kg/m³

Phantom: SAM 12,Phantom section: Flat Section

DASY4 Configuration:

Probe: ET3DV6 - SN1664, ConvF(4.66, 4.66, 4.66), Calibrated: 7/16/2007

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

Electronics: DAE4 Sn527,Calibrated: 9/14/2007

Measurement SW: DASY4, V4.7 Build 55

Postprocessing SW: SEMCAD, V1.8 Build 176

Temperature:

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

1900MHz Validation @20dBm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 58.1 V/m; Power Drift = -0.004 dB

Peak SAR (extrapolated) = 6.68 W/kg

SAR(1 g) = 3.99 mW/g; SAR(10 g) = 2.16 mW/g

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

Maximum value of SAR (measured) = 4.45 mW/g

