

Appendix A:

Validation Test Plots

Test Laboratory: Kyocera-Wireless Corp.

835Mhz Validation @ 20dBm Probe 1664, DAE 602 and Dipole 467

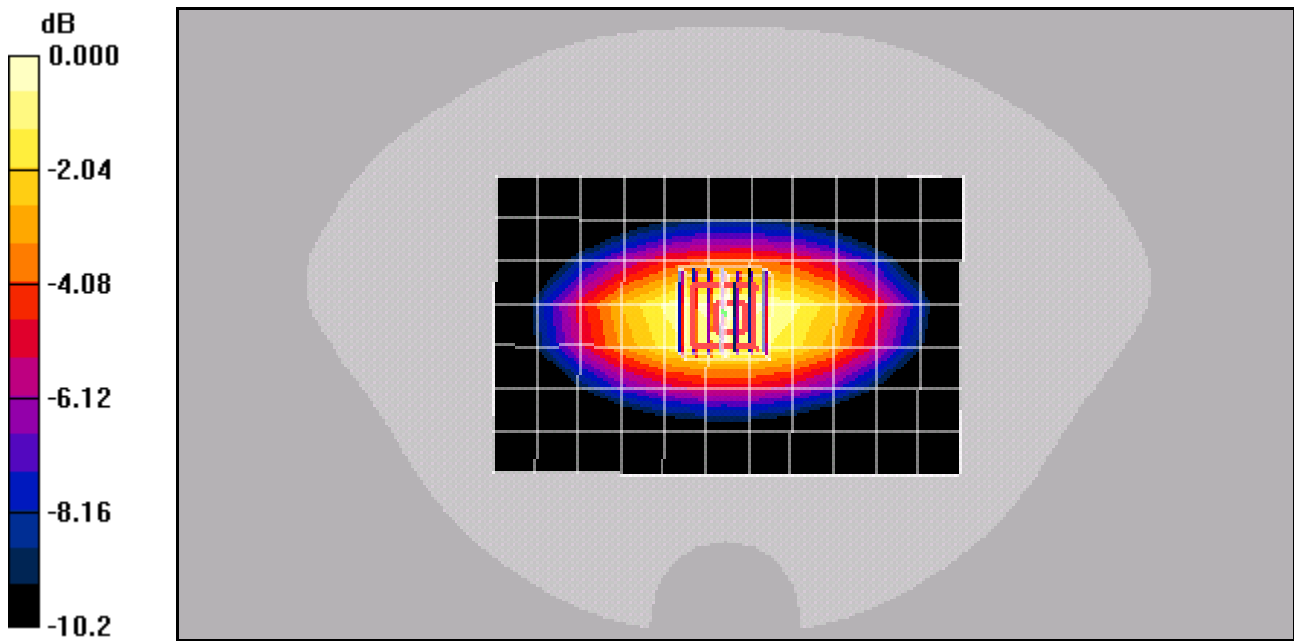
Communication System: CW, Frequency: 835 MHz, Duty Cycle: 1:1
 Medium: HSL900, Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 0.891 \text{ mho/m}$; $\epsilon_r = 40.4$; $\rho = 1000 \text{ kg/m}^3$
 Phantom: SAM 12, Phantom section: Flat Section

DASY4 Configuration:
 Probe: ET3DV6 - SN1664, ConvF(6.47, 6.47, 6.47), Calibrated: 6/23/2008
 Sensor-Surface: 4mm (Mechanical And Optical Surface Detection),
 Electronics: DAE4 Sn602, Calibrated: 6/25/2008
 Measurement SW: DASY4, V4.7 Build 71
 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 = 34.5 V/m; Power Drift = 0.004 dB
 Peak SAR (extrapolated) = 1.18 W/kg
SAR(1 g) = 0.895 mW/g; SAR(10 g) = 0.600 mW/g
 Maximum value of SAR (measured) = 0.969 mW/g



0 dB = 0.969mW/g

Test Laboratory: Kyocera-Wireless Corp.

835Mhz Validation (In Muscle) @ 20dBm with Probe 1664, DAE 602 and Dipole 467

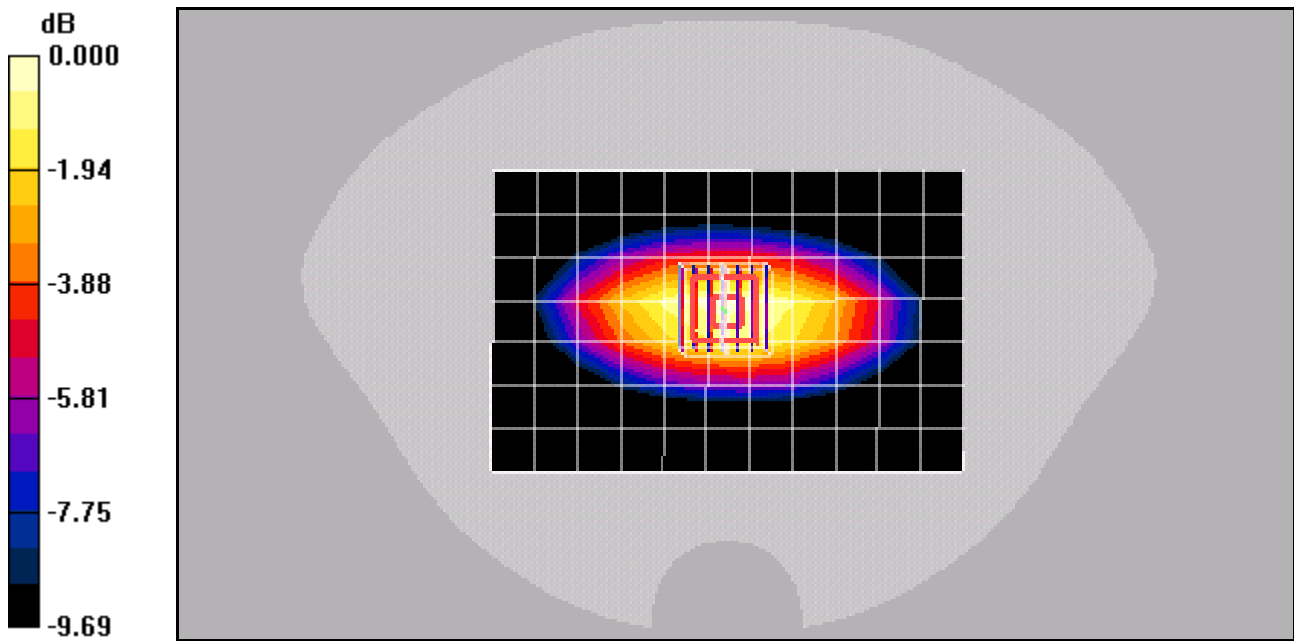
Communication System: CW, Frequency: 835 MHz, Duty Cycle: 1:1
 Medium: M900,Medium parameters used: f = 835 MHz; $\sigma = 0.994$ mho/m; $\epsilon_r = 56.6$; $\rho = 1000$ kg/m³
 Phantom: SAM 12,Phantom section: Flat Section

DASY4 Configuration:
 Probe: ET3DV6 - SN1664, ConvF(6.26, 6.26, 6.26), Calibrated: 6/23/2008
 Sensor-Surface: 4mm (Mechanical And Optical Surface Detection),
 Electronics: DAE4 Sn602,Calibrated: 6/25/2008
 Measurement SW: DASY4, V4.7 Build 71
 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 = 34.5 V/m; Power Drift = 0.065 dB
 Peak SAR (extrapolated) = 1.35 W/kg
SAR(1 g) = 1.01 mW/g; SAR(10 g) = 0.683 mW/g
 Maximum value of SAR (measured) = 1.10 mW/g



0 dB = 1.10mW/g

Test Laboratory: Kyocera-Wirless Corp

1800Mhz Validation @ 20dBm with Probe 1664, DAE 602 and Dipole 220

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

Medium: HSL1800,Medium parameters used (extrapolated): $f = 1800 \text{ MHz}$; $\sigma = 1.38 \text{ mho/m}$; $\epsilon_r = 41.3$; $\rho = 1000 \text{ kg/m}^3$

Phantom: SAM 12,Phantom section: Flat Section

DASY4 Configuration:

Probe: ET3DV6 - SN1664, ConvF(5.49, 5.49, 5.49), Calibrated: 6/23/2008

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

Electronics: DAE4 Sn602,Calibrated: 6/25/2008

Measurement SW: DASY4, V4.7 Build 71

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

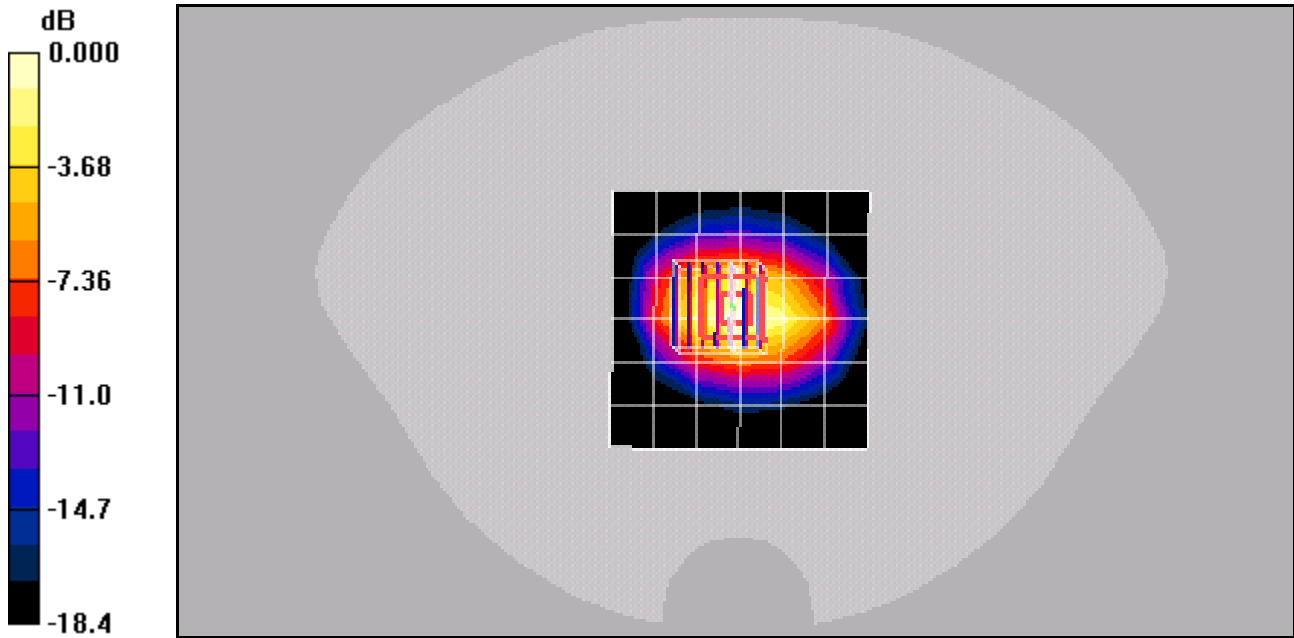
Reference Value = 57.5 V/m; Power Drift = -0.078 dB

Peak SAR (extrapolated) = 6.87 W/kg

SAR(1 g) = 3.82 mW/g; SAR(10 g) = 2.01 mW/g

Info: Extrapolated medium parameters used for SAR evaluation.

Maximum value of SAR (measured) = 4.35 mW/g



0 dB = 4.35mW/g

Test Laboratory: Kyocera-Wireless Corp.

1800Mhz Validation @ 20dBm Probe 1664, DAE 602 and Dipole 220

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

Medium: HSL1800,Medium parameters used (extrapolated): $f = 1800$ MHz; $\sigma = 1.4$ mho/m; $\epsilon_r = 39.7$; $\rho = 1000$ kg/m³

Phantom: SAM 12,Phantom section: Flat Section

DASY4 Configuration:

Probe: ET3DV6 - SN1664, ConvF(5.49, 5.49, 5.49), Calibrated: 6/23/2008

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

Electronics: DAE4 Sn602,Calibrated: 6/25/2008

Measurement SW: DASY4, V4.7 Build 71

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

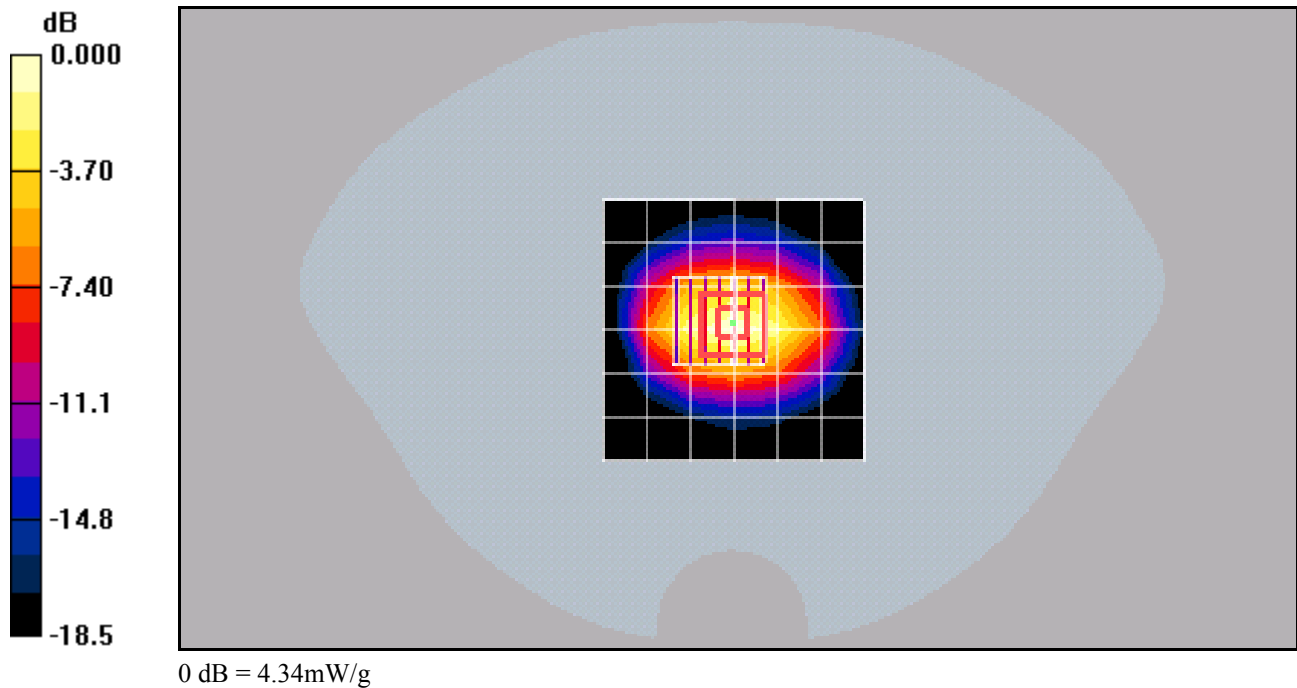
Reference Value = 57.0 V/m; Power Drift = 0.014 dB

Peak SAR (extrapolated) = 6.90 W/kg

SAR(1 g) = 3.86 mW/g; SAR(10 g) = 2.03 mW/g

Info: Extrapolated medium parameters used for SAR evaluation.

Maximum value of SAR (measured) = 4.34 mW/g



Test Laboratory: Kyocera-Wireless Corp.

1800Mhz Validation (In Muscle) @ 20dBm with Probe 1664, DAE 602 and Dipole 220

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

Medium: M1700,Medium parameters used (extrapolated): $f = 1800 \text{ MHz}$; $\sigma = 1.52 \text{ mho/m}$; $\epsilon_r = 55.6$; $\rho = 1000 \text{ kg/m}^3$

Phantom: SAM 12,Phantom section: Flat Section

DASY4 Configuration:

Probe: ET3DV6 - SN1664, ConvF(4.73, 4.73, 4.73), Calibrated: 6/23/2008

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

Electronics: DAE4 Sn602,Calibrated: 6/25/2008

Measurement SW: DASY4, V4.7 Build 71

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

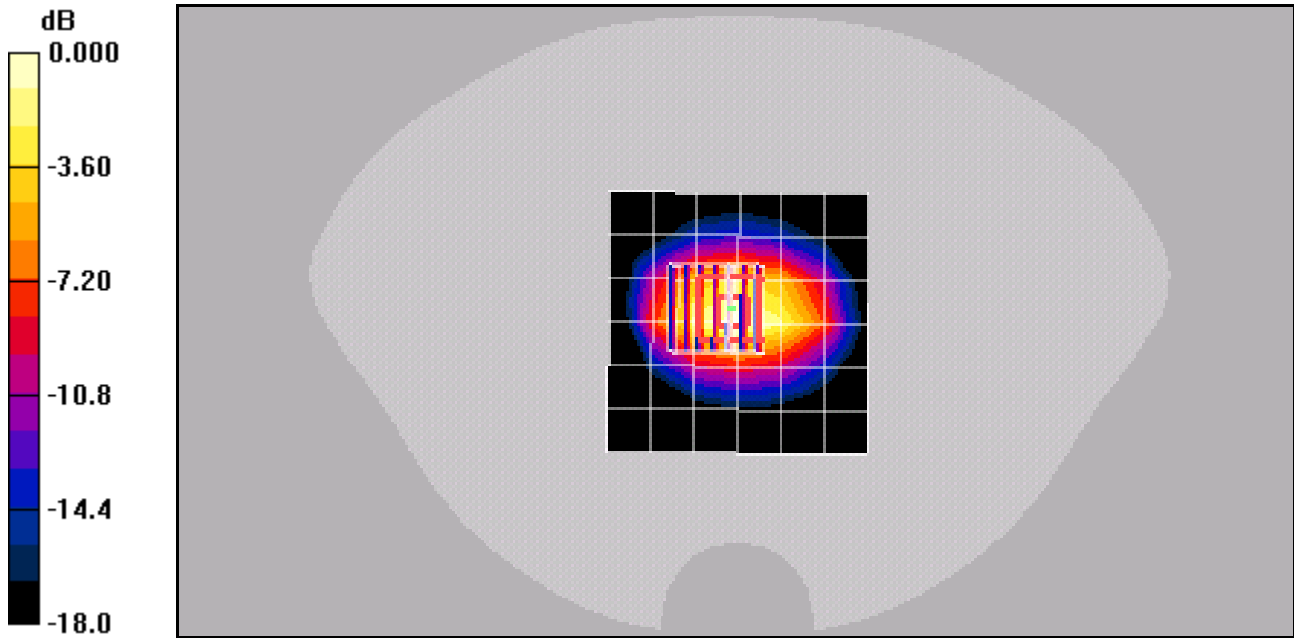
Reference Value = 53.3 V/m; Power Drift = -0.015 dB

Peak SAR (extrapolated) = 7.20 W/kg

SAR(1 g) = 3.9 mW/g; SAR(10 g) = 2.04 mW/g

Info: Extrapolated medium parameters used for SAR evaluation.

Maximum value of SAR (measured) = 4.39 mW/g



0 dB = 4.39mW/g

Test Laboratory: Kyocera-Wireless Corp.

1900Mhz Validation @ 20dBm with Probe 1664, DAE 602 and Dipole 5d016

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

Medium: HSL1900,Medium parameters used (interpolated): $f = 1900$ MHz; $\sigma = 1.38$ mho/m; $\epsilon_r = 40.5$; $\rho = 1000$ kg/m³

Phantom: SAM 12,Phantom section: Flat Section

DASY4 Configuration:

Probe: ET3DV6 - SN1664, ConvF(5.08, 5.08, 5.08), Calibrated: 6/23/2008

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

Electronics: DAE4 Sn602,Calibrated: 6/25/2008

Measurement SW: DASY4, V4.7 Build 71

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

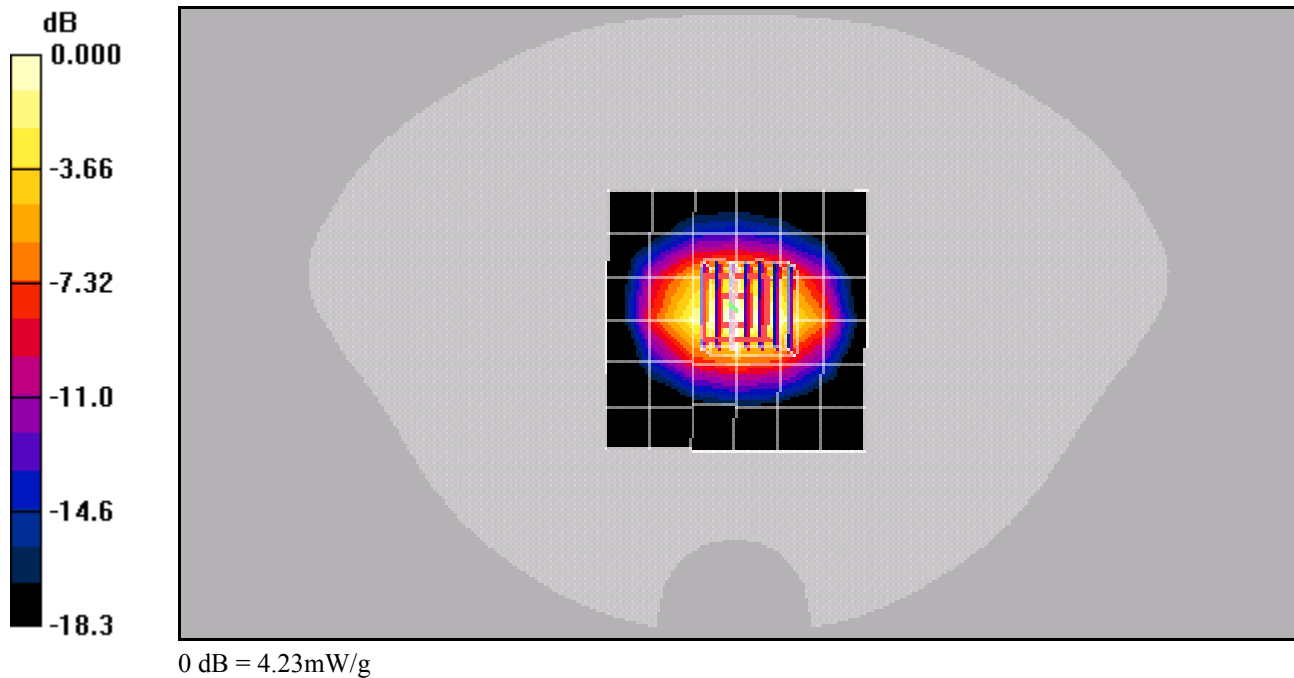
Reference Value = 58.0 V/m; Power Drift = -0.183 dB

Peak SAR (extrapolated) = 6.81 W/kg

SAR(1 g) = 3.75 mW/g; SAR(10 g) = 1.97 mW/g

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

Maximum value of SAR (measured) = 4.23 mW/g



Test Laboratory: Kyocera-Wireless Corp.

1900Mhz Validation @ 20dBm Probe 1664, DAE 602 and Dipole 5d003

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

Medium: HSL1900,Medium parameters used (interpolated): $f = 1900$ MHz; $\sigma = 1.41$ mho/m; $\epsilon_r = 39.9$; $\rho = 1000$ kg/m³

Phantom: SAM 12,Phantom section: Flat Section

DASY4 Configuration:

Probe: ET3DV6 - SN1664, ConvF(5.08, 5.08, 5.08), Calibrated: 6/23/2008

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

Electronics: DAE4 Sn602,Calibrated: 6/25/2008

Measurement SW: DASY4, V4.7 Build 71

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

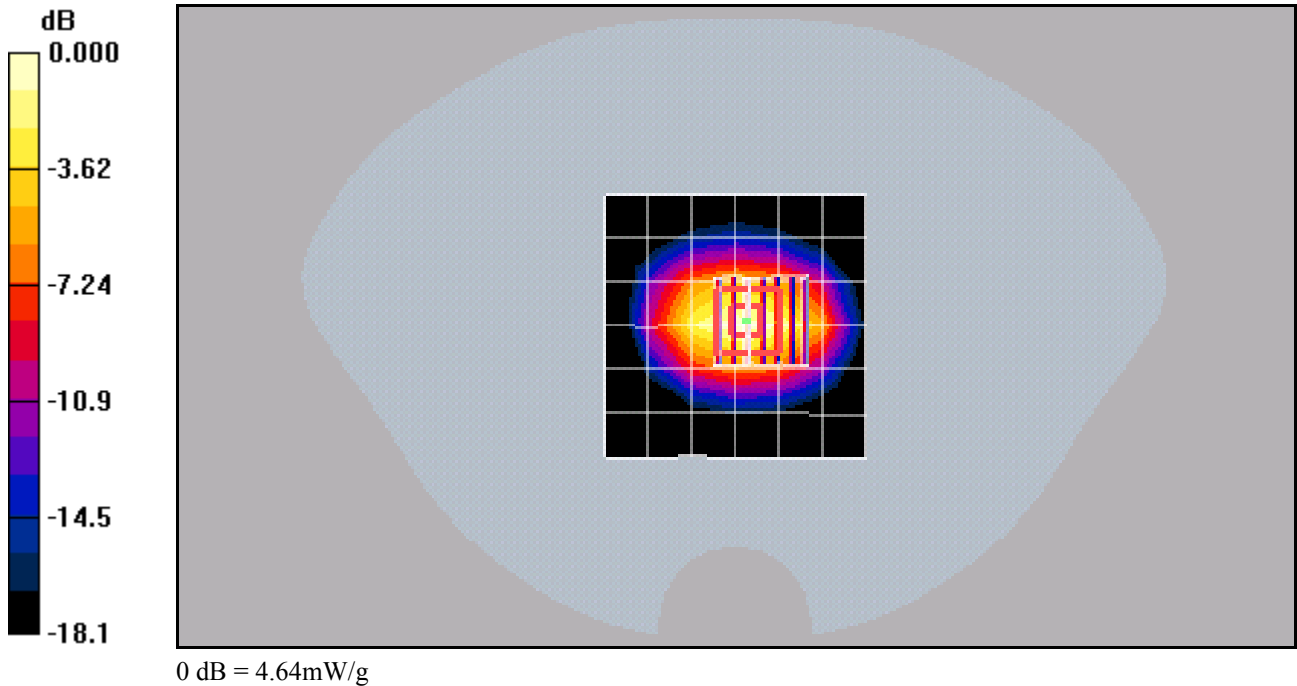
Reference Value = 58.2 V/m; Power Drift = -0.009 dB

Peak SAR (extrapolated) = 7.48 W/kg

SAR(1 g) = 4.1 mW/g; SAR(10 g) = 2.15 mW/g

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

Maximum value of SAR (measured) = 4.64 mW/g



Test Laboratory: Kyocera-Wireless Corp.

1900Mhz Validation (In Muscle) @ 20dBm with Probe 1664, DAE 602 and Dipole 5d016

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

Medium: M1800,Medium parameters used (interpolated): $f = 1900 \text{ MHz}$; $\sigma = 1.47 \text{ mho/m}$; $\epsilon_r = 53.7$; $\rho = 1000 \text{ kg/m}^3$

Phantom: SAM 12,Phantom section: Flat Section

DASY4 Configuration:

Probe: ET3DV6 - SN1664, ConvF(4.44, 4.44, 4.44), Calibrated: 6/23/2008

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

Electronics: DAE4 Sn602,Calibrated: 6/25/2008

Measurement SW: DASY4, V4.7 Build 71

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

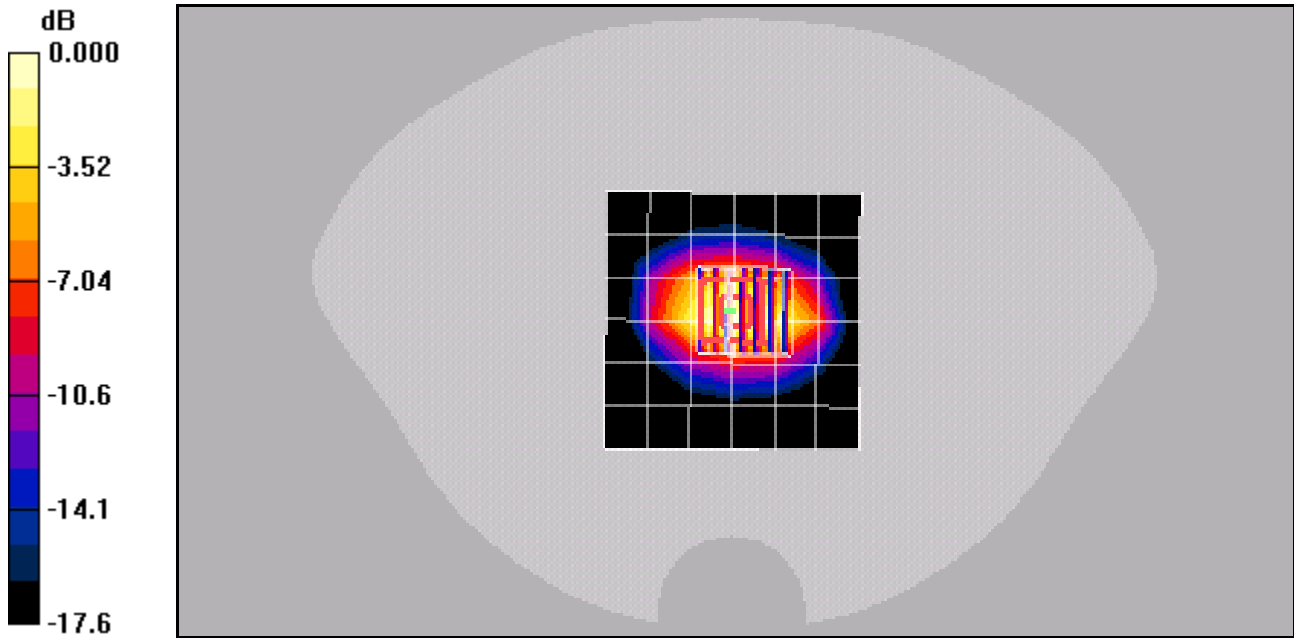
Reference Value = 54.9 V/m; Power Drift = -0.025 dB

Peak SAR (extrapolated) = 7.06 W/kg

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

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

Maximum value of SAR (measured) = 4.36 mW/g



0 dB = 4.36mW/g