

Appendix A: Validation Test Plots

Test Laboratory: Kyocera-Wireless Corp.

835Mhz Validation in Head Liquid @ 20dBm Probe 1664, DAE 493 and Dipole 454

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

Medium: HSL900,Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 0.921 \text{ mho/m}$; $\epsilon_r = 41.3$; $\rho = 1000 \text{ kg/m}^3$

Phantom: SAM 12,Phantom section: Flat Section

DASY4 Configuration:

Probe: ET3DV6 - SN1664, ConvF(6.58, 6.58, 6.58), Calibrated: 6/22/2006

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

Electronics: DAE3 Sn493,Calibrated: 11/7/2006

Measurement SW: DASY4, V4.7 Build 53

Postprocessing SW: SEMCAD, V1.8 Build 160

Temperature:

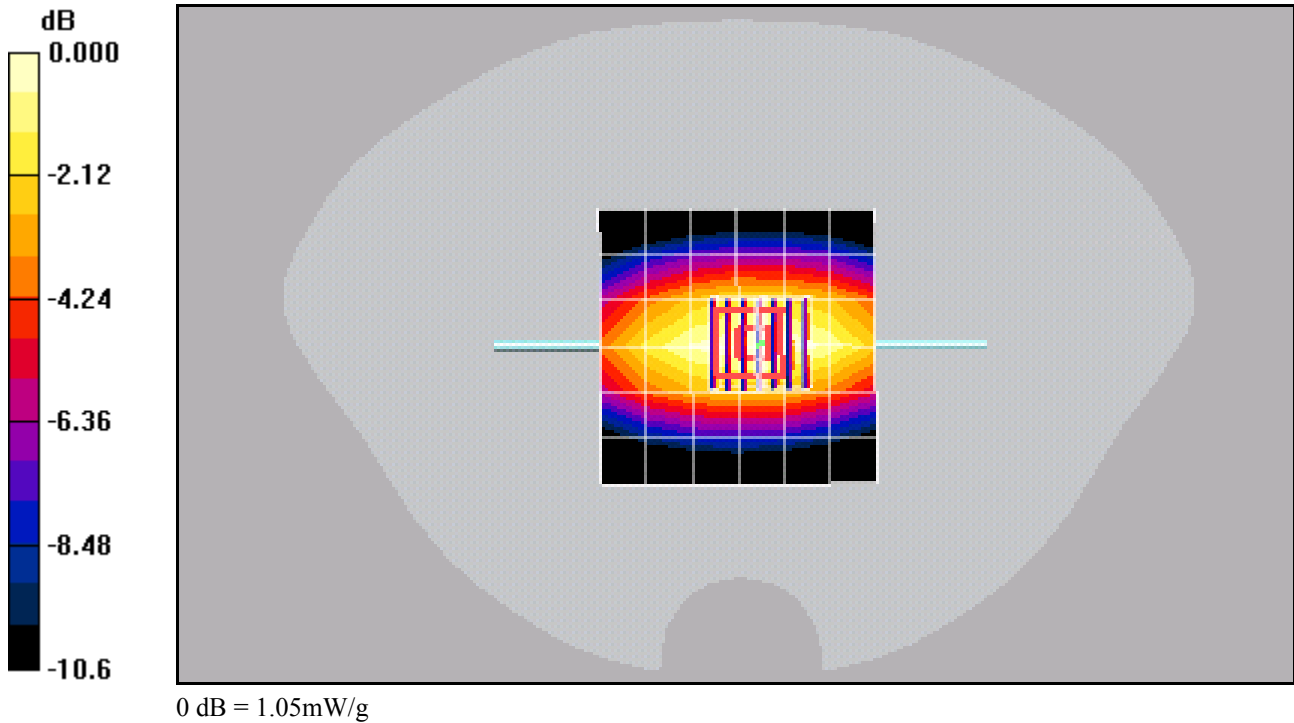
Room T = 21.8 +/- 1 deg C, Liquid T = 22.0 +/- 1 deg C

20 dbm validation/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 36.8 V/m; Power Drift = -0.054 dB

Peak SAR (extrapolated) = 1.34 W/kg

SAR(1 g) = 0.969 mW/g; SAR(10 g) = 0.639 mW/g



Test Laboratory: Kyocera-Wireless Corp.

835Mhz Validation in Muscle Liquid @ 20dBm Probe 1664, DAE 493 and Dipole 454

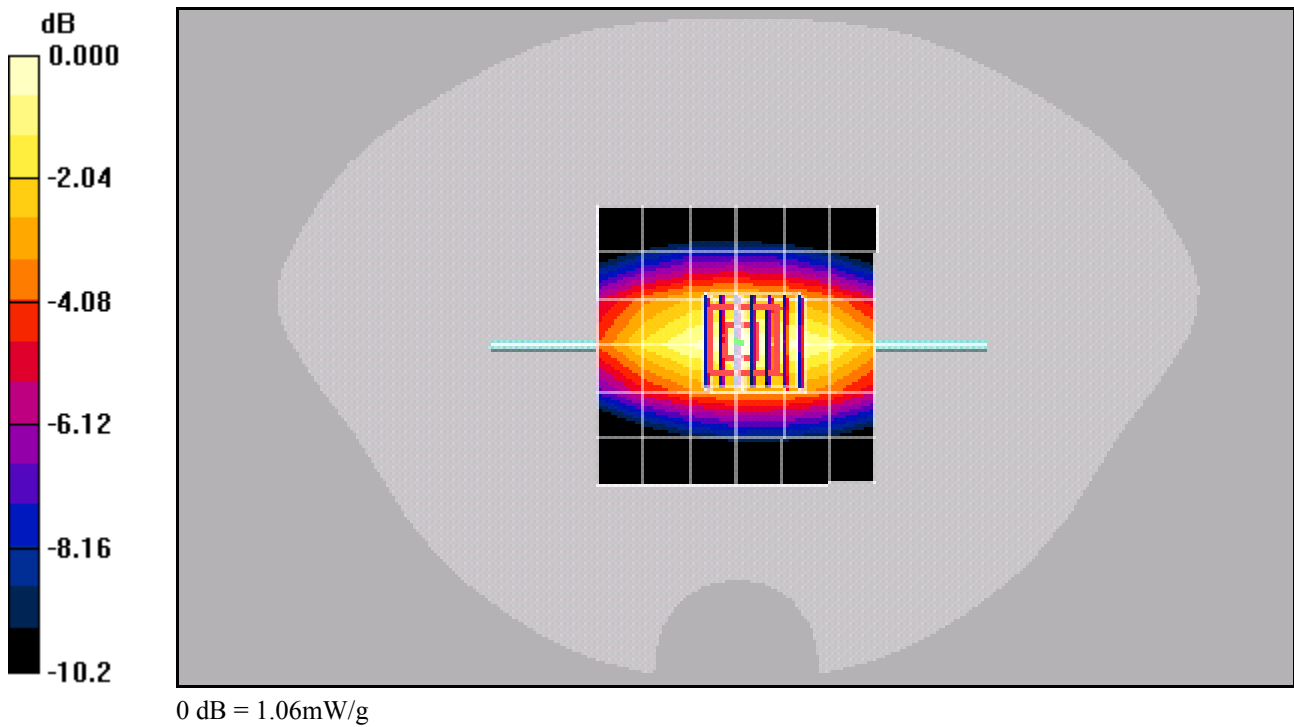
Communication System: CW, Frequency: 835 MHz, Duty Cycle: 1:1
Medium: M900,Medium parameters used: f = 835 MHz; $\sigma = 0.97$ mho/m; $\epsilon_r = 55.3$; $\rho = 1000$ kg/m³
Phantom: SAM 12,Phantom section: Flat Section

DASY4 Configuration:
Probe: ET3DV6 - SN1664, ConvF(6.43, 6.43, 6.43), Calibrated: 6/22/2006
Sensor-Surface: 4mm (Mechanical And Optical Surface Detection),
Electronics: DAE3 Sn493,Calibrated: 11/7/2006
Measurement SW: DASY4, V4.7 Build 53
Postprocessing SW: SEMCAD, V1.8 Build 160

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

20 dbm validation/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 34.4 V/m; Power Drift = -0.066 dB
Peak SAR (extrapolated) = 1.39 W/kg
SAR(1 g) = 0.973 mW/g; SAR(10 g) = 0.640 mW/g
Maximum value of SAR (measured) = 1.06 mW/g



Test Laboratory: Kyocera-Wireless Corp.

1900Mhz Validation in Muscle Liquid @ 20dBm Probe 1664, DAE 493 and Dipole 5d003

Communication System: CW, Frequency: 1900 MHz, Duty Cycle: 1:1
Medium: M1800,Medium parameters used (interpolated): $f = 1900$ MHz; $\sigma = 1.54$ mho/m; $\epsilon_r = 53.2$; $\rho = 1000$ kg/m³
Phantom: SAM 12,Phantom section: Flat Section

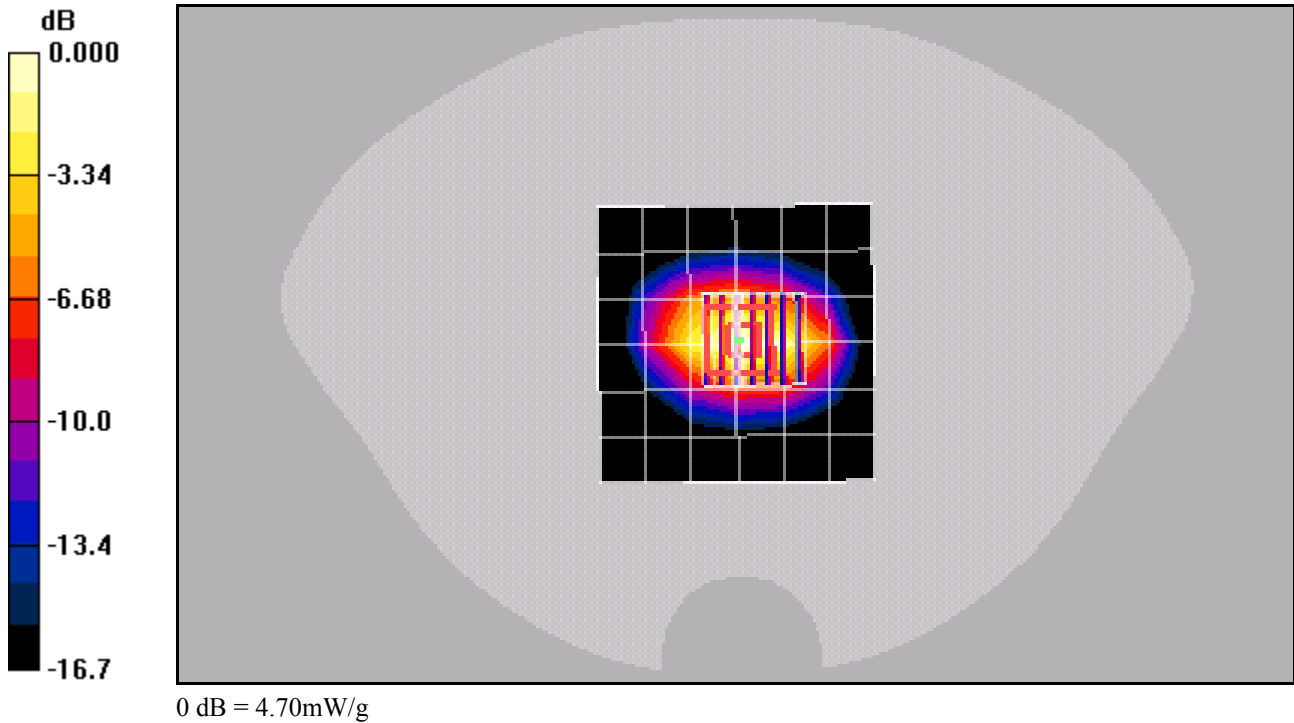
DASY4 Configuration:
Probe: ET3DV6 - SN1664, ConvF(4.57, 4.57, 4.57), Calibrated: 6/22/2006
Sensor-Surface: 4mm (Mechanical And Optical Surface Detection),
Electronics: DAE3 Sn493,Calibrated: 11/7/2006
Measurement SW: DASY4, V4.7 Build 53
Postprocessing SW: SEMCAD, V1.8 Build 160

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 = -0.095 dB
Peak SAR (extrapolated) = 7.07 W/kg
SAR(1 g) = 4.13 mW/g; SAR(10 g) = 2.22 mW/g

Info: [Interpolated medium parameters used for SAR evaluation.](#)
Maximum value of SAR (measured) = 4.70 mW/g



Test Laboratory: Kyocera-Wireless Corp.

1900Mhz Validation in Head Liquid @ 20dBm Probe 1664, DAE 493 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; $\epsilon_r = 41.8$; $\rho = 1000$ kg/m³

Phantom: SAM 12,Phantom section: Flat Section

DASY4 Configuration:

Probe: ET3DV6 - SN1664, ConvF(5.05, 5.05, 5.05), Calibrated: 6/22/2006

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

Electronics: DAE3 Sn493,Calibrated: 11/7/2006

Measurement SW: DASY4, V4.7 Build 53

Postprocessing SW: SEMCAD, V1.8 Build 160

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

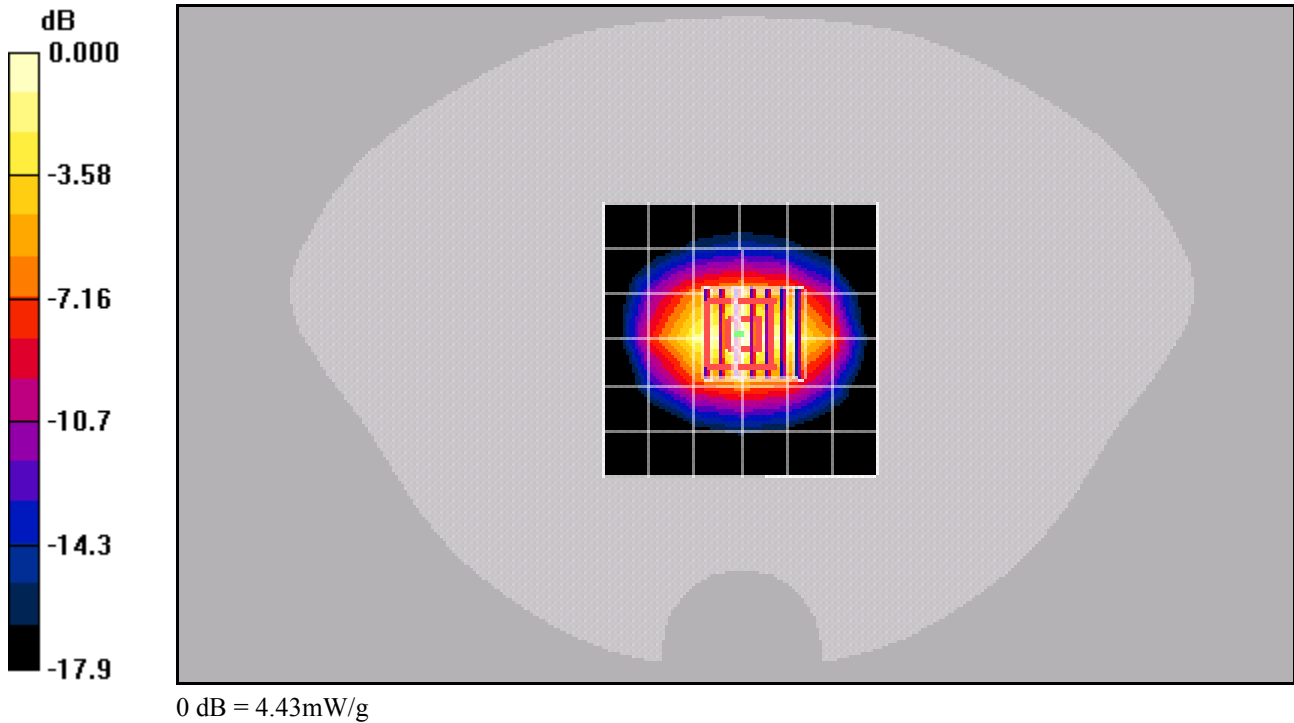
Reference Value = 58.6 V/m; Power Drift = -0.026 dB

Peak SAR (extrapolated) = 6.76 W/kg

SAR(1 g) = 3.91 mW/g; SAR(10 g) = 2.07 mW/g

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

Maximum value of SAR (measured) = 4.43 mW/g



Test Laboratory: Kyocera-Wireless Corp.

1900Mhz Validation in Head Liquid @ 20dBm Probe 1664, DAE 493 Dipole 5d003

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

Medium: HSL1800,Medium parameters used (interpolated): $f = 1900$ MHz; $\sigma = 1.39$ mho/m; $\epsilon_r = 39.8$; $\rho = 1000$ kg/m³

Phantom: SAM 12,Phantom section: Flat Section

DASY4 Configuration:

Probe: ET3DV6 - SN1664, ConvF(5.05, 5.05, 5.05), Calibrated: 6/22/2006

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

Electronics: DAE3 Sn493,Calibrated: 11/7/2006

Measurement SW: DASY4, V4.7 Build 53

Postprocessing SW: SEMCAD, V1.8 Build 160

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

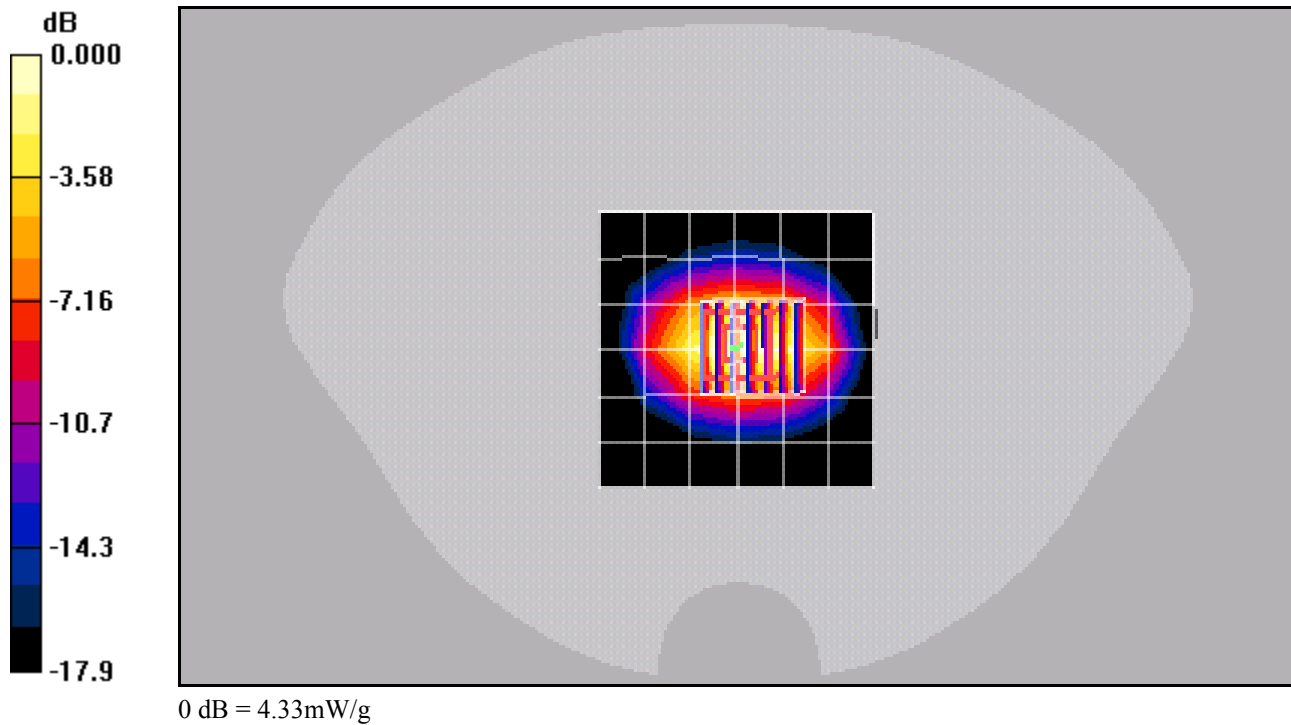
Reference Value = 58.4 V/m; Power Drift = -0.081 dB

Peak SAR (extrapolated) = 6.56 W/kg

SAR(1 g) = 3.84 mW/g; SAR(10 g) = 2.04 mW/g

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

Maximum value of SAR (measured) = 4.33 mW/g



Test Laboratory: Kyocera-Wireless Corp.

1900Mhz Validation in Muscle Liquid @ 20dBm Probe 1664, DAE 493 and Dipole 5d003

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

Medium: M1800,Medium parameters used: $f = 1900$ MHz; $\sigma = 1.53$ mho/m; $\epsilon_r = 53.2$; $\rho = 1000$ kg/m³

Phantom: SAM 12,Phantom section: Flat Section

DASY4 Configuration:

Probe: ET3DV6 - SN1664, ConvF(4.57, 4.57, 4.57), Calibrated: 6/22/2006

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

Electronics: DAE3 Sn493,Calibrated: 11/7/2006

Measurement SW: DASY4, V4.7 Build 53

Postprocessing SW: SEMCAD, V1.8 Build 160

Temperature:

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

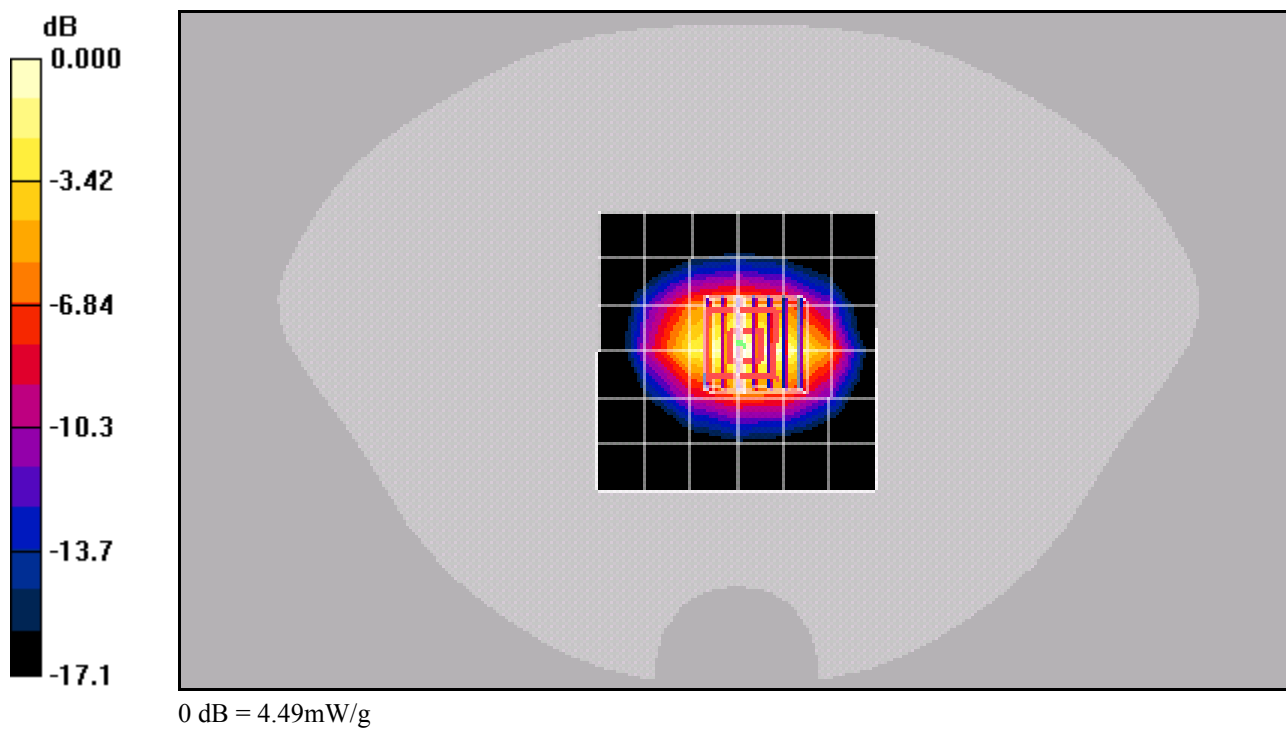
1900MHz Validation @20dBm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 56.9 V/m; Power Drift = -0.014 dB

Peak SAR (extrapolated) = 6.77 W/kg

SAR(1 g) = 3.95 mW/g; SAR(10 g) = 2.13 mW/g

Maximum value of SAR (measured) = 4.49 mW/g



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1900Mhz Validation in Muscle Liquid @ 20dBm Probe 1664, DAE 493 and Dipole 5d003

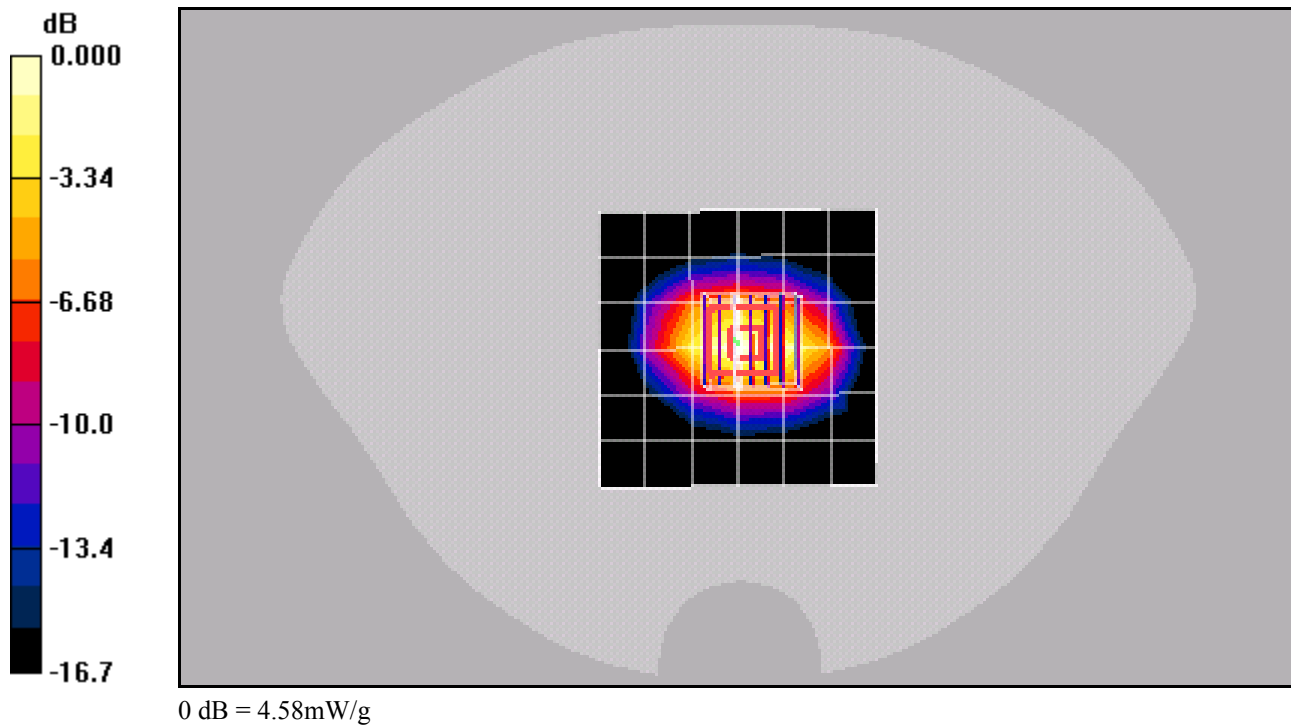
Communication System: CW, Frequency: 1900 MHz, Duty Cycle: 1:1
Medium: M1800,Medium parameters used: $f = 1900$ MHz; $\sigma = 1.53$ mho/m; $\epsilon_r = 53$; $\rho = 1000$ kg/m³
Phantom: SAM 12,Phantom section: Flat Section

DASY4 Configuration:
Probe: ET3DV6 - SN1664, ConvF(4.57, 4.57, 4.57), Calibrated: 6/22/2006
Sensor-Surface: 4mm (Mechanical And Optical Surface Detection),
Electronics: DAE3 Sn493,Calibrated: 11/7/2006
Measurement SW: DASY4, V4.7 Build 53
Postprocessing SW: SEMCAD, V1.8 Build 160

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 = -0.072 dB
Peak SAR (extrapolated) = 7.01 W/kg
SAR(1 g) = 4.1 mW/g; SAR(10 g) = 2.21 mW/g
Maximum value of SAR (measured) = 4.58 mW/g



Test Laboratory: Kyocera-Wireless Corp.

835Mhz Validation in Muscle Liquid @ 20dBm Probe 1664, DAE 493 and Dipole 454

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

Medium: M900,Medium parameters used (interpolated): $f = 835 \text{ MHz}$; $\sigma = 0.971 \text{ mho/m}$; $\epsilon_r = 55.6$; $\rho = 1000 \text{ kg/m}^3$

Phantom: SAM 12,Phantom section: Flat Section

DASY4 Configuration:

Probe: ET3DV6 - SN1664, ConvF(6.43, 6.43, 6.43), Calibrated: 6/22/2006

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

Electronics: DAE3 Sn493,Calibrated: 11/7/2006

Measurement SW: DASY4, V4.7 Build 53

Postprocessing SW: SEMCAD, V1.8 Build 160

Temperature:

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

20 dbm validation/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

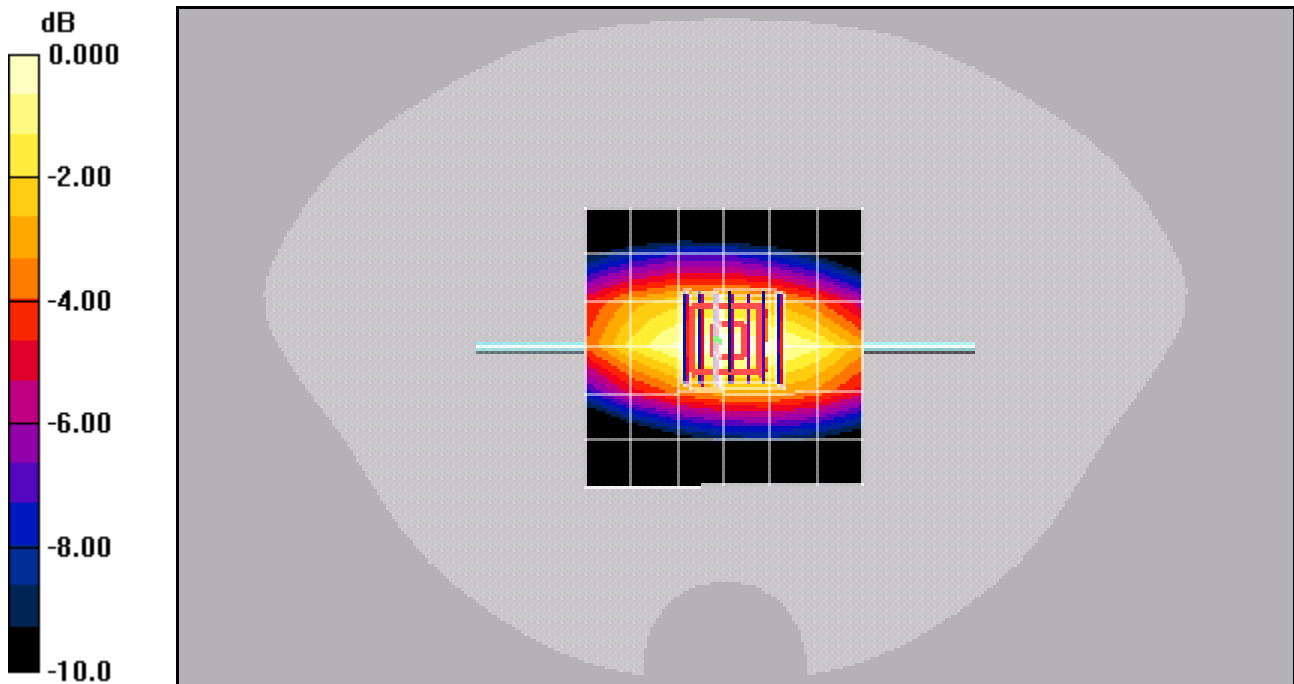
Reference Value = 34.5 V/m; Power Drift = -0.027 dB

Peak SAR (extrapolated) = 1.37 W/kg

SAR(1 g) = 0.979 mW/g; SAR(10 g) = 0.648 mW/g

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

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



0 dB = 1.06mW/g