Appendix A:

Validation Test Plots

Test Laboratory: Kyocera-Wireless Corp.

835Mhz Validation @ 20dBm Probe 1714, DAE 602 and Dipole 467

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

Medium: HSL900,Medium parameters used: f = 835 MHz; σ = 0.92 mho/m; ε_r = 41.1; ρ = 1000 kg/m^3

Phantom: SAM 12,Phantom section: Flat Section

DASY4 Configuration:
Probe: ET3DV6 - SN1714, ConvF(6.38, 6.38, 6.38), Calibrated: 9/6/2005
Sensor-Surface: 4mm (Mechanical And Optical Surface Detection),
Electronics: DAE4 Sn602,Calibrated: 8/30/2005
Measurement SW: DASY4, V4.6 Build 23
Postprocessing SW: SEMCAD, V1.8 Build 160

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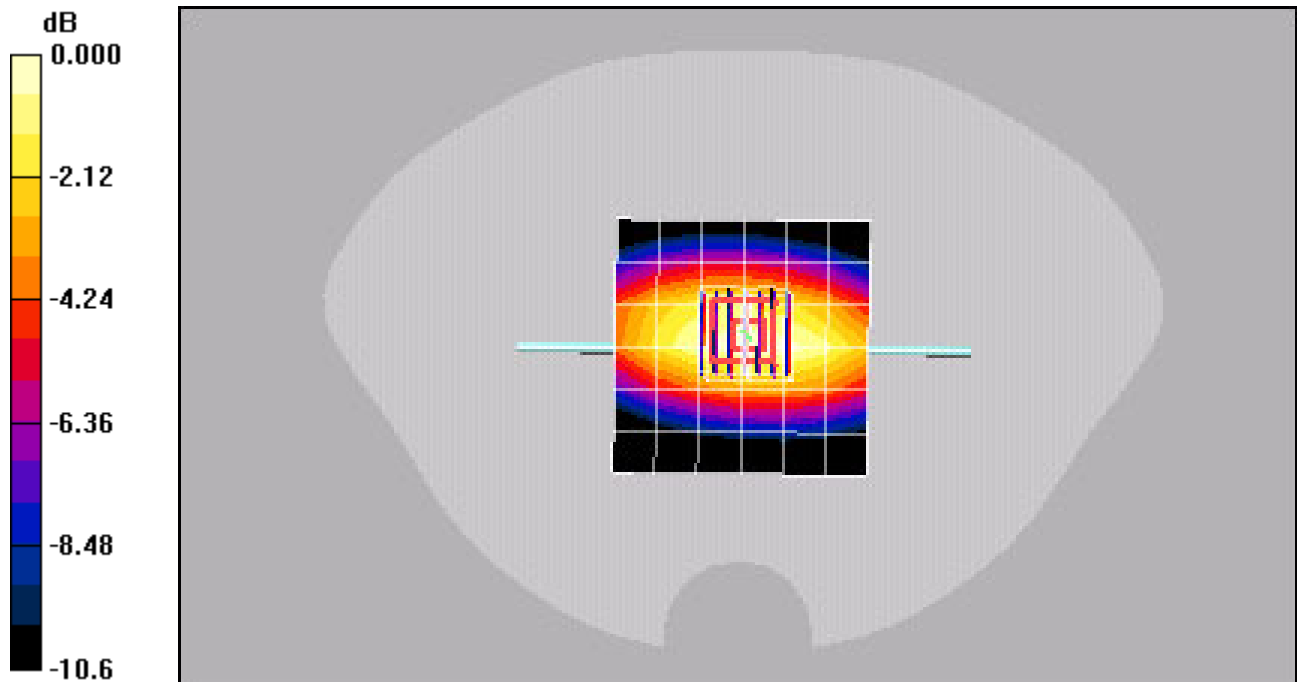Room T = 21.8 +/− 1 deg C, Liquid T = 22.0 +/− 1 deg C

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

Reference Value = 35.1 V/m; Power Drift = -0.012 dB
Peak SAR (extrapolated) = 1.54 W/kg
SAR(1 g) = 1.02 mW/g; SAR(10 g) = 0.658 mW/g
Maximum value of SAR (measured) = 1.09 mW/g

0 dB = 1.09mW/g

Test Laboratory: Kyocera-Wireless Corp.

835Mhz Validation @ 20dBm Probe 1714, DAE 602 and Dipole 453

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

Medium: HSL900,Medium parameters used: f = 835 MHz; σ = 0.91 mho/m; ε_r = 41.2; ρ = 1000 kg/m^3

Phantom: SAM 12,Phantom section: Flat Section

DASY4 Configuration:
Probe: ET3DV6 - SN1714, ConvF(6.38, 6.38, 6.38), Calibrated: 9/6/2005
Sensor-Surface: 4mm (Mechanical And Optical Surface Detection),
Electronics: DAE4 Sn602,Calibrated: 8/30/2005
Measurement SW: DASY4, V4.6 Build 23
Postprocessing SW: SEMCAD, V1.8 Build 160

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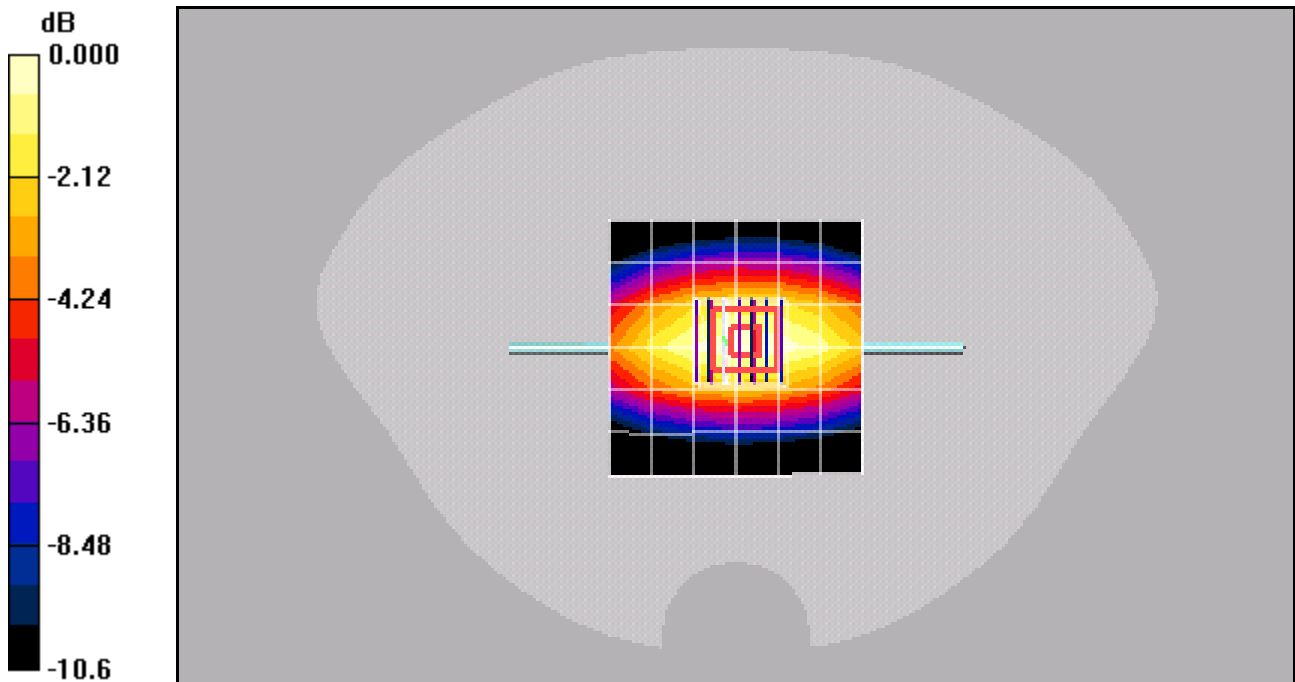Room T = 21.8 +/− 1 deg C, Liquid T = 22.0 +/− 1 deg C

20 dbm validation/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 34.2 V/m; Power Drift = -0.025 dB
Peak SAR (extrapolated) = 1.38 W/kg
SAR(1 g) = 0.920 mW/g; SAR(10 g) = 0.599 mW/g
Maximum value of SAR (measured) = 0.991 mW/g

0 dB = 0.991mW/g

Test Laboratory: Kyocera-Wireless Corp.

835Mhz Validation @ 20dBm Probe 1714, DAE 602 and Dipole 453

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

Medium: HSL900,Medium parameters used: f = 835 MHz; σ = 0.914 mho/m; ε_r = 40.5; ρ = 1000 kg/m^3

Phantom: SAM 12,Phantom section: Flat Section

DASY4 Configuration:
Probe: ET3DV6 - SN1714, ConvF(6.38, 6.38, 6.38), Calibrated: 9/6/2005
Sensor-Surface: 4mm (Mechanical And Optical Surface Detection),
Electronics: DAE4 Sn602,Calibrated: 8/30/2005
Measurement SW: DASY4, V4.6 Build 23
Postprocessing SW: SEMCAD, V1.8 Build 160

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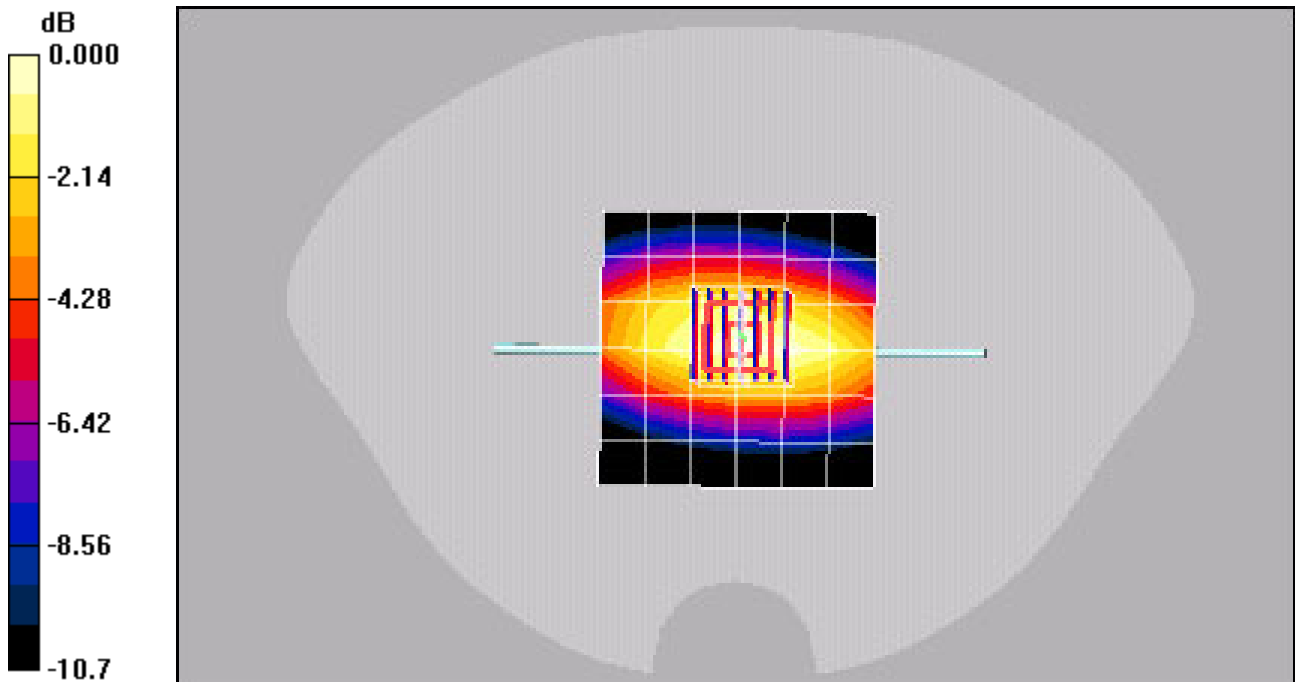Room T = 21.8 +/− 1 deg C, Liquid T = 22.0 +/− 1 deg C

20 dbm validation/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 33.9 V/m; Power Drift = -0.013 dB
Peak SAR (extrapolated) = 1.43 W/kg
SAR(1 g) = 0.944 mW/g; SAR(10 g) = 0.613 mW/g
Maximum value of SAR (measured) = 1.02 mW/g

0 dB = 1.02mW/g

Test Laboratory: Kyocera-Wireless Corp.

835Mhz Validation @ 20dBm Probe 1714, DAE 602 and Dipole 453

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

Medium: HSL900,Medium parameters used: f = 835 MHz; σ = 0.898 mho/m; ε_r = 40.9; ρ = 1000 kg/m^3

Phantom: SAM 12,Phantom section: Flat Section

DASY4 Configuration:
Probe: ET3DV6 - SN1714, ConvF(6.38, 6.38, 6.38), Calibrated: 9/6/2005
Sensor-Surface: 4mm (Mechanical And Optical Surface Detection),
Electronics: DAE4 Sn602,Calibrated: 8/30/2005
Measurement SW: DASY4, V4.6 Build 23
Postprocessing SW: SEMCAD, V1.8 Build 160

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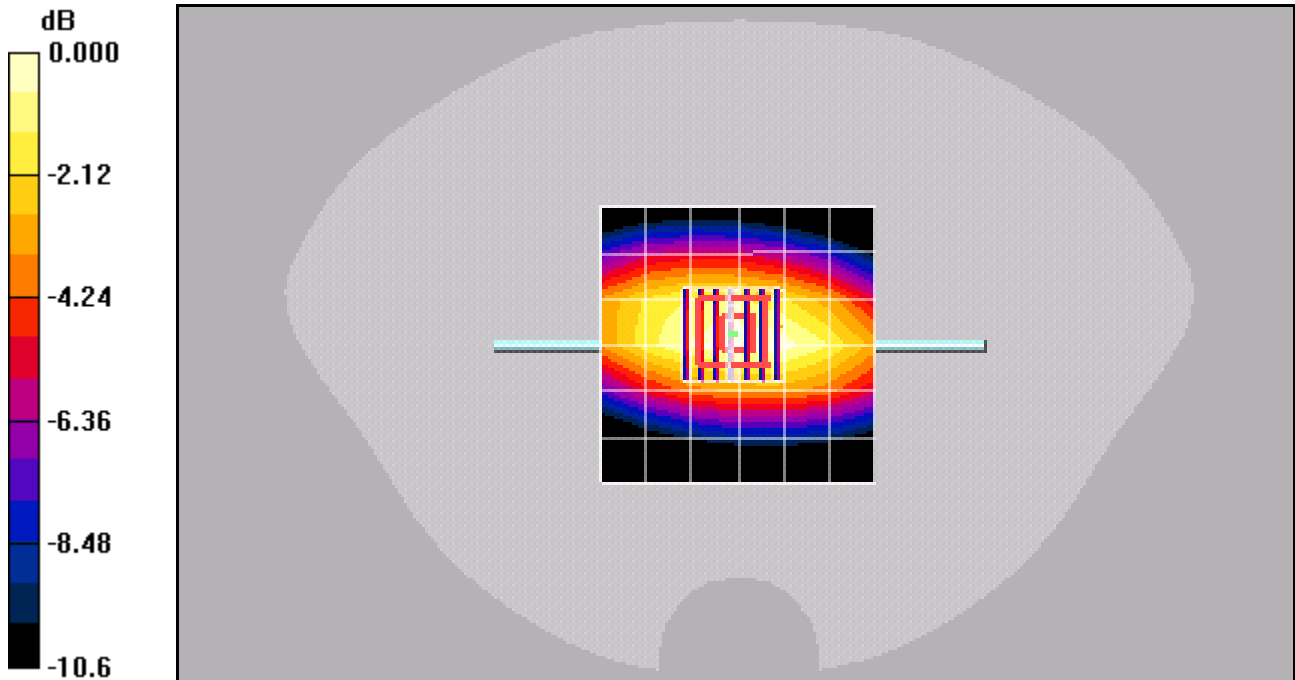Room T = 21.8 +/− 1 deg C, Liquid T = 22.0 +/− 1 deg C

20 dbm validation/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 33.2 V/m; Power Drift = -0.010 dB
Peak SAR (extrapolated) = 1.41 W/kg
SAR(1 g) = 0.917 mW/g; SAR(10 g) = 0.591 mW/g
Maximum value of SAR (measured) = 0.993 mW/g

0 dB = 0.993mW/g

Test Laboratory: Kyocera-Wireless Corp.

835Mhz Validation @ 20dBm Probe 1714, DAE 602 and Dipole 453

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

Medium: HSL900,Medium parameters used: f = 835 MHz; σ = 0.92 mho/m; ε_r = 41.4; ρ = 1000 kg/m^3

Phantom: SAM 12,Phantom section: Flat Section

DASY4 Configuration:
Probe: ET3DV6 - SN1714, ConvF(6.38, 6.38, 6.38), Calibrated: 9/6/2005
Sensor-Surface: 4mm (Mechanical And Optical Surface Detection),
Electronics: DAE4 Sn602,Calibrated: 8/30/2005
Measurement SW: DASY4, V4.6 Build 23
Postprocessing SW: SEMCAD, V1.8 Build 160

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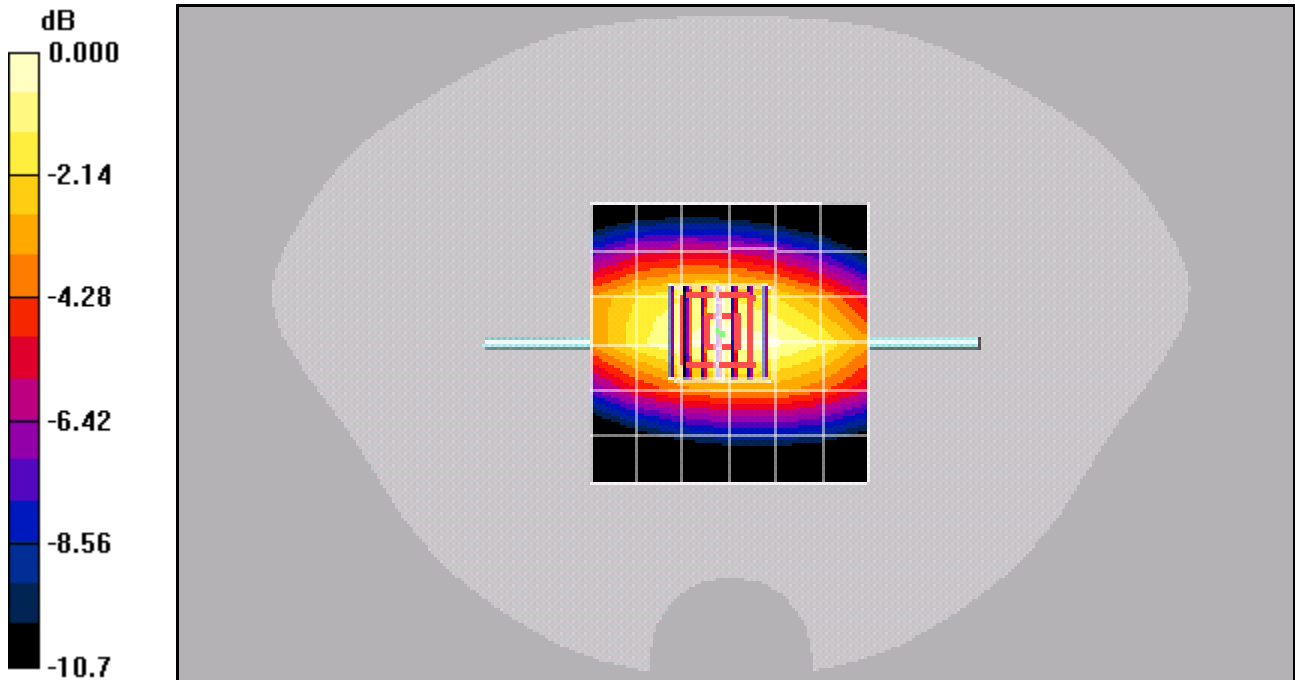Room T = 21.8 +/− 1 deg C, Liquid T = 22.0 +/− 1 deg C

20 dbm validation/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 34.2 V/m; Power Drift = -0.006 dB
Peak SAR (extrapolated) = 1.48 W/kg
SAR(1 g) = 0.969 mW/g; SAR(10 g) = 0.626 mW/g
Maximum value of SAR (measured) = 1.05 mW/g

0 dB = 1.05mW/g

Test Laboratory: Kyocera-Wireless Corp.

835Mhz Validation @ 20dBm Probe 1714, DAE 602 and Dipole 453

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

Medium: HSL900,Medium parameters used: f = 835 MHz; σ = 0.923 mho/m; ε_r = 42.3; ρ = 1000 kg/m^3

Phantom: SAM 12,Phantom section: Flat Section

DASY4 Configuration:
Probe: ET3DV6 - SN1714, ConvF(6.38, 6.38, 6.38), Calibrated: 9/6/2005
Sensor-Surface: 4mm (Mechanical And Optical Surface Detection),
Electronics: DAE4 Sn602,Calibrated: 8/30/2005
Measurement SW: DASY4, V4.6 Build 23
Postprocessing SW: SEMCAD, V1.8 Build 160

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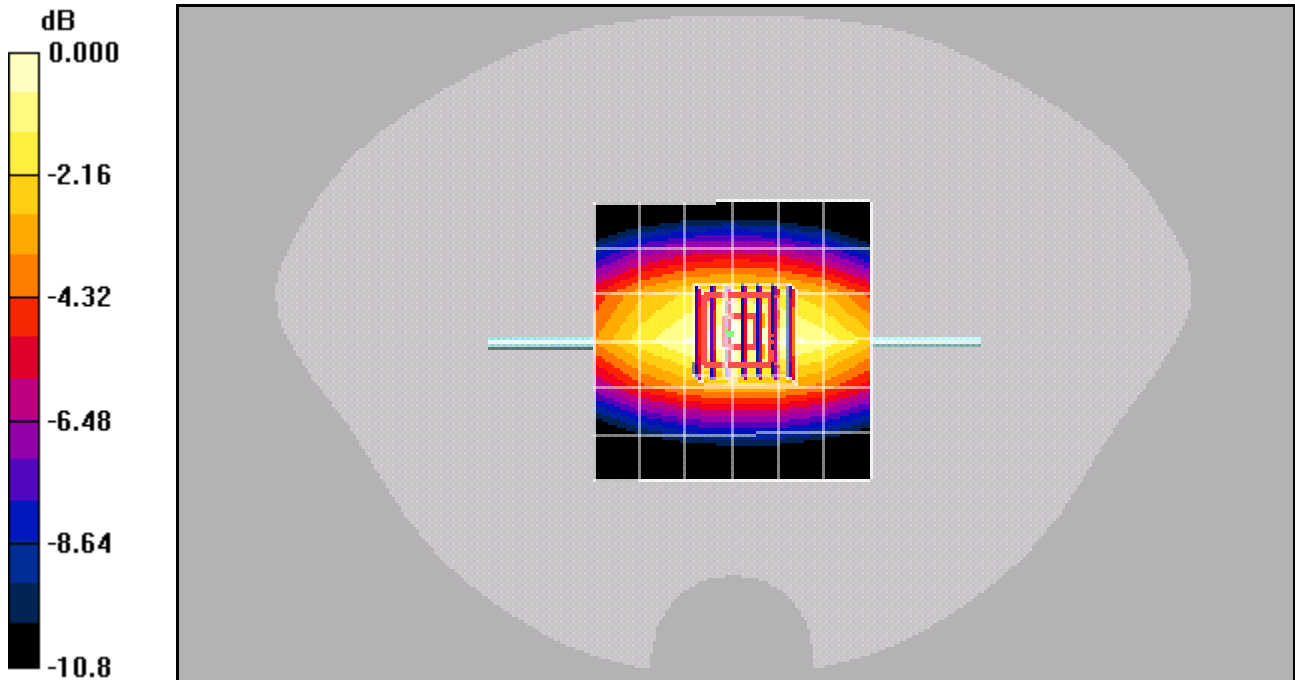Room T = 21.8 +/− 1 deg C, Liquid T = 22.0 +/− 1 deg C

20 dbm validation/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 33.3 V/m; Power Drift = -0.024 dB
Peak SAR (extrapolated) = 1.39 W/kg
SAR(1 g) = 0.917 mW/g; SAR(10 g) = 0.593 mW/g
Maximum value of SAR (measured) = 0.988 mW/g

0 dB = 0.988mW/g

Test Laboratory: Kyocera-Wireless Corp.

835Mhz Validation @ 20dBm Probe 1714, DAE 602 and Dipole 467

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

Medium: HSL900,Medium parameters used: f = 835 MHz; σ = 0.923 mho/m; ε_r = 42.4; ρ = 1000 kg/m^3

Phantom: SAM 12,Phantom section: Flat Section

DASY4 Configuration:
Probe: ET3DV6 - SN1714, ConvF(6.38, 6.38, 6.38), Calibrated: 9/6/2005
Sensor-Surface: 4mm (Mechanical And Optical Surface Detection),
Electronics: DAE4 Sn602,Calibrated: 8/30/2005
Measurement SW: DASY4, V4.6 Build 23
Postprocessing SW: SEMCAD, V1.8 Build 160

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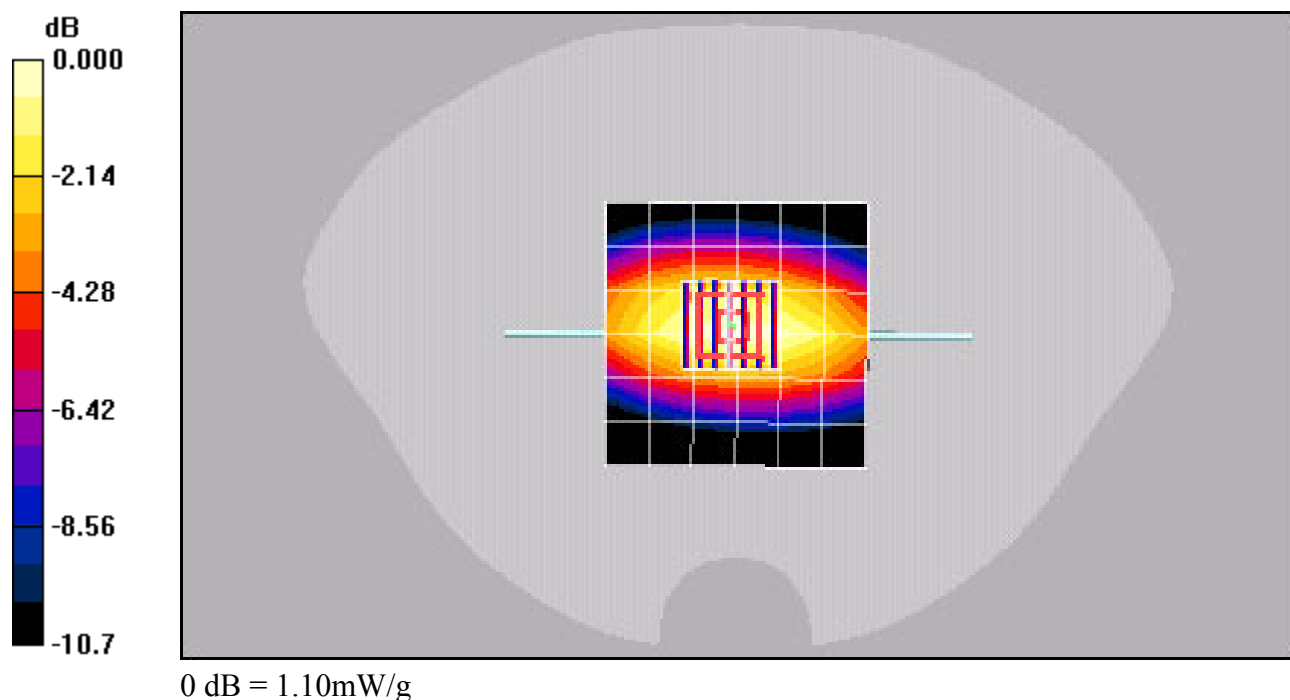Room T = 21.8 +/− 1 deg C, Liquid T = 22.0 +/− 1 deg C

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

Reference Value = 35.1 V/m; Power Drift = -0.010 dB
Peak SAR (extrapolated) = 1.53 W/kg
SAR(1 g) = 1.01 mW/g; SAR(10 g) = 0.654 mW/g
Maximum value of SAR (measured) = 1.10 mW/g

0 dB = 1.10mW/g

Test Laboratory: Kyocera-Wireless Corp.

835Mhz Validation @ 20dBm Probe 1714, DAE 602, Dipole 467

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

Medium: HSL900,Medium parameters used: f = 835 MHz; σ = 0.896 mho/m; ε_r = 41; ρ = 1000 kg/m^3

Phantom: SAM 12,Phantom section: Flat Section

DASY4 Configuration:
Probe: ET3DV6 - SN1714, ConvF(6.38, 6.38, 6.38), Calibrated: 9/6/2005
Sensor-Surface: 4mm (Mechanical And Optical Surface Detection),
Electronics: DAE4 Sn602,Calibrated: 8/30/2005
Measurement SW: DASY4, V4.6 Build 23
Postprocessing SW: SEMCAD, V1.8 Build 160

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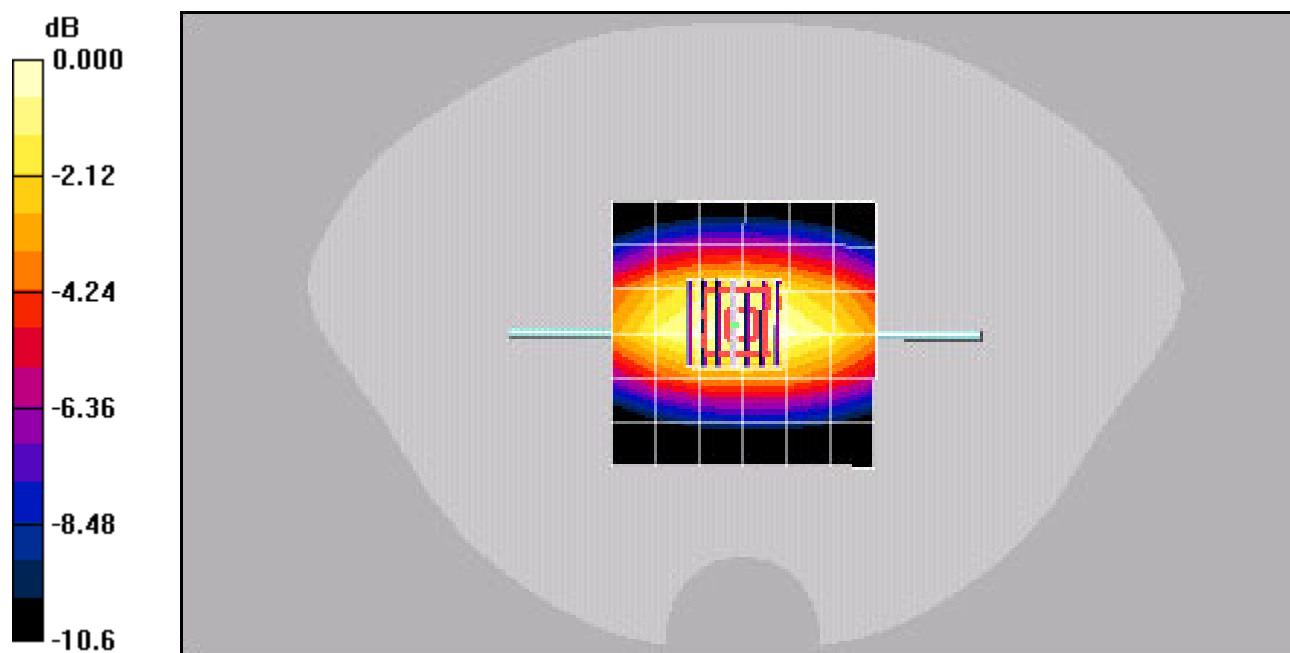Room T = 21.8 +/− 1 deg C, Liquid T = 22.0 +/− 1 deg C

20 dbm validation/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 35.3 V/m; Power Drift = -0.008 dB
Peak SAR (extrapolated) = 1.49 W/kg
SAR(1 g) = 1 mW/g; SAR(10 g) = 0.652 mW/g
Maximum value of SAR (measured) = 1.08 mW/g

0 dB = 1.08mW/g

Test Laboratory: Kyocera-Wireless Corp.

1900Mhz Validation @ 20dB Probe 1714, DAE 602 and Dipole 5d003

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

Medium: HSL1800,Medium parameters used (interpolated): f = 1900 MHz; σ = 1.43 mho/m; ε_r = 39.4; ρ = 1000 kg/m^3

Phantom: SAM 12,Phantom section: Flat Section

DASY4 Configuration:
Probe: ET3DV6 - SN1714, ConvF(4.95, 4.95, 4.95), Calibrated: 9/6/2005
Sensor-Surface: 4mm (Mechanical And Optical Surface Detection),
Electronics: DAE4 Sn602,Calibrated: 8/30/2005
Measurement SW: DASY4, V4.6 Build 23
Postprocessing SW: SEMCAD, V1.8 Build 160

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

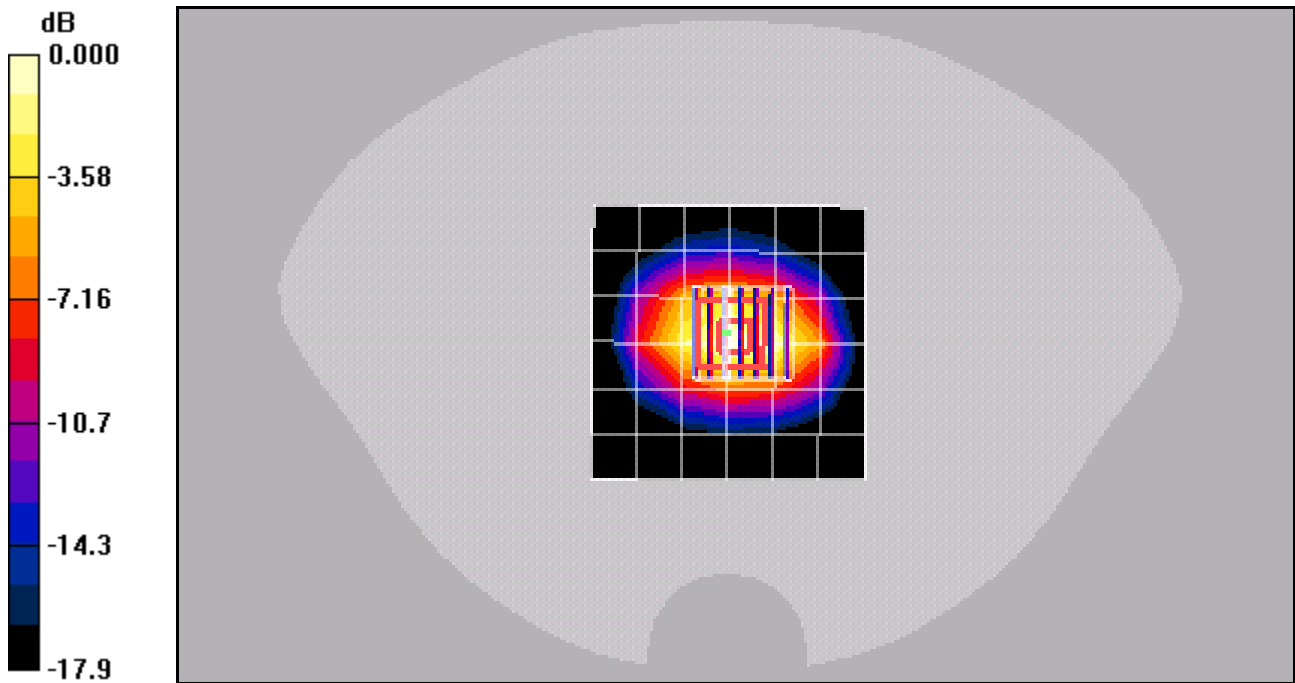# 1900MHz Validation @20dBm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 56.7 V/m; Power Drift = -0.100 dB
Peak SAR (extrapolated) = 6.64 W/kg
SAR(1 g) = 3.84 mW/g; SAR(10 g) = 2.04 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 4.33 mW/g

0 dB = 4.33mW/g

Test Laboratory: Kyocera-Wireless Corp.

1900Mhz Validation @ 20dB Probe 1714, DAE 602 and Dipole 5d003

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

Medium: HSL1800,Medium parameters used (interpolated): f = 1900 MHz; σ = 1.43 mho/m; ε_r = 39.1; ρ = 1000 kg/m^3

Phantom: SAM 12,Phantom section: Flat Section

DASY4 Configuration:
Probe: ET3DV6 - SN1714, ConvF(4.95, 4.95, 4.95), Calibrated: 9/6/2005
Sensor-Surface: 4mm (Mechanical And Optical Surface Detection),
Electronics: DAE4 Sn602,Calibrated: 8/30/2005
Measurement SW: DASY4, V4.6 Build 23
Postprocessing SW: SEMCAD, V1.8 Build 160

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

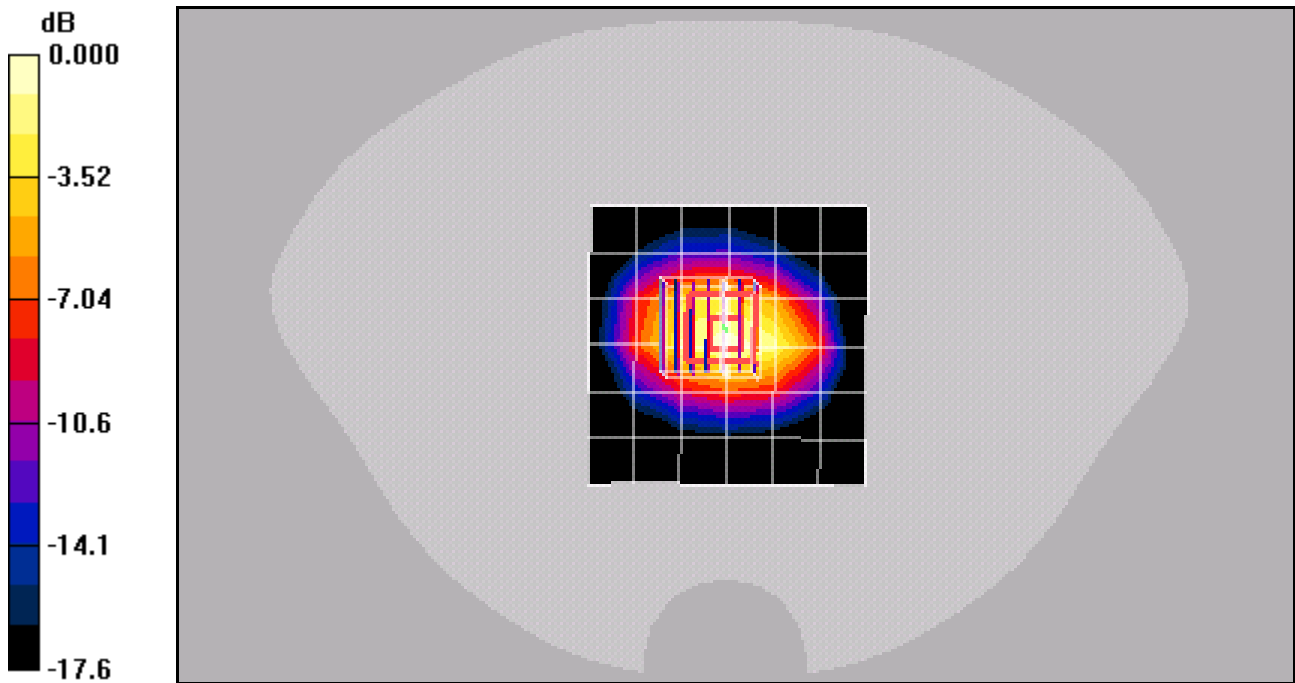# 1900MHz Validation @20dBm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 56.9 V/m; Power Drift = -0.006 dB
Peak SAR (extrapolated) = 6.86 W/kg
SAR(1 g) = 3.96 mW/g; SAR(10 g) = 2.1 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 4.47 mW/g

0 dB = 4.47mW/g

Test Laboratory: Kyocera-Wireless Corp.

1900Mhz Validation @ 20dB Probe 1714, DAE 602 and Dipole 5d003

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

Medium: HSL1800,Medium parameters used (interpolated): f = 1900 MHz; σ = 1.41 mho/m; ε_r = 40.1; ρ = 1000 kg/m^3

Phantom: SAM 12,Phantom section: Flat Section

DASY4 Configuration:
Probe: ET3DV6 - SN1714, ConvF(4.95, 4.95, 4.95), Calibrated: 9/6/2005
Sensor-Surface: 4mm (Mechanical And Optical Surface Detection),
Electronics: DAE4 Sn602,Calibrated: 8/30/2005
Measurement SW: DASY4, V4.6 Build 23
Postprocessing SW: SEMCAD, V1.8 Build 160

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

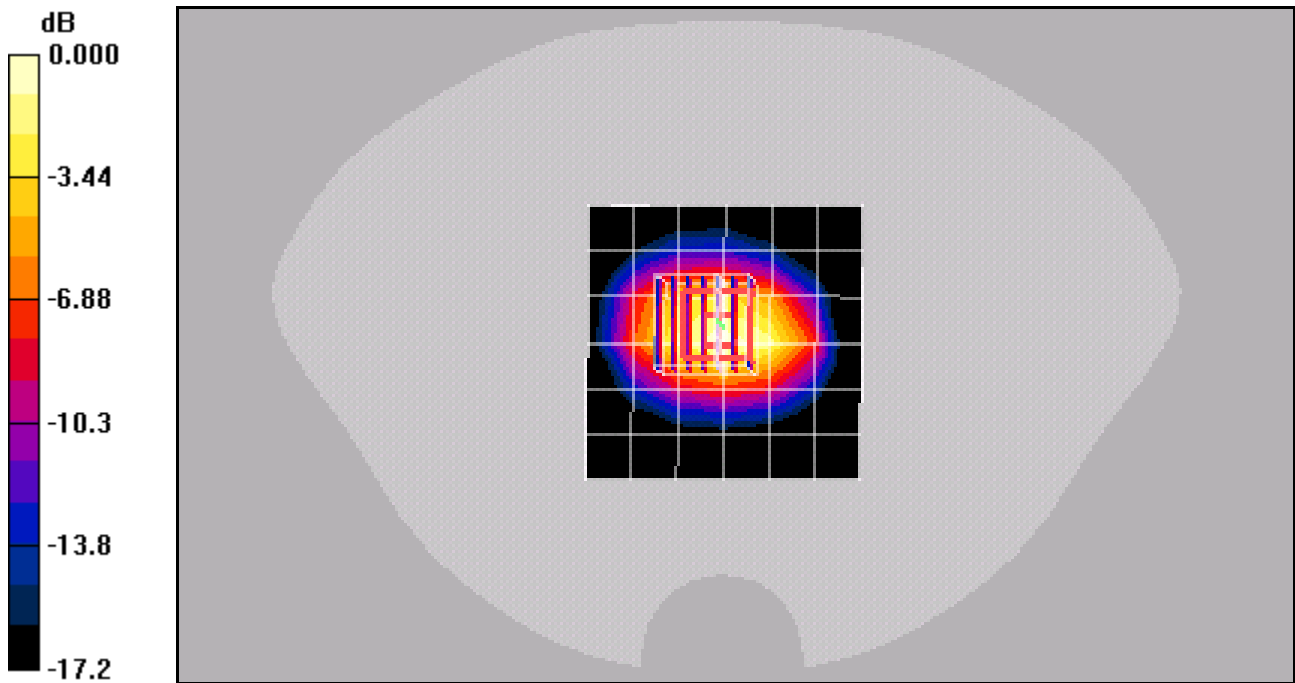# 1900MHz Validation @20dBm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 56.0 V/m; Power Drift = -0.031 dB
Peak SAR (extrapolated) = 6.52 W/kg
SAR(1 g) = 3.79 mW/g; SAR(10 g) = 2.02 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 4.26 mW/g

0 dB = 4.26mW/g

Test Laboratory: Kyocera-Wireless Corp.

1900Mhz Validation @ 20dBm Probe 1714, DAE 602, Dipole 5d003

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

Medium: HSL1800,Medium parameters used (interpolated): f = 1900 MHz; σ = 1.47 mho/m; ε_r = 39.8; ρ = 1000 kg/m^3

Phantom: SAM 12,Phantom section: Flat Section

DASY4 Configuration:
Probe: ET3DV6 - SN1714, ConvF(4.95, 4.95, 4.95), Calibrated: 9/6/2005
Sensor-Surface: 4mm (Mechanical And Optical Surface Detection),
Electronics: DAE4 Sn602,Calibrated: 8/30/2005
Measurement SW: DASY4, V4.6 Build 23
Postprocessing SW: SEMCAD, V1.8 Build 160

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

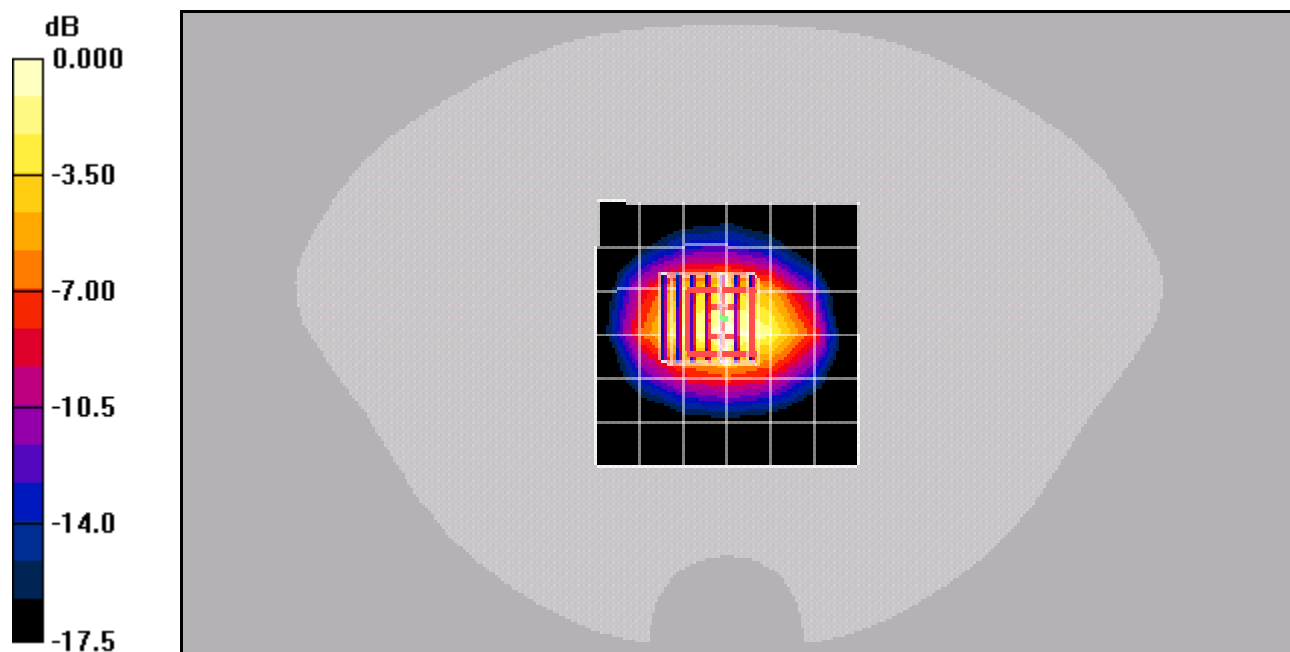# 1900MHz Validation @20dBm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 57.1 V/m; Power Drift = -0.048 dB
Peak SAR (extrapolated) = 7.14 W/kg
SAR(1 g) = 4.11 mW/g; SAR(10 g) = 2.17 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 4.62 mW/g

0 dB = 4.62mW/g