Appendix A:

Validation Test Plots

Test Laboratory: Kyocera

835MHz Validation, Probe#1713, DAE#530, Dipole#454, 08-17-05

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

Medium: HSL900,Medium parameters used: f = 835 MHz; σ = 0.895 mho/m; ε_r = 41.5; ρ = 1000 kg/m^3

Phantom: SAM 12,Phantom section: Flat Section

DASY4 Configuration:
Probe: ET3DV6 - SN1713, ConvF(6.29, 6.29, 6.29), Calibrated: 5/19/2005
Sensor-Surface: 4mm (Mechanical And Optical Surface Detection),
Electronics: DAE4 Sn530,Calibrated: 1/4/2005
Measurement SW: DASY4, V4.4 Build 3
Postprocessing SW: SEMCAD, V1.8 Build 130
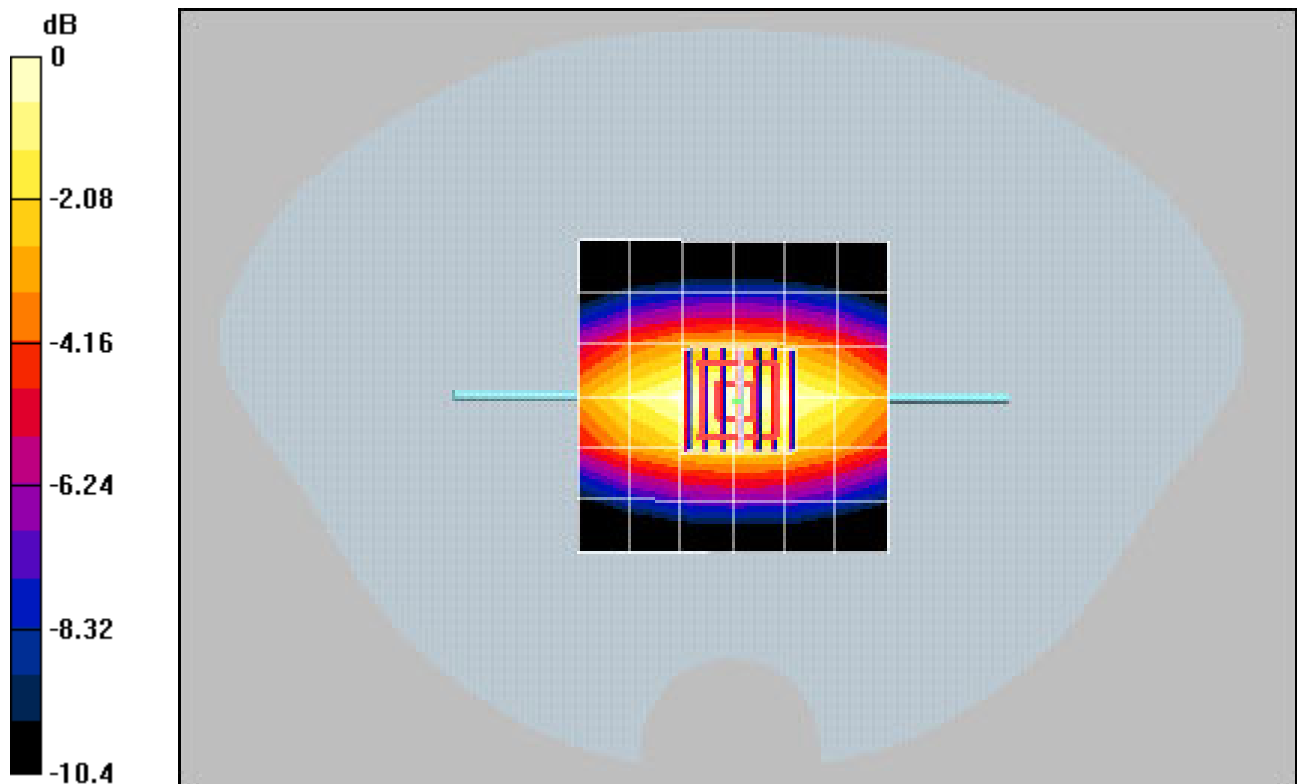
Temperature:
Room T = 21.8 +/− 1 deg C, Liquid T = 22.0 +/− 1 deg C

Validation Flat/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 36.3 V/m; Power Drift = -0.007 dB
Peak SAR (extrapolated) = 1.52 W/kg
SAR(1 g) = 1.02 mW/g; SAR(10 g) = 0.663 mW/g

0 dB = 1.1mW/g

Test Laboratory: Kyocera

835MHz Validation, Probe#1713, DAE#530, Dipole#454, 08-18-05

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

Medium: HSL900,Medium parameters used: f = 835 MHz; σ = 0.911 mho/m; ε_r = 42.3; ρ = 1000 kg/m^3

Phantom: SAM 12,Phantom section: Flat Section

DASY4 Configuration:
Probe: ET3DV6 - SN1713, ConvF(6.29, 6.29, 6.29), Calibrated: 5/19/2005
Sensor-Surface: 4mm (Mechanical And Optical Surface Detection),
Electronics: DAE4 Sn530,Calibrated: 1/4/2005
Measurement SW: DASY4, V4.4 Build 3
Postprocessing SW: SEMCAD, V1.8 Build 130

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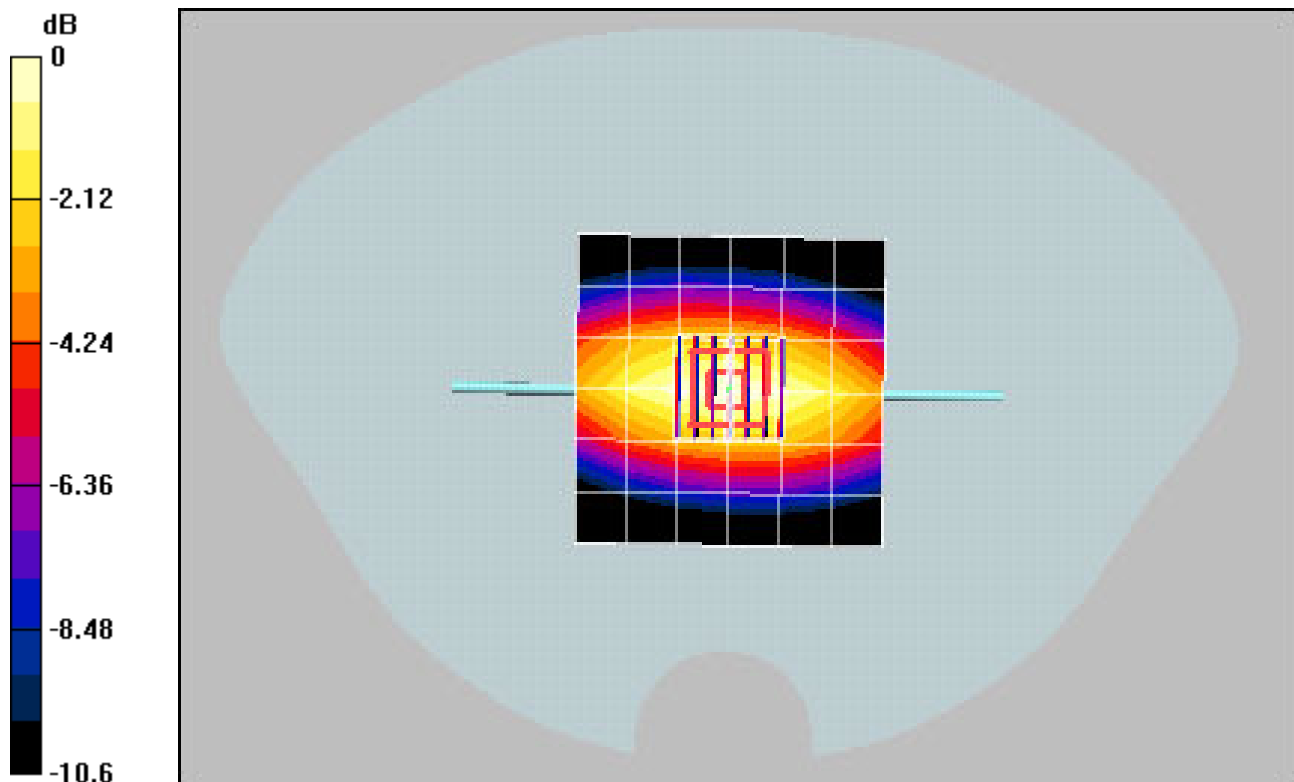Room T = 21.8 +/− 1 deg C, Liquid T = 22.0 +/− 1 deg C

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

Reference Value = 36.4 V/m; Power Drift = -0.0 dB
Peak SAR (extrapolated) = 1.55 W/kg
SAR(1 g) = 1.03 mW/g; SAR(10 g) = 0.670 mW/g
Maximum value of SAR (measured) = 1.12 mW/g

0 dB = 1.12mW/g

Test Laboratory: Kyocera

835MHz Validation, Probe#1713, DAE#530, Dipole#454, 08-19-05

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

Medium: HSL900,Medium parameters used: f = 835 MHz; σ = 0.907 mho/m; ε_r = 42.3; ρ = 1000 kg/m³

Phantom: SAM 12,Phantom section: Flat Section

DASY4 Configuration:
Probe: ET3DV6 - SN1713, ConvF(6.29, 6.29, 6.29), Calibrated: 5/19/2005
Sensor-Surface: 4mm (Mechanical And Optical Surface Detection),
Electronics: DAE4 Sn530,Calibrated: 1/4/2005
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
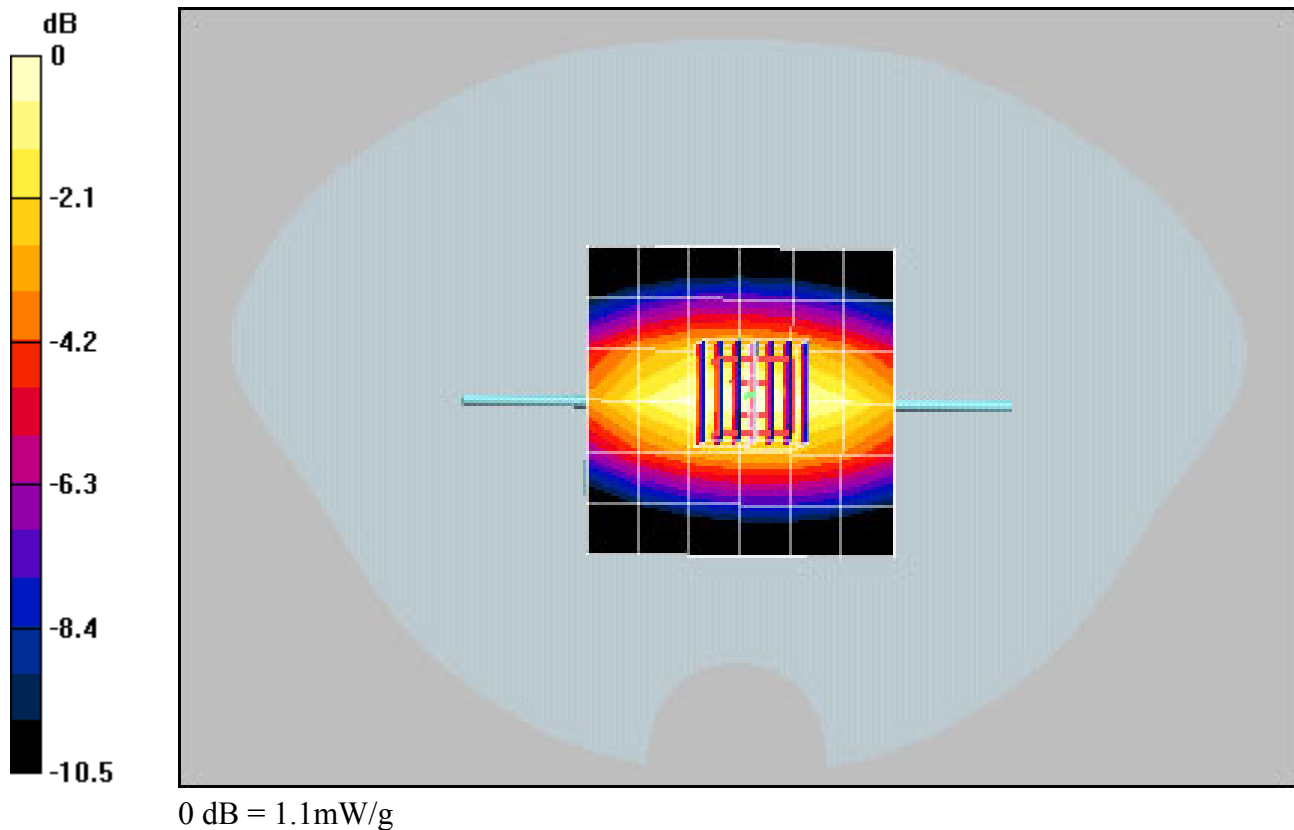
Validation Flat/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 35.9 V/m; Power Drift = -0.0007 dB
Peak SAR (extrapolated) = 1.53 W/kg
SAR(1 g) = 1.02 mW/g; SAR(10 g) = 0.658 mW/g
Maximum value of SAR (measured) = 1.1 mW/g

0 dB = 1.1mW/g

835MHz Validation, Probe#1713, DAE#530, Dipole#454, 08-20-05

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

Medium: HSL900,Medium parameters used: f = 835 MHz; σ = 0.918 mho/m; ε_r = 42.8; ρ = 1000 kg/m^3

Phantom: SAM 12,Phantom section: Flat Section

DASY4 Configuration:
Probe: ET3DV6 - SN1713, ConvF(6.29, 6.29, 6.29), Calibrated: 5/19/2005
Sensor-Surface: 4mm (Mechanical And Optical Surface Detection),
Electronics: DAE4 Sn530,Calibrated: 1/4/2005
Measurement SW: DASY4, V4.4 Build 3
Postprocessing SW: SEMCAD, V1.8 Build 130

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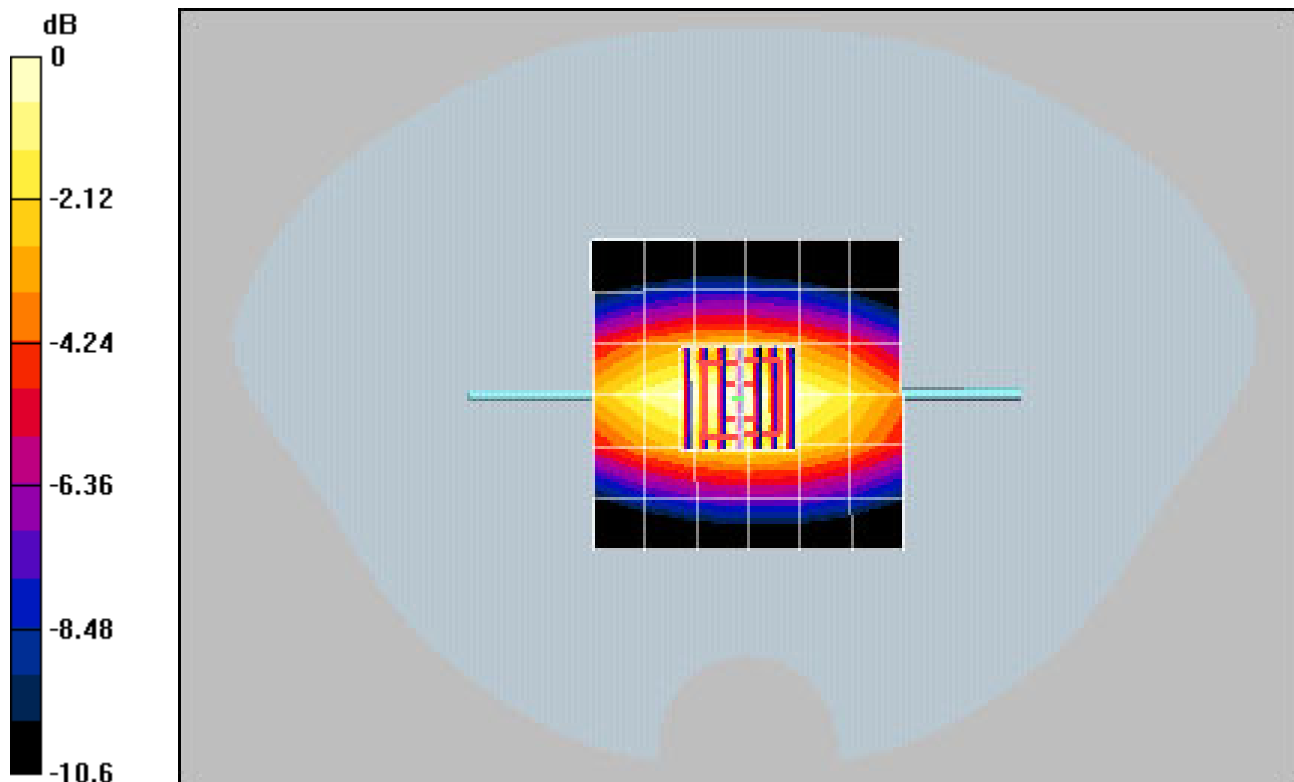Room T = 21.8 +/− 1 deg C, Liquid T = 22.0 +/− 1 deg C

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

Reference Value = 35.7 V/m; Power Drift = 0.0 dB
Peak SAR (extrapolated) = 1.54 W/kg
SAR(1 g) = 1.03 mW/g; SAR(10 g) = 0.671 mW/g
Maximum value of SAR (measured) = 1.12 mW/g

0 dB = 1.12mW/g

Test Laboratory: Kyocera

835MHz Validation, Probe#1713, DAE#530, Dipole#454, 08-22-05

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

Medium: HSL900,Medium parameters used: f = 835 MHz; σ = 0.891 mho/m; ε_r = 41.3; ρ = 1000 kg/m^3

Phantom: SAM 12,Phantom section: Flat Section

DASY4 Configuration:
Probe: ET3DV6 - SN1713, ConvF(6.29, 6.29, 6.29), Calibrated: 5/19/2005
Sensor-Surface: 4mm (Mechanical And Optical Surface Detection),
Electronics: DAE4 Sn530,Calibrated: 1/4/2005
Measurement SW: DASY4, V4.4 Build 3
Postprocessing SW: SEMCAD, V1.8 Build 130

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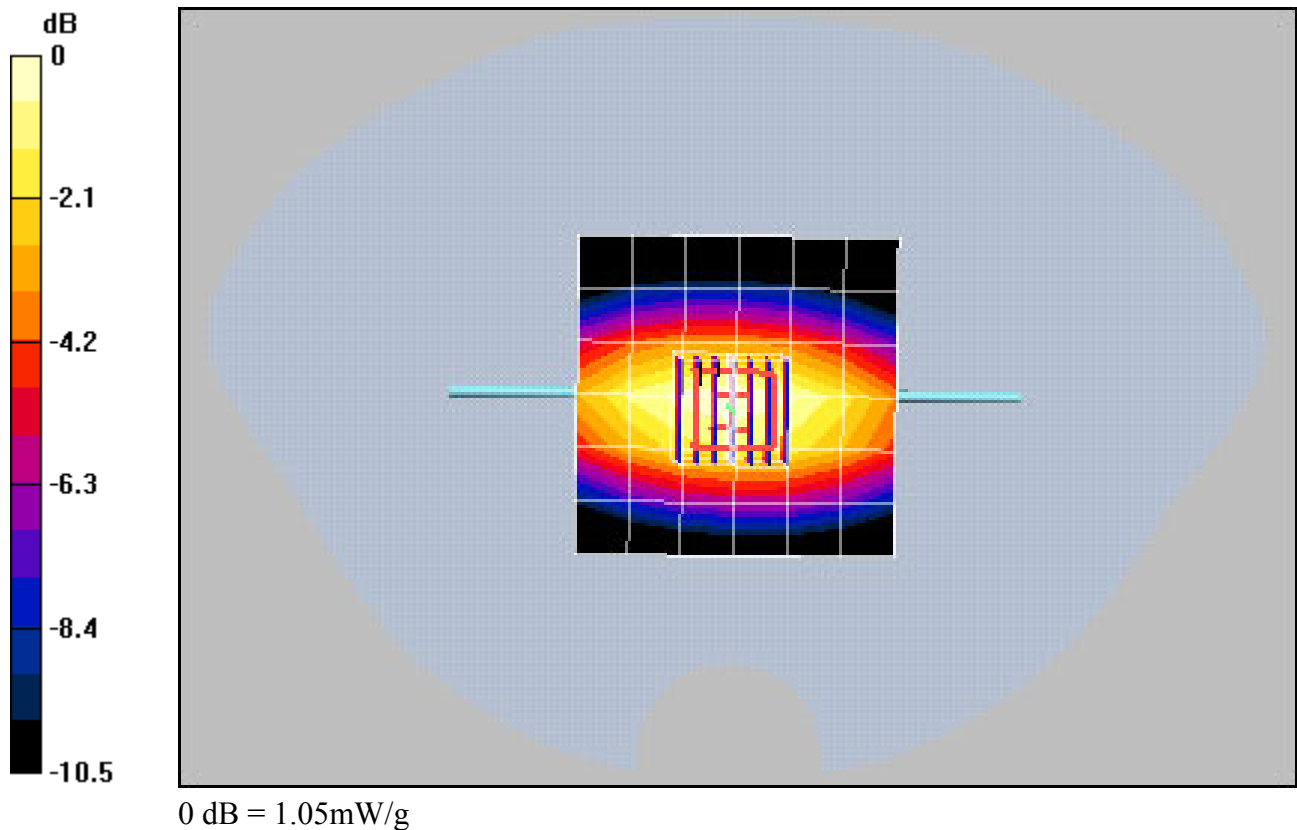Room T = 21.8 +/− 1 deg C, Liquid T = 22.0 +/− 1 deg C

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

Reference Value = 34.8 V/m; Power Drift = 0.0 dB
Peak SAR (extrapolated) = 1.45 W/kg
SAR(1 g) = 0.968 mW/g; SAR(10 g) = 0.629 mW/g
Maximum value of SAR (measured) = 1.05 mW/g

0 dB = 1.05mW/g

Test Laboratory: Kyocera

835MHz Validation, Probe#1713, DAE#530, Dipole#454, 08-23-05

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

Medium: HSL900,Medium parameters used: f = 835 MHz; σ = 0.93 mho/m; ε_r = 43.2; ρ = 1000 kg/m^3

Phantom: SAM 12,Phantom section: Flat Section

DASY4 Configuration:
Probe: ET3DV6 - SN1713, ConvF(6.29, 6.29, 6.29), Calibrated: 5/19/2005
Sensor-Surface: 4mm (Mechanical And Optical Surface Detection),
Electronics: DAE4 Sn530,Calibrated: 1/4/2005
Measurement SW: DASY4, V4.4 Build 3
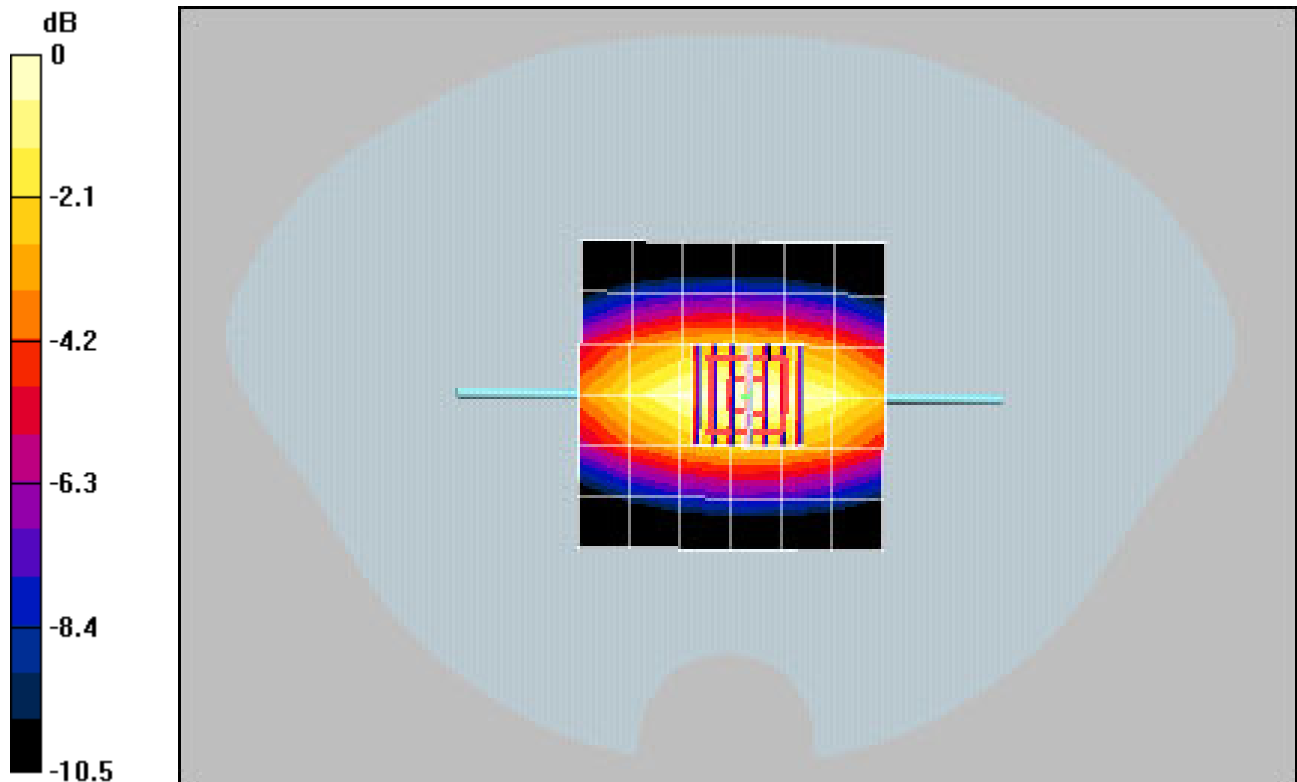Postprocessing SW: SEMCAD, V1.8 Build 130

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

Validation Flat/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 35.6 V/m; Power Drift = 0.0 dB
Peak SAR (extrapolated) = 1.53 W/kg
SAR(1 g) = 1.02 mW/g; SAR(10 g) = 0.662 mW/g

0 dB = 1.1mW/g

Test Laboratory: Kyocera

835MHz Validation, Probe#1713, DAE#530, Dipole#454, 08-25-05

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

Medium: HSL900,Medium parameters used: f = 835 MHz; σ = 0.93 mho/m; $ε_r$ = 43.2; ρ = 1000 kg/m^3

Phantom: SAM 12,Phantom section: Flat Section

DASY4 Configuration:
Probe: ET3DV6 - SN1713, ConvF(6.29, 6.29, 6.29), Calibrated: 5/19/2005
Sensor-Surface: 4mm (Mechanical And Optical Surface Detection),
Electronics: DAE4 Sn530,Calibrated: 1/4/2005
Measurement SW: DASY4, V4.4 Build 3
Postprocessing SW: SEMCAD, V1.8 Build 130

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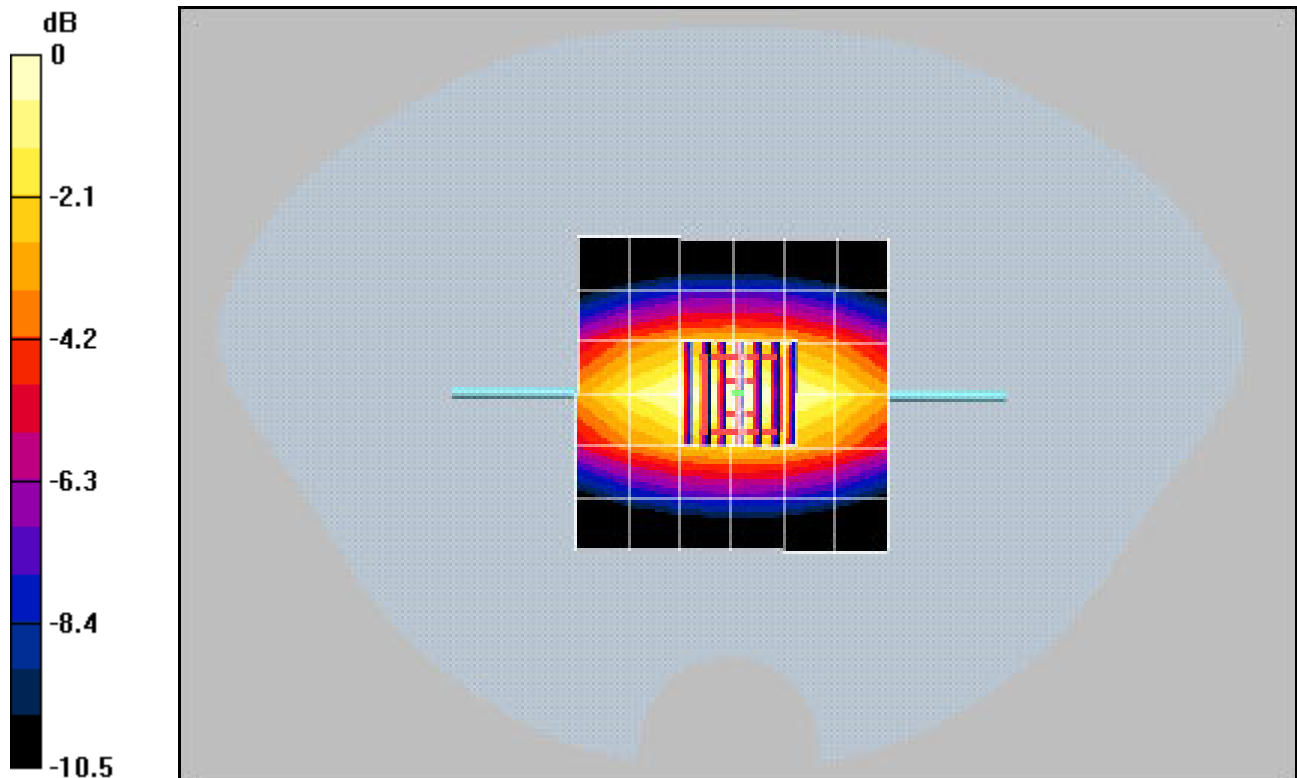Room T = 21.8 +/– 1 deg C, Liquid T = 22.0 +/– 1 deg C

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

Reference Value = 35.7 V/m; Power Drift = 0.0 dB
Peak SAR (extrapolated) = 1.55 W/kg
SAR(1 g) = 1.03 mW/g; SAR(10 g) = 0.666 mW/g
Maximum value of SAR (measured) = 1.12 mW/g

0 dB = 1.12mW/g

835MHz Validation, Probe#1713, DAE#530, Dipole#454, 08-30-05

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

Medium: HSL900,Medium parameters used: f = 835 MHz; σ = 0.916 mho/m; ε_r = 43; ρ = 1000 kg/m^3

Phantom: SAM 12,Phantom section: Flat Section

DASY4 Configuration:
Probe: ET3DV6 - SN1713, ConvF(6.29, 6.29, 6.29), Calibrated: 5/19/2005
Sensor-Surface: 4mm (Mechanical And Optical Surface Detection),
Electronics: DAE4 Sn530,Calibrated: 1/4/2005
Measurement SW: DASY4, V4.4 Build 3
Postprocessing SW: SEMCAD, V1.8 Build 130
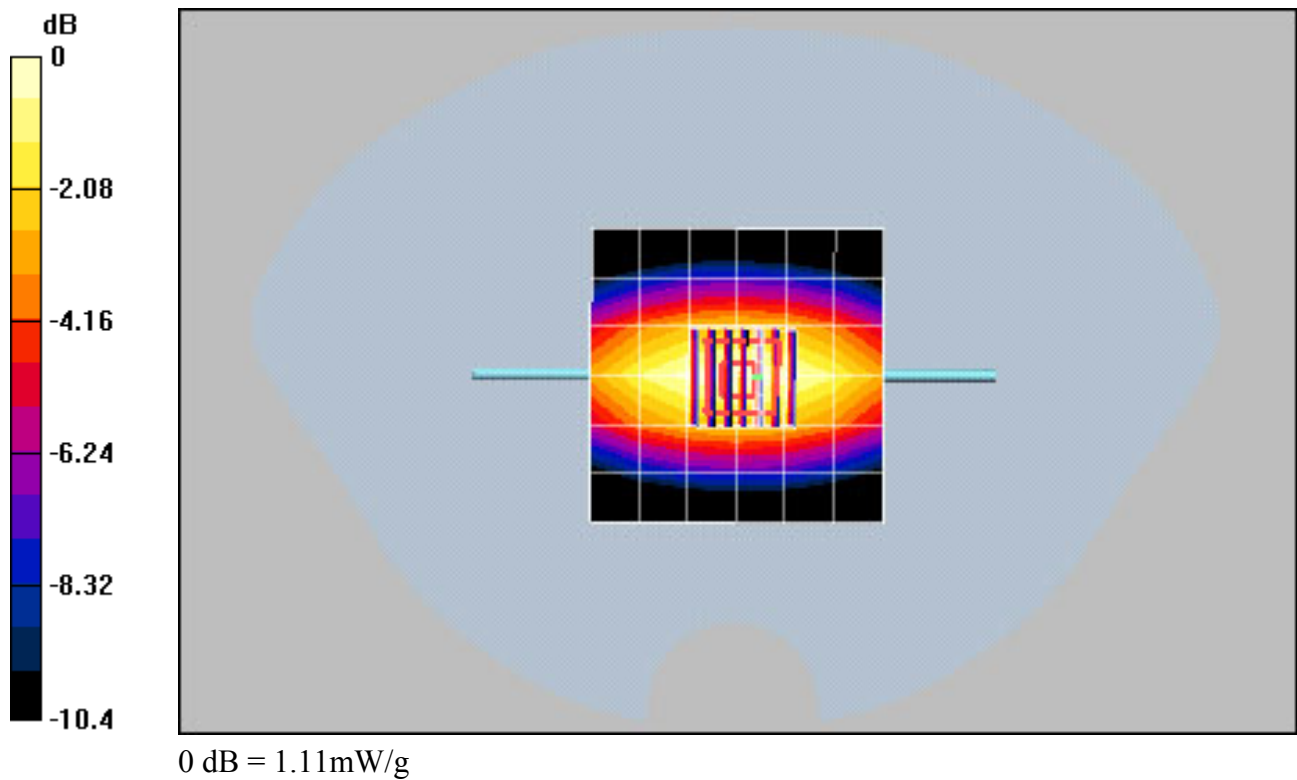
Temperature:
Room T = 21.8 +/− 1 deg C, Liquid T = 22.0 +/− 1 deg C

Validation Flat/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 36 V/m; Power Drift = -0.0 dB
Peak SAR (extrapolated) = 1.53 W/kg
SAR(1 g) = 1.03 mW/g; SAR(10 g) = 0.667 mW/g

0 dB = 1.11mW/g

Test Laboratory: Kyocera

1900MHz Validation, Probe#1713, DAE#530, Dipole#5d005, 08-23-05

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

Medium: HSL1800,Medium parameters used (interpolated): f = 1900 MHz; σ = 1.36 mho/m; ε_r = 41.2; ρ = 1000 kg/m^3

Phantom: SAM 12,Phantom section: Flat Section

DASY4 Configuration:
Probe: ET3DV6 - SN1713, ConvF(5.18, 5.18, 5.18), Calibrated: 5/19/2005
Sensor-Surface: 4mm (Mechanical And Optical Surface Detection),
Electronics: DAE4 Sn530,Calibrated: 1/4/2005
Measurement SW: DASY4, V4.4 Build 3
Postprocessing SW: SEMCAD, V1.8 Build 130

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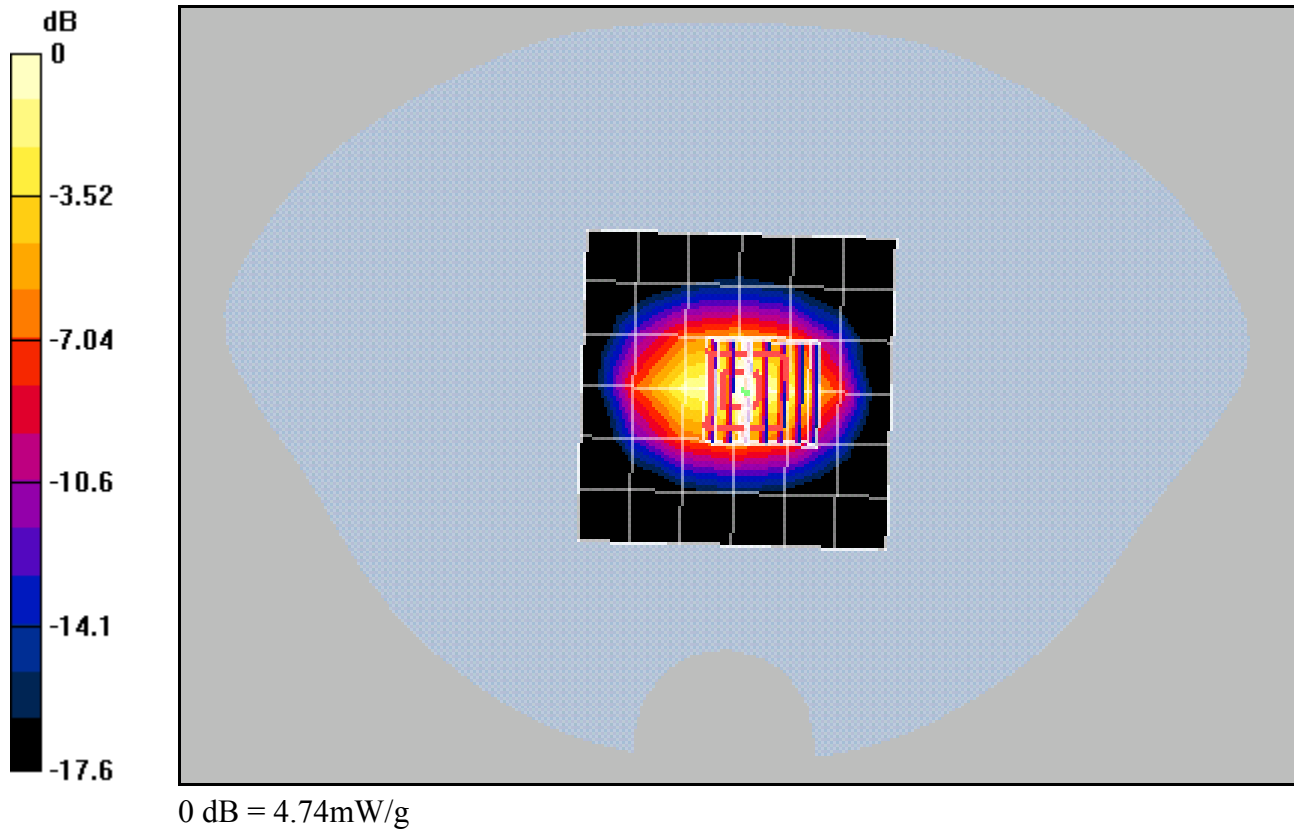Room T = 21.8 +/– 1 deg C, Liquid T = 22.0 +/– 1 deg C

1900Mhz/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 62.4 V/m; Power Drift = 0.0004 dB
Peak SAR (extrapolated) = 7.26 W/kg
SAR(1 g) = 4.22 mW/g; SAR(10 g) = 2.24 mW/g

Info: Interpolated medium parameters used for SAR evaluation!

0 dB = 4.74mW/g

Test Laboratory: Kyocera

1900MHz Validation, Probe#1713, DAE#530, Dipole#5d005, 08-24-05

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

Medium: HSL1800,Medium parameters used (interpolated): f = 1900 MHz; σ = 1.38 mho/m; ε_r = 41.1; ρ = 1000 kg/m^3

Phantom: SAM 12,Phantom section: Flat Section

DASY4 Configuration:
Probe: ET3DV6 - SN1713, ConvF(5.18, 5.18, 5.18), Calibrated: 5/19/2005
Sensor-Surface: 4mm (Mechanical And Optical Surface Detection),
Electronics: DAE4 Sn530,Calibrated: 1/4/2005
Measurement SW: DASY4, V4.4 Build 3
Postprocessing SW: SEMCAD, V1.8 Build 130

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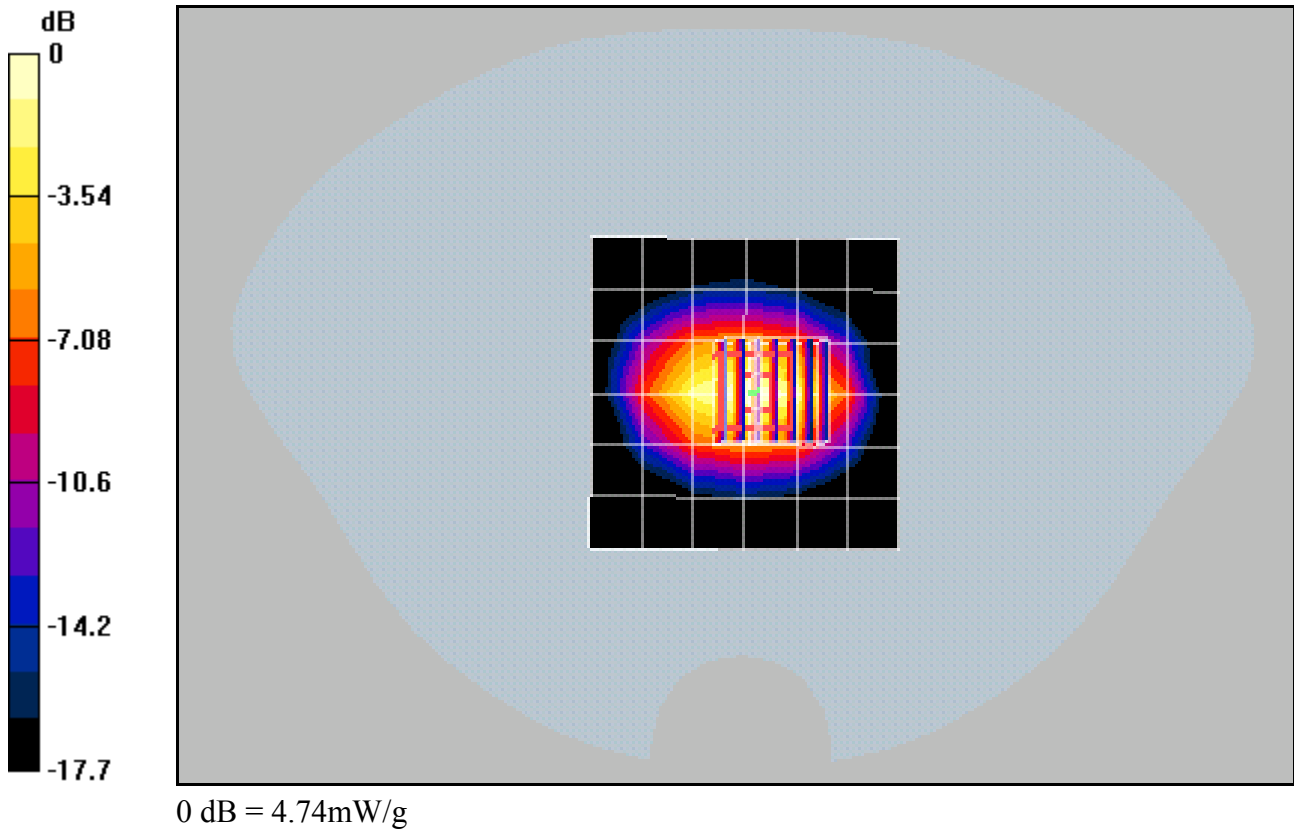Room T = 21.8 +/− 1 deg C, Liquid T = 22.0 +/− 1 deg C

1900Mhz/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 62.1 V/m; Power Drift = -0.2 dB
Peak SAR (extrapolated) = 7.47 W/kg
SAR(1 g) = 4.14 mW/g; SAR(10 g) = 2.18 mW/g

Info: Interpolated medium parameters used for SAR evaluation!

0 dB = 4.74mW/g

Test Laboratory: Kyocera

1900MHz Validation, Probe#1713, DAE#530, Dipole#5d005, 08-24-05

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

Medium: HSL1800,Medium parameters used (interpolated): f = 1900 MHz; σ = 1.37 mho/m; ε_r = 41; ρ = 1000 kg/m^3

Phantom: SAM 12,Phantom section: Flat Section

DASY4 Configuration:
Probe: ET3DV6 - SN1713, ConvF(5.18, 5.18, 5.18), Calibrated: 5/19/2005
Sensor-Surface: 4mm (Mechanical And Optical Surface Detection),
Electronics: DAE4 Sn530,Calibrated: 1/4/2005
Measurement SW: DASY4, V4.4 Build 3
Postprocessing SW: SEMCAD, V1.8 Build 130

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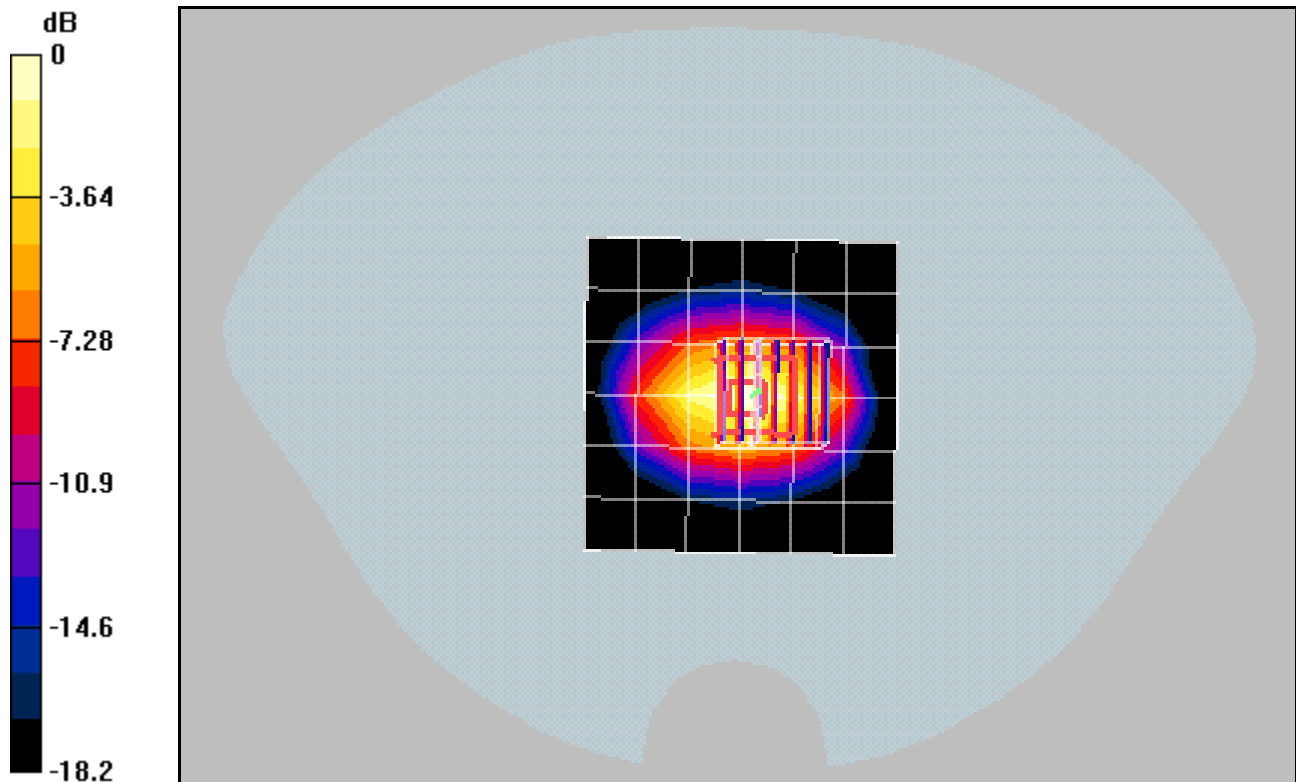Room T = 21.8 +/− 1 deg C, Liquid T = 22.0 +/− 1 deg C

1900Mhz/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 62.6 V/m; Power Drift = -0.1 dB
Peak SAR (extrapolated) = 7.4 W/kg
SAR(1 g) = 4.25 mW/g; SAR(10 g) = 2.25 mW/g
Info: Interpolated medium parameters used for SAR evaluation!

0 dB = 4.81mW/g