

Appendix A

Validation Plots

Date/Time: 6/12/2009

Test Laboratory: Kyocera Wireless Corporation

835MHz Validation @ 20dbm, Probe #3036, DAE#527, Dipole #467, 06-12-09

Communication System: CDMA, Frequency: 835 MHz, Duty Cycle: 1:1
Medium: Head 835 MHz, Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 0.9 \text{ mho/m}$; $\epsilon_r = 41.6$; $\rho = 1000 \text{ kg/m}^3$
Phantom: SAM 12, Phantom section: Flat Section

DASY4 Configuration:

Probe: ES3DV3 - SN3036, ConvF(6.09, 6.09, 6.09), Calibrated: 9/18/2008
Sensor-Surface: 4mm (Mechanical Surface Detection),
Electronics: DAE4 Sn527, Calibrated: 8/14/2008
Measurement SW: DASY4, V4.7 Build 71
Postprocessing SW: SEMCAD, V1.8 Build 184

Temperature:

Room T = $21.8 \pm 1 \text{ deg C}$, Liquid T = $22.0 \pm 1 \text{ deg C}$

835MHz Validation/Area Scan (7x13x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 1.03 mW/g

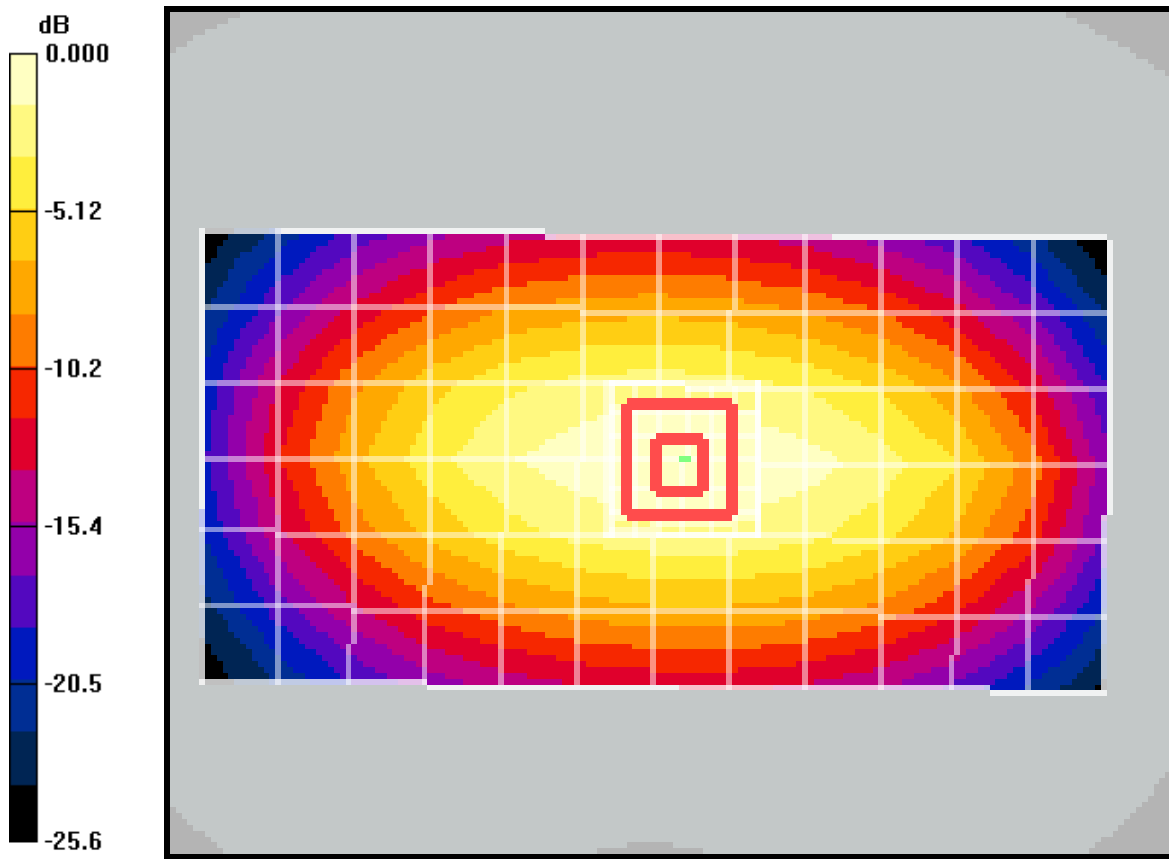
835MHz Validation/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 34.6 V/m; Power Drift = -0.084 dB

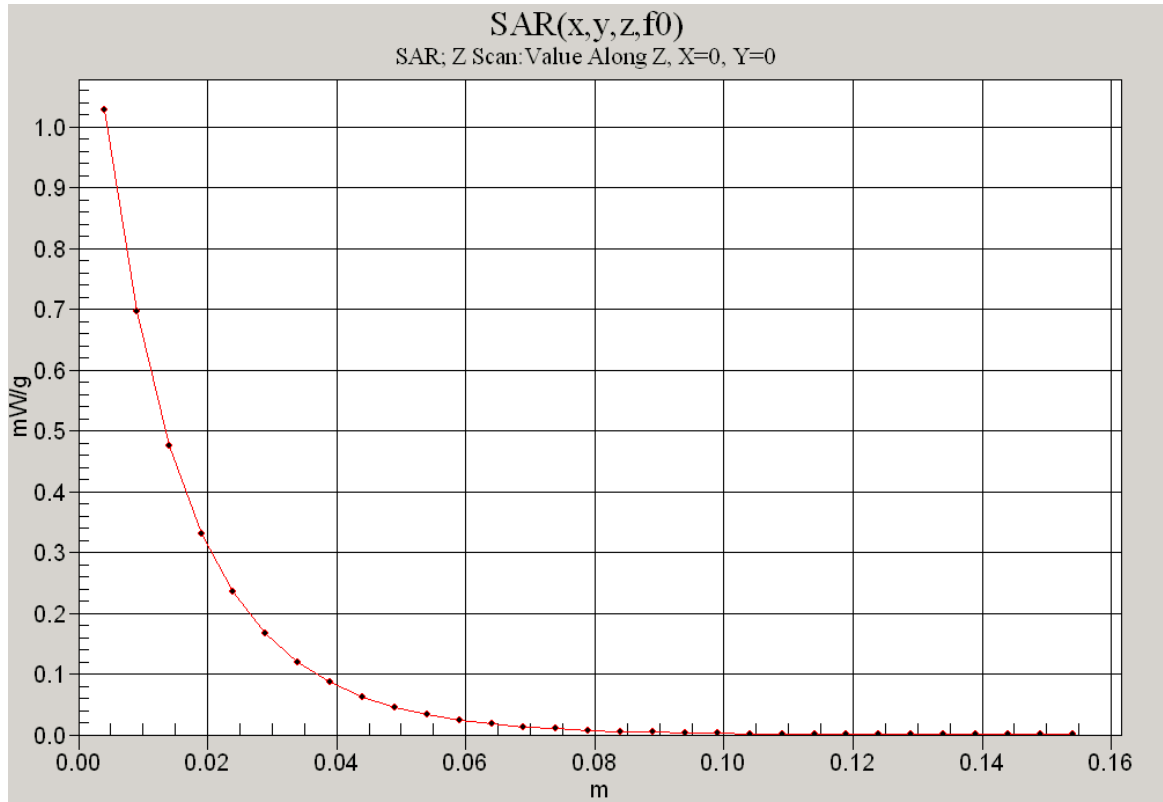
Peak SAR (extrapolated) = 1.40 W/kg

SAR(1 g) = 0.957 mW/g; SAR(10 g) = 0.625 mW/g

Maximum value of SAR (measured) = 1.04 mW/g



0 dB = 1.03mW/g



Date/Time: 6/15/2009

Test Laboratory: Kyocera Wireless Corporation

835MHz Validation @ 20dbm, Probe #3036, DAE#527, Dipole #467, 06-15-09

Communication System: CDMA, Frequency: 835 MHz, Duty Cycle: 1:1
Medium: Head 835 MHz, Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 0.91 \text{ mho/m}$; $\epsilon_r = 42.2$; $\rho = 1000 \text{ kg/m}^3$
Phantom: SAM 12, Phantom section: Flat Section

DASY4 Configuration:

Probe: ES3DV3 - SN3036, ConvF(6.09, 6.09, 6.09), Calibrated: 9/18/2008

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

Electronics: DAE4 Sn527, Calibrated: 8/14/2008

Measurement SW: DASY4, V4.7 Build 71

Postprocessing SW: SEMCAD, V1.8 Build 184

Temperature:

Room T = $21.8 \pm 1 \text{ deg C}$, Liquid T = $22.0 \pm 1 \text{ deg C}$

835MHz Validation/Area Scan (7x13x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 1.03 mW/g

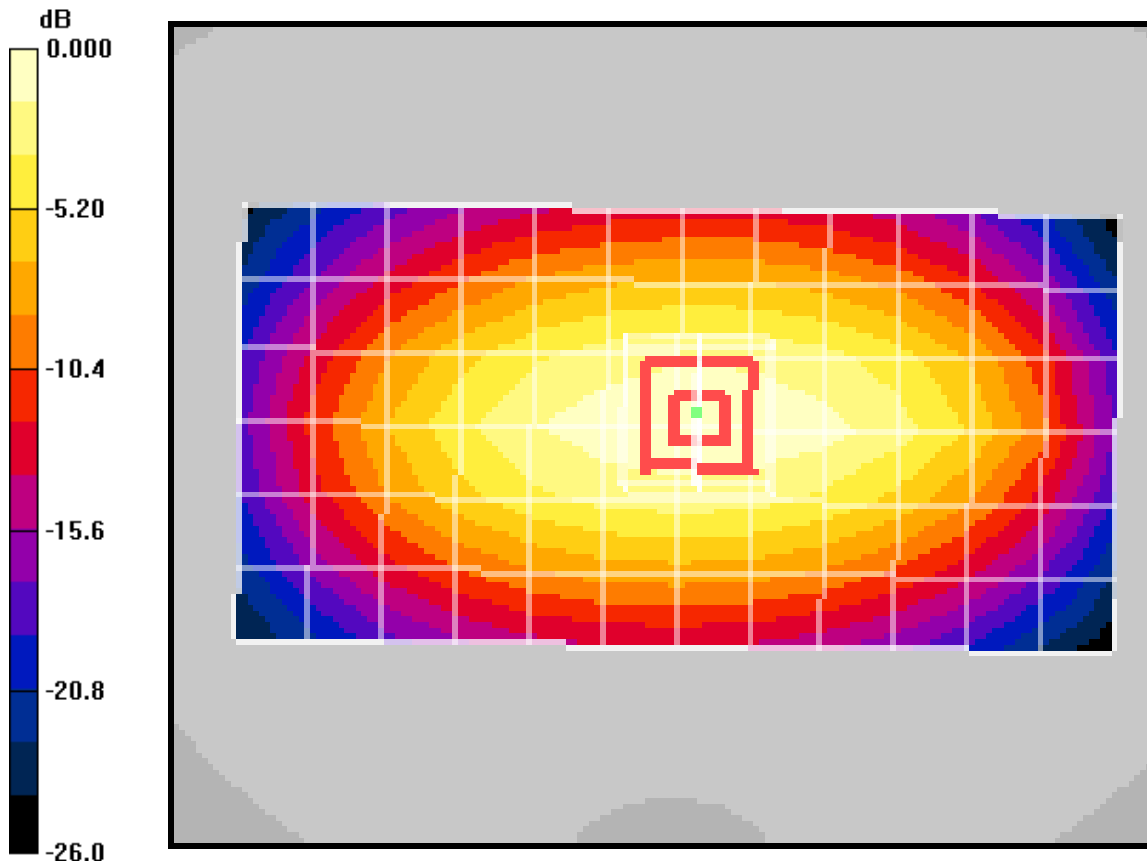
835MHz Validation/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 34.8 V/m; Power Drift = -0.094 dB

Peak SAR (extrapolated) = 1.41 W/kg

SAR(1 g) = 0.958 mW/g; SAR(10 g) = 0.627 mW/g

Maximum value of SAR (measured) = 1.04 mW/g



0 dB = 1.03mW/g

Test Laboratory: KWC

1800MHz Validation @ 20.00dBm, Probe #1618, DAE #603, Dipole #220, 06-16-09

Communication System: CW 1800Mhz, Frequency: 1800 MHz, Duty Cycle: 1:1
Medium: HSL1700,Medium parameters used: $f = 1800 \text{ MHz}$; $\sigma = 1.42 \text{ mho/m}$; $\epsilon_r = 38.9$; $\rho = 1000 \text{ kg/m}^3$
Phantom: SAM 12,Phantom section: Flat Section

DASY4 Configuration:

Probe: ET3DV6 - SN1618, ConvF(5.57, 5.57, 5.57), Calibrated: 8/25/2008

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

Electronics: DAE4 Sn603,Calibrated: 9/17/2008

Measurement SW: DASY4, V4.7 Build 71

Postprocessing SW: SEMCAD, V1.8 Build 184

Temperature:

Room T = $21.8 \pm 1 \text{ deg C}$, Liquid T = $22.0 \pm 1 \text{ deg C}$

1800Mhz/Area Scan (7x7x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 4.03 mW/g

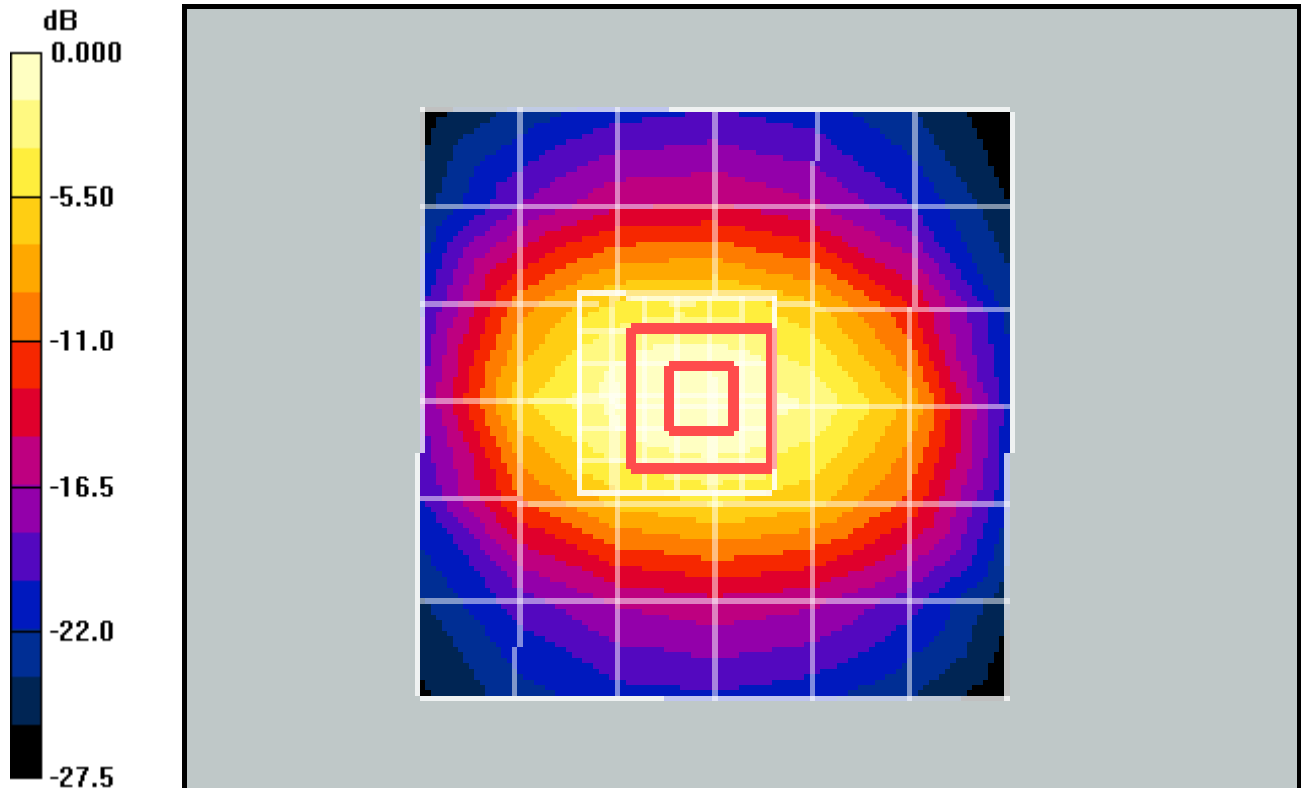
1800Mhz/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 56.1 V/m; Power Drift = 0.024 dB

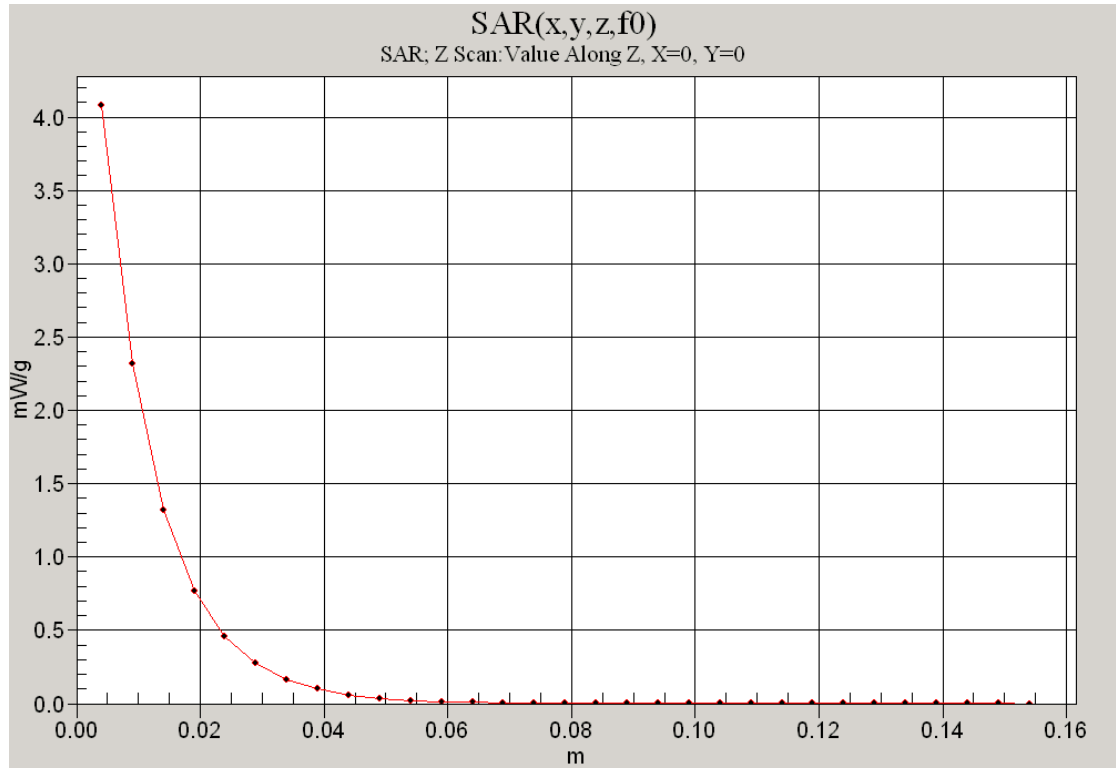
Peak SAR (extrapolated) = 6.37 W/kg

SAR(1 g) = 3.6 mW/g; SAR(10 g) = 1.9 mW/g

Maximum value of SAR (measured) = 4.08 mW/g



0 dB = 4.03mW/g



Test Laboratory: KWC

1800MHz Validation @ 20.00dBm, Probe #1618, DAE #603, Dipole #220, 06-17-09

Communication System: CW 1800Mhz, Frequency: 1800 MHz, Duty Cycle: 1:1
Medium: HSL1700,Medium parameters used: $f = 1800 \text{ MHz}$; $\sigma = 1.42 \text{ mho/m}$; $\epsilon_r = 39.1$; $\rho = 1000 \text{ kg/m}^3$
Phantom: SAM 12,Phantom section: Flat Section

DASY4 Configuration:

Probe: ET3DV6 - SN1618, ConvF(5.57, 5.57, 5.57), Calibrated: 8/25/2008

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

Electronics: DAE4 Sn603,Calibrated: 9/17/2008

Measurement SW: DASY4, V4.7 Build 71

Postprocessing SW: SEMCAD, V1.8 Build 184

Temperature:

Room T = $21.8 \pm 1 \text{ deg C}$, Liquid T = $22.0 \pm 1 \text{ deg C}$

1800Mhz/Area Scan (7x7x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 3.73 mW/g

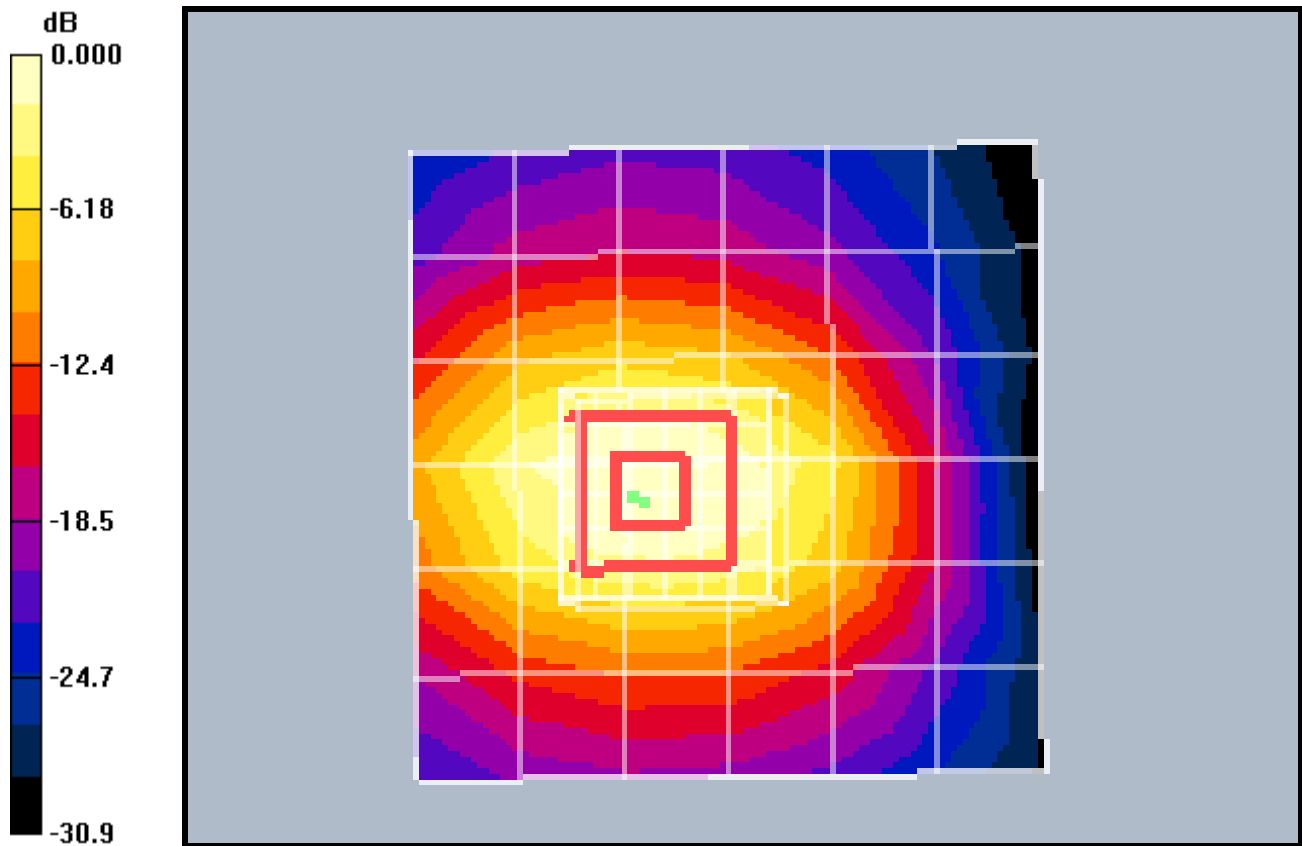
1800Mhz/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 48.1 V/m; Power Drift = -0.140 dB

Peak SAR (extrapolated) = 6.37 W/kg

SAR(1 g) = 3.6 mW/g; SAR(10 g) = 1.9 mW/g

Maximum value of SAR (measured) = 4.03 mW/g



0 dB = 3.73mW/g

Test Laboratory: Kyocera

1900Mhz Validation @ 20dBm Probe 3035, DAE 493 and Dipole 5d016, 06-11-09

Communication System: CW, Frequency: 1900 MHz, Duty Cycle: 1:1
Medium: HSL1900,Medium parameters used (interpolated): $f = 1900$ MHz; $\sigma = 1.38$ mho/m; $\epsilon_r = 39.7$; $\rho = 1000$ kg/m³

Phantom: SAM 12,Phantom section: Flat Section

DASY4 Configuration:

Probe: ES3DV3 - SN3035, ConvF(5.01, 5.01, 5.01), Calibrated: 8/25/2008

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

Electronics: DAE3 Sn493,Calibrated: 9/17/2008

Measurement SW: DASY4, V4.7 Build 71

Postprocessing SW: SEMCAD, V1.8 Build 184

Temperature:

Room T = 21.8̄ 1 deg C, Liquid T = 22.0̄ 1 deg C

1900MHz Validation @20dBm/Area Scan (7x7x1): Measurement grid: dx=15mm, dy=15mm

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

Maximum value of SAR (measured) = 4.09 mW/g

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

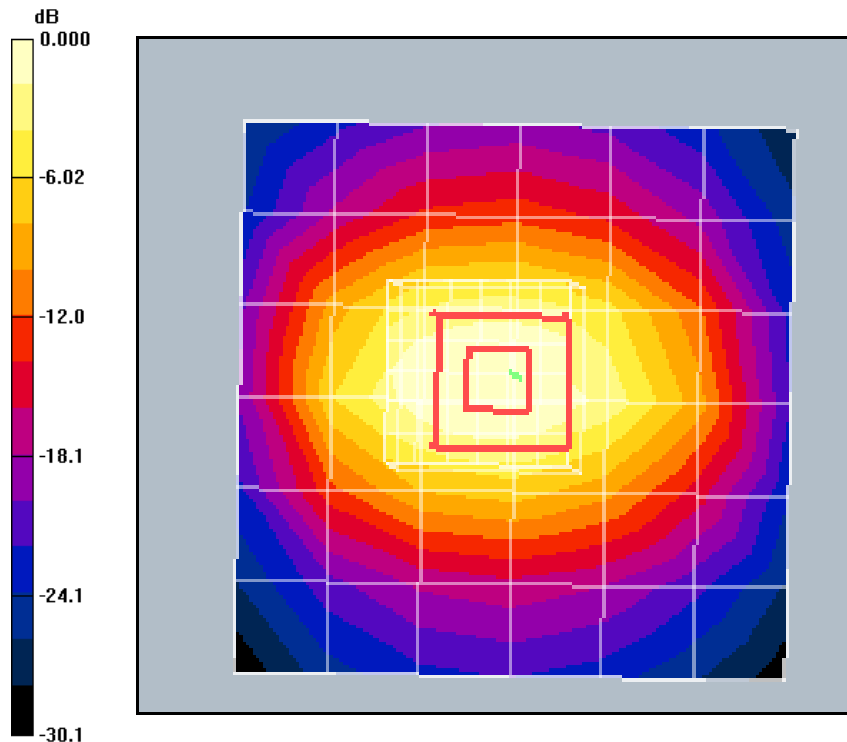
Reference Value = 55.2 V/m; Power Drift = 0.004 dB

Peak SAR (extrapolated) = 7.31 W/kg

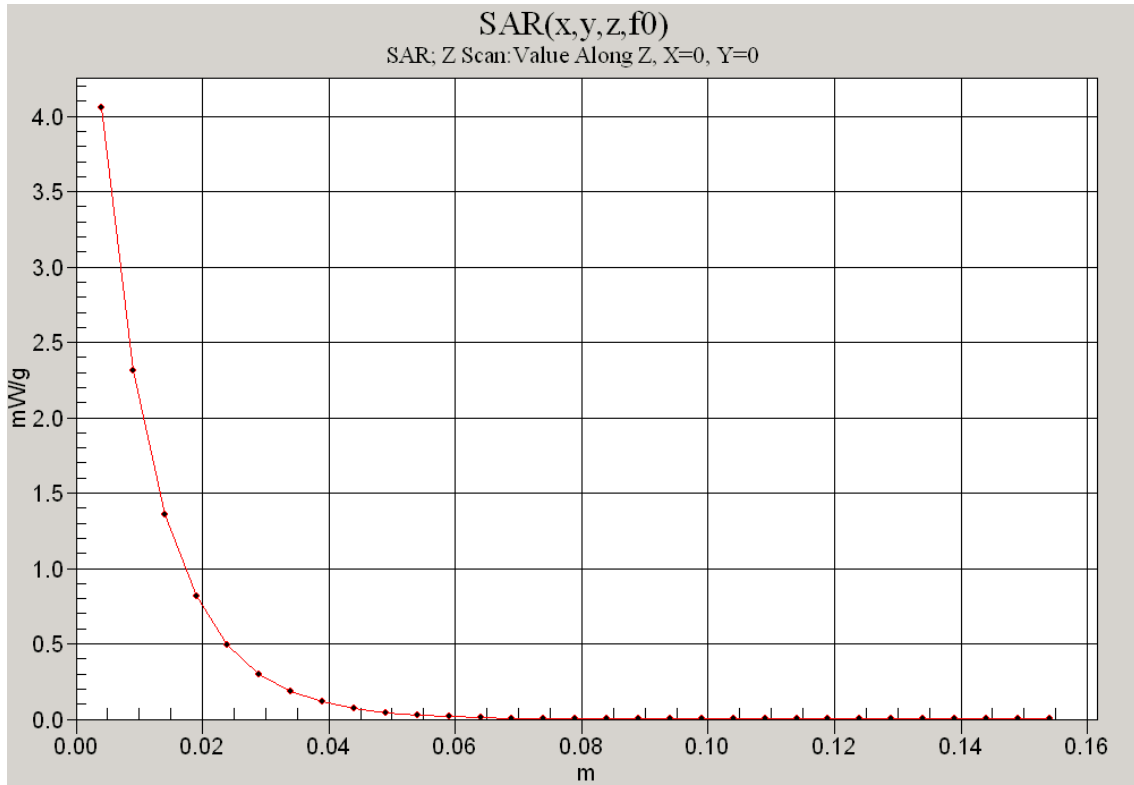
SAR(1 g) = 3.94 mW/g; SAR(10 g) = 2.06 mW/g

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

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



0 dB = 4.09mW/g



Body

Test Laboratory: Kyocera Wireless

835MHz Validation (In Muscle) Probe 1618 DAE 675 Dipole #467, 06-18-09

Communication System: CW, Frequency: 835 MHz, Duty Cycle: 1:1
Medium: M835, Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 0.94 \text{ mho/m}$; $\epsilon_r = 54.3$; $\rho = 1000 \text{ kg/m}^3$
Phantom: SAM 12, Phantom section: Flat Section

DASY4 Configuration:

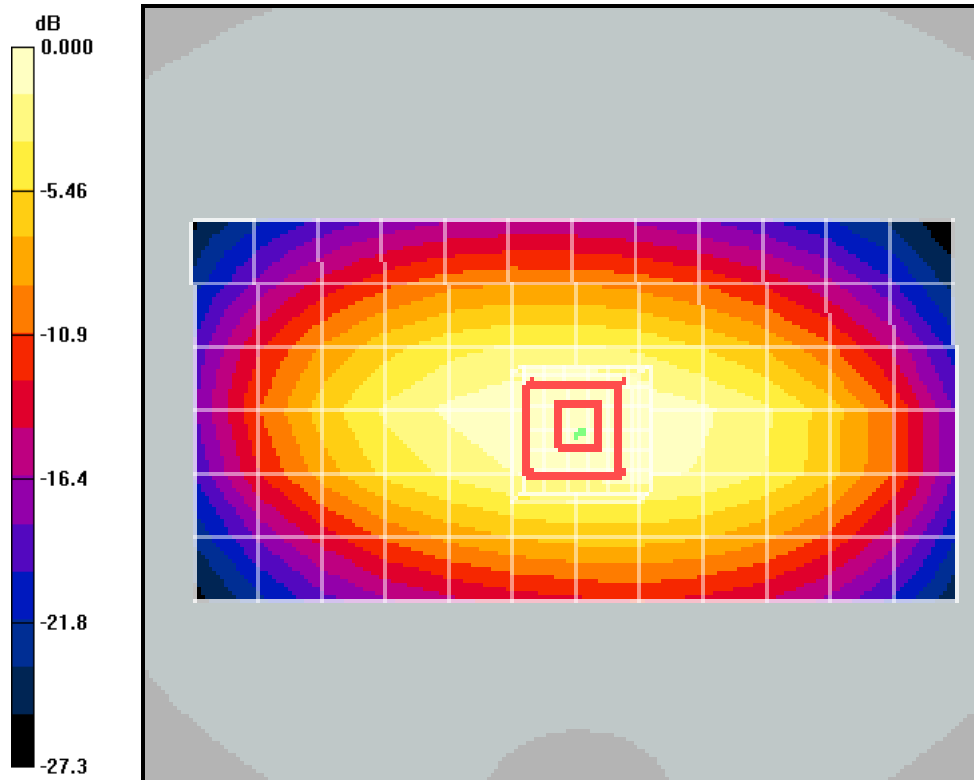
Probe: ET3DV6 - SN1618, ConvF(6.41, 6.41, 6.41), Calibrated: 8/25/2008
Sensor-Surface: 4mm (Mechanical Surface Detection),
Electronics: DAE4 Sn675, Calibrated: 4/29/2009
Measurement SW: DASY4, V4.7 Build 71
Postprocessing SW: SEMCAD, V1.8 Build 184

Temperature:

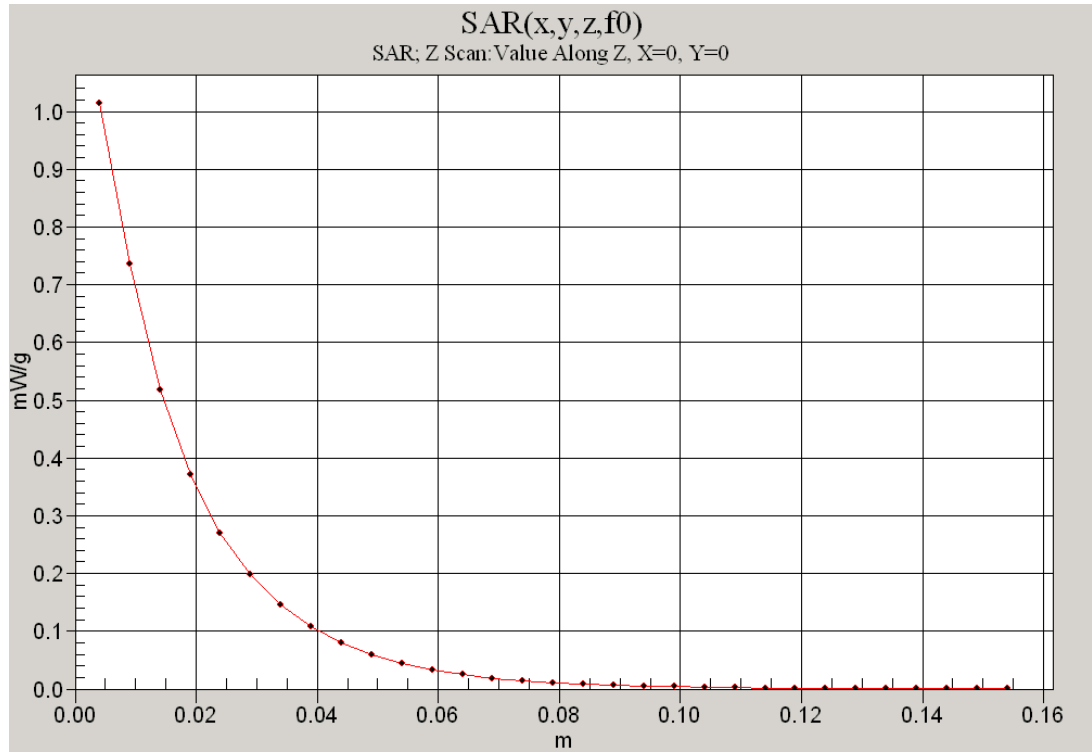
Room T = $21.8 \pm 1 \text{ deg C}$, Liquid T = $22.0 \pm 1 \text{ deg C}$

835MHz/Area Scan (7x13x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$
Maximum value of SAR (measured) = 1.02 mW/g

835MHz/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$
Reference Value = 34.9 V/m; Power Drift = -0.139 dB
Peak SAR (extrapolated) = 1.31 W/kg
SAR(1 g) = 0.973 mW/g; SAR(10 g) = 0.655 mW/g
Maximum value of SAR (measured) = 1.05 mW/g



0 dB = 1.02mW/g



Test Laboratory: Kyocera Wireless

1800MHz Validation (In Muscle) @ 20dBm Probe 1618, DAE 675 and Dipole 220, 06-19-09

Communication System: CW, Frequency: 1800 MHz, Duty Cycle: 1:1
Medium: M1700, Medium parameters used: $f = 1800 \text{ MHz}$; $\sigma = 1.53 \text{ mho/m}$; $\epsilon_r = 51.6$; $\rho = 1000 \text{ kg/m}^3$
Phantom: SAM 12, Phantom section: Flat Section

DASY4 Configuration:

Probe: ET3DV6 - SN1618, ConvF(5.02, 5.02, 5.02), Calibrated: 9/19/2007

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

Electronics: DAE4 Sn675, Calibrated: 4/29/2009

Measurement SW: DASY4, V4.7 Build 71

Postprocessing SW: SEMCAD, V1.8 Build 184

Temperature:

Room T = $21.8 \pm 1 \text{ deg C}$, Liquid T = $22.0 \pm 1 \text{ deg C}$

1800MHz Validation @20dBm/Area Scan (7x7x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 4.15 mW/g

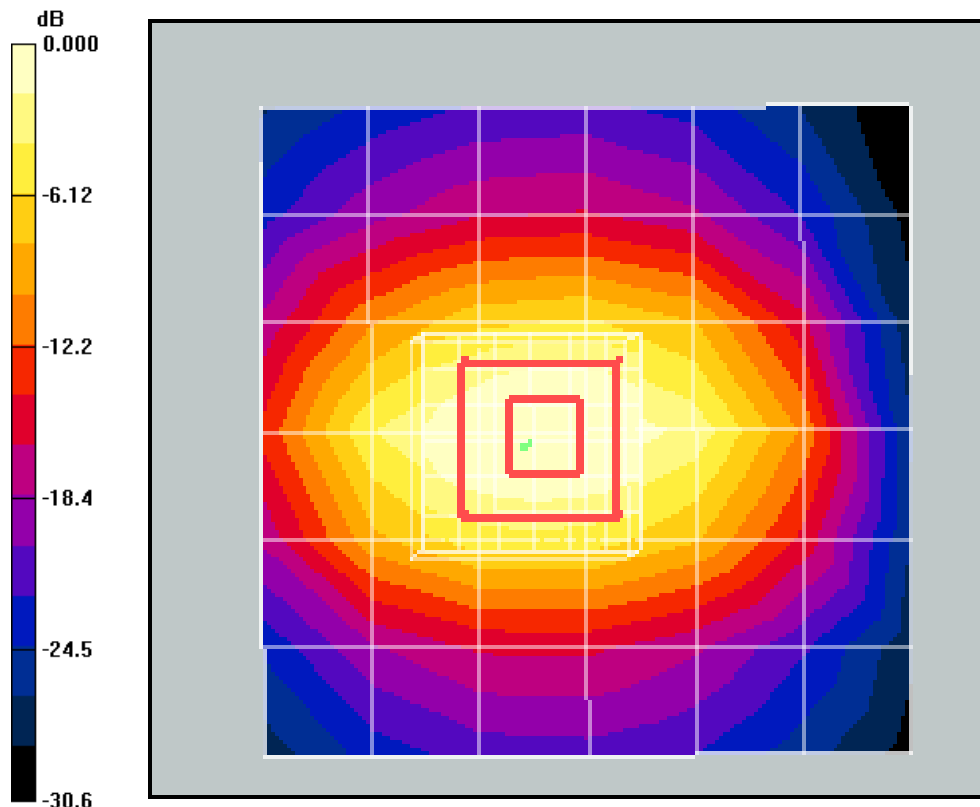
1800MHz Validation @20dBm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 55.7 V/m; Power Drift = -0.086 dB

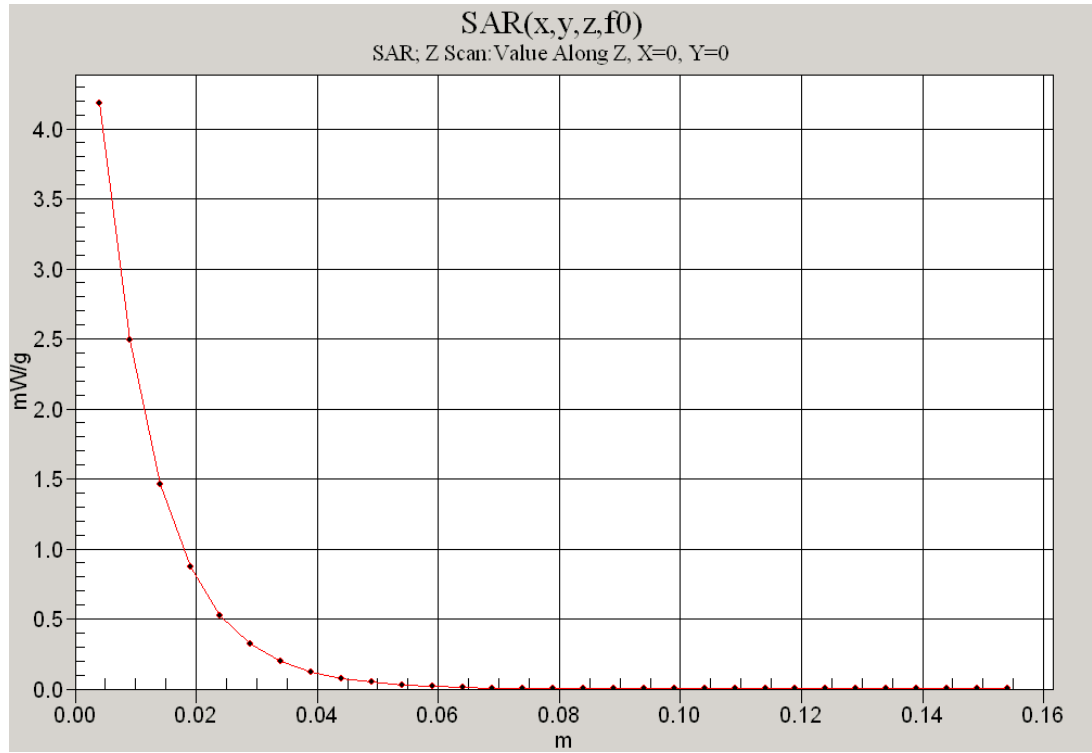
Peak SAR (extrapolated) = 6.49 W/kg

SAR(1 g) = 3.87 mW/g; SAR(10 g) = 2.07 mW/g

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



0 dB = 4.15mW/g



Test Laboratory: Kyocera Wireless

1900MHz Validation (In Muscle) Probe 1618, DAE 675 and Dipole 5d016, 06-22-09

Communication System: CDMA-1900, Frequency: 1880 MHz, Duty Cycle: 1:1
Medium: M1900, Medium parameters used: $f = 1880$ MHz; $\sigma = 1.51$ mho/m; $\epsilon_r = 52.8$; $\rho = 1000$ kg/m³
Phantom: SAM 12, Phantom section: Flat Section

DASY4 Configuration:

Probe: ET3DV6 - SN1618, ConvF(4.57, 4.57, 4.57), Calibrated: 8/25/2008

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

Electronics: DAE4 Sn675, Calibrated: 4/29/2009

Measurement SW: DASY4, V4.7 Build 71

Postprocessing SW: SEMCAD, V1.8 Build 184

Temperature:

Room T = 21.8 ± 1 deg C, Liquid T = 22.0 ± 1 deg C

1900Mhz/Area Scan (7x7x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 4.22 mW/g

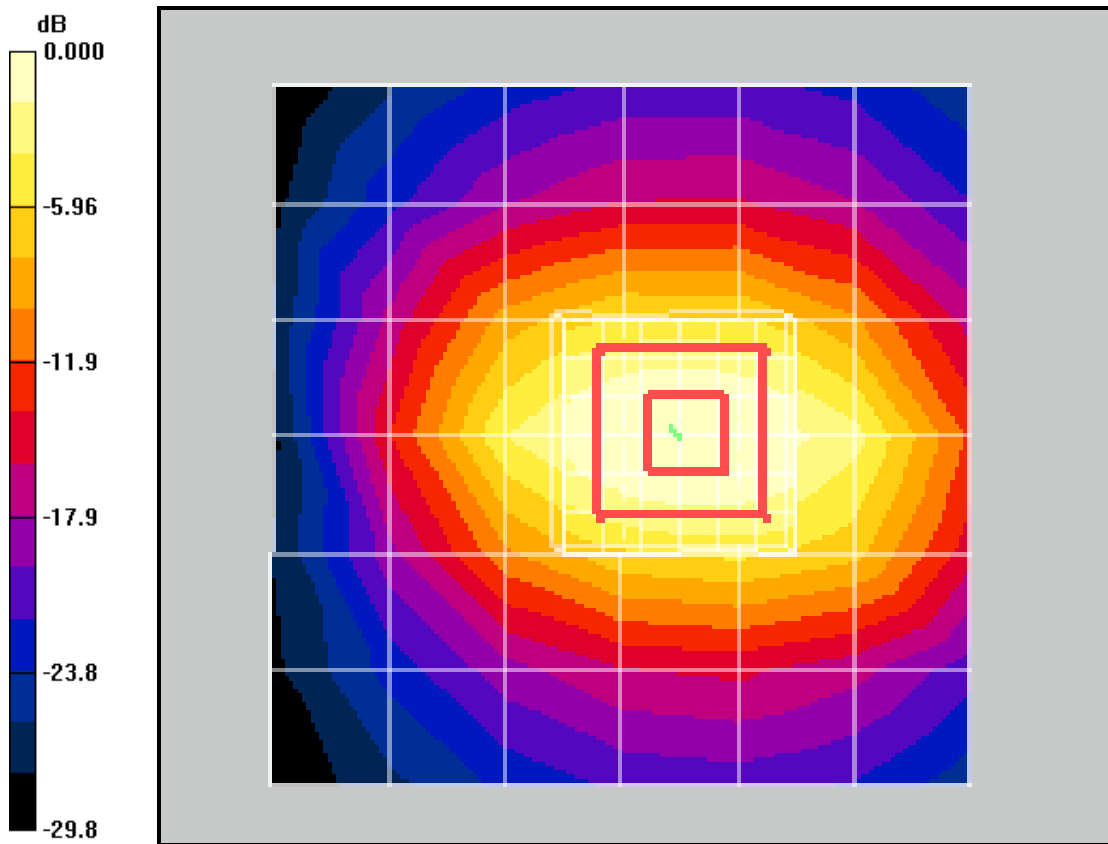
1900Mhz/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 53.2 V/m; Power Drift = 0.029 dB

Peak SAR (extrapolated) = 7.22 W/kg

SAR(1 g) = 4.01 mW/g; SAR(10 g) = 2.13 mW/g

Maximum value of SAR (measured) = 4.50 mW/g



0 dB = 4.22mW/g

