

## Appendix A Validation Plots

### 1900Mhz Validation @ 20dBm Probe 3035, DAE 602 and Dipole 5d016, 05-12-09

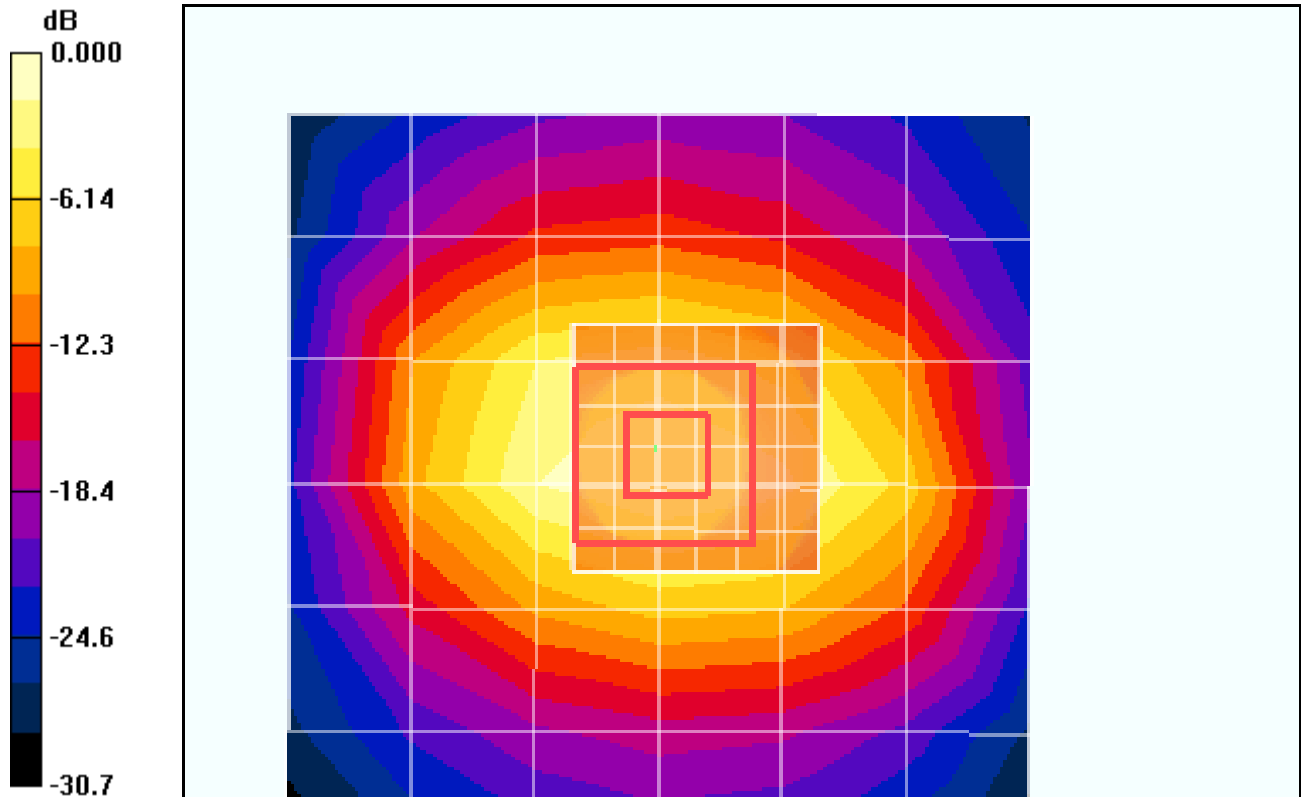
Communication System: CW, Frequency: 1900 MHz, Duty Cycle: 1:1  
Medium: HSL1900, Medium parameters used (interpolated):  $f = 1900$  MHz;  $\sigma = 1.39$  mho/m;  $\epsilon_r = 38.8$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom: SAM 12, Phantom section: Flat Section  
**DASY4 Configuration:**  
Probe: ES3DV3 - SN3035, ConvF(5.01, 5.01, 5.01), Calibrated: 8/25/2008  
Sensor-Surface: 4mm (Mechanical Surface Detection),  
Electronics: DAE4 Sn602, Calibrated: 6/25/2008  
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 Validation @20dBm/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm  
Reference Value = 55.9 V/m; Power Drift = 0.165 dB  
Peak SAR (extrapolated) = 7.78 W/kg  
**SAR(1 g) = 4.17 mW/g; SAR(10 g) = 2.17 mW/g**

Info: [Interpolated medium parameters used for SAR evaluation.](#)  
Maximum value of SAR (measured) = 4.66 mW/g

**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) = 4.35 mW/g



0 dB = 4.35mW/g

Test Laboratory: Kyocera Wireless Corporation

### 1900MHz Validation (In Muscle) Probe 1618, DAE 493 and Dipole 5d016, 05-19-09

Communication System: CDMA-1900, Frequency: 1880 MHz, Duty Cycle: 1:1  
Medium: M1900, Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.52$  mho/m;  $\epsilon_r = 52.5$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
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: DAE3 Sn493, Calibrated: 9/17/2008  
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/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 56.3 V/m; Power Drift = 0.021 dB

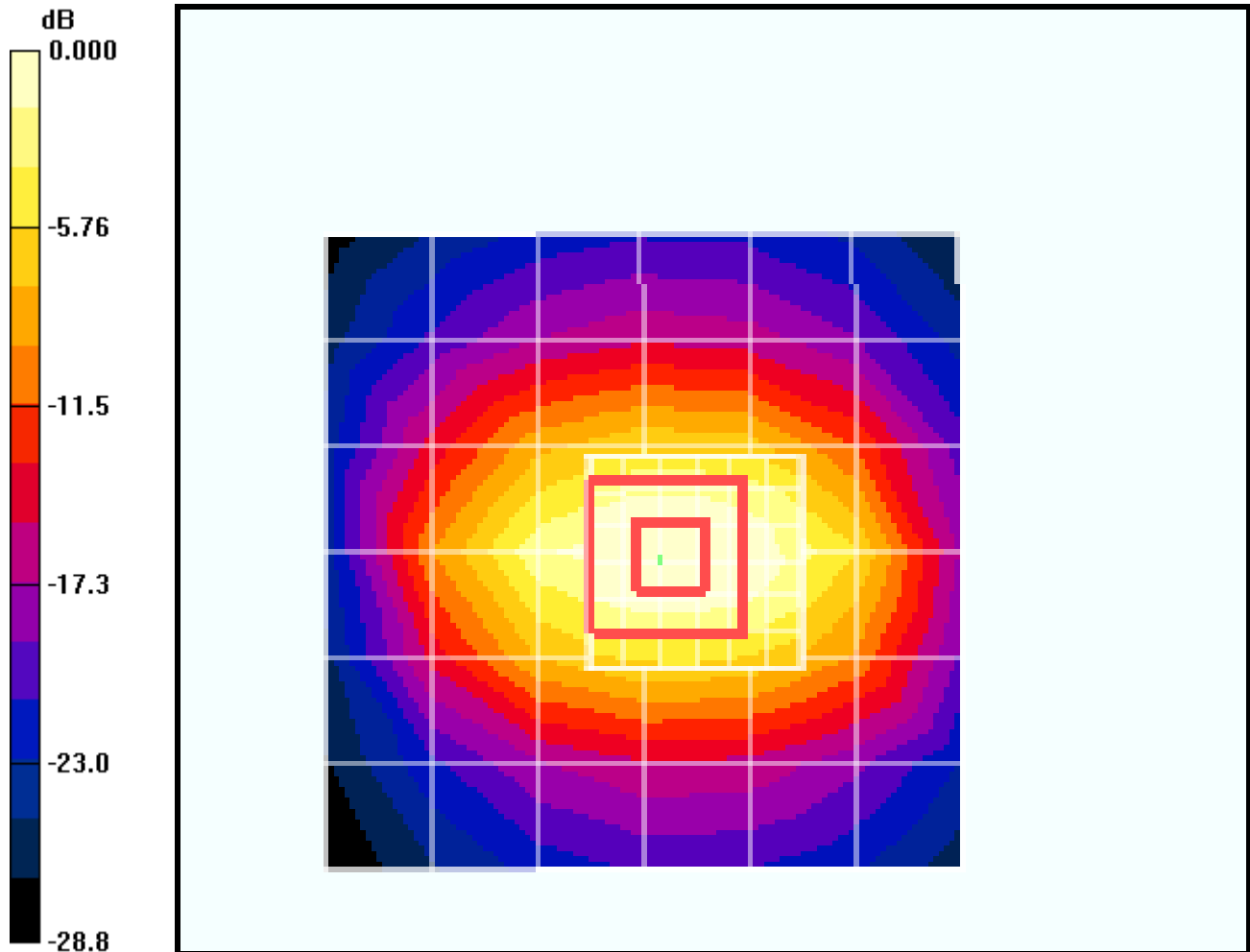
Peak SAR (extrapolated) = 7.29 W/kg

**SAR(1 g) = 4.03 mW/g; SAR(10 g) = 2.15 mW/g**

Maximum value of SAR (measured) = 4.53 mW/g

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

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



0 dB = 4.43mW/g

Test Laboratory: Kyocera Wireless Corporation

### 1800MHz Validation @ 20.00dBm, Probe #1664, DAE #603, Dipole #220, 05-13-09

Communication System: CW 1800Mhz, Frequency: 1800 MHz, Duty Cycle: 1:1  
Medium: HSL1700,Medium parameters used:  $f = 1800 \text{ MHz}$ ;  $\sigma = 1.45 \text{ mho/m}$ ;  $\epsilon_r = 38.2$ ;  $\rho = 1000 \text{ kg/m}^3$   
Phantom: SAM 12,Phantom section: Flat Section

**DASY4 Configuration:**

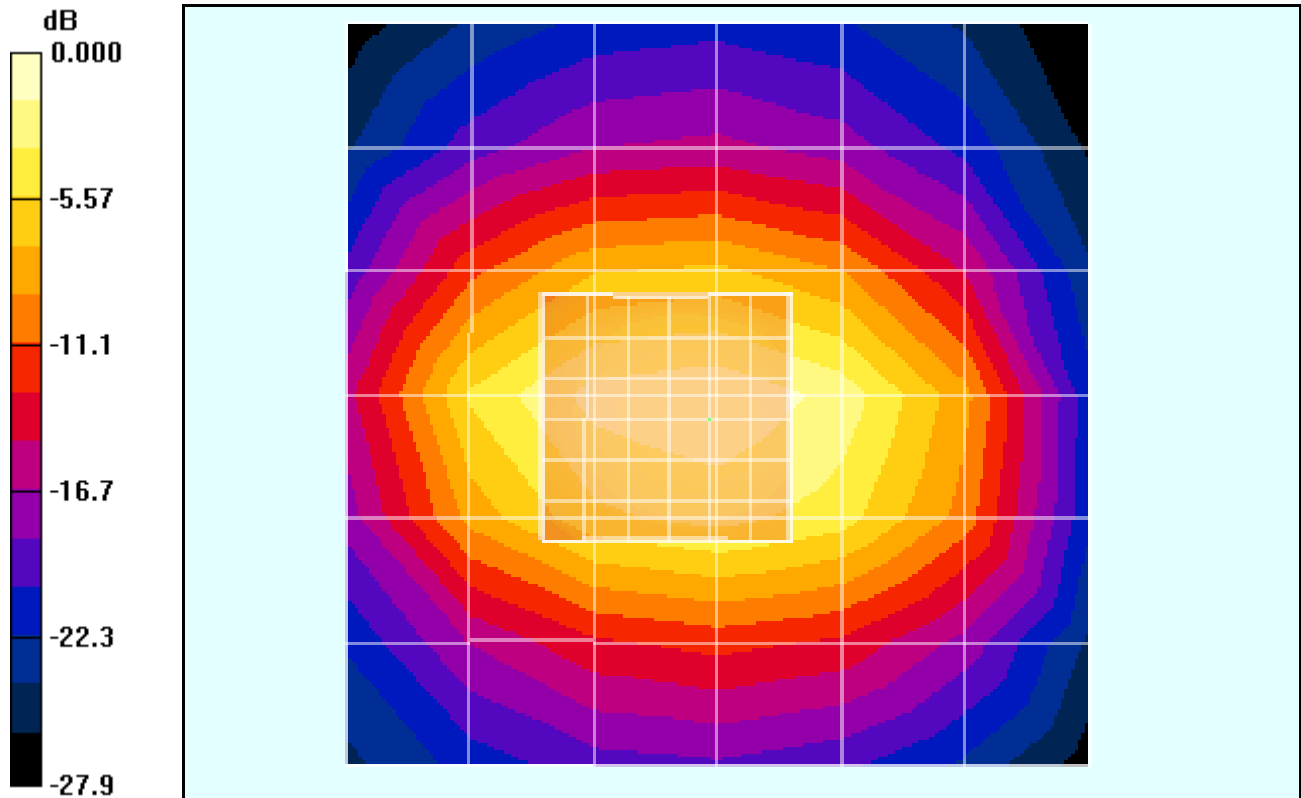
Probe: ET3DV6 - SN1664, ConvF(5.49, 5.49, 5.49), Calibrated: 6/23/2008  
Sensor-Surface: 4mm (Mechanical And Optical Surface Detection),  
Electronics: DAE4 Sn603,Calibrated: 9/17/2008  
Measurement SW: DASY4, V4.7 Build 71  
Postprocessing SW: SEMCAD, V1.8 Build 184

**Temperature:**

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

**1800Mhz/Area Scan (7x7x1):** Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (measured) = 3.87 mW/g

**1800Mhz/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm  
Reference Value = 54.2 V/m; Power Drift = 0.049 dB  
Peak SAR (extrapolated) = 6.61 W/kg  
**SAR(1 g) = 3.67 mW/g; SAR(10 g) = 1.93 mW/g**  
Maximum value of SAR (measured) = 4.10 mW/g



0 dB = 4.10mW/g

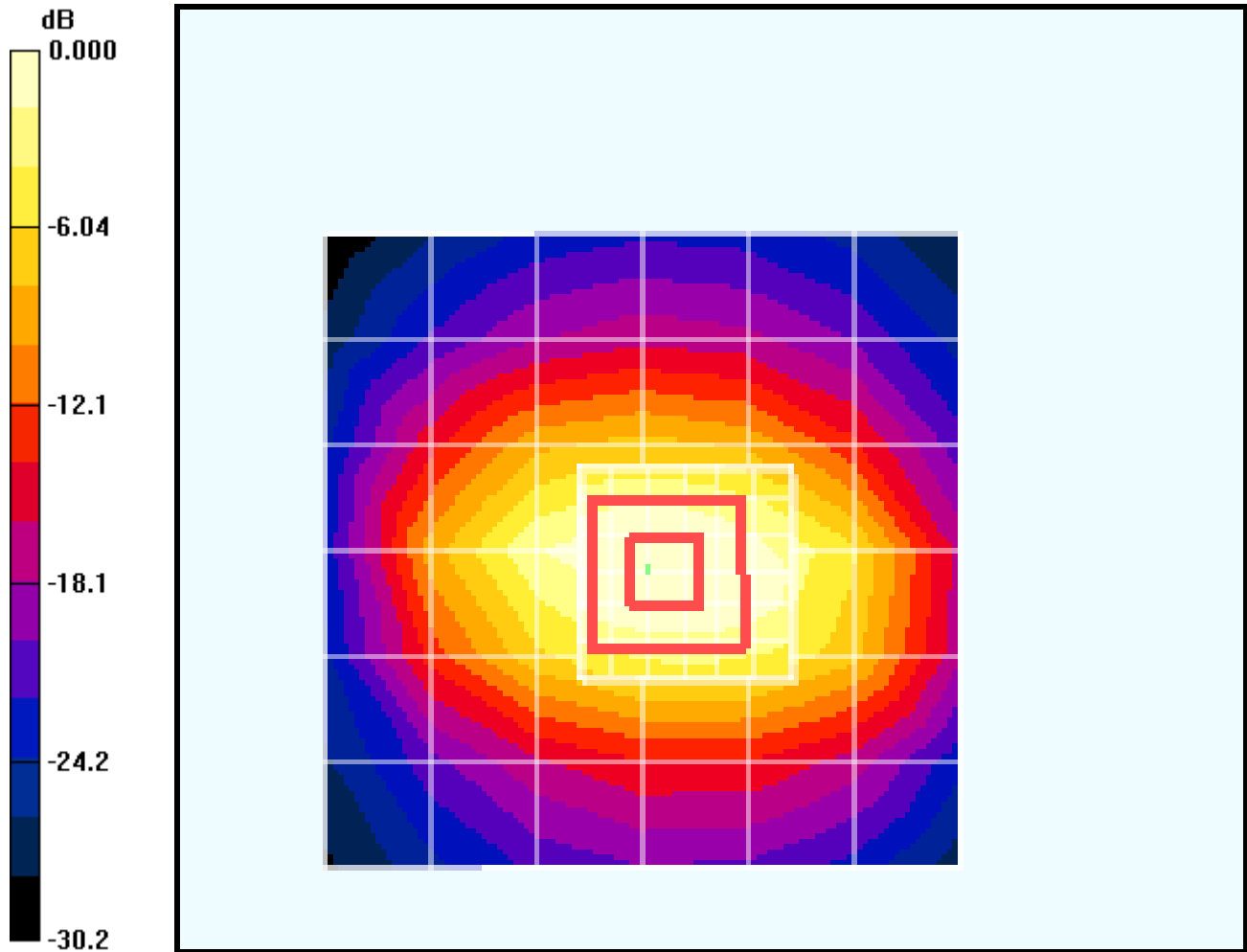
Test Laboratory: Kyocera Wireless Corporation

### 1800Mhz Validation (In Muscle) @ 20dBm Probe 1618, DAE 493 and Dipole 220, 05-18-09

Communication System: CW, Frequency: 1800 MHz, Duty Cycle: 1:1  
Medium: M1700, Medium parameters used:  $f = 1800$  MHz;  $\sigma = 1.54$  mho/m;  $\epsilon_r = 51.6$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
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: DAE3 Sn493, Calibrated: 9/17/2008  
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

**1800MHz Validation @20dBm/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm  
Reference Value = 54.7 V/m; Power Drift = -0.074 dB  
Peak SAR (extrapolated) = 6.35 W/kg  
**SAR(1 g) = 3.76 mW/g; SAR(10 g) = 2 mW/g**  
Maximum value of SAR (measured) = 4.24 mW/g

**1800MHz Validation @20dBm/Area Scan (7x7x1):** Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (measured) = 4.03 mW/g



0 dB = 4.03mW/g

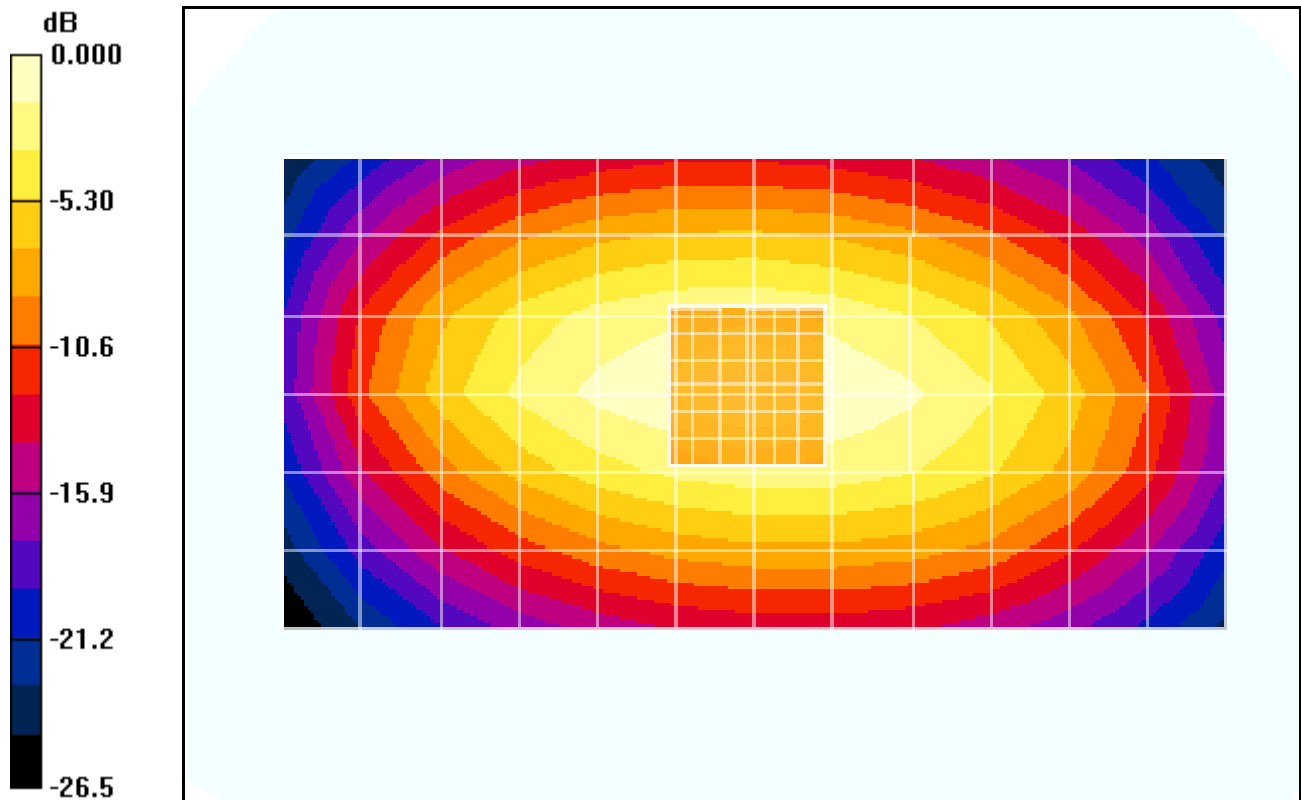
Test Laboratory: Kyocera Wireless Corporation

### 835MHz Validation @ 20dbm, Probe #3036, DAE#527, Dipole #467, 05-12-09

Communication System: CDMA, Frequency: 835 MHz, Duty Cycle: 1:1  
Medium: Head 835 MHz, Medium parameters used:  $f = 835 \text{ MHz}$ ;  $\sigma = 0.9 \text{ mho/m}$ ;  $\epsilon_r = 41.8$ ;  $\rho = 1000 \text{ kg/m}^3$   
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 +/- 1 deg C, Liquid T = 22.0 +/- 1 deg C

**835MHz Validation/Area Scan (7x13x1):** Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (measured) = 1.06 mW/g

**835MHz Validation/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm  
Reference Value = 35.4 V/m; Power Drift = -0.232 dB  
Peak SAR (extrapolated) = 1.40 W/kg  
**SAR(1 g) = 0.954 mW/g; SAR(10 g) = 0.624 mW/g**  
Maximum value of SAR (measured) = 1.03 mW/g



0 dB = 1.03mW/g

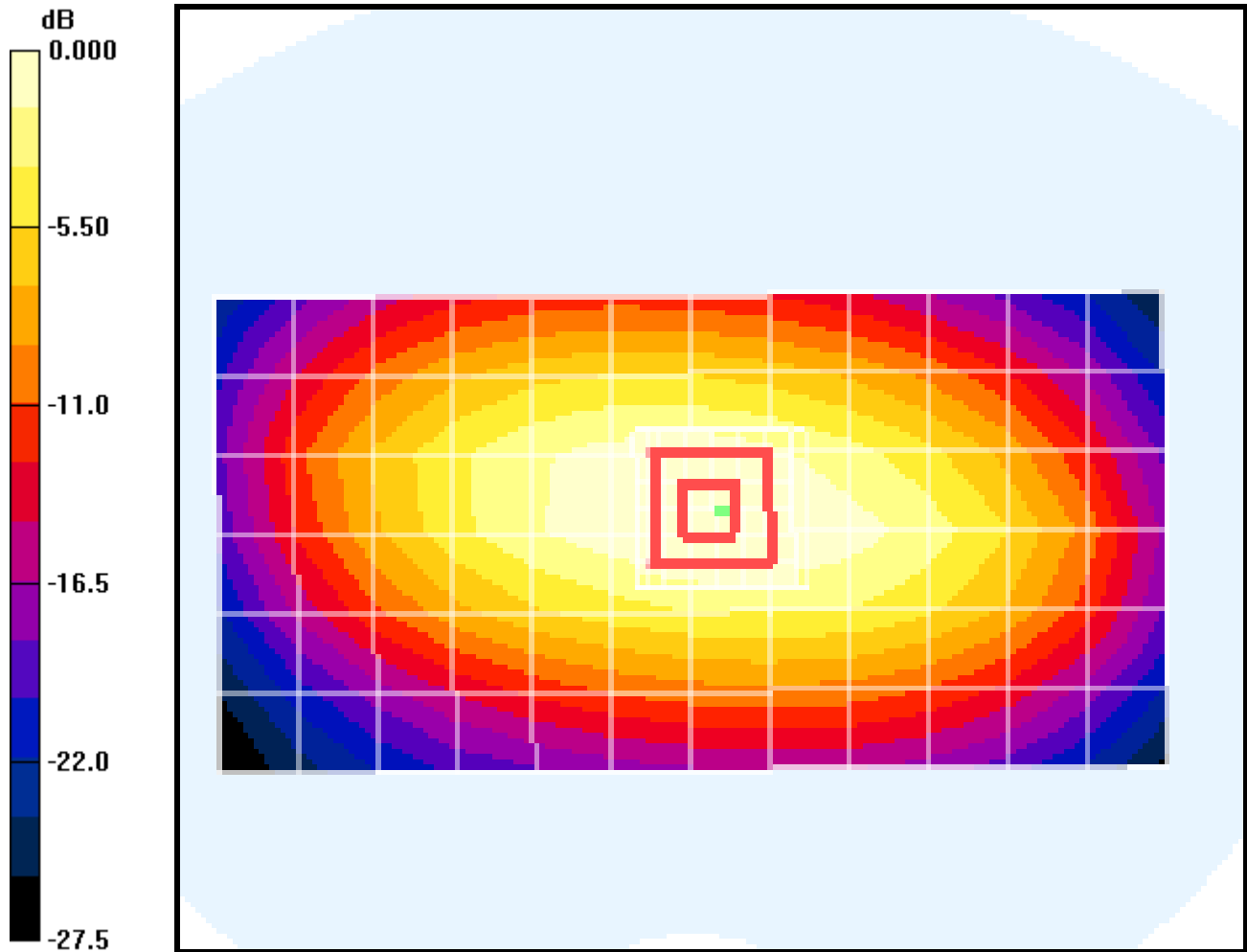
Test Laboratory: Kyocera Wireless Corporation

### 835MHz Validation (In Muscle) Probe 1618 DAE 493 Dipole #467, 05-14-09

Communication System: CW, Frequency: 835 MHz, Duty Cycle: 1:1  
Medium: M835, Medium parameters used:  $f = 835$  MHz;  $\sigma = 0.947$  mho/m;  $\epsilon_r = 54.8$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
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: DAE3 Sn493, Calibrated: 9/17/2008  
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

**835MHz/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm  
Reference Value = 33.9 V/m; Power Drift = 0.089 dB  
Peak SAR (extrapolated) = 1.31 W/kg  
**SAR(1 g) = 0.968 mW/g; SAR(10 g) = 0.653 mW/g**  
Maximum value of SAR (measured) = 1.04 mW/g

**835MHz/Area Scan (7x13x1):** Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (measured) = 0.984 mW/g



0 dB = 0.984mW/g