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**APPENDIX B: MEASUREMENT SCANS**

Date: 2005-06-16; Test Laboratory: TCC San Diego

Type: RM-66; HWID: 3000; Serial No. 044/12052363

Communication System: AMPS800; Channel: 799; Frequency: 848.97 MHz; Duty Cycle: 1:1  
Medium parameters used (interpolated):  $f = 848.97$  MHz;  $\sigma = 0.899$  mho/m;  $\epsilon_r = 40.4$ ;  $\rho = 1000$  kg/m<sup>3</sup> ;  
Temperature (liq.) = 21.2 °C  
Phantom section: Left Section; **Worst Case Extrapolation**

DASY4 Configuration:

- Probe: ET3DV6 - SN1739; ConvF(6.79, 6.79, 6.79); Calibrated: 8/26/2004
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE4 Sn604; Calibrated: 10/28/2004
- Phantom: SAM1; Type: SAM; Serial: TP-1035
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

**left cheek/Area Scan (61x91x1):** Measurement grid: dx=15mm, dy=15mm

Reference Value = 29.2 V/m; Power Drift = -0.028 dB  
Maximum value of SAR (interpolated) = 1.17 mW/g

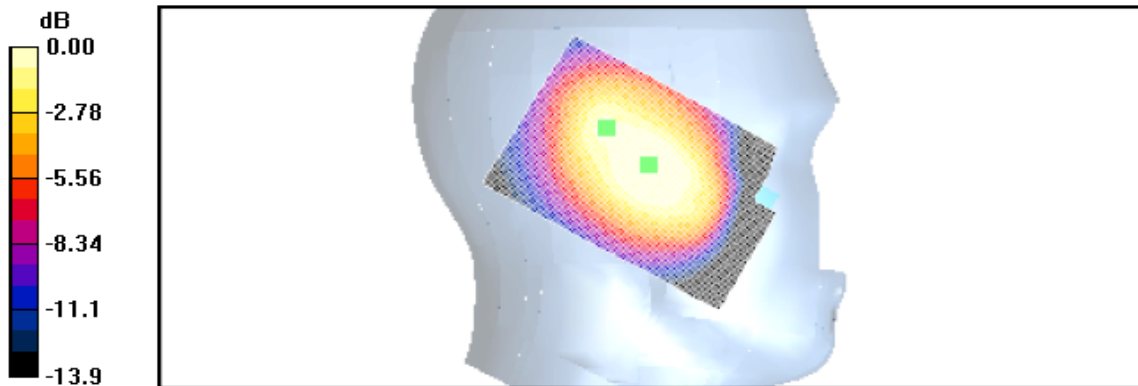
**left cheek/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 29.2 V/m; Power Drift = -0.028 dB  
Maximum value of SAR (measured) = 1.17 mW/g  
Peak SAR (extrapolated) = 1.65 W/kg  
SAR(1 g) = 1.11 mW/g; SAR(10 g) = 0.775 mW/g

**left cheek/Zoom Scan (5x5x7)/Cube 1:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 29.2 V/m; Power Drift = -0.028 dB  
Maximum value of SAR (measured) = 1.03 mW/g  
Peak SAR (extrapolated) = 1.48 W/kg  
SAR(1 g) = 0.891 mW/g; SAR(10 g) = 0.584 mW/g

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



0 dB = 1.03mW/g



Date: 2005-06-16; Test Laboratory: TCC San Diego

DUT: RM-66; HWID: 3000; Serial No: 044/12052363

Communication System: AMPS800; Channel: 799; Frequency: 848.97 MHz; Duty Cycle: 1:1  
 Medium parameters used (interpolated):  $f = 848.97$  MHz;  $\sigma = 0.899$  mho/m;  $\epsilon_r = 40.4$ ;  $\rho = 1000$  kg/m<sup>3</sup> ;  
 Temperature (liq.) = 21.2 °C  
 Phantom section: Left Section; **Worst Case Extrapolation**

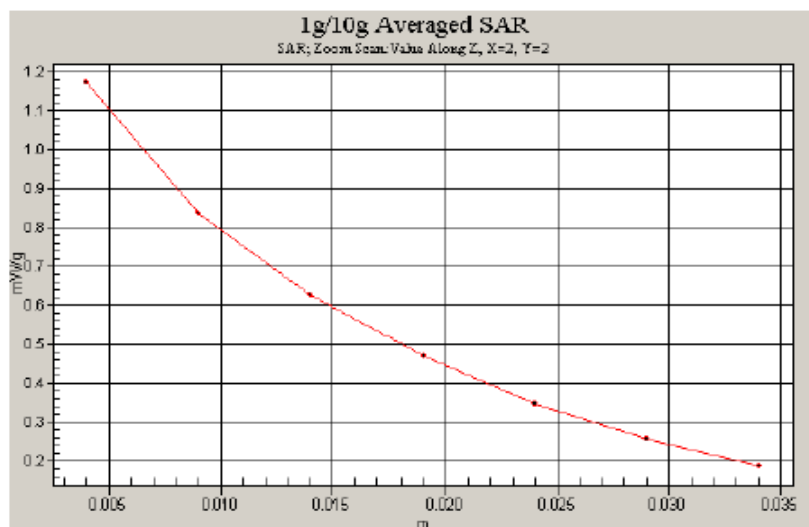
DASY4 Configuration:

- Probe: ET3DV6 - SN1739; ConvF(6.79, 6.79, 6.79); Calibrated: 8/26/2004
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE4 Sn604; Calibrated: 10/28/2004
- Phantom: SAM1; Type: SAM; Serial: TP-1035
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

**left cheek/Area Scan (61x91x1):** Measurement grid: dx=15mm, dy=15mm  
 Reference Value = 29.2 V/m; Power Drift = -0.028 dB  
 Maximum value of SAR (interpolated) = 1.17 mW/g

**left cheek/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
 Reference Value = 29.2 V/m; Power Drift = -0.028 dB  
 Maximum value of SAR (measured) = 1.17 mW/g  
 Peak SAR (extrapolated) = 1.65 W/kg  
 SAR(1 g) = 1.11 mW/g; SAR(10 g) = 0.775 mW/g

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



Date: 2005-06-17; Test Laboratory: TCC San Diego

Type: RM-66; HWID: 3000; Serial No. 044/12052363

Communication System: AMPS800; Channel: 384; Frequency: 836.52 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated):  $f = 836.52$  MHz;  $\sigma = 0.888$  mho/m;  $\epsilon_r = 41$ ;  $\rho = 1000$  kg/m<sup>3</sup> ;

Temperature (liq.) = 21.4 °C

Phantom section: Left Section; **Worst Case Extrapolation**

DASY4 Configuration:

- Probe: ET3DV6 - SN1739; ConvF(6.79, 6.79, 6.79); Calibrated: 8/26/2004
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE4 Sn604; Calibrated: 10/28/2004
- Phantom: SAM1; Type: SAM; Serial: TP-1035
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

**left tilt/Area Scan (61x91x1)**: Measurement grid: dx=15mm, dy=15mm

Reference Value = 25.6 V/m; Power Drift = 0.023 dB

Maximum value of SAR (interpolated) = 0.767 mW/g

**left tilt/Zoom Scan (5x5x7)/Cube 0**: Measurement grid: dx=8mm, dy=8mm, dz=5mm

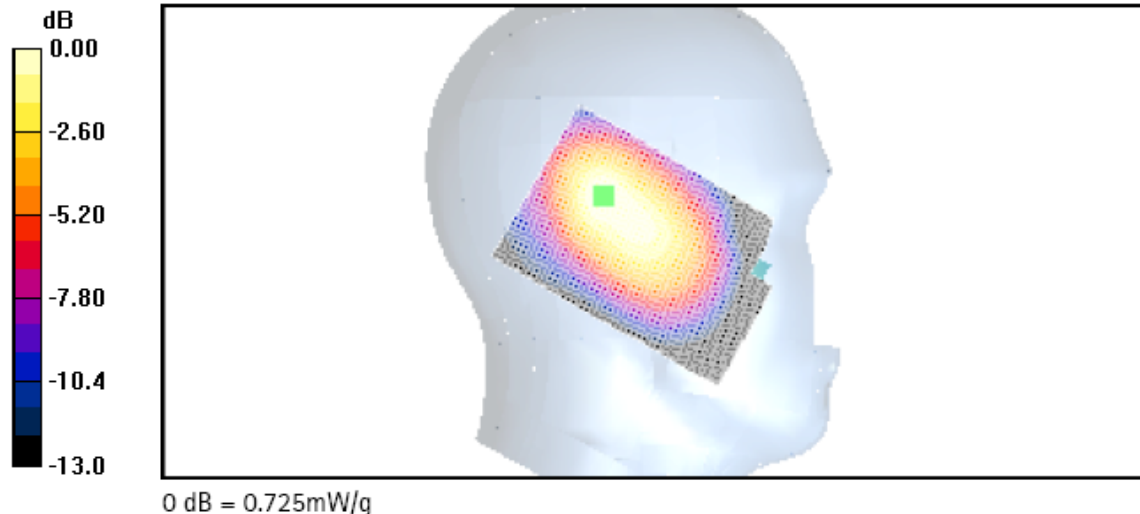
Reference Value = 25.6 V/m; Power Drift = 0.023 dB

Maximum value of SAR (measured) = 0.725 mW/g

Peak SAR (extrapolated) = 1.19 W/kg

SAR(1 g) = 0.677 mW/g; SAR(10 g) = 0.441 mW/g

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



Date: 2005-06-17; Test Laboratory: TCC San Diego

Type: RM-66; HWID: 3000; Serial No. 044/12052363

Communication System: AMPS800; Channel: 799; Frequency: 848.97 MHz; Duty Cycle: 1:1  
Medium parameters used (interpolated):  $f = 848.97$  MHz;  $\sigma = 0.898$  mho/m;  $\epsilon_r = 40.8$ ;  $\rho = 1000$  kg/m<sup>3</sup> ;  
Temperature (liq.) = 21.4 °C  
Phantom section: Right Section ; **Worst Case Extrapolation**

DASY4 Configuration:

- Probe: ET3DV6 - SN1739; ConvF(6.79, 6.79, 6.79); Calibrated: 8/26/2004
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE4 Sn604; Calibrated: 10/28/2004
- Phantom: SAM1; Type: SAM; Serial: TP-1035
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

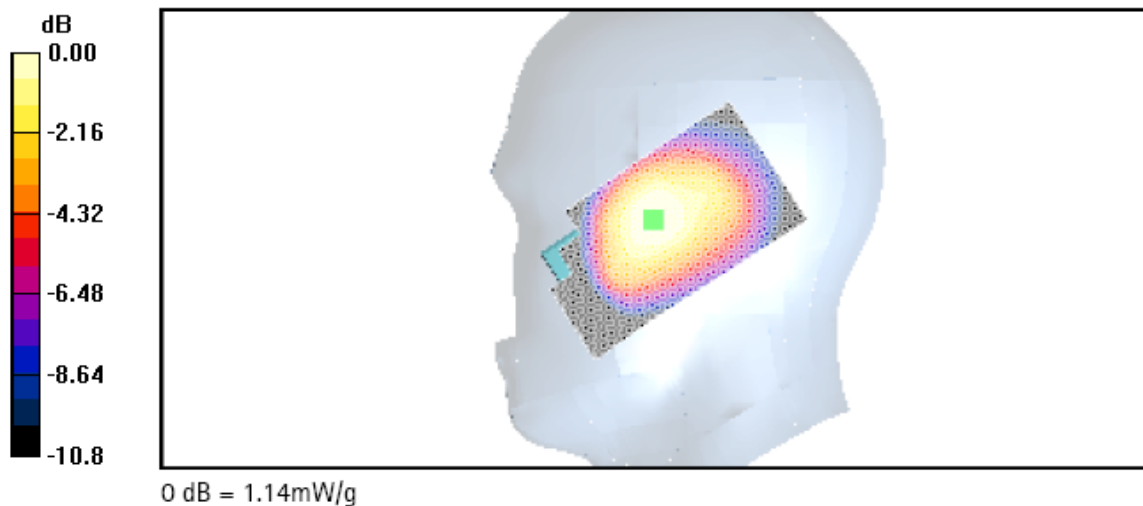
**Right cheek/Area Scan (51x91x1):** Measurement grid: dx=15mm, dy=15mm

Reference Value = 29.1 V/m; Power Drift = 0.017 dB  
Maximum value of SAR (interpolated) = 1.15 mW/g

**Right cheek/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 29.1 V/m; Power Drift = 0.017 dB  
Maximum value of SAR (measured) = 1.14 mW/g  
Peak SAR (extrapolated) = 1.59 W/kg  
SAR(1 g) = 1.09 mW/g; SAR(10 g) = 0.767 mW/g

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



Date: 2005-06-17; Test Laboratory: TCC San Diego

Type: RM-66; HWID: 3000; Serial No. 044/12052363

Communication System: AMPS800; Channel: 384; Frequency: 836.52 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated):  $f = 836.52$  MHz;  $\sigma = 0.888$  mho/m;  $\epsilon_r = 41$ ;  $\rho = 1000$  kg/m<sup>3</sup> ;

Temperature (liq.) = 21.4 °C

Phantom section: Right Section; **Worst Case Extrapolation**

DASY4 Configuration:

- Probe: ET3DV6 - SN1739; ConvF(6.79, 6.79, 6.79); Calibrated: 8/26/2004

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

- Electronics: DAE4 Sn604; Calibrated: 10/28/2004

- Phantom: SAM1; Type: SAM; TP-1035

- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

**Right tilt/Area Scan (51x91x1):** Measurement grid: dx=15mm, dy=15mm

Reference Value = 26.3 V/m; Power Drift = 0.062 dB

Maximum value of SAR (interpolated) = 0.668 mW/g

**Right tilt/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 26.3 V/m; Power Drift = 0.062 dB

Maximum value of SAR (measured) = 0.645 mW/g

Peak SAR (extrapolated) = 0.982 W/kg

SAR(1 g) = 0.606 mW/g; SAR(10 g) = 0.414 mW/g

**Right tilt/Zoom Scan (5x5x7)/Cube 1:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

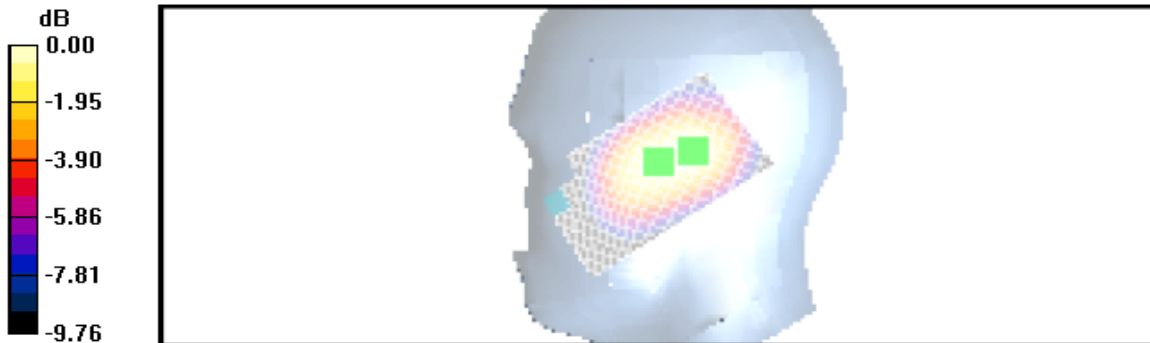
Reference Value = 26.3 V/m; Power Drift = 0.062 dB

Maximum value of SAR (measured) = 0.621 mW/g

Peak SAR (extrapolated) = 0.842 W/kg

SAR(1 g) = 0.592 mW/g; SAR(10 g) = 0.421 mW/g

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



0 dB = 0.621mW/g

Date: 2005-06-21; Test Laboratory: TCC San Diego

Type: RM-66; HWID: 3000; Serial No. 044/12052363

Communication System: CDMA800; Channel: 777; Frequency: 848.31 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated):  $f = 848.31$  MHz;  $\sigma = 0.898$  mho/m;  $\epsilon_r = 40.4$ ;  $\rho = 1000$  kg/m<sup>3</sup> ;

Temperature (liq.) = 21.3 °C

Phantom section: Left Section; **Worst Case Extrapolation**

DASY4 Configuration:

- Probe: ET3DV6 - SN1739; ConvF(6.79, 6.79, 6.79); Calibrated: 8/26/2004
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE4 Sn604; Calibrated: 10/28/2004
- Phantom: SAM1; Type: SAM; Serial: TP-1035
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

**left cheek/Area Scan (61x91x1):** Measurement grid: dx=15mm, dy=15mm

Reference Value = 28.0 V/m; Power Drift = 0.020 dB

Maximum value of SAR (interpolated) = 1.08 mW/g

**left cheek/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

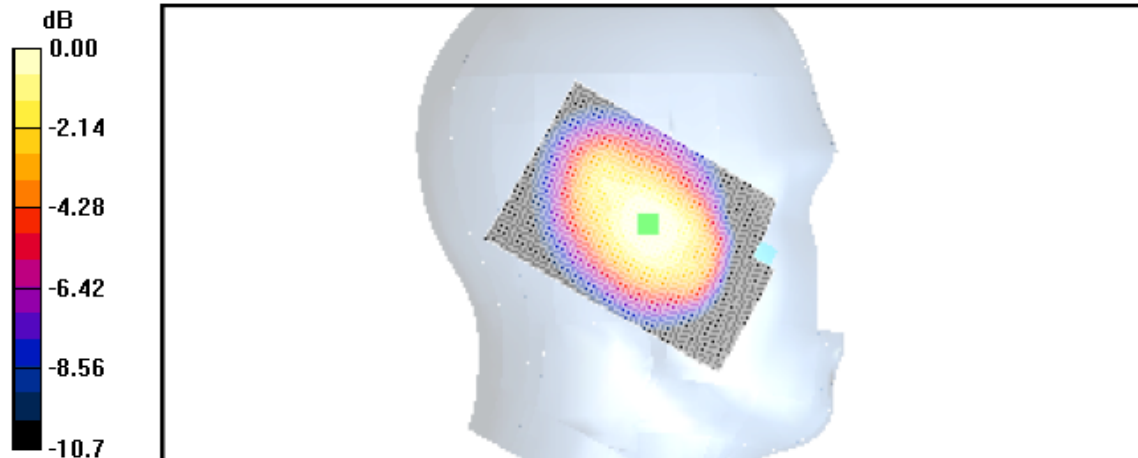
Reference Value = 28.0 V/m; Power Drift = 0.020 dB

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

Peak SAR (extrapolated) = 1.49 W/kg

SAR(1 g) = 1.01 mW/g; SAR(10 g) = 0.700 mW/g

Info: Interpolated medium parameters used for SAR evaluation!



0 dB = 1.06mW/g



Date: 2005-06-24; Test Laboratory: TCC San Diego

Type: RM-66; HWID: 3000; Serial No. 044/12052363

Communication System: CDMA1900; Channel: 600; Frequency: 1880 MHz; Duty Cycle: 1:1  
Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.42$  mho/m;  $\epsilon_r = 38.3$ ;  $\rho = 1000$  kg/m<sup>3</sup>; Temperature (liq.) = 21.2 °C

Phantom section: Left Section; **Worst Case Extrapolation**

DASY4 Configuration:

- Probe: ET3DV6 - SN1739; ConvF(5.1, 5.1, 5.1); Calibrated: 8/26/2004
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE4 Sn604; Calibrated: 10/28/2004
- Phantom: SAM2; Type: SAM; Serial: TP-1279
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

**left cheek/Area Scan (61x91x1):** Measurement grid: dx=15mm, dy=15mm

Reference Value = 16.8 V/m; Power Drift = 0.021 dB

Maximum value of SAR (interpolated) = 1.08 mW/g

**left cheek/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 16.8 V/m; Power Drift = 0.021 dB

Maximum value of SAR (measured) = 1.10 mW/g

Peak SAR (extrapolated) = 2.17 W/kg

SAR(1 g) = 1.01 mW/g; SAR(10 g) = 0.528 mW/g

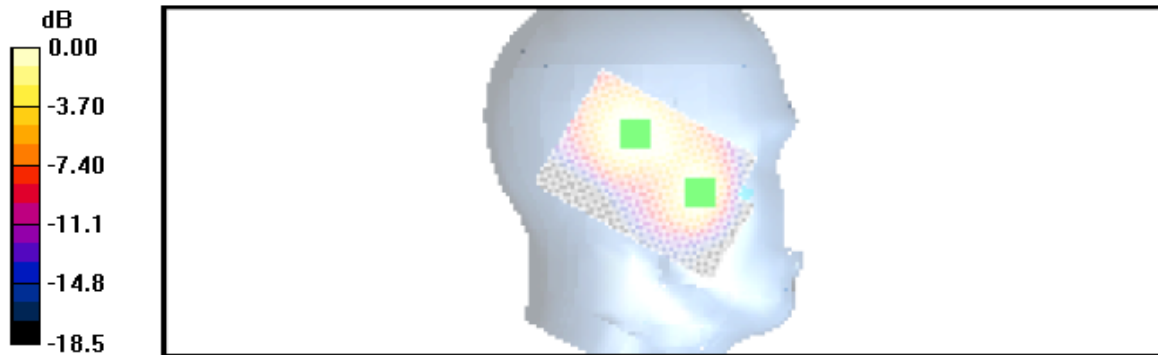
**left cheek/Zoom Scan (5x5x7)/Cube 1:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 16.8 V/m; Power Drift = 0.021 dB

Maximum value of SAR (measured) = 0.632 mW/g

Peak SAR (extrapolated) = 0.955 W/kg

SAR(1 g) = 0.591 mW/g; SAR(10 g) = 0.341 mW/g



0 dB = 0.632mW/g



Date: 2005-06-24; Test Laboratory: TCC San Diego

Type: RM-66; HWID: 3000; Serial No. 044/12052363

Communication System: CDMA1900; Channel: 600; Frequency: 1880 MHz; Duty Cycle: 1:1  
Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.42$  mho/m;  $\epsilon_r = 38.3$ ;  $\rho = 1000$  kg/m<sup>3</sup> ; Temperature (liq.) = 21.2 °C

Phantom section: Left Section ; **Worst Case Extrapolation**

DASY4 Configuration:

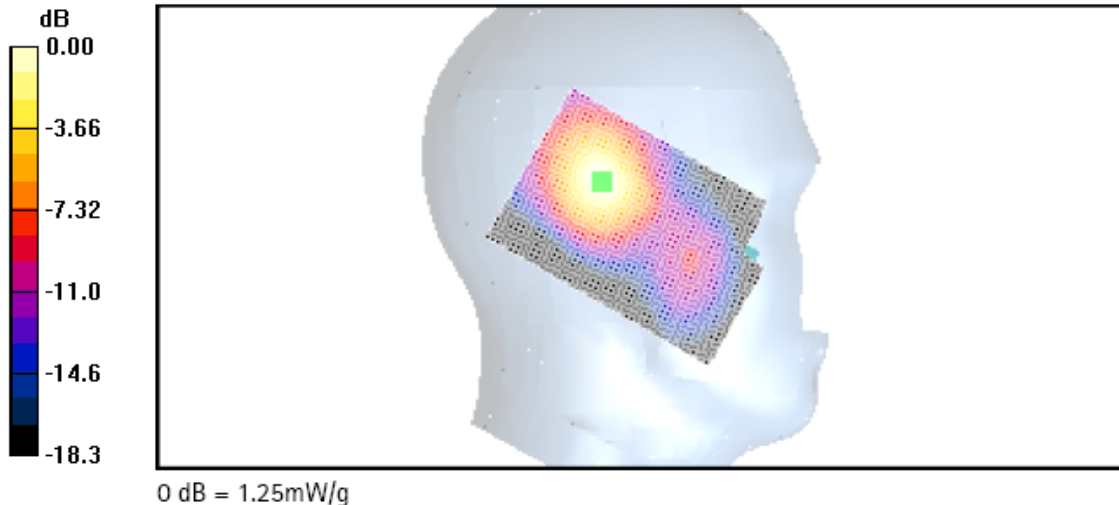
- Probe: ET3DV6 - SN1739; ConvF(5.1, 5.1, 5.1); Calibrated: 8/26/2004
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE4 Sn604; Calibrated: 10/28/2004
- Phantom: SAM2; Type: SAM; Serial: TP-1279
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

**left tilt/Area Scan (61x91x1):** Measurement grid: dx=15mm, dy=15mm

Reference Value = 21.0 V/m; Power Drift = -0.00 dB  
Maximum value of SAR (interpolated) = 1.28 mW/g

**left tilt/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 21.0 V/m; Power Drift = -0.00 dB  
Maximum value of SAR (measured) = 1.25 mW/g  
Peak SAR (extrapolated) = 2.54 W/kg  
SAR(1 g) = 1.17 mW/g; SAR(10 g) = 0.597 mW/g



Date: 2005-06-27; Test Laboratory: TCC San Diego

Type: RM-66; HWID: 3000; Serial No. 044/12052363

Communication System: CDMA1900; Channel: 600; Frequency: 1880 MHz; Duty Cycle: 1:1  
 Medium parameters used:  $f = 1880 \text{ MHz}$ ;  $\sigma = 1.41 \text{ mho/m}$ ;  $\epsilon_r = 38.3$ ;  $\rho = 1000 \text{ kg/m}^3$ ; Temperature (liq.) = 21.6 °C

Phantom section: Right Section; Worst Case Extrapolation

DASY4 Configuration:

- Probe: ET3DV6 - SN1739; ConvF(5.1, 5.1, 5.1); Calibrated: 8/26/2004
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE4 Sn604; Calibrated: 10/28/2004
- Phantom: SAM2; Type: SAM; Serial: TP-1279
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

**Right cheek/Area Scan (61x91x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$

Reference Value = 21.5 V/m; Power Drift = -0.024 dB

Maximum value of SAR (interpolated) = 0.735 mW/g

**Right cheek/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$

Reference Value = 21.5 V/m; Power Drift = -0.024 dB

Maximum value of SAR (measured) = 0.770 mW/g

Peak SAR (extrapolated) = 1.46 W/kg

SAR(1 g) = 0.715 mW/g; SAR(10 g) = 0.386 mW/g

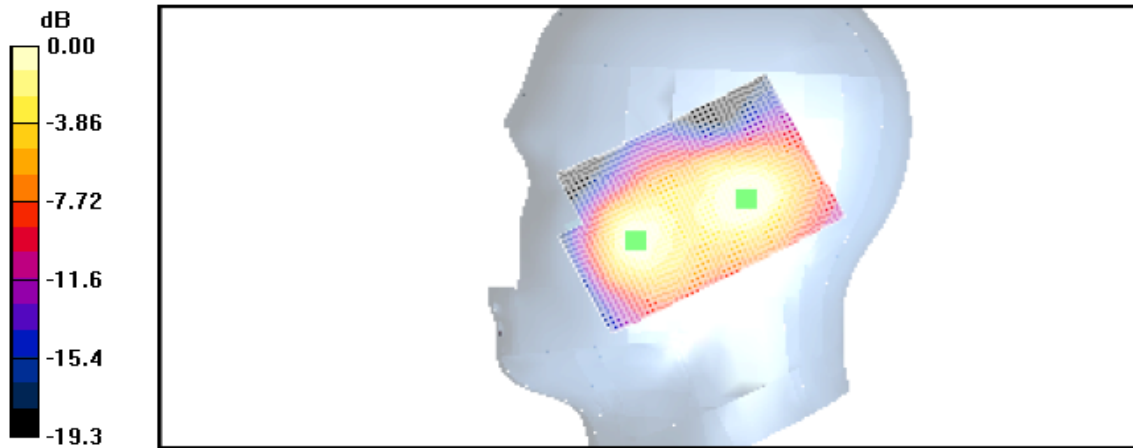
**Right cheek/Zoom Scan (5x5x7)/Cube 1:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$

Reference Value = 21.5 V/m; Power Drift = -0.024 dB

Maximum value of SAR (measured) = 0.610 mW/g

Peak SAR (extrapolated) = 0.934 W/kg

SAR(1 g) = 0.558 mW/g; SAR(10 g) = 0.324 mW/g



Date: 2005-06-27; Test Laboratory: TCC San Diego

Type: RM-66; HWID: 3000; Serial No. 044/12052363

Communication System: CDMA1900; Channel: 600; Frequency: 1880 MHz; Duty Cycle: 1:1  
Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.41$  mho/m;  $\epsilon_r = 38.3$ ;  $\rho = 1000$  kg/m<sup>3</sup> ; Temperature (liq.) = 21.6 °C  
Phantom section: Right Section; **Worst Case Extrapolation**

DASY4 Configuration:

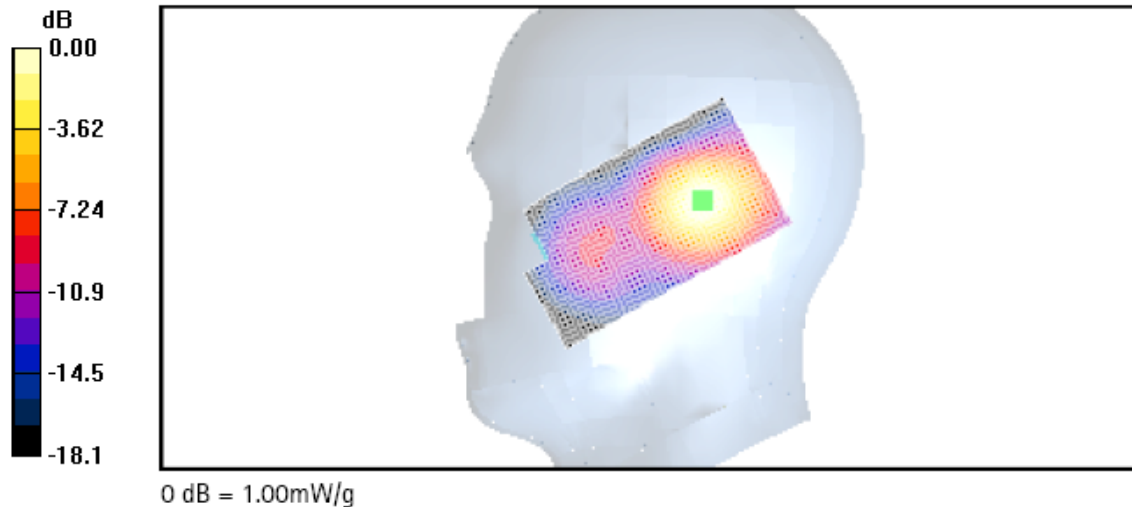
- Probe: ET3DV6 - SN1739; ConvF(5.1, 5.1, 5.1); Calibrated: 8/26/2004
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE4 Sn604; Calibrated: 10/28/2004
- Phantom: SAM2; Type: SAM; Serial: TP-1279
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

**Right tilt/Area Scan (51x91x1):** Measurement grid: dx=15mm, dy=15mm

Reference Value = 25.2 V/m; Power Drift = 0.021 dB  
Maximum value of SAR (interpolated) = 1.02 mW/g

**Right tilt/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 25.2 V/m; Power Drift = 0.021 dB  
Maximum value of SAR (measured) = 1.00 mW/g  
Peak SAR (extrapolated) = 1.84 W/kg  
SAR(1 g) = 0.928 mW/g; SAR(10 g) = 0.497 mW/g



Date: 2005-06-29; Test Laboratory: TCC San Diego

Type: RM-66; HWID: 3000; Serial No. 044/12052363; with SD card

Communication System: CDMA1900; Channel: 600; Frequency: 1880 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.43$  mho/m;  $\epsilon_r = 38.3$ ;  $\rho = 1000$  kg/m<sup>3</sup> ; Temperature (liq.) = 21.6 °C

Phantom section: Left Section ; **Worst Case Extrapolation**

DASY4 Configuration:

- Probe: ET3DV6 - SN1739; ConvF(5.1, 5.1, 5.1); Calibrated: 8/26/2004
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE4 Sn604; Calibrated: 10/28/2004
- Phantom: SAM2; Type: SAM; Serial: TP-1279
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

**left tilt/Area Scan (61x91x1):** Measurement grid: dx=15mm, dy=15mm

Reference Value = 22.5 V/m; Power Drift = -0.031 dB

Maximum value of SAR (interpolated) = 1.27 mW/g

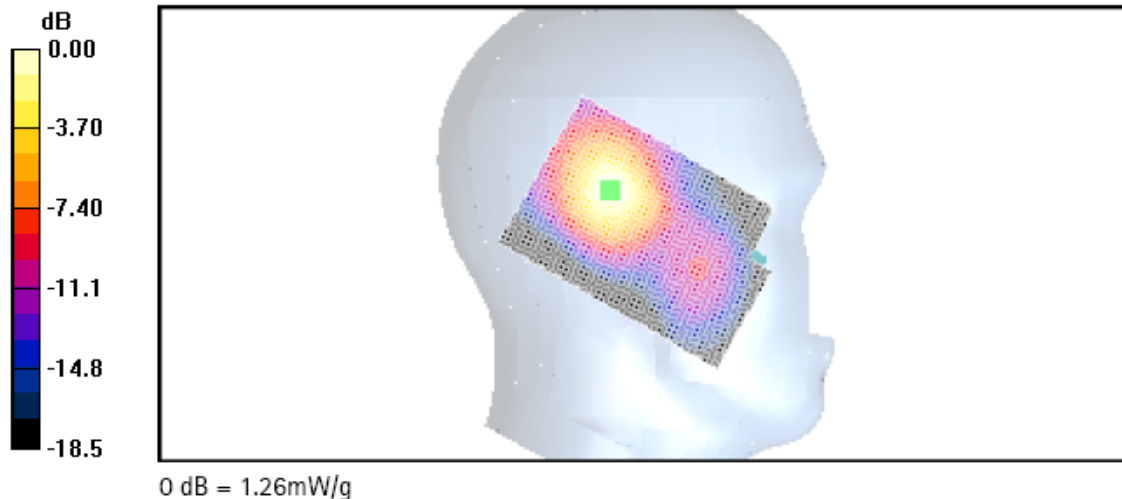
**left tilt/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 22.5 V/m; Power Drift = -0.031 dB

Maximum value of SAR (measured) = 1.26 mW/g

Peak SAR (extrapolated) = 2.48 W/kg

SAR(1 g) = 1.17 mW/g; SAR(10 g) = 0.601 mW/g





Date: 2005-06-29; Test Laboratory: TCC San Diego

DUT: RM-66; HWID: 3000; Serial No: 044/12052363; with SD card

Communication System: CDMA1900; Channel: 600; Frequency: 1880 MHz; Duty Cycle: 1:1  
 Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.43$  mho/m;  $\epsilon_r = 38.3$ ;  $\rho = 1000$  kg/m<sup>3</sup>; Temperature (liq.) - 21.6 °C

Phantom section: Left Section; **Worst Case Extrapolation**

DASY4 Configuration:

- Probe: ET3DV6 - SN1739; ConvF(5.1, 5.1, 5.1); Calibrated: 8/26/2004
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE4 Sn604; Calibrated: 10/28/2004
- Phantom: SAM2; Type: SAM; Serial: TP-1279
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

**left tilt/Area Scan (61x91x1):** Measurement grid: dx=15mm, dy=15mm

Reference Value = 22.5 V/m; Power Drift = -0.031 dB

Maximum value of SAR (interpolated) = 1.27 mW/g

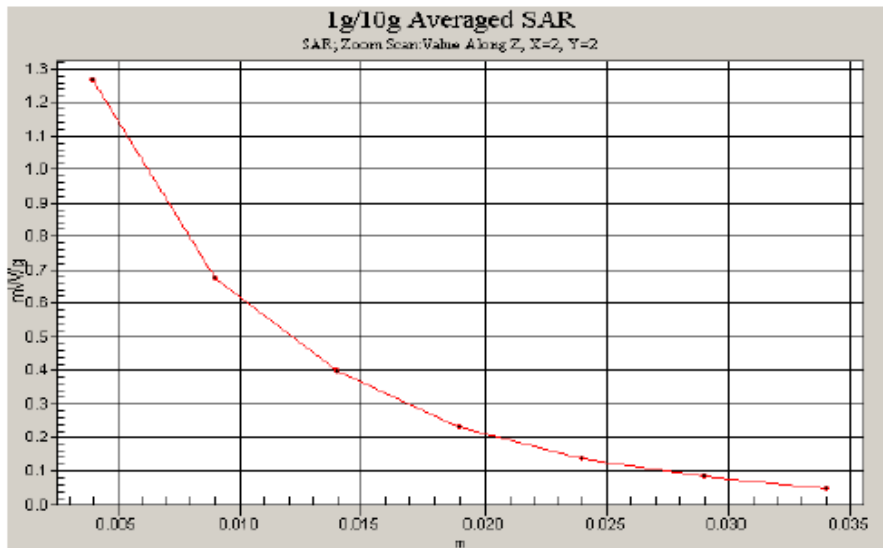
**left tilt/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 22.5 V/m; Power Drift = -0.031 dB

Maximum value of SAR (measured) = 1.26 mW/g

Peak SAR (extrapolated) = 2.48 W/kg

SAR(1 g) = 1.17 mW/g; SAR(10 g) = 0.601 mW/g



Date: 2005-07-05; Test Laboratory: TCC San Diego

Type: RM-66; HWID: 3000; Serial No: 044/12052363; no headset

Communication System: AMPS800; Channel: 799; Frequency: 848.97 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated):  $f = 848.97$  MHz;  $\sigma = 0.967$  mho/m;  $\epsilon_r = 53.6$ ;  $\rho = 1000$  kg/m<sup>3</sup> ;

Temperature (liq.) = 21.6 °C

Phantom section: Flat Section; **Worst Case Extrapolation**

DASY4 Configuration:

- Probe: ET3DV6 - SN1739; ConvF(6.47, 6.47, 6.47); Calibrated: 8/26/2004
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE4 Sn604; Calibrated: 10/28/2004
- Phantom: SAM1; Type: SAM; Serial: TP-1035
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

**Body/Area Scan (51x91x1):** Measurement grid: dx=15mm, dy=15mm

Reference Value = 20.8 V/m; Power Drift = -0.065 dB

Maximum value of SAR (interpolated) = 1.02 mW/g

**Body/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

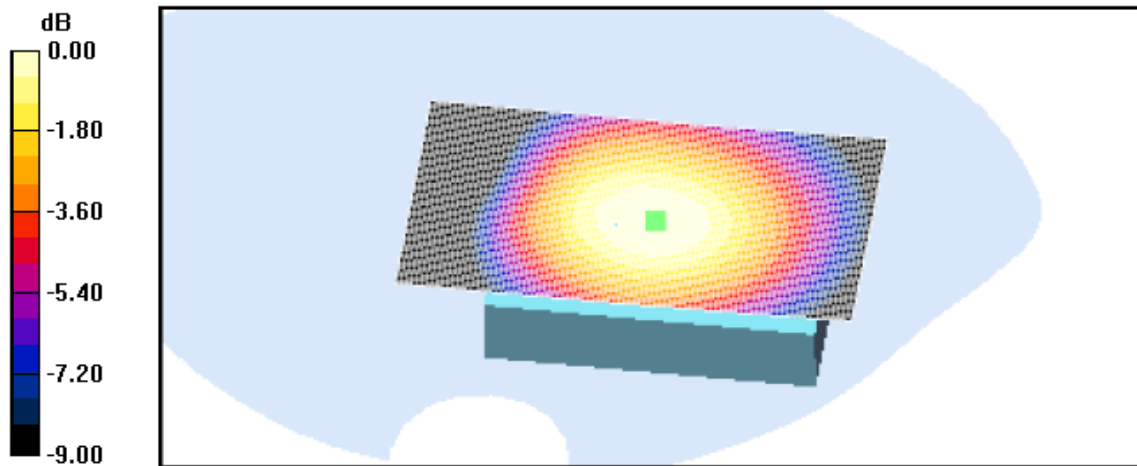
Reference Value = 20.8 V/m; Power Drift = -0.065 dB

Maximum value of SAR (measured) = 1.00 mW/g

Peak SAR (extrapolated) = 1.41 W/kg

SAR(1 g) = 0.956 mW/g; SAR(10 g) = 0.675 mW/g

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



0 dB = 1.00mW/g



Date: 2005-07-05; Test Laboratory: TCC San Diego

Type: RM-66; HWID: 3000; Serial No: 044/12052363; with headset HS-9

Communication System: AMPS800; Channel: 991; Frequency: 824.04 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated):  $f = 824.04$  MHz;  $\sigma = 0.941$  mho/m;  $\epsilon_r = 53.9$ ;  $\rho = 1000$  kg/m<sup>3</sup> ;

Temperature (liq.) = 21.6 °C

Phantom section: Flat Section; **Worst Case Extrapolation**

DASY4 Configuration:

- Probe: ET3DV6 - SN1739; ConvF(6.47, 6.47, 6.47); Calibrated: 8/26/2004
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE4 Sn604; Calibrated: 10/28/2004
- Phantom: SAM1; Type: SAM; Serial: TP-1035
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

**Body/Area Scan (51x91x1):** Measurement grid: dx=15mm, dy=15mm

Reference Value = 21.6 V/m; Power Drift = -0.062 dB

Maximum value of SAR (interpolated) = 1.11 mW/g

**Body/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

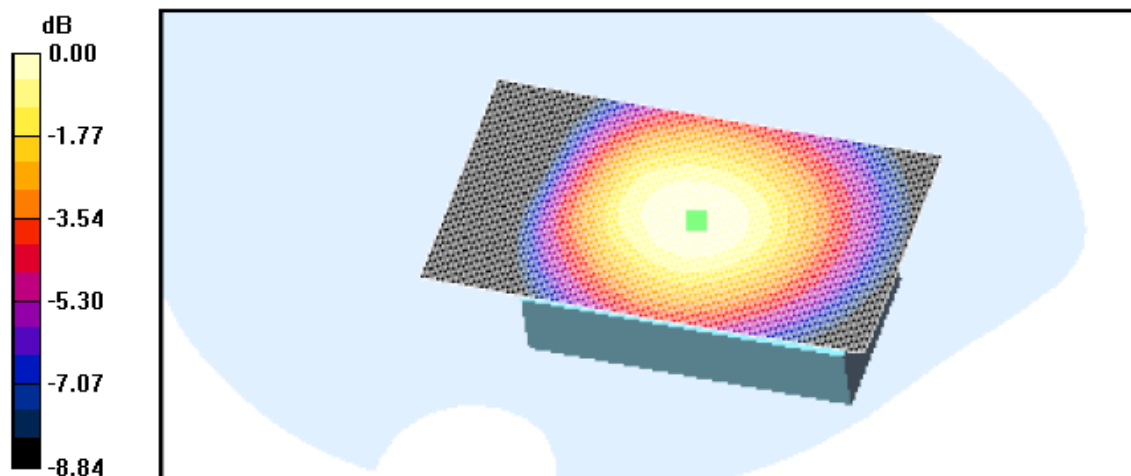
Reference Value = 21.6 V/m; Power Drift = -0.062 dB

Maximum value of SAR (measured) = 1.10 mW/g

Peak SAR (extrapolated) = 1.55 W/kg

SAR(1 g) = 1.05 mW/g; SAR(10 g) = 0.742 mW/g

Info: Interpolated medium parameters used for SAR evaluation!



0 dB = 1.10mW/g





Date: 2005-07-05; Test Laboratory: TCC San Diego

Type: RM-66; HWID: 3000; Serial No: 044/12052363; with headset HS-9

Communication System: AMPS800; Channel: 991; Frequency: 824.04 MHz; Duty Cycle: 1:1  
 Medium parameters used (interpolated):  $f = 824.04$  MHz;  $\sigma = 0.941$  mho/m;  $\epsilon_r = 53.9$ ;  $\rho = 1000$  kg/m<sup>3</sup> ;  
 Temperature (liq.) = 21.6 °C  
 Phantom section: Flat Section ; **Worst Case Extrapolation**

DASY4 Configuration:

- Probe: ET3DV6 - SN1739; ConvF(6.47, 6.47, 6.47); Calibrated: 8/26/2004
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE4 Sn604; Calibrated: 10/28/2004
- Phantom: SAM1; Type: SAM; Serial: TP-1035
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

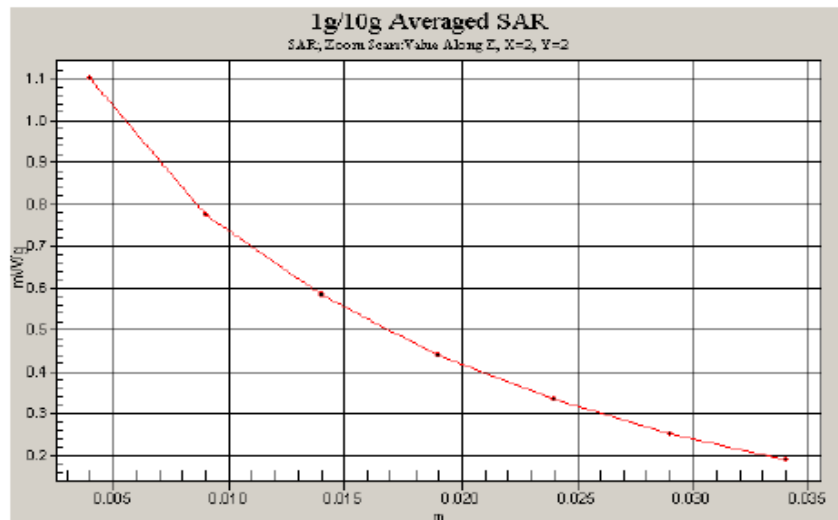
**Body/Area Scan (51x91x1):** Measurement grid: dx=15mm, dy=15mm

Reference Value = 21.6 V/m; Power Drift = -0.062 dB  
 Maximum value of SAR (interpolated) = 1.11 mW/g

**Body/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 21.6 V/m; Power Drift = -0.062 dB  
 Maximum value of SAR (measured) = 1.10 mW/g  
 Peak SAR (extrapolated) = 1.55 W/kg  
 SAR(1 g) = 1.05 mW/g; SAR(10 g) = 0.742 mW/g

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



Date: 2005-06-30; Test Laboratory: TCC San Diego

Type: RM-66; HWID: 3000; Serial No: 044/12052363; with headset HS-1C

Communication System: AMPS800; Channel: 384; Frequency: 836.52 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated):  $f = 836.52$  MHz;  $\sigma = 0.952$  mho/m;  $\epsilon_r = 53.2$ ;  $\rho = 1000$  kg/m<sup>3</sup> ;

Temperature (liq.) = 22.0 °C

Phantom section: Flat Section; **Worst Case Extrapolation**

DASY4 Configuration:

- Probe: ET3DV6 - SN1739; ConvF(6.47, 6.47, 6.47); Calibrated: 8/26/2004
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE4 Sn604; Calibrated: 10/28/2004
- Phantom: SAM1; Type: SAM; Serial: TP-1035
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

**Body/Area Scan (51x91x1):** Measurement grid: dx=15mm, dy=15mm

Reference Value = 16.3 V/m; Power Drift = -0.129 dB

Maximum value of SAR (interpolated) = 0.606 mW/g

**Body/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

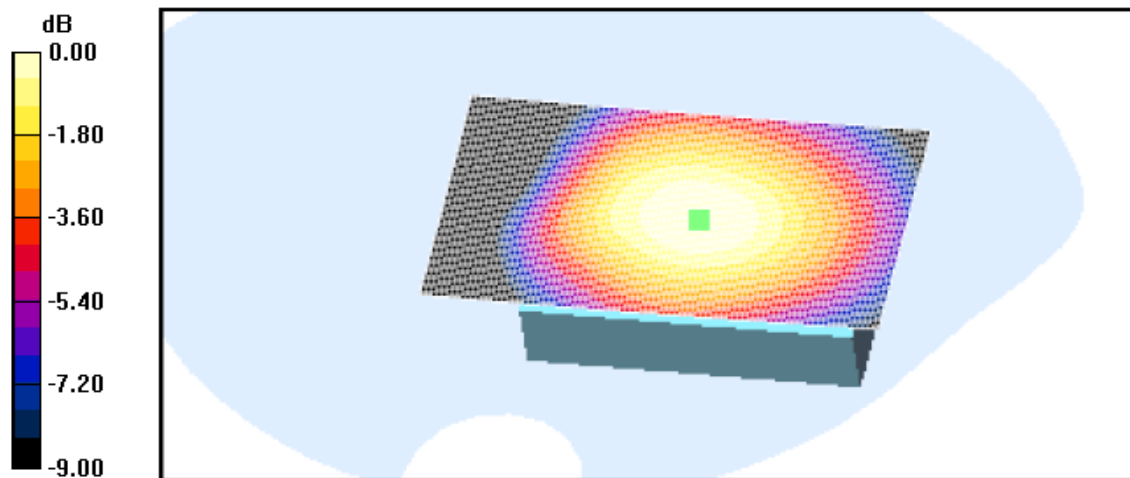
Reference Value = 16.3 V/m; Power Drift = -0.129 dB

Maximum value of SAR (measured) = 0.602 mW/g

Peak SAR (extrapolated) = 0.847 W/kg

SAR(1 g) = 0.573 mW/g; SAR(10 g) = 0.405 mW/g

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



0 dB = 0.602mW/g

Date: 2005-07-05; Test Laboratory: TCC San Diego

Type: RM-66; HWID: 3000; Serial No: 044/12052363; no headset

Communication System: CDMA800; Channel: 777; Frequency: 848.31 MHz; Duty Cycle: 1:1  
 Medium parameters used (interpolated):  $f = 848.31$  MHz;  $\sigma = 0.966$  mho/m;  $\epsilon_r = 53.6$ ;  $\rho = 1000$  kg/m<sup>3</sup> ;  
 Temperature (liq.) = 21.6 °C  
 Phantom section: Flat Section; **Worst Case Extrapolation**

DASY4 Configuration:

- Probe: ET3DV6 - SN1739; ConvF(6.47, 6.47, 6.47); Calibrated: 8/26/2004
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE4 Sn604; Calibrated: 10/28/2004
- Phantom: SAM1; Type: SAM; Serial: TP-1035
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

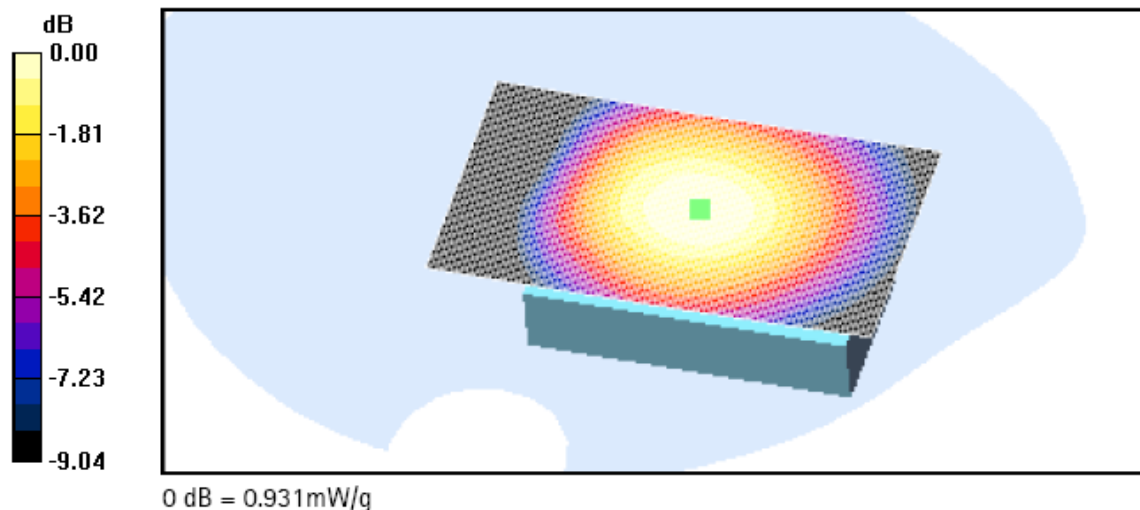
**Body/Area Scan (51x91x1):** Measurement grid: dx=15mm, dy=15mm

Reference Value = 19.8 V/m; Power Drift = 0.045 dB  
 Maximum value of SAR (interpolated) = 0.940 mW/g

**Body/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 19.8 V/m; Power Drift = 0.045 dB  
 Maximum value of SAR (measured) = 0.931 mW/g  
 Peak SAR (extrapolated) = 1.32 W/kg  
 SAR(1 g) = 0.887 mW/g; SAR(10 g) = 0.626 mW/g

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



Date: 2005-07-07; Test Laboratory: TCC San Diego

Type: RM-66; HWID: 3000; Serial No: 044/12052363; no headset

Communication System: CDMA1900; Channel: 600; Frequency: 1880 MHz; Duty Cycle: 1:1  
Medium parameters used:  $f = 1880 \text{ MHz}$ ;  $\sigma = 1.56 \text{ mho/m}$ ;  $\epsilon_r = 51.1$ ;  $\rho = 1000 \text{ kg/m}^3$ ; Temperature (liq.)  
= 22.2 °C

Phantom section: Flat Section; **Worst Case Extrapolation**

DASY4 Configuration:

- Probe: ET3DV6 - SN1739; ConvF(4.57, 4.57, 4.57); Calibrated: 8/26/2004
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE4 Sn604; Calibrated: 10/28/2004
- Phantom: SAM2; Type: SAM; Serial: TP-1279
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

**Body/Area Scan (51x91x1):** Measurement grid: dx=15mm, dy=15mm

Reference Value = 21.0 V/m; Power Drift = -0.01 dB

Maximum value of SAR (interpolated) = 0.780 mW/g

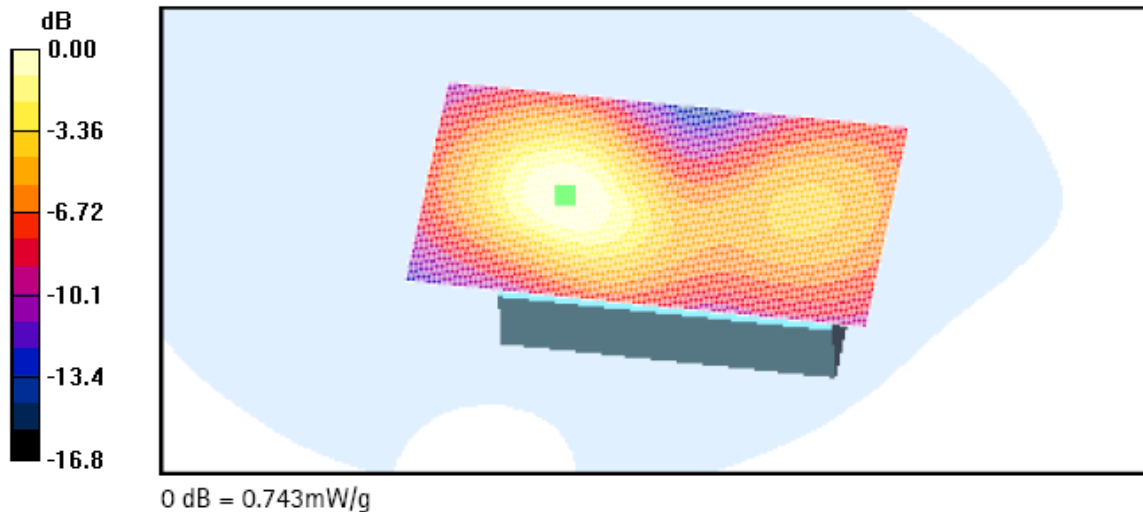
**Body/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 21.0 V/m; Power Drift = -0.01 dB

Maximum value of SAR (measured) = 0.743 mW/g

Peak SAR (extrapolated) = 1.51 W/kg

SAR(1 g) = 0.713 mW/g; SAR(10 g) = 0.404 mW/g



Date: 2005-07-07; Test Laboratory: TCC San Diego

Type: RM-66; HWID: 3000; Serial No: 044/12052363; with headset HS-9

Communication System: CDMA1900; Channel: 600; Frequency: 1880 MHz; Duty Cycle: 1:1  
Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.56$  mho/m;  $\epsilon_r = 51.1$ ;  $\rho = 1000$  kg/m<sup>3</sup>; Temperature (liq.)  
= 22.2 °C

Phantom section: Flat Section; **Worst Case Extrapolation**

DASY4 Configuration:

- Probe: ET3DV6 - SN1739; ConvF(4.57, 4.57, 4.57); Calibrated: 8/26/2004
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE4 Sn604; Calibrated: 10/28/2004
- Phantom: SAM2; Type: SAM; Serial: TP-1279
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

**Body/Area Scan (51x91x1):** Measurement grid: dx=15mm, dy=15mm

Reference Value = 20.5 V/m; Power Drift = -0.026 dB

Maximum value of SAR (interpolated) = 0.732 mW/g

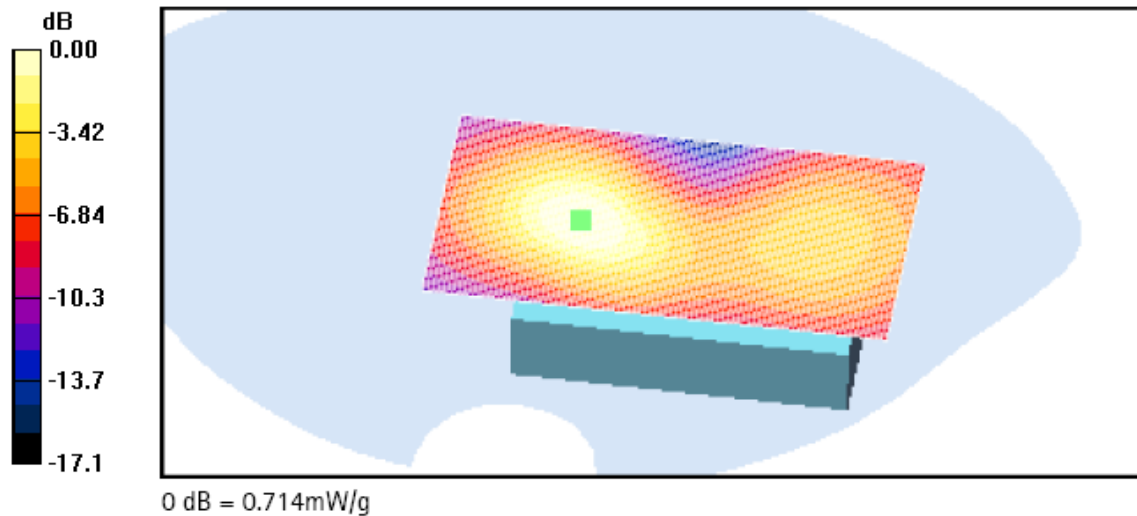
**Body/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 20.5 V/m; Power Drift = -0.026 dB

Maximum value of SAR (measured) = 0.714 mW/g

Peak SAR (extrapolated) = 1.45 W/kg

SAR(1 g) = 0.682 mW/g; SAR(10 g) = 0.384 mW/g



Date: 2005-07-08; Test Laboratory: TCC San Diego

Type: RM-66; HWID: 3000; Serial No: 044/12052363; with headset HS-1C, SD card, and Bluetooth active

Communication System: CDMA1900; Channel: 600; Frequency: 1880 MHz; Duty Cycle: 1:1  
Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.55$  mho/m;  $\epsilon_r = 51.7$ ;  $\rho = 1000$  kg/m<sup>3</sup>; Temperature (liq.)  
= 21.6 °C  
Phantom section: Flat Section; **Worst Case Extrapolation**

**DASY4 Configuration:**

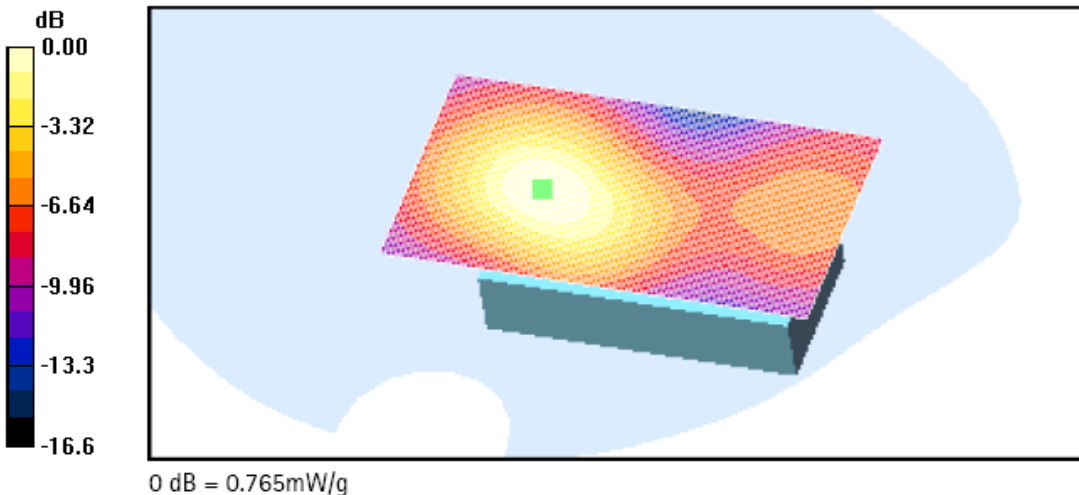
- Probe: ET3DV6 - SN1739; ConvF(4.57, 4.57, 4.57); Calibrated: 8/26/2004
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE4 Sn604; Calibrated: 10/28/2004
- Phantom: SAM2; Type: SAM; Serial: TP-1279
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

**Body/Area Scan (51x91x1):** Measurement grid: dx=15mm, dy=15mm

Reference Value = 21.5 V/m; Power Drift = 0.01 dB  
Maximum value of SAR (interpolated) = 0.783 mW/g

**Body/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 21.5 V/m; Power Drift = 0.01 dB  
Maximum value of SAR (measured) = 0.765 mW/g  
Peak SAR (extrapolated) = 1.56 W/kg  
SAR(1 g) = 0.736 mW/g; SAR(10 g) = 0.421 mW/g







Date: 2005-07-08; Test Laboratory: TCC San Diego

Type: RM-66; HWID: 3000; Serial No: 044/12052363; with headset HS-1C, SD card, and Bluetooth active

Communication System: CDMA1900 ; Channel: 600; Frequency: 1880 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.55$  mho/m;  $\epsilon_r = 51.7$ ;  $\rho = 1000$  kg/m<sup>3</sup> ; Temperature (liq.) = 21.6 °C

Phantom section: Flat Section; **Worst Case Extrapolation**

DASY4 Configuration:

- Probe: ET3DV6 - SN1739; ConvF(4.57, 4.57, 4.57); Calibrated: 8/26/2004
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE4 Sn604; Calibrated: 10/28/2004
- Phantom: SAM2; Type: SAM; Serial: TP-1279
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

**Body/Area Scan (51x91x1):** Measurement grid: dx=15mm, dy=15mm

Reference Value = 21.5 V/m; Power Drift = 0.01 dB

Maximum value of SAR (interpolated) = 0.783 mW/g

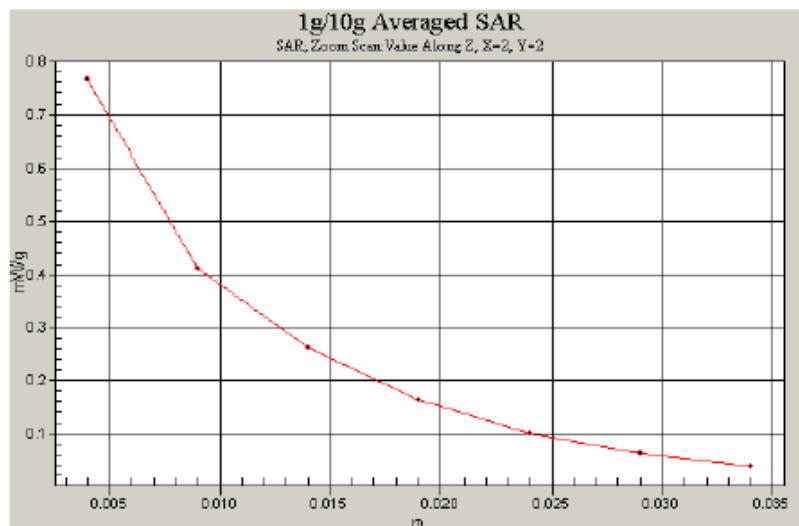
**Body/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 21.5 V/m; Power Drift = 0.01 dB

Maximum value of SAR (measured) = 0.765 mW/g

Peak SAR (extrapolated) = 1.56 W/kg

SAR(1 g) = 0.736 mW/g; SAR(10 g) = 0.421 mW/g







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**APPENDIX C: RELEVANT PAGES FROM PROBE CALIBRATION REPORT(S)**



**Calibration Laboratory of**  
Schmid & Partner  
Engineering AG  
Zeughausstrasse 43, 8004 Zurich, Switzerland

**Client**      **Nokia SD**

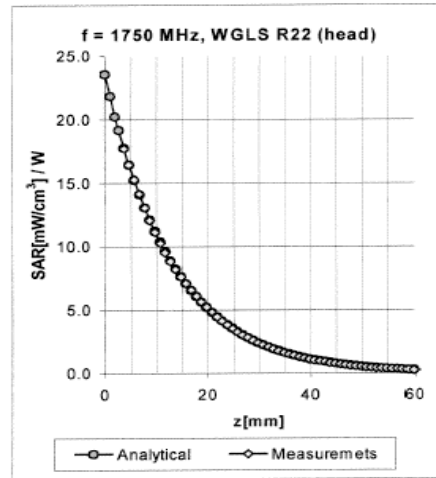
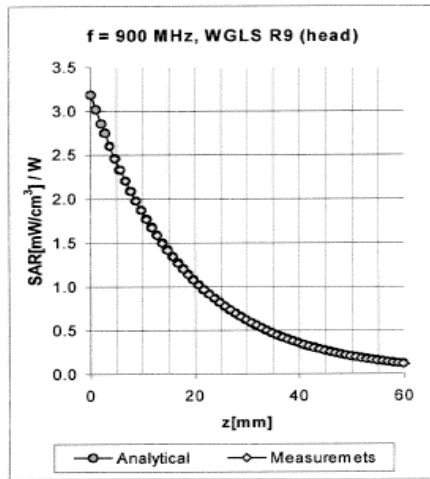
CALIBRATION CERTIFICATE																																			
Object(s)	ET3DV6 - SN:1739																																		
Calibration procedure(s)	QA CAL-01.v2 Calibration procedure for dosimetric E-field probes																																		
Calibration date:	August 26, 2004																																		
Condition of the calibrated item	In Tolerance (according to the specific calibration document)																																		
<p>This calibration certificate documents the traceability to national standards, which realize the physical units of measurements (SI). The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.</p> <p>All calibrations have been conducted in the closed laboratory facility: environment temperature 22 +/- 2 degrees Celsius and humidity &lt; 75%.</p> <p>Calibration Equipment used (M&amp;TE critical for calibration)</p> <table border="1"> <thead> <tr> <th>Model Type</th> <th>ID #</th> <th>Cal Date (Calibrated by, Certificate No.)</th> <th>Scheduled Calibration</th> </tr> </thead> <tbody> <tr> <td>Power meter EPM E4419B</td> <td>GB41293874</td> <td>5-May-04 (METAS, No 251-00388)</td> <td>May-05</td> </tr> <tr> <td>Power sensor E4412A</td> <td>MY41495277</td> <td>5-May-04 (METAS, No 251-00388)</td> <td>May-05</td> </tr> <tr> <td>Reference 20 dB Attenuator</td> <td>SN: 5086 (20b)</td> <td>3-May-04 (METAS, No 251-00388)</td> <td>May-05</td> </tr> <tr> <td>Fluke Process Calibrator Type 702</td> <td>SN: 6295803</td> <td>8-Sep-03 (Sintrel SCS No. E030020)</td> <td>Sep-04</td> </tr> <tr> <td>Power sensor HP 8481A</td> <td>MY41092180</td> <td>18-Sep-02 (SPEAG, in house check Oct03)</td> <td>In house check: Oct 05</td> </tr> <tr> <td>RF generator HP 8684C</td> <td>US3642U01700</td> <td>4-Aug-99 (SPEAG, in house check Aug02)</td> <td>In house check: Aug 05</td> </tr> <tr> <td>Network Analyzer HP 8753E</td> <td>US37390585</td> <td>18-Oct-01 (SPEAG, in house check Oct03)</td> <td>In house check: Oct 05</td> </tr> </tbody> </table>				Model Type	ID #	Cal Date (Calibrated by, Certificate No.)	Scheduled Calibration	Power meter EPM E4419B	GB41293874	5-May-04 (METAS, No 251-00388)	May-05	Power sensor E4412A	MY41495277	5-May-04 (METAS, No 251-00388)	May-05	Reference 20 dB Attenuator	SN: 5086 (20b)	3-May-04 (METAS, No 251-00388)	May-05	Fluke Process Calibrator Type 702	SN: 6295803	8-Sep-03 (Sintrel SCS No. E030020)	Sep-04	Power sensor HP 8481A	MY41092180	18-Sep-02 (SPEAG, in house check Oct03)	In house check: Oct 05	RF generator HP 8684C	US3642U01700	4-Aug-99 (SPEAG, in house check Aug02)	In house check: Aug 05	Network Analyzer HP 8753E	US37390585	18-Oct-01 (SPEAG, in house check Oct03)	In house check: Oct 05
Model Type	ID #	Cal Date (Calibrated by, Certificate No.)	Scheduled Calibration																																
Power meter EPM E4419B	GB41293874	5-May-04 (METAS, No 251-00388)	May-05																																
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Network Analyzer HP 8753E	US37390585	18-Oct-01 (SPEAG, in house check Oct03)	In house check: Oct 05																																
Calibrated by:	Name Nico Vetterli	Function Technician	Signature <i>N. Vetterli</i>																																
Approved by:	Name Katja Pokovic	Function Laboratory Director	Signature <i>Katja Pokovic</i>																																
Date issued: August 26, 2004																																			
<p>This calibration certificate is issued as an intermediate solution until the accreditation process (based on ISO/IEC 17025 International Standard) for Calibration Laboratory of Schmid &amp; Partner Engineering AG is completed.</p>																																			



ET3DV6 SN:1739

August 26, 2004

### Conversion Factor Assessment



f [MHz]	Validity [MHz] <sup>B</sup>	Tissue	Permittivity	Conductivity	Alpha	Depth	ConvF	Uncertainty
835	785-885	Head	41.5 ± 5%	0.90 ± 5%	0.81	1.52	6.79 ± 9.7%	(k=2)
900	850-950	Head	41.5 ± 5%	0.97 ± 5%	0.61	1.77	6.50 ± 9.7%	(k=2)
1750	1700-1800	Head	40.0 ± 5%	1.40 ± 5%	0.44	2.65	5.26 ± 9.7%	(k=2)
1900	1850-1950	Head	40.0 ± 5%	1.40 ± 5%	0.47	2.69	5.10 ± 9.7%	(k=2)
2450	2400-2500	Head	39.2 ± 5%	1.80 ± 5%	0.93	1.84	4.53 ± 9.7%	(k=2)
835	785-885	Body	55.2 ± 5%	0.97 ± 5%	0.58	1.84	6.47 ± 9.7%	(k=2)
900	850-950	Body	55.0 ± 5%	1.05 ± 5%	0.44	2.23	6.12 ± 9.7%	(k=2)
1750	1700-1800	Body	53.3 ± 5%	1.52 ± 5%	0.50	2.80	4.66 ± 9.7%	(k=2)
1900	1850-1950	Body	53.3 ± 5%	1.52 ± 5%	0.57	2.70	4.57 ± 9.7%	(k=2)
2450	2400-2500	Body	52.7 ± 5%	1.95 ± 5%	1.12	1.60	4.22 ± 9.7%	(k=2)

<sup>B</sup> The total standard uncertainty is calculated as root-sum-square of standard uncertainty of the Conversion Factor at calibration frequency and the standard uncertainty for the indicated frequency band.



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**APPENDIX D: RELEVANT PAGES FROM DIPOLE VALIDATION KIT REPORT(S)**



**Calibration Laboratory of  
Schmid & Partner  
Engineering AG**  
Zeughausstrasse 43, 8004 Zurich, Switzerland



**S** Schweizerischer Kalibrierdienst  
**C** Service suisse d'étalonnage  
**S** Servizio svizzero di taratura  
**S** Swiss Calibration Service

Accredited by the Swiss Federal Office of Metrology and Accreditation  
The Swiss Accreditation Service is one of the signatories to the EA  
Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: **SCS 108**

Client **Nokia SD**

Certificate No: **D835V2-478\_Oct04/2**

**CALIBRATION CERTIFICATE (Replacement of No: D835V2-478\_Oct04)**

Object	D835V2 - SN: 478		
Calibration procedure(s)	QA CAL-05.v6 Calibration procedure for dipole validation kits		
Calibration date:	October 22, 2004		
Condition of the calibrated item	In Tolerance		
<p>This calibration certificate documents the traceability to national standards, which realize the physical units of measurements (SI). The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.</p> <p>All calibrations have been conducted in the closed laboratory facility: environment temperature (22 ± 3)°C and humidity &lt; 70%.</p> <p>Calibration Equipment used (M&amp;TE critical for calibration)</p>			
<b>Primary Standards</b>	<b>ID #</b>	<b>Cal Date (Calibrated by, Certificate No.)</b>	<b>Scheduled Calibration</b>
Power meter EPM E442	GB37480704	12-Oct-04 (METAS, No. 251-00412)	Oct-05
Power sensor HP 8481A	US37292783	12-Oct-04 (METAS, No. 251-00412)	Oct-05
Reference 20 dB Attenuator	SN: 5086 (20g)	10-Aug-04 (METAS, No 251-00402)	Aug-05
Reference 10 dB Attenuator	SN: 5047.2 (10r)	10-Aug-04 (METAS, No 251-00402)	Aug-05
Reference Probe ET3DV6	SN 1680	23-Feb-04 (SPEAG, No. ET3-1680_Feb04)	Feb-05
DAE4	SN 601	22-Jul-04 (SPEAG, No. DAE4-601_Jul04)	Jul-05
<b>Secondary Standards</b>	<b>ID #</b>	<b>Check Date (in house)</b>	<b>Scheduled Check</b>
Power sensor HP 8481A	MY41092317	18-Oct-02 (SPEAG, in house check Oct-03)	in house check: Oct-05
RF generator R&S SML-03	100698	27-Mar-02 (SPEAG, in house check Dec-03)	in house check: Dec-05
Network Analyzer HP 8753E	US37390585 S4206	18-Oct-01 (SPEAG, in house check Nov-03)	in house check: Nov 04
Calibrated by:	Name Katja Pokovic	Function Technical Manager	Signature 
Approved by:	Name Niels Kuster	Function Quality Manager	Signature 
			Issued: November 15, 2004
This calibration certificate shall not be reproduced except in full without written approval of the laboratory.			



**DASY4 Validation Report for Head TSL**

Date/Time: 10/22/04 19:01:22

Test Laboratory: SPEAG, Zurich, Switzerland

**DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN478**

Communication System: CW-835; Frequency: 835 MHz; Duty Cycle: 1:1

Medium: HSL 835 MHz;

Medium parameters used:  $f = 835 \text{ MHz}$ ;  $\sigma = 0.89 \text{ mho/m}$ ;  $\epsilon_r = 41.8$ ;  $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ET3DV6 - SN1680; ConvF(6.4, 6.4, 6.4); Calibrated: 23.02.2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 22.07.2004
- Phantom: Flat Phantom half size; Type: QD000P49AA; Serial: SN:1001;
- Measurement SW: DASY4, V4.4 Build 3; Postprocessing SW: SEMCAD, V1.8 Build 130

**Pin = 250 mW; d = 15 mm/Area Scan (81x81x1):** Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (interpolated) = 2.49 mW/g

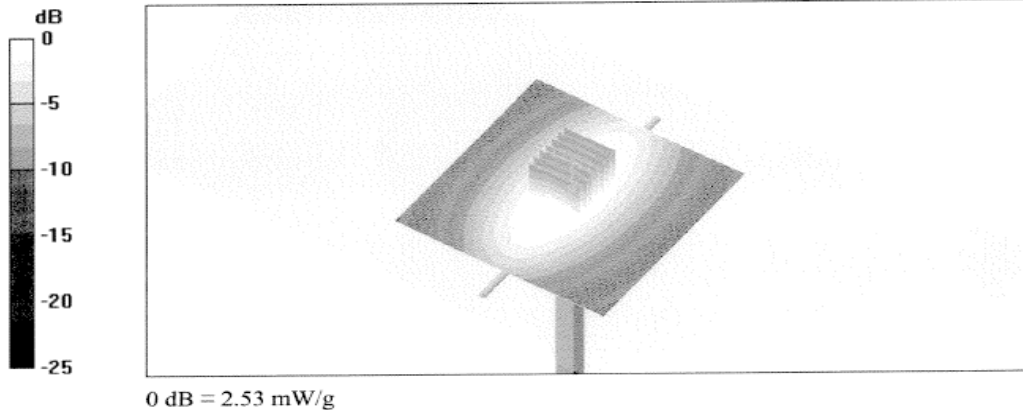
**Pin = 250 mW; d = 15 mm/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 54.1 V/m; Power Drift = 0.0 dB

Peak SAR (extrapolated) = 3.41 W/kg

**SAR(1 g) = 2.34 mW/g; SAR(10 g) = 1.54 mW/g**

Maximum value of SAR (measured) = 2.53 mW/g





**DASY4 Validation Report for Body TSL**

Date/Time: 10/22/04 18:58:12

Test Laboratory: SPEAG, Zurich, Switzerland

**DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN478**

Communication System: CW-835; Frequency: 835 MHz; Duty Cycle: 1:1

Medium: Muscle 835 MHz;

Medium parameters used:  $f = 835 \text{ MHz}$ ;  $\sigma = 1 \text{ mho/m}$ ;  $\epsilon_r = 54.3$ ;  $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Measurement Standard: DASY4 (High Precision Assessment)

**DASY4 Configuration:**

- Probe: ET3DV6 - SN1680; ConvF(6.31, 6.31, 6.31); Calibrated: 23.02.2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 22.07.2004
- Phantom: Flat Phantom half size; Type: QD000P49AA; Serial: SN:1001;
- Measurement SW: DASY4, V4.4 Build 3; Postprocessing SW: SEMCAD, V1.8 Build 130

**Pin = 250 mW; d = 15 mm/Area Scan (81x81x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$   
Maximum value of SAR (interpolated) = 2.61 mW/g

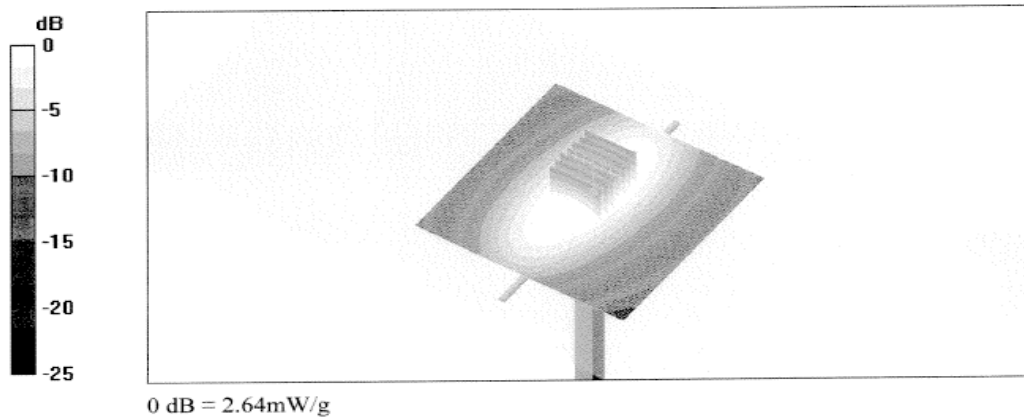
**Pin = 250 mW; d = 15 mm/Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$

Reference Value = 51.6 V/m; Power Drift = 0.0 dB

Peak SAR (extrapolated) = 3.54 W/kg

**SAR(1 g) = 2.44 mW/g; SAR(10 g) = 1.61 mW/g**

Maximum value of SAR (measured) = 2.64 mW/g







**Calibration Laboratory of  
Schmid & Partner  
Engineering AG**  
Zeughausstrasse 43, 8004 Zurich, Switzerland



**S** Schweizerischer Kalibrierdienst  
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The Swiss Accreditation Service is one of the signatories to the EA  
Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: **SCS 108**

Client **Nokia SD**

Certificate No: **D1900V2-534\_Oct04/2**

**CALIBRATION CERTIFICATE (Replacement of No: D1900V2-534\_Oct04)**

Object	D1900V2 - SN: 534		
Calibration procedure(s)	QA CAL-05.v6 Calibration procedure for dipole validation kits		
Calibration date:	October 22, 2004		
Condition of the calibrated item	In Tolerance		
<p>This calibration certificate documents the traceability to national standards, which realize the physical units of measurements (SI). The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.</p> <p>All calibrations have been conducted in the closed laboratory facility: environment temperature (22 ± 3)°C and humidity &lt; 70%.</p> <p>Calibration Equipment used (M&amp;TE critical for calibration)</p>			
<b>Primary Standards</b>	<b>ID #</b>	<b>Cal Date (Calibrated by, Certificate No.)</b>	<b>Scheduled Calibration</b>
Power meter EPM E442	GB37480704	12-Oct-04 (METAS, No. 251-00412)	Oct-05
Power sensor HP 8481A	US37292783	12-Oct-04 (METAS, No. 251-00412)	Oct-05
Reference 20 dB Attenuator	SN: 5086 (20g)	10-Aug-04 (METAS, No 251-00402)	Aug-05
Reference 10 dB Attenuator	SN: 5047.2 (10r)	10-Aug-04 (METAS, No 251-00402)	Aug-05
Reference Probe ET3DV6	SN 1680	23-Feb-04 (SPEAG, No. ET3-1680_Feb04)	Feb-05
DAE4	SN 601	22-Jul-04 (SPEAG, No. DAE4-601_Jul04)	Jul-05
<b>Secondary Standards</b>	<b>ID #</b>	<b>Check Date (in house)</b>	<b>Scheduled Check</b>
Power sensor HP 8481A	MY41092317	18-Oct-02 (SPEAG, in house check Oct-03)	In house check: Oct-05
RF generator R&S SML-03	100698	27-Mar-02 (SPEAG, in house check Dec-03)	In house check: Dec-05
Network Analyzer HP 8753E	US37390585 S4206	18-Oct-01 (SPEAG, in house check Nov-03)	In house check: Nov 04
Calibrated by:	Name Mike Meili	Function Laboratory Technician	Signature <i>Mike Meili</i>
Approved by:	Katja Pokovic	Technical Manager	<i>Katja Pokovic</i>
			Issued: November 15, 2004
This calibration certificate shall not be reproduced except in full without written approval of the laboratory.			

**DASY4 Validation Report for Head TSL**

Date/Time: 11/15/04 16:09:12

Test Laboratory: SPEAG, Zürich, Switzerland

**DUT: Dipole 1900 MHz; Type: D1900V2; Serial: D1900V2 - SN:534**

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

Medium: HSL 1800 MHz;

Medium parameters used:  $f = 1900$  MHz;  $\sigma = 1.44$  mho/m;  $\epsilon_r = 39.4$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ET3DV6 - SN1680; ConvF(5.02, 5.02, 5.02); Calibrated: 23.02.2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 22.07.2004
- Phantom: Flat Phantom quarter size -SN:1001; Type: QD000P50AA; Serial: SN:1001;
- Measurement SW: DASY4, V4.4 Build 3; Postprocessing SW: SEMCAD, V1.8 Build 130

**Pin = 250 mW; d = 10 mm/Area Scan (81x81x1):** Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (interpolated) = 11.4 mW/g

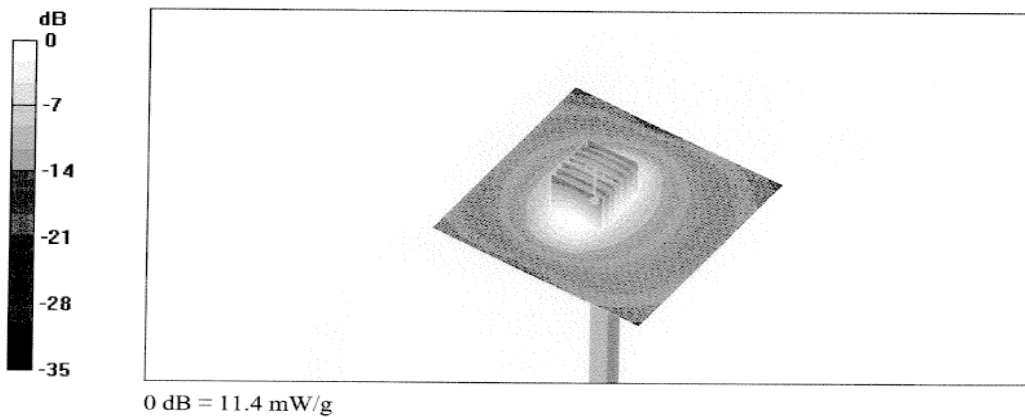
**Pin = 250 mW; d = 10 mm/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 77.7 V/m; Power Drift = 0.1 dB

Peak SAR (extrapolated) = 17.5 W/kg

**SAR(1 g) = 9.91 mW/g; SAR(10 g) = 5.18 mW/g**

Maximum value of SAR (measured) = 11.4 mW/g





**DASY4 Validation Report for Body TSL**

Date/Time: 11/15/04 16:09:27

Test Laboratory: SPEAG, Z<sup>ür</sup>ich, Switzerland

**DUT: Dipole 1900 MHz; Type: D1900V2; Serial: D1900V2 – SN:534**

Communication System: CW; Frequency: 1900 MHz; Duty Cycle: 1:1  
 Medium: Muscle 1900 MHz;  
 Medium parameters used:  $f = 1900 \text{ MHz}$ ;  $\sigma = 1.59 \text{ mho/m}$ ;  $\epsilon_r = 51.3$ ;  $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Flat Section  
 Measurement Standard: DASY4 (High Precision Assessment)

**DASY4 Configuration:**

- Probe: ET3DV6 - SN1680; ConvF(4.52, 4.52, 4.52); Calibrated: 23.02.2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 22.07.2004
- Phantom: Flat Phantom quarter size -SN:1001; Type: QD000P50AA; Serial: SN:1001;
- Measurement SW: DASY4, V4.4 Build 3; Postprocessing SW: SEMCAD, V1.8 Build 130

**Pin = 250 mW; d = 10 mm/Area Scan (81x81x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$   
 Maximum value of SAR (interpolated) = 11.8 mW/g

**Pin = 250 mW; d = 10 mm/Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$   
 Reference Value = 74.3 V/m; Power Drift = 0.1 dB  
 Peak SAR (extrapolated) = 16.4 W/kg  
**SAR(1 g) = 9.85 mW/g; SAR(10 g) = 5.28 mW/g**  
 Maximum value of SAR (measured) = 11.3 mW/g

