

# PCTEST ENGINEERING LABORATORY, INC.

**DUT: SCP-5500; Type: SANYO Tri Mode Phone; Serial: FCC1**  
**Program: SCP-5500 AMPS, Right ;Conducted Power: 24.5 dBm**

Communication System: AMPS; Frequency: 836.49 MHz;Duty Cycle: 1:1  
Medium: 835 Brain ( $\sigma = 0.89$  mho/m,  $\epsilon_r = 40.82$ ,  $\rho = 1000$  kg/m<sup>3</sup>)  
Phantom section: Right Section

Test Date: 07-29-2003; Ambient Temp: 22.8°C; Tissue Temp: 20.4°C

Probe: ET3DV6 - SN1560; ConvF(6.9, 6.9, 6.9); Calibrated: 9/27/2002  
Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)  
Electronics: DAE3 SN330; Calibrated: 12/1/2002  
Phantom: SAM 12b; Type: SAM 4.0; Serial: TP:1197

Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 115

## Touch, Ch.383, Ant Out, Standard Battery

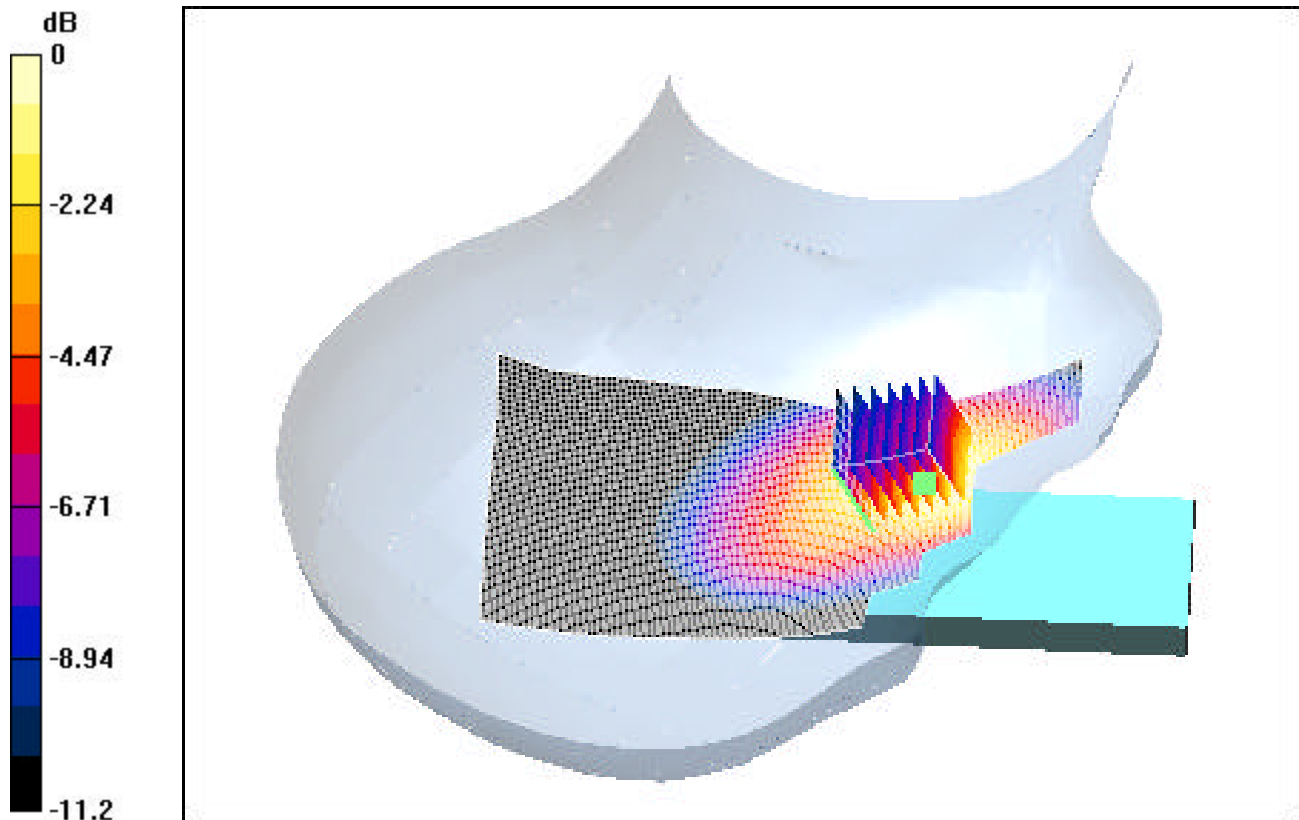
**Area Scan (61x141x1):** Measurement grid: dx=15mm, dy=15mm

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

Peak SAR (extrapolated) = 1.62 W/kg

SAR(1 g) = 1.1 mW/g; SAR(10 g) = 0.699 mW/g

Reference Value = 9.53 V/m



0 dB = 1.18mW/g

# PCTEST ENGINEERING LABORATORY, INC.

**DUT: SCP-5500; Type: SANYO Tri Mode Phone; Serial: FCC1**  
**Program: SCP-5500 AMPS, Right ;Conducted Power : 24.5 dBm**

Communication System: AMPS; Frequency: 836.49 MHz;Duty Cycle: 1:1  
Medium: 835 Brain ( $\sigma = 0.89$  mho/m,  $\epsilon_r = 40.82$ ,  $\rho = 1000$  kg/m<sup>3</sup>)  
Phantom section: Right Section

Test Date: 07-29-2003; Ambient Temp: 22.8°C; Tissue Temp: 20.4°C

Probe: ET3DV6 - SN1560; ConvF(6.9, 6.9, 6.9); Calibrated: 9/27/2002  
Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)  
Electronics: DAE3 SN330; Calibrated: 12/1/2002  
Phantom: SAM 12b; Type: SAM 4.0; Serial: TP:1197

Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 115

**Tilt, Ch.383, Ant Out, Standard Battery**

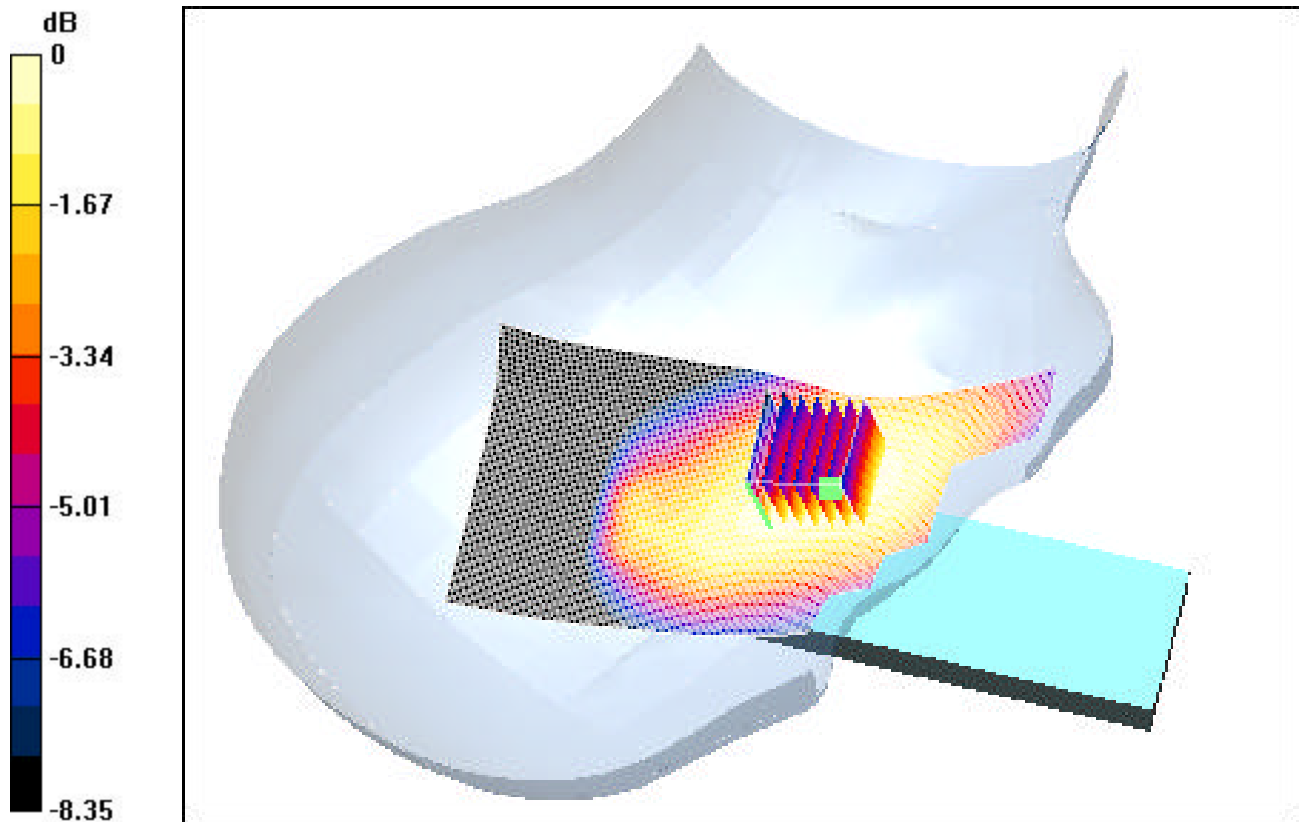
**Area Scan (61x141x1):** Measurement grid: dx=15mm, dy=15mm

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

Peak SAR (extrapolated) = 0.282 W/kg

SAR(1 g) = 0.213 mW/g; SAR(10 g) = 0.161 mW/g

Reference Value = 11.6 V/m



0 dB = 0.222mW/g

# PCTEST ENGINEERING LABORATORY, INC.

**DUT: SCP-5500; Type: SANYO Tri Mode Phone; Serial: FCC1**  
**Program: SCP-5500 AMPS, Left; Conducted Power: 24.5 dBm**

Communication System: AMPS; Frequency: 836.49 MHz; Duty Cycle: 1:1  
Medium: 835 Brain ( $\sigma = 0.89$  mho/m,  $\epsilon_r = 40.82$ ,  $\rho = 1000$  kg/m<sup>3</sup>)  
Phantom section: Left Section

Test Date: 07-29-2003; Ambient Temp: 22.8°C; Tissue Temp: 20.4°C

Probe: ET3DV6 - SN1560; ConvF(6.9, 6.9, 6.9); Calibrated: 9/27/2002  
Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)  
Electronics: DAE3 SN330; Calibrated: 12/1/2002  
Phantom: SAM 12b; Type: SAM 4.0; Serial: TP:1197

Measurement SW: DASYS4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 115

## Touch, Ch.383, Ant Out, Standard Battery

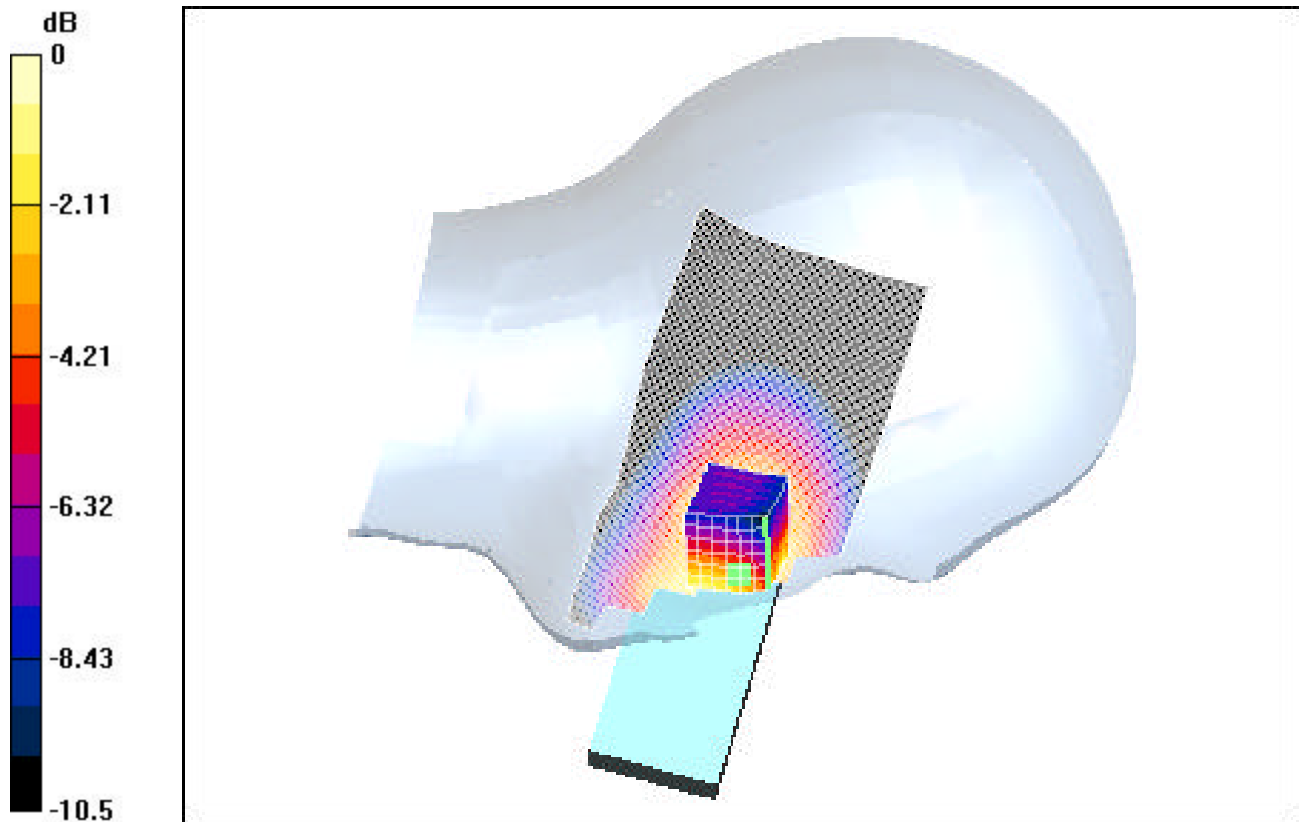
**Area Scan (61x141x1):** Measurement grid: dx=15mm, dy=15mm

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

Peak SAR (extrapolated) = 1.22 W/kg

SAR(1 g) = 0.84 mW/g; SAR(10 g) = 0.571 mW/g

Reference Value = 9.61 V/m



0 dB = 0.893mW/g

# PCTEST ENGINEERING LABORATORY, INC.

**DUT: SCP-5500; Type: SANYO Tri Mode Phone; Serial: FCC1**  
**Program: SCP-5500 AMPS, Left; Conducted Power: 24.5 dBm**

Communication System: AMPS; Frequency: 836.49 MHz; Duty Cycle: 1:1  
Medium: 835 Brain ( $\sigma = 0.89$  mho/m,  $\epsilon_r = 40.82$ ,  $\rho = 1000$  kg/m<sup>3</sup>)  
Phantom section: Left Section

Test Date: 07-29-2003; Ambient Temp: 22.8°C; Tissue Temp: 20.4°C

Probe: ET3DV6 - SN1560; ConvF(6.9, 6.9, 6.9); Calibrated: 9/27/2002  
Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)  
Electronics: DAE3 SN330; Calibrated: 12/1/2002  
Phantom: SAM 12b; Type: SAM 4.0; Serial: TP:1197

Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 115

## Tilt, Ch.383, Ant In, Standard Battery

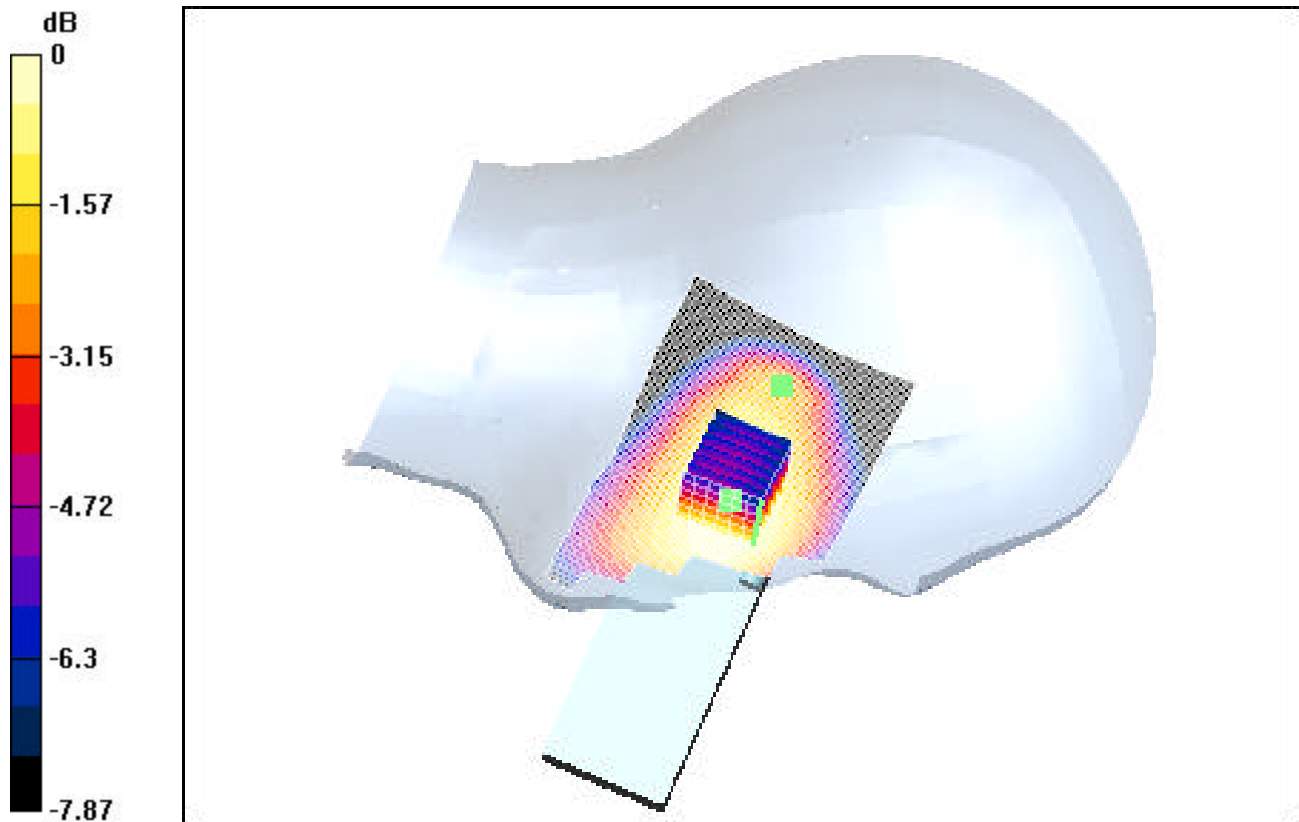
**Area Scan (61x121x1):** Measurement grid: dx=15mm, dy=15mm

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

Peak SAR (extrapolated) = 0.277 W/kg

SAR(1 g) = 0.219 mW/g; SAR(10 g) = 0.167 mW/g

Reference Value = 10.9 V/m



0 dB = 0.229mW/g

# PCTEST ENGINEERING LABORATORY, INC.

**DUT: SCP-5500; Type: SANYO Tri Mode Phone; Serial: FCC1**  
**Program: SCP-5500 CDMA, Right; Conducted Power: 24.5 dBm**

Communication System: Cellular CDMA; Frequency: 836.49 MHz; Duty Cycle: 1:1  
Medium: 835 Brain ( $\sigma = 0.89$  mho/m,  $\epsilon_r = 40.82$ ,  $\rho = 1000$  kg/m<sup>3</sup>)  
Phantom section: Right Section

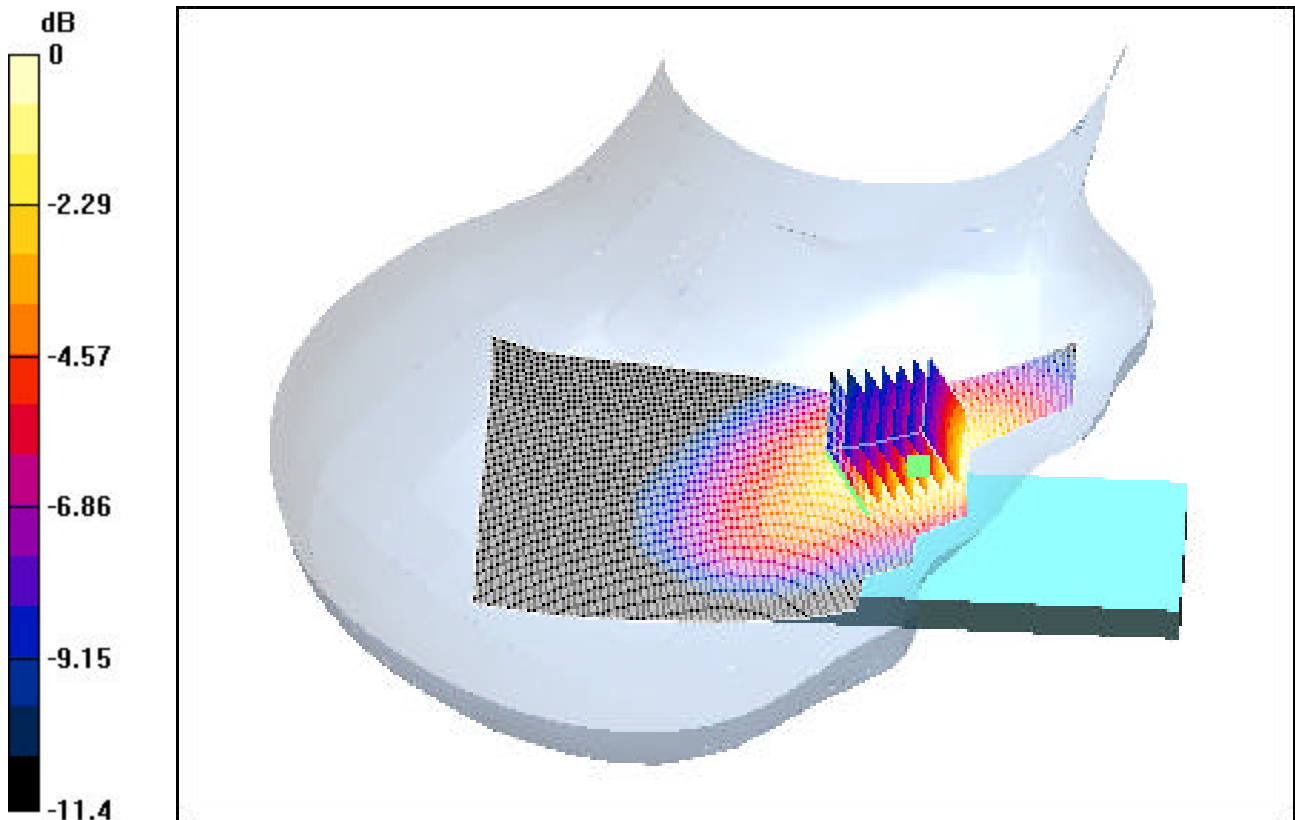
Test Date: 07-29-2003; Ambient Temp: 22.8°C; Tissue Temp: 20.4°C

Probe: ET3DV6 - SN1560; ConvF(6.9, 6.9, 6.9); Calibrated: 9/27/2002  
Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)  
Electronics: DAE3 SN330; Calibrated: 12/1/2002  
Phantom: SAM 12b; Type: SAM 4.0; Serial: TP:1197

Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 115

## Touch, Ch.383, Ant Out, Standard Battery

**Area Scan (61x141x1):** Measurement grid: dx=15mm, dy=15mm  
**Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm  
Peak SAR (extrapolated) = 1.95 W/kg  
SAR(1 g) = 1.25 mW/g; SAR(10 g) = 0.781 mW/g  
Reference Value = 11.4 V/m



0 dB = 1.34mW/g

# PCTEST ENGINEERING LABORATORY, INC.

**DUT: SCP-5500; Type: SANYO Tri Mode Phone; Serial: FCC1**  
**Program: SCP-5500 CDMA, Right; Conducted Power: 24.5 dBm**

Communication System: Cellular CDMA; Frequency: 836.49 MHz; Duty Cycle: 1:1  
Medium: 835 Brain ( $\sigma = 0.89$  mho/m,  $\epsilon_r = 40.82$ ,  $\rho = 1000$  kg/m<sup>3</sup>)  
Phantom section: Right Section

Test Date: 07-29-2003; Ambient Temp: 22.8°C; Tissue Temp: 20.4°C

Probe: ET3DV6 - SN1560; ConvF(6.9, 6.9, 6.9); Calibrated: 9/27/2002

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

Electronics: DAE3 SN330; Calibrated: 12/1/2002

Phantom: SAM 12b; Type: SAM 4.0; Serial: TP:1197

Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 115

## Tilt, Ch.383, Ant Out, Standard Battery

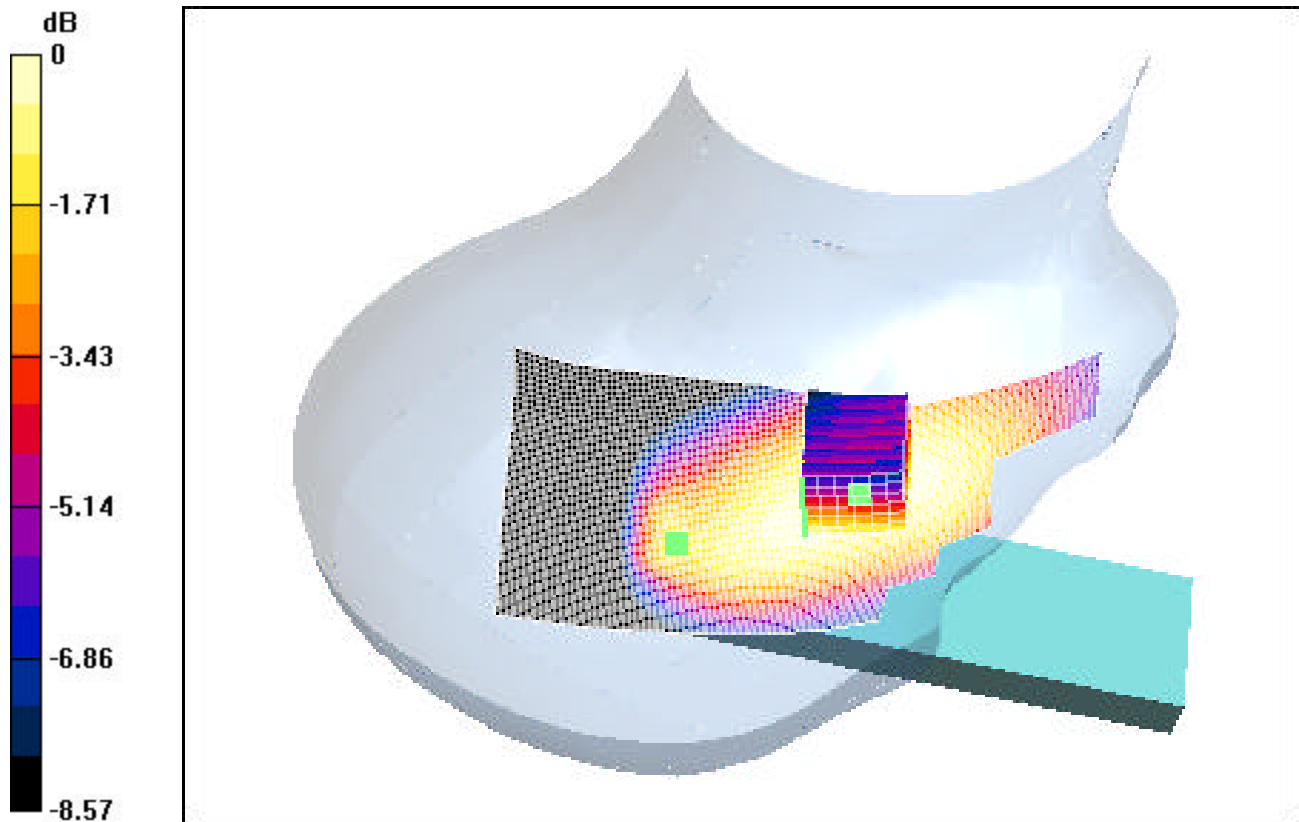
**Area Scan (61x141x1):** Measurement grid: dx=15mm, dy=15mm

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

Peak SAR (extrapolated) = 0.333 W/kg

SAR(1 g) = 0.244 mW/g; SAR(10 g) = 0.181 mW/g

Reference Value = 12.8 V/m



0 dB = 0.257mW/g

# PCTEST ENGINEERING LABORATORY, INC.

**DUT: SCP-5500; Type: SANYO Tri Mode Phone; Serial: FCC1**  
**Program: SCP-5500 CDMA, Left; Conducted Power: 24.5 dBm**

Communication System: Cellular CDMA; Frequency: 836.49 MHz; Duty Cycle: 1:1  
Medium: 835 Brain ( $\sigma = 0.89$  mho/m,  $\epsilon_r = 40.82$ ,  $\rho = 1000$  kg/m<sup>3</sup>)  
Phantom section: Left Section

Test Date: 07-29-2003; Ambient Temp: 22.8°C; Tissue Temp: 20.4°C

Probe: ET3DV6 - SN1560; ConvF(6.9, 6.9, 6.9); Calibrated: 9/27/2002

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

Electronics: DAE3 SN330; Calibrated: 12/1/2002

Phantom: SAM 12b; Type: SAM 4.0; Serial: TP:1197

Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 115

## **Touch, Ch.383, Ant Out, Standard Battery**

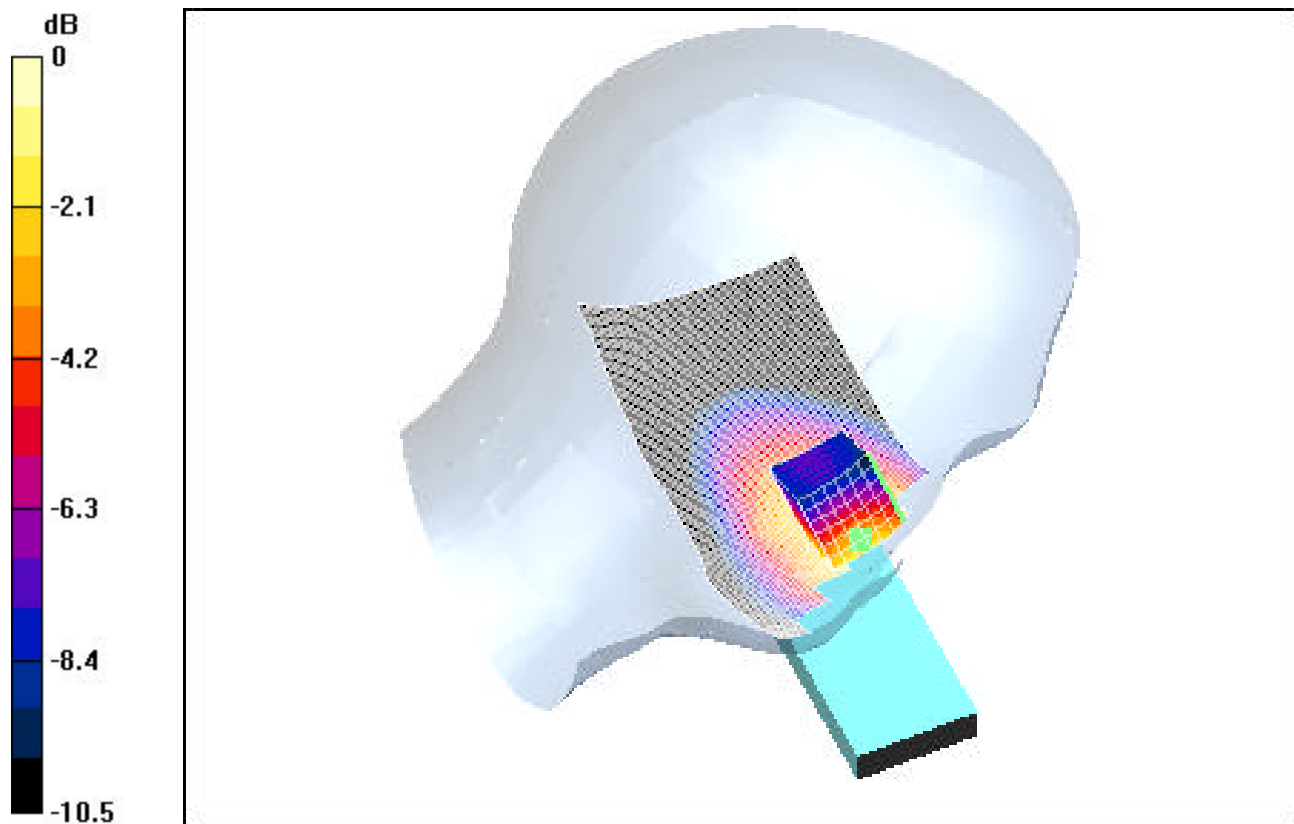
**Area Scan (61x141x1):** Measurement grid: dx=15mm, dy=15mm

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

Peak SAR (extrapolated) = 1.47 W/kg

SAR(1 g) = 0.933 mW/g; SAR(10 g) = 0.61 mW/g

Reference Value = 10.6 V/m



0 dB = 0.989mW/g

# PCTEST ENGINEERING LABORATORY, INC.

**DUT: SCP-5500; Type: SANYO Tri Mode Phone; Serial: FCC1**  
**Program: SCP-5500 CDMA, Left; Conducted Power: 24.5 dBm**

Communication System: Cellular CDMA; Frequency: 836.49 MHz; Duty Cycle: 1:1  
Medium: 835 Brain ( $\sigma = 0.89$  mho/m,  $\epsilon_r = 40.82$ ,  $\rho = 1000$  kg/m<sup>3</sup>)  
Phantom section: Left Section

Test Date: 07-29-2003; Ambient Temp: 22.8°C; Tissue Temp: 20.4°C

Probe: ET3DV6 - SN1560; ConvF(6.9, 6.9, 6.9); Calibrated: 9/27/2002

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

Electronics: DAE3 SN330; Calibrated: 12/1/2002

Phantom: SAM 12b; Type: SAM 4.0; Serial: TP:1197

Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 115

## Tilt, Ch.383, Ant Out, Standard Battery

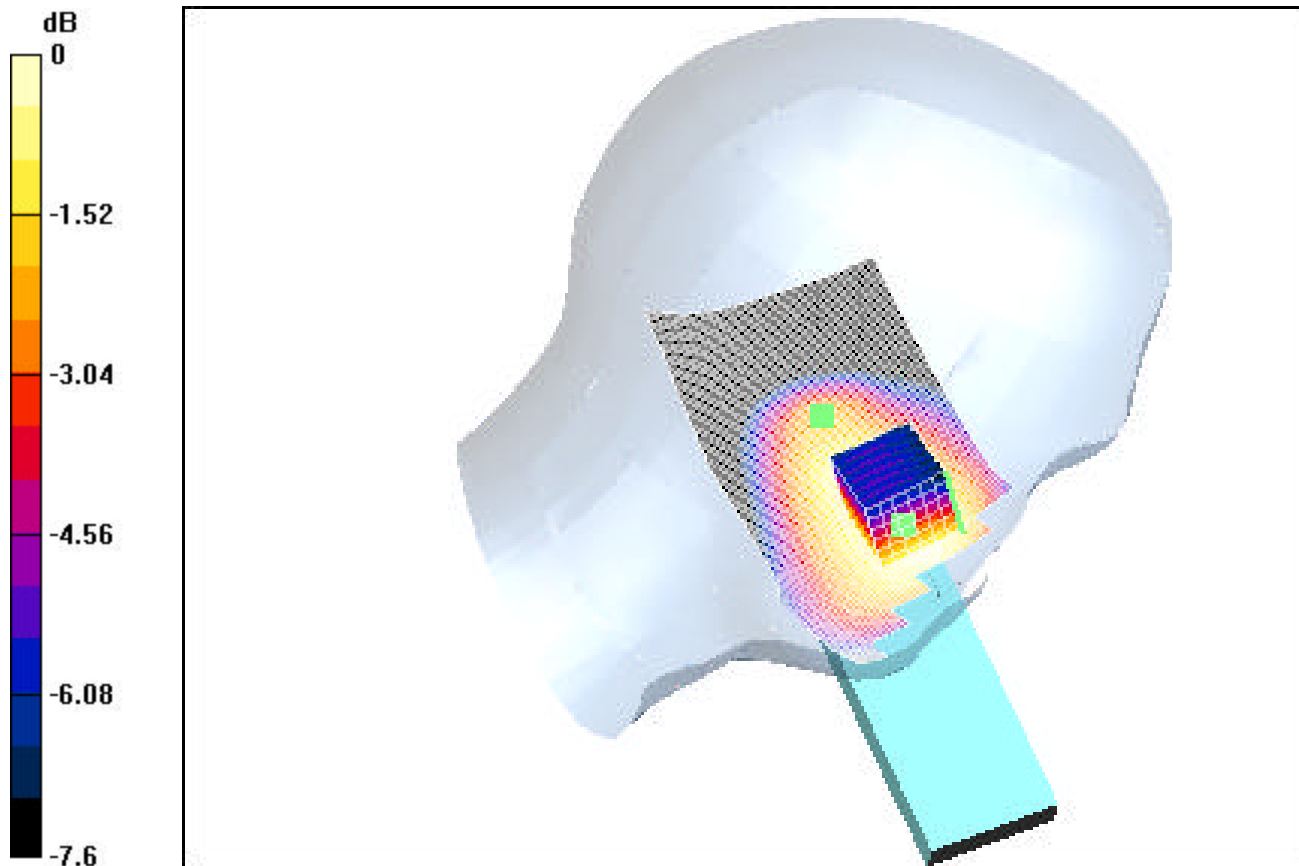
**Area Scan (61x141x1):** Measurement grid: dx=15mm, dy=15mm

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

Peak SAR (extrapolated) = 0.296 W/kg

SAR(1 g) = 0.231 mW/g; SAR(10 g) = 0.175 mW/g

Reference Value = 11.6 V/m



0 dB = 0.24mW/g



# PCTEST ENGINEERING LABORATORY, INC.

**DUT: SCP-5500; Type: SANYO Tri Mode Phone; Serial: FCC1**  
**Program: SCP-5500 PCS, Right; Conducted Power: 23.5 dBm**

Communication System: PCS CDMA; Frequency: 1880 MHz; Duty Cycle: 1:1  
Medium: 1900 Brain ( $\sigma = 1.46$  mho/m,  $\epsilon_r = 39.92$ ,  $\rho = 1000$  kg/m<sup>3</sup>)  
Phantom section: Right Section

Test Date: 07-28-2003; Ambient Temp: 23.2°C; Tissue Temp: 20.7°C

Probe: ET3DV6 - SN1560; ConvF(5.4, 5.4, 5.4); Calibrated: 9/27/2002  
Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)  
Electronics: DAE3 SN330; Calibrated: 12/1/2002  
Phantom: SAM 12b; Type: SAM 4.0; Serial: TP:1197

Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 115

## Touch, Ch.0600, Ant In, Standard Battery

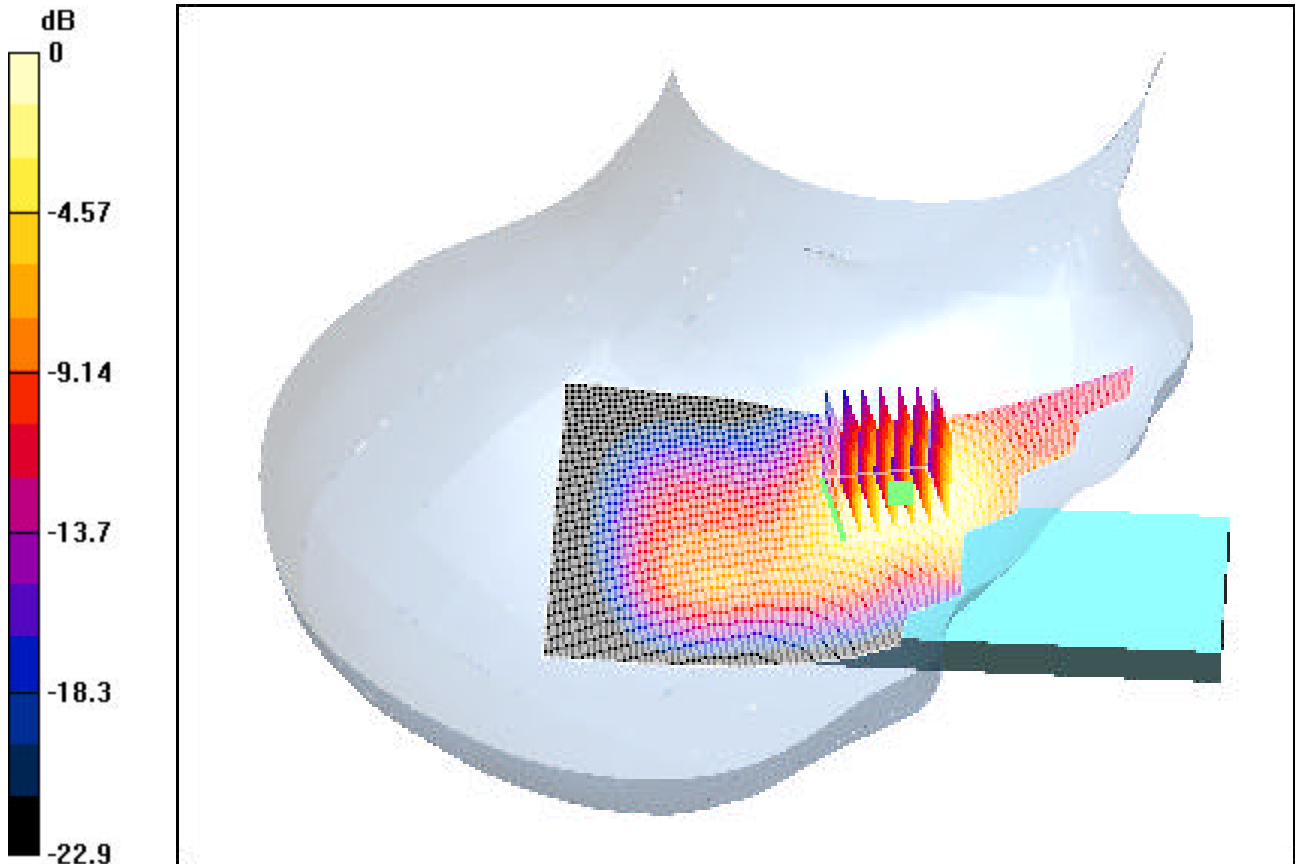
**Area Scan (61x131x1):** Measurement grid: dx=15mm, dy=15mm

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

Peak SAR (extrapolated) = 2.17 W/kg

SAR(1 g) = 1.25 mW/g; SAR(10 g) = 0.67 mW/g

Reference Value = 8.69 V/m



0 dB = 1.37mW/g

# PCTEST ENGINEERING LABORATORY, INC.

**DUT: SCP-5500; Type: SANYO Tri Mode Phone; Serial: FCC1**  
**Program: SCP-5500 PCS, Right; Conducted Power: 23.5 dBm**

Communication System: PCS CDMA; Frequency: 1880 MHz; Duty Cycle: 1:1  
Medium: 1900 Brain ( $\sigma = 1.46$  mho/m,  $\epsilon_r = 39.92$ ,  $\rho = 1000$  kg/m<sup>3</sup>)  
Phantom section: Right Section

Test Date: 08-07-2003; Ambient Temp: 22.9°C; Tissue Temp: 20.6°C

Probe: ET3DV6 - SN1560; ConvF(5.4, 5.4, 5.4); Calibrated: 9/27/2002

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

Electronics: DAE3 SN330; Calibrated: 12/1/2002

Phantom: SAM 12b; Type: SAM 4.0; Serial: TP:1197

Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 115

**Tilt, Ch.0600, Ant In, Standard Battery**

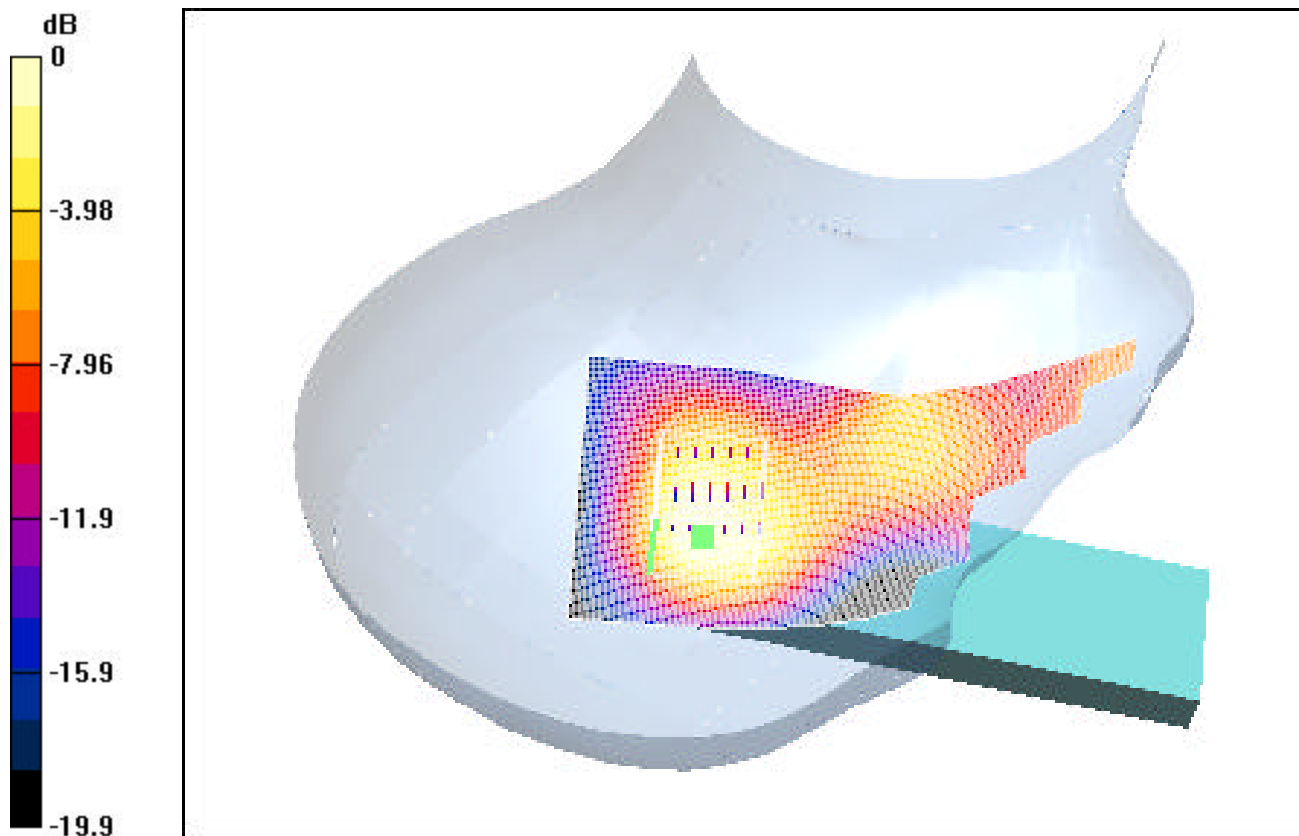
**Area Scan (61x131x1):** Measurement grid: dx=15mm, dy=15mm

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

Peak SAR (extrapolated) = 0.391 W/kg

SAR(1 g) = 0.235 mW/g; SAR(10 g) = 0.134 mW/g

Reference Value = 11.3 V/m



0 dB = 0.255mW/g

# PCTEST ENGINEERING LABORATORY, INC.

**DUT: SCP-5500; Type: SANYO Tri Mode Phone; Serial: FCC1**  
**Program: SCP-5500 PCS, Left; Conducted Power: 23.5 dBm**

Communication System: PCS CDMA; Frequency: 1880 MHz; Duty Cycle: 1:1  
Medium: 1900 Brain ( $\sigma = 1.46$  mho/m,  $\epsilon_r = 39.92$ ,  $\rho = 1000$  kg/m<sup>3</sup>)  
Phantom section: Left Section

Test Date: 07-28-2003; Ambient Temp: 23.2°C; Tissue Temp: 20.7°C

Probe: ET3DV6 - SN1560; ConvF(5.4, 5.4, 5.4); Calibrated: 9/27/2002  
Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)  
Electronics: DAE3 SN330; Calibrated: 12/1/2002  
Phantom: SAM 12b; Type: SAM 4.0; Serial: TP:1197

Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 115

## Touch, Ch.0600, Ant In, Standard Battery

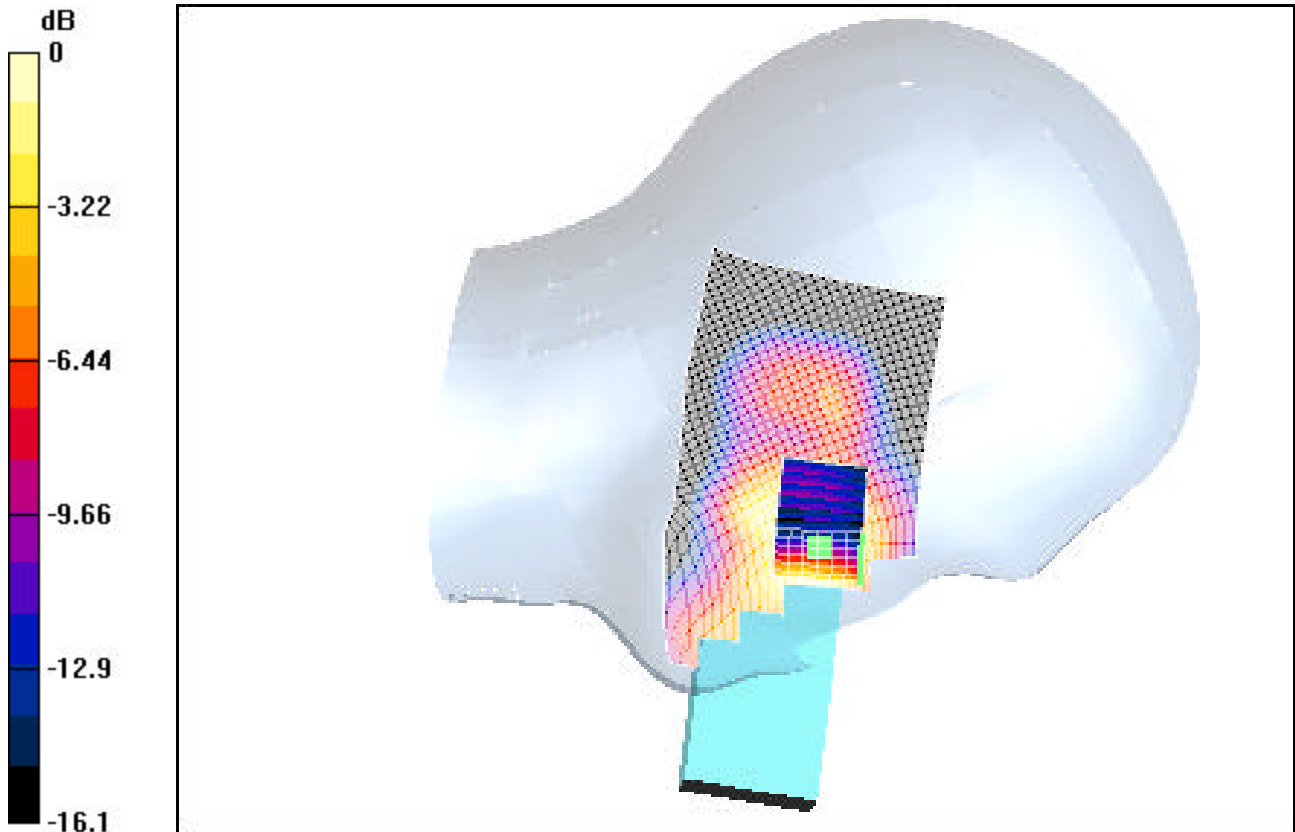
**Area Scan (61x131x1):** Measurement grid: dx=15mm, dy=15mm

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

Peak SAR (extrapolated) = 1.15 W/kg

SAR(1 g) = 0.713 mW/g; SAR(10 g) = 0.419 mW/g

Reference Value = 7.81 V/m



0 dB = 0.77mW/g

# PCTEST ENGINEERING LABORATORY, INC.

**DUT: SCP-5500; Type: SANYO Tri Mode Phone; Serial: FCC1**  
**Program: SCP-5500 PCS, Left; Conducted Power: 23.5 dBm**

Communication System: PCS CDMA; Frequency: 1880 MHz; Duty Cycle: 1:1  
Medium: 1900 Brain ( $\sigma = 1.46$  mho/m,  $\epsilon_r = 39.92$ ,  $\rho = 1000$  kg/m<sup>3</sup>)  
Phantom section: Left Section

Test Date: 08-07-2003; Ambient Temp: 22.9°C; Tissue Temp: 20.6°C

Probe: ET3DV6 - SN1560; ConvF(5.4, 5.4, 5.4); Calibrated: 9/27/2002  
Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)  
Electronics: DAE3 SN330; Calibrated: 12/1/2002  
Phantom: SAM 12b; Type: SAM 4.0; Serial: TP:1197

Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 115

## Tilt, Ch.0600, Ant In, Standard Battery

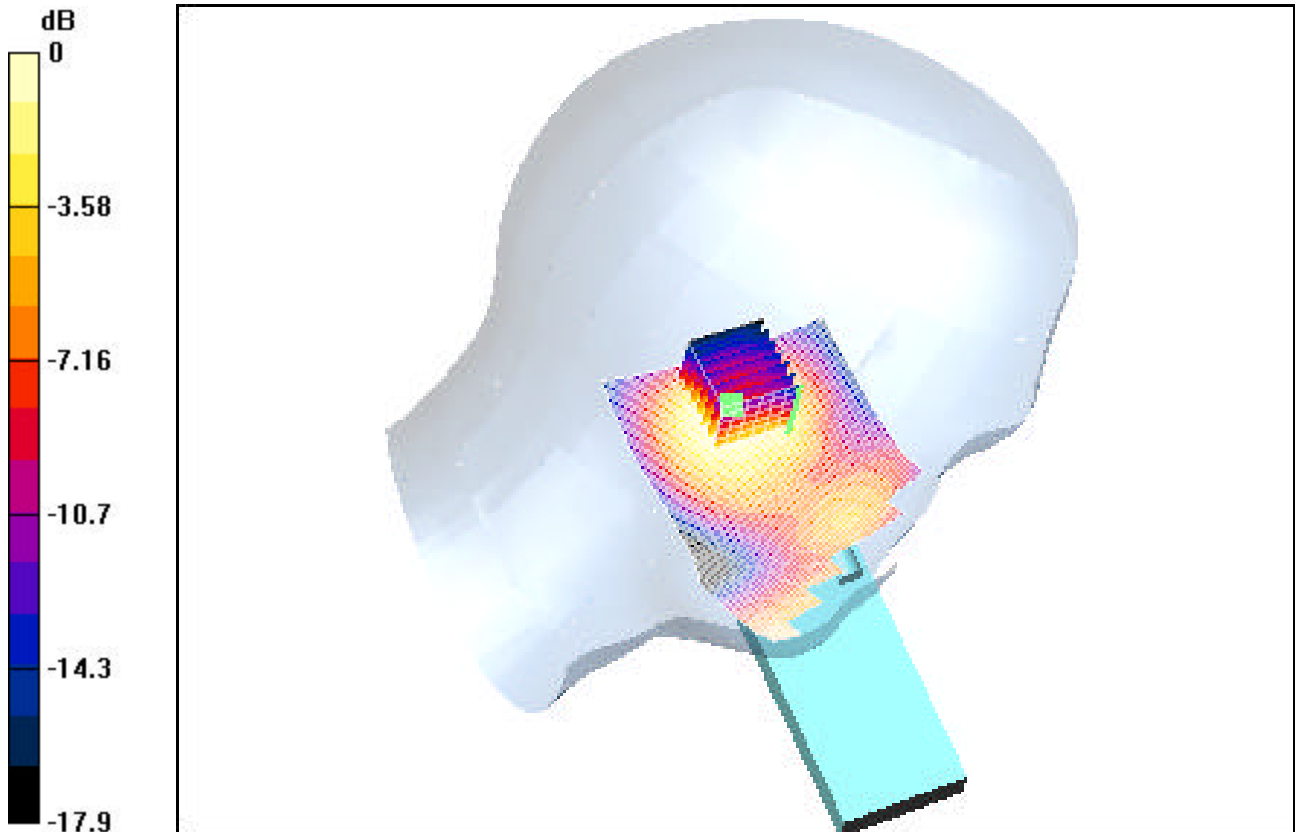
**Area Scan (61x121x1):** Measurement grid: dx=15mm, dy=15mm

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

Peak SAR (extrapolated) = 0.286 W/kg

SAR(1 g) = 0.191 mW/g; SAR(10 g) = 0.114 mW/g

Reference Value = 9.24 V/m



0 dB = 0.207mW/g

# PCTEST ENGINEERING LABORATORY, INC.

**DUT: SCP-5500; Type: SANYO Tri Mode Phone; Serial: FCC1**  
**Program: SCP-5500 AMPS Body ; Conducted Power: 24.5 dBm**

Communication System: AMPS; Frequency: 836.49 MHz; Duty Cycle: 1:1  
Medium: 835 Muscle ( $\sigma = 0.99$  mho/m,  $\epsilon_r = 53.54$ ,  $\rho = 1000$  kg/m<sup>3</sup>)  
Phantom section: Flat Section; Space: 1.9 cm

Test Date: 07-31-2003; Ambient Temp: 23.5°C; Tissue Temp: 20.5°C

Probe: ET3DV6 - SN1560; ConvF(6.6, 6.6, 6.6); Calibrated: 9/27/2002  
Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)  
Electronics: DAE3 SN330; Calibrated: 12/1/2002  
Phantom: SAM 12b; Type: SAM 4.0; Serial: TP:1197

Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 115

## Ch.0383, Ant Out, Standard Battery

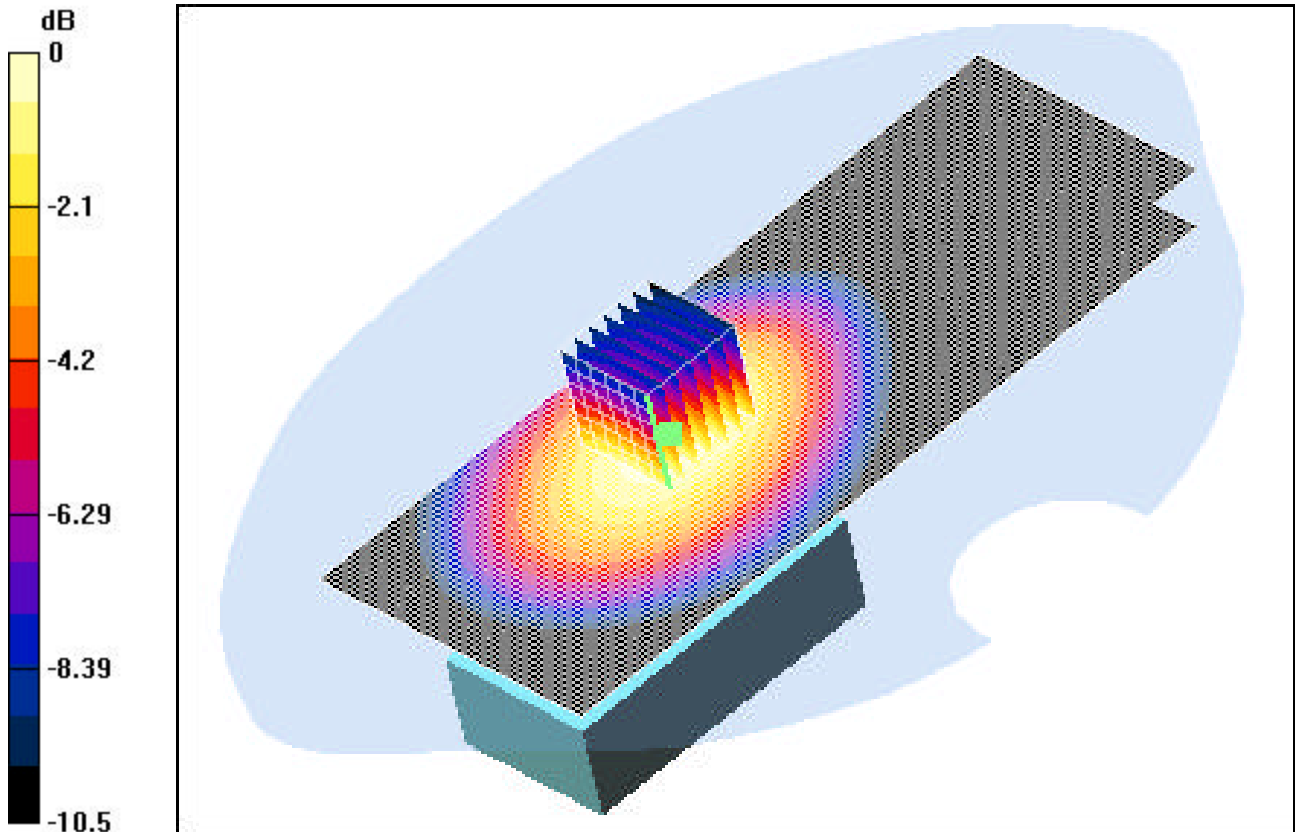
**Area Scan (61x151x1):** Measurement grid: dx=15mm, dy=15mm

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

Peak SAR (extrapolated) = 1.28 W/kg

SAR(1 g) = 0.933 mW/g; SAR(10 g) = 0.643 mW/g

Reference Value = 26.6 V/m



0 dB = 0.99mW/g

# PCTEST ENGINEERING LABORATORY, INC.

**DUT: SCP-5500; Type: SANYO Tri Mode Phone; Serial: FCC1**  
**Program: SCP-5500 CDMA Body; Conducted Power: 24.5 dBm**

Communication System: Cellular CDMA; Frequency: 836.49 MHz; Duty Cycle: 1:1  
Medium: 835 Muscle ( $\sigma = 0.99$  mho/m,  $\epsilon_r = 53.54$ ,  $\rho = 1000$  kg/m<sup>3</sup>)  
Phantom section: Flat Section; Space: 1.9 cm

Test Date: 07-31-2003; Ambient Temp: 23.5°C; Tissue Temp: 20.5°C

Probe: ET3DV6 - SN1560; ConvF(6.6, 6.6, 6.6); Calibrated: 9/27/2002  
Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)  
Electronics: DAE3 SN330; Calibrated: 12/1/2002  
Phantom: SAM 12b; Type: SAM 4.0; Serial: TP:1197

Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 115

## Ch.0383, Ant Out, Standard Battery

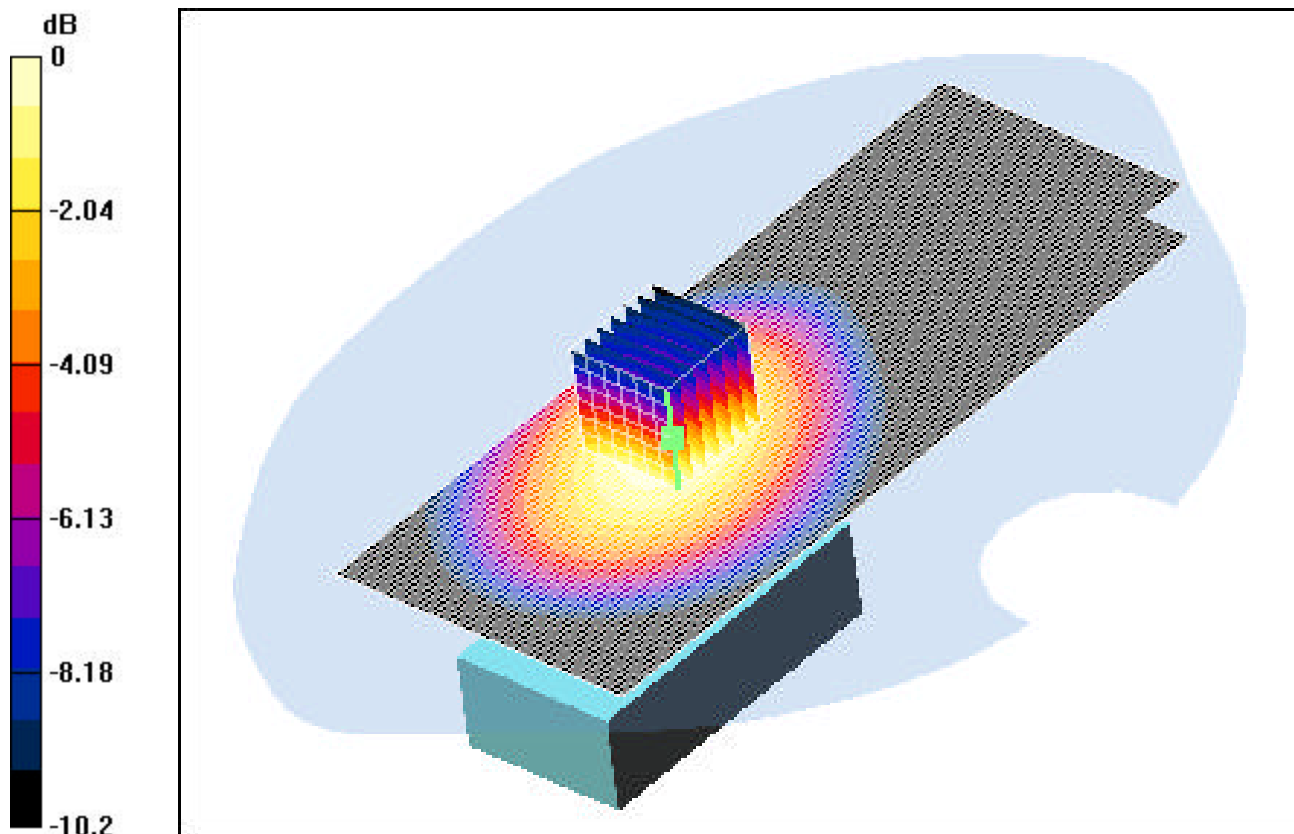
**Area Scan (61x151x1):** Measurement grid: dx=15mm, dy=15mm

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

Peak SAR (extrapolated) = 1.22 W/kg

SAR(1 g) = 0.887 mW/g; SAR(10 g) = 0.613 mW/g

Reference Value = 24.9 V/m



0 dB = 0.945mW/g

# PCTEST ENGINEERING LABORATORY, INC.

**DUT: SCP-5500; Type: SANYO Tri Mode Phone; Serial: FCC1**  
**Program: SCP-5500 PCS Body; Conducted Power: 23.5 dBm**

Communication System: PCS CDMA; Frequency: 1851.25 MHz; Duty Cycle: 1:1  
Medium: 1900 Muscle ( $\sigma = 1.58$  mho/m,  $\epsilon_r = 55.06$ ,  $\rho = 1000$  kg/m<sup>3</sup>)  
Phantom section: Flat Section; Space: 1.9 cm

Test Date: 08-01-2003; Ambient Temp: 23.1°C; Tissue Temp: 20.4°C

Probe: ET3DV6 - SN1560; ConvF(4.9, 4.9, 4.9); Calibrated: 9/27/2002  
Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)  
Electronics: DAE3 SN330; Calibrated: 12/1/2002  
Phantom: SAM 12b; Type: SAM 4.0; Serial: TP:1197

Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 115

## Ch.0025, Ant Out, Standard Battery

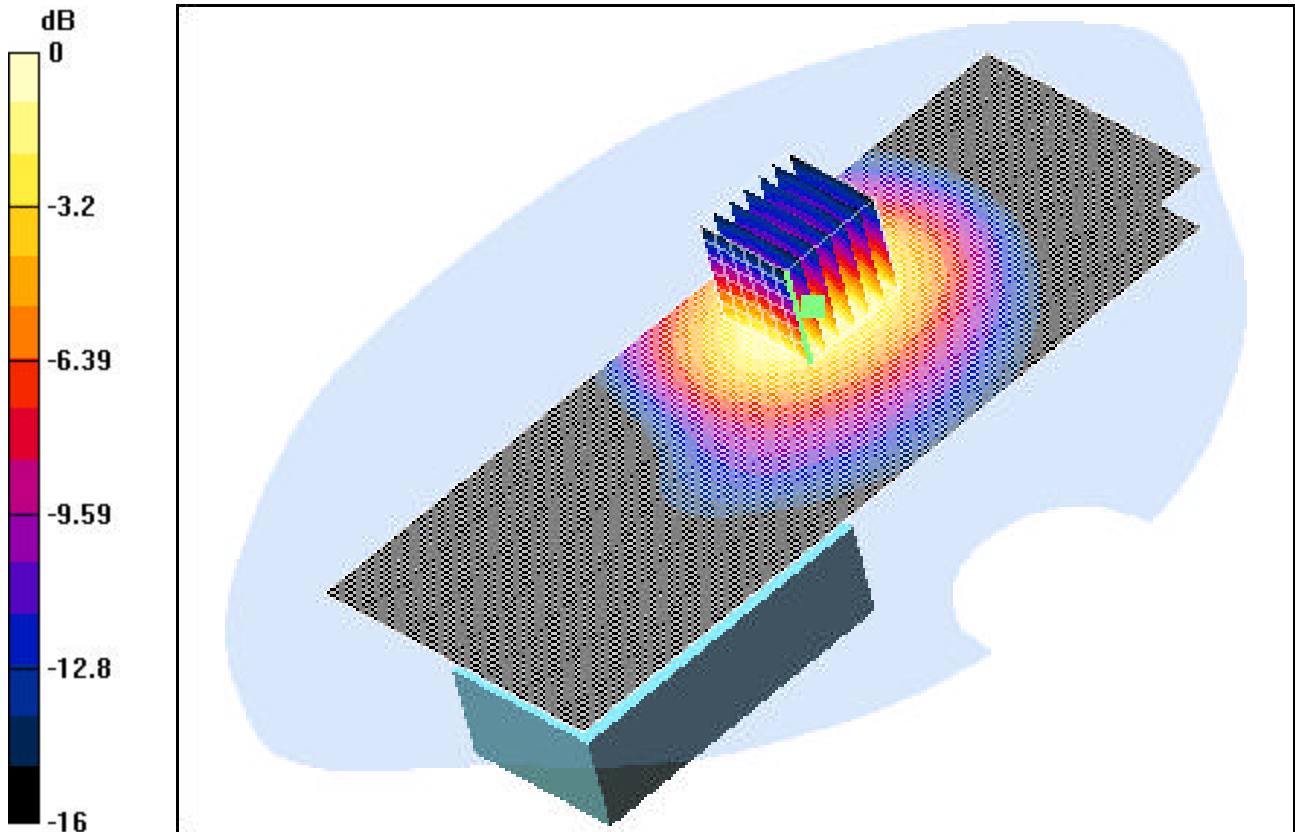
**Area Scan (61x151x1):** Measurement grid: dx=15mm, dy=15mm

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

Peak SAR (extrapolated) = 1.17 W/kg

SAR(1 g) = 0.691 mW/g; SAR(10 g) = 0.399 mW/g

Reference Value = 10.2 V/m



0 dB = 0.743mW/g

# PCTEST ENGINEERING LABORATORY, INC.

**DUT: SCP-5500; Type: SANYO Tri Mode Phone; Serial: FCC1**  
**Program: SCP-5500 AMPS PTT; Conducted Power: 24.5 dBm**

Communication System: AMPS; Frequency: 836.49 MHz; Duty Cycle: 1:1  
Medium: 835 Brain ( $\sigma = 0.89$  mho/m,  $\epsilon_r = 40.82$ ,  $\rho = 1000$  kg/m<sup>3</sup>)  
Phantom section: Flat Section; Space: 2.5 cm

Test Date: 08-08-2003; Ambient Temp: 22.8°C; Tissue Temp: 20.3°C

Probe: ET3DV6 - SN1560; ConvF(6.9, 6.9, 6.9); Calibrated: 9/27/2002  
Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)  
Electronics: DAE3 SN330; Calibrated: 12/1/2002  
Phantom: SAM 12b; Type: SAM 4.0; Serial: TP:1197

Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 115

## Ch.0383, Ant In, LCD Open, Standard Battery

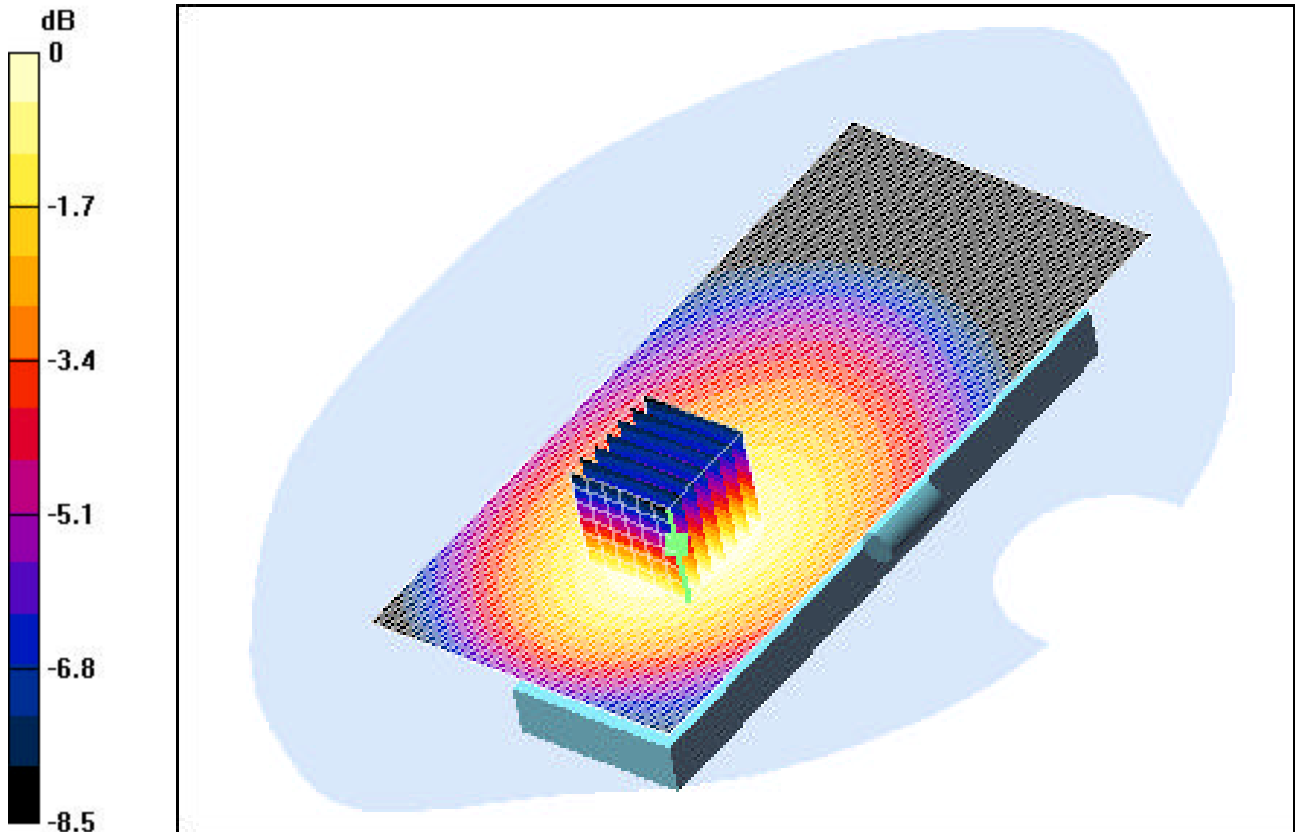
**Area Scan (61x131x1):** Measurement grid: dx=15mm, dy=15mm

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

Peak SAR (extrapolated) = 0.246 W/kg

SAR(1 g) = 0.184 mW/g; SAR(10 g) = 0.133 mW/g

Reference Value = 12 V/m



0 dB = 0.193mW/g



# PCTEST ENGINEERING LABORATORY, INC.

**DUT: SCP-5500; Type: SANYO Tri Mode Phone; Serial: FCC1**  
**Program: SCP-5500 AMPS PTT; Conducted Power: 24.5 dBm**

Communication System: AMPS; Frequency: 836.49 MHz; Duty Cycle: 1:1  
Medium: 835 Brain ( $\sigma = 0.89$  mho/m,  $\epsilon_r = 40.82$ ,  $\rho = 1000$  kg/m<sup>3</sup>)  
Phantom section: Flat Section; Space: 2.5 cm

Test Date: 08-08-2003; Ambient Temp: 22.8°C; Tissue Temp: 20.3°C

Probe: ET3DV6 - SN1560; ConvF(6.9, 6.9, 6.9); Calibrated: 9/27/2002  
Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)  
Electronics: DAE3 SN330; Calibrated: 12/1/2002  
Phantom: SAM 12b; Type: SAM 4.0; Serial: TP:1197

Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 115

## Ch.0383, Ant Out, LCD Close, Standard Battery

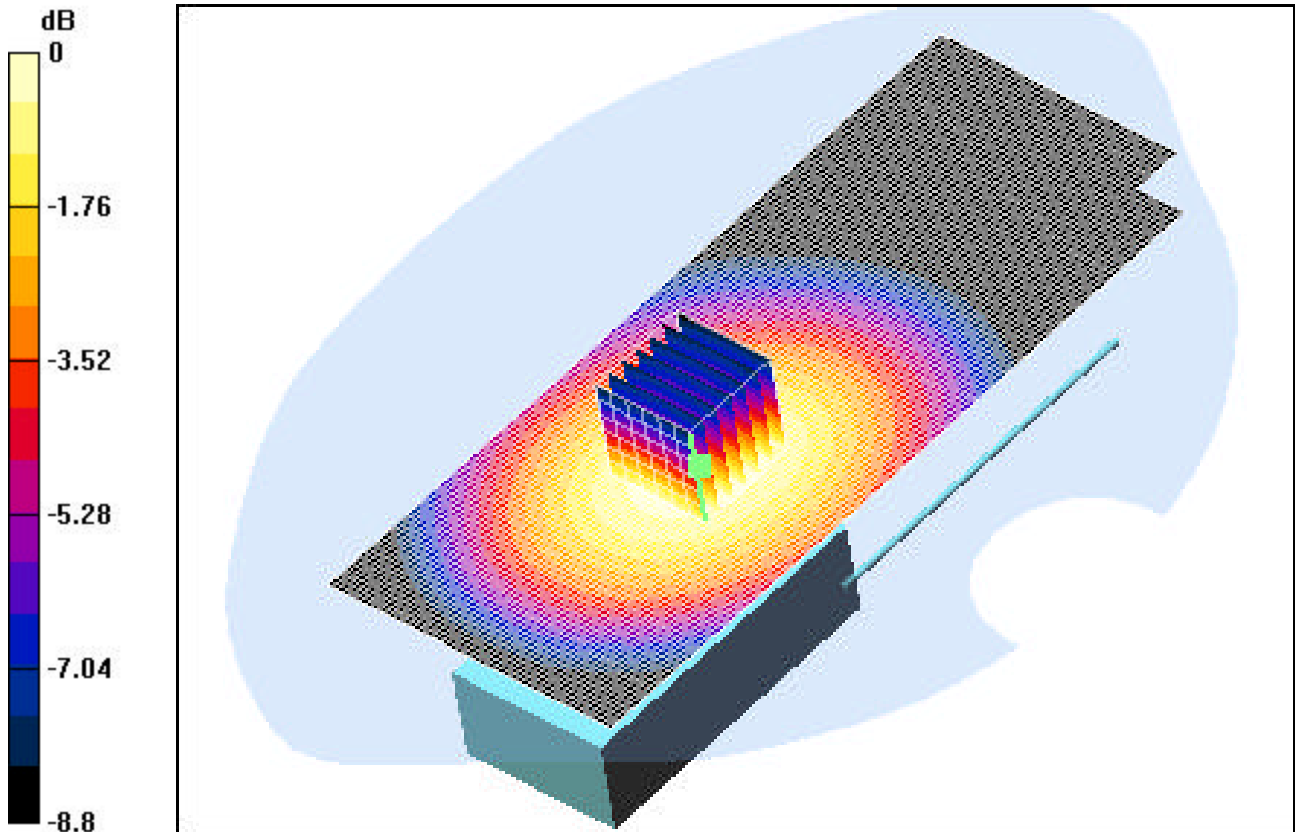
**Area Scan (61x151x1):** Measurement grid: dx=15mm, dy=15mm

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

Peak SAR (extrapolated) = 0.457 W/kg

SAR(1 g) = 0.341 mW/g; SAR(10 g) = 0.246 mW/g

Reference Value = 18.5 V/m



0 dB = 0.359mW/g

# PCTEST ENGINEERING LABORATORY, INC.

**DUT: SCP-5500; Type: SANYO Tri Mode Phone; Serial: FCC1**  
**Program: SCP-5500 CDMA PTT; Conducted Power: 24.5 dBm**

Communication System: Cellular CDMA; Frequency: 836.49 MHz; Duty Cycle: 1:1  
Medium: 835 Brain ( $\sigma = 0.89$  mho/m,  $\epsilon_r = 40.82$ ,  $\rho = 1000$  kg/m<sup>3</sup>)  
Phantom section: Flat Section; Space: 2.5 cm

Test Date: 08-08-2003; Ambient Temp: 22.8°C; Tissue Temp: 20.3°C

Probe: ET3DV6 - SN1560; ConvF(6.9, 6.9, 6.9); Calibrated: 9/27/2002  
Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)  
Electronics: DAE3 SN330; Calibrated: 12/1/2002  
Phantom: SAM 12b; Type: SAM 4.0; Serial: TP:1197

Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 115

## Ch.0383, Ant In, LCD Open, Standard Battery

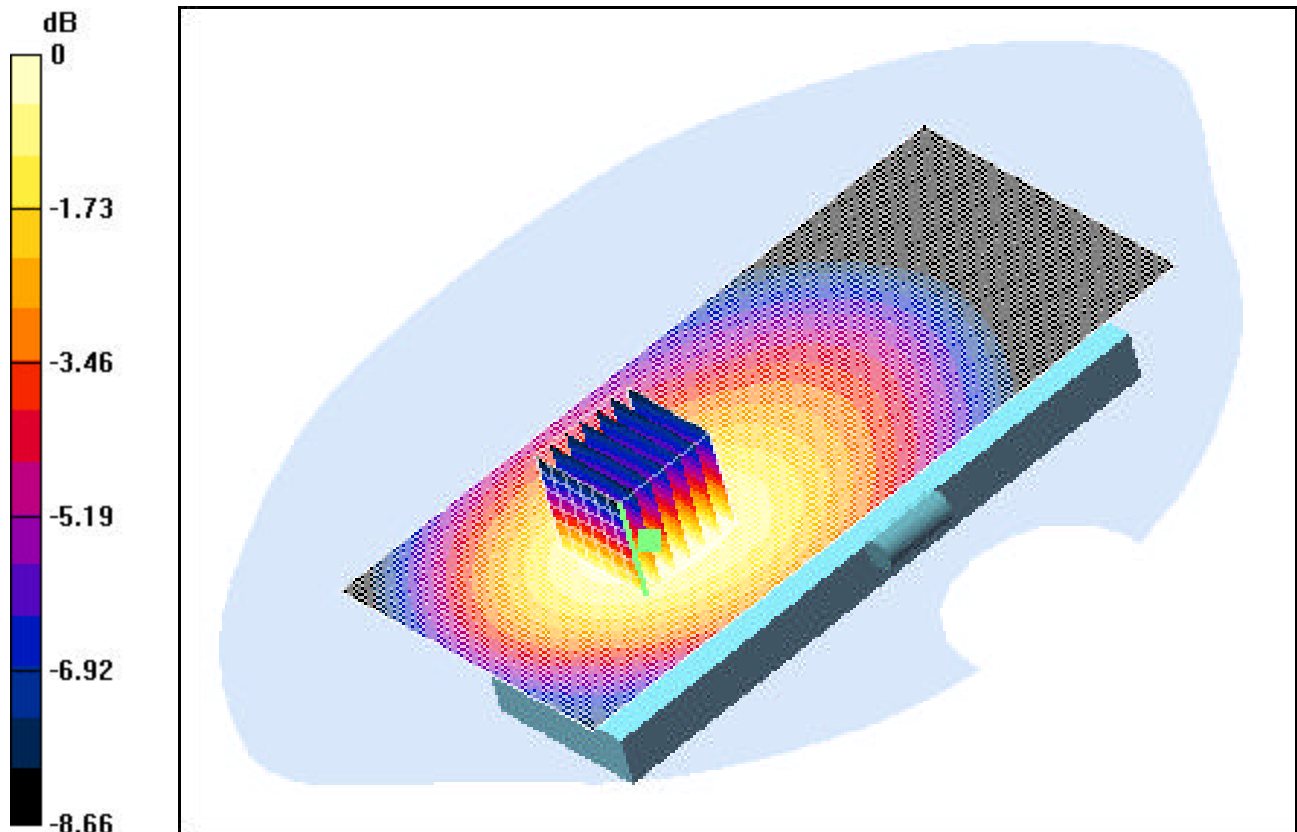
**Area Scan (61x131x1):** Measurement grid: dx=15mm, dy=15mm

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

Peak SAR (extrapolated) = 0.252 W/kg

SAR(1 g) = 0.187 mW/g; SAR(10 g) = 0.135 mW/g

Reference Value = 11.9 V/m



0 dB = 0.197mW/g

# PCTEST ENGINEERING LABORATORY, INC.

**DUT: SCP-5500; Type: SANYO Tri Mode Phone; Serial: FCC1**  
**Program: SCP-5500 CDMA PTT; Conducted Power: 24.5 dBm**

Communication System: Cellular CDMA; Frequency: 836.49 MHz; Duty Cycle: 1:1  
Medium: 835 Brain ( $\sigma = 0.89$  mho/m,  $\epsilon_r = 40.82$ ,  $\rho = 1000$  kg/m<sup>3</sup>)  
Phantom section: Flat Section

Test Date: 08-08-2003; Ambient Temp: 22.8°C; Tissue Temp: 20.3°C

Probe: ET3DV6 - SN1560; ConvF(6.9, 6.9, 6.9); Calibrated: 9/27/2002  
Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)  
Electronics: DAE3 SN330; Calibrated: 12/1/2002  
Phantom: SAM 12b; Type: SAM 4.0; Serial: TP:1197

Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 115

## Ch.0383, Ant Out, LCD Close, Standard Battery

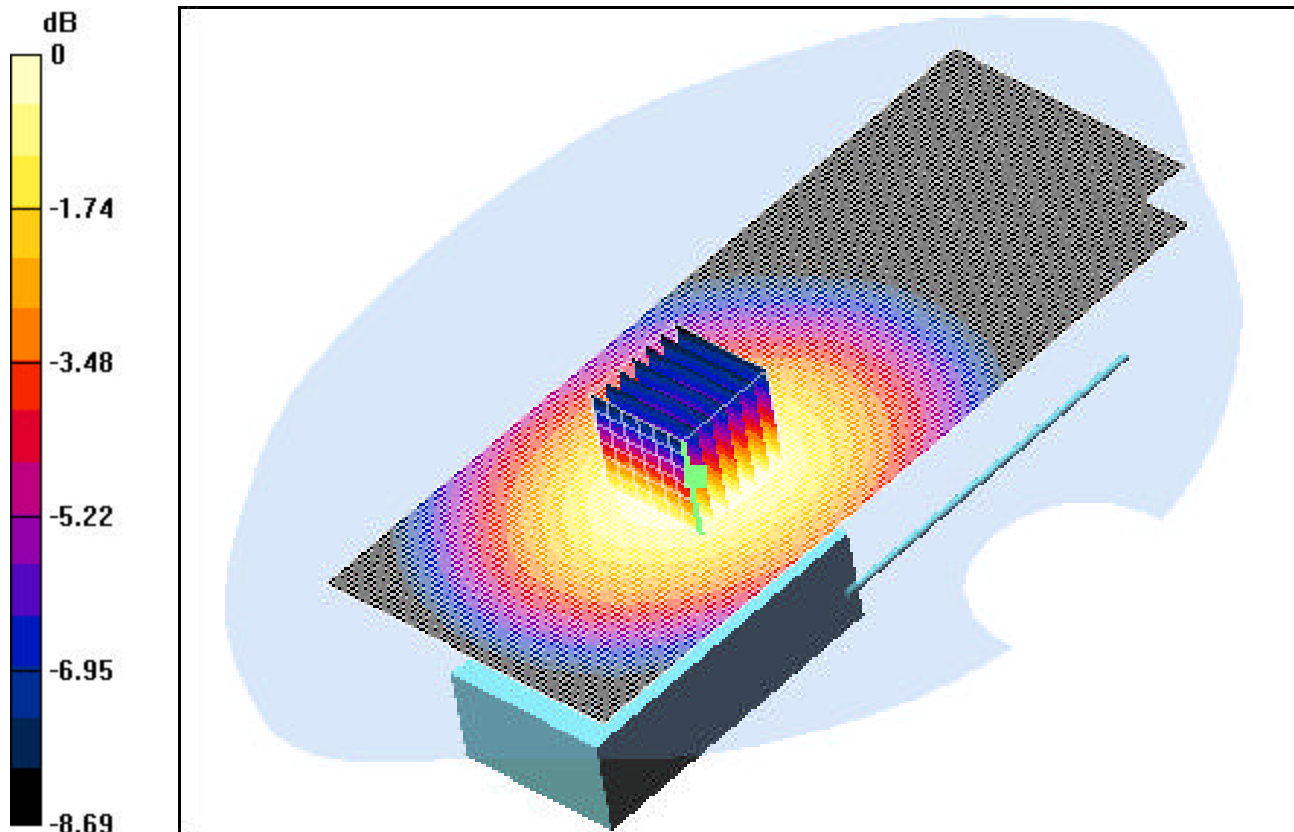
**Area Scan (61x151x1):** Measurement grid: dx=15mm, dy=15mm

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

Peak SAR (extrapolated) = 0.47 W/kg

SAR(1 g) = 0.349 mW/g; SAR(10 g) = 0.25 mW/g

Reference Value = 17.8 V/m



0 dB = 0.366mW/g

# PCTEST ENGINEERING LABORATORY, INC.

**DUT: SCP-5500; Type: SANYO Tri Mode Phone; Serial: FCC1**  
**Program: SCP-5500 PCS PTT; Conducted Power: 23.5 dBm**

Communication System: PCS CDMA; Frequency: 1880 MHz; Duty Cycle: 1:1  
Medium: 1900 Brain ( $\sigma = 1.46$  mho/m,  $\epsilon_r = 39.92$ ,  $\rho = 1000$  kg/m<sup>3</sup>)  
Phantom section: Flat Section; Space: 2.5 cm

Test Date: 08-07-2003; Ambient Temp: 22.9°C; Tissue Temp: 20.6°C

Probe: ET3DV6 - SN1560; ConvF(5.4, 5.4, 5.4); Calibrated: 9/27/2002  
Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)  
Electronics: DAE3 SN330; Calibrated: 12/1/2002  
Phantom: SAM 12b; Type: SAM 4.0; Serial: TP:1197

Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 115

## Ch.0600, Ant In, LCD Open, Standard Battery

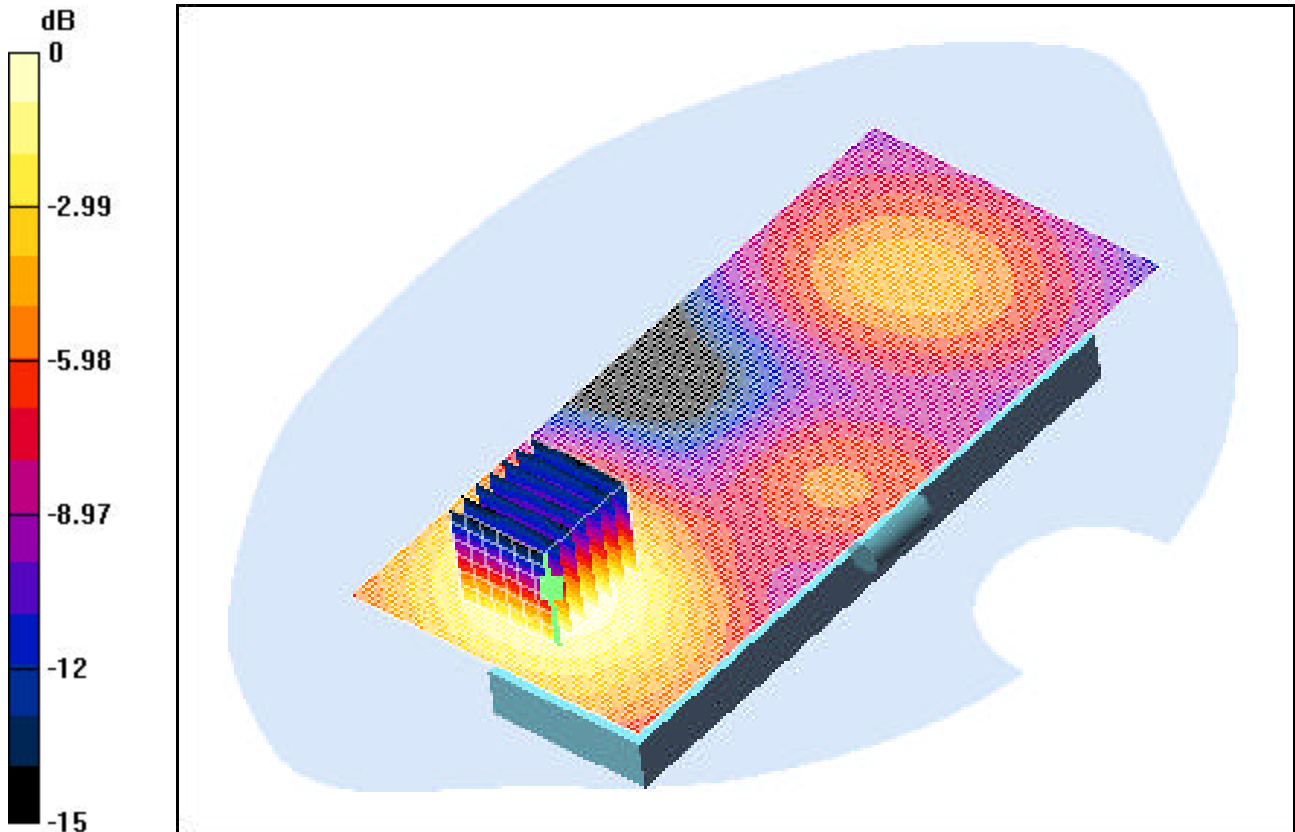
**Area Scan (61x131x1):** Measurement grid: dx=15mm, dy=15mm

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

Peak SAR (extrapolated) = 0.162 W/kg

SAR(1 g) = 0.102 mW/g; SAR(10 g) = 0.062 mW/g

Reference Value = 3.03 V/m



0 dB = 0.108mW/g

# PCTEST ENGINEERING LABORATORY, INC.

**DUT: SCP-5500; Type: SANYO Tri Mode Phone; Serial: FCC1**  
**Program: SCP-5500 PCS PTT; Conducted Power: 23.5 dBm**

Communication System: PCS CDMA; Frequency: 1880 MHz; Duty Cycle: 1:1  
Medium: 1900 Brain ( $\sigma = 1.46$  mho/m,  $\epsilon_r = 39.92$ ,  $\rho = 1000$  kg/m<sup>3</sup>)  
Phantom section: Flat Section; Space: 2.5 cm

Test Date: 08-07-2003; Ambient Temp: 22.9°C; Tissue Temp: 20.6°C

Probe: ET3DV6 - SN1560; ConvF(5.4, 5.4, 5.4); Calibrated: 9/27/2002  
Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)  
Electronics: DAE3 SN330; Calibrated: 12/1/2002  
Phantom: SAM 12b; Type: SAM 4.0; Serial: TP:1197

Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 115

## Ch.0600, Ant Out, LCD Close, Standard Battery

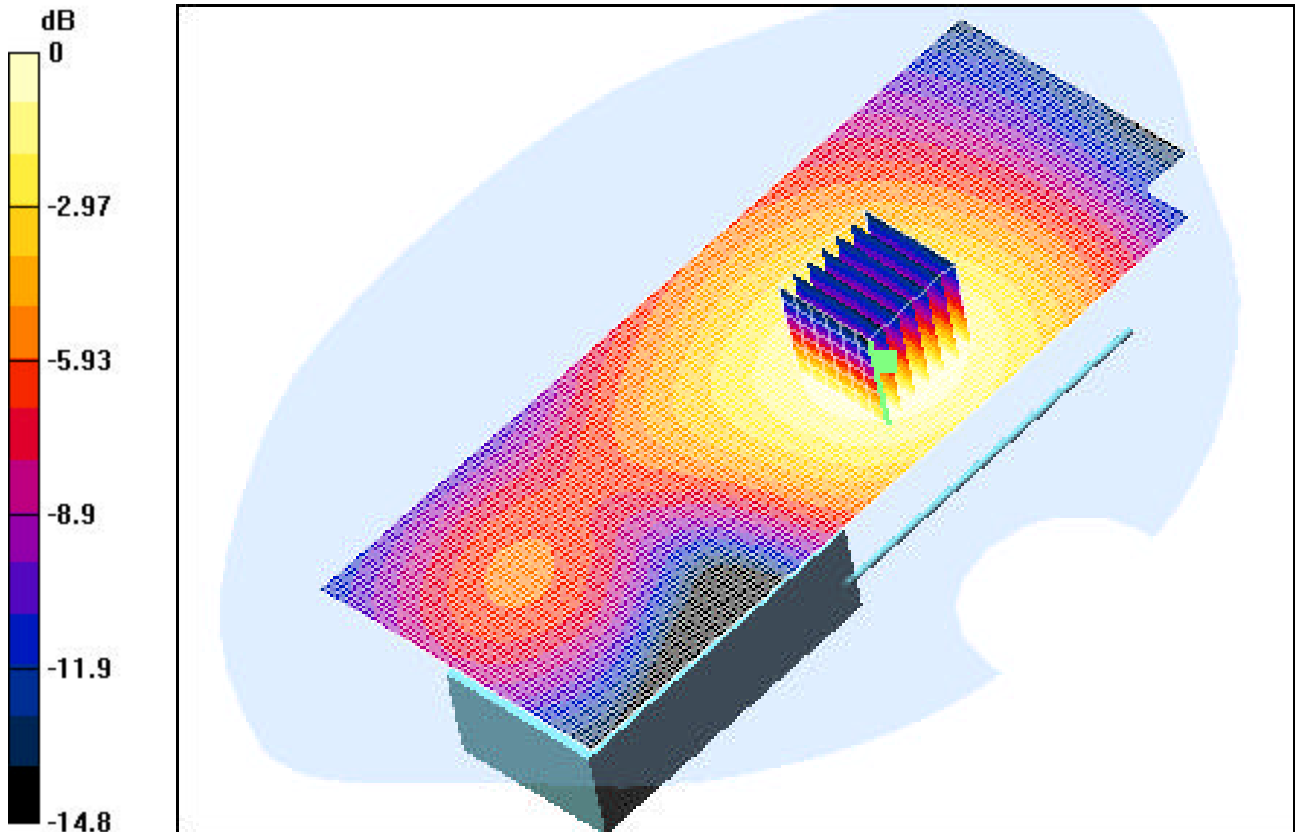
**Area Scan (61x151x1):** Measurement grid: dx=15mm, dy=15mm

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

Peak SAR (extrapolated) = 0.217 W/kg

SAR(1 g) = 0.134 mW/g; SAR(10 g) = 0.0832 mW/g

Reference Value = 8.14 V/m



0 dB = 0.142mW/g

# PCTEST ENGINEERING LABORATORY, INC.

**DUT: SCP-5500; Type: SANYO Tri Mode Phone; Serial: FCC1**  
**Program: SCP-5500 CDMA, Right; Conducted Power: 24.5 dBm**

Communication System: Cellular CDMA; Frequency: 836.49 MHz; Duty Cycle: 1:1  
Medium: 835 Brain ( $\sigma = 0.89$  mho/m,  $\epsilon_r = 40.82$ ,  $\rho = 1000$  kg/m<sup>3</sup>)  
Phantom section: Right Section

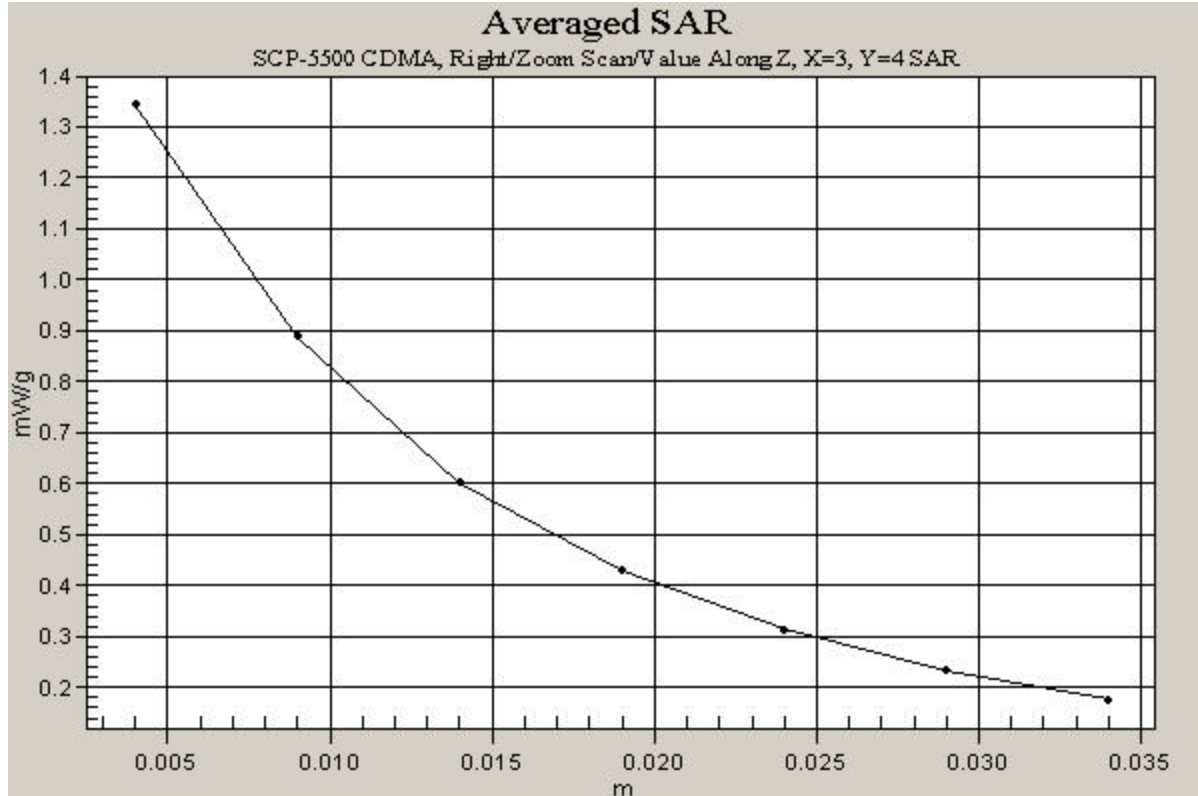
Test Date: 07-29-2003; Ambient Temp: 22.8°C; Tissue Temp: 20.4°C

Probe: ET3DV6 - SN1560; ConvF(6.9, 6.9, 6.9); Calibrated: 9/27/2002  
Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)  
Electronics: DAE3 SN330; Calibrated: 12/1/2002  
Phantom: SAM 12b; Type: SAM 4.0; Serial: TP:1197

Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 115

## Touch, Ch.383, Ant Out, Standard Battery

**Area Scan (61x141x1):** Measurement grid: dx=15mm, dy=15mm  
**Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm  
Peak SAR (extrapolated) = 1.95 W/kg  
SAR(1 g) = 1.25 mW/g; SAR(10 g) = 0.781 mW/g  
Reference Value = 11.4 V/m



# PCTEST ENGINEERING LABORATORY, INC.

**DUT: SCP-5500; Type: SANYO Tri Mode Phone; Serial: FCC1**  
**Program: SCP-5500 PCS, Right; Conducted Power: 23.5 dBm**

Communication System: PCS CDMA; Frequency: 1880 MHz; Duty Cycle: 1:1  
Medium: 1900 Brain ( $\sigma = 1.46$  mho/m,  $\epsilon_r = 39.92$ ,  $\rho = 1000$  kg/m<sup>3</sup>)  
Phantom section: Right Section

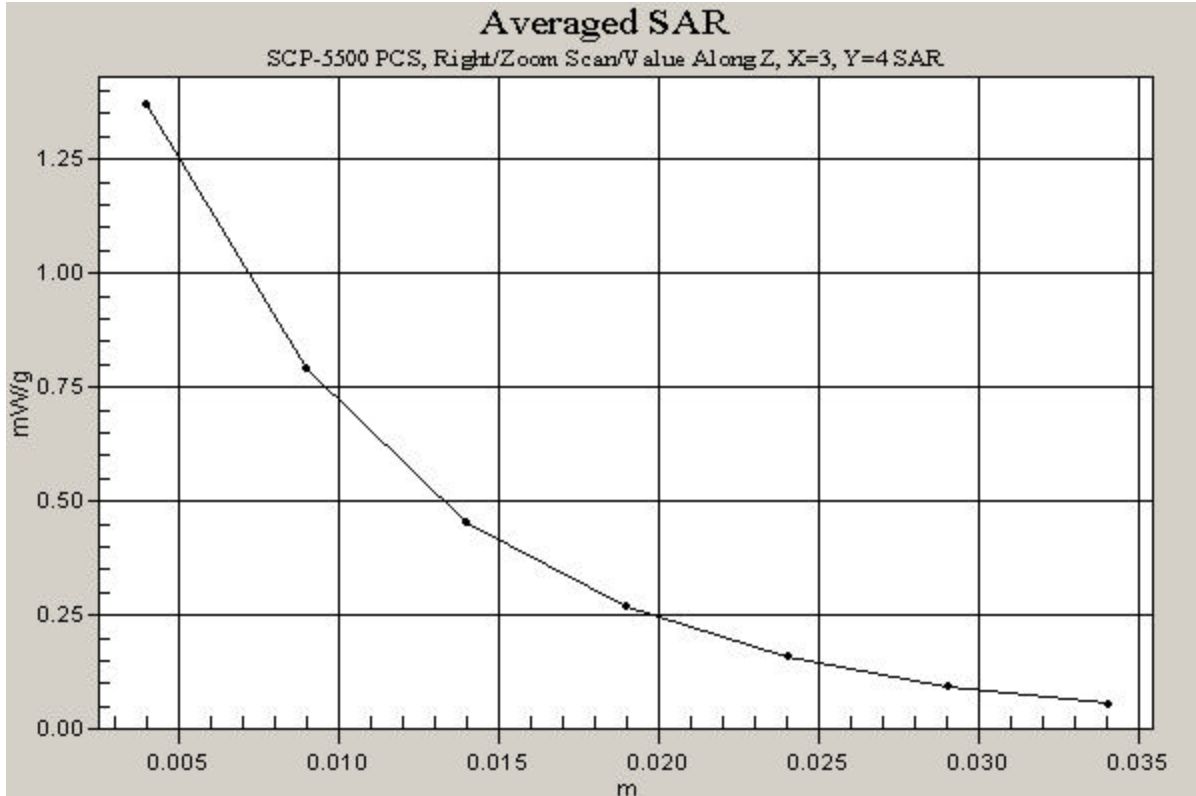
Test Date: 07-28-2003; Ambient Temp: 23.2°C; Tissue Temp: 20.7°C

Probe: ET3DV6 - SN1560; ConvF(5.4, 5.4, 5.4); Calibrated: 9/27/2002  
Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)  
Electronics: DAE3 SN330; Calibrated: 12/1/2002  
Phantom: SAM 12b; Type: SAM 4.0; Serial: TP:1197

Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 115

## Touch, Ch.0600, Ant In, Standard Battery

**Area Scan (61x131x1):** Measurement grid: dx=15mm, dy=15mm  
**Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm  
Peak SAR (extrapolated) = 2.17 W/kg  
SAR(1 g) = 1.25 mW/g; SAR(10 g) = 0.67 mW/g  
Reference Value = 8.69 V/m



# PCTEST ENGINEERING LABORATORY, INC.

**DUT: SCP-5500; Type: SANYO Tri Mode Phone; Serial: FCC1**  
**Program: SCP-5500 AMPS Body ; Conducted Power: 24.5 dBm**

Communication System: AMPS; Frequency: 836.49 MHz; Duty Cycle: 1:1  
Medium: 835 Muscle ( $\sigma = 0.99$  mho/m,  $\epsilon_r = 53.54$ ,  $\rho = 1000$  kg/m<sup>3</sup>)  
Phantom section: Flat Section; Space: 1.9 cm

Test Date: 07-31-2003; Ambient Temp: 23.5°C; Tissue Temp: 20.5°C

Probe: ET3DV6 - SN1560; ConvF(6.6, 6.6, 6.6); Calibrated: 9/27/2002  
Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)  
Electronics: DAE3 SN330; Calibrated: 12/1/2002  
Phantom: SAM 12b; Type: SAM 4.0; Serial: TP:1197

Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 115

## Ch.0383, Ant Out, Standard Battery

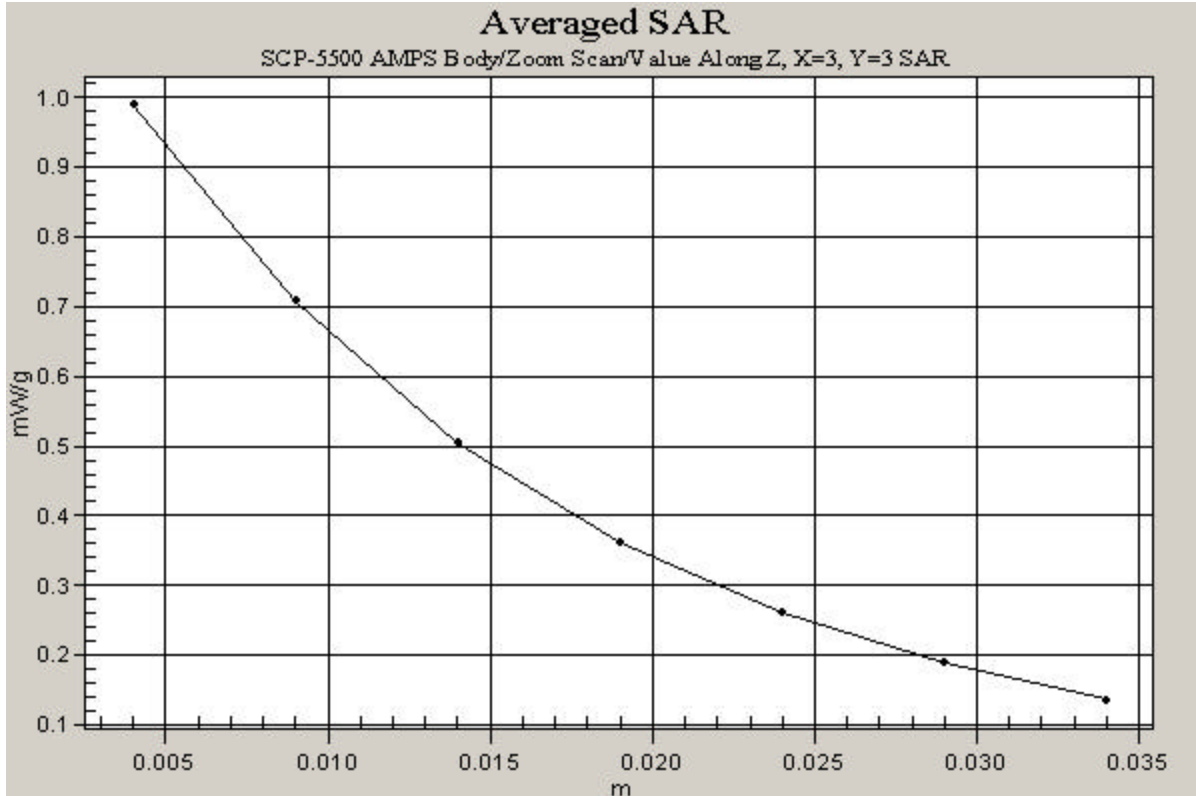
**Area Scan (61x151x1):** Measurement grid: dx=15mm, dy=15mm

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

Peak SAR (extrapolated) = 1.28 W/kg

SAR(1 g) = 0.933 mW/g; SAR(10 g) = 0.643 mW/g

Reference Value = 26.6 V/m





# PCTEST ENGINEERING LABORATORY, INC.

**DUT: SCP-5500; Type: SANYO Tri Mode Phone; Serial: FCC1**  
**Program: SCP-5500 PCS Body; Conducted Power: 23.5 dBm**

Communication System: PCS CDMA; Frequency: 1851.25 MHz; Duty Cycle: 1:1  
Medium: 1900 Muscle ( $\sigma = 1.58$  mho/m,  $\epsilon_r = 55.06$ ,  $\rho = 1000$  kg/m<sup>3</sup>)  
Phantom section: Flat Section; Space: 1.9 cm

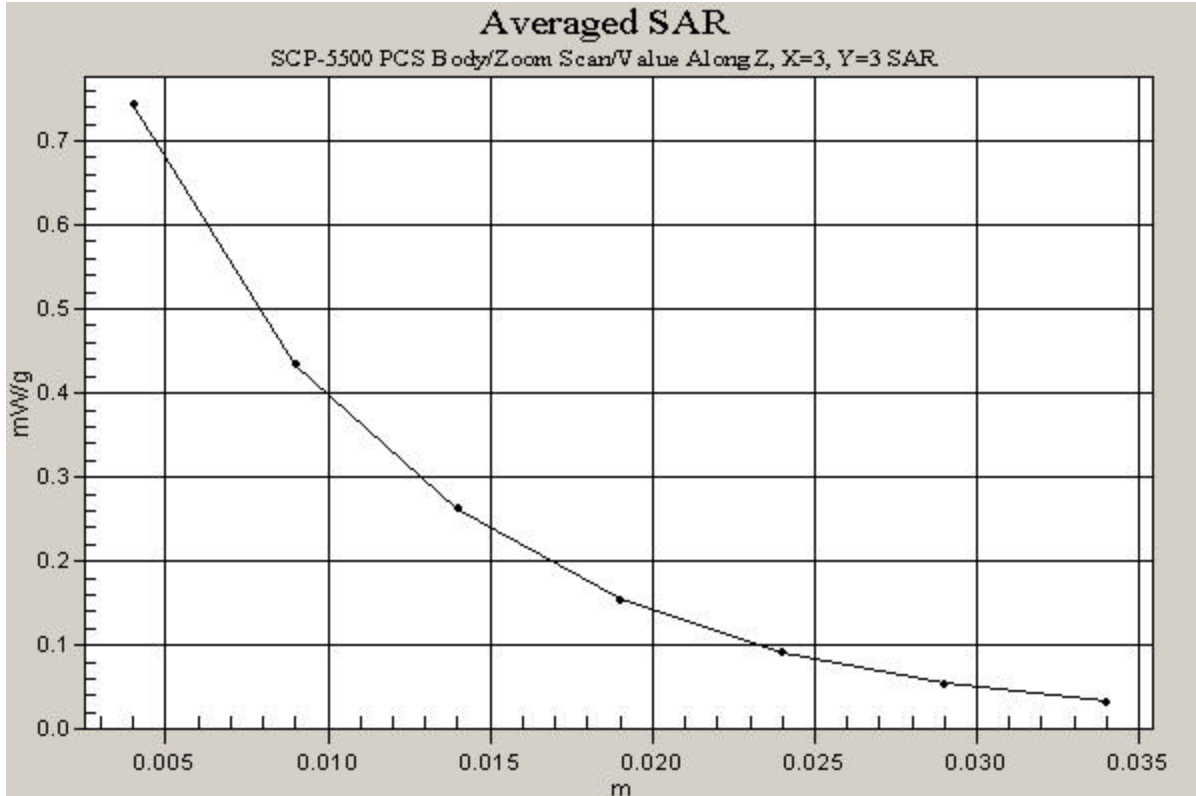
Test Date: 08-01-2003; Ambient Temp: 23.1°C; Tissue Temp: 20.4°C

Probe: ET3DV6 - SN1560; ConvF(4.9, 4.9, 4.9); Calibrated: 9/27/2002  
Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)  
Electronics: DAE3 SN330; Calibrated: 12/1/2002  
Phantom: SAM 12b; Type: SAM 4.0; Serial: TP:1197

Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 115

## Ch.0025, Ant Out, Standard Battery

**Area Scan (61x151x1):** Measurement grid: dx=15mm, dy=15mm  
**Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm  
Peak SAR (extrapolated) = 1.17 W/kg  
SAR(1 g) = 0.691 mW/g; SAR(10 g) = 0.399 mW/g  
Reference Value = 10.2 V/m



# PCTEST ENGINEERING LABORATORY, INC.

**DUT: SCP-5500; Type: SANYO Tri Mode Phone; Serial: FCC1**  
**Program: SCP-5500 CDMA PTT; Conducted Power: 24.5 dBm**

Communication System: Cellular CDMA; Frequency: 836.49 MHz; Duty Cycle: 1:1  
Medium: 835 Brain ( $\sigma = 0.89$  mho/m,  $\epsilon_r = 40.82$ ,  $\rho = 1000$  kg/m<sup>3</sup>)  
Phantom section: Flat Section; Space: 2.5 cm

Test Date: 08-08-2003; Ambient Temp: 22.8°C; Tissue Temp: 20.3°C

Probe: ET3DV6 - SN1560; ConvF(6.9, 6.9, 6.9); Calibrated: 9/27/2002  
Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)  
Electronics: DAE3 SN330; Calibrated: 12/1/2002  
Phantom: SAM 12b; Type: SAM 4.0; Serial: TP:1197

Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 115

## Ch.0383, Ant Out, LCD Close, Standard Battery

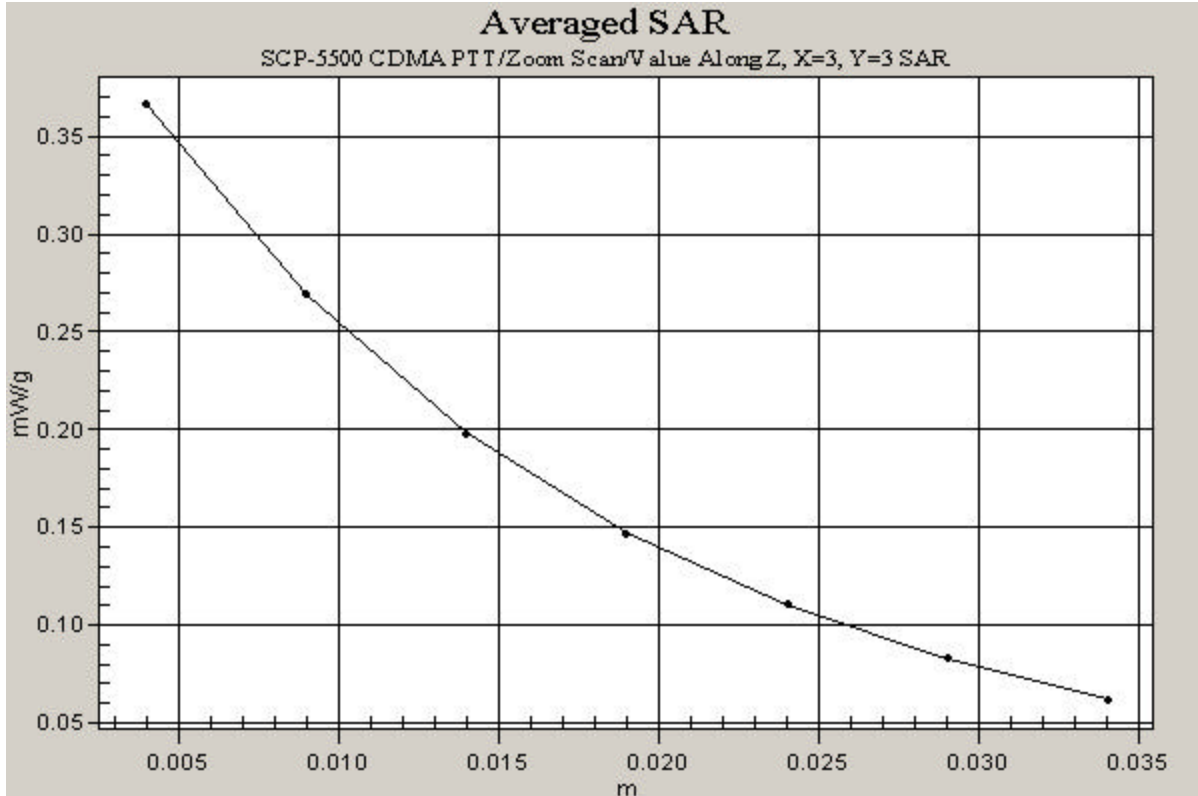
**Area Scan (61x151x1):** Measurement grid: dx=15mm, dy=15mm

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

Peak SAR (extrapolated) = 0.47 W/kg

SAR(1 g) = 0.349 mW/g; SAR(10 g) = 0.25 mW/g

Reference Value = 17.8 V/m



# PCTEST ENGINEERING LABORATORY, INC.

**DUT: SCP-5500; Type: SANYO Tri Mode Phone; Serial: FCC1**  
**Program: SCP-5500 PCS PTT; Conducted Power: 23.5 dBm**

Communication System: PCS CDMA; Frequency: 1880 MHz; Duty Cycle: 1:1  
Medium: 1900 Brain ( $\sigma = 1.46$  mho/m,  $\epsilon_r = 39.92$ ,  $\rho = 1000$  kg/m<sup>3</sup>)  
Phantom section: Flat Section; Space: 2.5 cm

Test Date: 08-07-2003; Ambient Temp: 22.9°C; Tissue Temp: 20.6°C

Probe: ET3DV6 - SN1560; ConvF(5.4, 5.4, 5.4); Calibrated: 9/27/2002  
Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)  
Electronics: DAE3 SN330; Calibrated: 12/1/2002  
Phantom: SAM 12b; Type: SAM 4.0; Serial: TP:1197

Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 115

## Ch.0600, Ant Out, LCD Close, Standard Battery

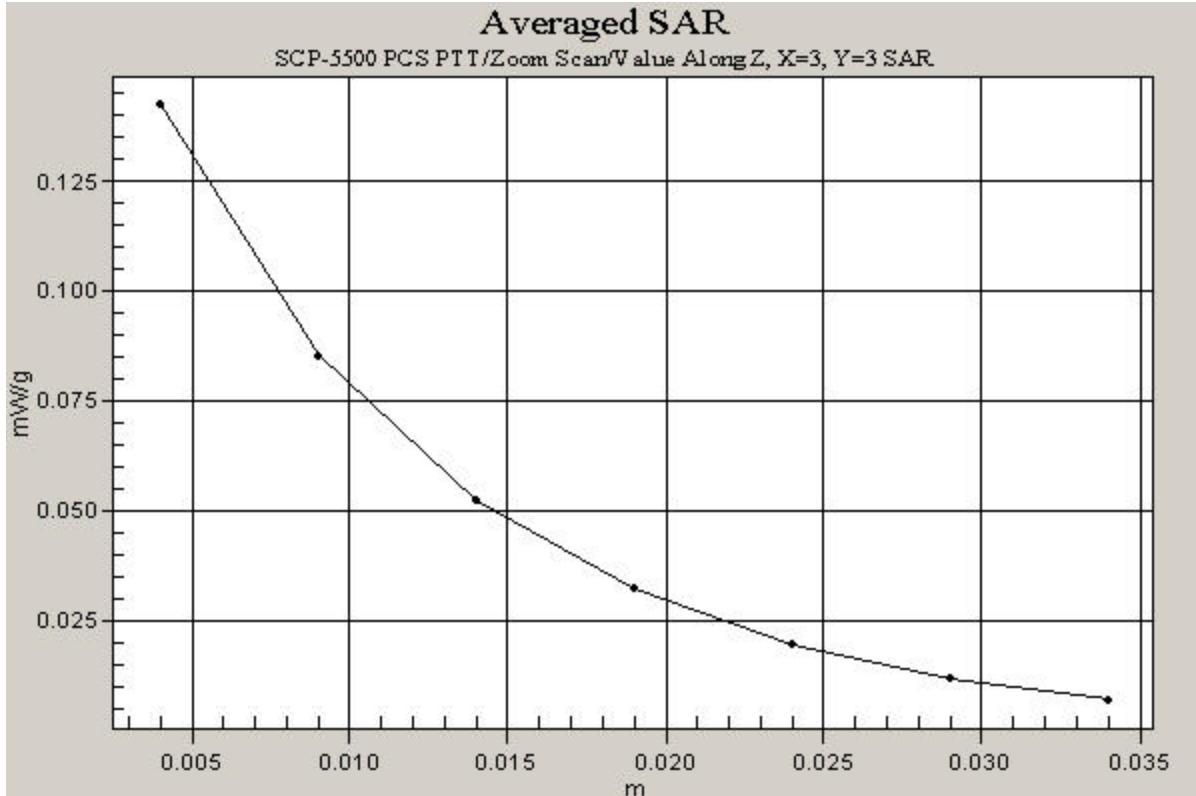
**Area Scan (61x151x1):** Measurement grid: dx=15mm, dy=15mm

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

Peak SAR (extrapolated) = 0.217 W/kg

SAR(1 g) = 0.134 mW/g; SAR(10 g) = 0.0832 mW/g

Reference Value = 8.14 V/m



## **APPENDIX B: DIPOLE VALIDATION**

# PCTEST ENGINEERING LABORATORY, INC.

**DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN:406**  
**Program: 835MHz. Dipole Validation - 1560**

Communication System: CW; Frequency: 835 MHz; Duty Cycle: 1:1  
Medium: HSL 835 ( $\sigma = 0.93$  mho/m,  $\epsilon_r = 40.78$ ,  $\rho = 1000$  kg/m<sup>3</sup>)  
Phantom section: Flat Section

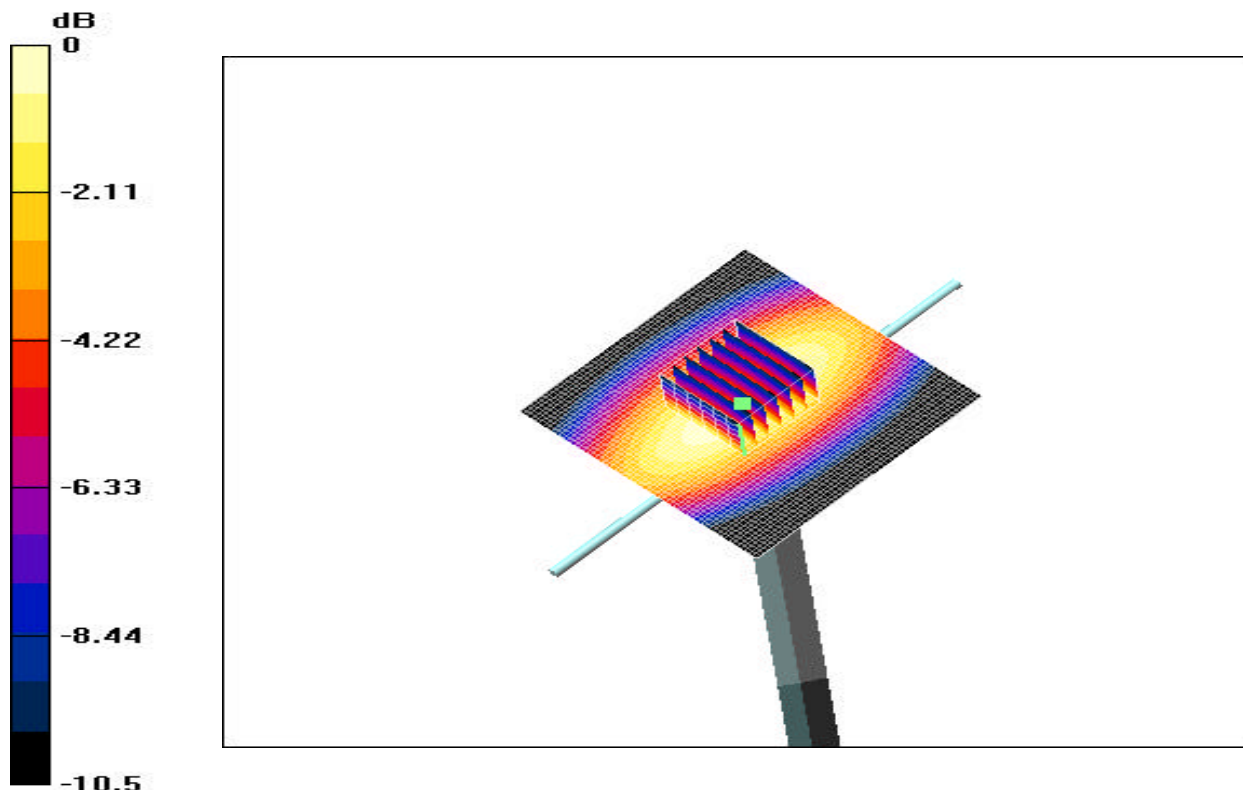
Test Date: 07-28-2003; Ambient Temp: 22.9°C; Tissue Temp: 20.3°C

Probe: ET3DV6 - SN1560; ConvF(6.9, 6.9, 6.9); Calibrated: 9/27/2002  
Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)  
Electronics: DAE3 SN330; Calibrated: 12/1/2002  
Phantom: SAM 12b; Type: SAM 4.0; Serial: TP:1197

Measurement SW: DASY4, V4.1 Build 33; Postprocessing SW: SEMCAD, V1.6 Build 115

**validation/Area Scan (61x61x1):** Measurement grid: dx=15mm, dy=15mm  
Reference Value = 59.4 V/m

**validation/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm  
Peak SAR (extrapolated) = 3.72W/kg  
SAR(1 g) = 2.53 mW/g; SAR(10 g) = 1.64 mW/g  
Reference Value = 59.6 V/m



# PCTEST ENGINEERING LABORATORY, INC.

**DUT: Dipole 1900 MHz; Type: D1900V2; Serial: D1900V2 - SN:502**  
**Program: 1900MHz Dipole Validation - 1560**

Communication System: CW; Frequency: 1900 MHz; Duty Cycle: 1:1  
Medium: 1900 Brain ( $\sigma = 1.38$  mho/m,  $\epsilon_r = 39.1$ ,  $\rho = 1000$  kg/m<sup>3</sup>)  
Phantom section: Flat Section

Test Date: 08-04-2003; Ambient Temp: 22.7°C; Tissue Temp: 20.1°C

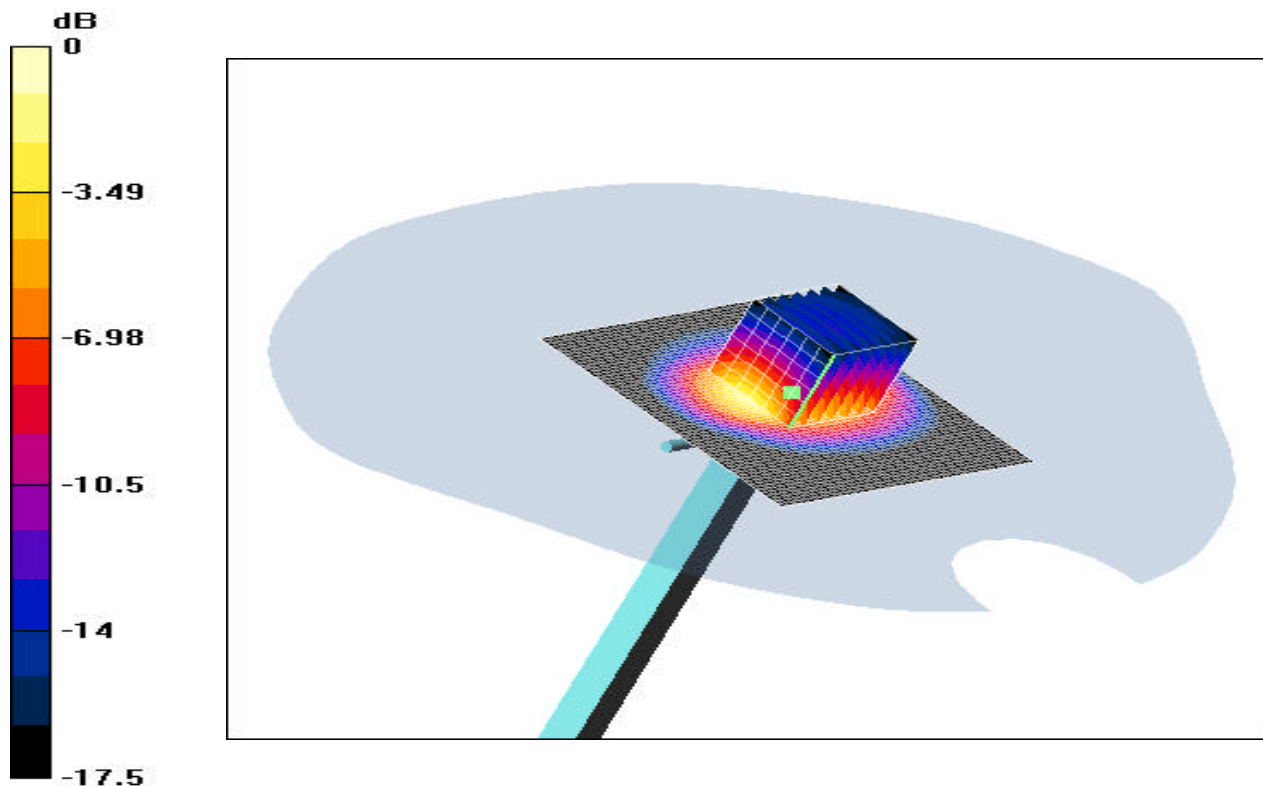
Probe: ET3DV6 - SN1560; ConvF(5.4, 5.4, 5.4); Calibrated: 9/27/2002  
Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)  
Electronics: DAE3 SN330; Calibrated: 12/1/2002  
Phantom: SAM 12b; Type: SAM 4.0; Serial: TP:1197

Measurement SW: DASY4, V4.1 Build 33; Postprocessing SW: SEMCAD, V1.6 Build 115

**1900MHz Dipole Validation - 1560/Area Scan (61x61x1):** Measurement grid: dx=15mm, dy=15mm

**1900MHz Dipole Validation - 1560/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm,  
dy=5mm, dz=5mm

Peak SAR (extrapolated) = 17.5 W/kg  
SAR(1 g) = 9.83 mW/g; SAR(10 g) = 5.05 mW/g  
Reference Value = 93.8 V/m



## **APPENDIX C: PROBE CALIBRATION**

# Schmid & Partner Engineering AG

Zeughausstrasse 43, 8004 Zurich, Switzerland, Phone +41 1 245 97 00, Fax +41 1 245 97 79

## Calibration Certificate

### Dosimetric E-Field Probe

Type:

**ET3DV6**

Serial Number:

**1560**

Place of Calibration:

**Zurich**

Date of Calibration:

**September 27, 2002**

Calibration Interval:

**12 months**

Schmid & Partner Engineering AG hereby certifies, that this device has been calibrated on the date indicated above. The calibration was performed in accordance with specifications and procedures of Schmid & Partner Engineering AG.

Wherever applicable, the standards used in the calibration process are traceable to international standards. In all other cases the standards of the Laboratory for EMF and Microwave Electronics at the Swiss Federal Institute of Technology (ETH) in Zurich, Switzerland have been applied.

Calibrated by:

*N. Vetter*

Approved by:

*Alvin Kofler*



# Probe ET3DV6

## SN:1560

Manufactured:	December 1, 2000
Last calibration:	February 20, 2001
Recalibrated:	September 27, 2002

**Calibrated for DASY Systems**

(Note: non-compatible with DASY2 system!)

## DASY - Parameters of Probe: ET3DV6 SN:1560

### Sensitivity in Free Space

NormX	<b>1.48</b> $\mu\text{V}/(\text{V}/\text{m})^2$
NormY	<b>1.50</b> $\mu\text{V}/(\text{V}/\text{m})^2$
NormZ	<b>1.42</b> $\mu\text{V}/(\text{V}/\text{m})^2$

### Diode Compression

DCP X	<b>93</b>	mV
DCP Y	<b>93</b>	mV
DCP Z	<b>93</b>	mV

### Sensitivity in Tissue Simulating Liquid

Head	<b>835 MHz</b>	$\epsilon_r = 41.5 \pm 5\%$	$\sigma = 0.90 \pm 5\%$ mho/m
Head	<b>900 MHz</b>	$\epsilon_r = 41.5 \pm 5\%$	$\sigma = 0.97 \pm 5\%$ mho/m
ConvF X	<b>6.9</b> $\pm 9.5\%$ (k=2)	Boundary effect:	
ConvF Y	<b>6.9</b> $\pm 9.5\%$ (k=2)	Alpha	<b>0.60</b>
ConvF Z	<b>6.9</b> $\pm 9.5\%$ (k=2)	Depth	<b>1.69</b>
Head	<b>1900 MHz</b>	$\epsilon_r = 40.0 \pm 5\%$	$\sigma = 1.40 \pm 5\%$ mho/m
Head	<b>1800 MHz</b>	$\epsilon_r = 40.0 \pm 5\%$	$\sigma = 1.40 \pm 5\%$ mho/m
ConvF X	<b>5.4</b> $\pm 9.5\%$ (k=2)	Boundary effect:	
ConvF Y	<b>5.4</b> $\pm 9.5\%$ (k=2)	Alpha	<b>0.49</b>
ConvF Z	<b>5.4</b> $\pm 9.5\%$ (k=2)	Depth	<b>2.36</b>

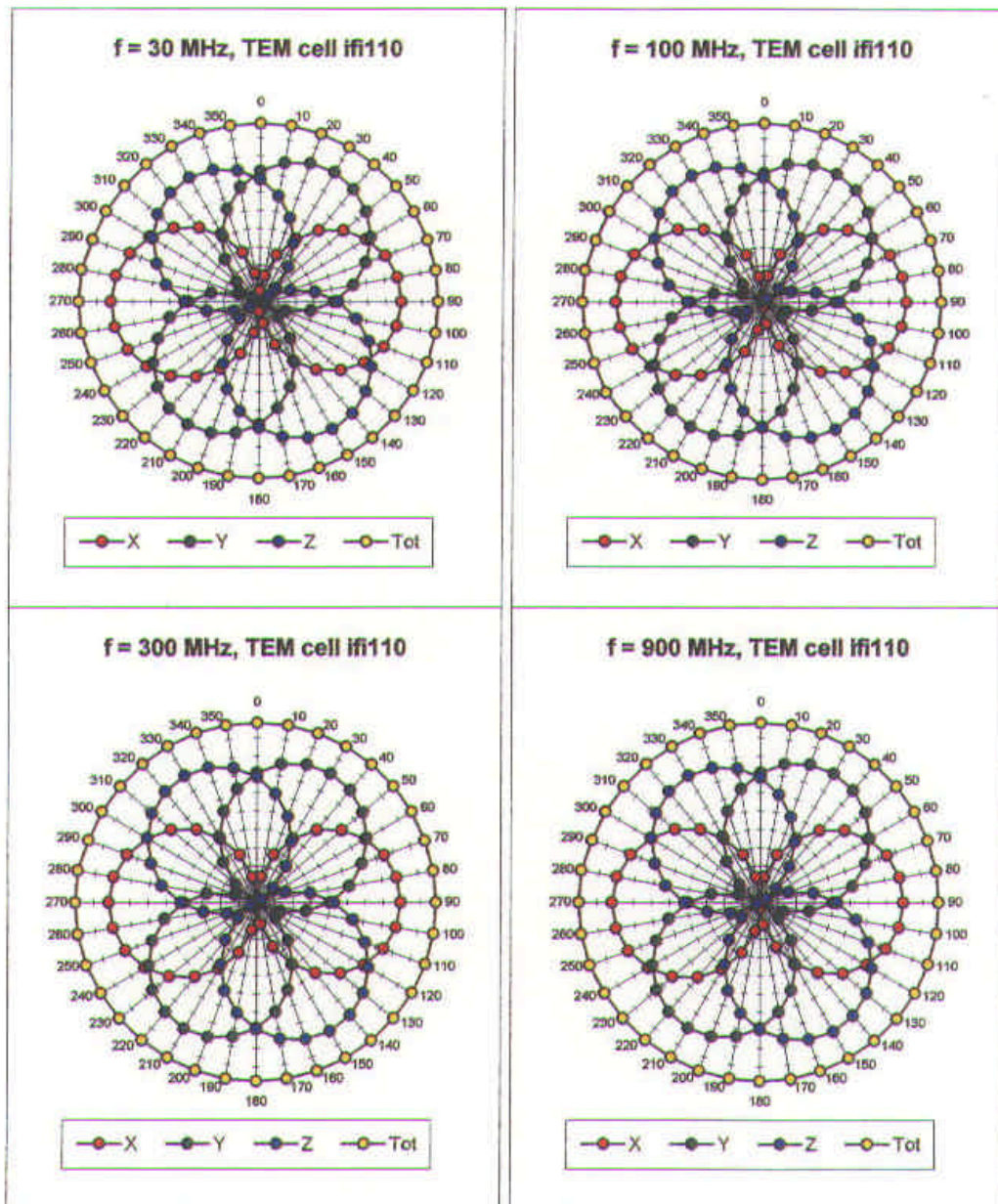
### Boundary Effect

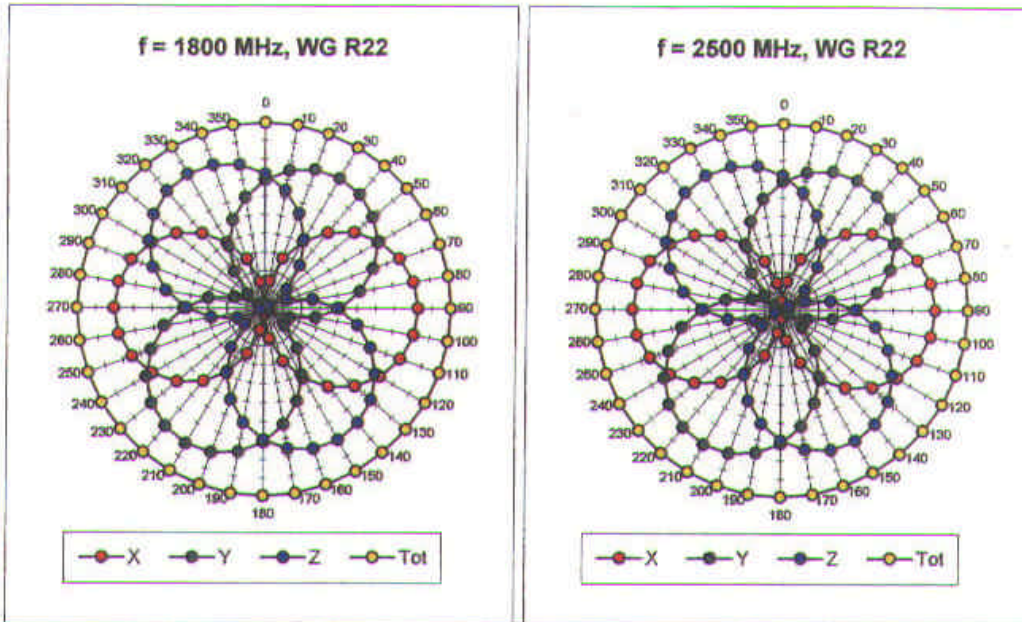
Head	<b>835 MHz</b>	<b>Typical SAR gradient: 5 % per mm</b>	
	Probe Tip to Boundary	<b>1 mm</b>	<b>2 mm</b>
	SAR <sub>be</sub> [%] Without Correction Algorithm	7.3	3.7
	SAR <sub>be</sub> [%] With Correction Algorithm	0.0	0.2
Head	<b>1900 MHz</b>	<b>Typical SAR gradient: 10 % per mm</b>	
	Probe Tip to Boundary	<b>1 mm</b>	<b>2 mm</b>
	SAR <sub>be</sub> [%] Without Correction Algorithm	11.1	7.6
	SAR <sub>be</sub> [%] With Correction Algorithm	0.2	0.4

### Sensor Offset

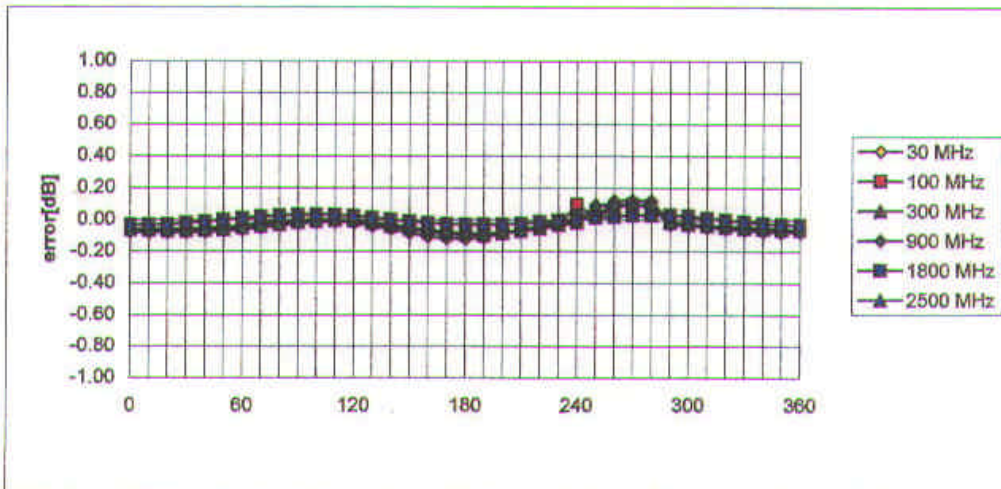
Probe Tip to Sensor Center	<b>2.7</b>	mm
Optical Surface Detection	<b>1.3 <math>\pm</math> 0.2</b>	mm

### Receiving Pattern ( $\phi$ ), $\theta = 0^\circ$



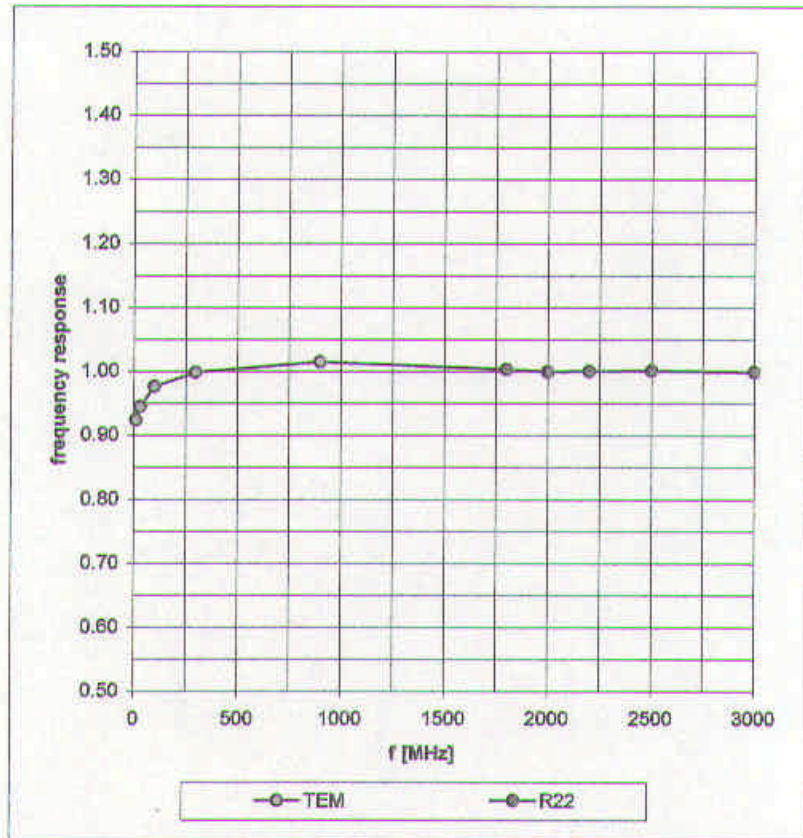


### Isotropy Error ( $\phi$ ), $\theta = 0^\circ$



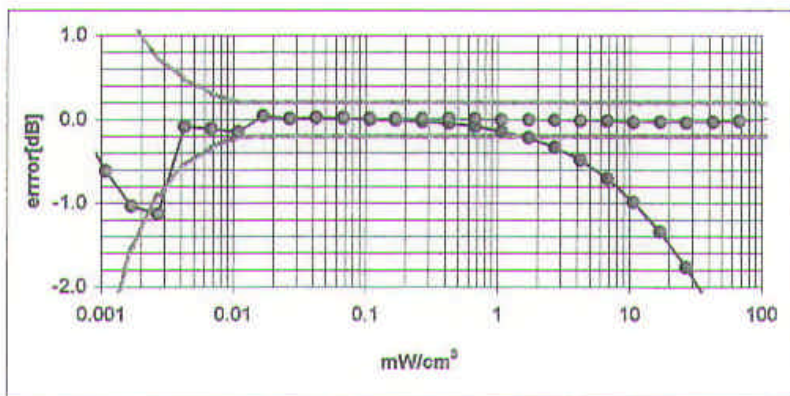
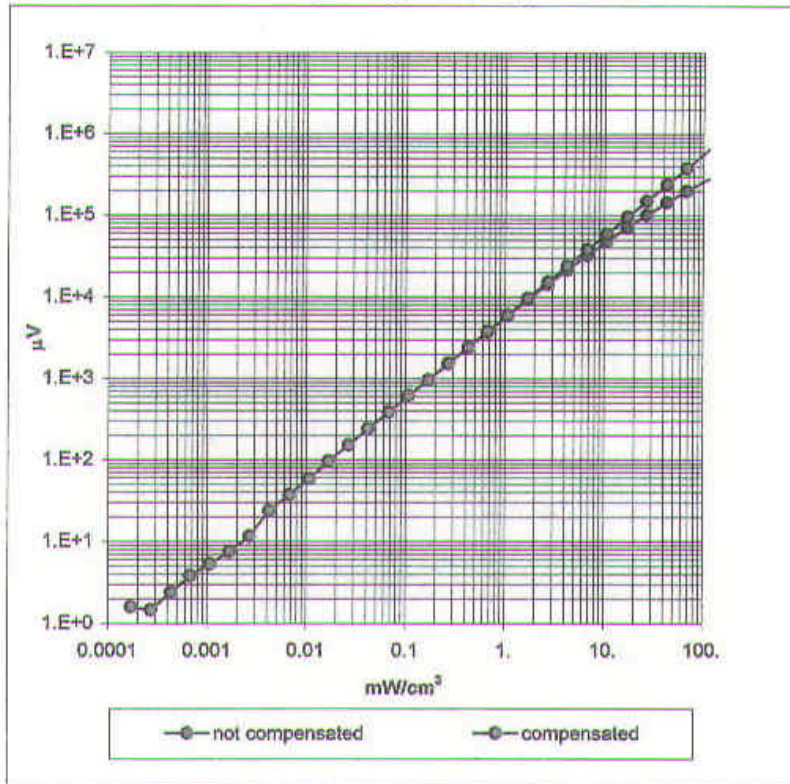
### Frequency Response of E-Field

( TEM-Cell:ifi110, Waveguide R22)

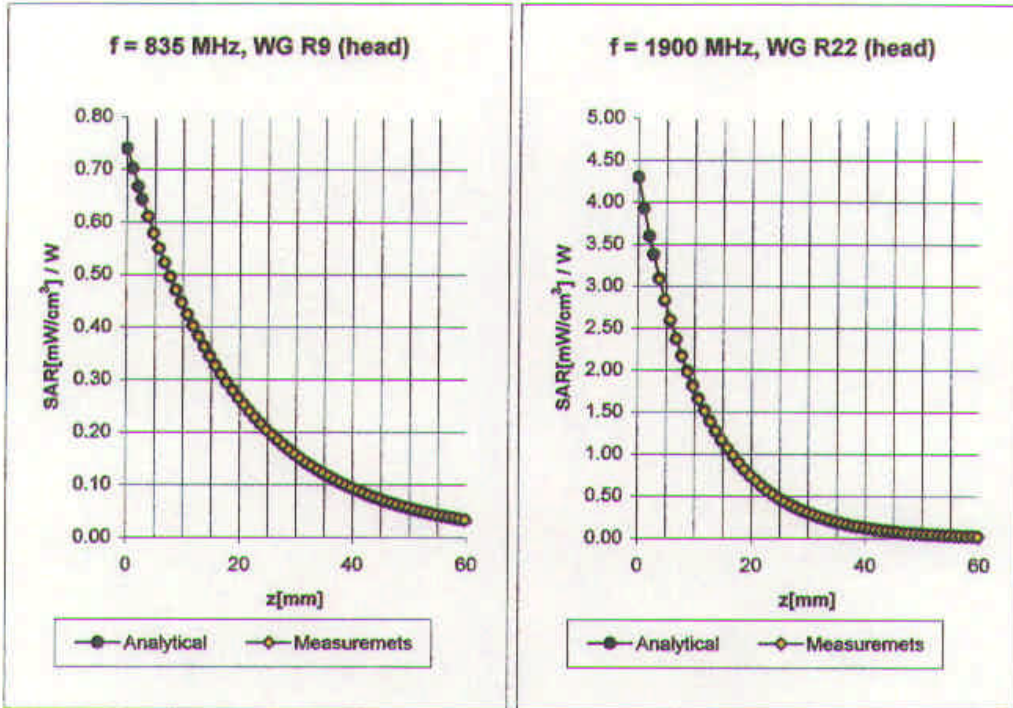




### Dynamic Range $f(\text{SAR}_{\text{brain}})$ ( Waveguide R22 )

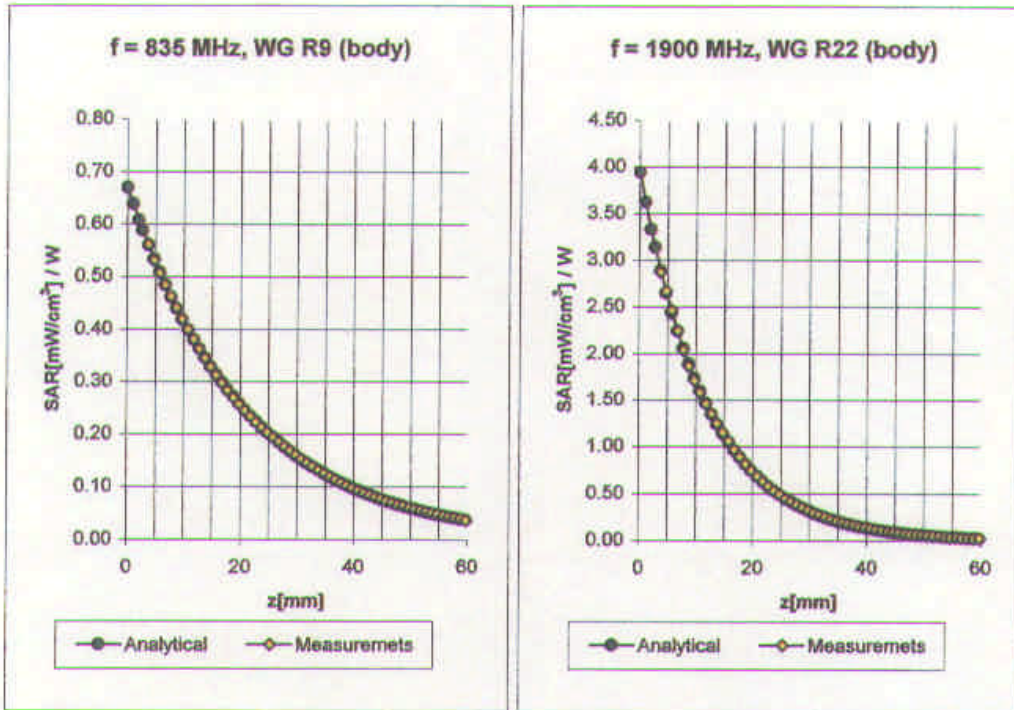


### Conversion Factor Assessment



Head	835 MHz	$\epsilon_r = 41.5 \pm 5\%$	$\sigma = 0.90 \pm 5\%$ mho/m	
Head	900 MHz	$\epsilon_r = 41.5 \pm 5\%$	$\sigma = 0.97 \pm 5\%$ mho/m	
	ConvF X	$6.9 \pm 9.5\%$ (k=2)	Boundary effect:	
	ConvF Y	$6.9 \pm 9.5\%$ (k=2)	Alpha	<b>0.60</b>
	ConvF Z	$6.9 \pm 9.5\%$ (k=2)	Depth	<b>1.69</b>
Head	1900 MHz	$\epsilon_r = 40.0 \pm 5\%$	$\sigma = 1.40 \pm 5\%$ mho/m	
Head	1800 MHz	$\epsilon_r = 40.0 \pm 5\%$	$\sigma = 1.40 \pm 5\%$ mho/m	
	ConvF X	$5.4 \pm 9.5\%$ (k=2)	Boundary effect:	
	ConvF Y	$5.4 \pm 9.5\%$ (k=2)	Alpha	<b>0.49</b>
	ConvF Z	$5.4 \pm 9.5\%$ (k=2)	Depth	<b>2.36</b>

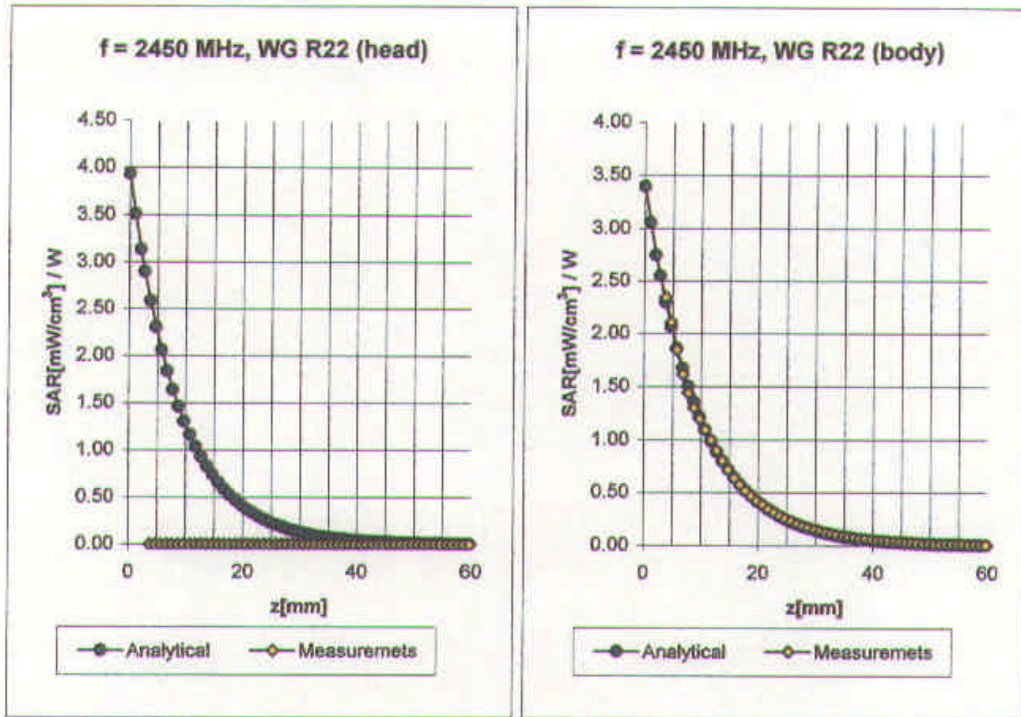
### Conversion Factor Assessment



Body	835 MHz	$\epsilon_r = 55.2 \pm 5\%$	$\sigma = 0.97 \pm 5\%$ mho/m	
Body	900 MHz	$\epsilon_r = 55.0 \pm 5\%$	$\sigma = 1.05 \pm 5\%$ mho/m	
	ConvF X	$6.6 \pm 9.5\%$ (k=2)	Boundary effect:	
	ConvF Y	$6.6 \pm 9.5\%$ (k=2)	Alpha	<b>0.33</b>
	ConvF Z	$6.6 \pm 9.5\%$ (k=2)	Depth	<b>2.60</b>
Body	1900 MHz	$\epsilon_r = 53.3 \pm 5\%$	$\sigma = 1.52 \pm 5\%$ mho/m	
Body	1800 MHz	$\epsilon_r = 53.3 \pm 5\%$	$\sigma = 1.52 \pm 5\%$ mho/m	
	ConvF X	$4.9 \pm 9.5\%$ (k=2)	Boundary effect:	
	ConvF Y	$4.9 \pm 9.5\%$ (k=2)	Alpha	<b>0.64</b>
	ConvF Z	$4.9 \pm 9.5\%$ (k=2)	Depth	<b>2.24</b>



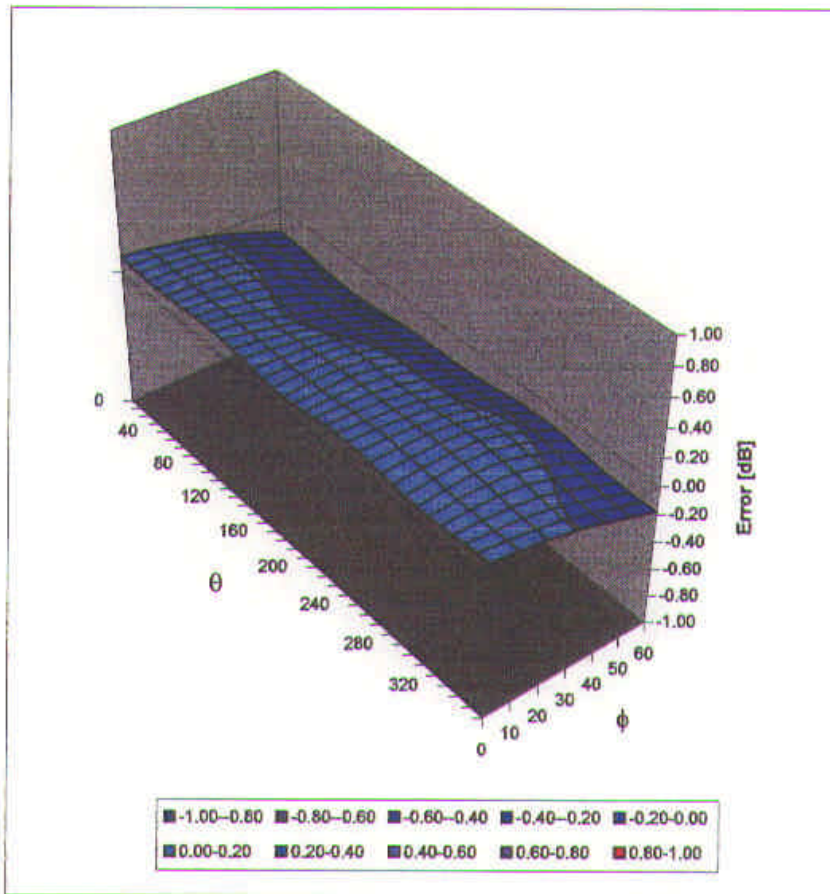
### Conversion Factor Assessment



<b>2450</b>	<b>Head</b>	<b>MHz</b>	$\epsilon_r = 39.2 \pm 5\%$	$\sigma = 1.80 \pm 5\%$ mho/m
	ConvF X	<b>4.9</b> $\pm$ 8.9% (k=2)		Boundary effect:
	ConvF Y	<b>4.9</b> $\pm$ 8.9% (k=2)		Alpha <b>1.00</b>
	ConvF Z	<b>4.9</b> $\pm$ 8.9% (k=2)		Depth <b>1.60</b>
<b>2450</b>	<b>Body</b>	<b>MHz</b>	$\epsilon_r = 62.7 \pm 5\%$	$\sigma = 1.95 \pm 5\%$ mho/m
	ConvF X	<b>4.4</b> $\pm$ 8.9% (k=2)		Boundary effect:
	ConvF Y	<b>4.4</b> $\pm$ 8.9% (k=2)		Alpha <b>1.00</b>
	ConvF Z	<b>4.4</b> $\pm$ 8.9% (k=2)		Depth <b>1.50</b>

### Deviation from Isotropy in HSL

Error ( $\theta, \phi$ ),  $f = 900$  MHz



## Additional Conversion Factors for Dosimetric E-Field Probe

Type:

**ET3DV6**

Serial Number:

**1560**

Place of Assessment:

**Zurich**

Date of Assessment:

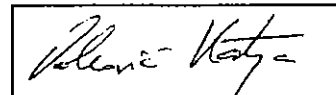
**September 30, 2002**

Probe Calibration Date:

**September 27, 2002**

Schmid & Partner Engineering AG hereby certifies that conversion factor(s) of this probe have been evaluated on the date indicated above. The assessment was performed using the FDTD numerical code SEMCAD of Schmid & Partner Engineering AG. Since the evaluation is coupled with measured conversion factors, it has to be recalculated yearly, i.e., following the re-calibration schedule of the probe. The uncertainty of the numerical assessment is based on the extrapolation from measured value at 900 MHz or at 1800 MHz.

Assessed by:



# Dosimetric E-Field Probe ET3DV6 SN: 1560

Conversion factor ( $\pm$  standard deviation)

150 MHz	ConvF	8.6 $\pm$ 8%	$\epsilon_r = 52.3 \pm 5\%$ $s = 0.76 \pm 5\%$ mho/m (Head tissue)
150 MHz	ConvF	8.5 $\pm$ 8%	$\epsilon_r = 61.9 \pm 5\%$ $s = 0.80 \pm 5\%$ mho/m (Body tissue)
300 MHz	ConvF	7.4 $\pm$ 8%	$\epsilon_r = 45.3 \pm 5\%$ $s = 0.87 \pm 5\%$ mho/m (Head tissue)
450 MHz	ConvF	7.9 $\pm$ 8%	$\epsilon_r = 45.1 \pm 5\%$ $s = 0.85 \pm 5\%$ mho/m (Head tissue)
450 MHz	ConvF	7.7 $\pm$ 8%	$\epsilon_r = 56.7 \pm 5\%$ $s = 0.94 \pm 5\%$ mho/m (Body tissue)