Date Tested: 07/29/04

Head SAR - Cellular GSM Voice Mode - Low Channel - Left Ear - Tilt Position (15°)

DUT: palmOne Model: Treo 650; Type: Dual-Band PCS/Cellular GSM/GPRS Phone; Serial: SGXW07D4H00P

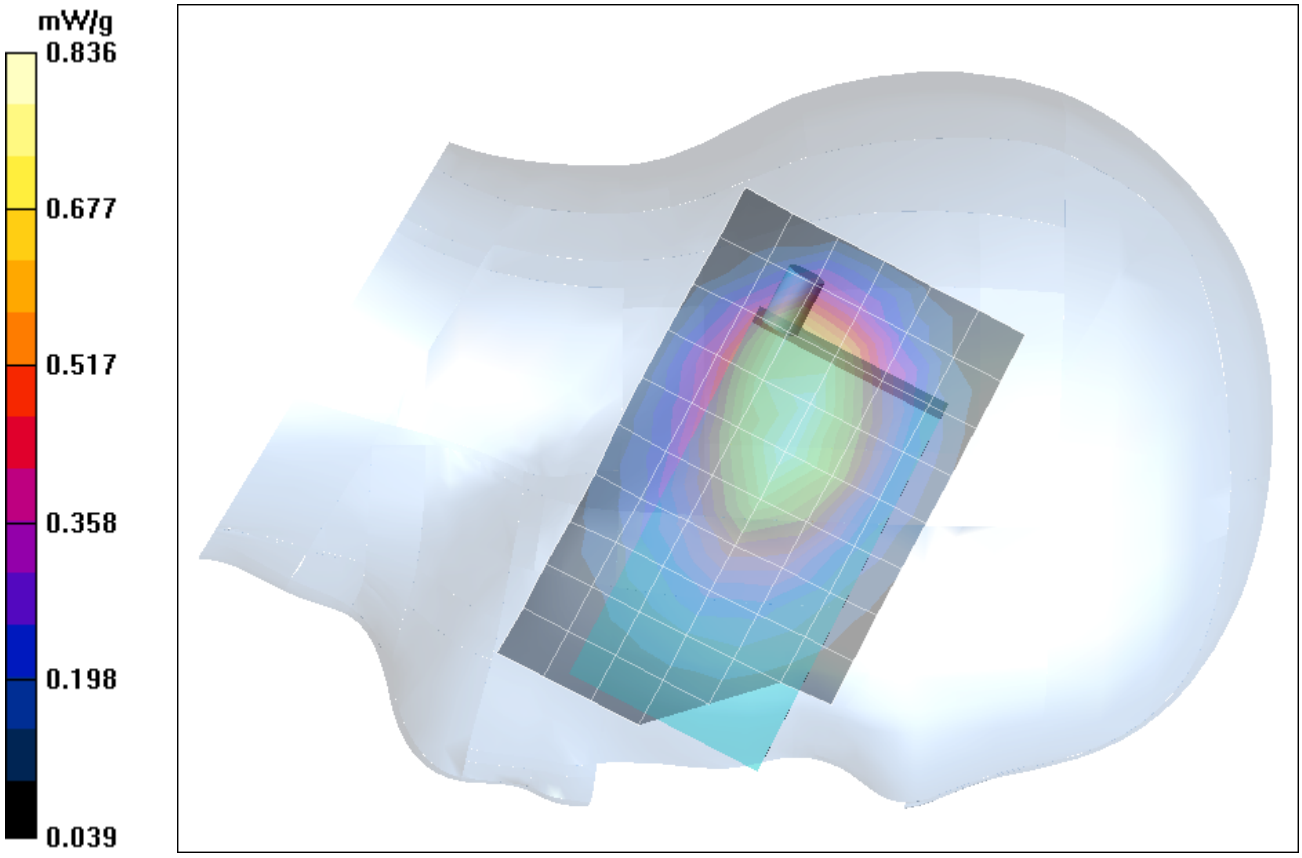
Ambient Temp: 23.8 °C; Fluid Temp: 22.5 °C; Barometric Pressure: 102.1 kPa; Humidity: 38%

Frequency: 824.2 MHz; Duty Cycle: 1:8.3
RF Output Power: 31.9 dBm (Peak Conducted)
Communication System: Cellular GSM (1 Time Slot)
3.7V 1900mAh Li-ion Battery Pack (P/N: 167-10165-00)
Medium: HSL835 (σ = 0.90 mho/m; ε_r = 40.4; ρ = 1000 kg/m^3)

- Probe: ET3DV6 - SN1590; ConvF(6.71, 6.71, 6.71); Calibrated: 24/05/2004
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn370; Calibrated: 14/05/2004
- Phantom: SAM 4.0; Type: Fiberglas; Serial: 1033
- Measurement SW: DASY4, V4.2 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 112

Head SAR - Cellular GSM - Left Ear - Tilt Position (15°) - Channel 128/Area Scan (7x11x1):
Measurement grid: dx=15mm, dy=15mm

Head SAR - Cellular GSM - Left Ear - Tilt Position (15°) - Channel 128/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 29.3 V/m; Power Drift = -0.0469 dB
Peak SAR (extrapolated) = 1.14 W/kg
SAR(1 g) = 0.785 mW/g; SAR(10 g) = 0.552 mW/g



Date Tested: 07/29/04

Head SAR - Cellular GSM Voice Mode - High Channel - Left Ear - Tilt Position (15°)

DUT: palmOne Model: Treo 650; Type: Dual-Band PCS/Cellular GSM/GPRS Phone; Serial: SGXW07D4H00P

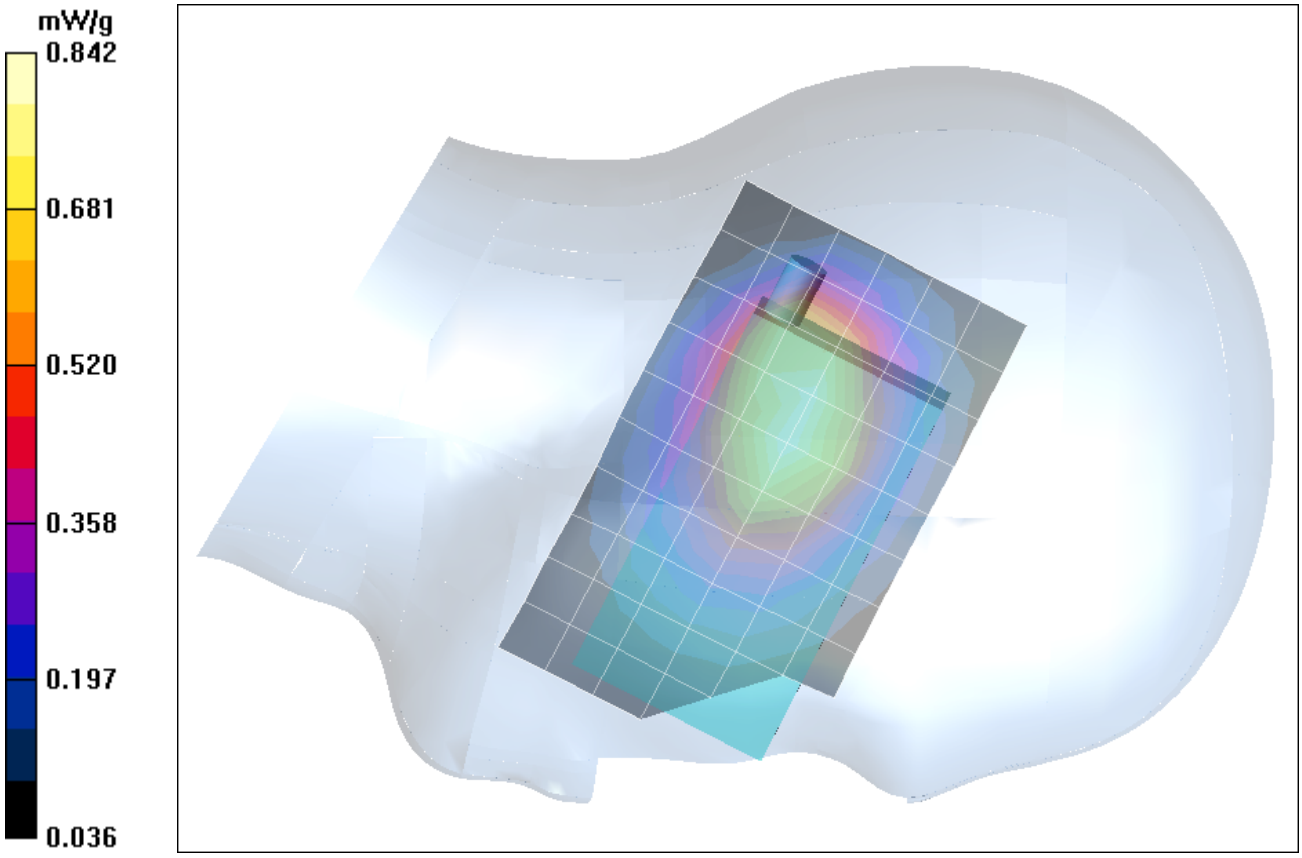
Ambient Temp: 23.8 °C; Fluid Temp: 22.5 °C; Barometric Pressure: 102.1 kPa; Humidity: 38%

Frequency: 848.8 MHz; Duty Cycle: 1:8.3
RF Output Power: 32.2 dBm (Peak Conducted)
Communication System: Cellular GSM (1 Time Slot)
3.7V 1900mAh Li-ion Battery Pack (P/N: 167-10165-00)
Medium: HSL835 (σ = 0.90 mho/m; ε_r = 40.4; ρ = 1000 kg/m^3)

- Probe: ET3DV6 - SN1590; ConvF(6.71, 6.71, 6.71); Calibrated: 24/05/2004
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn370; Calibrated: 14/05/2004
- Phantom: SAM 4.0; Type: Fiberglas; Serial: 1033
- Measurement SW: DASY4, V4.2 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 112

Head SAR - Cellular GSM - Left Ear - Tilt Position (15°) - Channel 251/Area Scan (7x11x1):
Measurement grid: dx=15mm, dy=15mm

Head SAR - Cellular GSM - Left Ear - Tilt Position (15°) - Channel 251/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 29.4 V/m; Power Drift = -0.0311 dB
Peak SAR (extrapolated) = 1.12 W/kg
SAR(1 g) = 0.786 mW/g; SAR(10 g) = 0.551 mW/g



Date Tested: 07/29/04

Head SAR - Cellular GSM Voice Mode - Mid Channel - Right Ear - Tilt Position (15°) With Aluminum Case Accessory (SKU#3202WW)

DUT: palmOne Model: Treo 650; Type: Dual-Band PCS/Cellular GSM/GPRS Phone; Serial: SGXW07D4H00P

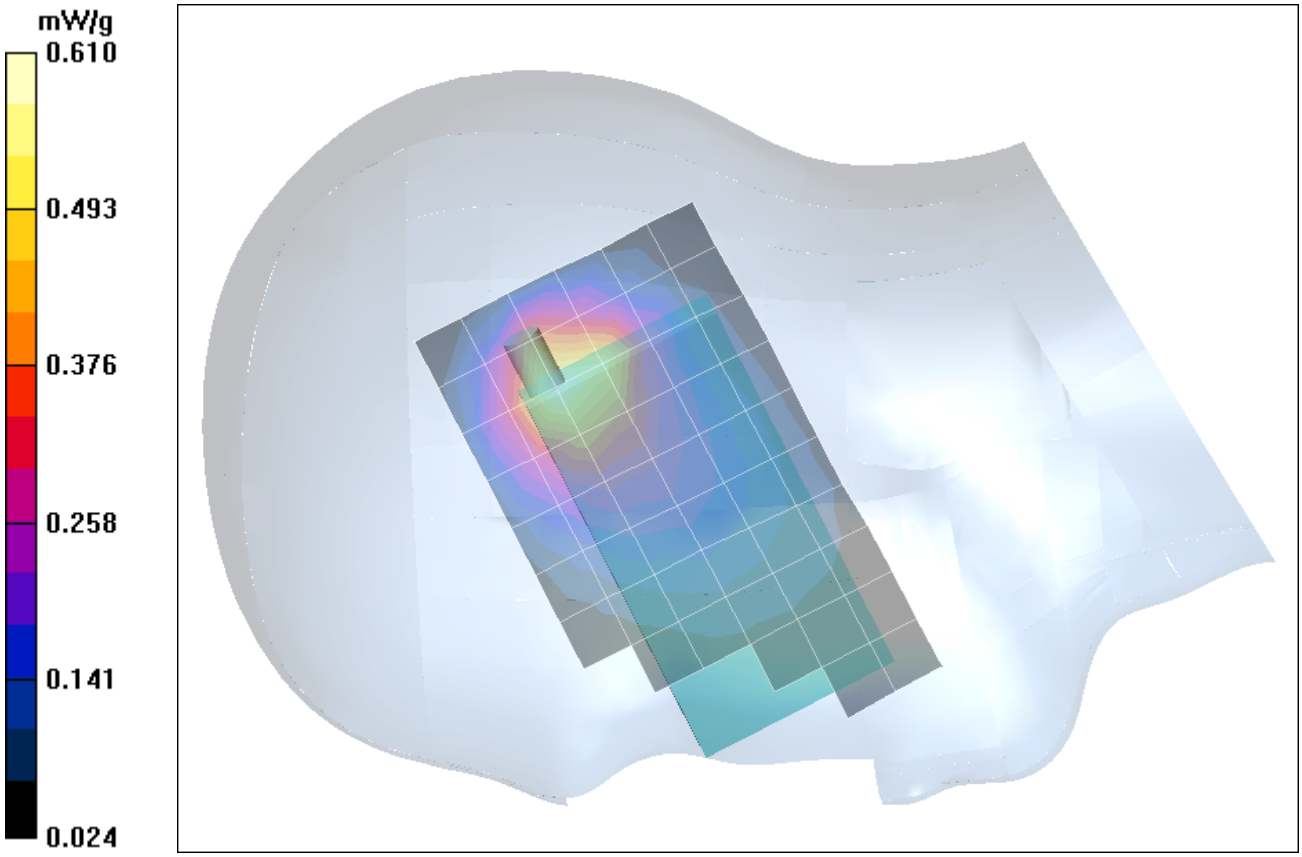
Ambient Temp: 23.8 °C; Fluid Temp: 22.5 °C; Barometric Pressure: 102.1 kPa; Humidity: 38%

Frequency: 836.6 MHz; Duty Cycle: 1:8.3
RF Output Power: 32.1 dBm (Peak Conducted)
Communication System: Cellular GSM (1 Time Slot)
3.7V 1900mAh Li-ion Battery Pack (P/N: 167-10165-00)
Medium: HSL835 (σ = 0.90 mho/m; ε_r = 40.4; ρ = 1000 kg/m^3)

- Probe: ET3DV6 - SN1590; ConvF(6.71, 6.71, 6.71); Calibrated: 24/05/2004
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn370; Calibrated: 14/05/2004
- Phantom: SAM 4.0; Type: Fiberglas; Serial: 1033
- Measurement SW: DASY4, V4.2 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 112

Head SAR - Cellular GSM - Right Ear - Tilt Position (15°) - Channel 190/Area Scan (7x11x1):
Measurement grid: dx=15mm, dy=15mm

Head SAR - Cellular GSM - Right Ear - Tilt Position (15°) - Channel 190/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 21.3 V/m; Power Drift = 0.00365 dB
Peak SAR (extrapolated) = 1.06 W/kg
SAR(1 g) = 0.573 mW/g; SAR(10 g) = 0.354 mW/g



Date Tested: 07/29/04

Head SAR - PCS GSM Voice Mode - Mid Channel - Right Ear - Cheek/Touch Position

DUT: palmOne Model: Treo 650; Type: Dual-Band PCS/Cellular GSM/GPRS Phone; Serial: SGXW07D4H00P

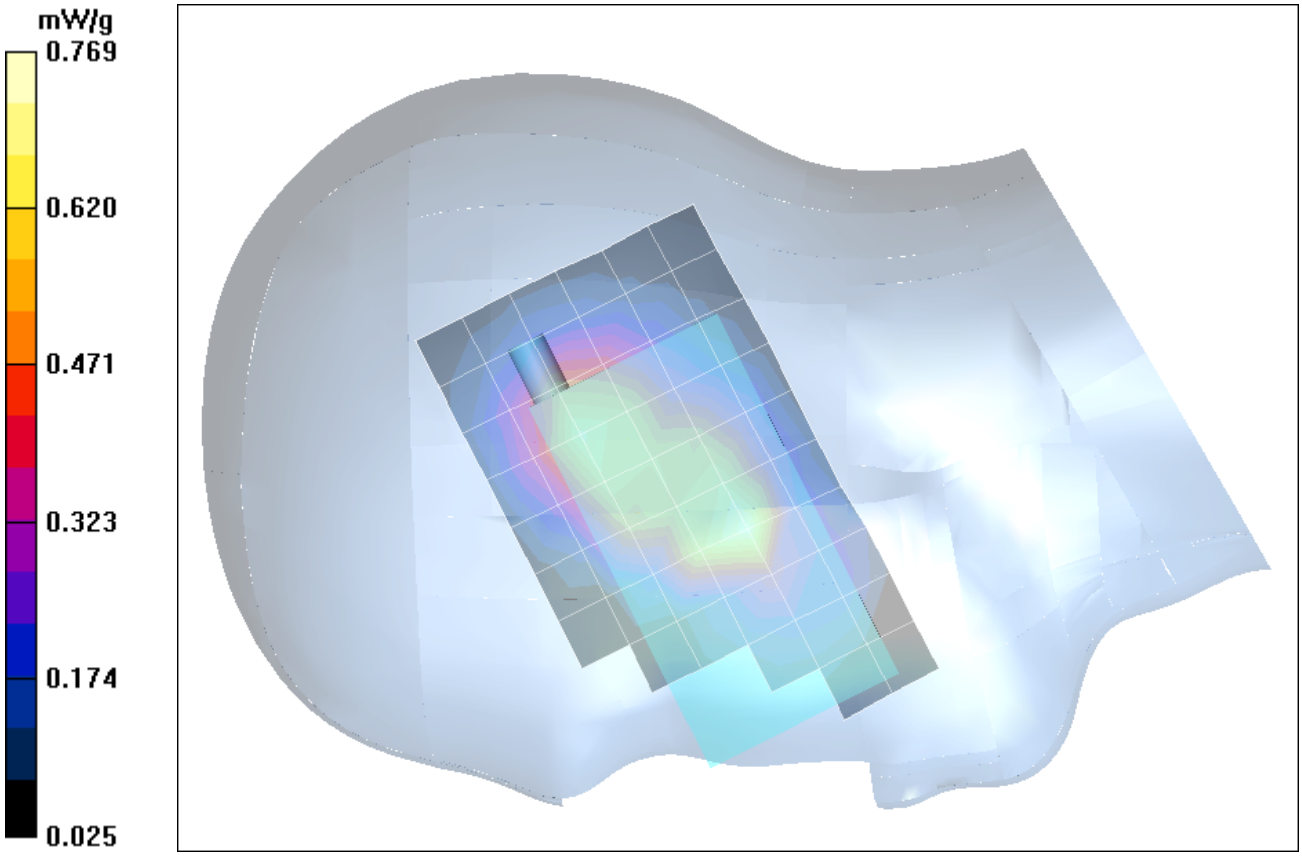
Ambient Temp: 24.5 °C; Fluid Temp: 23.5 °C; Barometric Pressure: 101.7 kPa; Humidity: 41%

Frequency: 1880.0 MHz; Duty Cycle: 1:8.3
RF Output Power: 30.1 dBm (Peak Conducted)
Communication System: PCS GSM (1 Time Slot)
3.7V 1900mAh Li-ion Battery Pack (P/N: 167-10165-00)
Medium: HSL1880 (σ = 1.39 mho/m; ε_r = 38.1; ρ = 1000 kg/m^3)
- Probe: ET3DV6 - SN1590; ConvF(5.03, 5.03, 5.03); Calibrated: 24/05/2004
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn370; Calibrated: 14/05/2004
- Phantom: SAM 4.0; Type: Fiberglas; Serial: 1033
- Measurement SW: DASY4, V4.2 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 112

Head SAR - PCS GSM - Right Ear - Cheek/Touch Position - Channel 661/Area Scan (7x11x1):
Measurement grid: dx=15mm, dy=15mm

Head SAR - PCS GSM - Right Ear - Cheek/Touch Position - Channel 661/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 19.1 V/m; Power Drift = -0.0438 dB
Peak SAR (extrapolated) = 1 W/kg
SAR(1 g) = 0.708 mW/g; SAR(10 g) = 0.443 mW/g

Head SAR - PCS GSM - Right Ear - Cheek/Touch Position - Channel 661/Zoom Scan (7x7x7)/Cube 1:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 19.1 V/m; Power Drift = -0.0438 dB
Peak SAR (extrapolated) = 0.999 W/kg
SAR(1 g) = 0.649 mW/g; SAR(10 g) = 0.400 mW/g



Date Tested: 07/29/04

Head SAR - PCS GSM Voice Mode - Mid Channel - Right Ear - Tilt Position (15°)

DUT: palmOne Model: Treo 650; Type: Dual-Band PCS/Cellular GSM/GPRS Phone; Serial: SGXW07D4H00P

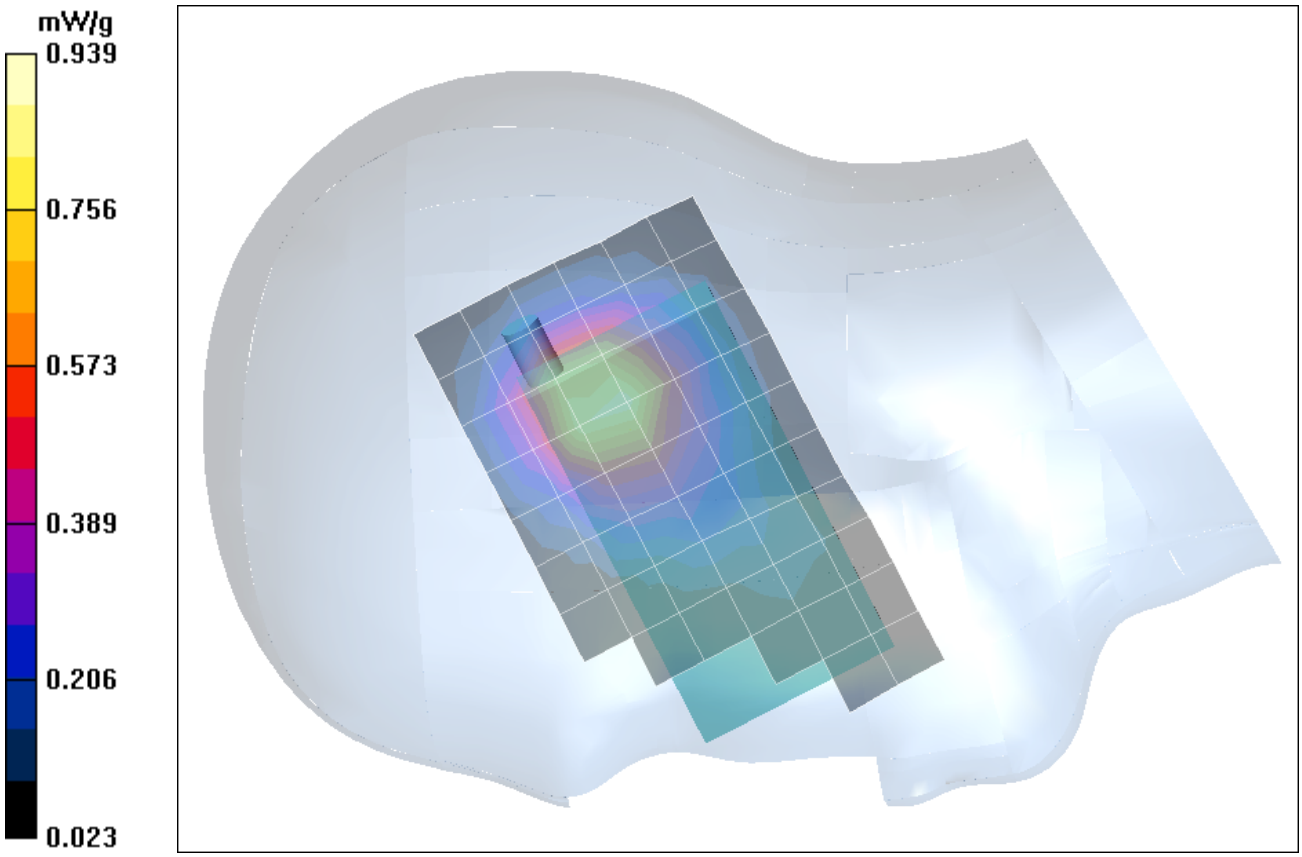
Ambient Temp: 24.5 °C; Fluid Temp: 23.5 °C; Barometric Pressure: 101.7 kPa; Humidity: 41%

Frequency: 1880.0 MHz; Duty Cycle: 1:8.3
RF Output Power: 30.1 dBm (Peak Conducted)
Communication System: PCS GSM (1 Time Slot)
3.7V 1900mAh Li-ion Battery Pack (P/N: 167-10165-00)
Medium: HSL1880 (σ = 1.39 mho/m; ε_r = 38.1; ρ = 1000 kg/m^3)

- Probe: ET3DV6 - SN1590; ConvF(5.03, 5.03, 5.03); Calibrated: 24/05/2004
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn370; Calibrated: 14/05/2004
- Phantom: SAM 4.0; Type: Fiberglas; Serial: 1033
- Measurement SW: DASY4, V4.2 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 112

Head SAR - PCS GSM - Right Ear - Tilt Position (15°) - Channel 661/Area Scan (7x11x1):
Measurement grid: dx=15mm, dy=15mm

Head SAR - PCS GSM - Right Ear - Tilt Position (15°) - Channel 661/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 24.6 V/m; Power Drift = 0.0435 dB
Peak SAR (extrapolated) = 1.33 W/kg
SAR(1 g) = 0.859 mW/g; SAR(10 g) = 0.521 mW/g



Date Tested: 07/29/04

Head SAR - PCS GSM Voice Mode - Low Channel - Right Ear - Tilt Position (15°)

DUT: palmOne Model: Treo 650; Type: Dual-Band PCS/Cellular GSM/GPRS Phone; Serial: SGXW07D4H00P

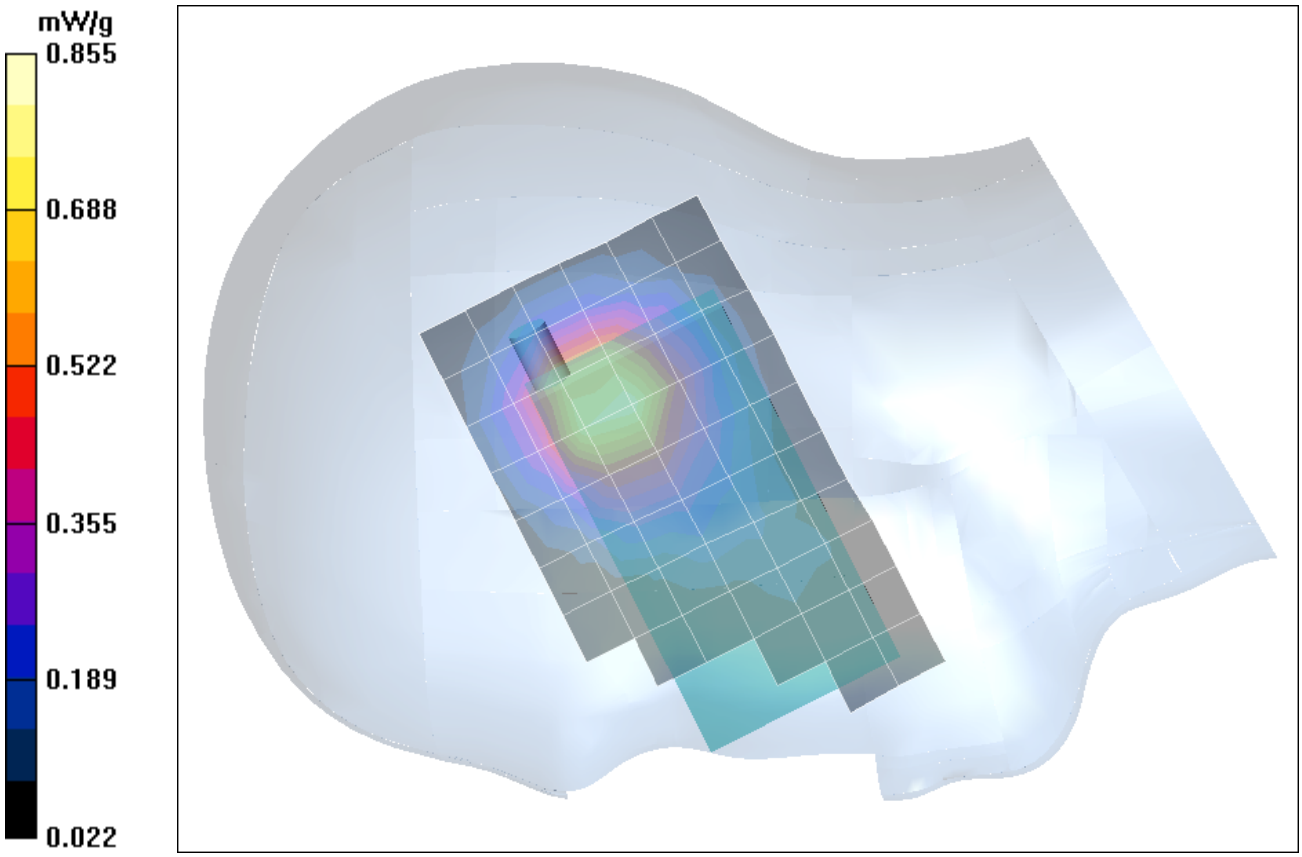
Ambient Temp: 24.5 °C; Fluid Temp: 23.5 °C; Barometric Pressure: 101.7 kPa; Humidity: 41%

Frequency: 1850.2 MHz; Duty Cycle: 1:8.3
RF Output Power: 30.2 dBm (Peak Conducted)
Communication System: PCS GSM (1 Time Slot)
3.7V 1900mAh Li-ion Battery Pack (P/N: 167-10165-00)
Medium: HSL1880 (σ = 1.39 mho/m; ε_r = 38.1; ρ = 1000 kg/m^3)

- Probe: ET3DV6 - SN1590; ConvF(5.03, 5.03, 5.03); Calibrated: 24/05/2004
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn370; Calibrated: 14/05/2004
- Phantom: SAM 4.0; Type: Fiberglas; Serial: 1033
- Measurement SW: DASY4, V4.2 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 112

Head SAR - PCS GSM - Right Ear - Tilt Position (15°) - Channel 512/Area Scan (7x11x1):
Measurement grid: dx=15mm, dy=15mm

Head SAR - PCS GSM - Right Ear - Tilt Position (15°) - Channel 512/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 23.6 V/m; Power Drift = 0.0463 dB
Peak SAR (extrapolated) = 1.19 W/kg
SAR(1 g) = 0.784 mW/g; SAR(10 g) = 0.479 mW/g



Date Tested: 07/29/04

Head SAR - PCS GSM Voice Mode - High Channel - Right Ear - Tilt Position (15°)

DUT: palmOne Model: Treo 650; Type: Dual-Band PCS/Cellular GSM/GPRS Phone; Serial: SGXW07D4H00P

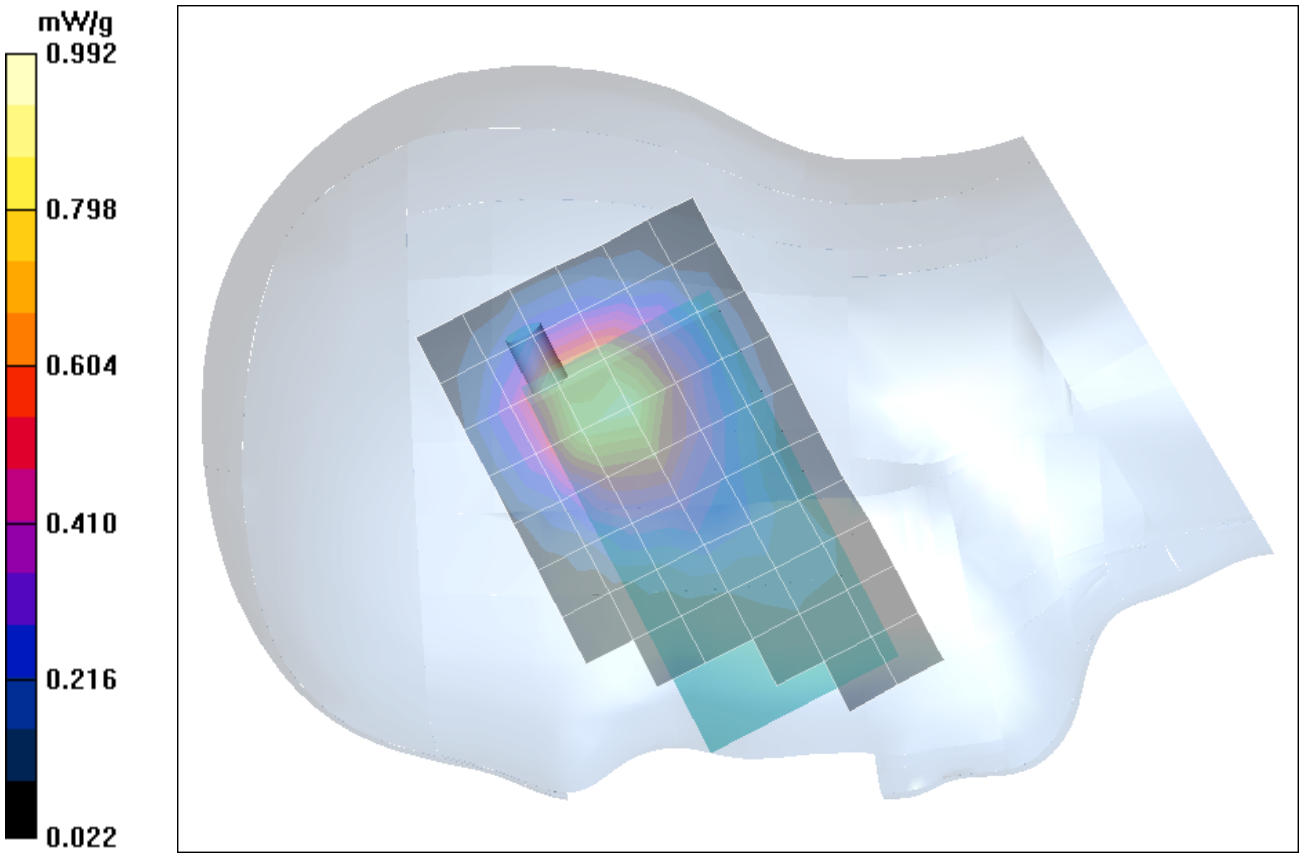
Ambient Temp: 24.5 °C; Fluid Temp: 23.5 °C; Barometric Pressure: 101.7 kPa; Humidity: 41%

Frequency: 1909.8 MHz; Duty Cycle: 1:8.3
RF Output Power: 29.7 dBm (Peak Conducted)
Communication System: PCS GSM (1 Time Slot)
3.7V 1900mAh Li-ion Battery Pack (P/N: 167-10165-00)
Medium: HSL1880 (σ = 1.39 mho/m; ε_r = 38.1; ρ = 1000 kg/m^3)

- Probe: ET3DV6 - SN1590; ConvF(5.03, 5.03, 5.03); Calibrated: 24/05/2004
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn370; Calibrated: 14/05/2004
- Phantom: SAM 4.0; Type: Fiberglas; Serial: 1033
- Measurement SW: DASY4, V4.2 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 112

Head SAR - PCS GSM - Right Ear - Tilt Position (15°) - Channel 810/Area Scan (7x11x1):
Measurement grid: dx=15mm, dy=15mm

Head SAR - PCS GSM - Right Ear - Tilt Position (15°) - Channel 810/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 25.2 V/m; Power Drift = 0.0395 dB
Peak SAR (extrapolated) = 1.41 W/kg
SAR(1 g) = 0.904 mW/g; SAR(10 g) = 0.545 mW/g



Date Tested: 07/29/04

Head SAR - PCS GSM Voice Mode - Mid Channel - Left Ear - Cheek/Touch Position

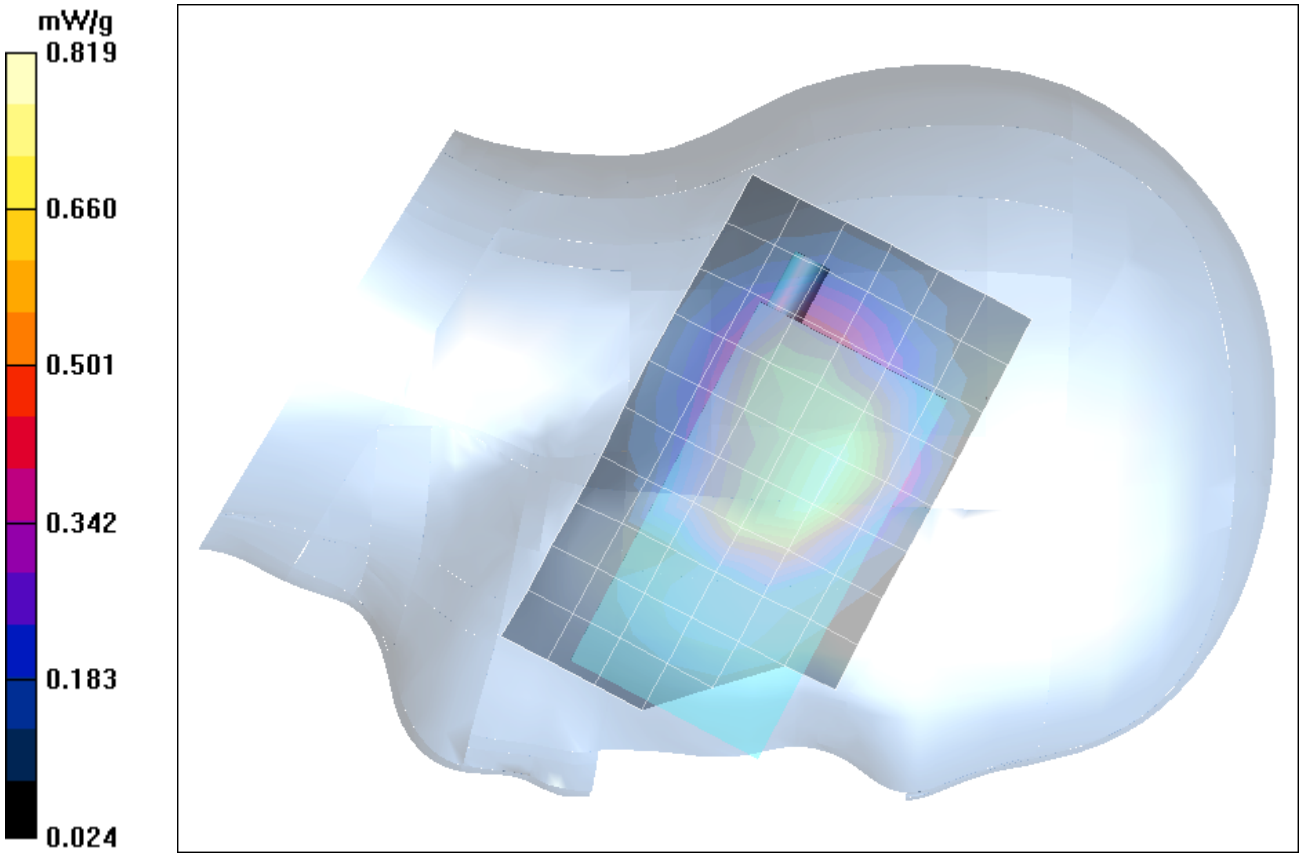
DUT: palmOne Model: Treo 650; Type: Dual-Band PCS/Cellular GSM/GPRS Phone; Serial: SGXW07D4H00P
Ambient Temp: 24.5 °C; Fluid Temp: 23.5 °C; Barometric Pressure: 101.7 kPa; Humidity: 41%

Frequency: 1880.0 MHz; Duty Cycle: 1:8.3
RF Output Power: 30.1 dBm (Peak Conducted)
Communication System: PCS GSM (1 Time Slot)
3.7V 1900mAh Li-ion Battery Pack (P/N: 167-10165-00)
Medium: HSL1880 (σ = 1.39 mho/m; ε_r = 38.1; ρ = 1000 kg/m^3)
- Probe: ET3DV6 - SN1590; ConvF(5.03, 5.03, 5.03); Calibrated: 24/05/2004
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn370; Calibrated: 14/05/2004
- Phantom: SAM 4.0; Type: Fiberglas; Serial: 1033
- Measurement SW: DASY4, V4.2 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 112

Head SAR - PCS GSM - Left Ear - Cheek/Touch Position - Channel 661/Area Scan (7x11x1):
Measurement grid: dx=15mm, dy=15mm

Head SAR - PCS GSM - Left Ear - Cheek/Touch Position - Channel 661/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 20.9 V/m; Power Drift = -0.0657 dB
Peak SAR (extrapolated) = 1.11 W/kg
SAR(1 g) = 0.753 mW/g; SAR(10 g) = 0.463 mW/g

Head SAR - PCS GSM - Left Ear - Cheek/Touch Position - Channel 661/Zoom Scan (7x7x7)/Cube 1:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 20.9 V/m; Power Drift = -0.0657 dB
Peak SAR (extrapolated) = 0.847 W/kg
SAR(1 g) = 0.565 mW/g; SAR(10 g) = 0.376 mW/g



Date Tested: 07/29/04

Head SAR - PCS GSM Voice Mode - Mid Channel - Left Ear - Tilt Position (15°)

DUT: palmOne Model: Treo 650; Type: Dual-Band PCS/Cellular GSM/GPRS Phone; Serial: SGXW07D4H00P

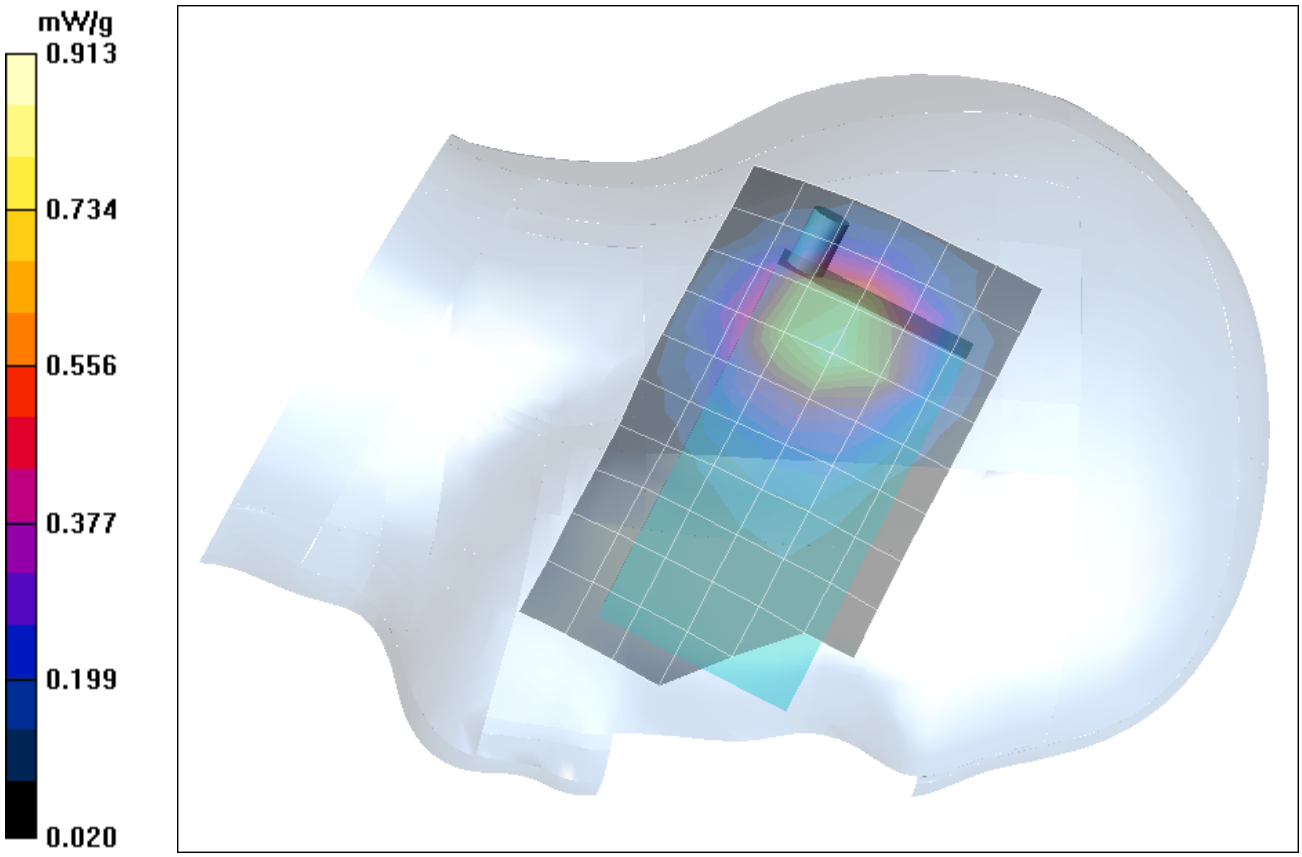
Ambient Temp: 24.5 °C; Fluid Temp: 23.5 °C; Barometric Pressure: 101.7 kPa; Humidity: 41%

Frequency: 1880.0 MHz; Duty Cycle: 1:8.3
RF Output Power: 30.1 dBm (Peak Conducted)
Communication System: PCS GSM (1 Time Slot)
3.7V 1900mAh Li-ion Battery Pack (P/N: 167-10165-00)
Medium: HSL1880 (σ = 1.39 mho/m; ε_r = 38.1; ρ = 1000 kg/m^3)

- Probe: ET3DV6 - SN1590; ConvF(5.03, 5.03, 5.03); Calibrated: 24/05/2004
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn370; Calibrated: 14/05/2004
- Phantom: SAM 4.0; Type: Fiberglas; Serial: 1033
- Measurement SW: DASY4, V4.2 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 112

Head SAR - PCS GSM - Left Ear - Tilt Position (15°) - Channel 661/Area Scan (7x11x1):
Measurement grid: dx=15mm, dy=15mm

Head SAR - PCS GSM - Left Ear - Tilt Position (15°) - Channel 661/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 26.2 V/m; Power Drift = -0.0351 dB
Peak SAR (extrapolated) = 1.27 W/kg
SAR(1 g) = 0.843 mW/g; SAR(10 g) = 0.522 mW/g



Date Tested: 07/29/04

Head SAR - PCS GSM Voice Mode - Low Channel - Left Ear - Tilt Position (15°)

DUT: palmOne Model: Treo 650; Type: Dual-Band PCS/Cellular GSM/GPRS Phone; Serial: SGXW07D4H00P

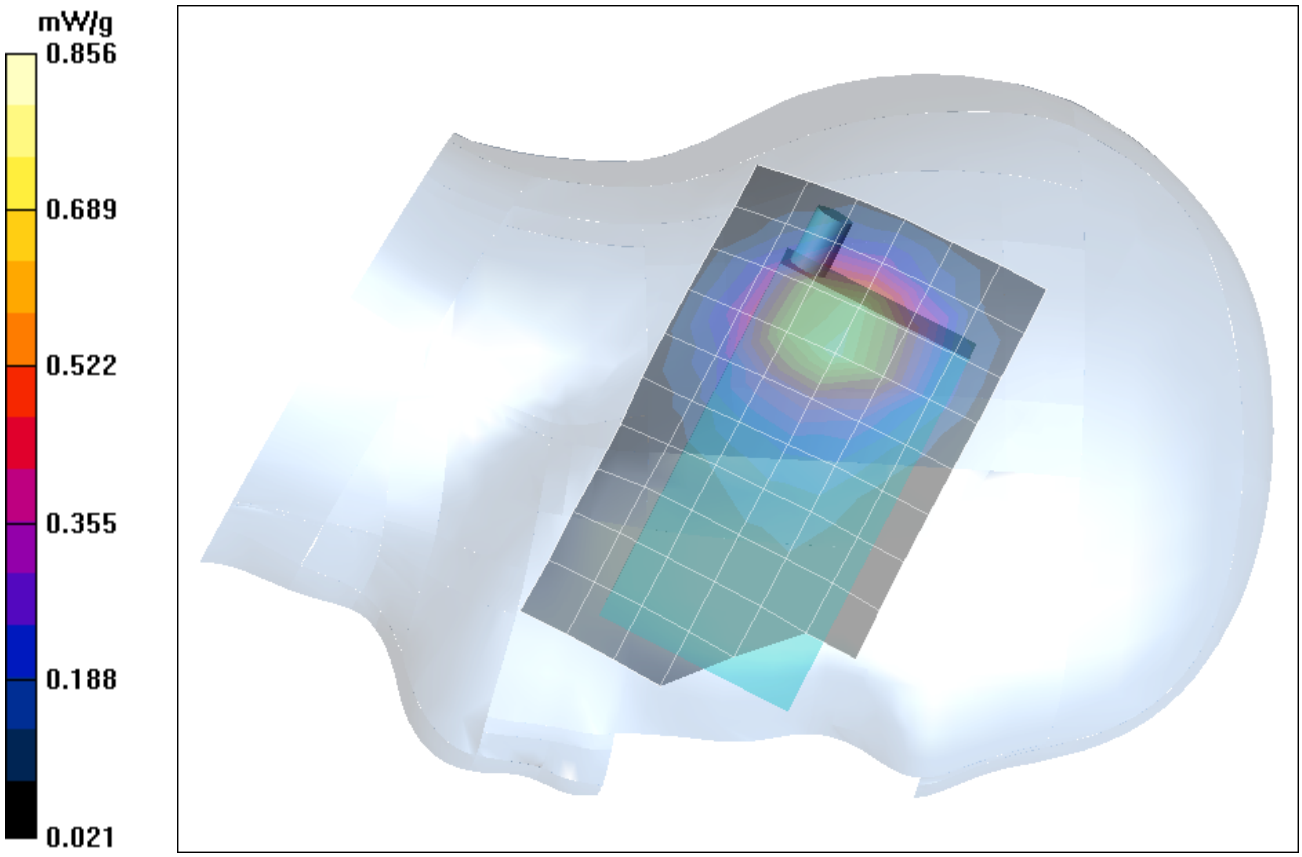
Ambient Temp: 24.5 °C; Fluid Temp: 23.5 °C; Barometric Pressure: 101.7 kPa; Humidity: 41%

Frequency: 1850.2 MHz; Duty Cycle: 1:8.3
RF Output Power: 30.2 dBm (Peak Conducted)
Communication System: PCS GSM (1 Time Slot)
3.7V 1900mAh Li-ion Battery Pack (P/N: 167-10165-00)
Medium: HSL1880 (σ = 1.39 mho/m; ε_r = 38.1; ρ = 1000 kg/m^3)

- Probe: ET3DV6 - SN1590; ConvF(5.03, 5.03, 5.03); Calibrated: 24/05/2004
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn370; Calibrated: 14/05/2004
- Phantom: SAM 4.0; Type: Fiberglas; Serial: 1033
- Measurement SW: DASY4, V4.2 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 112

Head SAR - PCS GSM - Left Ear - Tilt Position (15°) - Channel 512/Area Scan (7x11x1):
Measurement grid: dx=15mm, dy=15mm

Head SAR - PCS GSM - Left Ear - Tilt Position (15°) - Channel 512/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 25.2 V/m; Power Drift = 0.0183 dB
Peak SAR (extrapolated) = 1.18 W/kg
SAR(1 g) = 0.780 mW/g; SAR(10 g) = 0.483 mW/g



Date Tested: 07/29/04

Head SAR - PCS GSM Voice Mode - High Channel - Left Ear - Tilt Position (15°)

DUT: palmOne Model: Treo 650; Type: Dual-Band PCS/Cellular GSM/GPRS Phone; Serial: SGXW07D4H00P

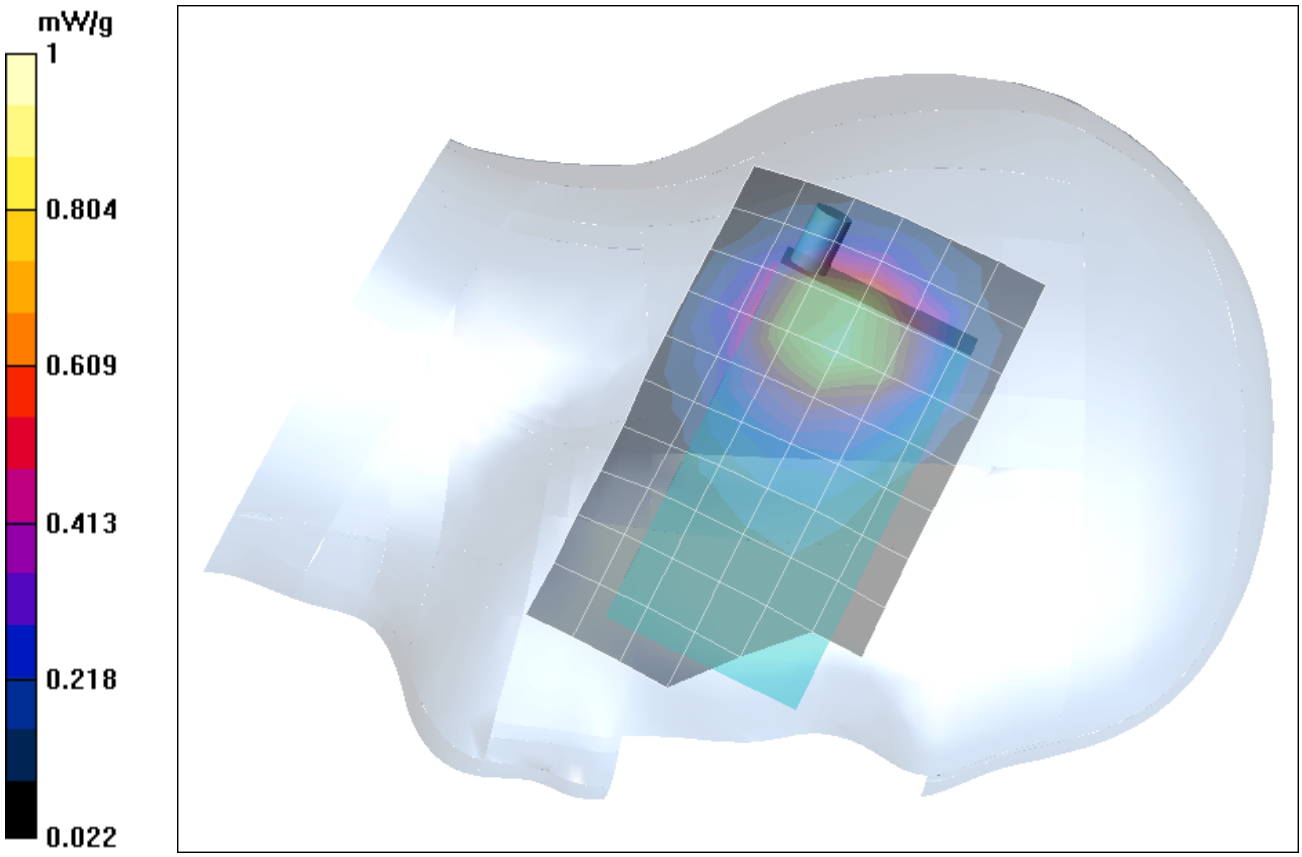
Ambient Temp: 24.5 °C; Fluid Temp: 23.5 °C; Barometric Pressure: 101.7 kPa; Humidity: 41%

Frequency: 1909.8 MHz; Duty Cycle: 1:8.3
RF Output Power: 29.7 dBm (Peak Conducted)
Communication System: PCS GSM (1 Time Slot)
3.7V 1900mAh Li-ion Battery Pack (P/N: 167-10165-00)
Medium: HSL1880 (σ = 1.39 mho/m; ε_r = 38.1; ρ = 1000 kg/m^3)

- Probe: ET3DV6 - SN1590; ConvF(5.03, 5.03, 5.03); Calibrated: 24/05/2004
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn370; Calibrated: 14/05/2004
- Phantom: SAM 4.0; Type: Fiberglas; Serial: 1033
- Measurement SW: DASY4, V4.2 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 112

Head SAR - PCS GSM - Left Ear - Tilt Position (15°) - Channel 810/Area Scan (7x11x1):
Measurement grid: dx=15mm, dy=15mm

Head SAR - PCS GSM - Left Ear - Tilt Position (15°) - Channel 810/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 27.6 V/m; Power Drift = -0.0874 dB
Peak SAR (extrapolated) = 1.39 W/kg
SAR(1 g) = 0.922 mW/g; SAR(10 g) = 0.567 mW/g

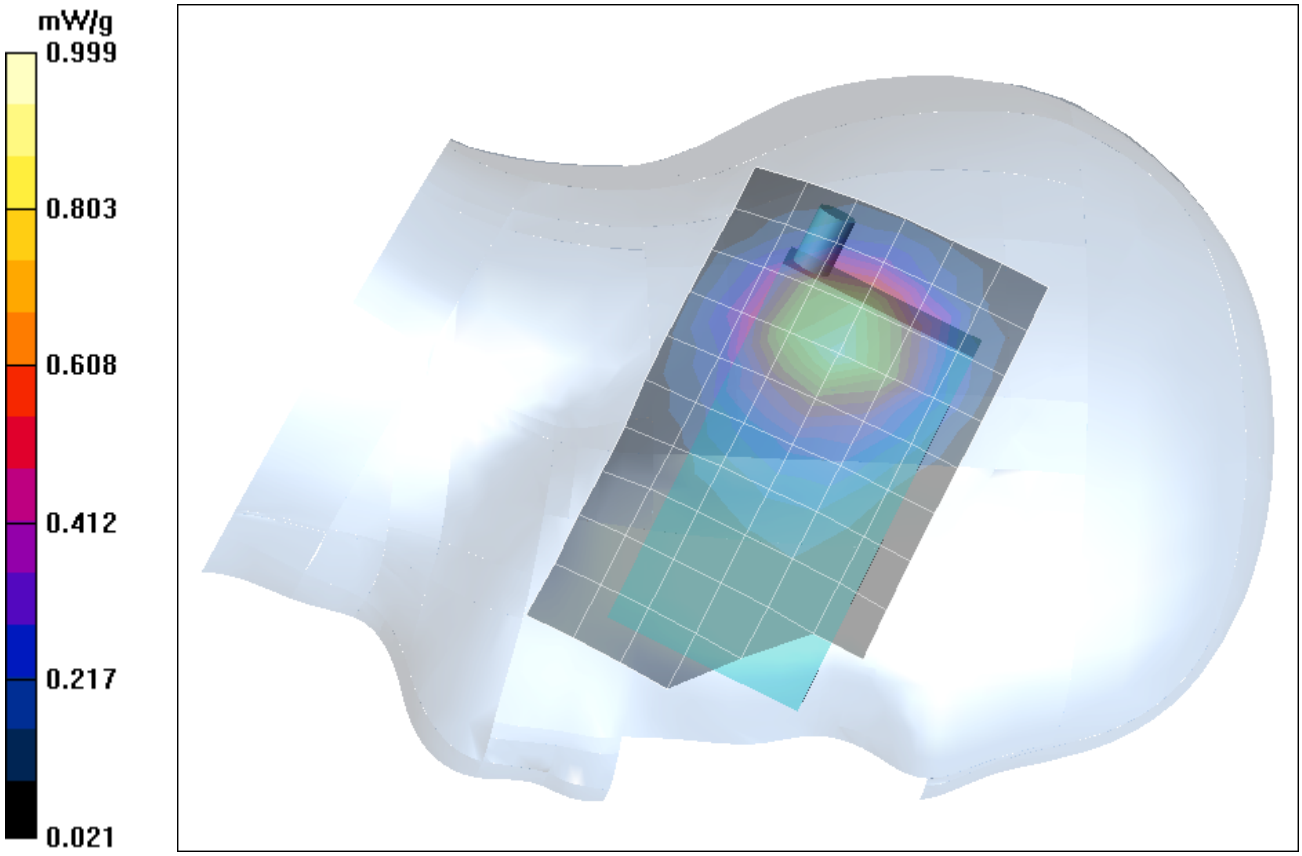


Date Tested: 07/29/04

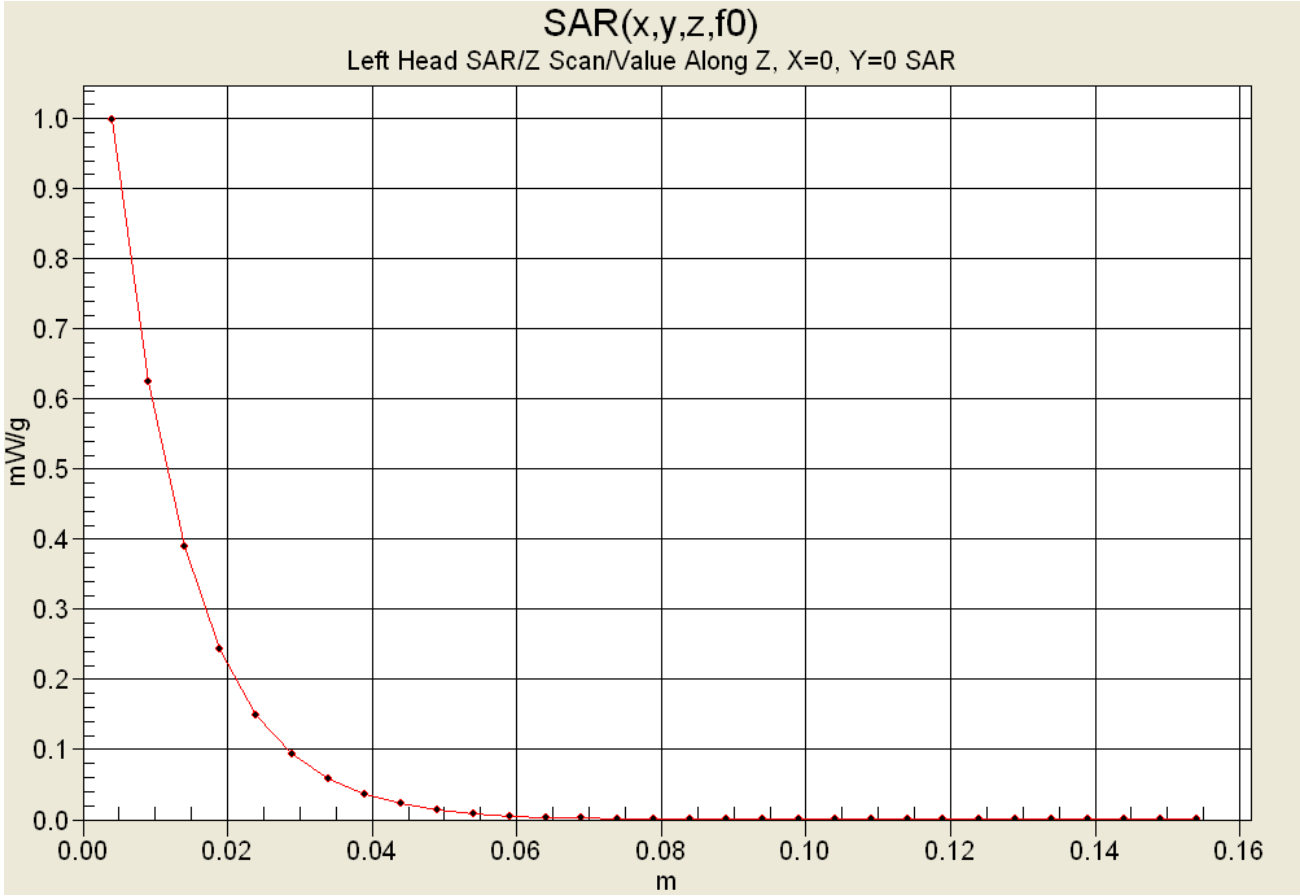
Head SAR - PCS GSM Voice Mode - High Channel - Left Ear - Tilt Position (15°) Simultaneous Transmit with Co-located Bluetooth Transmitter (Broadcom BCM-2035)

DUT: palmOne Model: Treo 650; Type: Dual-Band PCS/Cellular GSM/GPRS Phone; Serial: SGXW07D4H00P
Ambient Temp: 24.5 °C; Fluid Temp: 23.5 °C; Barometric Pressure: 101.7 kPa; Humidity: 41%
3.7V 1900mAh Li-ion Battery Pack (P/N: 167-10165-00)
Frequency: 1909.8 MHz; Duty Cycle: 1:8.3
RF Output Power: 29.7 dBm (Peak Conducted)
Communication System: PCS GSM (1 Time Slot)
Frequency: 2441 MHz; Duty Cycle: 1:1 (Bluetooth)
RF Output Power: -5.1 dBm (Peak Conducted) Bluetooth
Communication System: Modulated Fixed Frequency (Bluetooth)
Medium: HSL1880 (σ = 1.39 mho/m; ε_r = 38.1; ρ = 1000 kg/m^3)
- Probe: ET3DV6 - SN1590; ConvF(5.03, 5.03, 5.03); Calibrated: 24/05/2004
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn370; Calibrated: 14/05/2004
- Phantom: SAM 4.0; Type: Fiberglas; Serial: 1033
- Measurement SW: DASY4, V4.2 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 112

Head SAR - PCS GSM & Bluetooth - Left Ear - Tilt Position (15°) - Channel 810/Area Scan (7x11x1):
Measurement grid: dx=15mm, dy=15mm
Head SAR - PCS GSM & Bluetooth - Left Ear - Tilt Position (15°) - Channel 810/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 27.9 V/m; Power Drift = -0.100 dB
Peak SAR (extrapolated) = 1.4 W/kg
SAR(1 g) = 0.922 mW/g; SAR(10 g) = 0.570 mW/g



Z-Axis Scan


SAR(x,y,z,f0)
Left Head SAR/Z Scan/Value Along Z, X=0, Y=0 SAR
mW/g
1.0
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
0.00
0.02
0.04
0.06
0.08
0.10
0.12
0.14
0.16
m

Date Tested: 07/30/04

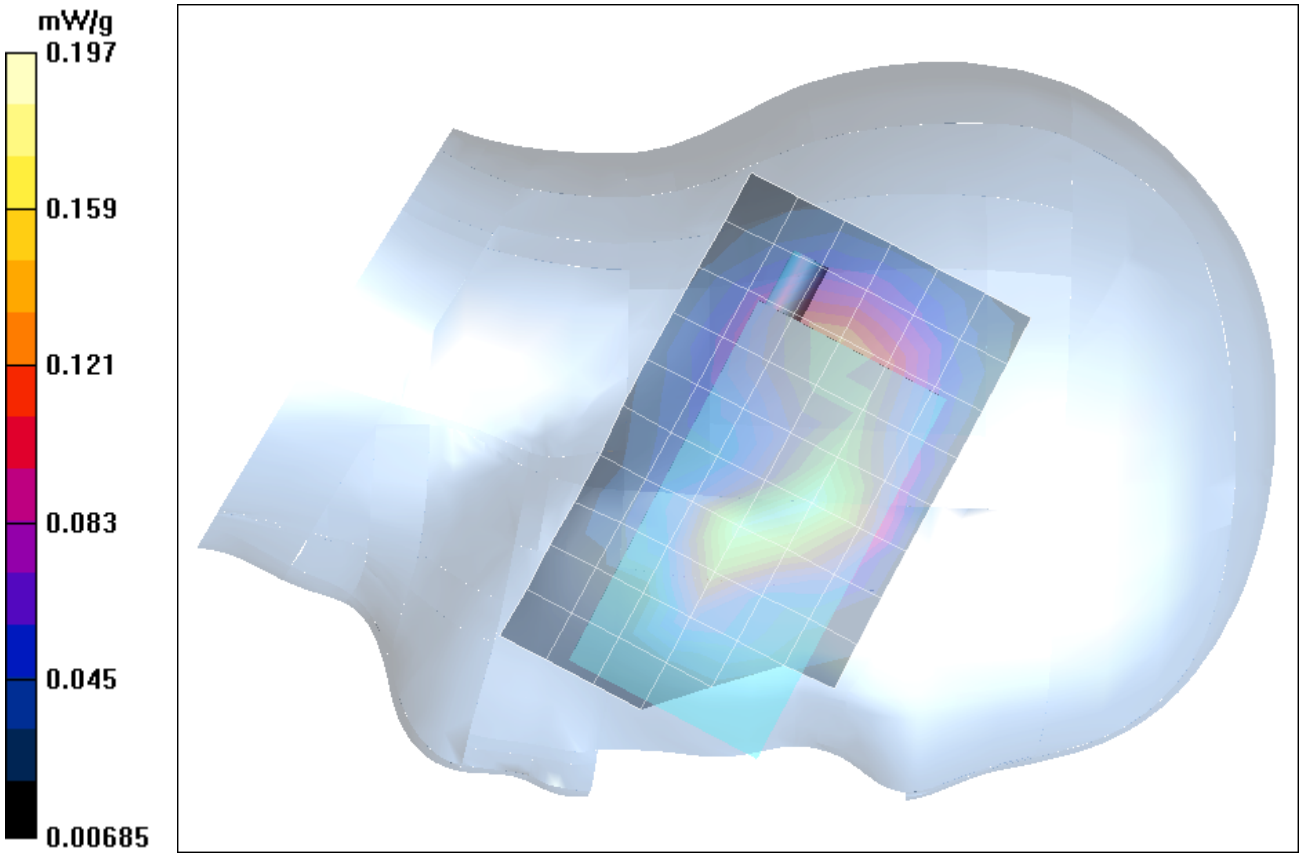
Head SAR - PCS GSM Voice Mode - Mid Channel - Left Ear - Cheek/Touch Position With Aluminum Case Accessory (SKU#3202WW)

DUT: palmOne Model: Treo 650; Type: Dual-Band PCS/Cellular GSM/GPRS Phone; Serial: SGXW07D4H00P
Ambient Temp: 24.8 °C; Fluid Temp: 23.0 °C; Barometric Pressure: 101.9 kPa; Humidity: 39%
Frequency: 1880.0 MHz; Duty Cycle: 1:8.3
RF Output Power: 30.1 dBm (Peak Conducted)
Communication System: PCS GSM (1 Time Slot)
3.7V 1900mAh Li-ion Battery Pack (P/N: 167-10165-00)
Medium: HSL1880 (σ = 1.40 mho/m; ε_r = 38.1; ρ = 1000 kg/m^3)
- Probe: ET3DV6 - SN1590; ConvF(5.03, 5.03, 5.03); Calibrated: 24/05/2004
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn370; Calibrated: 14/05/2004
- Phantom: SAM 4.0; Type: Fiberglas; Serial: 1033
- Measurement SW: DASY4, V4.2 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 112

Head SAR - PCS GSM - Left Ear - Cheek/Touch Position - Channel 661/Area Scan (7x11x1):
Measurement grid: dx=15mm, dy=15mm

Head SAR - PCS GSM - Left Ear - Cheek/Touch Position - Channel 661/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 10.6 V/m; Power Drift = -0.154 dB
Peak SAR (extrapolated) = 0.236 W/kg
SAR(1 g) = 0.180 mW/g; SAR(10 g) = 0.115 mW/g

Head SAR - PCS GSM - Left Ear - Cheek/Touch Position - Channel 661/Zoom Scan (7x7x7)/Cube 1:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 10.6 V/m; Power Drift = -0.154 dB
Peak SAR (extrapolated) = 0.196 W/kg
SAR(1 g) = 0.130 mW/g; SAR(10 g) = 0.083 mW/g



Date Tested: 07/30/04

Head SAR - PCS GSM Voice Mode - High Channel - Left Ear - Tilt Position (15°) With Aluminum Case Accessory (SKU#3202WW)

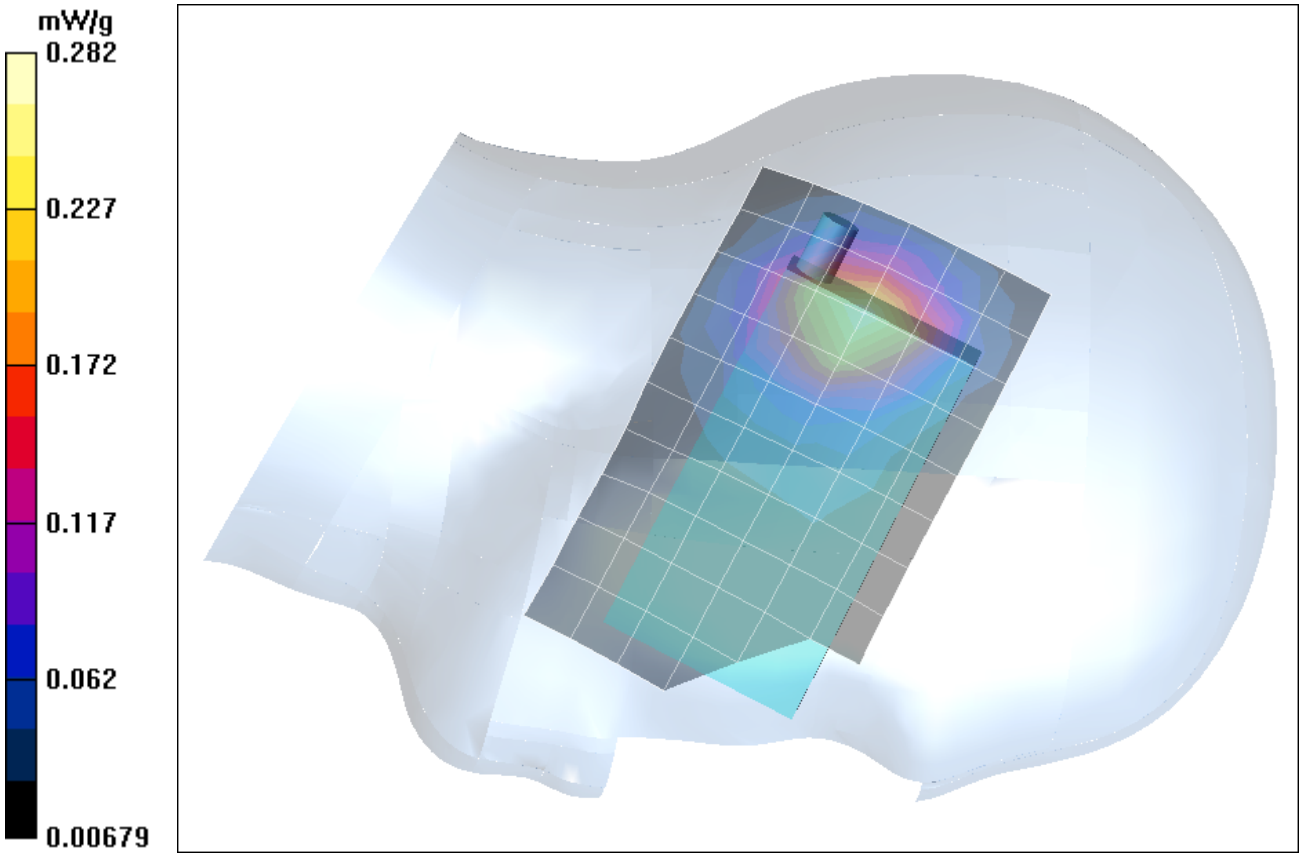
DUT: palmOne Model: Treo 650; Type: Dual-Band PCS/Cellular GSM/GPRS Phone; Serial: SGXW07D4H00P

Ambient Temp: 24.8 °C; Fluid Temp: 23.0 °C; Barometric Pressure: 101.9 kPa; Humidity: 39%

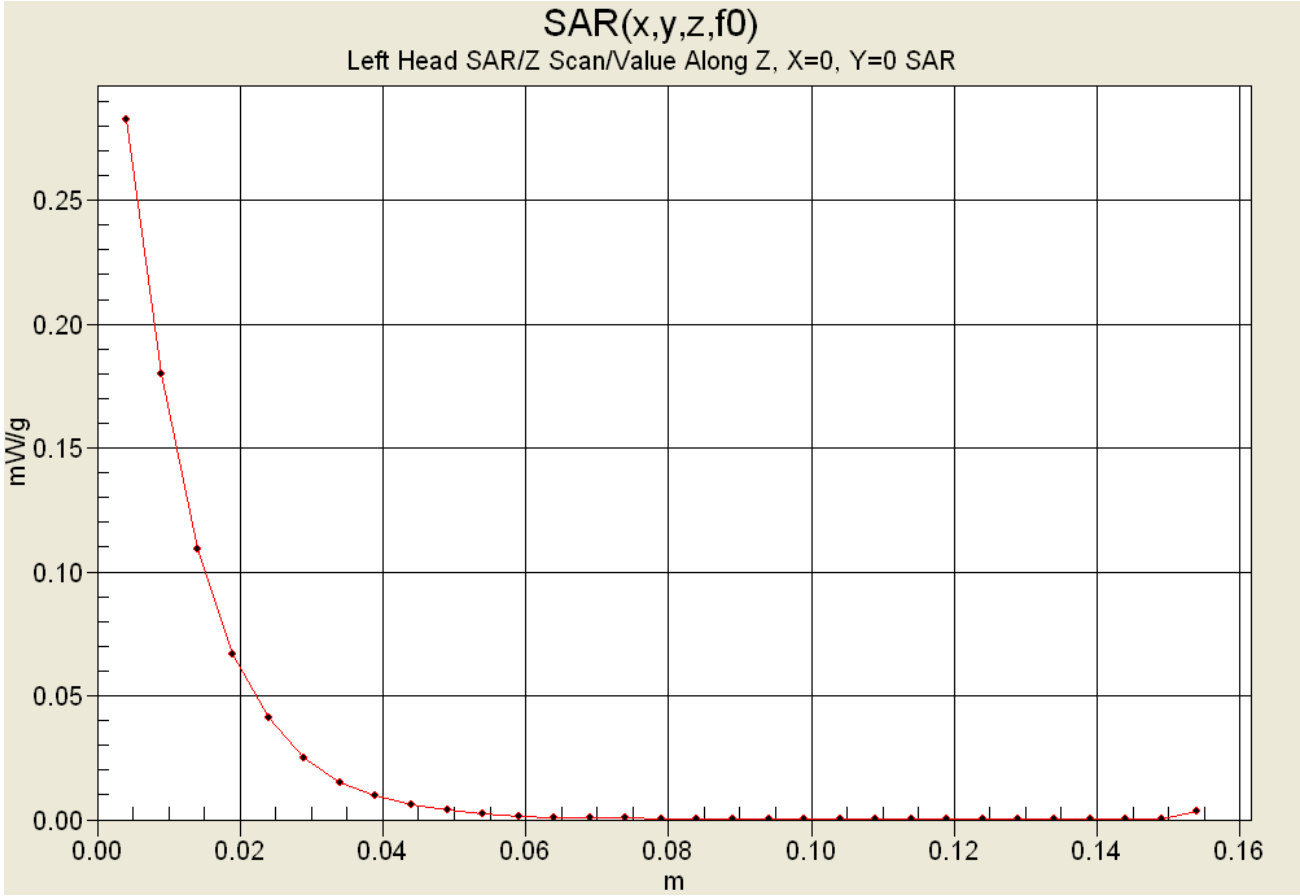
Frequency: 1909.8 MHz; Duty Cycle: 1:8.3
RF Output Power: 29.7 dBm (Peak Conducted)
Communication System: PCS GSM (1 Time Slot)
3.7V 1900mAh Li-ion Battery Pack (P/N: 167-10165-00)
Medium: HSL1880 (σ = 1.40 mho/m; ε_r = 38.1; ρ = 1000 kg/m^3)
- Probe: ET3DV6 - SN1590; ConvF(5.03, 5.03, 5.03); Calibrated: 24/05/2004
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn370; Calibrated: 14/05/2004
- Phantom: SAM 4.0; Type: Fiberglas; Serial: 1033
- Measurement SW: DASY4, V4.2 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 112

Head SAR - PCS GSM - Left Ear - Tilt Position (15°) - Channel 810/Area Scan (7x11x1):
Measurement grid: dx=15mm, dy=15mm

Head SAR - PCS GSM - Left Ear - Tilt Position (15°) - Channel 810/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 13.9 V/m; Power Drift = -0.0360 dB
Peak SAR (extrapolated) = 0.385 W/kg
SAR(1 g) = 0.256 mW/g; SAR(10 g) = 0.153 mW/g



Z-Axis Scan


SAR(x,y,z,f0)
Left Head SAR/Z Scan/Value Along Z, X=0, Y=0 SAR
mW/g
0.25
0.20
0.15
0.10
0.05
0.00
0.00
0.02
0.04
0.06
0.08
0.10
0.12
0.14
0.16
m

Date Tested: 07/31/04

Body-Worn SAR - Cellular GPRS Data Mode - Mid Channel - With Leather Side Case (Front of DUT)

DUT: palmOne Model: Treo 650; Type: Dual-Band PCS/Cellular GSM/GPRS Phone; Serial: SGXW07D4H00P

Body-Worn Accessories: Leather Side Case with Belt-Clip (SKU#3180WW), Generic Ear-Microphone

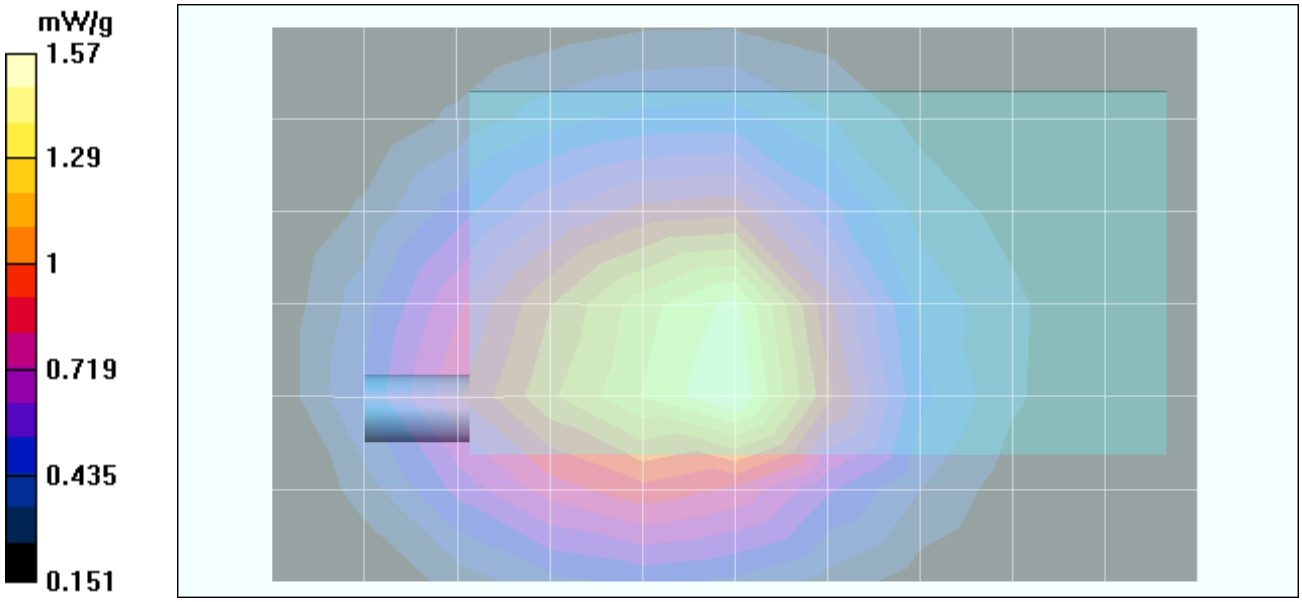
Ambient Temp: 24.3 °C; Fluid Temp: 23.3 °C; Barometric Pressure: 101.5 kPa; Humidity: 37%

Frequency: 836.6 MHz; Duty Cycle: 1:4.16
RF Output Power: 32.1 dBm (Peak Conducted)
Communication System: Cellular GPRS (2 Time Slots)
3.7V 1900mAh Li-ion Battery Pack (P/N: 167-10165-00)
Medium: M835 (σ = 1.00 mho/m; ε_r = 54.1; ρ = 1000 kg/m^3)

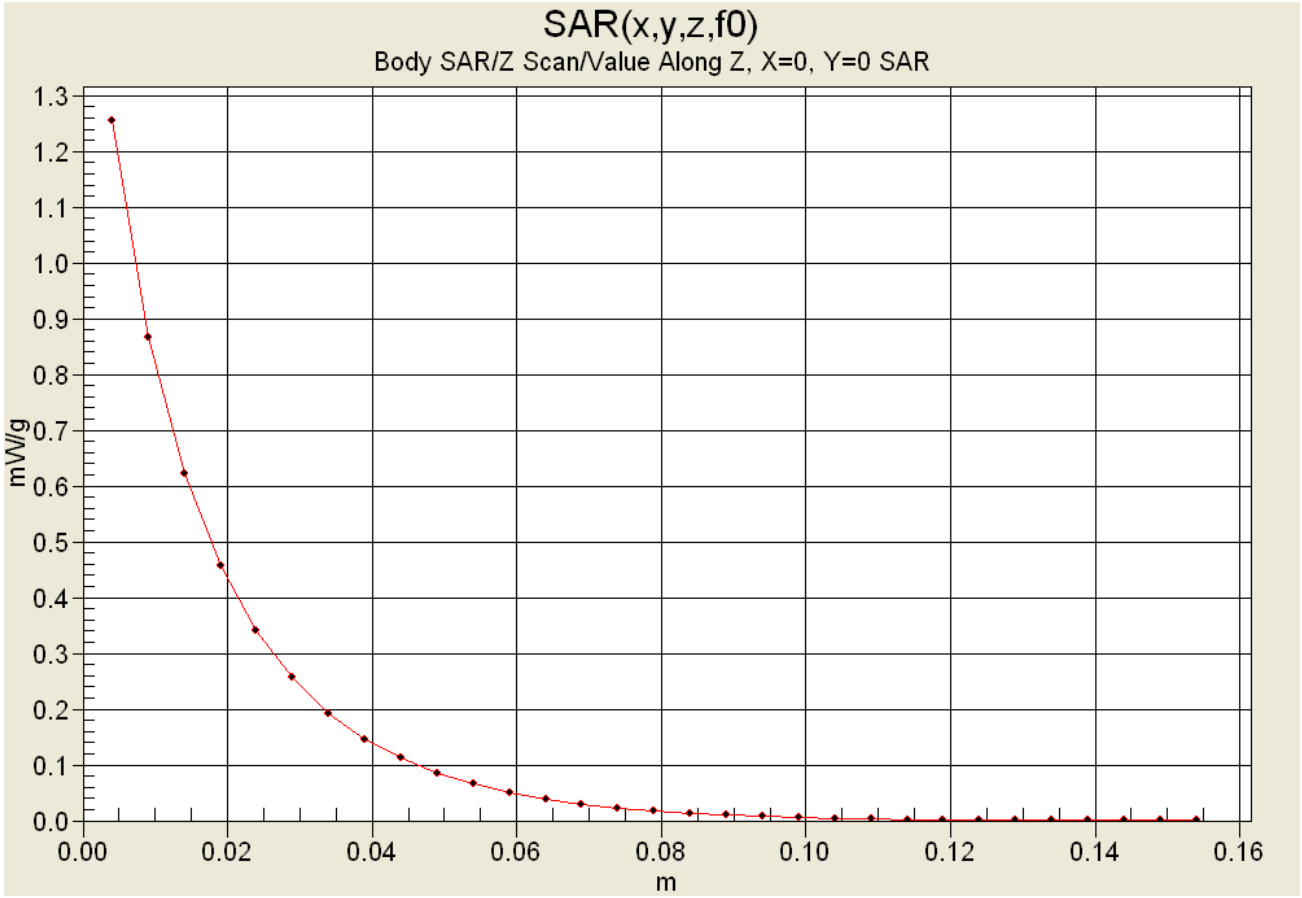
- Probe: ET3DV6 - SN1590; ConvF(6.54, 6.54, 6.54); Calibrated: 24/05/2004
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn370; Calibrated: 14/05/2004
- Phantom: SAM 4.0; Type: Fiberglas; Serial: 1033
- Measurement SW: DASY4, V4.2 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 112

Body-Worn SAR - Cellular GPRS - Leather Side Case Accessory - 1.4 cm Belt-Clip Separation Distance - Channel 190
Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm

Body-Worn SAR - Cellular GPRS - Leather Side Case Accessory - 1.4 cm Belt-Clip Separation Distance - Channel 190
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 37.2 V/m; Power Drift = -0.102 dB
Peak SAR (extrapolated) = 2.37 W/kg
SAR(1 g) = 1.43 mW/g; SAR(10 g) = 0.957 mW/g



Z-Axis Scan


SAR(x,y,z,f0)
Body SAR/Z Scan/Value Along Z, X=0, Y=0 SAR
mW/g
1.3
1.2
1.1
1.0
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
0.00
0.02
0.04
0.06
0.08
0.10
0.12
0.14
0.16
m

Date Tested: 07/31/04

Body-Worn SAR - Cellular GPRS Data Mode - Low Channel - With Leather Side Case (Front of DUT)

DUT: palmOne Model: Treo 650; Type: Dual-Band PCS/Cellular GSM/GPRS Phone; Serial: SGXW07D4H00P

Body-Worn Accessories: Leather Side Case with Belt-Clip (SKU#3180WW), Generic Ear-Microphone

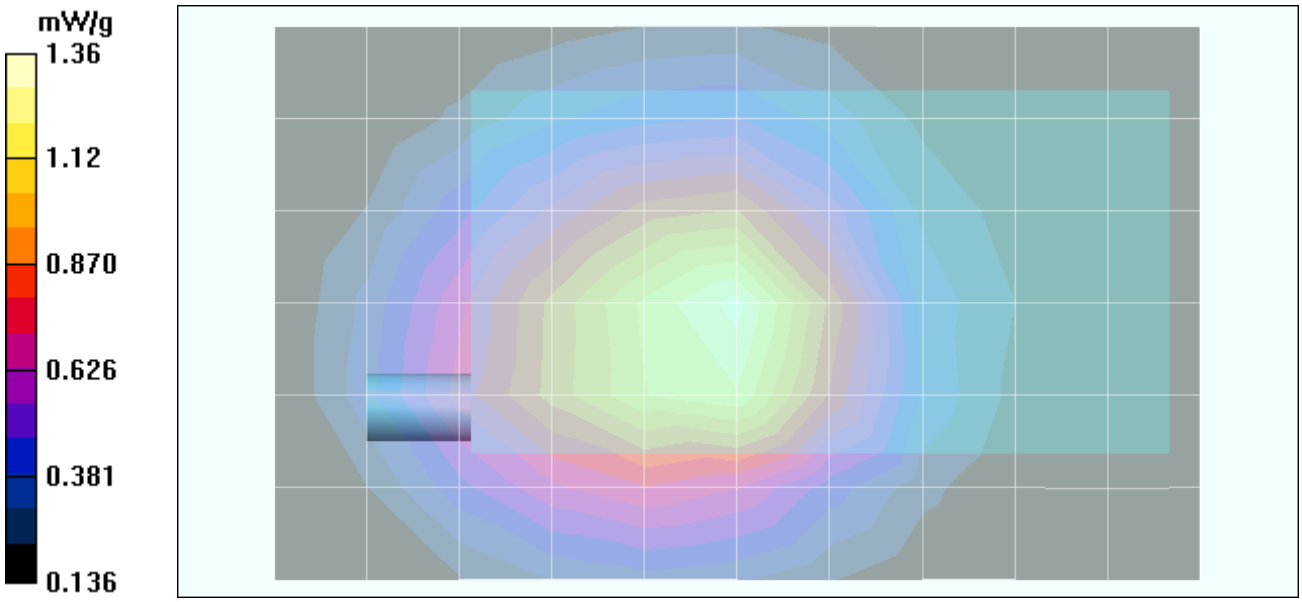
Ambient Temp: 24.3 °C; Fluid Temp: 23.3 °C; Barometric Pressure: 101.5 kPa; Humidity: 37%

Frequency: 824.2 MHz; Duty Cycle: 1:4.16
RF Output Power: 31.9 dBm (Peak Conducted)
Communication System: Cellular GPRS (2 Time Slots)
3.7V 1900mAh Li-ion Battery Pack (P/N: 167-10165-00)
Medium: M835 (σ = 1.00 mho/m; ε_r = 54.1; ρ = 1000 kg/m^3)

- Probe: ET3DV6 - SN1590; ConvF(6.54, 6.54, 6.54); Calibrated: 24/05/2004
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn370; Calibrated: 14/05/2004
- Phantom: SAM 4.0; Type: Fiberglas; Serial: 1033
- Measurement SW: DASY4, V4.2 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 112

Body-Worn SAR - Cellular GPRS - Leather Side Case Accessory - 1.4 cm Belt-Clip Separation Distance - Channel 128
Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm

Body-Worn SAR - Cellular GPRS - Leather Side Case Accessory - 1.4 cm Belt-Clip Separation Distance - Channel 128
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 35.8 V/m; Power Drift = -0.155 dB
Peak SAR (extrapolated) = 1.95 W/kg
SAR(1 g) = 1.26 mW/g; SAR(10 g) = 0.863 mW/g



Date Tested: 07/31/04

Body-Worn SAR - Cellular GPRS Data Mode - High Channel - With Leather Side Case (Front of DUT)

DUT: palmOne Model: Treo 650; Type: Dual-Band PCS/Cellular GSM/GPRS Phone; Serial: SGXW07D4H00P

Body-Worn Accessories: Leather Side Case with Belt-Clip (SKU#3180WW), Generic Ear-Microphone

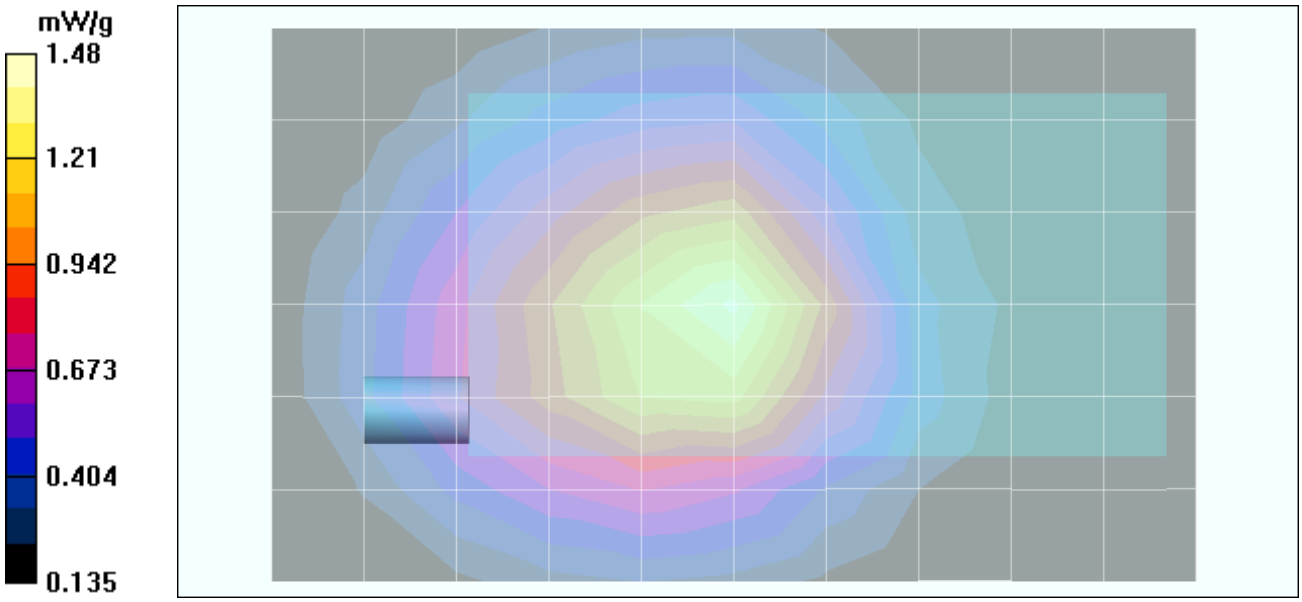
Ambient Temp: 24.3 °C; Fluid Temp: 23.3 °C; Barometric Pressure: 101.5 kPa; Humidity: 37%

Frequency: 848.8 MHz; Duty Cycle: 1:4.16
RF Output Power: 32.2 dBm (Peak Conducted)
Communication System: Cellular GPRS (2 Time Slots)
3.7V 1900mAh Li-ion Battery Pack (P/N: 167-10165-00)
Medium: M835 (σ = 1.00 mho/m; ε_r = 54.1; ρ = 1000 kg/m^3)

- Probe: ET3DV6 - SN1590; ConvF(6.54, 6.54, 6.54); Calibrated: 24/05/2004
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn370; Calibrated: 14/05/2004
- Phantom: SAM 4.0; Type: Fiberglas; Serial: 1033
- Measurement SW: DASY4, V4.2 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 112

Body-Worn SAR - Cellular GPRS - Leather Side Case Accessory - 1.4 cm Belt-Clip Separation Distance - Channel 251
Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm

Body-Worn SAR - Cellular GPRS - Leather Side Case Accessory - 1.4 cm Belt-Clip Separation Distance - Channel 251
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 37.3 V/m; Power Drift = -0.0230 dB
Peak SAR (extrapolated) = 2.19 W/kg
SAR(1 g) = 1.36 mW/g; SAR(10 g) = 0.919 mW/g



Date Tested: 07/31/04

Body-Worn SAR - Cellular GPRS Data Mode - Mid Channel - 1.5 cm Air-Gap Spacing - Front of DUT

DUT: palmOne Model: Treo 650; Type: Dual-Band PCS/Cellular GSM/GPRS Phone; Serial: SGXW07D4H00P

Body-Worn Accessories: Generic Ear-Microphone

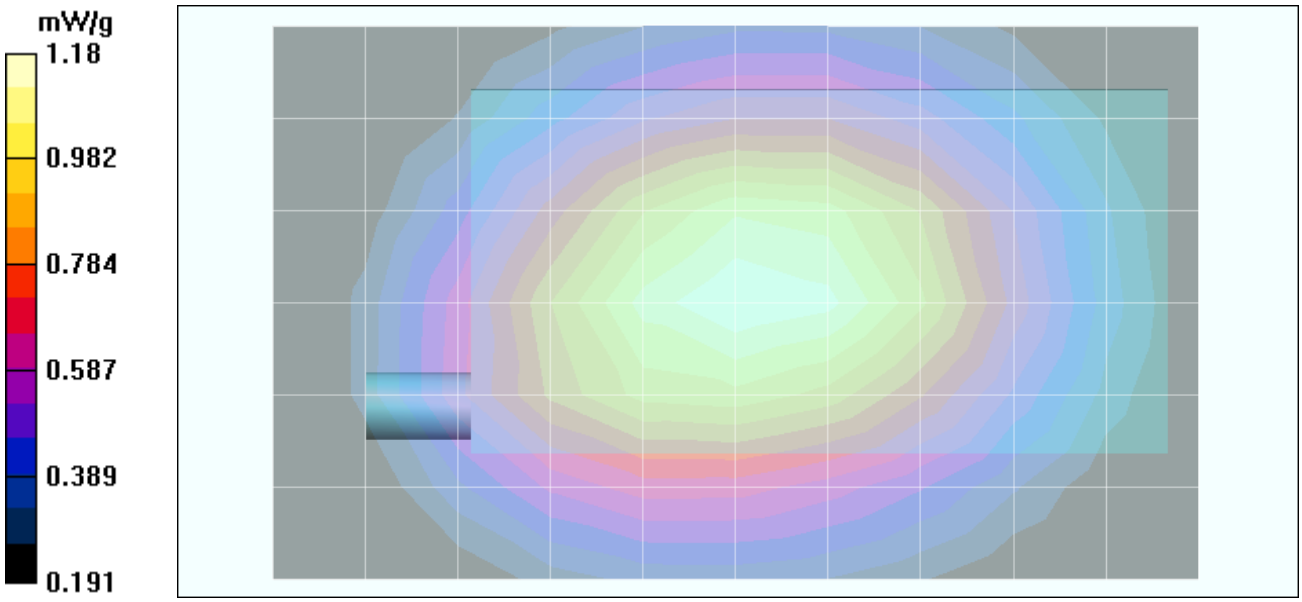
Ambient Temp: 24.3 °C; Fluid Temp: 23.3 °C; Barometric Pressure: 101.5 kPa; Humidity: 37%

Frequency: 836.6 MHz; Duty Cycle: 1:4.16
RF Output Power: 32.1 dBm (Peak Conducted)
Communication System: Cellular GPRS (2 Time Slots)
3.7V 1900mAh Li-ion Battery Pack (P/N: 167-10165-00)
Medium: M835 (σ = 1.00 mho/m; ε_r = 54.1; ρ = 1000 kg/m^3)

- Probe: ET3DV6 - SN1590; ConvF(6.54, 6.54, 6.54); Calibrated: 24/05/2004
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn370; Calibrated: 14/05/2004
- Phantom: SAM 4.0; Type: Fiberglas; Serial: 1033
- Measurement SW: DASY4, V4.2 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 112

Body-Worn SAR - Cellular GPRS - Front of DUT - 1.5 cm Air-Gap Separation Distance - Channel 190
Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm

Body-Worn SAR - Cellular GPRS - Front of DUT - 1.5 cm Air-Gap Separation Distance - Channel 190
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 36 V/m; Power Drift = -0.161 dB
Peak SAR (extrapolated) = 1.39 W/kg
SAR(1 g) = 1.12 mW/g; SAR(10 g) = 0.843 mW/g



Date Tested: 07/31/04

Body-Worn SAR - Cellular GPRS Data Mode - Low Channel - 1.5 cm Air-Gap Spacing - Front of DUT

DUT: palmOne Model: Treo 650; Type: Dual-Band PCS/Cellular GSM/GPRS Phone; Serial: SGXW07D4H00P

Body-Worn Accessories: Generic Ear-Microphone

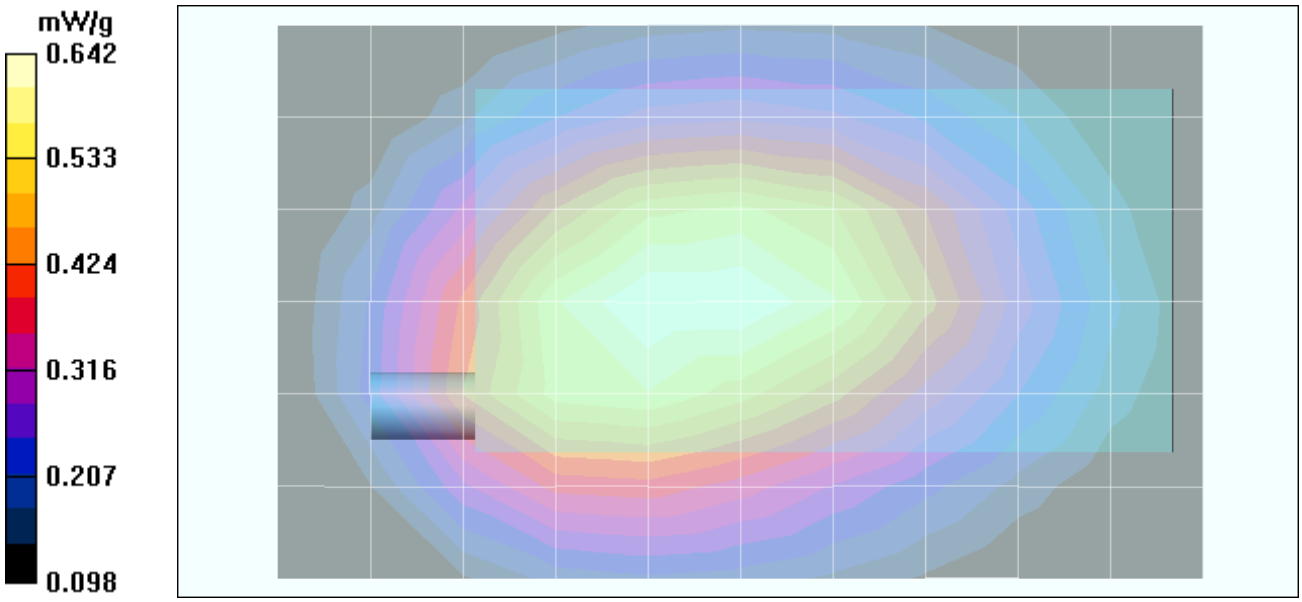
Ambient Temp: 24.3 °C; Fluid Temp: 23.3 °C; Barometric Pressure: 101.5 kPa; Humidity: 37%

Frequency: 824.2 MHz; Duty Cycle: 1:4.16
RF Output Power: 31.9 dBm (Peak Conducted)
Communication System: Cellular GPRS (2 Time Slots)
3.7V 1900mAh Li-ion Battery Pack (P/N: 167-10165-00)
Medium: M835 (σ = 1.00 mho/m; ε_r = 54.1; ρ = 1000 kg/m^3)

- Probe: ET3DV6 - SN1590; ConvF(6.54, 6.54, 6.54); Calibrated: 24/05/2004
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn370; Calibrated: 14/05/2004
- Phantom: SAM 4.0; Type: Fiberglas; Serial: 1033
- Measurement SW: DASY4, V4.2 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 112

Body-Worn SAR - Cellular GPRS - Front of DUT - 1.5 cm Air-Gap Separation Distance - Channel 128
Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm

Body-Worn SAR - Cellular GPRS - Front of DUT - 1.5 cm Air-Gap Separation Distance - Channel 128
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 27.1 V/m; Power Drift = -0.0144 dB
Peak SAR (extrapolated) = 0.758 W/kg
SAR(1 g) = 0.607 mW/g; SAR(10 g) = 0.454 mW/g



Date Tested: 07/31/04

Body-Worn SAR - Cellular GPRS Data Mode - High Channel - 1.5 cm Air-Gap Spacing - Front of DUT

DUT: palmOne Model: Treo 650; Type: Dual-Band PCS/Cellular GSM/GPRS Phone; Serial: SGXW07D4H00P

Body-Worn Accessories: Generic Ear-Microphone

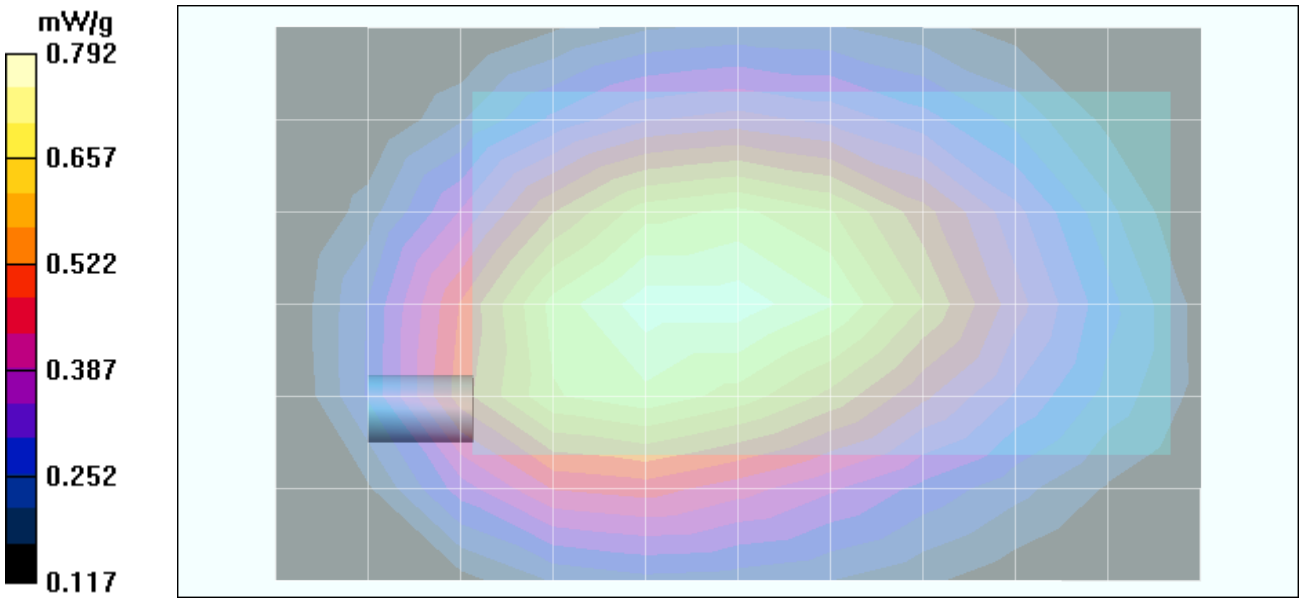
Ambient Temp: 24.3 °C; Fluid Temp: 23.3 °C; Barometric Pressure: 101.5 kPa; Humidity: 37%

Frequency: 848.8 MHz; Duty Cycle: 1:4.16
RF Output Power: 32.2 dBm (Peak Conducted)
Communication System: Cellular GPRS (2 Time Slots)
3.7V 1900mAh Li-ion Battery Pack (P/N: 167-10165-00)
Medium: M835 (σ = 1.00 mho/m; ε_r = 54.1; ρ = 1000 kg/m^3)

- Probe: ET3DV6 - SN1590; ConvF(6.54, 6.54, 6.54); Calibrated: 24/05/2004
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn370; Calibrated: 14/05/2004
- Phantom: SAM 4.0; Type: Fiberglas; Serial: 1033
- Measurement SW: DASY4, V4.2 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 112

Body-Worn SAR - Cellular GPRS - Front of DUT - 1.5 cm Air-Gap Separation Distance - Channel 251
Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm

Body-Worn SAR - Cellular GPRS - Front of DUT - 1.5 cm Air-Gap Separation Distance - Channel 251
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 29.3 V/m; Power Drift = -0.115 dB
Peak SAR (extrapolated) = 0.932 W/kg
SAR(1 g) = 0.747 mW/g; SAR(10 g) = 0.561 mW/g



Date Tested: 07/31/04

Body-Worn SAR - Cellular GPRS Data Mode - Mid Channel - 1.5 cm Air-Gap Spacing - Back of DUT

DUT: palmOne Model: Treo 650; Type: Dual-Band PCS/Cellular GSM/GPRS Phone; Serial: SGXW07D4H00P

Body-Worn Accessories: Generic Ear-Microphone

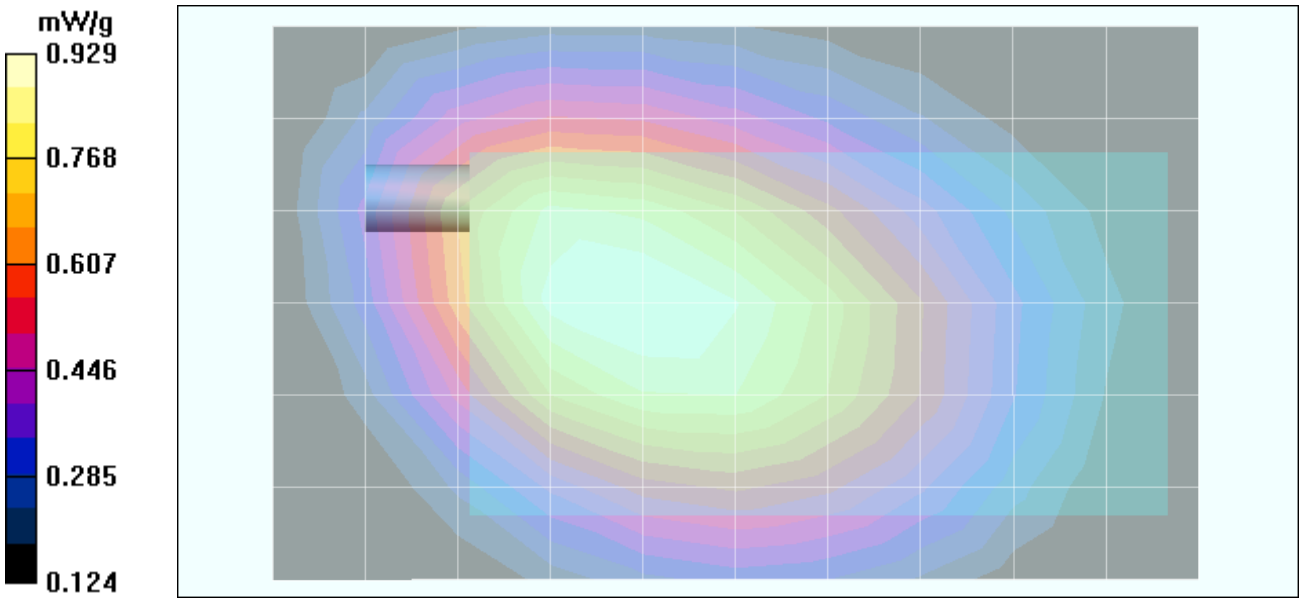
Ambient Temp: 24.3 °C; Fluid Temp: 23.3 °C; Barometric Pressure: 101.5 kPa; Humidity: 37%

Frequency: 836.6 MHz; Duty Cycle: 1:4.16
RF Output Power: 32.1 dBm (Peak Conducted)
Communication System: Cellular GPRS (2 Time Slots)
3.7V 1900mAh Li-ion Battery Pack (P/N: 167-10165-00)
Medium: M835 (σ = 1.00 mho/m; ε_r = 54.1; ρ = 1000 kg/m^3)

- Probe: ET3DV6 - SN1590; ConvF(6.54, 6.54, 6.54); Calibrated: 24/05/2004
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn370; Calibrated: 14/05/2004
- Phantom: SAM 4.0; Type: Fiberglas; Serial: 1033
- Measurement SW: DASY4, V4.2 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 112

Body-Worn SAR - Cellular GPRS - Back of DUT - 1.5 cm Air-Gap Separation Distance - Channel 190
Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm

Body-Worn SAR - Cellular GPRS - Back of DUT - 1.5 cm Air-Gap Separation Distance - Channel 190
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 32 V/m; Power Drift = -0.101 dB
Peak SAR (extrapolated) = 1.15 W/kg
SAR(1 g) = 0.882 mW/g; SAR(10 g) = 0.655 mW/g



Date Tested: 07/31/04

Body-Worn SAR - Cellular GPRS Data Mode - Low Channel - 1.5 cm Air-Gap Spacing - Back of DUT

DUT: palmOne Model: Treo 650; Type: Dual-Band PCS/Cellular GSM/GPRS Phone; Serial: SGXW07D4H00P

Body-Worn Accessories: Generic Ear-Microphone

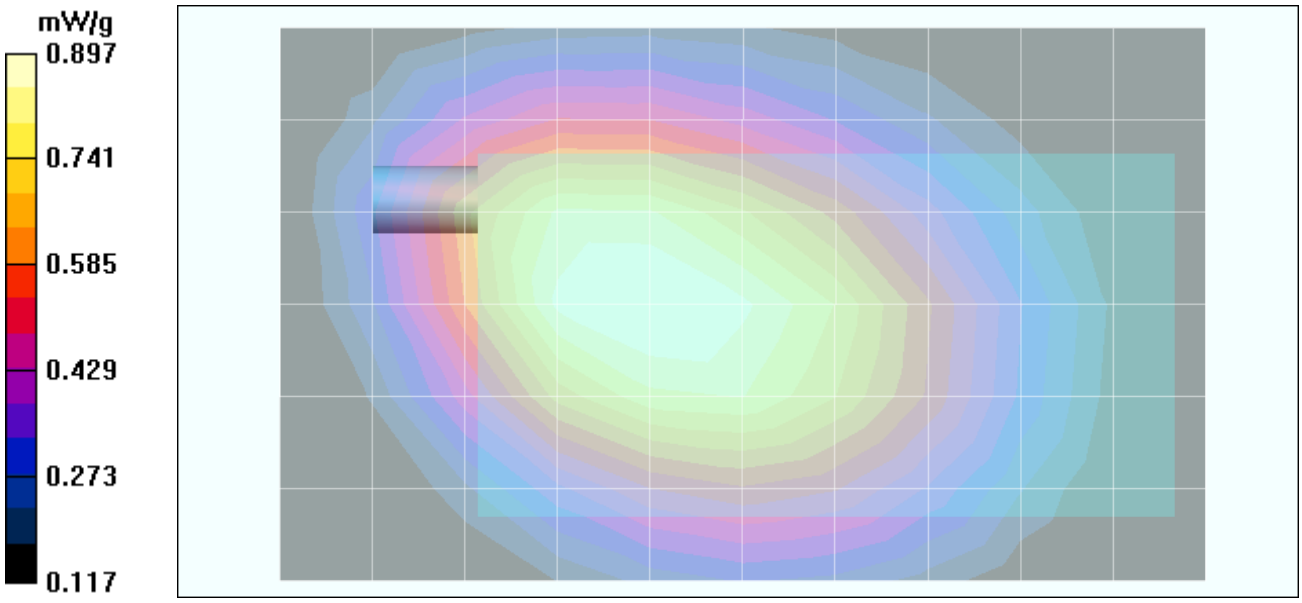
Ambient Temp: 24.3 °C; Fluid Temp: 23.3 °C; Barometric Pressure: 101.5 kPa; Humidity: 37%

Frequency: 824.2 MHz; Duty Cycle: 1:4.16
RF Output Power: 31.9 dBm (Peak Conducted)
Communication System: Cellular GPRS (2 Time Slots)
3.7V 1900mAh Li-ion Battery Pack (P/N: 167-10165-00)
Medium: M835 (σ = 1.00 mho/m; ε_r = 54.1; ρ = 1000 kg/m^3)

- Probe: ET3DV6 - SN1590; ConvF(6.54, 6.54, 6.54); Calibrated: 24/05/2004
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn370; Calibrated: 14/05/2004
- Phantom: SAM 4.0; Type: Fiberglas; Serial: 1033
- Measurement SW: DASY4, V4.2 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 112

Body-Worn SAR - Cellular GPRS - Back of DUT - 1.5 cm Air-Gap Separation Distance - Channel 128
Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm

Body-Worn SAR - Cellular GPRS - Back of DUT - 1.5 cm Air-Gap Separation Distance - Channel 128
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 31.3 V/m; Power Drift = -0.129 dB
Peak SAR (extrapolated) = 1.1 W/kg
SAR(1 g) = 0.853 mW/g; SAR(10 g) = 0.637 mW/g



Date Tested: 07/31/04

Body-Worn SAR - Cellular GPRS Data Mode - High Channel - 1.5 cm Air-Gap Spacing - Back of DUT

DUT: palmOne Model: Treo 650; Type: Dual-Band PCS/Cellular GSM/GPRS Phone; Serial: SGXW07D4H00P

Body-Worn Accessories: Generic Ear-Microphone

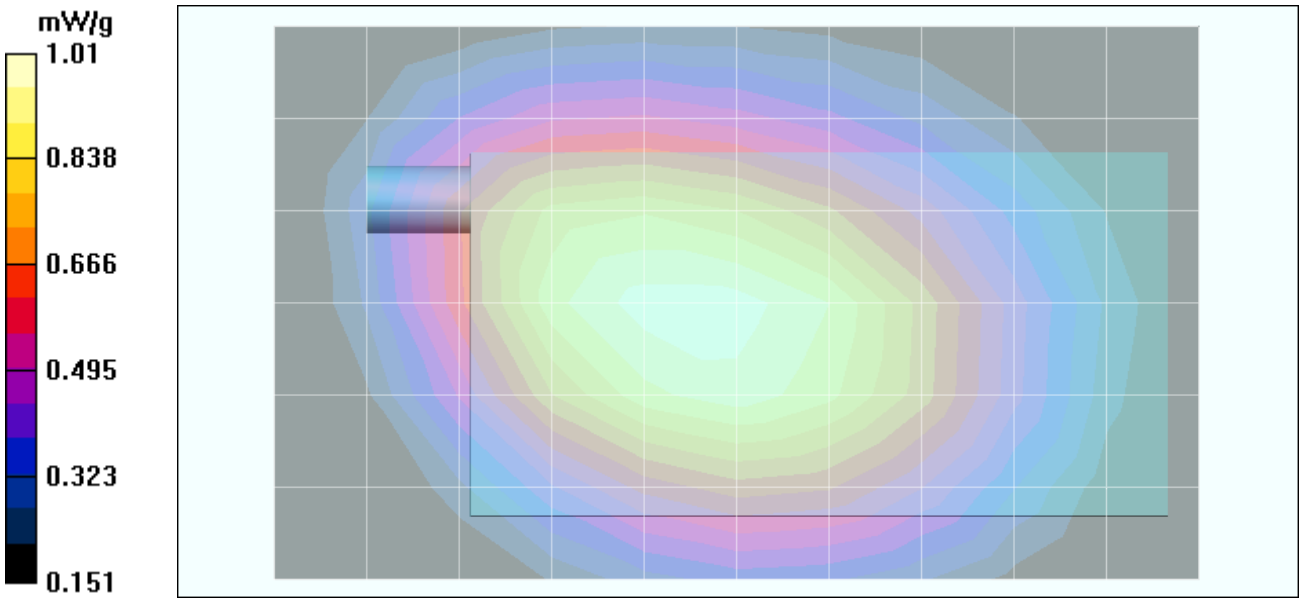
Ambient Temp: 24.3 °C; Fluid Temp: 23.3 °C; Barometric Pressure: 101.5 kPa; Humidity: 37%

Frequency: 848.8 MHz; Duty Cycle: 1:4.16
RF Output Power: 32.2 dBm (Peak Conducted)
Communication System: Cellular GPRS (2 Time Slots)
3.7V 1900mAh Li-ion Battery Pack (P/N: 167-10165-00)
Medium: M835 (σ = 1.00 mho/m; ε_r = 54.1; ρ = 1000 kg/m^3)

- Probe: ET3DV6 - SN1590; ConvF(6.54, 6.54, 6.54); Calibrated: 24/05/2004
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn370; Calibrated: 14/05/2004
- Phantom: SAM 4.0; Type: Fiberglas; Serial: 1033
- Measurement SW: DASY4, V4.2 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 112

Body-Worn SAR - Cellular GPRS - Back of DUT - 1.5 cm Air-Gap Separation Distance - Channel 251
Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm

Body-Worn SAR - Cellular GPRS - Back of DUT - 1.5 cm Air-Gap Separation Distance - Channel 251
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 32.9 V/m; Power Drift = -0.0346 dB
Peak SAR (extrapolated) = 1.2 W/kg
SAR(1 g) = 0.952 mW/g; SAR(10 g) = 0.716 mW/g



Date Tested: 07/31/04

Body-Worn SAR - Cellular GPRS Data Mode - Mid Channel - With Fitted Leather Pouch (Back of DUT)

DUT: palmOne Model: Treo 650; Type: Dual-Band PCS/Cellular GSM/GPRS Phone; Serial: SGXW07D4H00P

Body-Worn Accessories: Fitted Leather Pouch and Swivel Belt-Clip (SKU#3179WW), Generic Ear-Microphone

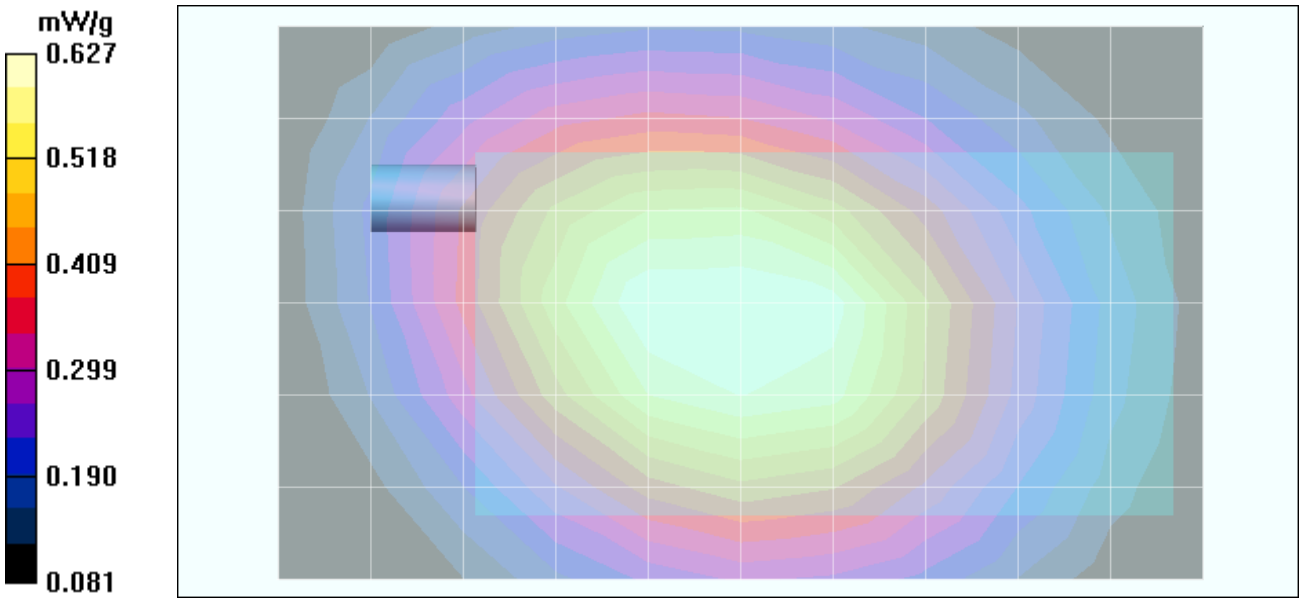
Ambient Temp: 24.3 °C; Fluid Temp: 23.3 °C; Barometric Pressure: 101.5 kPa; Humidity: 37%

Frequency: 836.6 MHz; Duty Cycle: 1:4.16
RF Output Power: 32.1 dBm (Peak Conducted)
Communication System: Cellular GPRS (2 Time Slots)
3.7V 1900mAh Li-ion Battery Pack (P/N: 167-10165-00)
Medium: M835 (σ = 1.00 mho/m; ε_r = 54.1; ρ = 1000 kg/m^3)

- Probe: ET3DV6 - SN1590; ConvF(6.54, 6.54, 6.54); Calibrated: 24/05/2004
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn370; Calibrated: 14/05/2004
- Phantom: SAM 4.0; Type: Fiberglas; Serial: 1033
- Measurement SW: DASY4, V4.2 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 112

Body-Worn SAR - Cellular GPRS - Fitted Leather Pouch Accessory - 2.5 cm Belt-Clip Separation Distance - Channel 190
Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm

Body-Worn SAR - Cellular GPRS - Fitted Leather Pouch Accessory - 2.5 cm Belt-Clip Separation Distance - Channel 190
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 25.9 V/m; Power Drift = -0.116 dB
Peak SAR (extrapolated) = 0.792 W/kg
SAR(1 g) = 0.592 mW/g; SAR(10 g) = 0.448 mW/g



Date Tested: 07/31/04

Body-Worn SAR - Cellular GPRS Data Mode - Mid Channel - With Aluminum Case (Back of DUT)

DUT: palmOne Model: Treo 650; Type: Dual-Band PCS/Cellular GSM/GPRS Phone; Serial: SGXW07D4H00P

Body-Worn Accessories: Aluminum Case and Swivel Belt-Clip (SKU#3202WW), Generic Ear-Microphone

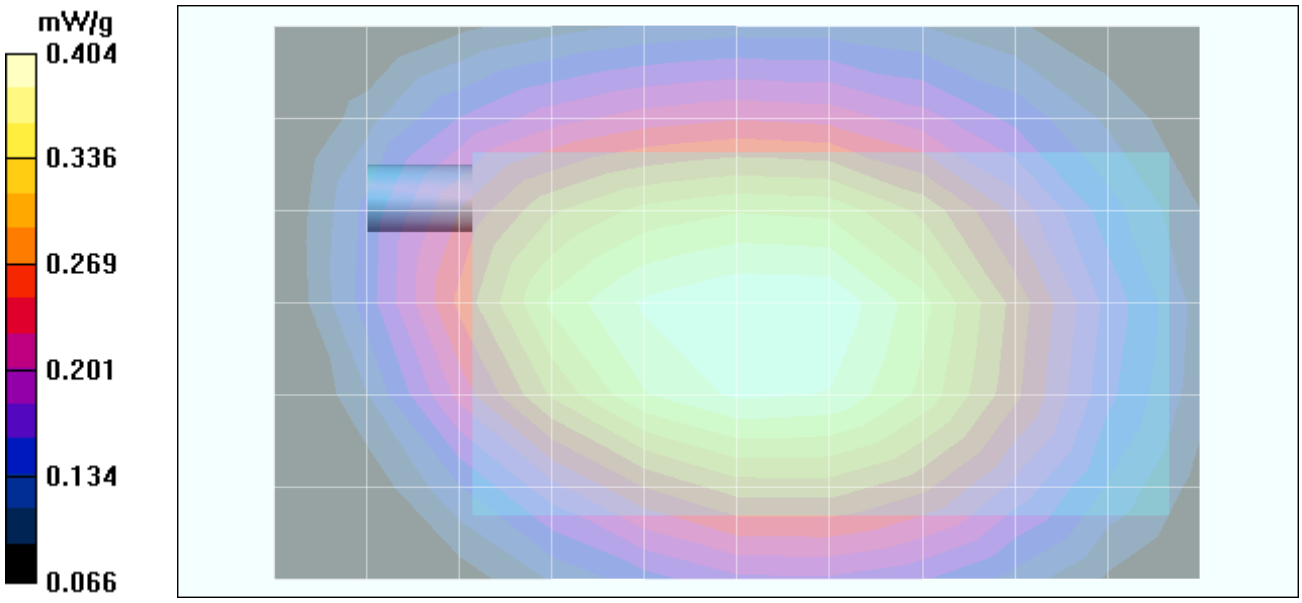
Ambient Temp: 24.3 °C; Fluid Temp: 23.3 °C; Barometric Pressure: 101.5 kPa; Humidity: 37%

Frequency: 836.6 MHz; Duty Cycle: 1:4.16
RF Output Power: 32.1 dBm (Peak Conducted)
Communication System: Cellular GPRS (2 Time Slots)
3.7V 1900mAh Li-ion Battery Pack (P/N: 167-10165-00)
Medium: M835 (σ = 1.00 mho/m; ε_r = 54.1; ρ = 1000 kg/m^3)

- Probe: ET3DV6 - SN1590; ConvF(6.54, 6.54, 6.54); Calibrated: 24/05/2004
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn370; Calibrated: 14/05/2004
- Phantom: SAM 4.0; Type: Fiberglas; Serial: 1033
- Measurement SW: DASY4, V4.2 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 112

Body-Worn SAR - Cellular GPRS - Aluminum Case Accessory - 2.5 cm Belt-Clip Separation Distance - Channel 190
Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm

Body-Worn SAR - Cellular GPRS - Aluminum Case Accessory - 2.5 cm Belt-Clip Separation Distance - Channel 190
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 20.9 V/m; Power Drift = -0.120 dB
Peak SAR (extrapolated) = 0.477 W/kg
SAR(1 g) = 0.383 mW/g; SAR(10 g) = 0.291 mW/g



Date Tested: 07/31/04

Body-Worn SAR - Cellular GPRS Data Mode - Mid Channel - With Leather Side Case (Front of DUT) Simultaneous Transmit with Co-located Bluetooth Transmitter (Broadcom BCM-2035)

DUT: palmOne Model: Treo 650; Type: Dual-Band PCS/Cellular GSM/GPRS Phone; Serial: SGXW07D4H00P

Body-Worn Accessories: Leather Side Case with Belt-Clip (SKU#3180WW), Generic Ear-Microphone

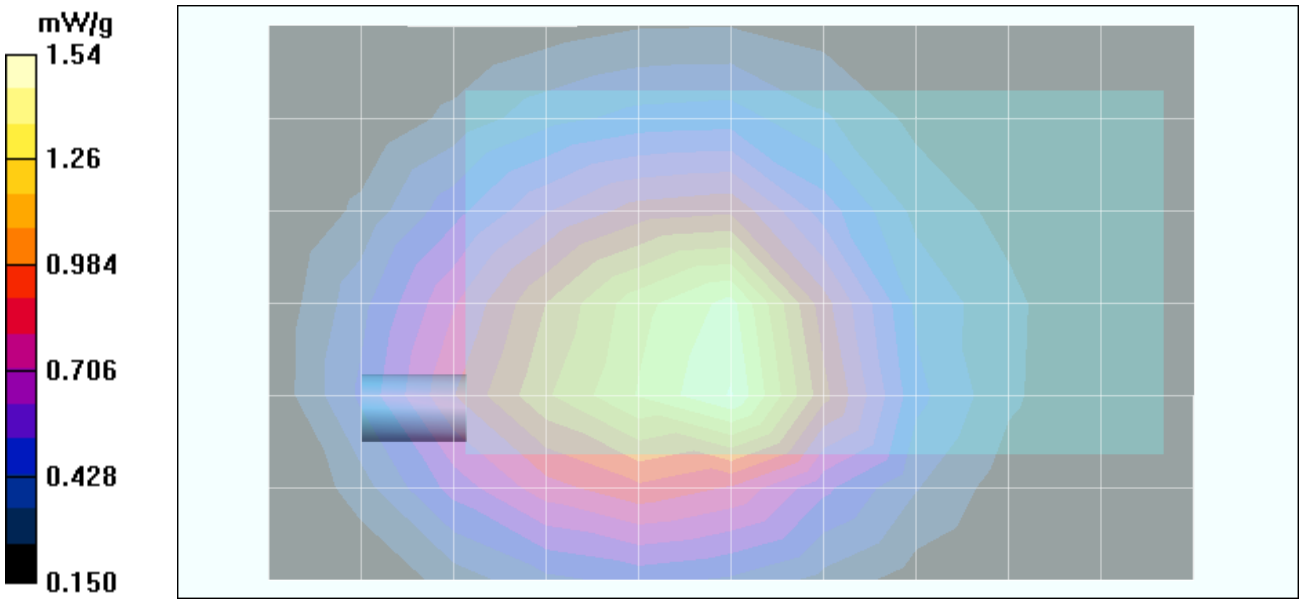
Ambient Temp: 24.3 °C; Fluid Temp: 23.3 °C; Barometric Pressure: 101.5 kPa; Humidity: 37%

3.7V 1900mAh Li-ion Battery Pack (P/N: 167-10165-00)
Frequency: 836.6 MHz; Duty Cycle: 1:4.16
RF Output Power: 32.1 dBm (Peak Conducted)
Communication System: Cellular GPRS (2 Time Slots)
Frequency: 2441 MHz; Duty Cycle: 1:1 (Bluetooth)
RF Output Power: -5.1 dBm (Peak Conducted) Bluetooth
Communication System: Modulated Fixed Frequency (Bluetooth)
Medium: M835 (σ = 1.00 mho/m; ε_r = 54.1; ρ = 1000 kg/m^3)

- Probe: ET3DV6 - SN1590; ConvF(6.54, 6.54, 6.54); Calibrated: 24/05/2004
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn370; Calibrated: 14/05/2004
- Phantom: SAM 4.0; Type: Fiberglas; Serial: 1033
- Measurement SW: DASY4, V4.2 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 112

Body-Worn SAR - Cellular GPRS & Bluetooth - Leather Side Case Accessory - 1.4 cm Belt-Clip Separation Distance - Channel 190
Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm

Body-Worn SAR - Cellular GPRS & Bluetooth - Leather Side Case Accessory - 1.4 cm Belt-Clip Separation Distance - Channel 190
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 36.9 V/m; Power Drift = -0.101 dB
Peak SAR (extrapolated) = 2.3 W/kg
SAR(1 g) = 1.41 mW/g; SAR(10 g) = 0.944 mW/g



Date Tested: 08/03/04

Body-Worn SAR - PCS GPRS Data Mode - Mid Channel - With Leather Side Case (Front of DUT)

DUT: palmOne Model: Treo 650; Type: Dual-Band PCS/Cellular GSM/GPRS Phone; Serial: SGXW07D4H00P

Body-Worn Accessories: Leather Side Case with Belt-Clip (SKU#3180WW), Generic Ear-Microphone

Ambient Temp: 23.9 °C; Fluid Temp: 23.1 °C; Barometric Pressure: 102.1 kPa; Humidity: 40%

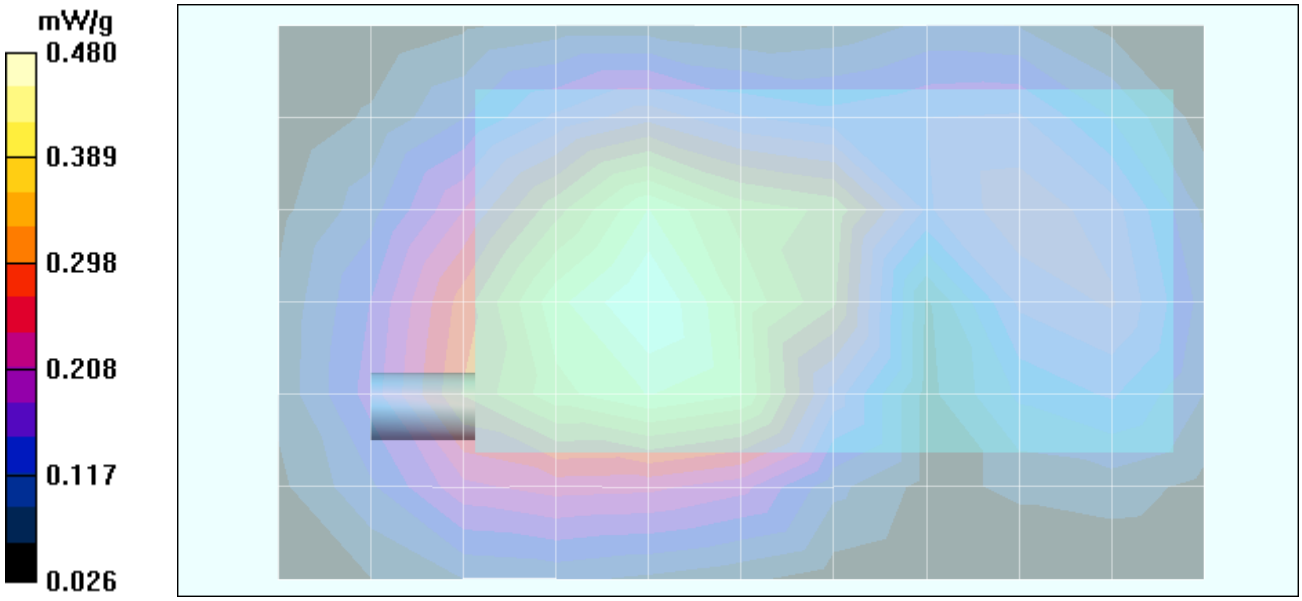
Frequency: 1880.0 MHz; Duty Cycle: 1:4.16
RF Output Power: 30.1 dBm (Peak Conducted)
Communication System: PCS GPRS (2 Time Slots)
3.7V 1900mAh Li-ion Battery Pack (P/N: 167-10165-00)
Medium: M1880 (σ = 1.55 mho/m; ε_r = 52.0; ρ = 1000 kg/m^3)

- Probe: ET3DV6 - SN1590; ConvF(4.58, 4.58, 4.58); Calibrated: 24/05/2004
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn370; Calibrated: 14/05/2004
- Phantom: SAM 4.0; Type: Fiberglas; Serial: 1033
- Measurement SW: DASY4, V4.2 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 112

Body-Worn SAR - PCS GPRS - Leather Side Case Accessory - 1.4 cm Belt-Clip Separation Distance - Channel 661
Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm

Body-Worn SAR - PCS GPRS - Leather Side Case Accessory - 1.4 cm Belt-Clip Separation Distance - Channel 661
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 17.8 V/m; Power Drift = 0.161 dB
Peak SAR (extrapolated) = 0.647 W/kg
SAR(1 g) = 0.450 mW/g; SAR(10 g) = 0.302 mW/g

Body-Worn SAR - PCS GPRS - Leather Side Case Accessory - 1.4 cm Belt-Clip Separation Distance - Channel 661
Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 17.8 V/m; Power Drift = 0.161 dB
Peak SAR (extrapolated) = 0.647 W/kg
SAR(1 g) = 0.389 mW/g; SAR(10 g) = 0.244 mW/g



Date Tested: 08/03/04

Body-Worn SAR - PCS GPRS Data Mode - Mid Channel - 1.5 cm Air-Gap Spacing - Front of DUT

DUT: palmOne Model: Treo 650; Type: Dual-Band PCS/Cellular GSM/GPRS Phone; Serial: SGXW07D4H00P

Body-Worn Accessories: Generic Ear-Microphone

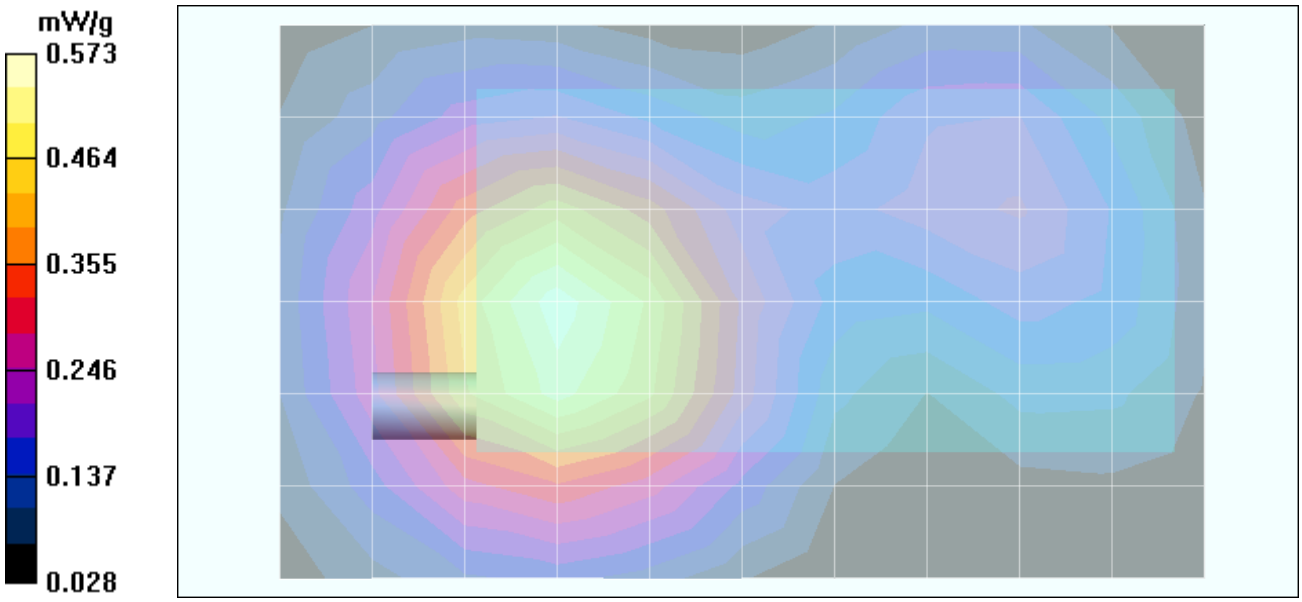
Ambient Temp: 23.9 °C; Fluid Temp: 23.1 °C; Barometric Pressure: 102.1 kPa; Humidity: 40%

Frequency: 1880.0 MHz; Duty Cycle: 1:4.16
RF Output Power: 30.1 dBm (Peak Conducted)
Communication System: PCS GPRS (2 Time Slots)
3.7V 1900mAh Li-ion Battery Pack (P/N: 167-10165-00)
Medium: M1880 (σ = 1.55 mho/m; ε_r = 52.0; ρ = 1000 kg/m^3)

- Probe: ET3DV6 - SN1590; ConvF(4.58, 4.58, 4.58); Calibrated: 24/05/2004
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn370; Calibrated: 14/05/2004
- Phantom: SAM 4.0; Type: Fiberglas; Serial: 1033
- Measurement SW: DASY4, V4.2 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 112

Body-Worn SAR - PCS GPRS - Front of DUT - 1.5 cm Air-Gap Separation Distance - Channel 661
Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm

Body-Worn SAR - PCS GPRS - Front of DUT - 1.5 cm Air-Gap Separation Distance - Channel 661
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 15.6 V/m; Power Drift = -0.0927 dB
Peak SAR (extrapolated) = 0.776 W/kg
SAR(1 g) = 0.533 mW/g; SAR(10 g) = 0.349 mW/g



Date Tested: 08/03/04

Body-Worn SAR - PCS GPRS Data Mode - Mid Channel - 1.5 cm Air-Gap Spacing - Back of DUT

DUT: palmOne Model: Treo 650; Type: Dual-Band PCS/Cellular GSM/GPRS Phone; Serial: SGXW07D4H00P

Body-Worn Accessories: Generic Ear-Microphone

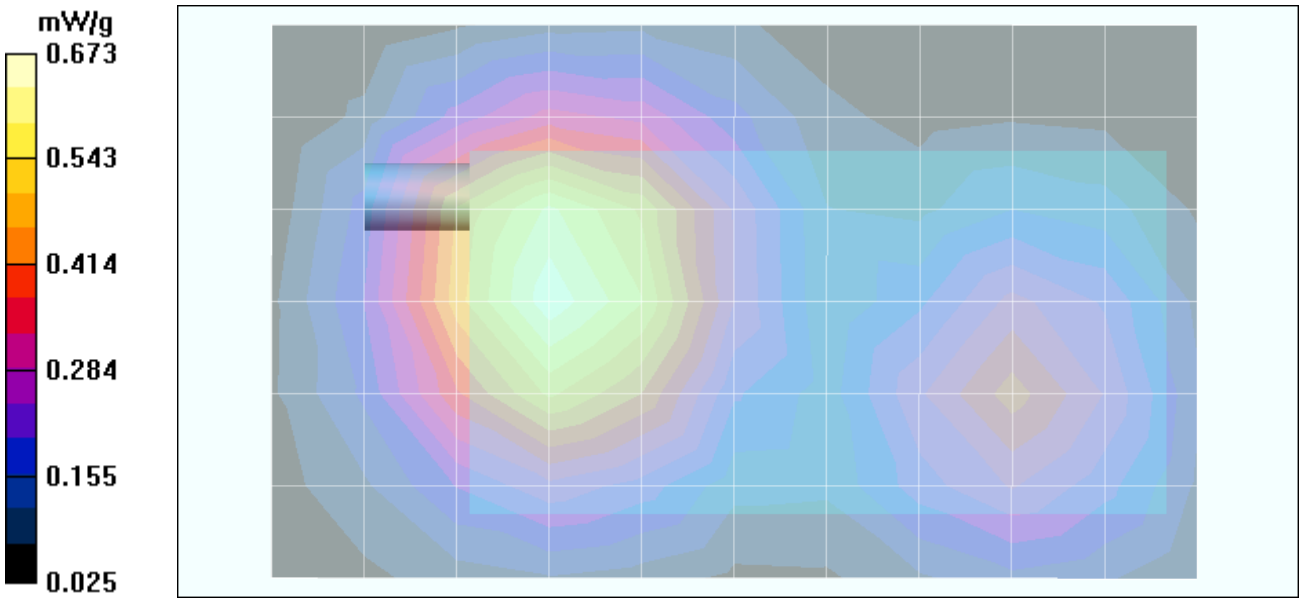
Ambient Temp: 23.9 °C; Fluid Temp: 23.1 °C; Barometric Pressure: 102.1 kPa; Humidity: 40%

Frequency: 1880.0 MHz; Duty Cycle: 1:4.16
RF Output Power: 30.1 dBm (Peak Conducted)
Communication System: PCS GPRS (2 Time Slots)
3.7V 1900mAh Li-ion Battery Pack (P/N: 167-10165-00)
Medium: M1880 (σ = 1.55 mho/m; ε_r = 52.0; ρ = 1000 kg/m^3)

- Probe: ET3DV6 - SN1590; ConvF(4.58, 4.58, 4.58); Calibrated: 24/05/2004
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn370; Calibrated: 14/05/2004
- Phantom: SAM 4.0; Type: Fiberglas; Serial: 1033
- Measurement SW: DASY4, V4.2 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 112

Body-Worn SAR - PCS GPRS - Back of DUT - 1.5 cm Air-Gap Separation Distance - Channel 661
Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm

Body-Worn SAR - PCS GPRS - Back of DUT - 1.5 cm Air-Gap Separation Distance - Channel 661
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 16.1 V/m; Power Drift = -0.129 dB
Peak SAR (extrapolated) = 0.972 W/kg
SAR(1 g) = 0.628 mW/g; SAR(10 g) = 0.399 mW/g



Date Tested: 08/03/04

Body-Worn SAR - PCS GPRS Data Mode - Mid Channel - With Fitted Leather Pouch (Back of DUT)

DUT: palmOne Model: Treo 650; Type: Dual-Band PCS/Cellular GSM/GPRS Phone; Serial: SGXW07D4H00P

Body-Worn Accessories: Fitted Leather Pouch and Swivel Belt-Clip (SKU#3179WW), Generic Ear-Microphone

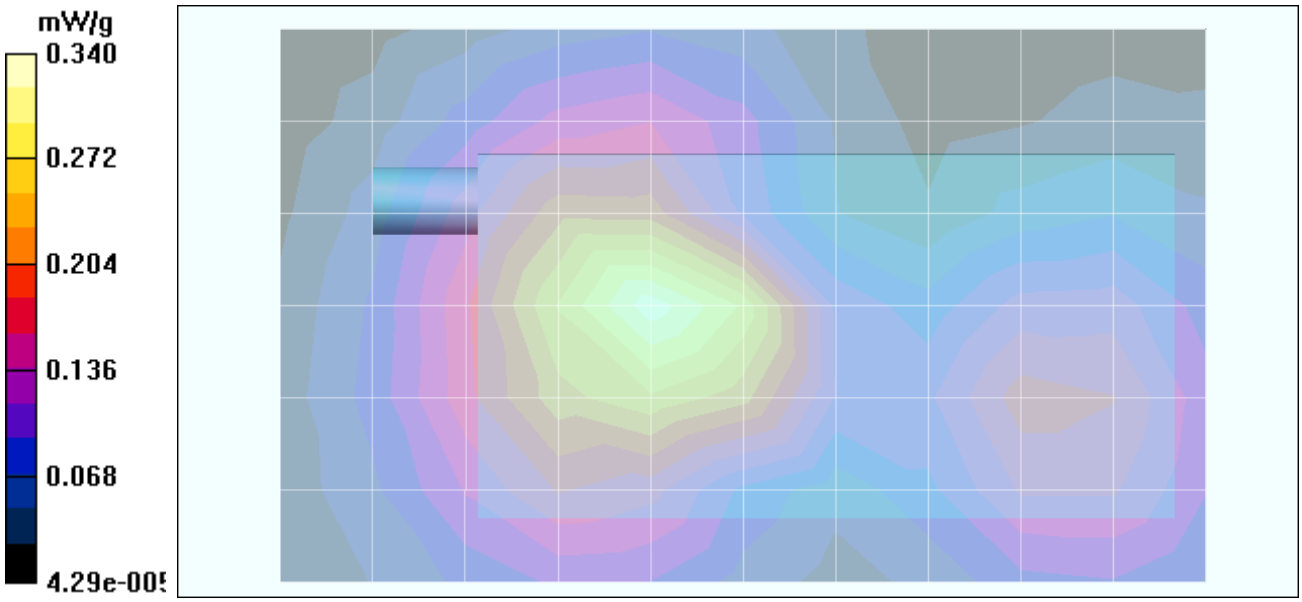
Ambient Temp: 23.9 °C; Fluid Temp: 23.1 °C; Barometric Pressure: 102.1 kPa; Humidity: 40%

Frequency: 1880.0 MHz; Duty Cycle: 1:4.16
RF Output Power: 30.1 dBm (Peak Conducted)
Communication System: PCS GPRS (2 Time Slots)
3.7V 1900mAh Li-ion Battery Pack (P/N: 167-10165-00)
Medium: M1880 (σ = 1.55 mho/m; ε_r = 52.0; ρ = 1000 kg/m^3)

- Probe: ET3DV6 - SN1590; ConvF(4.58, 4.58, 4.58); Calibrated: 24/05/2004
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn370; Calibrated: 14/05/2004
- Phantom: SAM 4.0; Type: Fiberglas; Serial: 1033
- Measurement SW: DASY4, V4.2 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 112

Body-Worn SAR - PCS GPRS - Fitted Leather Pouch Accessory - 2.5 cm Belt-Clip Separation Distance - Channel 661
Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm

Body-Worn SAR - PCS GPRS - Fitted Leather Pouch Accessory - 2.5 cm Belt-Clip Separation Distance - Channel 661
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 16 V/m; Power Drift = -0.124 dB
Peak SAR (extrapolated) = 0.489 W/kg
SAR(1 g) = 0.312 mW/g; SAR(10 g) = 0.188 mW/g



Date Tested: 08/03/04

Body-Worn SAR - PCS GPRS Data Mode - Mid Channel - With Aluminum Case (Back of DUT)

DUT: palmOne Model: Treo 650; Type: Dual-Band PCS/Cellular GSM/GPRS Phone; Serial: SGXW07D4H00P

Body-Worn Accessories: Aluminum Case and Swivel Belt-Clip (SKU#3202WW), Generic Ear-Microphone

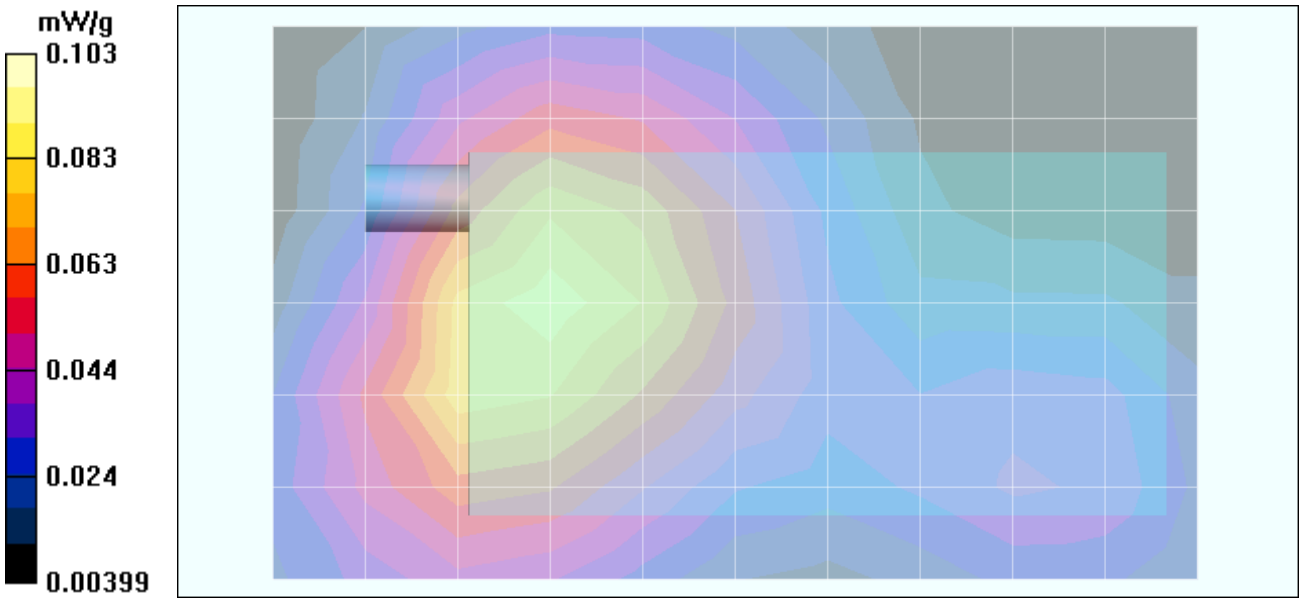
Ambient Temp: 23.9 °C; Fluid Temp: 23.1 °C; Barometric Pressure: 102.1 kPa; Humidity: 40%

Frequency: 1880.0 MHz; Duty Cycle: 1:4.16
RF Output Power: 30.1 dBm (Peak Conducted)
Communication System: PCS GPRS (2 Time Slots)
3.7V 1900mAh Li-ion Battery Pack (P/N: 167-10165-00)
Medium: M1880 (σ = 1.55 mho/m; ε_r = 52.0; ρ = 1000 kg/m^3)

- Probe: ET3DV6 - SN1590; ConvF(4.58, 4.58, 4.58); Calibrated: 24/05/2004
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn370; Calibrated: 14/05/2004
- Phantom: SAM 4.0; Type: Fiberglas; Serial: 1033
- Measurement SW: DASY4, V4.2 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 112

Body-Worn SAR - PCS GPRS - Aluminum Case Accessory - 2.5 cm Belt-Clip Separation Distance - Channel 661
Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm

Body-Worn SAR - PCS GPRS - Aluminum Case Accessory - 2.5 cm Belt-Clip Separation Distance - Channel 661
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 6.37 V/m; Power Drift = 0.115 dB
Peak SAR (extrapolated) = 0.144 W/kg
SAR(1 g) = 0.0960 mW/g; SAR(10 g) = 0.061 mW/g



Date Tested: 08/03/04

Body-Worn SAR - PCS GPRS Data Mode - Mid Channel - 1.5 cm Air-Gap Spacing - Back of DUT Simultaneous Transmit with Co-located Bluetooth Transmitter (Broadcom BCM-2035)

DUT: palmOne Model: Treo 650; Type: Dual-Band PCS/Cellular GSM/GPRS Phone; Serial: SGXW07D4H00P

Body-Worn Accessories: Generic Ear-Microphone

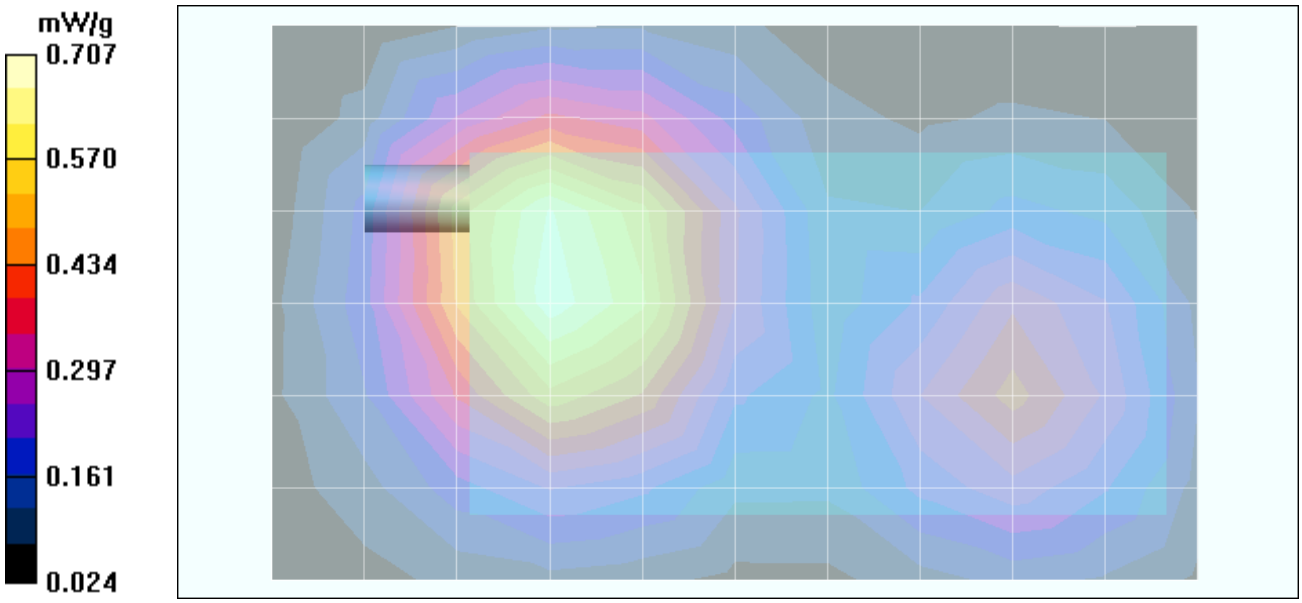
Ambient Temp: 23.9 °C; Fluid Temp: 23.1 °C; Barometric Pressure: 102.1 kPa; Humidity: 40%

3.7V 1900mAh Li-ion Battery Pack (P/N: 167-10165-00)
Frequency: 1880.0 MHz; Duty Cycle: 1:4.16
RF Output Power: 30.1 dBm (Peak Conducted)
Communication System: PCS GPRS (2 Time Slots)
Frequency: 2441 MHz; Duty Cycle: 1:1 (Bluetooth)
RF Output Power: -5.1 dBm (Peak Conducted) Bluetooth
Communication System: Modulated Fixed Frequency (Bluetooth)
Medium: M1880 (σ = 1.55 mho/m; ε_r = 52.0; ρ = 1000 kg/m^3)

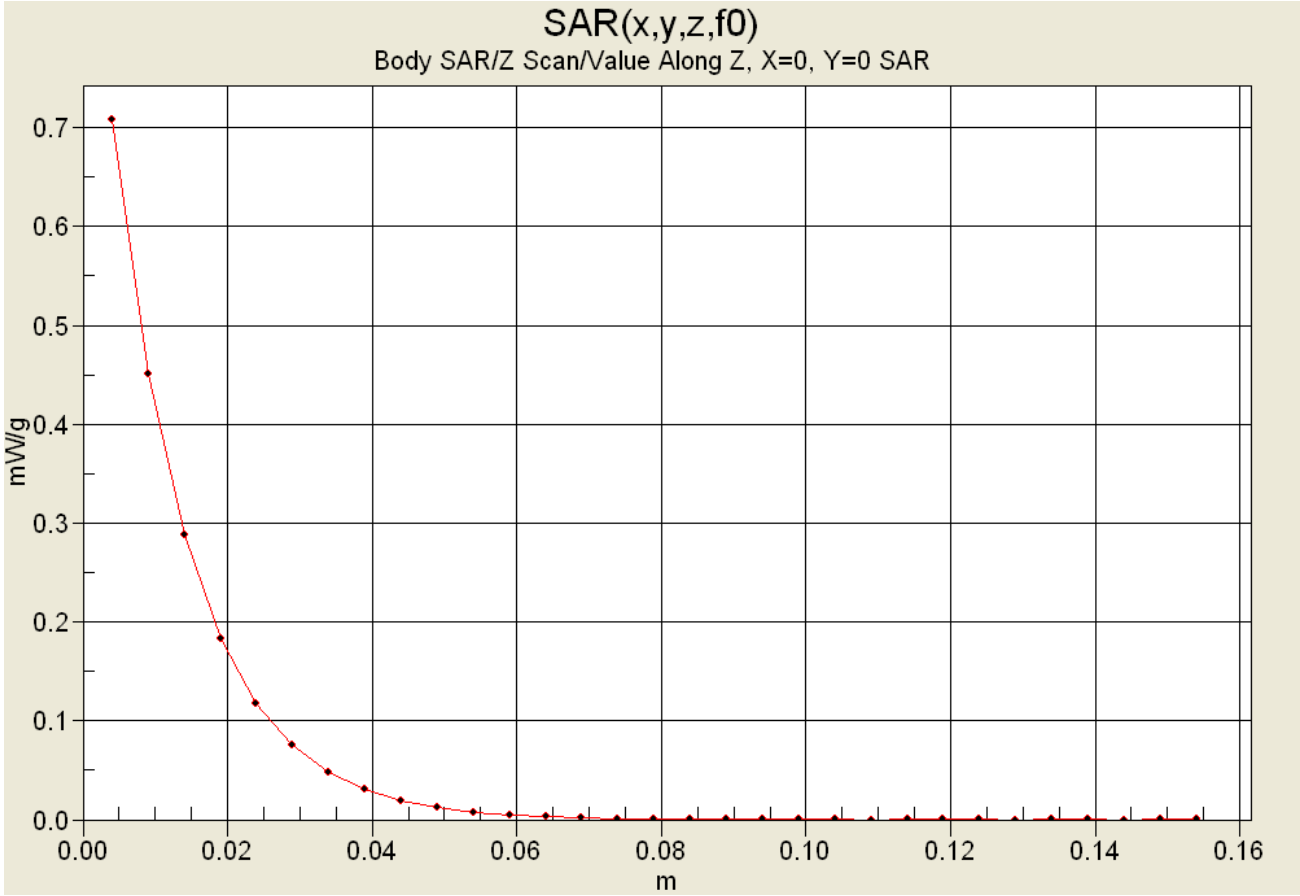
- Probe: ET3DV6 - SN1590; ConvF(4.58, 4.58, 4.58); Calibrated: 24/05/2004
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn370; Calibrated: 14/05/2004
- Phantom: SAM 4.0; Type: Fiberglas; Serial: 1033
- Measurement SW: DASY4, V4.2 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 112

Body-Worn SAR - PCS GPRS & Bluetooth - Back of DUT - 1.5 cm Air-Gap Separation Distance - Channel 661
Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm

Body-Worn SAR - PCS GPRS & Bluetooth - Back of DUT - 1.5 cm Air-Gap Separation Distance - Channel 661
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 16.7 V/m; Power Drift = -0.168 dB
Peak SAR (extrapolated) = 1.02 W/kg
SAR(1 g) = 0.662 mW/g; SAR(10 g) = 0.422 mW/g



Z-Axis Scan


SAR(x,y,z,f0)
Body SAR/Z Scan/Value Along Z, X=0, Y=0 SAR
mW/g
0.0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.00
0.02
0.04
0.06
0.08
0.10
0.12
0.14
0.16
m