# APPENDIX A - SAR MEASUREMENT DATA

Date Tested: 10/20/04

## Face-Held SAR - Duracell Alkaline Battery Pack (P/N: KBP-5) - Stubby Antenna (P/N: KRA-17M)

**DUT: Kenwood Model: TK-3170-K4; Type: Portable UHF PTT Radio Transceiver; Serial: 1S-U1-21**

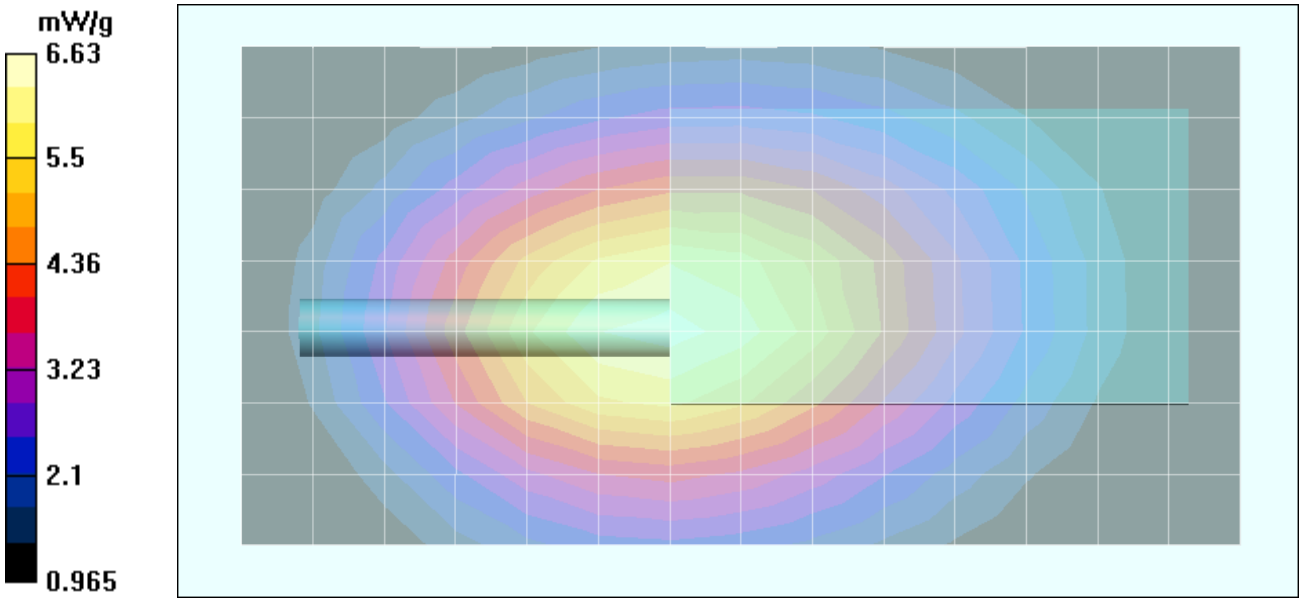
Ambient Temp: 23.6 °C; Fluid Temp: 22.9 °C; Barometric Pressure: 101.5 kPa; Humidity: 34%

Communication System: FM UHF
Frequency: 470.05 MHz; Duty Cycle: 1:1
RF Output Power: 36.21 dBm (Conducted)
9V AA Alkaline Duracell ProCell Battery Pack (Battery Case P/N: KBP-5)
Medium: HSL450 ($\sigma$ = 0.87 mho/m; $\varepsilon_r$ = 44.0; $\rho$ = 1000 kg/m$^3$)

- Probe: ET3DV6 - SN1590; ConvF(7.5, 7.5, 7.5); Calibrated: 24/05/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn370; Calibrated: 14/05/2004
- Phantom: Planar; Type: Plexiglas; Serial: 161
- Measurement SW: DASY4, V4.3 Build 22; Postprocessing SW: SEMCAD, V1.8 Build 127

**Face-Held - 2.5 cm Separation Distance - Mid Channel/Area Scan (8x15x1):**
Measurement grid: dx=15mm, dy=15mm

**Face-Held - 2.5 cm Separation Distance - Mid Channel/Zoom Scan (5x5x7)/Cube 0:**
Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 88.8 V/m; Power Drift = -0.895 dB
Peak SAR (extrapolated) = 9.65 W/kg
**SAR(1 g) = 6.36 mW/g; SAR(10 g) = 4.56 mW/g**



Date Tested: 10/20/04

## Face-Held SAR - Li-ion Battery (P/N: KNB-35L) - Stubby Antenna (P/N: KRA-17M)

**DUT: Kenwood Model: TK-3170-K4; Type: Portable UHF PTT Radio Transceiver; Serial: 1S-U1-21**

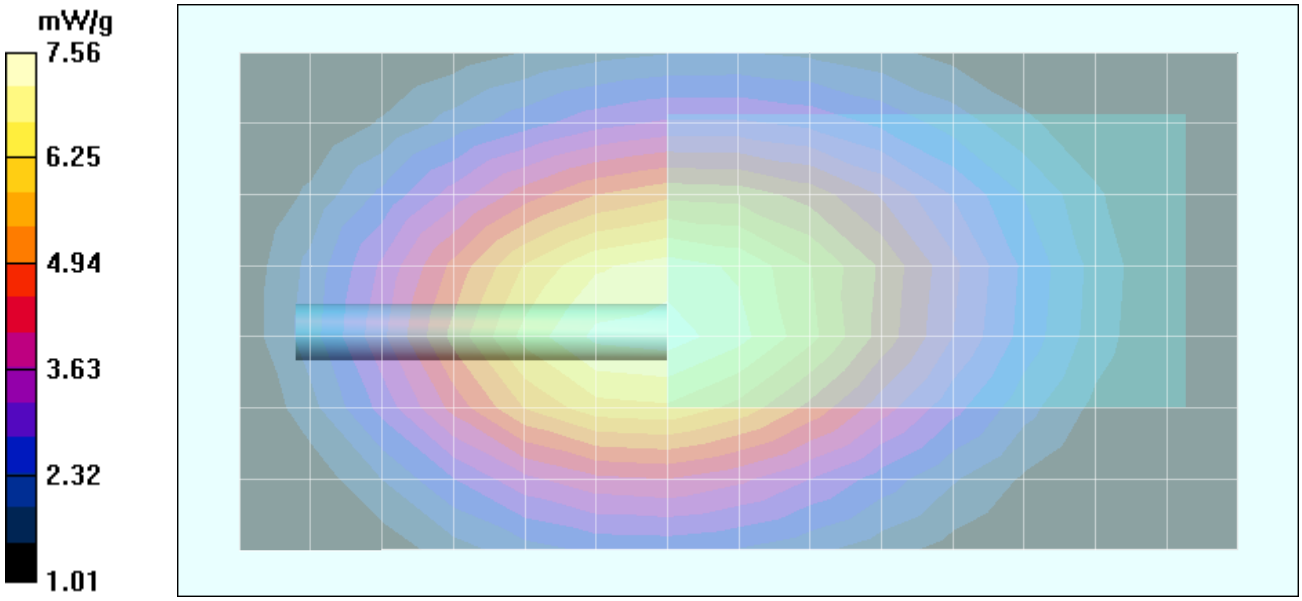
Ambient Temp: 23.6 °C; Fluid Temp: 22.9 °C; Barometric Pressure: 101.5 kPa; Humidity: 34%

Communication System: FM UHF
Frequency: 470.05 MHz; Duty Cycle: 1:1
RF Output Power: 36.34 dBm (Conducted)
7.4V 1400mAh Li-Ion Battery Pack (P/N: KNB-35L)
Medium: HSL450 ($\sigma$ = 0.87 mho/m; $\varepsilon_r$ = 44.0; $\rho$ = 1000 kg/m$^3$)

- Probe: ET3DV6 - SN1590; ConvF(7.5, 7.5, 7.5); Calibrated: 24/05/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn370; Calibrated: 14/05/2004
- Phantom: Planar; Type: Plexiglas; Serial: 161
- Measurement SW: DASY4, V4.3 Build 22; Postprocessing SW: SEMCAD, V1.8 Build 127

**Face-Held - 2.5 cm Separation Distance - Mid Channel/Area Scan (8x15x1):**
Measurement grid: dx=15mm, dy=15mm

**Face-Held - 2.5 cm Separation Distance - Mid Channel/Zoom Scan (5x5x7)/Cube 0:**
Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 89.3 V/m; Power Drift = -0.00492 dB
Peak SAR (extrapolated) = 11 W/kg
**SAR(1 g) = 7.23 mW/g; SAR(10 g) = 5.16 mW/g**



Date Tested: 10/20/04

## Face-Held SAR - Li-ion Battery (P/N: KNB-24L) - Stubby Antenna (P/N: KRA-17M)

**DUT: Kenwood Model: TK-3170-K4; Type: Portable UHF PTT Radio Transceiver; Serial: 1S-U1-21**

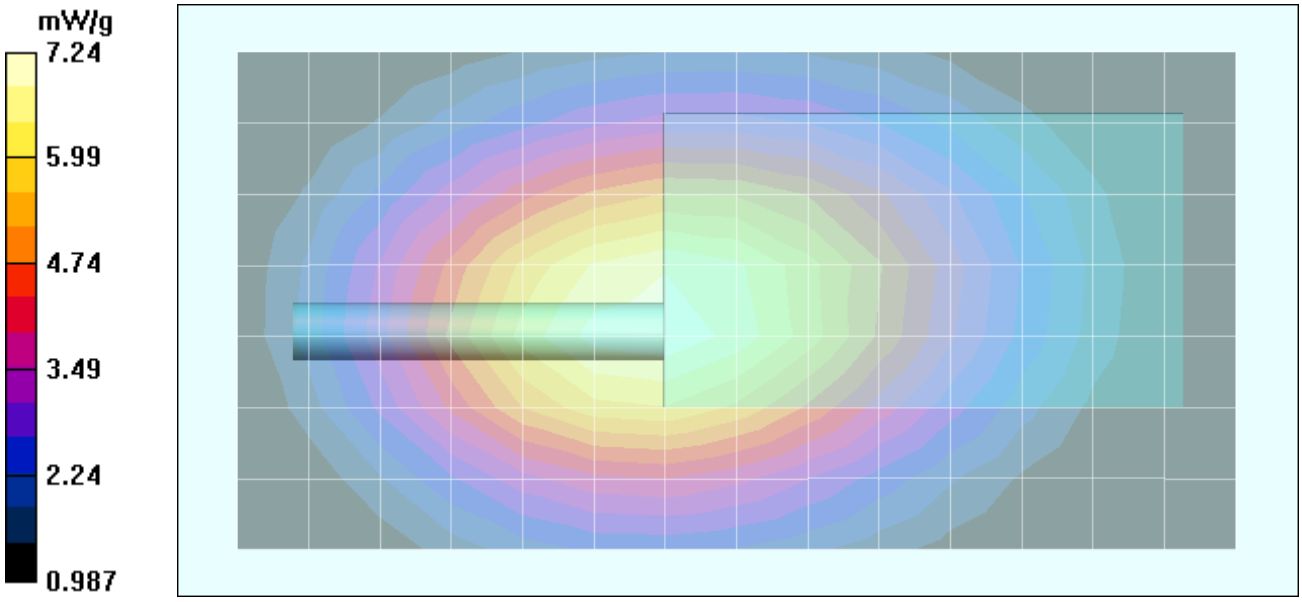
Ambient Temp: 23.6 °C; Fluid Temp: 22.9 °C; Barometric Pressure: 101.5 kPa; Humidity: 34%

Communication System: FM UHF
Frequency: 470.05 MHz; Duty Cycle: 1:1
RF Output Power: 36.27 dBm (Conducted)
7.4V 1400mAh Li-Ion Battery Pack (P/N: KNB-24L)
Medium: HSL450 ($\sigma$ = 0.87 mho/m; $\varepsilon_r$ = 44.0; $\rho$ = 1000 kg/m$^3$)

- Probe: ET3DV6 - SN1590; ConvF(7.5, 7.5, 7.5); Calibrated: 24/05/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn370; Calibrated: 14/05/2004
- Phantom: Planar; Type: Plexiglas; Serial: 161
- Measurement SW: DASY4, V4.3 Build 22; Postprocessing SW: SEMCAD, V1.8 Build 127

**Face-Held - 2.5 cm Separation Distance - Mid Channel/Area Scan (8x15x1):**
Measurement grid: dx=15mm, dy=15mm

**Face-Held - 2.5 cm Separation Distance - Mid Channel/Zoom Scan (5x5x7)/Cube 0:**
Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 88.7 V/m; Power Drift = -0.161 dB
Peak SAR (extrapolated) = 10.5 W/kg
**SAR(1 g) = 6.91 mW/g; SAR(10 g) = 4.93 mW/g**



Date Tested: 10/20/04

## Face-Held SAR - Ni-Cd Battery (P/N: KNB-25A) - Stubby Antenna (P/N: KRA-17M)

**DUT: Kenwood Model: TK-3170-K4; Type: Portable UHF PTT Radio Transceiver; Serial: 1S-U1-21**

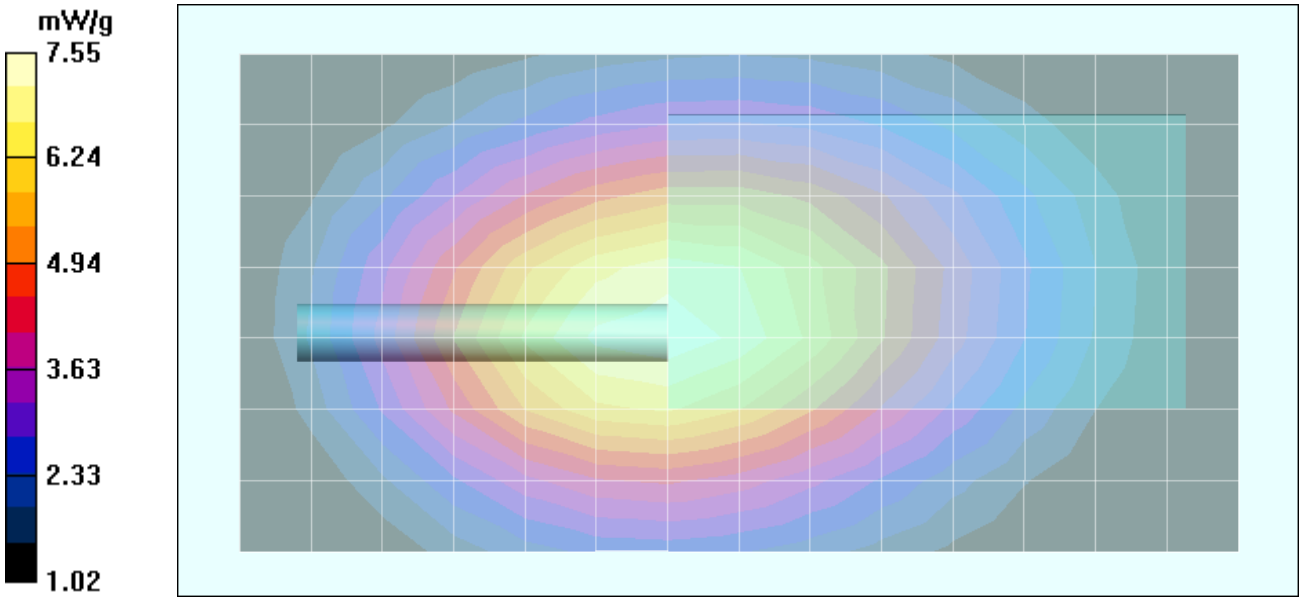
Ambient Temp: 23.6 °C; Fluid Temp: 22.9 °C; Barometric Pressure: 101.5 kPa; Humidity: 34%

Communication System: FM UHF
Frequency: 470.05 MHz; Duty Cycle: 1:1
RF Output Power: 36.36 dBm (Conducted)
7.2V 1200mAh Ni-Cd Battery Pack (P/N: KNB-25A)
Medium: HSL450 ($\sigma$ = 0.87 mho/m; $\varepsilon_r$ = 44.0; $\rho$ = 1000 kg/m$^3$)

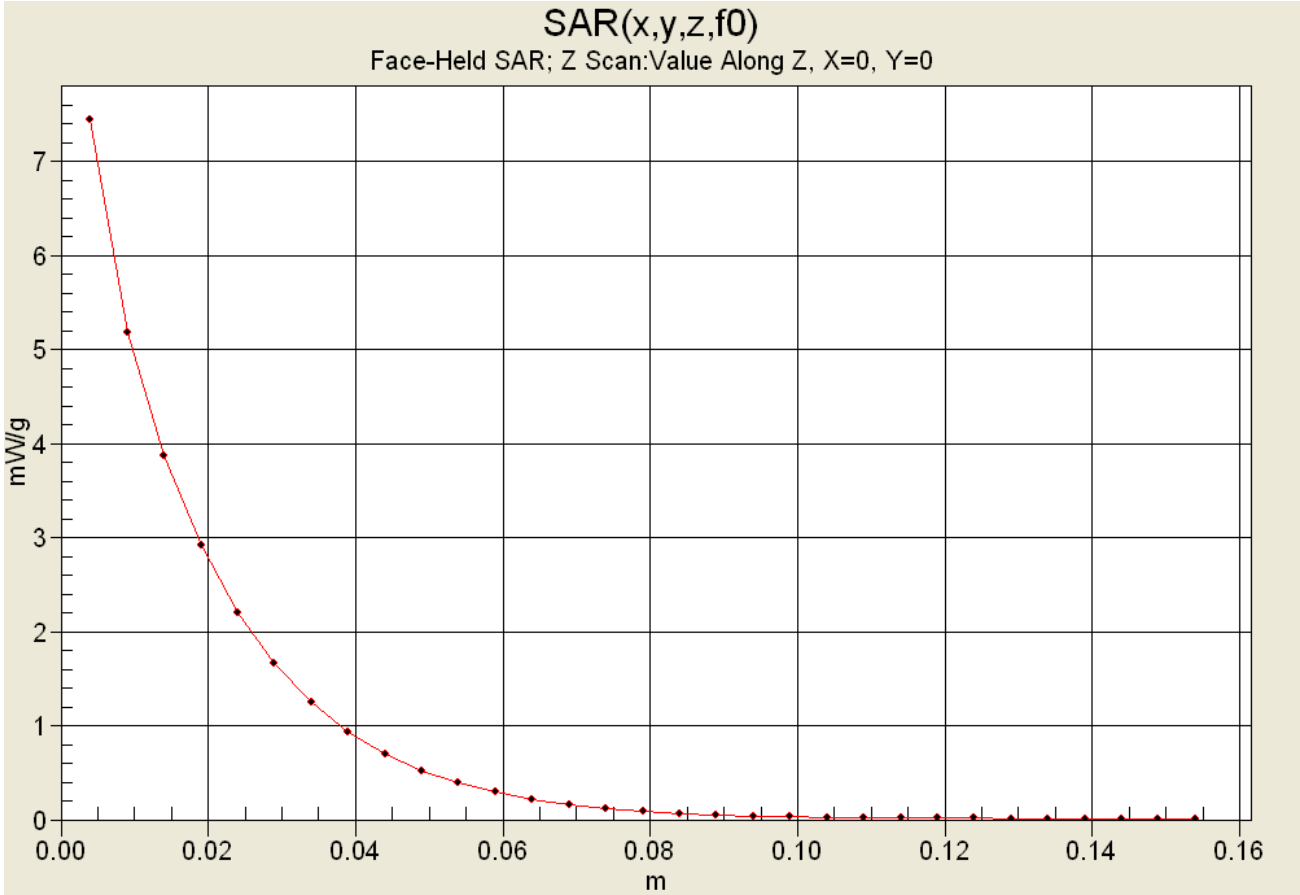
- Probe: ET3DV6 - SN1590; ConvF(7.5, 7.5, 7.5); Calibrated: 24/05/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn370; Calibrated: 14/05/2004
- Phantom: Planar; Type: Plexiglas; Serial: 161
- Measurement SW: DASY4, V4.3 Build 22; Postprocessing SW: SEMCAD, V1.8 Build 127

**Face-Held - 2.5 cm Separation Distance - Mid Channel/Area Scan (8x15x1):**
Measurement grid: dx=15mm, dy=15mm

**Face-Held - 2.5 cm Separation Distance - Mid Channel/Zoom Scan (5x5x7)/Cube 0:**
Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 90.4 V/m; Power Drift = -0.138 dB
Peak SAR (extrapolated) = 11 W/kg
**SAR(1 g) = 7.24 mW/g; SAR(10 g) = 5.17 mW/g**



## Z-Axis Scan


SAR(x,y,z,f0)
Face-Held SAR; Z Scan:Value Along Z, X=0, Y=0
mW/g
0
1
2
3
4
5
6
7
0.00
0.02
0.04
0.06
0.08
0.10
0.12
0.14
0.16
m

Date Tested: 10/20/04

## Face-Held SAR - Ni-MH Battery (P/N: KNB-26N) - Stubby Antenna (P/N: KRA-17M)

**DUT: Kenwood Model: TK-3170-K4; Type: Portable UHF PTT Radio Transceiver; Serial: 1S-U1-21**

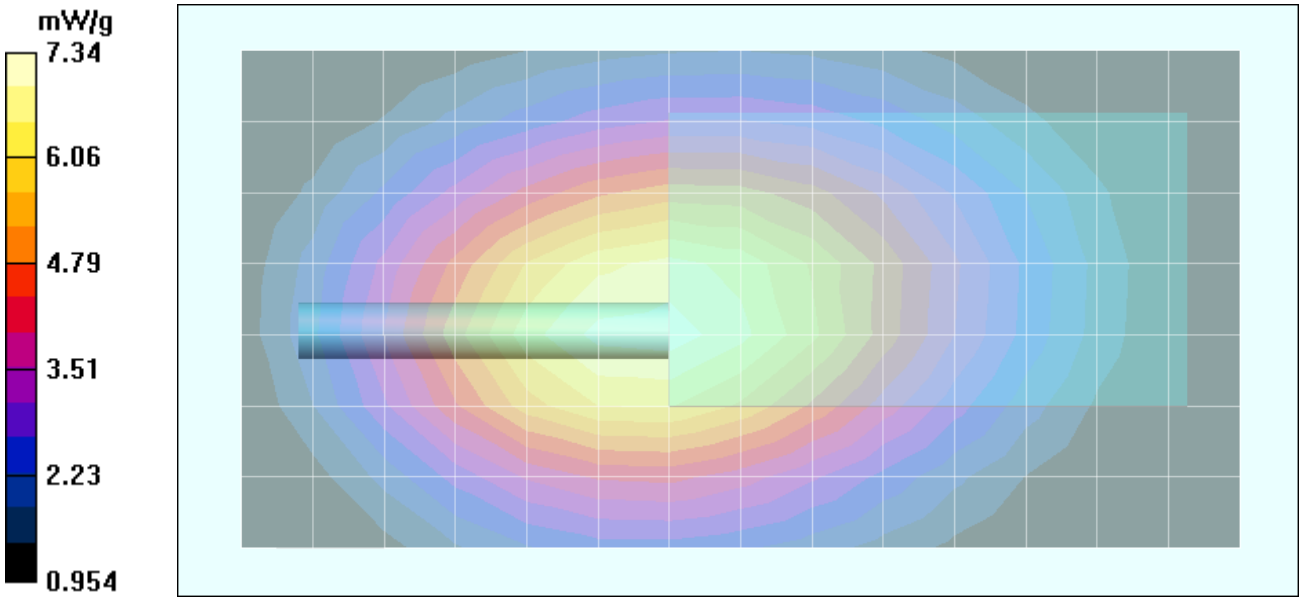
Ambient Temp: 23.6 °C; Fluid Temp: 22.9 °C; Barometric Pressure: 101.5 kPa; Humidity: 34%

Communication System: FM UHF
Frequency: 470.05 MHz; Duty Cycle: 1:1
RF Output Power: 36.33 dBm (Conducted)
7.2V 2000mAh Ni-MH Battery Pack (P/N: KNB-26N)
Medium: HSL450 ($\sigma$ = 0.87 mho/m; $\varepsilon_r$ = 44.0; $\rho$ = 1000 kg/m$^3$)

- Probe: ET3DV6 - SN1590; ConvF(7.5, 7.5, 7.5); Calibrated: 24/05/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn370; Calibrated: 14/05/2004
- Phantom: Planar; Type: Plexiglas; Serial: 161
- Measurement SW: DASY4, V4.3 Build 22; Postprocessing SW: SEMCAD, V1.8 Build 127

**Face-Held - 2.5 cm Separation Distance - Mid Channel/Area Scan (8x15x1):**
Measurement grid: dx=15mm, dy=15mm

**Face-Held - 2.5 cm Separation Distance - Mid Channel/Zoom Scan (5x5x7)/Cube 0:**
Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 88.7 V/m; Power Drift = -0.130 dB
Peak SAR (extrapolated) = 10.7 W/kg
**SAR(1 g) = 7.04 mW/g; SAR(10 g) = 5.03 mW/g**



Date Tested: 10/20/04

## Face-Held SAR - Duracell Alkaline Battery Pack (P/N: KBP-5) - Stubby Antenna (P/N: KRA-17M2)

**DUT: Kenwood Model: TK-3170-K4; Type: Portable UHF PTT Radio Transceiver; Serial: 1S-U1-21**

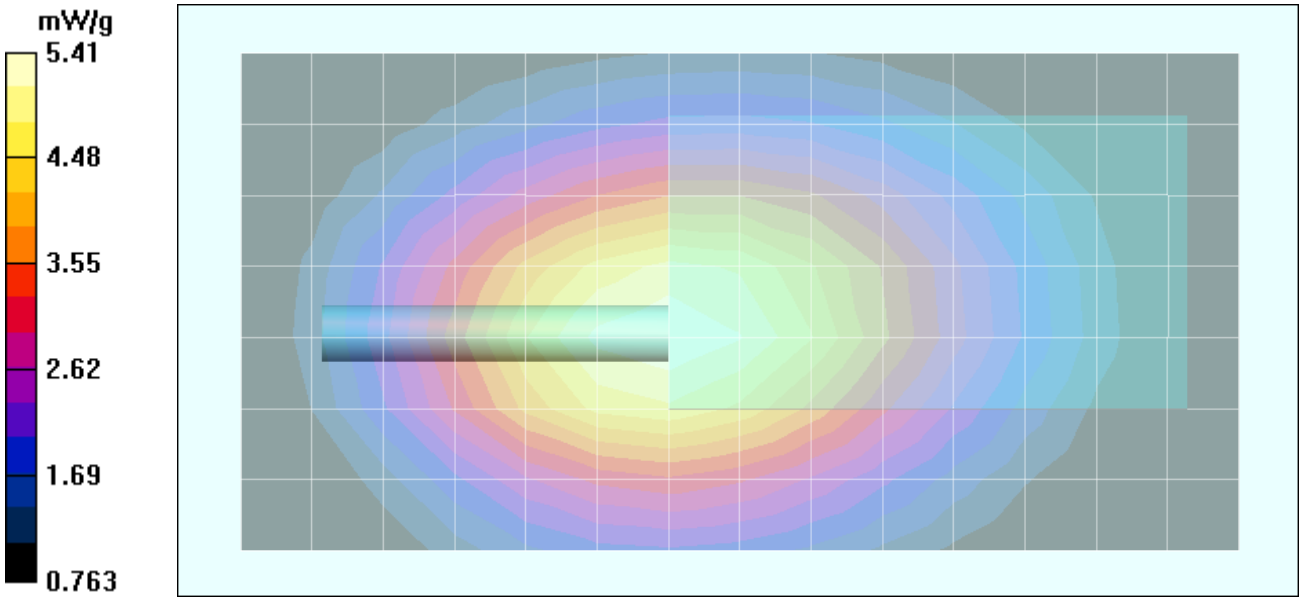
Ambient Temp: 23.6 °C; Fluid Temp: 22.9 °C; Barometric Pressure: 101.5 kPa; Humidity: 34%

Communication System: FM UHF
Frequency: 489.95 MHz; Duty Cycle: 1:1
RF Output Power: 36.05 dBm (Conducted)
9V AA Alkaline Duracell ProCell Battery Pack (Battery Case P/N: KBP-5)
Medium: HSL450 ($\sigma$ = 0.87 mho/m; $\varepsilon_r$ = 44.0; $\rho$ = 1000 kg/m$^3$)

- Probe: ET3DV6 - SN1590; ConvF(7.5, 7.5, 7.5); Calibrated: 24/05/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn370; Calibrated: 14/05/2004
- Phantom: Planar; Type: Plexiglas; Serial: 161
- Measurement SW: DASY4, V4.3 Build 22; Postprocessing SW: SEMCAD, V1.8 Build 127

**Face-Held - 2.5 cm Separation Distance - High Channel/Area Scan (8x15x1):**
Measurement grid: dx=15mm, dy=15mm

**Face-Held - 2.5 cm Separation Distance - High Channel/Zoom Scan (5x5x7)/Cube 0:**
Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 81.6 V/m; Power Drift = -1.12 dB
Peak SAR (extrapolated) = 7.93 W/kg
**SAR(1 g) = 5.20 mW/g; SAR(10 g) = 3.7 mW/g**



Date Tested: 10/20/04

## Face-Held SAR - Duracell Alkaline Battery Pack (P/N: KBP-5) - Whip Antenna (P/N: KRA-27M)

**DUT: Kenwood Model: TK-3170-K4; Type: Portable UHF PTT Radio Transceiver; Serial: 1S-U1-21**

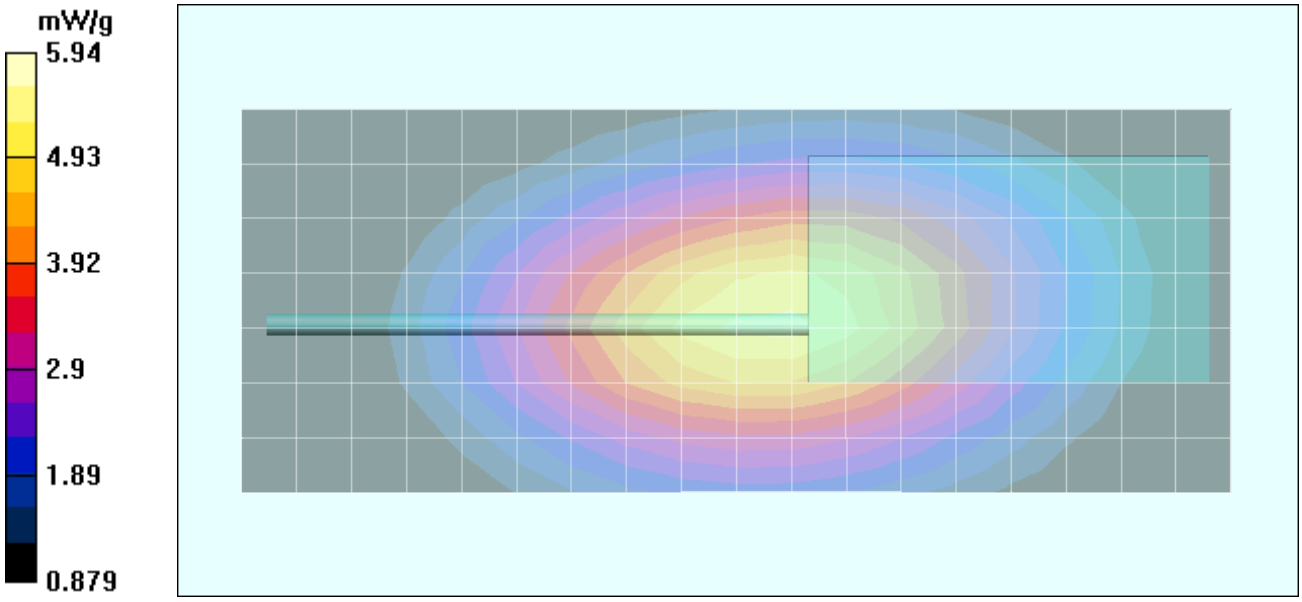
Ambient Temp: 23.6 °C; Fluid Temp: 22.9 °C; Barometric Pressure: 101.5 kPa; Humidity: 34%

Communication System: FM UHF
Frequency: 470.05 MHz; Duty Cycle: 1:1
RF Output Power: 36.22 dBm (Conducted)
9V AA Alkaline Duracell ProCell Battery Pack (Battery Case P/N: KBP-5)
Medium: HSL450 ($\sigma$ = 0.87 mho/m; $\varepsilon_r$ = 44.0; $\rho$ = 1000 kg/m$^3$)

- Probe: ET3DV6 - SN1590; ConvF(7.5, 7.5, 7.5); Calibrated: 24/05/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn370; Calibrated: 14/05/2004
- Phantom: Planar; Type: Plexiglas; Serial: 161
- Measurement SW: DASY4, V4.3 Build 22; Postprocessing SW: SEMCAD, V1.8 Build 127

**Face-Held - 2.5 cm Separation Distance - Mid Channel/Area Scan (8x19x1):**
Measurement grid: dx=15mm, dy=15mm

**Face-Held - 2.5 cm Separation Distance - Mid Channel/Zoom Scan (5x5x7)/Cube 0:**
Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 83.9 V/m; Power Drift = -0.842 dB
Peak SAR (extrapolated) = 8.61 W/kg
**SAR(1 g) = 5.68 mW/g; SAR(10 g) = 4.08 mW/g**



Date Tested: 10/20/04

## Face-Held SAR - Li-ion Battery (P/N: KNB-35L) - Whip Antenna (P/N: KRA-27M)

**DUT: Kenwood Model: TK-3170-K4; Type: Portable UHF PTT Radio Transceiver; Serial: 1S-U1-21**

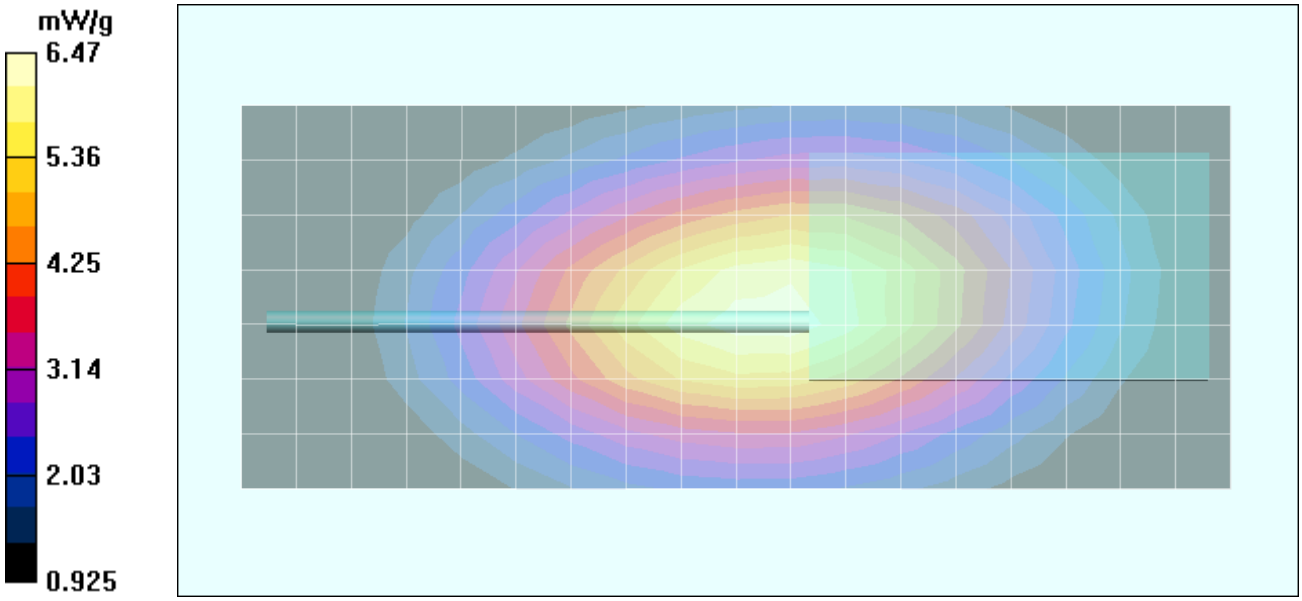
Ambient Temp: 23.6 °C; Fluid Temp: 22.9 °C; Barometric Pressure: 101.5 kPa; Humidity: 34%

Communication System: FM UHF
Frequency: 470.05 MHz; Duty Cycle: 1:1
RF Output Power: 36.35 dBm (Conducted)
7.4V 1400mAh Li-Ion Battery Pack (P/N: KNB-35L)
Medium: HSL450 ($\sigma$ = 0.87 mho/m; $\varepsilon_r$ = 44.0; $\rho$ = 1000 kg/m$^3$)

- Probe: ET3DV6 - SN1590; ConvF(7.5, 7.5, 7.5); Calibrated: 24/05/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn370; Calibrated: 14/05/2004
- Phantom: Planar; Type: Plexiglas; Serial: 161
- Measurement SW: DASY4, V4.3 Build 22; Postprocessing SW: SEMCAD, V1.8 Build 127

**Face-Held - 2.5 cm Separation Distance - Mid Channel/Area Scan (8x19x1):**
Measurement grid: dx=15mm, dy=15mm

**Face-Held - 2.5 cm Separation Distance - Mid Channel/Zoom Scan (5x5x7)/Cube 0:**
Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 83.8 V/m; Power Drift = -0.137 dB
Peak SAR (extrapolated) = 9.38 W/kg
**SAR(1 g) = 6.20 mW/g; SAR(10 g) = 4.45 mW/g**



Date Tested: 10/20/04

## Face-Held SAR - Li-ion Battery (P/N: KNB-24L) - Whip Antenna (P/N: KRA-27M)

**DUT: Kenwood Model: TK-3170-K4; Type: Portable UHF PTT Radio Transceiver; Serial: 1S-U1-21**

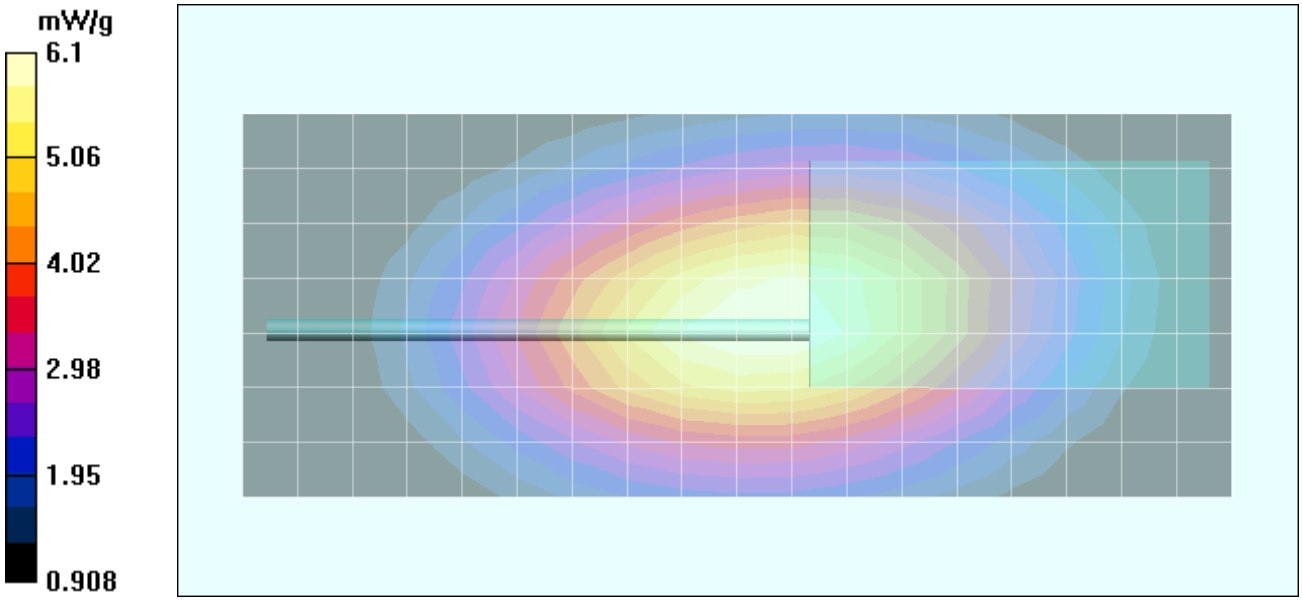
Ambient Temp: 23.6 °C; Fluid Temp: 22.9 °C; Barometric Pressure: 101.5 kPa; Humidity: 34%

Communication System: FM UHF
Frequency: 470.05 MHz; Duty Cycle: 1:1
RF Output Power: 36.18 dBm (Conducted)
7.4V 1400mAh Li-Ion Battery Pack (P/N: KNB-24L)
Medium: HSL450 ($\sigma$ = 0.87 mho/m; $\varepsilon_r$ = 44.0; $\rho$ = 1000 kg/m$^3$)

- Probe: ET3DV6 - SN1590; ConvF(7.5, 7.5, 7.5); Calibrated: 24/05/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn370; Calibrated: 14/05/2004
- Phantom: Planar; Type: Plexiglas; Serial: 161
- Measurement SW: DASY4, V4.3 Build 22; Postprocessing SW: SEMCAD, V1.8 Build 127

**Face-Held - 2.5 cm Separation Distance - Mid Channel/Area Scan (8x19x1):**
Measurement grid: dx=15mm, dy=15mm

**Face-Held - 2.5 cm Separation Distance - Mid Channel/Zoom Scan (5x5x7)/Cube 0:**
Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 81.1 V/m; Power Drift = -0.241 dB
Peak SAR (extrapolated) = 8.85 W/kg
**SAR(1 g) = 5.87 mW/g; SAR(10 g) = 4.22 mW/g**



Date Tested: 10/20/04

## Face-Held SAR - Ni-Cd Battery (P/N: KNB-25A) - Whip Antenna (P/N: KRA-27M)

**DUT: Kenwood Model: TK-3170-K4; Type: Portable UHF PTT Radio Transceiver; Serial: 1S-U1-21**

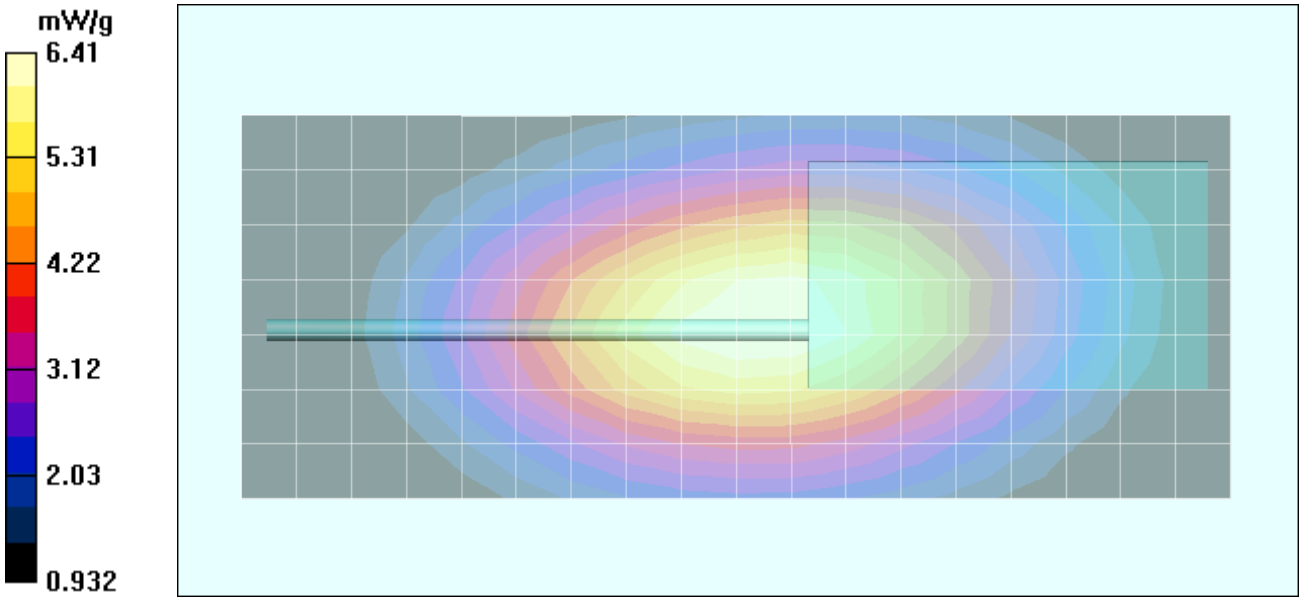
Ambient Temp: 23.6 °C; Fluid Temp: 22.9 °C; Barometric Pressure: 101.5 kPa; Humidity: 34%

Communication System: FM UHF
Frequency: 470.05 MHz; Duty Cycle: 1:1
RF Output Power: 36.26 dBm (Conducted)
7.2V 1200mAh Ni-Cd Battery Pack (P/N: KNB-25A)
Medium: HSL450 ($\sigma$ = 0.87 mho/m; $\varepsilon_r$ = 44.0; $\rho$ = 1000 kg/m$^3$)

- Probe: ET3DV6 - SN1590; ConvF(7.5, 7.5, 7.5); Calibrated: 24/05/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn370; Calibrated: 14/05/2004
- Phantom: Planar; Type: Plexiglas; Serial: 161
- Measurement SW: DASY4, V4.3 Build 22; Postprocessing SW: SEMCAD, V1.8 Build 127

**Face-Held - 2.5 cm Separation Distance - Mid Channel/Area Scan (8x19x1):**
Measurement grid: dx=15mm, dy=15mm

**Face-Held - 2.5 cm Separation Distance - Mid Channel/Zoom Scan (5x5x7)/Cube 0:**
Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 84.1 V/m; Power Drift = -0.211 dB
Peak SAR (extrapolated) = 9.29 W/kg
**SAR(1 g) = 6.15 mW/g; SAR(10 g) = 4.42 mW/g**



Date Tested: 10/20/04

## Face-Held SAR - Ni-MH Battery (P/N: KNB-26N) - Whip Antenna (P/N: KRA-27M)

**DUT: Kenwood Model: TK-3170-K4; Type: Portable UHF PTT Radio Transceiver; Serial: 1S-U1-21**

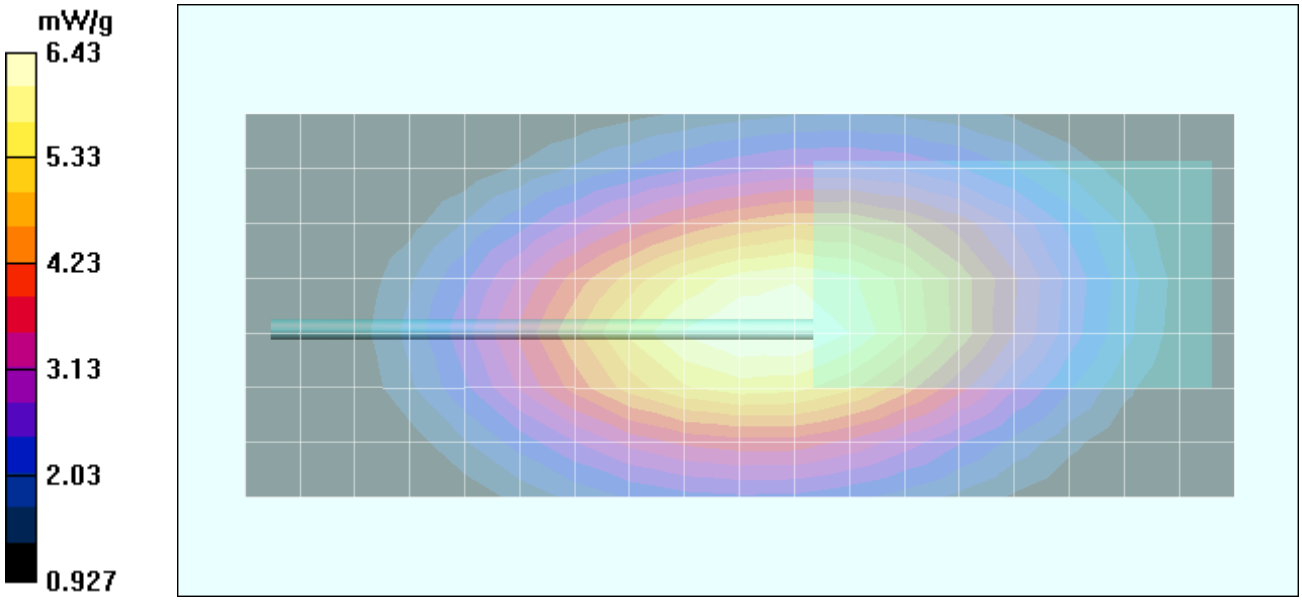
Ambient Temp: 23.6 °C; Fluid Temp: 22.9 °C; Barometric Pressure: 101.5 kPa; Humidity: 34%

Communication System: FM UHF
Frequency: 470.05 MHz; Duty Cycle: 1:1
RF Output Power: 36.29 dBm (Conducted)
7.2V 2000mAh Ni-MH Battery Pack (P/N: KNB-26N)
Medium: HSL450 ($\sigma$ = 0.87 mho/m; $\varepsilon_r$ = 44.0; $\rho$ = 1000 kg/m$^3$)

- Probe: ET3DV6 - SN1590; ConvF(7.5, 7.5, 7.5); Calibrated: 24/05/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn370; Calibrated: 14/05/2004
- Phantom: Planar; Type: Plexiglas; Serial: 161
- Measurement SW: DASY4, V4.3 Build 22; Postprocessing SW: SEMCAD, V1.8 Build 127

**Face-Held - 2.5 cm Separation Distance - Mid Channel/Area Scan (8x19x1):**
Measurement grid: dx=15mm, dy=15mm

**Face-Held - 2.5 cm Separation Distance - Mid Channel/Zoom Scan (5x5x7)/Cube 0:**
Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 84 V/m; Power Drift = -0.222 dB
Peak SAR (extrapolated) = 9.34 W/kg
**SAR(1 g) = 6.16 mW/g; SAR(10 g) = 4.42 mW/g**



Date Tested: 10/20/04

## Face-Held SAR - Duracell Alkaline Battery Pack (P/N: KBP-5) - Whip Antenna (P/N: KRA-27M2)

**DUT: Kenwood Model: TK-3170-K4; Type: Portable UHF PTT Radio Transceiver; Serial: 1S-U1-21**

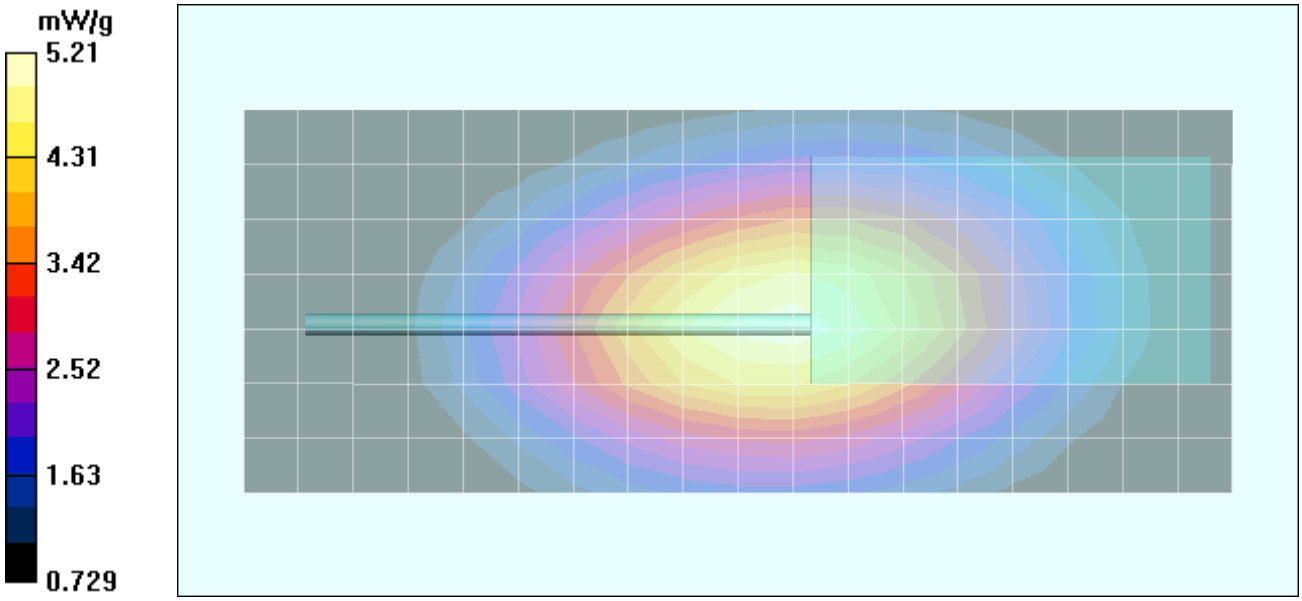
Ambient Temp: 23.6 °C; Fluid Temp: 22.9 °C; Barometric Pressure: 101.5 kPa; Humidity: 34%

Communication System: FM UHF
Frequency: 489.95 MHz; Duty Cycle: 1:1
RF Output Power: 36.02 dBm (Conducted)
9V AA Alkaline Duracell ProCell Battery Pack (Battery Case P/N: KBP-5)
Medium: HSL450 ($\sigma$ = 0.87 mho/m; $\varepsilon_r$ = 44.0; $\rho$ = 1000 kg/m$^3$)

- Probe: ET3DV6 - SN1590; ConvF(7.5, 7.5, 7.5); Calibrated: 24/05/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn370; Calibrated: 14/05/2004
- Phantom: Planar; Type: Plexiglas; Serial: 161
- Measurement SW: DASY4, V4.3 Build 22; Postprocessing SW: SEMCAD, V1.8 Build 127

**Face-Held - 2.5 cm Separation Distance - High Channel/Area Scan (8x19x1):**
Measurement grid: dx=15mm, dy=15mm

**Face-Held - 2.5 cm Separation Distance - High Channel/Zoom Scan (5x5x7)/Cube 0:**
Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 80 V/m; Power Drift = -1.03 dB
Peak SAR (extrapolated) = 7.61 W/kg
**SAR(1 g) = 5.00 mW/g; SAR(10 g) = 3.55 mW/g**



Date Tested: 10/21/04

## Face-Held SAR - Duracell Alkaline Battery Pack (P/N: KBP-5) - Stubby Antenna (P/N: KRA-23M)

**DUT: Kenwood Model: TK-3170-K4; Type: Portable UHF PTT Radio Transceiver; Serial: 1S-U1-21**

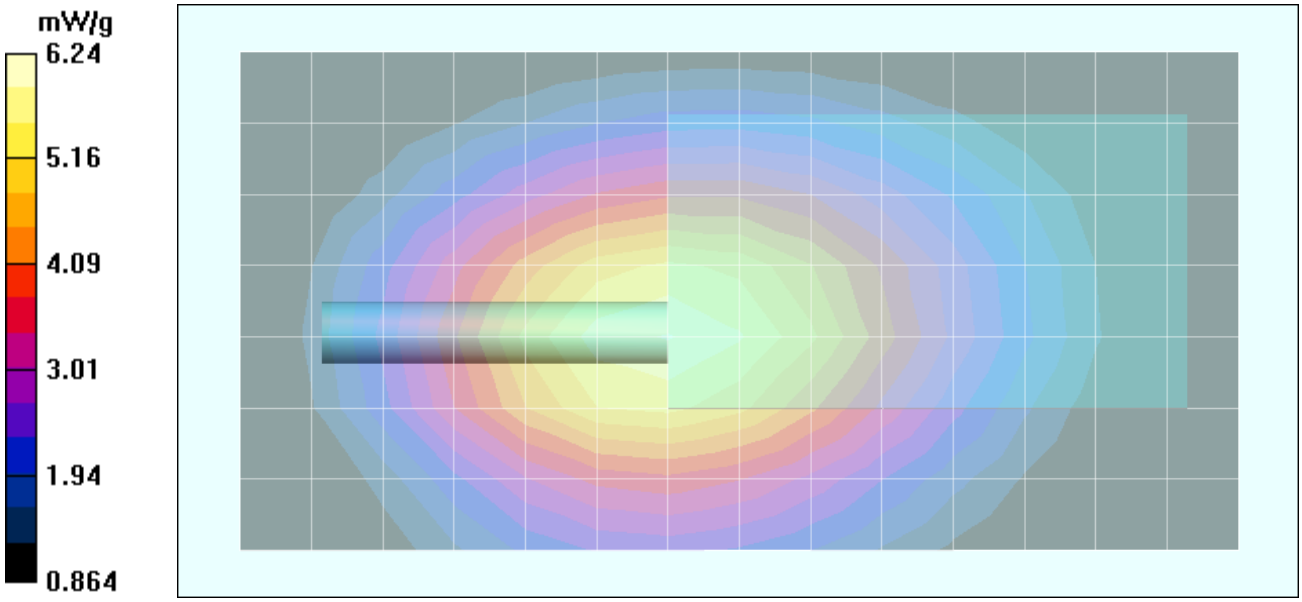
Ambient Temp: 23.7 °C; Fluid Temp: 23.3 °C; Barometric Pressure: 101.9 kPa; Humidity: 33%

Communication System: FM UHF
Frequency: 470.05 MHz; Duty Cycle: 1:1
RF Output Power: 36.16 dBm (Conducted)
9V AA Alkaline Duracell ProCell Battery Pack (Battery Case P/N: KBP-5)
Medium: HSL450 ($\sigma$ = 0.86 mho/m; $\varepsilon_r$ = 43.5; $\rho$ = 1000 kg/m$^3$)

- Probe: ET3DV6 - SN1590; ConvF(7.5, 7.5, 7.5); Calibrated: 24/05/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn370; Calibrated: 14/05/2004
- Phantom: Planar; Type: Plexiglas; Serial: 161
- Measurement SW: DASY4, V4.3 Build 22; Postprocessing SW: SEMCAD, V1.8 Build 127

**Face-Held - 2.5 cm Separation Distance - Mid Channel/Area Scan (8x15x1):**
Measurement grid: dx=15mm, dy=15mm

**Face-Held - 2.5 cm Separation Distance - Mid Channel/Zoom Scan (5x5x7)/Cube 0:**
Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 86.6 V/m; Power Drift = -0.979 dB
Peak SAR (extrapolated) = 9.08 W/kg
**SAR(1 g) = 6.02 mW/g; SAR(10 g) = 4.29 mW/g**



Date Tested: 10/21/04

## Face-Held SAR - Li-ion Battery (P/N: KNB-35L) - Stubby Antenna (P/N: KRA-23M)

**DUT: Kenwood Model: TK-3170-K4; Type: Portable UHF PTT Radio Transceiver; Serial: 1S-U1-21**

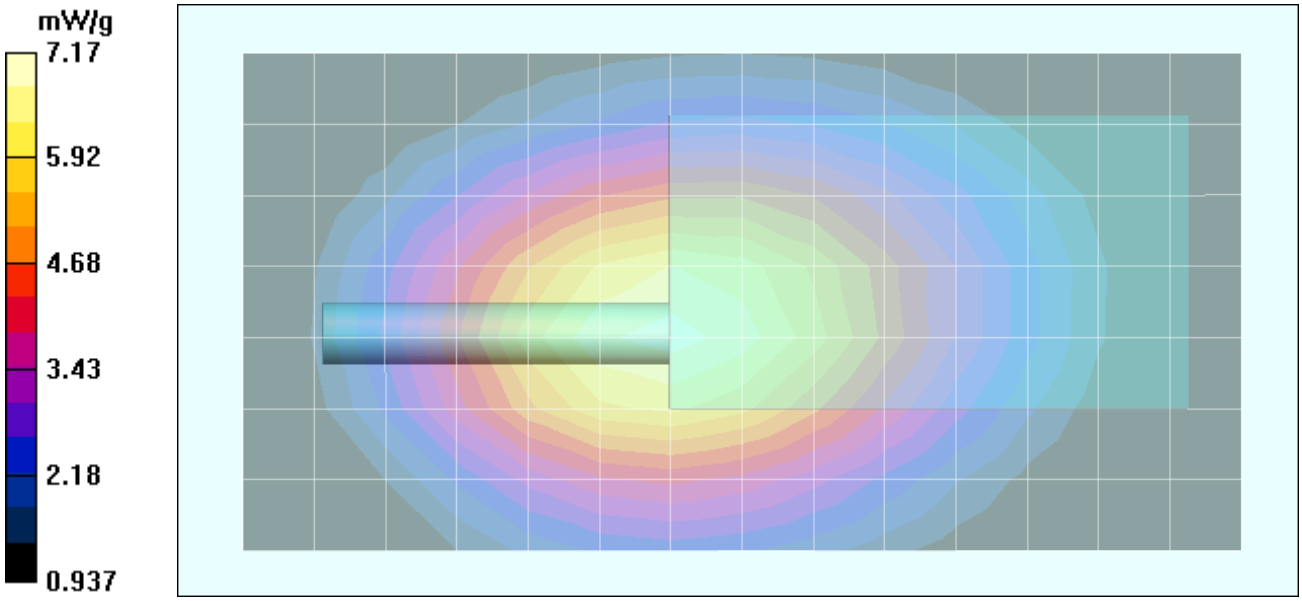
Ambient Temp: 23.7 °C; Fluid Temp: 23.3 °C; Barometric Pressure: 101.9 kPa; Humidity: 33%

Communication System: FM UHF
Frequency: 470.05 MHz; Duty Cycle: 1:1
RF Output Power: 36.25 dBm (Conducted)
7.4V 1400mAh Li-Ion Battery Pack (P/N: KNB-35L)
Medium: HSL450 ($\sigma$ = 0.86 mho/m; $\varepsilon_r$ = 43.5; $\rho$ = 1000 kg/m$^3$)

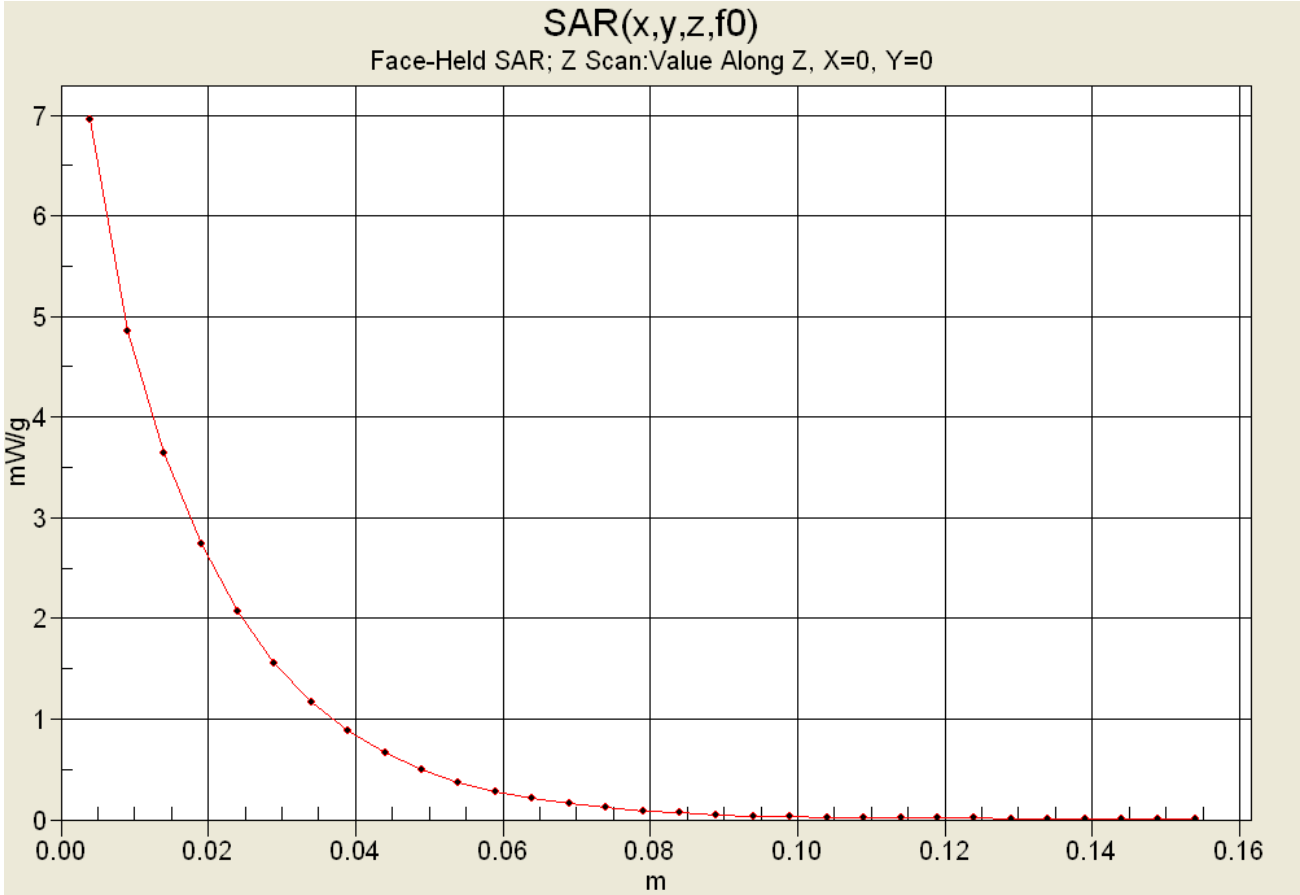
- Probe: ET3DV6 - SN1590; ConvF(7.5, 7.5, 7.5); Calibrated: 24/05/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn370; Calibrated: 14/05/2004
- Phantom: Planar; Type: Plexiglas; Serial: 161
- Measurement SW: DASY4, V4.3 Build 22; Postprocessing SW: SEMCAD, V1.8 Build 127

**Face-Held - 2.5 cm Separation Distance - Mid Channel/Area Scan (8x15x1):**
Measurement grid: dx=15mm, dy=15mm

**Face-Held - 2.5 cm Separation Distance - Mid Channel/Zoom Scan (5x5x7)/Cube 0:**
Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 87.7 V/m; Power Drift = -0.123 dB
Peak SAR (extrapolated) = 10.3 W/kg
**SAR(1 g) = 6.88 mW/g; SAR(10 g) = 4.89 mW/g**



## Z-Axis Scan


SAR(x,y,z,f0)
Face-Held SAR; Z Scan:Value Along Z, X=0, Y=0
mW/g
0
1
2
3
4
5
6
7
0.00
0.02
0.04
0.06
0.08
0.10
0.12
0.14
0.16
m

Date Tested: 10/21/04

## Face-Held SAR - Li-ion Battery (P/N: KNB-24L) - Stubby Antenna (P/N: KRA-23M)

**DUT: Kenwood Model: TK-3170-K4; Type: Portable UHF PTT Radio Transceiver; Serial: 1S-U1-21**

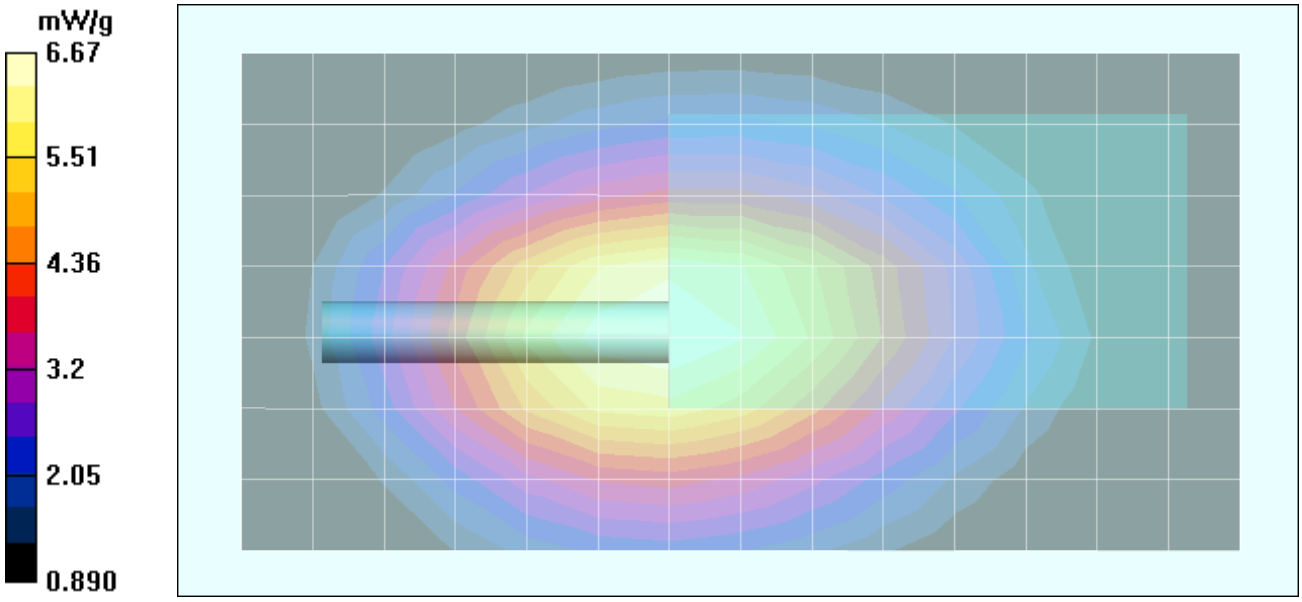
Ambient Temp: 23.7 °C; Fluid Temp: 23.3 °C; Barometric Pressure: 101.9 kPa; Humidity: 33%

Communication System: FM UHF
Frequency: 470.05 MHz; Duty Cycle: 1:1
RF Output Power: 36.18 dBm (Conducted)
7.4V 1400mAh Li-Ion Battery Pack (P/N: KNB-24L)
Medium: HSL450 ($\sigma$ = 0.86 mho/m; $\varepsilon_r$ = 43.5; $\rho$ = 1000 kg/m$^3$)

- Probe: ET3DV6 - SN1590; ConvF(7.5, 7.5, 7.5); Calibrated: 24/05/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn370; Calibrated: 14/05/2004
- Phantom: Planar; Type: Plexiglas; Serial: 161
- Measurement SW: DASY4, V4.3 Build 22; Postprocessing SW: SEMCAD, V1.8 Build 127

**Face-Held - 2.5 cm Separation Distance - Mid Channel/Area Scan (8x15x1):**
Measurement grid: dx=15mm, dy=15mm

**Face-Held - 2.5 cm Separation Distance - Mid Channel/Zoom Scan (5x5x7)/Cube 0:**
Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 86.2 V/m; Power Drift = -0.308 dB
Peak SAR (extrapolated) = 9.56 W/kg
**SAR(1 g) = 6.42 mW/g; SAR(10 g) = 4.61 mW/g**



Date Tested: 10/21/04

## Face-Held SAR - Ni-Cd Battery (P/N: KNB-25A) - Stubby Antenna (P/N: KRA-23M)

**DUT: Kenwood Model: TK-3170-K4; Type: Portable UHF PTT Radio Transceiver; Serial: 1S-U1-21**

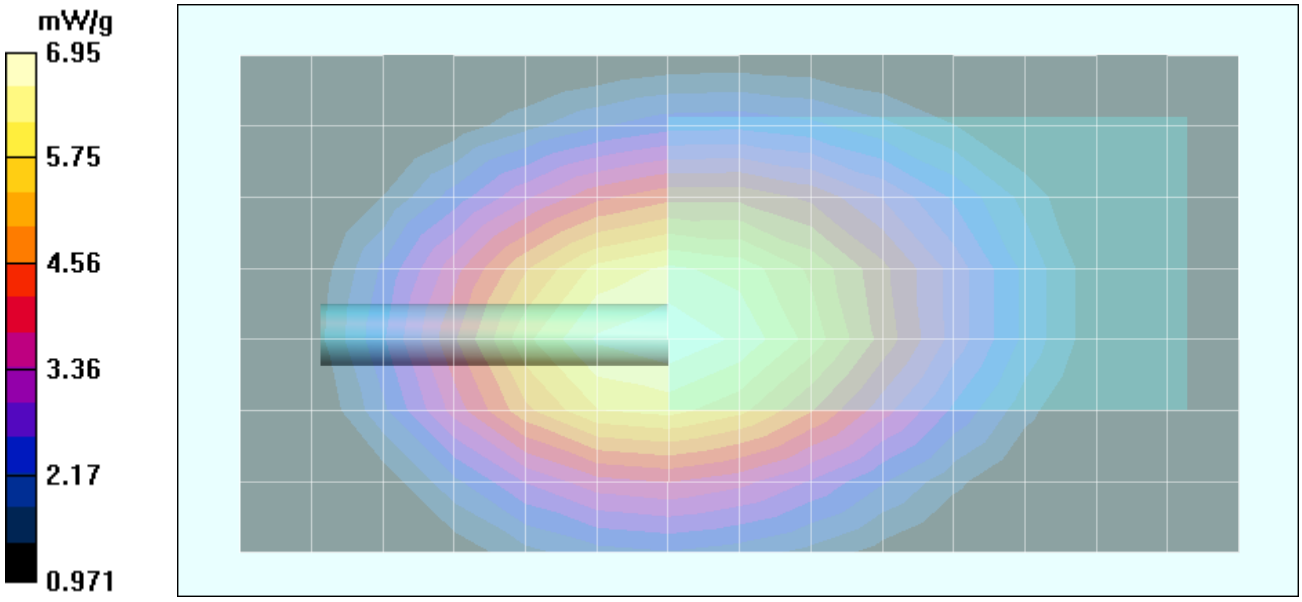
Ambient Temp: 23.7 °C; Fluid Temp: 23.3 °C; Barometric Pressure: 101.9 kPa; Humidity: 33%

Communication System: FM UHF
Frequency: 470.05 MHz; Duty Cycle: 1:1
RF Output Power: 36.26 dBm (Conducted)
7.2V 1200mAh Ni-Cd Battery Pack (P/N: KNB-25A)
Medium: HSL450 ($\sigma$ = 0.86 mho/m; $\varepsilon_r$ = 43.5; $\rho$ = 1000 kg/m$^3$)

- Probe: ET3DV6 - SN1590; ConvF(7.5, 7.5, 7.5); Calibrated: 24/05/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn370; Calibrated: 14/05/2004
- Phantom: Planar; Type: Plexiglas; Serial: 161
- Measurement SW: DASY4, V4.3 Build 22; Postprocessing SW: SEMCAD, V1.8 Build 127

**Face-Held - 2.5 cm Separation Distance - Mid Channel/Area Scan (8x15x1):**
Measurement grid: dx=15mm, dy=15mm

**Face-Held - 2.5 cm Separation Distance - Mid Channel/Zoom Scan (5x5x7)/Cube 0:**
Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 90.3 V/m; Power Drift = -0.562 dB
Peak SAR (extrapolated) = 9.96 W/kg
**SAR(1 g) = 6.64 mW/g; SAR(10 g) = 4.77 mW/g**



Date Tested: 10/21/04

## Face-Held SAR - Ni-MH Battery (P/N: KNB-26N) - Stubby Antenna (P/N: KRA-23M)

**DUT: Kenwood Model: TK-3170-K4; Type: Portable UHF PTT Radio Transceiver; Serial: 1S-U1-21**

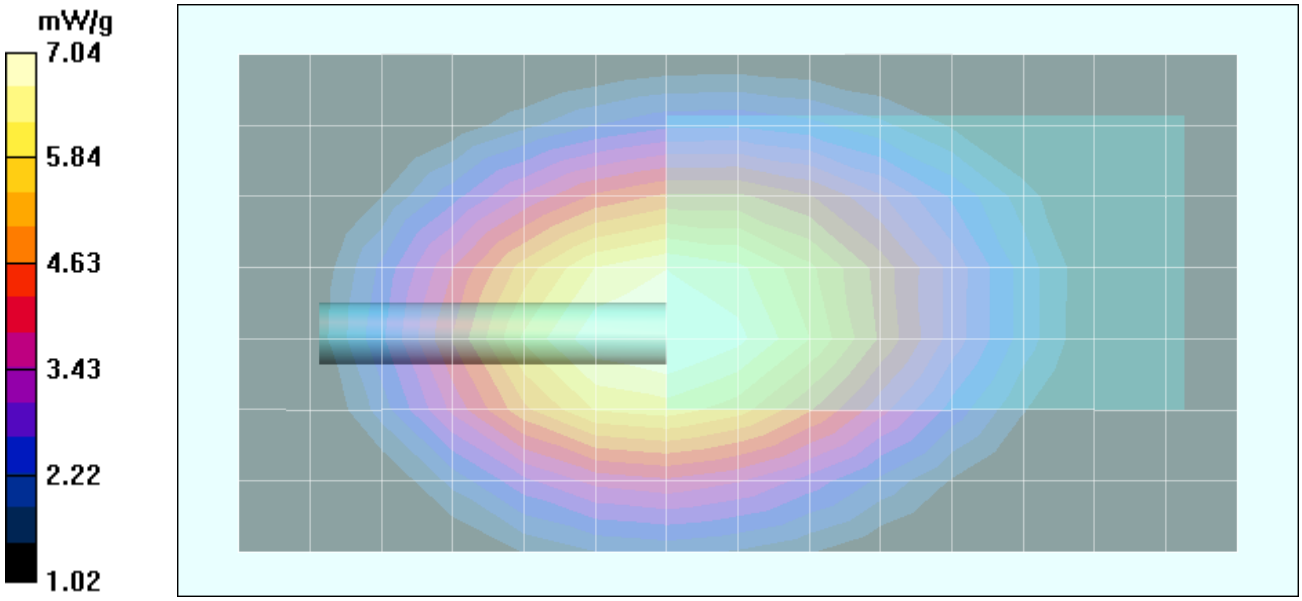
Ambient Temp: 23.7 °C; Fluid Temp: 23.3 °C; Barometric Pressure: 101.9 kPa; Humidity: 33%

Communication System: FM UHF
Frequency: 470.05 MHz; Duty Cycle: 1:1
RF Output Power: 36.23 dBm (Conducted)
7.2V 2000mAh Ni-MH Battery Pack (P/N: KNB-26N)
Medium: HSL450 ($\sigma$ = 0.86 mho/m; $\varepsilon_r$ = 43.5; $\rho$ = 1000 kg/m$^3$)

- Probe: ET3DV6 - SN1590; ConvF(7.5, 7.5, 7.5); Calibrated: 24/05/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn370; Calibrated: 14/05/2004
- Phantom: Planar; Type: Plexiglas; Serial: 161
- Measurement SW: DASY4, V4.3 Build 22; Postprocessing SW: SEMCAD, V1.8 Build 127

**Face-Held - 2.5 cm Separation Distance - Mid Channel/Area Scan (8x15x1):**
Measurement grid: dx=15mm, dy=15mm

**Face-Held - 2.5 cm Separation Distance - Mid Channel/Zoom Scan (5x5x7)/Cube 0:**
Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 90.7 V/m; Power Drift = -0.582 dB
Peak SAR (extrapolated) = 10.1 W/kg
**SAR(1 g) = 6.76 mW/g; SAR(10 g) = 4.85 mW/g**



Date Tested: 10/21/04

## Face-Held SAR - Ni-MH Battery (P/N: KNB-26N) - Stubby Antenna (P/N: KRA-23M)

**DUT: Kenwood Model: TK-3170-K4; Type: Portable UHF PTT Radio Transceiver; Serial: 1S-U1-21**

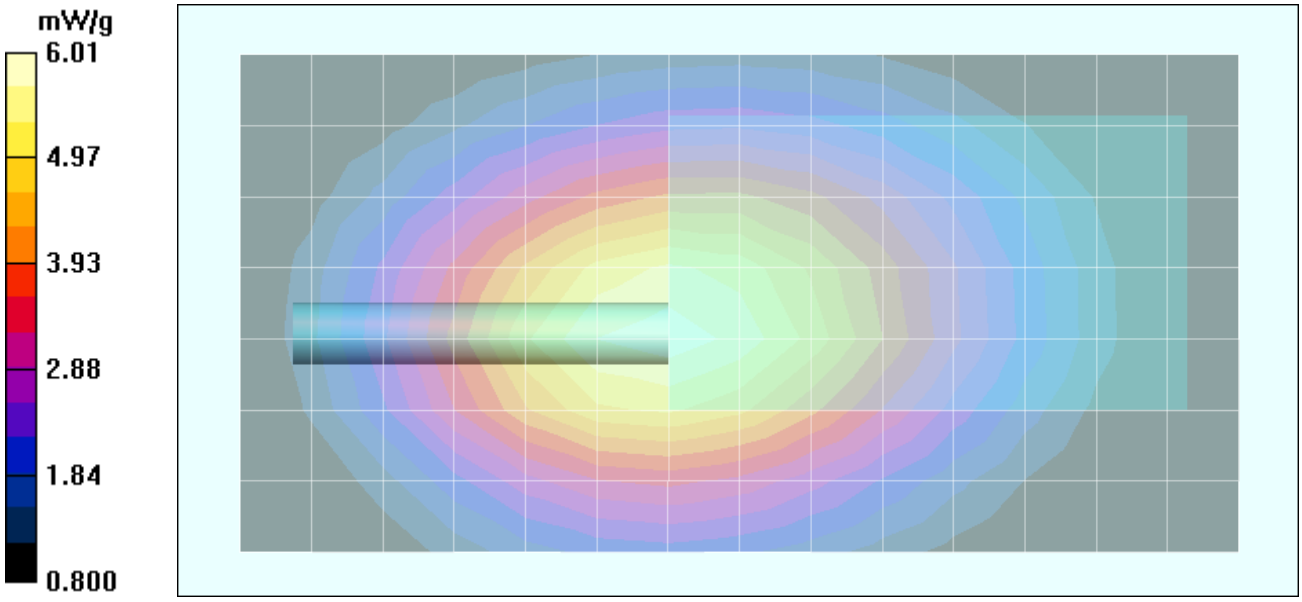
Ambient Temp: 23.7 °C; Fluid Temp: 23.3 °C; Barometric Pressure: 101.9 kPa; Humidity: 33%

Communication System: FM UHF
Frequency: 489.95 MHz; Duty Cycle: 1:1
RF Output Power: 36.25 dBm (Conducted)
7.2V 2000mAh Ni-MH Battery Pack (P/N: KNB-26N)
Medium: HSL450 ($\sigma$ = 0.86 mho/m; $\varepsilon_r$ = 43.5; $\rho$ = 1000 kg/m$^3$)

- Probe: ET3DV6 - SN1590; ConvF(7.5, 7.5, 7.5); Calibrated: 24/05/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn370; Calibrated: 14/05/2004
- Phantom: Planar; Type: Plexiglas; Serial: 161
- Measurement SW: DASY4, V4.3 Build 22; Postprocessing SW: SEMCAD, V1.8 Build 127

**Face-Held - 2.5 cm Separation Distance - High Channel/Area Scan (8x15x1):**
Measurement grid: dx=15mm, dy=15mm

**Face-Held - 2.5 cm Separation Distance - High Channel/Zoom Scan (5x5x7)/Cube 0:**
Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 83.1 V/m; Power Drift = -0.599 dB
Peak SAR (extrapolated) = 8.65 W/kg
**SAR(1 g) = 5.73 mW/g; SAR(10 g) = 4.07 mW/g**



Date Tested: 10/21/04

## Body-Worn SAR - Duracell Alkaline Battery Pack (P/N: KBP-5) - Whip Antenna (P/N: KRA-27M)

**DUT: Kenwood Model: TK-3170-K4; Type: Portable UHF PTT Radio Transceiver; Serial: 1S-U1-21**

**Body-Worn Accessories: Speaker-Microphone (P/N: KMC-17), Belt-Clip (P/N: KBH-12)**

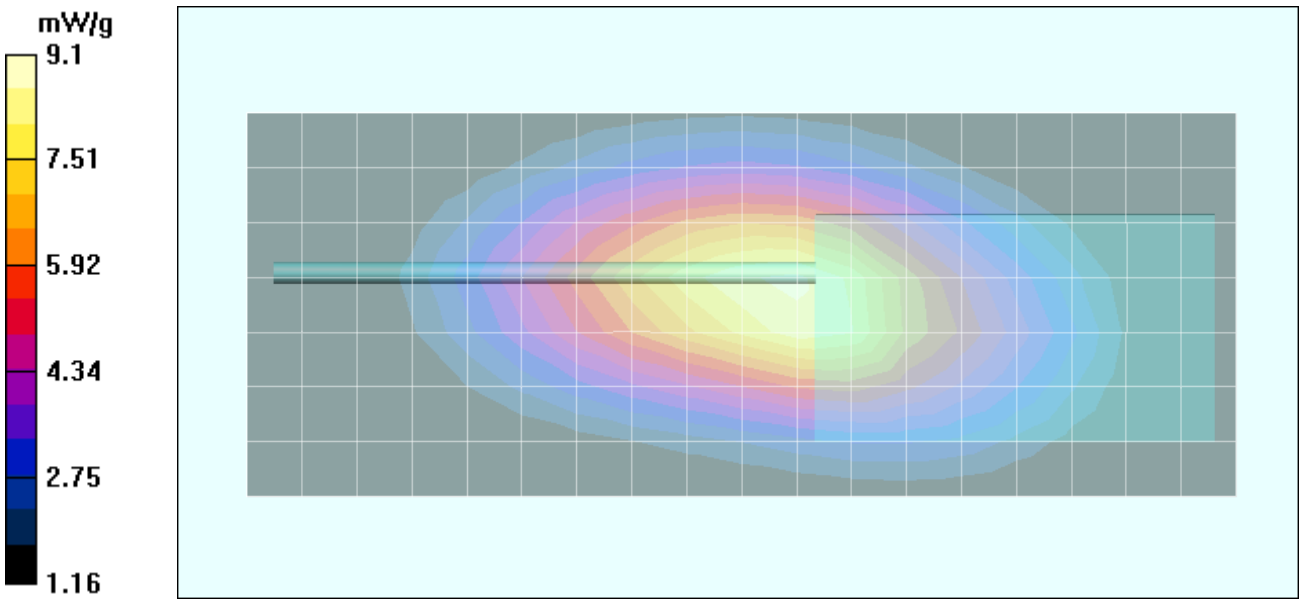
Ambient Temp: 24.5 °C; Fluid Temp: 23.6 °C; Barometric Pressure: 101.8 kPa; Humidity: 32%

Communication System: FM UHF
Frequency: 470.05 MHz; Duty Cycle: 1:1
RF Output Power: 36.15 dBm (Conducted)
9V AA Alkaline Duracell ProCell Battery Pack (Battery Case P/N: KBP-5)
Medium: M450 ($\sigma$ = 0.91 mho/m; $\varepsilon_r$ = 57.1; $\rho$ = 1000 kg/m$^3$)

- Probe: ET3DV6 - SN1590; ConvF(7.7, 7.7, 7.7); Calibrated: 24/05/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn370; Calibrated: 14/05/2004
- Phantom: Planar; Type: Plexiglas; Serial: 161
- Measurement SW: DASY4, V4.3 Build 22; Postprocessing SW: SEMCAD, V1.8 Build 127

**Body-Worn - 1.0 cm Belt-Clip Separation Distance - Mid Channel/Area Scan (8x19x1):**
Measurement grid: dx=15mm, dy=15mm

**Body-Worn - 1.0 cm Belt-Clip Separation Distance - Mid Channel/Zoom Scan (5x5x7)/Cube 0:**
Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 103.5 V/m; Power Drift = -0.904 dB
Peak SAR (extrapolated) = 13.4 W/kg
**SAR(1 g) = 8.74 mW/g; SAR(10 g) = 6.22 mW/g**



Date Tested: 10/21/04

## Body-Worn SAR - Li-ion Battery (P/N: KNB-35L) - Whip Antenna (P/N: KRA-27M)

**DUT: Kenwood Model: TK-3170-K4; Type: Portable UHF PTT Radio Transceiver; Serial: 1S-U1-21**

**Body-Worn Accessories: Speaker-Microphone (P/N: KMC-17), Belt-Clip (P/N: KBH-12)**

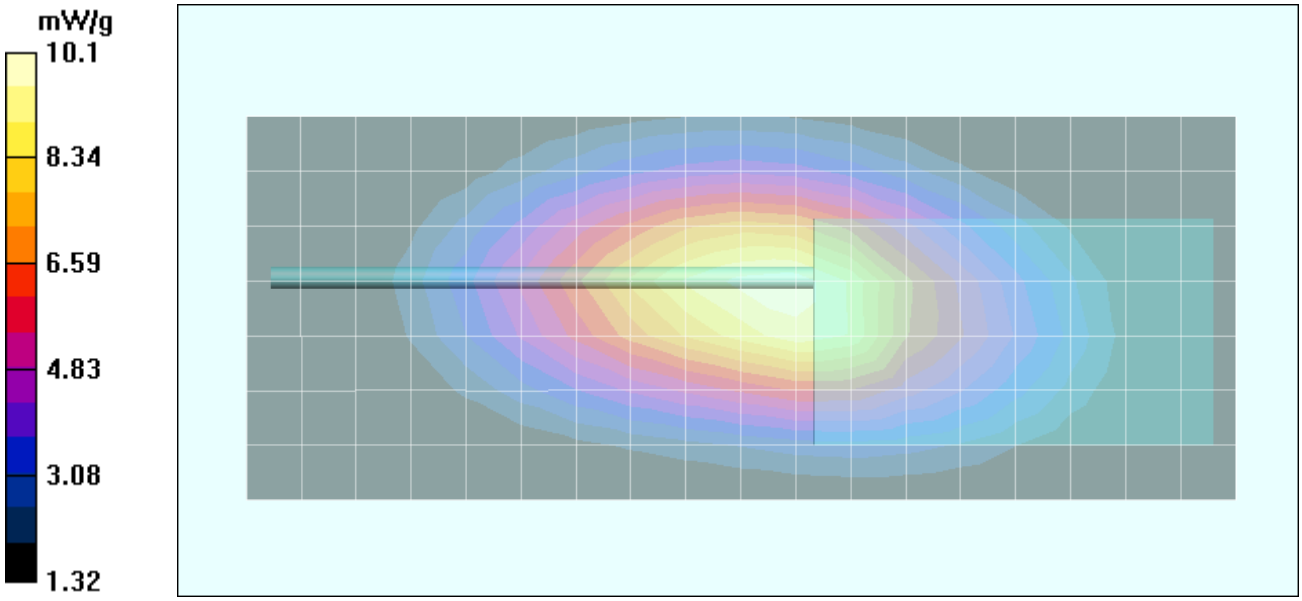
Ambient Temp: 24.5 °C; Fluid Temp: 23.6 °C; Barometric Pressure: 101.8 kPa; Humidity: 32%

Communication System: FM UHF
Frequency: 470.05 MHz; Duty Cycle: 1:1
RF Output Power: 36.20 dBm (Conducted)
7.4V 1400mAh Li-Ion Battery Pack (P/N: KNB-35L)
Medium: M450 ($\sigma$ = 0.91 mho/m; $\varepsilon_r$ = 57.1; $\rho$ = 1000 kg/m$^3$)

- Probe: ET3DV6 - SN1590; ConvF(7.7, 7.7, 7.7); Calibrated: 24/05/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn370; Calibrated: 14/05/2004
- Phantom: Planar; Type: Plexiglas; Serial: 161
- Measurement SW: DASY4, V4.3 Build 22; Postprocessing SW: SEMCAD, V1.8 Build 127

**Body-Worn - 1.4 cm Belt-Clip Separation Distance - Mid Channel/Area Scan (8x19x1):**
Measurement grid: dx=15mm, dy=15mm

**Body-Worn - 1.4 cm Belt-Clip Separation Distance - Mid Channel/Zoom Scan (5x5x7)/Cube 0:**
Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 103.7 V/m; Power Drift = -0.169 dB
Peak SAR (extrapolated) = 14.8 W/kg
**SAR(1 g) = 9.67 mW/g; SAR(10 g) = 6.86 mW/g**



Date Tested: 10/21/04

## Body-Worn SAR - Li-ion Battery (P/N: KNB-24L) - Whip Antenna (P/N: KRA-27M)

**DUT: Kenwood Model: TK-3170-K4; Type: Portable UHF PTT Radio Transceiver; Serial: 1S-U1-21**

**Body-Worn Accessories: Speaker-Microphone (P/N: KMC-17), Belt-Clip (P/N: KBH-12)**

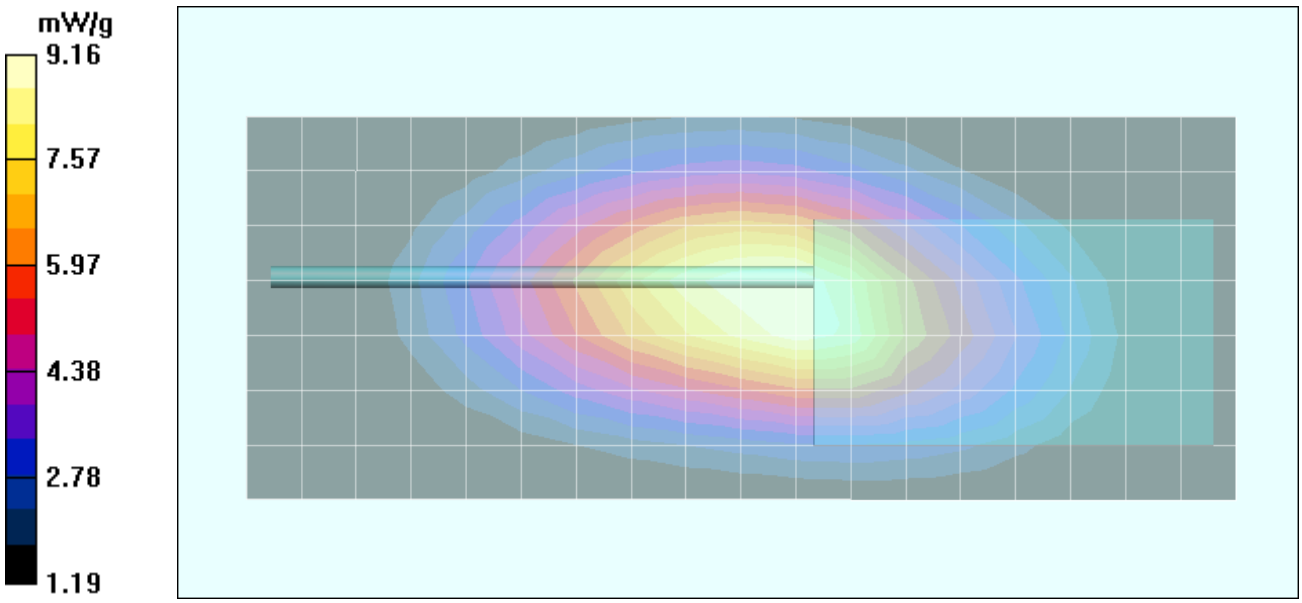
Ambient Temp: 24.5 °C; Fluid Temp: 23.6 °C; Barometric Pressure: 101.8 kPa; Humidity: 32%

Communication System: FM UHF
Frequency: 470.05 MHz; Duty Cycle: 1:1
RF Output Power: 36.18 dBm (Conducted)
7.4V 1400mAh Li-Ion Battery Pack (P/N: KNB-24L)
Medium: M450 ($\sigma$ = 0.91 mho/m; $\varepsilon_r$ = 57.1; $\rho$ = 1000 kg/m$^3$)

- Probe: ET3DV6 - SN1590; ConvF(7.7, 7.7, 7.7); Calibrated: 24/05/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn370; Calibrated: 14/05/2004
- Phantom: Planar; Type: Plexiglas; Serial: 161
- Measurement SW: DASY4, V4.3 Build 22; Postprocessing SW: SEMCAD, V1.8 Build 127

**Body-Worn - 1.4 cm Belt-Clip Separation Distance - Mid Channel/Area Scan (8x19x1):**
Measurement grid: dx=15mm, dy=15mm

**Body-Worn - 1.4 cm Belt-Clip Separation Distance - Mid Channel/Zoom Scan (5x5x7)/Cube 0:**
Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 99.6 V/m; Power Drift = -0.304 dB
Peak SAR (extrapolated) = 13.3 W/kg
**SAR(1 g) = 8.75 mW/g; SAR(10 g) = 6.22 mW/g**



Date Tested: 10/21/04

## Body-Worn SAR - Ni-Cd Battery (P/N: KNB-25A) - Whip Antenna (P/N: KRA-27M)

**DUT: Kenwood Model: TK-3170-K4; Type: Portable UHF PTT Radio Transceiver; Serial: 1S-U1-21**

**Body-Worn Accessories: Speaker-Microphone (P/N: KMC-17), Belt-Clip (P/N: KBH-12)**

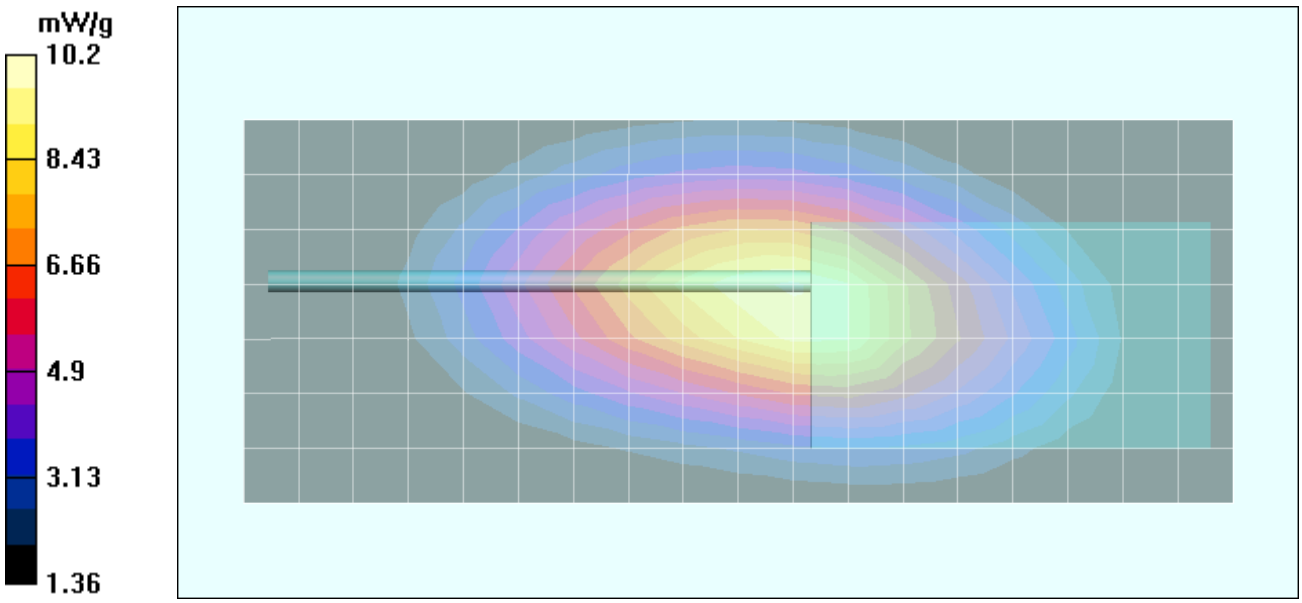
Ambient Temp: 24.5 °C; Fluid Temp: 23.6 °C; Barometric Pressure: 101.8 kPa; Humidity: 32%

Communication System: FM UHF
Frequency: 470.05 MHz; Duty Cycle: 1:1
RF Output Power: 36.25 dBm (Conducted)
7.2V 1200mAh Ni-Cd Battery Pack (P/N: KNB-25A)
Medium: M450 ($\sigma$ = 0.91 mho/m; $\varepsilon_r$ = 57.1; $\rho$ = 1000 kg/m$^3$)

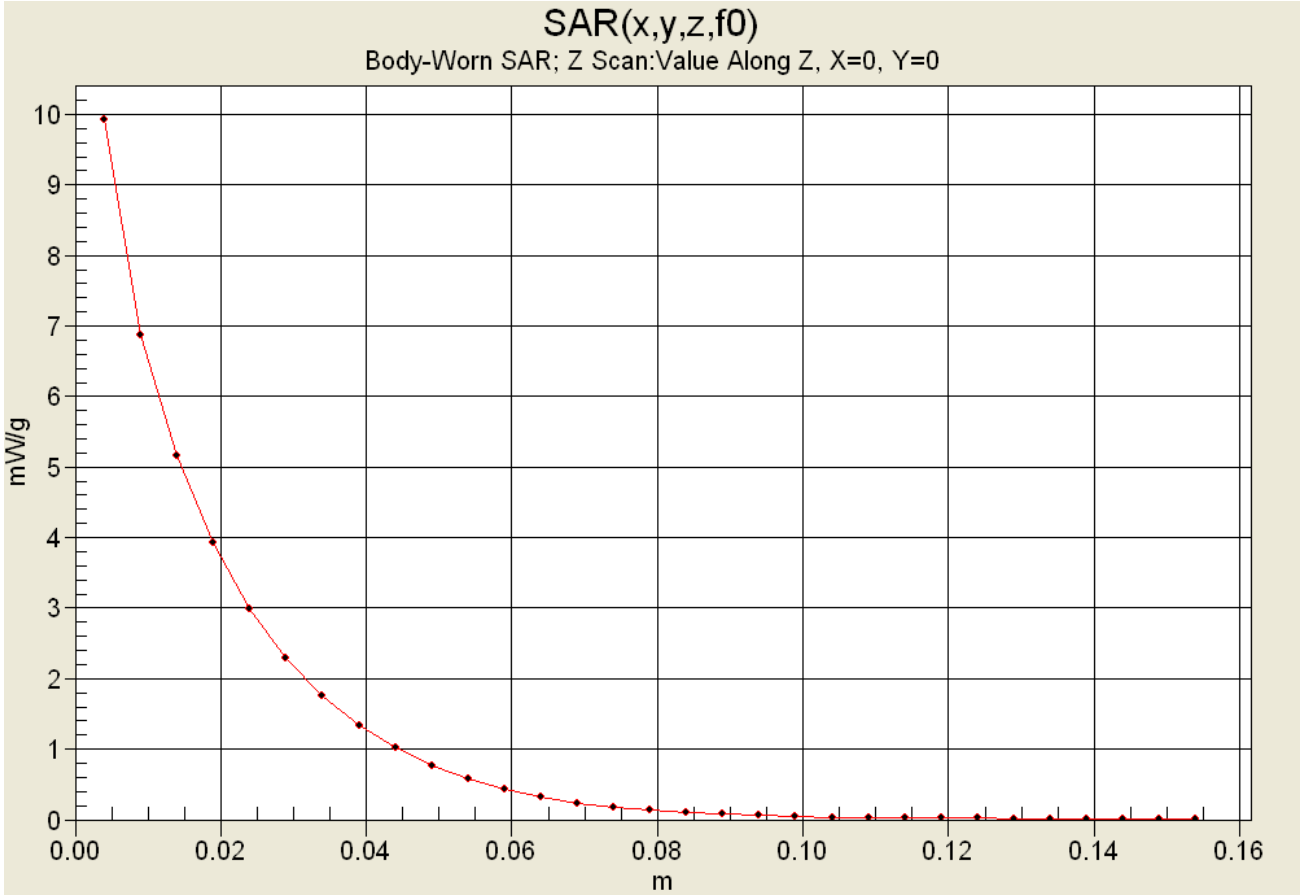
- Probe: ET3DV6 - SN1590; ConvF(7.7, 7.7, 7.7); Calibrated: 24/05/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn370; Calibrated: 14/05/2004
- Phantom: Planar; Type: Plexiglas; Serial: 161
- Measurement SW: DASY4, V4.3 Build 22; Postprocessing SW: SEMCAD, V1.8 Build 127

**Body-Worn - 0.9 cm Belt-Clip Separation Distance - Mid Channel/Area Scan (8x19x1):**
Measurement grid: dx=15mm, dy=15mm

**Body-Worn - 0.9 cm Belt-Clip Separation Distance - Mid Channel/Zoom Scan (5x5x7)/Cube 0:**
Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 104.6 V/m; Power Drift = -0.307 dB
Peak SAR (extrapolated) = 14.8 W/kg
**SAR(1 g) = 9.70 mW/g; SAR(10 g) = 6.9 mW/g**



## Z-Axis Scan


SAR(x,y,z,f0)
Body-Worn SAR; Z Scan:Value Along Z, X=0, Y=0
mW/g
m
0
1
2
3
4
5
6
7
8
9
10
0.00
0.02
0.04
0.06
0.08
0.10
0.12
0.14
0.16

Date Tested: 10/21/04

## Body-Worn SAR - Ni-MH Battery (P/N: KNB-26N) - Whip Antenna (P/N: KRA-27M)

**DUT: Kenwood Model: TK-3170-K4; Type: Portable UHF PTT Radio Transceiver; Serial: 1S-U1-21**

**Body-Worn Accessories: Speaker-Microphone (P/N: KMC-17), Belt-Clip (P/N: KBH-12)**

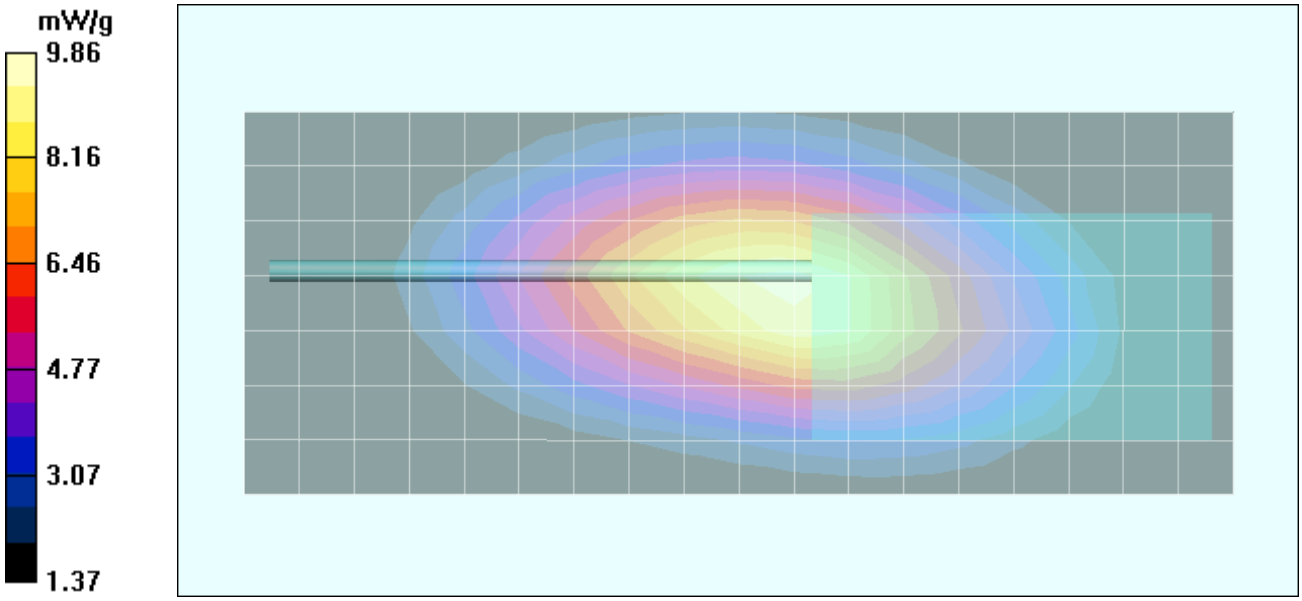
Ambient Temp: 24.5 °C; Fluid Temp: 23.6 °C; Barometric Pressure: 101.8 kPa; Humidity: 32%

Communication System: FM UHF
Frequency: 470.05 MHz; Duty Cycle: 1:1
RF Output Power: 36.28 dBm (Conducted)
7.2V 2000mAh Ni-MH Battery Pack (P/N: KNB-26N)
Medium: M450 ($\sigma$ = 0.91 mho/m; $\varepsilon_r$ = 57.1; $\rho$ = 1000 kg/m$^3$)

- Probe: ET3DV6 - SN1590; ConvF(7.7, 7.7, 7.7); Calibrated: 24/05/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn370; Calibrated: 14/05/2004
- Phantom: Planar; Type: Plexiglas; Serial: 161
- Measurement SW: DASY4, V4.3 Build 22; Postprocessing SW: SEMCAD, V1.8 Build 127

**Body-Worn - 0.9 cm Belt-Clip Separation Distance - Mid Channel/Area Scan (8x19x1):**
Measurement grid: dx=15mm, dy=15mm

**Body-Worn - 0.9 cm Belt-Clip Separation Distance - Mid Channel/Zoom Scan (5x5x7)/Cube 0:**
Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 103.8 V/m; Power Drift = -0.285 dB
Peak SAR (extrapolated) = 14.4 W/kg
**SAR(1 g) = 9.46 mW/g; SAR(10 g) = 6.73 mW/g**



Date Tested: 10/21/04

## Body-Worn SAR - Duracell Alkaline Battery Pack (P/N: KBP-5) - Whip Antenna (P/N: KRA-27M)

**DUT: Kenwood Model: TK-3170-K4; Type: Portable UHF PTT Radio Transceiver; Serial: 1S-U1-21**

**Body-Worn Accessories: Speaker-Microphone (P/N: KMC-17), Belt-Clip (P/N: KBH-12)**

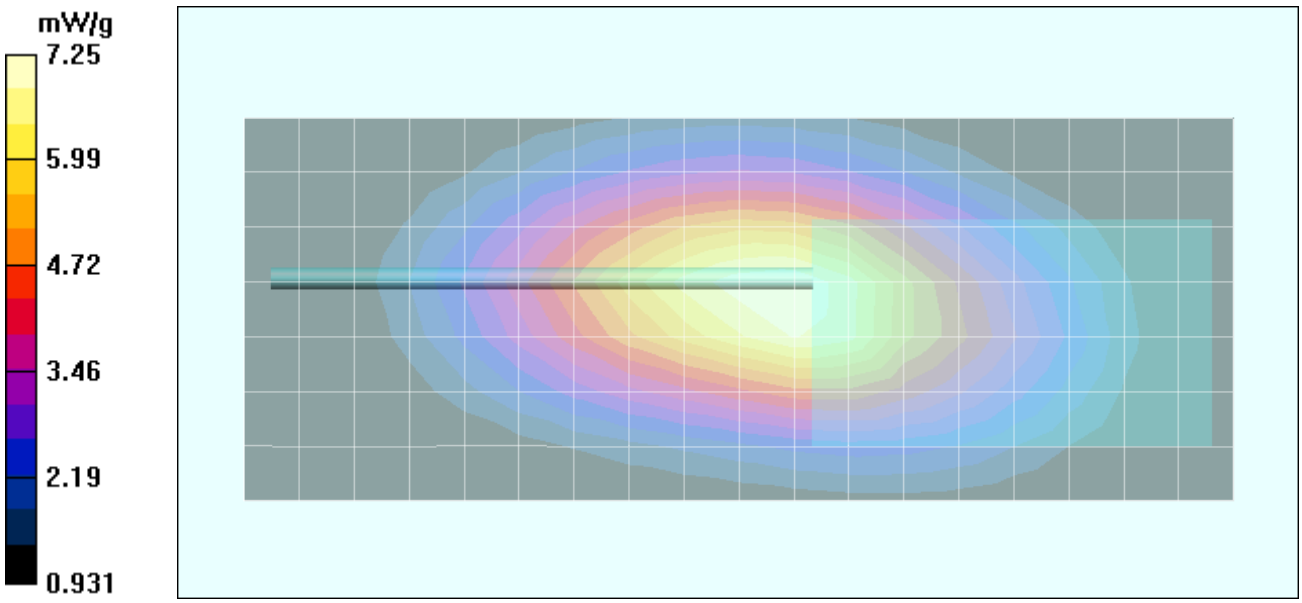
Ambient Temp: 24.5 °C; Fluid Temp: 23.6 °C; Barometric Pressure: 101.8 kPa; Humidity: 32%

Communication System: FM UHF
Frequency: 450.05 MHz; Duty Cycle: 1:1
RF Output Power: 36.30 dBm (Conducted)
9V AA Alkaline Duracell ProCell Battery Pack (Battery Case P/N: KBP-5)
Medium: M450 ($\sigma$ = 0.91 mho/m; $\varepsilon_r$ = 57.1; $\rho$ = 1000 kg/m$^3$)

- Probe: ET3DV6 - SN1590; ConvF(7.7, 7.7, 7.7); Calibrated: 24/05/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn370; Calibrated: 14/05/2004
- Phantom: Planar; Type: Plexiglas; Serial: 161
- Measurement SW: DASY4, V4.3 Build 22; Postprocessing SW: SEMCAD, V1.8 Build 127

**Body-Worn - 1.0 cm Belt-Clip Separation Distance - Low Channel/Area Scan (8x19x1):**
Measurement grid: dx=15mm, dy=15mm

**Body-Worn - 1.0 cm Belt-Clip Separation Distance - Low Channel/Zoom Scan (5x5x7)/Cube 0:**
Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 88.2 V/m; Power Drift = -0.615 dB
Peak SAR (extrapolated) = 10.7 W/kg
**SAR(1 g) = 6.90 mW/g; SAR(10 g) = 4.89 mW/g**



Date Tested: 10/21/04

## Body-Worn SAR - Duracell Alkaline Battery Pack (P/N: KBP-5) - Whip Antenna (P/N: KRA-27M)

**DUT: Kenwood Model: TK-3170-K4; Type: Portable UHF PTT Radio Transceiver; Serial: 1S-U1-21**

**Body-Worn Accessories: Speaker-Microphone (P/N: KMC-17), Belt-Clip (P/N: KBH-12)**

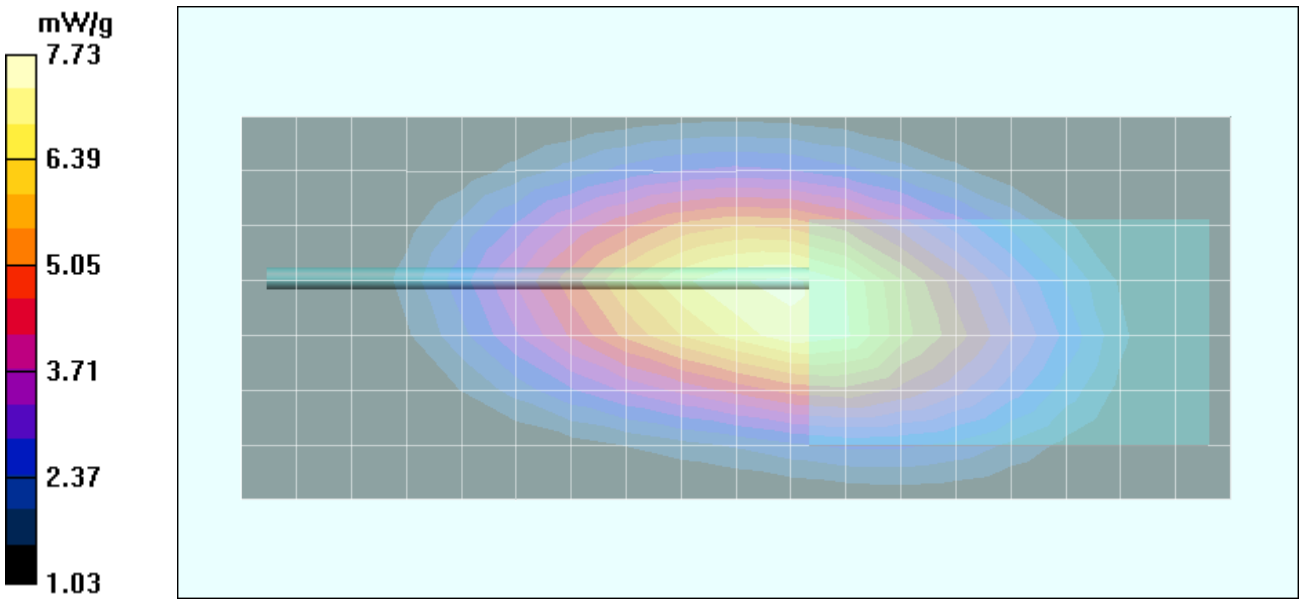
Ambient Temp: 24.5 °C; Fluid Temp: 23.6 °C; Barometric Pressure: 101.8 kPa; Humidity: 32%

Communication System: FM UHF
Frequency: 489.95 MHz; Duty Cycle: 1:1
RF Output Power: 36.05 dBm (Conducted)
9V AA Alkaline Duracell ProCell Battery Pack (Battery Case P/N: KBP-5)
Medium: M450 ($\sigma$ = 0.91 mho/m; $\varepsilon_r$ = 57.1; $\rho$ = 1000 kg/m$^3$)

- Probe: ET3DV6 - SN1590; ConvF(7.7, 7.7, 7.7); Calibrated: 24/05/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn370; Calibrated: 14/05/2004
- Phantom: Planar; Type: Plexiglas; Serial: 161
- Measurement SW: DASY4, V4.3 Build 22; Postprocessing SW: SEMCAD, V1.8 Build 127

**Body-Worn - 1.0 cm Belt-Clip Separation Distance - High Channel/Area Scan (8x19x1):**
Measurement grid: dx=15mm, dy=15mm

**Body-Worn - 1.0 cm Belt-Clip Separation Distance - High Channel/Zoom Scan (5x5x7)/Cube 0:**
Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 95.7 V/m; Power Drift = -0.953 dB
Peak SAR (extrapolated) = 11.3 W/kg
**SAR(1 g) = 7.41 mW/g; SAR(10 g) = 5.26 mW/g**



Date Tested: 10/21/04

## Body-Worn SAR - Duracell Alkaline Battery Pack (P/N: KBP-5) - Whip Antenna (P/N: KRA-27M2)

**DUT: Kenwood Model: TK-3170-K4; Type: Portable UHF PTT Radio Transceiver; Serial: 1S-U1-21**

**Body-Worn Accessories: Speaker-Microphone (P/N: KMC-17), Belt-Clip (P/N: KBH-12)**

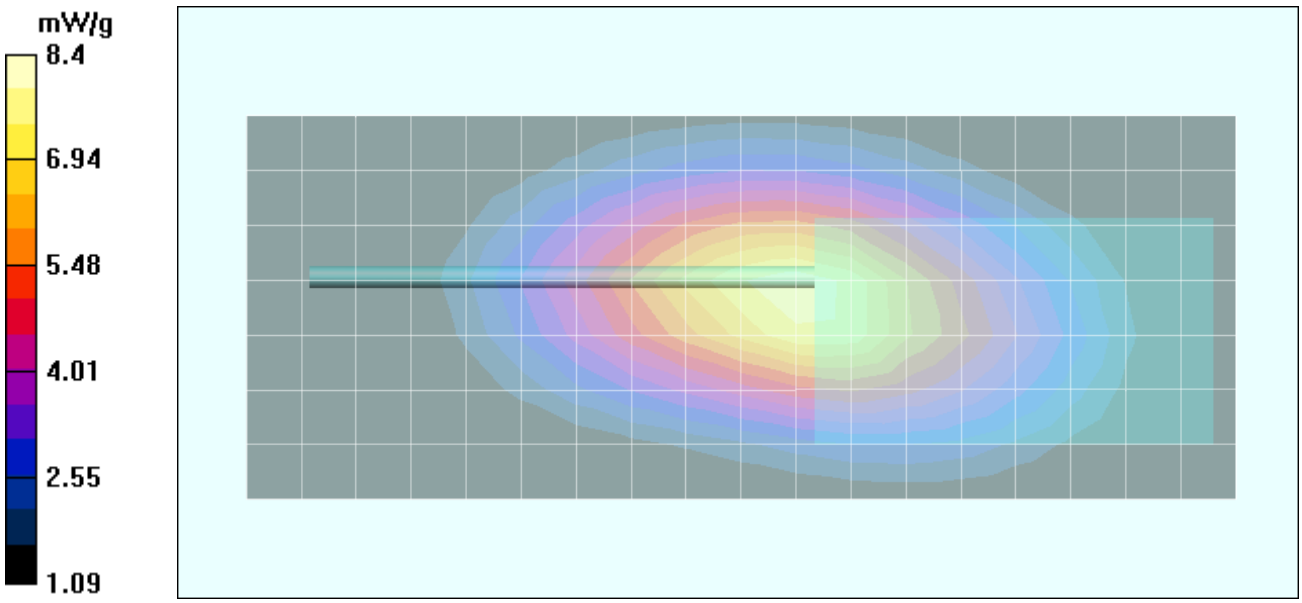
Ambient Temp: 24.5 °C; Fluid Temp: 23.6 °C; Barometric Pressure: 101.8 kPa; Humidity: 32%

Communication System: FM UHF
Frequency: 489.95 MHz; Duty Cycle: 1:1
RF Output Power: 36.01 dBm (Conducted)
9V AA Alkaline Duracell ProCell Battery Pack (Battery Case P/N: KBP-5)
Medium: M450 ($\sigma$ = 0.91 mho/m; $\varepsilon_r$ = 57.1; $\rho$ = 1000 kg/m$^3$)

- Probe: ET3DV6 - SN1590; ConvF(7.7, 7.7, 7.7); Calibrated: 24/05/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn370; Calibrated: 14/05/2004
- Phantom: Planar; Type: Plexiglas; Serial: 161
- Measurement SW: DASY4, V4.3 Build 22; Postprocessing SW: SEMCAD, V1.8 Build 127

**Body-Worn - 1.0 cm Belt-Clip Separation Distance - High Channel/Area Scan (8x19x1):**
Measurement grid: dx=15mm, dy=15mm

**Body-Worn - 1.0 cm Belt-Clip Separation Distance - High Channel/Zoom Scan (5x5x7)/Cube 0:**
Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 100.5 V/m; Power Drift = -1.06 dB
Peak SAR (extrapolated) = 12.4 W/kg
**SAR(1 g) = 8.05 mW/g; SAR(10 g) = 5.69 mW/g**



Date Tested: 10/22/04

## Body-Worn SAR - Duracell Alkaline Battery Pack (P/N: KBP-5) - Whip Antenna (P/N: KRA-27M)

**DUT: Kenwood Model: TK-3170-K4; Type: Portable UHF PTT Radio Transceiver; Serial: 1S-U1-21**

**Body-Worn Accessories: Headset (P/N: KHS-21), Belt-Clip (P/N: KBH-12)**

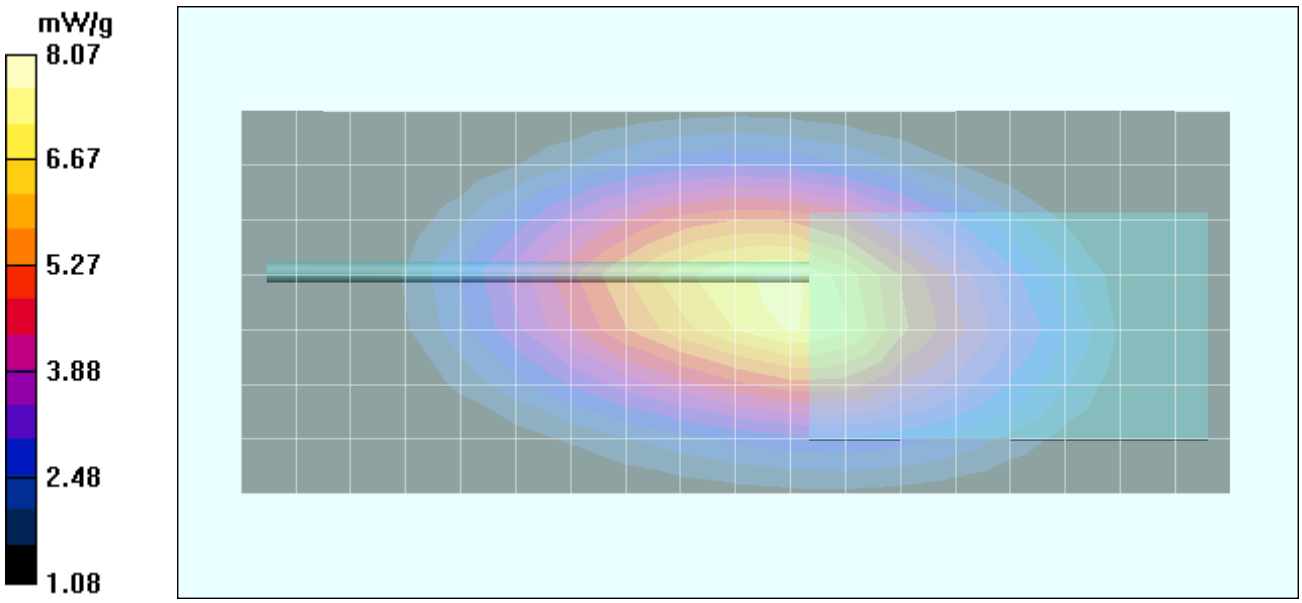
Ambient Temp: 23.9 °C; Fluid Temp: 23.1 °C; Barometric Pressure: 101.3 kPa; Humidity: 33%

Communication System: FM UHF
Frequency: 470.05 MHz; Duty Cycle: 1:1
RF Output Power: 36.26 dBm (Conducted)
9V AA Alkaline Duracell ProCell Battery Pack (Battery Case P/N: KBP-5)
Medium: M450 ($\sigma$ = 0.90 mho/m; $\varepsilon_r$ = 56.6; $\rho$ = 1000 kg/m$^3$)

- Probe: ET3DV6 - SN1590; ConvF(7.7, 7.7, 7.7); Calibrated: 24/05/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn370; Calibrated: 14/05/2004
- Phantom: Planar; Type: Plexiglas; Serial: 161
- Measurement SW: DASY4, V4.3 Build 22; Postprocessing SW: SEMCAD, V1.8 Build 127

**Body-Worn - 1.0 cm Belt-Clip Separation Distance - Mid Channel/Area Scan (8x19x1):**
Measurement grid: dx=15mm, dy=15mm

**Body-Worn - 1.0 cm Belt-Clip Separation Distance - Mid Channel/Zoom Scan (5x5x7)/Cube 0:**
Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 97.8 V/m; Power Drift = -0.845 dB
Peak SAR (extrapolated) = 11.8 W/kg
**SAR(1 g) = 7.73 mW/g; SAR(10 g) = 5.5 mW/g**



Date Tested: 10/22/04

## Body-Worn SAR - Li-ion Battery (P/N: KNB-35L) - Whip Antenna (P/N: KRA-27M)

**DUT: Kenwood Model: TK-3170-K4; Type: Portable UHF PTT Radio Transceiver; Serial: 1S-U1-21**

**Body-Worn Accessories: Headset (P/N: KHS-21), Belt-Clip (P/N: KBH-12)**

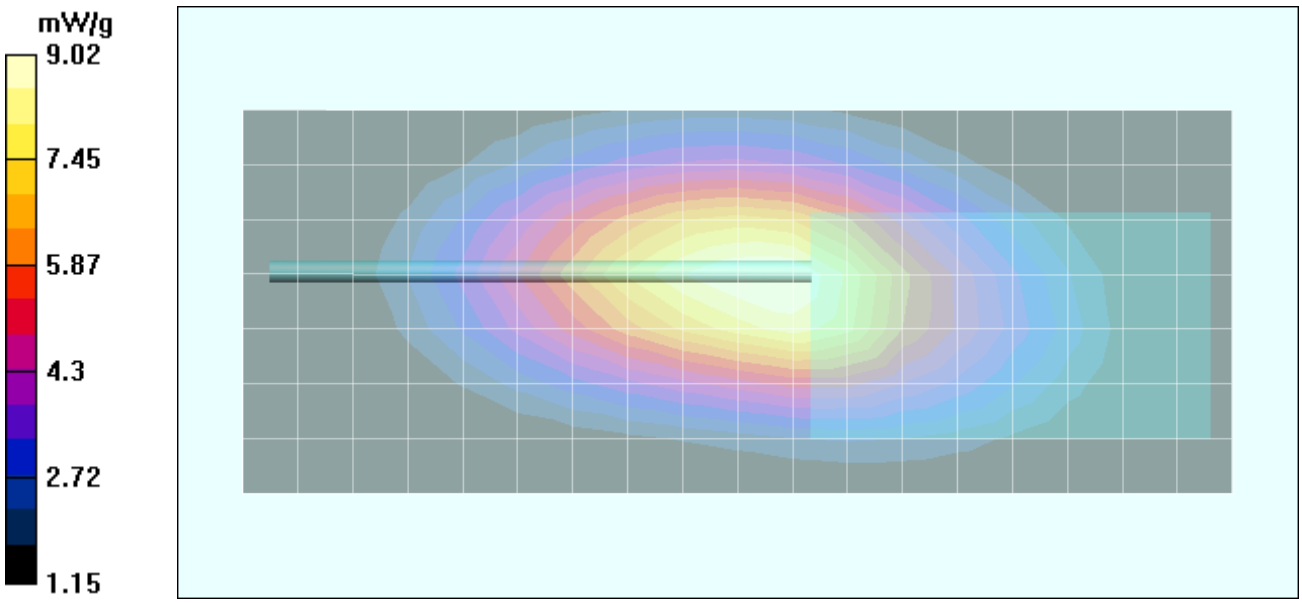
Ambient Temp: 23.9 °C; Fluid Temp: 23.1 °C; Barometric Pressure: 101.3 kPa; Humidity: 33%

Communication System: FM UHF
Frequency: 470.05 MHz; Duty Cycle: 1:1
RF Output Power: 36.36 dBm (Conducted)
7.4V 1400mAh Li-Ion Battery Pack (P/N: KNB-35L)
Medium: M450 ($\sigma$ = 0.90 mho/m; $\varepsilon_r$ = 56.6; $\rho$ = 1000 kg/m$^3$)

- Probe: ET3DV6 - SN1590; ConvF(7.7, 7.7, 7.7); Calibrated: 24/05/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn370; Calibrated: 14/05/2004
- Phantom: Planar; Type: Plexiglas; Serial: 161
- Measurement SW: DASY4, V4.3 Build 22; Postprocessing SW: SEMCAD, V1.8 Build 127

**Body-Worn - 1.4 cm Belt-Clip Separation Distance - Mid Channel/Area Scan (8x19x1):**
Measurement grid: dx=15mm, dy=15mm

**Body-Worn - 1.4 cm Belt-Clip Separation Distance - Mid Channel/Zoom Scan (5x5x7)/Cube 0:**
Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 99 V/m; Power Drift = -0.125 dB
Peak SAR (extrapolated) = 13.3 W/kg
**SAR(1 g) = 8.68 mW/g; SAR(10 g) = 6.19 mW/g**



Date Tested: 10/22/04

## Body-Worn SAR - Li-ion Battery (P/N: KNB-24L) - Whip Antenna (P/N: KRA-27M)

**DUT: Kenwood Model: TK-3170-K4; Type: Portable UHF PTT Radio Transceiver; Serial: 1S-U1-21**

**Body-Worn Accessories: Headset (P/N: KHS-21), Belt-Clip (P/N: KBH-12)**

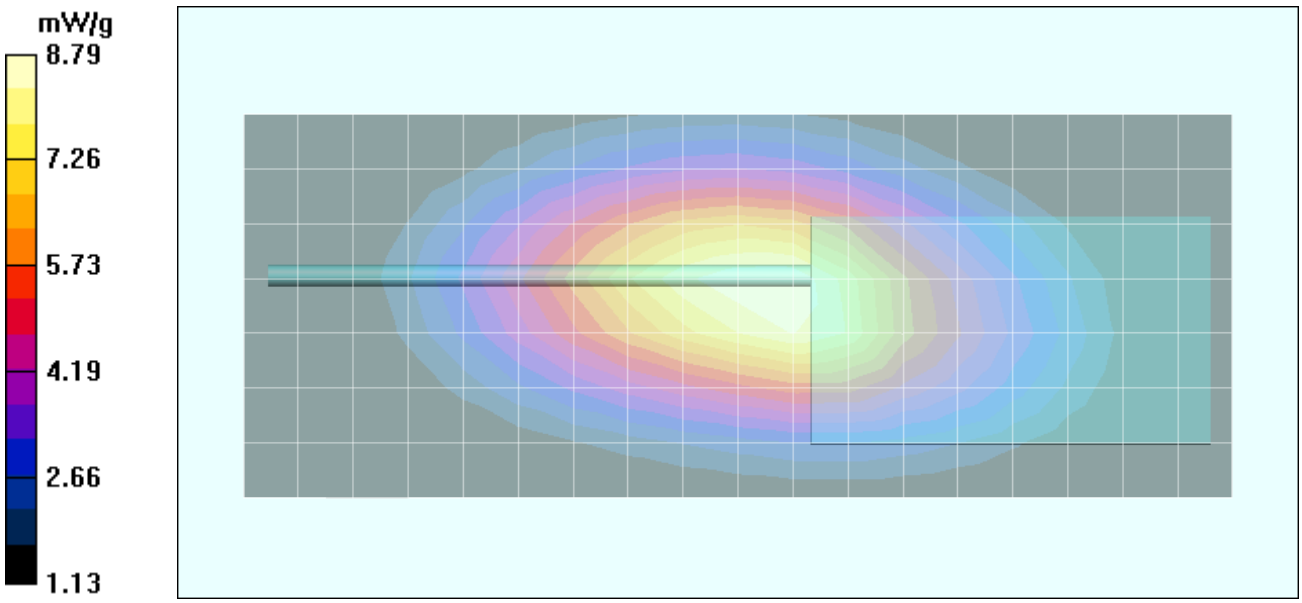
Ambient Temp: 23.9 °C; Fluid Temp: 23.1 °C; Barometric Pressure: 101.3 kPa; Humidity: 33%

Communication System: FM UHF
Frequency: 470.05 MHz; Duty Cycle: 1:1
RF Output Power: 36.32 dBm (Conducted)
7.4V 1400mAh Li-Ion Battery Pack (P/N: KNB-24L)
Medium: M450 ($\sigma$ = 0.90 mho/m; $\varepsilon_r$ = 56.6; $\rho$ = 1000 kg/m$^3$)

- Probe: ET3DV6 - SN1590; ConvF(7.7, 7.7, 7.7); Calibrated: 24/05/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn370; Calibrated: 14/05/2004
- Phantom: Planar; Type: Plexiglas; Serial: 161
- Measurement SW: DASY4, V4.3 Build 22; Postprocessing SW: SEMCAD, V1.8 Build 127

**Body-Worn - 1.4 cm Belt-Clip Separation Distance - Mid Channel/Area Scan (8x19x1):**
Measurement grid: dx=15mm, dy=15mm

**Body-Worn - 1.4 cm Belt-Clip Separation Distance - Mid Channel/Zoom Scan (5x5x7)/Cube 0:**
Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 98.2 V/m; Power Drift = -0.293 dB
Peak SAR (extrapolated) = 12.8 W/kg
**SAR(1 g) = 8.40 mW/g; SAR(10 g) = 5.96 mW/g**



Date Tested: 10/22/04

## Body-Worn SAR - Ni-Cd Battery (P/N: KNB-25A) - Whip Antenna (P/N: KRA-27M)

**DUT: Kenwood Model: TK-3170-K4; Type: Portable UHF PTT Radio Transceiver; Serial: 1S-U1-21**

**Body-Worn Accessories: Headset (P/N: KHS-21), Belt-Clip (P/N: KBH-12)**

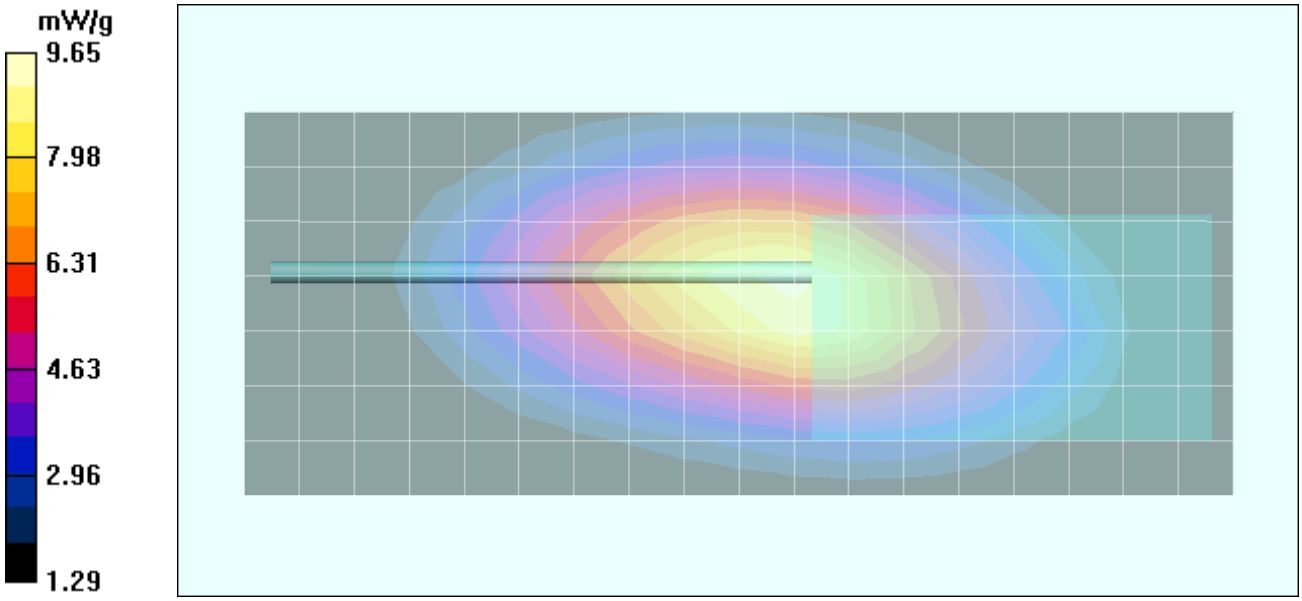
Ambient Temp: 23.9 °C; Fluid Temp: 23.1 °C; Barometric Pressure: 101.3 kPa; Humidity: 33%

Communication System: FM UHF
Frequency: 470.05 MHz; Duty Cycle: 1:1
RF Output Power: 36.35 dBm (Conducted)
7.2V 1200mAh Ni-Cd Battery Pack (P/N: KNB-25A)
Medium: M450 ($\sigma$ = 0.90 mho/m; $\varepsilon_r$ = 56.6; $\rho$ = 1000 kg/m$^3$)

- Probe: ET3DV6 - SN1590; ConvF(7.7, 7.7, 7.7); Calibrated: 24/05/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn370; Calibrated: 14/05/2004
- Phantom: Planar; Type: Plexiglas; Serial: 161
- Measurement SW: DASY4, V4.3 Build 22; Postprocessing SW: SEMCAD, V1.8 Build 127

**Body-Worn - 0.9 cm Belt-Clip Separation Distance - Mid Channel/Area Scan (8x19x1):**
Measurement grid: dx=15mm, dy=15mm

**Body-Worn - 0.9 cm Belt-Clip Separation Distance - Mid Channel/Zoom Scan (5x5x7)/Cube 0:**
Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 102.6 V/m; Power Drift = -0.274 dB
Peak SAR (extrapolated) = 14 W/kg
**SAR(1 g) = 9.25 mW/g; SAR(10 g) = 6.6 mW/g**



Date Tested: 10/22/04

## Body-Worn SAR - Ni-MH Battery (P/N: KNB-26N) - Whip Antenna (P/N: KRA-27M)

**DUT: Kenwood Model: TK-3170-K4; Type: Portable UHF PTT Radio Transceiver; Serial: 1S-U1-21**

**Body-Worn Accessories: Headset (P/N: KHS-21), Belt-Clip (P/N: KBH-12)**

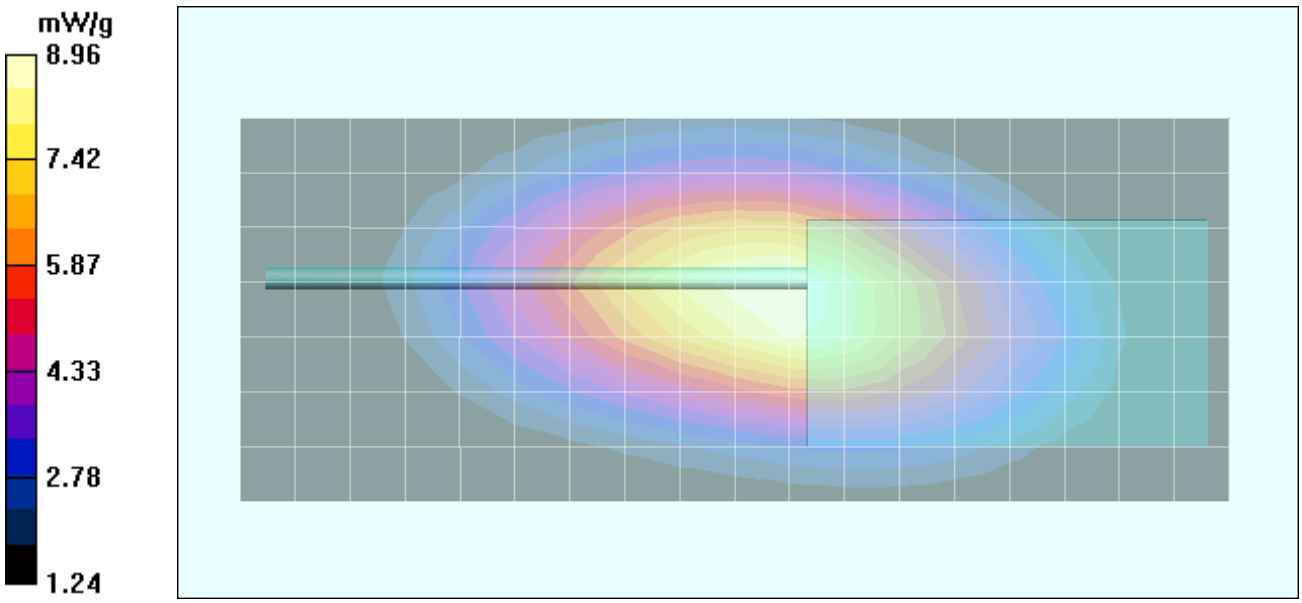
Ambient Temp: 23.9 °C; Fluid Temp: 23.1 °C; Barometric Pressure: 101.3 kPa; Humidity: 33%

Communication System: FM UHF
Frequency: 470.05 MHz; Duty Cycle: 1:1
RF Output Power: 36.36 dBm (Conducted)
7.2V 2000mAh Ni-MH Battery Pack (P/N: KNB-26N)
Medium: M450 ($\sigma$ = 0.90 mho/m; $\varepsilon_r$ = 56.6; $\rho$ = 1000 kg/m$^3$)

- Probe: ET3DV6 - SN1590; ConvF(7.7, 7.7, 7.7); Calibrated: 24/05/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn370; Calibrated: 14/05/2004
- Phantom: Planar; Type: Plexiglas; Serial: 161
- Measurement SW: DASY4, V4.3 Build 22; Postprocessing SW: SEMCAD, V1.8 Build 127

**Body-Worn - 0.9 cm Belt-Clip Separation Distance - Mid Channel/Area Scan (8x19x1):**
Measurement grid: dx=15mm, dy=15mm

**Body-Worn - 0.9 cm Belt-Clip Separation Distance - Mid Channel/Zoom Scan (5x5x7)/Cube 0:**
Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 99.3 V/m; Power Drift = -0.231 dB
Peak SAR (extrapolated) = 13.1 W/kg
**SAR(1 g) = 8.62 mW/g; SAR(10 g) = 6.17 mW/g**



Date Tested: 10/22/04

## Body-Worn SAR - Ni-Cd Battery (P/N: KNB-25A) - Whip Antenna (P/N: KRA-27M)

**DUT: Kenwood Model: TK-3170-K4; Type: Portable UHF PTT Radio Transceiver; Serial: 1S-U1-21**

**Body-Worn Accessories: Headset (P/N: KHS-21), Belt-Clip (P/N: KBH-12)**

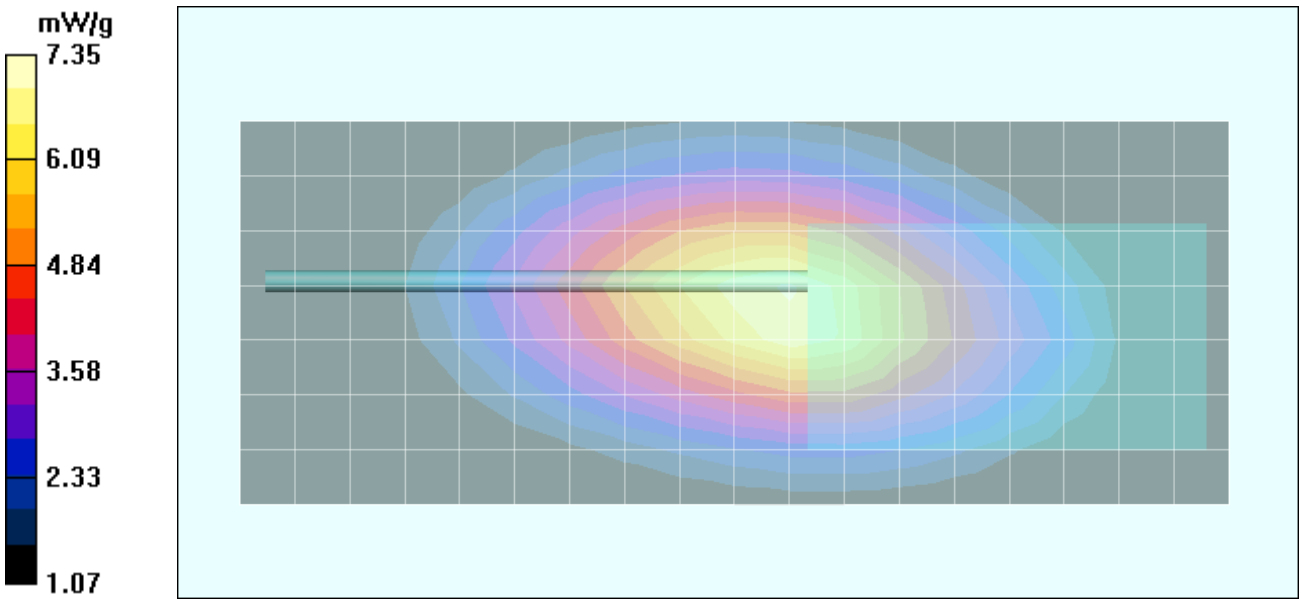
Ambient Temp: 23.9 °C; Fluid Temp: 23.1 °C; Barometric Pressure: 101.3 kPa; Humidity: 33%

Communication System: FM UHF
Frequency: 450.05 MHz; Duty Cycle: 1:1
RF Output Power: 36.47 dBm (Conducted)
7.2V 1200mAh Ni-Cd Battery Pack (P/N: KNB-25A)
Medium: M450 ($\sigma$ = 0.90 mho/m; $\varepsilon_r$ = 56.6; $\rho$ = 1000 kg/m$^3$)

- Probe: ET3DV6 - SN1590; ConvF(7.7, 7.7, 7.7); Calibrated: 24/05/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn370; Calibrated: 14/05/2004
- Phantom: Planar; Type: Plexiglas; Serial: 161
- Measurement SW: DASY4, V4.3 Build 22; Postprocessing SW: SEMCAD, V1.8 Build 127

**Body-Worn - 0.9 cm Belt-Clip Separation Distance - Low Channel/Area Scan (8x19x1):**
Measurement grid: dx=15mm, dy=15mm

**Body-Worn - 0.9 cm Belt-Clip Separation Distance - Low Channel/Zoom Scan (5x5x7)/Cube 0:**
Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 88 V/m; Power Drift = -0.0683 dB
Peak SAR (extrapolated) = 10.6 W/kg
**SAR(1 g) = 7.03 mW/g; SAR(10 g) = 5.02 mW/g**



Date Tested: 10/22/04

## Body-Worn SAR - Ni-Cd Battery (P/N: KNB-25A) - Whip Antenna (P/N: KRA-27M)

**DUT: Kenwood Model: TK-3170-K4; Type: Portable UHF PTT Radio Transceiver; Serial: 1S-U1-21**

**Body-Worn Accessories: Headset (P/N: KHS-21), Belt-Clip (P/N: KBH-12)**

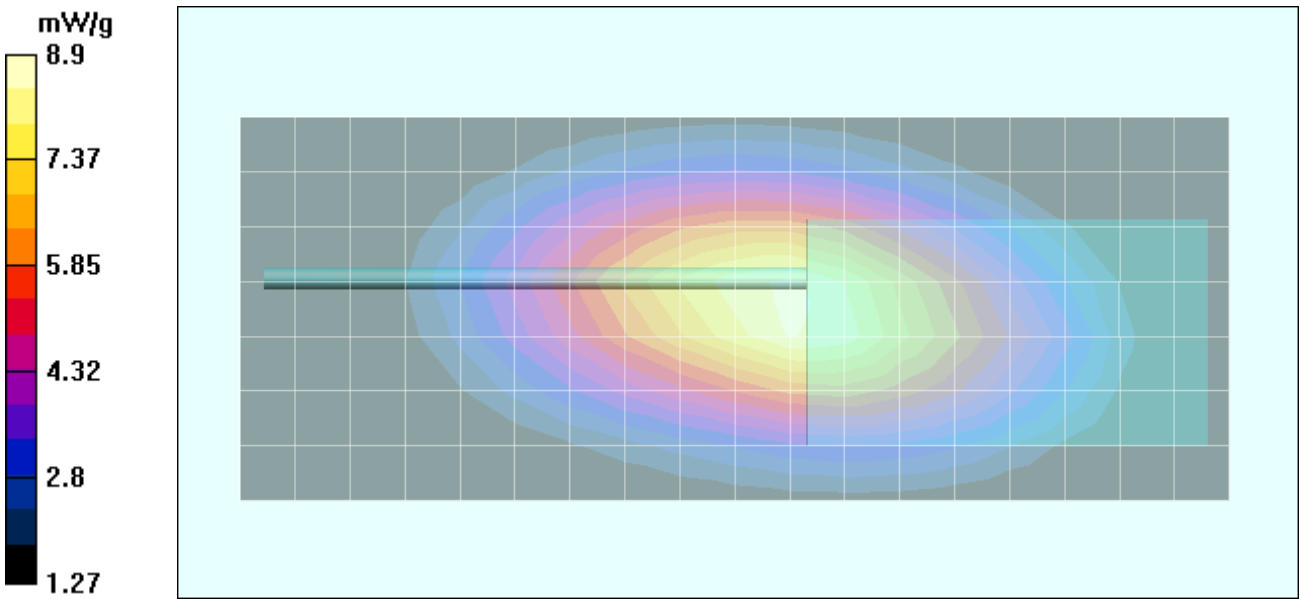
Ambient Temp: 23.9 °C; Fluid Temp: 23.1 °C; Barometric Pressure: 101.3 kPa; Humidity: 33%

Communication System: FM UHF
Frequency: 489.95 MHz; Duty Cycle: 1:1
RF Output Power: 36.37 dBm (Conducted)
7.2V 1200mAh Ni-Cd Battery Pack (P/N: KNB-25A)
Medium: M450 ($\sigma$ = 0.90 mho/m; $\varepsilon_r$ = 56.6; $\rho$ = 1000 kg/m$^3$)

- Probe: ET3DV6 - SN1590; ConvF(7.7, 7.7, 7.7); Calibrated: 24/05/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn370; Calibrated: 14/05/2004
- Phantom: Planar; Type: Plexiglas; Serial: 161
- Measurement SW: DASY4, V4.3 Build 22; Postprocessing SW: SEMCAD, V1.8 Build 127

**Body-Worn - 0.9 cm Belt-Clip Separation Distance - High Channel/Area Scan (8x19x1):**
Measurement grid: dx=15mm, dy=15mm

**Body-Worn - 0.9 cm Belt-Clip Separation Distance - High Channel/Zoom Scan (5x5x7)/Cube 0:**
Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 100.3 V/m; Power Drift = -0.453 dB
Peak SAR (extrapolated) = 12.9 W/kg
**SAR(1 g) = 8.51 mW/g; SAR(10 g) = 6.07 mW/g**



Date Tested: 10/22/04

## Body-Worn SAR - Ni-Cd Battery (P/N: KNB-25A) - Whip Antenna (P/N: KRA-27M2)

**DUT: Kenwood Model: TK-3170-K4; Type: Portable UHF PTT Radio Transceiver; Serial: 1S-U1-21**

**Body-Worn Accessories: Headset (P/N: KHS-21), Belt-Clip (P/N: KBH-12)**

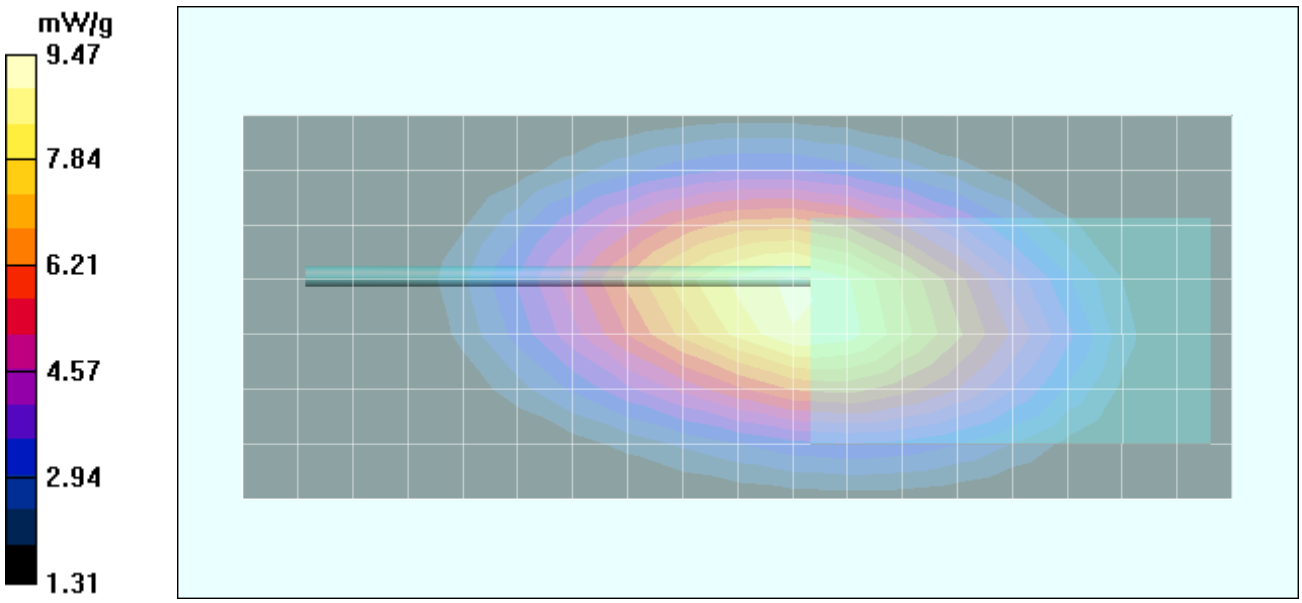
Ambient Temp: 23.9 °C; Fluid Temp: 23.1 °C; Barometric Pressure: 101.3 kPa; Humidity: 33%

Communication System: FM UHF
Frequency: 489.95 MHz; Duty Cycle: 1:1
RF Output Power: 36.33 dBm (Conducted)
7.2V 1200mAh Ni-Cd Battery Pack (P/N: KNB-25A)
Medium: M450 ($\sigma$ = 0.90 mho/m; $\varepsilon_r$ = 56.6; $\rho$ = 1000 kg/m$^3$)

- Probe: ET3DV6 - SN1590; ConvF(7.7, 7.7, 7.7); Calibrated: 24/05/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn370; Calibrated: 14/05/2004
- Phantom: Planar; Type: Plexiglas; Serial: 161
- Measurement SW: DASY4, V4.3 Build 22; Postprocessing SW: SEMCAD, V1.8 Build 127

**Body-Worn - 0.9 cm Belt-Clip Separation Distance - High Channel/Area Scan (8x19x1):**
Measurement grid: dx=15mm, dy=15mm

**Body-Worn - 0.9 cm Belt-Clip Separation Distance - High Channel/Zoom Scan (5x5x7)/Cube 0:**
Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 103.5 V/m; Power Drift = -0.448 dB
Peak SAR (extrapolated) = 13.8 W/kg
**SAR(1 g) = 9.06 mW/g; SAR(10 g) = 6.44 mW/g**



Date Tested: 10/22/04

## Body-Worn SAR - Duracell Alkaline Battery Pack (P/N: KBP-5) - Stubby Antenna (P/N: KRA-23M)

**DUT: Kenwood Model: TK-3170-K4; Type: Portable UHF PTT Radio Transceiver; Serial: 1S-U1-21**

**Body-Worn Accessories: Headset (P/N: KHS-21), Belt-Clip (P/N: KBH-12)**

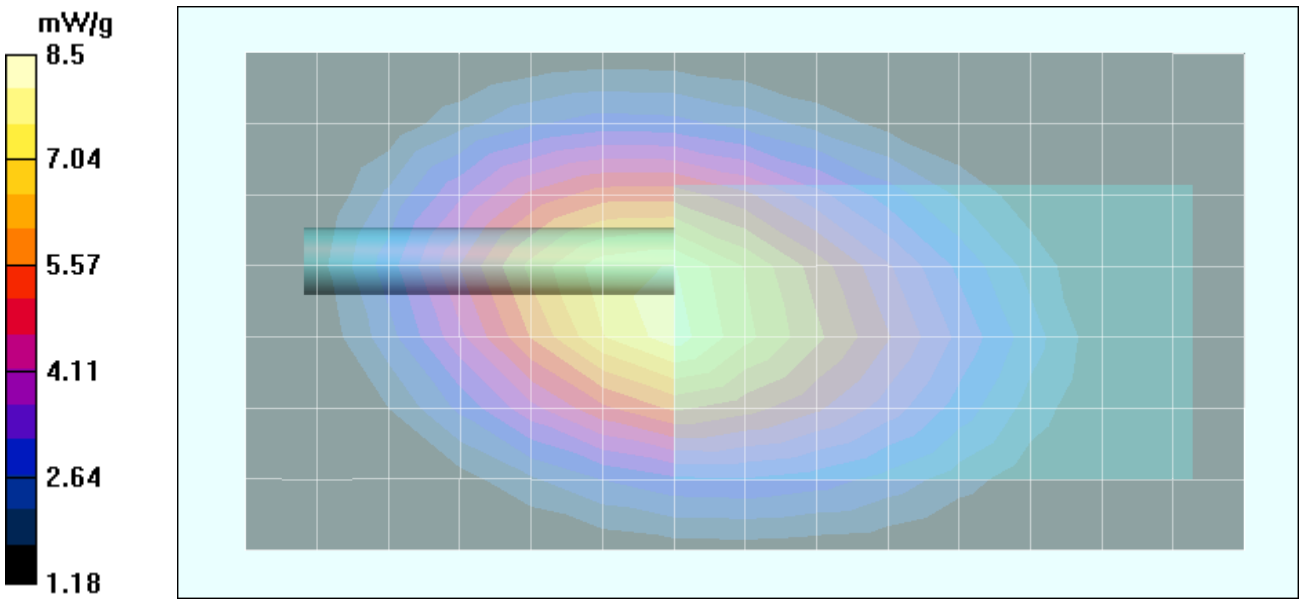
Ambient Temp: 23.9 °C; Fluid Temp: 23.1 °C; Barometric Pressure: 101.3 kPa; Humidity: 33%

Communication System: FM UHF
Frequency: 470.05 MHz; Duty Cycle: 1:1
RF Output Power: 36.24 dBm (Conducted)
9V AA Alkaline Duracell ProCell Battery Pack (Battery Case P/N: KBP-5)
Medium: M450 ($\sigma$ = 0.90 mho/m; $\varepsilon_r$ = 56.6; $\rho$ = 1000 kg/m$^3$)

- Probe: ET3DV6 - SN1590; ConvF(7.7, 7.7, 7.7); Calibrated: 24/05/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn370; Calibrated: 14/05/2004
- Phantom: Planar; Type: Plexiglas; Serial: 161
- Measurement SW: DASY4, V4.3 Build 22; Postprocessing SW: SEMCAD, V1.8 Build 127

**Body-Worn - 1.0 cm Belt-Clip Separation Distance - Mid Channel/Area Scan (8x15x1):**
Measurement grid: dx=15mm, dy=15mm

**Body-Worn - 1.0 cm Belt-Clip Separation Distance - Mid Channel/Zoom Scan (5x5x7)/Cube 0:**
Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 103.1 V/m; Power Drift = -1.01 dB
Peak SAR (extrapolated) = 12.4 W/kg
**SAR(1 g) = 8.09 mW/g; SAR(10 g) = 5.73 mW/g**



Date Tested: 10/22/04

## Body-Worn SAR - Li-ion Battery (P/N: KNB-35L) - Stubby Antenna (P/N: KRA-23M)

**DUT: Kenwood Model: TK-3170-K4; Type: Portable UHF PTT Radio Transceiver; Serial: 1S-U1-21**

**Body-Worn Accessories: Headset (P/N: KHS-21), Belt-Clip (P/N: KBH-12)**

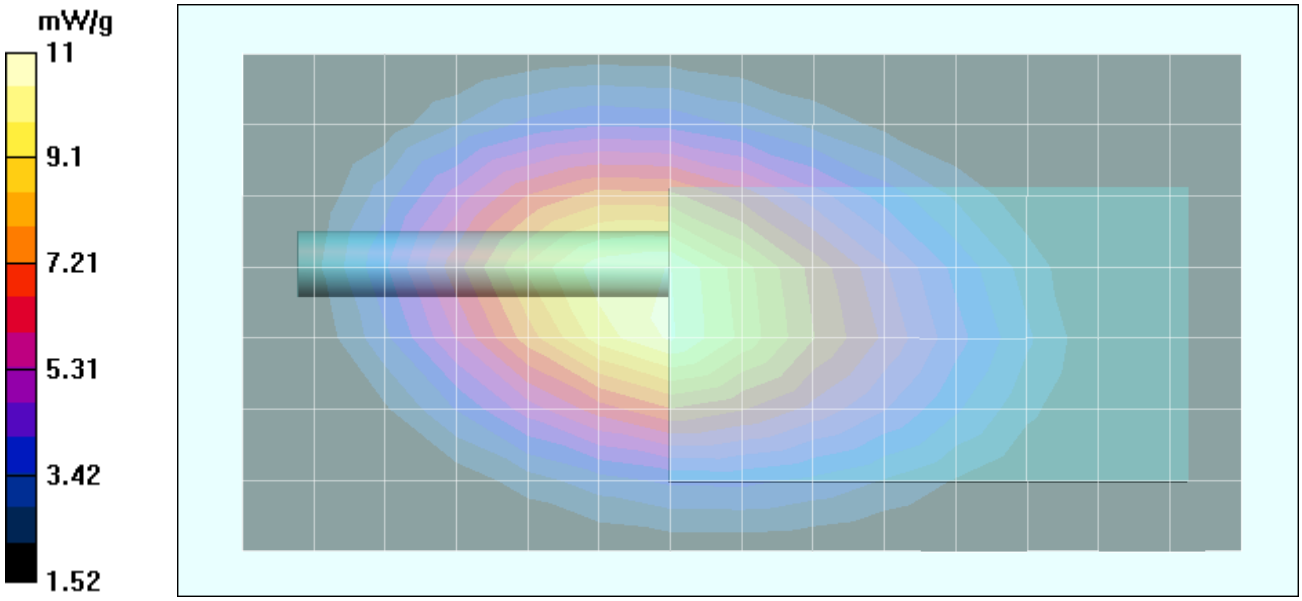
Ambient Temp: 23.9 °C; Fluid Temp: 23.1 °C; Barometric Pressure: 101.3 kPa; Humidity: 33%

Communication System: FM UHF
Frequency: 470.05 MHz; Duty Cycle: 1:1
RF Output Power: 36.37 dBm (Conducted)
7.4V 1400mAh Li-Ion Battery Pack (P/N: KNB-35L)
Medium: M450 ($\sigma$ = 0.90 mho/m; $\varepsilon_r$ = 56.6; $\rho$ = 1000 kg/m$^3$)

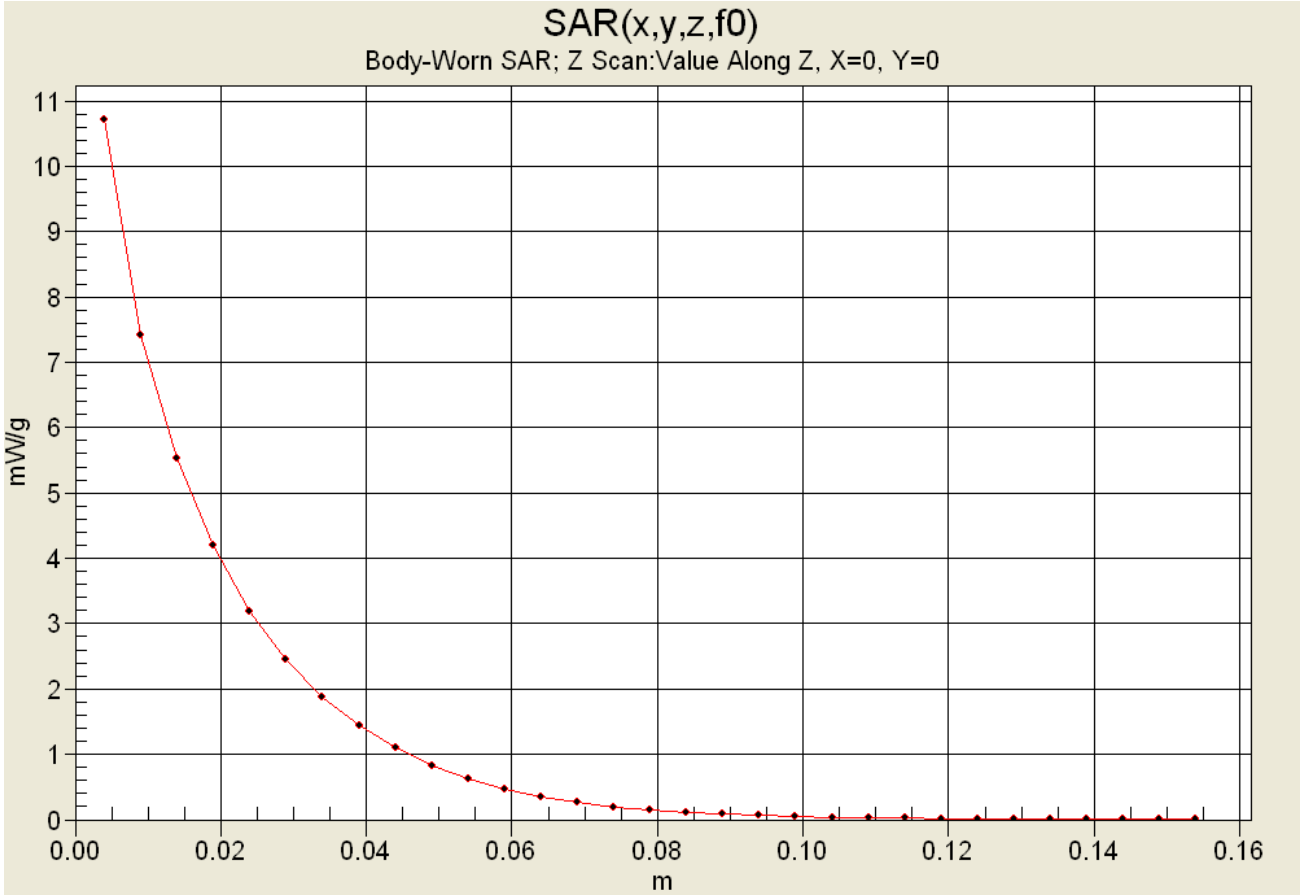
- Probe: ET3DV6 - SN1590; ConvF(7.7, 7.7, 7.7); Calibrated: 24/05/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn370; Calibrated: 14/05/2004
- Phantom: Planar; Type: Plexiglas; Serial: 161
- Measurement SW: DASY4, V4.3 Build 22; Postprocessing SW: SEMCAD, V1.8 Build 127

**Body-Worn - 1.4 cm Belt-Clip Separation Distance - Mid Channel/Area Scan (8x15x1):**
Measurement grid: dx=15mm, dy=15mm

**Body-Worn - 1.4 cm Belt-Clip Separation Distance - Mid Channel/Zoom Scan (5x5x7)/Cube 0:**
Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 111.3 V/m; Power Drift = -0.293 dB
Peak SAR (extrapolated) = 16.3 W/kg
**SAR(1 g) = 10.5 mW/g; SAR(10 g) = 7.4 mW/g**



## Z-Axis Scan


SAR(x,y,z,f0)
Body-Worn SAR; Z Scan:Value Along Z, X=0, Y=0
mW/g
m
0
1
2
3
4
5
6
7
8
9
10
11
0.00
0.02
0.04
0.06
0.08
0.10
0.12
0.14
0.16

Date Tested: 10/22/04

## Body-Worn SAR - Li-ion Battery (P/N: KNB-24L) - Stubby Antenna (P/N: KRA-23M)

**DUT: Kenwood Model: TK-3170-K4; Type: Portable UHF PTT Radio Transceiver; Serial: 1S-U1-21**

**Body-Worn Accessories: Headset (P/N: KHS-21), Belt-Clip (P/N: KBH-12)**

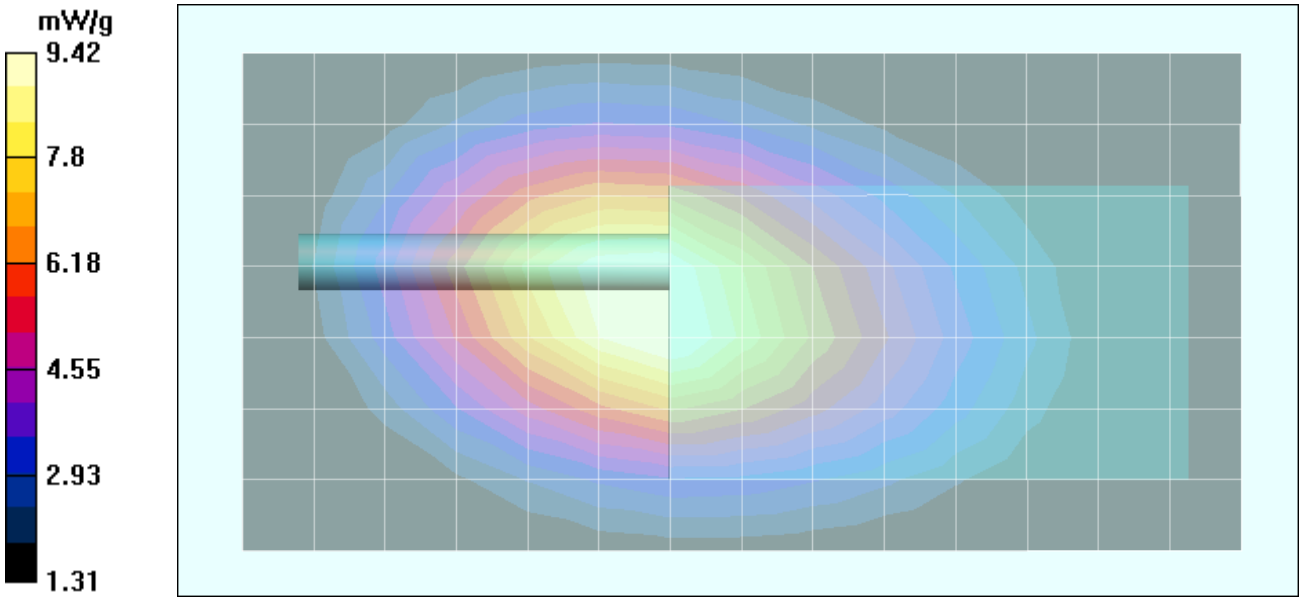
Ambient Temp: 23.9 °C; Fluid Temp: 23.1 °C; Barometric Pressure: 101.3 kPa; Humidity: 33%

Communication System: FM UHF
Frequency: 470.05 MHz; Duty Cycle: 1:1
RF Output Power: 36.34 dBm (Conducted)
7.4V 1400mAh Li-Ion Battery Pack (P/N: KNB-24L)
Medium: M450 ($\sigma$ = 0.90 mho/m; $\varepsilon_r$ = 56.6; $\rho$ = 1000 kg/m$^3$)

- Probe: ET3DV6 - SN1590; ConvF(7.7, 7.7, 7.7); Calibrated: 24/05/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn370; Calibrated: 14/05/2004
- Phantom: Planar; Type: Plexiglas; Serial: 161
- Measurement SW: DASY4, V4.3 Build 22; Postprocessing SW: SEMCAD, V1.8 Build 127

**Body-Worn - 1.4 cm Belt-Clip Separation Distance - Mid Channel/Area Scan (8x15x1):**
Measurement grid: dx=15mm, dy=15mm

**Body-Worn - 1.4 cm Belt-Clip Separation Distance - Mid Channel/Zoom Scan (5x5x7)/Cube 0:**
Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 104.9 V/m; Power Drift = -0.468 dB
Peak SAR (extrapolated) = 13.9 W/kg
**SAR(1 g) = 9.00 mW/g; SAR(10 g) = 6.35 mW/g**



Date Tested: 10/22/04

## Body-Worn SAR - Ni-Cd Battery (P/N: KNB-25A) - Stubby Antenna (P/N: KRA-23M)

**DUT: Kenwood Model: TK-3170-K4; Type: Portable UHF PTT Radio Transceiver; Serial: 1S-U1-21**

**Body-Worn Accessories: Headset (P/N: KHS-21), Belt-Clip (P/N: KBH-12)**

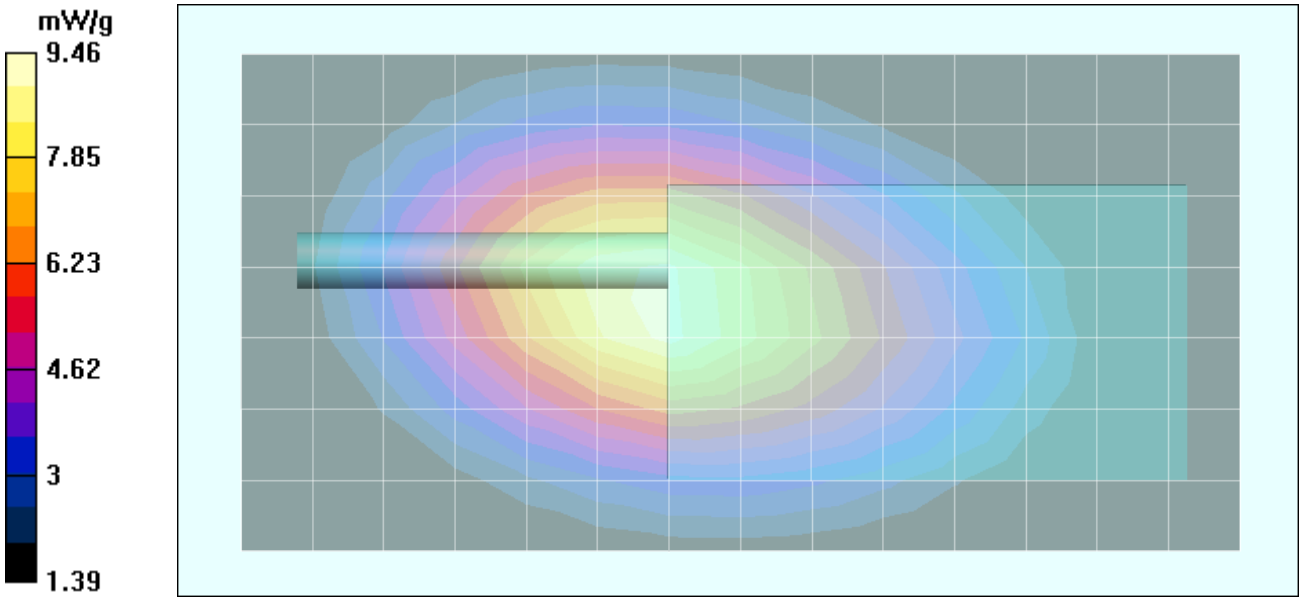
Ambient Temp: 23.9 °C; Fluid Temp: 23.1 °C; Barometric Pressure: 101.3 kPa; Humidity: 33%

Communication System: FM UHF
Frequency: 470.05 MHz; Duty Cycle: 1:1
RF Output Power: 36.29 dBm (Conducted)
7.2V 1200mAh Ni-Cd Battery Pack (P/N: KNB-25A)
Medium: M450 ($\sigma$ = 0.90 mho/m; $\varepsilon_r$ = 56.6; $\rho$ = 1000 kg/m$^3$)

- Probe: ET3DV6 - SN1590; ConvF(7.7, 7.7, 7.7); Calibrated: 24/05/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn370; Calibrated: 14/05/2004
- Phantom: Planar; Type: Plexiglas; Serial: 161
- Measurement SW: DASY4, V4.3 Build 22; Postprocessing SW: SEMCAD, V1.8 Build 127

**Body-Worn - 0.9 cm Belt-Clip Separation Distance - Mid Channel/Area Scan (8x15x1):**
Measurement grid: dx=15mm, dy=15mm

**Body-Worn - 0.9 cm Belt-Clip Separation Distance - Mid Channel/Zoom Scan (5x5x7)/Cube 0:**
Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 104.0 V/m; Power Drift = -0.453 dB
Peak SAR (extrapolated) = 13.8 W/kg
**SAR(1 g) = 9.04 mW/g; SAR(10 g) = 6.39 mW/g**



Date Tested: 10/22/04

## Body-Worn SAR - Ni-MH Battery (P/N: KNB-26N) - Stubby Antenna (P/N: KRA-23M)

**DUT: Kenwood Model: TK-3170-K4; Type: Portable UHF PTT Radio Transceiver; Serial: 1S-U1-21**

**Body-Worn Accessories: Headset (P/N: KHS-21), Belt-Clip (P/N: KBH-12)**

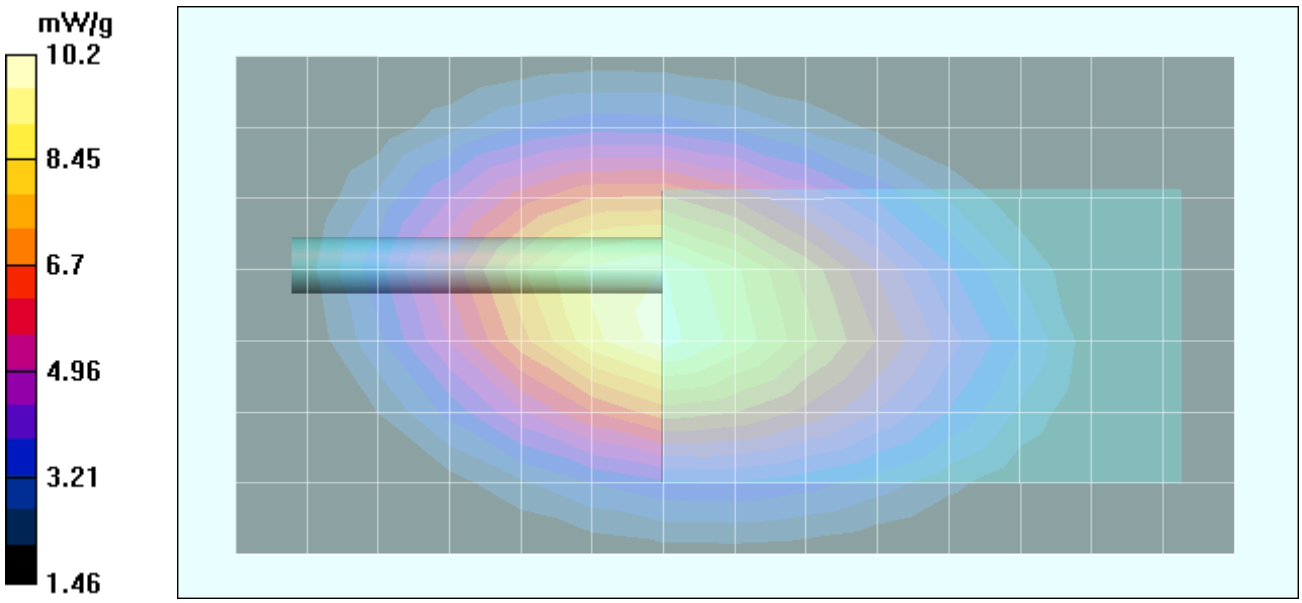
Ambient Temp: 23.9 °C; Fluid Temp: 23.1 °C; Barometric Pressure: 101.3 kPa; Humidity: 33%

Communication System: FM UHF
Frequency: 470.05 MHz; Duty Cycle: 1:1
RF Output Power: 36.28 dBm (Conducted)
7.2V 2000mAh Ni-MH Battery Pack (P/N: KNB-26N)
Medium: M450 ($\sigma$ = 0.90 mho/m; $\varepsilon_r$ = 56.6; $\rho$ = 1000 kg/m$^3$)

- Probe: ET3DV6 - SN1590; ConvF(7.7, 7.7, 7.7); Calibrated: 24/05/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn370; Calibrated: 14/05/2004
- Phantom: Planar; Type: Plexiglas; Serial: 161
- Measurement SW: DASY4, V4.3 Build 22; Postprocessing SW: SEMCAD, V1.8 Build 127

**Body-Worn - 0.9 cm Belt-Clip Separation Distance - Mid Channel/Area Scan (8x15x1):**
Measurement grid: dx=15mm, dy=15mm

**Body-Worn - 0.9 cm Belt-Clip Separation Distance - Mid Channel/Zoom Scan (5x5x7)/Cube 0:**
Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 109.2 V/m; Power Drift = -0.597 dB
Peak SAR (extrapolated) = 14.8 W/kg
**SAR(1 g) = 9.72 mW/g; SAR(10 g) = 6.9 mW/g**



Date Tested: 10/22/04

## Body-Worn SAR - Li-ion Battery (P/N: KNB-35L) - Stubby Antenna (P/N: KRA-23M)

**DUT: Kenwood Model: TK-3170-K4; Type: Portable UHF PTT Radio Transceiver; Serial: 1S-U1-21**

**Body-Worn Accessories: Headset (P/N: KHS-21), Belt-Clip (P/N: KBH-12)**

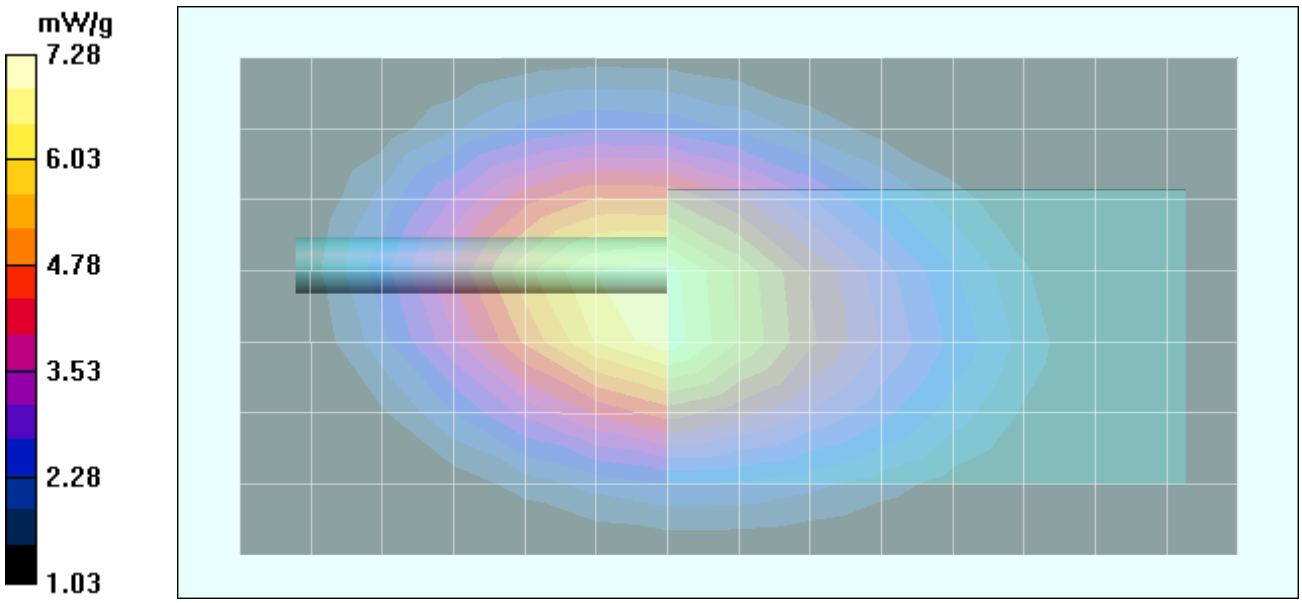
Ambient Temp: 23.9 °C; Fluid Temp: 23.1 °C; Barometric Pressure: 101.3 kPa; Humidity: 33%

Communication System: FM UHF
Frequency: 450.05 MHz; Duty Cycle: 1:1
RF Output Power: 36.43 dBm (Conducted)
7.4V 1400mAh Li-Ion Battery Pack (P/N: KNB-35L)
Medium: M450 ($\sigma$ = 0.90 mho/m; $\varepsilon_r$ = 56.6; $\rho$ = 1000 kg/m$^3$)

- Probe: ET3DV6 - SN1590; ConvF(7.7, 7.7, 7.7); Calibrated: 24/05/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn370; Calibrated: 14/05/2004
- Phantom: Planar; Type: Plexiglas; Serial: 161
- Measurement SW: DASY4, V4.3 Build 22; Postprocessing SW: SEMCAD, V1.8 Build 127

**Body-Worn - 1.4 cm Belt-Clip Separation Distance - Low Channel/Area Scan (8x15x1):**
Measurement grid: dx=15mm, dy=15mm

**Body-Worn - 1.4 cm Belt-Clip Separation Distance - Low Channel/Zoom Scan (5x5x7)/Cube 0:**
Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 88.3 V/m; Power Drift = 0.0469 dB
Peak SAR (extrapolated) = 10.8 W/kg
**SAR(1 g) = 6.96 mW/g; SAR(10 g) = 4.89 mW/g**



Date Tested: 10/22/04

## Body-Worn SAR - Li-ion Battery (P/N: KNB-35L) - Stubby Antenna (P/N: KRA-23M)

**DUT: Kenwood Model: TK-3170-K4; Type: Portable UHF PTT Radio Transceiver; Serial: 1S-U1-21**

**Body-Worn Accessories: Headset (P/N: KHS-21), Belt-Clip (P/N: KBH-12)**

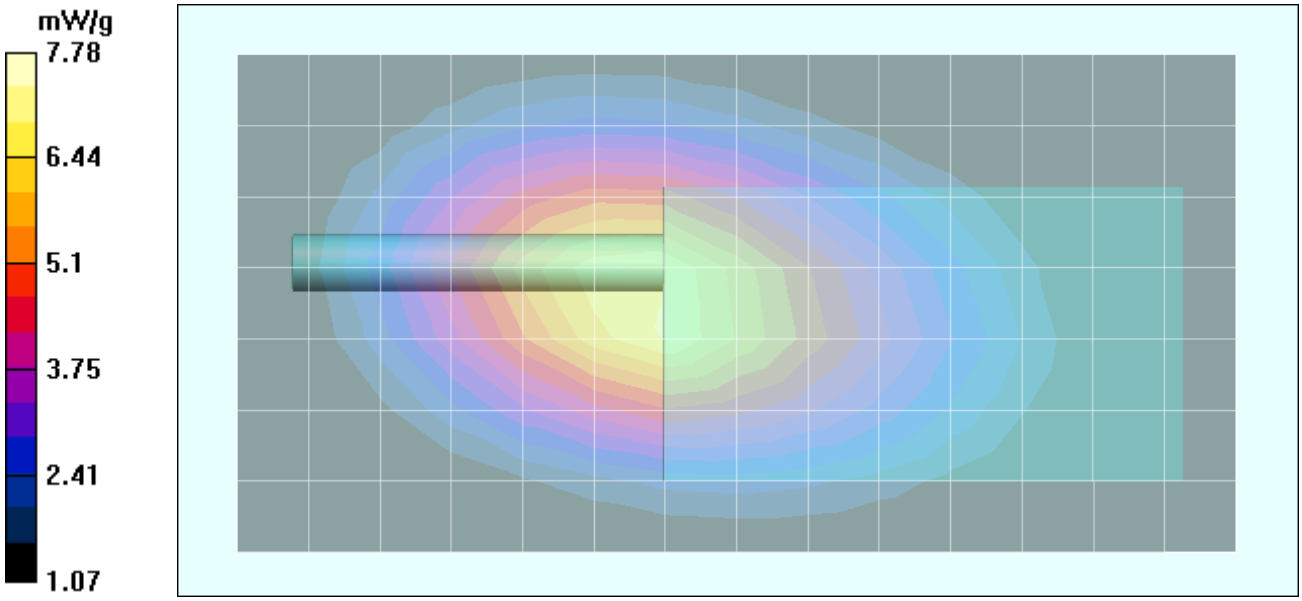
Ambient Temp: 23.9 °C; Fluid Temp: 23.1 °C; Barometric Pressure: 101.3 kPa; Humidity: 33%

Communication System: FM UHF
Frequency: 489.95 MHz; Duty Cycle: 1:1
RF Output Power: 36.18 dBm (Conducted)
7.4V 1400mAh Li-Ion Battery Pack (P/N: KNB-35L)
Medium: M450 ($\sigma$ = 0.90 mho/m; $\varepsilon_r$ = 56.6; $\rho$ = 1000 kg/m$^3$)

- Probe: ET3DV6 - SN1590; ConvF(7.7, 7.7, 7.7); Calibrated: 24/05/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn370; Calibrated: 14/05/2004
- Phantom: Planar; Type: Plexiglas; Serial: 161
- Measurement SW: DASY4, V4.3 Build 22; Postprocessing SW: SEMCAD, V1.8 Build 127

**Body-Worn - 1.4 cm Belt-Clip Separation Distance - High Channel/Area Scan (8x15x1):**
Measurement grid: dx=15mm, dy=15mm

**Body-Worn - 1.4 cm Belt-Clip Separation Distance - High Channel/Zoom Scan (5x5x7)/Cube 0:**
Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 92.7 V/m; Power Drift = -0.323 dB
Peak SAR (extrapolated) = 11.4 W/kg
**SAR(1 g) = 7.40 mW/g; SAR(10 g) = 5.18 mW/g**



Date Tested: 10/22/04

## Body-Worn SAR - Li-ion Battery (P/N: KNB-35L) - Stubby Antenna (P/N: KRA-23M2)

**DUT: Kenwood Model: TK-3170-K4; Type: Portable UHF PTT Radio Transceiver; Serial: 1S-U1-21**

**Body-Worn Accessories: Headset (P/N: KHS-21), Belt-Clip (P/N: KBH-12)**

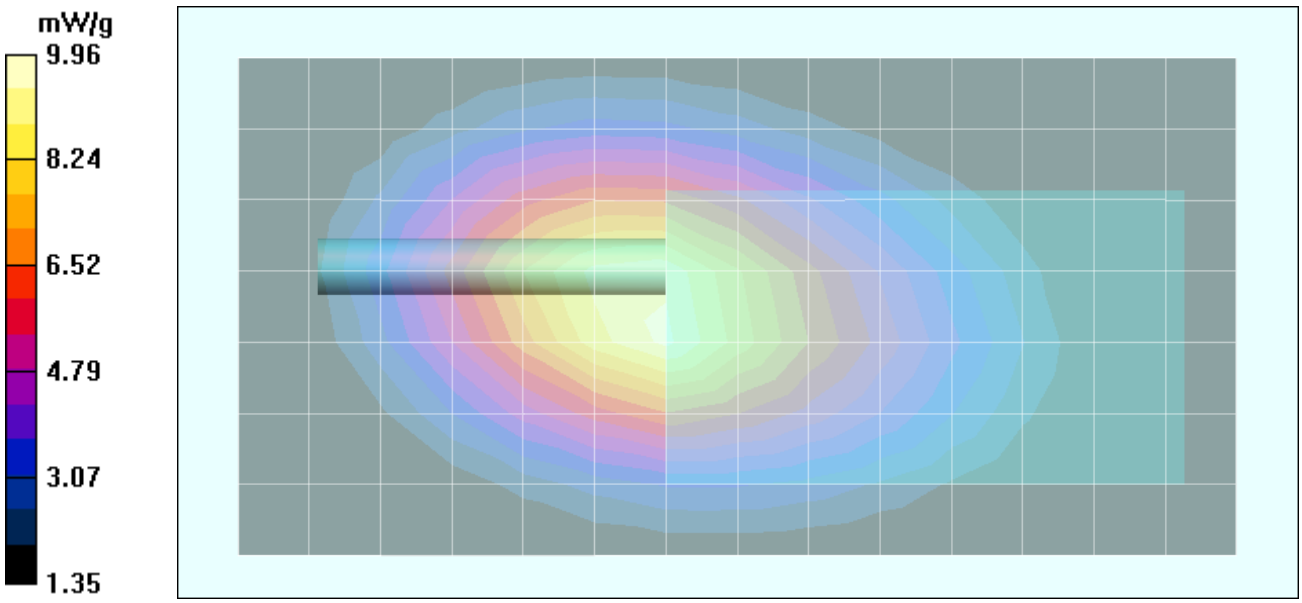
Ambient Temp: 23.9 °C; Fluid Temp: 23.1 °C; Barometric Pressure: 101.3 kPa; Humidity: 33%

Communication System: FM UHF
Frequency: 489.95 MHz; Duty Cycle: 1:1
RF Output Power: 36.21 dBm (Conducted)
7.4V 1400mAh Li-Ion Battery Pack (P/N: KNB-35L)
Medium: M450 ($\sigma$ = 0.90 mho/m; $\varepsilon_r$ = 56.6; $\rho$ = 1000 kg/m$^3$)

- Probe: ET3DV6 - SN1590; ConvF(7.7, 7.7, 7.7); Calibrated: 24/05/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn370; Calibrated: 14/05/2004
- Phantom: Planar; Type: Plexiglas; Serial: 161
- Measurement SW: DASY4, V4.3 Build 22; Postprocessing SW: SEMCAD, V1.8 Build 127

**Body-Worn - 1.4 cm Belt-Clip Separation Distance - High Channel/Area Scan (8x15x1):**
Measurement grid: dx=15mm, dy=15mm

**Body-Worn - 1.4 cm Belt-Clip Separation Distance - High Channel/Zoom Scan (5x5x7)/Cube 0:**
Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 105.8 V/m; Power Drift = -0.311 dB
Peak SAR (extrapolated) = 14.7 W/kg
**SAR(1 g) = 9.54 mW/g; SAR(10 g) = 6.67 mW/g**



Date Tested: 10/22/04

## Body-Worn SAR - Duracell Alkaline Battery Pack (P/N: KBP-5) - Stubby Antenna (P/N: KRA-23M)

**DUT: Kenwood Model: TK-3170-K4; Type: Portable UHF PTT Radio Transceiver; Serial: 1S-U1-21**

**Body-Worn Accessories: Speaker-Microphone (P/N: KMC-17), Belt-Clip (P/N: KBH-12)**

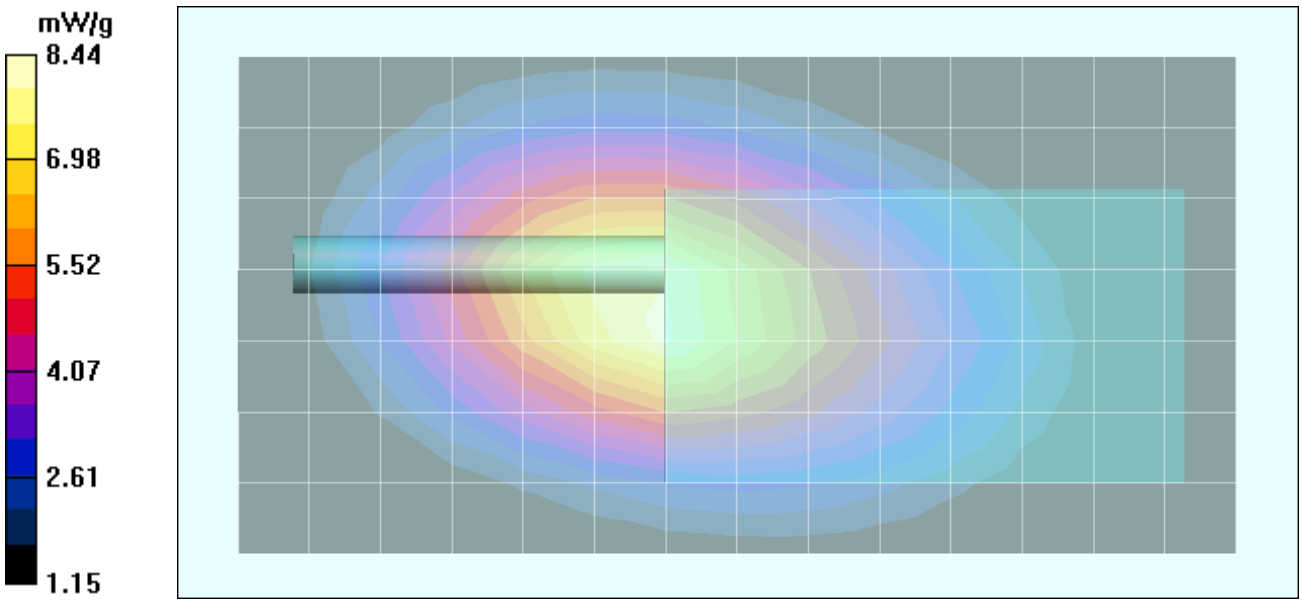
Ambient Temp: 23.9 °C; Fluid Temp: 23.1 °C; Barometric Pressure: 101.3 kPa; Humidity: 33%

Communication System: FM UHF
Frequency: 470.05 MHz; Duty Cycle: 1:1
RF Output Power: 36.22 dBm (Conducted)
9V AA Alkaline Duracell ProCell Battery Pack (Battery Case P/N: KBP-5)
Medium: M450 ($\sigma$ = 0.90 mho/m; $\varepsilon_r$ = 56.6; $\rho$ = 1000 kg/m$^3$)

- Probe: ET3DV6 - SN1590; ConvF(7.7, 7.7, 7.7); Calibrated: 24/05/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn370; Calibrated: 14/05/2004
- Phantom: Planar; Type: Plexiglas; Serial: 161
- Measurement SW: DASY4, V4.3 Build 22; Postprocessing SW: SEMCAD, V1.8 Build 127

**Body-Worn - 1.0 cm Belt-Clip Separation Distance - Mid Channel/Area Scan (8x15x1):**
Measurement grid: dx=15mm, dy=15mm

**Body-Worn - 1.0 cm Belt-Clip Separation Distance - Mid Channel/Zoom Scan (5x5x7)/Cube 0:**
Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 104.3 V/m; Power Drift = -1.18 dB
Peak SAR (extrapolated) = 12.4 W/kg
**SAR(1 g) = 8.08 mW/g; SAR(10 g) = 5.7 mW/g**



Date Tested: 10/22/04

## Body-Worn SAR - Li-ion Battery (P/N: KNB-35L) - Stubby Antenna (P/N: KRA-23M)

**DUT: Kenwood Model: TK-3170-K4; Type: Portable UHF PTT Radio Transceiver; Serial: 1S-U1-21**

**Body-Worn Accessories: Speaker-Microphone (P/N: KMC-17), Belt-Clip (P/N: KBH-12)**

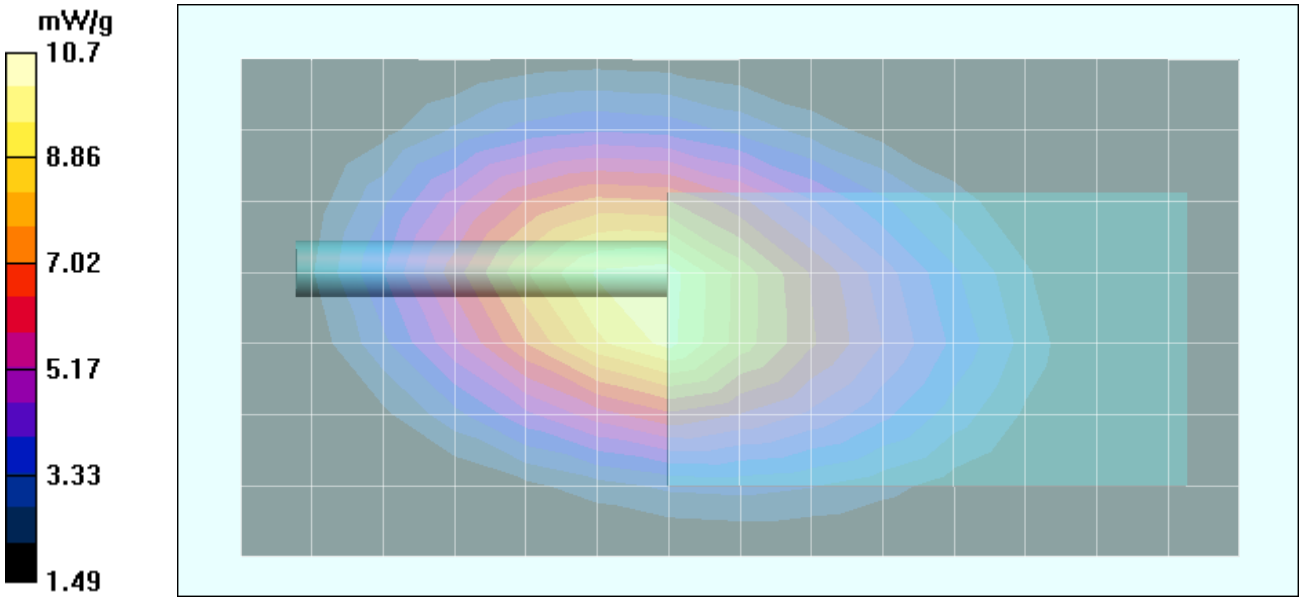
Ambient Temp: 23.9 °C; Fluid Temp: 23.1 °C; Barometric Pressure: 101.3 kPa; Humidity: 33%

Communication System: FM UHF
Frequency: 470.05 MHz; Duty Cycle: 1:1
RF Output Power: 36.31 dBm (Conducted)
7.4V 1400mAh Li-Ion Battery Pack (P/N: KNB-35L)
Medium: M450 ($\sigma$ = 0.90 mho/m; $\varepsilon_r$ = 56.6; $\rho$ = 1000 kg/m$^3$)

- Probe: ET3DV6 - SN1590; ConvF(7.7, 7.7, 7.7); Calibrated: 24/05/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn370; Calibrated: 14/05/2004
- Phantom: Planar; Type: Plexiglas; Serial: 161
- Measurement SW: DASY4, V4.3 Build 22; Postprocessing SW: SEMCAD, V1.8 Build 127

**Body-Worn - 1.4 cm Belt-Clip Separation Distance - Mid Channel/Area Scan (8x15x1):**
Measurement grid: dx=15mm, dy=15mm

**Body-Worn - 1.4 cm Belt-Clip Separation Distance - Mid Channel/Zoom Scan (5x5x7)/Cube 0:**
Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 109.9 V/m; Power Drift = -0.328 dB
Peak SAR (extrapolated) = 15.8 W/kg
**SAR(1 g) = 10.3 mW/g; SAR(10 g) = 7.21 mW/g**



Date Tested: 10/22/04

## Body-Worn SAR - Li-ion Battery (P/N: KNB-24L) - Stubby Antenna (P/N: KRA-23M)

**DUT: Kenwood Model: TK-3170-K4; Type: Portable UHF PTT Radio Transceiver; Serial: 1S-U1-21**

**Body-Worn Accessories: Speaker-Microphone (P/N: KMC-17), Belt-Clip (P/N: KBH-12)**

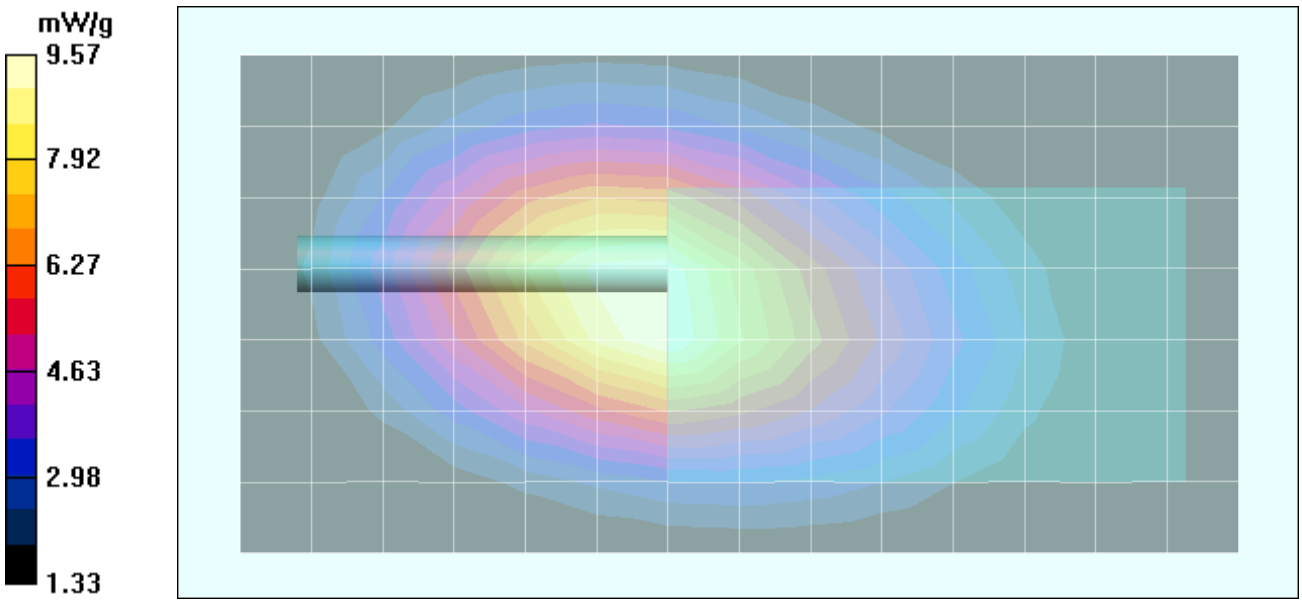
Ambient Temp: 23.9 °C; Fluid Temp: 23.1 °C; Barometric Pressure: 101.3 kPa; Humidity: 33%

Communication System: FM UHF
Frequency: 470.05 MHz; Duty Cycle: 1:1
RF Output Power: 36.24 dBm (Conducted)
7.4V 1400mAh Li-Ion Battery Pack (P/N: KNB-24L)
Medium: M450 ($\sigma$ = 0.90 mho/m; $\varepsilon_r$ = 56.6; $\rho$ = 1000 kg/m$^3$)

- Probe: ET3DV6 - SN1590; ConvF(7.7, 7.7, 7.7); Calibrated: 24/05/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn370; Calibrated: 14/05/2004
- Phantom: Planar; Type: Plexiglas; Serial: 161
- Measurement SW: DASY4, V4.3 Build 22; Postprocessing SW: SEMCAD, V1.8 Build 127

**Body-Worn - 1.4 cm Belt-Clip Separation Distance - Mid Channel/Area Scan (8x15x1):**
Measurement grid: dx=15mm, dy=15mm

**Body-Worn - 1.4 cm Belt-Clip Separation Distance - Mid Channel/Zoom Scan (5x5x7)/Cube 0:**
Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 106.2 V/m; Power Drift = -0.501 dB
Peak SAR (extrapolated) = 14.3 W/kg
**SAR(1 g) = 9.17 mW/g; SAR(10 g) = 6.44 mW/g**



Date Tested: 10/22/04

## Body-Worn SAR - Ni-Cd Battery (P/N: KNB-25A) - Stubby Antenna (P/N: KRA-23M)

**DUT: Kenwood Model: TK-3170-K4; Type: Portable UHF PTT Radio Transceiver; Serial: 1S-U1-21**

**Body-Worn Accessories: Speaker-Microphone (P/N: KMC-17), Belt-Clip (P/N: KBH-12)**

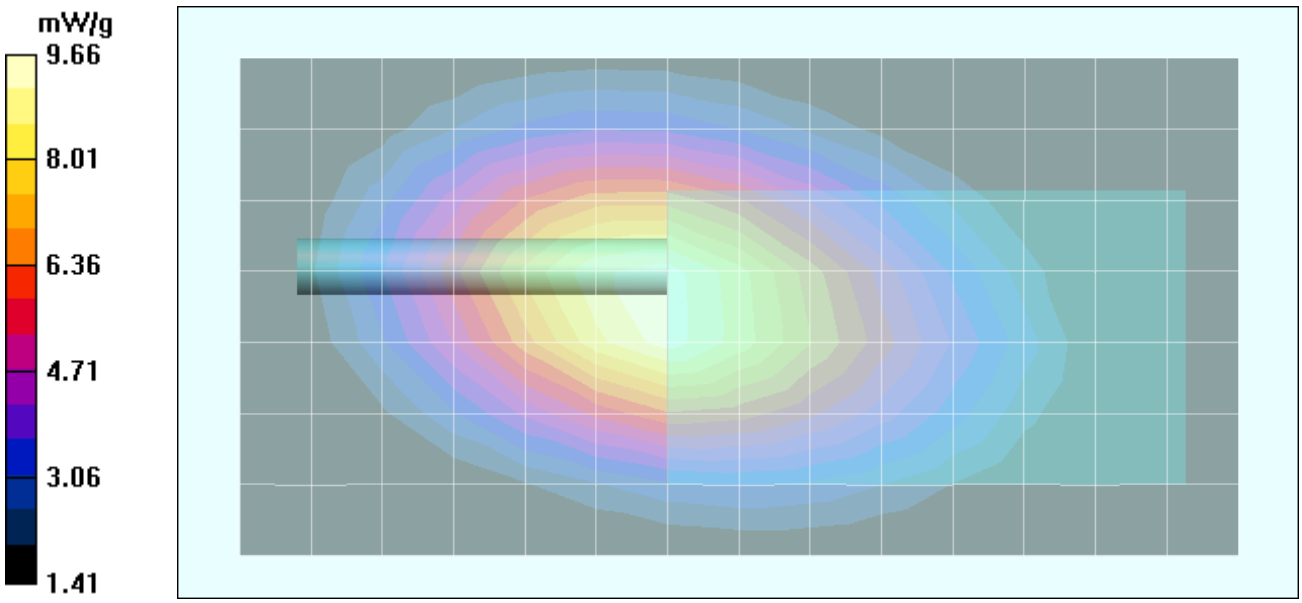
Ambient Temp: 23.9 °C; Fluid Temp: 23.1 °C; Barometric Pressure: 101.3 kPa; Humidity: 33%

Communication System: FM UHF
Frequency: 470.05 MHz; Duty Cycle: 1:1
RF Output Power: 36.30 dBm (Conducted)
7.2V 1200mAh Ni-Cd Battery Pack (P/N: KNB-25A)
Medium: M450 ($\sigma$ = 0.90 mho/m; $\varepsilon_r$ = 56.6; $\rho$ = 1000 kg/m$^3$)

- Probe: ET3DV6 - SN1590; ConvF(7.7, 7.7, 7.7); Calibrated: 24/05/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn370; Calibrated: 14/05/2004
- Phantom: Planar; Type: Plexiglas; Serial: 161
- Measurement SW: DASY4, V4.3 Build 22; Postprocessing SW: SEMCAD, V1.8 Build 127

**Body-Worn - 0.9 cm Belt-Clip Separation Distance - Mid Channel/Area Scan (8x15x1):**
Measurement grid: dx=15mm, dy=15mm

**Body-Worn - 0.9 cm Belt-Clip Separation Distance - Mid Channel/Zoom Scan (5x5x7)/Cube 0:**
Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 105.9 V/m; Power Drift = -0.531 dB
Peak SAR (extrapolated) = 14.1 W/kg
**SAR(1 g) = 9.24 mW/g; SAR(10 g) = 6.54 mW/g**



Date Tested: 10/22/04

## Body-Worn SAR - Ni-MH Battery (P/N: KNB-26N) - Stubby Antenna (P/N: KRA-23M)

**DUT: Kenwood Model: TK-3170-K4; Type: Portable UHF PTT Radio Transceiver; Serial: 1S-U1-21**

**Body-Worn Accessories: Speaker-Microphone (P/N: KMC-17), Belt-Clip (P/N: KBH-12)**

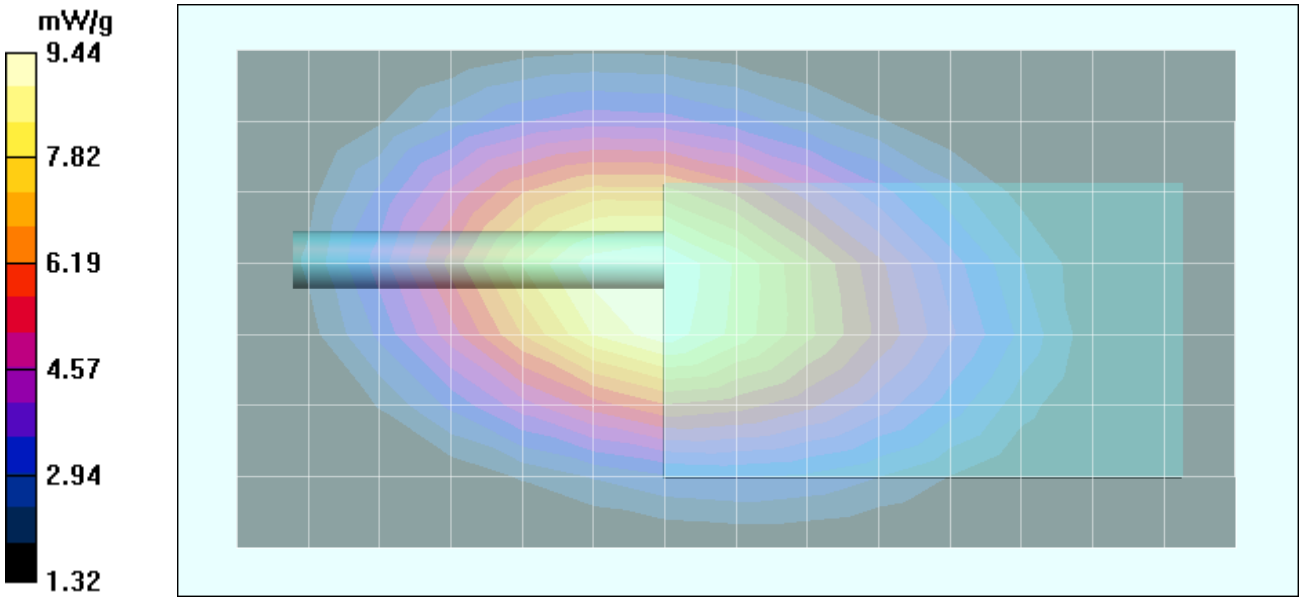
Ambient Temp: 23.9 °C; Fluid Temp: 23.1 °C; Barometric Pressure: 101.3 kPa; Humidity: 33%

Communication System: FM UHF
Frequency: 470.05 MHz; Duty Cycle: 1:1
RF Output Power: 36.27 dBm (Conducted)
7.2V 2000mAh Ni-MH Battery Pack (P/N: KNB-26N)
Medium: M450 ($\sigma$ = 0.90 mho/m; $\varepsilon_r$ = 56.6; $\rho$ = 1000 kg/m$^3$)

- Probe: ET3DV6 - SN1590; ConvF(7.7, 7.7, 7.7); Calibrated: 24/05/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn370; Calibrated: 14/05/2004
- Phantom: Planar; Type: Plexiglas; Serial: 161
- Measurement SW: DASY4, V4.3 Build 22; Postprocessing SW: SEMCAD, V1.8 Build 127

**Body-Worn - 0.9 cm Belt-Clip Separation Distance - Mid Channel/Area Scan (8x15x1):**
Measurement grid: dx=15mm, dy=15mm

**Body-Worn - 0.9 cm Belt-Clip Separation Distance - Mid Channel/Zoom Scan (5x5x7)/Cube 0:**
Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 103.0 V/m; Power Drift = -0.536 dB
Peak SAR (extrapolated) = 13.7 W/kg
**SAR(1 g) = 9.00 mW/g; SAR(10 g) = 6.38 mW/g**



Date Tested: 10/22/04

## Body-Worn SAR - Li-ion Battery (P/N: KNB-35L) - Stubby Antenna (P/N: KRA-23M)

**DUT: Kenwood Model: TK-3170-K4; Type: Portable UHF PTT Radio Transceiver; Serial: 1S-U1-21**

**Body-Worn Accessories: Speaker-Microphone (P/N: KMC-17), Belt-Clip (P/N: KBH-12)**

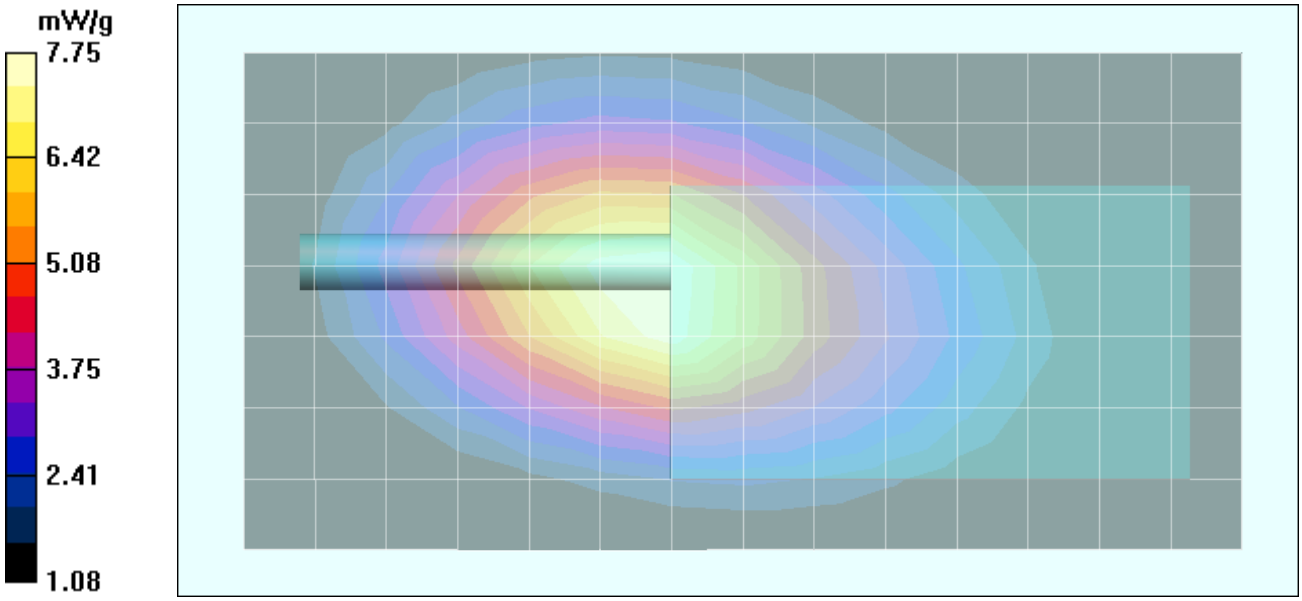
Ambient Temp: 23.9 °C; Fluid Temp: 23.1 °C; Barometric Pressure: 101.3 kPa; Humidity: 33%

Communication System: FM UHF
Frequency: 450.05 MHz; Duty Cycle: 1:1
RF Output Power: 36.39 dBm (Conducted)
7.4V 1400mAh Li-Ion Battery Pack (P/N: KNB-35L)
Medium: M450 ($\sigma$ = 0.90 mho/m; $\varepsilon_r$ = 56.6; $\rho$ = 1000 kg/m$^3$)

- Probe: ET3DV6 - SN1590; ConvF(7.7, 7.7, 7.7); Calibrated: 24/05/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn370; Calibrated: 14/05/2004
- Phantom: Planar; Type: Plexiglas; Serial: 161
- Measurement SW: DASY4, V4.3 Build 22; Postprocessing SW: SEMCAD, V1.8 Build 127

**Body-Worn - 1.4 cm Belt-Clip Separation Distance - Low Channel/Area Scan (8x15x1):**
Measurement grid: dx=15mm, dy=15mm

**Body-Worn - 1.4 cm Belt-Clip Separation Distance - Low Channel/Zoom Scan (5x5x7)/Cube 0:**
Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 89.5 V/m; Power Drift = 0.0709 dB
Peak SAR (extrapolated) = 11.4 W/kg
**SAR(1 g) = 7.38 mW/g; SAR(10 g) = 5.18 mW/g**



Date Tested: 10/22/04

## Body-Worn SAR - Li-ion Battery (P/N: KNB-35L) - Stubby Antenna (P/N: KRA-23M)

**DUT: Kenwood Model: TK-3170-K4; Type: Portable UHF PTT Radio Transceiver; Serial: 1S-U1-21**

**Body-Worn Accessories: Speaker-Microphone (P/N: KMC-17), Belt-Clip (P/N: KBH-12)**

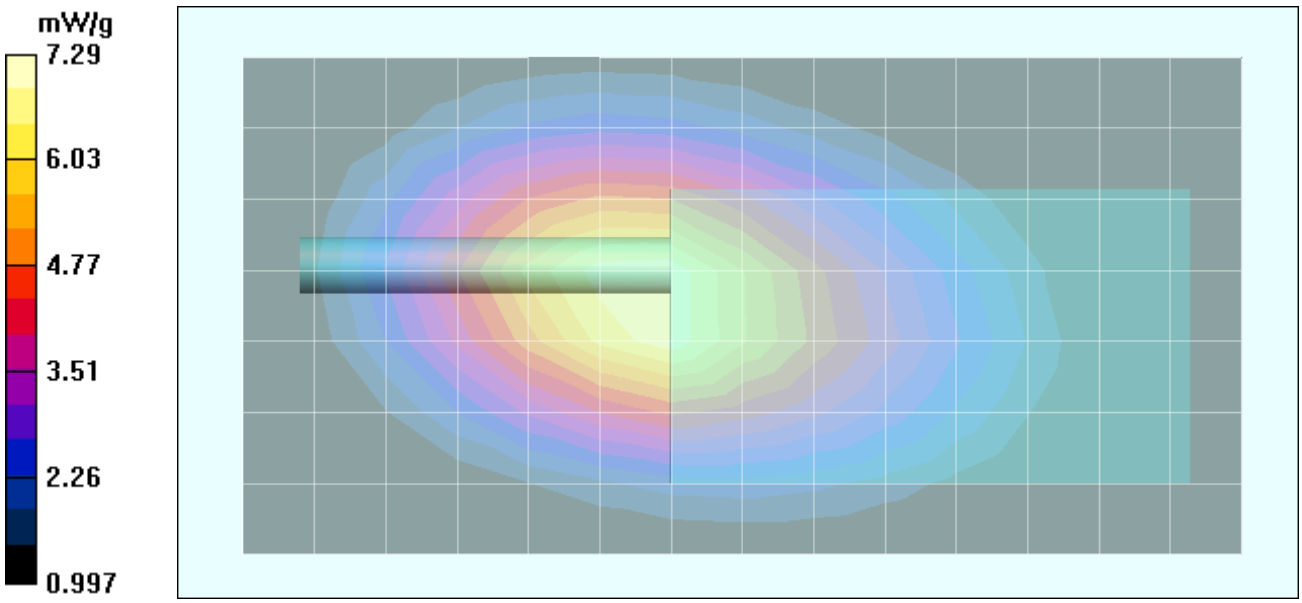
Ambient Temp: 23.9 °C; Fluid Temp: 23.1 °C; Barometric Pressure: 101.3 kPa; Humidity: 33%

Communication System: FM UHF
Frequency: 489.95 MHz; Duty Cycle: 1:1
RF Output Power: 36.15 dBm (Conducted)
7.4V 1400mAh Li-Ion Battery Pack (P/N: KNB-35L)
Medium: M450 ($\sigma$ = 0.90 mho/m; $\varepsilon_r$ = 56.6; $\rho$ = 1000 kg/m$^3$)

- Probe: ET3DV6 - SN1590; ConvF(7.7, 7.7, 7.7); Calibrated: 24/05/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn370; Calibrated: 14/05/2004
- Phantom: Planar; Type: Plexiglas; Serial: 161
- Measurement SW: DASY4, V4.3 Build 22; Postprocessing SW: SEMCAD, V1.8 Build 127

**Body-Worn - 1.4 cm Belt-Clip Separation Distance - High Channel/Area Scan (8x15x1):**
Measurement grid: dx=15mm, dy=15mm

**Body-Worn - 1.4 cm Belt-Clip Separation Distance - High Channel/Zoom Scan (5x5x7)/Cube 0:**
Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 90.2 V/m; Power Drift = -0.381 dB
Peak SAR (extrapolated) = 10.7 W/kg
**SAR(1 g) = 6.95 mW/g; SAR(10 g) = 4.87 mW/g**



Date Tested: 10/23/04

## Body-Worn SAR - Li-ion Battery (P/N: KNB-35L) - Stubby Antenna (P/N: KRA-23M2)

**DUT: Kenwood Model: TK-3170-K4; Type: Portable UHF PTT Radio Transceiver; Serial: 1S-U1-21**

**Body-Worn Accessories: Speaker-Microphone (P/N: KMC-17), Belt-Clip (P/N: KBH-12)**

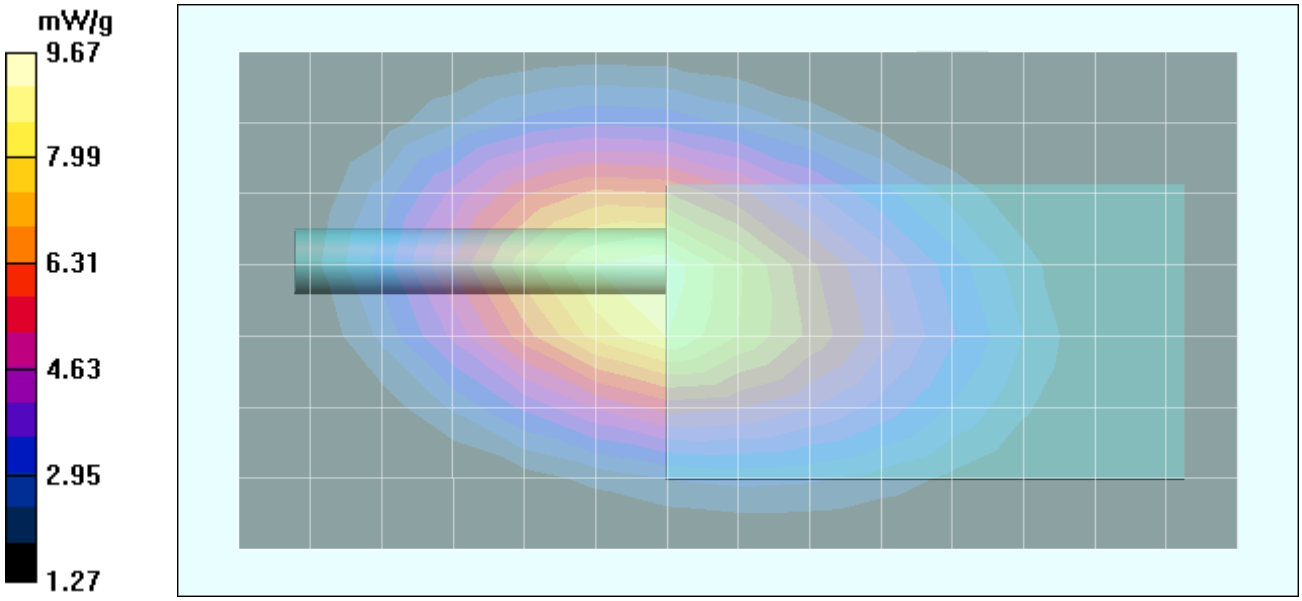
Ambient Temp: 23.2 °C; Fluid Temp: 23.2 °C; Barometric Pressure: 101.7 kPa; Humidity: 31%

Communication System: FM UHF
Frequency: 489.95 MHz; Duty Cycle: 1:1
RF Output Power: 36.24 dBm (Conducted)
7.4V 1400mAh Li-Ion Battery Pack (P/N: KNB-35L)
Medium: M450 ($\sigma$ = 0.90 mho/m; $\varepsilon_r$ = 56.8; $\rho$ = 1000 kg/m$^3$)

- Probe: ET3DV6 - SN1590; ConvF(7.7, 7.7, 7.7); Calibrated: 24/05/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn370; Calibrated: 14/05/2004
- Phantom: Planar; Type: Plexiglas; Serial: 161
- Measurement SW: DASY4, V4.3 Build 22; Postprocessing SW: SEMCAD, V1.8 Build 127

**Body-Worn - 1.4 cm Belt-Clip Separation Distance - High Channel/Area Scan (8x15x1):**
Measurement grid: dx=15mm, dy=15mm

**Body-Worn - 1.4 cm Belt-Clip Separation Distance - High Channel/Zoom Scan (5x5x7)/Cube 0:**
Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 102.5 V/m; Power Drift = -0.291 dB
Peak SAR (extrapolated) = 14.3 W/kg
**SAR(1 g) = 9.22 mW/g; SAR(10 g) = 6.43 mW/g**



Date Tested: 10/23/04

## Body-Worn SAR - Duracell Alkaline Battery Pack (P/N: KBP-5) - Stubby Antenna (P/N: KRA-17M)

**DUT: Kenwood Model: TK-3170-K4; Type: Portable UHF PTT Radio Transceiver; Serial: 1S-U1-21**

**Body-Worn Accessories: Headset (P/N: KHS-21), Belt-Clip (P/N: KBH-12)**

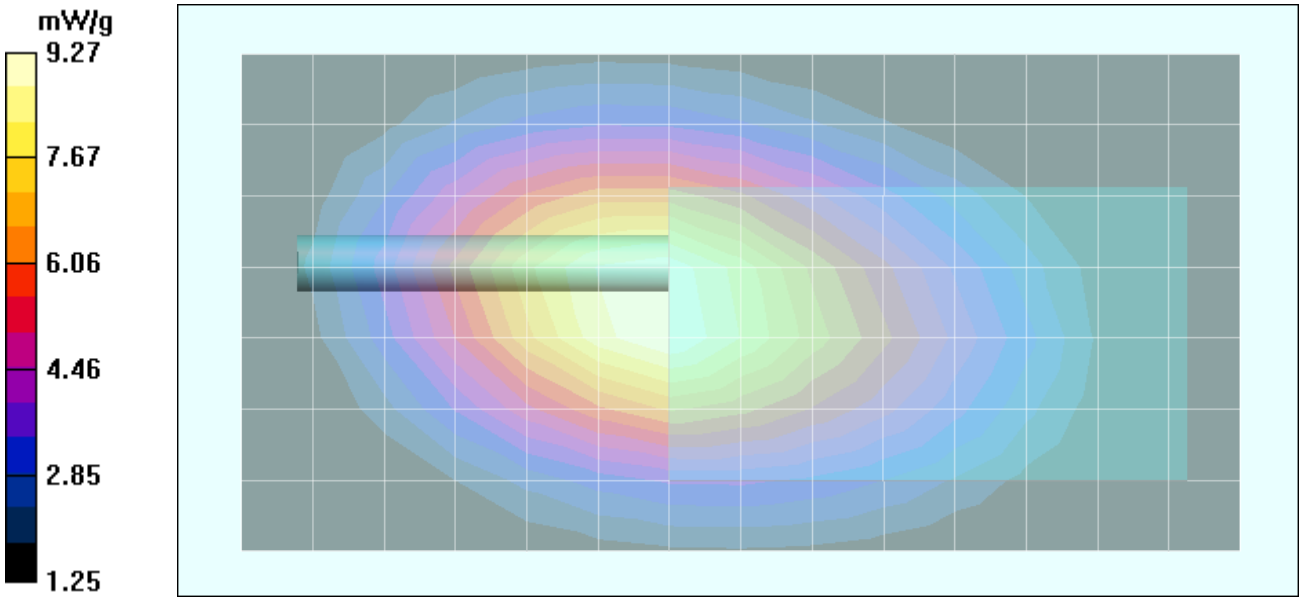
Ambient Temp: 23.2 °C; Fluid Temp: 23.2 °C; Barometric Pressure: 101.7 kPa; Humidity: 31%

Communication System: FM UHF
Frequency: 470.05 MHz; Duty Cycle: 1:1
RF Output Power: 36.29 dBm (Conducted)
9V AA Alkaline Duracell ProCell Battery Pack (Battery Case P/N: KBP-5)
Medium: M450 ($\sigma$ = 0.90 mho/m; $\varepsilon_r$ = 56.8; $\rho$ = 1000 kg/m$^3$)

- Probe: ET3DV6 - SN1590; ConvF(7.7, 7.7, 7.7); Calibrated: 24/05/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn370; Calibrated: 14/05/2004
- Phantom: Planar; Type: Plexiglas; Serial: 161
- Measurement SW: DASY4, V4.3 Build 22; Postprocessing SW: SEMCAD, V1.8 Build 127

**Body-Worn - 1.0 cm Belt-Clip Separation Distance - Mid Channel/Area Scan (8x15x1):**
Measurement grid: dx=15mm, dy=15mm

**Body-Worn - 1.0 cm Belt-Clip Separation Distance - Mid Channel/Zoom Scan (5x5x7)/Cube 0:**
Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 107.5 V/m; Power Drift = -1.07 dB
Peak SAR (extrapolated) = 13.6 W/kg
**SAR(1 g) = 8.81 mW/g; SAR(10 g) = 6.19 mW/g**



Date Tested: 10/23/04

## Body-Worn SAR - Li-ion Battery (P/N: KNB-35L) - Stubby Antenna (P/N: KRA-17M)

**DUT: Kenwood Model: TK-3170-K4; Type: Portable UHF PTT Radio Transceiver; Serial: 1S-U1-21**

**Body-Worn Accessories: Headset (P/N: KHS-21), Belt-Clip (P/N: KBH-12)**

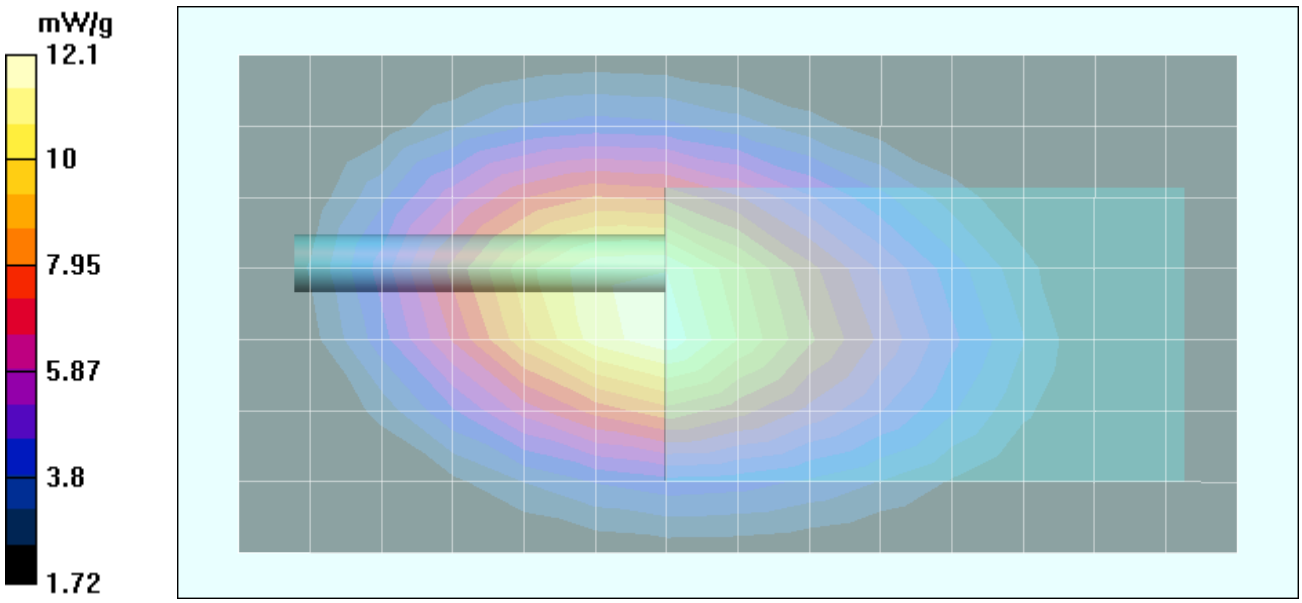
Ambient Temp: 23.2 °C; Fluid Temp: 23.2 °C; Barometric Pressure: 101.7 kPa; Humidity: 31%

Communication System: FM UHF
Frequency: 470.05 MHz; Duty Cycle: 1:1
RF Output Power: 36.40 dBm (Conducted)
7.4V 1400mAh Li-Ion Battery Pack (P/N: KNB-35L)
Medium: M450 ($\sigma$ = 0.90 mho/m; $\varepsilon_r$ = 56.8; $\rho$ = 1000 kg/m$^3$)

- Probe: ET3DV6 - SN1590; ConvF(7.7, 7.7, 7.7); Calibrated: 24/05/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn370; Calibrated: 14/05/2004
- Phantom: Planar; Type: Plexiglas; Serial: 161
- Measurement SW: DASY4, V4.3 Build 22; Postprocessing SW: SEMCAD, V1.8 Build 127

**Body-Worn - 1.4 cm Belt-Clip Separation Distance - Mid Channel/Area Scan (8x15x1):**
Measurement grid: dx=15mm, dy=15mm

**Body-Worn - 1.4 cm Belt-Clip Separation Distance - Mid Channel/Zoom Scan (5x5x7)/Cube 0:**
Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 115.4 V/m; Power Drift = -0.141 dB
Peak SAR (extrapolated) = 17.9 W/kg
**SAR(1 g) = 11.6 mW/g; SAR(10 g) = 8.2 mW/g**



Date Tested: 10/23/04

## Body-Worn SAR - Li-ion Battery (P/N: KNB-24L) - Stubby Antenna (P/N: KRA-17M)

**DUT: Kenwood Model: TK-3170-K4; Type: Portable UHF PTT Radio Transceiver; Serial: 1S-U1-21**

**Body-Worn Accessories: Headset (P/N: KHS-21), Belt-Clip (P/N: KBH-12)**

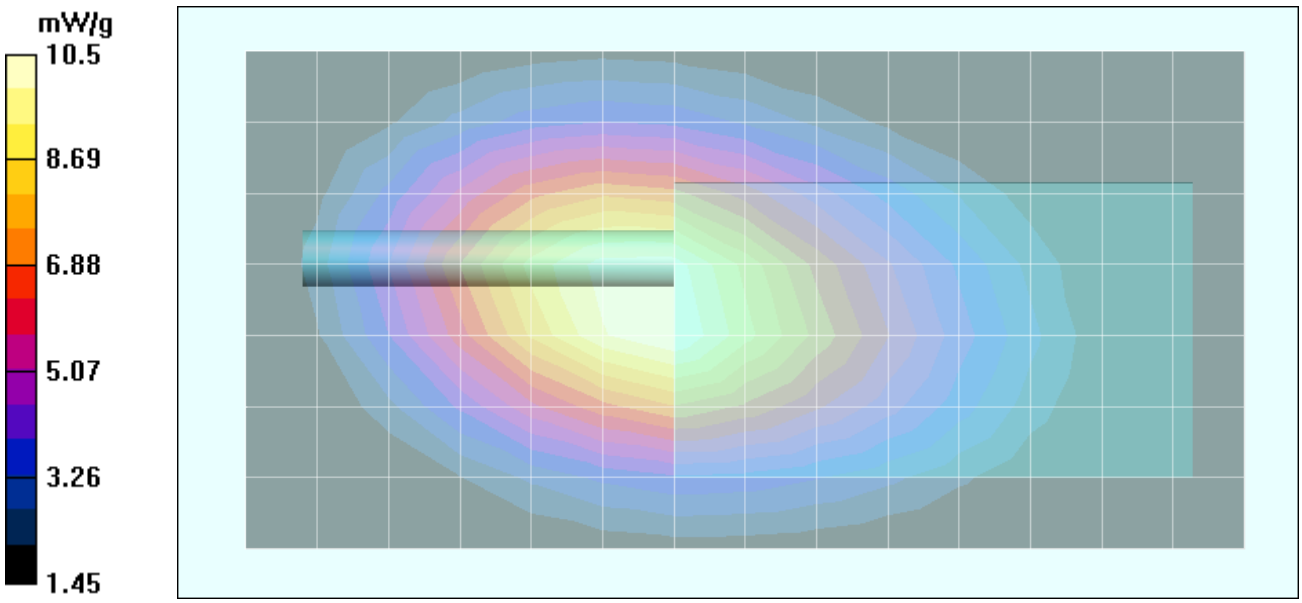
Ambient Temp: 23.2 °C; Fluid Temp: 23.2 °C; Barometric Pressure: 101.7 kPa; Humidity: 31%

Communication System: FM UHF
Frequency: 470.05 MHz; Duty Cycle: 1:1
RF Output Power: 36.29 dBm (Conducted)
7.4V 1400mAh Li-Ion Battery Pack (P/N: KNB-24L)
Medium: M450 ($\sigma$ = 0.90 mho/m; $\varepsilon_r$ = 56.8; $\rho$ = 1000 kg/m$^3$)

- Probe: ET3DV6 - SN1590; ConvF(7.7, 7.7, 7.7); Calibrated: 24/05/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn370; Calibrated: 14/05/2004
- Phantom: Planar; Type: Plexiglas; Serial: 161
- Measurement SW: DASY4, V4.3 Build 22; Postprocessing SW: SEMCAD, V1.8 Build 127

**Body-Worn - 1.4 cm Belt-Clip Separation Distance - Mid Channel/Area Scan (8x15x1):**
Measurement grid: dx=15mm, dy=15mm

**Body-Worn - 1.4 cm Belt-Clip Separation Distance - Mid Channel/Zoom Scan (5x5x7)/Cube 0:**
Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 109.6 V/m; Power Drift = -0.370 dB
Peak SAR (extrapolated) = 15.7 W/kg
**SAR(1 g) = 10.1 mW/g; SAR(10 g) = 7.08 mW/g**



Date Tested: 10/23/04

## Body-Worn SAR - Ni-Cd Battery (P/N: KNB-25A) - Stubby Antenna (P/N: KRA-17M)

**DUT: Kenwood Model: TK-3170-K4; Type: Portable UHF PTT Radio Transceiver; Serial: 1S-U1-21**

**Body-Worn Accessories: Headset (P/N: KHS-21), Belt-Clip (P/N: KBH-12)**

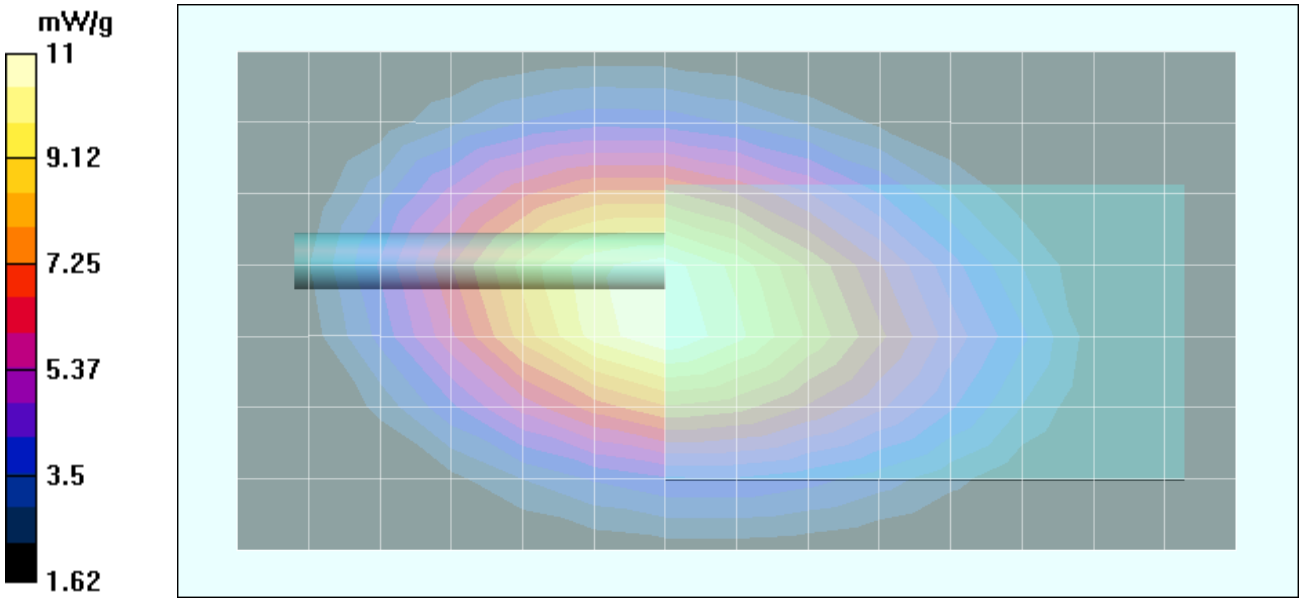
Ambient Temp: 23.2 °C; Fluid Temp: 23.2 °C; Barometric Pressure: 101.7 kPa; Humidity: 31%

Communication System: FM UHF
Frequency: 470.05 MHz; Duty Cycle: 1:1
RF Output Power: 36.35 dBm (Conducted)
7.2V 1200mAh Ni-Cd Battery Pack (P/N: KNB-25A)
Medium: M450 ($\sigma$ = 0.90 mho/m; $\varepsilon_r$ = 56.8; $\rho$ = 1000 kg/m$^3$)

- Probe: ET3DV6 - SN1590; ConvF(7.7, 7.7, 7.7); Calibrated: 24/05/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn370; Calibrated: 14/05/2004
- Phantom: Planar; Type: Plexiglas; Serial: 161
- Measurement SW: DASY4, V4.3 Build 22; Postprocessing SW: SEMCAD, V1.8 Build 127

**Body-Worn - 0.9 cm Belt-Clip Separation Distance - Mid Channel/Area Scan (8x15x1):**
Measurement grid: dx=15mm, dy=15mm

**Body-Worn - 0.9 cm Belt-Clip Separation Distance - Mid Channel/Zoom Scan (5x5x7)/Cube 0:**
Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 111.2 V/m; Power Drift = -0.358 dB
Peak SAR (extrapolated) = 16 W/kg
**SAR(1 g) = 10.5 mW/g; SAR(10 g) = 7.45 mW/g**



Date Tested: 10/23/04

## Body-Worn SAR - Ni-MH Battery (P/N: KNB-26N) - Stubby Antenna (P/N: KRA-17M)

**DUT: Kenwood Model: TK-3170-K4; Type: Portable UHF PTT Radio Transceiver; Serial: 1S-U1-21**

**Body-Worn Accessories: Headset (P/N: KHS-21), Belt-Clip (P/N: KBH-12)**

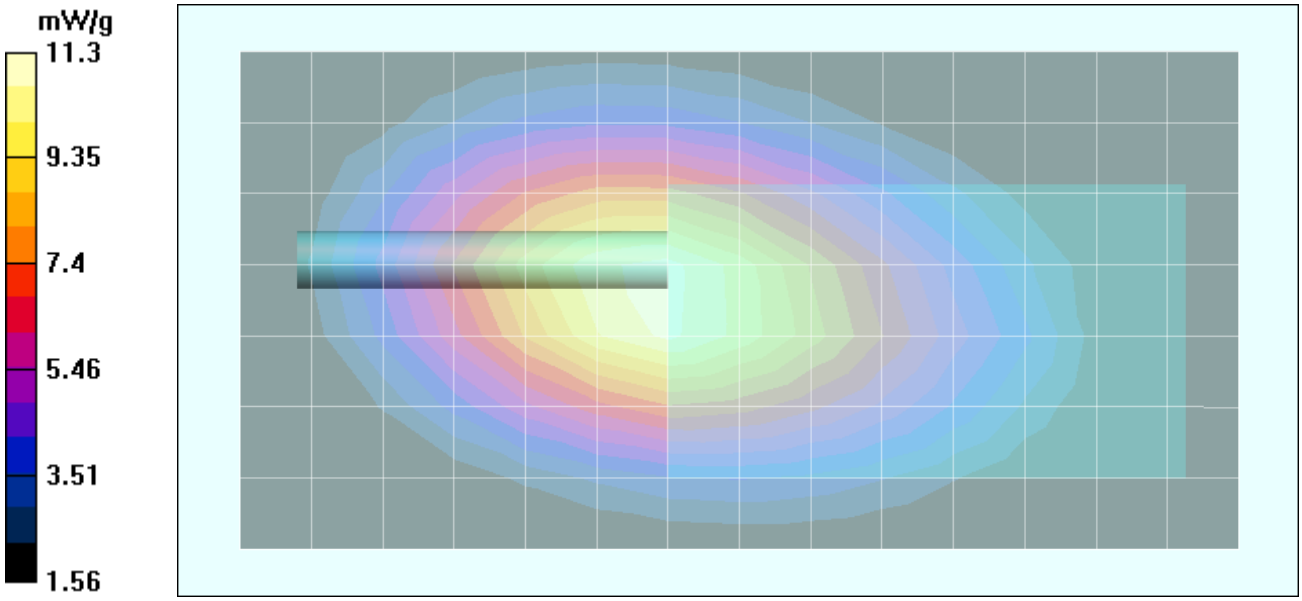
Ambient Temp: 23.2 °C; Fluid Temp: 23.2 °C; Barometric Pressure: 101.7 kPa; Humidity: 31%

Communication System: FM UHF
Frequency: 470.05 MHz; Duty Cycle: 1:1
RF Output Power: 36.39 dBm (Conducted)
7.2V 2000mAh Ni-MH Battery Pack (P/N: KNB-26N)
Medium: M450 ($\sigma$ = 0.90 mho/m; $\varepsilon_r$ = 56.8; $\rho$ = 1000 kg/m$^3$)

- Probe: ET3DV6 - SN1590; ConvF(7.7, 7.7, 7.7); Calibrated: 24/05/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn370; Calibrated: 14/05/2004
- Phantom: Planar; Type: Plexiglas; Serial: 161
- Measurement SW: DASY4, V4.3 Build 22; Postprocessing SW: SEMCAD, V1.8 Build 127

**Body-Worn - 0.9 cm Belt-Clip Separation Distance - Mid Channel/Area Scan (8x15x1):**
Measurement grid: dx=15mm, dy=15mm

**Body-Worn - 0.9 cm Belt-Clip Separation Distance - Mid Channel/Zoom Scan (5x5x7)/Cube 0:**
Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 113.2 V/m; Power Drift = -0.453 dB
Peak SAR (extrapolated) = 16.3 W/kg
**SAR(1 g) = 10.7 mW/g; SAR(10 g) = 7.59 mW/g**



Date Tested: 10/23/04

## Body-Worn SAR - Li-ion Battery (P/N: KNB-35L) - Stubby Antenna (P/N: KRA-17M)

**DUT: Kenwood Model: TK-3170-K4; Type: Portable UHF PTT Radio Transceiver; Serial: 1S-U1-21**

**Body-Worn Accessories: Headset (P/N: KHS-21), Belt-Clip (P/N: KBH-12)**

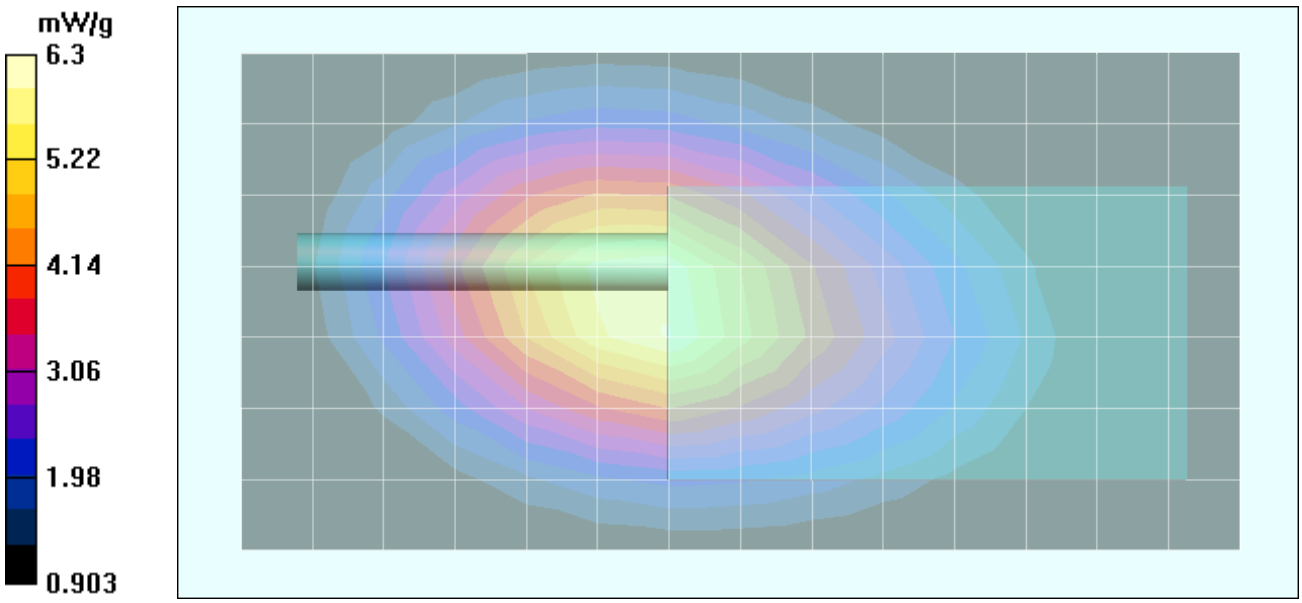
Ambient Temp: 23.2 °C; Fluid Temp: 23.2 °C; Barometric Pressure: 101.7 kPa; Humidity: 31%

Communication System: FM UHF
Frequency: 450.05 MHz; Duty Cycle: 1:1
RF Output Power: 36.48 dBm (Conducted)
7.4V 1400mAh Li-Ion Battery Pack (P/N: KNB-35L)
Medium: M450 ($\sigma$ = 0.90 mho/m; $\varepsilon_r$ = 56.8; $\rho$ = 1000 kg/m$^3$)

- Probe: ET3DV6 - SN1590; ConvF(7.7, 7.7, 7.7); Calibrated: 24/05/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn370; Calibrated: 14/05/2004
- Phantom: Planar; Type: Plexiglas; Serial: 161
- Measurement SW: DASY4, V4.3 Build 22; Postprocessing SW: SEMCAD, V1.8 Build 127

**Body-Worn - 1.4 cm Belt-Clip Separation Distance - Low Channel/Area Scan (8x15x1):**
Measurement grid: dx=15mm, dy=15mm

**Body-Worn - 1.4 cm Belt-Clip Separation Distance - Low Channel/Zoom Scan (5x5x7)/Cube 0:**
Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 81.9 V/m; Power Drift = -0.0295 dB
Peak SAR (extrapolated) = 9.3 W/kg
**SAR(1 g) = 6.03 mW/g; SAR(10 g) = 4.25 mW/g**



Date Tested: 10/23/04

## Body-Worn SAR - Li-ion Battery (P/N: KNB-35L) - Stubby Antenna (P/N: KRA-17M)

**DUT: Kenwood Model: TK-3170-K4; Type: Portable UHF PTT Radio Transceiver; Serial: 1S-U1-21**

**Body-Worn Accessories: Headset (P/N: KHS-21), Belt-Clip (P/N: KBH-12)**

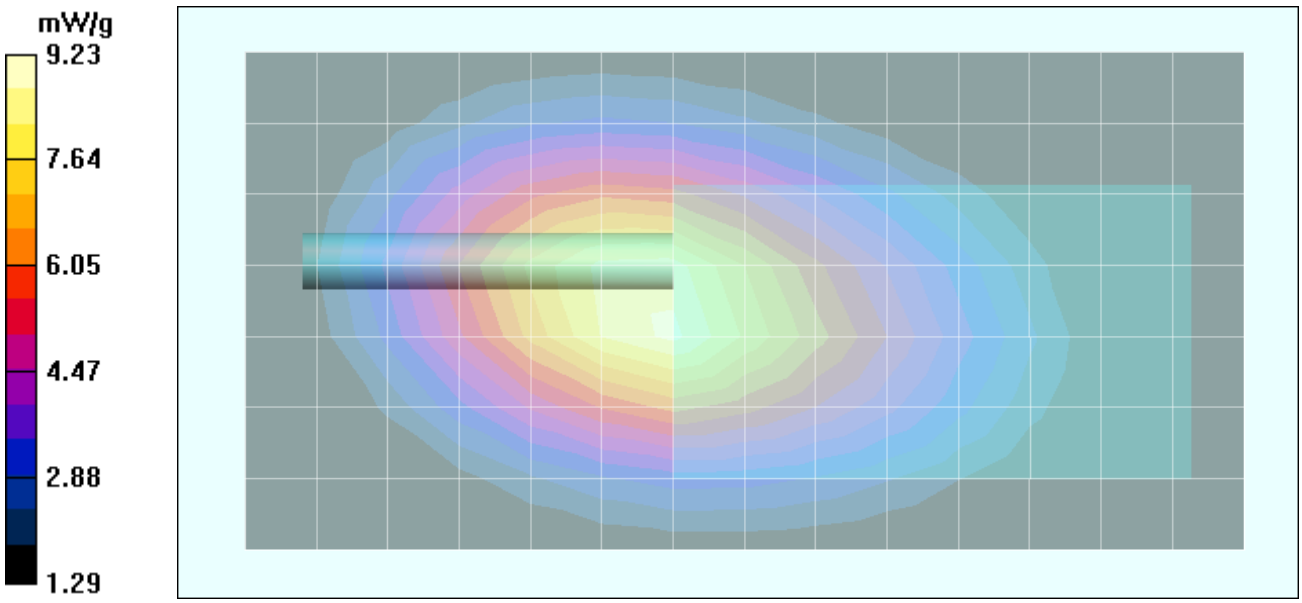
Ambient Temp: 23.2 °C; Fluid Temp: 23.2 °C; Barometric Pressure: 101.7 kPa; Humidity: 31%

Communication System: FM UHF
Frequency: 489.95 MHz; Duty Cycle: 1:1
RF Output Power: 36.27 dBm (Conducted)
7.4V 1400mAh Li-Ion Battery Pack (P/N: KNB-35L)
Medium: M450 ($\sigma$ = 0.90 mho/m; $\varepsilon_r$ = 56.8; $\rho$ = 1000 kg/m$^3$)

- Probe: ET3DV6 - SN1590; ConvF(7.7, 7.7, 7.7); Calibrated: 24/05/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn370; Calibrated: 14/05/2004
- Phantom: Planar; Type: Plexiglas; Serial: 161
- Measurement SW: DASY4, V4.3 Build 22; Postprocessing SW: SEMCAD, V1.8 Build 127

**Body-Worn - 1.4 cm Belt-Clip Separation Distance - High Channel/Area Scan (8x15x1):**
Measurement grid: dx=15mm, dy=15mm

**Body-Worn - 1.4 cm Belt-Clip Separation Distance - High Channel/Zoom Scan (5x5x7)/Cube 0:**
Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 102.9 V/m; Power Drift = -0.368 dB
Peak SAR (extrapolated) = 13.6 W/kg
**SAR(1 g) = 8.80 mW/g; SAR(10 g) = 6.18 mW/g**



Date Tested: 10/23/04

## Body-Worn SAR - Li-ion Battery (P/N: KNB-35L) - Stubby Antenna (P/N: KRA-17M2)

**DUT: Kenwood Model: TK-3170-K4; Type: Portable UHF PTT Radio Transceiver; Serial: 1S-U1-21**

**Body-Worn Accessories: Headset (P/N: KHS-21), Belt-Clip (P/N: KBH-12)**

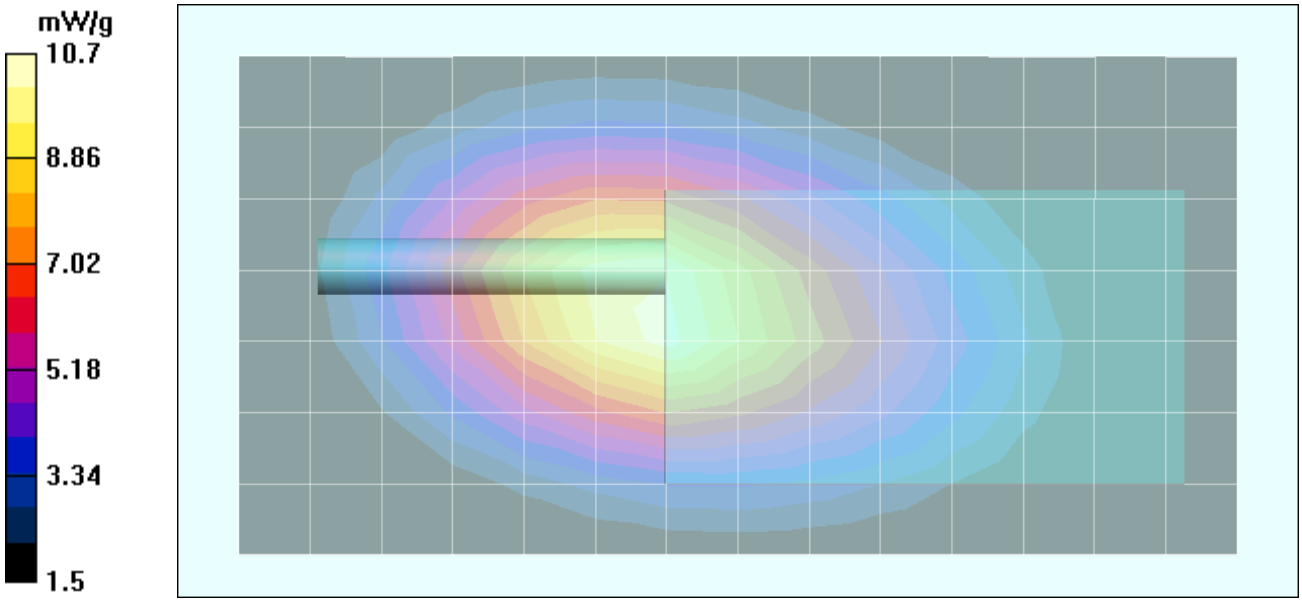
Ambient Temp: 23.2 °C; Fluid Temp: 23.2 °C; Barometric Pressure: 101.7 kPa; Humidity: 31%

Communication System: FM UHF
Frequency: 489.95 MHz; Duty Cycle: 1:1
RF Output Power: 36.24 dBm (Conducted)
7.4V 1400mAh Li-Ion Battery Pack (P/N: KNB-35L)
Medium: M450 ($\sigma$ = 0.90 mho/m; $\varepsilon_r$ = 56.8; $\rho$ = 1000 kg/m$^3$)

- Probe: ET3DV6 - SN1590; ConvF(7.7, 7.7, 7.7); Calibrated: 24/05/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn370; Calibrated: 14/05/2004
- Phantom: Planar; Type: Plexiglas; Serial: 161
- Measurement SW: DASY4, V4.3 Build 22; Postprocessing SW: SEMCAD, V1.8 Build 127

**Body-Worn - 1.4 cm Belt-Clip Separation Distance - High Channel/Area Scan (8x15x1):**
Measurement grid: dx=15mm, dy=15mm

**Body-Worn - 1.4 cm Belt-Clip Separation Distance - High Channel/Zoom Scan (5x5x7)/Cube 0:**
Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 109.5 V/m; Power Drift = -0.250 dB
Peak SAR (extrapolated) = 15.9 W/kg
**SAR(1 g) = 10.2 mW/g; SAR(10 g) = 7.15 mW/g**



Date Tested: 10/23/04

## Body-Worn SAR - Duracell Alkaline Battery Pack (P/N: KBP-5) - Stubby Antenna (P/N: KRA-17M)

**DUT: Kenwood Model: TK-3170-K4; Type: Portable UHF PTT Radio Transceiver; Serial: 1S-U1-21**

**Body-Worn Accessories: Speaker-Microphone (P/N: KMC-17), Belt-Clip (P/N: KBH-12)**

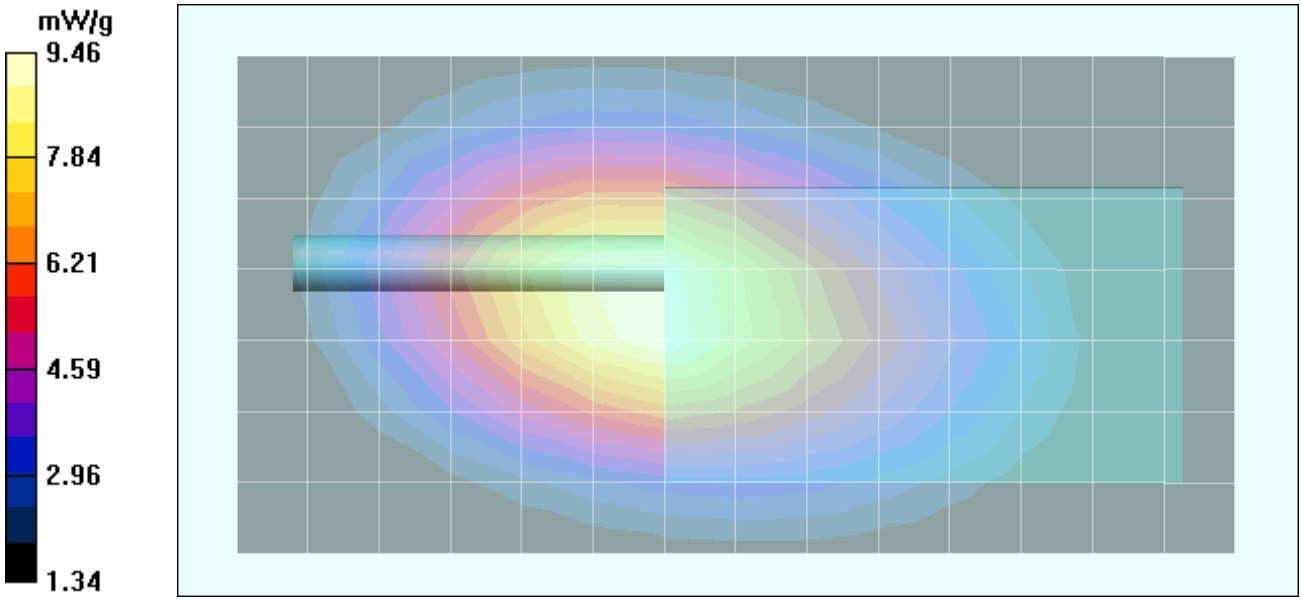
Ambient Temp: 23.2 °C; Fluid Temp: 23.2 °C; Barometric Pressure: 101.7 kPa; Humidity: 31%

Communication System: FM UHF
Frequency: 470.05 MHz; Duty Cycle: 1:1
RF Output Power: 36.27 dBm (Conducted)
9V AA Alkaline Duracell ProCell Battery Pack (Battery Case P/N: KBP-5)
Medium: M450 ($\sigma$ = 0.90 mho/m; $\varepsilon_r$ = 56.8; $\rho$ = 1000 kg/m$^3$)

- Probe: ET3DV6 - SN1590; ConvF(7.7, 7.7, 7.7); Calibrated: 24/05/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn370; Calibrated: 14/05/2004
- Phantom: Planar; Type: Plexiglas; Serial: 161
- Measurement SW: DASY4, V4.3 Build 22; Postprocessing SW: SEMCAD, V1.8 Build 127

**Body-Worn - 1.0 cm Belt-Clip Separation Distance - Mid Channel/Area Scan (8x15x1):**
Measurement grid: dx=15mm, dy=15mm

**Body-Worn - 1.0 cm Belt-Clip Separation Distance - Mid Channel/Zoom Scan (5x5x7)/Cube 0:**
Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 109.0 V/m; Power Drift = -1.08 dB
Peak SAR (extrapolated) = 13.9 W/kg
**SAR(1 g) = 9.03 mW/g; SAR(10 g) = 6.39 mW/g**



Date Tested: 10/23/04

## Body-Worn SAR - Li-ion Battery (P/N: KNB-35L) - Stubby Antenna (P/N: KRA-17M)

**DUT: Kenwood Model: TK-3170-K4; Type: Portable UHF PTT Radio Transceiver; Serial: 1S-U1-21**

**Body-Worn Accessories: Speaker-Microphone (P/N: KMC-17), Belt-Clip (P/N: KBH-12)**

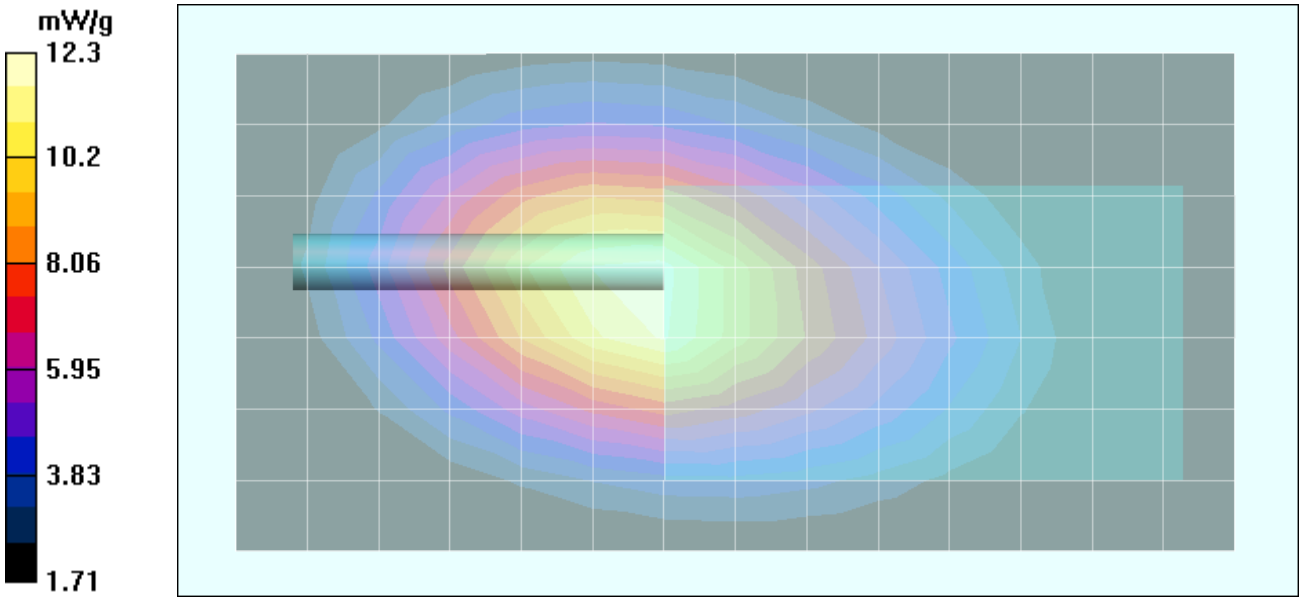
Ambient Temp: 23.2 °C; Fluid Temp: 23.2 °C; Barometric Pressure: 101.7 kPa; Humidity: 31%

Communication System: FM UHF
Frequency: 470.05 MHz; Duty Cycle: 1:1
RF Output Power: 36.38 dBm (Conducted)
7.4V 1400mAh Li-Ion Battery Pack (P/N: KNB-35L)
Medium: M450 ($\sigma$ = 0.90 mho/m; $\varepsilon_r$ = 56.8; $\rho$ = 1000 kg/m$^3$)

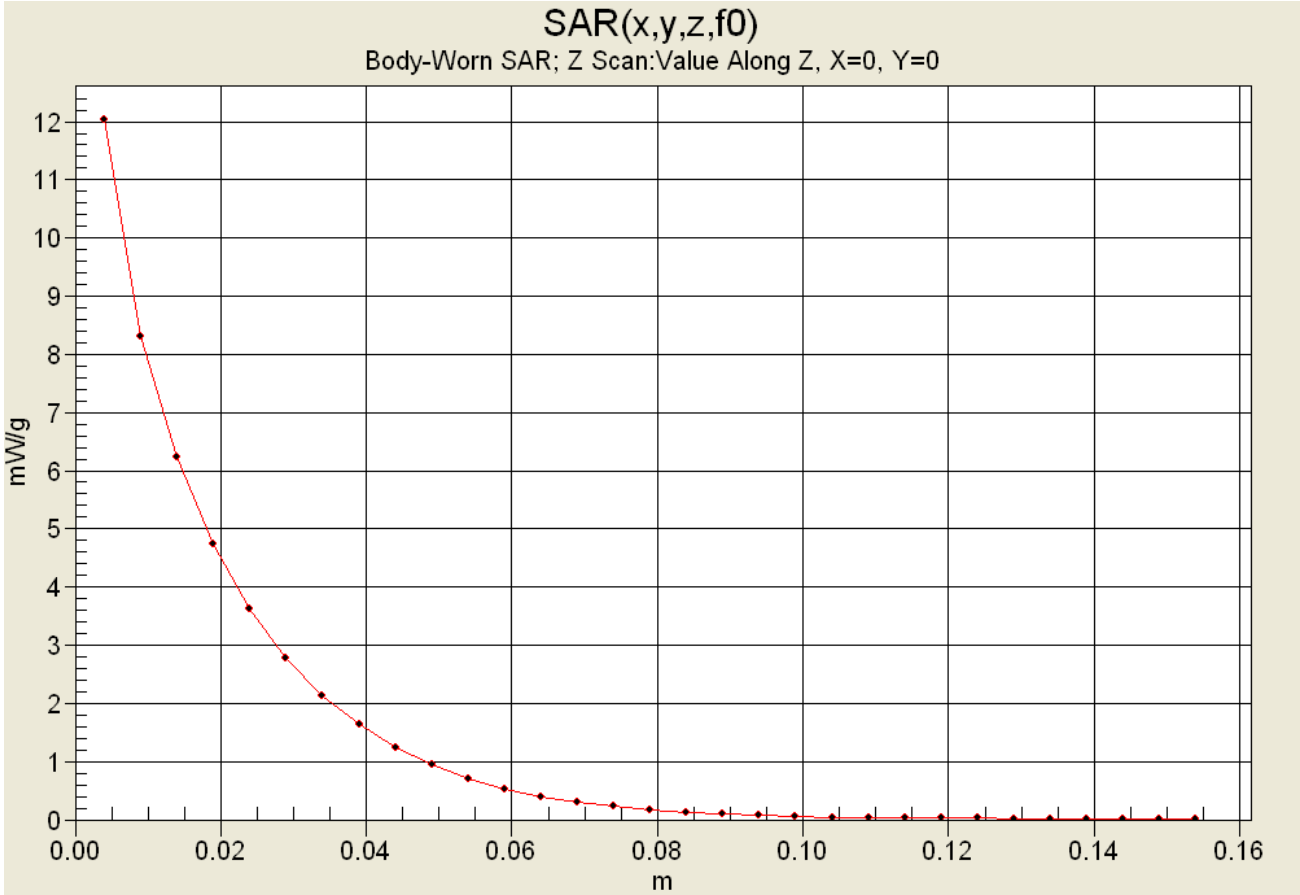
- Probe: ET3DV6 - SN1590; ConvF(7.7, 7.7, 7.7); Calibrated: 24/05/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn370; Calibrated: 14/05/2004
- Phantom: Planar; Type: Plexiglas; Serial: 161
- Measurement SW: DASY4, V4.3 Build 22; Postprocessing SW: SEMCAD, V1.8 Build 127

**Body-Worn - 1.4 cm Belt-Clip Separation Distance - Mid Channel/Area Scan (8x15x1):**
Measurement grid: dx=15mm, dy=15mm

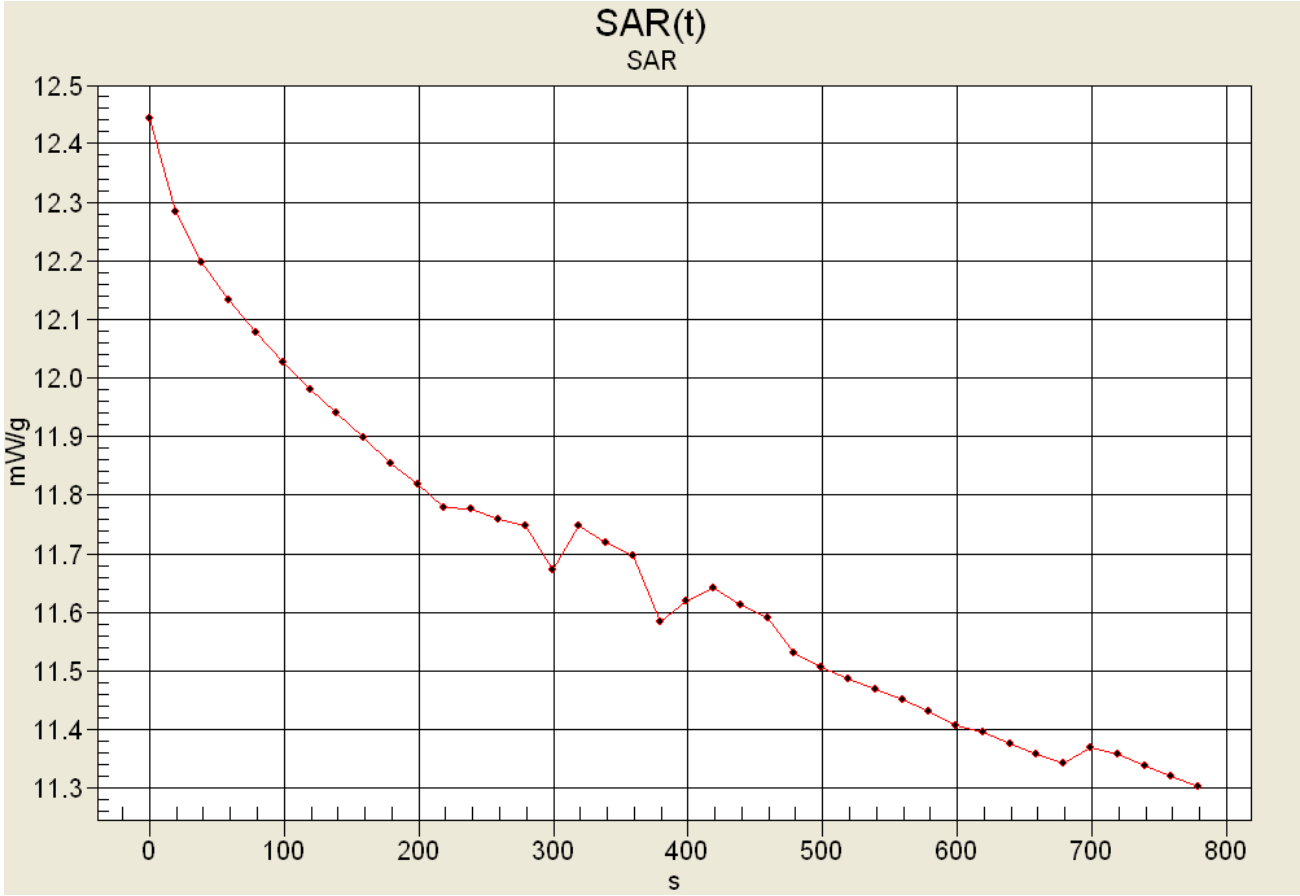
**Body-Worn - 1.4 cm Belt-Clip Separation Distance - Mid Channel/Zoom Scan (5x5x7)/Cube 0:**
Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 125.0 V/m; Power Drift = -0.222 dB
Peak SAR (extrapolated) = 18.1 W/kg
**SAR(1 g) = 11.7 mW/g; SAR(10 g) = 8.23 mW/g**



## Z-Axis Scan


SAR(x,y,z,f0)
Body-Worn SAR; Z Scan:Value Along Z, X=0, Y=0
mW/g
0
1
2
3
4
5
6
7
8
9
10
11
12
0.00
0.02
0.04
0.06
0.08
0.10
0.12
0.14
0.16
m

**SAR-versus-Time Power Drift Evaluation**
DUT with Belt-Clip and Speaker-Microphone
Li-ion Battery Pack - KNB-35L
Stubby Antenna - KRA-17M
Mid Channel - 470.05 MHz




**Start SAR: 12.4424 mW/g**
**End SAR: 11.3035 mW/g (-0.4169 dB)**
**SAR after 340s: 11.7198 mW/g (-0.2598 dB)**
**(340s = Zoom Scan Duration)**
**(780s = Area Scan Duration)**

Date Tested: 10/24/04

## Body-Worn SAR - Li-ion Battery (P/N: KNB-24L) - Stubby Antenna (P/N: KRA-17M)

**DUT: Kenwood Model: TK-3170-K4; Type: Portable UHF PTT Radio Transceiver; Serial: 1S-U1-21**

**Body-Worn Accessories: Speaker-Microphone (P/N: KMC-17), Belt-Clip (P/N: KBH-12)**

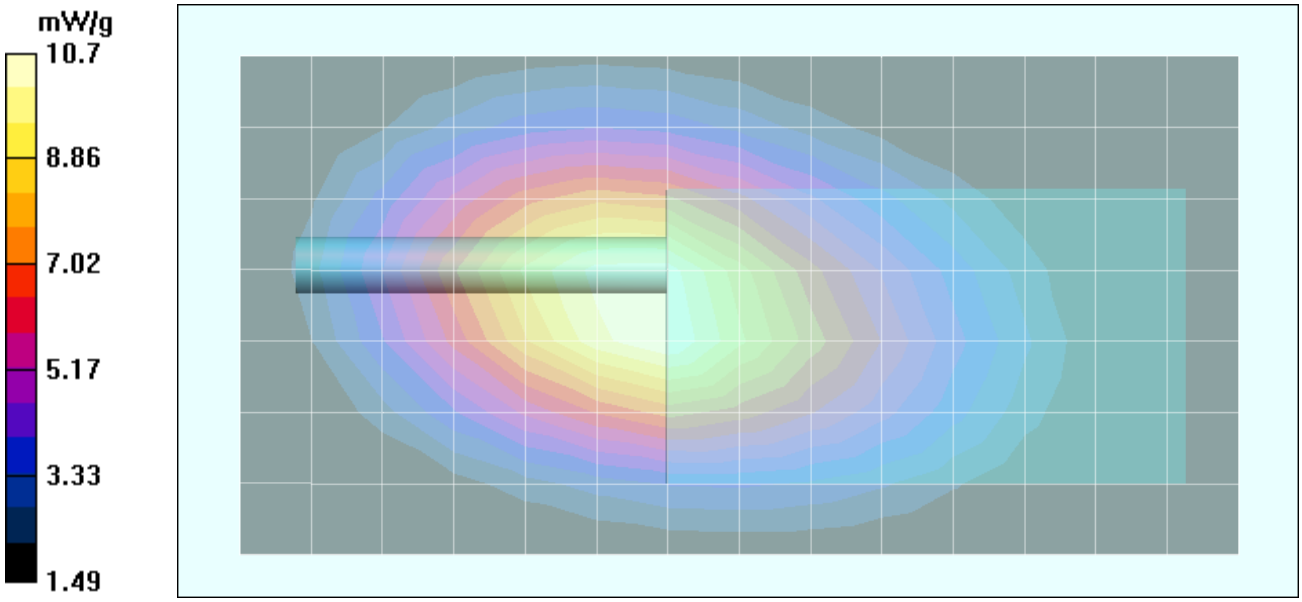
Ambient Temp: 23.5 °C; Fluid Temp: 22.7 °C; Barometric Pressure: 102.2 kPa; Humidity: 31%

Communication System: FM UHF
Frequency: 470.05 MHz; Duty Cycle: 1:1
RF Output Power: 36.26 dBm (Conducted)
7.4V 1400mAh Li-Ion Battery Pack (P/N: KNB-24L)
Medium: M450 ($\sigma$ = 0.89 mho/m; $\varepsilon_r$ = 57.4; $\rho$ = 1000 kg/m$^3$)

- Probe: ET3DV6 - SN1590; ConvF(7.7, 7.7, 7.7); Calibrated: 24/05/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn370; Calibrated: 14/05/2004
- Phantom: Planar; Type: Plexiglas; Serial: 161
- Measurement SW: DASY4, V4.3 Build 22; Postprocessing SW: SEMCAD, V1.8 Build 127

**Body-Worn - 1.4 cm Belt-Clip Separation Distance - Mid Channel/Area Scan (8x15x1):**
Measurement grid: dx=15mm, dy=15mm

**Body-Worn - 1.4 cm Belt-Clip Separation Distance - Mid Channel/Zoom Scan (5x5x7)/Cube 0:**
Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 111.7 V/m; Power Drift = -0.402 dB
Peak SAR (extrapolated) = 16 W/kg
**SAR(1 g) = 10.3 mW/g; SAR(10 g) = 7.2 mW/g**



Date Tested: 10/24/04

## Body-Worn SAR - Ni-Cd Battery (P/N: KNB-25A) - Stubby Antenna (P/N: KRA-17M)

**DUT: Kenwood Model: TK-3170-K4; Type: Portable UHF PTT Radio Transceiver; Serial: 1S-U1-21**

**Body-Worn Accessories: Speaker-Microphone (P/N: KMC-17), Belt-Clip (P/N: KBH-12)**

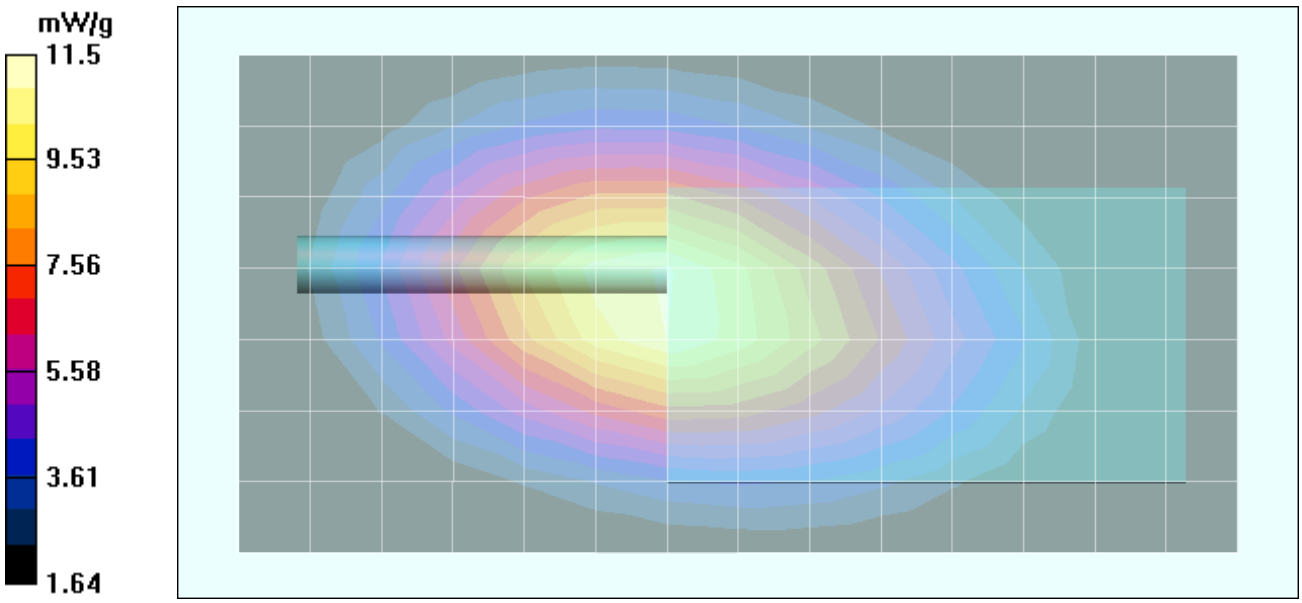
Ambient Temp: 23.5 °C; Fluid Temp: 22.7 °C; Barometric Pressure: 102.2 kPa; Humidity: 31%

Communication System: FM UHF
Frequency: 470.05 MHz; Duty Cycle: 1:1
RF Output Power: 36.40 dBm (Conducted)
7.2V 1200mAh Ni-Cd Battery Pack (P/N: KNB-25A)
Medium: M450 ($\sigma$ = 0.89 mho/m; $\varepsilon_r$ = 57.4; $\rho$ = 1000 kg/m$^3$)

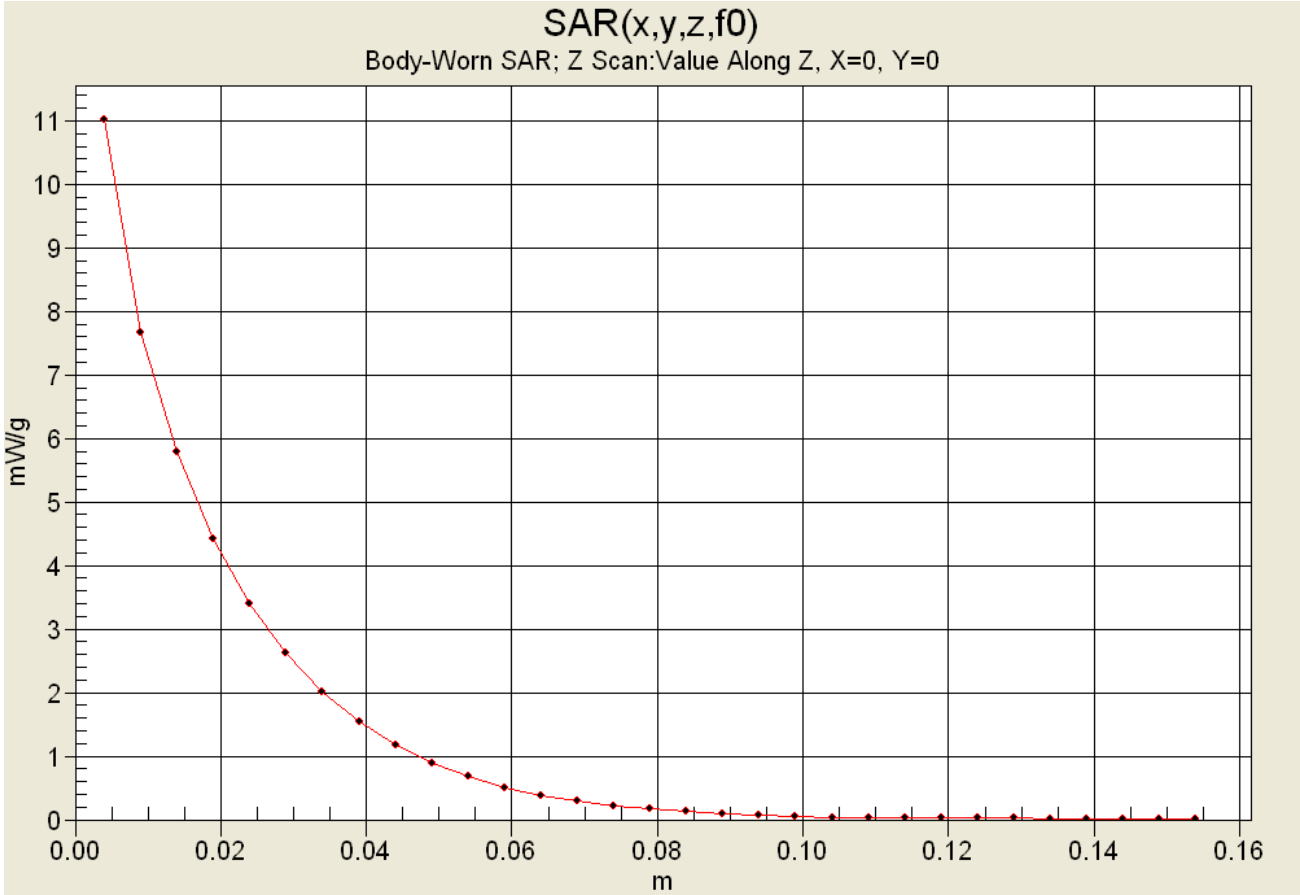
- Probe: ET3DV6 - SN1590; ConvF(7.7, 7.7, 7.7); Calibrated: 24/05/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn370; Calibrated: 14/05/2004
- Phantom: Planar; Type: Plexiglas; Serial: 161
- Measurement SW: DASY4, V4.3 Build 22; Postprocessing SW: SEMCAD, V1.8 Build 127

**Body-Worn - 0.9 cm Belt-Clip Separation Distance - Mid Channel/Area Scan (8x15x1):**
Measurement grid: dx=15mm, dy=15mm

**Body-Worn - 0.9 cm Belt-Clip Separation Distance - Mid Channel/Zoom Scan (5x5x7)/Cube 0:**
Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 114.6 V/m; Power Drift = -0.443 dB
Peak SAR (extrapolated) = 16.7 W/kg
**SAR(1 g) = 11.0 mW/g; SAR(10 g) = 7.81 mW/g**



## Z-Axis Scan


SAR(x,y,z,f0)
Body-Worn SAR; Z Scan:Value Along Z, X=0, Y=0
mW/g
m
0
1
2
3
4
5
6
7
8
9
10
11
0.00
0.02
0.04
0.06
0.08
0.10
0.12
0.14
0.16

Date Tested: 10/24/04

## Body-Worn SAR - Ni-MH Battery (P/N: KNB-26N) - Stubby Antenna (P/N: KRA-17M)

**DUT: Kenwood Model: TK-3170-K4; Type: Portable UHF PTT Radio Transceiver; Serial: 1S-U1-21**

**Body-Worn Accessories: Speaker-Microphone (P/N: KMC-17), Belt-Clip (P/N: KBH-12)**

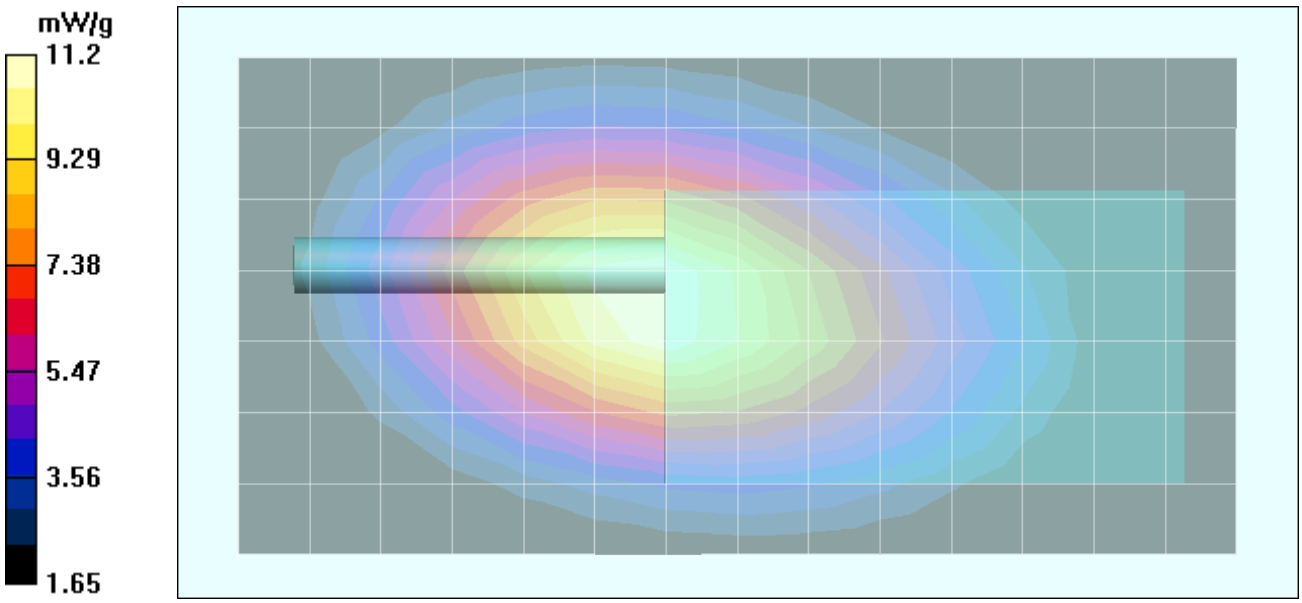
Ambient Temp: 23.5 °C; Fluid Temp: 22.7 °C; Barometric Pressure: 102.2 kPa; Humidity: 31%

Communication System: FM UHF
Frequency: 470.05 MHz; Duty Cycle: 1:1
RF Output Power: 36.36 dBm (Conducted)
7.2V 2000mAh Ni-MH Battery Pack (P/N: KNB-26N)
Medium: M450 ($\sigma$ = 0.89 mho/m; $\varepsilon_r$ = 57.4; $\rho$ = 1000 kg/m$^3$)

- Probe: ET3DV6 - SN1590; ConvF(7.7, 7.7, 7.7); Calibrated: 24/05/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn370; Calibrated: 14/05/2004
- Phantom: Planar; Type: Plexiglas; Serial: 161
- Measurement SW: DASY4, V4.3 Build 22; Postprocessing SW: SEMCAD, V1.8 Build 127

**Body-Worn - 0.9 cm Belt-Clip Separation Distance - Mid Channel/Area Scan (8x15x1):**
Measurement grid: dx=15mm, dy=15mm

**Body-Worn - 0.9 cm Belt-Clip Separation Distance - Mid Channel/Zoom Scan (5x5x7)/Cube 0:**
Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 113.7 V/m; Power Drift = -0.429 dB
Peak SAR (extrapolated) = 16.3 W/kg
**SAR(1 g) = 10.7 mW/g; SAR(10 g) = 7.63 mW/g**



Date Tested: 10/24/04

## Body-Worn SAR - Li-ion Battery (P/N: KNB-35L) - Stubby Antenna (P/N: KRA-17M)

**DUT: Kenwood Model: TK-3170-K4; Type: Portable UHF PTT Radio Transceiver; Serial: 1S-U1-21**

**Body-Worn Accessories: Speaker-Microphone (P/N: KMC-17), Belt-Clip (P/N: KBH-12)**

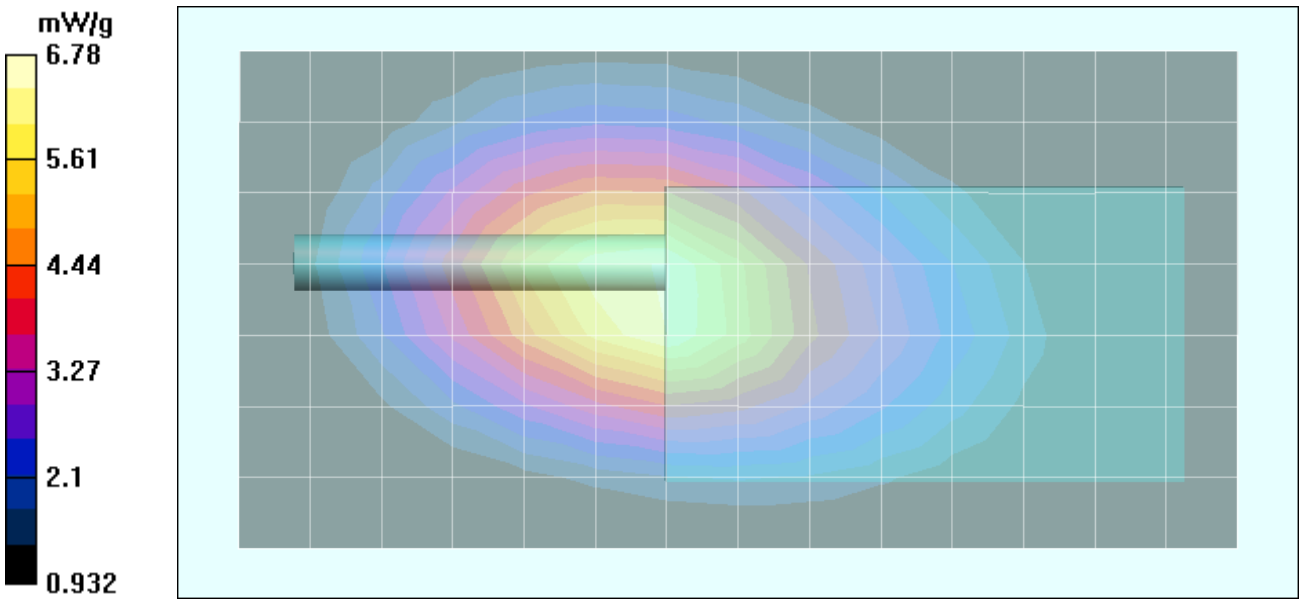
Ambient Temp: 23.5 °C; Fluid Temp: 22.7 °C; Barometric Pressure: 102.2 kPa; Humidity: 31%

Communication System: FM UHF
Frequency: 450.05 MHz; Duty Cycle: 1:1
RF Output Power: 36.36 dBm (Conducted)
7.4V 1400mAh Li-Ion Battery Pack (P/N: KNB-35L)
Medium: M450 ($\sigma$ = 0.89 mho/m; $\varepsilon_r$ = 57.4; $\rho$ = 1000 kg/m$^3$)

- Probe: ET3DV6 - SN1590; ConvF(7.7, 7.7, 7.7); Calibrated: 24/05/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn370; Calibrated: 14/05/2004
- Phantom: Planar; Type: Plexiglas; Serial: 161
- Measurement SW: DASY4, V4.3 Build 22; Postprocessing SW: SEMCAD, V1.8 Build 127

**Body-Worn - 1.4 cm Belt-Clip Separation Distance - Low Channel/Area Scan (8x15x1):**
Measurement grid: dx=15mm, dy=15mm

**Body-Worn - 1.4 cm Belt-Clip Separation Distance - Low Channel/Zoom Scan (5x5x7)/Cube 0:**
Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 84.7 V/m; Power Drift = -0.0440 dB
Peak SAR (extrapolated) = 10 W/kg
**SAR(1 g) = 6.47 mW/g; SAR(10 g) = 4.54 mW/g**



Date Tested: 10/24/04

## Body-Worn SAR - Li-ion Battery (P/N: KNB-35L) - Stubby Antenna (P/N: KRA-17M)

**DUT: Kenwood Model: TK-3170-K4; Type: Portable UHF PTT Radio Transceiver; Serial: 1S-U1-21**

**Body-Worn Accessories: Speaker-Microphone (P/N: KMC-17), Belt-Clip (P/N: KBH-12)**

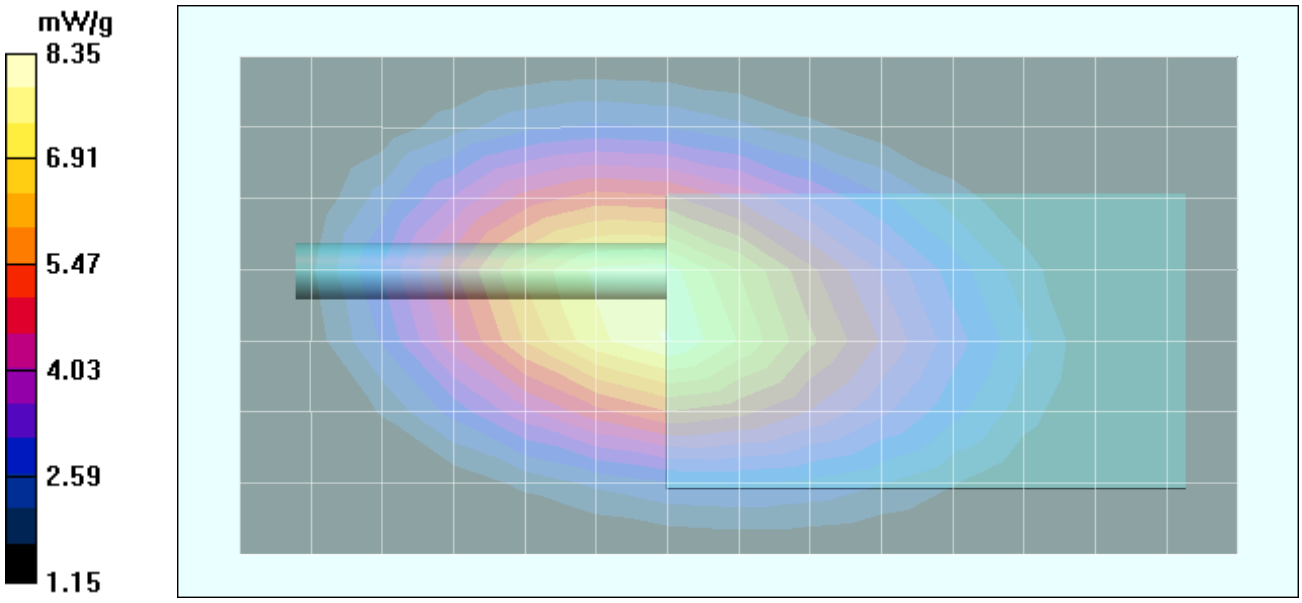
Ambient Temp: 23.5 °C; Fluid Temp: 22.7 °C; Barometric Pressure: 102.2 kPa; Humidity: 31%

Communication System: FM UHF
Frequency: 489.95 MHz; Duty Cycle: 1:1
RF Output Power: 36.15 dBm (Conducted)
7.4V 1400mAh Li-Ion Battery Pack (P/N: KNB-35L)
Medium: M450 ($\sigma$ = 0.89 mho/m; $\varepsilon_r$ = 57.4; $\rho$ = 1000 kg/m$^3$)

- Probe: ET3DV6 - SN1590; ConvF(7.7, 7.7, 7.7); Calibrated: 24/05/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn370; Calibrated: 14/05/2004
- Phantom: Planar; Type: Plexiglas; Serial: 161
- Measurement SW: DASY4, V4.3 Build 22; Postprocessing SW: SEMCAD, V1.8 Build 127

**Body-Worn - 1.4 cm Belt-Clip Separation Distance - High Channel/Area Scan (8x15x1):**
Measurement grid: dx=15mm, dy=15mm

**Body-Worn - 1.4 cm Belt-Clip Separation Distance - High Channel/Zoom Scan (5x5x7)/Cube 0:**
Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 98 V/m; Power Drift = -0.435 dB
Peak SAR (extrapolated) = 12.2 W/kg
**SAR(1 g) = 7.97 mW/g; SAR(10 g) = 5.6 mW/g**



Date Tested: 10/24/04

## Body-Worn SAR - Li-ion Battery (P/N: KNB-35L) - Stubby Antenna (P/N: KRA-17M2)

**DUT: Kenwood Model: TK-3170-K4; Type: Portable UHF PTT Radio Transceiver; Serial: 1S-U1-21**

**Body-Worn Accessories: Speaker-Microphone (P/N: KMC-17), Belt-Clip (P/N: KBH-12)**

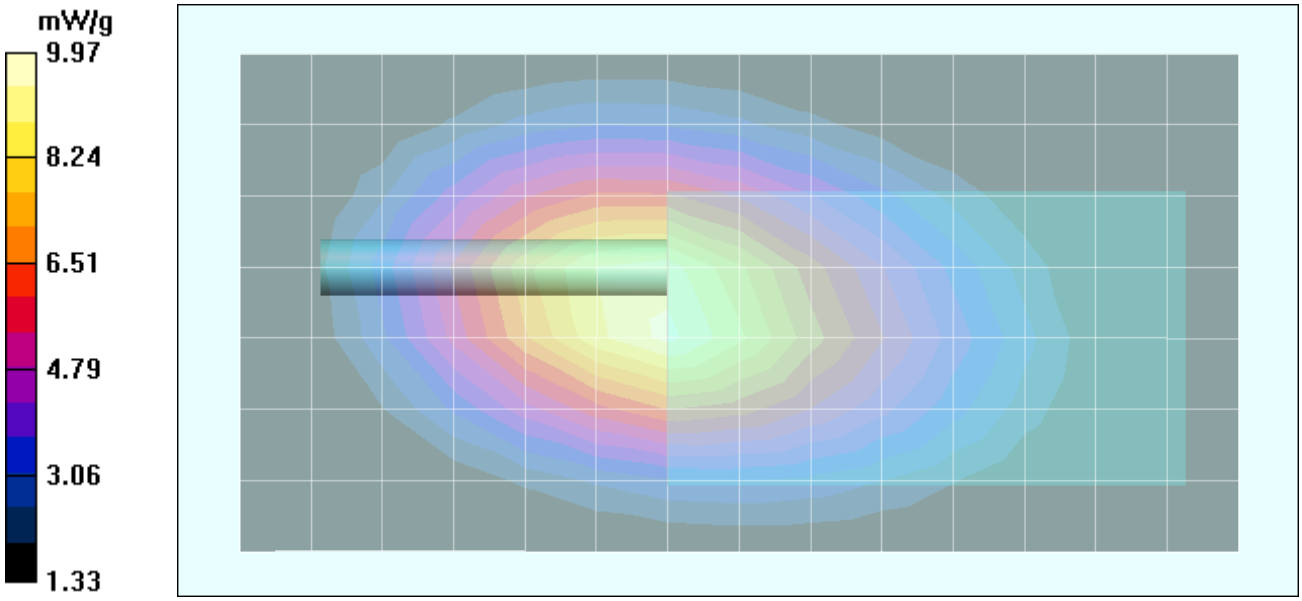
Ambient Temp: 23.5 °C; Fluid Temp: 22.7 °C; Barometric Pressure: 102.2 kPa; Humidity: 31%

Communication System: FM UHF
Frequency: 489.95 MHz; Duty Cycle: 1:1
RF Output Power: 36.16 dBm (Conducted)
7.4V 1400mAh Li-Ion Battery Pack (P/N: KNB-35L)
Medium: M450 ($\sigma$ = 0.89 mho/m; $\varepsilon_r$ = 57.4; $\rho$ = 1000 kg/m$^3$)

- Probe: ET3DV6 - SN1590; ConvF(7.7, 7.7, 7.7); Calibrated: 24/05/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn370; Calibrated: 14/05/2004
- Phantom: Planar; Type: Plexiglas; Serial: 161
- Measurement SW: DASY4, V4.3 Build 22; Postprocessing SW: SEMCAD, V1.8 Build 127

**Body-Worn - 1.4 cm Belt-Clip Separation Distance - High Channel/Area Scan (8x15x1):**
Measurement grid: dx=15mm, dy=15mm

**Body-Worn - 1.4 cm Belt-Clip Separation Distance - High Channel/Zoom Scan (5x5x7)/Cube 0:**
Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 106.5 V/m; Power Drift = -0.304 dB
Peak SAR (extrapolated) = 14.9 W/kg
**SAR(1 g) = 9.59 mW/g; SAR(10 g) = 6.71 mW/g**



Date Tested: 10/24/04

## Body-Worn SAR - Energizer Alkaline Battery Pack (P/N: KBP-5) - Stubby Antenna (P/N: KRA-17M)

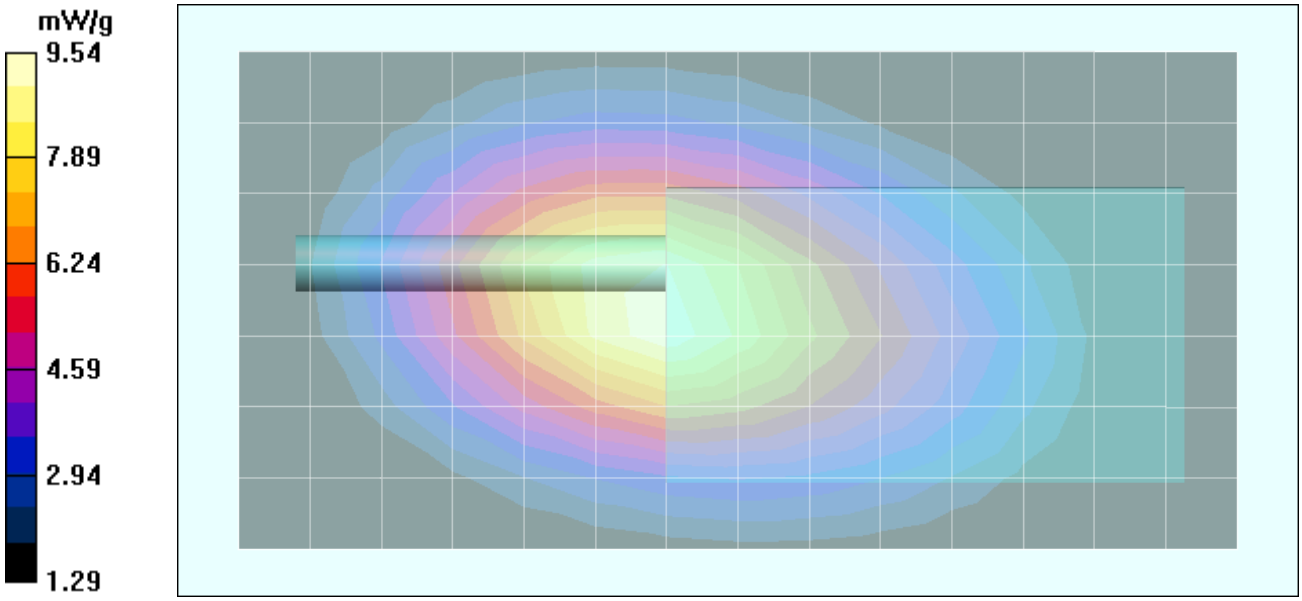
**DUT: Kenwood Model: TK-3170-K4; Type: Portable UHF PTT Radio Transceiver; Serial: 1S-U1-21**

**Body-Worn Accessories: Speaker-Microphone (P/N: KMC-17), Belt-Clip (P/N: KBH-12)**

Ambient Temp: 23.5 °C; Fluid Temp: 22.7 °C; Barometric Pressure: 102.2 kPa; Humidity: 31%

Communication System: FM UHF
Frequency: 470.05 MHz; Duty Cycle: 1:1
RF Output Power: 36.13 dBm (Conducted)
9V AA Alkaline Energizer E91 Battery Pack (Battery Case P/N: KBP-5)
Medium: M450 ($\sigma$ = 0.89 mho/m; $\varepsilon_r$ = 57.4; $\rho$ = 1000 kg/m$^3$)

- Probe: ET3DV6 - SN1590; ConvF(7.7, 7.7, 7.7); Calibrated: 24/05/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn370; Calibrated: 14/05/2004
- Phantom: Planar; Type: Plexiglas; Serial: 161
- Measurement SW: DASY4, V4.3 Build 22; Postprocessing SW: SEMCAD, V1.8 Build 127

**Body-Worn - 1.0 cm Belt-Clip Separation Distance - Mid Channel/Area Scan (8x15x1):**
Measurement grid: dx=15mm, dy=15mm

**Body-Worn - 1.0 cm Belt-Clip Separation Distance - Mid Channel/Zoom Scan (5x5x7)/Cube 0:**
Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 110.4 V/m; Power Drift = -1.09 dB
Peak SAR (extrapolated) = 14.1 W/kg
**SAR(1 g) = 9.19 mW/g; SAR(10 g) = 6.5 mW/g**