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Appendix for the Report

Dosimetric Assessment of the SDP660TU FM Analogue PMR and Digital DMR (TDMA) Two-Way Radio from Simoco (FCC ID: STZSDP600TU) (IC: 7068A-SDP600TU)

According to the FCC Requirements SAR Distribution Plots

July 24, 2013

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1 SAR Distribution Plots, Body Worn Measurement

Test Laboratory: Imst GmbH, DASY Yellow (II); File Name: [SDP660_b4h_400Hi_1_clip_hs.da4](#)

DUT: Simoco; Type: SDP660TU; Serial: 56KTU123800FZ

Program Name: DMR

Communication System: CW; Frequency: 400.125 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 400.125$ MHz; $\sigma = 0.91$ mho/m; $\epsilon_r = 56.3$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6R - SN1669; ConvF(7.62, 7.62, 7.62); Calibrated: 19.02.2013

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

- Electronics: DAE4 Sn631; Calibrated: 20.09.2012

- Phantom: ELI 4; Type: ELI 4;

- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body Worn/Area Scan (9x22x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 5.93 mW/g

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

Reference Value = 78.8 V/m; Power Drift = -0.080 dB

Peak SAR (extrapolated) = 7.27 W/kg

SAR(1 g) = 5.32 mW/g; SAR(10 g) = 4.08 mW/g

Maximum value of SAR (measured) = 5.55 mW/g

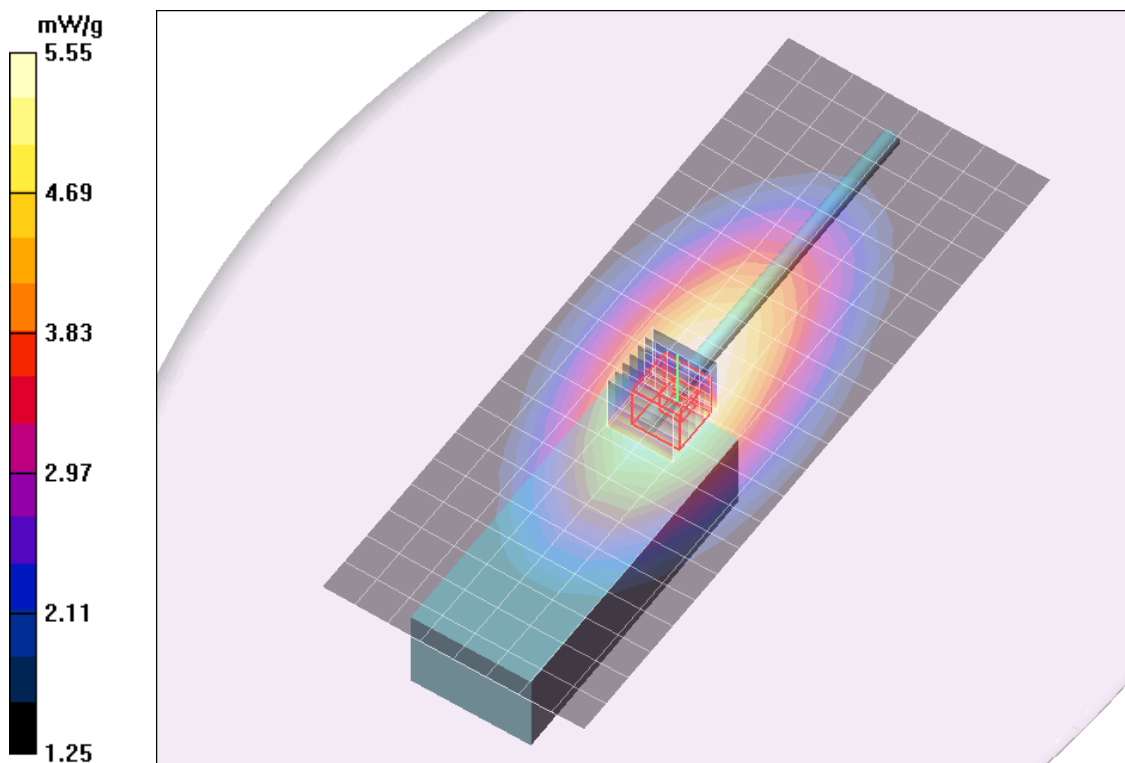


Fig. 1: SAR distribution for Simoco SDP660TU, low channel, 400.125 MHz, body worn configuration, belt clip and remote speaker attached (May 08, 2013; Ambient Temperature: 22.1°C; Liquid Temperature: 21.7°C).

Test Laboratory: Imst GmbH, DASY Yellow (II); File Name: [SDP660_b4h_412Hi_1_clip_hs.da4](#)

DUT: Simoco; Type: SDP660TU; Serial: 56KTU123800FZ

Program Name: DMR

Communication System: CW; Frequency: 412.95 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 412.95$ MHz; $\sigma = 0.922$ mho/m; $\epsilon_r = 56$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6R - SN1669; ConvF(7.62, 7.62, 7.62); Calibrated: 19.02.2013

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

- Electronics: DAE4 Sn631; Calibrated: 20.09.2012

- Phantom: ELI 4; Type: ELI 4;

- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body Worn/Area Scan (9x22x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 5.28 mW/g

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

Reference Value = 69.5 V/m; Power Drift = -0.158 dB

Peak SAR (extrapolated) = 6.72 W/kg

SAR(1 g) = 4.85 mW/g; SAR(10 g) = 3.69 mW/g

Maximum value of SAR (measured) = 5.07 mW/g

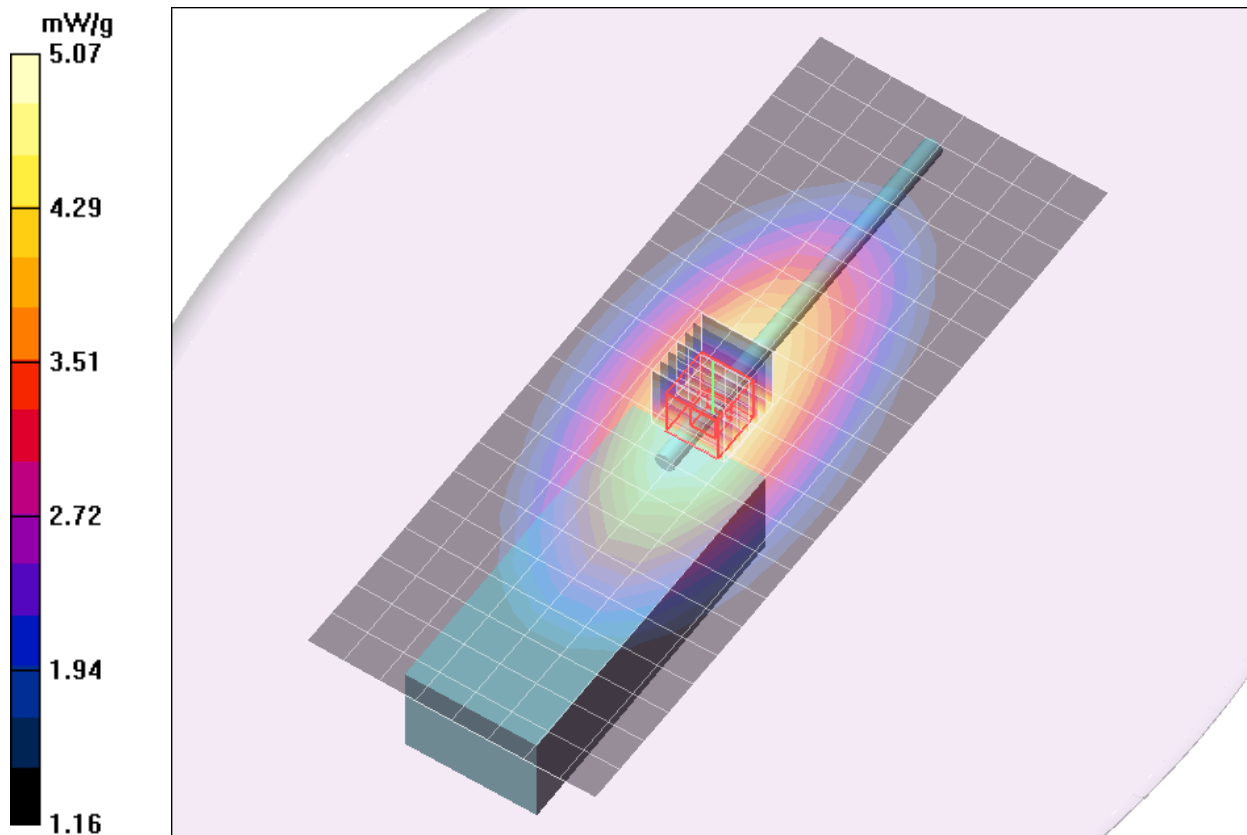


Fig. 2: SAR distribution for Simoco SDP660TU, mid channel, 412.950 MHz, body worn configuration, belt clip and remote speaker attached (May 08, 2013; Ambient Temperature: 22.1°C; Liquid Temperature: 21.7°C).

Test Laboratory: Imst GmbH, DASY Yellow (II); File Name: [SDP660_b4h_459Hi_1_clip_hs.da4](#)

DUT: Simoco; Type: SDP660TU; Serial: 56KTU123800FZ

Program Name: DMR

Communication System: CW; Frequency: 459.075 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 460$ MHz; $\sigma = 0.95$ mho/m; $\epsilon_r = 55.6$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6R - SN1669; ConvF(7.62, 7.62, 7.62); Calibrated: 19.02.2013

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

- Electronics: DAE4 Sn631; Calibrated: 20.09.2012

- Phantom: ELI 4; Type: ELI 4;

- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body Worn/Area Scan (9x22x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 4.02 mW/g

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

Reference Value = 58.6 V/m; Power Drift = -0.074 dB

Peak SAR (extrapolated) = 5.44 W/kg

SAR(1 g) = 3.76 mW/g; SAR(10 g) = 2.76 mW/g

Maximum value of SAR (measured) = 3.93 mW/g

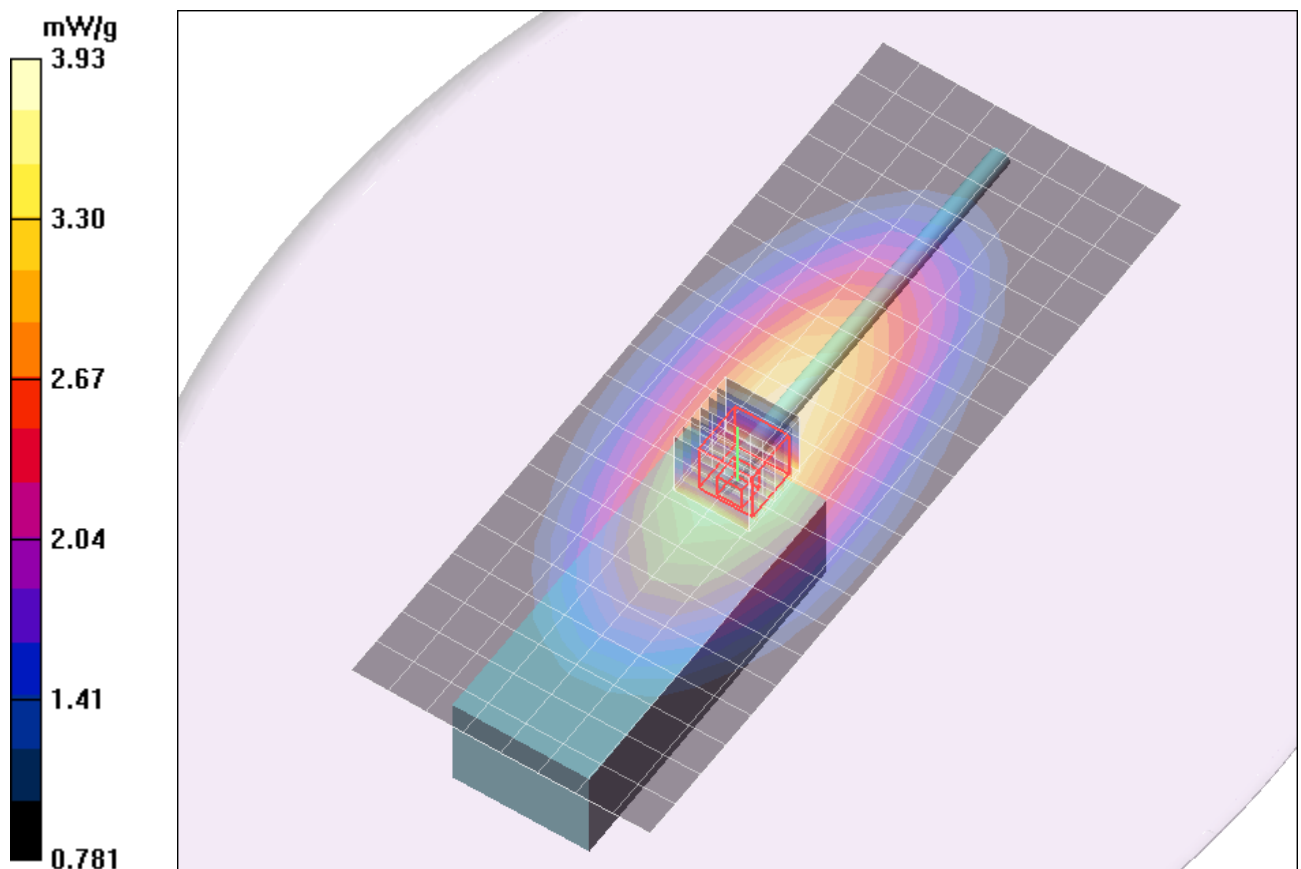


Fig. 3: SAR distribution for Simoco SDP660TU, mid channel, 459.075 MHz, body worn configuration, belt clip and remote speaker attached (May 08, 2013; Ambient Temperature: 22.1°C; Liquid Temperature: 21.7°C).

Test Laboratory: Imst GmbH, DASY Yellow (II); File Name: [SDP660 b4h 479Hi 1 clip hs.da4](#)

DUT: Simoco; Type: SDP660TU; Serial: 56KTU123800FZ

Program Name: DMR

Communication System: CW; Frequency: 479.925 MHz; Duty Cycle: 1:1

Medium parameters used (extrapolated): $f = 479.925$ MHz; $\sigma = 0.98$ mho/m; $\epsilon_r = 55.5$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6R - SN1669; ConvF(7.62, 7.62, 7.62); Calibrated: 19.02.2013
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn631; Calibrated: 20.09.2012
- Phantom: ELI 4; Type: ELI 4;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body Worn/Area Scan (9x22x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 3.89 mW/g

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

Reference Value = 59.0 V/m; Power Drift = -0.105 dB

Peak SAR (extrapolated) = 5.21 W/kg

SAR(1 g) = 3.56 mW/g; SAR(10 g) = 2.6 mW/g

Maximum value of SAR (measured) = 3.75 mW/g

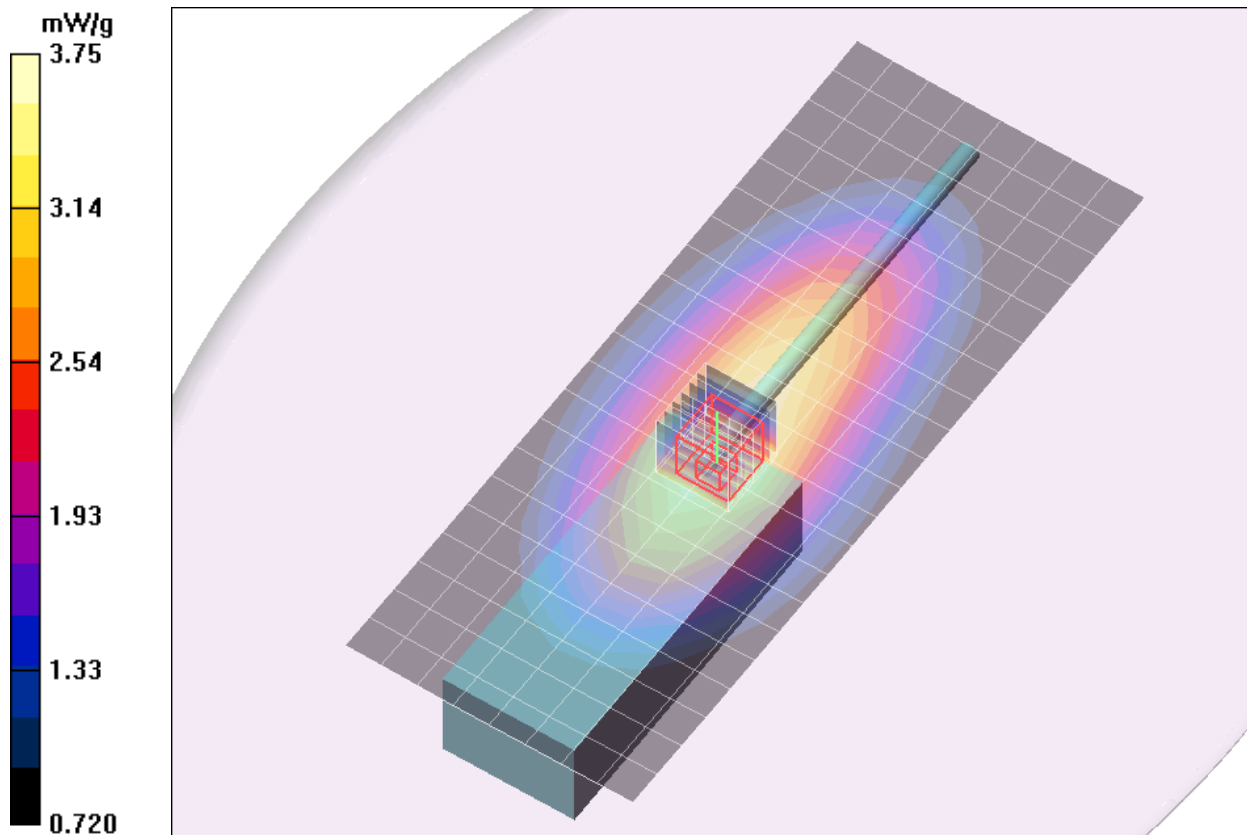


Fig. 4: SAR distribution for Simoco SDP660TU, high channel, 479.925 MHz, body worn configuration, belt clip and remote speaker attached (May 08, 2013; Ambient Temperature: 22.1°C; Liquid Temperature: 21.7°C).

2 SAR Distribution Plots, PTT Configuration Measurement

Test Laboratory: IMST GmbH, DASY Blue (I); File Name: [SDP660_b4hm_400Hi_PTT_25mm.da4](#)

DUT: Simoco; Type: SDP660TU; Serial: 56KTU123800FZ

Program Name: DMR

Communication System: CW; Frequency: 400.125 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 400.125$ MHz; $\sigma = 0.83$ mho/m; $\epsilon_r = 43$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6R - SN1669; ConvF(7.35, 7.35, 7.35); Calibrated: 19.02.2013

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

- Electronics: DAE4 Sn631; Calibrated: 20.09.2012

- Phantom: ELI 4; Type: ELI 4;

- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body Worn/Area Scan (9x23x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 4.90 mW/g

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

Reference Value = 86.6 V/m; Power Drift = -0.131 dB

Peak SAR (extrapolated) = 6.83 W/kg

SAR(1 g) = 5.28 mW/g; SAR(10 g) = 4.13 mW/g

Maximum value of SAR (measured) = 5.49 mW/g

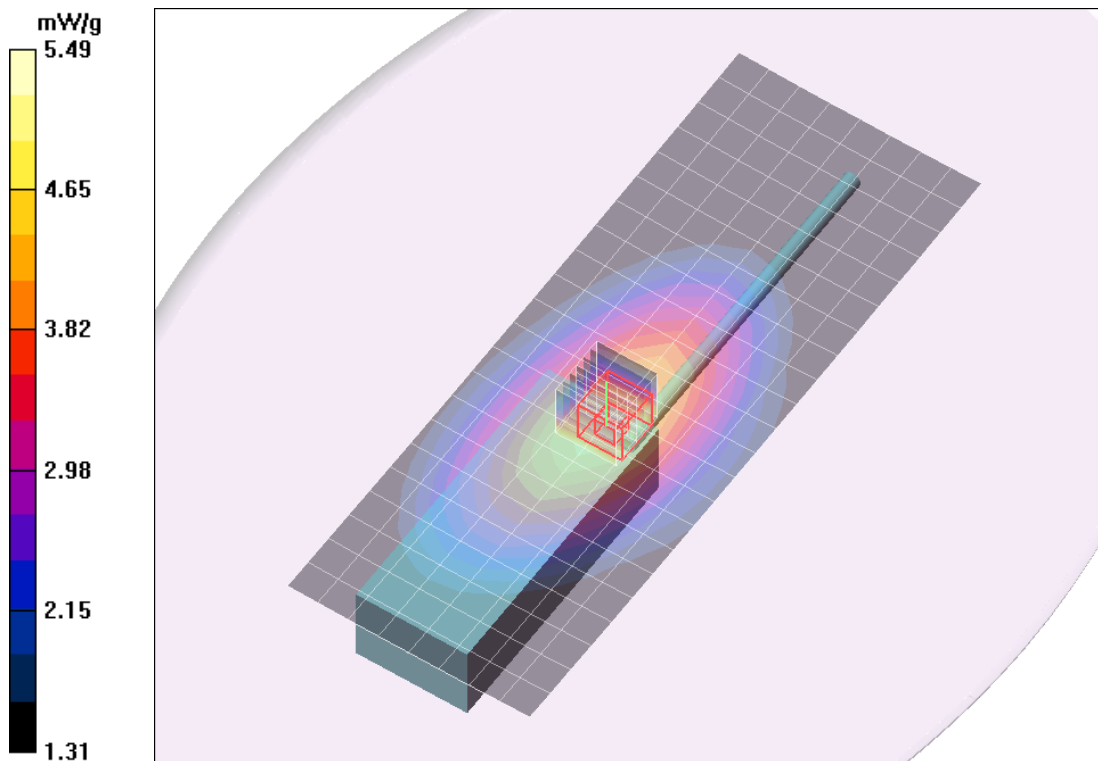


Fig. 5: SAR distribution for Simoco SDP660TU, low channel, 400.125 MHz, PTT configuration, 25 mm distance, belt clip attached (May 02, 2013; Ambient Temperature: 21.9°C; Liquid Temperature: 21.2°C).

Test Laboratory: IMST GmbH, DASY Blue (I); File Name: [SDP660_b4hm_412Hi_PTT_25mm.da4](#)

DUT: Simoco; Type: SDP660TU; Serial: 56KTU123800FZ

Program Name: DMR

Communication System: CW; Frequency: 412.95 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 412.95$ MHz; $\sigma = 0.83$ mho/m; $\epsilon_r = 42.7$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6R - SN1669; ConvF(7.35, 7.35, 7.35); Calibrated: 19.02.2013

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

- Electronics: DAE4 Sn631; Calibrated: 20.09.2012

- Phantom: ELI 4; Type: ELI 4;

- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body Worn/Area Scan (9x23x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 4.65 mW/g

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

Reference Value = 77.0 V/m; Power Drift = 0.148 dB

Peak SAR (extrapolated) = 6.61 W/kg

SAR(1 g) = 5.08 mW/g; SAR(10 g) = 3.97 mW/g

Maximum value of SAR (measured) = 5.29 mW/g

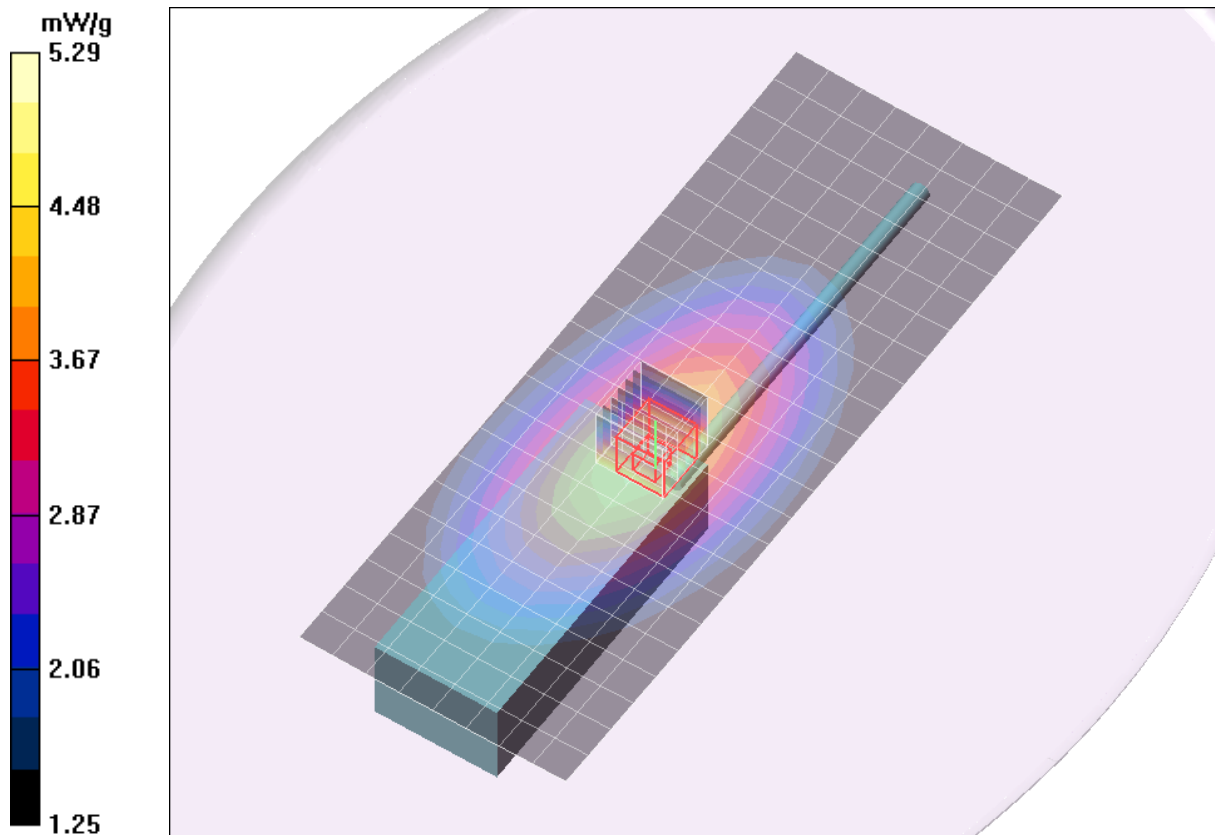


Fig. 6: SAR distribution for Simoco SDP660TU, mid channel, 412.950 MHz, PTT configuration, 25 mm distance, belt clip attached (May 02, 2013; Ambient Temperature: 21.9°C; Liquid Temperature: 21.2°C).

Test Laboratory: IMST GmbH, DASY Blue (I); File Name: [SDP660_b4hm_459Hi_PTT_25mm.da4](#)

DUT: Simoco; Type: SDP660TU; Serial: 56KTU123800FZ

Program Name: DMR

Communication System: CW; Frequency: 459.075 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 459.075$ MHz; $\sigma = 0.87$ mho/m; $\epsilon_r = 41.6$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6R - SN1669; ConvF(7.35, 7.35, 7.35); Calibrated: 19.02.2013
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn631; Calibrated: 20.09.2012
- Phantom: ELI 4; Type: ELI 4;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body Worn/Area Scan (9x23x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 3.30 mW/g

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

Reference Value = 61.2 V/m; Power Drift = 0.083 dB

Peak SAR (extrapolated) = 4.19 W/kg

SAR(1 g) = 3.18 mW/g; SAR(10 g) = 2.45 mW/g

Maximum value of SAR (measured) = 3.32 mW/g

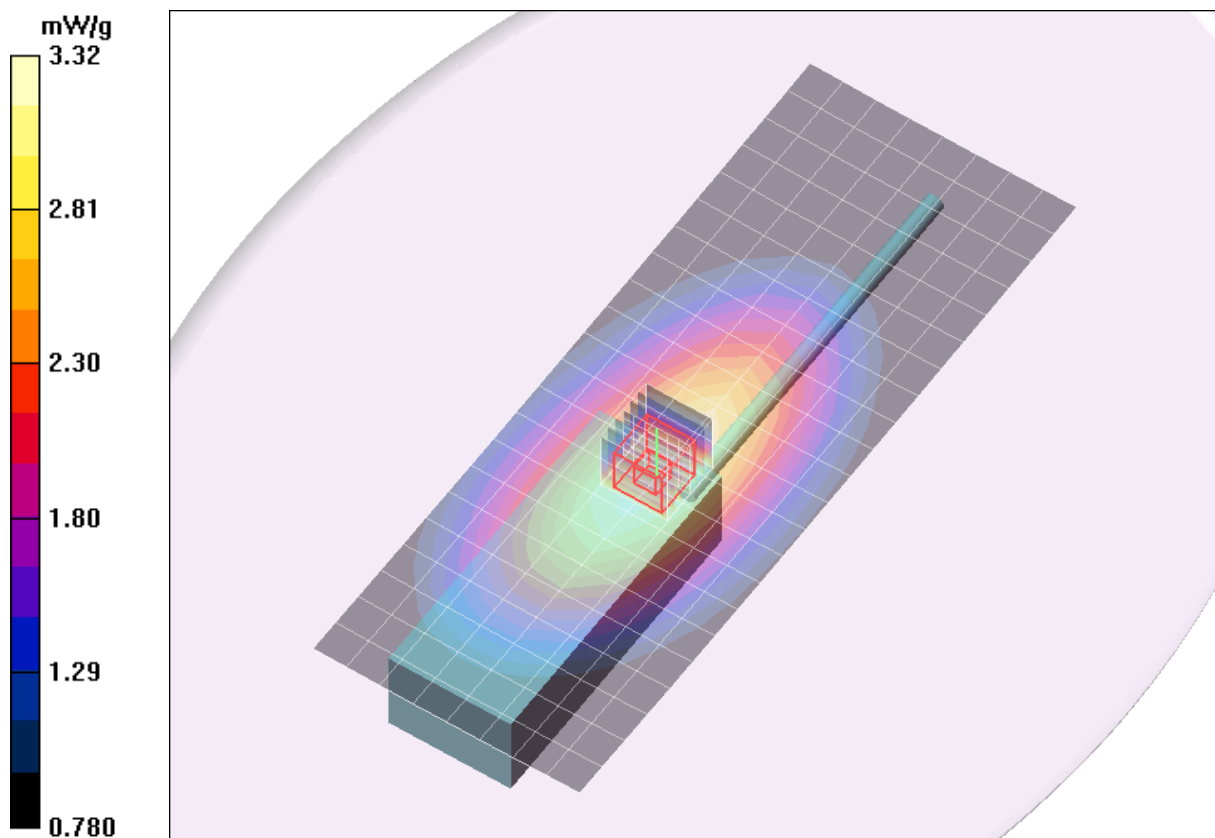


Fig. 7: SAR distribution for Simoco SDP660TU, mid channel, 459.075 MHz, PTT configuration, 25 mm distance, belt clip attached (May 02, 2013; Ambient Temperature: 21.9°C; Liquid Temperature: 21.2°C).

Test Laboratory: IMST GmbH, DASY Blue (I); File Name: [SDP660_b4hm_479Hi_PTT_25mm.da4](#)

DUT: Simoco; Type: SDP660TU; Serial: 56KTU123800FZ

Program Name: DMR

Communication System: CW; Frequency: 479.925 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 479.925$ MHz; $\sigma = 0.89$ mho/m; $\epsilon_r = 41.4$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6R - SN1669; ConvF(7.35, 7.35, 7.35); Calibrated: 19.02.2013

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

- Electronics: DAE4 Sn631; Calibrated: 20.09.2012

- Phantom: ELI 4; Type: ELI 4;

- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body Worn/Area Scan (9x23x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 2.88 mW/g

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

Reference Value = 57.5 V/m; Power Drift = -0.103 dB

Peak SAR (extrapolated) = 3.59 W/kg

SAR(1 g) = 2.72 mW/g; SAR(10 g) = 2.08 mW/g

Maximum value of SAR (measured) = 2.85 mW/g

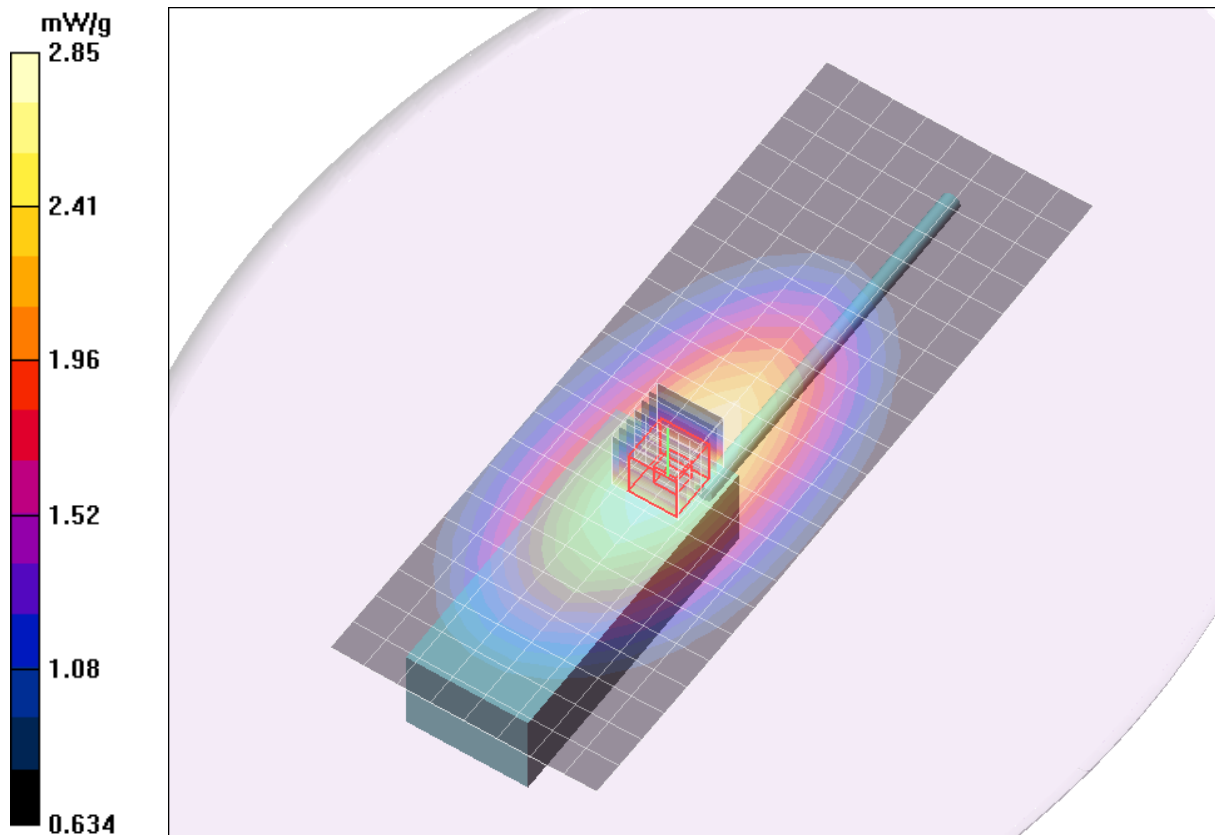


Fig. 8: SAR distribution for Simoco SDP660TU, high channel, 479.925 MHz, PTT configuration, 25 mm distance, belt clip attached (May 02, 2013; Ambient Temperature: 21.9°C; Liquid Temperature: 21.2°C).