



香港商立德國際商品試驗有限公司桃園分公司

Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch

APPENDIX A: TEST DATA

Product Name: Smart Phone ; Model Number: PG86300

Liquid Level Photo

Tissue 835MHz D=150mm



Tissue 1900MHz D=150mm



Date/Time: 2011/5/5 11:43:08

M01-Right Head-Cheek-GSM850-Ch190 / Bat-HT Energy 3.8VDC

Communication System: GSM850 ; Frequency: 836.6 MHz ; Duty Cycle: 1:8.3

Medium: HSL835 Medium parameters used: $f = 836.6 \text{ MHz}$; $\sigma = 0.92 \text{ mho/m}$; $\epsilon_r = 42.75$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Right Section ; DUT test position : Cheek ; Modulation type: GMSK

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(10.21, 10.21, 10.21); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Touch position - Middle/Area Scan (7x11x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$
Maximum value of SAR (measured) = 0.588 mW/g

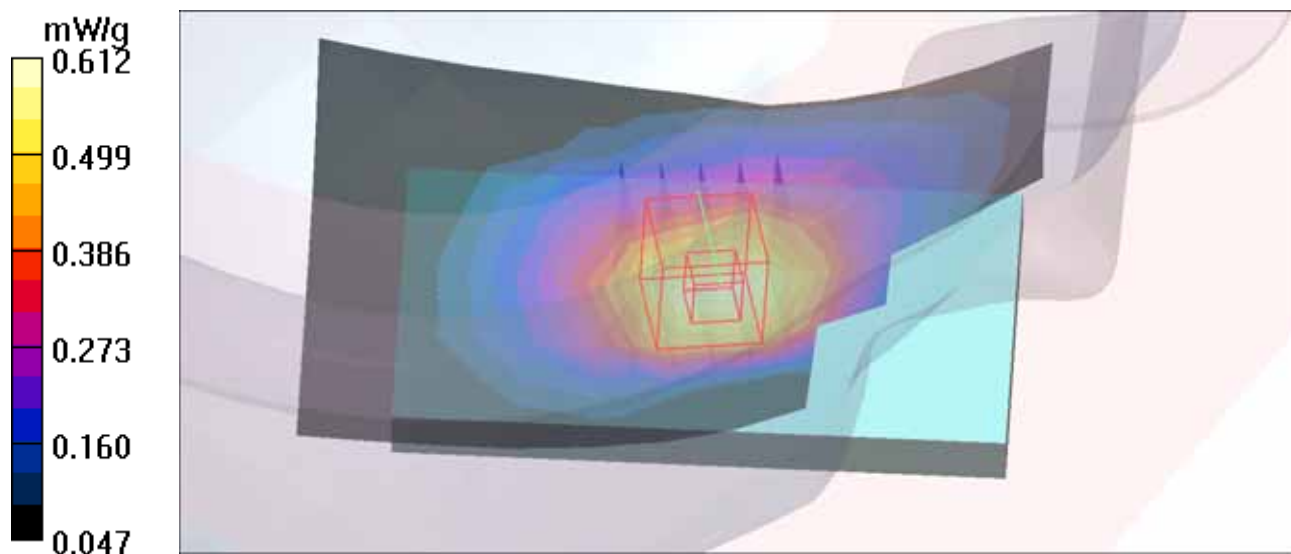
Touch position - Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 9.93 V/m; Power Drift = -0.009 dB

Peak SAR (extrapolated) = 0.683 W/kg

SAR(1 g) = 0.538 mW/g; SAR(10 g) = 0.388 mW/g

Maximum value of SAR (measured) = 0.612 mW/g



M02-Right Head-Tilt-GSM850-Ch190 / Bat-HT Energy 3.8VDC

Communication System: GSM850 ; Frequency: 836.6 MHz ; Duty Cycle: 1:8.3

Medium: HSL835 Medium parameters used: $f = 836.6 \text{ MHz}$; $\sigma = 0.92 \text{ mho/m}$; $\epsilon_r = 42.75$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Right Section ; DUT test position : Tilt ; Modulation type: GMSK

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(10.21, 10.21, 10.21); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

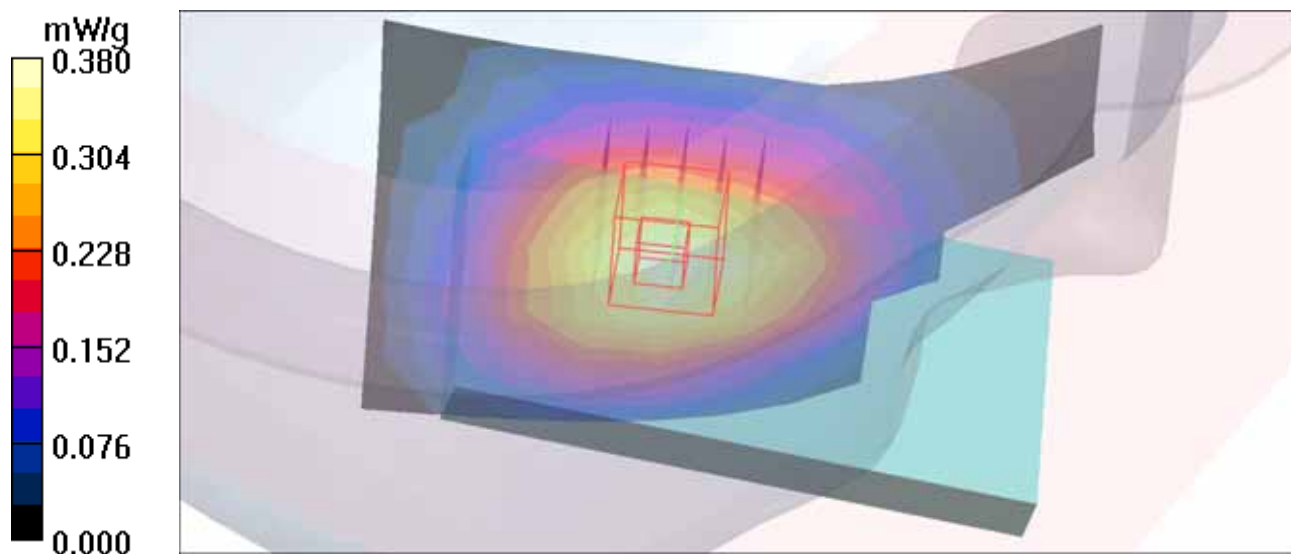
Tilt position - Middle/Area Scan (7x11x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$
Maximum value of SAR (measured) = 0.380 mW/g**Tilt position - Middle/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 16.1 V/m; Power Drift = -0.059 dB

Peak SAR (extrapolated) = 0.392 W/kg

SAR(1 g) = 0.321 mW/g; SAR(10 g) = 0.245 mW/g

Maximum value of SAR (measured) = 0.363 mW/g



Date/Time: 2011/5/5 01:17:36

M03-Left Head-Cheek-GSM850-Ch190 / Bat-HT Energy 3.8VDC

Communication System: GSM850 ; Frequency: 836.6 MHz ; Duty Cycle: 1:8.3

Medium: HSL835 Medium parameters used: $f = 836.6 \text{ MHz}$; $\sigma = 0.92 \text{ mho/m}$; $\epsilon_r = 42.75$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Left Section ; DUT test position : Cheek ; Modulation type: GMSK

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(10.21, 10.21, 10.21); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

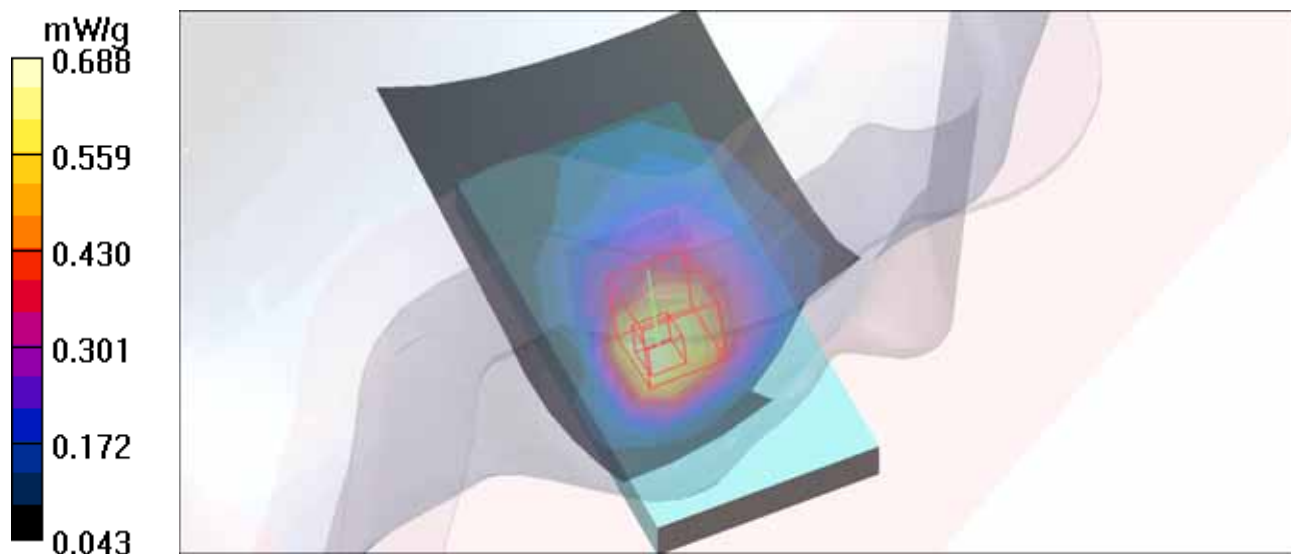
Touch position - Middle/Area Scan (7x11x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$
Maximum value of SAR (measured) = 0.629 mW/g**Touch position - Middle/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 9.98 V/m; Power Drift = -0.025 dB

Peak SAR (extrapolated) = 0.838 W/kg

SAR(1 g) = 0.587 mW/g; SAR(10 g) = 0.408 mW/g

Maximum value of SAR (measured) = 0.688 mW/g



M04-Left Head-Tilt-GSM850-Ch190 / Bat-HT Energy 3.8VDC

Communication System: GSM850 ; Frequency: 836.6 MHz ; Duty Cycle: 1:8.3

Medium: HSL835 Medium parameters used: $f = 836.6 \text{ MHz}$; $\sigma = 0.92 \text{ mho/m}$; $\epsilon_r = 42.75$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Left Section ; DUT test position : Tilt ; Modulation type: GMSK

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(10.21, 10.21, 10.21); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Tilt position - Middle/Area Scan (7x11x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 0.299 mW/g

Tilt position - Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 13.8 V/m; Power Drift = -0.122 dB

Peak SAR (extrapolated) = 0.322 W/kg

SAR(1 g) = 0.264 mW/g; SAR(10 g) = 0.205 mW/g

Maximum value of SAR (measured) = 0.295 mW/g

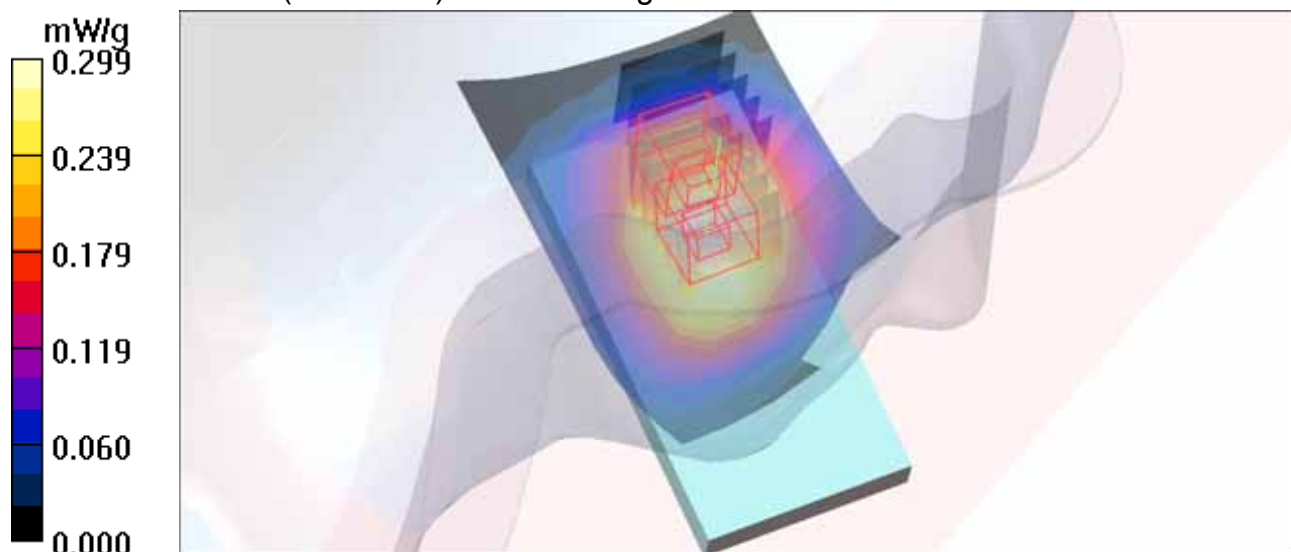
Tilt position - Middle/Zoom Scan (5x5x7)/Cube 1: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 13.8 V/m; Power Drift = -0.122 dB

Peak SAR (extrapolated) = 0.307 W/kg

SAR(1 g) = 0.230 mW/g; SAR(10 g) = 0.161 mW/g

Maximum value of SAR (measured) = 0.281 mW/g



M05-Right Head-Cheek-GSM850-Ch190 / Bat-HT Energy 3.7VDC

Communication System: GSM850 ; Frequency: 836.6 MHz ; Duty Cycle: 1:8.3

Medium: HSL835 Medium parameters used: $f = 836.6 \text{ MHz}$; $\sigma = 0.92 \text{ mho/m}$; $\epsilon_r = 42.75$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Right Section ; DUT test position : Cheek ; Modulation type: GMSK

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(10.21, 10.21, 10.21); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Touch position - Middle/Area Scan (7x11x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$
Maximum value of SAR (measured) = 0.652 mW/g

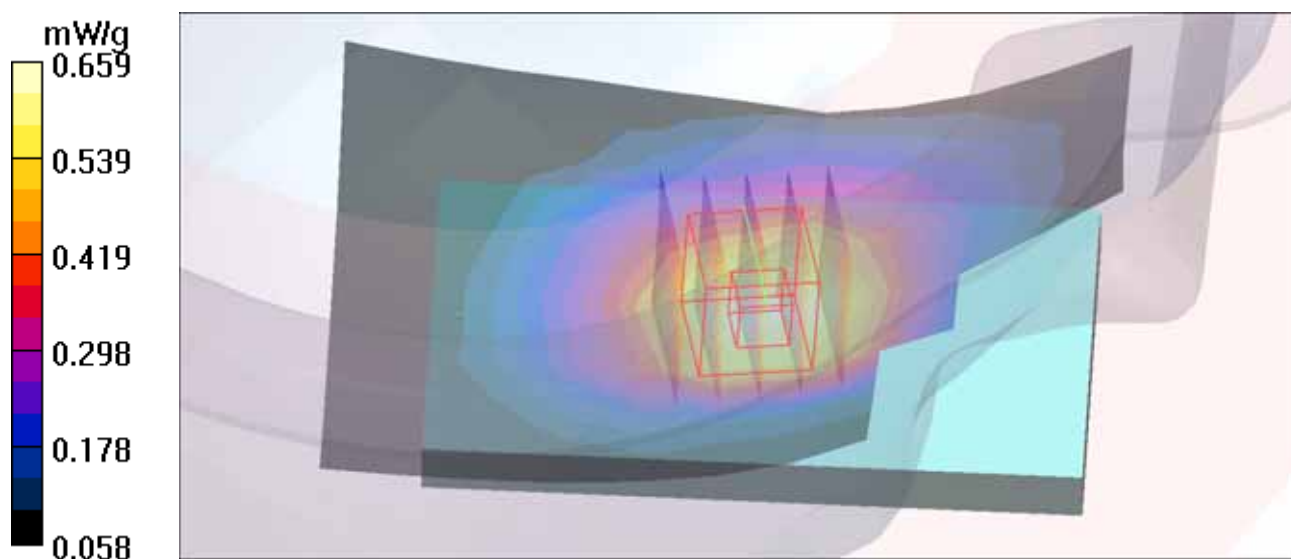
Touch position - Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 11.4 V/m; Power Drift = -0.103 dB

Peak SAR (extrapolated) = 0.728 W/kg

SAR(1 g) = 0.582 mW/g; SAR(10 g) = 0.427 mW/g

Maximum value of SAR (measured) = 0.659 mW/g



M06-Right Head-Tilt-GSM850-Ch190 / Bat-HT Energy 3.7VDC

Communication System: GSM850 ; Frequency: 836.6 MHz ; Duty Cycle: 1:8.3

Medium: HSL835 Medium parameters used: $f = 836.6$ MHz; $\sigma = 0.92$ mho/m; $\epsilon_r = 42.75$; $\rho = 1000$ kg/m³

Phantom section: Right Section ; DUT test position : Tilt ; Modulation type: GMSK

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(10.21, 10.21, 10.21); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Tilt position - Middle/Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.411 mW/g

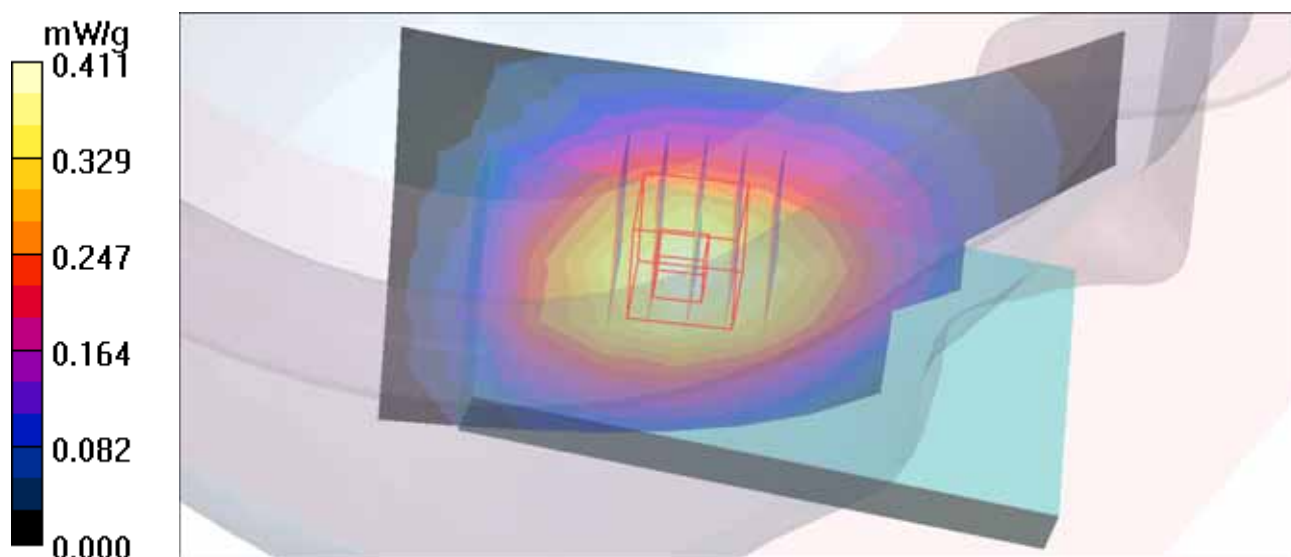
Tilt position - Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 15.6 V/m; Power Drift = -0.180 dB

Peak SAR (extrapolated) = 0.432 W/kg

SAR(1 g) = 0.351 mW/g; SAR(10 g) = 0.267 mW/g

Maximum value of SAR (measured) = 0.399 mW/g



M07-Left Head-Cheek-GSM850-Ch190 / Bat-HT Energy 3.7VDC

Communication System: GSM850 ; Frequency: 836.6 MHz ; Duty Cycle: 1:8.3

Medium: HSL835 Medium parameters used: $f = 836.6 \text{ MHz}$; $\sigma = 0.92 \text{ mho/m}$; $\epsilon_r = 42.75$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Left Section ; DUT test position : Cheek ; Modulation type: GMSK

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(10.21, 10.21, 10.21); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

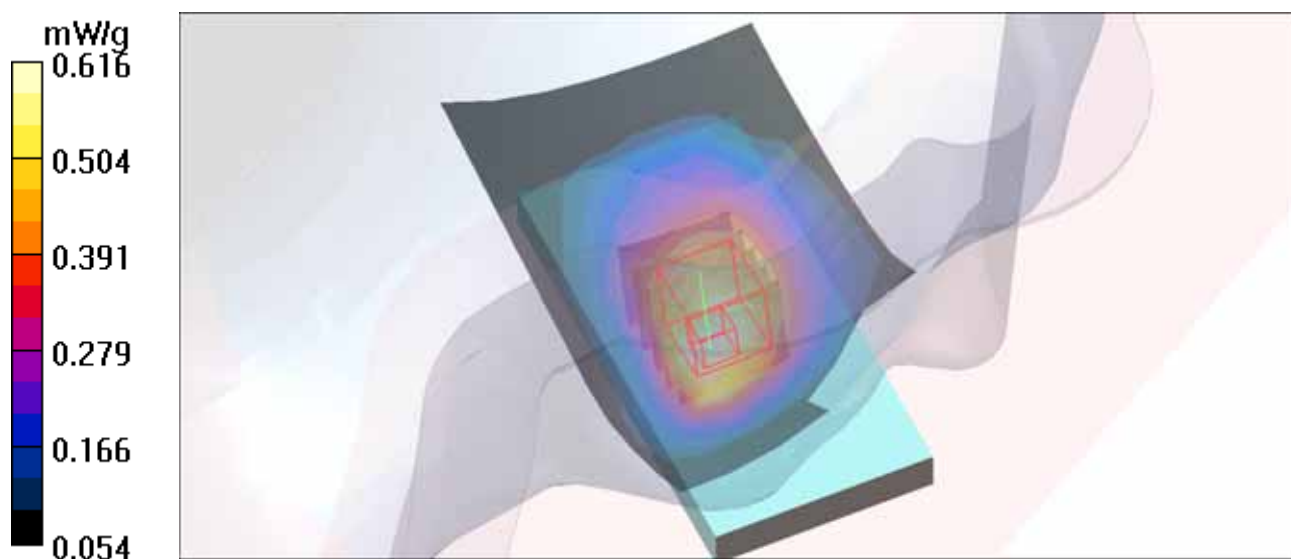
Touch position - Middle/Area Scan (7x11x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$
Maximum value of SAR (measured) = 0.598 mW/g**Touch position - Middle/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 13.8 V/m; Power Drift = 0.185 dB

Peak SAR (extrapolated) = 0.681 W/kg

SAR(1 g) = 0.529 mW/g; SAR(10 g) = 0.392 mW/g

Maximum value of SAR (measured) = 0.616 mW/g



M08-Left Head-Tilt-GSM850-Ch190 / Bat-HT Energy 3.7VDC

Communication System: GSM850 ; Frequency: 836.6 MHz ; Duty Cycle: 1:8.3

Medium: HSL835 Medium parameters used: $f = 836.6 \text{ MHz}$; $\sigma = 0.92 \text{ mho/m}$; $\epsilon_r = 42.75$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Left Section ; DUT test position : Tilt ; Modulation type: GMSK

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(10.21, 10.21, 10.21); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Tilt position - Middle/Area Scan (7x11x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$
Maximum value of SAR (measured) = 0.292 mW/g

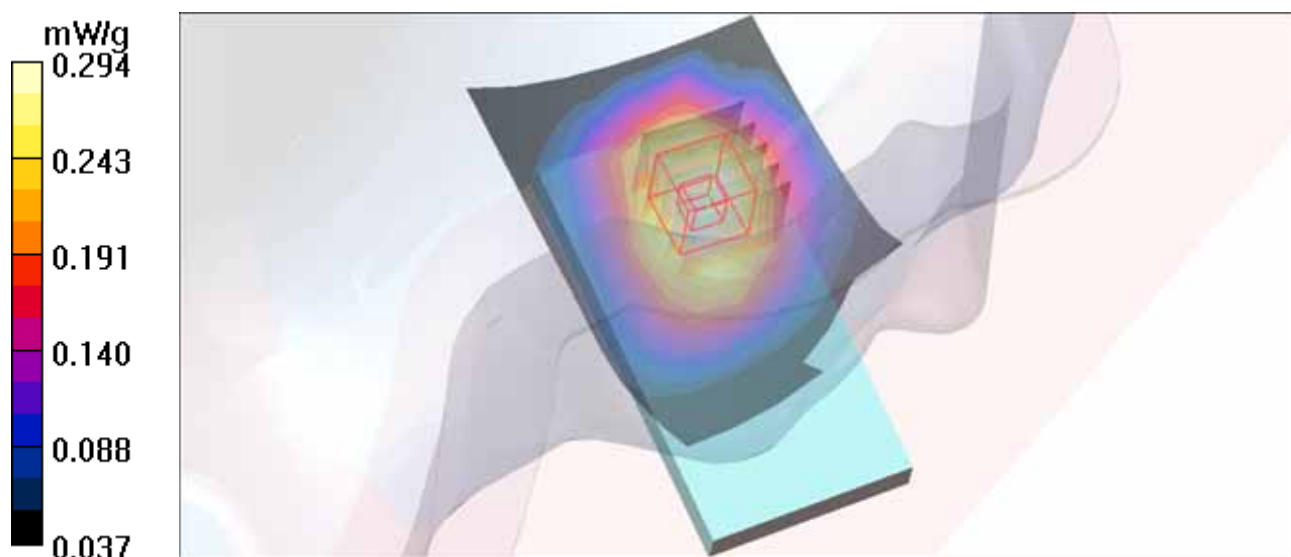
Tilt position - Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 16.9 V/m; Power Drift = -0.053 dB

Peak SAR (extrapolated) = 0.324 W/kg

SAR(1 g) = 0.257 mW/g; SAR(10 g) = 0.196 mW/g

Maximum value of SAR (measured) = 0.294 mW/g



M09-Back-GSM850-Ch190 / Bat-HT Energy 3.8VDC

Communication System: GSM850 ; Frequency: 836.6 MHz ; Duty Cycle: 1:8.3 ; Modulation type: GMSK

Medium: MSL835 Medium parameters used: $f = 836.6 \text{ MHz}$; $\sigma = 0.99 \text{ mho/m}$; $\epsilon_r = 56.73$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section ; Separation distance : 10 mm (The Back side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(10.32, 10.32, 10.32); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body Position - Mid/Area Scan (7x11x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 0.870 mW/g

Body Position - Mid/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 26.3 V/m; Power Drift = -0.084 dB

Peak SAR (extrapolated) = 0.993 W/kg

SAR(1 g) = 0.743 mW/g; SAR(10 g) = 0.541 mW/g

Maximum value of SAR (measured) = 0.879 mW/g

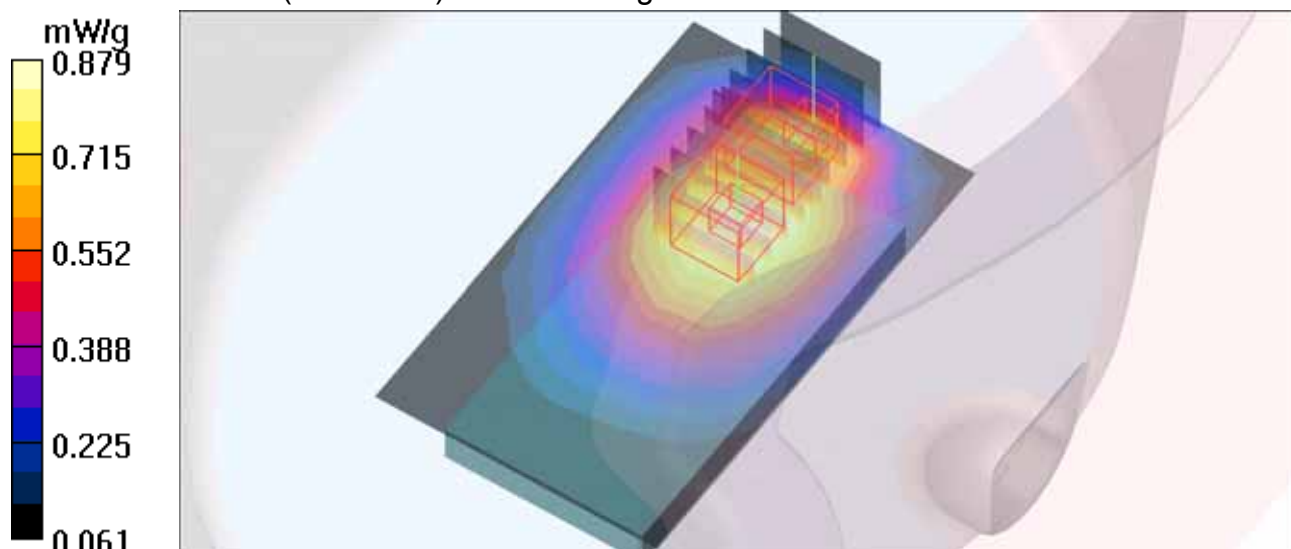
Body Position - Mid/Zoom Scan (5x5x7)/Cube 1: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 26.3 V/m; Power Drift = -0.084 dB

Peak SAR (extrapolated) = 0.991 W/kg

SAR(1 g) = 0.571 mW/g; SAR(10 g) = 0.360 mW/g

Maximum value of SAR (measured) = 0.738 mW/g



M10-Back-GPRS850 TS1-Ch190 / Bat-HT Energy 3.8VDC

Communication System: GPRS850 ; Frequency: 836.6 MHz ; Duty Cycle: 1:8.3 ; Modulation type: GMSK / UL 1 time slot

Medium: MSL835 Medium parameters used: $f = 836.6 \text{ MHz}$; $\sigma = 0.99 \text{ mho/m}$; $\epsilon_r = 56.73$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section ; Separation distance : 10 mm (The Back side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(10.32, 10.32, 10.32); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body Position - Mid/Area Scan (7x11x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 0.877 mW/g

Body Position - Mid/Zoom Scan(5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 27.7 V/m; Power Drift = -0.117 dB

Peak SAR (extrapolated) = 0.999 W/kg

SAR(1 g) = 0.758 mW/g; SAR(10 g) = 0.555 mW/g

Maximum value of SAR (measured) = 0.888 mW/g

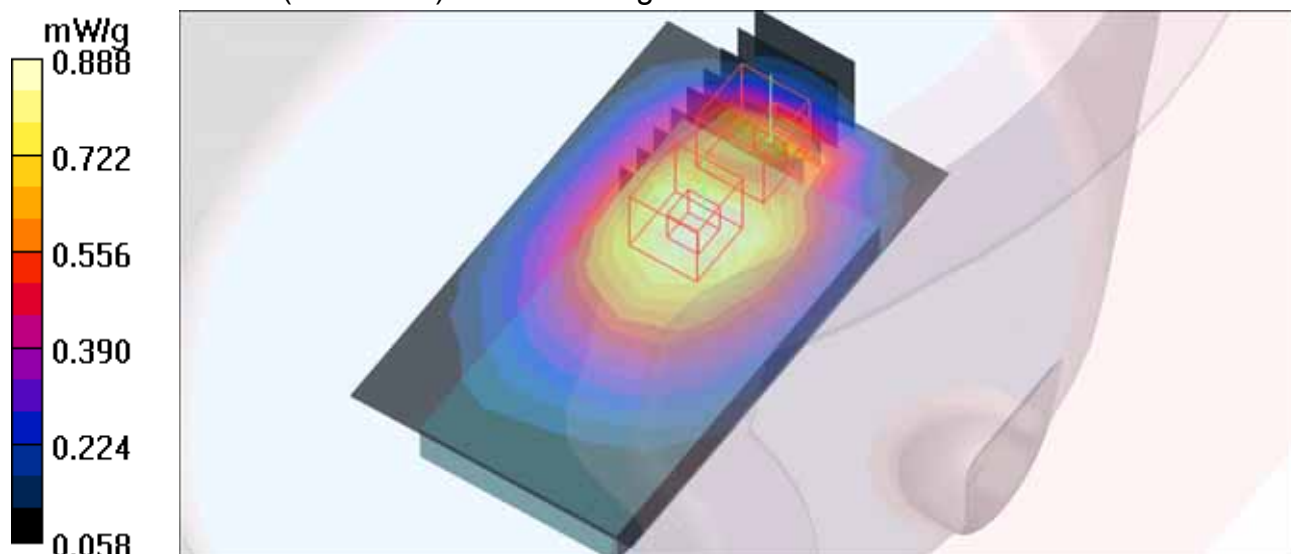
Body Position - Mid/Zoom Scan(5x5x7)/Cube 1: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 27.7 V/m; Power Drift = -0.117 dB

Peak SAR (extrapolated) = 0.942 W/kg

SAR(1 g) = 0.551 mW/g; SAR(10 g) = 0.352 mW/g

Maximum value of SAR (measured) = 0.750 mW/g



Date/Time: 2011/5/6 08:18:11

M11-Back-GPRS850 TS2-Ch128 / Bat-HT Energy 3.8VDC

Communication System: GPRS850 ; Frequency: 824.2 MHz ; Duty Cycle: 1:4 ; Modulation type: GMSK / UL 2 time slots

Medium: MSL835 Medium parameters used: $f = 824.2 \text{ MHz}$; $\sigma = 0.98 \text{ mho/m}$; $\epsilon_r = 57.04$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section ; Separation distance : 10 mm (The Back side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(10.32, 10.32, 10.32); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body Position - Low /Area Scan (7x11x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 0.782 mW/g

Body Position - Low /Zoom Scan(5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 25.2 V/m; Power Drift = -0.118 dB

Peak SAR (extrapolated) = 0.891 W/kg

SAR(1 g) = 0.665 mW/g; SAR(10 g) = 0.482 mW/g

Maximum value of SAR (measured) = 0.784 mW/g

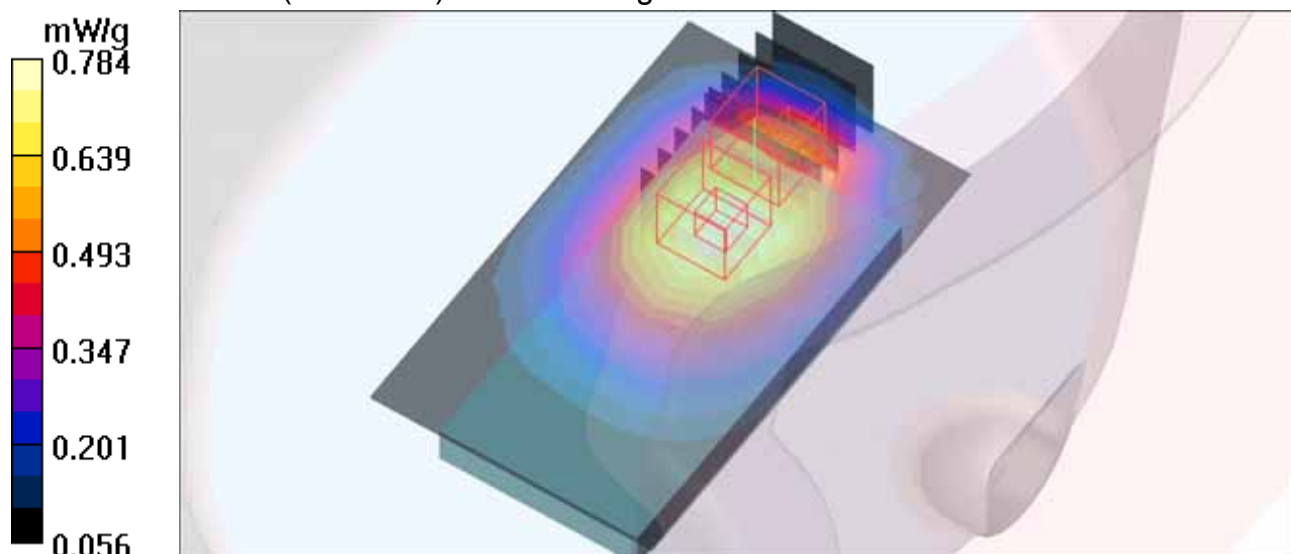
Body Position - Low /Zoom Scan(5x5x7)/Cube 1: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 25.2 V/m; Power Drift = -0.118 dB

Peak SAR (extrapolated) = 0.774 W/kg

SAR(1 g) = 0.460 mW/g; SAR(10 g) = 0.318 mW/g

Maximum value of SAR (measured) = 0.627 mW/g



M11-Back-GPRS850 TS2-Ch190 / Bat-HT Energy 3.8VDC

Communication System: GPRS850 ; Frequency: 836.6 MHz ; Duty Cycle: 1:4 ; Modulation type: GMSK / UL 2 time slots

Medium: MSL835 Medium parameters used: $f = 836.6 \text{ MHz}$; $\sigma = 0.99 \text{ mho/m}$; $\epsilon_r = 56.73$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section ; Separation distance : 10 mm (The Back side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(10.32, 10.32, 10.32); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body Position - Mid/Area Scan (7x11x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 0.954 mW/g

Body Position - Mid/Zoom Scan(5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 28.1 V/m; Power Drift = -0.023 dB

Peak SAR (extrapolated) = 1.12 W/kg

SAR(1 g) = 0.825 mW/g; SAR(10 g) = 0.595 mW/g

Maximum value of SAR (measured) = 0.983 mW/g

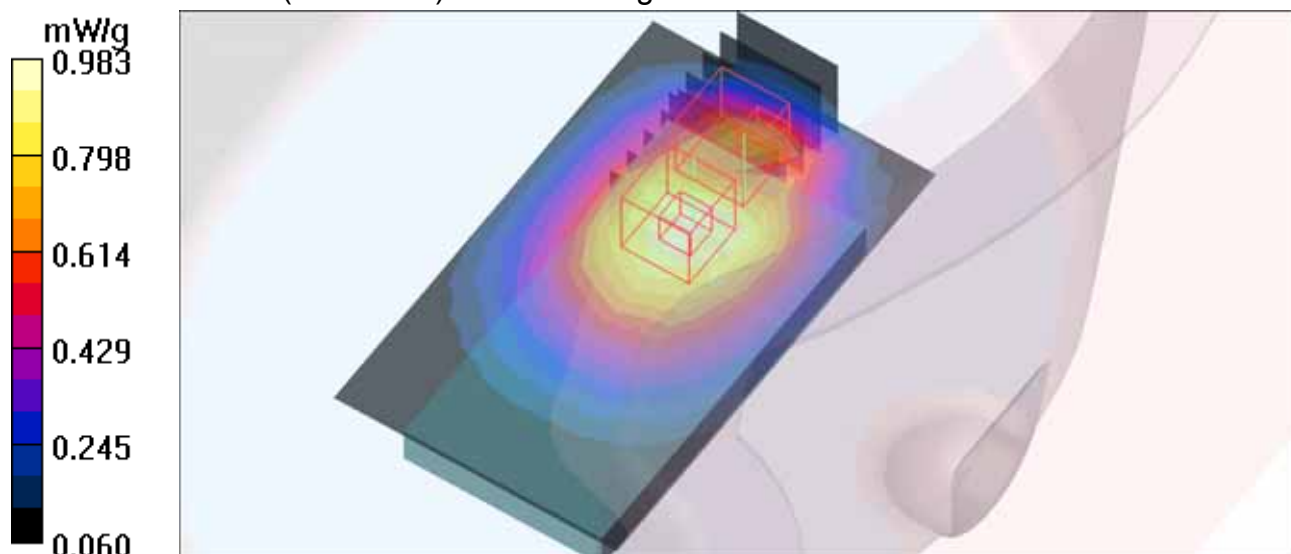
Body Position - Mid/Zoom Scan(5x5x7)/Cube 1: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 28.1 V/m; Power Drift = -0.023 dB

Peak SAR (extrapolated) = 0.959 W/kg

SAR(1 g) = 0.553 mW/g; SAR(10 g) = 0.372 mW/g

Maximum value of SAR (measured) = 0.754 mW/g



M11-Back-GPRS850 TS2-Ch251 / Bat-HT Energy 3.8VDC

Communication System: GPRS850 ; Frequency: 848.8 MHz ; Duty Cycle: 1:4 ; Modulation type: GMSK / UL 2 time slots

Medium: MSL835 Medium parameters used: $f = 848.8 \text{ MHz}$; $\sigma = 1 \text{ mho/m}$; $\epsilon_r = 56.62$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section ; Separation distance : 10 mm (The Back side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(10.32, 10.32, 10.32); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body Position - High /Area Scan (7x11x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 0.985 mW/g

Body Position - High /Zoom Scan(5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 29.1 V/m; Power Drift = 0.069 dB

Peak SAR (extrapolated) = 1.18 W/kg

SAR(1 g) = 0.869 mW/g; SAR(10 g) = 0.628 mW/g

Maximum value of SAR (measured) = 1.04 mW/g

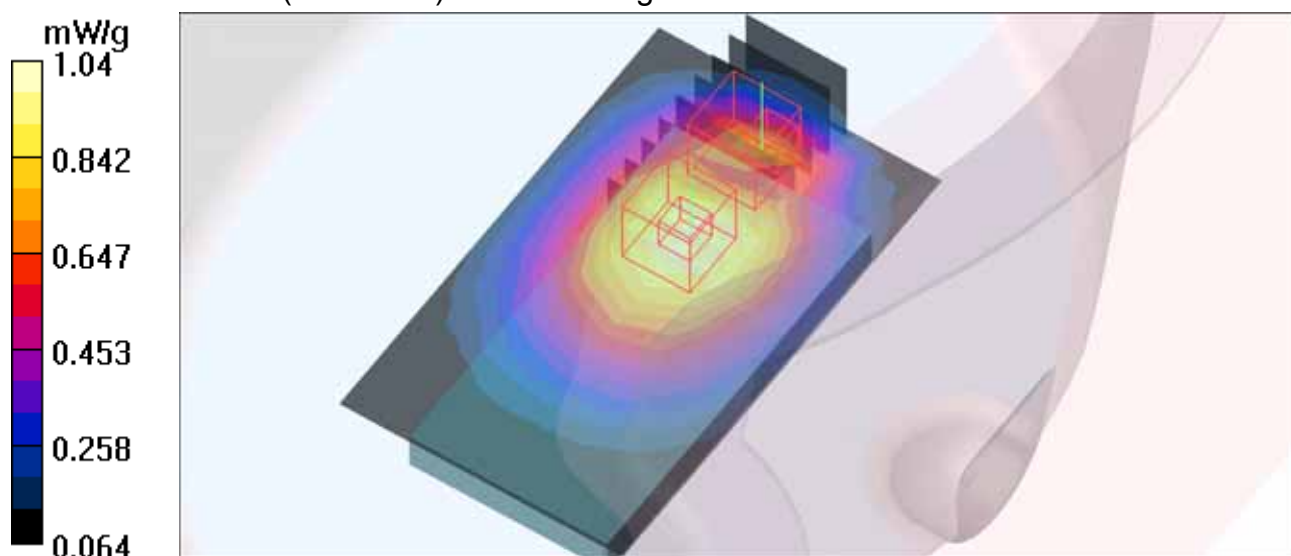
Body Position - High /Zoom Scan(5x5x7)/Cube 1: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 29.1 V/m; Power Drift = 0.069 dB

Peak SAR (extrapolated) = 1.000 W/kg

SAR(1 g) = 0.574 mW/g; SAR(10 g) = 0.367 mW/g

Maximum value of SAR (measured) = 0.786 mW/g



M12-Back-GPRS850 TS3-Ch190 / Bat-HT Energy 3.8VDC

Communication System: GPRS850 ; Frequency: 836.6 MHz ; Duty Cycle: 1:2.67 ; Modulation type: GMSK / UL 3 time slots

Medium: MSL835 Medium parameters used: $f = 836.6 \text{ MHz}$; $\sigma = 0.99 \text{ mho/m}$; $\epsilon_r = 56.73$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section ; Separation distance : 10 mm (The Back side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(10.32, 10.32, 10.32); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body Position - Mid/Area Scan (7x11x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 0.834 mW/g

Body Position - Mid/Zoom Scan(5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 28.2 V/m; Power Drift = -0.078 dB

Peak SAR (extrapolated) = 0.918 W/kg

SAR(1 g) = 0.702 mW/g; SAR(10 g) = 0.521 mW/g

Maximum value of SAR (measured) = 0.820 mW/g

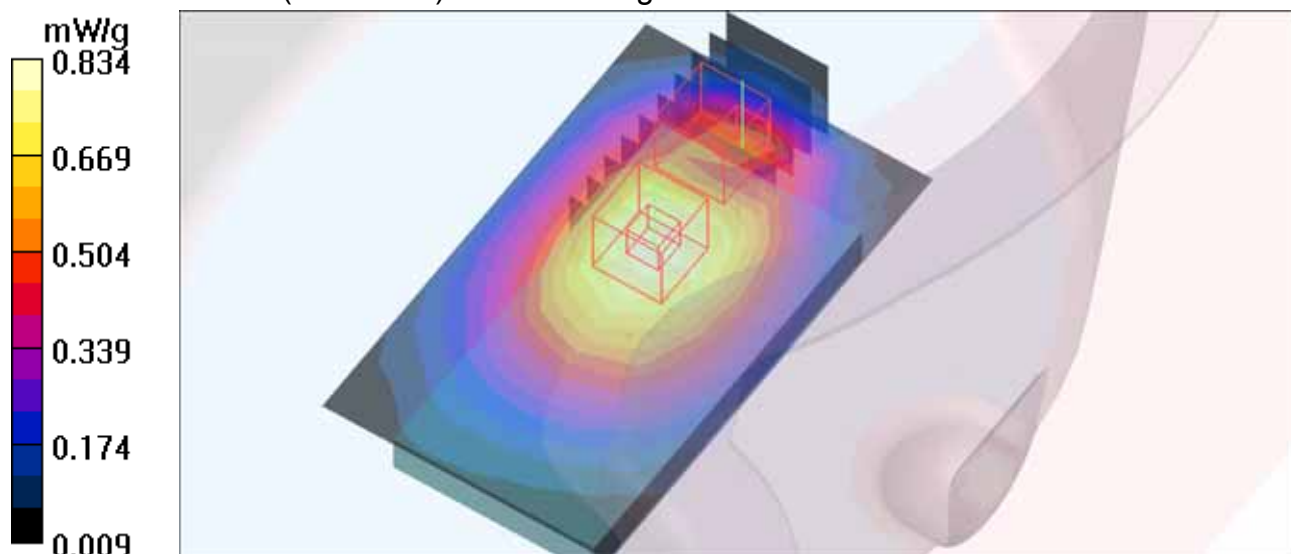
Body Position - Mid/Zoom Scan(5x5x7)/Cube 1: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 28.2 V/m; Power Drift = -0.078 dB

Peak SAR (extrapolated) = 0.737 W/kg

SAR(1 g) = 0.440 mW/g; SAR(10 g) = 0.295 mW/g

Maximum value of SAR (measured) = 0.596 mW/g



M13-Back-GPRS850 TS4-Ch190 / Bat-HT Energy 3.8VDC

Communication System: GPRS850 ; Frequency: 836.6 MHz ; Duty Cycle: 1:2 ; Modulation type: GMSK / UL 4 time slots

Medium: MSL835 Medium parameters used: $f = 836.6 \text{ MHz}$; $\sigma = 0.99 \text{ mho/m}$; $\epsilon_r = 56.73$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section ; Separation distance : 10 mm (The Back side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(10.32, 10.32, 10.32); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body Position - Mid/Area Scan (7x11x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 0.791 mW/g

Body Position - Mid/Zoom Scan(5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 27.0 V/m; Power Drift = -0.022 dB

Peak SAR (extrapolated) = 0.905 W/kg

SAR(1 g) = 0.675 mW/g; SAR(10 g) = 0.491 mW/g

Maximum value of SAR (measured) = 0.792 mW/g

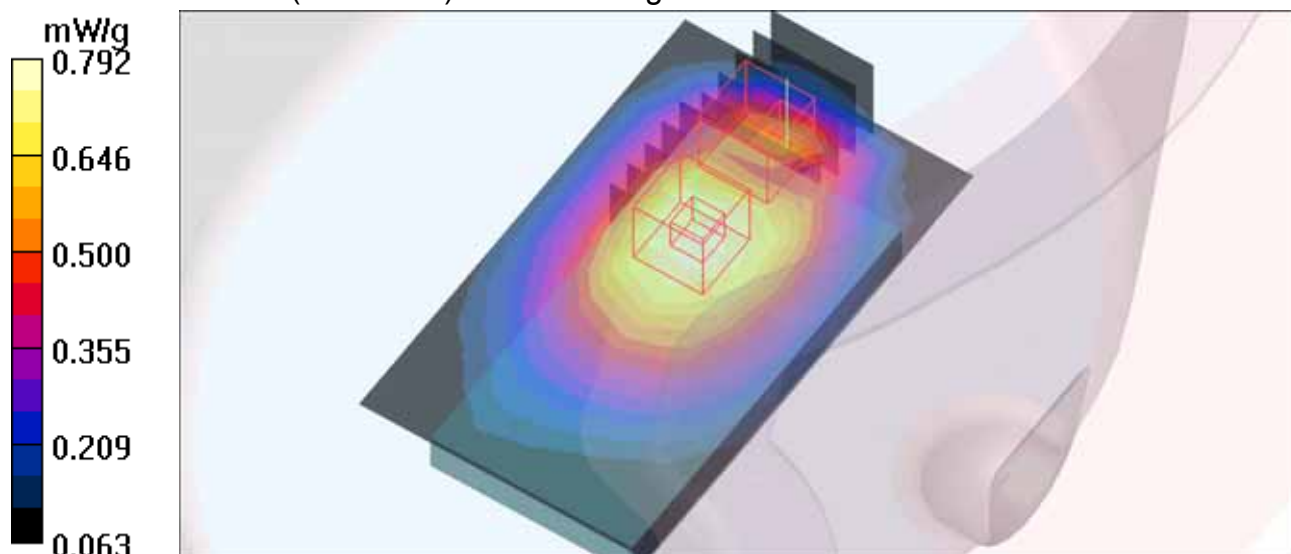
Body Position - Mid/Zoom Scan(5x5x7)/Cube 1: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 27.0 V/m; Power Drift = -0.022 dB

Peak SAR (extrapolated) = 0.789 W/kg

SAR(1 g) = 0.458 mW/g; SAR(10 g) = 0.296 mW/g

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



M14-Back-GSM850-Ch128 / Bat-HT Energy 3.7VDC

Communication System: GSM850 ; Frequency: 824.2 MHz ; Duty Cycle: 1:8.3 ; Modulation type: GMSK

Medium: MSL835 Medium parameters used: $f = 824.2 \text{ MHz}$; $\sigma = 0.98 \text{ mho/m}$; $\epsilon_r = 57.04$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section ; Separation distance : 10 mm (The Back side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(10.32, 10.32, 10.32); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body Position - Low /Area Scan (7x11x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 0.959 mW/g

Body Position - Low /Zoom Scan(5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 28.8 V/m; Power Drift = -0.158 dB

Peak SAR (extrapolated) = 0.999 W/kg

SAR(1 g) = 0.749 mW/g; SAR(10 g) = 0.549 mW/g

Maximum value of SAR (measured) = 0.888 mW/g

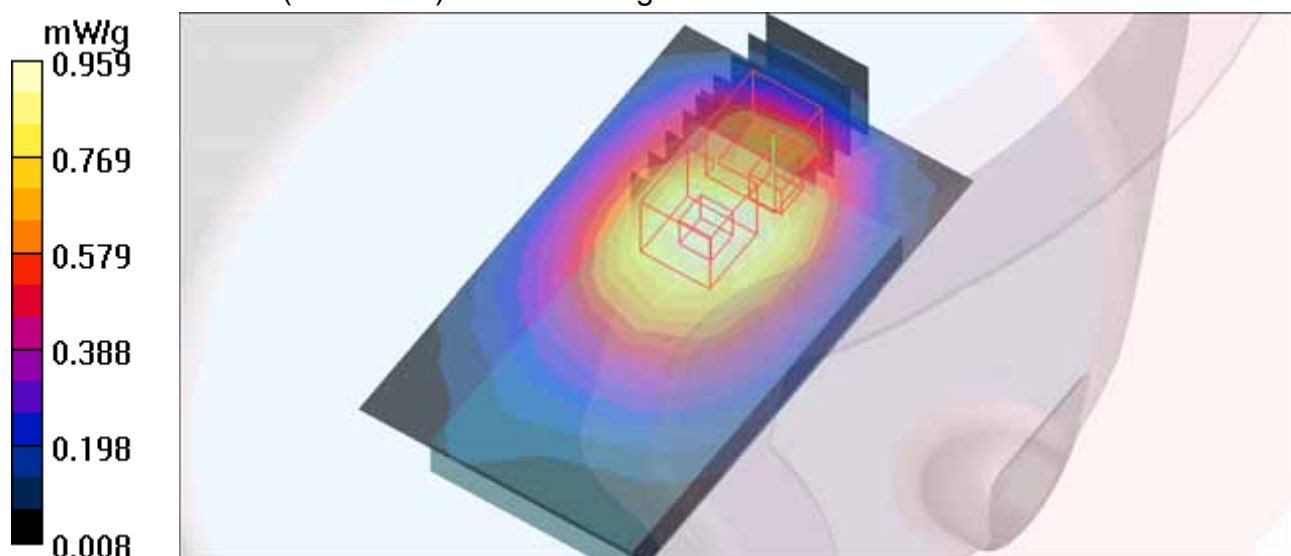
Body Position - Low /Zoom Scan(5x5x7)/Cube 1: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 28.8 V/m; Power Drift = -0.158 dB

Peak SAR (extrapolated) = 0.844 W/kg

SAR(1 g) = 0.512 mW/g; SAR(10 g) = 0.342 mW/g

Maximum value of SAR (measured) = 0.719 mW/g



M14-Back-GSM850-Ch190 / Bat-HT Energy 3.7VDC

Communication System: GSM850 ; Frequency: 836.6 MHz ; Duty Cycle: 1:8.3 ; Modulation type: GMSK

Medium: MSL835 Medium parameters used: $f = 836.6 \text{ MHz}$; $\sigma = 0.99 \text{ mho/m}$; $\epsilon_r = 56.73$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section ; Separation distance : 10 mm (The Back side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(10.32, 10.32, 10.32); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body Position - Mid/Area Scan (7x11x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 0.868 mW/g

Body Position - Mid/Zoom Scan(5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 29.0 V/m; Power Drift = -0.076 dB

Peak SAR (extrapolated) = 1.10 W/kg

SAR(1 g) = 0.824 mW/g; SAR(10 g) = 0.604 mW/g

Maximum value of SAR (measured) = 0.968 mW/g

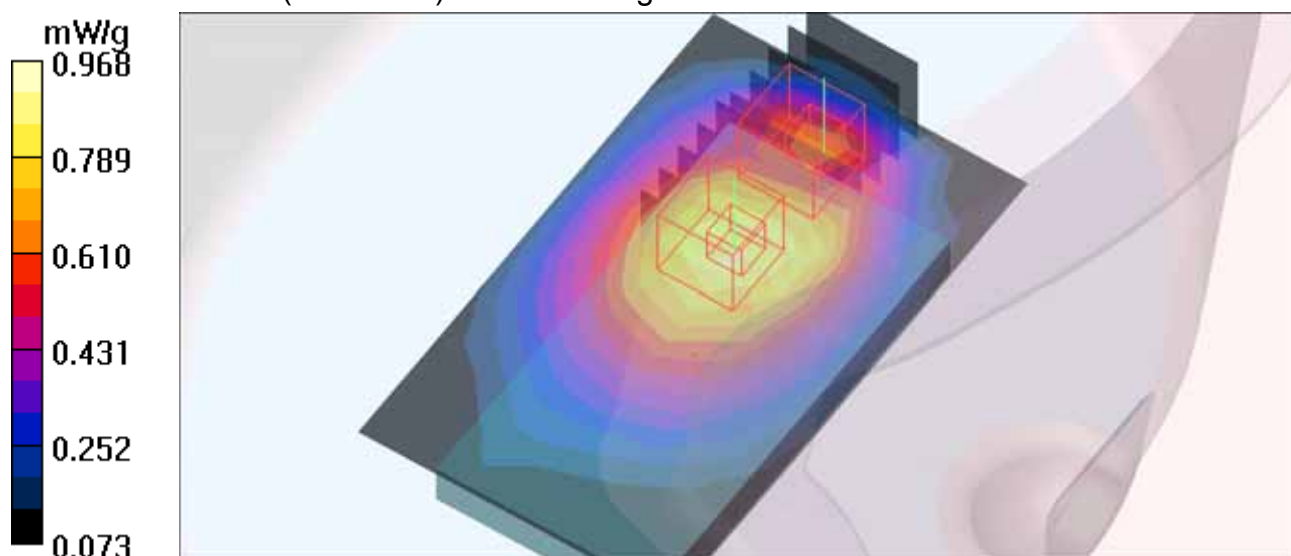
Body Position - Mid/Zoom Scan(5x5x7)/Cube 1: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 29.0 V/m; Power Drift = -0.076 dB

Peak SAR (extrapolated) = 1.00 W/kg

SAR(1 g) = 0.590 mW/g; SAR(10 g) = 0.376 mW/g

Maximum value of SAR (measured) = 0.804 mW/g



M14-Back-GSM850-Ch251 / Bat-HT Energy 3.7VDC

Communication System: GSM850 ; Frequency: 848.8 MHz ; Duty Cycle: 1:8.3 ; Modulation type: GMSK

Medium: MSL835 Medium parameters used: $f = 848.8$ MHz; $\sigma = 1$ mho/m; $\epsilon_r = 56.62$; $\rho = 1000$ kg/m³

Phantom section: Flat Section ; Separation distance : 10 mm (The Back side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(10.32, 10.32, 10.32); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body Position - High /Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.886 mW/g

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

Reference Value = 28.3 V/m; Power Drift = -0.077 dB

Peak SAR (extrapolated) = 1.01 W/kg

SAR(1 g) = 0.755 mW/g; SAR(10 g) = 0.555 mW/g

Maximum value of SAR (measured) = 0.881 mW/g

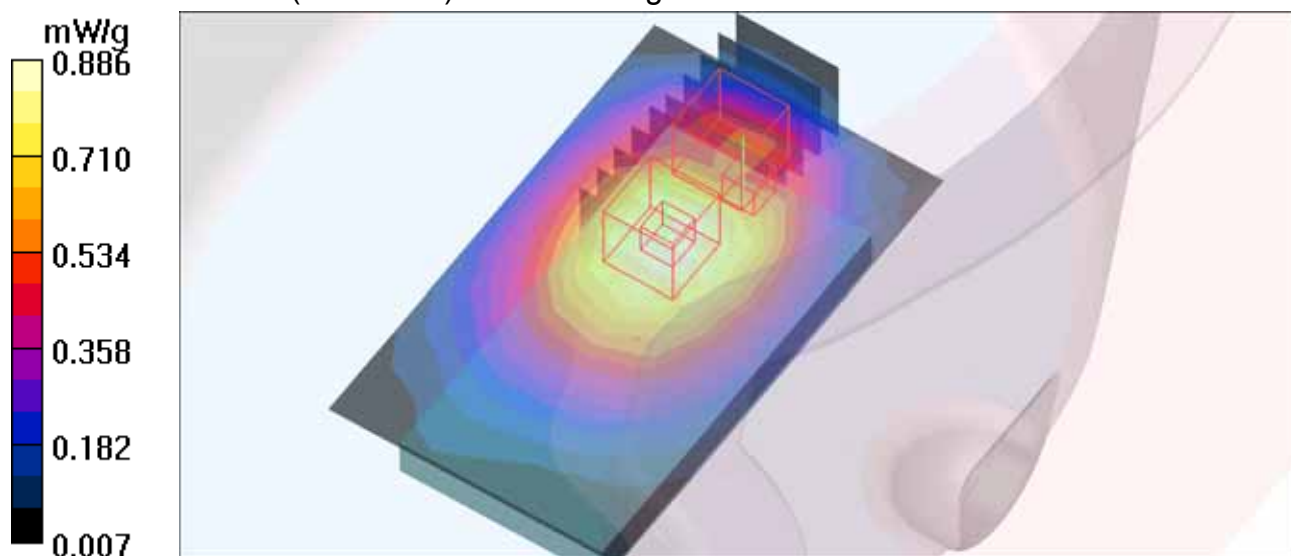
Body Position - High /Zoom Scan(5x5x7)/Cube 1: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 28.3 V/m; Power Drift = -0.077 dB

Peak SAR (extrapolated) = 0.781 W/kg

SAR(1 g) = 0.466 mW/g; SAR(10 g) = 0.312 mW/g

Maximum value of SAR (measured) = 0.663 mW/g



M15-Back-GPRS850 TS1-Ch190 / Bat-HT Energy 3.7VDC

Communication System: GPRS850 ; Frequency: 836.6 MHz ; Duty Cycle: 1:8.3 ; Modulation type: GMSK / UL 1 time slot

Medium: MSL835 Medium parameters used: $f = 836.6 \text{ MHz}$; $\sigma = 0.99 \text{ mho/m}$; $\epsilon_r = 56.73$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section ; Separation distance : 10 mm (The Back side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(10.32, 10.32, 10.32); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body Position - Mid/Area Scan (7x11x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 0.836 mW/g

Body Position - Mid/Zoom Scan(5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 26.7 V/m; Power Drift = -0.180 dB

Peak SAR (extrapolated) = 0.947 W/kg

SAR(1 g) = 0.711 mW/g; SAR(10 g) = 0.520 mW/g

Maximum value of SAR (measured) = 0.841 mW/g

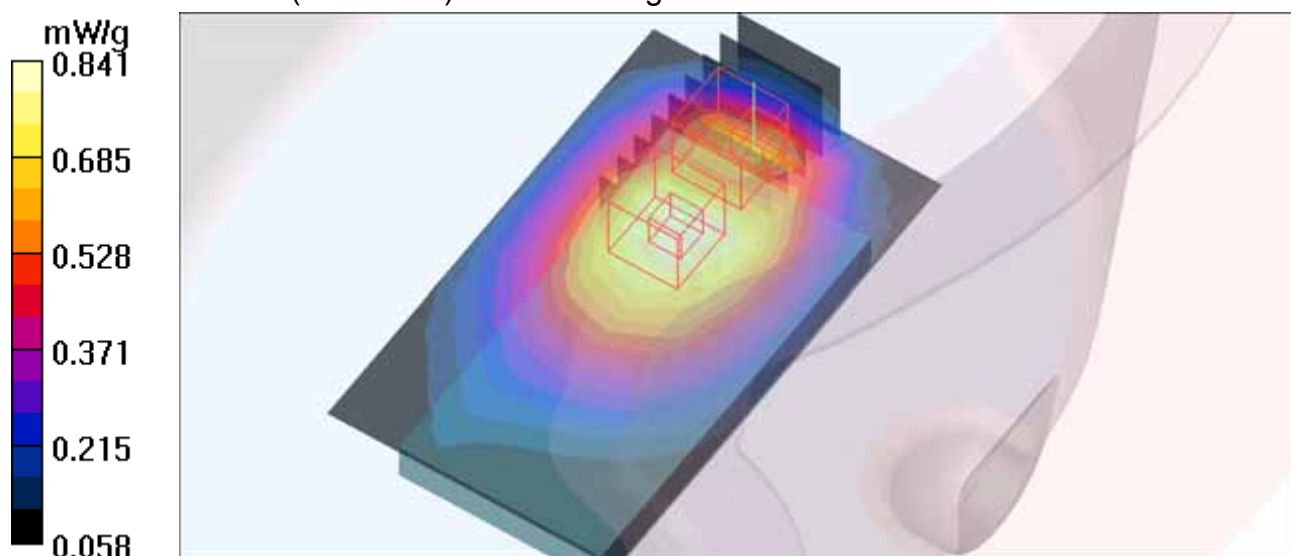
Body Position - Mid/Zoom Scan(5x5x7)/Cube 1: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 26.7 V/m; Power Drift = -0.180 dB

Peak SAR (extrapolated) = 0.853 W/kg

SAR(1 g) = 0.509 mW/g; SAR(10 g) = 0.332 mW/g

Maximum value of SAR (measured) = 0.679 mW/g



M16-Back-GPRS850 TS2-Ch190 / Bat-HT Energy 3.7VDC

Communication System: GPRS850 ; Frequency: 836.6 MHz ; Duty Cycle: 1:4 ; Modulation type: GMSK / UL 2 time slots

Medium: MSL835 Medium parameters used: $f = 836.6 \text{ MHz}$; $\sigma = 0.99 \text{ mho/m}$; $\epsilon_r = 56.73$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section ; Separation distance : 10 mm (The Back side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(10.32, 10.32, 10.32); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body Position - Mid/Area Scan (7x11x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 0.877 mW/g

Body Position - Mid/Zoom Scan(5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 27.5 V/m ; Power Drift = -0.012 dB

Peak SAR (extrapolated) = 1.01 W/kg

SAR(1 g) = 0.742 mW/g ; SAR(10 g) = 0.538 mW/g

Maximum value of SAR (measured) = 0.889 mW/g

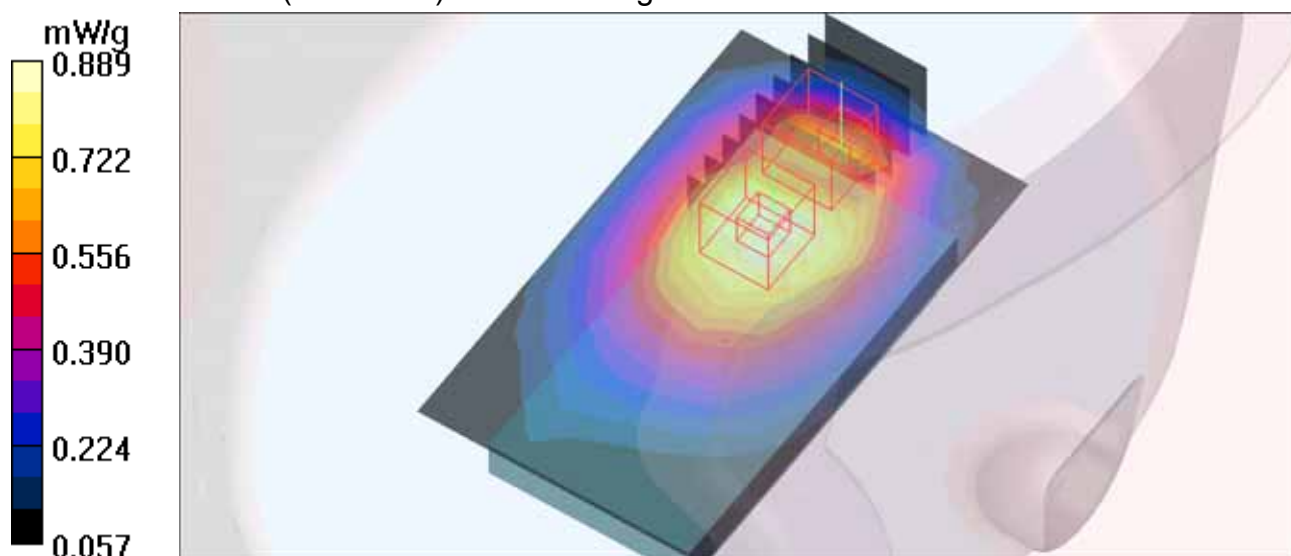
Body Position - Mid/Zoom Scan(5x5x7)/Cube 1: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 27.5 V/m ; Power Drift = -0.012 dB

Peak SAR (extrapolated) = 0.911 W/kg

SAR(1 g) = 0.528 mW/g ; SAR(10 g) = 0.341 mW/g

Maximum value of SAR (measured) = 0.708 mW/g



M17-Back-GPRS850 TS3-Ch128 / Bat-HT Energy 3.7VDC

Communication System: GPRS850 ; Frequency: 824.2 MHz ; Duty Cycle: 1:2.67 ; Modulation type: GMSK / UL 3 time slots

Medium: MSL835 Medium parameters used: $f = 824.2$ MHz; $\sigma = 0.98$ mho/m; $\epsilon_r = 57.04$; $\rho = 1000$ kg/m³

Phantom section: Flat Section ; Separation distance : 10 mm (The Back side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(10.32, 10.32, 10.32); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body Position - Low /Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm

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

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

Reference Value = 29.4 V/m; Power Drift = -0.097 dB

Peak SAR (extrapolated) = 1.12 W/kg

SAR(1 g) = 0.814 mW/g; SAR(10 g) = 0.585 mW/g

Maximum value of SAR (measured) = 0.970 mW/g

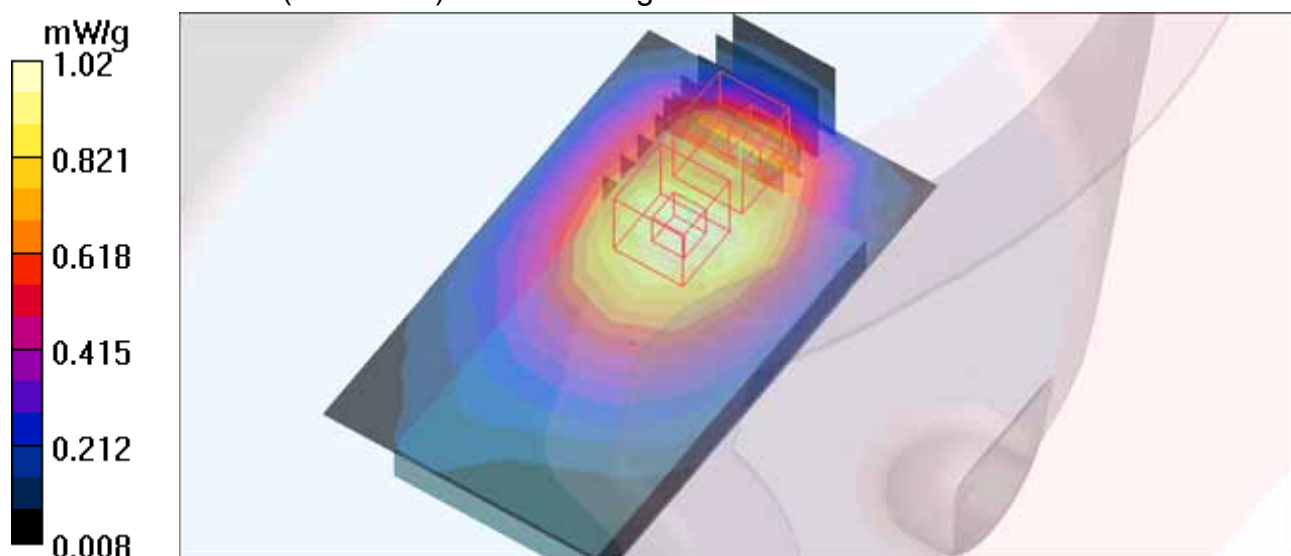
Body Position - Low /Zoom Scan(5x5x7)/Cube 1: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 29.4 V/m; Power Drift = -0.097 dB

Peak SAR (extrapolated) = 1.06 W/kg

SAR(1 g) = 0.603 mW/g; SAR(10 g) = 0.384 mW/g

Maximum value of SAR (measured) = 0.798 mW/g



M17Back-GPRS850 TS3-Ch190 / Bat-HT Energy 3.7VDC

Communication System: GPRS850 ; Frequency: 836.6 MHz ; Duty Cycle: 1:2.67 ; Modulation type: GMSK / UL 3 time slots

Medium: MSL835 Medium parameters used: $f = 836.6 \text{ MHz}$; $\sigma = 0.99 \text{ mho/m}$; $\epsilon_r = 56.73$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section ; Separation distance : 10 mm (The Back side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(10.32, 10.32, 10.32); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body Position - Mid/Area Scan (7x11x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 0.980 mW/g

Body Position - Mid/Zoom Scan(5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 29.1 V/m; Power Drift = -0.018 dB

Peak SAR (extrapolated) = 1.12 W/kg

SAR(1 g) = 0.821 mW/g; SAR(10 g) = 0.593 mW/g

Maximum value of SAR (measured) = 0.983 mW/g

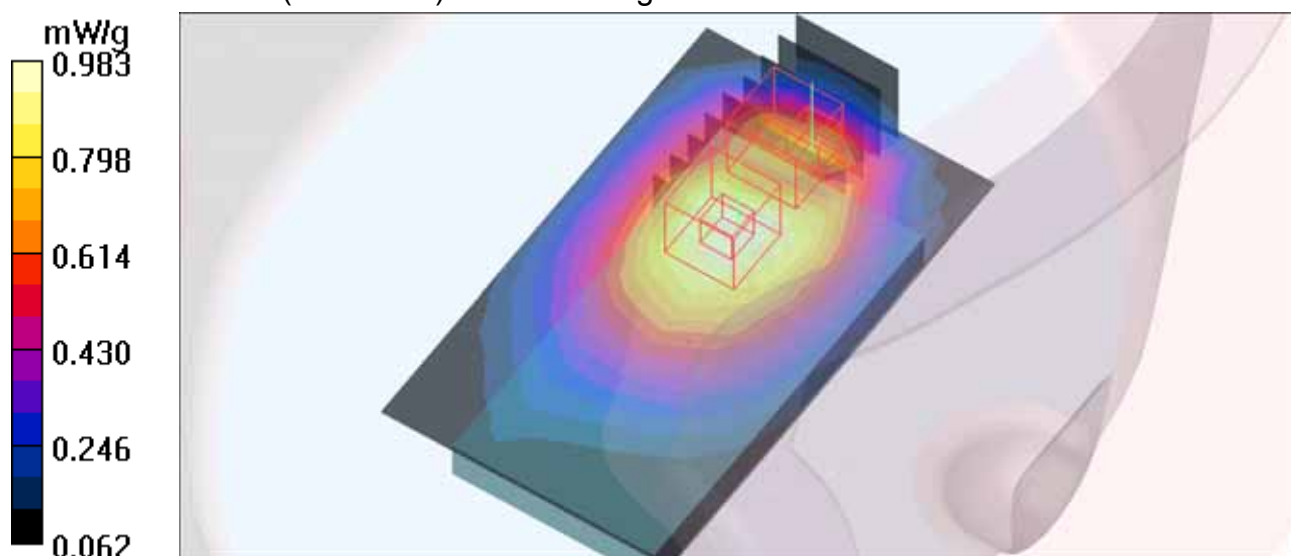
Body Position - Mid/Zoom Scan(5x5x7)/Cube 1: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 29.1 V/m; Power Drift = -0.018 dB

Peak SAR (extrapolated) = 1.00 W/kg

SAR(1 g) = 0.576 mW/g; SAR(10 g) = 0.373 mW/g

Maximum value of SAR (measured) = 0.771 mW/g



M17-Back-GPRS850 TS3-Ch251 / Bat-HT Energy 3.7VDC

Communication System: GPRS850 ; Frequency: 848.8 MHz ; Duty Cycle: 1:2.67 ; Modulation type: GMSK / UL 3 time slots

Medium: MSL835 Medium parameters used: $f = 848.8 \text{ MHz}$; $\sigma = 1 \text{ mho/m}$; $\epsilon_r = 56.62$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section ; Separation distance : 10 mm The Back side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(10.32, 10.32, 10.32); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body Position - High /Area Scan (7x11x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

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

Body Position - High /Zoom Scan(5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 28.8 V/m; Power Drift = -0.056 dB

Peak SAR (extrapolated) = 1.21 W/kg

SAR(1 g) = 0.890 mW/g; SAR(10 g) = 0.638 mW/g

Maximum value of SAR (measured) = 1.05 mW/g

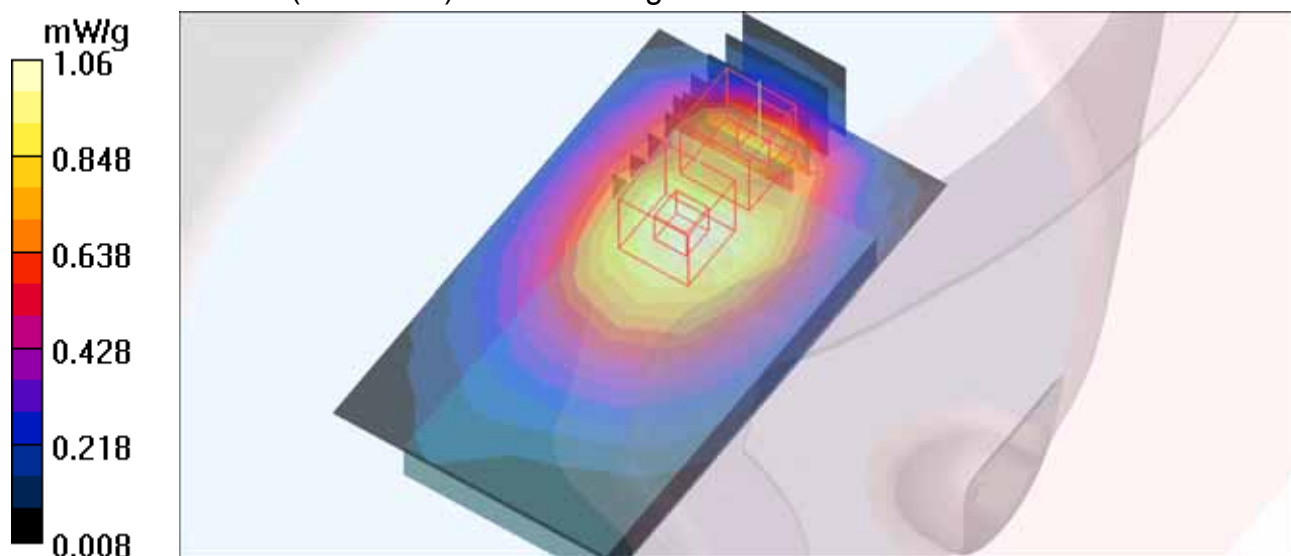
Body Position - High /Zoom Scan(5x5x7)/Cube 1: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 28.8 V/m; Power Drift = -0.056 dB

Peak SAR (extrapolated) = 1.19 W/kg

SAR(1 g) = 0.666 mW/g; SAR(10 g) = 0.411 mW/g

Maximum value of SAR (measured) = 0.868 mW/g



M18-Back-GPRS850 TS4-Ch190 / Bat-HT Energy 3.7VDC

Communication System: GPRS850 ; Frequency: 836.6 MHz ; Duty Cycle: 1:2 ; Modulation type: GMSK / UL 4 time slots

Medium: MSL835 Medium parameters used: $f = 836.6 \text{ MHz}$; $\sigma = 0.99 \text{ mho/m}$; $\epsilon_r = 56.73$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section ; Separation distance : 10 mm (The Back side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(10.32, 10.32, 10.32); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body Position - Mid/Area Scan (7x11x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 0.934 mW/g

Body Position - Mid/Zoom Scan(5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 26.9 V/m; Power Drift = -0.103 dB

Peak SAR (extrapolated) = 1.07 W/kg

SAR(1 g) = 0.780 mW/g; SAR(10 g) = 0.559 mW/g

Maximum value of SAR (measured) = 0.940 mW/g

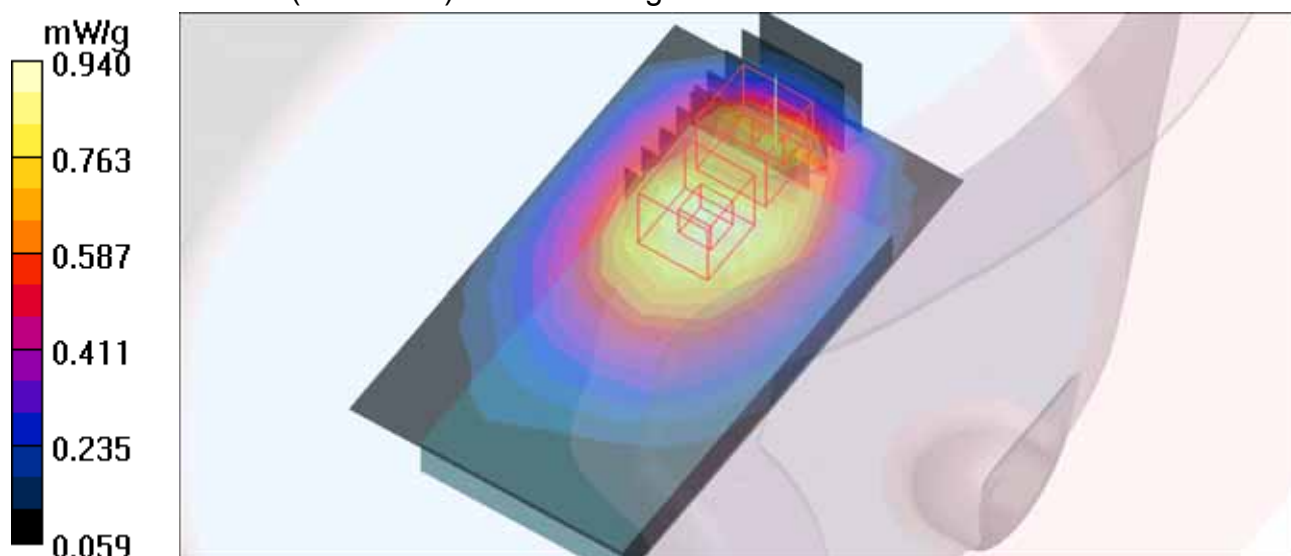
Body Position - Mid/Zoom Scan(5x5x7)/Cube 1: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 26.9 V/m; Power Drift = -0.103 dB

Peak SAR (extrapolated) = 1.03 W/kg

SAR(1 g) = 0.584 mW/g; SAR(10 g) = 0.373 mW/g

Maximum value of SAR (measured) = 0.771 mW/g



M19-Front-GSM850-Ch190 / Bat-HT Energy 3.8VDC

Communication System: GSM850 ; Frequency: 836.6 MHz ; Duty Cycle: 1:8.3 ; Modulation type: GMSK

Medium: MSL835 Medium parameters used: $f = 836.6 \text{ MHz}$; $\sigma = 1.01 \text{ mho/m}$; $\epsilon_r = 56.42$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section ; Separation distance : 10 mm (The front side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(10.32, 10.32, 10.32); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body Position - Mid/Area Scan (7x11x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 0.430 mW/g

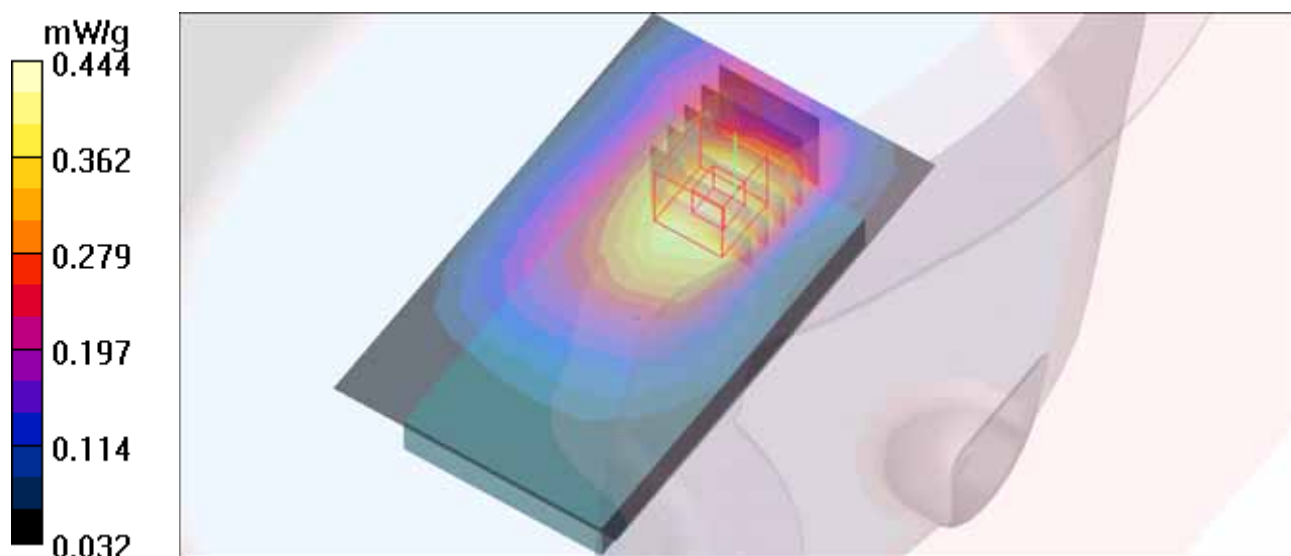
Body Position - Mid/Zoom Scan(5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 17.9 V/m; Power Drift = -0.001 dB

Peak SAR (extrapolated) = 0.497 W/kg

SAR(1 g) = 0.381 mW/g; SAR(10 g) = 0.275 mW/g

Maximum value of SAR (measured) = 0.444 mW/g



M20-Front-GPRS850 TS1-Ch190 / Bat-HT Energy 3.8VDC

Communication System: GPRS850 ; Frequency: 836.6 MHz ; Duty Cycle: 1:8.3 ; Modulation type: GMSK / UL 1 time slot

Medium: MSL835 Medium parameters used: $f = 836.6 \text{ MHz}$; $\sigma = 1.01 \text{ mho/m}$; $\epsilon_r = 56.42$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section ; Separation distance : 10 mm (The front side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(10.32, 10.32, 10.32); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body Position - Mid/Area Scan (7x11x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 0.456 mW/g

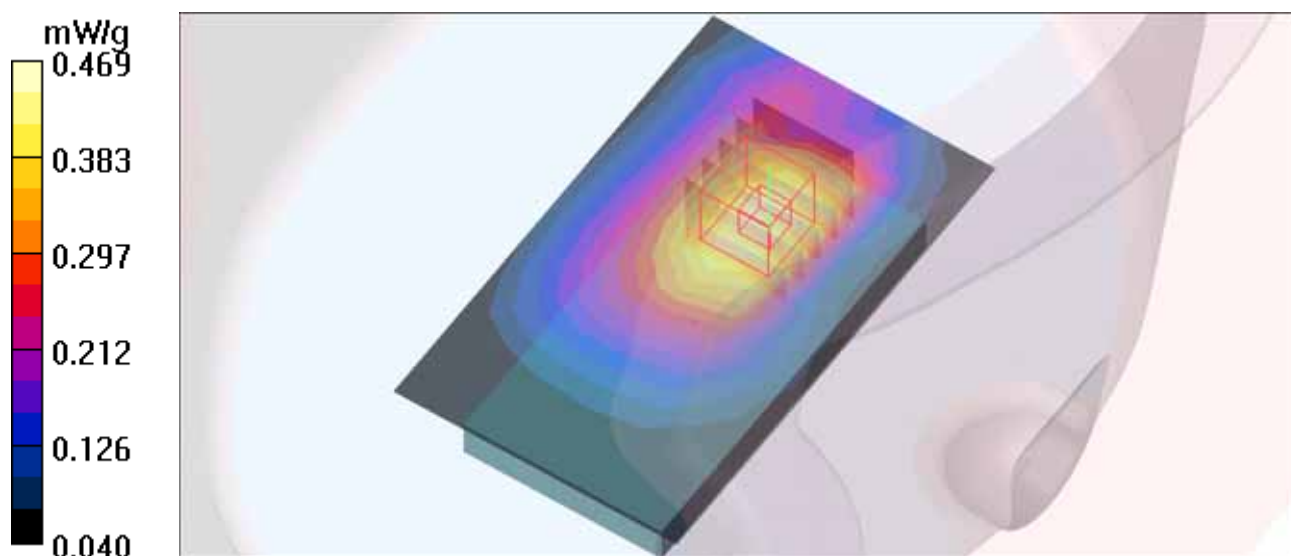
Body Position - Mid/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 19.4 V/m; Power Drift = -0.092 dB

Peak SAR (extrapolated) = 0.527 W/kg

SAR(1 g) = 0.401 mW/g; SAR(10 g) = 0.289 mW/g

Maximum value of SAR (measured) = 0.469 mW/g



M21-Front-GPRS850 TS2-Ch190 / Bat-HT Energy 3.8VDC

Communication System: GPRS850 ; Frequency: 836.6 MHz ; Duty Cycle: 1:4 ; Modulation type: GMSK / UL 2 time slots

Medium: MSL835 Medium parameters used: $f = 836.6$ MHz; $\sigma = 1.01$ mho/m; $\epsilon_r = 56.42$; $\rho = 1000$ kg/m³

Phantom section: Flat Section ; Separation distance : 10 mm (The front side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(10.32, 10.32, 10.32); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body Position - Mid/Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.423 mW/g

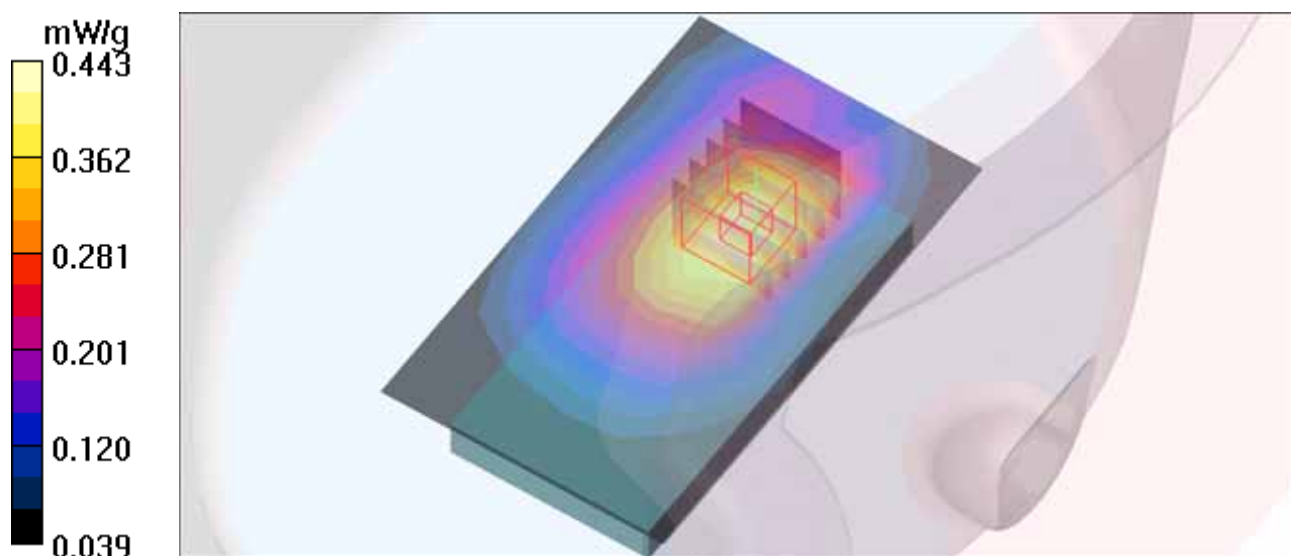
Body Position - Mid/Zoom Scan(5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 19.6 V/m; Power Drift = -0.131 dB

Peak SAR (extrapolated) = 0.502 W/kg

SAR(1 g) = 0.374 mW/g; SAR(10 g) = 0.268 mW/g

Maximum value of SAR (measured) = 0.443 mW/g



M22-Front-GPRS850 TS3-Ch190 / Bat-HT Energy 3.8VDC

Communication System: GPRS850 ; Frequency: 836.6 MHz ; Duty Cycle: 1:2.67 ; Modulation type: GMSK / UL 3 time slots

Medium: MSL835 Medium parameters used: $f = 836.6 \text{ MHz}$; $\sigma = 1.01 \text{ mho/m}$; $\epsilon_r = 56.42$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section ; Separation distance : 10 mm (The front side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(10.32, 10.32, 10.32); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body Position - Mid/Area Scan (7x11x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 0.432 mW/g

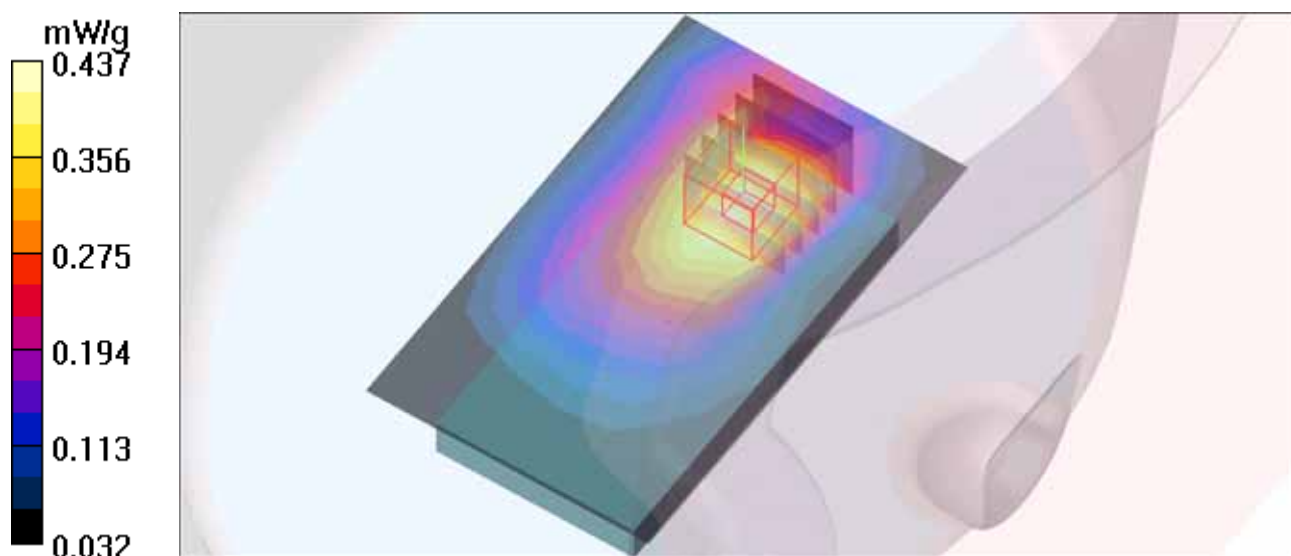
Body Position - Mid/Zoom Scan(5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 18.1 V/m; Power Drift = -0.082 dB

Peak SAR (extrapolated) = 0.500 W/kg

SAR(1 g) = 0.379 mW/g; SAR(10 g) = 0.270 mW/g

Maximum value of SAR (measured) = 0.437 mW/g



M23-Front-GPRS850 TS4-Ch190 / Bat-HT Energy 3.8VDC

Communication System: GPRS850 ; Frequency: 836.6 MHz ; Duty Cycle: 1:2 ; Modulation type: GMSK / UL 4 time slots

Medium: MSL835 Medium parameters used: $f = 836.6 \text{ MHz}$; $\sigma = 1.01 \text{ mho/m}$; $\epsilon_r = 56.42$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section ; Separation distance : 10 mm (The front side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(10.32, 10.32, 10.32); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body Position - Mid/Area Scan (7x11x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 0.473 mW/g

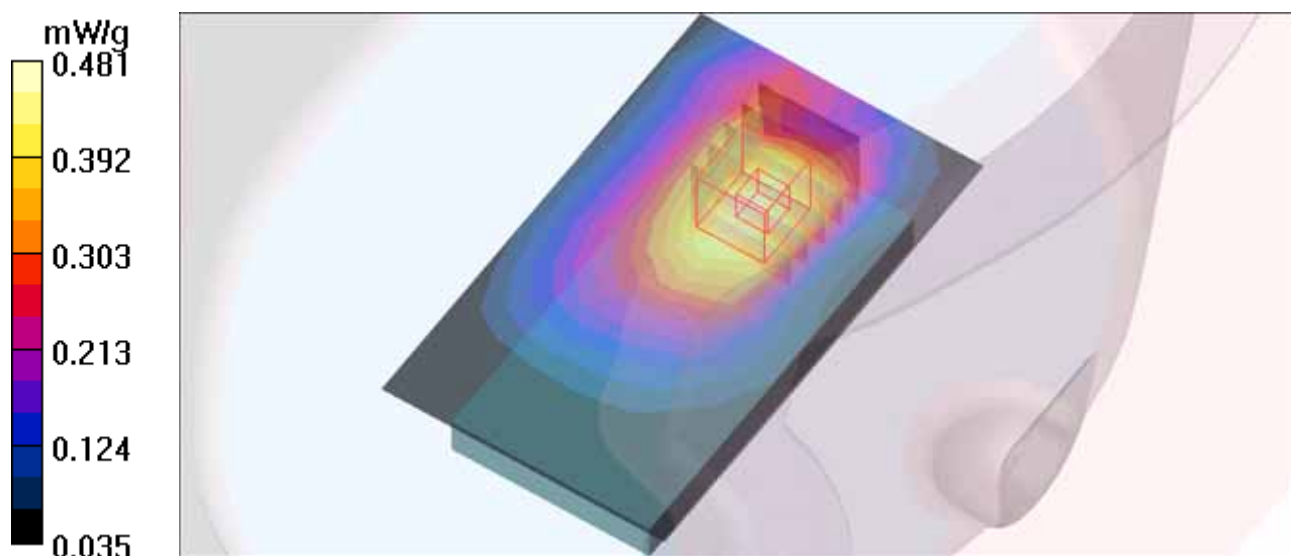
Body Position - Mid/Zoom Scan(5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 19.0 V/m; Power Drift = -0.096 dB

Peak SAR (extrapolated) = 0.551 W/kg

SAR(1 g) = 0.416 mW/g; SAR(10 g) = 0.297 mW/g

Maximum value of SAR (measured) = 0.481 mW/g



M24-Front-GSM850-Ch190 / Bat-HT Energy 3.7VDC

Communication System: GSM850 ; Frequency: 836.6 MHz ; Duty Cycle: 1:8.3 ; Modulation type: GMSK

Medium: MSL835 Medium parameters used: $f = 836.6 \text{ MHz}$; $\sigma = 1.01 \text{ mho/m}$; $\epsilon_r = 56.42$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section ; Separation distance : 10 mm (The front side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(10.32, 10.32, 10.32); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body Position - Mid/Area Scan (7x11x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 0.484 mW/g

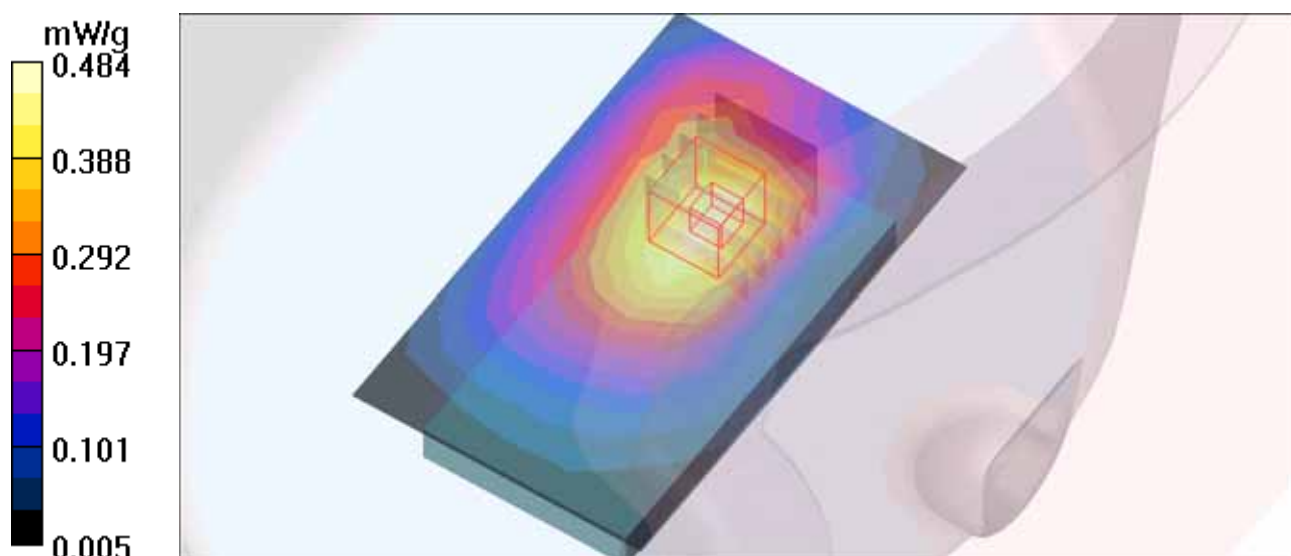
Body Position - Mid/Zoom Scan(5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 20.5 V/m; Power Drift = -0.066 dB

Peak SAR (extrapolated) = 0.537 W/kg

SAR(1 g) = 0.416 mW/g; SAR(10 g) = 0.303 mW/g

Maximum value of SAR (measured) = 0.479 mW/g



M25-Front-GPRS850TS1-Ch190 / Bat-HT Energy 3.7VDC

Communication System: GPRS850 ; Frequency: 836.6 MHz ; Duty Cycle: 1:8.3 ; Modulation type: GMSK / UL 1 time slot

Medium: MSL835 Medium parameters used: $f = 836.6 \text{ MHz}$; $\sigma = 1.01 \text{ mho/m}$; $\epsilon_r = 56.42$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section ; Separation distance : 10 mm (The front side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(10.32, 10.32, 10.32); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body Position - Mid/Area Scan (7x11x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 0.465 mW/g

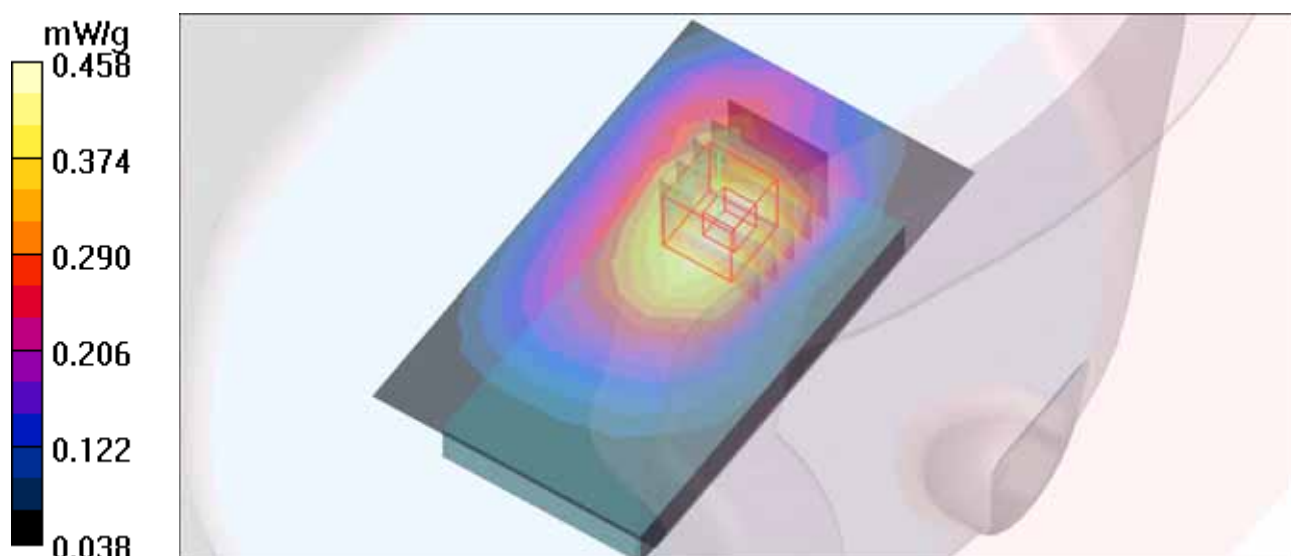
Body Position - Mid/Zoom Scan(5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 20.0 V/m; Power Drift = -0.038 dB

Peak SAR (extrapolated) = 0.515 W/kg

SAR(1 g) = 0.397 mW/g; SAR(10 g) = 0.289 mW/g

Maximum value of SAR (measured) = 0.458 mW/g



M26-Front-GPRS850TS2-Ch190 / Bat-HT Energy 3.7VDC

Communication System: GSM850 ; Frequency: 836.6 MHz ; Duty Cycle: 1:4 ; Modulation type: GMSK / UL 2 time slots

Medium: MSL835 Medium parameters used: $f = 836.6 \text{ MHz}$; $\sigma = 1.01 \text{ mho/m}$; $\epsilon_r = 56.42$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section ; Separation distance : 10 mm (The front side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(10.32, 10.32, 10.32); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body Position - Mid/Area Scan (7x11x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 0.471 mW/g

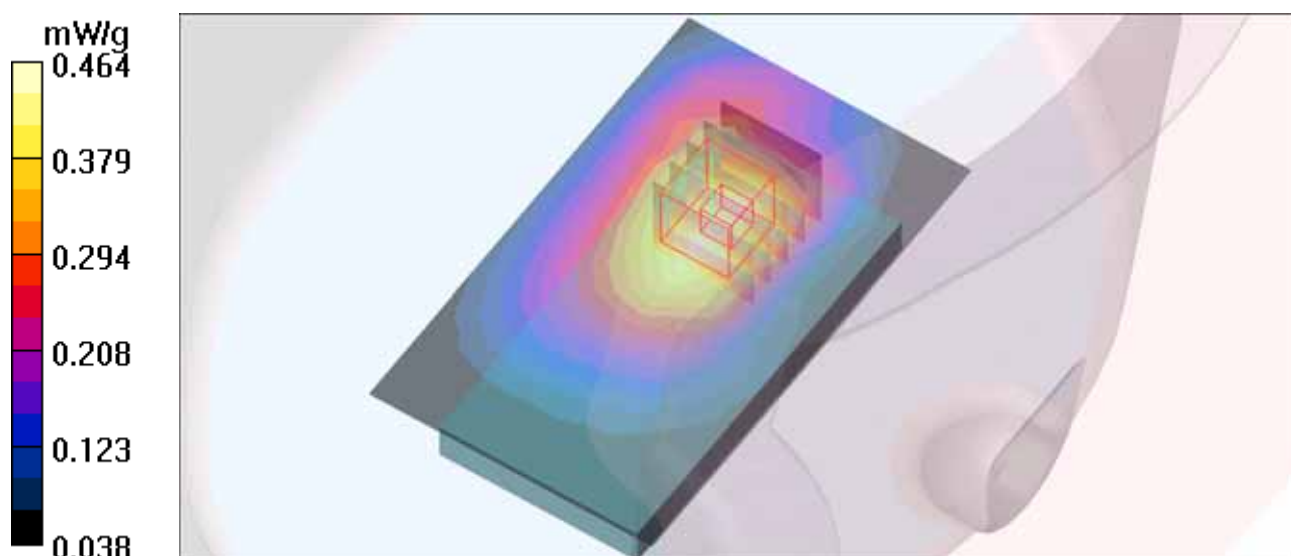
Body Position - Mid/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 20.5 V/m; Power Drift = -0.168 dB

Peak SAR (extrapolated) = 0.527 W/kg

SAR(1 g) = 0.403 mW/g; SAR(10 g) = 0.292 mW/g

Maximum value of SAR (measured) = 0.464 mW/g



M27-Front-GPRS850 TS3-Ch190 / Bat-HT Energy 3.7VDC

Communication System: GPRS850 ; Frequency: 836.6 MHz ; Duty Cycle: 1:2.67 ; Modulation type: GMSK / UL 3 time slots

Medium: MSL835 Medium parameters used: $f = 836.6 \text{ MHz}$; $\sigma = 1.01 \text{ mho/m}$; $\epsilon_r = 56.42$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section ; Separation distance : 10 mm (The front side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(10.32, 10.32, 10.32); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body Position - Mid/Area Scan (7x11x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 0.521 mW/g

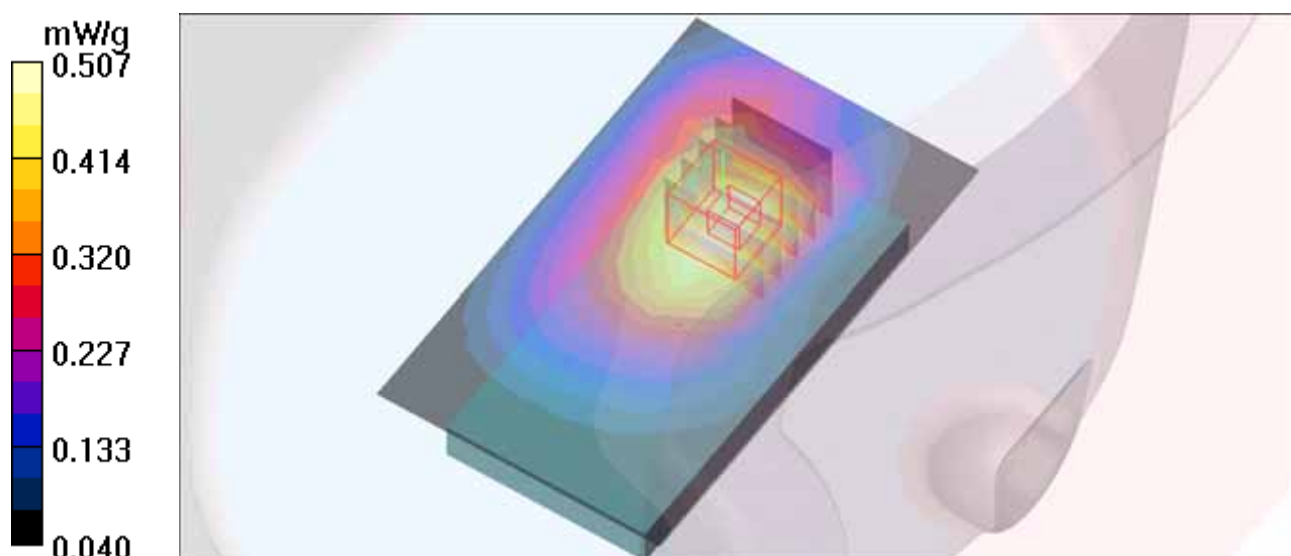
Body Position - Mid/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 21.3 V/m; Power Drift = -0.120 dB

Peak SAR (extrapolated) = 0.573 W/kg

SAR(1 g) = 0.440 mW/g; SAR(10 g) = 0.318 mW/g

Maximum value of SAR (measured) = 0.507 mW/g



M28-Front-GPRS850 TS4-Ch190 / Bat-HT Energy 3.7VDC

Communication System: GPRS850 ; Frequency: 836.6 MHz ; Duty Cycle: 1:2 ; Modulation type: GMSK / UL 4 time slots

Medium: MSL835 Medium parameters used: $f = 836.6 \text{ MHz}$; $\sigma = 1.01 \text{ mho/m}$; $\epsilon_r = 56.42$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section ; Separation distance : 10 mm (The front side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(10.32, 10.32, 10.32); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body Position - Mid/Area Scan (7x11x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 0.521 mW/g

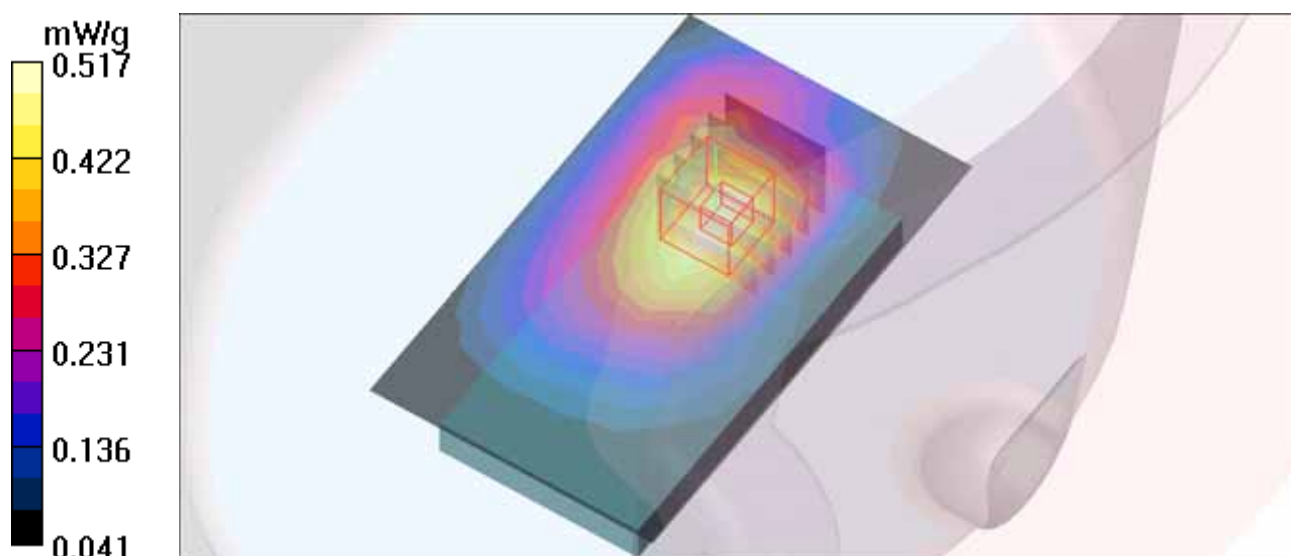
Body Position - Mid/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 21.2 V/m; Power Drift = -0.006 dB

Peak SAR (extrapolated) = 0.587 W/kg

SAR(1 g) = 0.447 mW/g; SAR(10 g) = 0.322 mW/g

Maximum value of SAR (measured) = 0.517 mW/g



M29-Right edge-GSM850-Ch190 / Bat- HT Energy 3.8VDC

Communication System: GSM850 ; Frequency: 836.6 MHz ; Duty Cycle: 1:8.3 ; Modulation type: GMSK

Medium: MSL835 Medium parameters used: $f = 836.6$ MHz; $\sigma = 1.01$ mho/m; $\epsilon_r = 56.42$; $\rho = 1000$ kg/m³

Phantom section: Flat Section ; Separation distance : 10 mm (The right edge side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(10.32, 10.32, 10.32); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body Position - Mid/Area Scan (5x11x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.421 mW/g

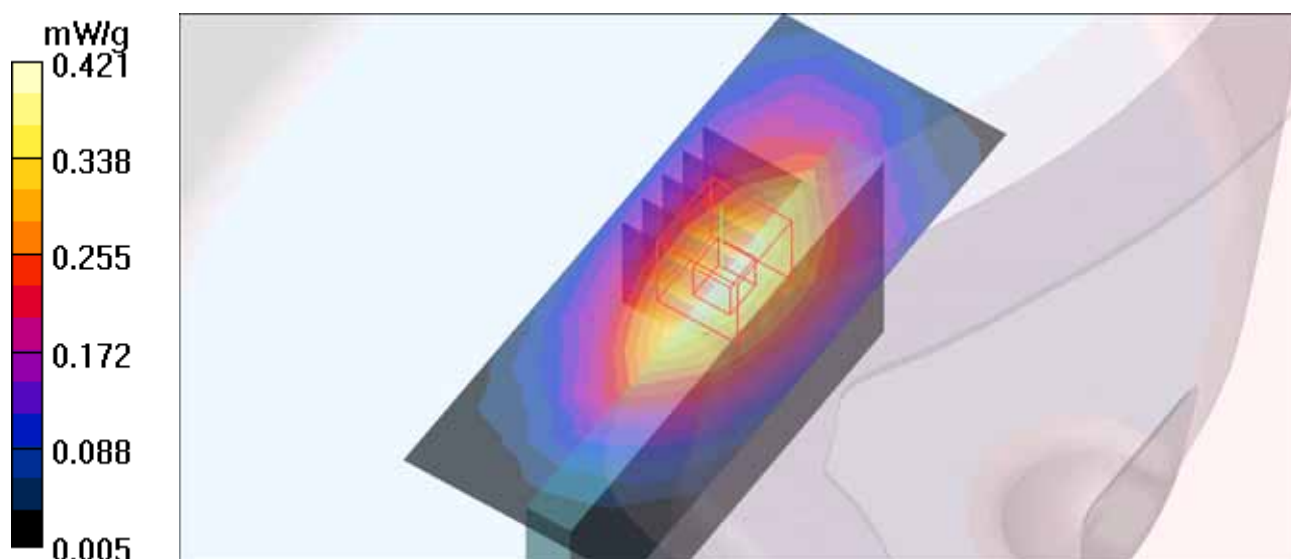
Body Position - Mid/Zoom Scan(5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 21.1 V/m; Power Drift = -0.161 dB

Peak SAR (extrapolated) = 0.491 W/kg

SAR(1 g) = 0.336 mW/g; SAR(10 g) = 0.227 mW/g

Maximum value of SAR (measured) = 0.420 mW/g



M30-Right edge-GPRS850 TS1-Ch190 / Bat-HT Energy 3.8VDC

Communication System: GPRS850 ; Frequency: 836.6 MHz ; Duty Cycle: 1:8.3 ; Modulation type: GMSK / UL 1 time slot

Medium: MSL835 Medium parameters used: $f = 836.6 \text{ MHz}$; $\sigma = 1.01 \text{ mho/m}$; $\epsilon_r = 56.42$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section ; Separation distance : 10 mm (The right edge side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(10.32, 10.32, 10.32); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body Position - Mid/Area Scan (5x11x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 0.433 mW/g

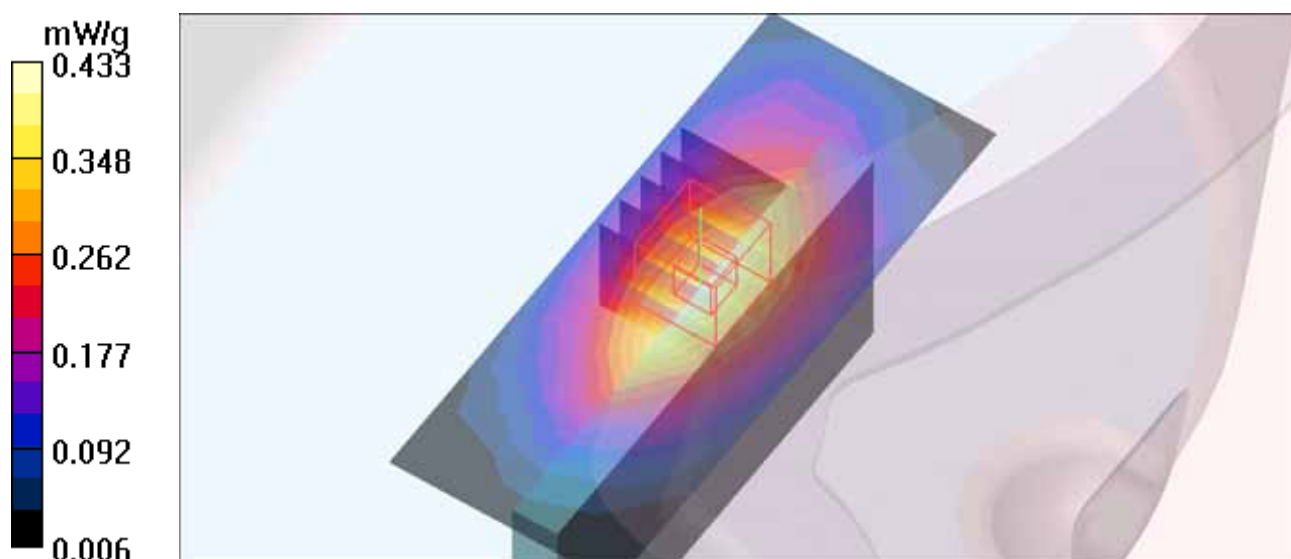
Body Position - Mid/Zoom Scan(5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 21.3 V/m; Power Drift = -0.038 dB

Peak SAR (extrapolated) = 0.500 W/kg

SAR(1 g) = 0.344 mW/g; SAR(10 g) = 0.232 mW/g

Maximum value of SAR (measured) = 0.427 mW/g



M31-Right edge-GSM850-Ch190 / Bat-HT Energy 3.7VDC

Communication System: GSM850 ; Frequency: 836.6 MHz ; Duty Cycle: 1:8.3 ; Modulation type: GMSK

Medium: MSL835 Medium parameters used: $f = 836.6 \text{ MHz}$; $\sigma = 1.01 \text{ mho/m}$; $\epsilon_r = 56.42$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section ; Separation distance : 10 mm (The right edge side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(10.32, 10.32, 10.32); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body Position - Mid/Area Scan (5x11x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 0.319 mW/g

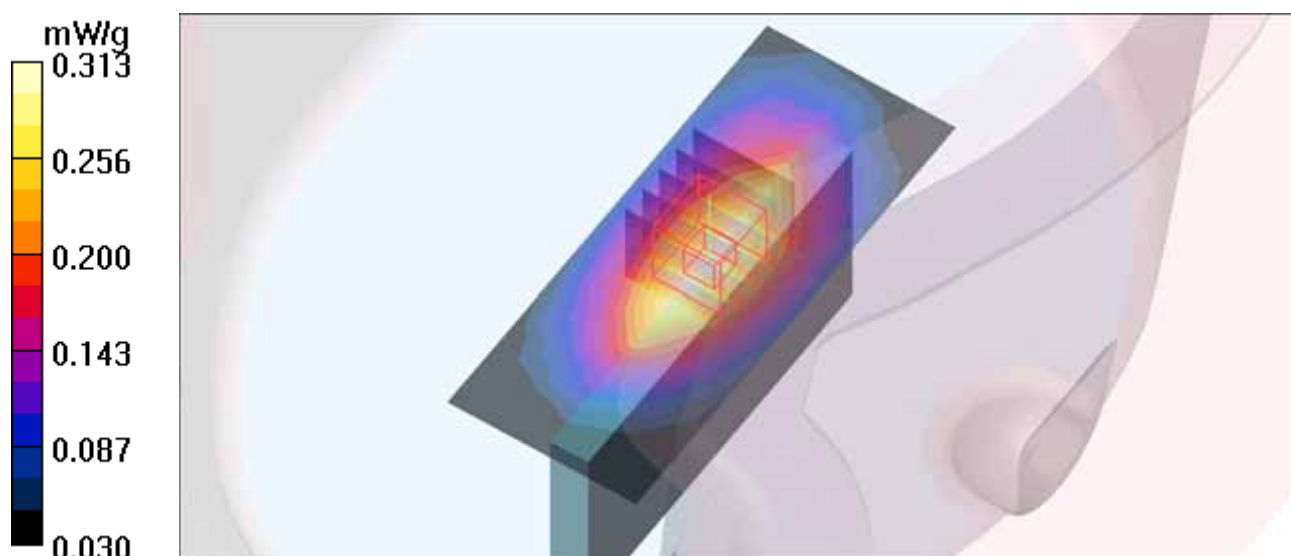
Body Position - Mid/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 18.5 V/m; Power Drift = -0.182 dB

Peak SAR (extrapolated) = 0.367 W/kg

SAR(1 g) = 0.252 mW/g; SAR(10 g) = 0.171 mW/g

Maximum value of SAR (measured) = 0.313 mW/g



M32-Right edge-GPRS850 TS1-Ch190 / Bat-HT Energy 3.7VDC

Communication System: GPRS850 ; Frequency: 836.6 MHz ; Duty Cycle: 1:8.3 ; Modulation type: GMSK / UL 1 time slot

Medium: MSL835 Medium parameters used: $f = 836.6 \text{ MHz}$; $\sigma = 1.01 \text{ mho/m}$; $\epsilon_r = 56.42$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section ; Separation distance : 10 mm (The right edge side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(10.32, 10.32, 10.32); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body Position - Mid/Area Scan (5x11x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 0.292 mW/g

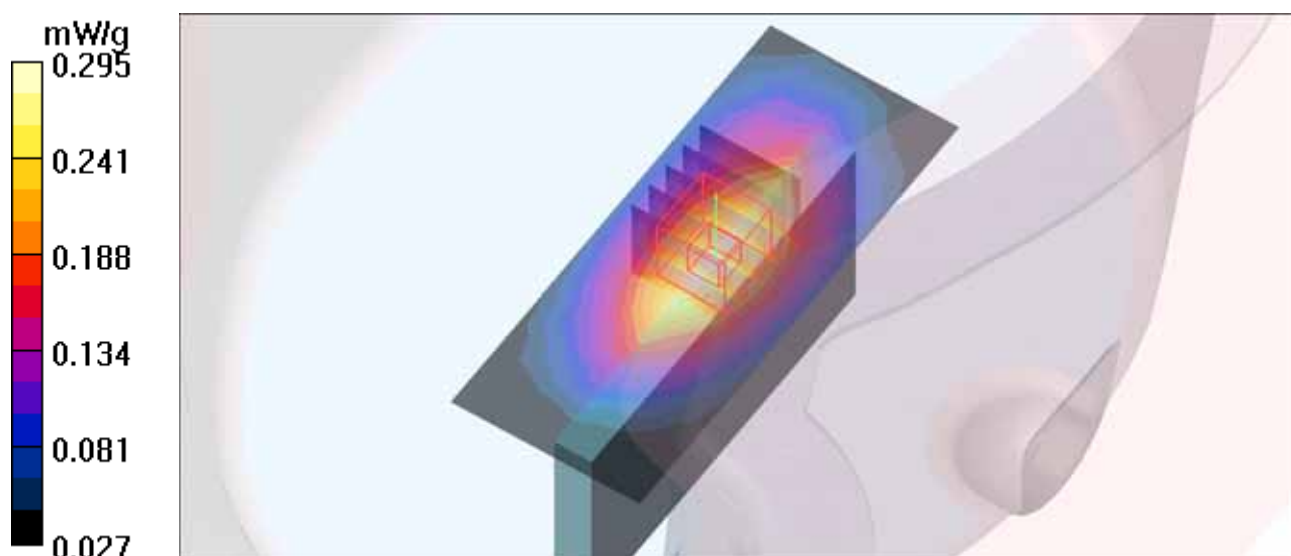
Body Position - Mid/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 17.7 V/m; Power Drift = -0.121 dB

Peak SAR (extrapolated) = 0.345 W/kg

SAR(1 g) = 0.235 mW/g; SAR(10 g) = 0.159 mW/g

Maximum value of SAR (measured) = 0.295 mW/g



M33-Left edge-GSM850-Ch190 / Bat-HT Energy 3.8VDC

Communication System: GSM850 ; Frequency: 836.6 MHz ; Duty Cycle: 1:8.3 ; Modulation type: GMSK

Medium: MSL835 Medium parameters used: $f = 836.6 \text{ MHz}$; $\sigma = 1.01 \text{ mho/m}$; $\epsilon_r = 56.42$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section ; Separation distance : 10 mm (The left edge side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(10.32, 10.32, 10.32); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body Position - Mid/Area Scan (5x11x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 0.513 mW/g

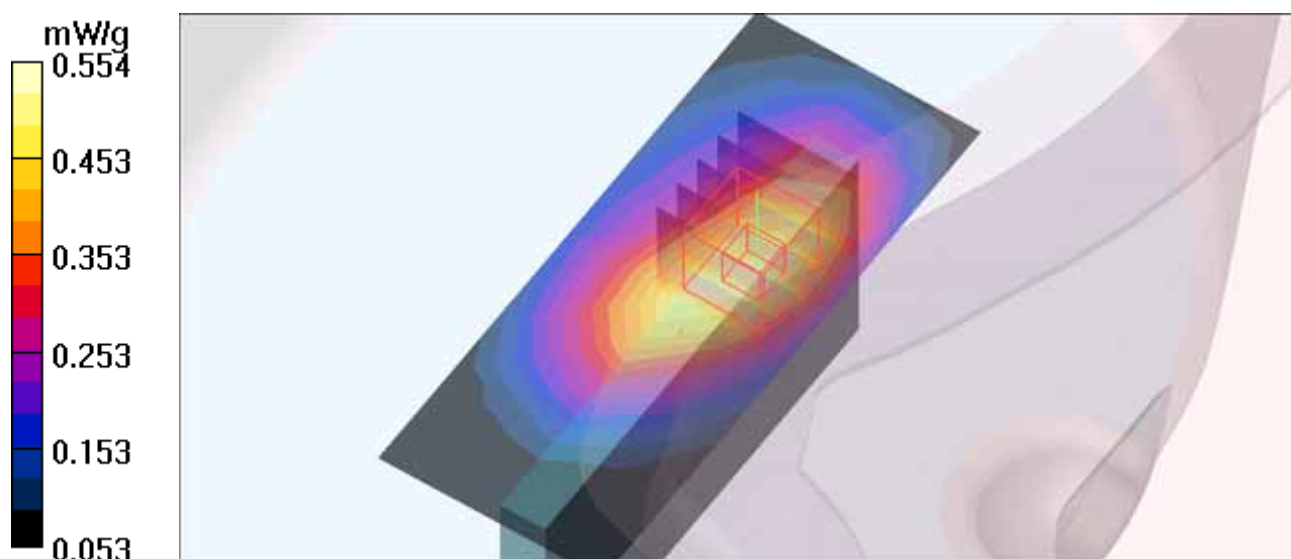
Body Position - Mid/Zoom Scan(5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 23.2 V/m; Power Drift = -0.196 dB

Peak SAR (extrapolated) = 0.655 W/kg

SAR(1 g) = 0.447 mW/g; SAR(10 g) = 0.301 mW/g

Maximum value of SAR (measured) = 0.554 mW/g



M34-Left edge-GPRS850 TS1-Ch190 / Bat-HT Energy 3.8VDC

Communication System: GPRS850 ; Frequency: 836.6 MHz ; Duty Cycle: 1:8.3 ; Modulation type: GMSK / UL 1 time slot

Medium: MSL835 Medium parameters used: $f = 836.6 \text{ MHz}$; $\sigma = 1.01 \text{ mho/m}$; $\epsilon_r = 56.42$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section ; Separation distance : 10 mm (The left edge side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(10.32, 10.32, 10.32); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body Position - Mid/Area Scan (5x11x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 0.441 mW/g

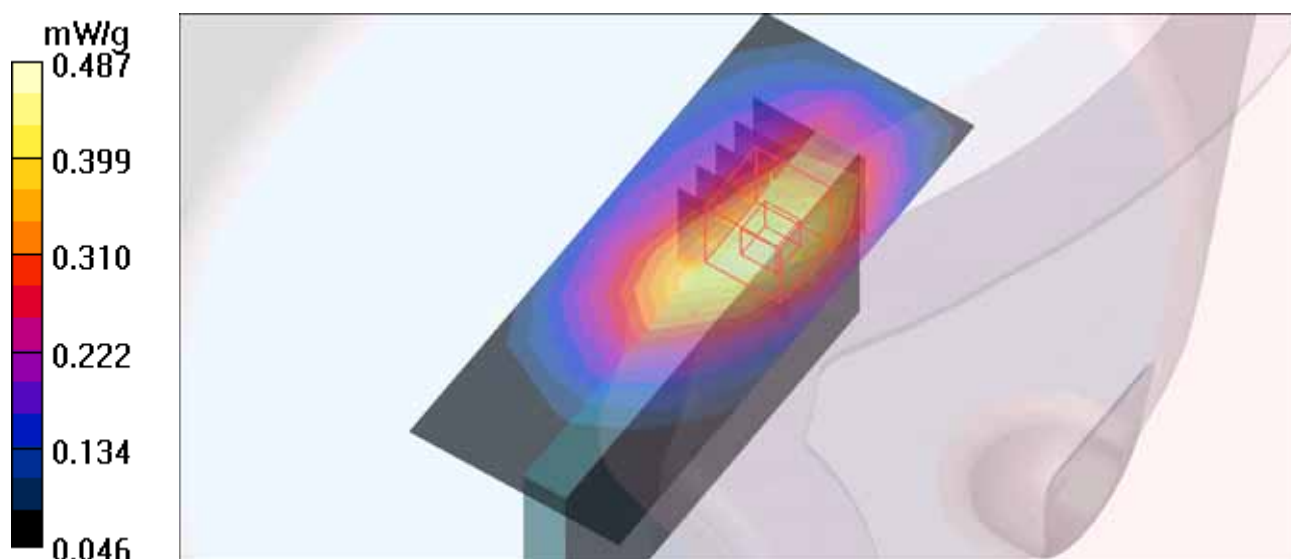
Body Position - Mid/Zoom Scan(5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 21.2 V/m; Power Drift = -0.084 dB

Peak SAR (extrapolated) = 0.575 W/kg

SAR(1 g) = 0.394 mW/g; SAR(10 g) = 0.265 mW/g

Maximum value of SAR (measured) = 0.487 mW/g



M35-Left edge-GSM850-Ch190 / Bat-HT Energy 3.7VDC

Communication System: GSM850 ; Frequency: 836.6 MHz ; Duty Cycle: 1:8.3 ; Modulation type: GMSK

Medium: MSL835 Medium parameters used: $f = 836.6 \text{ MHz}$; $\sigma = 1.01 \text{ mho/m}$; $\epsilon_r = 56.42$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section ; Separation distance : 10 mm (The left edge side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(10.32, 10.32, 10.32); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body Position - Mid/Area Scan (5x11x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.290 mW/g

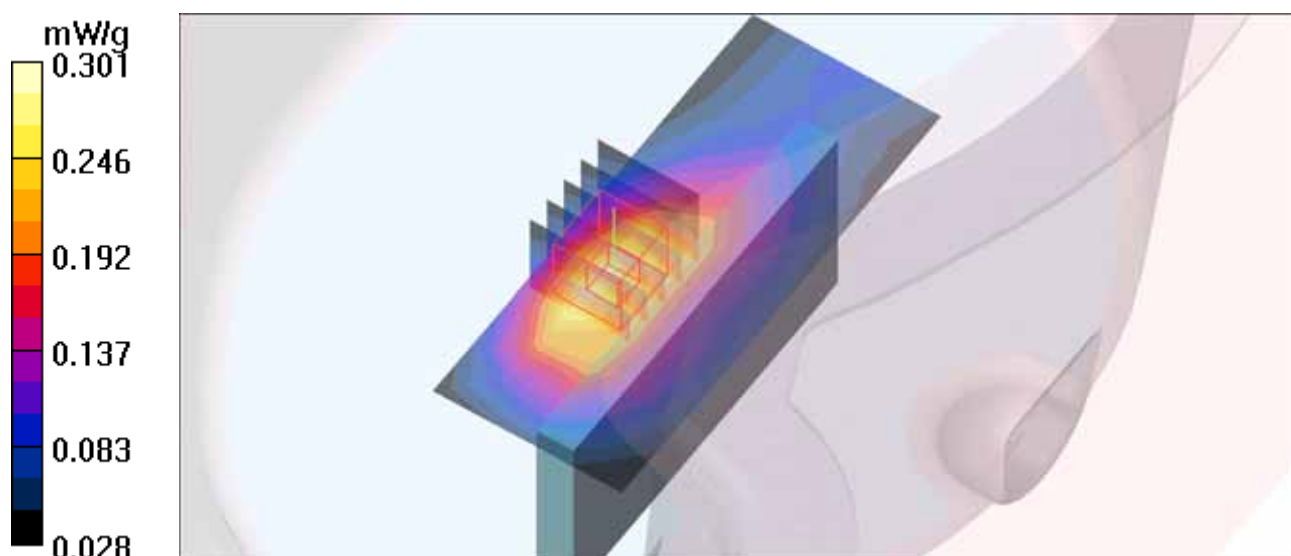
Body Position - Mid/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 15.4 V/m; Power Drift = 0.027 dB

Peak SAR (extrapolated) = 0.356 W/kg

SAR(1 g) = 0.243 mW/g; SAR(10 g) = 0.161 mW/g

Maximum value of SAR (measured) = 0.301 mW/g



M36-Left edge-GPRS850 TS1-Ch190 / Bat-HT Energy 3.7VDC

Communication System: GPRS850 ; Frequency: 836.6 MHz ; Duty Cycle: 1:8.3 ; Modulation type: GMSK / UL 1 time slot

Medium: MSL835 Medium parameters used: $f = 836.6 \text{ MHz}$; $\sigma = 1.01 \text{ mho/m}$; $\epsilon_r = 56.42$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section ; Separation distance : 10 mm (The left edge side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(10.32, 10.32, 10.32); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body Position - Mid/Area Scan (5x11x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.276 mW/g

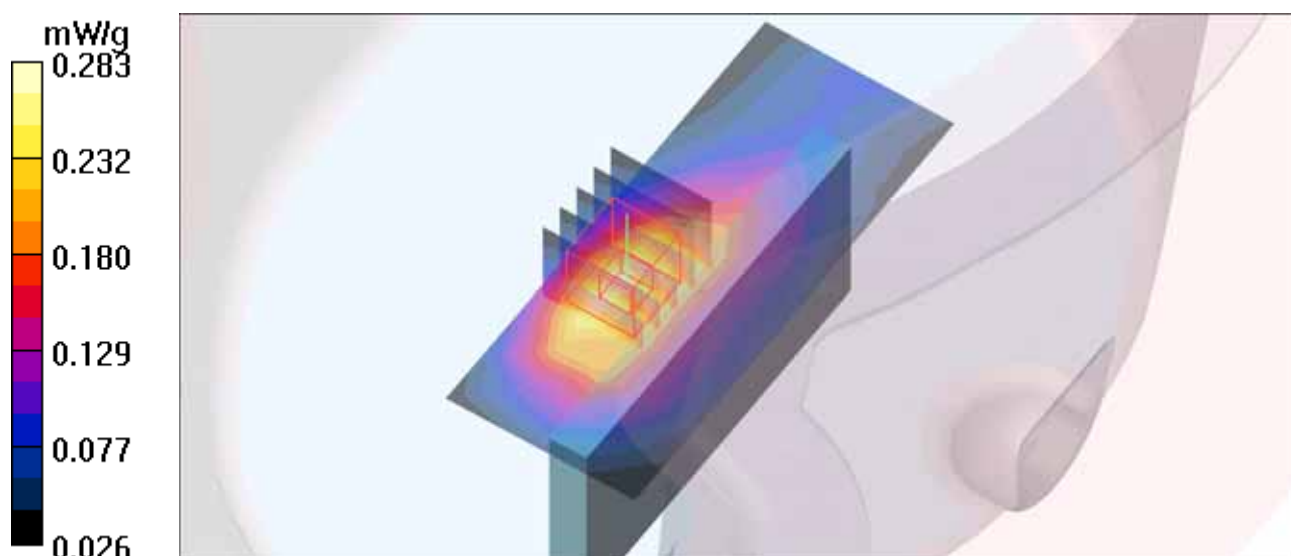
Body Position - Mid/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 15.0 V/m; Power Drift = -0.002 dB

Peak SAR (extrapolated) = 0.333 W/kg

SAR(1 g) = 0.229 mW/g; SAR(10 g) = 0.153 mW/g

Maximum value of SAR (measured) = 0.283 mW/g



M37-Bottom edge-GSM850-Ch190 / Bat-HT Energy 3.8VDC

Communication System: GSM850 ; Frequency: 836.6 MHz ; Duty Cycle: 1:8.3 ; Modulation type: GMSK

Medium: MSL835 Medium parameters used: $f = 836.6 \text{ MHz}$; $\sigma = 1.01 \text{ mho/m}$; $\epsilon_r = 56.42$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section ; Separation distance : 10 mm (The Bottom edge side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(10.32, 10.32, 10.32); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body Position - Mid/Area Scan (5x8x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$
Maximum value of SAR (measured) = 0.181 mW/g

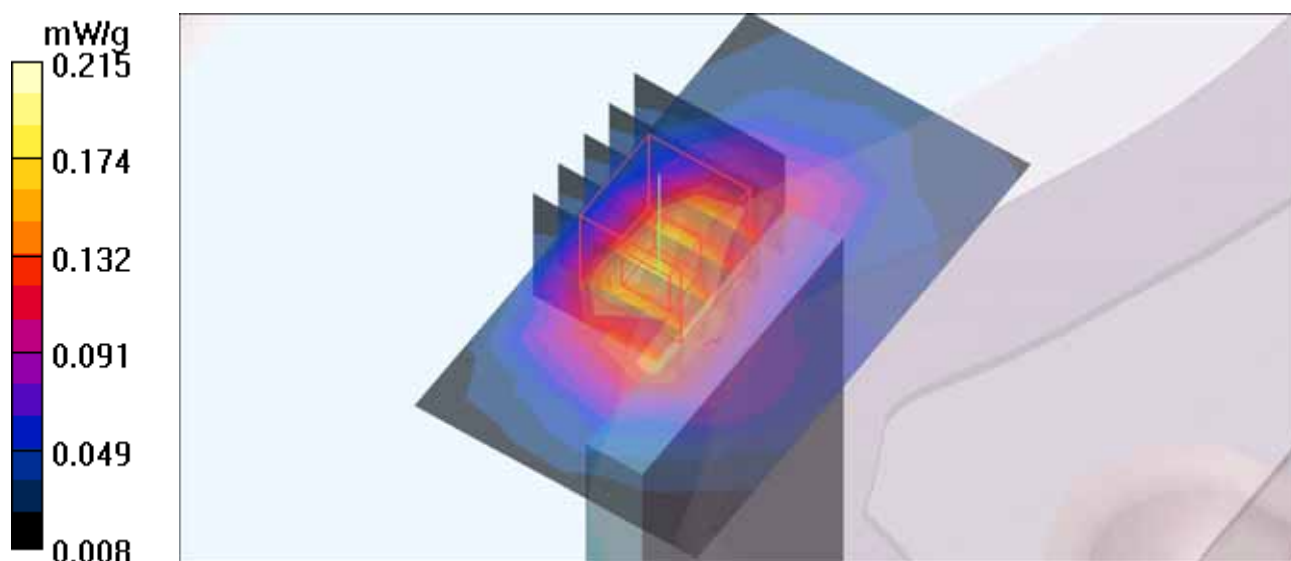
Body Position - Mid/Zoom Scan(5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 11.4 V/m; Power Drift = 0.104 dB

Peak SAR (extrapolated) = 0.268 W/kg

SAR(1 g) = 0.159 mW/g; SAR(10 g) = 0.093 mW/g

Maximum value of SAR (measured) = 0.215 mW/g



M38-Bottom edge-GPRS850 TS1-Ch190 / Bat-HT Energy 3.8VDC

Communication System: GPRS850 ; Frequency: 836.6 MHz ; Duty Cycle: 1:8.3 ; Modulation type: GMSK / UL 1 time slot

Medium: MSL835 Medium parameters used: $f = 836.6 \text{ MHz}$; $\sigma = 1.01 \text{ mho/m}$; $\epsilon_r = 56.42$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section ; Separation distance : 10 mm (The Bottom edge side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(10.32, 10.32, 10.32); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body Position - Mid/Area Scan (5x8x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 0.178 mW/g

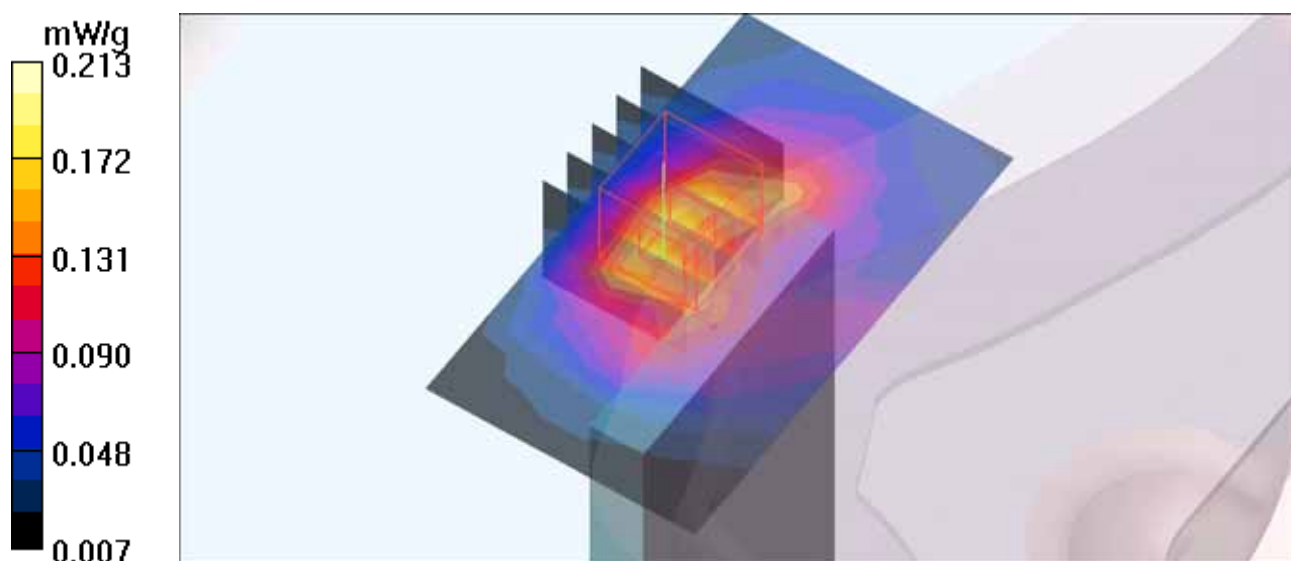
Body Position - Mid/Zoom Scan(5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 11.4 V/m; Power Drift = 0.176 dB

Peak SAR (extrapolated) = 0.270 W/kg

SAR(1 g) = 0.158 mW/g; SAR(10 g) = 0.091 mW/g

Maximum value of SAR (measured) = 0.213 mW/g



M39-Bottom edge-GSM850-Ch190 / Bat-HT Energy 3.7VDC

Communication System: GSM850 ; Frequency: 836.6 MHz ; Duty Cycle: 1:8.3 ; Modulation type: GMSK

Medium: MSL835 Medium parameters used: $f = 836.6 \text{ MHz}$; $\sigma = 1.01 \text{ mho/m}$; $\epsilon_r = 56.42$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section ; Separation distance : 10 mm (The Bottom edge side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(10.32, 10.32, 10.32); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body Position - Mid/Area Scan (5x8x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 0.209 mW/g

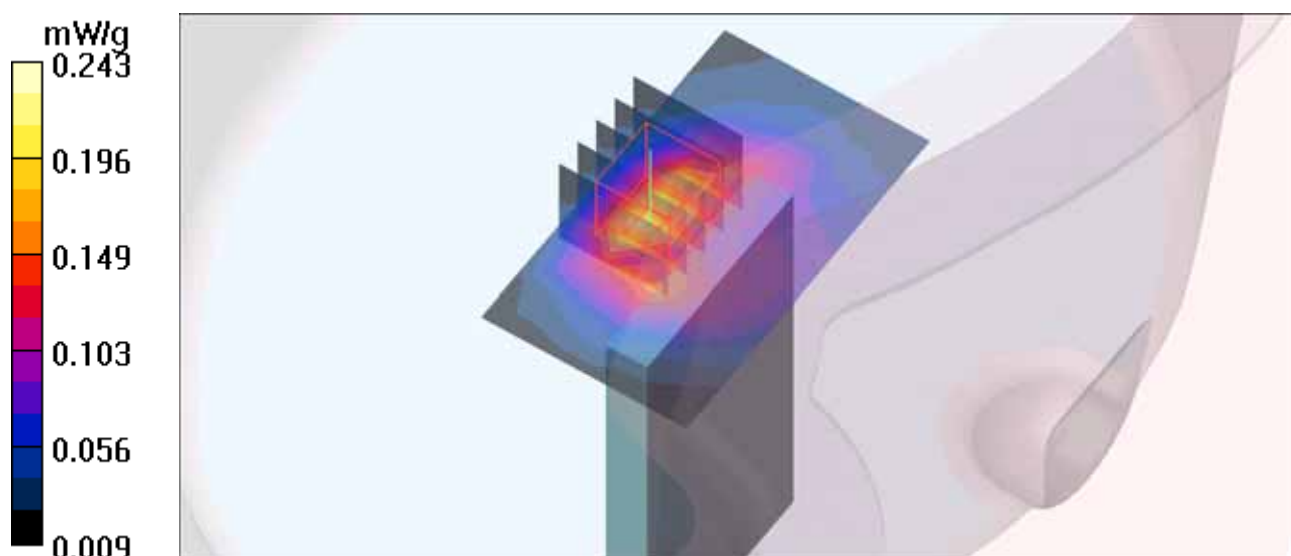
Body Position - Mid/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 10.6 V/m; Power Drift = 0.170 dB

Peak SAR (extrapolated) = 0.317 W/kg

SAR(1 g) = 0.176 mW/g; SAR(10 g) = 0.098 mW/g

Maximum value of SAR (measured) = 0.243 mW/g



M40-Bottom edge-GPRS850 TS1-Ch190 / Bat-HT Energy 3.7VDC

Communication System: GPRS850 ; Frequency: 836.6 MHz ; Duty Cycle: 1:8.3 ; Modulation type: GMSK / UL 1 time slot

Medium: MSL835 Medium parameters used: $f = 836.6 \text{ MHz}$; $\sigma = 1.01 \text{ mho/m}$; $\epsilon_r = 56.42$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section ; Separation distance : 10 mm (The Bottom edge side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(10.32, 10.32, 10.32); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body Position - Mid/Area Scan (5x8x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 0.202 mW/g

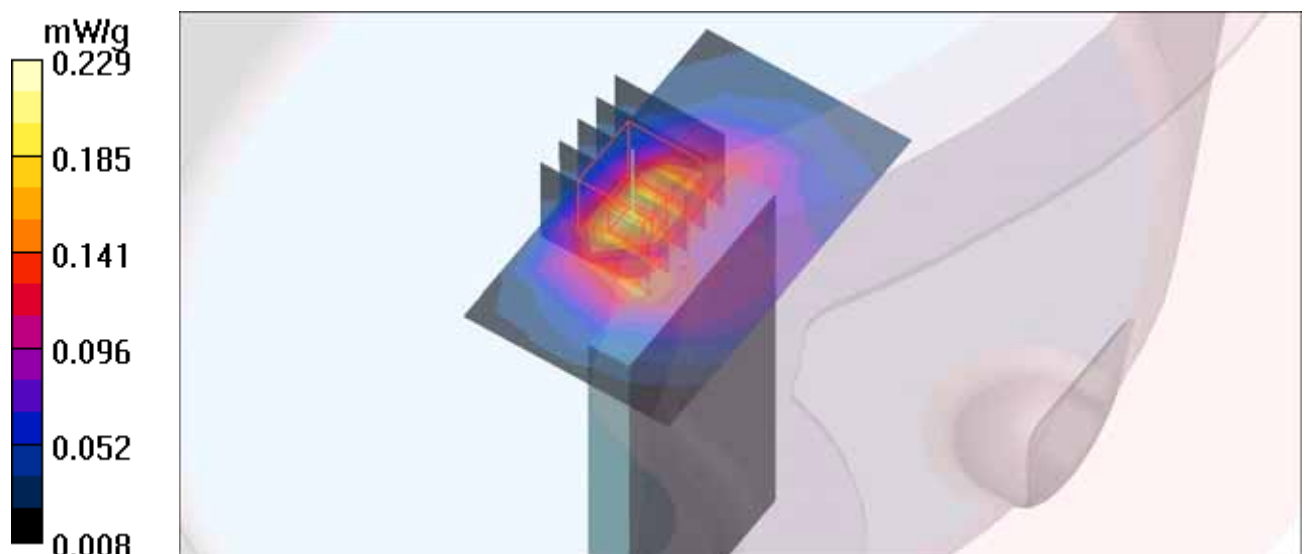
Body Position - Mid/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 10.5 V/m; Power Drift = 0.146 dB

Peak SAR (extrapolated) = 0.295 W/kg

SAR(1 g) = 0.167 mW/g; SAR(10 g) = 0.095 mW/g

Maximum value of SAR (measured) = 0.229 mW/g



M41-Right Head-Cheek-PCS1900-Ch661 / Bat-HT Energy 3.8VDC

Communication System: GSM1900 ; Frequency: 1880 MHz ; Duty Cycle: 1:8.3

Medium: HSL1900 Medium parameters used: $f = 1880$ MHz; $\sigma = 1.42$ mho/m; $\epsilon_r = 40.88$; $\rho = 1000$ kg/m³

Phantom section: Right Section ; DUT test position : Cheek ; Modulation type: GMSK

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(8.45, 8.45, 8.45); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Touch position - Middle/Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.630 mW/g

Touch position - Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 14.3 V/m; Power Drift = -0.015 dB

Peak SAR (extrapolated) = 0.792 W/kg

SAR(1 g) = 0.493 mW/g; SAR(10 g) = 0.293 mW/g

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

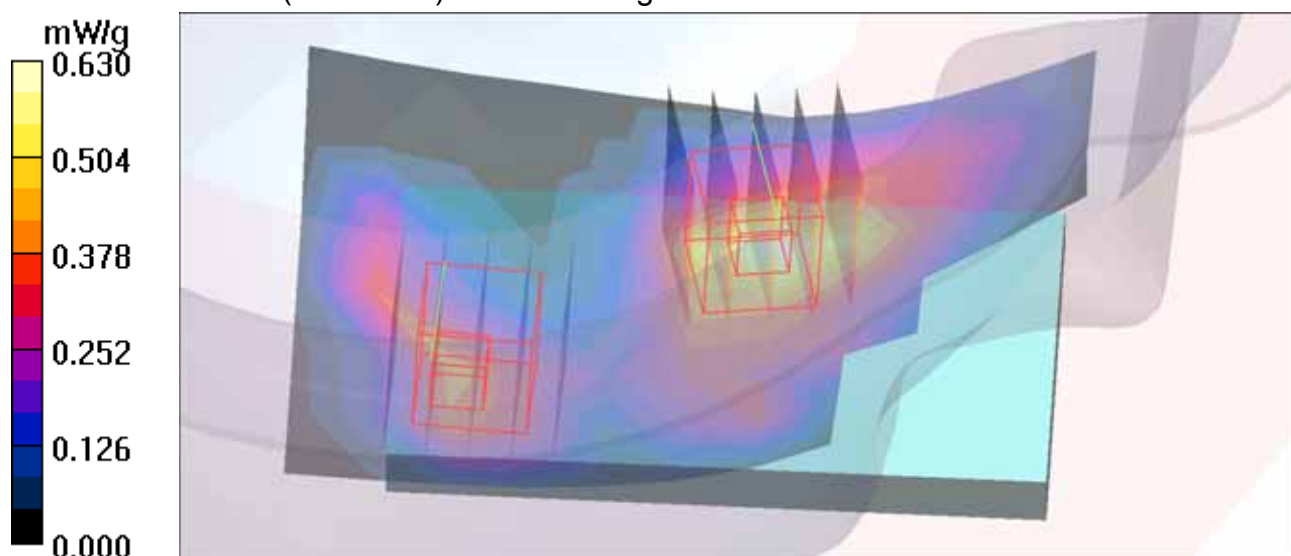
Touch position - Middle/Zoom Scan (5x5x7)/Cube 1: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 14.3 V/m; Power Drift = -0.015 dB

Peak SAR (extrapolated) = 0.618 W/kg

SAR(1 g) = 0.348 mW/g; SAR(10 g) = 0.199 mW/g

Maximum value of SAR (measured) = 0.435 mW/g



M42-Right Head-Tilt-PCS1900-Ch661 / Bat-HT Energy 3.8VDC

Communication System: GSM1900 ; Frequency: 1880 MHz ; Duty Cycle: 1:8.3

Medium: HSL1900 Medium parameters used: $f = 1880$ MHz; $\sigma = 1.42$ mho/m; $\epsilon_r = 40.88$; $\rho = 1000$ kg/m³

Phantom section: Right Section ; DUT test position : Tilt ; Modulation type: GMSK

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(8.45, 8.45, 8.45); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Tilt position - Middle/Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.381 mW/g

Tilt position - Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 16.9 V/m; Power Drift = -0.025 dB

Peak SAR (extrapolated) = 0.526 W/kg

SAR(1 g) = 0.290 mW/g; SAR(10 g) = 0.166 mW/g

Maximum value of SAR (measured) = 0.392 mW/g

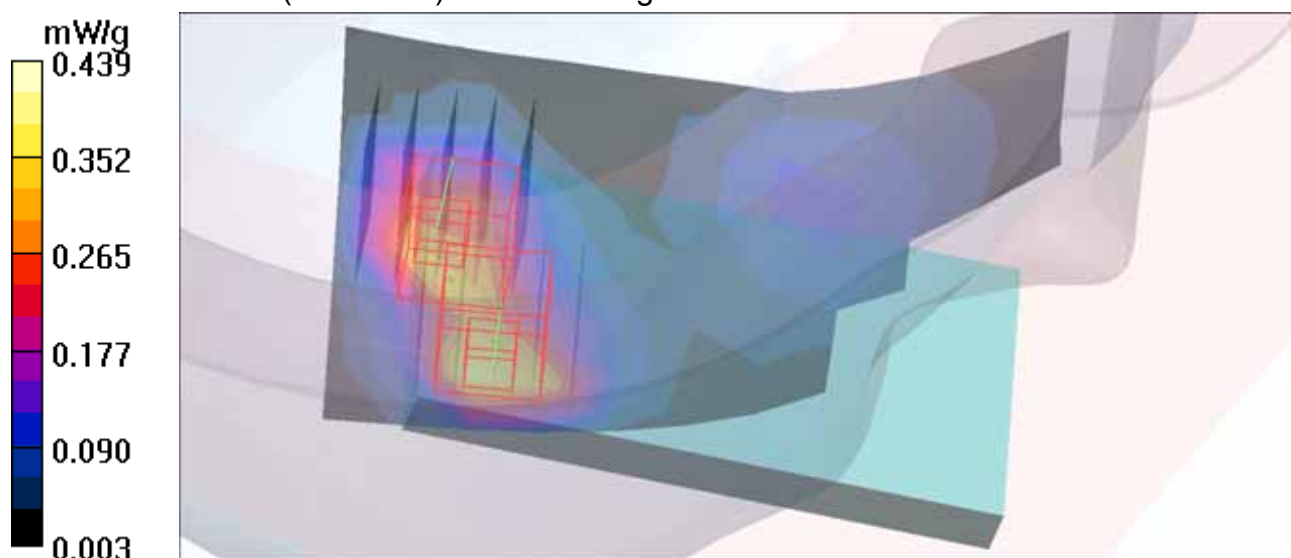
Tilt position - Middle/Zoom Scan (5x5x7)/Cube 1: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 16.9 V/m; Power Drift = -0.025 dB

Peak SAR (extrapolated) = 0.598 W/kg

SAR(1 g) = 0.285 mW/g; SAR(10 g) = 0.149 mW/g

Maximum value of SAR (measured) = 0.439 mW/g



M43-Left Head-Cheek-PCS1900-Ch661 / Bat-HT Energy 3.8VDC

Communication System: GSM1900 ; Frequency: 1880 MHz ; Duty Cycle: 1:8.3

Medium: HSL1900 Medium parameters used: $f = 1880 \text{ MHz}$; $\sigma = 1.42 \text{ mho/m}$; $\epsilon_r = 40.88$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Left Section ; DUT test position : Cheek ; Modulation type: GMSK

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(8.45, 8.45, 8.45); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

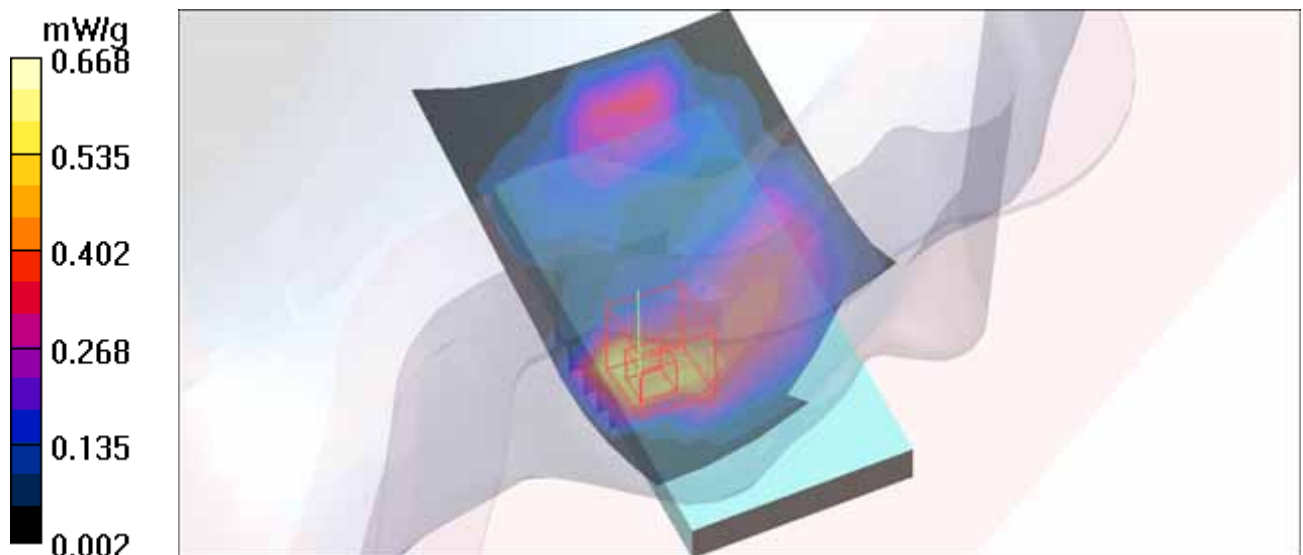
Touch position - Middle/Area Scan (7x11x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$
Maximum value of SAR (measured) = 0.579 mW/g**Touch position - Middle/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 18.1 V/m; Power Drift = -0.078 dB

Peak SAR (extrapolated) = 0.930 W/kg

SAR(1 g) = 0.486 mW/g; SAR(10 g) = 0.278 mW/g

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



M44-Left Head-Tilt-PCS1900-Ch661 / Bat-HT Energy 3.8VDC

Communication System: GSM1900 ; Frequency: 1880 MHz ; Duty Cycle: 1:8.3

Medium: HSL1900 Medium parameters used: $f = 1880$ MHz; $\sigma = 1.42$ mho/m; $\epsilon_r = 40.88$; $\rho = 1000$ kg/m³

Phantom section: Left Section ; DUT test position : Tilt ; Modulation type: GMSK

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(8.45, 8.45, 8.45); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Tilt position - Middle/Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.320 mW/g

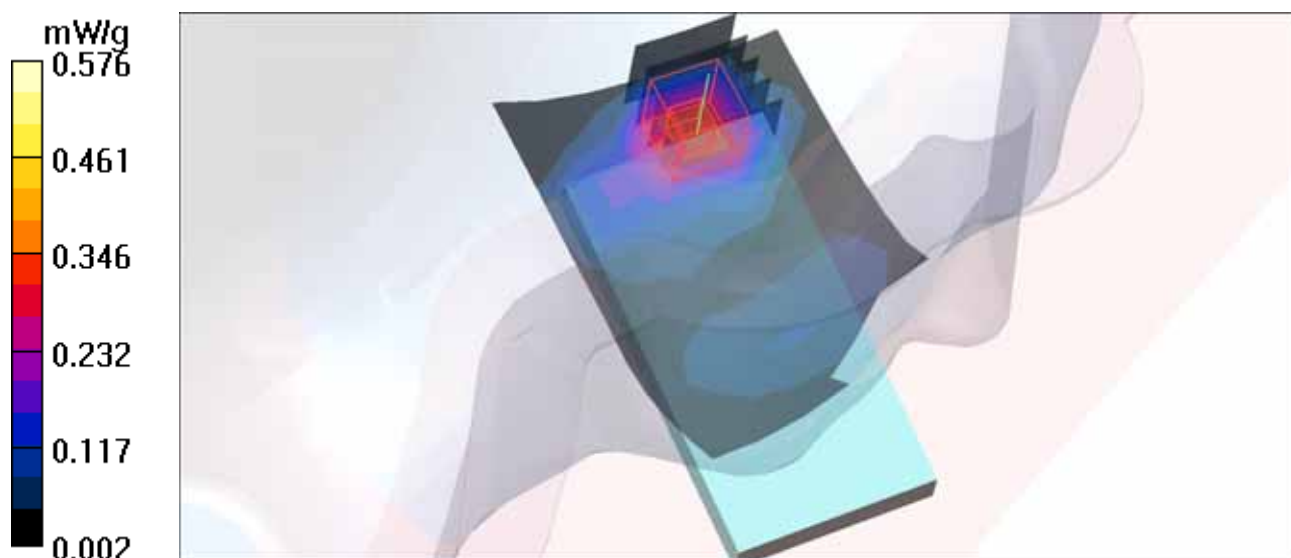
Tilt position - Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 18.8 V/m; Power Drift = 0.188 dB

Peak SAR (extrapolated) = 0.770 W/kg

SAR(1 g) = 0.357 mW/g; SAR(10 g) = 0.171 mW/g

Maximum value of SAR (measured) = 0.576 mW/g



M45-Right Head-Cheek-PCS1900-Ch661 / Bat-HT Energy 3.7VDC

Communication System: GSM1900 ; Frequency: 1880 MHz ; Duty Cycle: 1:8.3

Medium: HSL1900 Medium parameters used: $f = 1880$ MHz; $\sigma = 1.42$ mho/m; $\epsilon_r = 40.88$; $\rho = 1000$ kg/m³

Phantom section: Right Section ; DUT test position : Cheek ; Modulation type: GMSK

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(8.45, 8.45, 8.45); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Touch position - Middle/Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.657 mW/g

Touch position - Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 14.9 V/m; Power Drift = -0.176 dB

Peak SAR (extrapolated) = 0.833 W/kg

SAR(1 g) = 0.512 mW/g; SAR(10 g) = 0.300 mW/g

Maximum value of SAR (measured) = 0.643 mW/g

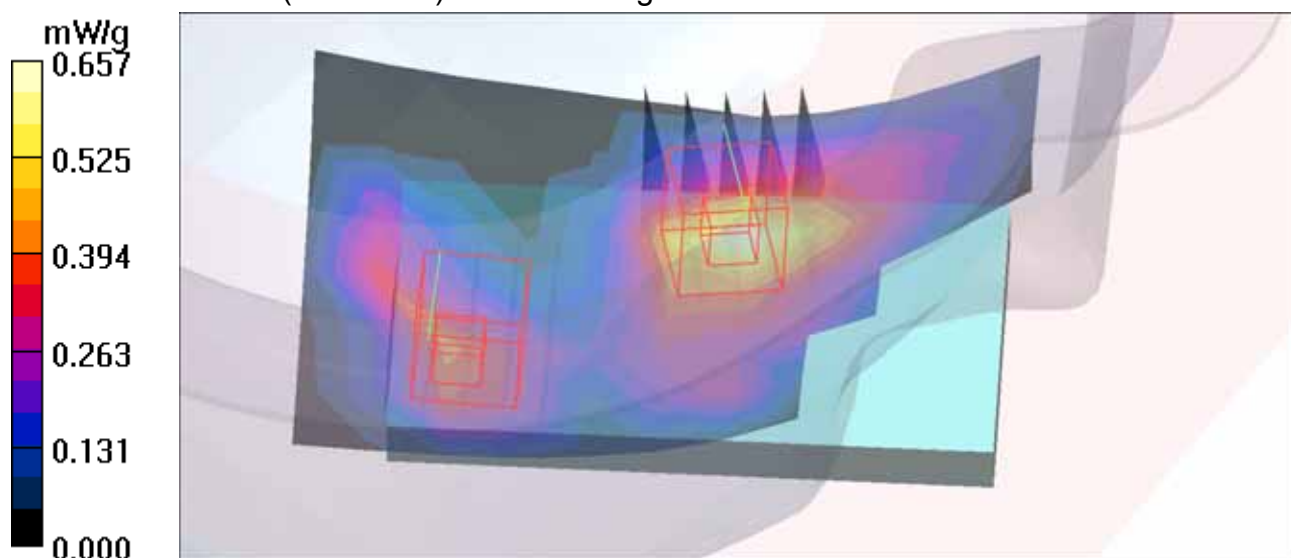
Touch position - Middle/Zoom Scan (5x5x7)/Cube 1: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 14.9 V/m; Power Drift = -0.176 dB

Peak SAR (extrapolated) = 0.579 W/kg

SAR(1 g) = 0.343 mW/g; SAR(10 g) = 0.197 mW/g

Maximum value of SAR (measured) = 0.434 mW/g



M46-Right Head-Tilt-PCS1900-Ch661 / Bat-HT Energy 3.7VDC

Communication System: GSM1900 ; Frequency: 1880 MHz ; Duty Cycle: 1:8.3

Medium: HSL1900 Medium parameters used: $f = 1880$ MHz; $\sigma = 1.42$ mho/m; $\epsilon_r = 40.88$; $\rho = 1000$ kg/m³

Phantom section: Right Section ; DUT test position : Tilt ; Modulation type: GMSK

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(8.45, 8.45, 8.45); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Tilt position - Middle/Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.403 mW/g

Tilt position - Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 17.0 V/m; Power Drift = -0.115 dB

Peak SAR (extrapolated) = 0.534 W/kg

SAR(1 g) = 0.299 mW/g; SAR(10 g) = 0.171 mW/g

Maximum value of SAR (measured) = 0.401 mW/g

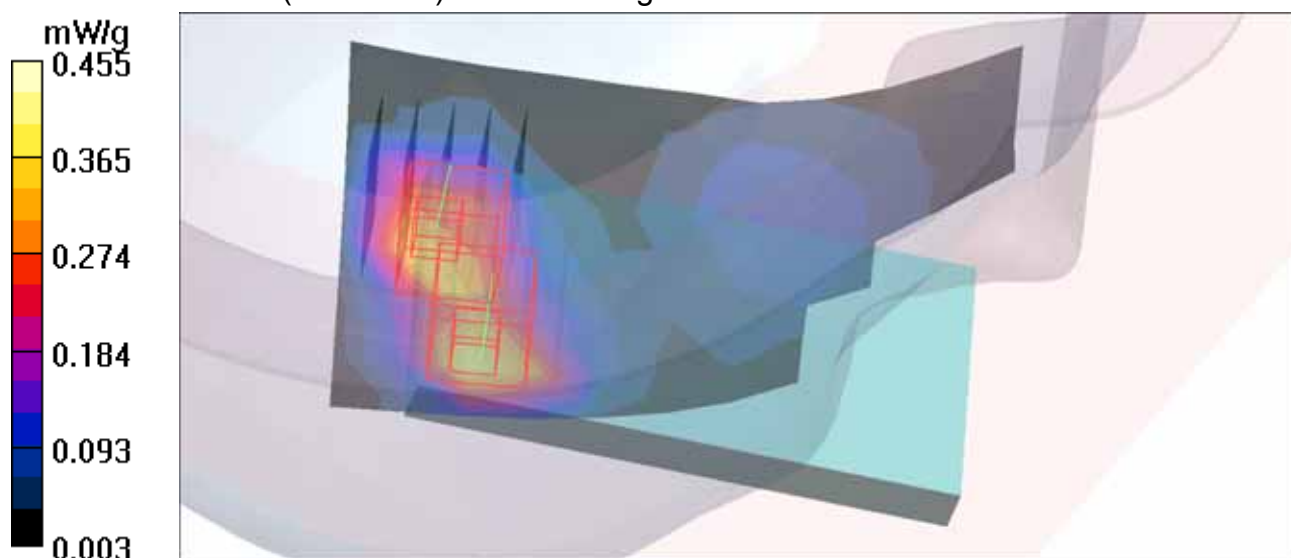
Tilt position - Middle/Zoom Scan (5x5x7)/Cube 1: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 17.0 V/m; Power Drift = -0.115 dB

Peak SAR (extrapolated) = 0.613 W/kg

SAR(1 g) = 0.298 mW/g; SAR(10 g) = 0.155 mW/g

Maximum value of SAR (measured) = 0.455 mW/g



M47-Left Head-Cheek-PCS190-Ch661 / Bat-HT Energy 3.7VDC

Communication System: GSM1900 ; Frequency: 1880 MHz ; Duty Cycle: 1:8.3

Medium: HSL1900 Medium parameters used: $f = 1880$ MHz; $\sigma = 1.42$ mho/m; $\epsilon_r = 40.88$; $\rho = 1000$ kg/m³

Phantom section: Left Section ; DUT test position : Cheek ; Modulation type: GMSK

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(8.45, 8.45, 8.45); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Touch position - Middle/Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.532 mW/g

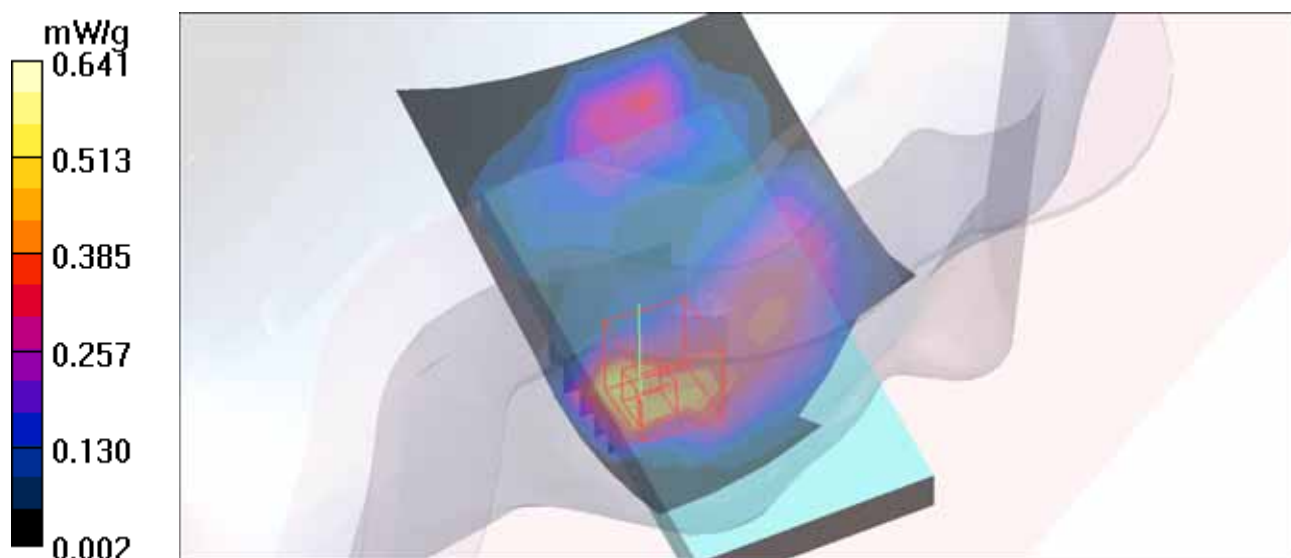
Touch position - Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 17.3 V/m; Power Drift = 0.141 dB

Peak SAR (extrapolated) = 0.896 W/kg

SAR(1 g) = 0.469 mW/g; SAR(10 g) = 0.269 mW/g

Maximum value of SAR (measured) = 0.641 mW/g



M48-Left Head-Tilt-PCS1900-Ch661 / Bat-HT Energy 3.7VDC

Communication System: GSM1900 ; Frequency: 1880 MHz ; Duty Cycle: 1:8.3

Medium: HSL1900 Medium parameters used: $f = 1880 \text{ MHz}$; $\sigma = 1.42 \text{ mho/m}$; $\epsilon_r = 40.88$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Left Section ; DUT test position : Tilt ; Modulation type: GMSK

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(8.45, 8.45, 8.45); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Tilt position - Middle/Area Scan (7x11x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 0.373 mW/g

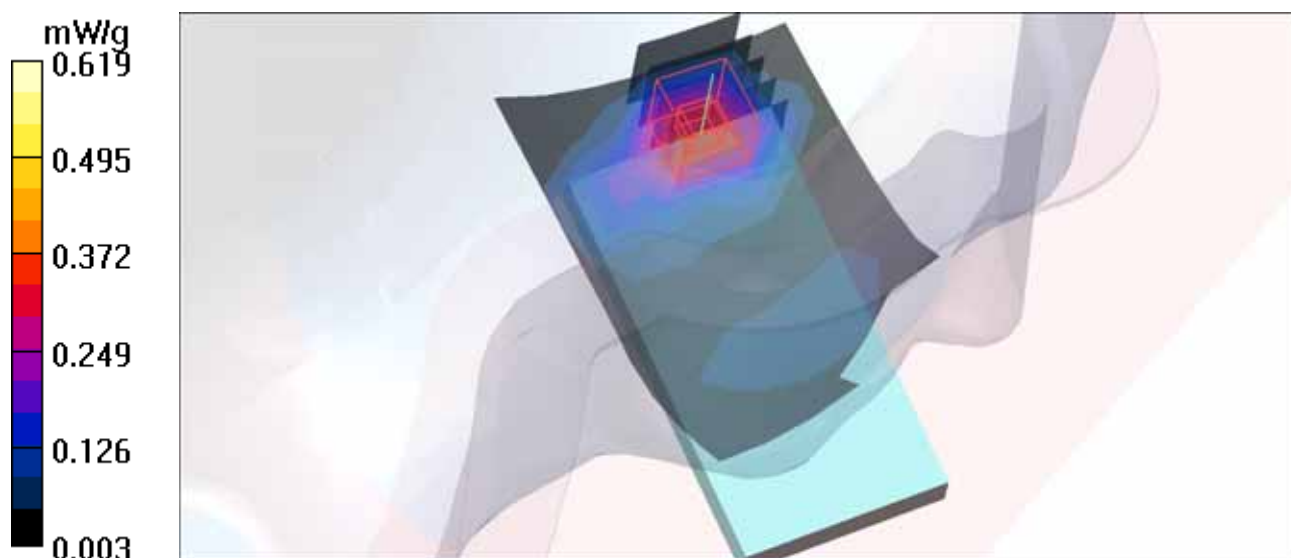
Tilt position - Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 19.9 V/m; Power Drift = -0.008 dB

Peak SAR (extrapolated) = 0.825 W/kg

SAR(1 g) = 0.386 mW/g; SAR(10 g) = 0.185 mW/g

Maximum value of SAR (measured) = 0.619 mW/g



M49-Back-PCS1900-Ch661 / Bat-HT Energy 3.8VDC

Communication System: GSM1900 ; Frequency: 1880 MHz ; Duty Cycle: 1:8.3 ; Modulation type: GMSK

Medium: MSL1900 Medium parameters used: $f = 1880$ MHz; $\sigma = 1.54$ mho/m; $\epsilon_r = 54.62$; $\rho = 1000$ kg/m³

Phantom section: Flat Section ; Separation distance : 10 mm (The Back side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(8.49, 8.49, 8.49); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body Position - Mid/Area Scan (7x10x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.600 mW/g

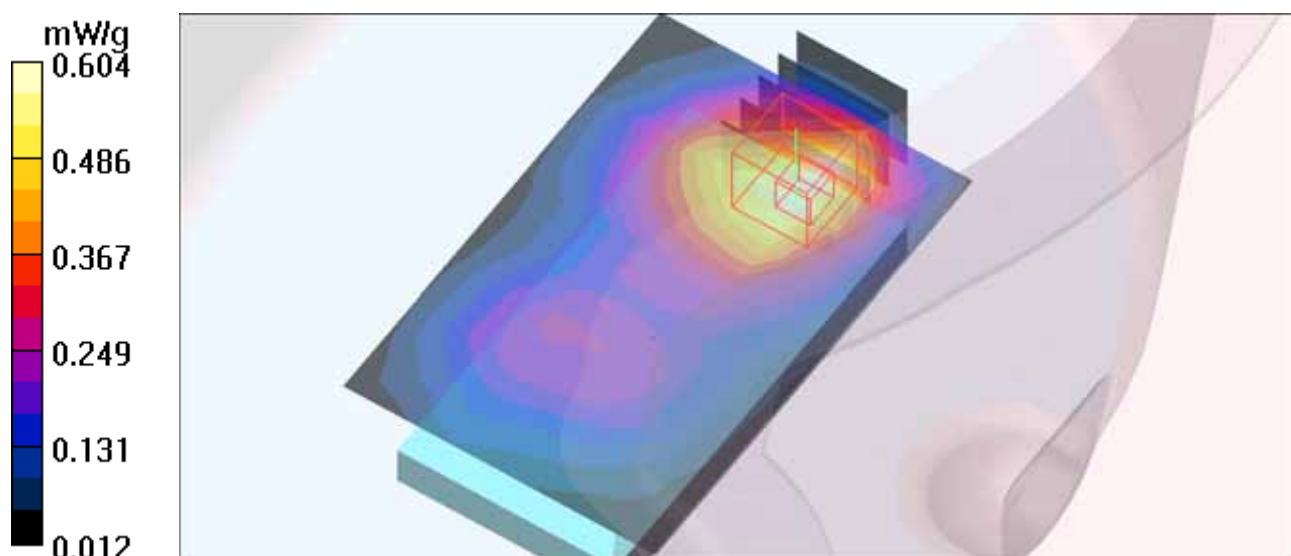
Body Position - Mid/Zoom Scan(5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 12.0 V/m; Power Drift = -0.06 dB

Peak SAR (extrapolated) = 0.761 W/kg

SAR(1 g) = 0.461 mW/g; SAR(10 g) = 0.280 mW/g

Maximum value of SAR (measured) = 0.604 mW/g



M50-Back-GPRS1900 TS1-Ch661 / Bat-HT Energy 3.8VDC

Communication System: GPRS1900 ; Frequency: 1880 MHz ; Duty Cycle: 1:8.3 ; Modulation type: GMSK / UL 1 time slot

Medium: MSL1900 Medium parameters used: $f = 1880$ MHz; $\sigma = 1.54$ mho/m; $\epsilon_r = 54.62$; $\rho = 1000$ kg/m³

Phantom section: Flat Section ; Separation distance : 10 mm (The Back side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(8.49, 8.49, 8.49); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body Position - Mid/Area Scan (7x12x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.587 mW/g

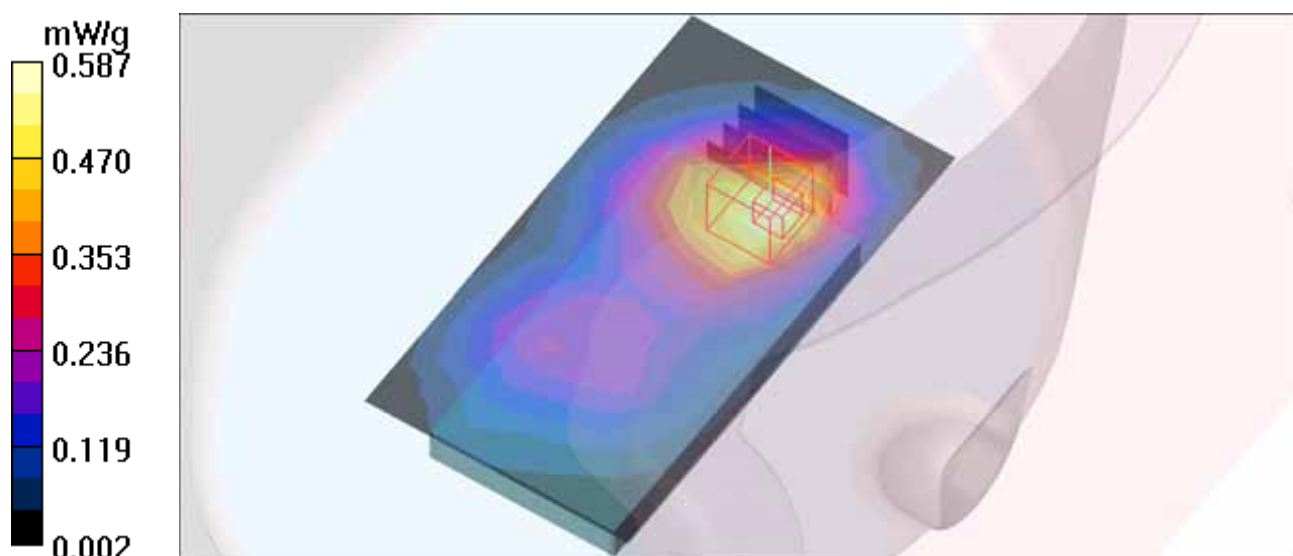
Body Position - Mid/Zoom Scan(5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 11.4 V/m; Power Drift = -0.111 dB

Peak SAR (extrapolated) = 0.726 W/kg

SAR(1 g) = 0.435 mW/g; SAR(10 g) = 0.264 mW/g

Maximum value of SAR (measured) = 0.573 mW/g



M51-Back-GPRS1900 TS2-Ch661 / Bat-HT Energy 3.8VDC

Communication System: GPRS1900 ; Frequency: 1880 MHz ; Duty Cycle: 1:4 ; Modulation type: GMSK / UL 2 time slots

Medium: MSL1900 Medium parameters used: $f = 1880 \text{ MHz}$; $\sigma = 1.54 \text{ mho/m}$; $\epsilon_r = 54.62$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section ; Separation distance : 10 mm (The Back side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(8.49, 8.49, 8.49); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body Position - Mid/Area Scan (7x12x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 0.932 mW/g

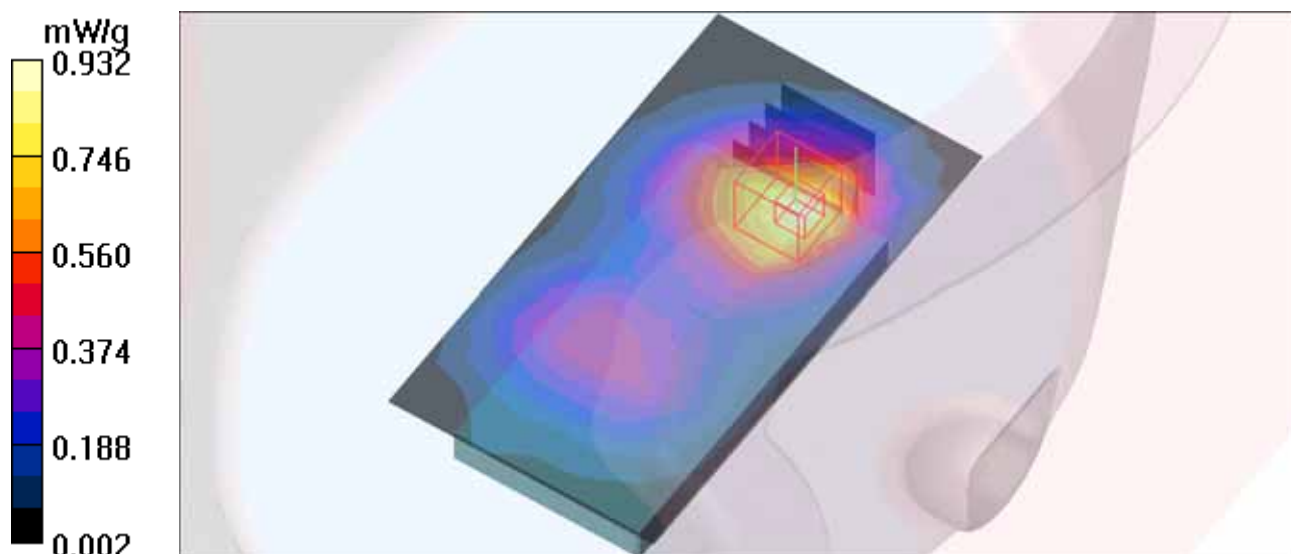
Body Position - Mid/Zoom Scan(5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 13.2 V/m; Power Drift = -0.076 dB

Peak SAR (extrapolated) = 1.16 W/kg

SAR(1 g) = 0.686 mW/g; SAR(10 g) = 0.409 mW/g

Maximum value of SAR (measured) = 0.919 mW/g



M52-Back-GPRS1900 TS3-Ch512 / Bat-HT Energy 3.8VDC

Communication System: GSM1900 ; Frequency: 1850.2 MHz ; Duty Cycle: 1:2.67 ; Modulation type: GMSK / UL 3 time slots

Medium: MSL1900 Medium parameters used: $f = 1850.2 \text{ MHz}$; $\sigma = 1.51 \text{ mho/m}$; $\epsilon_r = 54.76$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section ; Separation distance : 10 mm (The Back side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(8.49, 8.49, 8.49); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body Position - Low /Area Scan (7x12x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$
Maximum value of SAR (measured) = 0.959 mW/g

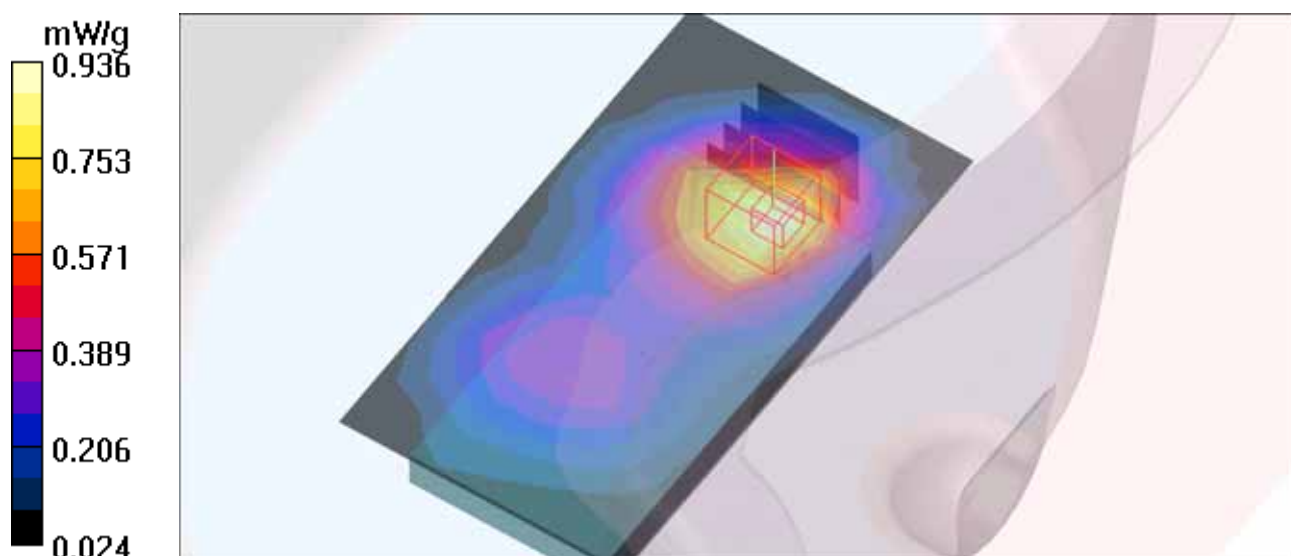
Body Position - Low /Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 14.1 V/m; Power Drift = -0.142 dB

Peak SAR (extrapolated) = 1.18 W/kg

SAR(1 g) = 0.704 mW/g; SAR(10 g) = 0.426 mW/g

Maximum value of SAR (measured) = 0.936 mW/g



M52-Back-GPRS1900 TS3-Ch661 / Bat-HT Energy 3.8VDC

Communication System: GPRS1900 ; Frequency: 1880 MHz ; Duty Cycle: 1:2.67 ; Modulation type: GMSK / UL 3 time slots

Medium: MSL1900 Medium parameters used: $f = 1880$ MHz; $\sigma = 1.54$ mho/m; $\epsilon_r = 54.62$; $\rho = 1000$ kg/m³

Phantom section: Flat Section ; Separation distance : 10 mm (The Back side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(8.49, 8.49, 8.49); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body Position - Mid/Area Scan (7x12x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 1.66 mW/g

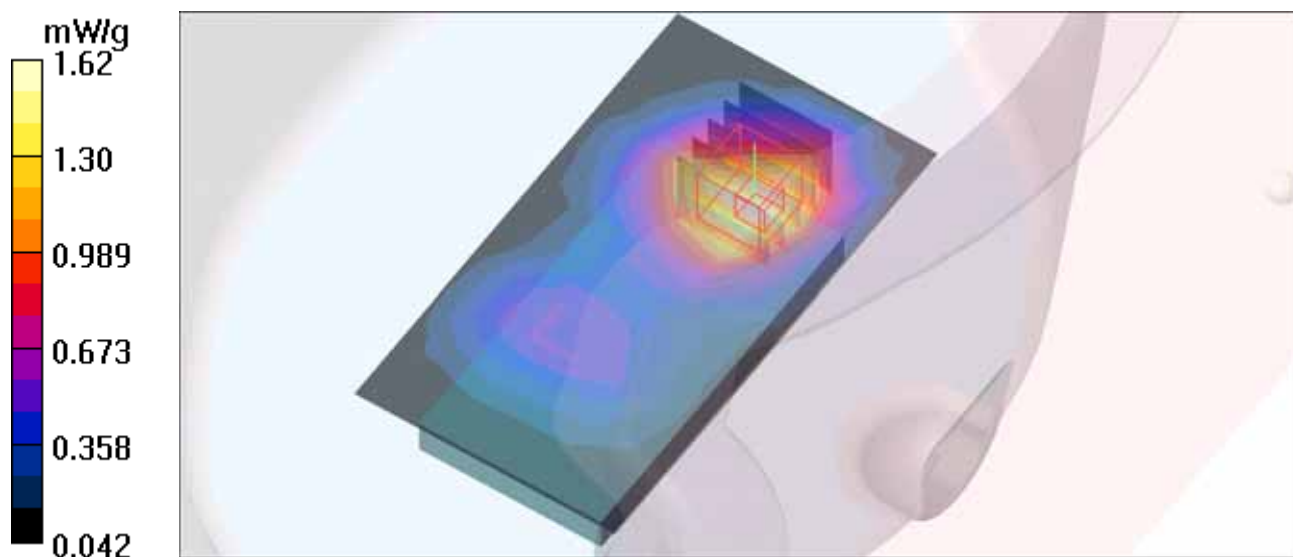
Body Position - Mid/Zoom Scan(5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

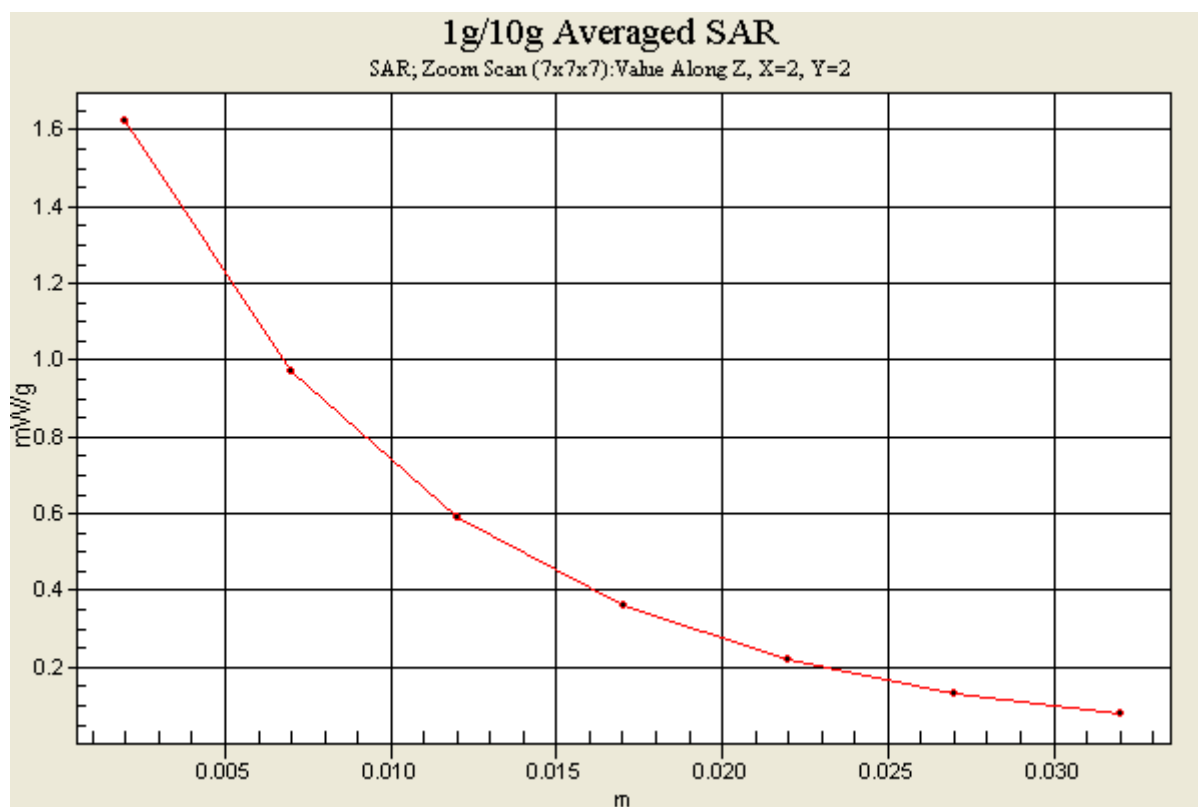
Reference Value = 15.9 V/m; Power Drift = -0.049 dB

Peak SAR (extrapolated) = 2.09 W/kg

SAR(1 g) = 1.23 mW/g; SAR(10 g) = 0.740 mW/g

Maximum value of SAR (measured) = 1.62 mW/g





M52-Back-GPRS1900 TS3-Ch810 / Bat-HT Energy 3.8VDC

Communication System: GPRS1900 ; Frequency: 1909.8 MHz ; Duty Cycle: 1:2.67 ; Modulation type: GMSK / UL 3 time slots

Medium: MSL1900 Medium parameters used: $f = 1909.8 \text{ MHz}$; $\sigma = 1.57 \text{ mho/m}$; $\epsilon_r = 54.41$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section ; Separation distance : 10 mm (The Back side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(8.49, 8.49, 8.49); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body Position - High /Area Scan (7x12x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

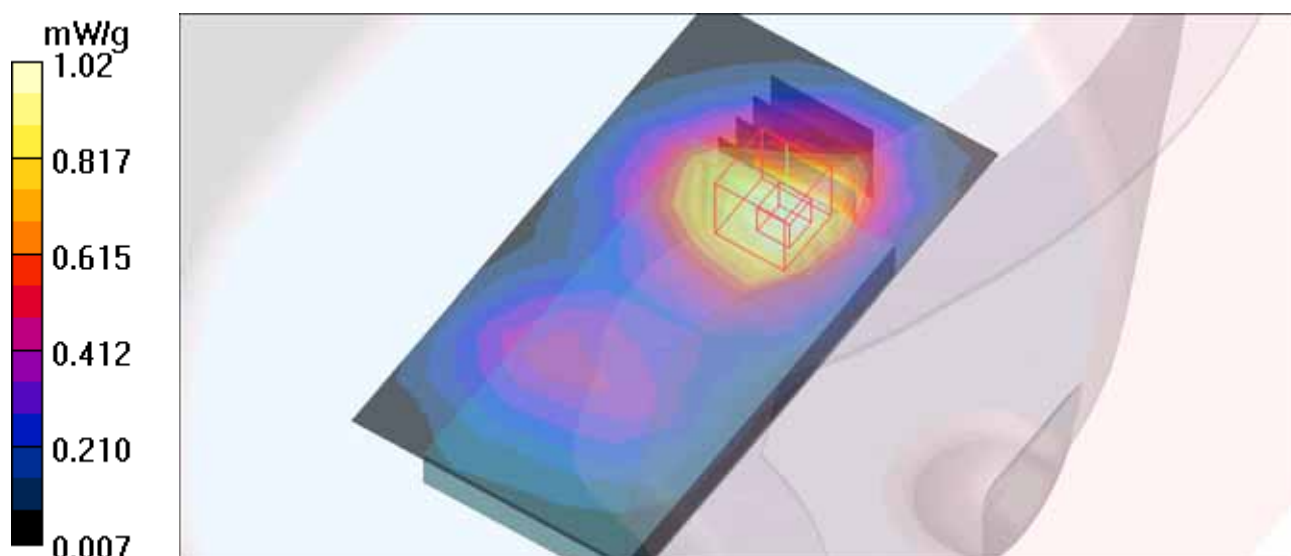
Maximum value of SAR (measured) = 1.02 mW/g

Body Position - High /Zoom Scan(5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 13.1 V/m; Power Drift = -0.110 dB

Peak SAR (extrapolated) = 1.28 W/kg

SAR(1 g) = 0.778 mW/g; SAR(10 g) = 0.479 mW/g



M53-Back-GPRS1900 TS4-Ch661 / Bat-HT Energy 3.8VDC

Communication System: GPRS1900 ; Frequency: 1880 MHz ; Duty Cycle: 1:2 ; Modulation type: GMSK / UL 4 time slots

Medium: MSL1900 Medium parameters used: $f = 1880 \text{ MHz}$; $\sigma = 1.54 \text{ mho/m}$; $\epsilon_r = 54.62$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section ; Separation distance : 10 mm (The Back side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(8.49, 8.49, 8.49); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body Position - Mid/Area Scan (7x12x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

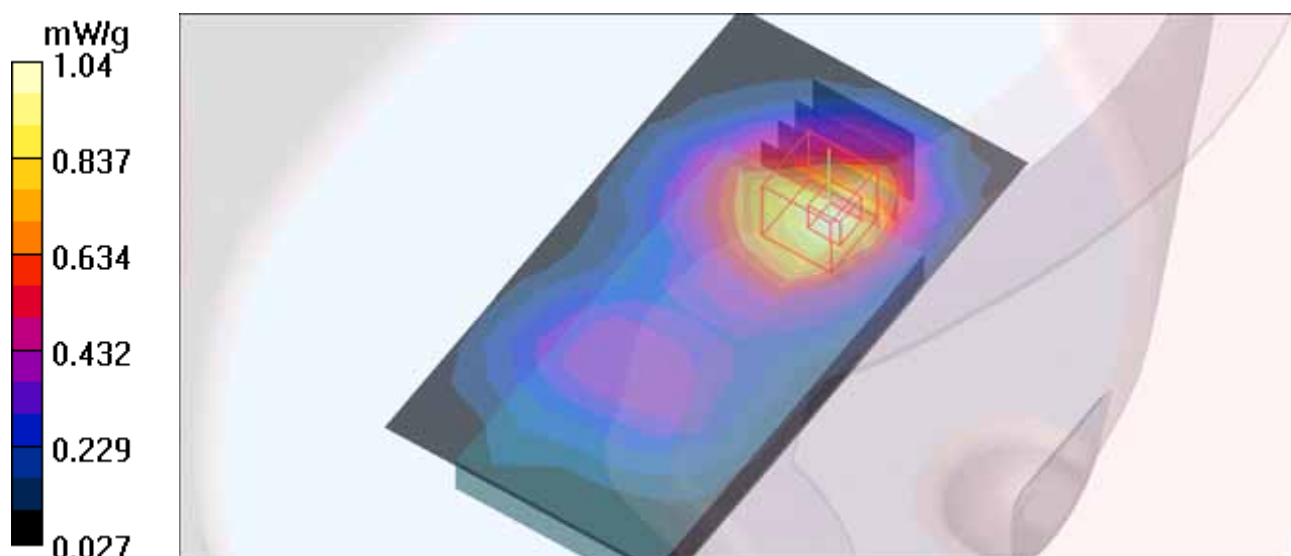
Maximum value of SAR (measured) = 1.04 mW/g

Body Position - Mid/Zoom Scan(5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 14.2 V/m; Power Drift = -0.065 dB

Peak SAR (extrapolated) = 1.32 W/kg

SAR(1 g) = 0.776 mW/g; SAR(10 g) = 0.466 mW/g



M54-Back-PCS1900-Ch661 / Bat-HT Energy 3.7VDC

Communication System: GSM1900 ; Frequency: 1880 MHz ; Duty Cycle: 1:8.3 ; Modulation type: GMSK

Medium: MSL1900 Medium parameters used: $f = 1880$ MHz; $\sigma = 1.54$ mho/m; $\epsilon_r = 54.62$; $\rho = 1000$ kg/m³

Phantom section: Flat Section ; Separation distance : 10 mm (The Back side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(8.49, 8.49, 8.49); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body Position - Mid/Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.588 mW/g

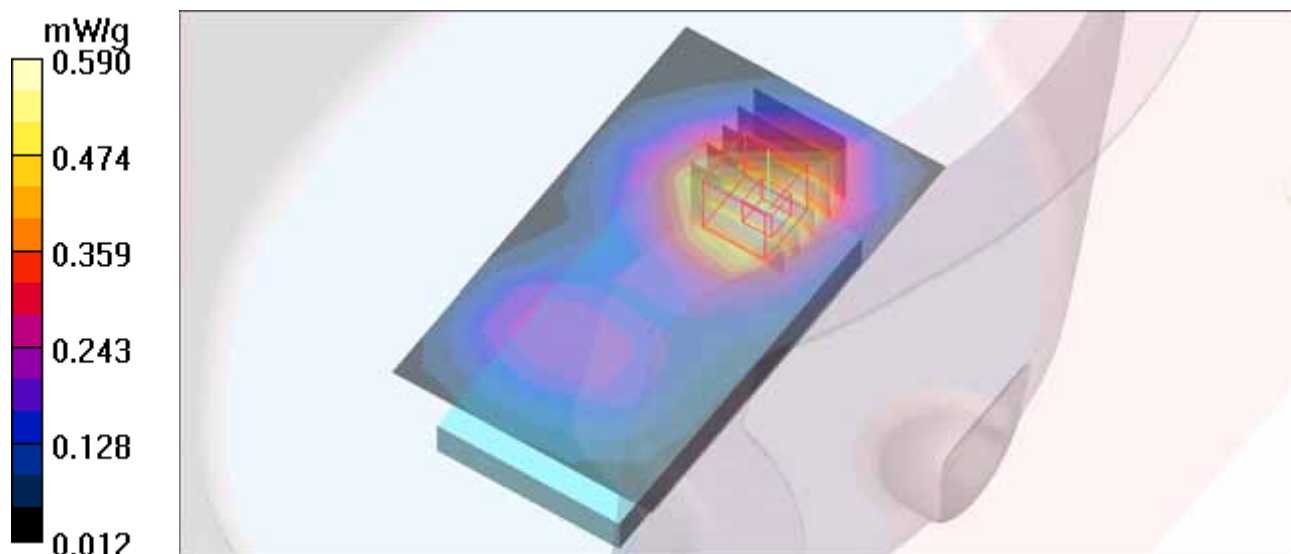
Body Position - Mid/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 9.97 V/m; Power Drift = -0.111 dB

Peak SAR (extrapolated) = 0.728 W/kg

SAR(1 g) = 0.442 mW/g; SAR(10 g) = 0.270 mW/g

Maximum value of SAR (measured) = 0.590 mW/g



M55-Back-GPRS1900 TS1-Ch661 / Bat-HT Energy 3.7VDC

Communication System: GSM1900 ; Frequency: 1880 MHz ; Duty Cycle: 1:8.3 ; Modulation type: GMSK / UL 1 time slot

Medium: MSL1900 Medium parameters used: $f = 1880$ MHz; $\sigma = 1.54$ mho/m; $\epsilon_r = 54.62$; $\rho = 1000$ kg/m³

Phantom section: Flat Section ; Separation distance : 10 mm (The Back side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(8.49, 8.49, 8.49); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body Position - Mid/Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.556 mW/g

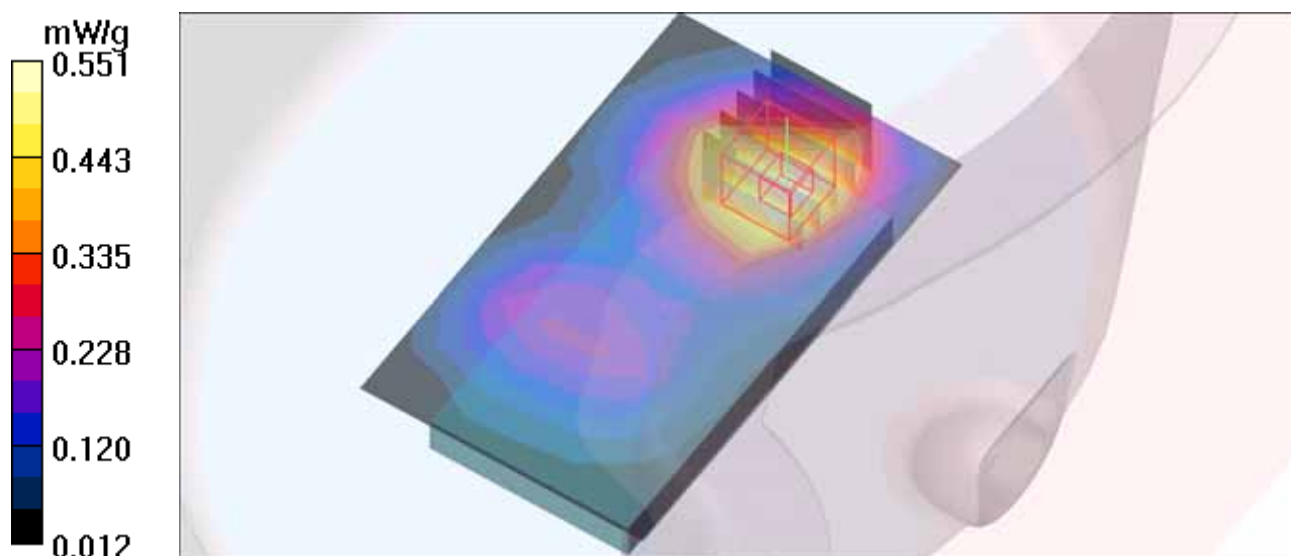
Body Position - Mid/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 9.70 V/m; Power Drift = -0.079 dB

Peak SAR (extrapolated) = 0.690 W/kg

SAR(1 g) = 0.420 mW/g; SAR(10 g) = 0.257 mW/g

Maximum value of SAR (measured) = 0.551 mW/g



M56-Back-GPRS1900 TS2-Ch661 / Bat-HT Energy 3.7VDC

Communication System: GSM1900 ; Frequency: 1880 MHz ; Duty Cycle: 1:4 ; Modulation type: GMSK / UL 2 time slots

Medium: MSL1900 Medium parameters used: $f = 1880$ MHz; $\sigma = 1.54$ mho/m; $\epsilon_r = 54.62$; $\rho = 1000$ kg/m³

Phantom section: Flat Section ; Separation distance : 10 mm (The Back side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(8.49, 8.49, 8.49); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body Position - Mid/Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.901 mW/g

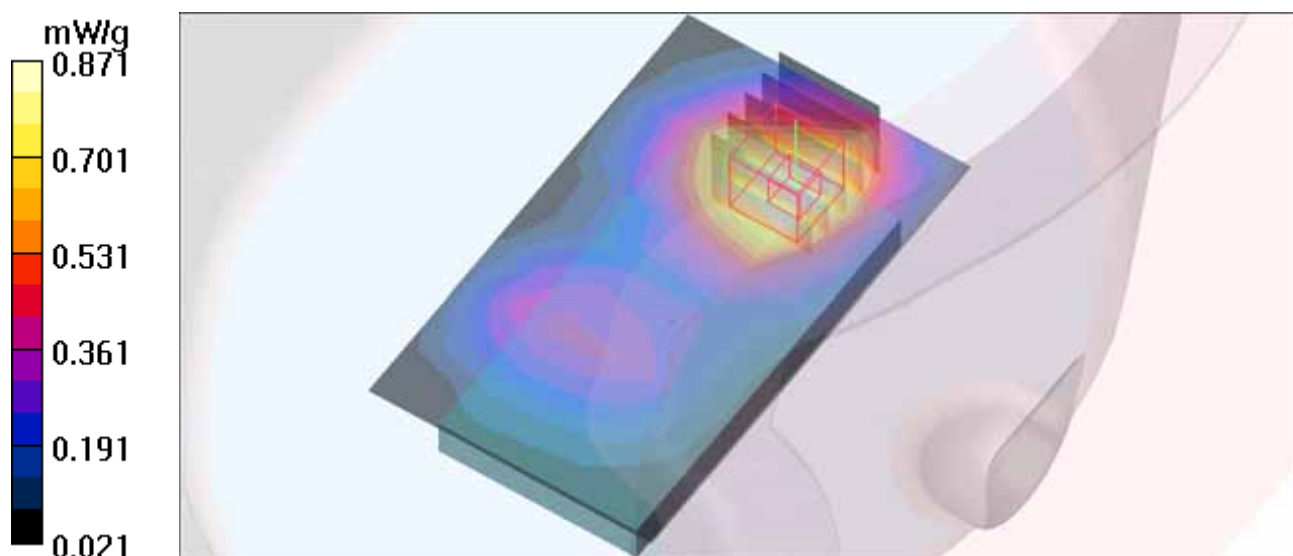
Body Position - Mid/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 12.3 V/m; Power Drift = -0.123 dB

Peak SAR (extrapolated) = 1.11 W/kg

SAR(1 g) = 0.662 mW/g; SAR(10 g) = 0.403 mW/g

Maximum value of SAR (measured) = 0.871 mW/g



M57-Back-GPRS1900 TS3-Ch512 / Bat-HT Energy 3.7VDC

Communication System: GSM1900 ; Frequency: 1850.2 MHz ; Duty Cycle: 1:2.67 ; Modulation type: GMSK / UL 3 time slots

Medium: MSL1900 Medium parameters used: $f = 1850.2$ MHz; $\sigma = 1.51$ mho/m; $\epsilon_r = 54.76$; $\rho = 1000$ kg/m³

Phantom section: Flat Section ; Separation distance : 10 mm (The Back side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(8.49, 8.49, 8.49); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body Position - Low /Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.949 mW/g

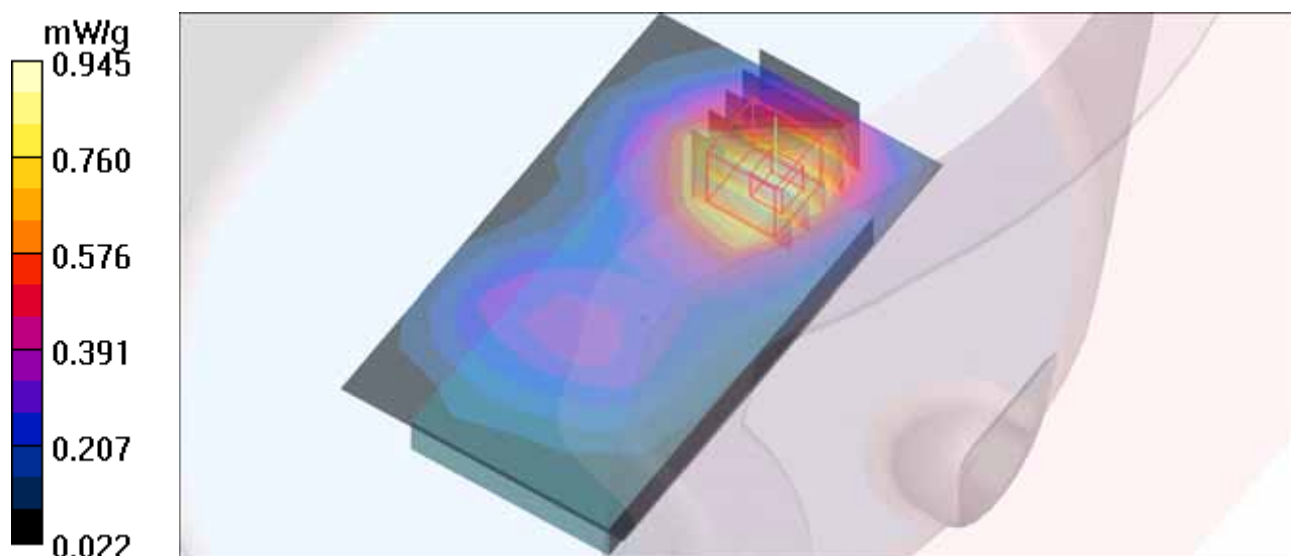
Body Position - Low /Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 13.6 V/m; Power Drift = -0.041 dB

Peak SAR (extrapolated) = 1.20 W/kg

SAR(1 g) = 0.706 mW/g; SAR(10 g) = 0.425 mW/g

Maximum value of SAR (measured) = 0.945 mW/g



M57-Back-GPRS1900 TS3-Ch661 / Bat-HT Energy 3.7VDC

Communication System: GSM1900 ; Frequency: 1880 MHz ; Duty Cycle: 1:2.67 ; Modulation type: GMSK / UL 3 time slots

Medium: MSL1900 Medium parameters used: $f = 1880$ MHz; $\sigma = 1.54$ mho/m; $\epsilon_r = 54.62$; $\rho = 1000$ kg/m³

Phantom section: Flat Section ; Separation distance : 10 mm (The Back side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(8.49, 8.49, 8.49); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body Position - Mid/Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 1.39 mW/g

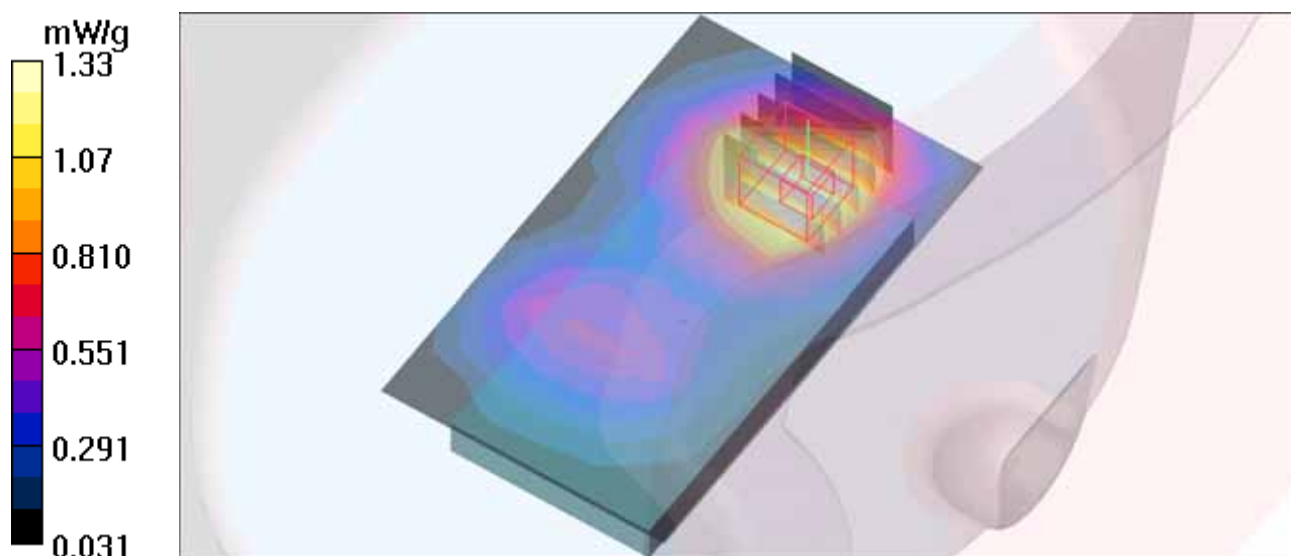
Body Position - Mid/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 15.2 V/m; Power Drift = -0.128 dB

Peak SAR (extrapolated) = 1.69 W/kg

SAR(1 g) = 1 mW/g; SAR(10 g) = 0.605 mW/g

Maximum value of SAR (measured) = 1.33 mW/g



M57-Back-GPRS1900 TS3-Ch810 / Bat-HT Energy 3.7VDC

Communication System: GSM1900 ; Frequency: 1909.8 MHz ; Duty Cycle: 1:2.67 ; Modulation type: GMSK / UL 3 time slots

Medium: MSL1900 Medium parameters used: $f = 1909.8 \text{ MHz}$; $\sigma = 1.57 \text{ mho/m}$; $\epsilon_r = 54.41$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section ; Separation distance : 10 mm (The Back side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(8.49, 8.49, 8.49); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body Position - High /Area Scan (7x11x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 0.849 mW/g

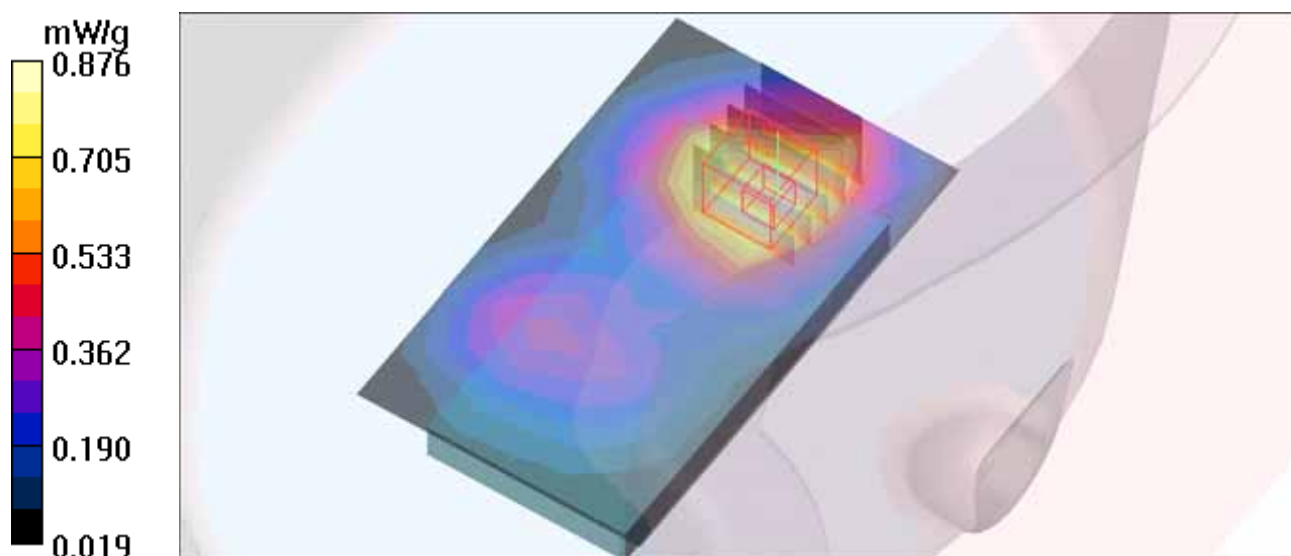
Body Position - High /Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 11.9 V/m; Power Drift = -0.033 dB

Peak SAR (extrapolated) = 1.10 W/kg

SAR(1 g) = 0.660 mW/g; SAR(10 g) = 0.404 mW/g

Maximum value of SAR (measured) = 0.876 mW/g



M58-Back-GPRS1900 TS4-Ch661 / Bat-HT Energy 3.7VDC

Communication System: GSM1900 ; Frequency: 1880 MHz ; Duty Cycle: 1:2 ; Modulation type: GMSK / UL 4 time slots

Medium: MSL1900 Medium parameters used: $f = 1880$ MHz; $\sigma = 1.54$ mho/m; $\epsilon_r = 54.62$; $\rho = 1000$ kg/m³

Phantom section: Flat Section ; Separation distance : 10 mm (The Back side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(8.49, 8.49, 8.49); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body Position - Mid/Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.711 mW/g

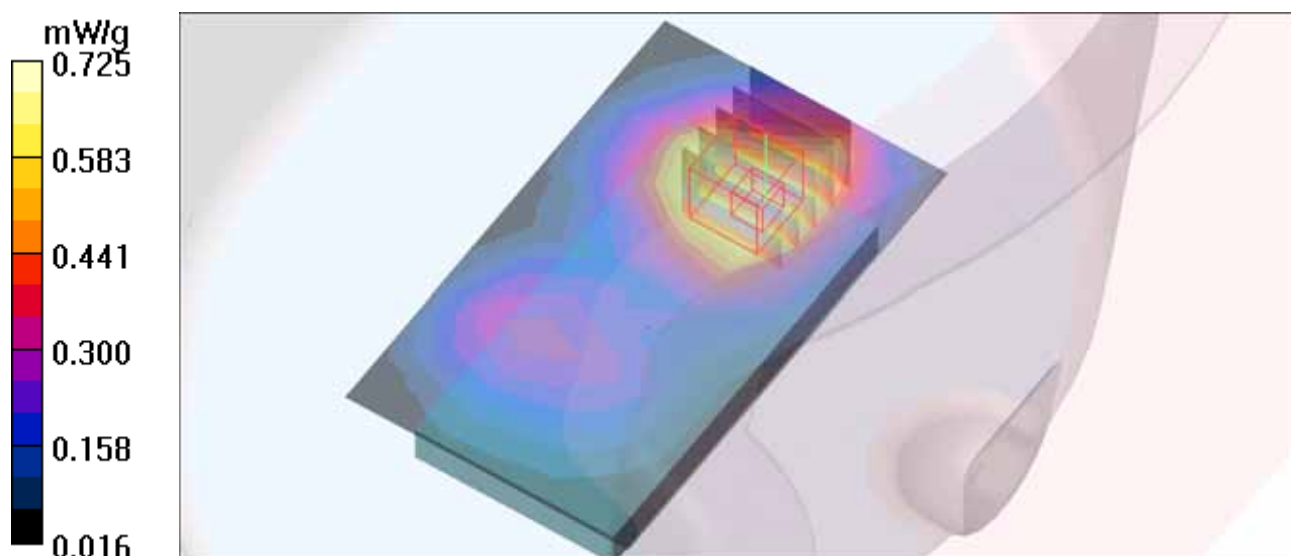
Body Position - Mid/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 11.1 V/m; Power Drift = -0.156 dB

Peak SAR (extrapolated) = 0.908 W/kg

SAR(1 g) = 0.550 mW/g; SAR(10 g) = 0.337 mW/g

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



M59-Front-PCS1900-Ch661 / Bat-HT Energy 3.8VDC

Communication System: GSM1900 ; Frequency: 1880 MHz ; Duty Cycle: 1:8.3 ; Modulation type: GMSK

Medium: MSL1900 Medium parameters used: $f = 1880 \text{ MHz}$; $\sigma = 1.51 \text{ mho/m}$; $\epsilon_r = 55.04$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section ; Separation distance : 10 mm (The front side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(8.49, 8.49, 8.49); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body Position - Mid/Area Scan (7x11x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 0.522 mW/g

Body Position - Mid/Zoom Scan(5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 8.37 V/m; Power Drift = -0.088 dB

Peak SAR (extrapolated) = 0.553 W/kg

SAR(1 g) = 0.362 mW/g; SAR(10 g) = 0.224 mW/g

Maximum value of SAR (measured) = 0.451 mW/g

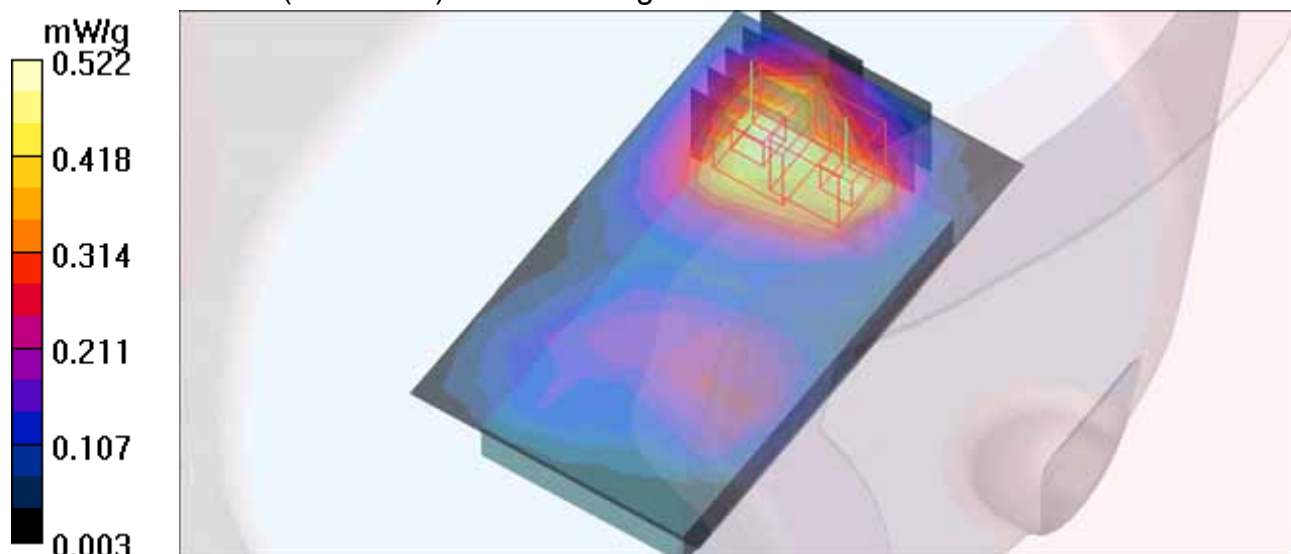
Body Position - Mid/Zoom Scan(5x5x7)/Cube 1: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 8.37 V/m; Power Drift = -0.088 dB

Peak SAR (extrapolated) = 0.641 W/kg

SAR(1 g) = 0.375 mW/g; SAR(10 g) = 0.226 mW/g

Maximum value of SAR (measured) = 0.503 mW/g



Date/Time: 2011/5/9 02:25:35

M60-Front-GPRS1900 TS1-Ch661 / Bat-HT Energy 3.8VDC

Communication System: GPRS1900 ; Frequency: 1880 MHz ; Duty Cycle: 1:8.3 ; Modulation type: GMSK / UL 1 time slot

Medium: MSL1900 Medium parameters used: $f = 1880 \text{ MHz}$; $\sigma = 1.51 \text{ mho/m}$; $\epsilon_r = 55.04$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section ; Separation distance : 10 mm (The front side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(8.49, 8.49, 8.49); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body Position - Mid/Area Scan (7x11x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 0.462 mW/g

Body Position - Mid/Zoom Scan(5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 7.89 V/m; Power Drift = -0.171 dB

Peak SAR (extrapolated) = 0.591 W/kg

SAR(1 g) = 0.347 mW/g; SAR(10 g) = 0.209 mW/g

Maximum value of SAR (measured) = 0.461 mW/g

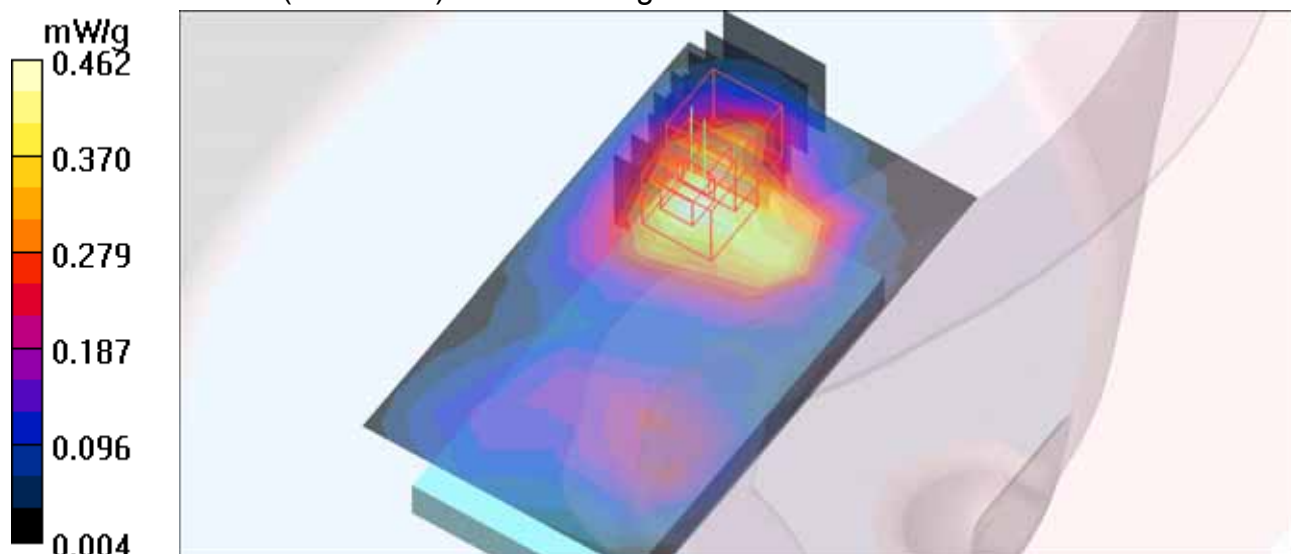
Body Position - Mid/Zoom Scan(5x5x7)/Cube 1: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 7.89 V/m; Power Drift = -0.171 dB

Peak SAR (extrapolated) = 0.579 W/kg

SAR(1 g) = 0.321 mW/g; SAR(10 g) = 0.181 mW/g

Maximum value of SAR (measured) = 0.448 mW/g



Date/Time: 2011/5/9 02:45:25

M61-Front-GPRS1900 TS2-Ch661 / Bat-HT Energy 3.8VDC

Communication System: GPRS1900 ; Frequency: 1880 MHz ; Duty Cycle: 1:4 ; Modulation type: GMSK / UL 2 time slots

Medium: MSL1900 Medium parameters used: $f = 1880 \text{ MHz}$; $\sigma = 1.51 \text{ mho/m}$; $\epsilon_r = 55.04$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section ; Separation distance : 10 mm (The front side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(8.49, 8.49, 8.49); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body Position - Mid/Area Scan (7x11x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 0.726 mW/g

Body Position - Mid/Zoom Scan(5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 9.85 V/m; Power Drift = -0.057 dB

Peak SAR (extrapolated) = 0.848 W/kg

SAR(1 g) = 0.543 mW/g; SAR(10 g) = 0.330 mW/g

Maximum value of SAR (measured) = 0.694 mW/g

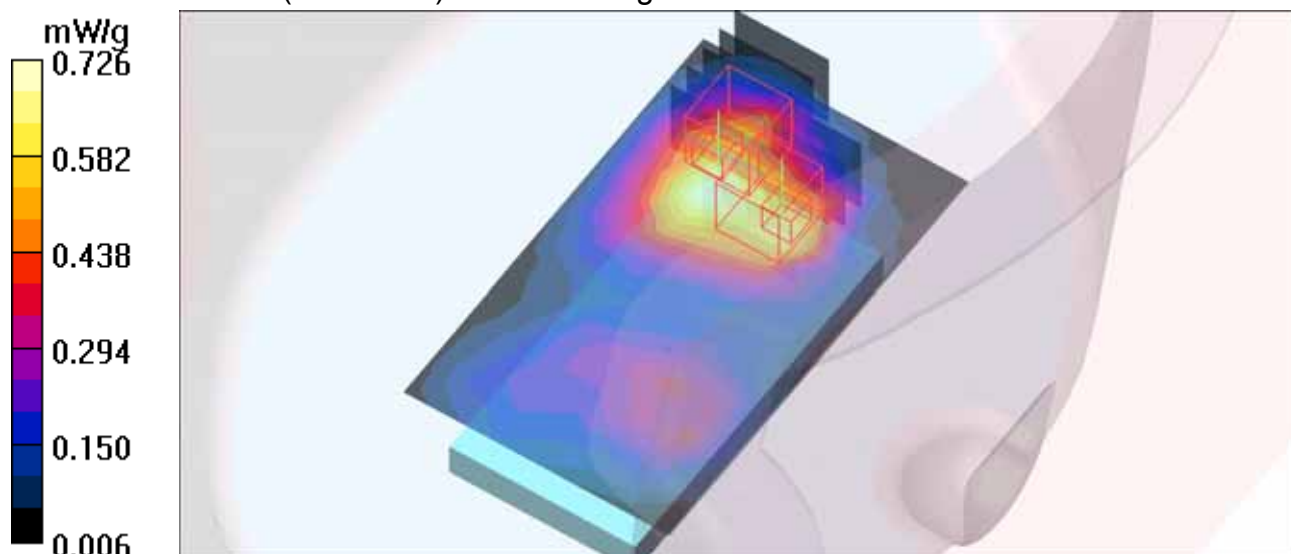
Body Position - Mid/Zoom Scan(5x5x7)/Cube 1: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 9.85 V/m; Power Drift = -0.057 dB

Peak SAR (extrapolated) = 0.896 W/kg

SAR(1 g) = 0.484 mW/g; SAR(10 g) = 0.272 mW/g

Maximum value of SAR (measured) = 0.692 mW/g



M62-Front-GPRS1900 TS3-Ch512 / Bat-HT Energy 3.8VDC

Communication System: GPRS1900 ; Frequency: 1850.2 MHz ; Duty Cycle: 1:2.67 ; Modulation type: GMSK / UL 3 time slots

Medium: MSL1900 Medium parameters used: $f = 1850.2 \text{ MHz}$; $\sigma = 1.48 \text{ mho/m}$; $\epsilon_r = 55.18$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section ; Separation distance : 10 mm (The front side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(8.49, 8.49, 8.49); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body Position - Low/Area Scan (7x10x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 0.921 mW/g

Body Position - Low/Zoom Scan(5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 10.5 V/m; Power Drift = -0.062 dB

Peak SAR (extrapolated) = 1.12 W/kg

SAR(1 g) = 0.671 mW/g; SAR(10 g) = 0.416 mW/g

Maximum value of SAR (measured) = 0.874 mW/g

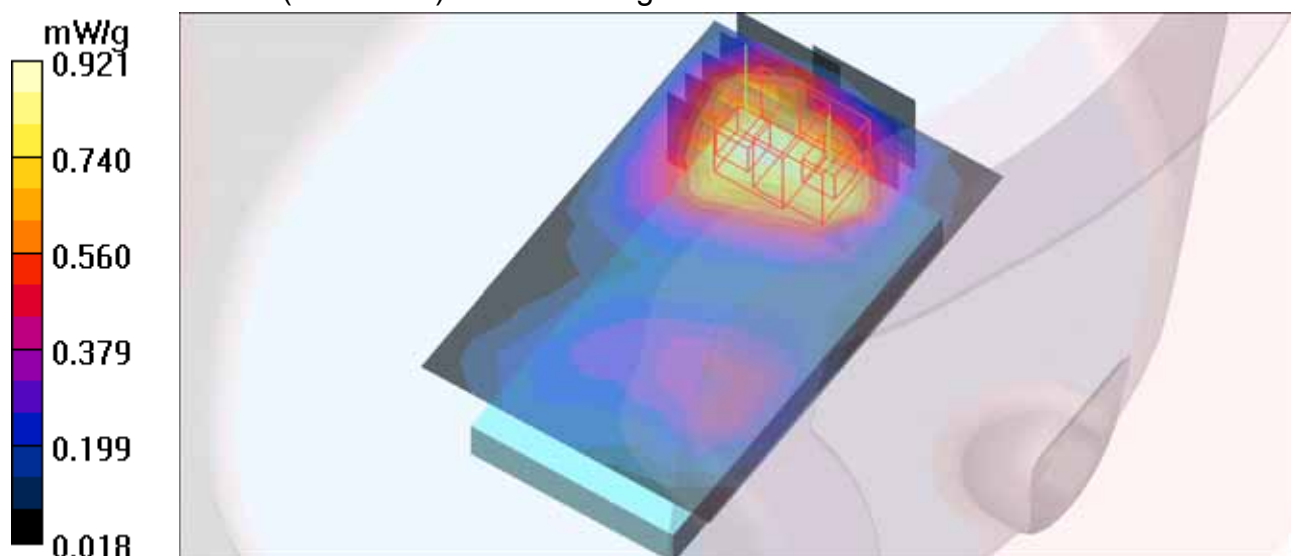
Body Position - Low/Zoom Scan(5x5x7)/Cube 1: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 10.5 V/m; Power Drift = -0.062 dB

Peak SAR (extrapolated) = 1.03 W/kg

SAR(1 g) = 0.670 mW/g; SAR(10 g) = 0.416 mW/g

Maximum value of SAR (measured) = 0.837 mW/g



M62-Front-GPRS1900 TS3-Ch661 / Bat-HT Energy 3.8VDC

Communication System: GPRS1900 ; Frequency: 1880 MHz ; Duty Cycle: 1:2.67 ; Modulation type: GMSK / UL 3 time slots

Medium: MSL1900 Medium parameters used: $f = 1880$ MHz; $\sigma = 1.51$ mho/m; $\epsilon_r = 55.04$; $\rho = 1000$ kg/m³

Phantom section: Flat Section ; Separation distance : 10 mm (The front side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(8.49, 8.49, 8.49); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body Position - Mid/Area Scan (7x10x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 1.15 mW/g

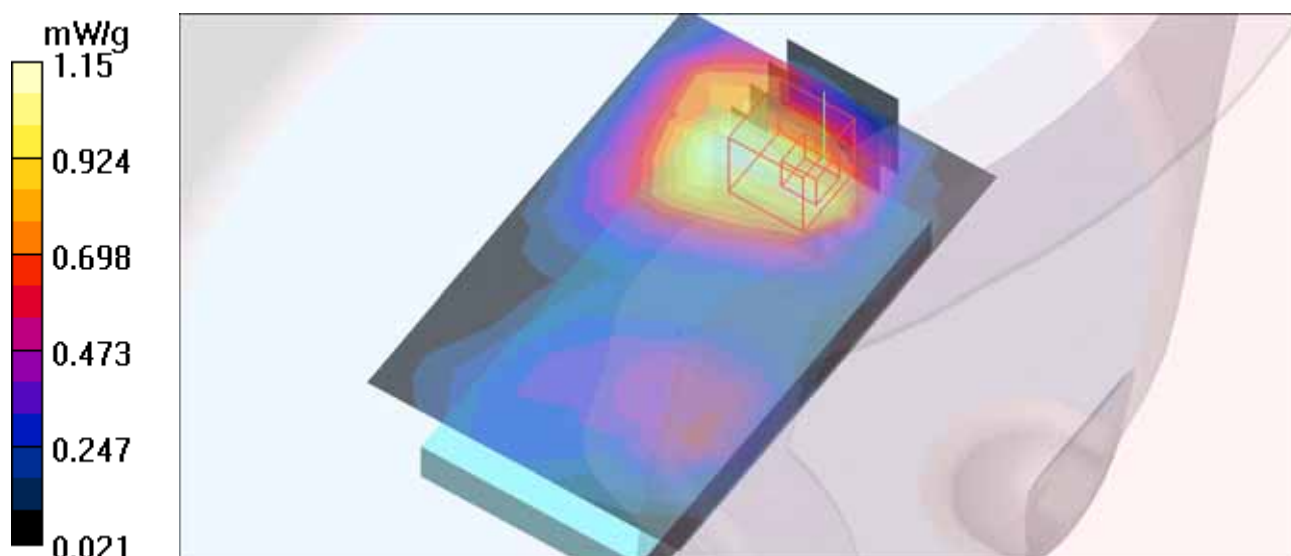
Body Position - Mid/Zoom Scan(5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 10.8 V/m; Power Drift = -0.149 dB

Peak SAR (extrapolated) = 1.42 W/kg

SAR(1 g) = 0.913 mW/g; SAR(10 g) = 0.560 mW/g

Maximum value of SAR (measured) = 1.14 mW/g



M62-Front-GPRS1900 TS3-Ch810 / Bat-HT Energy 3.8VDC

Communication System: GPRS1900 ; Frequency: 1909.8 MHz ; Duty Cycle: 1:2.67 ; Modulation type: GMSK / UL 3 time slots

Medium: MSL1900 Medium parameters used: $f = 1909.8$ MHz; $\sigma = 1.54$ mho/m; $\epsilon_r = 54.83$; $\rho = 1000$ kg/m³

Phantom section: Flat Section ; Separation distance : 10 mm (The front side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(8.49, 8.49, 8.49); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body Position - High/Area Scan (7x10x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.940 mW/g

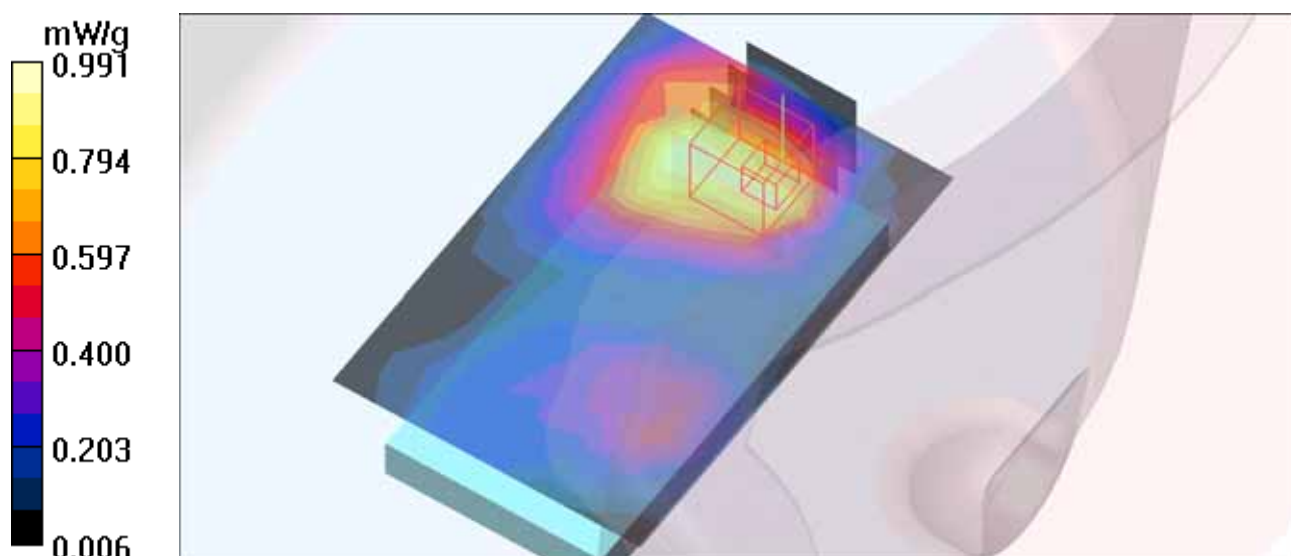
Body Position - High/Zoom Scan5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 9.60 V/m; Power Drift = 0.038 dB

Peak SAR (extrapolated) = 1.24 W/kg

SAR(1 g) = 0.787 mW/g; SAR(10 g) = 0.477 mW/g

Maximum value of SAR (measured) = 0.991 mW/g



M63-Front-GPRS1900 TS4-Ch661 / Bat-HT Energy 3.8VDC

Communication System: GPRS1900 ; Frequency: 1880 MHz ; Duty Cycle: 1:2 ; Modulation type: GMSK / UL 4 time slots

Medium: MSL1900 Medium parameters used: $f = 1880 \text{ MHz}$; $\sigma = 1.51 \text{ mho/m}$; $\epsilon_r = 55.04$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section ; Separation distance : 10 mm (The front side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(8.49, 8.49, 8.49); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body Position - Mid/Area Scan (7x10x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 0.957 mW/g

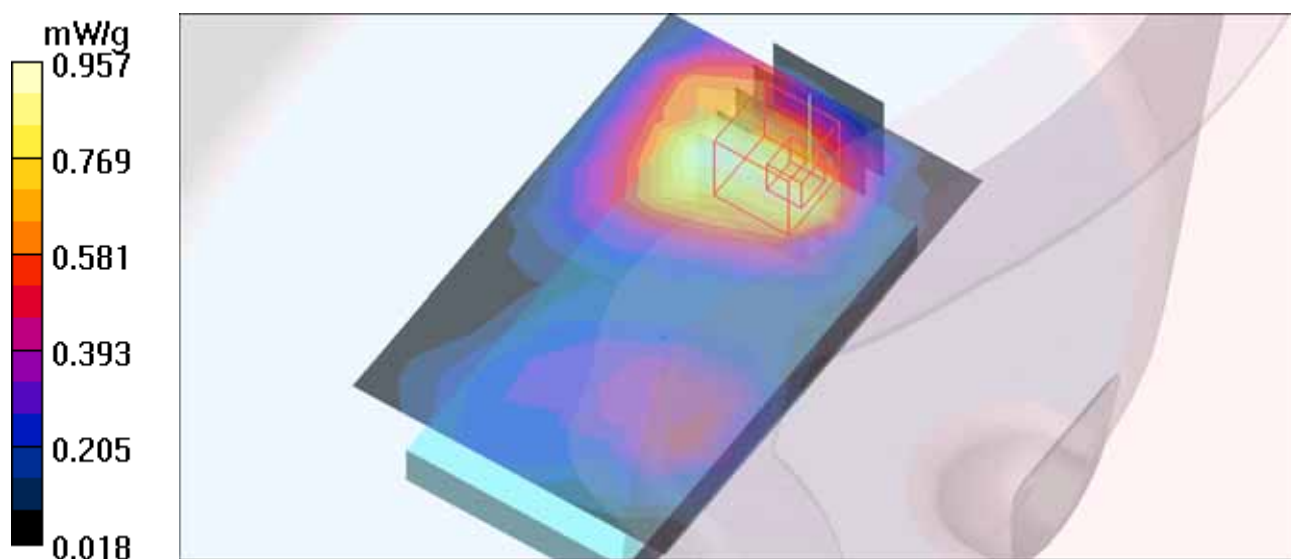
Body Position - Mid/Zoom Scan(5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 10.2 V/m; Power Drift = -0.051 dB

Peak SAR (extrapolated) = 1.17 W/kg

SAR(1 g) = 0.748 mW/g; SAR(10 g) = 0.460 mW/g

Maximum value of SAR (measured) = 0.937 mW/g



M64-Front-PCS1900-Ch661 / Bat-HT Energy 3.7VDC

Communication System: GSM1900 ; Frequency: 1880 MHz ; Duty Cycle: 1:8.3 ; Modulation type: GMSK

Medium: MSL1900 Medium parameters used: $f = 1880 \text{ MHz}$; $\sigma = 1.51 \text{ mho/m}$; $\epsilon_r = 55.04$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section ; Separation distance : 10 mm (The front side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(8.49, 8.49, 8.49); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body Position - Mid/Area Scan (7x11x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 0.529 mW/g

Body Position - Mid/Zoom Scan(5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 8.50 V/m; Power Drift = -0.079 dB

Peak SAR (extrapolated) = 0.649 W/kg

SAR(1 g) = 0.422 mW/g; SAR(10 g) = 0.256 mW/g

Maximum value of SAR (measured) = 0.540 mW/g

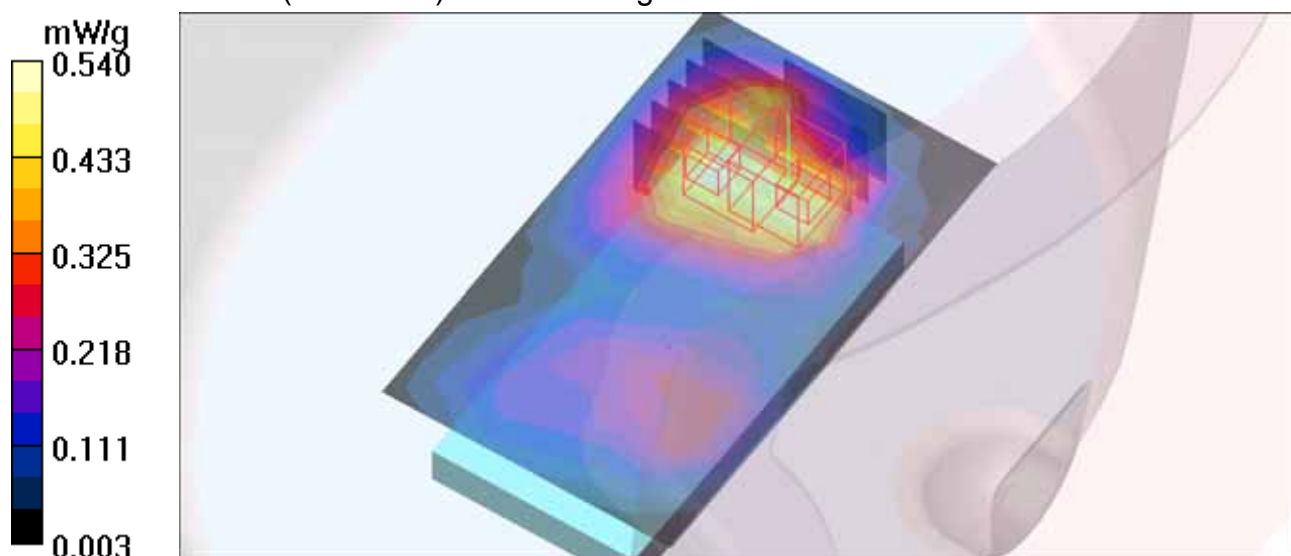
Body Position - Mid/Zoom Scan(5x5x7)/Cube 1: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 8.50 V/m; Power Drift = -0.079 dB

Peak SAR (extrapolated) = 0.654 W/kg

SAR(1 g) = 0.385 mW/g; SAR(10 g) = 0.237 mW/g

Maximum value of SAR (measured) = 0.513 mW/g



M65-Front-GPRS1900 TS1-Ch661 / Bat-HT Energy 3.7VDC

Communication System: GPRS1900 ; Frequency: 1880 MHz ; Duty Cycle: 1:8.3 ; Modulation type: GMSK / UL 1 time slot

Medium: MSL1900 Medium parameters used: $f = 1880$ MHz; $\sigma = 1.51$ mho/m; $\epsilon_r = 55.04$; $\rho = 1000$ kg/m³

Phantom section: Flat Section ; Separation distance : 10 mm (The front side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(8.49, 8.49, 8.49); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body Position - Mid/Area Scan (7x10x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.430 mW/g

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

Reference Value = 7.45 V/m; Power Drift = -0.039 dB

Peak SAR (extrapolated) = 0.536 W/kg

SAR(1 g) = 0.319 mW/g; SAR(10 g) = 0.192 mW/g

Maximum value of SAR (measured) = 0.419 mW/g

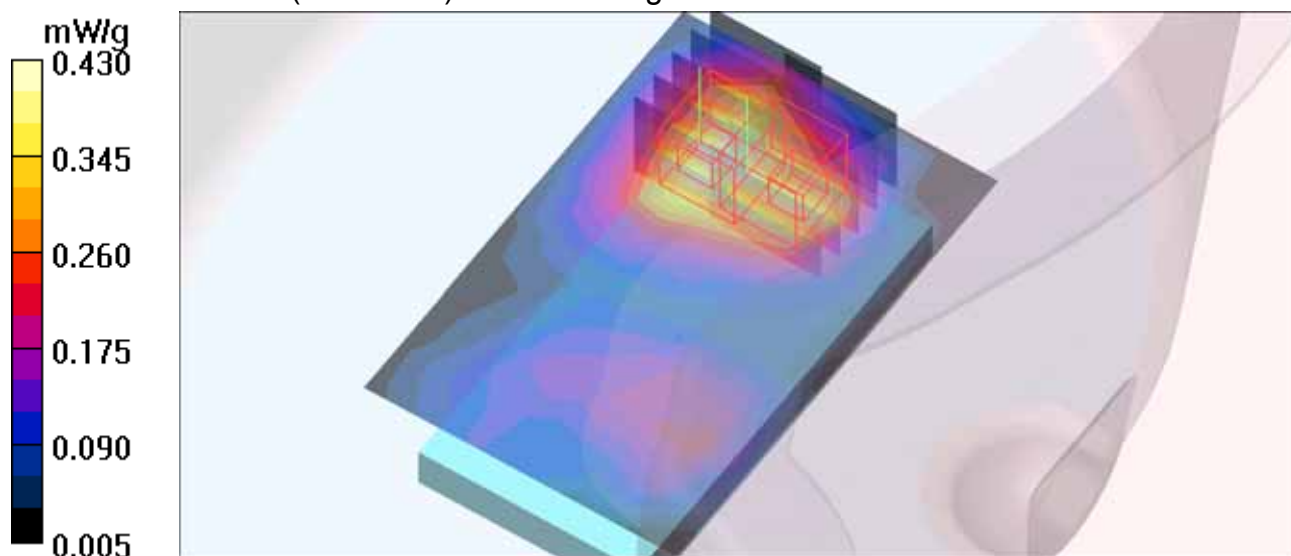
Body Position - Mid/Zoom Scan(5x5x7)/Cube 1: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 7.45 V/m; Power Drift = -0.039 dB

Peak SAR (extrapolated) = 0.478 W/kg

SAR(1 g) = 0.302 mW/g; SAR(10 g) = 0.190 mW/g

Maximum value of SAR (measured) = 0.386 mW/g



M66-Front-GPRS1900 TS2-Ch661 / Bat-HT Energy 3.7VDC

Communication System: GPRS1900 ; Frequency: 1880 MHz ; Duty Cycle: 1:4 ; Modulation type: GMSK / UL 2 time slots

Medium: MSL1900 Medium parameters used: $f = 1880 \text{ MHz}$; $\sigma = 1.51 \text{ mho/m}$; $\epsilon_r = 55.04$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section ; Separation distance : 10 mm (The front side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(8.49, 8.49, 8.49); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body Position - Mid/Area Scan (7x10x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 0.705 mW/g

Body Position - Mid/Zoom Scan(5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 9.43 V/m; Power Drift = -0.054 dB

Peak SAR (extrapolated) = 0.887 W/kg

SAR(1 g) = 0.516 mW/g; SAR(10 g) = 0.308 mW/g

Maximum value of SAR (measured) = 0.684 mW/g

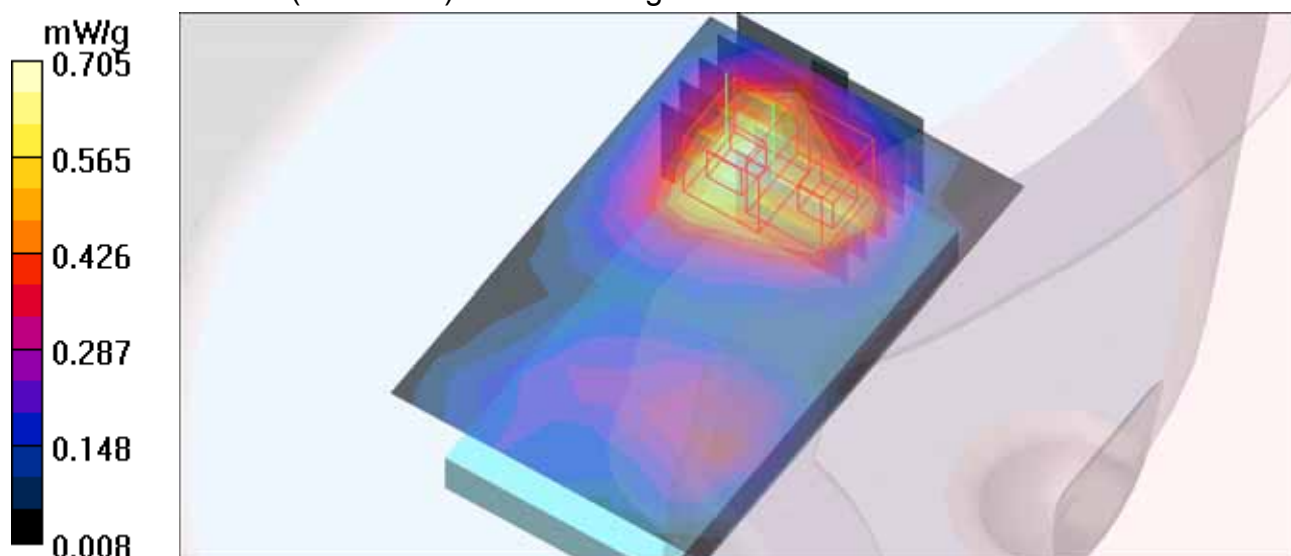
Body Position - Mid/Zoom Scan(5x5x7)/Cube 1: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 9.43 V/m; Power Drift = -0.054 dB

Peak SAR (extrapolated) = 0.763 W/kg

SAR(1 g) = 0.479 mW/g; SAR(10 g) = 0.298 mW/g

Maximum value of SAR (measured) = 0.613 mW/g



M67-Front-GPRS1900 TS3-Ch661 / Bat-HT Energy 3.7VDC

Communication System: GPRS1900 ; Frequency: 1880 MHz ; Duty Cycle: 1:2.67 ; Modulation type: GMSK / UL 3 time slots

Medium: MSL1900 Medium parameters used: $f = 1880$ MHz; $\sigma = 1.51$ mho/m; $\epsilon_r = 55.04$; $\rho = 1000$ kg/m³

Phantom section: Flat Section ; Separation distance : 10 mm (The front side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(8.49, 8.49, 8.49); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body Position - Mid/Area Scan (7x10x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 1.03 mW/g

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

Reference Value = 11.2 V/m; Power Drift = -0.138 dB

Peak SAR (extrapolated) = 1.15 W/kg

SAR(1 g) = 0.723 mW/g; SAR(10 g) = 0.447 mW/g

Maximum value of SAR (measured) = 0.920 mW/g

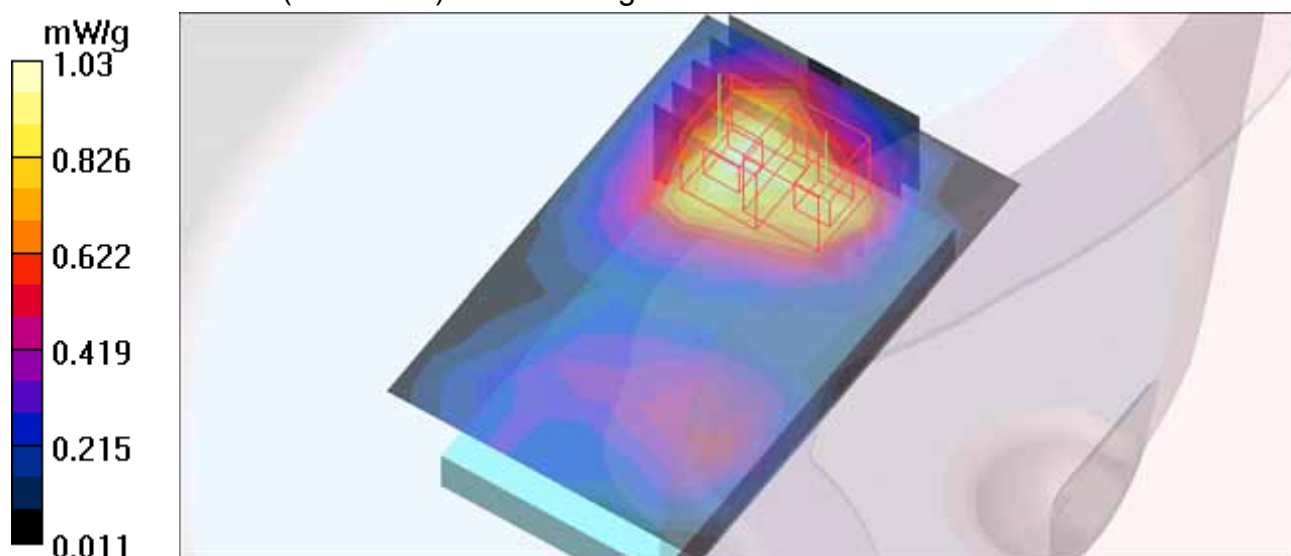
Body Position - Mid/Zoom Scan(5x5x7)/Cube 1: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 11.2 V/m; Power Drift = -0.138 dB

Peak SAR (extrapolated) = 1.33 W/kg

SAR(1 g) = 0.766 mW/g; SAR(10 g) = 0.455 mW/g

Maximum value of SAR (measured) = 1.01 mW/g



M68-Front-GPRS1900 TS4-Ch661 / Bat-HT Energy 3.7VDC

Communication System: GPRS1900 ; Frequency: 1880 MHz ; Duty Cycle: 1:2 ; Modulation type: GMSK / UL 4 time slots

Medium: MSL1900 Medium parameters used: $f = 1880 \text{ MHz}$; $\sigma = 1.51 \text{ mho/m}$; $\epsilon_r = 55.04$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section ; Separation distance : 10 mm (The front side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(8.49, 8.49, 8.49); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body Position - Mid/Area Scan (7x10x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 0.865 mW/g

Body Position - Mid/Zoom Scan(5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 13.0 V/m; Power Drift = -0.066 dB

Peak SAR (extrapolated) = 1.16 W/kg

SAR(1 g) = 0.734 mW/g; SAR(10 g) = 0.448 mW/g

Maximum value of SAR (measured) = 0.951 mW/g

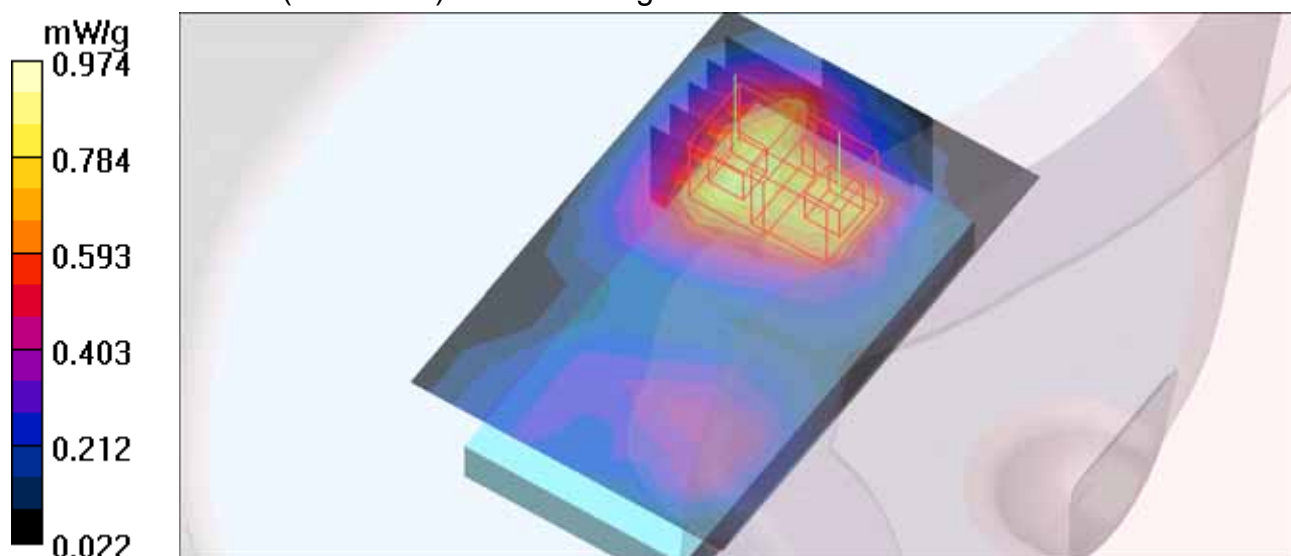
Body Position - Mid/Zoom Scan(5x5x7)/Cube 1: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 13.0 V/m; Power Drift = -0.066 dB

Peak SAR (extrapolated) = 1.28 W/kg

SAR(1 g) = 0.728 mW/g; SAR(10 g) = 0.435 mW/g

Maximum value of SAR (measured) = 0.974 mW/g



M69-Right edge-PCS1900-Ch661 / Bat-HT Energy 3.8VDC

Communication System: GSM1900 ; Frequency: 1880 MHz ; Duty Cycle: 1:8.3 ; Modulation type: GMSK

Medium: MSL1900 Medium parameters used: $f = 1880 \text{ MHz}$; $\sigma = 1.51 \text{ mho/m}$; $\epsilon_r = 55.04$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section ; Separation distance : 10 mm (The right edge side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(8.49, 8.49, 8.49); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body Position - Mid/Area Scan (5x11x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 0.339 mW/g

Body Position - Mid/Zoom Scan(5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 8.45 V/m; Power Drift = -0.076 dB

Peak SAR (extrapolated) = 0.429 W/kg

SAR(1 g) = 0.250 mW/g; SAR(10 g) = 0.142 mW/g

Maximum value of SAR (measured) = 0.342 mW/g

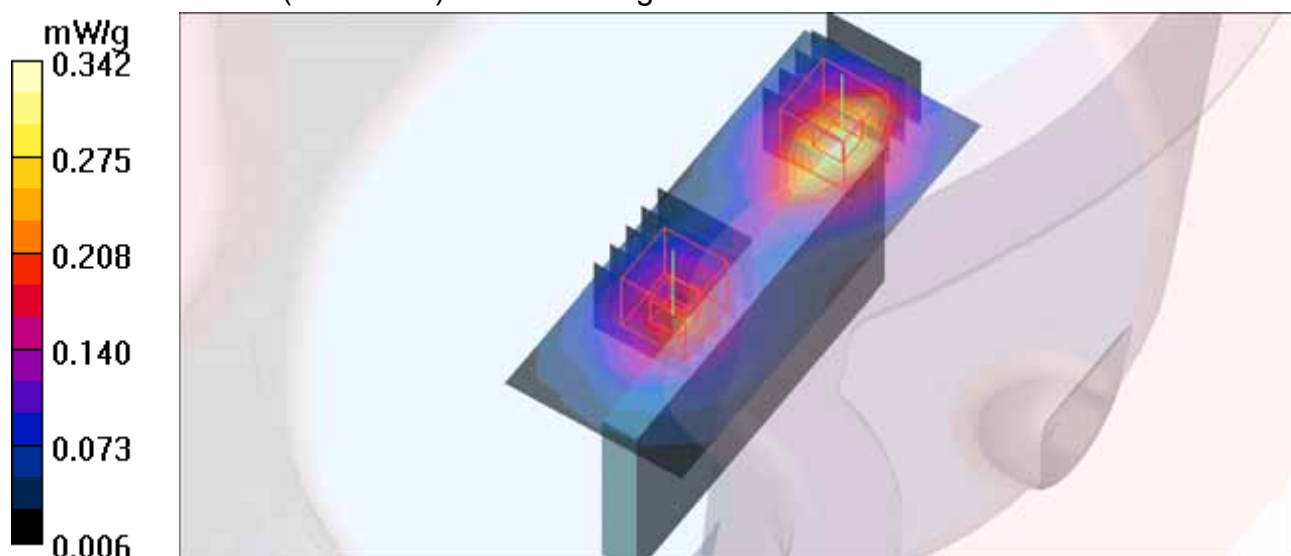
Body Position - Mid/Zoom Scan(5x5x7)/Cube 1: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 8.45 V/m; Power Drift = -0.076 dB

Peak SAR (extrapolated) = 0.275 W/kg

SAR(1 g) = 0.168 mW/g; SAR(10 g) = 0.099 mW/g

Maximum value of SAR (measured) = 0.225 mW/g



M70-Right edge-GPRS1900 TS3-Ch661 / Bat-HT Energy 3.8VDC

Communication System: GSM1900 ; Frequency: 1880 MHz ; Duty Cycle: 1: 2.67 ; Modulation type: GMSK / UL 3 time slots

Medium: MSL1900 Medium parameters used: $f = 1880 \text{ MHz}$; $\sigma = 1.51 \text{ mho/m}$; $\epsilon_r = 55.04$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section ; Separation distance : 10 mm (The right edge side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(8.49, 8.49, 8.49); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body Position - Mid/Area Scan (5x11x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 0.612 mW/g

Body Position - Mid/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 13.5 V/m ; Power Drift = -0.178 dB

Peak SAR (extrapolated) = 0.813 W/kg

SAR(1 g) = 0.449 mW/g ; SAR(10 g) = 0.248 mW/g

Maximum value of SAR (measured) = 0.636 mW/g

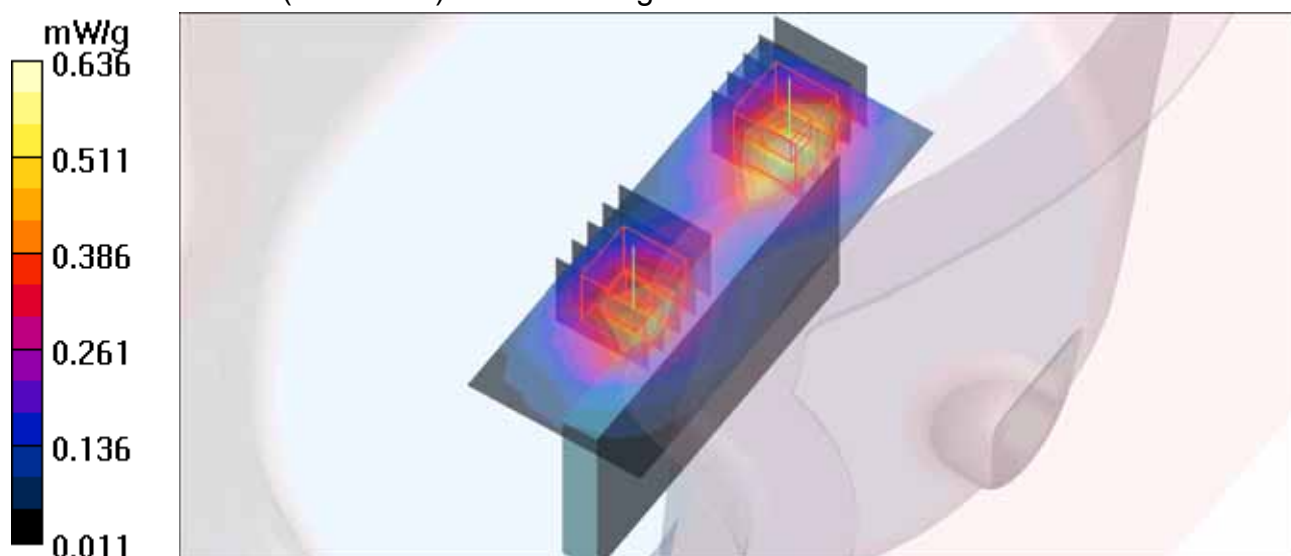
Body Position - Mid/Zoom Scan (5x5x7)/Cube 1: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 13.5 V/m ; Power Drift = -0.178 dB

Peak SAR (extrapolated) = 0.650 W/kg

SAR(1 g) = 0.376 mW/g ; SAR(10 g) = 0.215 mW/g

Maximum value of SAR (measured) = 0.518 mW/g



M71-Right edge-GSM1900-Ch661 / Bat-HT Energy 3.7VDC

Communication System: GSM1900 ; Frequency: 1880 MHz ; Duty Cycle: 1:8.3 ; Modulation type: GMSK

Medium: MSL1900 Medium parameters used: $f = 1880 \text{ MHz}$; $\sigma = 1.51 \text{ mho/m}$; $\epsilon_r = 55.04$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section ; Separation distance : 10 mm (The right edge side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(8.49, 8.49, 8.49); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body Position - Mid/Area Scan (5x11x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 0.253 mW/g

Body Position - Mid/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 8.07 V/m; Power Drift = -0.087 dB

Peak SAR (extrapolated) = 0.317 W/kg

SAR(1 g) = 0.181 mW/g; SAR(10 g) = 0.101 mW/g

Maximum value of SAR (measured) = 0.248 mW/g

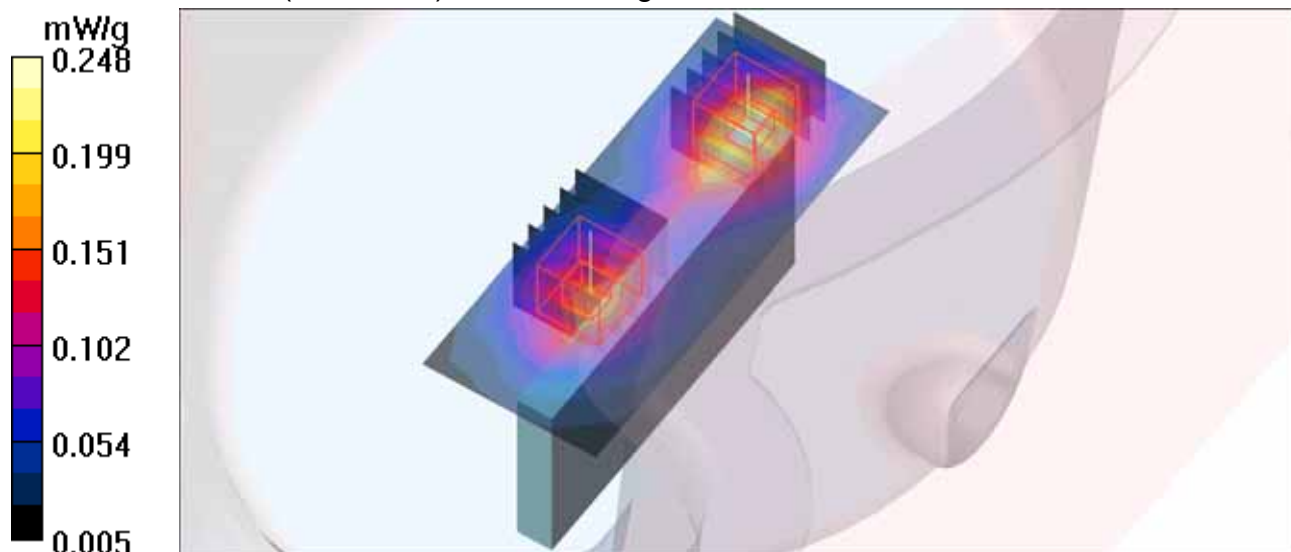
Body Position - Mid/Zoom Scan (5x5x7)/Cube 1: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 8.07 V/m; Power Drift = -0.087 dB

Peak SAR (extrapolated) = 0.232 W/kg

SAR(1 g) = 0.138 mW/g; SAR(10 g) = 0.080 mW/g

Maximum value of SAR (measured) = 0.188 mW/g



M72-Right edge-GPRS1900 TS3-Ch661 / Bat-HT Energy 3.7VDC

Communication System: GSM1900 ; Frequency: 1880 MHz ; Duty Cycle: 1: 2.67 ; Modulation type: GMSK / UL 3 time slots

Medium: MSL1900 Medium parameters used: $f = 1880 \text{ MHz}$; $\sigma = 1.51 \text{ mho/m}$; $\epsilon_r = 55.04$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section ; Separation distance : 10 mm (The right edge side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(8.49, 8.49, 8.49); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body Position - Mid/Area Scan (5x11x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 0.515 mW/g

Body Position - Mid/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 12.4 V/m; Power Drift = -0.190 dB

Peak SAR (extrapolated) = 0.733 W/kg

SAR(1 g) = 0.408 mW/g; SAR(10 g) = 0.225 mW/g

Maximum value of SAR (measured) = 0.575 mW/g

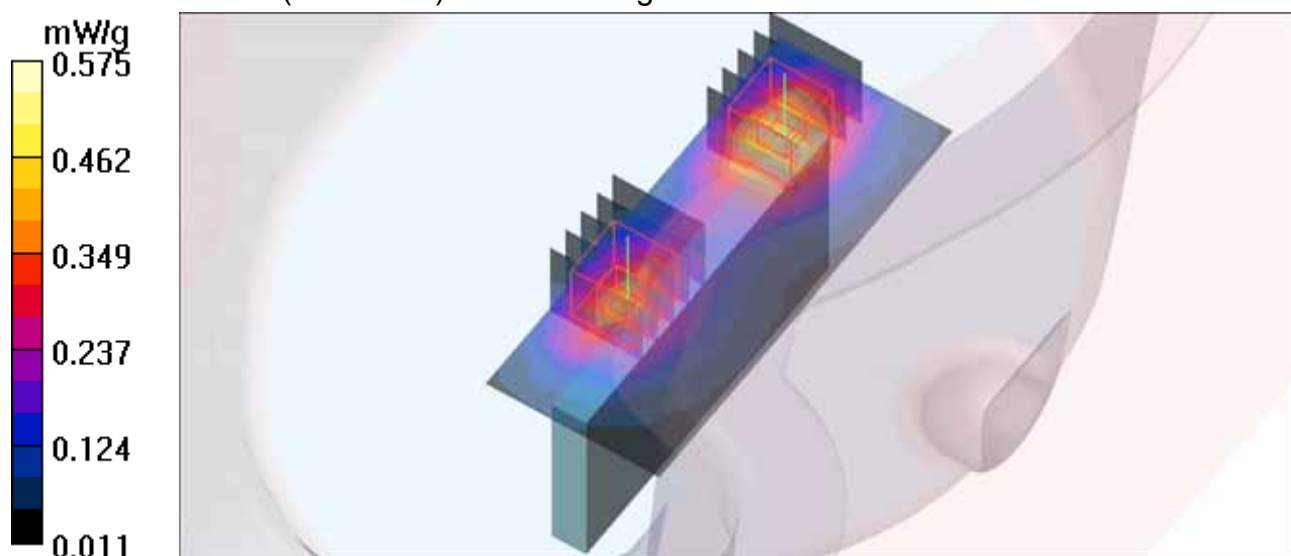
Body Position - Mid/Zoom Scan (5x5x7)/Cube 1: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 12.4 V/m; Power Drift = -0.190 dB

Peak SAR (extrapolated) = 0.524 W/kg

SAR(1 g) = 0.306 mW/g; SAR(10 g) = 0.176 mW/g

Maximum value of SAR (measured) = 0.419 mW/g



M73-Left edge-PCS1900-Ch661 / Bat-HT Energy 3.8VDC

Communication System: GSM1900 ; Frequency: 1880 MHz ; Duty Cycle: 1:8.3 ; Modulation type: GMSK

Medium: MSL1900 Medium parameters used: $f = 1880 \text{ MHz}$; $\sigma = 1.51 \text{ mho/m}$; $\epsilon_r = 55.04$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section ; Separation distance : 10 mm (The left edge side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(8.49, 8.49, 8.49); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body Position - Mid/Area Scan (5x11x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 0.111 mW/g

Body Position - Mid/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 5.84 V/m ; Power Drift = -0.126 dB

Peak SAR (extrapolated) = 0.143 W/kg

SAR(1 g) = 0.086 mW/g ; SAR(10 g) = 0.048 mW/g

Maximum value of SAR (measured) = 0.107 mW/g

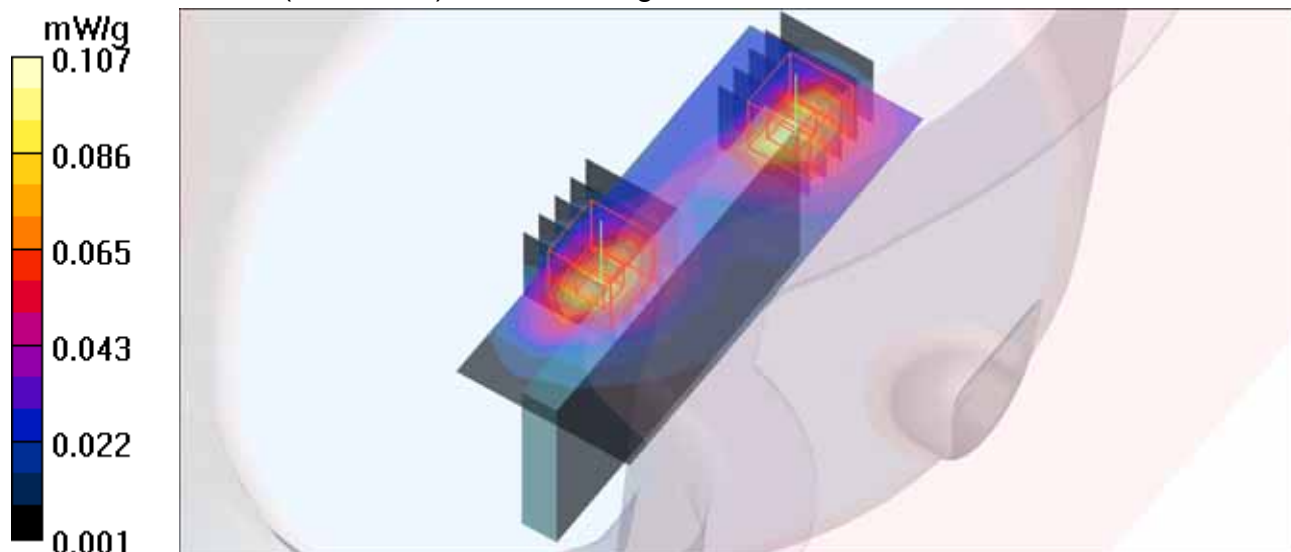
Body Position - Mid/Zoom Scan (5x5x7)/Cube 1: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 5.84 V/m ; Power Drift = -0.126 dB

Peak SAR (extrapolated) = 0.135 W/kg

SAR(1 g) = 0.077 mW/g ; SAR(10 g) = 0.043 mW/g

Maximum value of SAR (measured) = 0.106 mW/g



M74-Left edge-GPRS1900 TS3-Ch661 / Bat-HT Energy 3.8VDC

Communication System: GSM1900 ; Frequency: 1880 MHz ; Duty Cycle: 1: 2.67 ; Modulation type: GMSK / UL 3 time slots

Medium: MSL1900 Medium parameters used: $f = 1880 \text{ MHz}$; $\sigma = 1.51 \text{ mho/m}$; $\epsilon_r = 55.04$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section ; Separation distance : 10 mm (The left edge side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(8.49, 8.49, 8.49); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body Position - Mid/Area Scan (5x11x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 0.280 mW/g

Body Position - Mid/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 9.67 V/m; Power Drift = 0.188 dB

Peak SAR (extrapolated) = 0.356 W/kg

SAR(1 g) = 0.216 mW/g; SAR(10 g) = 0.122 mW/g

Maximum value of SAR (measured) = 0.272 mW/g

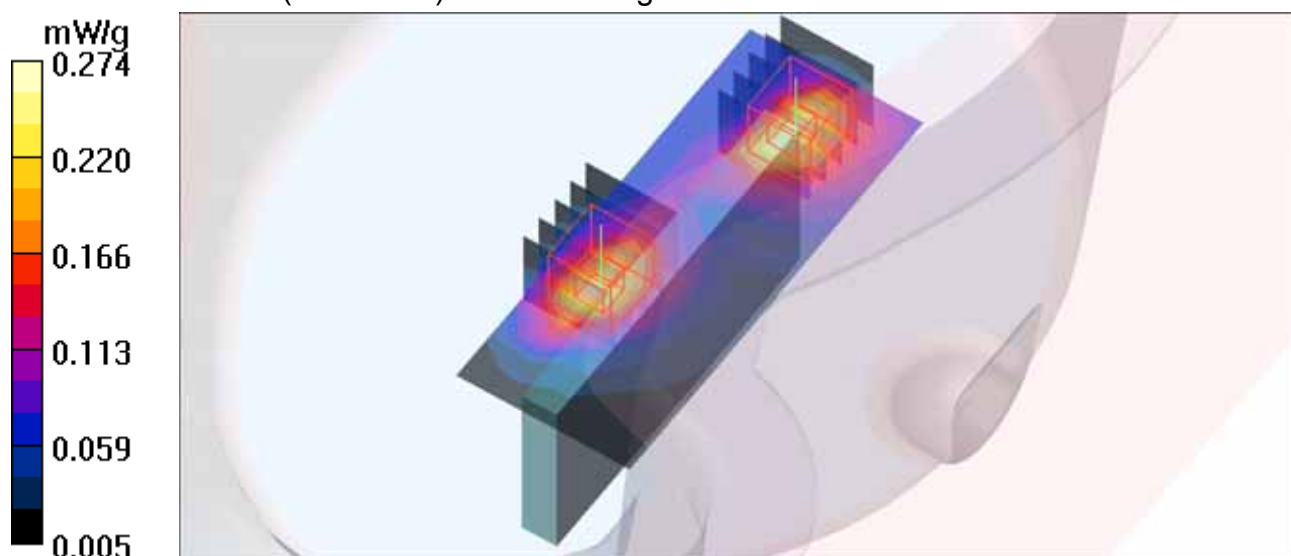
Body Position - Mid/Zoom Scan (5x5x7)/Cube 1: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 9.67 V/m; Power Drift = 0.188 dB

Peak SAR (extrapolated) = 0.345 W/kg

SAR(1 g) = 0.199 mW/g; SAR(10 g) = 0.113 mW/g

Maximum value of SAR (measured) = 0.274 mW/g



M75-Left edge-PCS1900-Ch661 / Bat-HT Energy 3.7VDC

Communication System: GSM1900 ; Frequency: 1880 MHz ; Duty Cycle: 1:8.3 ; Modulation type: GMSK

Medium: MSL1900 Medium parameters used: $f = 1880 \text{ MHz}$; $\sigma = 1.51 \text{ mho/m}$; $\epsilon_r = 55.04$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section ; Separation distance : 10 mm (The left edge side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(8.49, 8.49, 8.49); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body Position - Mid/Area Scan (5x11x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 0.129 mW/g

Body Position - Mid/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 6.53 V/m; Power Drift = -0.193 dB

Peak SAR (extrapolated) = 0.172 W/kg

SAR(1 g) = 0.102 mW/g; SAR(10 g) = 0.056 mW/g

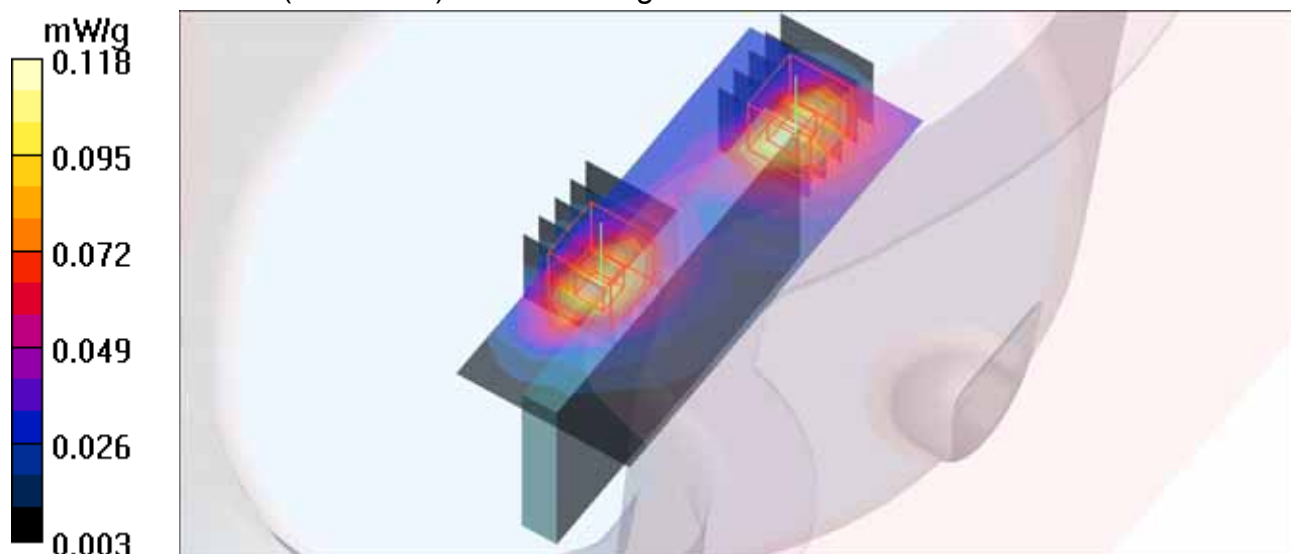
Body Position - Mid/Zoom Scan (5x5x7)/Cube 1: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 6.53 V/m; Power Drift = -0.193 dB

Peak SAR (extrapolated) = 0.149 W/kg

SAR(1 g) = 0.086 mW/g; SAR(10 g) = 0.048 mW/g

Maximum value of SAR (measured) = 0.118 mW/g



M76-Left edge-GPRS1900 TS3-Ch661 / Bat-HT Energy 3.7VDC

Communication System: GSM1900 ; Frequency: 1880 MHz ; Duty Cycle: 1: 2.67 ; Modulation type: GMSK / UL 3 time slots

Medium: MSL1900 Medium parameters used: $f = 1880 \text{ MHz}$; $\sigma = 1.51 \text{ mho/m}$; $\epsilon_r = 55.04$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section ; Separation distance : 10 mm (The left edge side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(8.49, 8.49, 8.49); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body Position - Mid/Area Scan (5x11x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 0.285 mW/g

Body Position - Mid/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 10.3 V/m; Power Drift = -0.136 dB

Peak SAR (extrapolated) = 0.370 W/kg

SAR(1 g) = 0.222 mW/g; SAR(10 g) = 0.124 mW/g

Maximum value of SAR (measured) = 0.298 mW/g

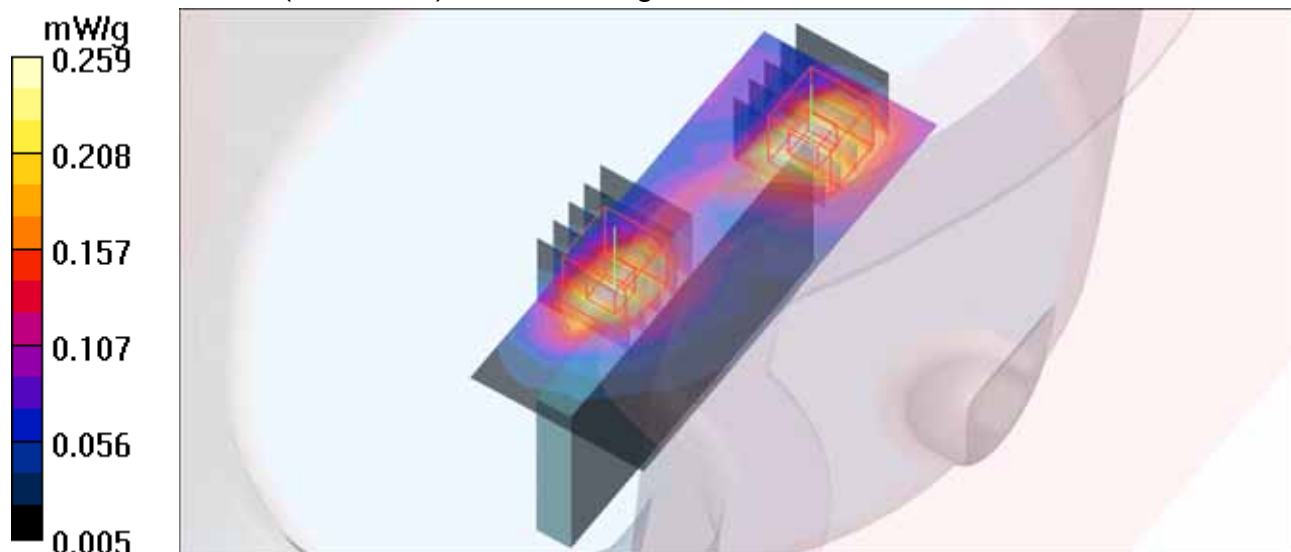
Body Position - Mid/Zoom Scan (5x5x7)/Cube 1: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 10.3 V/m; Power Drift = -0.136 dB

Peak SAR (extrapolated) = 0.329 W/kg

SAR(1 g) = 0.187 mW/g; SAR(10 g) = 0.104 mW/g

Maximum value of SAR (measured) = 0.259 mW/g



M77-Bottom edge-PCS1900-Ch661 / Bat-HT Energy 3.8VDC

Communication System: GSM1900 ; Frequency: 1880 MHz ; Duty Cycle: 1:8.3 ; Modulation type: GMSK

Medium: MSL1900 Medium parameters used: $f = 1880$ MHz; $\sigma = 1.51$ mho/m; $\epsilon_r = 55.04$; $\rho = 1000$ kg/m³

Phantom section: Flat Section ; Separation distance : 10 mm (The Bottom edge side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(8.49, 8.49, 8.49); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body Position - Mid /Area Scan (5x8x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.315 mW/g

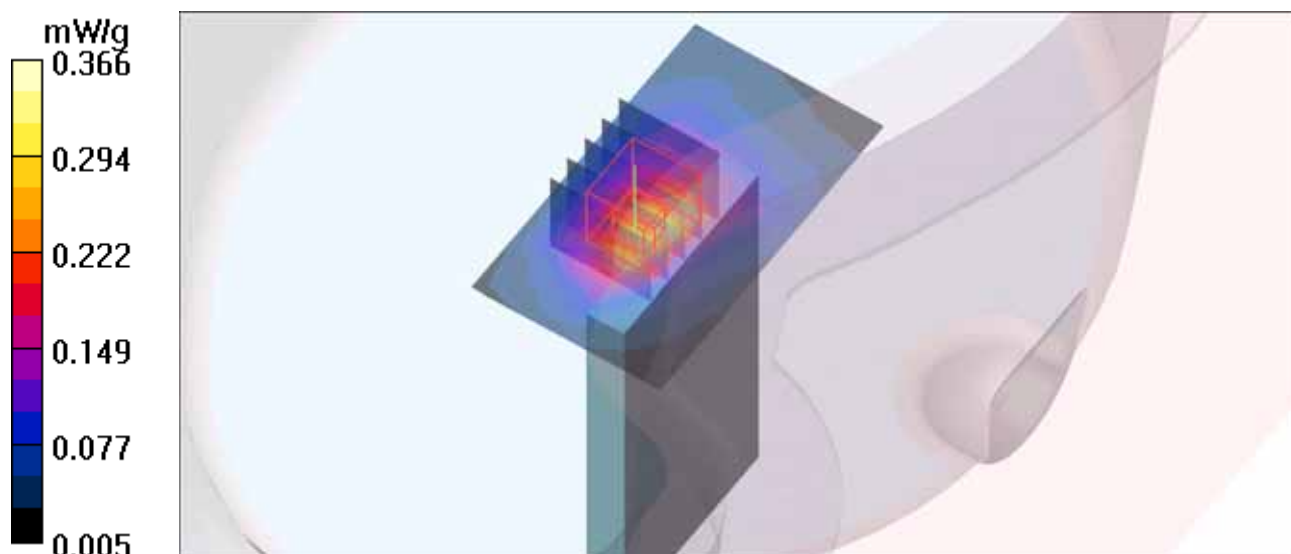
Body Position - Mid /Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 13.9 V/m; Power Drift = 0.095 dB

Peak SAR (extrapolated) = 0.458 W/kg

SAR(1 g) = 0.258 mW/g; SAR(10 g) = 0.137 mW/g

Maximum value of SAR (measured) = 0.366 mW/g



M78-Bottom edge-GPRS1900 TS3-Ch661 / Bat-HT Energy 3.8VDC

Communication System: GSM1900 ; Frequency: 1880 MHz ; Duty Cycle: 1: 2.67 ; Modulation type: GMSK / UL 3 time slots

Medium: MSL1900 Medium parameters used: $f = 1880$ MHz; $\sigma = 1.51$ mho/m; $\epsilon_r = 55.04$; $\rho = 1000$ kg/m³

Phantom section: Flat Section ; Separation distance : 10 mm (The Bottom edge side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(8.49, 8.49, 8.49); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body Position - Mid/Area Scan (5x8x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.790 mW/g

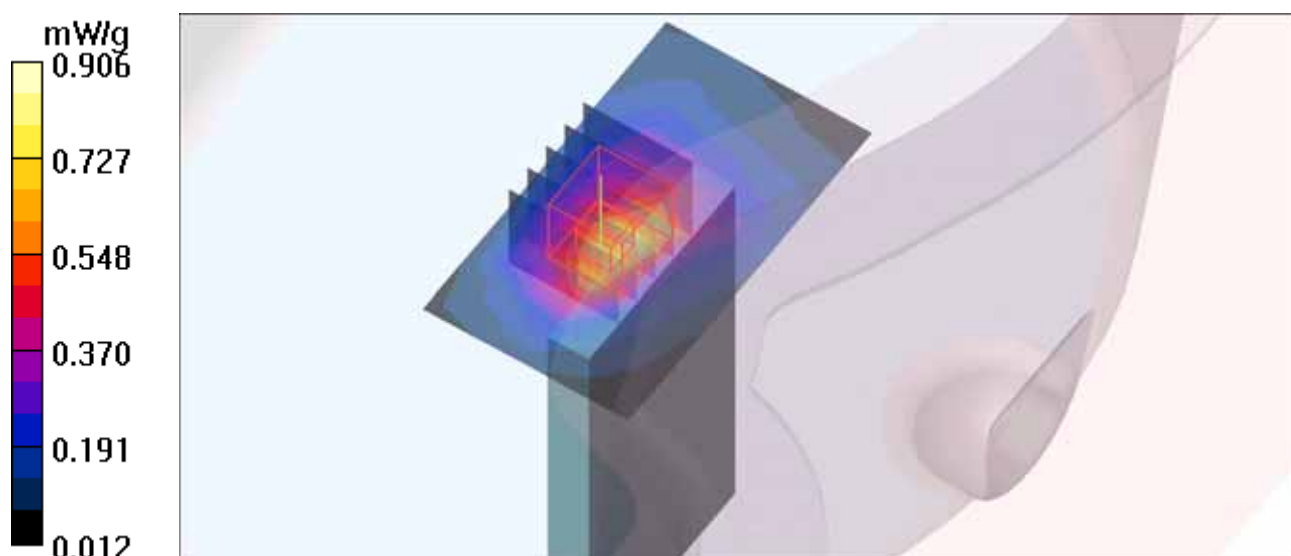
Body Position - Mid/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 22.4 V/m; Power Drift = -0.175 dB

Peak SAR (extrapolated) = 1.15 W/kg

SAR(1 g) = 0.632 mW/g; SAR(10 g) = 0.331 mW/g

Maximum value of SAR (measured) = 0.906 mW/g



M79-Bottom edge-PCS1900-Ch661 / Bat-HT Energy 3.7VDC

Communication System: GSM1900 ; Frequency: 1880 MHz ; Duty Cycle: 1:8.3 ; Modulation type: GMSK

Medium: MSL1900 Medium parameters used: $f = 1880$ MHz; $\sigma = 1.51$ mho/m; $\epsilon_r = 55.04$; $\rho = 1000$ kg/m³

Phantom section: Flat Section ; Separation distance : 10 mm (The Bottom edge side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(8.49, 8.49, 8.49); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body Position - Mid/Area Scan (5x8x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.461 mW/g

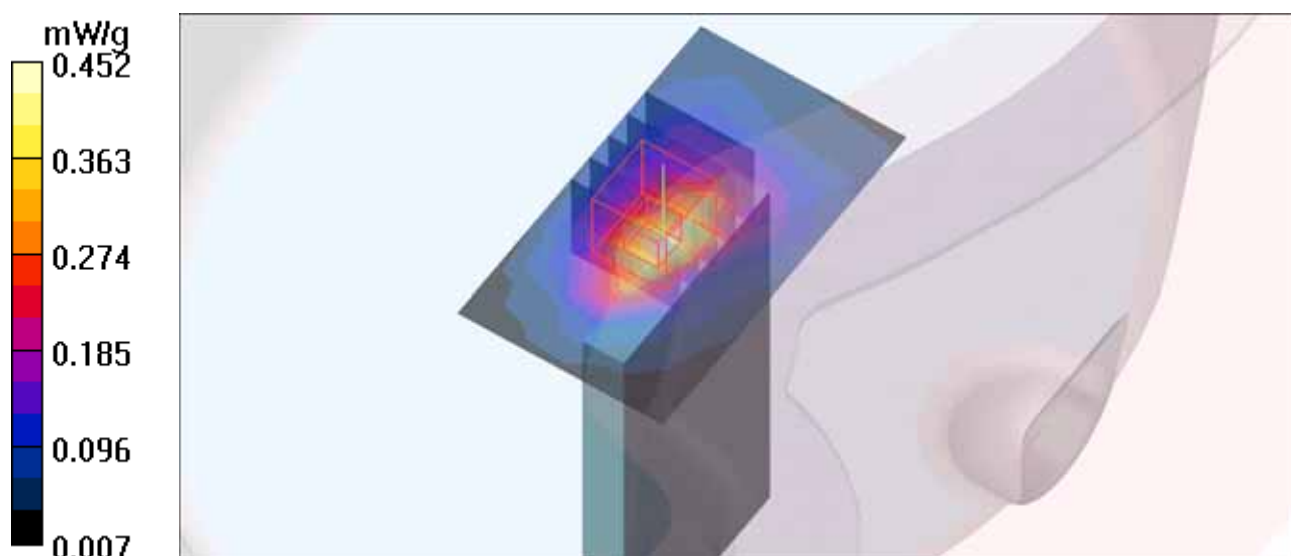
Body Position - Mid/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 17.8 V/m; Power Drift = -0.122 dB

Peak SAR (extrapolated) = 0.593 W/kg

SAR(1 g) = 0.330 mW/g; SAR(10 g) = 0.170 mW/g

Maximum value of SAR (measured) = 0.452 mW/g



M80-Bottom edge-GPRS1900 TS3-Ch661 / Bat-HT Energy 3.7VDC

Communication System: GSM1900 ; Frequency: 1880 MHz ; Duty Cycle: 1:2.67 ; Modulation type: GMSK / UL 3 time slots

Medium: MSL1900 Medium parameters used: $f = 1880$ MHz; $\sigma = 1.51$ mho/m; $\epsilon_r = 55.04$; $\rho = 1000$ kg/m³

Phantom section: Flat Section ; Separation distance : 10 mm (The Bottom edge side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(8.49, 8.49, 8.49); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body Position - Mid/Area Scan (5x8x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.807 mW/g

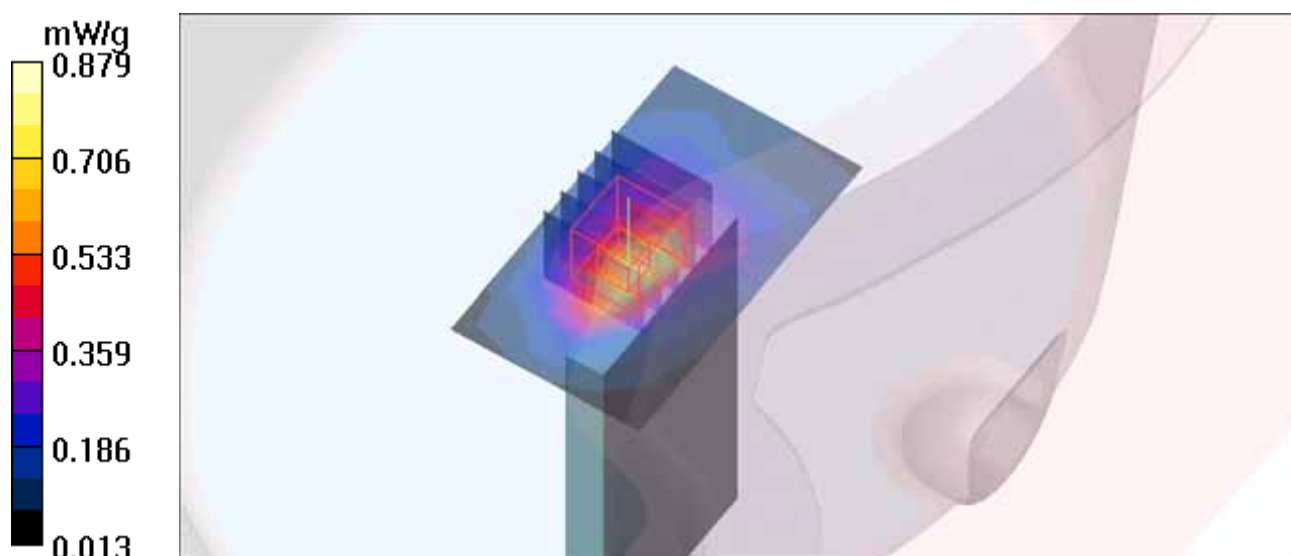
Body Position - Mid/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 22.9 V/m; Power Drift = -0.160 dB

Peak SAR (extrapolated) = 1.11 W/kg

SAR(1 g) = 0.615 mW/g; SAR(10 g) = 0.319 mW/g

Maximum value of SAR (measured) = 0.879 mW/g



SystemPerformanceCheck-D835V2-HSL835 MHz

DUT: Dipole 835 MHz ; Type: D835V2 ; Serial: D835V2 - SN:4d021 ; Test Frequency: 835 MHz

Communication System: CW ; Frequency: 835 MHz; Duty Cycle: 1:1; Modulation type: CW

Medium: HSL835; Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 0.91 \text{ mho/m}$; $\epsilon_r = 42.86$; $\rho = 1000 \text{ kg/m}^3$;

Liquid level : 150 mm

Phantom section: Flat Section ; Separation distance : 15 mm (The feet point of the dipole to the Phantom) Air temp. : 22.2 degrees ; Liquid temp. : 21.3 degrees

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(10.21, 10.21, 10.21); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

d=15mm, Pin=250mW/Area Scan (7x9x1): Measurement grid: dx=15mm, dy=15mm

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

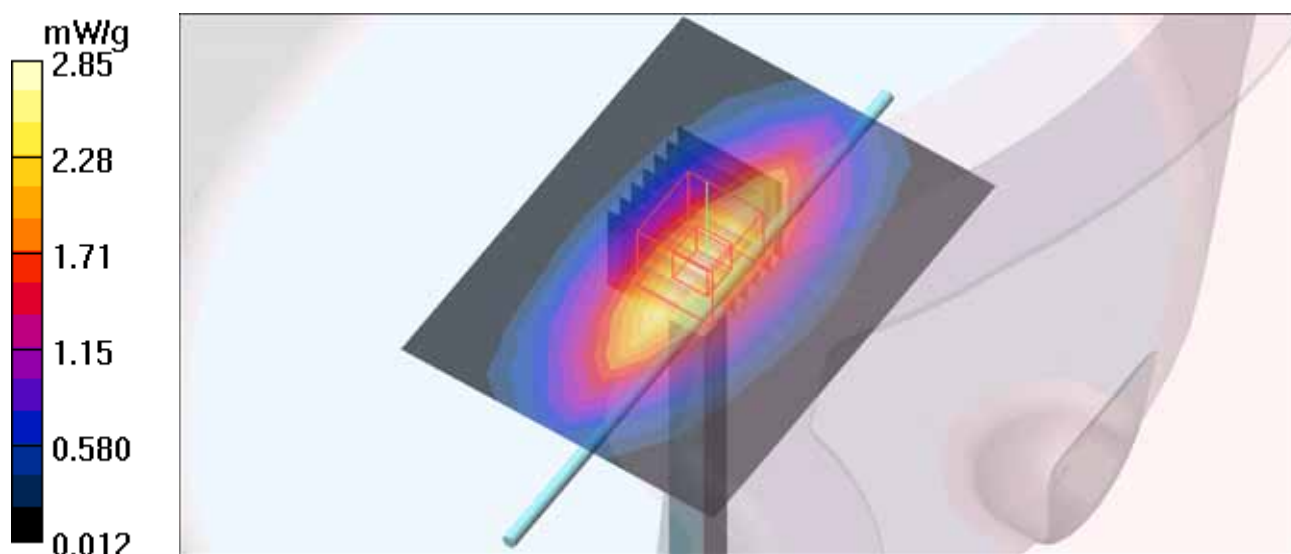
d=15mm, Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 55.9 V/m; Power Drift = -0.035 dB

Peak SAR (extrapolated) = 3.45 W/kg

SAR(1 g) = 2.25 mW/g; SAR(10 g) = 1.46 mW/g

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



SystemPerformanceCheck-D835V2-MSL835 MHz

DUT: Dipole 835 MHz ; Type: D835V2 ; Serial: D835V2 - SN:4d021 ; Test Frequency: 835 MHz

Communication System: CW ; Frequency: 835 MHz; Duty Cycle: 1:1; Modulation type: CW
 Medium: MSL835;Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 0.99 \text{ mho/m}$; $\epsilon_r = 56.81$; $\rho = 1000 \text{ kg/m}^3$; Liquid level : 150 mm
 Phantom section: Flat Section ; Separation distance : 15 mm (The feet point of the dipole to the Phantom)Air temp. : 22.4 degrees ; Liquid temp. : 21.1 degrees

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(10.32, 10.32, 10.32); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

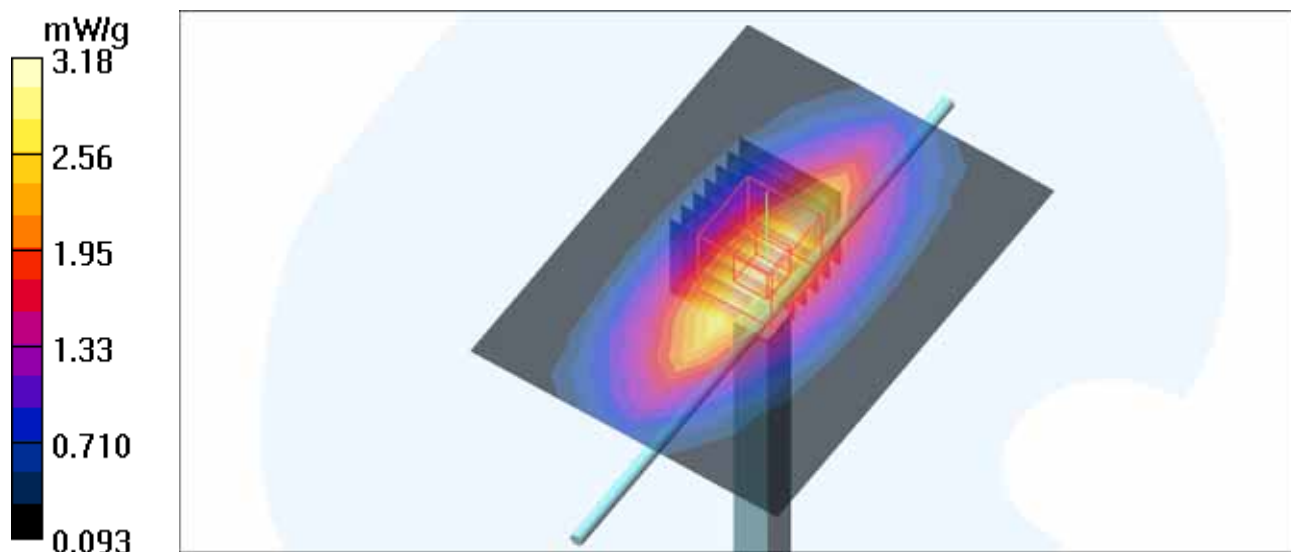
d=15mm, Pin=250mW/Area Scan (7x9x1): Measurement grid: dx=15mm, dy=15mm
 Maximum value of SAR (measured) = 3.18 mW/g

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

Reference Value = 54.7 V/m; Power Drift = 0.009 dB

Peak SAR (extrapolated) = 3.80 W/kg

SAR(1 g) = 2.49 mW/g; SAR(10 g) = 1.62 mW/g



SystemPerformanceCheck-D835V2-MSL835 MHz

DUT: Dipole 835 MHz ; Type: D835V2 ; Serial: D835V2 - SN:4d021 ; Test Frequency: 835 MHz

Communication System: CW ; Frequency: 835 MHz; Duty Cycle: 1:1; Modulation type: CW
 Medium: MSL835;Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 1.01 \text{ mho/m}$; $\epsilon_r = 56.55$; $\rho = 1000 \text{ kg/m}^3$; Liquid level : 150 mm
 Phantom section: Flat Section ; Separation distance : 15 mm (The feet point of the dipole to the Phantom)Air temp. : 22.5 degrees ; Liquid temp. : 21.3 degrees

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(10.32, 10.32, 10.32); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

d=15mm, Pin=250mW/Area Scan (7x9x1): Measurement grid: dx=15mm, dy=15mm
 Maximum value of SAR (measured) = 3.18 mW/g

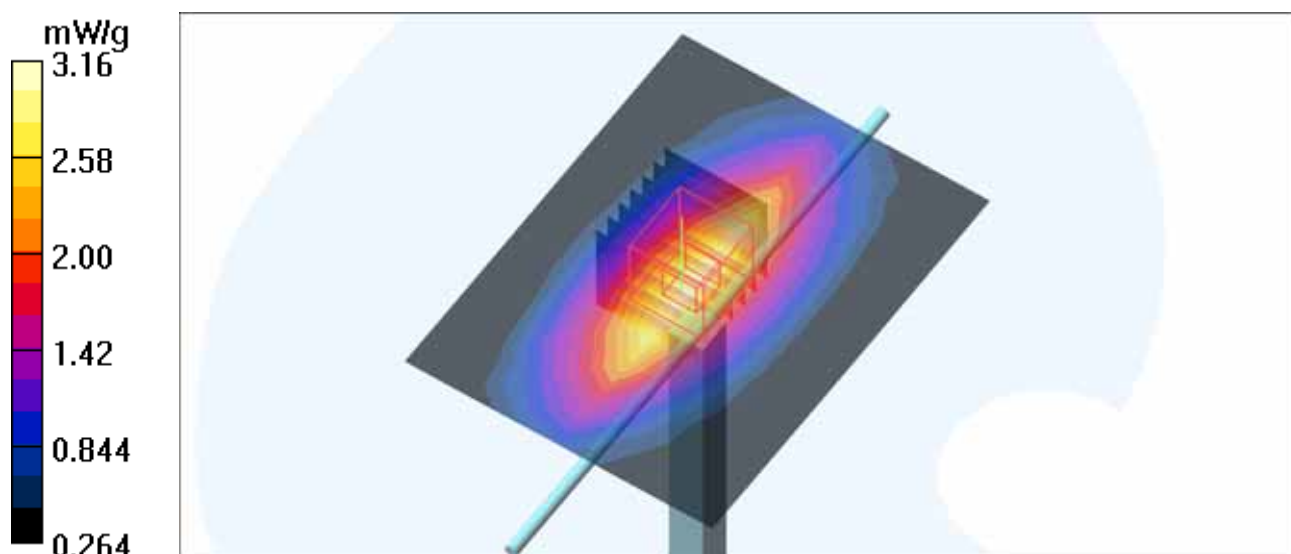
d=15mm, Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 57.5 V/m; Power Drift = 0.005 dB

Peak SAR (extrapolated) = 3.76 W/kg

SAR(1 g) = 2.48 mW/g; SAR(10 g) = 1.61 mW/g

Maximum value of SAR (measured) = 3.16 mW/g



SystemPerformanceCheck-D1900V2-HSL1900 MHz

DUT: Dipole 1900 MHz ; Type: D1900V2 ; Serial: D1900V2 - SN:5d022 ; Test Frequency: 1900 MHz

Communication System: CW ; Frequency: 1900 MHz; Duty Cycle: 1:1; Modulation type: CW
Medium: HSL1900;Medium parameters used: $f = 1900$ MHz; $\sigma = 1.43$ mho/m; $\epsilon_r = 40.83$; $\rho = 1000$ kg/m³ ; Liquid level : 150 mm

Phantom section: Flat Section ; Separation distance : 10 mm (The feet point of the dipole to the Phantom)Air temp. : 22.2 degrees ; Liquid temp. : 21.3 degrees

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(8.45, 8.45, 8.45); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

d=10mm, Pin=250mW/Area Scan (7x7x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 13.8 mW/g

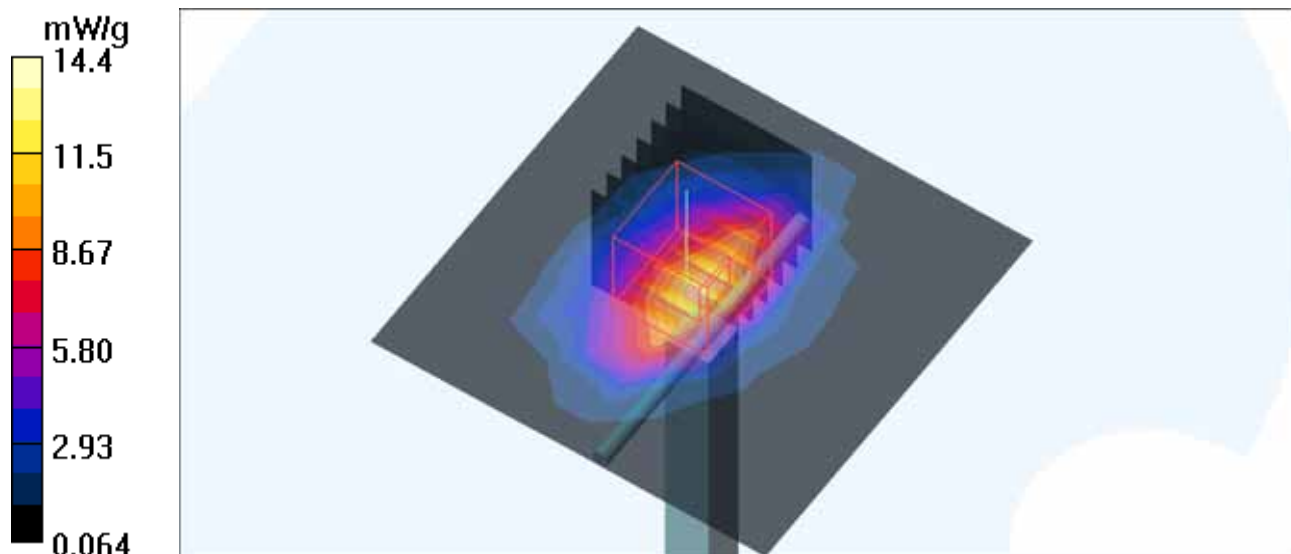
d=10mm, Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 96.6 V/m; Power Drift = -0.006 dB

Peak SAR (extrapolated) = 18.9 W/kg

SAR(1 g) = 9.73 mW/g; SAR(10 g) = 5.02 mW/g

Maximum value of SAR (measured) = 14.4 mW/g



SystemPerformanceCheck-D1900V2-MSL1900 MHz

DUT: Dipole 1900 MHz ; Type: D1900V2 ; Serial: D1900V2 - SN:5d022 ; Test Frequency: 1900 MHz

Communication System: CW ; Frequency: 1900 MHz; Duty Cycle: 1:1; Modulation type: CW
Medium: MSL1900;Medium parameters used: $f = 1900 \text{ MHz}$; $\sigma = 1.55 \text{ mho/m}$; $\epsilon_r = 54.53$; $\rho = 1000 \text{ kg/m}^3$; Liquid level : 150 mm

Phantom section: Flat Section ; Separation distance : 10 mm (The feet point of the dipole to the Phantom)Air temp. : 22.3 degrees ; Liquid temp. : 21.2 degrees

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(8.49, 8.49, 8.49); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

d=10mm, Pin=250mW/Area Scan (7x7x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 15.4 mW/g

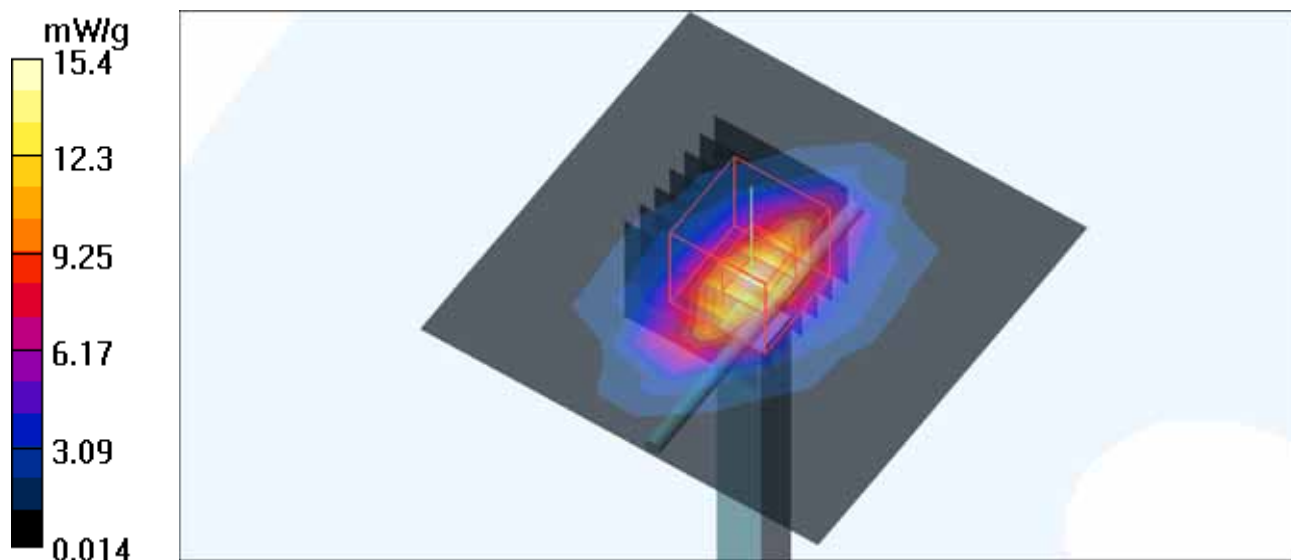
d=10mm, Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 101.3 V/m; Power Drift = -0.027 dB

Peak SAR (extrapolated) = 19.8 W/kg

SAR(1 g) = 10.6 mW/g; SAR(10 g) = 5.42 mW/g

Maximum value of SAR (measured) = 15.3 mW/g



SystemPerformanceCheck-D1900V2-MSL1900 MHz

DUT: Dipole 1900 MHz ; Type: D1900V2 ; Serial: 5d022 ; Test Frequency: 1900 MHz

Communication System: CW ; Frequency: 1900 MHz; Duty Cycle: 1:1; Modulation type: CW
Medium: MSL1900;Medium parameters used: $f = 1900$ MHz; $\sigma = 1.52$ mho/m; $\epsilon_r = 54.95$; $\rho = 1000$ kg/m³ ; Liquid level : 150 mm

Phantom section: Flat Section ; Separation distance : 10 mm (The feet point of the dipole to the Phantom)Air temp. : 22.7 degrees ; Liquid temp. : 21.5 degrees

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(8.49, 8.49, 8.49); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

d=10mm, Pin=250mW/Area Scan (7x7x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 15.4 mW/g

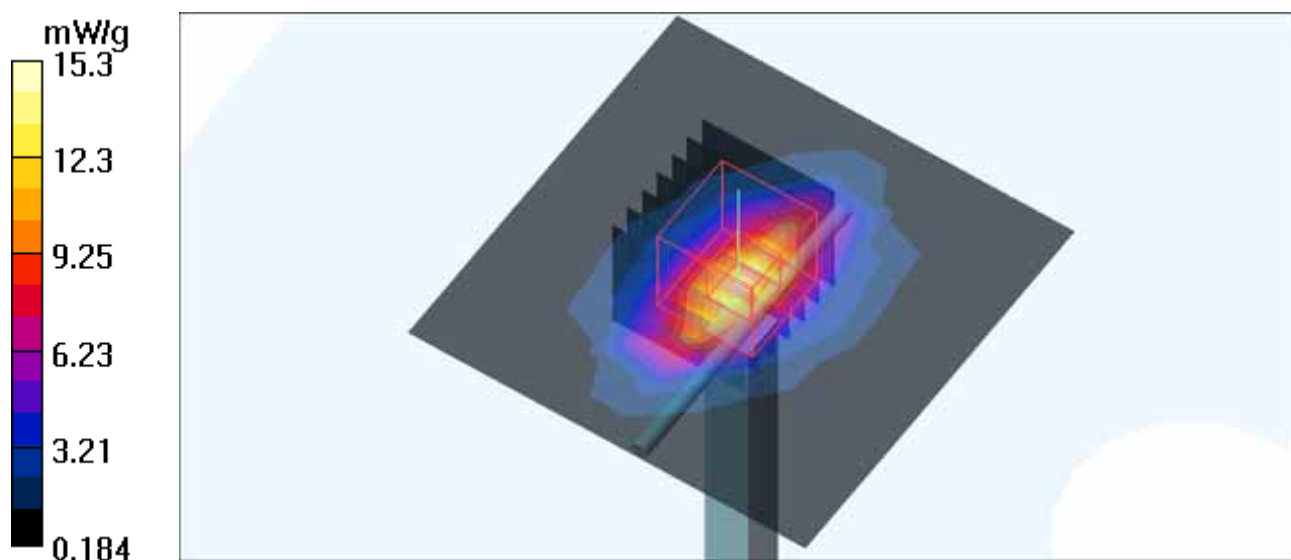
d=10mm, Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 100.2 V/m; Power Drift = -0.036 dB

Peak SAR (extrapolated) = 19.7 W/kg

SAR(1 g) = 10.6 mW/g; SAR(10 g) = 5.4 mW/g

Maximum value of SAR (measured) = 15.3 mW/g





香港商立德國際商品試驗有限公司桃園分公司

Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch

APPENDIX A: TEST DATA FOR GPRS AT HEAD POSITION

Product Name: Smart Phone ; Model Number: PG86300

Liquid Level Photo

Tissue 835MHz D=150mm



Tissue 1900MHz D=150mm



Date/Time: 2011/6/22 11:09:01

M01-Right Head-Cheek-GPRS850 TS1-Ch190 / HT 3.8VDC

Communication System: GPRS850 ; Frequency: 836.6 MHz ; Duty Cycle: 1:8.3

Medium: HSL835 Medium parameters used: $f = 836.6 \text{ MHz}$; $\sigma = 0.93 \text{ mho/m}$; $\epsilon_r = 42.35$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Right Section ; DUT test position : Cheek ; Modulation type: GMSK / UL 1 time slot

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(10.21, 10.21, 10.21); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

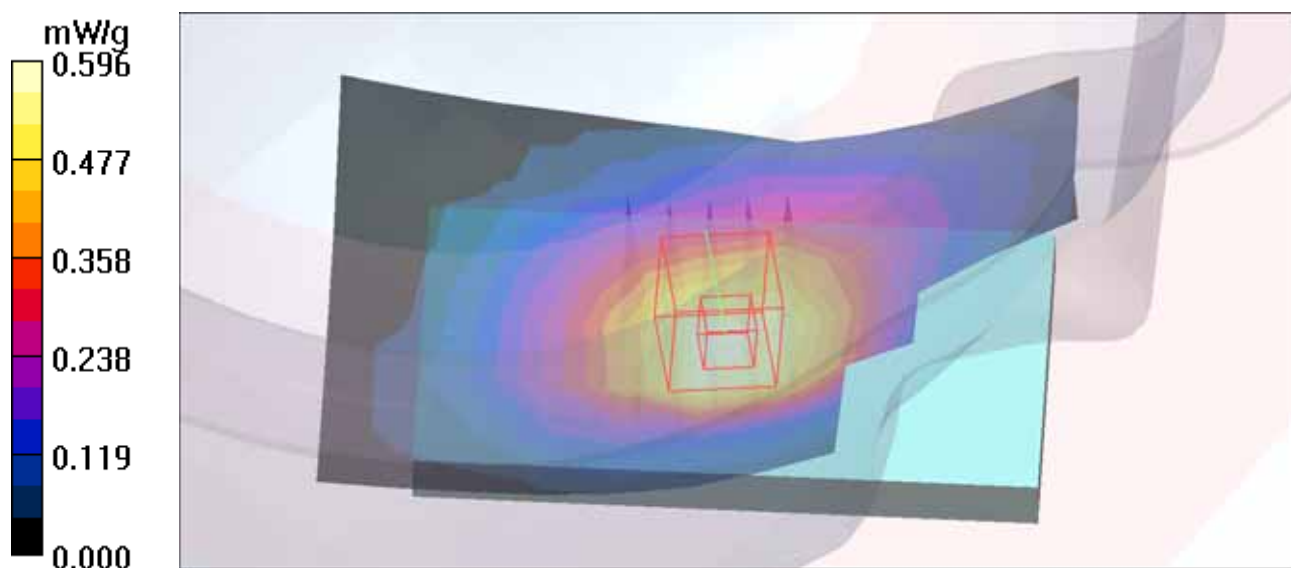
Touch position - Middle/Area Scan (7x11x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$
Maximum value of SAR (measured) = 0.596 mW/g**Touch position - Middle/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 10.9 V/m; Power Drift = -0.055 dB

Peak SAR (extrapolated) = 0.647 W/kg

SAR(1 g) = 0.513 mW/g; SAR(10 g) = 0.376 mW/g

Maximum value of SAR (measured) = 0.582 mW/g



M02-Right Head-Tilt-GPRS850 TS1-Ch190 / HT 3.8VDC

Communication System: GPRS850 ; Frequency: 836.6 MHz ; Duty Cycle: 1:8.3

Medium: HSL835 Medium parameters used: $f = 836.6 \text{ MHz}$; $\sigma = 0.93 \text{ mho/m}$; $\epsilon_r = 42.35$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Right Section ; DUT test position : Tilt ; Modulation type: GMSK / UL 1 time slot

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(10.21, 10.21, 10.21); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Tilt position - Middle/Area Scan (7x11x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 0.366 mW/g

Tilt position - Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 15.6 V/m ; Power Drift = -0.094 dB

Peak SAR (extrapolated) = 0.404 W/kg

SAR(1 g) = 0.322 mW/g ; SAR(10 g) = 0.243 mW/g

Maximum value of SAR (measured) = 0.370 mW/g

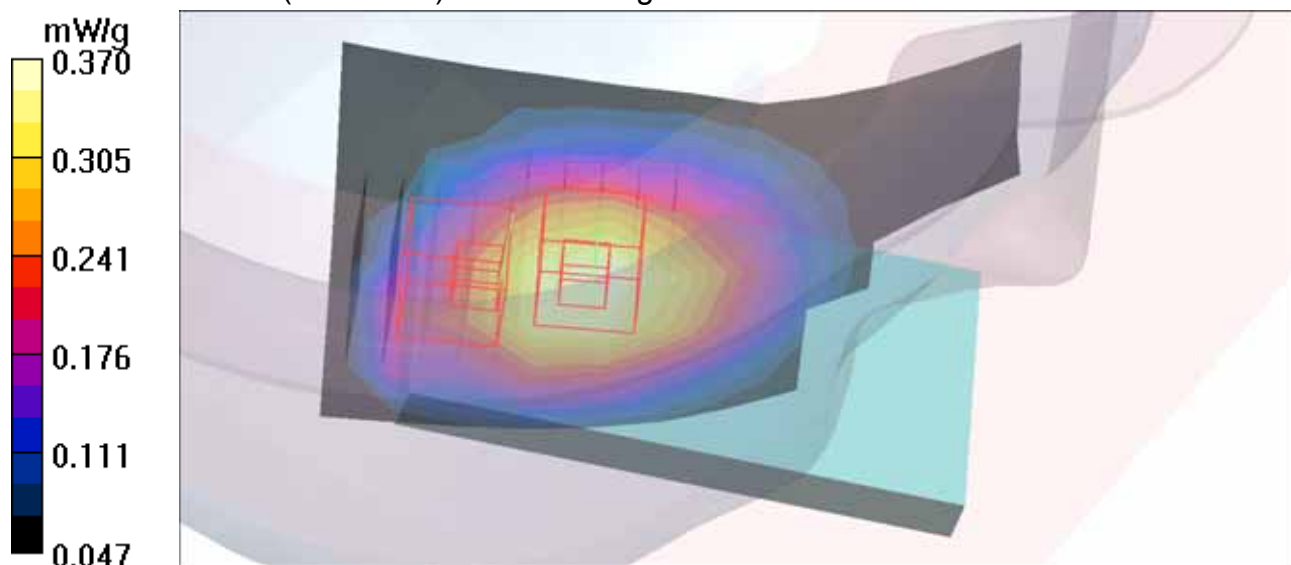
Tilt position - Middle/Zoom Scan (5x5x7)/Cube 1: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 15.6 V/m ; Power Drift = -0.094 dB

Peak SAR (extrapolated) = 0.325 W/kg

SAR(1 g) = 0.232 mW/g ; SAR(10 g) = 0.153 mW/g

Maximum value of SAR (measured) = 0.290 mW/g



Date/Time: 2011/6/22 12:05:26

M03-Left Head-Cheek-GPRS850 TS1-Ch190 / HT 3.8VDC

Communication System: GPRS850 ; Frequency: 836.6 MHz ; Duty Cycle: 1:8.3

Medium: HSL835 Medium parameters used: $f = 836.6 \text{ MHz}$; $\sigma = 0.93 \text{ mho/m}$; $\epsilon_r = 42.35$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Left Section ; DUT test position : Cheek ; Modulation type: GMSK / UL 1 time slot

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(10.21, 10.21, 10.21); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

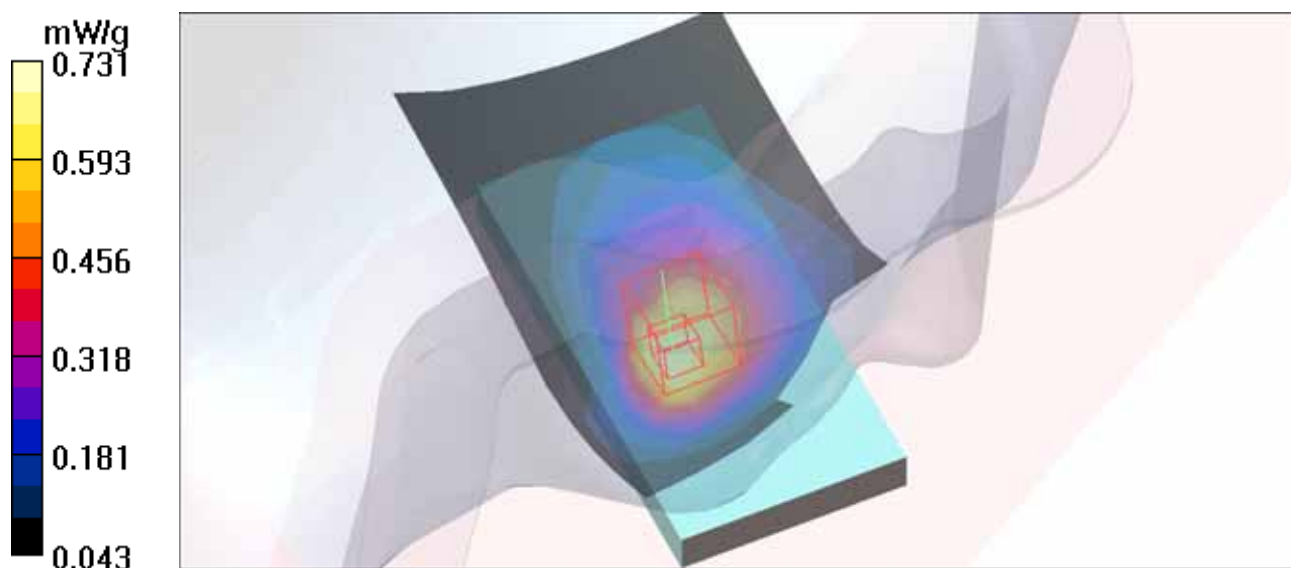
Touch position - Middle/Area Scan (7x11x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$
Maximum value of SAR (measured) = 0.688 mW/g**Touch position - Middle/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 11.6 V/m; Power Drift = -0.078 dB

Peak SAR (extrapolated) = 0.879 W/kg

SAR(1 g) = 0.612 mW/g; SAR(10 g) = 0.427 mW/g

Maximum value of SAR (measured) = 0.731 mW/g



M04-Left Head-Tilt-GPRS850 TS1-Ch190 / HT 3.8VDC

Communication System: GPRS850 ; Frequency: 836.6 MHz ; Duty Cycle: 1:8.3

Medium: HSL835 Medium parameters used: $f = 836.6 \text{ MHz}$; $\sigma = 0.93 \text{ mho/m}$; $\epsilon_r = 42.35$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Left Section ; DUT test position : Tilt ; Modulation type: GMSK / UL 1 time slot

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(10.21, 10.21, 10.21); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Tilt position - Middle/Area Scan (7x11x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 0.368 mW/g

Tilt position - Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 15.8 V/m ; Power Drift = -0.002 dB

Peak SAR (extrapolated) = 0.401 W/kg

SAR(1 g) = 0.320 mW/g ; SAR(10 g) = 0.244 mW/g

Maximum value of SAR (measured) = 0.366 mW/g

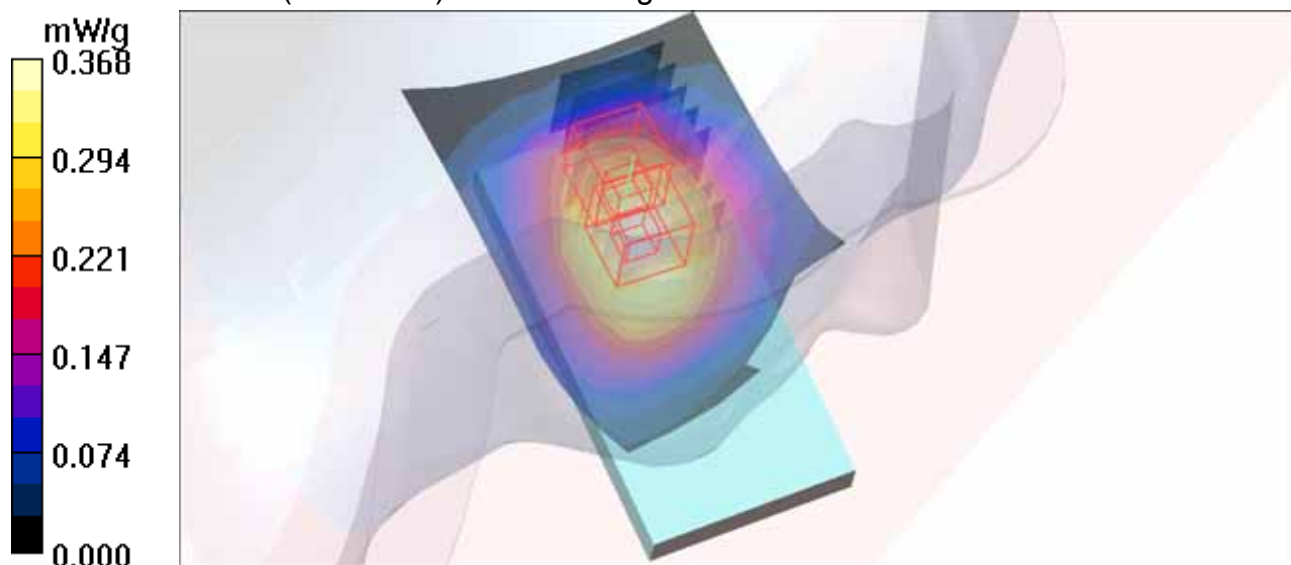
Tilt position - Middle/Zoom Scan (5x5x7)/Cube 1: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 15.8 V/m ; Power Drift = -0.002 dB

Peak SAR (extrapolated) = 0.378 W/kg

SAR(1 g) = 0.286 mW/g ; SAR(10 g) = 0.201 mW/g

Maximum value of SAR (measured) = 0.346 mW/g



M05-Right Head-Cheek-GPRS850 TS2-Ch190 / HT 3.8VDC

Communication System: GSM850 ; Frequency: 836.6 MHz ; Duty Cycle: 1:4

Medium: HSL835 Medium parameters used: $f = 836.6 \text{ MHz}$; $\sigma = 0.93 \text{ mho/m}$; $\epsilon_r = 42.35$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Right Section ; DUT test position : Cheek ; Modulation type: GMSK / UL 2 time slots

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(10.21, 10.21, 10.21); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Touch position - Middle/Area Scan (7x11x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$
Maximum value of SAR (measured) = 0.658 mW/g

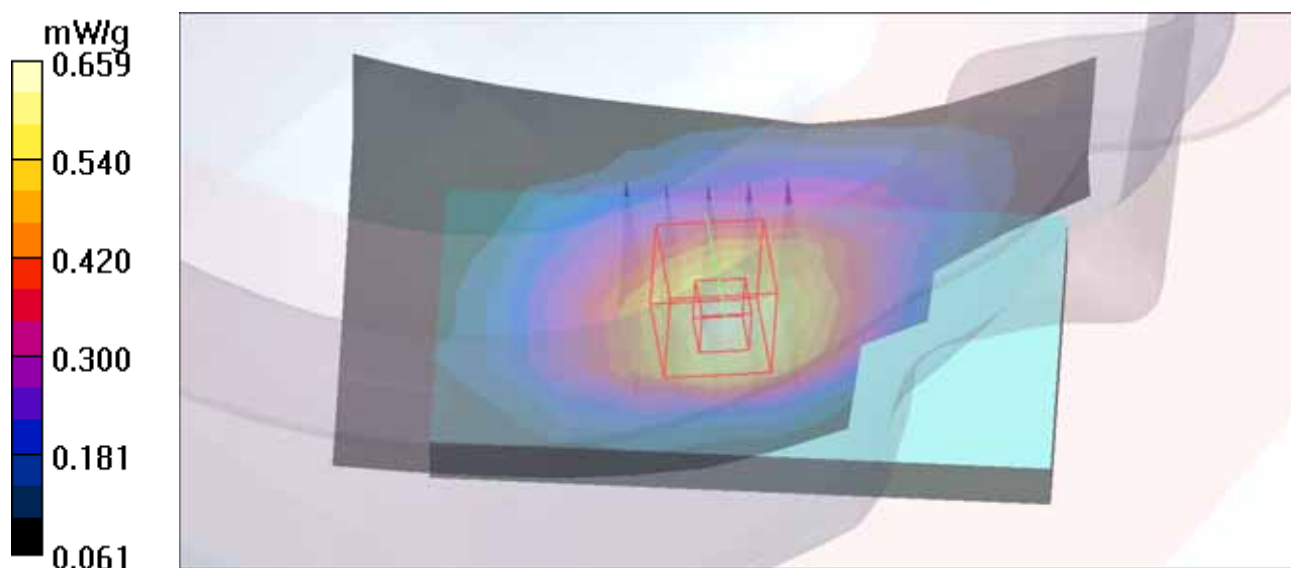
Touch position - Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 11.6 V/m; Power Drift = -0.054 dB

Peak SAR (extrapolated) = 0.720 W/kg

SAR(1 g) = 0.572 mW/g; SAR(10 g) = 0.421 mW/g

Maximum value of SAR (measured) = 0.659 mW/g



M06-Right Head-Tilt-GPRS850 TS2-Ch190 / HT 3.8VDC

Communication System: GPRS850 ; Frequency: 836.6 MHz ; Duty Cycle: 1:4

Medium: HSL835 Medium parameters used: $f = 836.6 \text{ MHz}$; $\sigma = 0.93 \text{ mho/m}$; $\epsilon_r = 42.35$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Right Section ; DUT test position : Tilt ; Modulation type: GMSK / UL 2 time slots

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(10.21, 10.21, 10.21); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Tilt position - Middle/Area Scan (7x11x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 0.431 mW/g

Tilt position - Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 17.2 V/m ; Power Drift = -0.177 dB

Peak SAR (extrapolated) = 0.466 W/kg

SAR(1 g) = 0.376 mW/g ; SAR(10 g) = 0.285 mW/g

Maximum value of SAR (measured) = 0.426 mW/g

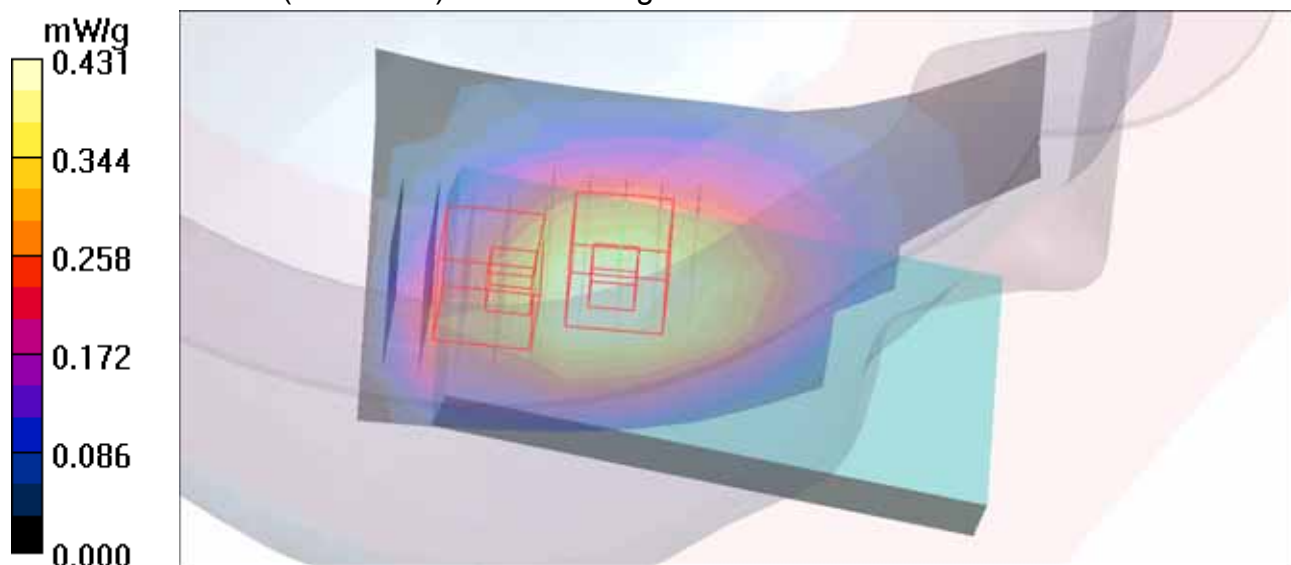
Tilt position - Middle/Zoom Scan (5x5x7)/Cube 1: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 17.2 V/m ; Power Drift = -0.177 dB

Peak SAR (extrapolated) = 0.359 W/kg

SAR(1 g) = 0.269 mW/g ; SAR(10 g) = 0.177 mW/g

Maximum value of SAR (measured) = 0.341 mW/g



M07-Left Head-Cheek-GPRS850 TS2-Ch190 / HT 3.8VDC

Communication System: GPRS850 ; Frequency: 836.6 MHz ; Duty Cycle: 1:4

Medium: HSL835 Medium parameters used: $f = 836.6 \text{ MHz}$; $\sigma = 0.93 \text{ mho/m}$; $\epsilon_r = 42.35$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Left Section ; DUT test position : Cheek ; Modulation type: GMSK / UL 2 time slots

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(10.21, 10.21, 10.21); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Touch position - Middle/Area Scan (7x11x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$
Maximum value of SAR (measured) = 0.719 mW/g

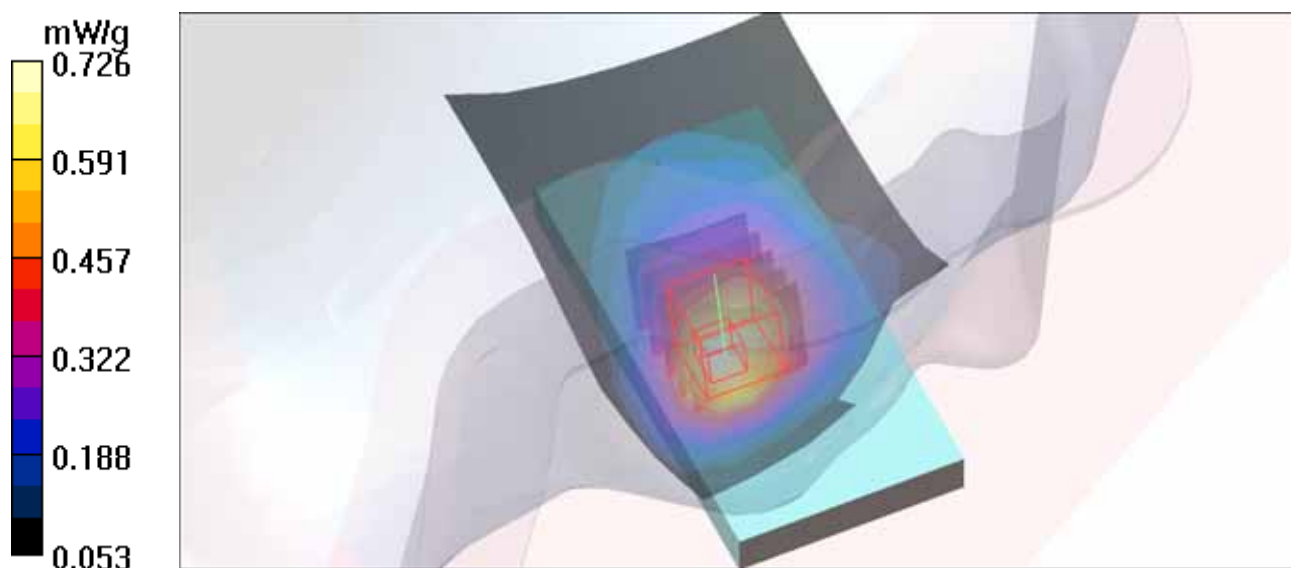
Touch position - Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 12.5 V/m; Power Drift = -0.119 dB

Peak SAR (extrapolated) = 0.859 W/kg

SAR(1 g) = 0.621 mW/g; SAR(10 g) = 0.439 mW/g

Maximum value of SAR (measured) = 0.726 mW/g



Date/Time: 2011/6/22 14:03:35

M08-Left Head-Tilt-GPRS850 TS2-Ch190 / HT 3.8VDC

Communication System: GPRS850 ; Frequency: 836.6 MHz ; Duty Cycle: 1:4

Medium: HSL835 Medium parameters used: $f = 836.6 \text{ MHz}$; $\sigma = 0.93 \text{ mho/m}$; $\epsilon_r = 42.35$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Left Section ; DUT test position : Tilt ; Modulation type: GMSK / UL 2 time slots

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(10.21, 10.21, 10.21); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

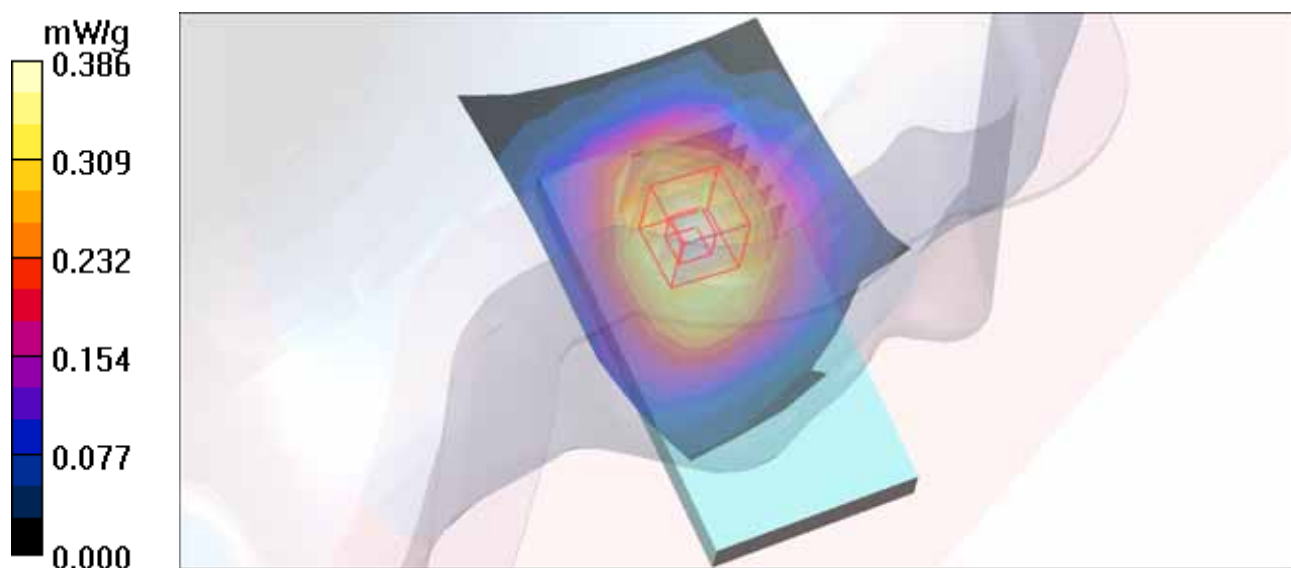
Tilt position - Middle/Area Scan (7x11x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$
Maximum value of SAR (measured) = 0.386 mW/g**Tilt position - Middle/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 17.0 V/m; Power Drift = -0.099 dB

Peak SAR (extrapolated) = 0.419 W/kg

SAR(1 g) = 0.335 mW/g; SAR(10 g) = 0.255 mW/g

Maximum value of SAR (measured) = 0.385 mW/g



M09-Right Head-Cheek-GPRS850 TS1-Ch190 / HT 3.7VDC

Communication System: GPRS850 ; Frequency: 836.6 MHz ; Duty Cycle: 1:8.3

Medium: HSL835 Medium parameters used: $f = 836.6 \text{ MHz}$; $\sigma = 0.93 \text{ mho/m}$; $\epsilon_r = 42.35$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Right Section ; DUT test position : Cheek ; Modulation type: GMSK / UL 1 time slot

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(10.21, 10.21, 10.21); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Touch position - Middle/Area Scan (7x11x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$
Maximum value of SAR (measured) = 0.560 mW/g

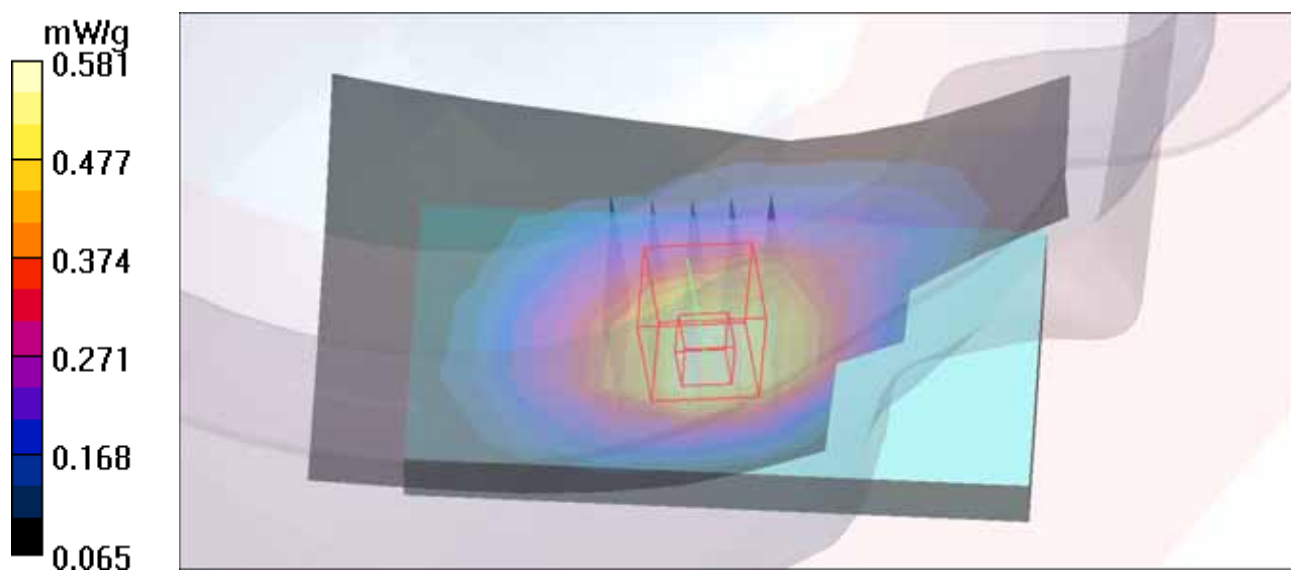
Touch position - Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 10.6 V/m; Power Drift = -0.093 dB

Peak SAR (extrapolated) = 0.629 W/kg

SAR(1 g) = 0.503 mW/g; SAR(10 g) = 0.371 mW/g

Maximum value of SAR (measured) = 0.581 mW/g



M10-Right Head-Tilt-GPRS850 TS1-Ch190 / HT 3.7VDC

Communication System: GPRS850 ; Frequency: 836.6 MHz ; Duty Cycle: 1:8.3

Medium: HSL835 Medium parameters used: $f = 836.6 \text{ MHz}$; $\sigma = 0.93 \text{ mho/m}$; $\epsilon_r = 42.35$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Right Section ; DUT test position : Tilt ; Modulation type: GMSK / UL 1 time slot

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(10.21, 10.21, 10.21); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Tilt position - Middle/Area Scan (7x11x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 0.359 mW/g

Tilt position - Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 14.9 V/m ; Power Drift = -0.003 dB

Peak SAR (extrapolated) = 0.401 W/kg

SAR(1 g) = 0.322 mW/g ; SAR(10 g) = 0.244 mW/g

Maximum value of SAR (measured) = 0.364 mW/g

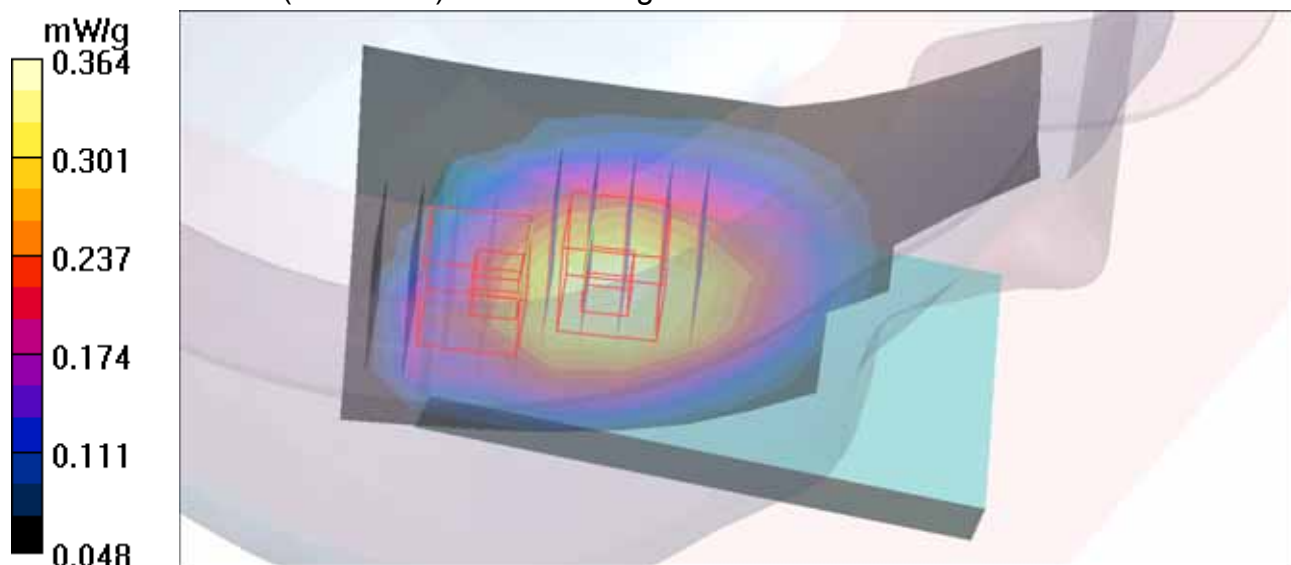
Tilt position - Middle/Zoom Scan (5x5x7)/Cube 1: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 14.9 V/m ; Power Drift = -0.003 dB

Peak SAR (extrapolated) = 0.305 W/kg

SAR(1 g) = 0.224 mW/g ; SAR(10 g) = 0.145 mW/g

Maximum value of SAR (measured) = 0.283 mW/g



Date/Time: 2011/6/22 15:13:53

M11-Left Head-Cheek-GPRS850 TS1-Ch190 / HT 3.7VDC

Communication System: GSM850 ; Frequency: 836.6 MHz ; Duty Cycle: 1:8.3

Medium: HSL835 Medium parameters used: $f = 836.6 \text{ MHz}$; $\sigma = 0.93 \text{ mho/m}$; $\epsilon_r = 42.35$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Left Section ; DUT test position : Cheek ; Modulation type: GMSK / UL 1 time slot

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(10.21, 10.21, 10.21); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

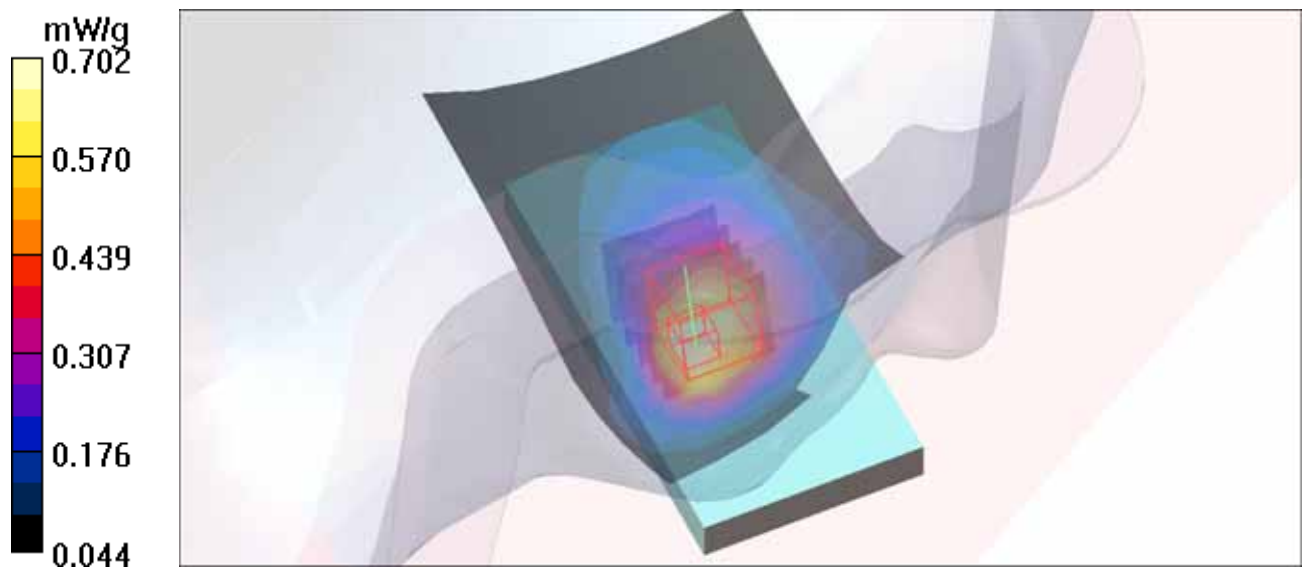
Touch position - Middle/Area Scan (7x11x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$
Maximum value of SAR (measured) = 0.674 mW/g**Touch position - Middle/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 11.5 V/m; Power Drift = 0.010 dB

Peak SAR (extrapolated) = 0.830 W/kg

SAR(1 g) = 0.590 mW/g; SAR(10 g) = 0.419 mW/g

Maximum value of SAR (measured) = 0.702 mW/g



M12-Left Head-Tilt-GPRS850 TS1-Ch190 / HT 3.7VDC

Communication System: GSM850 ; Frequency: 836.6 MHz ; Duty Cycle: 1:8.3

Medium: HSL835 Medium parameters used: $f = 836.6 \text{ MHz}$; $\sigma = 0.93 \text{ mho/m}$; $\epsilon_r = 42.35$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Left Section ; DUT test position : Tilt ; Modulation type: GMSK / UL 1 time slot

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(10.21, 10.21, 10.21); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Tilt position - Middle/Area Scan (7x11x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 0.348 mW/g

Tilt position - Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 15.4 V/m; Power Drift = 0.065 dB

Peak SAR (extrapolated) = 0.377 W/kg

SAR(1 g) = 0.306 mW/g; SAR(10 g) = 0.234 mW/g

Maximum value of SAR (measured) = 0.346 mW/g

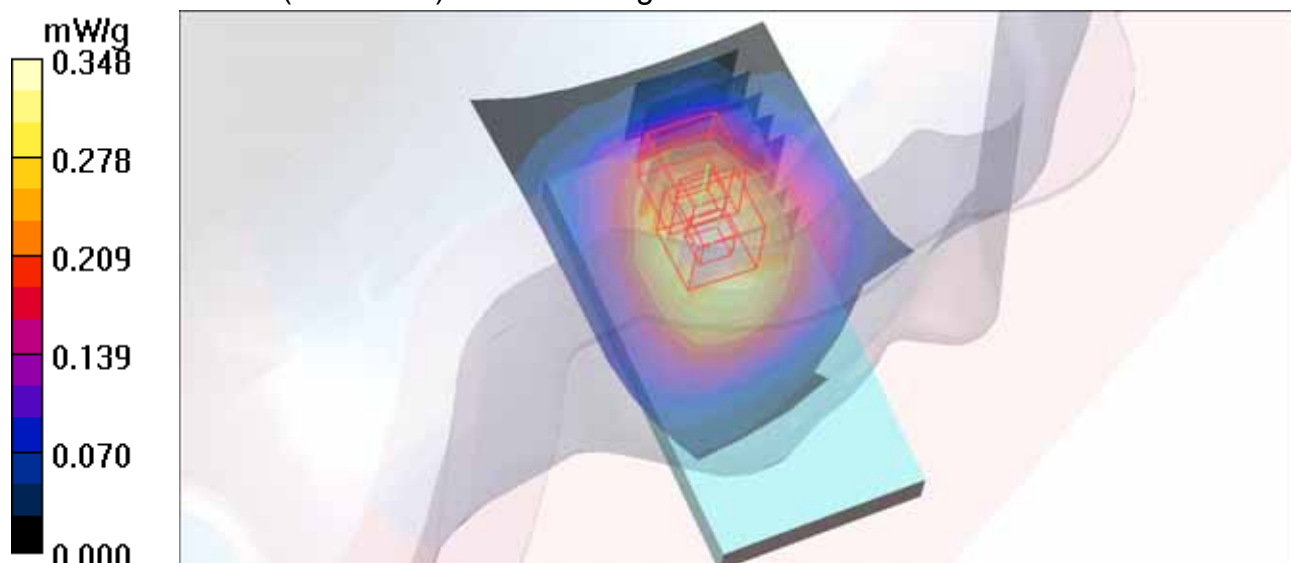
Tilt position - Middle/Zoom Scan (5x5x7)/Cube 1: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 15.4 V/m; Power Drift = 0.065 dB

Peak SAR (extrapolated) = 0.365 W/kg

SAR(1 g) = 0.278 mW/g; SAR(10 g) = 0.197 mW/g

Maximum value of SAR (measured) = 0.333 mW/g



M13-Right Head-Cheek-GPRS850 TS2-Ch190 / HT 3.7VDC

Communication System: GPRS850 ; Frequency: 836.6 MHz ; Duty Cycle: 1:4

Medium: HSL835 Medium parameters used: $f = 836.6 \text{ MHz}$; $\sigma = 0.93 \text{ mho/m}$; $\epsilon_r = 42.35$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Right Section ; DUT test position : Cheek ; Modulation type: GMSK / UL 2 time slots

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(10.21, 10.21, 10.21); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Touch position - Middle/Area Scan (7x11x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$
Maximum value of SAR (measured) = 0.652 mW/g

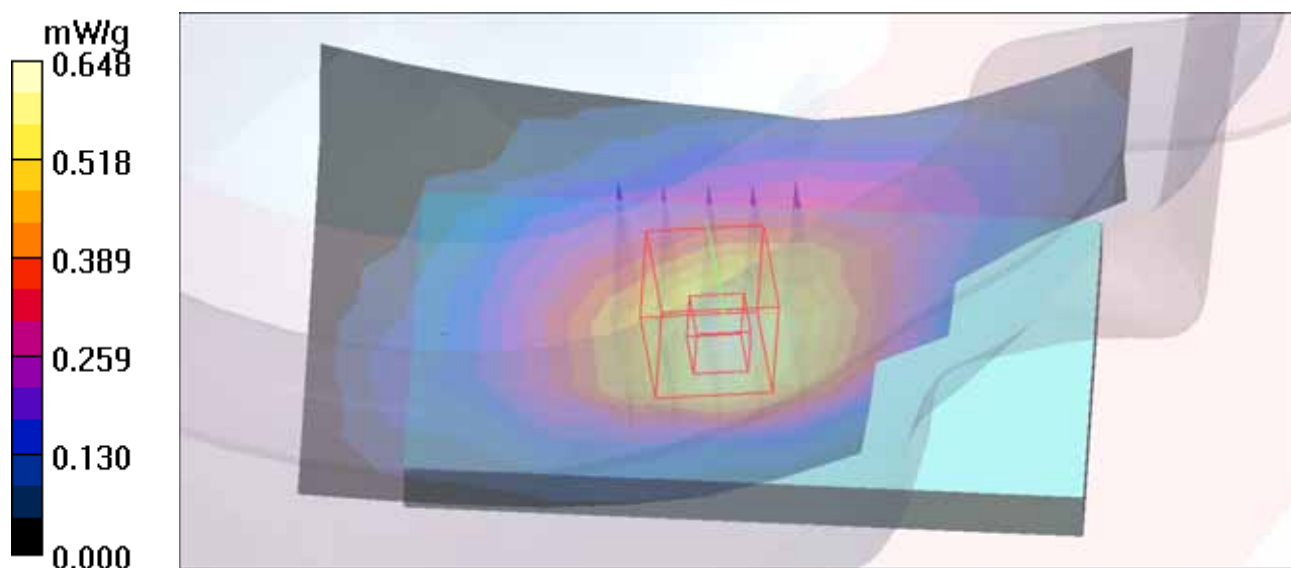
Touch position - Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 12.7 V/m; Power Drift = -0.023 dB

Peak SAR (extrapolated) = 0.721 W/kg

SAR(1 g) = 0.564 mW/g; SAR(10 g) = 0.411 mW/g

Maximum value of SAR (measured) = 0.648 mW/g



M14-Right Head-Tilt-GPRS850 TS2-Ch190 / HT 3.7VDC

Communication System: GPRS850 ; Frequency: 836.6 MHz ; Duty Cycle: 1:4

Medium: HSL835 Medium parameters used: $f = 836.6 \text{ MHz}$; $\sigma = 0.93 \text{ mho/m}$; $\epsilon_r = 42.35$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Right Section ; DUT test position : Tilt ; Modulation type: GMSK / UL 2 time slots

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(10.21, 10.21, 10.21); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Tilt position - Middle/Area Scan (7x11x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 0.441 mW/g

Tilt position - Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 17.7 V/m ; Power Drift = -0.084 dB

Peak SAR (extrapolated) = 0.507 W/kg

SAR(1 g) = 0.399 mW/g ; SAR(10 g) = 0.301 mW/g

Maximum value of SAR (measured) = 0.463 mW/g

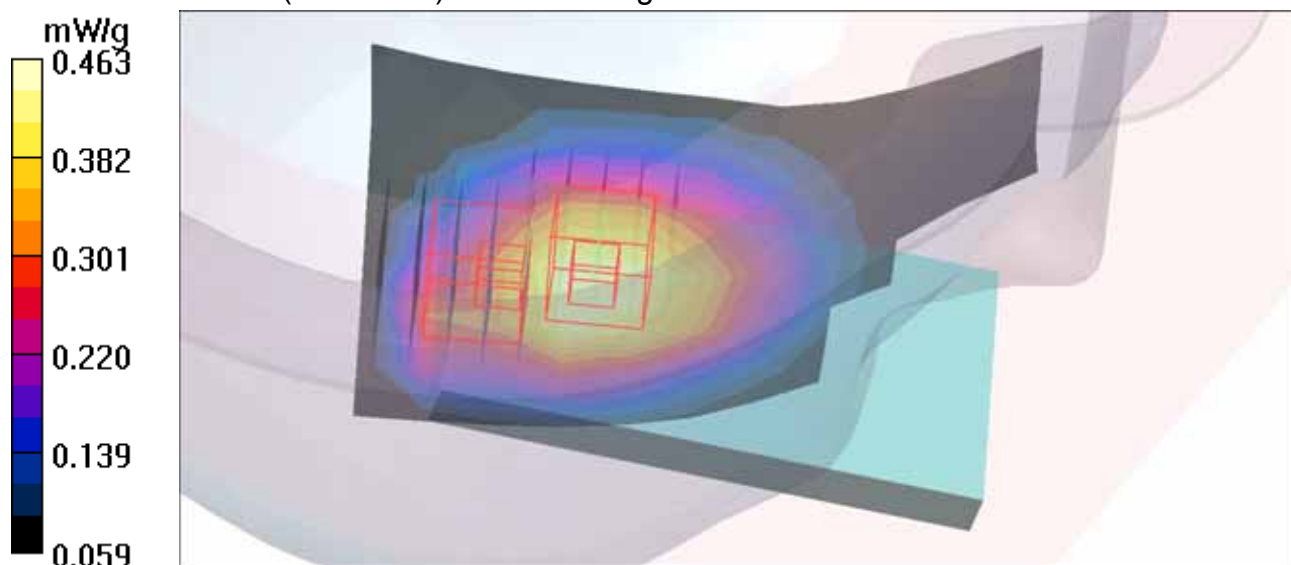
Tilt position - Middle/Zoom Scan (5x5x7)/Cube 1: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 17.7 V/m ; Power Drift = -0.084 dB

Peak SAR (extrapolated) = 0.427 W/kg

SAR(1 g) = 0.296 mW/g ; SAR(10 g) = 0.199 mW/g

Maximum value of SAR (measured) = 0.375 mW/g



M15-Left Head-Cheek-GPRS850 TS2-Ch190 / HT 3.7VDC

Communication System: GSM850 ; Frequency: 836.6 MHz ; Duty Cycle: 1:4

Medium: HSL835 Medium parameters used: $f = 836.6 \text{ MHz}$; $\sigma = 0.93 \text{ mho/m}$; $\epsilon_r = 42.35$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Left Section ; DUT test position : Cheek ; Modulation type: GMSK / UL 2 time slots

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(10.21, 10.21, 10.21); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Touch position - Middle/Area Scan (7x11x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$
Maximum value of SAR (measured) = 0.793 mW/g

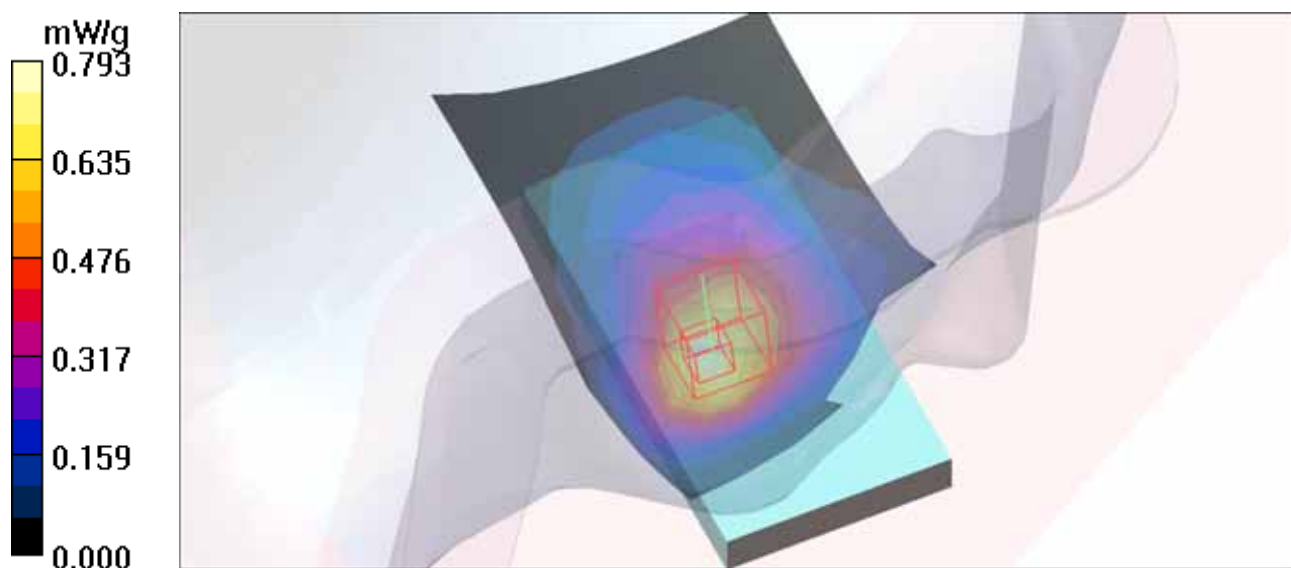
Touch position - Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 13.1 V/m; Power Drift = -0.026 dB

Peak SAR (extrapolated) = 0.929 W/kg

SAR(1 g) = 0.675 mW/g; SAR(10 g) = 0.471 mW/g

Maximum value of SAR (measured) = 0.789 mW/g



M16-Left Head-Tilt-GPRS850 TS2-Ch190 / HT 3.7VDC

Communication System: GSM850 ; Frequency: 836.6 MHz ; Duty Cycle: 1:4

Medium: HSL835 Medium parameters used: $f = 836.6 \text{ MHz}$; $\sigma = 0.93 \text{ mho/m}$; $\epsilon_r = 42.35$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Left Section ; DUT test position : Tilt ; Modulation type: GMSK / UL 2 time slots

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(10.21, 10.21, 10.21); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Tilt position - Middle/Area Scan (7x11x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 0.387 mW/g

Tilt position - Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 17.1 V/m; Power Drift = -0.063 dB

Peak SAR (extrapolated) = 0.422 W/kg

SAR(1 g) = 0.334 mW/g; SAR(10 g) = 0.253 mW/g

Maximum value of SAR (measured) = 0.385 mW/g

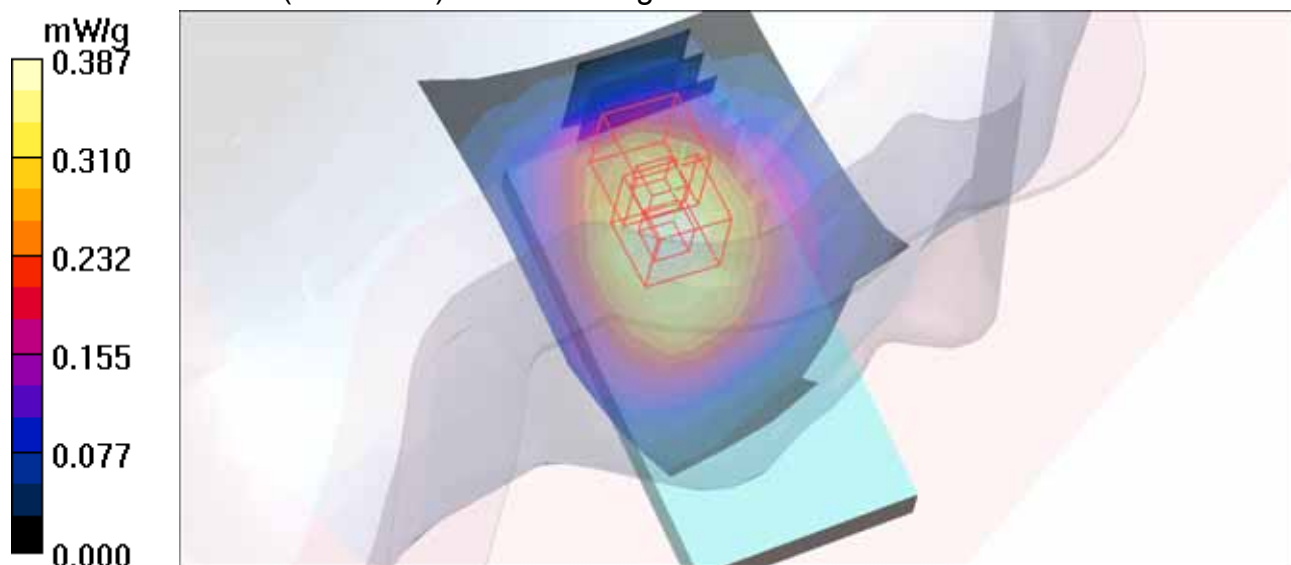
Tilt position - Middle/Zoom Scan (5x5x7)/Cube 1: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 17.1 V/m; Power Drift = -0.063 dB

Peak SAR (extrapolated) = 0.409 W/kg

SAR(1 g) = 0.303 mW/g; SAR(10 g) = 0.212 mW/g

Maximum value of SAR (measured) = 0.372 mW/g



M17-Right Head-Cheek-GPRS1900 TS1-Ch661 / HT 3.8VDC

Communication System: GPRS1900 ; Frequency: 1880 MHz ; Duty Cycle: 1:8.3

Medium: HSL1900 Medium parameters used: $f = 1880$ MHz; $\sigma = 1.43$ mho/m; $\epsilon_r = 41.11$; $\rho = 1000$ kg/m³

Phantom section: Right Section ; DUT test position : Cheek ; Modulation type: GMSK / UL 1 time slot

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(8.45, 8.45, 8.45); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Touch position - Middle/Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.597 mW/g

Touch position - Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 13.8 V/m; Power Drift = 0.105 dB

Peak SAR (extrapolated) = 0.735 W/kg

SAR(1 g) = 0.466 mW/g; SAR(10 g) = 0.278 mW/g

Maximum value of SAR (measured) = 0.567 mW/g

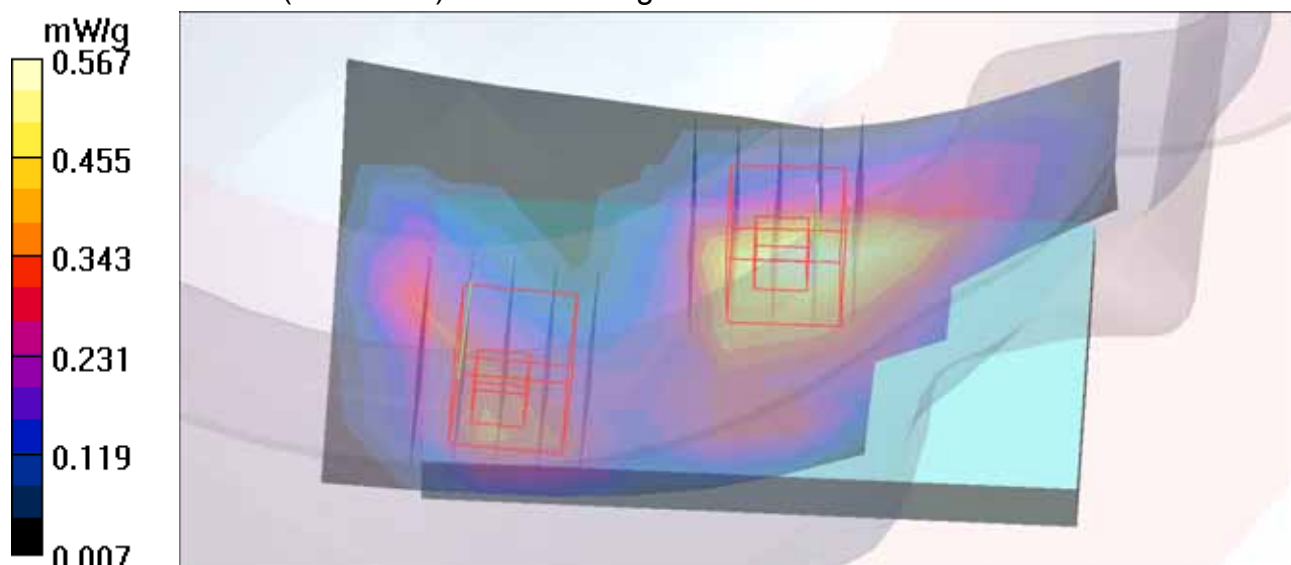
Touch position - Middle/Zoom Scan (5x5x7)/Cube 1: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 13.8 V/m; Power Drift = 0.105 dB

Peak SAR (extrapolated) = 0.580 W/kg

SAR(1 g) = 0.324 mW/g; SAR(10 g) = 0.188 mW/g

Maximum value of SAR (measured) = 0.394 mW/g



M18-Right Head-Tilt-GPRS1900 TS1-Ch661 / HT 3.8VDC

Communication System: GPRS1900 ; Frequency: 1880 MHz ; Duty Cycle: 1:8.3

Medium: HSL1900 Medium parameters used: $f = 1880 \text{ MHz}$; $\sigma = 1.43 \text{ mho/m}$; $\epsilon_r = 41.11$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Right Section ; DUT test position : Tilt ; Modulation type: GMSK / UL 1 time slot

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(8.45, 8.45, 8.45); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Tilt position - Middle/Area Scan (7x11x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 0.336 mW/g

Tilt position - Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 15.7 V/m ; Power Drift = 0.040 dB

Peak SAR (extrapolated) = 0.474 W/kg

SAR(1 g) = 0.263 mW/g ; SAR(10 g) = 0.154 mW/g

Maximum value of SAR (measured) = 0.343 mW/g

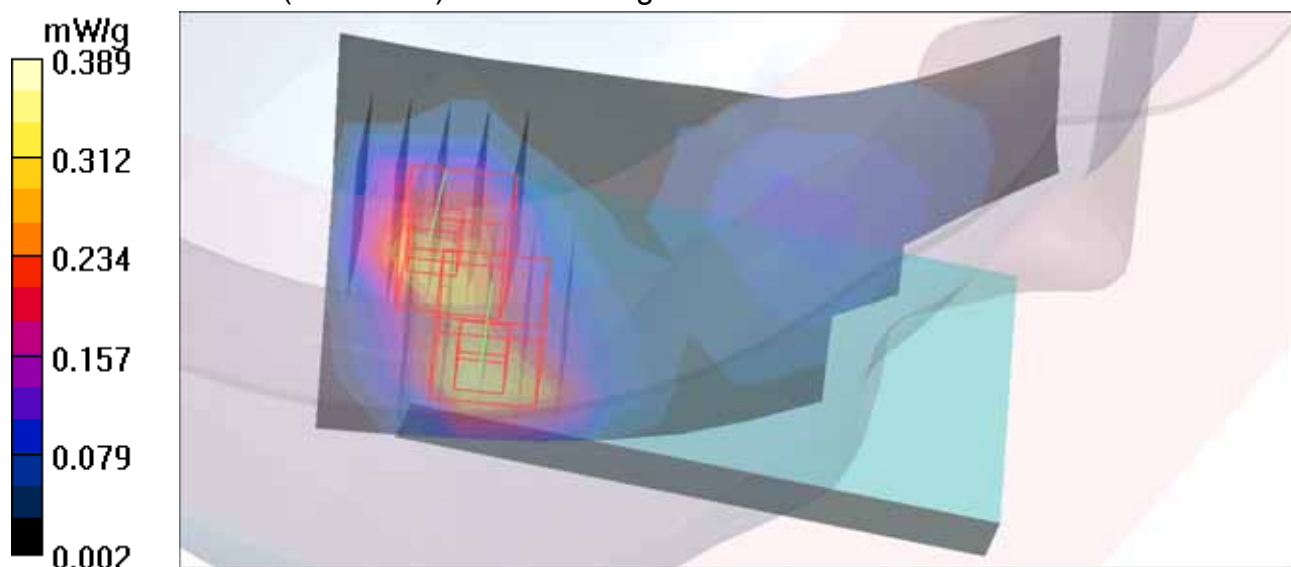
Tilt position - Middle/Zoom Scan (5x5x7)/Cube 1: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 15.7 V/m ; Power Drift = 0.040 dB

Peak SAR (extrapolated) = 0.528 W/kg

SAR(1 g) = 0.252 mW/g ; SAR(10 g) = 0.133 mW/g

Maximum value of SAR (measured) = 0.389 mW/g



Date/Time: 2011/6/21 10:25:52

M19-Left Head-Cheek-GPRS1900 TS1-Ch661 / HT 3.8VDC

Communication System: GPRS1900 ; Frequency: 1880 MHz ; Duty Cycle: 1:8.3

Medium: HSL1900 Medium parameters used: $f = 1880$ MHz; $\sigma = 1.43$ mho/m; $\epsilon_r = 41.11$; $\rho = 1000$ kg/m³

Phantom section: Left Section ; DUT test position : Cheek ; Modulation type: GMSK / UL 1 time slot

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(8.45, 8.45, 8.45); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

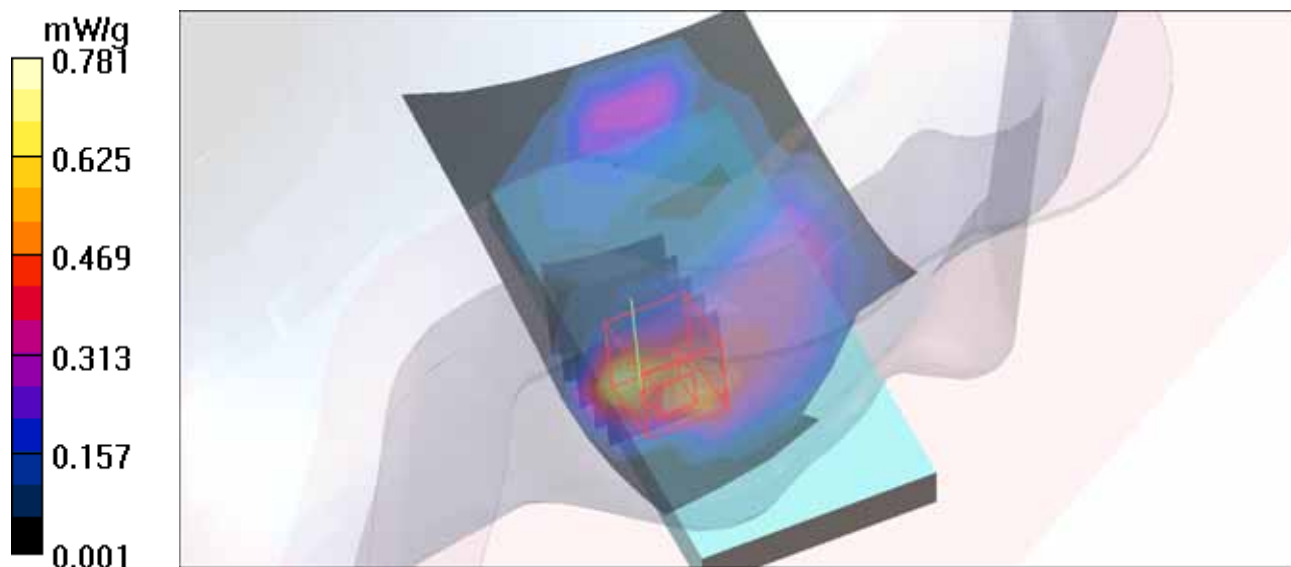
Touch position - Middle/Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.721 mW/g**Touch position - Middle/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 14.6 V/m; Power Drift = 0.103 dB

Peak SAR (extrapolated) = 1.07 W/kg

SAR(1 g) = 0.577 mW/g; SAR(10 g) = 0.320 mW/g

Maximum value of SAR (measured) = 0.781 mW/g



Date/Time: 2011/6/21 10:45:33

M20-Left Head-Tilt-GPRS1900 TS1-Ch661 / HT 3.8VDC

Communication System: GPRS1900 ; Frequency: 1880 MHz ; Duty Cycle: 1:8.3

Medium: HSL1900 Medium parameters used: $f = 1880$ MHz; $\sigma = 1.43$ mho/m; $\epsilon_r = 41.11$; $\rho = 1000$ kg/m³

Phantom section: Left Section ; DUT test position : Tilt ; Modulation type: GMSK / UL 1 time slot

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(8.45, 8.45, 8.45); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

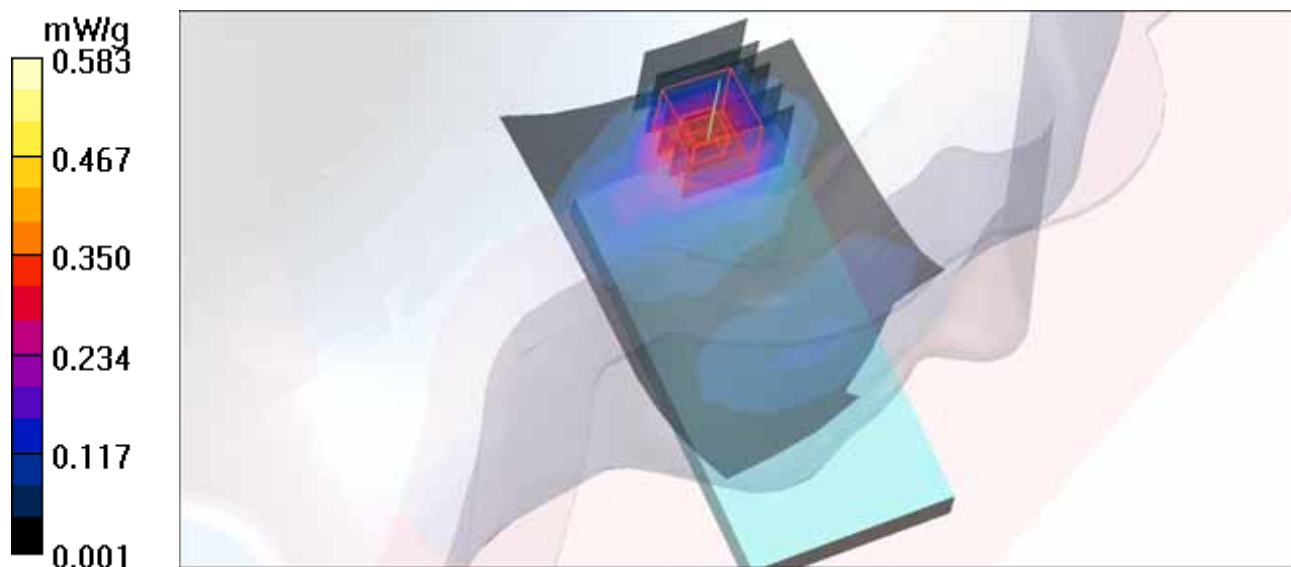
Tilt position - Middle/Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.345 mW/g**Tilt position - Middle/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 18.0 V/m; Power Drift = -0.070 dB

Peak SAR (extrapolated) = 0.797 W/kg

SAR(1 g) = 0.355 mW/g; SAR(10 g) = 0.169 mW/g

Maximum value of SAR (measured) = 0.583 mW/g



M21-Right Head-Cheek-GPRS1900 TS2-Ch661 / HT 3.8VDC

Communication System: GPRS1900 ; Frequency: 1880 MHz ; Duty Cycle: 1:4

Medium: HSL1900 Medium parameters used: $f = 1880 \text{ MHz}$; $\sigma = 1.43 \text{ mho/m}$; $\epsilon_r = 41.11$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Right Section ; DUT test position : Cheek ; Modulation type: GMSK / UL 2 time slots

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(8.45, 8.45, 8.45); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Touch position - Middle/Area Scan (7x11x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 0.837 mW/g

Touch position - Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 18.9 V/m ; Power Drift = -0.187 dB

Peak SAR (extrapolated) = 1.04 W/kg

SAR(1 g) = 0.653 mW/g ; SAR(10 g) = 0.388 mW/g

Maximum value of SAR (measured) = 0.809 mW/g

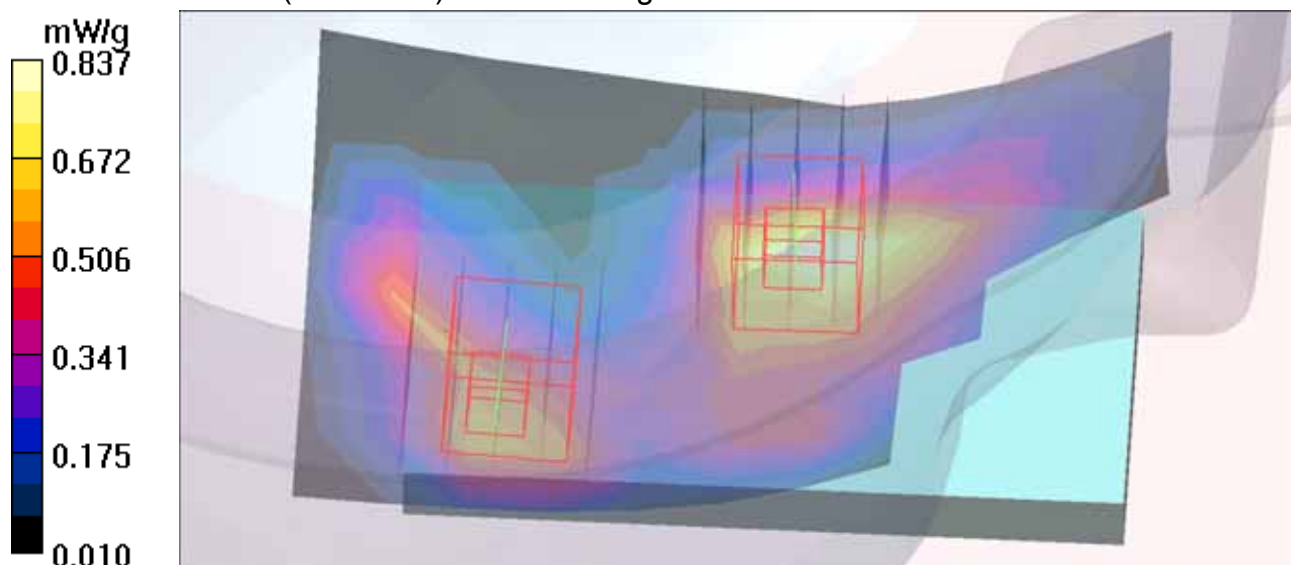
Touch position - Middle/Zoom Scan (5x5x7)/Cube 1: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 18.9 V/m ; Power Drift = -0.187 dB

Peak SAR (extrapolated) = 0.955 W/kg

SAR(1 g) = 0.565 mW/g ; SAR(10 g) = 0.325 mW/g

Maximum value of SAR (measured) = 0.701 mW/g



M22-Right Head-Tilt-GPRS1900 TS2-Ch661 / HT 3.8VDC

Communication System: GPRS1900 ; Frequency: 1880 MHz ; Duty Cycle: 1:4

Medium: HSL1900 Medium parameters used: $f = 1880 \text{ MHz}$; $\sigma = 1.43 \text{ mho/m}$; $\epsilon_r = 41.11$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Right Section ; DUT test position : Tilt ; Modulation type: GMSK / UL 2 time slots

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(8.45, 8.45, 8.45); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Tilt position - Middle/Area Scan (7x11x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 0.541 mW/g

Tilt position - Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 20.3 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 0.751 W/kg

SAR(1 g) = 0.410 mW/g; SAR(10 g) = 0.239 mW/g

Maximum value of SAR (measured) = 0.536 mW/g

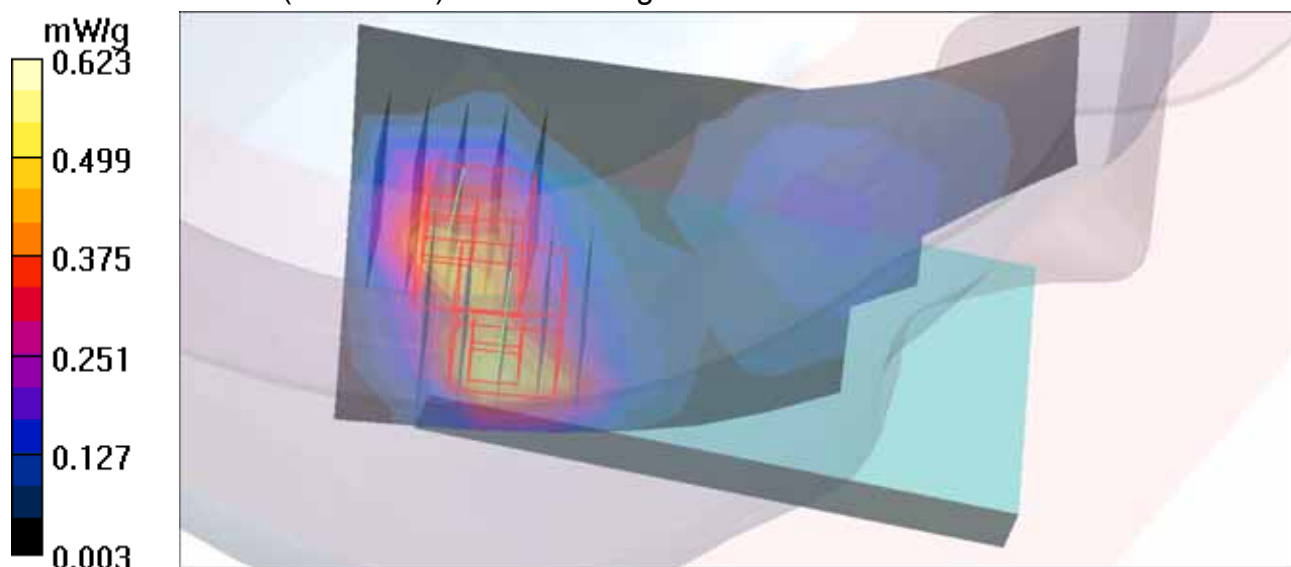
Tilt position - Middle/Zoom Scan (5x5x7)/Cube 1: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 20.3 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 0.846 W/kg

SAR(1 g) = 0.394 mW/g; SAR(10 g) = 0.207 mW/g

Maximum value of SAR (measured) = 0.623 mW/g



M23-Left Head-Cheek-GPRS1900 TS2-Ch661 / HT 3.8VDC

Communication System: GPRS1900 ; Frequency: 1880 MHz ; Duty Cycle: 1:4

Medium: HSL1900 Medium parameters used: $f = 1880 \text{ MHz}$; $\sigma = 1.43 \text{ mho/m}$; $\epsilon_r = 41.11$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Left Section ; DUT test position : Cheek ; Modulation type: GMSK / UL 2 time slots

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(8.45, 8.45, 8.45); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Touch position - Middle/Area Scan (7x11x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 0.646 mW/g

Touch position - Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 22.4 V/m ; Power Drift = -0.171 dB

Peak SAR (extrapolated) = 1.08 W/kg

SAR(1 g) = 0.591 mW/g ; SAR(10 g) = 0.339 mW/g

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

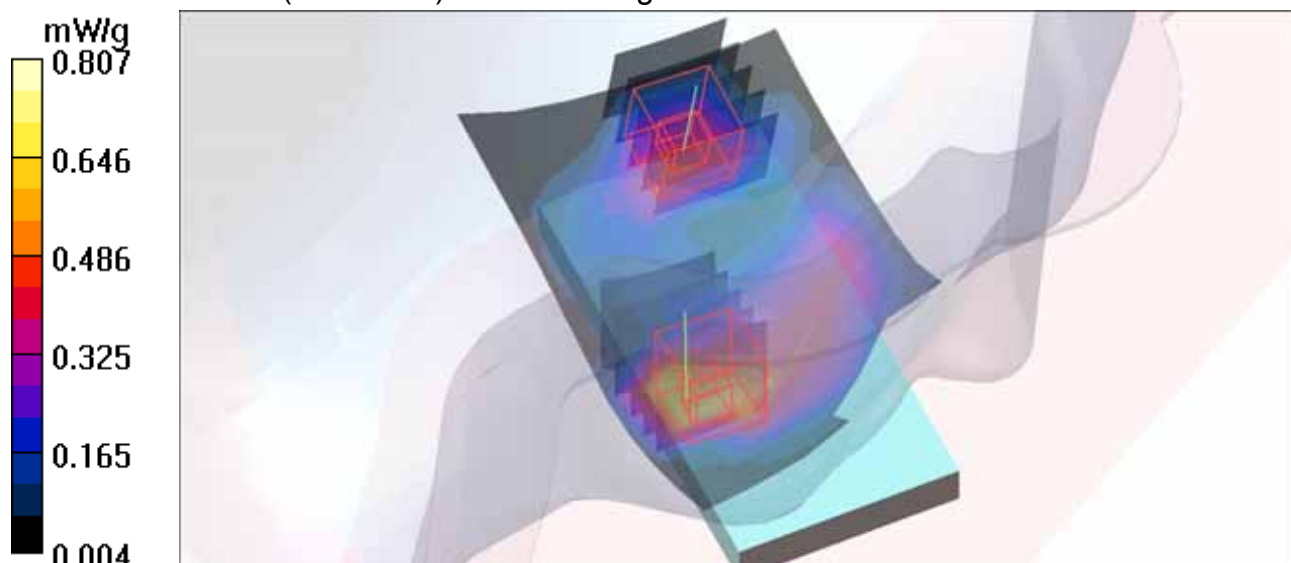
Touch position - Middle/Zoom Scan (5x5x7)/Cube 1: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 22.4 V/m ; Power Drift = -0.171 dB

Peak SAR (extrapolated) = 1.10 W/kg

SAR(1 g) = 0.470 mW/g ; SAR(10 g) = 0.209 mW/g

Maximum value of SAR (measured) = 0.807 mW/g



M24-Left Head-Tilt-GPRS1900 TS2-Ch661 / HT 3.8VDC

Communication System: GPRS1900 ; Frequency: 1880 MHz ; Duty Cycle: 1:4

Medium: HSL1900 Medium parameters used: $f = 1880 \text{ MHz}$; $\sigma = 1.43 \text{ mho/m}$; $\epsilon_r = 41.11$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Left Section ; DUT test position : Tilt ; Modulation type: GMSK / UL 2 time slots

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(8.45, 8.45, 8.45); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Tilt position - Middle/Area Scan (7x11x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$
Maximum value of SAR (measured) = 0.605 mW/g

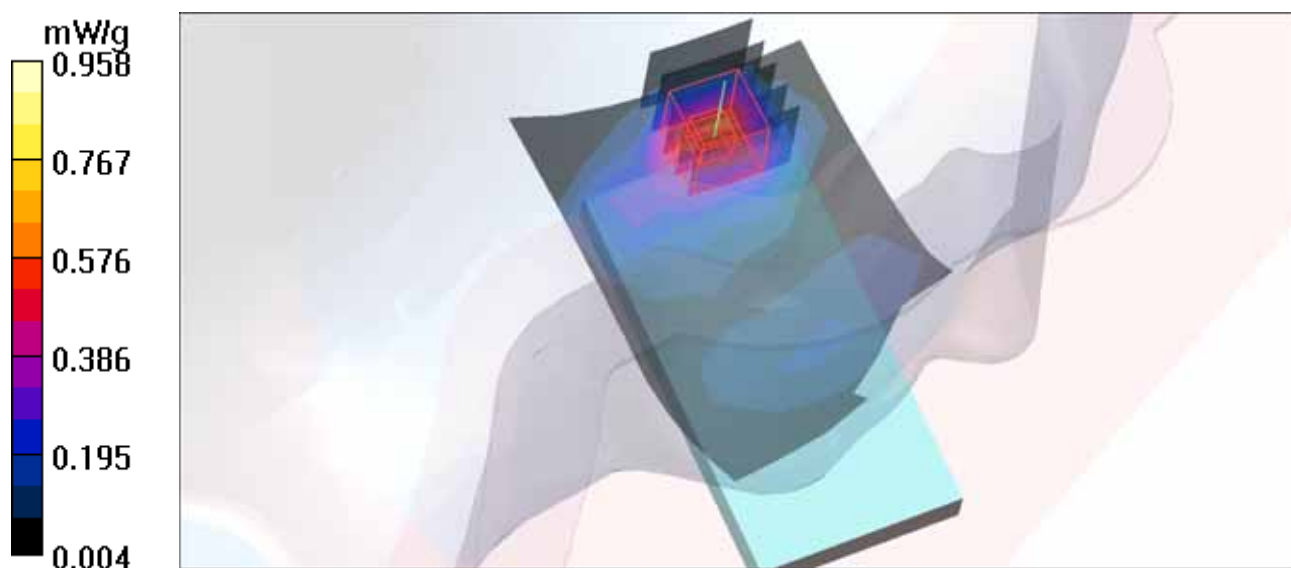
Tilt position - Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 23.4 V/m; Power Drift = -0.194 dB

Peak SAR (extrapolated) = 1.32 W/kg

SAR(1 g) = 0.587 mW/g; SAR(10 g) = 0.279 mW/g

Maximum value of SAR (measured) = 0.958 mW/g



Date/Time: 2011/6/21 13:12:26

M25-Right Head-Cheek-GPRS1900 TS1-Ch661 / HT 3.7VDC

Communication System: GPRS1900 ; Frequency: 1880 MHz ; Duty Cycle: 1:8.3

Medium: HSL1900 Medium parameters used: $f = 1880 \text{ MHz}$; $\sigma = 1.43 \text{ mho/m}$; $\epsilon_r = 41.11$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Right Section ; DUT test position : Cheek ; Modulation type: GMSK / UL 1 time slot

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(8.45, 8.45, 8.45); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Touch position - Middle/Area Scan (7x11x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 0.550 mW/g

Touch position - Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 12.4 V/m; Power Drift = -0.177 dB

Peak SAR (extrapolated) = 0.683 W/kg

SAR(1 g) = 0.441 mW/g; SAR(10 g) = 0.268 mW/g

Maximum value of SAR (measured) = 0.552 mW/g

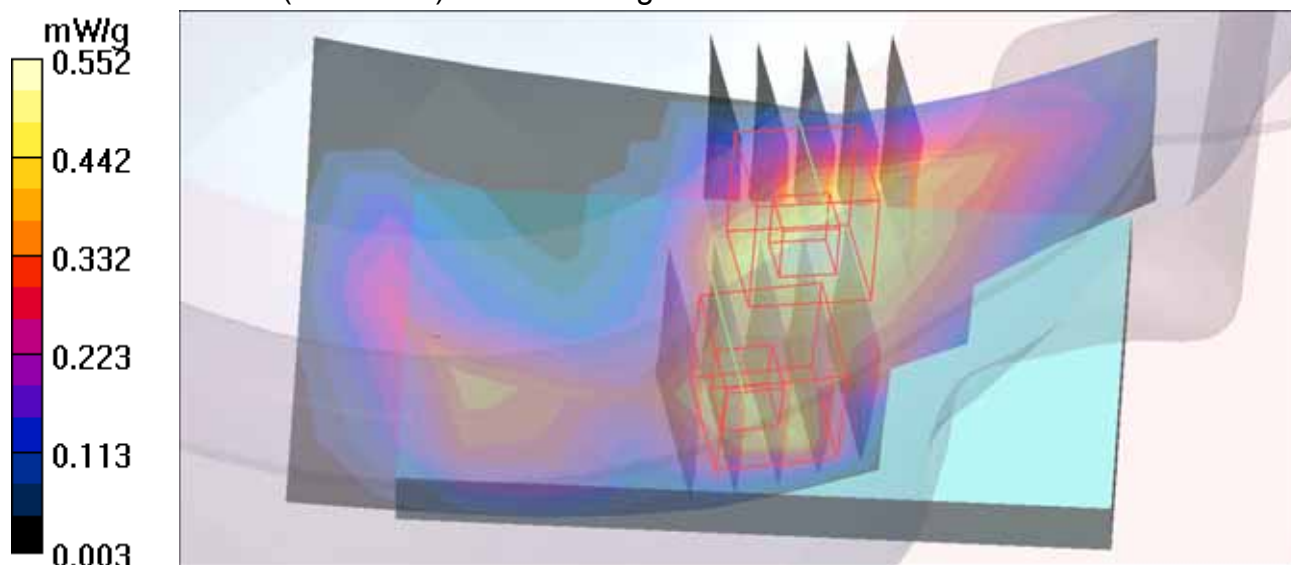
Touch position - Middle/Zoom Scan (5x5x7)/Cube 1: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 12.4 V/m; Power Drift = -0.177 dB

Peak SAR (extrapolated) = 0.540 W/kg

SAR(1 g) = 0.336 mW/g; SAR(10 g) = 0.198 mW/g

Maximum value of SAR (measured) = 0.433 mW/g



M26-Right Head-Tilt-GPRS1900 TS1-Ch661 / HT 3.7VDC

Communication System: GPRS1900 ; Frequency: 1880 MHz ; Duty Cycle: 1:8.3

Medium: HSL1900 Medium parameters used: $f = 1880$ MHz; $\sigma = 1.43$ mho/m; $\epsilon_r = 41.11$; $\rho = 1000$ kg/m³

Phantom section: Right Section ; DUT test position : Tilt ; Modulation type: GMSK / UL 1 time slot

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(8.45, 8.45, 8.45); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Tilt position - Middle/Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.318 mW/g

Tilt position - Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 13.0 V/m; Power Drift = 0.176 dB

Peak SAR (extrapolated) = 0.444 W/kg

SAR(1 g) = 0.248 mW/g; SAR(10 g) = 0.140 mW/g

Maximum value of SAR (measured) = 0.344 mW/g

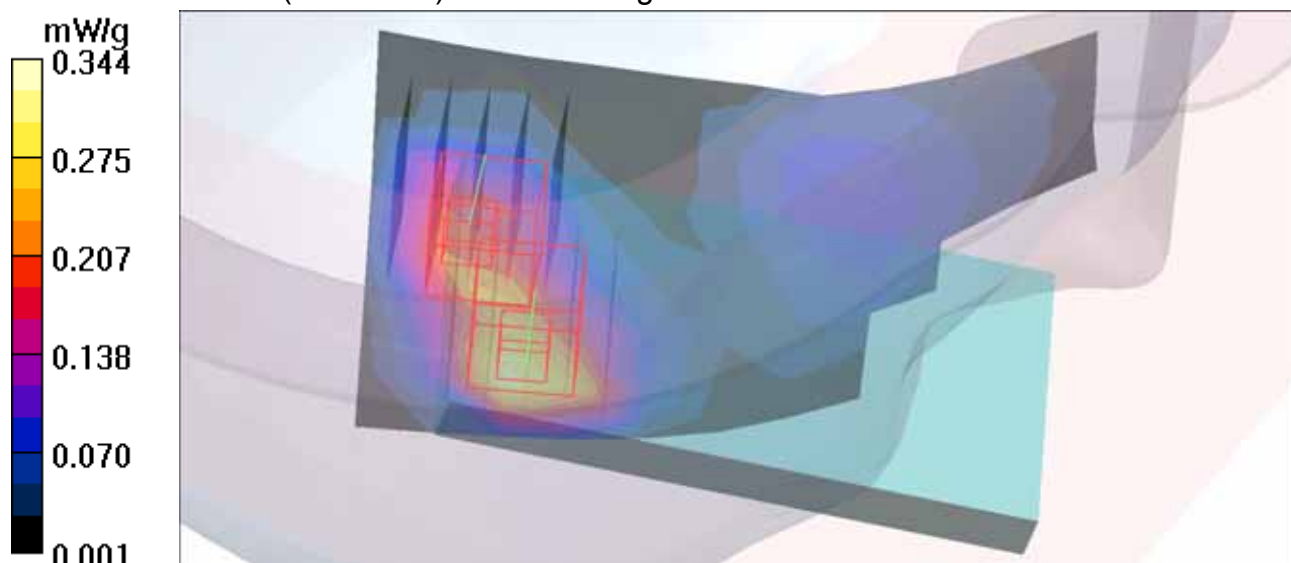
Tilt position - Middle/Zoom Scan (5x5x7)/Cube 1: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 13.0 V/m; Power Drift = 0.176 dB

Peak SAR (extrapolated) = 0.378 W/kg

SAR(1 g) = 0.188 mW/g; SAR(10 g) = 0.104 mW/g

Maximum value of SAR (measured) = 0.280 mW/g



M27-Left Head-Cheek-GPRS1900 TS1-Ch661 / HT 3.7VDC

Communication System: GPRS1900 ; Frequency: 1880 MHz ; Duty Cycle: 1:8.3

Medium: HSL1900 Medium parameters used: $f = 1880 \text{ MHz}$; $\sigma = 1.43 \text{ mho/m}$; $\epsilon_r = 41.11$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Left Section ; DUT test position : Cheek ; Modulation type: GMSK / UL 1 time slot

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(8.45, 8.45, 8.45); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Touch position - Middle/Area Scan (7x11x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$
Maximum value of SAR (measured) = 0.560 mW/g

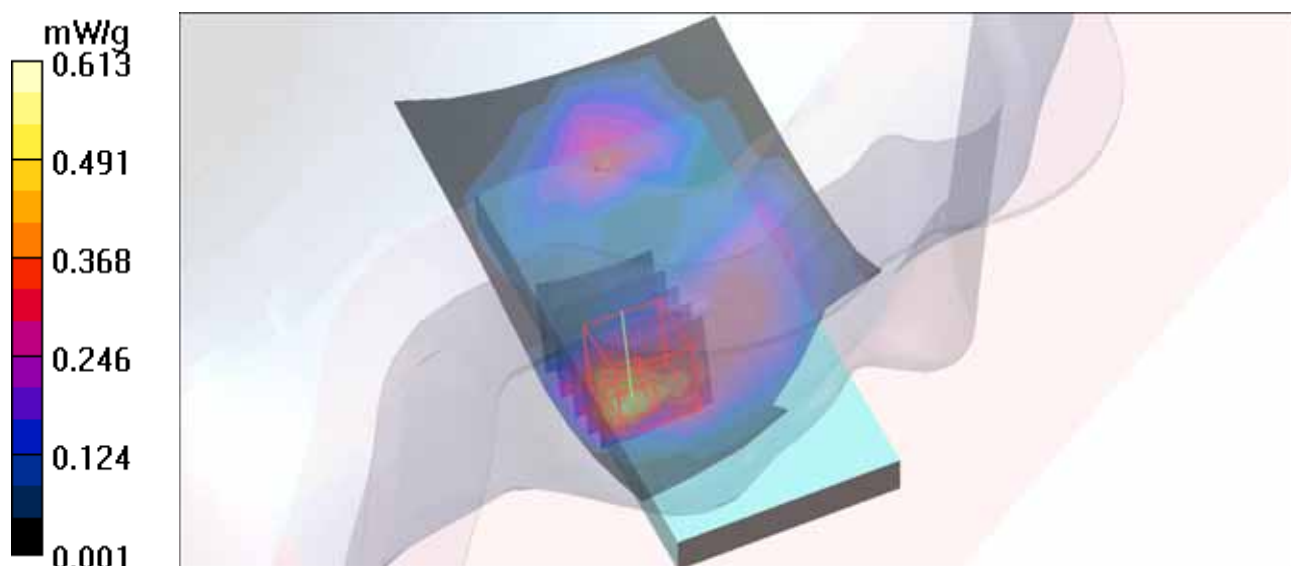
Touch position - Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 18.8 V/m; Power Drift = -0.002 dB

Peak SAR (extrapolated) = 0.890 W/kg

SAR(1 g) = 0.450 mW/g; SAR(10 g) = 0.252 mW/g

Maximum value of SAR (measured) = 0.613 mW/g



M28-Left Head-Tilt-PCS1900 TS1-Ch661 / HT 3.7VDC

Communication System: GPRS1900 ; Frequency: 1880 MHz ; Duty Cycle: 1:8.3

Medium: HSL1900 Medium parameters used: $f = 1880 \text{ MHz}$; $\sigma = 1.43 \text{ mho/m}$; $\epsilon_r = 41.11$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Left Section ; DUT test position : Tilt ; Modulation type: GMSK / UL 1 time slot

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(8.45, 8.45, 8.45); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Tilt position - Middle/Area Scan (7x11x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$
Maximum value of SAR (measured) = 0.392 mW/g

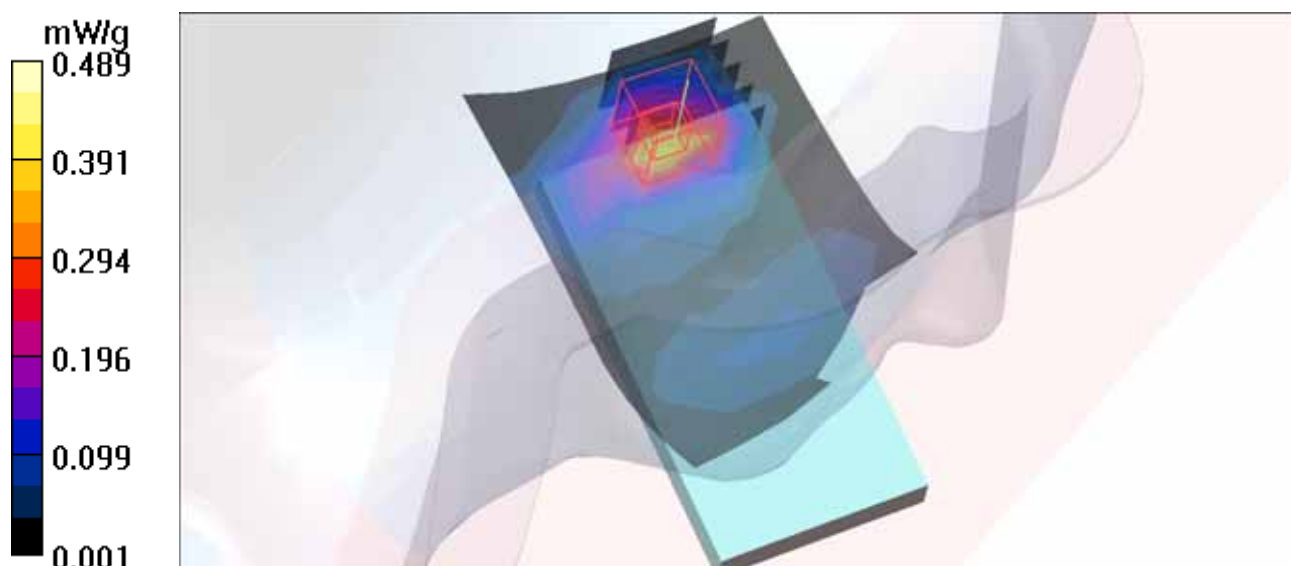
Tilt position - Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 19.2 V/m; Power Drift = 0.117 dB

Peak SAR (extrapolated) = 0.694 W/kg

SAR(1 g) = 0.328 mW/g; SAR(10 g) = 0.156 mW/g

Maximum value of SAR (measured) = 0.489 mW/g



M29-Right Head-Cheek-GPRS1900 TS2-Ch661 / HT 3.7VDC

Communication System: GPRS1900 ; Frequency: 1880 MHz ; Duty Cycle: 1:4

Medium: HSL1900 Medium parameters used: $f = 1880 \text{ MHz}$; $\sigma = 1.43 \text{ mho/m}$; $\epsilon_r = 41.11$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Right Section ; DUT test position : Cheek ; Modulation type: GMSK / UL 2 time slots

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(8.45, 8.45, 8.45); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Touch position - Middle/Area Scan (7x11x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

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

Touch position - Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 13.7 V/m ; Power Drift = 0.016 dB

Peak SAR (extrapolated) = 0.980 W/kg

SAR(1 g) = 0.623 mW/g ; SAR(10 g) = 0.377 mW/g

Maximum value of SAR (measured) = 0.789 mW/g

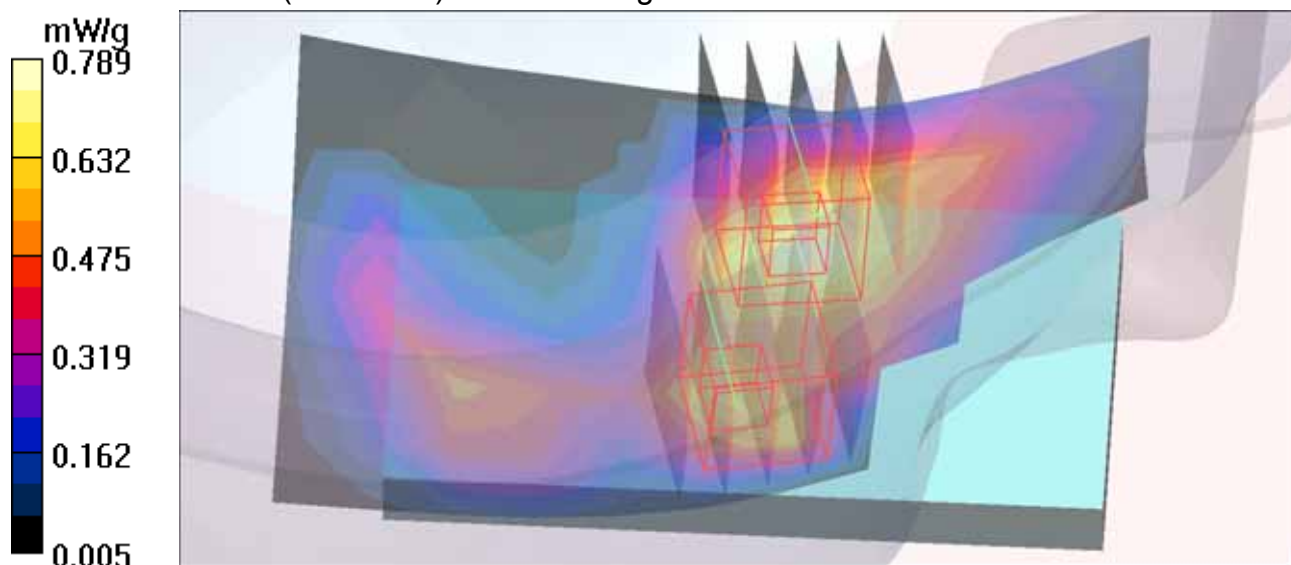
Touch position - Middle/Zoom Scan (5x5x7)/Cube 1: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 13.7 V/m ; Power Drift = 0.016 dB

Peak SAR (extrapolated) = 0.799 W/kg

SAR(1 g) = 0.490 mW/g ; SAR(10 g) = 0.284 mW/g

Maximum value of SAR (measured) = 0.637 mW/g



M30-Right Head-Tilt-GPRS1900 TS2-Ch661 / HT 3.7VDC

Communication System: GPRS1900 ; Frequency: 1880 MHz ; Duty Cycle: 1:4

Medium: HSL1900 Medium parameters used: $f = 1880 \text{ MHz}$; $\sigma = 1.43 \text{ mho/m}$; $\epsilon_r = 41.11$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Right Section ; DUT test position : Tilt ; Modulation type: GMSK / UL 2 time slots

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(8.45, 8.45, 8.45); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Tilt position - Middle/Area Scan (7x11x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 0.656 mW/g

Tilt position - Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 19.6 V/m ; Power Drift = -0.063 dB

Peak SAR (extrapolated) = 0.860 W/kg

SAR(1 g) = 0.420 mW/g ; SAR(10 g) = 0.233 mW/g

Maximum value of SAR (measured) = 0.628 mW/g

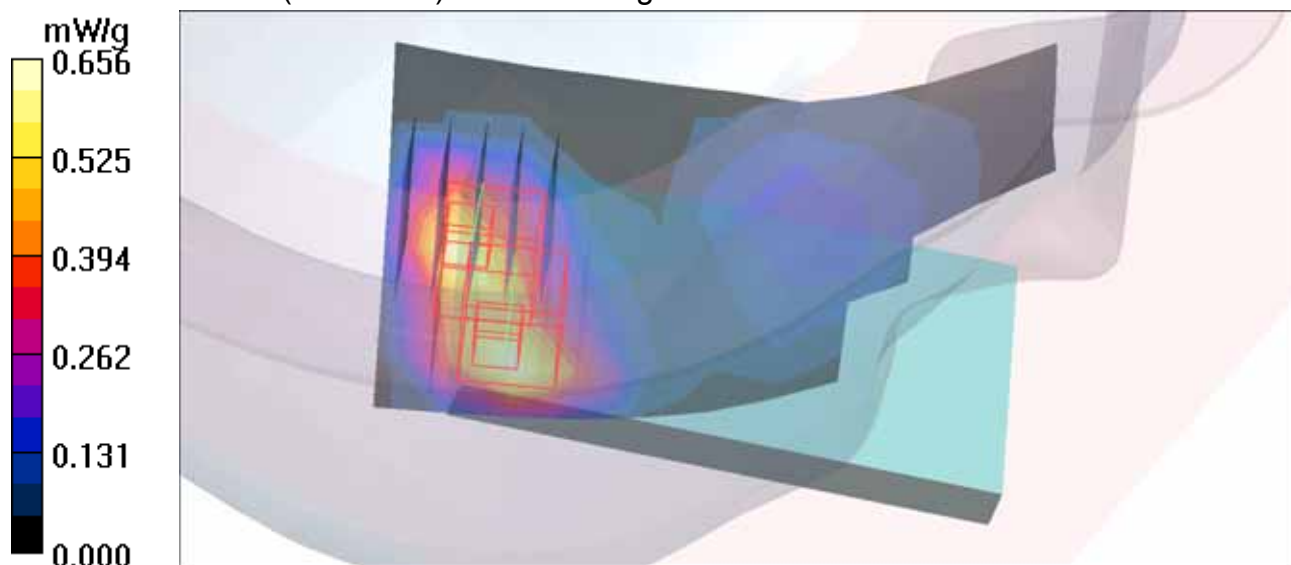
Tilt position - Middle/Zoom Scan (5x5x7)/Cube 1: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 19.6 V/m ; Power Drift = -0.063 dB

Peak SAR (extrapolated) = 0.825 W/kg

SAR(1 g) = 0.446 mW/g ; SAR(10 g) = 0.252 mW/g

Maximum value of SAR (measured) = 0.578 mW/g



M31-Left Head-Cheek-GPRS1900 TS2-Ch661 / HT 3.7VDC

Communication System: GPRS1900 ; Frequency: 1880 MHz ; Duty Cycle: 1:4

Medium: HSL1900 Medium parameters used: $f = 1880 \text{ MHz}$; $\sigma = 1.43 \text{ mho/m}$; $\epsilon_r = 41.11$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Left Section ; DUT test position : Cheek ; Modulation type: GMSK / UL 2 time slots

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(8.45, 8.45, 8.45); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Touch position - Middle/Area Scan (7x11x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$
Maximum value of SAR (measured) = 0.946 mW/g

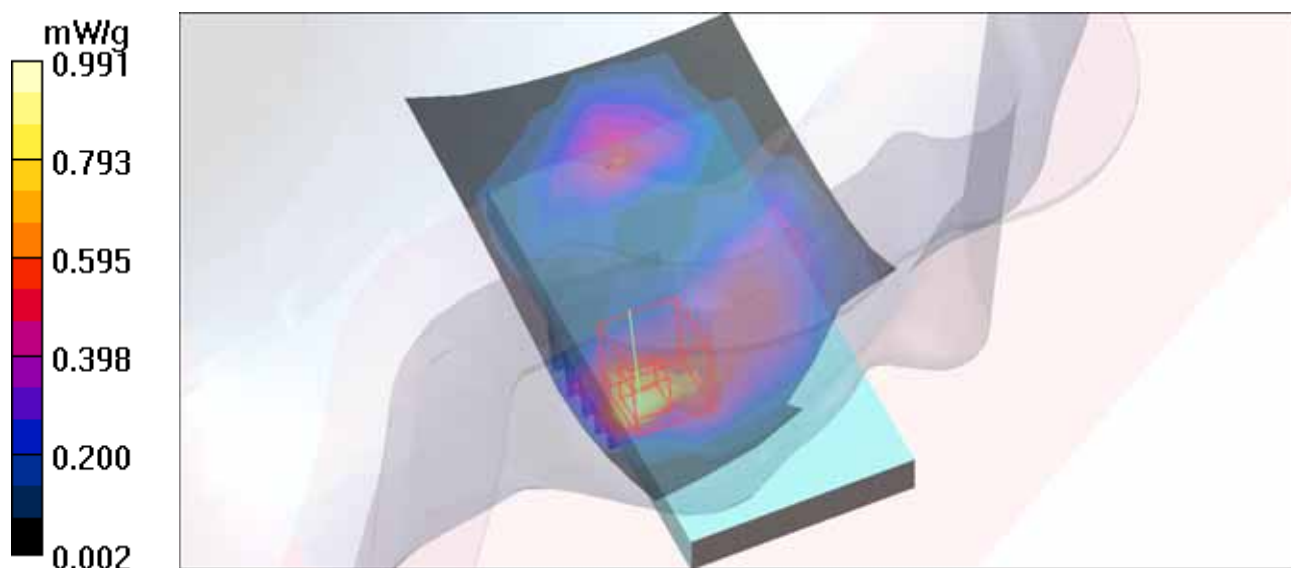
Touch position - Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

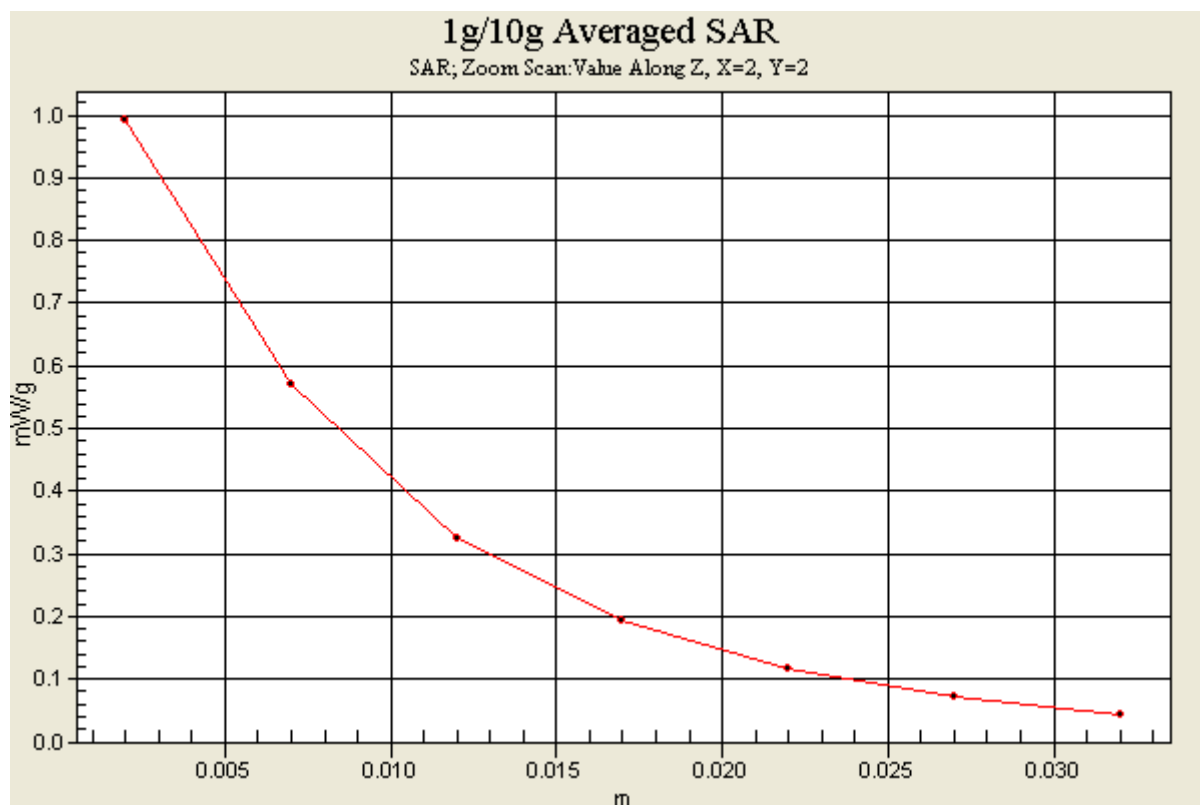
Reference Value = 24.2 V/m; Power Drift = -0.020 dB

Peak SAR (extrapolated) = 1.43 W/kg

SAR(1 g) = 0.702 mW/g; SAR(10 g) = 0.392 mW/g

Maximum value of SAR (measured) = 0.991 mW/g





M32-Left Head-Tilt-PCS1900 TS2-Ch661 / HT 3.7VDC

Communication System: GPRS1900 ; Frequency: 1880 MHz ; Duty Cycle: 1:4

Medium: HSL1900 Medium parameters used: $f = 1880 \text{ MHz}$; $\sigma = 1.43 \text{ mho/m}$; $\epsilon_r = 41.11$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Left Section ; DUT test position : Tilt ; Modulation type: GMSK / UL 2 time slots

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(8.45, 8.45, 8.45); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Tilt position - Middle/Area Scan (7x11x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$
Maximum value of SAR (measured) = 0.604 mW/g

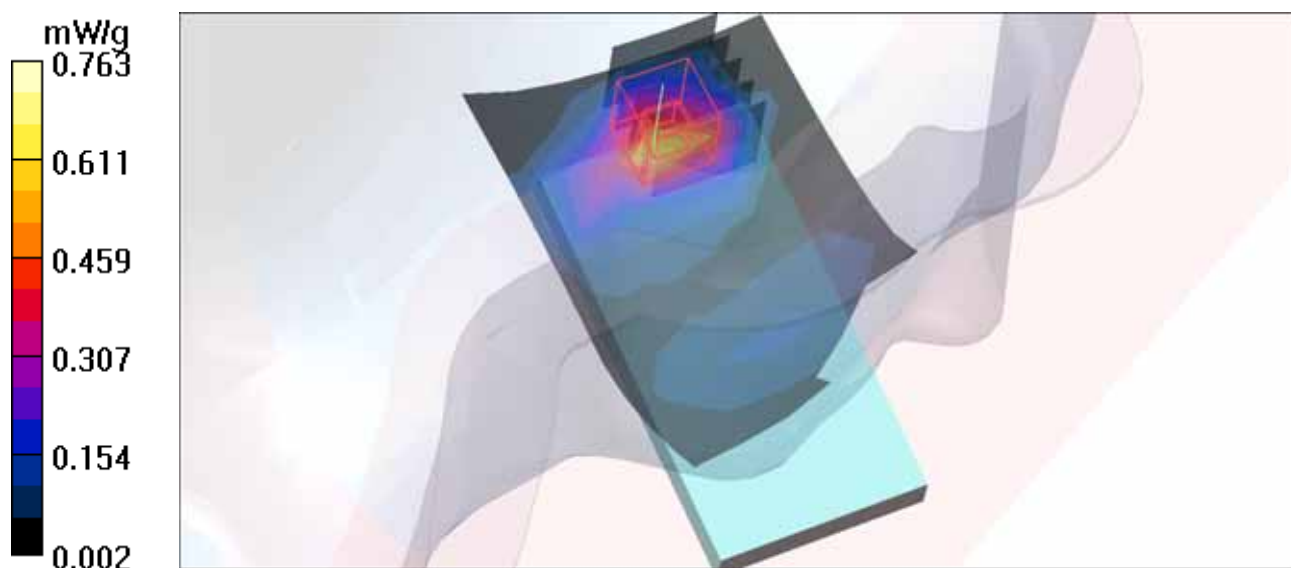
Tilt position - Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 24.5 V/m; Power Drift = -0.073 dB

Peak SAR (extrapolated) = 1.12 W/kg

SAR(1 g) = 0.513 mW/g; SAR(10 g) = 0.242 mW/g

Maximum value of SAR (measured) = 0.763 mW/g



SystemPerformanceCheck-D835V2-HSL835 MHz

DUT: Dipole 835 MHz ; Type: D835V2 ; Serial: D835V2 - SN:4d021 ; Test Frequency: 835 MHz

Communication System: CW ; Frequency: 835 MHz; Duty Cycle: 1:1; Modulation type: CW
 Medium: HSL835; Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 0.92 \text{ mho/m}$; $\epsilon_r = 42.49$; $\rho = 1000 \text{ kg/m}^3$;
 Liquid level : 150 mm
 Phantom section: Flat Section ; Separation distance : 15 mm (The feet point of the dipole to the Phantom)
 Air temp. : 22.3 degrees ; Liquid temp. : 21.4 degrees

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(10.21, 10.21, 10.21); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

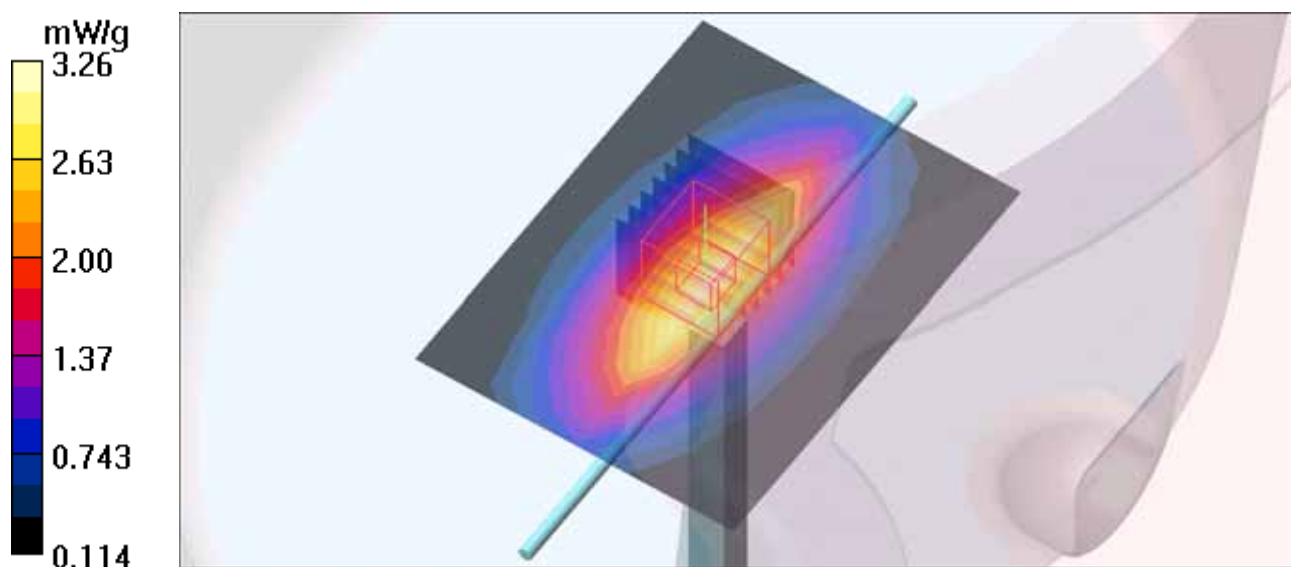
d=15mm, Pin=250mW/Area Scan (7x9x1): Measurement grid: dx=15mm, dy=15mm
 Maximum value of SAR (measured) = 3.26 mW/g

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

Reference Value = 56.3 V/m; Power Drift = -0.142 dB

Peak SAR (extrapolated) = 3.91 W/kg

SAR(1 g) = 2.52 mW/g; SAR(10 g) = 1.62 mW/g



SystemPerformanceCheck-D1900V2-HSL1900 MHz

DUT: Dipole 1900 MHz ; Type: D1900V2 ; Serial: D1900V2 - SN:5d022 ; Test Frequency: 1900 MHz

Communication System: CW ; Frequency: 1900 MHz; Duty Cycle: 1:1; Modulation type: CW
 Medium: HSL1900;Medium parameters used: $f = 1900 \text{ MHz}$; $\sigma = 1.45 \text{ mho/m}$; $\epsilon_r = 41.09$; $\rho = 1000 \text{ kg/m}^3$; Liquid level : 150 mm
 Phantom section: Flat Section ; Separation distance : 10 mm (The feet point of the dipole to the Phantom)Air temp. : 22.7 degrees ; Liquid temp. : 21.6 degrees

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(8.45, 8.45, 8.45); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

d=10mm, Pin=250mW/Area Scan (7x7x1): Measurement grid: dx=15mm, dy=15mm
 Maximum value of SAR (measured) = 13.8 mW/g

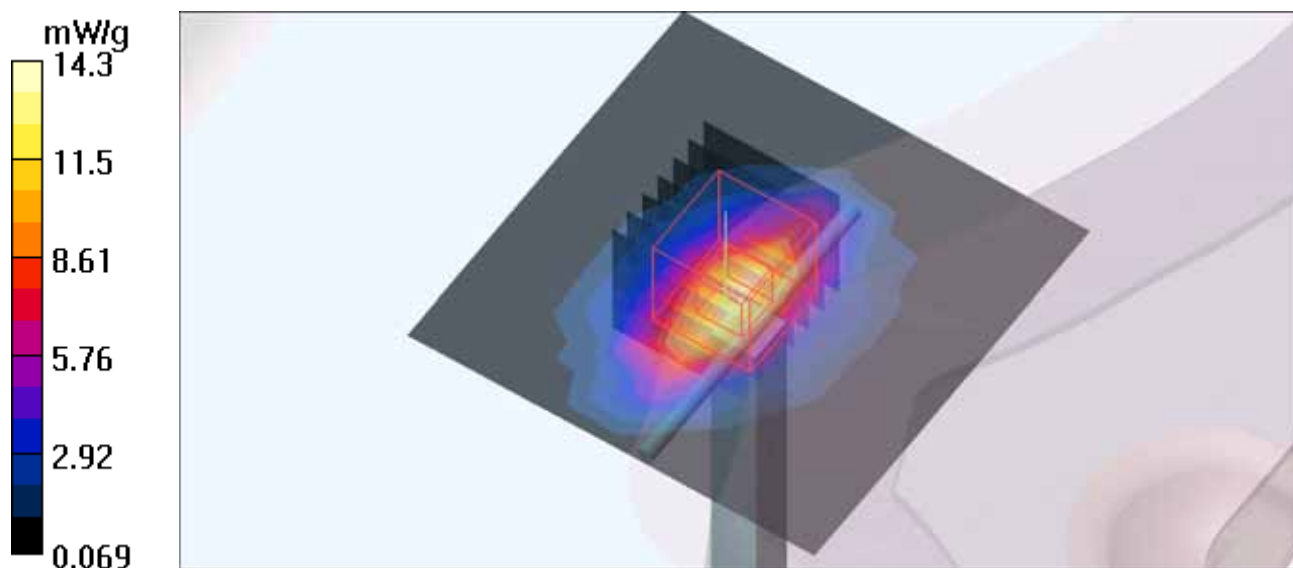
d=10mm, Pin=250mW/Zoom Scan(7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 96.6 V/m; Power Drift = -0.013 dB

Peak SAR (extrapolated) = 18.9 W/kg

SAR(1 g) = 9.75 mW/g; SAR(10 g) = 4.94 mW/g

Maximum value of SAR (measured) = 14.3 mW/g





香港商立德國際商品試驗有限公司桃園分公司

Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch

APPENDIX A: TEST DATA

Product Name: Smart Phone ; Model Number: PG86300

Liquid Level Photo

Tissue 1700MHz D=150mm



Date/Time: 2011/5/11 10:54:37

M01-Right Head-Cheek-WCDMA Band4-Ch1412 / Bat-HT Energy 3.8VDC

Communication System: WCDMA1700 ; Frequency: 1732.4 MHz ; Duty Cycle: 1:1

Medium: HSL1700 Medium parameters used : $f = 1732.4 \text{ MHz}$; $\sigma = 1.4 \text{ mho/m}$; $\epsilon_r = 41.65$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Right Section ; DUT test position : Cheek ; Modulation type: BPSK

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(9.03, 9.03, 9.03); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

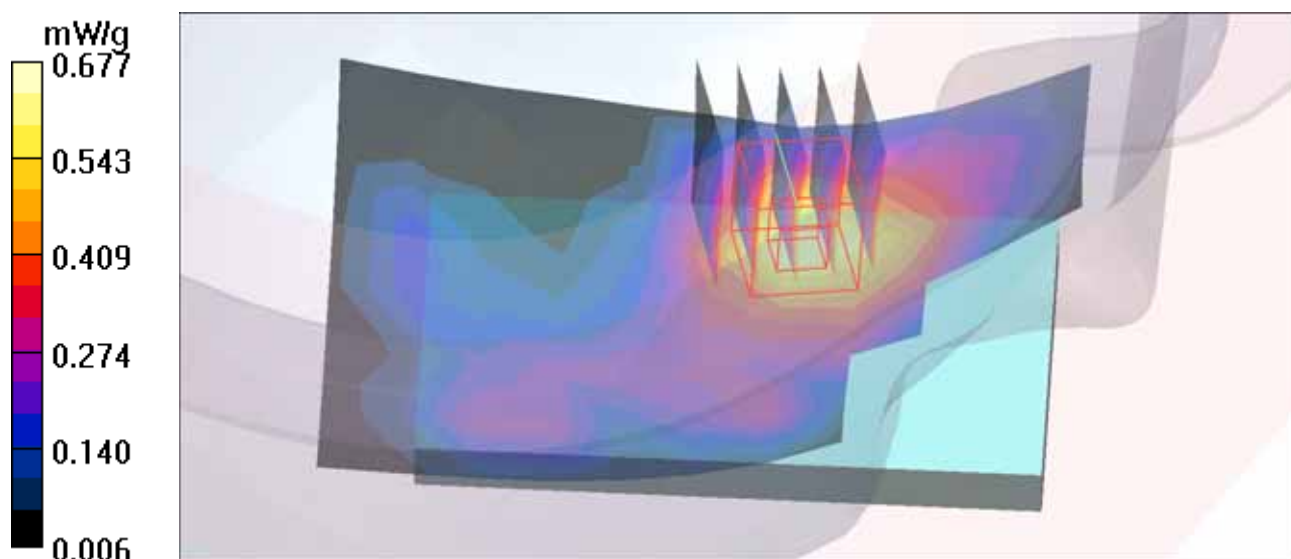
Touch position - Middle/Area Scan (7x11x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$
Maximum value of SAR (measured) = 0.636 mW/g**Touch position - Middle/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 11.3 V/m; Power Drift = 0.132 dB

Peak SAR (extrapolated) = 0.803 W/kg

SAR(1 g) = 0.552 mW/g; SAR(10 g) = 0.352 mW/g

Maximum value of SAR (measured) = 0.677 mW/g



Date/Time: 2011/5/11 11:24:05

M02-Right Head-Tilt-WCDMA Band4-Ch1412 / Bat-HT Energy 3.8VDC

Communication System: WCDMA1700 ; Frequency: 1732.4 MHz ; Duty Cycle: 1:1

Medium: HSL1700 Medium parameters used : $f = 1732.4$ MHz; $\sigma = 1.4$ mho/m; $\epsilon_r = 41.65$; $\rho = 1000$ kg/m³

Phantom section: Right Section ; DUT test position : Tilt ; Modulation type: BPSK

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(9.03, 9.03, 9.03); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Tilt position - Middle/Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.406 mW/g

Tilt position - Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 14.3 V/m; Power Drift = 0.182 dB

Peak SAR (extrapolated) = 0.574 W/kg

SAR(1 g) = 0.318 mW/g; SAR(10 g) = 0.178 mW/g

Maximum value of SAR (measured) = 0.432 mW/g

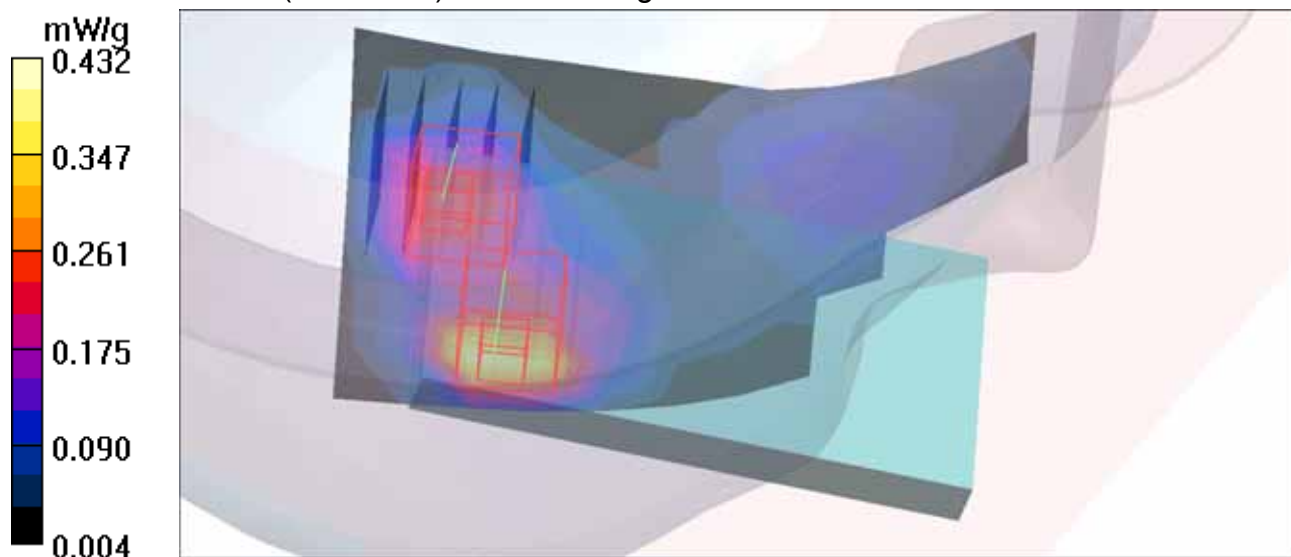
Tilt position - Middle/Zoom Scan (5x5x7)/Cube 1: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 14.3 V/m; Power Drift = 0.182 dB

Peak SAR (extrapolated) = 0.445 W/kg

SAR(1 g) = 0.240 mW/g; SAR(10 g) = 0.129 mW/g

Maximum value of SAR (measured) = 0.347 mW/g



M03-Left Head-Cheek-WCDMA Band4-Ch1412 / Bat-HT Energy 3.8VDC

Communication System: WCDMA1700 ; Frequency: 1732.4 MHz ; Duty Cycle: 1:1

Medium: HSL1700 Medium parameters used : $f = 1732.4$ MHz; $\sigma = 1.4$ mho/m; $\epsilon_r = 41.65$; $\rho = 1000$ kg/m³

Phantom section: Left Section ; DUT test position : Cheek ; Modulation type: BPSK

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(9.03, 9.03, 9.03); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Touch position - Middle/Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.466 mW/g

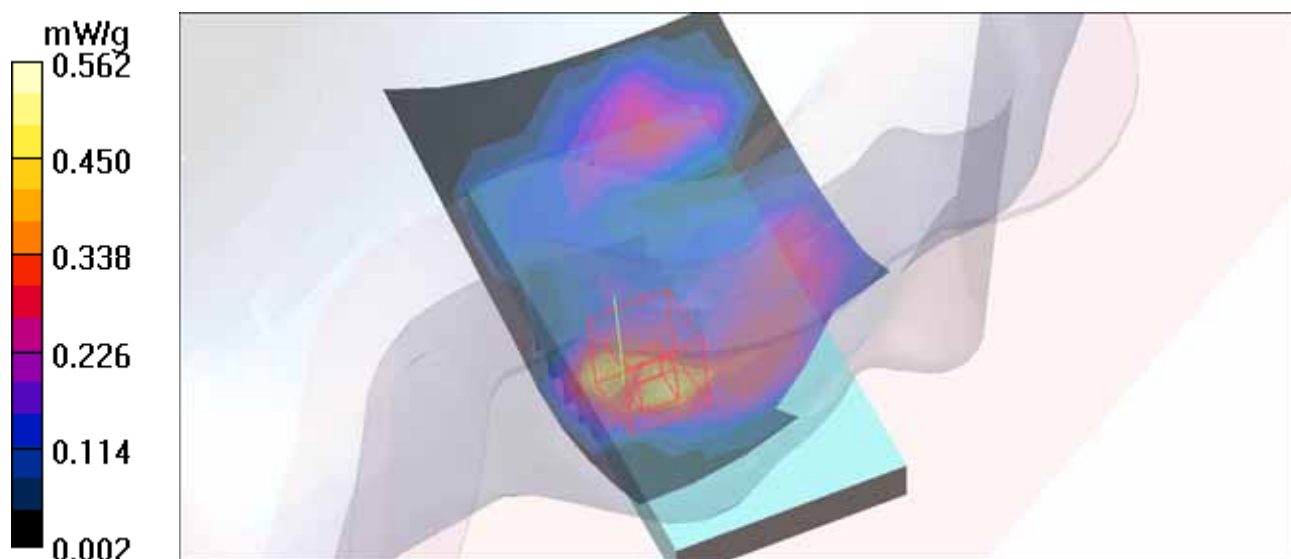
Touch position - Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 14.7 V/m; Power Drift = 0.146 dB

Peak SAR (extrapolated) = 0.778 W/kg

SAR(1 g) = 0.388 mW/g; SAR(10 g) = 0.219 mW/g

Maximum value of SAR (measured) = 0.562 mW/g



Date/Time: 2011/5/11 13:05:00

M04-Left Head-Tilt-WCDMA Band4-Ch1412 / Bat-HT Energy 3.8VDC

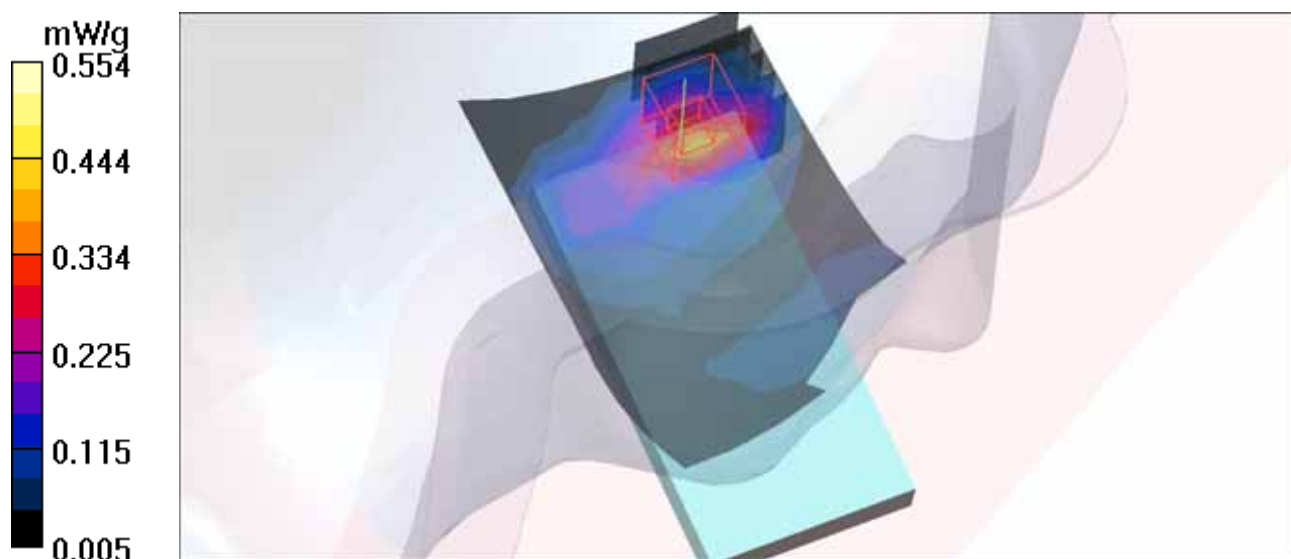
Communication System: WCDMA1700 ; Frequency: 1732.4 MHz ; Duty Cycle: 1:1
Medium: HSL1700 Medium parameters used : $f = 1732.4$ MHz; $\sigma = 1.4$ mho/m; $\epsilon_r = 41.65$; $\rho = 1000$ kg/m³
Phantom section: Left Section ; DUT test position : Tilt ; Modulation type: BPSK

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(9.03, 9.03, 9.03); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Tilt position - Middle/Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.404 mW/g

Tilt position - Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 16.8 V/m; Power Drift = -0.071 dB
Peak SAR (extrapolated) = 0.732 W/kg
SAR(1 g) = 0.369 mW/g; SAR(10 g) = 0.181 mW/g
Maximum value of SAR (measured) = 0.554 mW/g



M05-Right Head-Cheek-WCDMA Band4-Ch1412 / Bat-HT Energy 3.7VDC

Communication System: WCDMA1700 ; Frequency: 1732.4 MHz ; Duty Cycle: 1:1

Medium: HSL1700 Medium parameters used : $f = 1732.4 \text{ MHz}$; $\sigma = 1.4 \text{ mho/m}$; $\epsilon_r = 41.65$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Right Section ; DUT test position : Cheek ; Modulation type: BPSK

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(9.03, 9.03, 9.03); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Touch position - Middle/Area Scan (7x11x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$
Maximum value of SAR (measured) = 0.653 mW/g

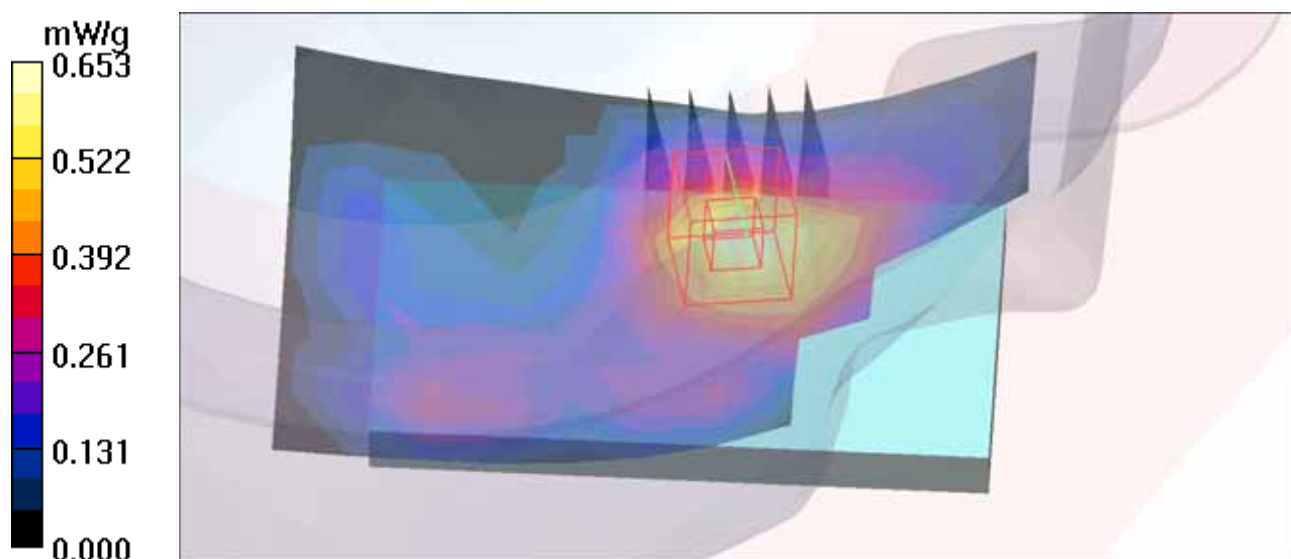
Touch position - Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 11.3 V/m; Power Drift = 0.115 dB

Peak SAR (extrapolated) = 0.798 W/kg

SAR(1 g) = 0.527 mW/g; SAR(10 g) = 0.328 mW/g

Maximum value of SAR (measured) = 0.648 mW/g



M06-Right Head-Tilt-WCDMA Band4-Ch1412 / Bat-HT Energy 3.7VDC

Communication System: WCDMA1700 ; Frequency: 1732.4 MHz ; Duty Cycle: 1:1

Medium: HSL1700 Medium parameters used : $f = 1732.4$ MHz; $\sigma = 1.4$ mho/m; $\epsilon_r = 41.65$; $\rho = 1000$ kg/m³

Phantom section: Right Section ; DUT test position : Tilt ; Modulation type: BPSK

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(9.03, 9.03, 9.03); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Tilt position - Middle/Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.419 mW/g

Tilt position - Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 13.9 V/m; Power Drift = 0.147 dB

Peak SAR (extrapolated) = 0.582 W/kg

SAR(1 g) = 0.314 mW/g; SAR(10 g) = 0.173 mW/g

Maximum value of SAR (measured) = 0.413 mW/g

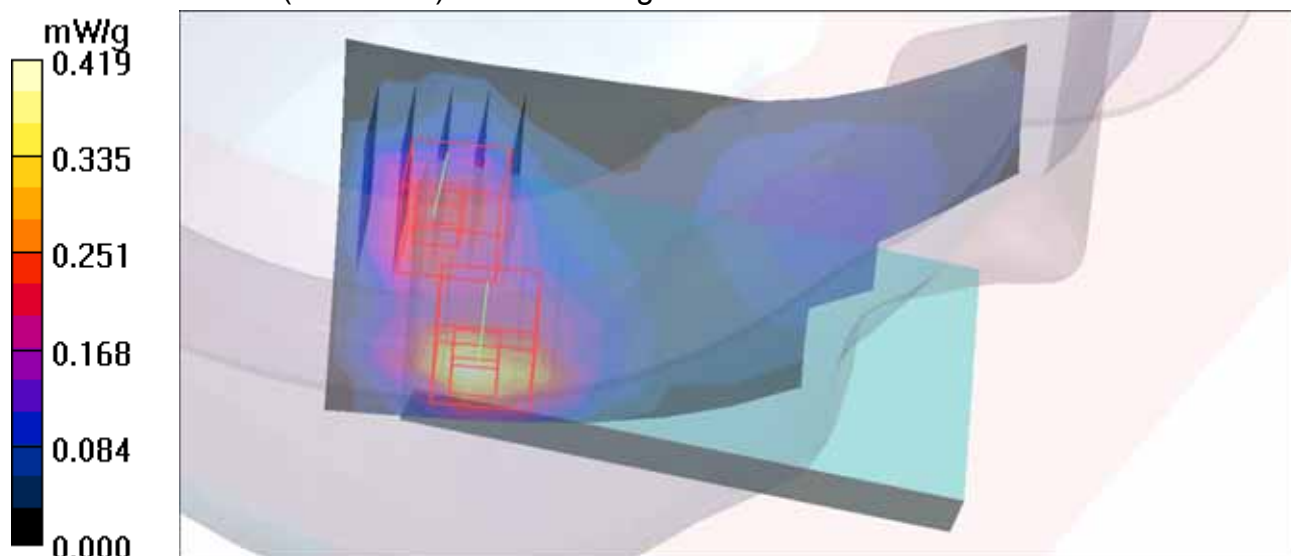
Tilt position - Middle/Zoom Scan (5x5x7)/Cube 1: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 13.9 V/m; Power Drift = 0.147 dB

Peak SAR (extrapolated) = 0.418 W/kg

SAR(1 g) = 0.222 mW/g; SAR(10 g) = 0.119 mW/g

Maximum value of SAR (measured) = 0.324 mW/g



Date/Time: 2011/5/11 14:01:08

M07-Left Head-Cheek-WCDMA Band4-Ch1412 / Bat-HT Energy 3.7VDC

Communication System: WCDMA1700 ; Frequency: 1732.4 MHz ; Duty Cycle: 1:1

Medium: HSL1700 Medium parameters used : $f = 1732.4$ MHz; $\sigma = 1.4$ mho/m; $\epsilon_r = 41.65$; $\rho = 1000$ kg/m³

Phantom section: Left Section ; DUT test position : Cheek ; Modulation type: BPSK

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(9.03, 9.03, 9.03); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

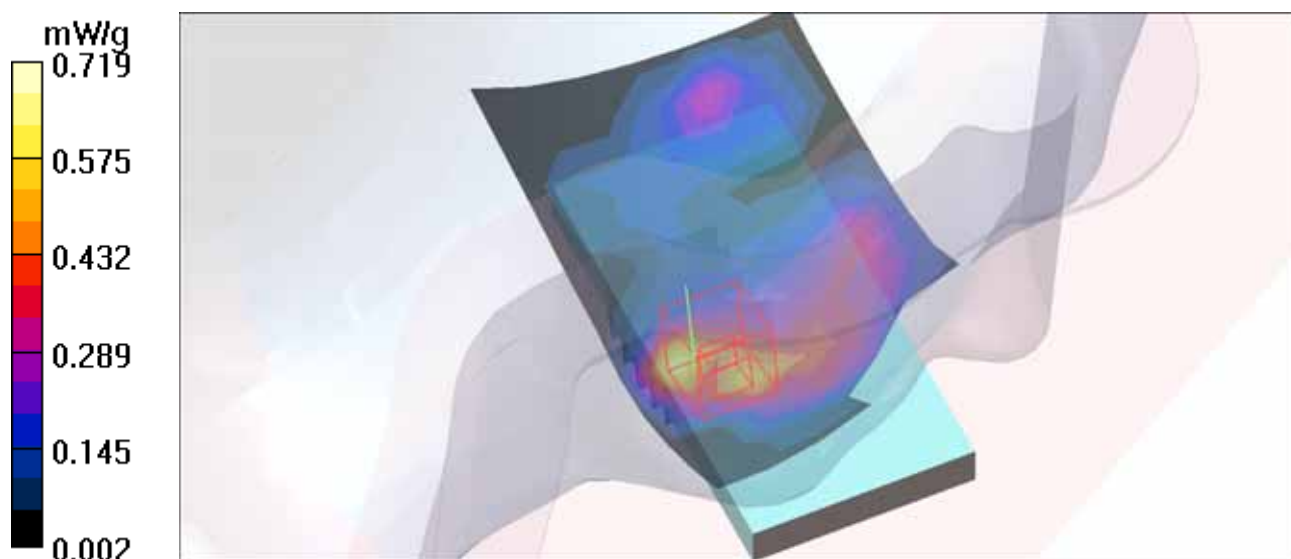
Touch position - Middle/Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.658 mW/g**Touch position - Middle/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 13.2 V/m; Power Drift = 0.197 dB

Peak SAR (extrapolated) = 0.981 W/kg

SAR(1 g) = 0.507 mW/g; SAR(10 g) = 0.292 mW/g

Maximum value of SAR (measured) = 0.719 mW/g



M08-Left Head-Tilt-WCDMA Band4-Ch1412 / Bat-HT Energy 3.7VDC

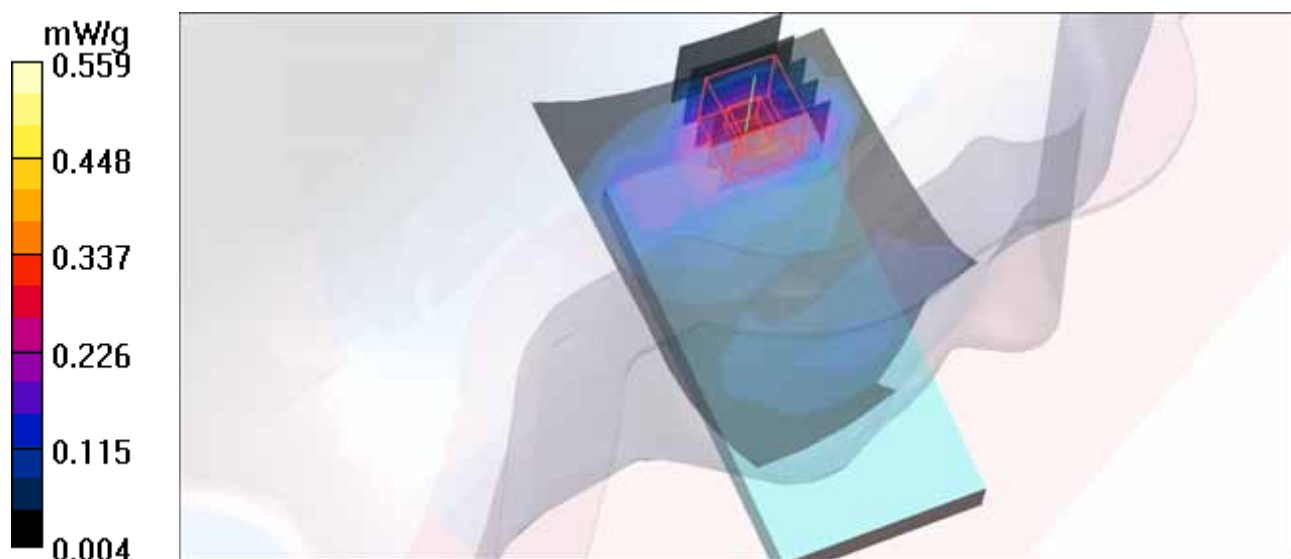
Communication System: WCDMA1700 ; Frequency: 1732.4 MHz ; Duty Cycle: 1:1
Medium: HSL1700 Medium parameters used : $f = 1732.4$ MHz; $\sigma = 1.4$ mho/m; $\epsilon_r = 41.65$; $\rho = 1000$ kg/m³
Phantom section: Left Section ; DUT test position : Tilt ; Modulation type: BPSK

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(9.03, 9.03, 9.03); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Tilt position - Middle/Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.327 mW/g

Tilt position - Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 16.9 V/m; Power Drift = -0.017 dB
Peak SAR (extrapolated) = 0.719 W/kg
SAR(1 g) = 0.354 mW/g; SAR(10 g) = 0.173 mW/g
Maximum value of SAR (measured) = 0.559 mW/g



M09-Bottom-WCDMA Band 4-Ch1312 / Bat-HT Energy 3.8VDC

Communication System: WCDMA1700 ; Frequency: 1712.4 MHz ; Duty Cycle: 1:1 ; Modulation type: BPSK

Medium: MSL 1700 Medium parameters used : $f = 1712.4$ MHz; $\sigma = 1.49$ mho/m; $\epsilon_r = 55.24$; $\rho = 1000$ kg/m³

Phantom section: Flat Section ; Separation distance : 10 mm (The bottom side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(8.77, 8.77, 8.77); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body Position - Low /Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.924 mW/g

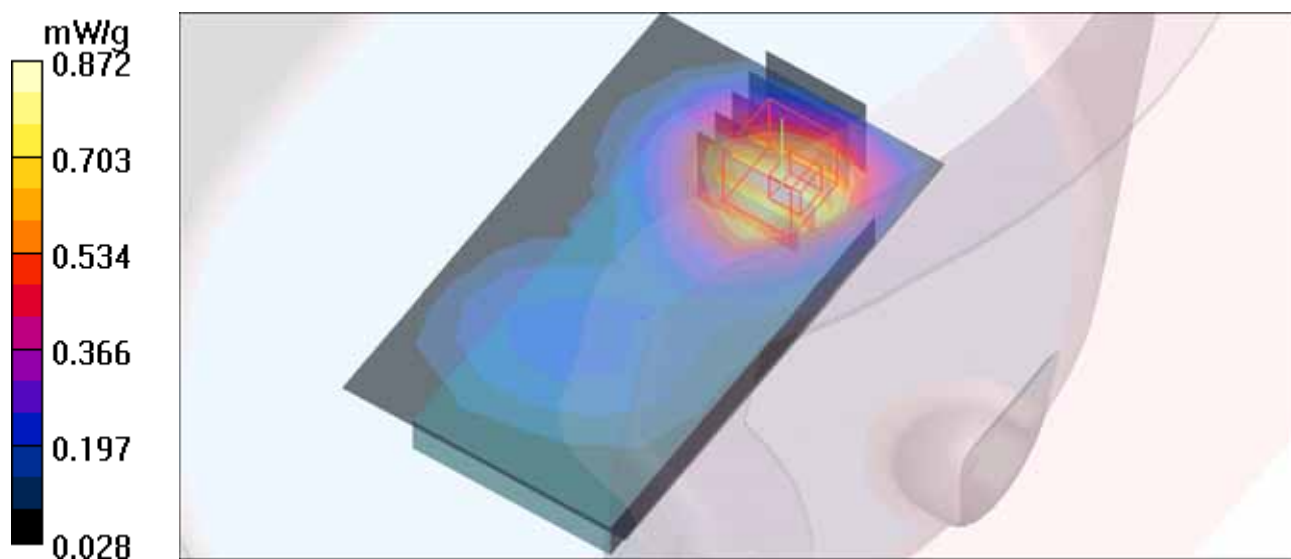
Body Position - Low /Zoom Scan(5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 11.0 V/m; Power Drift = -0.035 dB

Peak SAR (extrapolated) = 1.10 W/kg

SAR(1 g) = 0.690 mW/g; SAR(10 g) = 0.424 mW/g

Maximum value of SAR (measured) = 0.872 mW/g



M09-Bottom-WCDMA Band 4-Ch1412 / Bat-HT Energy 3.8VDC

Communication System: WCDMA1700 ; Frequency: 1732.4 MHz ; Duty Cycle: 1:1 ; Modulation type: BPSK

Medium: MSL 1700 Medium parameters used : $f = 1732.4$ MHz; $\sigma = 1.51$ mho/m; $\epsilon_r = 55.13$; $\rho = 1000$ kg/m³

Phantom section: Flat Section ; Separation distance : 10 mm (The bottom side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(8.77, 8.77, 8.77); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body Position - Mid/Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm

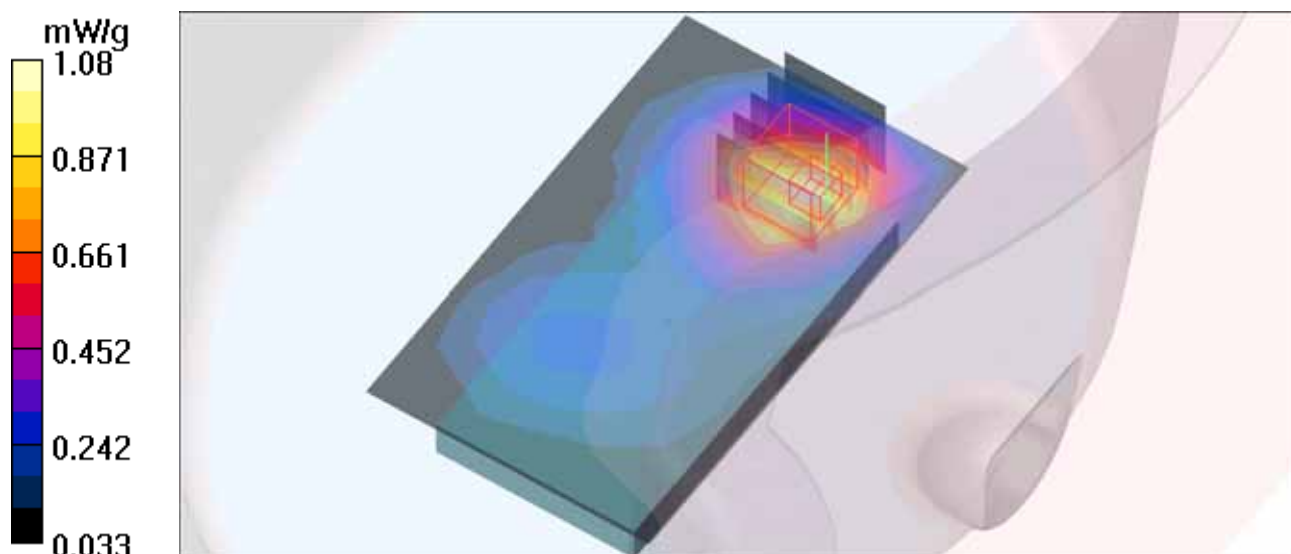
Maximum value of SAR (measured) = 1.08 mW/g

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

Reference Value = 11.6 V/m; Power Drift = 0.151 dB

Peak SAR (extrapolated) = 1.34 W/kg

SAR(1 g) = 0.839 mW/g; SAR(10 g) = 0.518 mW/g



M09-Bottom-WCDMA Band 4-Ch1513 / Bat-HT Energy 3.8VDC

Communication System: WCDMA1700 ; Frequency: 1752.6 MHz ; Duty Cycle: 1:1 ; Modulation type: BPSK

Medium: MSL 1700 Medium parameters used : $f = 1752.6$ MHz; $\sigma = 1.52$ mho/m; $\epsilon_r = 54.93$; $\rho = 1000$ kg/m³

Phantom section: Flat Section ; Separation distance : 10 mm (The bottom side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(8.77, 8.77, 8.77); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body Position - High /Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm

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

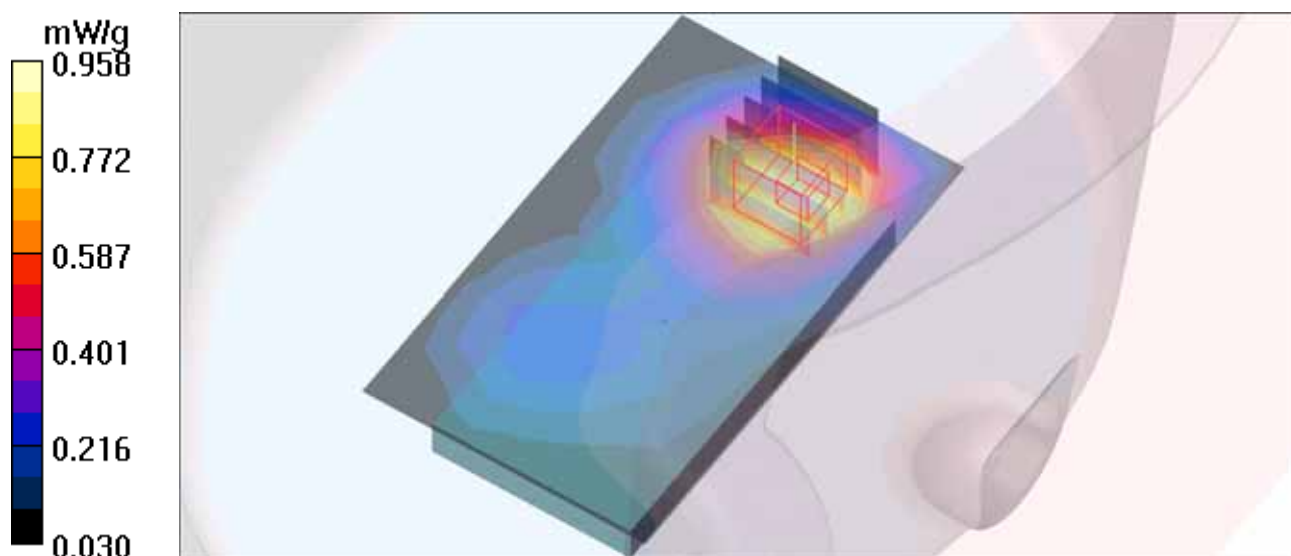
Body Position - High /Zoom Scan(5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 12.8 V/m; Power Drift = -0.005 dB

Peak SAR (extrapolated) = 1.19 W/kg

SAR(1 g) = 0.756 mW/g; SAR(10 g) = 0.474 mW/g

Maximum value of SAR (measured) = 0.958 mW/g



M10-Bottom-WCDMA Band 4-Ch1312 / Bat-HT Energy 3.7VDC

Communication System: WCDMA1700 ; Frequency: 1712.4 MHz ; Duty Cycle: 1:1 ; Modulation type: BPSK

Medium: MSL 1700 Medium parameters used : $f = 1712.4$ MHz; $\sigma = 1.49$ mho/m; $\epsilon_r = 55.24$; $\rho = 1000$ kg/m³

Phantom section: Flat Section ; Separation distance : 10 mm (The bottom side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(8.77, 8.77, 8.77); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body Position - Low /Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm

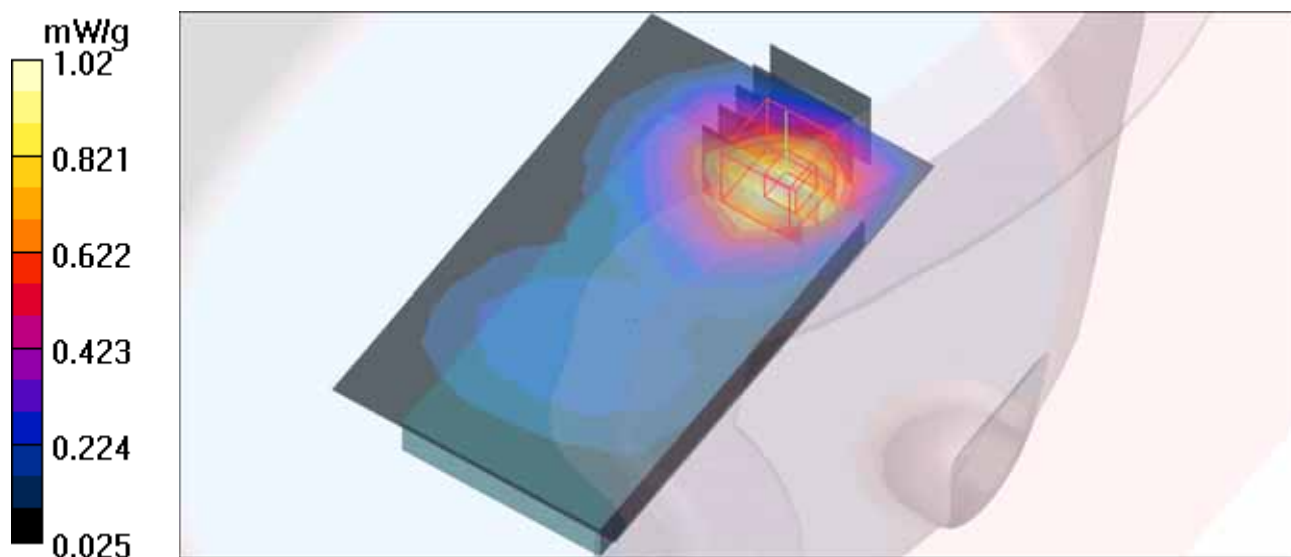
Maximum value of SAR (measured) = 1.02 mW/g

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

Reference Value = 10.8 V/m; Power Drift = -0.141 dB

Peak SAR (extrapolated) = 1.30 W/kg

SAR(1 g) = 0.795 mW/g; SAR(10 g) = 0.474 mW/g



M10-Bottom-WCDMA Band 4-Ch1412 / Bat-HT Energy 3.7VDC

Communication System: WCDMA1700 ; Frequency: 1732.4 MHz ; Duty Cycle: 1:1 ; Modulation type: BPSK

Medium: MSL 1700 Medium parameters used : $f = 1732.4$ MHz; $\sigma = 1.51$ mho/m; $\epsilon_r = 55.13$; $\rho = 1000$ kg/m³

Phantom section: Flat Section ; Separation distance : 10 mm (The bottom side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(8.77, 8.77, 8.77); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body Position - Mid/Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 1.15 mW/g

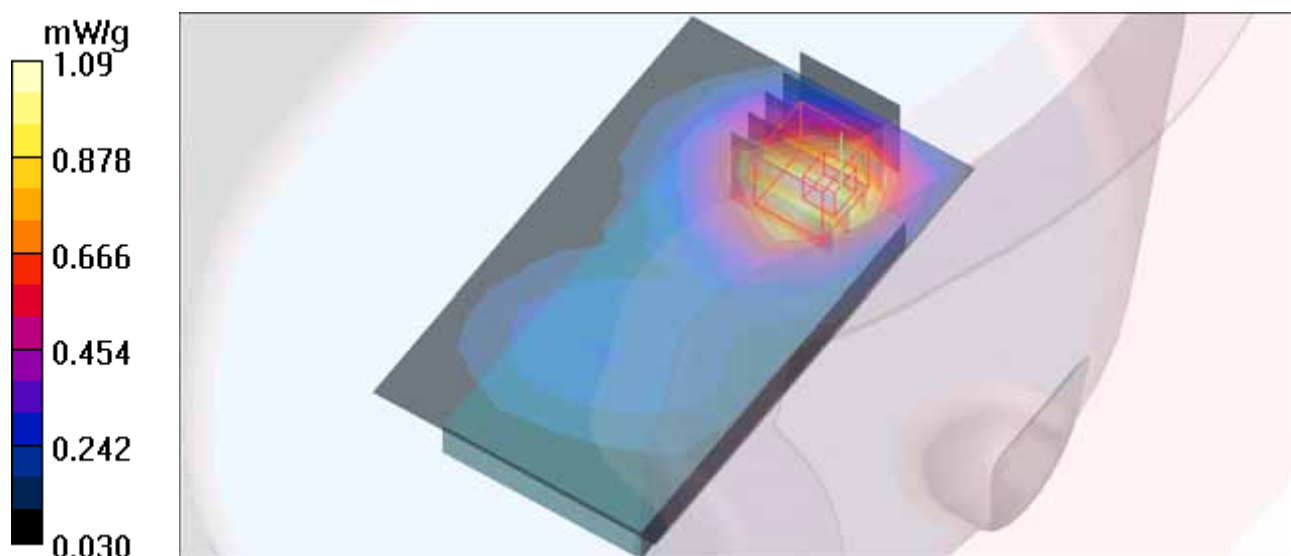
Body Position - Mid/Zoom Scan(5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 11.2 V/m; Power Drift = 0.072 dB

Peak SAR (extrapolated) = 1.39 W/kg

SAR(1 g) = 0.856 mW/g; SAR(10 g) = 0.518 mW/g

Maximum value of SAR (measured) = 1.09 mW/g



M10-Bottom-WCDMA Band 4-Ch1513 / Bat-HT Energy 3.7VDC

Communication System: WCDMA1700 ; Frequency: 1752.6 MHz ; Duty Cycle: 1:1 ; Modulation type: BPSK

Medium: MSL 1700 Medium parameters used : $f = 1752.6$ MHz; $\sigma = 1.52$ mho/m; $\epsilon_r = 54.93$; $\rho = 1000$ kg/m³

Phantom section: Flat Section ; Separation distance : 10 mm (The bottom side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(8.77, 8.77, 8.77); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body Position - High /Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 1.03 mW/g

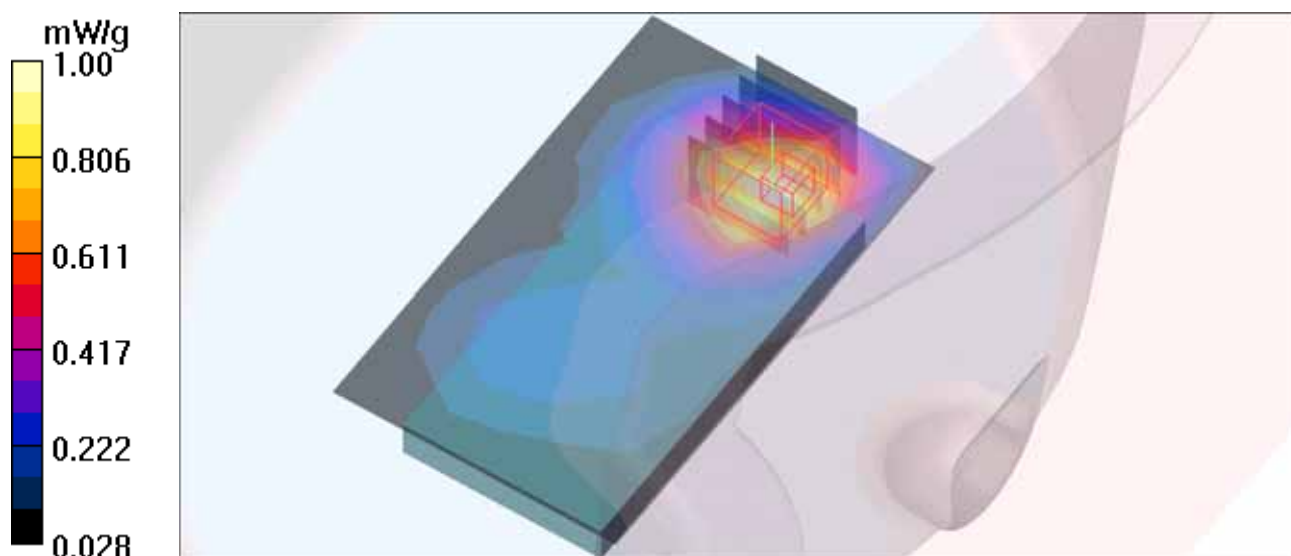
Body Position - High /Zoom Scan(5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 10.8 V/m; Power Drift = -0.146 dB

Peak SAR (extrapolated) = 1.29 W/kg

SAR(1 g) = 0.790 mW/g; SAR(10 g) = 0.477 mW/g

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



M11-Front-WCDMA Band 4-Ch1412 / Bat-HT Energy 3.8VDC

Communication System: WCDMA1700 ; Frequency: 1732.4 MHz ; Duty Cycle: 1:1 ; Modulation type: BPSK

Medium: MSL 1700 Medium parameters used : $f = 1732.4 \text{ MHz}$; $\sigma = 1.51 \text{ mho/m}$; $\epsilon_r = 55.13$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section ; Separation distance : 10 mm (The front side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(8.77, 8.77, 8.77); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body Position - Mid/Area Scan (7x11x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 0.669 mW/g

Body Position - Mid/Zoom Scan(5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 8.61 V/m; Power Drift = 0.169 dB

Peak SAR (extrapolated) = 0.898 W/kg

SAR(1 g) = 0.543 mW/g; SAR(10 g) = 0.341 mW/g

Maximum value of SAR (measured) = 0.702 mW/g

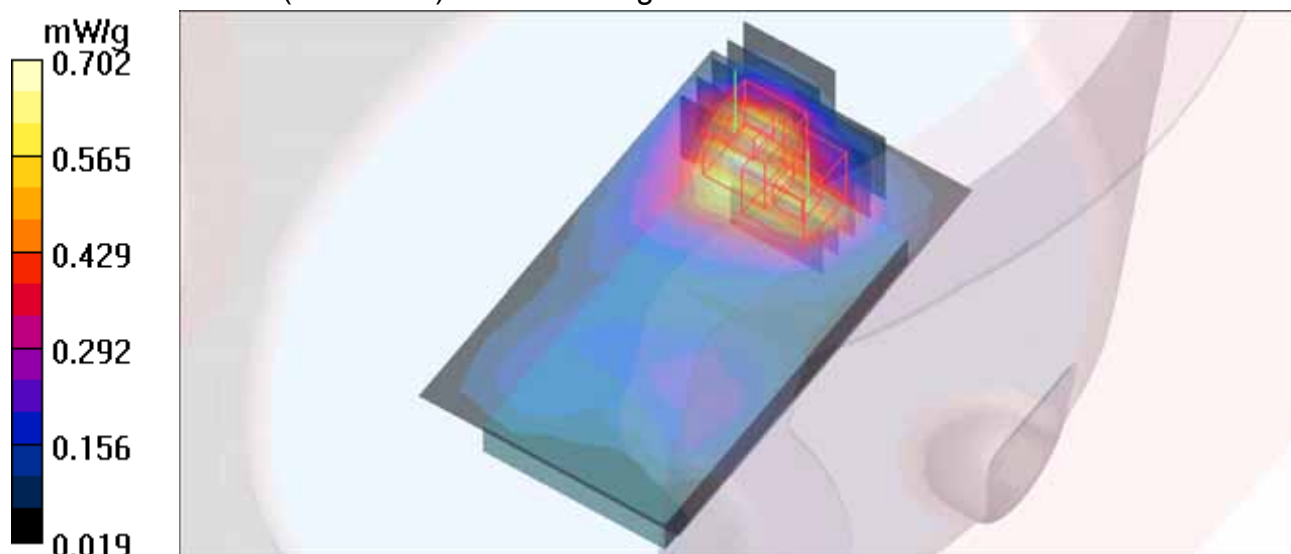
Body Position - Mid/Zoom Scan(5x5x7)/Cube 1: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 8.61 V/m; Power Drift = 0.169 dB

Peak SAR (extrapolated) = 0.732 W/kg

SAR(1 g) = 0.505 mW/g; SAR(10 g) = 0.324 mW/g

Maximum value of SAR (measured) = 0.609 mW/g



M12-Front-WCDMA Band 4-Ch1412 / Bat-HT Energy 3.7VDC

Communication System: WCDMA1700 ; Frequency: 1732.4 MHz ; Duty Cycle: 1:1 ; Modulation type: BPSK

Medium: MSL 1700 Medium parameters used : $f = 1732.4 \text{ MHz}$; $\sigma = 1.51 \text{ mho/m}$; $\epsilon_r = 55.13$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section ; Separation distance : 10 mm (The front side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(8.77, 8.77, 8.77); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body Position - Mid/Area Scan (7x11x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 0.658 mW/g

Body Position - Mid/Zoom Scan(5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 8.74 V/m; Power Drift = 0.032 dB

Peak SAR (extrapolated) = 0.882 W/kg

SAR(1 g) = 0.536 mW/g; SAR(10 g) = 0.336 mW/g

Maximum value of SAR (measured) = 0.687 mW/g

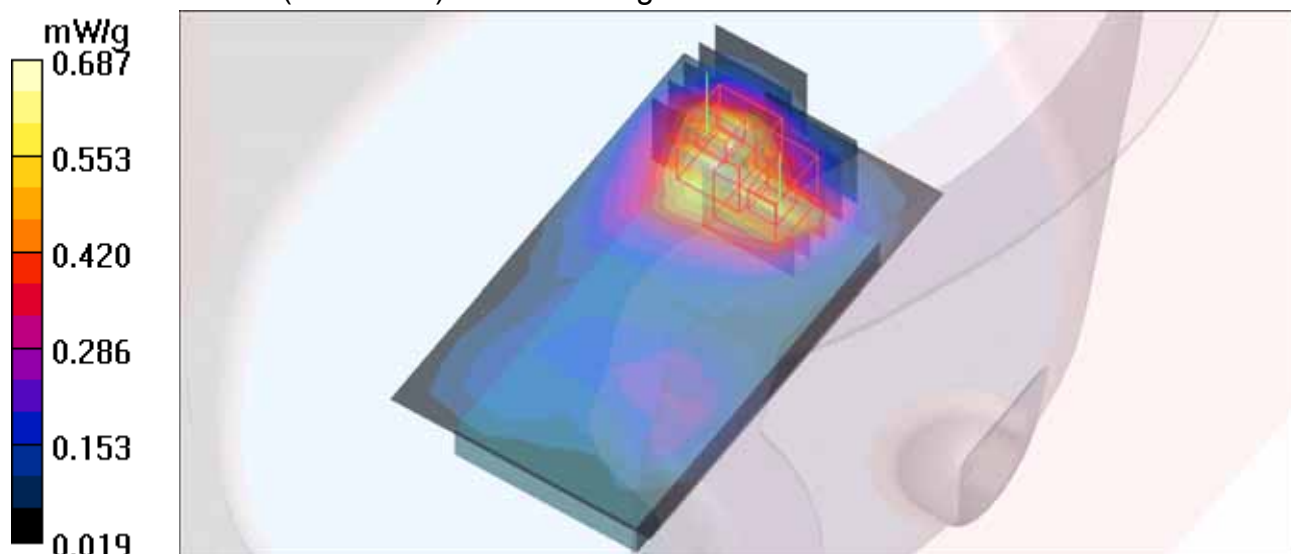
Body Position - Mid/Zoom Scan(5x5x7)/Cube 1: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 8.74 V/m; Power Drift = 0.032 dB

Peak SAR (extrapolated) = 0.731 W/kg

SAR(1 g) = 0.505 mW/g; SAR(10 g) = 0.324 mW/g

Maximum value of SAR (measured) = 0.609 mW/g



Date/Time: 2011/5/12 16:22:27

M13-Right edge-WCDMA Band 4-Ch1412 / Bat-HT Energy 3.8VDC

Communication System: WCDMA1700 ; Frequency: 1732.4 MHz ; Duty Cycle: 1:1 ; Modulation type: BPSK

Medium: MSL 1700 Medium parameters used : $f = 1732.4 \text{ MHz}$; $\sigma = 1.51 \text{ mho/m}$; $\epsilon_r = 55.13$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section ; Separation distance : 10 mm (The right edge side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(8.77, 8.77, 8.77); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body Position - Mid/Area Scan (5x11x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 0.355 mW/g

Body Position - Mid/Zoom Scan(5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 10.3 V/m; Power Drift = -0.070 dB

Peak SAR (extrapolated) = 0.480 W/kg

SAR(1 g) = 0.280 mW/g; SAR(10 g) = 0.153 mW/g

Maximum value of SAR (measured) = 0.387 mW/g

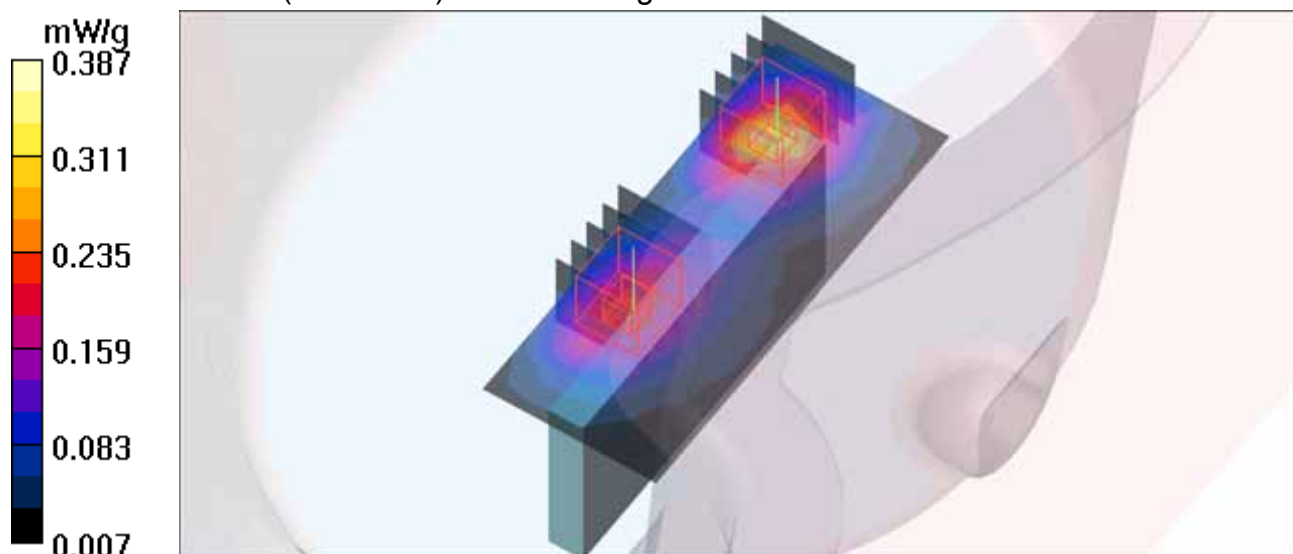
Body Position - Mid/Zoom Scan(5x5x7)/Cube 1: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 10.3 V/m; Power Drift = -0.070 dB

Peak SAR (extrapolated) = 0.289 W/kg

SAR(1 g) = 0.181 mW/g; SAR(10 g) = 0.110 mW/g

Maximum value of SAR (measured) = 0.238 mW/g



M14-Right edge-WCDMA Band4-Ch1412 / Bat-HT Energy 3.7VDC

Communication System: WCDMA1700 ; Frequency: 1732.4 MHz ; Duty Cycle: 1:1 ; Modulation type: BPSK

Medium: MSL 1700 Medium parameters used : $f = 1732.4 \text{ MHz}$; $\sigma = 1.51 \text{ mho/m}$; $\epsilon_r = 55.13$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section ; Separation distance : 10 mm (The right edge side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(8.77, 8.77, 8.77); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body Position - Mid/Area Scan (5x11x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 0.338 mW/g

Body Position - Mid/Zoom Scan(5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 9.52 V/m; Power Drift = -0.099 dB

Peak SAR (extrapolated) = 0.423 W/kg

SAR(1 g) = 0.246 mW/g; SAR(10 g) = 0.136 mW/g

Maximum value of SAR (measured) = 0.342 mW/g

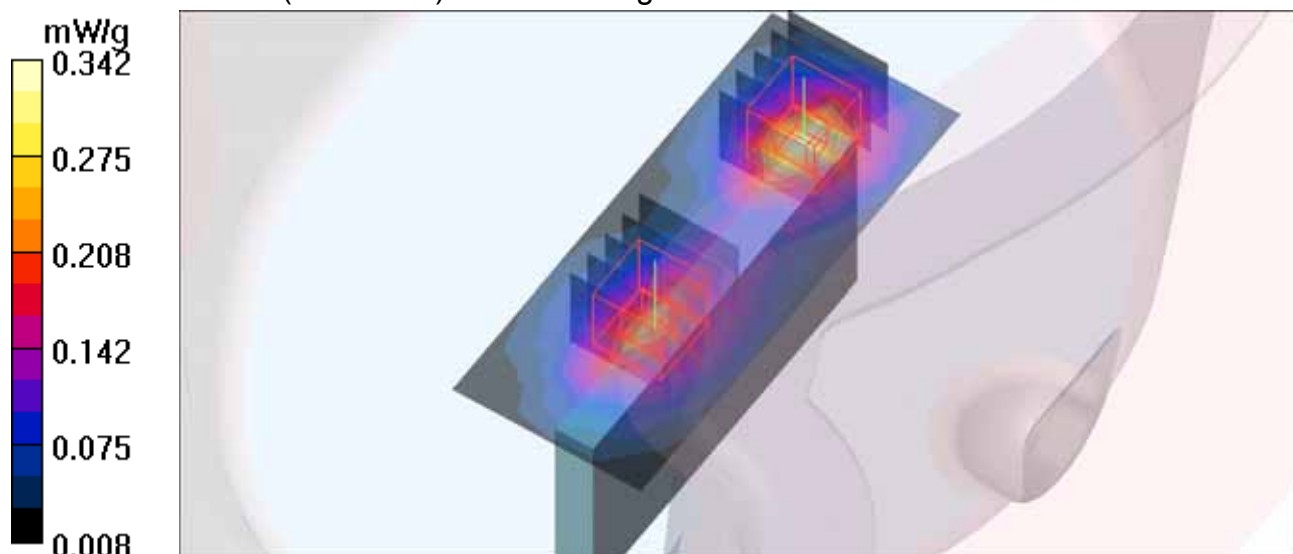
Body Position - Mid/Zoom Scan(5x5x7)/Cube 1: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 9.52 V/m; Power Drift = -0.099 dB

Peak SAR (extrapolated) = 0.289 W/kg

SAR(1 g) = 0.185 mW/g; SAR(10 g) = 0.112 mW/g

Maximum value of SAR (measured) = 0.239 mW/g



M15-Left edge-WCDMA Band 4-Ch1412 / Bat-HT Energy 3.8VDC

Communication System: WCDMA1700 ; Frequency: 1732.4 MHz ; Duty Cycle: 1:1 ; Modulation type: BPSK

Medium: MSL 1700 Medium parameters used : $f = 1732.4 \text{ MHz}$; $\sigma = 1.51 \text{ mho/m}$; $\epsilon_r = 55.13$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section ; Separation distance : 10 mm (The left edge side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(8.77, 8.77, 8.77); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body Position - Mid/Area Scan (5x11x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 0.078 mW/g

Body Position - Mid/Zoom Scan(5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 5.29 V/m; Power Drift = -0.048 dB

Peak SAR (extrapolated) = 0.098 W/kg

SAR(1 g) = 0.059 mW/g; SAR(10 g) = 0.034 mW/g

Maximum value of SAR (measured) = 0.079 mW/g

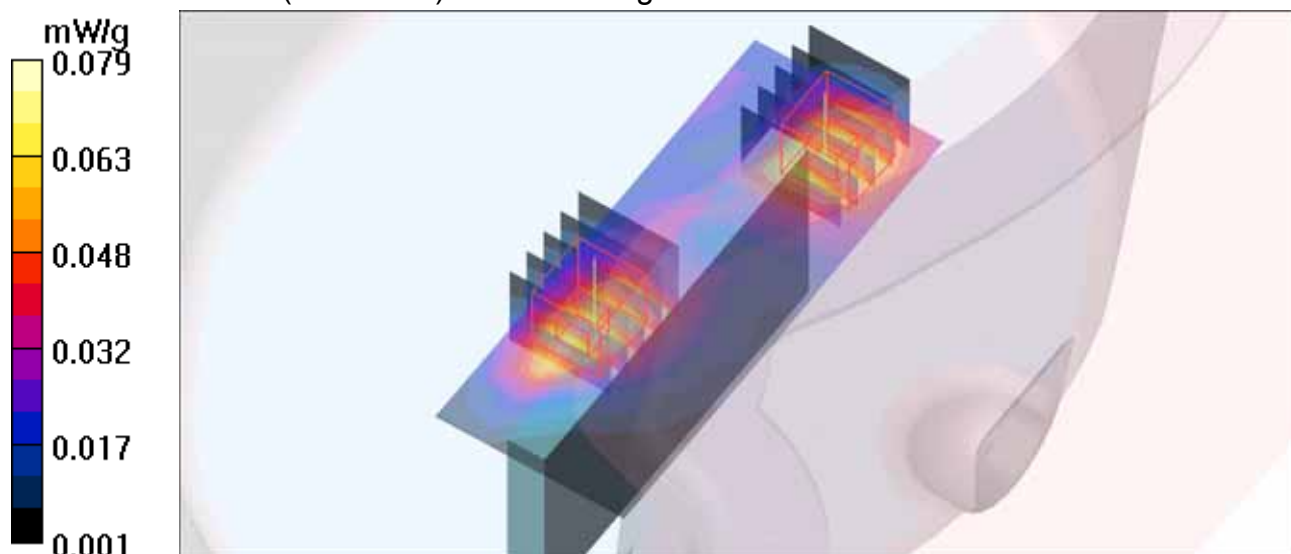
Body Position - Mid/Zoom Scan(5x5x7)/Cube 1: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 5.29 V/m; Power Drift = -0.048 dB

Peak SAR (extrapolated) = 0.088 W/kg

SAR(1 g) = 0.059 mW/g; SAR(10 g) = 0.033 mW/g

Maximum value of SAR (measured) = 0.075 mW/g



Date/Time: 2011/5/12 15:30:28

M16-Left edge-WCDMA Band4-Ch1412 / Bat-HT Energy 3.7VDC

Communication System: WCDMA1700 ; Frequency: 1732.4 MHz ; Duty Cycle: 1:1 ; Modulation type: BPSK

Medium: MSL 1700 Medium parameters used : $f = 1732.4 \text{ MHz}$; $\sigma = 1.51 \text{ mho/m}$; $\epsilon_r = 55.13$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section ; Separation distance : 10 mm (The left edge side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(8.77, 8.77, 8.77); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body Position - Mid/Area Scan (5x11x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 0.076 mW/g

Body Position - Mid/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 5.31 V/m; Power Drift = -0.185 dB

Peak SAR (extrapolated) = 0.111 W/kg

SAR(1 g) = 0.067 mW/g; SAR(10 g) = 0.039 mW/g

Maximum value of SAR (measured) = 0.092 mW/g

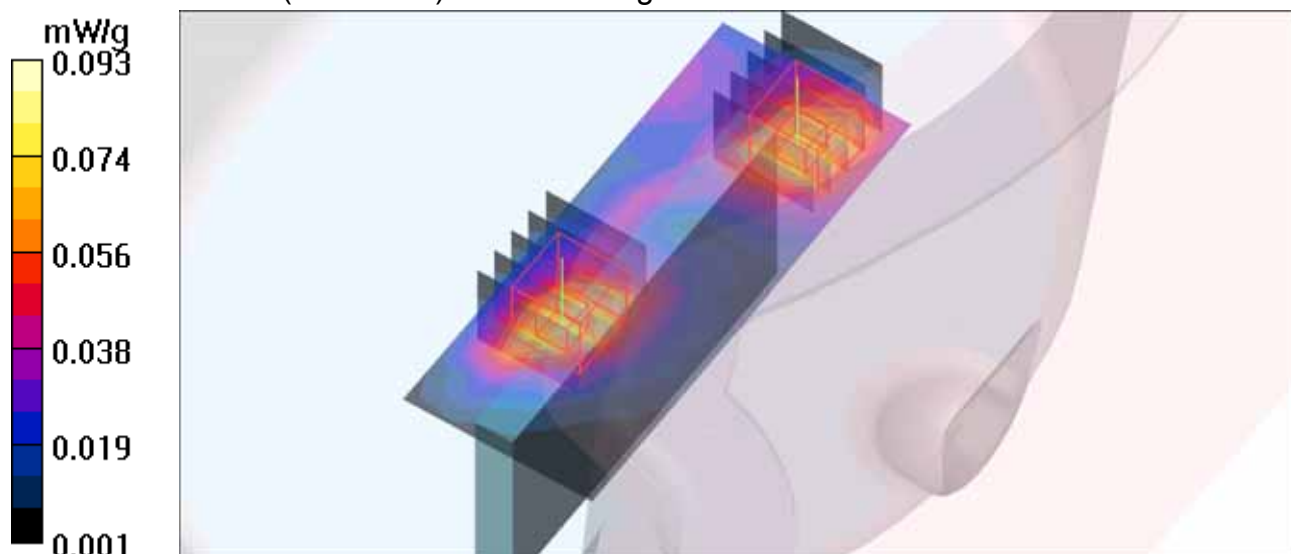
Body Position - Mid/Zoom Scan (5x5x7)/Cube 1: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 5.31 V/m; Power Drift = -0.185 dB

Peak SAR (extrapolated) = 0.106 W/kg

SAR(1 g) = 0.071 mW/g; SAR(10 g) = 0.042 mW/g

Maximum value of SAR (measured) = 0.093 mW/g



M17-Back edge-MCDMA Band 4-Ch1412 / Bat-HT Energy 3.8VDC

Communication System: WCDMA1700 ; Frequency: 1732.4 MHz ; Duty Cycle: 1:1 ; Modulation type: BPSK

Medium: MSL 1700 Medium parameters used : $f = 1732.4$ MHz; $\sigma = 1.51$ mho/m; $\epsilon_r = 55.13$; $\rho = 1000$ kg/m³

Phantom section: Flat Section ; Separation distance : 10 mm (The back edge side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(8.77, 8.77, 8.77); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body Position - Mid/Area Scan (5x8x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.408 mW/g

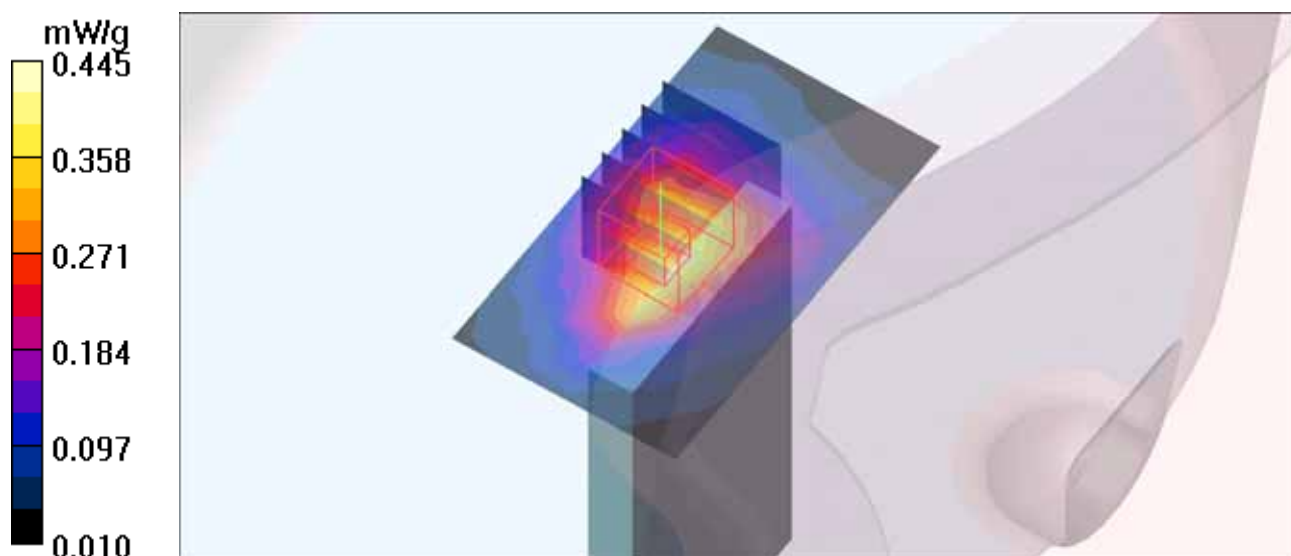
Body Position - Mid/Zoom Scan(5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 16.9 V/m; Power Drift = -0.010 dB

Peak SAR (extrapolated) = 0.538 W/kg

SAR(1 g) = 0.331 mW/g; SAR(10 g) = 0.190 mW/g

Maximum value of SAR (measured) = 0.445 mW/g



M18-Back edge-WCDMA Band 4-Ch1412 / Bat-HT Energy 3.7VDC

Communication System: WCDMA1700 ; Frequency: 1732.4 MHz ; Duty Cycle: 1:1 ; Modulation type: BPSK

Medium: MSL 1700 Medium parameters used : $f = 1732.4$ MHz; $\sigma = 1.51$ mho/m; $\epsilon_r = 55.13$; $\rho = 1000$ kg/m³

Phantom section: Flat Section ; Separation distance : 10 mm (The back edge side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(8.77, 8.77, 8.77); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body Position - Mid/Area Scan (5x8x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.351 mW/g

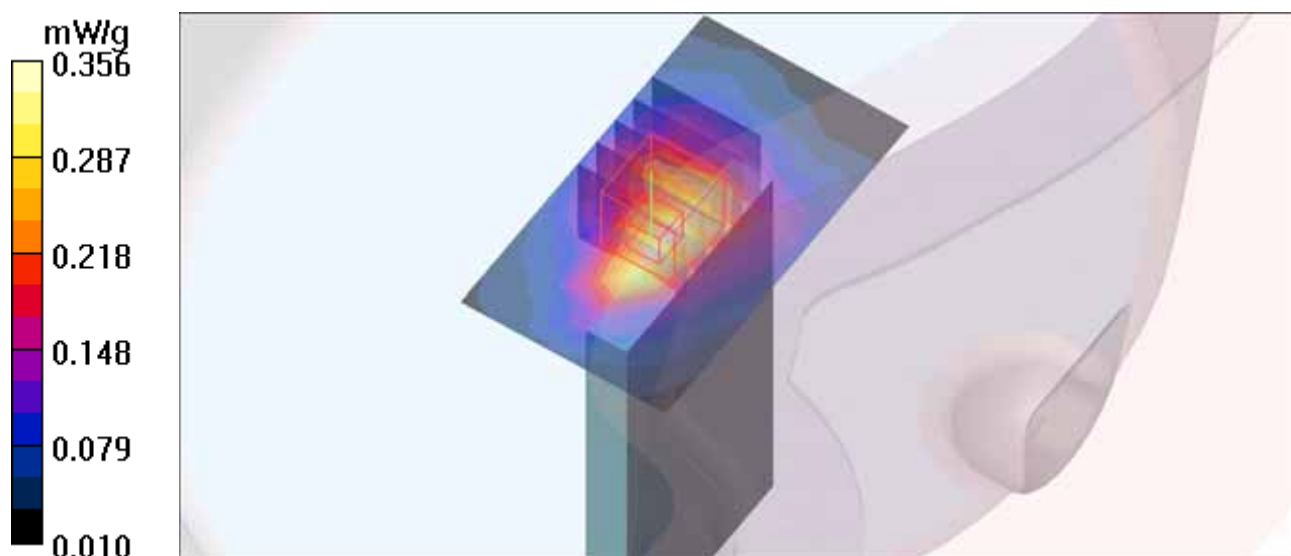
Body Position - Mid/Zoom Scan(5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 15.4 V/m; Power Drift = -0.185 dB

Peak SAR (extrapolated) = 0.425 W/kg

SAR(1 g) = 0.261 mW/g; SAR(10 g) = 0.152 mW/g

Maximum value of SAR (measured) = 0.356 mW/g



SystemPerformanceCheck-D1750-HSL1750 MHz

DUT: Dipole 1750 MHz ; Type: D1750V2 ; Serial: D1750V2 - SN:1003 ; Test Frequency: 1750 MHz

Communication System: CW ; Frequency: 1750 MHz; Duty Cycle: 1:1; Modulation type: CW
 Medium: HSL1700;Medium parameters used: $f = 1750 \text{ MHz}$; $\sigma = 1.41 \text{ mho/m}$; $\epsilon_r = 41.51$; $\rho = 1000 \text{ kg/m}^3$; Liquid level : 150 mm
 Phantom section: Flat Section ; Separation distance : 10 mm (The feet point of the dipole to the Phantom)Air temp. : 22.5 degrees ; Liquid temp. : 21.5 degrees

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(9.03, 9.03, 9.03); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

d=10mm, Pin=250mW/Area Scan (7x7x1): Measurement grid: dx=15mm, dy=15mm
 Maximum value of SAR (measured) = 13.9 mW/g

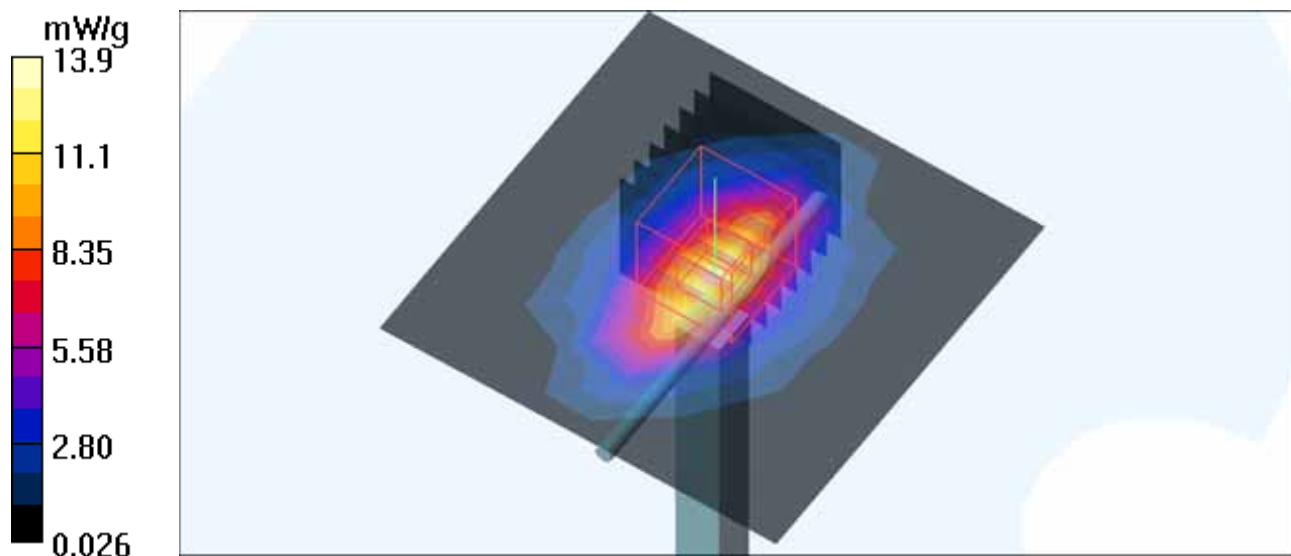
d=10mm, Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 96.2 V/m; Power Drift = -0.117 dB

Peak SAR (extrapolated) = 17.8 W/kg

SAR(1 g) = 9.46 mW/g; SAR(10 g) = 4.93 mW/g

Maximum value of SAR (measured) = 13.7 mW/g



SystemPerformanceCheck-D1750-MSL1750 MHz

DUT: Dipole 1750 MHz ; Type: D1750V2 ; Serial: D1750V2 - SN:1003 ; Test Frequency: 1750 MHz

Communication System: CW ; Frequency: 1750 MHz; Duty Cycle: 1:1; Modulation type: CW
 Medium: MSL1700;Medium parameters used: $f = 1750 \text{ MHz}$; $\sigma = 1.52 \text{ mho/m}$; $\epsilon_r = 55.01$; $\rho = 1000 \text{ kg/m}^3$; Liquid level : 150 mm
 Phantom section: Flat Section ; Separation distance : 10 mm (The feet point of the dipole to the Phantom)Air temp. : 22.9 degrees ; Liquid temp. : 21.8 degrees

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(8.77, 8.77, 8.77); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

d=10mm, Pin=250mW/Area Scan (7x7x1): Measurement grid: dx=15mm, dy=15mm
 Maximum value of SAR (measured) = 14.1 mW/g

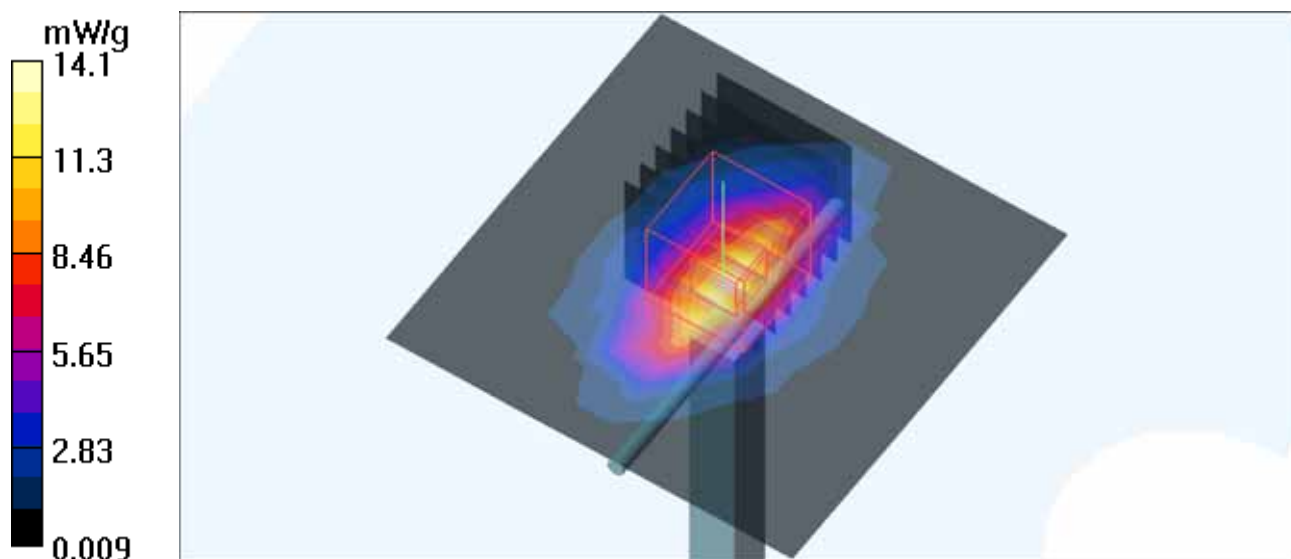
d=10mm, Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 96.8 V/m; Power Drift = 0.041 dB

Peak SAR (extrapolated) = 17.8 W/kg

SAR(1 g) = 9.82 mW/g; SAR(10 g) = 5.16 mW/g

Maximum value of SAR (measured) = 14.2 mW/g





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Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch

APPENDIX A: TEST DATA for DTM (GSM 850 Band only)

Product Name: Smart Phone ; Model Number: PG86300

Liquid Level Photo

Tissue 835MHz D=150mm



M01-Back-GSM TS1 + GPRS TS1-Ch128 / DTM & HT 3.8VDC

Communication System: (GSM+GPRS) 850 ; Frequency: 824.2 MHz ; Duty Cycle: 1:4 ; Modulation type: GMSK / UL 2 time slots

Medium: MSL835 Medium parameters used: $f = 824.2$ MHz; $\sigma = 0.99$ mho/m; $\epsilon_r = 56.57$; $\rho = 1000$ kg/m³

Phantom section: Flat Section ; Separation distance : 10 mm (The back side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(10.32, 10.32, 10.32); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body Position - Low/Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.896 mW/g

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

Reference Value = 28.2 V/m; Power Drift = 0.141 dB

Peak SAR (extrapolated) = 0.997 W/kg

SAR(1 g) = 0.759 mW/g; SAR(10 g) = 0.556 mW/g

Maximum value of SAR (measured) = 0.880 mW/g

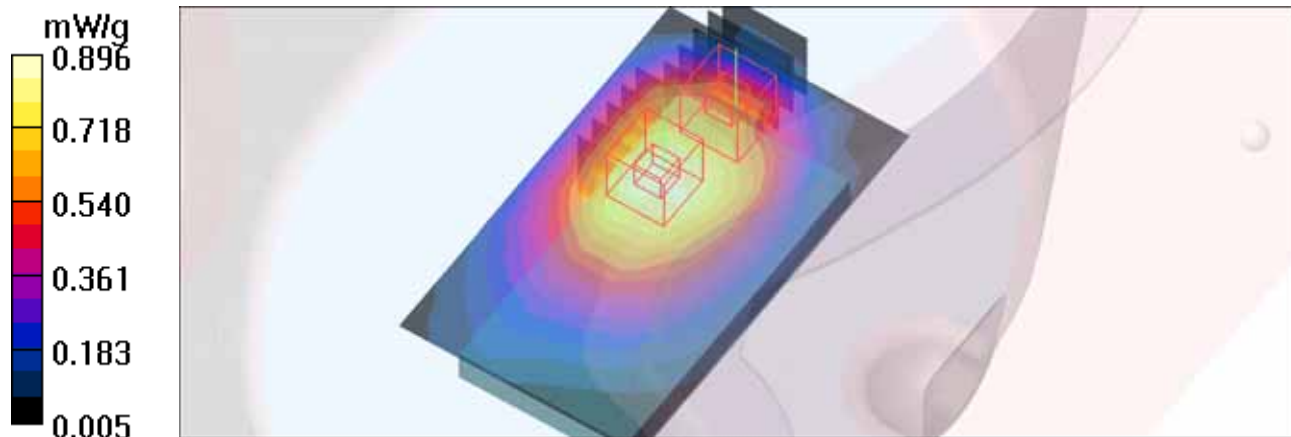
Body Position - Low/Zoom Scan(5x5x7)/Cube 1: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 28.2 V/m; Power Drift = 0.141 dB

Peak SAR (extrapolated) = 1.40 W/kg

SAR(1 g) = 0.645 mW/g; SAR(10 g) = 0.362 mW/g

Maximum value of SAR (measured) = 0.802 mW/g



M01-Back-GSM TS1 + GPRS TS1-Ch190 / DTM & HT 3.8VDC

Communication System: (GSM+GPRS) 850 ; Frequency: 836.6 MHz ; Duty Cycle: 1:4 ; Modulation type: GMSK / UL 2 time slots

Medium: MSL835 Medium parameters used: $f = 836.6 \text{ MHz}$; $\sigma = 1 \text{ mho/m}$; $\epsilon_r = 56.24$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section ; Separation distance : 10 mm (The back side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(10.32, 10.32, 10.32); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body Position - Mid/Area Scan (7x11x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 0.965 mW/g

Body Position - Mid/Zoom Scan(5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 29.2 V/m; Power Drift = 0.091 dB

Peak SAR (extrapolated) = 1.13 W/kg

SAR(1 g) = 0.851 mW/g; SAR(10 g) = 0.623 mW/g

Maximum value of SAR (measured) = 0.991 mW/g

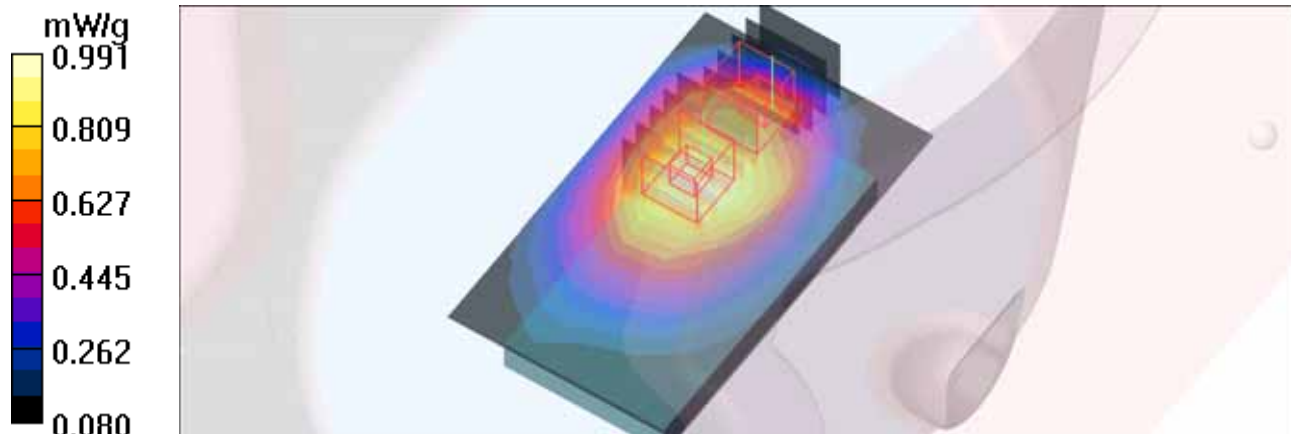
Body Position - Mid/Zoom Scan(5x5x7)/Cube 1: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 29.2 V/m; Power Drift = 0.091 dB

Peak SAR (extrapolated) = 1.22 W/kg

SAR(1 g) = 0.675 mW/g; SAR(10 g) = 0.409 mW/g

Maximum value of SAR (measured) = 0.952 mW/g



M01-Back-GSM TS1 + GPRS TS1-Ch251 / DTM & HT 3.8VDC

Communication System: (GSM+GPRS) 850 ; Frequency: 848.8 MHz ; Duty Cycle: 1:4 ; Modulation type: GMSK / UL 2 time slots

Medium: MSL835 Medium parameters used: $f = 848.8 \text{ MHz}$; $\sigma = 1.01 \text{ mho/m}$; $\epsilon_r = 56.15$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section ; Separation distance : 10 mm (The back side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(10.32, 10.32, 10.32); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body Position - High/Area Scan (7x11x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 0.994 mW/g

Body Position - High/Zoom Scan(5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 29.4 V/m; Power Drift = 0.036 dB

Peak SAR (extrapolated) = 1.22 W/kg

SAR(1 g) = 0.855 mW/g; SAR(10 g) = 0.627 mW/g

Maximum value of SAR (measured) = 1.01 mW/g

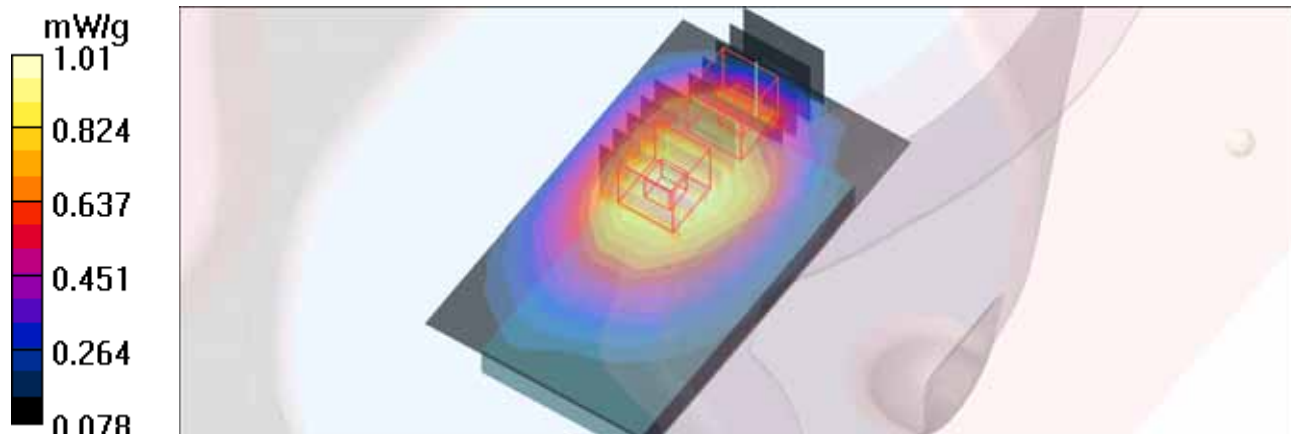
Body Position - High/Zoom Scan(5x5x7)/Cube 1: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 29.4 V/m; Power Drift = 0.036 dB

Peak SAR (extrapolated) = 1.28 W/kg

SAR(1 g) = 0.700 mW/g; SAR(10 g) = 0.413 mW/g

Maximum value of SAR (measured) = 0.957 mW/g



M02-Back-GSM TS1 + GPRS TS2-Ch128 / DTM & HT 3.8VDC

Communication System: (GSM+GPRS) 850 ; Frequency: 824.2 MHz ; Duty Cycle: 1:2.67 ; Modulation type: GMSK / UL 3 time slots

Medium: MSL835 Medium parameters used: $f = 824.2$ MHz; $\sigma = 0.99$ mho/m; $\epsilon_r = 56.57$; $\rho = 1000$ kg/m³

Phantom section: Flat Section ; Separation distance : 10 mm (The back side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(10.32, 10.32, 10.32); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body Position - Low/Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.866 mW/g

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

Reference Value = 27.9 V/m; Power Drift = -0.101 dB

Peak SAR (extrapolated) = 0.994 W/kg

SAR(1 g) = 0.755 mW/g; SAR(10 g) = 0.553 mW/g

Maximum value of SAR (measured) = 0.877 mW/g

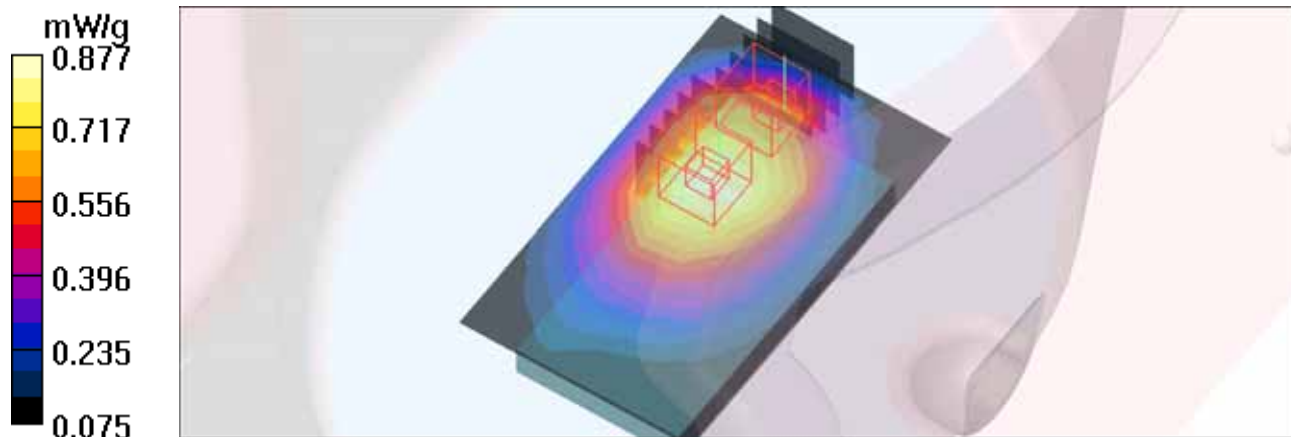
Body Position - Low/Zoom Scan(5x5x7)/Cube 1: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 27.9 V/m; Power Drift = -0.101 dB

Peak SAR (extrapolated) = 1.04 W/kg

SAR(1 g) = 0.582 mW/g; SAR(10 g) = 0.363 mW/g

Maximum value of SAR (measured) = 0.814 mW/g



M02-Back-GSM TS1 + GPRS TS2-Ch190 / DTM & HT 3.8VDC

Communication System: (GSM+GPRS) 850 ; Frequency: 836.6 MHz ; Duty Cycle: 1:2.67 ; Modulation type: GMSK / UL 3 time slots

Medium: MSL835 Medium parameters used: $f = 836.6$ MHz; $\sigma = 1$ mho/m; $\epsilon_r = 56.24$; $\rho = 1000$ kg/m³

Phantom section: Flat Section ; Separation distance : 10 mm (The back side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(10.32, 10.32, 10.32); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body Position - Mid /Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm

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

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

Reference Value = 30.7 V/m; Power Drift = -0.087 dB

Peak SAR (extrapolated) = 1.22 W/kg

SAR(1 g) = 0.916 mW/g; SAR(10 g) = 0.668 mW/g

Maximum value of SAR (measured) = 1.07 mW/g

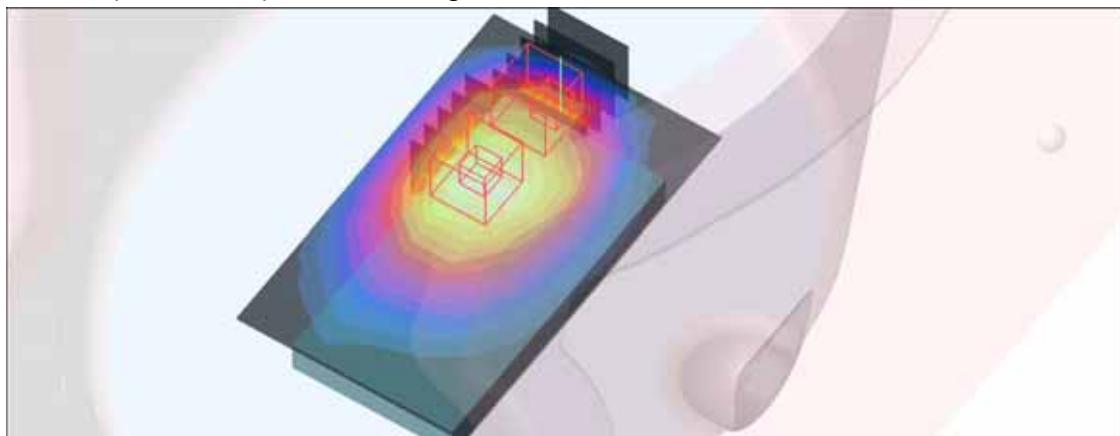
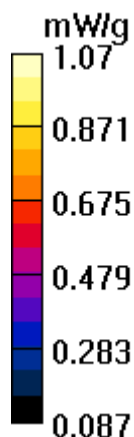
Body Position - Mid /Zoom Scan(5x5x7)/Cube 1: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 30.7 V/m; Power Drift = -0.087 dB

Peak SAR (extrapolated) = 1.30 W/kg

SAR(1 g) = 0.725 mW/g; SAR(10 g) = 0.439 mW/g

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



M02-Back-GSM TS1 + GPRS TS2-Ch251 / DTM & HT 3.8VDC

Communication System: (GSM+GPRS) 850 ; Frequency: 848.8 MHz ; Duty Cycle: 1:2.67 ; Modulation type: GMSK / UL 3 time slots

Medium: MSL835 Medium parameters used: $f = 848.8 \text{ MHz}$; $\sigma = 1.01 \text{ mho/m}$; $\epsilon_r = 56.15$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section ; Separation distance : 10 mm (The back side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(10.32, 10.32, 10.32); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body Position - High/Area Scan (7x11x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

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

Body Position - High/Zoom Scan(5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 31.0 V/m; Power Drift = 0.025 dB

Peak SAR (extrapolated) = 1.27 W/kg

SAR(1 g) = 0.956 mW/g; SAR(10 g) = 0.697 mW/g

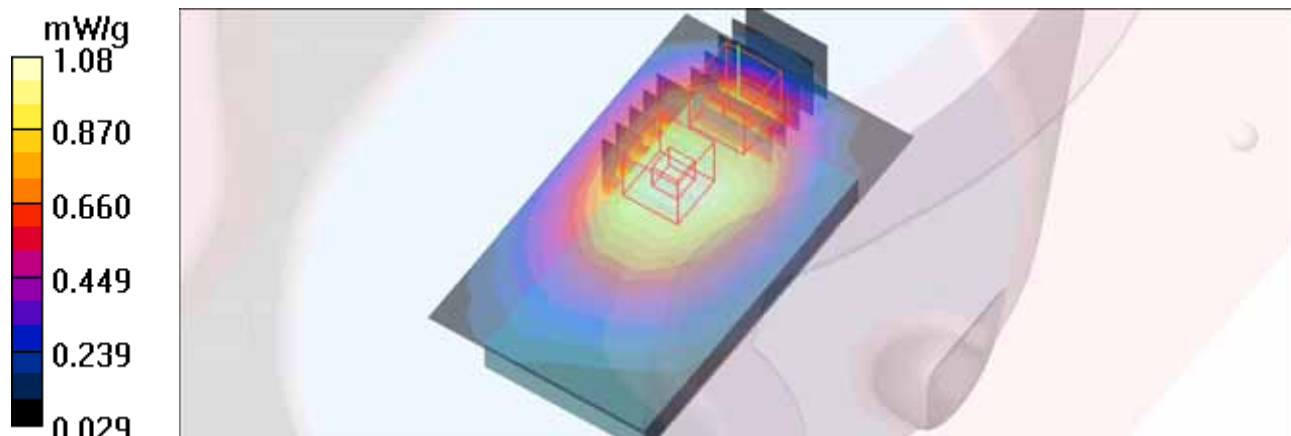
Body Position - High/Zoom Scan(5x5x7)/Cube 1: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

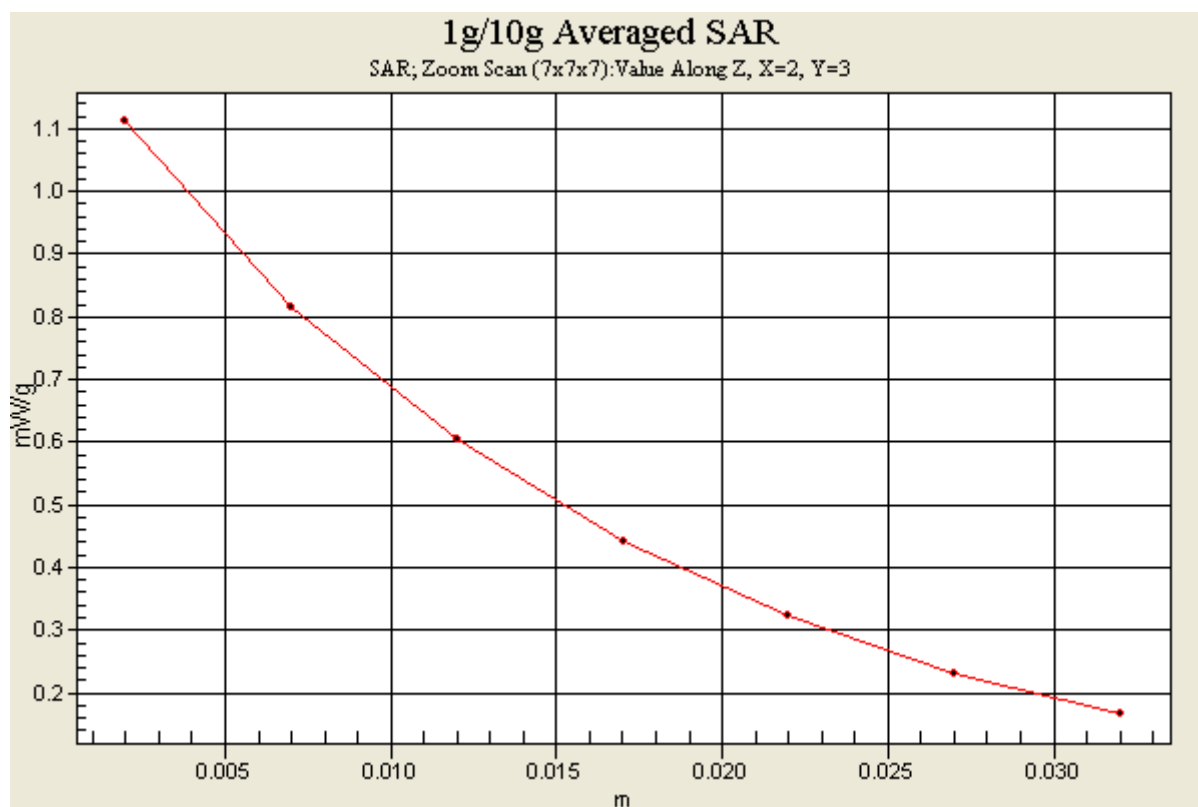
Reference Value = 31.0 V/m; Power Drift = 0.025 dB

Peak SAR (extrapolated) = 1.44 W/kg

SAR(1 g) = 0.781 mW/g; SAR(10 g) = 0.459 mW/g

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





M03-Back-GSM TS1 + GPRS TS1-Ch128 / DTM & HT 3.7VDC

Communication System: (GSM+GPRS) 850 ; Frequency: 824.2 MHz ; Duty Cycle: 1:4 ; Modulation type: GMSK / UL 2 time slots

Medium: MSL835 Medium parameters used: $f = 824.2$ MHz; $\sigma = 0.99$ mho/m; $\epsilon_r = 56.57$; $\rho = 1000$ kg/m³

Phantom section: Flat Section ; Separation distance : 10 mm (The back side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(10.32, 10.32, 10.32); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body Position - Low/Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.797 mW/g

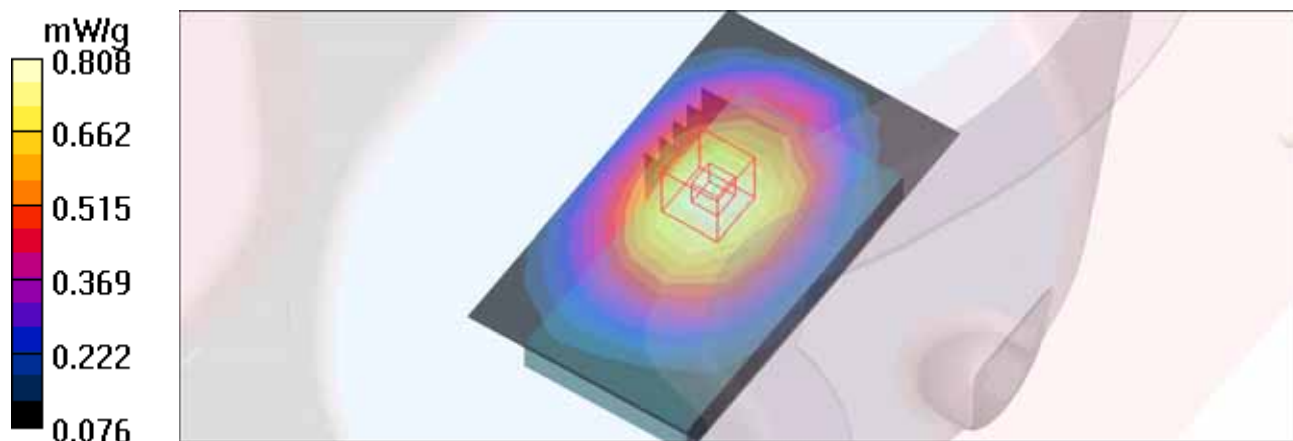
Body Position - Low/Zoom Scan(5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 29.2 V/m; Power Drift = -0.172 dB

Peak SAR (extrapolated) = 0.898 W/kg

SAR(1 g) = 0.690 mW/g; SAR(10 g) = 0.513 mW/g

Maximum value of SAR (measured) = 0.808 mW/g



M03-Back-GSM TS1 + GPRS TS1-Ch190 / DTM & HT 3.7VDC

Communication System: (GSM+GPRS) 850 ; Frequency: 836.6 MHz ; Duty Cycle: 1:4 ; Modulation type: GMSK / UL 2 time slots

Medium: MSL835 Medium parameters used: $f = 836.6$ MHz; $\sigma = 1$ mho/m; $\epsilon_r = 56.24$; $\rho = 1000$ kg/m³

Phantom section: Flat Section ; Separation distance : 10 mm (The back side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(10.32, 10.32, 10.32); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body Position - Mid/Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.972 mW/g

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

Reference Value = 31.1 V/m; Power Drift = -0.039 dB

Peak SAR (extrapolated) = 1.06 W/kg

SAR(1 g) = 0.820 mW/g; SAR(10 g) = 0.604 mW/g

Maximum value of SAR (measured) = 0.957 mW/g

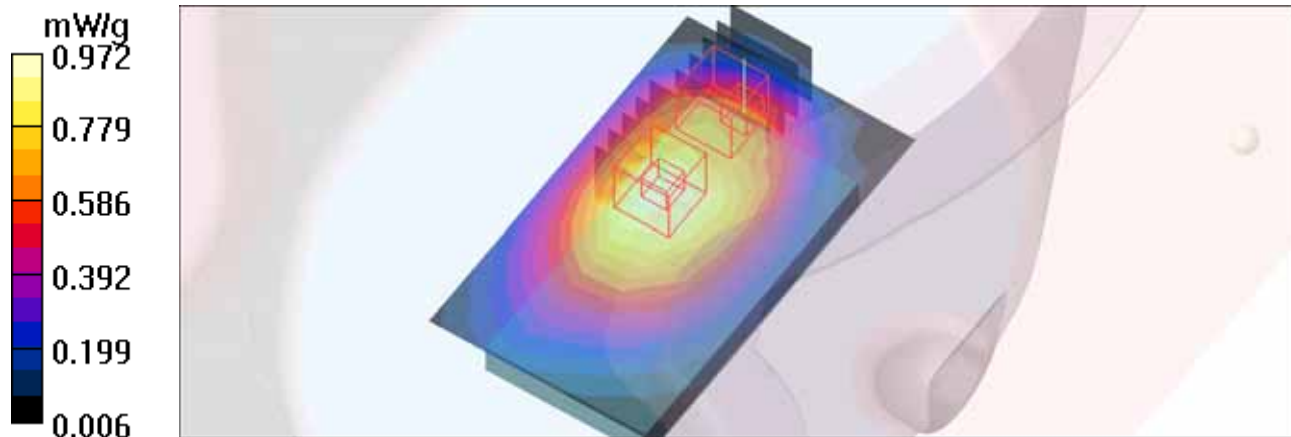
Body Position - Mid/Zoom Scan(5x5x7)/Cube 1: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 31.1 V/m; Power Drift = -0.039 dB

Peak SAR (extrapolated) = 1.10 W/kg

SAR(1 g) = 0.608 mW/g; SAR(10 g) = 0.370 mW/g

Maximum value of SAR (measured) = 0.871 mW/g



M03-Back-GSM TS1 + GPRS TS1-Ch251 / DTM & HT 3.7VDC

Communication System: (GSM+GPRS) 850 ; Frequency: 848.8 MHz ; Duty Cycle: 1:4 ; Modulation type: GMSK / UL 2 time slots

Medium: MSL835 Medium parameters used: $f = 848.8$ MHz; $\sigma = 1.01$ mho/m; $\epsilon_r = 56.15$; $\rho = 1000$ kg/m³

Phantom section: Flat Section ; Separation distance : 10 mm (The back side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(10.32, 10.32, 10.32); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body Position - High/Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.799 mW/g

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

Reference Value = 28.7 V/m; Power Drift = 0.010 dB

Peak SAR (extrapolated) = 0.914 W/kg

SAR(1 g) = 0.701 mW/g; SAR(10 g) = 0.519 mW/g

Maximum value of SAR (measured) = 0.816 mW/g

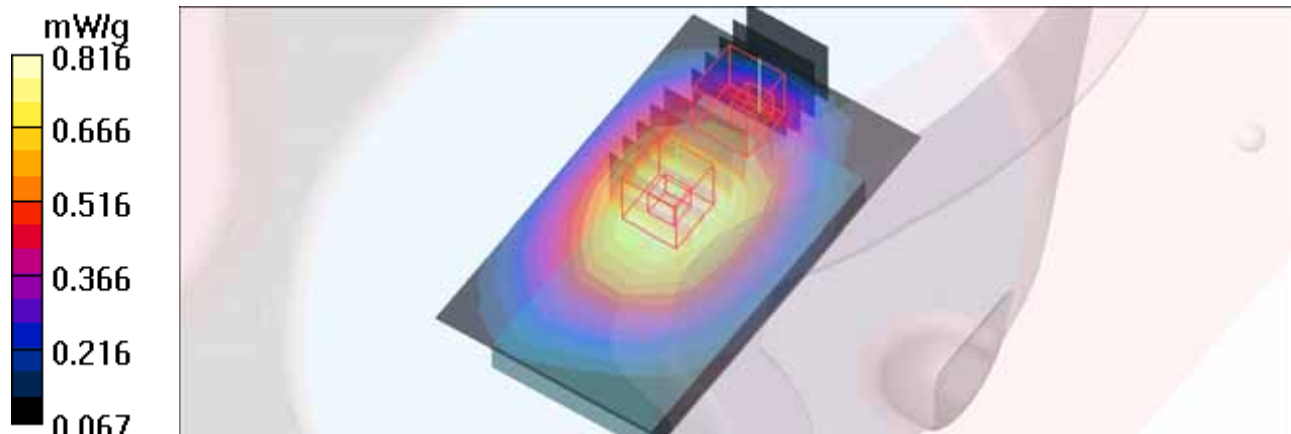
Body Position - High/Zoom Scan(5x5x7)/Cube 1: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 28.7 V/m; Power Drift = 0.010 dB

Peak SAR (extrapolated) = 0.774 W/kg

SAR(1 g) = 0.452 mW/g; SAR(10 g) = 0.283 mW/g

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



M04-Back-GSM TS1 + GPRS TS2-Ch128 / DTM & HT 3.7VDC

Communication System: (GSM+GPRS) 850 ; Frequency: 824.2 MHz ; Duty Cycle: 1:2.67 ; Modulation type: GMSK / UL 3 time slots

Medium: MSL835 Medium parameters used: $f = 824.2$ MHz; $\sigma = 0.99$ mho/m; $\epsilon_r = 56.57$; $\rho = 1000$ kg/m³

Phantom section: Flat Section ; Separation distance : 10 mm (The back side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(10.32, 10.32, 10.32); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body Position - Low/Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.892 mW/g

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

Reference Value = 29.5 V/m; Power Drift = -0.162 dB

Peak SAR (extrapolated) = 0.990 W/kg

SAR(1 g) = 0.757 mW/g; SAR(10 g) = 0.561 mW/g

Maximum value of SAR (measured) = 0.878 mW/g

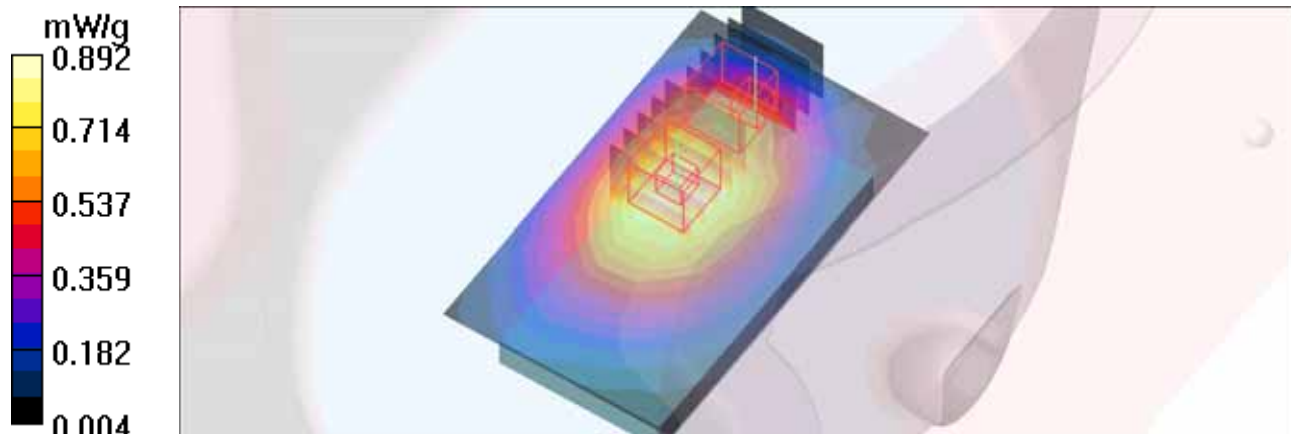
Body Position - Low/Zoom Scan(5x5x7)/Cube 1: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 29.5 V/m; Power Drift = -0.162 dB

Peak SAR (extrapolated) = 0.910 W/kg

SAR(1 g) = 0.516 mW/g; SAR(10 g) = 0.332 mW/g

Maximum value of SAR (measured) = 0.727 mW/g



M04-Back-GSM TS1 + GPRS TS2-Ch190 / DTM & HT 3.7VDC

Communication System: (GSM+GPRS) 850 ; Frequency: 836.6 MHz ; Duty Cycle: 1:2.67 ; Modulation type: GMSK / UL 3 time slots

Medium: MSL835 Medium parameters used: $f = 836.6 \text{ MHz}$; $\sigma = 1 \text{ mho/m}$; $\epsilon_r = 56.24$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section ; Separation distance : 10 mm (The back side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(10.32, 10.32, 10.32); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body Position - Mid/Area Scan (7x11x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 1.01 mW/g

Body Position - Mid/Zoom Scan(5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 31.3 V/m; Power Drift = -0.127 dB

Peak SAR (extrapolated) = 1.12 W/kg

SAR(1 g) = 0.858 mW/g; SAR(10 g) = 0.630 mW/g

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

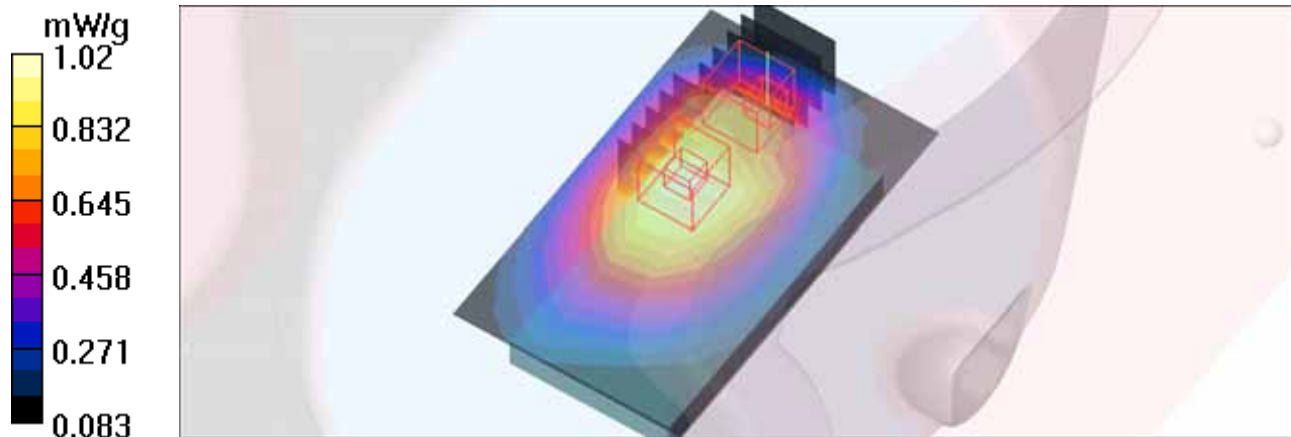
Body Position - Mid/Zoom Scan(5x5x7)/Cube 1: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 31.3 V/m; Power Drift = -0.127 dB

Peak SAR (extrapolated) = 1.14 W/kg

SAR(1 g) = 0.633 mW/g; SAR(10 g) = 0.386 mW/g

Maximum value of SAR (measured) = 0.904 mW/g



M04-Back-GSM TS1 + GPRS TS2-Ch251 / DTM & HT 3.7VDC

Communication System: (GSM+GPRS) 850 ; Frequency: 848.8 MHz ; Duty Cycle: 1:2.67 ; Modulation type: GMSK / UL 3 time slots

Medium: MSL835 Medium parameters used: $f = 848.8 \text{ MHz}$; $\sigma = 1.01 \text{ mho/m}$; $\epsilon_r = 56.15$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section ; Separation distance : 10 mm (The back side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(10.32, 10.32, 10.32); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body Position - High/Area Scan (7x11x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 0.986 mW/g

Body Position - High/Zoom Scan(5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 30.0 V/m; Power Drift = -0.037 dB

Peak SAR (extrapolated) = 1.11 W/kg

SAR(1 g) = 0.844 mW/g; SAR(10 g) = 0.618 mW/g

Maximum value of SAR (measured) = 0.984 mW/g

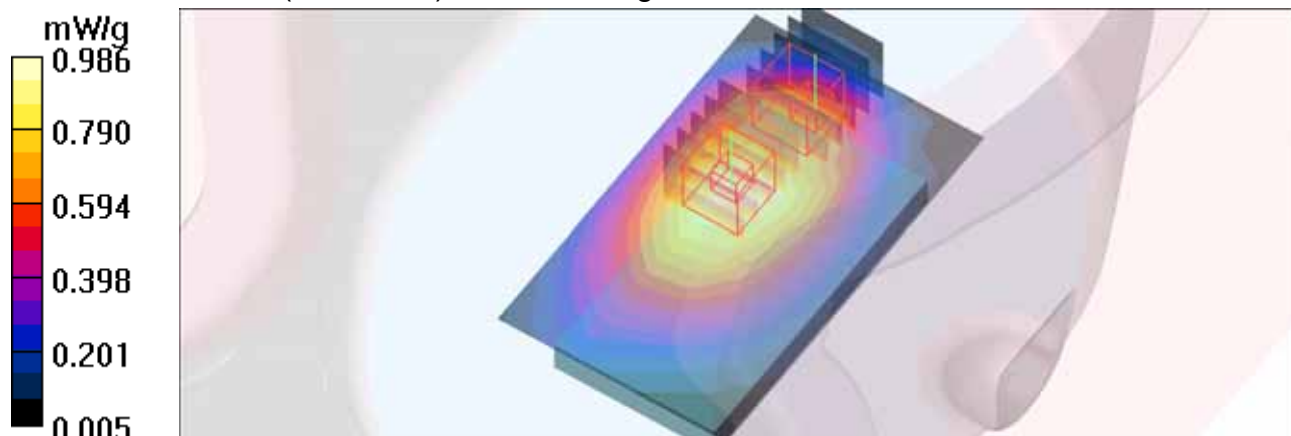
Body Position - High/Zoom Scan(5x5x7)/Cube 1: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 30.0 V/m; Power Drift = -0.037 dB

Peak SAR (extrapolated) = 1.24 W/kg

SAR(1 g) = 0.680 mW/g; SAR(10 g) = 0.398 mW/g

Maximum value of SAR (measured) = 0.954 mW/g



SystemPerformanceCheck-D835V2-MSL835 MHz

DUT: Dipole 835 MHz ; Type: D835V2 ; Serial: D835V2 - SN:4d021 ; Test Frequency: 835 MHz

Communication System: CW ; Frequency: 835 MHz; Duty Cycle: 1:1; Modulation type: CW
 Medium: MSL835;Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 1 \text{ mho/m}$; $\epsilon_r = 56.36$; $\rho = 1000 \text{ kg/m}^3$;
 Liquid level : 150 mm
 Phantom section: Flat Section ; Separation distance : 15 mm (The feet point of the dipole to the Phantom)Air temp. : 22.5 degrees ; Liquid temp. : 21.6 degrees

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(10.32, 10.32, 10.32); Calibrated: 2011/2/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2010/9/20
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1202
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

d=15mm, Pin=250mW/Area Scan (7x9x1): Measurement grid: dx=15mm, dy=15mm
 Maximum value of SAR (measured) = 2.88 mW/g

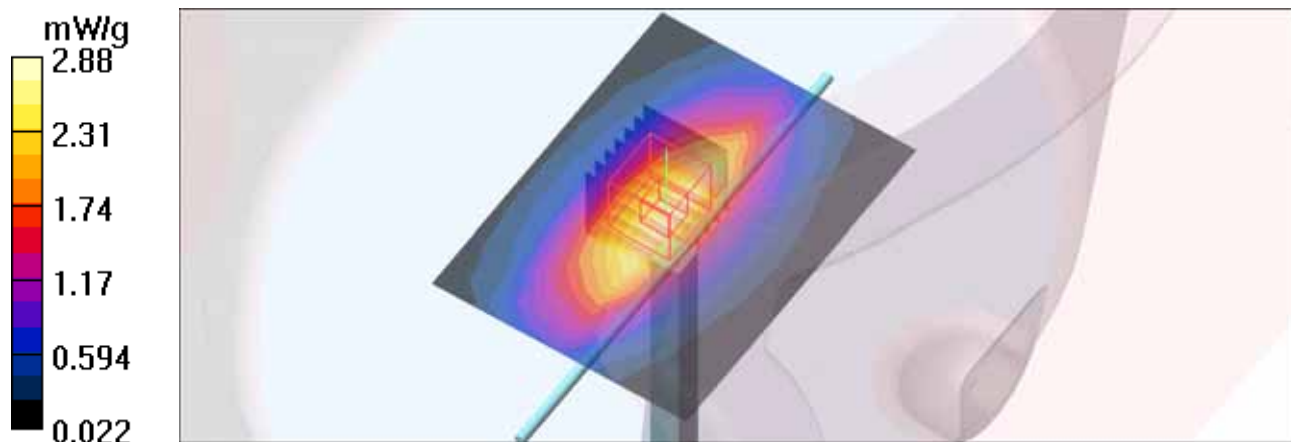
d=15mm, Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 55.3 V/m; Power Drift = 0.087 dB

Peak SAR (extrapolated) = 3.56 W/kg

SAR(1 g) = 2.39 mW/g; SAR(10 g) = 1.56 mW/g

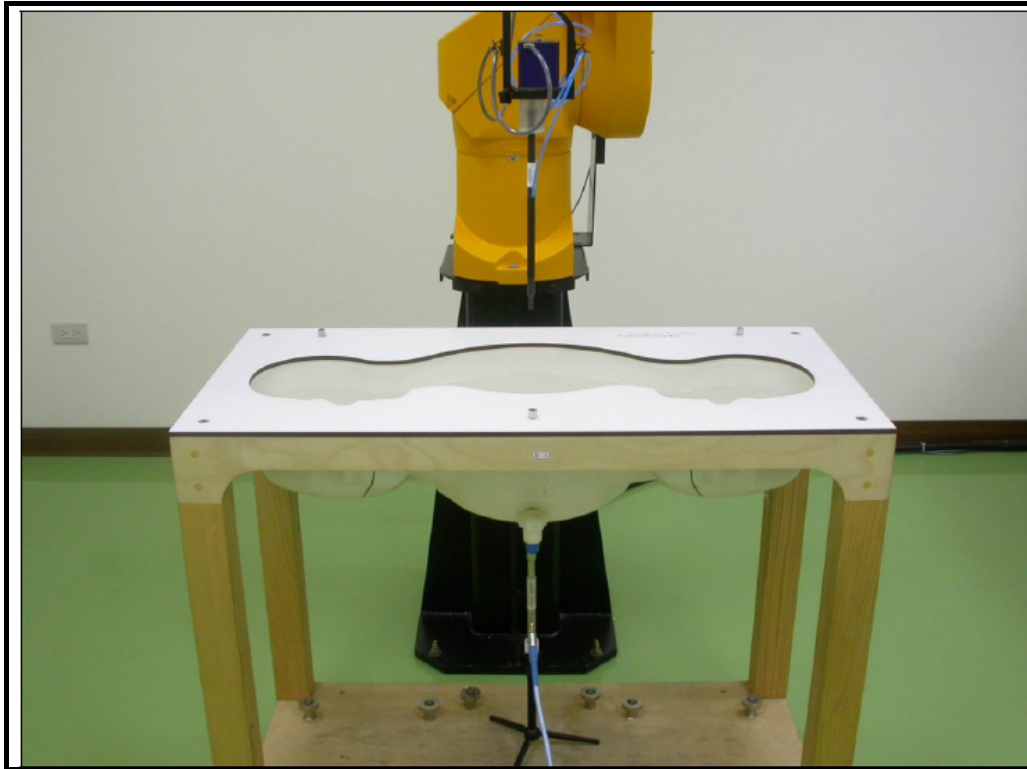
Maximum value of SAR (measured) = 3.00 mW/g



APPENDIX B: BV ADT SAR MEASUREMENT SYSTEM



APPENDIX C: PHOTOGRAPHS OF SYSTEM VALIDATION





APPENDIX D: SYSTEM CERTIFICATE & CALIBRATION

D1: SAM PHANTOM

Schmid & Partner Engineering AG

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

Certificate of conformity / First Article Inspection

Item	SAM Twin Phantom V4.0
Type No	QD 000 P40 CA
Series No	TP-1150 and higher
Manufacturer / Origin	Untersee Composites Hauptstr. 69 CH-8559 Fruthwilen Switzerland

Tests

The series production process used allows the limitation to test of first articles. Complete tests were made on the pre-series Type No. QD 000 P40 AA, Serial No. TP-1001 and on the series first article Type No. QD 000 P40 BA, Serial No. TP-1006. Certain parameters have been retested using further series units (called samples).

Test	Requirement	Details	Units tested
Shape	Compliance with the geometry according to the CAD model.	IT'IS CAD File (*)	First article, Samples
Material thickness	Compliant with the requirements according to the standards	2mm +/- 0.2mm in specific areas	First article, Samples
Material parameters	Dielectric parameters for required frequencies	200 MHz - 3 GHz Relative permittivity < 5 Loss tangent < 0.05.	Material sample TP 104-5
Material resistivity	The material has been tested to be compatible with the liquids defined in the standards	Liquid type HSL 1800 and others according to the standard.	Pre-series, First article

Standards

- [1] CENELEC EN 50361
- [2] IEEE P1528-200x draft 6.5
- [3] IEC PT 62209 draft 0.9

(*) The IT'IS CAD file is derived from [2] and is also within the tolerance requirements of the shapes of [1] and [3].

Conformity

Based on the sample tests above, we certify that this item is in compliance with the uncertainty requirements of SAR measurements specified in standard [1] and draft standards [2] and [3].

Date

28.02.2002

Signature / Stamp

F. Bernhardt

**Schmid & Partner
Engineering AG**

Zeughausstrasse 43, CH-8004 Zurich
Tel. +41 1 245 97 00, Fax +41 1 245 97 79

Volker Kappeler

D2: DOSIMETRIC E-FIELD PROBE



Accredited by the Swiss Accreditation Service (SAS)

Accreditation No.: **SCS 108**

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

Client **BV ADT (Auden)**

Certificate No: **EX3-3590_Feb11**

CALIBRATION CERTIFICATE

Object **EX3DV4 - SN:3590**

Calibration procedure(s) **QA CAL-01.v7, QA CAL-14.v3, QA CAL-23.v4, QA CAL-25.v3
 Calibration procedure for dosimetric E-field probes**

Calibration date: **February 25, 2011**

This calibration certificate documents the traceability to national standards, which realize the physical units of measurements (SI).
 The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.

All calibrations have been conducted in the closed laboratory facility: environment temperature $(22 \pm 3)^{\circ}\text{C}$ and humidity < 70%.

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID	Cal Date (Certificate No.)	Scheduled Calibration
Power meter E4419B	GB41293874	01-Apr-10 (No. 217-01136)	Apr-11
Power sensor E4412A	MY41495277	01-Apr-10 (No. 217-01136)	Apr-11
Power sensor E4412A	MY41498087	01-Apr-10 (No. 217-01136)	Apr-11
Reference 3 dB Attenuator	SN: S5054 (3c)	30-Mar-10 (No. 217-01159)	Mar-11
Reference 20 dB Attenuator	SN: S5086 (20b)	30-Mar-10 (No. 217-01161)	Mar-11
Reference 30 dB Attenuator	SN: S5129 (30b)	30-Mar-10 (No. 217-01160)	Mar-11
Reference Probe ES3DV2	SN: 3013	29-Dec-10 (No. ES3-3013_Dec10)	Dec-11
DAE4	SN: 654	23-Apr-10 (No. DAE4-654_Apr10)	Apr-11
Secondary Standards	ID	Check Date (in house)	Scheduled Check
RF generator HP 8648C	US3642U01700	4-Aug-99 (in house check Oct-09)	In house check: Oct-11
Network Analyzer HP 8753E	US37390585	18-Oct-01 (in house check Oct-10)	In house check: Oct-11

	Name	Function	Signature
Calibrated by:	Katja Pokovic	Technical Manager	
Approved by:	Niels Kuster	Quality Manager	
Issued: February 25, 2011			
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Accreditation No.: **SCS 108**

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Glossary:

TSL	tissue simulating liquid
NORM _{x,y,z}	sensitivity in free space
ConvF	sensitivity in TSL / NORM _{x,y,z}
DCP	diode compression point
CF	crest factor (1/duty_cycle) of the RF signal
A, B, C	modulation dependent linearization parameters
Polarization ϕ	ϕ rotation around probe axis
Polarization θ	θ rotation around an axis that is in the plane normal to probe axis (at measurement center), i.e., $\theta = 0$ is normal to probe axis

Calibration is Performed According to the Following Standards:

- IEEE Std 1528-2003, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", December 2003
- IEC 62209-1, "Procedure to measure the Specific Absorption Rate (SAR) for hand-held devices used in close proximity to the ear (frequency range of 300 MHz to 3 GHz)", February 2005

Methods Applied and Interpretation of Parameters:

- NORM_{x,y,z}**: Assessed for E-field polarization $\theta = 0$ ($f \leq 900$ MHz in TEM-cell; $f > 1800$ MHz: R22 waveguide). NORM_{x,y,z} are only intermediate values, i.e., the uncertainties of NORM_{x,y,z} does not affect the E^2 -field uncertainty inside TSL (see below *ConvF*).
- NORM(f)_{x,y,z}** = NORM_{x,y,z} * frequency_response (see Frequency Response Chart). This linearization is implemented in DASY4 software versions later than 4.2. The uncertainty of the frequency response is included in the stated uncertainty of *ConvF*.
- DCP_{x,y,z}**: DCP are numerical linearization parameters assessed based on the data of power sweep with CW signal (no uncertainty required). DCP does not depend on frequency nor media.
- PAR**: PAR is the Peak to Average Ratio that is not calibrated but determined based on the signal characteristics
- A_{x,y,z}; B_{x,y,z}; C_{x,y,z}** are numerical linearization parameters in dB assessed based on the data of power sweep for specific modulation signal. The parameters do not depend on frequency nor media.
- VR**: VR is the validity range of the calibration related to the average diode voltage or DAE voltage in mV.
- ConvF and Boundary Effect Parameters**: Assessed in flat phantom using E-field (or Temperature Transfer Standard for $f \leq 800$ MHz) and inside waveguide using analytical field distributions based on power measurements for $f > 800$ MHz. The same setups are used for assessment of the parameters applied for boundary compensation (alpha, depth) of which typical uncertainty values are given. These parameters are used in DASY4 software to improve probe accuracy close to the boundary. The sensitivity in TSL corresponds to NORM_{x,y,z} * ConvF whereby the uncertainty corresponds to that given for ConvF. A frequency dependent ConvF is used in DASY version 4.4 and higher which allows extending the validity from ± 50 MHz to ± 100 MHz.
- Spherical isotropy (3D deviation from isotropy)**: in a field of low gradients realized using a flat phantom exposed by a patch antenna.
- Sensor Offset**: The sensor offset corresponds to the offset of virtual measurement center from the probe tip (on probe axis). No tolerance required.

Probe EX3DV4

SN:3590

Manufactured: March 23, 2009
Calibrated: February 25, 2011

Calibrated for DASY/EASY Systems
(Note: non-compatible with DASY2 system!)

DASY/EASY - Parameters of Probe: EX3DV4 - SN:3590

Basic Calibration Parameters

	Sensor X	Sensor Y	Sensor Z	Unc (k=2)
Norm ($\mu\text{V}/(\text{V/m})^2$) ^A	0.51	0.48	0.51	$\pm 10.1 \%$
DCP (mV) ^B	94.6	95.5	92.8	

Modulation Calibration Parameters

UID	Communication System Name	PAR		A dB	B dB	C dB	VR mV	Unc ^E (k=2)
10000	CW	0.00	X	0.00	0.00	1.00	119.0	$\pm 2.7 \%$
			Y	0.00	0.00	1.00	141.4	
			Z	0.00	0.00	1.00	115.0	

The reported uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor $k=2$, which for a normal distribution corresponds to a coverage probability of approximately 95%.

^A The uncertainties of NormX,Y,Z do not affect the E^2 -field uncertainty inside TSL (see Pages 5 and 6).

^B Numerical linearization parameter; uncertainty not required.

^E Uncertainty is determined using the max. deviation from linear response applying rectangular distribution and is expressed for the square of the field value.

DASY/EASY - Parameters of Probe: EX3DV4 - SN:3590

Calibration Parameter Determined in Head Tissue Simulating Media

f (MHz) ^C	Relative Permittivity ^F	Conductivity (S/m) ^F	ConvF X	ConvF Y	ConvF Z	Alpha	Depth (mm)	Unct. (k=2)
835	41.5	0.90	10.21	10.21	10.21	0.56	0.68	± 12.0 %
1640	40.3	1.29	9.25	9.25	9.25	0.68	0.60	± 12.0 %
1750	40.1	1.37	9.03	9.03	9.03	0.79	0.58	± 12.0 %
1950	40.0	1.40	8.45	8.45	8.45	0.55	0.66	± 12.0 %
2300	39.5	1.67	8.14	8.14	8.14	0.40	0.80	± 12.0 %
2450	39.2	1.80	7.73	7.73	7.73	0.29	1.00	± 12.0 %
2600	39.0	1.96	7.53	7.53	7.53	0.28	1.06	± 12.0 %
3500	37.9	2.91	7.55	7.55	7.55	0.36	1.03	± 13.1 %
5200	36.0	4.66	5.51	5.51	5.51	0.30	1.80	± 13.1 %
5300	35.9	4.76	5.17	5.17	5.17	0.30	1.80	± 13.1 %
5500	35.6	4.96	5.00	5.00	5.00	0.40	1.80	± 13.1 %
5600	35.5	5.07	4.52	4.52	4.52	0.50	1.80	± 13.1 %
5800	35.3	5.27	4.53	4.53	4.53	0.50	1.80	± 13.1 %

^C Frequency validity of ± 100 MHz only applies for DASY v4.4 and higher (see Page 2), else it is restricted to ± 50 MHz. The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band.

^F At frequencies below 3 GHz, the validity of tissue parameters (ϵ and σ) can be relaxed to ± 10% if liquid compensation formula is applied to measured SAR values. At frequencies above 3 GHz, the validity of tissue parameters (ϵ and σ) is restricted to ± 5%. The uncertainty is the RSS of the ConvF uncertainty for indicated target tissue parameters.

DASY/EASY - Parameters of Probe: EX3DV4- SN:3590

Calibration Parameter Determined in Body Tissue Simulating Media

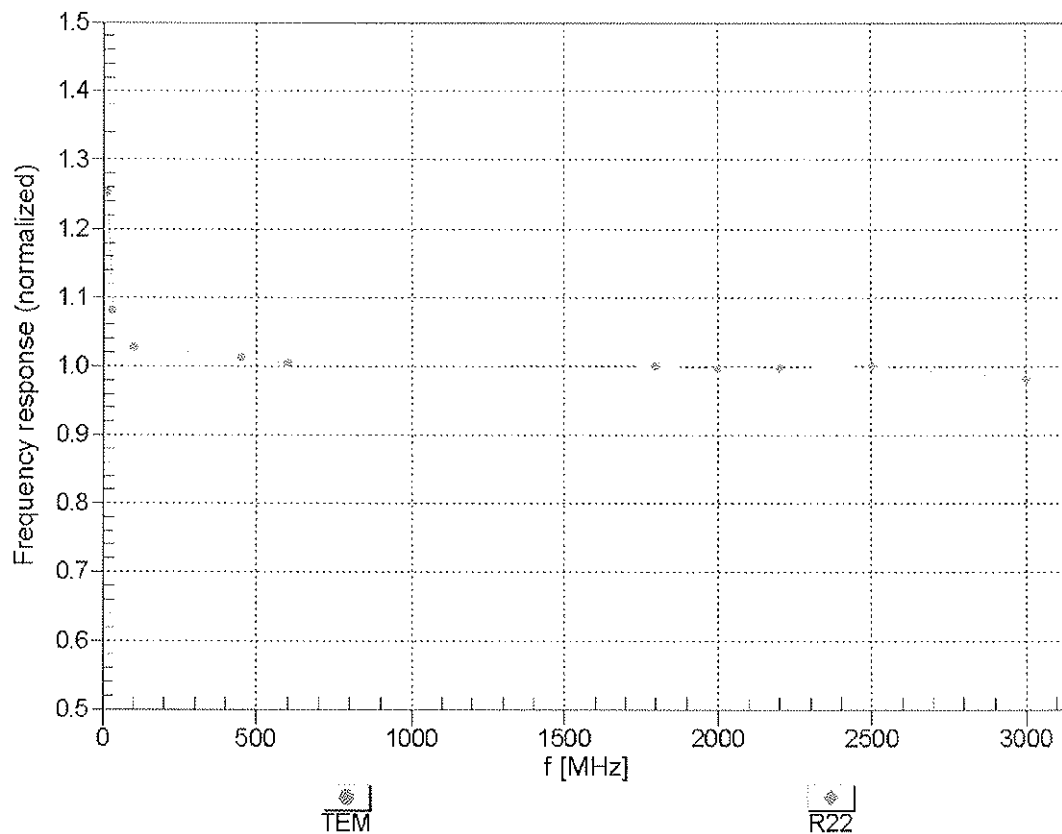
f (MHz) ^c	Relative Permittivity ^f	Conductivity (S/m) ^f	ConvF X	ConvF Y	ConvF Z	Alpha	Depth (mm)	Unct. (k=2)
835	55.2	0.97	10.32	10.32	10.32	0.38	0.82	± 12.0 %
1640	53.8	1.40	9.72	9.72	9.72	0.51	0.79	± 12.0 %
1750	53.4	1.49	8.77	8.77	8.77	0.37	0.92	± 12.0 %
1950	53.3	1.52	8.49	8.49	8.49	0.60	0.67	± 12.0 %
2300	52.9	1.81	8.08	8.08	8.08	0.30	1.00	± 12.0 %
2450	52.7	1.95	7.91	7.91	7.91	0.42	0.82	± 12.0 %
2600	52.5	2.16	7.78	7.78	7.78	0.25	1.17	± 12.0 %
3500	51.3	3.31	7.14	7.14	7.14	0.43	0.96	± 13.1 %
5200	49.0	5.30	4.81	4.81	4.81	0.50	1.90	± 13.1 %
5300	48.9	5.42	4.56	4.56	4.56	0.50	1.90	± 13.1 %
5500	48.6	5.65	4.32	4.32	4.32	0.50	1.90	± 13.1 %
5600	48.5	5.77	4.01	4.01	4.01	0.60	1.90	± 13.1 %
5800	48.2	6.00	4.55	4.55	4.55	0.50	1.90	± 13.1 %

^c Frequency validity of ± 100 MHz only applies for DASY v4.4 and higher (see Page 2), else it is restricted to ± 50 MHz. The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band.

^f At frequencies below 3 GHz, the validity of tissue parameters (ϵ and σ) can be relaxed to ± 10% if liquid compensation formula is applied to measured SAR values. At frequencies above 3 GHz, the validity of tissue parameters (ϵ and σ) is restricted to ± 5%. The uncertainty is the RSS of the ConvF uncertainty for indicated target tissue parameters.

Frequency Response of E-Field

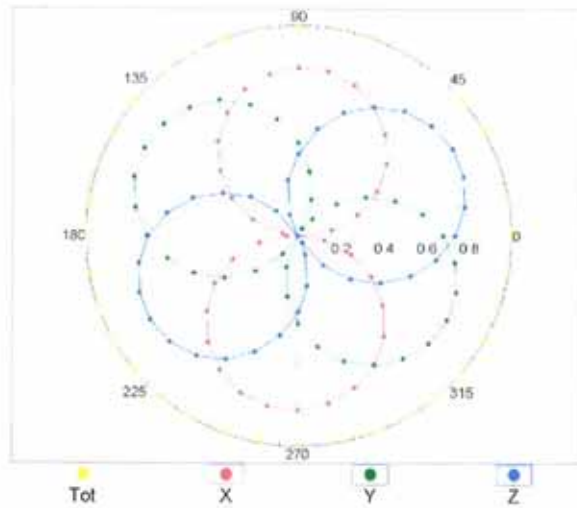
(TEM-Cell:ifi110 EXX, Waveguide: R22)



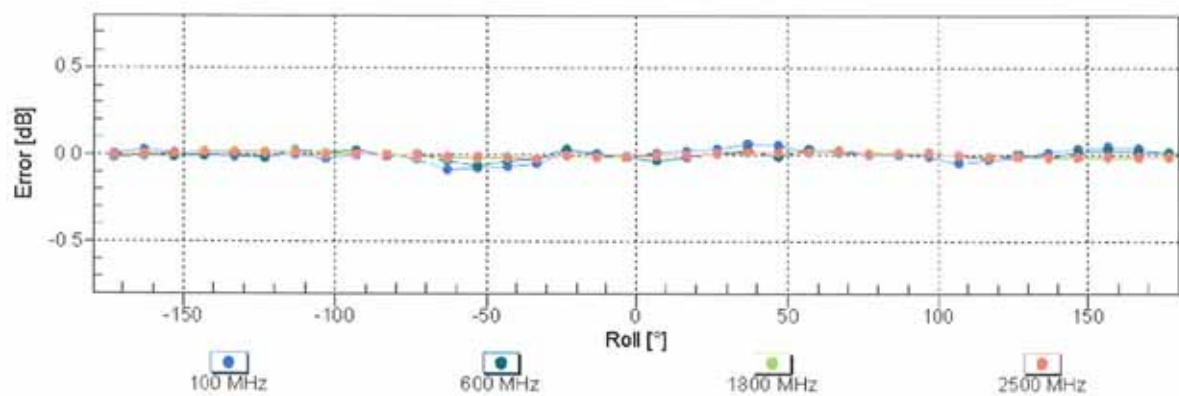
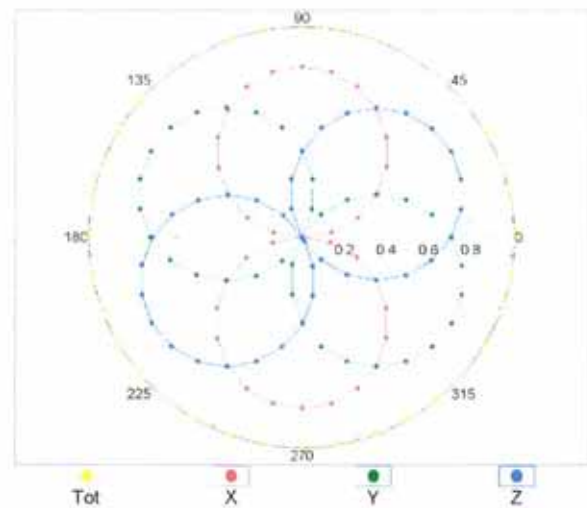
Uncertainty of Frequency Response of E-field: $\pm 6.3\%$ ($k=2$)

Receiving Pattern (ϕ), $\vartheta = 0^\circ$

f=600 MHz, TEM



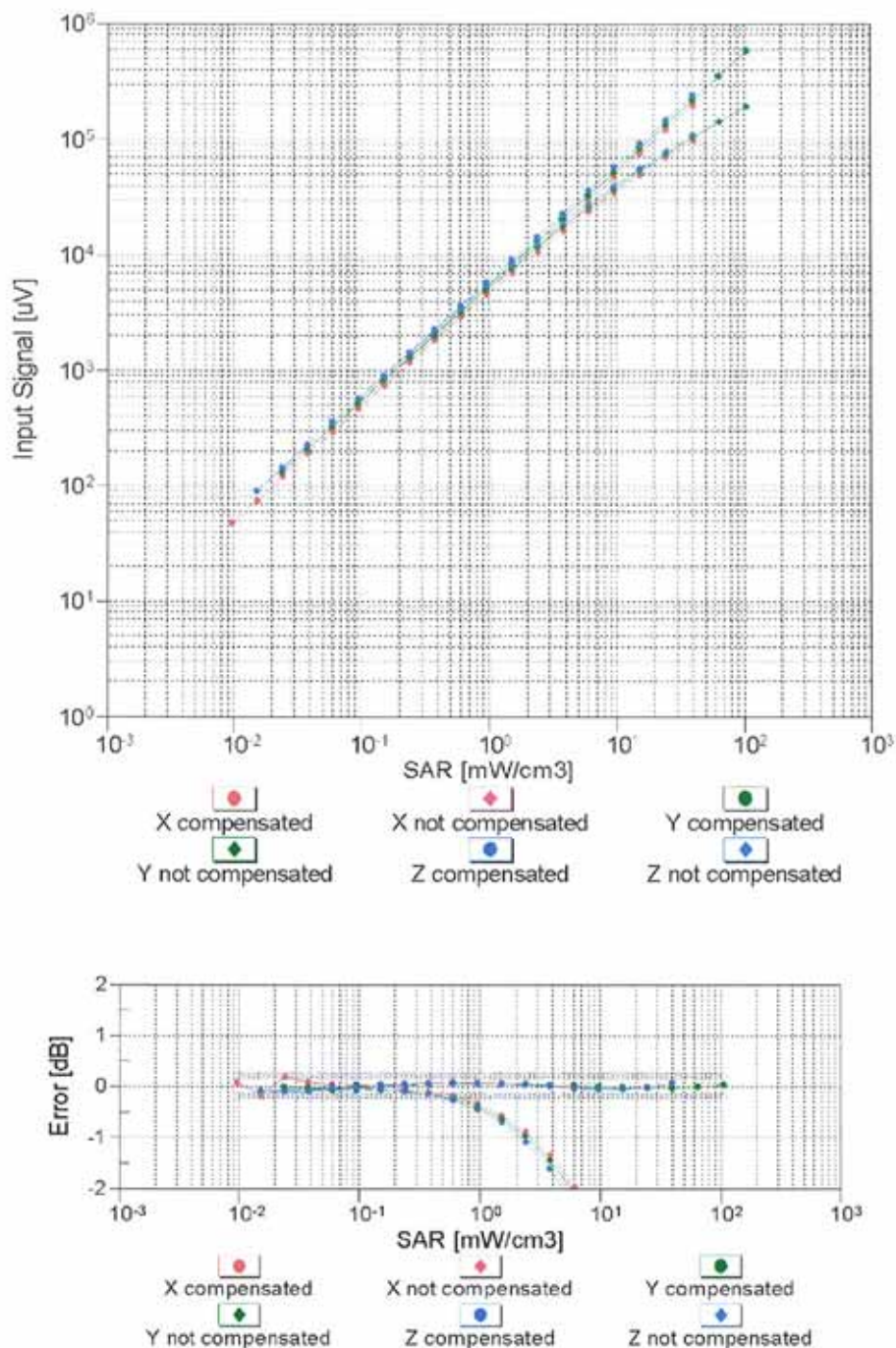
f=1800 MHz, R22



Uncertainty of Axial Isotropy Assessment: $\pm 0.5\%$ ($k=2$)

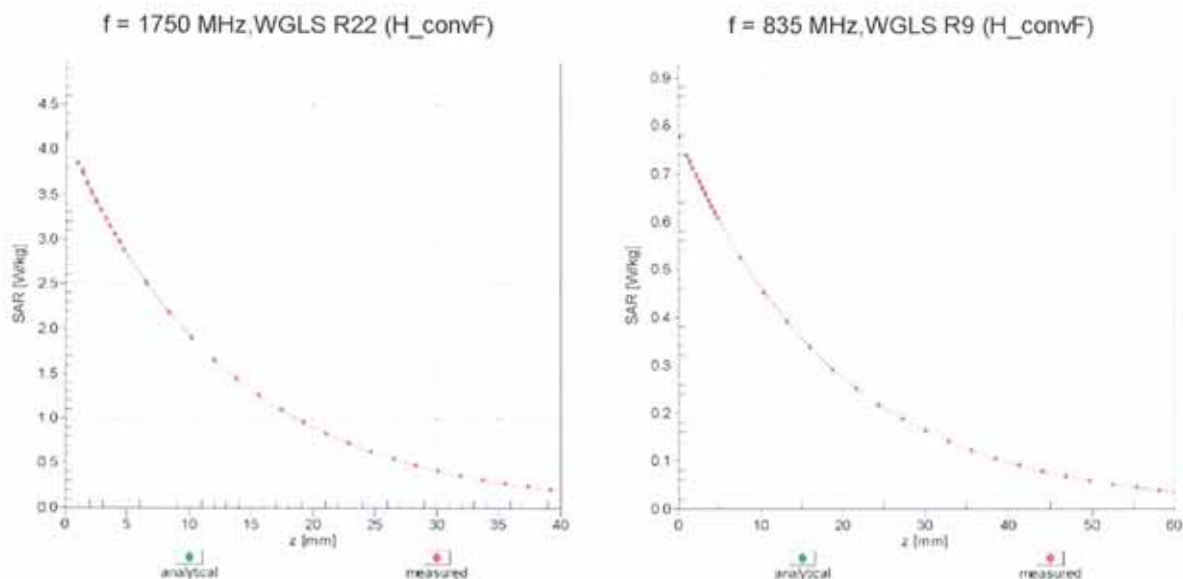
Dynamic Range f(SAR_{head})

(TEM cell , f = 900 MHz)



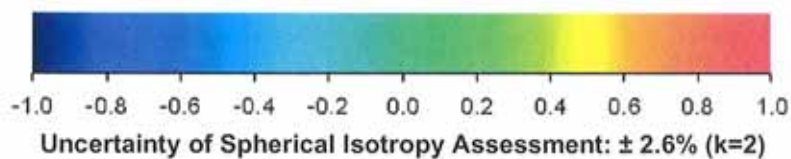
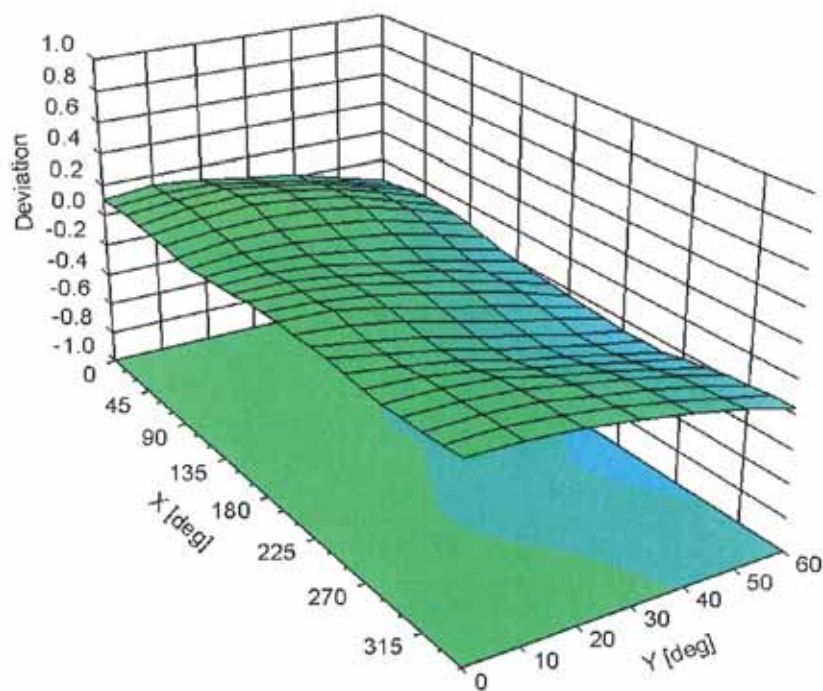
Uncertainty of Linearity Assessment: $\pm 0.6\%$ (k=2)

Conversion Factor Assessment



Deviation from Isotropy in Air

Error (ϕ, ϑ), $f = 900 \text{ MHz}$



DASY/EASY - Parameters of Probe: EX3DV4 - SN:3590

Other Probe Parameters

Sensor Arrangement	Triangular
Connector Angle (°)	Not applicable
Mechanical Surface Detection Mode	enabled
Optical Surface Detection Mode	disabled
Probe Overall Length	337 mm
Probe Body Diameter	10 mm
Tip Length	9 mm
Tip Diameter	2.5 mm
Probe Tip to Sensor X Calibration Point	1 mm
Probe Tip to Sensor Y Calibration Point	1 mm
Probe Tip to Sensor Z Calibration Point	1 mm
Recommended Measurement Distance from Surface	2 mm

D3: DAE

IMPORTANT NOTICE

USAGE OF THE DAE 3

The DAE unit is a delicate, high precision instrument and requires careful treatment by the user. There are no serviceable parts inside the DAE. Special attention shall be given to the following points:

Battery Exchange: The battery cover of the DAE3 unit is connected to a fragile 3-pin battery connector. Customer is responsible to apply utmost caution not to bend or damage the connector when changing batteries.

Shipping of the DAE: Before shipping the DAE to SPEAG for calibration the customer shall remove the batteries and pack the DAE in an antistatic bag. This antistatic bag shall then be packed into a larger box or container which protects the DAE from impacts transportation. The package shall be marked to indicate that a fragile instrument is inside.

E-Stop Failures: Touch detection may be malfunctioning due to broken magnets in the E-stop. Rough handling of the E-stop may lead to damage of these magnets. Touch and collision errors are often caused by dust and dirt accumulated in the E-stop. To prevent E-stop failure, Customer shall always mount the probe to the DAE carefully and keep the DAE unit in a non-dusty environment if not used for measurements.

Repair: Minor repairs are performed at no extra cost during the annual calibration. However, SPEAG reserves the right to charge for any repair especially if rough unprofessional handling caused the defect.

DASY Configuration Files: Since the exact values of the DAE input resistances, as measured during the calibration procedure of a DAE unit, are not used by the DASY software, a nominal value of 200 MOhm is given in the corresponding configuration file.

Important Note:

Warranty and calibration is void if the DAE unit is disassembled partly or fully by the Customer.

Important Note:

Never attempt to grease or oil the E-stop assembly. Cleaning and readjusting of the E-stop assembly is allowed by certified SPEAG personnel only and is part of the annual calibration procedure.

Important Note:

To prevent damage of the DAE probe connector pins, use great care when installing the probe to the DAE. Carefully connect the probe with the connector notch oriented in the mating position. Avoid any rotational movement of the probe body versus the DAE while turning the locking nut of the connector. The same care shall be used when disconnecting the probe from the DAE.



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Accreditation No.: SCS 108

Client **BV-ADT (Auden)**

Certificate No: DAE3-579_Sep10

CALIBRATION CERTIFICATE

Object **DAE3 - SD 000 D03 AA - SN: 579**

Calibration procedure(s) **QA CAL-06.v22
Calibration procedure for the data acquisition electronics (DAE)**

Calibration date: **September 20, 2010**

This calibration certificate documents the traceability to national standards, which realize the physical units of measurements (SI).
The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.

All calibrations have been conducted in the closed laboratory facility: environment temperature $(22 \pm 3)^{\circ}\text{C}$ and humidity $< 70\%$.

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID #	Cal Date (Certificate No.)	Scheduled Calibration
Keithley Multimeter Type 2001	SN: 0810278	1-Oct-09 (No: 9055)	Oct-10
Secondary Standards	ID #	Check Date (in house)	Scheduled Check
Calibrator Box V1.1	SE UMS 006 AB 1004	07-Jun-10 (in house check)	In house check: Jun-11

	Name	Function	Signature
Calibrated by:	Dominique Steffen	Technician	
Approved by:	Fin Bomholt	R&D Director	

Issued: September 20, 2010

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Glossary

DAE data acquisition electronics
Connector angle information used in DASY system to align probe sensor X to the robot coordinate system.

Methods Applied and Interpretation of Parameters

- *DC Voltage Measurement:* Calibration Factor assessed for use in DASY system by comparison with a calibrated instrument traceable to national standards. The figure given corresponds to the full scale range of the voltmeter in the respective range.
- *Connector angle:* The angle of the connector is assessed measuring the angle mechanically by a tool inserted. Uncertainty is not required.
- The following parameters as documented in the Appendix contain technical information as a result from the performance test and require no uncertainty.
 - *DC Voltage Measurement Linearity:* Verification of the Linearity at +10% and -10% of the nominal calibration voltage. Influence of offset voltage is included in this measurement.
 - *Common mode sensitivity:* Influence of a positive or negative common mode voltage on the differential measurement.
 - *Channel separation:* Influence of a voltage on the neighbor channels not subject to an input voltage.
 - *AD Converter Values with inputs shorted:* Values on the internal AD converter corresponding to zero input voltage
 - *Input Offset Measurement:* Output voltage and statistical results over a large number of zero voltage measurements.
 - *Input Offset Current:* Typical value for information; Maximum channel input offset current, not considering the input resistance.
 - *Input resistance:* Typical value for information: DAE input resistance at the connector, during internal auto-zeroing and during measurement.
 - *Low Battery Alarm Voltage:* Typical value for information. Below this voltage, a battery alarm signal is generated.
 - *Power consumption:* Typical value for information. Supply currents in various operating modes.

DC Voltage Measurement

A/D - Converter Resolution nominal

High Range: 1LSB = 6.1 μ V, full range = -100...+300 mV

Low Range: 1LSB = 61 nV, full range = -1.....+3mV

DASY measurement parameters: Auto Zero Time: 3 sec; Measuring time: 3 sec

Calibration Factors	X	Y	Z
High Range	404.327 $\pm$ 0.1% (k=2)	404.379 $\pm$ 0.1% (k=2)	404.160 $\pm$ 0.1% (k=2)
Low Range	3.98675 $\pm$ 0.7% (k=2)	3.99301 $\pm$ 0.7% (k=2)	3.94834 $\pm$ 0.7% (k=2)

Connector Angle

Connector Angle to be used in DASY system	358.0 ° $\pm$ 1 °
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Appendix

1. DC Voltage Linearity

High Range		Reading (μV)	Difference (μV)	Error (%)
Channel X	+ Input	200003.9	0.96	0.00
Channel X	+ Input	20003.19	3.09	0.02
Channel X	- Input	-19994.55	4.75	-0.02
Channel Y	+ Input	199992.4	-0.09	-0.00
Channel Y	+ Input	19999.51	0.41	0.00
Channel Y	- Input	-19997.22	3.18	-0.02
Channel Z	+ Input	200002.0	0.91	0.00
Channel Z	+ Input	20001.93	2.03	0.01
Channel Z	- Input	-19997.58	2.82	-0.01

Low Range		Reading (μV)	Difference (μV)	Error (%)
Channel X	+ Input	2000.0	0.02	0.00
Channel X	+ Input	199.82	0.12	0.06
Channel X	- Input	-200.46	-0.56	0.28
Channel Y	+ Input	2000.3	0.47	0.02
Channel Y	+ Input	199.12	-0.78	-0.39
Channel Y	- Input	-201.36	-1.16	0.58
Channel Z	+ Input	1999.9	-0.07	-0.00
Channel Z	+ Input	199.18	-0.72	-0.36
Channel Z	- Input	-201.47	-1.47	0.73

2. Common mode sensitivity

DASY measurement parameters: Auto Zero Time: 3 sec; Measuring time: 3 sec

	Common mode Input Voltage (mV)	High Range Average Reading (μV)	Low Range Average Reading (μV)
Channel X	200	7.07	5.75
	- 200	-4.60	-6.25
Channel Y	200	9.48	9.62
	- 200	-10.39	-10.96
Channel Z	200	8.79	8.42
	- 200	-9.64	-9.80

3. Channel separation

DASY measurement parameters: Auto Zero Time: 3 sec; Measuring time: 3 sec

	Input Voltage (mV)	Channel X (μV)	Channel Y (μV)	Channel Z (μV)
Channel X	200	-	0.03	0.35
Channel Y	200	1.14	-	2.31
Channel Z	200	2.01	0.80	-

4. AD-Converter Values with inputs shorted

DASY measurement parameters: Auto Zero Time: 3 sec; Measuring time: 3 sec

	High Range (LSB)	Low Range (LSB)
Channel X	16343	16314
Channel Y	16194	16427
Channel Z	15816	16265

5. Input Offset Measurement

DASY measurement parameters: Auto Zero Time: 3 sec; Measuring time: 3 sec

Input 10M Ω

	Average (μ V)	min. Offset (μ V)	max. Offset (μ V)	Std. Deviation (μ V)
Channel X	-0.70	-1.94	0.80	0.49
Channel Y	-1.55	-2.12	-0.66	0.27
Channel Z	0.57	-0.11	5.61	0.62

6. Input Offset Current

Nominal Input circuitry offset current on all channels: <25fA

7. Input Resistance (Typical values for information)

	Zeroing (kOhm)	Measuring (MOhm)
Channel X	200	200
Channel Y	200	200
Channel Z	200	200

8. Low Battery Alarm Voltage (Typical values for information)

Typical values	Alarm Level (VDC)
Supply (+ Vcc)	+7.9
Supply (- Vcc)	-7.6

9. Power Consumption (Typical values for information)

Typical values	Switched off (mA)	Stand by (mA)	Transmitting (mA)
Supply (+ Vcc)	+0.01	+6	+14
Supply (- Vcc)	-0.01	-8	-9

D4: SYSTEM VALIDATION DIPOLE



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Accreditation No.: **SCS 108**

Client **B.V. ADT (Auden)**

Certificate No: **D835V2-4d021_Mar11**

CALIBRATION CERTIFICATE

Object **D835V2 - SN: 4d021**

Calibration procedure(s) **QA CAL-05.v8**
Calibration procedure for dipole validation kits

Calibration date: **March 23, 2011**

This calibration certificate documents the traceability to national standards, which realize the physical units of measurements (SI).
The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.

All calibrations have been conducted in the closed laboratory facility: environment temperature (22 ± 3)°C and humidity < 70%.

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID #	Cal Date (Certificate No.)	Scheduled Calibration
Power meter EPM-442A	GB37480704	06-Oct-10 (No. 217-01266)	Oct-11
Power sensor HP 8481A	US37292783	06-Oct-10 (No. 217-01266)	Oct-11
Reference 20 dB Attenuator	SN: 5086 (20g)	30-Mar-10 (No. 217-01158)	Mar-11
Type-N mismatch combination	SN: 5047.2 / 06327	30-Mar-10 (No. 217-01162)	Mar-11
Reference Probe ES3DV3	SN: 3205	30-Apr-10 (No. ES3-3205_Apr10)	Apr-11
DAE4	SN: 601	10-Jun-10 (No. DAE4-601_Jun10)	Jun-11
Secondary Standards	ID #	Check Date (in house)	Scheduled Check
Power sensor HP 8481A	MY41092317	18-Oct-02 (in house check Oct-09)	In house check: Oct-11
RF generator R&S SMT-06	100005	4-Aug-99 (in house check Oct-09)	In house check: Oct-11
Network Analyzer HP 8753E	US37390585 S4206	18-Oct-01 (in house check Oct-10)	In house check: Oct-11

Calibrated by: **Dimce Iliev** **Laboratory Technician**

Signature

Approved by: **Katja Pokovic** **Technical Manager**

Issued: March 23, 2011

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Accreditation No.: **SCS 108**

Glossary:

TSL	tissue simulating liquid
ConvF	sensitivity in TSL / NORM x,y,z
N/A	not applicable or not measured

Calibration is Performed According to the Following Standards:

- a) IEEE Std 1528-2003, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", December 2003
- b) IEC 62209-1, "Procedure to measure the Specific Absorption Rate (SAR) for hand-held devices used in close proximity to the ear (frequency range of 300 MHz to 3 GHz)", February 2005
- c) Federal Communications Commission Office of Engineering & Technology (FCC OET), "Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields; Additional Information for Evaluating Compliance of Mobile and Portable Devices with FCC Limits for Human Exposure to Radiofrequency Emissions", Supplement C (Edition 01-01) to Bulletin 65

Additional Documentation:

- d) DASY4/5 System Handbook

Methods Applied and Interpretation of Parameters:

- *Measurement Conditions:* Further details are available from the Validation Report at the end of the certificate. All figures stated in the certificate are valid at the frequency indicated.
- *Antenna Parameters with TSL:* The dipole is mounted with the spacer to position its feed point exactly below the center marking of the flat phantom section, with the arms oriented parallel to the body axis.
- *Feed Point Impedance and Return Loss:* These parameters are measured with the dipole positioned under the liquid filled phantom. The impedance stated is transformed from the measurement at the SMA connector to the feed point. The Return Loss ensures low reflected power. No uncertainty required.
- *Electrical Delay:* One-way delay between the SMA connector and the antenna feed point. No uncertainty required.
- *SAR measured:* SAR measured at the stated antenna input power.
- *SAR normalized:* SAR as measured, normalized to an input power of 1 W at the antenna connector.
- *SAR for nominal TSL parameters:* The measured TSL parameters are used to calculate the nominal SAR result.

Measurement Conditions

DASY system configuration, as far as not given on page 1.

DASY Version	DASY5	V52.6.2
Extrapolation	Advanced Extrapolation	
Phantom	Modular Flat Phantom V4.9	
Distance Dipole Center - TSL	15 mm	with Spacer
Zoom Scan Resolution	dx, dy, dz = 5 mm	
Frequency	835 MHz $\pm$ 1 MHz	

Head TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	41.5	0.90 mho/m
Measured Head TSL parameters	(22.0 $\pm$ 0.2) °C	41.0 $\pm$ 6 %	0.89 mho/m $\pm$ 6 %
Head TSL temperature during test	(21.8 $\pm$ 0.2) °C	----	----

SAR result with Head TSL

SAR averaged over 1 cm³ (1 g) of Head TSL	Condition	
SAR measured	250 mW input power	2.40 mW / g
SAR normalized	normalized to 1W	9.60 mW / g
SAR for nominal Head TSL parameters	normalized to 1W	9.65 mW / g $\pm$ 17.0 % (k=2)

SAR averaged over 10 cm³ (10 g) of Head TSL	condition	
SAR measured	250 mW input power	1.57 mW / g
SAR normalized	normalized to 1W	6.28 mW / g
SAR for nominal Head TSL parameters	normalized to 1W	6.31 mW / g $\pm$ 16.5 % (k=2)

Body TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Body TSL parameters	22.0 °C	55.2	0.97 mho/m
Measured Body TSL parameters	(22.0 ± 0.2) °C	54.3 ± 6 %	0.99 mho/m ± 6 %
Body TSL temperature during test	(21.7 ± 0.2) °C	----	----

SAR result with Body TSL

SAR averaged over 1 cm ³ (1 g) of Body TSL	Condition	
SAR measured	250 mW input power	2.56 mW / g
SAR normalized	normalized to 1W	10.2 mW / g
SAR for nominal Body TSL parameters	normalized to 1W	10.1 mW / g ± 17.0 % (k=2)

SAR averaged over 10 cm ³ (10 g) of Body TSL	condition	
SAR measured	250 mW input power	1.68 mW / g
SAR normalized	normalized to 1W	6.72 mW / g
SAR for nominal Body TSL parameters	normalized to 1W	6.63 mW / g ± 16.5 % (k=2)

Appendix

Antenna Parameters with Head TSL

Impedance, transformed to feed point	52.0 Ω - 2.0 j Ω
Return Loss	- 31.0 dB

Antenna Parameters with Body TSL

Impedance, transformed to feed point	47.9 Ω - 4.2 j Ω
Return Loss	- 26.4 dB

General Antenna Parameters and Design

Electrical Delay (one direction)	1.393 ns
----------------------------------	----------

After long term use with 100W radiated power, only a slight warming of the dipole near the feedpoint can be measured.

The dipole is made of standard semirigid coaxial cable. The center conductor of the feeding line is directly connected to the second arm of the dipole. The antenna is therefore short-circuited for DC-signals.

No excessive force must be applied to the dipole arms, because they might bend or the soldered connections near the feedpoint may be damaged.

Design Modification by End User

The dipole has been modified with Teflon Rings (TR) placed within identified markings close to the end of each dipole arm. Calibration has been performed with TR attached to the dipole.

Additional EUT Data

Manufactured by	SPEAG
Manufactured on	April 22, 2004

DASY5 Validation Report for Head TSL

Date/Time: 18.03.2011 11:51:13

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN:4d021

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

Medium: HSL900

Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 0.89 \text{ mho/m}$; $\epsilon_r = 40.9$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: ES3DV3 - SN3205; ConvF(6.03, 6.03, 6.03); Calibrated: 30.04.2010
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 10.06.2010
- Phantom: Flat Phantom 4.9L; Type: QD000P49AA; Serial: 1001
- Measurement SW: DASY52, V52.6.2 Build (424)
- Postprocessing SW: SEMCAD X, V14.4.4 Build (2829)

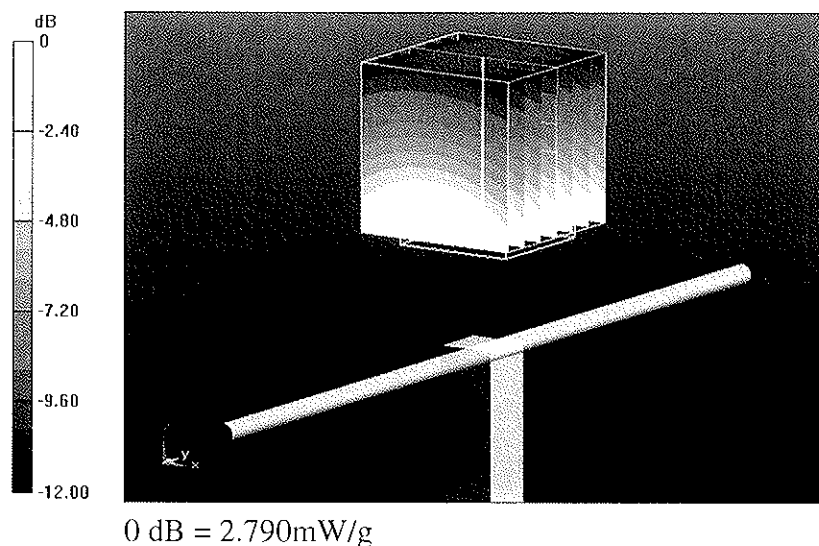
Pin=250 mW /d=15mm, dist=3.0mm (ES-Probe)/Zoom Scan (7x7x7) /Cube 0: Measurement
grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 57.571 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 3.583 W/kg

SAR(1 g) = 2.4 mW/g; SAR(10 g) = 1.57 mW/g

Maximum value of SAR (measured) = 2.792 mW/g



Impedance Measurement Plot for Head TSL

18 Mar 2011 10:32:43
 CH1 S11 1 U FS 1: 51.996 Ω -2.0463 Ω 93.120 pF 835.000 000 MHz

%
 Del
 Cor

Avg
 16

↑

CH2 S11 LOG 5 dB/REF -20 dB 1: -31.025 dB 835.000 000 MHz

Cor

Avg
 16

↑

START 835.000 000 MHz

STOP 1.188.000 000 MHz

DASY5 Validation Report for Body TSL

Date/Time: 23.03.2011 10:45:49

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN:4d021

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

Medium: MSL900

Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 0.99 \text{ mho/m}$; $\epsilon_r = 54.3$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: ES3DV3 - SN3205; ConvF(5.86, 5.86, 5.86); Calibrated: 30.04.2010
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 10.06.2010
- Phantom: Flat Phantom 4.9L; Type: QD000P49AA; Serial: 1001
- Measurement SW: DASY52, V52.6.2 Build (424)
- Postprocessing SW: SEMCAD X, V14.4.4 Build (2829)

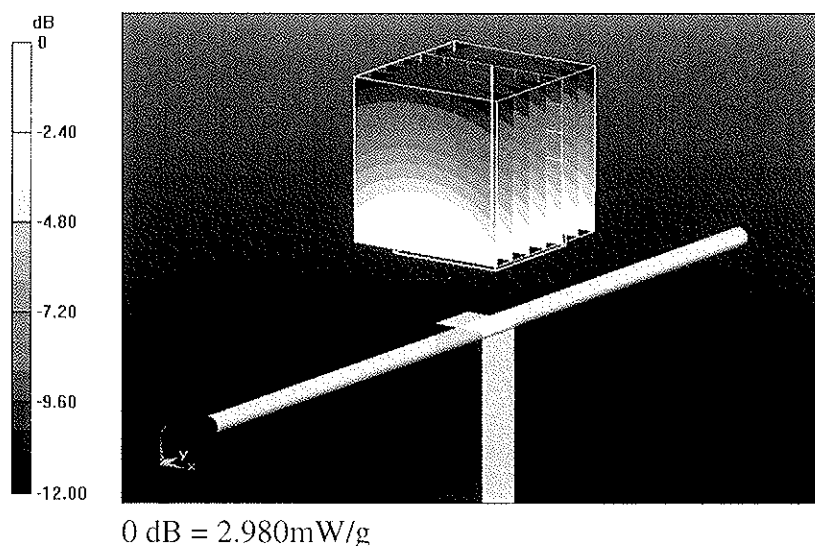
Pin=250 mW /d=15mm, dist=3.0mm (ES-Probe)/Zoom Scan (7x7x7) /Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 56.615 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 3.794 W/kg

SAR(1 g) = 2.56 mW/g; SAR(10 g) = 1.68 mW/g

Maximum value of SAR (measured) = 2.981 mW/g



Impedance Measurement Plot for Body TSL

23 Mar 2011 10:18:11
 [CH1] S11 1 U FS 1: 47.865 Ω -4.1953 Ω 45.433 pF 835.000 000 MHz

*
 De1
 Cor

Avg
 16

↑

CH2 S11 LOG 5 dB/REF -20 dB 1: -25.372 dB 835.000 000 MHz

Cor

Avg
 16

↑

START 635.000 000 MHz

STOP 1 100.000 000 MHz



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Accreditation No.: **SCS 108**

Client **B.V. ADT (Auden)**

Certificate No: **D1900V2-5d022_Jan11**

CALIBRATION CERTIFICATE

Object **D1900V2 - SN: 5d022**

Calibration procedure(s) **QA CAL-05.v8
Calibration procedure for dipole validation kits**

Calibration date: **January 26, 2011**

This calibration certificate documents the traceability to national standards, which realize the physical units of measurements (SI).
The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.

All calibrations have been conducted in the closed laboratory facility: environment temperature $(22 \pm 3)^{\circ}\text{C}$ and humidity $< 70\%$.

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID #	Cal Date (Certificate No.)	Scheduled Calibration
Power meter EPM-442A	GB37480704	06-Oct-10 (No. 217-01266)	Oct-11
Power sensor HP 8481A	US37292783	06-Oct-10 (No. 217-01266)	Oct-11
Reference 20 dB Attenuator	SN: 5086 (20g)	30-Mar-10 (No. 217-01158)	Mar-11
Type-N mismatch combination	SN: 5047.2 / 06327	30-Mar-10 (No. 217-01162)	Mar-11
Reference Probe ES3DV3	SN: 3205	30-Apr-10 (No. ES3-3205_Apr10)	Apr-11
DAE4	SN: 601	10-Jun-10 (No. DAE4-601_Jun10)	Jun-11
Secondary Standards	ID #	Check Date (in house)	Scheduled Check
Power sensor HP 8481A	MY41092317	18-Oct-02 (in house check Oct-09)	In house check: Oct-11
RF generator R&S SMT-06	100005	4-Aug-99 (in house check Oct-09)	In house check: Oct-11
Network Analyzer HP 8753E	US37390585 S4206	18-Oct-01 (in house check Oct-10)	In house check: Oct-11

Calibrated by: **Dimce Iliev** **Dimce Iliev** **Laboratory Technician** **D. Iliev**

Approved by: **Katja Pokovic** **Katja Pokovic** **Technical Manager** **K. Pokovic**

Issued: January 27, 2011

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Accreditation No.: **SCS 108**

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Glossary:

TSL	tissue simulating liquid
ConvF	sensitivity in TSL / NORM x,y,z
N/A	not applicable or not measured

Calibration is Performed According to the Following Standards:

- IEEE Std 1528-2003, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", December 2003
- IEC 62209-1, "Procedure to measure the Specific Absorption Rate (SAR) for hand-held devices used in close proximity to the ear (frequency range of 300 MHz to 3 GHz)", February 2005
- Federal Communications Commission Office of Engineering & Technology (FCC OET), "Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields; Additional Information for Evaluating Compliance of Mobile and Portable Devices with FCC Limits for Human Exposure to Radiofrequency Emissions", Supplement C (Edition 01-01) to Bulletin 65

Additional Documentation:

- DASY4/5 System Handbook

Methods Applied and Interpretation of Parameters:

- Measurement Conditions:** Further details are available from the Validation Report at the end of the certificate. All figures stated in the certificate are valid at the frequency indicated.
- Antenna Parameters with TSL:** The dipole is mounted with the spacer to position its feed point exactly below the center marking of the flat phantom section, with the arms oriented parallel to the body axis.
- Feed Point Impedance and Return Loss:** These parameters are measured with the dipole positioned under the liquid filled phantom. The impedance stated is transformed from the measurement at the SMA connector to the feed point. The Return Loss ensures low reflected power. No uncertainty required.
- Electrical Delay:** One-way delay between the SMA connector and the antenna feed point. No uncertainty required.
- SAR measured:** SAR measured at the stated antenna input power.
- SAR normalized:** SAR as measured, normalized to an input power of 1 W at the antenna connector.
- SAR for nominal TSL parameters:** The measured TSL parameters are used to calculate the nominal SAR result.

Measurement Conditions

DASY system configuration, as far as not given on page 1.

DASY Version	DASY5	V52.6
Extrapolation	Advanced Extrapolation	
Phantom	Modular Flat Phantom V5.0	
Distance Dipole Center - TSL	10 mm	with Spacer
Zoom Scan Resolution	dx, dy, dz = 5 mm	
Frequency	1900 MHz $\pm$ 1 MHz	

Head TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	40.0	1.40 mho/m
Measured Head TSL parameters	(22.0 $\pm$ 0.2) °C	38.5 $\pm$ 6 %	1.43 mho/m $\pm$ 6 %
Head TSL temperature during test	(20.5 $\pm$ 0.2) °C	----	----

SAR result with Head TSL

SAR averaged over 1 cm ³ (1 g) of Head TSL	Condition	
SAR measured	250 mW input power	10.4 mW / g
SAR normalized	normalized to 1W	41.6 mW / g
SAR for nominal Head TSL parameters	normalized to 1W	40.9 mW /g $\pm$ 17.0 % (k=2)

SAR averaged over 10 cm ³ (10 g) of Head TSL	condition	
SAR measured	250 mW input power	5.37 mW / g
SAR normalized	normalized to 1W	21.5 mW / g
SAR for nominal Head TSL parameters	normalized to 1W	21.3 mW /g $\pm$ 16.5 % (k=2)

Body TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Body TSL parameters	22.0 °C	53.3	1.52 mho/m
Measured Body TSL parameters	(22.0 ± 0.2) °C	52.9 ± 6 %	1.56 mho/m ± 6 %
Body TSL temperature during test	(20.8 ± 0.2) °C	----	----

SAR result with Body TSL

SAR averaged over 1 cm³ (1 g) of Body TSL	Condition	
SAR measured	250 mW input power	10.4 mW / g
SAR normalized	normalized to 1W	41.6 mW / g
SAR for nominal Body TSL parameters	normalized to 1W	40.9 mW / g ± 17.0 % (k=2)

SAR averaged over 10 cm³ (10 g) of Body TSL	condition	
SAR measured	250 mW input power	5.48 mW / g
SAR normalized	normalized to 1W	21.9 mW / g
SAR for nominal Body TSL parameters	normalized to 1W	21.7 mW / g ± 16.5 % (k=2)

Appendix

Antenna Parameters with Head TSL

Impedance, transformed to feed point	$51.5 \Omega + 4.0 j\Omega$
Return Loss	- 27.6 dB

Antenna Parameters with Body TSL

Impedance, transformed to feed point	$46.2 \Omega + 4.0 j\Omega$
Return Loss	- 24.9 dB

General Antenna Parameters and Design

Electrical Delay (one direction)	1.193 ns
----------------------------------	----------

After long term use with 100W radiated power, only a slight warming of the dipole near the feedpoint can be measured.

The dipole is made of standard semirigid coaxial cable. The center conductor of the feeding line is directly connected to the second arm of the dipole. The antenna is therefore short-circuited for DC-signals.

No excessive force must be applied to the dipole arms, because they might bend or the soldered connections near the feedpoint may be damaged.

Additional EUT Data

Manufactured by	SPEAG
Manufactured on	August 29, 2002

DASY5 Validation Report for Head TSL

Date/Time: 24.01.2011 11:20:43

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 1900 MHz; Type: D1900V2; Serial: D1900V2 - SN:5d022

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

Medium: HSL U12 BB

Medium parameters used: $f = 1900$ MHz; $\sigma = 1.42$ mho/m; $\epsilon_r = 38.7$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: ES3DV3 - SN3205; ConvF(5.09, 5.09, 5.09); Calibrated: 30.04.2010
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 10.06.2010
- Phantom: Flat Phantom 5.0 (front); Type: QD000P50AA; Serial: 1001
- Measurement SW: DASY52, V52.6.1 Build (408)
- Postprocessing SW: SEMCAD X, V14.4.2 Build (2595)

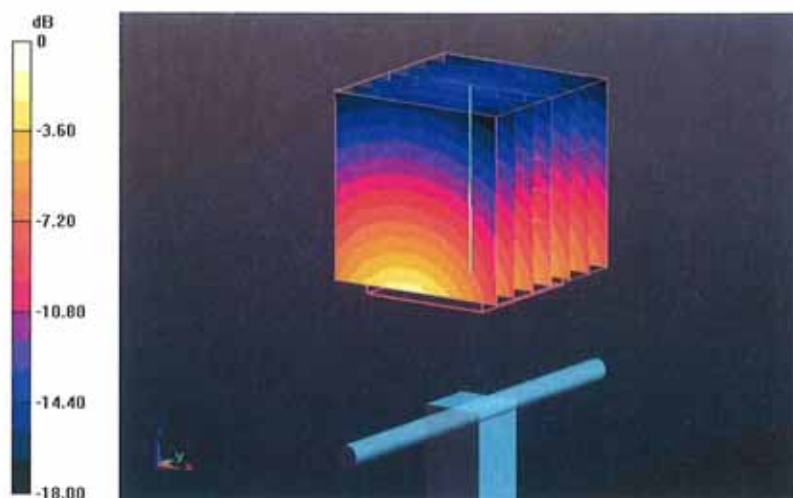
Pin=250 mW /d=10mm, dist=3.0mm (ES-Probe)/Zoom Scan (7x7x7) /Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 99.002 V/m; Power Drift = 0.02 dB

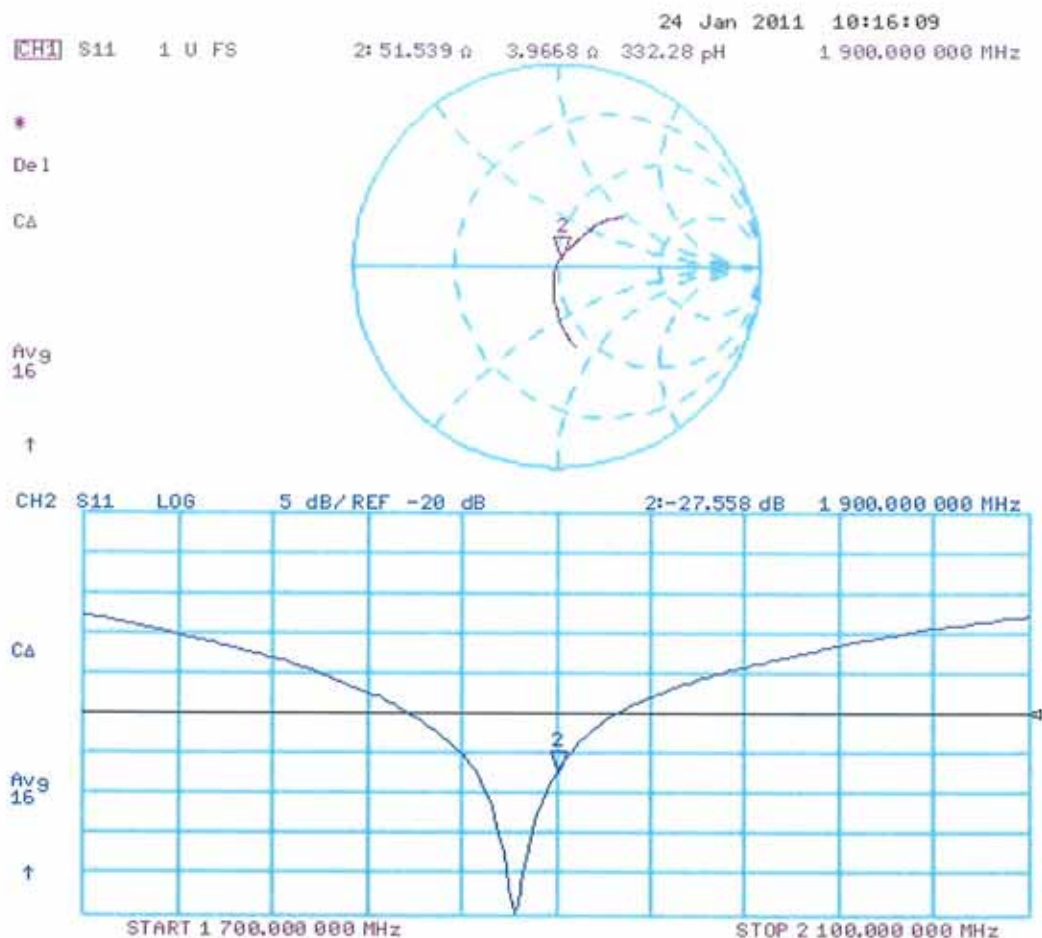
Peak SAR (extrapolated) = 19.131 W/kg

SAR(1 g) = 10.4 mW/g; SAR(10 g) = 5.37 mW/g

Maximum value of SAR (measured) = 12.963 mW/g



Impedance Measurement Plot for Head TSL



DASY5 Validation Report for Body TSL

Date/Time: 26.01.2011 12:06:07

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 1900 MHz; Type: D1900V2; Serial: D1900V2 - SN:5d022

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

Medium: MSL U12 BB

Medium parameters used: $f = 1900$ MHz; $\sigma = 1.56$ mho/m; $\epsilon_r = 53.1$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: ES3DV3 - SN3205; ConvF(4.59, 4.59, 4.59); Calibrated: 30.04.2010
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 10.06.2010
- Phantom: Flat Phantom 5.0 (back); Type: QD000P50AA; Serial: 1002
- Measurement SW: DASY52, V52.6.1 Build (408)
- Postprocessing SW: SEMCAD X, V14.4.2 Build (2595)

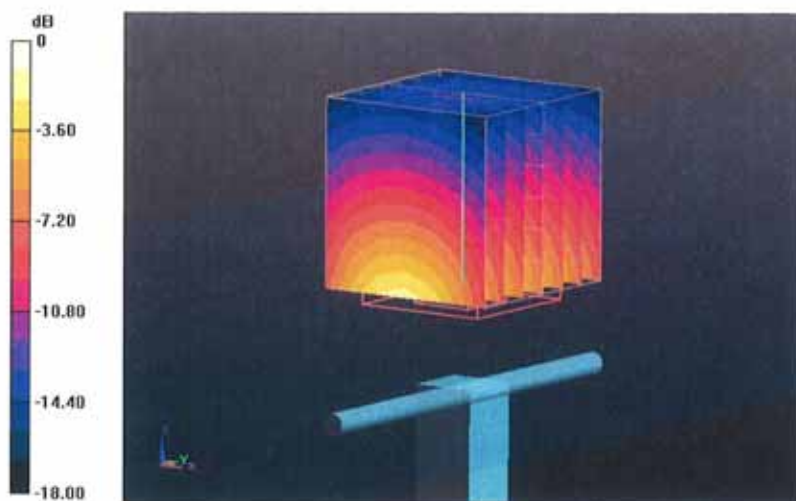
Pin=250 mW /d=10mm, dist=3.0mm (ES-Probe)/Zoom Scan (7x7x7) /Cube 0: Measurement
grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 96.936 V/m; Power Drift = -0.0021 dB

Peak SAR (extrapolated) = 17.774 W/kg

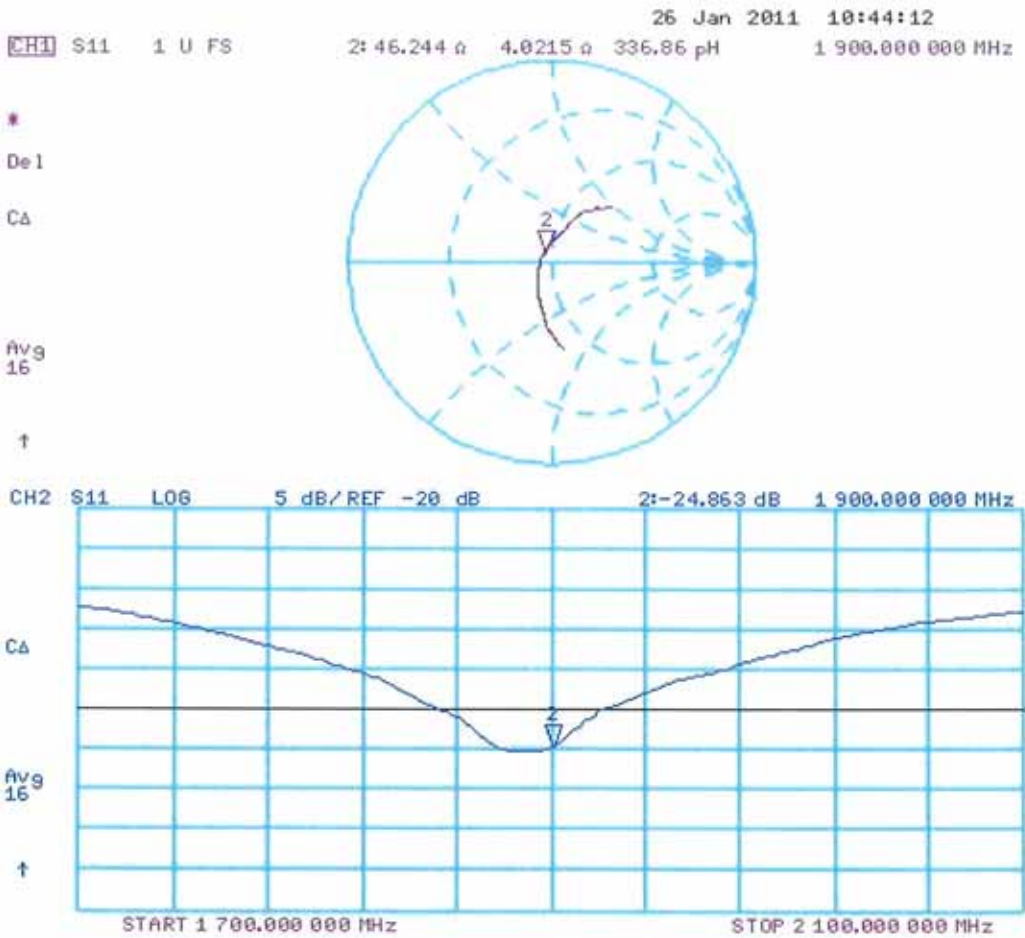
SAR(1 g) = 10.4 mW/g; SAR(10 g) = 5.48 mW/g

Maximum value of SAR (measured) = 13.186 mW/g



0 dB = 13.190mW/g

Impedance Measurement Plot for Body TSL





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 Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: **SCS 108**

Client **TMC (Auden)**

Certificate No: **D1750V2-1003_Sep10**

CALIBRATION CERTIFICATE

Object **D1750V2 - SN: 1003**

Calibration procedure(s) **QA CAL-05.v6**
Calibration procedure for dipole validation kits

Calibration date: **September 29, 2010**

This calibration certificate documents the traceability to national standards, which realize the physical units of measurements (SI).
 The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.

All calibrations have been conducted in the closed laboratory facility: environment temperature (22 ± 3)°C and humidity < 70%.

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID #	Cal Date (Certificate No.)	Scheduled Calibration
Power meter EPM-442A	GB37480704	06-Oct-09 (No. 217-01086)	Oct-10
Power sensor HP 8481A	US37292783	06-Oct-09 (No. 217-01086)	Oct-10
Reference 20 dB Attenuator	SN: 5086 (20g)	30-Mar-10 (No. 217-01158)	Mar-11
Type-N mismatch combination	SN: 5047.2 / 06327	30-Mar-10 (No. 217-01162)	Mar-11
Reference Probe ES3DV3	SN: 3205	30-Apr-10 (No. ES3-3205_Apr10)	Apr-11
DAE4	SN: 601	02-Mar-10 (No. DAE4-601_Mar10)	Mar-11

Secondary Standards	ID #	Check Date (in house)	Scheduled Check
Power sensor HP 8481A	MY41092317	18-Oct-02 (in house check Oct-09)	In house check: Oct-11
RF generator R&S SMT-06	100005	4-Aug-99 (in house check Oct-09)	In house check: Oct-11
Network Analyzer HP 8753E	US37390585 S4206	18-Oct-01 (in house check Oct-09)	In house check: Oct-10

Calibrated by: **Jeton Kastrati** **Laboratory Technician**

Approved by: **Katja Pokovic** **Technical Manager**

Signature

Issued: October 1, 2010

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Accreditation No.: **SCS 108**

Glossary:

TSL	tissue simulating liquid
ConvF	sensitivity in TSL / NORM x,y,z
N/A	not applicable or not measured

Calibration is Performed According to the Following Standards:

- IEEE Std 1528-2003, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", December 2003
- IEC 62209-1, "Procedure to measure the Specific Absorption Rate (SAR) for hand-held devices used in close proximity to the ear (frequency range of 300 MHz to 3 GHz)", February 2005
- Federal Communications Commission Office of Engineering & Technology (FCC OET), "Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields; Additional Information for Evaluating Compliance of Mobile and Portable Devices with FCC Limits for Human Exposure to Radiofrequency Emissions", Supplement C (Edition 01-01) to Bulletin 65

Additional Documentation:

- DASY4/5 System Handbook

Methods Applied and Interpretation of Parameters:

- Measurement Conditions:** Further details are available from the Validation Report at the end of the certificate. All figures stated in the certificate are valid at the frequency indicated.
- Antenna Parameters with TSL:** The dipole is mounted with the spacer to position its feed point exactly below the center marking of the flat phantom section, with the arms oriented parallel to the body axis.
- Feed Point Impedance and Return Loss:** These parameters are measured with the dipole positioned under the liquid filled phantom. The impedance stated is transformed from the measurement at the SMA connector to the feed point. The Return Loss ensures low reflected power. No uncertainty required.
- Electrical Delay:** One-way delay between the SMA connector and the antenna feed point. No uncertainty required.
- SAR measured:** SAR measured at the stated antenna input power.
- SAR normalized:** SAR as measured, normalized to an input power of 1 W at the antenna connector.
- SAR for nominal TSL parameters:** The measured TSL parameters are used to calculate the nominal SAR result.

Measurement Conditions

DASY system configuration, as far as not given on page 1.

DASY Version	DASY5	V52.2
Extrapolation	Advanced Extrapolation	
Phantom	Modular Flat Phantom V5.0	
Distance Dipole Center - TSL	10 mm	with Spacer
Zoom Scan Resolution	dx, dy, dz = 5 mm	
Frequency	1750 MHz $\pm$ 1 MHz	

Head TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	40.1	1.37 mho/m
Measured Head TSL parameters	(22.0 $\pm$ 0.2) °C	39.7 $\pm$ 6 %	1.34 mho/m $\pm$ 6 %
Head TSL temperature during test	(22.0 $\pm$ 0.2) °C	----	----

SAR result with Head TSL

SAR averaged over 1 cm ³ (1 g) of Head TSL	Condition	
SAR measured	250 mW input power	9.07 mW / g
SAR normalized	normalized to 1W	36.3 mW / g
SAR for nominal Head TSL parameters	normalized to 1W	36.7 mW / g $\pm$ 17.0 % (k=2)

SAR averaged over 10 cm ³ (10 g) of Head TSL	condition	
SAR measured	250 mW input power	4.82 mW / g
SAR normalized	normalized to 1W	19.3 mW / g
SAR for nominal Head TSL parameters	normalized to 1W	19.4 mW / g $\pm$ 16.5 % (k=2)

Body TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Body TSL parameters	22.0 °C	53.4	1.49 mho/m
Measured Body TSL parameters	(22.0 ± 0.2) °C	53.1 ± 6 %	1.45 mho/m ± 6 %
Body TSL temperature during test	(21.4 ± 0.2) °C	----	----

SAR result with Body TSL

SAR averaged over 1 cm ³ (1 g) of Body TSL	condition	
SAR measured	250 mW input power	9.38 mW / g
SAR normalized	normalized to 1W	37.5 mW / g
SAR for nominal Body TSL parameters	normalized to 1W	38.0 mW / g ± 17.0 % (k=2)

SAR averaged over 10 cm ³ (10 g) of Body TSL	condition	
SAR measured	250 mW input power	5.05 mW / g
SAR normalized	normalized to 1W	20.2 mW / g
SAR for nominal Body TSL parameters	normalized to 1W	20.3 mW / g ± 16.5 % (k=2)

Appendix

Antenna Parameters with Head TSL

Impedance, transformed to feed point	$51.3 \Omega + 0.9 j\Omega$
Return Loss	- 36.4 dB

Antenna Parameters with Body TSL

Impedance, transformed to feed point	$46.9 \Omega + 1.4 j\Omega$
Return Loss	- 29.0 dB

General Antenna Parameters and Design

Electrical Delay (one direction)	1.211 ns
----------------------------------	----------

After long term use with 100W radiated power, only a slight warming of the dipole near the feedpoint can be measured.

The dipole is made of standard semirigid coaxial cable. The center conductor of the feeding line is directly connected to the second arm of the dipole. The antenna is therefore short-circuited for DC-signals.

No excessive force must be applied to the dipole arms, because they might bend or the soldered connections near the feedpoint may be damaged.

Additional EUT Data

Manufactured by	SPEAG
Manufactured on	July 30, 2008

DASY5 Validation Report for Head TSL

Date/Time: 28.09.2010 14:40:48

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 1750 MHz; Type: D1750V2; Serial: D1750V2 - SN:1003

Communication System: CW; Frequency: 1750 MHz; Duty Cycle: 1:1

Medium: HSL U12 BB

Medium parameters used: $f = 1750$ MHz; $\sigma = 1.34$ mho/m; $\epsilon_r = 39.7$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: ES3DV3 - SN3205; ConvF(5.25, 5.25, 5.25); Calibrated: 30.04.2010
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 02.03.2010
- Phantom: Flat Phantom 5.0 (front); Type: QD000P50AA; Serial: 1001
- Measurement SW: DASY52, V52.2 Build 0, Version 52.2.0 (163)
- Postprocessing SW: SEMCAD X, V14.2 Build 2, Version 14.2.2 (1685)

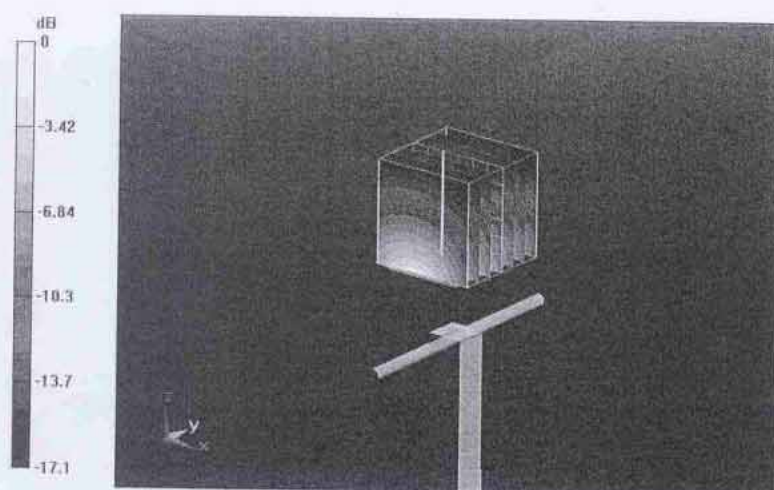
Pin=250 mW /d=10mm, dist=3.0mm (ES-Probe)/Zoom Scan (7x7x7)/Cube 0: Measurement
grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 92.2 V/m; Power Drift = 0.077 dB

Peak SAR (extrapolated) = 16.2 W/kg

SAR(1 g) = 9.07 mW/g; SAR(10 g) = 4.82 mW/g

Maximum value of SAR (measured) = 11.3 mW/g



0 dB = 11.3mW/g

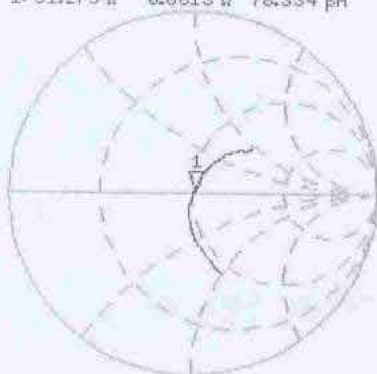
Impedance Measurement Plot for Head TSL

28 Sep 2010 09:22:55
 [CH1] S11 1 U FS 1: 51.273 Ω 0.8613 Ω 78.334 pF 1 750.000 000 MHz

*
 De1

CA

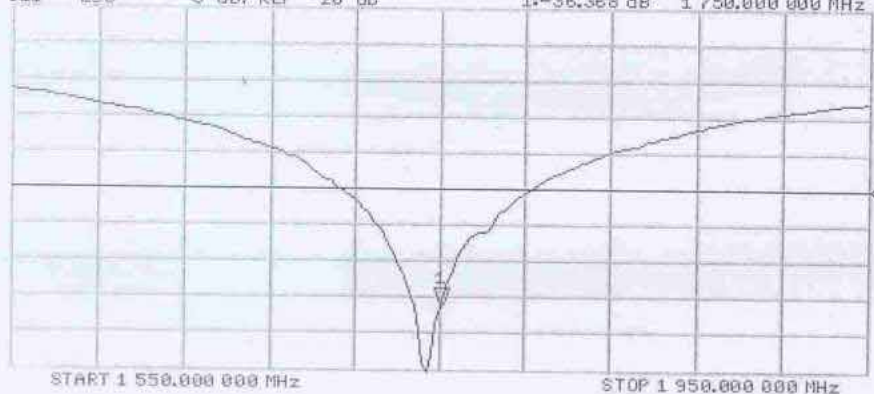
avg
 16



CH2 S11 LOG 5 dB/REF -20 dB 1:-36.368 dB 1 750.000 000 MHz

CA

avg
 16



START 1 550.000 000 MHz

STOP 1 950.000 000 MHz

DASY5 Validation Report for Body TSL

Date/Time: 29.09.2010 14:14:51

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 1750 MHz; Type: D1750V2; Serial: D1750V2 - SN:1003

Communication System: CW; Frequency: 1750 MHz; Duty Cycle: 1:1

Medium: MSL U12 BB

Medium parameters used: $f = 1750$ MHz; $\sigma = 1.45$ mho/m; $\epsilon_r = 53.1$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: ES3DV3 - SN3205; ConvF(5.25, 5.25, 5.25); Calibrated: 30.04.2010
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 02.03.2010
- Phantom: Flat Phantom 5.0 (front); Type: QD000P50AA; Serial: 1001
- Measurement SW: DASY52, V52.2 Build 0, Version 52.2.0 (163)
- Postprocessing SW: SEMCAD X, V14.2 Build 2, Version 14.2.2 (1685)

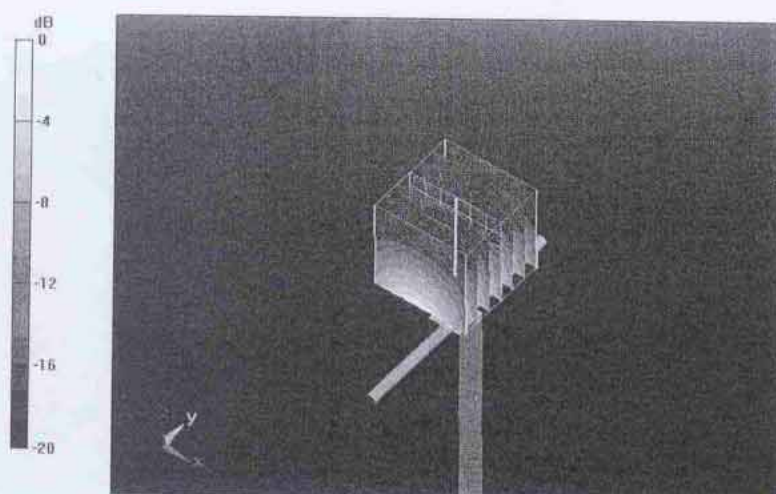
Pin=250 mW /d=10mm, dist=3.0mm (ES-Probe)/Zoom Scan (7x7x7)/Cube 0: Measurement
grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 94.5 V/m; Power Drift = -0.00829 dB

Peak SAR (extrapolated) = 16.2 W/kg

SAR(1 g) = 9.38 mW/g; SAR(10 g) = 5.05 mW/g

Maximum value of SAR (measured) = 11.7 mW/g



0 dB = 11.7mW/g

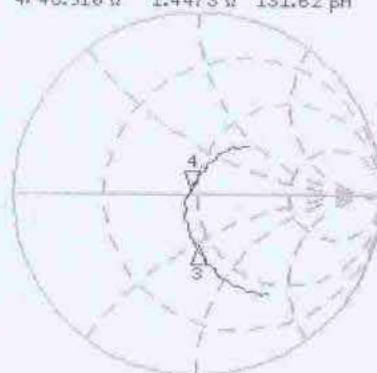
Impedance Measurement Plot for Body TSL

29 Sep 2010 09:28:54
 CH1 S11 1 UFS 4: 45.910 Ω 1.4473 Ω 131.62 pF 1 750.000 000 MHz

 Del
 CA

Avg
 15

↑



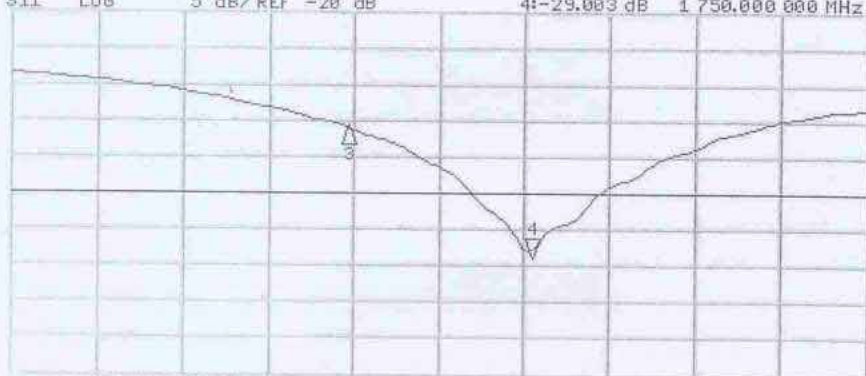
CH1 Markers
 3: 42.617 Ω
 -26.549 Ω
 1.64000 GHz

CH2 S11 LOG 5 dB/REF -20 dB 4: -29.003 dB 1 750.000 000 MHz

CA

Avg
 15

↑



CH2 Markers
 3: -10.873 dB
 -29.003 dB
 1.64000 GHz

START 1 440.000 000 MHz

STOP 1 950.000 000 MHz