

## APPENDIX A: TEST DATA

### Liquid Level Photo

Tissue HSL835MHz D=155mm



Tissue MSL835MHz D=151mm



**Tissue HSL1900MHz D=151mm**



**Tissue MSL1900MHz D=150mm**



Test Laboratory: Advance Data Technology

## Right Head-Cheek-GSM850-Ch128-Mode 1

**DUT: Dual Band GSM Mobile Phone ; Type: S198+ ; Test Frequency: 824.2 MHz**

Communication System: PCS 850 ; Frequency: 824.2 MHz ; Duty Cycle: 1:8.3

Phantom: SAM 12 Medium parameters used:  $f = 824.2$  MHz;  $\sigma = 0.87$  mho/m;  $\epsilon_r = 41.4$ ;  $\rho = 1000$  kg/m<sup>3</sup> ; Liquid level: 155 mm

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

Antenna type : Internal Antenna ; Air temp. : 22.0 degrees ; Liquid temp. : 21.0 degrees

DASY4 Configuration:

- Probe: ET3DV6 - SN1687; ConvF(6.34, 6.34, 6.34) ; Calibrated: 2005/9/15
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: 2005/8/17
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP 1202
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 161

**Touch position - Low Channel 128/Area Scan (5x10x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.367 mW/g

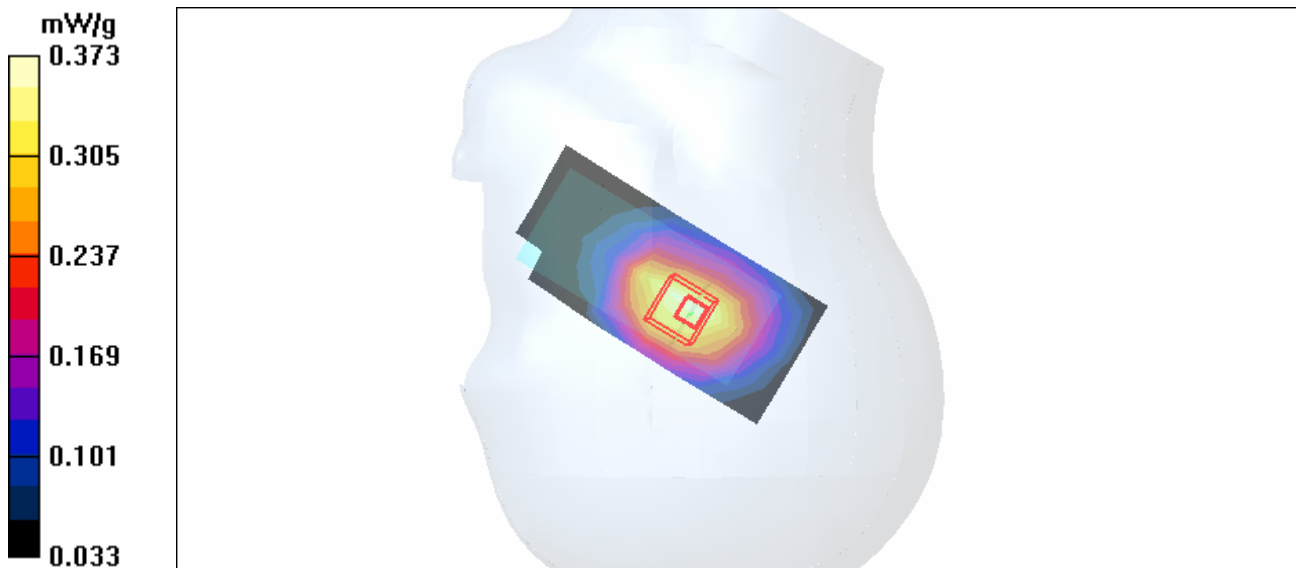
**Touch position - Low Channel 128/Zoom Scan (7x7x7) (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 18.5 V/m

Peak SAR (extrapolated) = 0.518 W/kg

**SAR(1 g) = 0.347 mW/g; SAR(10 g) = 0.233 mW/g**

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



Test Laboratory: Advance Data Technology

## Right Head-Cheek-GSM850-Ch190-Mode 1

**DUT: Dual Band GSM Mobile Phone ; Type: S198+ ; Test Frequency: 836.6 MHz**

Communication System: PCS 850 ; Frequency: 836.6 MHz ; Duty Cycle: 1:8.3

Phantom: SAM 12 Medium parameters used:  $f = 836.6$  MHz;  $\sigma = 0.88$  mho/m;  $\epsilon_r = 41.2$ ;  $\rho = 1000$  kg/m<sup>3</sup> ; Liquid level: 155 mm

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

Antenna type : Internal Antenna ; Air temp. : 22.0 degrees ; Liquid temp. : 21.0 degrees

DASY4 Configuration:

- Probe: ET3DV6 - SN1687; ConvF(6.34, 6.34, 6.34) ; Calibrated: 2005/9/15
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: 2005/8/17
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP 1202
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 161

**Touch position - Mid Channel 190/Area Scan (5x10x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.406 mW/g

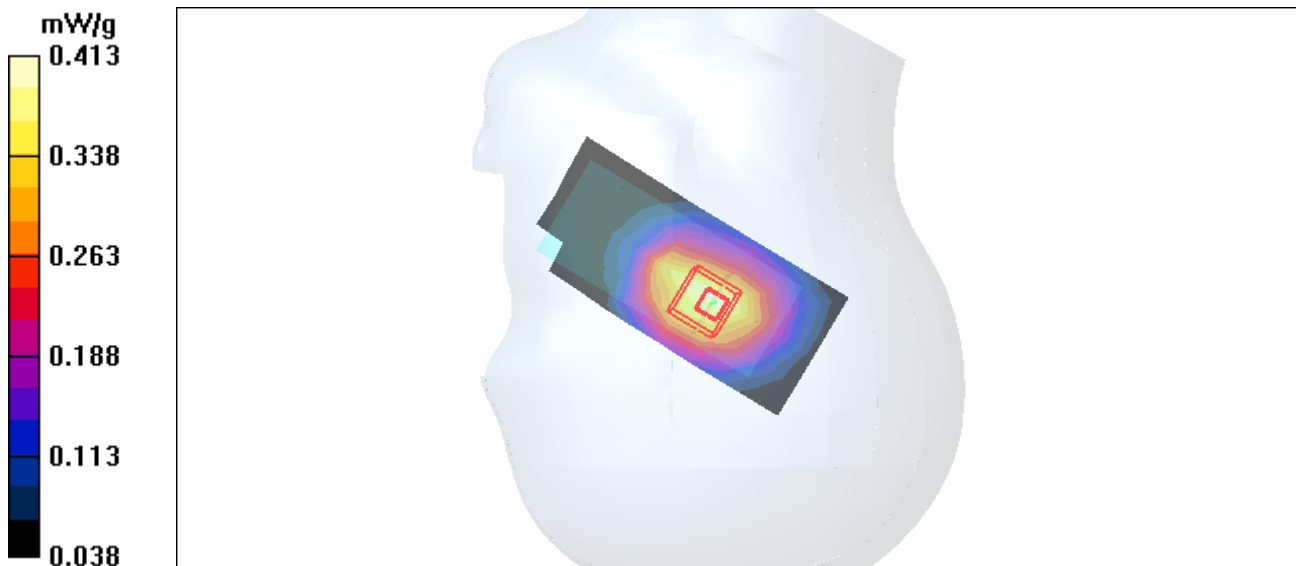
**Touch position - Mid Channel 190/Zoom Scan (7x7x7) (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 18.9 V/m

Peak SAR (extrapolated) = 0.571 W/kg

**SAR(1 g) = 0.387 mW/g; SAR(10 g) = 0.262 mW/g**

Maximum value of SAR (measured) = 0.413 mW/g



Test Laboratory: Advance Data Technology

## Right Head-Cheek-GSM850-Ch251-Mode 1

**DUT: Dual Band GSM Mobile Phone ; Type: S198+ ; Test Frequency: 848.8 MHz**

Communication System: PCS 850 ; Frequency: 848.8 MHz ; Duty Cycle: 1:8.3

Phantom: SAM 12 Medium parameters used:  $f = 848.8$  MHz;  $\sigma = 0.9$  mho/m;  $\epsilon_r = 41$ ;  $\rho = 1000$  kg/m<sup>3</sup> ;

Liquid level: 155 mm

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

Antenna type : Internal Antenna ; Air temp. : 22.0 degrees ; Liquid temp. : 21.0 degrees

DASY4 Configuration:

- Probe: ET3DV6 - SN1687; ConvF(6.34, 6.34, 6.34) ; Calibrated: 2005/9/15
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: 2005/8/17
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP 1202
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 161

**Touch position - High Channel 251/Area Scan (5x10x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.410 mW/g

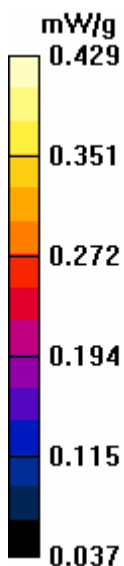
**Touch position - High Channel 251/Zoom Scan (7x7x7) (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 18.7 V/m

Peak SAR (extrapolated) = 0.586 W/kg

**SAR(1 g) = 0.399 mW/g; SAR(10 g) = 0.270 mW/g**

Maximum value of SAR (measured) = 0.429 mW/g



Test Laboratory: Advance Data Technology

## Right Head-Tilt-GSM850-Ch128-Mode 2

**DUT: Dual Band GSM Mobile Phone ; Type: S198+ ; Test Frequency: 824.2 MHz**

Communication System: PCS 850 ; Frequency: 824.2 MHz; Duty Cycle: 1:8.3

Medium: HSL835 Medium parameters used:  $f = 824.2$  MHz;  $\sigma = 0.87$  mho/m;  $\epsilon_r = 41.4$ ;  $\rho = 1000$  kg/m<sup>3</sup> ; Liquid level: 155 mm

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

Antenna type : Internal Antenna ; Air temp. : 22.0 degrees ; Liquid temp. : 21.0 degrees

DASY4 Configuration:

- Probe: ET3DV6 - SN1687 ; ConvF(6.34, 6.34, 6.34) ; Calibrated: 2005/9/15
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: 2005/8/17
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP 1202
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 161

**Tilt position - Low Channel 128/Area Scan (5x10x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.123 mW/g

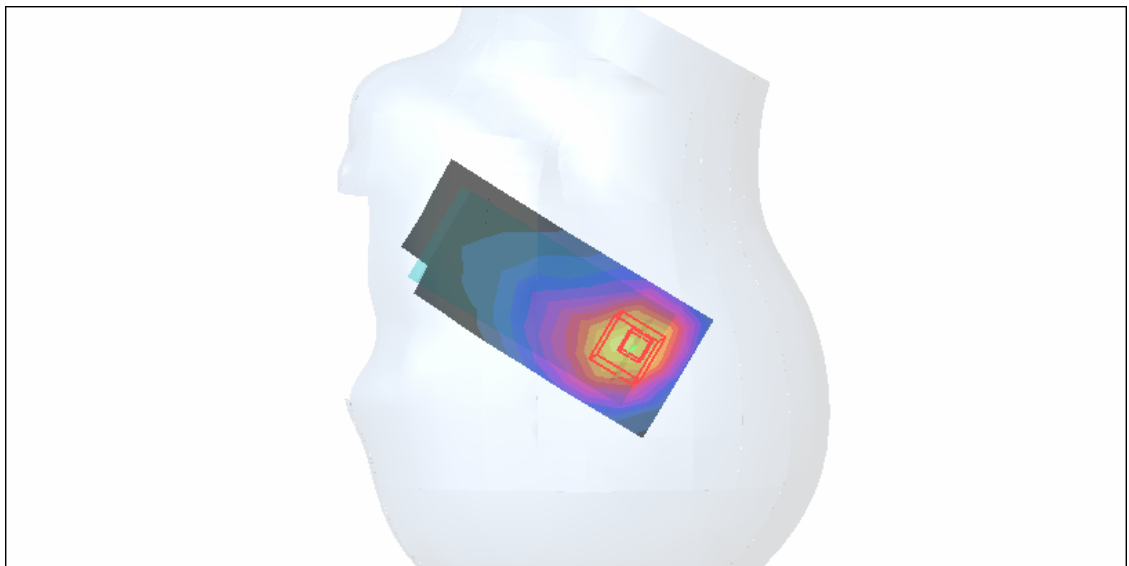
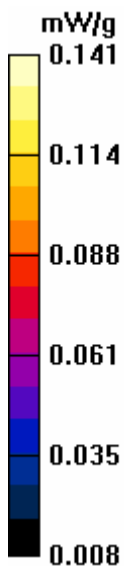
**Tilt position - Low Channel 128/Zoom Scan (7x7x7) (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 12.3 V/m

Peak SAR (extrapolated) = 0.209 W/kg

**SAR(1 g) = 0.128 mW/g; SAR(10 g) = 0.079 mW/g**

Maximum value of SAR (measured) = 0.141 mW/g



Test Laboratory: Advance Data Technology

## Right Head-Tilt-GSM850-Ch190-Mode 2

**DUT: Dual Band GSM Mobile Phone ; Type: S198+ ; Test Frequency: 836.6 MHz**

Communication System: PCS 850 ; Frequency: 836.6 MHz; Duty Cycle: 1:8.3

Medium: HSL835 Medium parameters used:  $f = 836.6$  MHz;  $\sigma = 0.88$  mho/m;  $\epsilon_r = 41.2$ ;  $\rho = 1000$  kg/m<sup>3</sup> ; Liquid level: 155 mm

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

Antenna type : Internal Antenna ; Air temp. : 22.0 degrees ; Liquid temp. : 21.0 degrees

DASY4 Configuration:

- Probe: ET3DV6 - SN1687 ; ConvF(6.34, 6.34, 6.34) ; Calibrated: 2005/9/15
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: 2005/8/17
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP 1202
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 161

**Tilt position - Mid Channel 190/Area Scan (5x10x1):** Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (measured) = 0.148 mW/g

**Tilt position - Mid Channel 190/Zoom Scan (7x7x7) (7x7x7)/Cube 0:** Measurement grid:  
dx=5mm, dy=5mm, dz=5mm  
Reference Value = 13.2 V/m  
Peak SAR (extrapolated) = 0.237 W/kg  
**SAR(1 g) = 0.149 mW/g; SAR(10 g) = 0.094 mW/g**  
Maximum value of SAR (measured) = 0.162 mW/g



Test Laboratory: Advance Data Technology

## Right Head-Tilt-GSM850-Ch251-Mode 2

**DUT: Dual Band GSM Mobile Phone ; Type: S198+ ; Test Frequency: 848.8 MHz**

Communication System: PCS 850 ; Frequency: 848.8 MHz; Duty Cycle: 1:8.3

Medium: HSL835 Medium parameters used:  $f = 848.8$  MHz;  $\sigma = 0.9$  mho/m;  $\epsilon_r = 41$ ;  $\rho = 1000$  kg/m<sup>3</sup> ;

Liquid level: 155 mm

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

Antenna type : Internal Antenna ; Air temp. : 22.0 degrees ; Liquid temp. : 21.0 degrees

DASY4 Configuration:

- Probe: ET3DV6 - SN1687 ; ConvF(6.34, 6.34, 6.34) ; Calibrated: 2005/9/15
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: 2005/8/17
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP 1202
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 161

**Tilt position - High Channel 251/Area Scan (5x10x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.161 mW/g

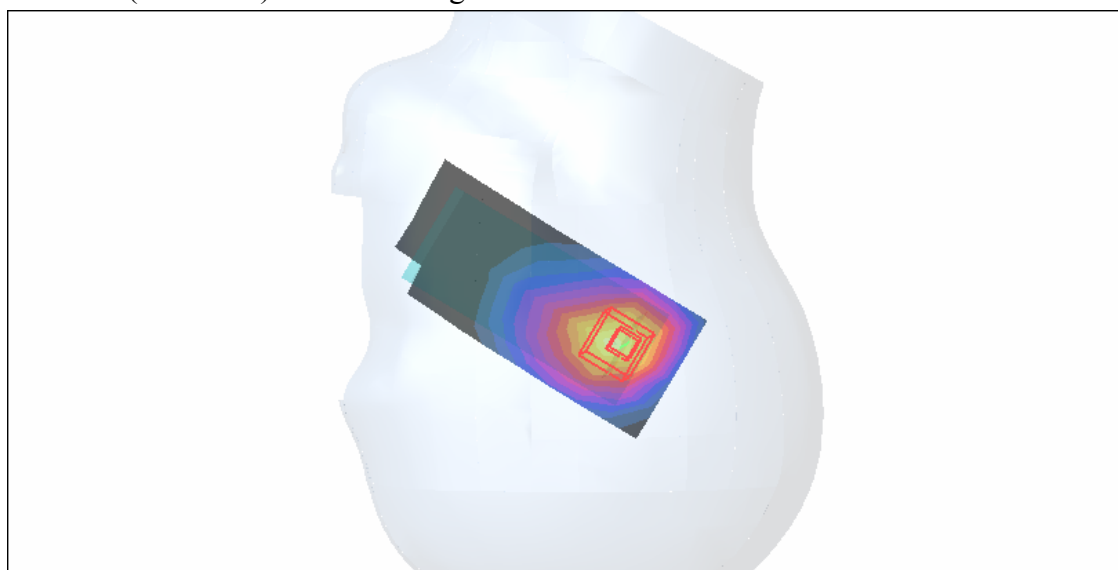
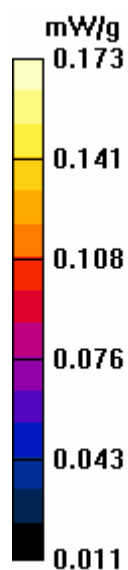
**Tilt position - High Channel 251/Zoom Scan (7x7x7) (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 13.5 V/m

Peak SAR (extrapolated) = 0.241 W/kg

**SAR(1 g) = 0.159 mW/g; SAR(10 g) = 0.103 mW/g**

Maximum value of SAR (measured) = 0.173 mW/g



Test Laboratory: Advance Data Technology

## Left Head-Cheek-GSM850-Ch128-Mode 3

**DUT: Dual Band GSM Mobile Phone ; Type: S198+ ; Test Frequency: 824.2 MHz**

Communication System: PCS 850 ; Frequency: 824.2 MHz ; Duty Cycle: 1:8.3

Phantom: SAM 12 Medium parameters used:  $f = 824.2$  MHz;  $\sigma = 0.87$  mho/m;  $\epsilon_r = 41.4$ ;  $\rho = 1000$  kg/m<sup>3</sup> ; Liquid level: 155 mm

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

Antenna type : Internal Antenna ; Air temp. : 22.0 degrees ; Liquid temp. : 21.0 degrees

DASY4 Configuration:

- Probe: ET3DV6 - SN1687; ConvF(6.34, 6.34, 6.34) ; Calibrated: 2005/9/15
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: 2005/8/17
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP 1202
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 161

**Touch position - Low Channel 128/Area Scan (5x10x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.366 mW/g

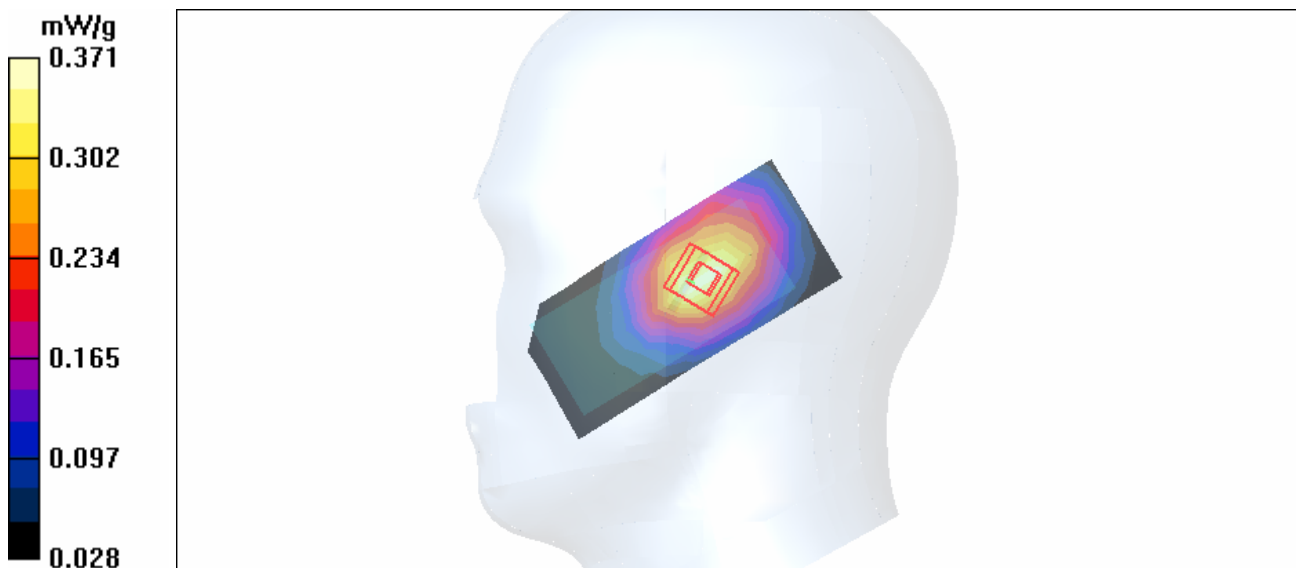
**Touch position - Low Channel 128/Zoom Scan (7x7x7) (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 18.5 V/m

Peak SAR (extrapolated) = 0.498 W/kg

**SAR(1 g) = 0.347 mW/g; SAR(10 g) = 0.231 mW/g**

Maximum value of SAR (measured) = 0.371 mW/g



Test Laboratory: Advance Data Technology

## Left Head-Cheek-GSM850-Ch190-Mode 3

**DUT: Dual Band GSM Mobile Phone ; Type: S198+ ; Test Frequency: 836.6 MHz**

Communication System: PCS 850 ; Frequency: 836.6 MHz ; Duty Cycle: 1:8.3

Phantom: SAM 12 Medium parameters used:  $f = 836.6$  MHz;  $\sigma = 0.88$  mho/m;  $\epsilon_r = 41.2$ ;  $\rho = 1000$  kg/m<sup>3</sup> ; Liquid level: 155 mm

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

Antenna type : Internal Antenna ; Air temp. : 22.0 degrees ; Liquid temp. : 21.0 degrees

DASY4 Configuration:

- Probe: ET3DV6 - SN1687; ConvF(6.34, 6.34, 6.34) ; Calibrated: 2005/9/15
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: 2005/8/17
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP 1202
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 161

**Touch position - Mid Channel 190/Area Scan (5x10x1):** Measurement grid: dx=15mm, dy=15mm

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

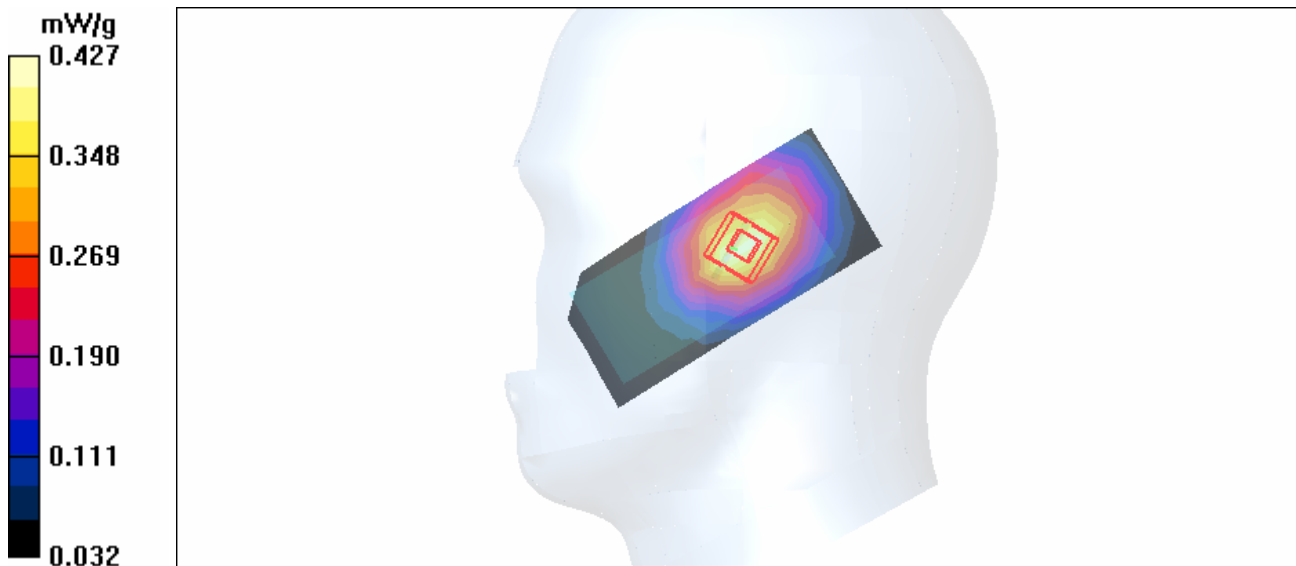
**Touch position - Mid Channel 190/Zoom Scan (7x7x7) (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 19.5 V/m

Peak SAR (extrapolated) = 0.564 W/kg

**SAR(1 g) = 0.399 mW/g; SAR(10 g) = 0.265 mW/g**

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



Test Laboratory: Advance Data Technology

## Left Head-Cheek-GSM850-Ch251-Mode 3

**DUT: Dual Band GSM Mobile Phone ; Type: S198+ ; Test Frequency: 848.8 MHz**

Communication System: PCS 850 ; Frequency: 848.8 MHz ; Duty Cycle: 1:8.3

Phantom: SAM 12 Medium parameters used:  $f = 848.8$  MHz;  $\sigma = 0.9$  mho/m;  $\epsilon_r = 41$ ;  $\rho = 1000$  kg/m<sup>3</sup> ;

Liquid level: 155 mm

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

Antenna type : Internal Antenna ; Air temp. : 22.0 degrees ; Liquid temp. : 21.0 degrees

DASY4 Configuration:

- Probe: ET3DV6 - SN1687; ConvF(6.34, 6.34, 6.34) ; Calibrated: 2005/9/15
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: 2005/8/17
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP 1202
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 161

**Touch position - High Channel 251/Area Scan (5x10x1):** Measurement grid: dx=15mm, dy=15mm

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

**Touch position - High Channel 251/Zoom Scan (7x7x7) (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 19.3 V/m

Peak SAR (extrapolated) = 0.578 W/kg

**SAR(1 g) = 0.411 mW/g; SAR(10 g) = 0.273 mW/g**

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



Test Laboratory: Advance Data Technology

## Left Head-Tilt-GSM850-Ch128-Mode 4

**DUT: Dual Band GSM Mobile Phone ; Type: S198+ ; Test Frequency: 824.2 MHz**

Communication System: PCS 850 ; Frequency: 824.2 MHz; Duty Cycle: 1:8.3

Medium: HSL835 Medium parameters used:  $f = 824.2$  MHz;  $\sigma = 0.87$  mho/m;  $\epsilon_r = 41.4$ ;  $\rho = 1000$  kg/m<sup>3</sup> ; Liquid level: 155 mm

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

Antenna type : Internal Antenna ; Air temp. : 22.0 degrees ; Liquid temp. : 21.0 degrees

DASY4 Configuration:

- Probe: ET3DV6 - SN1687 ; ConvF(6.34, 6.34, 6.34) ; Calibrated: 2005/9/15
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: 2005/8/17
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP 1202
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 161

**Tilt position - Low Channel 128/Area Scan (5x10x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.117 mW/g

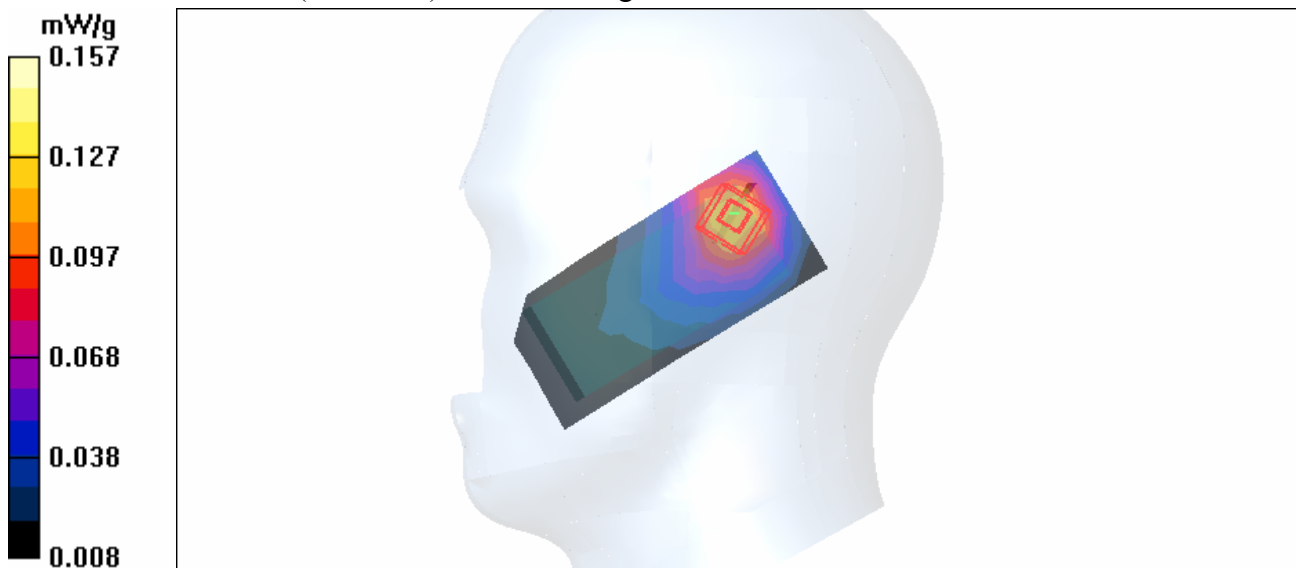
**Tilt position - Low Channel 128/Zoom Scan (7x7x7) (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 11.4 V/m

Peak SAR (extrapolated) = 0.279 W/kg

**SAR(1 g) = 0.143 mW/g; SAR(10 g) = 0.081 mW/g**

Maximum value of SAR (measured) = 0.157 mW/g



Test Laboratory: Advance Data Technology

## Left Head-Tilt-GSM850-Ch190-Mode 4

**DUT: Dual Band GSM Mobile Phone ; Type: S198+ ; Test Frequency: 836.6 MHz**

Communication System: PCS 850 ; Frequency: 836.6 MHz; Duty Cycle: 1:8.3

Medium: HSL835 Medium parameters used:  $f = 836.6$  MHz;  $\sigma = 0.88$  mho/m;  $\epsilon_r = 41.2$ ;  $\rho = 1000$  kg/m<sup>3</sup> ; Liquid level: 155 mm

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

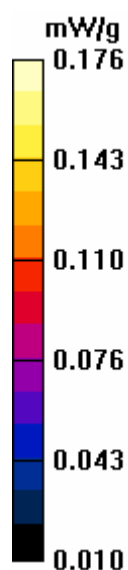
Antenna type : Internal Antenna ; Air temp. : 22.0 degrees ; Liquid temp. : 21.0 degrees

DASY4 Configuration:

- Probe: ET3DV6 - SN1687 ; ConvF(6.34, 6.34, 6.34) ; Calibrated: 2005/9/15
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: 2005/8/17
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP 1202
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 161

**Tilt position - Mid Channel 190/Area Scan (5x10x1):** Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (measured) = 0.140 mW/g

**Tilt position - Mid Channel 190/Zoom Scan (7x7x7) (7x7x7)/Cube 0:** Measurement grid:  
dx=5mm, dy=5mm, dz=5mm  
Reference Value = 12.4 V/m  
Peak SAR (extrapolated) = 0.279 W/kg  
**SAR(1 g) = 0.160 mW/g; SAR(10 g) = 0.095 mW/g**  
Maximum value of SAR (measured) = 0.176 mW/g



Test Laboratory: Advance Data Technology

## Left Head-Tilt-GSM850-Ch251-Mode 4

**DUT: Dual Band GSM Mobile Phone ; Type: S198+ ; Test Frequency: 848.8 MHz**

Communication System: PCS 850 ; Frequency: 848.8 MHz; Duty Cycle: 1:8.3

Medium: HSL835 Medium parameters used:  $f = 848.8$  MHz;  $\sigma = 0.9$  mho/m;  $\epsilon_r = 41$ ;  $\rho = 1000$  kg/m<sup>3</sup> ;

Liquid level: 155 mm

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

Antenna type : Internal Antenna ; Air temp. : 22.0 degrees ; Liquid temp. : 21.0 degrees

DASY4 Configuration:

- Probe: ET3DV6 - SN1687 ; ConvF(6.34, 6.34, 6.34) ; Calibrated: 2005/9/15
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: 2005/8/17
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP 1202
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 161

**Tilt position - High Channel 251/Area Scan (5x10x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.150 mW/g

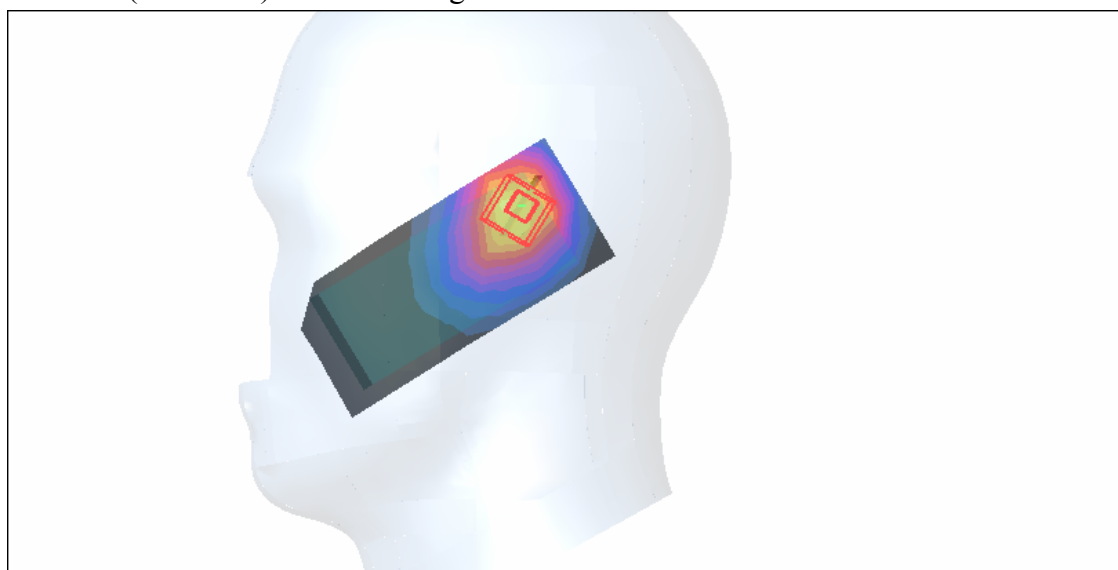
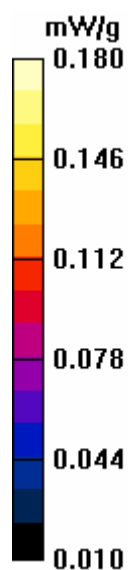
**Tilt position - High Channel 251/Zoom Scan (7x7x7) (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 12.9 V/m

Peak SAR (extrapolated) = 0.273 W/kg

**SAR(1 g) = 0.165 mW/g; SAR(10 g) = 0.101 mW/g**

Maximum value of SAR (measured) = 0.180 mW/g



Test Laboratory: Advance Data Technology

## BodyWorn-GSM850-CH128-Keypad Down-Mode 5

**DUT: Dual Band GSM Mobile Phone ; Type: S198+ ; Test Frequency: 824.2 MHz**

Communication System: PCS 850 ; Frequency: 824.2 MHz ; Duty Cycle: 1:8.

Medium: MSL835 Medium parameters used:  $f = 824.2 \text{ MHz}$ ;  $\sigma = 0.95 \text{ mho/m}$ ;  $\epsilon_r = 54.8$ ;  $\rho = 1000 \text{ kg/m}^3$  ; Liquid Level : 151 mm

Phantom section: Flat Section ; DUT test position : Body ; Modulation Type: GMSK

Separation Distance : 15 mm ( The bottom side of the EUT to the Phantom)

Antenna Type : Internal Antenna ; Air Temp. : 21.8 degrees ; Liquid Temp. : 20.9 degrees

DASY4 Configuration:

- Probe: ET3DV6 - SN1687 ; ConvF(6.21, 6.21, 6.21) ; Calibrated: 2005/9/15
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510 ; Calibrated: 2005/8/17
- Phantom: SAM 12 ; Type: SAM V4.0; Serial: TP 1202
- Measurement SW: DASY4, V4.6 Build 23 ; Postprocessing SW: SEMCAD, V1.8 Build 161

**Low Channel 128/Area Scan (5x9x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$

Maximum value of SAR (measured) = 0.996 mW/g

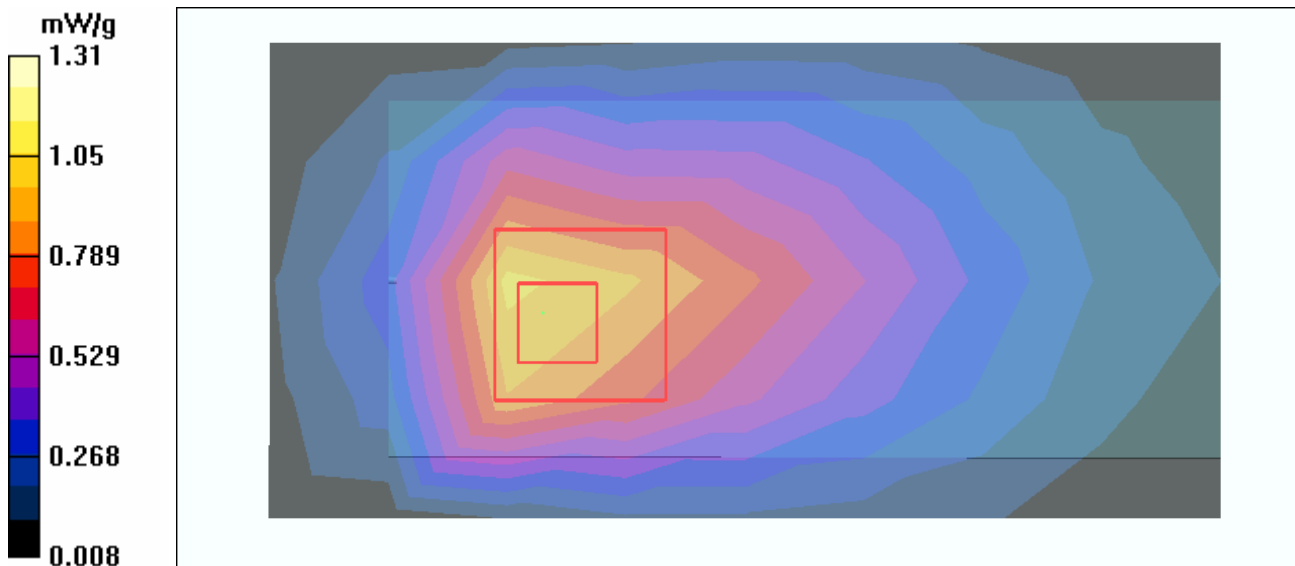
**Low Channel 128/Zoom Scan (7x7x7) (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$

Reference Value = 19.2 V/m

Peak SAR (extrapolated) = 2.64 W/kg

**SAR(1 g) = 1.15 mW/g; SAR(10 g) = 0.640 mW/g**

Maximum value of SAR (measured) = 1.31 mW/g



Test Laboratory: Advance Data Technology

## BodyWorn-GSM850-CH190-Keypad Down-Mode 5

**DUT: Dual Band GSM Mobile Phone ; Type: S198+ ; Test Frequency: 836.6 MHz**

Communication System: PCS 850 ; Frequency: 836.6 MHz ; Duty Cycle: 1:8.3

Medium: MSL835 Medium parameters used:  $f = 836.6$  MHz;  $\sigma = 0.96$  mho/m;  $\epsilon_r = 54.7$ ;  $\rho = 1000$  kg/m<sup>3</sup> ; Liquid Level : 151 mm

Phantom section: Flat Section ; DUT test position : Body ; Modulation Type: GMSK

Separation Distance : 15 mm ( The bottom side of the EUT to the Phantom)

Antenna Type : Internal Antenna ; Air Temp. : 21.8 degrees ; Liquid Temp. : 20.9 degrees

DASY4 Configuration:

- Probe: ET3DV6 - SN1687 ; ConvF(6.21, 6.21, 6.21) ; Calibrated: 2005/9/15
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510 ; Calibrated: 2005/8/17
- Phantom: SAM 12 ; Type: SAM V4.0; Serial: TP 1202
- Measurement SW: DASY4, V4.6 Build 23 ; Postprocessing SW: SEMCAD, V1.8 Build 161

**Mid Channel 190/Area Scan (5x9x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 1.11 mW/g

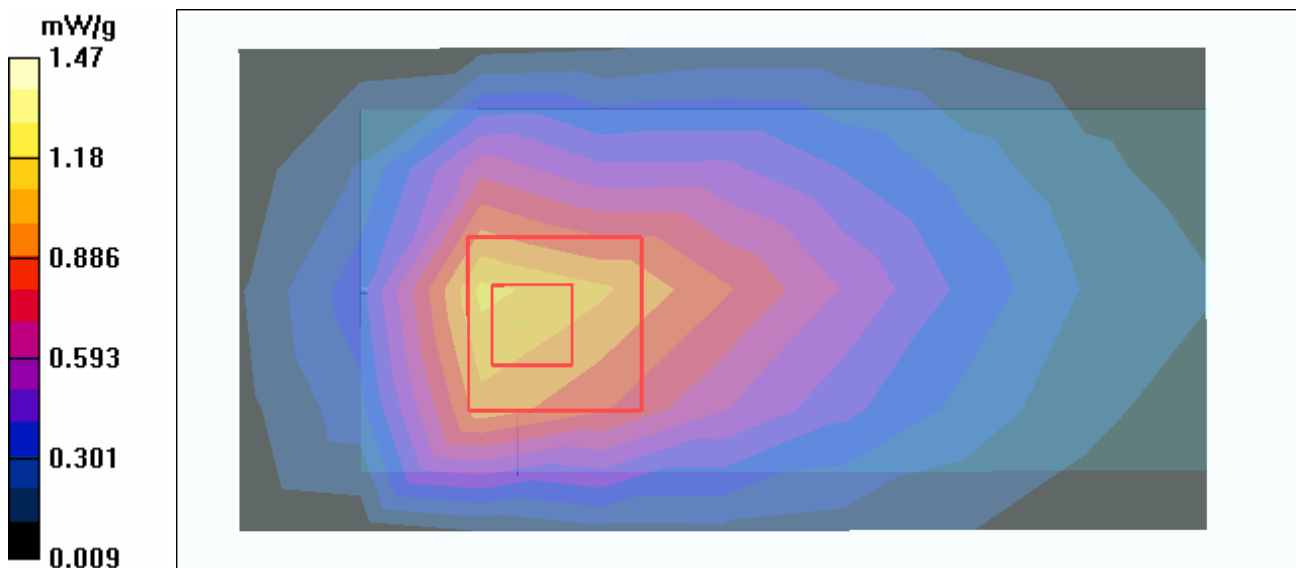
**Mid Channel 190/Zoom Scan (7x7x7) (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 20.6 V/m

Peak SAR (extrapolated) = 2.89 W/kg

**SAR(1 g) = 1.29 mW/g; SAR(10 g) = 0.707 mW/g**

Maximum value of SAR (measured) = 1.47 mW/g



Test Laboratory: Advance Data Technology

## BodyWorn-GSM850-CH251-Keypad Down-Mode 5

**DUT: Dual Band GSM Mobile Phone ; Type: S198+ ; Test Frequency: 848.8 MHz**

Communication System: PCS 850 ; Frequency: 848.8 MHz ; Duty Cycle: 1:8.3

Medium: MSL835 Medium parameters used:  $f = 848.8 \text{ MHz}$ ;  $\sigma = 0.97 \text{ mho/m}$ ;  $\epsilon_r = 54.5$ ;  $\rho = 1000 \text{ kg/m}^3$  ; Liquid Level : 151 mm

Phantom section: Flat Section ; DUT test position : Body ; Modulation Type: GMSK

Separation Distance : 15 mm ( The bottom side of the EUT to the Phantom)

Antenna Type : Internal Antenna ; Air Temp. : 21.8 degrees ; Liquid Temp. : 20.9 degrees

DASY4 Configuration:

- Probe: ET3DV6 - SN1687 ; ConvF(6.21, 6.21, 6.21) ; Calibrated: 2005/9/15
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510 ; Calibrated: 2005/8/17
- Phantom: SAM 12 ; Type: SAM V4.0; Serial: TP 1202
- Measurement SW: DASY4, V4.6 Build 23 ; Postprocessing SW: SEMCAD, V1.8 Build 161

**High Channel 251/Area Scan (5x9x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$

Maximum value of SAR (measured) = 1.26 mW/g

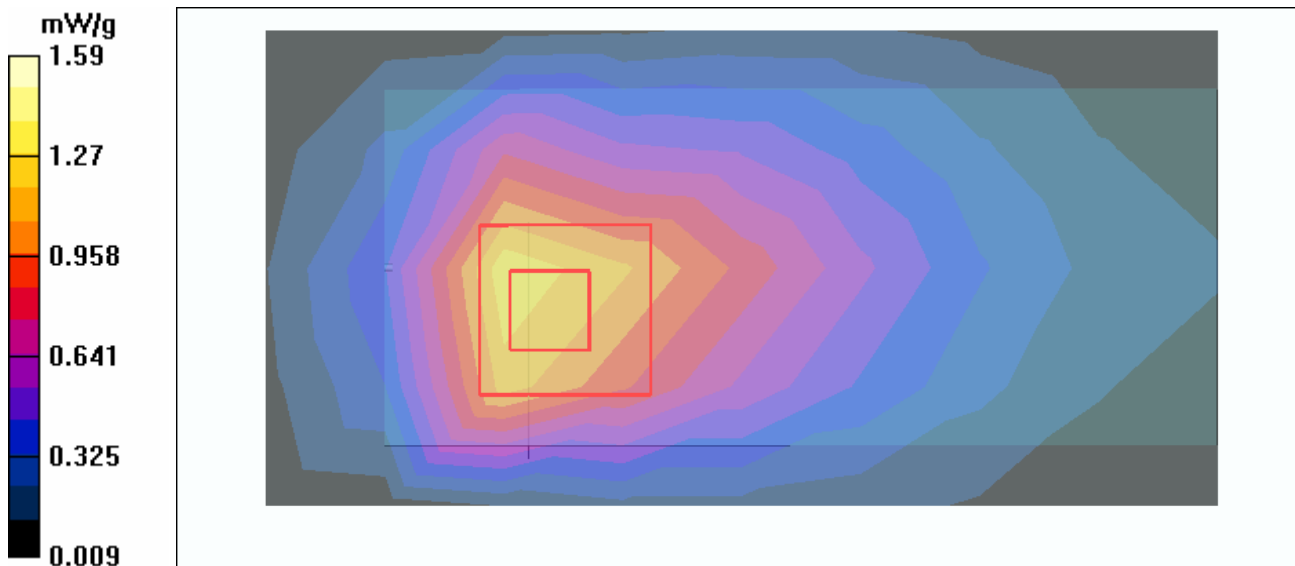
**High Channel 251/Zoom Scan (7x7x7) (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$

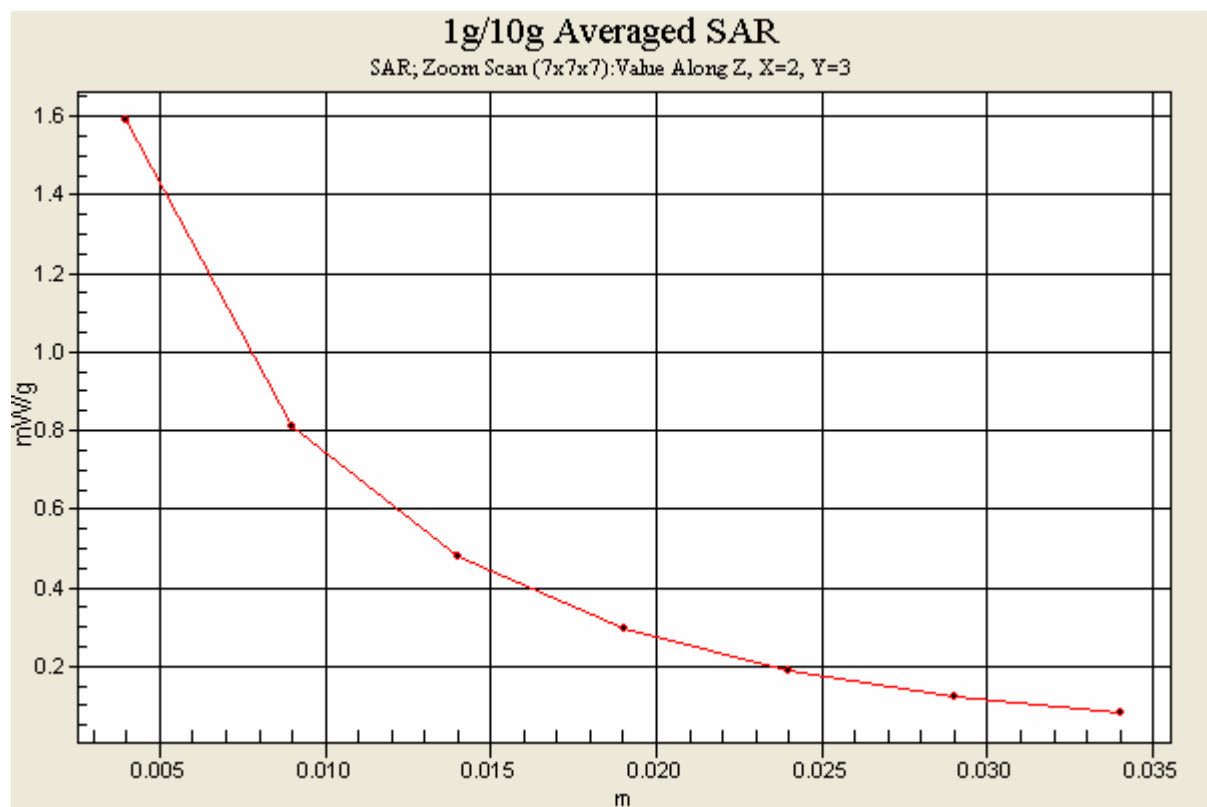
Reference Value = 21.7 V/m

Peak SAR (extrapolated) = 3.43 W/kg

**SAR(1 g) = 1.46 mW/g; SAR(10 g) = 0.780 mW/g**

Maximum value of SAR (measured) = 1.59 mW/g





Test Laboratory: Advance Data Technology

## BodyWorn-GSM850-CH251-Keypad Up-Mode 6

**DUT: Dual Band GSM Mobile Phone ; Type: S198+ ; Test Frequency: 848.8 MHz**

Communication System: PCS 850 ; Frequency: 848.8 MHz ; Duty Cycle: 1:8.3

Medium: MSL835 Medium parameters used:  $f = 848.8 \text{ MHz}$ ;  $\sigma = 0.97 \text{ mho/m}$ ;  $\epsilon_r = 54.5$ ;  $\rho = 1000 \text{ kg/m}^3$  ; Liquid Level : 151 mm

Phantom section: Flat Section ; DUT test position : Body ; Modulation Type: GMSK

Separation Distance : 15 mm ( The front side of the EUT to the Phantom)

Antenna Type : Internal Antenna ; Air Temp. : 21.8 degrees ; Liquid Temp. : 20.9 degrees

DASY4 Configuration:

- Probe: ET3DV6 - SN1687 ; ConvF(6.21, 6.21, 6.21) ; Calibrated: 2005/9/15
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510 ; Calibrated: 2005/8/17
- Phantom: SAM 12 ; Type: SAM V4.0; Serial: TP 1202
- Measurement SW: DASY4, V4.6 Build 23 ; Postprocessing SW: SEMCAD, V1.8 Build 161

**High Channel 251/Area Scan (5x9x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$

Maximum value of SAR (measured) = 0.486 mW/g

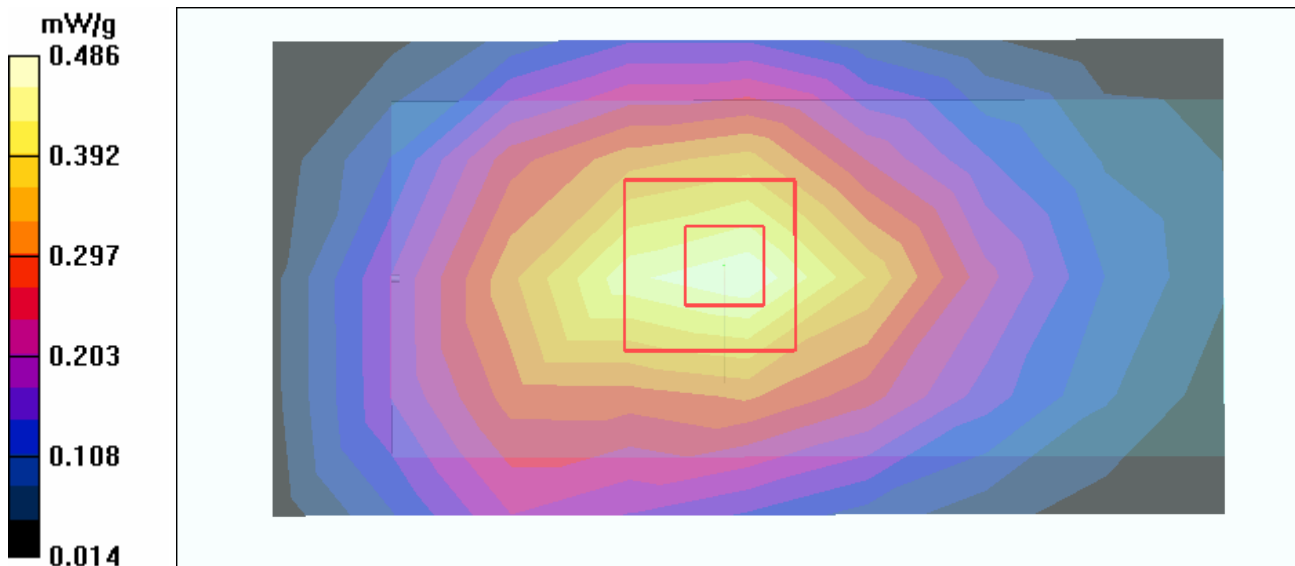
**High Channel 251/Zoom Scan (7x7x7) (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$

Reference Value = 14.0 V/m

Peak SAR (extrapolated) = 0.560 W/kg

**SAR(1 g) = 0.428 mW/g; SAR(10 g) = 0.295 mW/g**

Maximum value of SAR (measured) = 0.459 mW/g



Test Laboratory: Advance Data Technology

**Right Head-Cheek-PCS1900-Ch512-Mode 7****DUT: Dual Band GSM Mobile Phone ; Type: S198+ ; Test Frequency: 1850.2 MHz**

Communication System: PCS 1900 ; Frequency: 1850.2 MHz ; Duty Cycle: 1:8.3

Phantom: SAM 12 Medium parameters used:  $f = 1850.2$  MHz;  $\sigma = 1.39$  mho/m;  $\epsilon_r = 40.7$ ;  $\rho = 1000$  kg/m<sup>3</sup> ; Liquid level: 151 mm

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

Antenna type : Internal Antenna ; Air temp. : 21.5 degrees ; Liquid temp. : 20.3 degrees

DASY4 Configuration:

- Probe: ET3DV6 - SN1687; ConvF(4.96, 4.96, 4.96) ; Calibrated: 2005/9/15
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: 2005/8/17
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP 1202
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 161

**Touch position - Low Channel 512/Area Scan (5x10x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.268 mW/g

**Touch position - Low Channel 512/Zoom Scan (7x7x7) (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 14.3 V/m

Peak SAR (extrapolated) = 0.413 W/kg

**SAR(1 g) = 0.275 mW/g; SAR(10 g) = 0.163 mW/g**

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

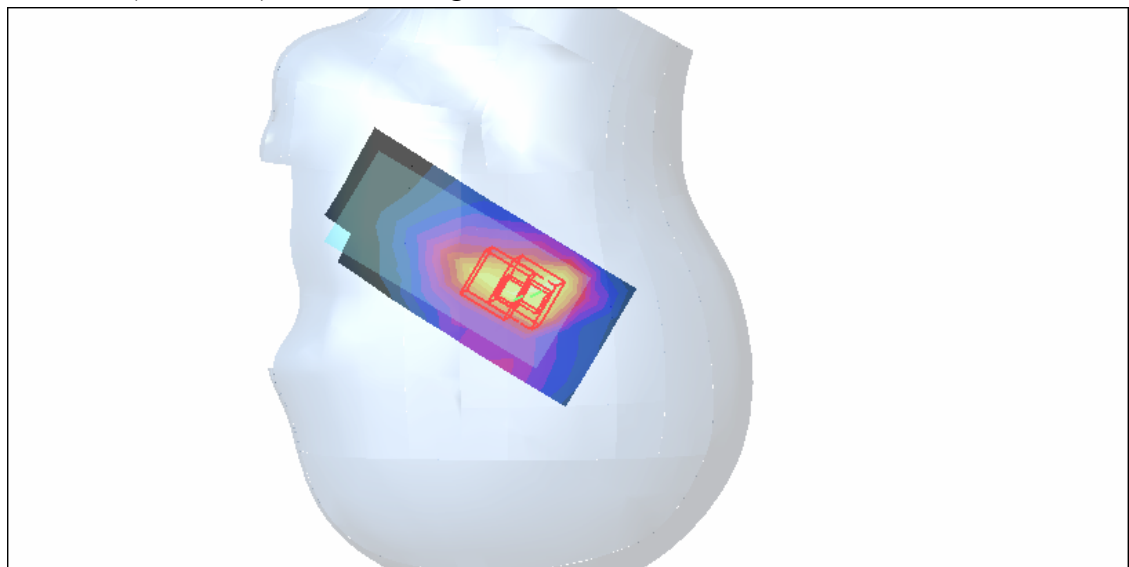
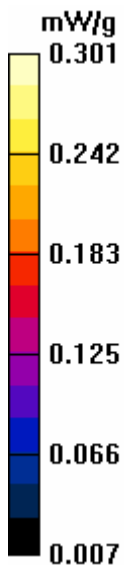
**Touch position - Low Channel 512/Zoom Scan (7x7x7) (7x7x7)/Cube 1:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 14.3 V/m

Peak SAR (extrapolated) = 0.378 W/kg

**SAR(1 g) = 0.239 mW/g; SAR(10 g) = 0.148 mW/g**

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



Test Laboratory: Advance Data Technology

### Right Head-Cheek-PCS1900-Ch661-Mode 7

**DUT: Dual Band GSM Mobile Phone ; Type: S198+ ; Test Frequency: 1880 MHz**

Communication System: PCS 1900 ; Frequency: 1880 MHz ; Duty Cycle: 1:8.3

Phantom: SAM 12 Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.42$  mho/m;  $\epsilon_r = 40.6$ ;  $\rho = 1000$  kg/m<sup>3</sup> ; Liquid level: 151 mm

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

Antenna type : Internal Antenna ; Air temp. : 21.5 degrees ; Liquid temp. : 20.3 degrees

DASY4 Configuration:

- Probe: ET3DV6 - SN1687; ConvF(4.96, 4.96, 4.96) ; Calibrated: 2005/9/15
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: 2005/8/17
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP 1202
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 161

**Touch position - Mid Channel 661/Area Scan (5x10x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.380 mW/g

**Touch position - Mid Channel 661/Zoom Scan (7x7x7) (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 16.2 V/m

Peak SAR (extrapolated) = 0.604 W/kg

**SAR(1 g) = 0.387 mW/g; SAR(10 g) = 0.229 mW/g**

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

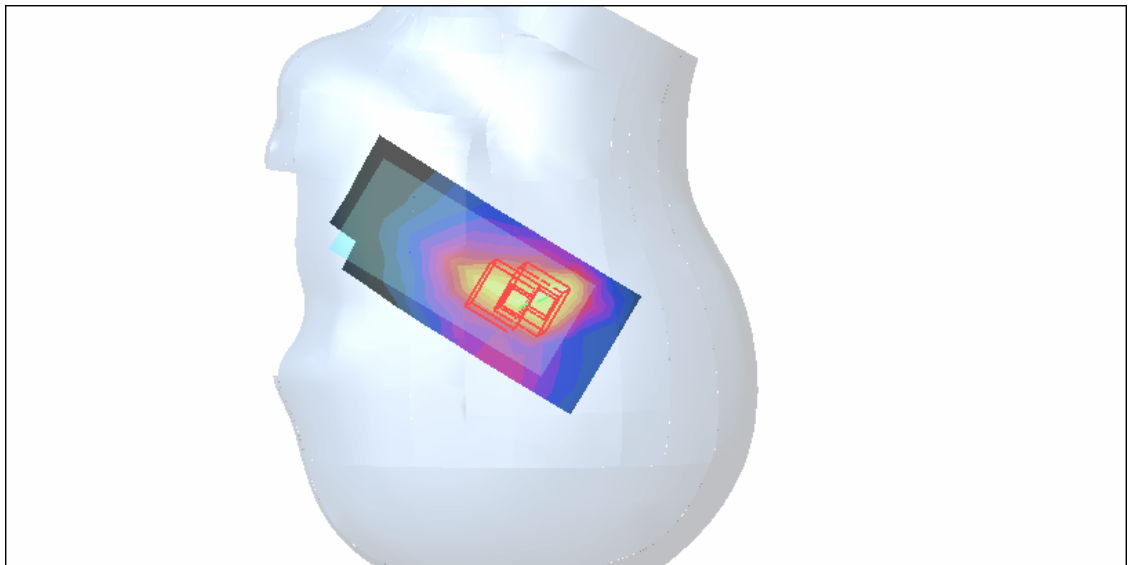
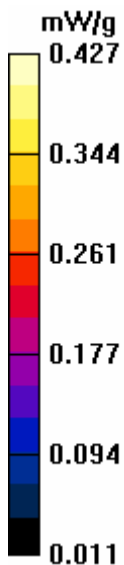
**Touch position - Mid Channel 661/Zoom Scan (7x7x7) (7x7x7)/Cube 1:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 16.2 V/m

Peak SAR (extrapolated) = 0.527 W/kg

**SAR(1 g) = 0.338 mW/g; SAR(10 g) = 0.209 mW/g**

Maximum value of SAR (measured) = 0.407 mW/g



Test Laboratory: Advance Data Technology

**Right Head-Cheek-PCS1900-Ch810-Mode 7****DUT: Dual Band GSM Mobile Phone ; Type: S198+ ; Test Frequency: 1909.8 MHz**

Communication System: PCS 1900 ; Frequency: 1909.8 MHz ; Duty Cycle: 1:8.3

Phantom: SAM 12 Medium parameters used:  $f = 1909.8$  MHz;  $\sigma = 1.46$  mho/m;  $\epsilon_r = 40.5$ ;  $\rho = 1000$  kg/m<sup>3</sup> ; Liquid level: 151 mm

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

Antenna type : Internal Antenna ; Air temp. : 21.5 degrees ; Liquid temp. : 20.3 degrees

DASY4 Configuration:

- Probe: ET3DV6 - SN1687; ConvF(4.96, 4.96, 4.96) ; Calibrated: 2005/9/15
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: 2005/8/17
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP 1202
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 161

**Touch position - High Channel 810/Area Scan (5x10x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.326 mW/g

**Touch position - High Channel 810/Zoom Scan (7x7x7) (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 14.6 V/m

Peak SAR (extrapolated) = 0.513 W/kg

**SAR(1 g) = 0.329 mW/g; SAR(10 g) = 0.193 mW/g**

Maximum value of SAR (measured) = 0.368 mW/g

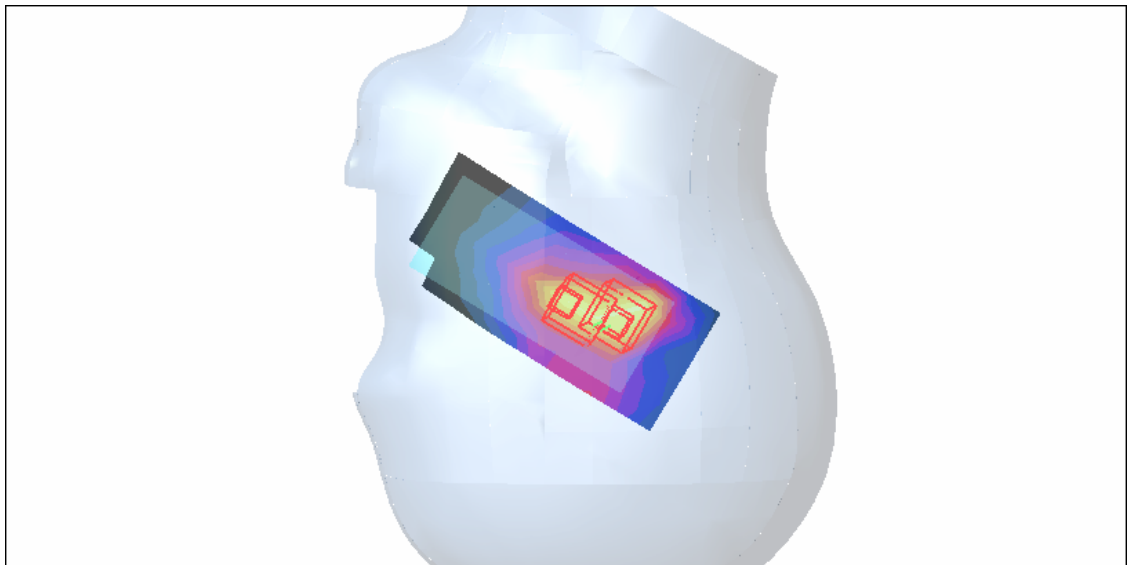
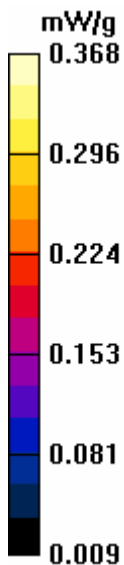
**Touch position - High Channel 810/Zoom Scan (7x7x7) (7x7x7)/Cube 1:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 14.6 V/m

Peak SAR (extrapolated) = 0.453 W/kg

**SAR(1 g) = 0.291 mW/g; SAR(10 g) = 0.180 mW/g**

Maximum value of SAR (measured) = 0.343 mW/g



Test Laboratory: Advance Data Technology

## Right Head-Tilt-PCS1900-Ch512-Mode 8

**DUT: Dual Band GSM Mobile Phone ; Type: S198+ ; Test Frequency: 1850.2 MHz**

Communication System: PCS 1900 ; Frequency: 1850.2 MHz; Duty Cycle: 1:8.3

Medium: HSL1900 Medium parameters used:  $f = 1850.2$  MHz;  $\sigma = 1.39$  mho/m;  $\epsilon_r = 40.7$ ;  $\rho = 1000$  kg/m<sup>3</sup> ; Liquid level: 151 mm

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

Antenna type : Internal Antenna ; Air temp. : 21.5 degrees ; Liquid temp. : 20.3 degrees

DASY4 Configuration:

- Probe: ET3DV6 - SN1687 ; ConvF(4.96, 4.96, 4.96) ; Calibrated: 2005/9/15
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: 2005/8/17
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP 1202
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 161

**Tilt position - Low Channel 512/Area Scan (5x10x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.336 mW/g

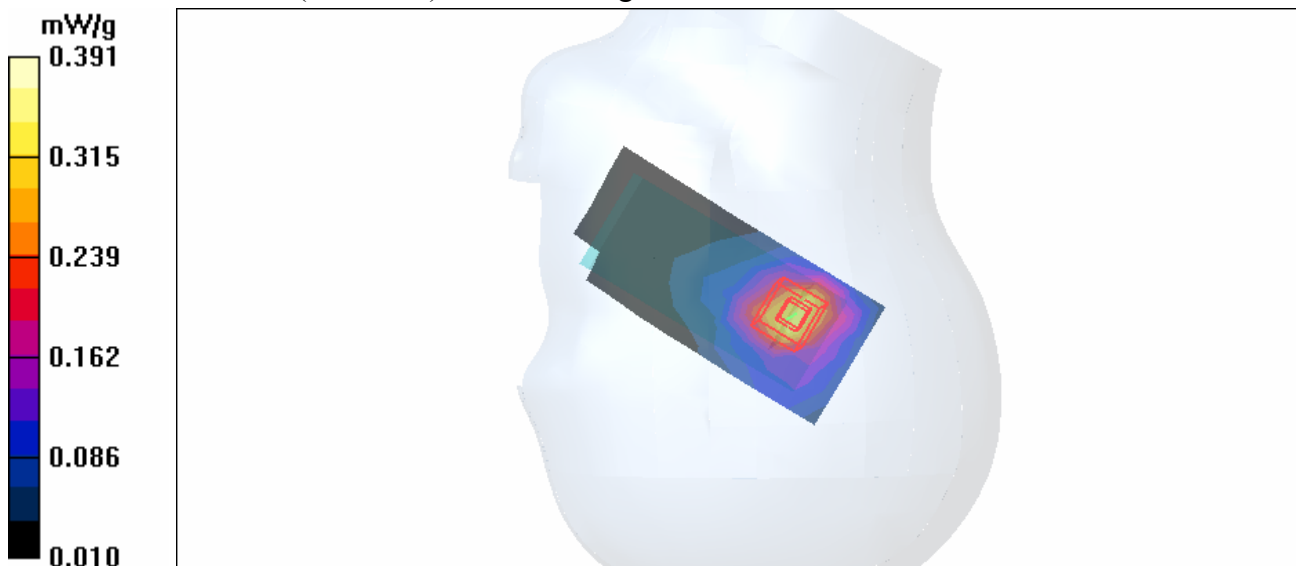
**Tilt position - Low Channel 512/Zoom Scan (7x7x7) (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 16.5 V/m

Peak SAR (extrapolated) = 0.562 W/kg

**SAR(1 g) = 0.352 mW/g; SAR(10 g) = 0.196 mW/g**

Maximum value of SAR (measured) = 0.391 mW/g



Test Laboratory: Advance Data Technology

## Right Head-Tilt-PCS1900-Ch661-Mode 8

**DUT: Dual Band GSM Mobile Phone ; Type: S198+ ; Test Frequency: 1880 MHz**

Communication System: PCS 1900 ; Frequency: 1880 MHz; Duty Cycle: 1:8.3

Medium: HSL1900 Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.42$  mho/m;  $\epsilon_r = 40.6$ ;  $\rho = 1000$  kg/m<sup>3</sup> ; Liquid level: 151 mm

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

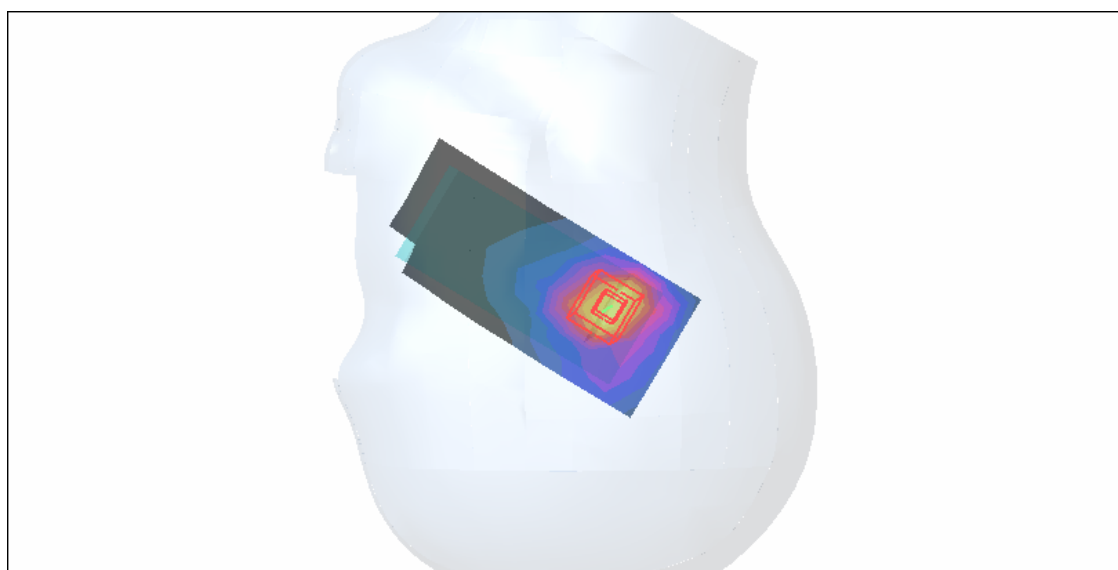
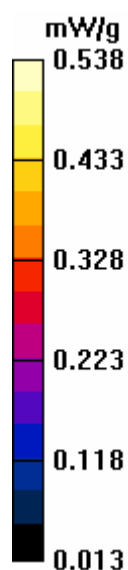
Antenna type : Internal Antenna ; Air temp. : 21.5 degrees ; Liquid temp. : 20.3 degrees

DASY4 Configuration:

- Probe: ET3DV6 - SN1687 ; ConvF(4.96, 4.96, 4.96) ; Calibrated: 2005/9/15
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: 2005/8/17
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP 1202
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 161

**Tilt position - Mid Channel 661/Area Scan (5x10x1):** Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (measured) = 0.460 mW/g

**Tilt position - Mid Channel 661/Zoom Scan (7x7x7) (7x7x7)/Cube 0:** Measurement grid:  
dx=5mm, dy=5mm, dz=5mm  
Reference Value = 19.0 V/m  
Peak SAR (extrapolated) = 0.797 W/kg  
**SAR(1 g) = 0.486 mW/g; SAR(10 g) = 0.269 mW/g**  
Maximum value of SAR (measured) = 0.538 mW/g



Test Laboratory: Advance Data Technology

## Right Head-Tilt-PCS1900-Ch810-Mode 8

**DUT: Dual Band GSM Mobile Phone ; Type: S198+ ; Test Frequency: 1909.8 MHz**

Communication System: PCS 1900 ; Frequency: 1909.8 MHz; Duty Cycle: 1:8.3

Medium: HSL1900 Medium parameters used:  $f = 1909.8$  MHz;  $\sigma = 1.46$  mho/m;  $\epsilon_r = 40.5$ ;  $\rho = 1000$  kg/m<sup>3</sup> ; Liquid level: 151 mm

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

Antenna type : Internal Antenna ; Air temp. : 21.5 degrees ; Liquid temp. : 20.3 degrees

DASY4 Configuration:

- Probe: ET3DV6 - SN1687 ; ConvF(4.96, 4.96, 4.96) ; Calibrated: 2005/9/15
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: 2005/8/17
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP 1202
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 161

**Tilt position - High Channel 810/Area Scan (5x10x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.386 mW/g

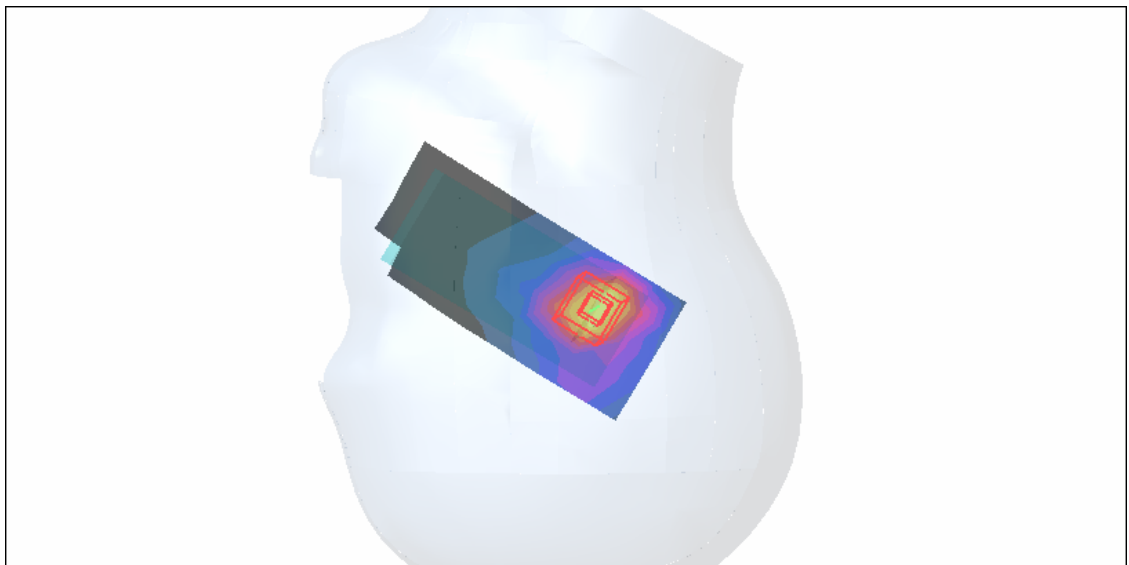
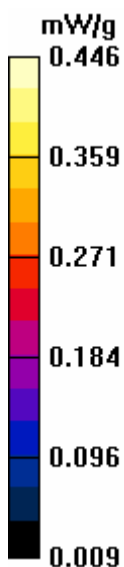
**Tilt position - High Channel 810/Zoom Scan (7x7x7) (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 16.7 V/m

Peak SAR (extrapolated) = 0.666 W/kg

**SAR(1 g) = 0.400 mW/g; SAR(10 g) = 0.220 mW/g**

Maximum value of SAR (measured) = 0.446 mW/g



Test Laboratory: Advance Data Technology

## Left Head-Cheek-PCS1900-Ch512-Mode 9

**DUT: Dual Band GSM Mobile Phone ; Type: S198+ ; Test Frequency: 1850.2 MHz**

Communication System: PCS 1900 ; Frequency: 1850.2 MHz ; Duty Cycle: 1:8.3

Phantom: SAM 12 Medium parameters used:  $f = 1850.2$  MHz;  $\sigma = 1.39$  mho/m;  $\epsilon_r = 40.7$ ;  $\rho = 1000$  kg/m<sup>3</sup> ; Liquid level: 151 mm

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

Antenna type : Internal Antenna ; Air temp. : 21.5 degrees ; Liquid temp. : 20.3 degrees

DASY4 Configuration:

- Probe: ET3DV6 - SN1687; ConvF(4.96, 4.96, 4.96) ; Calibrated: 2005/9/15
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: 2005/8/17
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP 1202
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 161

**Touch position - Low Channel 512/Area Scan (5x10x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.474 mW/g

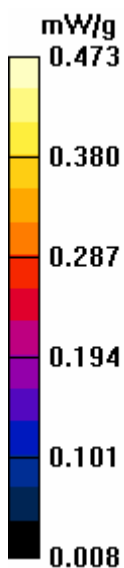
**Touch position - Low Channel 512/Zoom Scan (7x7x7) (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 14.0 V/m

Peak SAR (extrapolated) = 0.735 W/kg

**SAR(1 g) = 0.427 mW/g; SAR(10 g) = 0.234 mW/g**

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



Test Laboratory: Advance Data Technology

## Left Head-Cheek-PCS1900-Ch661-Mode 9

**DUT: Dual Band GSM Mobile Phone ; Type: S198+ ; Test Frequency: 1880 MHz**

Communication System: PCS 1900 ; Frequency: 1880 MHz ; Duty Cycle: 1:8.3

Phantom: SAM 12 Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.42$  mho/m;  $\epsilon_r = 40.6$ ;  $\rho = 1000$  kg/m<sup>3</sup> ; Liquid level: 151 mm

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

Antenna type : Internal Antenna ; Air temp. : 21.5 degrees ; Liquid temp. : 20.3 degrees

DASY4 Configuration:

- Probe: ET3DV6 - SN1687; ConvF(4.96, 4.96, 4.96) ; Calibrated: 2005/9/15
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: 2005/8/17
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP 1202
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 161

**Touch position - Mid Channel 661/Area Scan (5x10x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.727 mW/g

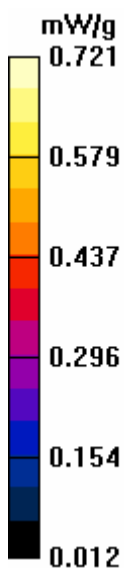
**Touch position - Mid Channel 661/Zoom Scan (7x7x7) (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 17.6 V/m

Peak SAR (extrapolated) = 1.12 W/kg

**SAR(1 g) = 0.652 mW/g; SAR(10 g) = 0.359 mW/g**

Maximum value of SAR (measured) = 0.721 mW/g



Test Laboratory: Advance Data Technology

## Left Head-Cheek-PCS1900-Ch810-Mode 9

**DUT: Dual Band GSM Mobile Phone ; Type: S198+ ; Test Frequency: 1909.8 MHz**

Communication System: PCS 1900 ; Frequency: 1909.8 MHz ; Duty Cycle: 1:8.3

Phantom: SAM 12 Medium parameters used:  $f = 1909.8 \text{ MHz}$ ;  $\sigma = 1.46 \text{ mho/m}$ ;  $\epsilon_r = 40.5$ ;  $\rho = 1000 \text{ kg/m}^3$  ; Liquid level: 151 mm

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

Antenna type : Internal Antenna ; Air temp. : 21.5 degrees ; Liquid temp. : 20.3 degrees

DASY4 Configuration:

- Probe: ET3DV6 - SN1687; ConvF(4.96, 4.96, 4.96) ; Calibrated: 2005/9/15
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: 2005/8/17
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP 1202
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 161

**Touch position - High Channel 810/Area Scan (5x10x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$

Maximum value of SAR (measured) = 0.601 mW/g

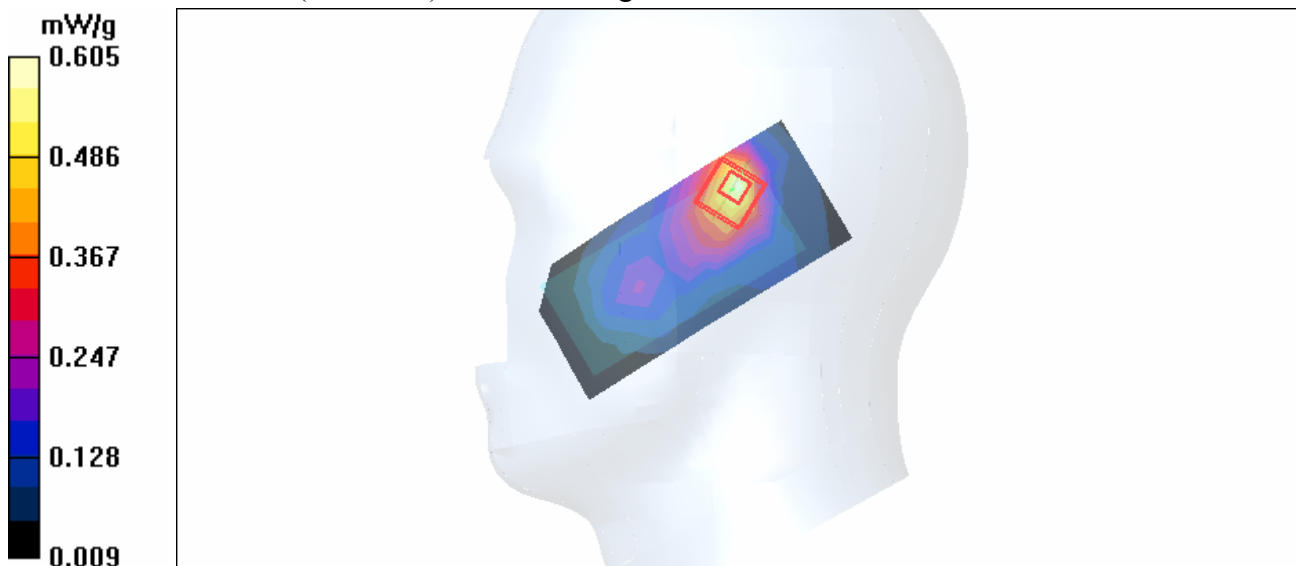
**Touch position - High Channel 810/Zoom Scan (7x7x7) (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$

Reference Value = 15.8 V/m

Peak SAR (extrapolated) = 0.929 W/kg

**SAR(1 g) = 0.544 mW/g; SAR(10 g) = 0.300 mW/g**

Maximum value of SAR (measured) = 0.605 mW/g



Test Laboratory: Advance Data Technology

## Left Head-Tilt-PCS1900-Ch512-Mode 10

**DUT: Dual Band GSM Mobile Phone ; Type: S198+ ; Test Frequency: 1850.2 MHz**

Communication System: PCS 1900 ; Frequency: 1850.2 MHz; Duty Cycle: 1:8.3

Medium: HSL1900 Medium parameters used:  $f = 1850.2$  MHz;  $\sigma = 1.39$  mho/m;  $\epsilon_r = 40.7$ ;  $\rho = 1000$  kg/m<sup>3</sup> ; Liquid level: 151 mm

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

Antenna type : Internal Antenna ; Air temp. : 21.5 degrees ; Liquid temp. : 20.3 degrees

DASY4 Configuration:

- Probe: ET3DV6 - SN1687 ; ConvF(4.96, 4.96, 4.96) ; Calibrated: 2005/9/15
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: 2005/8/17
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP 1202
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 161

**Tilt position - Low Channel 512/Area Scan (5x10x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.539 mW/g

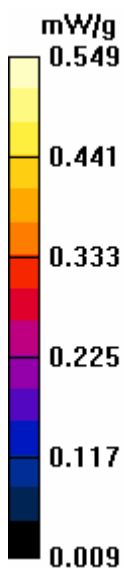
**Tilt position - Low Channel 512/Zoom Scan (7x7x7) (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 16.1 V/m

Peak SAR (extrapolated) = 0.861 W/kg

**SAR(1 g) = 0.485 mW/g; SAR(10 g) = 0.256 mW/g**

Maximum value of SAR (measured) = 0.549 mW/g



Test Laboratory: Advance Data Technology

## Left Head-Tilt-PCS1900-Ch661-Mode 10

**DUT: Dual Band GSM Mobile Phone ; Type: S198+ ; Test Frequency: 1880 MHz**

Communication System: PCS 1900 ; Frequency: 1880 MHz; Duty Cycle: 1:8.3

Medium: HSL1900 Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.42$  mho/m;  $\epsilon_r = 40.6$ ;  $\rho = 1000$  kg/m<sup>3</sup> ; Liquid level: 151 mm

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

Antenna type : Internal Antenna ; Air temp. : 21.5 degrees ; Liquid temp. : 20.3 degrees

DASY4 Configuration:

- Probe: ET3DV6 - SN1687 ; ConvF(4.96, 4.96, 4.96) ; Calibrated: 2005/9/15
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: 2005/8/17
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP 1202
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 161

**Tilt position - Mid Channel 661/Area Scan (5x10x1):** Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (measured) = 0.784 mW/g

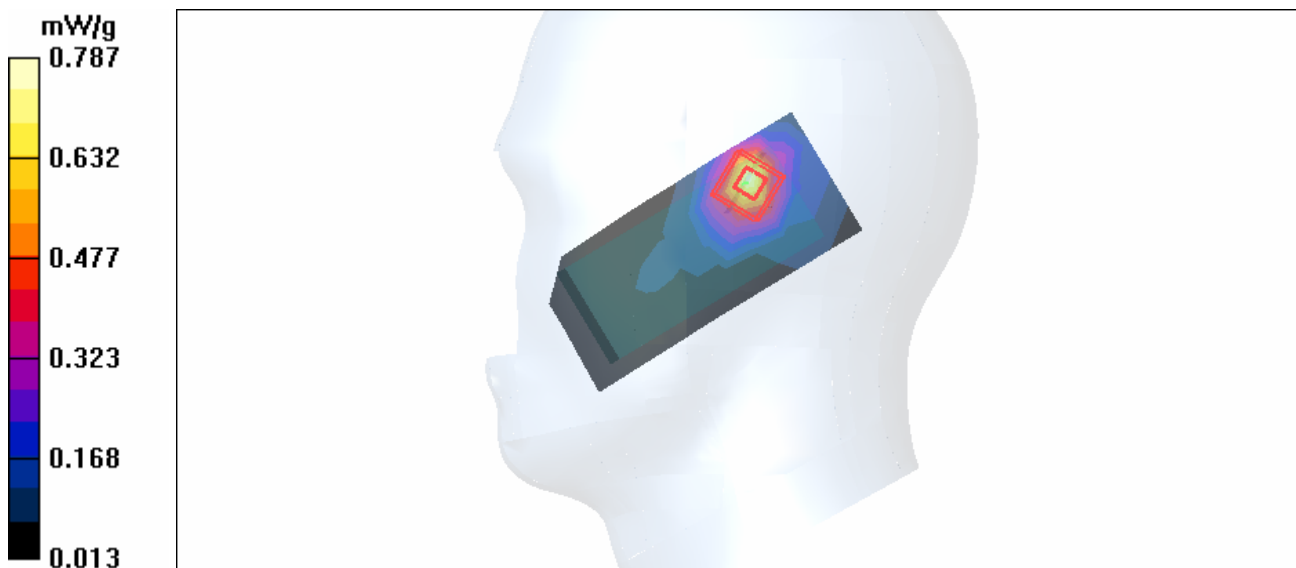
**Tilt position - Mid Channel 661/Zoom Scan (7x7x7) (7x7x7)/Cube 0:** Measurement grid:  
dx=5mm, dy=5mm, dz=5mm

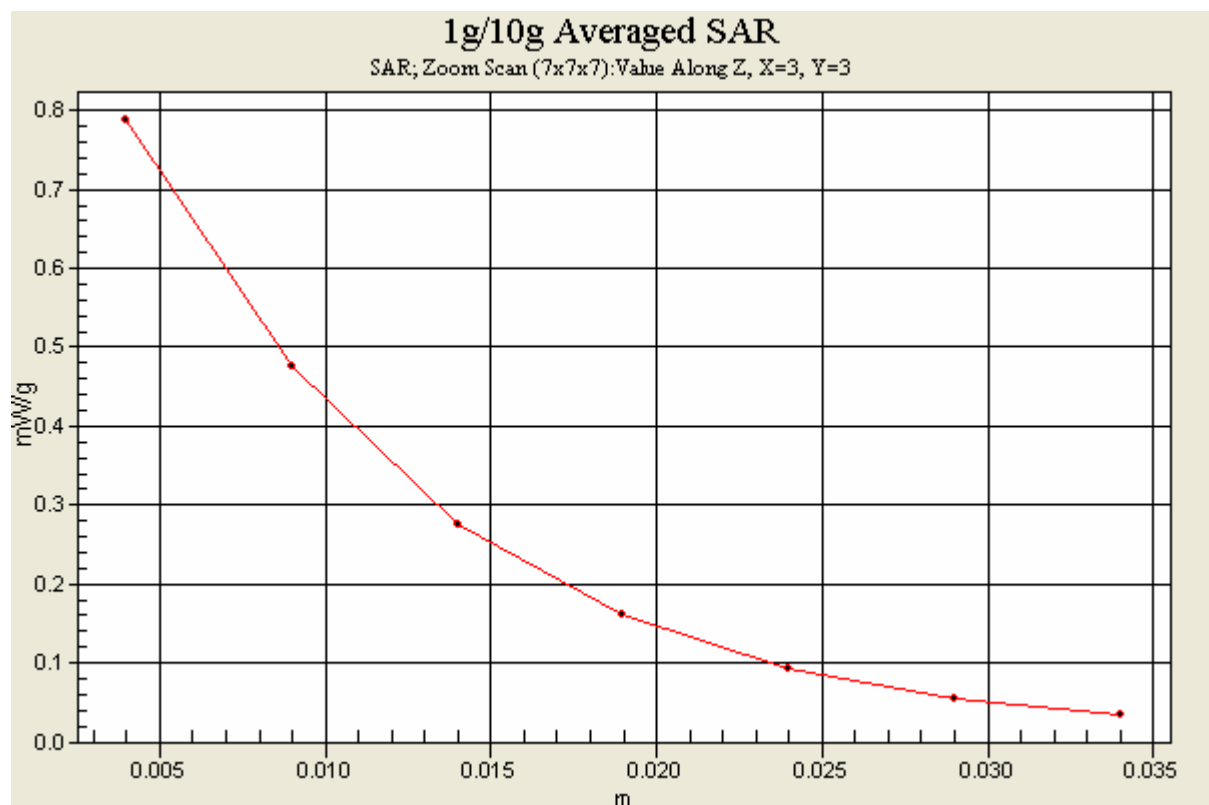
Reference Value = 18.9 V/m

Peak SAR (extrapolated) = 1.29 W/kg

**SAR(1 g) = 0.705 mW/g; SAR(10 g) = 0.369 mW/g**

Maximum value of SAR (measured) = 0.787 mW/g





Test Laboratory: Advance Data Technology

## Left Head-Tilt-PCS1900-Ch810-Mode 10

**DUT: Dual Band GSM Mobile Phone ; Type: S198+ ; Test Frequency: 1909.8 MHz**

Communication System: PCS 1900 ; Frequency: 1909.8 MHz; Duty Cycle: 1:8.3

Medium: HSL1900 Medium parameters used:  $f = 1909.8 \text{ MHz}$ ;  $\sigma = 1.46 \text{ mho/m}$ ;  $\epsilon_r = 40.5$ ;  $\rho = 1000 \text{ kg/m}^3$  ; Liquid level: 151 mm

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

Antenna type : Internal Antenna ; Air temp. : 21.5 degrees ; Liquid temp. : 20.3 degrees

DASY4 Configuration:

- Probe: ET3DV6 - SN1687 ; ConvF(4.96, 4.96, 4.96) ; Calibrated: 2005/9/15
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: 2005/8/17
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP 1202
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 161

**Tilt position - High Channel 810/Area Scan (5x10x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$

Maximum value of SAR (measured) = 0.649 mW/g

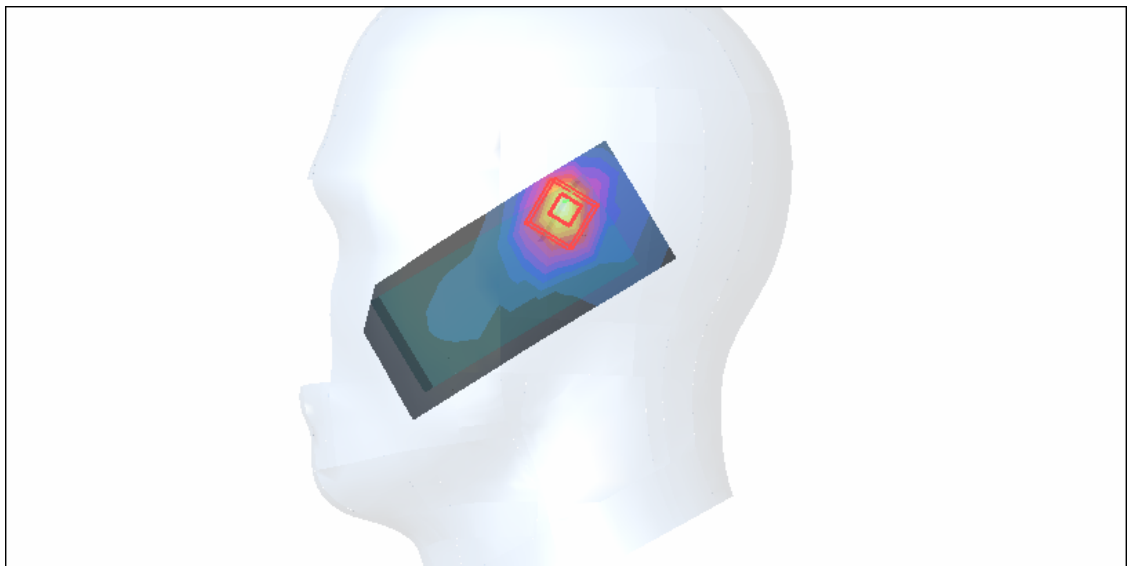
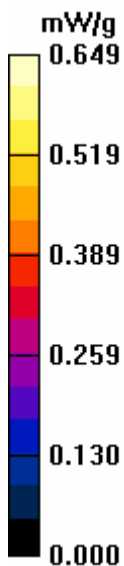
**Tilt position - High Channel 810/Zoom Scan (7x7x7) (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$

Reference Value = 16.8 V/m

Peak SAR (extrapolated) = 1.08 W/kg

**SAR(1 g) = 0.581 mW/g; SAR(10 g) = 0.305 mW/g**

Maximum value of SAR (measured) = 0.638 mW/g



Test Laboratory: Advance Data Technology

## BodyWorn-GSM1900-Ch512-Keypad Down-Mode 11

**DUT: Dual Band GSM Mobile Phone ; Type: S198+ ; Test Frequency: 1850.2 MHz**

Communication System: PCS 1900 ; Frequency: 1850.2 MHz ; Duty Cycle: 1:8.3

Medium: MSL1900 Medium parameters used:  $f = 1850.2$  MHz;  $\sigma = 1.52$  mho/m;  $\epsilon_r = 55.1$ ;  $\rho = 1000$  kg/m<sup>3</sup> ; Liquid Level : 150 mm

Phantom section: Flat Section ; DUT test position : Body ; Modulation Type: GMSK

Separation Distance : 15 mm ( The bottom side of the EUT to the Phantom)

Antenna Type : Internal Antenna ; Air Temp. : 21.8 degrees ; Liquid Temp. : 20.7 degrees

DASY4 Configuration:

- Probe: ET3DV6 - SN1687 ; ConvF(4.39, 4.39, 4.39) ; Calibrated: 2005/9/15
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510 ; Calibrated: 2005/8/17
- Phantom: SAM 12 ; Type: SAM V4.0; Serial: TP 1202
- Measurement SW: DASY4, V4.6 Build 23 ; Postprocessing SW: SEMCAD, V1.8 Build 161

**Low Channel 512/Area Scan (5x9x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.565 mW/g

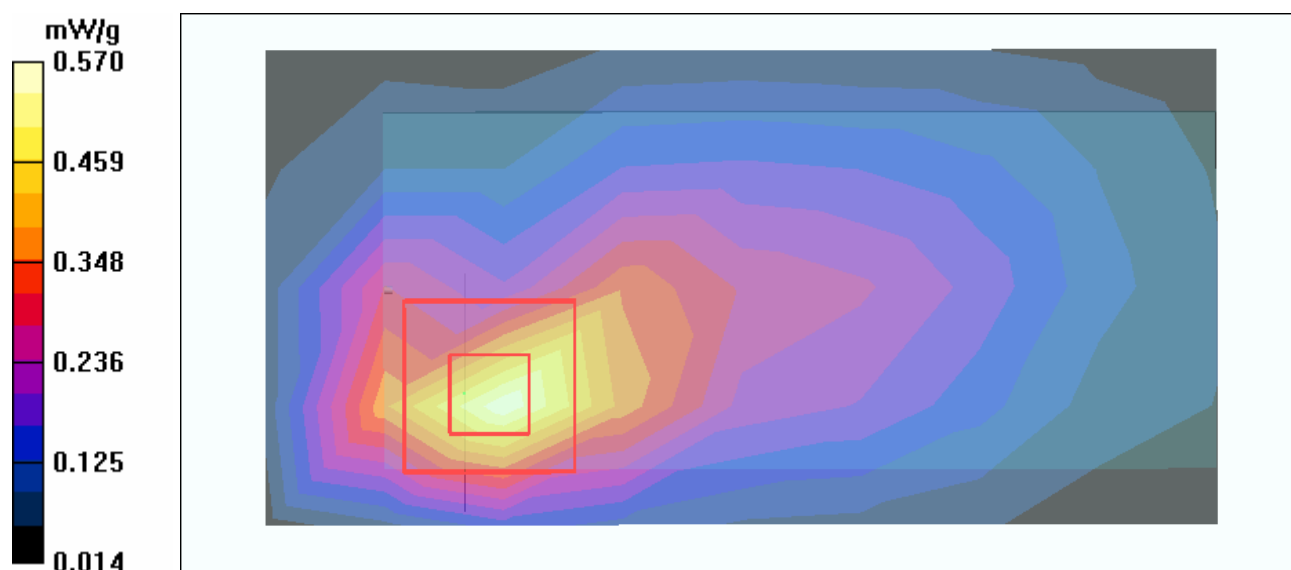
**Low Channel 512/Zoom Scan (7x7x7) (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 14.4 V/m

Peak SAR (extrapolated) = 0.918 W/kg

**SAR(1 g) = 0.512 mW/g; SAR(10 g) = 0.285 mW/g**

Maximum value of SAR (measured) = 0.570 mW/g



Test Laboratory: Advance Data Technology

## BodyWorn-GSM1900-Ch661-Keypad Down-Mode 11

**DUT: Dual Band GSM Mobile Phone ; Type: S198+ ; Test Frequency: 1880 MHz**

Communication System: PCS 1900 ; Frequency: 1880 MHz ; Duty Cycle: 1:8.3

Medium: MSL1900 Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.55$  mho/m;  $\epsilon_r = 55.1$ ;  $\rho = 1000$  kg/m<sup>3</sup> ; Liquid Level : 150 mm

Phantom section: Flat Section ; DUT test position : Body ; Modulation Type: GMSK

Separation Distance : 15 mm ( The bottom side of the EUT to the Phantom)

Antenna Type : Internal Antenna ; Air Temp. : 21.8 degrees ; Liquid Temp. : 20.7 degrees

DASY4 Configuration:

- Probe: ET3DV6 - SN1687 ; ConvF(4.39, 4.39, 4.39) ; Calibrated: 2005/9/15
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510 ; Calibrated: 2005/8/17
- Phantom: SAM 12 ; Type: SAM V4.0; Serial: TP 1202
- Measurement SW: DASY4, V4.6 Build 23 ; Postprocessing SW: SEMCAD, V1.8 Build 161

**Mid Channel 661/Area Scan (5x9x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.833 mW/g

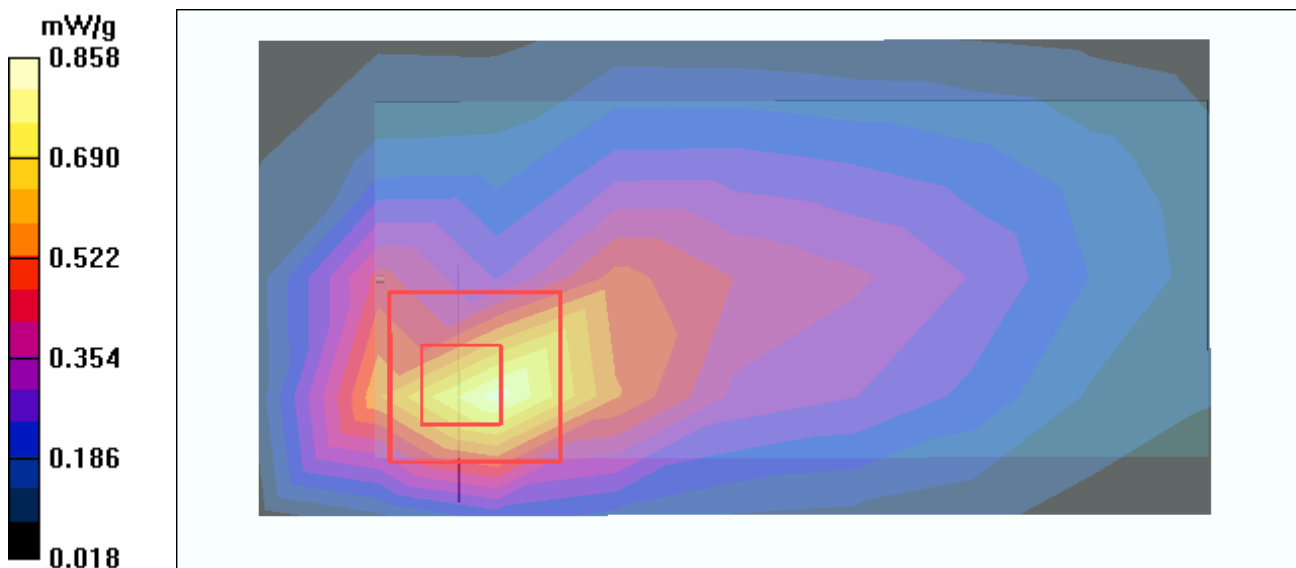
**Mid Channel 661/Zoom Scan (7x7x7) (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 17.8 V/m

Peak SAR (extrapolated) = 1.39 W/kg

**SAR(1 g) = 0.766 mW/g; SAR(10 g) = 0.417 mW/g**

Maximum value of SAR (measured) = 0.858 mW/g



Test Laboratory: Advance Data Technology

## BodyWorn-GSM1900-Ch810-Keypad Down-Mode 11

**DUT: Dual Band GSM Mobile Phone ; Type: S198+ ; Test Frequency: 1909.8 MHz**

Communication System: PCS 1900 ; Frequency: 1909.8 MHz ; Duty Cycle: 1:8.3

Medium: MSL1900 Medium parameters used:  $f = 1909.8$  MHz;  $\sigma = 1.58$  mho/m;  $\epsilon_r = 55$ ;  $\rho = 1000$  kg/m<sup>3</sup> ; Liquid Level : 150 mm

Phantom section: Flat Section ; DUT test position : Body ; Modulation Type: GMSK

Separation Distance : 15 mm ( The bottom side of the EUT to the Phantom)

Antenna Type : Internal Antenna ; Air Temp. : 21.8 degrees ; Liquid Temp. : 20.7 degrees

DASY4 Configuration:

- Probe: ET3DV6 - SN1687 ; ConvF(4.39, 4.39, 4.39) ; Calibrated: 2005/9/15
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510 ; Calibrated: 2005/8/17
- Phantom: SAM 12 ; Type: SAM V4.0; Serial: TP 1202
- Measurement SW: DASY4, V4.6 Build 23 ; Postprocessing SW: SEMCAD, V1.8 Build 161

**High Channel 810/Area Scan (5x9x1):** Measurement grid: dx=15mm, dy=15mm

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

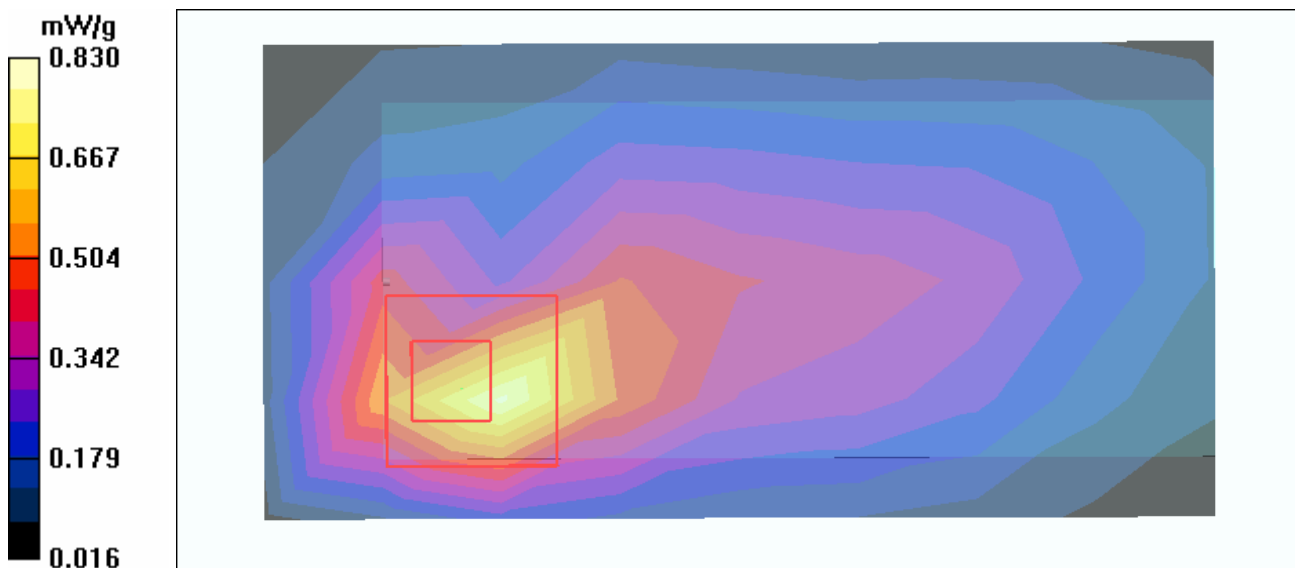
**High Channel 810/Zoom Scan (7x7x7) (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 17.6 V/m

Peak SAR (extrapolated) = 1.31 W/kg

**SAR(1 g) = 0.737 mW/g; SAR(10 g) = 0.398 mW/g**

Maximum value of SAR (measured) = 0.830 mW/g



Test Laboratory: Advance Data Technology

## BodyWorn-GSM1900-Ch661-Keypad Up-Mode 12

**DUT: Dual Band GSM Mobile Phone ; Type: S198+ ; Test Frequency: 1880 MHz**

Communication System: PCS 1900 ; Frequency: 1880 MHz ; Duty Cycle: 1:8.3

Medium: MSL1900 Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.55$  mho/m;  $\epsilon_r = 55.1$ ;  $\rho = 1000$  kg/m<sup>3</sup> ; Liquid Level : 150 mm

Phantom section: Flat Section ; DUT test position : Body ; Modulation Type: GMSK

Separation Distance : 15 mm ( The front side of the EUT to the Phantom)

Antenna Type : Internal Antenna ; Air Temp. : 21.8 degrees ; Liquid Temp. : 20.7 degrees

DASY4 Configuration:

- Probe: ET3DV6 - SN1687 ; ConvF(4.39, 4.39, 4.39) ; Calibrated: 2005/9/15
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510 ; Calibrated: 2005/8/17
- Phantom: SAM 12 ; Type: SAM V4.0; Serial: TP 1202
- Measurement SW: DASY4, V4.6 Build 23 ; Postprocessing SW: SEMCAD, V1.8 Build 161

**Mid Channel 661/Area Scan (5x9x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.239 mW/g

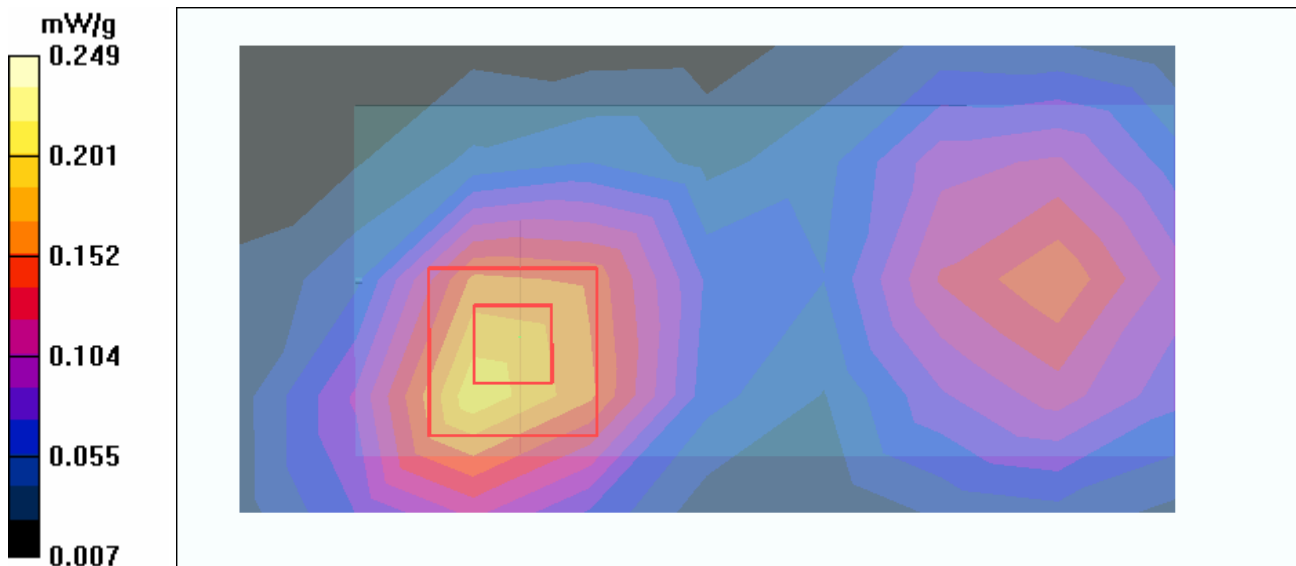
**Mid Channel 661/Zoom Scan (7x7x7) (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 6.74 V/m

Peak SAR (extrapolated) = 0.355 W/kg

**SAR(1 g) = 0.227 mW/g; SAR(10 g) = 0.136 mW/g**

Maximum value of SAR (measured) = 0.249 mW/g



Test Laboratory: Advance Data Technology

## System Validation Check-HSL 835MHz

**DUT: Dipole 850 MHz ; Type: D835V2 ; Serial: 4d021 ; Test Frequency: 835 MHz**

Communication System: CW ; Frequency: 835 MHz; Duty Cycle: 1:1; Modulation type: CW  
Medium: HSL835; Medium parameters used:  $f = 835$  MHz;  $\sigma = 0.88$  mho/m;  $\epsilon_r = 41.2$ ;  $\rho = 1000$  kg/m<sup>3</sup> ;  
Liquid level : 155 mm  
Phantom section: Flat Section ; Separation distance : 15 mm (The feetpoint of the dipole to the Phantom)  
Air temp. : 22.0 degrees ; Liquid temp. : 21.0 degrees

DASY4 Configuration:

- Probe: ET3DV6 - SN1687 ; ConvF(6.34, 6.34, 6.34) ; Calibrated: 2005/9/15
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: 2005/8/17
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP 1202
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 161

**d=15mm, Pin=250mW/Area Scan (7x9x1):** Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (measured) = 2.19 mW/g

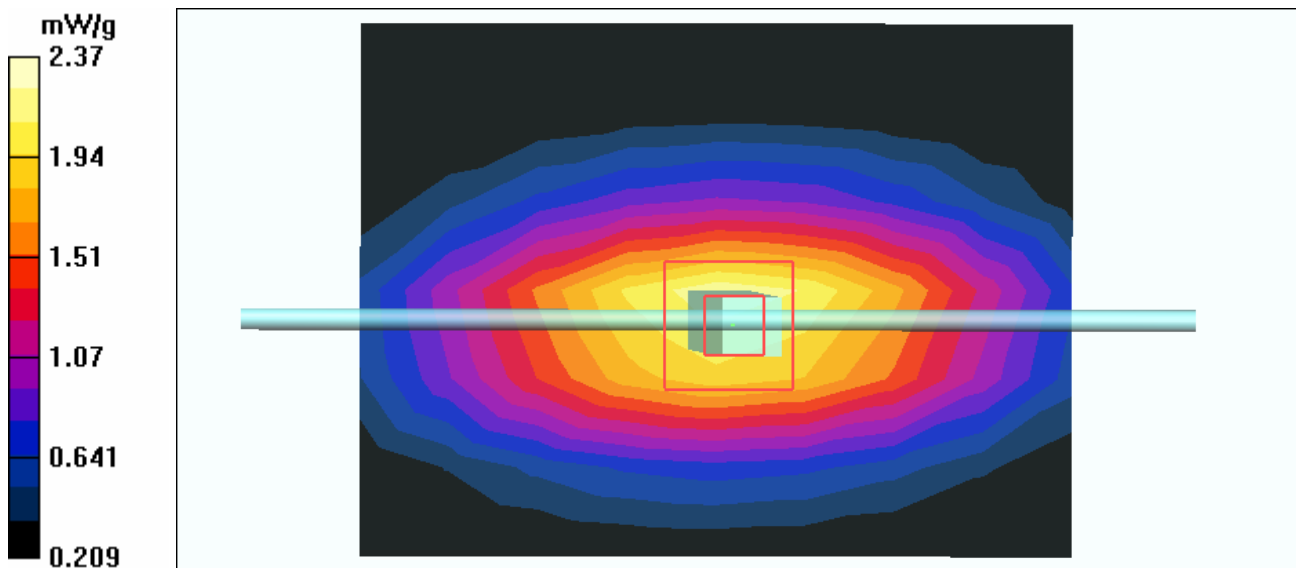
**d=15mm, Pin=250mW/Zoom Scan (7x7x7) (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 53.2 V/m; Power Drift = -0.052 dB

Peak SAR (extrapolated) = 3.33 W/kg

**SAR(1 g) = 2.19 mW/g; SAR(10 g) = 1.42 mW/g**

Maximum value of SAR (measured) = 2.37 mW/g



Test Laboratory: Advance Data Technology

**System Validation Check-MSL 835MHz****DUT: Dipole 850 MHz ; Type: D835V2 ; Serial: 4d021 ; Test Frequency: 835 MHz**

Communication System: CW ; Frequency: 835 MHz; Duty Cycle: 1:1; Modulation type: CW  
 Medium: MSL835; Medium parameters used:  $f = 835 \text{ MHz}$ ;  $\sigma = 0.96 \text{ mho/m}$ ;  $\epsilon_r = 54.7$ ;  $\rho = 1000 \text{ kg/m}^3$  ;  
 Liquid level : 151 mm  
 Phantom section: Flat Section ; Separation distance : 15 mm (The feetpoint of the dipole to the Phantom)  
 Air temp. : 21.8 degrees ; Liquid temp. : 20.9 degrees

**DASY4 Configuration:**

- Probe: ET3DV6 - SN1687 ; ConvF(6.21, 6.21, 6.21) ; Calibrated: 2005/9/15
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: 2005/8/17
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP 1202
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 161

**d=15mm, Pin=250mW/Area Scan (7x9x1):** Measurement grid: dx=15mm, dy=15mm  
 Maximum value of SAR (measured) = 2.42 mW/g

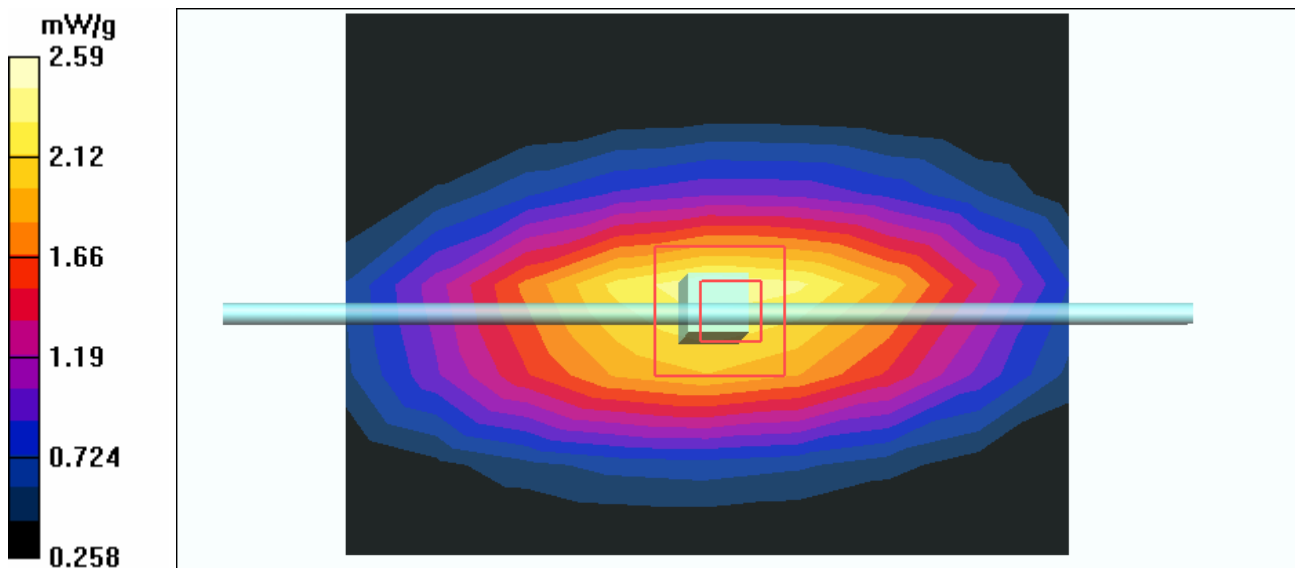
**d=15mm, Pin=250mW/Zoom Scan (7x7x7) (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 53.9 V/m; Power Drift = -0.063 dB

Peak SAR (extrapolated) = 3.48 W/kg

**SAR(1 g) = 2.4 mW/g; SAR(10 g) = 1.58 mW/g**

Maximum value of SAR (measured) = 2.59 mW/g



Test Laboratory: Advance Data Technology

## System Validation Check-HSL 1900MHz

**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: HSL1900; Medium parameters used:  $f = 1900$  MHz;  $\sigma = 1.45$  mho/m;  $\epsilon_r = 40.5$ ;  $\rho = 1000$  kg/m<sup>3</sup> ; Liquid level : 151 mm  
Phantom section: Flat Section ; Separation distance : 10 mm (The feetpoint of the dipole to the Phantom)  
Air temp. : 21.5 degrees ; Liquid temp. : 20.3 degrees

DASY4 Configuration:

- Probe: ET3DV6 - SN1687 ; ConvF(4.96, 4.96, 4.96) ; Calibrated: 2005/9/15
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: 2005/8/17
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP 1202
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 161

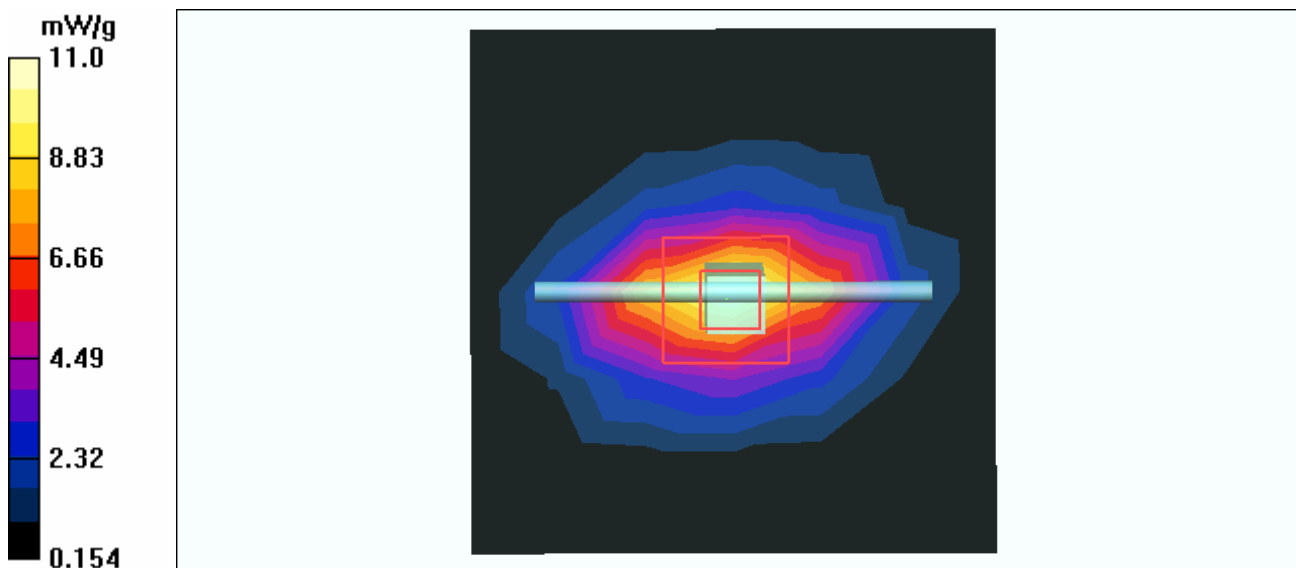
**d=10mm, Pin=250mW/Area Scan (7x7x1):** Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (measured) = 11.0 mW/g

**d=10mm, Pin=250mW/Zoom Scan (7x7x7) (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 90.3 V/m; Power Drift = -0.022 dB

Peak SAR (extrapolated) = 17.3 W/kg

SAR(1 g) = 9.7 mW/g; SAR(10 g) = 5.07 mW/g



Test Laboratory: Advance Data Technology

**System Validation Check-MSL 1900MHz****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:  $f = 1900 \text{ MHz}$ ;  $\sigma = 1.57 \text{ mho/m}$ ;  $\epsilon_r = 55$ ;  $\rho = 1000 \text{ kg/m}^3$  ;  
 Liquid level : 150 mm  
 Phantom section: Flat Section ; Separation distance : 10 mm (The feetpoint of the dipole to the Phantom)  
 Air temp. : 21.8 degrees ; Liquid temp. : 20.7 degrees

**DASY4 Configuration:**

- Probe: ET3DV6 - SN1687 ; ConvF(4.39, 4.39, 4.39) ; Calibrated: 2005/9/15
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: 2005/8/17
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP 1202
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 161

**d=10mm, Pin=250mW/Area Scan (7x7x1):** Measurement grid: dx=15mm, dy=15mm  
 Maximum value of SAR (measured) = 11.1 mW/g

**d=10mm, Pin=250mW/Zoom Scan (7x7x7) (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 85.2 V/m; Power Drift = -0.087 dB

Peak SAR (extrapolated) = 17.1 W/kg

SAR(1 g) = **9.76 mW/g**; SAR(10 g) = 5.14 mW/g