

For PCS Band

APPENDIX A: TEST CONFIGURATIONS AND TEST DATA

A1: TEST CONFIGURATION

Body Worn Bottom Position



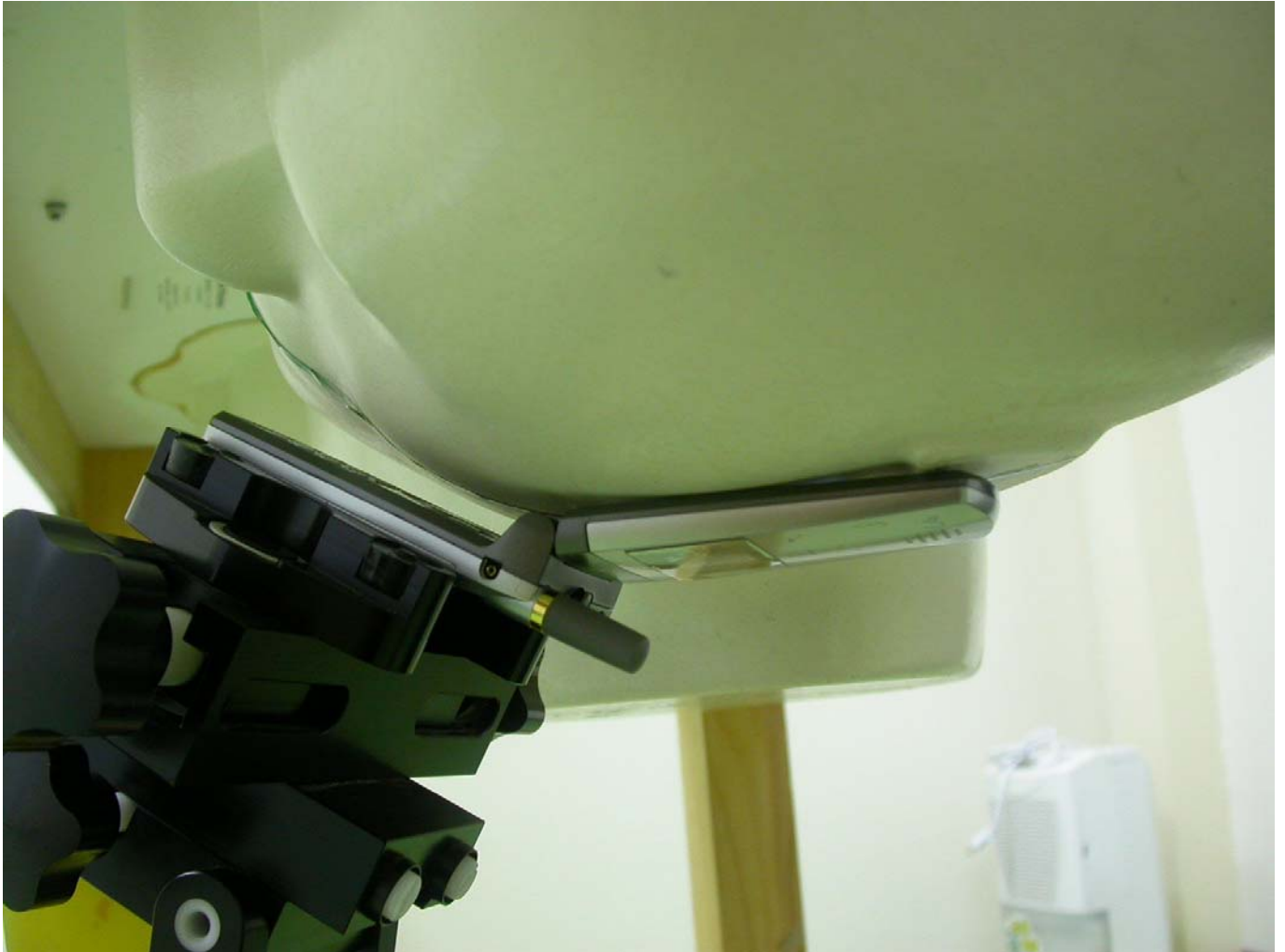
The bottom of the EUT to the flat phantom distance 15 mm

Body Worn Front Position



The front of the EUT to the flat phantom distance 15 mm

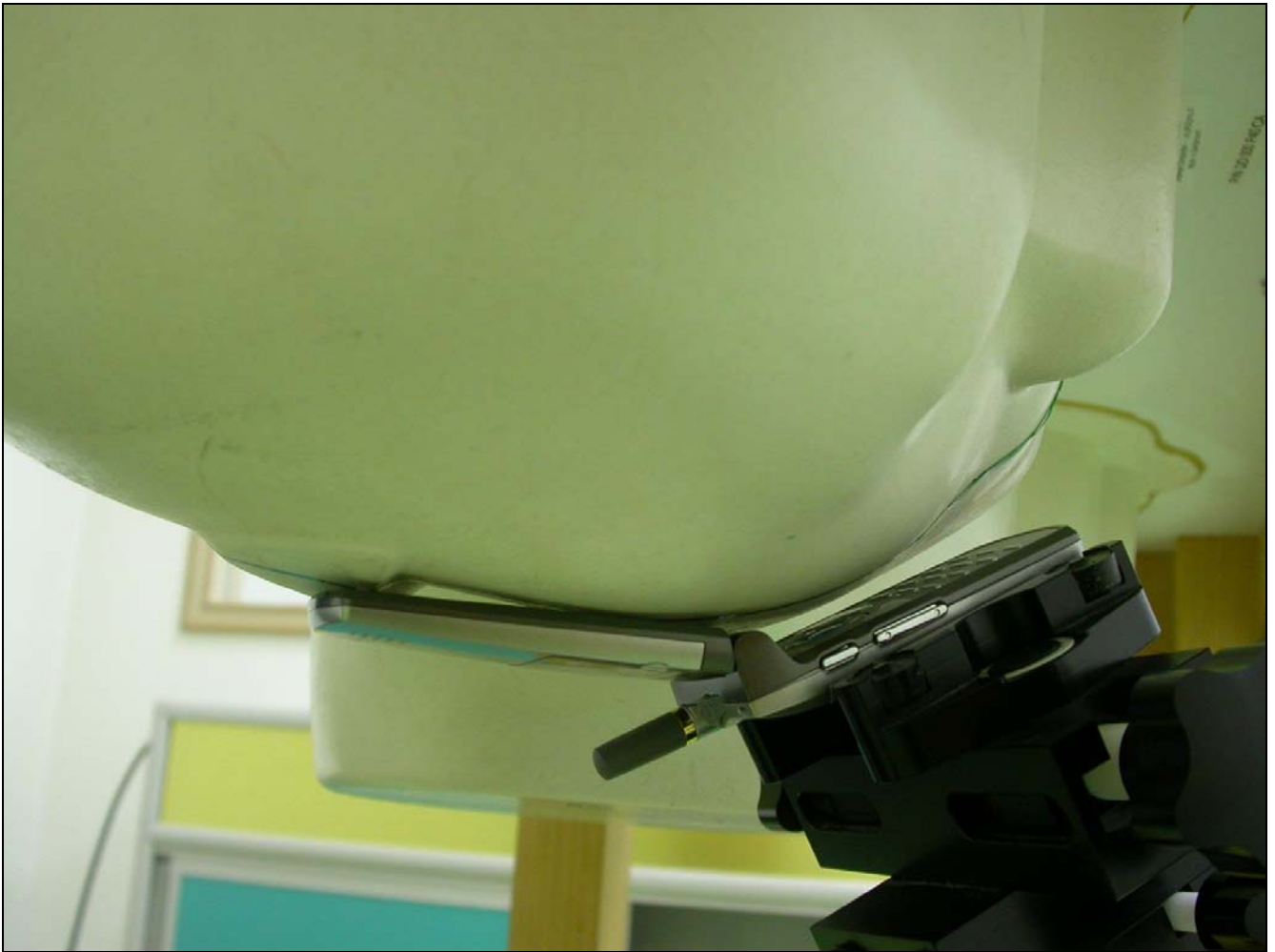
Left Head Cheek Position



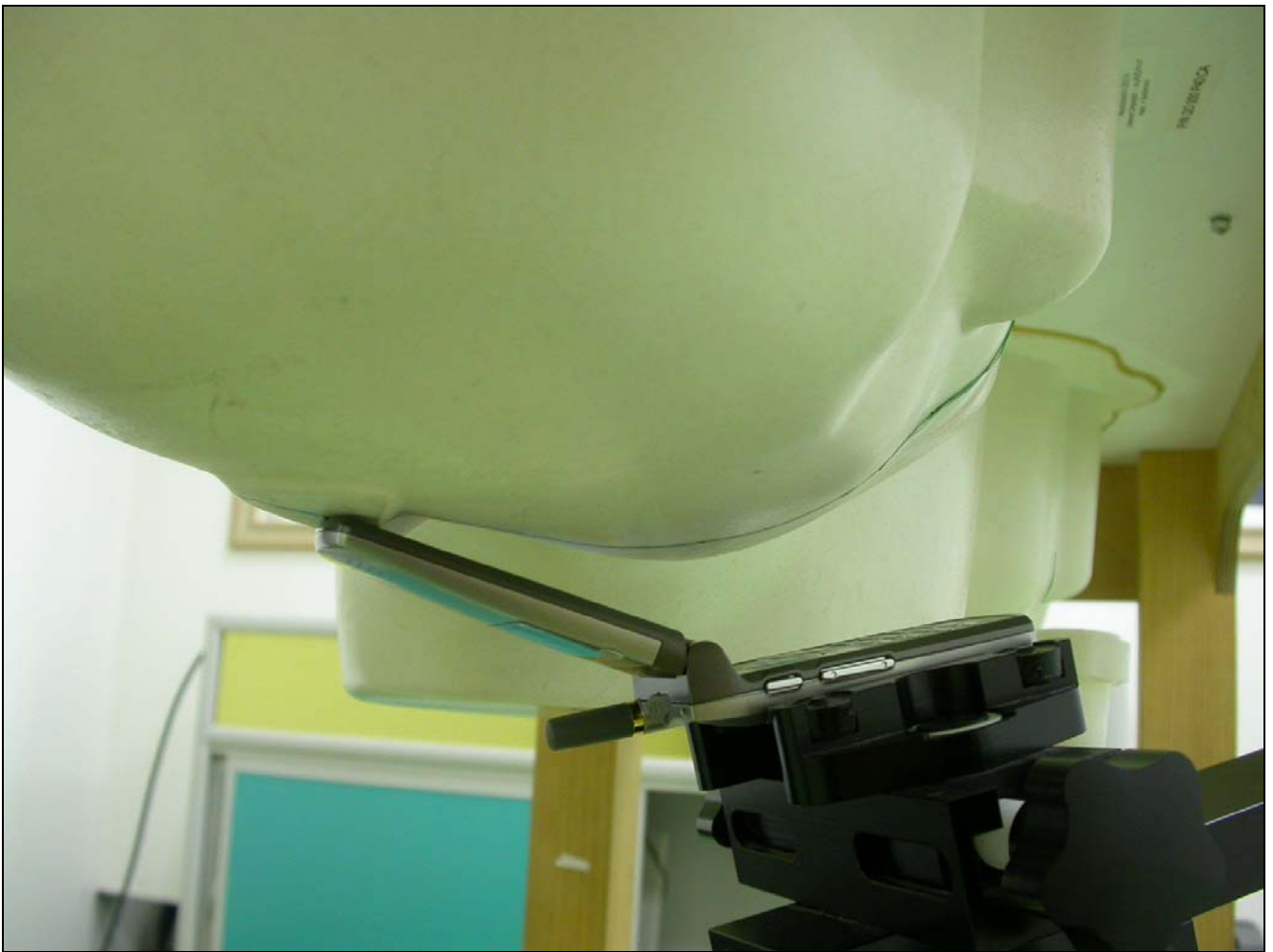
Left Head Tilt Position



Right Head Cheek Position



Right Head Tilt Position



EUT Photo





Liquid Level Photo

900MHz D=150mm



1900MHz D=150mm



Test Laboratory: Advance Data Technology

CA8a Mode 1 BodyWorn Bottom 15mm - PCS1900 GPRS

DUT: Mobil Phone ; Type: CA8a ; Test Channel Frequency: 1850.2 MHz

Communication System: PCS 1900 ; Frequency: 1850.2 MHz ; Duty Cycle: 1:4

Medium: MSL1900 Medium parameters used: $f = 1850.2$ MHz; $\sigma = 1.488$ mho/m; $\epsilon_r = 51.2$; $\rho = 1000$ kg/m³ ; Liquid Level : 150mm

Phantom section: Flat Section ; DUT test position : Body ; Modulation Type: GMSK / UL 2 time slots
Separation Distance : 15 mm (The bottom side of the EUT to the Phantom)

Antenna Type : External Antenna ; Air Temp. : 22.0 degrees ; Liquid Temp. : 21.0 degrees

DASY4 Configuration:

- Probe: ET3DV6 - SN1687 ; ConvF(4.54, 4.54, 4.54) ; Calibrated: 2004/8/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510 ; Calibrated: 2004/8/17
- Phantom: SAM 12 ; Type: SAM V4.0; Serial: TP 1202
- Measurement SW: DASY4, V4.4 Build 3 ; Postprocessing SW: SEMCAD, V1.8 Build 130

Low Channel 512/Area Scan (7x10x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 1.23 mW/g

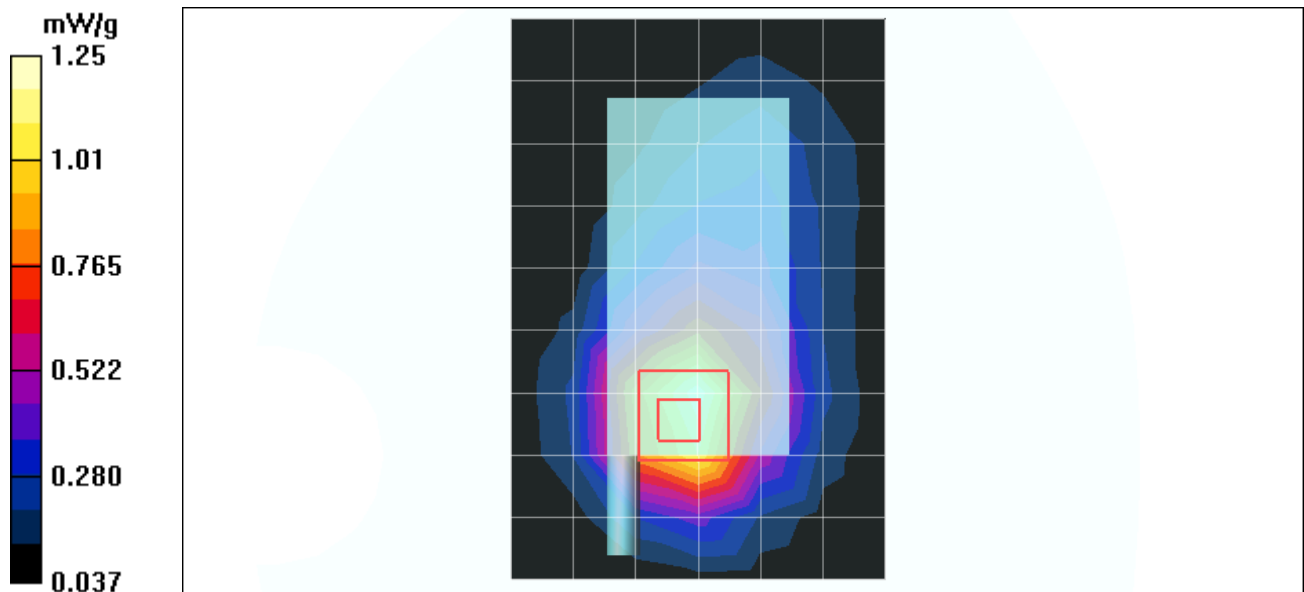
Low Channel 512/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

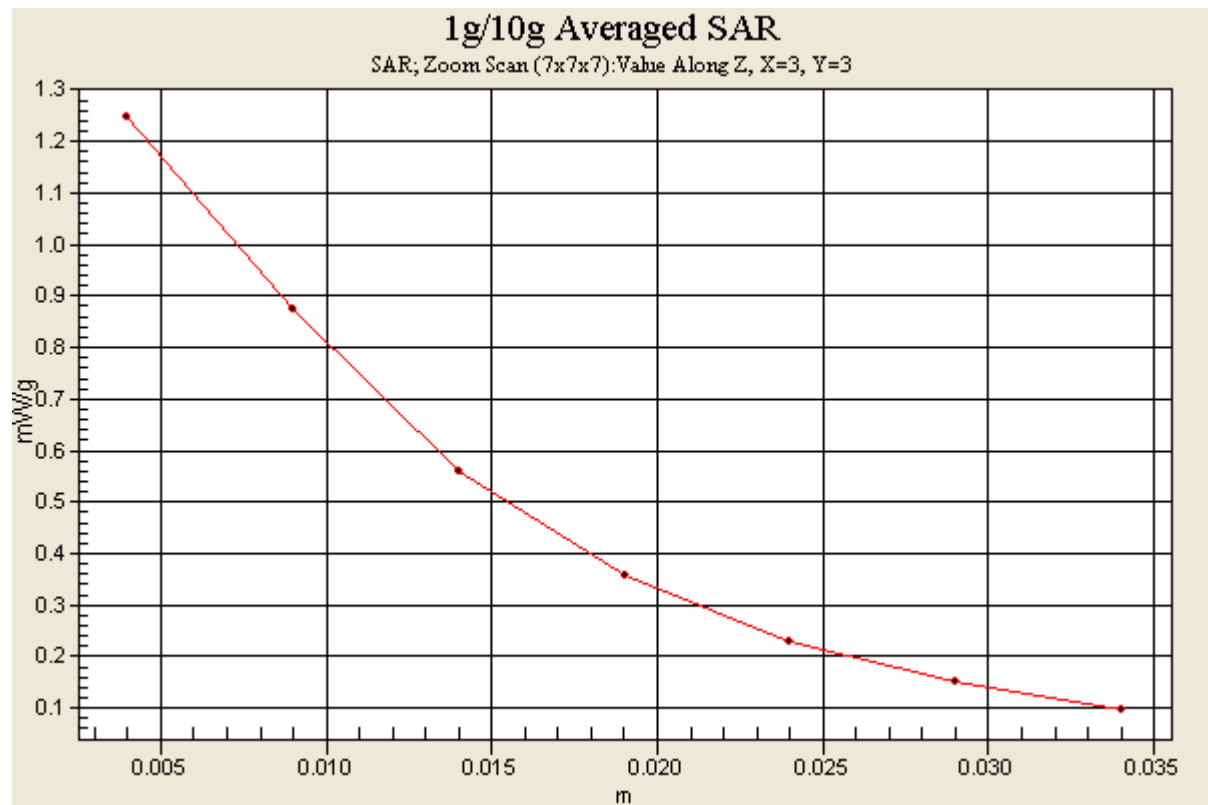
Reference Value = 28.3 V/m

Peak SAR (extrapolated) = 1.54 W/kg

SAR(1 g) = 1.14 mW/g; SAR(10 g) = 0.709 mW/g

Maximum value of SAR (measured) = 1.25 mW/g





Test Laboratory: Advance Data Technology

CA8a Mode 1 BodyWorn Bottom 15mm - PCS1900 GPRS

DUT: Mobil Phone ; Type: CA8a ; Test Channel Frequency: 1880 MHz

Communication System: PCS 1900 ; Frequency: 1880 MHz ; Duty Cycle: 1:4

Medium: MSL1900 Medium parameters used: $f = 1880 \text{ MHz}$; $\sigma = 1.522 \text{ mho/m}$; $\epsilon_r = 50.8$; $\rho = 1000 \text{ kg/m}^3$; Liquid Level : 150mm

Phantom section: Flat Section ; DUT test position : Body ; Modulation Type: GMSK / UL 2 time slots

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

Antenna Type : External Antenna ; Air Temp. : 22.0 degrees ; Liquid Temp. : 21.0 degrees

DASY4 Configuration:

- Probe: ET3DV6 - SN1687 ; ConvF(4.54, 4.54, 4.54) ; Calibrated: 2004/8/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510 ; Calibrated: 2004/8/17
- Phantom: SAM 12 ; Type: SAM V4.0; Serial: TP 1202
- Measurement SW: DASY4, V4.4 Build 3 ; Postprocessing SW: SEMCAD, V1.8 Build 130

Middle Channel 661/Area Scan (7x10x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

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

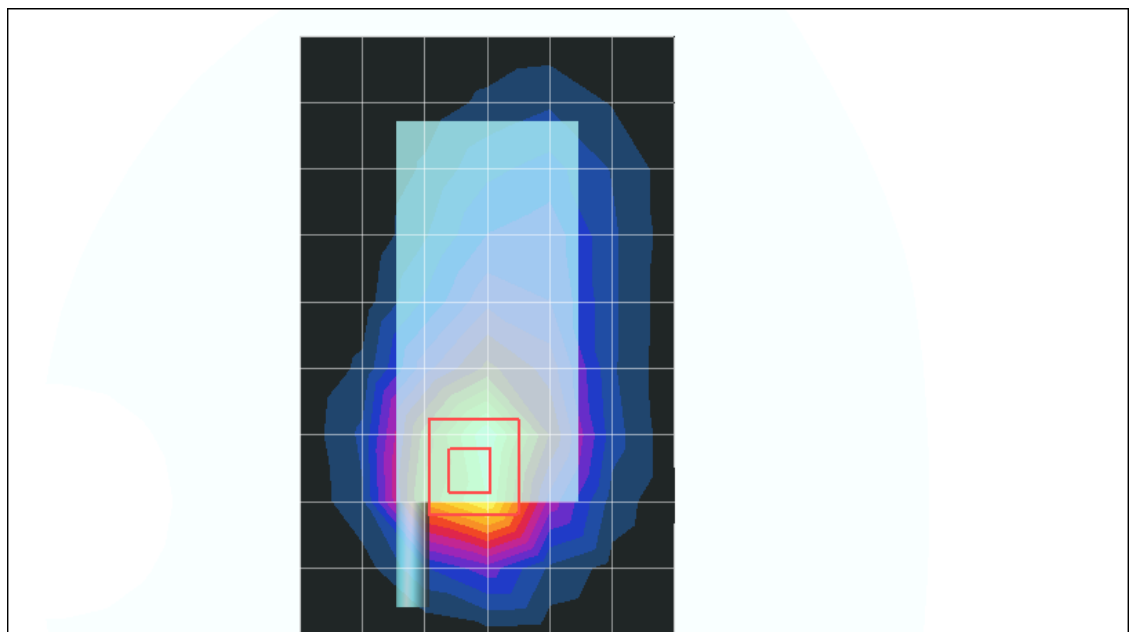
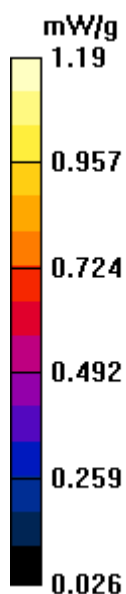
Middle Channel 661/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 27.4 V/m

Peak SAR (extrapolated) = 1.52 W/kg

SAR(1 g) = 1.07 mW/g; SAR(10 g) = 0.657 mW/g

Maximum value of SAR (measured) = 1.19 mW/g



Test Laboratory: Advance Data Technology

CA8a Mode 1 BodyWorn Bottom 15mm - PCS1900 GPRS

DUT: Mobil Phone ; Type: CA8a ; Test Channel Frequency: 1909.8 5Hz

Communication System: PCS 1900 ; Frequency: 1909.8 MHz ; Duty Cycle: 1:4

Medium: MSL1900 Medium parameters used: $f = 1909.8 \text{ MHz}$; $\sigma = 1.554 \text{ mho/m}$; $\epsilon_r = 50.8$; $\rho = 1000 \text{ kg/m}^3$; Liquid Level : 150mm

Phantom section: Flat Section ; DUT test position : Body ; Modulation Type: GMSK / UL 2 time slots

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

Antenna Type : External Antenna ; Air Temp. : 22.0 degrees ; Liquid Temp. : 21.0 degrees

DASY4 Configuration:

- Probe: ET3DV6 - SN1687 ; ConvF(4.54, 4.54, 4.54) ; Calibrated: 2004/8/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510 ; Calibrated: 2004/8/17
- Phantom: SAM 12 ; Type: SAM V4.0; Serial: TP 1202
- Measurement SW: DASY4, V4.4 Build 3 ; Postprocessing SW: SEMCAD, V1.8 Build 130

High Channel 810/Area Scan (7x10x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 1.1 mW/g

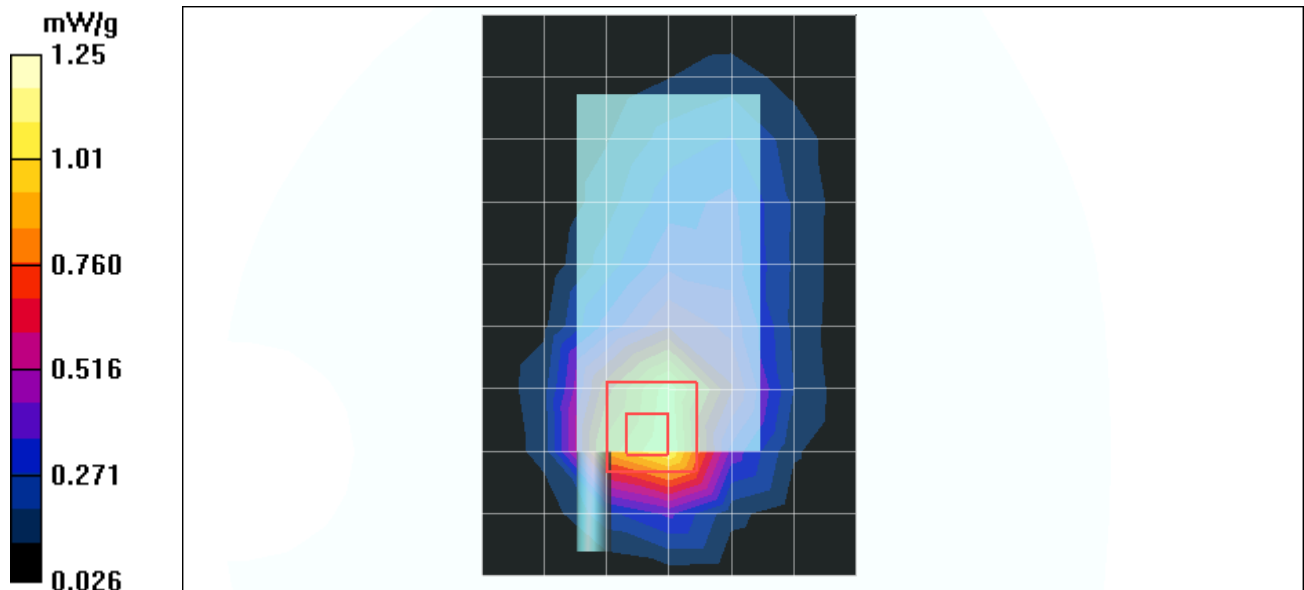
High Channel 810/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 28.2 V/m

Peak SAR (extrapolated) = 1.64 W/kg

SAR(1 g) = 1.13 mW/g; SAR(10 g) = 0.663 mW/g

Maximum value of SAR (measured) = 1.25 mW/g



Test Laboratory: Advance Data Technology

CA8a Mode 2 Body Worn Front 15mm - PCS1900 GPRS

DUT: Mobil Phone ; Type: CA8a ; Test Channel Frequency: 1850.2 MHz

Communication System: PCS 1900 ; Frequency: 1850.2 MHz ; Duty Cycle: 1:4

Medium: MSL1900 Medium parameters used: $f = 1850.2 \text{ MHz}$; $\sigma = 1.488 \text{ mho/m}$; $\epsilon_r = 51.2$; $\rho = 1000 \text{ kg/m}^3$; Liquid Level : 155mm

Phantom section: Flat Section ; DUT test position : Body ; Modulation Type: GMSK / UL 2 time slots

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

Antenna Type : External Antenna ; Air Temp. : 22.0 degrees ; Liquid Temp. : 21.0 degrees

DASY4 Configuration:

- Probe: ET3DV6 - SN1687 ; ConvF(4.54, 4.54, 4.54) ; Calibrated: 2004/8/26

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

- Electronics: DAE3 Sn510 ; Calibrated: 2004/8/17

- Phantom: SAM 12 ; Type: SAM V4.0; Serial: TP 1202

- Measurement SW: DASY4, V4.4 Build 3 ; Postprocessing SW: SEMCAD, V1.8 Build 130

Low Channel 1/Area Scan (7x10x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

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

Low Channel 1/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 15.5 V/m

Peak SAR (extrapolated) = 0.438 W/kg

SAR(1 g) = 0.330 mW/g; SAR(10 g) = 0.219 mW/g

Maximum value of SAR (measured) = 0.356 mW/g

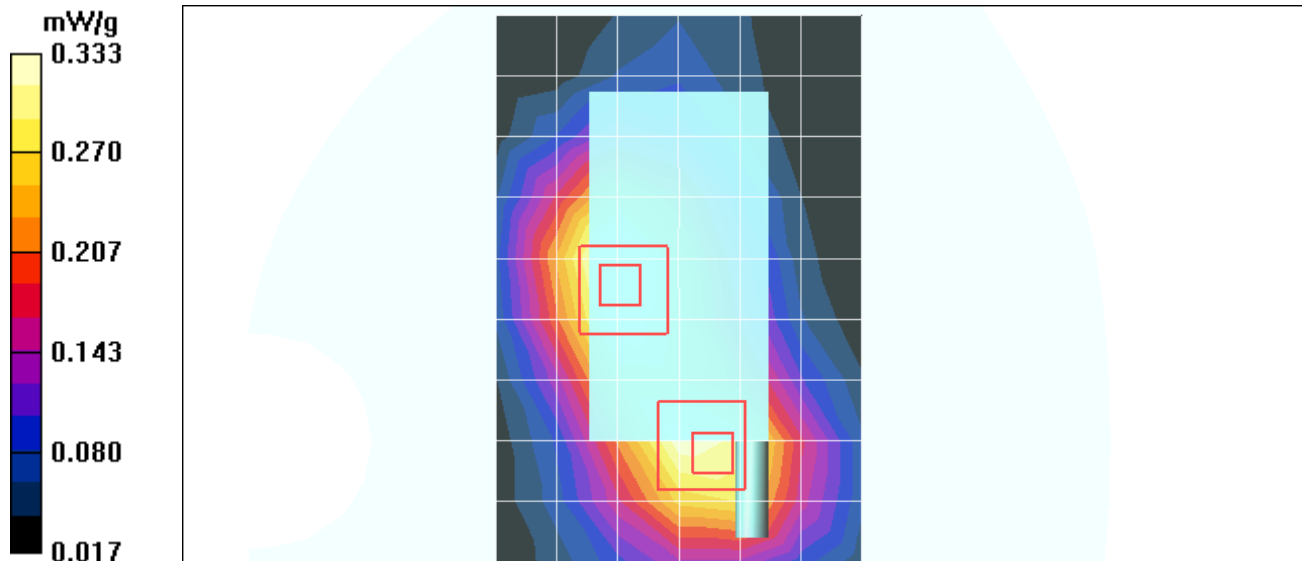
Low Channel 1/Zoom Scan (7x7x7) (7x7x7)/Cube 1: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 15.5 V/m

Peak SAR (extrapolated) = 0.444 W/kg

SAR(1 g) = 0.308 mW/g; SAR(10 g) = 0.199 mW/g

Maximum value of SAR (measured) = 0.333 mW/g



Test Laboratory: Advance Data Technology

CA8a Mode 2 Body Worn Front 15mm - PCS1900 GPRS

DUT: Mobil Phone ; Type: CA8a ; Test Channel Frequency: 1880 MHz

Communication System: PCS 1900 ; Frequency: 1880 MHz ; Duty Cycle: 1:4

Medium: MSL1900 Medium parameters used: $f = 1880 \text{ MHz}$; $\sigma = 1.522 \text{ mho/m}$; $\epsilon_r = 50.8$; $\rho = 1000 \text{ kg/m}^3$; Liquid Level : 155mm

Phantom section: Flat Section ; DUT test position : Body ; Modulation Type: GMSK / UL 2 time slots

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

Antenna Type : External Antenna ; Air Temp. : 22.0 degrees ; Liquid Temp. : 21.0 degrees

DASY4 Configuration:

- Probe: ET3DV6 - SN1687 ; ConvF(4.54, 4.54, 4.54) ; Calibrated: 2004/8/26

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

- Electronics: DAE3 Sn510 ; Calibrated: 2004/8/17

- Phantom: SAM 12 ; Type: SAM V4.0; Serial: TP 1202

- Measurement SW: DASY4, V4.4 Build 3 ; Postprocessing SW: SEMCAD, V1.8 Build 130

Low Channel 2/Area Scan (7x10x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

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

Low Channel 2/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 16.5 V/m

Peak SAR (extrapolated) = 0.521 W/kg

SAR(1 g) = 0.359 mW/g; SAR(10 g) = 0.228 mW/g

Maximum value of SAR (measured) = 0.390 mW/g

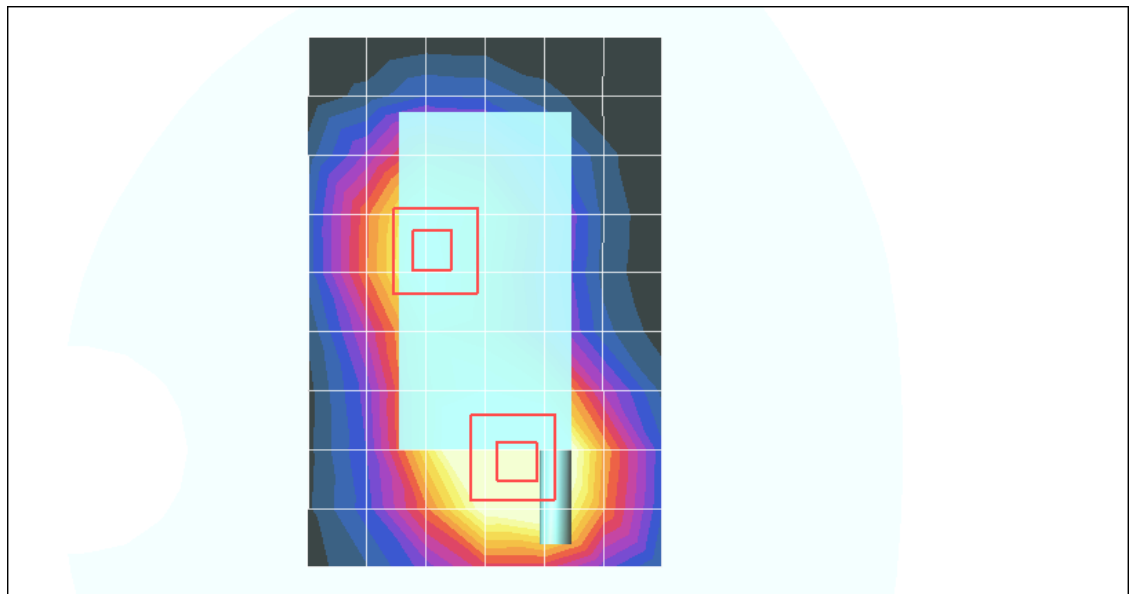
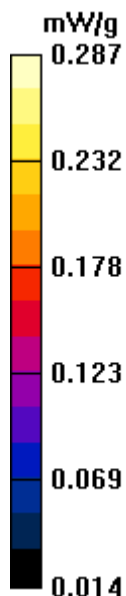
Low Channel 2/Zoom Scan (7x7x7) (7x7x7)/Cube 1: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 16.5 V/m

Peak SAR (extrapolated) = 0.360 W/kg

SAR(1 g) = 0.267 mW/g; SAR(10 g) = 0.176 mW/g

Maximum value of SAR (measured) = 0.287 mW/g



Test Laboratory: Advance Data Technology

CA8a Mode 2 Body Worn Front 15mm - PCS1900 GPRS

DUT: Mobil Phone ; Type: CA8a ; Test Channel Frequency: 1909.8 MHz

Communication System: PCS 1900 ; Frequency: 1909.8 MHz ; Duty Cycle: 1:4

Medium: MSL1900 Medium parameters used: $f = 1909.8 \text{ MHz}$; $\sigma = 1.554 \text{ mho/m}$; $\epsilon_r = 50.8$; $\rho = 1000 \text{ kg/m}^3$; Liquid Level : 155mm

Phantom section: Flat Section ; DUT test position : Body ; Modulation Type: GMSK / UL 2 time slots
Separation Distance : 15 mm (The Front side of the EUT to the Phantom)

Antenna Type : External Antenna ; Air Temp. : 22.0 degrees ; Liquid Temp. : 21.0 degrees

DASY4 Configuration:

- Probe: ET3DV6 - SN1687 ; ConvF(4.54, 4.54, 4.54) ; Calibrated: 2004/8/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510 ; Calibrated: 2004/8/17
- Phantom: SAM 12 ; Type: SAM V4.0; Serial: TP 1202
- Measurement SW: DASY4, V4.4 Build 3 ; Postprocessing SW: SEMCAD, V1.8 Build 130

Low Channel 3/Area Scan (7x10x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 0.256 mW/g

Low Channel 3/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 13.6 V/m

Peak SAR (extrapolated) = 0.360 W/kg

SAR(1 g) = 0.242 mW/g; SAR(10 g) = 0.155 mW/g

Maximum value of SAR (measured) = 0.262 mW/g

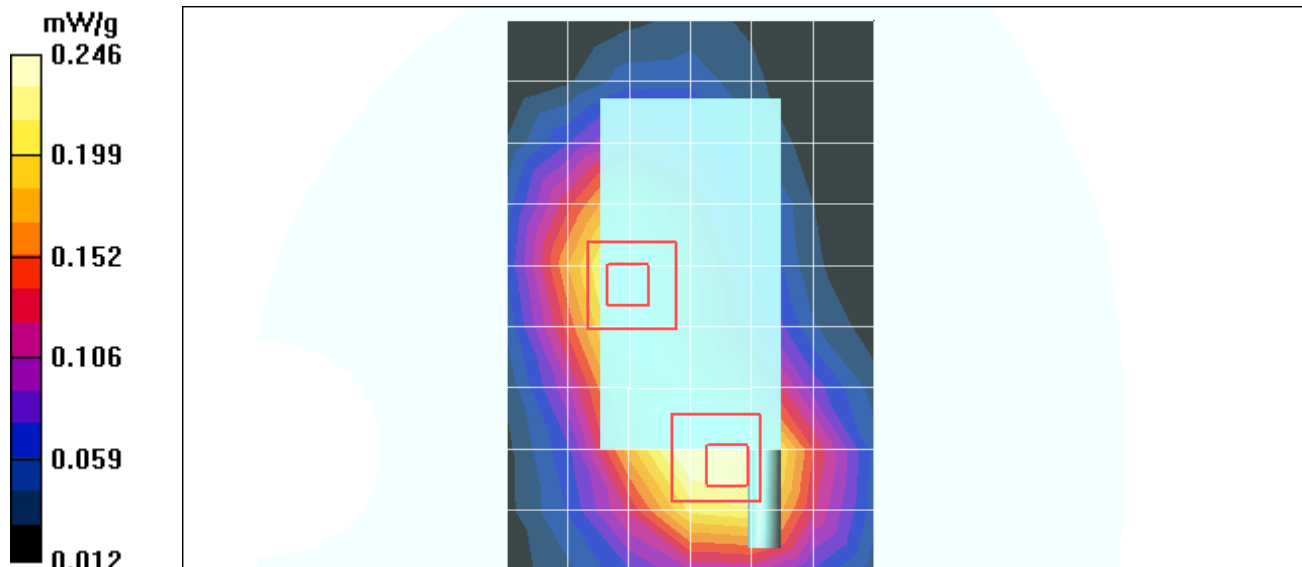
Low Channel 3/Zoom Scan (7x7x7) (7x7x7)/Cube 1: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 13.6 V/m

Peak SAR (extrapolated) = 0.313 W/kg

SAR(1 g) = 0.229 mW/g; SAR(10 g) = 0.150 mW/g

Maximum value of SAR (measured) = 0.246 mW/g



Test Laboratory: Advance Data Technology

CA8a Mode 3 BodyWorn Bottom 15mm - PCS1900 GSM

DUT: Mobil Phone ; Type: CA8a ; Test Channel Frequency: 1850.2 MHz

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

Medium: MSL1900 Medium parameters used: $f = 1850.2 \text{ MHz}$; $\sigma = 1.488 \text{ mho/m}$; $\epsilon_r = 51.2$; $\rho = 1000 \text{ kg/m}^3$; Liquid Level : 150mm

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

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

Antenna Type : External Antenna ; Air Temp. : 22.0 degrees ; Liquid Temp. : 21.0 degrees

DASY4 Configuration:

- Probe: ET3DV6 - SN1687 ; ConvF(4.54, 4.54, 4.54) ; Calibrated: 2004/8/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510 ; Calibrated: 2004/8/17
- Phantom: SAM 12 ; Type: SAM V4.0; Serial: TP 1202
- Measurement SW: DASY4, V4.4 Build 3 ; Postprocessing SW: SEMCAD, V1.8 Build 130

Low Channel 512/Area Scan (7x10x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 0.760 mW/g

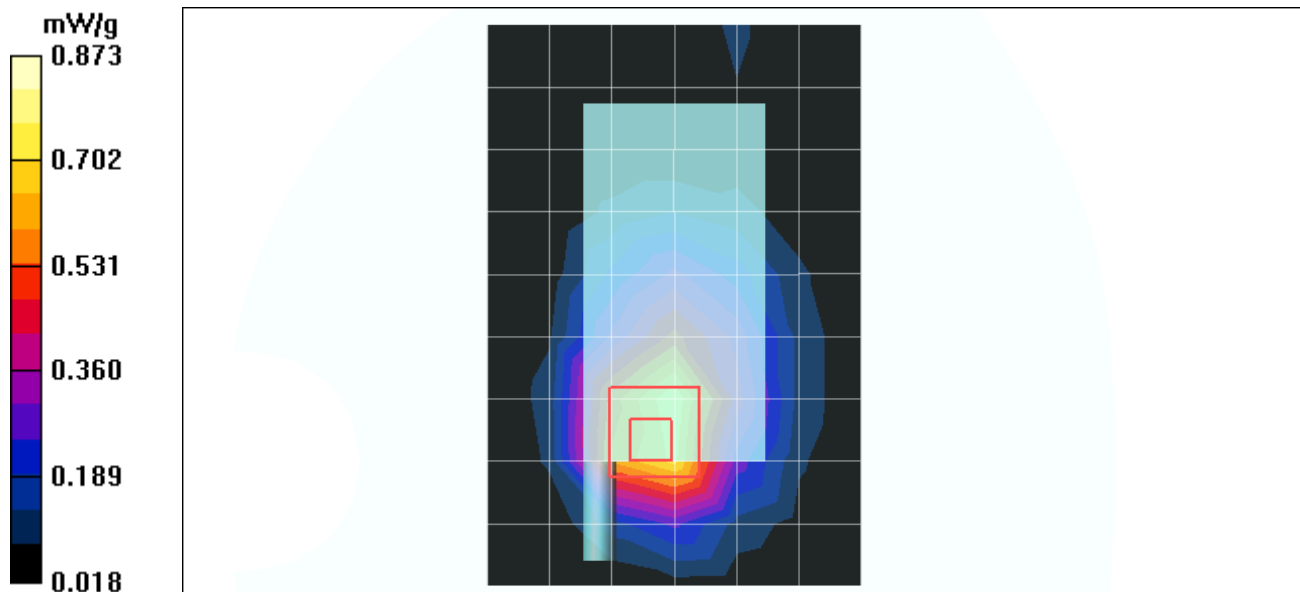
Low Channel 512/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 23 V/m

Peak SAR (extrapolated) = 1.09 W/kg

SAR(1 g) = 0.785 mW/g; SAR(10 g) = 0.472 mW/g

Maximum value of SAR (measured) = 0.873 mW/g



Test Laboratory: Advance Data Technology

CA8a Mode 3 BodyWorn Bottom 15mm - PCS1900 GSM

DUT: Mobil Phone ; Type: CA8a ; Test Channel Frequency: 1880 MHz

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

Medium: MSL1900 Medium parameters used: $f = 1880$ MHz; $\sigma = 1.522$ mho/m; $\epsilon_r = 50.8$; $\rho = 1000$ kg/m³ ; Liquid Level : 150mm

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

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

Antenna Type : External Antenna ; Air Temp. : 22.0 degrees ; Liquid Temp. : 21.0 degrees

DASY4 Configuration:

- Probe: ET3DV6 - SN1687 ; ConvF(4.54, 4.54, 4.54) ; Calibrated: 2004/8/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510 ; Calibrated: 2004/8/17
- Phantom: SAM 12 ; Type: SAM V4.0; Serial: TP 1202
- Measurement SW: DASY4, V4.4 Build 3 ; Postprocessing SW: SEMCAD, V1.8 Build 130

Middle Channel 661/Area Scan (7x10x1): Measurement grid: dx=15mm, dy=15mm

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

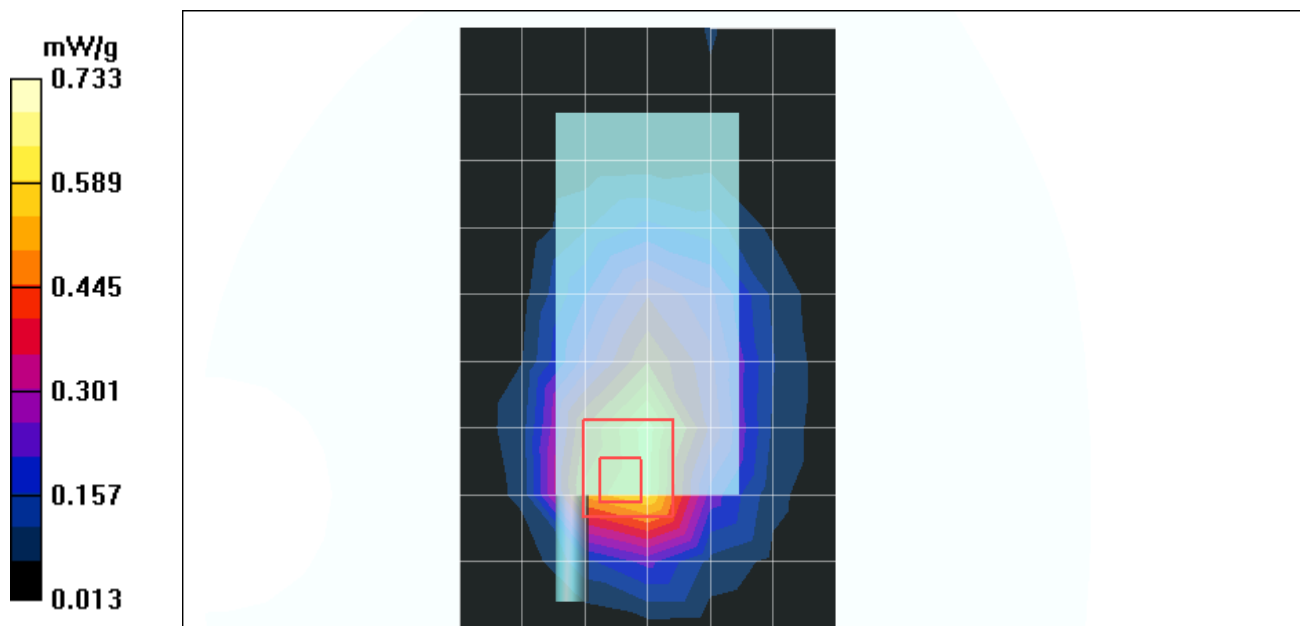
Middle Channel 661/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 21.3 V/m

Peak SAR (extrapolated) = 0.945 W/kg

SAR(1 g) = 0.654 mW/g; SAR(10 g) = 0.385 mW/g

Maximum value of SAR (measured) = 0.733 mW/g



Test Laboratory: Advance Data Technology

CA8a Mode 3 BodyWorn Bottom 15mm - PCS1900 GSM

DUT: Mobil Phone ; Type: CA8a ; Test Channel Frequency: 1909.8 MHz

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

Medium: MSL1900 Medium parameters used: $f = 1909.8 \text{ MHz}$; $\sigma = 1.554 \text{ mho/m}$; $\epsilon_r = 50.8$; $\rho = 1000 \text{ kg/m}^3$; Liquid Level : 150mm

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

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

Antenna Type : External Antenna ; Air Temp. : 22.0 degrees ; Liquid Temp. : 21.0 degrees

DASY4 Configuration:

- Probe: ET3DV6 - SN1687 ; ConvF(4.54, 4.54, 4.54) ; Calibrated: 2004/8/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510 ; Calibrated: 2004/8/17
- Phantom: SAM 12 ; Type: SAM V4.0; Serial: TP 1202
- Measurement SW: DASY4, V4.4 Build 3 ; Postprocessing SW: SEMCAD, V1.8 Build 130

High Channel 810/Area Scan (7x10x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 0.731 mW/g

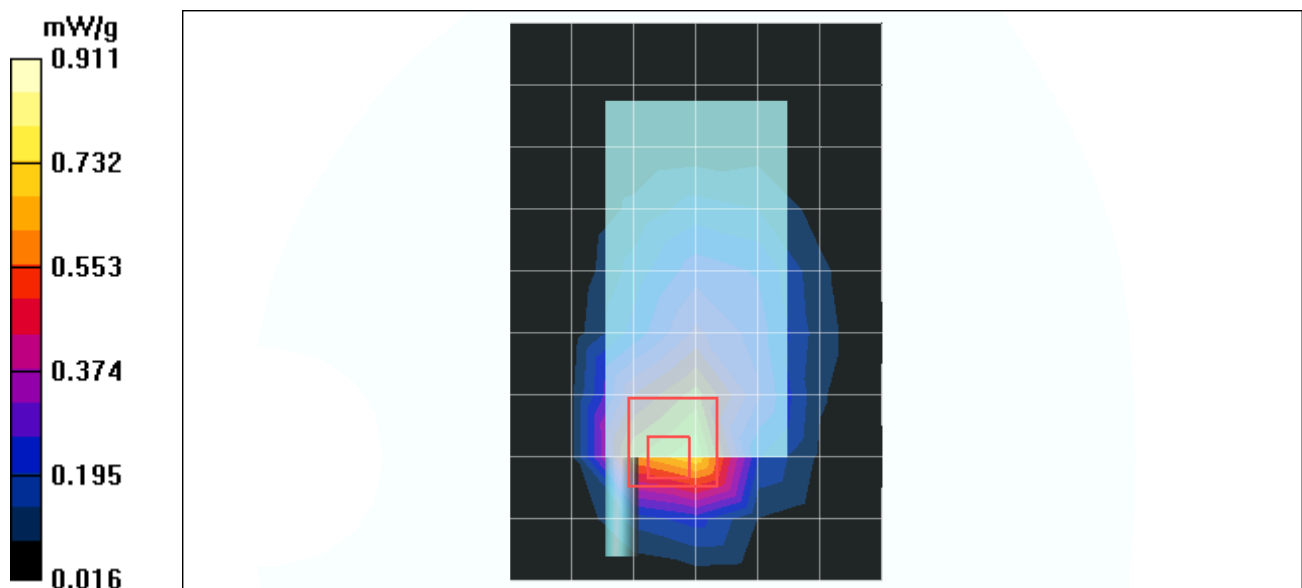
High Channel 810/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 22.5 V/m

Peak SAR (extrapolated) = 1.22 W/kg

SAR(1 g) = 0.793 mW/g; SAR(10 g) = 0.430 mW/g

Maximum value of SAR (measured) = 0.911 mW/g



Test Laboratory: Advance Data Technology

CA8a Mode 4 LeftHead Cheek PCS1900

DUT: Mobil Phone ; Type: CA8a ; 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; $\sigma = 1.335$ mho/m; $\epsilon_r = 39.6$; $\rho = 1000$ kg/m³ ; Liquid level: 155mm

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

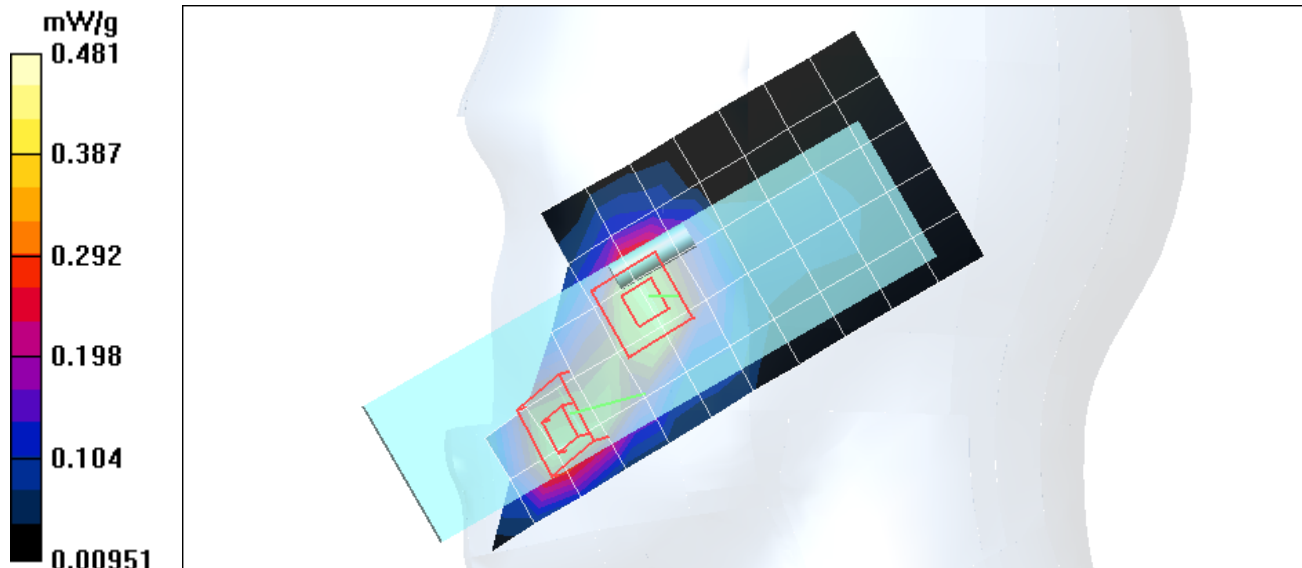
DASY4 Configuration:

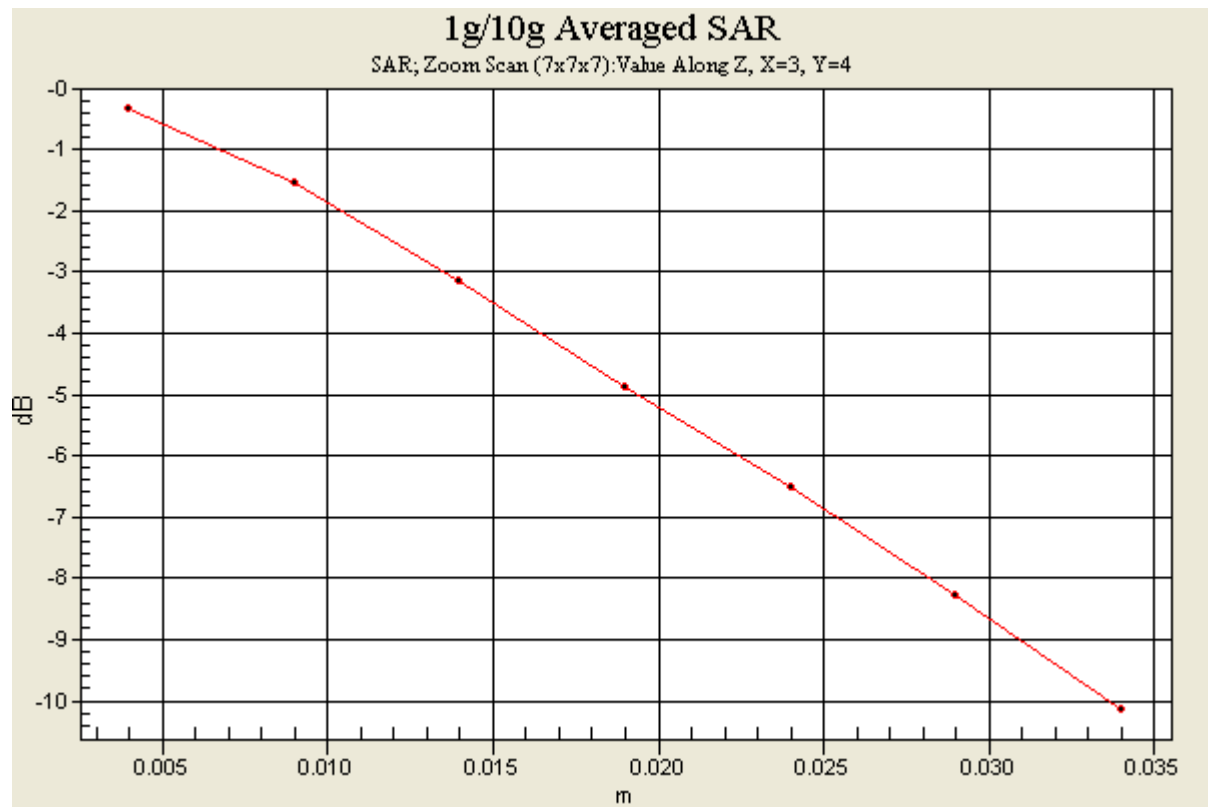
- Probe: ET3DV6 - SN1687; ConvF(5.16, 5.16, 5.16) ; Calibrated: 2004/8/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: 2004/8/17
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP 1202
- Measurement SW: DASY4, V4.4 Build 3; Postprocessing SW: SEMCAD, V1.8 Build 130

Touch position - Low Channel/Area Scan (6x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.407 mW/g

Touch position - Low Channel/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid:
dx=5mm, dy=5mm, dz=5mm
Reference Value = 5.5 V/m
Peak SAR (extrapolated) = 0.582 W/kg
SAR(1 g) = 0.415 mW/g; SAR(10 g) = 0.258 mW/g
Maximum value of SAR (measured) = 0.443 mW/g

Touch position - Low Channel/Zoom Scan (7x7x7) (7x7x7)/Cube 1: Measurement grid:
dx=5mm, dy=5mm, dz=5mm
Reference Value = 5.5 V/m
Peak SAR (extrapolated) = 0.631 W/kg
SAR(1 g) = 0.438 mW/g; SAR(10 g) = 0.251 mW/g
Maximum value of SAR (measured) = 0.481 mW/g





Test Laboratory: Advance Data Technology

CA8a Mode 4 LeftHead Cheek PCS1900

DUT: Mobil Phone ; Type: CA8a ; Test Frequency: 1880 MHz

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

Phantom: SAM 12 Medium parameters used: $f = 1880 \text{ MHz}$; $\sigma = 1.369 \text{ mho/m}$; $\epsilon_r = 39.4$; $\rho = 1000 \text{ kg/m}^3$; Liquid level: 155mm

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(5.16, 5.16, 5.16) ; Calibrated: 2004/8/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: 2004/8/17
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP 1202
- Measurement SW: DASY4, V4.4 Build 3; Postprocessing SW: SEMCAD, V1.8 Build 130

Touch position - Middle Channel/Area Scan (6x13x1): Measurement grid:

$dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 0.384 mW/g

Touch position - Middle Channel/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid:

$dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 5.34 V/m

Peak SAR (extrapolated) = 0.603 W/kg

SAR(1 g) = 0.394 mW/g; SAR(10 g) = 0.225 mW/g

Maximum value of SAR (measured) = 0.438 mW/g

Touch position - Middle Channel/Zoom Scan (7x7x7) (7x7x7)/Cube 1: Measurement grid:

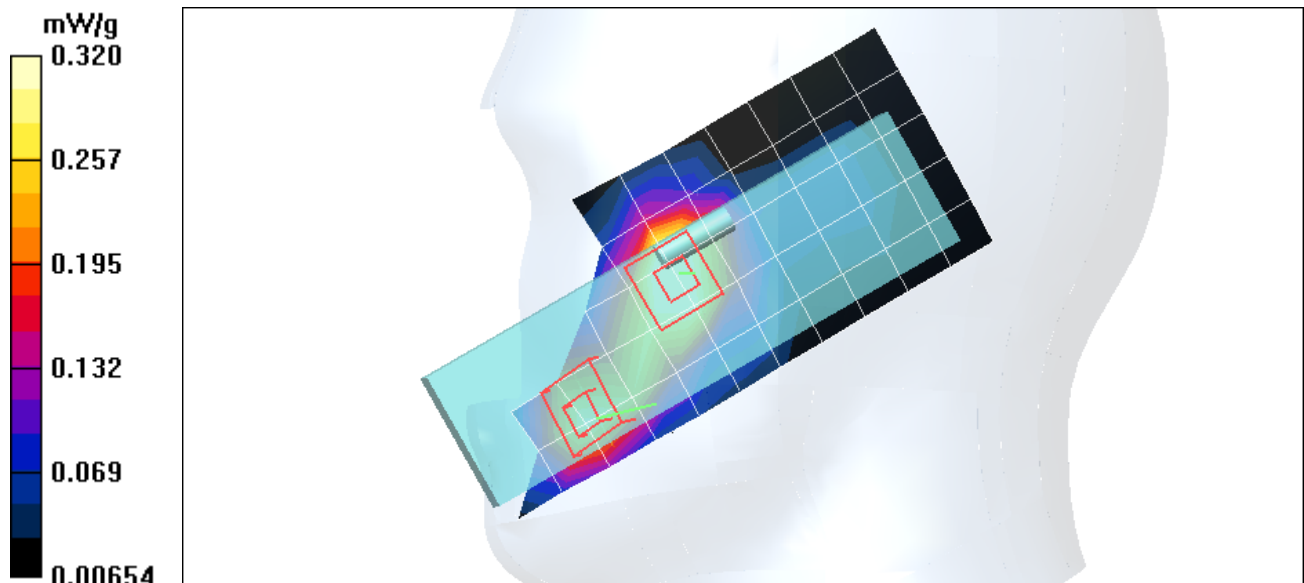
$dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 5.34 V/m

Peak SAR (extrapolated) = 0.411 W/kg

SAR(1 g) = 0.299 mW/g; SAR(10 g) = 0.188 mW/g

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



Test Laboratory: Advance Data Technology

CA8a Mode 4 LeftHead Cheek PCS1900

DUT: Mobil Phone ; Type: CA8a ; Test Frequency: 1909.8 MHz

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

Phantom: SAM 12 Medium parameters used: $f = 1909.8 \text{ MHz}$; $\sigma = 1.404 \text{ mho/m}$; $\epsilon_r = 39.3$; $\rho = 1000 \text{ kg/m}^3$; Liquid level: 155mm

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(5.16, 5.16, 5.16) ; Calibrated: 2004/8/26

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

- Electronics: DAE3 Sn510; Calibrated: 2004/8/17

- Phantom: SAM 12; Type: SAM V4.0; Serial: TP 1202

- Measurement SW: DASY4, V4.4 Build 3; Postprocessing SW: SEMCAD, V1.8 Build 130

Touch position - High Channel/Area Scan (6x13x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

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

Touch position - High Channel/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid:

$dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 5.25 V/m

Peak SAR (extrapolated) = 0.592 W/kg

SAR(1 g) = 0.387 mW/g; SAR(10 g) = 0.220 mW/g

Maximum value of SAR (measured) = 0.425 mW/g

Touch position - High Channel/Zoom Scan (7x7x7) (7x7x7)/Cube 1: Measurement grid:

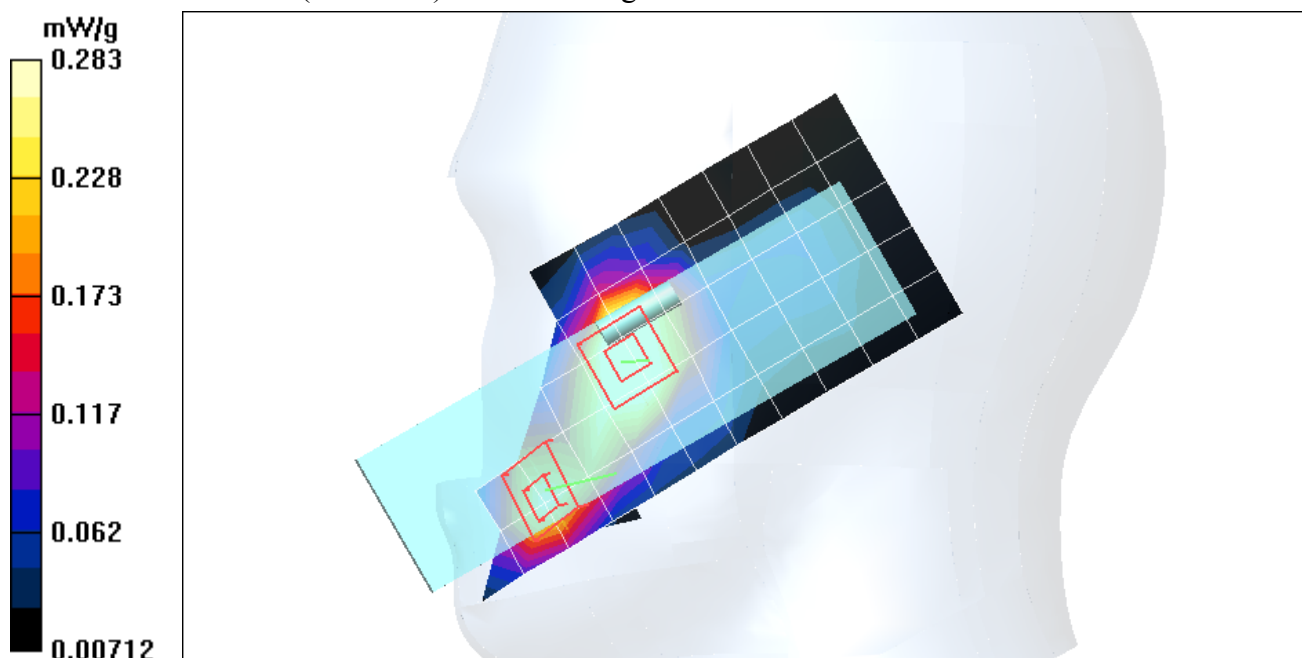
$dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 5.25 V/m

Peak SAR (extrapolated) = 0.380 W/kg

SAR(1 g) = 0.264 mW/g; SAR(10 g) = 0.165 mW/g

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



Test Laboratory: Advance Data Technology

CA8a Mode 5 LeftHead Tilt PCS1900

DUT: Mobil Phone ; Type: CA8a ; Test Channel 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; $\sigma = 1.335$ mho/m; $\epsilon_r = 39.6$; $\rho = 1000$ kg/m³ ; 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(5.16, 5.16, 5.16) ; Calibrated: 2004/8/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: 2004/8/17
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP 1202
- Measurement SW: DASY4, V4.4 Build 3; Postprocessing SW: SEMCAD, V1.8 Build 130

Tilt position - Low Channel 2 2/Area Scan (6x13x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.081 mW/g

Tilt position - Low Channel 2 2/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid:

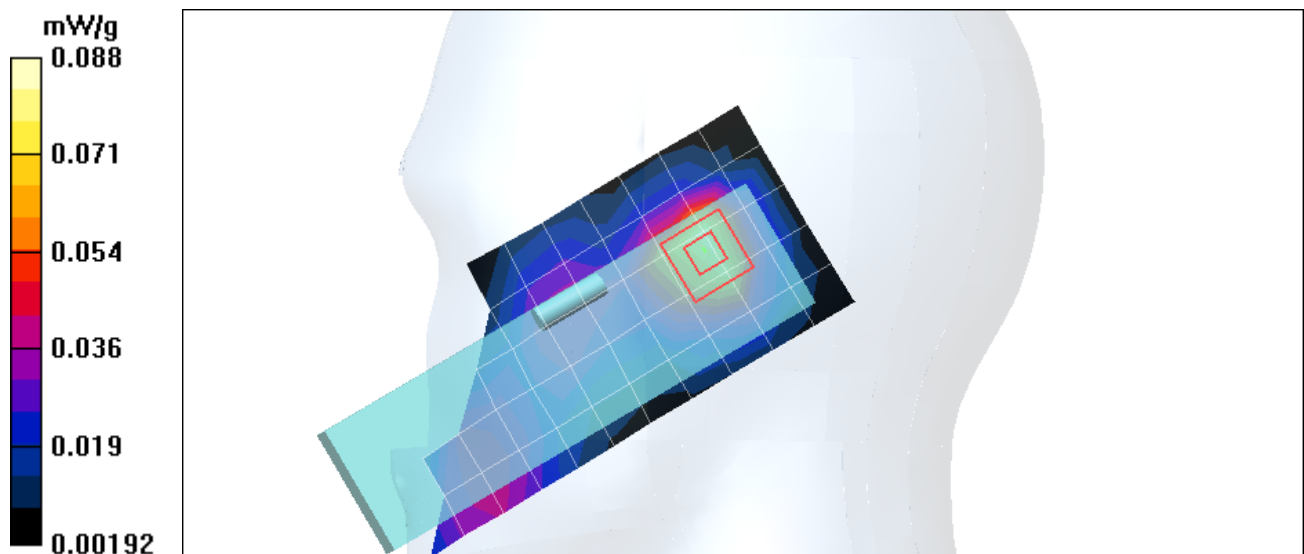
dx=5mm, dy=5mm, dz=5mm

Reference Value = 6.51 V/m

Peak SAR (extrapolated) = 0.110 W/kg

SAR(1 g) = 0.079 mW/g; SAR(10 g) = 0.049 mW/g

Maximum value of SAR (measured) = 0.088 mW/g



Test Laboratory: Advance Data Technology

CA8a Mode 5 LeftHead Tilt PCS1900

DUT: Mobil Phone ; Type: CA8a ; Test Channel Frequency: 1880 MHz

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

Medium: HSL1900 Medium parameters used: $f = 1880$ MHz; $\sigma = 1.369$ mho/m; $\epsilon_r = 39.4$; $\rho = 1000$ kg/m³ ; 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(5.16, 5.16, 5.16) ; Calibrated: 2004/8/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: 2004/8/17
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP 1202
- Measurement SW: DASY4, V4.4 Build 3; Postprocessing SW: SEMCAD, V1.8 Build 130

Tilt position - High Channel/Area Scan (6x13x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.099 mW/g

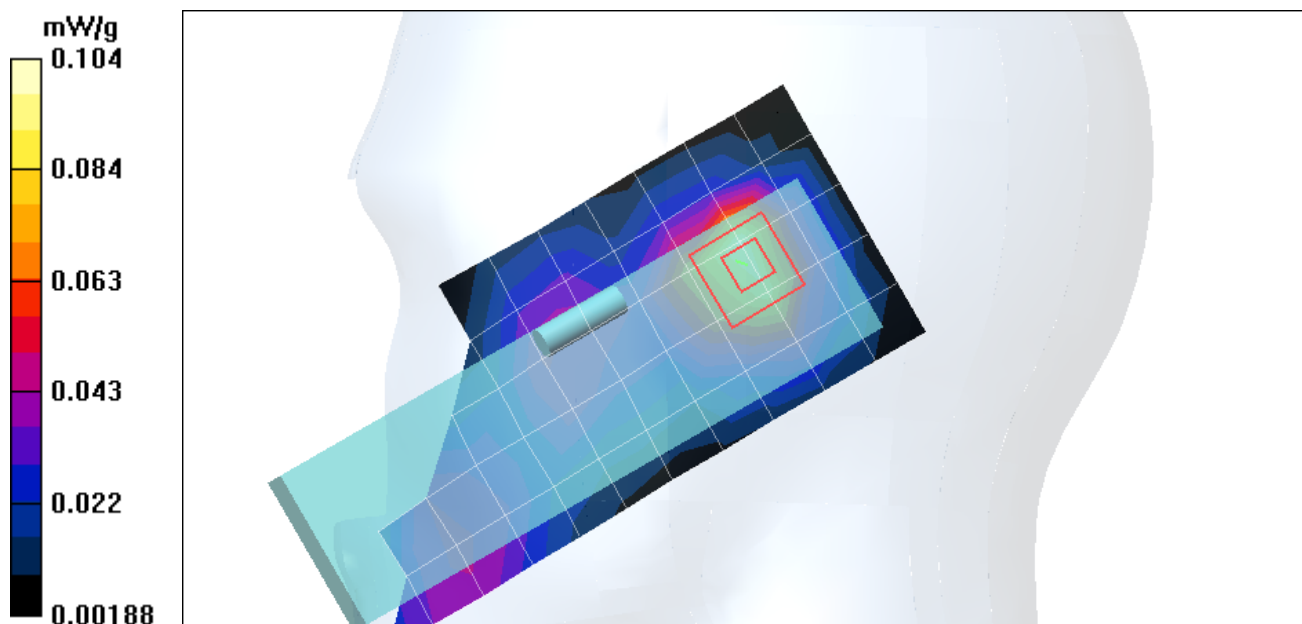
Tilt position - High Channel/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 7.24 V/m

Peak SAR (extrapolated) = 0.132 W/kg

SAR(1 g) = 0.095 mW/g; SAR(10 g) = 0.058 mW/g

Maximum value of SAR (measured) = 0.104 mW/g



Test Laboratory: Advance Data Technology

CA8a Mode 5 LeftHead Tilt PCS1900

DUT: Mobil Phone ; Type: CA8a ; Test Channel Frequency: 1909.8 MHz

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

Medium: HSL1900 Medium parameters used: $f = 1909.8 \text{ MHz}$; $\sigma = 1.404 \text{ mho/m}$; $\epsilon_r = 39.3$; $\rho = 1000 \text{ kg/m}^3$; 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

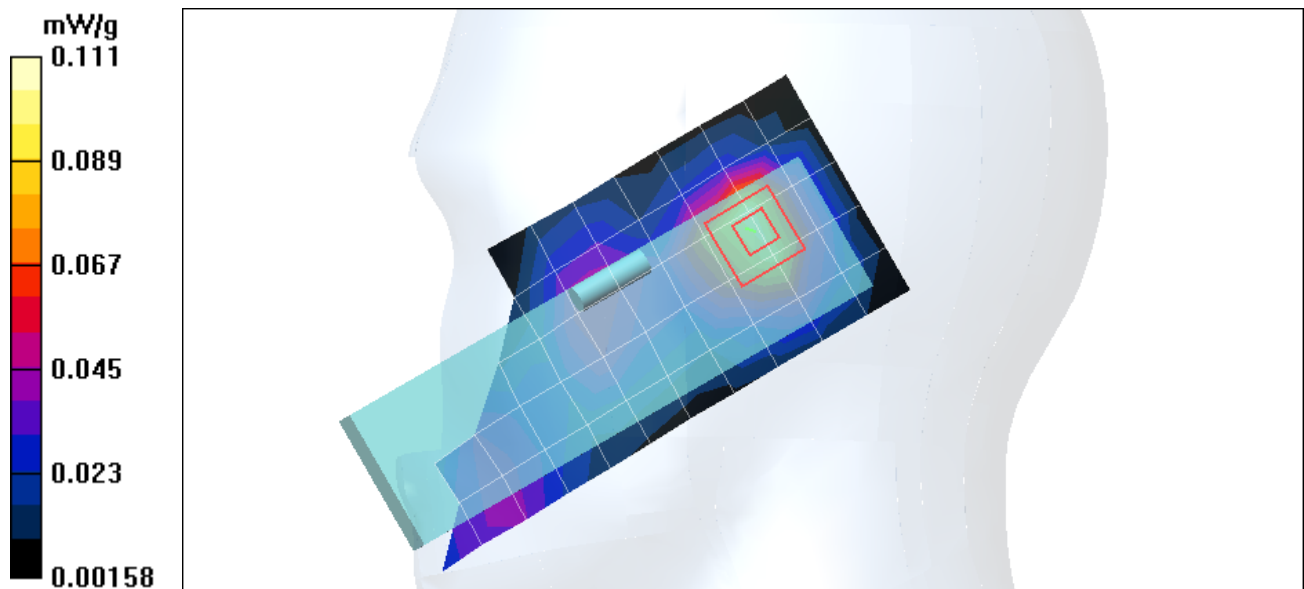
DASY4 Configuration:

- Probe: ET3DV6 - SN1687 ; ConvF(5.16, 5.16, 5.16) ; Calibrated: 2004/8/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: 2004/8/17
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP 1202
- Measurement SW: DASY4, V4.4 Build 3; Postprocessing SW: SEMCAD, V1.8 Build 130

Tilt position - Low Channel 2/Area Scan (6x13x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$
Maximum value of SAR (measured) = 0.103 mW/g

Tilt position - Low Channel 2/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid:
 $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$
Reference Value = 7.32 V/m
Peak SAR (extrapolated) = 0.148 W/kg

SAR(1 g) = 0.102 mW/g; SAR(10 g) = 0.061 mW/g
Maximum value of SAR (measured) = 0.111 mW/g



Test Laboratory: Advance Data Technology

CA8a Mode 6 RightHead Cheek PCS1900

DUT: Mobil Phone ; Type: CA8a ; Test Frequency: 1850.2 MHz

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

Phantom: SAM 12 Medium parameters used: $f = 1850.2 \text{ MHz}$; $\sigma = 1.335 \text{ mho/m}$; $\epsilon_r = 39.6$; $\rho = 1000 \text{ kg/m}^3$; Liquid level: 155mm

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

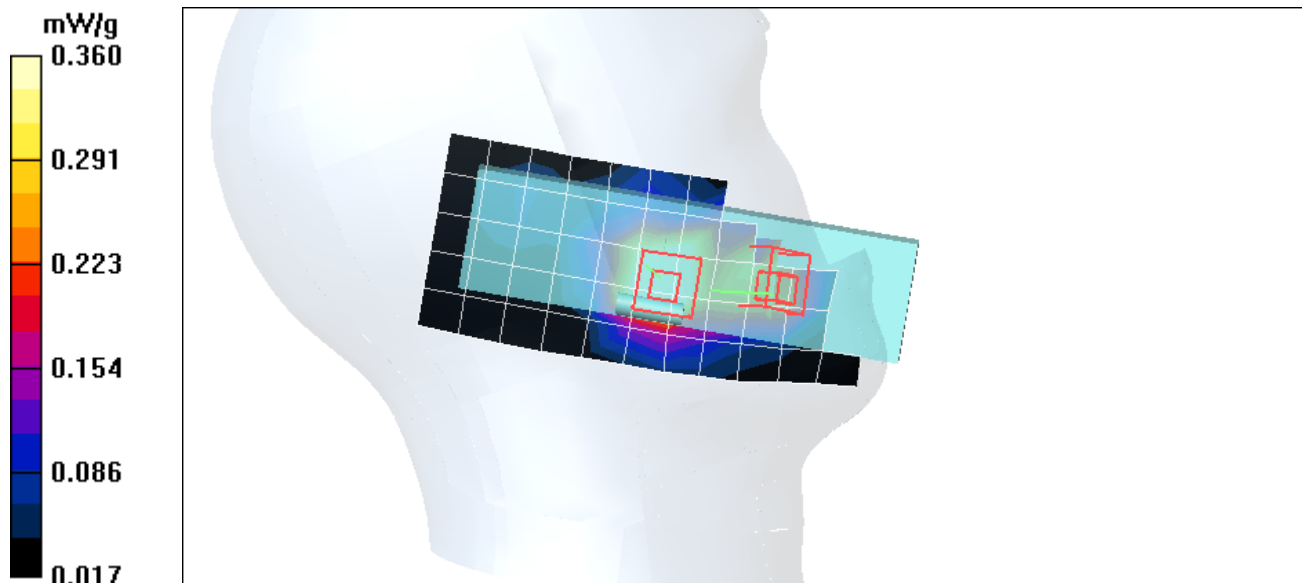
DASY4 Configuration:

- Probe: ET3DV6 - SN1687; ConvF(5.16, 5.16, 5.16) ; Calibrated: 2004/8/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: 2004/8/17
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP 1202
- Measurement SW: DASY4, V4.4 Build 3; Postprocessing SW: SEMCAD, V1.8 Build 130

Touch position - Low Channel/Area Scan (6x13x1): Measurement grid: $dx=15\text{mm}, dy=15\text{mm}$
Maximum value of SAR (measured) = 0.431 mW/g

Touch position - Low Channel/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid:
 $dx=5\text{mm}, dy=5\text{mm}, dz=5\text{mm}$
Reference Value = 6.81 V/m
Peak SAR (extrapolated) = 0.708 W/kg
SAR(1 g) = 0.464 mW/g; SAR(10 g) = 0.269 mW/g
Maximum value of SAR (measured) = 0.507 mW/g

Touch position - Low Channel/Zoom Scan (7x7x7) (7x7x7)/Cube 1: Measurement grid:
 $dx=5\text{mm}, dy=5\text{mm}, dz=5\text{mm}$
Reference Value = 6.81 V/m
Peak SAR (extrapolated) = 0.482 W/kg
SAR(1 g) = 0.335 mW/g; SAR(10 g) = 0.215 mW/g
Maximum value of SAR (measured) = 0.360 mW/g



Test Laboratory: Advance Data Technology

CA8a Mode 6 RightHead Cheek PCS1900

DUT: Mobil Phone ; Type: CA8a ; 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; $\sigma = 1.369$ mho/m; $\epsilon_r = 39.4$; $\rho = 1000$ kg/m³ ; Liquid level: 155mm

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(5.16, 5.16, 5.16) ; Calibrated: 2004/8/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: 2004/8/17
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP 1202
- Measurement SW: DASY4, V4.4 Build 3; Postprocessing SW: SEMCAD, V1.8 Build 130

Touch position - Middle Channel/Area Scan (6x13x1): Measurement grid: dx=15mm, dy=15mm

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

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

Reference Value = 6.68 V/m

Peak SAR (extrapolated) = 0.757 W/kg

SAR(1 g) = 0.495 mW/g; SAR(10 g) = 0.287 mW/g

Maximum value of SAR (measured) = 0.547 mW/g

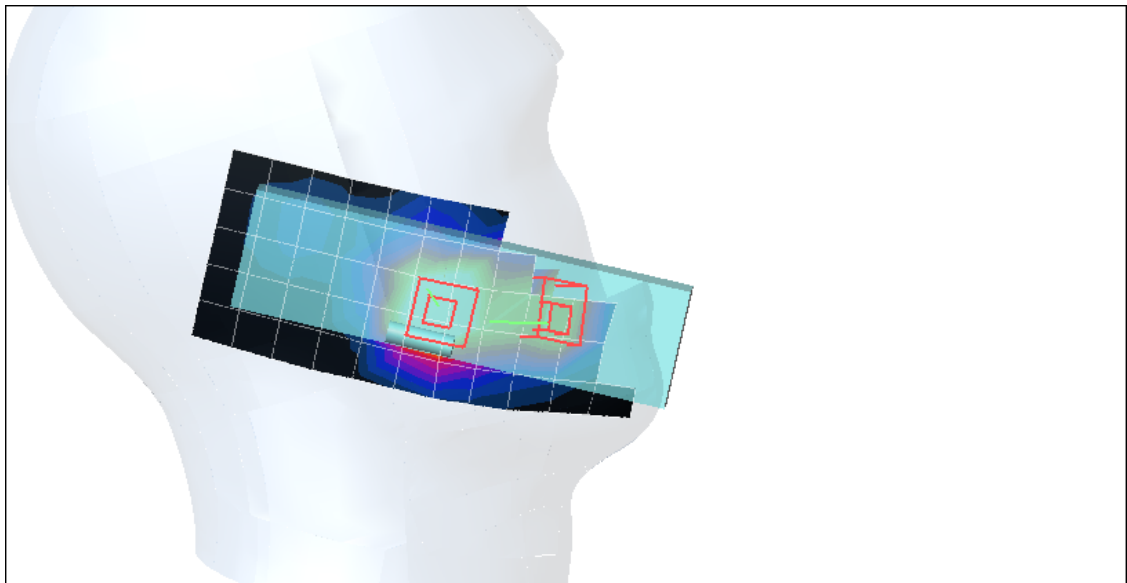
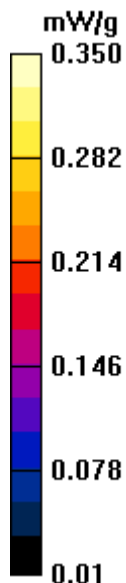
Touch position - Middle Channel/Zoom Scan (7x7x7) (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm

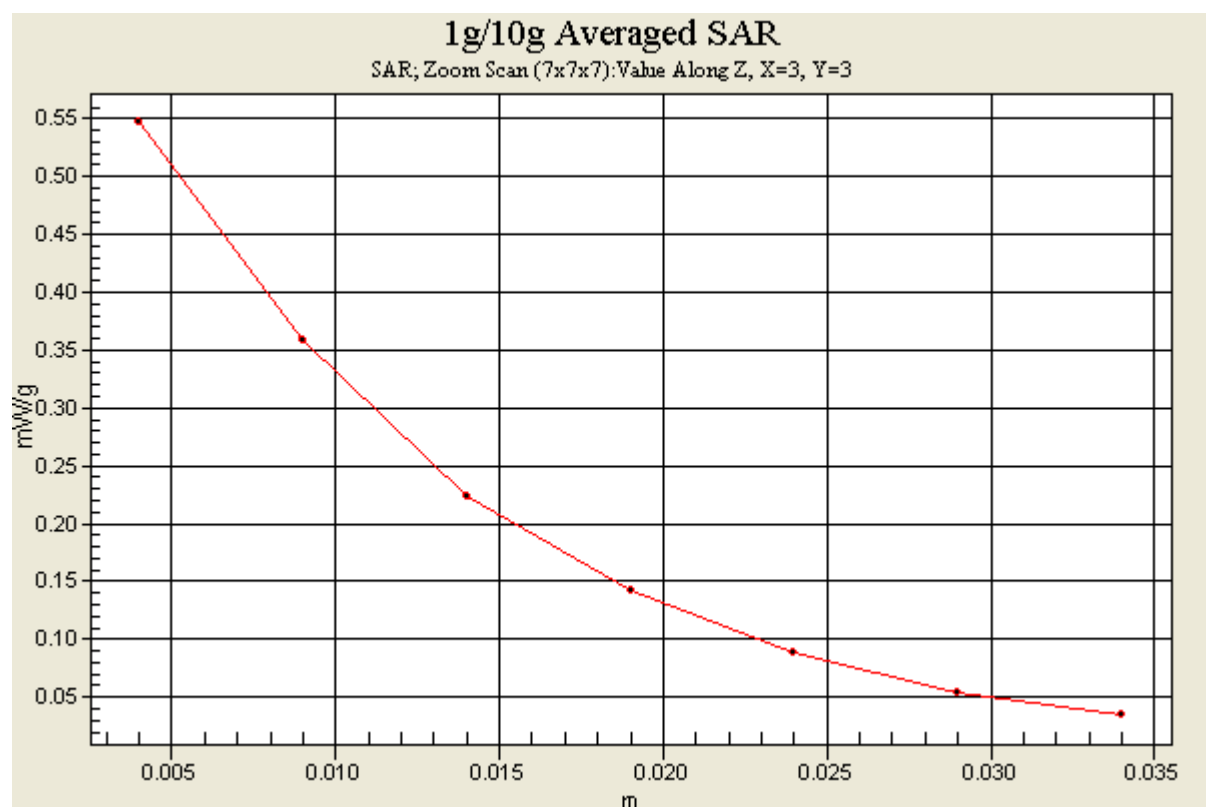
Reference Value = 6.68 V/m

Peak SAR (extrapolated) = 0.459 W/kg

SAR(1 g) = 0.319 mW/g; SAR(10 g) = 0.202 mW/g

Maximum value of SAR (measured) = 0.350 mW/g





Test Laboratory: Advance Data Technology

CA8a Mode 6 RightHead Cheek PCS1900

DUT: Mobil Phone ; Type: CA8a ; 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; $\sigma = 1.404$ mho/m; $\epsilon_r = 39.3$; $\rho = 1000$ kg/m³ ; Liquid level: 155mm

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

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

DASY4 Configuration:

- Probe: ET3DV6 - SN1687; ConvF(5.16, 5.16, 5.16);Calibrated: 2004/8/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: 2004/8/17
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP 1202
- Measurement SW: DASY4, V4.4 Build 3; Postprocessing SW: SEMCAD, V1.8 Build 130

Touch position - High Channel/Area Scan (6x13x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.442 mW/g

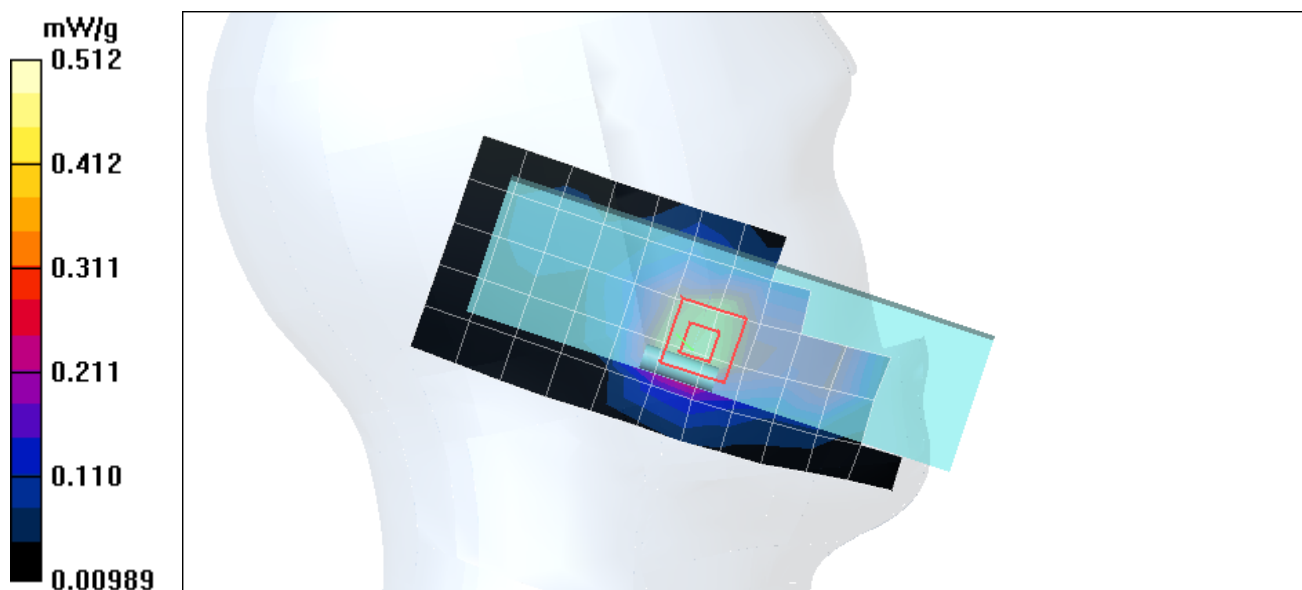
Touch position - High Channel/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 6.43 V/m

Peak SAR (extrapolated) = 0.759 W/kg

SAR(1 g) = 0.469 mW/g; SAR(10 g) = 0.270 mW/g

Maximum value of SAR (measured) = 0.512 mW/g



Test Laboratory: Advance Data Technology

CA8a Mode 7 Right Head Tilt PCS1900

DUT: Mobil Phone ; Type: CA8a ; Test Channel Frequency: 1850.2 MHz

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

Medium: HSL1900 Medium parameters used: $f = 1850.2 \text{ MHz}$; $\sigma = 1.335 \text{ mho/m}$; $\epsilon_r = 39.6$; $\rho = 1000 \text{ kg/m}^3$; 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(5.16, 5.16, 5.16) ; Calibrated: 2004/8/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: 2004/8/17
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP 1202
- Measurement SW: DASY4, V4.4 Build 3; Postprocessing SW: SEMCAD, V1.8 Build 130

Touch position - Low Channel/Area Scan (6x13x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 0.092 mW/g

Touch position - Low Channel/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid:

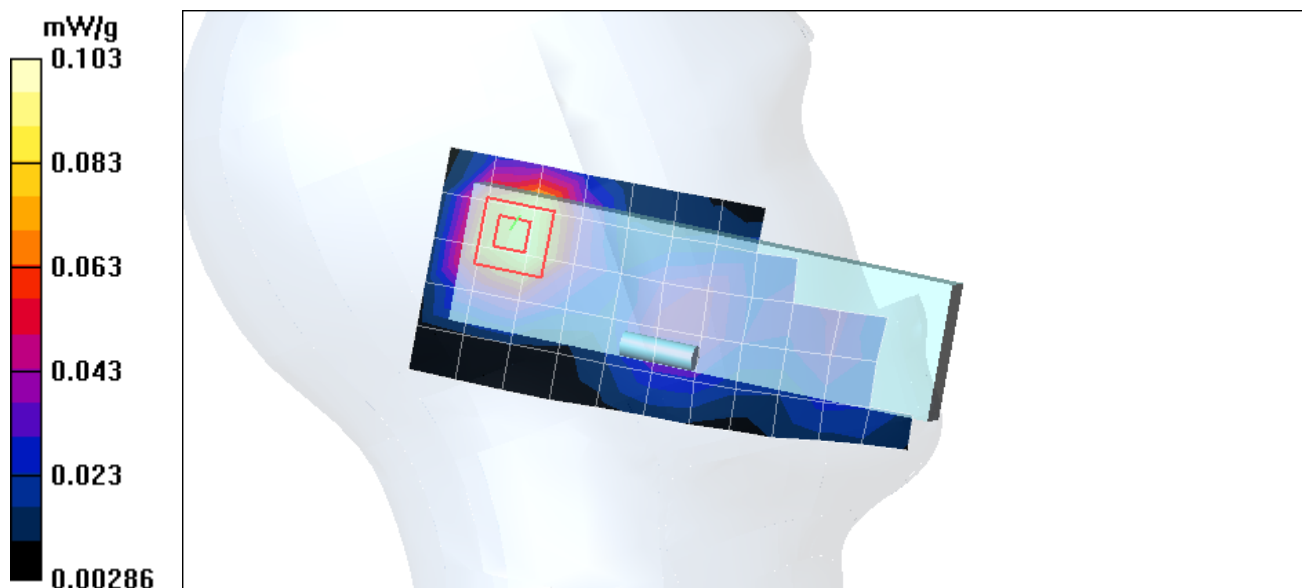
$dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 8.62 V/m

Peak SAR (extrapolated) = 0.135 W/kg

SAR(1 g) = 0.094 mW/g; SAR(10 g) = 0.058 mW/g

Maximum value of SAR (measured) = 0.103 mW/g



Test Laboratory: Advance Data Technology

CA8a Mode 7 Right Head Tilt PCS1900

DUT: Mobil Phone ; Type: CA8a ; Test Channel Frequency: 1880 MHz

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

Medium: HSL1900 Medium parameters used: $f = 1880$ MHz; $\sigma = 1.369$ mho/m; $\epsilon_r = 39.4$; $\rho = 1000$ kg/m³ ; 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(5.16, 5.16, 5.16) ; Calibrated: 2004/8/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: 2004/8/17
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP 1202
- Measurement SW: DASY4, V4.4 Build 3; Postprocessing SW: SEMCAD, V1.8 Build 130

Touch position - Middle Channel/Area Scan (6x13x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.092 mW/g

Touch position - Middle Channel/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid:

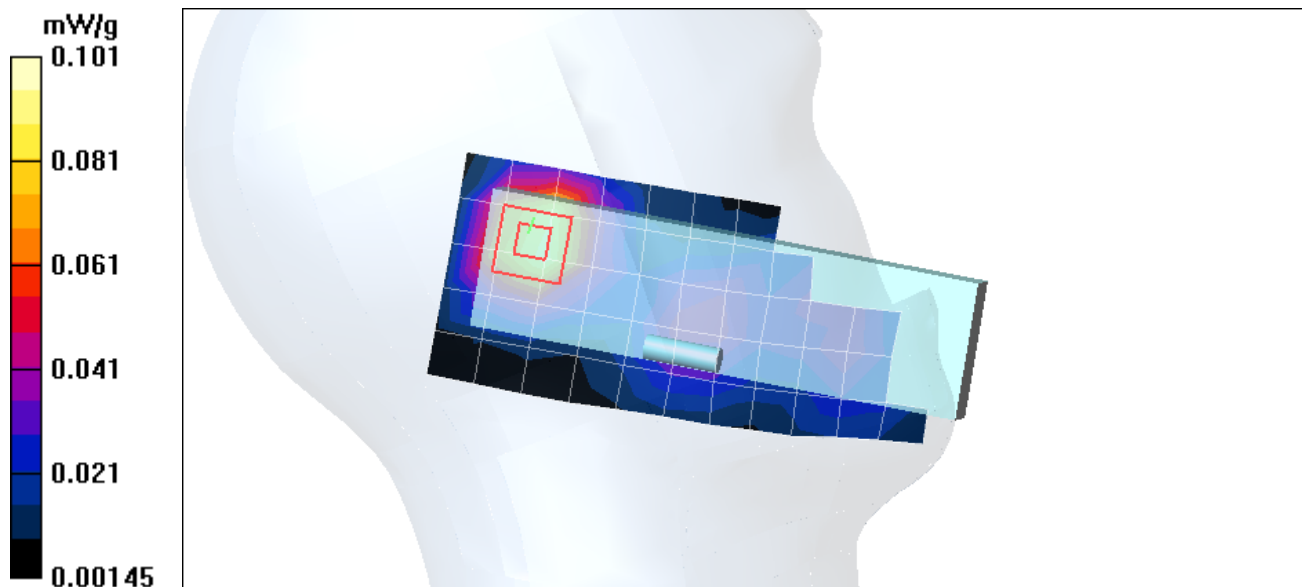
dx=5mm, dy=5mm, dz=5mm

Reference Value = 8.52 V/m

Peak SAR (extrapolated) = 0.132 W/kg

SAR(1 g) = 0.093 mW/g; SAR(10 g) = 0.057 mW/g

Maximum value of SAR (measured) = 0.101 mW/g



Date/Time: 03/18/05 15:45:25

Test Laboratory: Advance Data Technology

CA8a Mode 7 Right Head Tilt PCS1900

DUT: Mobil Phone ; Type: CA8a ; Test Channel 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; $\sigma = 1.404$ mho/m; $\epsilon_r = 39.3$; $\rho = 1000$ kg/m³ ; 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(5.16, 5.16, 5.16) ; Calibrated: 2004/8/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: 2004/8/17
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP 1202
- Measurement SW: DASY4, V4.4 Build 3; Postprocessing SW: SEMCAD, V1.8 Build 130

Touch position - High Channel/Area Scan (6x13x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.096 mW/g

Touch position - High Channel/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid:

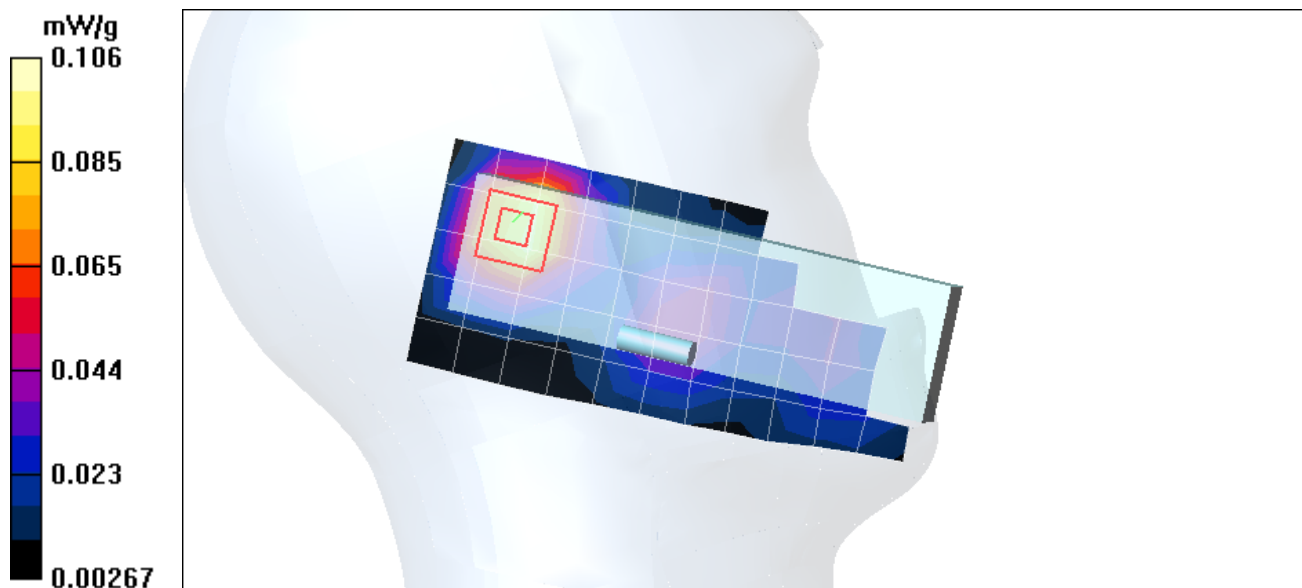
dx=5mm, dy=5mm, dz=5mm

Reference Value = 8.7 V/m

Peak SAR (extrapolated) = 0.138 W/kg

SAR(1 g) = 0.098 mW/g; SAR(10 g) = 0.060 mW/g

Maximum value of SAR (measured) = 0.106 mW/g



Date/Time: 03/18/05 09:25:21

Test Laboratory: Advance Data Technology

System Validation Check MSL 1900MHz 2005-03-11

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: $f = 1900$ MHz; $\sigma = 1.544$ mho/m; $\epsilon_r = 50.8$; $\rho = 1000$ kg/m³ ; Liquid level : 155 mm

Phantom section: Flat Section ; Separation distance : 10 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(4.54, 4.54, 4.54) ; Calibrated: 2004/8/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: 2004/8/17
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP 1202
- Measurement SW: DASY4, V4.4 Build 3; Postprocessing SW: SEMCAD, V1.8 Build 130

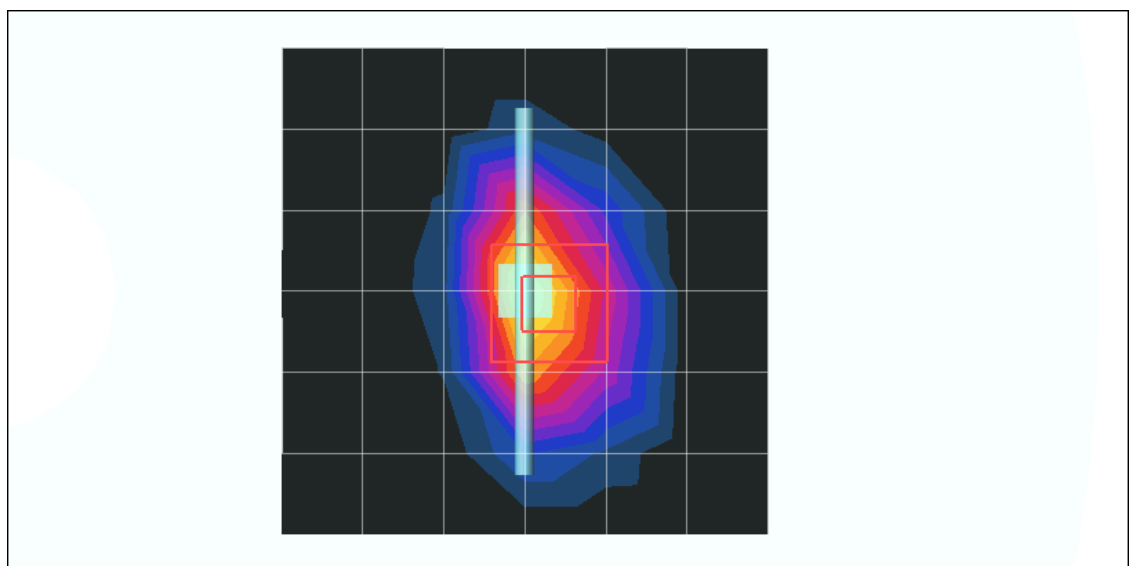
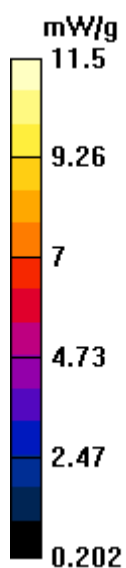
d=10mm, Pin=250mW/Area Scan (7x7x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 10.5 mW/g

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

Reference Value = 88.6 V/m

Peak SAR (extrapolated) = 17.3 W/kg

SAR(1 g) = 10.1 mW/g; SAR(10 g) = 5.35 mW/g



Test Laboratory: Advance Data Technology

System Validation Check HSL 1900MHz 2005-03-11

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; $\sigma = 1.393$ mho/m; $\epsilon_r = 39.4$; $\rho = 1000$ kg/m³ ; Liquid level : 155 mm

Phantom section: Flat Section ; Separation distance : 10 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(5.16, 5.16, 5.16) ; Calibrated: 2004/8/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: 2004/8/17
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP 1202
- Measurement SW: DASY4, V4.4 Build 3; Postprocessing SW: SEMCAD, V1.8 Build 130

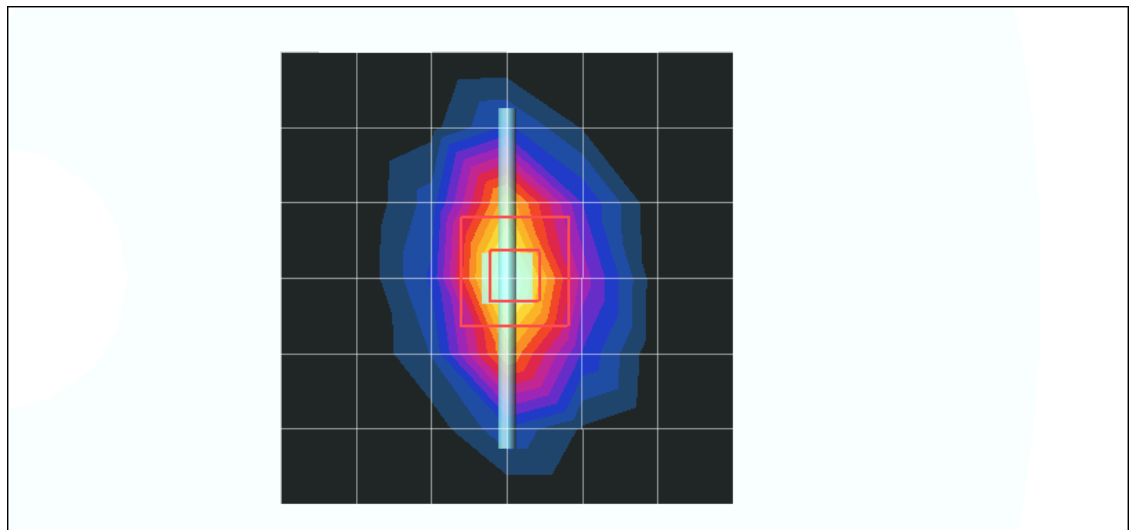
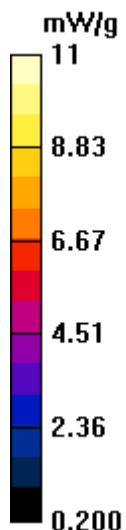
d=10mm, Pin=250mW/Area Scan (7x7x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 11 mW/g

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

Reference Value = 94 V/m; Power Drift = -0.2 dB

Peak SAR (extrapolated) = 16.4 W/kg

SAR(1 g) = 9.62 mW/g; SAR(10 g) = 5.16 mW/g



APPENDIX B: ADT SAR MEASUREMENT SYSTEM



APPENDIX C: PHOTOGRAPHS OF SYSTEM VALIDATION

