

## APPENDIX A: TEST CONFIGURATIONS AND TEST DATA

### A1: TEST CONFIGURATION

**Notebook: Compaq EVO N800C**



**The Bottom of the EUT to the flat phantom distance 10 mm**

**Notebook: Dell D600**



**The Bottom of the EUT to the flat phantom distance 13 mm**

**Notebook: Dell C600**



**The Bottom of the EUT to the flat phantom distance 11 mm**

EUT Photo





# Liquid Level Photo

MSL 1900MHz D=155mm



Test Laboratory: Advance Data Technology

### N800C-GPRS1900-Ch512-Mode 1

**DUT: GSM900/1800/1900/WCDMA A2100 dual mode PCMCIA card ; Type: E612 ; Test Frequency: 1850.2 MHz**

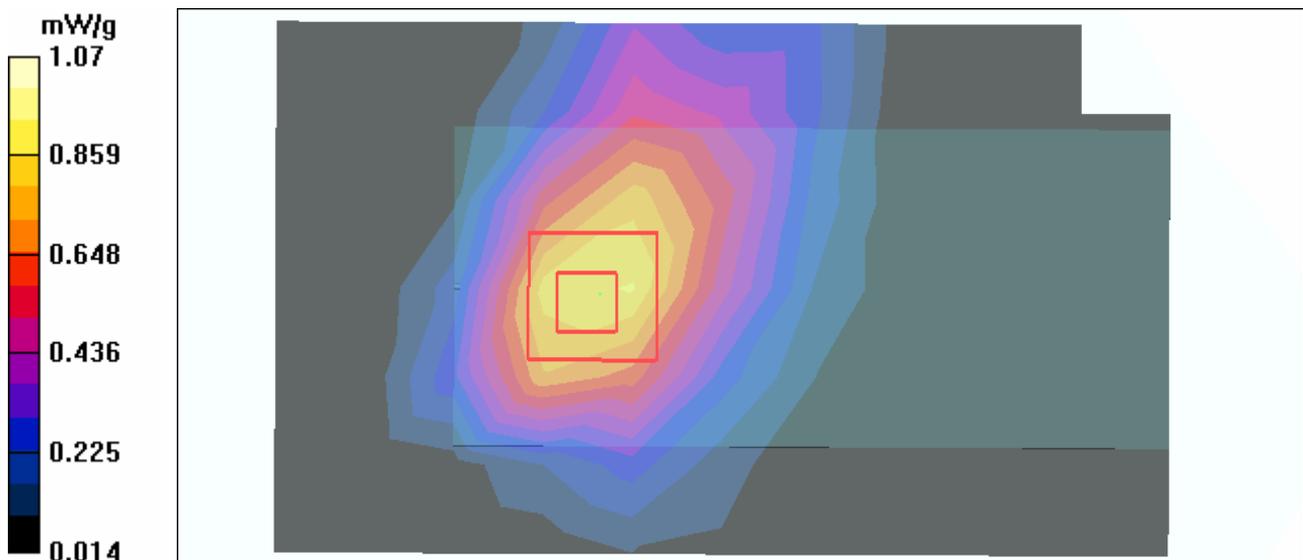
Communication System: PCS 1900 ; Frequency: 1850.2 MHz ; Duty Cycle: 1:4  
 Medium: MSL1900 Medium parameters used:  $f = 1850.2$  MHz;  $\sigma = 1.52$  mho/m;  $\epsilon_r = 54.7$ ;  $\rho = 1000$  kg/m<sup>3</sup> ; Liquid Level : 155 mm  
 Phantom section: Flat Section ; DUT test position : Body ; Modulation Type: GMSK  
 Separation Distance : 10 mm ( The bottom side of the EUT to the Phantom)  
 Antenna Type : Internal Antenna ; Air Temp. : 22.2 degrees ; Liquid Temp. : 21.1 degrees

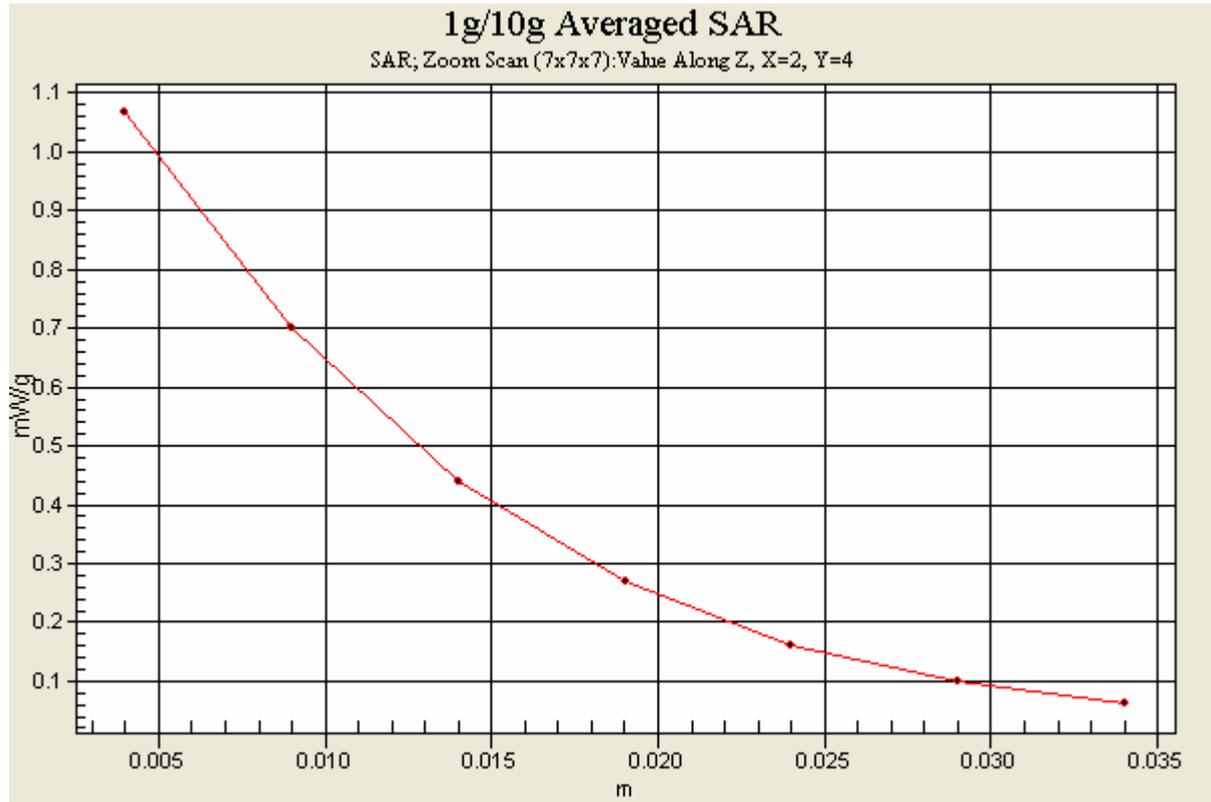
**DASY4 Configuration:**

- Probe: ET3DV6 - SN1790 ; ConvF(4.71, 4.71, 4.71) ; Calibrated: 2004/12/20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579 ; Calibrated: 2005/3/23
- Phantom: SAM 12 ; Type: SAM V4.0; Serial: TP 1202
- Measurement SW: DASY4, V4.6 Build 23 ; Postprocessing SW: SEMCAD, V1.8 Build 160

**Low Channel 512/Area Scan (7x11x1):** Measurement grid: dx=15mm, dy=15mm  
 Maximum value of SAR (measured) = 0.867 mW/g

**Low Channel 512/Zoom Scan (7x7x7) (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm  
 Reference Value = 12.2 V/m  
 Peak SAR (extrapolated) = 1.55 W/kg  
**SAR(1 g) = 0.977 mW/g; SAR(10 g) = 0.568 mW/g**  
 Maximum value of SAR (measured) = 1.07 mW/g





Test Laboratory: Advance Data Technology

### N800C-GPRS1900-Ch661-Mode 1

**DUT: GSM900/1800/1900/WCDMA A2100 dual mode PCMCIA card ; Type: E612 ; Test Frequency: 1880 MHz**

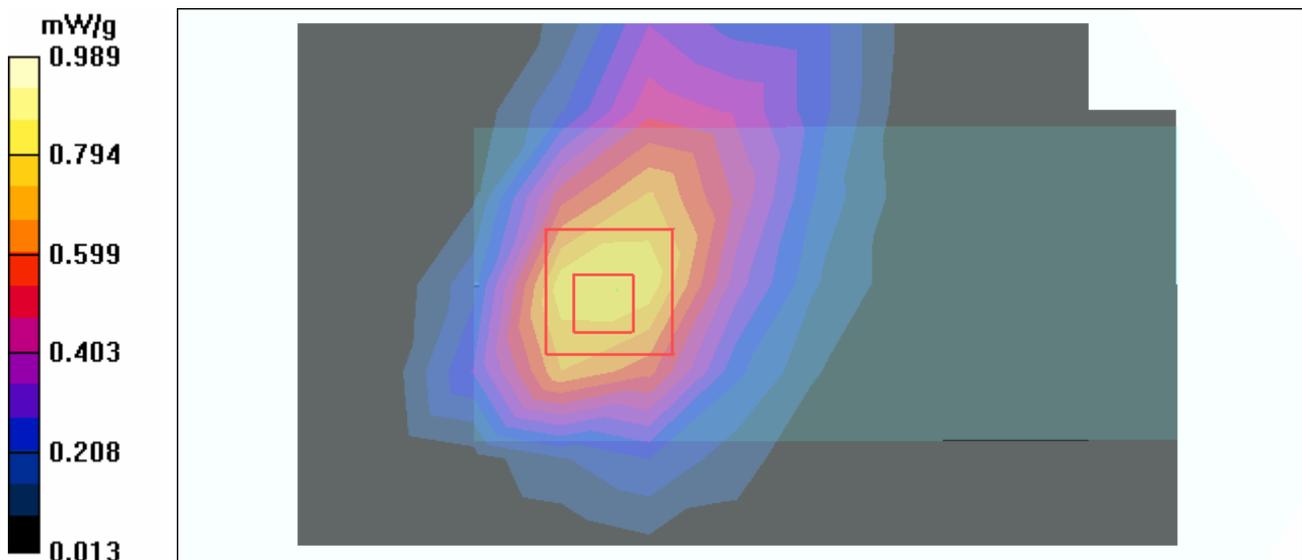
Communication System: PCS 1900 ; Frequency: 1880 MHz ; Duty Cycle: 1:4  
Medium: MSL1900 Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.56$  mho/m;  $\epsilon_r = 54.6$ ;  $\rho = 1000$  kg/m<sup>3</sup> ; Liquid Level : 155 mm  
Phantom section: Flat Section ; DUT test position : Body ; Modulation Type: GMSK  
Separation Distance : 10 mm ( The bottom side of the EUT to the Phantom)  
Antenna Type : Internal Antenna ; Air Temp. : 22.2 degrees ; Liquid Temp. : 21.1 degrees

DASY4 Configuration:

- Probe: ET3DV6 - SN1790 ; ConvF(4.71, 4.71, 4.71) ; Calibrated: 2004/12/20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579 ; Calibrated: 2005/3/23
- Phantom: SAM 12 ; Type: SAM V4.0; Serial: TP 1202
- Measurement SW: DASY4, V4.6 Build 23 ; Postprocessing SW: SEMCAD, V1.8 Build 160

**Mid Channel 661/Area Scan (7x11x1):** Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (measured) = 0.779 mW/g

**Mid Channel 661/Zoom Scan (7x7x7) (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm  
Reference Value = 11.9 V/m  
Peak SAR (extrapolated) = 1.49 W/kg  
**SAR(1 g) = 0.916 mW/g; SAR(10 g) = 0.521 mW/g**  
Maximum value of SAR (measured) = 0.989 mW/g



Test Laboratory: Advance Data Technology

## N800C-GPRS1900-Ch810-Mode 1

**DUT: GSM900/1800/1900/WCDMA A2100 dual mode PCMCIA card ; Type: E612 ; Test Frequency: 1909.8 MHz**

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

Medium: MSL1900 Medium parameters used:  $f = 1909.8$  MHz;  $\sigma = 1.59$  mho/m;  $\epsilon_r = 54.5$ ;  $\rho = 1000$  kg/m<sup>3</sup> ; Liquid Level : 155 mm

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

Separation Distance : 10 mm ( The bottom side of the EUT to the Phantom)

Antenna Type : Internal Antenna ; Air Temp. : 22.2 degrees ; Liquid Temp. : 21.1 degrees

DASY4 Configuration:

- Probe: ET3DV6 - SN1790 ; ConvF(4.71, 4.71, 4.71) ; Calibrated: 2004/12/20

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

- Electronics: DAE3 Sn579 ; Calibrated: 2005/3/23

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

- Measurement SW: DASY4, V4.6 Build 23 ; Postprocessing SW: SEMCAD, V1.8 Build 160

**High Channel 810/Area Scan (7x11x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.819 mW/g

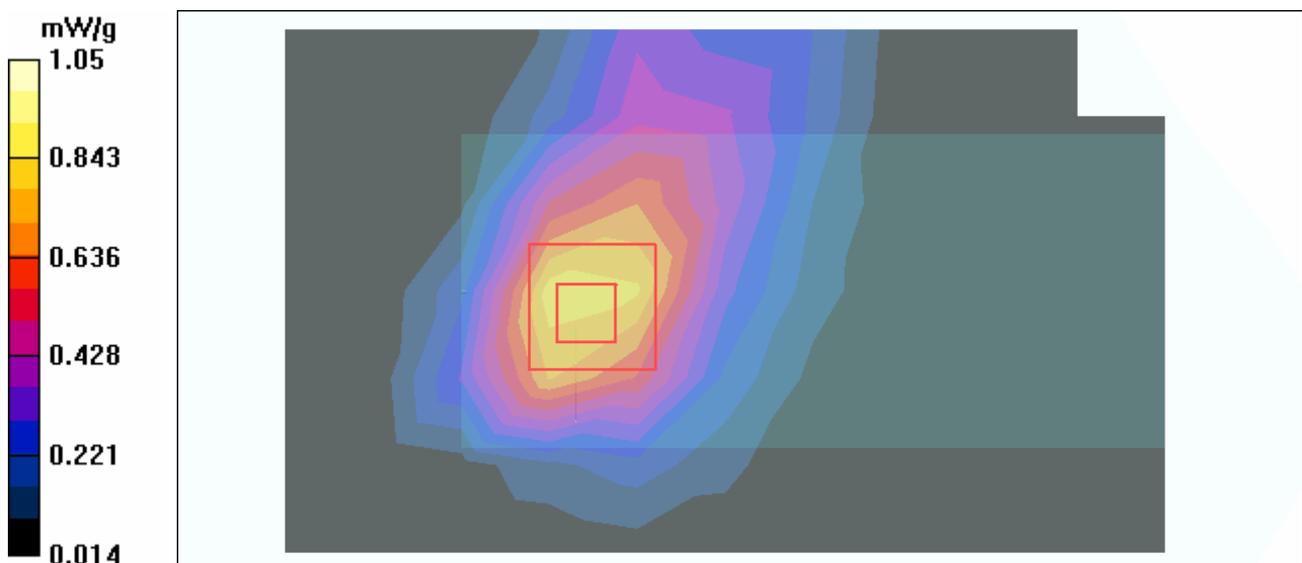
**High Channel 810/Zoom Scan (7x7x7) (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 12.2 V/m

Peak SAR (extrapolated) = 1.64 W/kg

**SAR(1 g) = 0.968 mW/g; SAR(10 g) = 0.536 mW/g**

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



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**D600-GPRS1900-Ch512-Mode 2**

**DUT: GSM900/1800/1900/WCDMA A2100 dual mode PCMCIA card ; Type: E612 ; Test 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;  $\sigma = 1.52$  mho/m;  $\epsilon_r = 54.7$ ;  $\rho = 1000$  kg/m<sup>3</sup> ; Liquid Level : 155 mm

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

Separation Distance : 13 mm ( The bottom side of the EUT to the Phantom)

Antenna Type : Internal Antenna ; Air Temp. : 22.2 degrees ; Liquid Temp. : 21.1 degrees

DASY4 Configuration:

- Probe: ET3DV6 - SN1790 ; ConvF(4.71, 4.71, 4.71) ; Calibrated: 2004/12/20

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

- Electronics: DAE3 Sn579 ; Calibrated: 2005/3/23

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

- Measurement SW: DASY4, V4.6 Build 23 ; Postprocessing SW: SEMCAD, V1.8 Build 160

**Low Channel 512/Area Scan (7x11x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.608 mW/g

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

Reference Value = 8.71 V/m

Peak SAR (extrapolated) = 0.898 W/kg

**SAR(1 g) = 0.624 mW/g; SAR(10 g) = 0.400 mW/g**

Maximum value of SAR (measured) = 0.687 mW/g

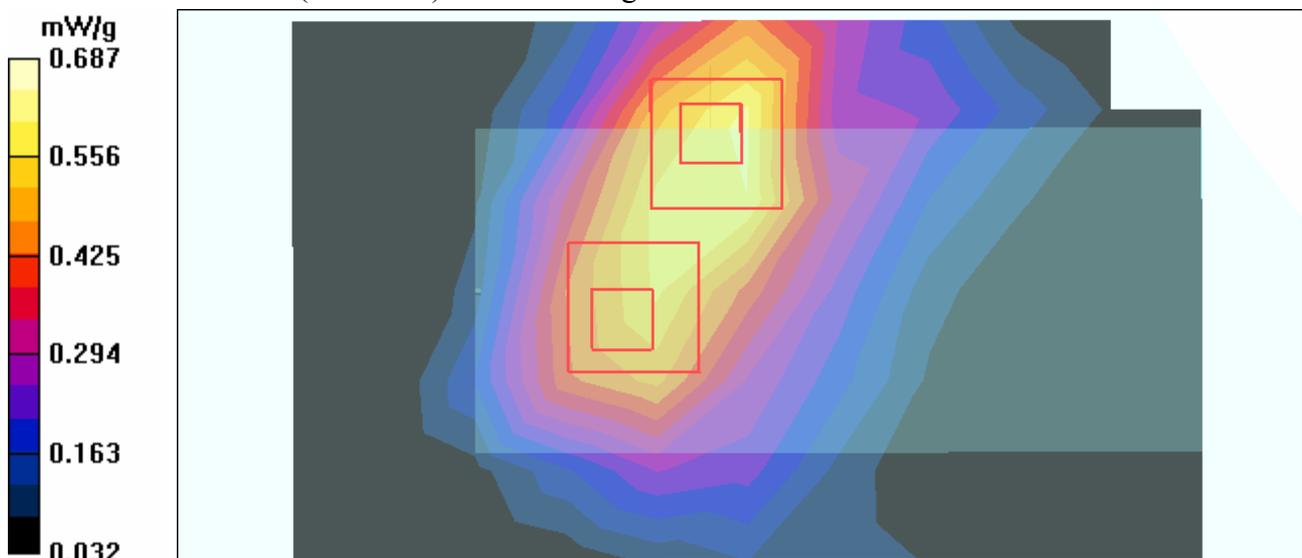
**Low Channel 512/Zoom Scan (7x7x7) (7x7x7)/Cube 1:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 8.71 V/m

Peak SAR (extrapolated) = 0.830 W/kg

**SAR(1 g) = 0.541 mW/g; SAR(10 g) = 0.333 mW/g**

Maximum value of SAR (measured) = 0.591 mW/g



Test Laboratory: Advance Data Technology

**D600-GPRS1900-Ch661-Mode 2**

**DUT: GSM900/1800/1900/WCDMA A2100 dual mode PCMCIA card ; Type: E612 ; Test Frequency: 1880 MHz**

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

Medium: MSL1900 Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.56$  mho/m;  $\epsilon_r = 54.6$ ;  $\rho = 1000$  kg/m<sup>3</sup> ; Liquid Level : 155 mm

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

Separation Distance : 13 mm ( The bottom side of the EUT to the Phantom)

Antenna Type : Internal Antenna ; Air Temp. : 22.2 degrees ; Liquid Temp. : 21.1 degrees

DASY4 Configuration:

- Probe: ET3DV6 - SN1790 ; ConvF(4.71, 4.71, 4.71) ; Calibrated: 2004/12/20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579 ; Calibrated: 2005/3/23
- Phantom: SAM 12 ; Type: SAM V4.0; Serial: TP 1202
- Measurement SW: DASY4, V4.6 Build 23 ; Postprocessing SW: SEMCAD, V1.8 Build 160

**Mid Channel 661/Area Scan (7x11x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.528 mW/g

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

Reference Value = 8.02 V/m

Peak SAR (extrapolated) = 0.800 W/kg

**SAR(1 g) = 0.551 mW/g; SAR(10 g) = 0.346 mW/g**

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

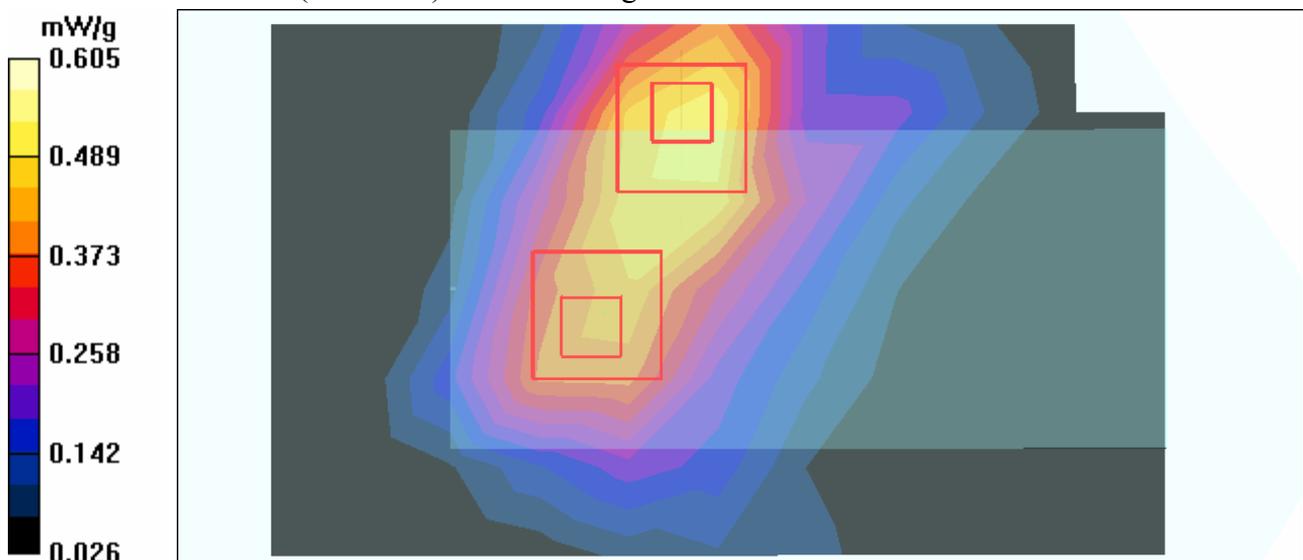
**Mid Channel 661/Zoom Scan (7x7x7) (7x7x7)/Cube 1:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 8.02 V/m

Peak SAR (extrapolated) = 0.729 W/kg

**SAR(1 g) = 0.456 mW/g; SAR(10 g) = 0.274 mW/g**

Maximum value of SAR (measured) = 0.494 mW/g



Test Laboratory: Advance Data Technology

**D600-GPRS1900-Ch810-Mode 2**

**DUT: GSM900/1800/1900/WCDMA A2100 dual mode PCMCIA card ; Type: E612 ; Test Frequency: 1909.8 MHz**

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

Medium: MSL1900 Medium parameters used:  $f = 1909.8 \text{ MHz}$ ;  $\sigma = 1.59 \text{ mho/m}$ ;  $\epsilon_r = 54.5$ ;  $\rho = 1000 \text{ kg/m}^3$  ; Liquid Level : 155 mm

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

Separation Distance : 13 mm ( The bottom side of the EUT to the Phantom)

Antenna Type : Internal Antenna ; Air Temp. : 22.2 degrees ; Liquid Temp. : 21.1 degrees

DASY4 Configuration:

- Probe: ET3DV6 - SN1790 ; ConvF(4.71, 4.71, 4.71) ; Calibrated: 2004/12/20

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

- Electronics: DAE3 Sn579 ; Calibrated: 2005/3/23

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

- Measurement SW: DASY4, V4.6 Build 23 ; Postprocessing SW: SEMCAD, V1.8 Build 160

**High Channel 810/Area Scan (7x11x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$

Maximum value of SAR (measured) = 0.495 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 = 8.04 V/m

Peak SAR (extrapolated) = 0.768 W/kg

**SAR(1 g) = 0.522 mW/g; SAR(10 g) = 0.322 mW/g**

Maximum value of SAR (measured) = 0.575 mW/g

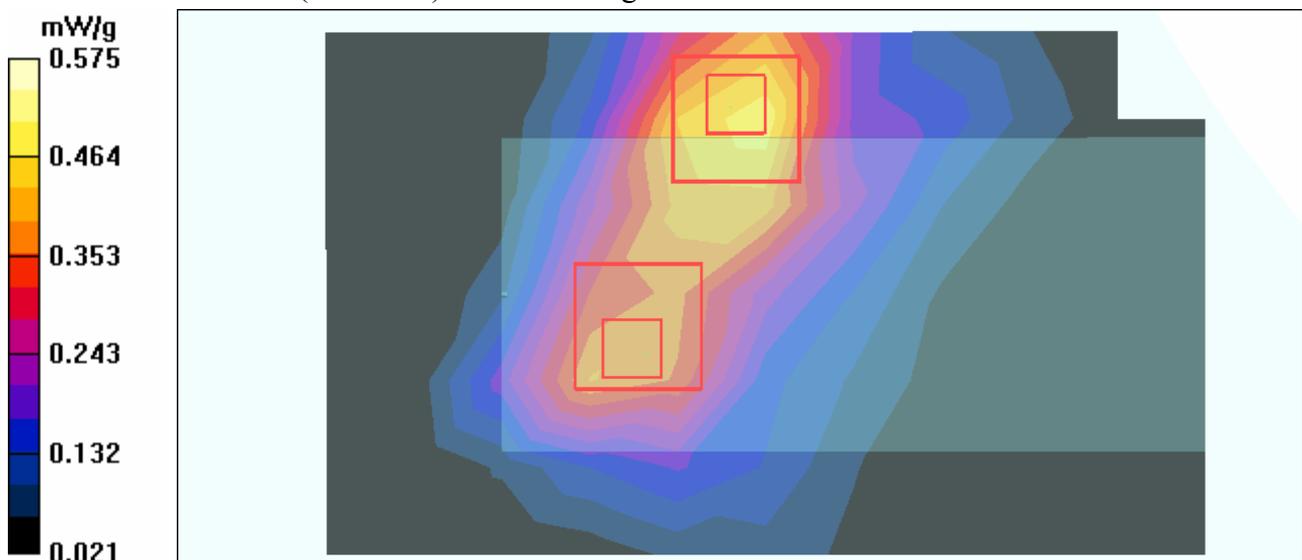
**High Channel 810/Zoom Scan (7x7x7) (7x7x7)/Cube 1:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$

Reference Value = 8.04 V/m

Peak SAR (extrapolated) = 0.695 W/kg

**SAR(1 g) = 0.425 mW/g; SAR(10 g) = 0.245 mW/g**

Maximum value of SAR (measured) = 0.460 mW/g



Test Laboratory: Advance Data Technology

### C600-GPRS1900-Ch512-Mode 3

**DUT: GSM900/1800/1900/WCDMA A2100 dual mode PCMCIA card ; Type: E612 ; Test 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;  $\sigma = 1.52$  mho/m;  $\epsilon_r = 54.7$ ;  $\rho = 1000$  kg/m<sup>3</sup> ; Liquid Level : 155 mm

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

Separation Distance : 11 mm ( The bottom side of the EUT to the Phantom)

Antenna Type : Internal Antenna ; Air Temp. : 22.2 degrees ; Liquid Temp. : 21.1 degrees

DASY4 Configuration:

- Probe: ET3DV6 - SN1790 ; ConvF(4.71, 4.71, 4.71) ; Calibrated: 2004/12/20

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

- Electronics: DAE3 Sn579 ; Calibrated: 2005/3/23

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

- Measurement SW: DASY4, V4.6 Build 23 ; Postprocessing SW: SEMCAD, V1.8 Build 160

**Low Channel 512/Area Scan (7x11x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.856 mW/g

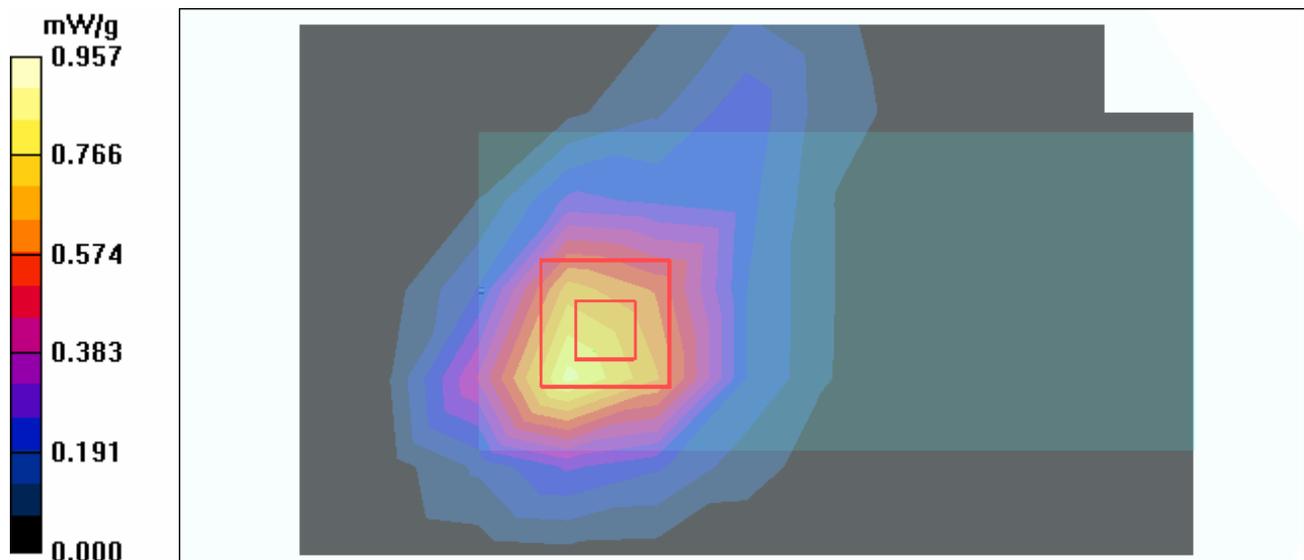
**Low Channel 512/Zoom Scan (7x7x7) (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 12.4 V/m

Peak SAR (extrapolated) = 1.88 W/kg

**SAR(1 g) = 0.879 mW/g; SAR(10 g) = 0.444 mW/g**

Maximum value of SAR (measured) = 0.957 mW/g



Test Laboratory: Advance Data Technology

### C600-GPRS1900-Ch661-Mode 3

**DUT: GSM900/1800/1900/WCDMA A2100 dual mode PCMCIA card ; Type: E612 ; Test Frequency: 1880 MHz**

Communication System: PCS 1900 ; Frequency: 1880 MHz ; Duty Cycle: 1:4  
 Medium: MSL1900 Medium parameters used:  $f = 1880 \text{ MHz}$ ;  $\sigma = 1.56 \text{ mho/m}$ ;  $\epsilon_r = 54.6$ ;  $\rho = 1000 \text{ kg/m}^3$  ; Liquid Level : 155 mm  
 Phantom section: Flat Section ; DUT test position : Body ; Modulation Type: GMSK  
 Separation Distance : 11 mm ( The bottom side of the EUT to the Phantom)  
 Antenna Type : Internal Antenna ; Air Temp. : 22.2 degrees ; Liquid Temp. : 21.1 degrees

DASY4 Configuration:

- Probe: ET3DV6 - SN1790 ; ConvF(4.71, 4.71, 4.71) ; Calibrated: 2004/12/20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579 ; Calibrated: 2005/3/23
- Phantom: SAM 12 ; Type: SAM V4.0; Serial: TP 1202
- Measurement SW: DASY4, V4.6 Build 23 ; Postprocessing SW: SEMCAD, V1.8 Build 160

**Mid Channel 661/Area Scan (7x11x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$   
 Maximum value of SAR (measured) = 0.825 mW/g

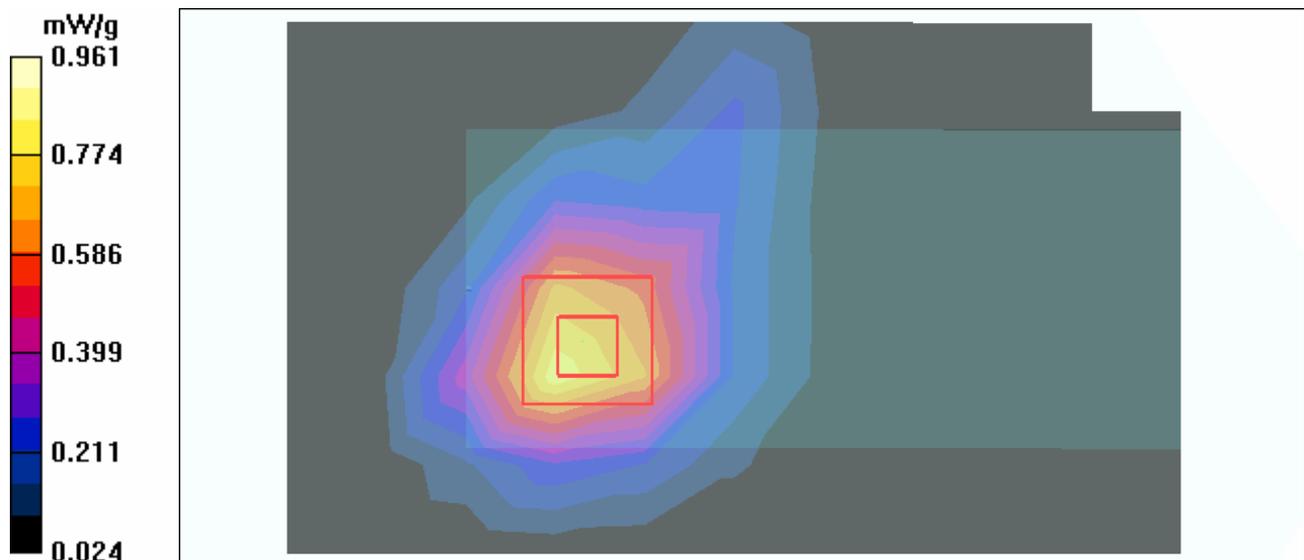
**Mid Channel 661/Zoom Scan (7x7x7) (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$

Reference Value = 12.2 V/m

Peak SAR (extrapolated) = 1.43 W/kg

**SAR(1 g) = 0.865 mW/g; SAR(10 g) = 0.486 mW/g**

Maximum value of SAR (measured) = 0.961 mW/g



Test Laboratory: Advance Data Technology

### C600-GPRS1900-Ch810-Mode 3

**DUT: GSM900/1800/1900/WCDMA A2100 dual mode PCMCIA card ; Type: E612 ; Test Frequency: 1909.8 MHz**

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

Medium: MSL1900 Medium parameters used:  $f = 1909.8$  MHz;  $\sigma = 1.59$  mho/m;  $\epsilon_r = 54.5$ ;  $\rho = 1000$  kg/m<sup>3</sup> ; Liquid Level : 155 mm

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

Separation Distance : 11 mm ( The bottom side of the EUT to the Phantom)

Antenna Type : Internal Antenna ; Air Temp. : 22.2 degrees ; Liquid Temp. : 21.1 degrees

DASY4 Configuration:

- Probe: ET3DV6 - SN1790 ; ConvF(4.71, 4.71, 4.71) ; Calibrated: 2004/12/20

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

- Electronics: DAE3 Sn579 ; Calibrated: 2005/3/23

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

- Measurement SW: DASY4, V4.6 Build 23 ; Postprocessing SW: SEMCAD, V1.8 Build 160

**High Channel 810/Area Scan (7x11x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.893 mW/g

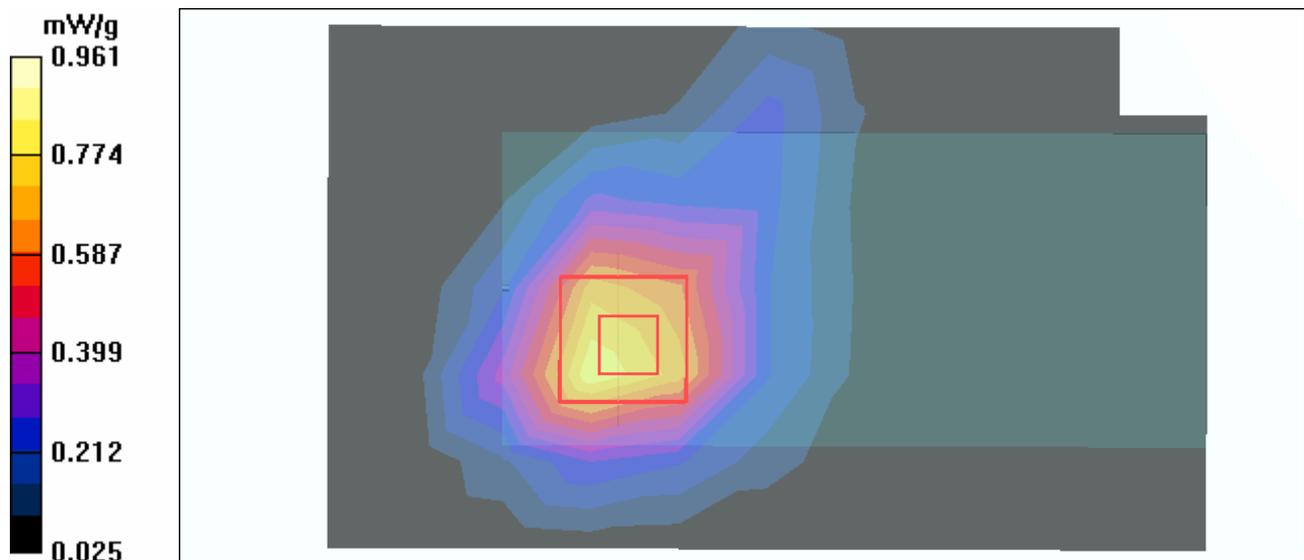
**High Channel 810/Zoom Scan (7x7x7) (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 12.9 V/m

Peak SAR (extrapolated) = 1.61 W/kg

**SAR(1 g) = 0.881 mW/g; SAR(10 g) = 0.502 mW/g**

Maximum value of SAR (measured) = 0.961 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:  $f = 1900$  MHz;  $\sigma = 1.58$  mho/m;  $\epsilon_r = 54.6$ ;  $\rho = 1000$  kg/m<sup>3</sup> ; Liquid level : 155 mm  
 Phantom section: Flat Section ; Separation distance : 10 mm (The feetpoint of the dipole to the Phantom) Air temp. : 22.2 degrees ; Liquid temp. : 21.1 degrees

DASY4 Configuration:

- Probe: ET3DV6 - SN1790 ; ConvF(4.71, 4.71, 4.71) ; Calibrated: 2004/12/20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2005/3/23
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP 1202
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 160

**d=10mm, Pin=250mW/Area Scan (7x7x1):** Measurement grid: dx=15mm, dy=15mm  
 Maximum value of SAR (measured) = 10.6 mW/g

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

Reference Value = 88.1 V/m; Power Drift = -0.052 dB

Peak SAR (extrapolated) = 16.4 W/kg

**SAR(1 g) = 9.35 mW/g; SAR(10 g) = 4.9 mW/g**

Maximum value of SAR (measured) = 10.7 mW/g

