



## ***Appendix A. Plots of System Performance Check***

The plots are shown as follows.

## **System Check\_Head\_835MHz\_111227**

### **DUT: Dipole 835 MHz**

Communication System: CW; Frequency: 835 MHz; Duty Cycle: 1:1

Medium: HSL\_850\_111227 Medium parameters used:  $f = 835 \text{ MHz}$ ;  $\sigma = 0.909 \text{ mho/m}$ ;  $\epsilon_r = 41.806$ ;

$\rho = 1000 \text{ kg/m}^3$

Ambient Temperature :  $23.4 \text{ }^\circ\text{C}$ ; Liquid Temperature :  $21.5 \text{ }^\circ\text{C}$

#### **DASY5 Configuration:**

- Probe: EX3DV4 - SN3697; ConvF(8.45, 8.45, 8.45); Calibrated: 2011-9-2
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2011-11-18
- Phantom: SAM1; Type: SAM; Serial: TP-1479
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.4.5 (3634)

**Pin=250mW/Area Scan (61x61x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$

Maximum value of SAR (interpolated) =  $2.543 \text{ mW/g}$

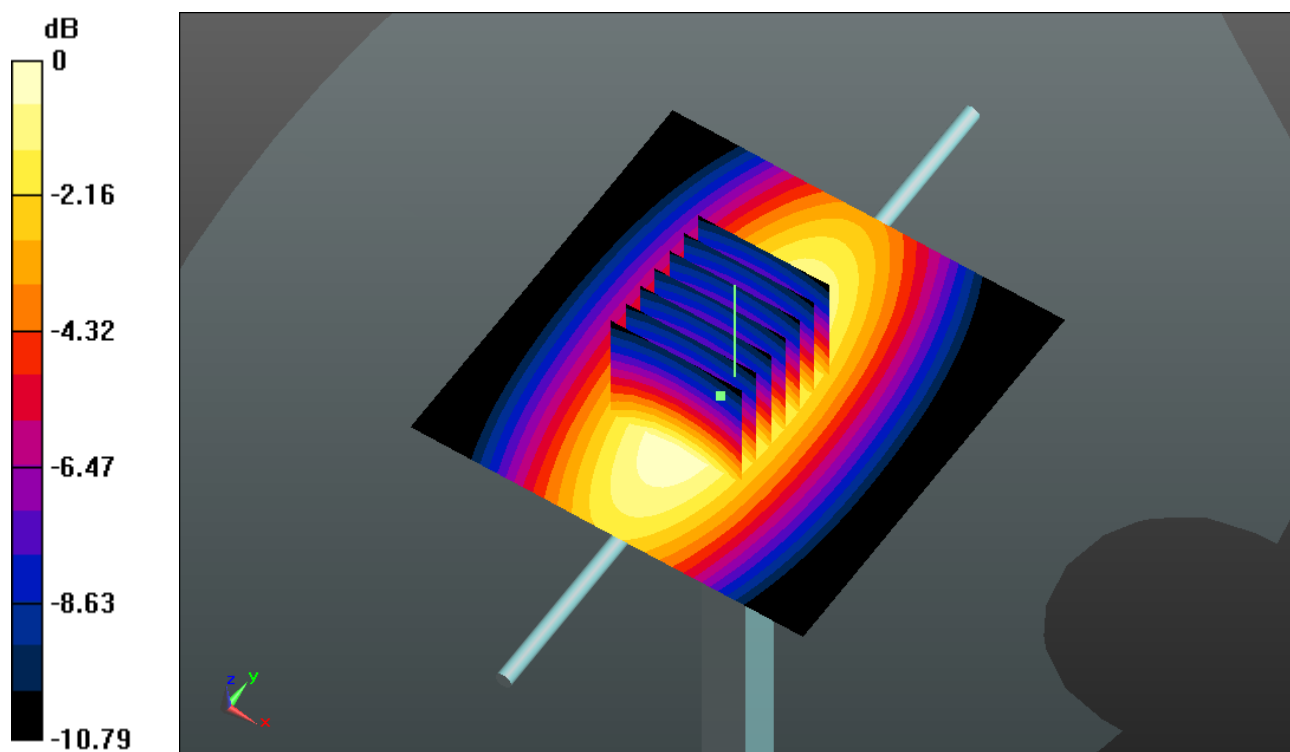
**Pin=250mW/Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$

Reference Value =  $53.413 \text{ V/m}$ ; Power Drift =  $-0.09 \text{ dB}$

Peak SAR (extrapolated) =  $3.469 \text{ W/kg}$

**SAR(1 g) =  $2.26 \text{ mW/g}$ ; SAR(10 g) =  $1.47 \text{ mW/g}$**

Maximum value of SAR (measured) =  $2.442 \text{ mW/g}$



0 dB = 2.440mW/g

## **System Check\_Head\_1900MHz\_111227**

### **DUT: Dipole 1900 MHz D1900V2**

Communication System: CW; Frequency: 1900 MHz; Duty Cycle: 1:1

Medium: HSL\_1900\_111227 Medium parameters used:  $f = 1900$  MHz;  $\sigma = 1.427$  mho/m;  $\epsilon_r =$

41.191;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature : 23.3 °C; Liquid Temperature : 21.6 °C

#### **DASY5 Configuration:**

- Probe: EX3DV4 - SN3697; ConvF(7.46, 7.46, 7.46); Calibrated: 2011-9-2
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2011-11-18
- Phantom: SAM1; Type: SAM; Serial: TP-1479
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.4.5 (3634)

**Pin=250mW/Area Scan (61x61x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 11.962 mW/g

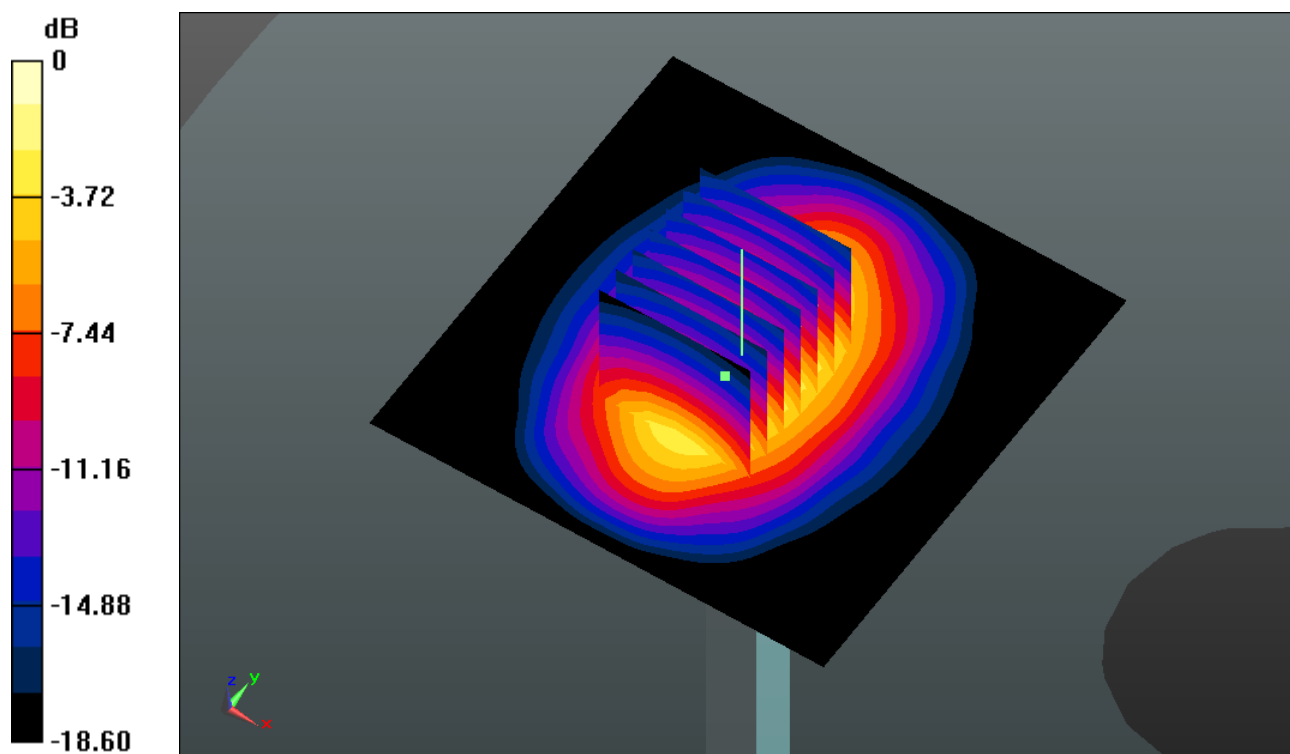
**Pin=250mW/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 91.455 V/m; Power Drift = -0.0026 dB

Peak SAR (extrapolated) = 20.061 W/kg

**SAR(1 g) = 10.6 mW/g; SAR(10 g) = 5.45 mW/g**

Maximum value of SAR (measured) = 11.912 mW/g



0 dB = 11.910mW/g

**System Check\_Head\_2450MHz\_120105****DUT: Dipole 2450 MHz**

Communication System: CW; Frequency: 2450 MHz; Duty Cycle: 1:1

Medium: HSL\_2450\_120105 Medium parameters used:  $f = 2450$  MHz;  $\sigma = 1.856$  mho/m;  $\epsilon_r =$

37.685;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature : 22.5 °C ; Liquid Temperature : 21.5 °C

**DASY5 Configuration:**

- Probe: EX3DV4 - SN3819; ConvF(7.33, 7.33, 7.33); Calibrated: 16.11.2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1303; Calibrated: 10.11.2011
- Phantom: SAM2; Type: QD000P40CD; Serial: TP:1671
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

**Pin=250mW/Area Scan (61x61x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 15.016 mW/g

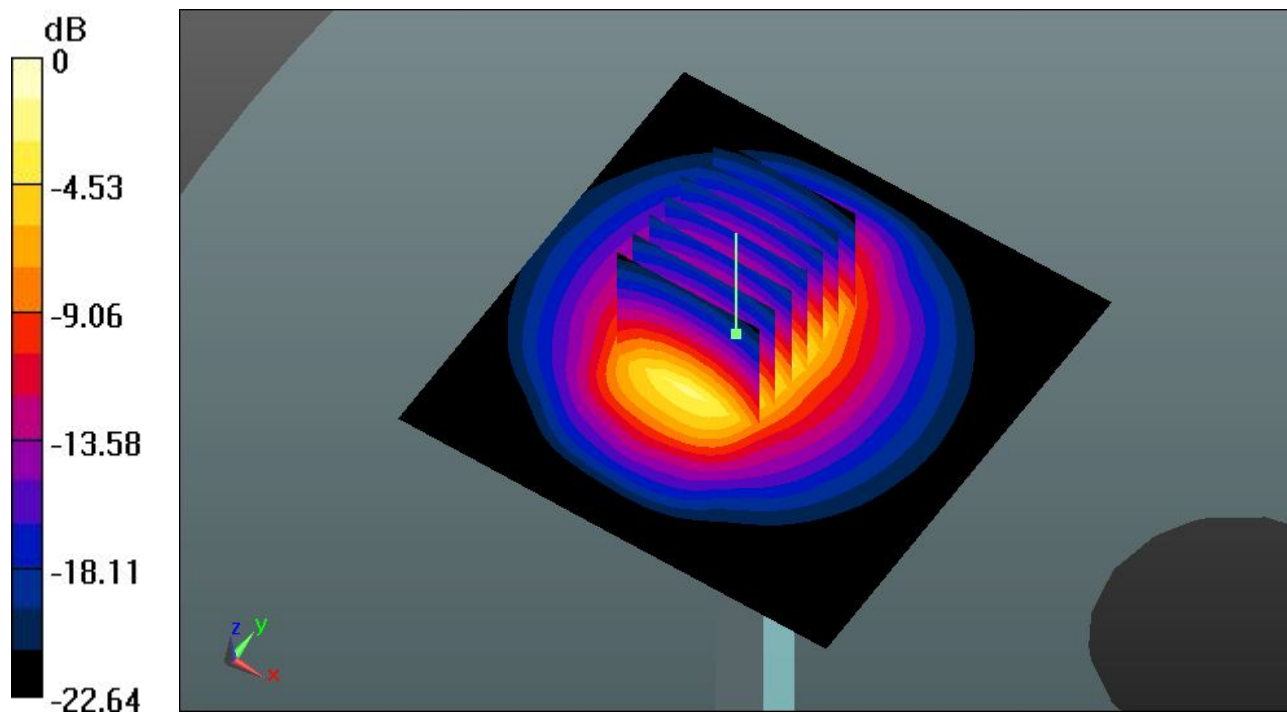
**Pin=250mW/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 77.430 V/m; Power Drift = 0.11 dB

Peak SAR (extrapolated) = 27.7030

**SAR(1 g) = 12.9 mW/g; SAR(10 g) = 5.87 mW/g**

Maximum value of SAR (measured) = 14.570 mW/g



0 dB = 14.570mW/g = 23.27 dB mW/g

## **System Check\_Body\_835MHz\_111227**

### **DUT: Dipole 835 MHz**

Communication System: CW; Frequency: 835 MHz; Duty Cycle: 1:1

Medium: MSL\_850\_111227 Medium parameters used:  $f = 835 \text{ MHz}$ ;  $\sigma = 0.978 \text{ mho/m}$ ;  $\epsilon_r = 54.403$ ;

$\rho = 1000 \text{ kg/m}^3$

Ambient Temperature :  $23.5^\circ\text{C}$ ; Liquid Temperature :  $21.4^\circ\text{C}$

#### **DASY5 Configuration:**

- Probe: EX3DV4 - SN3697; ConvF(8.67, 8.67, 8.67); Calibrated: 2011-9-2
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2011-11-18
- Phantom: SAM2; Type: SAM; Serial: TP-1477
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.4.5 (3634)

**Pin=250mW/Area Scan (61x61x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$

Maximum value of SAR (interpolated) =  $2.665 \text{ mW/g}$

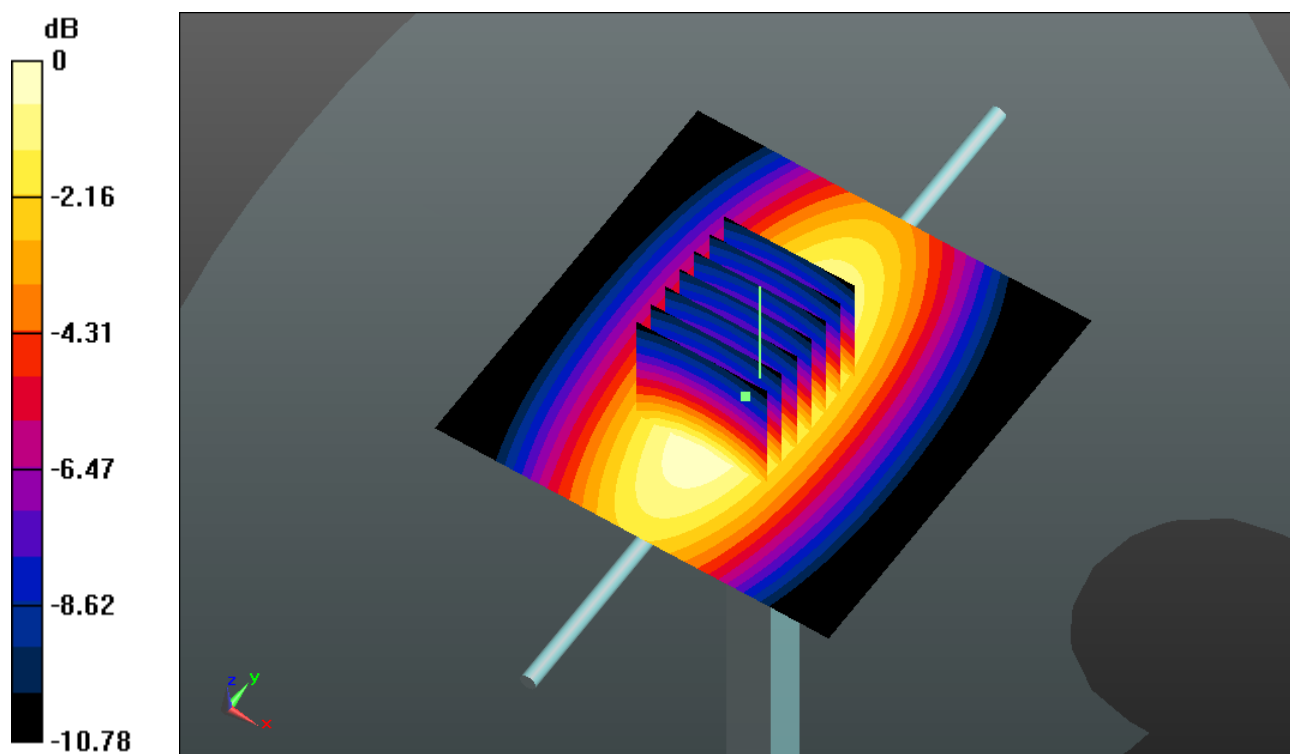
**Pin=250mW/Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$

Reference Value =  $52.731 \text{ V/m}$ ; Power Drift =  $-0.00025 \text{ dB}$

Peak SAR (extrapolated) =  $3.631 \text{ W/kg}$

**SAR(1 g) =  $2.37 \text{ mW/g}$ ; SAR(10 g) =  $1.54 \text{ mW/g}$**

Maximum value of SAR (measured) =  $2.559 \text{ mW/g}$



0 dB = 2.560mW/g



## **System Check\_Body\_1900MHz\_111227**

### **DUT: Dipole 1900 MHz**

Communication System: CW; Frequency: 1900 MHz; Duty Cycle: 1:1

Medium: MSL\_1900\_111227 Medium parameters used:  $f = 1900$  MHz;  $\sigma = 1.528$  mho/m;  $\epsilon_r =$

54.867;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature : 23.2 °C ; Liquid Temperature : 21.3 °C

#### **DASY5 Configuration:**

- Probe: EX3DV4 - SN3697; ConvF(6.96, 6.96, 6.96); Calibrated: 2011-9-2
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2011-11-18
- Phantom: SAM2; Type: SAM; Serial: TP-1477
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.4.5 (3634)

**Pin=250mW/Area Scan (61x61x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 12.371 mW/g

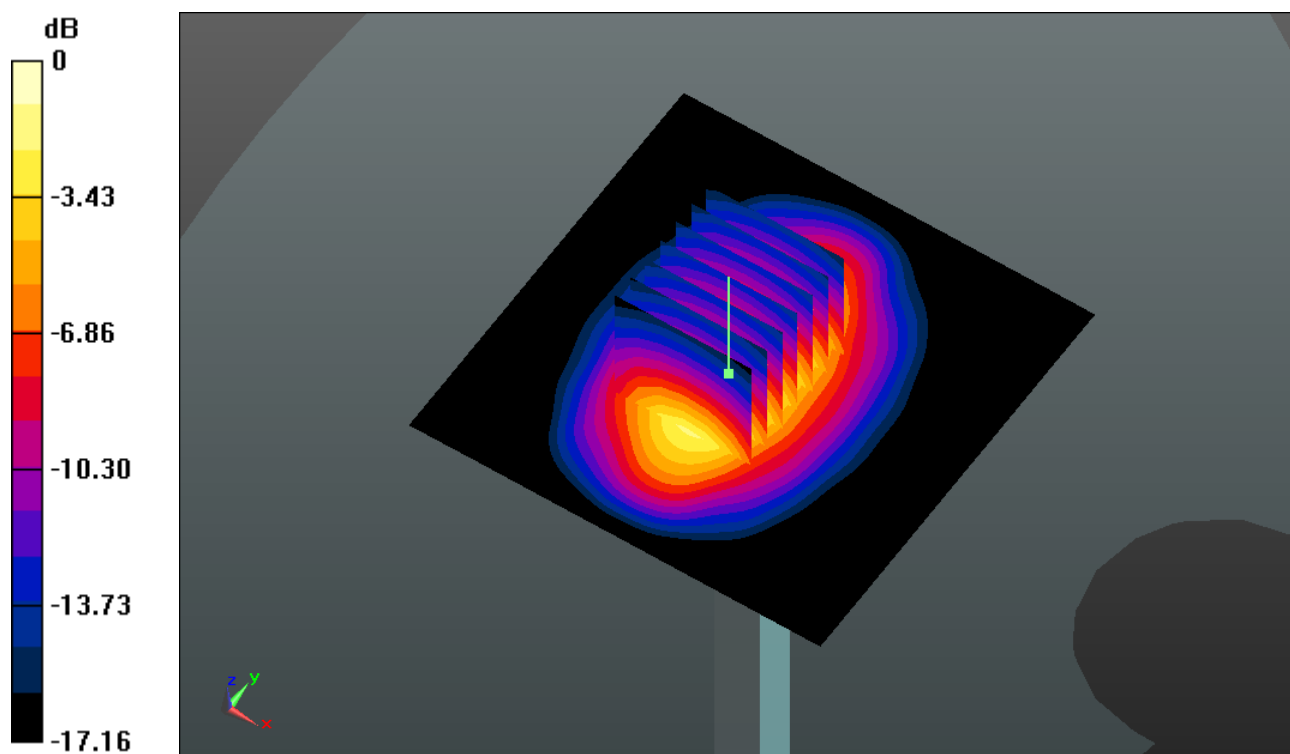
**Pin=250mW/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 88.308 V/m; Power Drift = 0.00023 dB

Peak SAR (extrapolated) = 19.905 W/kg

**SAR(1 g) = 10.9 mW/g; SAR(10 g) = 5.66 mW/g**

Maximum value of SAR (measured) = 12.160 mW/g



0 dB = 12.160mW/g

**System Check\_Body\_2450MHz\_120105****DUT: Dipole 2450 MHz**

Communication System: CW; Frequency: 2450 MHz; Duty Cycle: 1:1

Medium: MSL\_2450\_120105 Medium parameters used:  $f = 2450$  MHz;  $\sigma = 1.976$  mho/m;  $\epsilon_r = 54.13$ ;

$\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature : 22.6 °C ; Liquid Temperature : 21.4 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3819; ConvF(7.4, 7.4, 7.4); Calibrated: 16.11.2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1303; Calibrated: 10.11.2011
- Phantom: SAM1; Type: QD000P40CD; Serial: TP:1670
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

**Pin=250mW/Area Scan (61x61x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 15.125 mW/g

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

Reference Value = 86.533 V/m; Power Drift = -0.03 dB

Peak SAR (extrapolated) = 25.8280

**SAR(1 g) = 13 mW/g; SAR(10 g) = 6.16 mW/g**

Maximum value of SAR (measured) = 14.970 mW/g

