

## Attachment 1. – Dipole Validation Plots

## DIGITAL EMC CO., LTD

**DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN:464**

Communication System: CW; Frequency: 835 MHz; Duty Cycle: 1:1  
 Medium parameters used:  $f = 835 \text{ MHz}$ ;  $\sigma = 0.883 \text{ mho/m}$ ;  $\epsilon_r = 42$ ;  $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Flat Section

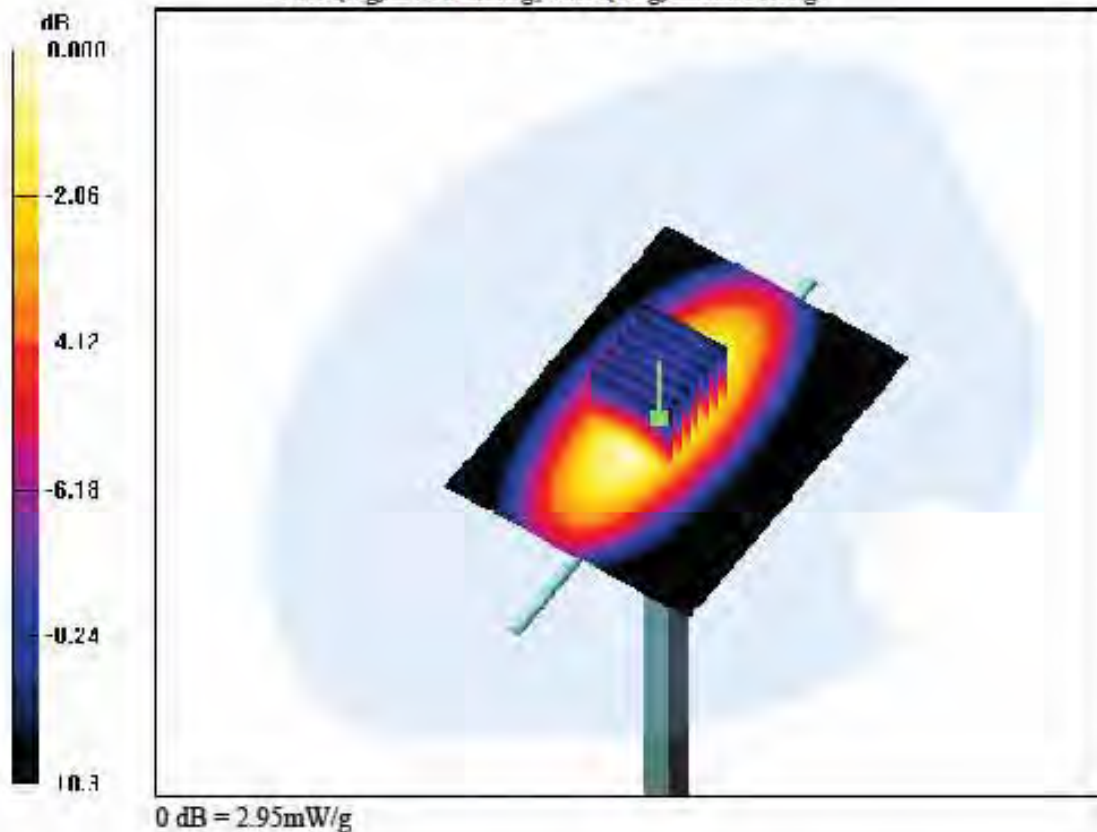
### DASY4 Configuration:

Probe: EX3DV4 - SN3643; ConvF(8.94, 8.94, 8.94); Calibrated: 2012-01-27; Electronics: DAE3 Sn519  
 Phantom: SAM with 835MHz; Type: SAM; Serial: TP-1223  
 Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Test Date: 2012-05-10; Ambient Temp: 22.1; Tissue Temp: 22.3

### Dipole Validation

**Area Scan (61x81x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$   
**Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$   
 Power Drift = 0.041 dB  
 Peak SAR (extrapolated) = 3.65 W/kg  
 SAR(1 g) = 2.42 W/kg; SAR(10 g) = 1.59 W/kg



## DIGITAL EMC CO., LTD

**DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN:464**

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

Medium parameters used:  $f = 835 \text{ MHz}$ ;  $\sigma = 0.959 \text{ mho/m}$ ;  $\epsilon_r = 53.9$ ;  $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

### DASY4 Configuration:

Probe: EX3DV4 - SN3643; ConvF(9.12, 9.12, 9.12); Calibrated: 2012-01-27; Electronics: DAE3 Sn519

Phantom: SAM with 835MHz; Type: SAM; Serial: TP-1223

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Test Date: 2012-05-10; Ambient Temp: 22.1; Tissue Temp: 22.3

### Dipole Validation

**Area Scan (41x111x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$

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

Power Drift = 0.017 dB

Peak SAR (extrapolated) = 3.74 W/kg

SAR(1 g) = 2.5 W/kg; SAR(10 g) = 1.64 W/kg



## DIGITAL EMC CO., LTD

**DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN:464**

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

Medium parameters used:  $f = 835 \text{ MHz}$ ;  $\sigma = 0.891 \text{ mho/m}$ ;  $\epsilon_r = 42.2$ ;  $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

### DASY4 Configuration:

Probe: EX3DV4 - SN3643; ConvF(8.94, 8.94, 8.94); Calibrated: 2012-01-27; Electronics: DAE3 Sn519

Phantom: SAM with 835MHz; Type: SAM; Serial: TP-1223

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Test Date: 2012-05-09; Ambient Temp: 22.3; Tissue Temp: 22.5

### Dipole Validation

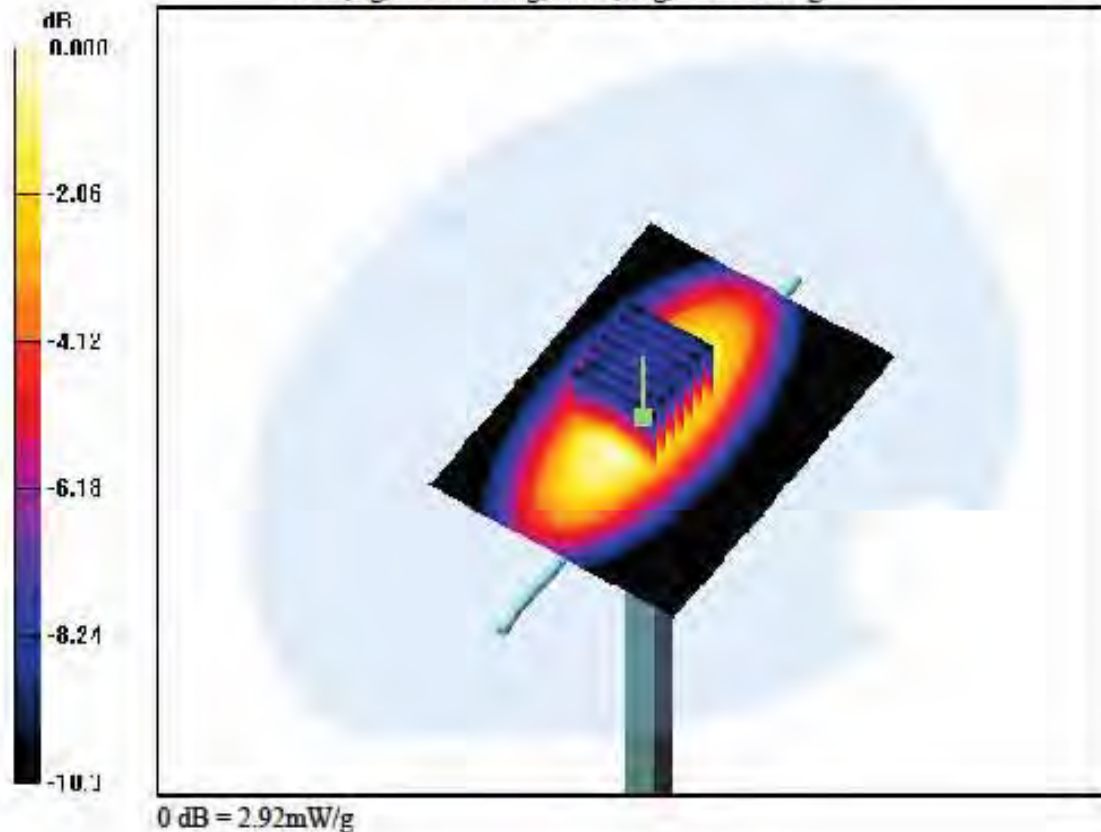
**Area Scan (61x81x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$

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

Power Drift = -0.020 dB

Peak SAR (extrapolated) = 3.60 W/kg

SAR(1 g) = 2.39 W/kg; SAR(10 g) = 1.57 W/kg



## DIGITAL EMC CO., LTD

**DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN:464**

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

Medium parameters used:  $f = 835 \text{ MHz}$ ;  $\sigma = 0.953 \text{ mho/m}$ ;  $\epsilon_r = 53.8$ ;  $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

### DASY4 Configuration:

Probe: EX3DV4 - SN3643; ConvF(9.12, 9.12, 9.12); Calibrated: 2012-01-27; Electronics: DAE3 Sn519

Phantom: SAM with 835MHz; Type: SAM; Serial: TP-1223

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Test Date: 2012-05-09; Ambient Temp: 22.3; Tissue Temp: 22.5

### Dipole Validation

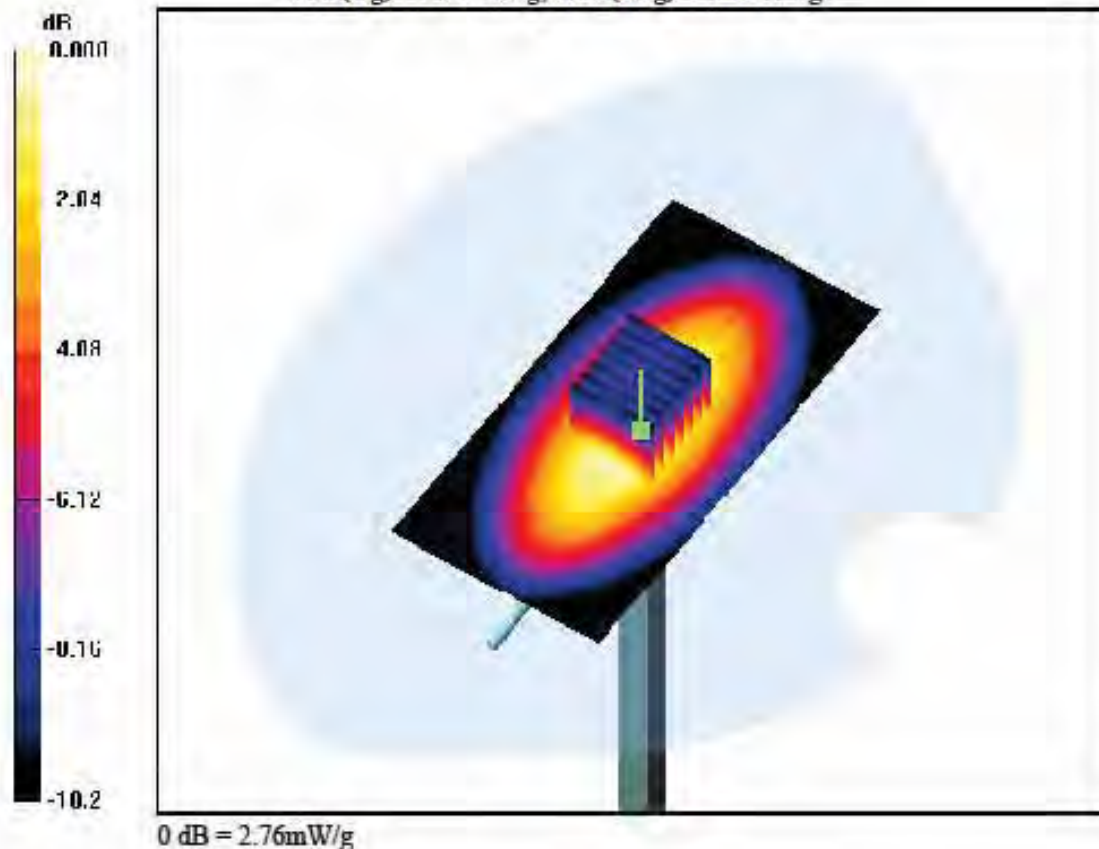
**Area Scan (51x101x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$

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

Power Drift = -0.010 dB

Peak SAR (extrapolated) = 3.85 W/kg

SAR(1 g) = 2.56 W/kg; SAR(10 g) = 1.68 W/kg



## DIGITAL EMC CO., LTD

**DUT: Dipole 1900 MHz; Type: D1900V2; Serial: D1900V2 - SN:5d029**

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

Medium parameters used:  $f = 1900 \text{ MHz}$ ;  $\sigma = 1.44 \text{ mho/m}$ ;  $\epsilon_r = 40.2$ ;  $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

### DASY4 Configuration:

Probe: EX3DV4 - SN3643; ConvF(7.97, 7.97, 7.97); Calibrated: 2012-01-27; Electronics: DAE3 Sn519

Phantom: SAM 1800/1900 MHz; Type: SAM; Serial: TP-1224

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Test Date: 2012-05-08; Ambient Temp: 22.2; Tissue Temp: 22.4

### Dipole Validation

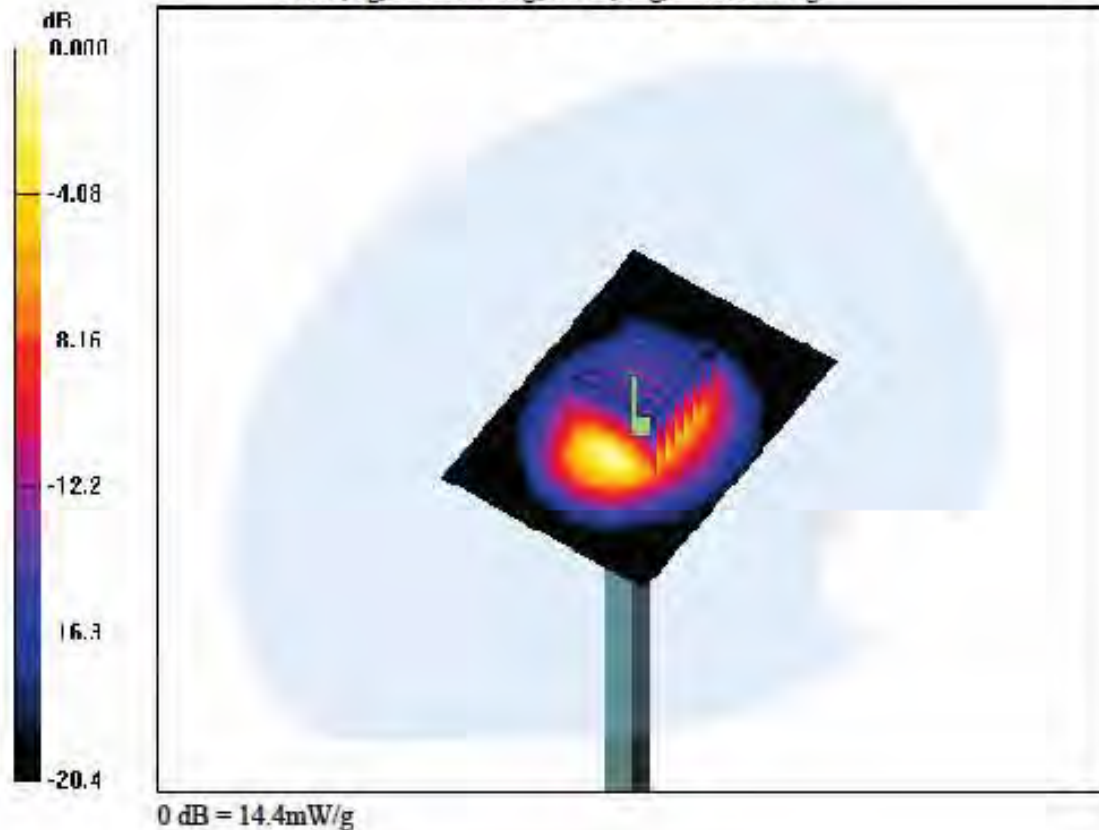
**Area Scan (51x71x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$

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

Power Drift = -0.088 dB

Peak SAR (extrapolated) = 21.3 W/kg

SAR(1 g) = 10.2 W/kg; SAR(10 g) = 4.92 W/kg



## DIGITAL EMC CO., LTD

**DUT: Dipole 1900 MHz; Type: D1900V2; Serial: D1900V2 - SN:5d029**

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

Medium parameters used:  $f = 1900$  MHz;  $\sigma = 1.53$  mho/m;  $\epsilon_r = 51.7$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

### DASY4 Configuration:

Probe: EX3DV4 - SN3643; ConvF(7.34, 7.34, 7.34); Calibrated: 2012-01-27; Electronics: DAE3 Sn519

Phantom: SAM 1800/1900 MHz; Type: SAM; Serial: TP-1224

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Test Date: 2012-05-08; Ambient Temp: 22.2; Tissue Temp: 22.4

### Dipole Validation

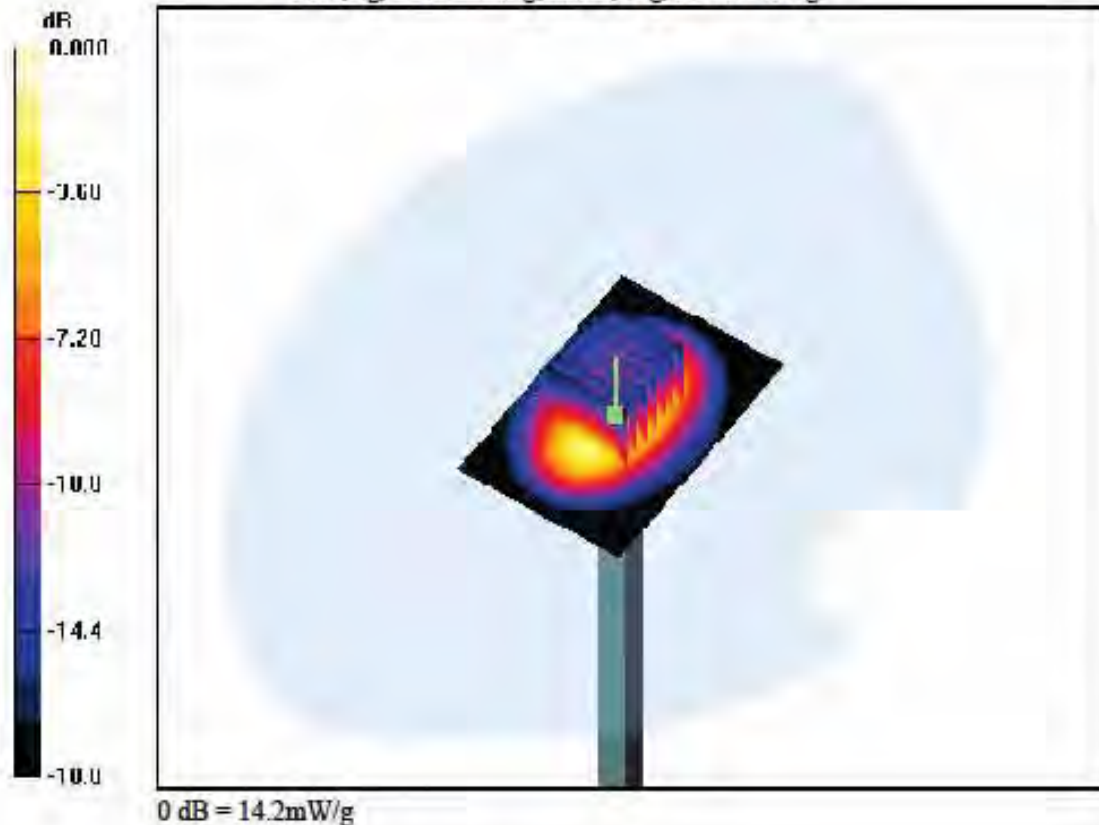
**Area Scan (61x91x1):** Measurement grid: dx=10mm, dy=10mm

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

Power Drift = 0.033 dB

Peak SAR (extrapolated) = 19.8 W/kg

SAR(1 g) = 10.4 W/kg; SAR(10 g) = 5.31 W/kg



## DIGITAL EMC CO., LTD

**DUT: Dipole 2450 MHz; Type: D2450V2; Serial: D2450V2 - SN:726**

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

Medium parameters used:  $f = 2450$  MHz;  $\sigma = 1.82$  mho/m;  $\epsilon_r = 40.3$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

### DASY4 Configuration:

Probe: EX3DV4 - SN3643; ConvF(7.12, 7.12, 7.12); Calibrated: 2012-01-27; Electronics: DAE3 Sn519

Phantom: SAM 1800/1900 MHz; Type: SAM; Serial: TP-1224

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Test Date: 2012-05-07; Ambient Temp: 22.2; Tissue Temp: 22.3

### Dipole Validation

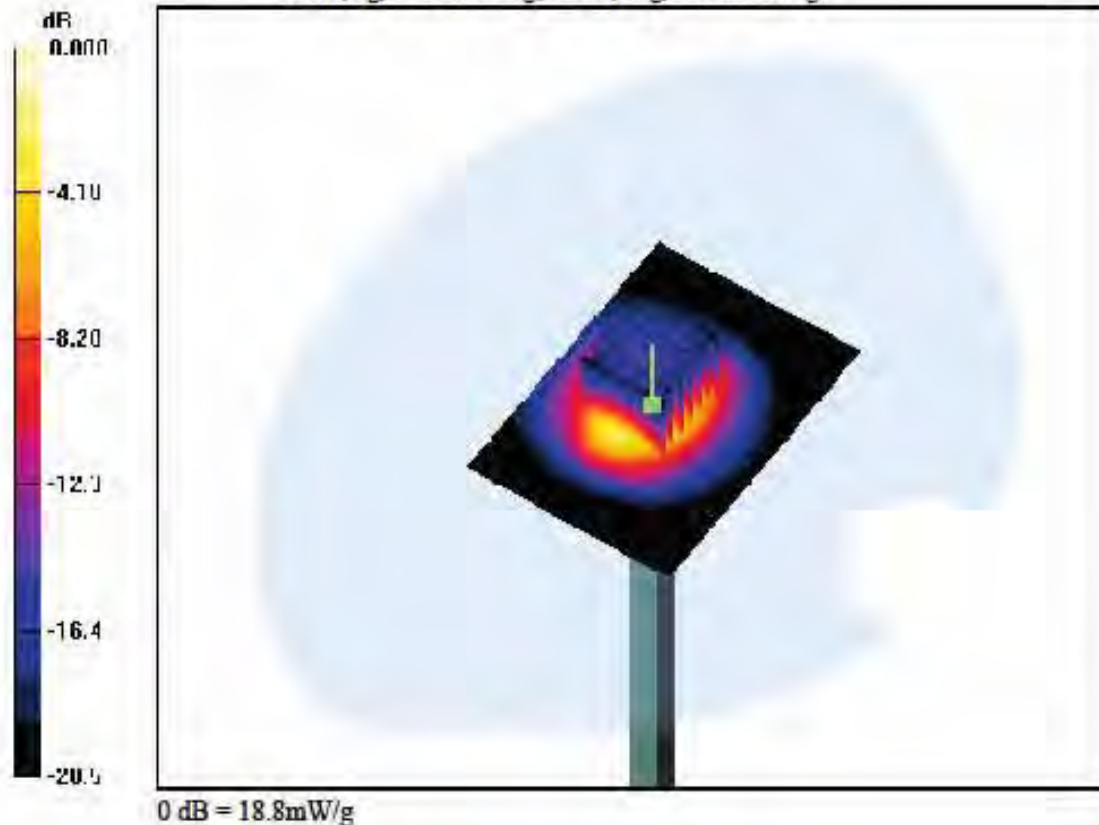
**Area Scan (51x71x1):** Measurement grid: dx=15mm, dy=15mm

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

Power Drift = -0.010 dB

Peak SAR (extrapolated) = 28.4 W/kg

SAR(1 g) = 13.1 W/kg; SAR(10 g) = 6.02 W/kg





## DIGITAL EMC CO., LTD

**DUT: Dipole 2450 MHz; Type: D2450V2; Serial: D2450V2 - SN:726**

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

Medium parameters used:  $f = 2450$  MHz;  $\sigma = 1.95$  mho/m;  $\epsilon_r = 51.9$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

### DASY4 Configuration:

Probe: EX3DV4 - SN3643; ConvF(6.95, 6.95, 6.95); Calibrated: 2012-01-27; Electronics: DAE3 Sn519

Phantom: SAM 1800/1900 MHz; Type: SAM; Serial: TP-1224

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Test Date: 2012-05-07; Ambient Temp: 22.2; Tissue Temp: 22.3

### Dipole Validation

**Area Scan (51x71x1):** Measurement grid: dx=15mm, dy=15mm

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

Power Drift = 0.007 dB

Peak SAR (extrapolated) = 27.3 W/kg

SAR(1 g) = 13 W/kg; SAR(10 g) = 6.03 W/kg

