



## **Appendix A. SAR Plots of System Verification**

The plots for system verification with largest deviation for each SAR system combination are shown as follows.

### System Check\_H750\_150426

**DUT: Dipole 750 MHz; Type: D750V3; SN: 1013**

Communication System: CW; Frequency: 750 MHz; Duty Cycle: 1:1

Medium: H07T08N1\_0426 Medium parameters used:  $f = 750 \text{ MHz}$ ;  $\sigma = 0.912 \text{ S/m}$ ;  $\epsilon_r = 40.638$ ;  $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature :  $21.7 \text{ }^\circ\text{C}$  ; Liquid Temperature :  $21.3 \text{ }^\circ\text{C}$

DASY5 Configuration:

- Probe: EX3DV4 - SN3864; ConvF(10.44, 10.44, 10.44); Calibrated: 2014/07/25;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: 2014/08/26
- Phantom: Twin SAM Phantom\_1653; Type: QD000P40;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Pin=250mW/Area Scan (61x81x1):** Interpolated grid:  $dx=1.500 \text{ mm}$ ,  $dy=1.500 \text{ mm}$

Maximum value of SAR (interpolated) =  $2.66 \text{ W/kg}$

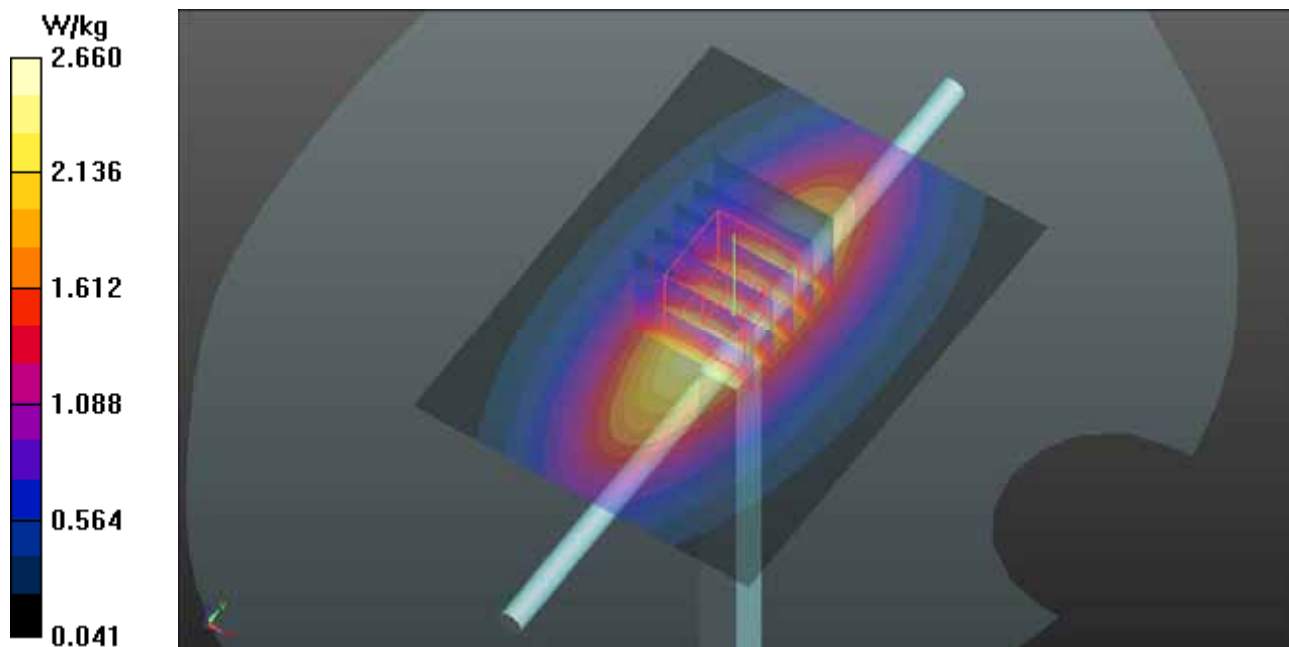
**Pin=250mW/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$

Reference Value =  $54.55 \text{ V/m}$ ; Power Drift =  $0.00 \text{ dB}$

Peak SAR (extrapolated) =  $3.12 \text{ W/kg}$

**SAR(1 g) =  $2.11 \text{ W/kg}$ ; SAR(10 g) =  $1.4 \text{ W/kg}$**

Maximum value of SAR (measured) =  $2.66 \text{ W/kg}$



### System Check\_H835\_150430

**DUT: Dipole 835 MHz; Type: D835V2; SN: 4d121**

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

Medium: H08T09N3\_0430 Medium parameters used:  $f = 835 \text{ MHz}$ ;  $\sigma = 0.898 \text{ S/m}$ ;  $\epsilon_r = 42.176$ ;  $\rho = 1000 \text{ kg/m}^3$

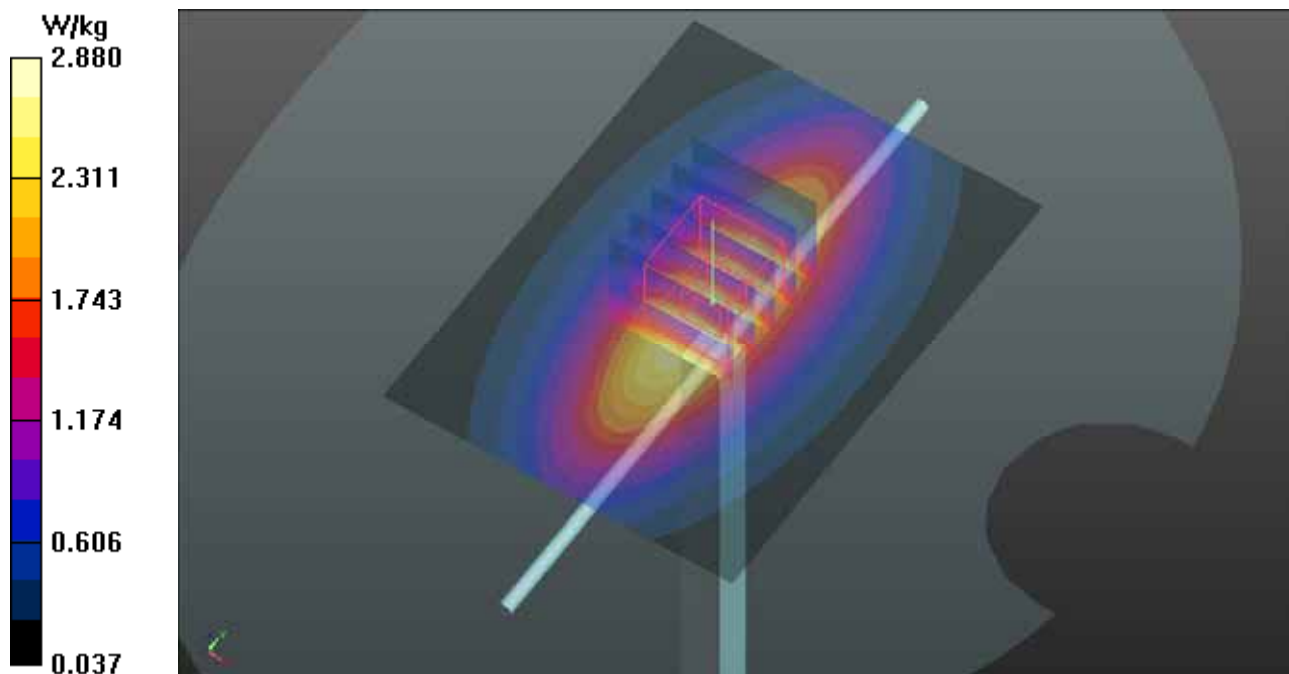
Ambient Temperature : 22.1 °C ; Liquid Temperature : 21.5 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3864; ConvF(10.03, 10.03, 10.03); Calibrated: 2014/07/25;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: 2014/08/26
- Phantom: Twin SAM Phantom\_1653; Type: QD000P40;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Pin=250mW/Area Scan (61x81x1):** Interpolated grid:  $dx=1.500 \text{ mm}$ ,  $dy=1.500 \text{ mm}$   
Maximum value of SAR (interpolated) = 2.88 W/kg

**Pin=250mW/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$   
Reference Value = 57.11 V/m; Power Drift = -0.02 dB  
Peak SAR (extrapolated) = 3.40 W/kg  
**SAR(1 g) = 2.24 W/kg; SAR(10 g) = 1.46 W/kg**  
Maximum value of SAR (measured) = 2.86 W/kg



### System Check\_H1750\_150423

**DUT: Dipole 1750 MHz; Type: D1750V2; SN: 1055**

Communication System: CW; Frequency: 1750 MHz; Duty Cycle: 1:1

Medium: H17T18N1\_0423 Medium parameters used:  $f = 1750$  MHz;  $\sigma = 1.385$  S/m;  $\epsilon_r = 41.359$ ;  $\rho = 1000$  kg/m<sup>3</sup>

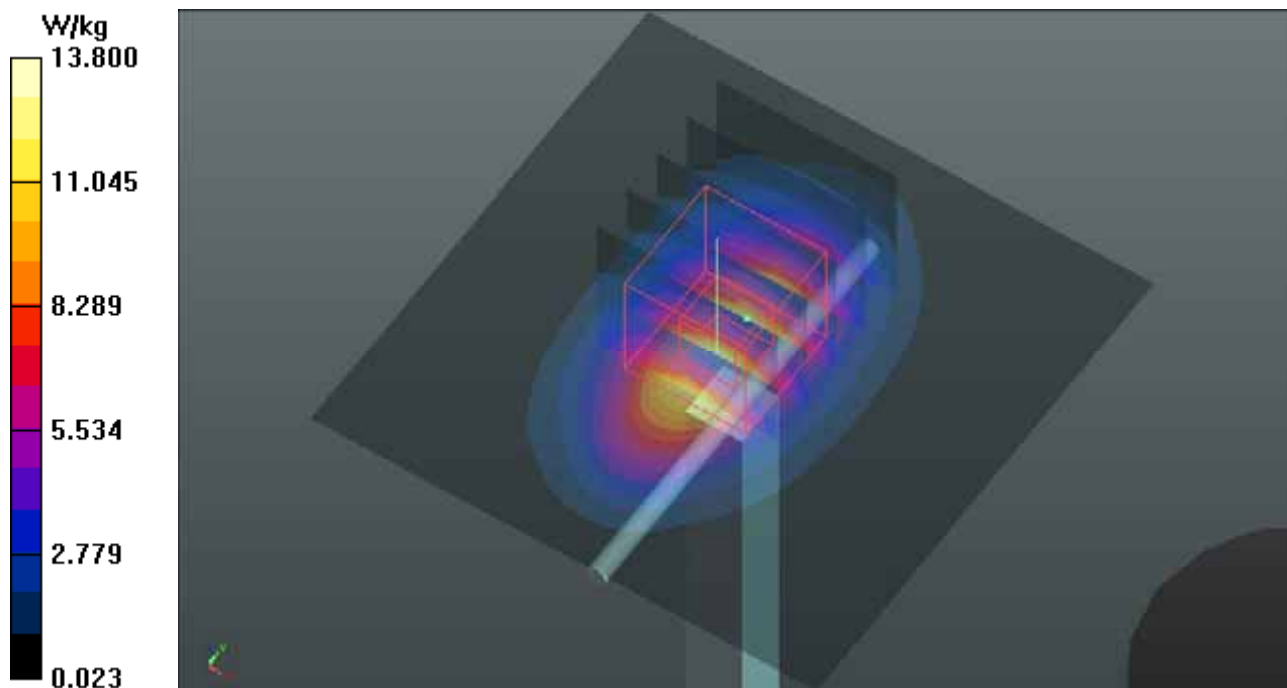
Ambient Temperature : 21.8 °C ; Liquid Temperature : 21.6 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3864; ConvF(8.39, 8.39, 8.39); Calibrated: 2014/07/25;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: 2014/08/26
- Phantom: Twin SAM Phantom\_1653; Type: QD000P40;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Pin=250mW/Area Scan (61x61x1):** Interpolated grid: dx=1.500 mm, dy=1.500 mm  
Maximum value of SAR (interpolated) = 13.8 W/kg

**Pin=250mW/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
Reference Value = 98.80 V/m; Power Drift = 0.02 dB  
Peak SAR (extrapolated) = 16.7 W/kg  
**SAR(1 g) = 9.42 W/kg; SAR(10 g) = 5.08 W/kg**  
Maximum value of SAR (measured) = 13.2 W/kg



### System Check\_H1900\_150423

**DUT: Dipole 1900 MHz; Type: D1900V2; SN: 5d036**

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

Medium: H18T19N1\_0423 Medium parameters used:  $f = 1900$  MHz;  $\sigma = 1.44$  S/m;  $\epsilon_r = 39.284$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature : 21.8 °C ; Liquid Temperature : 21.6 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3864; ConvF(8.1, 8.1, 8.1); Calibrated: 2014/07/25;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: 2014/08/26
- Phantom: Twin SAM Phantom\_1653; Type: QD000P40;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Pin=250mW/Area Scan (61x61x1):** Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 16.0 W/kg

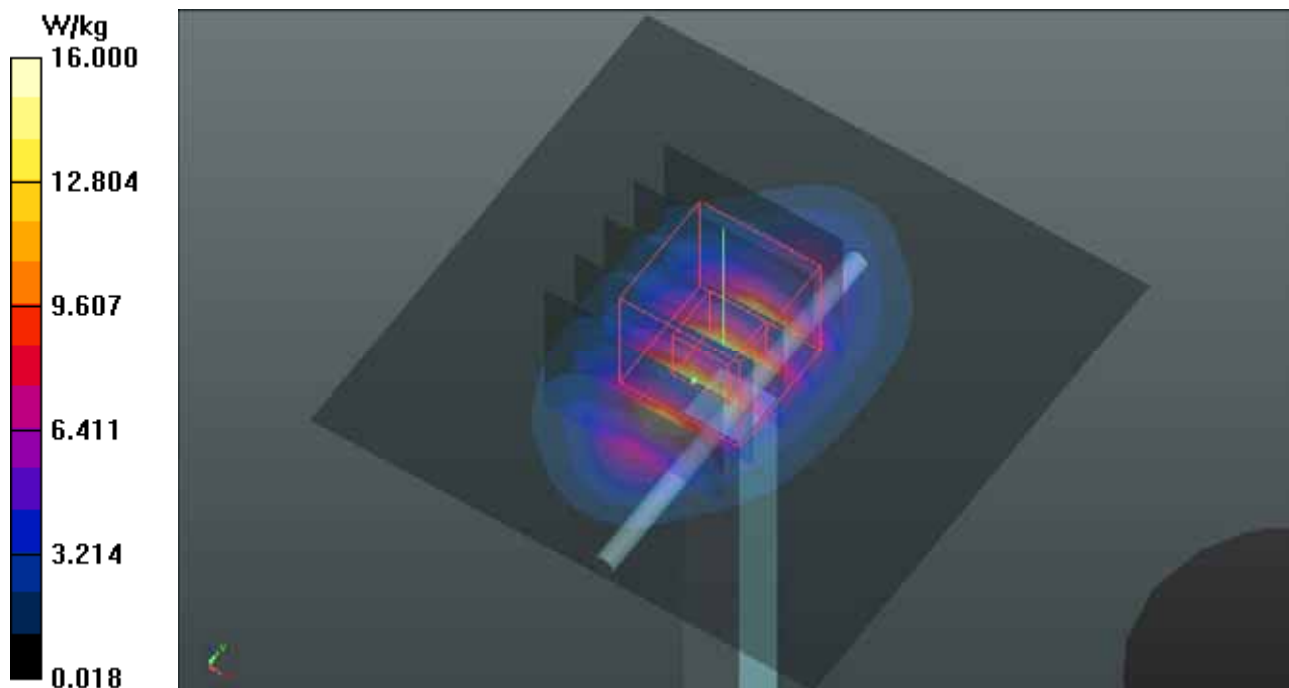
**Pin=250mW/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 103.0 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 19.0 W/kg

**SAR(1 g) = 10.4 W/kg; SAR(10 g) = 5.41 W/kg**

Maximum value of SAR (measured) = 14.7 W/kg



### System Check\_H2450\_150501

**DUT: Dipole 2450 MHz; Type: D2450V2; SN: 737**

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

Medium: H24T25N2\_0501 Medium parameters used:  $f = 2450$  MHz;  $\sigma = 1.879$  S/m;  $\epsilon_r = 38.687$ ;  $\rho = 1000$  kg/m<sup>3</sup>

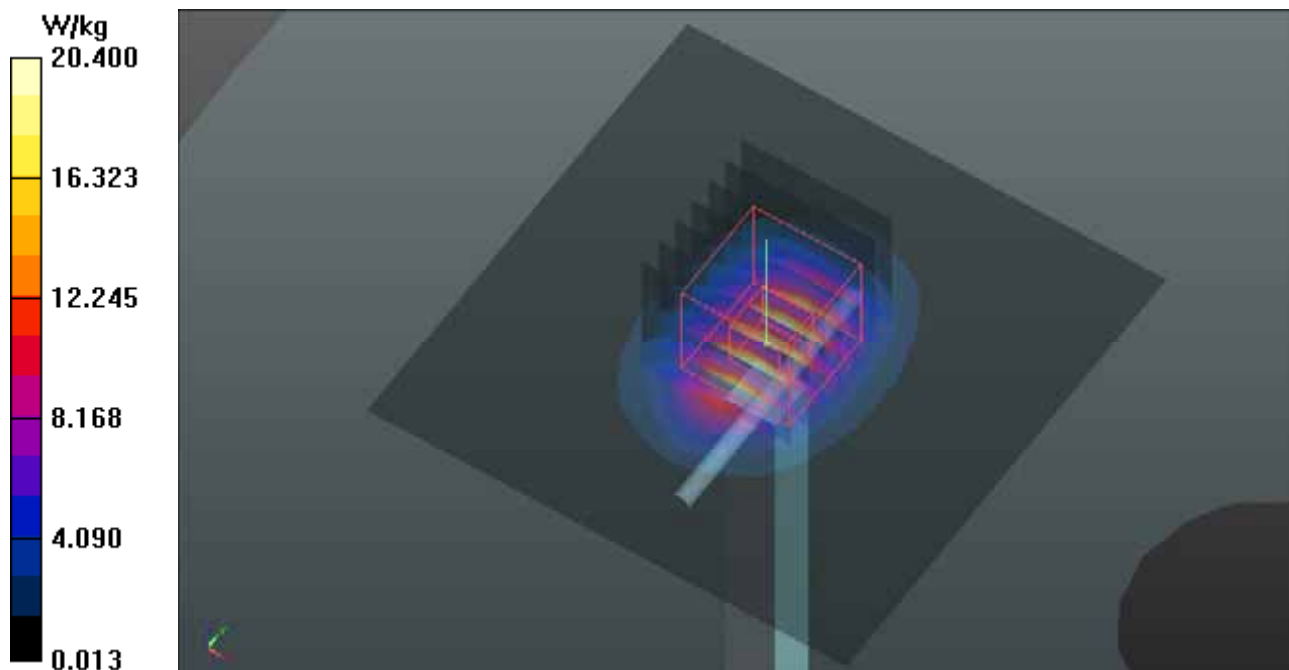
Ambient Temperature : 22.4 °C ; Liquid Temperature : 21.7 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3864; ConvF(7.39, 7.39, 7.39); Calibrated: 2014/07/25;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: 2014/08/26
- Phantom: Twin SAM Phantom\_1653; Type: QD000P40;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Pin=250mW/Area Scan (81x81x1):** Interpolated grid: dx=1.200 mm, dy=1.200 mm  
Maximum value of SAR (interpolated) = 20.4 W/kg

**Pin=250mW/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm  
Reference Value = 106.3 V/m; Power Drift = -0.05 dB  
Peak SAR (extrapolated) = 28.1 W/kg  
**SAR(1 g) = 13.2 W/kg; SAR(10 g) = 6 W/kg**  
Maximum value of SAR (measured) = 20.5 W/kg



## System Check\_H2600\_150429

**DUT: Dipole 2600 MHz; Type: D2600V2; SN: 1020**

Communication System: CW; Frequency: 2600 MHz; Duty Cycle: 1:1

Medium: H25T27N2\_0429 Medium parameters used:  $f = 2600$  MHz;  $\sigma = 2.056$  S/m;  $\epsilon_r = 37.575$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature : 22.0 °C; Liquid Temperature : 21.5 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3971; ConvF(7.24, 7.24, 7.24); Calibrated: 2015/03/26;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1431; Calibrated: 2015/03/20
- Phantom: Twin SAM Phantom\_1823; Type: QD000P40CD;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Pin=250mW/Area Scan (81x81x1):** Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 20.8 W/kg

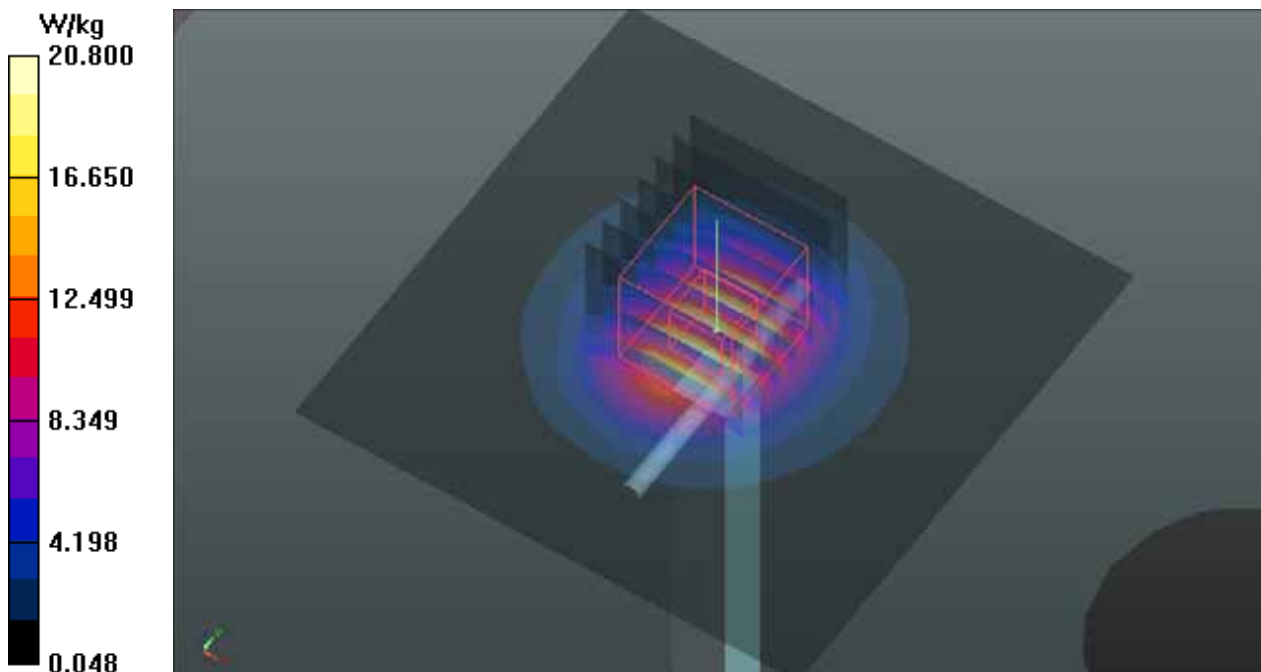
**Pin=250mW/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 102.0 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 28.3 W/kg

**SAR(1 g) = 13.9 W/kg; SAR(10 g) = 6.63 W/kg**

Maximum value of SAR (measured) = 20.9 W/kg



## System Check\_B750\_150428

**DUT: Dipole 750 MHz; Type: D750V3; SN: 1013**

Communication System: CW; Frequency: 750 MHz; Duty Cycle: 1:1

Medium: B07T08N1\_0428 Medium parameters used:  $f = 750 \text{ MHz}$ ;  $\sigma = 0.966 \text{ S/m}$ ;  $\epsilon_r = 55.176$ ;  $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature :  $21.9 \text{ }^\circ\text{C}$ ; Liquid Temperature :  $21.6 \text{ }^\circ\text{C}$

DASY5 Configuration:

- Probe: EX3DV4 - SN3971; ConvF(9.82, 9.82, 9.82); Calibrated: 2015/03/26;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1431; Calibrated: 2015/03/20
- Phantom: Twin SAM Phantom\_1823; Type: QD000P40CD;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Pin=250mW/Area Scan (61x81x1):** Interpolated grid:  $dx=1.500 \text{ mm}$ ,  $dy=1.500 \text{ mm}$

Maximum value of SAR (interpolated) =  $2.84 \text{ W/kg}$

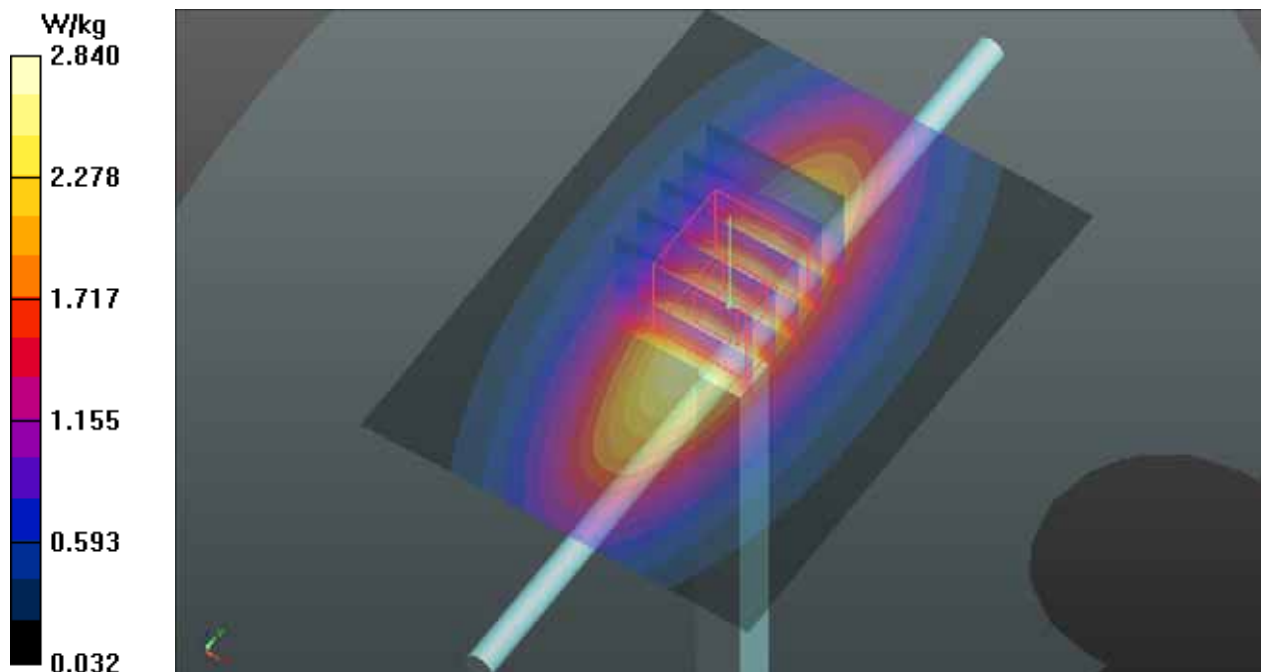
**Pin=250mW/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$

Reference Value =  $55.04 \text{ V/m}$ ; Power Drift =  $-0.00 \text{ dB}$

Peak SAR (extrapolated) =  $3.31 \text{ W/kg}$

**SAR(1 g) =  $2.27 \text{ W/kg}$ ; SAR(10 g) =  $1.52 \text{ W/kg}$**

Maximum value of SAR (measured) =  $2.84 \text{ W/kg}$





### System Check\_B835\_150428

**DUT: Dipole 835 MHz; Type: D835V2; SN: 4d121**

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

Medium: B08T09N1\_0428 Medium parameters used:  $f = 835 \text{ MHz}$ ;  $\sigma = 0.993 \text{ S/m}$ ;  $\epsilon_r = 55.526$ ;  $\rho = 1000 \text{ kg/m}^3$

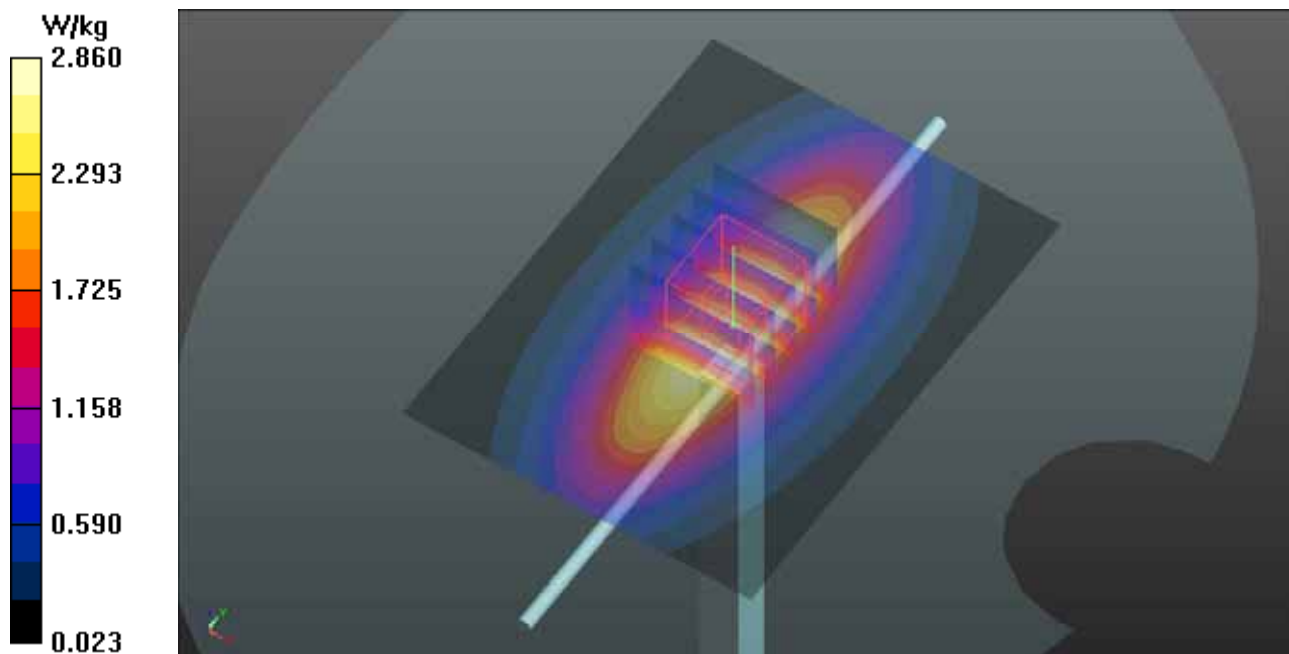
Ambient Temperature : 21.8 °C ; Liquid Temperature : 21.5 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3864; ConvF(10.04, 10.04, 10.04); Calibrated: 2014/07/25;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: 2014/08/26
- Phantom: Twin SAM Phantom\_1653; Type: QD000P40;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Pin=250mW/Area Scan (61x81x1):** Interpolated grid: dx=1.500 mm, dy=1.500 mm  
Maximum value of SAR (interpolated) = 2.86 W/kg

**Pin=250mW/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
Reference Value = 54.37 V/m; Power Drift = -0.03 dB  
Peak SAR (extrapolated) = 3.39 W/kg  
**SAR(1 g) = 2.26 W/kg; SAR(10 g) = 1.49 W/kg**  
Maximum value of SAR (measured) = 2.87 W/kg



## System Check\_B1750\_150501

**DUT: Dipole 1750 MHz; Type: D1750V2; SN: 1055**

Communication System: CW; Frequency: 1750 MHz; Duty Cycle: 1:1

Medium: B17T18N1\_0501 Medium parameters used:  $f = 1750$  MHz;  $\sigma = 1.479$  S/m;  $\epsilon_r = 52.382$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature : 22.3 °C ; Liquid Temperature : 21.6 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3864; ConvF(8.02, 8.02, 8.02); Calibrated: 2014/07/25;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: 2014/08/26
- Phantom: Twin SAM Phantom\_1652; Type: QD000P40;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Pin=250mW/Area Scan (61x61x1):** Interpolated grid: dx=1.500 mm, dy=1.500 mm  
Maximum value of SAR (interpolated) = 13.2 W/kg

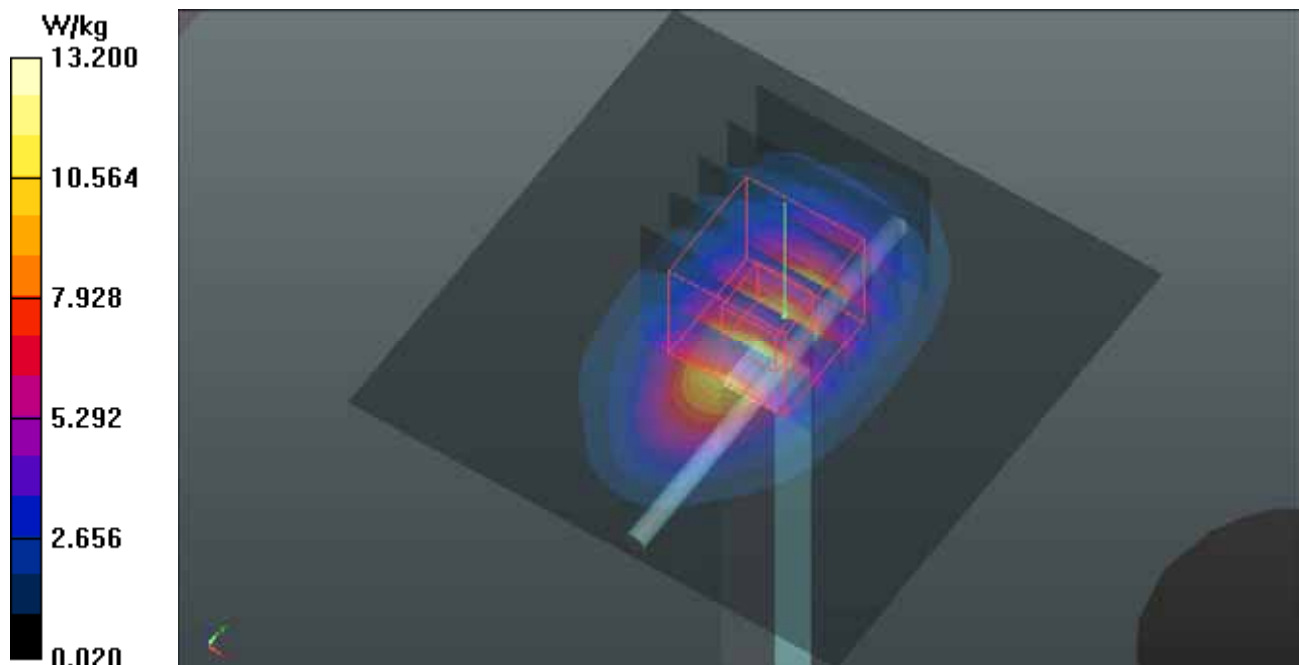
**Pin=250mW/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 93.90 V/m; Power Drift = -0.03 dB

Peak SAR (extrapolated) = 15.4 W/kg

**SAR(1 g) = 8.97 W/kg; SAR(10 g) = 4.81 W/kg**

Maximum value of SAR (measured) = 12.3 W/kg



### System Check\_B1900\_150427

**DUT: Dipole 1900 MHz; Type: D1900V2; SN: 5d036**

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

Medium: B18T19N1\_0427 Medium parameters used:  $f = 1900$  MHz;  $\sigma = 1.548$  S/m;  $\epsilon_r = 52.953$ ;  $\rho = 1000$  kg/m<sup>3</sup>

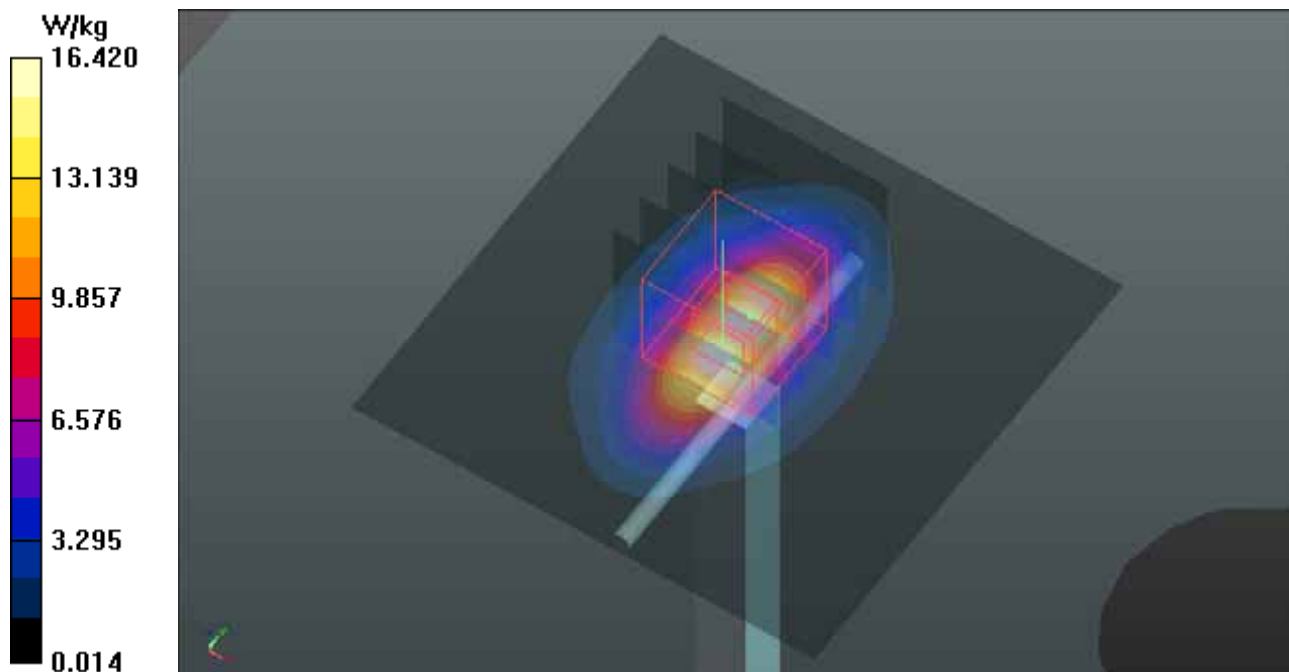
Ambient Temperature : 21.8 °C ; Liquid Temperature : 21.2 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3864; ConvF(7.72, 7.72, 7.72); Calibrated: 2014/07/25;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: 2014/08/26
- Phantom: Twin SAM Phantom\_1653; Type: QD000P40;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Pin=250mW/Area Scan (61x61x1):** Interpolated grid: dx=1.500 mm, dy=1.500 mm  
Maximum value of SAR (interpolated) = 16.4 W/kg

**Pin=250mW/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
Reference Value = 101.8 V/m; Power Drift = 0.06 dB  
Peak SAR (extrapolated) = 19.6 W/kg  
**SAR(1 g) = 10.9 W/kg; SAR(10 g) = 5.64 W/kg**  
Maximum value of SAR (measured) = 15.4 W/kg



### System Check\_B2450\_150501

**DUT: Dipole 2450 MHz; Type: D2450V2; SN: 737**

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

Medium: B24T25N2\_0501 Medium parameters used:  $f = 2450$  MHz;  $\sigma = 1.982$  S/m;  $\epsilon_r = 53.525$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature : 22.5 °C ; Liquid Temperature : 21.7 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3864; ConvF(7.14, 7.14, 7.14); Calibrated: 2014/07/25;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: 2014/08/26
- Phantom: Twin SAM Phantom\_1652; Type: QD000P40;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Pin=250mW/Area Scan (81x81x1):** Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 19.2 W/kg

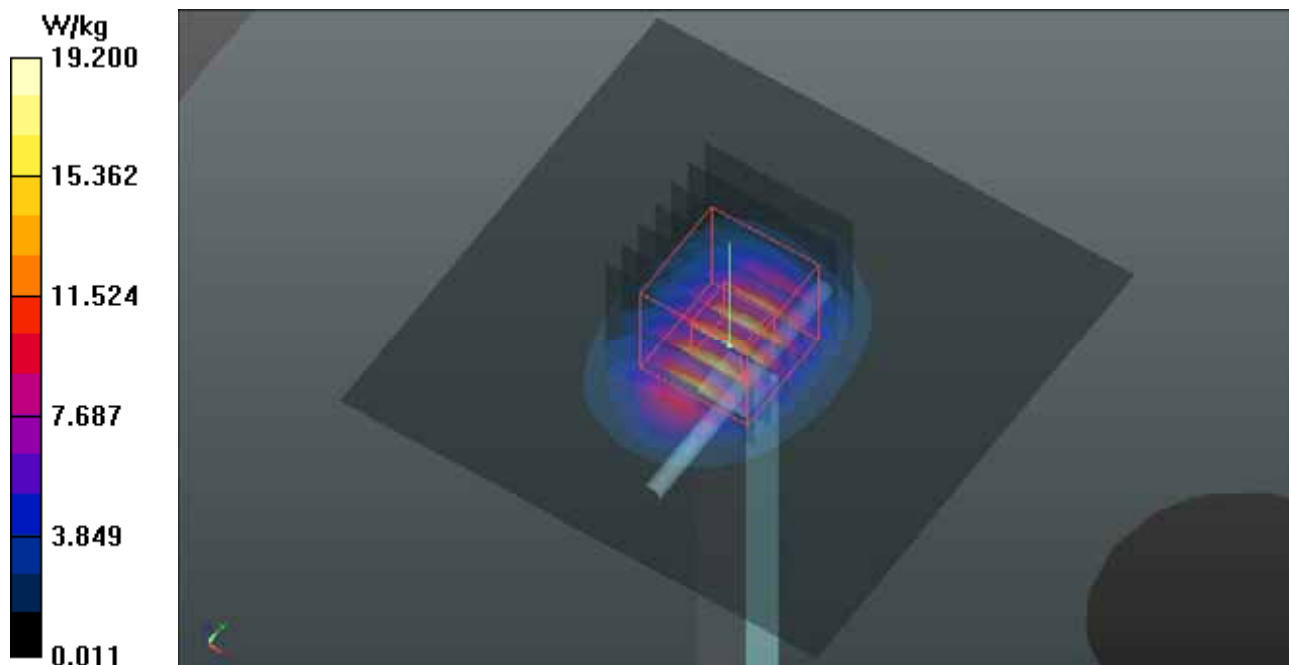
**Pin=250mW/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 99.29 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 26.0 W/kg

**SAR(1 g) = 12.4 W/kg; SAR(10 g) = 5.72 W/kg**

Maximum value of SAR (measured) = 19.2 W/kg



## System Check\_B2600\_150429

**DUT: Dipole 2600 MHz; Type: D2600V2; SN: 1020**

Communication System: CW; Frequency: 2600 MHz; Duty Cycle: 1:1

Medium: B25T27N2\_0429 Medium parameters used:  $f = 2600$  MHz;  $\sigma = 2.196$  S/m;  $\epsilon_r = 52.352$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature : 22.0 °C; Liquid Temperature : 21.4 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3971; ConvF(6.77, 6.77, 6.77); Calibrated: 2015/03/26;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1431; Calibrated: 2015/03/20
- Phantom: Twin SAM Phantom\_1823; Type: QD000P40CD;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Pin=250mW/Area Scan (81x81x1):** Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 22.2 W/kg

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

Reference Value = 99.65 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 31.1 W/kg

**SAR(1 g) = 14.1 W/kg; SAR(10 g) = 6.27 W/kg**

Maximum value of SAR (measured) = 22.4 W/kg

