

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

The plots for system verification are shown as follows.

## S01 System Check\_H2450\_210510

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

Communication System: UID 0, CW; Frequency: 2450 MHz; Duty Cycle: 1:1

Medium: H19T27N1\_0510 Medium parameters used (interpolated):  $f = 2450$  MHz;  $\sigma = 1.884$  S/m;  $\epsilon_r = 39.285$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature : 23.6 °C ; Liquid Temperature : 23.1 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3971; ConvF(7.87, 7.87, 7.87) @ 2450 MHz; Calibrated: 2021/01/27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1431; Calibrated: 2021/03/24
- Phantom: ELI Phantom\_1245; Type: QDOVA002AA;
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

**Pin=50mW/Area Scan (81x81x1):** Interpolated grid: dx=1.200 mm, dy=1.200 mm  
Maximum value of SAR (interpolated) = 3.86 W/kg

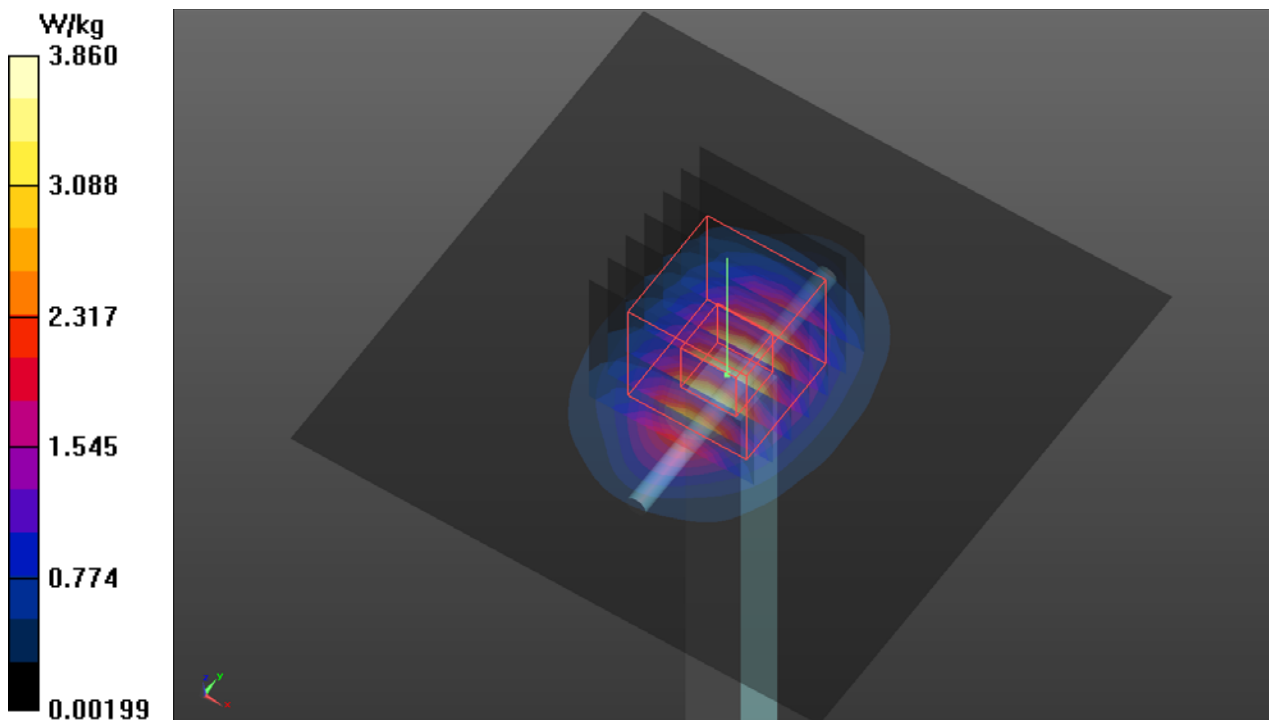
**Pin=50mW/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 47.05 V/m; Power Drift = -0.08 dB

Peak SAR (extrapolated) = 4.78 W/kg

**SAR(1 g) = 2.33 W/kg; SAR(10 g) = 1.2 W/kg** (SAR corrected for target medium)

Maximum value of SAR (measured) = 3.89 W/kg



## S02 System Check\_H5250\_210628

**DUT: Dipole 5 GHz; Type: D5GHzV2; SN: 1019**

Communication System: UID 0, CW; Frequency: 5250 MHz; Duty Cycle: 1:1

Medium: H34T60N1\_0628 Medium parameters used (interpolated):  $f = 5250$  MHz;  $\sigma = 4.519$  S/m;

$\epsilon_r = 37.125$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature : 23.7 °C ; Liquid Temperature : 23.2 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3887; ConvF(4.71, 4.71, 4.71) @ 5250 MHz; Calibrated: 2020/10/22
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2021/04/14
- Phantom: ELI Phantom\_1043\_P1aP2a; Type: QD OVA 002 Ax;
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

**Pin=50mW/Area Scan (91x91x1):** Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 8.44 W/kg

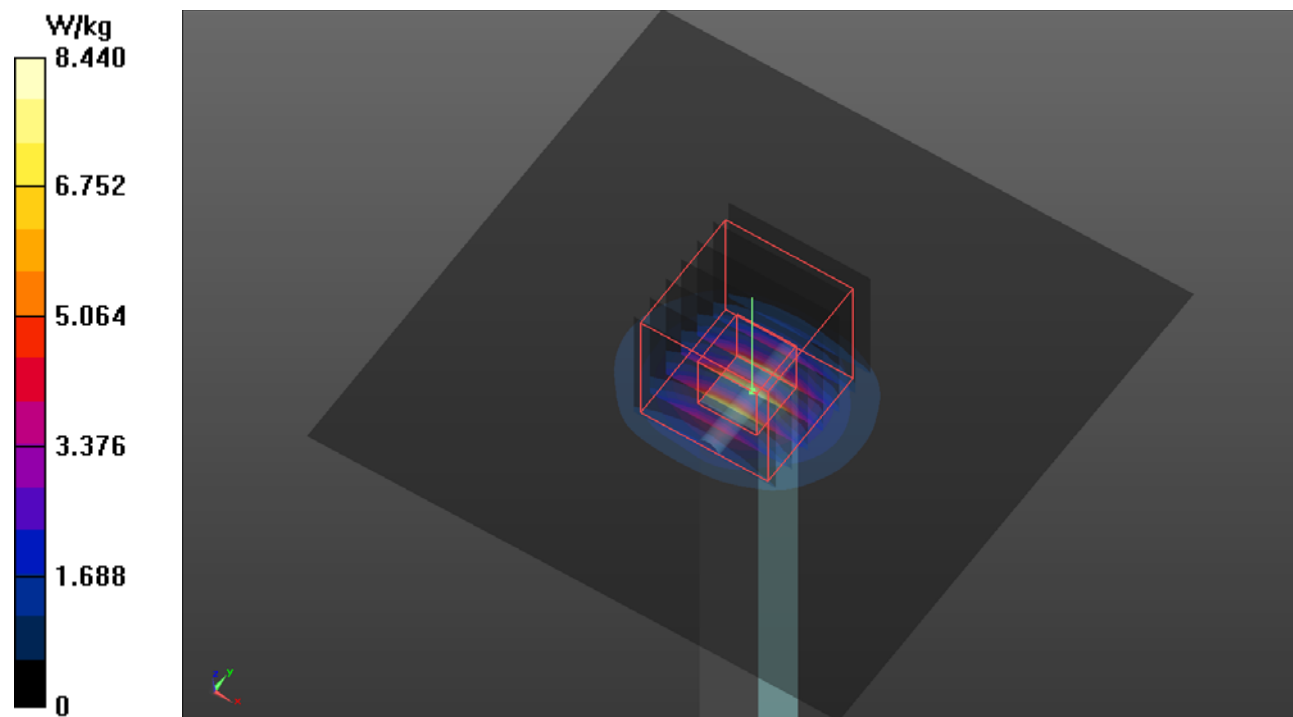
**Pin=50mW/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 43.82 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 14.3 W/kg

**SAR(1 g) = 3.67 W/kg; SAR(10 g) = 1.06 W/kg** (SAR corrected for target medium)

Maximum value of SAR (measured) = 9.02 W/kg



### S03 System Check\_H5250\_210518

**DUT: Dipole 5 GHz; Type: D5GHzV2; SN: 1019**

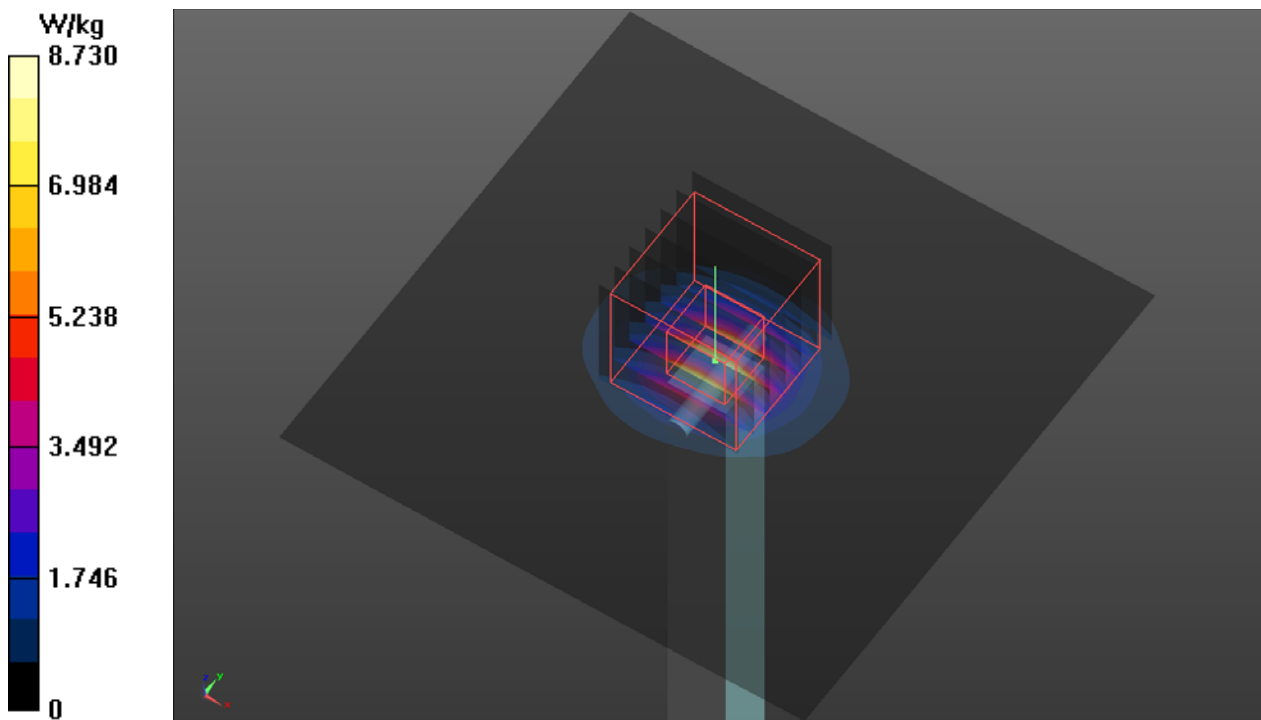
Communication System: UID 0, CW; Frequency: 5250 MHz; Duty Cycle: 1:1  
Medium: H34T60N1\_0518 Medium parameters used:  $f = 5250$  MHz;  $\sigma = 4.701$  S/m;  $\epsilon_r = 36.243$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Ambient Temperature : 23.6 °C ; Liquid Temperature : 23.3 °C

**DASY5 Configuration:**

- Probe: EX3DV4 - SN3971; ConvF(5.2, 5.2, 5.2) @ 5250 MHz; Calibrated: 2021/01/27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1431; Calibrated: 2021/03/24
- Phantom: ELI Phantom\_1245; Type: QDOVA002AA;
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

**Pin=50mW/Area Scan (91x91x1):** Interpolated grid: dx=1.000 mm, dy=1.000 mm  
Maximum value of SAR (interpolated) = 8.73 W/kg

**Pin=50mW/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=1.4mm  
Reference Value = 49.19 V/m; Power Drift = 0.13 dB  
Peak SAR (extrapolated) = 14.3 W/kg  
**SAR(1 g) = 3.86 W/kg; SAR(10 g) = 1.12 W/kg** (SAR corrected for target medium)  
Maximum value of SAR (measured) = 9.40 W/kg



### S04 System Check\_H5600\_210518

**DUT: Dipole 5 GHz; Type: D5GHzV2; SN: 1019**

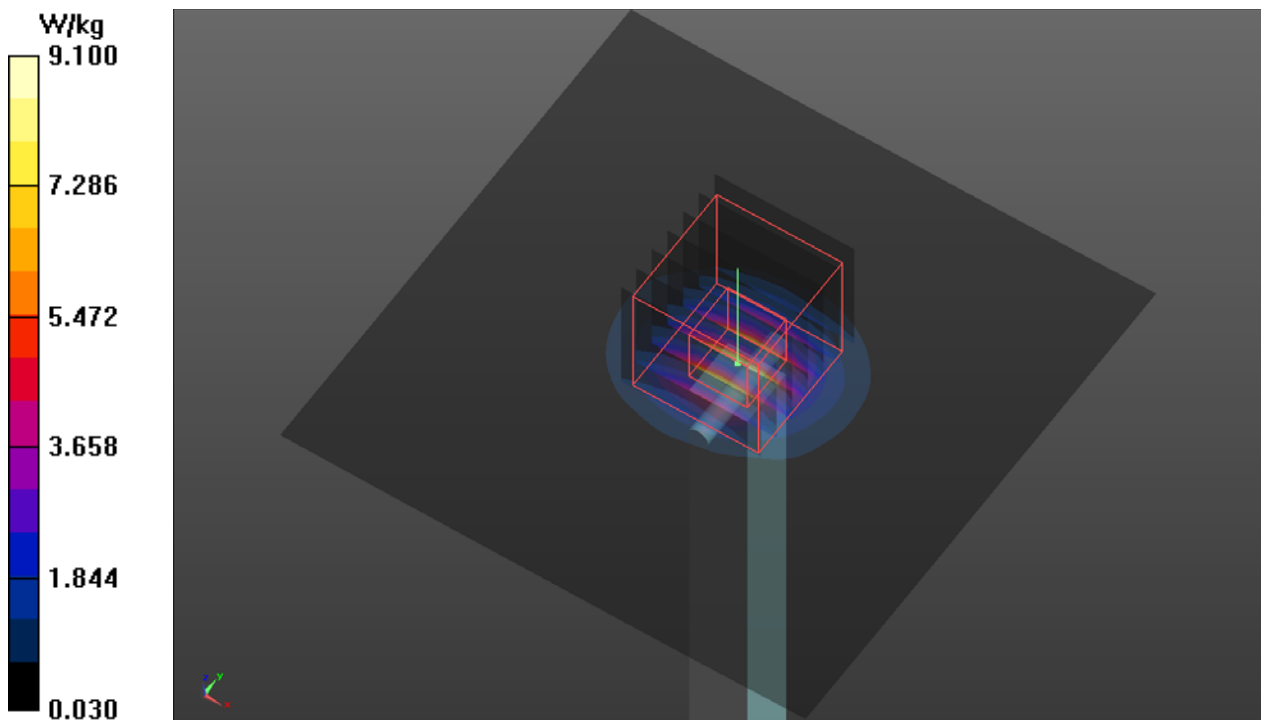
Communication System: UID 0, CW; Frequency: 5600 MHz; Duty Cycle: 1:1  
Medium: H34T60N1\_0518 Medium parameters used:  $f = 5600$  MHz;  $\sigma = 5.124$  S/m;  $\epsilon_r = 35.657$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Ambient Temperature : 23.6 °C ; Liquid Temperature : 23.3 °C

**DASY5 Configuration:**

- Probe: EX3DV4 - SN3971; ConvF(4.9, 4.9, 4.9) @ 5600 MHz; Calibrated: 2021/01/27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1431; Calibrated: 2021/03/24
- Phantom: ELI Phantom\_1245; Type: QDOVA002AA;
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

**Pin=50mW/Area Scan (91x91x1):** Interpolated grid: dx=1.000 mm, dy=1.000 mm  
Maximum value of SAR (interpolated) = 9.10 W/kg

**Pin=50mW/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=1.4mm  
Reference Value = 45.17 V/m; Power Drift = -0.11 dB  
Peak SAR (extrapolated) = 15.7 W/kg  
**SAR(1 g) = 3.79 W/kg; SAR(10 g) = 1.12 W/kg** (SAR corrected for target medium)  
Maximum value of SAR (measured) = 9.60 W/kg



## S05 System Check\_H5750\_210611

**DUT: Dipole 5 GHz; Type: D5GHzV2; SN: 1019**

Communication System: UID 0, CW; Frequency: 5750 MHz; Duty Cycle: 1:1

Medium: H34T60N1\_0611 Medium parameters used:  $f = 5750$  MHz;  $\sigma = 5.014$  S/m;  $\epsilon_r = 33.778$ ;  $\rho = 1000$  kg/m<sup>3</sup>

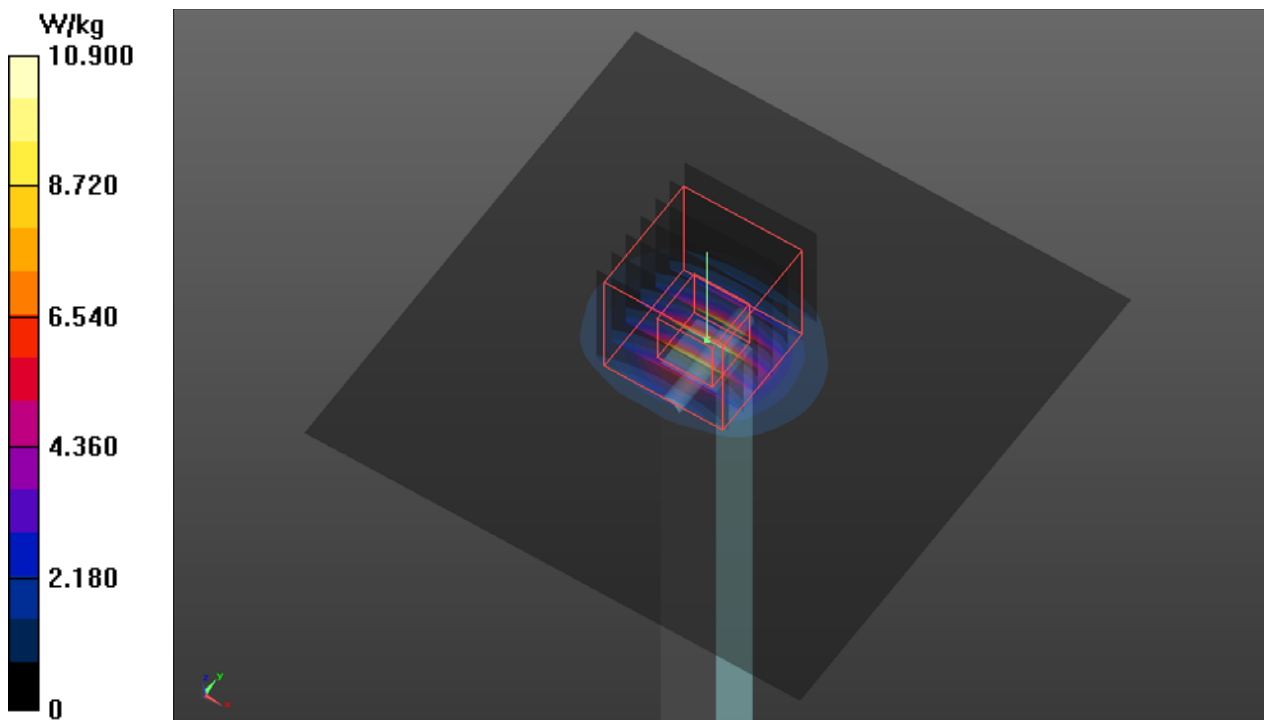
Ambient Temperature : 23.6 °C ; Liquid Temperature : 23.4 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3971; ConvF(4.95, 4.95, 4.95) @ 5750 MHz; Calibrated: 2021/01/27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1431; Calibrated: 2021/03/24
- Phantom: ELI Phantom\_1245; Type: QDOVA002AA;
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

**Pin=50mW/Area Scan (91x91x1):** Interpolated grid: dx=1.000 mm, dy=1.000 mm  
Maximum value of SAR (interpolated) = 10.9 W/kg

**Pin=50mW/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=1.4mm  
Reference Value = 45.64 V/m; Power Drift = 0.16 dB  
Peak SAR (extrapolated) = 19.8 W/kg  
**SAR(1 g) = 4.22 W/kg; SAR(10 g) = 1.19 W/kg** (SAR corrected for target medium)  
Maximum value of SAR (measured) = 11.4 W/kg



## S06 System Check\_H2450\_210512

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

Communication System: UID 0, CW; Frequency: 2450 MHz; Duty Cycle: 1:1  
Medium: H19T27N1\_0512 Medium parameters used (interpolated):  $f = 2450$  MHz;  $\sigma = 1.875$  S/m;  
 $\epsilon_r = 38.898$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Ambient Temperature : 23.5 °C ; Liquid Temperature : 23.2 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN7472; ConvF(7.69, 7.69, 7.69) @ 2450 MHz; Calibrated: 2020/08/24
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn528; Calibrated: 2021/03/23
- Phantom: Twin-ELI Phantom\_2118; Type: QD OVA 004 AA;
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

**Pin=50mW/Area Scan (81x81x1):** Interpolated grid: dx=1.200 mm, dy=1.200 mm  
Maximum value of SAR (interpolated) = 4.27 W/kg

**Pin=50mW/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm  
Reference Value = 50.22 V/m; Power Drift = -0.08 dB  
Peak SAR (extrapolated) = 5.22 W/kg  
**SAR(1 g) = 2.58 W/kg; SAR(10 g) = 1.24 W/kg** (SAR corrected for target medium)  
Maximum value of SAR (measured) = 4.31 W/kg

