

<b>Appendix A:SAR System performance Check Plots</b>
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Test Laboratory: CTI SAR Lab

**Systemcheck 835-Head****DUT: Dipole 835 MHz D835V2; Type: D835V2; Serial: D835V2 - SN:4d193**

Communication System: UID 0, CW (0); Communication System Band: D835(835.0 MHz); Frequency: 835 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 835$  MHz;  $\sigma = 0.92$  S/m;  $\epsilon_r = 40.835$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN7328; ConvF(10.17, 10.17, 10.17); Calibrated: 2/19/2016;
- Sensor-Surface: 2mm (Mechanical Surface Detection),  $z = 1.0, 31.0$
- Electronics: DAE4 Sn1458; Calibrated: 2/26/2016
- Phantom: Twin SAM V5.0; Type: QD000P40CD; Serial: 1875
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

**Configuration/d=15mm,Pin=25mW/Area Scan (8x12x1):** Measurement grid:  $dx=15$ mm,  $dy=15$ mm

Maximum value of SAR (measured) = 2.67 W/kg

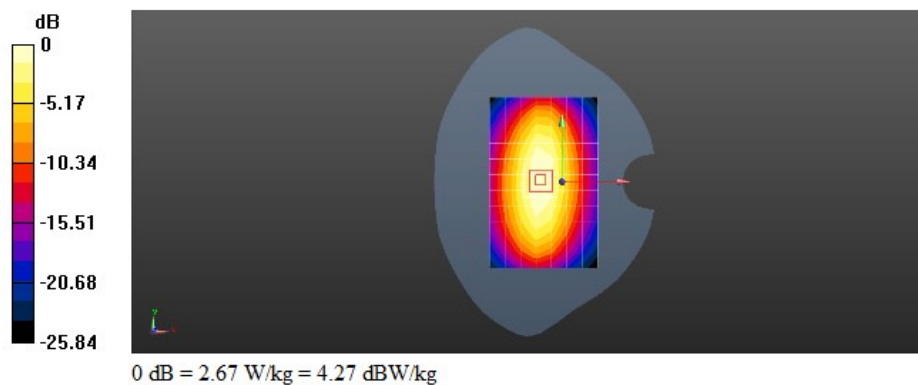
**Configuration/d=15mm,Pin=25mW/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8$ mm,  $dy=8$ mm,  $dz=5$ mm

Reference Value = 50.77 V/m; Power Drift = 0.14 dB

Peak SAR (extrapolated) = 3.40 W/kg

**SAR(1 g) = 2.3 W/kg; SAR(10 g) = 1.51 W/kg**

Maximum value of SAR (measured) = 2.92 W/kg



Test Laboratory: CTI SAR Lab

**Systemcheck 835-Body****DUT: Dipole 835 MHz D835V2; Type: D835V2; Serial: D835V2 - SN:4d193**

Communication System: UID 0, CW (0); Communication System Band: D835(835.0 MHz); Frequency: 835 MHz;Duty Cycle: 1:1

Medium parameters used:  $f = 835$  MHz;  $\sigma = 0.966$  S/m;  $\epsilon_r = 54.22$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN7328; ConvF(9.67, 9.67, 9.67); Calibrated: 2/19/2016;
- Sensor-Surface: 2mm (Mechanical Surface Detection),  $z = 1.0, 31.0$
- Electronics: DAE4 Sn1458; Calibrated: 2/26/2016
- Phantom: Twin SAM V5.0; Type: QD000P40CD; Serial: 1875
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

**Configuration/d=15mm,Pin=25mW/Area Scan (8x12x1):** Measurement grid:  $dx=15$ mm,  $dy=15$ mm

Maximum value of SAR (measured) = 2.65 W/kg

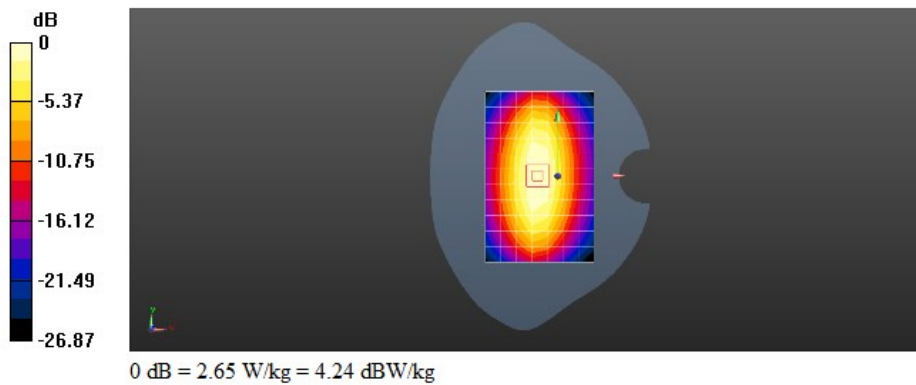
**Configuration/d=15mm,Pin=25mW/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8$ mm,  $dy=8$ mm,  $dz=5$ mm

Reference Value = 51.14 V/m; Power Drift = 0.09 dB

Peak SAR (extrapolated) = 3.44 W/kg

**SAR(1 g) = 2.39 W/kg; SAR(10 g) = 1.59 W/kg**

Maximum value of SAR (measured) = 2.99 W/kg



Test Laboratory: CTI SAR Lab

**Systemcheck 1900-Head****DUT: Dipole 1900 MHz D1900V2; Type: D1900V2; Serial: D1900V2 - SN:5d198**

Communication System: UID 0, CW (0); Communication System Band: D1900 (1900.0 MHz); Frequency: 1900 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 1900$  MHz;  $\sigma = 1.422$  S/m;  $\epsilon_r = 39.628$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN7328; ConvF(8.16, 8.16, 8.16); Calibrated: 2/19/2016;
- Sensor-Surface: 2mm (Mechanical Surface Detection),  $z = 1.0, 31.0$
- Electronics: DAE4 Sn1458; Calibrated: 2/26/2016
- Phantom: Twin SAM V5.0; Type: QD000P40CD; Serial: 1875
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

**Configuration/d=10mm,Pin=25mW/Area Scan (8x8x1);** Measurement grid:  $dx=15$ mm,  $dy=15$ mm

Maximum value of SAR (measured) = 10.4 W/kg

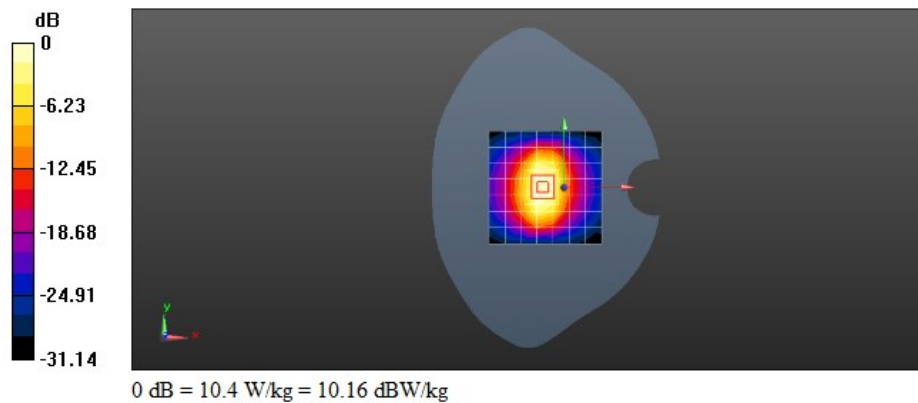
**Configuration/d=10mm,Pin=25mW/Zoom Scan (5x5x7)/Cube 0;** Measurement grid:  $dx=8$ mm,  $dy=8$ mm,  $dz=5$ mm

Reference Value = 83.66 V/m; Power Drift = 0.13 dB

Peak SAR (extrapolated) = 16.8 W/kg

**SAR(1 g) = 9.41 W/kg; SAR(10 g) = 4.94 W/kg**

Maximum value of SAR (measured) = 13.4 W/kg



Test Laboratory: CTI SAR Lab

**Systemcheck 1900-Body****DUT: Dipole 1900 MHz D1900V2; Type: D1900V2; Serial: D1900V2 - SN:5d198**

Communication System: UID 0, CW (0); Communication System Band: D1900 (1900.0 MHz); Frequency: 1900 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 1900$  MHz;  $\sigma = 1.518$  S/m;  $\epsilon_r = 51.257$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN7328; ConvF(7.8, 7.8, 7.8); Calibrated: 2/19/2016;
- Sensor-Surface: 2mm (Mechanical Surface Detection),  $z = 1.0, 31.0$
- Electronics: DAE4 Sn1458; Calibrated: 2/26/2016
- Phantom: Twin SAM V5.0; Type: QD000P40CD; Serial: 1875
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

**Configuration/d=10mm,Pin=25mW/Area Scan (8x8x1);** Measurement grid:  $dx=15$ mm,  $dy=15$ mm

Maximum value of SAR (measured) = 10.5 W/kg

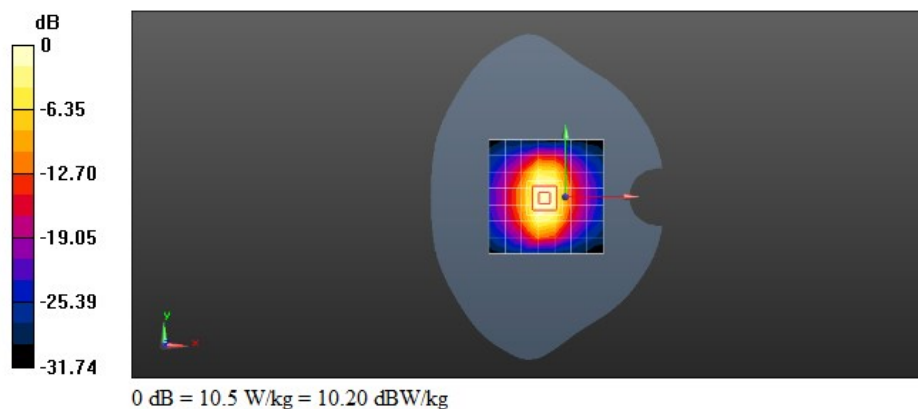
**Configuration/d=10mm,Pin=25mW/Zoom Scan (5x5x7)/Cube 0;** Measurement grid:  $dx=8$ mm,  $dy=8$ mm,  $dz=5$ mm

Reference Value = 84.39 V/m; Power Drift = 0.09 dB

Peak SAR (extrapolated) = 17.6 W/kg

**SAR(1 g) = 10 W/kg; SAR(10 g) = 5.26 W/kg**

Maximum value of SAR (measured) = 14.2 W/kg



Test Laboratory: CTI SAR Lab

**Systemcheck 2450-Head****DUT: Dipole 2450 MHz D2450V2; Type: D2450V2; Serial: D2450V2 - SN:959**

Communication System: UID 0, CW (0); Communication System Band: D2450 (2450.0 MHz); Frequency: 2450 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 2450$  MHz;  $\sigma = 1.792$  S/m;  $\epsilon_r = 38.307$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN7328; ConvF(7.39, 7.39, 7.39); Calibrated: 2/19/2016;
- Sensor-Surface: 2mm (Mechanical Surface Detection),  $z = 1.0, 31.0$
- Electronics: DAE4 Sn1458; Calibrated: 2/26/2016
- Phantom: Twin SAM V5.0; Type: QD000P40CD; Serial: 1875
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

**Configuration/d=10mm,Pin=25mW/Area Scan (10x10x1):** Measurement grid:  $dx=12$ mm,  $dy=12$ mm

Maximum value of SAR (measured) = 18.6 W/kg

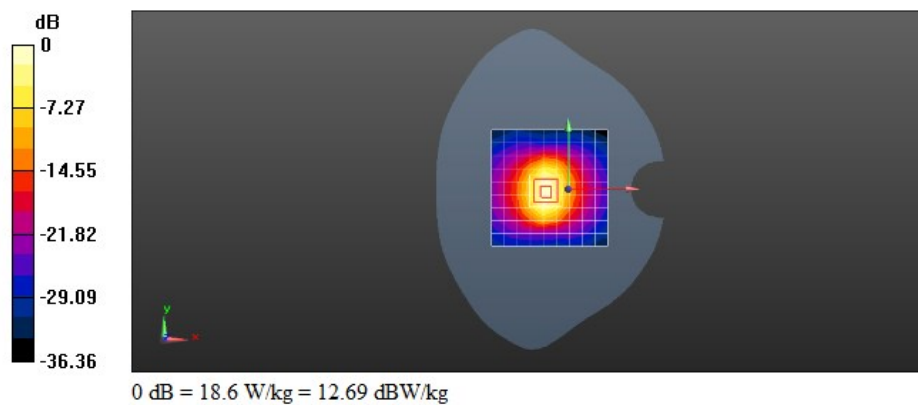
**Configuration/d=10mm,Pin=25mW/Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5$ mm,  $dy=5$ mm,  $dz=5$ mm

Reference Value = 88.94 V/m; Power Drift = 0.11 dB

Peak SAR (extrapolated) = 27.3 W/kg

**SAR(1 g) = 13.4 W/kg; SAR(10 g) = 6.27 W/kg**

Maximum value of SAR (measured) = 20.5 W/kg





Test Laboratory: CTI SAR Lab

**Systemcheck 2450-Body****DUT: Dipole 2450 MHz D2450V2; Type: D2450V2; Serial: D2450V2 - SN:959**

Communication System: UID 0, CW (0); Communication System Band: D2450 (2450.0 MHz); Frequency: 2450 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 2450$  MHz;  $\sigma = 1.967$  S/m;  $\epsilon_r = 51.591$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN7328; ConvF(7.45, 7.45, 7.45); Calibrated: 2/19/2016;
- Sensor-Surface: 2mm (Mechanical Surface Detection),  $z = 1.0, 31.0$
- Electronics: DAE4 Sn1458; Calibrated: 2/26/2016
- Phantom: Twin SAM V5.0; Type: QD000P40CD; Serial: 1875
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

**Configuration/d=10mm,Pin=25mW/Area Scan (10x10x1):** Measurement grid:  $dx=12$ mm,  $dy=12$ mm

Maximum value of SAR (measured) = 14.4 W/kg

**Configuration/d=10mm,Pin=25mW/Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5$ mm,  $dy=5$ mm,  $dz=5$ mm

Reference Value = 83.44 V/m; Power Drift = 0.13 dB

Peak SAR (extrapolated) = 24.6 W/kg

**SAR(1 g) = 12.4 W/kg; SAR(10 g) = 5.85 W/kg**

Maximum value of SAR (measured) = 18.7 W/kg

