Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2009/10/8

System Check 835MHz 091008

DUT: Dipole 835 MHz

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

Medium: HSL_850_091008 Medium parameters used: f = 835 MHz; $\sigma = 0.923$ mho/m; $\epsilon_r = 42$; $\rho = 1000$

 kg/m^3

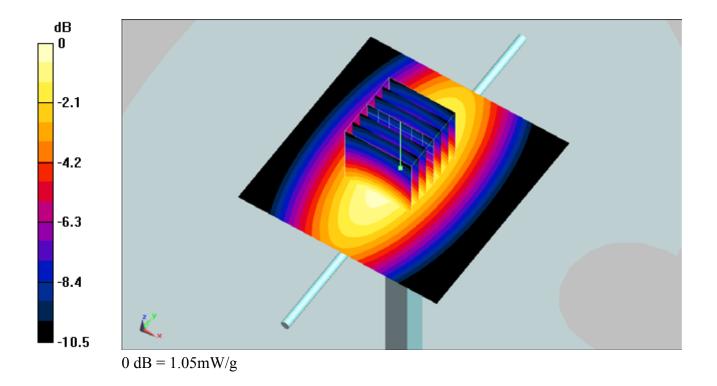
Ambient Temperature: 22.5 ; Liquid Temperature: 21.6

DASY5 Configuration:

- Probe: ET3DV6 SN1788; ConvF(6.3, 6.3, 6.3); Calibrated: 2009/9/23
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2009/9/18
- Phantom: SAM Front; Type: SAM; Serial: TP-1446
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

Pin=100mW/Area Scan (61x61x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 1.05 mW/g

Pin=100mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 34.9 V/m; Power Drift = 0.013 dB Peak SAR (extrapolated) = 1.43 W/kg SAR(1 g) = 0.966 mW/g; SAR(10 g) = 0.629 mW/g Maximum value of SAR (measured) = 1.05 mW/g



Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2009/10/9

System Check 835MHz 091009

DUT: Dipole 835 MHz

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

Medium: MSL_850_091009 Medium parameters used: f = 835 MHz; $\sigma = 0.979$ mho/m; $\varepsilon_r = 52.7$; $\rho = 1000$

 kg/m^3

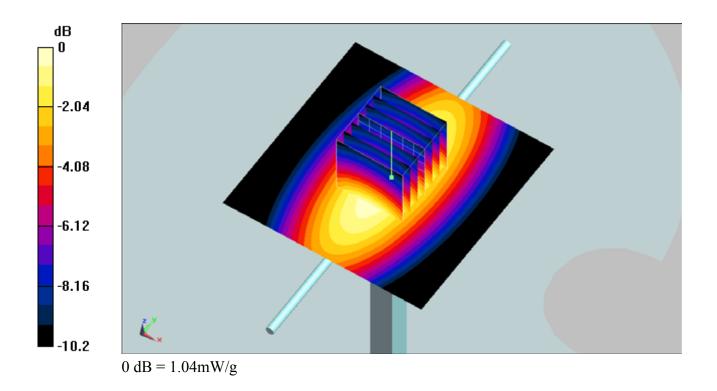
Ambient Temperature: 22.5; Liquid Temperature: 21.3

DASY5 Configuration:

- Probe: ET3DV6 SN1787; ConvF(6.09, 6.09, 6.09); Calibrated: 2009/5/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn577; Calibrated: 2009/8/24
- Phantom: SAM Front; Type: SAM; Serial: TP-1446
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

Pin=100mW/Area Scan (61x61x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 1.04 mW/g

Pin=100mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 33.6 V/m; Power Drift = -0.022 dB Peak SAR (extrapolated) = 1.38 W/kg SAR(1 g) = 0.956 mW/g; SAR(10 g) = 0.630 mW/g Maximum value of SAR (measured) = 1.04 mW/g



Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2009/12/30

System Check 835MHz 091230

DUT: Dipole 835 MHz

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

Medium: HSL_850_091230 Medium parameters used: f = 835 MHz; $\sigma = 0.898$ mho/m; $\epsilon_r = 41.3$; $\rho = 1000$

 kg/m^3

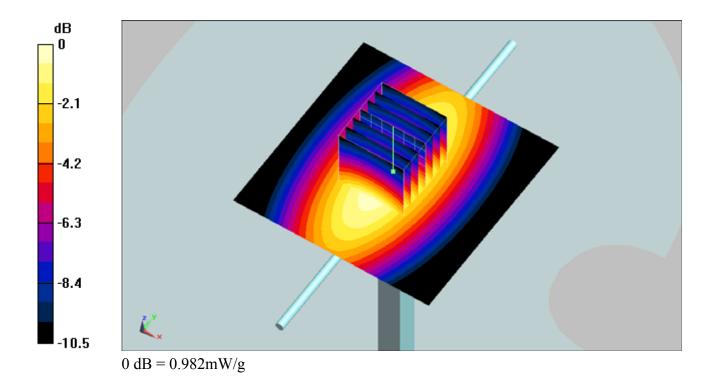
Ambient Temperature: 22.4 ; Liquid Temperature: 21.3

DASY5 Configuration:

- Probe: ET3DV6 SN1788; ConvF(6.3, 6.3, 6.3); Calibrated: 2009/9/23
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2009/9/18
- Phantom: SAM Front; Type: SAM; Serial: TP-1446
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

Pin=100mW/Area Scan (61x61x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.983 mW/g

Pin=100mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 34.2 V/m; Power Drift = 0.021 dB Peak SAR (extrapolated) = 1.34 W/kg SAR(1 g) = 0.907 mW/g; SAR(10 g) = 0.590 mW/g Maximum value of SAR (measured) = 0.982 mW/g



Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2010/4/8

System Check 835MHz 100408

DUT: Dipole 835 MHz

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

Medium: MSL_850_100408 Medium parameters used: f = 835 MHz; $\sigma = 0.963$ mho/m; $\varepsilon_r = 54.5$; $\rho = 1000$

 kg/m^3

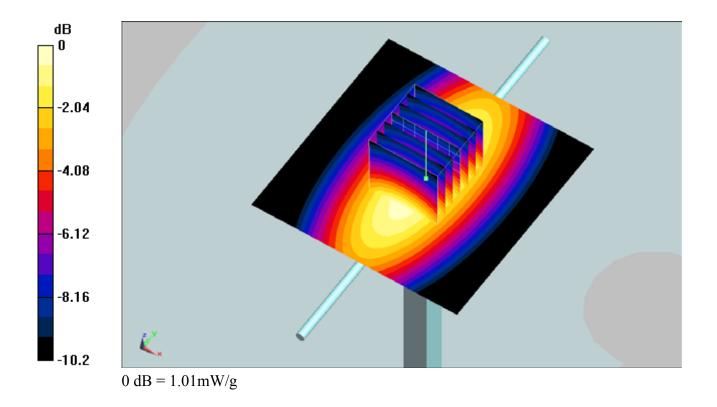
Ambient Temperature: 22.4; Liquid Temperature: 21.3

DASY5 Configuration:

- Probe: ET3DV6 SN1788; ConvF(6.08, 6.08, 6.08); Calibrated: 2009/9/23
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2009/9/18
- Phantom: SAM Front; Type: SAM; Serial: TP-1446
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

Pin=100mW/Area Scan (61x61x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 1.01 mW/g

Pin=100mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 33.4 V/m; Power Drift = -0.022 dB Peak SAR (extrapolated) = 1.35 W/kg SAR(1 g) = 0.929 mW/g; SAR(10 g) = 0.612 mW/g Maximum value of SAR (measured) = 1.01 mW/g



System Check_1800MHz_100211

DUT: Dipole 1800 MHz

Communication System: CW; Frequency: 1800 MHz; Duty Cycle: 1:1

Medium: HSL_1800_100211 Medium parameters used: f = 1800 MHz; $\sigma = 1.46$ mho/m; $\varepsilon_r = 39.2$; ρ

Date: 2010/2/11

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

Ambient Temperature: 22.4 °C; Liquid Temperature: 21.4 °C

DASY4 Configuration:

- Probe: ET3DV6 SN1787; ConvF(5.34, 5.34, 5.34); Calibrated: 2009/5/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn577; Calibrated: 2009/8/24
- Phantom: SAM-Left; Type: QD 000 P40 C; Serial: TP-1477
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

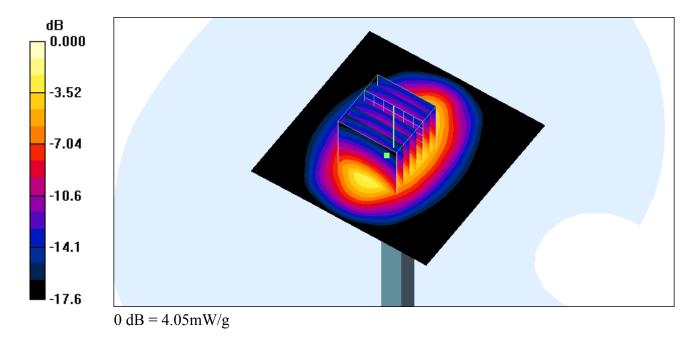
Pin=100mW/Area Scan (61x61x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 4.30 mW/g

Pin=100mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 56.1 V/m; Power Drift = 0.000 dB

Peak SAR (extrapolated) = 5.90 W/kg

SAR(1 g) = 3.58 mW/g; SAR(10 g) = 1.94 mW/g

Maximum value of SAR (measured) = 4.05 mW/g



System Check_1800MHz_100212

DUT: Dipole 1800 MHz

Communication System: CW; Frequency: 1800 MHz; Duty Cycle: 1:1

Medium: MSL 1800 100212 Medium parameters used: f = 1800 MHz; $\sigma = 1.58$ mho/m; $\varepsilon_r = 51.9$; ρ

Date: 2010/2/12

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

Ambient Temperature: 22.4 °C; Liquid Temperature: 21.6 °C

DASY4 Configuration:

- Probe: ET3DV6 SN1787; ConvF(4.82, 4.82, 4.82); Calibrated: 2009/5/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn577; Calibrated: 2009/8/24
- Phantom: ELI 4.0 Front; Type: QDOVA001BB; Serial: 1026
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Pin=100mW/Area Scan (91x91x1): Measurement grid: dx=10mm, dy=10mm Maximum value of SAR (interpolated) = 4.23 mW/g

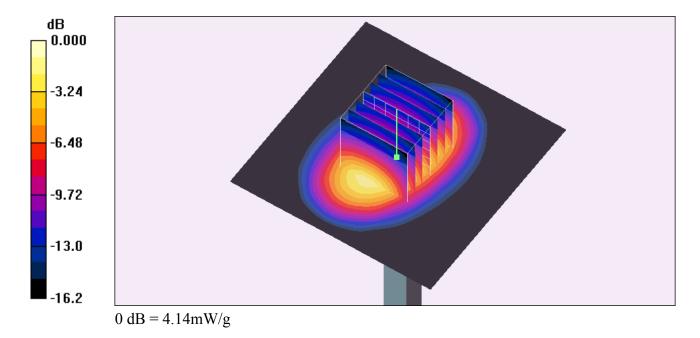
Pin=100mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 56.7 V/m; Power Drift = -0.011 dB

Peak SAR (extrapolated) = 5.33 W/kg

SAR(1 g) = 3.63 mW/g; SAR(10 g) = 2.01 mW/g

Maximum value of SAR (measured) = 4.14 mW/g



Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2010/4/8

System Check 1800MHz 100408

DUT: Dipole 1800 MHz

Communication System: CW; Frequency: 1800 MHz; Duty Cycle: 1:1

Medium: MSL_1800_100408 Medium parameters used: f = 1800 MHz; $\sigma = 1.6$ mho/m; $\epsilon_r = 51.6$; $\rho = 1000$

 kg/m^3

Ambient Temperature: 22.5; Liquid Temperature: 21.2

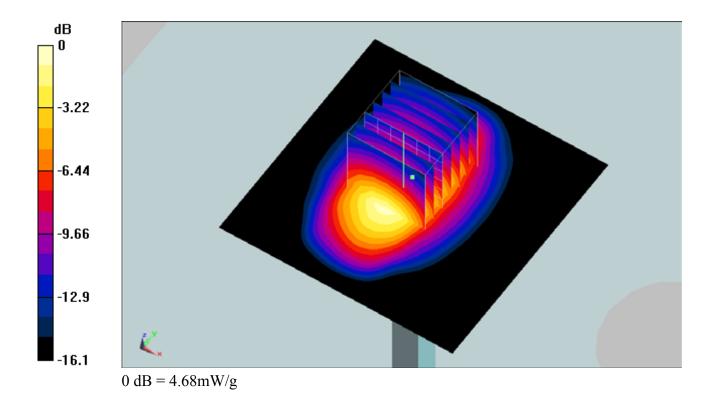
DASY5 Configuration:

- Probe: ET3DV6 SN1788; ConvF(4.77, 4.77, 4.77); Calibrated: 2009/9/23
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2009/9/18
- Phantom: SAM-Back; Type: QD 000 P40 C; Serial: TP-1383
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

Pin=100mW/Area Scan (61x61x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 4.94 mW/g

Pin=100mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 55 V/m; Power Drift = 0.031 dB Peak SAR (extrapolated) = 5.92 W/kg

SAR(1 g) = 4.11 mW/g; SAR(10 g) = 2.29 mW/g Maximum value of SAR (measured) = 4.68 mW/g



Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2009/10/9

System Check 1900MHz 091009

DUT: Dipole 1900 MHz

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

Medium: HSL_1900_091009 Medium parameters used: f = 1900 MHz; $\sigma = 1.43$ mho/m; $\varepsilon_r = 39.1$; $\rho = 1000$

 kg/m^3

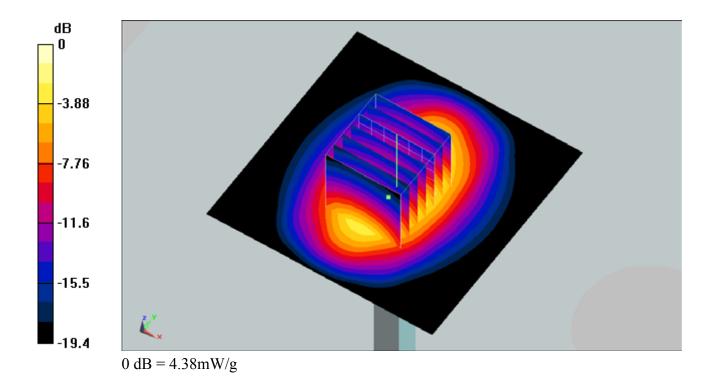
Ambient Temperature: 22.6; Liquid Temperature: 21.4

DASY5 Configuration:

- Probe: ET3DV6 SN1787; ConvF(5.12, 5.12, 5.12); Calibrated: 2009/5/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn577; Calibrated: 2009/8/24
- Phantom: SAM Front; Type: SAM; Serial: TP-1446
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

Pin=100mW/Area Scan (61x61x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 4.52 mW/g

Pin=100mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 58.5 V/m; Power Drift = -0.032 dB Peak SAR (extrapolated) = 6.77 W/kg SAR(1 g) = 3.85 mW/g; SAR(10 g) = 2 mW/g Maximum value of SAR (measured) = 4.38 mW/g



Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2009/12/30

System Check 1900MHz 091230

DUT: Dipole 1900 MHz

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

Medium: HSL_1900_091230 Medium parameters used: f = 1900 MHz; $\sigma = 1.43$ mho/m; $\varepsilon_r = 39$; $\rho = 1000$

 kg/m^3

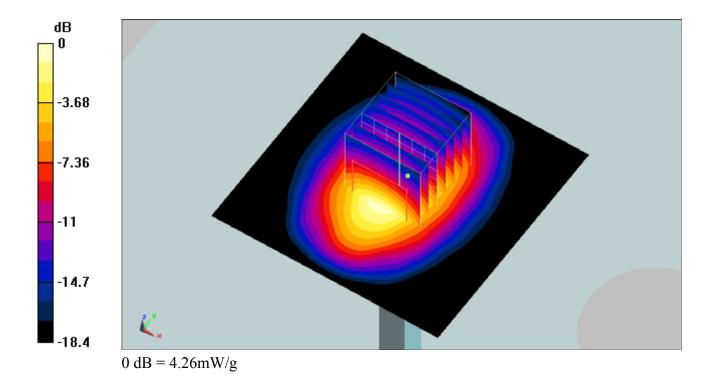
Ambient Temperature: 22.4 ; Liquid Temperature: 21.4

DASY5 Configuration:

- Probe: ET3DV6 SN1788; ConvF(5.11, 5.11, 5.11); Calibrated: 2009/9/23
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2009/9/18
- Phantom: SAM-Back; Type: QD 000 P40 C; Serial: TP-1383
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

Pin=100mW/Area Scan (61x61x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 4.29 mW/g

Pin=100mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 58 V/m; Power Drift = 0.033 dB Peak SAR (extrapolated) = 6.49 W/kg SAR(1 g) = 3.77 mW/g; SAR(10 g) = 1.98 mW/g Maximum value of SAR (measured) = 4.26 mW/g



Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2010/4/8

System Check 1900MHz 100408

DUT: Dipole 1900 MHz

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

Medium: MSL_1900_100408 Medium parameters used: f = 1900 MHz; $\sigma = 1.53$ mho/m; $\varepsilon_r = 51.6$; $\rho = 1000$

 kg/m^3

Ambient Temperature: 22.4 ; Liquid Temperature: 21.4

DASY5 Configuration:

- Probe: ET3DV6 SN1788; ConvF(4.52, 4.52, 4.52); Calibrated: 2009/9/23
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2009/9/18
- Phantom: SAM-Back; Type: QD 000 P40 C; Serial: TP-1383
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

Pin=100mW/Area Scan (61x61x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 4.49 mW/g

Pin=100mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 59.5 V/m; Power Drift = 0.00446 dB Peak SAR (extrapolated) = 5.82 W/kg SAR(1 g) = 3.85 mW/g; SAR(10 g) = 2.09 mW/g Maximum value of SAR (measured) = 4.4 mW/g

