MOTOROLA

ACCREDITED
Certificate Number: 1449-01

FCC ID: AZ489FT5843
DECLARATION OF COMPLIANCE SAR ASSESSMENT Part 2 of 3

Government & Enterprise Mobility Solutions
EME Test Laboratory
8000 West Sunrise Blvd
Fort Lauderdale, FL. 33322

Date of Report: May 17, 2005
Report Revision: Rev. A
Report ID: FCC rpt_i930_Rev A_050517
SR2035

Responsible Engineer: Kim Uong (EME lead Eng.)
Date/s Tested: 4/9/05-5/4/05
Manufacturer/Location: Motorola - Plantation
Sector/Group/Div.: iDEN Subscriber
Date submitted for test: 3/28/05
DUT Description: i930; Tri-band GSM(Voice and GPRS Data) and dual band iDEN (Voice/WiDEN), GPS capable
Test TX mode(s): iDEN - 1:3, 1:6, 236:310, 81:120; GSM - 1:8, 1:4
Max. Power output: iDEN 800/900MHz - 0.640W pulsed avg., GSM 900 – 1.905W pulsed avg., GSM 1800/1900 – 0.962W
Nominal Power: iDEN 800/900MHz - 0.600W, GSM 900 1.5W; GSM1800/1900MHz – 0.750W
Tx Frequency Bands: iDEN - 806-825, 896-902MHz; GSM – 880.2-914.8MHz, 1710.2-1784.8MHz, 1850.2-1909.8MHz
Signaling type: TDMA: iDEN/WiDEN; GSM 1999 spec
Model(s) Tested: H72UAH9JR7AN
Model(s) Certified: H72UAH9JR7AN
Serial Number(s): 805AFC0016, 805AFC0013
Classification: General Population/Uncontrolled
Rule Part(s): 15
Approved Accessories:

Antenna(s):
8585524F01 (retractable ¼ wave antenna, 806-825MHz (-2.44dBd); 896-902MHz (-2.77dBd); 880-915Mhz (-0.6dBi); retractable ½ wave antenna, 1710-1785MHz (-0.12dBi); 1850-1910MHz (0.58dBi)

Battery(ies):
SNN5706B (Extra capacity Li Ion); SNN5685A (High performance battery); NTN2136A (Hi performance battery door); NTN2261A (Slim battery door)

Body worn accessory(ies):
NNTN4758A (Holster); NNTN4747A (Belt clip)

Audio/Data cable accessory(ies):
NNTN5006A (PTT headset earbud), NNTN5005A (PTT headset over head), NSN6066A (RSM), SYN8390B (Earbud w/ mic.), NTN8496A (Lightweight headset w/ mic), NNTN4033A (Privacy earbud w/ PTT), SYN7875C (Hearing aide neckloop), NNTN5004A (PTT headset over ear), NNTN5774A (Stereo headset), SYN8146C (Over the ear headset w/ boom mic) , NTN8513B (Lightweight headset), NNTN5211A (Surveillance earpiece); NKN6559A (USB data cable), NKN6560A (RS232 data cable), NNTN5405A (USB data cable w/ charging), NNTN5406A (RS232 data cable w/ charging), NNTN5491A (Keyboard), NNTN5863A (Keypad adapter), NNTN5494A (Gamer w/ keypad)

Max. Calc. 1-g/10-g Avg. SAR: 1.21/0.89 mW/g (Body)
Max. Calc. 1-g/10-g Avg. SAR: 0.07/0.05 mW/g (Face)
Max. Calc. 1-g/10-g Avg. SAR: 0.87/0.58 mW/g (Head)

Based on the information and the testing results provided herein, the undersigned certifies that when used as stated in the operating instructions supplied, said product complies with the national and international reference standards and guidelines listed in section 2.0 of this report.
This report shall not be reproduced without written approval from an officially designated representative of the Motorola EME Laboratory.

This reporting format is consistent with the test report guidelines of the TIA TSB-150 December 2004
The results and statements contained in this report pertain only to the device(s) evaluated.

Ken Enger GEMS EME Lab Senior Resource Manager,
Laboratory Director,

Approval Date:

Certification Date: 05/12/05

Certification No.: L1050507P

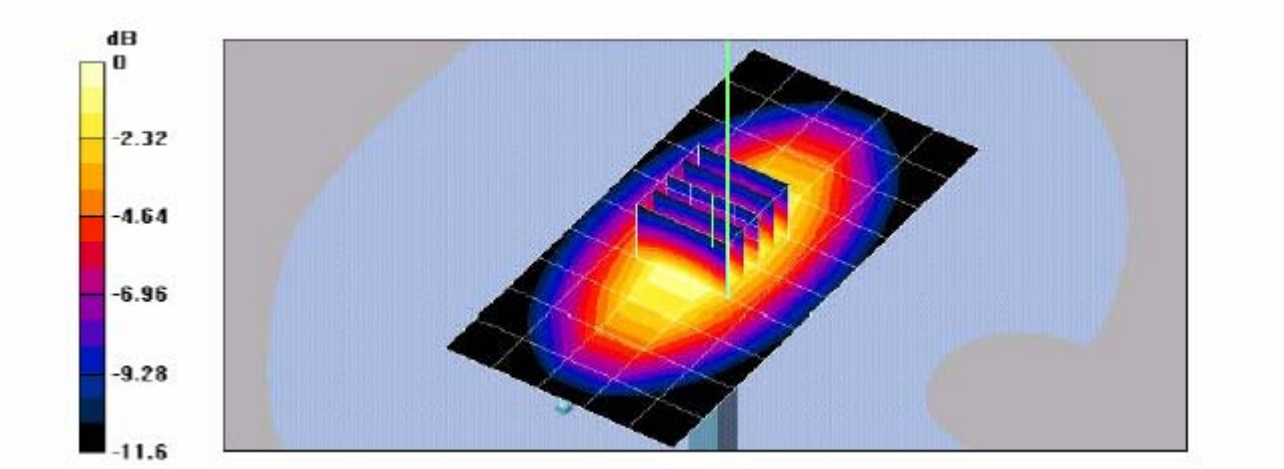
Appendix D
Test System Verification Scans

Note: Dipole validation scans at the head from SPEAG are provided in APPENDIX D. The GEMS EME lab validated the dipole to the applicable IEEE system performance targets. Within the same day system validation was performed using FCC body tissue parameters to generate the system performance target values for body at the applicable frequency. The results of the GEMS EME system performance validation are provided herein. To assess the isotropic characteristics of the measurement probe, two system performance zoom scans (0 and 90 degrees) were measured. The results were averaged together and adjusted to account for the power drift in order to obtain the final calculated 1 and 10 gram results.

Motorola GEMS EME Lab
SPEAG 900 MHz Dipole; Model D900V2, SN-085; Test Date: 4/9/05
Run #: 050409-01 Test operator: C. Miller
Sim.Tissue Temp: 20.6 (C)
TX Freq: 900(MHz) Start power: 250 (mW)

Target: 11.26 mW/g for 1g SAR 7.26 mW/g for 10g SAR
11.59 mW/g calculated 1g-SAR; 2.95 % from target (including drift)
7.35 mW/g calculated 10g-SAR; 1.18 % from target (including drift)

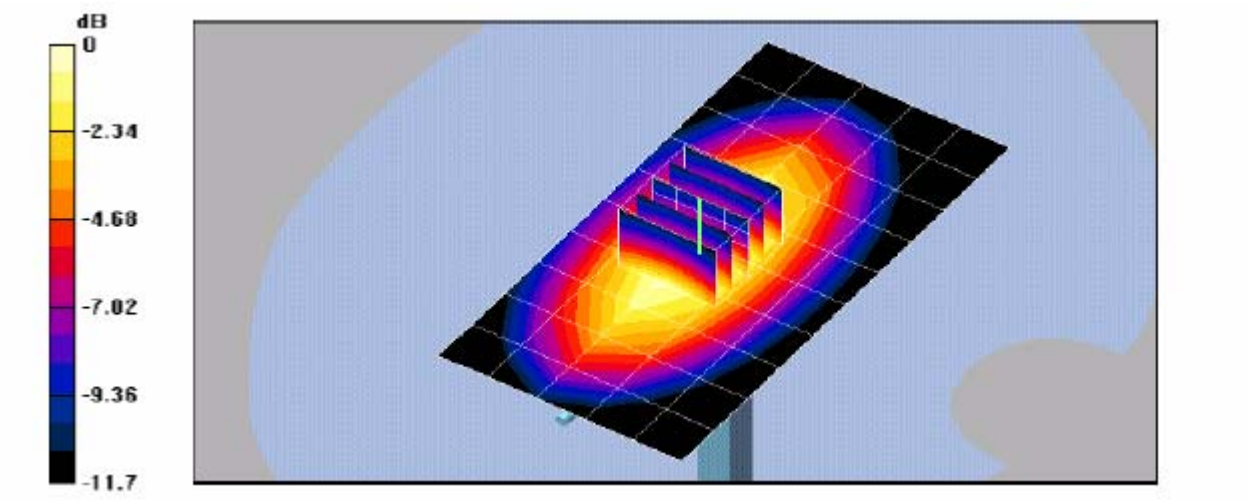
Probe: ET3DV6 - SN1383, Calibrated: 2/24/2005, ConvF(6.35, 6.35, 6.35)
Duty Cycle: 1:1, Medium: 900 MHz IEEE Head, Medium parameters used: σ = 1.01; mho/m, ε_r = 40.3; ρ = 1000 kg/m3
Electronics: DAE3 Sn406, Calibrated: 11/17/2004
System Performance 900 MHz Head/Zoom Scan (5x5x5)/Cube: Measurement grid: dx=7.5mm, dy=7.5mm, dz=7.5mm; Reference Value = 58 V/m; Power Drift = -0.0272 dB; Peak SAR (extrapolated) = 4.4 W/kg
SAR(1 g) = 2.88 mW/g; SAR(10 g) = 1.83 mW/g
System Performance 900 MHz Head/Zoom Scan 2 (5x5x5)/Cube: Measurement grid: dx=7.5mm, dy=7.5mm, dz=7.5mm; Reference Value = 58 V/m; Power Drift = -0.0272 dB; Peak SAR (extrapolated) = 4.4 W/kg
SAR(1 g) = 2.88 mW/g; SAR(10 g) = 1.82 mW/g



Motorola GEMS EME Lab
SPEAG 900 MHz Dipole; Model D900V2, SN-085; Test Date: 4/11/05
Run #: 050411-01 Test operator: C. Miller
Sim.Tissue Temp: 22.3 (C)
TX Freq: 900(MHz) Start power: 250 (mW)

Target: 11.26 mW/g for 1g SAR 7.26 mW/g for 10g SAR
11.46 mW/g calculated 1g-SAR; 1.80 % from target (including drift)
7.26 mW/g calculated 10g-SAR; 0.05 % from target (including drift)

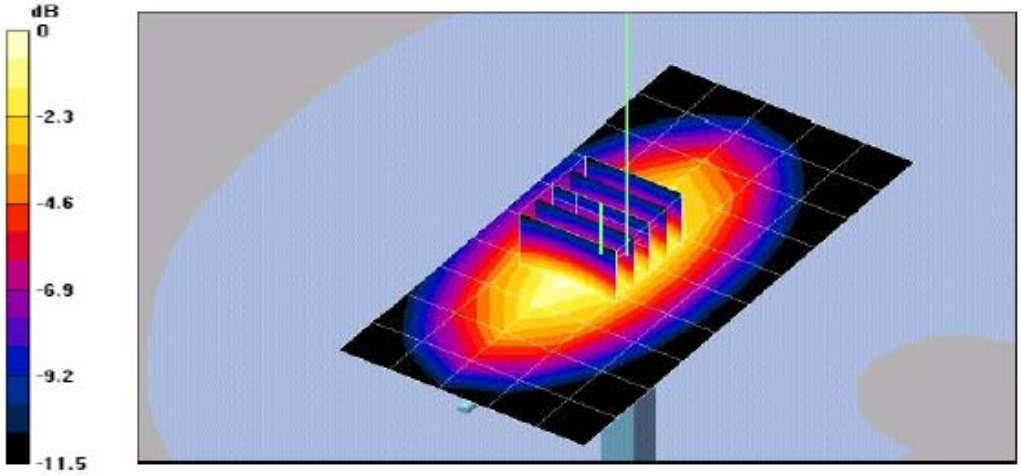
Probe: ET3DV6 - SN1383, Calibrated: 2/24/2005, ConvF(6.35, 6.35, 6.35)
Duty Cycle: 1:1, Medium: 900 MHz IEEE Head, Medium parameters used: σ = 1.01; mho/m, ε_r = 40.4; ρ = 1000 kg/m3
Electronics: DAE3 Sn406, Calibrated: 11/17/2004
System Performance 900 MHz Head/Zoom Scan (5x5x5)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=7.5mm, Reference Value = 56 V/m; Power Drift = 0.0215 dB; Peak SAR (extrapolated) = 4.44 W/kg
SAR(1 g) = 2.89 mW/g; SAR(10 g) = 1.83 mW/g
System Performance 900 MHz Head/Zoom Scan 2 (5x5x5)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=7.5mm; Reference Value = 56 V/m; Power Drift = 0.0215 dB; Peak SAR (extrapolated) = 4.41 W/kg
SAR(1 g) = 2.87 mW/g; SAR(10 g) = 1.82 mW/g



Motorola GEMS EME Lab
SPEAG 900 MHz Dipole; Model D900V2, SN-085; Test Date: 4/12/05
Run #: 050412-01 Test operator: C. Miller
Sim.Tissue Temp: 22.0 (C)
TX Freq: 900(MHz) Start power: 250 (mW)

Target: 11.26 mW/g for 1g SAR 7.26 mW/g for 10g SAR
11.63 mW/g calculated 1g-SAR; 3.26 % from target (including drift)
7.37 mW/g calculated 10g-SAR; 1.49 % from target (including drift)

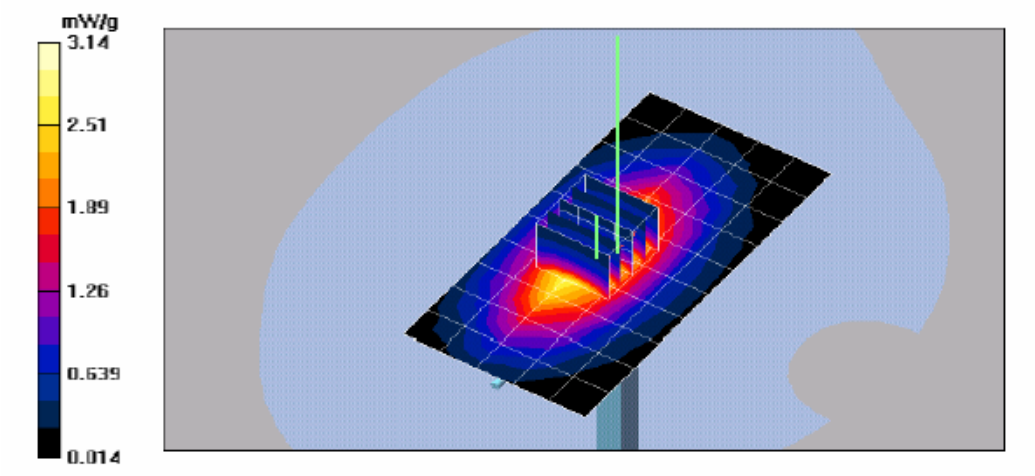
Probe: ET3DV6 - SN1383, Calibrated: 2/24/2005, ConvF(6.35, 6.35, 6.35)
Duty Cycle: 1:1, Medium: 900 MHz IEEE Head, Medium parameters used: σ = 1.01; mho/m, ε_r = 40.3; ρ = 1000 kg/m3
Electronics: DAE3 Sn406, Calibrated: 11/17/2004
System Performance 900 MHz Head/Zoom Scan (5x5x5)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=7.5mm; Reference Value = 56 V/m; Power Drift = -0.0403 dB; Peak SAR (extrapolated) = 4.42 W/kg
SAR(1 g) = 2.89 mW/g; SAR(10 g) = 1.83 mW/g
System Performance 900 MHz Head/Zoom Scan 2 (5x5x5)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=7.5mm; Reference Value = 56 V/m; Power Drift = -0.0403 dB; Peak SAR (extrapolated) = 4.39 W/kg
SAR(1 g) = 2.87 mW/g; SAR(10 g) = 1.82 mW/g



Motorola GEMS EME Lab
SPEAG 900 MHz Dipole; Model D900V2, SN-085; Test Date: 4/13/05
Run #: 050413-01 Test operator: C. Miller
Sim.Tissue Temp: 22.2 (C)
TX Freq: 900(MHz) Start power: 250 (mW)

Target: 11.26 mW/g for 1g SAR 7.26 mW/g for 10g SAR
11.58 mW/g calculated 1g-SAR; 2.85 % from target (including drift)
7.31 mW/g calculated 10g-SAR; 0.66 % from target (including drift)

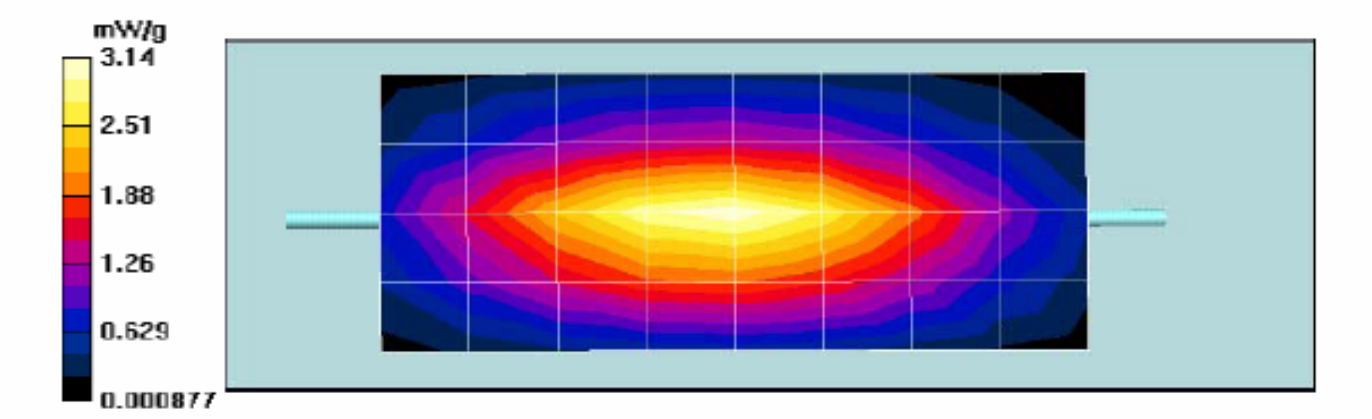
Probe: ET3DV6 - SN1383, Calibrated: 2/24/2005, ConvF(6.35, 6.35, 6.35)
Duty Cycle: 1:1, Medium: 900 MHz IEEE Head, Medium parameters used: σ = 1.01; mho/m, εr = 40.5; ρ = 1000 kg/m3
Electronics: DAE3 Sn406, Calibrated: 11/17/2004
System Performance 900 MHz Head/Zoom Scan (5x5x5)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=7.5mm; Reference Value = 55.8 V/m; Power Drift = 0.00722 dB; Peak SAR (extrapolated) = 4.46 W/kg
SAR(1 g) = 2.9 mW/g; SAR(10 g) = 1.83 mW/g
System Performance 900 MHz Head/Zoom Scan 2 (5x5x5)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=7.5mm; Reference Value = 55.8 V/m; Power Drift = 0.00722 dB; Peak SAR (extrapolated) = 4.46 W/kg
SAR(1 g) = 2.9 mW/g; SAR(10 g) = 1.83 mW/g



Motorola GEMS EME Lab
SPEAG 900 MHz Dipole; Model D900V2, SN-085; Test Date: 4/14/05
Run #: 050414-01 Test operator: Dave Hopper
Sim.Tissue Temp: 21.8 (C)
TX Freq: 900(MHz) Start power: 250 (mW)

Target: 11.41 mW/g calculated 1g-SAR, 7.43 mW/g calculated 10g-SAR
11.48 mW/g calculated 1g-SAR; +0.58 % from target (including drift)
7.41 mW/g calculated 10g-SAR; -0.27 % from target (including drift)

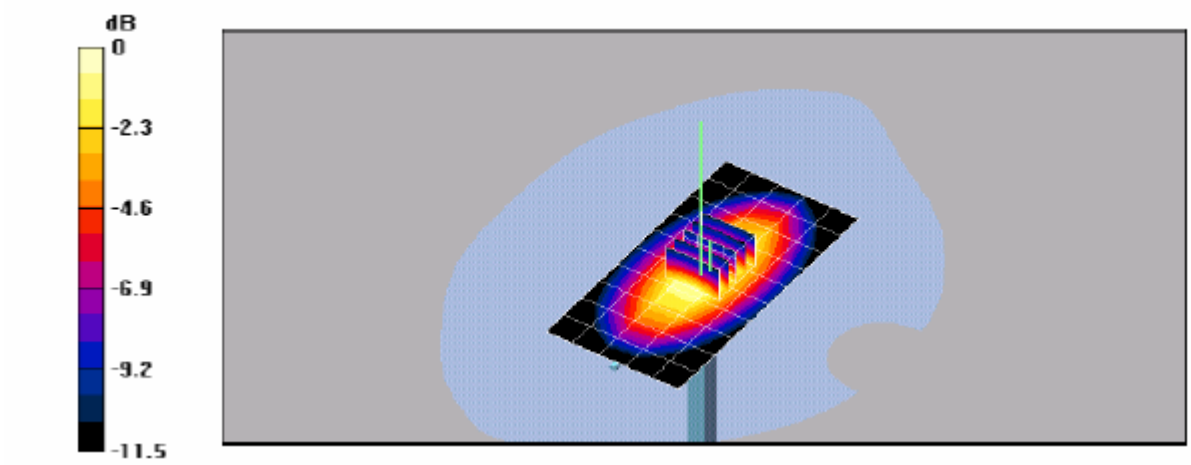
Probe: ET3DV6 - SN1383, Calibrated: 2/24/2005, ConvF(6.03, 6.03, 6.03)
Duty Cycle: 1:1, Medium: 900 MHz FCC Body, Medium parameters used: σ = 1.04; mho/m, εr = 52.7; ρ = 1000 kg/m3
Electronics: DAE3 Sn406, Calibrated: 11/17/2004
System Performance Check/0-Degree 5x5x7 Cube (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm; Reference Value = 57 V/m; Power Drift = -0.00603 dB; Peak SAR (extrapolated) = 4.13 W/kg
SAR(1 g) = 2.87 mW/g; SAR(10 g) = 1.85 mW/g
System Performance Check/90-Degree 5x5x7 Cube (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm; Reference Value = 57 V/m; Power Drift = -0.00603 dB; Peak SAR (extrapolated) = 4.12 W/kg
SAR(1 g) = 2.86 mW/g; SAR(10 g) = 1.85 mW/g



Motorola GEMS EME Lab
SPEAG 900 MHz Dipole; Model D900V2, SN-085; Test Date: 4/15/05
Run #: 050415-01 Test operator: E. Church
Sim.Tissue Temp: 20.8 (C)
TX Freq: 900(MHz) Start power: 250 (mW)

Target: 11.26 mW/g for 1g SAR 7.26 mW/g for 10g SAR
11.60 mW/g calculated 1g-SAR; 3.01 % from target (including drift)
7.34 mW/g calculated 10g-SAR; 1.07 % from target (including drift)

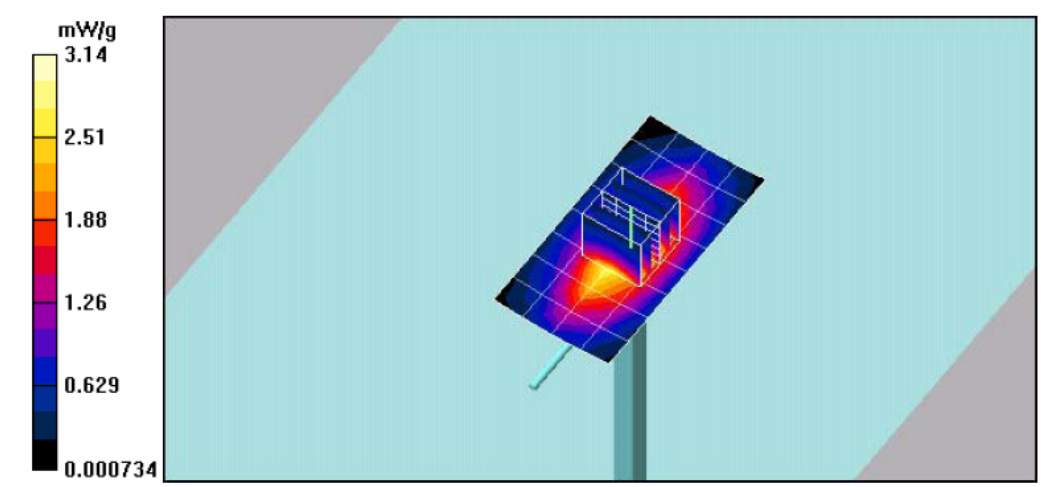
Probe: ET3DV6 - SN1383, Calibrated: 2/24/2005, ConvF(6.35, 6.35, 6.35)
Duty Cycle: 1:1, Medium: 900 MHz IEEE Head, Medium parameters used: σ = 1; mho/m, εr = 39.8; ρ = 1000 kg/m3
Electronics: DAE3 Sn406, Calibrated: 11/17/2004
System Performance 900 MHz Head/Zoom Scan (5x5x5)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=7.5mm; Reference Value = 58.1 V/m; Power Drift = -0.0223 dB; Peak SAR (extrapolated) = 4.45 W/kg
SAR(1 g) = 2.9 mW/g; SAR(10 g) = 1.83 mW/g
System Performance 900 MHz Head/Zoom Scan 2 (5x5x5)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=7.5mm; Reference Value = 58.1 V/m; Power Drift = -0.0223 dB; Peak SAR (extrapolated) = 4.37 W/kg
SAR(1 g) = 2.87 mW/g; SAR(10 g) = 1.82 mW/g



Motorola GEMS EME Lab
SPEAG 900 MHz Dipole; Model D900V2, SN-085; Test Date: 4/16/05
Run #: 050416-01 Test operator: C. Miller
Sim.Tissue Temp: 22.1 (C)
TX Freq: 900(MHz) Start power: 250 (mW)

Target: 11.41 mW/g calculated 1g-SAR, 7.43 mW/g calculated 10g-SAR
11.47 mW/g calculated 1g-SAR; 0.54 % from target (including drift)
7.45 mW/g calculated 10g-SAR; 0.25 % from target (including drift)

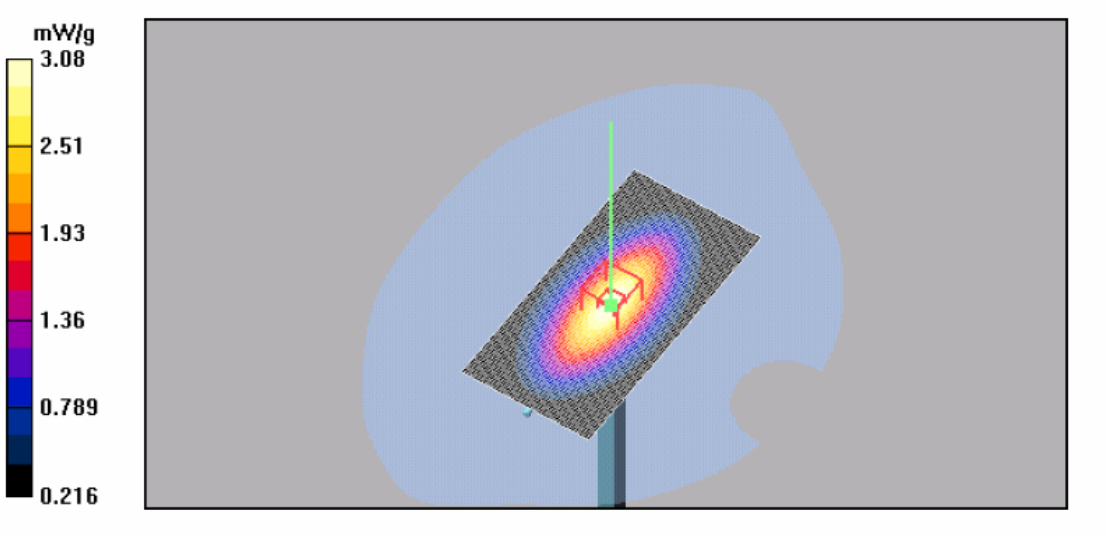
Probe: ET3DV6 - SN1383, Calibrated: 2/24/2005, ConvF(6.03, 6.03, 6.03)
Duty Cycle: 1:1, Medium: 900 MHz FCC Body, Medium parameters used: σ = 1.04; mho/m, εr = 52.8; ρ = 1000 kg/m3
Electronics: DAE3 Sn406, Calibrated: 11/17/2004
System Performance Check/0-Degree 5x5x7 Cube (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm; Reference Value = 56.7 V/m; Power Drift = 0.0183 dB; Peak SAR (extrapolated) = 4.15 W/kg
SAR(1 g) = 2.88 mW/g; SAR(10 g) = 1.87 mW/g
System Performance Check/90-Degree 5x5x7 Cube (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm; Reference Value = 56.7 V/m; Power Drift = 0.0183 dB; Peak SAR (extrapolated) = 4.16 W/kg
SAR(1 g) = 2.88 mW/g; SAR(10 g) = 1.87 mW/g



Motorola GEMS EME Lab
SPEAG 900 MHz Dipole; Model D900V2, SN-085; Test Date: 4/18/05
Run #: 050418-01 Test operator: S. Whalen
Sim.Tissue Temp: 21.5 (C)
TX Freq: 900(MHz) Start power: 250 (mW)

Target: 11.26 mW/g for 1g SAR 7.26 mW/g for 10g SAR
11.48 mW/g calculated 1g-SAR; 1.96 % from target (including drift)
7.30 mW/g calculated 10g-SAR; 0.53 % from target (including drift)

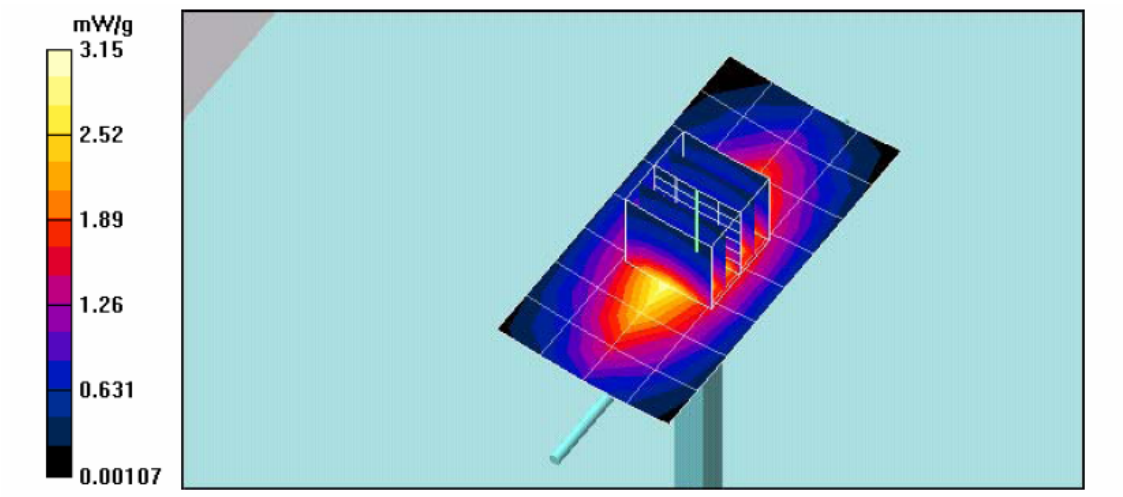
Probe: ET3DV6 - SN1383, Calibrated: 2/24/2005, ConvF(6.35, 6.35, 6.35),
Duty Cycle: 1:1, Medium: 900 MHz IEEE Head, Medium parameters used: σ = 0.99; mho/m, εr = 39.5; ρ = 1000 kg/m3;
Electronics: DAE3 Sn406, Calibrated: 11/17/2004
System Performance 900 MHz Head/Zoom Scan (5x5x5)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=7.5mm; Reference Value = 58.3 V/m; Power Drift = -0.023 dB; Peak SAR (extrapolated) = 4.41 W/kg
SAR(1 g) = 2.87 mW/g; SAR(10 g) = 1.82 mW/g
System Performance 900 MHz Head/Zoom Scan 2 (5x5x5)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=7.5mm; Reference Value = 58.3 V/m; Power Drift = -0.023 dB; Peak SAR (extrapolated) = 4.34 W/kg
SAR(1 g) = 2.84 mW/g; SAR(10 g) = 1.81 mW/g



Motorola GEMS EME Laboratory
SPEAG 900MHz Dipole; Model D900V2, SN-085; Test Date: 4/19/05
Run #: 050419-01 Test operator: C. Miller
Sim.Tissue Temp: 22.1 (C)
TX Freq: 900(MHz) Start power: 250 (mW)

Target: 11.41 mW/g calculated 1g-SAR, 7.43 mW/g calculated 10g-SAR
11.55 mW/g calculated 1g-SAR; 1.22 % from target (including drift)
7.47 mW/g calculated 10g-SAR; 0.48 % from target (including drift)

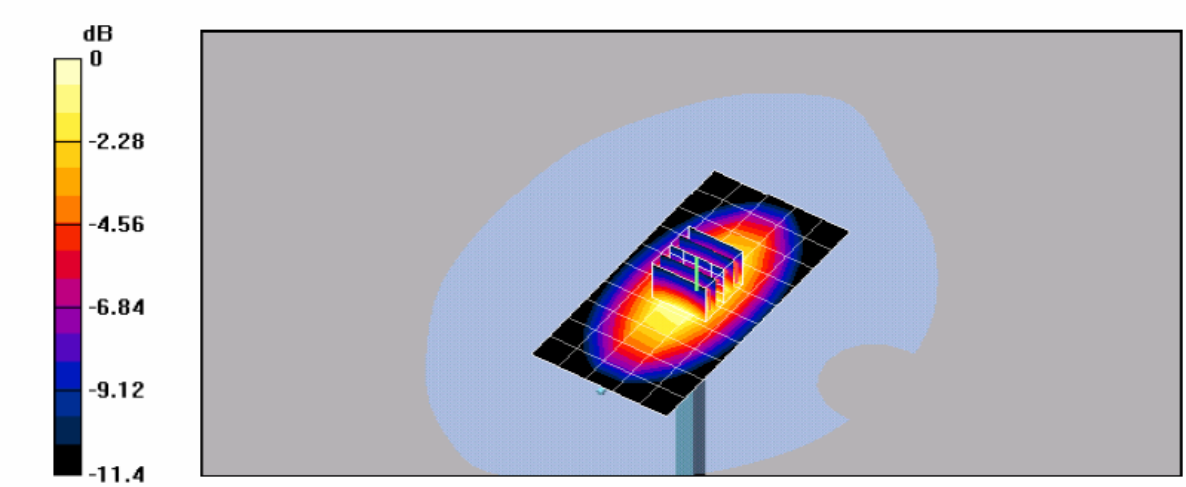
Probe: ET3DV6 - SN1383, Calibrated: 2/24/2005, ConvF(6.03, 6.03, 6.03)
Duty Cycle: 1:1, Medium: 900 MHz FCC Body, Medium parameters used: σ = 1.04; mho/m, εr = 52.8; ρ = 1000 kg/m3
Electronics: DAE3 Sn406, Calibrated: 11/17/2004
System Performance Check/0-Degree 5x5x7 Cube (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm; Reference Value = 57.3 V/m; Power Drift = -0.00341 dB; Peak SAR (extrapolated) = 4.18 W/kg
SAR(1 g) = 2.9 mW/g; SAR(10 g) = 1.87 mW/g
System Performance Check/90-Degree 5x5x7 Cube (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm; Reference Value = 57.3 V/m; Power Drift = -0.00341 dB; Peak SAR (extrapolated) = 4.14 W/kg
SAR(1 g) = 2.87 mW/g; SAR(10 g) = 1.86 mW/g



Motorola GEMS EME Lab
SPEAG 900 MHz Dipole; Model D900V2, SN-085; Test Date: 4/20/05
Run #: 050420-01 Test operator: C. Miller
Sim.Tissue Temp: 21.6 (C)
TX Freq: 900(MHz) Start power: 250 (mW)

Target: 11.26 mW/g for 1g SAR 7.26 mW/g for 10g SAR
11.68 mW/g calculated 1g-SAR; 3.70 % from target (including drift)
7.43 mW/g calculated 10g-SAR; 2.35 % from target (including drift)

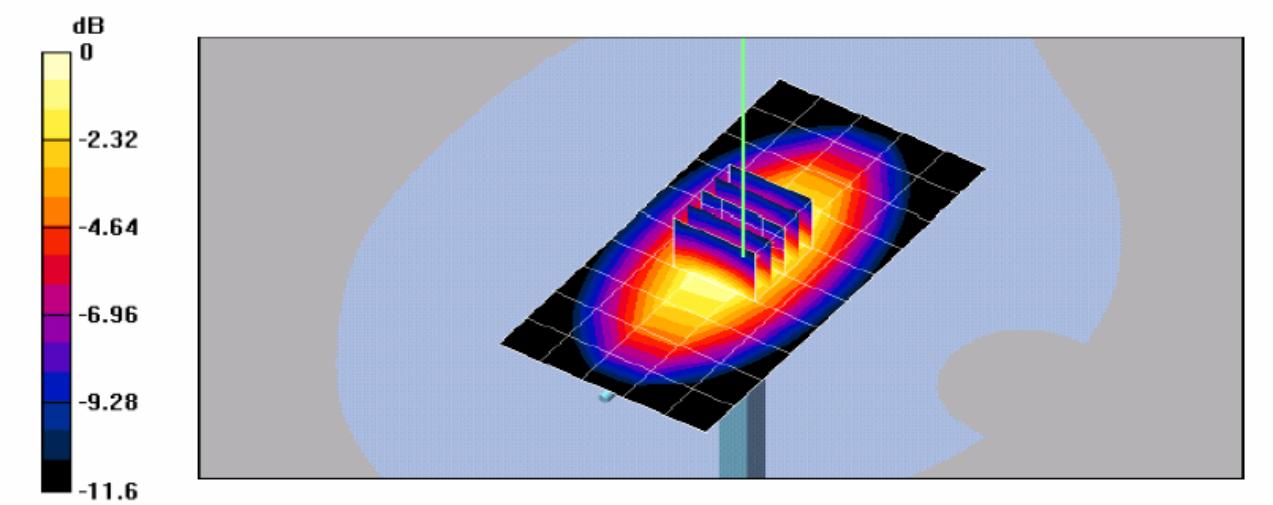
Probe: ET3DV6 - SN1383, Calibrated: 2/24/2005, ConvF(6.35, 6.35, 6.35)
Duty Cycle: 1:1, Medium: 900 MHz IEEE Head, Medium parameters used: σ = 1.01; mho/m, εr = 41.7; ρ = 1000 kg/m3
Electronics: DAE3 Sn406, Calibrated: 11/17/2004
System Performance 900 MHz Head/Zoom Scan (5x5x5)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=7.5mm; Reference Value = 58.4 V/m; Power Drift = -0.0889 dB; Peak SAR (extrapolated) = 4.42 W/kg
SAR(1 g) = 2.89 mW/g; SAR(10 g) = 1.83 mW/g
System Performance 900 MHz Head/Zoom Scan 2 (5x5x5)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=7.5mm; Reference Value = 58.4 V/m; Power Drift = -0.0889 dB; Peak SAR (extrapolated) = 4.29 W/kg
SAR(1 g) = 2.83 mW/g; SAR(10 g) = 1.81 mW/g



Motorola GEMS EME Lab
SPEAG 900 MHz Dipole; Model D900V2, SN-085; Test Date: 4/21/05
Run #: 050421-01 Test operator: C. Miller
Sim.Tissue Temp: 21.6 (C)
TX Freq: 900(MHz) Start power: 250 (mW)

Target: 11.26 mW/g for 1g SAR 7.26 mW/g for 10g SAR
11.63 mW/g calculated 1g-SAR; 3.28 % from target (including drift)
7.42 mW/g calculated 10g-SAR; 2.19 % from target (including drift)

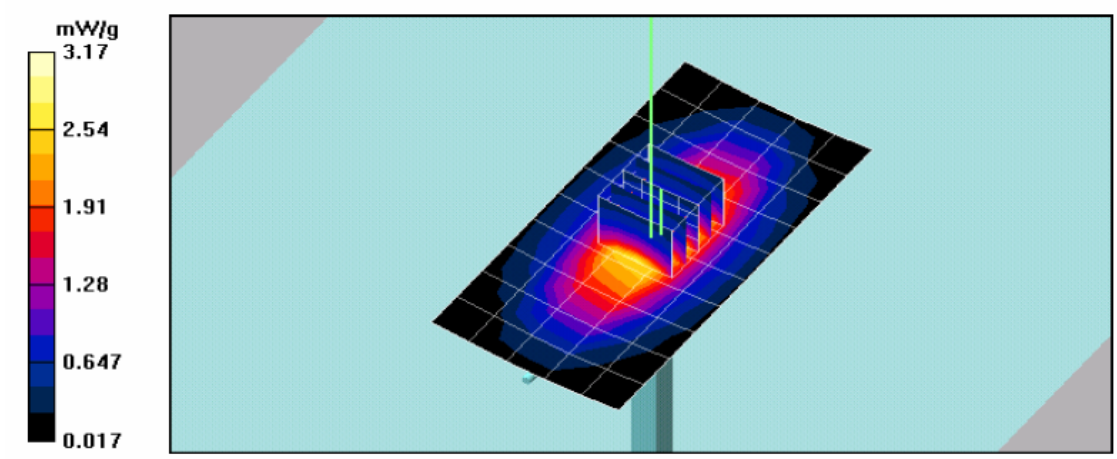
Probe: ET3DV6 - SN1383, Calibrated: 2/24/2005, ConvF(6.35, 6.35, 6.35)
Duty Cycle: 1:1, Medium: 900 MHz IEEE Head, Medium parameters used: σ = 1.01; mho/m, εr = 41.6; ρ = 1000 kg/m3
Electronics: DAE3 Sn406, Calibrated: 11/17/2004
System Performance 900 MHz Head/Zoom Scan (5x5x5)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=7.5mm; Reference Value = 58.2 V/m; Power Drift = -0.0941 dB; Peak SAR (extrapolated) = 4.34 W/kg
SAR(1 g) = 2.85 mW/g; SAR(10 g) = 1.82 mW/g
System Performance 900 MHz Head/Zoom Scan 2 (5x5x5)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=7.5mm; Reference Value = 58.2 V/m; Power Drift = -0.0941 dB; Peak SAR (extrapolated) = 4.33 W/kg
SAR(1 g) = 2.84 mW/g; SAR(10 g) = 1.81 mW/g



Motorola GEMS EME Lab
SPEAG 900 MHz Dipole; Model D900V2, SN-085; Test Date: 4/22/05
Run #: 050422-01 Test operator: C. Miller
Sim.Tissue Temp: 20.7 (C)
TX Freq: 900(MHz) Start power: 250 (mW)

Target: 11.41 mW/g for 1g SAR 7.43 mW/g for 10g SAR
11.75 mW/g calculated 1g-SAR; 2.97 % from target (including drift)
7.57 mW/g calculated 10g-SAR; 1.90 % from target (including drift)

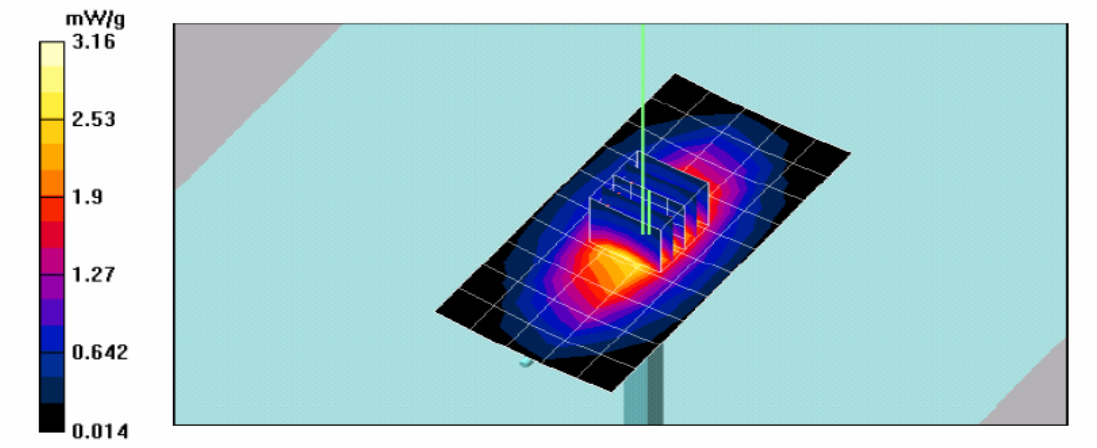
Probe: ET3DV6 - SN1383, Calibrated: 2/24/2005, ConvF(6.03, 6.03, 6.03)
Duty Cycle: 1:1, Medium: 900 MHz FCC Body, Medium parameters used: σ = 1.04; mho/m, εr = 52.5; ρ = 1000 kg/m3
Electronics: DAE3 Sn406, Calibrated: 11/17/2004
System Performance 900 MHz /Zoom Scan (5x5x5)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=7.5mm; Reference Value = 57.8 V/m; Power Drift = -0.0179 dB; Peak SAR (extrapolated) = 4.34 W/kg
SAR(1 g) = 2.93 mW/g; SAR(10 g) = 1.89 mW/g
System Performance 900 MHz /Zoom Scan 2 (5x5x5)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=7.5mm; Reference Value = 57.8 V/m; Power Drift = -0.0179 dB; Peak SAR (extrapolated) = 4.29 W/kg
SAR(1 g) = 2.92 mW/g; SAR(10 g) = 1.88 mW/g



Motorola GEMS EME Lab
SPEAG 900 MHz Dipole; Model D900V2, SN-085; Test Date: 4/23/05
Run #: 050423-01 Test operator: C. Miller
Sim.Tissue Temp: 22.0 (C)
TX Freq: 900(MHz) Start power: 250 (mW)

Target: 11.41 mW/g for 1g SAR 7.43 mW/g for 10g SAR
11.70 mW/g calculated 1g-SAR; 2.50 % from target (including drift)
7.54 mW/g calculated 10g-SAR; 1.54 % from target (including drift)

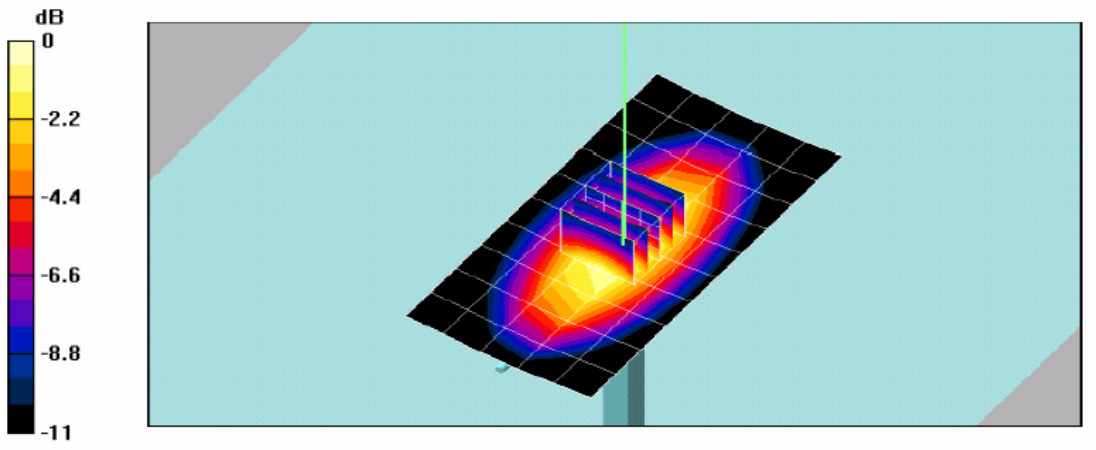
Probe: ET3DV6 - SN1383, Calibrated: 2/24/2005, ConvF(6.03, 6.03, 6.03)
Duty Cycle: 1:1, Medium: 900 MHz FCC Body, Medium parameters used: σ = 1.04; mho/m, εr = 52.7; ρ = 1000 kg/m3
Electronics: DAE3 Sn406, Calibrated: 11/17/2004
System Performance 900 MHz /Zoom Scan (5x5x5)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=7.5mm; Reference Value = 58.1 V/m; Power Drift = 0.0091 dB; Peak SAR (extrapolated) = 4.37 W/kg
SAR(1 g) = 2.94 mW/g; SAR(10 g) = 1.89 mW/g
System Performance 900 MHz /Zoom Scan 2 (5x5x5)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=7.5mm; Reference Value = 58.1 V/m; Power Drift = 0.0091 dB; Peak SAR (extrapolated) = 4.31 W/kg
SAR(1 g) = 2.92 mW/g; SAR(10 g) = 1.89 mW/g



Motorola GEMS EME Lab
SPEAG 900 MHz Dipole; Model D900V2, SN-085; Test Date: 4/25/05
Run #: 050425-01 Test operator: C. Miller
Sim.Tissue Temp: 22.0 (C)
TX Freq: 900(MHz) Start power: 250 (mW)

Target: 11.41 mW/g for 1g SAR 7.43 mW/g for 10g SAR
11.68 mW/g calculated 1g-SAR; 2.38 % from target (including drift)
7.54 mW/g calculated 10g-SAR; 1.44 % from target (including drift)

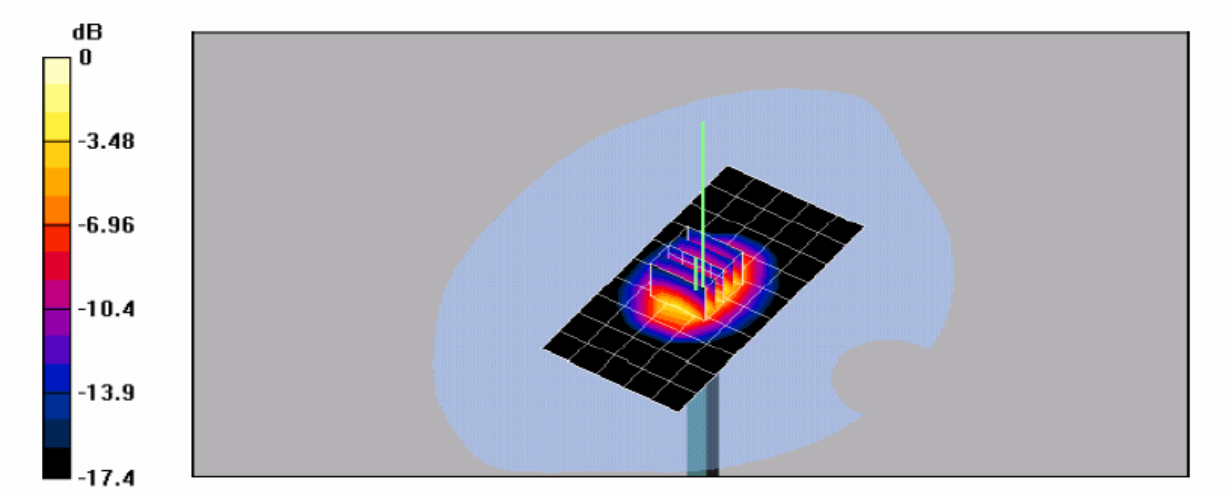
Probe: ET3DV6 - SN1383, Calibrated: 2/24/2005, ConvF(6.03, 6.03, 6.03)
Duty Cycle: 1:1, Medium: 900 MHz FCC Body, Medium parameters used: σ = 1.04; mho/m, εr = 52.5; ρ = 1000 kg/m3
Electronics: DAE3 Sn406, Calibrated: 11/17/2004
System Performance 900 MHz /Zoom Scan (5x5x5)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=7.5mm; Reference Value = 57.4 V/m; Power Drift = 0.0363 dB; Peak SAR (extrapolated) = 4.38 W/kg
SAR(1 g) = 2.96 mW/g; SAR(10 g) = 1.91 mW/g
System Performance 900 MHz /Zoom Scan 2 (5x5x5)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=7.5mm; Reference Value = 57.4 V/m; Power Drift = 0.0363 dB; Peak SAR (extrapolated) = 4.33 W/kg
SAR(1 g) = 2.93 mW/g; SAR(10 g) = 1.89 mW/g



Motorola GEMS EME Laboratory
SPEAG 1800MHz Dipole; Model D1800V2, SN-278; Test Date: 4/25/05
Run #: 050425-06 Test operator: C. Miller
Sim.Tissue Temp: 20.0 (C)
TX Freq: 1800 (MHz) Start power: 250 (mW)

Target: 37.87 mW/g for 1g SAR 20.00 mW/g for 10g SAR

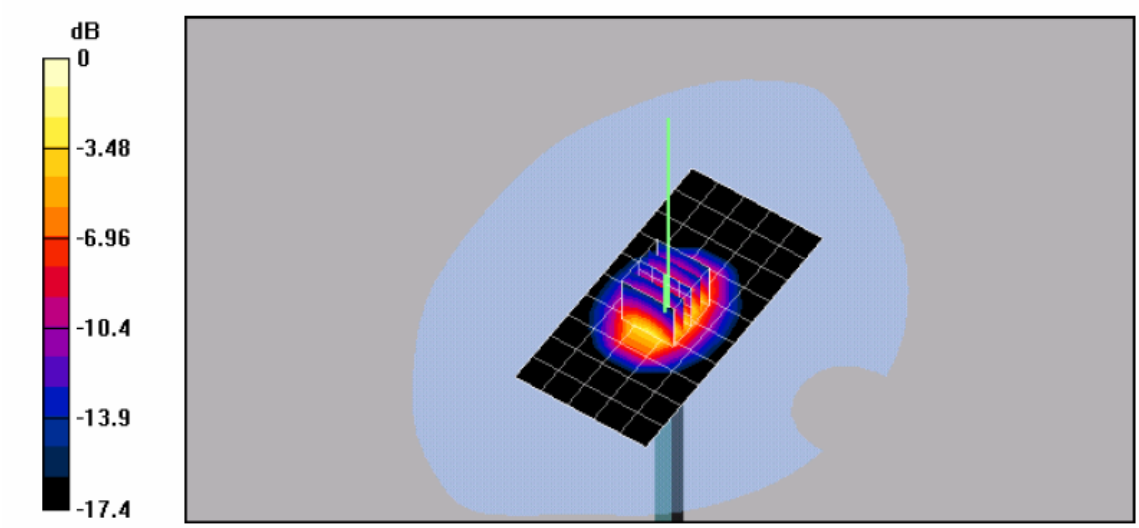
Probe: ET3DV6 - SN1383, Calibrated: 2/24/2005, ConvF(5.26, 5.26, 5.26)
Duty Cycle: 1:1, Medium: 1800 IEEE Head, Medium parameters used: σ = 1.36; mho/m, εr = 38.9; ρ = 1000 kg/m3
Electronics: DAE3 Sn406, Calibrated: 11/17/2004
System Performance 1800 MHz Head/Zoom Scan (5x5x5)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=7.5mm; Reference Value = 93.9 V/m; Power Drift = -0.056 dB; Peak SAR (extrapolated) = 16.5 W/kg
SAR(1 g) = 9.32 mW/g; SAR(10 g) = 4.93 mW/g
System Performance 1800 MHz Head/Zoom Scan 2 (5x5x5)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=7.5mm; Reference Value = 93.9 V/m; Power Drift = -0.056 dB; Peak SAR (extrapolated) = 16.6 W/kg
SAR(1 g) = 9.37 mW/g; SAR(10 g) = 4.94 mW/g



Motorola GEMS EME Laboratory
SPEAG 1800MHz Dipole; Model D1800V2, SN-278; Test Date: 4/26/05
Run #: 050426-01 Test operator: C. Miller
Sim.Tissue Temp: 21.6 (C)
TX Freq: 1800 (MHz) Start power: 250 (mW)

Target: 37.87 mW/g for 1g SAR 20.00 mW/g for 10g SAR
37.56 mW/g calculated 1g-SAR; -0.82 % from target (including drift)
19.83 mW/g calculated 10g-SAR; -0.87 % from target (including drift)

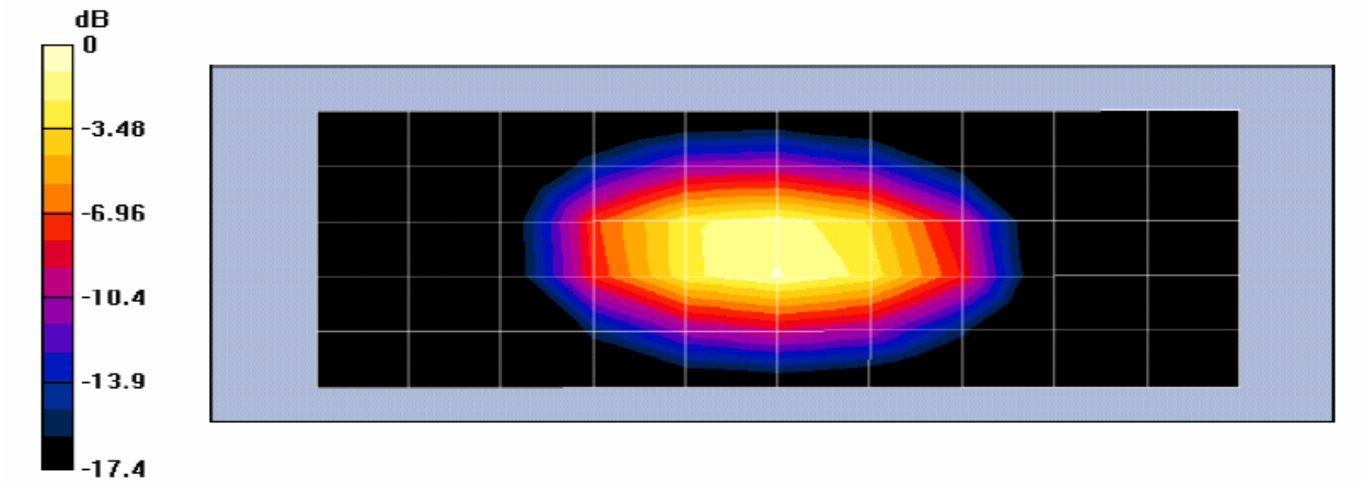
Probe: ET3DV6 - SN1383, Calibrated: 2/24/2005, ConvF(5.26, 5.26, 5.26)
Duty Cycle: 1:1, Medium: 1800 IEEE Head, Medium parameters used: σ = 1.36; mho/m, εr = 39; ρ = 1000 kg/m3
Electronics: DAE3 Sn406, Calibrated: 11/17/2004
System Performance 1800 MHz Head/Zoom Scan (5x5x5)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=7.5mm; Reference Value = 93.4 V/m; Power Drift = -0.0232 dB; Peak SAR (extrapolated) = 16.5 W/kg
SAR(1 g) = 9.34 mW/g; SAR(10 g) = 4.94 mW/g
System Performance 1800 MHz Head/Zoom Scan 2 (5x5x5)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=7.5mm; Reference Value = 93.4 V/m; Power Drift = -0.0232 dB; Peak SAR (extrapolated) = 16.6 W/kg
SAR(1 g) = 9.34 mW/g; SAR(10 g) = 4.92 mW/g



Motorola GEMS EME Laboratory
SPEAG 1800MHz Dipole; Model D1800V2, SN-278; Test Date: 4/27/05
Run #: 050427-01 Test operator: C. Miller
Sim.Tissue Temp: 21.6 (C)
TX Freq: 1800 (MHz) Start power: 250 (mW)

Target: 37.87 mW/g for 1g SAR 20.00 mW/g for 10g SAR
37.18 mW/g calculated 1g-SAR; -1.81% from target (including drift)
19.68 mW/g calculated 10g-SAR; -1.58 % from target (including drift)

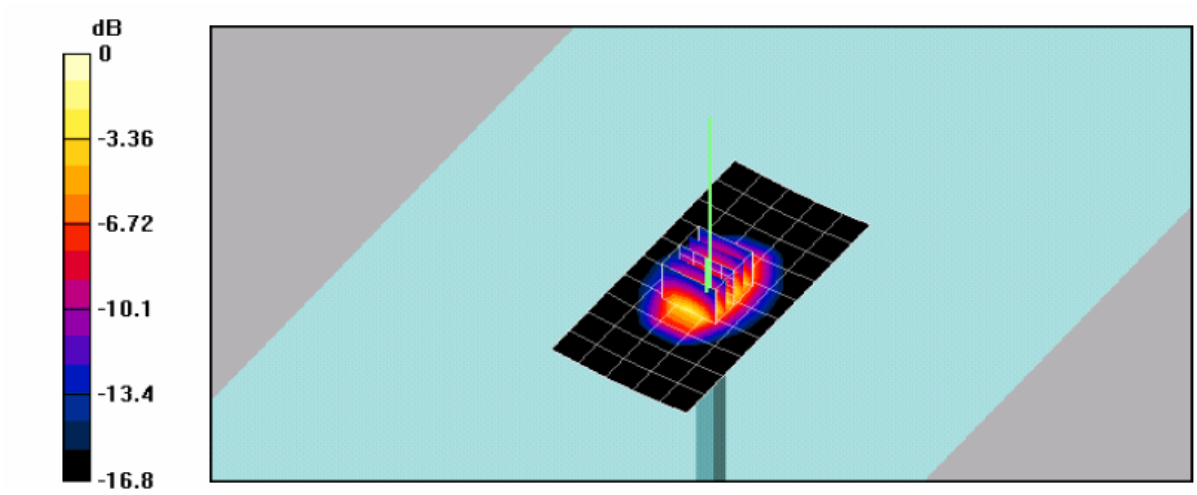
Probe: ET3DV6 - SN1383, Calibrated: 2/24/2005, ConvF(5.26, 5.26, 5.26)
Duty Cycle: 1:1, Medium: 1800 IEEE Head, Medium parameters used: σ = 1.35; mho/m, εr = 38.6; ρ = 1000 kg/m3
Electronics: DAE3 Sn406, Calibrated: 11/17/2004
System Performance 1800 MHz Head/Zoom Scan (5x5x5)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=7.5mm; Reference Value = 93.6 V/m; Power Drift = -0.00514 dB; Peak SAR (extrapolated) = 16.4 W/kg
SAR(1 g) = 9.31 mW/g; SAR(10 g) = 4.93 mW/g
System Performance 1800 MHz Head/Zoom Scan 2 (5x5x5)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=7.5mm; Reference Value = 93.6 V/m; Power Drift = -0.00514 dB; Peak SAR (extrapolated) = 16.4 W/kg
SAR(1 g) = 9.26 mW/g; SAR(10 g) = 4.9 mW/g



Motorola GEMS EME Laboratory
SPEAG 1800MHz Dipole; Model D1800V2, SN-278; Test Date: 4/28/05
Run #: 050428-02 Test operator: C. Miller
Sim.Tissue Temp: 21.9 (C)
TX Freq: 1800 (MHz) Start power: 250 (mW)

Validation Target: 36.48 mW/g for 1g SAR 19.69 mW/g for 10g SAR

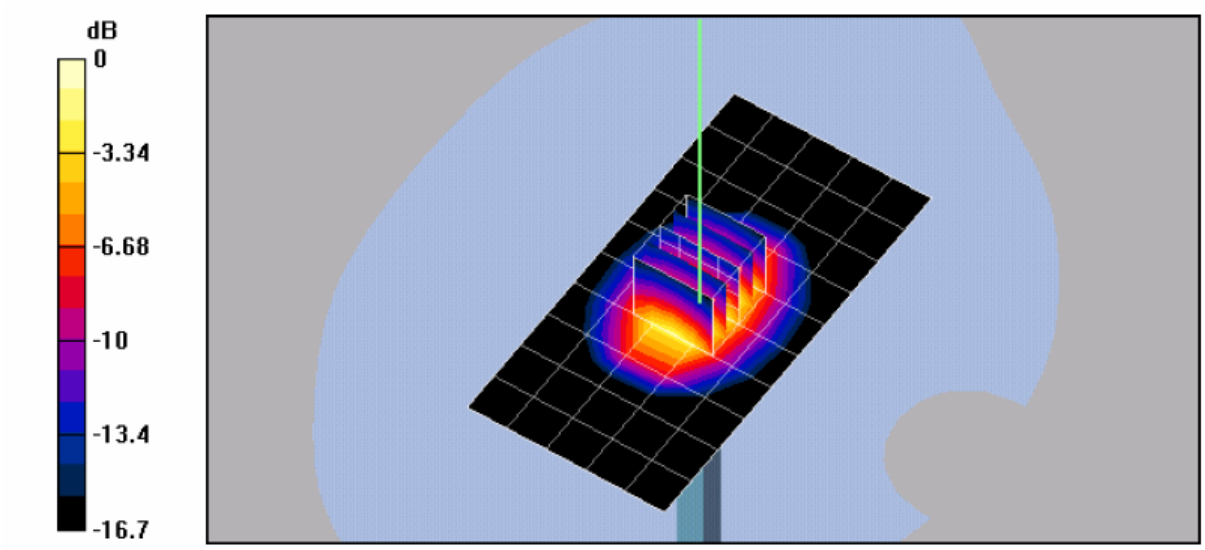
Probe: ET3DV6 - SN1383, Calibrated: 2/24/2005, ConvF(4.71, 4.71, 4.71)
Duty Cycle: 1:1, Medium: 1800 FCC Body, Medium parameters used: σ = 1.48; mho/m, εr = 55.1; ρ = 1000 kg/m3
Electronics: DAE3 Sn406, Calibrated: 11/17/2004
System Performance 1800 MHz Body/Zoom Scan (5x5x5)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=7.5mm; Reference Value = 90.3 V/m; Power Drift = -0.00755 dB; Peak SAR (extrapolated) = 15.1 W/kg
SAR(1 g) = 9.12 mW/g; SAR(10 g) = 4.92 mW/g
System Performance 1800 MHz Body/Zoom Scan 2 (5x5x5)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=7.5mm; Reference Value = 90.3 V/m; Power Drift = -0.00755 dB; Peak SAR (extrapolated) = 15.2 W/kg
SAR(1 g) = 9.09 mW/g; SAR(10 g) = 4.91 mW/g



Motorola GEMS EME Laboratory
SPEAG 1800MHz Dipole; Model D1800V2, SN-278; Test Date: 4/28/05
Run #: 050428-01 Test operator: C. Miller
Sim.Tissue Temp: 21.6 (C)
TX Freq: 1800 (MHz) Start power: 250 (mW)

Validation Target: 36.39 mW/g for 1g SAR 19.27 mW/g for 10g SAR

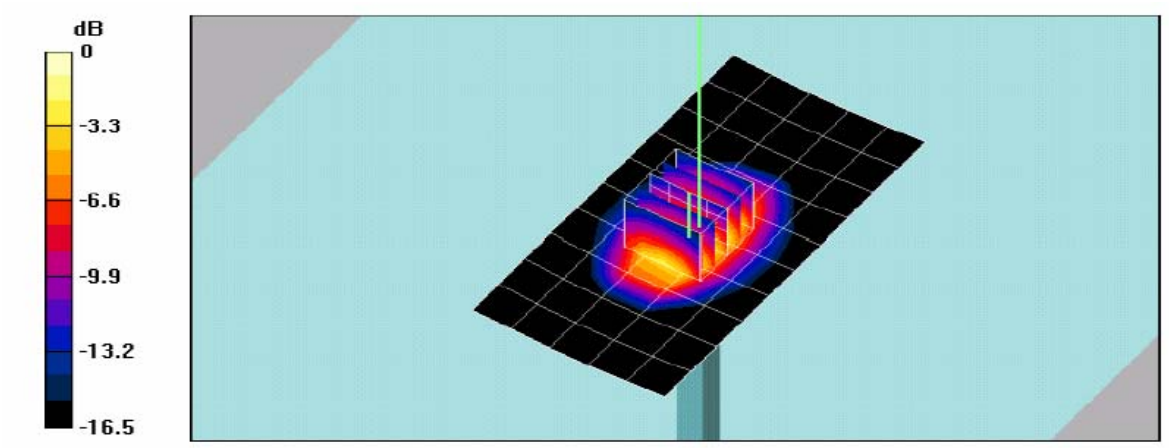
Probe: ET3DV6 - SN1383, Calibrated: 2/24/2005, ConvF(5.26, 5.26, 5.26)
Duty Cycle: 1:1, Medium: 1800 IEEE Head, Medium parameters used: σ = 1.36; mho/m, εr = 38.8; ρ = 1000 kg/m3
Electronics: DAE3 Sn406, Calibrated: 11/17/2004
System Performance 1800 MHz Head/Zoom Scan (5x5x5)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=7.5mm; Reference Value = 92.7 V/m; Power Drift = 0.003 dB; Peak SAR (extrapolated) = 16.1 W/kg
SAR(1 g) = 9.1 mW/g; SAR(10 g) = 4.82 mW/g
System Performance 1800 MHz Head/Zoom Scan 2 (5x5x5)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=7.5mm; Reference Value = 92.7 V/m; Power Drift = 0.003 dB; Peak SAR (extrapolated) = 16.1 W/kg
SAR(1 g) = 9.11 mW/g; SAR(10 g) = 4.82 mW/g



Motorola GEMS EME Laboratory
SPEAG 1800MHz Dipole; Model D1800V2, SN-278; Test Date: 4/29/05
Run #: 050429-01 Test operator: C. Miller
Sim.Tissue Temp: 21.2 (C)
TX Freq: 1800 (MHz) Start power: 250 (mW)

Target: 36.48 mW/g for 1g SAR 19.69 mW/g for 10g SAR
36.36 mW/g calculated 1g-SAR; -0.34 % from target (including drift)
19.53 mW/g calculated 10g-SAR; -0.83 % from target (including drift)

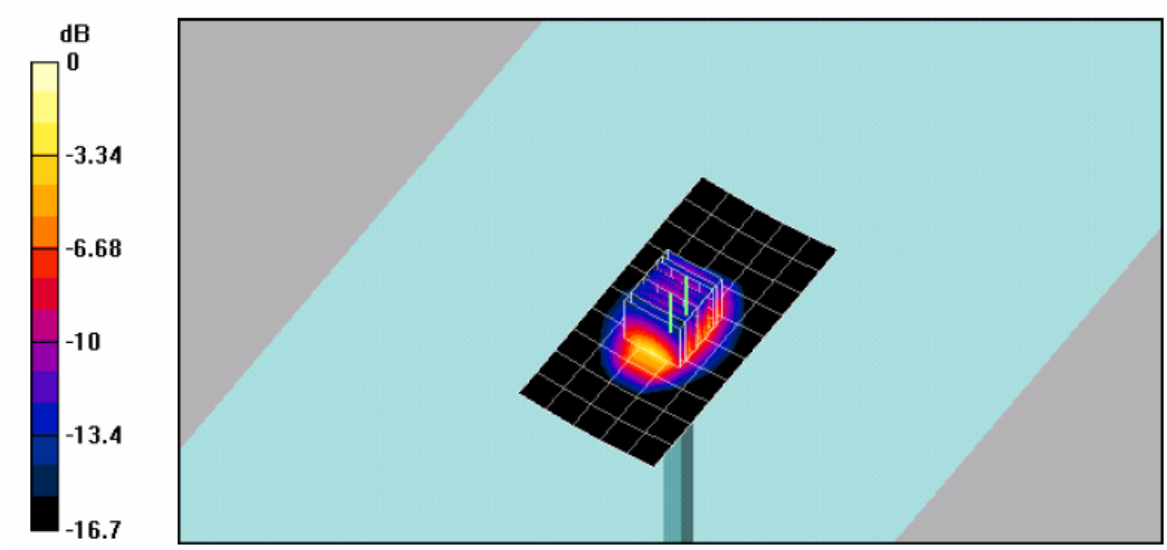
Probe: ET3DV6 - SN1383, Calibrated: 2/24/2005, ConvF(4.71, 4.71, 4.71)
Duty Cycle: 1:1, Medium: 1800 FCC Body, Medium parameters used: σ = 1.48; mho/m, εr = 54.9; ρ = 1000 kg/m3
Electronics: DAE3 Sn406, Calibrated: 11/17/2004
System Performance 1800 MHz Body/Zoom Scan (5x5x5)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=7.5mm; Reference Value = 88.5 V/m; Power Drift = 0.0386 dB; Peak SAR (extrapolated) = 15.4 W/kg
SAR(1 g) = 9.23 mW/g; SAR(10 g) = 4.96 mW/g
System Performance 1800 MHz Body/Zoom Scan 2 (5x5x5)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=7.5mm; Reference Value = 88.5 V/m; Power Drift = 0.0386 dB; Peak SAR (extrapolated) = 15.2 W/kg
SAR(1 g) = 9.11 mW/g; SAR(10 g) = 4.89 mW/g



Motorola GEMS EME Laboratory
SPEAG 1800MHz Dipole; Model D1800V2, SN-278; Test Date: 4/30/05
Run #: 050430-01 Test operator: C. Miller
Sim.Tissue Temp: 22.0 (C)
TX Freq: 1800 (MHz) Start power: 250 (mW)

Target: 36.48 mW/g for 1g SAR 19.69 mW/g for 10g SAR
36.07 mW/g calculated 1g-SAR; -1.11 % from target (including drift)
19.44 mW/g calculated 10g-SAR; -1.26 % from target (including drift)

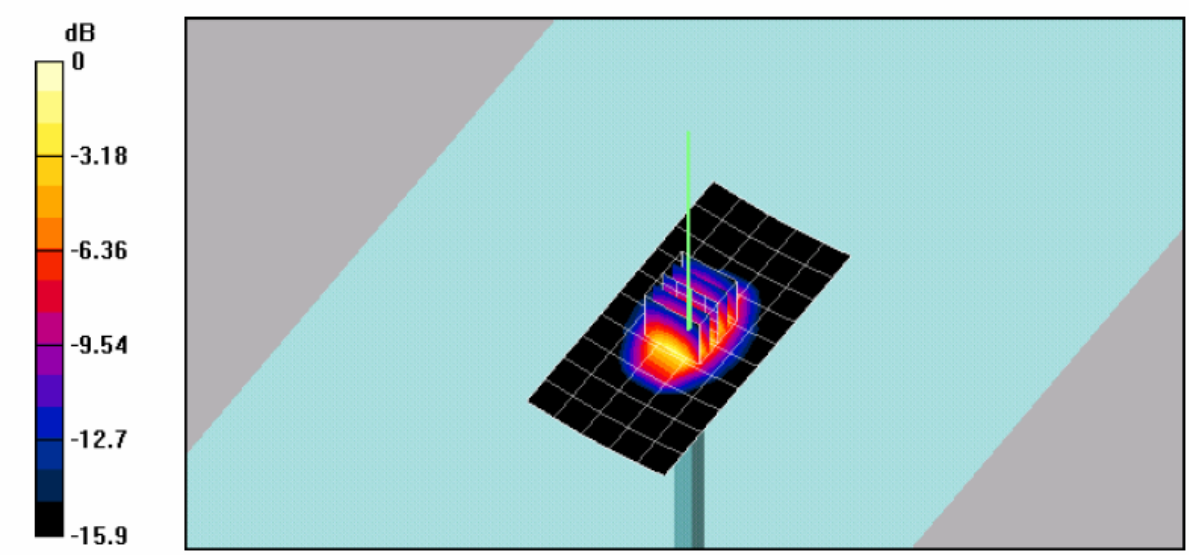
Probe: ET3DV6 - SN1383, Calibrated: 2/24/2005, ConvF(4.71, 4.71, 4.71)
Duty Cycle: 1:1, Medium: 1800 FCC Body, Medium parameters used: σ = 1.47; mho/m, εr = 54.6; ρ = 1000 kg/m3
Electronics: DAE3 Sn406, Calibrated: 11/17/2004
System Performance 1800 MHz Body/Zoom Scan (5x5x5)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=7.5mm; Reference Value = 89.1 V/m; Power Drift = 0.0794 dB; Peak SAR (extrapolated) = 15.3 W/kg
SAR(1 g) = 9.19 mW/g; SAR(10 g) = 4.95 mW/g
System Performance 1800 MHz Body/Zoom Scan 2 (5x5x5)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=7.5mm; Reference Value = 89.1 V/m; Power Drift = 0.0794 dB; Peak SAR (extrapolated) = 15.3 W/kg
SAR(1 g) = 9.18 mW/g; SAR(10 g) = 4.95 mW/g



Motorola GEMS EME Laboratory
SPEAG 1800MHz Dipole; Model D1800V2, SN-278; Test Date: 5/02/05
Run #: 050502-01 Test operator: C. Miller
Sim.Tissue Temp: 21.8 (C)
TX Freq: 1800 (MHz) Start power: 250 (mW)

Target: 36.48 mW/g for 1g SAR 19.69 mW/g for 10g SAR
38.45 mW/g calculated 1g-SAR; 5.40 % from target (including drift)
20.74 mW/g calculated 10g-SAR; 5.31 % from target (including drift)

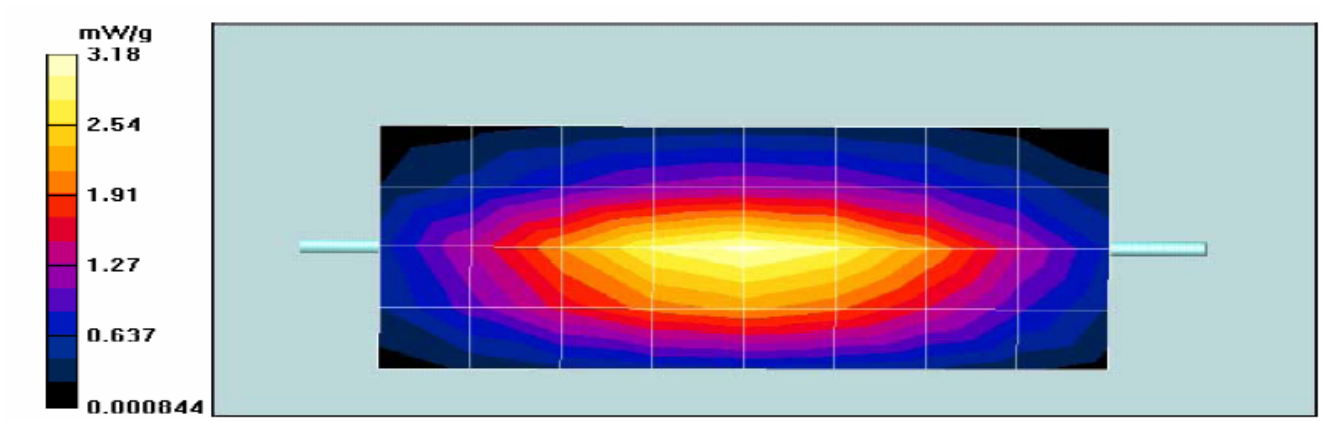
Probe: ET3DV6 - SN1383, Calibrated: 2/24/2005, ConvF(4.71, 4.71, 4.71)
Duty Cycle: 1:1, Medium: 1800 FCC Body, Medium parameters used: σ = 1.51; mho/m, εr = 52.9; ρ = 1000 kg/m3
Electronics: DAE3 Sn406, Calibrated: 11/17/2004
System Performance 1800 MHz Body/Zoom Scan (5x5x5)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=7.5mm; Reference Value = 91.6 V/m; Power Drift = -0.0284 dB; Peak SAR (extrapolated) = 15.8 W/kg
SAR(1 g) = 9.58 mW/g; SAR(10 g) = 5.17 mW/g
System Performance 1800 MHz Body/Zoom Scan 2 (5x5x5)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=7.5mm; Reference Value = 91.6 V/m; Power Drift = -0.0284 dB; Peak SAR (extrapolated) = 15.7 W/kg
SAR(1 g) = 9.52 mW/g; SAR(10 g) = 5.13 mW/g



Motorola GEMS EME Laboratory
SPEAG 900MHz Dipole; Model D900V2, SN-085; Test Date: 5/03/05
Run #: 050503-01 Test operator: D.Hopper
Sim.Tissue Temp: 21.9 (C)
TX Freq: 900(MHz) Start power: 250 (mW)

Target: 11.41 mW/g calculated 1g-SAR, 7.43 mW/g calculated 10g-SAR
11.52 mW/g calculated 1g-SAR; 0.96 % from target (including drift)
7.46 mW/g calculated 10g-SAR; 0.43 % from target (including drift)

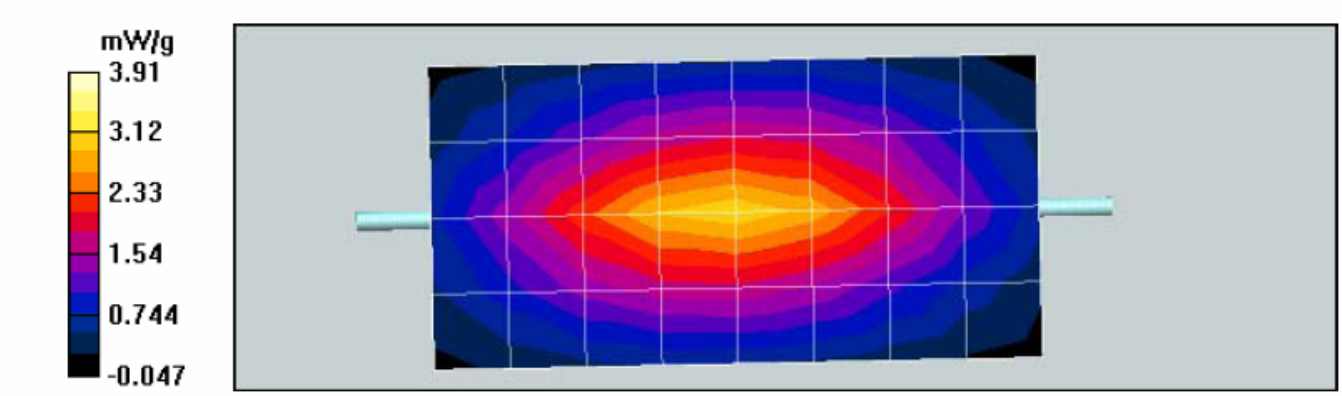
Probe: ET3DV6 - SN1383, Calibrated: 2/24/2005, ConvF(6.03, 6.03, 6.03)
Duty Cycle: 1:1, Medium: 900 MHz FCC Body, Medium parameters used: σ = 1.05; mho/m, ε_r = 53.6; ρ = 1000 kg/m3
Electronics: DAE3 Sn406, Calibrated: 11/17/2004
System Performance Check/0-Degree 5x5x7 Cube (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm; Reference Value = 56.8 V/m; Power Drift = 0.0453 dB; Peak SAR (extrapolated) = 4.22 W/kg
SAR(1 g) = 2.92 mW/g; SAR(10 g) = 1.89 mW/g
System Performance Check/90-Degree 5x5x7 Cube (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm; Reference Value = 56.8 V/m; Power Drift = 0.0453 dB; Peak SAR (extrapolated) = 4.19 W/kg
SAR(1 g) = 2.9 mW/g; SAR(10 g) = 1.88 mW/g



Motorola GEMS EME Laboratory
SPEAG 900MHz Dipole; Model D900V2, SN-085; Test Date: 5/04/05
Run #: 050504-01 Test operator: K.Uong
Sim.Tissue Temp: 20.4 (C)
TX Freq: 900(MHz) Start power: 250 (mW)

Target: 11.26 mW/g calculated 1g-SAR, 7.26 mW/g calculated 10g-SAR
11.43 mW/g calculated 1g-SAR; 1.5 % from target (including drift)
7.28 mW/g calculated 10g-SAR; 0.23 % from target (including drift)

Probe: ET3DV6 - SN1383, Calibrated: 2/24/2005, ConvF(6.35, 6.35, 6.35)
Duty Cycle: 1:1, Medium: 900 MHz IEEE Head, Medium parameters used: σ = 1.01; mho/m, εr = 41.9; ρ = 1000 kg/m3
Electronics: DAE3 Sn406, Calibrated: 11/17/2004
System Performance Check/0-Degree 5x5x7 Cube (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm Reference Value = 57.6 V/m; Power Drift = -0.034 dB; Peak SAR (extrapolated) = 4.33 W/kg
SAR(1 g) = 2.85 mW/g; SAR(10 g) = 1.81 mW/g
System Performance Check/90-Degree 5x5x7 Cube (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm; Reference Value = 57.6 V/m; Power Drift = -0.034 dB; Peak SAR (extrapolated) = 4.23 W/kg
SAR(1 g) = 2.82 mW/g; SAR(10 g) = 1.8 mW/g



SYSTEM PERFORMANCE TARGET CHECK

Date:	05/03/25	Frequency (MHz):	900
Lab Location:	GEMS-EME	Mixture Type:	900-Body
Robot System:	GEMS-EME -2	Ambient Temp.(°C):	22.0
Probe Serial #:	1393	Tissue Temp.(°C):	21.6
DAE Serial #:	DAE3V1 SN406		

Tissue Characteristics		Phantom Type/SN:	80302002D-S14
Permitivity:	52.9	Distance (mm):	15
Conductivity:	1.04		

Reference Source: Dipole (Dipole/Handset)
Reference SN: 085

Power to Dipole: 250 mW
Power Output (radio): N/A mW

Measured SAR Value: 2.855 mW/g, 1.86 mW/g (10g avg.)
Power Drift: -0.003 dB

Measured SAR Value: 11.41 mW/g, 7.43 mW/g (10g avg.)
(normalized to 1.0 W,
with drift compensation)

Test performed by: Dave Hopper Initial: [illegible]

DUT: Dipole 900 MHz; Date/Time: 03/25/05 17:01:42
Run #: 050325-05 Test operator: Dave Hopper
Robot = GEMS-2 Phantom #: 80302002D-S14 Sim.Tissue Temp: 21.6 (C)
Model #: D900V2 S/N: 085
TX Freq: 900(MHz) Start power: 250 (mW)
Target:
Establishing New Body Targets
11.41 mW/g calculated 1g-SAR; 0 % from target (including drift)
7.43 mW/g calculated 10g-SAR; 0 % from target (including drift)

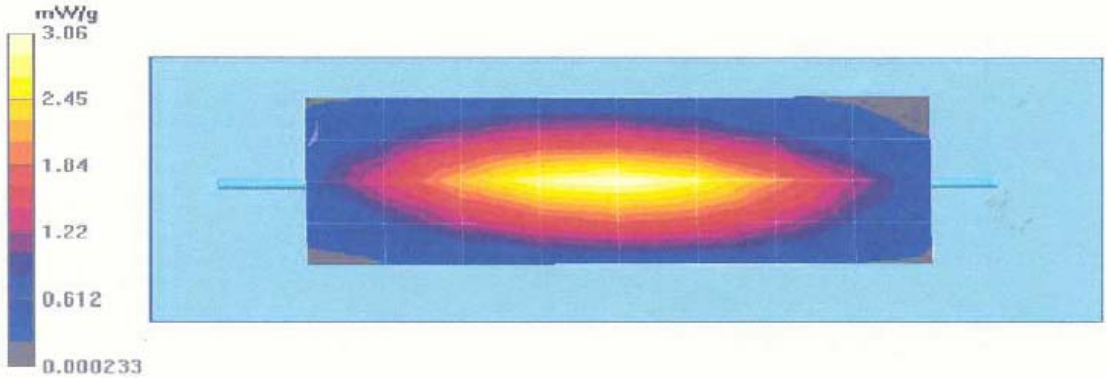
Probe: ET3DV6 - SN1393, Calibrated: 4/28/2004, ConvF(6.35, 6.35, 6.35)
Duty Cycle: 1:1, Medium: 900 MHz FCC Body, Medium parameters used: σ = 1.04; mho/m, ε_r = 52.9; ρ = 1000 kg/m^3
Electronics: DAE3 Sn406, Calibrated: 11/17/2004

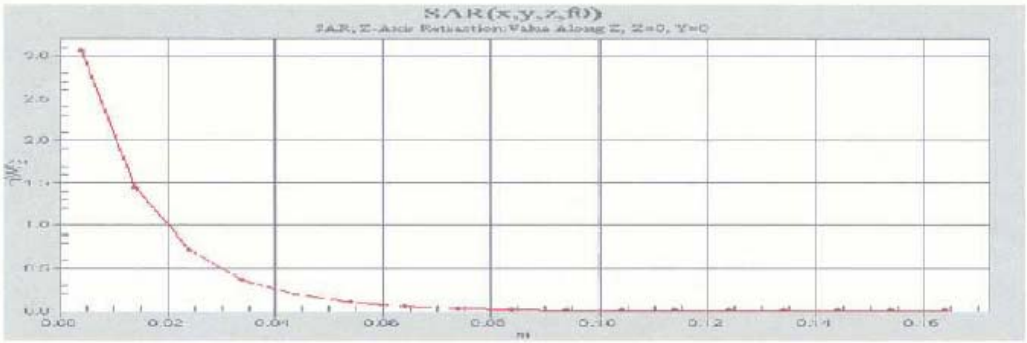
System Performance Check/0-Degree 5x5x7 Cube (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 56.3 V/m; Power Drift = 0.003 dB
Peak SAR (extrapolated) = 4.06 W/kg
SAR(1 g) = 2.83 mW/g; SAR(10 g) = 1.84 mW/g
Maximum value of SAR (measured) = 3.07 mW/g

System Performance Check/90-Degree 5x5x7 Cube (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 56.3 V/m; Power Drift = 0.003 dB
Peak SAR (extrapolated) = 4.1 W/kg
SAR(1 g) = 2.88 mW/g; SAR(10 g) = 1.88 mW/g
Maximum value of SAR (measured) = 3.14 mW/g

System Performance Check/Dipole Area Scan (5x9x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 3.04 mW/g

System Performance Check/Z-Axis Retraction (1x1x17): Measurement grid: dx=20mm, dy=20mm, dz=10mm
Maximum value of SAR (measured) = 3.06 mW/g





SYSTEM VALIDATION

Date:	03/25/05	Frequency (MHz):	900
Lab Location:	GEMS-EME	Mixture Type:	900-IEEE Head
Robot System:	GEMS-EME -2	Ambient Temp.(°C):	22.0
Probe Serial #:	1393	Tissue Temp.(°C):	20.3
DAE Serial #:	DAE3V1 SN406		

Tissue Characteristics		Phantom Type/SN:	SAMTP1209
Permitivity:	41.6	Distance (mm):	15
Conductivity:	1.00		

Reference Source: Dipole (Dipole/Handset)
Reference SN: 085

Power to Dipole: 250 mW
Power Output (radio): N/A mW

Target SAR Value: 10.8 mW/g, 6.9 mW/g (10g avg.)
(normalized to 1.0 W)

Measured SAR Value: 2.78 mW/g, 1.78 mW/g (10g avg.)
Power Drift: -0.0529 dB

Measured SAR Value: 11.26 mW/g, 7.26 mW/g (10g avg.)
(normalized to 1.0 W,
with drift compensation)

Percent Difference From Target (must be within System Uncertainty): 4.22 % (1g avg)
4.45 % (10g avg)

Test performed by: Dave Hopper Initial:

DUT: Dipole 900 MHz; Date/Time: 03/25/05 15:22:41
Run #: 050325-04 Test operator: Dave Hopper
Robot = GEMS-2 Phantom #: SAMTP1209 Sim.Tissue Temp: 20.9 (C)
Model #: D900V2 S/N: 085
TX Freq: 900(MHz) Start power: 250 (mW)
Target:
11.2 mW/g for 1g SAR 7.16 mW/g for 10g SAR
11.26 mW/g calculated 1g-SAR; 0.50 % from target (including drift)
7.21 mW/g calculated 10g-SAR; 1.23 % from target (including drift)

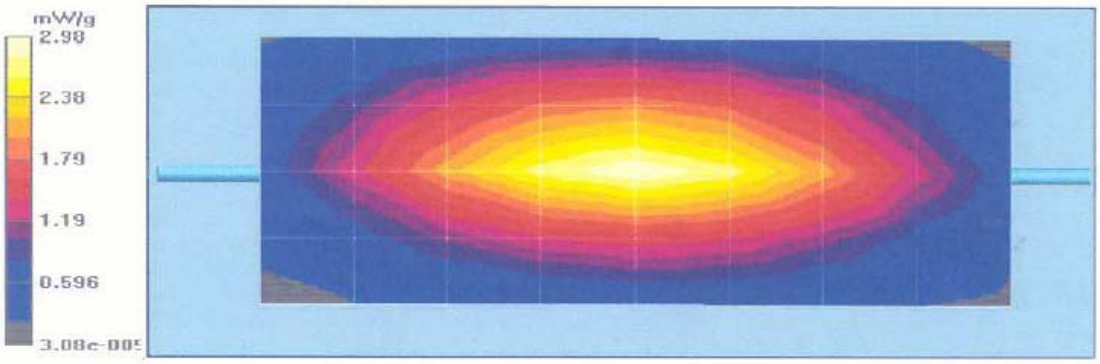
Probe: ET3DV6 - SN1393, Calibrated: 4/28/2004, ConvF(6.73, 6.73, 6.73)
Duty Cycle: 1:1, Medium: 900 MHz IEEE Head, Medium parameters used: σ = 1; mho/m, ε_r = 41.6; ρ = 1000 kg/m^3
Electronics: DAE3 Sn406, Calibrated: 11/17/2004

System Performance Check/0-Degree 5x5x7 Cube (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 56.7 V/m; Power Drift = -0.0529 dB
Peak SAR (extrapolated) = 4.11 W/kg
SAR(1 g) = 2.75 mW/g; SAR(10 g) = 1.76 mW/g
Maximum value of SAR (measured) = 2.98 mW/g

System Performance Check/90-Degree 5x5x7 Cube (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 56.7 V/m; Power Drift = -0.0529 dB
Peak SAR (extrapolated) = 4.18 W/kg
SAR(1 g) = 2.81 mW/g; SAR(10 g) = 1.8 mW/g
Maximum value of SAR (measured) = 3.05 mW/g

System Performance Check/Dipole Area Scan (5x9x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 2.96 mW/g

System Performance Check/Z-Axis Retraction (1x1x17): Measurement grid: dx=20mm, dy=20mm, dz=10mm



SYSTEM PERFORMANCE CHECK TARGET SAR

Date:	4/28/2005	Frequency (MHz):	1800
Lab Location:	GEMS	Mixture Type:	FCC Body
Robot System:	GEMS-2	Ambient Temp.(°C):	21 C
Probe Serial #:	1383	Tissue Temp.(°C):	21.9 C
DAE Serial #:	406		

Tissue Characteristics

Permitivity:	55.1	Phantom Type/SN:	80302002C
Conductivity:	1.48	Distance (mm):	10 mm (tissue/dipole ctr)

Reference Source:	1800 V2	(Dipole)
Reference SN:	278	

Power to Dipole: 250 mW

Measured SAR Value: 9.105 mW/g, 4.915 mW/g (10g avg.)
Power Drift: -0.00755 dB

New Target/Measured
SAR Value: 36.48 mW/g, 19.69 mW/g (10g avg.)
(normalized to 1.0 W, including drift)

Test performed by: C. Miller Initial:

DUT: Dipole 1800 MHz; Date/Time: 04/28/05 14:39:35
Run #: 050428-02 Test operator: C. Miller
Robot = GEMS-2 Phantom #: 80302002C/S9 Sim.Tissue Temp: 21.9 (C)
Model #: D1800V2 S/N: 278
TX Freq: 1800 (MHz) Start power: 250 (mW)
Target:
36.48 mW/g for 1g SAR 19.69 mW/g for 10g SAR
System performance targets

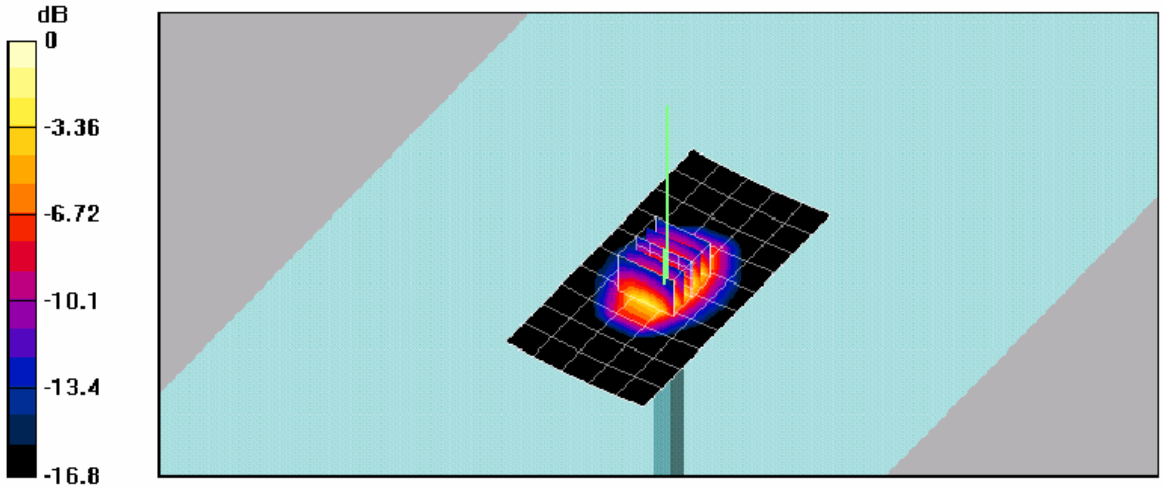
Probe: ET3DV6 - SN1383, Calibrated: 2/24/2005, ConvF(4.71, 4.71, 4.71)
Duty Cycle: 1:1, Medium: 1800 FCC Body, Medium parameters used: $\sigma = 1.48$; mho/m, $\varepsilon_r = 55.1$; $\rho = 1000$ kg/m^3
Electronics: DAE3 Sn406, Calibrated: 11/17/2004

System Performance 1800 MHz Body/Area Scan (51x101x1): Measurement grid: dx=15mm, dy=15mm
Reference Value = 90.3 V/m; Power Drift = -0.00755 dB
Motorola Fast SAR: SAR(1 g) = 9.29 mW/g; SAR(10 g) = 4.87 mW/g
Maximum value of SAR (interpolated) = 11.3 mW/g

System Performance 1800 MHz Body/Z Scan (1x1x16): Measurement grid: dx=20mm, dy=20mm, dz=10mm
Maximum value of SAR (measured) = 12.3 mW/g

System Performance 1800 MHz Body/Zoom Scan (5x5x5)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=7.5mm
Reference Value = 90.3 V/m; Power Drift = -0.00755 dB
Peak SAR (extrapolated) = 15.1 W/kg
SAR(1 g) = 9.12 mW/g; SAR(10 g) = 4.92 mW/g
Maximum value of SAR (measured) = 10.2 mW/g

System Performance 1800 MHz Body/Zoom Scan 2 (5x5x5)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=7.5mm
Reference Value = 90.3 V/m; Power Drift = -0.00755 dB
Peak SAR (extrapolated) = 15.2 W/kg
SAR(1 g) = 9.09 mW/g; SAR(10 g) = 4.91 mW/g
Maximum value of SAR (measured) = 9.91 mW/g



0 dB = 9.91mW/g

SYSTEM VALIDATION

Date:	4/28/2005	Frequency (MHz):	1800 MHz
Lab Location:	GEMS	Mixture Type:	IEEE Head
Robot System:	GEMS-2	Ambient Temp.(°C):	21 C
Probe Serial #:	1383	Tissue Temp.(°C):	22.0 C
DAE Serial #:	406		

Tissue Characteristics

Permitivity:	38.8	Phantom Type/SN:	SAMTP1208
Conductivity:	1.4	Distance (mm):	10 mm (tissue/dipole cnt)

Reference Source:	1800 V2	(Dipole)
Reference SN:	278	

Power to Dipole:	250	mW
Power Output (radio):	N/A	mW

Target SAR Value: (normalized to 1.0 W)	38.1	mW/g,	19.8	mW/g (10g avg.)
Measured SAR Value:	9.105	mW/g,	4.82	mW/g (10g avg.)
Power Drift:	0.00335	dB		
Measured SAR Value: (normalized to 1.0 W, including drift)	36.39	mW/g,	19.27	mW/g (10g avg.)

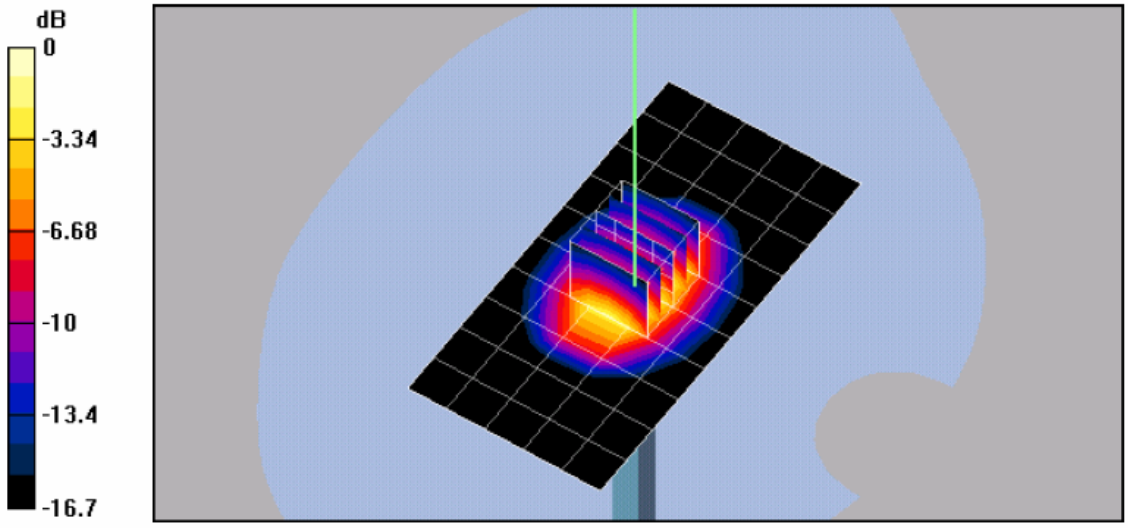
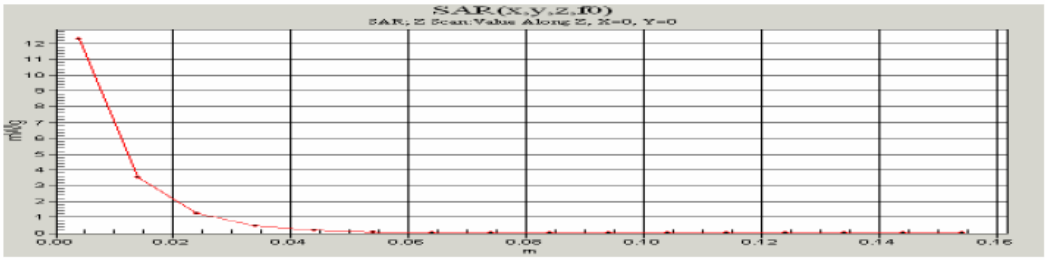
Percent Difference From Target (MUST be within System Uncertainty):	-4.48%	(1g ave)
	-2.70%	(10g ave)

Test performed by: Clint Miller Initial: Clint

DUT: Dipole 1800 MHz; Date/Time: 04/28/05 14:02:24
Run #: 050428-01 Test operator: C. Miller
Robot = GEMS-2 Phantom #: SAMTP1208 Sim.Tissue Temp: 21.6 (C)
Model #: D1800V2 S/N: 278
TX Freq: 1800 (MHz) Start power: 250 (mW)

Target: 36.39 mW/g for 1g SAR 19.27 mW/g for 10g SAR
System performance targets

Probe: ET3DV6 - SN1383, Calibrated: 2/24/2005, ConvF(5.26, 5.26, 5.26)
Duty Cycle: 1:1, Medium: 1800 IEEE Head, Medium parameters used: σ = 1.36; mho/m, εr = 38.8; ρ = 1000 kg/m3
Electronics: DAE3 Sn406, Calibrated: 11/17/2004
System Performance 1800 MHz Head/Zoom Scan (5x5x5)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=7.5mm; Reference Value = 92.7 V/m; Power Drift = 0.00335 dB; Peak SAR (extrapolated) = 16.1 W/kg
SAR(1 g) = 9.1 mW/g; SAR(10 g) = 4.82 mW/g
System Performance 1800 MHz Head/Zoom Scan 2 (5x5x5)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=7.5mm; Reference Value = 92.7 V/m; Power Drift = 0.00335 dB; Peak SAR (extrapolated) = 16.1 W/kg
SAR(1 g) = 9.11 mW/g; SAR(10 g) = 4.82 mW/g



0 dB = 10.2mW/g