



**MOTOROLA**



**CGISS EME Test Laboratory**

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Fort Lauderdale, FL. 33322

**S.A.R. EME Compliance Test Report**

**Part 2 of 3**

**Date of Report:** November 20, 2003  
**Report Revision:** Rev. O  
**Manufacturer:** Motorola  
**Product Description:** Portable 136-174 MHz, 5W, 32 CH  
w/ display/Limited Keypad  
**FCC ID:** **ABZ99FT3050**  
**Device Model:** PMUD1928A

**Test Period:** 11/6/03 – 11/13/03

**EME Technician:** Ed Church  
**Responsible Engineer:** Kim Uong (Sr. EME Engineer)

**Author:** Michael Sailsman  
Global EME Regulatory Affairs Liaison

**Note:** 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 all applicable national and international reference standards and guidelines.

Deanna Zakharia Signature on File

11/20/03

Ken Enger

Senior Resource Manager, Product Safety and EME Director, Phone: 954-723-6299

Date Approved

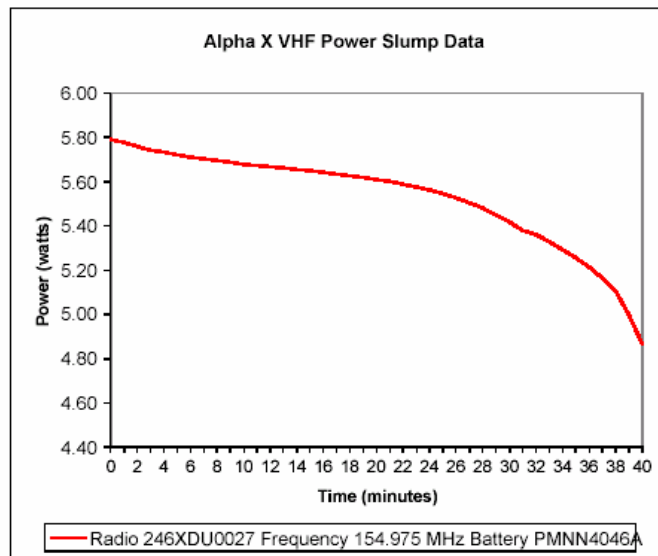
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## **APPENDIX A**

### **Power Slump Data/Shortened Scan**

## DUT Power versus time Data

Alpha X VHF	Radio
	246XDU0027
	Frequency 154.975 MHz
	Battery PMNN4046A
Time(minutes)	Power (watts)
0	5.79
1	5.78
2	5.76
3	5.74
4	5.74
5	5.72
6	5.71
7	5.70
8	5.70
9	5.69
10	5.68
11	5.67
12	5.67
13	5.66
14	5.66
15	5.65
16	5.64
17	5.64
18	5.63
19	5.62
20	5.61
21	5.60
22	5.59
23	5.58
24	5.56
25	5.55
26	5.53
27	5.51
28	5.48
29	5.45
30	5.42
31	5.38
32	5.36
33	5.33
34	5.29
35	5.26
36	5.21
37	5.16
38	5.11
39	5.00
40	4.87



## Shortened Scan Results

**FCC ID: ABZ99FT3050; Test Date: 11/11/03**

**Motorola CGISS EME Laboratory**

RUN #: EC-R2-031111-12

MODEL #: PMUD1928A S/N: 246XDU0027

Tx freq: 161.525 MHz

Tissue temp: 20.7 C

Start power: 5.68 W

Antenna #: PMAD4015A

Battery kit: PMNN4046A

Carry Accessories:PMLN4468A

Audio/data accessories: HMN9013A

**Shortened scan reflect highest S.A.R. producing configuration at the body.**

**Run time 7 minutes**

**Representative “normal” scan run time was 25 minutes**

**“Shortened” scan; max calc. S.A.R. (drift adjusted) w/ 50% duty cycle = 5.51 mW/g**

**“Normal” scan; max. calc. S.A.R. (drift adjusted) w/ 50% duty cycle = 6.26 mW/g**

**(see section 7.1 run # KU-R2-031110-05)**

**DUT w/ carry case against the phantom**

Flat (2) Phantom; Ab Section; Position: (90°,90°);

Probe: ET3DV6 - SN1383 (Cal Date 26 February 2003); ConvF(8.10,8.10,8.10); Probe cal date: 26/02/03; Crest factor: 1.0;

FCC Body 155:  $\sigma = 0.78$  mho/m  $\epsilon_r = 59.9$   $\rho = 1.00$  g/cm<sup>3</sup>; DAE: SN401 (08/21/03)

Cube 5x5x7: SAR (1g): 9.99 mW/g, SAR (10g): 5.23 mW/g, (Worst-case extrapolation)

Coarse: Dx = 15.0, Dy = 15.0, Dz = 10.0; Max at 28.5, 103.5, 4.7

Power drift: -0.41 dB



FCC ID: ABZ99FT3050; Test Date: 11/12/03

Motorola CGISS EME Laboratory

RUN #: EC-R2-031112-22

MODEL #: PMUD1928A S/N: 246XDU0027

Tx freq: 161.525

Tissue temp: 20.9 C

Start power : 5.71 W

Antenna #: NAD6502A

Battery kit: PMNN4046A

Carry Accessories: None

Audio/data accessories: None

Shortened scan reflect highest S.A.R. producing configuration at the face.

Run time 7 minutes

Representative “normal” scan run time was 25 minutes

“Shortened” scan; max calc. S.A.R. (drift adjusted) w/ 50% duty cycle = 2.03 mW/g

“Normal” scan; max. calc. S.A.R. (drift adjusted) w/ 50% duty cycle = 2.28 mW/g

(see section 7.1 run # EC-R2-031112-20)

DUT w/ front separated 2.5cm from the phantom

Flat (2) Phantom; Ab Section; Position: (90°,90°);

Probe: ET3DV6 - SN1383 (Cal Date 26 February 2003); ConvF(9.00,9.00,9.00); Probe cal date: 26/02/03; Crest factor: 1.0;

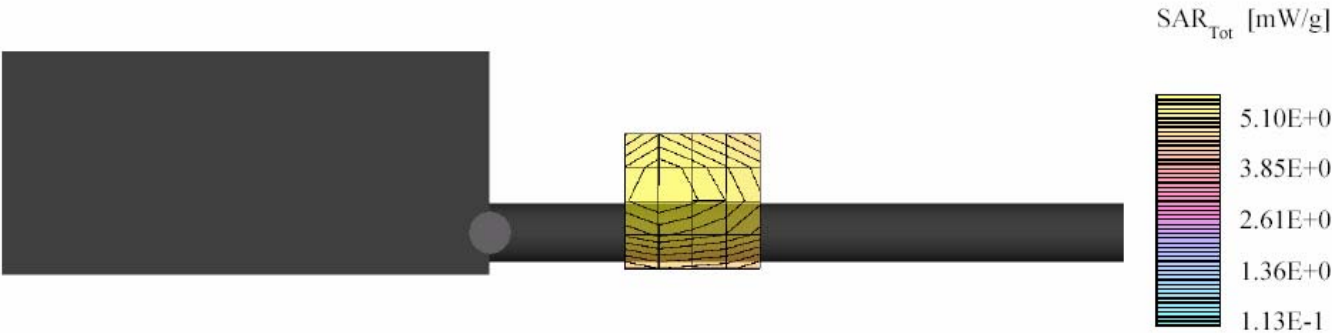
IEEE Head 155 MHz:  $\sigma = 0.76$  mho/m  $\epsilon_r = 53.1$   $\rho = 1.00$  g/cm<sup>3</sup>; DAE: SN401 (08/21/03)

Cube 5x5x7: SAR (1g): 4.04 mW/g, SAR (10g): 3.04 mW/g \* Max outside, (Worst-case extrapolation)

Coarse: Dx = 15.0, Dy = 15.0, Dz = 10.0; Max at 52.5, 168.0, 4.7

Power drift: -0.02 dB

Note: “Max outside” has been identified by SPEAG as an unresolved intermittent occurrence with the DASY 3 application even when the entire peak area is captured.



## **APPENDIX B**

### **Data Results**

**FCC ID: ABZ99FT3050; Test Date: 11/07/03**

**Motorola CGISS EME Laboratory**

RUN #: KU-R2-031107-06

MODEL #: PMUD1928A S/N: 246XDU0027

Tx freq: 161.525 MHz

Tissue temp: 21.0 C

Start power : 5.66 W

Antenna #: PMAD4015A

Battery kit: PMNN4046A

Carry Accessories: HLN9844A

Audio/data accessories: HMN9030A

**DUT w/ belt clip against the phantom**

Flat (2) Phantom; Ab Section; Position: (90°,90°);

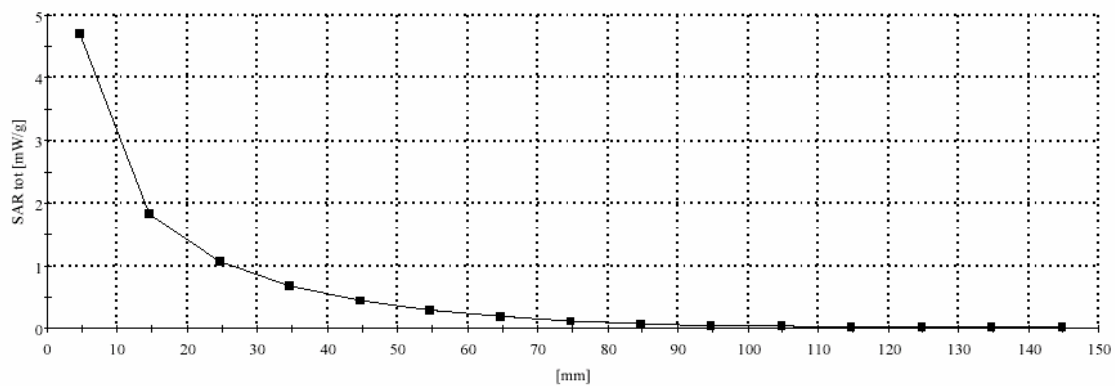
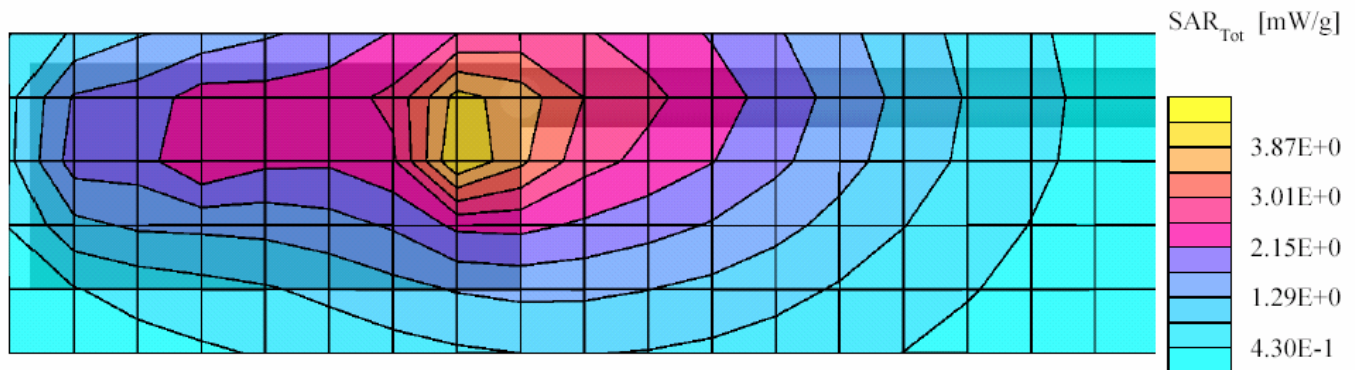
Probe: ET3DV6 - SN1383 (Cal Date 26 February 2003); ConvF(8.10,8.10,8.10); Probe cal date: 26/02/03; Crest factor: 1.0;

FCC Body 155:  $\sigma = 0.78$  mho/m  $\epsilon = 59.3$   $\rho = 1.00$  g/cm<sup>3</sup>; DAE: SN401 (08/21/03)

Cube 7x7x7: SAR (1g): 4.78 mW/g, SAR (10g): 2.86 mW/g, (Worst-case extrapolation)

Coarse: Dx = 15.0, Dy = 15.0, Dz = 10.0; Max at 24.0, 108.0, 4.7

Power drift: -0.81 dB



**FCC ID: ABZ99FT3050; Test Date: 11/11/03**

**Motorola CGISS EME Laboratory**

RUN #: KU-R2-031111-03

MODEL #: PMUD1928A S/N: 246XDU0027

Tx freq: 161.525 MHz

Tissue temp: 20.8 C

Start power : 5.73 W

Antenna #: PMAD4015A

Battery kit: PMNN4046A

Carry Accessories:PMLN4468A

Audio/data accessories: HMN9030A

**DUT w/ carry case against the phantom**

Flat (2) Phantom; Ab Section; Position: (90°,90°);

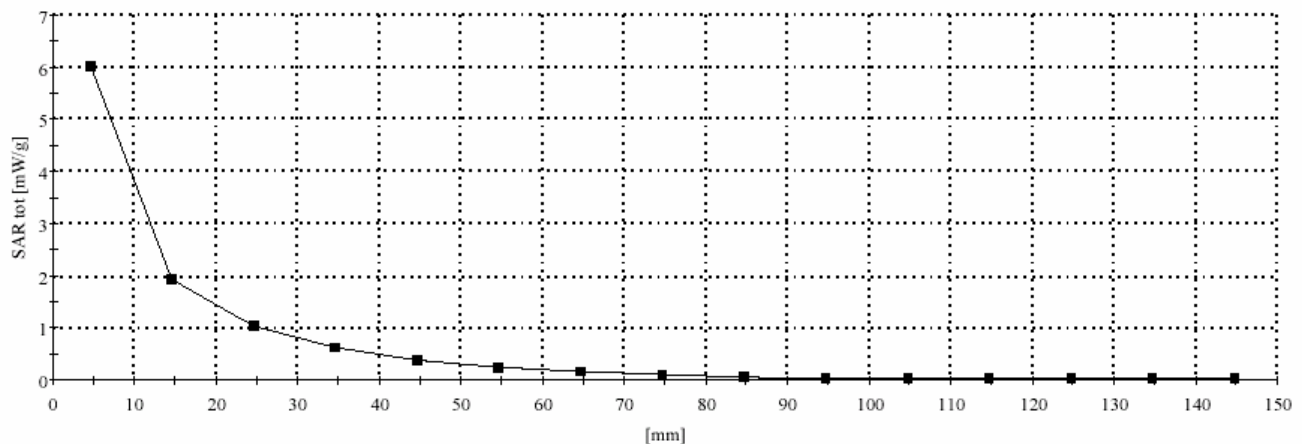
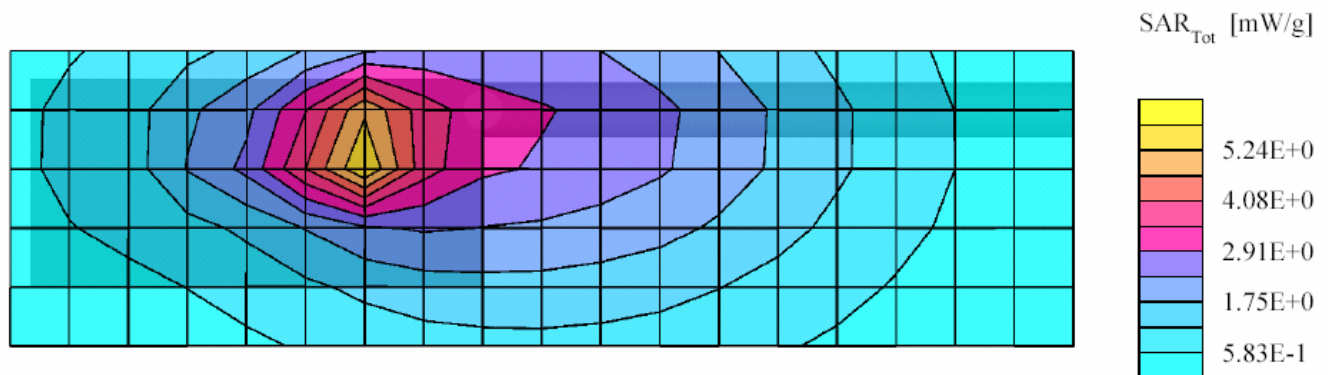
Probe: ET3DV6 - SN1383 (Cal Date 26 February 2003); ConvF(8.10,8.10,8.10); Probe cal date: 26/02/03; Crest factor: 1.0;

FCC Body 155:  $\sigma = 0.78$  mho/m  $\epsilon = 59.9$   $\rho = 1.00$  g/cm<sup>3</sup>; DAE: SN401 (08/21/03)

Cube 7x7x7: SAR (1g): 6.42 mW/g, SAR (10g): 3.48 mW/g, (Worst-case extrapolation)

Coarse: Dx = 15.0, Dy = 15.0, Dz = 10.0; Max at 25.5, 90.0, 4.7

Power drift: -0.90 dB





**FCC ID: ABZ99FT3050; Test Date: 11/10/03**

**Motorola CGISS EME Laboratory**

RUN #: KU-R2-031110-05

MODEL #: PMUD1928A S/N: 246XDU0027

Tx freq: 161.525 MHz

Tissue temp: 20.8 C

Start power : 5.61 W

Antenna #: PMAD4015A

Battery kit: PMNN4046A

Carry Accessories:PMLN4468A

Audio/data accessories: HMN9013A

**DUT w/ carry case against the phantom**

Flat (2) Phantom; Ab Section; Position: (90°,90°);

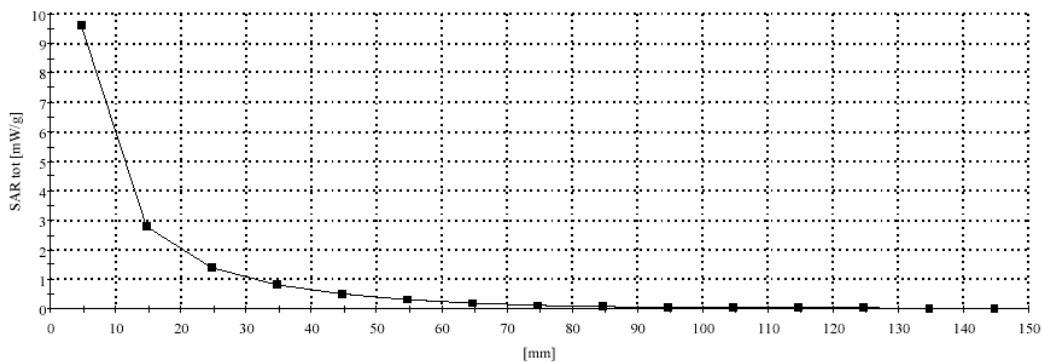
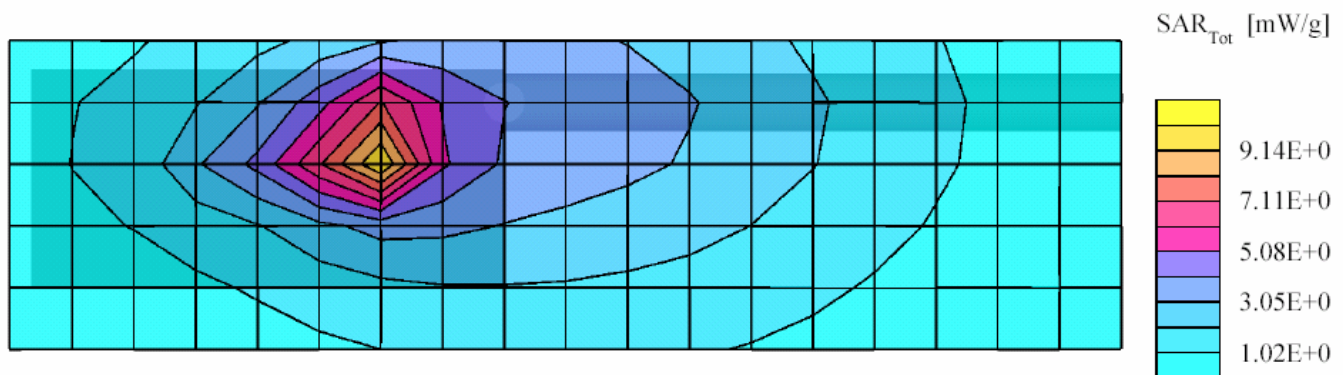
Probe: ET3DV6 - SN1383 (Cal Date 26 February 2003); ConvF(8.10,8.10,8.10); Probe cal date: 26/02/03; Crest factor: 1.0;

FCC Body 155:  $\sigma = 0.77$  mho/m  $\epsilon = 59.6$   $\rho = 1.00$  g/cm<sup>3</sup>; DAE: SN401 (08/21/03)

Cube 7x7x7: SAR (1g): 10.3 mW/g, SAR (10g): 5.35 mW/g, (Worst-case extrapolation)

Coarse: Dx = 15.0, Dy = 15.0, Dz = 10.0; Max at 27.0, 88.5, 4.7

Power drift: -0.78 dB



**FCC ID: ABZ99FT3050; Test Date: 11/11/03**

**Motorola CGISS EME Laboratory**

RUN #: EC-R2-031111-15

MODEL #: PMUD1928A S/N: 246XDU0027

Tx freq: 161.525

Tissue temp: 20.7 C

Start power : 5.69 W

Antenna #: PMAD4015A

Battery kit: PMNN4046A

Carry Accessories: None

Audio/data accessories: HMN9013A

**DUT w/ front separated 2.5 cm from the phantom**

Flat (2) Phantom; Ab Section; Position: (90°,90°);

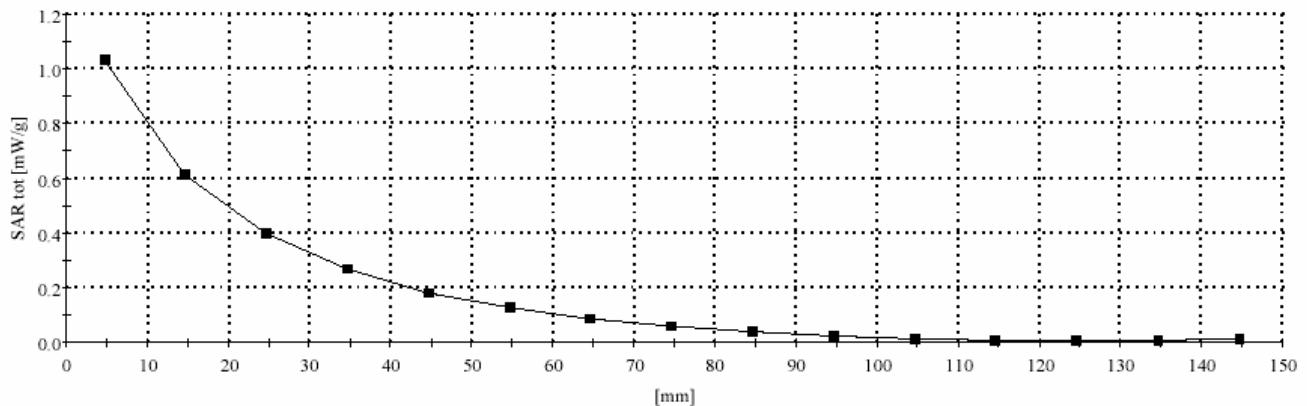
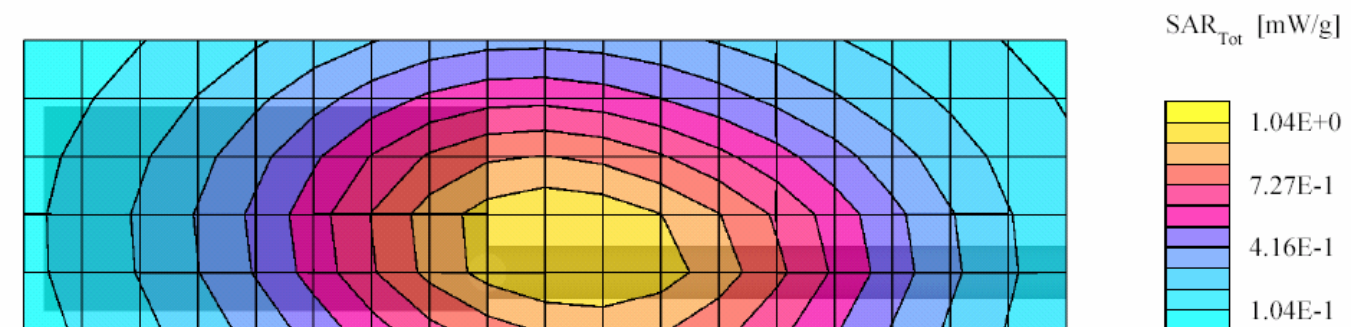
Probe: ET3DV6 - SN1383 (Cal Date 26 February 2003); ConvF(8.10,8.10,8.10); Probe cal date: 26/02/03; Crest factor: 1.0;

FCC Body 155:  $\sigma = 0.78$  mho/m  $\epsilon = 59.9$   $\rho = 1.00$  g/cm<sup>3</sup>; DAE: SN401 (08/21/03)

Cube 7x7x7: SAR (1g): 1.05 mW/g, SAR (10g): 0.790 mW/g, (Worst-case extrapolation)

Coarse: Dx = 15.0, Dy = 15.0, Dz = 10.0; Max at 54.0, 141.0, 4.7

Power drift: -0.03 dB



**FCC ID: ABZ99FT3050; Test Date: 11/12/03**

**Motorola CGISS EME Laboratory**

RUN #: EC-R2-031112-20

MODEL #: PMUD1928A S/N: 246XDU0027

Tx freq: 161.525 MHz

Tissue temp: 20.9 C

Start power : 5.71 W

Antenna #: NAD6502A

Battery kit: PMNN4046A

Carry Accessories: None

Audio/data accessories: None

**DUT w/ front separated 2.5cm from the phantom**

Flat (2) Phantom; Ab Section; Position: (90°,90°);

Probe: ET3DV6 - SN1383 (Cal Date 26 February 2003); ConvF(9.00,9.00,9.00); Probe cal date: 26/02/03; Crest factor: 1.0;

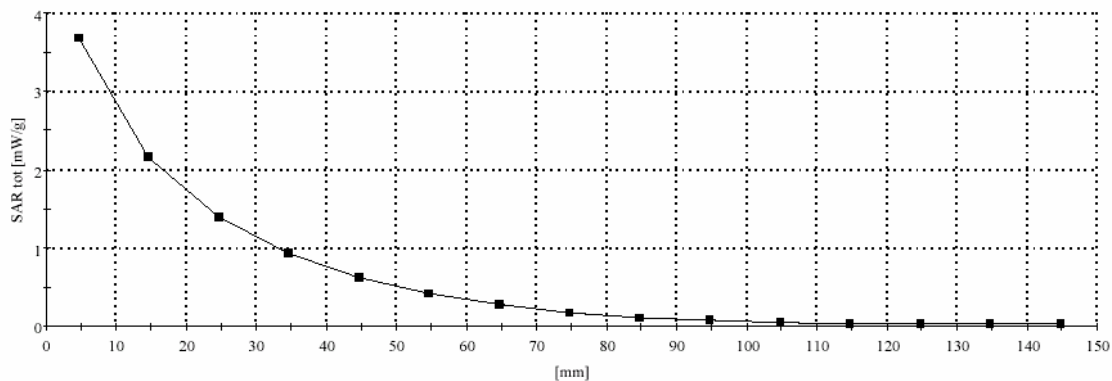
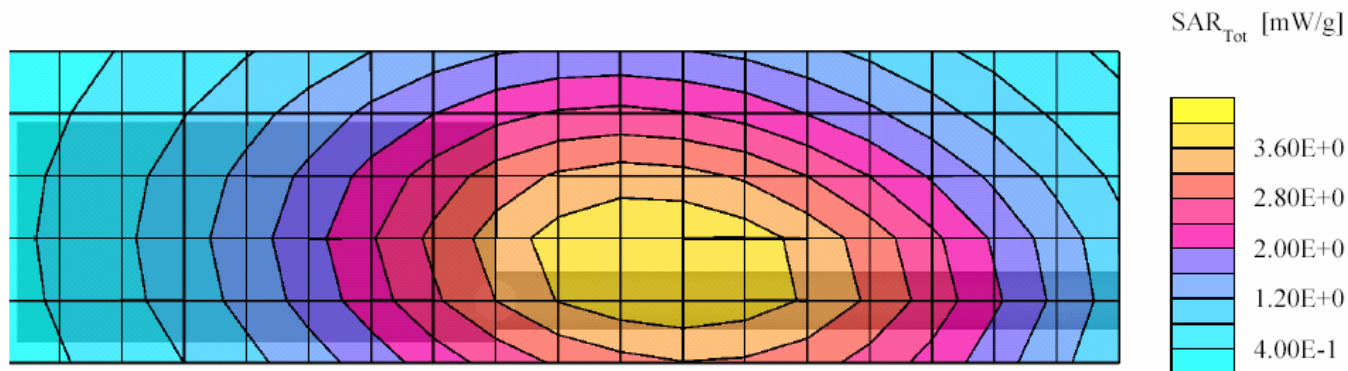
IEEE Head 155 MHz:  $\sigma = 0.76$  mho/m  $\epsilon_r = 53.1$   $\rho = 1.00$  g/cm<sup>3</sup>; DAE: SN401 (08/21/03)

Cube 7x7x7: SAR (1g): 3.92 mW/g, SAR (10g): 2.95 mW/g \* Max outside, (Worst-case extrapolation)

Coarse: Dx = 15.0, Dy = 15.0, Dz = 10.0; Max at 51.0, 162.0, 4.7

Power drift: -0.66 dB

Note: "Max outside" has been identified by SPEAG as an unresolved intermittent occurrence with the DASY 3 application even when the entire peak area is captured.



## **APPENDIX C**

### **Dipole System Performance Check Results**

Per FCC Supplement C (Edition 01-01) Appendix D under “System Verification” “(Note: systems maybe verified at 300MHz until standard dipoles at below 300MHz are available):” At the time of compliance assessment of this product, standard dipoles below 300MHz were not available.

IEEE Std 1528-2003 the system validation results is allowed to be within the measurement system uncertainty of the target numerical reference S.A.R. values published. Section 6.0 of the submitted report shows a total measurement system uncertainty of 12%.

300 MHz dipole validation scans at the head from SPEAG are provided in APPENDIX D. The CGISS 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 CGISS EME system performance validation are provided in this appendix.

**SPEAG 300 MHz Dipole; D300V2, SN1002; Test Date: 11/06/03**

**Motorola CGISS EME Lab**

Run #: Sys Perf-R2-031106-01

TX Freq: 300 MHz

Sim Tissue Temp: 20.9 C

Start Power: 250mW

Target: 2.74 mW/g (1g-SAR), 1.85 mW/g (10g-SAR) from System performance target (11/03/03)

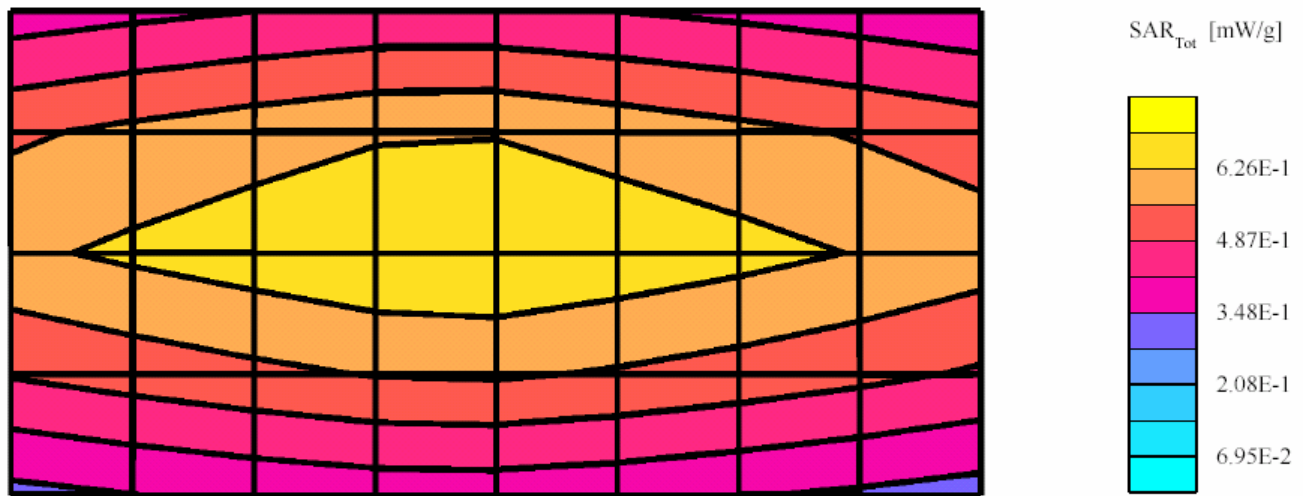
SAR calculated 1g is 2.80 mW/g percent from target (including drift) is + 2.13 %

SAR Calculated 10g is 1.88 mW/g Percent from target (including drift) is +1.97%

Flat (2); Probe: ET3DV6 - SN1383 (Cal Date 26 February 2003); Probe Cal Date: 26/02/03 ConvF(7.80,7.80,7.80); Crest factor: 1.0; FCC Body 300:  $\sigma = 0.88$  mho/m  $\epsilon = 55.8$   $\rho = 1.00$  g/cm<sup>3</sup>; DAE: SN401 (08/21/03)

Cubes (2): Peak: 1.07 mW/g  $\pm 0.01$  dB, SAR (1g): 0.699 mW/g  $\pm 0.01$  dB, SAR (10g): 0.470 mW/g  $\pm 0.01$  dB, (Worst-case extrapolation) Penetration depth: 13.2 (11.6, 15.3) [mm]

Power drift: -0.01 dB



**SPEAG 300 MHz Dipole; D300V2, SN1002; Test Date: 11/07/03**

**Motorola CGISS EME Lab**

Run #: Sys Perf-R2-031107-01

TX Freq: 300 MHz

Sim Tissue Temp: 21.0 C

Start Power: 250mW

Target: 2.74 mW/g (1g-SAR), 1.85 mW/g (10g-SAR) from System performance target (11/03/03)

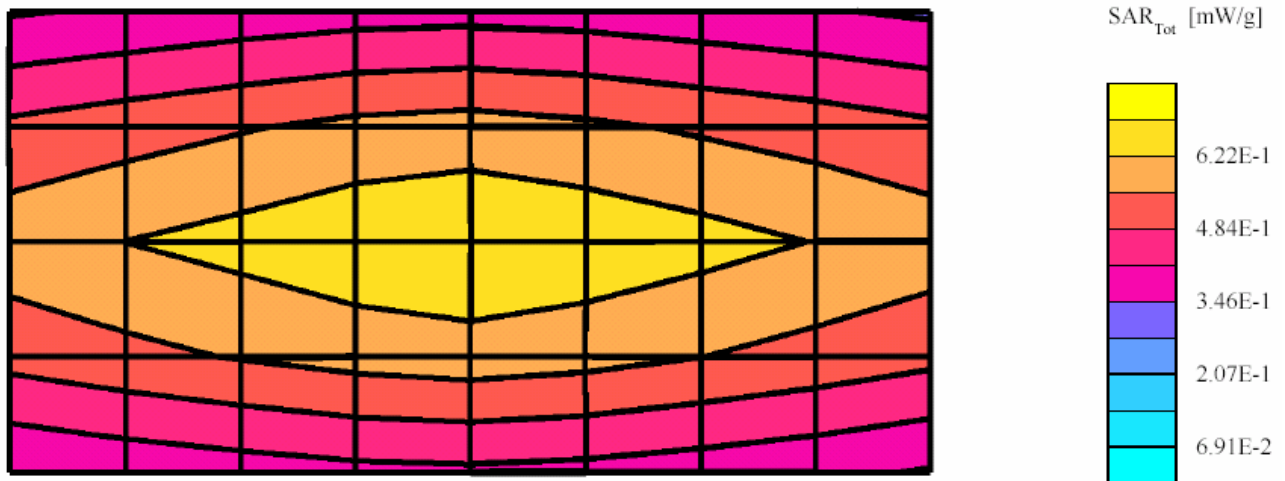
SAR calculated 1g is 2.78 mW/g percent from target (including drift) is + 1.39 %

SAR Calculated 10g is 1.87 mW/g Percent from target (including drift) is +1.17%

Flat (2); Probe: ET3DV6 - SN1383 (Cal Date 26 February 2003);Probe Cal Date: 26/02/03ConvF(7.80,7.80,7.80); Crest factor: 1.0; FCC Body 300:  $\sigma = 0.88$  mho/m  $\epsilon = 56.0$   $\rho = 1.00$  g/cm<sup>3</sup>; DAE3: SN: 401( 08/21/03)

Cubes (2): Peak: 1.05 mW/g  $\pm 0.01$  dB, SAR (1g): 0.686 mW/g  $\pm 0.01$  dB, SAR (10g): 0.461 mW/g  $\pm 0.01$  dB, (Worst-case extrapolation) Penetration depth: 13.2 (11.6, 15.2) [mm]

Power drift: -0.06 dB



**SPEAG 300 MHz Dipole; D300V2, SN1002; Test Date: 11/10/03**

**Motorola CGISS EME Lab**

Run #: Sys Perf-R2-031110-01

TX Freq: 300 MHz

Sim Tissue Temp: 21.0 C

Start Power: 250mW

Target: 2.74 mW/g (1g-SAR), 1.85 mW/g (10g-SAR) from System performance target (11/03/03)

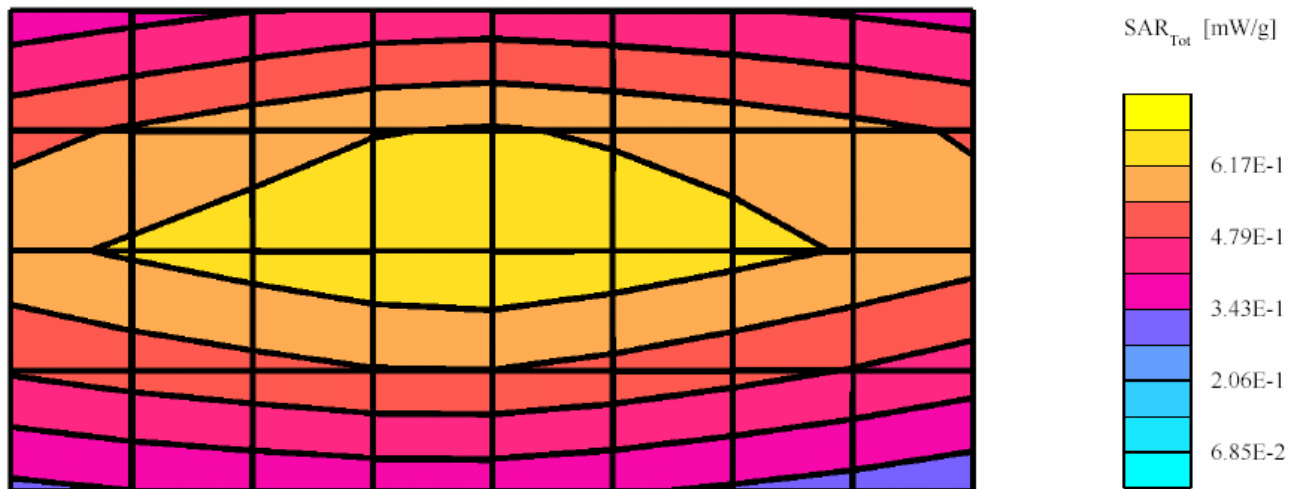
SAR calculated 1g is 2.74 mW/g percent from target (including drift) is -0.25%

SAR Calculated 10g is 1.85 mW/g Percent from target (including drift) is -0.04 %

Flat (2); Probe: ET3DV6 - SN1383 (Cal Date 26 February 2003); Probe Cal Date: 26/02/03 ConvF(7.80,7.80,7.80); Crest factor: 1.0; FCC Body 300:  $\sigma = 0.88$  mho/m  $\epsilon_r = 55.9$   $\epsilon_i = 1.00$  g/cm<sup>3</sup>; DAE3: SN: 401( 08/21/03)

Cubes (2): Peak: 1.05 mW/g  $\pm$  0.01 dB, SAR (1g): 0.689 mW/g  $\pm$  0.01 dB, SAR (10g): 0.465 mW/g  $\pm$  0.01 dB, (Worst-case extrapolation) Penetration depth: 13.3 (11.7, 15.4) [mm]

Power drift: 0.03 dB



**SPEAG 300 MHz Dipole; D300V2, SN1002; Test Date: 11/11/03**

**Motorola CGISS EME Lab**

Run #: Sys Perf-R2-031111-01

TX Freq: 300 MHz

Sim Tissue Temp: 20.9 C

Start Power: 250mW

Target: 2.74 mW/g (1g-SAR), 1.85 mW/g (10g-SAR) from System performance target (11/03/03)

SAR calculated 1g is 2.71 mW/g percent from target (including drift) is - 1.38%

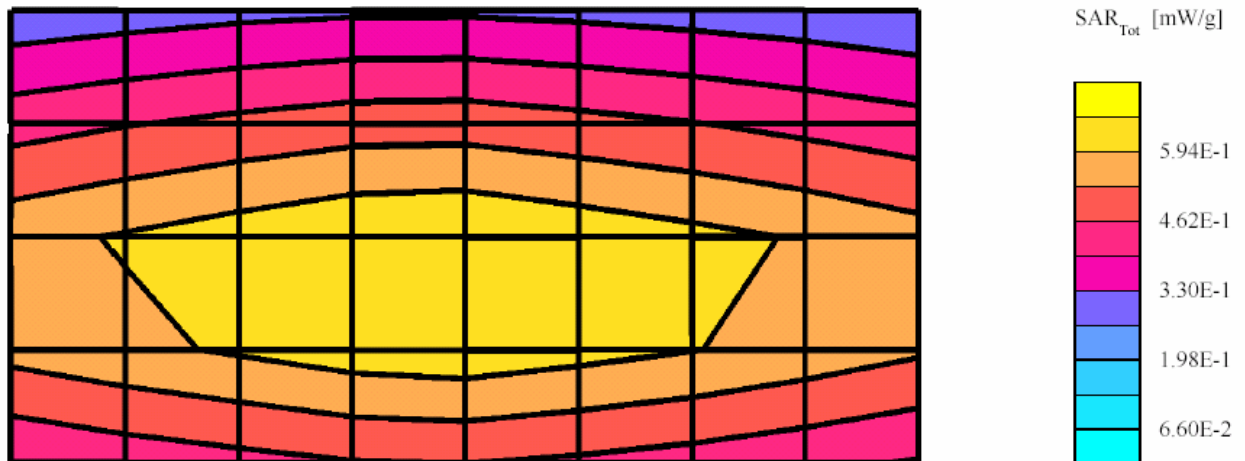
SAR Calculated 10g is 1.82 mW/g Percent from target (including drift) is -1.51 %

Flat (2);Probe: ET3DV6 - SN1383 (Cal Date 26 February 2003);Probe Cal Date: 26/02/03ConvF(7.80,7.80,7.80); Crest factor:

1.0; FCC Body 300:  $\sigma = 0.88\text{mho/m}$   $\epsilon = 56.4$   $\rho = 1.00\text{ g/cm}^3$ ; DAE3: SN: 401( 08/21/03)

Cubes (2): Peak: 1.04 mW/g  $\pm 0.00\text{ dB}$ , SAR (1g): 0.675 mW/g  $\pm 0.01\text{ dB}$ , SAR (10g): 0.454 mW/g  $\pm 0.01\text{ dB}$ , (Worst-case extrapolation)Penetration depth: 13.2 (11.5, 15.3) [mm]

Power drift: -0.01 dB





**SPEAG 300 MHz Dipole; D300V2, SN1002; Test Date: 11/11/03**

**Motorola CGISS EME Lab**

Run #: Sys Perf-R2-031111-16

TX Freq: 300 MHz

Sim Tissue Temp: 21.0 C

Start Power: 250mW

Target: 2.99 mW/g (1g-SAR), 1.99 mW/g (10g-SAR) from System performance target (11/03/03)

SAR calculated 1g is 2.84 mW/g percent from target (including drift) is - 5.01 %

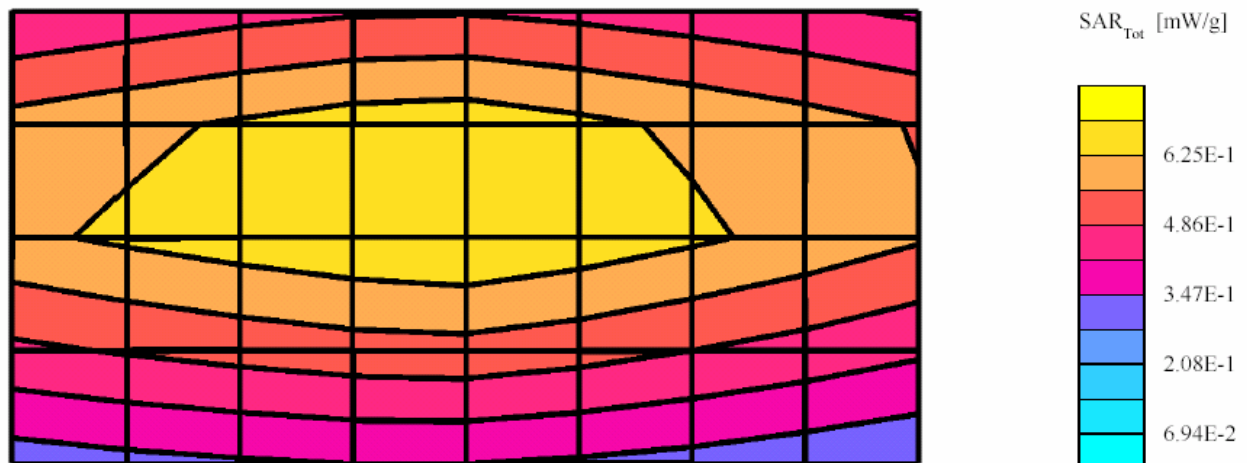
SAR Calculated 10g is 1.90 mW/g Percent from target (including drift) is -4.87 %

Flat (2); Probe: ET3DV6 - SN1383 (Cal Date 26 February 2003);Probe Cal Date: 26/02/03ConvF(7.70,7.70,7.70); Crest factor:

1.0; IEEE Head 300 MHz:  $\sigma = 0.84$  mho/m  $\epsilon = 46.7$   $\rho = 1.00$  g/cm<sup>3</sup>; DAE3: SN: 401( 08/21/03)

Cubes (2): Peak: 1.10 mW/g  $\pm 0.03$  dB, SAR (1g): 0.709 mW/g  $\pm 0.02$  dB, SAR (10g): 0.474 mW/g  $\pm 0.01$  dB, (Worst-case extrapolation) Penetration depth: 13.0 (11.4, 15.0) [mm]

Power drift: -0.00 dB



**SPEAG 300 MHz Dipole; D300V2, SN1002; Test Date: 11/12/03**

**Motorola CGISS EME Lab**

Run #: Sys Perf-R2-031112-01

TX Freq: 300 MHz

Sim Tissue Temp: 21.3 C

Start Power: 250mW

Target: 2.99 mW/g (1g-SAR), 1.99 mW/g (10g-SAR) from System performance target (11/03/03)

SAR calculated 1g is 2.94 mW/g percent from target (including drift) is - 1.62 %

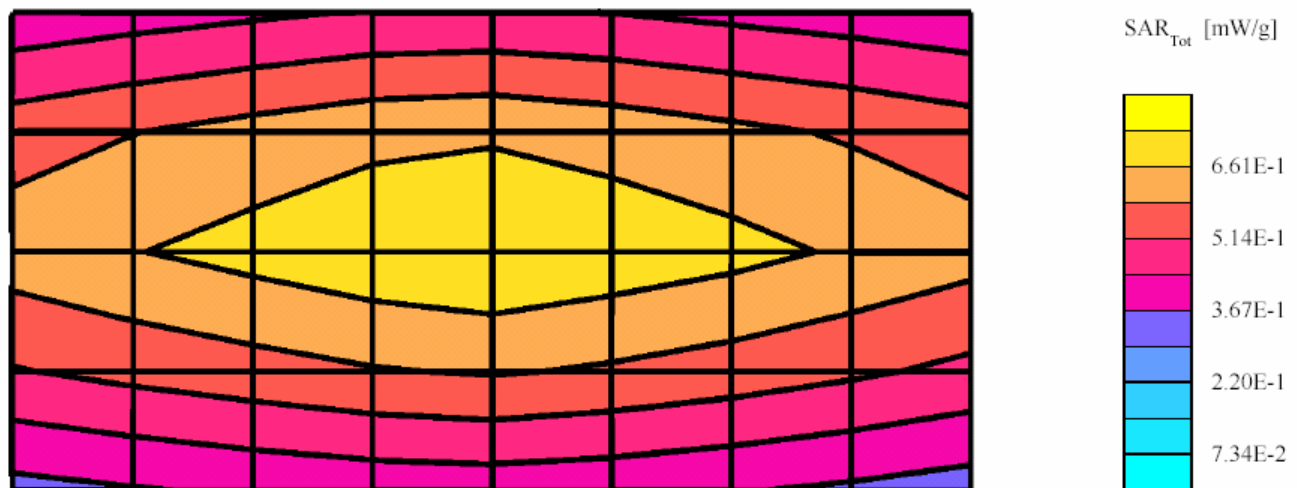
SAR Calculated 10g is 1.96 mW/g Percent from target (including drift) is -1.61 %

Flat (2); Probe: ET3DV6 - SN1383 (Cal Date 26 February 2003);Probe Cal Date: 26/02/03ConvF(7.70,7.70,7.70); Crest factor:

1.0; IEEE Head 300 MHz:  $\sigma = 0.88$  mho/m  $\epsilon = 47.5$   $\rho = 1.00$  g/cm<sup>3</sup>; DAE3: SN: 401( 08/21/03)

Cubes (2): Peak: 1.13 mW/g  $\pm 0.03$  dB, SAR (1g): 0.731 mW/g  $\pm 0.02$  dB, SAR (10g): 0.488 mW/g  $\pm 0.01$  dB, (Worst-case extrapolation) Penetration depth: 12.9 (11.4, 14.8) [mm]

Power drift: -0.02 dB



**SPEAG 300 MHz Dipole; D300V2, SN1002; Test Date: 11/13/03**

**Motorola CGISS EME Lab**

Run #: Sys Perf-R2-031113-01

Tester: K. Uong

TX Freq: 300 MHz Sim Tissue Temp: 20.9 C

Start Power: 250mW

Target: 2.74 mW/g (1g-SAR), 1.85 mW/g (10g-SAR) from System performance target (11/03/03)

SAR calculated 1g is 2.74 mW/g percent from target (including drift) is -0.21%

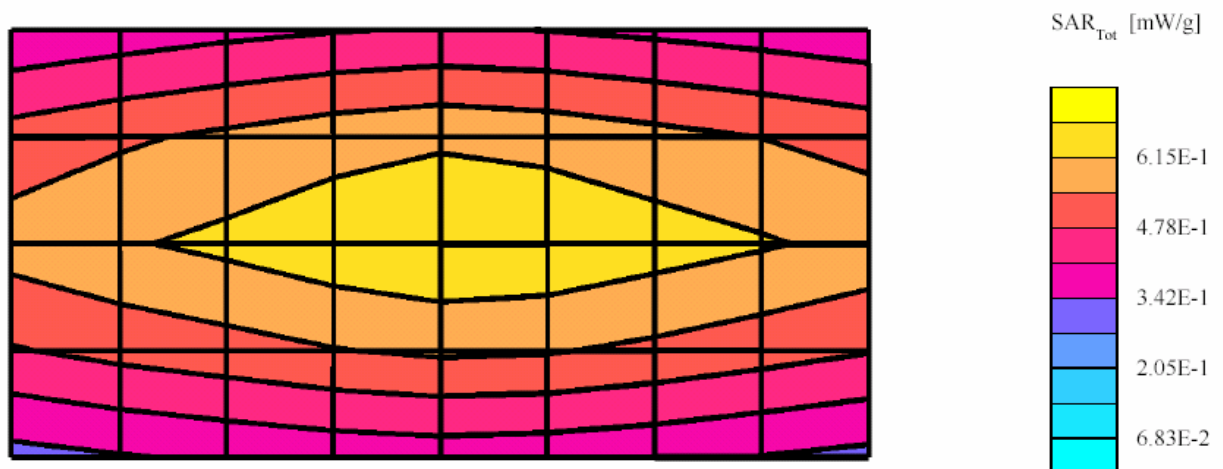
SAR Calculated 10g is 1.84 mW/g Percent from target (including drift) is -0.42 %

Flat (2); Probe: ET3DV6 - SN1383 (Cal Date 26 February 2003); Probe Cal Date: 26/02/03 ConvF(7.80,7.80,7.80); Crest factor:

1.0; FCC Body 300:  $\sigma = 0.88$  mho/m  $\epsilon = 56.1$   $\rho = 1.00$  g/cm<sup>3</sup>; DAE3: SN: 401( 08/21/03)

Cubes (2): Peak: 1.05 mW/g  $\pm 0.03$  dB, SAR (1g): 0.683 mW/g  $\pm 0.02$  dB, SAR (10g): 0.459 mW/g  $\pm 0.02$  dB, (Worst-case extrapolation) Penetration depth: 13.3 (11.6, 15.4) [mm]

Power drift: -0.01 dB



### SYSTEM VALIDATION

Date: 11/03/2003 Frequency (MHz): 300  
Lab Location: CGISS Mixture Type: 300-IEEE Head  
Robot System: CGISS-2 Ambient Temp.(°C): 21.2  
Probe Serial #: 1383 Tissue Temp.(°C): 20.6  
DAE Serial #: DAE3V1 SN401

Tissue Characteristics Phantom Type/SN: 80602002B/S2  
Permittivity: 47.4 Distance (mm): 15  
Conductivity: 0.87

Reference Source: Dipole (Dipole/Handset)  
Reference SN: 1002

Power to Dipole: 250 mW  
Power Output (radio): \_\_\_\_\_ mW

Target SAR Value: 2.83 mW/g, 1.89 mW/g (10g avg.)  
(Normalized to 1.0 W)

Measured SAR Value: 0.743 mW/g, 0.496 mW/g (10g avg.)  
Power Drift: -0.02 dB

Measured SAR Value: 2.99 mW/g, 1.99 mW/g (10g avg.)  
(normalized to 1.0 W,  
with drift compensation)

Percent Difference From Target (must be within System Uncertainty): + 5.50 % (1g avg)  
+ 5.46 % (10g avg)

Test performed by: Kim Uong

Initial: KU

**SYSTEM PERFORMANCE CHECK TARGET SAR**

Date: 11/03/2003 Frequency (MHz): 300  
Lab Location: CGISS Mixture Type: 300-IEEE Head  
Robot System: CGISS-2 Ambient Temp.(°C): 21.2  
Probe Serial #: 1383 Tissue Temp.(°C): 20.6  
DAE Serial #: DAE3V1 SN401


Tissue Characteristics Phantom Type/SN: 80602002B/S2  
Permittivity: 47.4 Distance (mm): 15  
Conductivity: 0.87

Reference Source: Dipole (Dipole)  
Reference SN: 1002  
Power to Dipole: 250 mW

Measured SAR Value: 0.743 mW/g, 0.496 mW/g (10g avg.)  
Power Drift: -0.02 dB

New Target/Measured  
SAR Value: 2.99 mW/g, 1.99 mW/g (10g avg.)  
(Normalized to 1.0 W,  
with drift compensation)

Test performed by: Kim Uong

Initial: 

11/03/03

## Dipole D300V2 SN1002; Test Date: 11/03/03

Run #: Sys Perf-R2-031103-06

Phantom #: 80602002B/S2

Model #: D300V2 SN: 1002

Robot: CGISS-2

DAE3: SN: 401( 08/21/03)

Tester: K. Uong

TX Freq: 300 MHz

Sim Tissue Temp: 20.6 C

Start Power: 250mW

Target:

2.83 mW/g (1g-SAR), 1.89 mW/g (10g-SAR) from Dipole certificate (Cal date 9/11/02)

SAR calculated 1g is 2.99 mW/g percent from target (including drift) is + 5.50 %

SAR Calculated 10g is 1.99 mW/g Percent from target (including drift) is +5.46%

Flat (2) Phantom; Section;

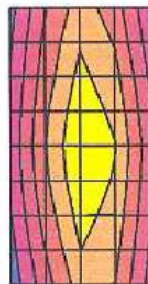
Probe: ET3DV6 - SN1383 (Cal Date 26 February 2003); ConvF(7.70,7.70,7.70); Probe cal date: 26/02/03;

Crest factor: 1.0; IEEE Head 300 MHz:  $\sigma = 0.87$  mho/m  $\epsilon_r = 47.4$   $\rho = 1.00$  g/cm<sup>3</sup>

Cubes (2): SAR (1g): 0.743 mW/g  $\pm 0.01$  dB, SAR (10g): 0.496 mW/g  $\pm 0.01$  dB, (Worst-case extrapolation)

Coarse: Dx = 10.0, Dy = 10.0, Dz = 10.0; Max at 18.0, 41.0, 4.7

Powerdrift: -0.02 dB



SAR<sub>Tot</sub> [mW/g]



4.45E-1

7.42E-2

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**SYSTEM PERFORMANCE CHECK TARGET SAR**

Date: 11/03/2003 Frequency (MHz): 300  
Lab Location: CGISS Mixture Type: 300-FCC Body  
Robot System: CGISS-2 Ambient Temp.(°C): 21.2  
Probe Serial #: 1383 Tissue Temp.(°C): 20.9  
DAE Serial #: DAE3V1 SN401


Tissue Characteristics Phantom Type/SN: 80602002A/S1  
Permittivity: 56.0 Distance (mm): 15  
Conductivity: 0.88

Reference Source: Dipole (Dipole)  
Reference SN: 1002  
Power to Dipole: 250 mW

Measured SAR Value: 0.686 mW/g, 0.462 mW/g (10g avg.)  
Power Drift: 0.00 dB

New Target/Measured  
SAR Value: 2.74 mW/g, 1.85 mW/g (10g avg.)  
(Normalized to 1.0 W,  
with drift compensation)

Test performed by: Kim Uong

Initial: 

## Dipole D300V2 SN1002; Test date:11/03/03

Run #: Sys Perf-R2-031103-05

Phantom #: 80602002A-S1

Model #: D300V2 SN: 1002

Robot: CGISS-2

DAE3; SN: 401( 08/21/03) Tester: K. Uong

TX Freq: 300 MHz

Sim Tissue Temp: 20.9 C

Start Power: 250mW

Target:

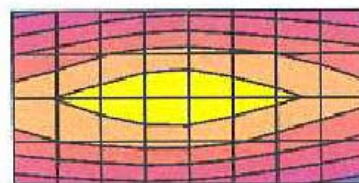
Flat (2); Probe: ET3DV6 - SN1383 (Cal Date 26 February 2003); ConvF(7.80,7.80,7.80); Crest factor: 1.0;

FCC Body 300:  $\sigma = 0.88$  mho/m  $\epsilon_r = 56.0$   $\rho = 1.00$  g/cm<sup>3</sup>

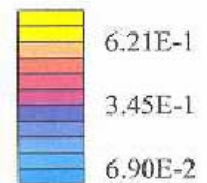
Cubes (2): Peak: 1.05 mW/g  $\pm 0.02$  dB, SAR (1g): 0.686 mW/g  $\pm 0.01$  dB, SAR (10g): 0.462 mW/g  $\pm 0.01$  dB, (Worst-case extrapolation)

Penetration depth: 13.2 (11.6, 15.3) [mm]

Powerdrift: -0.00 dB



SAR<sub>Tot</sub> [mW/g]



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