



MOTOROLA



CGISS EME Test Laboratory
8000 West Sunrise Blvd
Fort Lauderdale, FL. 33322

S.A.R. EME Compliance Test Report
Part 2 of 2

Date of Report: February 26, 2004
Report Revision: Rev. O
Manufacturer: Motorola
Product Description: XTS2500 digital; 136-174MHz, 5.0 watts nominal;
48 channel
FCC ID: **AZ489FT3807**
Device Model: H46KDH9PW7AN

Test Period: 2/6/04-2/16/04
EME Tech: Clint Miller
EME Eng.: Kim Uong (Sr. EME Eng.)
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 the national and international reference standards and guidelines listed in section 2.0 of this report.

Signature on File

2/27/04

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

Date Approved

Note: This report shall not be reproduced without written approval from an officially designated representative of the Motorola EME Laboratory.

APPENDIX A

Power Slump Data/Shortened Scan

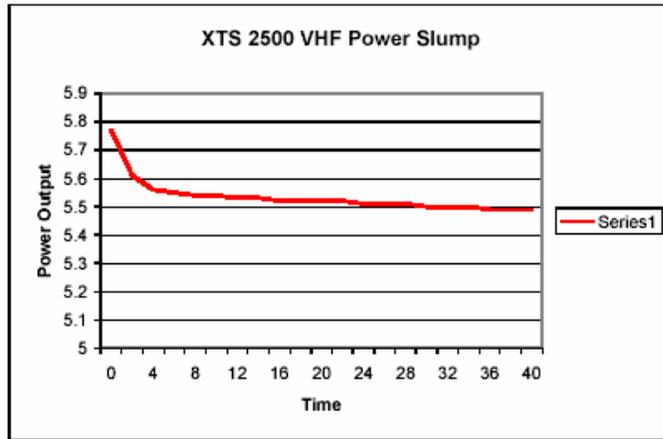
DUT Power versus time data

POWER SLUMP FOR XTS-2500 VHF

Serial # 407TDY0011, Battery NTN9858A, Frequency 143 MHz.

MINUTES POWER (WATTS)

0	5.77
2	5.61
4	5.56
6	5.55
8	5.54
10	5.54
12	5.53
14	5.53
16	5.52
18	5.52
20	5.52
22	5.52
24	5.51
26	5.51
28	5.51
30	5.50
32	5.50
34	5.50
36	5.49
38	5.49
40	5.49



Shortened Scan Results

FCC ID: AZ489FT3807; Test Date: 2/16/04

Motorola CGISS EME Laboratory

Run #: CM-R2-040216-03

Model # H46KDH9PW7AN S/N: 407TDY0011

Tx freq: 143.025 MHz

Tissue temp: 21.1 C

Start power : 5.80 W

Antenna #: NAD6566A

Battery kit: NTN9858A

Carry Accessories: NONE

Audio/data accessories: NONE

Shortened scan reflect highest S.A.R. producing configuration; Run time 7 minutes.

Representative “normal” scan run time was 30 minutes

“Shortened” scan max calculated S.A.R. using S.A.R. drift: 1-g Avg. = 1.500mW/g; 10-g Avg. = 1.160mW/g

“Normal” scan max calculated S.A.R. using S.A.R. drift: 1-g Avg. = 1.770mW/g; 10-g Avg. = 1.370mW/g

(see section 7.1 run # CM-R2-040212-04)

DUT front with 2.5cm separation from phantom

Flat Phantom; Position: (90°,90°);

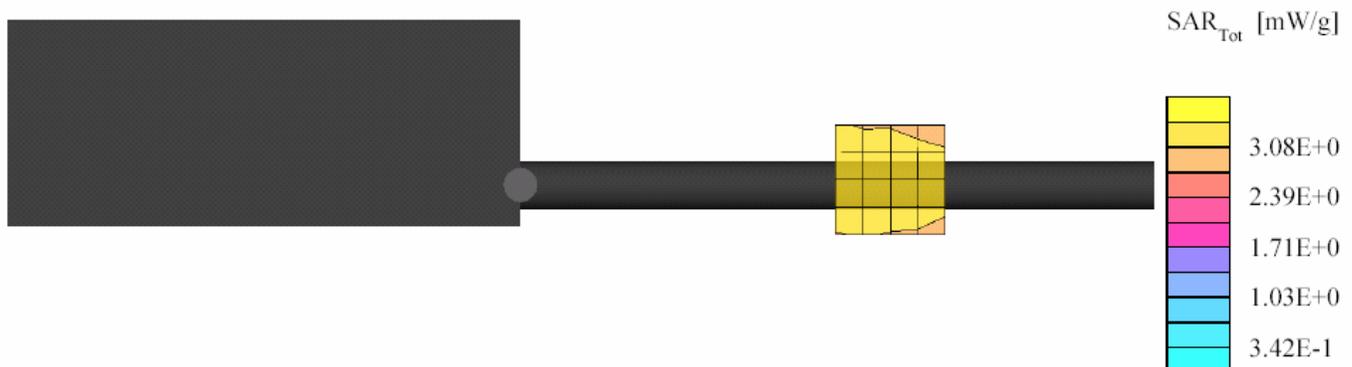
Probe: ET3DV6R - SN1545(cal Date 28 Aug 2003); ConvF(8.40,8.40,8.40); Probe cal date: 28/08/03; Crest factor: 1.0;

IEEE Head 156 MHz: $\rho = 0.74 \text{ mho/m}$ $\mu = 54.5$ $\sigma = 1.00 \text{ g/cm}^3$; DAE3:406V1 Cal date: 11/20/03

Cube 5x5x7: SAR (1g): 2.55 mW/g, SAR (10g): 1.97 mW/g * Max outside, (Worst-case extrapolation)

Power Drift: -0.72 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: AZ489FT3807; Test Date: 2/6/04

Motorola CGISS EME Laboratory

Run #: CM-R2-040206-08

Model # H46KDH9PW7AN S/N: 407TDY0011

Tx freq: 156.025 MHz

Tissue temp: 21.1 C

Start power: 5.70 W

Antenna #: NAD6563A

Battery kit: NTN9857A

Carry Accessories: HLN9844A

Audio/data accessories: NMN6193C

DUT with carry accessory against phantom

Flat Phantom; Position: (90°,90°);

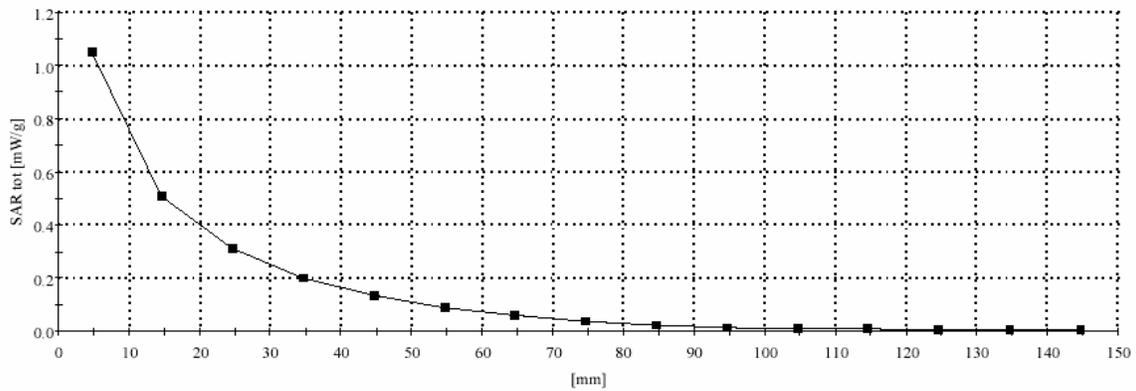
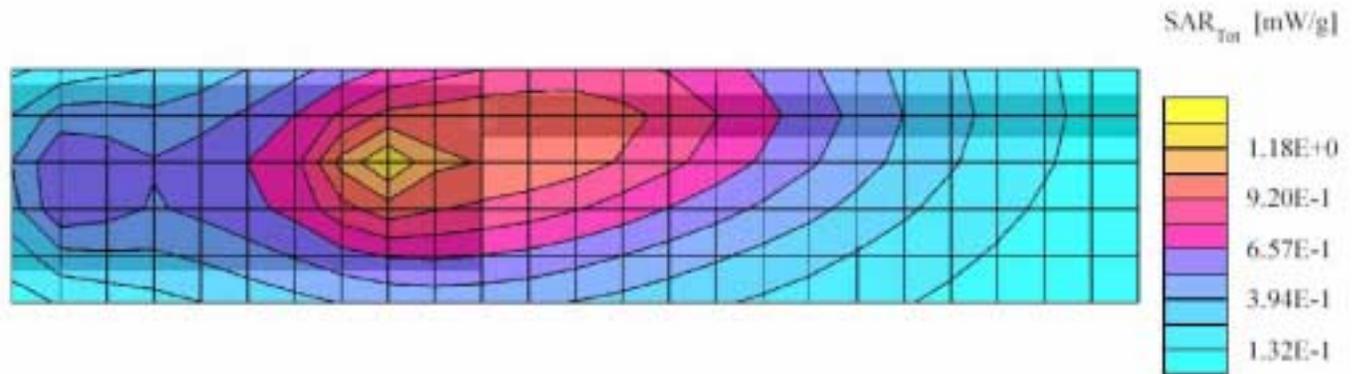
Probe: ET3DV6R - SN1545(cal Date 28 Aug 2003); ConvF(7.60,7.60,7.60); Probe cal date: 28/08/03; Crest factor: 1.0;

FCC Body 156: $\rho = 0.80$ mho/m $\mu = 62.4$ $\rho = 1.00$ g/cm³; DAE3:406V1 Cal date: 11/20/03

Cube 7x7x7: SAR (1g): 1.15 mW/g, SAR (10g): 0.758 mW/g, (Worst-case extrapolation)

Coarse: Dx = 15.0, Dy = 15.0, Dz = 10.0; Max at 30.0, 118.5, 4.7

Power Drift: -1.340 dB



FCC ID: AZ489FT3807; Test Date: 2/6/04

Motorola CGISS EME Laboratory

Run #: CM-R2-040206-17

Model # H46KDH9PW7AN S/N: 407TDY0011

Tx freq: 156.025 MHz

Tissue temp: 21.2 C

Start power : 5.94 W

Antenna #: NAD6563A

Battery kit: NTN9816A

Carry Accessories: HLN9844A

Audio/data accessories: NMN6193C

DUT with carry accessory against the phantom

Flat Phantom; Position: (90°,90°);

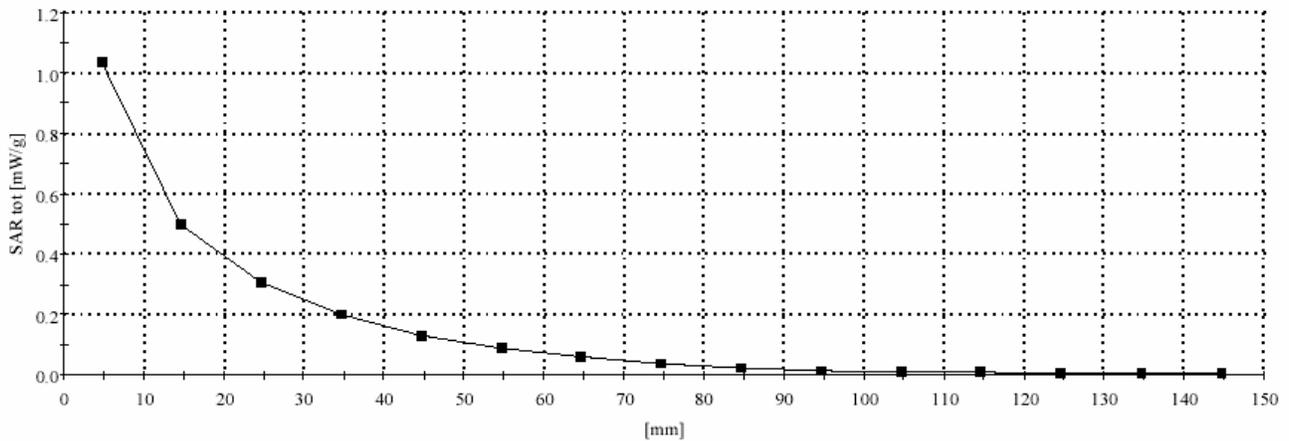
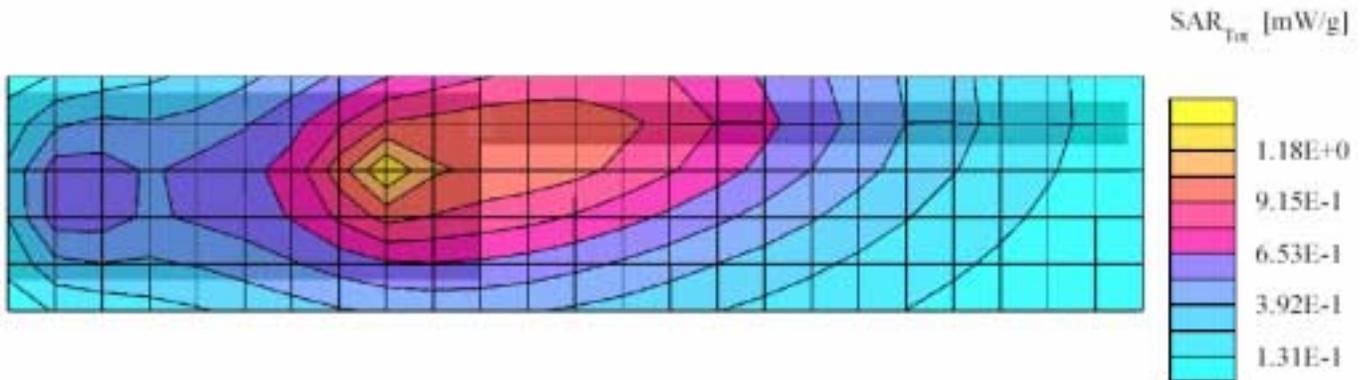
Probe: ET3DV6R - SN1545(cal Date 28 Aug 2003); ConvF(7.60,7.60,7.60); Probe cal date: 28/08/03; Crest factor: 1.0;

FCC Body 156: = 0.80 mho/m = 62.4 = 1.00 g/cm3; DAE3:406V1 Cal date: 11/20/03

Cube 7x7x7: SAR (1g): 1.12 mW/g, SAR (10g): 0.739 mW/g, (Worst-case extrapolation)

Coarse: Dx = 15.0, Dy = 15.0, Dz = 10.0; Max at 30.0, 120.0, 4.7

Power Drift: -1.36 dB



FCC ID: AZ489FT3807; Test Date: 2/7/04

Motorola CGISS EME Laboratory

Run #: CM-R2-040207-06

Model # H46KDH9PW7AN S/N: 407TDY0011

Tx freq: 156.025 MHz

Tissue temp: 21.3 C

Start power: 5.95 W

Antenna #: NAD6563A

Battery kit: NTN9857A

Carry Accessories: HLN6853A

Audio/data accessories: NMN6193C

DUT with carry accessory against the phantom

Flat Phantom; Position: (90°,90°);

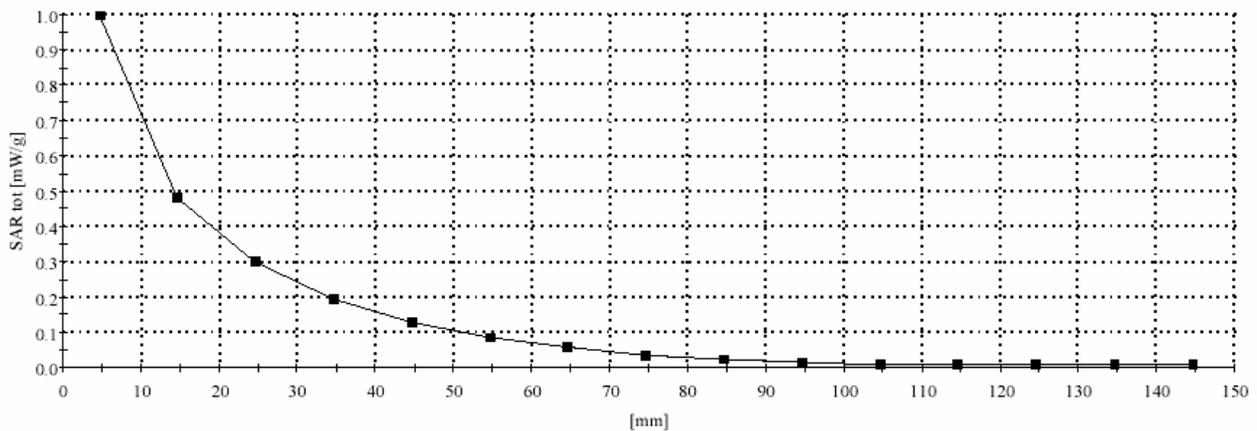
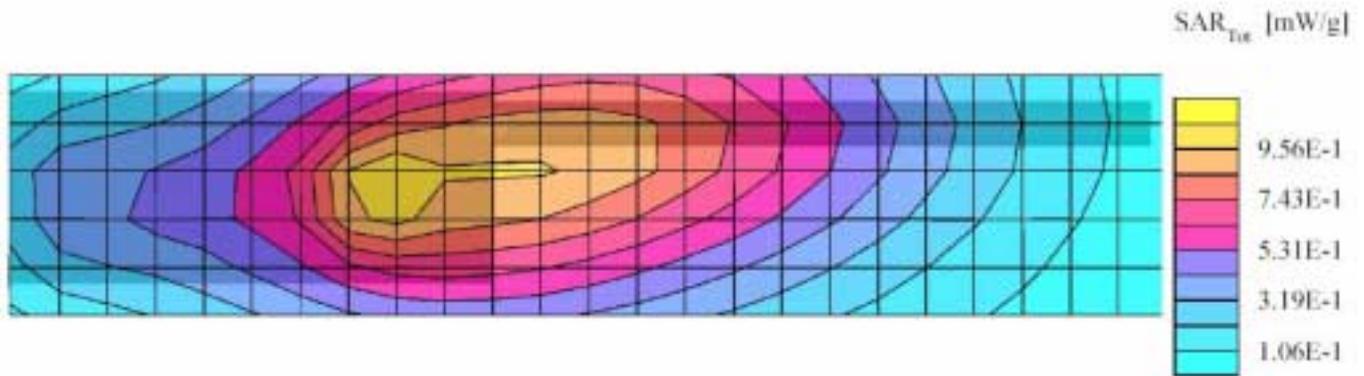
Probe: ET3DV6R - SN1545(cal Date 28 Aug 2003); ConvF(7.60,7.60,7.60); Probe cal date: 28/08/03; Crest factor: 1.0;

FCC Body 156: $\sigma = 0.81$ mho/m $\rho = 61.0$ = 1.00 g/cm³; DAE3:406V1 Cal date: 11/20/03

Cube 7x7x7: SAR (1g): 1.06 mW/g, SAR (10g): 0.713 mW/g, (Worst-case extrapolation)

Coarse: Dx = 15.0, Dy = 15.0, Dz = 10.0; Max at 34.5, 117.0, 4.7

Power drift: -0.97dB



FCC ID: AZ489FT3807; Test Date: 2/8/04

Motorola CGISS EME Laboratory

Run #: CM-R2-040208-08

Model # H46KDH9PW7AN S/N: 407TDY0011

Tx freq: 156.025 MHz

Tissue temp: 21.3 C

Start power : 5.93 W

Antenna #: NAD6563A

Battery kit: NTN9857A

Carry Accessories: HLN9844A

Audio/data accessories: BDN6636C w/ BDN6673B

DUT with carry accessory against the phantom

Flat Phantom; Position: (90°,90°);

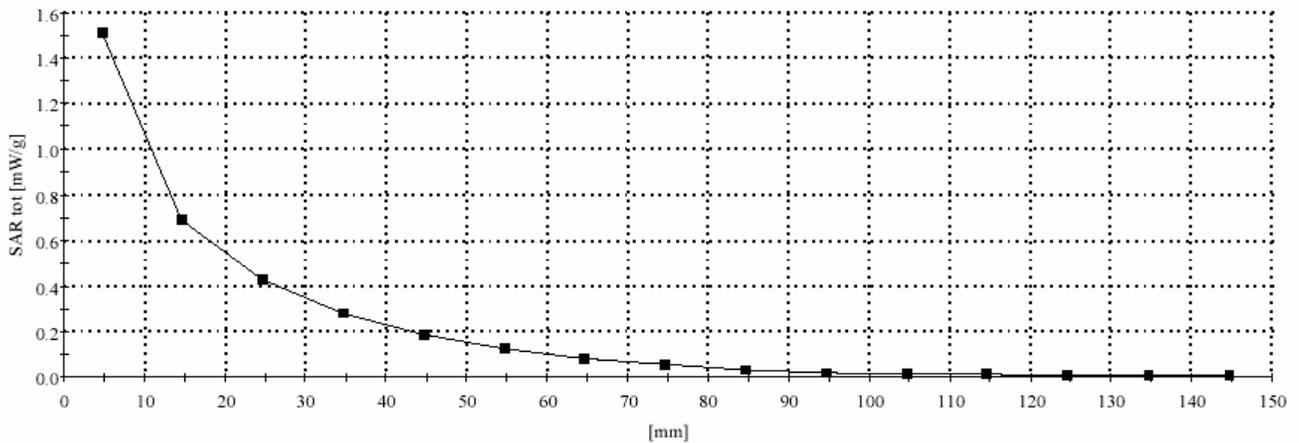
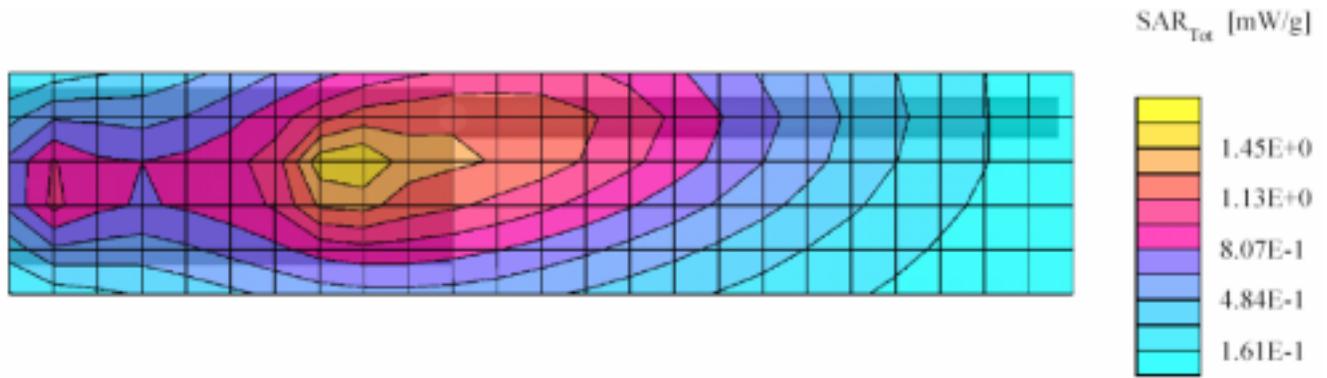
Probe: ET3DV6R - SN1545(cal Date 28 Aug 2003); ConvF(7.60,7.60,7.60); Probe cal date: 28/08/03; Crest factor: 1.0;

FCC Body 156: $\rho = 0.79$ mho/m $\mu = 60.8$ = 1.00 g/cm³; DAE3:406V1 Cal date: 11/20/03

Cube 7x7x7: SAR (1g): 1.73 mW/g, SAR (10g): 1.12 mW/g, (Worst-case extrapolation)

Coarse: Dx = 15.0, Dy = 15.0, Dz = 10.0; Max at 31.5, 114.0, 4.7

Power Drift: -0.92 dB



FCC ID: AZ489FT3807; Test Date: 2/9/04

Motorola CGISS EME Laboratory

Run #: KU-R2-040209-08

Model # H46KDH9PW7AN S/N: 407TDY0011

Tx freq: 156.025 MHz

Tissue temp: 21.1 C

Start power : 5.83 W

Antenna #: NAD6567A

Battery kit: NTN9857A

Carry Accessories: HLN9844A

Audio/data accessories: BDN6636C w/ BDN6673B

DUT with carry accessory against the phantom

Flat Phantom; Position: (90°,90°);

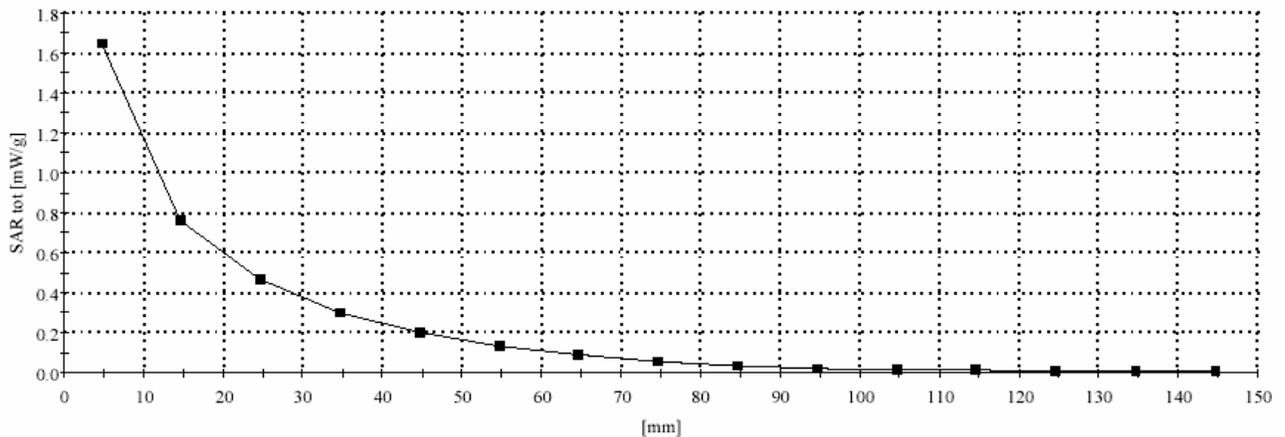
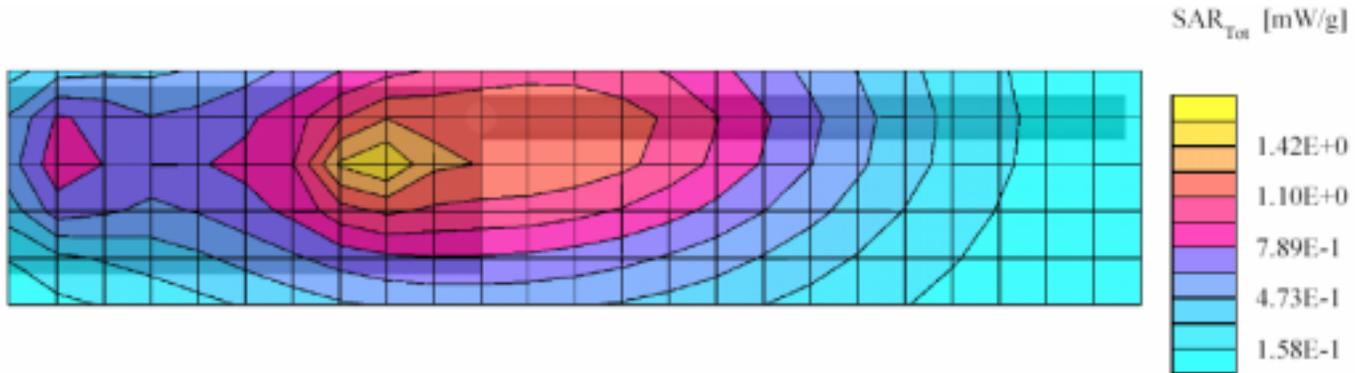
Probe: ET3DV6R - SN1545(cal Date 28 Aug 2003); ConvF(7.60,7.60,7.60); Probe cal date: 28/08/03; Crest factor: 1.0;

FCC Body 156: $\rho = 0.80$ mho/m $\mu = 60.8$ = 1.00 g/cm³; DAE3:406V1 Cal date: 11/20/03

Cube 7x7x7: SAR (1g): 1.64 mW/g, SAR (10g): 1.07 mW/g, (Worst-case extrapolation)

Coarse: Dx = 15.0, Dy = 15.0, Dz = 10.0; Max at 28.5, 115.5, 4.7

Power Drift: -0.27 dB



FCC ID: AZ489FT3807; Test Date: 2/9/04

Motorola CGISS EME Laboratory

Run #: CM-R2-040209-12

Model # H46KDH9PW7AN S/N: 407TDY0011

Tx freq: 173.985 MHz

Tissue temp: 21.3 C

Start power: 5.75 W

Antenna #: NAD6563A

Battery kit: NTN9857A

Carry Accessories: HLN9844A

Audio/data accessories: BDN6636C w/ BDN6673B

DUT with carry accessory against the phantom

Flat Phantom; Position: (90°,90°);

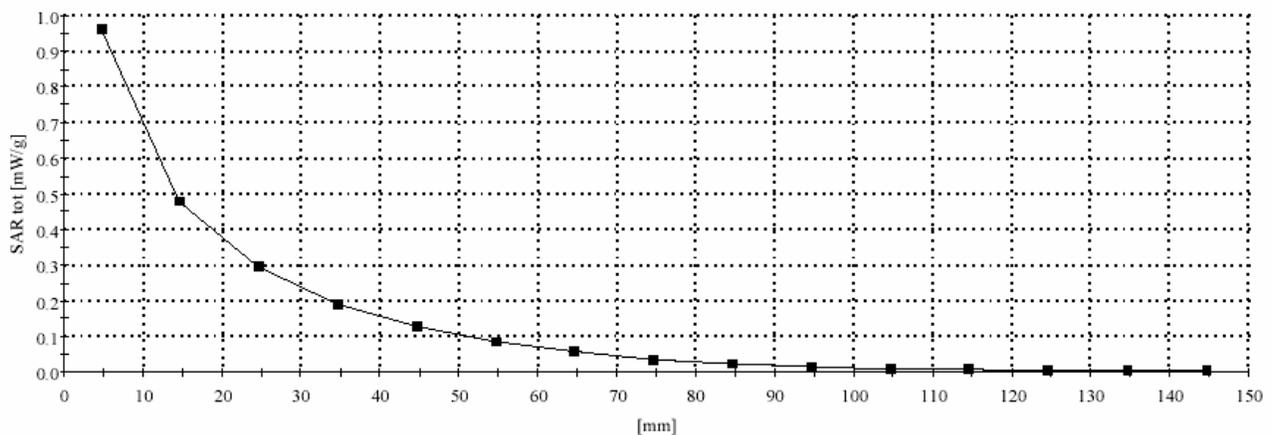
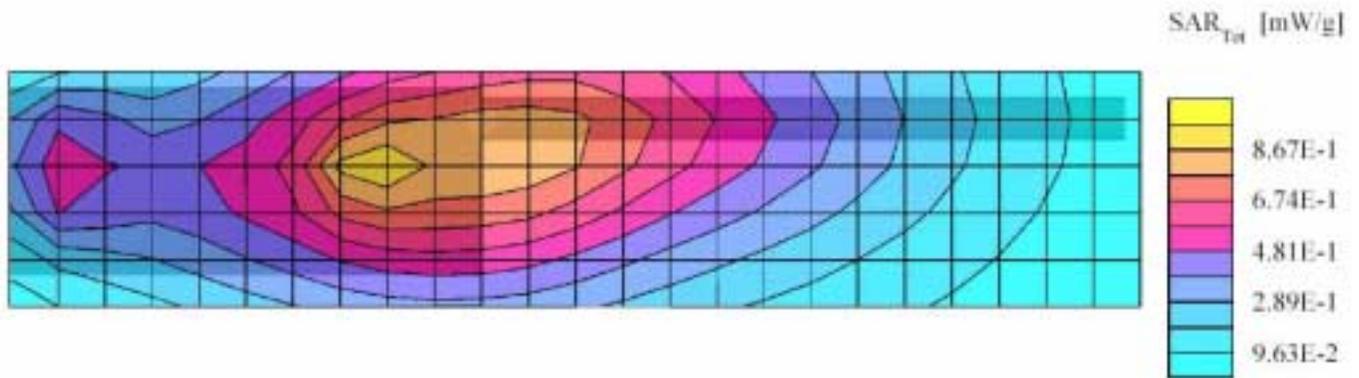
Probe: ET3DV6R - SN1545(cal Date 28 Aug 2003); ConvF(7.60,7.60,7.60); Probe cal date: 28/08/03; Crest factor: 1.0;

FCC Body 156: $\sigma = 0.80$ mho/m $\rho = 60.8$ = 1.00 g/cm³; DAE3:406V1 Cal date: 11/20/03

Cube 7x7x7: SAR (1g): 0.960 mW/g, SAR (10g): 0.652 mW/g, (Worst-case extrapolation)

Coarse: Dx = 15.0, Dy = 15.0, Dz = 10.0; Max at 30.0, 115.5, 4.7

Power drift: -0.57 dB



FCC ID: AZ489FT3807; Test Date: 2/10/04

Motorola CGISS EME Laboratory

Run #: KU-R2-040210-03

Model # H46KDH9PW7AN S/N: 407TDY0011

Tx freq: 156.025 MHz

Tissue temp: 20.7 C

Start power : 5.80 W

Antenna #: NAD6563A

Battery kit: NTN9857A

Carry Accessories: NONE

Audio/data accessories: BDN6636C w/ BDN6673B

DUT with back towards the phantom and antenna at 2.5 cm

Flat Phantom; Position: (90°,90°);

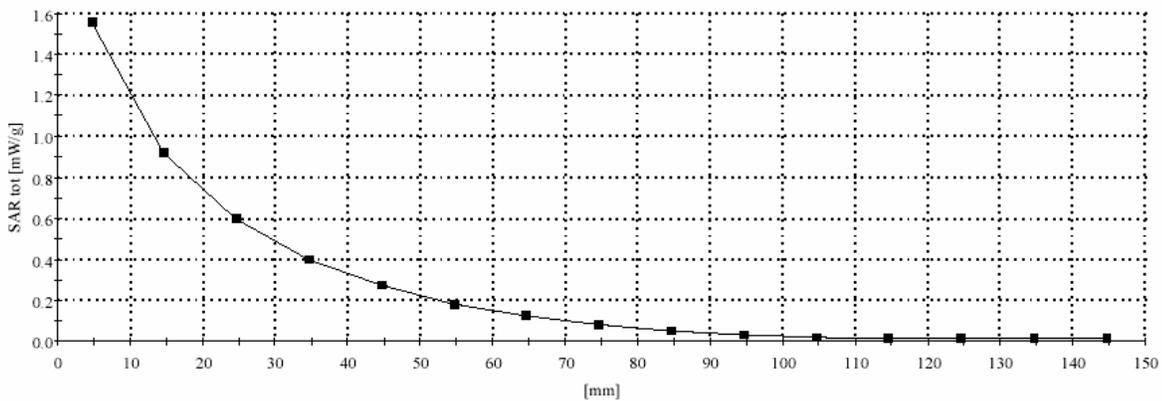
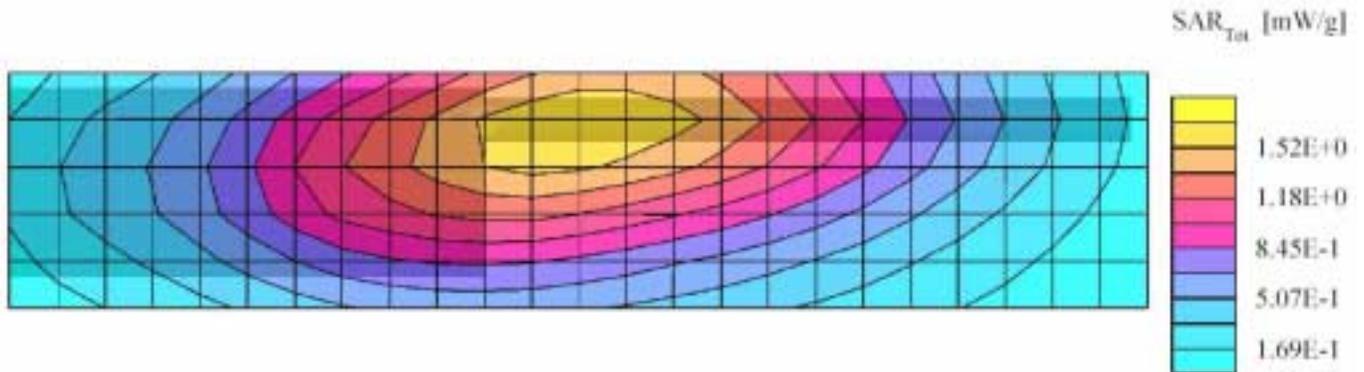
Probe: ET3DV6R - SN1545(cal Date 28 Aug 2003); ConvF(7.60,7.60,7.60); Probe cal date: 28/08/03; Crest factor: 1.0;

FCC Body 156: $\sigma = 0.81$ mho/m $\rho = 61.3$ = 1.00 g/cm³; DAE3:406V1 Cal date: 11/20/03

Cube 5x5x7: SAR (1g): 1.60 mW/g, SAR (10g): 1.20 mW/g, (Worst-case extrapolation)

Coarse: Dx = 15.0, Dy = 15.0, Dz = 10.0; Max at 16.5, 180.0, 4.7

Power Drift: -0.85 dB



FCC ID: AZ489FT3807; Test Date: 2/11/04

Motorola CGISS EME Laboratory

Run #: CM-R2-040211-03

Model # H46KDH9PW7AN S/N: 407TDY0011

Tx freq: 143.025 MHz

Tissue temp: 21.4 C

Start power : 5.82 W

Antenna #: NAD6566A

Battery kit: NTN9857A

Carry Accessories: NONE

Audio/data accessories: NONE

DUT front separated 2.5 cm from phantom

Flat Phantom; Position: (90°,90°);

Probe: ET3DV6R - SN1545(cal Date 28 Aug 2003); ConvF(8.40,8.40,8.40); Probe cal date: 28/08/03; Crest factor: 1.0;

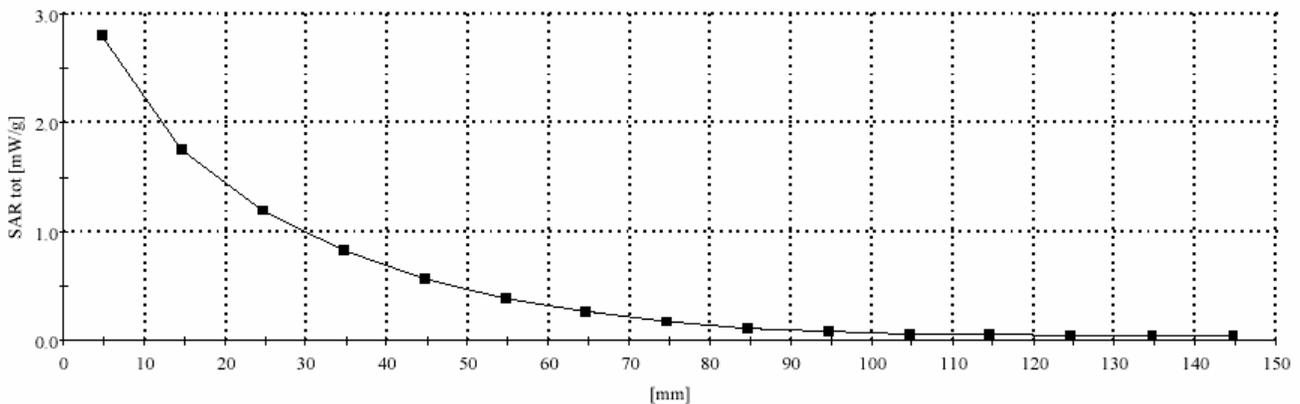
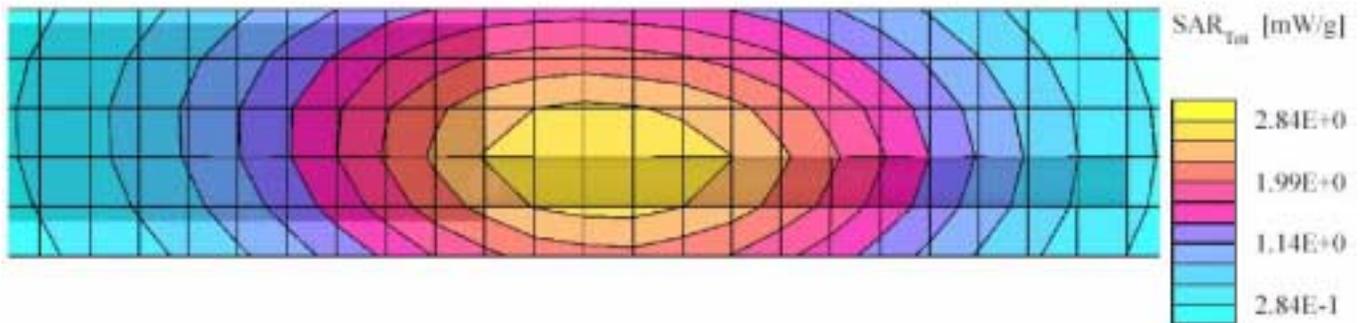
IEEE Head 156 MHz: $\rho = 0.73 \text{ mho/m}$ $\mu = 52.7$ $\rho = 1.00 \text{ g/cm}^3$; DAE3:406V1 Cal date: 11/20/03

Cube 5x5x7: SAR (1g): 3.00 mW/g, SAR (10g): 2.33 mW/g * Max outside, (Worst-case extrapolation)

Coarse: Dx = 15.0, Dy = 15.0, Dz = 10.0; Max at 31.5, 73.5, 4.7

Power drift: -0.59 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.



FCC ID: AZ489FT3807; Test Date: 2/12/04

Motorola CGISS EME Laboratory

Run #: CM-R2-040212-04

Model # H46KDH9PW7AN S/N: 407TDY0011

Tx freq: 143.025 MHz

Tissue temp: 20.8 C

Start power: 5.81 W

Antenna #: NAD6566A

Battery kit: NTN9858A

Carry Accessories: NONE

Audio/data accessories: NONE

DUT with front separated 2.5cm from the phantom

Flat Phantom; Position: (90°,90°);

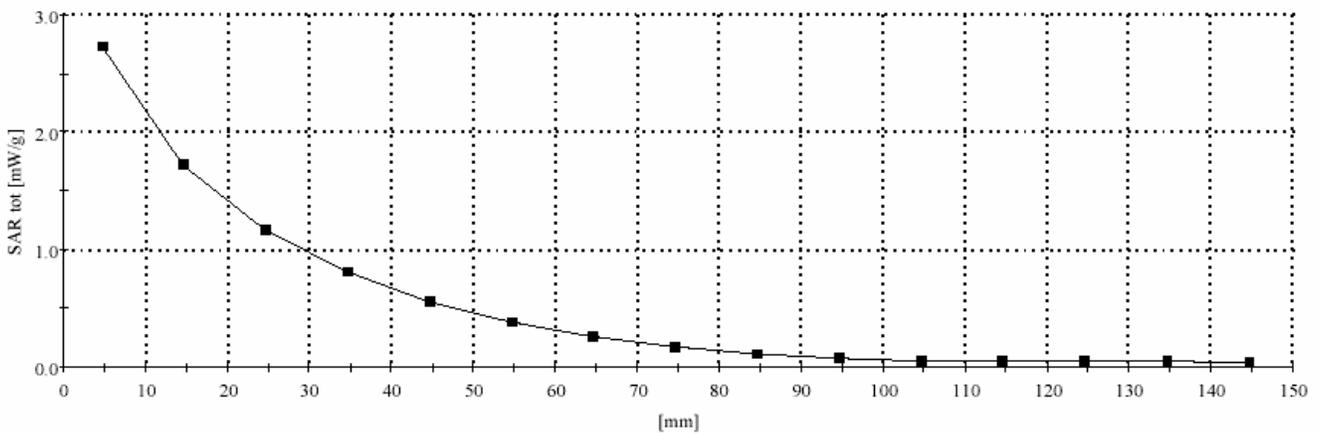
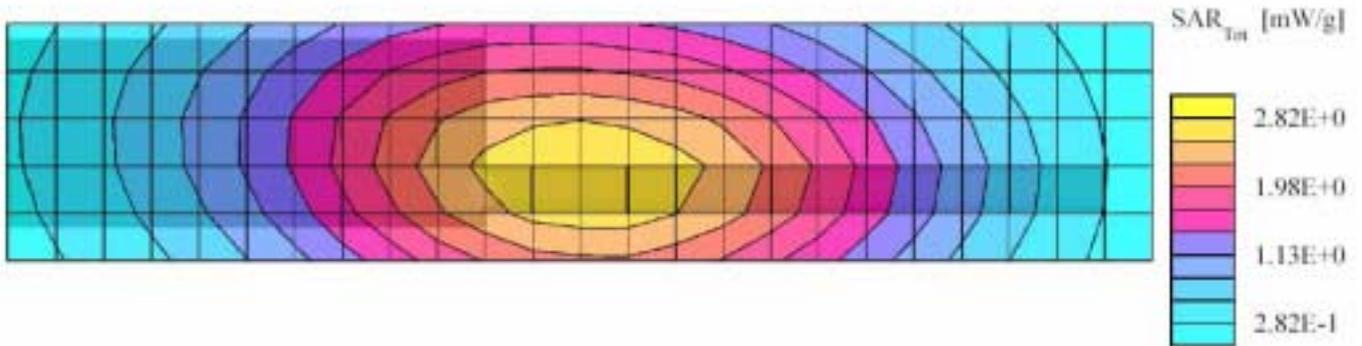
Probe: ET3DV6R - SN1545(cal Date 28 Aug 2003); ConvF(8.40,8.40,8.40); Probe cal date: 28/08/03; Crest factor: 1.0;

IEEE Head 156 MHz: $\rho = 0.73 \text{ mho/m}$ $\mu = 52.8$ $\rho = 1.00 \text{ g/cm}^3$; DAE3:406V1 Cal date: 11/20/03

Cube 5x5x7: SAR (1g): 3.01 mW/g, SAR (10g): 2.33 mW/g, (Worst-case extrapolation)

Coarse: Dx = 15.0, Dy = 15.0, Dz = 10.0; Max at 48.0, 186.0, 4.7

Power drift: -0.71 dB



FCC ID: AZ489FT3807; Test Date: 2/12/04

Motorola CGISS EME Laboratory

Run #: CM-R2-040212-09

Model # H46KDH9PW7AN S/N: 407TDY0011

Tx freq: 143.025 MHz

Tissue temp: 21.0 C

Start power : 5.84 W

Antenna #: NAD6566A

Battery kit: NTN9858A

Carry Accessories: NONE

Audio/data accessories: BDN6782A w/ BDN6676D

DUT with front separated 2.5cm from the phantom

Flat Phantom; Position: (90°,90°);

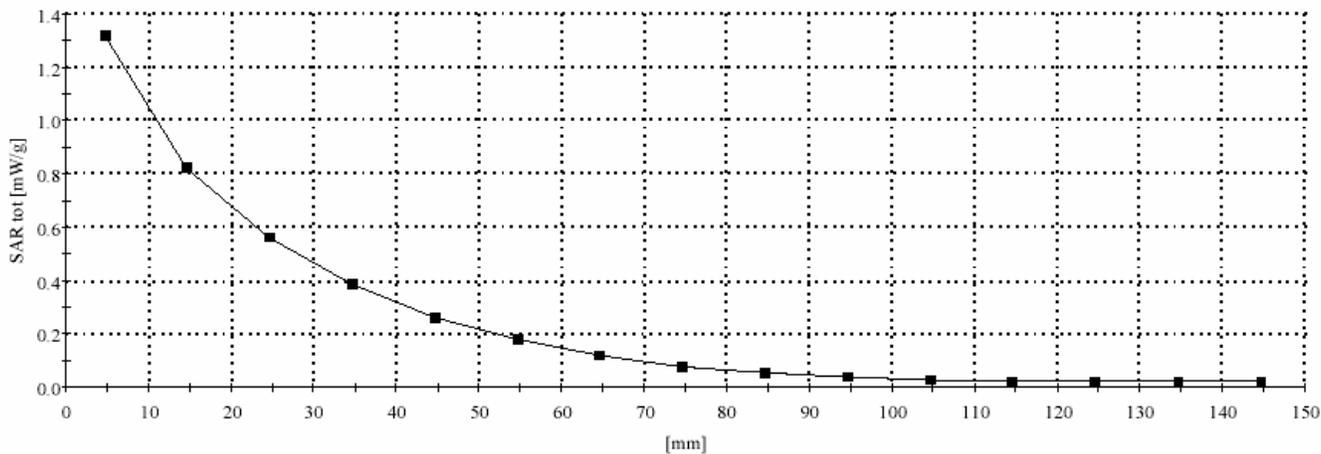
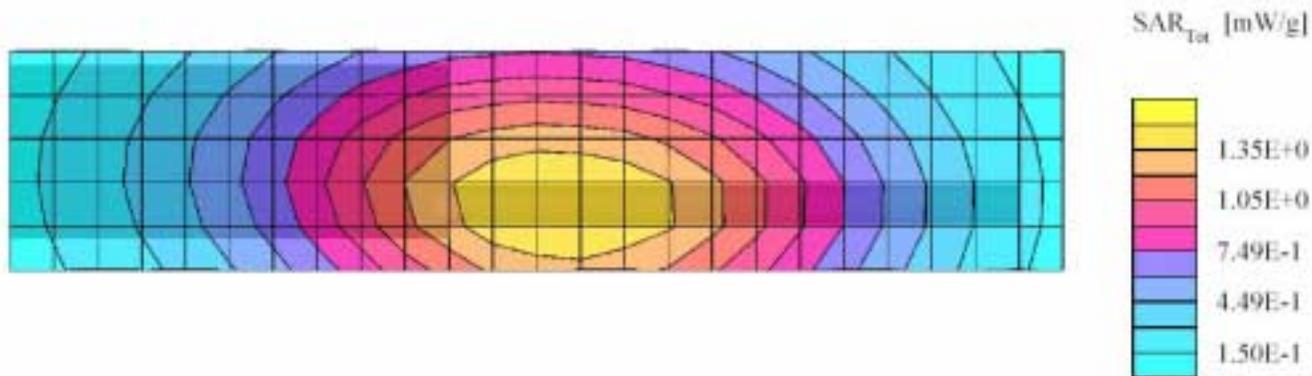
Probe: ET3DV6R - SN1545(cal Date 28 Aug 2003); ConvF(8.40,8.40,8.40); Probe cal date: 28/08/03; Crest factor: 1.0;

IEEE Head 156 MHz: = 0.73 mho/m = 52.8 = 1.00 g/cm³; DAE3:406V1 Cal date: 11/20/03

Cube 5x5x7: SAR (1g): 1.35 mW/g, SAR (10g): 1.05 mW/g, (Worst-case extrapolation)

Coarse: Dx = 15.0, Dy = 15.0, Dz = 10.0; Max at 52.5, 186.0, 4.7

Power drift: -1.20 dB



FCC ID: AZ489FT3807; Test Date: 2/12/04

Motorola CGISS EME Laboratory

Run #: CM-R2-040212-12

Model # H46KDH9PW7AN S/N: 407TDY0011

Tx freq: 169.025

Tissue temp: 21.1 C

Start power : 5.75 W

Antenna #: NAD6568A

Battery kit: NTN9858A

Carry Accessories: NONE

Audio/data accessories: NONE

DUT with front separated 2.5cm from the phantom

Flat Phantom; Position: (90°,90°);

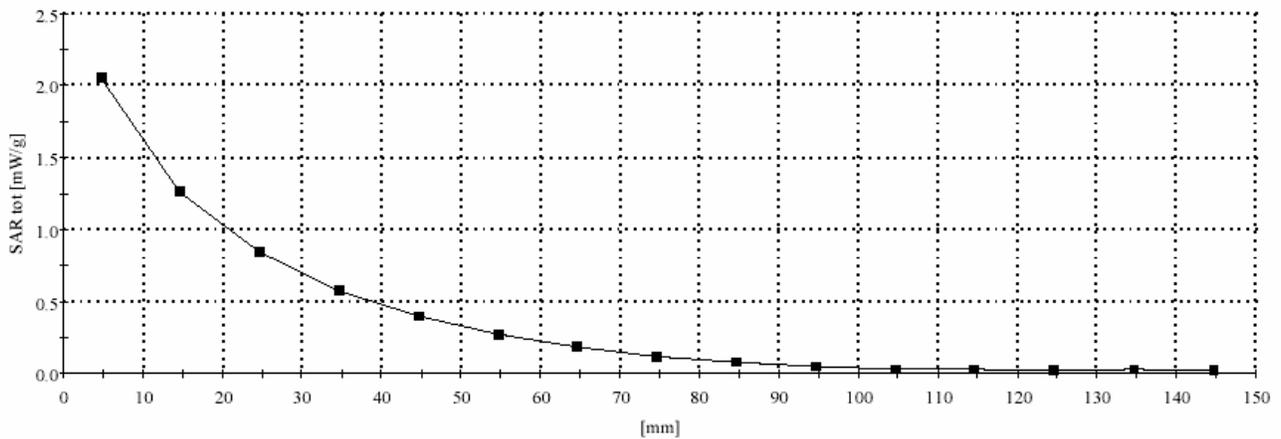
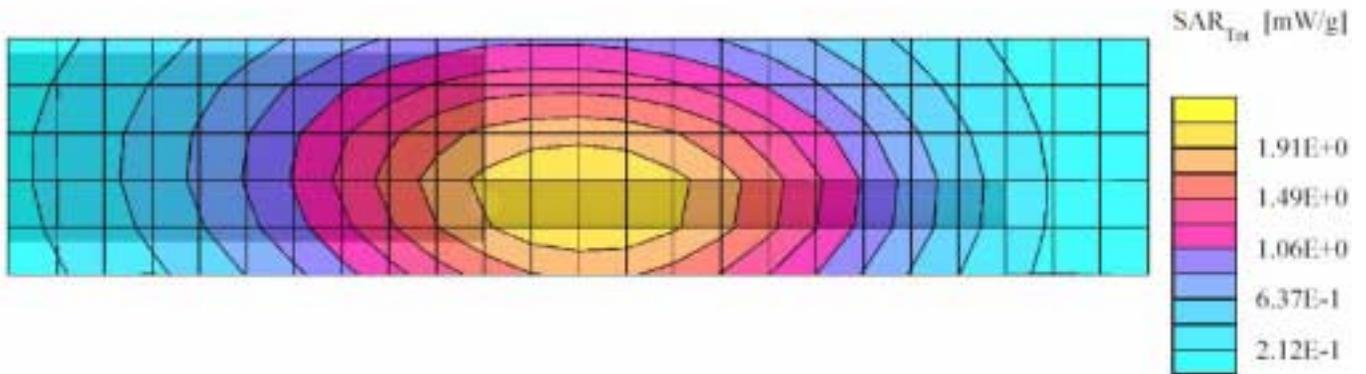
Probe: ET3DV6R - SN1545(cal Date 28 Aug 2003); ConvF(8.40,8.40,8.40); Probe cal date: 28/08/03; Crest factor: 1.0;

IEEE Head 156 MHz: $\sigma = 0.73$ mho/m $\rho = 52.8$ = 1.00 g/cm³; DAE3:406V1 Cal date: 11/20/03

Cube 5x5x7: SAR (1g): 2.08 mW/g, SAR (10g): 1.61 mW/g, (Worst-case extrapolation)

Coarse: Dx = 15.0, Dy = 15.0, Dz = 10.0; Max at 51.0, 183.0, 4.7

Power drift: -0.55 dB



FCC ID: AZ489FT3807; Test Date: 2/13/04

Motorola CGISS EME Laboratory

Run #: KU-R2-040213-02

Model # H46KDH9PW7AN S/N: 407TDY0011

Tx freq: 136.025 MHz

Tissue temp: 21.3 C

Start power: 5.84 W

Antenna #: NAD6566A

Battery kit: NTN9858A

Carry Accessories: NONE

Audio/data accessories: NONE

DUT with front separated 2.5cm from the phantom

Flat Phantom; Position: (90°,90°);

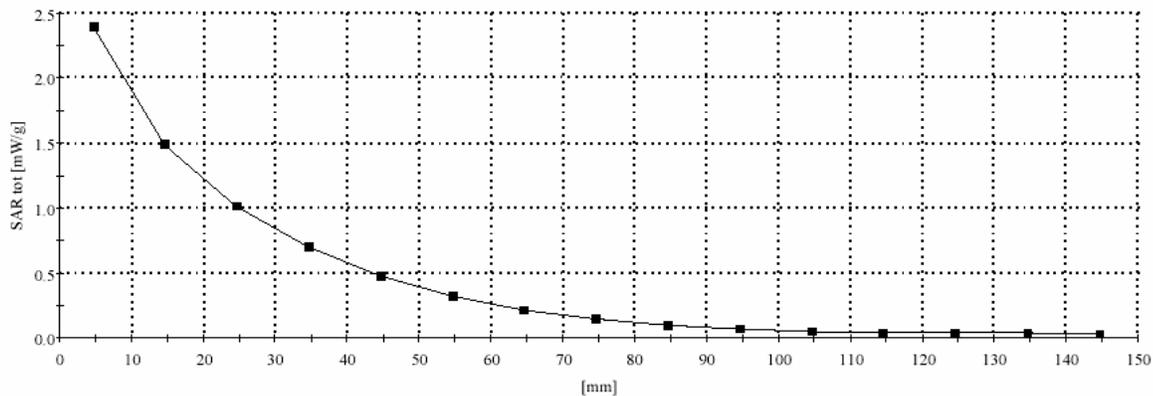
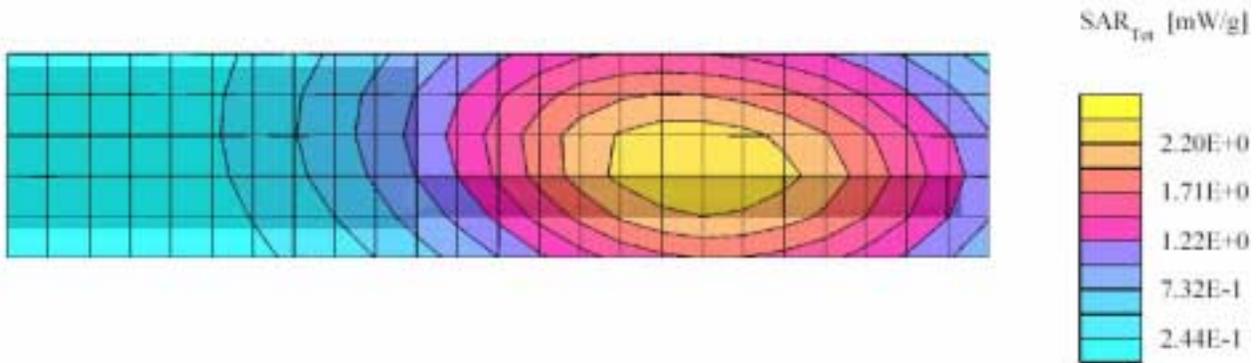
Probe: ET3DV6R - SN1545(cal Date 28 Aug 2003); ConvF(8.40,8.40,8.40); Probe cal date: 28/08/03; Crest factor: 1.0;

IEEE Head 156 MHz: $\rho = 0.73$ mho/m $\mu = 52.7$ = 1.00 g/cm³; DAE3:406V1 Cal date: 11/20/03

Cube 5x5x7: SAR (1g): 2.42 mW/g, SAR (10g): 1.89 mW/g, (Worst-case extrapolation)

Coarse: Dx = 15.0, Dy = 15.0, Dz = 10.0; Max at 42.0, 252.0, 4.7

Power drift: -0.17 dB



APPENDIX C

Dipole System Performance Check Results

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; Model D300V2, SN 1001; Test Date: 2/6/04

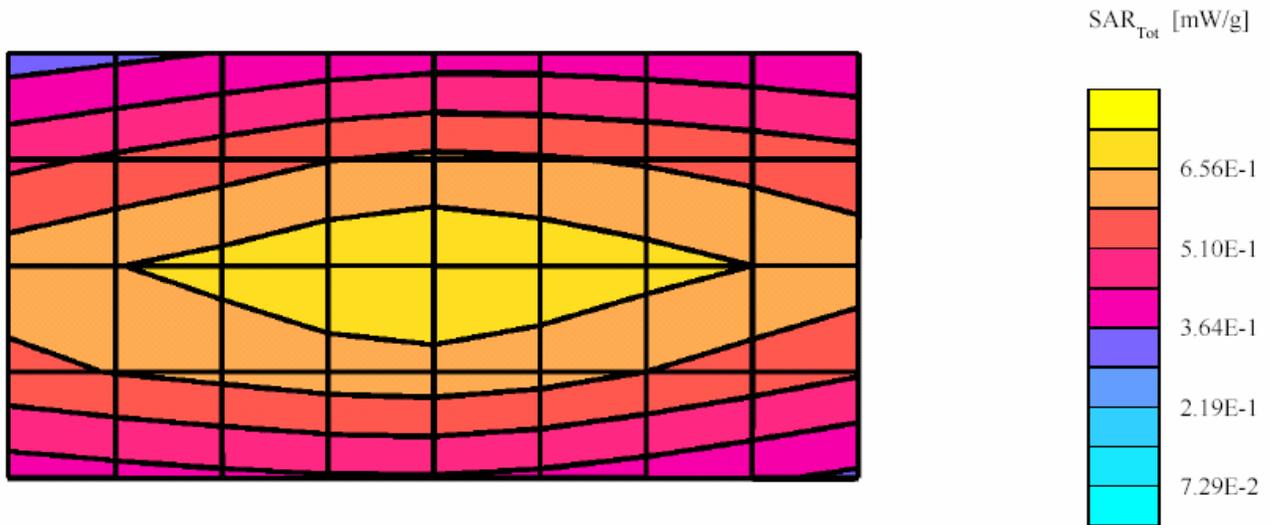
Motorola CGISS EME Lab

Run #: R2-040206-01
TX Freq: 300 MHz
Sim Tissue Temp: 20.9 C
Start Power: 250mW

Target: 2.72 mW/g (1g-SAR), 1.83 mW/g (10g-SAR) from System performance target (12/16/03)
SAR calculated 1g is 2.9 mW/g percent from target (including drift) is 6.5 %
SAR Calculated 10g is 1.95 mW/g Percent from target (including drift) is 6.65 %

Flat Phantom; Position:

Probe: ET3DV6R - SN1545(cal Date 28 Aug 2003);Probe Cal Date: 28/08/03ConvF(7.30,7.30,7.30); Crest factor: 1.0; FCC
Body 300: $\sigma = 0.90\text{mho/m}$ $\epsilon = 57.4$ $\rho = 1.00\text{ g/cm}^3$; DAE3:406V1 Cal date: 11/20/03
Cubes (2): Peak: 1.09 mW/g \pm 0.05 dB, SAR (1g): 0.711 mW/g \pm 0.06 dB, SAR (10g): 0.479 mW/g \pm 0.06 dB, (Worst-case extrapolation)Penetration depth: 13.3 (11.8, 15.3) [mm]
Power drift: -0.08 dB



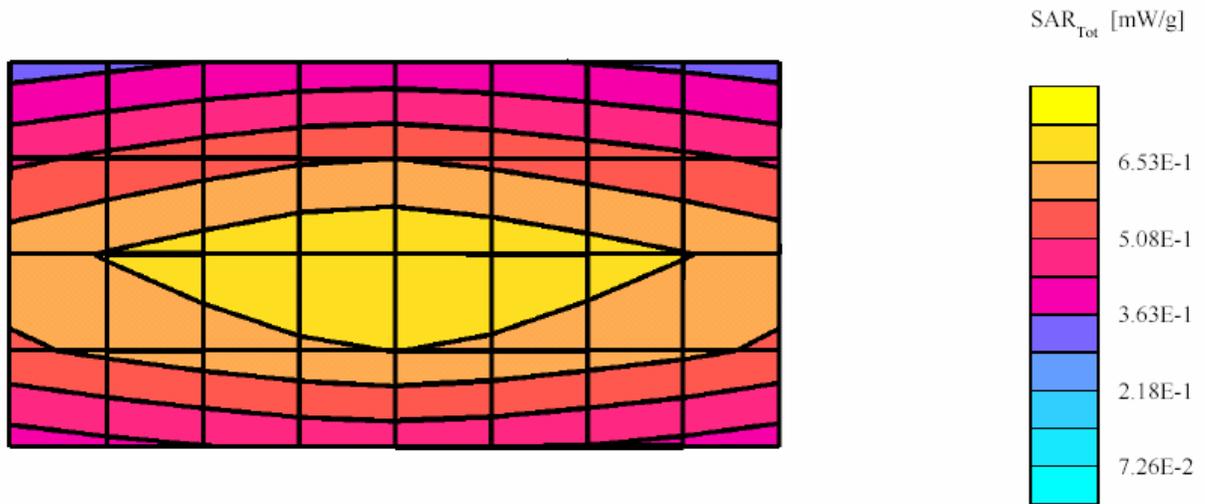
SPEAG 300 MHz Dipole; Model D300V2, SN 1001; Test Date: 2/7/04

Motorola CGISS EME Lab

Run #: R2-040207-01
TX Freq: 300 MHz
Sim Tissue Temp: 21.9 C
Start Power: 250mW

Target: 2.72 mW/g (1g-SAR), 1.83 mW/g (10g-SAR) from System performance target (12/16/03)
SAR calculated 1g is 2.86 mW/g percent from target (including drift) is 5.29 %
SAR Calculated 10g is 1.93 mW/g Percent from target (including drift) is 5.36 %

Flat Phantom ; Probe: ET3DV6R - SN1545(cal Date 28 Aug 2003);Probe Cal Date: 28/08/03ConvF(7.30,7.30,7.30); Crest factor: 1.0; FCC Body 300: $\sigma = 0.91\text{mho/m}$ $\rho = 57.1$ $\rho = 1.00$ g/cm³; DAE3:406V1 Cal date: 11/20/03
Cubes (2): Peak: 1.09 mW/g \pm 0.05 dB, SAR (1g): 0.716 mW/g \pm 0.05 dB, SAR (10g): 0.482 mW/g \pm 0.06 dB, (Worst-case extrapolation)Penetration depth: 13.3 (11.7, 15.2) [mm]
Power drift: 0.00 dB



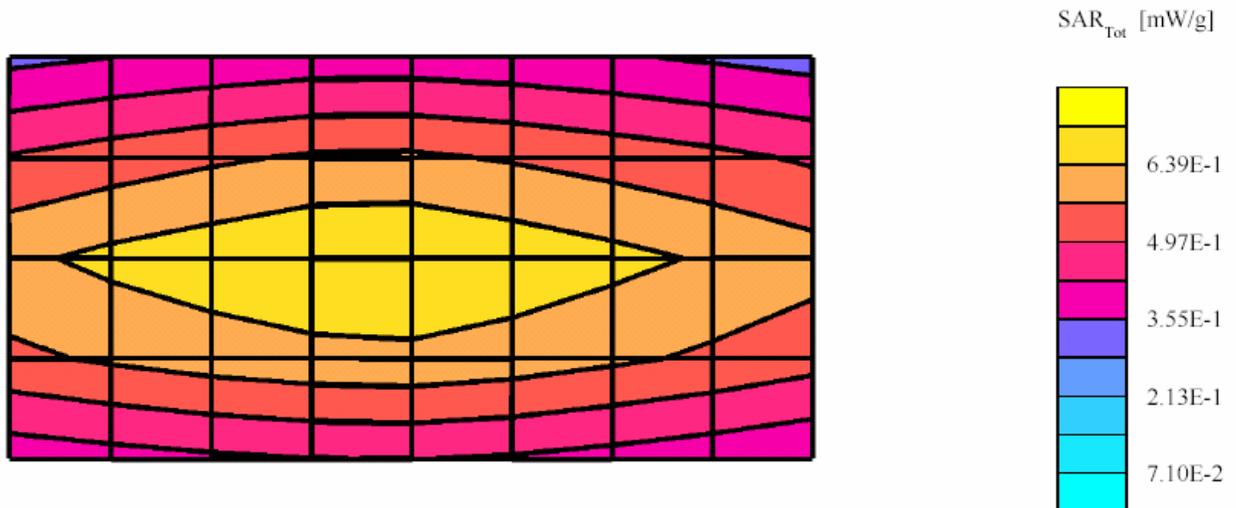
SPEAG 300 MHz Dipole; Model D300V2, SN 1001; Test Date: 2/8/04

Motorola CGISS EME Lab

Run #: R2-040208-01
TX Freq: 300 MHz
Sim Tissue Temp: 21.4 C
Start Power: 250mW

Target: 2.72 mW/g (1g-SAR), 1.83 mW/g (10g-SAR) from System performance target (12/16/03)
SAR calculated 1g is 2.80 mW/g percent from target (including drift) is 2.88 %
SAR Calculated 10g is 1.89 mW/g Percent from target (including drift) is 3.19 %

Flat Phantom; Probe: ET3DV6R - SN1545(cal Date 28 Aug 2003);Probe Cal Date: 28/08/03ConvF(7.30,7.30,7.30); Crest factor: 1.0; FCC Body 300: $\sigma = 0.89$ mho/m $\rho = 56.9$ = 1.00 g/cm³; DAE3:406V1 Cal date: 11/20/03
Cubes (2): Peak: 1.06 mW/g \pm 0.05 dB, SAR (1g): 0.698 mW/g \pm 0.05 dB, SAR (10g): 0.471 mW/g \pm 0.05 dB, (Worst-case extrapolation) Penetration depth: 13.4 (11.9, 15.3) [mm]
Power drift: -0.01 dB



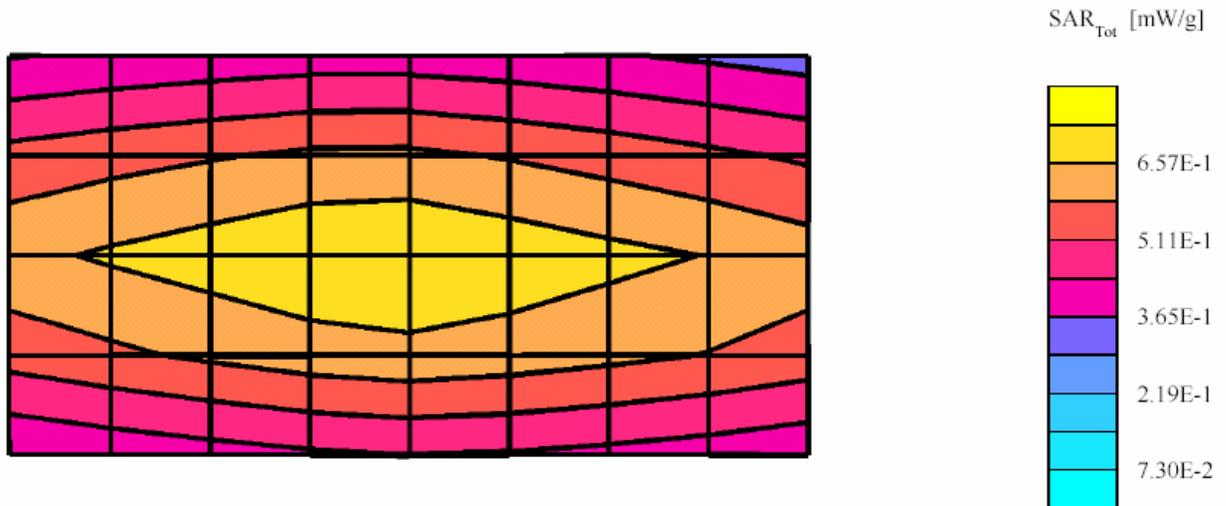
SPEAG 300 MHz Dipole; Model D300V2, SN 1001; Test Date: 2/9/04

Motorola CGISS EME Lab

Run #: R2-040209-01
TX Freq: 300 MHz
Sim Tissue Temp: 21.3 C
Start Power: 250mW

Target: 2.72 mW/g (1g-SAR), 1.83 mW/g (10g-SAR) from System performance target (12/16/03)
SAR calculated 1g is 2.85 mW/g percent from target (including drift) is 4.76 %
SAR Calculated 10g is 1.92 mW/g Percent from target (including drift) is 4.89 %

Flat Phantom; Probe: ET3DV6R - SN1545(cal Date 28 Aug 2003);Probe Cal Date: 28/08/03ConvF(7.30,7.30,7.30); Crest factor: 1.0; FCC Body 300: $\sigma = 0.90$ mho/m $\mu = 57.0$ $\rho = 1.00$ g/cm³; DAE3:406V1 Cal date: 11/20/03
Cubes (2): Peak: 1.09 mW/g \pm 0.06 dB, SAR (1g): 0.714 mW/g \pm 0.06 dB, SAR (10g): 0.481 mW/g \pm 0.05 dB, (Worst-case extrapolation) Penetration depth: 13.3 (11.8, 15.3) [mm]
Power drift: 0.01 dB



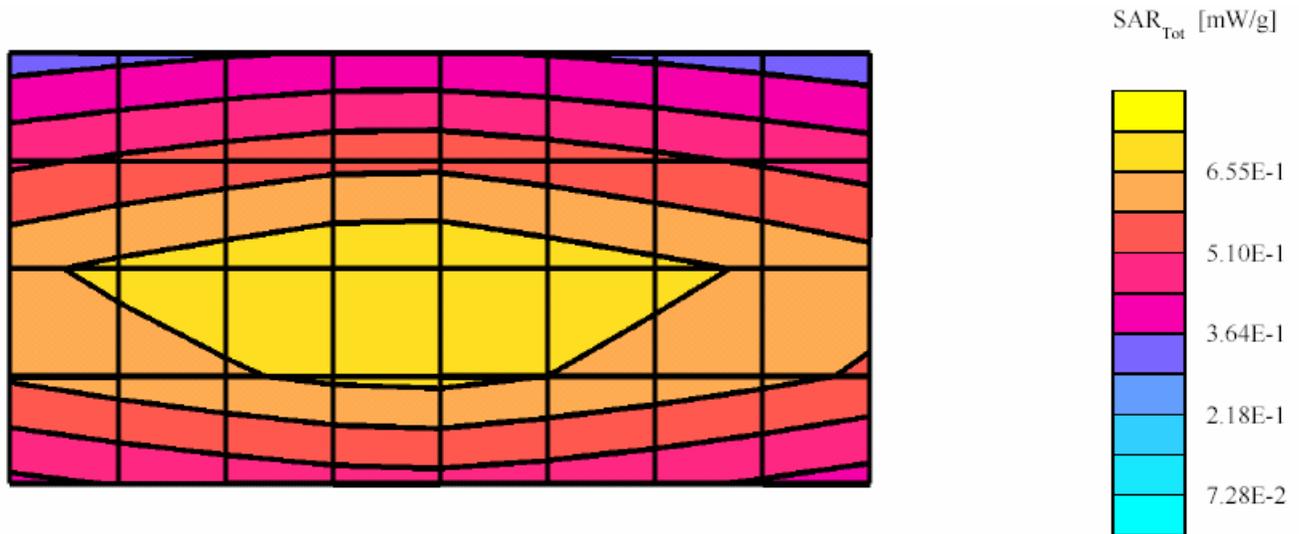
SPEAG 300 MHz Dipole; Model D300V2, SN 1001; Test Date: 2/10/04

Motorola CGISS EME Lab

Run #: R2-040210-01
TX Freq: 300 MHz
Sim Tissue Temp: 20.7 C
Start Power: 250mW

Target: 2.72 mW/g (1g-SAR), 1.83 mW/g (10g-SAR) from System performance target (12/16/03)
SAR calculated 1g is 2.90 mW/g percent from target (including drift) is 6.52%
SAR Calculated 10g is 1.96 mW/g Percent from target (including drift) is 6.94 %

Flat Phantom; Probe: ET3DV6R - SN1545(cal Date 28 Aug 2003);Probe Cal Date: 28/08/03ConvF(7.30,7.30,7.30); Crest factor: 1.0; FCC Body 300: $\sigma = 0.91\text{mho/m}$ $\rho = 57.4$ $\rho = 1.00\text{ g/cm}^3$; DAE3:406V1 Cal date: 11/20/03
Cubes (2): Peak: 1.10 mW/g $\pm 0.05\text{ dB}$, SAR (1g): 0.721 mW/g $\pm 0.06\text{ dB}$, SAR (10g): 0.487 mW/g $\pm 0.06\text{ dB}$, (Worst-case extrapolation) Penetration depth: 13.5 (11.9, 15.5) [mm]
Power drift: -0.02 dB



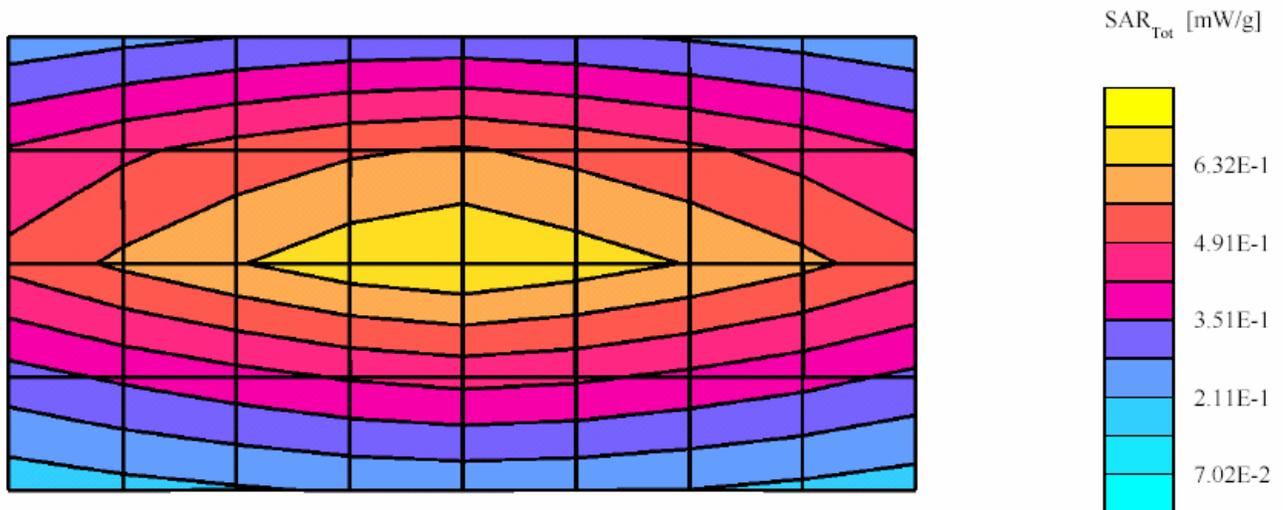
SPEAG 300 MHz Dipole; Model D300V2, SN 1001; Test Date: 2/11/04

Motorola CGISS EME Lab

Run #: R2-040211-01
TX Freq: 300 MHz
Sim Tissue Temp: 21.5 C
Start Power: 250mW

Target: 2.81 mW/g (1g-SAR), 1.88 mW/g (10g-SAR) from System performance target (12/16/03)
SAR calculated 1g is 2.81 mW/g percent from target (including drift) is +0.05 %
SAR Calculated 10g is 1.89 mW/g Percent from target (including drift) is +0.69 %

Flat Phantom; Probe: ET3DV6R - SN1545(cal Date 28 Aug 2003);Probe Cal Date: 28/08/03ConvF(7.40,7.40,7.40); Crest factor: 1.0; IEEE Head 300 MHz: $\sigma=0.85$ mho/m $\rho=47.1$ = 1.00 g/cm³; DAE3:406V1 Cal date: 11/20/03
Cubes (2): Peak: 1.06 mW/g \pm 0.05 dB, SAR (1g): 0.698 mW/g \pm 0.05 dB, SAR (10g): 0.470 mW/g \pm 0.06 dB, (Worst-case extrapolation) Penetration depth: 13.3 (11.8, 15.3) [mm]
Power drift: -0.03 dB



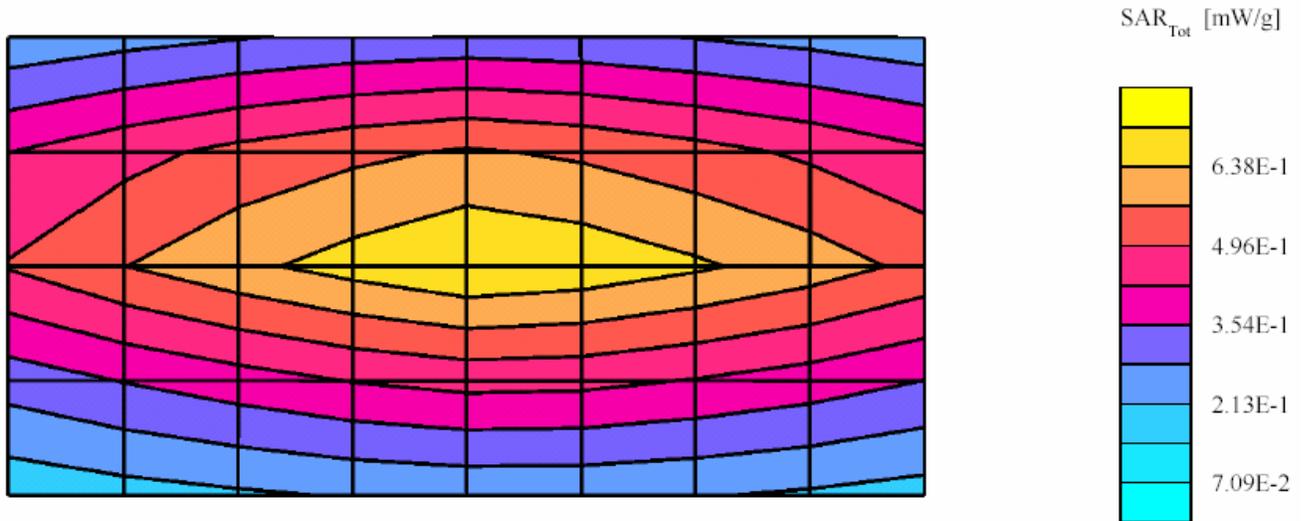
SPEAG 300 MHz Dipole; Model D300V2, SN 1001; Test Date: 2/12/04

Motorola CGISS EME Lab

Run #: R2-040212-01
TX Freq: 300 MHz
Sim Tissue Temp: 20.7 C
Start Power: 250mW

Target: 2.81 mW/g (1g-SAR), 1.88 mW/g (10g-SAR) from System performance target (12/16/03)
SAR calculated 1g is 2.83 mW/g percent from target (including drift) is +0.59 %
SAR Calculated 10g is 1.90 mW/g Percent from target (including drift) is +1.30 %

Flat Phantom; Probe: ET3DV6R - SN1545(cal Date 28 Aug 2003);Probe Cal Date: 28/08/03ConvF(7.40,7.40,7.40); Crest factor: 1.0; IEEE Head 300 MHz: $\epsilon = 0.85$ mho/m $\mu = 47.1$ = 1.00 g/cm³; DAE3:406V1 Cal date: 11/20/03
Cubes (2): Peak: 1.08 mW/g \pm 0.05 dB, SAR (1g): 0.705 mW/g \pm 0.05 dB, SAR (10g): 0.475 mW/g \pm 0.06 dB, (Worst-case extrapolation) Penetration depth: 13.4 (11.8, 15.4) [mm]
Power drift: -0.01 dB



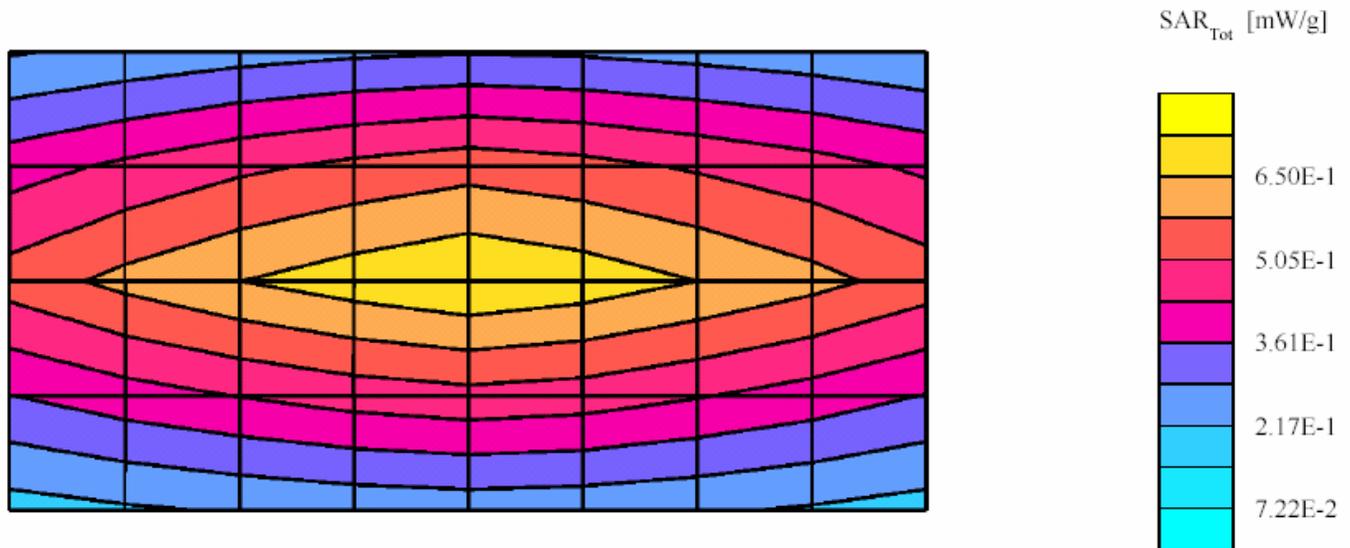
SPEAG 300 MHz Dipole; Model D300V2, SN 1001; Test Date: 2/13/04

Motorola CGISS EME Lab

Run #: R2-040213-01
TX Freq: 300 MHz
Sim Tissue Temp: 21.3 C
Start Power: 250mW

Target: 2.81 mW/g (1g-SAR), 1.88 mW/g (10g-SAR) from System performance target (12/16/03)
SAR calculated 1g is 2.85 mW/g percent from target (including drift) is +1.25 %
SAR Calculated 10g is 1.91 mW/g Percent from target (including drift) is +1.74 %

Flat Phantom; Probe: ET3DV6R - SN1545(cal Date 28 Aug 2003);Probe Cal Date: 28/08/03ConvF(7.40,7.40,7.40); Crest factor: 1.0; IEEE Head 300 MHz: $\epsilon = 0.85$ mho/m $\mu = 47.1$ = 1.00 g/cm³; DAE3:406V1 Cal date: 11/20/03
Cubes (2): Peak: 1.08 mW/g \pm 0.07 dB, SAR (1g): 0.708 mW/g \pm 0.06 dB, SAR (10g): 0.476 mW/g \pm 0.06 dB, (Worst-case extrapolation) Penetration depth: 13.1 (11.6, 15.1) [mm]
Power drift: -0.02 dB



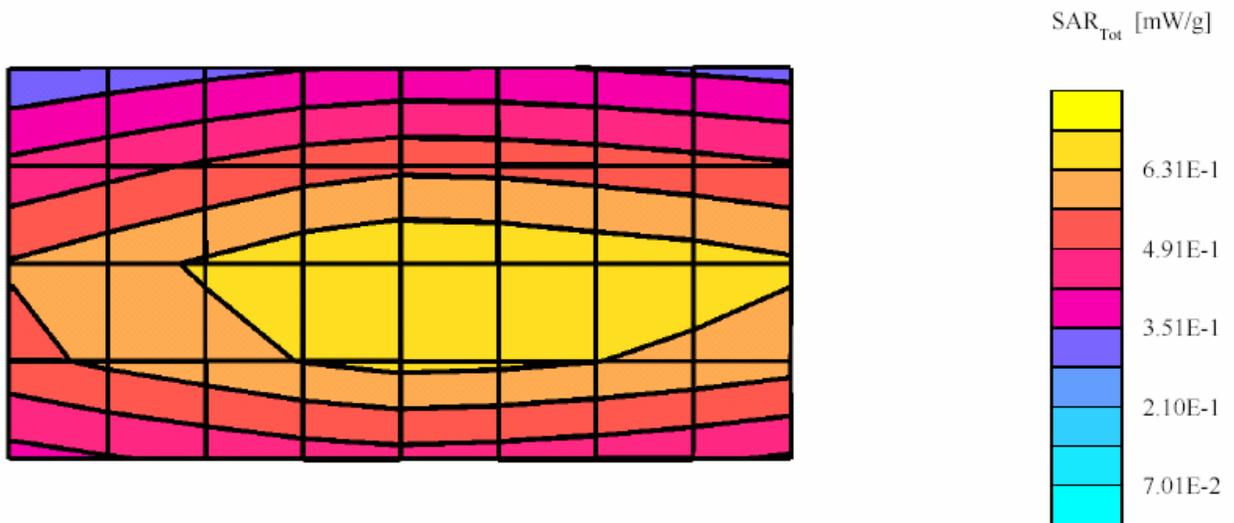
SPEAG 300 MHz Dipole; Model D300V2, SN 1001; Test Date: 2/16/04

Motorola CGISS EME Lab

Run #: R2-040216-01
TX Freq: 300 MHz
Sim Tissue Temp: 20.7 C
Start Power: 250mW

Target: 2.72 mW/g (1g-SAR), 1.83 mW/g (10g-SAR) from System performance target (12/16/03)
SAR calculated 1g is 2.72 mW/g percent from target (including drift) is +0.02 %
SAR Calculated 10g is 1.83 mW/g Percent from target (including drift) is +0.61 %

Flat Phantom; Probe: ET3DV6R - SN1545(cal Date 28 Aug 2003);Probe Cal Date: 28/08/03ConvF(7.30,7.30,7.30); Crest factor: 1.0; FCC Body 300: $\sigma = 0.88$ mho/m $\rho = 57.2$ = 1.00 g/cm³
Cubes (2): Peak: 1.05 mW/g \pm 0.05 dB, SAR (1g): 0.696 mW/g \pm 0.05 dB, SAR (10g): 0.471 mW/g \pm 0.05 dB, (Worst-case extrapolation) Penetration depth: 13.5 (11.9, 15.5) [mm]
Power drift: 0.10 dB



SYSTEM PERFORMANCE CHECK TARGET SAR

Date: 12/16/2003 Frequency (MHz): 300
Lab Location: CGISS Mixture Type: 300 Body
Robot System: CGISS-1 Ambient Temp.(°C): 22.8
Probe Serial #: 1384 Tissue Temp.(°C): 20.7
DAE Serial #: DAE3V2 SN363

Tissue Characteristics

Permittivity: 56.8 Phantom Type/SN: 80602002A/S1
Conductivity: _____ Distance (mm): 15 (tissue/dipole cnt)

Reference Source: Dipole (Dipole)
Reference SN: 1001

Power to Dipole: 250 mW

Measured SAR Value: 0.678 mW/g, 0.457 mW/g (10g avg.)
Power Drift: -0.01 dB

New Target/Measured

SAR Value: 2.72 mW/g, 1.83 mW/g (10g avg.)
(normalized to 1.0 W, including drift)

Test performed by: C. Miller Initial: 

Sys. Per. Chk. Form: 021024

SPEAG Dipole 300MHz. Test Date:12/16/03

Run #:Val-D300V2 sn1001-R1-031216-02 Phantom #: 80602002A/S1

Model #: D300V2

SN: 1001

Robot: CGISS-1

Tester: C. Miller

TX Freq: 300 MHz

Sim Tissue Temp: 20.7 (Celsius)

Start Power; 250mW

DAE3: 363V1

DAE Cal Date: 05/13/2003

- Comments-

SAR calculated for 1g is 2.72 mW/g, Percent from target (including drift) for 1g is -0.06 %

SAR calculated for 10g is 1.83 mW/g, Percent from target (including drift) for 10g is 0.12 %

Flat Phantom; Device

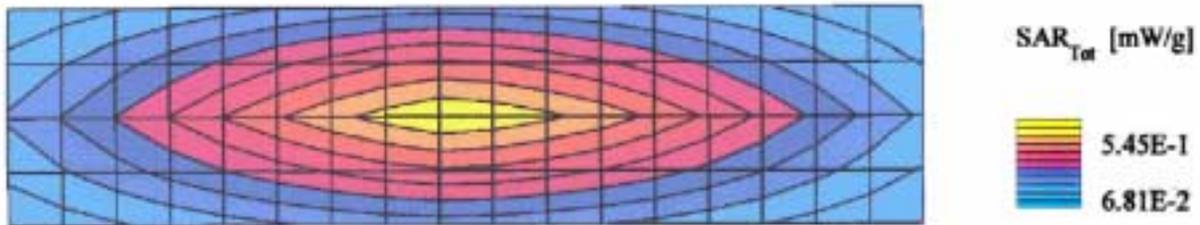
Probe: ET3DV6 - SN1384(Cal Date 05-15-2003);Probe Cal Date: 15/05/03ConvF(7.90,7.90,7.90); Crest

factor: 1.0; FCC Body 300 MHz: $\sigma = 0.89$ mho/m $\epsilon_r = 56.8$ $\rho = 1.00$ g/cm³

Cubes (2): Peak: 1.04 mW/g ± 0.00 dB, SAR (1g): 0.678 mW/g ± 0.02 dB, SAR (10g): 0.457 mW/g ± 0.02 dB, (Worst-case extrapolation)

Penetration depth: 13.3 (11.6, 15.4) [mm]

Powerdrift: -0.01 dB



Motorola CGISS EME Lab

SYSTEM VALIDATION

Date: 12/16/2003 Frequency (MHz): 300
Lab Location: CGISS Mixture Type: 300-IEEE Head
Robot System: CGISS-1 Ambient Temp.(°C): 22.8
Probe Serial #: 1384 Tissue Temp.(°C): _____
DAE Serial #: DAE3V1 SN363

Tissue Characteristics

Permittivity: 47.2 Phantom Type/SN: 80602002B/S2
Conductivity: 0.84 Distance (mm): 15 (tissue/dipole cnt)

Reference Source: Dipole (Dipole)
Reference SN: 1001

Power to Dipole: 250 mW
Power Output (radio): _____ mW

Target SAR Value: 3.00 mW/g, 2.00 mW/g (10g avg.)
(normalized to 1.0 W)

Measured SAR Value: 0.700 mW/g, 0.469 mW/g (10g avg.)
Power Drift: -0.01 dB

Measured SAR Value: 2.81 mW/g, 1.88 mW/g (10g avg.)
(normalized to 1.0 W, including drift)

Percent Difference From Target (MUST be within System Uncertainty): 6.45 % (1g ave)
5.98 % (10g ave)

Test performed by: C. Miller Initial: 

SPEAG Dipole 300MHz. Test Date:12/16/03

Run #:Val-D300V2 sn1001-R1-031216-01 Phantom #: 80602002B/S2

Model #: D300V2 SN: 1001

Robot: CGISS-1 Tester: C. Miller

TX Freq: 300 MHz Sim Tissue Temp: 20.9 (Celsius)

Start Power: 250mW

DAE3: 363V1

DAE Cal Date: 05/13/2003

- Comments-

IEEE Table 7-1 Target at 1W is 3.0 (1g)

SAR calculated for 1g is 2.81 mW/g, Percent from target (including drift) for 1g is -6.45 %

SAR calculated for 10g is 1.88 mW/g, Percent from target (including drift) for 10g is -5.98 %

Flat Phantom; Device

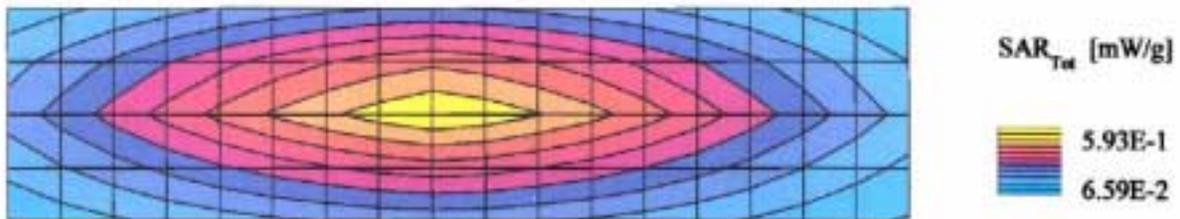
Probe: ET3DV6 - SN1384(Cal Date 05-15-2003);Probe Cal Date: 15/05/03ConvF(7.80,7.80,7.80); Crest

factor: 1.0; IEEE Head 300MHz: $\sigma = 0.84$ mho/m $\epsilon_r = 47.2$ $\rho = 1.00$ g/cm³

Cubes (2): Peak: 1.08 mW/g ± 0.02 dB, SAR (1g): 0.700 mW/g ± 0.02 dB, SAR (10g): 0.469 mW/g ± 0.03 dB, (Worst-case extrapolation)

Penetration depth: 13.2 (11.5, 15.3) [mm]

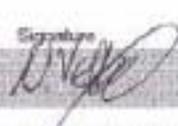
Powerdrift: -0.01 dB



Motorola CGISS EME Lab

APPENDIX D
Calibration Certificates

Client **Motorola CGISS**

CALIBRATION CERTIFICATE			
Object(s)	ET3DV6R - SN:1545		
Calibration procedure(s)	QA CAL-01.v2 Calibration procedure for dosimetric E-field probes		
Calibration date:	August 28, 2003		
Condition of the calibrated item	In Tolerance (according to the specific calibration document)		
<p>This calibration statement documents traceability of M&TE used in the calibration procedures and conformity of the procedures with the ISO/IEC 17025 international standard.</p> <p>All calibrations have been conducted in the closed laboratory facility: environment temperature 22 +/- 2 degrees Celsius and humidity < 75%.</p>			
Calibration Equipment used (M&TE critical for calibration)			
Model Type	ID #	Cal Date (Calibrated by, Certificate No.)	Scheduled Calibration
RF generator HP 8684C	US3642J01700	4-Aug-99 (SPEAG, in house check Aug-02)	In house check: Aug-05
Power sensor E4412A	MY41495277	2-Apr-03 (METAS, No 252-0250)	Apr-04
Power sensor HP 0401A	MY41092100	18-Sep-02 (Agilent, No. 20020918)	Sep-03
Power meter EPM E4419B	GB41293474	2-Apr-03 (METAS, No 252-0250)	Apr-04
Network Analyzer HP 8753E	US37390586	18-Oct-01 (Agilent, No. 248R1033101)	In house check: Oct 03
Fluke Process Calibrator Type 702	SN: 6296803	3-Sep-01 (ELCAL, No.2360)	Sep-03
Calibrated by:	Name Nicu Velhoi	Function Technician	Signature 
Approved by:	Name Kai's Pokovic	Function Laboratory Director	Signature 
Date issued: August 28, 2003			
<p>This calibration certificate is issued as an intermediate solution until the accreditation process (based on ISO/IEC 17025 International Standard) for Calibration Laboratory of Schmid & Partner Engineering AG is completed.</p>			

DASY - Parameters of Probe: ET3DV6R SN:1545

Sensitivity in Free Space

Diode Compression

NormX	2.06 $\mu\text{V}/(\text{V}/\text{m})^2$	DCP X	95	mV
NormY	2.14 $\mu\text{V}/(\text{V}/\text{m})^2$	DCP Y	95	mV
NormZ	1.81 $\mu\text{V}/(\text{V}/\text{m})^2$	DCP Z	95	mV

Sensitivity in Tissue Simulating Liquid

Head 900 MHz $\epsilon_r = 41.5 \pm 5\%$ $\sigma = 0.97 \pm 5\%$ mho/m

Valid for f=800-1000 MHz with Head Tissue Simulating Liquid according to EN 50361, P1 528-200X

ConvF X	6.1 $\pm 9.5\%$ (k=2)	Boundary effect:	
ConvF Y	6.1 $\pm 9.5\%$ (k=2)	Alpha	0.35
ConvF Z	6.1 $\pm 9.5\%$ (k=2)	Depth	2.84

Head 1800 MHz $\epsilon_r = 40.0 \pm 5\%$ $\sigma = 1.40 \pm 5\%$ mho/m

Valid for f=1710-1910 MHz with Head Tissue Simulating Liquid according to EN 50361, P1 528-200X

ConvF X	4.9 $\pm 9.5\%$ (k=2)	Boundary effect:	
ConvF Y	4.9 $\pm 9.5\%$ (k=2)	Alpha	0.50
ConvF Z	4.9 $\pm 9.5\%$ (k=2)	Depth	2.63

Boundary Effect

Head 900 MHz Typical SAR gradient: 5 % per mm

Probe Tip to Boundary		1 mm	2 mm
SAR _{be} [%]	Without Correction Algorithm	11.1	6.5
SAR _{be} [%]	With Correction Algorithm	0.5	0.6

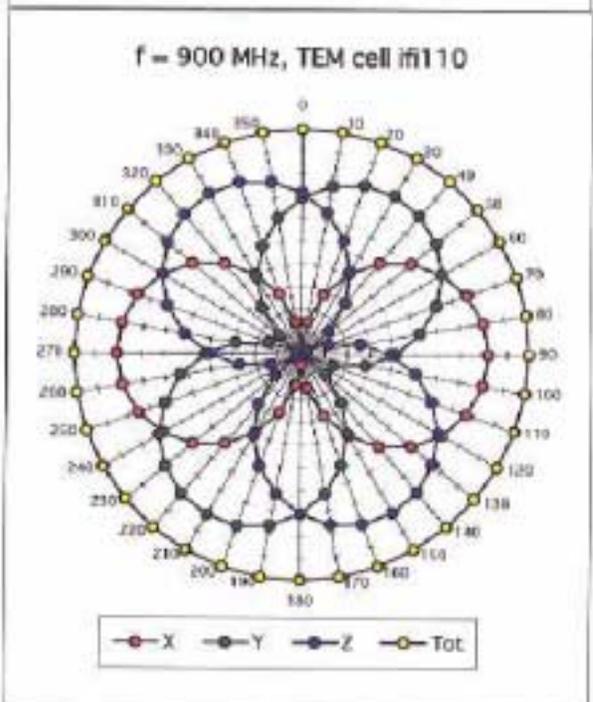
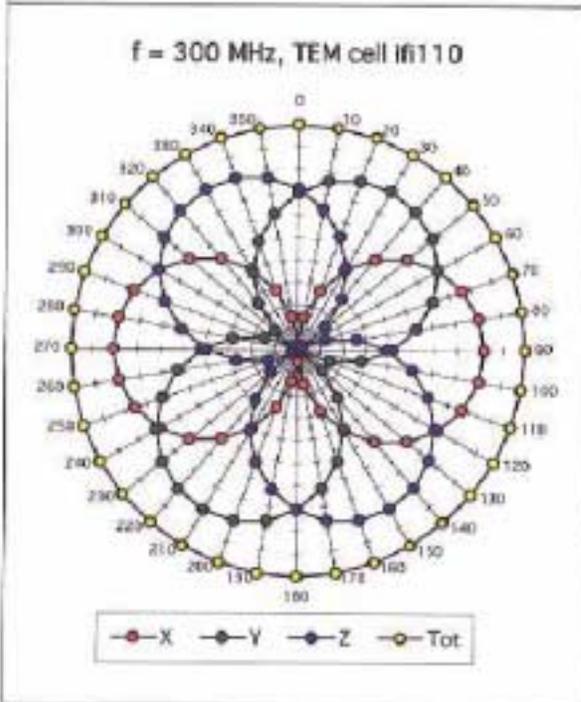
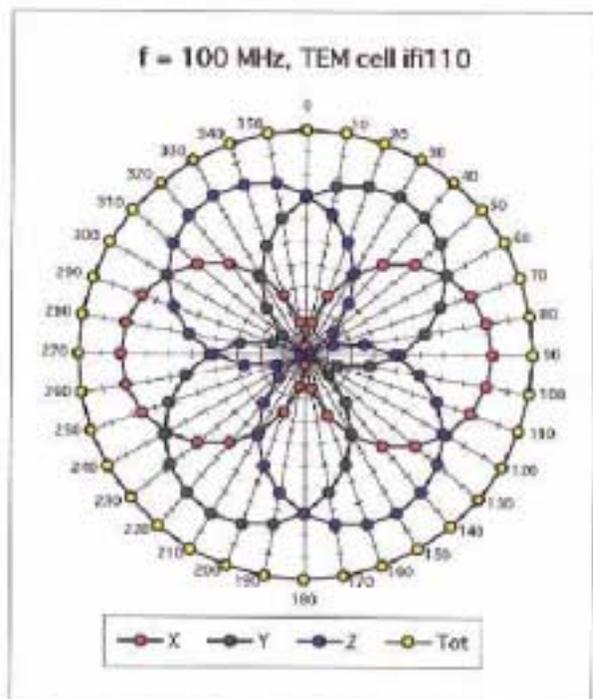
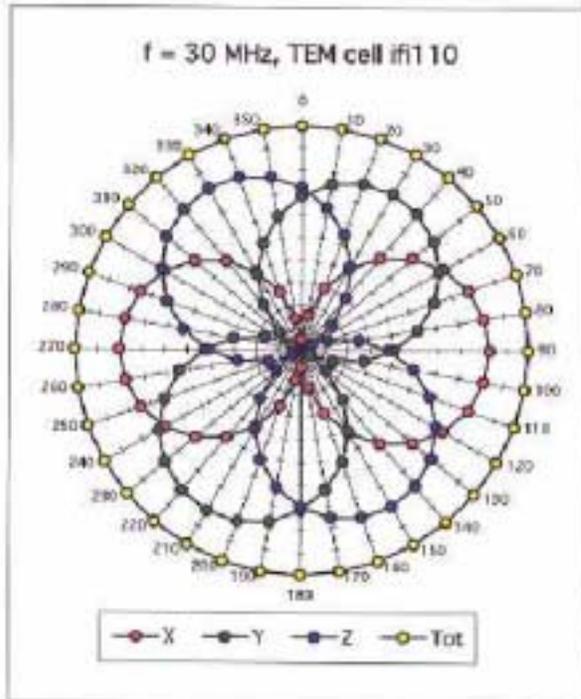
Head 1800 MHz Typical SAR gradient: 10 % per mm

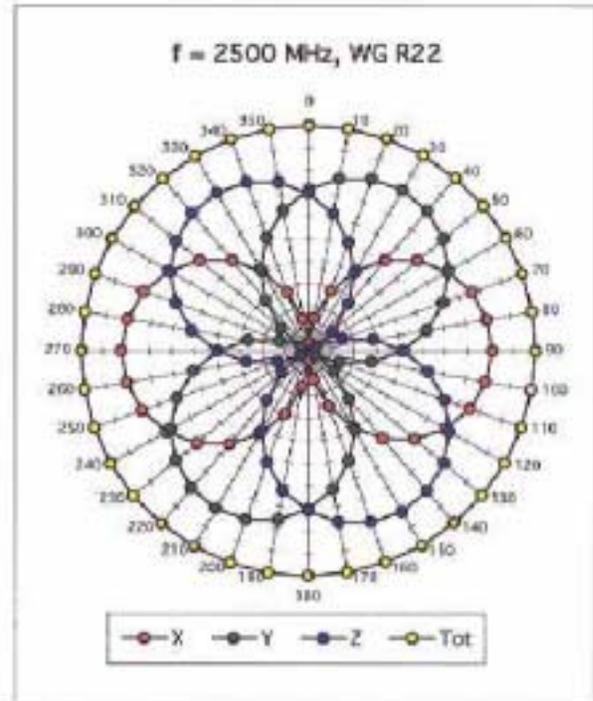
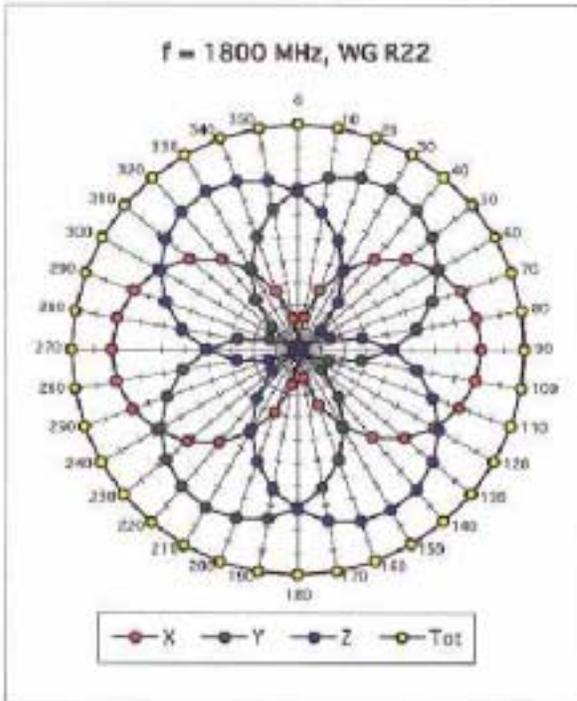
Probe Tip to Boundary		1 mm	2 mm
SAR _{be} [%]	Without Correction Algorithm	13.8	9.3
SAR _{be} [%]	With Correction Algorithm	0.2	0.1

Sensor Offset

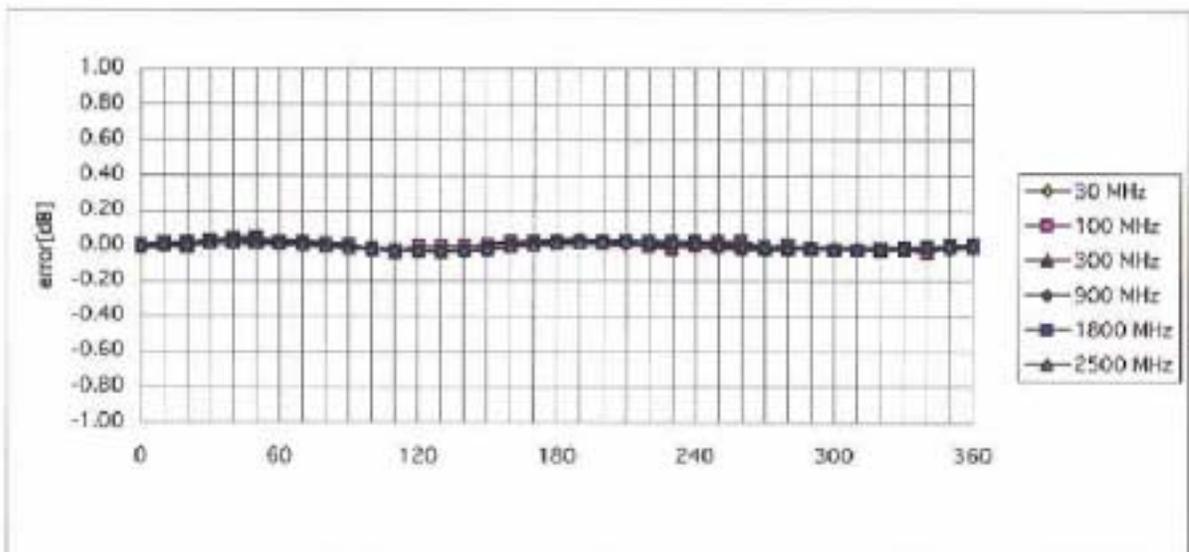
Probe Tip to Sensor Center 2.7 mm

Receiving Pattern (ϕ), $\theta = 0^\circ$



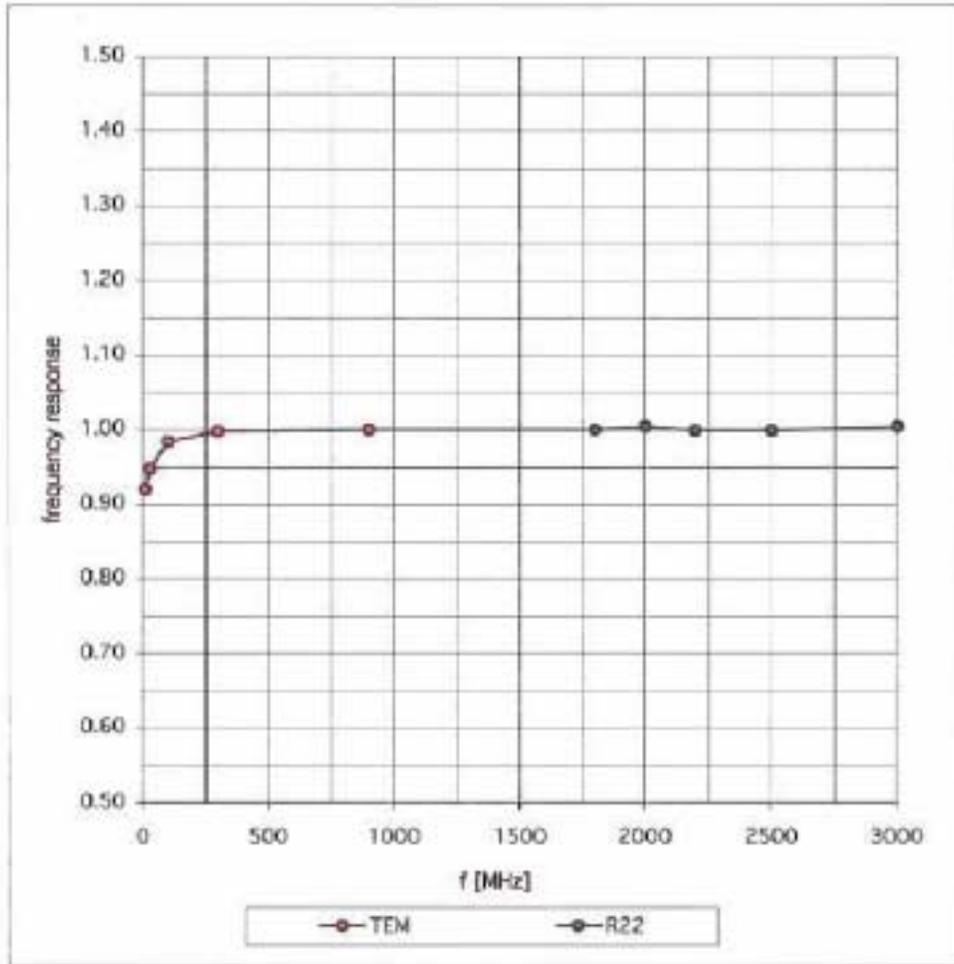


Isotropy Error (ϕ), $\theta = 0^\circ$



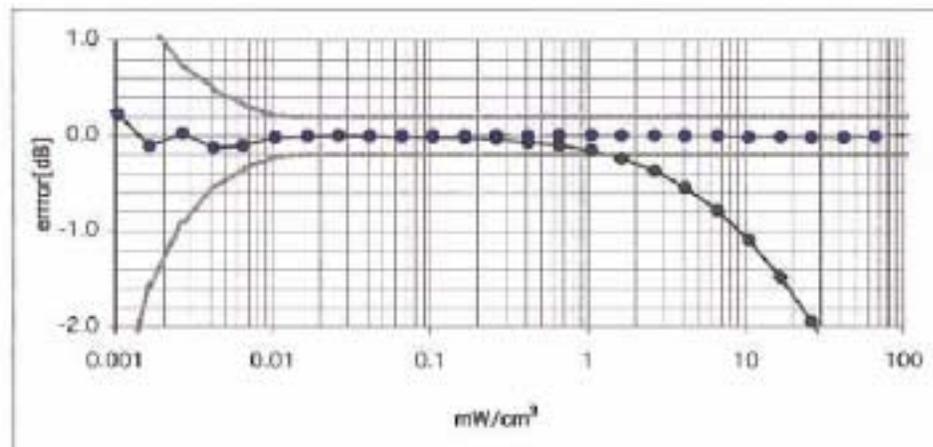
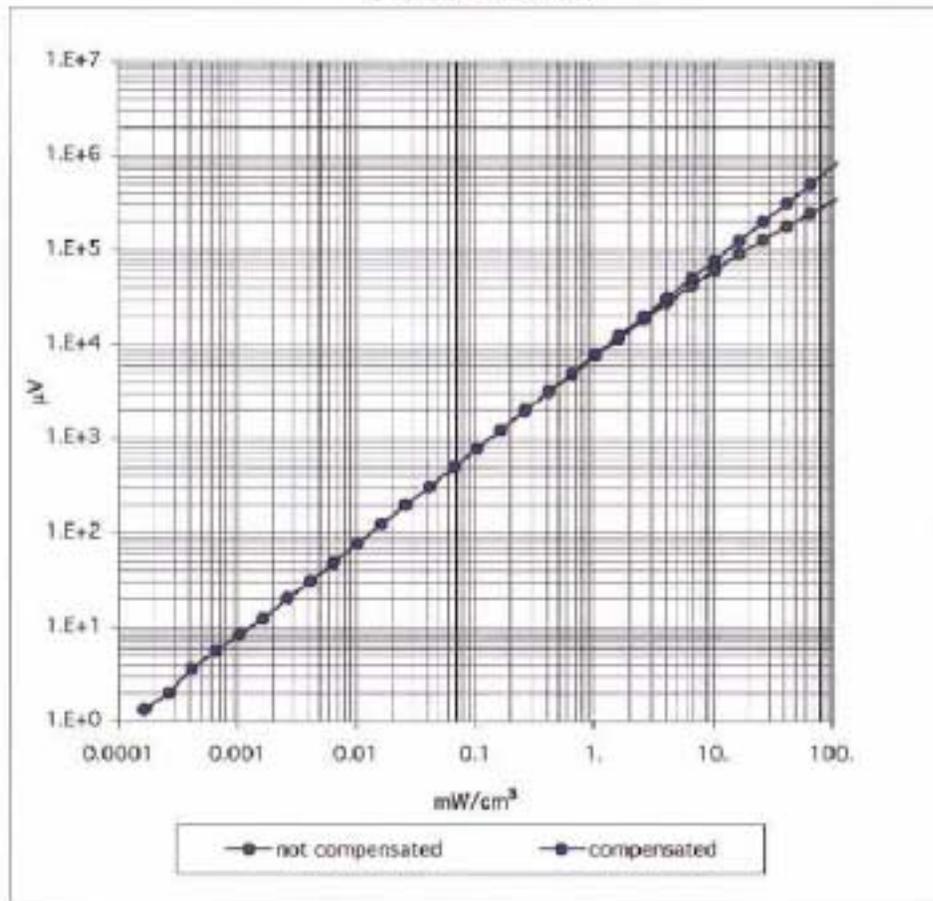
Frequency Response of E-Field

(TEM-Cell:ifi110, Waveguide R22)



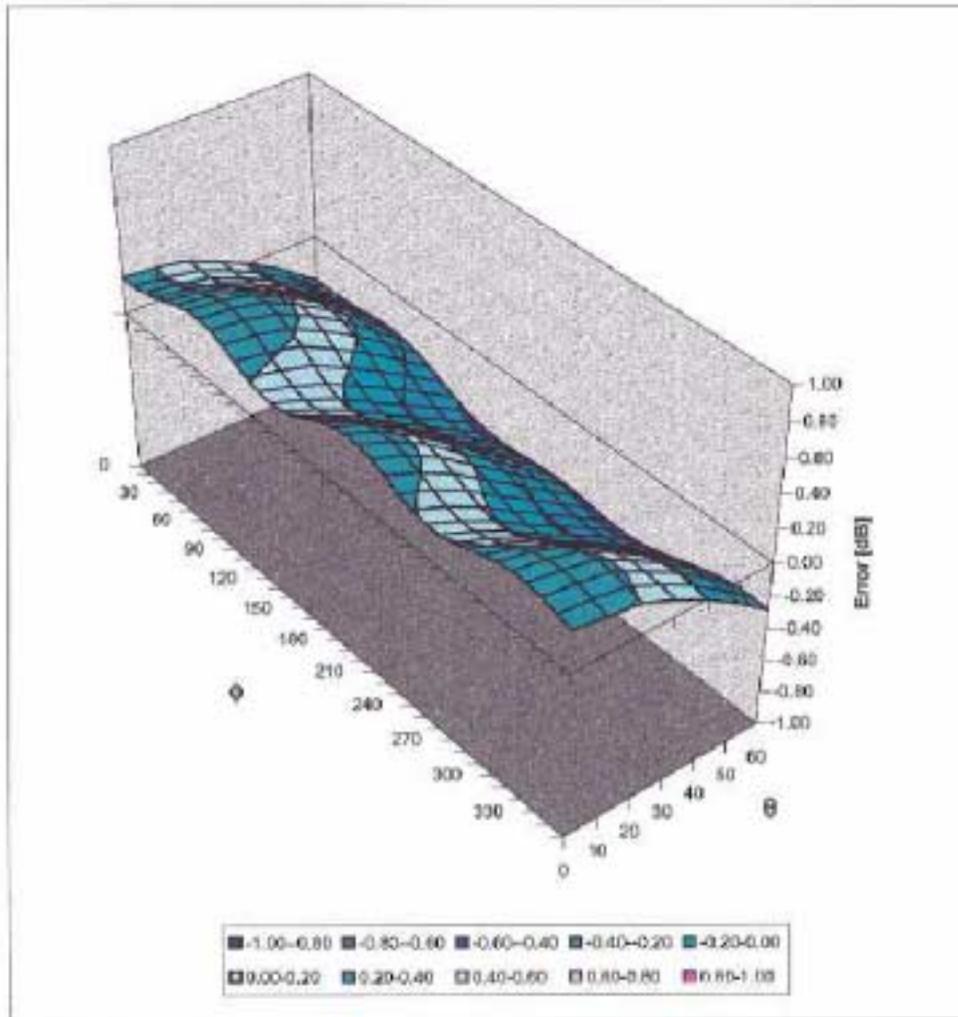
Dynamic Range f(SARhead)

(Waveguide R22)



Deviation from Isotropy in HSL

Error (θ, ϕ), $f = 900$ MHz



Additional Conversion Factors

for Dosimetric E-Field Probe

Type:

ET3DV6R

Serial Number:

1545

Place of Assessment:

Zurich

Date of Assessment:

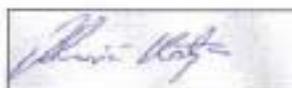
September 1, 2003

Probe Calibration Date:

August 28, 2003

Schmid & Partner Engineering AG hereby certifies that conversion factor(s) of this probe have been evaluated on the date indicated above. The assessment was performed using the FDTD numerical code SEMCAD of Schmid & Partner Engineering AG. Since the evaluation is coupled with measured conversion factors, it has to be recalculated yearly, i.e., following the re-calibration schedule of the probe. The uncertainty of the numerical assessment is based on the extrapolation from measured value at 900 MHz or at 1800 MHz.

Assessed by:



Dosimetric E-Field Probe ET3DV6R SN:1545

Conversion factor (\pm standard deviation)

150 MHz	ConvF	7.6 \pm 8 %	$\epsilon_r = 61.9$ $\sigma = 0.80$ mho/m (body tissue)
236 MHz	ConvF	7.4 \pm 8 %	$\epsilon_r = 59.8$ $\sigma = 0.87$ mho/m (body tissue)
300 MHz	ConvF	7.3 \pm 8 %	$\epsilon_r = 58.2$ $\sigma = 0.92$ mho/m (body tissue)
350 MHz	ConvF	7.3 \pm 8 %	$\epsilon_r = 57.7$ $\sigma = 0.93$ mho/m (body tissue)
450 MHz	ConvF	7.0 \pm 8 %	$\epsilon_r = 56.7$ $\sigma = 0.94$ mho/m (body tissue)
784 MHz	ConvF	6.1 \pm 8 %	$\epsilon_r = 55.4$ $\sigma = 0.97$ mho/m (body tissue)
1450 MHz	ConvF	5.0 \pm 8 %	$\epsilon_r = 54.0$ $\sigma = 1.30$ mho/m (body tissue)

Dosimetric E-Field Probe ET3DV6R SN:1545Conversion factor (\pm standard deviation)

150 MHz	ConvF	8.4 \pm 8%	$\epsilon_r = 52.3$ $\sigma = 0.76$ mho/m (head tissue)
236 MHz	ConvF	7.6 \pm 8%	$\epsilon_r = 48.3$ $\sigma = 0.82$ mho/m (head tissue)
300 MHz	ConvF	7.4 \pm 8%	$\epsilon_r = 45.3$ $\sigma = 0.87$ mho/m (head tissue)
350 MHz	ConvF	7.4 \pm 8%	$\epsilon_r = 44.7$ $\sigma = 0.87$ mho/m (head tissue)
400 MHz	ConvF	7.0 \pm 8%	$\epsilon_r = 44.4$ $\sigma = 0.87$ mho/m (head tissue - CENELEC)
450 MHz	ConvF	7.0 \pm 8%	$\epsilon_r = 43.5$ $\sigma = 0.87$ mho/m (head tissue)
784 MHz	ConvF	6.3 \pm 8%	$\epsilon_r = 41.8$ $\sigma = 0.90$ mho/m (head tissue)

Schmid & Partner Engineering AG

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Calibration Certificate

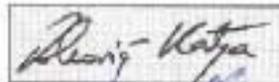
300 MHz System Validation Dipole

Type:	D300V2
Serial Number:	1001
Place of Calibration:	Zurich
Date of Calibration:	September 11, 2002
Calibration Interval:	24 months

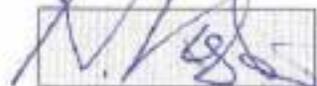
Schmid & Partner Engineering AG hereby certifies, that this device has been calibrated on the date indicated above. The calibration was performed in accordance with specifications and procedures of Schmid & Partner Engineering AG.

Wherever applicable, the standards used in the calibration process are traceable to international standards. In all other cases the standards of the Laboratory for EMF and Microwave Electronics at the Swiss Federal Institute of Technology (ETH) in Zurich, Switzerland have been applied.

Calibrated by:



Approved by:



1. Measurement Conditions

The measurements were performed in the flat phantom filled with head simulating liquid of the following electrical parameters at 300 MHz:

Relative Dielectricity	45.8	$\pm 5\%$
Conductivity	0.93 mho/m	$\pm 5\%$

The DASY System with a dosimetric E-field probe ET3DV6 (SN:1507, Conversion factor 8.5 at 300 MHz) was used for the measurements.

The dipole was mounted on the small tripod so that the dipole feedpoint was positioned below the center marking of the flat phantom and the dipole was oriented parallel to the longer side of the phantom. The standard measuring distance was 15mm from dipole center to the liquid surface including the 6mm thick phantom shell. The included distance holder was used during measurements for accurate distance positioning.

The coarse grid with a grid spacing of 20mm was aligned with the dipole. The 5x5x7 fine cube was chosen for cube integration. Probe isotropy errors were cancelled by measuring the SAR with normal and 90° turned probe orientations and averaging.

The dipole input power (forward power) was 400 mW $\pm 3\%$. The results are normalized to 1W input power.

2. SAR Measurement

Standard SAR-measurements were performed with the phantom according to the measurement conditions described in section 1. The results have been normalized to a dipole input power of 1W (forward power). The resulting averaged SAR-values are:

averaged over 1 cm³ (1 g) of tissue: **2.83 mW/g** (Advanced Extrapolation)

averaged over 10 cm³ (10 g) of tissue: **1.89 mW/g** (Advanced Extrapolation)

Advanced extrapolation has been applied to the measured SAR values to compensate for the probe boundary effect (see DASY User Manual for details).

Note: If the liquid parameters for validation are slightly different from the ones used for initial calibration, the SAR-values will be different as well.

3. Dipole Impedance and Return Loss

The impedance was measured at the SMA-connector with a network analyzer and numerically transformed to the dipole feedpoint. The transformation parameters from the SMA-connector to the dipole feedpoint are:

Electrical delay:	1.737 ns	(one direction)
Transmission factor:	0.995	(voltage transmission, one direction)

The dipole was positioned at the flat phantom sections according to section 1 and the distance holder was in place during impedance measurements.

Feedpoint impedance at 300 MHz:	$\text{Re}\{Z\} = 56.9 \Omega$
	$\text{Im}\{Z\} = -5.9 \Omega$
Return Loss at 300 MHz	-21.6 dB

4. Handling

Do not apply excessive force to the dipole arms, because they might bend. Bending of the dipole arms stresses the soldered connections near the feedpoint leading to a damage of the dipole.

5. Design

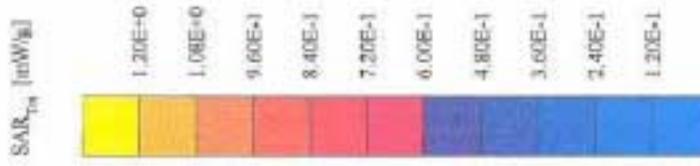
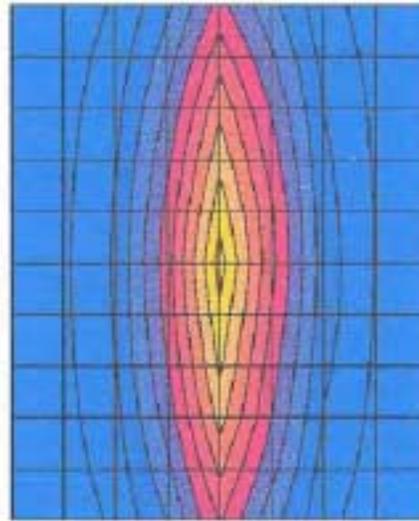
The dipole is made of standard semirigid coaxial cable. The center conductor of the feeding line is directly connected to the second arm of the dipole. The antenna is therefore short-circuited for DC-signals.

6. Power Test

After long term use with 100W radiated power, only a slight warming of the dipole near the feedpoint can be measured.

Validation Dipole D300V2 SN:1001, d = 15 mm

Frequency: 300 MHz, Antenna Input Power: 400 [mW], Flat Phantoms (shell thickness = 0mm)
Grid Spacing: Dx = 20.0, Dy = 20.0, Dz = 10.0
Probe: ET3DV6 - SN1597, Coeff(8,50,8,50,8,50); Crest factor: 1.0; Head 300 MHz: $\rho = 0.99 \text{ mho/in } \epsilon_r = 45.8 \text{ p} = 1.00 \text{ g/cm}^3$
Cubes (2): Peak: $1.74 \text{ mW/g} = 0.02 \text{ dB}$, SAR (10g): $0.755 \text{ mW/g} \pm 0.01 \text{ dB}$, (Advanced extrapolation)
Penetration depth: $12.9(11.6, 14.6) \text{ [mm]}$



06/11/02

Validation Dipole D300V2 SN:1001, d = 15 mm

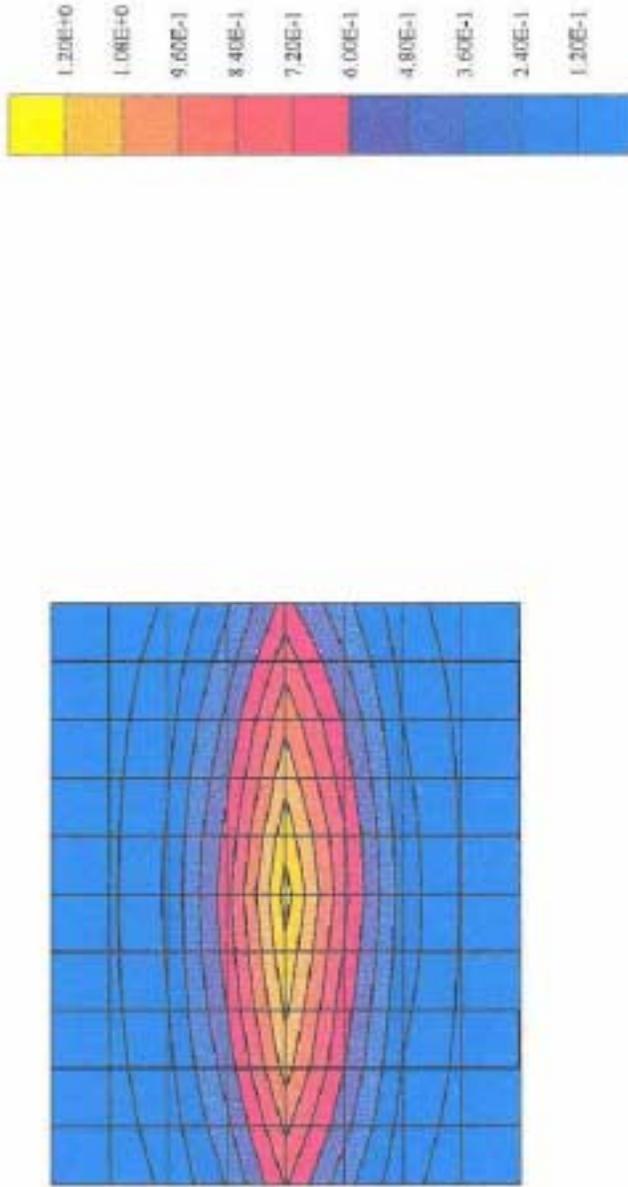
Frequency: 300 MHz; Antenna Input Power: 400 [mW]; Flat Phantom (shell thickness = 6mm)

Grid Spacing: Dx = 20.0, Dy = 20.0, Dz = 10.0

Probe: ET/DV/6 - 5N15/7; ConvF(8:50,8:50,8:50); Crest factor: 1.0; Head:300 MHz; $\sigma = 0.93$ mho/m; $\epsilon_r = 45.8$; $\rho = 1.00$ g/cm³

Cubes (2): Peak: 1.89 mW/g \pm 0.02 dB; SAR (10g): 0.779 mW/g \pm 0.01 dB; (Worst-case extrapolation)

Penetration depth: 12.3 (10.7, 14.6) [mm]



Schmal & Partner Engineering AG, Zurich, Switzerland

APPENDIX E
Illustration of Body-Worn Accessories

The purpose of this appendix is to illustrate the body-worn carry accessories for FCC ID: AZ489FT3807. The sample that was used in the following photos represents the product used to obtain the results presented herein.



Photo 1.
Model HLN9844A
Side View



Photo 2.
Model HLN9844A
Back View



Photo 3.
Model NNTN4115A
Side View



Photo 4.
Model NNTN4115A
Back View



Photo 5.
Model NNTN4116A
Side View



Photo 6.
Model NNTN4116A
Back View



Photo 7.
Model NNTN4117A
Side View



Photo 8.
Model NNTN4117A
Back View



Photo 9.
Model HLN6853A
Side View



Photo 10.
Model HLN6853A
Back View

Appendix F
Accessories and options test status and separation distances

The following table summarizes the test status and separation distance provided by each of the body-worn accessories:

Carry Case Models	Tested ?	Separation distances between DUT antenna and phantom surface. (mm)	Comments
HLN9844A	Yes	30-49	NA
HLN6853A	Yes	32-55	NA
NNTN4115A	Yes	69-107	NA
NNTN4116A	Yes	71-116	NA
NNTN4117A	Yes	58-103	NA
TDN9675A	No	NA	Wrist strap; for carrying only
NLN6349A	No	NA	Shoulder strap; for carrying only
NTN5243A	No	NA	Shoulder strap; for carrying only

Audio Acc. Models	Tested ?	Separation distances between DUT antenna and phantom surface. (mm)	Comments
NMN6193C	Yes	NA	NA
BDN6667A	Yes	NA	Tested w/ BDN6676D
BDN6668A	Yes	NA	Tested w/ BDN6676D
BDN6669A	Yes	NA	Tested w/ BDN6676D
BDN6670A	Yes	NA	Tested w/ BDN6676D
BDN6780A	Yes	NA	Tested w/ BDN6676D
BDN6645A	Yes	NA	Tested w/ BDN6673B
BDN6676D	Yes	NA	NA
NMN6191C	Yes	NA	NA
BDN6673B	Yes	NA	Tested w/ BDN6645A
BDN6708B	Yes	NA	Tested w/ BDN6678A
BDN6678A	Yes	NA	NA
BDN6671B	Yes	NA	Tested w/ BDN6641A
BDN6641A	Yes	NA	NA
BDN6635C	Yes	NA	Tested w/ BDN6673B
BDN6636C	Yes	NA	w/ BDN6673B
NMN1020A	Yes	NA	Tested w/ BDN6676D
NMN6245A	Yes	NA	NA
NMN6246B	Yes	NA	w/ BDN6676D
NMN6258A	Yes	NA	NA
NMN6259A	Yes	NA	NA

RMN4049A	Yes	NA	NA
BDN6665A	Yes	NA	NA
BDN6666A	Yes	NA	NA
BDN6719A	Yes	NA	NA
BDN6781A	Yes	NA	NA
BDN6677A	No	NA	Similar to BDN6678A
BDN6664A	No	NA	Similar to BDN6665A
BDN6726A	No	NA	Similar to BDN6665A
BDN6727A	No	NA	Similar to BDN6665A
BDN6728A	No	NA	Similar to BDN6666A
BDN6729A	No	NA	Similar to BDN6669A
BDN6730A	No	NA	Similar to BDN6670A
BDN6731A	No	NA	Similar to BDN6669A
BDN6732A	No	NA	Similar to BDN6670A