

**MOTOROLA****CGISS EME Test Laboratory**8000 West Sunrise Blvd
Fort Lauderdale, FL. 33322**S.A.R. EME Compliance Test Report****Part 2 of 3**

Attention: FCC
Date of Report: October 29, 2003
Report Revision: Rev. A
Manufacturer: Motorola China
Product Description: 1.0 Watt fixed antenna UHF/RBR/ 4 channel; 300mW
2.4GHz cordless phone; w/ display; Fixed antenna
FCC ID: **AZ489FT4863**
Device Model: HCUE1112A

Test Period: 9/10/03-10/03/03
EME Technician: Clint Miller (EME Technician)
EME Engineer: Stephen Whalen (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 the national and international reference standards and guidelines listed in section 2.0 of this report.

Signature on File

10/29/03

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

X_Change 7/21/03

Equipment HP8920B Control # SMHPB030 calibration date Mar 8, 02 Due Mar 8, 04

S/N: 451ABC0001

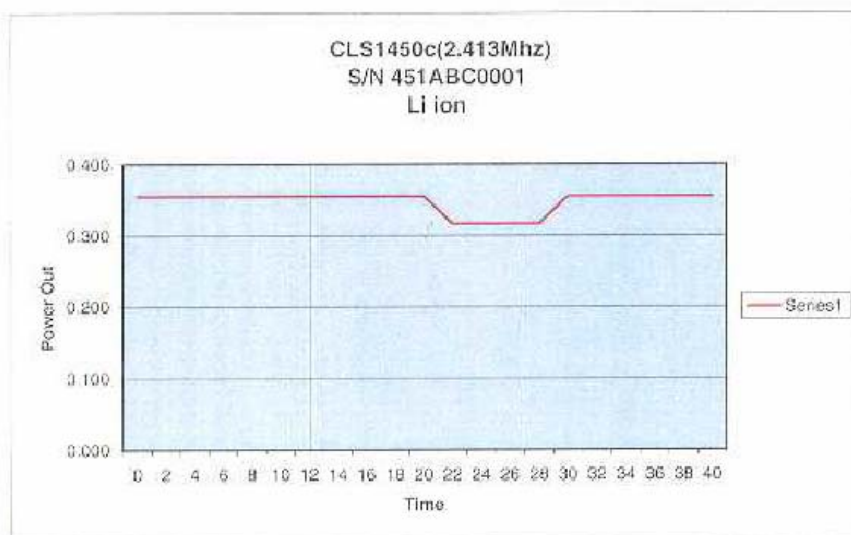
Cordless Power slump

Channel 45 Frequency:2.44GHz

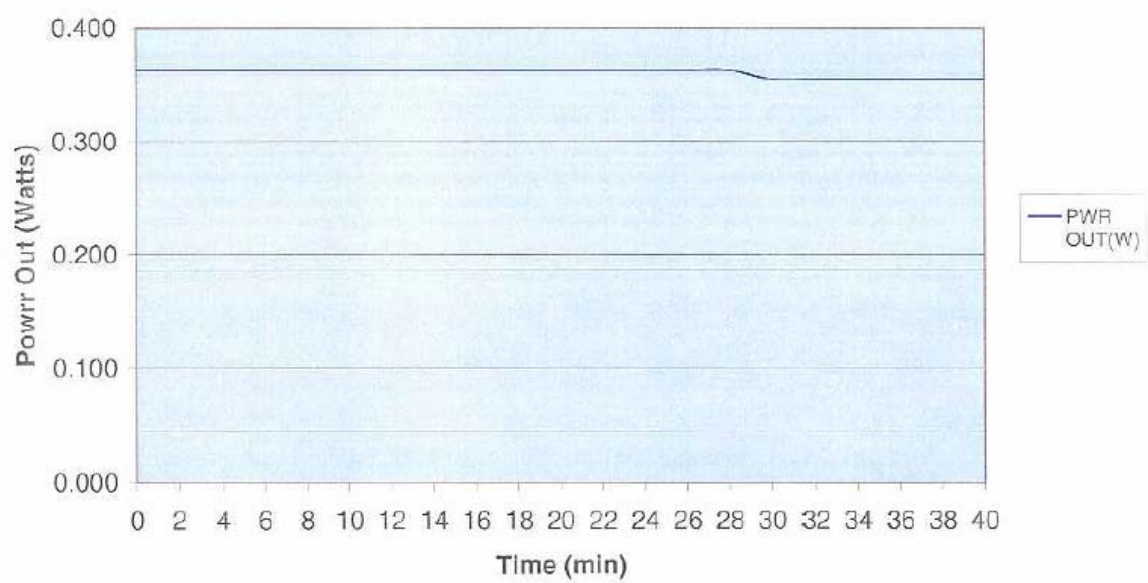
.3 Watts

Time (min) Pwr Out(W)

0	0.355
2	0.355
4	0.355
6	0.355
8	0.355
10	0.355
12	0.355
14	0.355
16	0.355
18	0.355
20	0.355
22	0.316
24	0.316
26	0.316
28	0.316
30	0.355
32	0.355
34	0.355
36	0.355
38	0.355
40	0.355

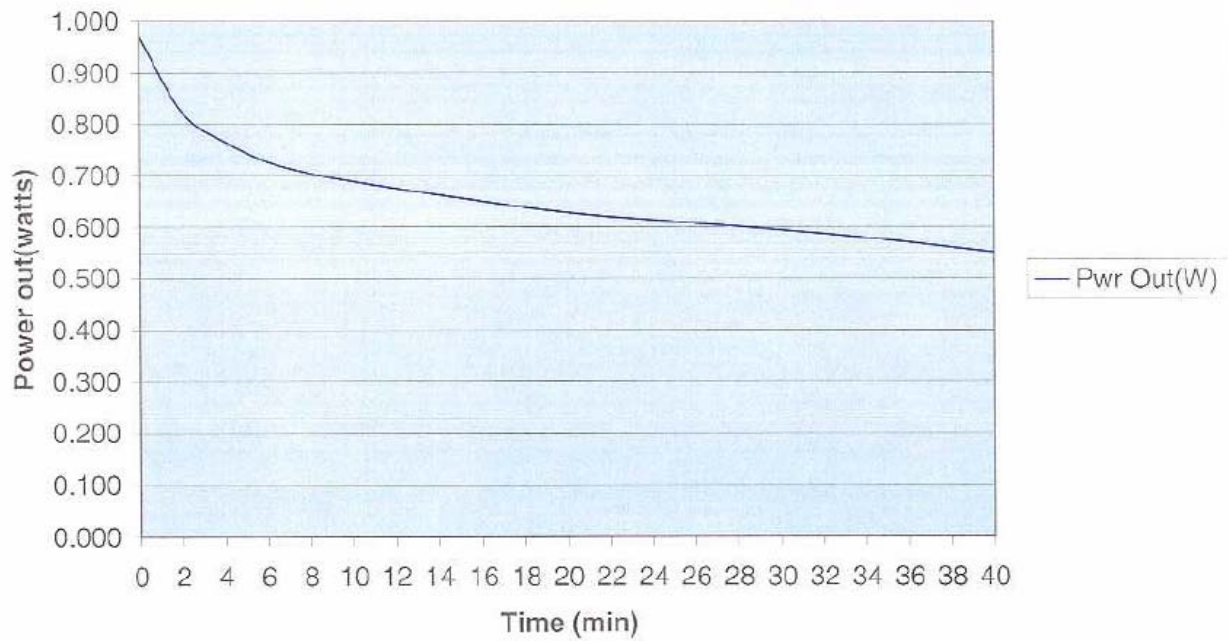


CLS1450C (2.413MHz)
S/N 451ABC0001
Alkaline



CLS1450C Power slump (464.5500MHz)
S/N:451ABC0001

Alkaline



Shortened Scan Results

FCC ID: AZ489FT4863; Test Date: 9/18/03

Motorola CGISS EME Laboratory

RUN #: SW-Face-R1-030918-02

MODEL #: HCUE1112A SN: 451ABC0001

TX Freq: 461.0375 MHz

Sim Tissue Temp: 21.5 (Celsius)

Start Power: 1.043 W

Antenna: Fixed

Battery Kit: AAA Alkaline w/1564200W18

Carry: NONE

Audio Acc. NONE

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

Run time 6 minutes

Representative “normal” scan run time was 21 minutes

“Shortened” scan; max calc. S.A.R. (drift adjusted) w/ 50% duty cycle = 1.04 mW/g

“Normal” scan; max. calc. S.A.R. (drift adjusted) w/ 50% duty cycle = 1.13/g

(see section 7.1 run # CM-Face-R1-030911-12)

DUT front w/ 2.5cm separation distance

Flat Phantom; Device Section; Position: (90°, 90°);

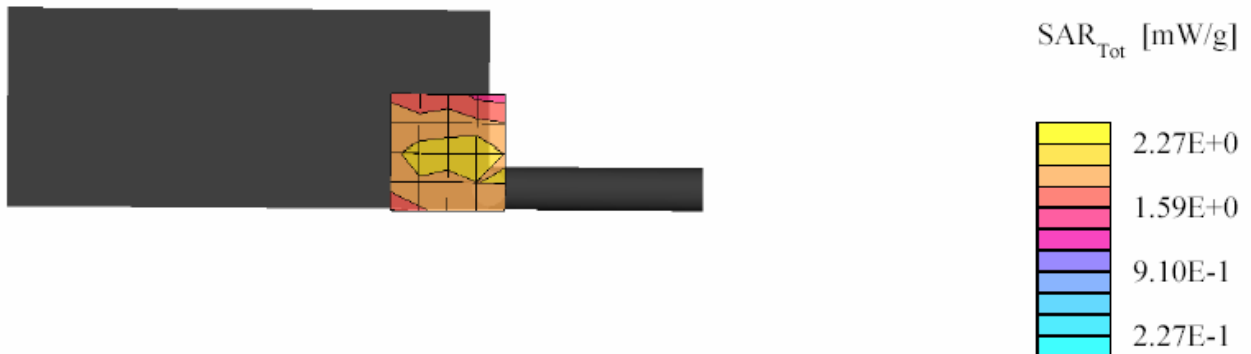
Probe: ET3DV6 - SN1384(Cal Date 05-15-2003); ConvF(7.50,7.50,7.50); Probe cal date: 15/05/03; Crest factor: 1.0; IEEE

Head 465 MHz: $\sigma = 0.88$ mho/m $\epsilon_r = 43.6$ $\rho = 1.00$ g/cm³; DAE3: 363V1 DAE Cal Date: 05/13/2003

Cube 5x5x7: SAR (1g): 1.50 mW/g, SAR (10g): 1.06 mW/g, (Worst-case extrapolation)

Cube 5x5x7: Dx = 8.0, Dy = 8.0, Dz = 5.0; SAR (1g): 1.50 mW/g, SAR (10g): 1.06 mW/g

Power drift: -1.410 dB



FCC ID: AZ489FT4863; Test Date: 10/03/03

Motorola CGISS EME Laboratory

RUN #: SW-Ab-R1-031003-02
MODEL #: HCUE1112A SN: 451ABC0001
TX Freq: 464.5500 MHz
Sim Tissue Temp: 21.7 (Celsius)
Start Power: 1.047 W

Antenna: Fixed
Battery Kit: SNN5571A
Carry: HCLN4019A
Audio Acc. HMN9026B

Shortened scan reflect test configuration at the body using battery kit SNN5571A.

Run time 7 minutes

Representative “normal” scan run time was 27 minutes

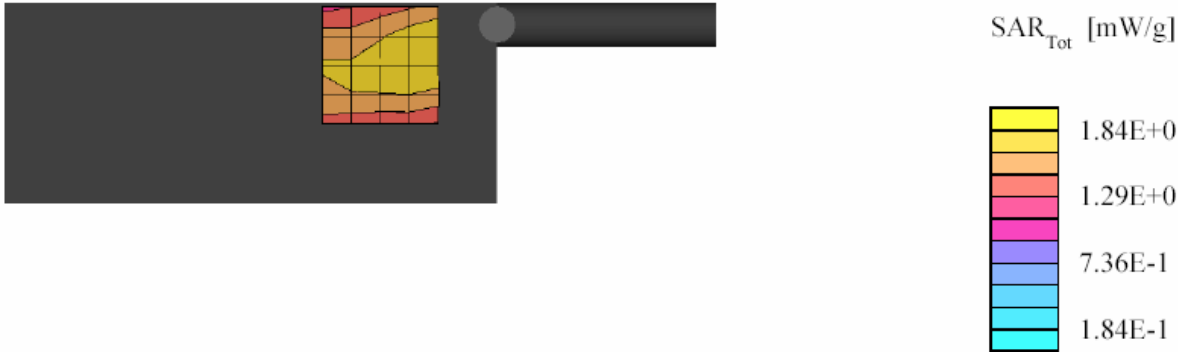
“Shortened” scan; max calc. S.A.R. (drift adjusted) w/ 50% duty cycle = 0.694 mW/g

“Normal” scan; max. calc. S.A.R. (drift adjusted) w/ 50% duty cycle = 0.712 mW/g

(see section 7.1 run # SW-Ab-R1-031001-02)

DUT w/ belt clip against the phantom

Flat Phantom; Device Section; Position: (90°,90°);
Probe: ET3DV6 - SN1384(Cal Date 05-15-2003); ConvF(7.60,7.60,7.60); Probe cal date: 15/05/03; Crest factor: 1.0; FCC
Body 465 MHz: $\sigma = 0.93$ mho/m $\epsilon_r = 54.2$ $\rho = 1.00$ g/cm³; DAE3: 363V1 DAE Cal Date: 05/13/2003
Cube 5x5x7: SAR (1g): 1.34 mW/g, SAR (10g): 0.919 mW/g, (Worst-case extrapolation)
Cube 5x5x7: Dx = 8.0, Dy = 8.0, Dz = 5.0; SAR (1g): 1.34 mW/g, SAR (10g): 0.919 mW/g
Power Drift: -0.150dB



APPENDIX B

Data Results

FCC ID: AZ489FT4863; Test Date: 9/10/03

Motorola CGISS EME Laboratory

RUN #: CM Ab-R1-030910-10

Model #: HCUE1112A SN: 451ABC0001

TX Freq: 461.0375 MHz

Sim Tissue Temp: 21.3 (Celsius)

Start Power: 0.939 W

Antenna: Fixed

Battery Kit: AAA Alkaline w/1564200W18

Carry: HCLN4019A belt clip

Audio Acc. HMN9026B

DUT w/belt clip against the phantom:

Flat Phantom Phantom; Device Section; Position: (90°,90°);

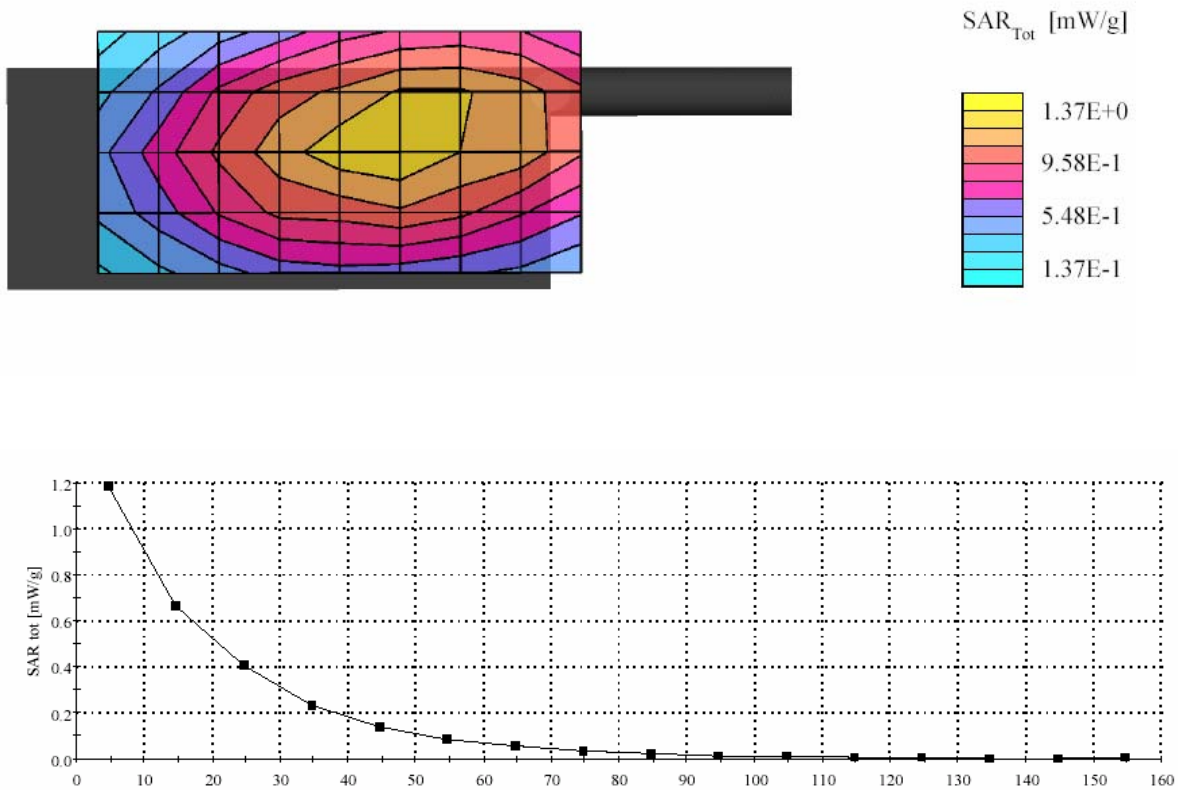
Probe: ET3DV6 - SN1384(Cal Date 05-15-2003); ConvF(7.60,7.60,7.60); Probe cal date: 15/05/03; Crest factor: 1.0; FCC

Body 465 MHz: $\sigma = 0.92$ mho/m $\epsilon_r = 54.9$ $\rho = 1.00$ g/cm³; DAE3: 363V1 DAE Cal Date: 05/13/2003

Cube 5x5x7: SAR (1g): 1.22 mW/g, SAR (10g): 0.902 mW/g, (Worst-case extrapolation)

Coarse: Dx = 15.0, Dy = 15.0, Dz = 10.0; Max at 27.0, 72.0, 4.7

Power drift: -1.49 dB



FCC ID: AZ489FT4863; Test Date: 10/02/03

Motorola CGISS EME Laboratory

Run #: CM-Ab-R1-031002-06

Model #: HCUE1112A SN: 451ABC0001

TX Freq: 461.0375 MHz

Sim Tissue Temp: 20.3 (Celsius)

Start Power: 0.939 W

Antenna: Fixed

Battery Kit: AAA Alkaline w/1564200W18

Carry: HCLN4019A belt clip

Audio Acc. HCSN4001A

DUT w/ belt clip against the phantom:

Flat Phantom; Device Section; Position: (90°,90°);

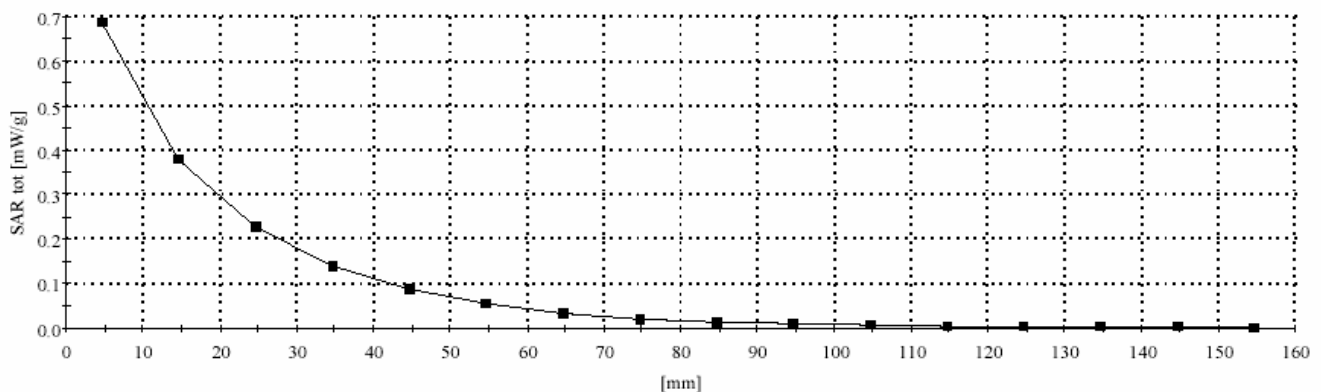
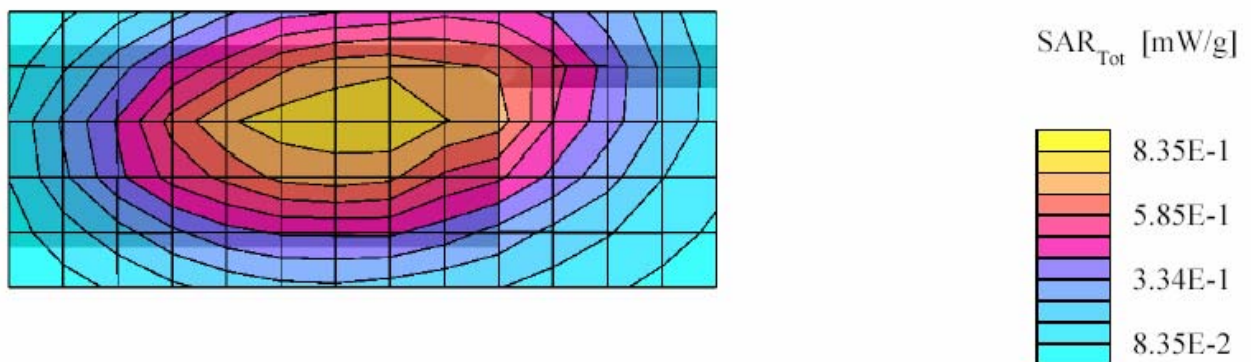
Probe: ET3DV6 - SN1384(Cal Date 05-15-2003); ConvF(7.60,7.60,7.60); Probe cal date: 15/05/03; Crest factor: 1.0; FCC

Body 465 MHz: $\rho = 0.93$ mho/m $\epsilon_r = 54.0$ $\rho = 1.00$ g/cm³; DAE3: 363V1 DAE Cal Date: 05/13/2003

Cube 5x5x7: SAR (1g): 0.786 mW/g, SAR (10g): 0.564 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: -1.70dB



FCC ID: AZ489FT4863; Test Date: 10/02/03

Motorola CGISS EME Laboratory

Run #: CM-Ab-R1-031002-08

Model #: HCUE1112A SN: 451ABC0001

TX Freq: 461.0375 MHz

Sim Tissue Temp: 20.0 (Celsius)

Start Power: 0.939 W

Antenna: Fixed

Battery Kit: AAA Alkaline w/1564200W18

Carry: None

Audio Acc. HMN9026B

DUT w/ front housing towards the phantom with 2.5cm separation:

Flat Phantom; Device Section; Position: (90°,90°);

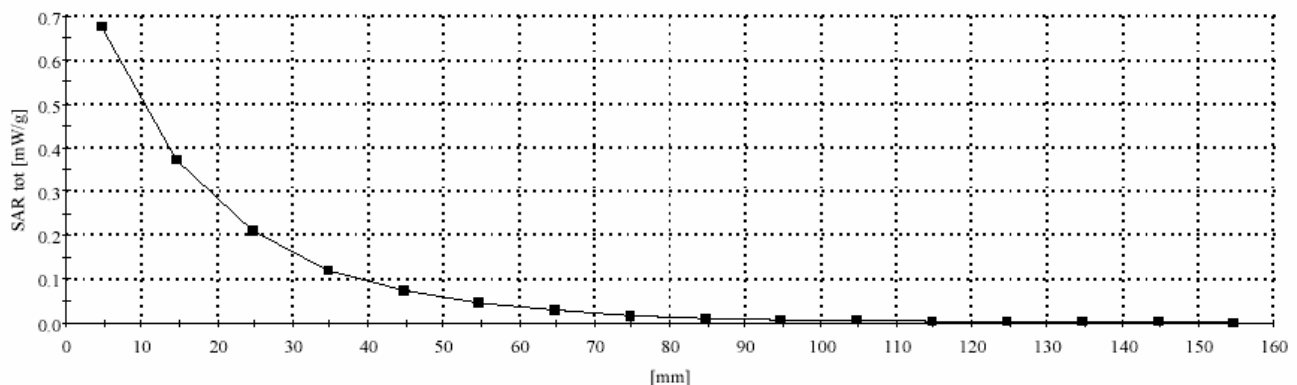
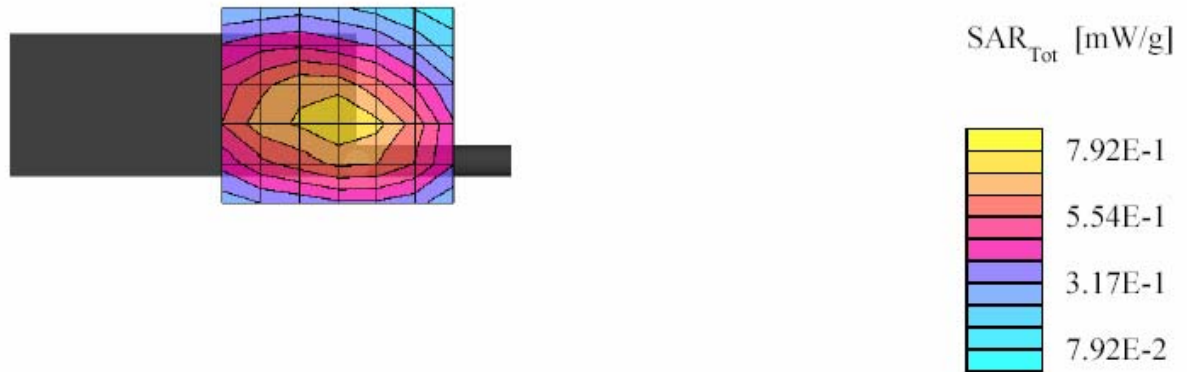
Probe: ET3DV6 - SN1384(Cal Date 05-15-2003); ConvF(7.60,7.60,7.60); Probe cal date: 15/05/03; Crest factor: 1.0; FCC

Body 465 MHz: $\sigma = 0.93$ mho/m $\epsilon_r = 54.0$ $\rho = 1.00$ g/cm³; DAE3: 363V1 DAE Cal Date: 05/13/2003

Cube 5x5x7: SAR (1g): 0.714 mW/g, SAR (10g): 0.515 mW/g, (Worst-case extrapolation)

Coarse: Dx = 15.0, Dy = 15.0, Dz = 10.0; Max at 43.5, 46.5, 4.7

Power drift: -1.21dB



FCC ID: AZ489FT4863; Test Date: 9/11/03

Motorola CGISS EME Laboratory

RUN #: CM-Face-R1-030911-12

Model #: HCUE1112A SN: 451ABC0001

TX Freq: 461.0375 MHz

Sim Tissue Temp: 20.4 (Celsius)

Start Power: 0.939 W

Antenna: Fixed

Battery Kit: AAA Alkaline w/1564200W18

Carry: NONE

Audio Acc. NONE

DUT front towards the phantom w/ 2.5cm separation:

Flat Phantom; Device Section; Position: (90°,90°);

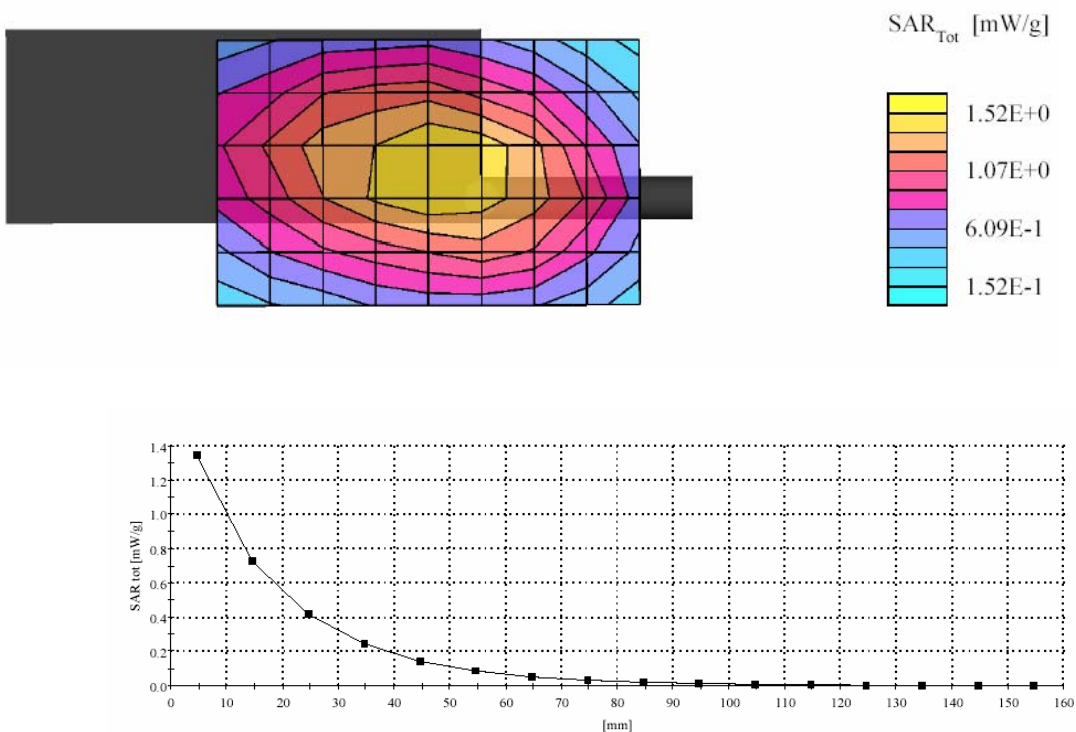
Probe: ET3DV6 - SN1384(Cal Date 05-15-2003); ConvF(7.50,7.50,7.50); Probe cal date: 15/05/03; Crest factor: 1.0; IEEE

Head 465 MHz: $\sigma = 0.87$ mho/m $\epsilon_r = 43.5$ $\rho = 1.00$ g/cm³; DAE3: 363V1 DAE Cal Date: 05/13/2003

Cube 5x5x7: SAR (1g): 1.44 mW/g, SAR (10g): 1.03 mW/g, (Worst-case extrapolation)

Coarse: Dx = 15.0, Dy = 15.0, Dz = 10.0; Max at 37.5, 63.0, 4.7

Power drift: -1.70 dB



FCC ID: AZ489FT4863; Test Date: 9/15/03

Motorola CGISS EME Laboratory

RUN #: CM-Ab-R1-030915-04

Model #: HCUE1112A SN: 451ABC0002

TX Freq: 2.4 GHz

Sim Tissue Temp: 21.2 (Celsius)

Start Power: 0.324 W

Antenna: Fixed

Battery Kit: SNN5571A

Carry: HCLN4019A belt clip

Audio Acc. HMN9026B

DUT w/ belt clip against the phantom:

Flat Phantom; Device Section; Position: (90°,90°);

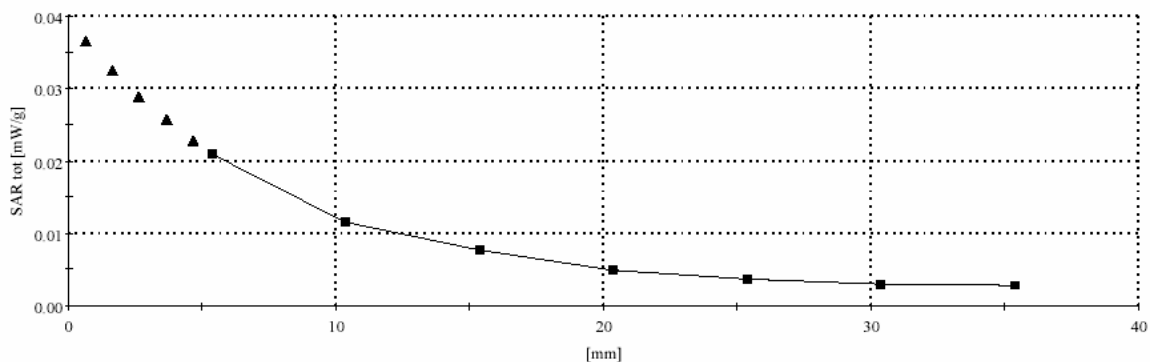
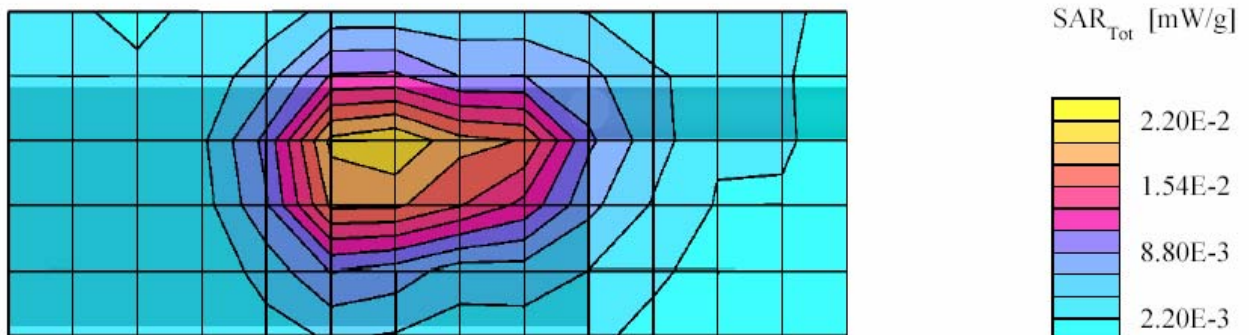
Probe: ET3DV6 - SN1384(Cal Date 05-15-2003); ConvF(4.80,4.80,4.80); Probe cal date: 15/05/03; Crest factor: 12.0; FCC

Body 2440MHz: $\sigma = 2.03$ mho/m $\epsilon_r = 56.2$ $\rho = 1.00$ g/cm³; DAE3: 363V1 DAE Cal Date: 05/13/2003

Cube 7x7x7: SAR (1g): 0.0234 mW/g, SAR (10g): 0.0138 mW/g, (Worst-case extrapolation)

Coarse: Dx = 15.0, Dy = 15.0, Dz = 10.0; Max at 33.0, 84.0, 4.7

Power drift: -0.31dB



FCC ID: AZ489FT4863; Test Date: 9/15/03

Motorola CGISS EME Laboratory

RUN #: CM- Ab-R1-030915-09

Model #: HCUE1112A SN: 451ABC0002

TX Freq: 2.4 GHz

Sim Tissue Temp: 20.5 (Celsius)

Start Power: 0.324 W

Antenna: Fixed

Battery Kit: SNN5571A

Carry: HCLN4019A belt clip

Audio Acc. NTN9159C

DUT w/ belt clip against the phantom:

Flat Phantom; Device Section; Position: (90°,90°);

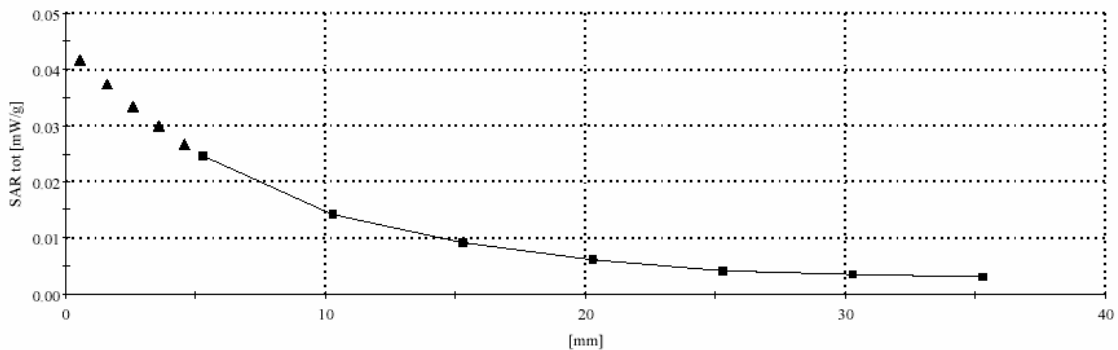
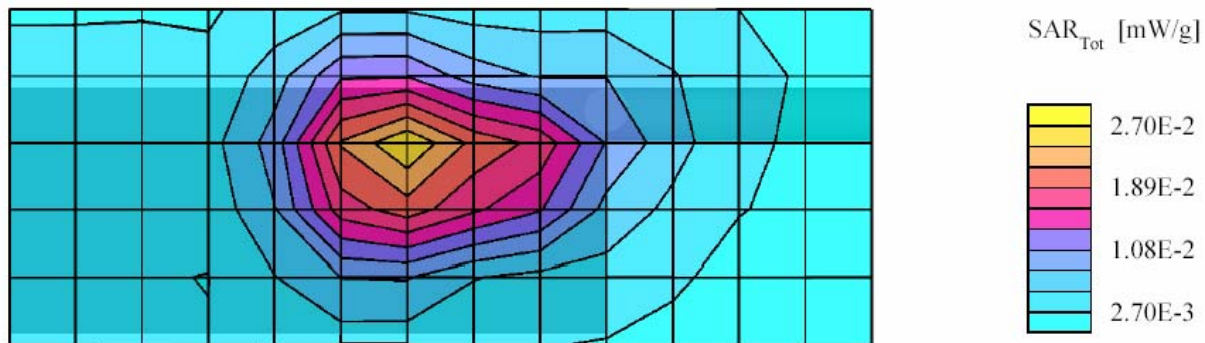
Probe: ET3DV6 - SN1384(Cal Date 05-15-2003); ConvF(4.80,4.80,4.80); Probe cal date: 15/05/03; Crest factor: 12.0; FCC

Body 2440MHz: $\sigma = 2.03$ mho/m $\epsilon_r = 56.2$ $\rho = 1.00$ g/cm³; DAE3: 363V1 DAE Cal Date: 05/13/2003

Cube 7x7x7: SAR (1g): 0.0276 mW/g, SAR (10g): 0.0161 mW/g, (Worst-case extrapolation)

Coarse: Dx = 15.0, Dy = 15.0, Dz = 10.0; Max at 31.5, 88.5, 4.7

Power drift: -0.06 dB



FCC ID: AZ489FT4863; Test Date: 9/15/03

Motorola CGISS EME Laboratory

RUN #: CM-Ab-R1-030915-13

Model #: HCUE1112A SN: 451ABC0002

TX Freq: 2.4 GHz

Sim Tissue Temp: 20.3 (Celsius)

Start Power: 0.324 W

Antenna: Fixed

Battery Kit: SNN5571A

Carry: NONE

Audio Acc. NTN9159C

DUT w/ back housing towards phantom and separated 2.5cm:

Flat Phantom; Device Section; Position: (90°,90°);

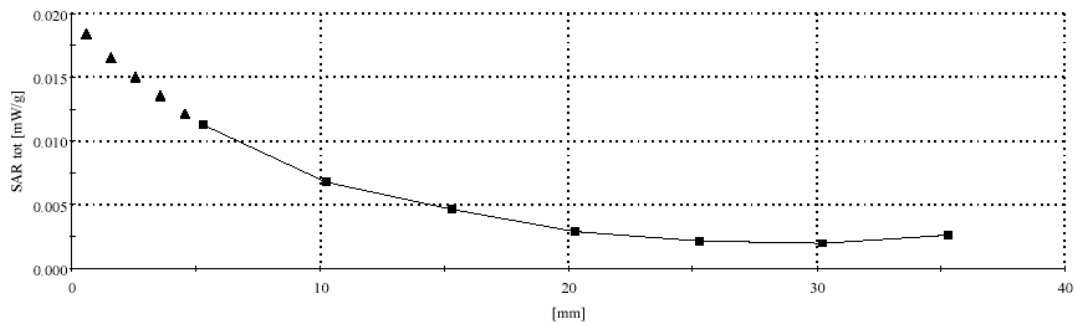
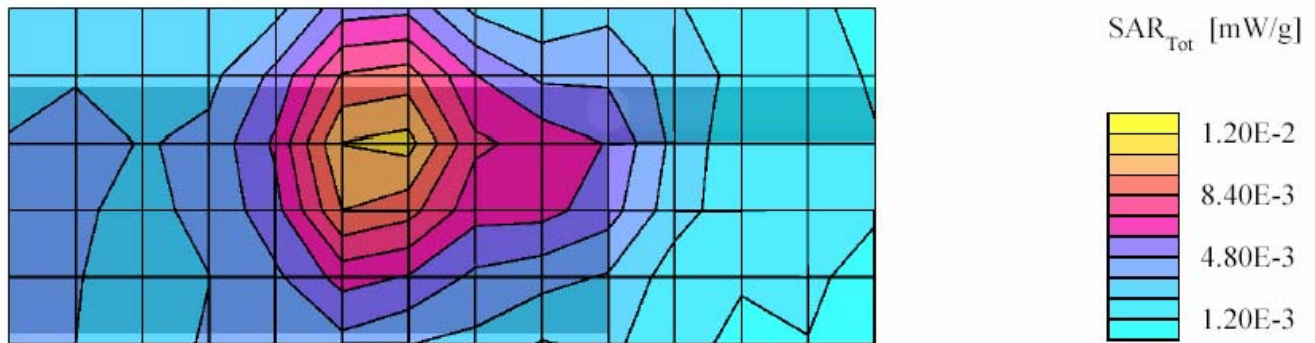
Probe: ET3DV6 - SN1384(Cal Date 05-15-2003); ConvF(4.80,4.80,4.80); Probe cal date: 15/05/03; Crest factor: 12.0; FCC

Body 2440MHz: $\sigma = 2.03$ mho/m $\epsilon_r = 56.2$ $\rho = 1.00$ g/cm³; DAE3: 363V1 DAE Cal Date: 05/13/2003

Cube 7x7x7: SAR (1g): 0.0117 mW/g, SAR (10g): 0.0073 mW/g, (Worst-case extrapolation)

Coarse: Dx = 15.0, Dy = 15.0, Dz = 10.0; Max at 30.0, 84.0, 4.7

Power drift: -0.16 dB



FCC ID: AZ489FT4863; Test Date: 9/16/03

Motorola CGISS EME Laboratory

RUN #: CM-LEAR-R1-030916-03

Model #: HCUE1112A SN: 451ABC0002

TX Freq: 2.44 GHz

Sim Tissue Temp: 20.7 (Celsius)

Start Power: 0.372 W

Antenna: Fixed

Battery Kit: AAA Alkaline w/1564200W18

Carry: NONE

Audio Acc. NONE

DUT in cheek touch position:

SAM - Expanded Phantom; Left Hand Section; Position: (90°,59°);

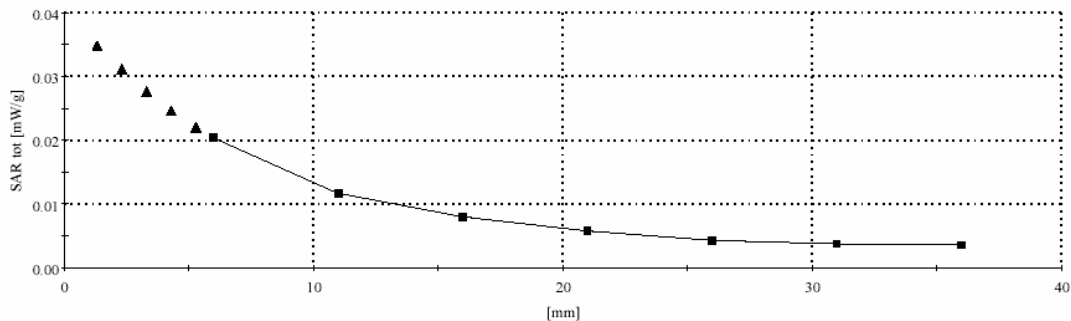
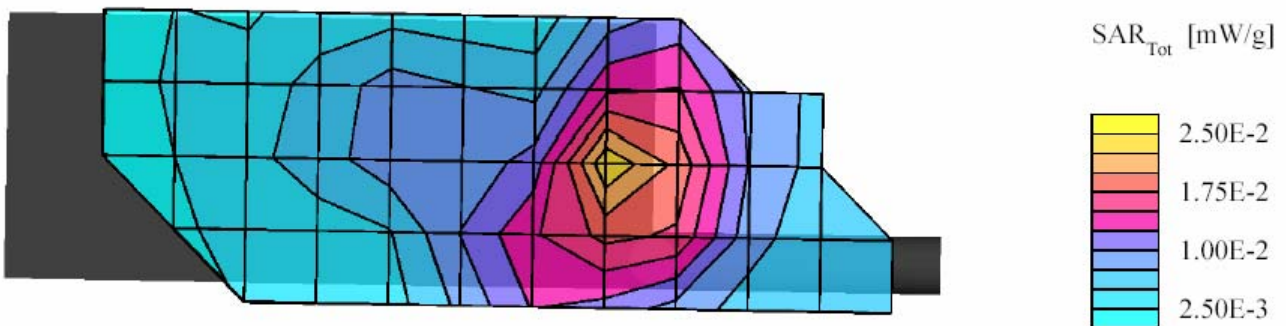
Probe: ET3DV6 - SN1384(Cal Date 05-15-2003); ConvF(5.00,5.00,5.00); Probe cal date: 15/05/03; Crest factor: 12.0; IEEE

Head 2440MHz: $\sigma = 1.85$ mho/m $\epsilon_r = 39.5$ $\rho = 1.00$ g/cm³; DAE3: 363V1 DAE Cal Date: 05/13/2003

Cube 7x7x7: SAR (1g): 0.0250 mW/g, SAR (10g): 0.0145 mW/g, (Worst-case extrapolation)

Coarse: Dx = 15.0, Dy = 15.0, Dz = 10.0; Max at 108.0, 28.5, 4.7

Power drift: -0.40dB



FCC ID: AZ489FT4863; Test Date: 9/17/03

Motorola CGISS EME Laboratory

RUN #: CM-LEAR-R1-030917-03

Model #: HCUE1112A SN: 451ABC0002

TX Freq: 2.4 GHz

Sim Tissue Temp: 21.2 (Celsius)

Start Power: 0.380 W

Antenna: Fixed

Battery Kit: AAA Alkaline w/1564200W18

Carry: NONE

Audio Acc. NONE

DUT at the left ear in 15° tilt position:

SAM - Expanded Phantom; Left Hand Section; Position: (90°,59°);

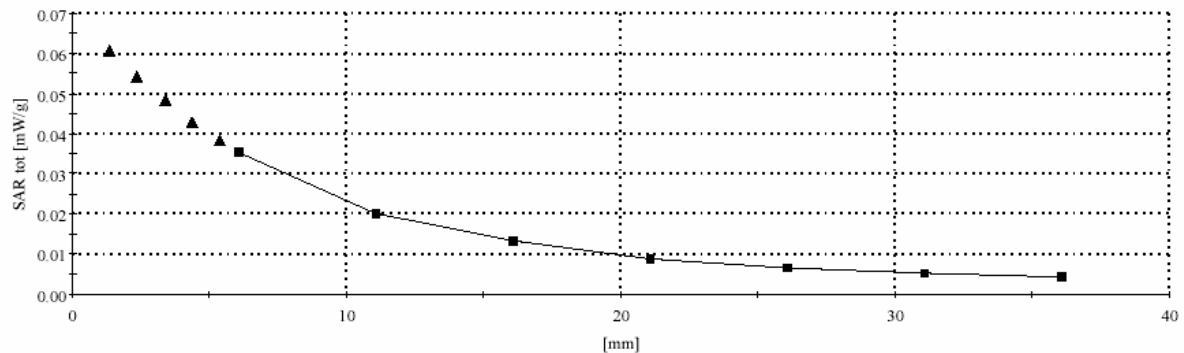
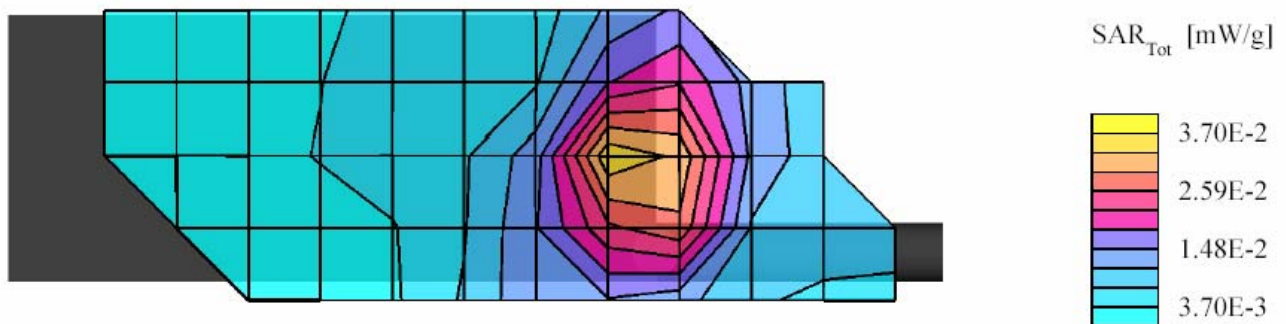
Probe: ET3DV6 - SN1384(Cal Date 05-15-2003); ConvF(5.00,5.00,5.00); Probe cal date: 15/05/03; Crest factor: 12.0; IEEE

Head 2440MHz: $\sigma = 1.82$ mho/m $\epsilon_r = 39.3$ $\rho = 1.00$ g/cm³; DAE3: 363V1 DAE Cal Date: 05/13/2003

Cube 7x7x7: SAR (1g): 0.0406 mW/g, SAR (10g): 0.0225 mW/g, (Worst-case extrapolation)

Coarse: Dx = 15.0, Dy = 15.0, Dz = 10.0; Max at 111.0, 28.5, 4.7

Power drift: -0.22 dB



FCC ID: AZ489FT4863; Test Date: 9/17/03

Motorola CGISS EME Laboratory

RUN #: CM-REAR-R1-030917-07

Model #: HCUE1112A SN: 451ABC0002

TX Freq: 2.4 GHz

Sim Tissue Temp: 21.0 (Celsius)

Start Power: 0.380 W

Antenna: Fixed

Battery Kit: AAA Alkaline w/1564200W18

Carry: NONE

Audio Acc. NONE

DUT at the right ear in 15° tilt position:

SAM - Expanded Phantom; Right Hand Section; Position: (90°,301°);

Probe: ET3DV6 - SN1384(Cal Date 05-15-2003); ConvF(5.00,5.00,5.00); Probe cal date: 15/05/03; Crest factor: 12.0; IEEE

Head 2440MHz: $\sigma = 1.82$ mho/m $\epsilon_r = 39.3$ $\rho = 1.00$ g/cm³; DAE3: 363V1 DAE Cal Date: 05/13/2003

Cube 7x7x7: SAR (1g): 0.0407 mW/g, SAR (10g): 0.0234 mW/g, (Worst-case extrapolation)

Coarse: Dx = 15.0, Dy = 15.0, Dz = 10.0; Max at 111.0, 28.5, 4.7

Power drift: -0.65 dB

