



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: September 18, 2003
Report Revision: Rev. B
Manufacturer: Motorola
Product Description: Portable 403-440 MHz 1-4W
16 Channel
FCC ID: **ABZ99FT4057**
Device Model: AAH65QDH9AA1AN/ AAH65QDC9AA1AN

Test Period: 8/08/03-9/06/03

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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

9/19/03

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

Date Approved

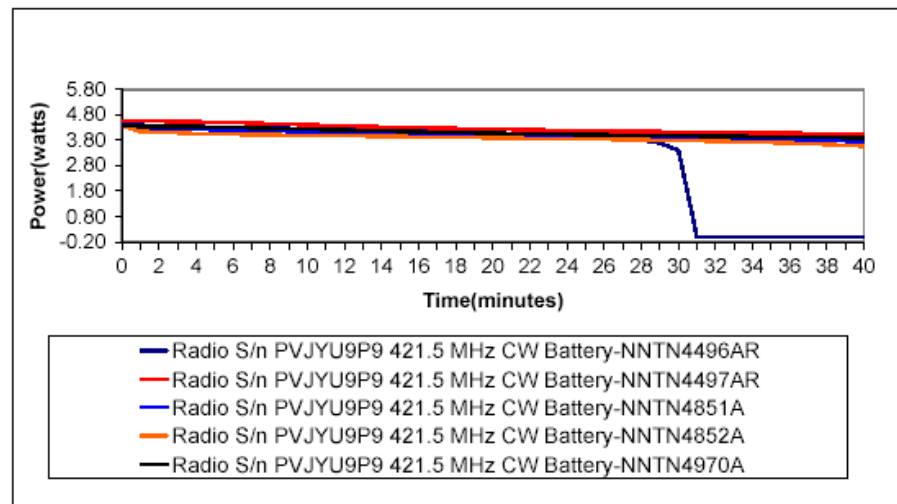
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APPENDIX A

Power Slump Data/Shortened Scan

DUT Power versus time data

	Radio S/n	Radio S/n	Radio S/n	Radio S/n	Radio S/n
Radio S/n	PVJYU9P9	PVJYU9P9	PVJYU9P9	PVJYU9P9	PVJYU9P9
Frequency	421.5 MHz	421.5 MHz	421.5 MHz	421.5 MHz	421.5 MHz
Mode	CW	CW	CW	CW	CW
Battery	Battery-NNTN4496AR	Battery-NNTN4497AR	Battery-NNTN4851A	Battery-NNTN4852A	Battery-NNTN4970A
Model #	AAH65QDH9AA1AN	AAH65QDH9AA1AN	AAH65QDH9AA1AN	AAH65QDH9AA1AN	AAH65QDH9AA1AN
Time(minutes)	Power (watts)	Power (watts)	Power (watts)	Power (watts)	Power (watts)
0	4.49	4.57	4.34	4.38	4.37
1	4.39	4.54	4.28	4.15	4.34
2	4.37	4.54	4.26	4.12	4.34
3	4.35	4.53	4.25	4.09	4.34
4	4.33	4.52	4.23	4.06	4.33
5	4.32	4.50	4.21	4.04	4.31
6	4.30	4.49	4.19	4.03	4.30
7	4.29	4.47	4.18	4.02	4.28
8	4.28	4.44	4.17	4.01	4.26
9	4.26	4.42	4.15	4.00	4.25
10	4.24	4.40	4.14	3.99	4.23
11	4.23	4.38	4.13	3.98	4.21
12	4.21	4.36	4.12	3.96	4.20
13	4.20	4.34	4.11	3.96	4.18
14	4.19	4.32	4.10	3.95	4.16
15	4.17	4.31	4.09	3.94	4.15
16	4.15	4.29	4.08	3.93	4.13
17	4.14	4.27	4.06	3.92	4.12
18	4.11	4.26	4.05	3.91	4.10
19	4.10	4.25	4.04	3.90	4.09
20	4.08	4.23	4.03	3.89	4.07
21	4.06	4.22	4.01	3.88	4.06
22	4.04	4.21	3.99	3.87	4.05
23	4.01	4.19	3.98	3.86	4.04
24	3.99	4.18	3.97	3.85	4.03
25	3.96	4.17	3.96	3.85	4.02
26	3.92	4.16	3.95	3.84	4.01
27	3.87	4.15	3.94	3.83	4.00
28	3.81	4.14	3.93	3.82	3.99
29	3.69	4.13	3.92	3.80	3.98
30	3.40	4.12	3.90	3.79	3.97
31	0.00	4.12	3.89	3.77	3.96
32	0.00	4.10	3.88	3.76	3.95
33	0.00	4.10	3.86	3.74	3.94
34	0.00	4.08	3.85	3.72	3.94
35	0.00	4.08	3.84	3.71	3.92
36	0.00	4.07	3.82	3.69	3.92
37	0.00	4.06	3.80	3.66	3.91
38	0.00	4.06	3.78	3.63	3.90
39	0.00	4.06	3.77	3.61	3.89
40	0.00	4.05	3.74	3.57	3.89



Shortened Scan Results

FCC ID: ABZ99FT4057; Test Date: 9/04/03

Motorola CGISS EME Laboratory

RUN #: CM-Ab-030904-09

MODEL #: AAH65QDH9AA1AN SN: PVJYU9P9

TX Freq: 403 MHz

Sim Tissue Temp: 20.5 (Celsius)

Start Power: 4.42 W

Antenna: NAE6483AR

Battery Kit: NNTN4970A

Carry: chest pack RLN4570A

Audio Acc. BDN6647F

Shortened scan reflects highest S.A.R. producing configuration at the abdomen.

Shortened scan run time was 6 minutes

Representative “normal” scan run time was 27 minutes

“Shortened” scan; max calc. S.A.R. (drift adjusted) w/ 50% duty cycle = 5.64 mW/g

“Normal” scan; max. calc. S.A.R. (drift adjusted) w/ 50% duty cycle = 6.00mW/g

(see section 7.1 run # SW-AB-030903-03)

DUT w/ body worn accessory 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 421 MHz: $\sigma = 0.90$ mho/m $\epsilon_r = 55.6$ $\rho = 1.00$ g/cm³; DAE3: 363V1 DAE Cal Date: 05/13/2003

Cube 5x5x7: SAR (1g): 9.82 mW/g, SAR (10g): 7.05 mW/g, (Worst-case extrapolation)

Power drift: -0.43 dB



FCC ID: ABZ99FT4057; Test Date: 8/29/03

Motorola CGISS EME Laboratory

RUN #: CM-Face-030829-12
MODEL #: AAH65QDH9AA1AN SN: PVJYU9P9
TX Freq: 403 MHz
Sim Tissue Temp: 21.4 (Celsius)
Start Power (short): 4.48 W

Antenna: NAE6483AR
Battery Kit: NNTN4970A
Carry: none
Audio Acc. None

Shortened scan reflects highest S.A.R. producing configuration at the abdomen.

Shortened scan run time 6 minutes

Representative “normal” scan run time was 27 minutes

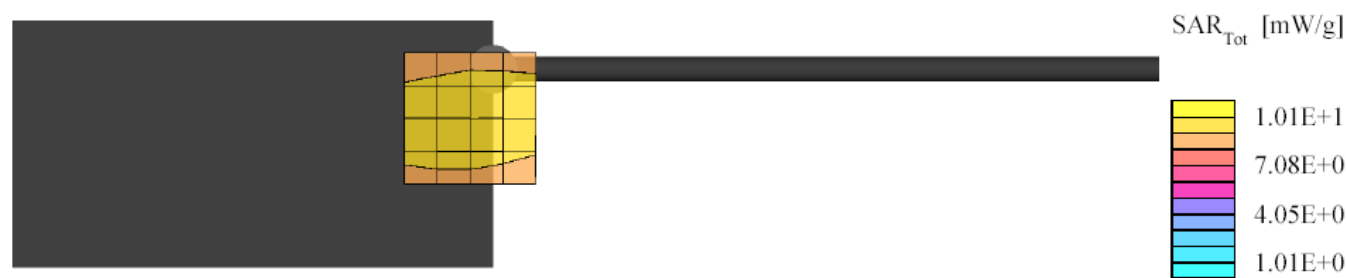
“Shortened” scan; max calc. S.A.R. (drift adjusted) w/ 50% duty cycle = 4.28 mW/g

“Normal” scan; max calc. S.A.R. (drift adjusted) w/ 50% duty cycle = 4.30mW/g

(see section 7.1 run # CM-Face-030829-12)

DUT Front towards 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 421 MHz: $\sigma = 0.84 \text{ mho}$; $\epsilon_r = 44.2$ $\rho = 1.00 \text{ g/cm}^3$; DAE3: 363V1 DAE Cal Date: 05/13/2003
Cube 5x5x7: SAR (1g): 7.26 mW/g, SAR (10g): 5.37 mW/g, (Worst-case extrapolation)
Power drift: -0.60 dB



APPENDIX B

Data Results

FCC ID: ABZ99FT4057; Test Date: 8/20/03

Motorola CGISS EME Laboratory

RUN #: SW-Ab-030820-06

MODEL #: AAH65QDH9AA1AN SN: PVJYU9P9

TX Freq: 403 MHz

Sim Tissue Temp: 21.0 (Celsius)

Antenna: NAE6483AR

Battery Kit: NNTN4970A

Carry: belt clip HLN8255B

Audio Acc. RSM HMN9030A

DUT w/ belt clip against the flat phantom

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

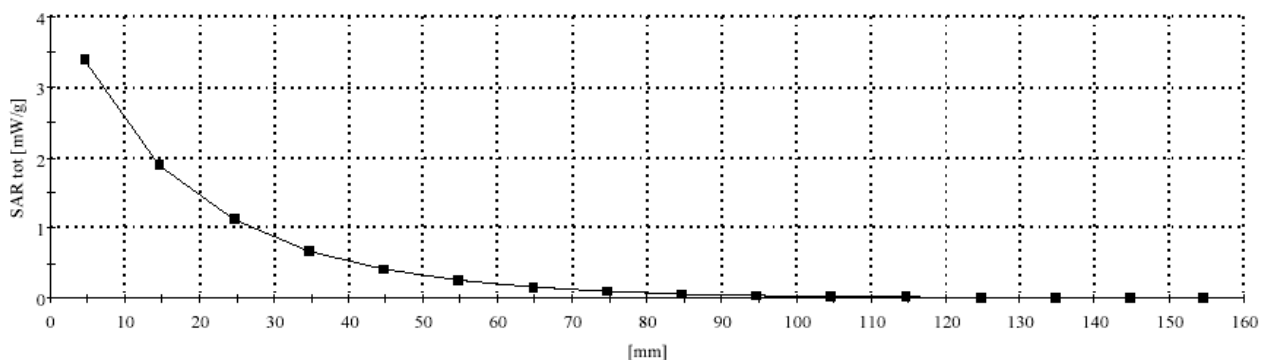
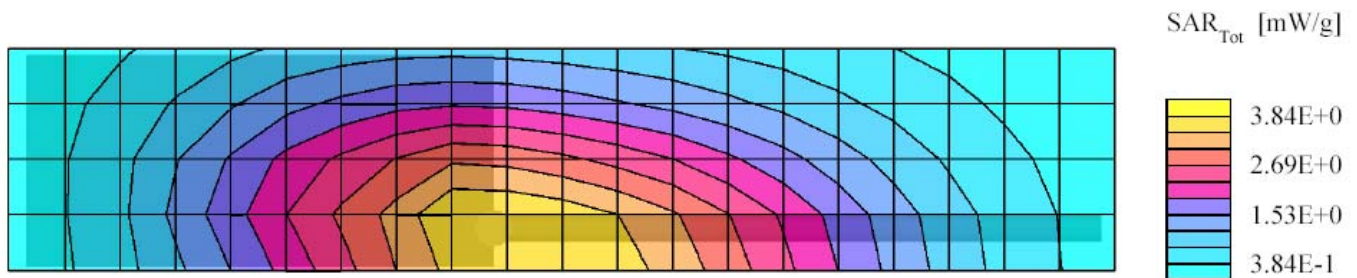
Probe: ET3DV6 - SN1384(Cal Date 05-15-2003); ConvF(7.60,7.60,7.60); Probe cal date: 15/05/03; Crest factor: 1.0; FCC

Body 421 MHz: $\sigma = 0.90$ mho/m $\epsilon_r = 55.8$ $\rho = 1.00$ g/cm³; DAE3: 363V1 DAE Cal Date: 05/13/2003

Cube 7x7x7: SAR (1g): 5.84 mW/g, SAR (10g): 4.27 mW/g, (Worst-case extrapolation)

Coarse: Dx = 15.0, Dy = 15.0, Dz = 10.0; Max at 57.0, 129.0, 4.7

Power drift: -0.87dB



FCC ID: ABZ99FT4057; Test Date: 8/27/03

Motorola CGISS EME Laboratory

RUN #: SW-Ab-030827-03

Model #: AAH65QDH9AA1AN SN: PVJYU9P9

TX Freq: 403 MHz

Sim Tissue Temp: 20.4 (Celsius)

Start Power: 4.47 W

Antenna: NAE6483AR

Battery Kit: NNTN4970A

Carry: RLN4570A chest pack

Audio Acc. RSM HMN9030A

DUT w/ chest pack against the flat phantom

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

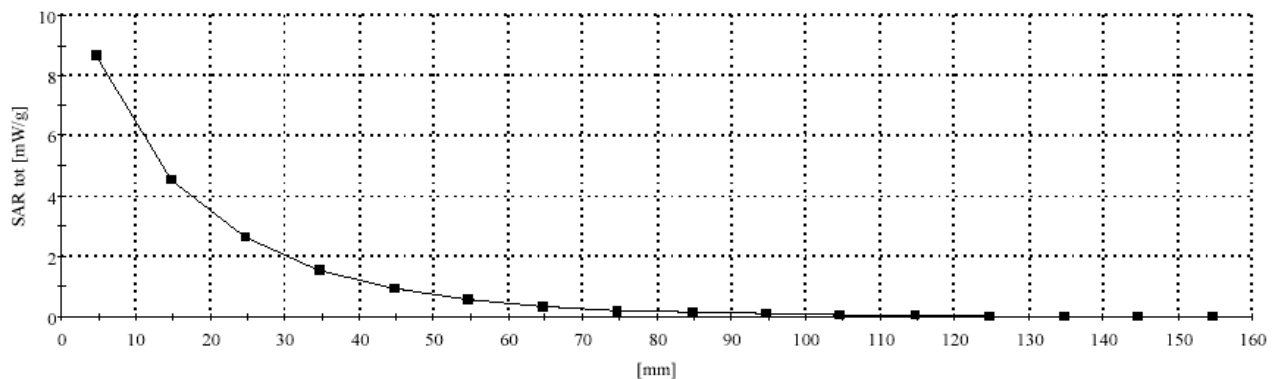
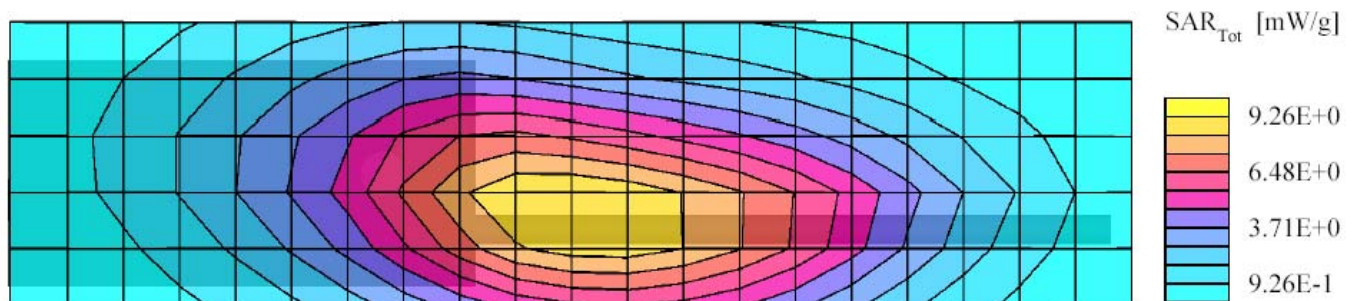
Probe: ET3DV6 - SN1384(Cal Date 05-15-2003); ConvF(7.60,7.60,7.60); Probe cal date: 15/05/03; Crest factor: 1.0; FCC

Body 421 MHz: $\sigma = 0.90$ mho/m $\epsilon_r = 55.4$ $\rho = 1.00$ g/cm³; DAE3: 363V1 DAE Cal Date: 05/13/2003

Cube 7x7x7: SAR (1g): 8.94 mW/g, SAR (10g): 6.34 mW/g, (Worst-case extrapolation)

Coarse: Dx = 15.0, Dy = 15.0, Dz = 10.0; Max at 51.0, 153.0, 4.7

Power drift: -0.85 dB



FCC ID: ABZ99FT4057; Test Date: 8/22/03

Motorola CGISS EME Laboratory

RUN #: SW-Ab-030822-03

Model #: AAH65QDH9AA1AN SN: PVJYU9P9

TX Freq: 440 MHz

Sim Tissue Temp: 21.2 (Celsius)

Start Power: 4.44 W

Antenna: NAE6522AR

Battery Kit: NNTN4970A

Carry: belt clip HLN8255B

Audio Acc. RSM HMN9030A

DUT w/ belt clip against the flat phantom

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

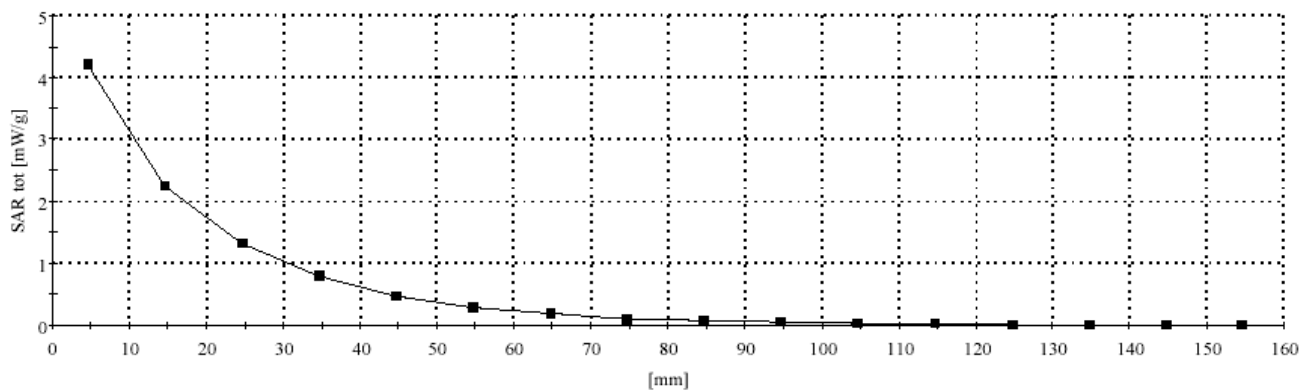
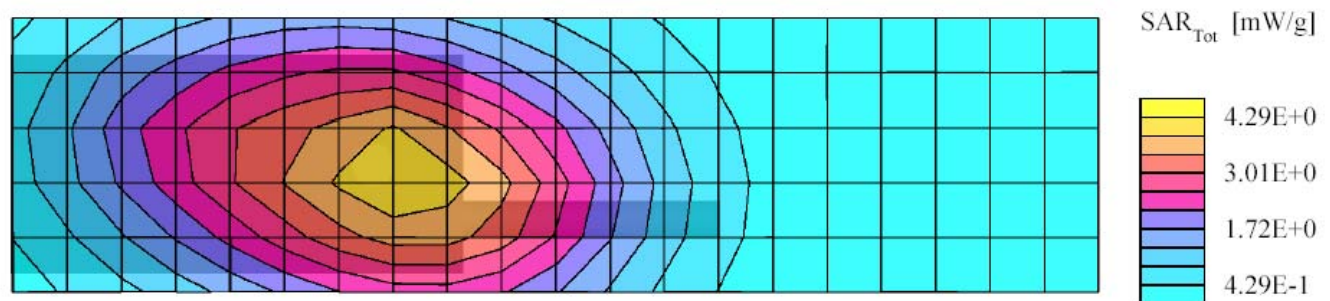
Probe: ET3DV6 - SN1384(Cal Date 05-15-2003); ConvF(7.60,7.60,7.60); Probe cal date: 15/05/03; Crest factor: 1.0; FCC

Body 421 MHz: $\sigma = 0.95$ mho/m $\epsilon_r = 56.7$ $\rho = 1.00$ g/cm³; DAE3: 363V1 DAE Cal Date: 05/13/2003

Cube 7x7x7: SAR (1g): 4.21 mW/g, SAR (10g): 3.04 mW/g, (Worst-case extrapolation)

Coarse: Dx = 15.0, Dy = 15.0, Dz = 10.0; Max at 42.0, 106.5, 4.7

Power drift: -0.13 dB



FCC ID: ABZ99FT4057; Test Date: 8/27/03

Motorola CGISS EME Laboratory

RUN #: CM-Ab-030827-05

Model #: AAH65QDH9AA1AN SN: PVJYU9P9

TX Freq: 440 MHz

Sim Tissue Temp: 20.3 (Celsius)

Start Power: 4.45 W

Antenna: NAE6522AR

Battery Kit: NNTN4970A

Carry: HLN6602A chest pack

Audio Acc. RSM HMN9030A

DUT w/ chest pack against the flat phantom

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

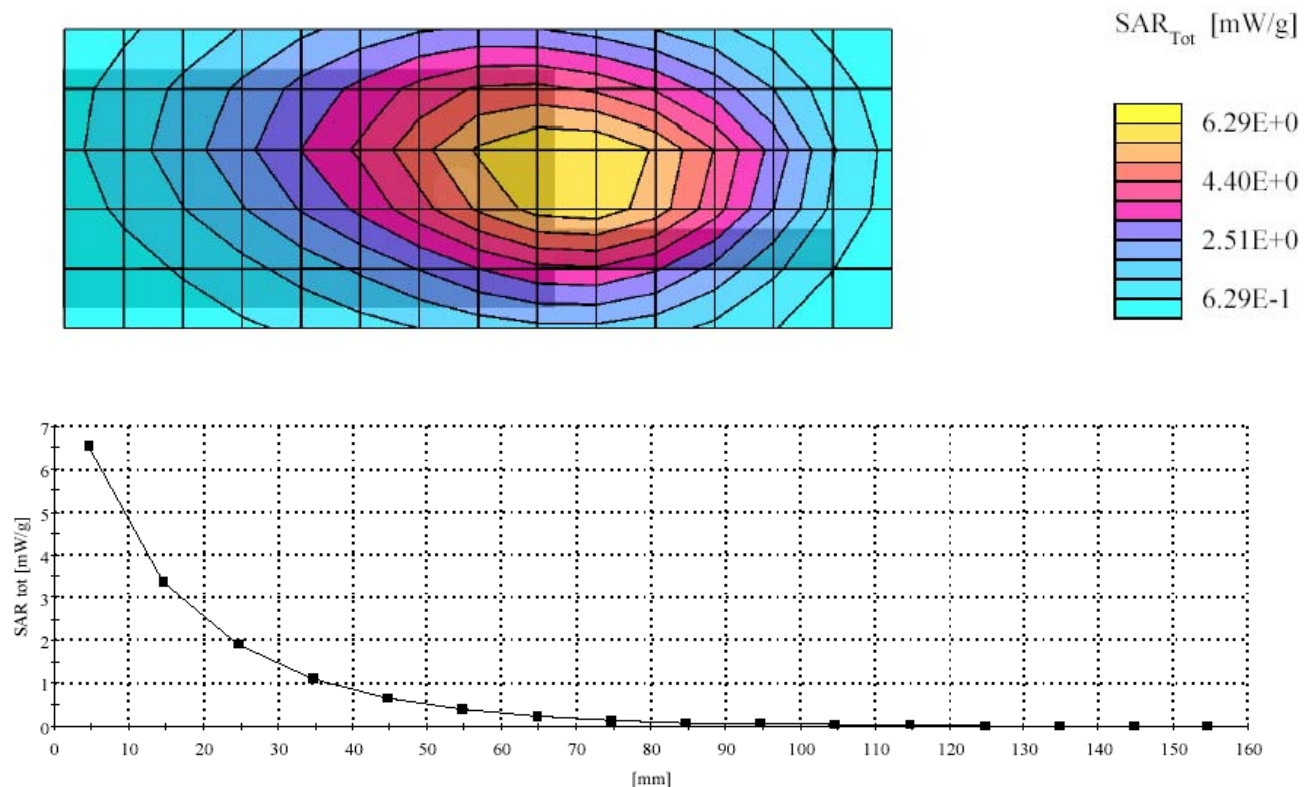
Probe: ET3DV6 - SN1384(Cal Date 05-15-2003); ConvF(7.60,7.60,7.60); Probe cal date: 15/05/03; Crest factor: 1.0; FCC

Body 421 MHz: $\sigma = 0.90$ mho/m $\epsilon_r = 55.4$ $\rho = 1.00$ g/cm³; DAE3: 363V1 DAE Cal Date: 05/13/2003

Cube 7x7x7: SAR (1g): 6.56 mW/g, SAR (10g): 4.60 mW/g, (Worst-case extrapolation)

Coarse: Dx = 15.0, Dy = 15.0, Dz = 10.0; Max at 36.0, 129.0, 4.7

Power drift: -0.11 dB



FCC ID: ABZ99FT4057; Test Date: 9/05/03

Motorola CGISS EME Laboratory

RUN #: SW-Ab-030905-09

Model #: AAH65QDH9AA1AN SN: PVJYU9Q7

TX Freq: 403 MHz

Sim Tissue Temp: 20.7 (Celsius)

Start Power: 4.39 W

Antenna: NAE6483AR

Battery Kit: NNTN4970A

Carry: chest pack RLN4570A

Audio Acc. PMMN4001A

DUT w/ chest pack 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

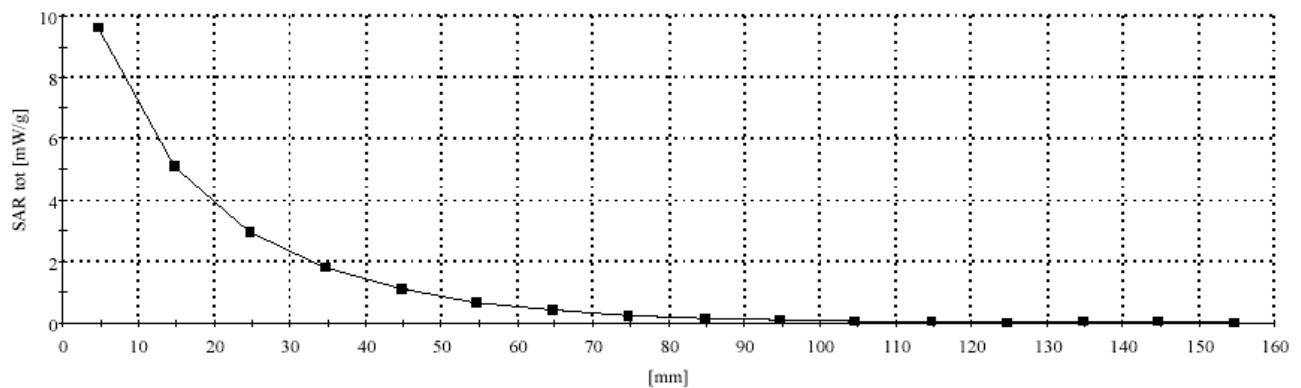
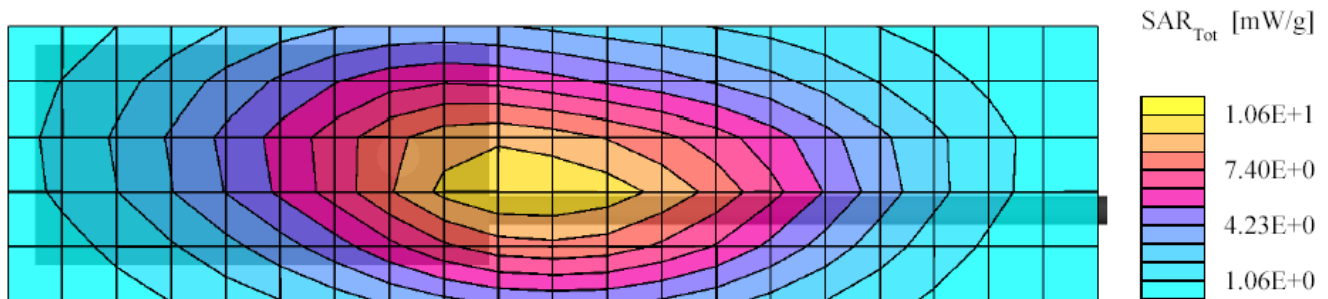
Body 421 MHz: $\sigma = 0.96$ mho/m $\epsilon_r = 56$. $\rho = 1.00$ g/cm³; DAE3: 363V1 DAE Cal Date: 05/13/2003

Cube 7x7x7: SAR (1g): 9.93 mW/g, SAR (10g): 7.10 mW/g * Max outside, (Worst-case extrapolation)

Coarse: Dx = 15.0, Dy = 15.0, Dz = 10.0; Max at 43.5, 141.0, 4.7

Power drift: -0.81 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: ABZ99FT4057; Test Date: 9/04/03

Motorola CGISS EME Laboratory

RUN #: SW-Ab-030904-05

Model #: AAH65QDH9AA1AN SN: PVJYU9P9

TX Freq: 403 MHz

Sim Tissue Temp: 20.7 (Celsius)

Start Power: 4.51 W

Antenna: NAE6483AR

Battery Kit: NNTN4970A

Carry: none

Audio Acc. BDN6647F

DUT back towards phantom w/ antenna separated 2.5 cm

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

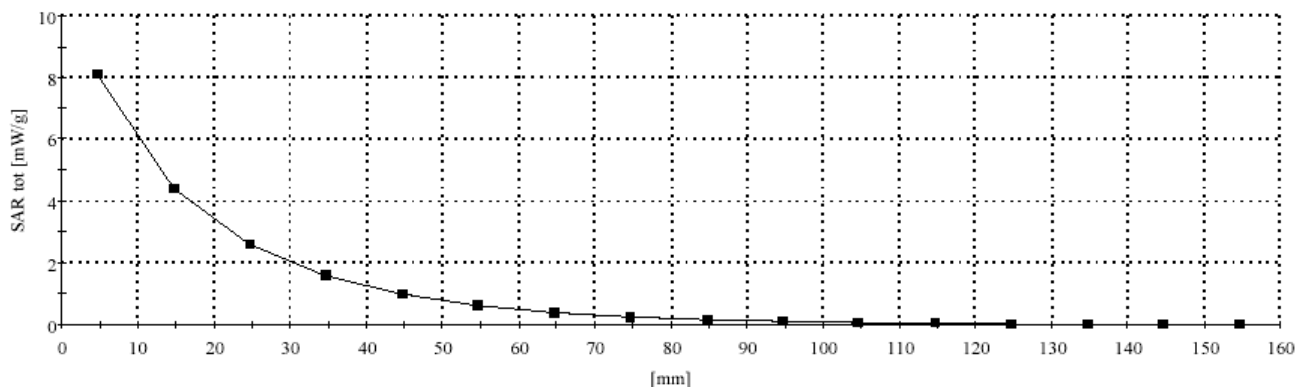
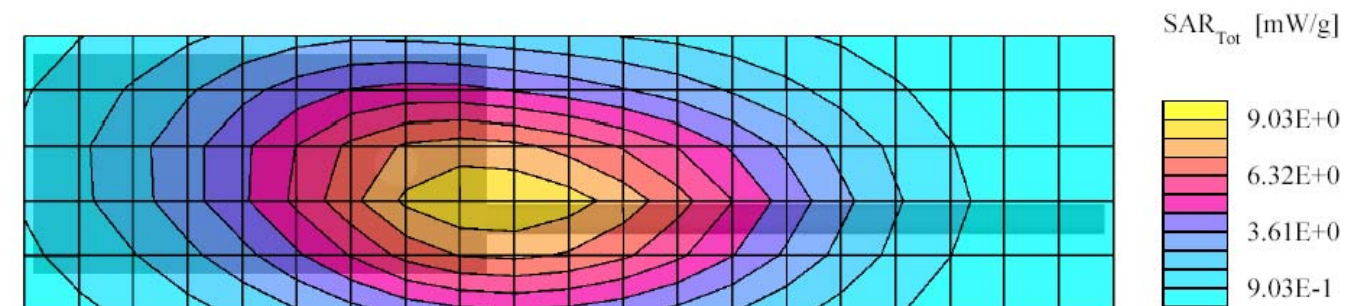
Probe: ET3DV6 - SN1384(Cal Date 05-15-2003); ConvF(7.60,7.60,7.60); Probe cal date: 15/05/03; Crest factor: 1.0; FCC

Body 421 MHz: $\sigma = 0.90$ mho/m $\epsilon_r = 55.6$ $\rho = 1.00$ g/cm³; DAE3: 363V1 DAE Cal Date: 05/13/2003

Cube 7x7x7: SAR (1g): 8.41 mW/g, SAR (10g): 6.09 mW/g, (Worst-case extrapolation)

Coarse: Dx = 15.0, Dy = 15.0, Dz = 10.0; Max at 45.0, 129.0, 4.7

Power Drift: -0.79dB



FCC ID: ABZ99FT4057; Test Date: 8/29/03

Motorola CGISS EME Laboratory

RUN #: CM-Face-030829-12

Model #: AAH65QDH9AA1AN SN: PVJYU9P9

TX Freq: 403 MHz

Sim Tissue Temp: 21.4 (Celsius)

Start Power: 4.52 W

Antenna: NAE6483AR

Battery Kit: NNTN4970A

Carry: none

Audio Acc. none

DUT front towards phantom w/ 2.5 cm separation.

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

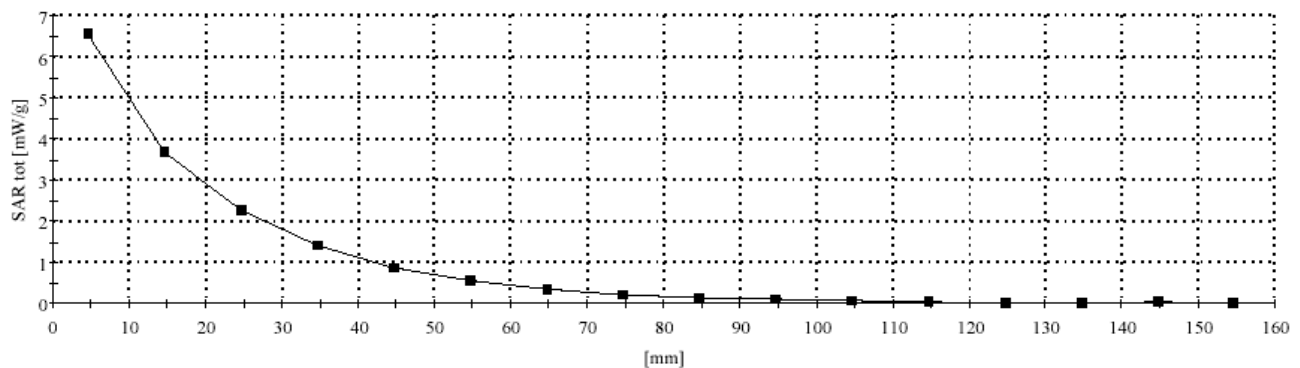
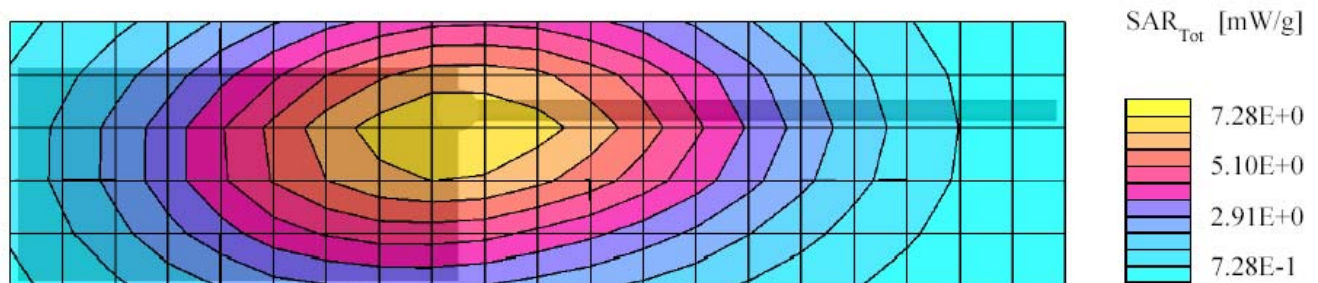
Probe: ET3DV6 - SN1384(Cal Date 05-15-2003); ConvF(7.50,7.50,7.50); Probe cal date: 15/05/03; Crest factor: 1.0; IEEE

Head 421 MHz: $\sigma = 0.84$ mho/m $\epsilon = 44.2$ $\rho = 1.00$ g/cm³; DAE3: 363V1 DAE Cal Date: 05/13/2003

Cube 7x7x7: SAR (1g): 6.81 mW/g, SAR (10g): 4.99 mW/g, (Worst-case extrapolation)

Coarse: Dx = 15.0, Dy = 15.0, Dz = 10.0; Max at 31.5, 126.0, 4.7

Power drift: -0.94 dB



FCC ID: ABZ99FT4057; Test Date: 8/29/03

Motorola CGISS EME Laboratory

RUN #: CM-Face-030829-09

Model #: AAH65QDH9AA1AN SN: PVJYU9P9

TX Freq: 440 MHz

Sim Tissue Temp: 21.4 (Celsius)

Start Power: 4.40 W

Antenna: NAE6522AR w/ant adap 5886627Z01

Battery Kit: NNTN4852A

Carry: none

Audio Acc. none

DUT front towards phantom w/ 2.5 cm separation

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

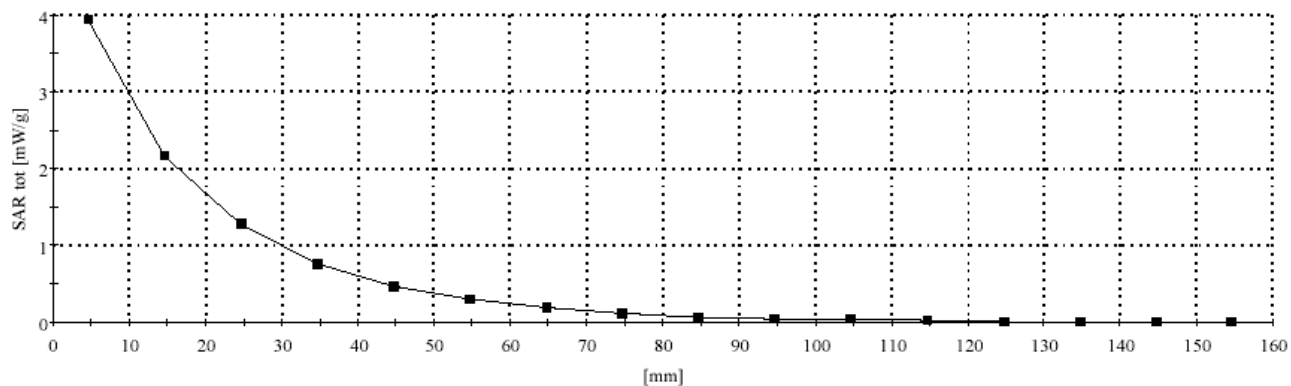
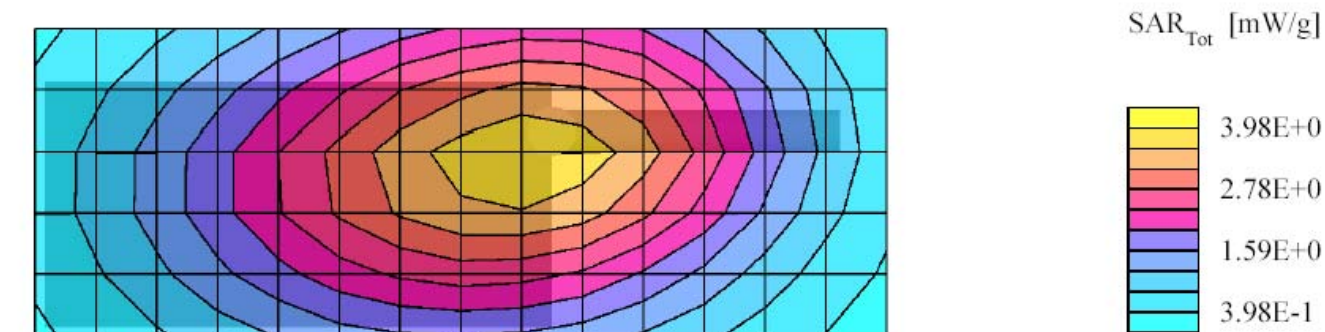
Probe: ET3DV6 - SN1384(Cal Date 05-15-2003); ConvF(7.50,7.50,7.50); Probe cal date: 15/05/03; Crest factor: 1.0; IEEE

Head 421 MHz: $\sigma = 0.84$ mho/m $\epsilon_r = 44.2$ $\rho = 1.00$ g/cm³; DAE3: 363V1 DAE Cal Date: 05/13/2003

Cube 7x7x7: SAR (1g): 3.94 mW/g, SAR (10g): 2.87 mW/g, (Worst-case extrapolation)

Coarse: Dx = 15.0, Dy = 15.0, Dz = 10.0; Max at 31.5, 121.5, 4.7

Power Drift: -0.22 dB



FCC ID: ABZ99FT4057; Test Date: 9/02/03

Motorola CGISS EME Laboratory

RUN #: CM-Face-030902-06

Model #: AAH65QDH9AA1AN SN: PVJYU9P9

TX Freq: 403 MHz

Sim Tissue Temp: 21.1 (Celsius)

Start Power: 4.50 W

Antenna: NAE6483AR

Battery Kit: NNTN4970A

Carry: none

Audio Acc. HLN9132A

DUT front towards phantom w/ 2.5 cm separation

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

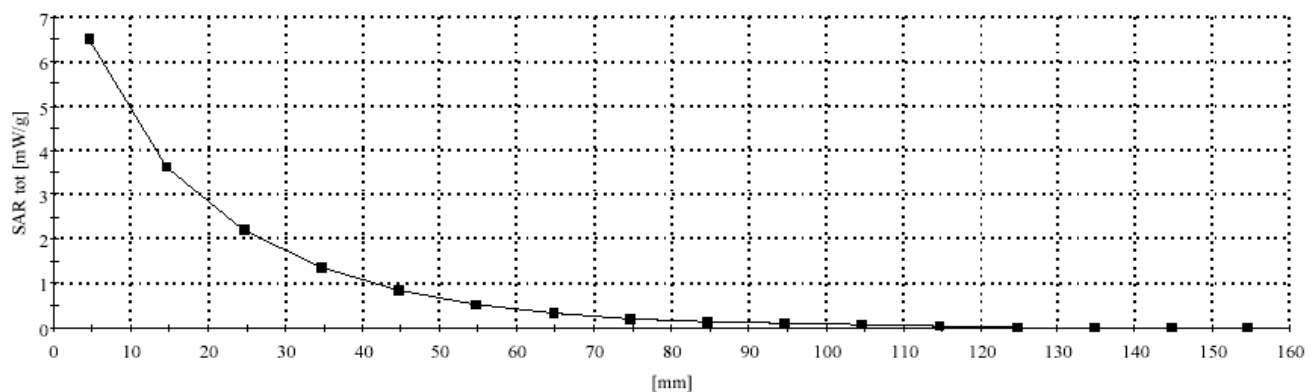
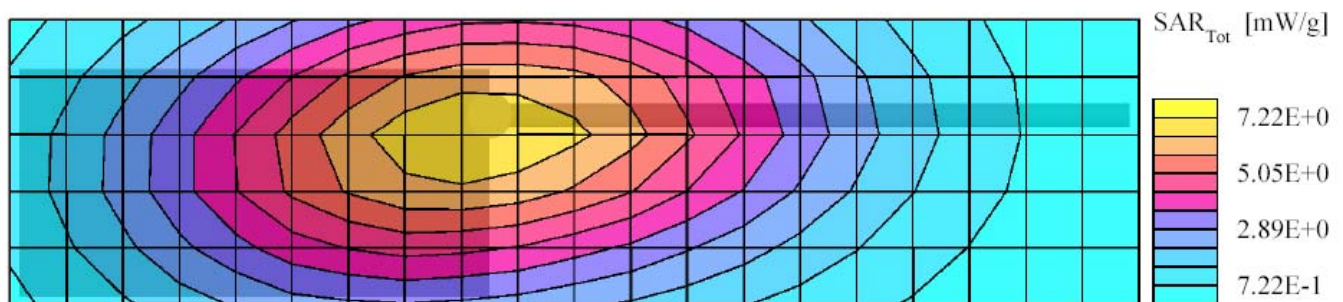
Probe: ET3DV6 - SN1384(Cal Date 05-15-2003); ConvF(7.50,7.50,7.50); Probe cal date: 15/05/03; Crest factor: 1.0; IEEE

Head 421 MHz: $\sigma = 0.87$ mho/m $\epsilon_r = 45.5$ $\rho = 1.00$ g/cm³; DAE3: 363V1 DAE Cal Date: 05/13/2003

Cube 7x7x7: SAR (1g): 6.70 mW/g, SAR (10g): 4.94 mW/g, (Worst-case extrapolation)

Coarse: Dx = 15.0, Dy = 15.0, Dz = 10.0; Max at 30.0, 123.0, 4.7

Power Drift: -0.90 dB



FCC ID: ABZ99FT4057; Test Date: 9/05/03

Motorola CGISS EME Laboratory

RUN #: CM-Ab-030905-15

Model #: AAH65QDC9AA1AN SN: PVKYU9QE

TX Freq: 403 MHz

Sim Tissue Temp: 20.7 (Celsius)

Start Power: 4.36 W

Antenna: NAE6483AR

Battery Kit: NNTN4970A

Carry: chest pack RLN4570A

Audio Acc. RMN5015A & RKN4090A

DUT front towards phantom w/ 2.5 cm 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

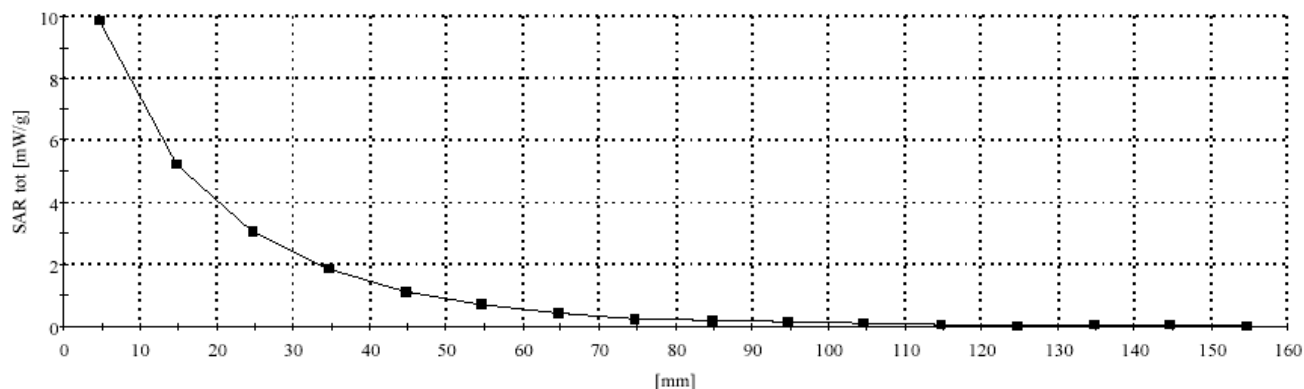
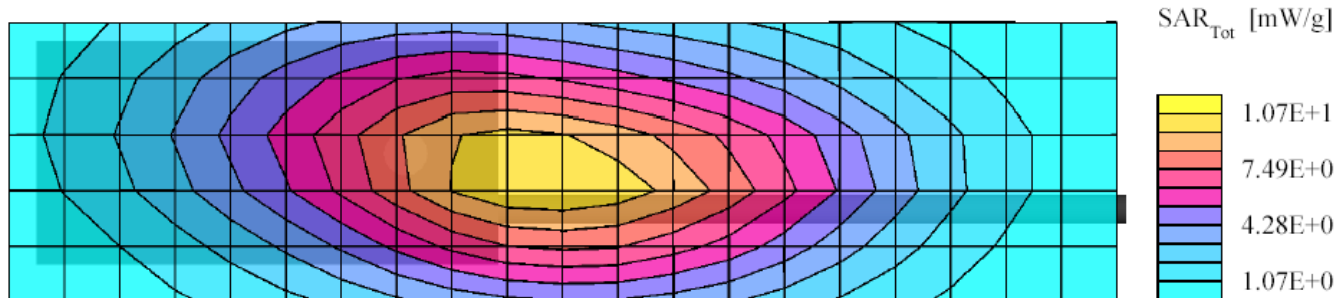
Body 421 MHz: $\sigma = 0.96$ mho/m $\epsilon_r = 56.8$ $\rho = 1.00$ g/cm³; DAE3: 363V1 DAE Cal Date: 05/13/2003

Cube 7x7x7: SAR (1g): 10.2 mW/g, SAR (10g): 7.28 mW/g * Max outside, (Worst-case extrapolation)

Coarse: Dx = 15.0, Dy = 15.0, Dz = 10.0; Max at 40.5, 142.5, 4.7

Power Drift: -0.79 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: ABZ99FT4057; Test Date: 8/29/03

Motorola CGISS EME Laboratory

RUN #: CM-Face-030829-13

Model #: AAH65QDC9AA1AN SN: PVKYU9QE

TX Freq: 403 MHz

Sim Tissue Temp: 21.4 (Celsius)

Start Power: 4.42 W

Antenna: NAE6483AR

Battery Kit: NNTN4970A

Carry: none

Audio Acc. none

DUT front towards phantom w/ 2.5 cm separation

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

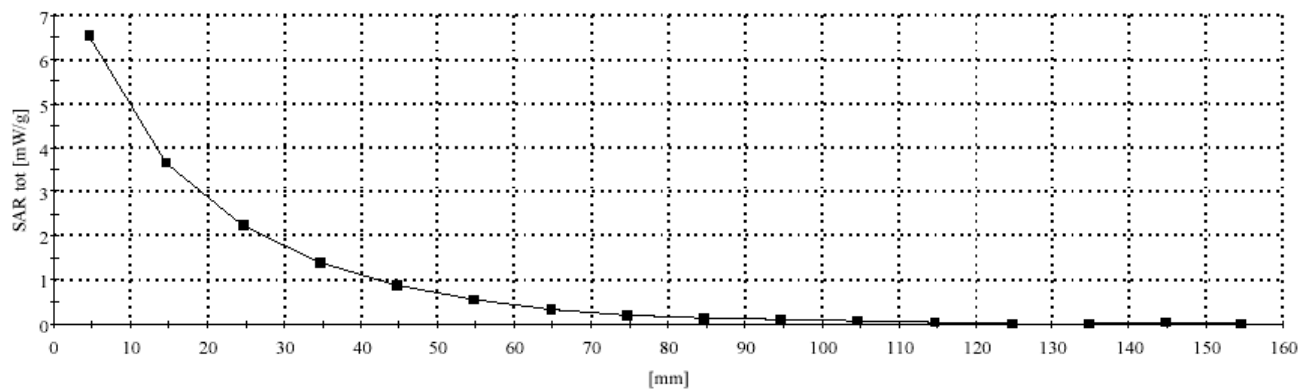
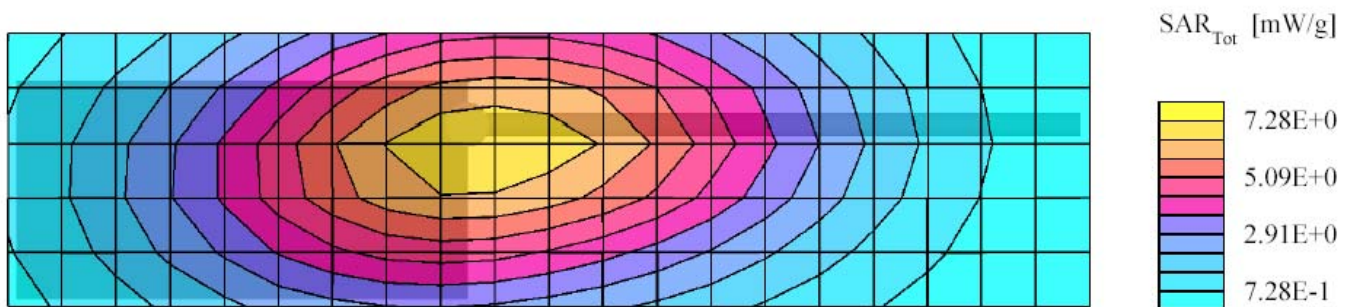
Probe: ET3DV6 - SN1384(Cal Date 05-15-2003); ConvF(7.50,7.50,7.50); Probe cal date: 15/05/03; Crest factor: 1.0; IEEE

Head 421 MHz: $\sigma = 0.84$ mho/m $\epsilon_r = 44.2$ $\rho = 1.00$ g/cm³; DAE3: 363V1 DAE Cal Date: 05/13/2003

Cube 7x7x7: SAR (1g): 6.86 mW/g, SAR (10g): 5.04 mW/g, (Worst-case extrapolation)

Coarse: Dx = 15.0, Dy = 15.0, Dz = 10.0; Max at 31.5, 130.5, 4.7

Power Drift: -0.81 dB



APPENDIX C

Dipole System Performance Check Results

Dipole validations at the head from SPEAG are provided herein. 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 450 MHz Dipole D450V2; SN-1001; Test Date: 8/08/03

Motorola CGISS EME Lab

Run #: Sys Perf-R1-030808-01

TX Freq: 450 MHz

Sim Tissue Temp: 20.7 (Celsius)

Start Power; 250mW

SAR target at 1W is 4.41 mW/g (1g avg, including drift)

SAR target at 1W is 2.93 mW/g (10g avg, including drift)

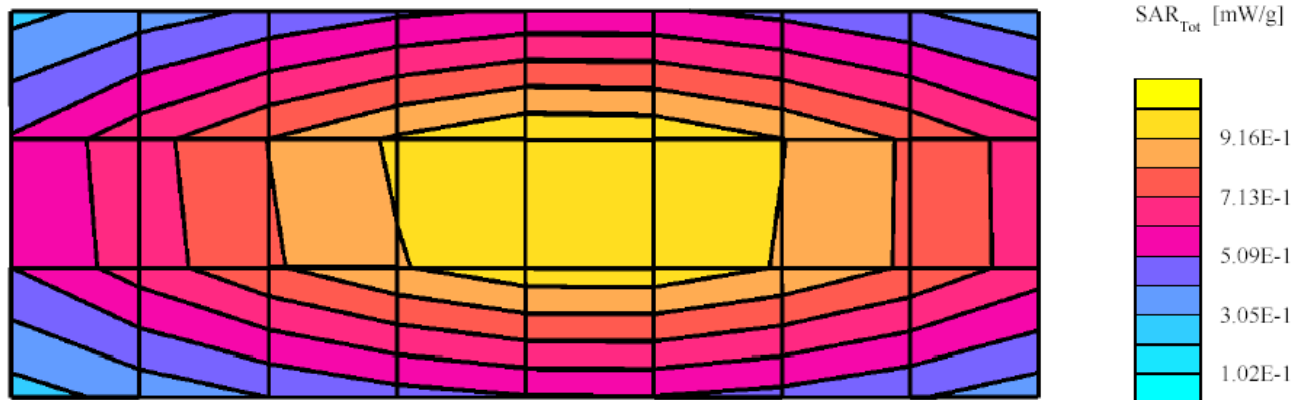
SAR calculated at 1W is 4.48 mW/g (1g avg). Percent from target (including drift) is 1.59%

SAR calculated at 1W is 2.96 mW/g (10g avg). Percent from target (including drift) is 0.89%

Flat Phantom; Probe: ET3DV6 - SN1384(Cal Date 05-15-2003);Probe Cal Date: 15/05/03ConvF(7.60,7.60,7.60); Crest factor: 1.0; FCC Body 450 MHz: $\sigma = 0.92$ mho/m $\epsilon_r = 55.3$ $\rho = 1.00$ g/cm³; DAE3: SN363-V1 DAE Cal Date: 05/13/2003

Cubes (2): Peak: 1.72 mW/g $\pm$ 0.02 dB, SAR (1g): 1.12 mW/g $\pm$ 0.03 dB, SAR (10g): 0.739 mW/g $\pm$ 0.03 dB, (Worst-case extrapolation)

Power drift: -0.00 dB



SPEAG 450 MHz Dipole D450V2; SN-1002; Test Date: 8/20/03

Motorola CGISS EME Lab

Run #: Sys Perf-R1-030820-01

TX Freq: 450 MHz

Sim Tissue Temp: 21.0 (Celsius)

Start Power; 250mW

SAR target at 1W is 4.52 mW/g (1g avg, including drift)

SAR target at 1W is 2.99 mW/g (10g avg, including drift)

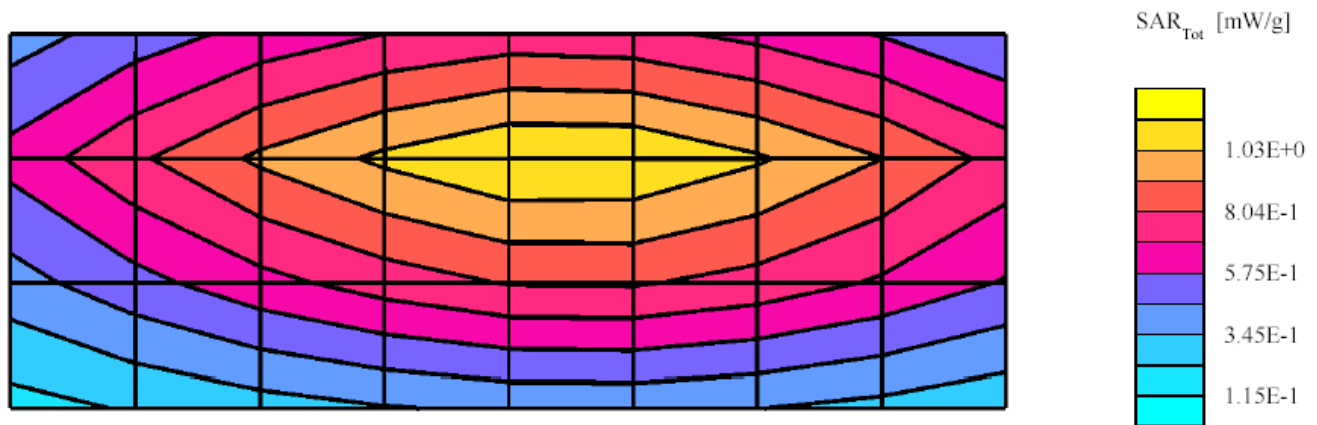
SAR calculated at 1W is 4.62 mW/g (1g avg). Percent from target (including drift) is +2.24 %

SAR calculated at 1W is 3.05 mW/g (10g avg). Percent from target (including drift) is +2.01%

Flat Phantom; Probe: ET3DV6 - SN1384(Cal Date 05-15-2003);Probe Cal Date: 15/05/03ConvF(7.60,7.60,7.60); Crest factor: 1.0; FCC Body 450 MHz: $\sigma = 0.92$ mho/m $\epsilon_r = 55.2$ $\rho = 1.00$ g/cm³; DAE3: SN363-V1 DAE Cal Date: 05/13/2003

Cubes (2): Peak: 1.78 mW/g ± 0.02 dB, SAR (1g): 1.15 mW/g ± 0.02 dB, SAR (10g): 0.759 mW/g ± 0.03 dB, (Worst-case extrapolation) Penetration depth: 12.8 (11.4, 14.6) [mm]

Power drift: -0.02 dB



SPEAG 450 MHz Dipole D450V2; SN-1001; Test Date: 8/22/03

Motorola CGISS EME Lab

Run #: Sys Perf-R1-030822-01

TX Freq:450 MHz

TX Freq: 450 MHz

Sim Tissue Temp: 21.2 (Celsius)

Start Power; 250mW

SAR target at 1W is 4.41 mW/g (1g avg, including drift)

SAR target at 1W is 2.93 mW/g (10g avg, including drift)

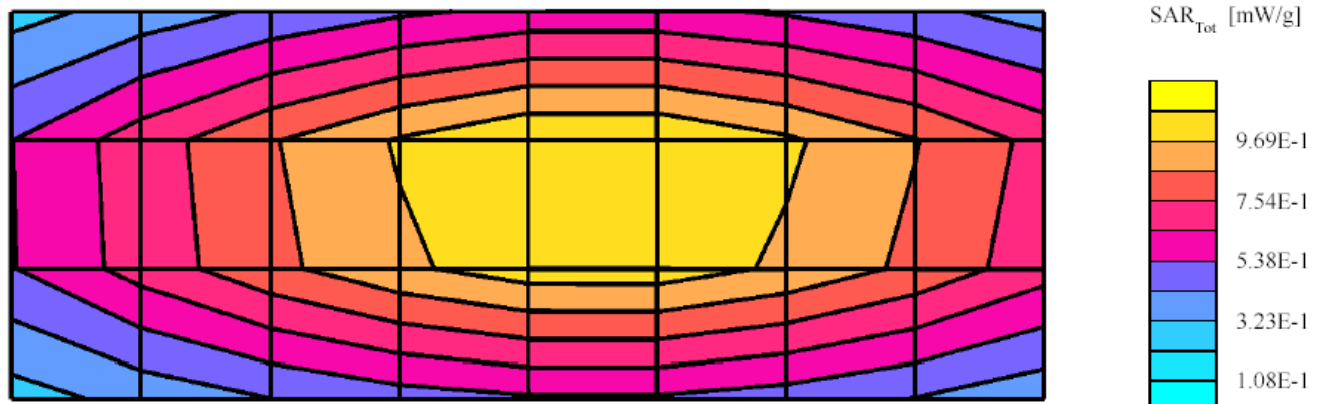
SAR calculated at 1W is 4.68 mW/g (1g avg). Percent from target (including drift) is 6.12%

SAR calculated at 1W is 3.10 mW/g (10g avg). Percent from target (including drift) is 5.94%

Flat Phantom; Probe: ET3DV6 - SN1384(Cal Date 05-15-2003);Probe Cal Date: 15/05/03ConvF(7.60,7.60,7.60); Crest factor: 1.0; FCC Body 450 MHz: $\sigma = 0.98$ mho/m $\epsilon_r = 56.4$ $\rho = 1.00$ g/cm³; DAE3: SN363-V1 DAE Cal Date: 05/13/2003

Cubes (2): Peak: 1.81 mW/g $\pm$ 0.03 dB, SAR (1g): 1.17 mW/g $\pm$ 0.04 dB, SAR (10g): 0.776 mW/g $\pm$ 0.03 dB, (Worst-case extrapolation) Penetration depth: 12.8 (11.4, 14.6) [mm]

Power drift: 0.00 dB



SPEAG 450 MHz Dipole D450V2; SN-1001; Test Date: 8/25/03

Motorola CGISS EME Lab

Run #: Sys Perf-R1-030825-01

TX Freq: 450 MHz

Sim Tissue Temp: 21.1 (Celsius)

Start Power; 250mW

SAR target at 1W is 4.41 mW/g (1g avg, including drift)

SAR target at 1W is 2.93 mW/g (10g avg, including drift)

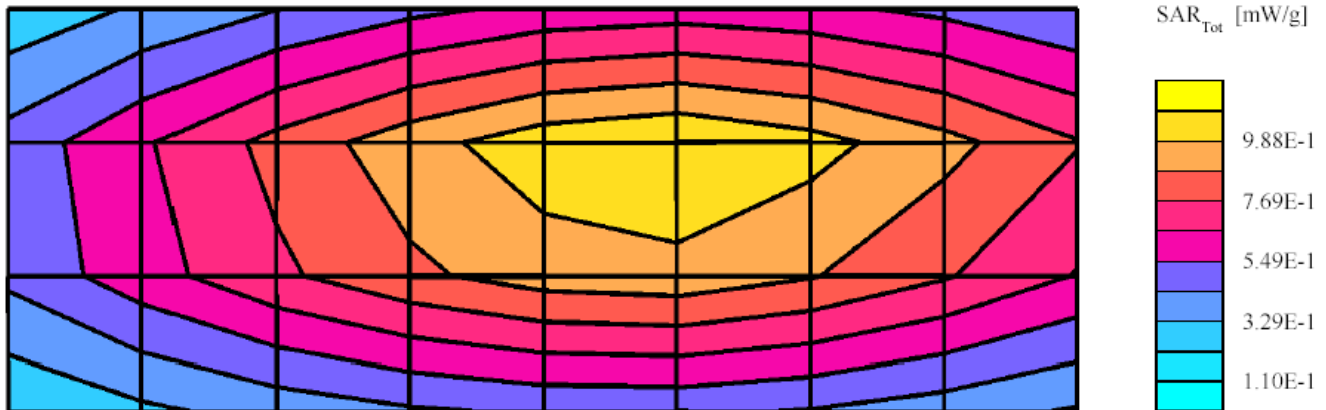
SAR calculated at 1W is 4.54 mW/g (1g avg). Percent from target (including drift) is 2.97%

SAR calculated at 1W is 3.01 mW/g (10g avg). Percent from target (including drift) is 2.72%

Flat Phantom; Probe: ET3DV6 - SN1384(Cal Date 05-15-2003);Probe Cal Date: 15/05/03ConvF(7.60,7.60,7.60); Crest factor: 1.0; FCC Body 450 MHz: $\sigma = 0.92$ mho/m $\epsilon_r = 55.1$ $\rho = 1.00$ g/cm³; DAE3: SN363-V1 DAE Cal Date: 05/13/2003

Cubes (2): Peak: 1.75 mW/g ± 0.04 dB, SAR (1g): 1.13 mW/g ± 0.04 dB, SAR (10g): 0.749 mW/g ± 0.04 dB, (Worst-case extrapolation) Penetration depth: 12.8 (11.4, 14.6) [mm]

Power drift: -0.02 dB



SPEAG 450 MHz Dipole D450V2; SN-1001; Test Date: 8/26/03

Motorola CGISS EME Lab

Run #: Sys Perf-R1-030826-01

TX Freq: 450 MHz

Sim Tissue Temp: 20.7 (Celsius)

Start Power; 250mW

SAR target at 1W is 4.41 mW/g (1g avg, including drift)

SAR target at 1W is 2.93 mW/g (10g avg, including drift)

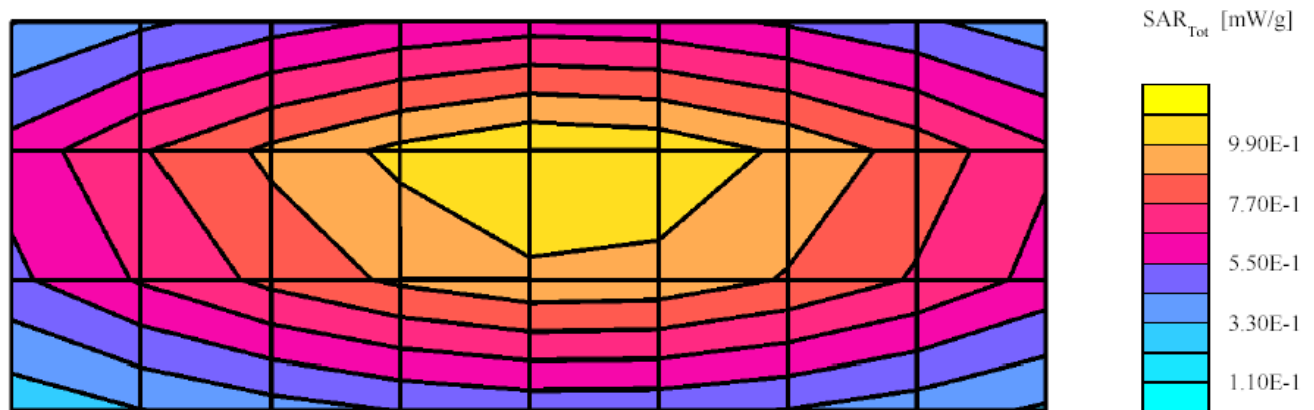
SAR calculated at 1W is 4.58 mW/g (1g avg). Percent from target (including drift) is 3.83%

SAR calculated at 1W is 3.03 mW/g (10g avg). Percent from target (including drift) is 3.41%

Flat Phantom; Probe: ET3DV6 - SN1384(Cal Date 05-15-2003);Probe Cal Date: 15/05/03ConvF(7.60,7.60,7.60); Crest factor: 1.0; FCC Body 450 MHz: $\sigma = 0.94$ mho/m $\epsilon_r = 55.1$ $\rho = 1.00$ g/cm³; DAE3: SN363-V1 DAE Cal Date: 05/13/2003

Cubes (2): Peak: 1.77 mW/g $\pm$ 0.03 dB, SAR (1g): 1.15 mW/g $\pm$ 0.03 dB, SAR (10g): 0.761 mW/g $\pm$ 0.03 dB, (Worst-case extrapolation) Penetration depth: 12.9 (11.5, 14.6) [mm]

Power drift: 0.02 dB



SPEAG 450 MHz Dipole D450V2; SN-1001; Test Date: 8/27/03

Motorola CGISS EME Lab

Run #: Sys Perf-R1-030827-01

TX Freq: 450 MHz

TX Freq: 450 MHz

Sim Tissue Temp: 20.4 (Celsius)

Start Power; 250mW

SAR target at 1W is 4.41 mW/g (1g avg, including drift)

SAR target at 1W is 2.93 mW/g (10g avg, including drift)

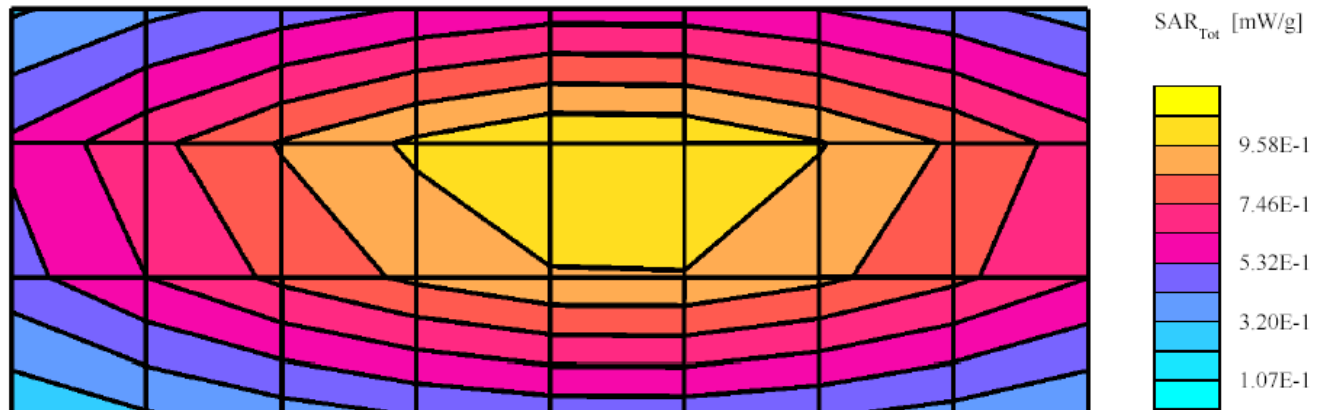
SAR calculated at 1W is 4.51 mW/g (1g avg). Percent from target (including drift) is 2.26%

SAR calculated at 1W is 2.99 mW/g (10g avg). Percent from target (including drift) is 1.88%

Flat Phantom; Probe: ET3DV6 - SN1384(Cal Date 05-15-2003);Probe Cal Date: 15/05/03ConvF(7.60,7.60,7.60); Crest factor: 1.0; FCC Body 450 MHz: $\sigma = 0.92$ mho/m $\epsilon_r = 55.0$ $\rho = 1.00$ g/cm³; DAE3: SN363-V1 DAE Cal Date: 05/13/2003

Cubes (2): Peak: 1.73 mW/g ± 0.04 dB, SAR (1g): 1.13 mW/g ± 0.03 dB, SAR (10g): 0.748 mW/g ± 0.03 dB, (Worst-case extrapolation) Penetration depth: 12.9 (11.5, 14.7) [mm]

Power drift: 0.01 dB



SPEAG 450 MHz Dipole D450V2; SN-1001; Test Date: 8/28/03

Motorola CGISS EME Lab

Run #: Sys Perf-R1-030828-01

TX Freq: 450 MHz

Sim Tissue Temp: 20.3 (Celsius)

Start Power; 250mW

SAR target at 1W is 4.41 mW/g (1g avg, including drift)

SAR target at 1W is 2.93 mW/g (10g avg, including drift)

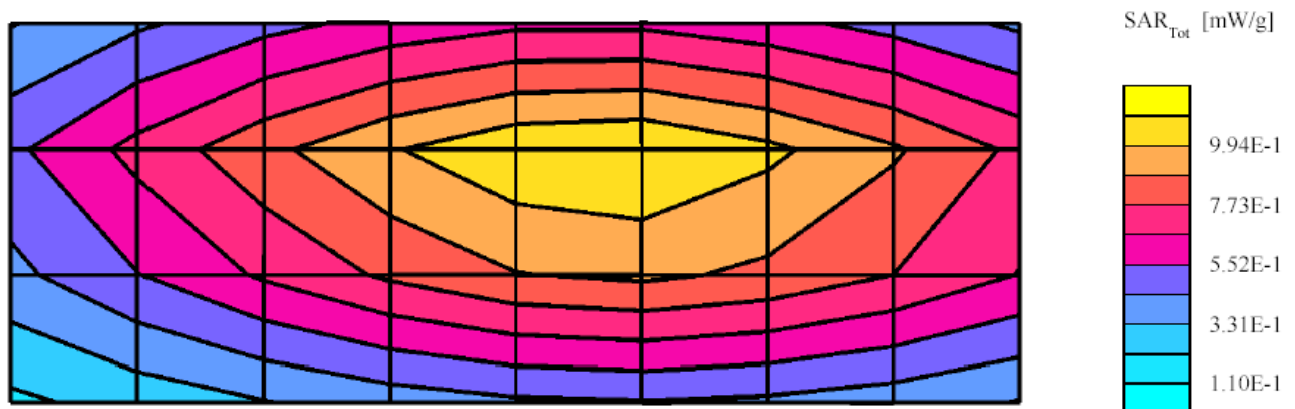
SAR calculated at 1W is 4.50 mW/g (1g avg). Percent from target (including drift) is 2.06%

SAR calculated at 1W is 3.00 mW/g (10g avg). Percent from target (including drift) is 2.45%

Flat Phantom; Probe: ET3DV6 - SN1384(Cal Date 05-15-2003);Probe Cal Date: 15/05/03ConvF(7.60,7.60,7.60); Crest factor: 1.0; FCC Body 450 MHz: $\sigma = 0.93$ mho/m $\epsilon_r = 55.6$ $\rho = 1.00$ g/cm³; DAE3: SN363-V1 DAE Cal Date: 05/13/2003

Cubes (2): Peak: 1.73 mW/g ± 0.04 dB, SAR (1g): 1.12 mW/g ± 0.03 dB, SAR (10g): 0.747 mW/g ± 0.03 dB, (Worst-case extrapolation) Penetration depth: 13.1 (11.7, 14.8) [mm]

Power drift: -0.02 dB



SPEAG 450 MHz Dipole D450V2; SN-1001; Test Date: 8/28/03

Motorola CGISS EME Lab

Run #: Sys Perf-R1-030828-08

TX Freq: 450 MHz

TX Freq: 450 MHz

Sim Tissue Temp: 21.1 (Celsius)

Start Power: 250mW

SAR target at 1W is 4.63 mW/g (1g avg, including drift)

SAR target at 1W is 3.06 mW/g (10g avg, including drift)

SAR calculated at 1W is 4.65 mW/g (1g avg). Percent from target (including drift) is 0.50 %

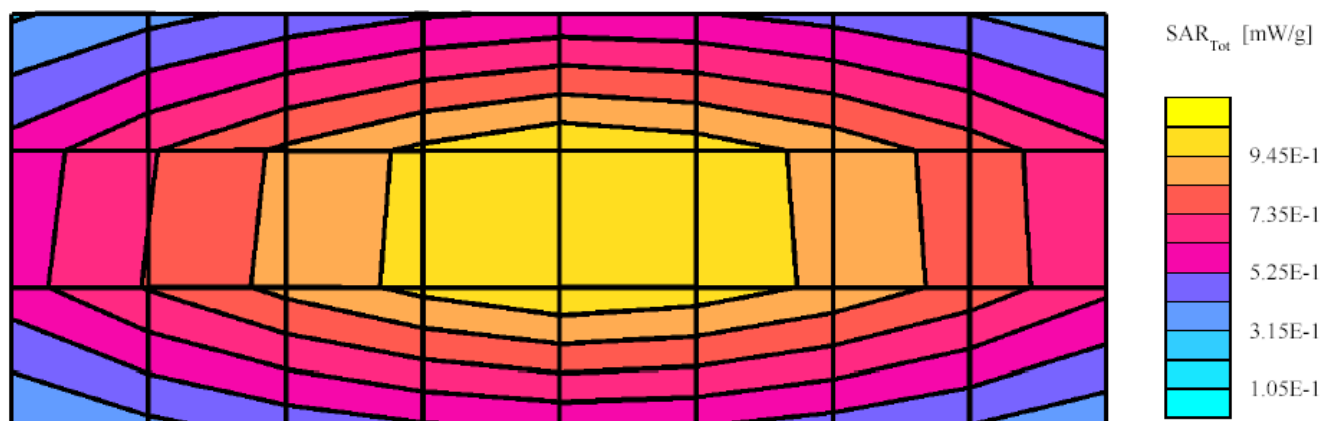
SAR calculated at 1W is 3.06 mW/g (10g avg). Percent from target (including drift) is 0.10 %

Flat Phantom; Probe: ET3DV6 - SN1384(Cal Date 05-15-2003);Probe Cal Date: 15/05/03ConvF(7.50,7.50,7.50); Crest factor:

1.0; IEEE Head 450MHz: $\sigma = 0.86$ mho/m $\epsilon_r = 44.0$ $\rho = 1.00$ g/cm³; DAE3: SN363-V1 DAE Cal Date: 05/13/2003

Cubes (2): Peak: 1.77 mW/g $\pm$ 0.03 dB, SAR (1g): 1.15 mW/g $\pm$ 0.03 dB, SAR (10g): 0.757 mW/g $\pm$ 0.04 dB, (Worst-case extrapolation) Penetration depth: 12.7 (11.4, 14.4) [mm]

Power drift: -0.05 dB



SPEAG 450 MHz Dipole D450V2; SN-1001; Test Date: 8/29/03

Motorola CGISS EME Lab

Run #: Sys Perf-R1-030829-01

TX Freq: 450 MHz

Sim Tissue Temp: 21.3 (Celsius)

Start Power; 250mW

SAR target at 1W is 4.63 mW/g (1g avg, including drift)

SAR target at 1W is 3.06 mW/g (10g avg, including drift)

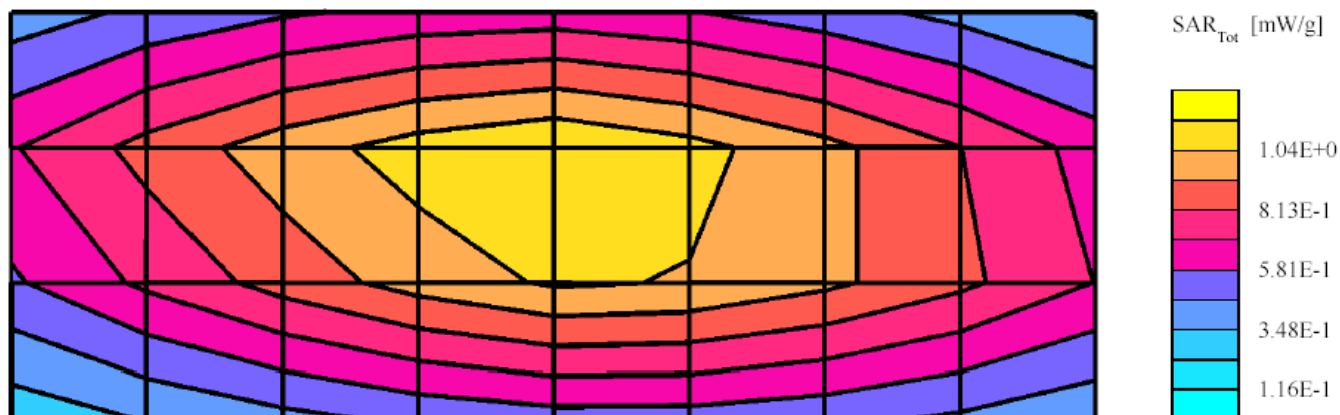
SAR calculated at 1W is 4.90 mW/g (1g avg). Percent from target (including drift) is 5.89 %

SAR calculated at 1W is 3.24 mW/g (10g avg). Percent from target (including drift) is 5.85 %

Flat Phantom; Probe: ET3DV6 - SN1384(Cal Date 05-15-2003);Probe Cal Date: 15/05/03ConvF(7.50,7.50,7.50); Crest factor: 1.0; IEEE Head 450MHz: $\sigma = 0.86$ mho/m $\epsilon_r = 43.7$ $\rho = 1.00$ g/cm³; DAE3: SN363-V1 DAE Cal Date: 05/13/2003

Cubes (2): Peak: 1.90 mW/g ± 0.03 dB, SAR (1g): 1.22 mW/g ± 0.03 dB, SAR (10g): 0.806 mW/g ± 0.04 dB, (Worst-case extrapolation) Penetration depth: 12.7 (11.3, 14.5) [mm]

Power drift: -0.02 dB



SPEAG 450 MHz Dipole D450V2; SN-1001; Test Date: 9/02/03

Motorola CGISS EME Lab

Run #: Sys Perf-R1-030902-01

TX Freq: 450 MHz

Sim Tissue Temp: 20.9 (Celsius)

Start Power; 250mW

SAR target at 1W is 4.63 mW/g (1g avg, including drift)

SAR target at 1W is 3.06 mW/g (10g avg, including drift)

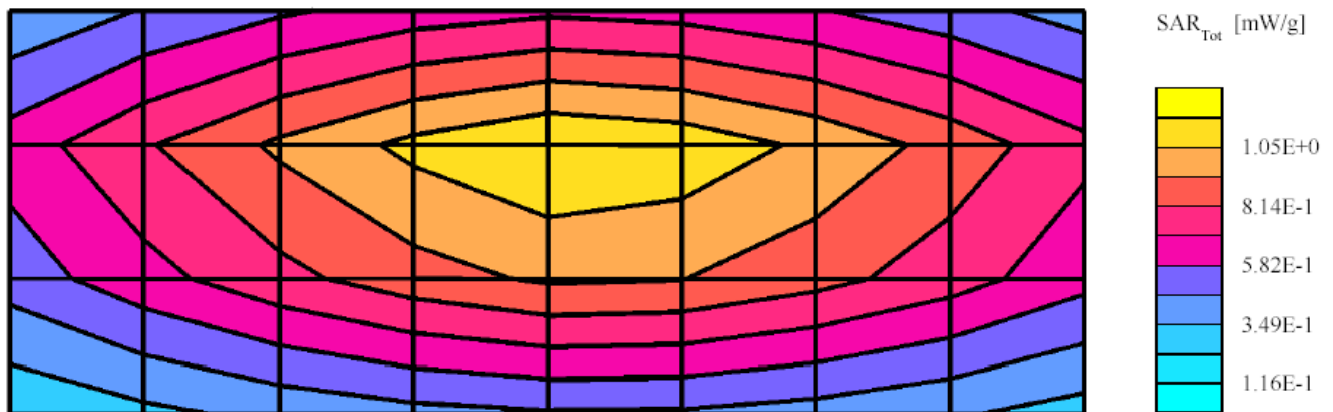
SAR calculated at 1W is 4.81 mW/g (1g avg). Percent from target (including drift) is 3.98 %

SAR calculated at 1W is 3.17 mW/g (10g avg). Percent from target (including drift) is 3.75 %

Flat Phantom; Probe: ET3DV6 - SN1384(Cal Date 05-15-2003);Probe Cal Date: 15/05/03ConvF(7.50,7.50,7.50); Crest factor: 1.0; IEEE Head 450MHz: $\sigma = 0.90$ mho/m $\epsilon_r = 45.0$ $\rho = 1.00$ g/cm³; DAE3: SN363-V1 DAE Cal Date: 05/13/2003

Cubes (2): Peak: 1.80 mW/g $\pm$ 0.05 dB, SAR (1g): 1.16 mW/g $\pm$ 0.05 dB, SAR (10g): 0.765 mW/g $\pm$ 0.05 dB, (Worst-case extrapolation) Penetration depth: 12.6 (11.3, 14.4) [mm]

Power drift: -0.16 dB



SPEAG 450 MHz Dipole D450V2; SN-1001; Test Date: 9/03/03

Motorola CGISS EME Lab

Run #: Sys Perf-R1-030903-01

TX Freq: 450 MHz

Sim Tissue Temp: 21.3 (Celsius)

Start Power; 250mW

SAR target at 1W is 4.41 mW/g (1g avg, including drift)

SAR target at 1W is 2.93 mW/g (10g avg, including drift)

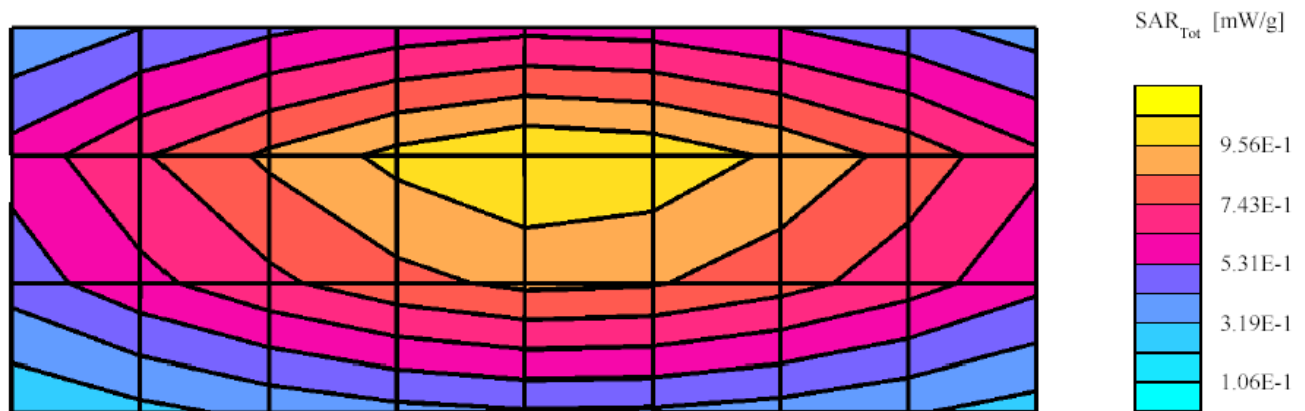
SAR calculated at 1W is 4.32 mW/g (1g avg). Percent from target (including drift) is 2.04%

SAR calculated at 1W is 2.86 mW/g (10g avg). Percent from target (including drift) is 2.25%

Flat Phantom; Probe: ET3DV6 - SN1384(Cal Date 05-15-2003);Probe Cal Date: 15/05/03ConvF(7.60,7.60,7.60); Crest factor: 1.0; FCC Body 450 MHz: $\sigma = 0.95$ mho/m $\epsilon_r = 55.1$ $\rho = 1.00$ g/cm³; DAE3: SN363-V1 DAE Cal Date: 05/13/2003

Cubes (2): Peak: 1.67 mW/g $\pm$ 0.03 dB, SAR (1g): 1.08 mW/g $\pm$ 0.03 dB, SAR (10g): 0.716 mW/g $\pm$ 0.04 dB, (Worst-case extrapolation) Penetration depth: 12.8 (11.4, 14.6) [mm]

Power drift: 0.00 dB



SPEAG 450 MHz Dipole D450V2; SN-1001; Test Date: 9/04/03

Motorola CGISS EME Lab

Run #: Sys Perf-R1-030904-01

TX Freq: 450 MHz

Sim Tissue Temp: 20.7 (Celsius)

Start Power; 250mW

SAR target at 1W is 4.41 mW/g (1g avg, including drift)

SAR target at 1W is 2.93 mW/g (10g avg, including drift)

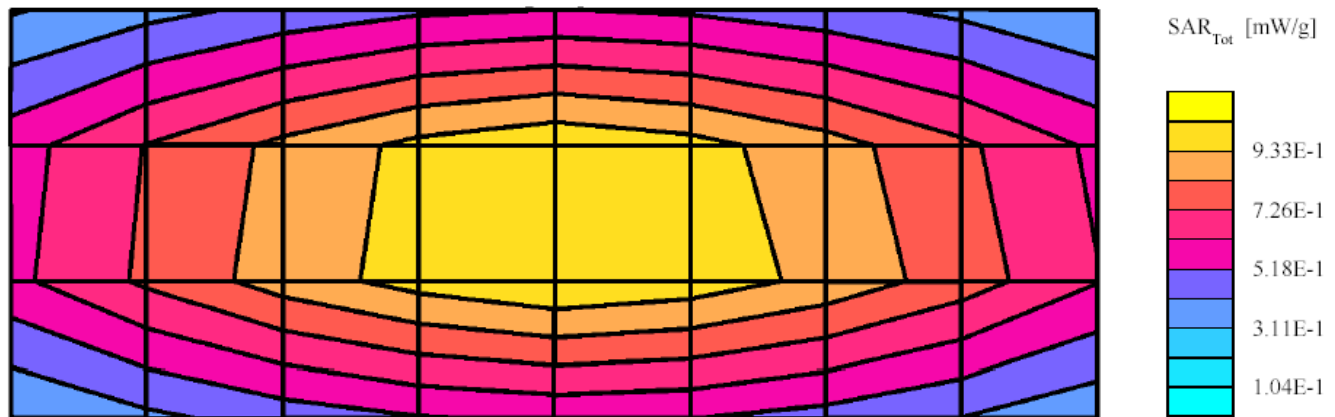
SAR calculated at 1W is 4.53 mW/g (1g avg). Percent from target (including drift) is 2.73%

SAR calculated at 1W is 3.00 mW/g (10g avg). Percent from target (including drift) is 2.35%

Flat Phantom; Probe: ET3DV6 - SN1384(Cal Date 05-15-2003);Probe Cal Date: 15/05/03ConvF(7.60,7.60,7.60); Crest factor: 1.0; FCC Body 450 MHz: $\sigma = 0.93$ mho/m $\epsilon_r = 55.0$ $\rho = 1.00$ g/cm³; DAE3: SN363-V1 DAE Cal Date: 05/13/2003

Cubes (2): Peak: 1.73 mW/g $\pm$ 0.02 dB, SAR (1g): 1.13 mW/g $\pm$ 0.02 dB, SAR (10g): 0.748 mW/g $\pm$ 0.02 dB, (Worst-case extrapolation) Penetration depth: 12.9 (11.5, 14.8) [mm]

Power drift: -0.01 dB



SPEAG 450 MHz Dipole D450V2; SN-1001; Test Date: 9/05/03

Motorola CGISS EME Lab

Run #: Sys Perf-R1-030905-01

TX Freq: 450 MHz

Sim Tissue Temp: 20.7 (Celsius)

Start Power; 250mW

SAR target at 1W is 4.41 mW/g (1g avg, including drift)

SAR target at 1W is 2.93 mW/g (10g avg, including drift)

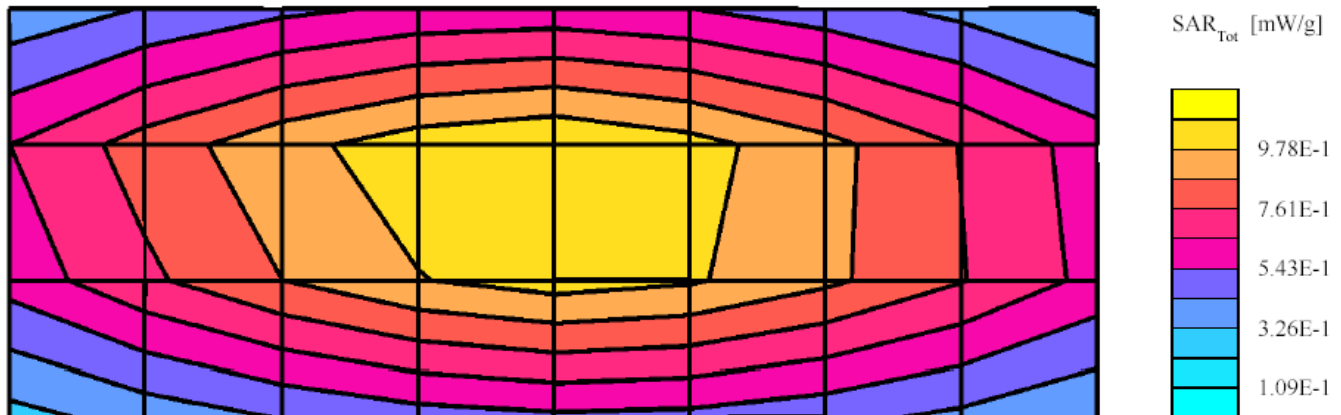
SAR calculated at 1W is 4.64 mW/g (1g avg). Percent from target (including drift) is 5.22%

SAR calculated at 1W is 3.09 mW/g (10g avg). Percent from target (including drift) is 5.53%

Flat Phantom; Probe: ET3DV6 - SN1384(Cal Date 05-15-2003);Probe Cal Date: 15/05/03ConvF(7.60,7.60,7.60); Crest factor: 1.0; FCC Body 450 MHz: $\sigma = 0.98$ mho/m $\epsilon_r = 56.4$ $\rho = 1.00$ g/cm³; DAE3: SN363-V1 DAE Cal Date: 05/13/2003

Cubes (2): Peak: 1.79 mW/g ± 0.04 dB, SAR (1g): 1.16 mW/g ± 0.03 dB, SAR (10g): 0.773 mW/g ± 0.03 dB, (Worst-case extrapolation) Penetration depth: 13.0 (11.5, 14.9) [mm]

Power drift: 0.00 dB



SPEAG 450 MHz Dipole D450V2; SN-1001; Test Date: 9/06/03

Motorola CGISS EME Lab

Run #: Sys Perf-R1-030906-01

TX Freq: 450 MHz

Sim Tissue Temp: 20.7 (Celsius)

Start Power; 250mW

SAR target at 1W is 4.41 mW/g (1g avg, including drift)

SAR target at 1W is 2.93 mW/g (10g avg, including drift)

SAR calculated at 1W is 4.42 mW/g (1g avg). Percent from target (including drift) is 0.23%

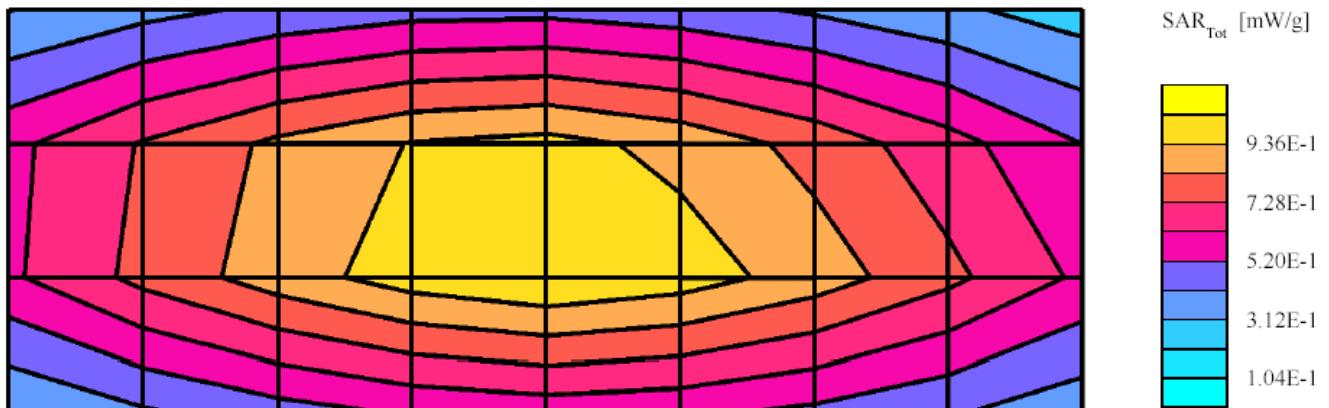
SAR calculated at 1W is 2.94 mW/g (10g avg). Percent from target (including drift) is 0.39%

Flat Phantom; Probe: ET3DV6 - SN1384(Cal Date 05-15-2003);Probe Cal Date: 15/05/03ConvF(7.60,7.60,7.60); Crest factor:

1.0; FCC Body 450 MHz: $\sigma = 0.94$ mho/m $\epsilon_r = 55.6$ $\rho = 1.00$ g/cm³; DAE3: SN363-V1 DAE Cal Date: 05/13/2003

Cubes (2): Peak: 1.70 mW/g $\pm$ 0.03 dB, SAR (1g): 1.10 mW/g $\pm$ 0.03 dB, SAR (10g): 0.732 mW/g $\pm$ 0.03 dB, (Worst-case extrapolation) Penetration depth: 13.0 (11.5, 14.8) [mm]

Power drift: -0.02 dB



SYSTEM VALIDATION

Date: 1/16/2003 Frequency (MHz): 450
Lab Location: CGISS Mixture Type: IEEE Head
Robot System: CGISS 3 Ambient Temp.(°C): 22.6, (Humid: 46.4%)
Probe Serial #: ET3DV6-1393 Tissue Temp.(°C): 21.2
DAE Serial #: 406

Tissue Characteristics

Permittivity: 43.3 Phantom Type/SN: 80302002B/S6
Conductivity: 0.87 Distance (mm): 15 (tissue/dipole cnt)

Reference Source: D450V2 (Dipole)
Reference SN: 1002

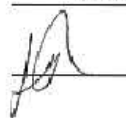
Power to Dipole: 250 mW
Power Output (radio): mW

Target SAR Value: 4.9 mW/g, 3.3 mW/g (10g avg.)
(normalized to 1.0 W)

Measured SAR Value: 1.17 mW/g, 0.774 mW/g (10g avg.)
Power Drift: -0.02 dB

Measured SAR Value: 4.70 mW/g, 3.11 mW/g (10g avg.)
(normalized to 1.0 W, including drift)

Percent Difference From Target (MUST be within System Uncertainty): 4.05 % (1g ave)
5.75 % (10g ave)

Test performed by: J. Fortier Initial: 

Dipole D450V2 SN1002; Test date:01/16/03

Run #: Sys Val_R3_030116-04

Phantom #:80302002B/S6

Model #: D450V2

SN: 1002

Robot: CGISS-3

Tester: J. Fortier

TX Freq: 450 MHz

Sim Tissue Temp: 21.2 (Celsius)

Start Power: 250mW

DAE Cal Date: 11/11/02

DAE3: SN:406

- Comments-

Target at 1W is 4.9 mW/g (1g)

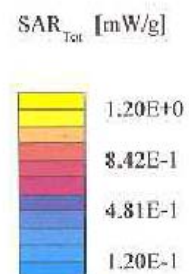
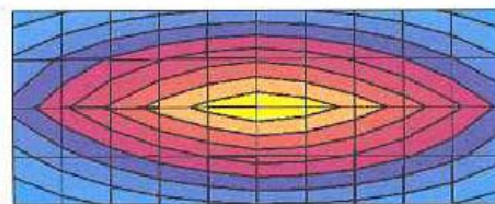
SAR calculated is 4.7 mW/g. Percent from IEEE-1528 target (including drift) for 1g is 4.0%

Flat; Probe: ET3DV6 - SN1393 SPEAG; ConvF(8.00,8.00,8.00); Crest factor: 1.0; IEEE Head 450 MHz; $\sigma = 0.87 \text{ mho/m}$ $\epsilon_c = 43.3$ $\rho = 1.00 \text{ g/cm}^3$

Cubes (2): Peak: 1.81 mW/g $\pm 0.05 \text{ dB}$, SAR (1g): 1.17 mW/g $\pm 0.05 \text{ dB}$, SAR (10g): 0.774 mW/g $\pm 0.06 \text{ dB}$, (Worst-case extrapolation)

Penetration depth: 12.8 (11.4, 14.5) [mm]

Powerdrift: -0.02 dB



Motorola CGISS EME Lab

SYSTEM PERFORMANCE CHECK TARGET SAR

Date:	<u>1/16/2003</u>	Frequency (MHz):	<u>450</u>
Lab Location:	<u>CGISS</u>	Mixture Type:	<u>FCC Body</u>
Robot System:	<u>CGISS 3</u>	Ambient Temp.(°C):	<u>22.6, (Humid: 45%)</u>
Probe Serial #:	<u>ET3DV6-1393</u>	Tissue Temp.(°C):	<u>21.5</u>
DAE Serial #:	<u>406</u>		

Tissue Characteristics

Permittivity:	<u>55.4</u>	Phantom Type/SN:	<u>80302002C/S7</u>
Conductivity:	<u>0.92</u>	Distance (mm):	<u>15 (tissue/dipole cnt)</u>

Reference Source:	<u>D450V2</u>	(Dipole)
Reference SN:	<u>1002</u>	

Power to Dipole: 250 mW

Measured SAR Value:	<u>1.13 mW/g,</u>	<u>0.748 mW/g (10g avg.)</u>
Power Drift:	<u>0 dB</u>	

New Target/Measured

SAR Value:	<u>4.52 mW/g,</u>	<u>2.99 mW/g (10g avg.)</u>
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(normalized to 1.0 W, including drift)

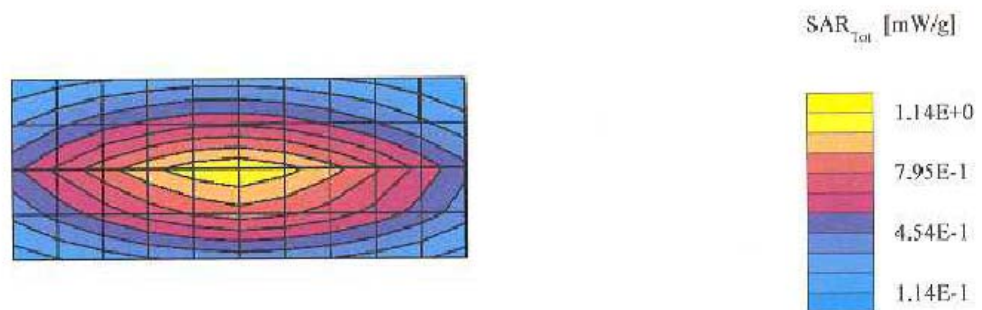
Test performed by: J. Fortier Initial: 

Dipole D450V2 SN1002; Test date:01/16/03

Run #: Sys Val_R3_030116-07 Phantom #:80302002C/S7
Model #: D450V2 SN: 1002
Robot: CGISS-3 Tester: J. Fortier
TX Freq: 450 MHz Sim Tissue Temp: 21.5 (Celsius)
Start Power: 250mW
DAE3: SN:406 DAE Cal Date: 11/11/02

- Comments-

Target at 1W is 4.52 mW/g (1g), 2.99 mW/g (10g)
Flat; Probe: ET3DV6 - SN1393 SPEAG; ConvF(8.20,8.20,8.20); Crest factor: 1.0; FCC Body 450: $\sigma = 0.92$ mho/m $\epsilon_r = 55.4$ $\rho = 1.00$ g/cm³
Cubes (2): Peak: 1.74 mW/g ± 0.06 dB, SAR (1g): 1.13 mW/g ± 0.06 dB, SAR (10g): 0.748 mW/g ± 0.06 dB, (Worst-case extrapolation)
Penetration depth: 13.1 (11.6, 14.9) [mm]
Powerdrift: -0.00 dB



Motorola CGISS EME Lab

SYSTEM VALIDATION

Date:	<u>1/16/2003</u>	Frequency (MHz):	<u>450</u>
Lab Location:	<u>CGISS</u>	Mixture Type:	<u>IEEE Head</u>
Robot System:	<u>CGISS 3</u>	Ambient Temp.(°C):	<u>22.4, (Humid: 45.0%)</u>
Probe Serial #:	<u>ET3DV6-1393</u>	Tissue Temp.(°C):	<u>21.2</u>
DAE Serial #:	<u>406</u>		

Tissue Characteristics

Permittivity:	<u>43.3</u>	Phantom Type/SN:	<u>80302002B/S6</u>
Conductivity:	<u>0.87</u>	Distance (mm):	<u>15 (tissue/dipole cnt)</u>

Reference Source:	<u>D450V2</u>	(Dipole)
Reference SN:	<u>1001</u>	

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

Target SAR Value: 4.9 mW/g, 3.3 mW/g (10g avg.)
(normalized to 1.0 W)

Measured SAR Value: 1.16 mW/g, 0.767 mW/g (10g avg.)
Power Drift: 0.01 dB

Measured SAR Value: 4.63 mW/g, 3.06 mW/g (10g avg.)
(normalized to 1.0 W, including drift)

Percent Difference From Target (MUST be within System Uncertainty): 5.52 % (1g ave)
7.24 % (10g ave)

Test performed by: J. Fortier Initial: 

SYSTEM PERFORMANCE CHECK TARGET SAR

Date:	<u>1/16/2003</u>	Frequency (MHz):	<u>450</u>
Lab Location:	<u>CGISS</u>	Mixture Type:	<u>IEEE Head</u>
Robot System:	<u>CGISS 3</u>	Ambient Temp.(°C):	<u>22.4, (Humid: 45.0%)</u>
Probe Serial #:	<u>ET3DV6-1393</u>	Tissue Temp.(°C):	<u>21.2</u>
DAE Serial #:	<u>406</u>		

Tissue Characteristics

Permittivity:	<u>43.3</u>	Phantom Type/SN:	<u>80302002B/S6</u>
Conductivity:	<u>0.87</u>	Distance (mm):	<u>15 (tissue/dipole cnt)</u>

Reference Source:	<u>D450V2</u>	(Dipole)
Reference SN:	<u>1001</u>	

Power to Dipole: 250 mW

Measured SAR Value:	<u>1.16</u> mW/g,	<u>0.767</u> mW/g (10g avg.)
Power Drift:	<u>0.01</u> dB	

New Target/Measured

SAR Value:	<u>4.63</u> mW/g,	<u>3.06</u> mW/g (10g avg.)
(normalized to 1.0 W, including drift)		

Test performed by: J. Fortier Initial: 

Dipole D450V2 SN1001; Test date:01/16/03

Run #: Sys Val_R3_030116-05

Phantom #:80302002B/S6

Model #: D450V2

SN: 1001

Robot: CGISS-3

Tester: J. Fortier

TX Freq: 450 MHz

Sim Tissue Temp: 21.2 (Celsius)

Start Power: 250mW

DAE3: SN:406

DAE Cal Date: 11/11/02

- Comments-

Target at 1W is 4.9 mW/g (1g)

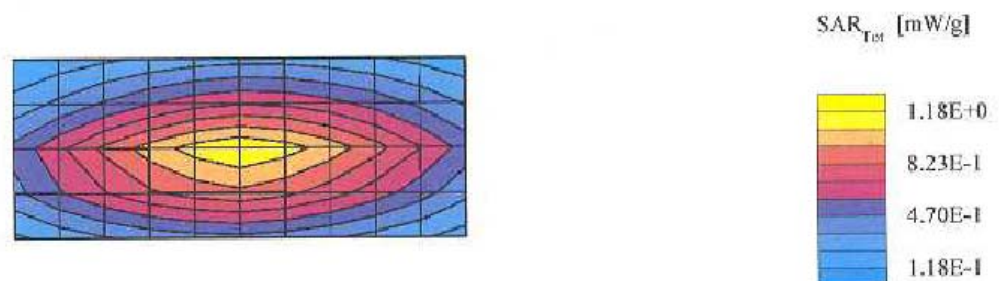
SAR calculated is 4.63 mW/g, Percent from IEEE-1528 target (including drift) for 1g is 5.5%

Flat; Probe: ET3DV6 - SN1393 SPEAG; ConvF(8.00,8.00,8.00); Crest factor: 1.0; IEEE Head 450 MHz: $\sigma = 0.87 \text{ mho/m}$, $\epsilon_r = 43.3$, $\rho = 1.00 \text{ g/cm}^3$

Cubes (2): Peak: 1.78 mW/g $\pm 0.04 \text{ dB}$, SAR (1g): 1.16 mW/g $\pm 0.05 \text{ dB}$, SAR (10g): 0.767 mW/g $\pm 0.05 \text{ dB}$, (Worst-case extrapolation)

Penetration depth: 12.8 (11.4, 14.5) [mm]

Powerdrift: 0.01 dB



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Dipole D450V2 SN1001; Test date:01/16/03

Run #: Sys Val_R3_030116-06

Model #: D450V2

Robot: CGISS-3

TX Freq: 450 MHz

Start Power: 250mW

DAE3: SN:406

Phantom #:80302002C/S7

SN: 1001

Tester: J. Fortier

Sim Tissue Temp: 21.5 (Celsius)

DAE Cal Date: 11/11/02

- Comments-

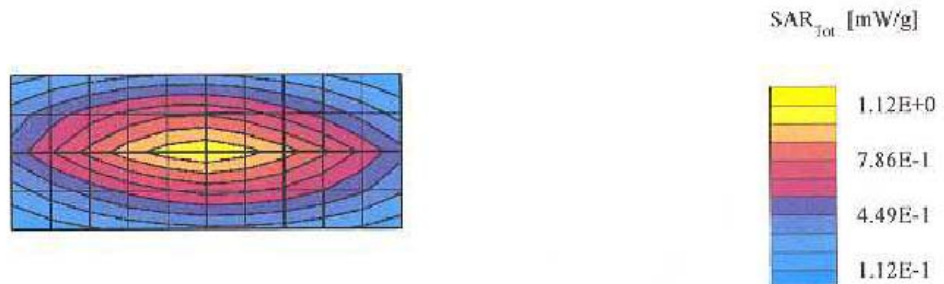
Target at 1W is 4.41 mW/g (1g), 2.93 mW/g (10g)

Flat; Probe: ET3DV6 - SN1393 SPEAG; ConvF(8.20,8.20,8.20); Crest factor: 1.0; FCC Body 450: $\sigma = 0.92$ mho/m $\epsilon_r = 55.4$ $\rho = 1.00$ g/cm³

Cubes (2): Peak: 1.69 mW/g ± 0.07 dB, SAR (1g): 1.10 mW/g ± 0.07 dB, SAR (10g): 0.732 mW/g ± 0.06 dB, (Worst-case extrapolation)

Penetration depth: 13.2 (11.7, 15.0) [mm]

Powerdrift: -0.01 dB



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