Certificate Number: 1449-02

MOTOROLA

ACCREDITED

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

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

Attention:	Federal Communication Commission
Date of Report:	June 25, 2002
Report Revision:	Rev. O
Device Manufacturer:	Motorola
Device Model:	H18KEH9PW7AN
Device Description:	VHF 1-6 Watts Digital Handheld Transceiver
FCC ID:	**AZ489FT3804**

Test Period:	4/30/02 – 6/12/02
Test Engineer:	Stephen Whalen Sr. Test Engineer
Author:	Michael Sailsman 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.

/s/ Ken Enger — *6/27/02*

Senior Resource Manager, Product Safety and EME Director — Date Approved

APPENDIX A
Power Slump Data/Shortened S.A.R. Scan

Battery Model #:	NTN8294B	NTN8610B	NTN9533A	NNTN4435AR	RNN4007AR	RNN4006AR	NTN8295A
Battery Chemistry	NiCad	LiIon	LiIon	NiMH	NiMH	NiMH	NiCad
Cell size (mAh)	1525	1650	2400	1800	3000	3000	1525
Test Frequency	156.0125 MHz	156.0125 MHz	156.0125 MHz	156.0125 MHz	156.0125 MHz	156.0125 MHz	156.0125 MHz
Time(Minutes)	Power(Watts)	Power(Watts)	Power(Watts)	Power(Watts)	Power(Watts)	Power(Watts)	Power(Watts)
0	6.45	6.42	6.45	6.45	6.40	6.41	6.42
2	6.44	6.43	6.46	6.44	6.38	6.40	6.40
4	6.42	6.41	6.45	6.41	6.22	6.35	6.35
6	6.41	6.40	6.44	6.40	6.02	6.17	6.11
8	6.40	6.39	6.43	6.38	5.87	5.99	6.03
10	6.38	6.38	6.42	6.37	5.78	5.88	5.96
12	6.37	6.37	6.41	6.36	5.68	5.78	5.90
14	6.36	6.36	6.40	6.34	5.60	5.70	5.82
16	6.33	6.35	6.40	6.33	5.55	5.62	5.76
18	6.31	6.34	6.39	6.32	5.50	5.55	5.68
20	6.21	6.33	6.38	6.32	5.47	5.50	5.60
22	6.12	6.32	6.38	6.31	5.43	5.46	5.53
24	6.04	6.31	6.37	6.29	5.36	5.41	5.47
26	5.99	6.29	6.37	6.29	5.33	5.37	5.41
28	5.92	6.24	6.36	6.26	5.31	5.33	5.34
30	5.89	6.17	6.35	6.23	5.29	5.31	5.26
32	5.79	6.11	6.34	6.19	5.29	5.29	5.21
34	5.70	5.95	6.34	6.13	5.27	5.28	5.14
36	5.61	5.68	6.33	6.08	5.26	5.27	5.10
38	5.53	5.32	6.32	6.01	5.26	5.26	5.07
40	5.41	4.55	6.32	5.92	5.24	5.25	5.02
Battery Model #:	NNTN4436AR	HNN9031A	HNN9032A	NTN8923A	NTN8299B	NTN8297A	NTN9177A
Battery Chemistry	NiMH	NiCad	NiCad	NiMH	NiMH	NiCad	Alkaline AA
Cell size (mAh)	1750	1525	1525	1800	1750	1525	unknown
Test Frequency	156.0125 MHz	156.0125 MHz	156.0125 MHz	156.0125 MHz	156.0125 MHz	156.0125 MHz	156.0125 MHz
Time(Minutes)	Power(Watts)	Power(Watts)	Power(Watts)	Power(Watts)	Power(Watts)	Power(Watts)	Power(Watts)
0	6.45	6.52	6.50	6.51	6.50	6.45	2.33
2	6.43	6.51	6.48	6.48	6.44	6.31	2.39
4	6.39	6.49	6.46	6.46	6.25	5.95	2.42
6	6.27	6.48	6.43	6.44	6.05	5.73	2.44
8	6.15	6.47	6.39	6.42	5.92	5.62	2.45
10	6.02	6.46	6.27	6.39	5.83	5.55	2.46
12	5.97	6.45	6.19	6.32	5.75	5.49	2.47
14	5.94	6.44	6.11	6.25	5.68	5.44	2.47
16	5.93	6.44	6.03	6.2	5.62	5.38	2.47
18	5.91	6.42	5.95	6.15	5.58	5.34	2.48
20	5.89	6.41	5.88	6.11	5.55	5.29	2.49
22	5.87	6.40	5.82	6.08	5.51	5.26	2.49
24	5.85	6.38	5.77	6.05	5.49	5.22	2.49
26	5.83	6.35	5.72	6.03	5.46	5.19	2.50
28	5.81	6.28	5.66	6.01	5.44	5.16	2.50
30	5.77	6.20	5.60	5.99	5.41	5.12	2.50
32	5.72	6.12	5.53	5.97	5.39	5.09	2.50
34	5.68	6.04	5.46	5.94	5.37	5.05	2.51
36	5.63	5.97	5.39	5.92	5.35	5.01	2.51
38	5.58	5.89	5.31	5.89	5.32	4.96	2.51
40	5.53	5.80	5.21	5.86	5.30	4.90	2.51

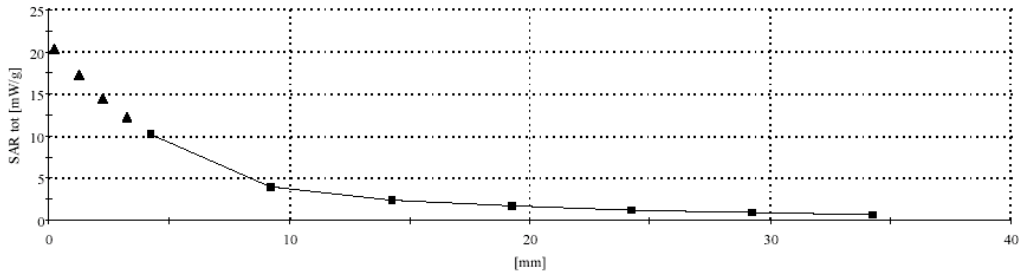
Shortened Scan of Highest S.A.R. Configuration

FCC ID: AZ489FT3804; SN: 002; Test Date: 06/11/02
Motorola CGISS EME Lab
Run #: Ab_R1_020611-03
TX Freq: 162 MHz
Sim Tissue Temp: 20.8 (Celsius)

6 minute scan
Start Power: 6.33 W End Power: 6.12 W

- Accessories -
Antenna:NAD6568A Battery Kit: NTN8294B
Carry: None Audio Acc. NMN6251A, PSM; NTN8327A, Adapter

- Comments-
Flat Phantom ; Device Section; Position: (90°,90°);
Probe: ET3DV6 - SN1547; ConvF(7.90,7.90,7.90); Probe cal date: 11/16/01; Crest factor: 1.0; FCC Body_156MHz: σ = 0.79 mho/m ε = 59.4 ρ = 1.00 g/cm3; DAE3: 401-V1 DAE Cal Date: 10/15/01
Cube 5x5x7: SAR (1g): 8.90 mW/g, SAR (10g): 4.28 mW/g, (Worst-case extrapolation)
Cube 5x5x7: Dx = 8.0, Dy = 8.0, Dz = 5.0; SAR (1g): 8.90 mW/g, SAR (10g): 4.28 mW/g

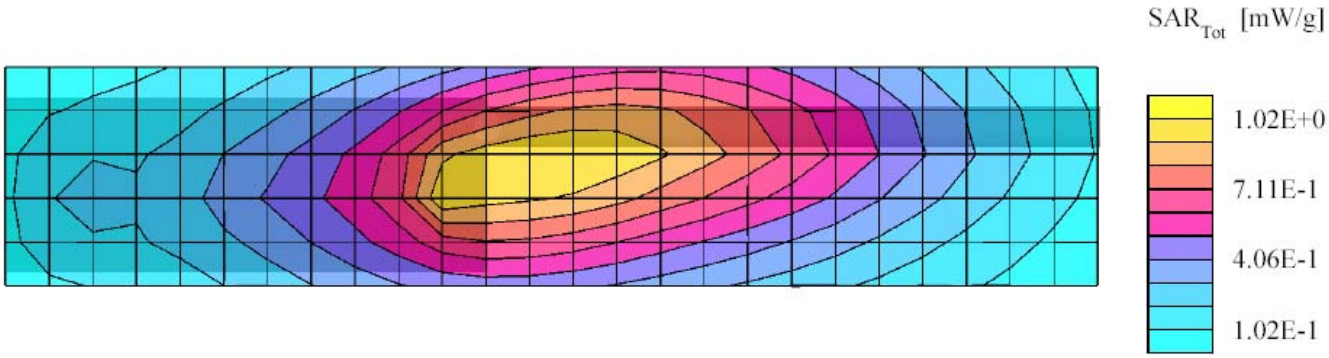


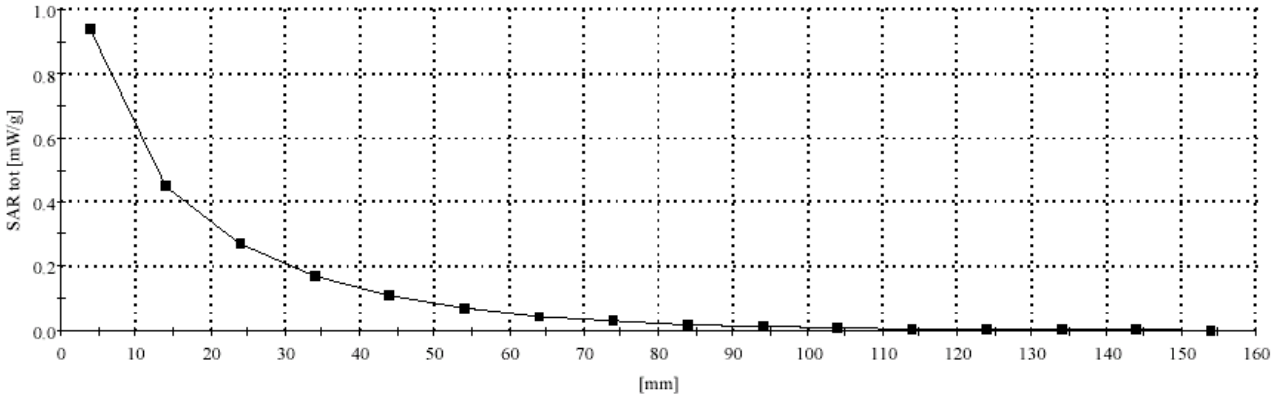
APPENDIX B
Data Results

FCC ID: AZ489FT3804; Test Date: 05/03/02
Motorola CGISS EME Laboratory
Run #: Ab_R1_020503-04
Model #: H18KEH9PW7AN Model III SN:50
TX Freq: 156 MHz
Sim Tissue Temp: 22.1 (Celsius)

- Accessories -
Antenna:NAD6563 Battery Kit: NTN9533A
Carry: belt clip NTN8266B Audio Acc. NMN6191C RSM
- Comments-

Flat Phantom; Device Section; Position: (90°,0°);
Probe: ET3DV6 - SN1547; ConvF(7.90,7.90,7.90); Probe cal date: 11/16/01; Crest factor: 1.0; FCC Body_156MHz: σ = 0.83 mho/m ε = 60.0 ρ = 1.00 g/cm3; DAE3: 401-V1 DAE Cal Date: 10/15/01
Cube 7x7x7: SAR (1g): 0.925 mW/g, SAR (10g): 0.642 mW/g, (Worst-case extrapolation)
Coarse: Dx = 15.0, Dy = 15.0, Dz = 10.0; Max at 154.5, 34.5, 4.0

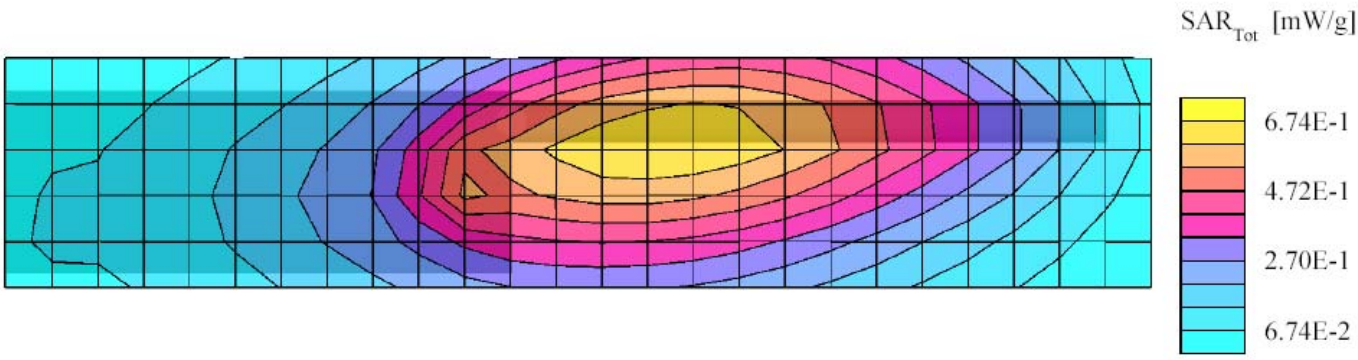


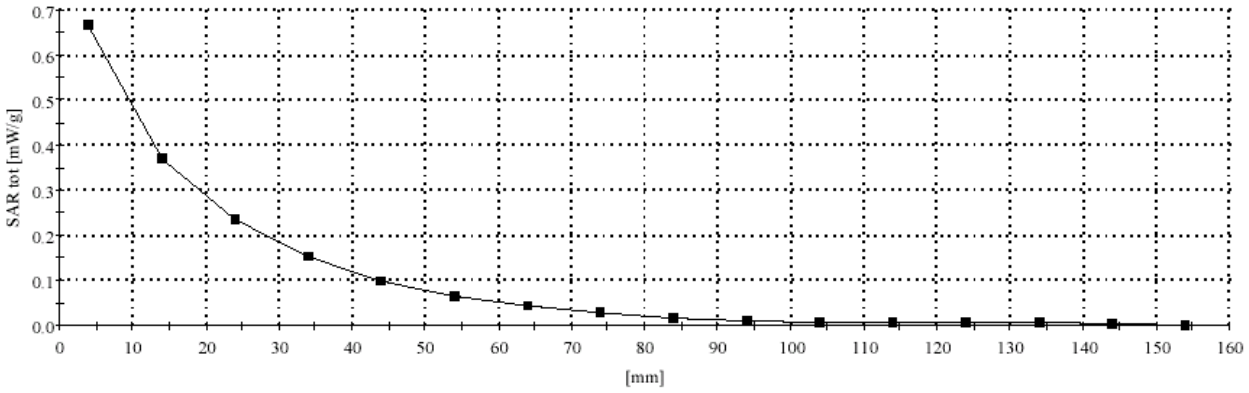


FCC ID: AZ489FT3804; Test Date: 05/08/02
Motorola CGISS EME Laboratory
Run #: Ab_R1_020508-04
Model #: H18KEH9PW7AN Model III SN:50
TX Freq: 143 MHz
Sim Tissue Temp: 21.8 (Celsius)

- Accessories -
Antenna:NAD6566A Battery Kit: NTN8294B
Carry: belt clip NTN8266B Audio Acc. NMN6191C RSM

- Comments-
Flat Phantom Phantom; Device Section; Position: (90°,0°);
Probe: ET3DV6 - SN1547; ConvF(7.90,7.90,7.90); Probe cal date: 11/16/01; Crest factor: 1.0; FCC Body_156MHz: σ = 0.82 mho/m ε = 59.9 ρ = 1.00 g/cm3; DAE3: 401-V1 DAE Cal Date: 10/15/01
Cube 7x7x7: SAR (1g): 0.636 mW/g, SAR (10g): 0.469 mW/g, (Worst-case extrapolation)
Coarse: Dx = 15.0, Dy = 15.0, Dz = 10.0; Max at 217.5, 46.5, 4.0





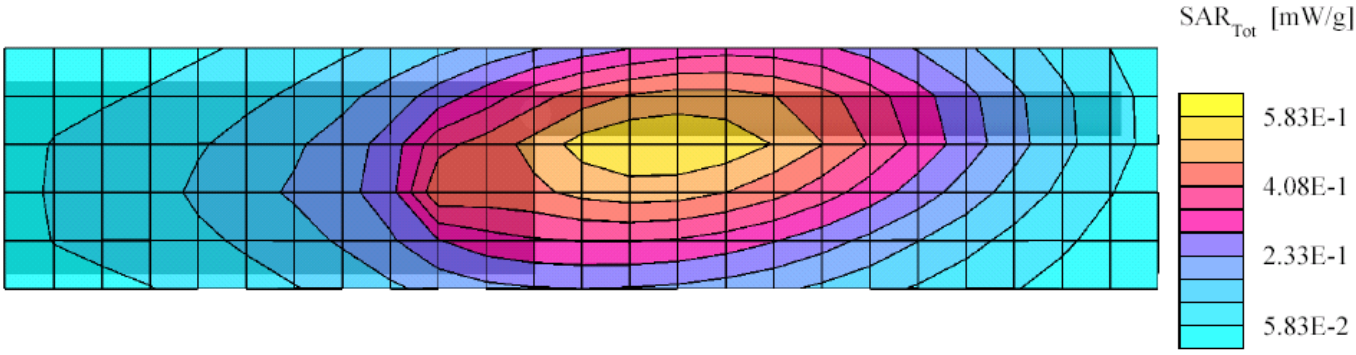
Run #: Ab_R1_020513-05
Model #: H18KEH9PW7AN Model III SN:50
TX Freq: 156 MHz
Sim Tissue Temp: 22.0 (Celsius)

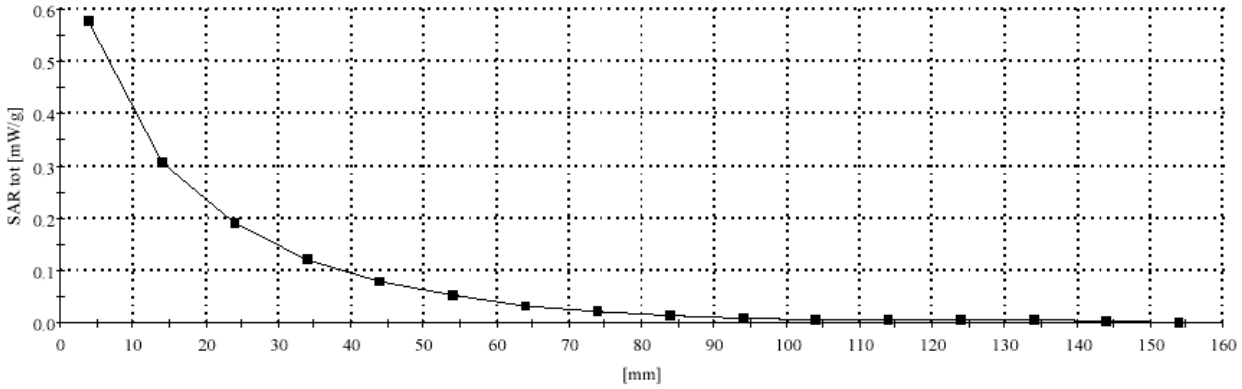
- Accessories -

Antenna:NAD6567A Battery Kit: NTN8610B
Carry: belt clip NTN8266B Audio Acc. NMN6191C RSM

- Comments-

Flat Phantom Phantom; Device Section; Position: (90°,0°);
Probe: ET3DV6 - SN1547; ConvF(7.90,7.90,7.90); Probe cal date: 11/16/01; Crest factor: 1.0; FCC Body_156MHz: σ = 0.81 mho/m ε = 60.1 ρ = 1.00 g/cm3; DAE3: 401-V1 DAE Cal Date: 10/15/01
Cube 7x7x7: SAR (1g): 0.548 mW/g, SAR (10g): 0.398 mW/g, (Worst-case extrapolation)
Coarse: Dx = 15.0, Dy = 15.0, Dz = 10.0; Max at 204.0, 45.0, 4.0



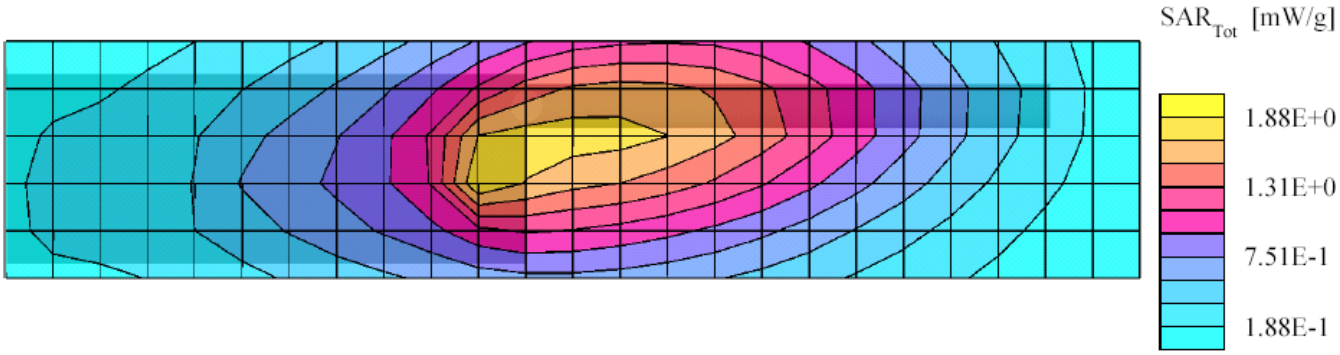


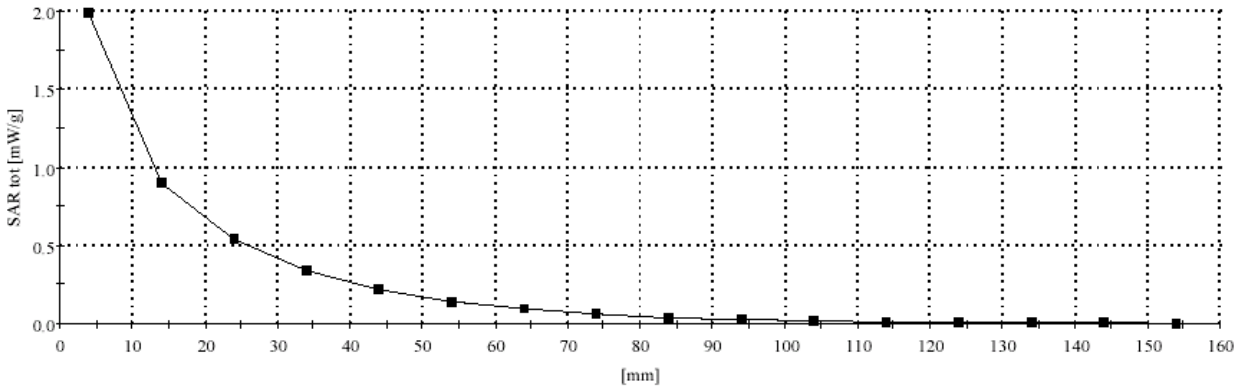
FCC ID: AZ489FT3804; Test Date: 05/13/02
Motorola CGISS EME Laboratory
Run #: Ab_R1_020513-09
Model #: H18KEH9PW7AN Model III SN:50
TX Freq: 168 MHz
Sim Tissue Temp: 22.0 (Celsius)

- Accessories -
Antenna:NAD6568A Battery Kit: NTN8294B
Carry: belt clip NTN8266B Audio Acc. NMN6191C RSM

- Comments-

Flat Phantom; Device Section; Position: (90°,0°);
Probe: ET3DV6 - SN1547; ConvF(7.90,7.90,7.90); Probe cal date: 11/16/01; Crest factor: 1.0; FCC Body_156MHz: σ = 0.81 mho/m ε = 60.1 ρ = 1.00 g/cm3; DAE3: 401-V1 DAE Cal Date: 10/15/01
Cube 7x7x7: SAR (1g): 1.87 mW/g, SAR (10g): 1.26 mW/g, (Worst-case extrapolation)
Coarse: Dx = 15.0, Dy = 15.0, Dz = 10.0; Max at 153.0, 34.5, 4.0





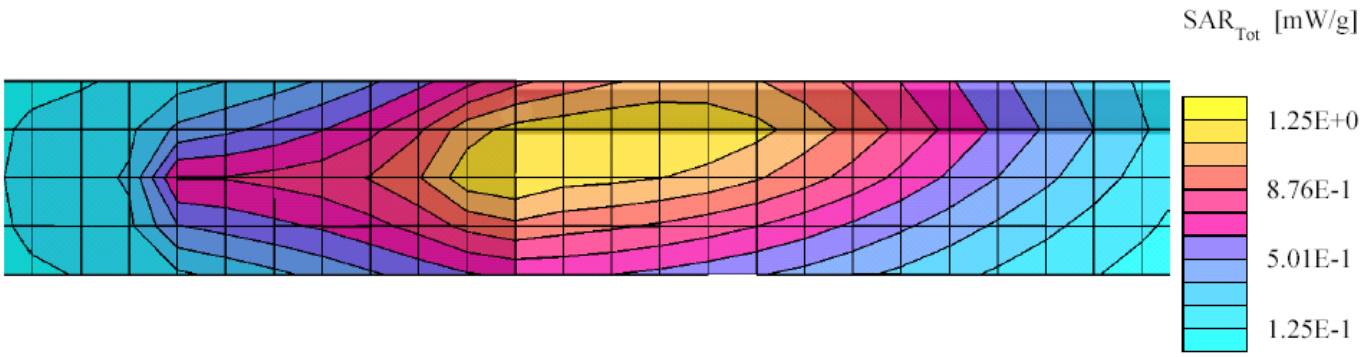
Run #: Ab_R1_020522-10
Model #: H18KEH9PW7AN Model III SN:50
TX Freq: 136 MHz
Sim Tissue Temp: 21.2 (Celsius)

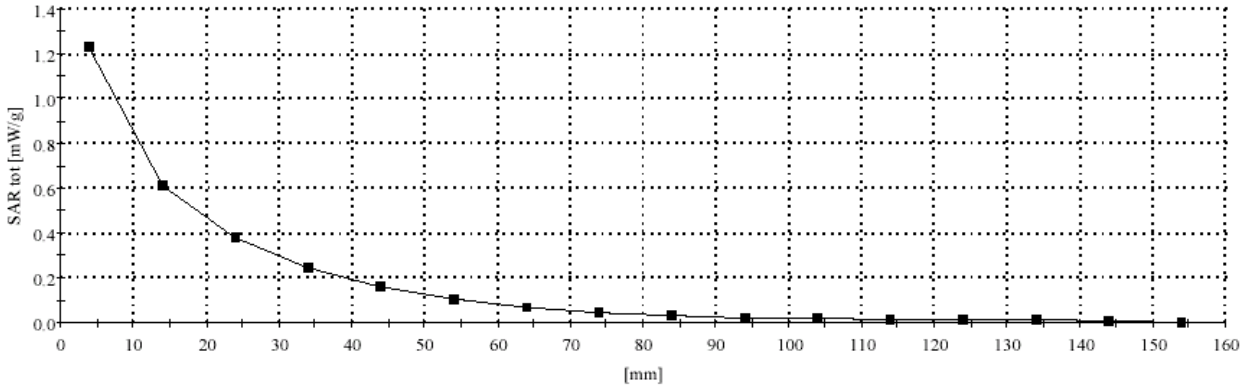
- Accessories -

Antenna:NAD6563A Battery Kit: NTN9533A
Carry: belt clip NTN8460A Audio Acc. NMN6191C RSM

- Comments-

Flat Phantom Phantom; Device Section; Position: (90°,0°);
Probe: ET3DV6 - SN1547; ConvF(7.90,7.90,7.90); Probe cal date: 11/16/01; Crest factor: 1.0; FCC Body_156MHz: σ = 0.79 mho/m ε = 59.2 ρ = 1.00 g/cm3; DAE3: 401-V1 DAE Cal Date: 10/15/01
Cube 5x5x7: SAR (1g): 1.20 mW/g, SAR (10g): 0.846 mW/g, (Worst-case extrapolation)
Coarse: Dx = 15.0, Dy = 15.0, Dz = 10.0; Max at 162.0, 33.0, 4.0





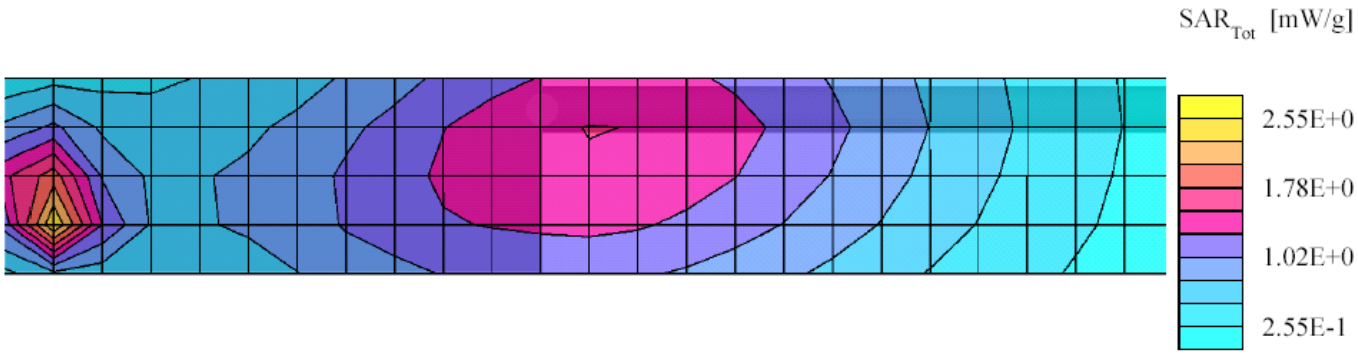
Run #: Ab_R1_020521-07
Model #: H18KEH9PW7AN Model III SN:50
TX Freq: 136 MHz
Sim Tissue Temp: 21.2 (Celsius)

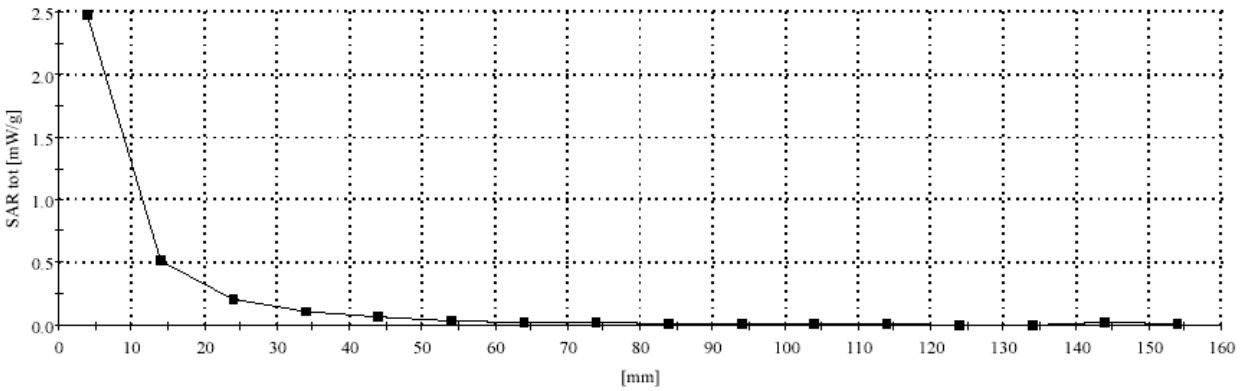
- Accessories -

Antenna:NAD6566A Battery Kit: NTN8294B
Carry: Leather swivel NTN9179A Audio Acc. NMN6191C RSM

- Comments-

Flat Phantom Phantom; Device Section; Position: (90°,0°);
Probe: ET3DV6 - SN1547; ConvF(7.90,7.90,7.90); Probe cal date: 11/16/01; Crest factor: 1.0; FCC Body_156MHz: σ = 0.81 mho/m ε = 59.4 ρ = 1.00 g/cm3; DAE3: 401-V1 DAE Cal Date: 10/15/01
Cube 5x5x7: SAR (1g): 2.35 mW/g, SAR (10g): 1.15 mW/g, (Worst-case extrapolation)
Coarse: Dx = 15.0, Dy = 15.0, Dz = 10.0; Max at 12.0, 16.5, 4.0





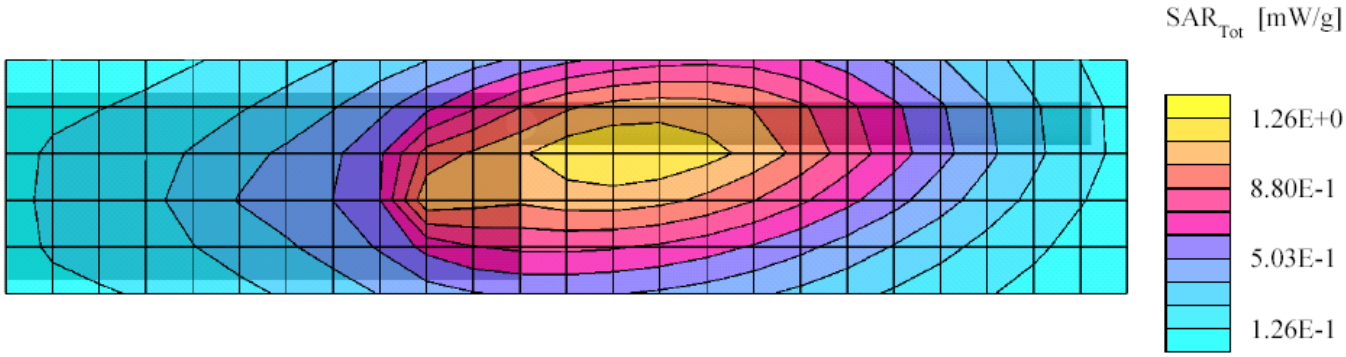
FCC ID: AZ489FT3804; Test Date: 05/13/02
Motorola CGISS EME Laboratory
Run #: Ab_R1_020513-07
Model #: H18KEH9PW7AN Model III SN:50
TX Freq: 151 MHz
Sim Tissue Temp: 22.0 (Celsius)

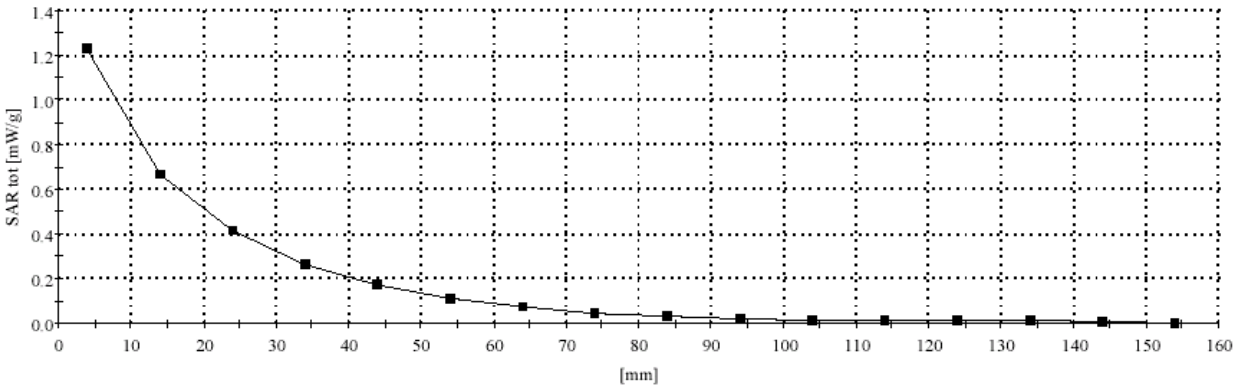
- Accessories

Antenna: NAD6567A Battery Kit: NTN8610B
Carry: belt clip NTN8266B Audio Acc. NMN6191C RSM

- Comments-

Flat Phantom Phantom; Device Section; Position: (90°,0°);
Probe: ET3DV6 - SN1547; ConvF(7.90,7.90,7.90); Probe cal date: 11/16/01; Crest factor: 1.0; FCC Body_156MHz: σ = 0.81 mho/m ε = 60.1 ρ = 1.00 g/cm3; DAE3: 401-V1 DAE Cal Date: 10/15/01
Cube 7x7x7: SAR (1g): 1.17 mW/g, SAR (10g): 0.853 mW/g, (Worst-case extrapolation)
Coarse: Dx = 15.0, Dy = 15.0, Dz = 10.0; Max at 198.0, 45.0, 4.0





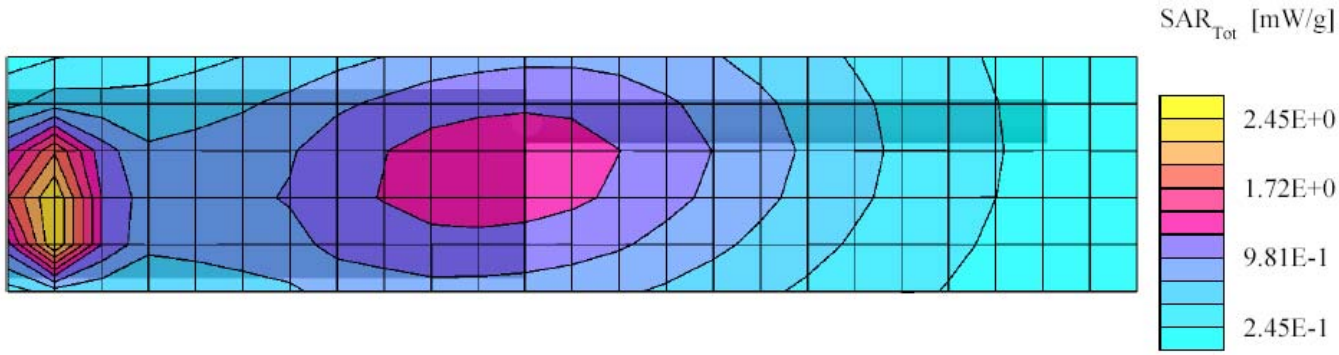
FCC ID: AZ489FT3804; Test Date: 05/20/02
Motorola CGISS EME Laboratory
Run #: Ab_R1_020520-02
Model #: H18KEH9PW7AN Model III SN:50
TX Freq: 168 MHz
Sim Tissue Temp: 21.4 (Celsius)

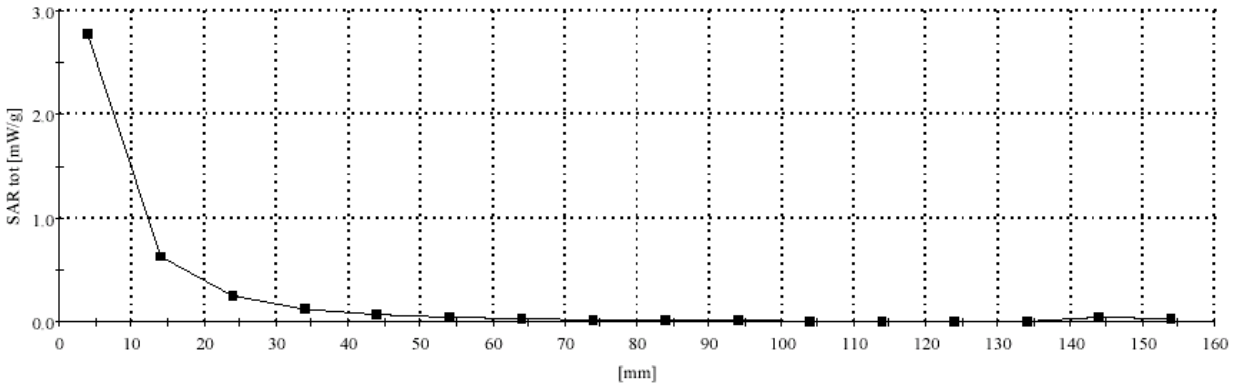
- Accessories -

Antenna:NAD6568A Battery Kit: NTN8294B
Carry: Leather swivel NTN9179A Audio Acc. NMN6191C RSM

- Comments-

Flat Phantom Phantom; Device Section; Position: (90°,0°);
Probe: ET3DV6 - SN1547; ConvF(7.90,7.90,7.90); Probe cal date: 11/16/01; Crest factor: 1.0; FCC Body_156MHz: σ = 0.78 mho/m ε = 59.3 ρ = 1.00 g/cm3; DAE3: 401-V1 DAE Cal Date: 10/15/01
Cube 7x7x7: SAR (1g): 2.55 mW/g, SAR (10g): 1.32 mW/g, (Worst-case extrapolation)
Coarse: Dx = 15.0, Dy = 15.0, Dz = 10.0; Max at 10.5, 22.5, 4.0





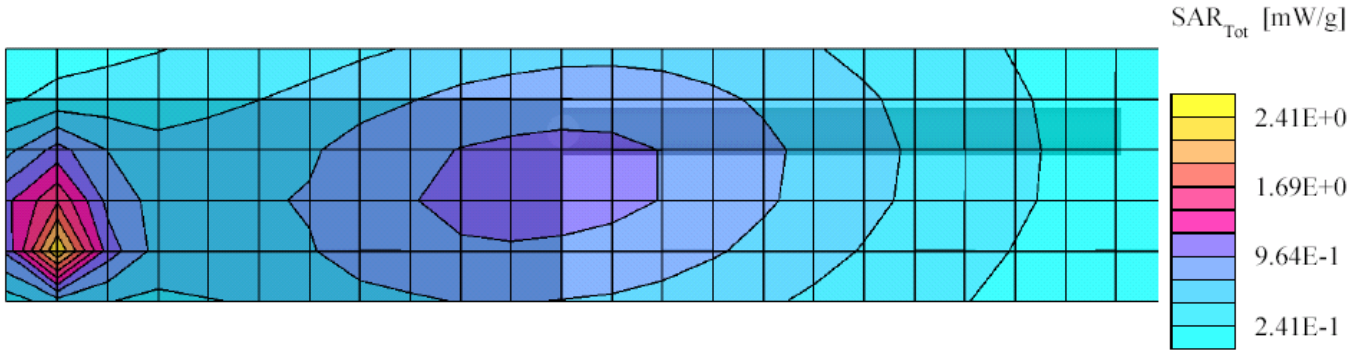
FCC ID: AZ489FT3804; Test Date: 05/30/02
Motorola CGISS EME Laboratory
Run #: Ab_R1_020530-05
Model #: H18KEH9PW7AN Model III SN:50
TX Freq: 168 MHz
Sim Tissue Temp: 21.5 (Celsius)

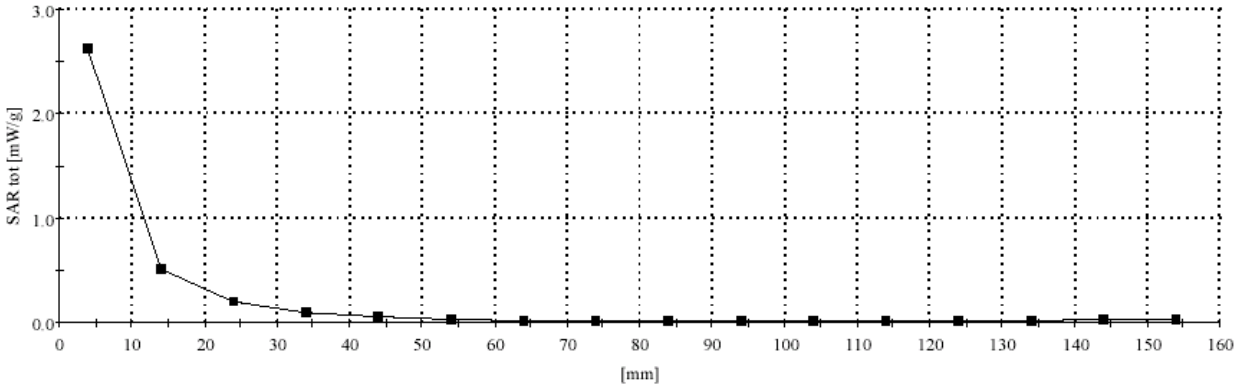
- Accessories -

Antenna:NAD6568A Battery Kit: NTN8294B
Carry: Leather swivel NTN9179A Audio Acc. NTN1736A Comport, BDN6676D Adapter

- Comments-

Flat Phantom Phantom; Device Section; Position: (90°,0°);
Probe: ET3DV6 - SN1547; ConvF(7.90,7.90,7.90); Probe cal date: 11/16/01; Crest factor: 1.0; FCC Body_156MHz: σ = 0.84 mho/m ε= 59.6 ρ = 1.00 g/cm3; DAE3: 401-V1 DAE Cal Date: 10/15/01
Cube 7x7x7: SAR (1g): 2.29 mW/g, SAR (10g): 1.12 mW/g * Max outside, (Worst-case extrapolation)
Coarse: Dx = 15.0, Dy = 15.0, Dz = 10.0; Max at 12.0, 15.0, 4.0





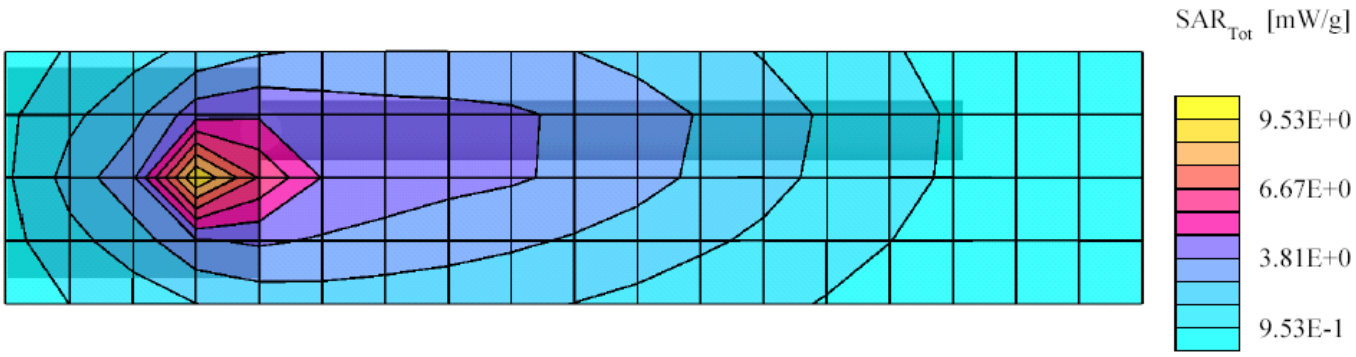
FCC ID: AZ489FT3804; Test Date: 06/03/02
Motorola CGISS EME Laboratory
Run #: Ab_R1_020603-10
Model #: H18KEH9PW7AN Model III SN:50
TX Freq: 162.125 MHz
Sim Tissue Temp: 21.6 (Celsius)

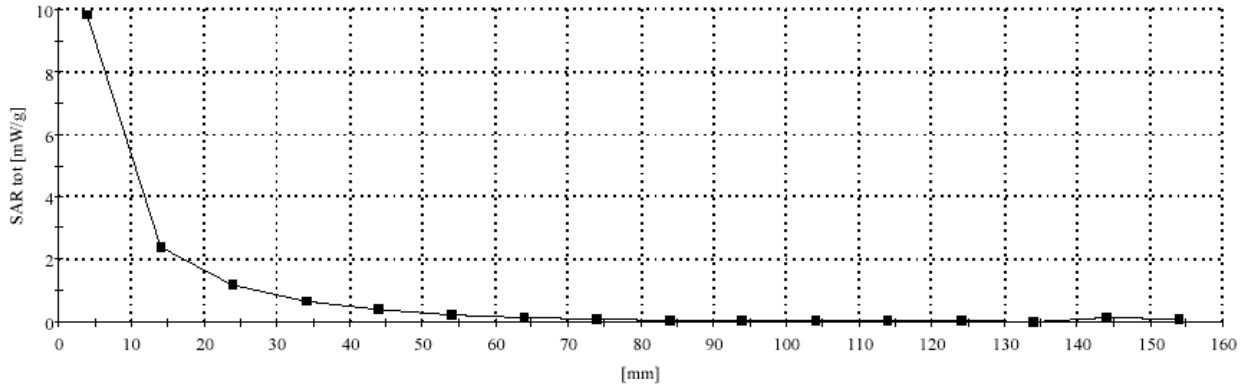
- Accessories -

Antenna:NAD6568A Battery Kit: NTN8294B
Carry: None Audio Acc. NMN6251A, PSM; NTN8327A, Adapter

- Comments-

Flat Phantom ; Device Section; Position: (90°,0°);
Probe: ET3DV6 - SN1547; ConvF(7.90,7.90,7.90); Probe cal date: 11/16/01; Crest factor: 1.0; FCC Body_156MHz: σ = 0.84 mho/m ε = 59.2 ρ = 1.00 g/cm3; DAE3: 401-V1 DAE Cal Date: 10/15/01
Cube 7x7x7: SAR (1g): 9.01 mW/g, SAR (10g): 4.29 mW/g, (Worst-case extrapolation)
Coarse: Dx = 15.0, Dy = 15.0, Dz = 10.0; Max at 46.5, 30.0, 4.0





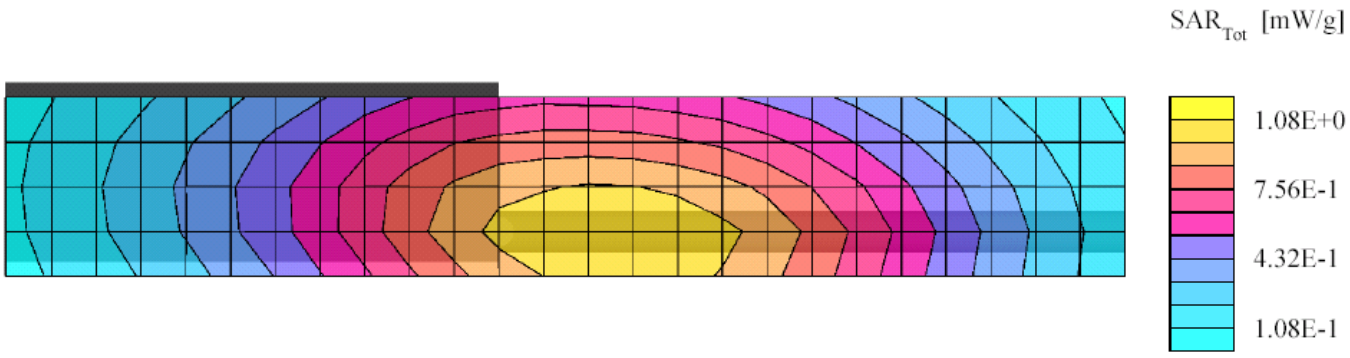
FCC ID: AZ489FT3804; Test Date: 06/10/02
Motorola CGISS EME Laboratory
Run #: Face_R1_020610-03
Model #: H18KEH9PW7AN Model III SN:50
TX Freq: 136 MHz
Sim Tissue Temp: 20.8 (Celsius)

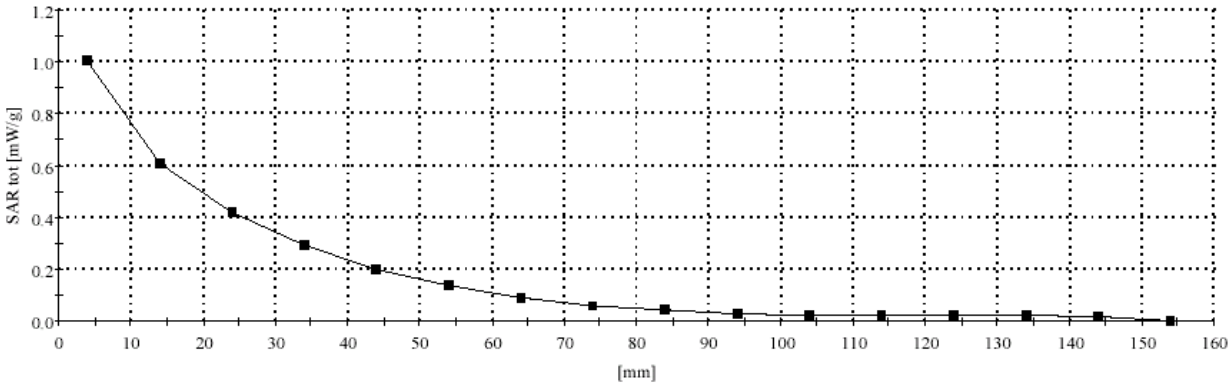
- Accessories -

Antenna: NAD6563A Battery Kit: NTN9533A
Carry: None; radio body @ 2.5cm Audio Acc. None

- Comments-

Flat Phantom Phantom; Device Section; Position: (90°,90°);
Probe: ET3DV6 - SN1547; ConvF(8.60,8.60,8.60); Probe cal date: 11/16/01; Crest factor: 1.0; IEEE Head_156 MHz: σ = 0.76 mho/m ε = 53.0 ρ = 1.00 g/cm3; DAE3: 401-V1 DAE Cal Date: 10/15/01
Cube 5x5x7: SAR (1g): 0.969 mW/g, SAR (10g): 0.749 mW/g, (Worst-case extrapolation)
Coarse: Dx = 15.0, Dy = 15.0, Dz = 10.0; Max at 48.0, 207.0, 4.0





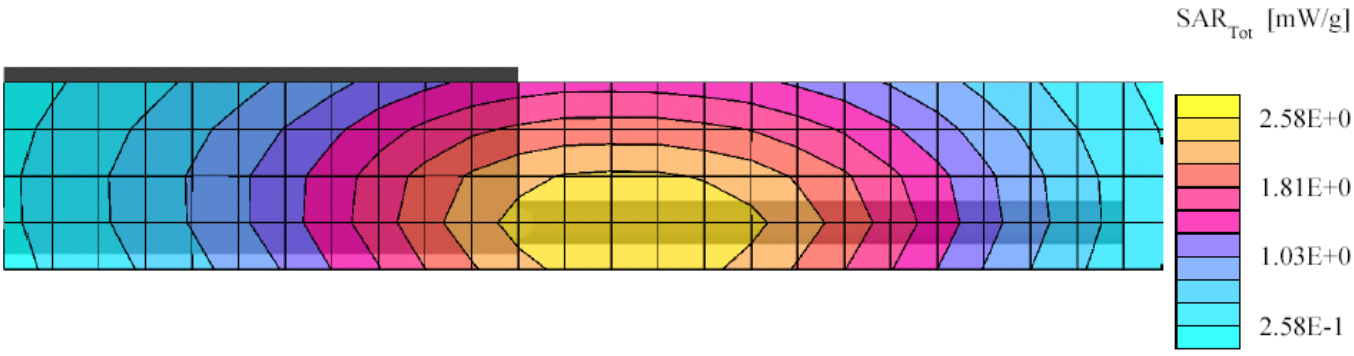
FCC ID: AZ489FT3804; Test Date: 06/06/02
Motorola CGISS EME Laboratory
Run #: Face_R1_020606-02a
Model #: H18KEH9PW7AN Model III SN:50
TX Freq: 143.125 MHz
Sim Tissue Temp: 20.8 (Celsius)

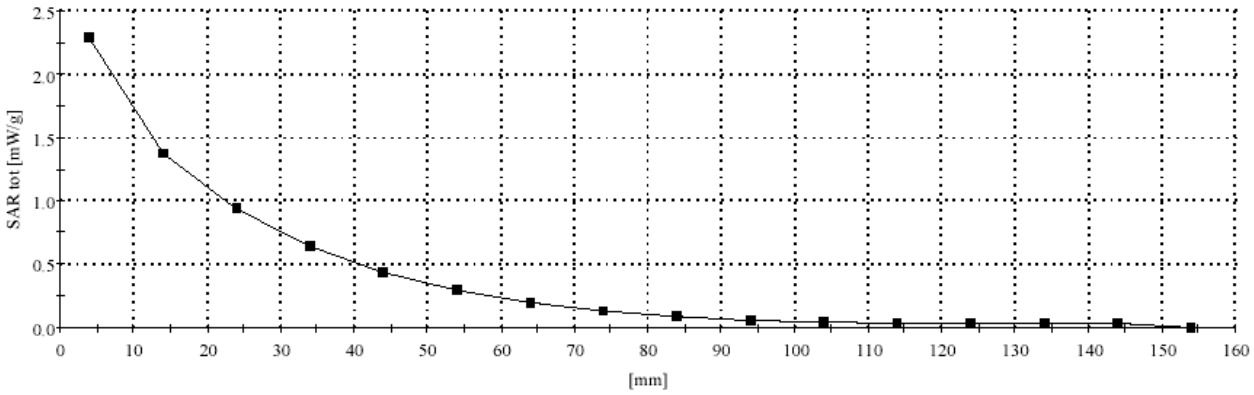
- Accessories -

Antenna:NAD6566A Battery Kit: NTN8294B
Carry: None; radio body @ 2.5cm Audio Acc. None

- Comments-

Flat Phantom; Device Section; Position: (90°,90°);
Probe: ET3DV6 - SN1547; ConvF(8.60,8.60,8.60); Probe cal date: 11/16/01; Crest factor: 1.0; IEEE Head_156 MHz: σ = 0.73 mho/m ε = 52.2 ρ = 1.00 g/cm3; DAE3: 401-V1 DAE Cal Date: 10/15/01
Cube 5x5x7: SAR (1g): 2.38 mW/g, SAR (10g): 1.83 mW/g, (Worst-case extrapolation)
Coarse: Dx = 15.0, Dy = 15.0, Dz = 10.0; Max at 48.0, 202.5, 4.0





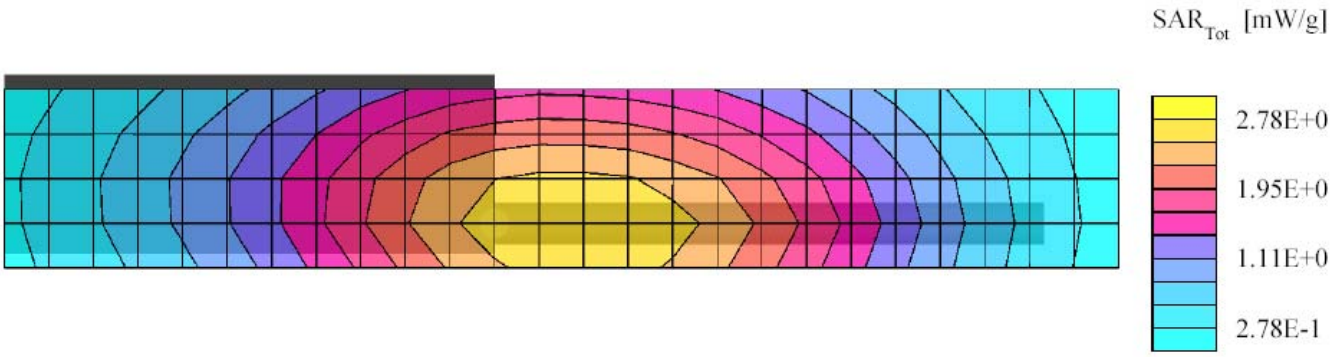
FCC ID: AZ489FT3804; Test Date: 06/07/02
Motorola CGISS EME Laboratory
Run #: Face_R1_020607-06
Model #: H18KEH9PW7AN Model III SN:50
TX Freq: 151.125 MHz
Sim Tissue Temp: 20.9 (Celsius)

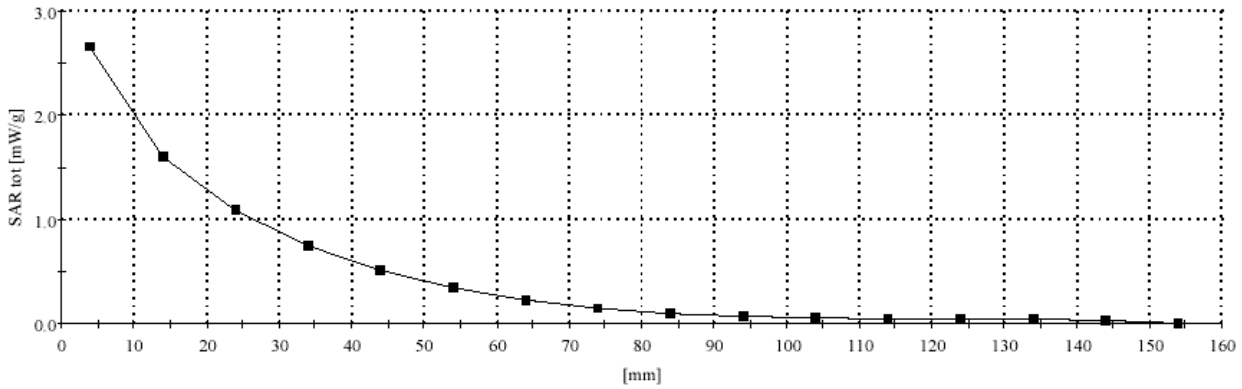
- Accessories -

Antenna:NAD6567A Battery Kit: NTN8294B
Carry: None; radio body @ 2.5cm Audio Acc. None

- Comments-

Flat Phantom; Device Section; Position: (90°,90°);
Probe: ET3DV6 - SN1547; ConvF(8.60,8.60,8.60); Probe cal date: 11/16/01; Crest factor: 1.0; IEEE Head_156 MHz: σ = 0.74 mho/m ε= 52.1 ρ= 1.00 g/cm3; DAE3: 401-V1 DAE Cal Date: 10/15/01
Cube 5x5x7: SAR (1g): 2.59 mW/g, SAR (10g): 2.00 mW/g, (Worst-case extrapolation)
Coarse: Dx = 15.0, Dy = 15.0, Dz = 10.0; Max at 46.5, 192.0, 4.0





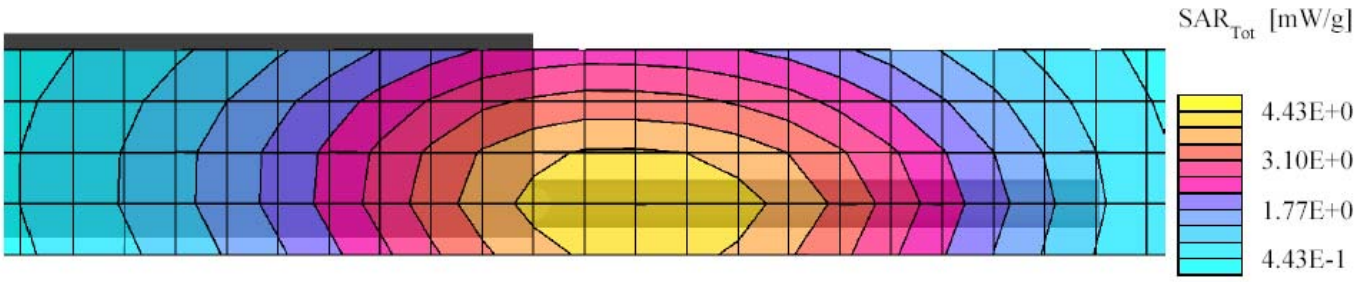
FCC ID: AZ489FT3804; Test Date: 06/12/02
Motorola CGISS EME Laboratory
Run #: Face_R1_020612-02
Model #: H18KEH9PW7AN Model III SN:50
TX Freq: 162.125 MHz
Sim Tissue Temp: 20.6 (Celsius)

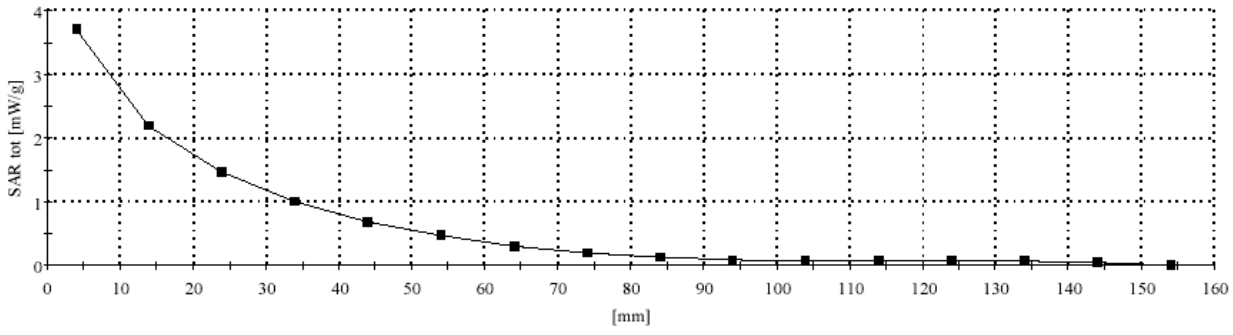
- Accessories -

Antenna:NAD6568A Battery Kit: NTN8294B
Carry: None; radio body @ 2.5cm Audio Acc. None

- Comments-

Flat Phantom; Device Section; Position: (90°,90°);
Probe: ET3DV6 - SN1547; ConvF(8.60,8.60,8.60); Probe cal date: 11/16/01; Crest factor: 1.0; IEEE Head_156 MHz: σ = 0.73 mho/m ε = 52.2 ρ = 1.00 g/cm3; DAE3: 401-V1 DAE Cal Date: 10/15/01
Cube 5x5x7: SAR (1g): 3.80 mW/g, SAR (10g): 2.92 mW/g, (Worst-case extrapolation)
Coarse: Dx = 15.0, Dy = 15.0, Dz = 10.0; Max at 46.5, 196.5, 4.0



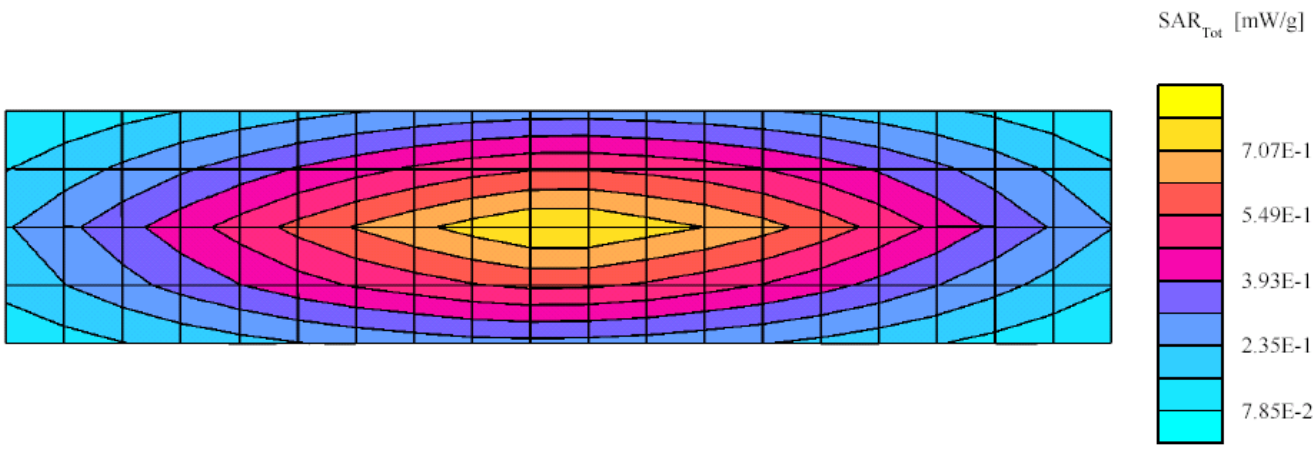


APPENDIX C
Dipole System Performance Check Results

CGISS Dipole 300MHz; SN 002; Test Date: 05/03/02
Motorola CGISS EME Lab
Run #: Sys Perf_R1_020503-01
TX Freq: 300 MHz
Sim Tissue Temp: 22.1 (Celsius)

- Comments-
Target at 1W is 2.93 (including drift) (1g)
Start Power; 250mW
SAR calculated is 2.92mW/g, Percent from target (including drift) for 1g is 0.5%

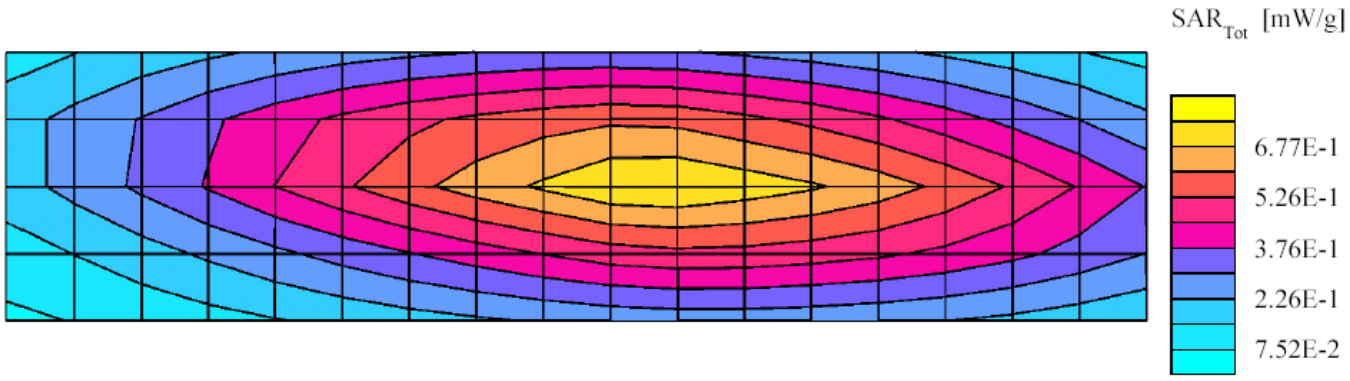
Flat Phantom; Probe: ET3DV6 - SN1547;Probe Cal Date: 11/16/01ConvF(7.60,7.60,7.60); Crest factor: 1.0; FCC Body_300 MHz: σ = 0.96 mho/m ε = 55.6 ρ = 1.00 g/cm3; DAE3: SN401-V1 DAE Cal Date: 10/15/01
Cube 7x7x7: Peak: 1.15 mW/g, SAR (1g): 0.724 mW/g, SAR (10g): 0.483 mW/g, (Worst-case extrapolation)
Penetration depth: 12.8 (10.8, 15.4) [mm]
Power Drift: -0.03 dB



CGISS Dipole 300MHz; SN: 002; Test Date: 05/08/02
Motorola CGISS EME Lab
Run #: Sys Perf_R1_020508-01
TX Freq: 300 MHz
Sim Tissue Temp: 21.8 (Celsius)

- Comments-
Target at 1W is 2.93 (including drift) (1g)
Start Power; 250mW
SAR calculated is 2.87mW/g, Percent from target (including drift) for 1g is 2.2%

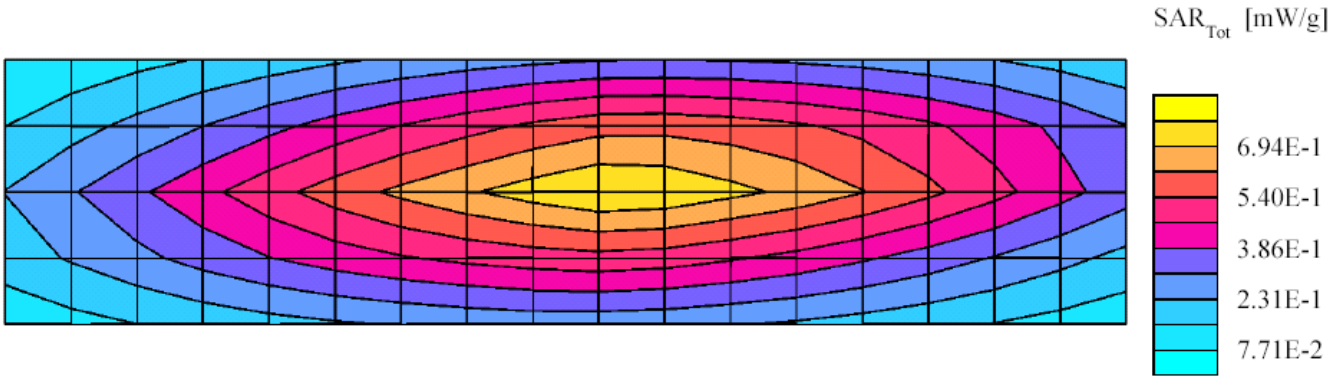
Flat Phantom; Probe: ET3DV6 - SN1547; ConvF(7.60,7.60,7.60); Probe cal date: 11/16/01; Crest factor: 1.0; FCC Body_300 MHz: σ = 0.93 mho/m ε = 55.6 ρ = 1.00 g/cm3; DAE3: SN401-V1 DAE Cal Date: 10/15/01
Cube 7x7x7: SAR (1g): 0.713 mW/g, SAR (10g): 0.478 mW/g, (Worst-case extrapolation)
Coarse: Dx = 15.0, Dy = 15.0, Dz = 10.0; Max at 144.0, 31.5, 4.0
Power Drift: -0.02dB



CGISS Dipole 300MHz; SN: 002 Test Date: 05/13/02
Motorola CGISS EME Lab
Run #: Sys Perf_R1_020513-01
TX Freq: 300 MHz
Sim Tissue Temp: 22.0 (Celsius)

- Comments-
Target at 1W is 2.93 (including drift) (1g)
Start Power; 250mW
SAR calculated is 2.94mW/g, Percent from target (including drift) for 1g is 0.3%

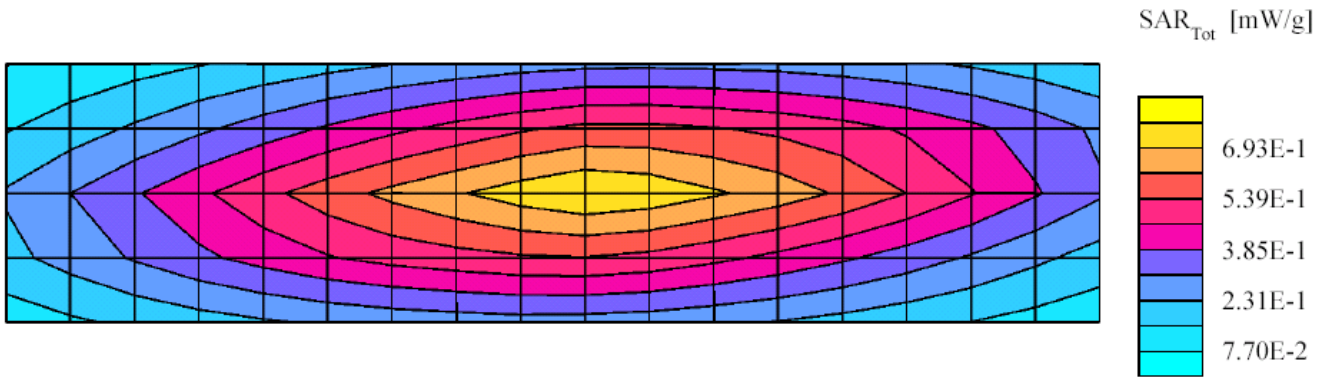
Flat Phantom; Probe: ET3DV6 - SN1547; ConvF(7.60,7.60,7.60); Probe cal date: 11/16/01; Crest factor: 1.0; FCC Body_300 MHz: σ = 0.92 mho/m ε = 55.7 ρ = 1.00 g/cm3; DAE3: SN401-V1 DAE Cal Date: 10/15/01
Cube 7x7x7: SAR (1g): 0.726 mW/g, SAR (10g): 0.485 mW/g, (Worst-case extrapolation)
Coarse: Dx = 15.0, Dy = 15.0, Dz = 10.0; Max at 139.5, 31.5, 4.0
Power Drift: -0.05dB



CGISS Dipole 300MHz; SN: 002 Test Date: 05/22/02
Motorola CGISS EME Lab
Run #: Sys Perf_R1_020522-01
TX Freq: 300 MHz
Sim Tissue Temp: 21.2 (Celsius)

- Comments-
Target at 1W is 2.93 (including drift) (1g)
Start Power; 250mW
SAR calculated is 2.89mW/g, Percent from target (including drift) for 1g is 1.2%

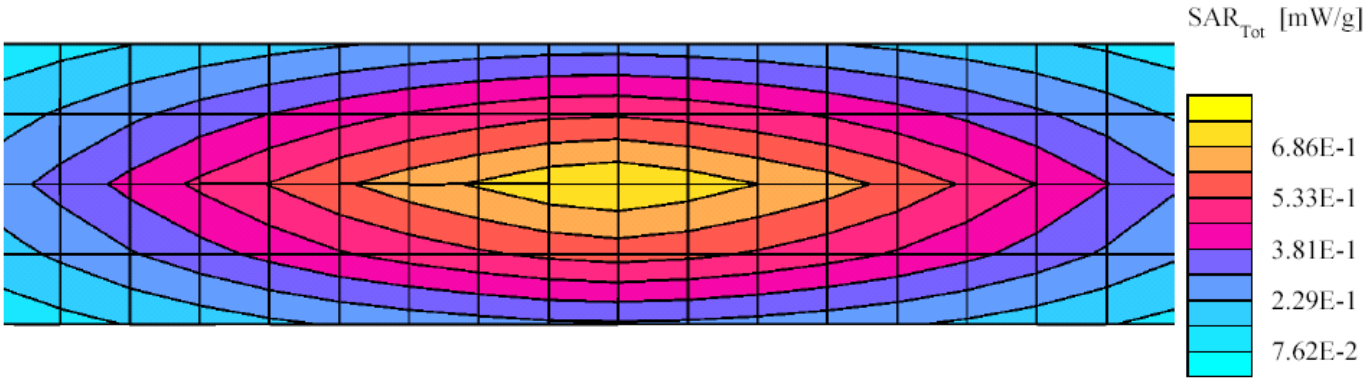
Flat Phantom; Probe: ET3DV6 - SN1547; ConvF(7.60,7.60,7.60); Probe cal date: 11/16/01; Crest factor: 1.0; FCC Body_300 MHz: σ = 0.90 mho/m ε = 55.4 ρ = 1.00 g/cm3; DAE3: SN401-V1 DAE Cal Date: 10/15/01
Cube 7x7x7: SAR (1g): 0.717 mW/g, SAR (10g): 0.482 mW/g, (Worst-case extrapolation)
Coarse: Dx = 15.0, Dy = 15.0, Dz = 10.0; Max at 136.5, 30.0, 4.0
Power Drift: -0.04 dB



CGISS Dipole 300MHz; SN: 002 Test Date: 05/21/02
Motorola CGISS EME Lab
Run #: Sys Perf_R1_020521-01
TX Freq: 300 MHz
Sim Tissue Temp: 21.2 (Celsius)

- Comments-
Target at 1W is 2.93 (including drift) (1g)
Start Power; 250mW
SAR calculated is 2.88mW/g, Percent from target (including drift) for 1g is 1.8%

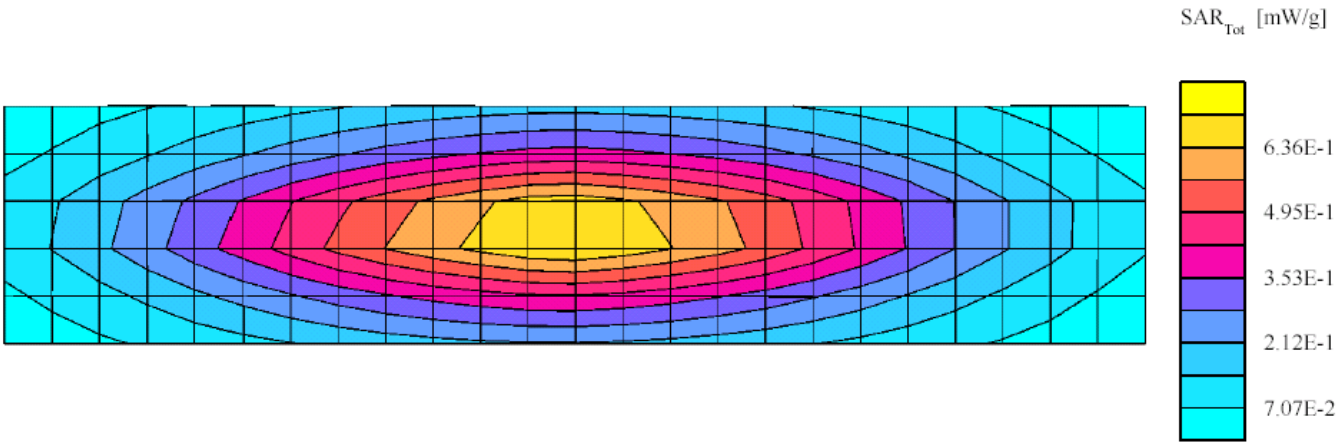
Flat Phantom; Probe: ET3DV6 - SN1547; ConvF(7.60,7.60,7.60); Probe cal date: 11/16/01; Crest factor: 1.0; FCC Body_300 MHz: σ = 0.91 mho/m ε = 55.3 ρ = 1.00 g/cm3; DAE3: SN401-V1 DAE Cal Date: 10/15/01
Cube 7x7x7: SAR (1g): 0.714 mW/g, SAR (10g): 0.479 mW/g, (Worst-case extrapolation)
Coarse: Dx = 15.0, Dy = 15.0, Dz = 10.0; Max at 133.5, 30.0, 4.0
Power Drift: -0.03dB



CGISS Dipole 300MHz; SN: 002 Test Date: 05/20/02
Motorola CGISS EME Lab
Run #: Sys Perf_R1_020520-01
TX Freq: 300 MHz
Sim Tissue Temp: 21.4 (Celsius)

- Comments-
Target at 1W is 2.93 (including drift) (1g)
Start Power; 250mW
SAR calculated is 2.88mW/g, Percent from target (including drift) for 1g is 1.8%

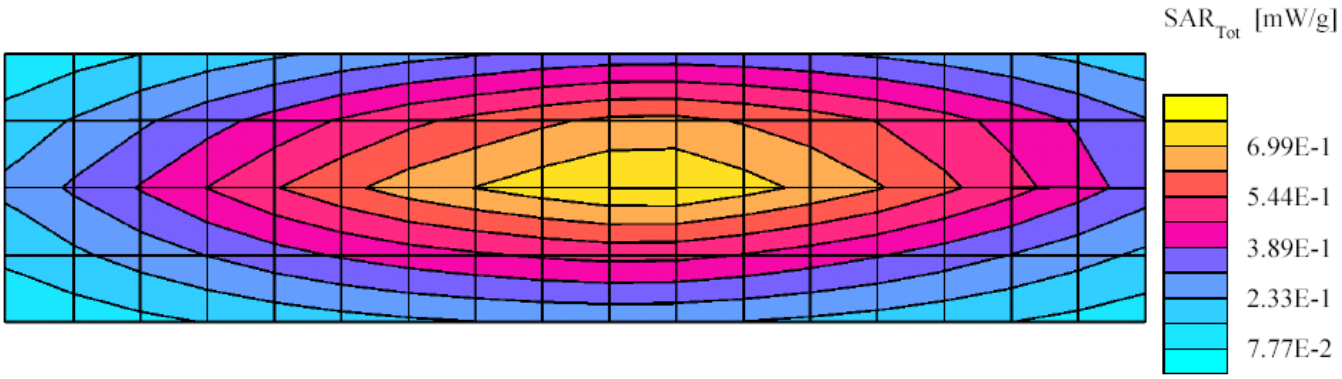
Flat Phantom; Probe: ET3DV6 - SN1547;Probe Cal Date: 11/16/01ConvF(7.60,7.60,7.60); Crest factor: 1.0; FCC Body_300 MHz: σ = 0.90 mho/m ε = 55.5 ρ = 1.00 g/cm3; DAE3: SN401-V1 DAE Cal Date: 10/15/01
Cube 7x7x7: Peak: 1.12 mW/g, SAR (1g): 0.714 mW/g, SAR (10g): 0.481 mW/g, (Worst-case extrapolation)
Penetration depth: 13.1 (11.0, 15.9) [mm]
Power Drift: -0.03 dB



CGISS Dipole 300MHz; SN: 002 Test Date: 05/30/02
Motorola CGISS EME Lab
Run #: Sys Perf_R1_020530-01
TX Freq: 300 MHz
Sim Tissue Temp: 21.5 (Celsius)

- Comments-
Target at 1W is 2.93 (including drift) (1g)
Start Power; 250mW
SAR calculated is 3.02 mW/g, Percent from target (including drift) for 1g is 2.9%

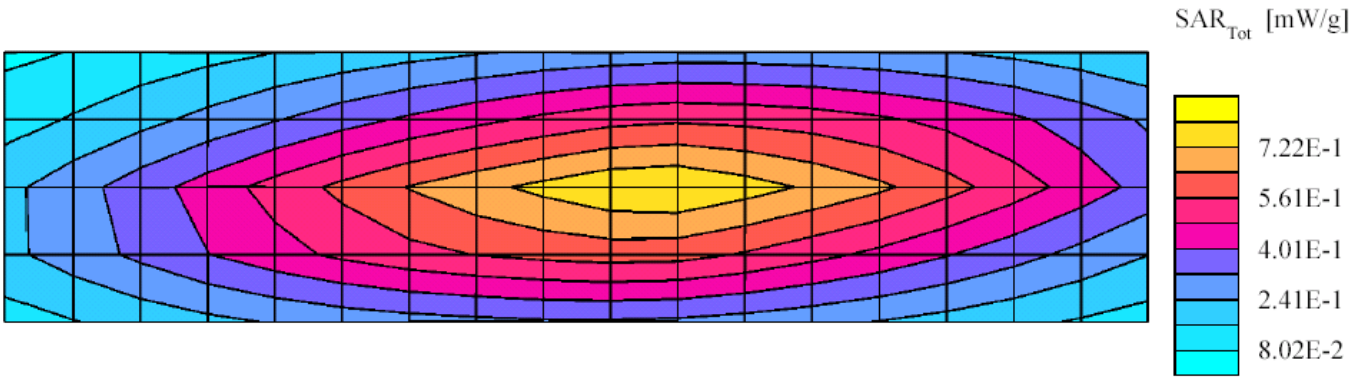
Flat Phantom; Probe: ET3DV6 - SN1547; ConvF(7.60,7.60,7.60); Probe cal date: 11/16/01; Crest factor: 1.0; FCC Body_300 MHz: σ = 0.95 mho/m ε = 56.2 ρ = 1.00 g/cm3; DAE3: SN401-V1 DAE Cal Date: 10/15/01
Cube 7x7x7: SAR (1g): 0.749 mW/g, SAR (10g): 0.500 mW/g, (Worst-case extrapolation)
Coarse: Dx = 15.0, Dy = 15.0, Dz = 10.0; Max at 144.0, 33.0, 4.0
Power Drift: -0.05 dB



CGISS Dipole 300MHz; SN: 002 Test Date: 06/03/02
Motorola CGISS EME Lab
Run #: Sys Perf_R1_020603-01
TX Freq: 300 MHz
Sim Tissue Temp: 22.1 (Celsius)

- Comments-
Target at 1W is 2.93 (including drift) (1g)
Start Power; 250mW
SAR calculated is 3.01 mW/g, Percent from target (including drift) for 1g is 2.9%

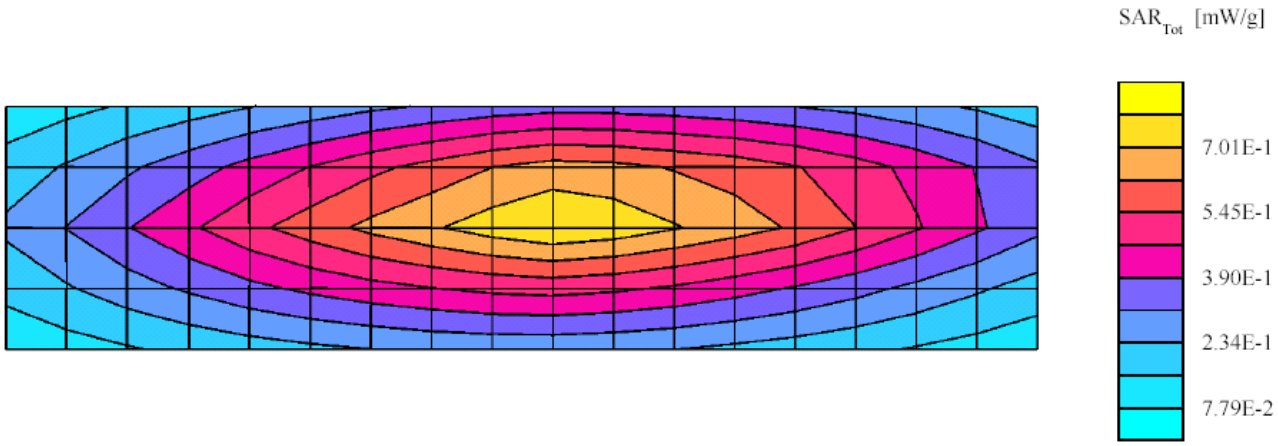
Flat Phantom; Probe: ET3DV6 - SN1547; ConvF(7.60,7.60,7.60); Probe cal date: 11/16/01; Crest factor: 1.0; FCC Body_300 MHz: σ = 0.96 mho/m ε = 55.9 ρ = 1.00 g/cm3; DAE3: SN401-V1 DAE Cal Date: 10/15/01
Cube 7x7x7: SAR (1g): 0.752 mW/g, SAR (10g): 0.503 mW/g, (Worst-case extrapolation)
Coarse: Dx = 15.0, Dy = 15.0, Dz = 10.0; Max at 145.5, 30.0, 4.0
Power Drift: -0.01 dB



CGISS Dipole 300MHz; SN: 002 Test Date: 06/10/02
Motorola CGISS EME Lab
Run #: Sys Perf_R1_020610-01
TX Freq: 300 MHz
Sim Tissue Temp: 20.8 (Celsius)

- Comments-
Target at 1W is 2.94 (including drift) (1g)
Start Power; 250mW
SAR calculated is 2.98 mW/g, Percent from target (including drift) for 1g is 1.4%

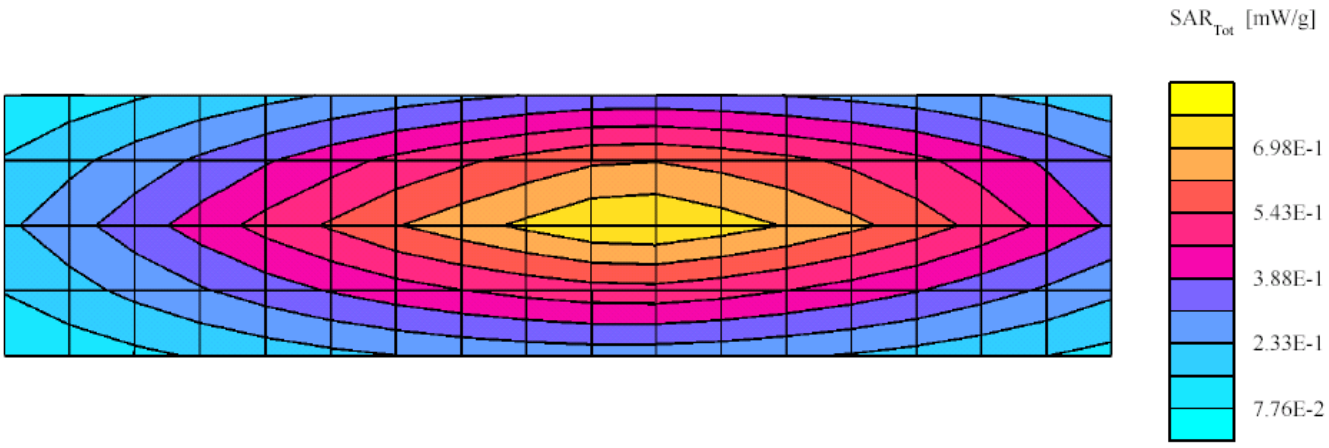
Flat Phantom; Probe: ET3DV6 - SN1547; ConvF(7.40,7.40,7.40); Crest factor: 1.0; IEEE Head_300 MHz: σ = 0.88 mho/m ε = 46.8 ρ = 1.00 g/cm3; DAE3: SN401-V1 DAE Cal Date: 10/15/01
Cube 5x5x7: SAR (1g): 0.742 mW/g, SAR (10g): 0.500 mW/g, (Worst-case extrapolation),Peak: 1.16 mW/g
Coarse: Dx = 15.0, Dy = 15.0, Dz = 10.0,
Power Drift: -0.02 dB



CGISS Dipole 300MHz; SN: 002 Test Date: 06/06/02
Motorola CGISS EME Lab
Run #: Sys Perf_R1_020606-01
TX Freq: 300 MHz
Sim Tissue Temp: 20.4 (Celsius)

- Comments-
Target at 1W is 2.94 (including drift) (1g)
Start Power; 250mW
SAR calculated is 2.93 mW/g, Percent from target (including drift) for 1g is -0.2%

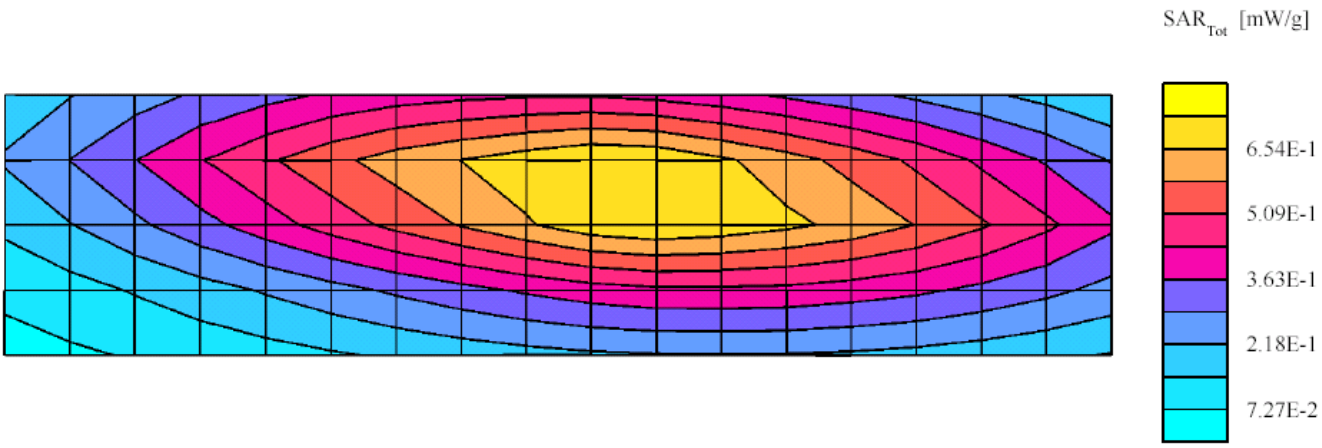
Flat Phantom;
Probe: ET3DV6 - SN1547;Probe Cal Date: 11/16/01ConvF(7.40,7.40,7.40); Crest factor: 1.0; IEEE Head_300 MHz: σ = 0.87 mho/m ε = 46.2 ρ = 1.00 g/cm3; DAE3: SN401-V1 DAE Cal Date: 10/15/01
Cube 7x7x7: Peak: 1.15 mW/g, SAR (1g): 0.735 mW/g, SAR (10g): 0.495 mW/g, (Worst-case extrapolation)
Penetration depth: 13.1 (11.0, 15.8) [mm]
Power Drift: 0.01 dB



CGISS Dipole 300MHz; SN: 002 Test Date: 06/07/02
Motorola CGISS EME Lab
Run #: Sys Perf_R1_020607-01
TX Freq: 300 MHz
Sim Tissue Temp: 20.9 (Celsius)

- Comments-
Target at 1W is 2.94 (including drift) (1g)
Start Power; 250mW
SAR calculated is 2.99 mW/g, Percent from target (including drift) for 1g is 1.7%

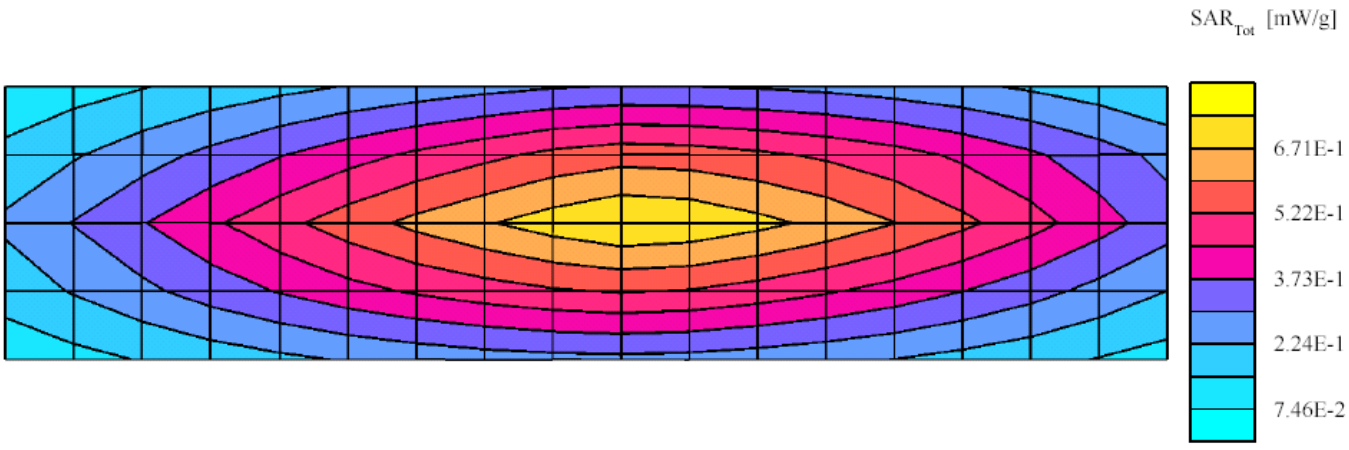
Flat Phantom; Probe: ET3DV6 - SN1547; Probe Cal Date: 11/16/01ConvF(7.40,7.40,7.40); Crest factor: 1.0; IEEE Head_300 MHz: σ = 0.87 mho/m ε = 46.2 ρ = 1.00 g/cm3; DAE3: SN401-V1 DAE Cal Date: 10/15/01
Cube 5x5x7: Peak: 1.16 mW/g, SAR (1g): 0.739 mW/g, SAR (10g): 0.496 mW/g, (Worst-case extrapolation)
Penetration depth: 13.1 (11.0, 15.7) [mm]
Power Drift: -0.05 dB



CGISS Dipole 300MHz; SN: 002 Test Date: 06/12/02
Motorola CGISS EME Lab
Run #: Sys Perf_R1_020612-01
TX Freq: 300 MHz
Sim Tissue Temp: 20.6 (Celsius)

- Comments-
Target at 1W is 2.94 (including drift) (1g)
Start Power; 250mW
SAR calculated is 2.83 mW/g, Percent from target (including drift) for 1g is 3.7%

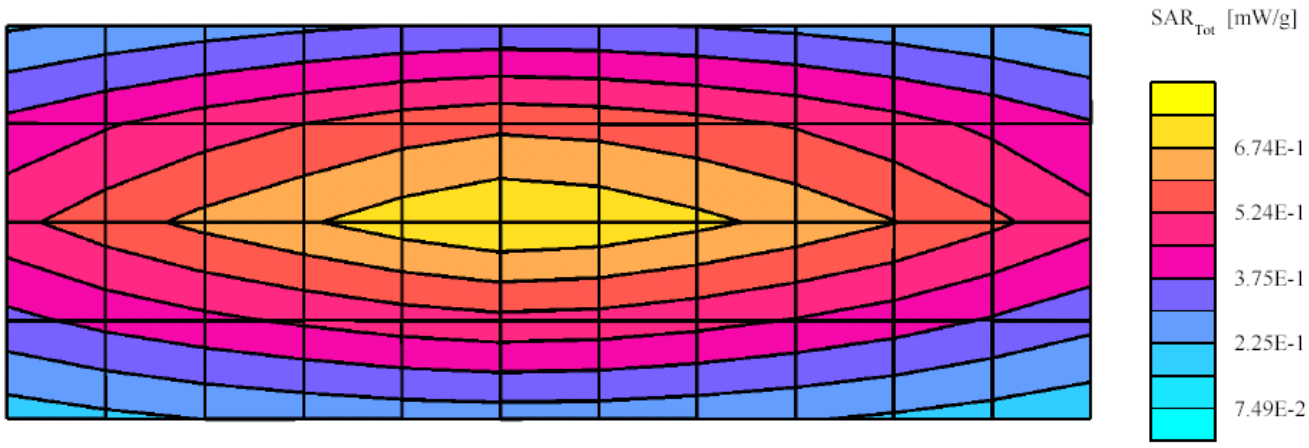
Flat Phantom; Probe: ET3DV6 - SN1547;Probe Cal Date: 11/16/01ConvF(7.40,7.40,7.40); Crest factor: 1.0; IEEE Head_300 MHz: σ = 0.84 mho/m ε = 45.7 ρ = 1.00 g/cm3; DAE3: SN401-V1 DAE Cal Date: 10/15/01
Cube 5x5x7: Peak: 1.09 mW/g, SAR (1g): 0.700 mW/g, SAR (10g): 0.473 mW/g, (Worst-case extrapolation)
Penetration depth: 13.2 (11.2, 15.8) [mm]
Power Drift: -0.05 dB



CGISS Dipole 300MHz; SN: 002 Test Date: 06/11/02
Motorola CGISS EME Lab
Run #: Sys Perf_R1_020611-01
TX Freq: 300 MHz
Sim Tissue Temp: 20.8 (Celsius)

- Comments-
6 Minutes Cube scan
Target at 1W is 2.93 (including drift) (1g)
Start Power; 250mW
SAR calculated is 2.82mW/g, Percent from target (including drift) for 1g is 3.9%

Flat Phantom; Probe: ET3DV6 - SN1547;Probe Cal Date: 11/16/01ConvF(7.60,7.60,7.60); Crest factor: 1.0; FCC Body_300 MHz: σ = 0.90 mho/m ε = 55.4 ρ = 1.00 g/cm3; DAE3: SN401-V1 DAE Cal Date: 10/15/01
Cube 5x5x7: Peak: 1.10 mW/g, SAR (1g): 0.704 mW/g, SAR (10g): 0.476 mW/g, (Worst-case extrapolation)
Penetration depth: 13.3 (11.2, 16.1) [mm]
Power Drift: 0.00 dB



SYSTEM VALIDATION

Date:	2/1/2001	Frequency (MHz):	835
Lab Location:	CGISS	Mixture Type:	IEEE Head
Robot System:	CGISS 2	Ambient Temp.(°C):	22.1
Probe Serial #:	1545	Tissue Temp.(°C):	21.2
DAE Serial #:	401		

Tissue Characteristics		Phantom Type/SN:	SAMTP1022
Permitivity:	42.5	Distance (mm):	15
Conductivity:	0.94		

Reference Source: D835V2 (Dipole/Handset)
Reference SN: 427

Power to Dipole: 500 mW
Power Output (radio): _____ mW

Target SAR Value: (normalized to 1.0 W)	9.5 mW/g,	6.2 mW/g (10g avg.)
Measured SAR Value:	5.31 mW/g,	3.37 mW/g (10g avg.)
Power Drift:	0.01 dB	
Measured SAR Value: (normalized to 1.0 W, with drift compensation)	10.60 mW/g,	6.72 mW/g (10g avg.)

Percent Difference From Target (must be within System Uncertainty): 11.6 % (1g avg)
8.4 % (10g avg)

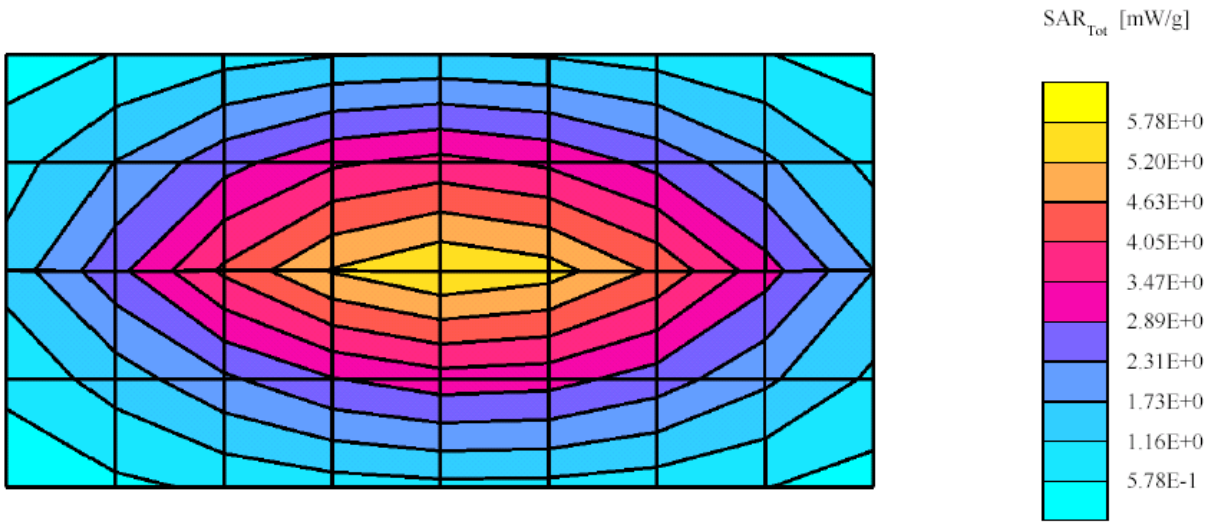
Test performed by: Kim Uong Initial: KU

JF 2/14/02

SPEAG Dipole D835V2 SN427; Test Date: 02/01/02

Motorola CGISS EME Lab
Run #: 02020101
Tx Freq: 835MHz
Sim tissue temp: 21.2C

Target: 9.5 +/-12.1% as indicated in IEEE std 1528-200X dated 8/20/01 (table 7.1)
Start power: 500mW
Flat phantom; Probe: ET3DV6 - SN1545;Probe Cal Date: 9/24/01ConvF(6.40,6.40,6.40); Crest factor: 1.0; IEEE HEAD
835MHz: σ = 0.94 mho/m ε = 42.5 ρ = 1.00 g/cm3
Cube 5x5x7: Peak: 8.57 mW/g, SAR (1g): 5.31 mW/g, SAR (10g): 3.37 mW/g, (Worst-case extrapolation)
Penetration depth: 11.7 (10.3, 13.4) [mm]
Power Drift: 0.01 dB



SYSTEM PERFORMANCE CHECK TARGET SAR

Date:	2/1/2002	Frequency (MHz):	300
Lab Location:	CGISS	Mixture Type:	FCC Body
Robot System:	CGISS 2	Ambient Temp.(°C):	22.1
Probe Serial #:	1545	Tissue Temp.(°C):	20.9
DAE Serial #:	401		

Tissue Characteristics		Phantom Type/SN:	80602002A
Permitivity:	55.48	Distance (mm):	15
Conductivity:	0.92		

Reference Source: MFRL-300 (Dipole)
Reference SN: 2

Power to Dipole: 500 mW

Measured SAR Value: 1.45 mW/g, 0.97 mW/g (10g avg.)
Power Drift: -0.05 dB

New Target/Measured SAR Value: 2.93 mW/g, 1.96 mW/g (10g avg.)
(normalized to 1.0 W, with drift compensation)

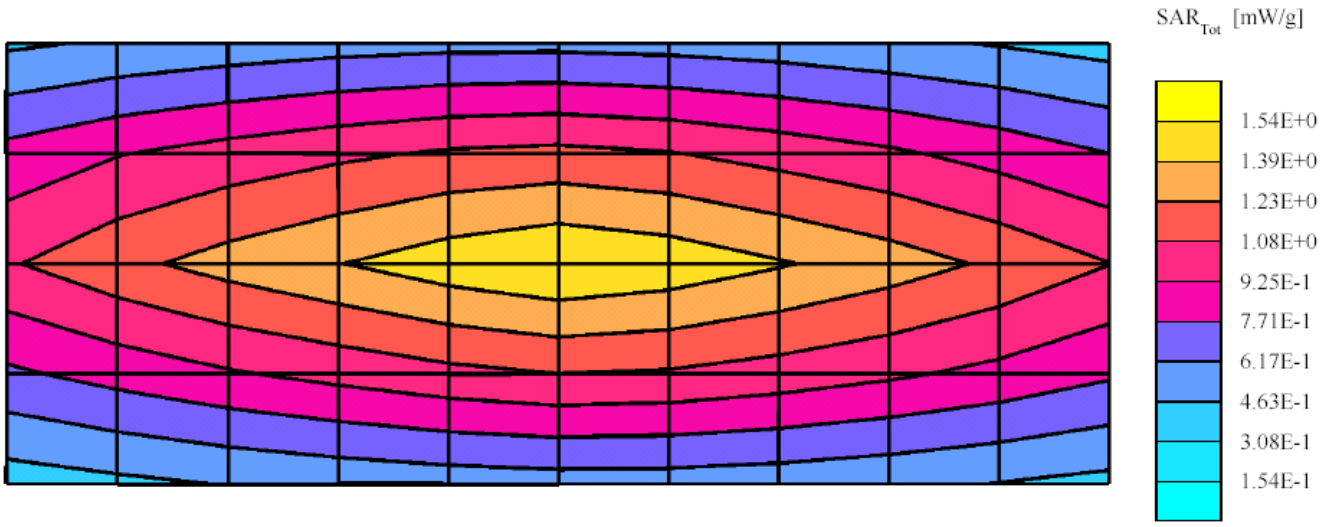
Test performed by: Kim Uong Initial: KU

JF 2/18/02

CGISS Dipole 300MHz; SN: 002 Test Date: 02/01/02
Motorola CGISS EME Lab
Run #: 02020102
Tx Freq: 300MHz
Sim tissue temp: 20.9C

Target:2.7 mW/g +/- 10% when normalized to 1W
Start power: 500mW
S.A.R. calculated is 2.93 mW/g. Percent from target (including drift) for 1g avg. is 8.65%

Flat_abdomen; Probe: ET3DV6 - SN1545;Probe Cal Date: 9/24/01ConvF(7.60,7.60,7.60); Crest factor: 1.0; FCC Body 300: σ = 0.92 mho/m ε = 55.5 ρ = 1.00 g/cm3
Cubes (2): Peak: 2.29 mW/g ± 0.07 dB, SAR (1g): 1.45 mW/g ± 0.06 dB, SAR (10g): 0.970 mW/g ± 0.06 dB, (Worst-case extrapolation)
Penetration depth: 13.0 (10.9, 15.7) [mm]
Power Drift: -0.05 dB



SYSTEM PERFORMANCE CHECK TARGET SAR

Date:	6/4/2002	Frequency (MHz):	300
Lab Location:	CGISS	Mixture Type:	IEEE Head
Robot System:	CGISS 1	Ambient Temp.(°C):	21.5
Probe Serial #:	1547	Tissue Temp.(°C):	21
DAE Serial #:	401		

Tissue Characteristics

Permitivity:	46.6	Phantom Type/SN:	80602002B
Conductivity:	0.88	Distance (mm):	16mm dipole/tissue

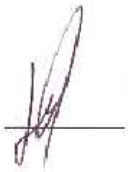
Reference Source: MFRL 300 (Dipole)
Reference SN: 2

Power to Dipole: 250 mW

Measured SAR Value: 0.741 mW/g, 0.495 mW/g (10g avg.)
Power Drift: 0.03 dB

New Target/Measured
SAR Value: 2.94 mW/g, 1.97 mW/g (10g avg.)
(normalized to 1.0 W, including drift)

Test performed by: Jim Fortier Initial:

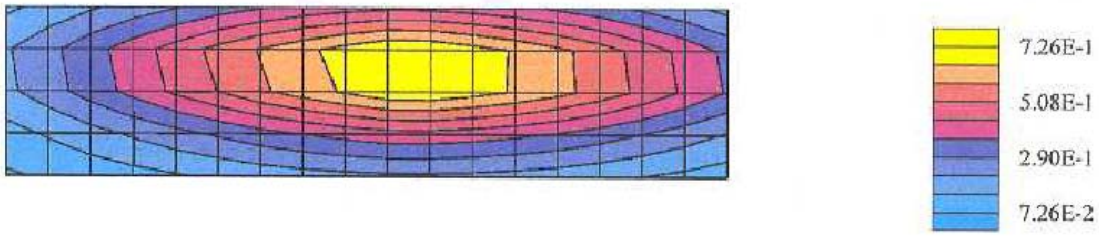


Motorola Internal Use Only S.C.W.6/4/2002

CGISS Dipole 300MHz. Test Date:06/04/02

Run #: Val_R1_020604-00 Phantom #: 80602002B / S2
Model #: CGISS 300 SN: 002
Robot: CGISS-1 Tester: J. Fortier
TX Freq: 300 MHz Sim Tissue Temp: 21.0 (Celsius)
Start Power; 250mW Air Temp: 21.5 (Celsius)
DAE3: SN401-V1 DAE Cal Date: 10/15/01
- Comments-
Target at 1W is 2.8 (including drift) (1g)

SAR calculated is 2.94 mW/g, Percent from target (including drift) for 1g is 5.0%
Flat Phantom;
Probe: ET3DV6 - SN1547;Probe Cal Date: 11/16/01ConvF(7.40,7.40,7.40); Crest factor: 1.0; IEEE Head_300 MHz: σ = 0.88 mho/m ε_r = 46.6 ρ = 1.00 g/cm^3
Cube 7x7x7: Peak: 1.18 mW/g, SAR (1g): 0.741 mW/g, SAR (10g): 0.495 mW/g, (Worst-case extrapolation)
Penetration depth: 12.8 (10.7, 15.5) [mm]
Powerdrift: 0.03 dB



Motorola CGISS EME Lab

APPENDIX D
Calibration Certificates

Schmid & Partner
Engineering AG

Zeughausstrasse 43, 8004 Zurich, Switzerland, Phone +41 1 245 97 00, Fax +41 1 245 97 79

Calibration Certificate

Dosimetric E-Field Probe

Type:	ET3DV6
Serial Number:	1547
Place of Calibration:	Zurich
Date of Calibration:	November 16, 2001
Calibration Interval:	12 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:	Nikolova Neviana
Approved by:	Katja Pokovic

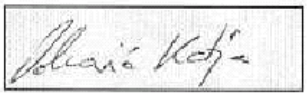
Additional Conversion Factors

for Dosimetric E-Field Probe

Type:	**ET3DV6**
Serial Number:	**1547**
Place of Assessment:	**Zurich**
Date of Assessment:	**November 17, 2001**
Probe Calibration Date:	**November 16, 2001**

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 ET3DV6 SN:1547

Conversion factor (± standard deviation)

150 MHz	ConvF	7.9 ± 8%	ε_r = 61.9 σ = 0.80 mho/m (body tissue)
236 MHz	ConvF	7.7 ± 8%	ε_r = 59.8 σ = 0.87 mho/m (body tissue)
300 MHz	ConvF	7.6 ± 8%	ε_r = 58.2 σ = 0.92 mho/m (body tissue)
350 MHz	ConvF	7.4 ± 8%	ε_r = 57.7 σ = 0.93 mho/m (body tissue)
450 MHz	ConvF	7.2 ± 8%	ε_r = 56.7 σ = 0.94 mho/m (body tissue)
784 MHz	ConvF	6.3 ± 8%	ε_r = 55.4 σ = 0.97 mho/m (body tissue)
835 MHz	ConvF	6.2 ± 8%	ε_r = 55.2 σ = 0.97 mho/m (body tissue)
925 MHz	ConvF	6.0 ± 8%	ε_r = 55.0 σ = 1.06 mho/m (body tissue)
1450 MHz	ConvF	5.5 ± 8%	ε_r = 54.0 σ = 1.30 mho/m (body tissue)
1900 MHz	ConvF	4.8 ± 8%	ε_r = 53.3 σ = 1.52 mho/m (body tissue)
2450 MHz	ConvF	4.0 ± 8%	ε_r = 52.7 σ = 1.95 mho/m (body tissue)

Dosimetric E-Field Probe ET3DV6 SN:1547

Conversion factor (± standard deviation)

150 MHz	ConvF	8.6 ± 8%	ε_r = 52.3 σ = 0.76 mho/m (head tissue)
236 MHz	ConvF	7.8 ± 8%	ε_r = 48.3 σ = 0.82 mho/m (head tissue)
300 MHz	ConvF	7.4 ± 8%	ε_r = 45.3 σ = 0.87 mho/m (head tissue)
350 MHz	ConvF	7.3 ± 8%	ε_r = 44.7 σ = 0.87 mho/m (head tissue)
400 MHz	ConvF	7.2 ± 8%	ε_r = 44.4 σ = 0.87 mho/m (head tissue - CENELEC)
450 MHz	ConvF	7.1 ± 8%	ε_r = 43.5 σ = 0.87 mho/m (head tissue)
784 MHz	ConvF	6.5 ± 8%	ε_r = 41.8 σ = 0.90 mho/m (head tissue)
835 MHz	ConvF	6.4 ± 8%	ε_r = 41.5 σ = 0.90 mho/m (head tissue)
835 MHz	ConvF	6.4 ± 8%	ε_r = 42.5 σ = 0.98 mho/m (head tissue - CENELEC)
925 MHz	ConvF	6.2 ± 8%	ε_r = 41.5 σ = 0.98 mho/m (head tissue)
900 MHz	ConvF	6.3 ± 8%	ε_r = 42.3 σ = 0.99 mho/m (head tissue - CENELEC)

Dosimetric E-Field Probe ET3DV6 SN:1547

Conversion factor (± standard deviation)

1500 MHz	ConvF	5.8 ± 8%	ε_r = 40.4 σ = 1.23 mho/m (head tissue)
1900 MHz	ConvF	5.2 ± 8%	ε_r = 40.0 σ = 1.40 mho/m (head tissue)
2450 MHz	ConvF	4.4 ± 8%	ε_r = 39.2 σ = 1.80 mho/m (head tissue)

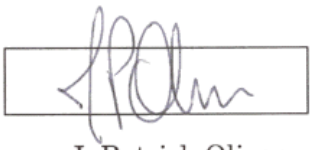
MOTOROLA

DIPOLE SAR VALIDATION CERTIFICATE

Frequency:	*300*	***MHz***
Dipole Serial Number:	*300-002*	
Simulated Tissue:	*head*	
Date of Validation:	*August 22, 2001*	
Validation Interval:	*12 months*	

Motorola Florida Research Laboratory hereby certifies, that the System Validation was performed on the date indicated above. The System Validation was performed in accordance with specifications and procedures of Motorola Florida Research Laboratory.

Calibrated by:



J. Patrick Oliver

Approved by:

C. K. Chou

Motorola Florida Research Laboratory - 8000 West Sunrise Blvd. Ft. Lauderdale, Florida 33322

Purpose:

To provide a method to check the validity of the SAR measurement system prior to testing

Tissue Simulate:

Name:	*Head 300*	
Targets for tissue characteristics:		
Dielectric Constant:	*45.3*	+/- 5%
Conductivity:	*0.87 S/m*	+/- 5%
Measurement values:		
Dielectric Constant:	*44.7*	
Conductivity:	*0.84*	

Validation setup:

Set up for the validation using constant forward power as shown in Figure 1. The total distance from the mixture to the top of the dipole tips is 16 mm.

Use 1.0 for the density of the simulated tissue.

Target for SAR validation:

The target is specified in terms of peak SAR averaged over 1 cm^3 (1 gram) of tissue.

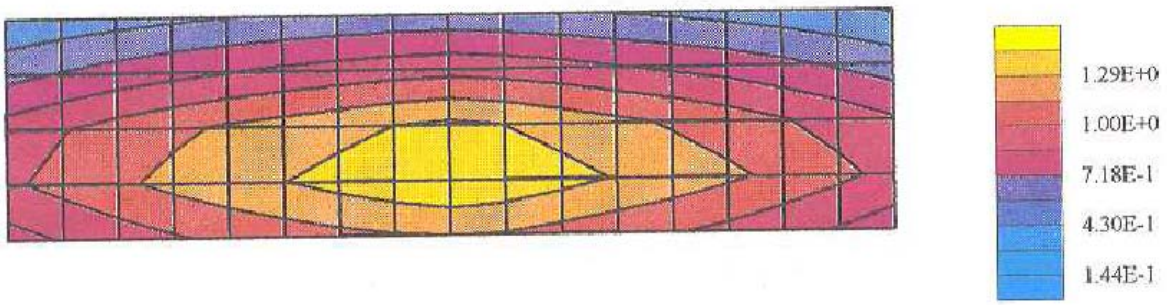
The target is normalized to 1 watt based on a constant forward input power of 500 mW.

Peak SAR, at 1 watt, averaged over 1 cm^3 (1 gram) of tissue:

2.8 mW/g	+/- 10%

dipole 300; Test Date:08/22/01

dipole 300-002, head, constant forward power = 500 mW
9x16 inch flat Phantom; Section; Position: ;
Probe: - SN1418; ConvF(7.00,7.00,7.00); Crest factor: 1.0; head 300: σ = 0.84 mho/m ε_r = 44.7 ρ = 1.00 g/cm^3
Cubes (2): SAR (1g): 1.39 mW/g ± 0.08 dB, SAR (10g): 0.935 mW/g ± 0.09 dB, (Worst-case extrapolation), Peak: 2.14 mW/g ± 0.08 dB,Max at 81.0, 12.0, 4.5
Coarse: Dx = 10.0, Dy = 10.0, Dz = 10.0
Powerdrift: 0.00 dB



Motorola Florida Research Lab

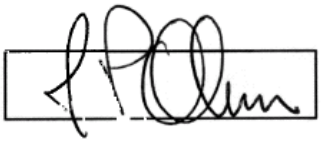
MOTOROLA

DIPOLE SAR VALIDATION CERTIFICATE

Frequency:	***300***	***MHz***
Dipole Serial Number:	***300-002***	
Simulated Tissue:	***body***	
Date of Validation:	***August 24, 2001***	
Validation Interval:	***12 months***	

Motorola Florida Research Laboratory hereby certifies, that the System Validation was performed on the date indicated above. The System Validation was performed in accordance with specifications and procedures of Motorola Florida Research Laboratory.

Calibrated by:



J. Patrick Oliver

Approved by:

C. K. Chou

Motorola Florida Research Laboratory - 8000 West Sunrise Blvd. Ft. Lauderdale, Florida 33322

Purpose:

To provide a method to check the validity of the SAR measurement system prior to testing

Tissue Simulate:

Name:	*Body 300*	
Targets for tissue characteristics:		
Dielectric Constant:	*58.2*	+/- 5%
Conductivity:	*0.92 S/m*	+/- 5%
Measurement values:		
Dielectric Constant:	*59.7*	
Conductivity:	*0.92*	

Validation setup:

Set up for the validation using constant forward power as shown in Figure 1. The total distance from the simulated tissue to the top of the dipole elements is 16 mm.

Use 1.0 for the density of the simulated tissue.

Target for SAR validation:

The target is specified in terms of peak SAR averaged over 1 cm^3 (1 gram) of tissue.

The target is normalized to 1 watt based on a constant forward input power of 500 mW.

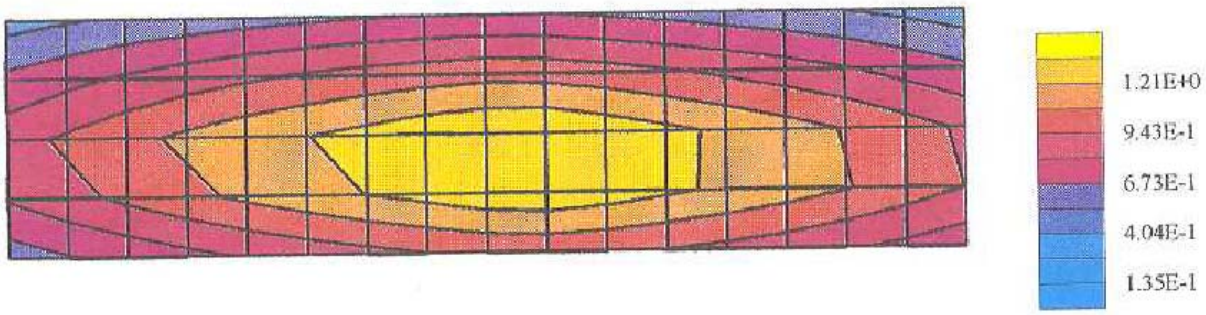
Peak SAR, at 1 watt, averaged over 1 cm^3 (1 gram) of tissue:

2.7 mW/g	+/- 10%

The SAR scan is shown in Figure 2.

dipole 300; Test Date:08/24/01

dipole 300-002, body, constant forward power = 500 mW
9x16 inch flat Phantom; Section; Position: ;
Probe: - SN1418; ConvF(7.10,7.10,7.10); Crest factor: 1.0; BODY 300: σ = 0.92 mho/m ε_r = 59.7 ρ = 1.00 g/cm^3
Cubes (2): SAR (1g): 1.36 mW/g ± 0.01 dB, SAR (10g): 0.916 mW/g ± 0.02 dB, (Worst-case extrapolation), Peak: 2.08 mW/g ± 0.00 dB,Max at 87.0, 16.0, 4.5
Coarse: Dx = 10.0, Dy = 10.0, Dz = 10.0
Powerdrift: -0.19 dB



Motorola Florida Research Lab

APPENDIX E
Illustration of Body-Worn Accessories

The purpose of this appendix is to illustrate the body-worn accessories used to assess S.A.R. compliance of FCC ID: AZ489FT3804. The radio used in the following photos represents the radio used to obtain the results presented herein and was used in this section solely to demonstrate the different body-worn accessories.

Photo 1.
Kit NTN8266B
Side view

Photo 2.
Kit NTN8266B
Back view

Photo 3.
Kit NTN8460A
Back view

Photo 4.
Kit NTN8460A
Side view

Photo 5
Kit NTN8725A
Includes
NTN8383A
Back View

Photo 6
Kit NTN8725A
Includes
NTN8383A
Front View

Photo 7.
Kit NTN8725A
Includes
NTN8383A
Side View

Photo 8.
Kit NTN9179A
Includes
NTN9212A&NTN9213A
Back View

Photo 9.
Kit NTN9179A
Includes
NTN9212A&NTN9213A
Side View

Photo 10.
Kit NTN9184A
Includes
NTN8383A
Back View

Photo 11.
Kit NTN9184A
Includes
NTN8383A
Front View

Photo 12.
Kit NTN9184A
Includes
NTN8383A
Side View

Photo 13.
Kit NTN8380B
&NTN8383A
Includes
NTN8383A
Front View

Photo 14.
Kit NTN8380B
&NTN8383A
Includes
NTN8383A
Side View

Photo 15.
Kit NTN8387A
Includes
NTN8383A
Front View

Photo 16.
Kit NTN8387A
Includes
NTN8383A
Back View

Photo 17.
Kit NTN8387A
Includes
NTN8383A
Side View

Photo 18.
Kit NTN5243A
Shoulder strap
Used with
NTN8387A

APPENDIX F
Justification for not testing accessory options

The following table provides justification for why specific body worn and audio accessories offered with FCC ID: AZ489FT3804 were not included in the test matrix.

Body Worn

Model	Tested ?	Closest Ant. Base separation from phantom (mm)	Justification/ comments
NTN8040B	No	NA	NTN8380 belt loop is same and smaller separation distance.
NTN8460A	Yes	21	NA
NTN8266B	Yes	21	NA
NTN8725A	Yes	26	NA
NTN9179A	Yes	46	NA
NTN9212A	Yes	NA	test with NTN9179A
NTN9213A	Yes	NA	test with NTN9179A
NTN8381C	No	NA	same as NTN8380B
NTN9184A	Yes	57	Clamshell battery and std battery
NTN8382B	No	NA	similar to NTN8387A, extra piece of leather on inside bottom
NTN8383A	Yes	NA	Part of kit NTN8386B
NTN8384A	No	NA	Same as NTN8383A
NTN8385B	No	NA	Same as NTN8380B &NTN8039B, includes NTN8383A
NTN8386B	No	NA	same as NTN8380B & NTN8039B, includes NTN8383A
NTN8387A	Yes	53	NA
NTN8039B	No	NA	same as NTN8380B
NTN8380B	Yes	65	includes NTN8383A
NTN5243A	Yes	55	NA

Audio Accessories

BDN6676D	Yes	NA	Included with ear pieces & headsets
NTN7660B	Yes	NA	
0180300E83	Yes	NA	Test with interface module BDN6708B
NTN8613A	Yes	NA	Test with ZMN6031A
Public Safety Microphone			
NMN6250A	Yes	NA	Includes NTN8327A
NMN6251A	Yes	NA	Includes NTN8327A
NMN6247A	Yes	NA	Includes NTN8327A
NTN8327A	Yes	NA	Includes NTN8327A
Remote speaker microphones			
NMN6191C	Yes	NA	
		NA	
NMN6193C	Yes	NA	
NMN6193BSPO3	No	NA	Similar to NMN6193C
NMN6193BSPO4	Yes	NA	
Headsets			
NMN6258A	Yes	NA	
RMN4049A	Yes	NA	
NMN6246B	Yes	NA	Test with BDN6676D
BDN6645A	Yes	NA	Test with BDN6673B
BDN6673B	Yes	NA	Test with BDN6635B
		NA	
BDN6635B	Yes	NA	Test with BDN6673B
BDN6636B	Yes	NA	Test with BDN6673B
NMN6245A	Yes	NA	
NMN6259A	Yes	NA	
NMN1020A	Yes	NA	Test with BDN6676D
Ear piece			
ZMN6031A	Yes	NA	Test with NTN8613A adapter
ZMN6032A	Yes	NA	Test with NTN8613A adapter
ZMN6038A	No	NA	Similar to ZMN6032A
ZMN6039A	No	NA	Similar to ZMN6031A
BDN6665A	No	NA	Similar to BDN6726A
BDN6666A	No	NA	Similar to BDN6728A
BDN6667A	No	NA	Similar to BDN6729A
BDN6668A	No	NA	Similar to BDN6730A
BDN6780A	Yes	NA	Test with BDN6676D adapter
BDN6664A	No	NA	Similar to BDN6726A
BDN6726A	Yes	NA	receive only, Test with BDN6676D adapter

BDN6727A	No	NA	Similar to BDN6726A
BDN6728A	Yes	NA	Test with BDN6676D adapter
BDN6729A	Yes	NA	Test with BDN6676D adapter
BDN6730A	Yes	NA	Test with BDN6676D adapter
BDN6669A	No	NA	Similar to BDN6729A
	No	NA	
BDN6731A	No	NA	Similar to BDN6729A
	No	NA	
BDN6670A	No	NA	Similar to BDN6730A
	No	NA	
BDN6781A	No	NA	Similar to BDN6726A
BDN6719A	No	NA	receive only, same as BDN6726A, not on application
BDN6732A	No	NA	Similar to BDN6730A, not on application
Comports			
NTN1625A	Yes	NA	Test with BDN6676D adapter
NTN1663A	Yes	NA	Test with BDN6676D adapter
NTN1736A	Yes	NA	Test with BDN6676D adapter
NTN1624A	Yes	NA	Test with BDN6676D adapter
Interface Module			
BDN6671B	Yes	NA	
		NA	
BDN6708B	Yes	NA	Test with body PTT 0180300E83
		NA	
BDN6677B	No	NA	Similar to BDN6678A (Beige)
	No	NA	
BDN6641A	No	NA	Similar to BDN6677B
BDN6678A	Yes	NA	Test with BDN6671B