



MOTOROLA



**2/25/03 Addendum Response to FCC correspondence 24784
FCC ID: AZ489FT4855**

R1.) Presented below are the S.A.R. results scan for the data presented in table 1 of response to correspondence 24784 dated 2/18/03.

FCC ID: AZ489FT4855; Test Date: 2/12/03

Motorola CGISS EME Laboratory

Run #: Ab-R1-030212-04

Model #: H18QDH9PW7AN SN:B212C0011

TX Freq: 425 MHz

Sim Tissue Temp: 20.3 (Celsius)

Antenna: NAE6549

Battery Kit: RNN4006A

Carry: belt clip NTN8266B

Audio Acc. NMN6191C

DUT w/ belt clip against phantom

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

Probe: ET3DV6R SN1545 (cal date 5-21-02) - SN1545; ConvF(7.10,7.10,7.10); Probe cal date: 21/05/02;

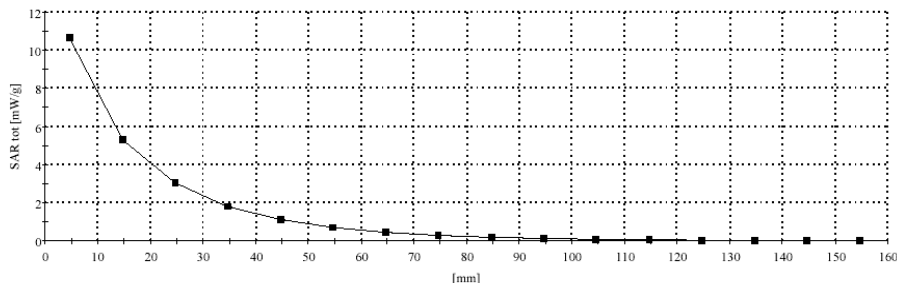
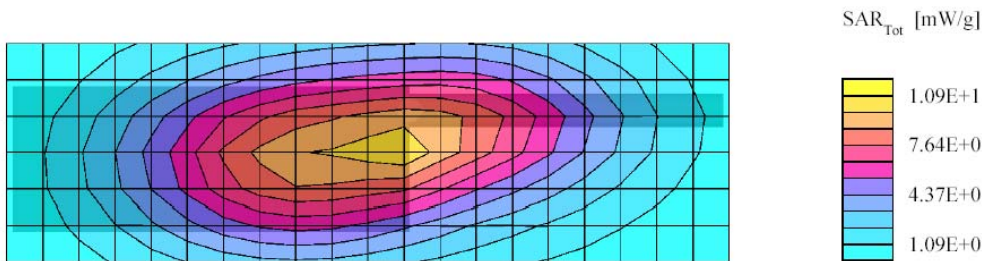
Crest factor: 1.0; FCC Body_425 MHz: $\sigma = 0.91$ mho/m $\epsilon = 55.3$ $\rho = 1.00$ g/cm³; DAE3: 363-V1 DAE Cal Date: 5/23/02

Cube 7x7x7: SAR (1g): 10.9 mW/g, SAR (10g): 7.57 mW/g * Max outside, (Worst-case extrapolation)

Coarse: Dx = 15.0, Dy = 15.0, Dz = 10.0; Max at 43.5, 162.0, 4.7

Power drift: -0.33 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.




MOTOROLA

FCC ID: AZ489FT4855; Test Date: 2/13/03
Motorola CGISS EME Laboratory

Run #: Ab-R1-030213-13

Model #: H18QDH9PW7AN SN:B212C0011

TX Freq: 407 MHz

Sim Tissue Temp: 20.6 (Celsius)

Antenna:NAE6546

Battery Kit: NTN8295A

Carry: NTN8266B belt clip

Audio Acc.NMN6191C RSM

DUT w belt clip against phantom

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

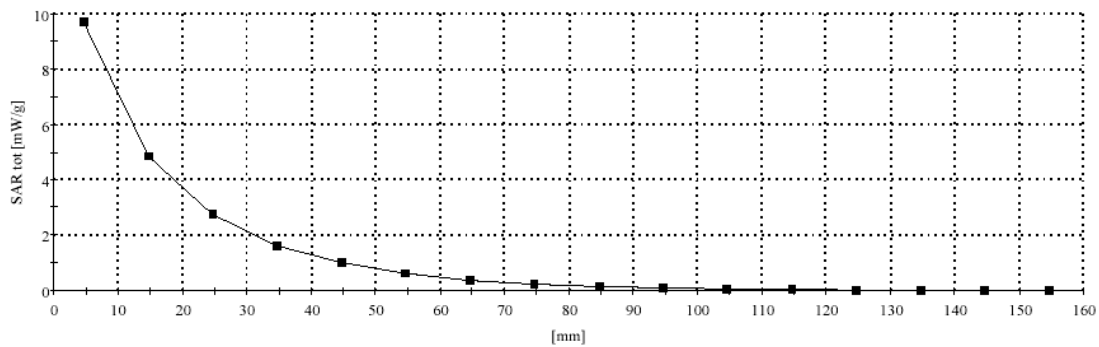
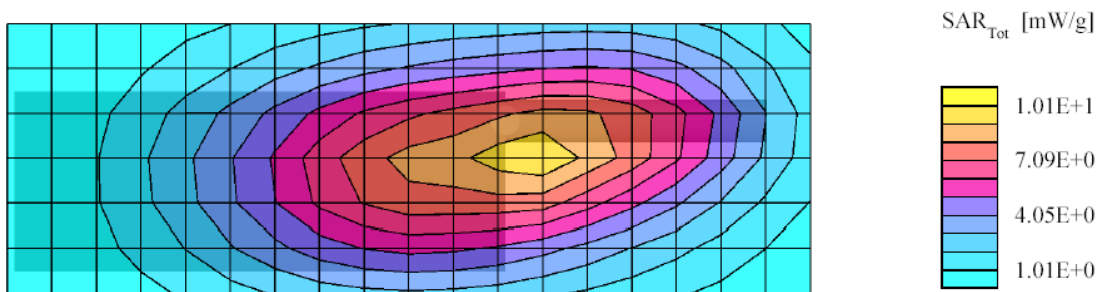
Probe: ET3DV6R SN1545 (cal date 5-21-02) - SN1545; ConvF(7.10,7.10,7.10); Probe cal date: 21/05/02;

 Crest factor: 1.0; FCC Body_425 MHz: $\sigma = 0.90$ mho/m $\epsilon = 55.6$ $\rho = 1.00$ g/cm³; DAE3: 363-V1 DAE Cal Date: 5/23/02

Cube 5x5x7: SAR (1g): 9.73 mW/g, SAR (10g): 6.71 mW/g, (Worst-case extrapolation)

Coarse: Dx = 15.0, Dy = 15.0, Dz = 10.0; Max at 43.5, 177.0, 4.7

Power drift: -0.99 dB

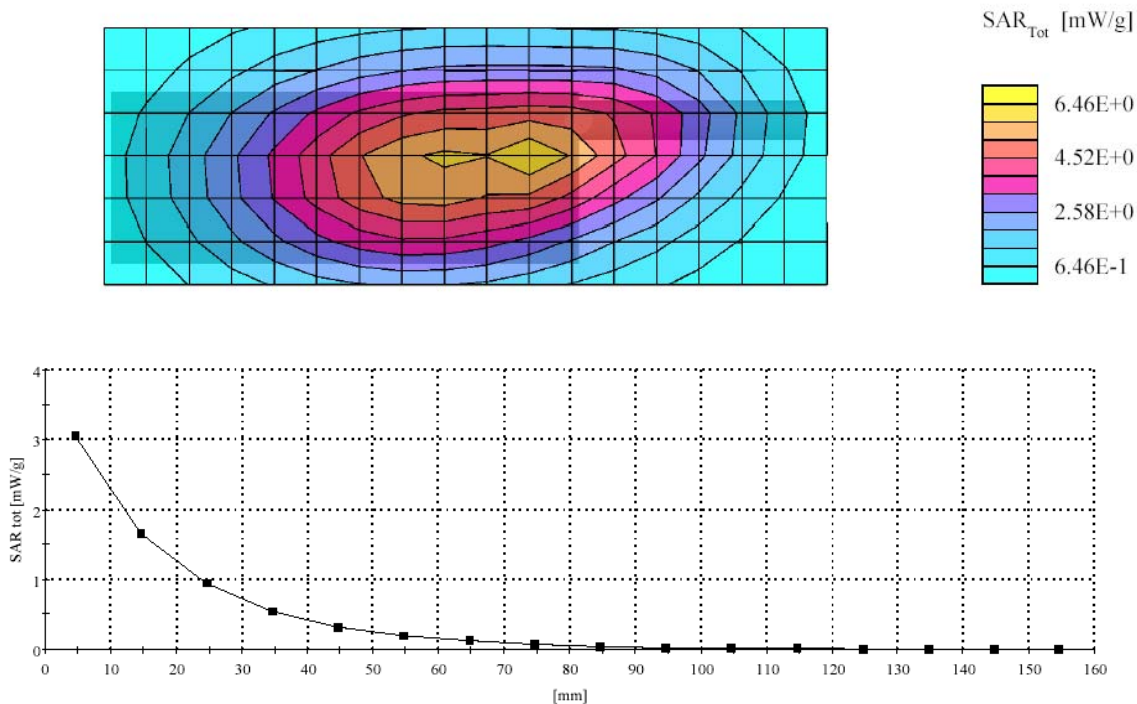




FCC ID: AZ489FT4855; Test Date: 2/13/03
Motorola CGISS EME Laboratory
Run #: Ab-R1-030213-11
Model #: H18QDH9PW7AN SN:B212C0011
TX Freq: 452 MHz
Sim Tissue Temp: 20.6 (Celsius)

Antenna:NAE6547
Battery Kit: NTN8297A
Carry: NTN8266B belt clip
Audio Acc.NMN6191C RSM

DUT w belt clip against the phantom
Flat Phantom; Device Section; Position: (90°,90°);
Probe: ET3DV6R SN1545 (cal date 5-21-02) - SN1545; ConvF(7.10,7.10,7.10); Probe cal date: 21/05/02;
Crest factor: 1.0; FCC Body_425 MHz: $\sigma = 0.90$ mho/m $\epsilon = 55.6$ $\rho = 1.00$ g/cm³; DAE3: 363-V1 DAE Cal
Date: 5/23/02
Cube 7x7x7: SAR (1g): 4.68 mW/g, SAR (10g): 3.30 mW/g, (Worst-case extrapolation)
Coarse: Dx = 15.0, Dy = 15.0, Dz = 10.0; Max at 45.0, 150.0, 4.7
Power drift: -2.45 dB




MOTOROLA

FCC ID: AZ489FT4855; Test Date: 2/13/03
Motorola CGISS EME Laboratory

Run #: Ab-R1-030213-09

Model #: H18QDH9PW7AN SN:B212C0011

TX Freq: 425 MHz

Sim Tissue Temp: 20.7 (Celsius)

Antenna: NAE6549

Battery Kit: RNN4006A

Carry: NTN8725A nylon

Audio Acc. NMN6191C RSM

DUT w/carry case against phantom

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

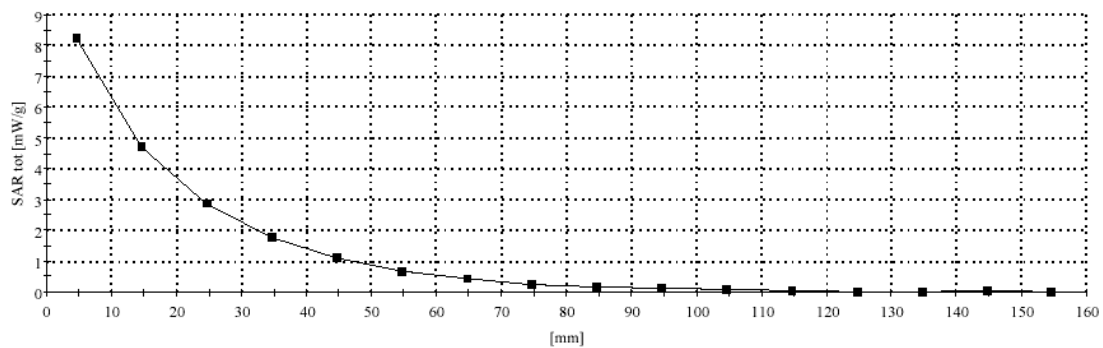
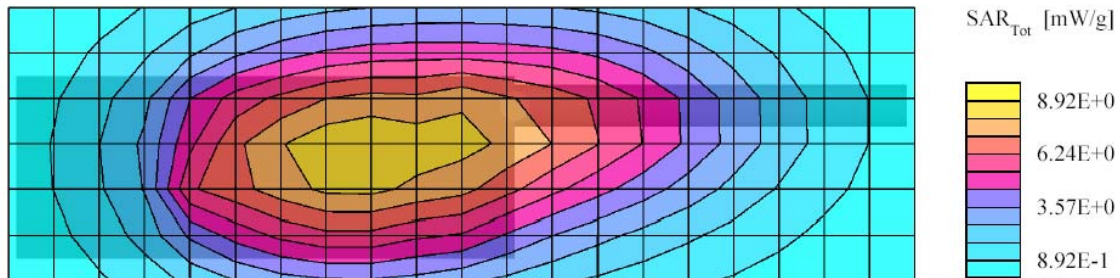
Probe: ET3DV6R SN1545 (cal date 5-21-02) - SN1545; ConvF(7.10,7.10,7.10); Probe cal date: 21/05/02;

 Crest factor: 1.0; FCC Body_425 MHz: $\sigma = 0.90$ mho/m $\epsilon = 55.6$ $\rho = 1.00$ g/cm³; DAE3: 363-V1 DAE Cal Date: 5/23/02

Cube 5x5x7: SAR (1g): 8.83 mW/g, SAR (10g): 6.54 mW/g, (Worst-case extrapolation)

Coarse: Dx = 15.0, Dy = 15.0, Dz = 10.0; Max at 48.0, 117.0, 4.7

Power drift: -0.35 dB




MOTOROLA

FCC ID: AZ489FT4855; Test Date: 2/14/03
Motorola CGISS EME Laboratory

Run #: Ab-R1-030214-02

Model #: H18QDH9PW7AN SN:B212C0011

TX Freq: 407 MHz

Sim Tissue Temp: 20.7 (Celsius)

Antenna: NAE6546

Battery Kit: NTN8295A

Carry: Nylon NTN8725A

Audio Acc. NMN6191C

DUT w/ carry case against phantom

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

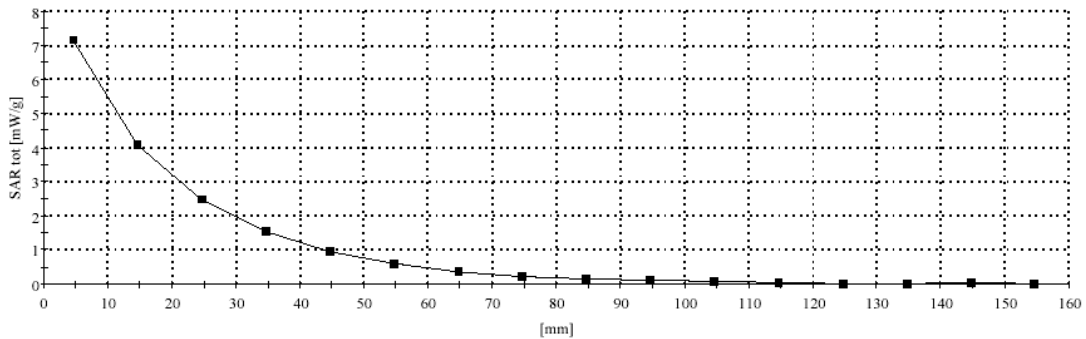
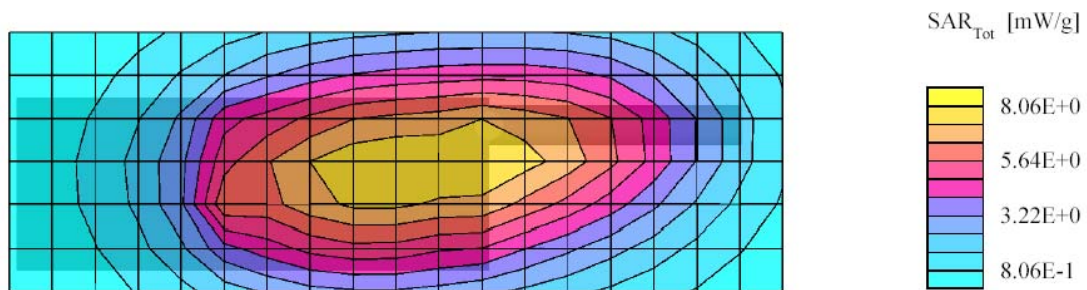
Probe: ET3DV6R SN1545 (cal date 5-21-02) - SN1545; ConvF(7.10,7.10,7.10); Probe cal date: 21/05/02;

 Crest factor: 1.0; FCC Body_425 MHz: $\sigma = 0.90$ mho/m $\epsilon = 56.1$ $\rho = 1.00$ g/cm³; DAE3: 363-V1 DAE Cal Date: 5/23/02

Cube 5x5x7: SAR (1g): 7.42 mW/g, SAR (10g): 5.50 mW/g, (Worst-case extrapolation)

Coarse: Dx = 15.0, Dy = 15.0, Dz = 10.0; Max at 48.0, 133.5, 4.7

Power drift: -1.01 dB





FCC ID: AZ489FT4855; Test Date: 2/14/03

Motorola CGISS EME Laboratory

Run #: Ab-R1-030214-03

Model #: H18QDH9PW7AN SN:B212C0011

TX Freq: 435 MHz

Sim Tissue Temp: 20.7 (Celsius)

Antenna: NAE6547

Battery Kit: NTN8297A

Carry: NTN8266B Belt clip

Audio Acc. NMN6191C

DUT w/ belt clip against the phantom

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

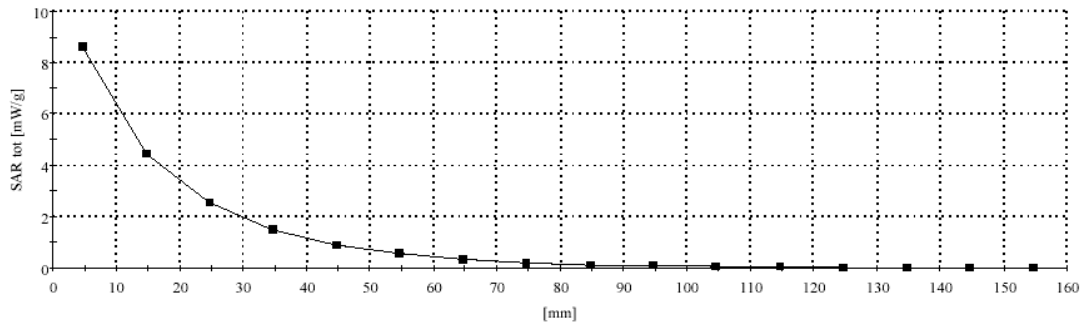
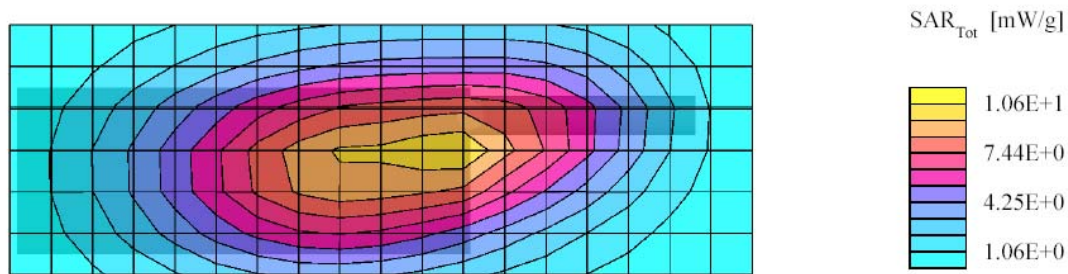
Probe: ET3DV6R SN1545 (cal date 5-21-02) - SN1545; ConvF(7.10,7.10,7.10); Probe cal date: 21/05/02;

Crest factor: 1.0; FCC Body_425 MHz: $\sigma = 0.90$ mho/m $\epsilon = 56.1$ $\rho = 1.00$ g/cm³; DAE3: 363-V1 DAE Cal Date: 5/23/02

Cube 5x5x7: SAR (1g): 9.95 mW/g, SAR (10g): 6.88 mW/g, (Worst-case extrapolation)

Coarse: Dx = 15.0, Dy = 15.0, Dz = 10.0; Max at 45.0, 160.5, 4.7

Power drift: -1.36 dB




MOTOROLA

FCC ID: AZ489FT4855; Test Date: 2/13/03
Motorola CGISS EME Laboratory

Run #: Ab-R1-030213-04

Model #: H18QDH9PW7AN SN:B212C0011

TX Freq: 425 MHz

Sim Tissue Temp: 20.7 (Celsius)

Antenna: NAE6549

Battery Kit: RNN4006A

Carry: belt clip NTN8266B

Audio Acc. BDN6671B & BDN6678A

DUT w/ belt clip against the phantom

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

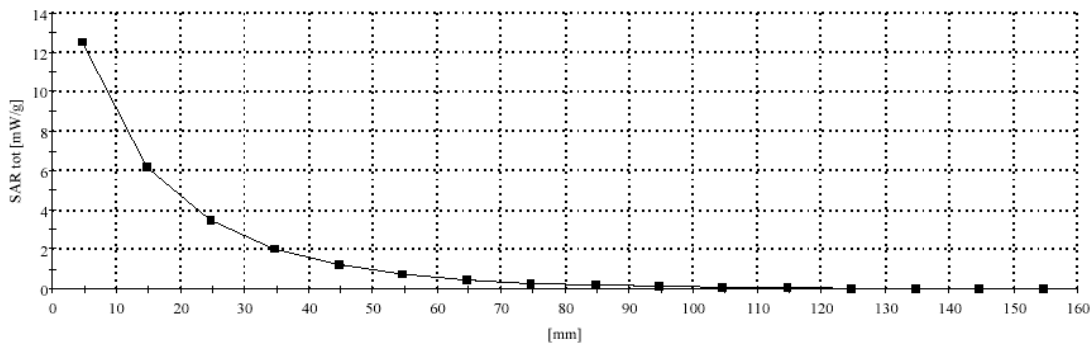
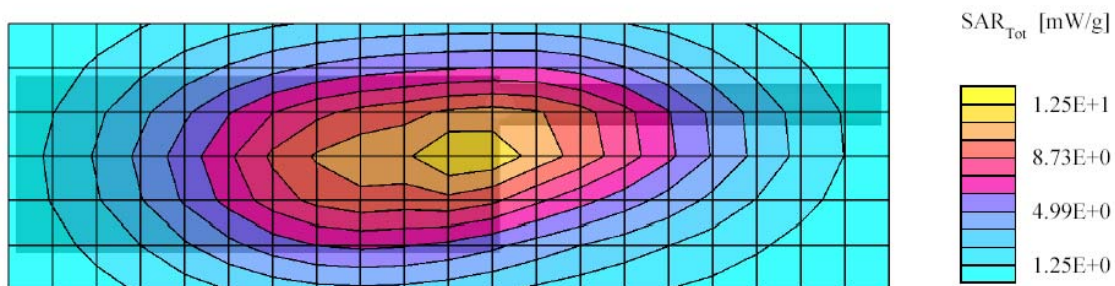
Probe: ET3DV6R SN1545 (cal date 5-21-02) - SN1545; ConvF(7.10,7.10,7.10); Probe cal date: 21/05/02;

 Crest factor: 1.0; FCC Body_425 MHz: $\sigma = 0.90$ mho/m $\epsilon = 55.6$ $\rho = 1.00$ g/cm³; DAE3: 363-V1 DAE Cal Date: 5/23/02

Cube 5x5x7: SAR (1g): 12.9 mW/g, SAR (10g): 8.77 mW/g, (Worst-case extrapolation)

Coarse: Dx = 15.0, Dy = 15.0, Dz = 10.0; Max at 43.5, 156.0, 4.7

Power drift: -0.15 dB




MOTOROLA

FCC ID: AZ489FT4855; Test Date: 2/14/03
Motorola CGISS EME Laboratory

Run #: Ab-R1-030214-06

Model #: H18QDH9PW7AN SN:B212C0011

TX Freq: 425 MHz

Sim Tissue Temp: 20.6 (Celsius)

Antenna: NAE6549

Battery Kit: RNN4006A

Carry: none

Audio Acc. BDN6671B & BDN6678A

DUT back towards the phantom, 2.5 cm separation.

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

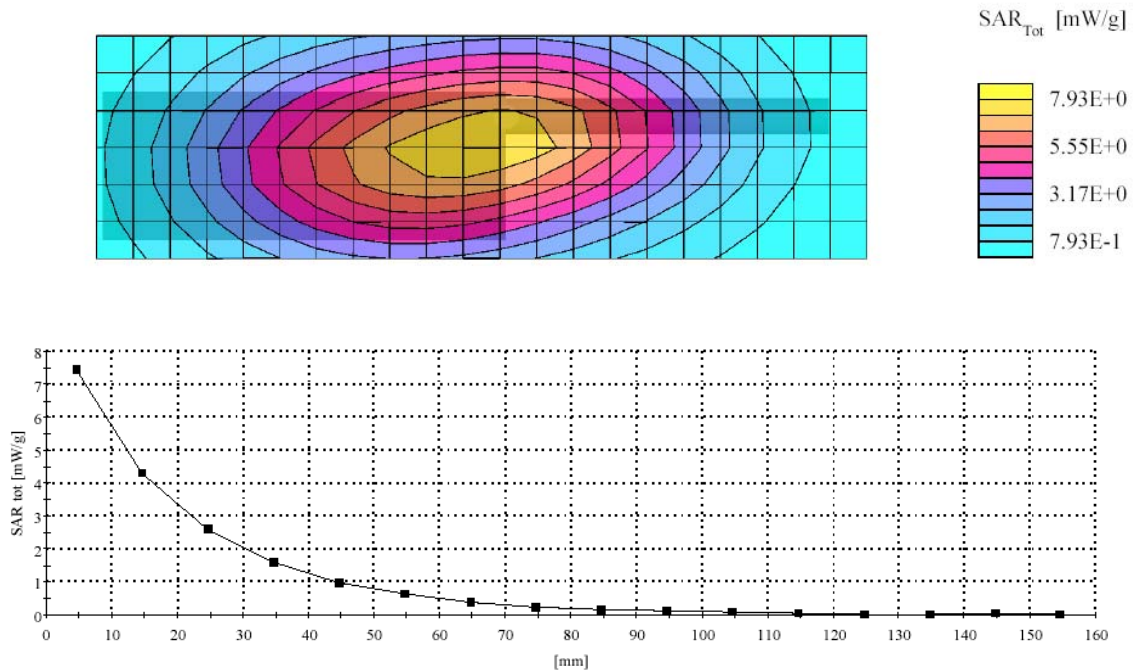
Probe: ET3DV6R SN1545 (cal date 5-21-02) - SN1545; ConvF(7.10,7.10,7.10); Probe cal date: 21/05/02;

 Crest factor: 1.0; FCC Body_425 MHz: $\sigma = 0.90$ mho/m $\epsilon = 56.1$ $\rho = 1.00$ g/cm³; DAE3: 363-V1 DAE Cal Date: 5/23/02

Cube 5x5x7: SAR (1g): 7.65 mW/g, SAR (10g): 5.68 mW/g, (Worst-case extrapolation)

Coarse: Dx = 15.0, Dy = 15.0, Dz = 10.0; Max at 43.5, 156.0, 4.7

Power drift: -0.21 dB





FCC ID: AZ489FT4855; Test Date: 2/13/03

Motorola CGISS EME Laboratory

Run #: Ab-R1-030213-05

Model #: H18QDH9PW7AN SN:B212C0011

TX Freq: 407 MHz

Sim Tissue Temp: 20.7 (Celsius)

Antenna: NAE6546

Battery Kit: NTN8295A

Carry: PSM belt clip

Audio Acc. NMN6251A PSM & NTN8327A

DUT w/ PSM against phantom

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

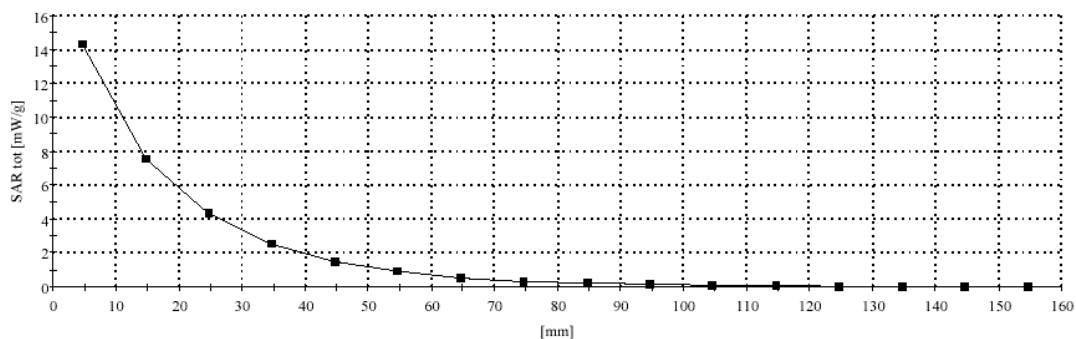
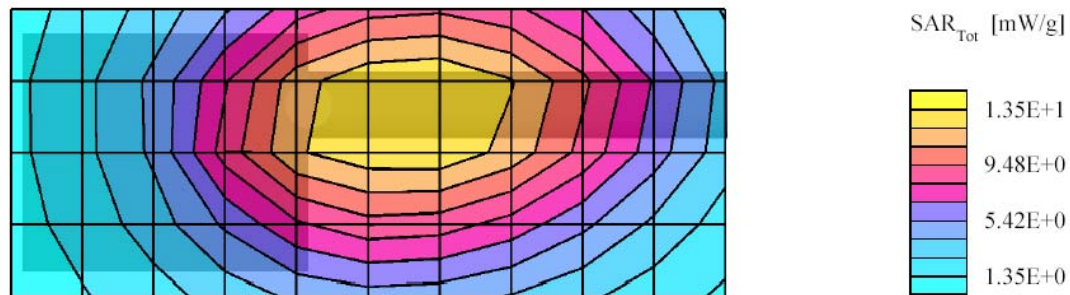
Probe: ET3DV6R SN1545 (cal date 5-21-02) - SN1545; ConvF(7.10,7.10,7.10); Probe cal date: 21/05/02;

Crest factor: 1.0; FCC Body_425 MHz: $\sigma = 0.90$ mho/m $\epsilon = 55.6$ $\rho = 1.00$ g/cm³; DAE3: 363-V1 DAE Cal Date: 5/23/02

Cube 5x5x7: SAR (1g): 14.2 mW/g, SAR (10g): 10.1 mW/g, (Worst-case extrapolation)

Coarse: Dx = 15.0, Dy = 15.0, Dz = 10.0; Max at 21.0, 85.5, 4.7

Power drift: -0.03 dB




MOTOROLA

FCC ID: AZ489FT4855; Test Date: 2/16/03
Motorola CGISS EME Laboratory

Run #: Face-R1-030216-02

Model #: H18QDH9PW7AN SN:B212C0011

TX Freq: 425 MHz

Sim Tissue Temp: 21.7 (Celsius)

Antenna: NAE6549

Battery Kit: NTN8610B

Carry: none

Audio Acc. none

DUT microphone towards phantom, 2.5 cm separation.

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

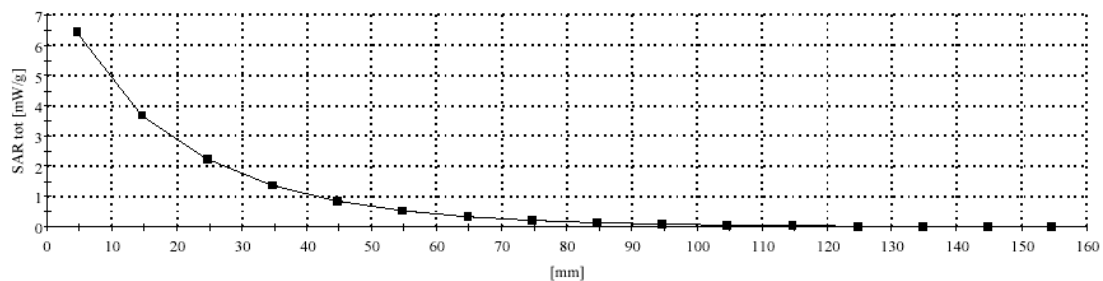
Probe: ET3DV6R SN1545 (cal date 5-21-02) - SN1545; ConvF(7.00,7.00,7.00); Probe cal date: 21/05/02;

 Crest factor: 1.0; IEEE Head_425MHz: $\sigma = 0.86$ mho/m $\epsilon = 44.4$ $\rho = 1.00$ g/cm³; DAE3: 363-V1 DAE Cal Date: 5/23/02

Cube 5x5x7: SAR (1g): 6.46 mW/g, SAR (10g): 4.81 mW/g, (Worst-case extrapolation)

Coarse: Dx = 15.0, Dy = 15.0, Dz = 10.0; Max at 43.5, 66.0, 4.7

Power drift: -0.12 dB




MOTOROLA

FCC ID: AZ489FT4855; Test Date: 2/16/03
Motorola CGISS EME Laboratory

Run #: Face-R1-030216-03

Model #: H18QDH9PW7AN SN:B212C0011

TX Freq: 407 MHz

Sim Tissue Temp: 21.7 (Celsius)

Antenna: NAE6546

Battery Kit: NTN8610B

Carry: none

Audio Acc. none

DUT microphone towards the phantom, 2.5 cm separation

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

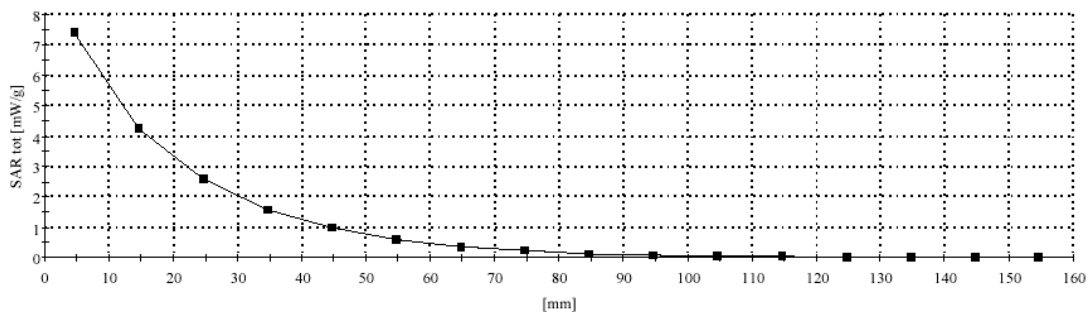
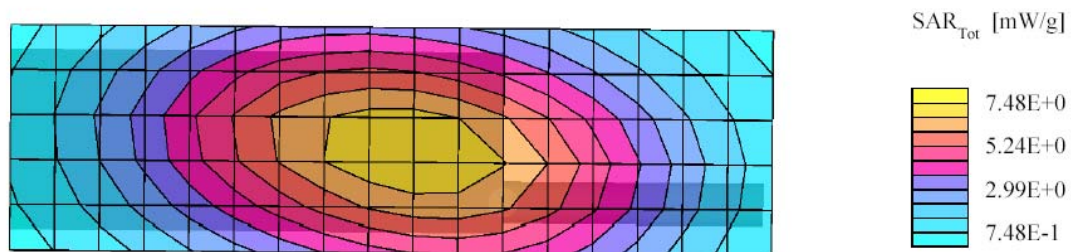
Probe: ET3DV6R SN1545 (cal date 5-21-02) - SN1545; ConvF(7.00,7.00,7.00); Probe cal date: 21/05/02;

 Crest factor: 1.0; IEEE Head_425MHz: $\sigma = 0.86$ mho/m $\epsilon = 44.4$ $\rho = 1.00$ g/cm³; DAE3: 363-V1 DAE Cal Date: 5/23/02

Cube 5x5x7: SAR (1g): 7.47 mW/g, SAR (10g): 5.57 mW/g, (Worst-case extrapolation)

Coarse: Dx = 15.0, Dy = 15.0, Dz = 10.0; Max at 40.5, 135.0, 4.7

Power drift: -0.17 dB





FCC ID: AZ489FT4855; Test Date: 2/16/03

Motorola CGISS EME Laboratory

Run #: Ab-R1-030216-05

Model #: H18QDH9PW7AN SN:B212C0011

TX Freq: 435 MHz

Sim Tissue Temp: 21.7 (Celsius)

Antenna: NAE6547

Battery Kit: NTN8297A

Carry: none

Audio Acc. none

DUT microphone towards phantom, 2.5 cm separation.

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

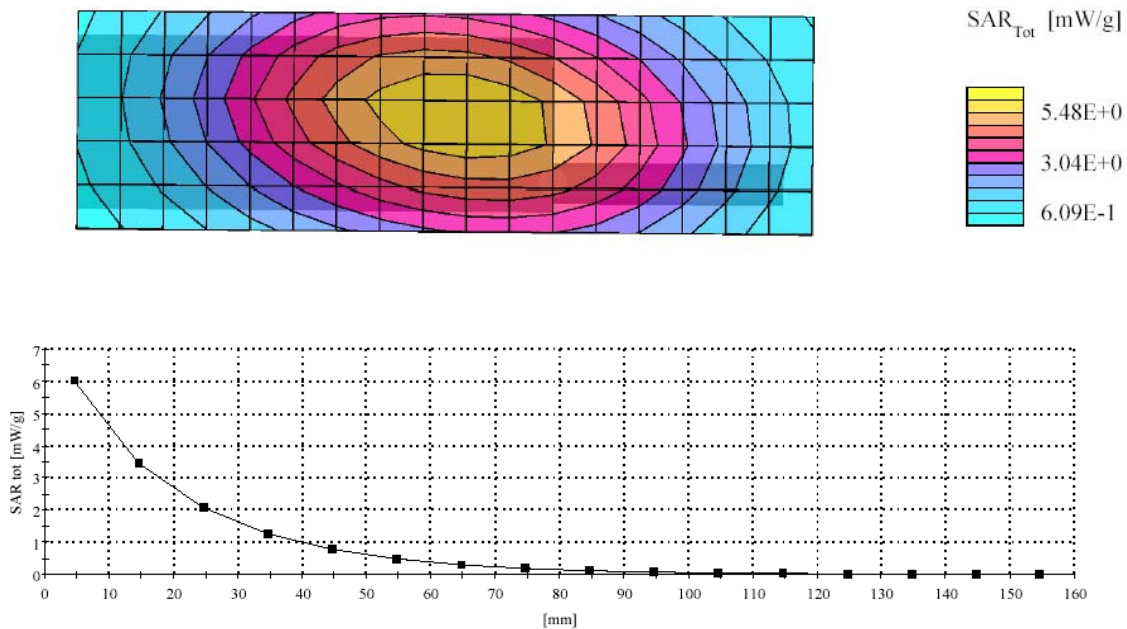
Probe: ET3DV6R SN1545 (cal date 5-21-02) - SN1545; ConvF(7.00,7.00,7.00); Probe cal date: 21/05/02;

Crest factor: 1.0; IEEE Head_425MHz: $\sigma = 0.86$ mho/m $\epsilon = 44.4$ $\rho = 1.00$ g/cm³; DAE3: 363-V1 DAE Cal Date: 5/23/02

Cube 5x5x7: SAR (1g): 6.04 mW/g, SAR (10g): 4.51 mW/g, (Worst-case extrapolation)

Coarse: Dx = 15.0, Dy = 15.0, Dz = 10.0; Max at 34.5, 133.5, 4.7

Power drift: -0.29 dB





MOTOROLA



Daily System Performance Check Results

SPEAG 450MHz Dipole D450V2; SN-1002; Test Date:02/12/03

Motorola CGISS EME Lab

Run #: Sys Perf-R1-030212-01

TX Freq: 450 MHz

Sim Tissue Temp: 21.7 (Celsius)

Start Power; 250mW

Target at 1W is 4.52 mW/g (including drift) (1g)

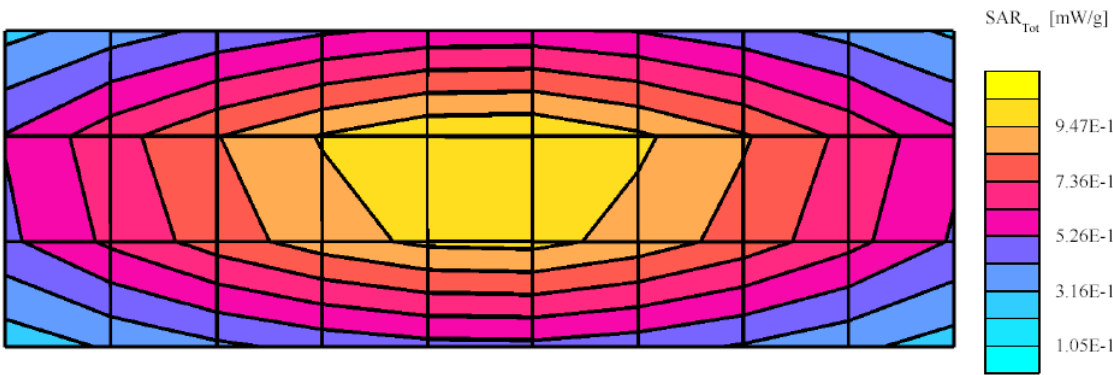
SAR calculated is 4.63 mW/g, Percent from target (including drift) for 1g is 2.42 %

Flat Phantom; Probe: ET3DV6R SN1545 (cal date 5-21-02) - SN1545;Probe Cal Date:

21/05/02ConvF(7.10,7.10,7.10); Crest factor: 1.0; FCC Body_450 MHz: $\sigma = 0.92$ mho/m $\epsilon = 55.3$ $\rho = 1.00$ g/cm³; DAE3: SN363-V1 DAE Cal Date: 05/23/02

Cubes (2): Peak: 1.77 mW/g ± 0.04 dB, SAR (1g): 1.16 mW/g ± 0.05 dB, SAR (10g): 0.768 mW/g ± 0.06 dB, (Worst-case extrapolation) Penetration depth: 13.0 (11.6, 14.7) [mm]

Power drift: 0.01 dB




MOTOROLA

SPEAG 450MHz Dipole D450V2; SN-1002; Test Date:02/13/03
Motorola CGISS EME Lab

Run #: Sys Perf-R1-030213-01

TX Freq: 450 MHz

Sim Tissue Temp: 20.7 (Celsius)

Start Power: 250mW

Target at 1W is 4.52 mW/g (including drift) (1g)

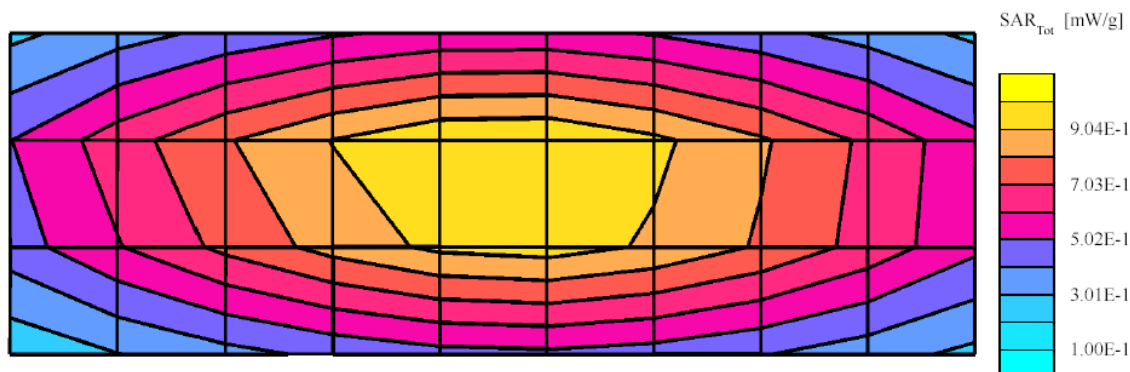
SAR calculated is 4.39 mW/g, Percent from target (including drift) for 1g is 2.88 %

Flat Phantom; Probe: ET3DV6R SN1545 (cal date 5-21-02) - SN1545; Probe Cal Date:

 21/05/02ConvF(7.10,7.10,7.10); Crest factor: 1.0; FCC Body_450 MHz: $\sigma = 0.91$ mho/m $\epsilon = 55.0$ $\rho = 1.00$ g/cm³; DAE3: SN363-V1 DAE Cal Date: 05/23/02

 Cubes (2): Peak: 1.69 mW/g ± 0.05 dB, SAR (1g): 1.10 mW/g ± 0.05 dB, SAR (10g): 0.734 mW/g ± 0.06 dB, (Worst-case extrapolation) Penetration depth: 13.0 (11.7, 14.7) [mm]

Power drift: 0.01 dB




MOTOROLA

SPEAG 450MHz Dipole D450V2; SN-1002; Test Date:02/14/03
Motorola CGISS EME Lab

Run #: Sys Perf-R1-030214-08

TX Freq: 450 MHz

Sim Tissue Temp: 20.9 (Celsius)

Start Power: 250mW

Target at 1W is 4.70 mW/g (including drift) (1g)

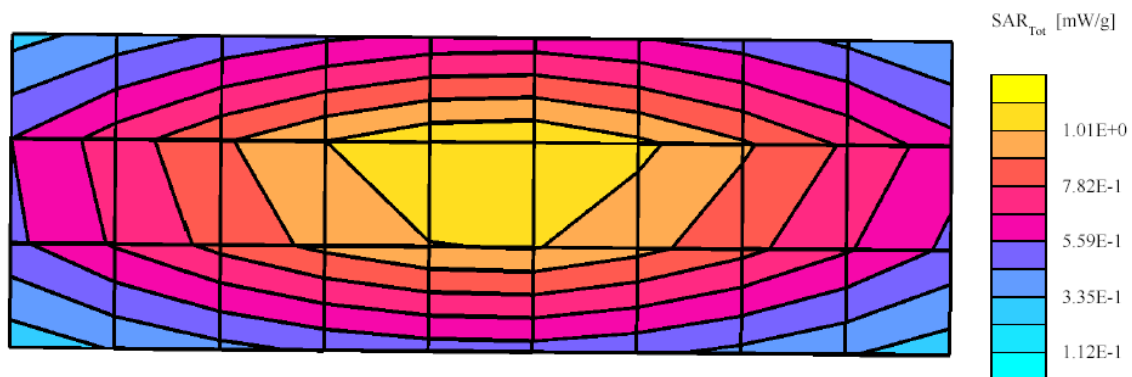
SAR calculated is 4.83 mW/g, Percent from target (including drift) for 1g is 2.74 %

Flat Phantom; Probe: ET3DV6R SN1545 (cal date 5-21-02) - SN1545;Probe Cal Date:

 21/05/02ConvF(7.00,7.00,7.00); Crest factor: 1.0; IEEE Head_450MHz: $\sigma = 0.90$ mho/m $\epsilon = 44.2$ $\rho = 1.00$ g/cm³; DAE3: SN363-V1 DAE Cal Date: 05/23/02

 Cubes (2): Peak: 1.86 mW/g ± 0.04 dB, SAR (1g): 1.21 mW/g ± 0.05 dB, SAR (10g): 0.795 mW/g ± 0.05 dB, (Worst-case extrapolation) Penetration depth: 12.7 (11.4, 14.3) [mm]

Power drift: 0.01 dB




MOTOROLA

SPEAG 450MHz Dipole D450V2; SN-1002; Test Date:02/16/03
Motorola CGISS EME Lab

Run #: Sys Perf-R1-030216-01

TX Freq: 450 MHz

Sim Tissue Temp: 21.7 (Celsius)

Start Power: 250mW

Target at 1W is 4.70 mW/g (including drift) (1g)

SAR calculated is 4.75 mW/g, Percent from target (including drift) for 1g is 1.12 %

Flat Phantom; Probe: ET3DV6R SN1545 (cal date 5-21-02) - SN1545; Probe Cal Date:

21/05/02 ConvF(7.00,7.00,7.00); Crest factor: 1.0; IEEE Head_450MHz: $\sigma = 0.88 \text{ mho/m}$ $\epsilon = 43.9$ $\rho = 1.00 \text{ g/cm}^3$; DAE3: SN363-V1 DAE Cal Date: 05/23/02

Cubes (2): Peak: $1.82 \text{ mW/g} \pm 0.06 \text{ dB}$, SAR (1g): $1.18 \text{ mW/g} \pm 0.06 \text{ dB}$, SAR (10g): $0.781 \text{ mW/g} \pm 0.07 \text{ dB}$, (Worst-case extrapolation) Penetration depth: 12.7 (11.5, 14.2) [mm]

Power drift: -0.03 dB

