



**MOTOROLA**

October 24, 2003

Supplement to SAR Test Report for Motorola portable cellular phone (FCC ID IHDT56DX1)

Prepared by:

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Libertyville, Illinois

## Summary of FCC request for additional information

There was a request for additional information regarding Motorola's SAR Test Report for Motorola portable cellular phone (FCC ID IHDT56DX1). The requested information is addressed below in the same numbering sequence received.

- Page 4 of the SAR report lists both dipole validation kits as past their cal due dates. Please correct.

**RESPONSE:** The original SAR test report inadvertently included the dates that the dipoles were last calibrated/validated. The table below indicates the date of the next required calibration/validation.

Description	Serial Number	Cal Due Date
DASY3 DAE V1	SN386	18-Mar-04
E-Field Probe ET3DV6	SN1514	31-Jul-04
Dipole Validation Kit, D900V2	SN092	24-Jun-04
S.A.M. Phantom used for 800MHz	TP-1131	
Dipole Validation Kit, D1800V2	SN272TR	24-Jun-04
S.A.M. Phantom used for 1900MHz	TP-1250	

- Please submit the following SAR plots: left head touch for both cellular and PCS; right head tilt for both cellular and PCS; right head touch for PCS with accessory MOTFL0076K; right head touch for cellular with accessory MOTPL0205K; both cellular and PCS body plots with accessory MOTFL0076K; both cellular and PCS body plots with accessory MOTPL0205K.

**RESPONSE:** Please see Appendix 1 for requested SAR plots.

## **Appendix 1**

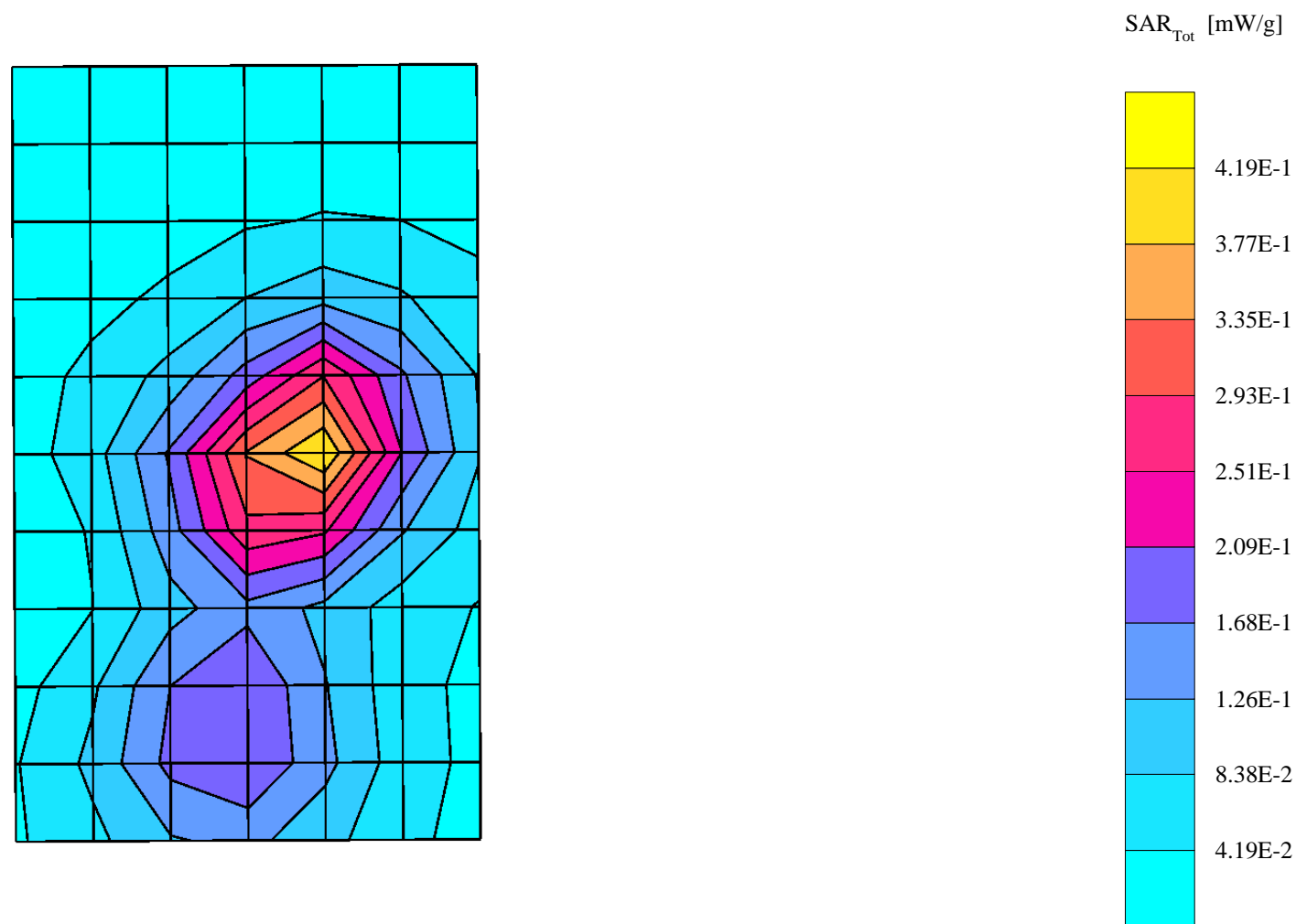
### **Additional SAR Test Plots**

s/n: 01100302

Ch# 661 Pwr Step: 0 (OTA)  
Type of Modulation: 1900 GSM  
Accessory Model #: MOTFL0076K

Antenna Position: INTERNAL  
Battery Model #: SNN5677A

R4 - Amy Twin Phantom Rev.4 (22Aug02) Phantom; section 2 Section; Position: (0°,0°); Frequency: 1880 MHz  
Probe: ET3DV6 - SN1514 - FCC Body; ConvF(4.70,4.70,4.70); Crest factor: 8.0; 1880 MHz Head & Body:  $\sigma = 1.58$  mho/m  $\epsilon_r = 51.1$   $\rho = 1.00$  g/cm<sup>3</sup>  
Cube 7x7x7: SAR (1g): 0.418 mW/g, SAR (10g): 0.237 mW/g, (Worst-case extrapolation)  
Coarse: Dx = 15.0, Dy = 15.0, Dz = 10.0  
Penetration depth: 9.3 (8.4, 10.7) [mm]  
Powerdrift: -0.09 dB



s/n: 01100302

Ch# 190 / Pwr Step: 5

Type of Modulation: GSM 850

DEVICE POSITION (cheek or rotated): Cheek    Accessory Model #: MOTPL0205K

R4 TP-1131 SUGAR sam expanded (Rev. 2)-9Jan03 Phantom; Right Hand Section; Position: (90°,180°); Frequency: 837 MHz

Probe: ET3DV6 - SN1514 - IEEE Head; ConvF(6.30,6.30,6.30); Crest factor: 8.0; 835 MHz Head & Body:  $\sigma = 0.92$  mho/m  $\epsilon_r = 43.0$   $\rho = 1.00$  g/cm<sup>3</sup>

Cube 7x7x7: SAR (1g): 0.732 mW/g, SAR (10g): 0.487 mW/g, (Worst-case extrapolation)

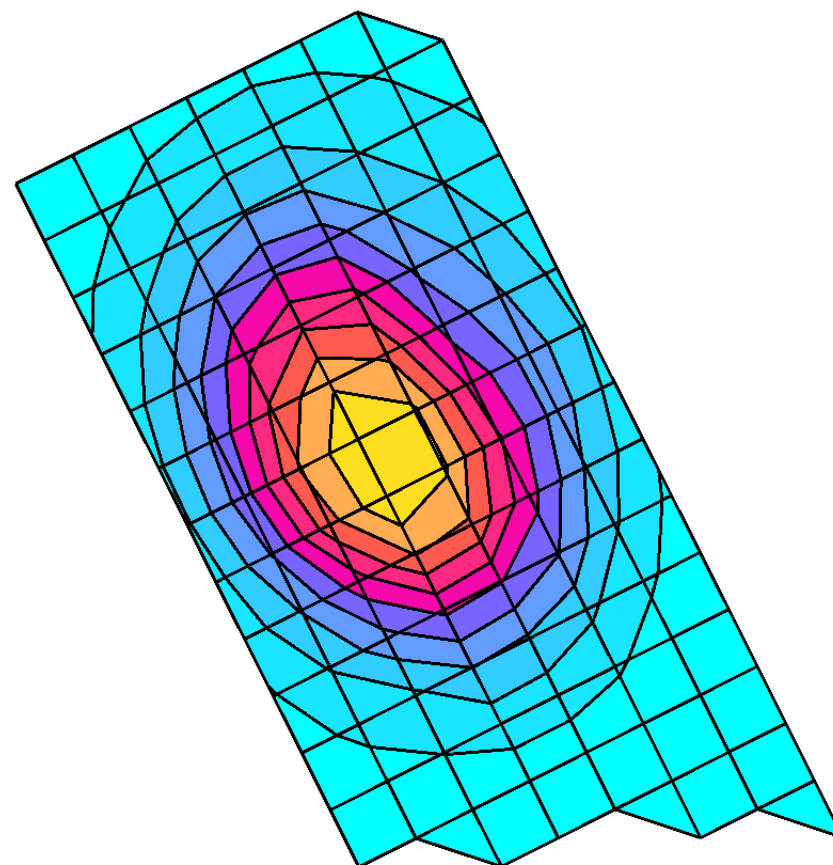
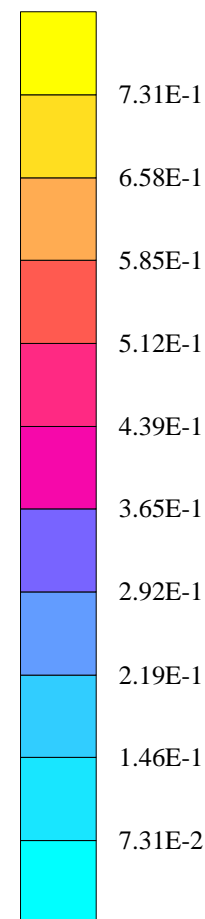
Coarse: Dx = 10.0, Dy = 10.0, Dz = 10.0

Penetration depth: 14.7 (13.9, 15.5) [mm]

Powerdrift: -0.02 dB

Antenna Position: Internal

Battery Model #: SNN5677A

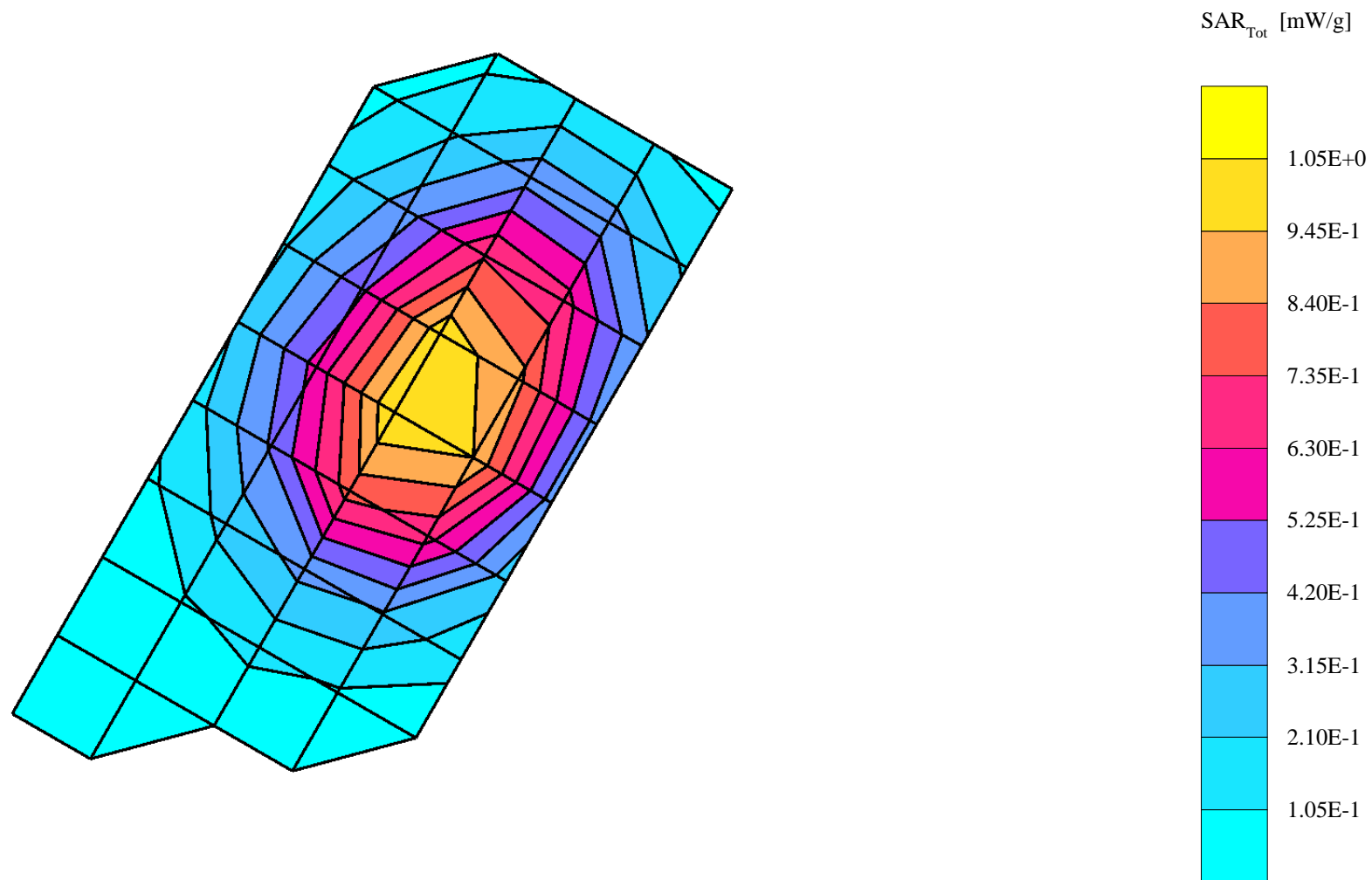
SAR<sub>Tot</sub> [mW/g]

s/n: 01100302

Ch# 128 Pwr Step: 5 (OTA)  
Type of Modulation: 850 GSM  
DEVICE POSITION: CHEEK

Antenna Position: INTERNAL  
Battery Model #: SNN5677A

R4 TP-1131 SUGAR sam expanded (Rev. 2)-9Jan03 Phantom; Left Hand Section; Position: (90°,180°); Frequency: 824 MHz  
Probe: ET3DV6 - SN1514 - IEEE Head; ConvF(6.30,6.30,6.30); Crest factor: 8.0; 835 MHz Head & Body:  $\sigma = 0.92$  mho/m  $\epsilon_r = 43.0$   $\rho = 1.00$  g/cm<sup>3</sup>  
Cube 7x7x7: SAR (1g): 1.10 mW/g, SAR (10g): 0.724 mW/g, (Worst-case extrapolation)  
Coarse: Dx = 15.0, Dy = 15.0, Dz = 15.0  
Penetration depth: 13.0 (11.9, 14.4) [mm]  
Powerdrift: -0.07 dB



s/n: 01100302

Ch# 190 / Pwr Step: 5

Type of Modulation: GSM 850

Accessory Model # = MOTPL0205K

Antenna Position: Internal

Battery Model #: SNN5677A

R4 - Amy Twin Phantom Rev.4 (22Aug02) Phantom; section 1 Section; Position: (0°,0°); Frequency: 837 MHz

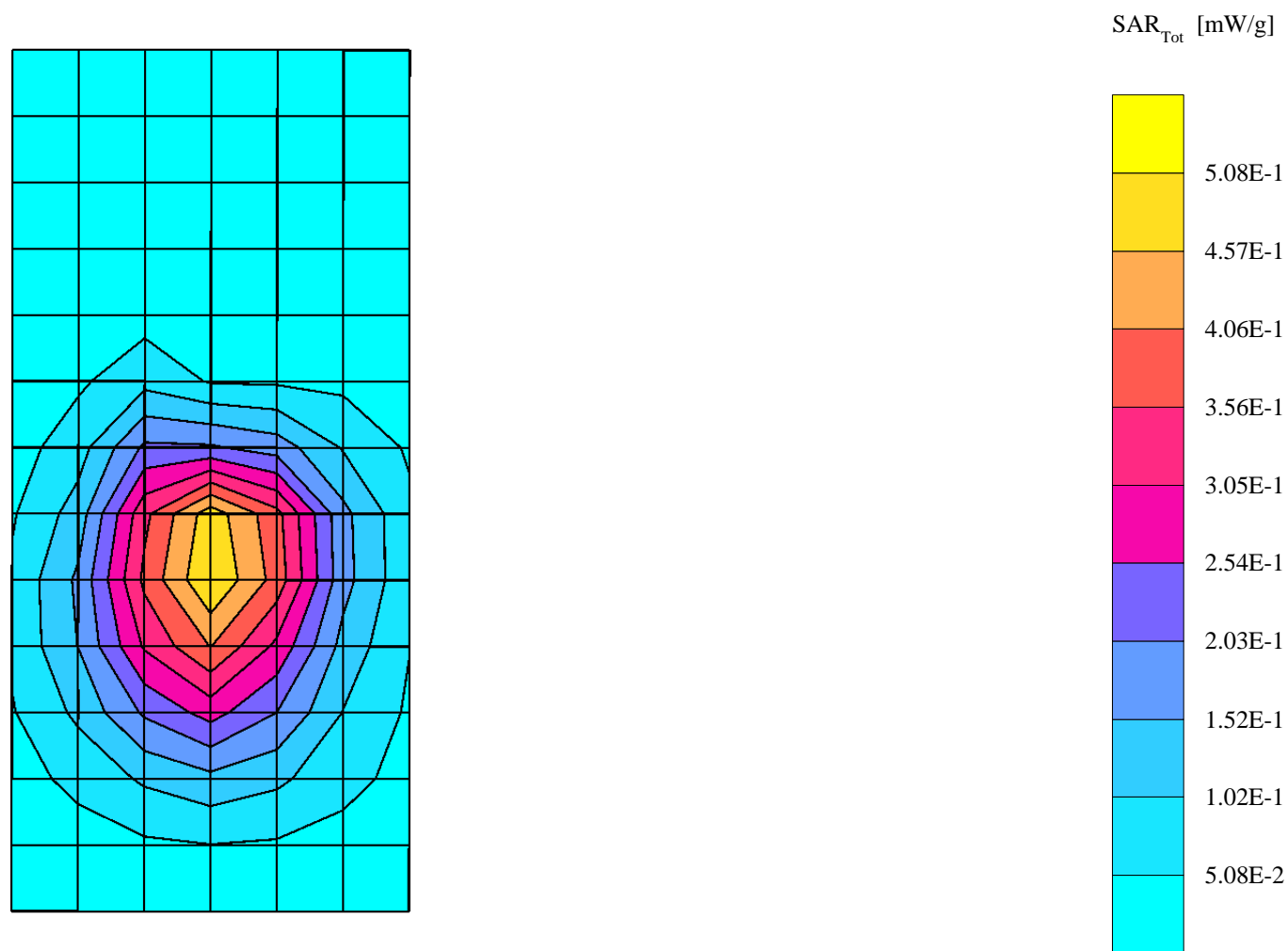
Probe: ET3DV6 - SN1514 - FCC Body; ConvF(6.10,6.10,6.10); Crest factor: 8.0; 835 MHz Head & Body:  $\sigma = 0.98$  mho/m  $\epsilon_r = 54.3$   $\rho = 1.00$  g/cm<sup>3</sup>

Cube 7x7x7: SAR (1g): 0.525 mW/g, SAR (10g): 0.356 mW/g, (Worst-case extrapolation)

Coarse: Dx = 15.0, Dy = 15.0, Dz = 10.0

Penetration depth: 14.1 (13.2, 15.2) [mm]

Powerdrift: 0.04 dB



s/n: 01100302

Ch# 190 / Pwr Step: 5

Type of Modulation: GSM 850

Accessory Model # = MOTFL0076K

Antenna Position: Internal

Battery Model #: SNN5677A

R4 - Amy Twin Phantom Rev.4 (22Aug02) Phantom; section 1 Section; Position: (0°,0°); Frequency: 837 MHz

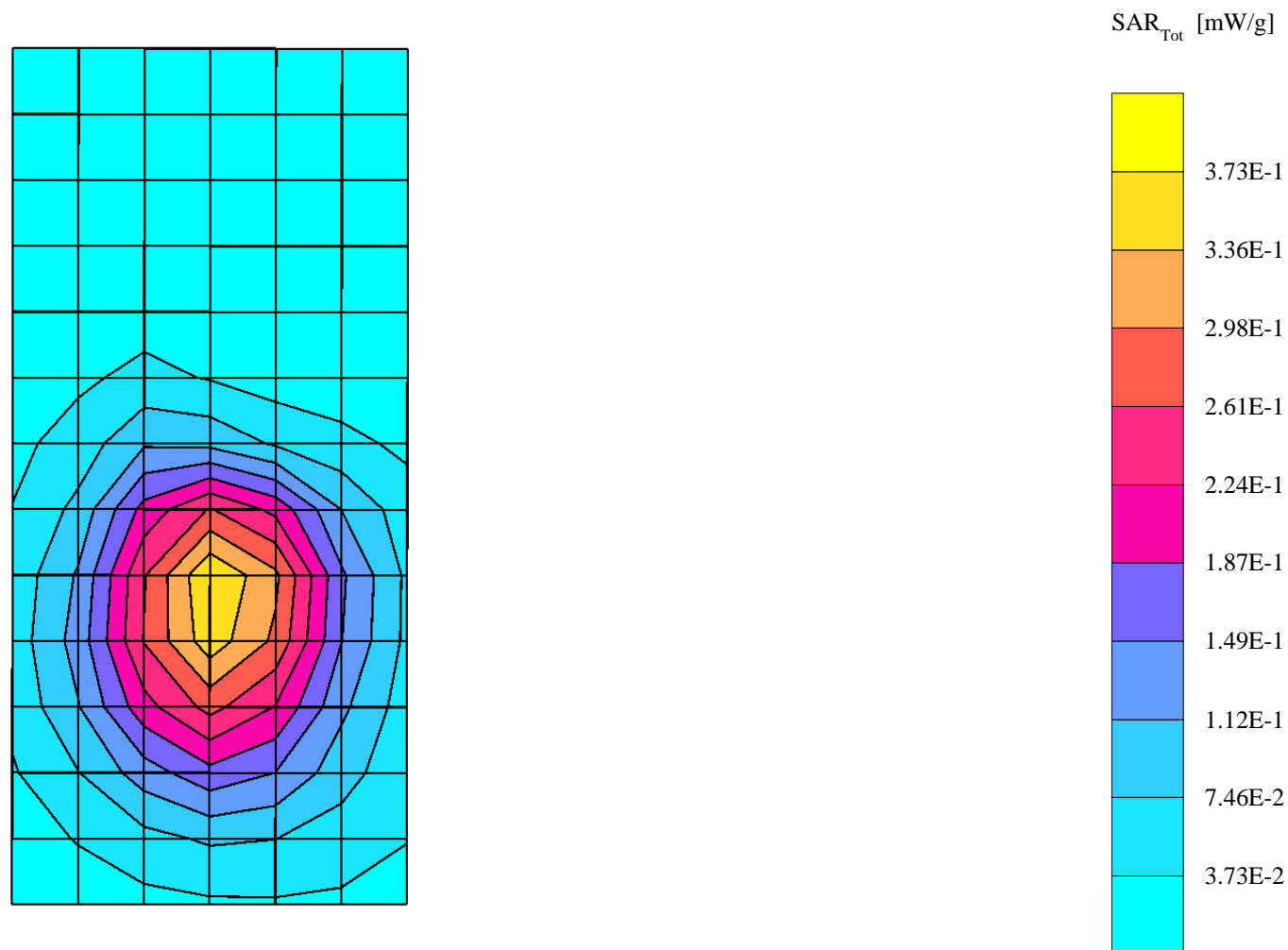
Probe: ET3DV6 - SN1514 - FCC Body; ConvF(6.10,6.10,6.10); Crest factor: 8.0; 835 MHz Head & Body:  $\sigma = 0.98$  mho/m  $\epsilon_r = 54.3$   $\rho = 1.00$  g/cm<sup>3</sup>

Cube 7x7x7: SAR (1g): 0.378 mW/g, SAR (10g): 0.263 mW/g, (Worst-case extrapolation)

Coarse: Dx = 15.0, Dy = 15.0, Dz = 10.0

Penetration depth: 15.7 (14.9, 16.7) [mm]

Powerdrift: -0.07 dB



s/n: 01100302

Ch# 661 / Pwr Step: 0

Type of Modulation: GSM 1900

Antenna Position: Internal

Battery Model #: SNN5677A

DEVICE POSITION (cheek or rotated): Rotated

R4 TP-1250 GLYCOL sam expanded (Rev. 2)-9Jan03 Phantom; Right Hand Section; Position: (90°,180°); Frequency: 1880 MHz

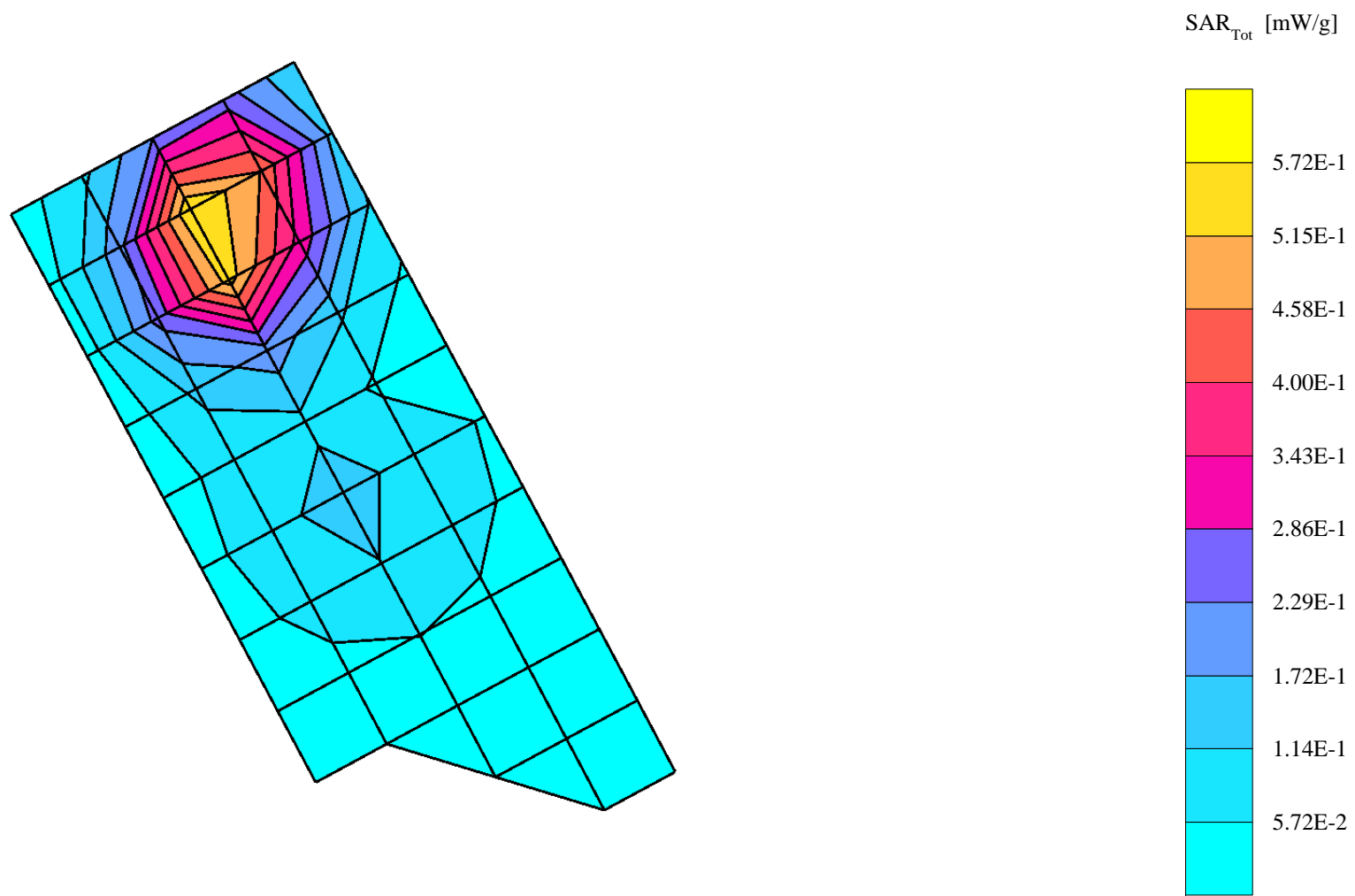
Probe: ET3DV6 - SN1514 - IEEE Head; ConvF(5.10,5.10,5.10); Crest factor: 8.0; 1880 MHz Head & Body:  $\sigma = 1.46$  mho/m  $\epsilon_r = 38.7$   $\rho = 1.00$  g/cm<sup>3</sup>

Cube 7x7x7: SAR (1g): 0.638 mW/g, SAR (10g): 0.345 mW/g, (Worst-case extrapolation)

Coarse: Dx = 15.0, Dy = 15.0, Dz = 15.0

Penetration depth: 8.8 (8.4, 9.5) [mm]

Powerdrift: -0.01 dB



s/n: 01100302

Ch# 661 / Pwr Step: 0

Type of Modulation: GSM 1900

Antenna Position: Internal

Battery Model #: SNN5677A

DEVICE POSITION (cheek or rotated): Cheek Accessory Model #: MOTFL0076K

R4 TP-1250 GLYCOL sam expanded (Rev. 2)-9Jan03 Phantom; Right Hand Section; Position: (90°,180°); Frequency: 1880 MHz

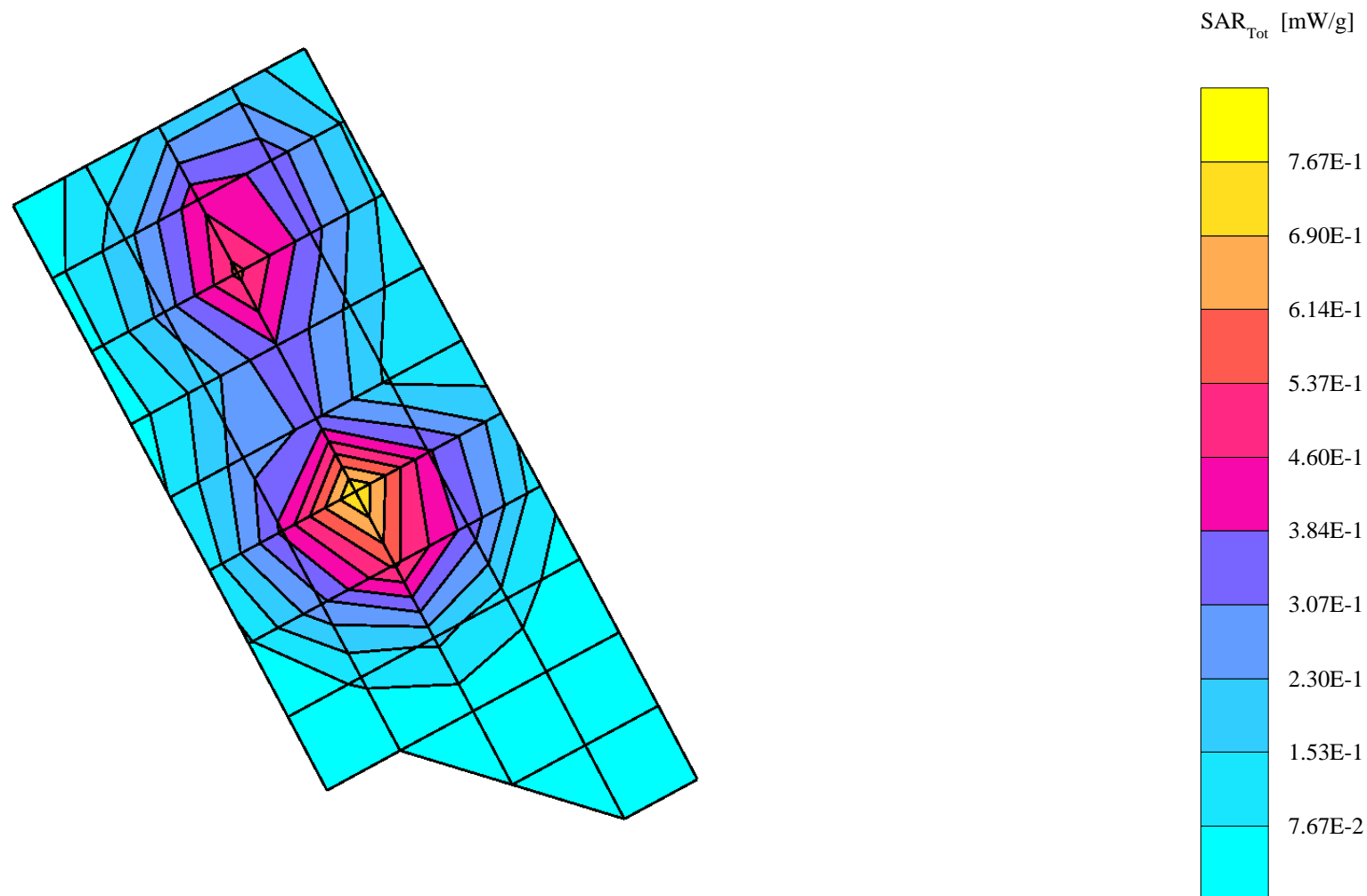
Probe: ET3DV6 - SN1514 - IEEE Head; ConvF(5.10,5.10,5.10); Crest factor: 8.0; 1880 MHz Head & Body:  $\sigma = 1.46$  mho/m  $\epsilon_r = 38.7$   $\rho = 1.00$  g/cm<sup>3</sup>

Cube 7x7x7: SAR (1g): 0.734 mW/g, SAR (10g): 0.420 mW/g, (Worst-case extrapolation)

Coarse: Dx = 15.0, Dy = 15.0, Dz = 15.0

Penetration depth: 11.4 (11.2, 11.7) [mm]

Powerdrift: -0.03 dB



s/n: 01100302

Ch# 661 / Pwr Step: 0

Type of Modulation: GSM 1900

DEVICE POSITION (cheek or rotated): Cheek    Accessory Model #: MOTFL0076K

2nd Hot Spot

R4 TP-1250 GLYCOL sam expanded (Rev. 2)-9Jan03 Phantom; Right Hand Section; Position: (90°,180°); Frequency: 1880 MHz

Probe: ET3DV6 - SN1514 - IEEE Head; ConvF(5.10,5.10,5.10); Crest factor: 8.0; 1880 MHz Head & Body:  $\sigma = 1.46$  mho/m  $\epsilon_r = 38.7$   $\rho = 1.00$  g/cm<sup>3</sup>

Cube 7x7x7: SAR (1g): 0.538 mW/g, SAR (10g): 0.302 mW/g, (Worst-case extrapolation)

Cube 7x7x7: Dx = 5.0, Dy = 5.0, Dz = 5.0

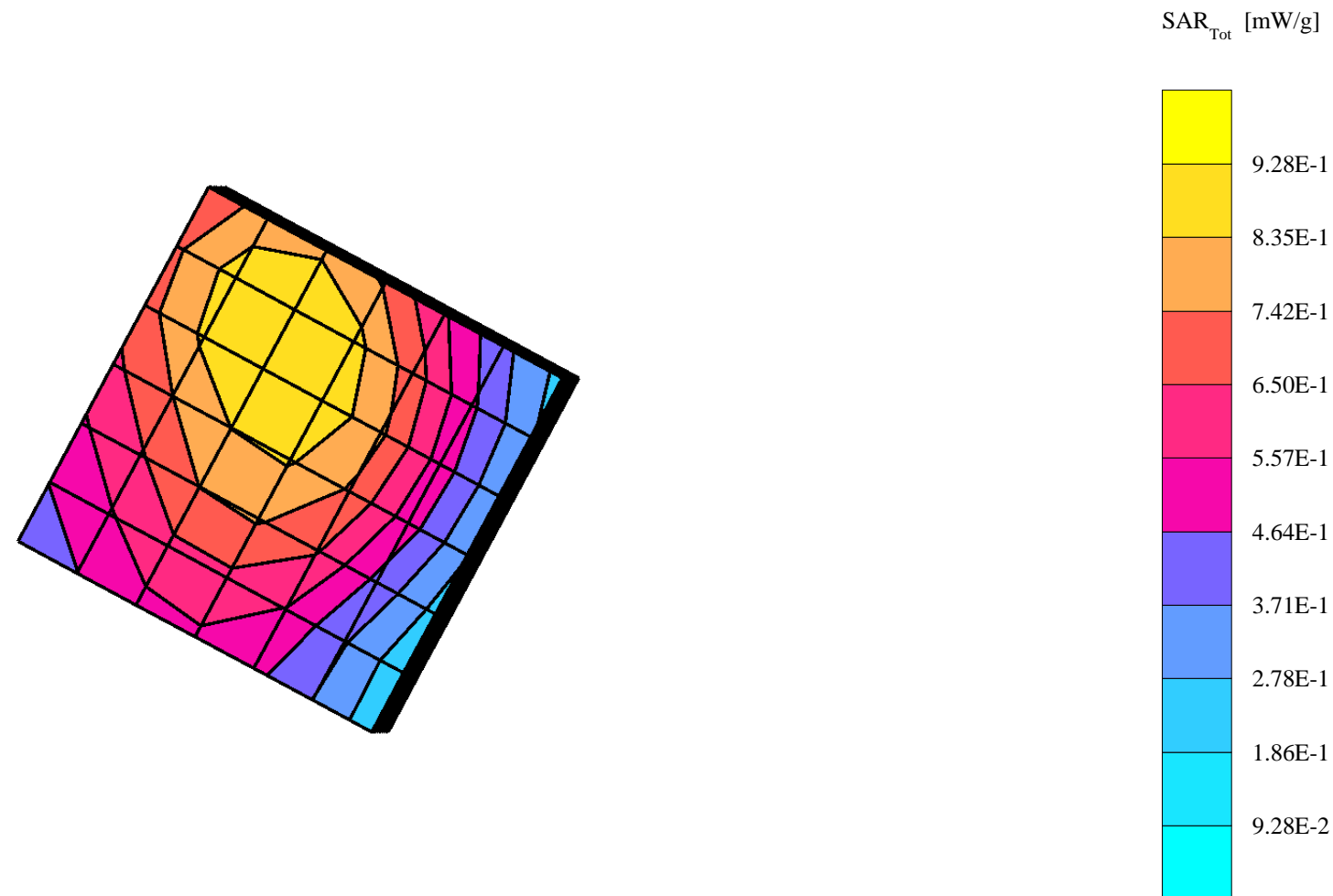
Penetration depth: 9.9 (9.5, 10.5) [mm]

Powerdrift: -0.08 dB

Antenna Position: Internal

Battery Model #: SNN5677A

Accessory Model #: MOTFL0076K



s/n: 01100302

Ch# 661 / Pwr Step: 0

Type of Modulation: GSM 1900

Antenna Position: Internal

Battery Model #: SNN5677A

DEVICE POSITION (cheek or rotated): Cheek Accessory Model #: MOTPL0205K

R4 TP-1250 GLYCOL sam expanded (Rev. 2)-9Jan03 Phantom; Right Hand Section; Position: (90°,180°); Frequency: 1880 MHz

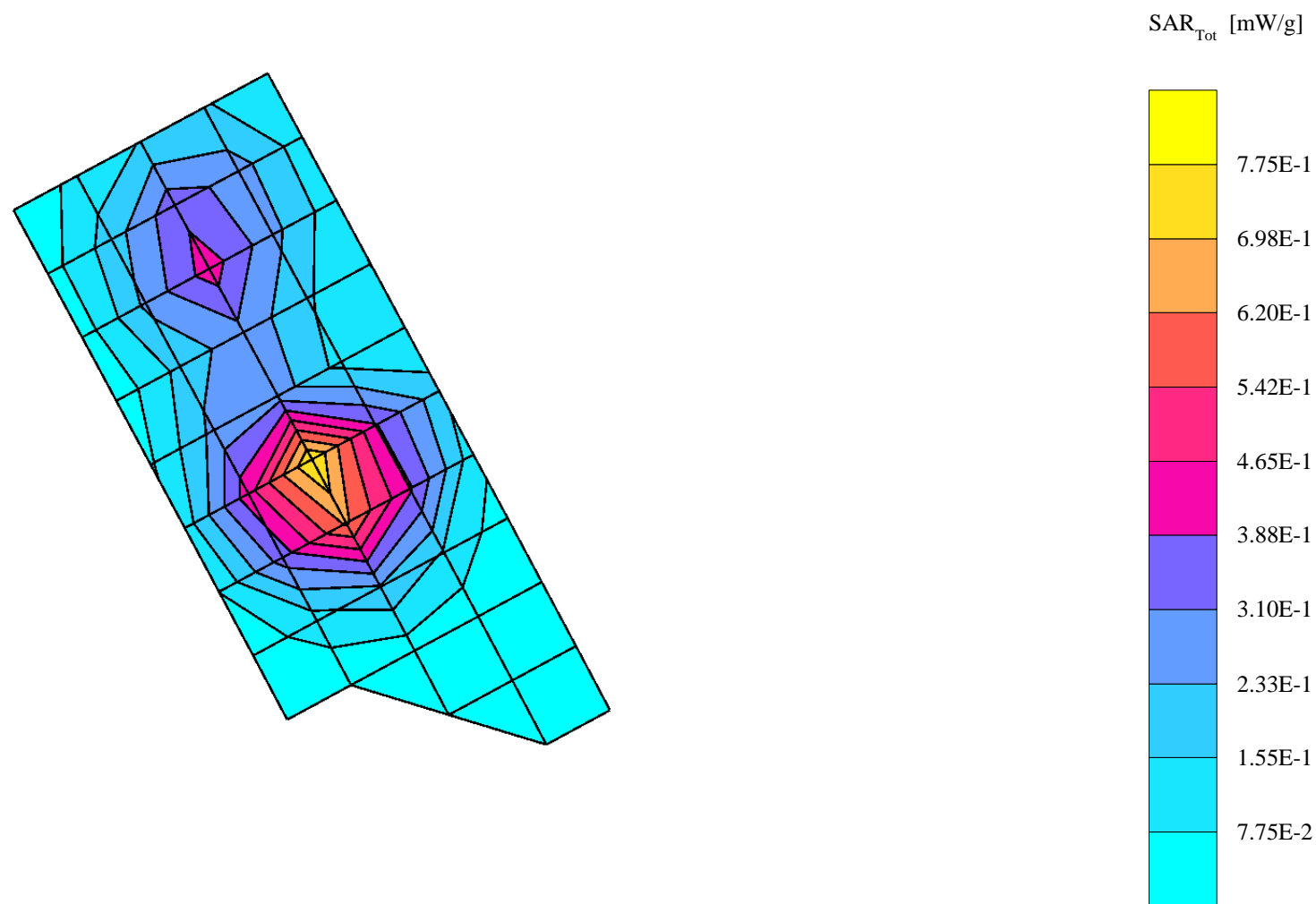
Probe: ET3DV6 - SN1514 - IEEE Head; ConvF(5.10,5.10,5.10); Crest factor: 8.0; 1880 MHz Head & Body:  $\sigma = 1.46$  mho/m  $\epsilon_r = 38.7$   $\rho = 1.00$  g/cm<sup>3</sup>

Cube 7x7x7: SAR (1g): 0.757 mW/g, SAR (10g): 0.438 mW/g, (Worst-case extrapolation)

Coarse: Dx = 15.0, Dy = 15.0, Dz = 15.0

Penetration depth: 11.4 (11.0, 11.9) [mm]

Powerdrift: -0.15 dB

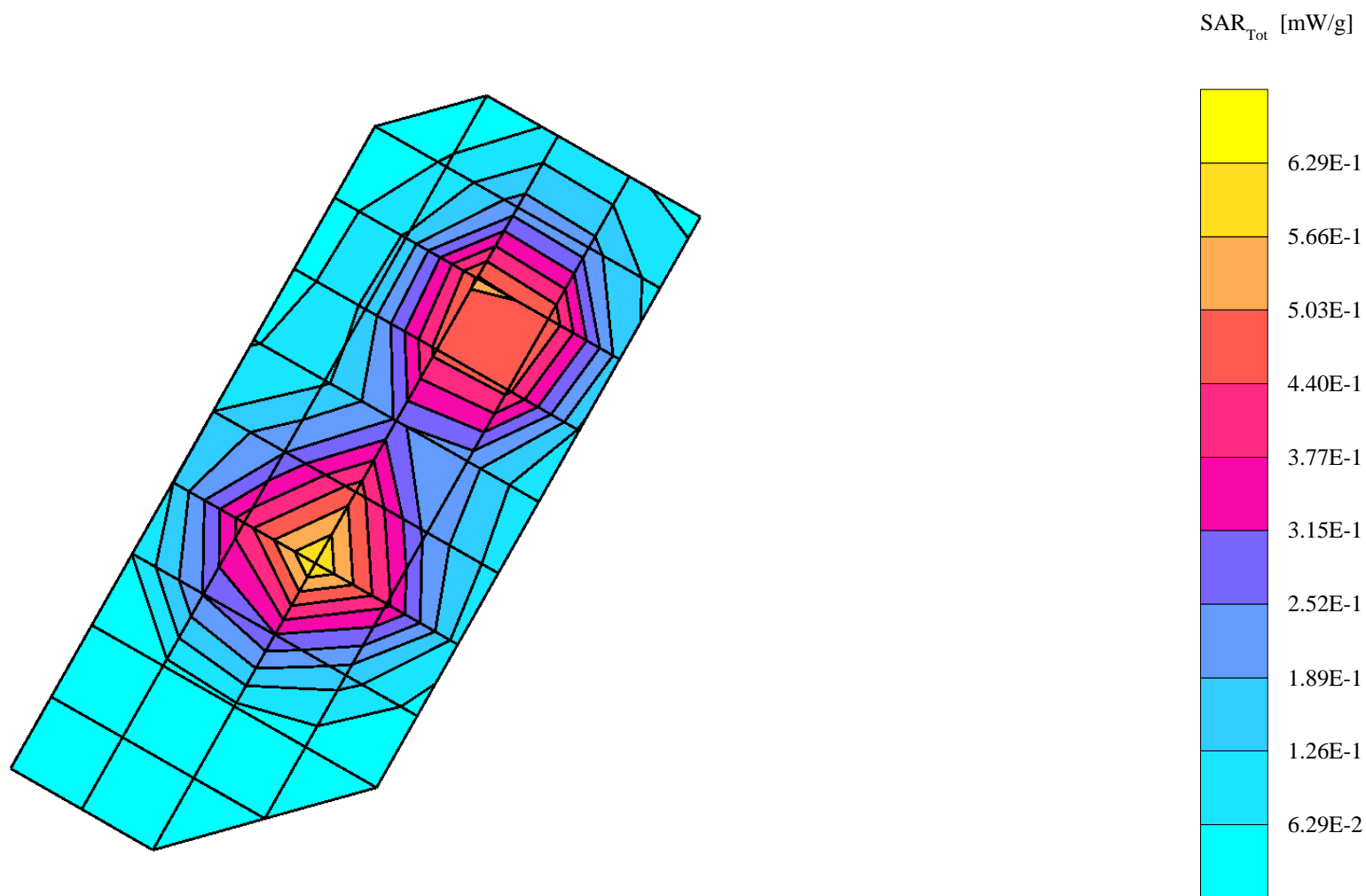


s/n: 01100302

Ch# 661 Pwr Step: 0 (OTA)  
Type of Modulation: 1900 GSM  
DEVICE POSITION: CHEEK

Antenna Position: INTERNAL  
Battery Model #: SNN5677A

R4 TP-1250 GLYCOL sam expanded (Rev. 2)-9Jan03 Phantom; Left Hand Section; Position: (90°,180°); Frequency: 1880 MHz  
Probe: ET3DV6 - SN1514 - IEEE Head; ConvF(5.10,5.10,5.10); Crest factor: 8.0; 1880 MHz Head & Body:  $\sigma = 1.46$  mho/m  $\epsilon_r = 38.7$   $\rho = 1.00$  g/cm<sup>3</sup>  
Cube 7x7x7: SAR (1g): 0.645 mW/g, SAR (10g): 0.380 mW/g, (Worst-case extrapolation)  
Coarse: Dx = 15.0, Dy = 15.0, Dz = 15.0  
Penetration depth: 12.2 (12.0, 12.4) [mm]  
Powerdrift: -0.07 dB

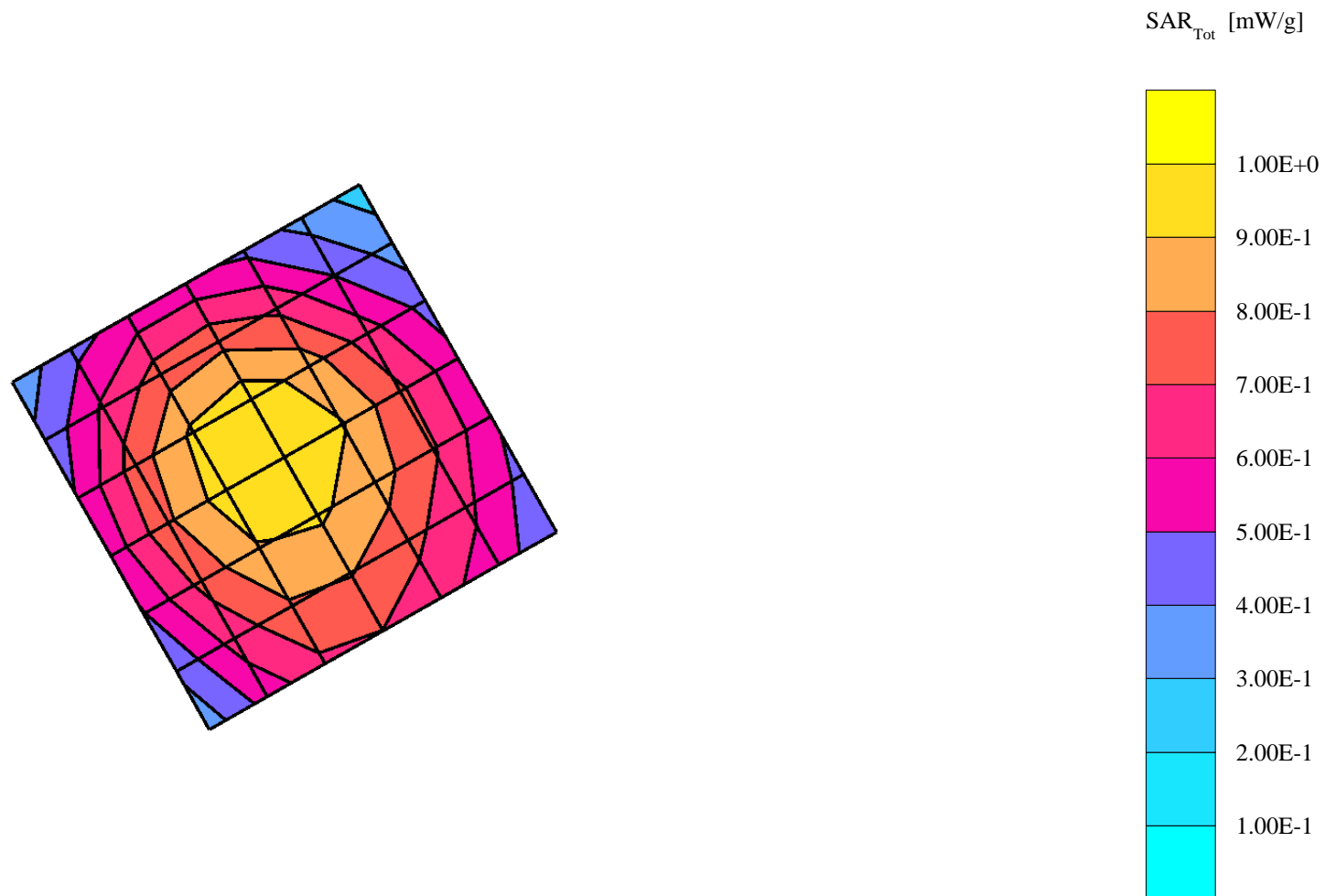


s/n: 01100302

Ch# 661 Pwr Step: 0 (OTA)  
Type of Modulation: 1900 GSM  
DEVICE POSITION: CHEEK

Antenna Position: INTERNAL  
Battery Model #: SNN5677A

2nd Hot Spot  
R4 TP-1250 GLYCOL sam expanded (Rev. 2)-9Jan03 Phantom; Left Hand Section; Position: (90°,180°); Frequency: 1880 MHz  
Probe: ET3DV6 - SN1514 - IEEE Head; ConvF(5.10,5.10,5.10); Crest factor: 8.0; 1880 MHz Head & Body:  $\sigma = 1.46$  mho/m  $\epsilon_r = 38.7$   $\rho = 1.00$  g/cm<sup>3</sup>  
Cube 7x7x7: SAR (1g): 0.570 mW/g, SAR (10g): 0.317 mW/g, (Worst-case extrapolation)  
Cube 7x7x7: Dx = 5.0, Dy = 5.0, Dz = 5.0  
Penetration depth: 8.9 (8.6, 9.5) [mm]  
Powerdrift: -0.02 dB

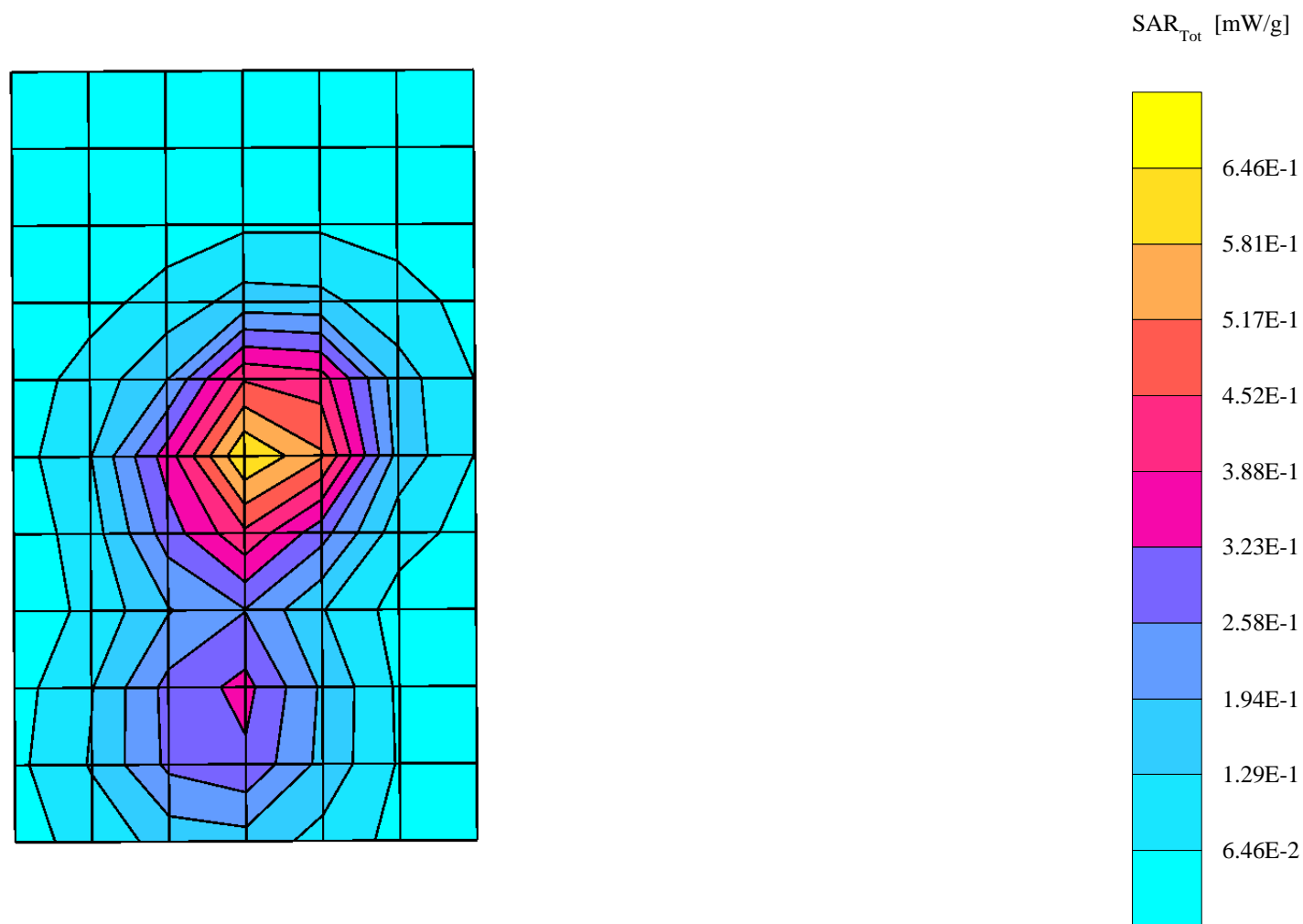


s/n: 01100302

Ch# 661 Pwr Step: 0 (OTA)  
Type of Modulation: 1900 GSM  
Accessory Model #: MOTPL0205K

Antenna Position: INTERNAL  
Battery Model #: SNN5677A

R4 - Amy Twin Phantom Rev.4 (22Aug02) Phantom; section 2 Section; Position: (0°,0°); Frequency: 1880 MHz  
Probe: ET3DV6 - SN1514 - FCC Body; ConvF(4.70,4.70,4.70); Crest factor: 8.0; 1880 MHz Head & Body:  $\sigma = 1.58$  mho/m  $\epsilon_r = 51.1$   $\rho = 1.00$  g/cm<sup>3</sup>  
Cube 7x7x7: SAR (1g): 0.672 mW/g, SAR (10g): 0.378 mW/g, (Worst-case extrapolation)  
Coarse: Dx = 15.0, Dy = 15.0, Dz = 10.0  
Penetration depth: 9.1 (8.3, 10.5) [mm]  
Powerdrift: -0.16 dB



s/n: 01100302

Ch# 190 / Pwr Step: 5

Type of Modulation: GSM 850

Antenna Position: Internal

Battery Model #: SNN5677A

DEVICE POSITION (cheek or rotated): Rotated

R4 TP-1131 SUGAR sam expanded (Rev. 2)-9Jan03 Phantom; Right Hand Section; Position: (90°,180°); Frequency: 837 MHz

Probe: ET3DV6 - SN1514 - IEEE Head; ConvF(6.30,6.30,6.30); Crest factor: 8.0; 835 MHz Head & Body:  $\sigma = 0.92$  mho/m  $\epsilon_r = 43.0$   $\rho = 1.00$  g/cm<sup>3</sup>

Cube 7x7x7: SAR (1g): 0.471 mW/g, SAR (10g): 0.315 mW/g, (Worst-case extrapolation)

Coarse: Dx = 15.0, Dy = 15.0, Dz = 15.0

Penetration depth: 13.9 (12.3, 15.8) [mm]

Powerdrift: 0.00 dB

