



**MOTOROLA**

September 08, 2004

Supplement to Class II Permissive Change SAR Test Report for Motorola portable cellular phone (FCC ID IHDT56ET1)

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## 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 IHDT56ET1). The requested information is addressed below in the same numbering sequence received.

1. Due to the relatively high SAR levels being reported, please submit the SAR data (tabular and plots) for the unreported channels:
  - (a) left head touch: remaining AMPS channels (both ANT ext and ANT ret), at least one channel for cellular CDMA ANT ext and at least one channel for cellular CDMA ANT ret (assuming SAR values less than 0.8, otherwise all 3 channels);
  - (b) right head touch: remaining channels for cellular CDMA (both ANT ext and ANT ret), at least one channel for AMPS ANT ext and at least one channel for AMPS ANT ret (assuming SAR values less than 0.8, otherwise all 3 channels);
  - (c) body worn: remaining AMPS channels (both ANT ext and ANT ret).
2. Please provide SAR plots for PCS right head tilt (channel 600, both ANT ext and ANT ret).

**Response:** The requested information is attached below and in the Supplement to Appendix 1, 2 and 3.

### Updated Electrical parameters of the tissue simulating liquid table for page 4

<i>f</i> (MHz)	Tissue type	Limits / Measured	Dielectric Parameters		
			$\epsilon_r$	$s$ (S/m)	Temp (°C)
835	Head	Measured, 27-Aug-04	43.0	0.92	20.0
		Measured, 27-Aug-04	42.6	0.92	20.0
		Measured, 30-Aug-04	42.5	0.91	19.9
		Measured, 1-Sep-04	42.1	0.91	20.0
		Measured, 2-Sep-04	42.1	0.91	19.7
		Measured, 3-Sep-04	41.8	0.90	19.5
		Recommended Limits	41.5 ±5%	0.90 ±5%	18-25
	Body	Measured, 27-Aug-04	53.6	0.98	20.0
		Measured, 30-Aug-04	53.6	0.97	20.0
		Measured, 3-Sep-04	53.2	0.97	20.3
Recommended Limits		55.2 ±5%	0.97 ±5%	18-25	
1880	Head	Measured, 26-Aug-04	39.3	1.45	19.1
		Measured, 28-Aug-04	39.1	1.44	19.0
		Recommended Limits	40.0 ±5%	1.40 ±5%	18-25
	Body	Measured, 27-Aug-04	52.4	1.59	19.3
		Measured, 29-Aug-04	52.0	1.58	19.7
		Recommended Limits	53.3 ±5%	1.52 ±5%	18-25

### Updated System Accuracy Verification table for page 5

f (MHz)	Description	SAR (W/kg), 1gram	Dielectric Parameters		Ambient Temp (°C)	Tissue Temp (°C)
			$\epsilon_r$	$\sigma$ (S/m)		
900	Measured, 27-Aug-04	11.3	42.2	0.98	20	20.1
	Measured, 30-Aug-04	11.2	41.8	0.97	20	20.0
	Measured, 1-Sep-04	11.4	41.3	0.97	20	20.0
	Measured, 2-Sep-04	11.5	41.3	0.97	20	20.0
	Measured, 3-Sep-04	11.56	41.0	0.97	20	20.0
	<b>Recommended Limits</b>	11.4	41.5 ±5%	0.97 ±5%	18-25	18-25
1800	Measured, 26-Aug-04	41.7	39.7	1.36	20	19.2
	Measured, 27-Aug-04	39.6	40.4	1.36	20	19.1
	Measured, 28-Aug-04	39.3	40.4	1.36	20	19.2
	Measured, 29-Aug-04	41.1	39.2	1.36	20	20.0
	<b>Recommended Limits</b>	40.7	40.0 ±5%	1.4 ±5%	18-25	18-25

### Updated Head Adjacent Test Results tables for page 7

f (MHz)	Description	Conducted Output Power (dBm)	Left Head (Cheek / Touch Position)							
			Ant Extended				Ant Retracted			
			Measured (W/kg)	Drift (dB)	Extrapolated (W/kg)	Simulate Temp (°C)	Measured (W/kg)	Drift (dB)	Extrapolated (W/kg)	Simulate Temp (°C)
Analog 800MHz	Channel 991	27.85	1.22	0.00	1.22	19.7	<b>1.33</b>	<b>-0.02</b>	<b>1.34</b>	<b>19.7</b>
	Channel 384	27.78	<b>1.39</b>	<b>-0.12</b>	<b>1.43</b>	<b>20.1</b>	1.30	-0.09	1.33	20.0
	Channel 799	27.80	1.14	-0.07	1.16	19.6	1.30	-0.02	1.31	19.6
Digital 800MHz	Channel 1013	25.01	1.35	-0.03	1.36	19.8	<b>1.37</b>	<b>-0.04</b>	<b>1.38</b>	<b>19.8</b>
	Channel 384	25.00	<b>1.41</b>	<b>0.03</b>	<b>1.41</b>	<b>20.0</b>	1.33	0.06	1.33	19.7
	Channel 777	25.00	1.25	0.00	1.25	19.7	1.36	-0.01	1.36	19.7
Digital 1900MHz	Channel 25	25.01					<b>1.11</b>	<b>-0.12</b>	<b>1.14</b>	<b>19.3</b>
	Channel 600	25.00	<b>0.453</b>	<b>-0.51</b>	<b>0.51</b>	<b>19.2</b>	0.969	0.16	0.97	19.2
	Channel 1175	24.92					0.888	-0.24	0.94	19.2

**Table 1: SAR measurement results for the portable cellular telephone FCC ID IHDT56ET1 at highest possible output power. Measured against the left head in the Cheek/Touch Position.**

f (MHz)	Description	Conducted Output Power (dBm)	Right Head (Cheek / Touch Position)							
			Ant Extended				Ant Retracted			
			Measured (W/kg)	Drift (dB)	Extrapolated (W/kg)	Simulate Temp (°C)	Measured (W/kg)	Drift (dB)	Extrapolated (W/kg)	Simulate Temp (°C)
Analog 800MHz	Channel 991	27.85	1.24	0.06	1.24	19.1	1.32	-0.12	1.36	19.4
	Channel 384	27.78	<b>1.38</b>	<b>0.20</b>	<b>1.38</b>	<b>19.4</b>	1.30	-0.13	1.34	19.3
	Channel 799	27.80	1.19	-0.07	1.21	19.2	<b>1.33</b>	<b>-0.22</b>	<b>1.40</b>	<b>19.3</b>
Digital 800MHz	Channel 1013	25.01	<b>1.45</b>	<b>-0.18</b>	<b>1.51</b>	<b>19.2</b>	1.43	0.01	1.43	19.2
	Channel 384	25.00	1.48	0.17	1.48	19.7	1.35	-0.46	1.50	19.4
	Channel 777	25.00	1.28	-0.23	1.35	20.1	<b>1.55</b>	<b>-0.03</b>	<b>1.55</b>	<b>20.1</b>
Digital 1900MHz	Channel 25	25.01					1.13	0.09	1.13	19.1
	Channel 600	25.00	<b>0.609</b>	<b>-0.18</b>	<b>0.63</b>	<b>19.2</b>	<b>1.22</b>	<b>-0.23</b>	<b>1.29</b>	<b>19.1</b>
	Channel 1175	24.92					0.951	-0.11	0.98	19.2

**Table 2: SAR measurement results for the portable cellular telephone FCC ID IHDT56ET1 at highest possible output power. Measured against the right head in the Cheek/Touch Position.**

### Updated Body Worn Test Results table for page 9

f (MHz)	Description	Conducted Output Power (dBm)	Body Worn							
			Ant Extended				Ant Retracted			
			Measured (W/kg)	Drift (dB)	Extrapolated (W/kg)	Simulate Temp (°C)	Measured (W/kg)	Drift (dB)	Extrapolated (W/kg)	Simulate Temp (°C)
Analog 800MHz	Channel 991	27.85	<b>1.28</b>	<b>-0.17</b>	<b>1.33</b>	<b>20.0</b>	1.37	-0.05	1.39	19.9
	Channel 384	27.78	1.02	0.25	1.02	20.2	1.07	-0.04	1.08	20.0
	Channel 799	27.80	0.987	-0.23	1.04	20.3	<b>1.44</b>	<b>-0.12</b>	<b>1.48</b>	<b>20.3</b>
Digital 800MHz	Channel 1013	25.01								
	Channel 384	25.00	<b>0.575</b>	<b>0.09</b>	<b>0.58</b>	<b>20.0</b>	<b>0.621</b>	<b>-0.09</b>	<b>0.63</b>	<b>20.1</b>
	Channel 777	25.00								
Digital 1900MHz	Channel 25	25.01					0.705	-0.01	0.71	19.3
	Channel 600	25.00	<b>0.309</b>	<b>-0.17</b>	<b>0.32</b>	<b>19.5</b>	<b>0.777</b>	<b>-0.23</b>	<b>0.82</b>	<b>19.7</b>
	Channel 1175	24.92					0.480	-0.11	0.49	19.3

**Table 5: SAR measurement results for the portable cellular telephone FCC ID IHDT56ET1 at highest possible output power. Measured against the body.**

**Supplement to Appendix 1**

**SAR distribution comparison for the system accuracy verification**

# Dipole 900 MHz

900 MHz System Performance Check / Dipole Sn# 96

PM1 Power = 200mW

Sim.Temp@meas=20.0\*C Sim.Temp@SPC = 20.0\*C Room Temp @ SPC = 20.0\*C

R4 TP-1131 SUGAR SAM Expanded (Rev. 2)-9Jan03 Phantom; Flat Section; Position: (90°,90°); Frequency: 900 MHz

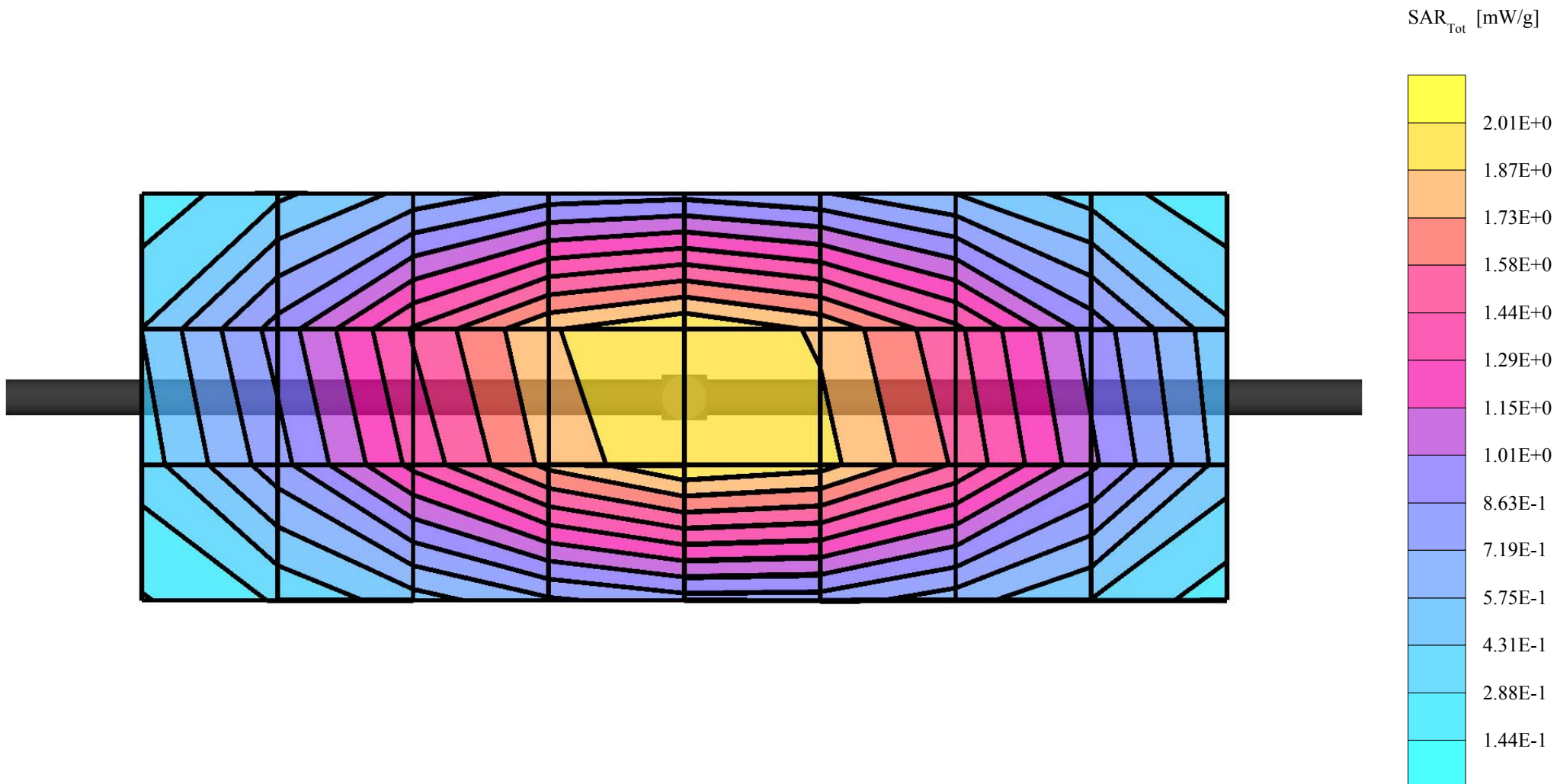
Probe: ET3DV6 - SN1514-VALADATION4; ConvF(6.08,6.08,6.08); Crest factor: 1.0; 900 MHz VALIDATION:  $\sigma = 0.97$  mho/m  $\epsilon_r = 41.3$   $\rho = 1.00$  g/cm<sup>3</sup>

Cubes (2): SAR (1g): 2.30 mW/g  $\pm 0.01$  dB, SAR (10g): 1.44 mW/g  $\pm 0.01$  dB, (Worst-case extrapolation)

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

Penetration depth: 11.3 (10.4, 12.6) [mm]

Powerdrift: -0.07 dB



# Dipole 900 MHz

900 MHz System Performance Check / Dipole Sn# 96

PM1 Power = 200mW

Sim.Temp@meas=20.0\*C Sim.Temp@SPC = 20.0\*C Room Temp @ SPC = 20.0\*C

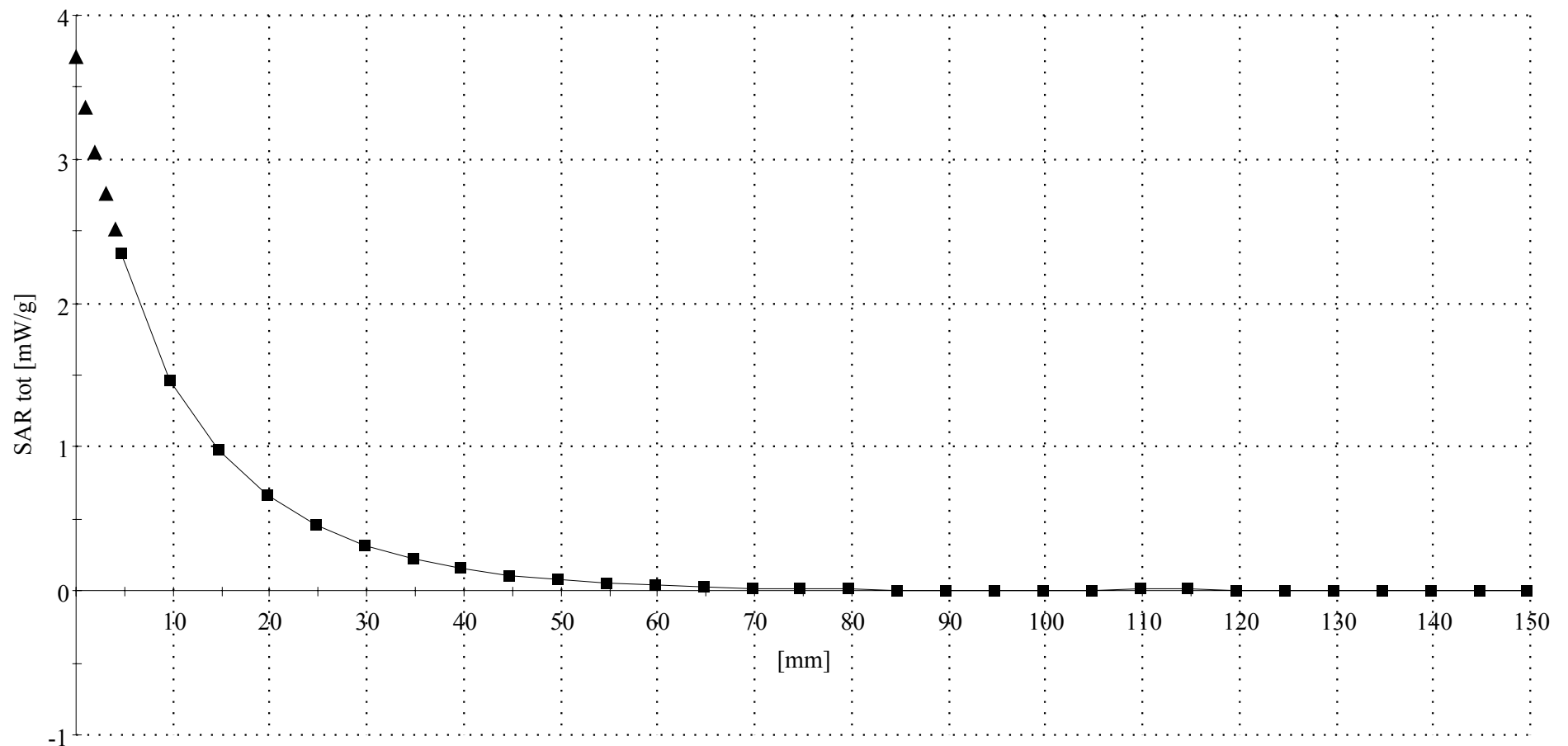
R4 TP-1131 SUGAR SAM Expanded (Rev. 2)-9Jan03 Phantom; Section; Position: ; Frequency: 900 MHz

Probe: ET3DV6 - SN1514-VALADATION4; ConvF(6.08,6.08,6.08); Crest factor: 1.0; 900 MHz VALIDATION:  $\sigma = 0.97$  mho/m  $\epsilon_r = 41.3$   $\rho = 1.00$  g/cm<sup>3</sup>

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Z-Axis: Dx = 0.0, Dy = 0.0, Dz = 5.0

Penetration depth: 11.3 (10.4, 12.5) [mm]



# Dipole 900 MHz

900 MHz System Performance Check / Dipole Sn# 096

PM1 Power = 199mW

Sim.Temp@meas=20.0C Sim.Temp@SPC = 20.0C Room Temp @ SPC = 20C

R4 TP-1131 SUGAR SAM Expanded (Rev. 2)-9Jan03 Phantom; Flat Section; Position: (90°,90°); Frequency: 900 MHz

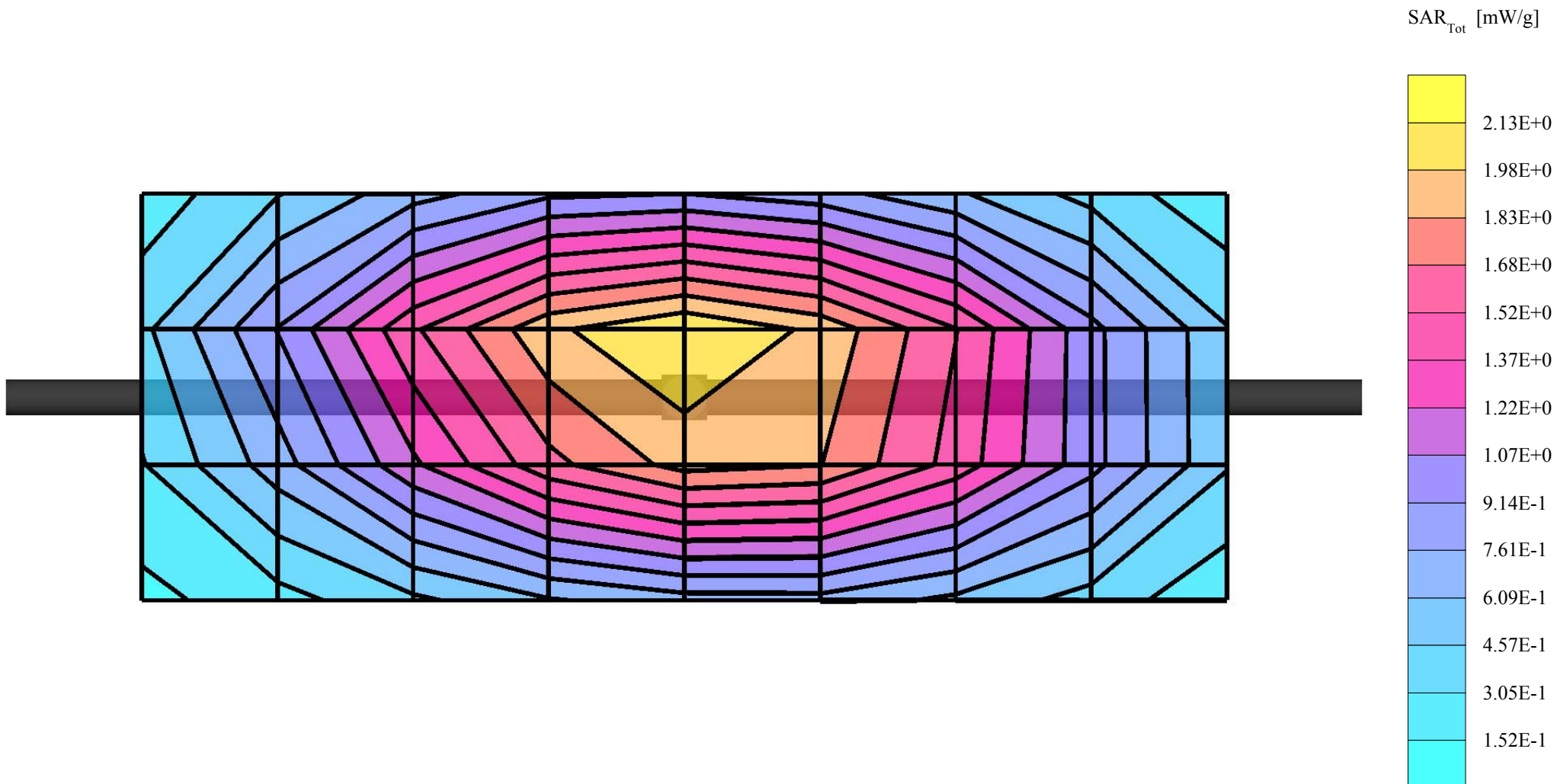
Probe: ET3DV6 - SN1514-VALADATION4; ConvF(6.08,6.08,6.08); Crest factor: 1.0; 900 MHz VALIDATION:  $\sigma = 0.97$  mho/m  $\epsilon_r = 41.0$   $\rho = 1.00$  g/cm<sup>3</sup>

Cubes (2): SAR (1g): 2.30 mW/g  $\pm 0.02$  dB, SAR (10g): 1.45 mW/g  $\pm 0.02$  dB, (Worst-case extrapolation)

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

Penetration depth: 11.5 (10.7, 12.7) [mm]

Powerdrift: -0.06 dB



# Dipole 900 MHz

900 MHz System Performance Check / Dipole Sn# 096

PM1 Power = 199mW

Sim.Temp@meas=20.0C Sim.Temp@SPC = 20.0C Room Temp @ SPC = 20C

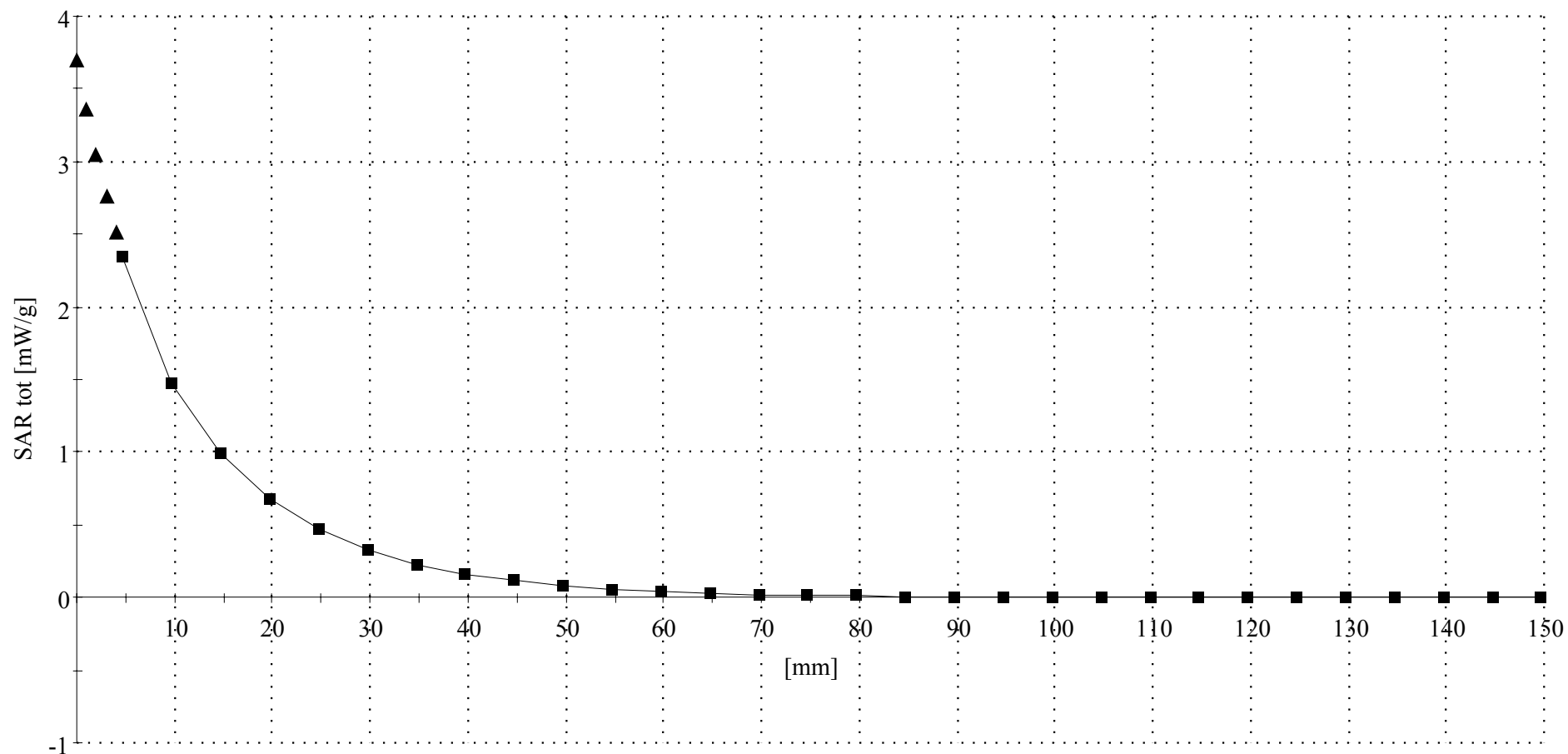
R4 TP-1131 SUGAR SAM Expanded (Rev. 2)-9Jan03 Phantom; Section; Position: ; Frequency: 900 MHz

Probe: ET3DV6 - SN1514-VALADATION4; ConvF(6.08,6.08,6.08); Crest factor: 1.0; 900 MHz VALIDATION:  $\sigma = 0.97$  mho/m  $\epsilon_r = 41.0$   $\rho = 1.00$  g/cm<sup>3</sup>

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Z-Axis: Dx = 0.0, Dy = 0.0, Dz = 5.0

Penetration depth: 11.4 (10.5, 12.7) [mm]



**Supplement to Appendix 2**

**SAR distribution plots for Phantom Head Adjacent Use**

sn: A8EE925D

Ch# 799 / Pwr Step: 02 (OTA)

Type of Modulation: 800 AMPS

DEVICE POSITION: Cheek touch

Accessory Model #: N/A

R4 TP-1131 SUGAR SAM Expanded (Rev. 2)-9Jan03 Phantom; Left Hand Section; Position: (90°,180°); Frequency: 849 MHz

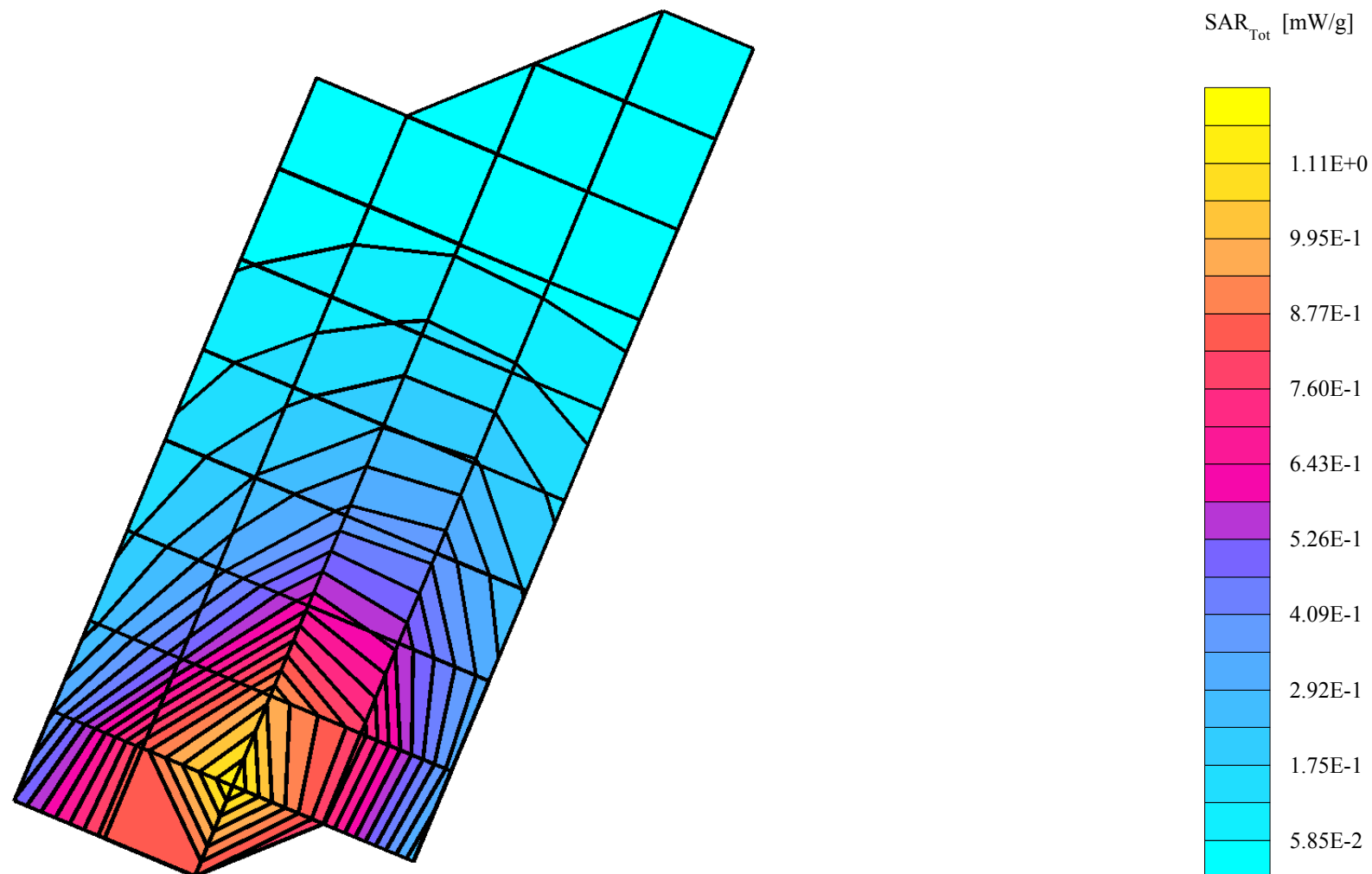
Probe: ET3DV6 - SN1514-IEEE Head2; ConvF(6.08,6.08,6.08); Crest factor: 1.0; 835 MHz Head & Body:  $\sigma = 0.90$  mho/m  $\epsilon_r = 41.8$   $\rho = 1.00$  g/cm<sup>3</sup>

Cube 7x7x7: SAR (1g): 1.14 mW/g, SAR (10g): 0.771 mW/g, (Worst-case extrapolation)

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

Penetration depth: 15.7 (13.8, 17.9) [mm]

Powerdrift: -0.07 dB

Antenna Position: EXT  
Battery Model #: SNN5654A (EXT)

sn: A8EE925D

Ch# 991 / Pwr Step: 2

Type of Modulation: Analog 800

DEVICE POSITION (check or rotated): Check

Accessory Model #: N/A

Simulate Temp when Measured: 19.7C

Simulate Temp after Test: 19.1C

R4 TP-1131 SUGAR SAM Expanded (Rev. 2)-9Jan03 Phantom; RH Front Tilt 20 Section; Position: (80°,180°); Frequency: 824 MHz

Probe: ET3DV6 - SN1514-IEEE Head2; ConvF(6.08,6.08,6.08); Crest factor: 1.0; 835 MHz Head & Body:  $\sigma = 0.91$  mho/m  $\epsilon_r = 42.1$   $\rho = 1.00$  g/cm<sup>3</sup>

Cube 7x7x7: SAR (1g): 1.24 mW/g, SAR (10g): 0.825 mW/g, (Worst-case extrapolation)

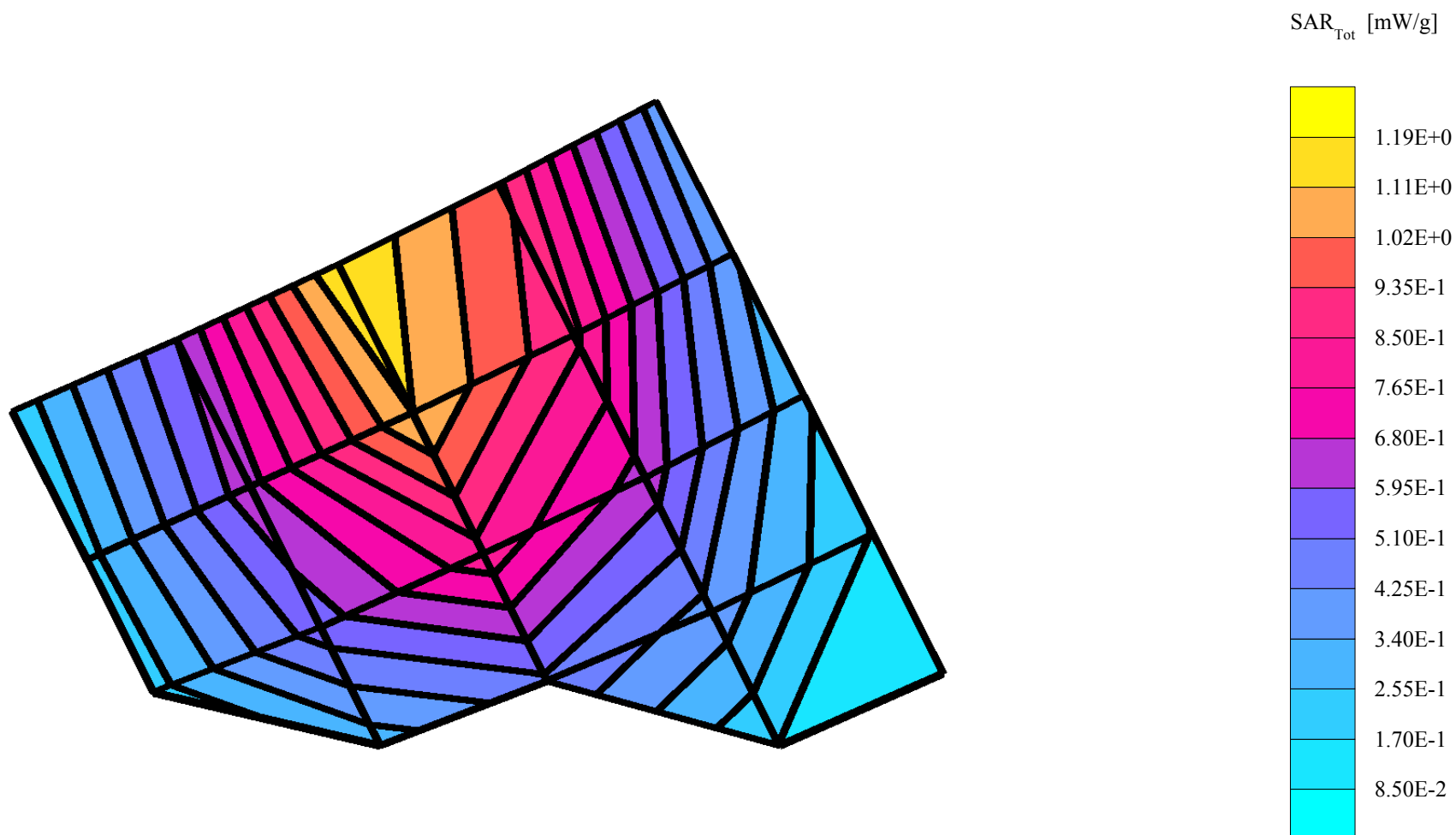
Coarse: Dx = 15.0, Dy = 15.0, Dz = 15.0

Penetration depth: 14.9 (14.1, 16.0) [mm]

Powerdrift: 0.06 dB

Antenna Position: Extended

Battery Model #: SN5654A



sn: A8EE925D

Ch# 799 / Pwr Step: 2

Type of Modulation: Analog 800

DEVICE POSITION (check or rotated): Check

Accessory Model #: N/A

Simulate Temp when Measured: 19.7C

Simulate Temp after Test: 19.3C

R4 TP-1131 SUGAR SAM Expanded (Rev. 2)-9Jan03 Phantom; RH Front Tilt 20 Section; Position: (80°,180°); Frequency: 849 MHz

Probe: ET3DV6 - SN1514-IEEE Head2; ConvF(6.08,6.08,6.08); Crest factor: 1.0; 835 MHz Head & Body:  $\sigma = 0.91$  mho/m  $\epsilon_r = 42.1$   $\rho = 1.00$  g/cm<sup>3</sup>

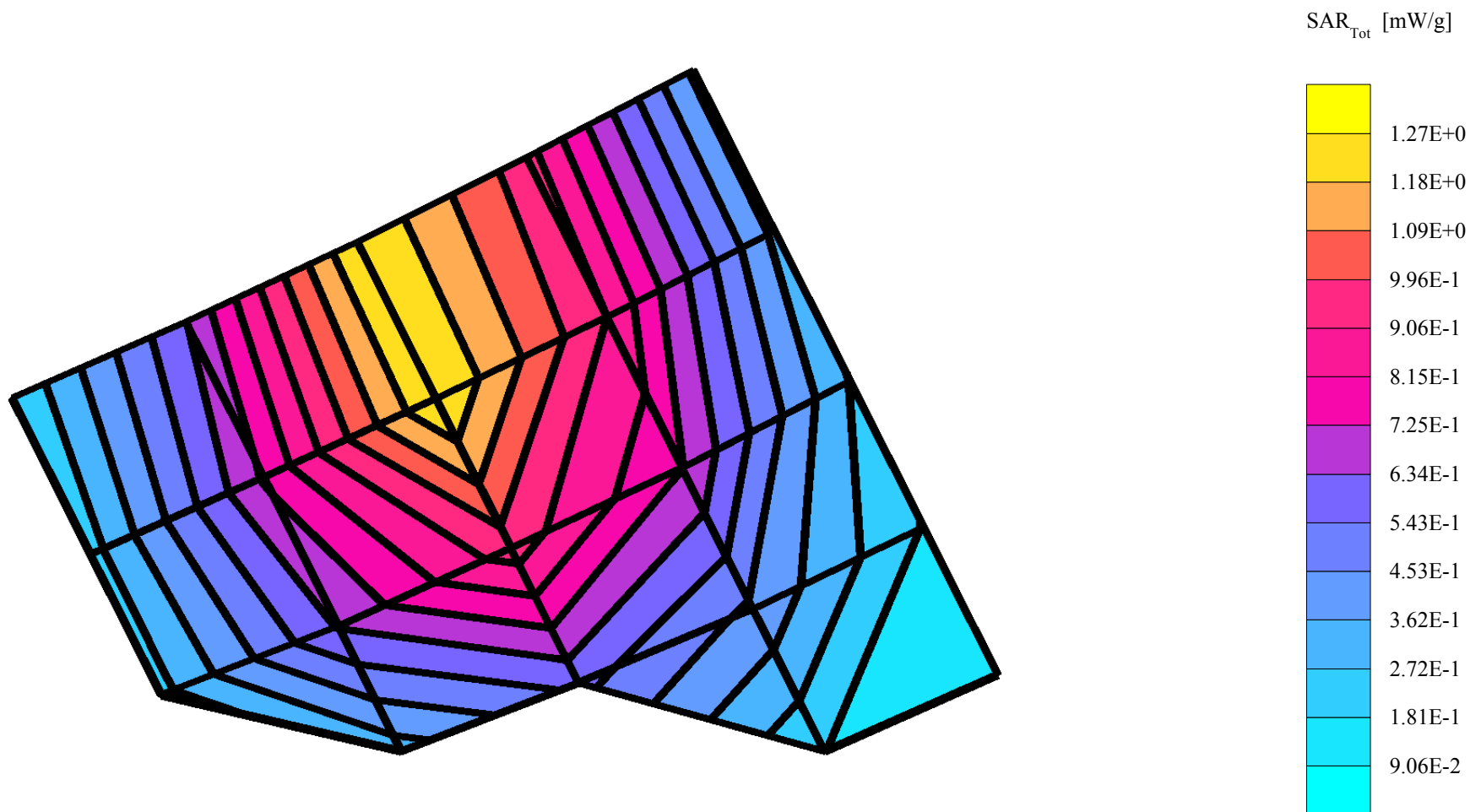
Cube 7x7x7: SAR (1g): 1.33 mW/g, SAR (10g): 0.873 mW/g, (Worst-case extrapolation)

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

Penetration depth: 14.6 (13.1, 16.1) [mm]

Powerdrift: -0.22 dB

Antenna Position: Retracted  
Battery Model #: SN5654A



sn: A8EE925D

Ch# 799 / Pwr Step: 2

Type of Modulation: Analog 800

DEVICE POSITION (cheek or rotated): Cheek

Accessory Model #: N/A

Simulate Temp when Measured: 19.7C

Simulate Temp after Test: 19.2C

R4 TP-1131 SUGAR SAM Expanded (Rev. 2)-9Jan03 Phantom; RH Front Tilt 20 Section; Position: (80°,180°); Frequency: 849 MHz

Probe: ET3DV6 - SN1514-IEEE Head2; ConvF(6.08,6.08,6.08); Crest factor: 1.0; 835 MHz Head & Body:  $\sigma = 0.91$  mho/m  $\epsilon_r = 42.1$   $\rho = 1.00$  g/cm<sup>3</sup>

Cube 7x7x7: SAR (1g): 1.19 mW/g, SAR (10g): 0.787 mW/g, (Worst-case extrapolation)

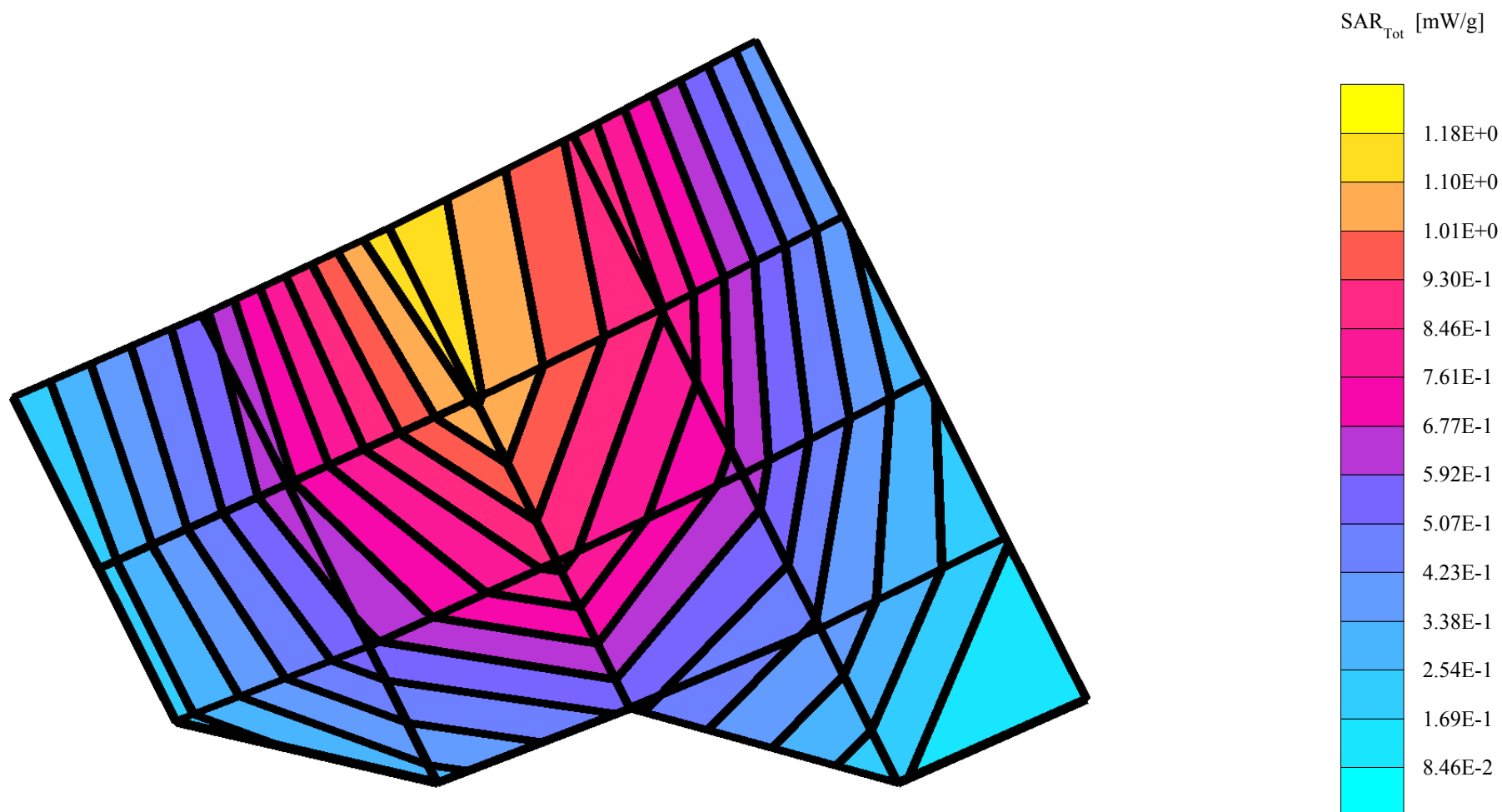
Coarse: Dx = 15.0, Dy = 15.0, Dz = 15.0

Penetration depth: 13.8 (12.6, 15.4) [mm]

Powerdrift: -0.07 dB

Antenna Position: Extended

Battery Model #: SN5654A



sn: A8EE925D

Ch# 384 / Pwr Step: 2

Type of Modulation: Analog 800

DEVICE POSITION (check or rotated): Check

Accessory Model #: N/A

Simulate Temp when Measured: 19.7C

Antenna Position: Retracted

Battery Model #: SN5654A

Simulate Temp after Test: 19.3C

R4 TP-1131 SUGAR SAM Expanded (Rev. 2)-9Jan03 Phantom; RH Front Tilt 20 Section; Position: (80°,180°); Frequency: 837 MHz

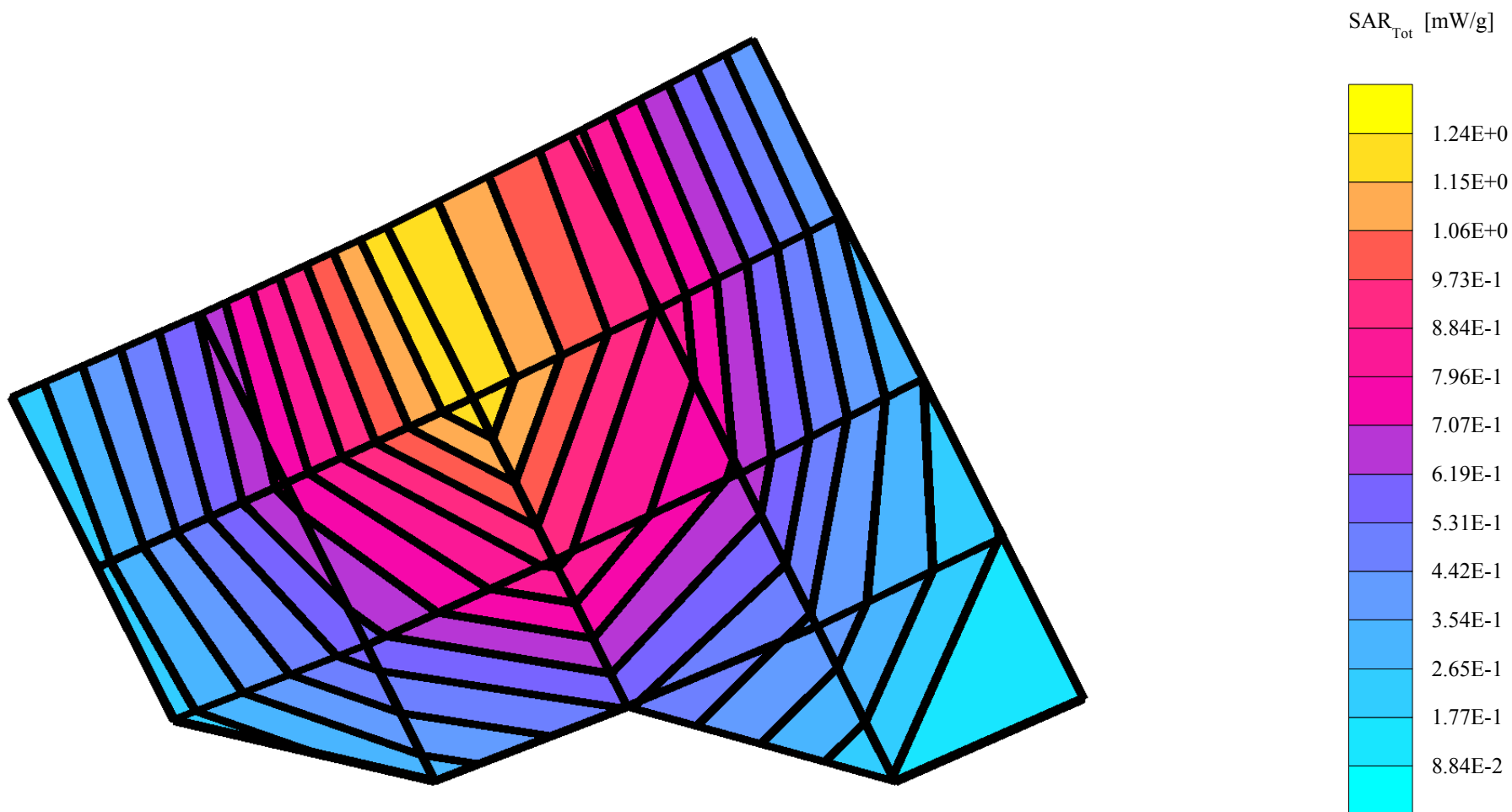
Probe: ET3DV6 - SN1514-IEEE Head2; ConvF(6.08,6.08,6.08); Crest factor: 1.0; 835 MHz Head & Body:  $\sigma = 0.91$  mho/m  $\epsilon_r = 42.1$   $\rho = 1.00$  g/cm<sup>3</sup>

Cube 7x7x7: SAR (1g): 1.30 mW/g, SAR (10g): 0.861 mW/g, (Worst-case extrapolation)

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

Penetration depth: 15.1 (14.7, 15.6) [mm]

Powerdrift: -0.13 dB



sn: A8EE925D

Ch# 384 / Pwr Step: 2

Type of Modulation: Analog 800

DEVICE POSITION (check or rotated): Check

Accessory Model #: N/A

Simulate Temp when Measured: 19.7C

Antenna Position: Extended

Battery Model #: SN5654A

Simulate Temp after Test: 19.4C

R4 TP-1131 SUGAR SAM Expanded (Rev. 2)-9Jan03 Phantom; RH Front Tilt 20 Section; Position: (80°,180°); Frequency: 837 MHz

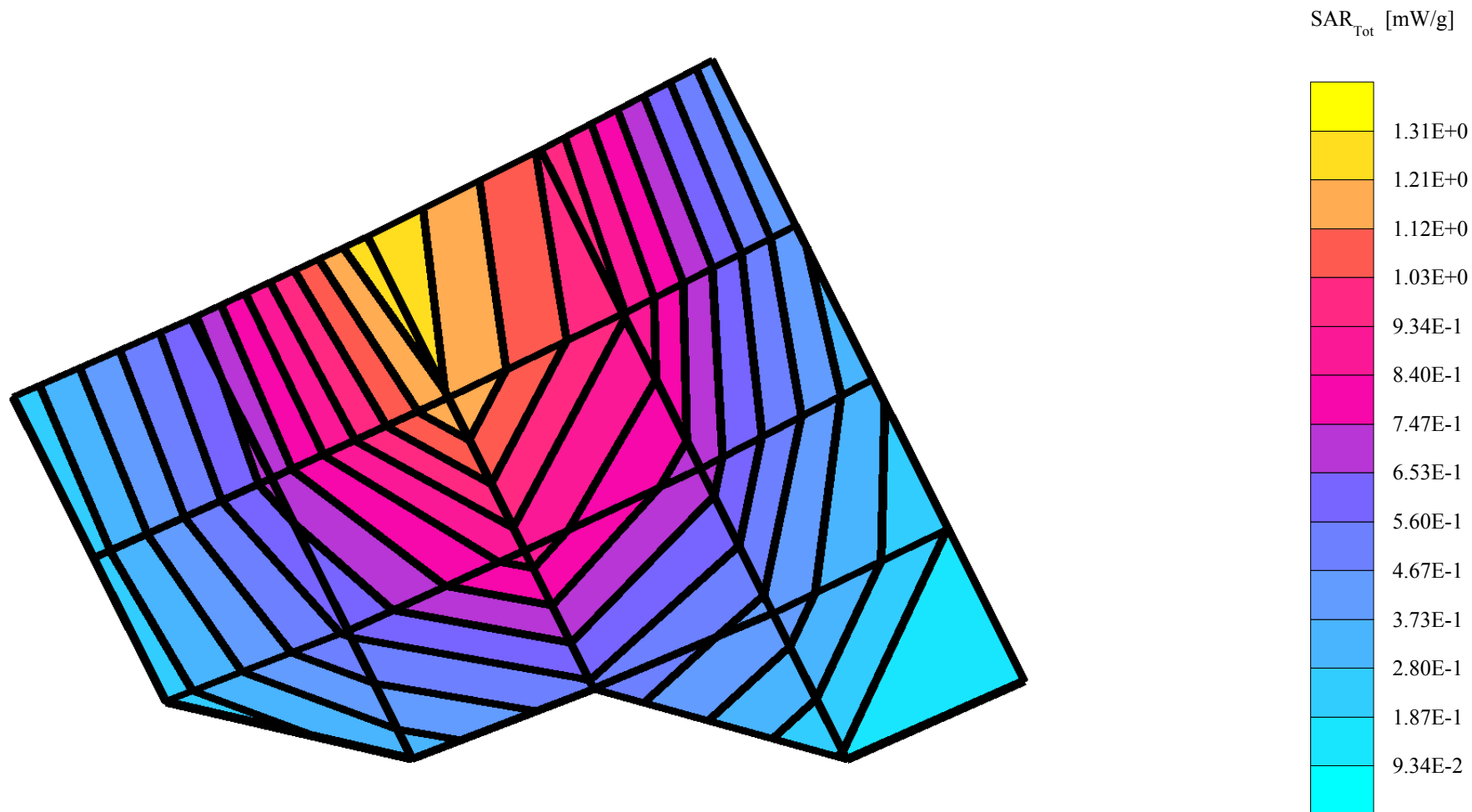
Probe: ET3DV6 - SN1514-IEEE Head2; ConvF(6.08,6.08,6.08); Crest factor: 1.0; 835 MHz Head & Body:  $\sigma = 0.91$  mho/m  $\epsilon_r = 42.1$   $\rho = 1.00$  g/cm<sup>3</sup>

Cube 7x7x7: SAR (1g): 1.38 mW/g, SAR (10g): 0.905 mW/g, (Worst-case extrapolation)

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

Penetration depth: 14.2 (13.0, 15.5) [mm]

Powerdrift: 0.20 dB



sn: A8EE925D

Ch# 991 / Pwr Step: 02 (OTA)

Type of Modulation: 800 AMPS

DEVICE POSITION: Cheek touch

Accessory Model #: N/A

R4 TP-1131 SUGAR SAM Expanded (Rev. 2)-9Jan03 Phantom; Left Hand Section; Position: (90°,180°); Frequency: 824 MHz

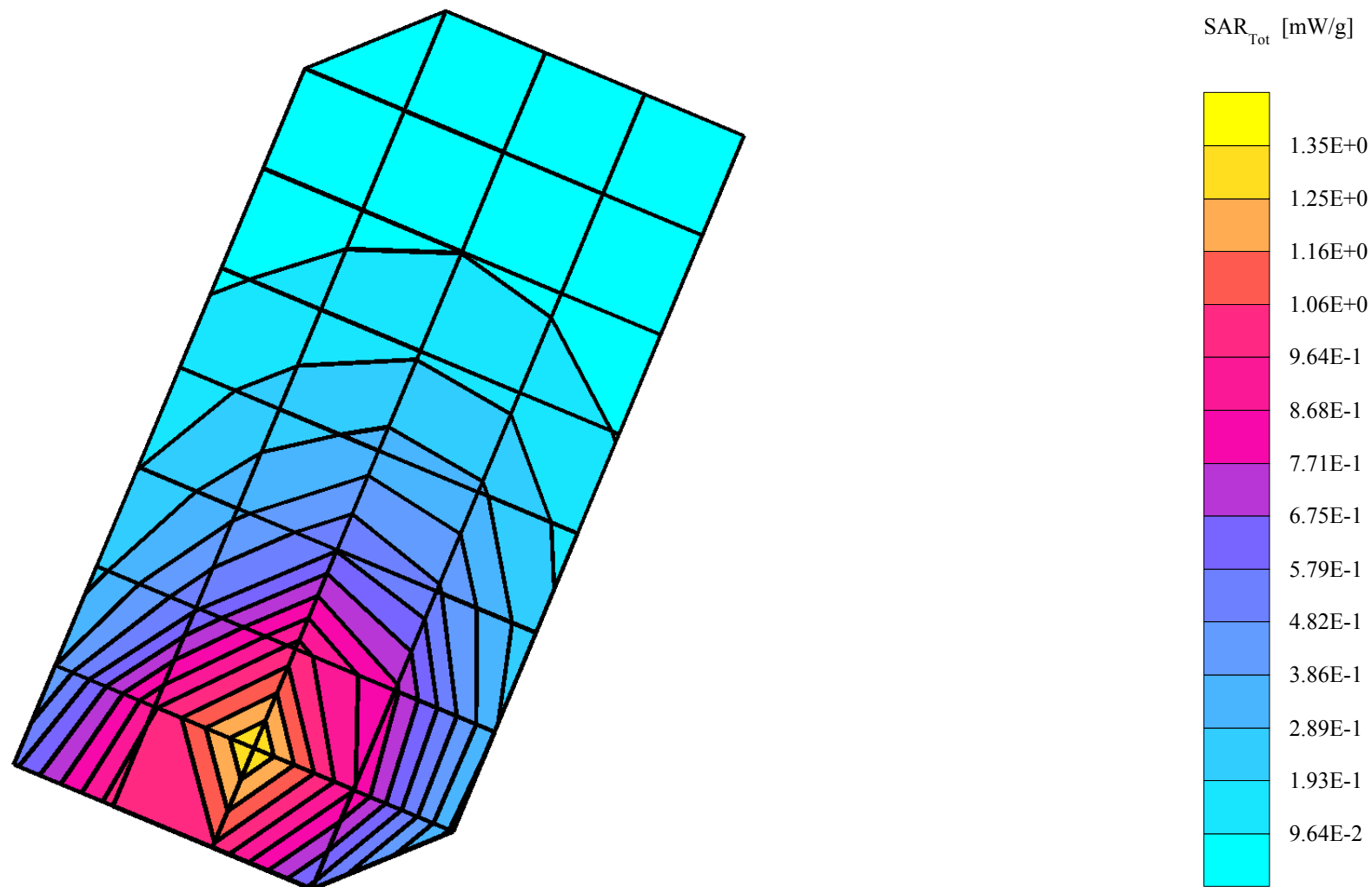
Probe: ET3DV6 - SN1514-IEEE Head2; ConvF(6.08,6.08,6.08); Crest factor: 1.0; 835 MHz Head & Body:  $\sigma = 0.90$  mho/m  $\epsilon_r = 41.8$   $\rho = 1.00$  g/cm<sup>3</sup>

Cube 7x7x7: SAR (1g): 1.33 mW/g, SAR (10g): 0.895 mW/g, (Worst-case extrapolation)

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

Penetration depth: 15.4 (12.6, 18.6) [mm]

Powerdrift: -0.02 dB



sn: A8EE925D

Ch# 991 / Pwr Step: 02 (OTA)

Type of Modulation: 800 AMPS

DEVICE POSITION: Cheek touch

Accessory Model #: N/A

R4 TP-1131 SUGAR SAM Expanded (Rev. 2)-9Jan03 Phantom; Left Hand Section; Position: (90°,180°); Frequency: 824 MHz

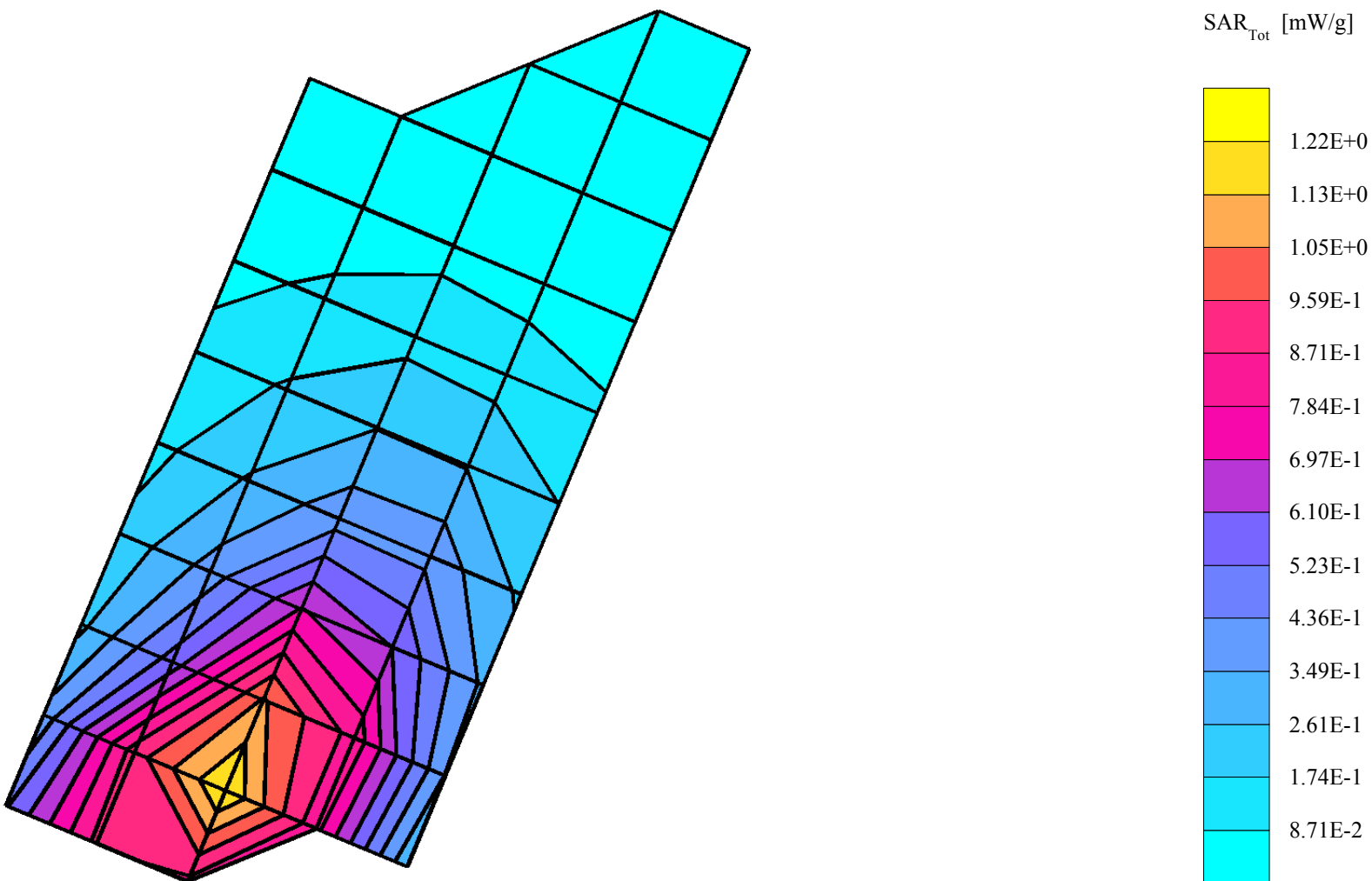
Probe: ET3DV6 - SN1514-IEEE Head2; ConvF(6.08,6.08,6.08); Crest factor: 1.0; 835 MHz Head & Body:  $\sigma = 0.90$  mho/m  $\epsilon_r = 41.8$   $\rho = 1.00$  g/cm<sup>3</sup>

Cube 7x7x7: SAR (1g): 1.22 mW/g, SAR (10g): 0.831 mW/g, (Worst-case extrapolation)

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

Penetration depth: 15.5 (13.6, 17.8) [mm]

Powerdrift: -0.00 dB



sn: A8EE925D

Ch# 799 / Pwr Step: 02 (OTA)

Type of Modulation: 800 AMPS

DEVICE POSITION: Cheek touch

Accessory Model #: N/A

R4 TP-1131 SUGAR SAM Expanded (Rev. 2)-9Jan03 Phantom; Left Hand Section; Position: (90°,180°); Frequency: 849 MHz

Probe: ET3DV6 - SN1514-IEEE Head2; ConvF(6.08,6.08,6.08); Crest factor: 1.0; 835 MHz Head & Body:  $\sigma = 0.90$  mho/m  $\epsilon_r = 41.8$   $\rho = 1.00$  g/cm<sup>3</sup>

Cube 7x7x7: SAR (1g): 1.30 mW/g, SAR (10g): 0.875 mW/g, (Worst-case extrapolation)

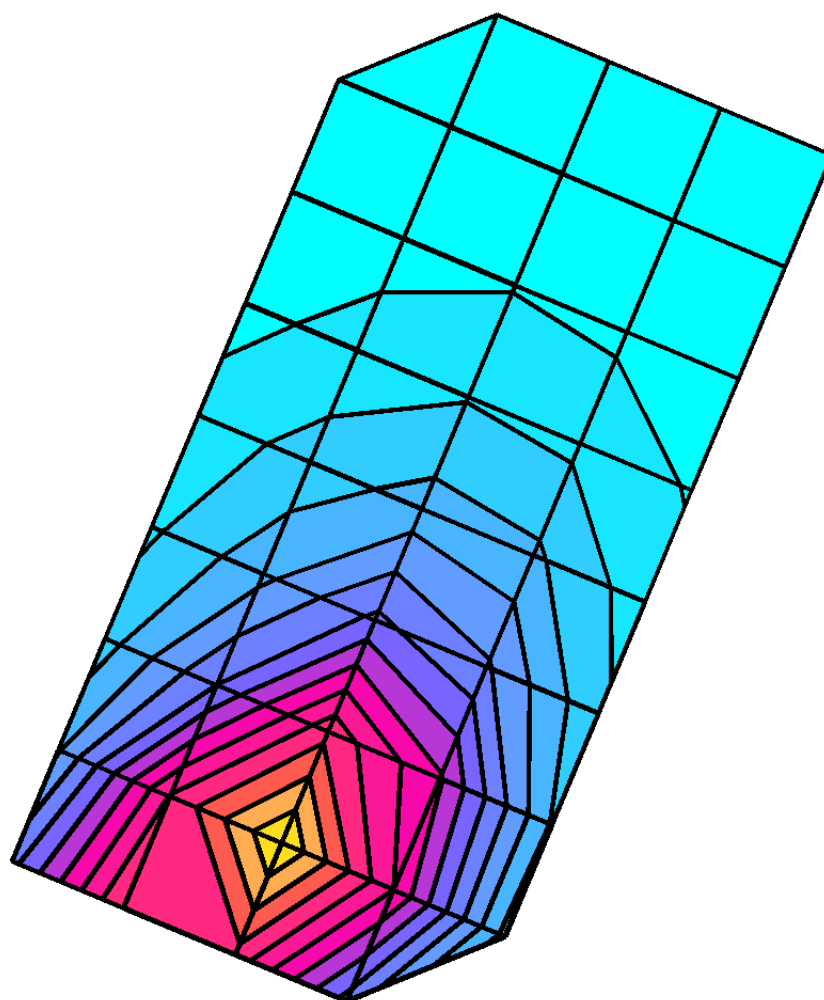
Coarse: Dx = 15.0, Dy = 15.0, Dz = 15.0

Penetration depth: 15.3 (13.3, 17.7) [mm]

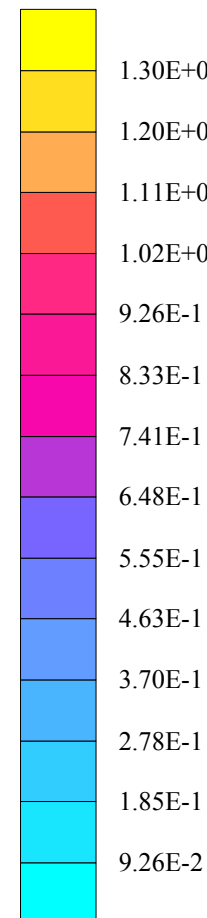
Powerdrift: -0.02 dB

Antenna Position: RET

Battery Model #: SNN5654A (EXT)



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



sn: A8EE925D

Ch# 991 / Pwr Step: 2

Type of Modulation: Analog 800

DEVICE POSITION (check or rotated): Check

Accessory Model #: N/A

Simulate Temp when Measured: 19.7C

Simulate Temp after Test: 19.4C

R4 TP-1131 SUGAR SAM Expanded (Rev. 2)-9Jan03 Phantom; RH Front Tilt 20 Section; Position: (80°,180°); Frequency: 824 MHz

Probe: ET3DV6 - SN1514-IEEE Head2; ConvF(6.08,6.08,6.08); Crest factor: 1.0; 835 MHz Head & Body:  $\sigma = 0.91$  mho/m  $\epsilon_r = 42.1$   $\rho = 1.00$  g/cm<sup>3</sup>

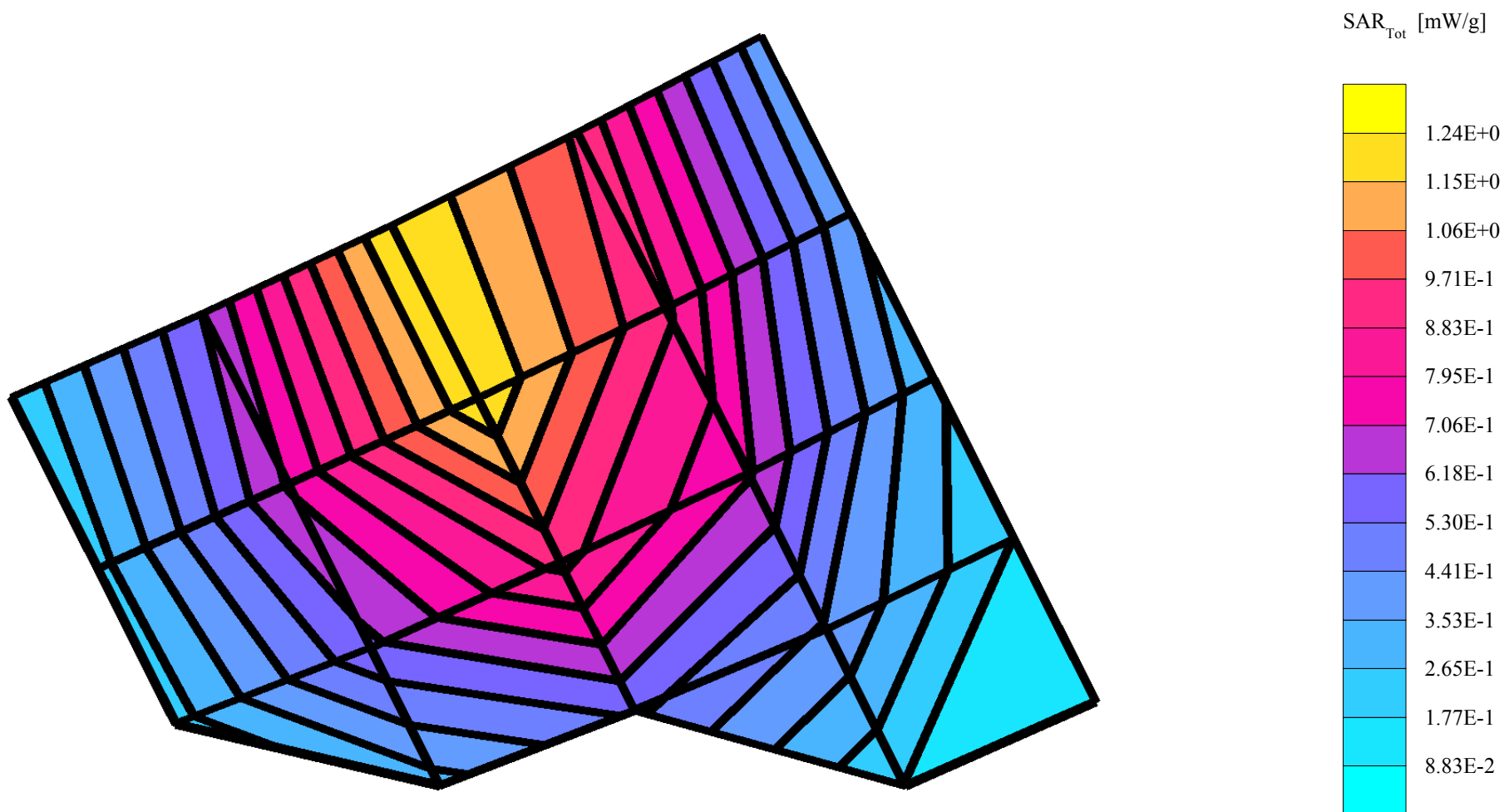
Cube 7x7x7: SAR (1g): 1.32 mW/g, SAR (10g): 0.874 mW/g, (Worst-case extrapolation)

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

Penetration depth: 14.5 (13.5, 15.8) [mm]

Powerdrift: -0.12 dB

Antenna Position: Retracted  
Battery Model #: SN5654A



sn: A8EE924A

Ch# 384 / Pwr Step: Always UP

Type of Modulation: 800 CDMA

DEVICE POSITION: Cheek touch

Accessory Model #: N/A

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

Probe: ET3DV6 - SN1514-IEEE Head2; ConvF(6.08,6.08,6.08); Crest factor: 1.0; 835 MHz Head & Body:  $\sigma = 0.90$  mho/m  $\epsilon_r = 41.8$   $\rho = 1.00$  g/cm<sup>3</sup>

Cube 7x7x7: SAR (1g): 1.33 mW/g, SAR (10g): 0.890 mW/g, (Worst-case extrapolation)

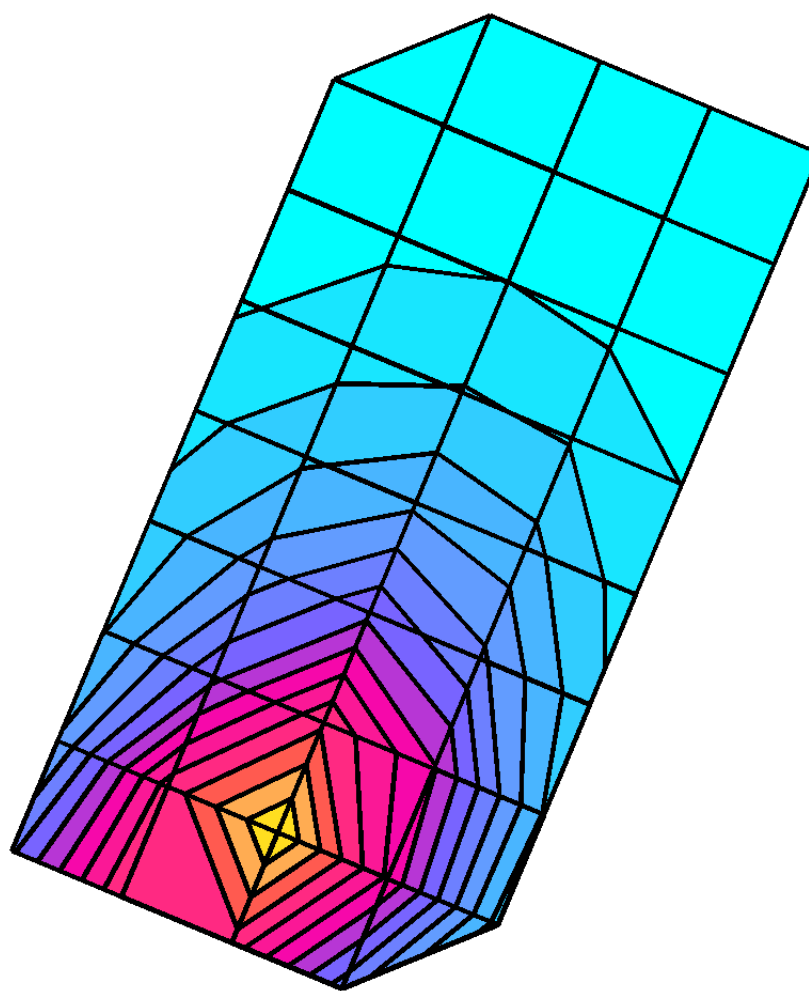
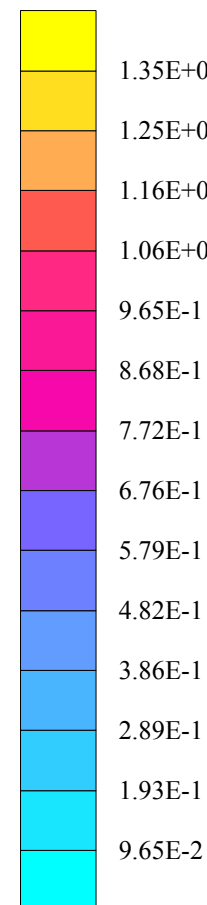
Coarse: Dx = 15.0, Dy = 15.0, Dz = 15.0

Penetration depth: 15.1 (14.1, 16.3) [mm]

Powerdrift: 0.06 dB

Antenna Position: RET

Battery Model #: SNN5654A (EXT)

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

## V260 Battery Lotus ID 14761 Model# SNN5654A Phone 1 (Archive 14784-1)

Ch# 1013 / Pwr Step: Always Up

Antenna Position: Retracted

Type of Modulation: CDMA 800

Battery Model #: SN5654A

DEVICE POSITION (cheek or rotated): Cheek

TESTER INITIALS: JGC

Accessory Model #: N/A

Simulate Temp when Measured: 19.7C

Simulate Temp after Test: 19.2C

R4 TP-1131 SUGAR SAM Expanded (Rev. 2)-9Jan03 Phantom; RH Front Tilt 20 Section; Position: (80°,180°); Frequency: 825 MHz

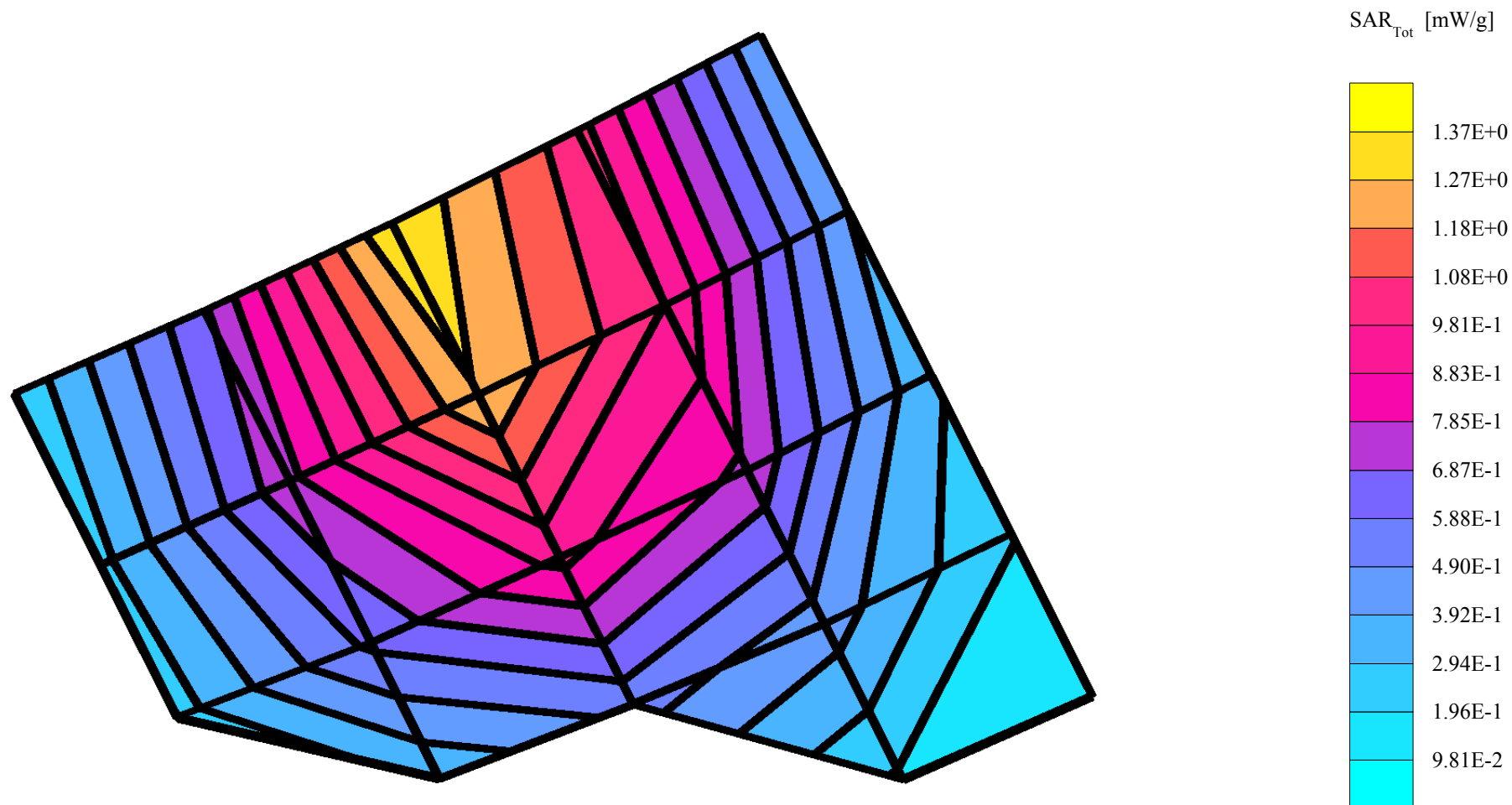
Probe: ET3DV6 - SN1514-IEEE Head2; ConvF(6.08,6.08,6.08); Crest factor: 1.0; 835 MHz Head & Body:  $\sigma = 0.91$  mho/m  $\epsilon_r = 42.1$   $\rho = 1.00$  g/cm<sup>3</sup>

Cube 7x7x7: SAR (1g): 1.43 mW/g, SAR (10g): 0.937 mW/g, (Worst-case extrapolation)

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

Penetration depth: 14.2 (13.6, 15.1) [mm]

Powerdrift: 0.01 dB



sn: A8EE925D

Ch# 1013 / Pwr Step: Always Up

Type of Modulation: CDMA 800

DEVICE POSITION (cheek or rotated): Cheek

Accessory Model #: N/A

Simulate Temp when Measured: 19.7C

Simulate Temp after Test: 19.2C

R4 TP-1131 SUGAR SAM Expanded (Rev. 2)-9Jan03 Phantom; RH Front Tilt 20 Section; Position: (80°,180°); Frequency: 825 MHz

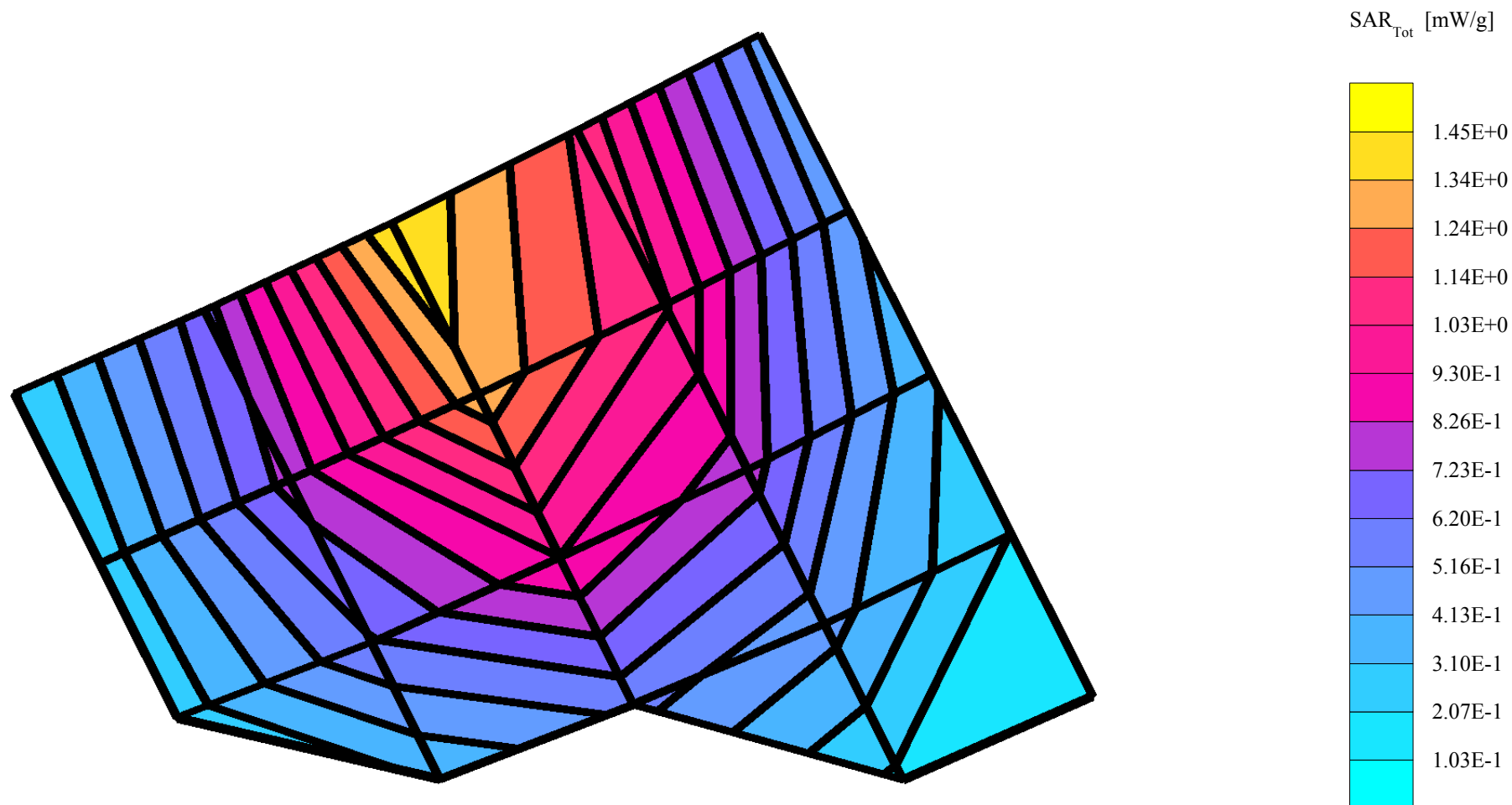
Probe: ET3DV6 - SN1514-IEEE Head2; ConvF(6.08,6.08,6.08); Crest factor: 1.0; 835 MHz Head & Body:  $\sigma = 0.91$  mho/m  $\epsilon_r = 42.1$   $\rho = 1.00$  g/cm<sup>3</sup>

Cube 7x7x7: SAR (1g): 1.45 mW/g, SAR (10g): 0.959 mW/g, (Worst-case extrapolation)

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

Penetration depth: 14.6 (13.3, 16.0) [mm]

Powerdrift: -0.18 dB



sn: A8EE925D

Ch# 384 / Pwr Step: Always Up

Type of Modulation: CDMA 800

DEVICE POSITION (cheek or rotated): Cheek

Accessory Model #: N/A

Simulate Temp when Measured: 19.7C

Simulate Temp after Test: 19.4C

R4 TP-1131 SUGAR SAM Expanded (Rev. 2)-9Jan03 Phantom; RH Front Tilt 20 Section; Position: (80°,180°); Frequency: 837 MHz

Probe: ET3DV6 - SN1514-IEEE Head2; ConvF(6.08,6.08,6.08); Crest factor: 1.0; 835 MHz Head & Body:  $\sigma = 0.91$  mho/m  $\epsilon_r = 42.1$   $\rho = 1.00$  g/cm<sup>3</sup>

Cube 7x7x7: SAR (1g): 1.35 mW/g, SAR (10g): 0.887 mW/g, (Worst-case extrapolation)

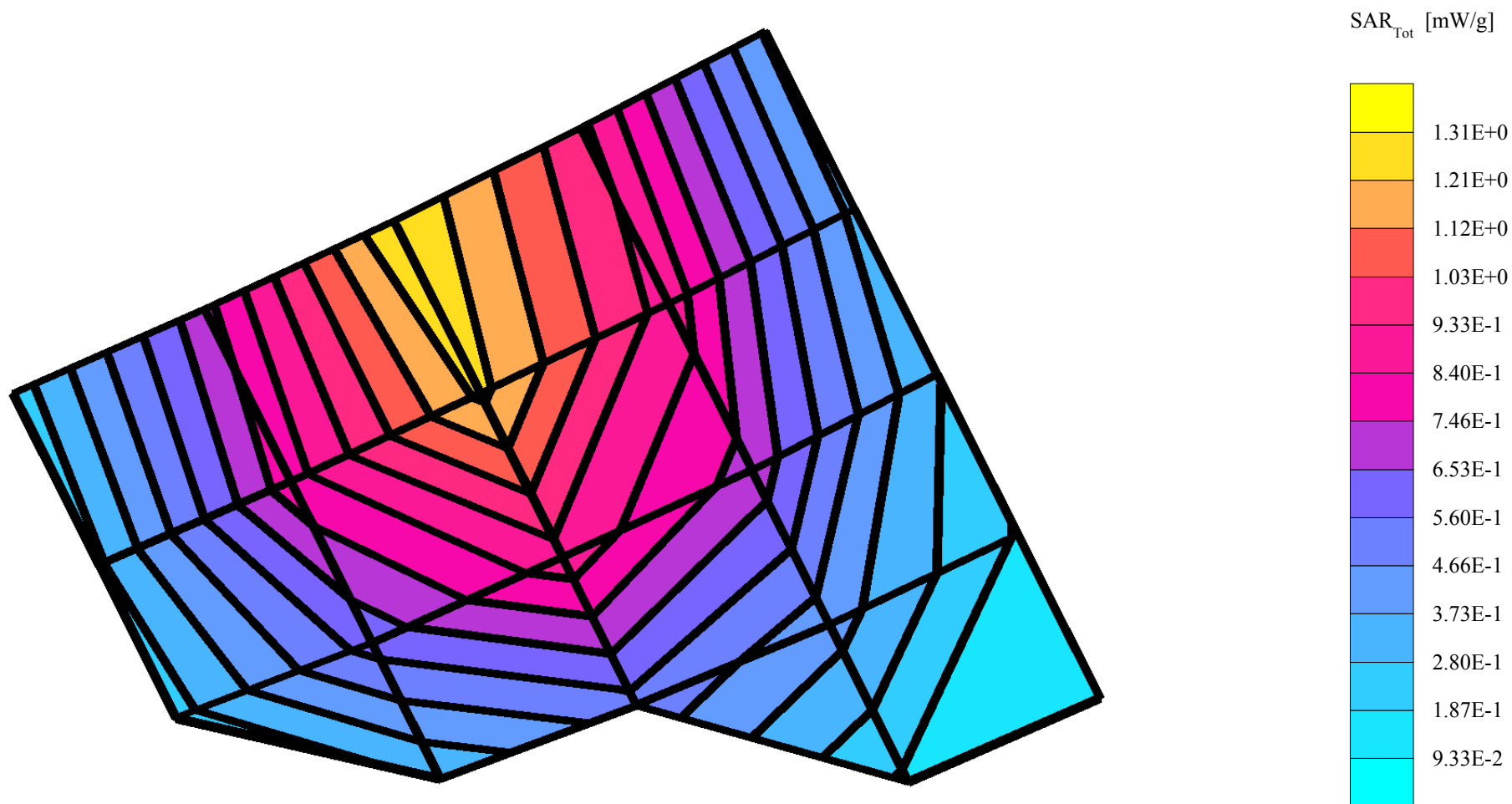
Coarse: Dx = 15.0, Dy = 15.0, Dz = 15.0

Penetration depth: 15.4 (14.8, 16.5) [mm]

Powerdrift: -0.46 dB

Antenna Position: Retracted

Battery Model #: SN5654A



# V260 Battery Lotus ID 14761 Model# SNN5654A Phone 1 (Archive 14784-1)

Ch# 384 / Pwr Step: Always Up

Antenna Position: Extended

Type of Modulation: CDMA 800

Battery Model #: SN5654A

DEVICE POSITION (cheek or rotated): Cheek

TESTER INITIALS: JGC

Accessory Model #: N/A

Simulate Temp when Measured: 19.7C

Simulate Temp after Test: 19.7C

R4 TP-1131 SUGAR SAM Expanded (Rev. 2)-9Jan03 Phantom; RH Front Tilt 20 Section; Position: (80°,180°); Frequency: 837 MHz

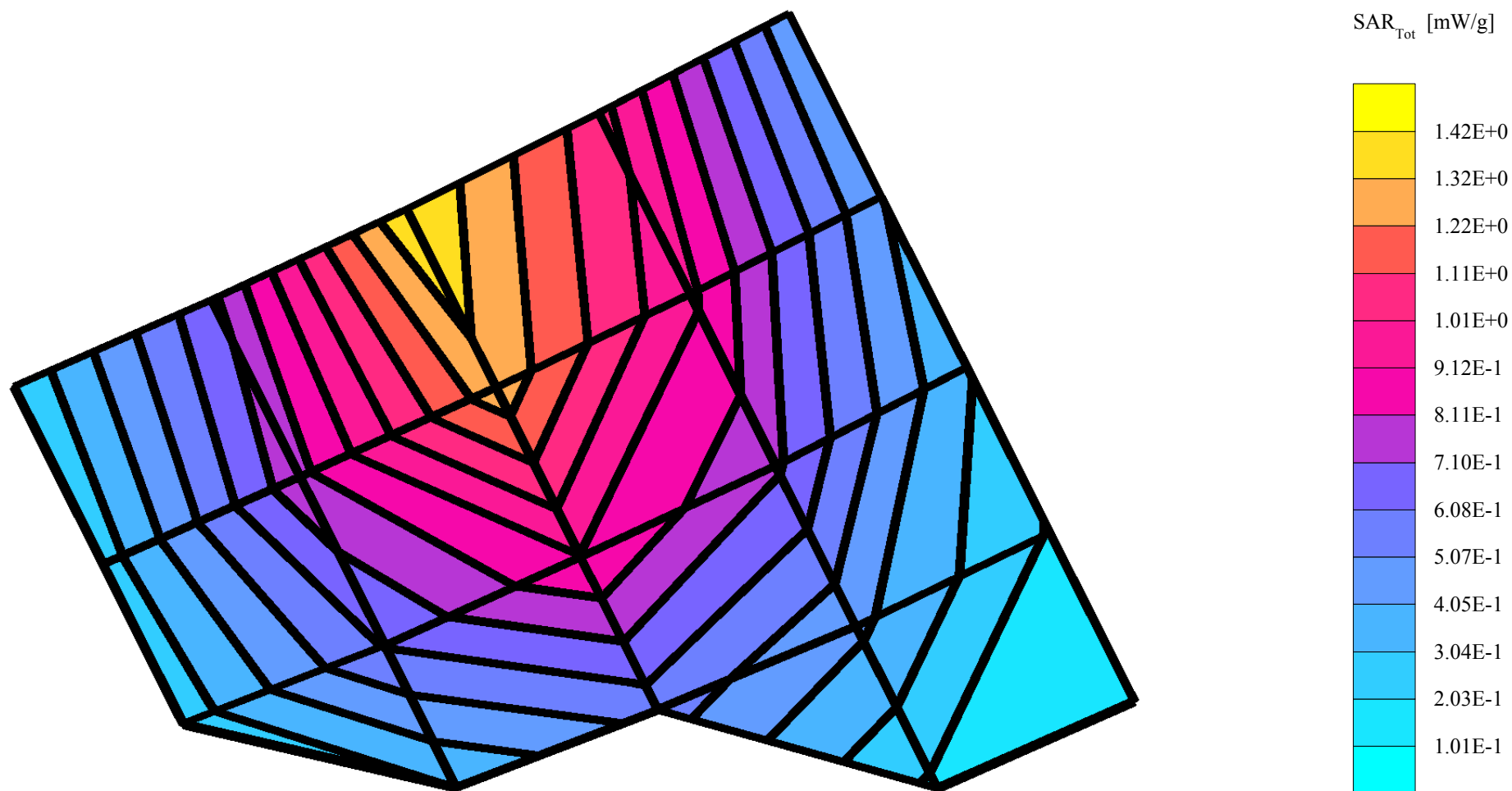
Probe: ET3DV6 - SN1514-IEEE Head2; ConvF(6.08,6.08,6.08); Crest factor: 1.0; 835 MHz Head & Body:  $\sigma = 0.91$  mho/m  $\epsilon_r = 42.1$   $\rho = 1.00$  g/cm<sup>3</sup>

Cube 7x7x7: SAR (1g): 1.48 mW/g, SAR (10g): 0.975 mW/g, (Worst-case extrapolation)

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

Penetration depth: 14.1 (13.8, 14.8) [mm]

Powerdrift: 0.17 dB



sn: A8EE924A

Ch# 777 / Pwr Step: Always UP

Type of Modulation: 800 CDMA

DEVICE POSITION: Cheek touch

Accessory Model #: N/A

R4 TP-1131 SUGAR SAM Expanded (Rev. 2)-9Jan03 Phantom; Left Hand Section; Position: (90°,180°); Frequency: 848 MHz

Probe: ET3DV6 - SN1514-IEEE Head2; ConvF(6.08,6.08,6.08); Crest factor: 1.0; 835 MHz Head & Body:  $\sigma = 0.90$  mho/m  $\epsilon_r = 41.8$   $\rho = 1.00$  g/cm<sup>3</sup>

Cube 7x7x7: SAR (1g): 1.36 mW/g, SAR (10g): 0.902 mW/g, (Worst-case extrapolation)

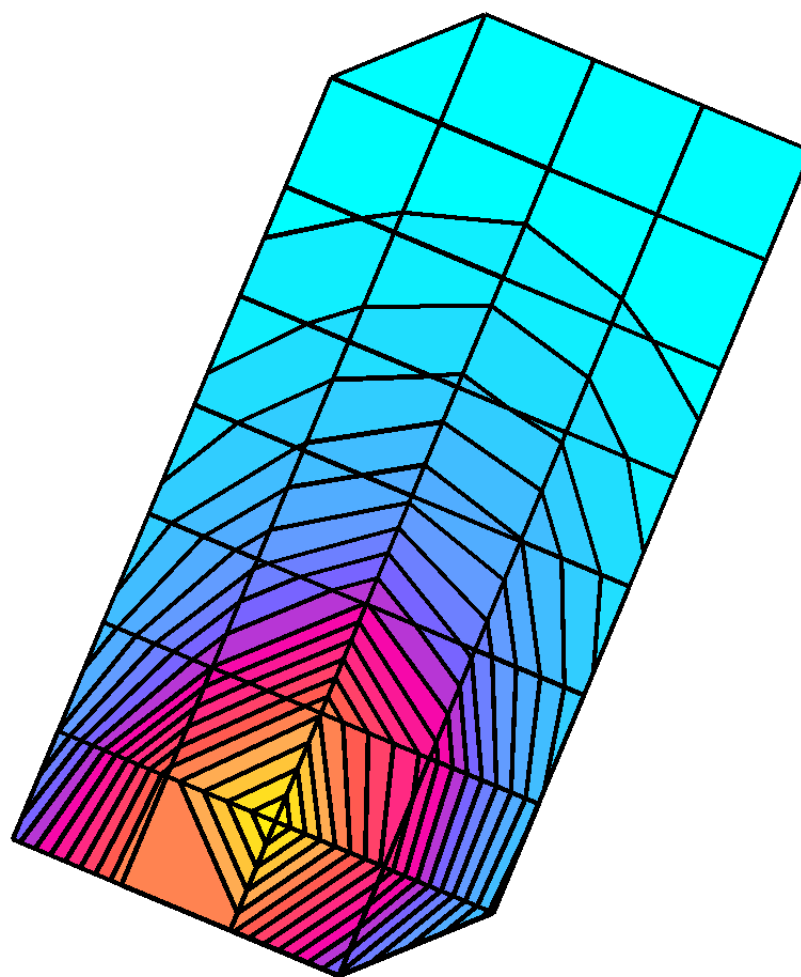
Coarse: Dx = 15.0, Dy = 15.0, Dz = 15.0

Penetration depth: 14.4 (12.0, 17.5) [mm]

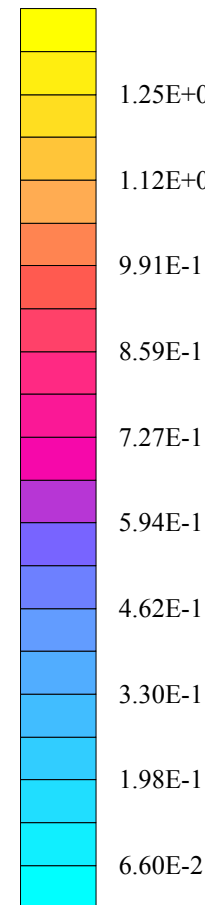
Powerdrift: -0.01 dB

Antenna Position: RET

Battery Model #: SNN5654A (EXT)



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



sn: A8EE924A

Ch# 777 / Pwr Step: Always UP

Type of Modulation: 800 CDMA

DEVICE POSITION: Cheek touch

Accessory Model #: N/A

R4 TP-1131 SUGAR SAM Expanded (Rev. 2)-9Jan03 Phantom; Left Hand Section; Position: (90°,180°); Frequency: 848 MHz

Probe: ET3DV6 - SN1514-IEEE Head2; ConvF(6.08,6.08,6.08); Crest factor: 1.0; 835 MHz Head & Body:  $\sigma = 0.90$  mho/m  $\epsilon_r = 41.8$   $\rho = 1.00$  g/cm<sup>3</sup>

Cube 7x7x7: SAR (1g): 1.25 mW/g, SAR (10g): 0.846 mW/g, (Worst-case extrapolation)

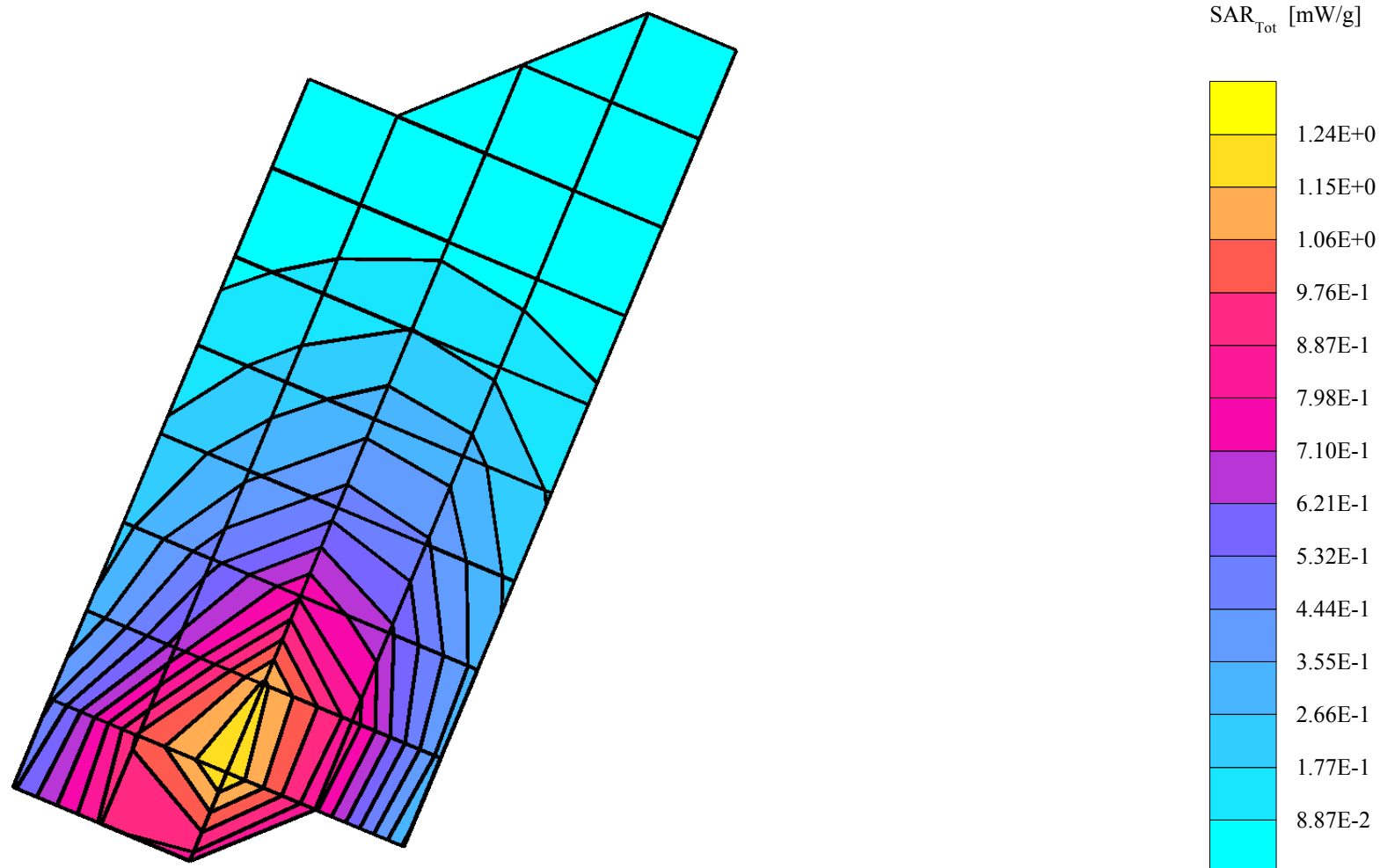
Coarse: Dx = 15.0, Dy = 15.0, Dz = 15.0

Penetration depth: 15.8 (13.0, 18.8) [mm]

Powerdrift: 0.00 dB

Antenna Position: EXT

Battery Model #: SNN5654A (EXT)



sn: A8EE924A

Ch# 1013 / Pwr Step: Always UP

Type of Modulation: 800 CDMA

DEVICE POSITION: Cheek touch

Accessory Model #: N/A

R4 TP-1131 SUGAR SAM Expanded (Rev. 2)-9Jan03 Phantom; Left Hand Section; Position: (90°,180°); Frequency: 825 MHz

Probe: ET3DV6 - SN1514-IEEE Head2; ConvF(6.08,6.08,6.08); Crest factor: 1.0; 835 MHz Head & Body:  $\sigma = 0.90$  mho/m  $\epsilon_r = 41.8$   $\rho = 1.00$  g/cm<sup>3</sup>

Cube 7x7x7: SAR (1g): 1.37 mW/g, SAR (10g): 0.912 mW/g, (Worst-case extrapolation)

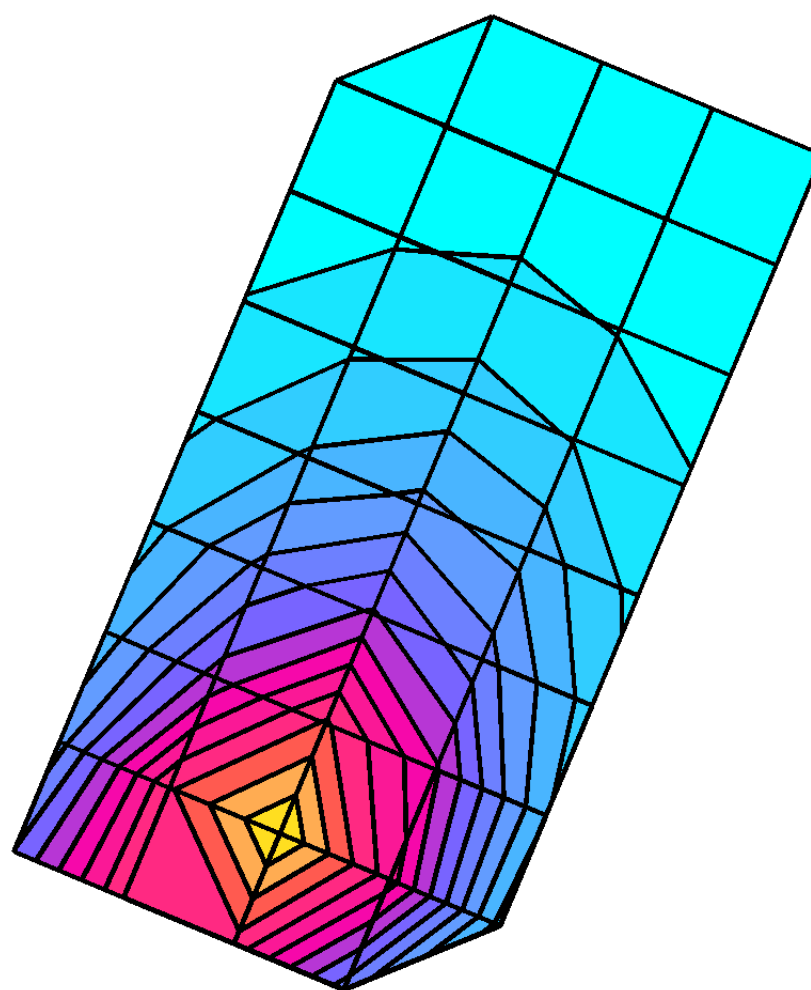
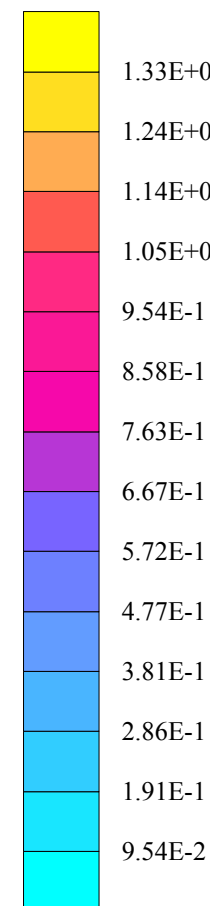
Coarse: Dx = 15.0, Dy = 15.0, Dz = 15.0

Penetration depth: 14.7 (11.4, 18.8) [mm]

Powerdrift: -0.04 dB

Antenna Position: RET

Battery Model #: SNN5654A (EXT)

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

sn: A8EE924A

Ch# 1013 / Pwr Step: Always UP

Type of Modulation: 800 CDMA

DEVICE POSITION: Cheek touch

Accessory Model #: N/A

R4 TP-1131 SUGAR SAM Expanded (Rev. 2)-9Jan03 Phantom; Left Hand Section; Position: (90°,180°); Frequency: 825 MHz

Probe: ET3DV6 - SN1514-IEEE Head2; ConvF(6.08,6.08,6.08); Crest factor: 1.0; 835 MHz Head & Body:  $\sigma = 0.90$  mho/m  $\epsilon_r = 41.8$   $\rho = 1.00$  g/cm<sup>3</sup>

Cube 7x7x7: SAR (1g): 1.35 mW/g, SAR (10g): 0.914 mW/g, (Worst-case extrapolation)

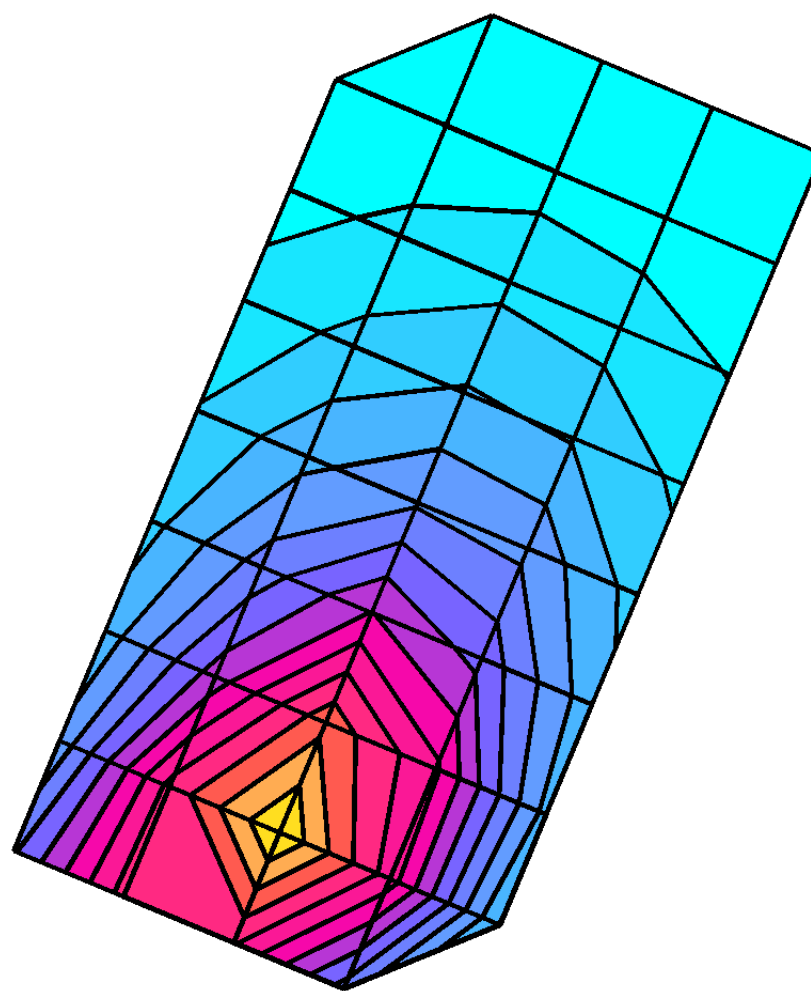
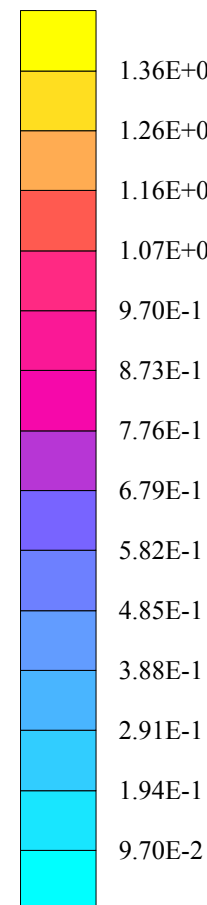
Coarse: Dx = 15.0, Dy = 15.0, Dz = 15.0

Penetration depth: 15.0 (12.4, 18.2) [mm]

Powerdrift: -0.03 dB

Antenna Position: EXT

Battery Model #: SNN5654A (EXT)

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

sn: A8EE925D

Ch# 777 / Pwr Step: Always UP

Type of Modulation: 800 CDMA

DEVICE POSITION: Cheek touch

Accessory Model #: N/A

R4 TP-1131 SUGAR SAM Expanded (Rev. 2)-9Jan03 Phantom; Left Hand Section; Position: (90°,180°); Frequency: 848 MHz

Probe: ET3DV6 - SN1514-IEEE Head2; ConvF(6.08,6.08,6.08); Crest factor: 1.0; 835 MHz Head & Body:  $\sigma = 0.90$  mho/m  $\epsilon_r = 41.8$   $\rho = 1.00$  g/cm<sup>3</sup>

Cube 7x7x7: SAR (1g): 1.25 mW/g, SAR (10g): 0.846 mW/g, (Worst-case extrapolation)

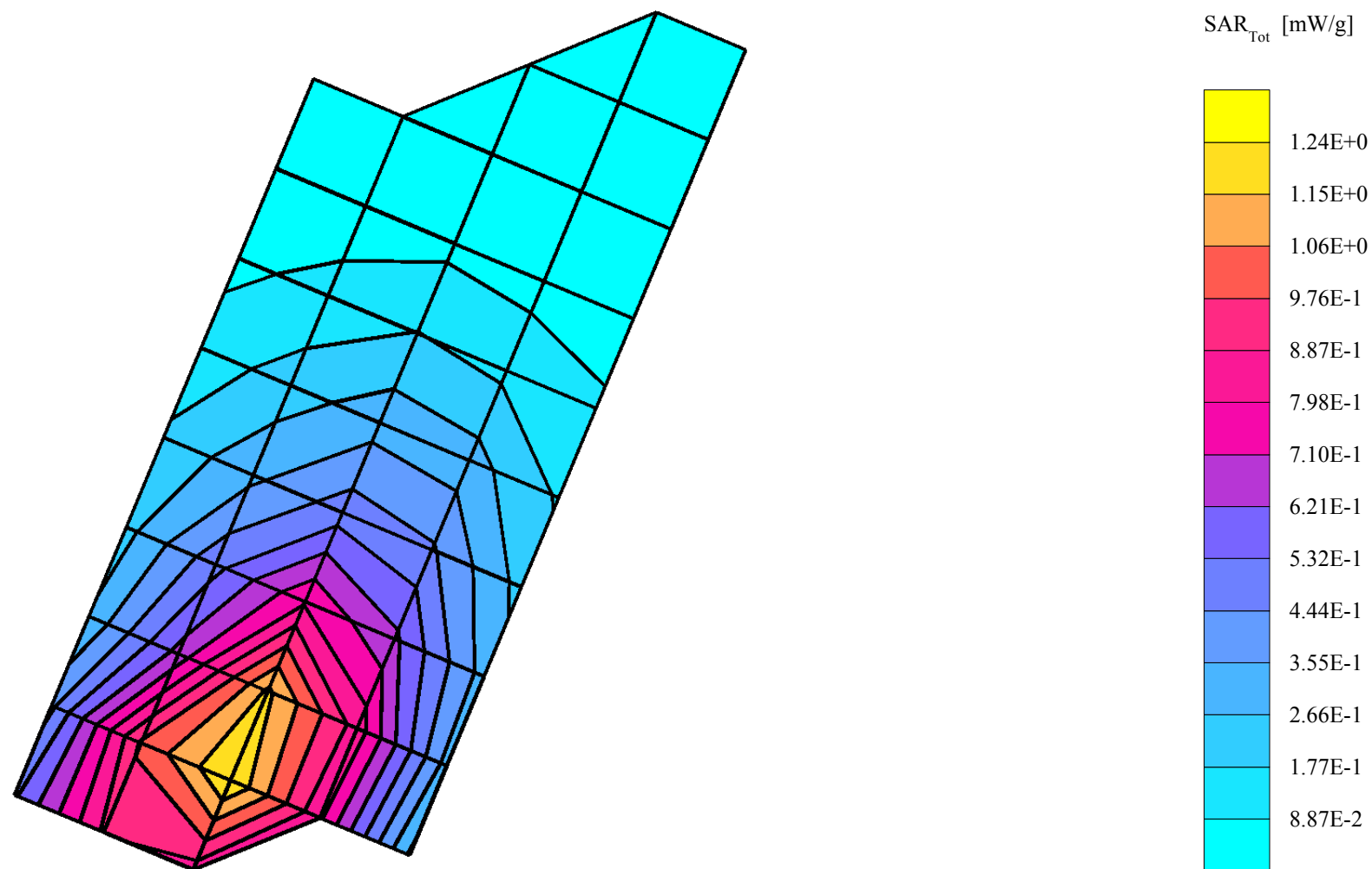
Coarse: Dx = 15.0, Dy = 15.0, Dz = 15.0

Penetration depth: 15.8 (13.0, 18.8) [mm]

Powerdrift: 0.00 dB

Antenna Position: EXT

Battery Model #: SNN5654A (EXT)



sn: A8EE925D

Ch# 600 / Pwr Step: Always Up

Type of Modulation: 1900 PCS

DEVICE POSITION : Rotated

Accessory Model #: n/a

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

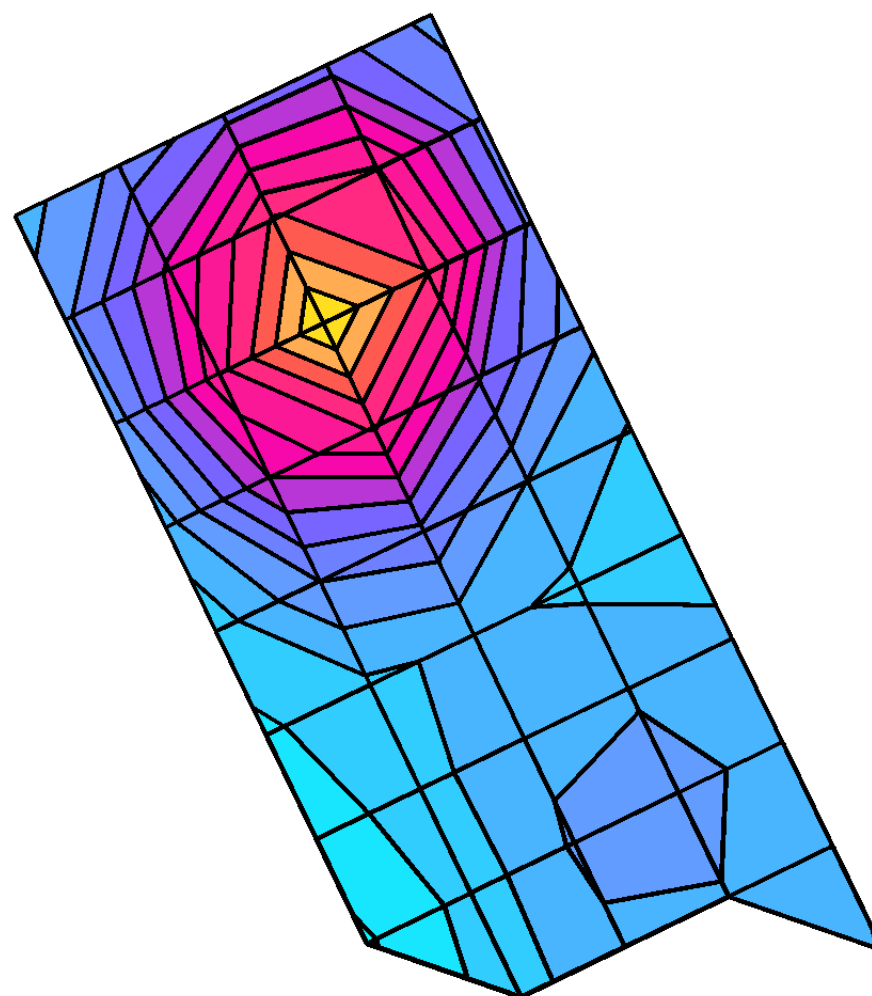
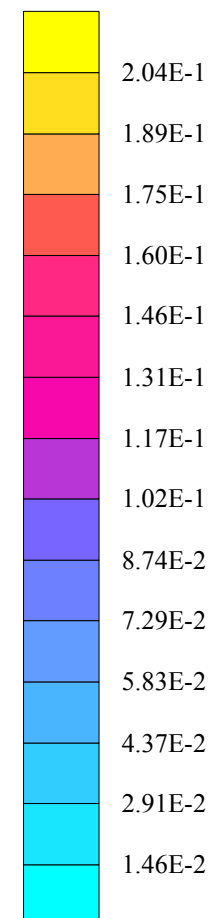
Probe: ET3DV6 - SN1514-IEEE Head2; ConvF(5.03,5.03,5.03); Crest factor: 1.0; 1880 MHz Head & Body:  $\sigma = 1.44$  mho/m  $\epsilon_r = 39.1$   $\rho = 1.00$  g/cm<sup>3</sup>

Cube 7x7x7: SAR (1g): 0.199 mW/g, SAR (10g): 0.124 mW/g, (Worst-case extrapolation)

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

Penetration depth: 11.5 (11.2, 11.8) [mm]

Powerdrift: -0.08 dB

Antenna Position: Ext  
Battery Model #: SNN5654ASAR<sub>Tot</sub> [mW/g]

sn: A8EE925D

Ch# 600 / Pwr Step: Always Up

Type of Modulation: 1900 PCS

DEVICE POSITION : Rotated

Accessory Model #: n/a

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

Probe: ET3DV6 - SN1514-IEEE Head2; ConvF(5.03,5.03,5.03); Crest factor: 1.0; 1880 MHz Head & Body:  $\sigma = 1.44$  mho/m  $\epsilon_r = 39.1$   $\rho = 1.00$  g/cm<sup>3</sup>

Cube 7x7x7: SAR (1g): 0.155 mW/g, SAR (10g): 0.0916 mW/g, (Worst-case extrapolation)

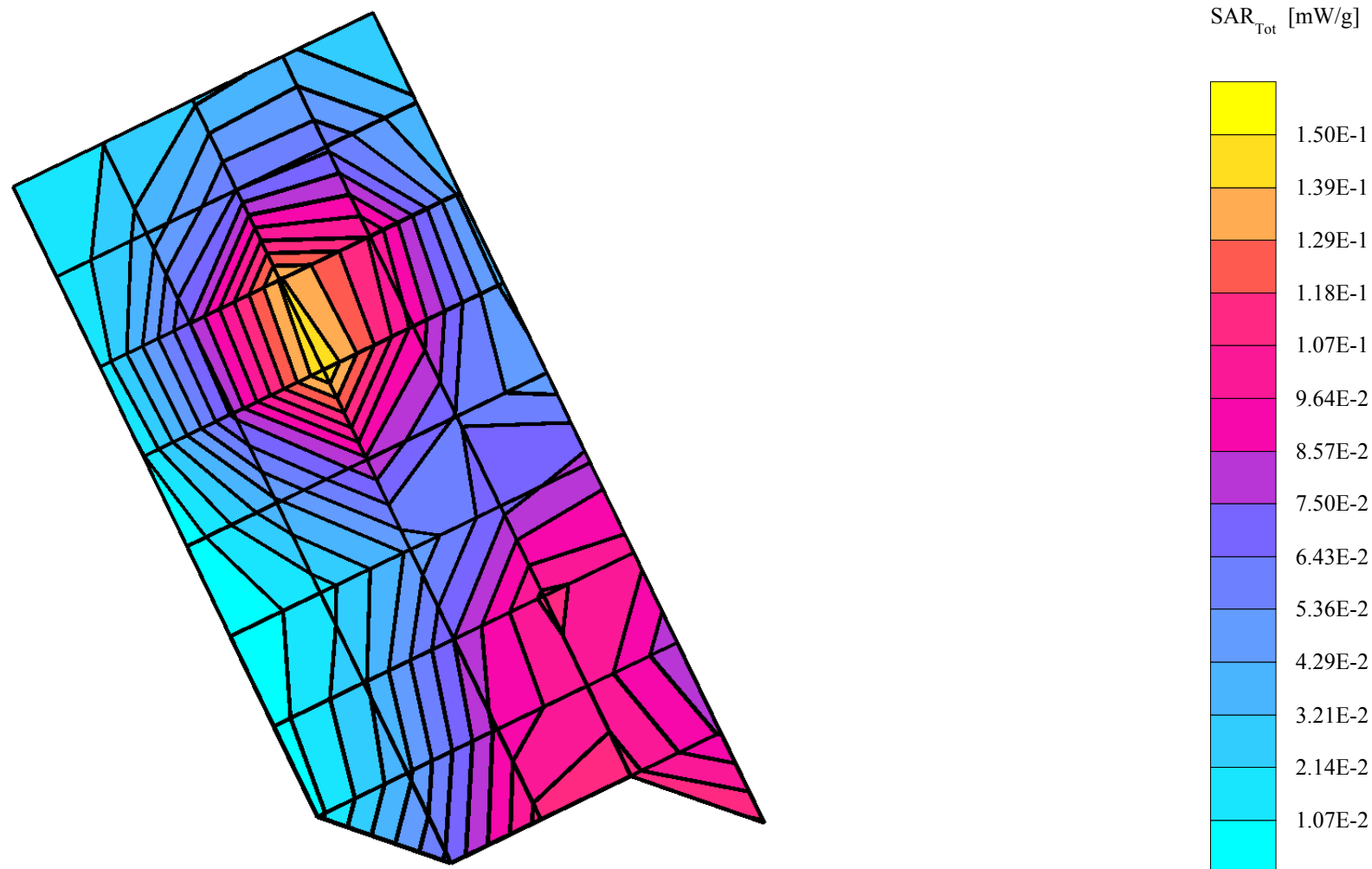
Coarse: Dx = 15.0, Dy = 15.0, Dz = 15.0

Penetration depth: 10.7 (9.7, 12.0) [mm]

Powerdrift: 0.01 dB

Antenna Position: Ret

Battery Model #: SNN5654A



**Supplement to Appendix 3**

**SAR distribution plots for Body Worn Configuration**

sn: A8EE924A

Ch# 384 / Pwr Step: 2

Type of Modulation: Analog 800

Accessory Model #: SYN1117A

Antenna Position: Extended

Battery Model #: SNN5654A

Simulate Temp when Measured: 20.3C

Simulate Temp after Test: 20.2C

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

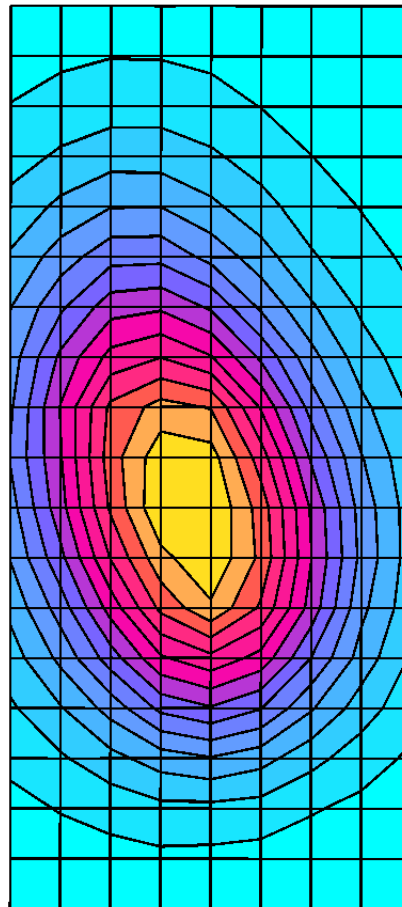
Probe: ET3DV6 - SN1514-FCC BODY2; ConvF(5.87,5.87,5.87); Crest factor: 1.0; 835 MHz Head & Body:  $\sigma = 0.97$  mho/m  $\epsilon_r = 53.2$   $\rho = 1.00$  g/cm<sup>3</sup>

Cube 7x7x7: SAR (1g): 1.02 mW/g, SAR (10g): 0.719 mW/g, (Worst-case extrapolation)

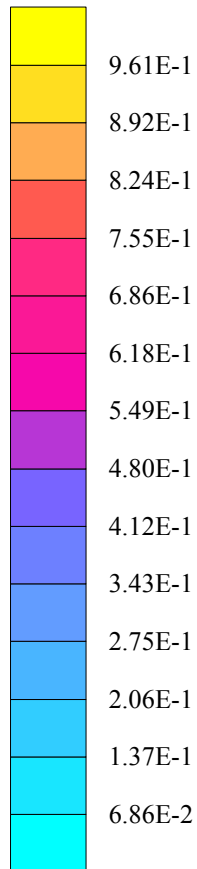
Coarse: Dx = 10.0, Dy = 10.0, Dz = 10.0

Penetration depth: 15.6 (14.2, 17.1) [mm]

Powerdrift: 0.25 dB



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

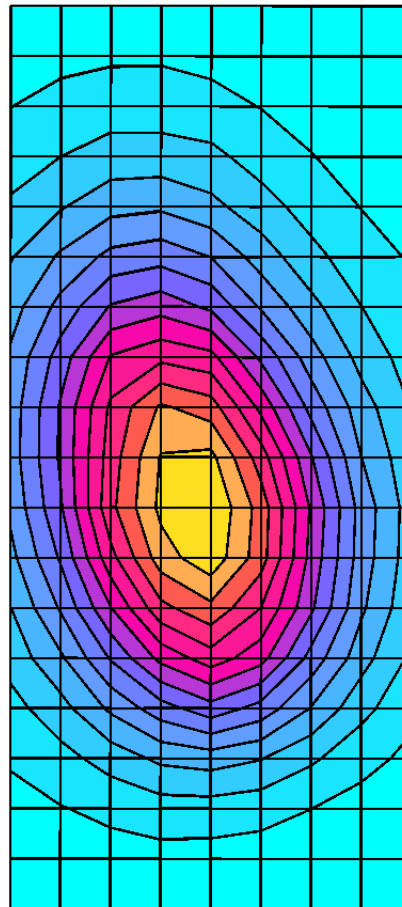


sn: A8EE924A

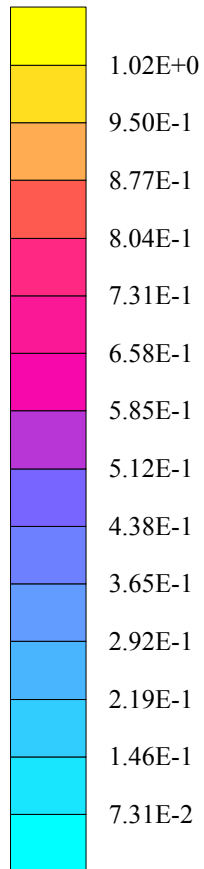
Ch# 799 / Pwr Step: 2  
Type of Modulation: Analog 800  
Accessory Model #: SYN1117A

Antenna Position: Extended  
Battery Model #: SNN5654A

Simulate Temp when Measured: 20.3C      Simulate Temp after Test: 20.3C  
R4 Amy Twin Phantom Rev.4 (22Aug02) Phantom; section 1 Section; Position: (0°,0°); Frequency: 849 MHz  
Probe: ET3DV6 - SN1514-FCC BODY2; ConvF(5.87,5.87,5.87); Crest factor: 1.0; 835 MHz    Head & Body:  $\sigma = 0.97$  mho/m  $\epsilon_r = 53.2$   $\rho = 1.00$  g/cm<sup>3</sup>  
Cube 7x7x7: SAR (1g): 0.987 mW/g, SAR (10g): 0.701 mW/g, (Worst-case extrapolation)  
Coarse: Dx = 10.0, Dy = 10.0, Dz = 10.0  
Penetration depth: 16.8 (14.4, 19.0) [mm]  
Powerdrift: -0.23 dB



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

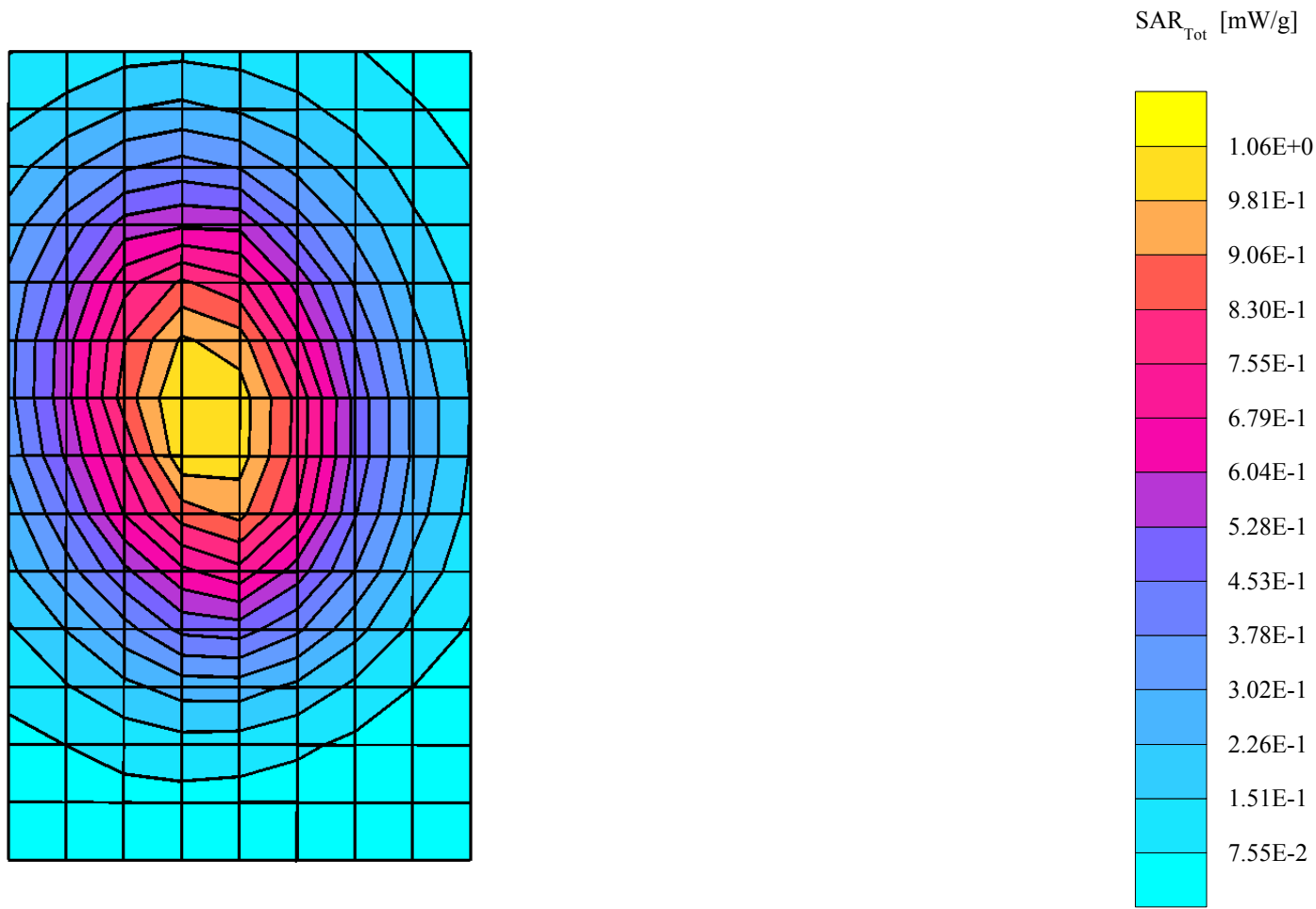


sn: A8EE924A

Ch# 384 / Pwr Step: 2  
Type of Modulation: Analog 800  
Accessory Model #: SYN1117A

Antenna Position: Retracted  
Battery Model #: SNN5654A

Simulate Temp when Measured: 20.3C      Simulate Temp after Test: 20.0C  
R4 Amy Twin Phantom Rev.4 (22Aug02) Phantom; section 1 Section; Position: (0°,0°); Frequency: 837 MHz  
Probe: ET3DV6 - SN1514-FCC BODY2; ConvF(5.87,5.87,5.87); Crest factor: 1.0; 835 MHz    Head & Body:  $\sigma = 0.97$  mho/m  $\epsilon_r = 53.2$   $\rho = 1.00$  g/cm<sup>3</sup>  
Cube 7x7x7: SAR (1g): 1.07 mW/g, SAR (10g): 0.744 mW/g, (Worst-case extrapolation)  
Coarse: Dx = 10.0, Dy = 10.0, Dz = 10.0  
Penetration depth: 15.1 (13.1, 17.3) [mm]  
Powerdrift: -0.04 dB



sn: A8EE924A

Ch# 799 / Pwr Step: 2  
Type of Modulation: Analog 800  
Accessory Model #: SYN1117A

Antenna Position: Retracted  
Battery Model #: SNN5654A

Simulate Temp when Measured: 20.3C      Simulate Temp after Test: 20.3C  
R4 Amy Twin Phantom Rev.4 (22Aug02) Phantom; section 1 Section; Position: (0°,0°); Frequency: 849 MHz  
Probe: ET3DV6 - SN1514-FCC BODY2; ConvF(5.87,5.87,5.87); Crest factor: 1.0; 835 MHz    Head & Body:  $\sigma = 0.97$  mho/m  $\epsilon_r = 53.2$   $\rho = 1.00$  g/cm<sup>3</sup>  
Cube 7x7x7: SAR (1g): 1.44 mW/g, SAR (10g): 1.01 mW/g, (Worst-case extrapolation)  
Coarse: Dx = 10.0, Dy = 10.0, Dz = 10.0  
Penetration depth: 15.7 (14.4, 17.2) [mm]  
Powerdrift: -0.12 dB

