

Prepared (also subject responsible if other) EUS/CV/RF/P Dulce Altabella		No. EUS/CV/R-01:0781/REP		
Approved EUS/CV/RF/P Mark Douglas	Checked MGD	2001-7-25	A	M:\FCC\sar addendum to T60c.doc

## Addendum to “SAR Test Report: T60c”

**Date of test:** July 23-25, 2001

**Laboratory:** Electromagnetic Near Field and Radio Frequency Dosimetry Laboratory  
Ericsson, Inc.  
7001 Development Drive, P.O. Box 13969,  
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**Test Responsible:** Mark Douglas, Ph.D.  
Senior Technical Leader, Antenna Development Group



This laboratory is accredited to ISO/IEC Guide 25-1990 to perform the following electromagnetic tests:

Specific Absorption Rate (SAR), dielectric parameters, and RF power measurement  
on the following types of products:  
Wireless communications devices

A2LA certificate Number: 1650-01

**Statement of Compliance:** Ericsson, Inc. declares under its sole responsibility that the product

### T60c

to which this declaration relates, is in conformity with the appropriate RF exposure standards, recommendations and guidelines. It also declares that the product was tested in accordance with the appropriate measurement standards, guidelines and recommended practices. Any deviations from these standards, guidelines and recommended practices are noted below:

(none)

Prepared (also subject responsible if other) EUS/CV/RF/P Dulce Altabella		No. <b>EUS/CV/R-01:0781/REP</b>		
Approved EUS/CV/RF/P Mark Douglas	Checked MGD	2001-7-25	A	M:\FCC\sar addendum to T60c.doc

## Table of Contents

1. Introduction	3
2. Device Under Test	3
2.1 Antenna description	3
2.2 Device description	3
3. Test equipment	3
3.1 Dosimetric system	3
3.2 Additional calibrated equipment	4
4. Electrical parameters of the tissue simulating liquid	4
5. System accuracy verification	4
6. Test results	5
References	6
Appendix 1: SAR distribution comparison for system accuracy verification	7
Appendix 2: SAR distribution plots	13
Appendix 3: Photographs of Device Under Test	19
Appendix 4: Position of Device on Phantom	24
Appendix 5: Probe calibration parameters	28

Prepared (also subject responsible if other) EUS/CV/RF/P Dulce Altabella		No. <b>EUS/CV/R-01:0781/REP</b>		
Approved EUS/CV/RF/P Mark Douglas	Checked MGD	2001-7-25	A	M:\FCC\sar addendum to T60c.doc

## 1. Introduction

This test report is an addendum to report EUS/CV/R-01:0701/REP, "SAR Test Report: T60c." In this report, compliance of the Ericsson T60c portable telephone with RF safety guidelines is demonstrated using carry accessories with the whip antenna extended (applicable RF safety guidelines are given in [1]). The device was tested in accordance with the same test guidelines as used in the original SAR test report [1]. Detailed procedures of the test are described in the *Ericsson SAR Measurement Specification* [1].

## 2. Device Under Test

### 2.1 Antenna description

<b>Type</b>	Internal antenna + retractable antenna		
<b>Location</b>	Inside the back cover, near the top		
<b>Dimensions</b>	Maximum length for internal antenna	38 mm	
	Maximum width for internal antenna	42 mm	
	Maximum length for retractable	80 mm	
<b>Configuration</b>	Patch antenna + whip		

### 2.2 Device description

<b>Device model</b>	T60c		
<b>FCC ID</b>	AXATR-413-A2		
<b>Serial number</b>	UA202092T8		
<b>Mode</b>	800 AMPS	800 CDMA	1900 CDMA
<b>Multiple Access Scheme</b>	FDMA	CDMA	CDMA
<b>Maximum Output Power Setting<sup>1</sup></b>	26.25 dBm	23.4 dBm	23.4 dBm
<b>Factory Tolerance in Power Setting</b>	± 0.25	± 0.40	± 0.40
<b>Maximum Peak Output Power<sup>2</sup></b>	26.50 dBm	23.80 dBm	23.80 dBm
<b>Duty Cycle</b>	1	1	1
<b>Transmitting Frequency Range</b>	824 – 849 MHz	824 – 849 MHz	1851 – 1909 MHz
<b>Prototype or Production Unit</b>	Prototype		

## 3. Test equipment

### 3.1 Dosimetric system

SAR measurements were made using two DASY3 professional systems (software version 3.1c), manufactured by Schmid & Partner Engineering AG and installed in February 1998, and November 2000. The extended SAR assessment uncertainty ( $K = 2$ ) is  $\pm 32\%$  with a  $+15\%$  offset. This assessment uncertainty includes measurement uncertainty ( $\pm 24\%$ ) and phantom uncertainty ( $\pm 10\%$ ), as described in [1]. This results in a total uncertainty range of  $-17\%$  to  $+47\%$ . The equipment list is given below.

<sup>1</sup> This is the conducted power measured at the antenna port when the device is set to its highest power setting. It is measured at the middle of the transmit frequency band. Note that the output power may be different at other frequencies.

<sup>2</sup> This equals the maximum output power setting plus the factory tolerance.

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Approved EUS/CV/RF/P Mark Douglas	Checked MGD	2001-7-25	A	M:\FCC\sar addendum to T60c.doc

<u>Description</u>	<u>Serial Number</u>	<u>Due Date</u>
DASY3 DAE V1	431	05/2002
E-field probe ET3DV5	1337	06/2002
Dipole Validation Kit, D900V2	049	01/2003
Dipole Validation Kit, D1800V2	217	12/2001

### 3.2 Additional calibrated equipment

<u>Description</u>	<u>Serial Number</u>	<u>Due Date</u>
Signal Generator HP8648C	3537A01598	09/2002
Dielectric probe kit HP 85070B	US33020256	10/2001
Network analyser HP 8752C	3410A03105	07/2001
Power meter E4418B	GB40206594	09/2001
Power sensor HP 8482H	3318A07097	02/2002
Power meter HP 437B	3125U13729	06/2002
Power sensor HP 8482H	3318A09268	08/2001

### 4. Electrical parameters of the tissue simulating liquid

Prior to conducting SAR measurements, the relative permittivity,  $\epsilon_r$ , and the conductivity,  $\sigma$ , of the tissue simulating liquids were measured with the dielectric probe kit. These values are shown in the table below. The mass density,  $\rho$ , entered into the DASY3 program is also given. Recommended limits for maximum permittivity, minimum conductivity and maximum mass density are also shown [2]. It is seen that the measured parameters result in an overestimation of SAR compared to the recommended values.

$f$ (MHz)	Tissue type	Limits / Measured	Dielectric Parameters			Chamber Temp. (°C)
			$\epsilon_r$	$\sigma$ (S/m)	$\rho$ (g/cm <sup>3</sup> )	
835	Muscle	Measured, 7/24/01	56.47	0.97	1.00	22.0
		Measured, 7/25/01	56.56	0.98	1.00	22.3
		Recommended Limits [2]	56.11	0.95	1.04	--
1800	Muscle	Measured, 7/23/01	39.35	1.73	1.00	22.6
		Measured, 7/24/01	39.40	1.72	1.00	22.1
		Recommended Limits [2]	54.44	1.39	1.04	--

### 5. System accuracy verification

A system accuracy verification of the DASY3 was performed using the dipole validation kits listed in Section 3.1. The system verification test was conducted on the same day as the measurement of the DUT. The obtained results are displayed in the table below (SAR values are scaled to 1 Watt power delivered to the antenna). It is seen that the system is operating within its specification, as the results are within acceptable tolerance of the reference values. At 900 MHz and 1800MHz, reference values are taken from the system manufacturer. The distributions of SAR compare well with those of the reference measurements (see Appendix 1).

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Approved EUS/CV/RF/P Mark Douglas	Checked MGD	2001-7-25	A	M:\FCC\sar addendum to T60c.doc

$f$ (MHz)	Tissue type	Measured / Reference	SAR (W/kg), 1 gram/10 gram	Dielectric Parameters			Chamber Temp. (°C)
				$\epsilon_r$	$s$ (S/m)	$r$ (g/cm <sup>3</sup> )	
900	Muscle	Measured, 7/24/01	11.24/7.03	55.93	1.03	1.00	22.0
		Measured, 7/25/01	10.72/6.83	55.74	1.03	1.00	23.0
		Reference	11.08/7.08	56.10	0.99	1.00	--
1800	Muscle	Measured, 7/23/01	41.63/21.02	39.35	1.73	1.00	22.8
		Measured, 7/24/01	41.69/20.81	39.40	1.72	1.00	23.0
		Reference	40.00/20.20	40.0	1.72	1.00	--

## 6. Test results

The measured 1and 10-gram averaged SAR values of the device are provided in Tables 1 and 2. Also shown are the measured conducted output powers and the temperature of the test facility during the test. The depth of the tissue simulating liquid was at least 15 cm for all the cases except for muscle in 800 AMPS mode. In this case, a depth of 14.2 cm was used. Test commands were used to control the device during the SAR measurements. The phone was supplied with a fully charged battery for the tests.

The device with the whip antenna extended was tested against a flat phantom representing the user's body, using product # SXX 109 4518/2, product # SXX 107 6820/55, and product # SXX-109 4705. SAR was measured at the lowest, middle and highest frequencies of the 800 AMPS and 1900 CDMA bands (800 CDMA is not necessary due to the significantly lower output power).

mode	$f$ (MHz)	Output Power (dBm)	SXX 109 4518/2			SXX 107 6820/55		
			Chamber Temp. (°C)	SAR, 1g /10g (W/kg)		Chamber Temp. (°C)	SAR, 1g /10g (W/kg)	
				measured	Calculated to max. power		measured	Calculated to max. power
800 AMPS	824	25.8	22.8	<b>0.89/0.60</b>	<b>0.98/0.66</b>	22.0	<b>0.97/0.66</b>	<b>1.06/0.72</b>
	837	26.1	22.9	0.58/0.40	0.64/0.44	22.1	0.60/0.41	0.66/0.45
	849	25.9	22.8	0.65/0.44	0.71/0.48	22.0	0.70/0.48	0.77/0.53
1900 CDMA	1851	23.1	23.1	0.43/0.22	0.49/0.25	23.3	0.21/0.11	0.24/0.13
	1880	23.2	23.2	0.53/0.27	0.61/0.31	23.3	0.35/0.18	0.40/0.21
	1909	23.2	23.1	<b>0.56/0.29</b>	<b>0.64/0.33</b>	23.2	<b>0.41/0.22</b>	<b>0.47/0.25</b>

**Table 1: SAR measurement results for the Ericsson T60c telephone at highest possible output power. Measured against the body using carry accessory SXX 109 4518/2and SXX 107 6820/55.**

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Approved EUS/CV/RF/P Mark Douglas	Checked MGD	2001-7-25	A	M:\FCC\sar addendum to T60c.doc

mode	$f$ (MHz)	Output Power (dBm)	SXX-109 4705			SXX-109 4705		
			Back of the phone against holster			Front of the phone against holster		
			Chamber Temp. (°C)	SAR, 1g /10g (W/kg)		Chamber Temp. (°C)	SAR, 1g /10g (W/kg)	
				measured	Calculated to max. power		measured	Calculated to max. power
800 AMPS	824	25.8	22.8	<b>0.93/0.66</b>	<b>1.02/0.72</b>	22.9	0.83/0.59	0.91/0.65
	837	26.1	22.9	0.55/0.38	0.60/0.42	22.9	0.60/0.42	0.66/0.46
	849	25.9	22.8	0.70/0.49	0.77/0.54	22.8	0.60/0.42	0.66/0.46
1900 CDMA	1851	23.1	22.9	0.15/0.09	0.17/0.10	23.0	0.31/0.18	0.36/0.21
	1880	23.2	23.0	0.26/0.15	0.30/0.17	22.9	0.38/0.22	0.44/0.25
	1909	23.2	22.9	0.36/0.17	0.41/0.19	22.9	<b>0.44/0.25</b>	<b>0.50/0.29</b>

**Table 2: SAR measurement results for the Ericsson T60c telephone at highest possible output power.  
Measured against the body using carry accessory SXX-109 4705.**

## References

- [1] C. Törnevik, M. Siegbahn, T. Persson, M. Douglas, and R. Plicanic, "Ericsson SAR measurement specification", Internal Document ERA/TF-00:037, March 2001.
- [2] Federal Communications Commission, "Tissue Dielectric Properties," <http://www.fcc.gov/fcc-bin/dielec.sh>.

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Approved EUS/CV/RF/P Mark Douglas	Checked MGD	2001-7-25	A M:\FCC\sar addendum to T60c.doc

## Appendix 1: SAR distribution comparison for system accuracy verification

### Dipole 900 MHz

Generic Twin A; Flat

Probe: ET3DV5 - SN1337; ConvF(5.39,5.39,5.39); Crest factor: 1.0; Muscle 900 MHz:  $\sigma = 1.03 \text{ mho/m}$ ,  $\epsilon_r = 55.9$ ,  $\rho = 1.00 \text{ g/cm}^3$

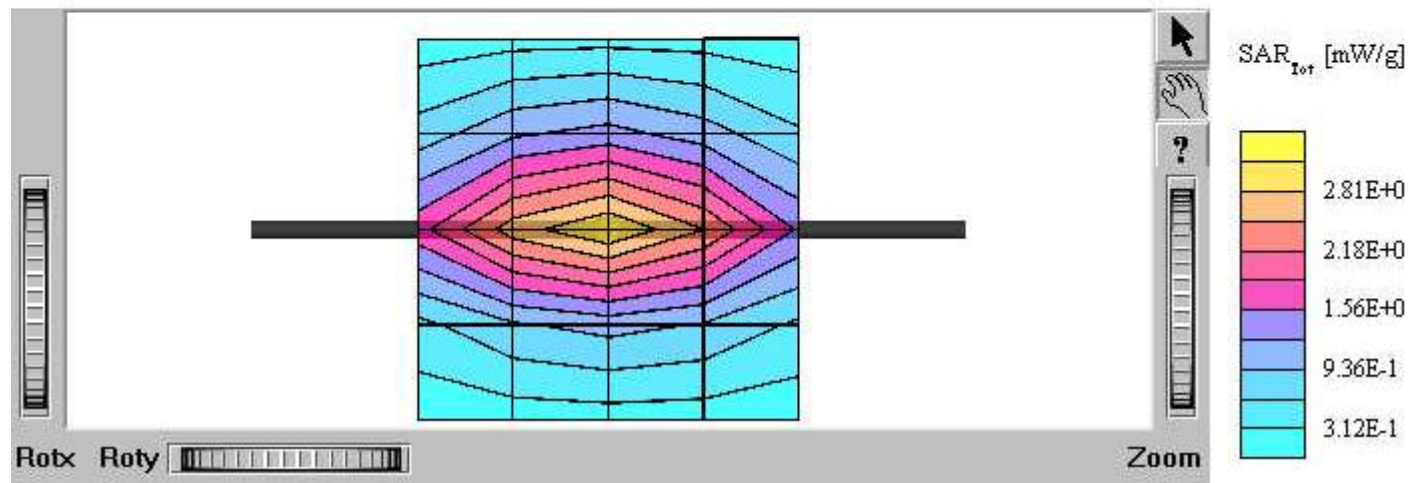
Cubes (2): Peak:  $4.59 \text{ mW/g} \pm 0.14 \text{ dB}$ , SAR (1g):  $2.80 \text{ mW/g} \pm 0.13 \text{ dB}$ , SAR (10g):  $1.75 \text{ mW/g} \pm 0.12 \text{ dB}$ , (Worst-case extrapolation)

Penetration depth: 11.7 (10.2, 13.8) [mm]

Powerdrift: 0.03 dB

Pout=249 mW

File name: Validation 900 MHz\_Muscle\_7\_24\_01\_SN049, Date: 07/24/01



900 MHz SAR distribution of validation dipole antenna from system accuracy verification test on July 24, 2001. Using muscle tissue.

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Approved EUS/CV/RF/P Mark Douglas	Checked MGD	2001-7-25	A M:\FCC\sar addendum to T60c.doc

## Dipole 900 MHz

Generic Twin A; Flat

Probe: ET3DV5 - SN1337; ConvF(5.39,5.39,5.39); Crest factor: 1.0; Muscle 900 MHz:  $\sigma = 1.03$  mho/m  $\epsilon_r = 55.7$   $\rho = 1.00$  g/cm<sup>3</sup>

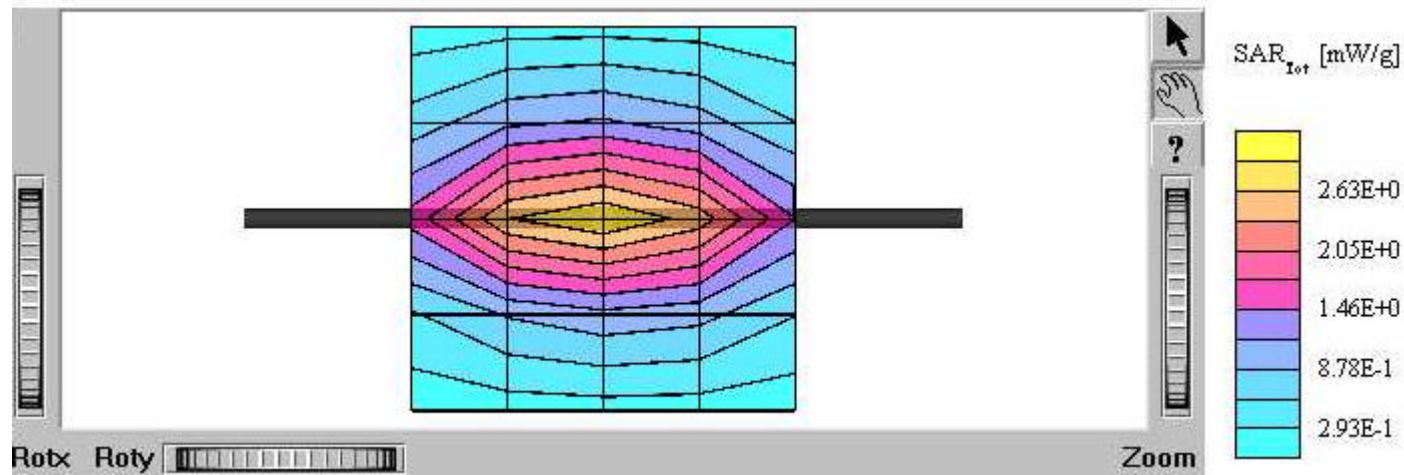
Cubes (2): Peak: 4.28 mW/g  $\pm 0.12$  dB, SAR (1g): 2.67 mW/g  $\pm 0.13$  dB, SAR (10g): 1.70 mW/g  $\pm 0.13$  dB, (Worst-case extrapolation)

Penetration depth: 12.1 (10.8, 13.8) [mm]

Powerdrift: 0.02 dB

Pout=249 mW

File name: Validation 900 MHz 07\_25\_01\_Muscle\_SN049, Date: 07/25/01



**900 MHz SAR distribution of validation dipole antenna from system accuracy verification test on July 25, 2001. Using muscle tissue.**



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**Validation Dipole D900V2 SN:049, d = 15 mm**

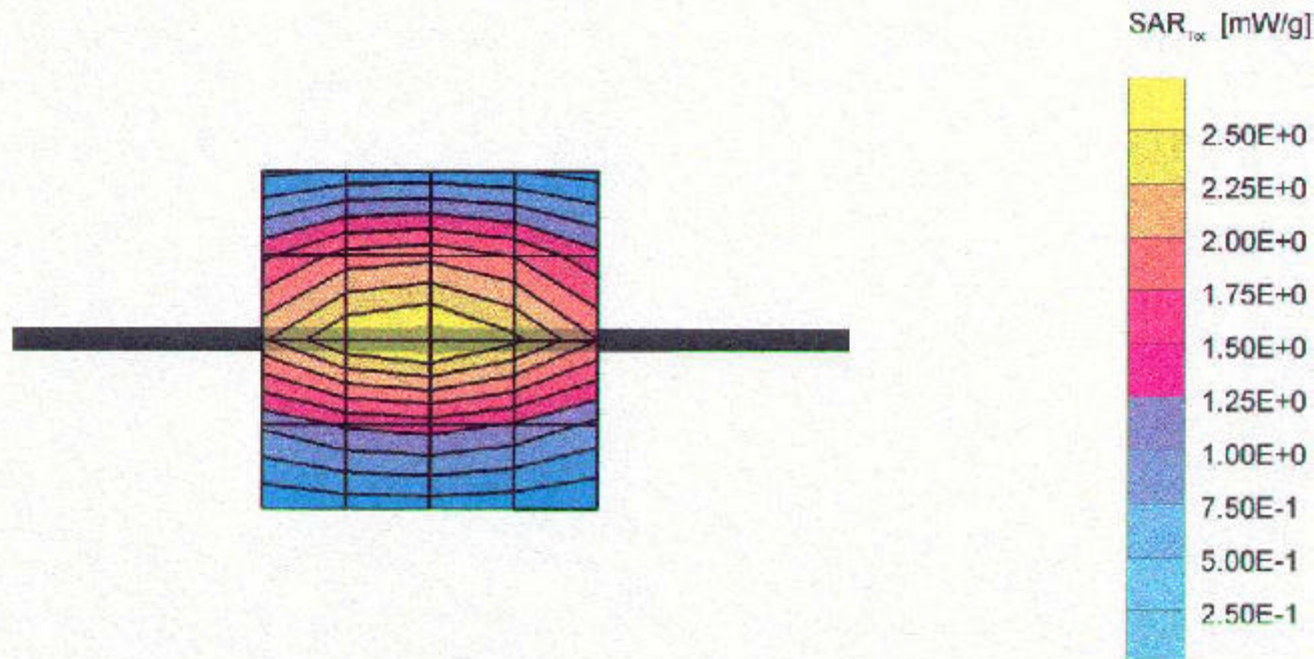
Frequency: 900 MHz; Antenna Input Power: 250 [mW]

Generic Twin Phantom; Flat Section; Grid Spacing: Dx = 15.0, Dy = 15.0, Dz = 10.0

Probe: ET3DV6 - SN1507; ConvF(6.17,6.17,6.17) at 900 MHz; Muscle 900 MHz;  $\sigma = 0.99$  mho/m  $\epsilon_r = 56.1$   $\rho = 1.00$  g/cm<sup>3</sup>Cubes (2): Peak: 4.42 mW/g  $\pm 0.03$  dB, SAR (1g): 2.77 mW/g  $\pm 0.02$  dB, SAR (10g): 1.77 mW/g  $\pm 0.02$  dB, (Worst-case extrapolation)

Penetration depth: 12.2 (10.7, 14.2) [mm]

Powerdrift: -0.01 dB



**900 MHz SAR distribution of validation dipole antenna from reference measurement. Using muscle tissue.**

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Approved EUS/CV/RF/P Mark Douglas	Checked MGD	2001-7-25	A M:\FCC\sar addendum to T60c.doc

## Dipole 1800 MHz

Generic Twin A; Flat

Probe: ET3DV5 - SN1337; ConvF(4.90,4.90,4.90); Crest factor: 1.0; Brain 1800 MHz:  $\sigma = 1.73 \text{ mho/m}$ ,  $\epsilon_r = 39.4$ ,  $\rho = 1.00 \text{ g/cm}^3$

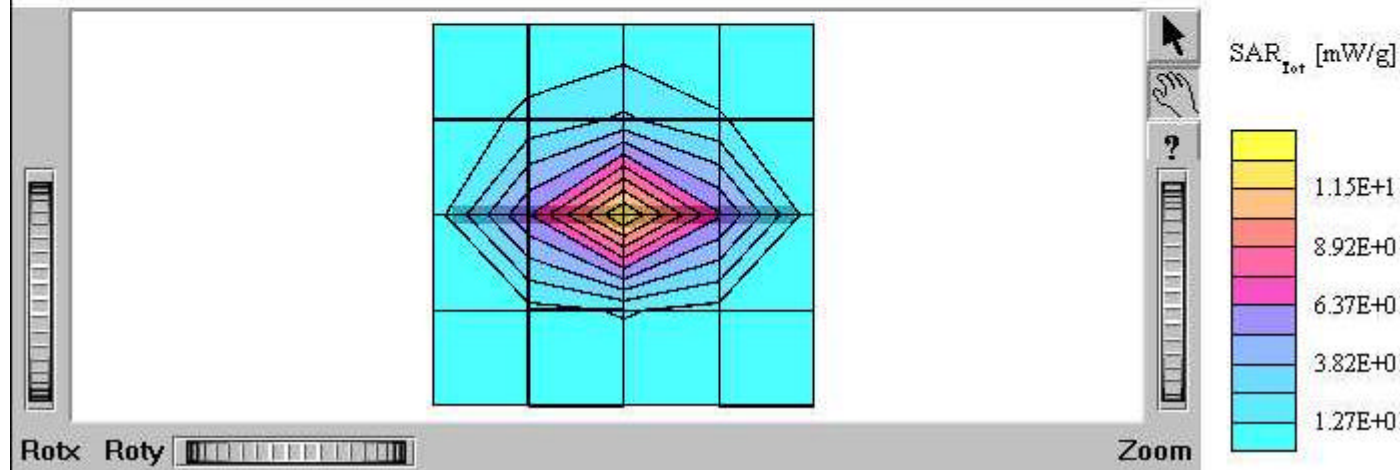
Cubes (Z): Peak:  $20.0 \text{ mW/g} \pm 0.13 \text{ dB}$ , SAR (1g):  $10.2 \text{ mW/g} \pm 0.13 \text{ dB}$ , SAR (10g):  $5.15 \text{ mW/g} \pm 0.13 \text{ dB}$ , (Worst-case extrapolation)

Penetration depth: 7.1 (6.8, 8.0) [mm]

Powerdrift: 0.03 dB

Pout=245 mW

File name: Validation 1800 MHz 07\_23\_01\_sn217, Date: 07/23/01



**1800 MHz SAR distribution of validation dipole antenna from system accuracy verification test on July 23, 2001.  
Using head/muscle tissue.**

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## Dipole 1800 MHz

Generic Twin A; Flat

Probe: ET3DV5 - SN1337; ConvF(4.90,4.90,4.90); Crest factor: 1.0; Brain 1800 MHz:  $\sigma = 1.72$  mho/m  $\epsilon_r = 39.4$   $\rho = 1.00$  g/cm<sup>3</sup>

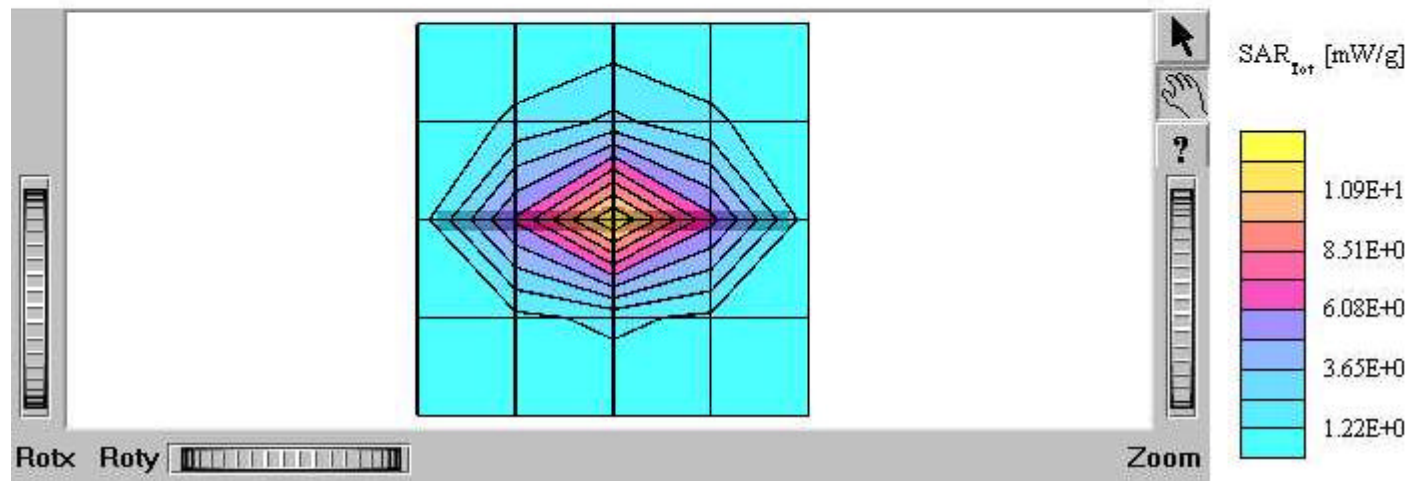
Cubes (2): Peak: 21.3 mW/g  $\pm 0.06$  dB, SAR (1g): 10.8 mW/g  $\pm 0.03$  dB, SAR (10g): 5.39 mW/g  $\pm 0.02$  dB, (Worst-case extrapolation)

Penetration depth: 7.2 (6.8, 8.1) [mm]

Powerdrift: 0.05 dB

Pout=259 mW

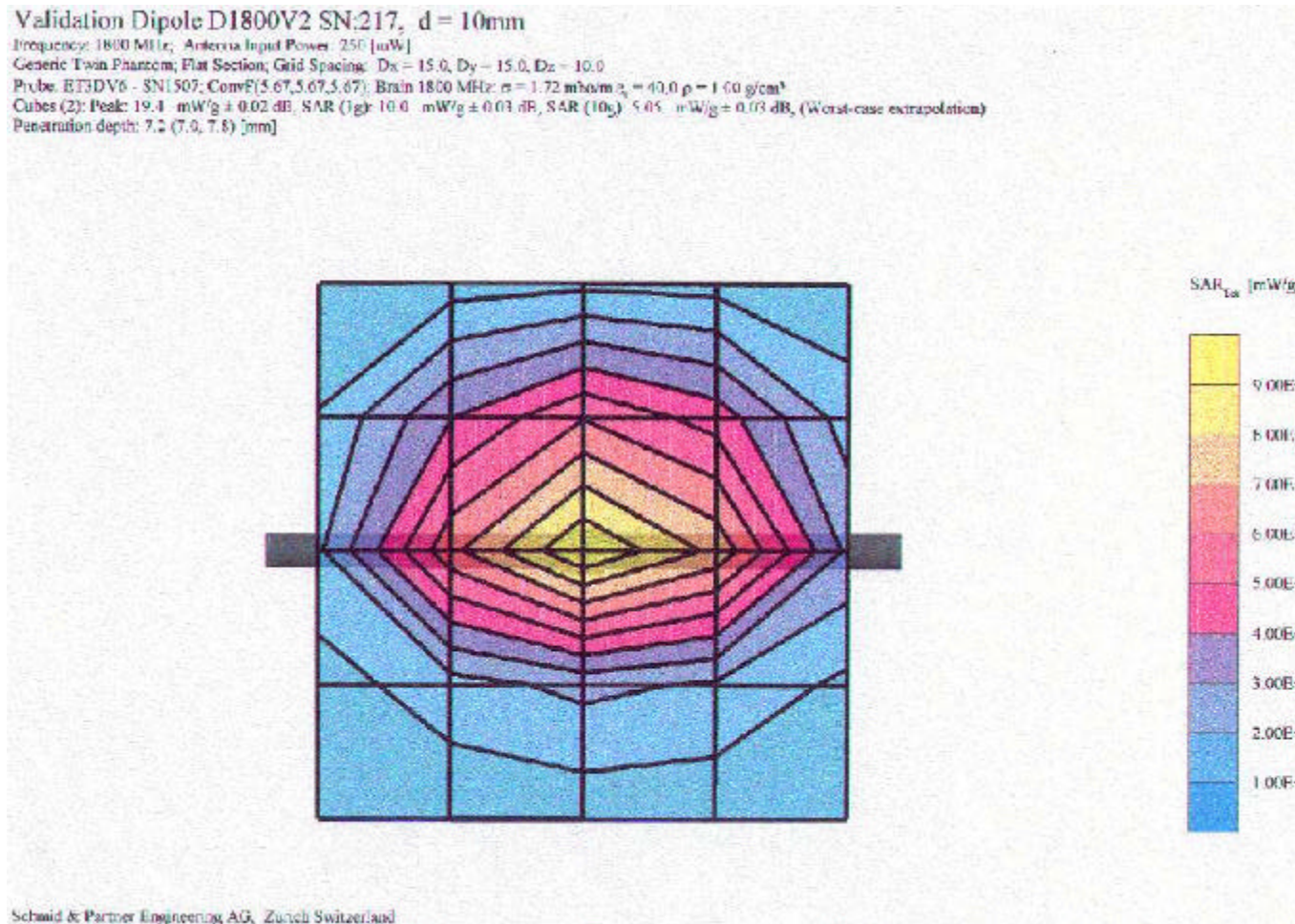
File name: Validation 1800 MHz 07\_24\_01, Date: 07/24/01



**1800 MHz SAR distribution of validation dipole antenna from system accuracy verification test on July 24, 2001.  
Using head/muscle tissue.**



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Approved EUS/CV/RF/P Mark Douglas	Checked MGD	2001-7-25	A M:\FCC\sar addendum to T60c.doc



1800 MHz SAR distribution of validation dipole antenna from reference measurement.  
Using head/muscle tissue.

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## Appendix 2: SAR distribution plots

### T60c

Generic Twin A; Flat

Probe: ET3DV5 - SN1337; ConvF(5.39,5.39,5.39); Crest factor: 1.0; Muscle 835 MHz:  $\sigma = 0.98$  mho/m  $\epsilon_r = 56.6$   $\rho = 1.00$  g/cm<sup>3</sup>

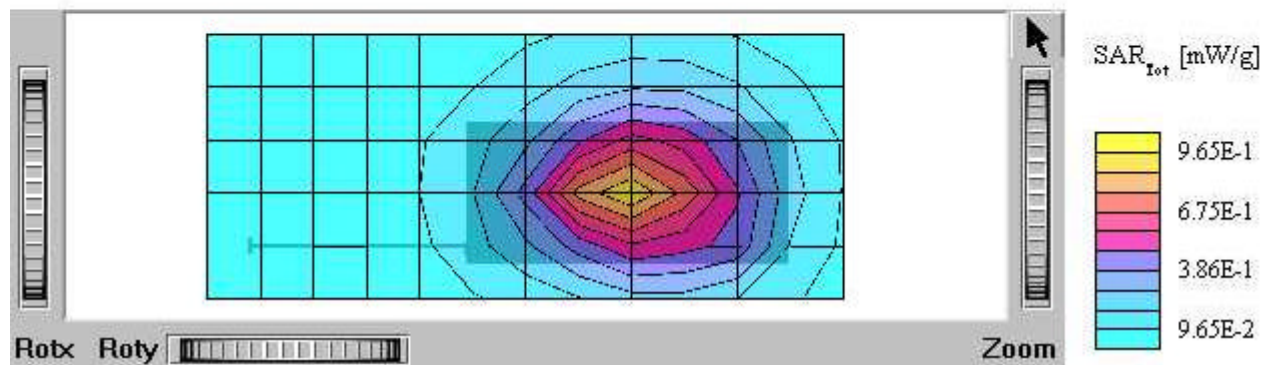
Cube 5x5x7: Peak: 1.39 mW/g, SAR (1g): 0.894 mW/g, SAR (10g): 0.601 mW/g, (Worst-case extrapolation)

Penetration depth: 14.2 (11.9, 17.0) [mm]

Powerdrift: -0.06 dB

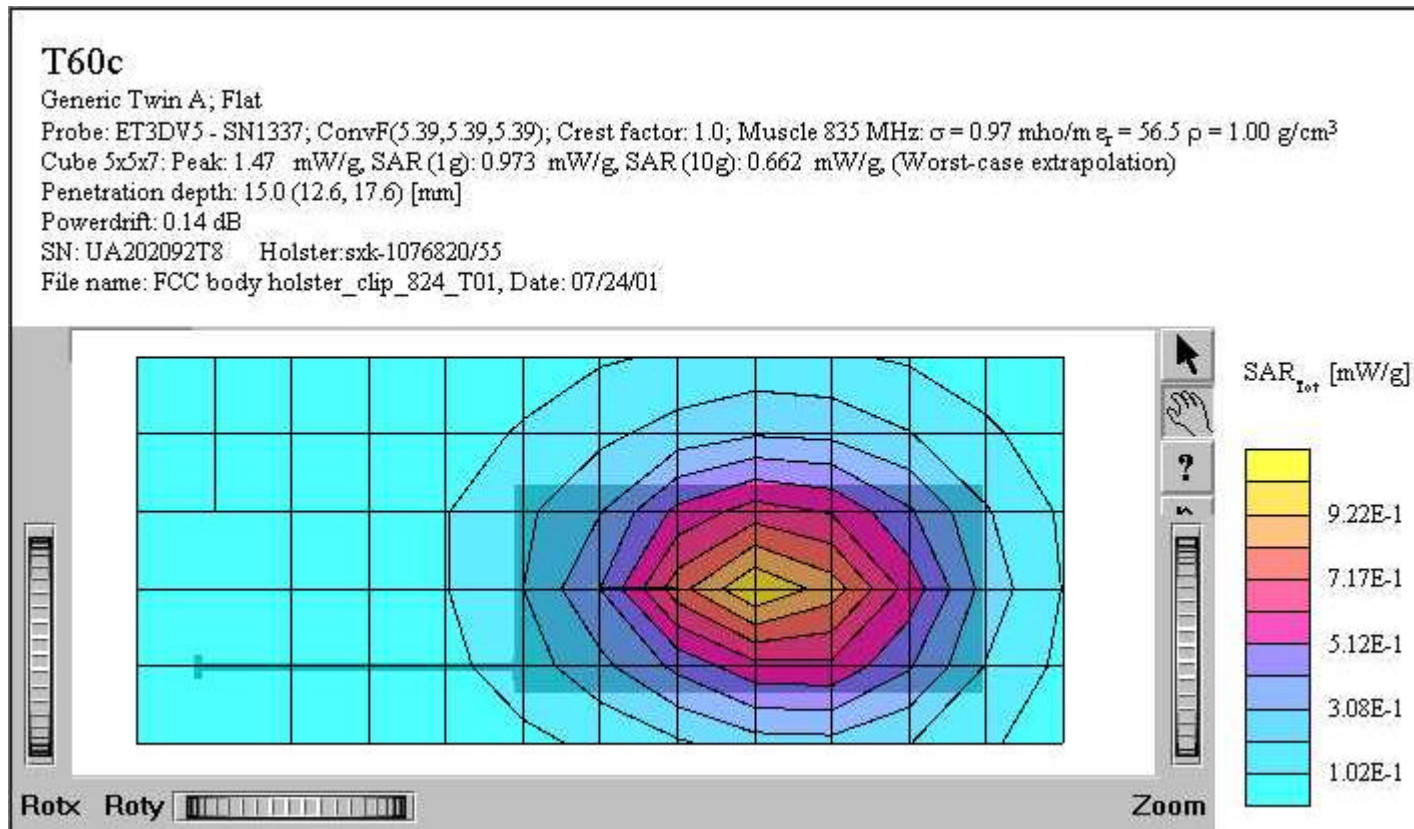
SN: UA202092T8 Holster: sxk-109 4518/2

File name: FCC body holster\_sxk 109 4518 2\_824, Date: 07/25/01



**Distribution of maximum SAR in 800 AMPS band.  
Measured against the body using product # SXK –109 4518/2 as a carry case.**

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**Distribution of maximum SAR in 800 AMPS band. Measured against the body using product # SXK –109 6820/55 as a carry case.**

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**T60c**

Generic Twin A; Flat

Probe: ET3DV5 - SN1337; ConvF(5.39,5.39,5.39); Crest factor: 1.0; Muscle 835 MHz:  $\sigma = 0.98$  mho/m  $\epsilon_r = 56.6$   $\rho = 1.00$  g/cm<sup>3</sup>

Cube 5x5x7: Peak: 1.32 mW/g, SAR (1g): 0.926 mW/g, SAR (10g): 0.657 mW/g, (Worst-case extrapolation)

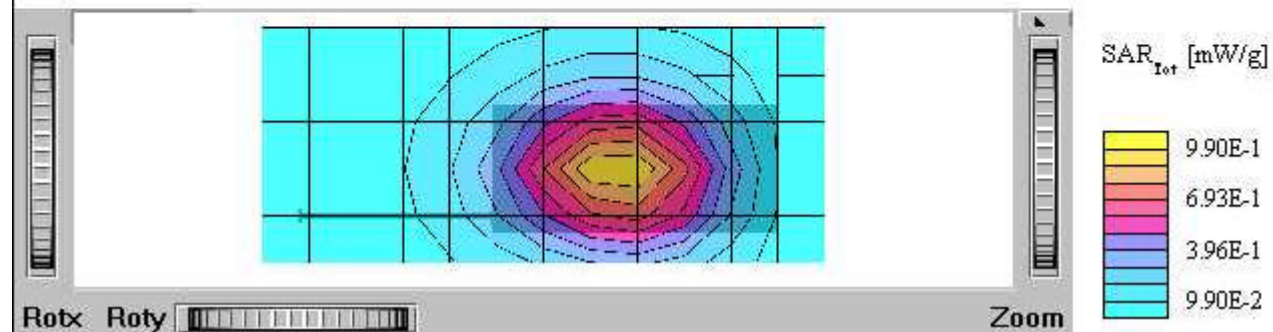
Penetration depth: 16.1 (14.5, 17.8) [mm]

Powerdrift: -0.07 dB

SN: UA202092T8 Holster: sxk-1094705

back of the phone against the holster

File name: FCC body holster\_sxk-1094705\_824\_T01, Date: 07/25/01



**Distribution of maximum SAR in 800 AMPS band.**  
**Measured against the body using product # SXX –109 4705 as a carry case.**



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Approved EUS/CV/RF/P Mark Douglas	Checked MGD	2001-7-25	A M:\FCC\sar addendum to T60c.doc

**T60c**

Generic Twin A, Flat

Probe: ET3DV5 - SN1337; ConvF(4.90,4.90,4.90); Crest factor: 1.0; Brain 1800 MHz:  $\sigma = 1.73 \text{ mho/m}$ ,  $\epsilon_r = 39.4$ ,  $\rho = 1.00 \text{ g/cm}^3$ 

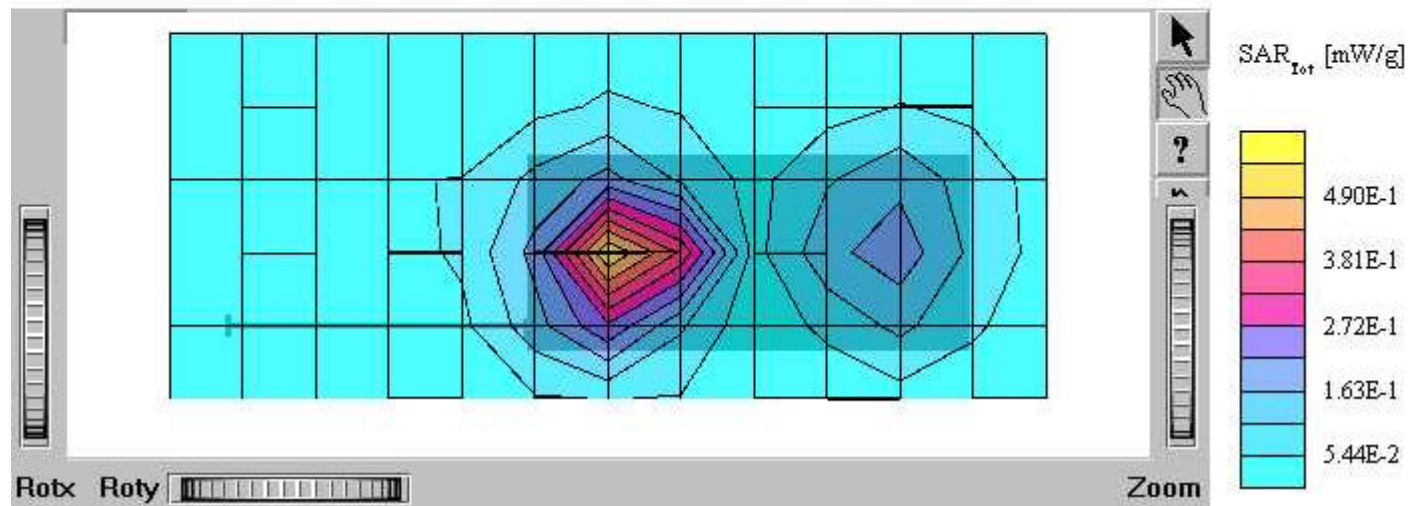
Cube 5x5x7: Peak: 1.05 mW/g, SAR (1g): 0.559 mW/g, SAR (10g): 0.288 mW/g, (Worst-case extrapolation)

Penetration depth: 7.6 (7.3, 8.2) [mm]

Powerdrift: -0.07 dB

SN: UA202092T8 Holster: sxk 1094518/2

File name: FCC body holster splastictranspar\_CDMAPCS\_1909\_T01, Date: 07/23/01



**Distribution of maximum SAR in 1900 CDMA band. Measured against the body using product # SXK -109 4518/2 as a carry case.**



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Approved EUS/CV/RF/P Mark Douglas	Checked MGD	2001-7-25	A M:\FCC\sar addendum to T60c.doc

## T60c

Generic Twin A; Flat

Probe: ET3DV5 - SN1337; ConvF(4.90,4.90,4.90); Crest factor: 1.0; Brain 1800 MHz:  $\sigma = 1.73$  mho/m  $\epsilon_r = 39.4$   $\rho = 1.00$  g/cm<sup>3</sup>

Cube 5x5x7: Peak: 0.778 mW/g, SAR (1g): 0.414 mW/g, SAR (10g): 0.216 mW/g, (Worst-case extrapolation)

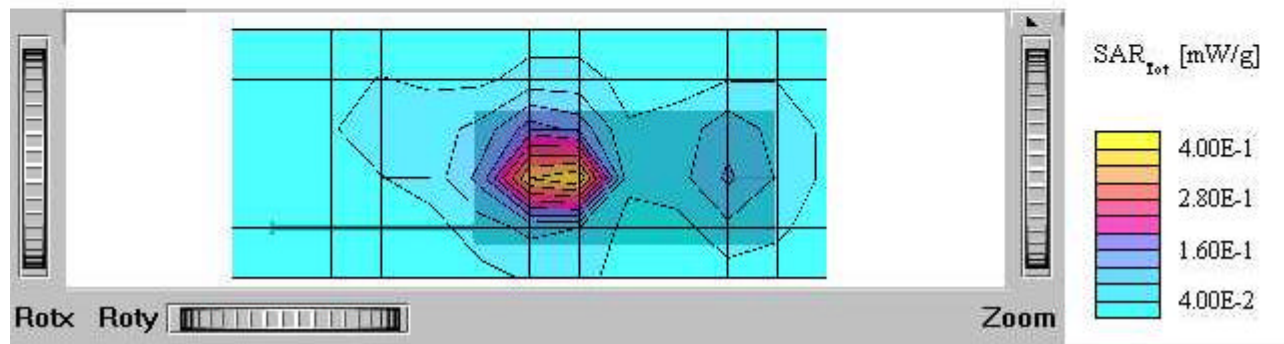
Penetration depth: 7.6 (7.3, 8.2) [mm]

Powerdrift: 0.02 dB

SN: UA202092T8 Holster: sxk-107 6820/55

belt clip

File name: FCC body holster sxk-107 6820 55\_2\_CDMAPCS\_1909\_T01, Date: 07/23/01



**Distribution of maximum SAR in 1900 CDMA band. Measured against the body using product # SXX -6820/55 as a carry case.**

Prepared (also subject responsible if other) EUS/CV/RF/P Dulce Altabella		No. EUS/CV/R-01:0781/REP	
Approved EUS/CV/RF/P Mark Douglas	Checked MGD	2001-7-25	A M:\FCC\sar addendum to T60c.doc

**T60c**

Generic Twin A; Flat

Probe: ET3DV5 - SN1337; ConvF(4.90,4.90,4.90); Crest factor: 1.0; Brain 1800 MHz:  $\sigma = 1.72 \text{ mho/m}$   $\epsilon_r = 39.4$   $\rho = 1.00 \text{ g/cm}^3$ 

Cube 5x5x7: Peak: 0.791 mW/g, SAR (1g): 0.440 mW/g, SAR (10g): 0.250 mW/g (Worst-case extrapolation)

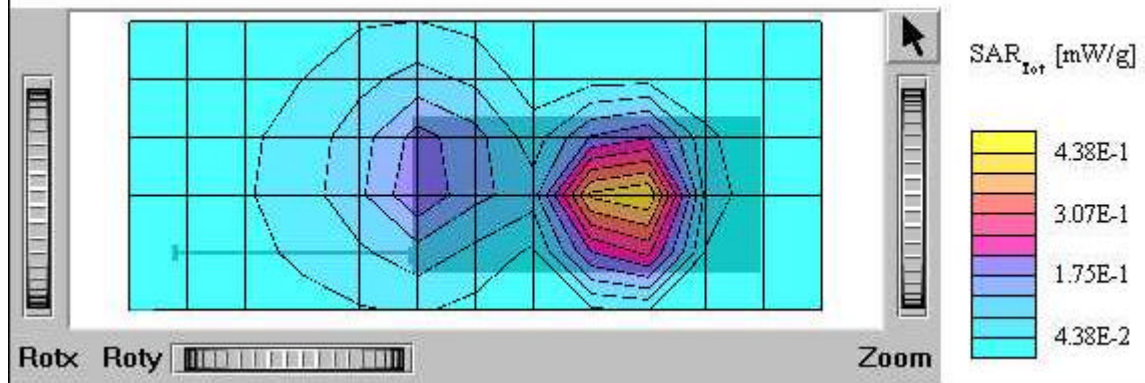
Penetration depth: 8.4 (8.1, 9.2) [mm]

Powerdrift: -0.06 dB

SN: UA202092T8 Holster: sxk 109 4705

front of the phone against the holster

File name: FCC body holster sxk-1094705\_2\_CDMA PCS\_1909\_T02, Date: 07/24/01



**Distribution of maximum SAR in 1900 CDMA band. Measured against the body using product # SXK –109 4705 as a carry case.**

Prepared (also subject responsible if other) EUS/CV/RF/P Dulce Altabella		No. <b>EUS/CV/R-01:0781/REP</b>	
Approved EUS/CV/RF/P Mark Douglas	Checked MGD	2001-7-25	A M:\FCC\sar addendum to T60c.doc

### Appendix 3: Photographs of Device Under Test



Front view of device



Back view of device

Prepared (also subject responsible if other) EUS/CV/RF/P Dulce Altabella		No. <b>EUS/CV/R-01:0781/REP</b>	
Approved EUS/CV/RF/P Mark Douglas	Checked MGD	2001-7-25	A M:\FCC\sar addendum to T60c.doc



**Side view of device.**

Prepared (also subject responsible if other) EUS/CV/RF/P Dulce Altabella		No. <b>EUS/CV/R-01:0781/REP</b>	
Approved EUS/CV/RF/P Mark Douglas	Checked MGD	2001-7-25	A M:\FCC\sar addendum to T60c.doc



Front, back, and side views of product number SXX –109-4518/2.

Prepared (also subject responsible if other) EUS/CV/RF/P Dulce Altabella		No. <b>EUS/CV/R-01:0781/REP</b>	
Approved EUS/CV/RF/P Mark Douglas	Checked MGD	2001-7-25	A M:\FCC\sar addendum to T60c.doc



**Front, side, and back views of part number SXX 107 6820/55.**



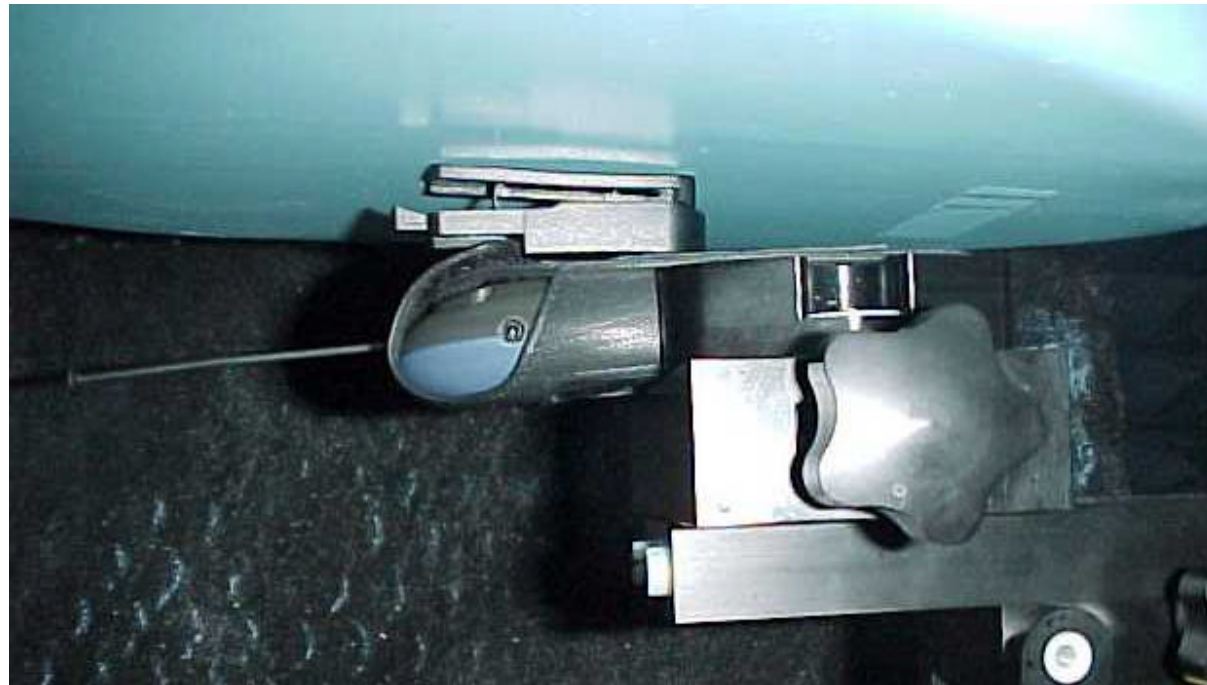
Prepared (also subject responsible if other) EUS/CV/RF/P Dulce Altabella		No. <b>EUS/CV/R-01:0781/REP</b>		
Approved EUS/CV/RF/P Mark Douglas	Checked MGD	2001-7-25	A	M:\FCC\sar addendum to T60c.doc



Front, side, and back views of part number SXX 109 4705.

Prepared (also subject responsible if other) EUS/CV/RF/P Dulce Altabella		No. <b>EUS/CV/R-01:0781/REP</b>		
Approved EUS/CV/RF/P Mark Douglas	Checked MGD	2001-7-25	A	M:\FCC\sar addendum to T60c.doc

#### Appendix 4: Position of Device on Phantom



**Position of device against flat phantom using carry accessory SXX –109-4518/2.**

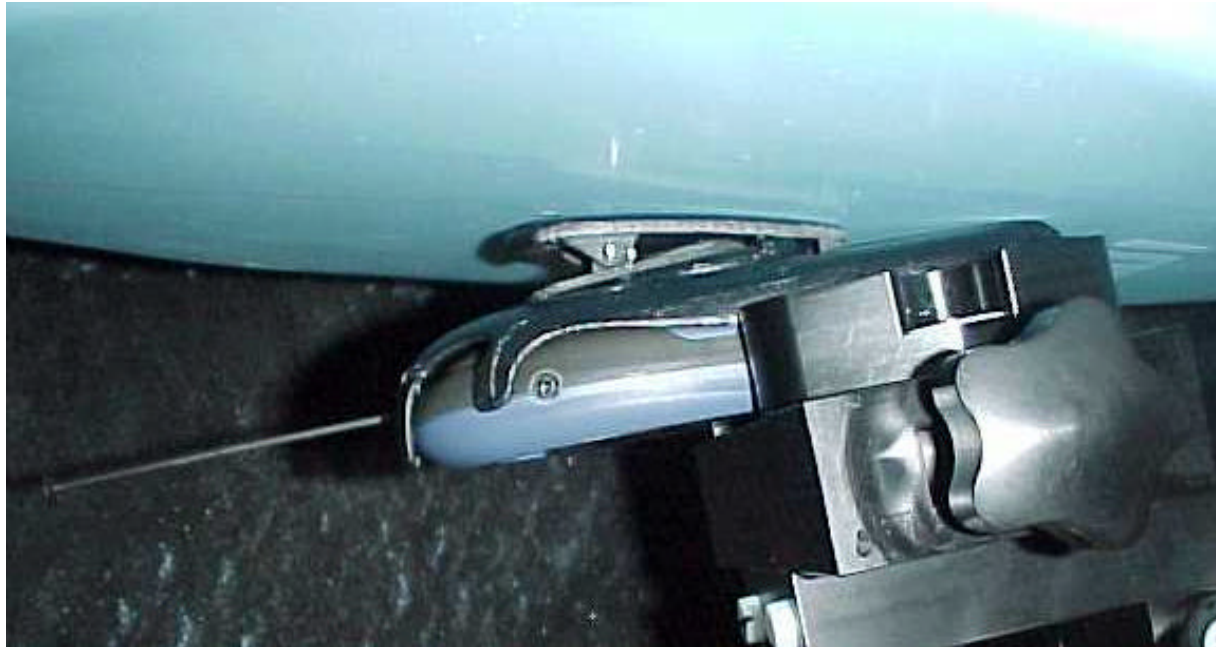


Prepared (also subject responsible if other) EUS/CV/RF/P Dulce Altabella		No. <b>EUS/CV/R-01:0781/REP</b>		
Approved EUS/CV/RF/P Mark Douglas	Checked MGD	2001-7-25	A	M:\FCC\sar addendum to T60c.doc



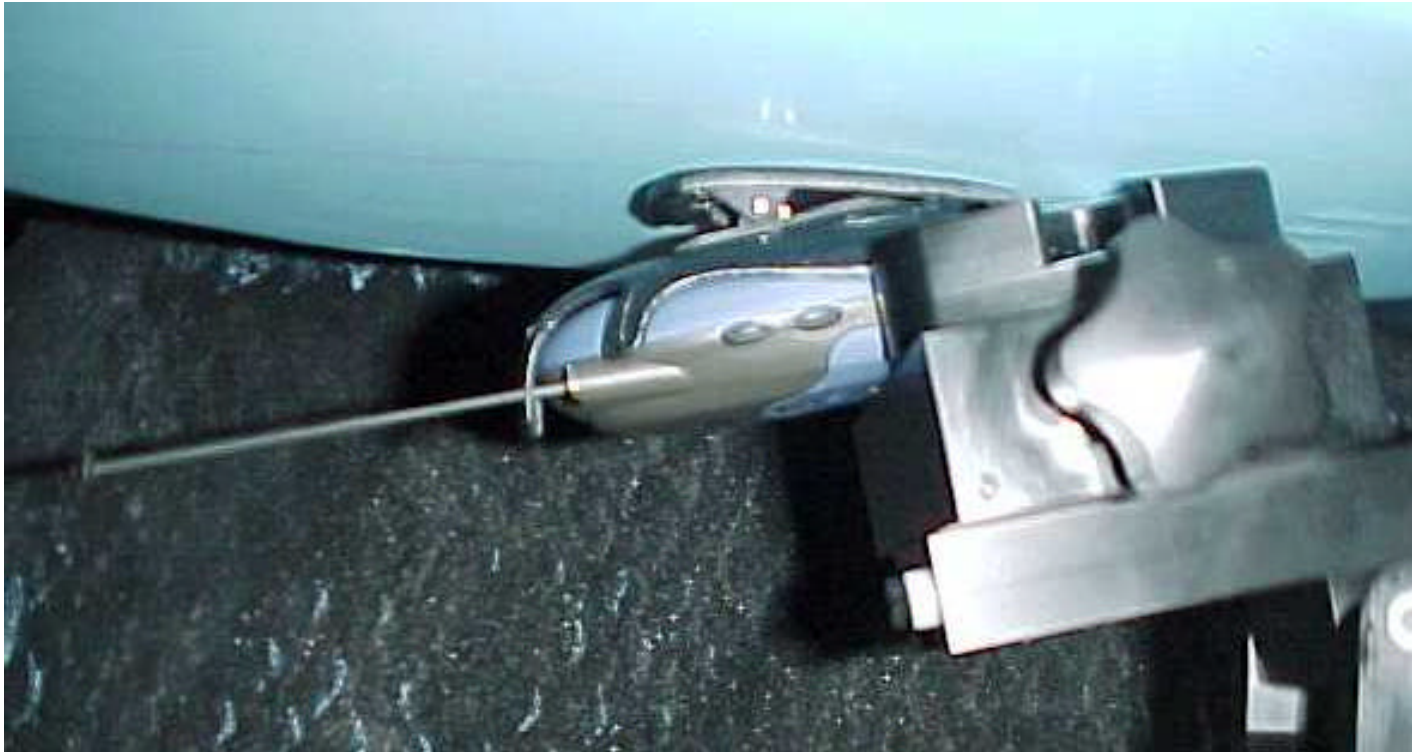
**Position of device against flat phantom using carry accessory SXX 107 6820/55.**

Prepared (also subject responsible if other) EUS/CV/RF/P Dulce Altabella		No. <b>EUS/CV/R-01:0781/REP</b>	
Approved EUS/CV/RF/P Mark Douglas	Checked MGD	2001-7-25	A M:\FCC\sar addendum to T60c.doc



**Position of device against flat phantom using carry accessory SXX 109 4705.  
Back of the phone against the holster.**

Prepared (also subject responsible if other) EUS/CV/RF/P Dulce Altabella		No. <b>EUS/CV/R-01:0781/REP</b>	
Approved EUS/CV/RF/P Mark Douglas	Checked MGD	2001-7-25	A M:\FCC\sar addendum to T60c.doc



**Position of device against flat phantom using carry accessory SXX 109 4705.  
Front of the phone against the holster.**

Prepared (also subject responsible if other) EUS/CV/RF/P Dulce Altabella		No. EUS/CV/R-01:0781/REP	
Approved EUS/CV/RF/P Mark Douglas	Checked MGD	2001-7-25	A M:\FCC\sar addendum to T60c.doc

## Appendix 5: Probe calibration parameters

ET3DV5 SN:1337

### DASY3 - Parameters of Probe: ET3DV5 SN:1337

#### Sensitivity in Free Space

NormX	<b>2.28</b> $\mu\text{V}/(\text{V/m})^2$
NormY	<b>2.10</b> $\mu\text{V}/(\text{V/m})^2$
NormZ	<b>2.14</b> $\mu\text{V}/(\text{V/m})^2$

#### Diode Compression

DCP X	<b>99</b> mV
DCP Y	<b>99</b> mV
DCP Z	<b>99</b> mV

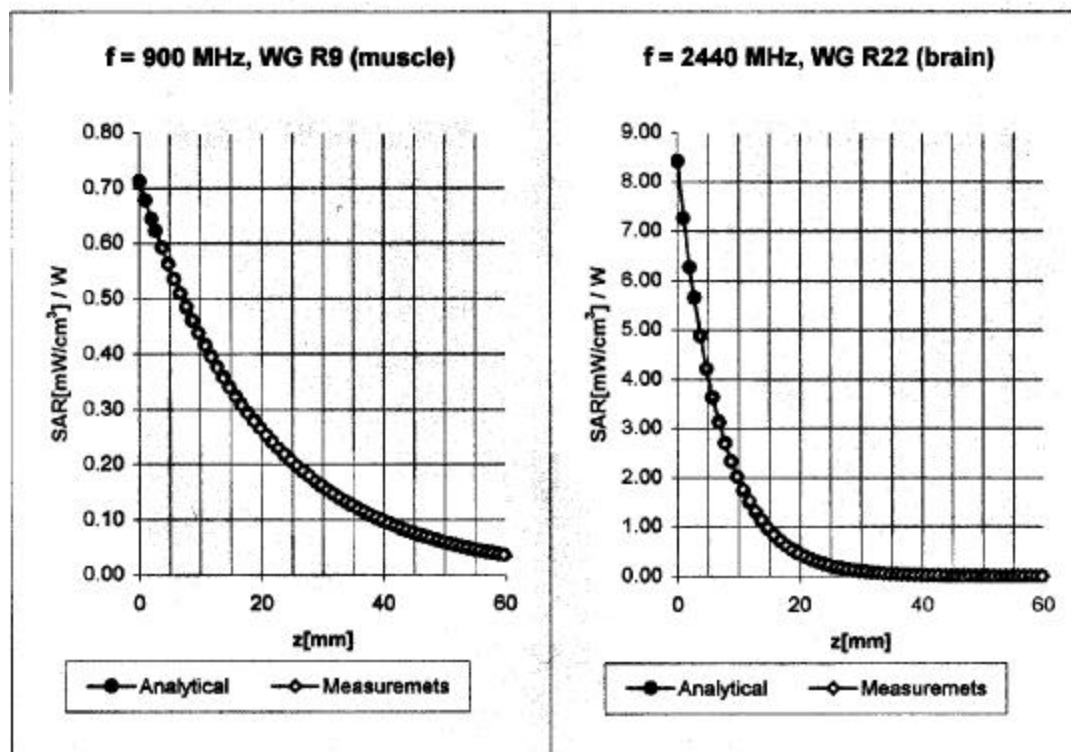
#### Sensitivity in Tissue Simulating Liquid

<b>Brain</b>	<b>450 MHz</b>	$\epsilon_r = 48 \pm 5\%$	$\sigma = 0.50 \pm 10\%$ mho/m
ConvF X	<b>5.89</b> extrapolated	Boundary effect:	
ConvF Y	<b>5.89</b> extrapolated	Alpha	<b>0.88</b>
ConvF Z	<b>5.89</b> extrapolated	Depth	<b>1.24</b>
<b>Brain</b>	<b>900 MHz</b>	$\epsilon_r = 42.5 \pm 5\%$	$\sigma = 0.86 \pm 10\%$ mho/m
ConvF X	<b>5.56</b> $\pm 7\%$ (k=2)	Boundary effect:	
ConvF Y	<b>5.56</b> $\pm 7\%$ (k=2)	Alpha	<b>0.78</b>
ConvF Z	<b>5.56</b> $\pm 7\%$ (k=2)	Depth	<b>1.62</b>
<b>Brain</b>	<b>1500 MHz</b>	$\epsilon_r = 41 \pm 5\%$	$\sigma = 1.32 \pm 10\%$ mho/m
ConvF X	<b>5.12</b> interpolated	Boundary effect:	
ConvF Y	<b>5.12</b> interpolated	Alpha	<b>0.65</b>
ConvF Z	<b>5.12</b> interpolated	Depth	<b>2.12</b>
<b>Brain</b>	<b>1800 MHz</b>	$\epsilon_r = 41 \pm 5\%$	$\sigma = 1.69 \pm 10\%$ mho/m
ConvF X	<b>4.90</b> $\pm 7\%$ (k=2)	Boundary effect:	

Prepared (also subject responsible if other) EUS/CV/RF/P Dulce Altabella		No. EUS/CV/R-01:0781/REP	
Approved EUS/CV/RF/P Mark Douglas	Checked MGD	2001-7-25	A M:\FCC\sar addendum to T60c.doc

ET3DV5 SN:1337

## Conversion Factor Assessment



Muscle      900 MHz       $\epsilon_r = 56 \pm 5\%$        $\sigma = 0.99 \pm 10\%$  mho/m

ConvF X      **5.39**  $\pm 7\%$  (k=2)  
ConvF Y      **5.39**  $\pm 7\%$  (k=2)  
ConvF Z      **5.39**  $\pm 7\%$  (k=2)

Boundary effect:

Alpha      **0.67**  
Depth      **1.82**

Prepared (also subject responsible if other)

EUS/CV/RF/P Dulce Altabella

No.

EUS/CV/R-01:0781/REP

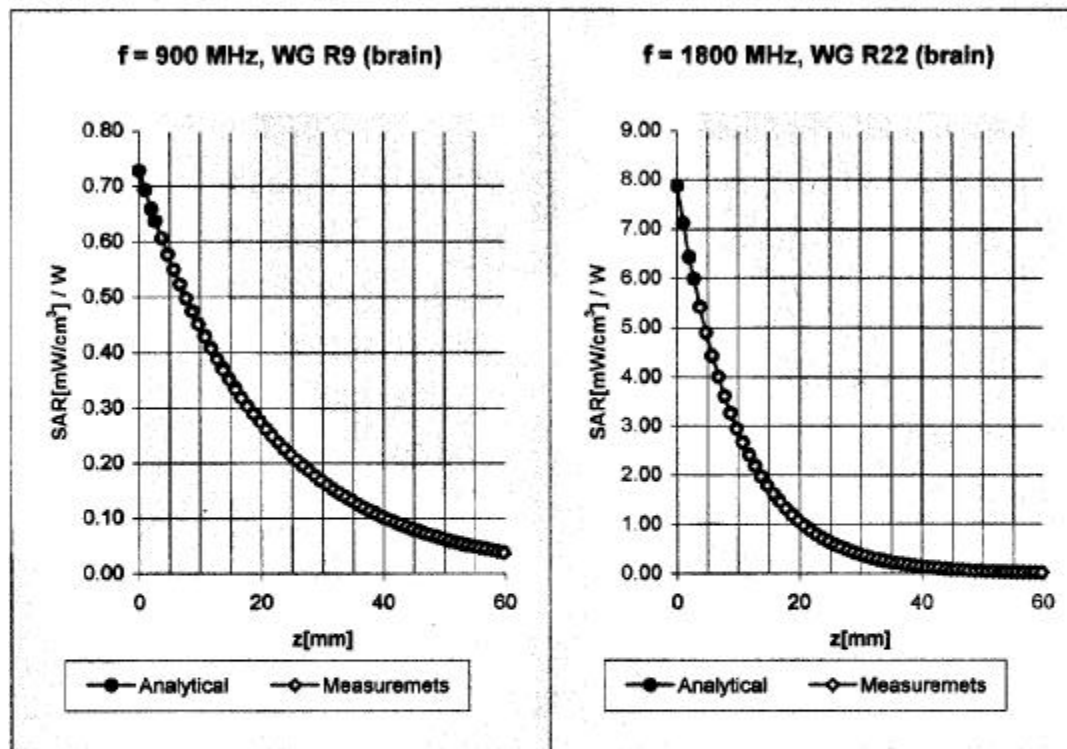
Approved

Checked

EU: ET3DV5 SN:1337

µm to T60c.doc

## Conversion Factor Assessment



Brain

900 MHz

 $\epsilon_r = 42.5 \pm 5\%$  $\sigma = 0.86 \pm 10\% \text{ mho/m}$ ConvF X **5.56**  $\pm 7\%$  ( $k=2$ )ConvF Y **5.56**  $\pm 7\%$  ( $k=2$ )ConvF Z **5.56**  $\pm 7\%$  ( $k=2$ )

Boundary effect:

Alpha **0.78**Depth **1.62**