Intertek Testing Services
ETL SEMKO

Specific Absorption Rate (SAR) Test Report

for

Telian Corporation

on the

Cellular Phone

Model Number: MTD-3500 & MTD-3510

FCC ID: NPQMTD-3500

Test Report: 30360051
Date of Report: December 26, 2002
Revised: February 19, 2003

Job #: 3036005
Date of Test: December 16 to 19, 2002 and February 18, 2003

A2LA Certificate Number: 1755-01

Tested by:	Suresh Kondapalli
Reviewed by: David Chernomordik	David Chernomordik, Ph.D., EMC Technical Manager

Review Date: 02/19/03

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Telian Corporation., Model No: MTD-3500 & MTD-3510
FCC ID: NPQMTD-3500 Date of Test: December 16 to 19, 2002and February 18, 2003

STATEMENT OF COMPLIANCE

The Telian Co. sample device, FCC ID: NPQMTD-3500 was evaluated for SAR in accordance with the requirements for RF Exposure compliance testing defined in FCC OET Bulletin 65, Supplement C (Edition 01-01). Testing was performed at the Intertek Testing Services facility in Menlo Park, California.

For the evaluation, the dosimetric assessment system DASY3 was used. The phantom employed was the "SAM Twin Phantom". The total uncertainty for the evaluation of the spatial peak SAR values averaged over a cube of 1g tissue mass had been assessed for this system to be ±27.8%.

The device was tested at their maximum output power declared by the Telian Co.

In summary, the maximum spatial peak SAR value for the sample device averaged over 1g was found to be:

Phantom	Position	SAR_{1g}, mW/g
Head Section	Left hand, cheek	1.11
Flat Section	1.5 cm from phantom	0.65

In conclusion, the tested sample device was found to be in compliance with the requirements defined in OET Bulletin 65, Supplement C (Edition 01-01) for head and body configurations.

1.0 JOB DESCRIPTION

1.1 Client Information

The MTD-3500 & MTD-3510 has been tested at the request of:

Company: Telian Corporation
4120 Reedland Circle
San Ramon, CA 94583
USA

Name of contact: Mr. Michael Cummiskey
Telephone: 925/648-2683
Fax: 925/648-2684

1.2 Equipment under test (EUT)

Product Descriptions:

Equipment	Cellular Phone		
Trade Name	Telian Corp.	**Model**	MTD-3500 & MTD-3510
FCC ID	NPQMTD-3500	**S/N No.**	Not Lsabeled
Category	Portable	**RF Exposure**	Uncontrolled Environment
Frequency Band	824 - 849 MHz	**System**	AMPS/TDMA

EUT Antenna Description			
Type	Monopole	**Configuration**	Fixed
Dimensions	19.7 mm	**Gain**	-2 dBd
Location	Right Side		

Use of Product: **W**ireless communication

Manufacturer: Telian Corporation

Production is planned: [x] Yes, [ ] No

EUT receive date: December 16, 2002 and February 18, 2003

EUT received condition: Good working condition prototype, according to the Applicant it is identical to the production units.

Test start date: December 16, 2002 and February 18, 2003

Test end date: December 19, 2002 and February 18, 2003

1.3 Test Plan Reference

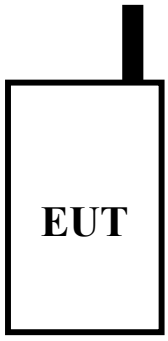
FCC Rule: Part 2.1093, FCC's OET Bulletin 65, Supplement C (Edition 01-01)

1.4 System Test Configuration

The phones Model MTD-3500 & MTD-3510 are identical except for the keypad arrangement and plastic face plate. Model MTD-3500 was used for testing. Test in worst-case configuration was repeated for the model MTD-3510.

1.4.1 System Block Diagram & Support equipment

The diagram shown below, details test configuration of the equipment under test.



No Support Equipment was used. The test sample was operated in a test mode that allows control of the transmitter without the need to place actual phone calls. For the purposes of this test, the device is commanded to test mode and manually set to the proper channel, transmitter power levels and transmit mode of operation. The device was then placed in the SAR Measurement System with a fully charged battery.

1.4.2 Test Position for Head

The MTD-3500 was configured for testing in a typical fashion (as a customer would normally use it), and in the confines as outlined in ANSI C95.1 (1992) and Supplement C of OET 65 (2001). The MTD-3500 was placed against the head phantom in 2 test positions as detailed in Figures 1 and 2 below.

Test Configuration for SAR

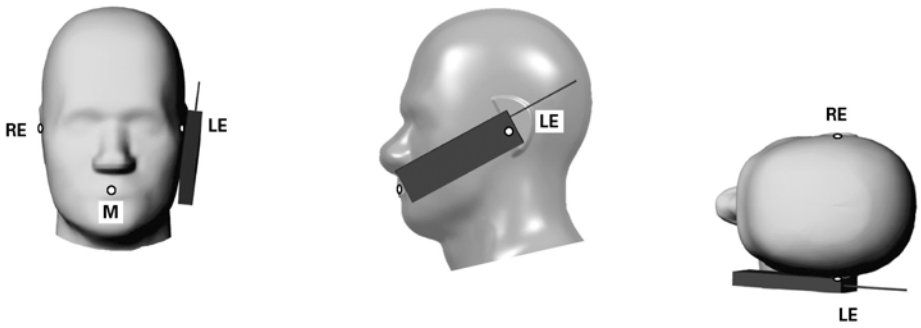


Figure 1 – Phone position 1, "cheek" or "touch" position. The reference points for the right ear (RE), left ear (LE) and mouth (M), which define the reference plane for phone positioning, are indicated.

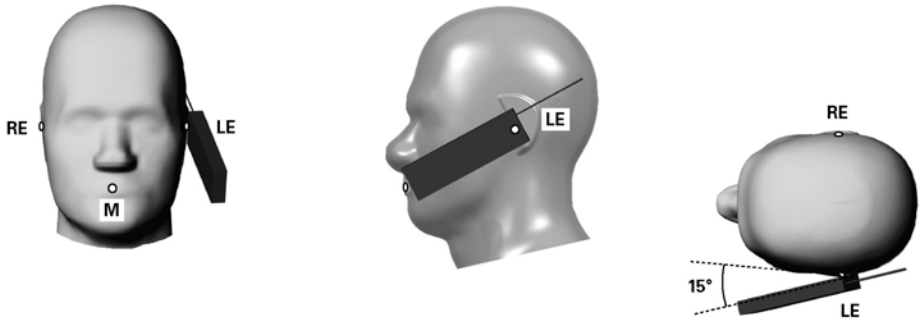


Figure 2 – Phone position 2, "tilted" position. The reference points for the right ear (RE), left ear (LE) and mouth (M), which define the reference plane for phone positioning, are indicated.

The positioning procedure is described below.

The EUT was positioned in a normal operating position with the "test device reference point" located along the "vertical centerline" on the front of the device aligned to the "ear reference point". The "test device reference point" is located at the same level as the center of the earpiece region. The "vertical centerline" is bisecting the front surface of the handset at its top and bottom edges. A "ear reference point" is located on the outer surface of the head phantom on each ear spacer. It is located 1.5 cm above the center of the ear canal entrance in the "phantom reference plane" defined by the three lines joining the center of each "ear reference point" (left and right) and the tip of the mouth.

The EUT is initially positioned with the earpiece region pressed against the ear spacer of a head phantom in "initial ear position". The "test device reference point" was aligned to the "ear reference point" on the head phantom and the "vertical centerline" was aligned to the "phantom reference plane". While maintaining these three alignments, the body of the handset is gradually adjusted to each of the following positions for evaluating SAR:

1. "Cheek/Touch Position" – the device is brought toward the mouth of the head phantom by pivoting against the "ear reference point". This test position is established:

i) When any point on the display, keypad or mouthpiece portions of the handset is in contact with the phantom.

or

ii) When any portion of a foldout, sliding or similar keypad cover opened to its intended self-adjusting normal use position is in contact with the cheek or mouth of the phantom.

2. "Ear/Tilt Position" – With the handset aligned in the "Cheek/Touch Position":

i) If the earpiece of the handset is not in full contact with the phantom's ear spacer (in the "Cheek/Touch position") and the peak SAR location for the "Cheek/Touch" position is located at the ear spacer region or corresponds to the earpiece region of the handset, the device is returned to the "initial ear position" by rotating it away from the mouth until the earpiece is in full contact with the ear spacer.

otherwise

ii) The handset is moved (translated) away from the cheek perpendicular to the line passes through both "ear reference points" for approximate 2-3 cm. While it is in this position, the handset is tilted away from the mouth with respect to the "test device reference point" by 15°. After the tilt, it is then moved (translated) back toward the head perpendicular to the line passes through both "ear reference points" until the device touches the phantom or the ear spacer. If the antenna touches the head first, the positioning process is repeated with a tilt angle less than 15° so that the device and its antenna would touch the phantom simultaneously.

1.4.3 Test Position for Body

The MTD-3500 was placed against the flat phantom in the test position as detailed in Figure 3 below. As the belt clip and holster were not supplied with the device, the MTD-3500 was positioned 15 mm from phantom.

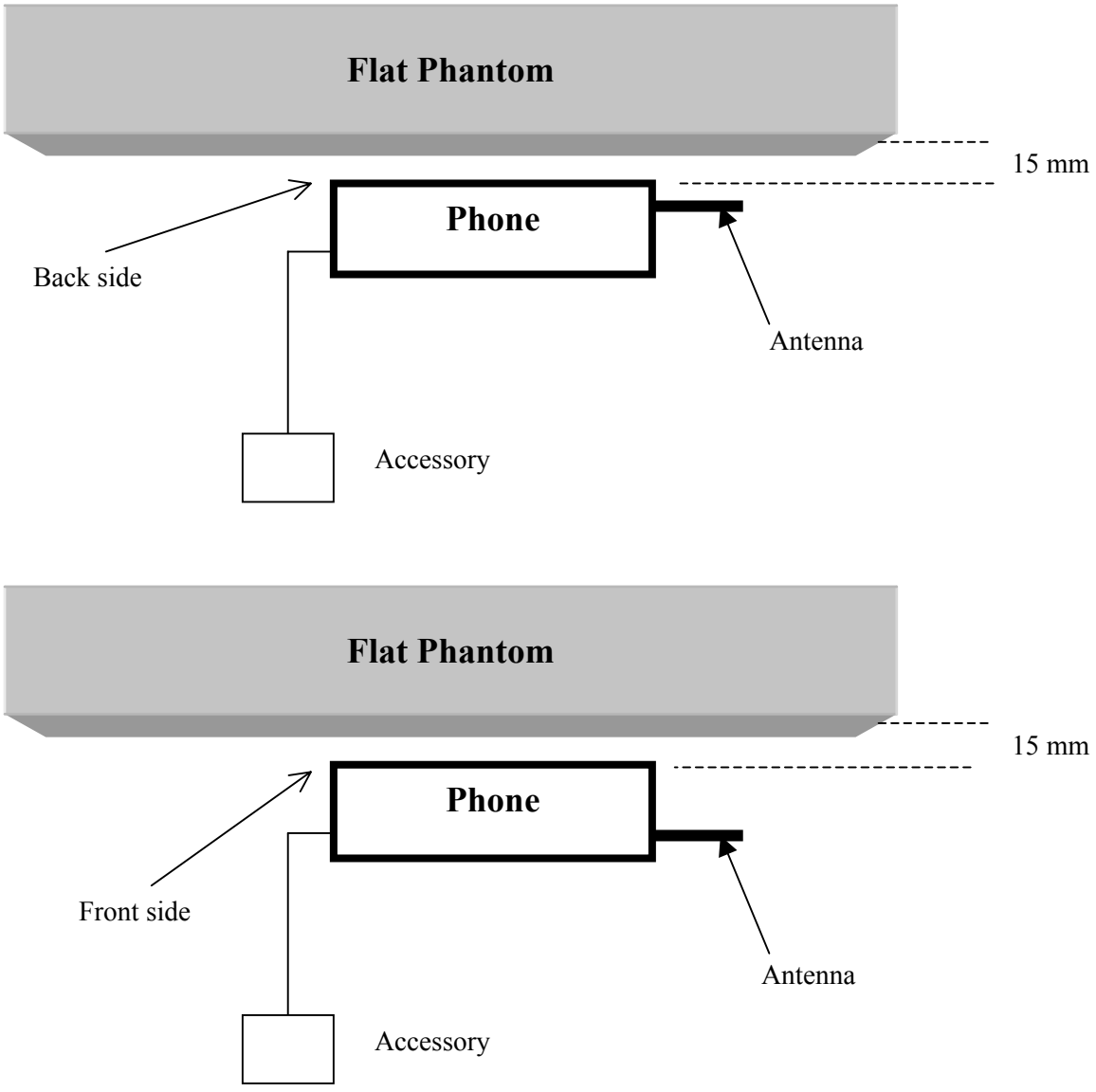


Figure 3 – Intended use position for Muscle SAR (Body-worn)

1.4.4 Test Condition

During tests, the worst case data (max. RF coupling) was determined with following conditions:

EUT Antenna	Fixed length	**Orientation**	On the top
Usage	Right hand, Left hand and body-worn.	**Distance between antenna and the phantom surface:**	Left Side: 12.7 mm, tilt position 17.13 mm, check position
			Right Side: 13.14 mm, tilt position 20.8 mm, check position
			15 mm, body worn position
Simulating human Body/hand	Body	**EUT Battery**	LI-ION battery

Conducted Peak Output Power	**AMPS Mode**		**TDMA Mode**	
	Frequency MHz	**Output Power dBm**	**Frequency MHz**	**Output Power dBm**
	824.04	26.4	824.04	26.4
	836.52	26.4	836.52	26.3
	848.97	26.2	848.97	26.6

The spatial peak SAR values were accessed for lowest, middle and highest operating channels defined by the manufacturer.

Antenna port power measurement was performed, with the HP 435A power meter, before and after the SAR tests to ensure that the MTD-3500 operated at the highest power level.

1.5 Modifications required for compliance

Intertek Testing Services implemented no modifications.

1.6 Additions, deviations and exclusions from standards

No additions, deviations or exclusions have been made from standard.

2.0 SAR EVALUATION

2.1 SAR Limits

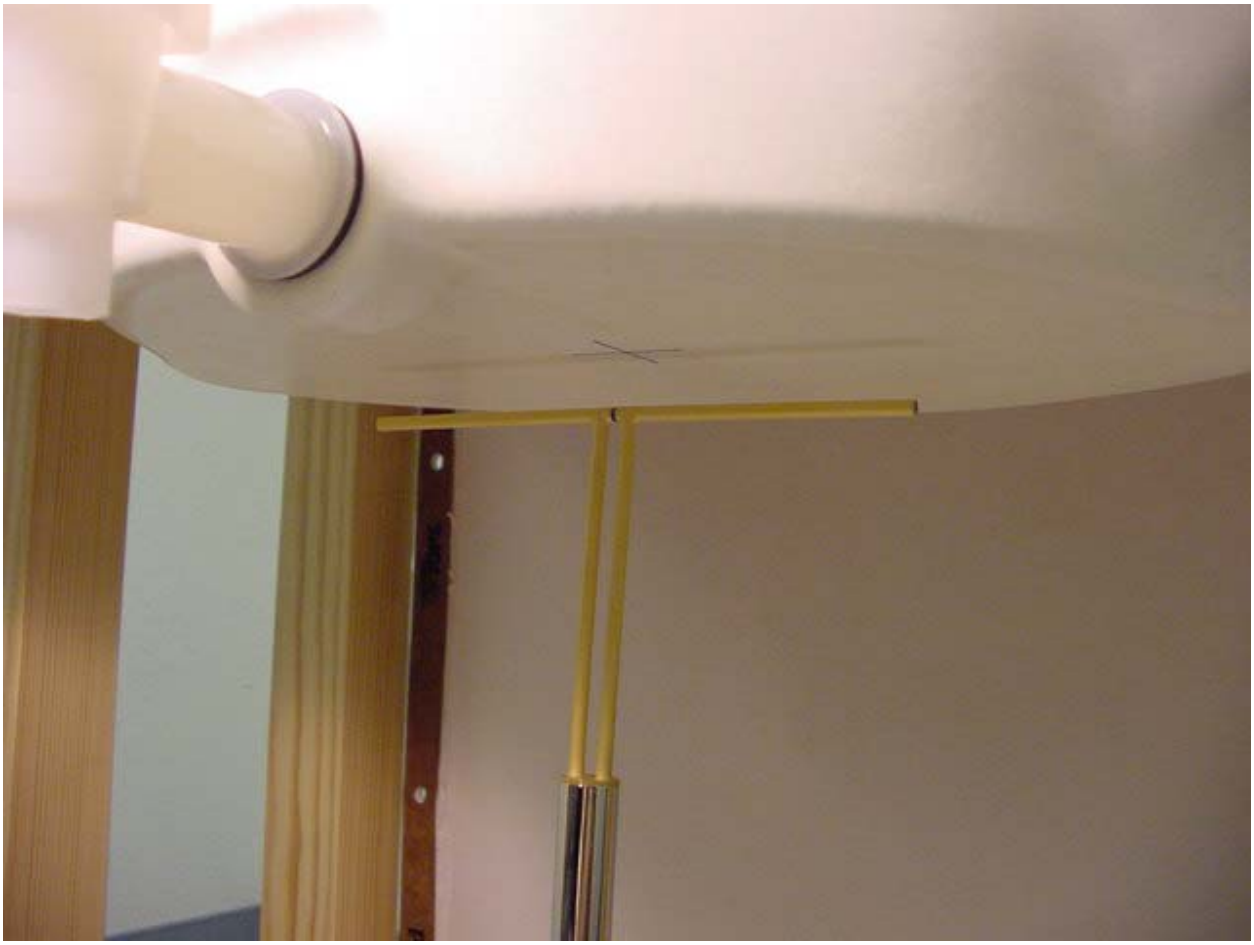
The following FCC limits for SAR apply to devices operate in General Population/Uncontrolled Exposure environment:

EXPOSURE (General Population/Uncontrolled Exposure environment)	**SAR (W/kg)**
Average over the whole body	0.08
Spatial Peak (1g)	1.60
Spatial Peak for hands, wrists, feet and ankles (10g)	4.00

2.2 Configuration Photographs

SAR Measurement Test Setup

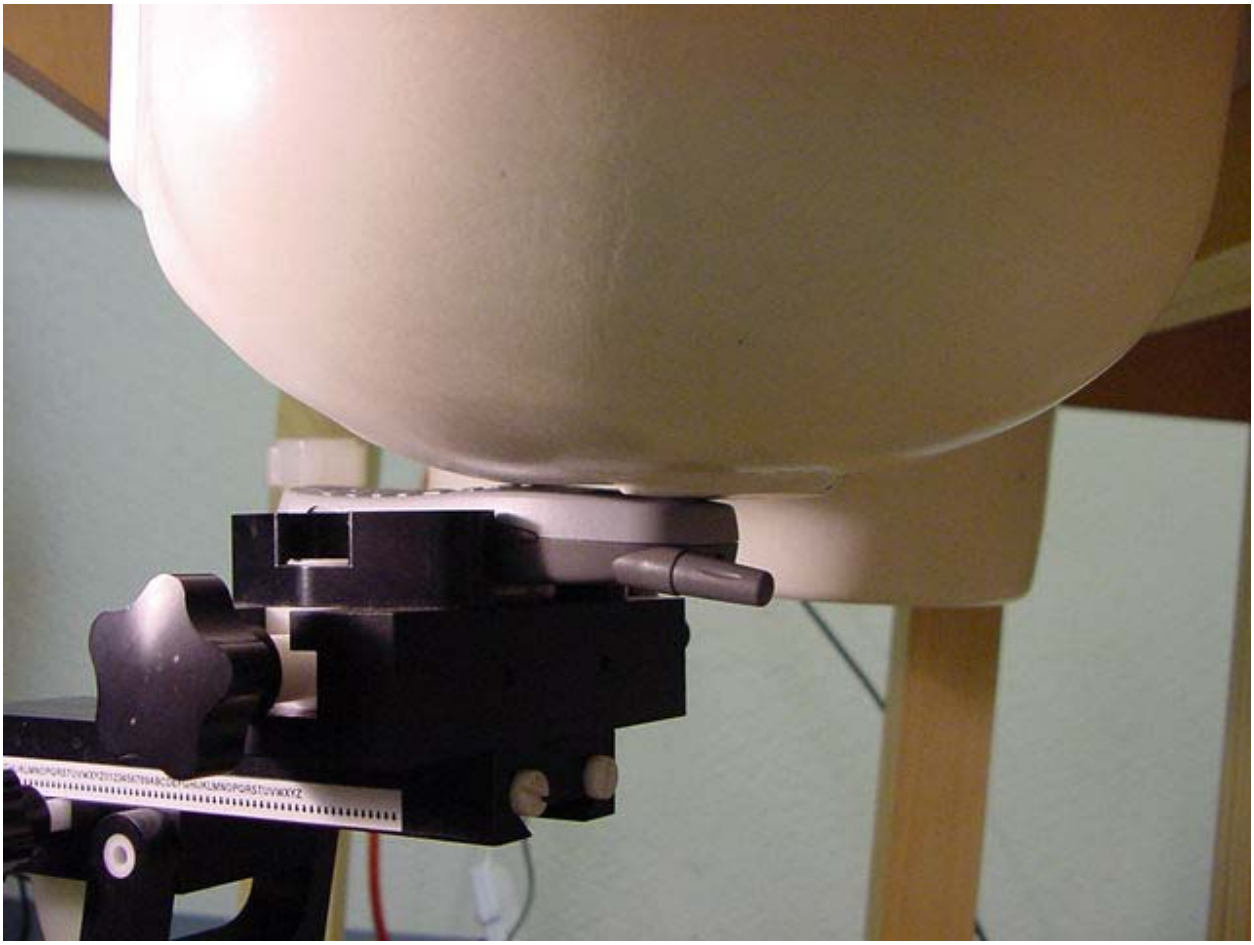
System Validation



2.2 Configuration Photographs (Continued)

SAR Measurement Test Setup

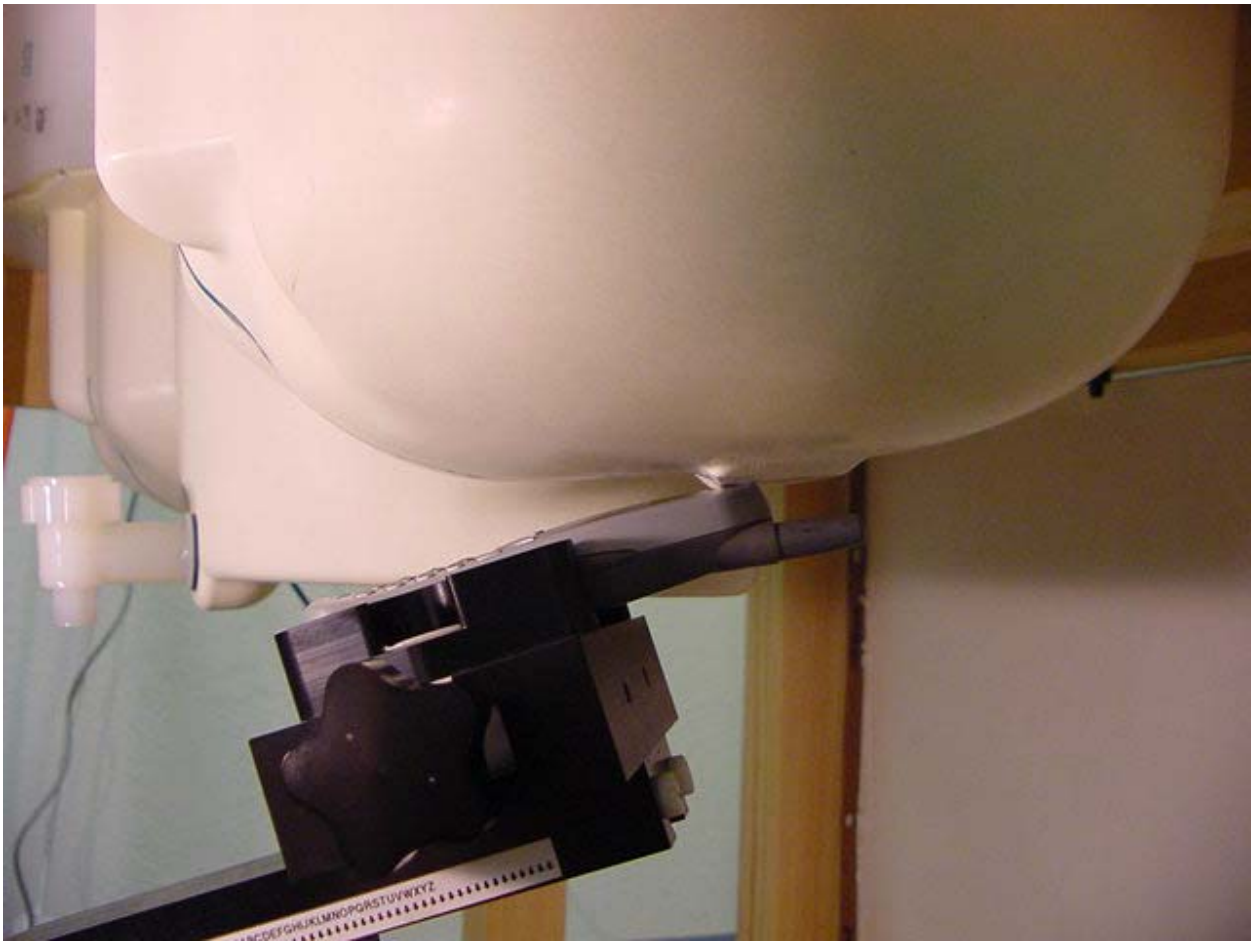
Left Touch



2.2 Configuration Photographs (Continued)

SAR Measurement Test Setup

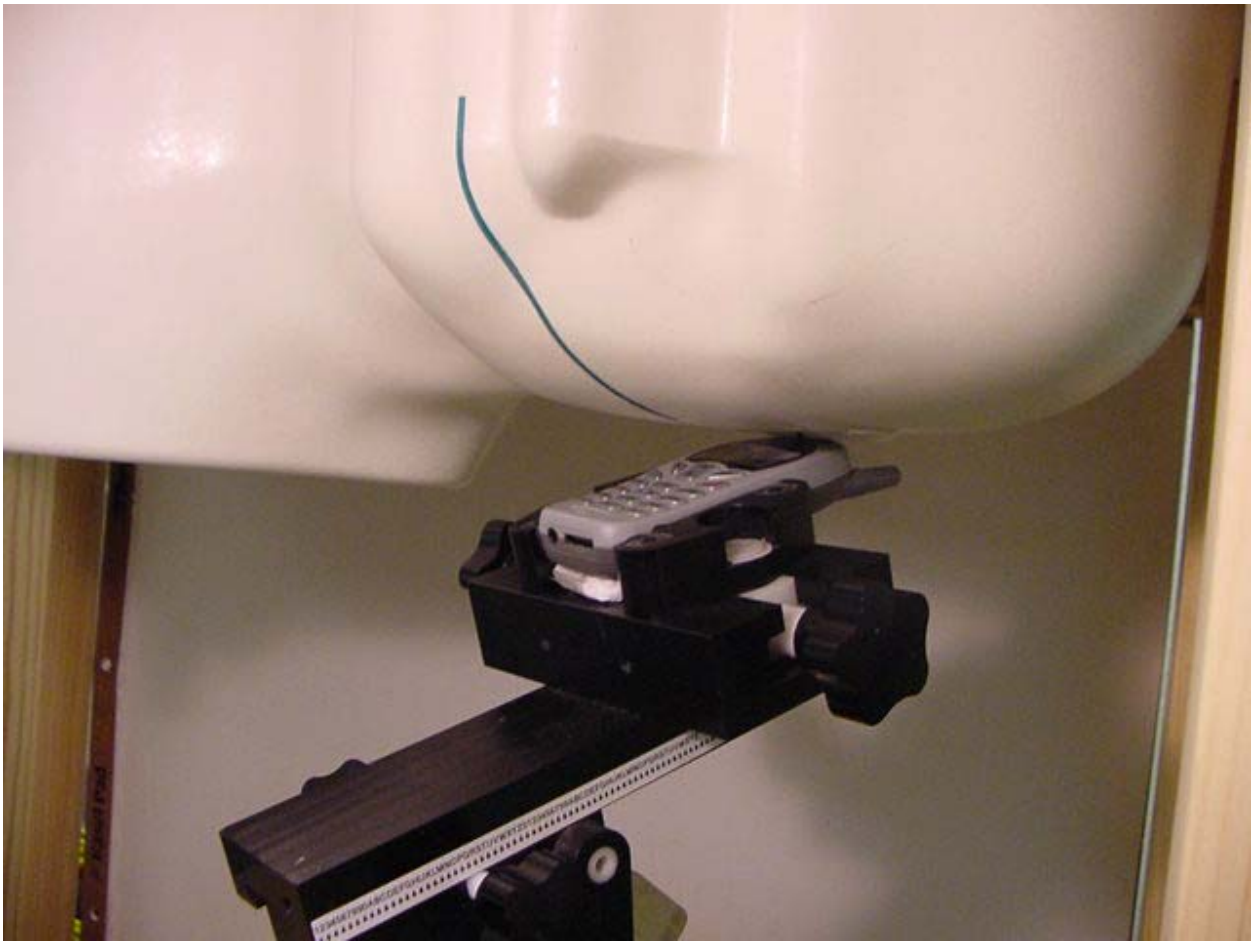
Left Tilt



2.2 Configuration Photographs (Continued)

SAR Measurement Test Setup

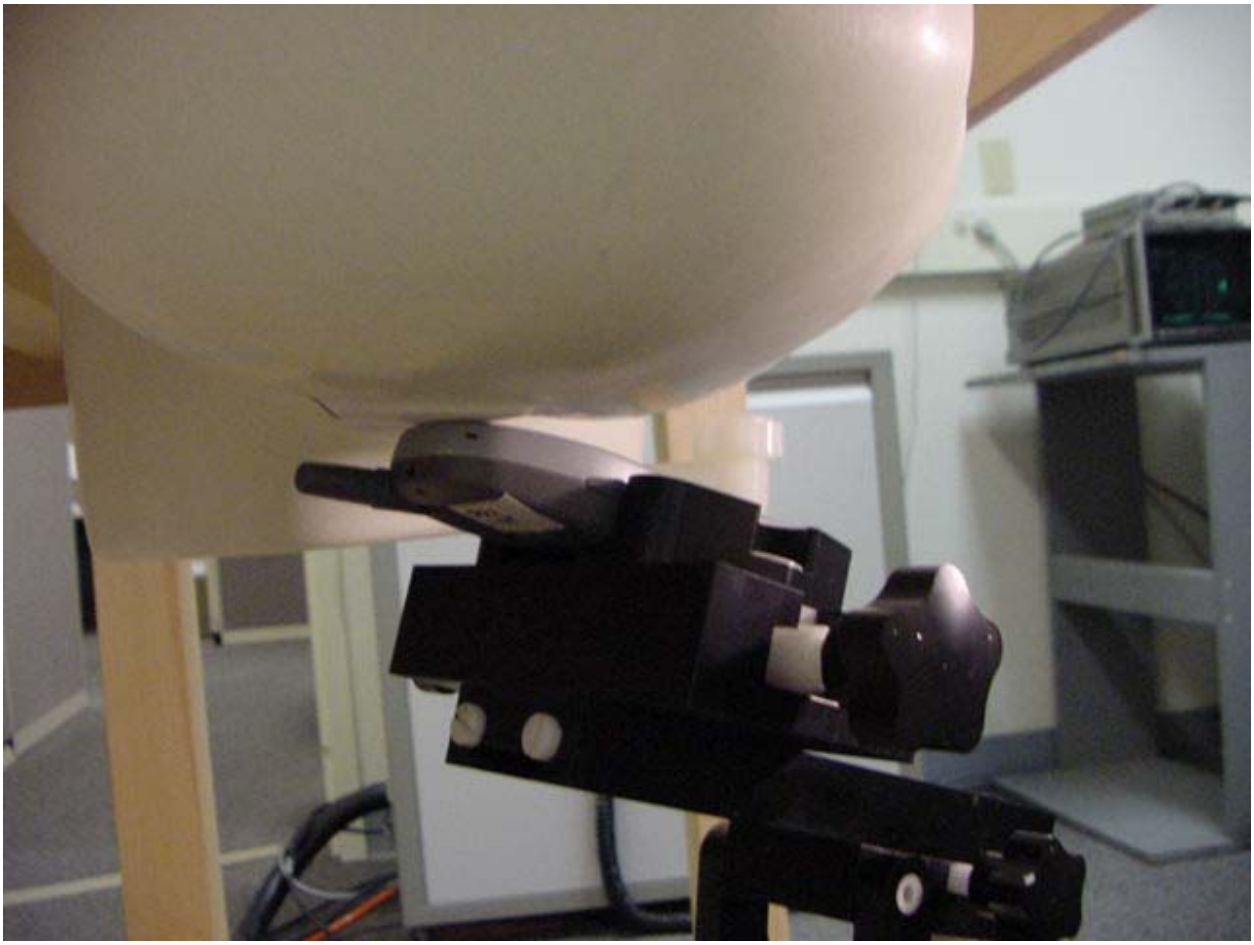
Left Tilt



2.2 Configuration Photographs (Continued)

SAR Measurement Test Setup

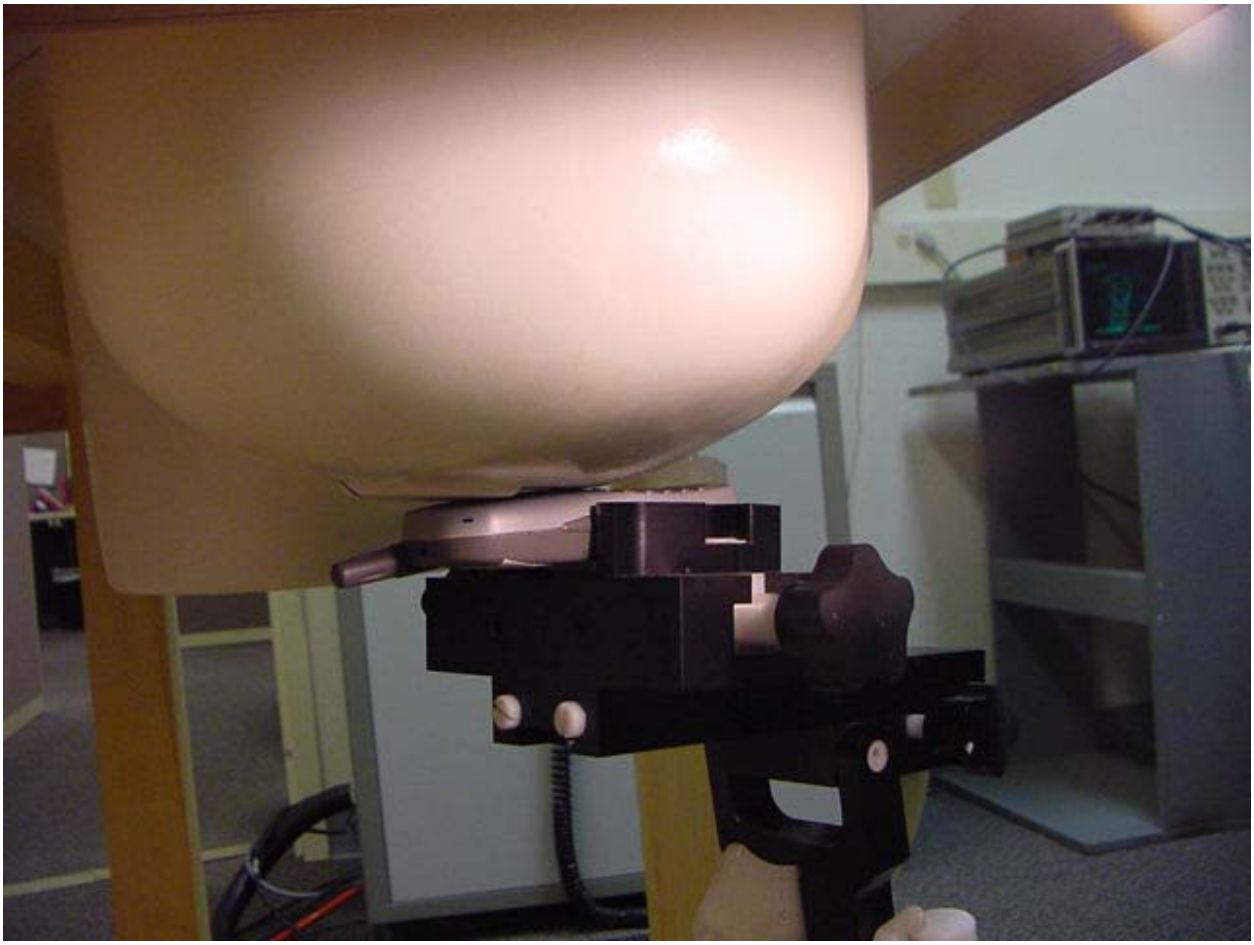
Right Tilt



2.2 Configuration Photographs (Continued)

SAR Measurement Test Setup

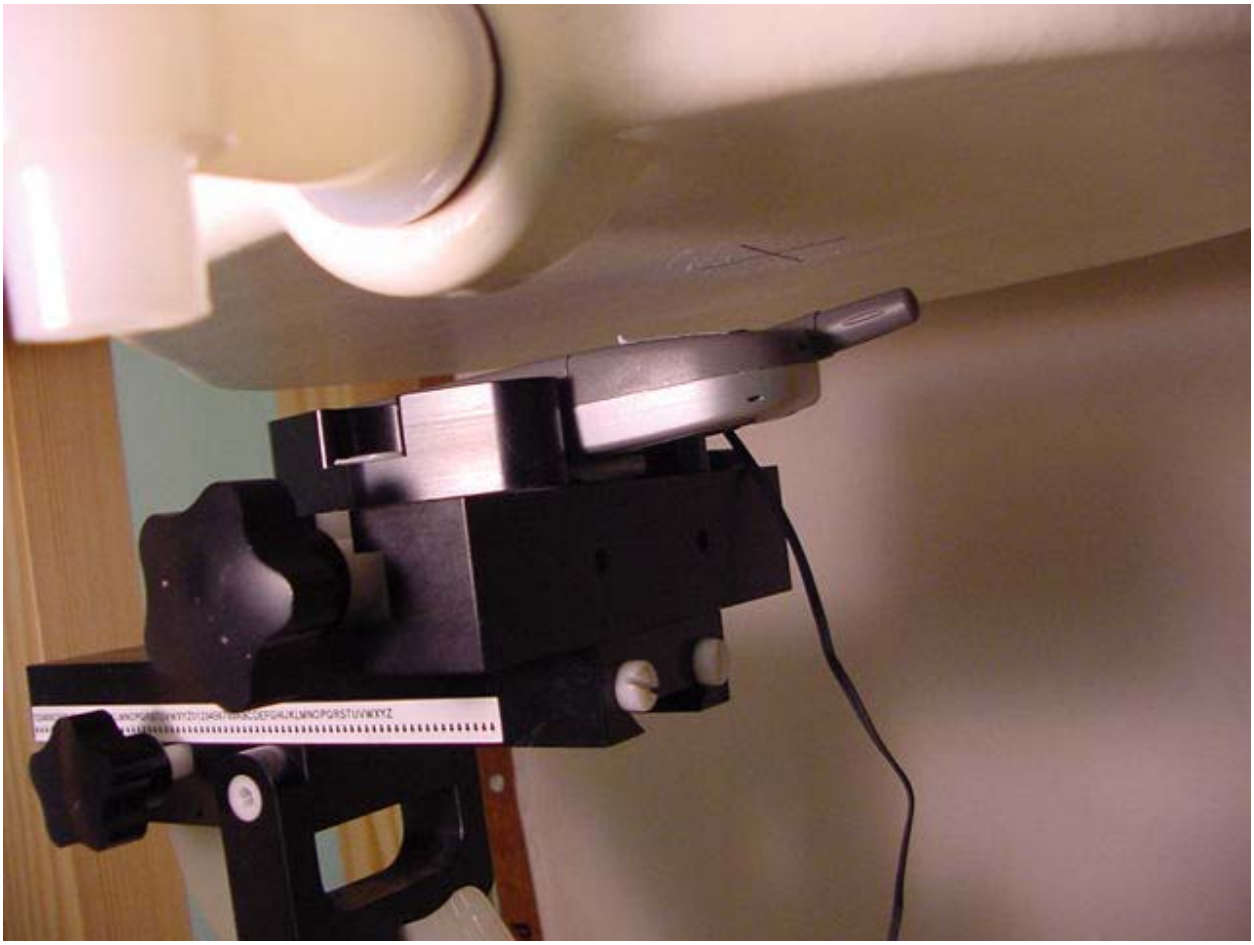
Right Touch



2.2 Configuration Photographs (Continued)

SAR Measurement Test Setup

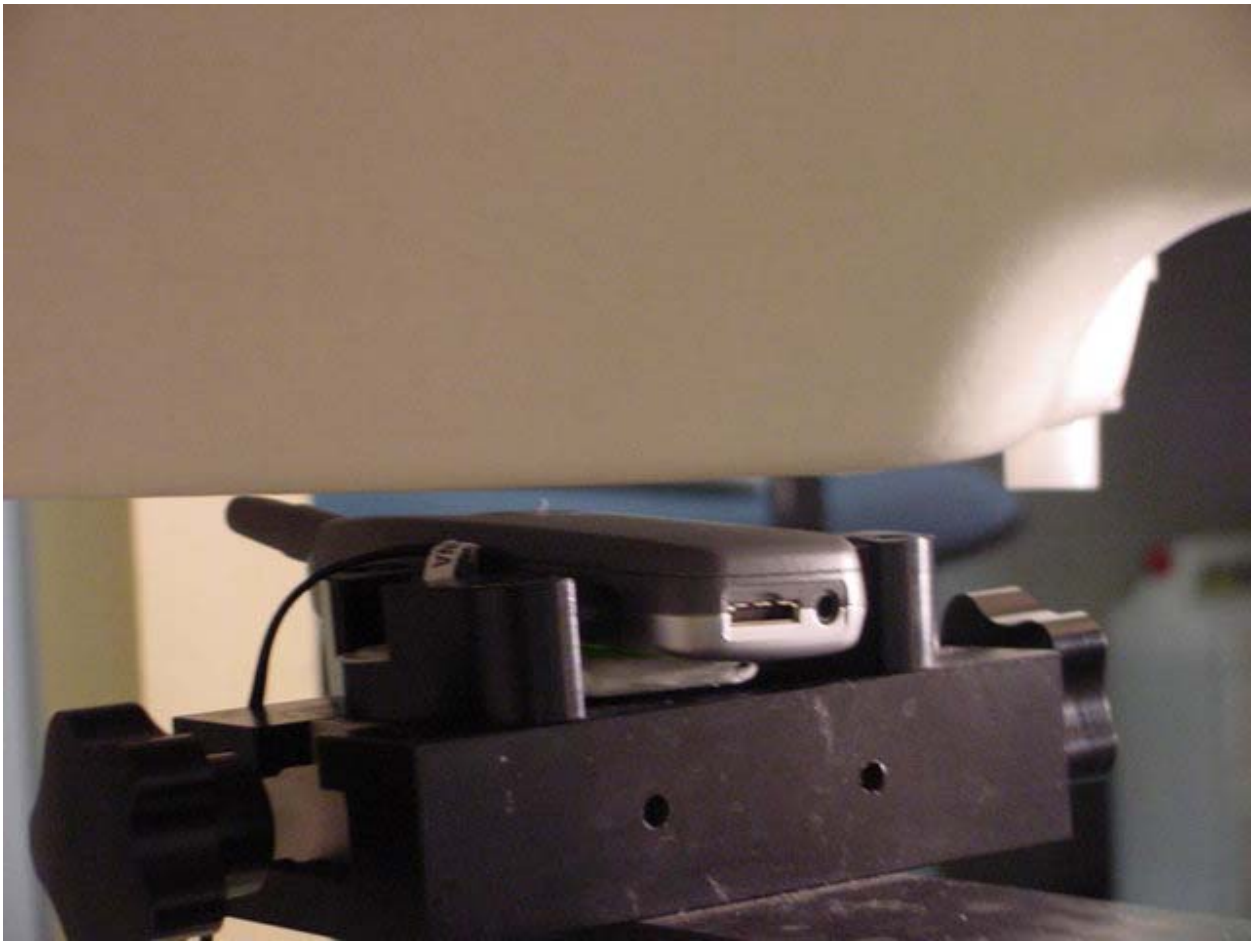
Body



2.2 Configuration Photographs (Continued)

SAR Measurement Test Setup

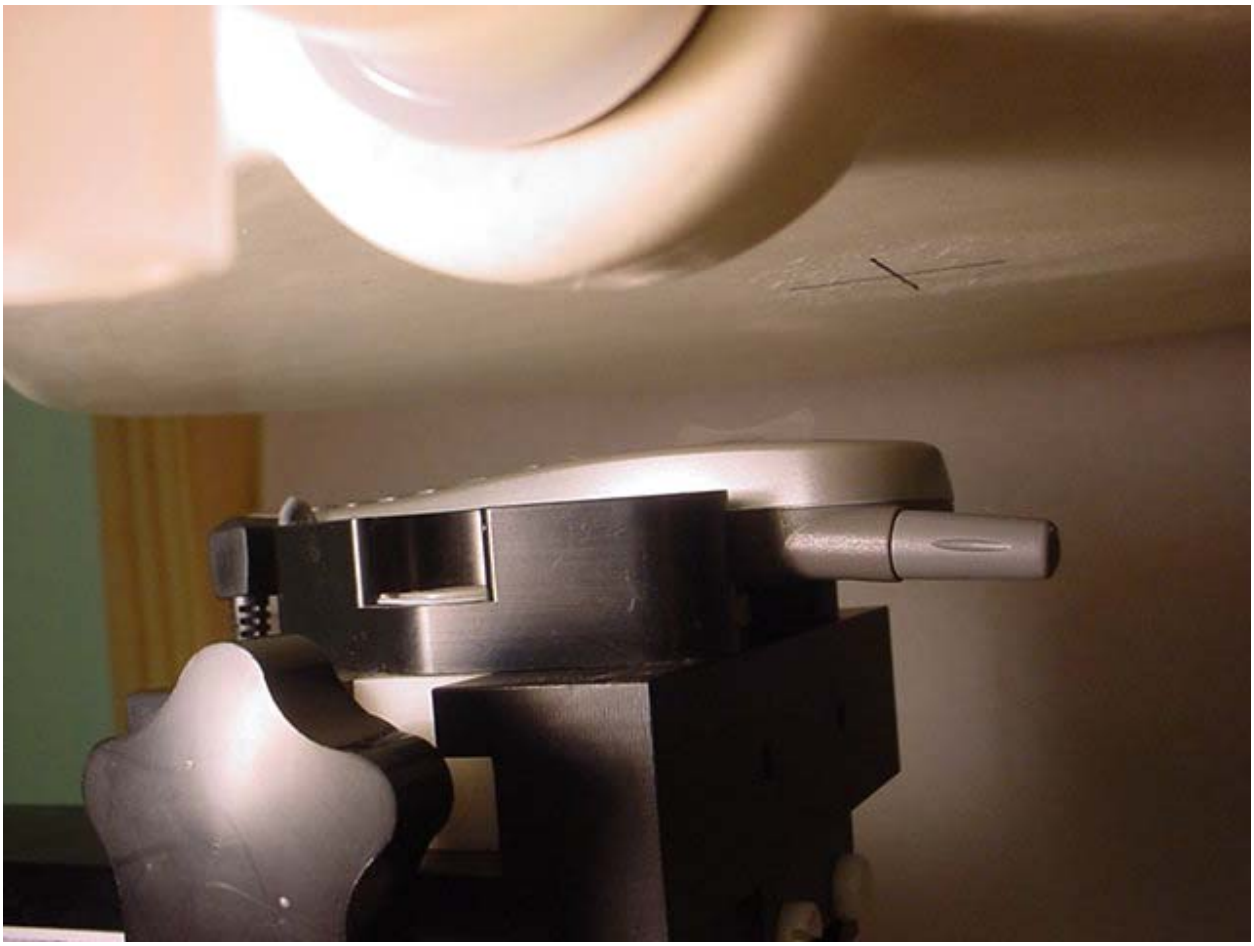
Body



2.2 Configuration Photographs (Continued)

SAR Measurement Test Setup

Body



2.2 Configuration Photographs (Continued)

EUT Photo - 3500

2.2 Configuration Photographs (Continued)

EUT Photo - 3500

2.2 Configuration Photographs (Continued)

EUT Photo - 3500

2.2 Configuration Photographs (Continued)

EUT Photo - 3500

2.2 Configuration Photographs (Continued)

EUT Photo - 3500

EUT with Accessory

2.2 Configuration Photographs (Continued)

EUT Photo - 3510

2.2 Configuration Photographs (Continued)

EUT Photo - 3510

2.3 System Verification

Prior to the assessment, the system was verified to the ±10% of the specifications by using the system validation kit. The validation was performed at 900 MHz.

Validation kit	Targeted SAR_{1g} (mW/g)	Measured SAR_{1g} (mW/g)	Plot #
D900V2, S/N #: 171	2.68	2.86	26

2.4 Evaluation Procedures

The SAR evaluation was performed with the following procedures:

a. SAR was measured at a fixed location above the reference point and used as a reference value for the assessing the power drop.

b. The SAR distribution at the exposed side of the flat Phantom was measured at a distance of 30 mm from the inner surface of the shell. The area covered the entire dimension of the head and the horizontal grid spacing was 20 mm x 20 mm. Based on this data, the area of the maximum absorption was determined by spline interpolation.

c. Around this point, a volume of 32 mm x 32 mm x 34 mm was assessed by measuring 5 x 5 x 7 points. On the basis of this data set, the spatial peak SAR value was evaluated with the following procedure:

   i) The data at the surface were extrapolated, since the center of the dipoles is 2.7 mm away from the tip of the probe and the distance between the surface and the lowest measurement point is 1.6 mm. The extrapolation was based on a least square algorithm. A polynomial of the fourth order was calculated through the points in Z-axes. This polynomial was then used to evaluate the points between the surface and the probe tip.

   ii) The maximum interpolated value was searched with a straightforward algorithm. Around this maximum, the SAR values averaged over the spatial volumes (1g or 10g) were computed using the 3-D spline interpolation algorithm. The 3-D spline is composed of three one-dimensional splines with the "Not a knot" condition (in x, y and z directions). The volume was integrated with the trapezoidal algorithm. 1000 points (10 x 10 x 10) were interpolated to calculate the average.

   iii) All neighboring volumes were evaluated until no neighboring volume with a higher average value was found.

d. Re-measurements of the SAR value at the same location as in step a. above. If the value changed by more than 5 %, the evaluation was repeated.

e. A receiving antenna connected to a spectrum analyzer was placed 2 meters away from the phantom to monitor possible interference from ambient signals. If an ambient signal was observed during the scan, the scan was repeated.

2.5 Results

The results on the following page(s) were obtained when the device was tested in the condition described in this report. Detail measurement data and plots, which reveal information about the location of the maximum SAR with respect to the device, are reported in Appendix A.

Measurement Results

Trade Name:	Telian Corp.	**Model No.:**	MTD-3500 & MTD-3510
Serial No.:	Not Labeled	**Test Engineer:**	Suresh Kondapalli

Brain EUT: MTD-3500 900 MHz Band			
Ambient Temperature	23.5 °C	**Relative Humidity**	55 %
Liquid Temperature	22°C ± 0.5 °C	**Liquid depth**	14.8 cm
Test Signal Source	Test Mode	**Signal Modulation**	AMPS
Output Power Before SAR Test	See Page 6	**Output Power After SAR Test**	Changes within +0.15 to - 0.46 dB
Test Duration	20 Min. each test	**Number of Battery Change**	New battery for every scan

Plot No	Frequency MHz	Operating Mode	Crest Factor	Position	Measured SAR_{1g} (mW/g)
1	837	AMPS	1	Left Hand, Cheek Position	1.11
2	837	AMPS	1	Left Hand, Tilt Position	0.930
3	837	AMPS	1	Right Hand, Touch Position	0.736
4	837	AMPS	1	Right Hand, Tilt Position	0.854
5	849	AMPS	1	Left Hand, Touch Position	0.698
6	849	AMPS	1	Left Hand, Tilt Position	0.729
7	849	AMPS	1	Right Hand, Touch Position	0.586
8	849	AMPS	1	Right Hand, Tilt Position	0.608
9	824	AMPS	1	Left Hand, Touch Position	0.595
10	824	AMPS	1	Left Hand, Tilt Position	0.750
11	824	AMPS	1	Right Hand, Touch Position	0.473
12	824	AMPS	1	Right Hand, Tilt Position	0.372

Brain EUT: MTD-3500 900 MHz Band					
Plot No	**Frequency MHz**	**Operating Mode**	**Crest Factor**	**Position**	**Measured SAR_{1g} (mW/g)**
13	837	TDMA	3	Left Hand, Cheek Position	0.463
14	837	TDMA	3	Left Hand, Tilt Position	0.447
15	837	TDMA	3	Right Hand, Cheek Position	0.352
16	837	TDMA	3	Right Hand, Tilt Position	0.329
17	824	TDMA	3	Left Hand, Cheek Position	0.223
18	849	TDMA	3	Left Hand, Cheek Position	0.410

Brain EUT: MTD-3510 900 MHz Band					
Plot No	**Frequency MHz**	**Operating Mode**	**Crest Factor**	**Position**	**Measured SAR_{1g} (mW/g)**
27	837	AMPS	1	Left Hand, Cheek Position	1.09
28	837	TDMA	3	Left Hand, Cheek Position	0.421

Muscle EUT: MTD-3500 900 MHz Band					
Plot No	**Frequency MHz**	**Operating Mode**	**Crest Factor**	**Position**	**Measured SAR_{1g} (mW/g)**
20	837	AMPS	1	1.5 cm from Phantom, back site facing Phantom	0.519
21	849	AMPS	1	1.5 cm from Phantom, back site facing Phantom	0.453
22	824	AMPS	1	1.5 cm from Phantom, back site facing Phantom	0.269
23	837	TDMA	3	1.5 cm from Phantom, back site facing Phantom	0.238
24	824	TDMA	3	1.5 cm from Phantom, back site facing Phantom	0.0612
25	849	TDMA	3	1.5 cm from Phantom, back site facing Phantom	0.127
29	824	AMPS	1	1.5 cm from Phantom, front (keyboard) facing Phantom	0.253
30	837	AMPS	1	1.5 cm from Phantom, front (keyboard) facing Phantom	0.649
31	849	AMPS	1	1.5 cm from Phantom, front (keyboard) facing Phantom	0.188

Z-Plot			
Frequency MHz	**Operating Mode**	**Crest Factor**	**Plot Number**
836	AMPS	1	19

Dipole, System Verification					
Frequency MHz	**Operating Mode**	**Crest Factor**	**Measured SAR_{1g} (mW/g)**	**Measured SAR_{10g} (mW/g)**	**Plot Number**
900	CW	1	2.86	1.84	26

Note: a) Worst case data were reported
b) Duty cycle factor included in the measured SAR data
c) Uncertainty of the system is not included

3.0 TEST EQUIPMENT

3.1 Equipment List

The Specific Absorption Rate (SAR) tests were performed with the SPEAG model DASY 3 automated near-field scanning system, which is a package, optimized for dosimetric evaluation of mobile radios [3].

The following major equipment/components were used for the SAR evaluations:

SAR Measurement System			
EQUIPMENT	**SPECIFICATIONS**	S/N #	Last cal. data
Robot	**Stäubi RX60L**	597412-01	N/A
	Repeatability: ± 0.025mm Accuracy: 0.806x10^{-3} degree Number of Axes: 6		
E-Field Probe	**ET3DV6**	1576	02/27/02
	Dynamic Range: 5 µW/g to >100 mW/g Tip diameter: 6.8 mm Probe Linearity: ± 0.2 dB (30 MHz to 3 GHz) Axial isotropy: ± 0.2 dB Spherical isotropy: ± 0.4 dB Length: 34.5 cm Distance between the probe tip and the dipole center: 2.7 mm Calibration: 835/900 MHz and 1800/1900 MHz for head & body simulating liquid		
Data Acquisition	**DAE3**	317	N/A
	Measurement Range: 1µV to >200mV Input offset Voltage: < 1µV (with auto zero) Input Resistance: 200 M		
Phantom	**SAM Twin V4.0**	TP-1243	QD000P40CA
Complies with IEEE P1528-200x, draft 6.5 (see certificate in App. C)	Type SAM Twin, Homogenous Shell Material: Fiberglass Thickness: 2 ± 0.2 mm Capacity: 20 liter Size of the flat section: approx. 320 x 230 mm		
Device holder	Non-conductive holder supplied with DASY3, dielectric constant less than 5.0	N/A	N/A
Simulated Tissue	**Mixture**	N/A	12/16/02
	Please see section 6.2 for details		
Power Meter	**HP 8900D** w/ 84811A sensor	3607U00673	08/27/02
	Frequency Range: 100kHz to 18 GHz Power Range: 300µW to 3W		

3.2 Tissue Simulating Liquid

Simulation Liquid Frequency: 800 - 900 MHz		
Ingredient	Brain	**Muscle**
Water	41.05 %	52.4 %
Sugar	56.5 %	45.0 %
Salt	1.35%	1.4 %
Bactericide	0.1%	0.1 %
HEC	1.0 %	1.0 %

The dielectric parameters were verified prior to assessment using the HP 85070A dielectric probe kit and the HP 8753C network Analyzer. The dielectric parameters were:

Frequency (MHz)	Simulating Liquid	ε_r*	σ *(S/m)
836	brain	43.2	0.92
836	muscle	55.8	0.98

* *Worst case uncertainty of the HP 85070A dielectric probe kit*
** *Worst-case assumption*

The maximum deviation from the recommended values is 4.1%.

3.3 E-Field Probe Calibration

The manufacturer in the TEM cell ifi 110 calibrated probes. To ensure consistency, a strict protocol was followed. The conversion factor (ConF) between this calibration and the measurement in the tissue simulation solution was performed by comparison with temperature measurement and computer simulations. Probe calibration factors are included in Appendix C.

3.4 Measurement Uncertainty

The Table below includes the uncertainty budget suggested by the IEEE Std 1528-200X and determined by SPEAG for the DASY3 measurement System.
The extended uncertainty (K=2) was assessed to be 27.8 %

Uncertainty Component	Tolerance (± %)	Probability Distribution	Divisor	c_i	Standard Uncertainty, (± %)	v_i^2 or v_{eff}
Measurement System						
Probe Calibration	4.7	Normal	1	1	4.7	Inf.
Axial Isotropy	4.7	Rectangular	√3	$(1\text{-cp})^{1/2}$	1.9	Inf.
Spherical Isotropy	9.6	Rectangular	√3	$\sqrt{c_p}$	3.9	Inf.
Boundary Effect	5.5	Rectangular	√3	1	3.2	Inf.
Linearity	4.7	Rectangular	√3	1	2.7	Inf.
System Detection Limits	1.0	Rectangular	√3	1	0.6	Inf.
Readout Electronics	1.0	Normal	1	1	1.0	Inf.
Response Time	0.8	Rectangular	√3	1	0.5	Inf.
Integration Time	1.4	Rectangular	√3	1	0.8	Inf.
RF Ambient Conditions	3.0	Rectangular	√3	1	1.7	Inf.
Probe Positioner Mechanical Tolerance	0.4	Rectangular	√3	1	0.2	Inf.
Probe Positioning with respect to Phantom Shell	2.9	Rectangular	√3	1	1.7	Inf.
Extrapolation, interpolation and Integration Algorithms for Max. SAR Evaluation	3.9	Rectangular	√3	1	2.3	Inf.
Test sample Related						
Test Sample Positioning	6.0	Normal	0.89	1	6.7	12
Device Holder Uncertainty	5.0	Normal	0.84	1	5.9	8
Output Power Variation - SAR drift measurement	7.0	Rectangular	√3	1	4.0	Inf.
Phantom and Tissue Parameters						
Phantom Uncertainty (shape and thickness tolerances)	4.0	Rectangular	√3	1	2.3	Inf.
Liquid Conductivity Target tolerance	5.0	Rectangular	√3	0.6	1.7	Inf.
Liquid Conductivity - measurement uncertainty	10.0	Rectangular	√3	0.6	3.5	Inf.
Liquid Permittivity Target tolerance	5.0	Rectangular	√3	0.6	1.7	Inf.
Liquid Permittivity - measurement uncertainty	5.0	Rectangular	√3	0.6	1.7	Inf.
Combined Standard Uncertainty					13.9	
Expanded Uncertainty (95% CONFIDENCE INTERVAL)					27.8	

Notes.

1. The Divisor is a function of the probability distribution and degrees of freedom (ν_i and ν_{eff}). See NIST Technical Note TN1297, NIS 81 and NIS 3003.
2. c_i is the sensitivity coefficient that should be applied to convert the variability of the uncertainty component into a variability of SAR.

3.5 Measurement Tractability

All measurements described in this report are traceable to National Institute of Standards and Technology (NIST) standards or appropriate national standards.

4.0 WARNING LABEL INFORMATION - USA

See Users Manual.

5.0 REFERENCES

1] ANSI, *ANSI/IEEE C95.1-1991: IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3kHz to 300 GHz*, The Institute of electrical and Electronics Engineers, Inc., New York, NY 10017, 1992

[2] Federal Communications Commission, "Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields", OET Bulletin 65, FCC, Washington, D.C. 20554, 1997

[3] Thomas Schmid, Oliver Egger, and Niels Kuster, "Automated E-field scanning system for dosimetric assessments", *IEEE Transaction on Microwave Theory and Techniques*, vol. 44, pp. 105-113, Jan. 1996.

[4] Niels Kuster, Ralph Kastle, and Thomas Schmid, "Dosimetic evaluation of mobile communications equipment with know precision", IEEE Transactions on Communications, vol. E80-B, no. 5, pp.645-652, May 1997.

5] NIS81, NAMAS, "The treatment of uncertainty in EMC measurement", Tech. Rep., NAMAS Executive, National Physical Laboratory, Teddinton, Middlesex, England, 1994.

6] Barry N. Tayor and Chris E. Kuyatt, "Guidelines for evaluating and expressing the uncertainty of NIST measurement results", Tech. Rep., National Institute of Standards and Technology, 1994.

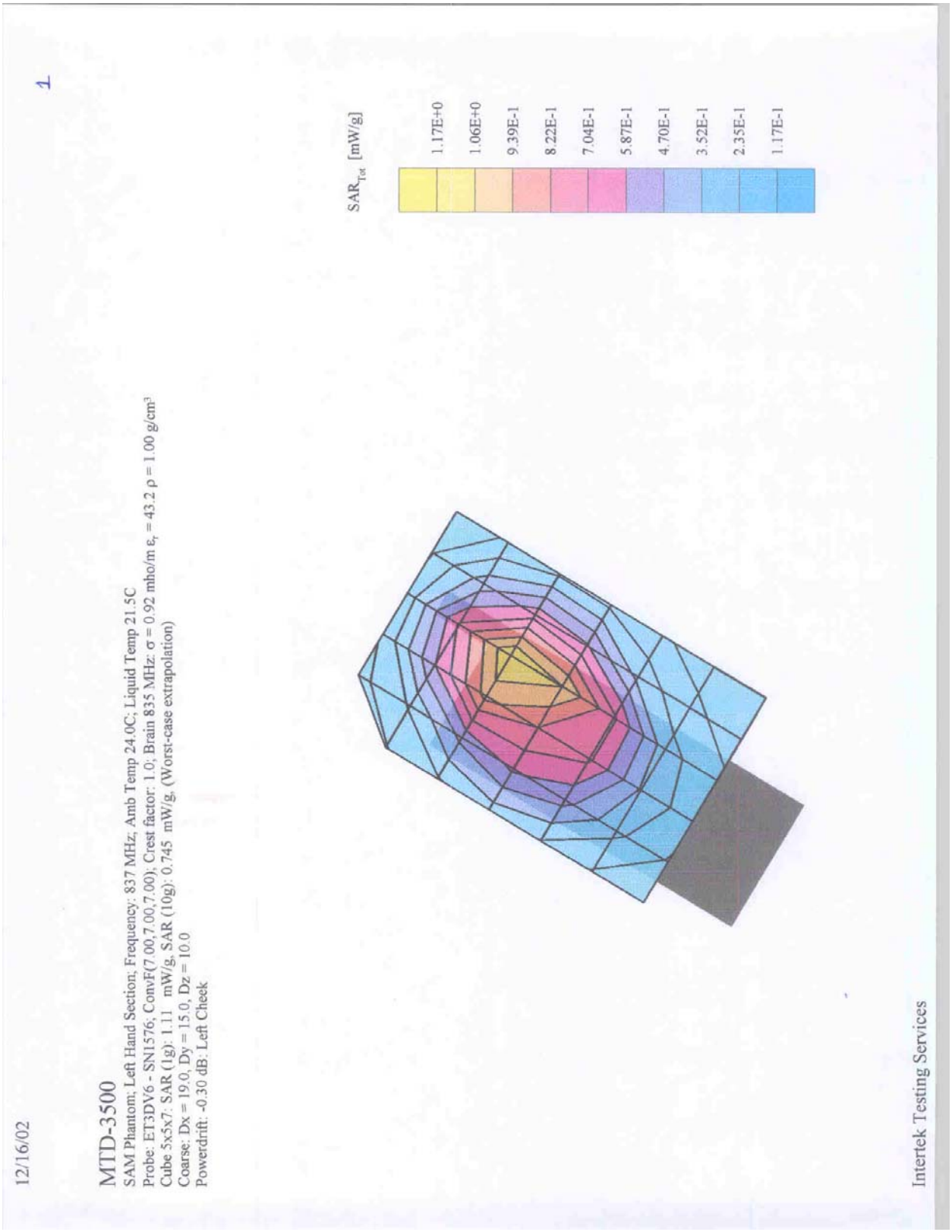
5.0 DOCUMENT HISTORY

Revision/ Job Number	Writer Initials	Date	Change
1.0 /3036005	SS	December 20, 2002	Original document
2.0/3036005	DC	January 15, 2003	Section 3.4
3.0/3036005	SS	February 19, 2003	Additional plots and info

APPENDIX A - SAR Evaluation Data

Please note that the graphical visualization of the phone position onto the SAR distribution gives only limited information on the current distribution of the device, since the curvature of the head results in graphical distortion. Full information can only be obtained either by H-field scans in free space or SAR evaluation with a flat phantom.

Power drift is the measurement of power drift of the device over one complete SAR scan.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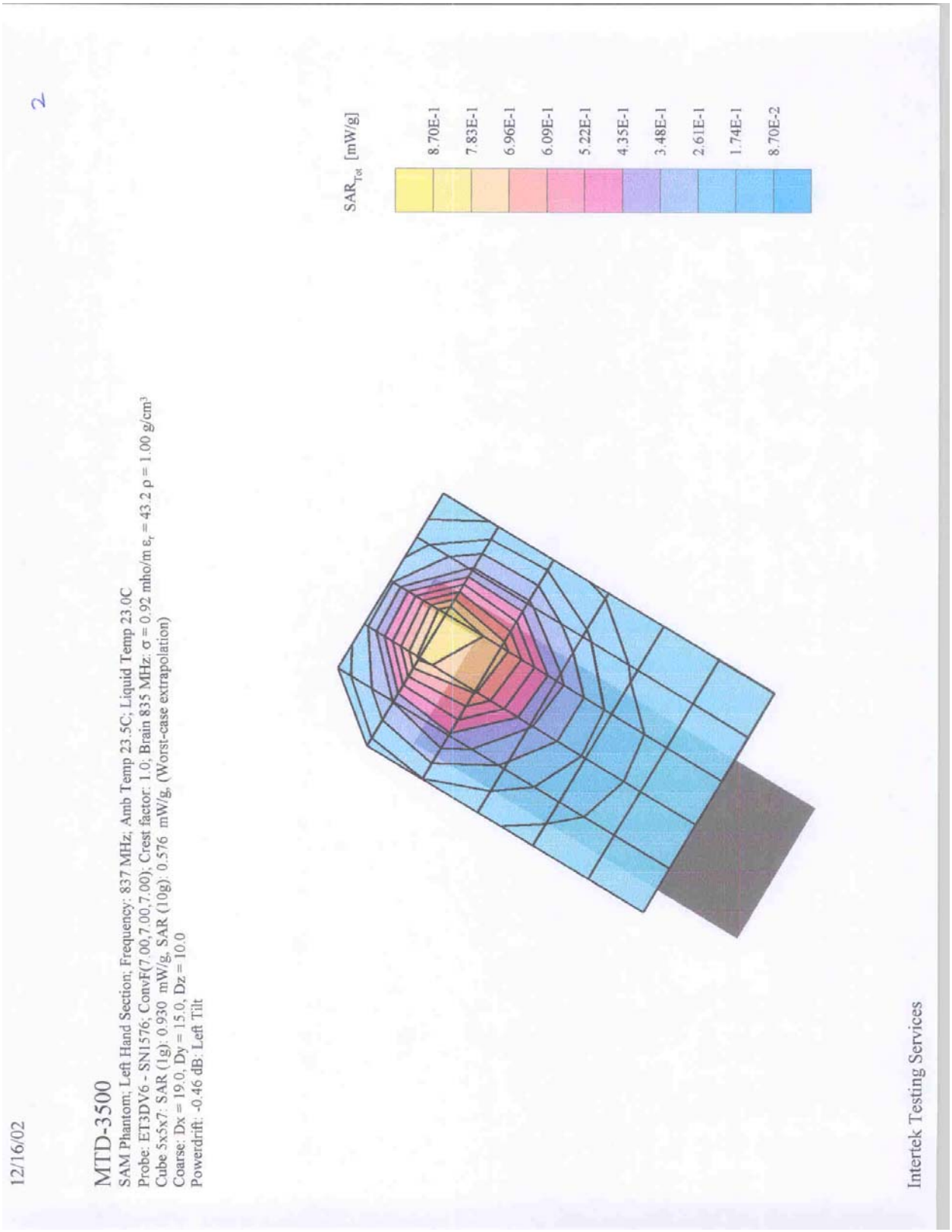
12/16/02
MTD-3500
SAM Phantom; Left Hand Section; Frequency: 837 MHz; Amb Temp 24.0C; Liquid Temp 21.5C
Probe: ET3DV6 - SN1576; ConvF(7.00,7.00,7.00); Crest factor: 1.0; Brain 835 MHz: σ = 0.92 mho/m εr = 43.2 ρ = 1.00 g/cm3
Cube 5x5x7: SAR (1g): 1.11 mW/g, SAR (10g): 0.745 mW/g, (Worst-case extrapolation)
Coarse: Dx = 19.0, Dy = 15.0, Dz = 10.0
Powerdrift: -0.30 dB Left Cheek
SARTot [mW/g]
1.17E+0
1.06E+0
9.39E-1
8.22E-1
7.04E-1
5.87E-1
4.70E-1
3.52E-1
2.35E-1
1.17E-1
Intertek Testing Services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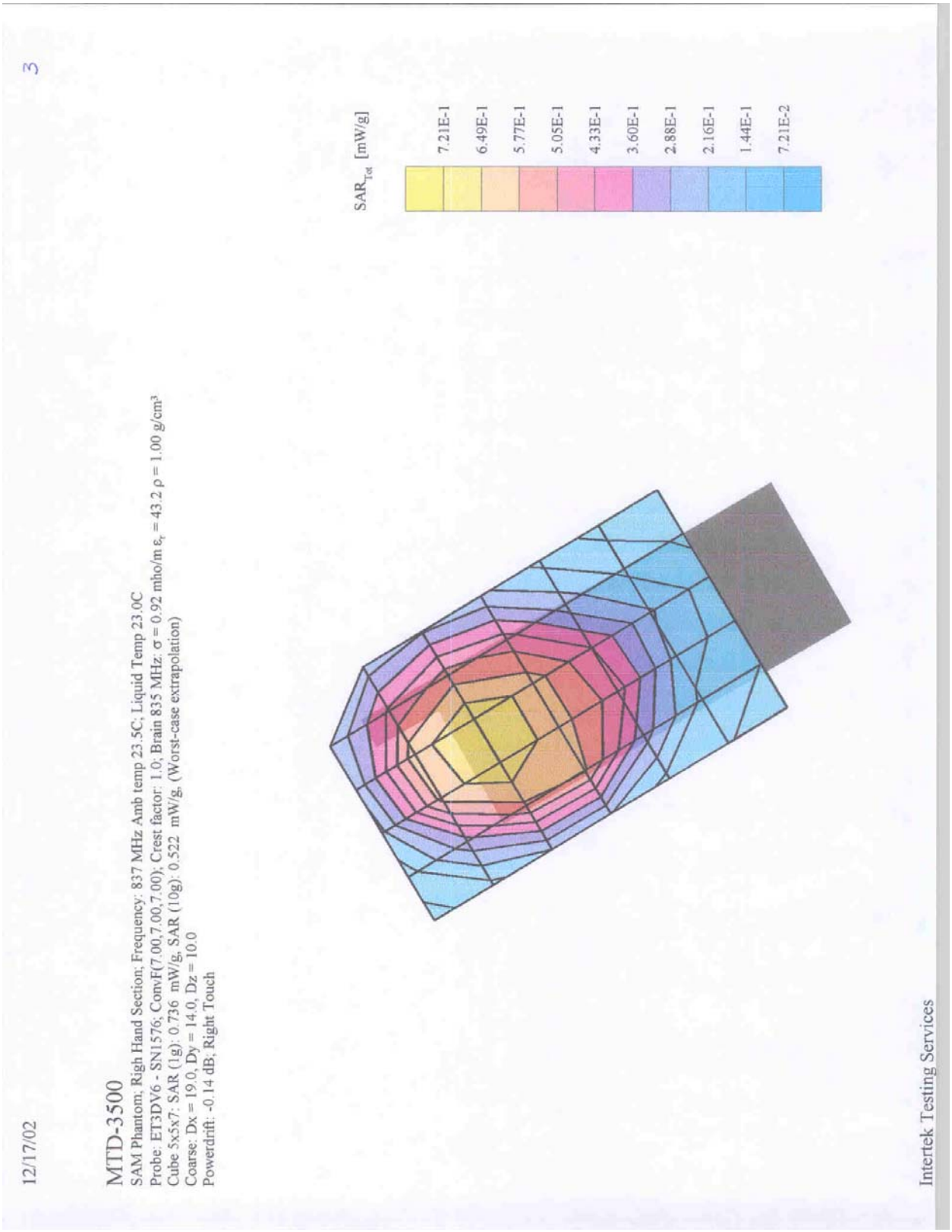
SAM Phantom; Left Hand Section; Frequency: 837 MHz; Amb Temp 23.5C; Liquid Temp 23.0C
Probe: ET3DV6 - SN1576; ConvF(7.00,7.00,7.00); Crest factor: 1.0; Brain 835 MHz: σ = 0.92 mho/m εr = 43.2 ρ = 1.00 g/cm³
Cube 5x5x7: SAR (1g): 0.930 mW/g, SAR (10g): 0.576 mW/g, (Worst-case extrapolation)
Coarse: Dx = 19.0, Dy = 15.0, Dz = 10.0
Powerdrift: -0.46 dB Left Tilt
SAR Tot [mW/g]
8.70E-1
7.83E-1
6.96E-1
6.09E-1
5.22E-1
4.35E-1
3.48E-1
2.61E-1
1.74E-1
8.70E-2
Intertek Testing Services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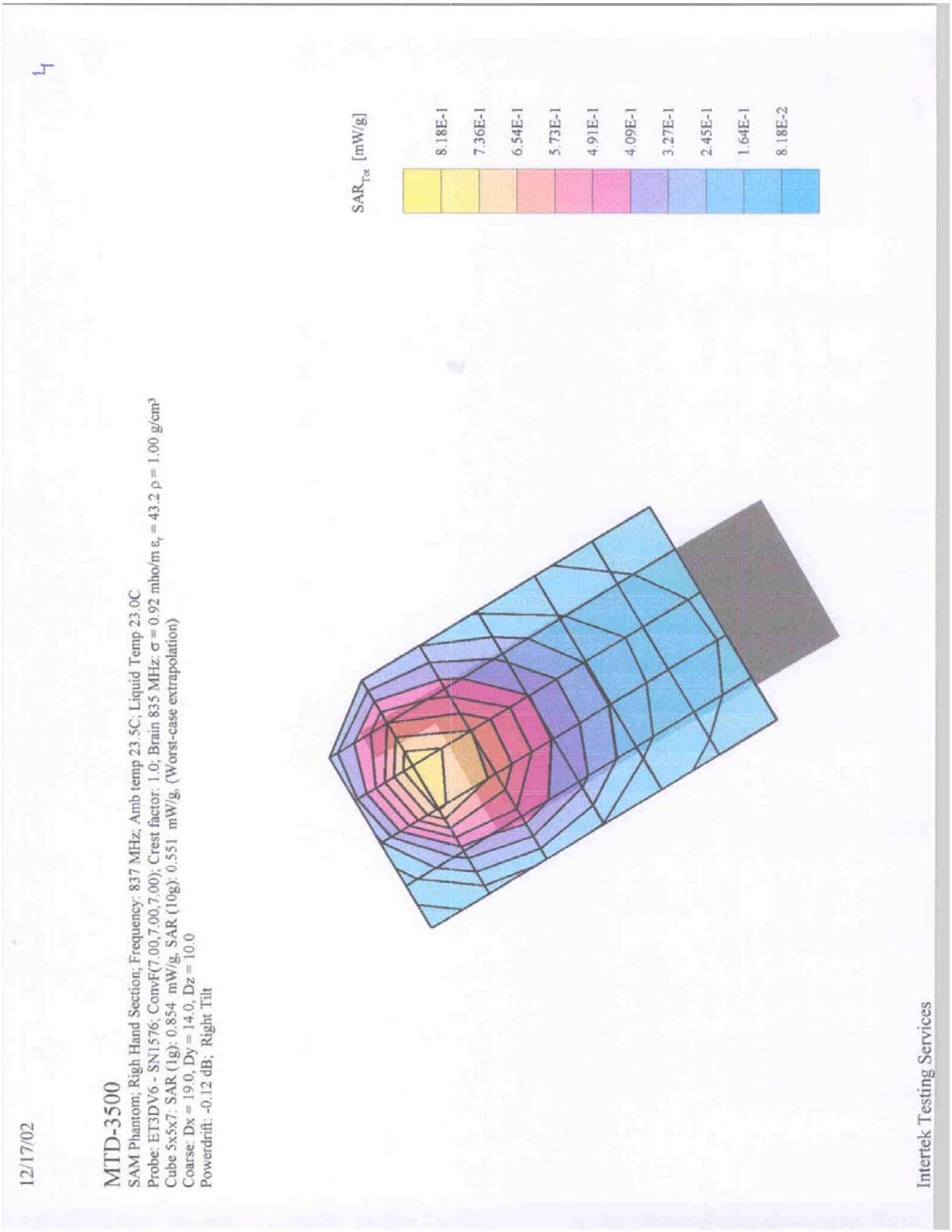
MTD-3500
SAM Phantom; Righ Hand Section; Frequency: 837 MHz Amb temp 23.5C; Liquid Temp 23.0C
Probe: ET3DV6 - SN1576; ConvF(7.00,7.00,7.00); Crest factor: 1.0; Brain 835 MHz: σ = 0.92 mho/m εr = 43.2 ρ = 1.00 g/cm³
Cube 5x5x7: SAR (1g): 0.736 mW/g, SAR (10g): 0.522 mW/g, (Worst-case extrapolation)
Coarse: Dx = 19.0, Dy = 14.0, Dz = 10.0
Powerdrift: -0.14 dB; Right Touch
SAR Tot [mW/g]
7.21E-1
6.49E-1
5.77E-1
5.05E-1
4.33E-1
3.60E-1
2.88E-1
2.16E-1
1.44E-1
7.21E-2
Intertek Testing Services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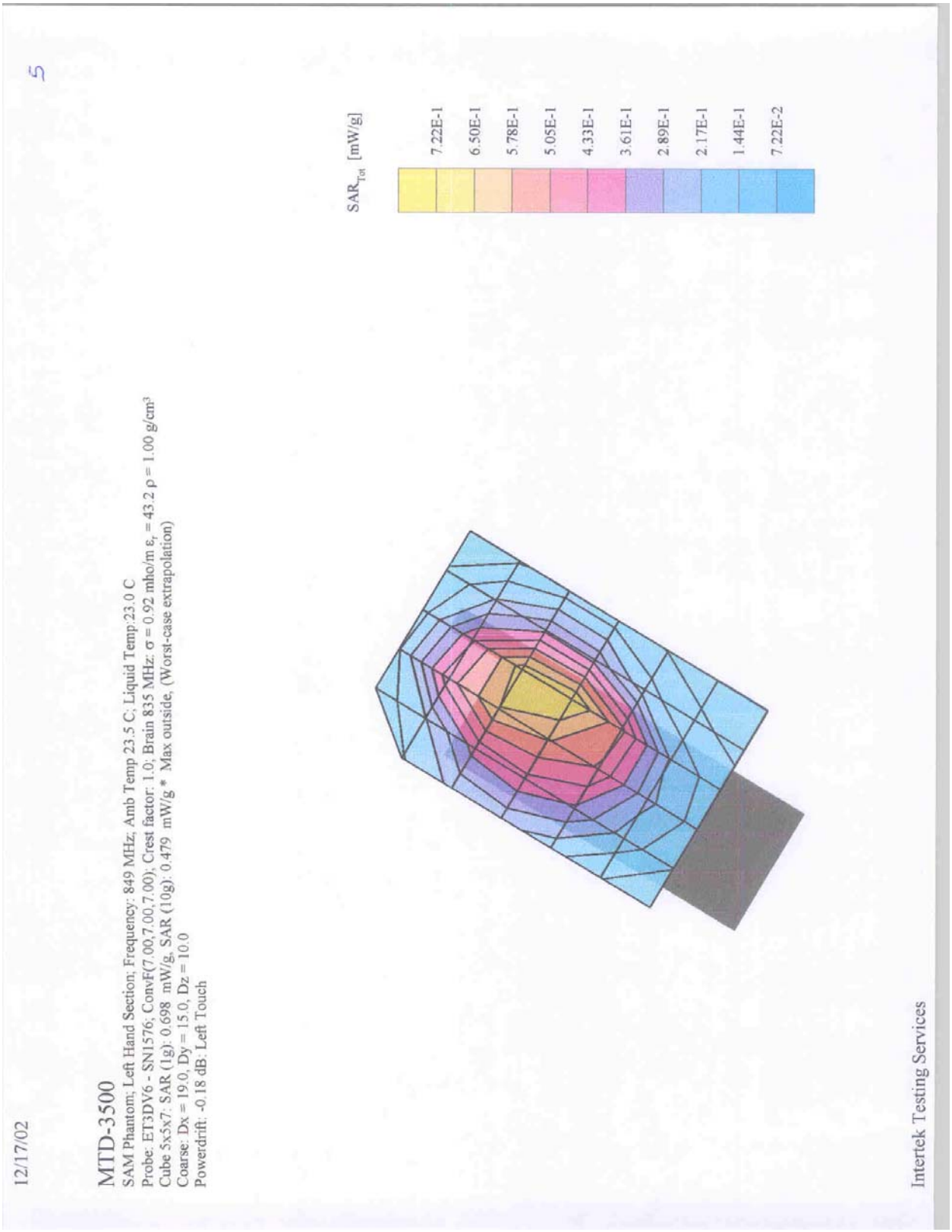
MTD-3500
SAM Phantom; Righ Hand Section; Frequency: 837 MHz; Amb temp 23.5C; Liquid Temp 23.0C
Probe: ET3DV6 - SN1576; ConvF(7.00,7.00,7.00); Crest factor: 1.0; Brain 835 MHz: σ = 0.92 mho/m εr = 43.2 ρ = 1.00 g/cm³
Cube 5x5x7: SAR (1g): 0.854 mW/g, SAR (10g): 0.551 mW/g, (Worst-case extrapolation)
Coarse: Dx = 19.0, Dy = 14.0, Dz = 10.0
Powerdrift: -0.12 dB; Right Tilt
SAR_Tot [mW/g]
8.18E-1
7.36E-1
6.54E-1
5.73E-1
4.91E-1
4.09E-1
3.27E-1
2.45E-1
1.64E-1
8.18E-2
Intertek Testing Services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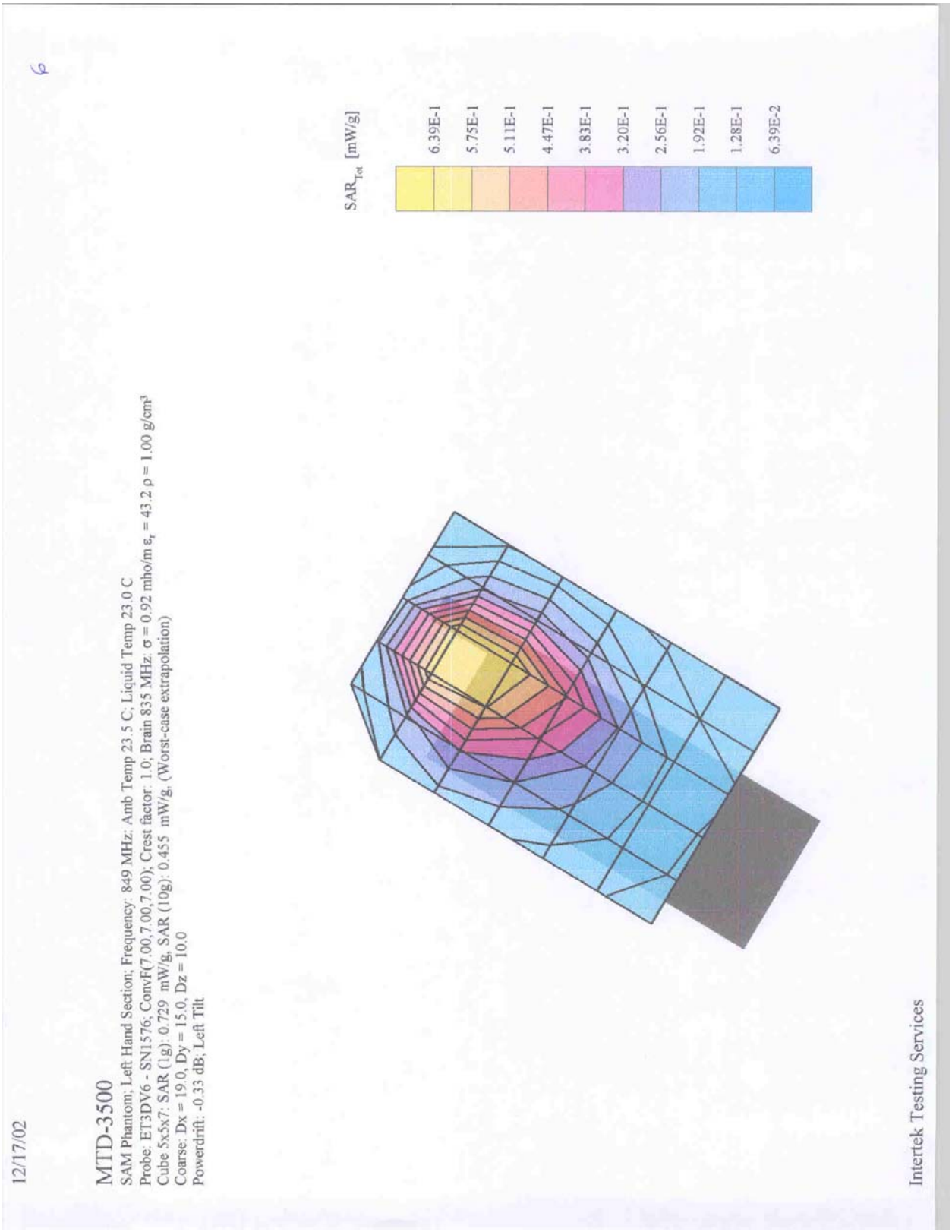
Probe: ET3DV6 - SN1576; ConvF(7.00,7.00,7.00); Crest factor: 1.0; Brain 835 MHz: σ = 0.92 mho/m ε_r = 43.2 ρ = 1.00 g/cm³
Cube 5x5x7: SAR (1g): 0.698 mW/g, SAR (10g): 0.479 mW/g * Max outside, (Worst-case extrapolation)
Coarse: Dx = 19.0, Dy = 15.0, Dz = 10.0
Powerdrift: -0.18 dB Left Touch
SAR_Tot [mW/g]
7.22E-1
6.50E-1
5.78E-1
5.05E-1
4.33E-1
3.61E-1
2.89E-1
2.17E-1
1.44E-1
7.22E-2
Intertek Testing Services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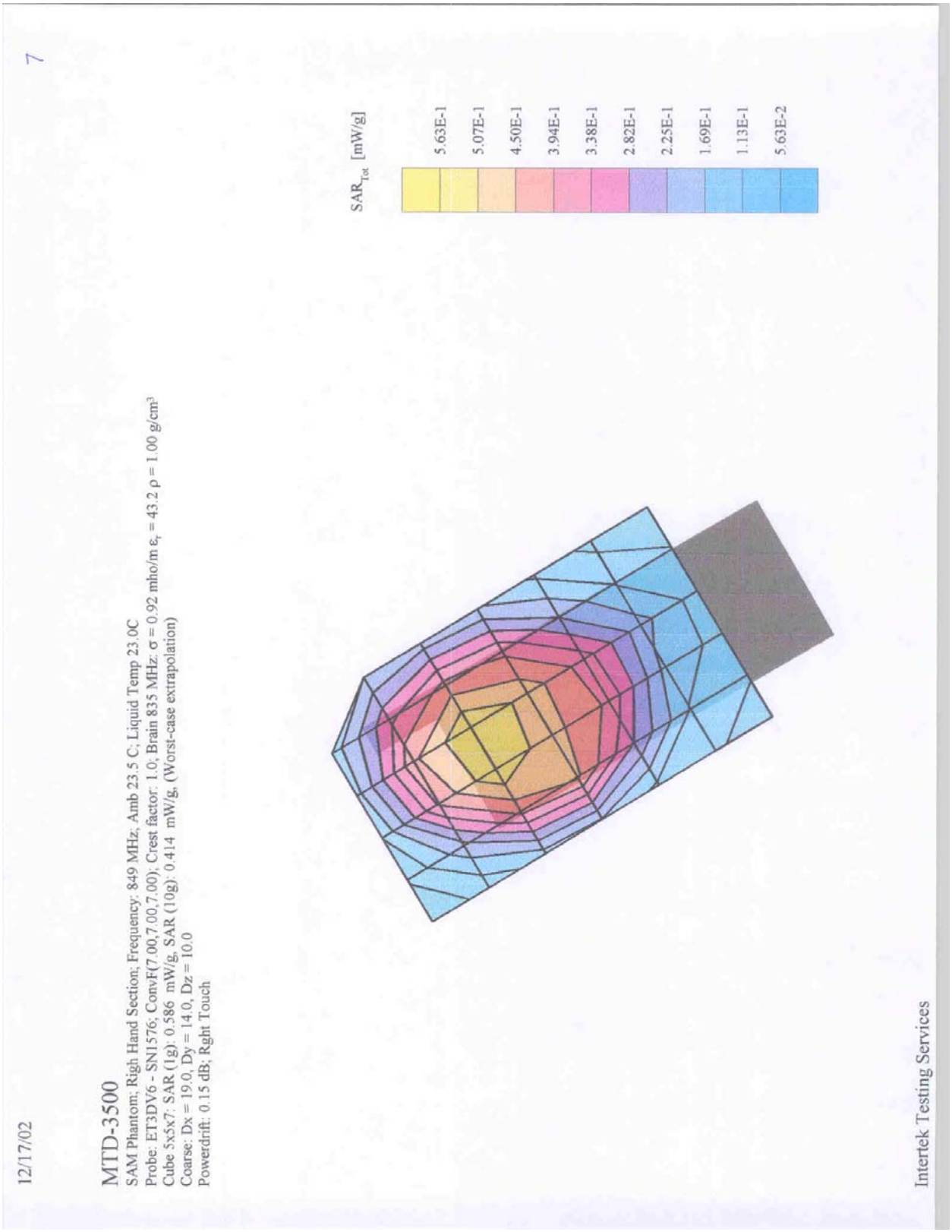
12/17/02
MTD-3500
SAM Phantom; Left Hand Section; Frequency: 849 MHz; Amb Temp 23.5 C; Liquid Temp 23.0 C
Probe: ET3DV6 - SN1576; ConvF(7.00,7.00,7.00); Crest factor: 1.0; Brain 835 MHz: σ = 0.92 mho/m εr = 43.2 ρ = 1.00 g/cm³
Cube 5x5x7: SAR (1g): 0.729 mW/g, SAR (10g): 0.455 mW/g, (Worst-case extrapolation)
Coarse: Dx = 19.0, Dy = 15.0, Dz = 10.0
Powerdrift: -0.33 dB; Left Tilt
SAR Tot [mW/g]
6.39E-1
5.75E-1
5.11E-1
4.47E-1
3.83E-1
3.20E-1
2.56E-1
1.92E-1
1.28E-1
6.39E-2
Intertek Testing Services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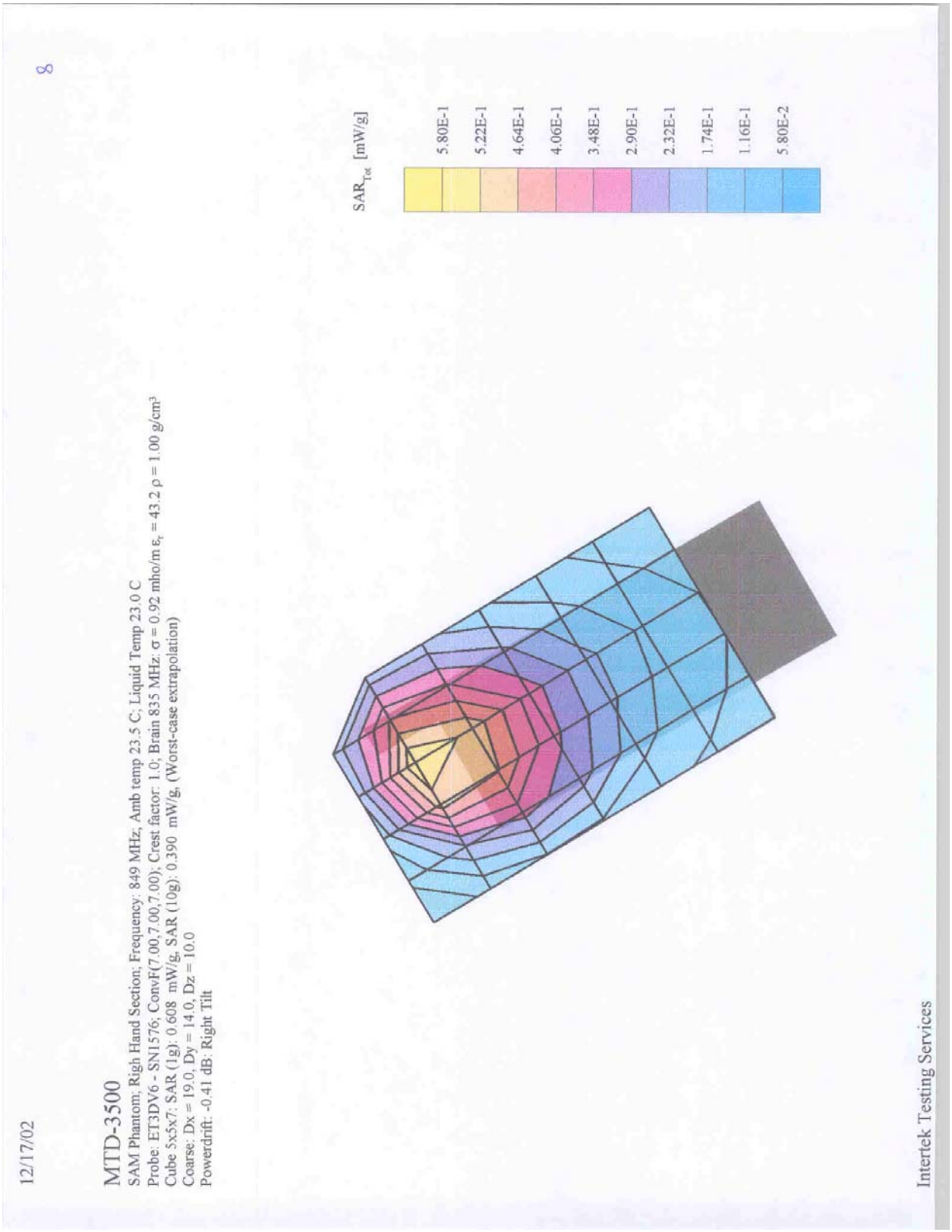
12/17/02
MTD-3500
SAM Phantom; Righ Hand Section; Frequency: 849 MHz; Amb 23.5 C; Liquid Temp 23.0C
Probe: ET3DV6 - SN1576; ConvF(7.00,7.00,7.00); Crest factor: 1.0; Brain 835 MHz: σ = 0.92 mho/m εr = 43.2 ρ = 1.00 g/cm³
Cube 5x5x7: SAR (1g): 0.586 mW/g, SAR (10g): 0.414 mW/g, (Worst-case extrapolation)
Coarse: Dx = 19.0, Dy = 14.0, Dz = 10.0
Powerdrift: 0.15 dB; Rght Touch
SAR Tot [mW/g]
5.63E-1
5.07E-1
4.50E-1
3.94E-1
3.38E-1
2.82E-1
2.25E-1
1.69E-1
1.13E-1
5.63E-2
Intertek Testing Services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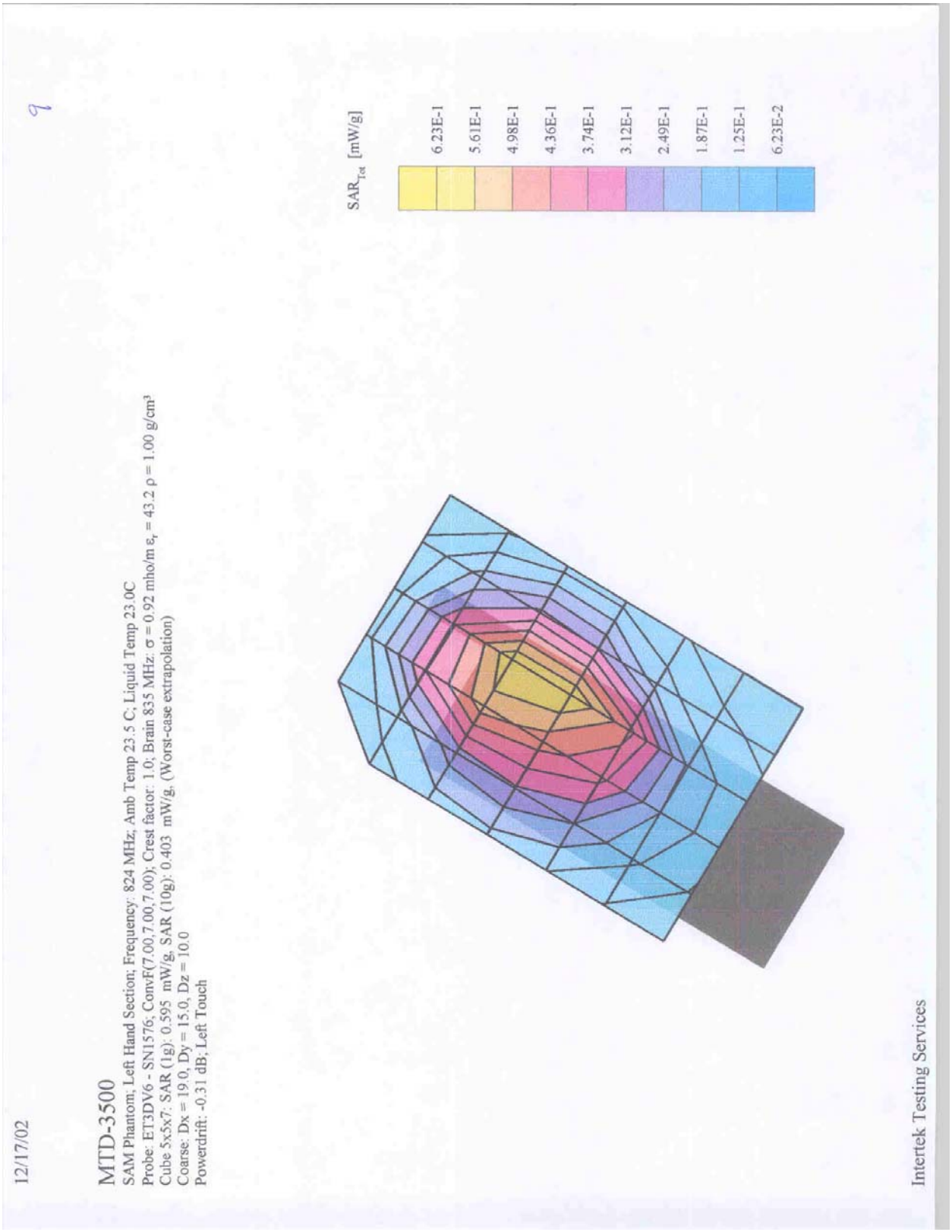
MTD-3500
SAM Phantom; Righ Hand Section; Frequency: 849 MHz, Amb temp 23.5 C; Liquid Temp 23.0 C
Probe: ET3DV6 - SN1576; ConvF(7.00,7.00,7.00); Crest factor: 1.0; Brain 835 MHz: σ = 0.92 mho/m εr = 43.2 ρ = 1.00 g/cm³
Cube 5x5x7: SAR (1g): 0.608 mW/g, SAR (10g): 0.390 mW/g, (Worst-case extrapolation)
Coarse: Dx = 19.0, Dy = 14.0, Dz = 10.0
Powerdrift: -0.41 dB: Right Tilt
SAR Tot [mW/g]
5.80E-1
5.22E-1
4.64E-1
4.06E-1
3.48E-1
2.90E-1
2.32E-1
1.74E-1
1.16E-1
5.80E-2
Intertek Testing Services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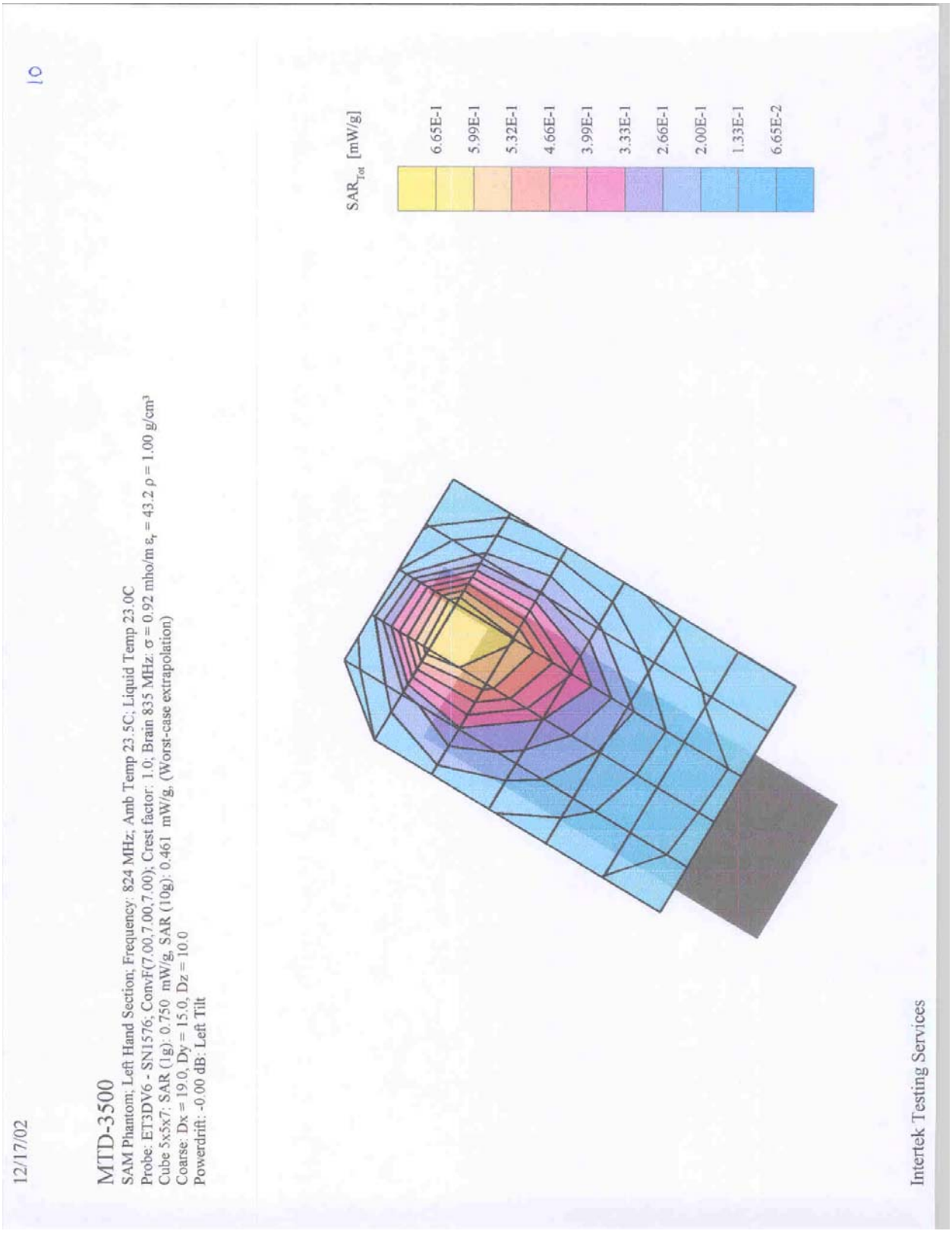
12/17/02
MTD-3500
SAM Phantom; Left Hand Section; Frequency: 824 MHz; Amb Temp 23.5 C; Liquid Temp 23.0C
Probe: ET3DV6 - SN1576; ConvF(7.00,7.00,7.00); Crest factor: 1.0; Brain 835 MHz: σ = 0.92 mho/m εr = 43.2 ρ = 1.00 g/cm³
Cube 5x5x7: SAR (1g): 0.595 mW/g, SAR (10g): 0.403 mW/g, (Worst-case extrapolation)
Coarse: Dx = 19.0, Dy = 15.0, Dz = 10.0
Powerdrift: -0.31 dB; Left Touch
SAR_Tot [mW/g]
6.23E-1
5.61E-1
4.98E-1
4.36E-1
3.74E-1
3.12E-1
2.49E-1
1.87E-1
1.25E-1
6.23E-2
Intertek Testing Services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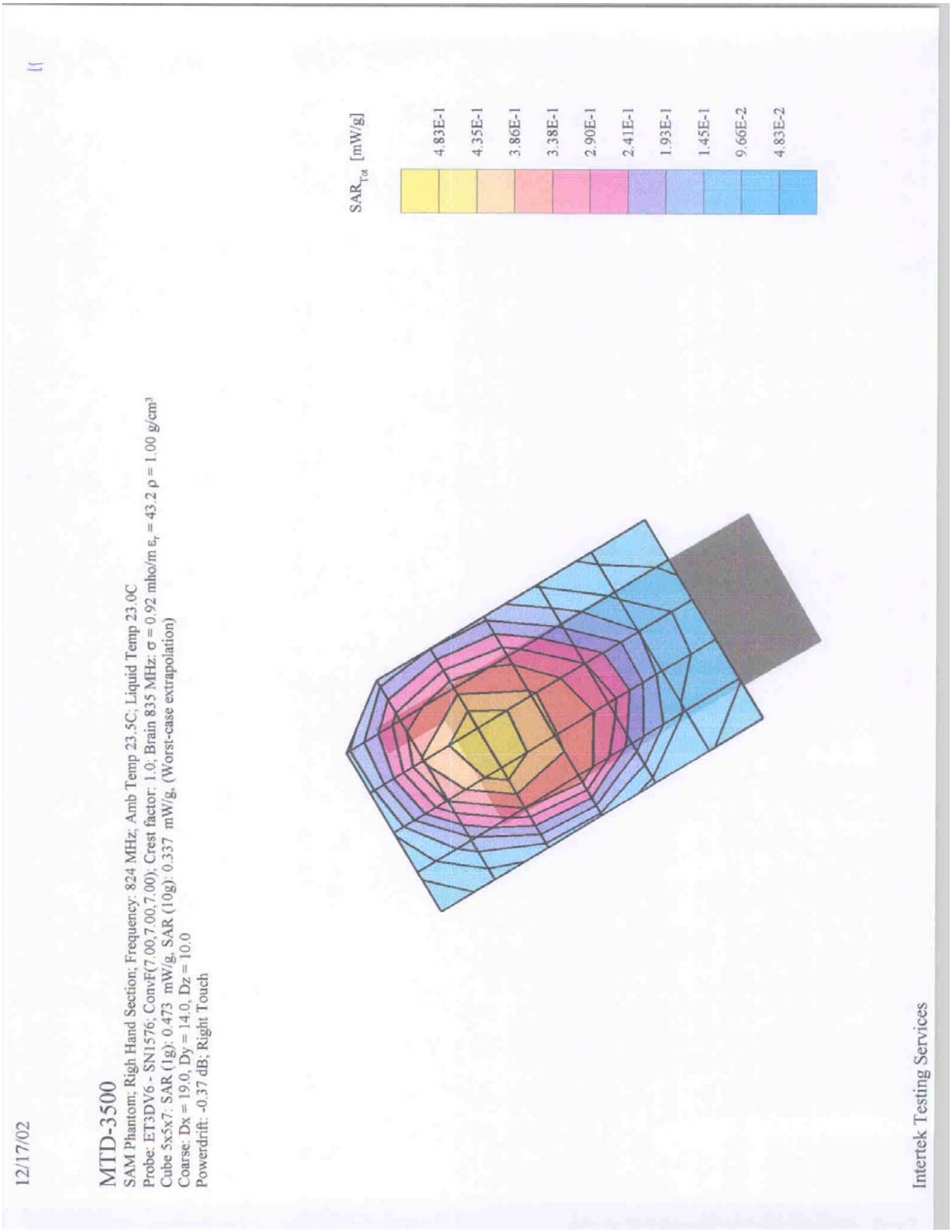
12/17/02
MTD-3500
SAM Phantom; Left Hand Section; Frequency: 824 MHz; Amb Temp 23 5C; Liquid Temp 23.0C
Probe: ET3DV6 - SN1576; ConvF(7.00,7.00,7.00); Crest factor: 1.0; Brain 835 MHz: σ = 0.92 mho/m εr = 43.2 ρ = 1.00 g/cm³
Cube 5x5x7: SAR (1g): 0.750 mW/g, SAR (10g): 0.461 mW/g, (Worst-case extrapolation)
Coarse: Dx = 19.0, Dy = 15.0, Dz = 10.0
Powerdrift: -0.00 dB: Left Tilt
SAR_Tot [mW/g]
6.65E-1
5.99E-1
5.32E-1
4.66E-1
3.99E-1
3.33E-1
2.66E-1
2.00E-1
1.33E-1
6.65E-2
Intertek Testing Services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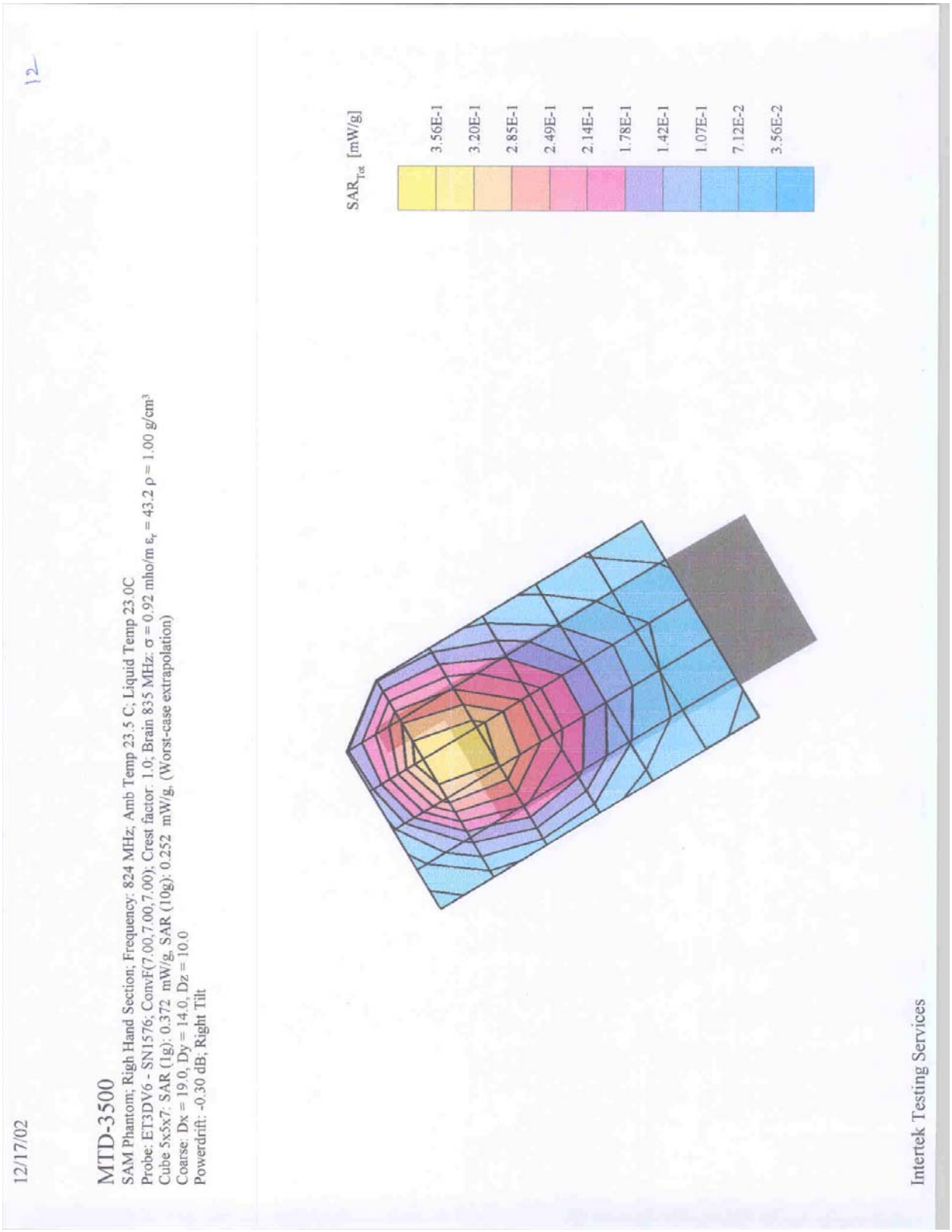
MTD-3500
SAM Phantom; Righ Hand Section; Frequency: 824 MHz; Amb Temp 23.5C; Liquid Temp 23.0C
Probe: ET3DV6 - SN1576; ConvF(7.00,7.00,7.00); Crest factor: 1.0; Brain 835 MHz: σ = 0.92 mho/m εr = 43.2 ρ = 1.00 g/cm³
Cube 5x5x7: SAR (1g): 0.473 mW/g, SAR (10g): 0.337 mW/g, (Worst-case extrapolation)
Coarse: Dx = 19.0, Dy = 14.0, Dz = 10.0
Powerdrift: -0.37 dB; Right Touch
SAR Tot [mW/g]
4.83E-1
4.35E-1
3.86E-1
3.38E-1
2.90E-1
2.41E-1
1.93E-1
1.45E-1
9.66E-2
4.83E-2
Intertek Testing Services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12/17/02
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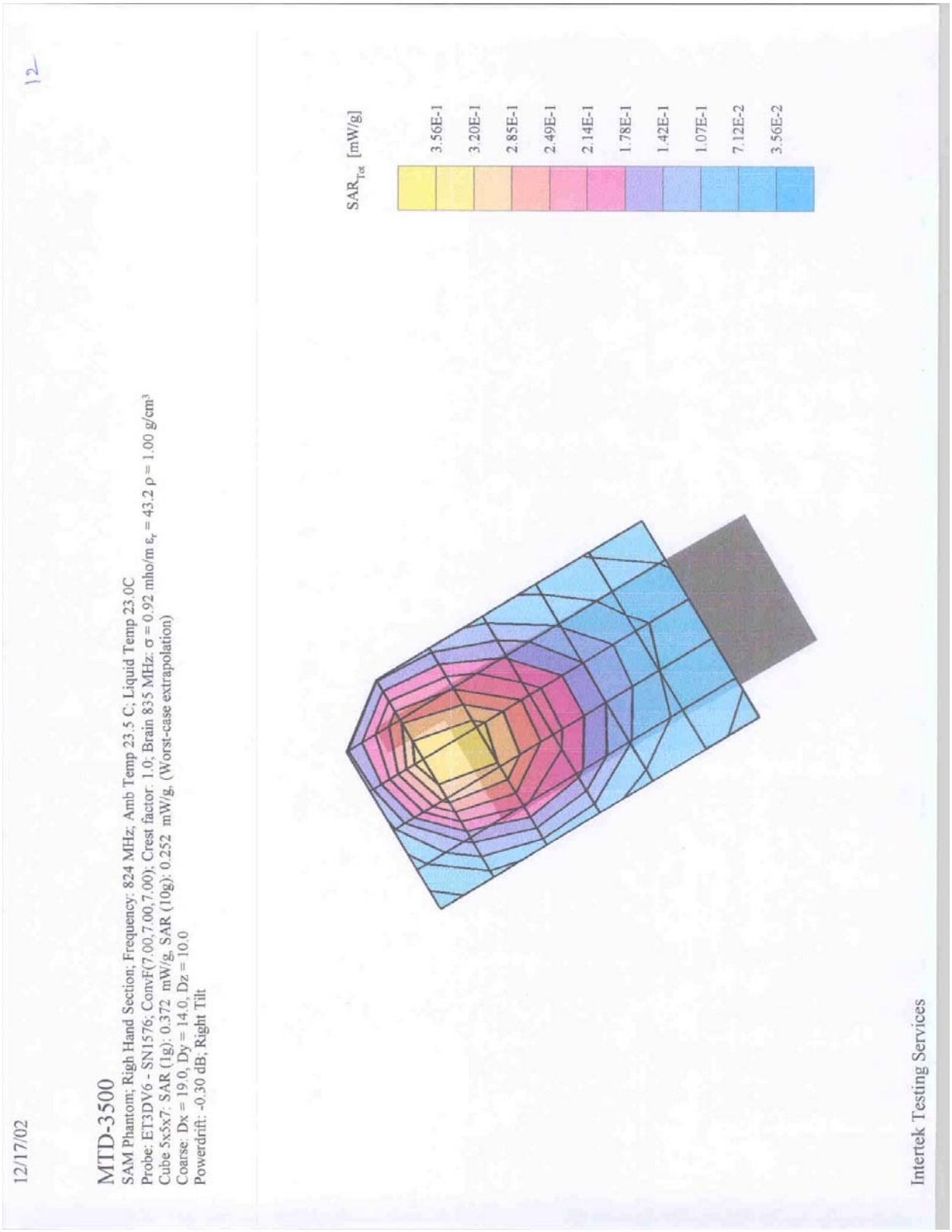
SAM Phantom; Righ Hand Section; Frequency: 824 MHz; Amb Temp 23.5 C; Liquid Temp 23 0C
Probe: ET3DV6 - SN1576; ConvF(7.00,7.00,7.00); Crest factor: 1.0; Brain 835 MHz: σ = 0.92 mho/m εr = 43.2 ρ = 1.00 g/cm3
Cube 5x5x7: SAR (1g): 0.372 mW/g, SAR (10g): 0.252 mW/g, (Worst-case extrapolation)
Coarse: Dx = 19.0, Dy = 14.0, Dz = 10.0
Powerdrift: -0.30 dB; Right Tilt
SARTot [mW/g]
3.56E-1
3.20E-1
2.85E-1
2.49E-1
2.14E-1
1.78E-1
1.42E-1
1.07E-1
7.12E-2
3.56E-2
Intertek Testing Services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Probe: ET3DV6 - SN1576; ConvF(7.00,7.00,7.00); Crest factor: 1.0; Brain 835 MHz: σ = 0.92 mho/m εr = 43.2 ρ = 1.00 g/cm3
Cube 5x5x7: SAR (1g): 0.372 mW/g, SAR (10g): 0.252 mW/g, (Worst-case extrapolation)
Coarse: Dx = 19.0, Dy = 14.0, Dz = 10.0
Powerdrift: -0.30 dB; Right Tilt
SARTot [mW/g]
3.56E-1
3.20E-1
2.85E-1
2.49E-1
2.14E-1
1.78E-1
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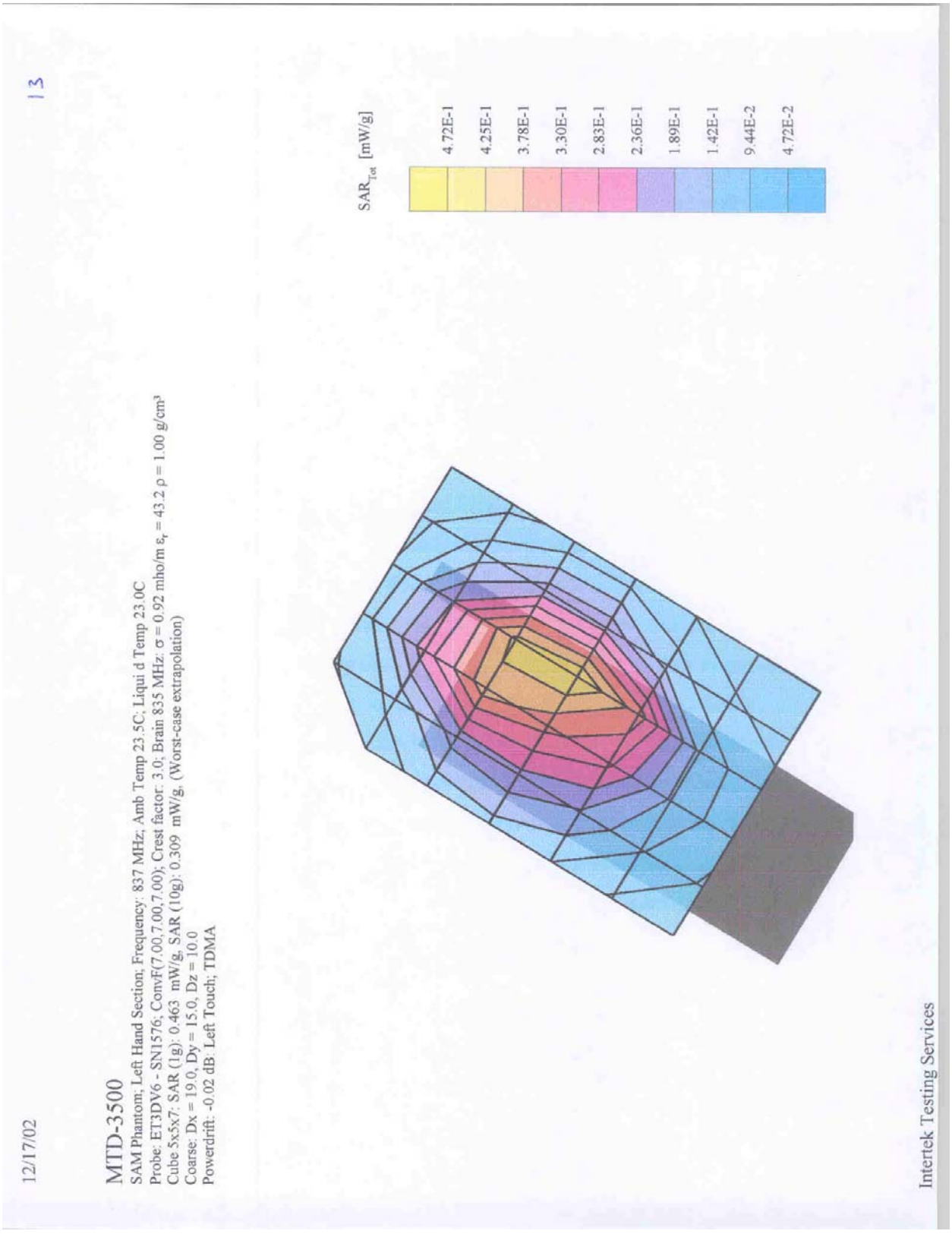
1.07E-1
7.12E-2
3.56E-2
Intertek Testing Services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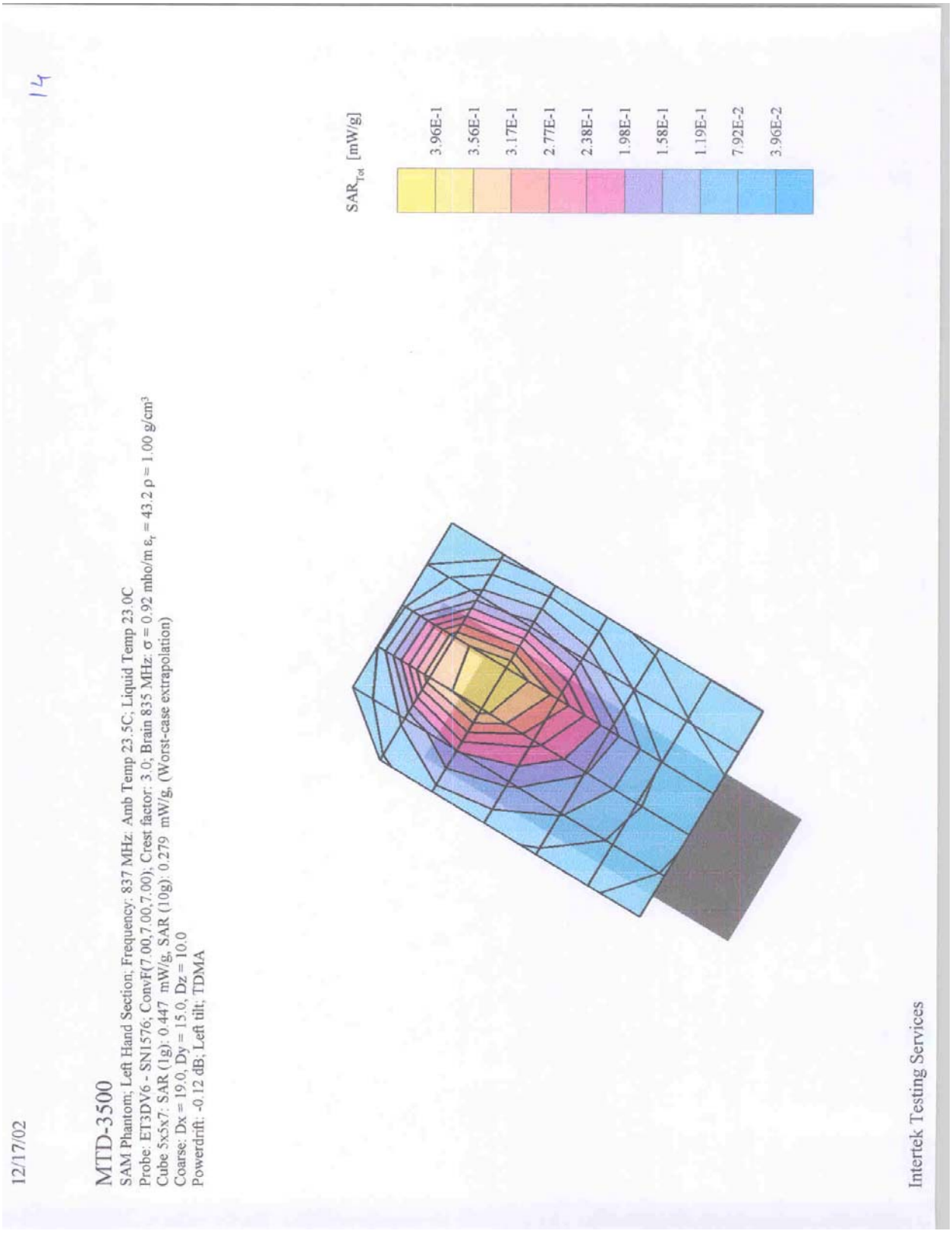
MTD-3500
SAM Phantom; Left Hand Section; Frequency: 837 MHz; Amb Temp 23.5C; Liqui d Temp 23.0C
Probe: ET3DV6 - SN1576; ConvF(7.00,7.00,7.00); Crest factor: 3.0; Brain 835 MHz: σ = 0.92 mho/m εr = 43.2 ρ = 1.00 g/cm³
Cube 5x5x7: SAR (1g): 0.463 mW/g, SAR (10g): 0.309 mW/g, (Worst-case extrapolation)
Coarse: Dx = 19.0, Dy = 15.0, Dz = 10.0
Powerdrift: -0.02 dB: Left Touch; TDMA
SAR Tot [mW/g]
4.72E-1
4.25E-1
3.78E-1
3.30E-1
2.83E-1
2.36E-1
1.89E-1
1.42E-1
9.44E-2
4.72E-2
Intertek Testing Services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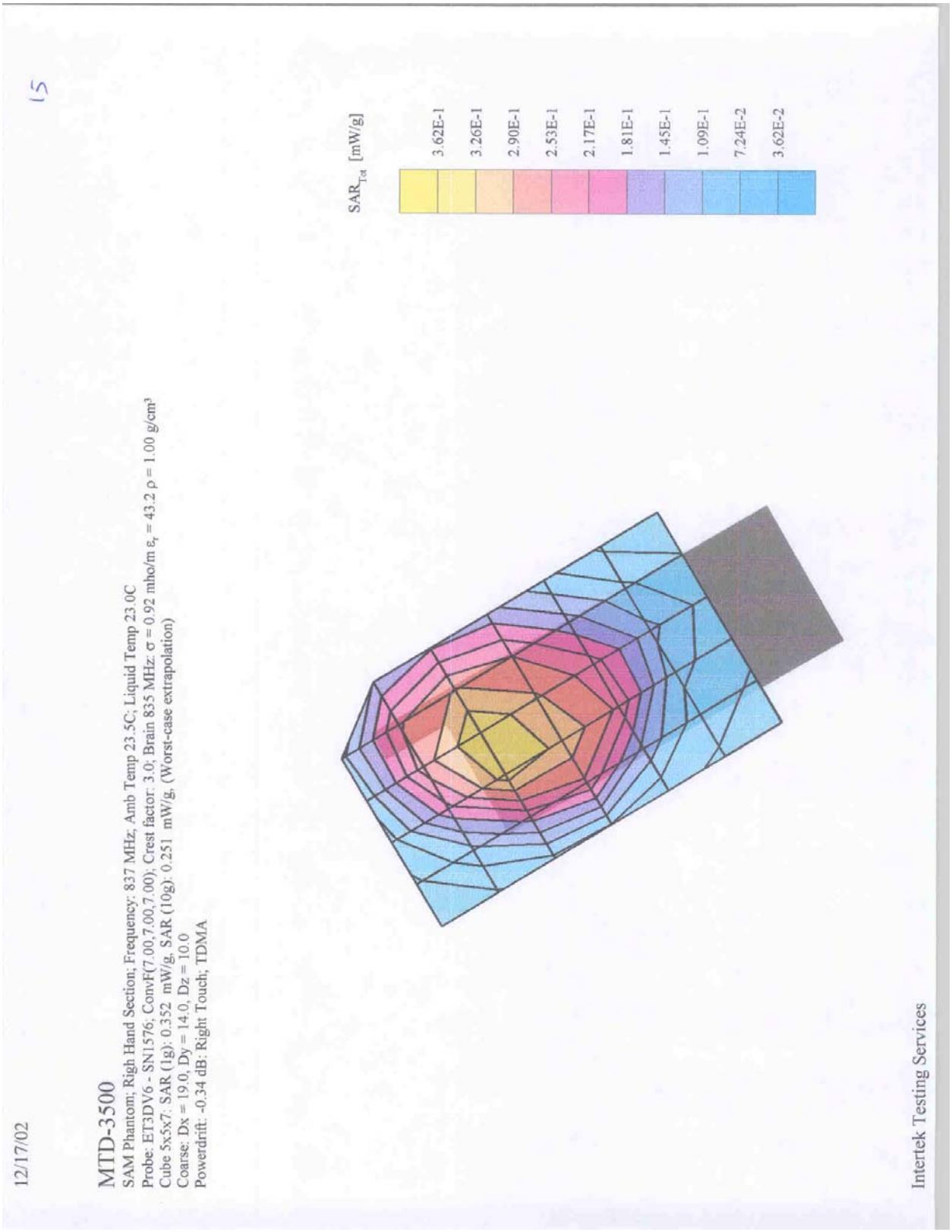
MTD-3500
SAM Phantom; Left Hand Section; Frequency: 837 MHz; Amb Temp 23.5C; Liquid Temp 23.0C
Probe: ET3DV6 - SN1576; ConvF(7.00,7.00,7.00); Crest factor: 3.0; Brain 835 MHz: σ = 0.92 mho/m εr = 43.2 ρ = 1.00 g/cm³
Cube 5x5x7: SAR (1g): 0.447 mW/g, SAR (10g): 0.279 mW/g, (Worst-case extrapolation)
Coarse: Dx = 19.0, Dy = 15.0, Dz = 10.0
Powerdrift: -0.12 dB; Left tilt; TDMA
SAR Tot [mW/g]
3.96E-1
3.56E-1
3.17E-1
2.77E-1
2.38E-1
1.98E-1
1.58E-1
1.19E-1
7.92E-2
3.96E-2
Intertek Testing Services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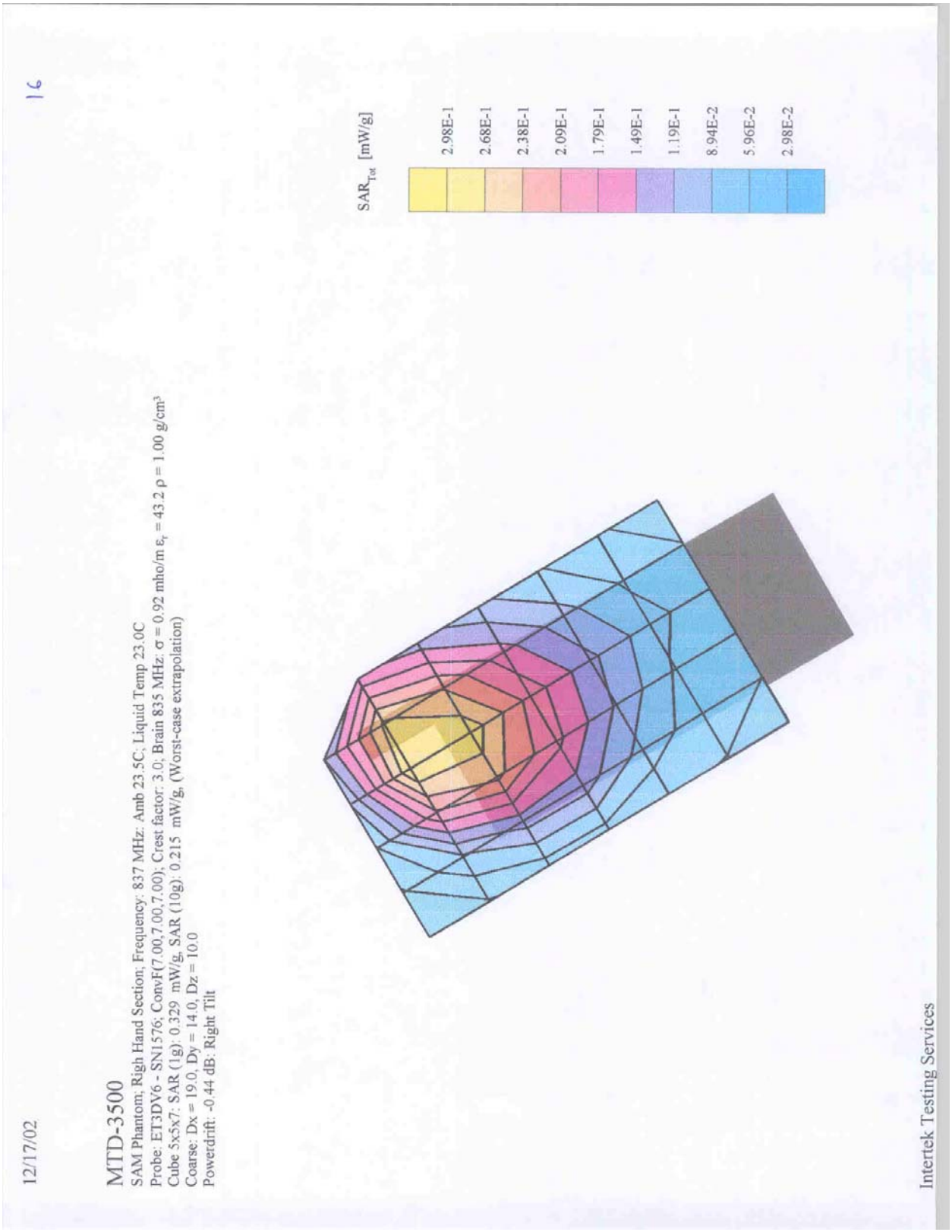
SAM Phantom; Righ Hand Section; Frequency: 837 MHz; Amb Temp 23.5C; Liquid Temp 23.0C
Probe: ET3DV6 - SN1576; ConvF(7.00,7.00,7.00); Crest factor: 3.0; Brain 835 MHz: σ = 0.92 mho/m εr = 43.2 ρ = 1.00 g/cm³
Cube 5x5x7: SAR (1g): 0.352 mW/g, SAR (10g): 0.251 mW/g, (Worst-case extrapolation)
Coarse: Dx = 19.0, Dy = 14.0, Dz = 10.0
Powerdrift: -0.34 dB: Right Touch; TDMA
SAR Tot [mW/g]
3.62E-1
3.26E-1
2.90E-1
2.53E-1
2.17E-1
1.81E-1
1.45E-1
1.09E-1
7.24E-2
3.62E-2
Intertek Testing Services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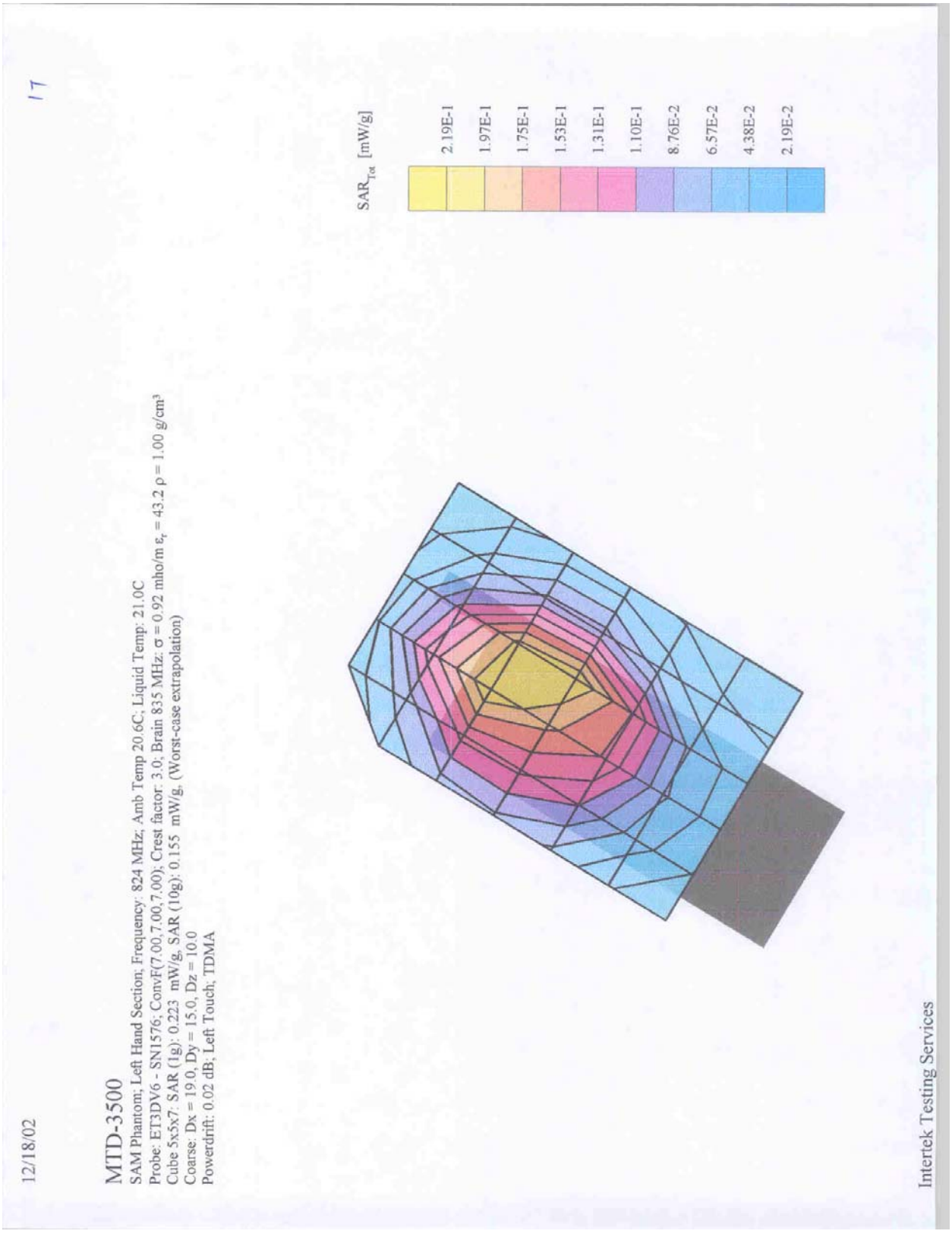
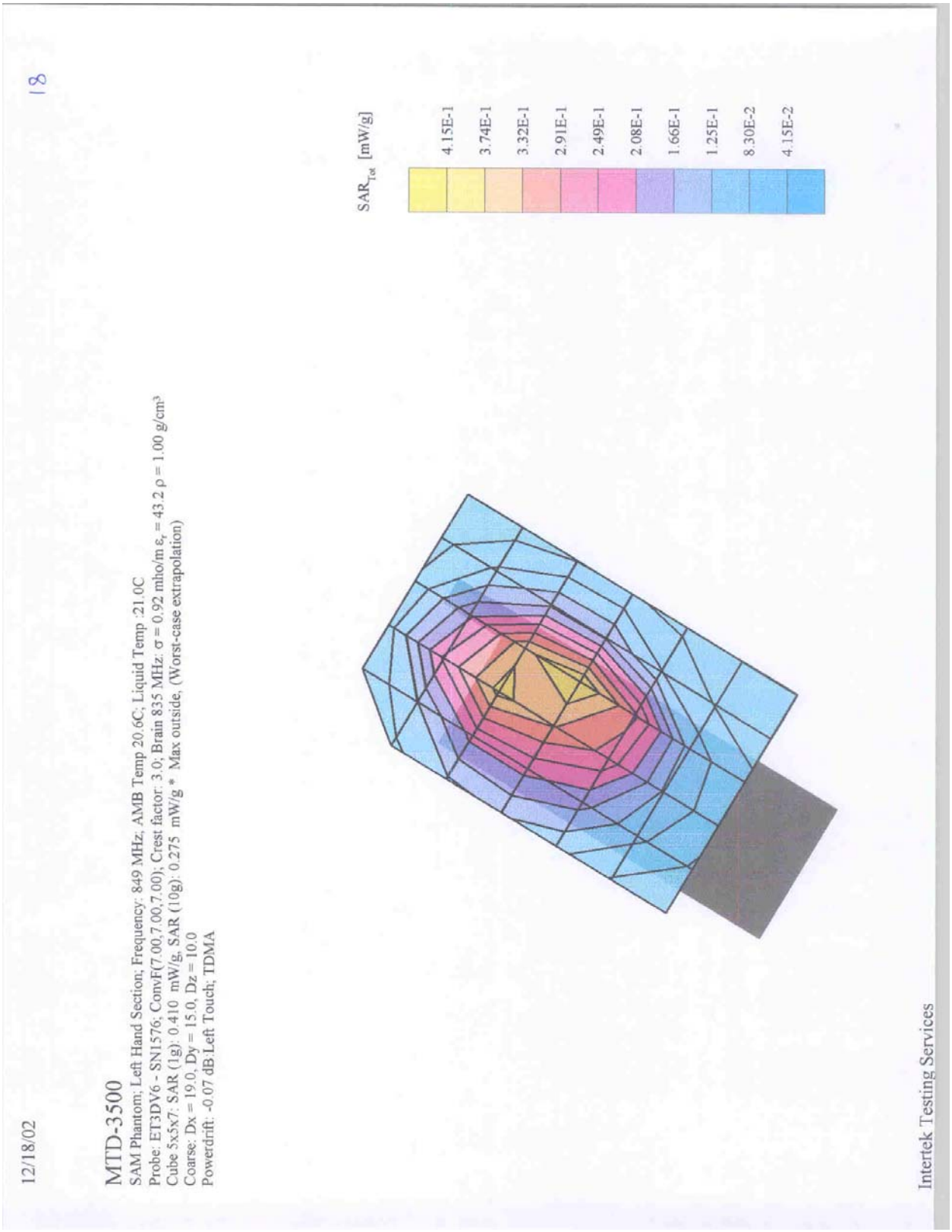
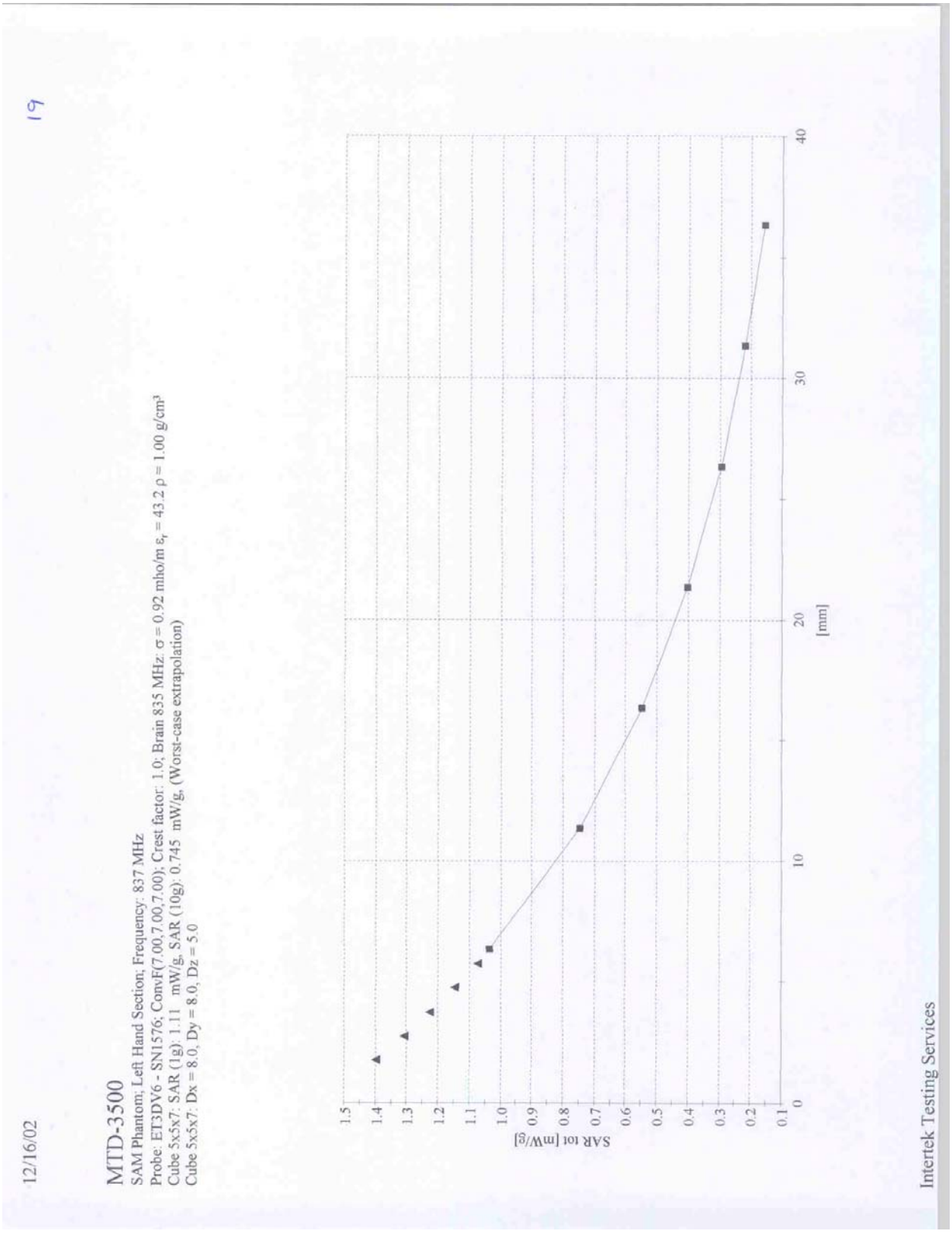
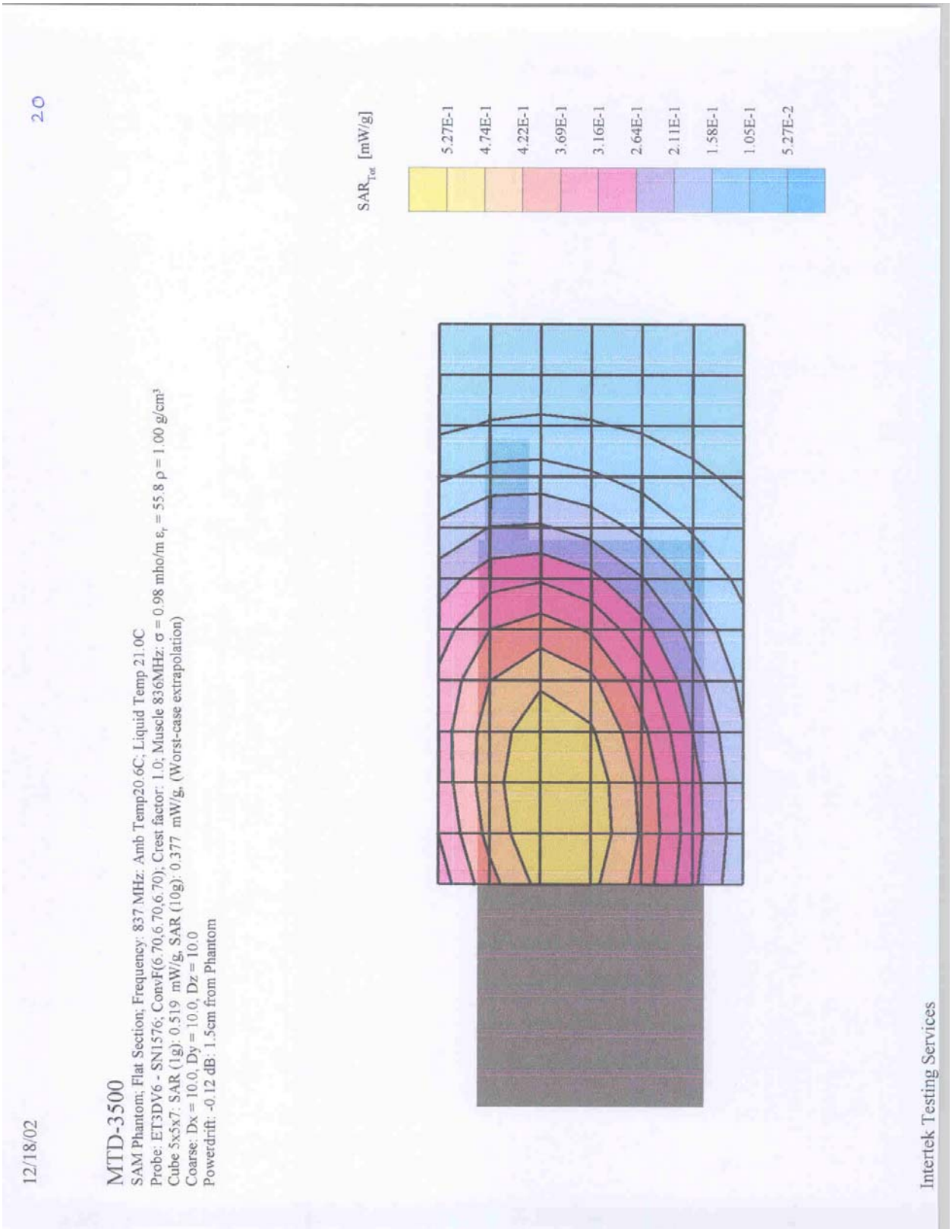
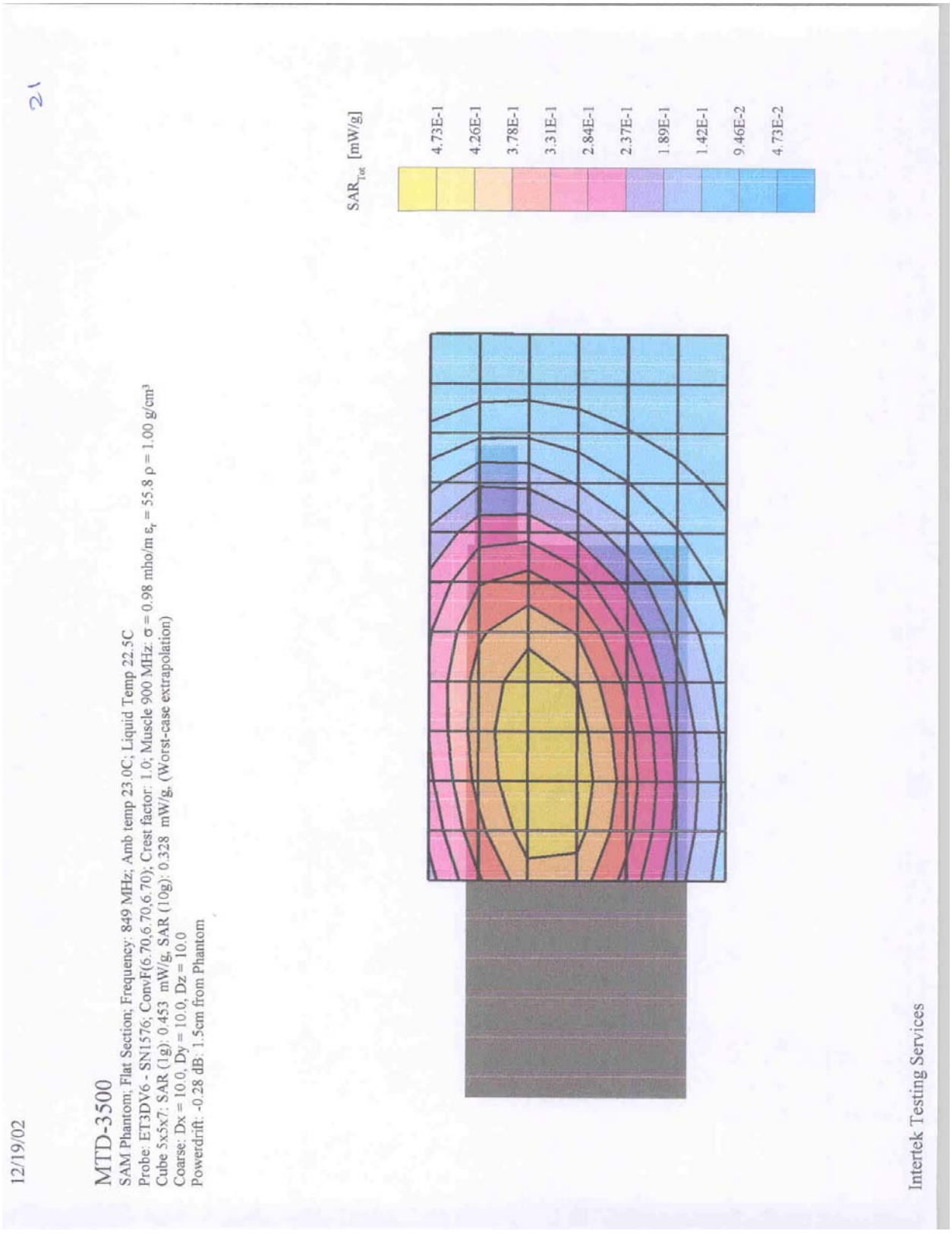
SAM Phantom; Righ Hand Section; Frequency: 837 MHz; Amb 23.5C; Liquid Temp 23.0C
Probe: ET3DV6 - SN1576; ConvF(7.00,7.00,7.00); Crest factor: 3.0; Brain 835 MHz: σ = 0.92 mho/m εr = 43.2 ρ = 1.00 g/cm³
Cube 5x5x7: SAR (1g): 0.329 mW/g, SAR (10g): 0.215 mW/g, (Worst-case extrapolation)
Coarse: Dx = 19.0, Dy = 14.0, Dz = 10.0
Powerdrift: -0.44 dB: Right Tilt
SAR Tot [mW/g]
2.98E-1
2.68E-1
2.38E-1
2.09E-1
1.79E-1
1.49E-1
1.19E-1
8.94E-2
5.96E-2
2.98E-2
Intertek Testing Services

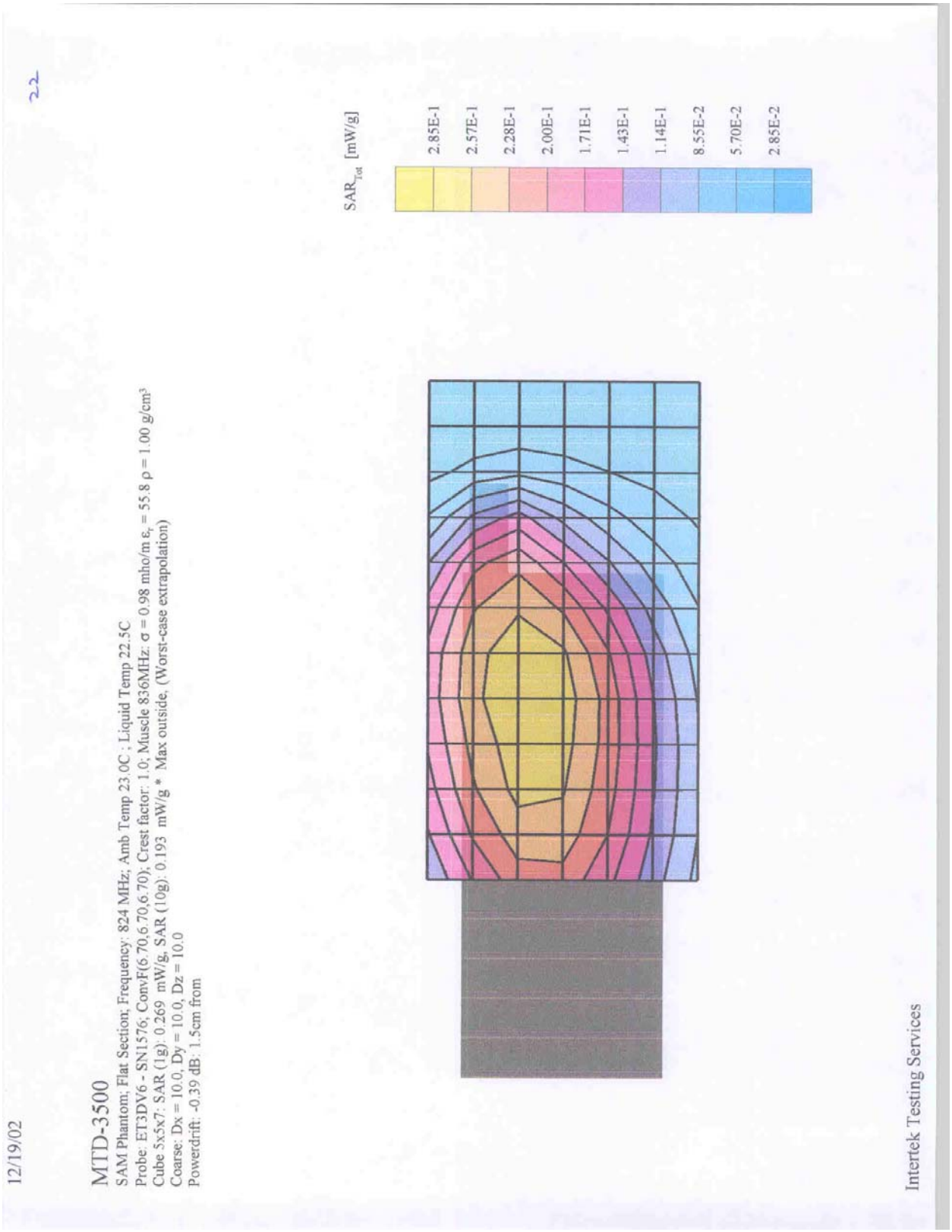

17
12/18/02
MTD-3500
SAM Phantom; Left Hand Section; Frequency: 824 MHz; Amb Temp 20.6C; Liquid Temp: 21.0C
Probe: ET3DV6 - SN1576; ConvF(7.00,7.00,7.00); Crest factor: 3.0; Brain 835 MHz: σ = 0.92 mho/m εr = 43.2 ρ = 1.00 g/cm³
Cube 5x5x7: SAR (1g): 0.223 mW/g, SAR (10g): 0.155 mW/g, (Worst-case extrapolation)
Coarse: Dx = 19.0, Dy = 15.0, Dz = 10.0
Powerdrift: 0.02 dB; Left Touch, TDMA
SAR_Tot [mW/g]
2.19E-1
1.97E-1
1.75E-1
1.53E-1
1.31E-1
1.10E-1
8.76E-2
6.57E-2
4.38E-2
2.19E-2
Intertek Testing Services

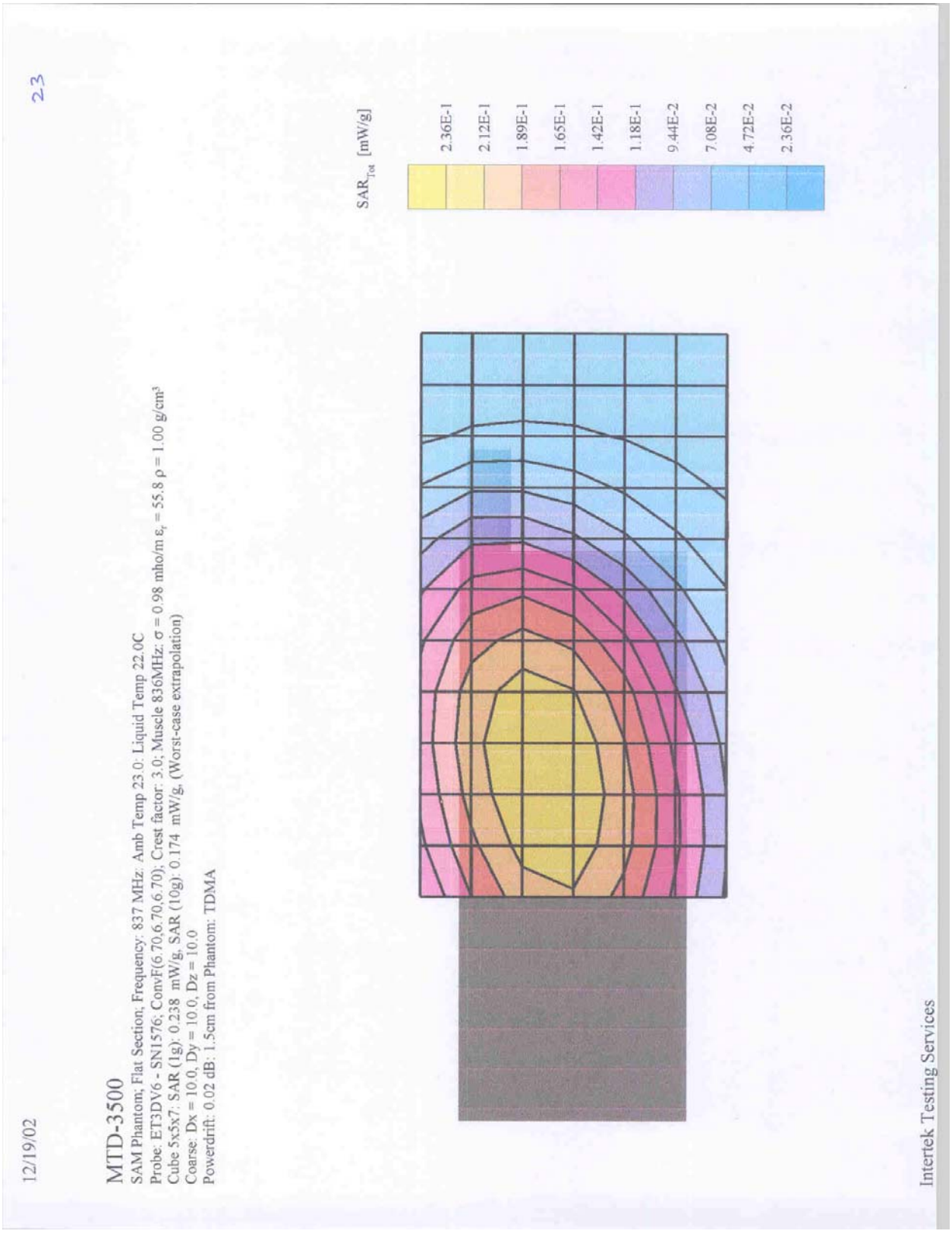

18
12/18/02
MTD-3500
SAM Phantom; Left Hand Section; Frequency: 849 MHz; AMB Temp 20.6C; Liquid Temp :21.0C
Probe: ET3DV6 - SN1576; ConvF(7.00,7.00,7.00); Crest factor: 3.0; Brain 835 MHz: σ = 0.92 mho/m εr = 43.2 ρ = 1.00 g/cm³
Cube 5x5x7: SAR (1g): 0.410 mW/g, SAR (10g): 0.275 mW/g * Max outside, (Worst-case extrapolation)
Coarse: Dx = 19.0, Dy = 15.0, Dz = 10.0
Powerdrift: -0.07 dB Left Touch; TDMA
SAR Tot [mW/g]
4.15E-1
3.74E-1
3.32E-1
2.91E-1
2.49E-1
2.08E-1
1.66E-1
1.25E-1
8.30E-2
4.15E-2
Intertek Testing Services

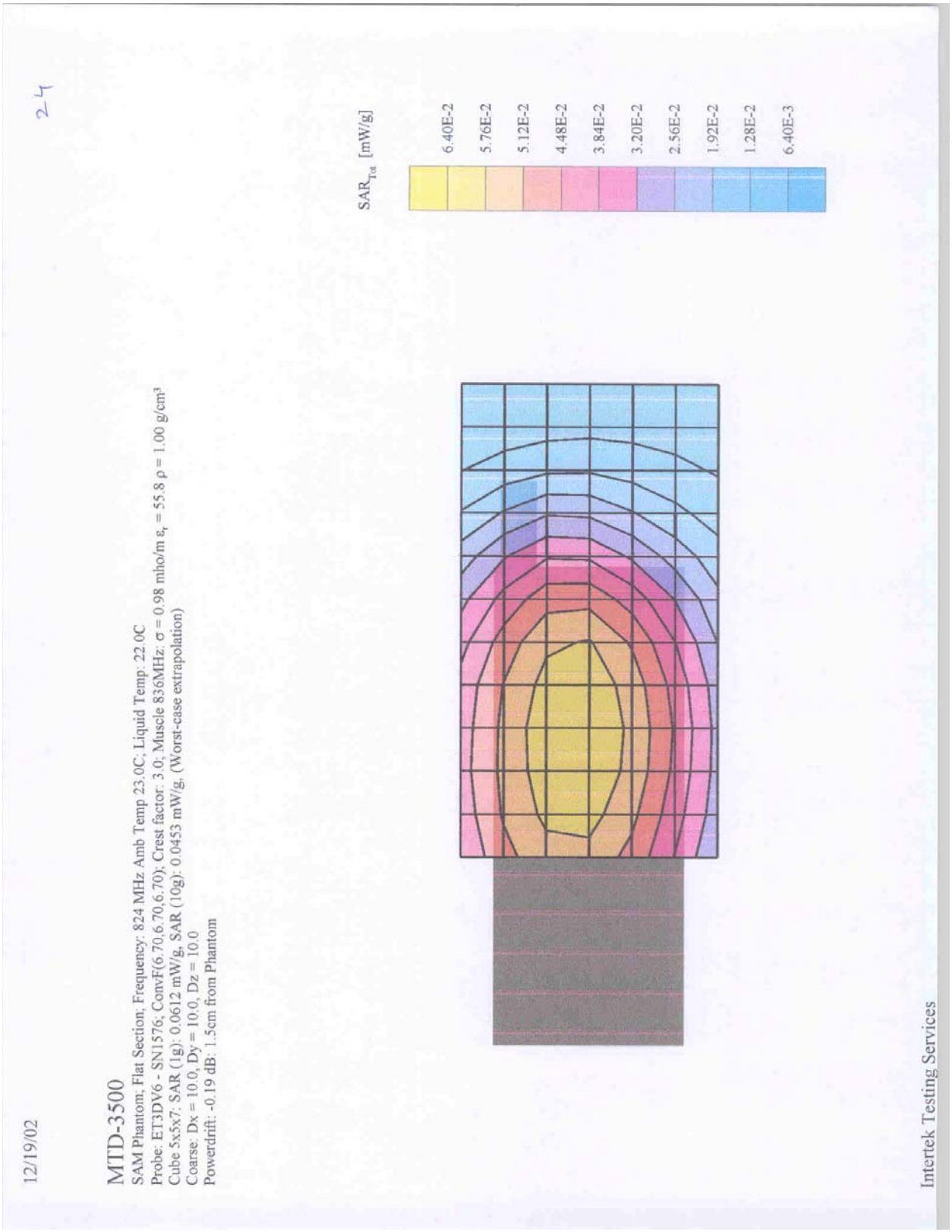

19
12/16/02
MTD-3500
SAM Phantom; Left Hand Section; Frequency: 837 MHz
Probe: ET3DV6 - SN1576; ConvF(7.00,7.00,7.00); Crest factor: 1.0; Brain 835 MHz: σ = 0.92 mho/m εr = 43.2 ρ = 1.00 g/cm³
Cube 5x5x7: SAR (1g): 1.11 mW/g, SAR (10g): 0.745 mW/g, (Worst-case extrapolation)
Cube 5x5x7: Dx = 8.0, Dy = 8.0, Dz = 5.0
SAR tot [mW/g]
1.5
1.4
1.3
1.2
1.1
1.0
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
10
20
30
40
[mm]
Intertek Testing Services

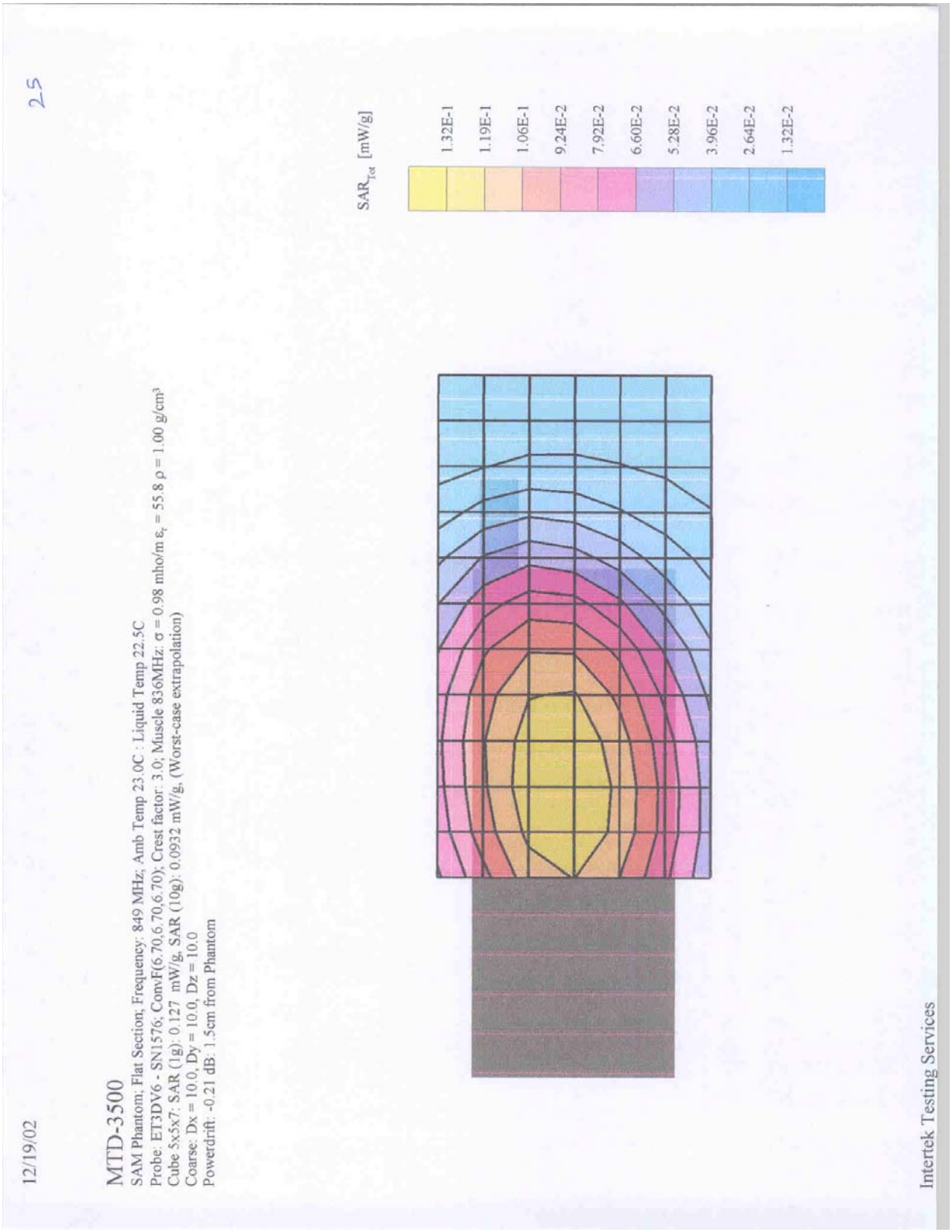

20
12/18/02
MTD-3500
SAM Phantom; Flat Section; Frequency: 837 MHz; Amb Temp20.6C; Liquid Temp 21.0C
Probe: ET3DV6 - SN1576; ConvF(6.70,6.70,6.70); Crest factor: 1.0; Muscle 836MHz: σ = 0.98 mho/m ε_r = 55.8 ρ = 1.00 g/cm³
Cube 5x5x7: SAR (1g): 0.519 mW/g, SAR (10g): 0.377 mW/g, (Worst-case extrapolation)
Coarse: Dx = 10.0, Dy = 10.0, Dz = 10.0
Powerdrift: -0.12 dB: 1.5cm from Phantom
SAR_Tot [mW/g]
5.27E-1
4.74E-1
4.22E-1
3.69E-1
3.16E-1
2.64E-1
2.11E-1
1.58E-1
1.05E-1
5.27E-2
Intertek Testing Services

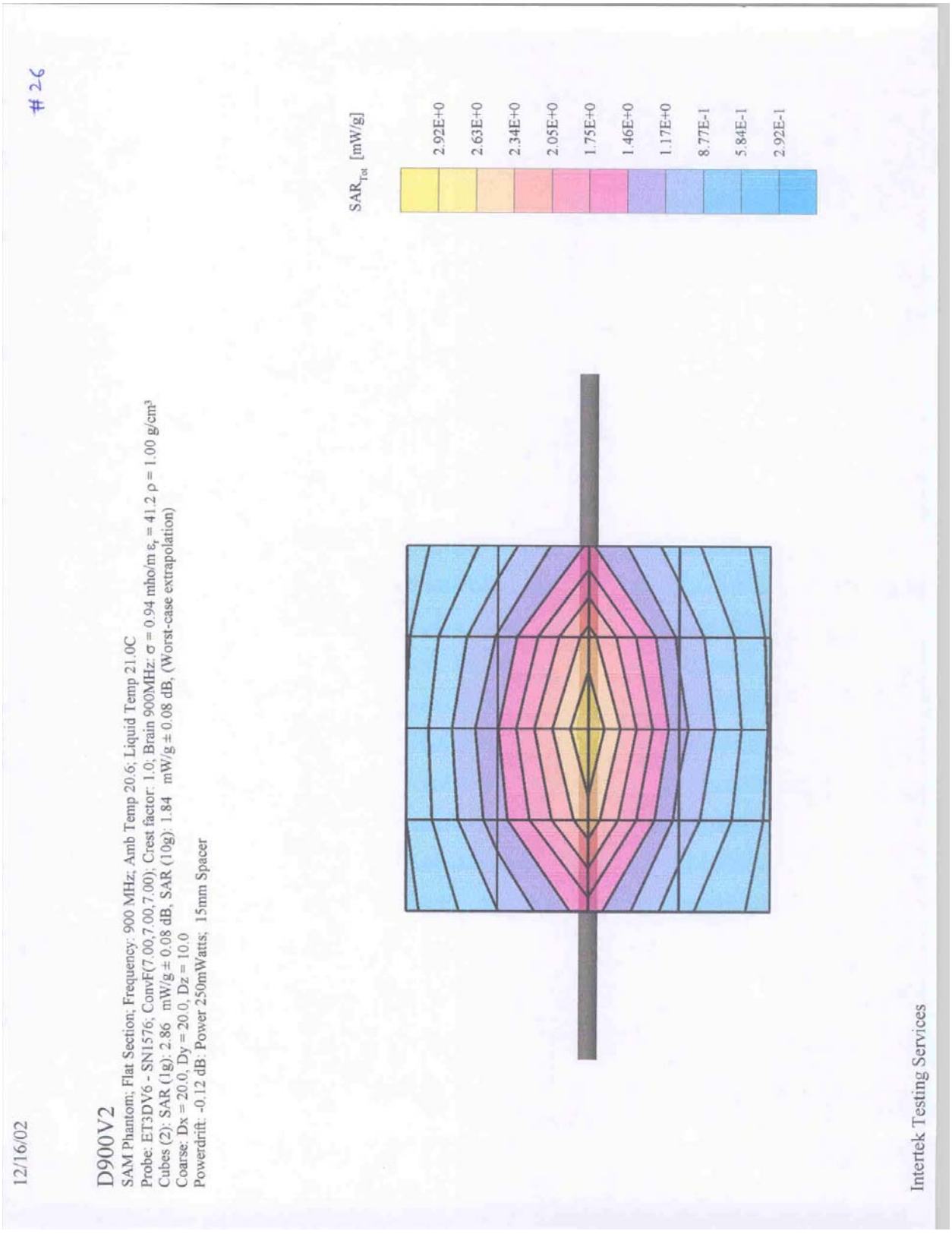

21
12/19/02
MTD-3500
SAM Phantom; Flat Section; Frequency: 849 MHz; Amb temp 23.0C; Liquid Temp 22.5C
Probe: ET3DV6 - SN1576; ConvF(6.70,6.70,6.70); Crest factor: 1.0; Muscle 900 MHz: σ = 0.98 mho/m ε_r = 55.8 ρ = 1.00 g/cm³
Cube 5x5x7: SAR (1g): 0.453 mW/g, SAR (10g): 0.328 mW/g, (Worst-case extrapolation)
Coarse: Dx = 10.0, Dy = 10.0, Dz = 10.0
Powerdrift: -0.28 dB: 1.5cm from Phantom
SAR_Tot [mW/g]
4.73E-1
4.26E-1
3.78E-1
3.31E-1
2.84E-1
2.37E-1
1.89E-1
1.42E-1
9.46E-2
4.73E-2
Intertek Testing Services

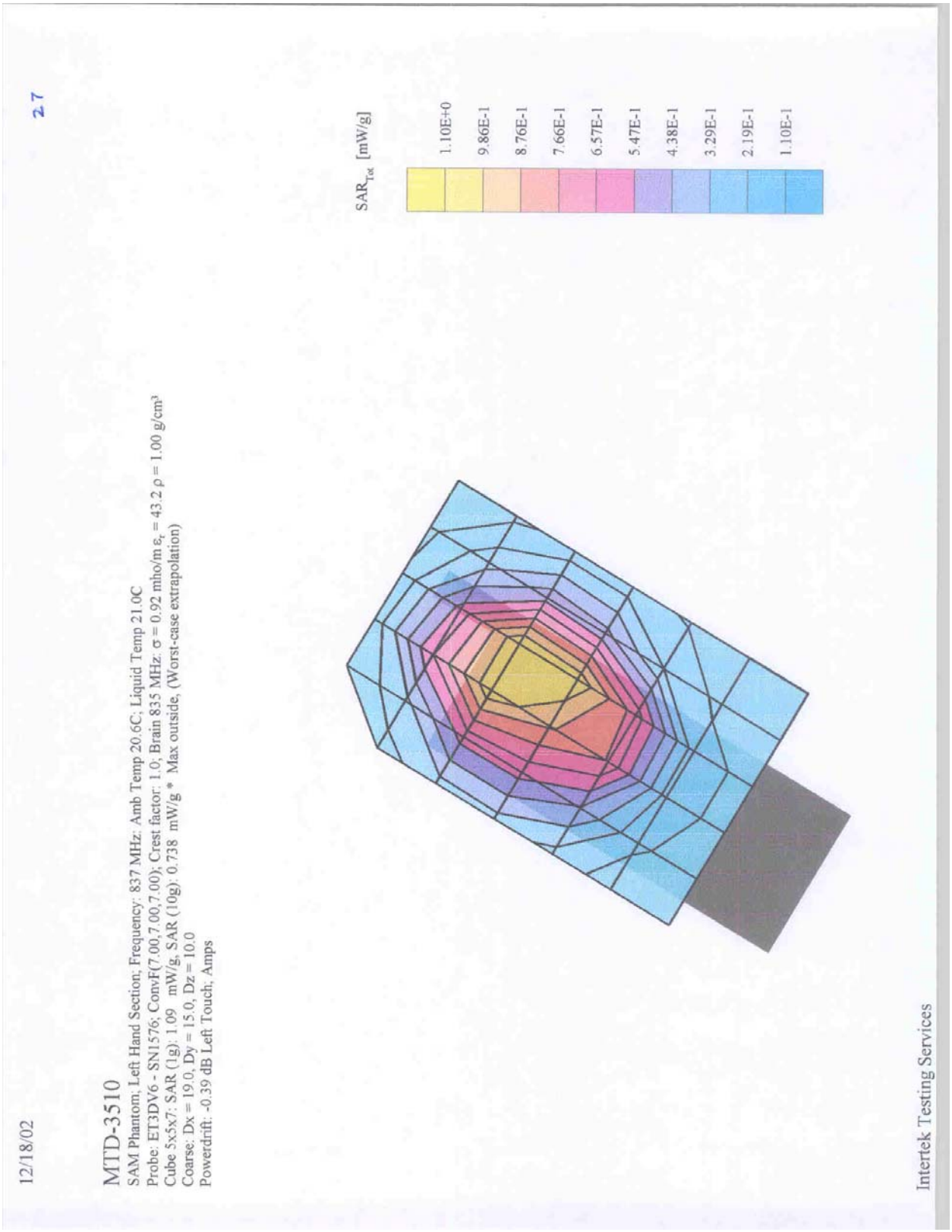

2.2
SAR$_{Tot}$ [mW/g]
2.85E-1
2.57E-1
2.28E-1
2.00E-1
1.71E-1
1.43E-1
1.14E-1
8.55E-2
5.70E-2
2.85E-2
12/19/02
MTD-3500
SAM Phantom; Flat Section; Frequency: 824 MHz; Amb Temp 23.0C ; Liquid Temp 22.5C
Probe: ET3DV6 - SN1576; ConvF(6.70,6.70,6.70); Crest factor: 1.0; Muscle 836MHz: σ = 0.98 mho/m ε$_r$ = 55.8 ρ = 1.00 g/cm^3
Cube 5x5x7: SAR (1g): 0.269 mW/g, SAR (10g): 0.193 mW/g * Max outside, (Worst-case extrapolation)
Coarse: Dx = 10.0, Dy = 10.0, Dz = 10.0
Powerdrift: -0.39 dB: 1.5cm from
Intertek Testing Services

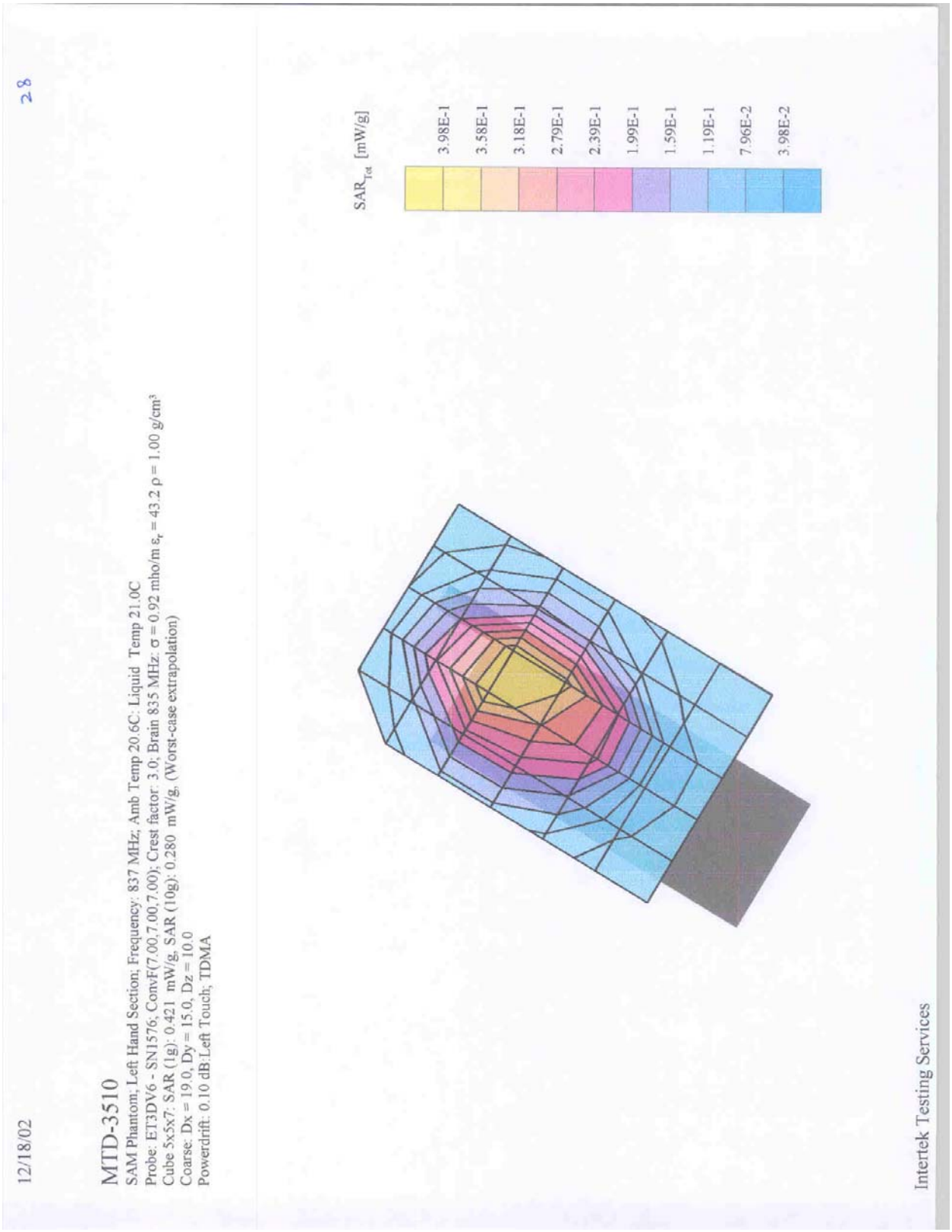

2.3
12/19/02
MTD-3500
SAM Phantom; Flat Section; Frequency: 837 MHz; Amb Temp 23.0; Liquid Temp 22.0C
Probe: ET3DV6 - SN1576; ConvF(6.70,6.70,6.70); Crest factor: 3.0; Muscle 836MHz: σ = 0.98 mho/m εr = 55.8 ρ = 1.00 g/cm³
Cube 5x5x7: SAR (1g): 0.238 mW/g, SAR (10g): 0.174 mW/g, (Worst-case extrapolation)
Coarse: Dx = 10.0, Dy = 10.0, Dz = 10.0
Powerdrift: 0.02 dB: 1.5cm from Phantom: TDMA
SAR[Tot] [mW/g]
2.36E-1
2.12E-1
1.89E-1
1.65E-1
1.42E-1
1.18E-1
9.44E-2
7.08E-2
4.72E-2
2.36E-2
Intertek Testing Services

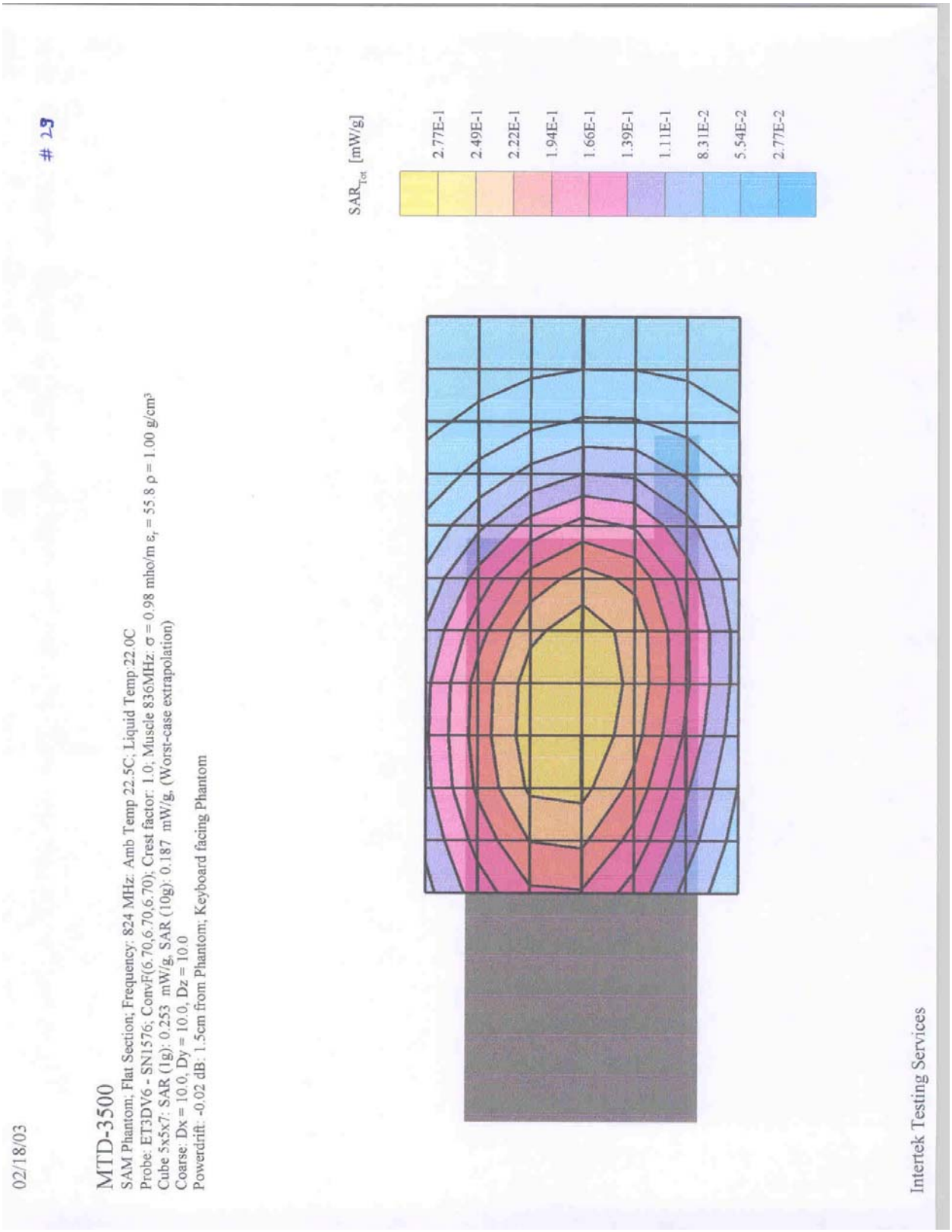

2-4
12/19/02
MTD-3500
SAM Phantom; Flat Section; Frequency: 824 MHz Amb Temp 23.0C; Liquid Temp: 22.0C
Probe: ET3DV6 - SN1576; ConvF(6.70,6.70,6.70); Crest factor: 3.0; Muscle 836MHz: σ = 0.98 mho/m εr = 55.8 ρ = 1.00 g/cm³
Cube 5x5x7: SAR (1g): 0.0612 mW/g, SAR (10g): 0.0453 mW/g, (Worst-case extrapolation)
Coarse: Dx = 10.0, Dy = 10.0, Dz = 10.0
Powerdrift: -0.19 dB: 1.5cm from Phantom
SAR_Tot [mW/g]
6.40E-2
5.76E-2
5.12E-2
4.48E-2
3.84E-2
3.20E-2
2.56E-2
1.92E-2
1.28E-2
6.40E-3
Intertek Testing Services

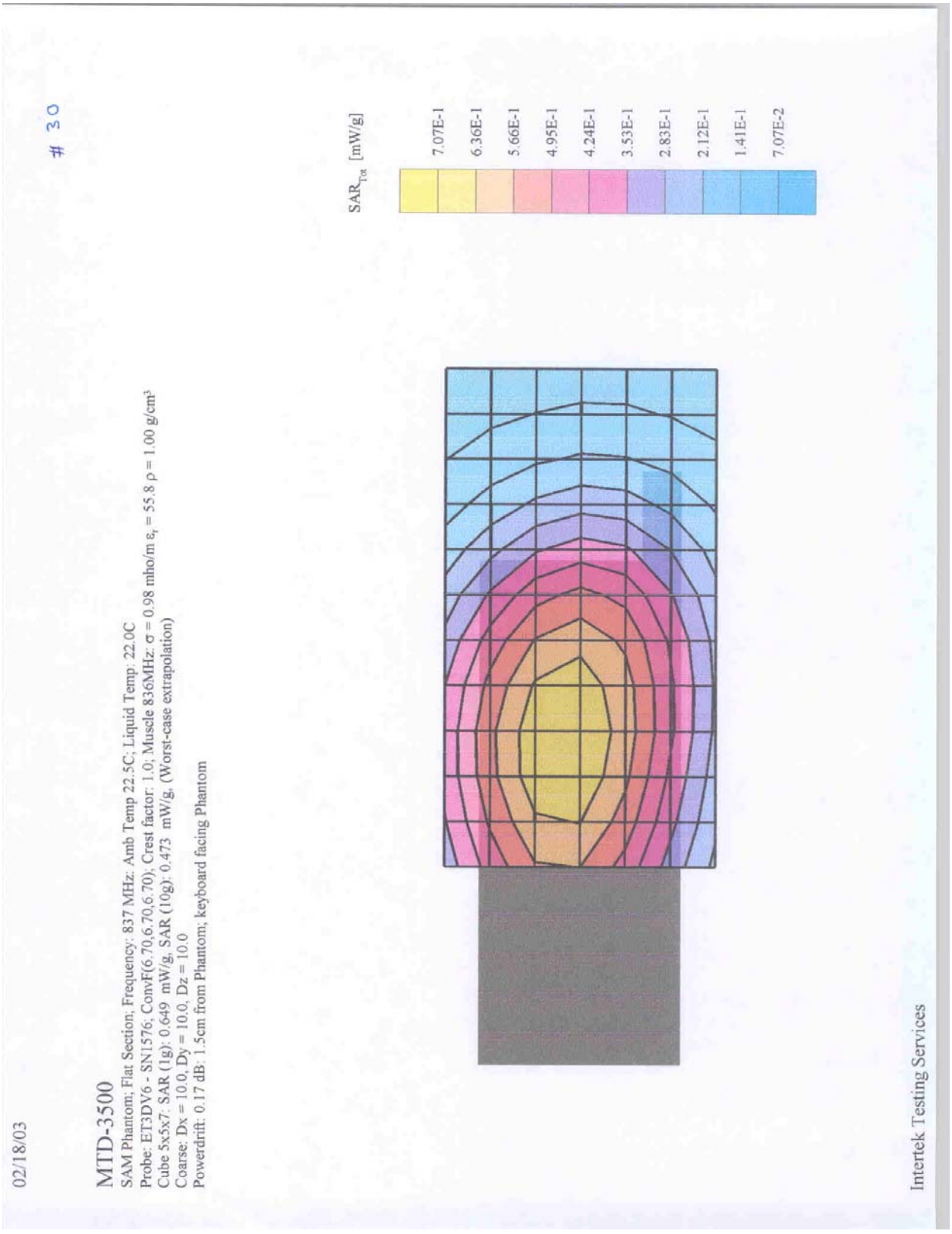

2.5
12/19/02
MTD-3500
SAM Phantom; Flat Section; Frequency: 849 MHz; Amb Temp 23.0C ; Liquid Temp 22.5C
Probe: ET3DV6 - SN1576; ConvF(6.70,6.70,6.70); Crest factor: 3.0; Muscle 836MHz: σ = 0.98 mho/m ε_r = 55.8 ρ = 1.00 g/cm³
Cube 5x5x7: SAR (1g): 0.127 mW/g, SAR (10g): 0.0932 mW/g, (Worst-case extrapolation)
Coarse: Dx = 10.0, Dy = 10.0, Dz = 10.0
Powerdrift: -0.21 dB: 1.5cm from Phantom
SAR_Tot [mW/g]
1.32E-1
1.19E-1
1.06E-1
9.24E-2
7.92E-2
6.60E-2
5.28E-2
3.96E-2
2.64E-2
1.32E-2
Intertek Testing Services

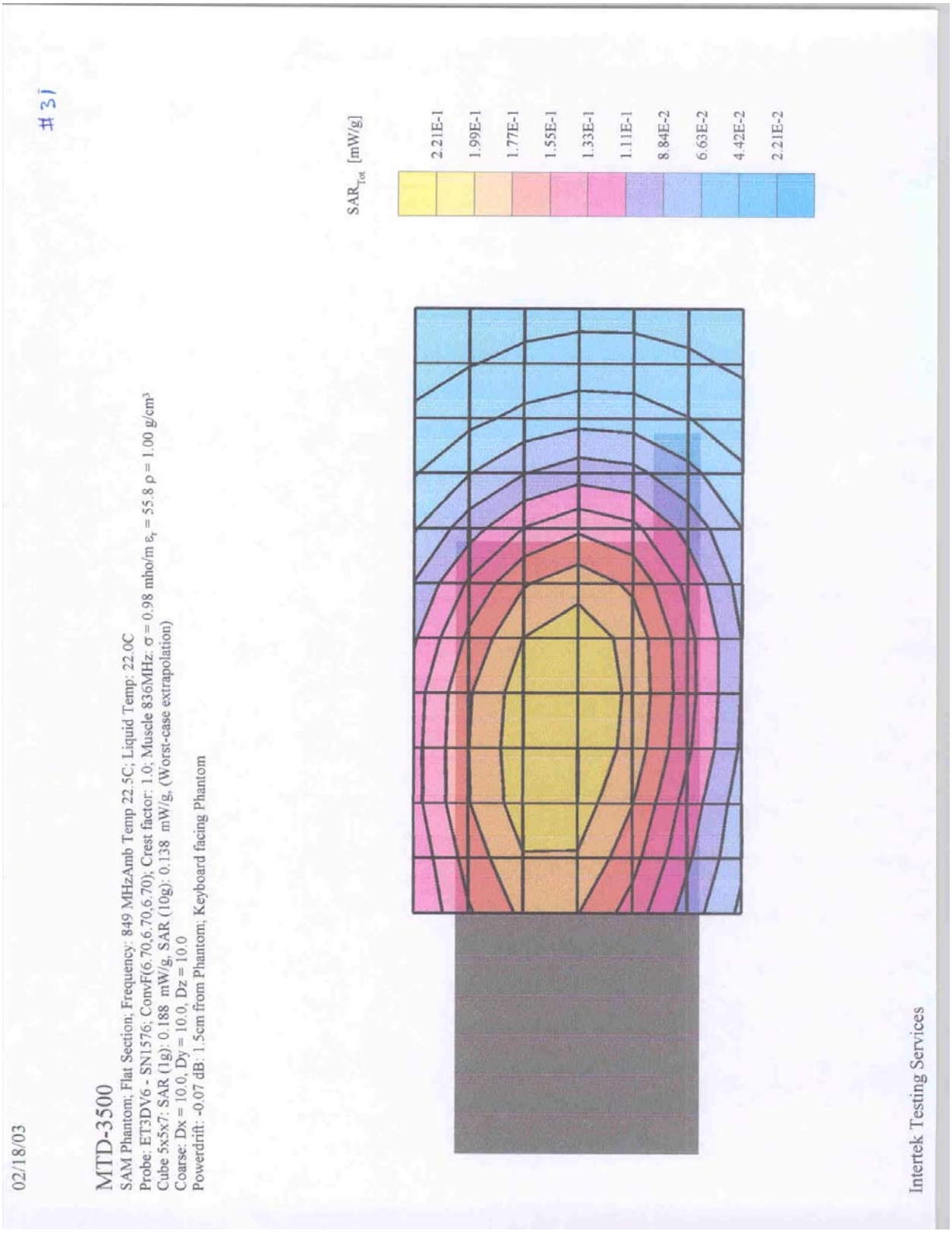

#26
SAR$_{Tot}$ [mW/g]
2.92E+0
2.63E+0
2.34E+0
2.05E+0
1.75E+0
1.46E+0
1.17E+0
8.77E-1
5.84E-1
2.92E-1
12/16/02
D900V2
SAM Phantom; Flat Section; Frequency: 900 MHz; Amb Temp 20.6; Liquid Temp 21.0C
Probe: ET3DV6 - SN1576; ConvF(7.00,7.00,7.00); Crest factor: 1.0; Brain 900MHz: σ = 0.94 mho/m ε$_r$ = 41.2 ρ = 1.00 g/cm^3
Cubes (2): SAR (1g): 2.86 mW/g ± 0.08 dB, SAR (10g): 1.84 mW/g ± 0.08 dB, (Worst-case extrapolation)
Coarse: Dx = 20.0, Dy = 20.0, Dz = 10.0
Powerdrift: -0.12 dB Power 250mWatts; 15mm Spacer
Intertek Testing Services


2.7
SAR$_{Tot}$ [mW/g]
1.10E+0
9.86E-1
8.76E-1
7.66E-1
6.57E-1
5.47E-1
4.38E-1
3.29E-1
2.19E-1
1.10E-1
12/18/02
MTD-3510
SAM Phantom; Left Hand Section; Frequency: 837 MHz; Amb Temp 20.6C; Liquid Temp 21.0C
Probe: ET3DV6 - SN1576; ConvF(7.00,7.00,7.00); Crest factor: 1.0; Brain 835 MHz: σ = 0.92 mho/m ε$_r$ = 43.2 ρ = 1.00 g/cm^3
Cube 5x5x7: SAR (1g): 1.09 mW/g, SAR (10g): 0.738 mW/g * Max outside, (Worst-case extrapolation)
Coarse: Dx = 19.0, Dy = 15.0, Dz = 10.0
Powerdrift: -0.39 dB Left Touch, Amps
Intertek Testing Services


28
12/18/02
MTD-3510
SAM Phantom; Left Hand Section; Frequency: 837 MHz; Amb Temp 20.6C: Liquid Temp 21.0C
Probe: ET3DV6 - SN1576; ConvF(7.00,7.00,7.00); Crest factor: 3.0; Brain 835 MHz: σ = 0.92 mho/m εr = 43.2 ρ = 1.00 g/cm³
Cube 5x5x7: SAR (1g): 0.421 mW/g, SAR (10g): 0.280 mW/g, (Worst-case extrapolation)
Coarse: Dx = 19.0, Dy = 15.0, Dz = 10.0
Powerdrift: 0.10 dB:Left Touch; TDMA
SAR Tot [mW/g]
3.98E-1
3.58E-1
3.18E-1
2.79E-1
2.39E-1
1.99E-1
1.59E-1
1.19E-1
7.96E-2
3.98E-2
Intertek Testing Services


02/18/03
23
MTD-3500
SAM Phantom; Flat Section; Frequency: 824 MHz; Amb Temp 22.5C; Liquid Temp:22.0C
Probe: ET3DV6 - SN1576; ConvF(6.70,6.70,6.70); Crest factor: 1.0; Muscle 836MHz: σ = 0.98 mho/m εr = 55.8 ρ = 1.00 g/cm3
Cube 5x5x7: SAR (1g): 0.253 mW/g, SAR (10g): 0.187 mW/g, (Worst-case extrapolation)
Coarse: Dx = 10.0, Dy = 10.0, Dz = 10.0
Powerdrift: -0.02 dB: 1.5cm from Phantom; Keyboard facing Phantom
SARTot [mW/g]
2.77E-1
2.49E-1
2.22E-1
1.94E-1
1.66E-1
1.39E-1
1.11E-1
8.31E-2
5.54E-2
2.77E-2
Intertek Testing Services


MTD-3500
SAM Phantom; Flat Section; Frequency: 837 MHz; Amb Temp 22.5C; Liquid Temp: 22.0C
Probe: ET3DV6 - SN1576; ConvF(6.70,6.70,6.70); Crest factor: 1.0; Muscle 836MHz: σ = 0.98 mho/m εr = 55.8 ρ = 1.00 g/cm³
Cube 5x5x7: SAR (1g): 0.649 mW/g, SAR (10g): 0.473 mW/g, (Worst-case extrapolation)
Coarse: Dx = 10.0, Dy = 10.0, Dz = 10.0
Powerdrift: 0.17 dB: 1.5cm from Phantom; keyboard facing Phantom
02/18/03
30
SAR Tot [mW/g]
7.07E-1
6.36E-1
5.66E-1
4.95E-1
4.24E-1
3.53E-1
2.83E-1
2.12E-1
1.41E-1
7.07E-2
Intertek Testing Services


#31
SAR_{Tot} [mW/g]
2.21E-1
1.99E-1
1.77E-1
1.55E-1
1.33E-1
1.11E-1
8.84E-2
6.63E-2
4.42E-2
2.21E-2
02/18/03
MTD-3500
SAM Phantom; Flat Section; Frequency: 849 MHzAmb Temp 22.5C; Liquid Temp: 22.0C
Probe: ET3DV6 - SN1576; ConvF(6.70,6.70,6.70); Crest factor: 1.0; Muscle 836MHz: σ = 0.98 mho/m εr = 55.8 ρ = 1.00 g/cm³
Cube 5x5x7: SAR (1g): 0.188 mW/g, SAR (10g): 0.138 mW/g, (Worst-case extrapolation)
Coarse: Dx = 10.0, Dy = 10.0, Dz = 10.0
Powerdrift: -0.07 dB: 1.5cm from Phantom; Keyboard facing Phantom
Intertek Testing Services

APPENDIX C – Phantom Certification

Schmid & Partner Engineering AG

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

Certificate of conformity / First Article Inspection

Item	SAM Twin Phantom V4.0
Type No	QD 000 P40 BA
Series No	TP-1002 and higher
Manufacturer / Origin	Untersee Composites Hauptstr. 69 CH-8559 Fruthwilen Switzerland

Tests

The series production process used allows the limitation to test of first articles.
Complete tests were made on the pre-series Type No. QD 000 P40 AA, Serial No. TP-1001 and on the series first article Type No. QD 000 P40 BA, Serial No. TP-1006. Certain parameters have been retested using further series units (called samples).

Test	Requirement	Details	Units tested
Shape	Compliance with the geometry according to the CAD model.	IT'IS CAD File (*)	First article, Samples
Material thickness	Compliant with the requirements according to the standards	2mm +/- 0.2mm in specific areas	First article, Samples
Material parameters	Dielectric parameters for required frequencies	200 MHz – 3 GHz Relative permittivity < 5 Loss tangent < 0.05.	Material sample TP 104-5
Material resistivity	The material has been tested to be compatible with the liquids defined in the standards	Liquid type HSL 1800 and others according to the standard.	Pre-series, First article

Standards

[1] CENELEC EN 50361
[2] IEEE P1528-200x draft 6.5
[3] IEC PT 62209 draft 0.9
(*) The IT'IS CAD file is derived from [2] and is also within the tolerance requirements of the shapes of [1] and [3].

Conformity

Based on the sample tests above, we certify that this item is in compliance with the uncertainty requirements of SAR measurements specified in standard [1] and draft standards [2] and [3].

Date 18.11.2001

Signature / Stamp

Doc No 881 – QD 000 P40 BA – B Page 1 (1)