Exhibit 11: SAR Test Report IHDT56FK1

Date of test: March 22, 2005 – May 6, 2005
Date of Report: May 9, 2005

Laboratory:
Motorola Personal Communications Sector Product Safety & Compliance Laboratory
600 N. US Highway 45
Room: MW113
Libertyville, Illinois 60048

Test Responsible:
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Electrical Engineer I

Accreditation: This laboratory is accredited to ISO/IEC 17025-1999 to perform the following tests:

Tests:	Procedures:
Electromagnetic Specific Absorption Rate	ANSI/IEEE C95.1-1992, 1999 (SAR) IEEE C95.3-1991 IEEE 1528, IEC 62209-1 FCC OET Bulletin 65 (*including Supplements A, B, C*) Australian Communications Authority Radio Communications (Electromagnetic Radiation – Human Exposure) Standard 1999 CENELEC EN 50361 (2001)
Simulated Tissue Preparation	APP-0247
RF Power Measurement	DOI-0876, 0900, 0902, 0904, 0915

On the following products or types of products:
Wireless Communications Devices (Examples): Two Way Radios; Portable Phones (including Cellular, Licensed Non-Broadcast and PCS); Low Frequency Readers; and Pagers

A2LA certificate #1651-01

Statement of Compliance: Motorola declares under its sole responsibility that portable cellular telephone FCC ID IHDT56FK1 to which this declaration relates, is in conformity with the appropriate General Population/Uncontrolled RF exposure standards, recommendations and guidelines (FCC 47 CFR §2.1093). 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)

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The results and statements contained herein relate only to the items tested. The names of individuals involved may be mentioned only in connection with the statements or results from this report.

Motorola encourages all feedback, both positive and negative, on this test report.

Table of Contents

1 Introduction

The Motorola Personal Communications Sector Product Safety Laboratory has performed measurements of the maximum potential exposure to the user of portable cellular phone (FCC ID IHDT56FK1). The Specific Absorption Rate (SAR) of this product was measured. The portable cellular phone was tested in accordance with FCC OET Bulletin 65 Supplement C 01-01.

2 Description of the Device Under Test

2.1 Antenna description

Type	Stubby	
Location	Right Side	
Dimensions	Length	21mm
	Width	8mm
Configuration	Fixed	

2.2 Device description

FCC ID Number	IHDT56FK1								
Serial number	TA13602121								
Mode(s) of Operation	GSM 850	GSM 900	GSM 1800	GSM 1900	GPRS 850	GPRS 900	GPRS 1800	GPRS 1900	Blue Tooth Class I
Modulation Mode(s)	GSM	GSM	GSM	GSM	GSM	GSM	GSM	GSM	Blue Tooth
Maximum Output Power Setting	33.00 dBm	32.70 dBm	30.00 dBm	30.00 dBm	33.00 dBm	32.70 dBm	30.00 dBm	30.00 dBm	16.17 dBm
Duty Cycle	1:08	1:08	1:08	1:08	2:08	2:08	2:08	2:08	1:01
Transmitting Frequency Rang(s)	824.2-848.8 MHz	880.2-914.8 MHz	1710.2-1784.8 MHz	1850.20-1909.80 MHz	824.2-848.8 MHz	880.2-914.8 MHz	1710.2-1784.8 MHz	1850.20-1909.80 MHz	2400-2483.5 MHz
Production Unit or Identical Prototype (47 CFR §2..908)	Identical Prototype								
Device Category	Portable								
RF Exposure Limits	General Population / Uncontrolled								

3 Test Equipment Used

3.1 Dosimetric System

The Motorola Personal Communications Sector Product Safety & Compliance Laboratory utilizes a Dosimetric Assessment System (Dasy4™ v4.4) manufactured by Schmid & Partner Engineering AG (SPEAG™), of Zurich Switzerland. All the SAR measurements are taken within a shielded enclosure. The overall RSS uncertainty of the measurement system is ±11.7% (K=1) with an expanded uncertainty of ±23.0% (K=2). The measurement uncertainty budget is given in Appendix 6. Per IEEE 1528, this uncertainty budget is applicable to the SAR range of 0.4 W/kg to 10 W/kg. The list of calibrated equipment used for the measurements is shown below.

Description	Serial Number	Cal Due Date
DASY3 DAE V1	SN 316	1/13/2006
	SN 365	9/22/2005
E-Field Probe ET3DV6	SN 1397	5/21/2005
	SN 1398	2/24/2006
	SN 1514	7/22/2005
Dipole Validation Kit, D900V2	91	
Dipole Validation Kit, D1800V2	259TR	
	251TR	
Dipole Validation Kit, D2450V2	740	
S.A.M. Phantom used for 800MHz	TP-1005	
S.A.M. Phantom used for 1900MHz	TP-1154	
S.A.M. Phantom used for 2450MHz	TP-1250	

3.2 Additional Equipment

Description	Serial Number	Cal Due Date
Signal Generator HP8648C	3847A04832	9/3/2005
	3847A04843	10/25/2005
Power Meter E4419B	GB39511088	12/16/2005
	GB39511082	12/16/2005
Power Sensor #1 - E9301A	US39210915	9/16/2005
	US39210929	7/21/2005
Power Sensor #2 - E9301A	US39210916	9/16/2005
	US39210930	7/21/2005
Network Analyzer HP8753ES	US39171846	9/3/2005
Dielectric Probe Kit HP85070C	US99360070	N/A

4 Electrical parameters of the tissue simulating liquid

Prior to conducting SAR measurements, the relative permittivity, ε_r, and the conductivity, σ, of the tissue simulating liquids were measured with the HP85070C Dielectric Probe Kit These values, along with the temperature of the tissue simulate are shown in the table below. The recommended limits for maximum permittivity and minimum conductivity are also shown. These come from the Federal Communication Commission, OET Bulletin 65 Supplement C 01-01. It is seen that the measured parameters are satisfactory for compliance testing.

f (MHz)	Tissue type	Limits / Measured	Dielectric Parameters		
			ε_r	σ (S/m)	Temp (°C)
835	Head	**Measured,** 3/24/2005	42.9	0.92	18.3
		Measured, 3/25/2005	43.0	0.94	18.3
		Measured, 3/27/2005	41.3	0.90	19.2
		Measured, 3/29/2005	42.8	0.92	19.6
		Recommended Limits	41.5 ±5%	0.90 ±5%	18-25
	Body	**Measured,** 3/28/2005	55.0	0.98	18.3
		Measured, 3/29/2005	55.0	0.98	19.3
		Measured, 4/06/2005	54.2	0.97	19.1
		Measured, 4/07/2005	53.6	0.97	19.3
		Recommended Limits	55.2 ±5%	0.97 ±5%	18-25
1880	Head	**Measured,** 3/22/2005	38.2	1.45	18.9
		Measured, 3/26/2005	39.7	1.44	19.5
		Measured, 3/27/2005	39.1	1.44	19.7
		Recommended Limits	40.0 ±5%	1.40 ±5%	18-25
	Body	**Measured,** 3/30/2005	51.3	1.59	18.4
		Measured, 4/05/2005	51.2	1.59	18.6
		Measured, 4/07/2005	51.4	1.59	19.1
		Recommended Limits	53.3 ±5%	1.52 ±5%	18-25
2450	Head	**Measured,** 3/23/2005	39.1	1.87	19.5
		Measured, 3/29/2005	39	1.87	20.2
		Measured, 4/06/2005	38.7	1.87	20
		Recommended Limits	39.2±5%	1.80±5%	18-25
	Body	**Measured,** 3/23/2005	50.2	1.97	19.2
		Measured, 3/29/2005	50.4	1.97	19.7
		Measured, 4/06/2005	51.2	1.98	20
		Measured, 5/06/2005	50.8	2.03	20
		Recommended Limits	52.7±5%	1.95±5%	18-25

The list of ingredients and the percent composition used for the tissue simulates are indicated in the table below.

Ingredient	800MHz Head	800MHz Body	1900MHz Head	1900MHz Body	2450MHz Head	2450MHz Body
Sugar	57.0	44.9	--	--	--	--
DGBE	--	--	47.0	30.80	--	30.0
Diacetin	--	--	--	--	51.0	--
Water	40.45	53.06	52.8	68.91	48.75	70.0
Salt	1.45	0.94	0.2	0.29	0.15	--
HEC	1.0	1.0	--	--	--	--
Bact.	0.1	0.1	--	--	0.1	--

5 System Accuracy Verification

A system accuracy verification of the DASY4.4 was performed using the measurement equipment listed in Section 3.1. The daily system accuracy verification occurs within center section of the SAM phantom.

A SAR measurement was performed to see if the measured SAR was within +/- 10% from the target SAR indicated in Section 8.3.7 Reference SAR Values in IEEE 1528. These tests were done at 900MHz and/or 1800MHz. These frequencies are within 100MHz of the mid-band frequency of the test device. This is within the allowable window given in Supplement C 01-01 *Appendix D System Verification* section item #5. The test was conducted on the same days as the measurement of the DUT. Recommended limits for maximum permittivity, minimum conductivity are shown in the table below. These come from the Federal Communication Commission, OET Bulletin 65 Supplement C 01-01. The obtained results from the system accuracy verification are displayed in the table below. The distributions of SAR compare well with those of the reference measurements (see Appendix 1). The tissue stimulant depth was verified to be 15.0cm ±0.5cm. Z-axis scans showing the SAR penetration are also included in Appendix 1. SAR values are normalized to 1W forward power delivered to the dipole.

f (MHz)	Description	SAR (W/kg), 1gram	Dielectric Parameters		Ambient Temp (°C)	Tissue Temp (°C)
			ε_r	σ (S/m)		
900	**Measured,** 3/24/2005	11.48	42.1	0.99	21	19
	Measured, 3/25/2005	11.78	42.2	1.00	21	19.1
	Measured, 3/27/2005	11.13	40.6	0.96	21	19.2
	Measured, 3/28/2005	11.50	41.8	0.98	21	19.3
	Measured, 3/29/2005	11.43	42.0	0.98	21	19.3
	Measured, 4/06/2005	11.08	42.6	0.99	21	19
	Measured, 4/07/2005	11.20	42.5	0.99	21	19
	Recommended Limits	10.8	41.5 ±5%	0.97 ±5%	18-25	18-25
1800	**Measured,** 3/22/2005	39.05	38.6	1.36	21	19.5
	Measured, 3/26/2005	37.30	40.1	1.34	21	19.6
	Measured, 3/27/2005	37.88	39.5	1.36	21	19.5
	Measured, 3/30/2005	39.23	39.3	1.35	21	19
	Measured, 4/05/2005	38.63	38.6	1.35	21	19.8
	Measured, 4/07/2005	38.98	38.7	1.34	21	19
	Recommended Limits	38.1	40.0 ±5%	1.4 ±5%	18-25	18-25
2450	**Measured,** 3/23/2005	55.25	39.1	1.87	21	20.5
	Measured, 3/29/2005	55.75	39.0	1.87	21	20.2
	Measured, 4/06/2005	56.25	38.7	1.87	21	20
	Measured, 5/06/2005	57.00	38.4	1.86	21	20.9
	Recommended Limits	52.4	39.2 ±5%	1.80 ±5%	18-25	18-25

The following probe conversion factors were used on the E-Field probe(s) used for the system accuracy verification measurements:

Description	Serial Number	f (MHz)	Conversion Factor	Cal Cert pg #
E-Field Probe ET3DV6	SN 1397	900	6.10	7 of 8
		1800	5.09	7 of 8
	SN 1398	900	6.42	8 of 9
		1810	5.12	8 of 9
	SN 1514	2450	4.46	7 of 8

6 Test Results

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 unit is commanded to test mode and manually set to the proper channel, transmitter power level and transmit mode of operation. The phone was tested in the configurations stipulated in OET Bulletin 65 Supplement C 01-01. Motorola also followed the requirements in Supplement. C / Appendix D: SAR Measurement Procedures, section titled "*Devices Operating Next To A Person's Ear* ". These directions state "The device should be tested on the left and right side of the head phantom in the "Cheek/Touch" and "Ear/Tilt" positions. When applicable, each configuration should be tested with the antenna in its fully extended and fully retracted positions. These test configurations should be tested at the high, middle and low frequency channels of each operating mode; for example, AMPS, CDMA, and TDMA. If the SAR measured at the middle channel for each test configuration (left, right, Cheek/Touch, Tile/Ear, extended and retracted) is at least 2.0 dB lower than the SAR limit, testing at the high and low channels is optional for such test configuration(s)."

The DASY v4.4 SAR measurement system specified in section 3.1 was utilized within the intended operations as set by the SPEAG™ setup. The phone was positioned into the measurement configurations using the positioner supplied with the DASY v4.4 SAR measurement system. The measured dielectric constant of the material used for the positioner is less than 2.9 and the loss tangent is less than 0.02 (± 30%) at 850MHz. The default settings for the "coarse" and "cube" scans were chosen and use for measurements. The grid spacing of the course scan was set to 15cm as shown in the SAR plots included in appendix 2 and 3. Please refer to the DASY manual for additional information on SAR scanning procedures and algorithms used.

The Cellular Phone (FCC ID IHDT56FK1) has the following battery options:

Model #1 – SNN5683A 780mAH Battery
Model #2 – SNN5704B 700mAH Battery
Model #3 – SNN5683A (rev B) 780mAH Battery

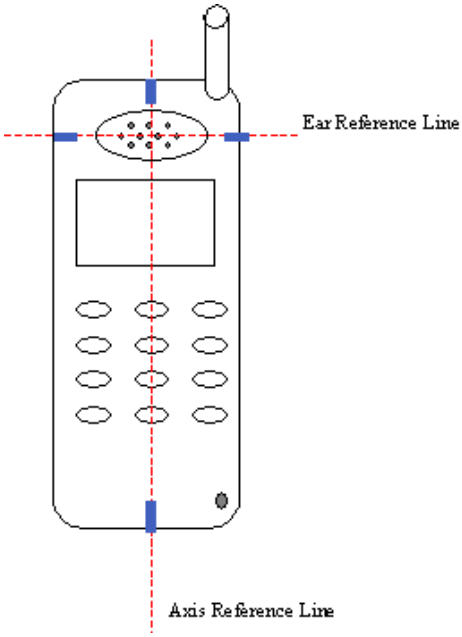
The battery with the highest capacity is the SNN5683A. This battery was used to do most of the SAR testing. The phone was placed in the SAR measurement system with a fully charged battery. The configuration that resulted in the highest SAR values were tested using the other batteries listed above.

6.1 Head Adjacent Test Results

To aid in positioning repeatability, the ear reference line of the device and the axis reference line of the device have been physically added using a non-metallic marker.

- Per Figure 1, the "Ear Reference Line" is centered vertically through the center of the listening area (as defined by the speaker holes in the housing).
- The "Axis Reference Line" bisects the front surface of the device at its top and bottom edges.
- The intersection of these two lines defines the location of the "Ear Reference Point".

The lines drawn on the device extended to the outside edges, as shown in blue in the figure below, & wrap around the sides of the device.



The SAR results shown in tables 1 through 4 are maximum SAR values averaged over 1 gram of phantom tissue. Also shown are the measured conducted output powers, the temperature of the test facility during the test, the temperature of the tissue simulate after the test, the measured drift and the extrapolated SAR. The exact method of extrapolation is New SAR = Old SAR * 10^(-drift/10). The SAR reported at the end of the measurement process by the DASY™ measurement system can be scaled up by the measured drift to determine the SAR at the beginning of the measurement process. This is the most conservative SAR because it corresponds to the average output power at the beginning of the SAR test. This extrapolation has been done because when the DUT is operating properly it may exhibit a slump in radiated power and SAR over time. This is verified by measuring the SAR drift after the test. The test conditions indicated as bold numbers in the following table are included in Appendix 2

The SAR measurements were performed using the SAM phantoms listed in section 3.1. Since same phantoms and tissue simulate are used for the system accuracy verification as the device SAR measurements, the Z-axis scans included in within Appendix 1 are applicable for verification of tissue simulate depth to be 15.0cm ±0.5cm. All other test conditions measured lower SAR values than those included in Appendix 2.

The following probe conversion factors were used on the E-Field probe(s) used for the head adjacent measurements:

Description	Serial Number	f (MHz)	Conversion Factor	Cal Cert pg #
E-Field Probe ET3DV6	SN 1397	900	6.10	7 of 8
		1800	5.09	7 of 8
	SN 1398	900	6.42	8 of 9
		1810	5.12	8 of 9
	SN 1514	2450	4.46	7 of 8

f (MHz)	Description	Conducted Output Power (dBm)	Cheek / Touch Position							
			Left Head				Right Head			
			Measured (W/kg)	Drift (dB)	Extrapolated (W/kg)	Simulate Temp (°C)	Measured (W/kg)	Drift (dB)	Extrapolated (W/kg)	Simulate Temp (°C)
Digital 850MHz	Channel 128	32.99	0.797	0.076	0.80	18.3	0.893	-0.027	0.90	18.2
	Channel 190	32.99	0.855	0.002	0.86	18.3	0.932	-0.059	0.94	18.2
	Channel 251	32.99	**0.917**	**0.00**	**0.92**	**18**	**1.01**	**-0.063**	**1.02**	**18.3**
Digital 1900MHz	Channel 512	30.00								
	Channel 661	29.99	**0.769**	**0.033**	**0.77**	**18.9**	**0.717**	**-0.082**	**0.73**	**18.5**
	Channel 810	30.00								
Bluetooth 2400MHz	N/A	16.17	**0.039**	**-1.04**	**0.05**	**20.2**	**0.019**	**-0.122**	**0.02**	**20**

Table 1: SAR measurement results for the portable cellular telephone FCC ID IHDT56FK1 at highest possible output power. Measured against the left head in the Cheek/Touch Position.

f (MHz)	Description	Conducted Output Power (dBm)	15° Tilt Position							
			Left Head				Right Head			
			Measured (W/kg)	Drift (dB)	Extrapolated (W/kg)	Simulate Temp (°C)	Measured (W/kg)	Drift (dB)	Extrapolated (W/kg)	Simulate Temp (°C)
Digital 850MHz	Channel 128	32.99								
	Channel 190	32.99	**0.319**	**0.041**	**0.32**	**18.1**	**0.298**	**0.077**	**0.30**	**18.1**
	Channel 251	32.99								
Digital 1900MHz	Channel 512	30.00								
	Channel 661	29.99	**0.229**	**0.00**	**0.23**	**18.6**	**0.205**	**-0.02**	**0.21**	**18.6**
	Channel 810	30.00								
Bluetooth 2400MHz	N/A	16.17	**0.00541**	**-0.482**	**0.01**	**20.2**	**0.00637**	**0.017**	**0.01**	**19.1**

Table 2: SAR measurement results for the portable cellular telephone FCC ID IHDT56FK1 at highest possible output power. Measured against the left head in the 15° Tilt Position.

f (MHz)	Description	Conducted Output Power (dBm)	Highest Head with SNN5704B (Cheek / Touch Position)							
			Left Head				Right Head			
			Measured (W/kg)	Drift (dB)	Extrapolated (W/kg)	Simulate Temp (°C)	Measured (W/kg)	Drift (dB)	Extrapolated (W/kg)	Simulate Temp (°C)
Digital 850MHz	Channel 128	32.99					0.859	-0.04	0.87	19.1
	Channel 190	32.99					0.917	-0.05	0.93	19
	Channel 251	32.99					**0.992**	**-0.046**	**1.00**	**19**
Digital 1900MHz	Channel 512	30.00	0.667	-0.3	0.71	19.5				
	Channel 661	29.99	**0.834**	**-0.090**	**0.85**	**19.5**				
	Channel 810	30.00	0.798	-0.04	0.81	19.5				
Bluetooth 2400MHz	N/A	16.17	**0.053**	**-0.053**	**0.05**	**20**				

Table 3: SAR measurement results for the portable cellular telephone FCC ID IHDT56FK1 at highest possible output power. Measured against the left head in the Cheek/Touch Position.

f (MHz)	Description	Conducted Output Power (dBm)	Highest Head with SNN5683A rev B (Cheek / Touch Position)							
			Left Head				Right Head			
			Measured (W/kg)	Drift (dB)	Extrapolated (W/kg)	Simulate Temp (°C)	Measured (W/kg)	Drift (dB)	Extrapolated (W/kg)	Simulate Temp (°C)
Digital 850MHz	Channel 128	32.99					0.87	-0.008	0.87	19.2
	Channel 190	32.99					0.879	-0.075	0.89	19.6
	Channel 251	32.99					**0.998**	**-0.045**	**1.01**	**18.7**
Digital 1900MHz	Channel 512	30.00								
	Channel 661	29.99	**0.748**	**0.021**	**0.75**	**19.5**				
	Channel 810	30.00								
Bluetooth 2400MHz	N/A	16.17	**0.057**	**-0.141**	**0.06**	**20**				

Table 4: SAR measurement results for the portable cellular telephone FCC ID IHDT56FK1 at highest possible output power. Measured against the left head in the Cheek/Touch Position.

6.2 Body Worn Test Results

The SAR results shown in table 5 are the maximum SAR values averaged over 1 gram of phantom tissue. Also shown are the measured conducted output powers, the temperature of the test facility during the test, the temperature of the tissue simulate after the test, the measured drift and the extrapolated SAR. The exact method of extrapolation is New SAR = Old SAR * 10^(-drift/10). The SAR reported at the end of the measurement process by the DASY™ measurement system can be scaled up by the measured drift to determine the SAR at the beginning of the measurement process. This is the most conservative SAR because it corresponds to the average output power at the beginning of the SAR test. This extrapolation has been done because when the DUT is operating properly it may exhibit a slump in radiated power and SAR over time. This is verified by measuring the SAR drift after the test. The test conditions indicated as bold numbers in the following table are included in Appendix 3. All other test conditions measured lower SAR values than those included in Appendix 3.

A “flat” phantom was for the body-worn tests. This “flat” phantom is made out of 1” thick natural High Density Polyethylene with a thickness at the bottom equal to 2.0mm. It measures 52.7cm(long) x 26.7cm(wide) x 21.2cm(tall). The measured dielectric constant of the material used is less than 2.3 and the loss tangent is less than 0.0046 all the way up to 2.184GHz.

The tissue stimulant depth was verified to be 15.0cm ±0.5cm. The same device holder described in section 6 was used for positioning the phone. The functional accessories were divided into two categories, the ones with metal

components and the ones with non-metal components. For non-metallic component accessories', testing was performed on the accessory that displayed the closest proximity to the flat phantom. Each metallic component accessory, if any, was checked for uniqueness of metal component so that each is tested with the device. If multiple accessories shared an identical metal component, only the accessory that dictates the closest spacing to the body was tested. The cellular phone was tested with a headset connected to the device for all body-worn SAR measurements.

All non-metallic component accessories provide distance further than 15mm separation between the phone and phantom. Thus, phone is tested with 15mm separation.

There are six Body-Worn Accessories available which differ in metal components:

A Plastic Holster and a Metal Belt Clip: Model # SYN1084A
A Leather Pouch with a Metal/Magnetic closure: Model # MOTPN0670K with Wishbone Belt Clip Model # SYN8631A
A Leather Pouch with a Metal Belt Clip: Model # SYN1109A
A Leather Pouch with a Metal Belt Clip: Model # MOTPL0686K

The phone is initially tested with SNN5683A battery without accessories (Tables 5, 6). The configuration that resulted in the highest SAR values, "15mm Separation between Back of Phone and Phantom", is tested using the other batteries. Then, the battery that resulted in the highest SAR (for each band) is tested with six accessories.

Digital 850MHz – SNN5704B
Digital 1900MHz – SNN5683A rev B
Bluetooth 2400MHz – SNN5683A

The following probe conversion factors were used on the E-Field probe(s) used for the body worn measurements:

Description	Serial Number	f (MHz)	Conversion Factor	Cal Cert pg #
E-Field Probe ET3DV6	SN 1397	900	5.92	7 of 8
		1800	4.52	7 of 8
	SN 1398	900	6.04	8 of 9
		1810	4.65	8 of 9
		2450	4.26	8 of 9
	SN 1514	2450	4.24	7 of 8

f (MHz)	Description	Conducted Output Power (dBm)	Body Worn							
			15mm Separation between Front of Phone and Phantom				15mm Separation between Back of Phone and Phantom			
			Measured (W/kg)	Drift (dB)	Extrapolated (W/kg)	Simulate Temp (°C)	Measured (W/kg)	Drift (dB)	Extrapolated (W/kg)	Simulate Temp (°C)
Digital 850MHz	Channel 128	32.99								
	Channel 190	32.99	**0.150**	**0.00**	**0.15**	**18.3**	**0.415**	**-0.045**	**0.42**	**18.3**
	Channel 251	32.99								
Digital 1900MHz	Channel 512	30.00								
	Channel 661	29.99	**0.121**	**-0.089**	**0.12**	**18.3**	**0.248**	**-0.055**	**0.25**	**18.3**
	Channel 810	30.00								
Bluetooth 2400MHz	N/A	16.17	**0.0000445**	**-0.049**	**0.00**	**19.2**	**0.00593**	**0.087**	**0.01**	**19.1**
Digital 850MHz & Bluetooth 2400MHz	summation of extrapolated SAR values	N/A			0.15				0.43	
Digital 1900MHz & Bluetooth 2400MHz	summation of extrapolated SAR values	N/A			0.12				0.26	

Table 5: SAR measurement results for the portable cellular telephone FCC ID IHDT56FK1 at highest possible output power. Measured against the body.

f (MHz)	Description	Conducted Output Power (dBm)	Body Worn			
			25mm Separation between Back of Phone and Phantom			
			Measured (W/kg)	Drift (dB)	Extrapolated (W/kg)	Simulate Temp (°C)
GPRS 850MHz	Channel 128	32.99				
	Channel 190	32.99	**0.353**	**-0.063**	**0.36**	**18.3**
	Channel 251	32.99				
GPRS 1900MHz	Channel 512	30.00				
	Channel 661	29.99	**0.178**	**-0.698**	**0.21**	**18.4**
	Channel 810	30.00				
Bluetooth 2400MHz	N/A	16.17	**0.00346**	**-0.296**	**0.00**	**19.1**
GPRS 850MHz & Bluetooth 2400MHz	summation of extrapolated SAR values	N/A			0.36	
GPRS 1900MHz & Bluetooth 2400MHz	summation of extrapolated SAR values	N/A			0.21	

Table 6: SAR measurement results for the portable cellular telephone FCC ID IHDT56FK1 at highest possible output power. Measured against the body.

f (MHz)	Description	Conducted Output Power (dBm)	Body Worn							
			15mm Separation between Back of Phone and Phantom with SNN5704B battery				15mm Separation between Back of Phone and Phantom with SNN5683A rev B			
			Measured (W/kg)	Drift (dB)	Extrapolated (W/kg)	Simulate Temp (°C)	Measured (W/kg)	Drift (dB)	Extrapolated (W/kg)	Simulate Temp (°C)
Digital 850MHz	Channel 128	32.99								
	Channel 190	32.99	**0.468**	**-0.179**	**0.49**	**19.3**	**0.471**	**-0.121**	**0.48**	**19.2**
	Channel 251	32.99								
Digital 1900MHz	Channel 512	30.00								
	Channel 661	29.99	**0.271**	**0.052**	**0.27**	**18.4**	**0.294**	**0.085**	**0.29**	**18.4**
	Channel 810	30.00								
Bluetooth 2400MHz	N/A	16.17	**0.00985**	**0.062**	**0.01**	**19.7**	**0.013**	**0.011**	**0.01**	**19.7**
Digital 850MHz & Bluetooth 2400MHz	summation of extrapolated SAR values	N/A			0.50				0.49	
Digital 1900MHz & Bluetooth 2400MHz	summation of extrapolated SAR values	N/A			0.28				0.30	

Table 7: SAR measurement results for the portable cellular telephone FCC ID IHDT56FK1 at highest possible output power. Measured against the body.

f (MHz)	Description	Conducted Output Power (dBm)	Body Worn							
			SYN1084A / Highest battery				MOTPN0670K / Highest battery			
			Measured (W/kg)	Drift (dB)	Extrapolated (W/kg)	Simulate Temp (°C)	Measured (W/kg)	Drift (dB)	Extrapolated (W/kg)	Simulate Temp (°C)
Digital 850MHz	Channel 128	32.99								
	Channel 190	32.99	**0.249**	**-0.039**	**0.25**	**18.4**	**0.308**	**0.112**	**0.31**	**19.3**
	Channel 251	32.99								
Digital 1900MHz	Channel 512	30.00								
	Channel 661	29.99	**0.189**	**-0.088**	**0.19**	**19**	**0.114**	**-0.012**	**0.11**	**18.4**
	Channel 810	30.00								
Bluetooth 2400MHz	N/A	16.17	**0.00658**	**0.202**	**0.01**	**19.9**	**0.00644**	**-0.031**	**0.01**	**20**
Digital 850MHz & Bluetooth 2400MHz	summation of extrapolated SAR values	N/A			0.26				0.32	
Digital 1900MHz & Bluetooth 2400MHz	summation of extrapolated SAR values	N/A			0.20				0.12	

Table 8: SAR measurement results for the portable cellular telephone FCC ID IHDT56FK1 at highest possible output power. Measured against the body.

f (MHz)	Description	Conducted Output Power (dBm)	Body Worn							
			SYN1109A / Highest battery				MOTPL0686K / Highest battery			
			Measured (W/kg)	Drift (dB)	Extrapolated (W/kg)	Simulate Temp (°C)	Measured (W/kg)	Drift (dB)	Extrapolated (W/kg)	Simulate Temp (°C)
Digital 850MHz	Channel 128	32.99								
	Channel 190	32.99	**0.188**	**0.040**	**0.19**	**19.1**	**0.412**	**-0.082**	**0.42**	**18.6**
	Channel 251	32.99								
Digital 1900MHz	Channel 512	30.00								
	Channel 661	29.99	**0.194**	**0.165**	**0.19**	**18.5**	**0.224**	**-0.053**	**0.23**	**18.6**
	Channel 810	30.00								
Bluetooth 2400MHz	N/A	16.17	**0.00000757**	**0.023**	**0.00**	**20**	**0.00598**	**0.314**	**0.01**	**20**
Digital 850MHz & Bluetooth 2400MHz	summation of extrapolated SAR values	N/A			0.19				0.43	
Digital 1900MHz & Bluetooth 2400MHz	summation of extrapolated SAR values	N/A			0.19				0.24	

Table 9: SAR measurement results for the portable cellular telephone FCC ID IHDT56FK1 at highest possible output power. Measured against the body.

Appendix 1

SAR distribution comparison for the system accuracy verification

Date/Time: 3/24/2005 7:18:09 AM

Test Laboratory: Motorola

032405 900MHz GOOD +6.2%

DUT: Dipole 900 MHz; Type: D900V2
Procedure Notes: 900 MHz System Performance Check / Dipole Sn# 91; PM1 Power = 200mW
Sim.Temp@ meas = 19*C; Sim.Temp@ SPC = 19*C; Room Temp@ SPC = 21*C;

Communication System: CW - Dipole; Frequency: 900 MHz; Duty Cycle: 1:1
Medium: VALIDATION Only; Medium parameters used: σ = 0.99 mho/m, ε_r = 42.1; ρ = 1000 kg/m^3
DASY4 Configuration:

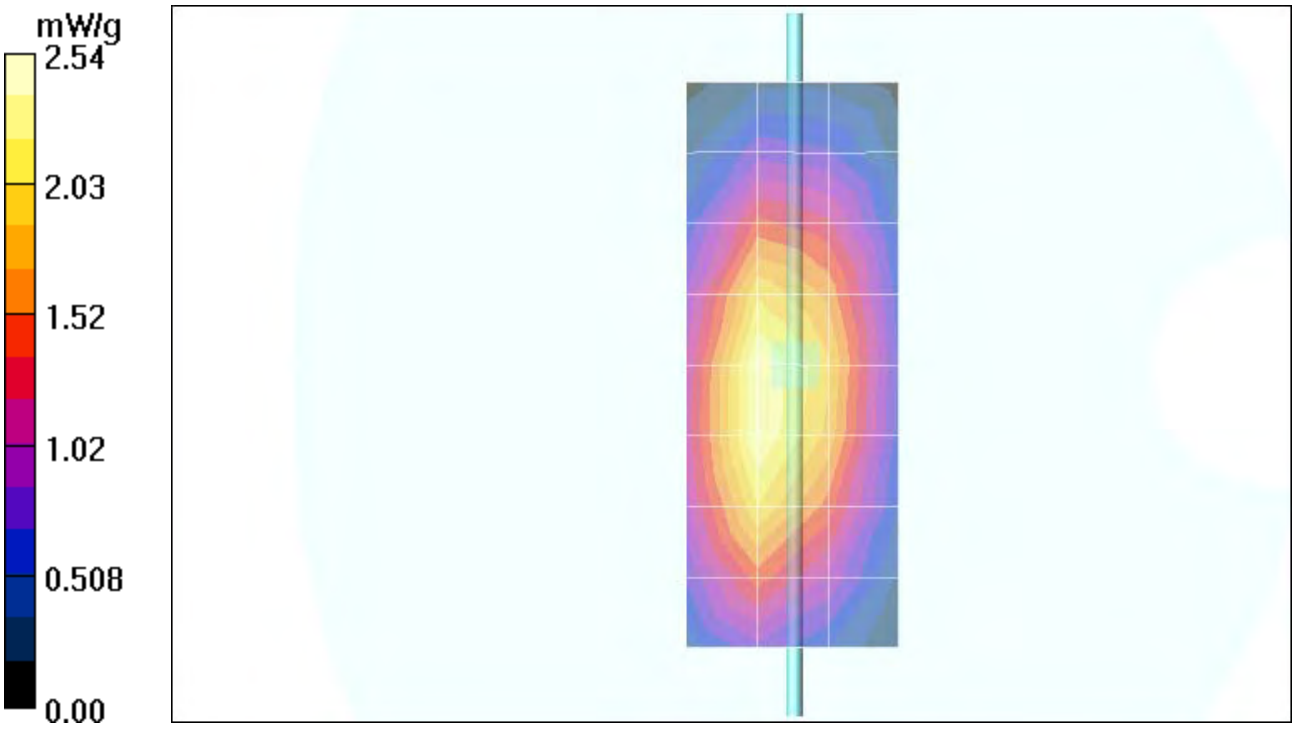
- Probe: ET3DV6R - SN1397; ConvF(6.1, 6.1, 6.1); Calibrated: 5/21/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn316; Calibrated: 1/13/2005
- Phantom: R1: Sugar SAM; Type: SAM; Serial: TP-1005;
- Measurement SW: DASY4, V4.4 Build 3; Postprocessing SW: SEMCAD, V1.8 Build 146

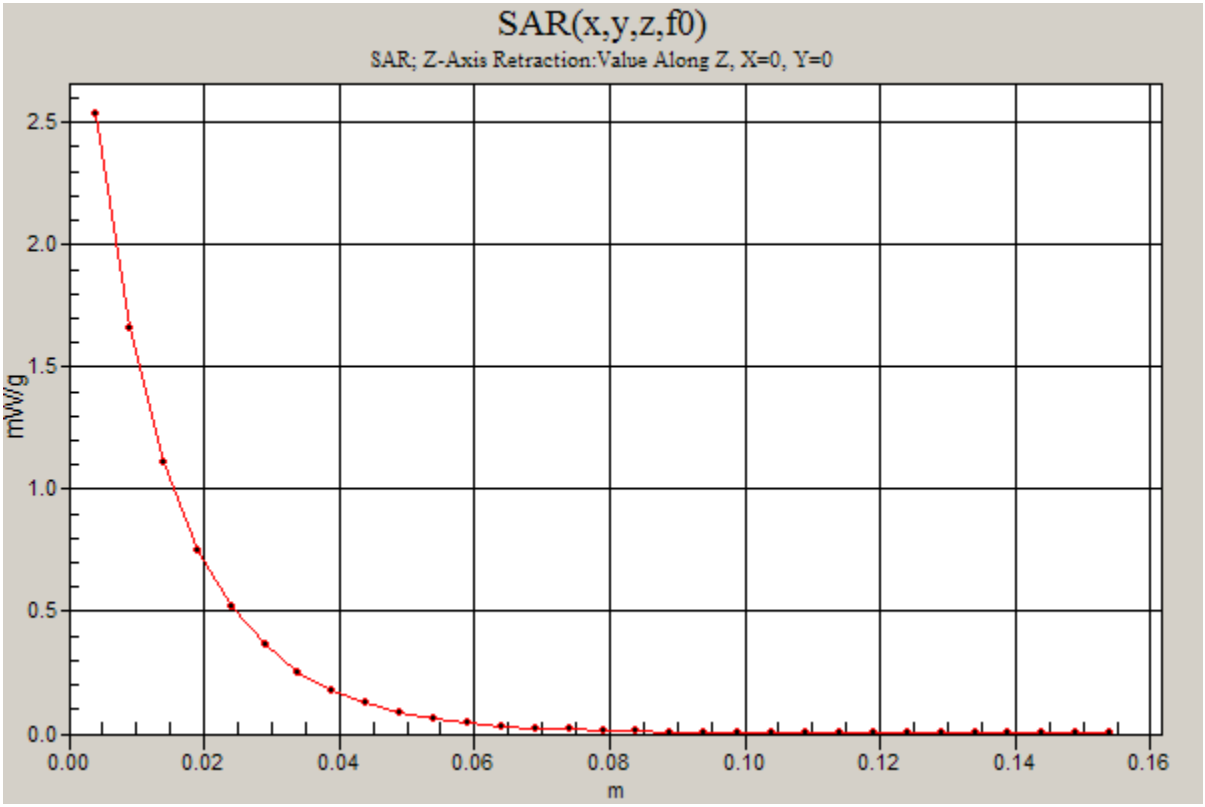
Daily SPC Check/Dipole Area Scan (4x9x1):
Measurement grid: dx=15mm, dy=15mm; Maximum value of SAR (measured) = 2.38 mW/g

Daily SPC Check/0-Degree 5x5x7 Cube (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm; Reference Value = 50.9 V/m; Power Drift = 0.045 dB
Peak SAR (extrapolated) = 3.57 W/kg; **SAR(1 g) = 2.34 mW/g; SAR(10 g) = 1.5 mW/g**
Maximum value of SAR (measured) = 2.52 mW/g

Daily SPC Check/90-Degree 5x5x7 Cube (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm; Reference Value = 50.9 V/m; Power Drift = 0.045 dB
Peak SAR (extrapolated) = 3.45 W/kg; **SAR(1 g) = 2.25 mW/g; SAR(10 g) = 1.44 mW/g**
Maximum value of SAR (measured) = 2.35 mW/g

Daily SPC Check/Z-Axis Retraction (1x1x31):
Measurement grid: dx=20mm, dy=20mm, dz=5mm
Maximum value of SAR (measured) = 2.54 mW/g


mW/g
2.54
2.03
1.52
1.02
0.508
0.00


SAR(x,y,z,f0)
SAR; Z-Axis Retraction:Value Along Z, X=0, Y=0
mW/g
2.5
2.0
1.5
1.0
0.5
0.0
0.00
0.02
0.04
0.06
0.08
0.10
0.12
0.14
0.16
m

Date/Time: 3/25/2005 8:58:46 AM

Test Laboratory: Motorola

032505 900MHz GOOD +9.0%

DUT: Dipole 900 MHz; Type: D900V2
Procedure Notes: 900 MHz System Performance Check / Dipole Sn# 91; PM1 Power = 200mW
Sim.Temp@ meas = 19.1*C; Sim.Temp@ SPC = 19.1*C; Room Temp@ SPC = 21*C

Communication System: CW - Dipole; Frequency: 900 MHz; Duty Cycle: 1:1
Medium: VALIDATION Only; Medium parameters used: σ = 1 mho/m, ε_r = 42.2; ρ = 1000 kg/m^3
DASY4 Configuration:

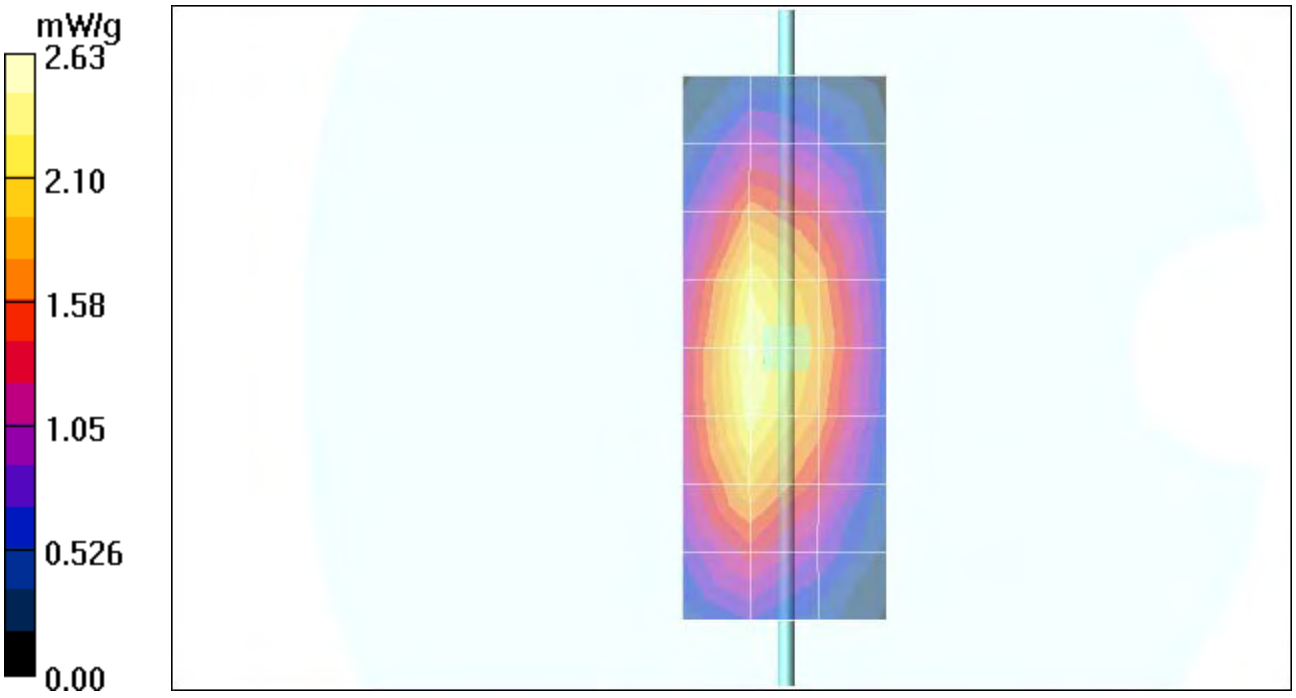
- Probe: ET3DV6R - SN1397; ConvF(6.1, 6.1, 6.1); Calibrated: 5/21/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn316; Calibrated: 1/13/2005
- Phantom: R1: Sugar SAM; Type: SAM; Serial: TP-1005;
- Measurement SW: DASY4, V4.4 Build 3; Postprocessing SW: SEMCAD, V1.8 Build 146

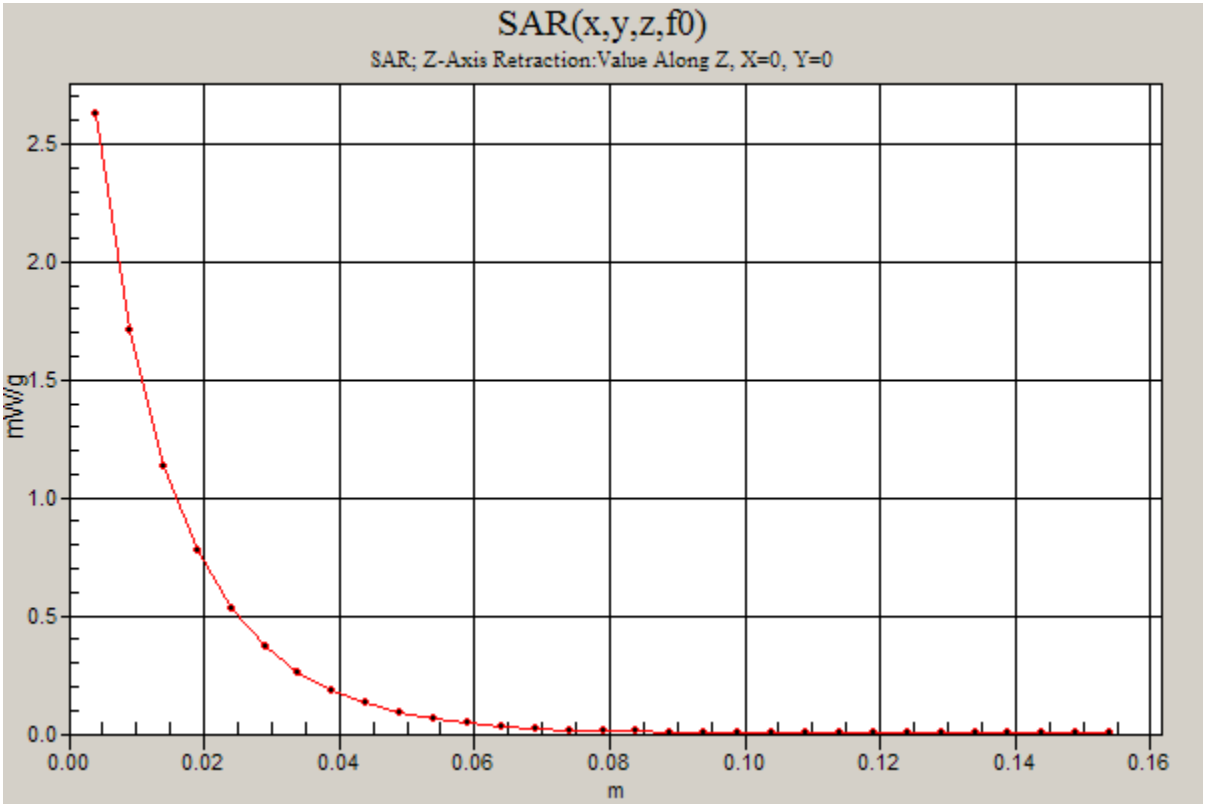
Daily SPC Check/Dipole Area Scan (4x9x1):
Measurement grid: dx=15mm, dy=15mm; Maximum value of SAR (measured) = 2.50 mW/g

Daily SPC Check/0-Degree 5x5x7 Cube (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm; Reference Value = 51.6 V/m; Power Drift = 0.068 dB
Peak SAR (extrapolated) = 3.66 W/kg; **SAR(1 g) = 2.41 mW/g; SAR(10 g) = 1.53 mW/g**
Maximum value of SAR (measured) = 2.60 mW/g

Daily SPC Check/90-Degree 5x5x7 Cube (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm; Reference Value = 51.6 V/m; Power Drift = 0.068 dB
Peak SAR (extrapolated) = 3.54 W/kg; **SAR(1 g) = 2.3 mW/g; SAR(10 g) = 1.46 mW/g**
Maximum value of SAR (measured) = 2.49 mW/g

Daily SPC Check/Z-Axis Retraction (1x1x31):
Measurement grid: dx=20mm, dy=20mm, dz=5mm
Maximum value of SAR (measured) = 2.63 mW/g


mW/g
2.63
2.10
1.58
1.05
0.526
0.00


SAR(x,y,z,f0)
SAR; Z-Axis Retraction:Value Along Z, X=0, Y=0
mW/g
2.5
2.0
1.5
1.0
0.5
0.0
0.00
0.02
0.04
0.06
0.08
0.10
0.12
0.14
0.16
m

Date/Time: 3/27/2005 9:11:27 PM

Test Laboratory: Motorola

032705 900MHz GOOD +3.0%

DUT: Dipole 900 MHz; Type: D900V2
Procedure Notes: 900 MHz System Performance Check / Dipole Sn# 91; PM1 Power = 200 mW; Sim.Temp@ meas = 19.2*C; Sim.Temp@ SPC = 19.2*C; Room Temp@ SPC = 21*C

Communication System: CW - Dipole; Frequency: 900 MHz; Duty Cycle: 1:1
Medium: VALIDATION Only; Medium parameters used: σ = 0.96 mho/m, ε_r = 40.6; ρ = 1000 kg/m^3
DASY4 Configuration:

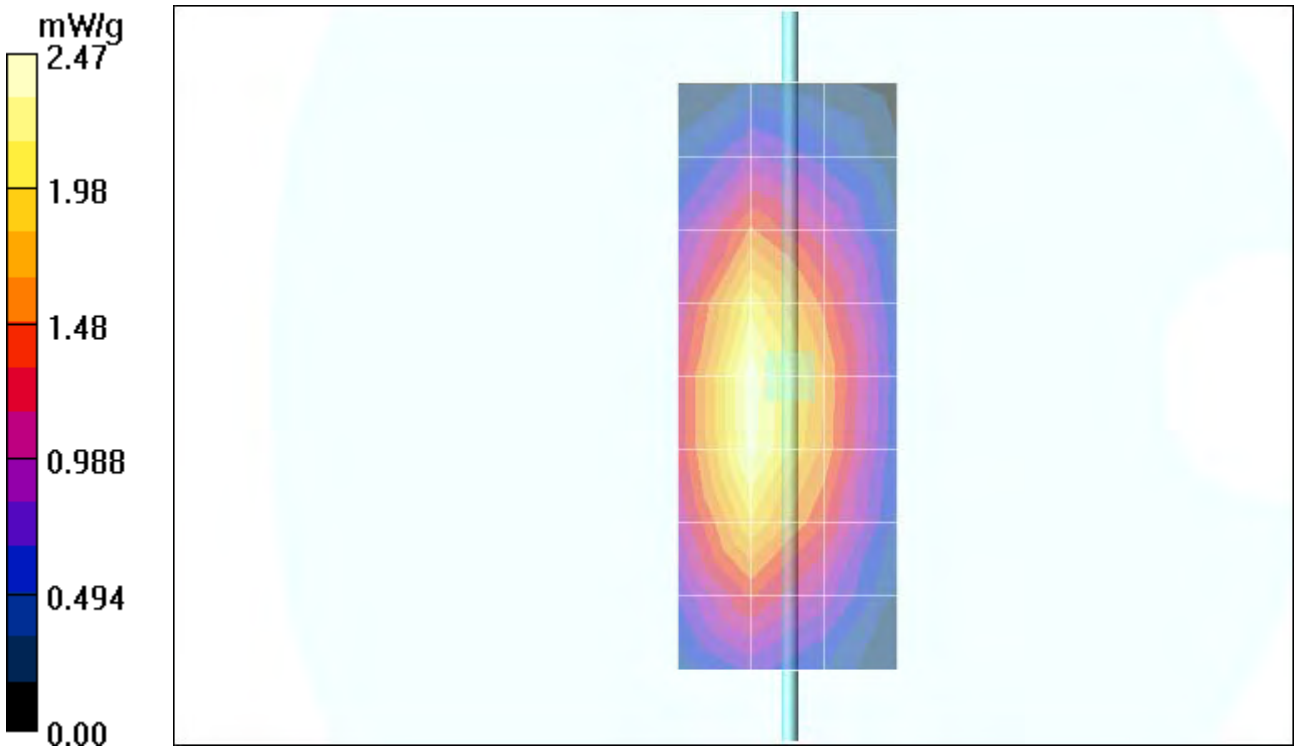
- Probe: ET3DV6R - SN1397; ConvF(6.1, 6.1, 6.1); Calibrated: 5/21/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn316; Calibrated: 1/13/2005
- Phantom: R1: Sugar SAM; Type: SAM; Serial: TP-1005;
- Measurement SW: DASY4, V4.4 Build 3; Postprocessing SW: SEMCAD, V1.8 Build 146

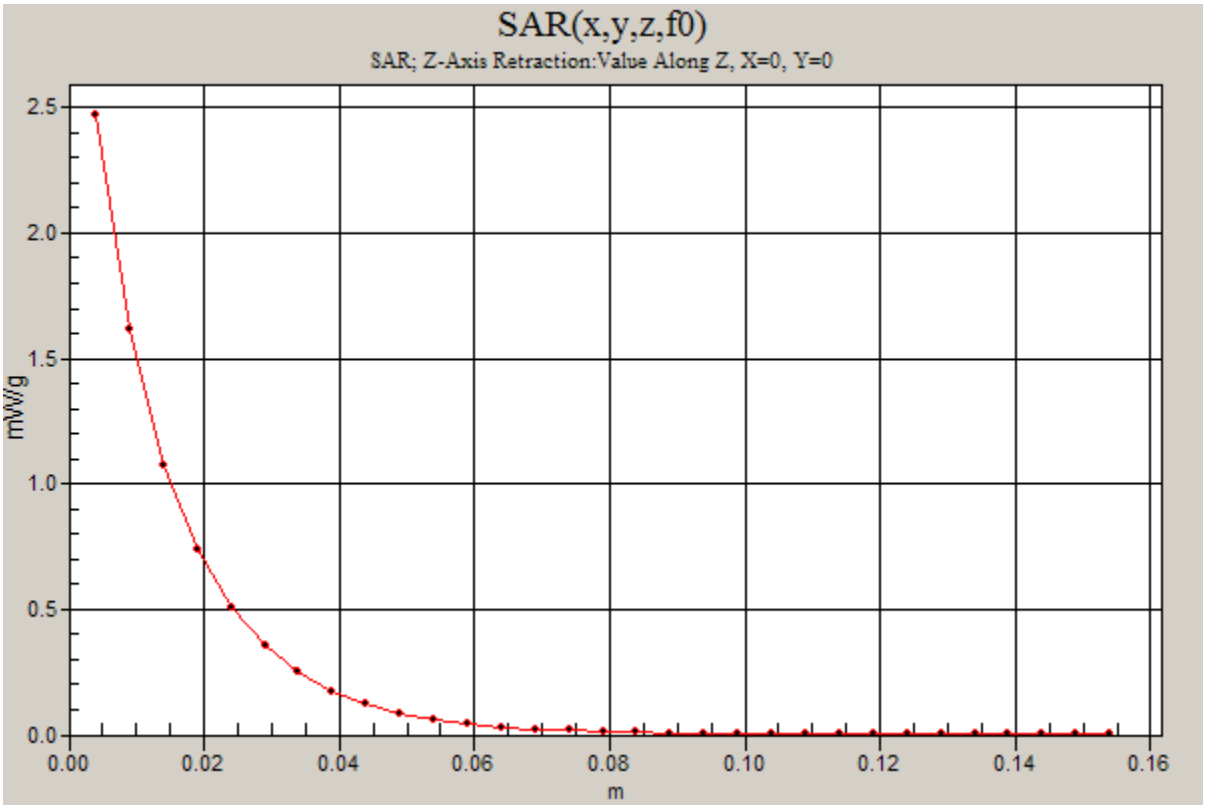
Daily SPC Check/Dipole Area Scan (4x9x1):
Measurement grid: dx=15mm, dy=15mm; Maximum value of SAR (measured) = 2.41 mW/g

Daily SPC Check/0-Degree 5x5x7 Cube (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm; Reference Value = 50.1 V/m; Power Drift = 0.062 dB
Peak SAR (extrapolated) = 3.50 W/kg; **SAR(1 g) = 2.29 mW/g; SAR(10 g) = 1.46 mW/g**
Maximum value of SAR (measured) = 2.48 mW/g

Daily SPC Check/90-Degree 5x5x7 Cube (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm; Reference Value = 50.1 V/m; Power Drift = 0.062 dB
Peak SAR (extrapolated) = 3.31 W/kg; **SAR(1 g) = 2.16 mW/g; SAR(10 g) = 1.37 mW/g**
Maximum value of SAR (measured) = 2.35 mW/g

Daily SPC Check/Z-Axis Retraction (1x1x31):
Measurement grid: dx=20mm, dy=20mm, dz=5mm
Maximum value of SAR (measured) = 2.47 mW/g


mW/g
2.47
1.98
1.48
0.988
0.494
0.00


SAR(x,y,z,f0)
SAR; Z-Axis Retraction:Value Along Z, X=0, Y=0
mW/g
2.5
2.0
1.5
1.0
0.5
0.0
0.00
0.02
0.04
0.06
0.08
0.10
0.12
0.14
0.16
m

Date/Time: 3/28/2005 8:00:40 AM

Test Laboratory: Motorola

032805 900MHz GOOD +6.5%

DUT: Dipole 900 MHz; Type: D900V2
Procedure Notes: 900 MHz System Performance Check / Dipole Sn# 91; PM1 Power = 200 mW
Sim.Temp@ meas = 19.3*C; Sim.Temp@ SPC = 19.3*C; Room Temp@ SPC = 21*C

Communication System: CW - Dipole; Frequency: 900 MHz; Duty Cycle: 1:1
Medium: VALIDATION Only; Medium parameters used: σ = 0.98 mho/m, ε_r = 41.8; ρ = 1000 kg/m^3
DASY4 Configuration:

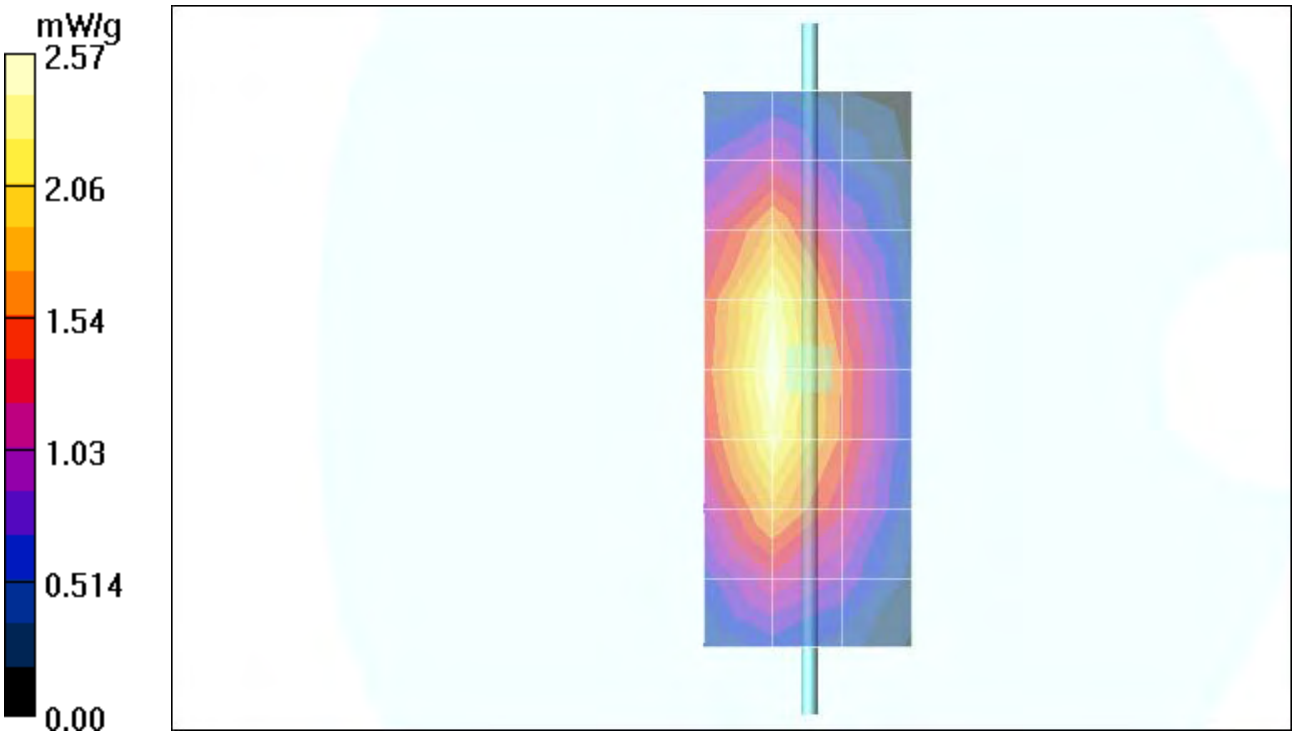
- Probe: ET3DV6R - SN1397; ConvF(6.1, 6.1, 6.1); Calibrated: 5/21/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn316; Calibrated: 1/13/2005
- Phantom: R1: Sugar SAM; Type: SAM; Serial: TP-1005;
- Measurement SW: DASY4, V4.4 Build 3; Postprocessing SW: SEMCAD, V1.8 Build 146

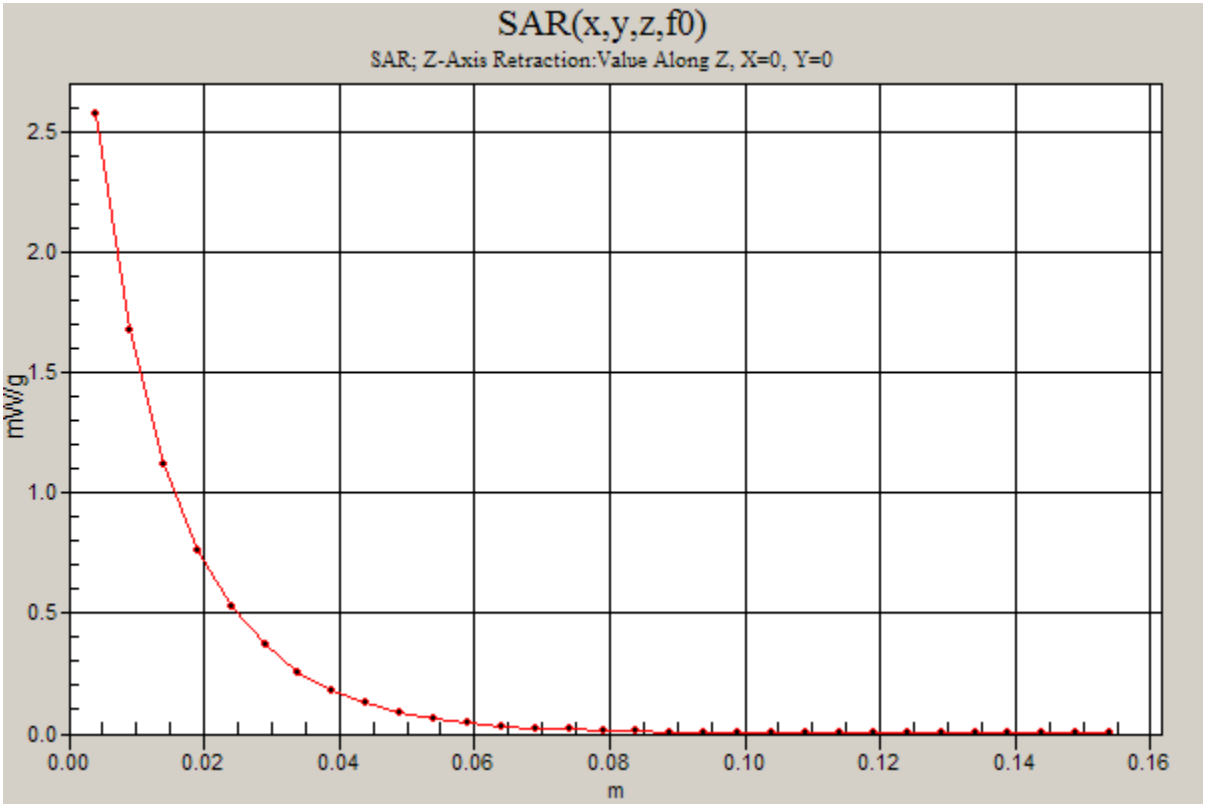
Daily SPC Check/Dipole Area Scan (4x9x1):
Measurement grid: dx=15mm, dy=15mm; Maximum value of SAR (measured) = 2.54 mW/g

Daily SPC Check/0-Degree 5x5x7 Cube (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm; Reference Value = 49.0 V/m; Power Drift = 0.129 dB
Peak SAR (extrapolated) = 3.58 W/kg; **SAR(1 g) = 2.36 mW/g; SAR(10 g) = 1.51 mW/g**
Maximum value of SAR (measured) = 2.55 mW/g

Daily SPC Check/90-Degree 5x5x7 Cube (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm; Reference Value = 49.0 V/m; Power Drift = 0.129 dB
Peak SAR (extrapolated) = 3.44 W/kg; **SAR(1 g) = 2.24 mW/g; SAR(10 g) = 1.43 mW/g**
Maximum value of SAR (measured) = 2.36 mW/g

Daily SPC Check/Z-Axis Retraction (1x1x31):
Measurement grid: dx=20mm, dy=20mm, dz=5mm;
Maximum value of SAR (measured) = 2.57 mW/g


mW/g
2.57
2.06
1.54
1.03
0.514
0.00


SAR(x,y,z,f0)
SAR; Z-Axis Retraction:Value Along Z, X=0, Y=0
mW/g
2.5
2.0
1.5
1.0
0.5
0.0
0.00
0.02
0.04
0.06
0.08
0.10
0.12
0.14
0.16
m

Date/Time: 3/29/2005 9:16:37 AM

Test Laboratory: Motorola

032905 900MHZ GOOD +5.8%

DUT: Dipole 900 MHz; Type: D900V2
Procedure Notes: 900 MHz System Performance Check / Dipole Sn# 91; PM1 Power = 200mW; Sim.Temp@ meas = 19.3*C; Sim.Temp@ SPC = 19.3*C; Room Temp@ SPC = 21*C

Communication System: CW - Dipole; Frequency: 900 MHz; Duty Cycle: 1:1
Medium: VALIDATION Only; Medium parameters used: σ = 0.98 mho/m, ε_r = 42; ρ = 1000 kg/m^3
DASY4 Configuration:

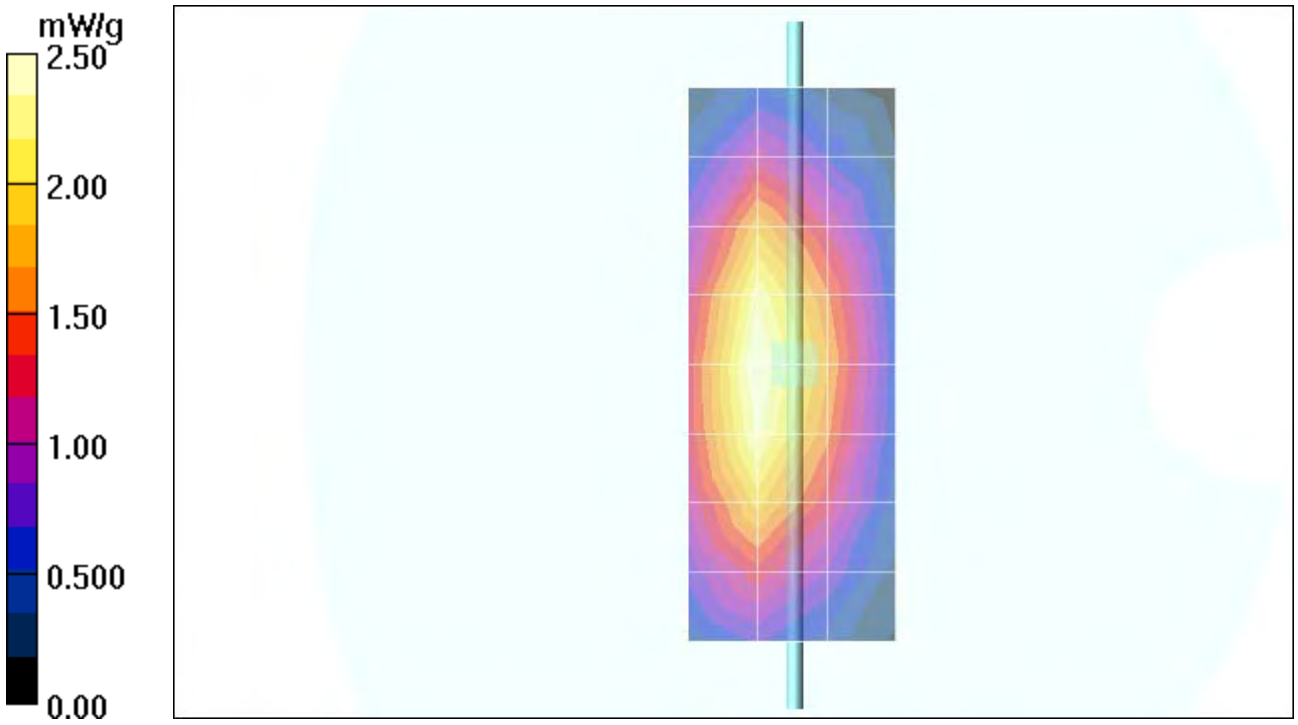
- Probe: ET3DV6R - SN1397; ConvF(6.1, 6.1, 6.1); Calibrated: 5/21/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn316; Calibrated: 1/13/2005
- Phantom: R1: Sugar SAM; Type: SAM; Serial: TP-1005;
- Measurement SW: DASY4, V4.4 Build 3; Postprocessing SW: SEMCAD, V1.8 Build 146

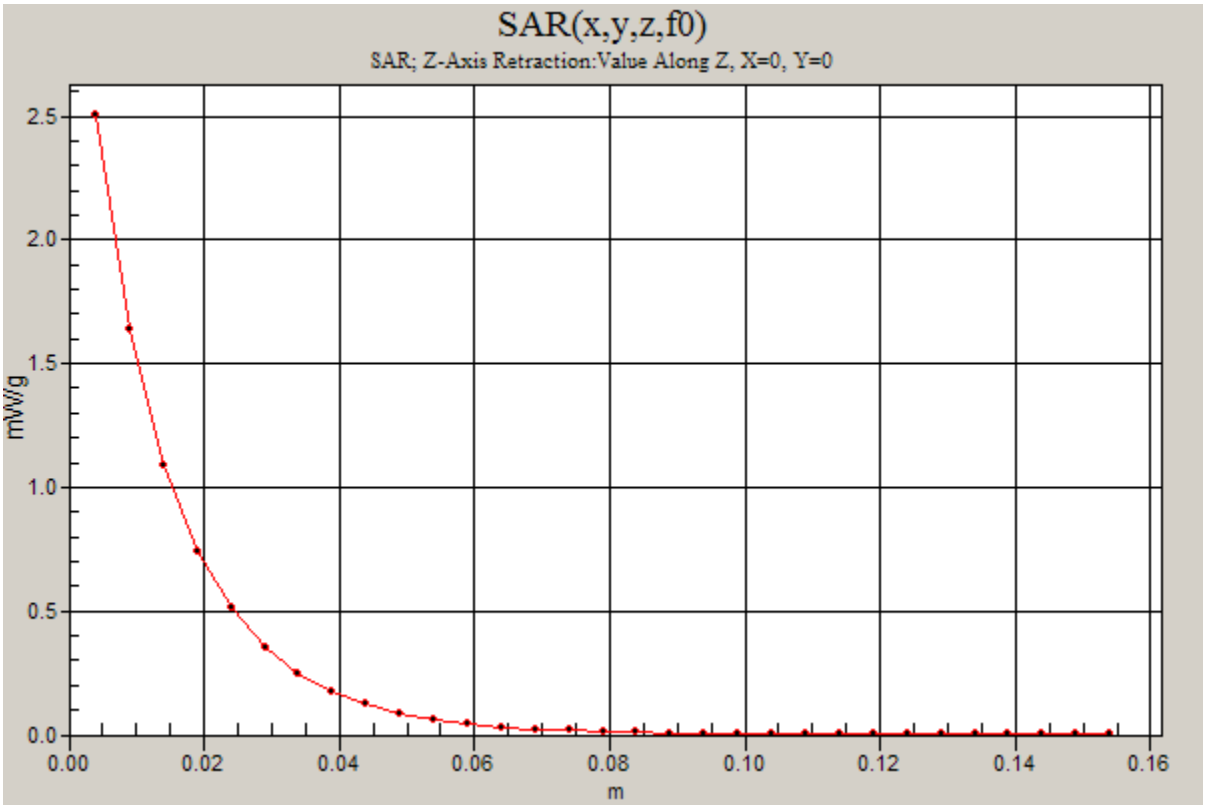
Daily SPC Check/Dipole Area Scan (4x9x1):
Measurement grid: dx=15mm, dy=15mm; Maximum value of SAR (measured) = 2.52 mW/g

Daily SPC Check/0-Degree 5x5x7 Cube (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm; Reference Value = 50.3 V/m; Power Drift = 0.054 dB
Peak SAR (extrapolated) = 3.57 W/kg; **SAR(1 g) = 2.34 mW/g; SAR(10 g) = 1.5 mW/g**
Maximum value of SAR (measured) = 2.53 mW/g

Daily SPC Check/90-Degree 5x5x7 Cube (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm; Reference Value = 50.3 V/m; Power Drift = 0.054 dB
Peak SAR (extrapolated) = 3.41 W/kg; **SAR(1 g) = 2.23 mW/g; SAR(10 g) = 1.43 mW/g**
Maximum value of SAR (measured) = 2.35 mW/g

Daily SPC Check/Z-Axis Retraction (1x1x31):
Measurement grid: dx=20mm, dy=20mm, dz=5mm
Maximum value of SAR (measured) = 2.50 mW/g


mW/g
2.50
2.00
1.50
1.00
0.500
0.00


SAR(x,y,z,f0)
SAR; Z-Axis Retraction:Value Along Z, X=0, Y=0
mW/g
2.5
2.0
1.5
1.0
0.5
0.0
0.00
0.02
0.04
0.06
0.08
0.10
0.12
0.14
0.16
m

Date/Time: 4/6/2005 7:48:23 AM

Test Laboratory: Motorola

040605 900MHz GOOD +2.5%

DUT: Dipole 900 MHz; Type: D900V2
Procedure Notes: 900MHz System Performance Check / Dipole Sn# 91; PM1 Power = 200mW
Sim.Temp@ meas = 19*C; Sim.Temp@ SPC = 19*C; Room Temp@ SPC = 21*C

Communication System: CW - Dipole; Frequency: 900 MHz; Duty Cycle: 1:1
Medium: VALIDATION Only; Medium parameters used: σ = 0.99 mho/m, ε_r = 42.6; ρ = 1000 kg/m^3
DASY4 Configuration:

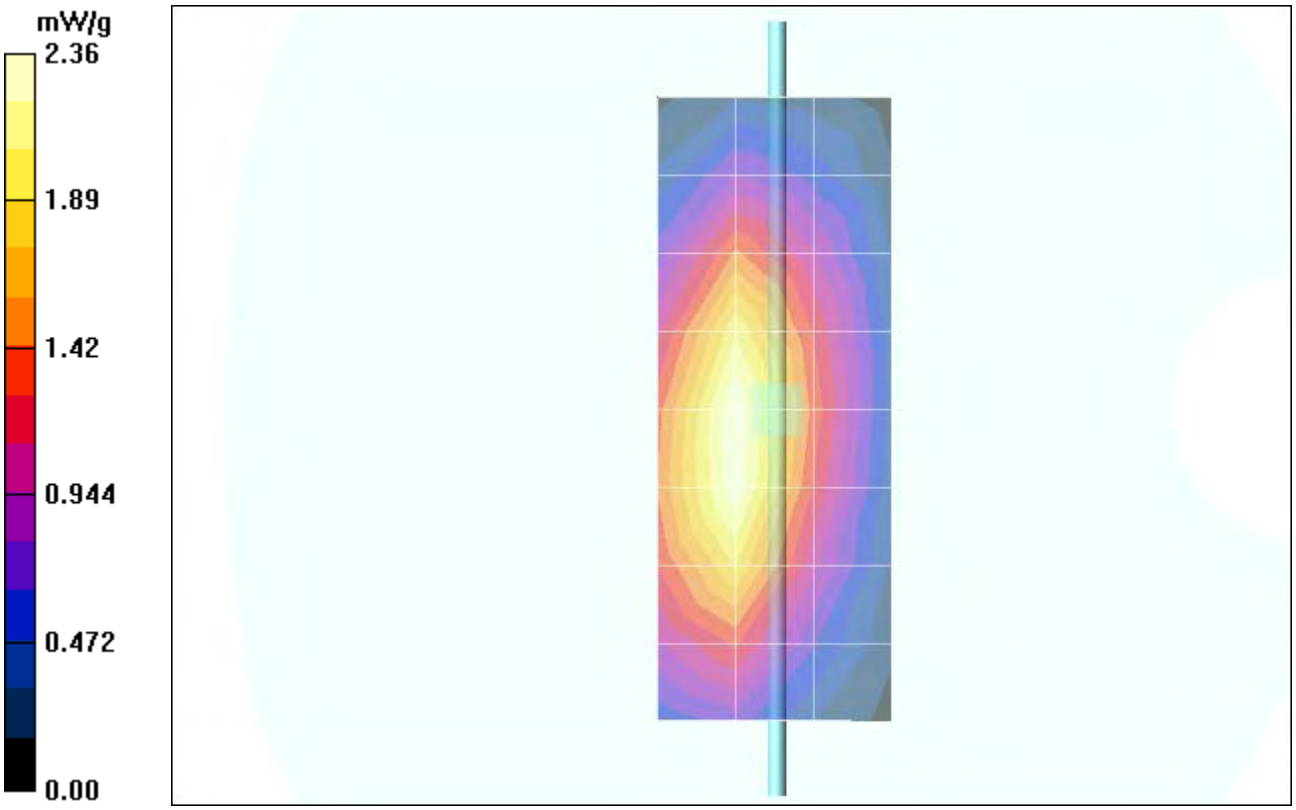
- Probe: ET3DV6 - SN1398; ConvF(6.42, 6.42, 6.42); Calibrated: 2/24/2005
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn316; Calibrated: 1/13/2005
- Phantom: R1: Sugar SAM; Type: SAM; Serial: TP-1005;
- Measurement SW: DASY4, V4.4 Build 3; Postprocessing SW: SEMCAD, V1.8 Build 146

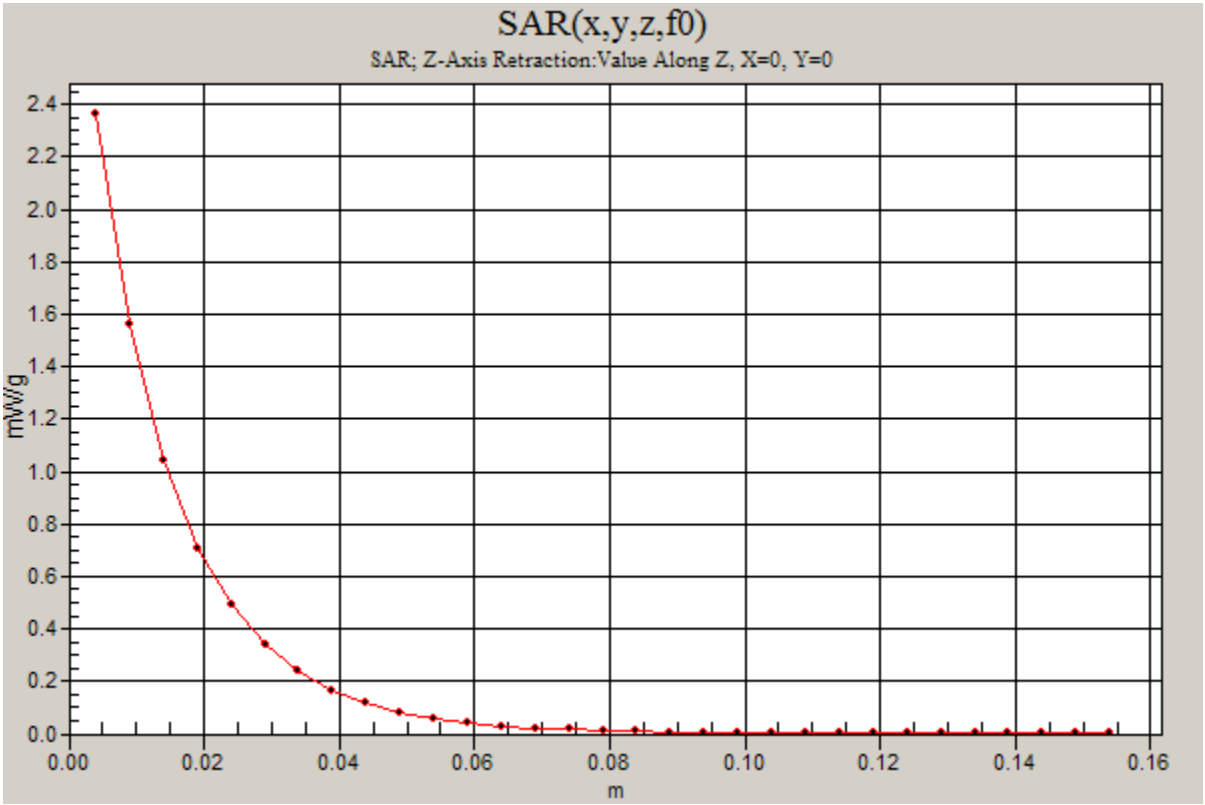
Daily SPC Check/Dipole Area Scan (4x9x1):
Measurement grid: dx=15mm, dy=15mm; Maximum value of SAR (measured) = 2.38 mW/g

Daily SPC Check/0-Degree 5x5x7 Cube (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm; Reference Value = 46.1 V/m; Power Drift = 0.098 dB
Peak SAR (extrapolated) = 3.32 W/kg; **SAR(1 g) = 2.2 mW/g; SAR(10 g) = 1.41 mW/g**

Daily SPC Check/90-Degree 5x5x7 Cube (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm; Reference Value = 46.1 V/m; Power Drift = 0.098 dB
Peak SAR (extrapolated) = 3.37 W/kg; **SAR(1 g) = 2.23 mW/g; SAR(10 g) = 1.43 mW/g**
Maximum value of SAR (measured) = 2.40 mW/g

Daily SPC Check/Z-Axis Retraction (1x1x31):
Measurement grid: dx=20mm, dy=20mm, dz=5mm
Maximum value of SAR (measured) = 2.36 mW/g


mW/g
2.36
1.89
1.42
0.944
0.472
0.00


SAR(x,y,z,f0)
SAR; Z-Axis Retraction:Value Along Z, X=0, Y=0
mW/g
2.4
2.2
2.0
1.8
1.6
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
0.00
0.02
0.04
0.06
0.08
0.10
0.12
0.14
0.16
m

Date/Time: 4/7/2005 7:43:23 AM

Test Laboratory: Motorola

040705 900MHz GOOD +3.7%

DUT: Dipole 900 MHz; Type: D900V2
Procedure Notes: 900 MHz System Performance Check / Dipole Sn# 091; PM1 Power = 200mW
Sim.Temp@ meas = 19.2*C; Sim.Temp@ SPC = 19*C; Room Temp@ SPC = 21*C

Communication System: CW - Dipole; Frequency: 900 MHz; Duty Cycle: 1:1
Medium: VALIDATION Only; Medium parameters used: σ = 0.99 mho/m, ε_r = 42.5; ρ = 1000 kg/m^3
DASY4 Configuration:

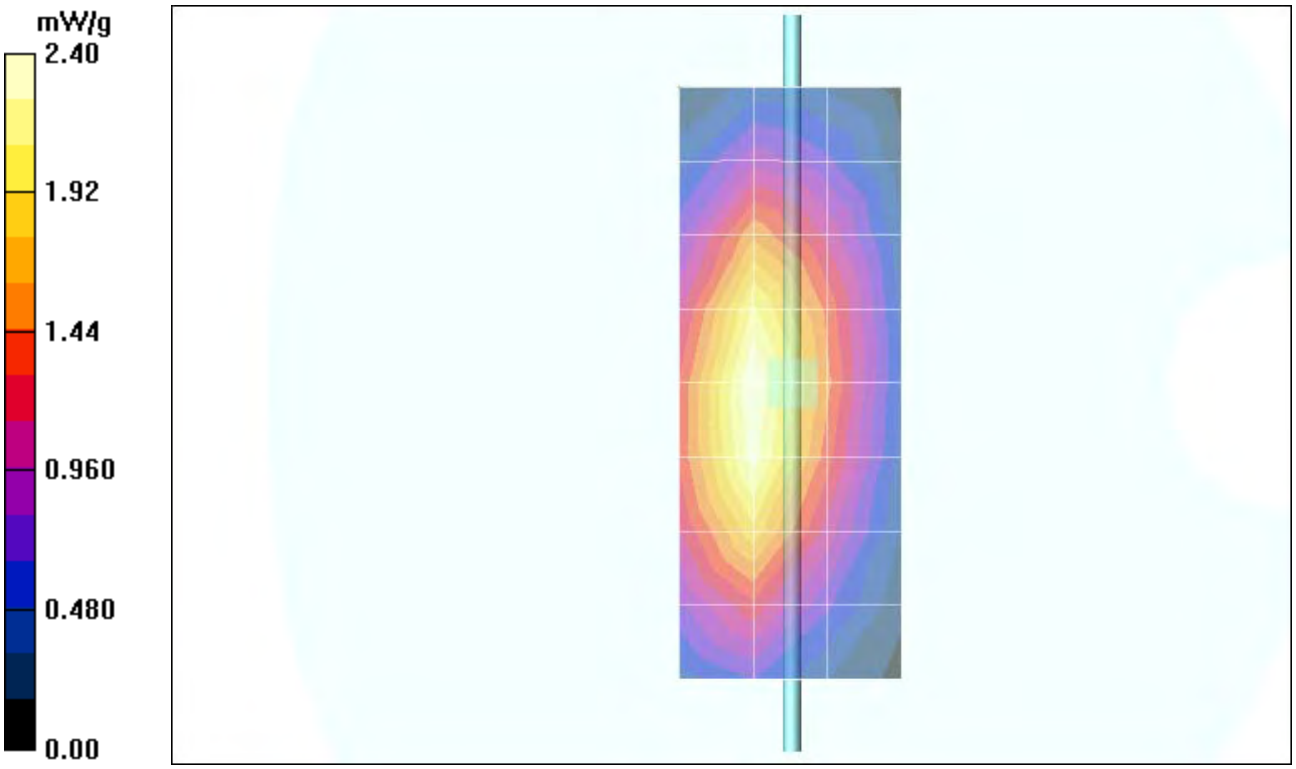
- Probe: ET3DV6 - SN1398; ConvF(6.42, 6.42, 6.42); Calibrated: 2/24/2005
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn316; Calibrated: 1/13/2005
- Phantom: R1: Sugar SAM; Type: SAM; Serial: TP-1005;
- Measurement SW: DASY4, V4.4 Build 3; Postprocessing SW: SEMCAD, V1.8 Build 146

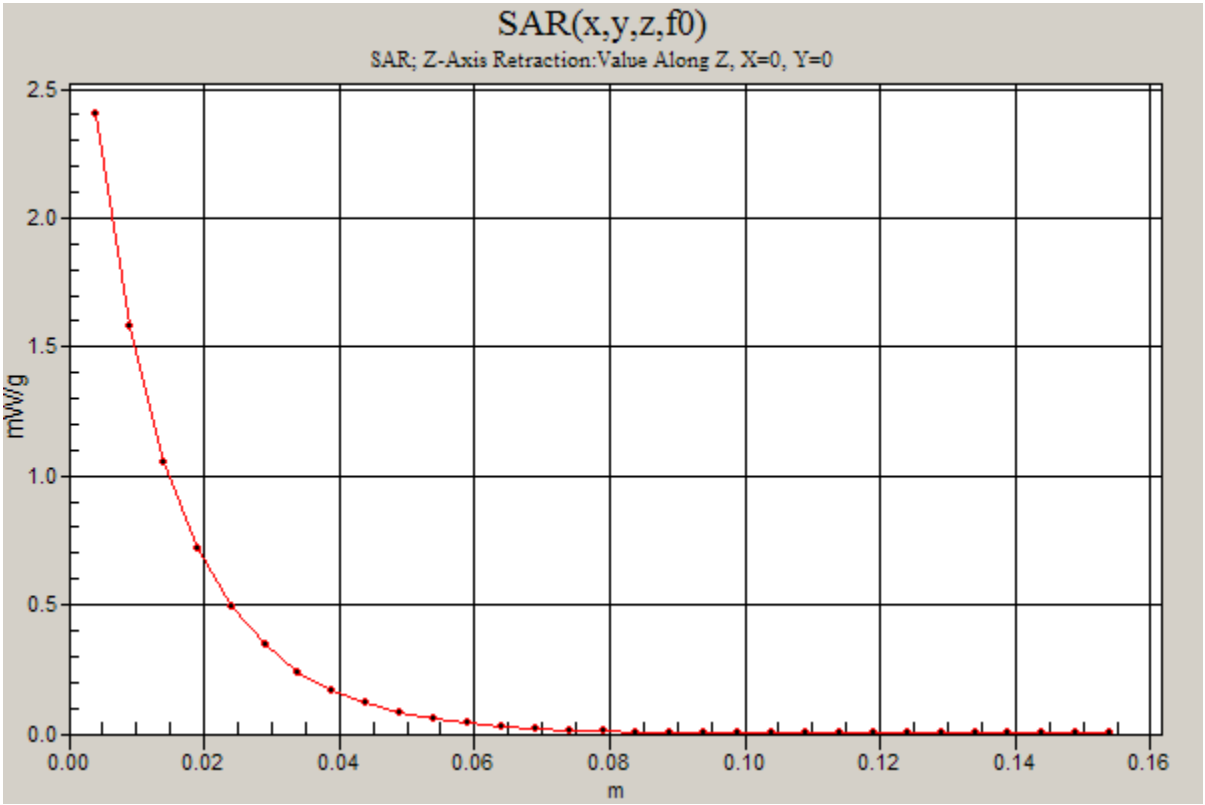
Daily SPC Check/Dipole Area Scan (4x9x1):
Measurement grid: dx=15mm, dy=15mm; Maximum value of SAR (measured) = 2.42 mW/g

Daily SPC Check/0-Degree 5x5x7 Cube (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm; Reference Value = 47.9 V/m; Power Drift = 0.026 dB
Peak SAR (extrapolated) = 3.39 W/kg; **SAR(1 g) = 2.23 mW/g; SAR(10 g) = 1.42 mW/g**
Maximum value of SAR (measured) = 2.40 mW/g

Daily SPC Check/90-Degree 5x5x7 Cube (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm; Reference Value = 47.9 V/m; Power Drift = 0.026 dB
Peak SAR (extrapolated) = 3.41 W/kg; **SAR(1 g) = 2.25 mW/g; SAR(10 g) = 1.44 mW/g**
Maximum value of SAR (measured) = 2.43 mW/g

Daily SPC Check/Z-Axis Retraction (1x1x31):
Measurement grid: dx=20mm, dy=20mm, dz=5mm


mW/g
2.40
1.92
1.44
0.960
0.480
0.00


SAR(x,y,z,f0)
SAR; Z-Axis Retraction:Value Along Z, X=0, Y=0
mW/g
2.5
2.0
1.5
1.0
0.5
0.0
0.00
0.02
0.04
0.06
0.08
0.10
0.12
0.14
0.16
m

Date/Time: 3/22/2005 6:29:19 AM

Test Laboratory: Motorola

032205 1800MHz GOOD 2.5%

DUT: Dipole 1800 MHz; Type: D1800V2
Procedure Notes: 1800 MHz System Performance Check / Dipole Sn# 259tr; PM1 Power = 200mW
Sim.Temp@ meas = 20*C; Sim.Temp@ SPC = 19.5*C; Room Tem@ SPC = 21*C

Communication System: CW - Dipole; Frequency: 1800 MHz; Duty Cycle: 1:1
Medium: VALIDATION Only; Medium parameters used: σ = 1.36 mho/m, ε_r = 38.6; ρ = 1000 kg/m^3
DASY4 Configuration:

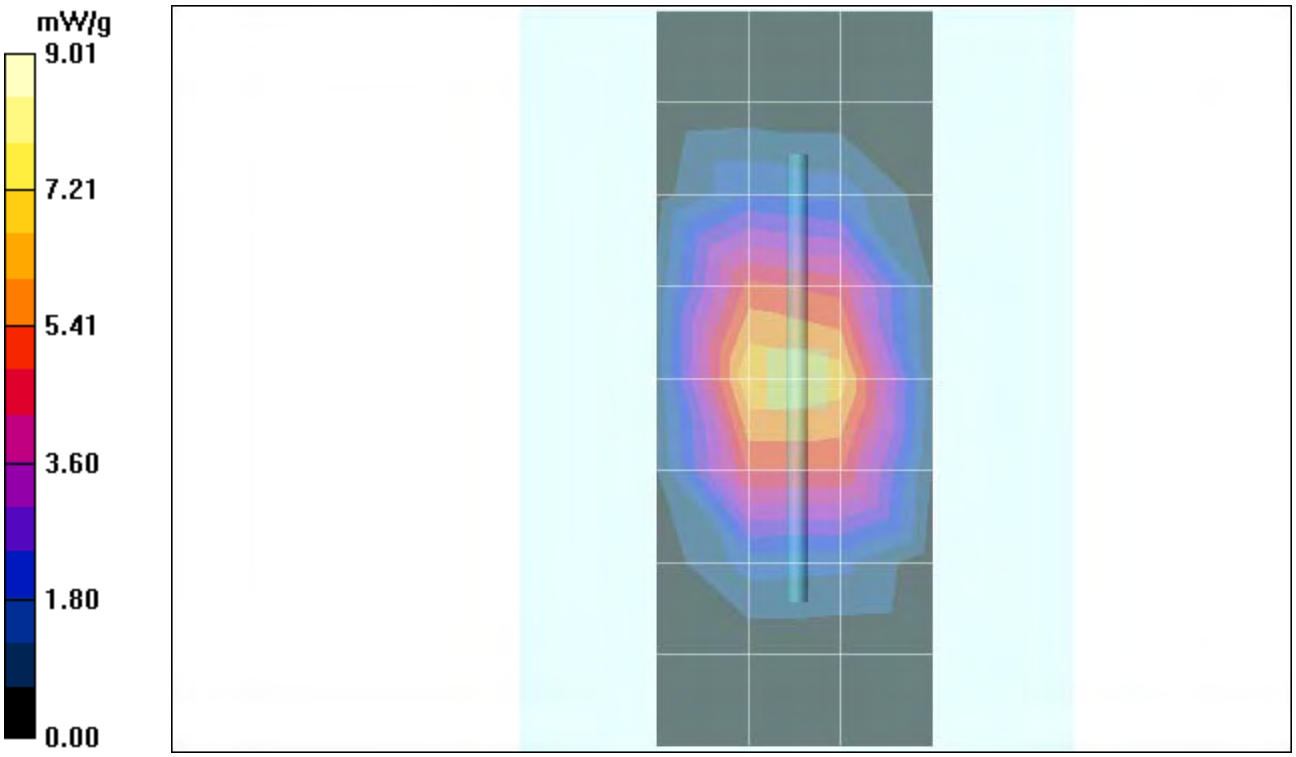
- Probe: ET3DV6R - SN1397; ConvF(5.09, 5.09, 5.09); Calibrated: 5/21/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn316; Calibrated: 1/13/2005
- Phantom: R1: Sect.2, Amy Twin; Type: Amy Twin Flat; Serial: n/a;
- Measurement SW: DASY4, V4.4 Build 3; Postprocessing SW: SEMCAD, V1.8 Build 146

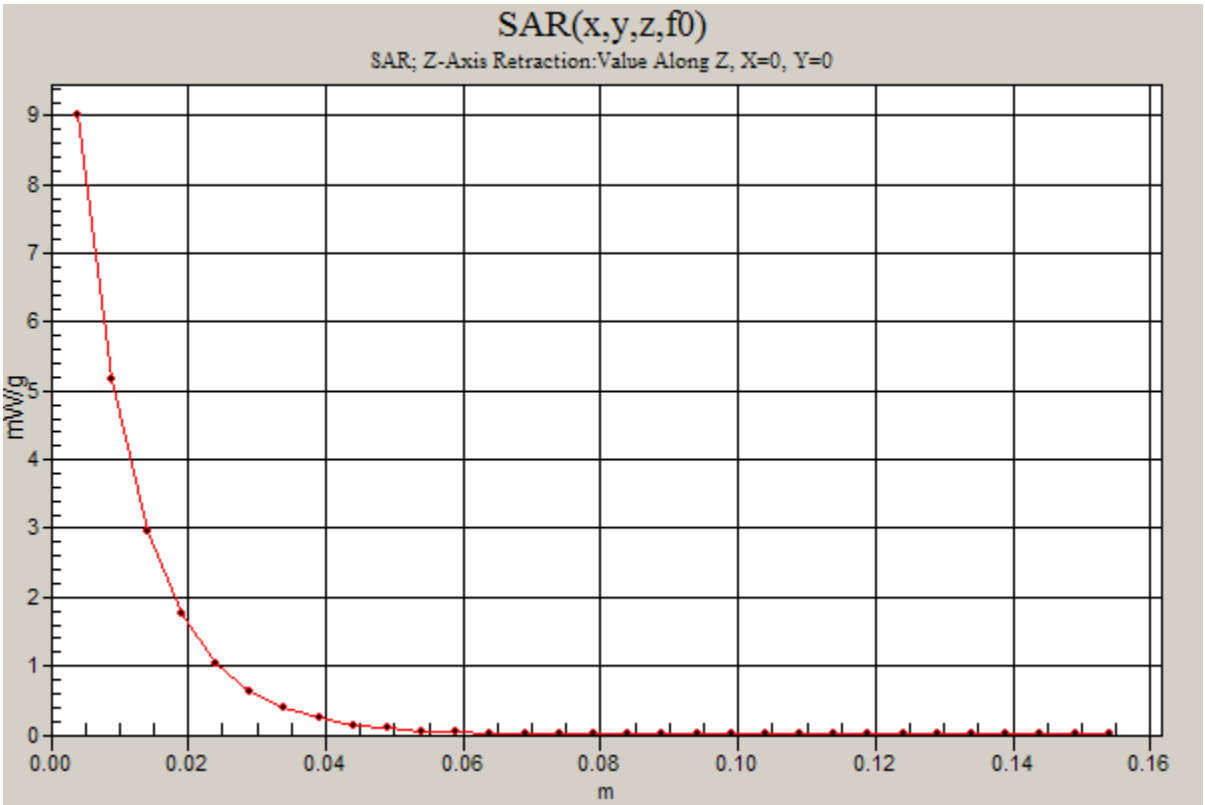
Daily SPC Check/Dipole Area Scan (9x4x1):
Measurement grid: dx=15mm, dy=15mm; Maximum value of SAR (measured) = 6.62 mW/g

Daily SPC Check/0-Degree 5x5x7 Cube (5x5x7)/Cube 0:
Measurement grid: dx=8mm,dy=8mm,dz=5mm; Reference Value = 85.8 V/m; Power Drift = -0.046 dB
Peak SAR (extrapolated) = 13.7 W/kg; **SAR(1 g) = 7.97 mW/g; SAR(10 g) = 4.26 mW/g**
Maximum value of SAR (measured) = 8.83 mW/g

Daily SPC Check/90-Degree 5x5x7 Cube (5x5x7)/Cube 0:
Measurement grid: dx=8mm,dy=8mm,dz=5mm; Reference Value = 85.8 V/m; Power Drift = -0.046 dB
Peak SAR (extrapolated) = 13.1 W/kg; **SAR(1 g) = 7.65 mW/g; SAR(10 g) = 4.09 mW/g**
Maximum value of SAR (measured) = 8.32 mW/g

Daily SPC Check/Z-Axis Retraction (1x1x31):
Measurement grid: dx=20mm, dy=20mm, dz=5mm
Maximum value of SAR (measured) = 9.01 mW/g


mW/g
9.01
7.21
5.41
3.60
1.80
0.00


SAR(x,y,z,f0)
SAR; Z-Axis Retraction:Value Along Z, X=0, Y=0
mW/g
m
0
1
2
3
4
5
6
7
8
9
0.00
0.02
0.04
0.06
0.08
0.10
0.12
0.14
0.16

Date/Time: 3/26/2005 6:01:28 PM

Test Laboratory: Motorola

032605 1800MHz GOOD -2.1%

DUT: Dipole 1800 MHz; Type: D1800V2
Procedure Notes: 1800 MHz System Performance Check / Dipole Sn# 259tr; PM1 Power = 200 mW; Sim.Temp@ meas = 19.6*C; Sim.Temp@ SPC = 19.6*C; Room Temp@ SPC = 21*C

Communication System: CW - Dipole; Frequency: 1800 MHz; Duty Cycle: 1:1
Medium: VALIDATION Only; Medium parameters used: σ = 1.34 mho/m, ε_r = 40.1; ρ = 1000 kg/m^3
DASY4 Configuration:

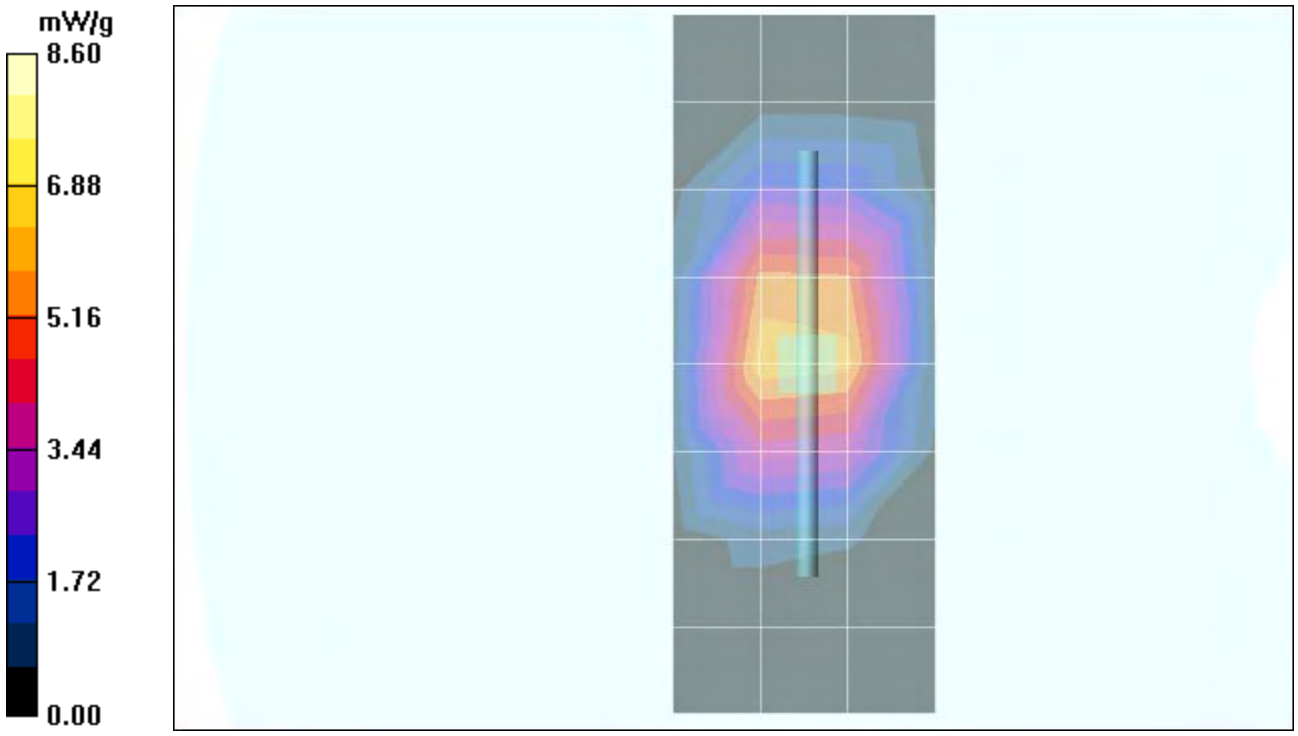
- Probe: ET3DV6R - SN1397; ConvF(5.09, 5.09, 5.09); Calibrated: 5/21/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn316; Calibrated: 1/13/2005
- Phantom: R1: Glycol SAM; Type: SAM; Serial: TP-1154;
- Measurement SW: DASY4, V4.4 Build 3; Postprocessing SW: SEMCAD, V1.8 Build 146

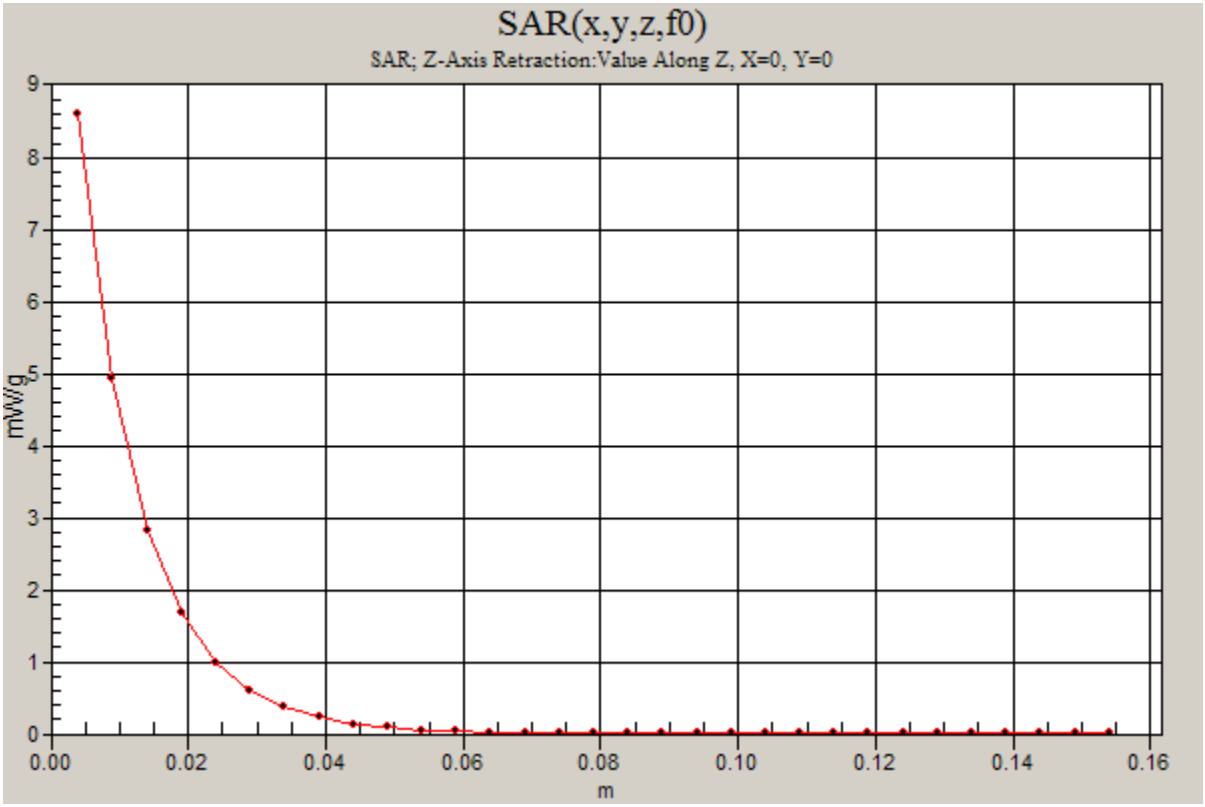
Daily SPC Check/Dipole Area Scan (4x9x1):
Measurement grid: dx=15mm, dy=15mm; Maximum value of SAR (measured) = 6.17 mW/g

Daily SPC Check/0-Degree 5x5x7 Cube (5x5x7)/Cube 0:
Measurement grid: dx=8mm,dy=8mm,dz=5mm; Reference Value = 83.5 V/m; Power Drift = -0.019 dB
Peak SAR (extrapolated) = 13.1 W/kg; **SAR(1 g) = 7.61 mW/g; SAR(10 g) = 4.06 mW/g**
Maximum value of SAR (measured) = 8.61 mW/g

Daily SPC Check/90-Degree 5x5x7 Cube (5x5x7)/Cube 0:
Measurement grid: dx=8mm,dy=8mm,dz=5mm; Reference Value = 83.5 V/m; Power Drift = -0.019 dB
Peak SAR (extrapolated) = 12.6 W/kg; **SAR(1 g) = 7.31 mW/g; SAR(10 g) = 3.9 mW/g**
Maximum value of SAR (measured) = 8.10 mW/g

Daily SPC Check/Z-Axis Retraction (1x1x31):
Measurement grid: dx=20mm, dy=20mm, dz=5mm
Maximum value of SAR (measured) = 8.60 mW/g


mW/g
8.60
6.88
5.16
3.44
1.72
0.00


SAR(x,y,z,f0)
SAR; Z-Axis Retraction:Value Along Z, X=0, Y=0
mW/g
m
0
1
2
3
4
5
6
7
8
9
0.00
0.02
0.04
0.06
0.08
0.10
0.12
0.14
0.16

Date/Time: 3/27/2005 5:45:45 PM

Test Laboratory: Motorola

032705 1800MHz GOOD -0.6%

DUT: Dipole 1800 MHz; Type: D1800V2
Procedure Notes: 1800 MHz System Performance Check / Dipole Sn# 259tr; PM1 Power = 200 mW
Sim.Temp@ meas = 19.5*C; Sim.Temp@ SPC = 19.5*C; Room Temp@ SPC = 21*C

Communication System: CW - Dipole; Frequency: 1800 MHz; Duty Cycle: 1:1
Medium: VALIDATION Only; Medium parameters used: σ = 1.36 mho/m, ε_r = 39.5; ρ = 1000 kg/m^3
DASY4 Configuration:

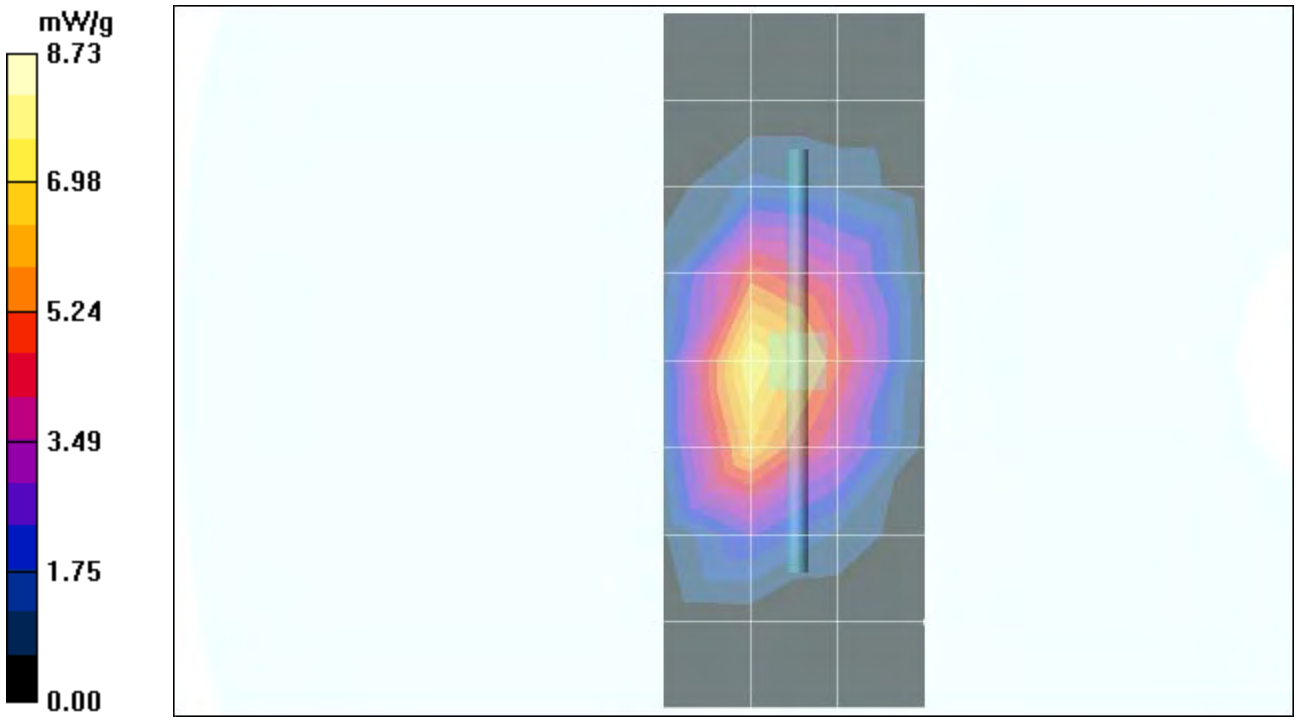
- Probe: ET3DV6R - SN1397; ConvF(5.09, 5.09, 5.09); Calibrated: 5/21/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn316; Calibrated: 1/13/2005
- Phantom: R1: Glycol SAM; Type: SAM; Serial: TP-1154;
- Measurement SW: DASY4, V4.4 Build 3; Postprocessing SW: SEMCAD, V1.8 Build 146

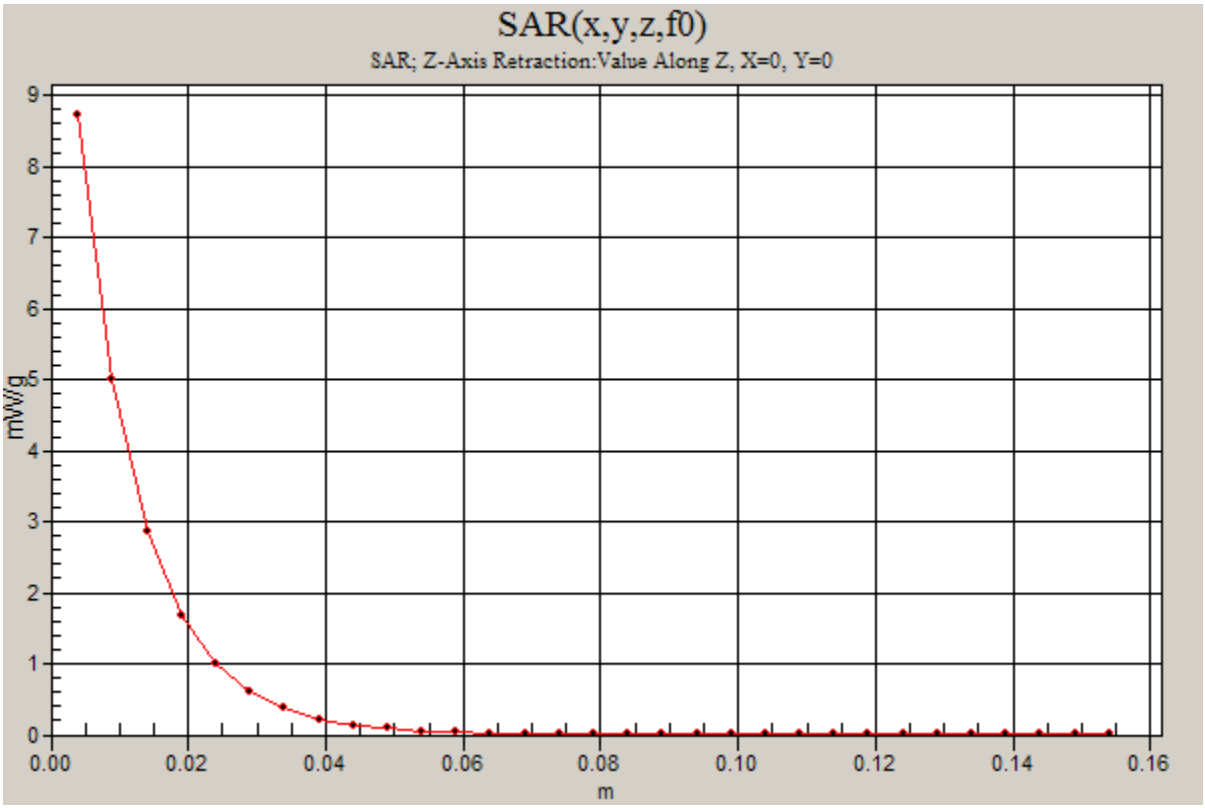
Daily SPC Check/Dipole Area Scan (4x9x1):
Measurement grid: dx=15mm, dy=15mm; Maximum value of SAR (measured) = 7.64 mW/g

Daily SPC Check/0-Degree 5x5x7 Cube (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm; Reference Value = 82.1 V/m; Power Drift = 0.128 dB
Peak SAR (extrapolated) = 13.4 W/kg; **SAR(1 g) = 7.77 mW/g; SAR(10 g) = 4.15 mW/g**
Maximum value of SAR (measured) = 8.74 mW/g

Daily SPC Check/90-Degree 5x5x7 Cube (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm; Reference Value = 82.1 V/m; Power Drift = 0.128 dB
Peak SAR (extrapolated) = 12.7 W/kg; **SAR(1 g) = 7.38 mW/g; SAR(10 g) = 3.94 mW/g**
Maximum value of SAR (measured) = 8.20 mW/g

Daily SPC Check/Z-Axis Retraction (1x1x31):
Measurement grid: dx=20mm, dy=20mm, dz=5mm
Maximum value of SAR (measured) = 8.73 mW/g


mW/g
8.73
6.98
5.24
3.49
1.75
0.00


SAR(x,y,z,f0)
SAR; Z-Axis Retraction:Value Along Z, X=0, Y=0
mW/g
m
0
1
2
3
4
5
6
7
8
9
0.00
0.02
0.04
0.06
0.08
0.10
0.12
0.14
0.16

Date/Time: 3/30/2005 6:38:54 AM

Test Laboratory: Motorola

033005 1800MHZ GOOD +3%

DUT: Dipole 1800 MHz; Type: D1800V2
Procedure Notes: 1800MHz System Performance Check / Dipole Sn# 251tr; PM1 Power = 200 mW
Sim.Temp@ meas = 19.1*C; Sim.Temp@ SPC = 19*C; Room Temp@ SPC = 21*C

Communication System: CW - Dipole; Frequency: 1800 MHz; Duty Cycle: 1:1
Medium: VALIDATION Only; Medium parameters used: σ = 1.35 mho/m, ε_r = 39.3; ρ = 1000 kg/m^3
DASY4 Configuration:

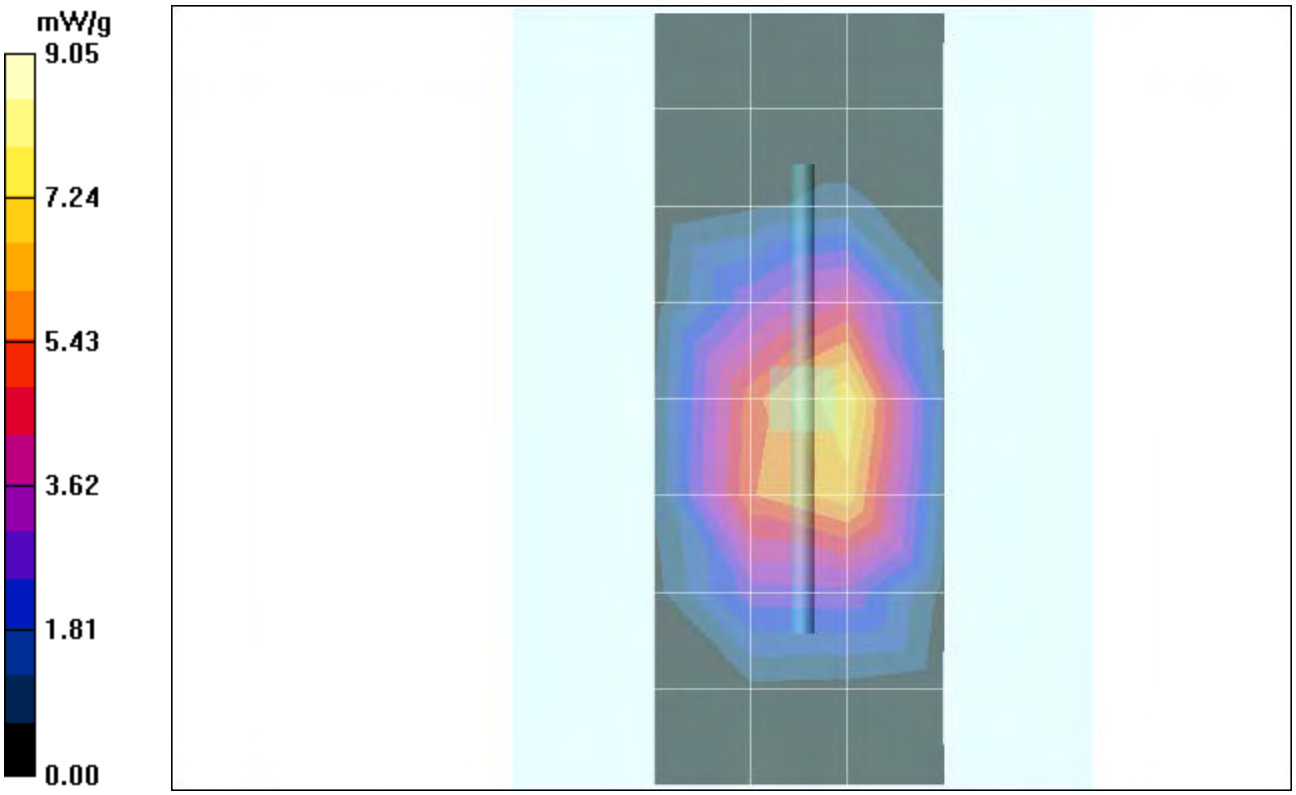
- Probe: ET3DV6R - SN1397; ConvF(5.09, 5.09, 5.09); Calibrated: 5/21/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn316; Calibrated: 1/13/2005
- Phantom: R1: Sect.2, Amy Twin; Type: Amy Twin Flat; Serial: n/a;
- Measurement SW: DASY4, V4.4 Build 3; Postprocessing SW: SEMCAD, V1.8 Build 146

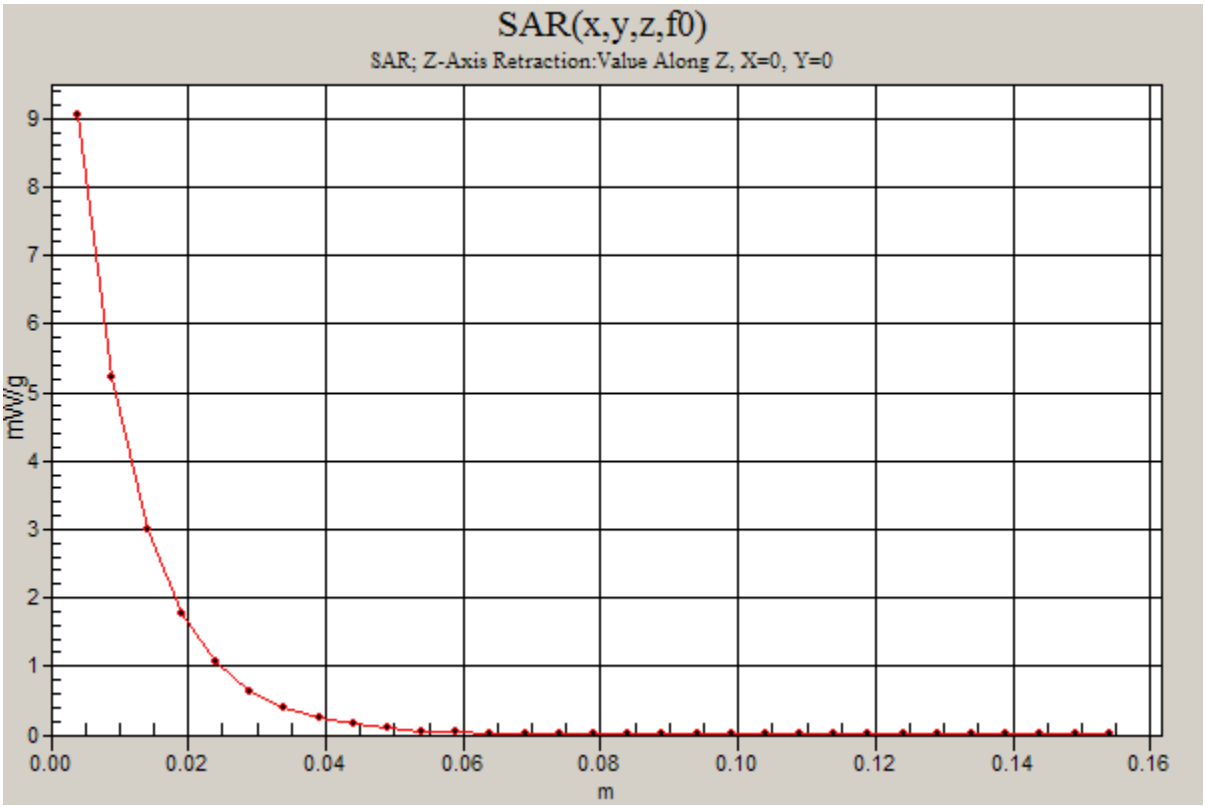
Daily SPC Check/Dipole Area Scan (9x4x1):
Measurement grid: dx=15mm, dy=15mm; Maximum value of SAR (measured) = 7.21 mW/g

Daily SPC Check/0-Degree 5x5x7 Cube (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm; Reference Value = 83.4 V/m; Power Drift = 0.00 dB
Peak SAR (extrapolated) = 13.7 W/kg; **SAR(1 g) = 8 mW/g; SAR(10 g) = 4.28 mW/g**
Maximum value of SAR (measured) = 9.01 mW/g

Daily SPC Check/90-Degree 5x5x7 Cube (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm; Reference Value = 83.4 V/m; Power Drift = 0.00 dB
Peak SAR (extrapolated) = 13.2 W/kg; **SAR(1 g) = 7.69 mW/g; SAR(10 g) = 4.12 mW/g**
Maximum value of SAR (measured) = 8.52 mW/g

Daily SPC Check/Z-Axis Retraction (1x1x31):
Measurement grid: dx=20mm, dy=20mm, dz=5mm
Maximum value of SAR (measured) = 9.05 mW/g


mW/g
9.05
7.24
5.43
3.62
1.81
0.00


SAR(x,y,z,f0)
SAR; Z-Axis Retraction:Value Along Z, X=0, Y=0
mW/g
m
0
1
2
3
4
5
6
7
8
9
0.00
0.02
0.04
0.06
0.08
0.10
0.12
0.14
0.16

Date/Time: 4/5/2005 6:33:09 AM

Test Laboratory: Motorola

040505 1800MHZ GOOD +1.5%

DUT: Dipole 1800 MHz; Type: D1800V2
Procedure Notes: 1800 MHz System Performance Check / Dipole Sn# 251tr; PM1 Power = 200 mW
Sim.Temp@ meas = 20*C; Sim.Temp@ SPC = 19.8*C; Room Temp@ SPC = 21*C

Communication System: CW - Dipole; Frequency: 1800 MHz; Duty Cycle: 1:1
Medium: VALIDATION Only; Medium parameters used: σ = 1.35 mho/m, ε_r = 38.6; ρ = 1000 kg/m^3
DASY4 Configuration:

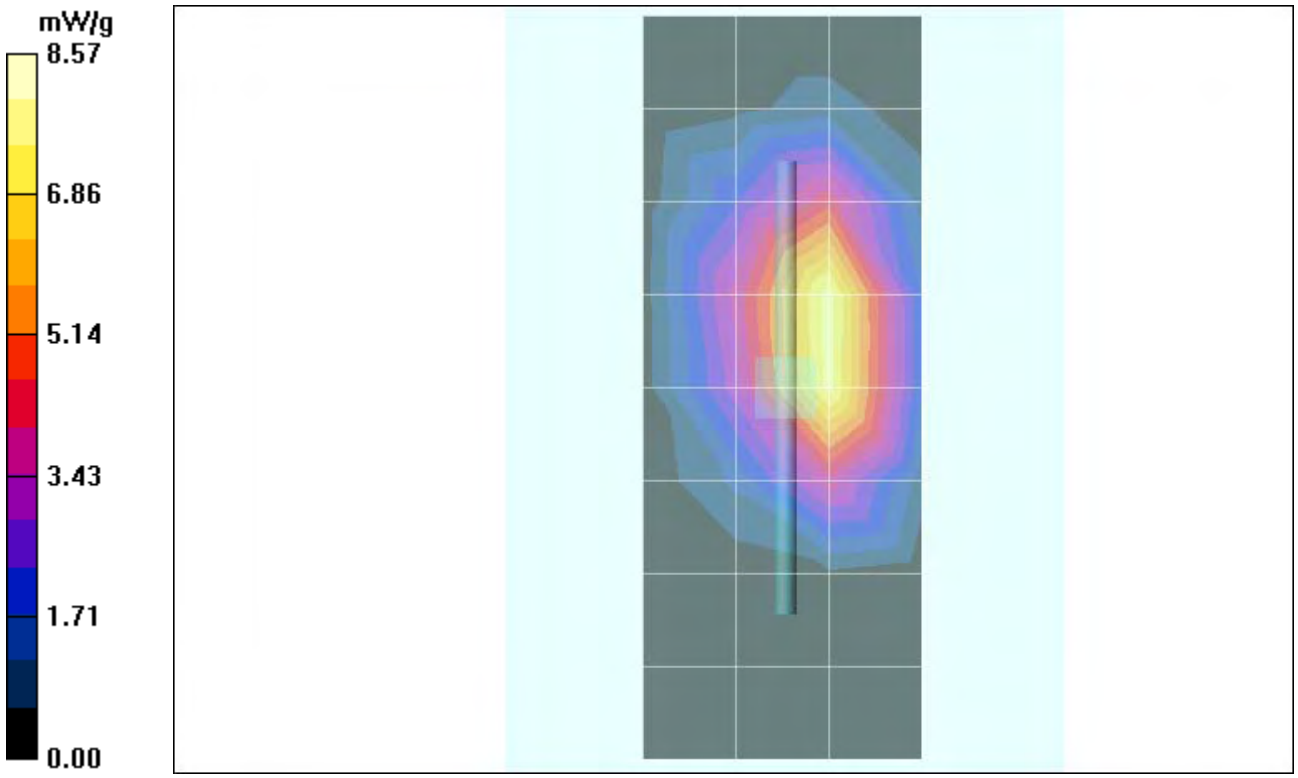
- Probe: ET3DV6 - SN1398; ConvF(5.12, 5.12, 5.12); Calibrated: 2/24/2005
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn316; Calibrated: 1/13/2005
- Phantom: R1: Sect.2, Amy Twin; Type: Amy Twin Flat; Serial: n/a;
- Measurement SW: DASY4, V4.4 Build 3; Postprocessing SW: SEMCAD, V1.8 Build 146

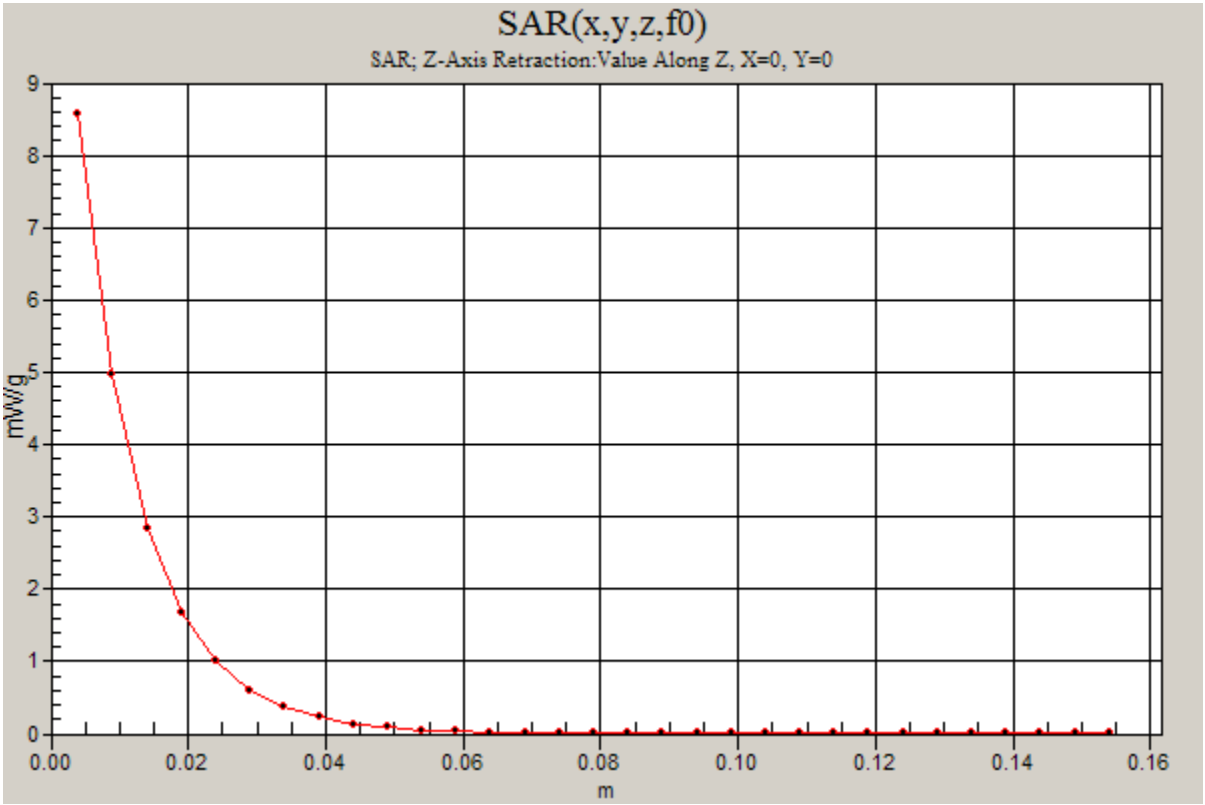
Daily SPC Check/Dipole Area Scan (9x4x1):
Measurement grid: dx=15mm, dy=15mm; Maximum value of SAR (measured) = 7.75 mW/g

Daily SPC Check/0-Degree 5x5x7 Cube (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm; Reference Value = 74.9 V/m; Power Drift = 0.022 dB
Peak SAR (extrapolated) = 12.8 W/kg; **SAR(1 g) = 7.58 mW/g; SAR(10 g) = 4.08 mW/g**
Maximum value of SAR (measured) = 8.53 mW/g

Daily SPC Check/90-Degree 5x5x7 Cube (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm; Reference Value = 74.9 V/m; Power Drift = 0.022 dB
Peak SAR (extrapolated) = 13.4 W/kg; **SAR(1 g) = 7.87 mW/g; SAR(10 g) = 4.2 mW/g**
Maximum value of SAR (measured) = 8.88 mW/g

Daily SPC Check/Z-Axis Retraction (1x1x31):
Measurement grid: dx=20mm, dy=20mm, dz=5mm
Maximum value of SAR (measured) = 8.57 mW/g


mW/g
8.57
6.86
5.14
3.43
1.71
0.00


SAR(x,y,z,f0)
SAR; Z-Axis Retraction:Value Along Z, X=0, Y=0
mW/g
m
0
1
2
3
4
5
6
7
8
9
0.00
0.02
0.04
0.06
0.08
0.10
0.12
0.14
0.16

Date/Time: 4/7/2005 4:11:42 PM

Test Laboratory: Motorola

040705 1800MHZ GOOD +2.3%

DUT: Dipole 1800 MHz; Type: D1800V2
Procedure Notes: 1800 MHz System Performance Check / Dipole Sn# 251TR; PM1 Power = 200 mW
Sim.Temp@ meas = 19.2*C; Sim.Temp@ SPC = 19*C; Room Temp@ SPC = 21*C

Communication System: CW - Dipole; Frequency: 1800 MHz; Duty Cycle: 1:1
Medium: VALIDATION Only; Medium parameters used: σ = 1.34 mho/m, ε_r = 38.7; ρ = 1000 kg/m^3
DASY4 Configuration:

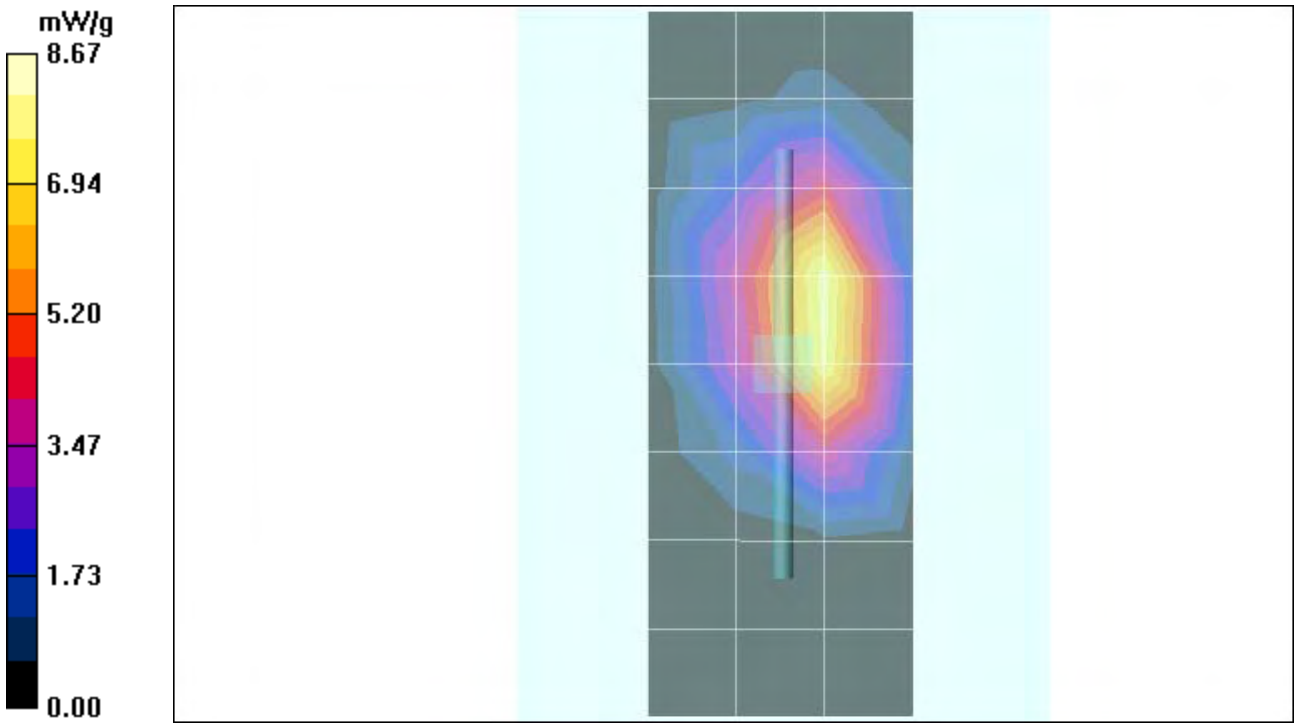
- Probe: ET3DV6 - SN1398; ConvF(5.12, 5.12, 5.12); Calibrated: 2/24/2005
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn316; Calibrated: 1/13/2005
- Phantom: R1: Sect.2, Amy Twin; Type: Amy Twin Flat; Serial: n/a;
- Measurement SW: DASY4, V4.4 Build 3; Postprocessing SW: SEMCAD, V1.8 Build 146

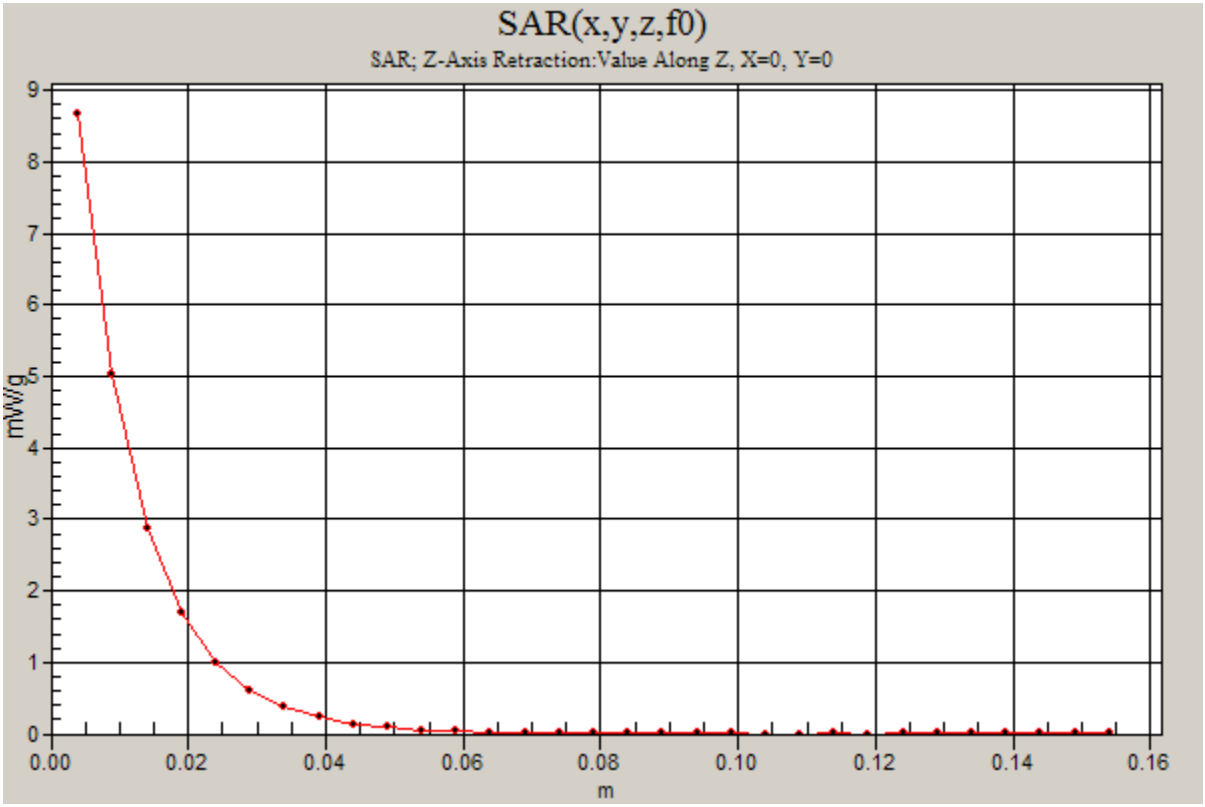
Daily SPC Check/Dipole Area Scan (9x4x1):
Measurement grid: dx=15mm, dy=15mm; Maximum value of SAR (measured) = 7.84 mW/g

Daily SPC Check/0-Degree 5x5x7 Cube (5x5x7)/Cube 0:
Measurement grid: dx=8mm,dy=8mm,dz=5mm; Reference Value = 76.9 V/m; Power Drift = -0.117 dB
Peak SAR (extrapolated) = 13.1 W/kg; **SAR(1 g) = 7.69 mW/g; SAR(10 g) = 4.12 mW/g**
Maximum value of SAR (measured) = 8.69 mW/g

Daily SPC Check/90-Degree 5x5x7 Cube (5x5x7)/Cube 0:
Measurement grid: dx=8mm,dy=8mm,dz=5mm; Reference Value = 76.9 V/m; Power Drift = -0.117 dB
Peak SAR (extrapolated) = 13.4 W/kg; **SAR(1 g) = 7.9 mW/g; SAR(10 g) = 4.22 mW/g**
Maximum value of SAR (measured) = 8.92 mW/g

Daily SPC Check/Z-Axis Retraction (1x1x31):
Measurement grid: dx=20mm, dy=20mm, dz=5mm
Maximum value of SAR (measured) = 8.67 mW/g


mW/g
8.67
6.94
5.20
3.47
1.73
0.00


SAR(x,y,z,f0)
SAR; Z-Axis Retraction:Value Along Z, X=0, Y=0
mW/g
m
0
1
2
3
4
5
6
7
8
9
0.00
0.02
0.04
0.06
0.08
0.10
0.12
0.14
0.16

Date/Time: 3/23/2005 1:47:50 PM

Test Laboratory: Motorola

032305 2450MHz GOOD +5.4%

DUT: Dipole 2450 MHz; Type: D2450V2
Procedure Notes: 2450 MHz; System Performance Check / Dipole Sn# 740; PM1 Power = 200mW
Sim.Temp@ meas=20.5*C; Sim.Temp@ SPC = 20.5*C; Room Temp@ SPC = 21*C

Communication System: CW - Dipole; Frequency: 2450 MHz; Duty Cycle: 1:1
Medium: VALIDATION Only; Medium parameters used: σ = 1.87 mho/m, ε_r = 39.1; ρ = 1000 kg/m^3
DASY4 Configuration:

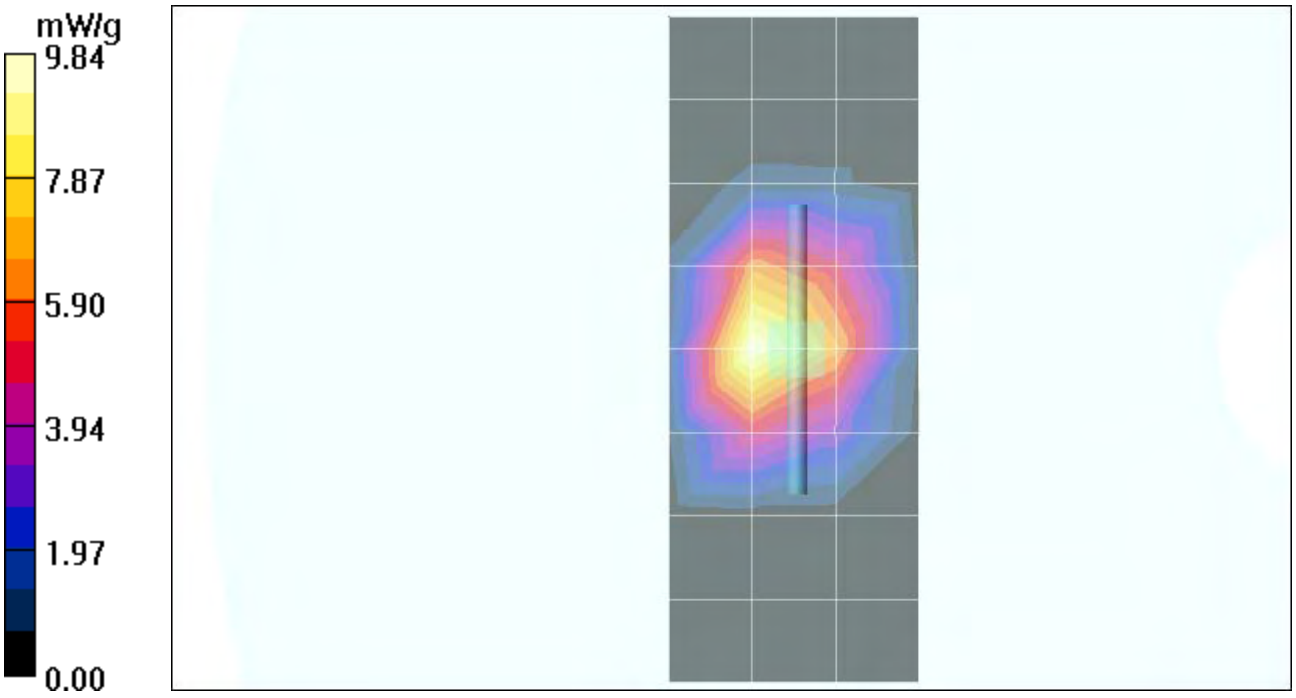
- Probe: ET3DV6 - SN1514; ConvF(4.46, 4.46, 4.46); Calibrated: 7/22/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn365; Calibrated: 9/22/2004
- Phantom: R4: Glycol SAM; Type: SAM; Serial: TP-1250;
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

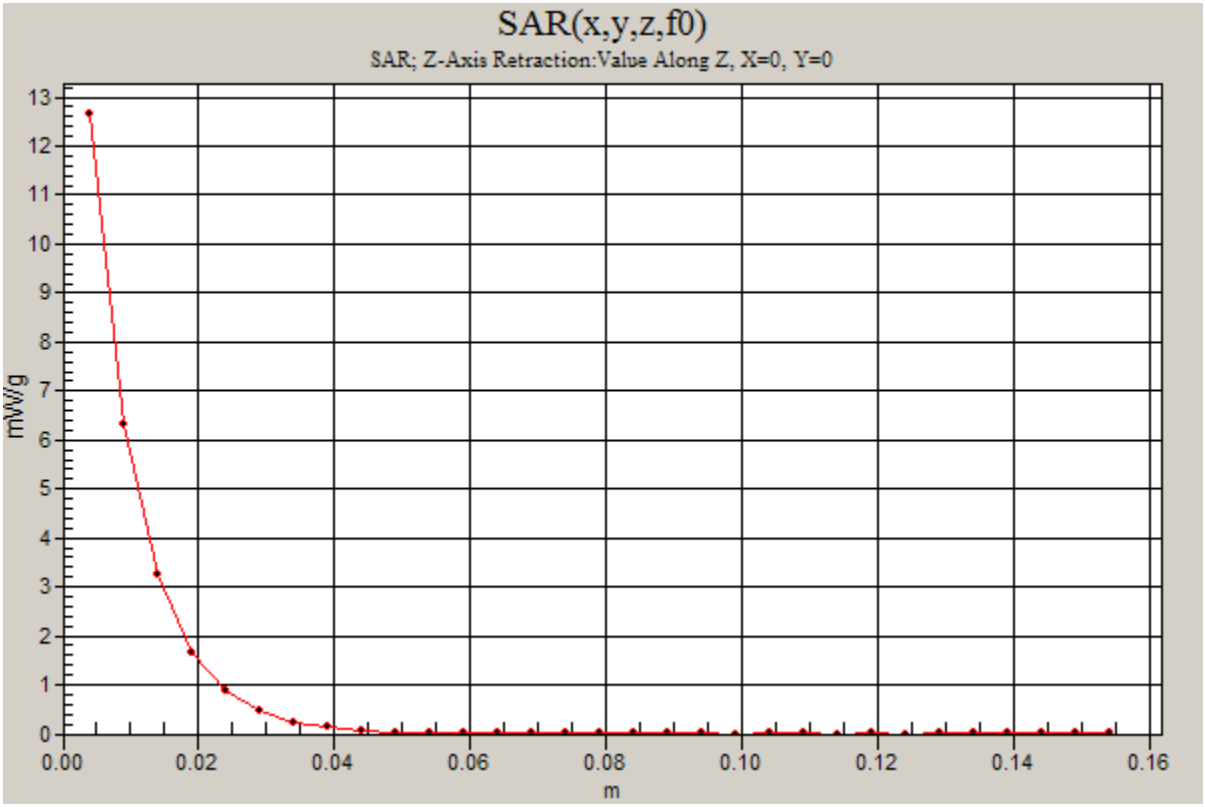
Daily SPC Check/Dipole Area Scan (4x9x1):
Measurement grid: dx=15mm, dy=15mm; Maximum value of SAR (measured) = 9.84 mW/g

Daily SPC Check/0-Degree 5x5x7 Cube (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm; Reference Value = 85.1 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 23.0 W/kg; **SAR(1 g) = 11 mW/g; SAR(10 g) = 5.13 mW/g**
Maximum value of SAR (measured) = 12.4 mW/g

Daily SPC Check/90-Degree 5x5x7 Cube (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm; Reference Value = 85.1 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 23.3 W/kg; **SAR(1 g) = 11.1 mW/g; SAR(10 g) = 5.19 mW/g**
Maximum value of SAR (measured) = 12.2 mW/g

Daily SPC Check/Z-Axis Retraction (1x1x31):
Measurement grid: dx=20mm, dy=20mm, dz=5mm
Maximum value of SAR (measured) = 12.7 mW/g


mW/g
9.84
7.87
5.90
3.94
1.97
0.00


SAR(x,y,z,f0)
SAR; Z-Axis Retraction:Value Along Z, X=0, Y=0
mW/g
m
0
1
2
3
4
5
6
7
8
9
10
11
12
13
0.00
0.02
0.04
0.06
0.08
0.10
0.12
0.14
0.16

Date/Time: 3/29/2005 11:10:05 AM

Test Laboratory: Motorola

032905 2450 MHz GOOD +6.4%

DUT: Dipole 2450 MHz; Type: D2450V2
Procedure Notes: 2450 MHz System Performance Check / Dipole Sn# 740; PM1 Power = 200mW
Sim.Temp@ meas=20.2*C; Sim.Temp@ SPC = 20.2*C; Room Temp@ SPC = 21*C

Communication System: CW - Dipole; Frequency: 2450 MHz; Duty Cycle: 1:1
Medium: VALIDATION Only; Medium parameters used: σ = 1.87 mho/m, ε_r = 39; ρ = 1000 kg/m^3
DASY4 Configuration:

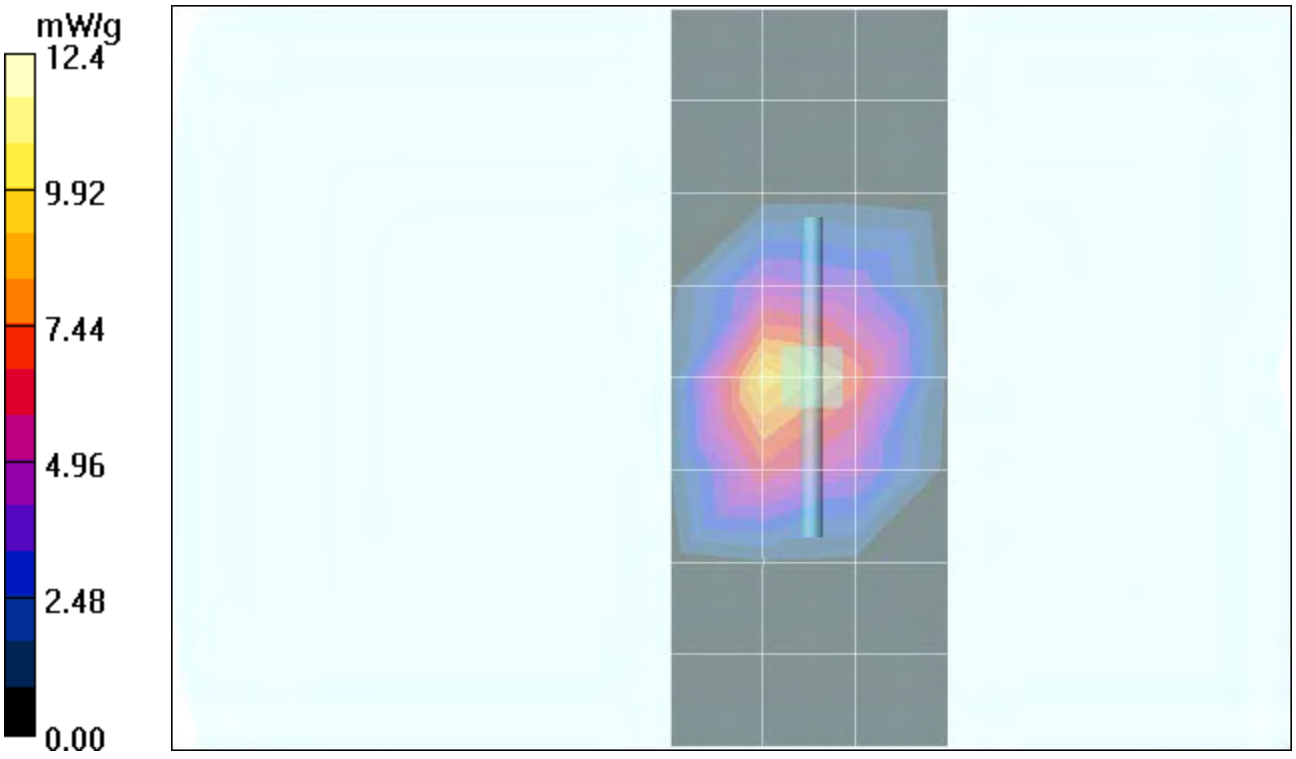
- Probe: ET3DV6 - SN1514; ConvF(4.46, 4.46, 4.46); Calibrated: 7/22/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn365; Calibrated: 9/22/2004
- Phantom: R4 Glycol SAM (extended range), Rev.1 (25-Mar-05); Type: SAM v4.0; Serial: TP-1250;
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

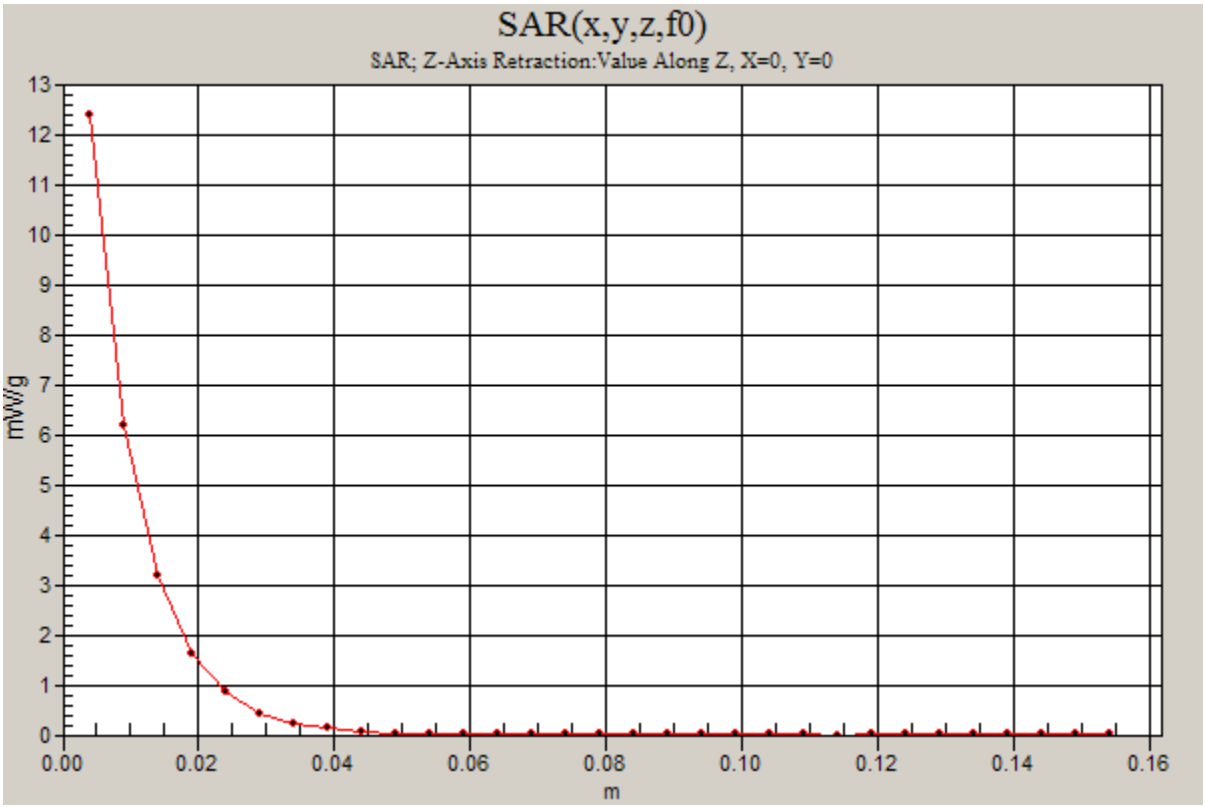
Daily SPC Check/Dipole Area Scan (4x9x1):
Measurement grid: dx=15mm, dy=15mm; Maximum value of SAR (measured) = 9.63 mW/g

Daily SPC Check/0-Degree 5x5x7 Cube (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm; Reference Value = 86.4 V/m; Power Drift = 0.00 dB
Peak SAR (extrapolated) = 23.4 W/kg; **SAR(1 g) = 11.2 mW/g; SAR(10 g) = 5.2 mW/g**
Maximum value of SAR (measured) = 12.6 mW/g

Daily SPC Check/90-Degree 5x5x7 Cube (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm; Reference Value = 86.4 V/m; Power Drift = 0.00 dB
Peak SAR (extrapolated) = 23.3 W/kg; **SAR(1 g) = 11.1 mW/g; SAR(10 g) = 5.2 mW/g**
Maximum value of SAR (measured) = 12.3 mW/g

Daily SPC Check/Z-Axis Retraction (1x1x31):
Measurement grid: dx=20mm, dy=20mm, dz=5mm;
Maximum value of SAR (measured) = 12.4 mW/g


mW/g
12.4
9.92
7.44
4.96
2.48
0.00


SAR(x,y,z,f0)
SAR; Z-Axis Retraction:Value Along Z, X=0, Y=0
mW/g
m
0.00
0.02
0.04
0.06
0.08
0.10
0.12
0.14
0.16
0
1
2
3
4
5
6
7
8
9
10
11
12
13

Date/Time: 4/6/2005 10:20:01 AM

Test Laboratory: Motorola

040605 2450 MHz GOOD +7.3%

DUT: Dipole 2450 MHz; Type: D2450V2
Procedure Notes: 2450 MHz System Performance Check / Dipole Sn# 740; PM1 Power = 200mW
Sim.Temp@ meas=20*C; Sim.Temp@ SPC = 20*C; Room Temp@ SPC = 21*C

Communication System: CW - Dipole; Frequency: 2450 MHz; Duty Cycle: 1:1
Medium: VALIDATION Only; Medium parameters used: σ = 1.87 mho/m, ε_r = 38.7; ρ = 1000 kg/m^3
DASY4 Configuration:

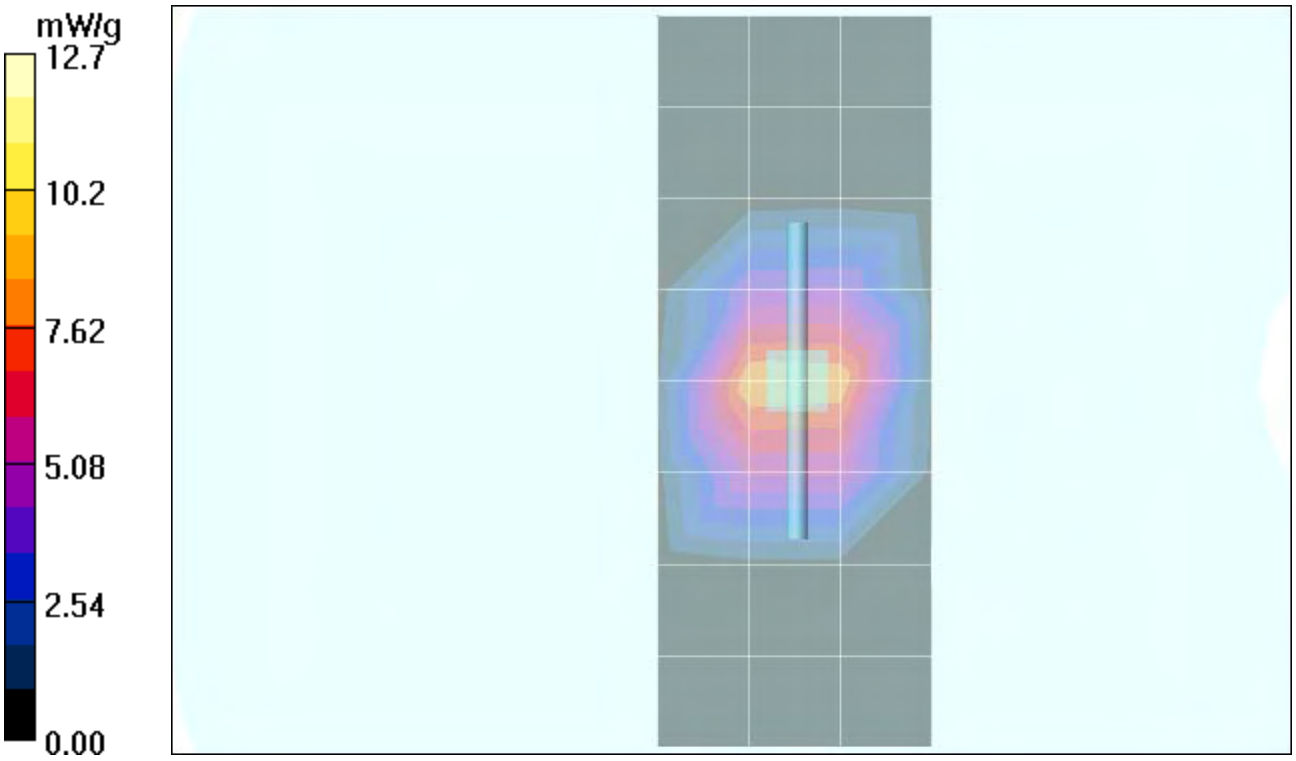
- Probe: ET3DV6 - SN1514; ConvF(4.46, 4.46, 4.46); Calibrated: 7/22/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn365; Calibrated: 9/22/2004
- Phantom: R4 Glycol SAM (extended range), Rev.1 (25-Mar-05); Type: SAM v4.0; Serial: TP-1250;
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

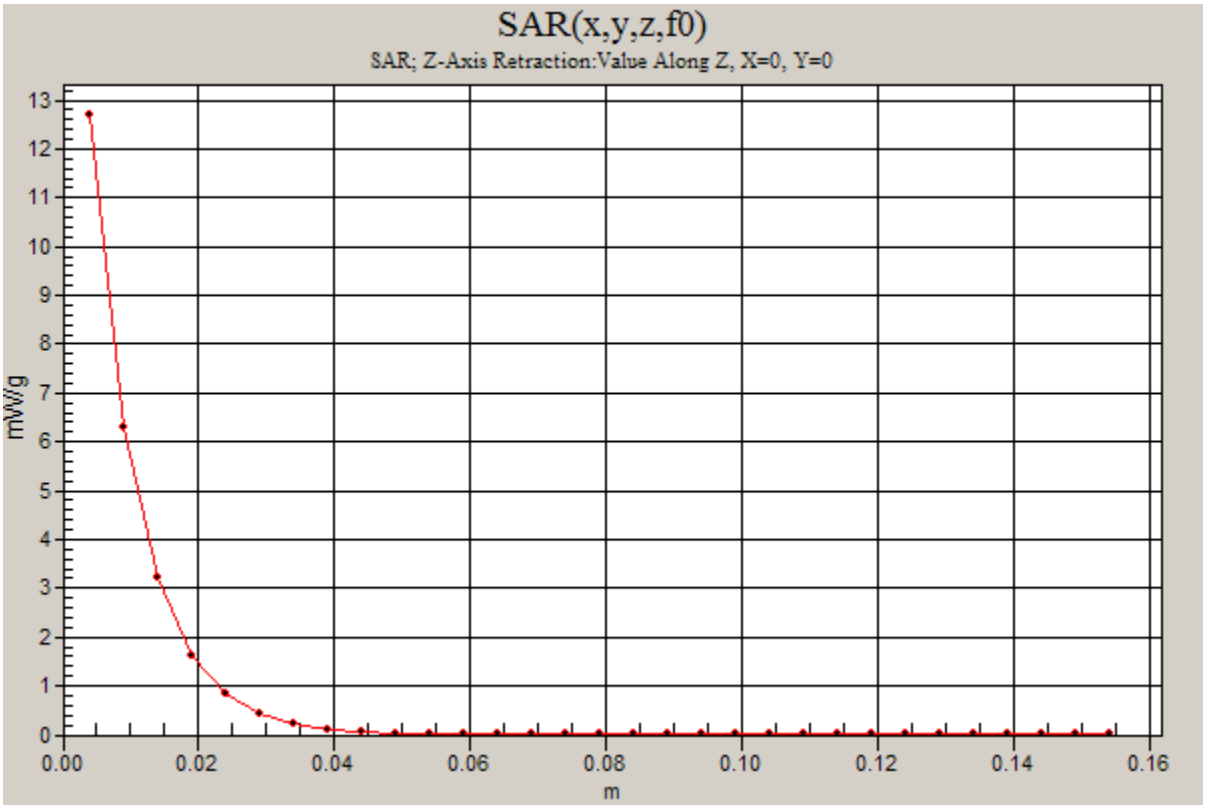
Daily SPC Check/Dipole Area Scan (4x9x1):
Measurement grid: dx=15mm, dy=15mm; Maximum value of SAR (measured) = 8.58 mW/g

Daily SPC Check/0-Degree 5x5x7 Cube (5x5x7)/Cube 0:
Measurement grid: dx=8mm,dy=8mm,dz=5mm; Reference Value = 87.8 V/m; Power Drift = -0.021 dB
Peak SAR (extrapolated) = 23.8 W/kg; **SAR(1 g) = 11.3 mW/g; SAR(10 g) = 5.21 mW/g**
Maximum value of SAR (measured) = 12.6 mW/g

Daily SPC Check/90-Degree 5x5x7 Cube (5x5x7)/Cube 0:
Measurement grid: dx=8mm,dy=8mm,dz=5mm; Reference Value = 87.8 V/m; Power Drift = -0.021 dB
Peak SAR (extrapolated) = 23.6 W/kg; **SAR(1 g) = 11.2 mW/g; SAR(10 g) = 5.2 mW/g**
Maximum value of SAR (measured) = 12.3 mW/g

Daily SPC Check/Z-Axis Retraction (1x1x31):
Measurement grid: dx=20mm, dy=20mm, dz=5mm;
Maximum value of SAR (measured) = 12.7 mW/g


mW/g
12.7
10.2
7.62
5.08
2.54
0.00


SAR(x,y,z,f0)
SAR; Z-Axis Retraction:Value Along Z, X=0, Y=0
mW/g
m
0.00
0.02
0.04
0.06
0.08
0.10
0.12
0.14
0.16

Date/Time: 5/6/2005 11:28:57 AM

Test Laboratory: Motorola

050605 2450 MHZ Good +8.8%

DUT: Dipole 2450 MHz; Type: D2450V2
Procedure Notes: 2450 MHz System Performance Check / Dipole Sn# 740; PM1 Power = 200 mW
Sim.Temp@ meas = 20.9*C; Sim.Temp@ SPC = 20.9*C; Room Temp@ SPC = 21*C

Communication System: CW - Dipole; Frequency: 2450 MHz; Duty Cycle: 1:1
Medium: VALIDATION Only; Medium parameters used: σ = 1.86 mho/m, ε_r = 38.4; ρ = 1000 kg/m^3
DASY4 Configuration:

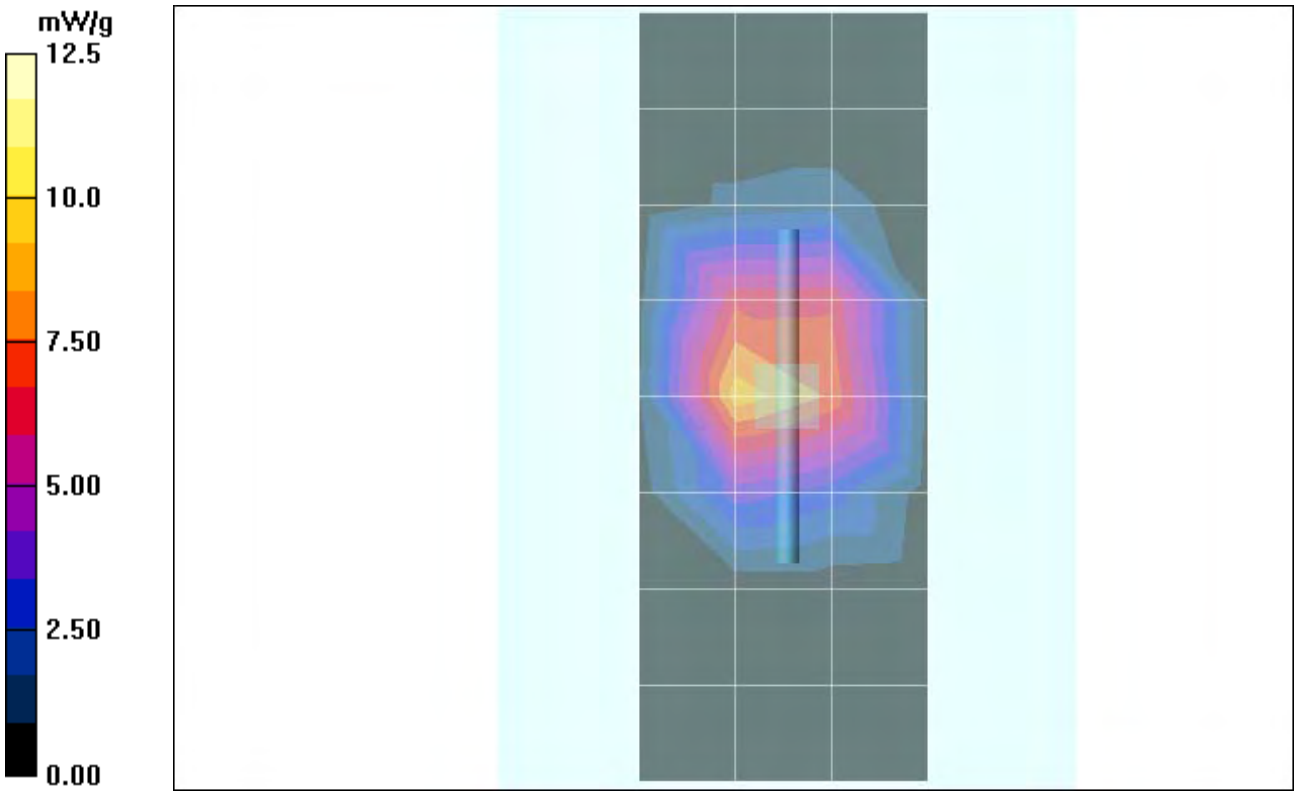
- Probe: ET3DV6 - SN1398; ConvF(4.5, 4.5, 4.5); Calibrated: 2/24/2005
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn316; Calibrated: 1/13/2005
- Phantom: R1: Sect.2, Amy Twin; Type: Amy Twin Flat; Serial: n/a;
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 147

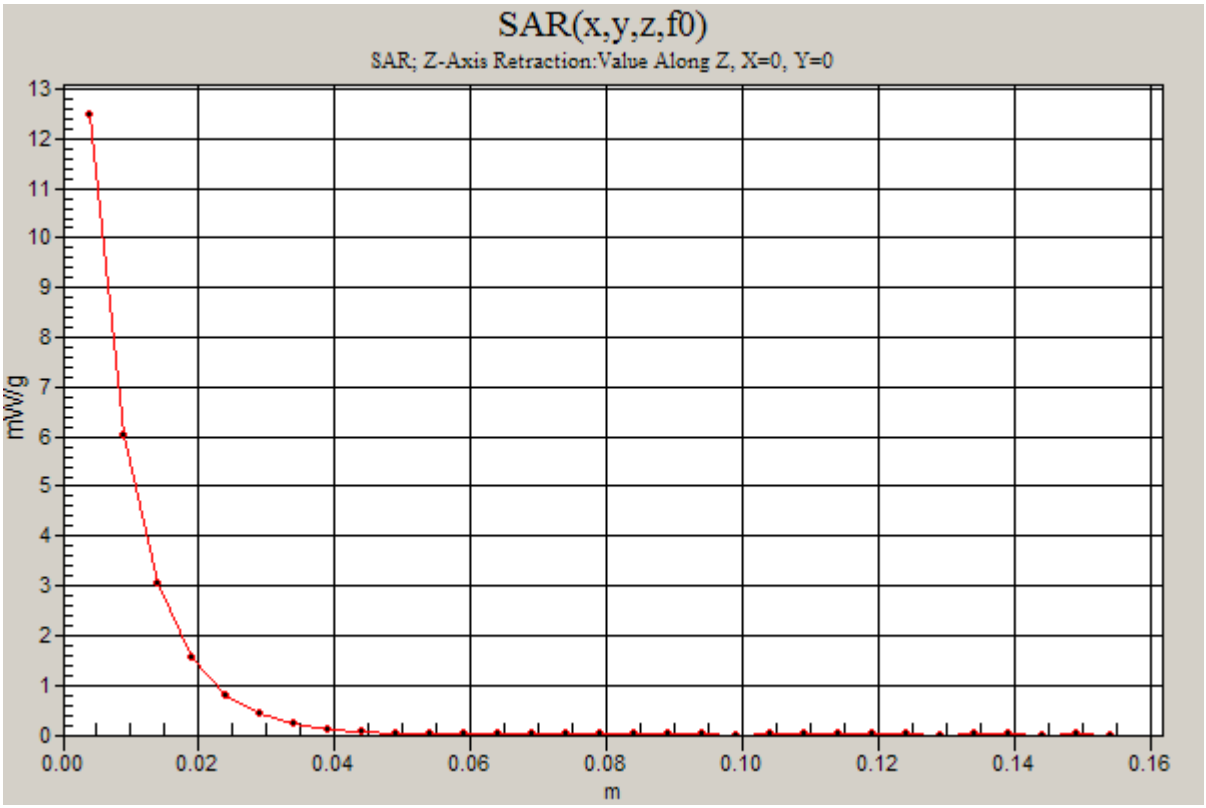
Daily SPC Check/Dipole Area Scan (9x4x1):
Measurement grid: dx=15mm, dy=15mm; Maximum value of SAR (measured) = 8.87 mW/g

Daily SPC Check/0-Degree 5x5x7 Cube (5x5x7)/Cube 0:
Measurement grid: dx=8mm,dy=8mm,dz=5mm; Reference Value = 85.0 V/m; Power Drift = -0.124 dB
Peak SAR (extrapolated) = 24.0 W/kg; **SAR(1 g) = 11.1 mW/g; SAR(10 g) = 5.14 mW/g**
Maximum value of SAR (measured) = 12.3 mW/g

Daily SPC Check/90-Degree 5x5x7 Cube (5x5x7)/Cube 0:
Measurement grid: dx=8mm,dy=8mm,dz=5mm; Reference Value = 85.0 V/m; Power Drift = -0.124 dB
Peak SAR (extrapolated) = 25.0 W/kg; **SAR(1 g) = 11.7 mW/g; SAR(10 g) = 5.41 mW/g**
Maximum value of SAR (measured) = 13.0 mW/g

Daily SPC Check/Z-Axis Retraction (1x1x31):
Measurement grid: dx=20mm, dy=20mm, dz=5mm;
Maximum value of SAR (measured) = 12.5 mW/g


mW/g
12.5
10.0
7.50
5.00
2.50
0.00


SAR(x,y,z,f0)
SAR; Z-Axis Retraction:Value Along Z, X=0, Y=0
mW/g
m
0.00
0.02
0.04
0.06
0.08
0.10
0.12
0.14
0.16

Appendix 2

SAR distribution plots for Phantom Head Adjacent Use

Date/Time: 3/24/2005 11:29:35 PM

Test Laboratory: Motorola

Serial: TA13602121
Procedure Notes: Ch# 251 / Pwr Step: 5 OTA; Antenna Position: FIXED; Accessory Model #: NONE; Battery Model #: SNN5683A; DEVICE POSITION: CHEEK

Communication System: GSM 850; Frequency: 848.8 MHz; Duty Cycle: 1:8
Medium: Low Freq Head; Medium parameters used: σ = 0.92 mho/m, ε_r = 42.9; ρ = 1000 kg/m^3

DASY4 Configuration:

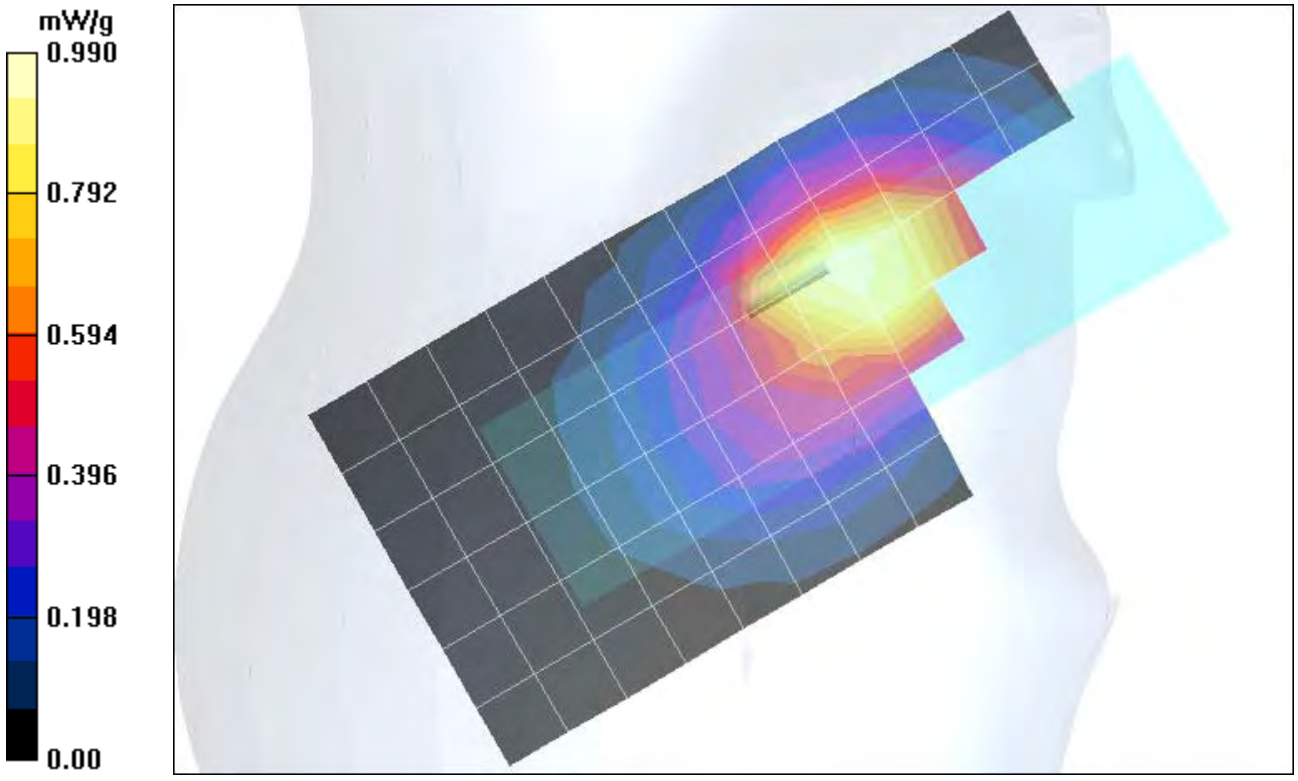
- Probe: ET3DV6R - SN1397; ConvF(6.1, 6.1, 6.1); Calibrated: 5/21/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn316; Calibrated: 1/13/2005
- Phantom: R1: Sugar SAM; Type: SAM; Serial: TP-1005;
- Measurement SW: DASY4, V4.4 Build 3; Postprocessing SW: SEMCAD, V1.8 Build 146

Right Head Template/Area Scan - Normal (15mm) (7x14x1):

Measurement grid: dx=15mm, dy=15mm; Maximum value of SAR (measured) = 0.990mW/g

Right Head Template/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm,dy=5mm,dz=5mm; Reference Value = 35.3V/m; **Power Drift = -0.063 dB**
Peak SAR (extrapolated) = 1.51 W/kg; **SAR(1 g) = 1.01 mW/g; SAR(10 g) = 0.665 mW/g**
Maximum value of SAR (measured) = 1.09 mW/g



Date/Time: 3/25/2005 11:45:55 PM

Test Laboratory: Motorola

Serial: TA13602121
Procedure Notes: Ch# 251 / Pwr Step: 5 OTA; Antenna Position: FIXED; Accessory Model #: NONE; Battery Model #: SNN5683A; DEVICE POSITION: CHEEK

Communication System: GSM 850; Frequency: 848.8 MHz; Duty Cycle: 1:8
Medium: Low Freq Head; Medium parameters used: σ = 0.94 mho/m, ε_r = 43; ρ = 1000 kg/m^3

DASY4 Configuration:

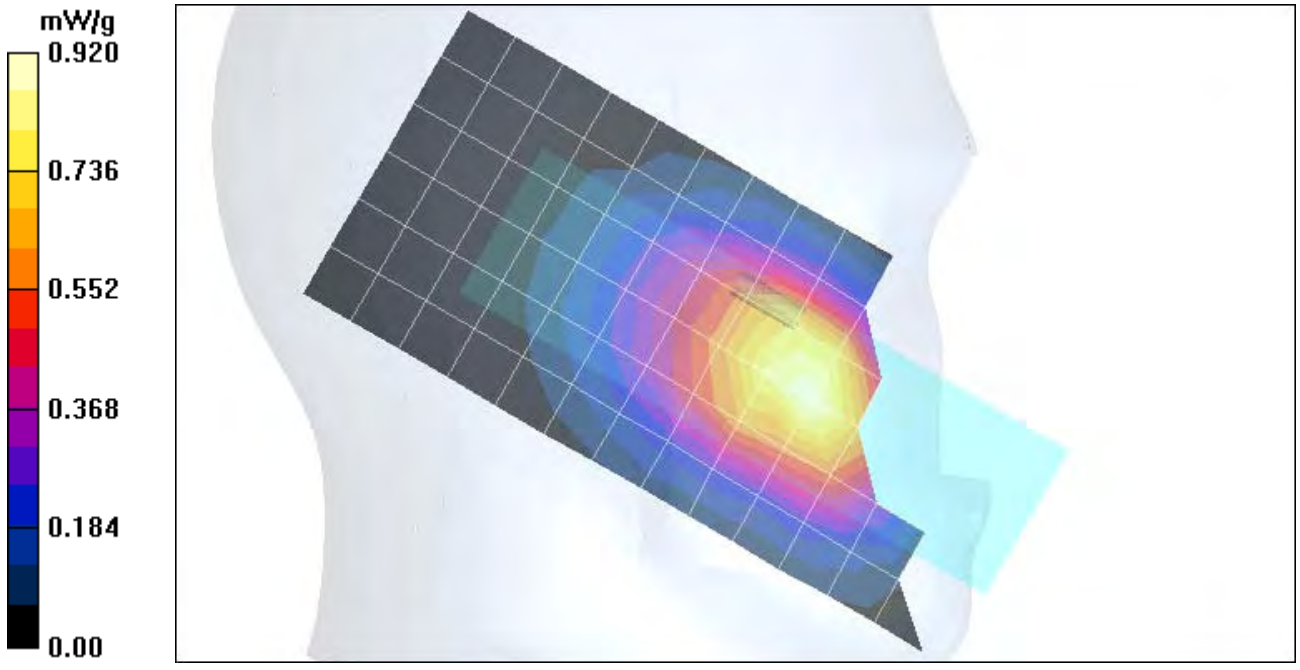
- Probe: ET3DV6R - SN1397; ConvF(6.1, 6.1, 6.1); Calibrated: 5/21/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn316; Calibrated: 1/13/2005
- Phantom: R1: Sugar SAM; Type: SAM; Serial: TP-1005;
- Measurement SW: DASY4, V4.4 Build 3; Postprocessing SW: SEMCAD, V1.8 Build 146

Left Head Template/Area Scan - Normal (15mm) (7x14x1):

Measurement grid: dx=15mm, dy=15mm; Maximum value of SAR (measured) = 0.920 mW/g

Left Head Template/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mm; Reference Value = 32.0 V/m; **Power Drift = 0.00 dB**
Peak SAR (extrapolated) = 1.27 W/kg; **SAR(1 g) = 0.917 mW/g; SAR(10 g) = 0.629 mW/g**
Maximum value of SAR (measured) = 0.969 mW/g



Date/Time: 3/24/2005 11:54:33 PM

Test Laboratory: Motorola

Serial: TA13602121
Procedure Notes: Ch# 190 / Pwr Step: 5 OTA; Antenna Position: FIXED; Accessory Model #: NONE; Battery Model #: SNN5683A; DEVICE POSITION: TILTED

Communication System: GSM 850; Frequency: 836.6 MHz; Duty Cycle: 1:8
Medium: Low Freq Head; Medium parameters used: σ = 0.92 mho/m, ε_r = 42.9; ρ = 1000 kg/m^3

DASY4 Configuration:

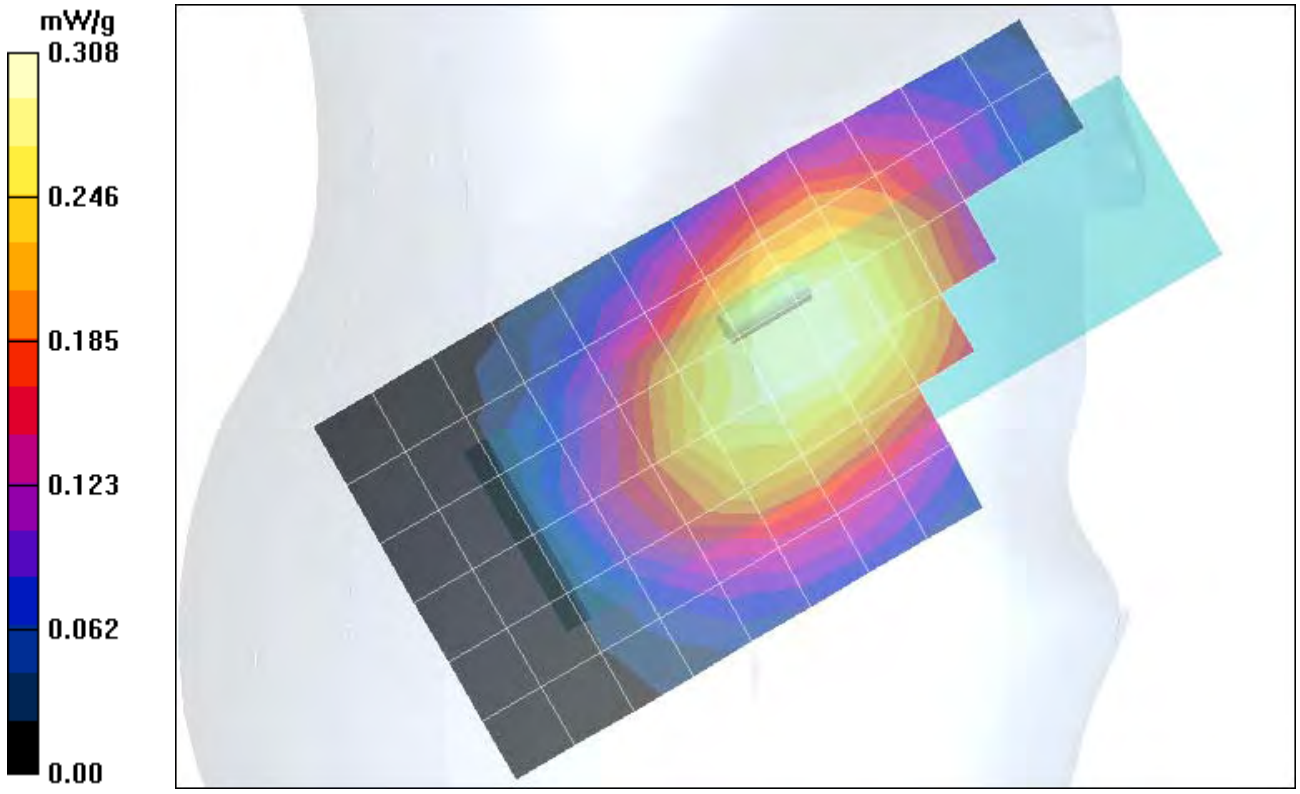
- Probe: ET3DV6R - SN1397; ConvF(6.1, 6.1, 6.1); Calibrated: 5/21/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn316; Calibrated: 1/13/2005
- Phantom: R1: Sugar SAM; Type: SAM; Serial: TP-1005;
- Measurement SW: DASY4, V4.4 Build 3; Postprocessing SW: SEMCAD, V1.8 Build 146

Right Head Template/Area Scan - Normal (15mm) (7x14x1):

Measurement grid: dx=15mm, dy=15mm; Maximum value of SAR (measured) = 0.308 mW/g

Right Head Template/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mm; Reference Value = 18.7V/m; **Power Drift = 0.077 dB**
Peak SAR (extrapolated) = 0.383 W/kg; **SAR(1 g) = 0.298 mW/g; SAR(10 g) = 0.227 mW/g**
Maximum value of SAR (measured) = 0.315 mW/g



Date/Time: 3/24/2005 10:11:33 PM

Test Laboratory: Motorola

Serial: TA13602121
Procedure Notes: Ch# 190 / Pwr Step: 5 OTA; Antenna Position: FIXED; Accessory Model #: NONE; Battery Model #: SNN5683A; DEVICE POSITION: TILTED

Communication System: GSM 850; Frequency: 836.6 MHz; Duty Cycle: 1:8
Medium: Low Freq Head; Medium parameters used: σ = 0.92 mho/m, ε_r = 42.9; ρ = 1000 kg/m^3

DASY4 Configuration:

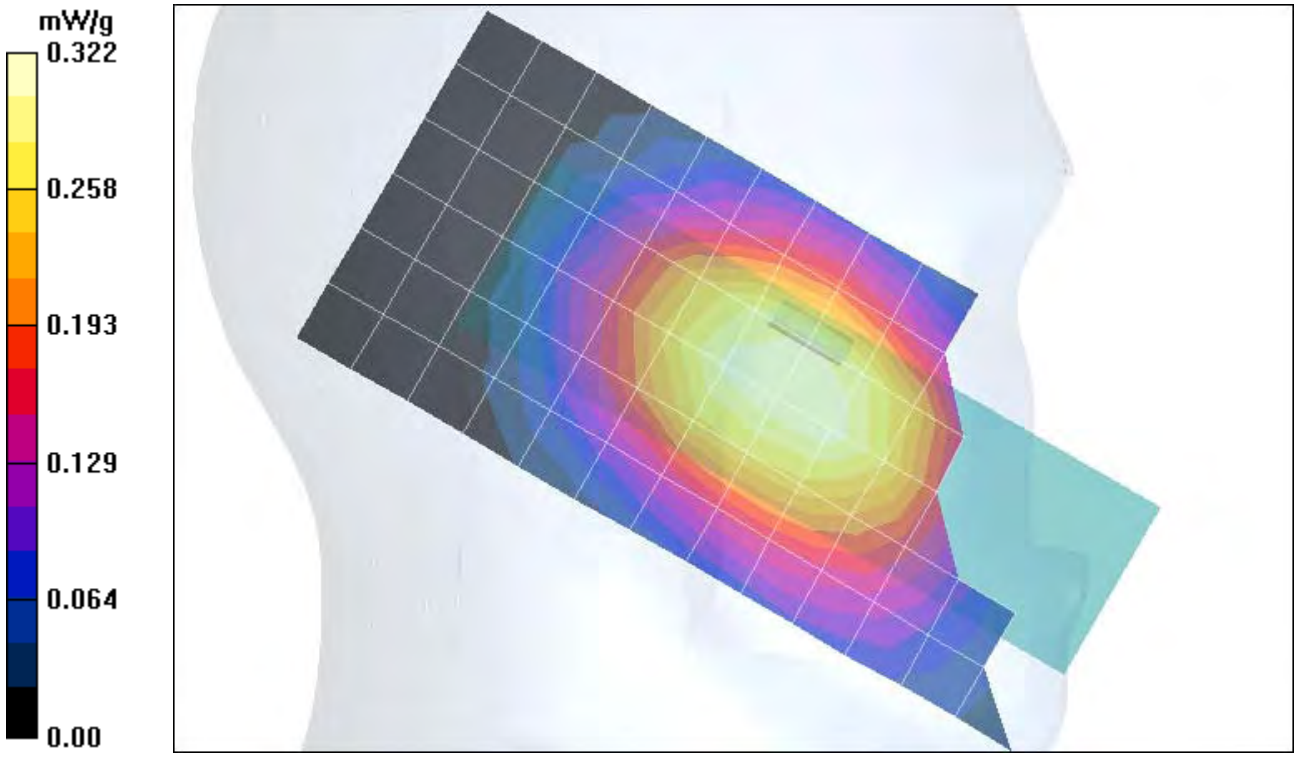
- Probe: ET3DV6R - SN1397; ConvF(6.1, 6.1, 6.1); Calibrated: 5/21/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn316; Calibrated: 1/13/2005
- Phantom: R1: Sugar SAM; Type: SAM; Serial: TP-1005;
- Measurement SW: DASY4, V4.4 Build 3; Postprocessing SW: SEMCAD, V1.8 Build 146

Left Head Template/Area Scan - Normal (15mm) (7x14x1):

Measurement grid: dx=15mm, dy=15mm; Maximum value of SAR (measured) = 0.322 mW/g

Left Head Template/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mm; Reference Value = 19.3V/m; **Power Drift = 0.041 dB**
Peak SAR (extrapolated) = 0.411 W/kg; **SAR(1 g) = 0.319 mW/g; SAR(10 g) = 0.241 mW/g**
Maximum value of SAR (measured) = 0.333 mW/g



Date/Time: 3/28/2005 1:41:32 AM

Test Laboratory: Motorola

Serial: TA13602121
Procedure Notes: Ch# 251 / Pwr Step: 5 OTA; Antenna Position: FIXED; Accessory Model #: n/a; Battery Model #: SNN5704A; DEVICE POSITION: CHEEK

Communication System: GSM 850; Frequency: 848.8 MHz; Duty Cycle: 1:8
Medium: Low Freq Head; Medium parameters used: σ = 0.9 mho/m, ε_r = 41.3; ρ = 1000 kg/m^3
DASY4 Configuration:

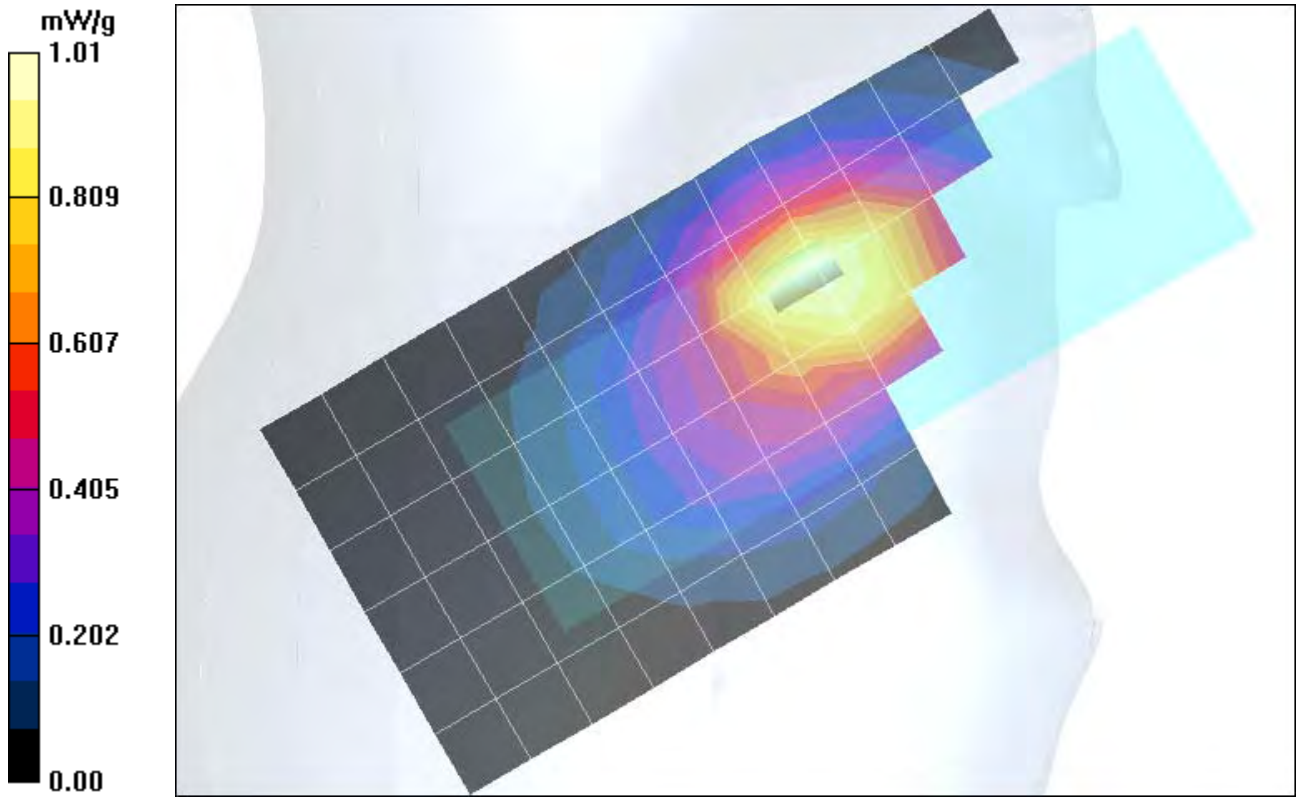
- Probe: ET3DV6R - SN1397; ConvF(6.1, 6.1, 6.1); Calibrated: 5/21/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn316; Calibrated: 1/13/2005
- Phantom: R1: Sugar SAM; Type: SAM; Serial: TP-1005;
- Measurement SW: DASY4, V4.4 Build 3; Postprocessing SW: SEMCAD, V1.8 Build 146

Right Head Template/Area Scan - Normal (15mm) (7x14x1):

Measurement grid: dx=15mm, dy=15mm; Maximum value of SAR (measured) = 1.01 mW/g

Right Head Template/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm,dy=5mm,dz=5mm; Reference Value = 35.6 V/m; **Power Drift = -0.046 dB**
Peak SAR (extrapolated) = 1.53 W/kg; **SAR(1 g) = 0.992 mW/g; SAR(10 g) = 0.654 mW/g**
Maximum value of SAR (measured) = 1.07 mW/g



Date/Time: 3/29/2005 9:20:18 PM

Test Laboratory: Motorola

Serial: TA13602121
Procedure Notes: Ch# 251 / Pwr Step: 5 OTA; Antenna Position: FIXED; Accessory Model #: NONE; Battery Model #: SNN5683A (rev B); DEVICE POSITION: CHEEK

Communication System: GSM 850; Frequency: 848.8 MHz; Duty Cycle: 1:8
Medium: Low Freq Head; Medium parameters used: σ = 0.92 mho/m, ε_r = 42.8; ρ = 1000 kg/m^3
DASY4 Configuration:

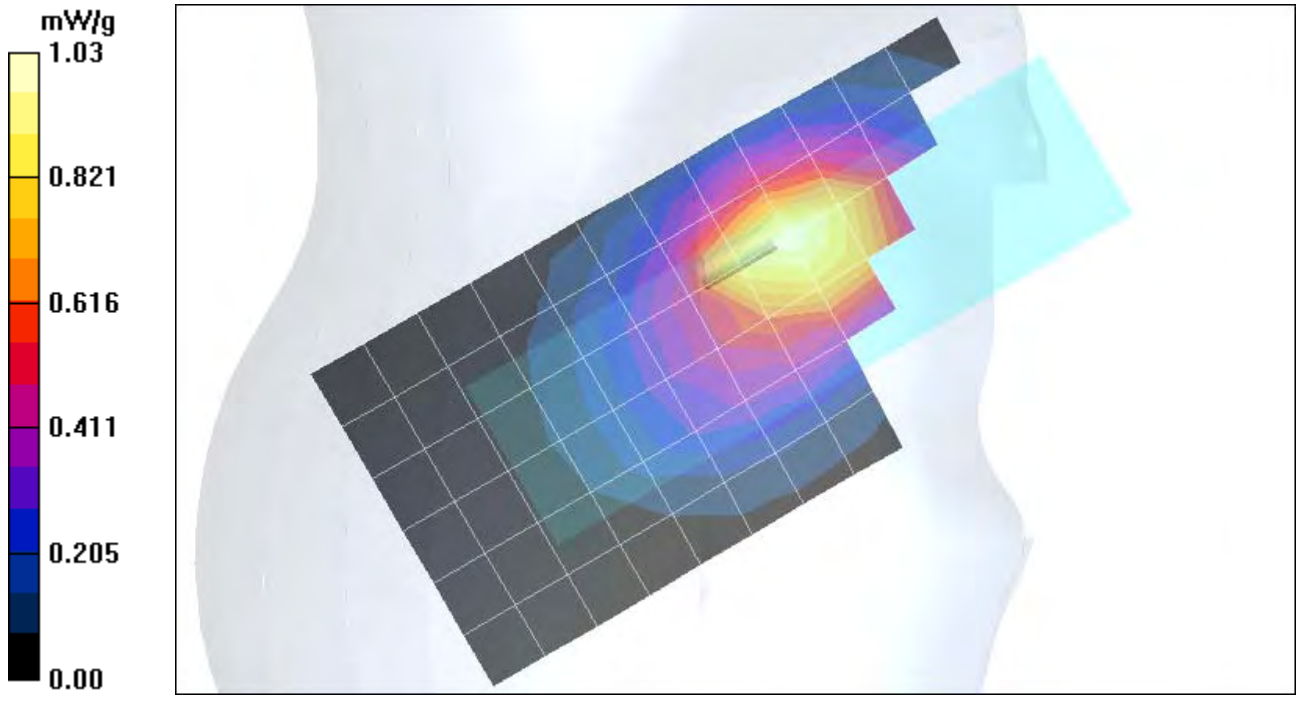
- Probe: ET3DV6R - SN1397; ConvF(6.1, 6.1, 6.1); Calibrated: 5/21/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn316; Calibrated: 1/13/2005
- Phantom: R1: Sugar SAM; Type: SAM; Serial: TP-1005;
- Measurement SW: DASY4, V4.4 Build 3; Postprocessing SW: SEMCAD, V1.8 Build 146

Right Head Template/Area Scan - Normal (15mm) (7x14x1):

Measurement grid: dx=15mm, dy=15mm; Maximum value of SAR (measured) = 1.03 mW/g

Right Head Template/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm,dy=5mm,dz=5mm; Reference Value = 34.8 V/m; **Power Drift = -0.045 dB**
Peak SAR (extrapolated) = 1.53 W/kg; **SAR(1 g) = 0.998 mW/g; SAR(10 g) = 0.655 mW/g**
Maximum value of SAR (measured) = 1.07 mW/g



Date/Time: 3/22/2005 7:43:09 PM

Test Laboratory: Motorola

Serial: TA13602121
Procedure Notes: Ch# 661 / Pwr Step: 0 OTA; Antenna Position: FIXED; Accessory Model #: NONE; Battery Model #: SNN5683A; DEVICE POSITION: CHEEK

Communication System: GSM 1900; Frequency: 1880 MHz; Duty Cycle: 1:8
Medium: Regular Glycol Head; Medium parameters used: σ = 1.45 mho/m, ε_r = 38.2; ρ = 1000 kg/m^3
DASY4 Configuration:

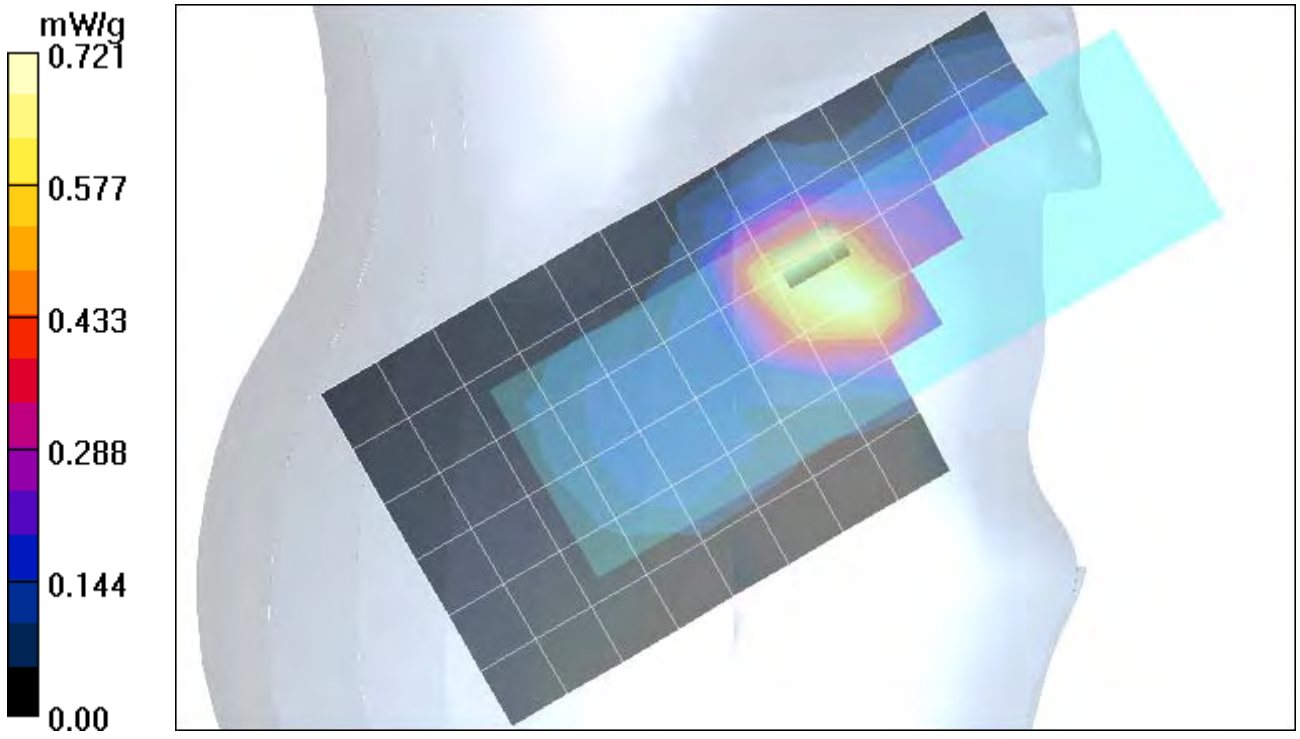
- Probe: ET3DV6R - SN1397; ConvF(5.09, 5.09, 5.09); Calibrated: 5/21/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn316; Calibrated: 1/13/2005
- Phantom: R1: Glycol SAM; Type: SAM; Serial: TP-1154;
- Measurement SW: DASY4, V4.4 Build 3; Postprocessing SW: SEMCAD, V1.8 Build 146

Right Head Template/Area Scan - Normal (15mm) (7x14x1):

Measurement grid: dx=15mm, dy=15mm; Maximum value of SAR (measured) = 0.721 mW/g

Right Head Template/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm,dy=5mm,dz=5mm; Reference Value = 24.0 V/m; **Power Drift = -0.082 dB**
Peak SAR (extrapolated) = 1.18 W/kg; **SAR(1 g) = 0.717 mW/g; SAR(10 g) = 0.403 mW/g**
Maximum value of SAR (measured) = 0.781 mW/g



Date/Time: 3/22/2005 6:25:04 PM

Test Laboratory: Motorola

Serial: TA13602121
Procedure Notes: Ch# 661 / Pwr Step: 0 OTA; Antenna Position: FIXED; Accessory Model #: NONE; Battery Model #: SNN5683A; DEVICE POSITION: CHEEK

Communication System: GSM 1900; Frequency: 1880 MHz; Duty Cycle: 1:8
Medium: Regular Glycol Head; Medium parameters used: σ = 1.45 mho/m, ε_r = 38.2; ρ = 1000 kg/m^3
DASY4 Configuration:

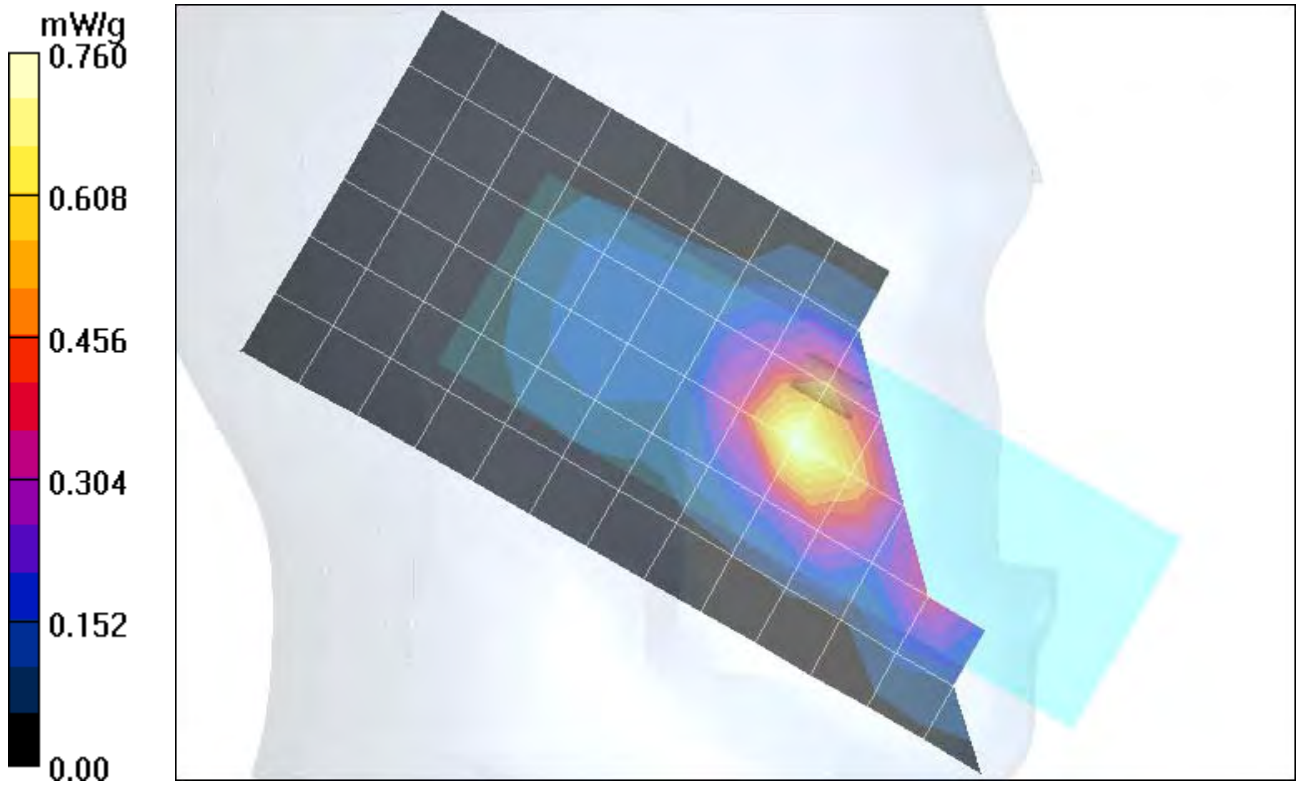
- Probe: ET3DV6R - SN1397; ConvF(5.09, 5.09, 5.09); Calibrated: 5/21/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn316; Calibrated: 1/13/2005
- Phantom: R1: Glycol SAM; Type: SAM; Serial: TP-1154;
- Measurement SW: DASY4, V4.4 Build 3; Postprocessing SW: SEMCAD, V1.8 Build 146

Left Head Template/Area Scan - Normal (15mm) (7x14x1):

Measurement grid: dx=15mm, dy=15mm; Maximum value of SAR (measured) = 0.760 mW/g

Left Head Template/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm,dy=5mm,dz=5mm; Reference Value = 21.1 V/m; **Power Drift = 0.033 dB**
Peak SAR (extrapolated) = 1.30 W/kg; **SAR(1 g) = 0.769 mW/g; SAR(10 g) = 0.415 mW/g**
Maximum value of SAR (measured) = 0.826 mW/g



Date/Time: 3/22/2005 8:55:44 PM

Test Laboratory: Motorola

Serial: TA13602121
Procedure Notes: Ch# 661 / Pwr Step: 0 OTA; Antenna Position: FIXED; Accessory Model #: NONE; Battery Model #: SNN5683A; DEVICE POSITION: TILTED

Communication System: GSM 1900; Frequency: 1880 MHz; Duty Cycle: 1:8
Medium: Regular Glycol Head; Medium parameters used: σ = 1.45 mho/m, ε_r = 38.2; ρ = 1000 kg/m^3
DASY4 Configuration:

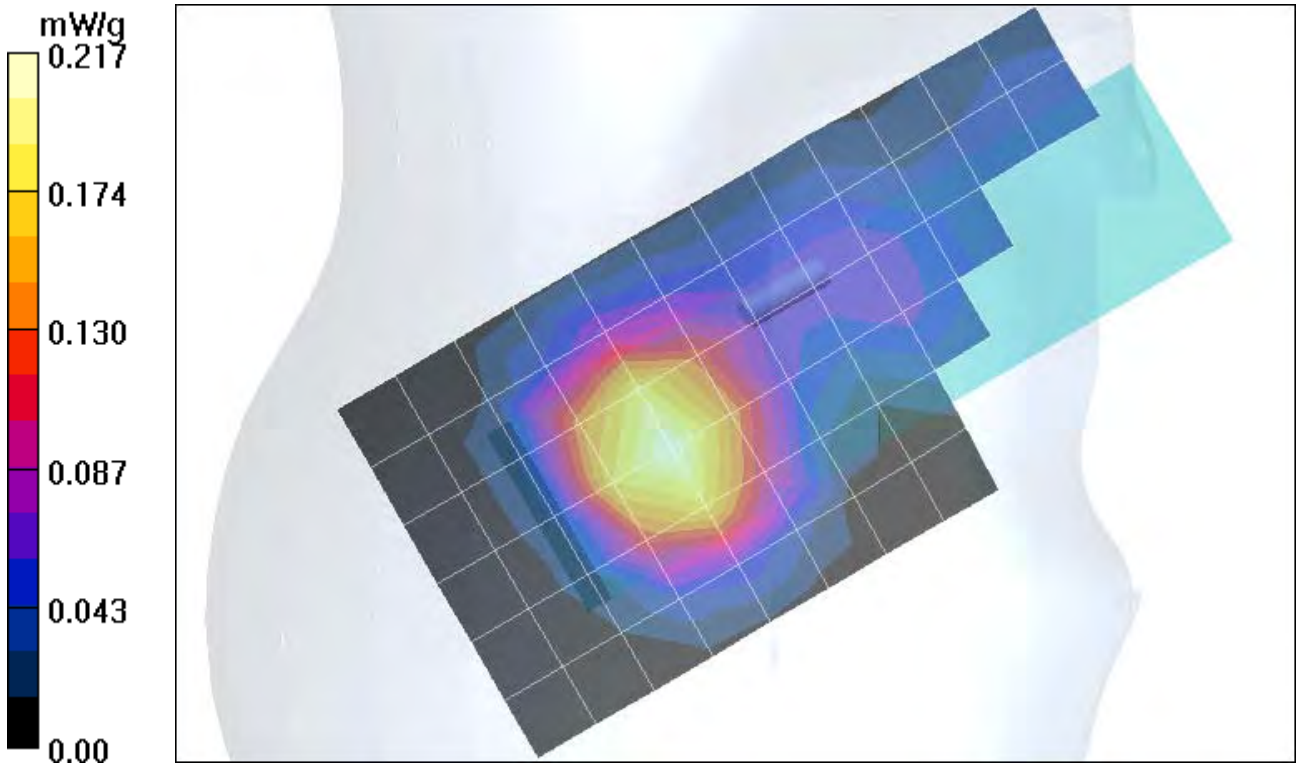
- Probe: ET3DV6R - SN1397; ConvF(5.09, 5.09, 5.09); Calibrated: 5/21/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn316; Calibrated: 1/13/2005
- Phantom: R1: Glycol SAM; Type: SAM; Serial: TP-1154;
- Measurement SW: DASY4, V4.4 Build 3; Postprocessing SW: SEMCAD, V1.8 Build 146

Right Head Template/Area Scan - Normal (15mm) (7x14x1):

Measurement grid: dx=15mm, dy=15mm; Maximum value of SAR (measured) = 0.217 mW/g

Right Head Template/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm,dy=5mm,dz=5mm; Reference Value = 12.5 V/m; **Power Drift = -0.020 dB**
Peak SAR (extrapolated) = 0.294 W/kg; **SAR(1 g) = 0.205 mW/g; SAR(10 g) = 0.131 mW/g**
Maximum value of SAR (measured) = 0.220 mW/g



Date/Time: 3/22/2005 7:12:17 PM

Test Laboratory: Motorola

Serial: TA13602121
Procedure Notes: Ch# 661 / Pwr Step: 0 OTA; Antenna Position: FIXED; Accessory Model #: NONE; Battery Model #: SNN5683A; DEVICE POSITION: TILTED

Communication System: GSM 1900; Frequency: 1880 MHz; Duty Cycle: 1:8
Medium: Regular Glycol Head; Medium parameters used: σ = 1.45 mho/m, ε_r = 38.2; ρ = 1000 kg/m^3
DASY4 Configuration:

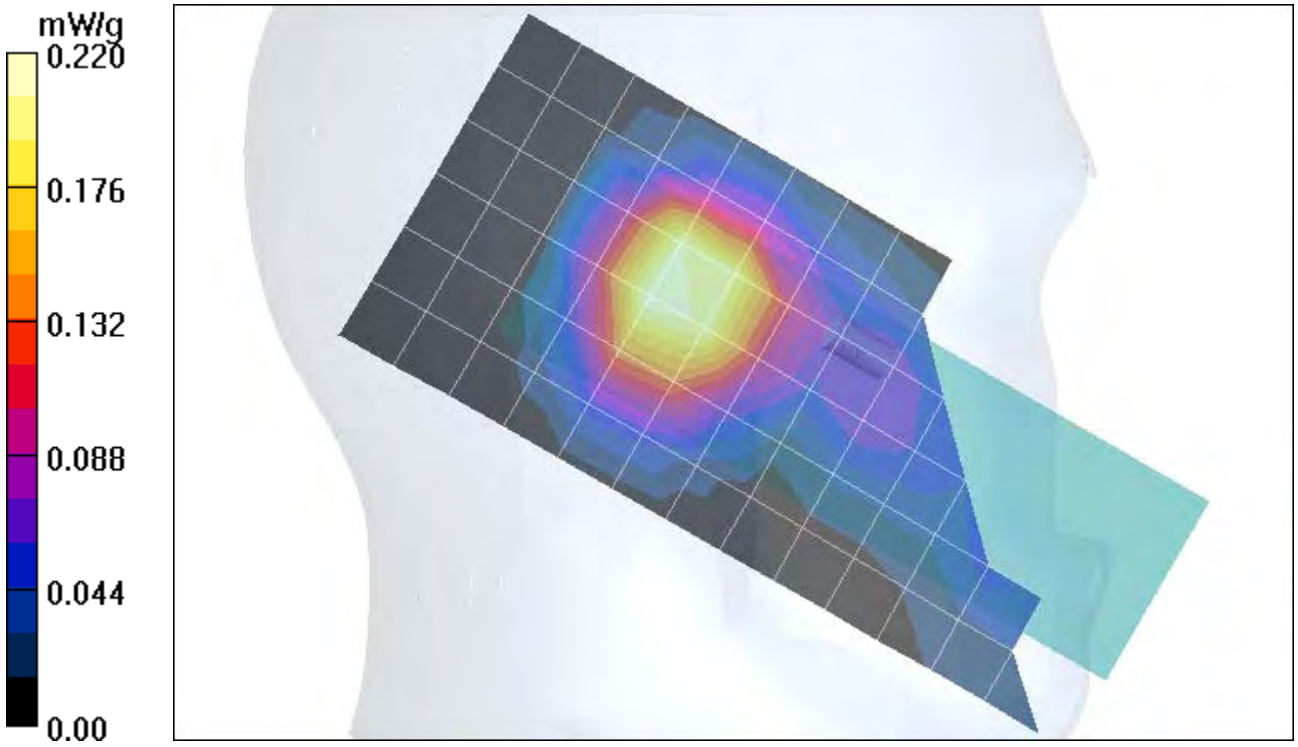
- Probe: ET3DV6R - SN1397; ConvF(5.09, 5.09, 5.09); Calibrated: 5/21/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn316; Calibrated: 1/13/2005
- Phantom: R1: Glycol SAM; Type: SAM; Serial: TP-1154;
- Measurement SW: DASY4, V4.4 Build 3; Postprocessing SW: SEMCAD, V1.8 Build 146

Left Head Template/Area Scan - Normal (15mm) (7x14x1):

Measurement grid: dx=15mm, dy=15mm; Maximum value of SAR (measured) = 0.220 mW/g

Left Head Template/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mm; Reference Value = 13.4 V/m; **Power Drift = 0.00 dB**
Peak SAR (extrapolated) = 0.332 W/kg; **SAR(1 g) = 0.229 mW/g; SAR(10 g) = 0.144 mW/g**
Maximum value of SAR (measured) = 0.246 mW/g



Date/Time: 3/27/2005 2:12:16 AM

Test Laboratory: Motorola

Serial: TA13602121
Procedure Notes: Ch# 661 / Pwr Step: 0 (OTA); Antenna Position: Fixed; Accessory Model #: NONE; Battery Model #: SNN5704A; DEVICE POSITION: Cheek

Communication System: GSM 1900; Frequency: 1880 MHz; Duty Cycle: 1:8
Medium: Back-Up Glycol Head; Medium parameters used: σ = 1.44 mho/m, ε_r = 39.7; ρ = 1000 kg/m^3
DASY4 Configuration:

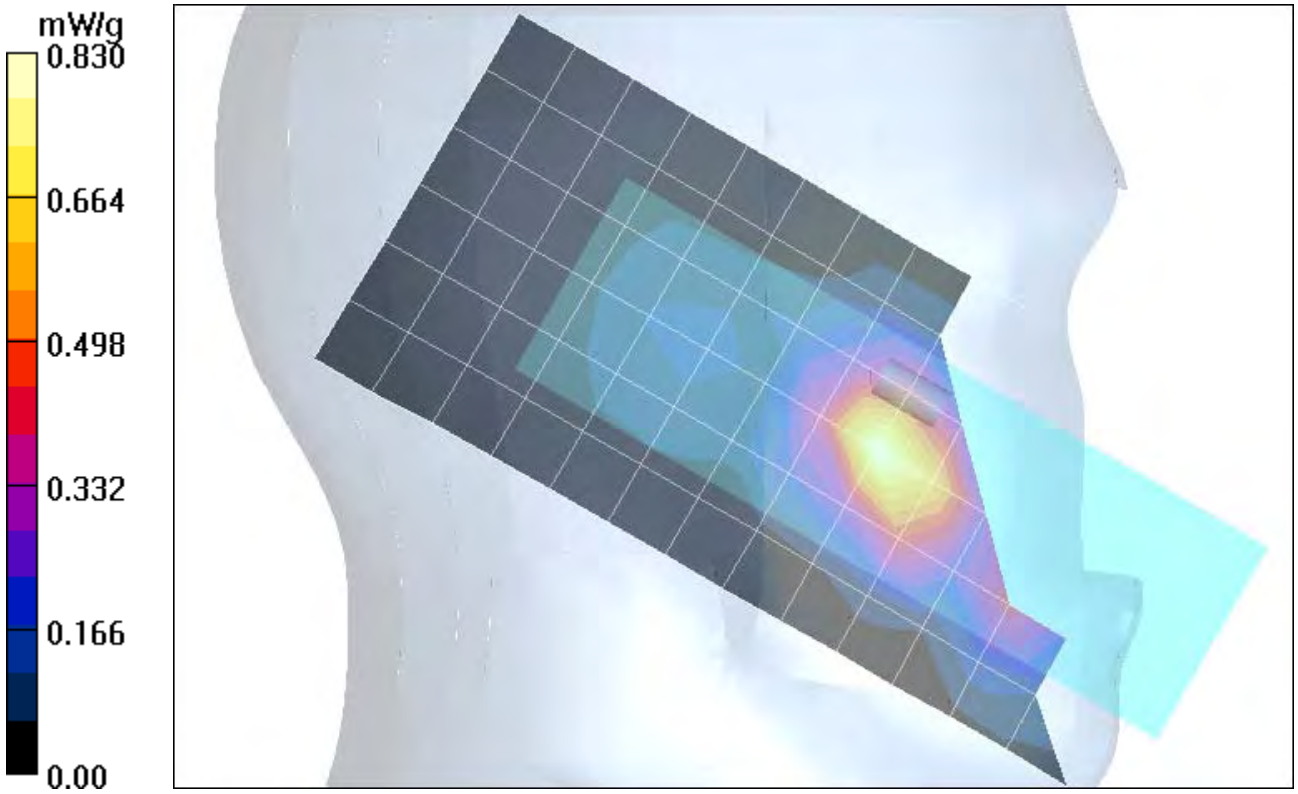
- Probe: ET3DV6R - SN1397; ConvF(5.09, 5.09, 5.09); Calibrated: 5/21/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn316; Calibrated: 1/13/2005
- Phantom: R1: Glycol SAM; Type: SAM; Serial: TP-1154;
- Measurement SW: DASY4, V4.4 Build 3; Postprocessing SW: SEMCAD, V1.8 Build 146

Left Head Template/Area Scan - Normal (15mm) (7x14x1):

Measurement grid: dx=15mm, dy=15mm; Maximum value of SAR (measured) = 0.830 mW/g

Left Head Template/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm,dy=5mm,dz=5mm; Reference Value = 23.7 V/m; **Power Drift = -0.090 dB**
Peak SAR (extrapolated) = 1.45 W/kg; **SAR(1 g) = 0.834 mW/g; SAR(10 g) = 0.446 mW/g**
Maximum value of SAR (measured) = 0.885 mW/g



Date/Time: 3/27/2005 7:02:53 PM

Test Laboratory: Motorola

Serial: TA13602121
Procedure Notes: Ch# 661 / Pwr Step: 0 (OTA); Antenna Position: Fixed; Accessory Model #: NONE; Battery Model #: SNN5683A (rev B); DEVICE POSITION: Cheek

Communication System: GSM 1900; Frequency: 1880 MHz; Duty Cycle: 1:8
Medium: Back-Up Glycol Head; Medium parameters used: σ = 1.44 mho/m, ε_r = 39.1; ρ = 1000 kg/m^3
DASY4 Configuration:

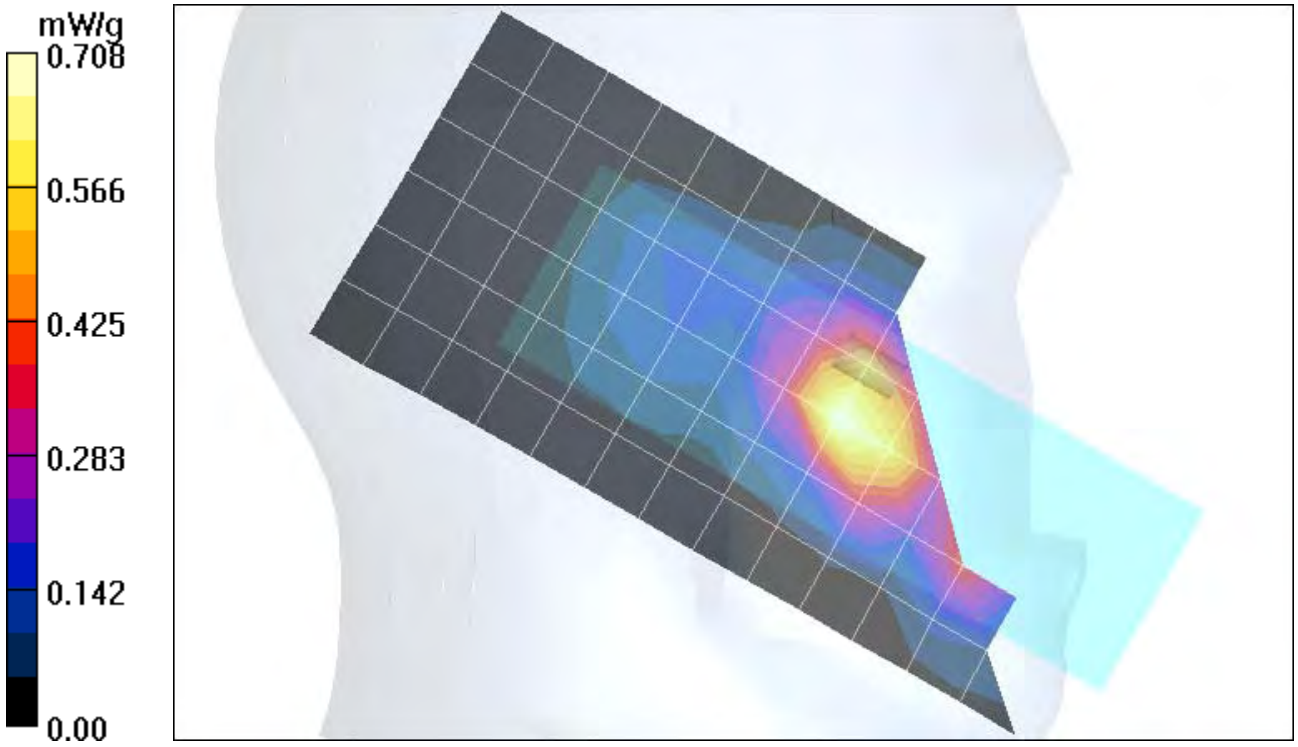
- Probe: ET3DV6R - SN1397; ConvF(5.09, 5.09, 5.09); Calibrated: 5/21/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn316; Calibrated: 1/13/2005
- Phantom: R1: Glycol SAM; Type: SAM; Serial: TP-1154;
- Measurement SW: DASY4, V4.4 Build 3; Postprocessing SW: SEMCAD, V1.8 Build 146

Left Head Template/Area Scan - Normal (15mm) (7x14x1):

Measurement grid: dx=15mm, dy=15mm; Maximum value of SAR (measured) = 0.708 mW/g

Left Head Template/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm,dy=5mm,dz=5mm; Reference Value = 21.5 V/m; **Power Drift = 0.021 dB**
Peak SAR (extrapolated) = 1.25 W/kg; **SAR(1 g) = 0.748 mW/g; SAR(10 g) = 0.408 mW/g**
Maximum value of SAR (measured) = 0.826 mW/g



Date/Time: 4/6/2005 11:21:03 AM

Test Laboratory: Motorola

Serial: TA13602121
Procedure Notes: Ch# frequency hopping / Pwr Step: continuous; Antenna Position: FIXED; Accessory Model #: NONE; Battery Model #: SNN5683A; DEVICE POSITION: CHEEK

Communication System: Bluetooth; Frequency: 2441 MHz; Duty Cycle: 1:1
Medium: 2450 Glycol Head; Medium parameters used: σ = 1.87 mho/m, ε_r = 38.7; ρ = 1000 kg/m^3
DASY4 Configuration:

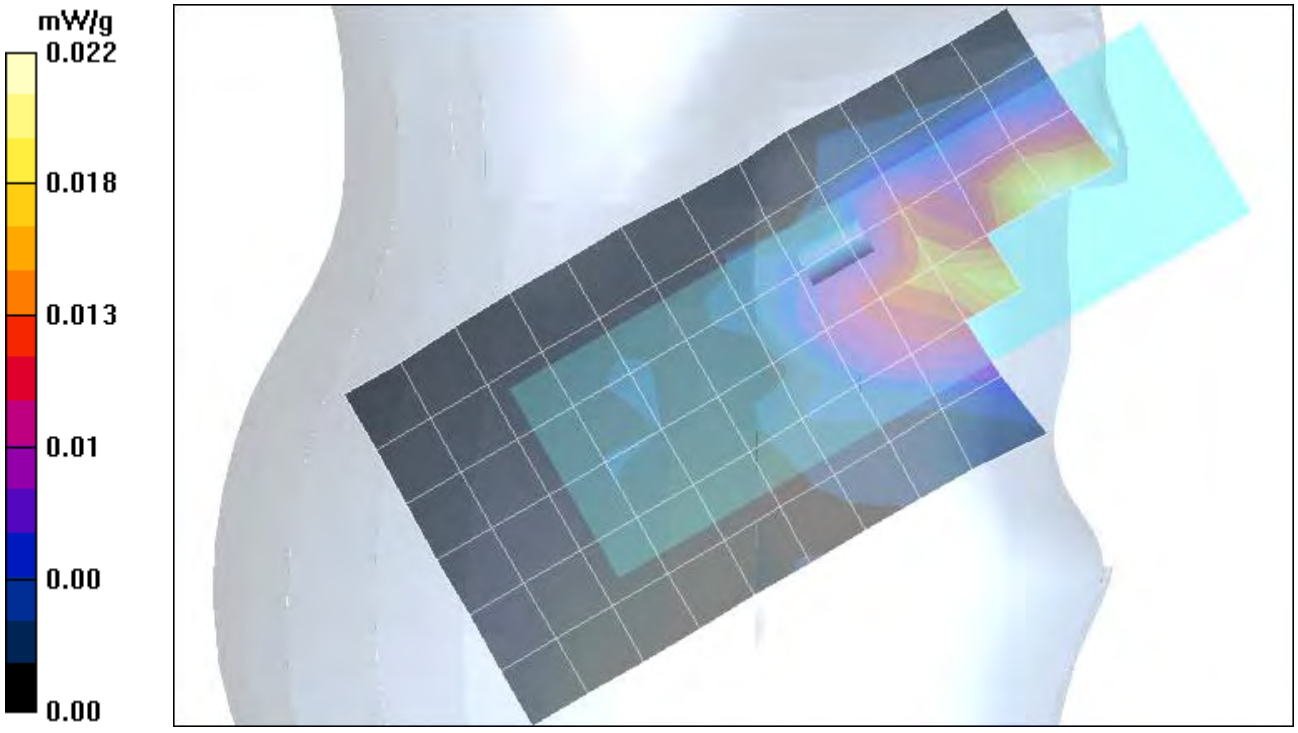
- Probe: ET3DV6 - SN1514; ConvF(4.46, 4.46, 4.46); Calibrated: 7/22/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn365; Calibrated: 9/22/2004
- Phantom: R4 Glycol SAM (extended range), Rev.1 (25-Mar-05); Type: SAM v4.0; Serial: TP-1250;
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 147

Right Head Template/Area Scan - Normal (15mm) (7x17x1):

Measurement grid: dx=15mm, dy=15mm; Maximum value of SAR (measured) = 0.022 mW/g

Right Head Template/Zoom Scan - shift cube (7x7x7)/Cube 0:

Measurement grid: dx=5mm,dy=5mm,dz=5mm; Reference Value = 3.89 V/m; **Power Drift = -0.122 dB**
Peak SAR (extrapolated) = 0.033 W/kg; **SAR(1 g) = 0.019 mW/g; SAR(10 g) = 0.00838 mW/g**
Maximum value of SAR (measured) = 0.023 mW/g



Date/Time: 3/29/2005 2:19:08 PM

Test Laboratory: Motorola

Serial: TA13602121
Procedure Notes: Ch # Frequency hopping / Pwr Step: continuous; Antenna Position: FIXED; Accessory Model #: NONE; Battery Model #: SNN5683A; DEVICE POSITION: CHEEK

Communication System: Bluetooth; Frequency: 2441 MHz; Duty Cycle: 1:1
Medium: 2450 Glycol Head; Medium parameters used: σ = 1.87 mho/m, ε_r = 39; ρ = 1000 kg/m^3
DASY4 Configuration:

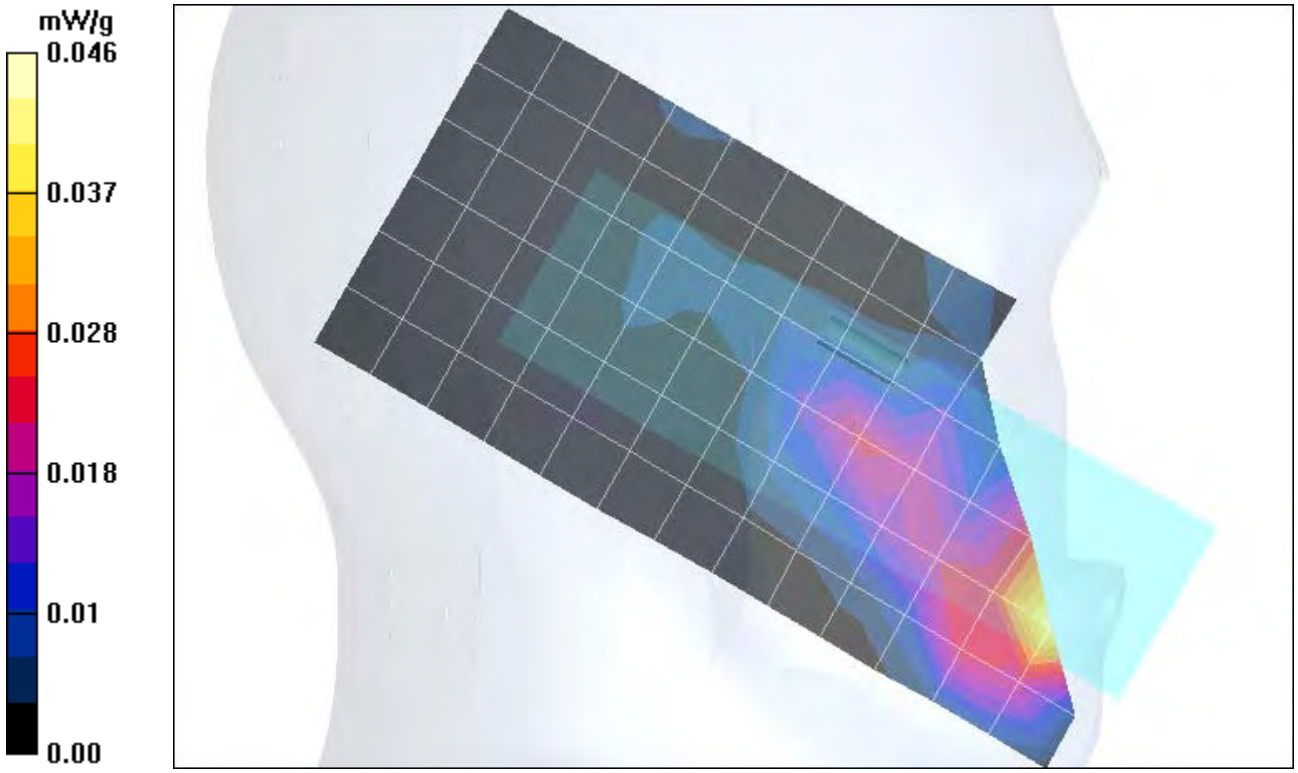
- Probe: ET3DV6 - SN1514; ConvF(4.46, 4.46, 4.46); Calibrated: 7/22/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn365; Calibrated: 9/22/2004
- Phantom: R4 Glycol SAM (extended range), Rev.1 (25-Mar-05); Type: SAM v4.0; Serial: TP-1250;
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

Left Head Template/Area Scan - Normal (15mm) (7x14x1):

Measurement grid: dx=15mm, dy=15mm; Maximum value of SAR (measured) = 0.043 mW/g

Left Head Template/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mm; Reference Value = 3.64 V/m; **Power Drift = -1.04 dB**
Peak SAR (extrapolated) = 0.081 W/kg; **SAR(1 g) = 0.039 mW/g; SAR(10 g) = 0.019 mW/g**
Maximum value of SAR (measured) = 0.046 mW/g



Date/Time: 3/23/2005 7:17:32 PM

Test Laboratory: Motorola

Serial: TA13602121
Procedure Notes: Ch# Frequency hopping / Pwr Step: continuous; Antenna Position: FIXED; Accessory Model #: NONE; Battery Model #: SNN5683A; DEVICE POSITION: TILT

Communication System: Bluetooth; Frequency: 2441 MHz; Duty Cycle: 1:1
Medium: 2450 Glycol Head; Medium parameters used: σ = 1.87 mho/m, ε_r = 39.1; ρ = 1000 kg/m^3
DASY4 Configuration:

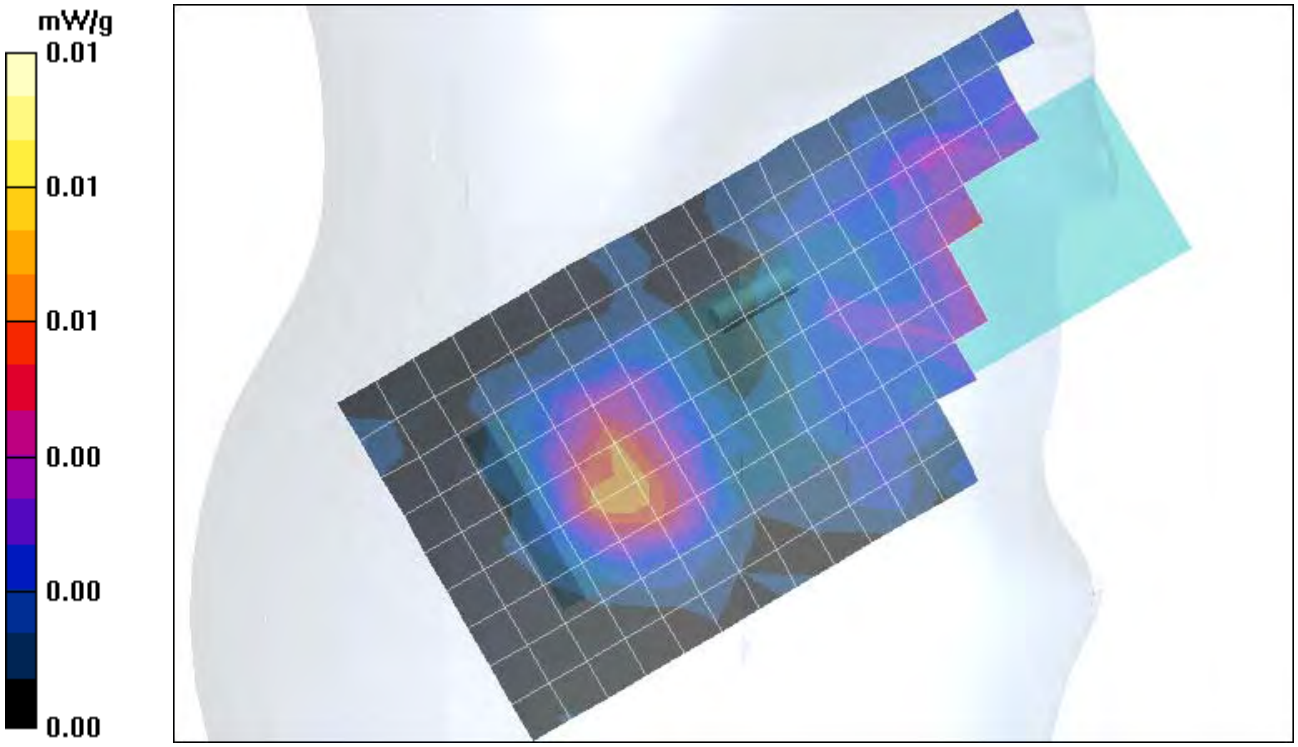
- Probe: ET3DV6 - SN1514; ConvF(4.46, 4.46, 4.46); Calibrated: 7/22/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn365; Calibrated: 9/22/2004
- Phantom: R4: Glycol SAM; Type: SAM; Serial: TP-1250;
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 147

Right Head Template/Area Scan - Normal (10mm) (10x21x1):

Measurement grid: dx=10mm, dy=10mm; Maximum value of SAR (measured) = 0.01 mW/g

Right Head Template/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm,dy=5mm,dz=5mm; Reference Value = 1.97 V/m; **Power Drift = 0.017 dB**
Peak SAR (extrapolated) = 0.012 W/kg; **SAR(1 g) = 0.00637 mW/g; SAR(10 g) = 0.00303 mW/g**



Date/Time: 3/29/2005 2:53:39 PM

Test Laboratory: Motorola

Serial: TA13602121
Procedure Notes: Ch# frequency hopping / Pwr Step: continuous; Antenna Position: FIXED; Accessory Model #: NONE; Battery Model #: SNN5683A; DEVICE POSITION: TILT

Communication System: Bluetooth; Frequency: 2441 MHz; Duty Cycle: 1:1
Medium: 2450 Glycol Head; Medium parameters used: σ = 1.87 mho/m, ε_r = 39; ρ = 1000 kg/m^3
DASY4 Configuration:

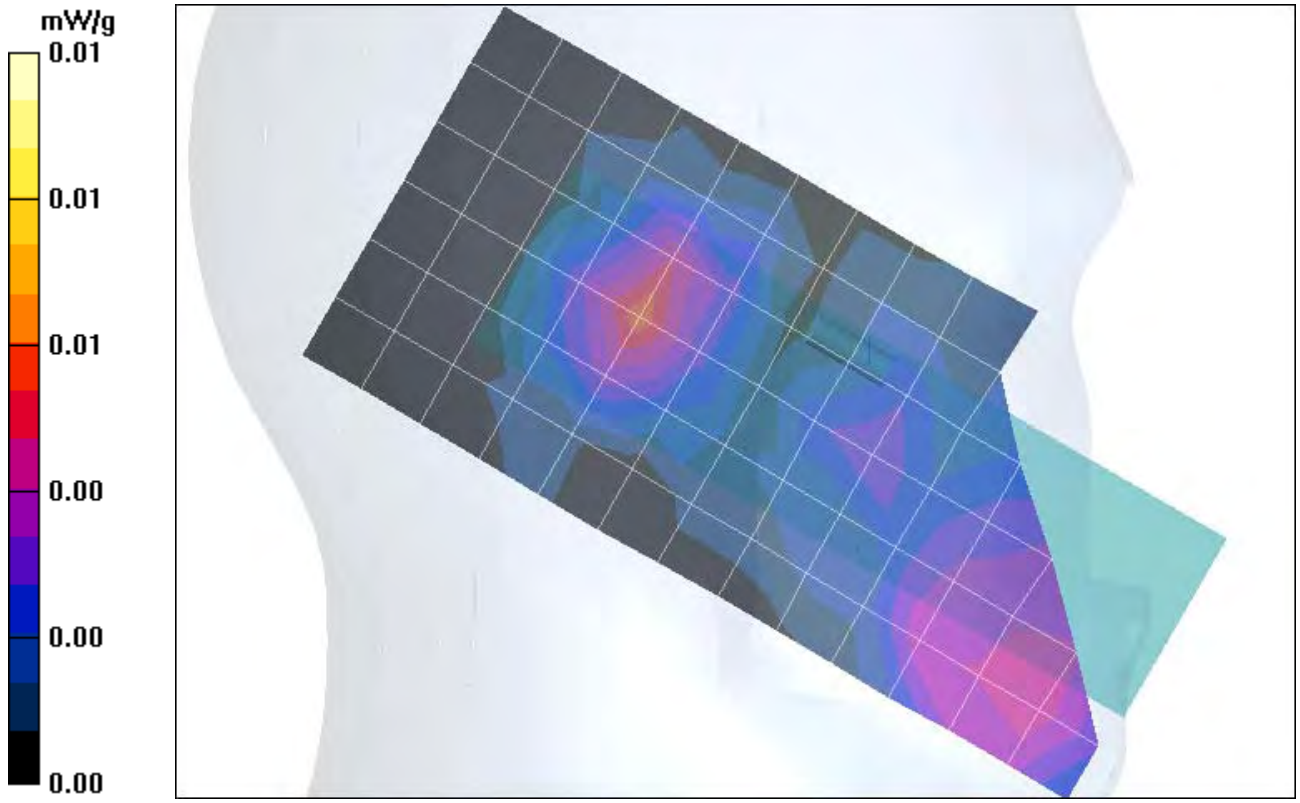
- Probe: ET3DV6 - SN1514; ConvF(4.46, 4.46, 4.46); Calibrated: 7/22/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn365; Calibrated: 9/22/2004
- Phantom: R4 Glycol SAM (extended range), Rev.1 (25-Mar-05); Type: SAM v4.0; Serial: TP-1250;
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

Left Head Template/Area Scan - Normal (15mm) (7x14x1):

Measurement grid: dx=15mm, dy=15mm; Maximum value of SAR (measured) = 0.01 mW/g

Left Head Template/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm,dy=5mm,dz=5mm; Reference Value = 1.68 V/m; **Power Drift = -0.482 dB**
Peak SAR (extrapolated) = 0.031 W/kg; **SAR(1 g) = 0.00541 mW/g; SAR(10 g) = 0.00159 mW/g**
Maximum value of SAR (measured) = 0.017 mW/g



Date/Time: 4/6/2005 12:38:58 PM

Test Laboratory: Motorola

Serial: TA13602121
Procedure Notes: Ch# frequency hopping / Pwr Step: continuous; Antenna Position: FIXED; Accessory Model #: NONE; Battery Model #: SNN5704A; DEVICE POSITION: CHEEK

Communication System: Bluetooth; Frequency: 2441 MHz; Duty Cycle: 1:1
Medium: 2450 Glycol Head; Medium parameters used: σ = 1.87 mho/m, ε_r = 38.7; ρ = 1000 kg/m^3
DASY4 Configuration:

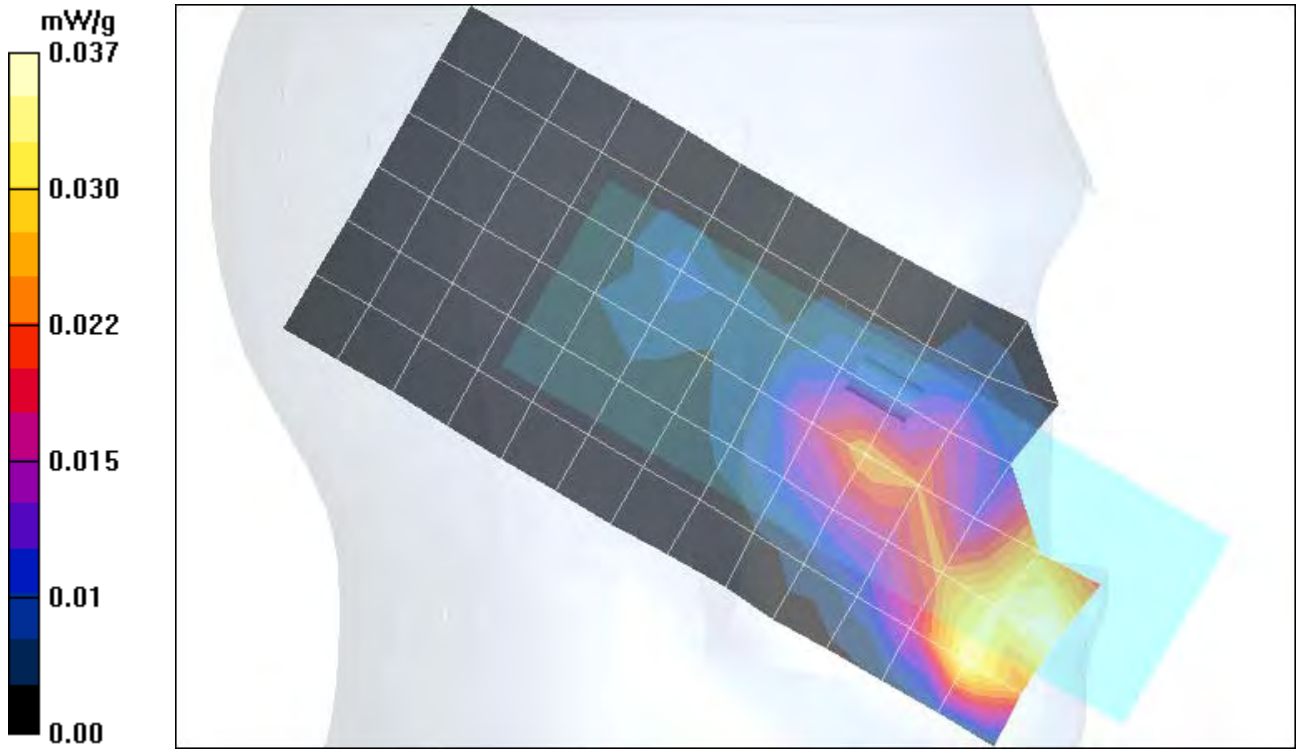
- Probe: ET3DV6 - SN1514; ConvF(4.46, 4.46, 4.46); Calibrated: 7/22/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn365; Calibrated: 9/22/2004
- Phantom: R4 Glycol SAM (extended range), Rev.1 (25-Mar-05); Type: SAM v4.0; Serial: TP-1250;
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

Left Head Template to Shift Cube/Area Scan - Normal (15mm) (7x17x1):

Measurement grid: dx=15mm, dy=15mm; Maximum value of SAR (measured) = 0.037 mW/g

Left Head Template to Shift Cube/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm,dy=5mm,dz=5mm; Reference Value = 3.89 V/m; **Power Drift = -0.053 dB**
Peak SAR (extrapolated) = 0.115 W/kg; **SAR(1 g) = 0.053 mW/g; SAR(10 g) = 0.027 mW/g**
Maximum value of SAR (measured) = 0.060 mW/g



Date/Time: 4/6/2005 1:13:12 PM

Test Laboratory: Motorola

Serial: TA13602121
Procedure Notes: Ch# frequency hopping / Pwr Step: continuous; Antenna Position: FIXED; Accessory Model #: NONE; Battery Model #: SNN5683A (rev B); DEVICE POSITION: CHEEK

Communication System: Bluetooth; Frequency: 2441 MHz; Duty Cycle: 1:1
Medium: 2450 Glycol Head; Medium parameters used: σ = 1.87 mho/m, ε_r = 38.7; ρ = 1000 kg/m^3
DASY4 Configuration:

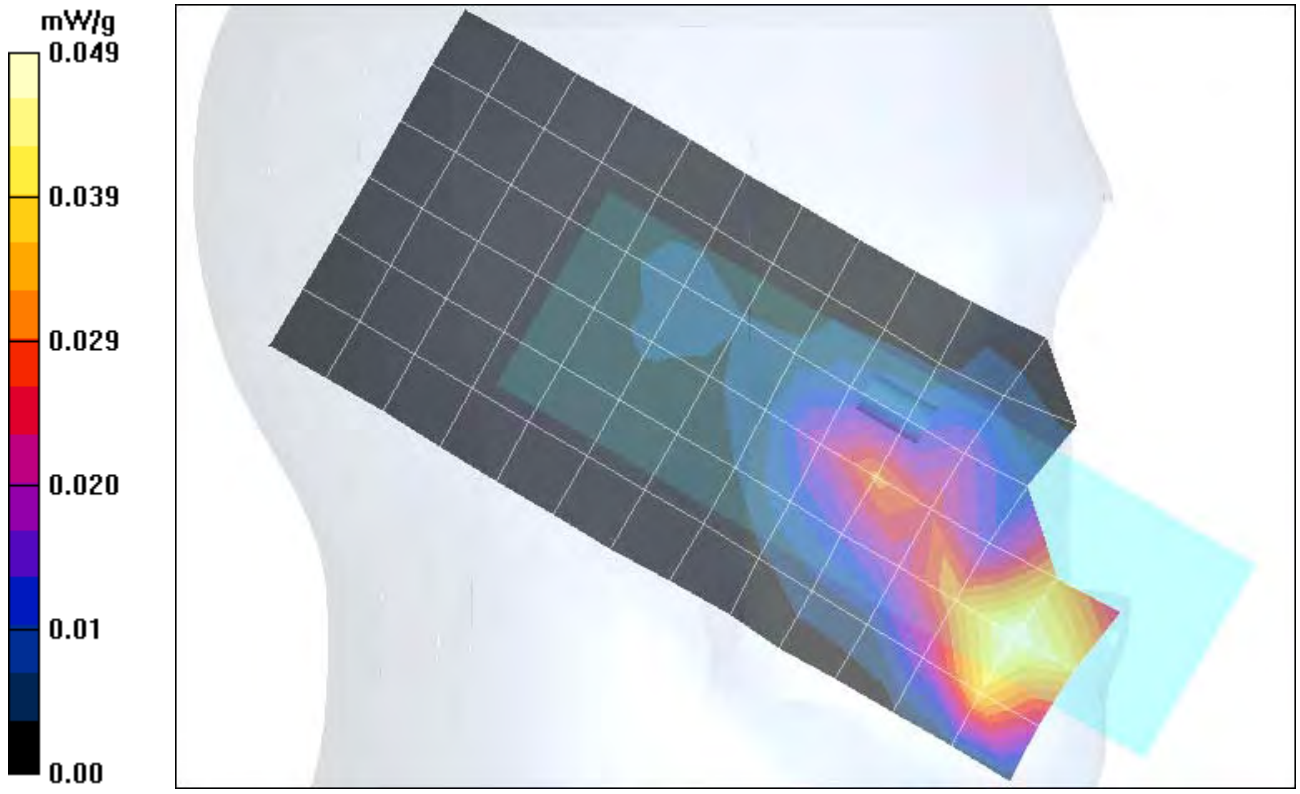
- Probe: ET3DV6 - SN1514; ConvF(4.46, 4.46, 4.46); Calibrated: 7/22/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn365; Calibrated: 9/22/2004
- Phantom: R4 Glycol SAM (extended range), Rev.1 (25-Mar-05); Type: SAM v4.0; Serial: TP-1250;
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

Left Head Template to Shift Cube/Area Scan - Normal (15mm) (7x17x1):

Measurement grid: dx=15mm, dy=15mm; Maximum value of SAR (measured) = 0.049 mW/g

Left Head Template to Shift Cube/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm,dy=5mm,dz=5mm; Reference Value = 4.02 V/m; **Power Drift = -0.141 dB**
Peak SAR (extrapolated) = 0.107 W/kg; **SAR(1 g) = 0.057 mW/g; SAR(10 g) = 0.029 mW/g**
Maximum value of SAR (measured) = 0.063 mW/g



Appendix 3

SAR distribution plots for Body Worn Configuration

Date/Time: 3/29/2005 12:18:38 AM

Test Laboratory: Motorola

Serial: TA13602121
Procedure Notes: Ch# 190 / Pwr Step: 05 (OTA); Antenna Position: Fixed; Accessory Model#: NONE; Battery Model #: SNN5683A; DEVICE POSITION = Front of phone 15mm from phantom

Communication System: GSM 850; Frequency: 836.6 MHz; Duty Cycle: 1:8
Medium: Low Freq Body; Medium parameters used: σ = 0.98 mho/m, ε_r = 55; ρ = 1000 kg/m^3
DASY4 Configuration:

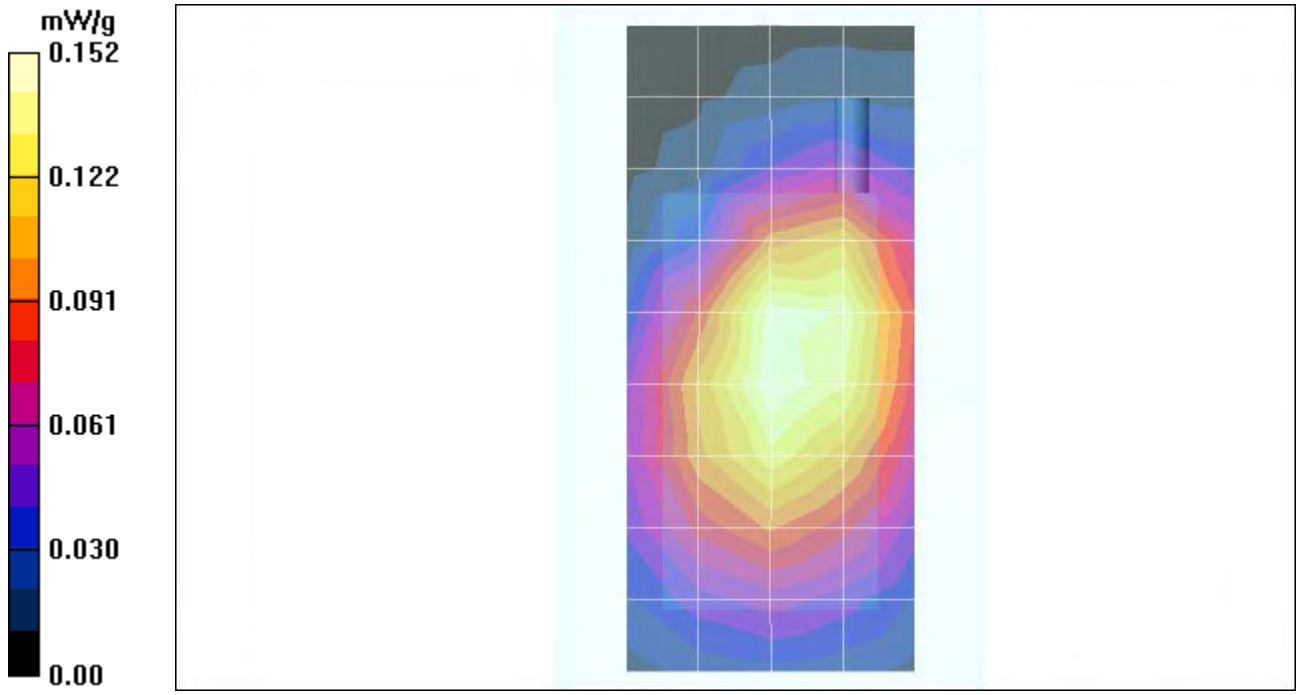
- Probe: ET3DV6R - SN1397; ConvF(5.92, 5.92, 5.92); Calibrated: 5/21/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn316; Calibrated: 1/13/2005
- Phantom: R1: Sect.1, Amy Twin; Type: Amy Twin Flat; Serial: n/a;
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

Amy Twin Phone Template/Area Scan - Normal Body (15mm) (12x7x1):

Measurement grid: dx=15mm, dy=15mm; Maximum value of SAR (measured) = 0.152 mW/g

Amy Twin Phone Template/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mm; Reference Value = 12.4 V/m; **Power Drift = 0.00 dB**
Peak SAR (extrapolated) = 0.192 W/kg; **SAR(1 g) = 0.150 mW/g; SAR(10 g) = 0.108 mW/g**
Maximum value of SAR (measured) = 0.159 mW/g



Date/Time: 3/28/2005 11:58:28 PM

Test Laboratory: Motorola

Serial: TA13602121
Procedure Notes: Ch# 190 / Pwr Step: 05 (OTA); Antenna Position: Fixed; Accessory Model #: NONE; Battery Model #: SNN5683A; DEVICE POSITION = Back of phone 15mm from phantom

Communication System: GSM 850; Frequency: 836.6 MHz; Duty Cycle: 1:8
Medium: Low Freq Body; Medium parameters used: σ = 0.98 mho/m, ε_r = 55; ρ = 1000 kg/m^3
DASY4 Configuration:

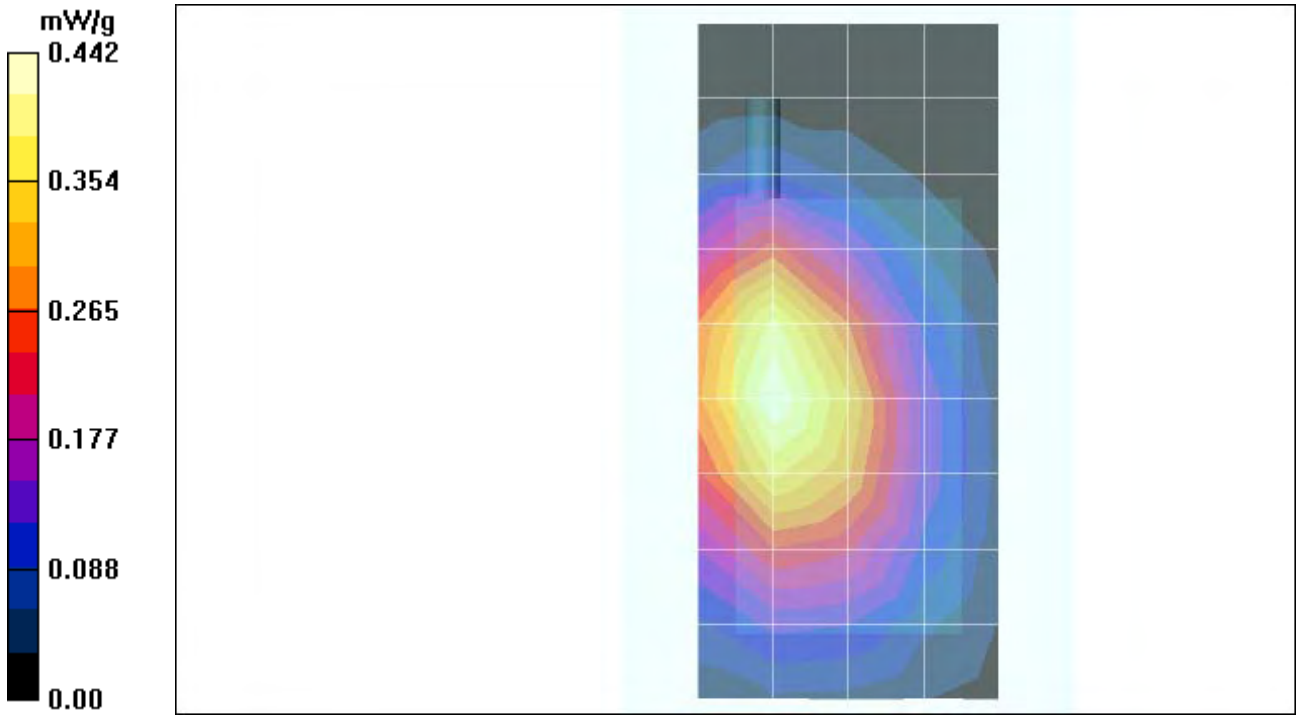
- Probe: ET3DV6R - SN1397; ConvF(5.92, 5.92, 5.92); Calibrated: 5/21/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn316; Calibrated: 1/13/2005
- Phantom: R1: Sect.1, Amy Twin; Type: Amy Twin Flat; Serial: n/a;
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

Amy Twin Phone Template/Area Scan - Normal Body (15mm) (12x7x1):

Measurement grid: dx=15mm, dy=15mm; Maximum value of SAR (measured) = 0.442 mW/g

Amy Twin Phone Template/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm,dy=5mm,dz=5mm; Reference Value = 18.8 V/m; **Power Drift = -0.045 dB**
Peak SAR (extrapolated) = 0.556 W/kg; **SAR(1 g) = 0.415 mW/g; SAR(10 g) = 0.289 mW/g**
Maximum value of SAR (measured) = 0.444 mW/g



Date/Time: 3/29/2005 3:11:17 AM

Test Laboratory: Motorola

Serial: TA13602121
Procedure Notes: Ch# 190 / Pwr Step: 05 (OTA); Antenna Position: Fixed; Accessory Model #: NONE; Battery Model #: SNN5683A; DEVICE POSITION = Back of phone 25mm from phantom

Communication System: GPRS 850 - Class 10; Frequency: 836.6 MHz; Duty Cycle: 1:4
Medium: Low Freq Body; Medium parameters used: σ = 0.98 mho/m, ε_r = 55; ρ = 1000 kg/m^3
DASY4 Configuration:

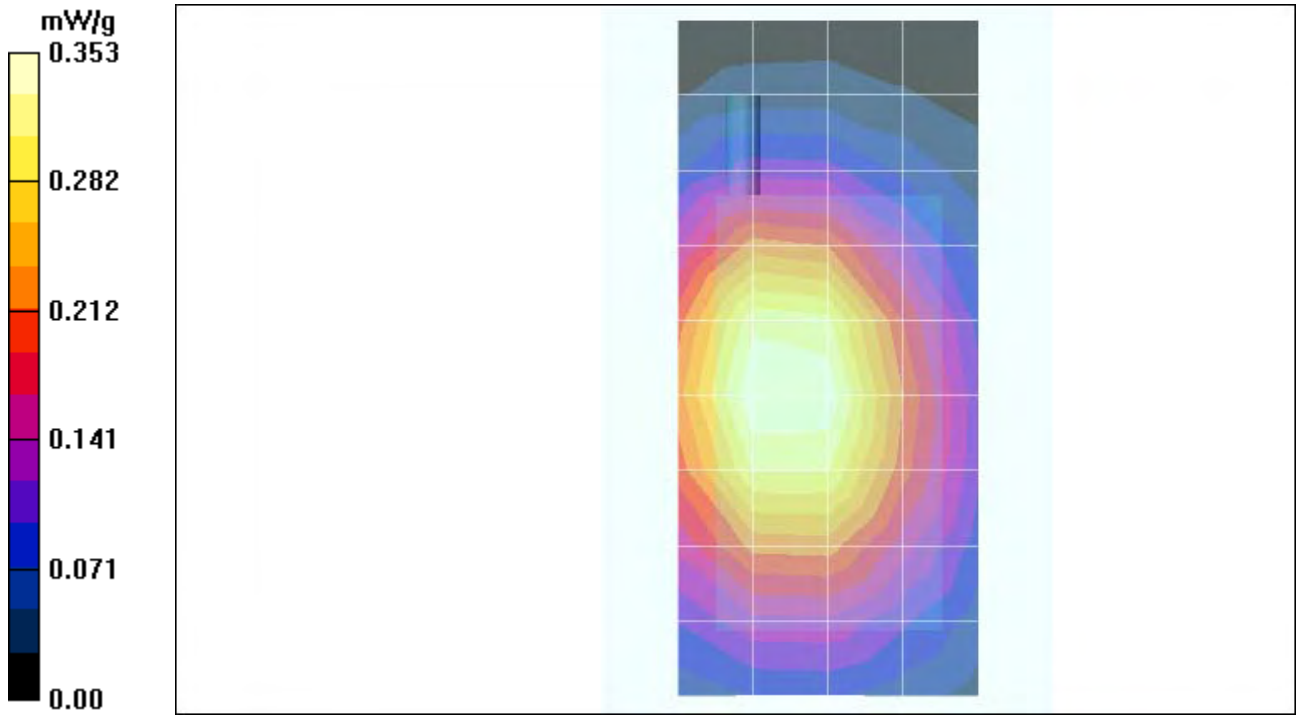
- Probe: ET3DV6R - SN1397; ConvF(5.92, 5.92, 5.92); Calibrated: 5/21/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn316; Calibrated: 1/13/2005
- Phantom: R1: Sect.1, Amy Twin; Type: Amy Twin Flat; Serial: n/a;
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

Amy Twin Phone Template/Area Scan - Normal Body (15mm) (12x7x1):

Measurement grid: dx=15mm, dy=15mm; Maximum value of SAR (measured) = 0.353 mW/g

Amy Twin Phone Template/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm,dy=5mm,dz=5mm; Reference Value = 19.1 V/m; **Power Drift = -0.063 dB**
Peak SAR (extrapolated) = 0.452 W/kg; **SAR(1 g) = 0.353 mW/g; SAR(10 g) = 0.255 mW/g**
Maximum value of SAR (measured) = 0.377 mW/g



Date/Time: 3/29/2005 10:18:50 PM

Test Laboratory: Motorola

Serial: TA13602121
Procedure Notes: Ch# 190 / Pwr Step: 5 OTA; Antenna Position: FIXED; Accessory Model #: NONE; Battery Model #: SNN5704B; DEVICE POSITION: Back of phone 15mm from phantom

Communication System: GSM 850; Frequency: 836.6 MHz; Duty Cycle: 1:8
Medium: Low Freq Body; Medium parameters used: σ = 0.98 mho/m, ε_r = 55; ρ = 1000 kg/m^3
DASY4 Configuration:

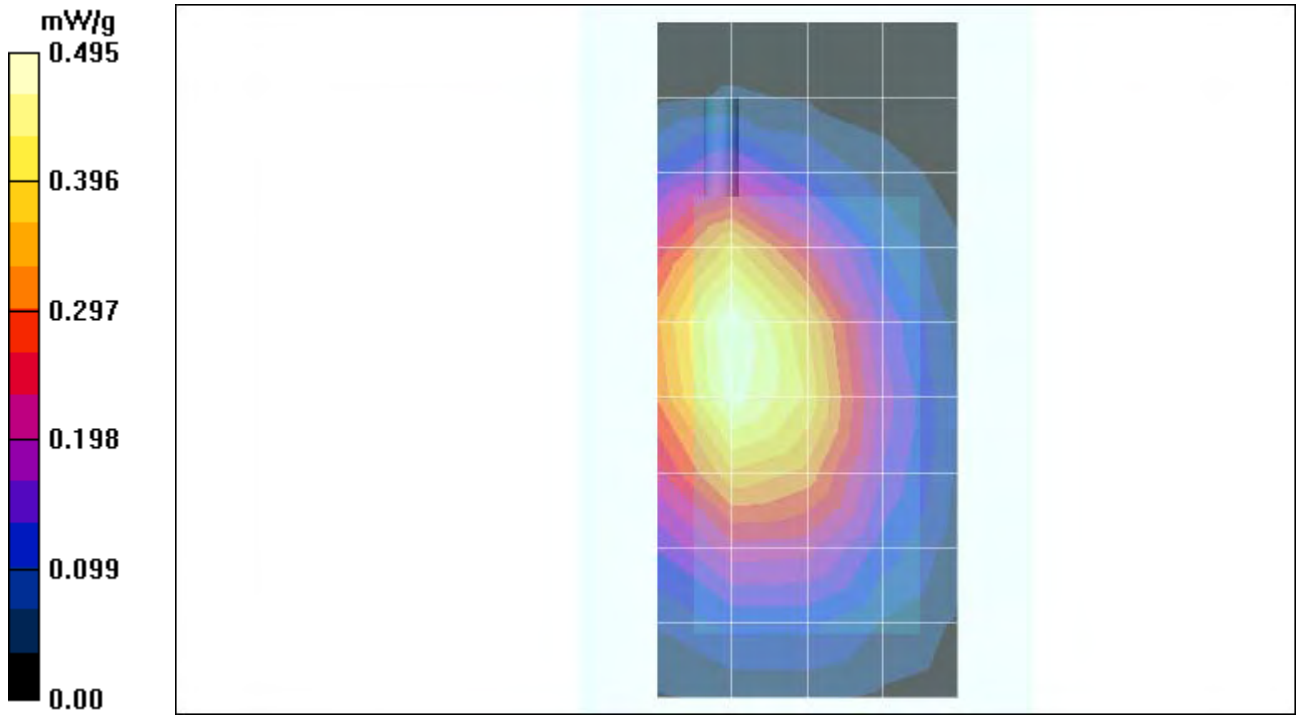
- Probe: ET3DV6R - SN1397; ConvF(5.92, 5.92, 5.92); Calibrated: 5/21/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn316; Calibrated: 1/13/2005
- Phantom: R1: Sect.1, Amy Twin; Type: Amy Twin Flat; Serial: n/a;
- Measurement SW: DASY4, V4.4 Build 3; Postprocessing SW: SEMCAD, V1.8 Build 146

Amy Twin Phone Template/Area Scan - Normal Body (15mm) (12x7x1):

Measurement grid: dx=15mm, dy=15mm; Maximum value of SAR (measured) = 0.495 mW/g

Amy Twin Phone Template/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm,dy=5mm,dz=5mm; Reference Value = 19.8 V/m; **Power Drift = -0.179 dB**
Peak SAR (extrapolated) = 0.625 W/kg; **SAR(1 g) = 0.468 mW/g; SAR(10 g) = 0.324 mW/g**
Maximum value of SAR (measured) = 0.501 mW/g



Date/Time: 3/29/2005 10:41:21 PM

Test Laboratory: Motorola

Serial: TA13602121
Procedure Notes: Ch# 190 / Pwr Step: 5 OTA; Antenna Position: FIXED; Accessory Model #: NONE; Battery Model #: SNN5683A (rev B); DEVICE POSITION: Back of Phone 15mm from Flat Phantom

Communication System: GSM 850; Frequency: 836.6 MHz; Duty Cycle: 1:8
Medium: Low Freq Body; Medium parameters used: σ = 0.98 mho/m, ε_r = 55; ρ = 1000 kg/m^3
DASY4 Configuration:

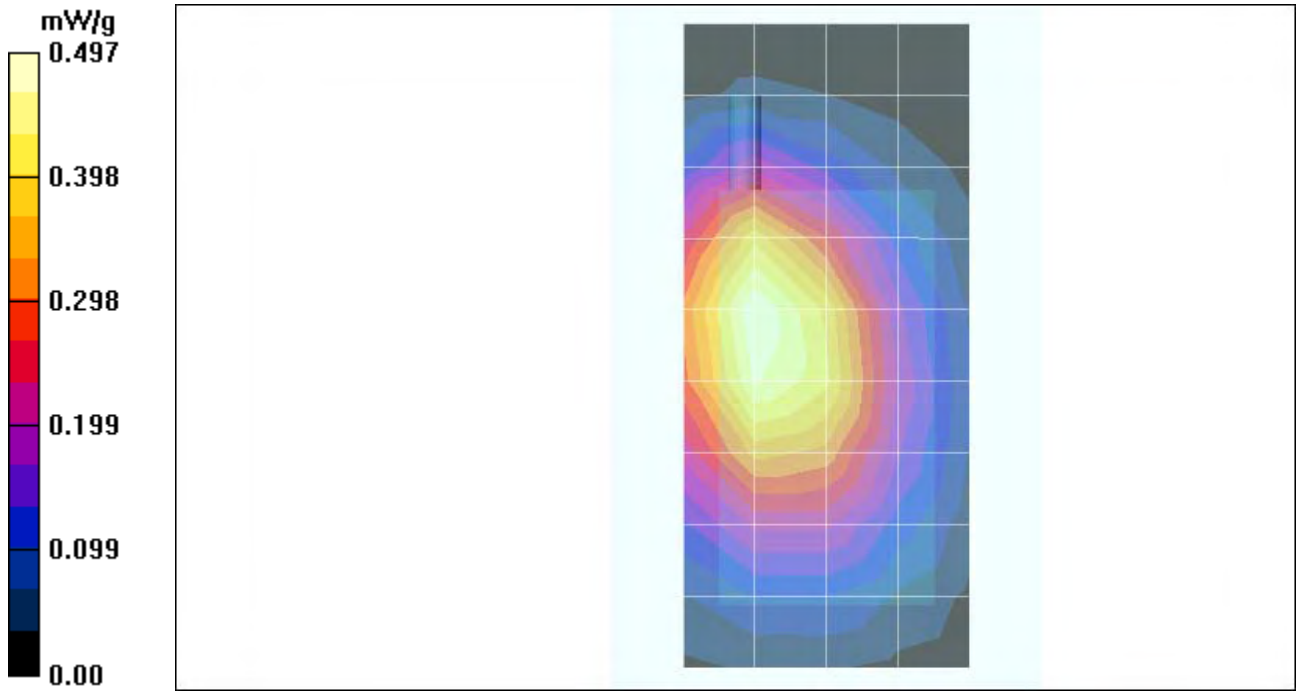
- Probe: ET3DV6R - SN1397; ConvF(5.92, 5.92, 5.92); Calibrated: 5/21/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn316; Calibrated: 1/13/2005
- Phantom: R1: Sect.1, Amy Twin; Type: Amy Twin Flat; Serial: n/a;
- Measurement SW: DASY4, V4.4 Build 3; Postprocessing SW: SEMCAD, V1.8 Build 146

Amy Twin Phone Template/Area Scan - Normal Body (15mm) (12x7x1):

Measurement grid: dx=15mm, dy=15mm; Maximum value of SAR (measured) = 0.497 mW/g

Amy Twin Phone Template/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm,dy=5mm,dz=5mm; Reference Value = 19.8 V/m; **Power Drift = -0.121 dB**
Peak SAR (extrapolated) = 0.629 W/kg; **SAR(1 g) = 0.471 mW/g; SAR(10 g) = 0.328 mW/g**
Maximum value of SAR (measured) = 0.500 mW/g



Date/Time: 4/6/2005 9:55:12 PM

Test Laboratory: Motorola

Serial: TA13602121
Procedure Notes: Ch# 190 / Pwr Step: 5 OTA; Antenna Position: FIXED; Battery Model #: SNN5704B; Accessory Model # = SYN1084A Holster Rotated 90 Degrees; DEVICE POSITION: Body

Communication System: GSM 850; Frequency: 836.6 MHz; Duty Cycle: 1:8
Medium: Low Freq Body; Medium parameters used: σ = 0.97 mho/m, ε_r = 54.2; ρ = 1000 kg/m^3
DASY4 Configuration:

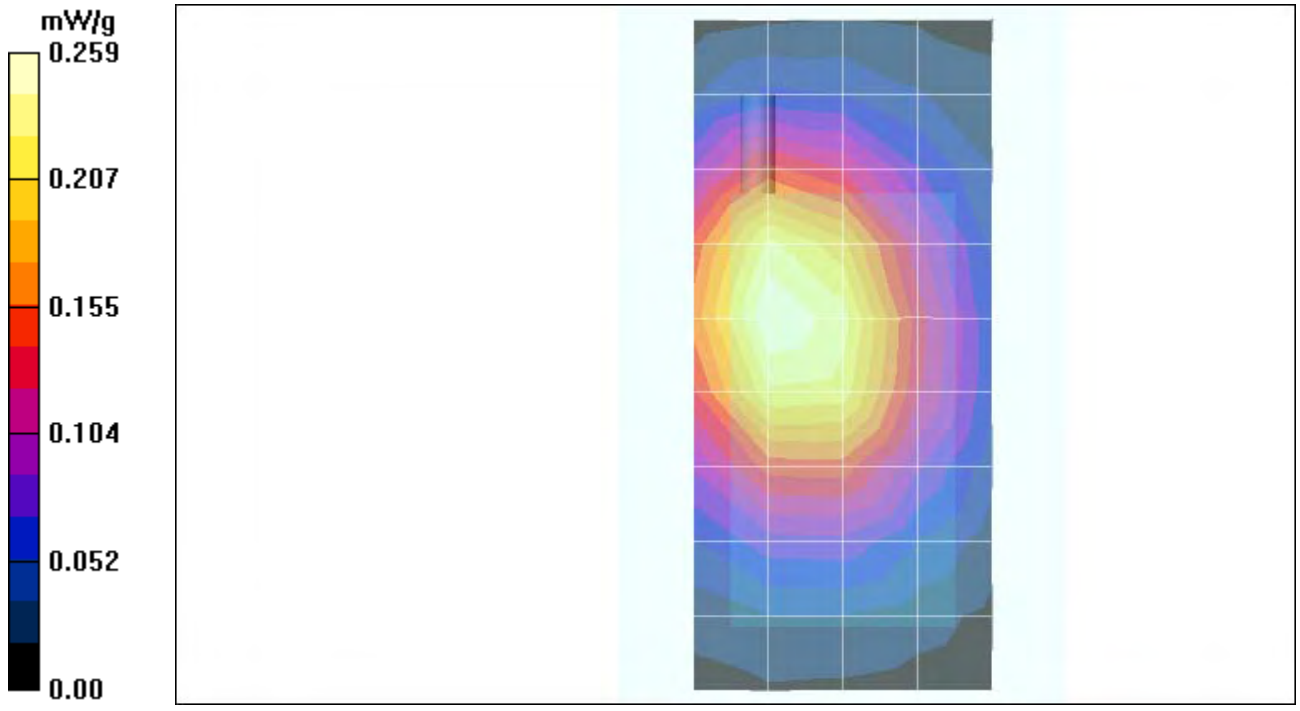
- Probe: ET3DV6 - SN1398; ConvF(6.04, 6.04, 6.04); Calibrated: 2/24/2005
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn316; Calibrated: 1/13/2005
- Phantom: R1: Sect.1, Amy Twin; Type: Amy Twin Flat; Serial: n/a;
- Measurement SW: DASY4, V4.4 Build 3; Postprocessing SW: SEMCAD, V1.8 Build 146

Amy Twin Phone Template/Area Scan - Normal Body (15mm) (12x7x1):

Measurement grid: dx=15mm, dy=15mm; Maximum value of SAR (measured) = 0.259 mW/g

Amy Twin Phone Template/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm,dy=5mm,dz=5mm; Reference Value = 16.0 V/m; **Power Drift = -0.039 dB**
Peak SAR (extrapolated) = 0.330 W/kg; **SAR(1 g) = 0.249 mW/g; SAR(10 g) = 0.176 mW/g**
Maximum value of SAR (measured) = 0.267 mW/g



Date/Time: 4/7/2005 10:26:40 PM

Test Laboratory: Motorola

Serial: TA13602121
Procedure Notes: Ch# 190 / Pwr Step: 5 OTA; Antenna Position: FIXED; Battery Model #: SNN5704B; Accessory Model # = MOTPN0670K Pouch / SYN8631A Wishbone Belt Clip

Communication System: GSM 850; Frequency: 836.6 MHz; Duty Cycle: 1:8
Medium: Low Freq Body; Medium parameters used: σ = 0.97 mho/m, ε_r = 53.6; ρ = 1000 kg/m^3
DASY4 Configuration:

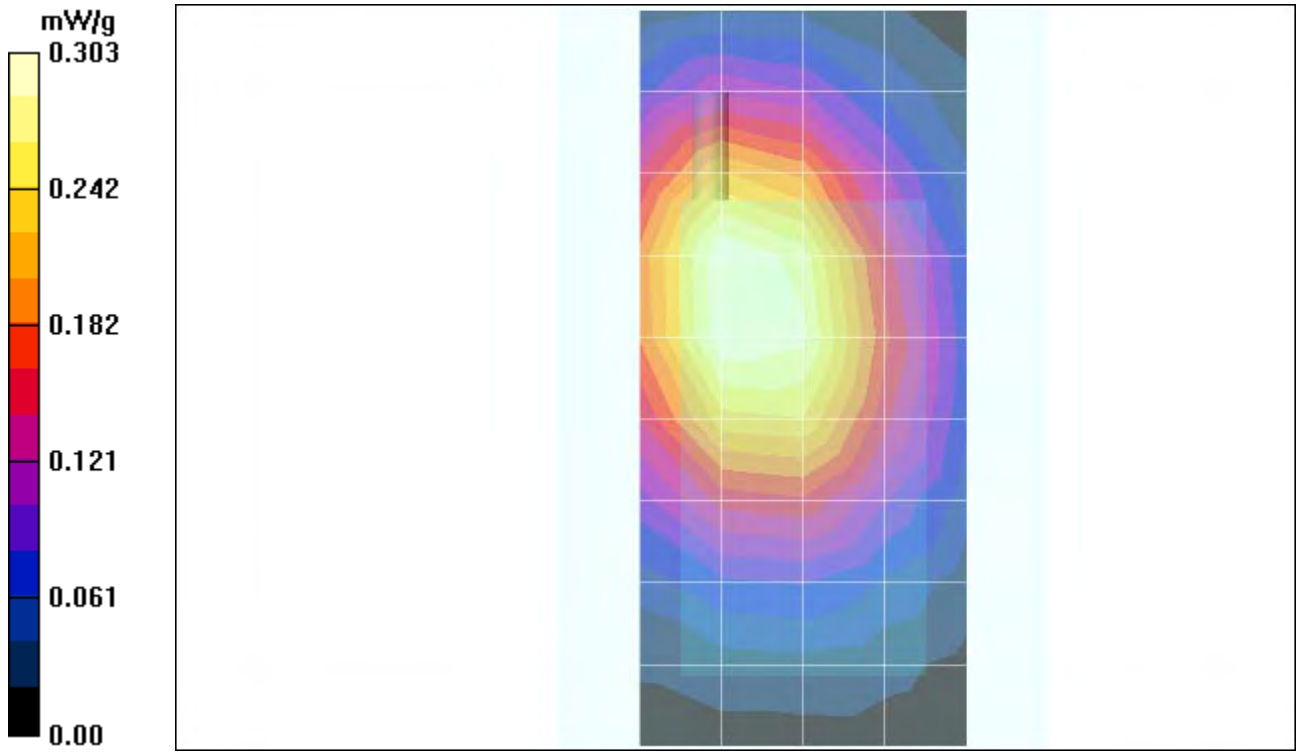
- Probe: ET3DV6 - SN1398; ConvF(6.04, 6.04, 6.04); Calibrated: 2/24/2005
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn316; Calibrated: 1/13/2005
- Phantom: R1: Sect.1, Amy Twin; Type: Amy Twin Flat; Serial: n/a;
- Measurement SW: DASY4, V4.4 Build 3; Postprocessing SW: SEMCAD, V1.8 Build 146

Amy Twin Phone Template/Area Scan - Normal Body (15mm) (12x7x1):

Measurement grid: dx=15mm, dy=15mm; Maximum value of SAR (measured) = 0.303 mW/g

Amy Twin Phone Template/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm,dy=5mm,dz=5mm; Reference Value = 18.1 V/m; **Power Drift = 0.112 dB**
Peak SAR (extrapolated) = 0.397 W/kg; **SAR(1 g) = 0.308 mW/g; SAR(10 g) = 0.220 mW/g**
Maximum value of SAR (measured) = 0.328 mW/g



Date/Time: 4/7/2005 10:52:30 PM

Test Laboratory: Motorola

Serial: TA13602121
Procedure Notes: Ch# 190 / Pwr Step: 5 OTA; Antenna Position: FIXED; Battery Model #: SNN5704B; Accessory Model #: SYN1109A pouch

Communication System: GSM 850; Frequency: 836.6 MHz; Duty Cycle: 1:8
Medium: Low Freq Body; Medium parameters used: σ = 0.97 mho/m, ε_r = 53.6; ρ = 1000 kg/m^3
DASY4 Configuration:

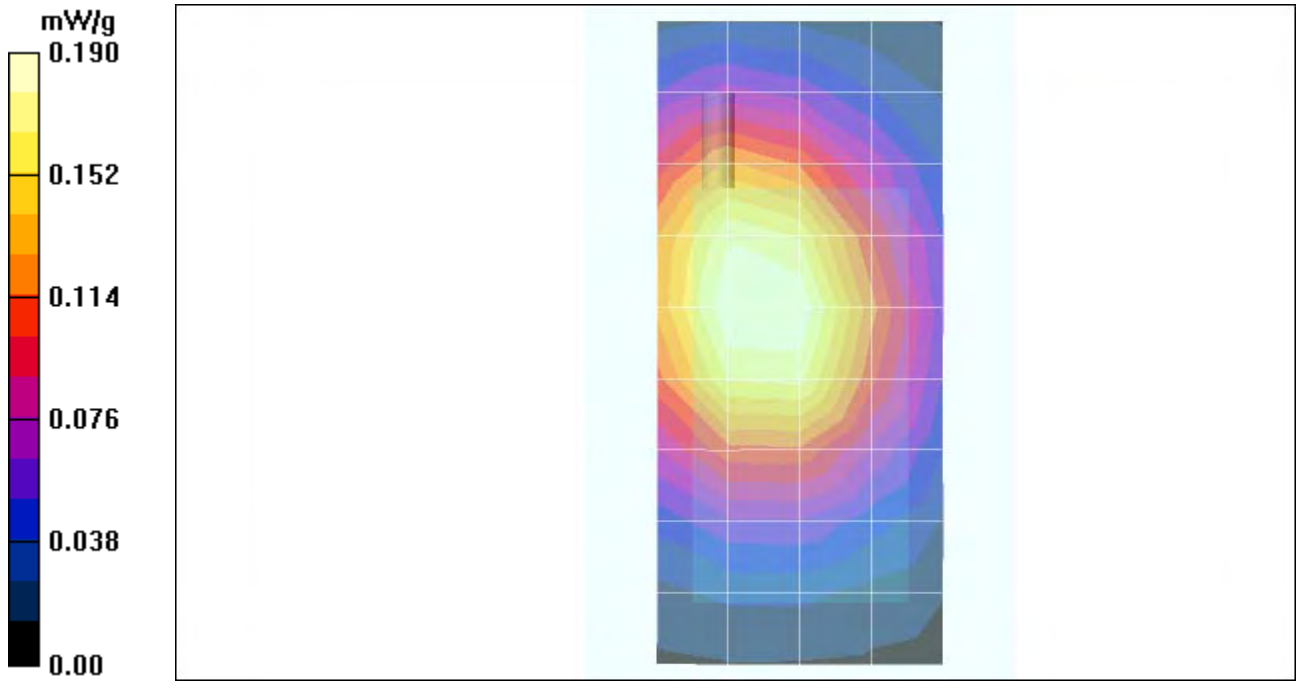
- Probe: ET3DV6 - SN1398; ConvF(6.04, 6.04, 6.04); Calibrated: 2/24/2005
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn316; Calibrated: 1/13/2005
- Phantom: R1: Sect.1, Amy Twin; Type: Amy Twin Flat; Serial: n/a;
- Measurement SW: DASY4, V4.4 Build 3; Postprocessing SW: SEMCAD, V1.8 Build 146

Amy Twin Phone Template/Area Scan - Normal Body (15mm) (12x7x1):

Measurement grid: dx=15mm, dy=15mm; Maximum value of SAR (measured) = 0.190 mW/g

Amy Twin Phone Template/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm,dy=5mm,dz=5mm; Reference Value = 14.3 V/m; **Power Drift = 0.040 dB**
Peak SAR (extrapolated) = 0.236 W/kg; **SAR(1 g) = 0.188 mW/g; SAR(10 g) = 0.139 mW/g**
Maximum value of SAR (measured) = 0.198 mW/g



Date/Time: 4/7/2005 9:55:47 PM

Test Laboratory: Motorola

Serial: TA13602121
Procedure Notes: Ch# 190 / Pwr Step: 5 OTA; Antenna Position: FIXED; Battery
Model #: SNN5704B; Accessory Model # = MOTPL0686K pouch; DEVICE POSITION: Body

Communication System: GSM 850; Frequency: 836.6 MHz; Duty Cycle: 1:8
Medium: Low Freq Body; Medium parameters used: σ = 0.97 mho/m, ε_r = 53.6; ρ = 1000 kg/m^3
DASY4 Configuration:

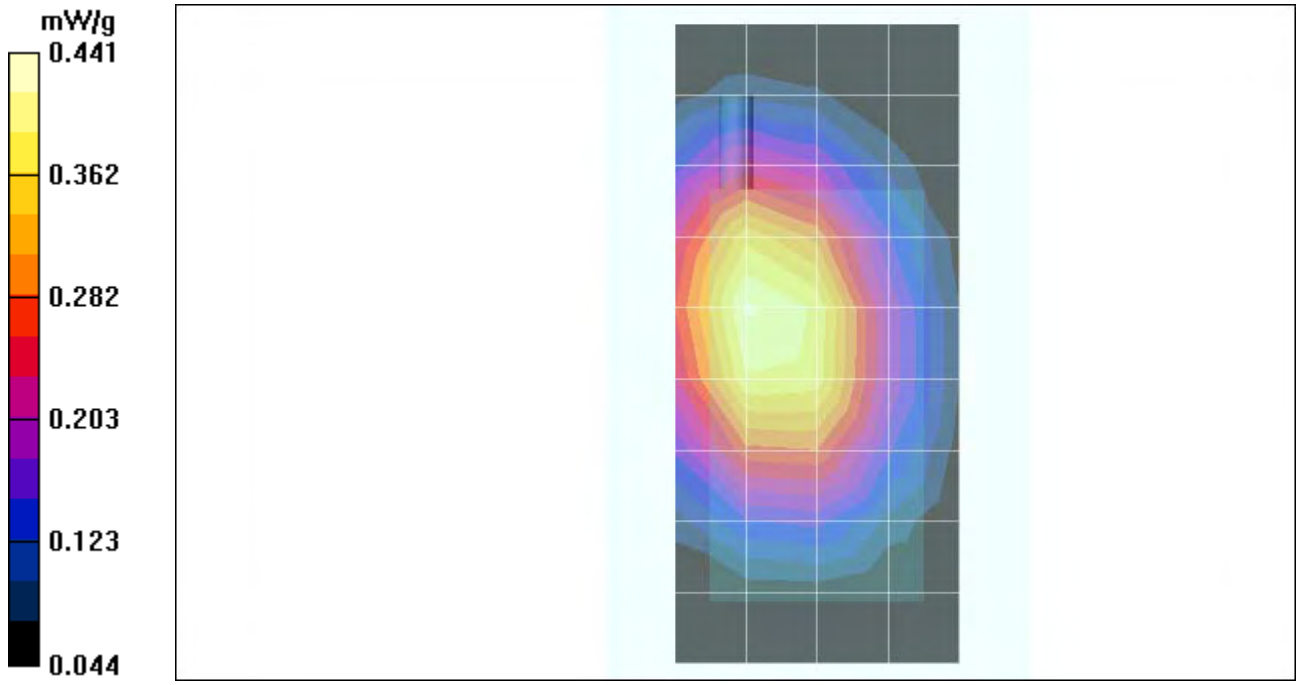
- Probe: ET3DV6 - SN1398; ConvF(6.04, 6.04, 6.04); Calibrated: 2/24/2005
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn316; Calibrated: 1/13/2005
- Phantom: R1: Sect.1, Amy Twin; Type: Amy Twin Flat; Serial: n/a;
- Measurement SW: DASY4, V4.4 Build 3; Postprocessing SW: SEMCAD, V1.8 Build 146

Amy Twin Phone Template/Area Scan - Normal Body (15mm) (12x7x1):

Measurement grid: dx=15mm, dy=15mm; Maximum value of SAR (measured) = 0.420 mW/g

Amy Twin Phone Template/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm,dy=5mm,dz=5mm; Reference Value = 20.1 V/m; **Power Drift = -0.082 dB**
Peak SAR (extrapolated) = 0.541 W/kg; **SAR(1 g) = 0.412 mW/g; SAR(10 g) = 0.292 mW/g**
Maximum value of SAR (measured) = 0.441 mW/g



Date/Time: 3/30/2005 11:22:33 PM

Test Laboratory: Motorola

Serial: TA13602121
Procedure Notes: Ch# 661 / Pwr Step: 0 OTA; Antenna Position: FIXED; Battery Model #: SNN5683A; Accessory Model #: NONE; DEVICE POSITION: Front of Phone 15mm Away from Flat Phantom

Communication System: GSM 1900; Frequency: 1880 MHz; Duty Cycle: 1:8
Medium: Regular Glycol Body; Medium parameters used: σ = 1.59 mho/m, ε_r = 51.3; ρ = 1000 kg/m^3
DASY4 Configuration:

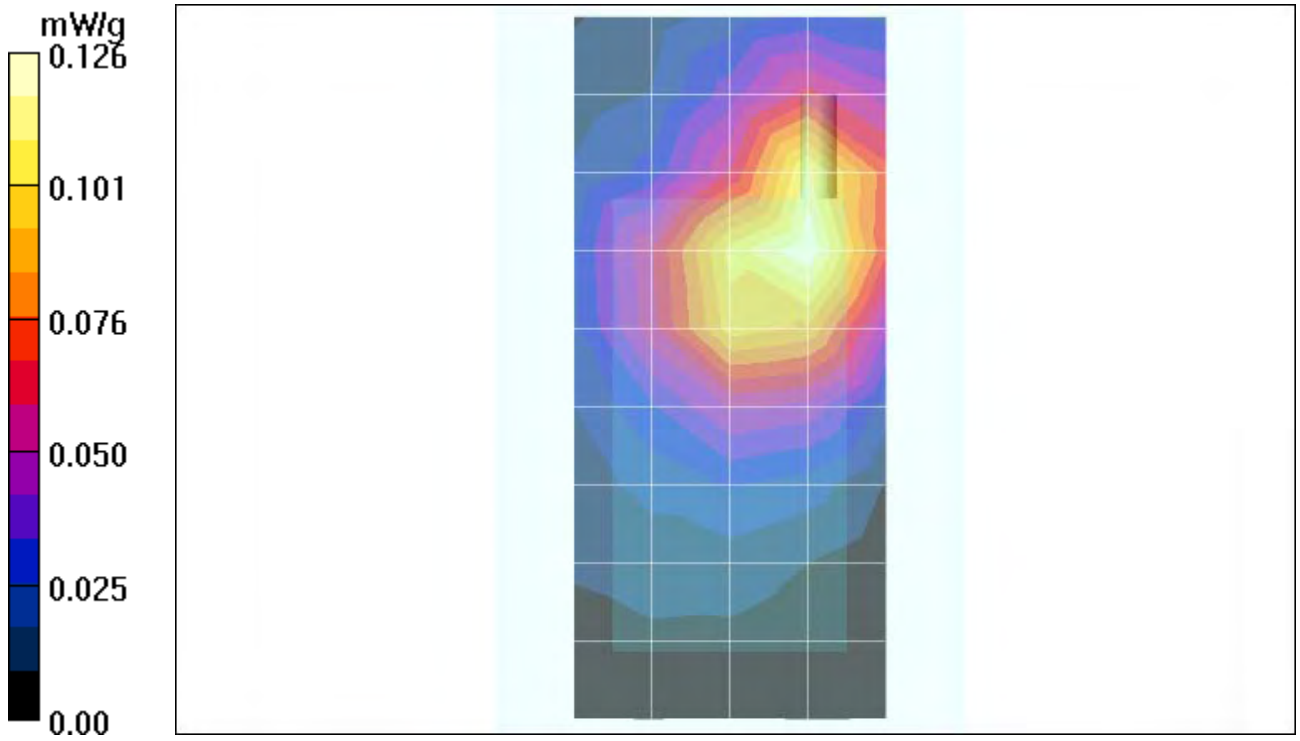
- Probe: ET3DV6R - SN1397; ConvF(4.52, 4.52, 4.52); Calibrated: 5/21/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn316; Calibrated: 1/13/2005
- Phantom: R1: Sect.2, Amy Twin; Type: Amy Twin Flat; Serial: n/a;
- Measurement SW: DASY4, V4.4 Build 3; Postprocessing SW: SEMCAD, V1.8 Build 146

Amy Twin Phone Template/Area Scan - Normal Body (15mm) (12x7x1):

Measurement grid: dx=15mm, dy=15mm; Maximum value of SAR (measured) = 0.126 mW/g

Amy Twin Phone Template/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm,dy=5mm,dz=5mm; Reference Value = 9.01 V/m; **Power Drift = -0.089 dB**
Peak SAR (extrapolated) = 0.196 W/kg; **SAR(1 g) = 0.121 mW/g; SAR(10 g) = 0.073 mW/g**
Maximum value of SAR (measured) = 0.131 mW/g



Date/Time: 3/30/2005 11:54:49 PM

Test Laboratory: Motorola

Serial: TA13602121
Procedure Notes: Ch# 661 / Pwr Step: 0 OTA; Antenna Position: FIXED; Battery Model #: SNN5683A; Accessory Model #: none; DEVICE POSITION: Back of Phone 15mm Away from Flat Phantom

Communication System: GSM 1900; Frequency: 1880 MHz; Duty Cycle: 1:8
Medium: Regular Glycol Body; Medium parameters used: σ = 1.59 mho/m, ε_r = 51.3; ρ = 1000 kg/m^3
DASY4 Configuration:

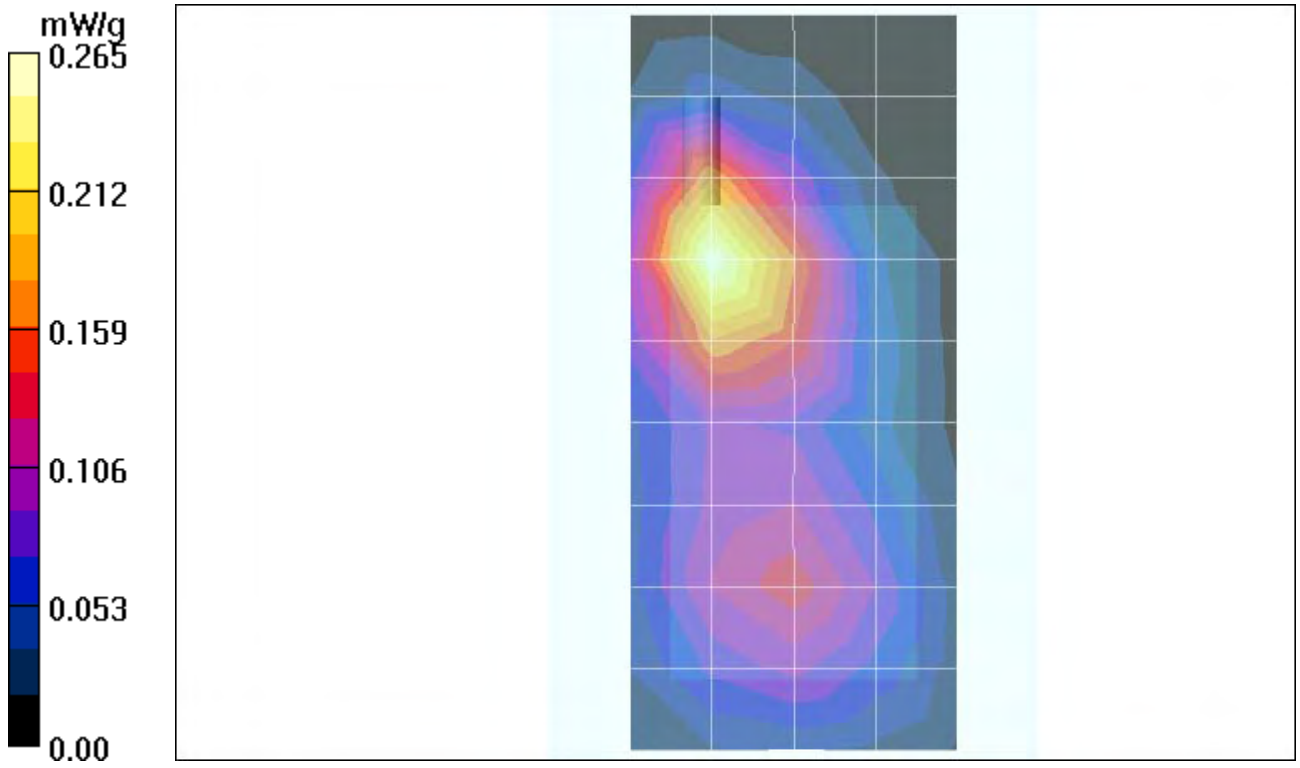
- Probe: ET3DV6R - SN1397; ConvF(4.52, 4.52, 4.52); Calibrated: 5/21/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn316; Calibrated: 1/13/2005
- Phantom: R1: Sect.2, Amy Twin; Type: Amy Twin Flat; Serial: n/a;
- Measurement SW: DASY4, V4.4 Build 3; Postprocessing SW: SEMCAD, V1.8 Build 146

Amy Twin Phone Template/Area Scan - Normal Body (15mm) (12x7x1):

Measurement grid: dx=15mm, dy=15mm; Maximum value of SAR (measured) = 0.265 mW/g

Amy Twin Phone Template/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm,dy=5mm,dz=5mm; Reference Value = 10.9 V/m; **Power Drift = -0.055 dB**
Peak SAR (extrapolated) = 0.392 W/kg; **SAR(1 g) = 0.248 mW/g; SAR(10 g) = 0.143 mW/g**
Maximum value of SAR (measured) = 0.273 mW/g



Date/Time: 3/31/2005 12:30:05 AM

Test Laboratory: Motorola

Serial: TA13602121
Procedure Notes: Ch# 661 / Pwr Step: 0 OTA; Antenna Position: FIXED; Battery Model #: SNN5683A; Accessory Model #: none; DEVICE POSITION: Back of Phone 25mm Away from Flat Phantom

Communication System: GPRS 1900 - Class 10; Frequency: 1880 MHz; Duty Cycle: 1:4
Medium: Regular Glycol Body; Medium parameters used: σ = 1.59 mho/m, ε_r = 51.3; ρ = 1000 kg/m^3
DASY4 Configuration:

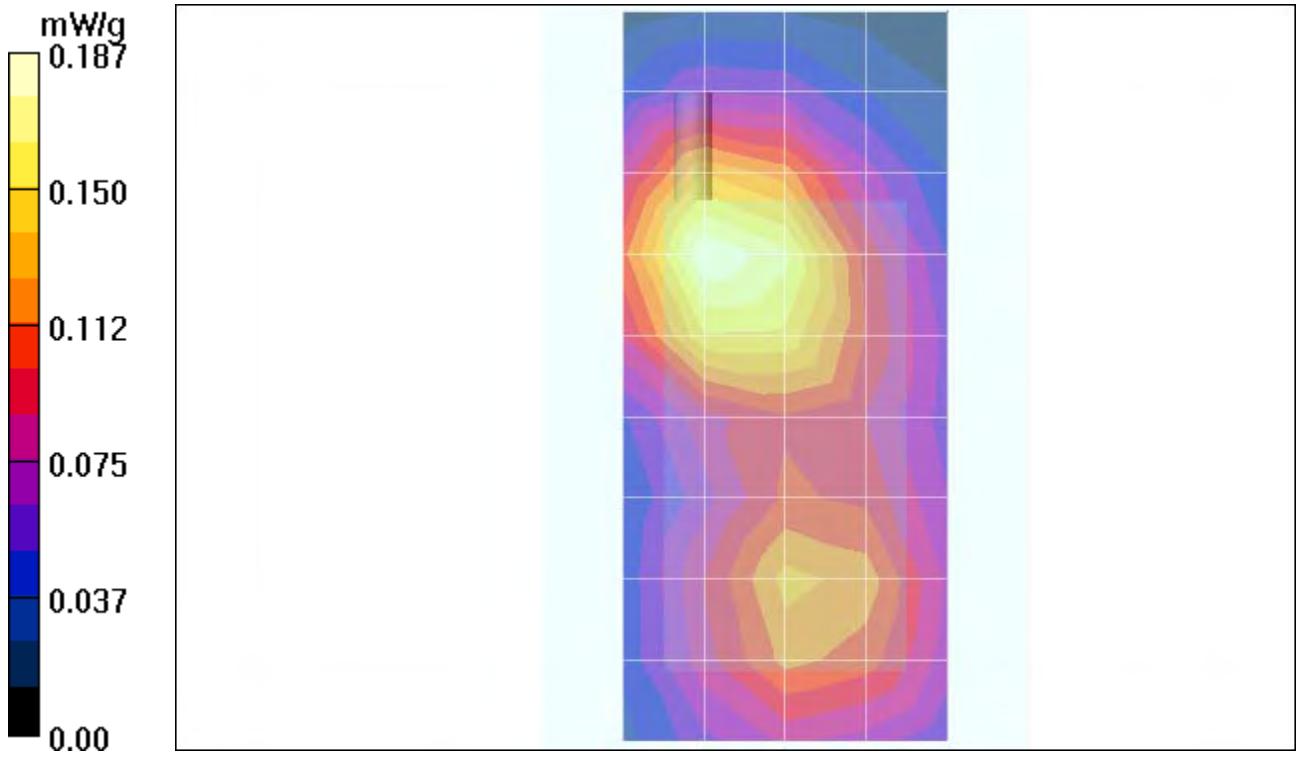
- Probe: ET3DV6R - SN1397; ConvF(4.52, 4.52, 4.52); Calibrated: 5/21/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn316; Calibrated: 1/13/2005
- Phantom: R1: Sect.2, Amy Twin; Type: Amy Twin Flat; Serial: n/a;
- Measurement SW: DASY4, V4.4 Build 3; Postprocessing SW: SEMCAD, V1.8 Build 146

Amy Twin Phone Template/Area Scan - Normal Body (15mm) (12x7x1):

Measurement grid: dx=15mm, dy=15mm; Maximum value of SAR (measured) = 0.187 mW/g

Amy Twin Phone Template/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm,dy=5mm,dz=5mm; Reference Value = 10.8 V/m; **Power Drift = -0.698 dB**
Peak SAR (extrapolated) = 0.272 W/kg; **SAR(1 g) = 0.178 mW/g; SAR(10 g) = 0.111 mW/g**
Maximum value of SAR (measured) = 0.193 mW/g



Date/Time: 3/31/2005 12:55:07 AM

Test Laboratory: Motorola

Serial: TA13602121
Procedure Notes: Ch# 661 / Pwr Step: 0 OTA; Antenna Position: FIXED; Battery Model #: SNN5704B; Accessory Model #: none; DEVICE POSITION: Back of Phone 15mm Away from Flat Phantom

Communication System: GSM 1900; Frequency: 1880 MHz; Duty Cycle: 1:8
Medium: Regular Glycol Body; Medium parameters used: σ = 1.59 mho/m, ε_r = 51.3; ρ = 1000 kg/m^3
DASY4 Configuration:

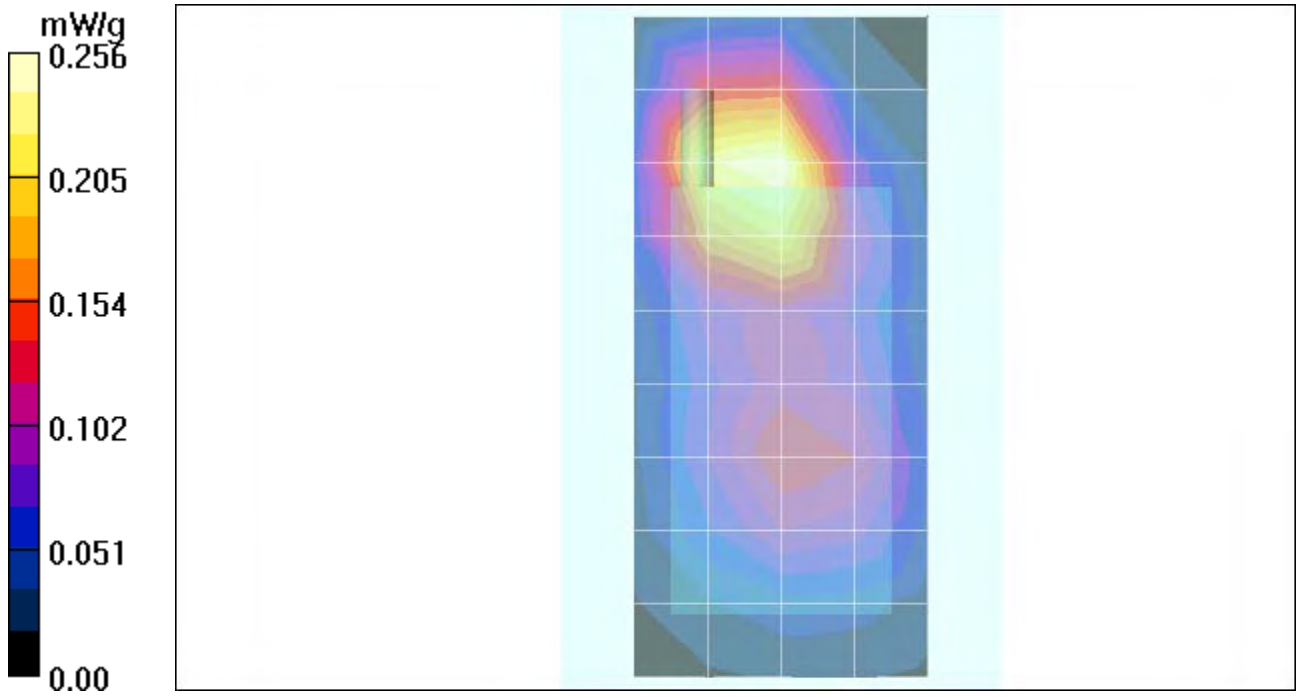
- Probe: ET3DV6R - SN1397; ConvF(4.52, 4.52, 4.52); Calibrated: 5/21/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn316; Calibrated: 1/13/2005
- Phantom: R1: Sect.2, Amy Twin; Type: Amy Twin Flat; Serial: n/a;
- Measurement SW: DASY4, V4.4 Build 3; Postprocessing SW: SEMCAD, V1.8 Build 146

Amy Twin Phone Template/Area Scan - Normal Body (15mm) (12x7x1):

Measurement grid: dx=15mm, dy=15mm; Maximum value of SAR (measured) = 0.256 mW/g

Amy Twin Phone Template/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm,dy=5mm,dz=5mm; Reference Value = 12.9 V/m; **Power Drift = 0.052 dB**
Peak SAR (extrapolated) = 0.431 W/kg; **SAR(1 g) = 0.271 mW/g; SAR(10 g) = 0.156 mW/g**
Maximum value of SAR (measured) = 0.298 mW/g



Date/Time: 3/31/2005 1:17:50 AM

Test Laboratory: Motorola

Serial: TA13602121
Procedure Notes: Ch# 661 / Pwr Step: 0 OTA; Antenna Position: FIXED;
Battery Model #: SNN5683A (rev B); Accessory Model #: none; DEVICE POSITION: Back of Phone 15mm Away from Flat Phantom

Communication System: GSM 1900; Frequency: 1880 MHz; Duty Cycle: 1:8
Medium: Regular Glycol Body; Medium parameters used: σ = 1.59 mho/m, ε_r = 51.3; ρ = 1000 kg/m^3
DASY4 Configuration:

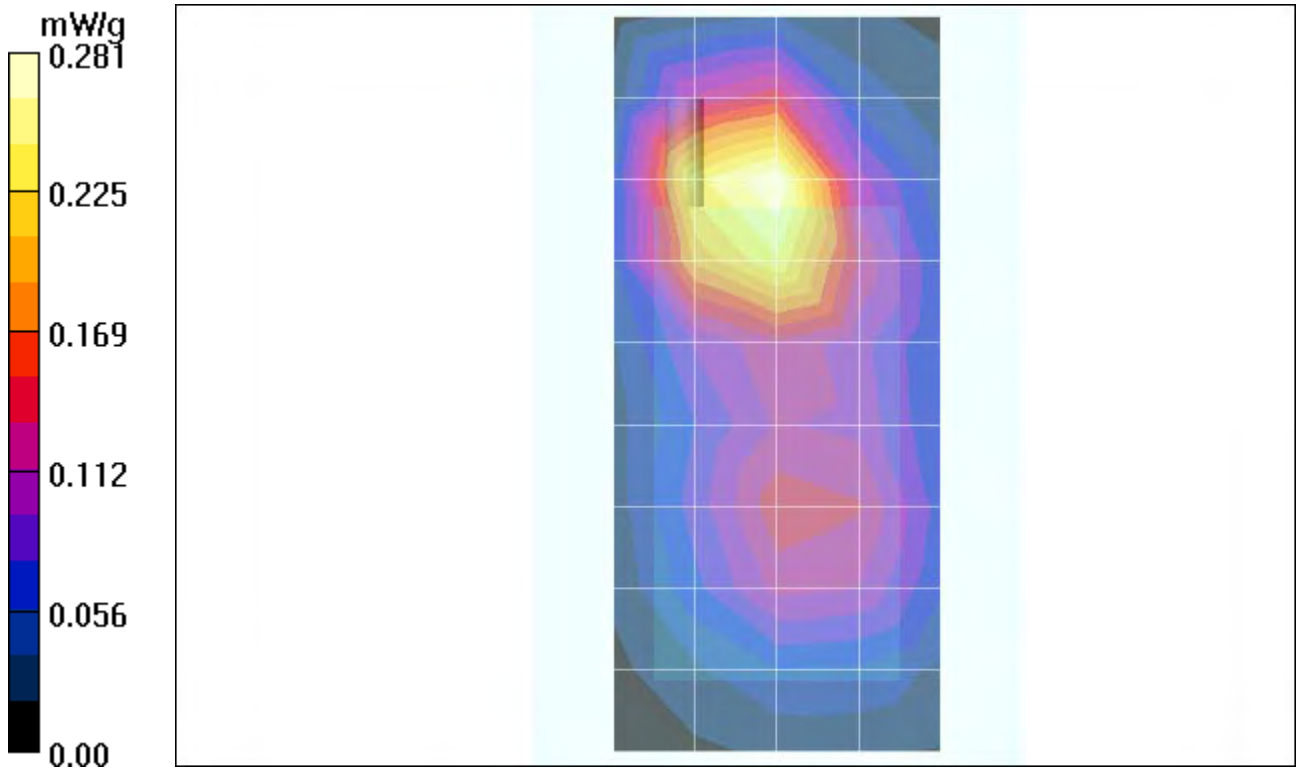
- Probe: ET3DV6R - SN1397; ConvF(4.52, 4.52, 4.52); Calibrated: 5/21/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn316; Calibrated: 1/13/2005
- Phantom: R1: Sect.2, Amy Twin; Type: Amy Twin Flat; Serial: n/a;
- Measurement SW: DASY4, V4.4 Build 3; Postprocessing SW: SEMCAD, V1.8 Build 146

Amy Twin Phone Template/Area Scan - Normal Body (15mm) (12x7x1):

Measurement grid: dx=15mm, dy=15mm; Maximum value of SAR (measured) = 0.281 mW/g

Amy Twin Phone Template/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm,dy=5mm,dz=5mm; Reference Value = 13.4 V/m; **Power Drift = 0.085 dB**
Peak SAR (extrapolated) = 0.472 W/kg; **SAR(1 g) = 0.294 mW/g; SAR(10 g) = 0.169 mW/g**
Maximum value of SAR (measured) = 0.323 mW/g



Date/Time: 4/7/2005 6:42:39 PM

Test Laboratory: Motorola

Serial: TA13602121
Procedure Notes: Ch# 661 / Pwr Step: 0 OTA; Antenna Position: FIXED; Battery Model #: SNN5683A (rev B); Accessory Model # = SYN1084A Holster Rotated 90 Degrees

Communication System: GSM 1900; Frequency: 1880 MHz; Duty Cycle: 1:8
Medium: Regular Glycol Body; Medium parameters used: σ = 1.59 mho/m, ε_r = 51.4; ρ = 1000 kg/m^3
DASY4 Configuration:

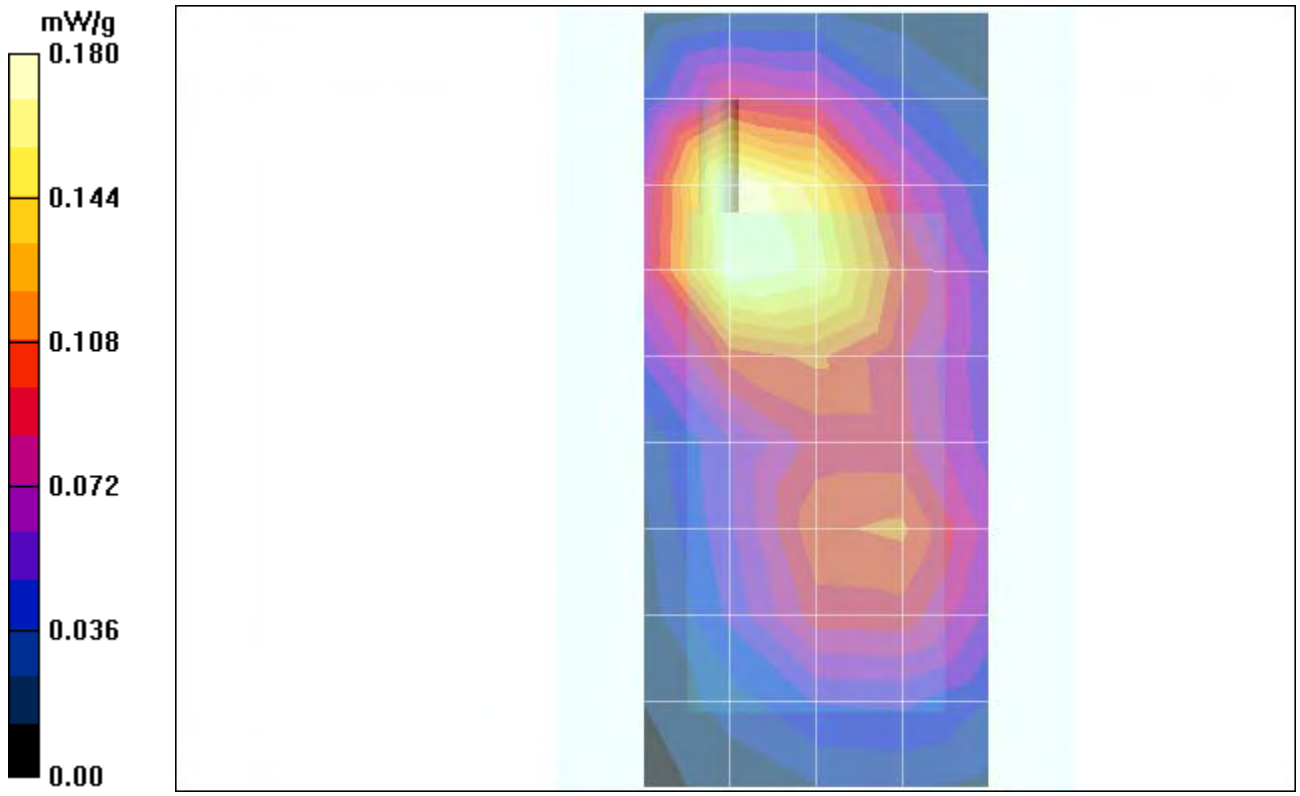
- Probe: ET3DV6 - SN1398; ConvF(4.65, 4.65, 4.65); Calibrated: 2/24/2005
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn316; Calibrated: 1/13/2005
- Phantom: R1: Sect.2, Amy Twin; Type: Amy Twin Flat; Serial: n/a;
- Measurement SW: DASY4, V4.4 Build 3; Postprocessing SW: SEMCAD, V1.8 Build 147

Amy Twin Phone Template/Area Scan - Normal Body (15mm) (12x7x1):

Measurement grid: dx=15mm, dy=15mm; Maximum value of SAR (measured) = 0.180 mW/g

Amy Twin Phone Template/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm,dy=5mm,dz=5mm; Reference Value = 9.77 V/m; **Power Drift = -0.088 dB**
Peak SAR (extrapolated) = 0.295 W/kg; **SAR(1 g) = 0.189 mW/g; SAR(10 g) = 0.114 mW/g**
Maximum value of SAR (measured) = 0.207 mW/g



Date/Time: 4/6/2005 12:01:46 AM

Test Laboratory: Motorola

Serial: TA13602121
Procedure Notes: Ch# 661 / Pwr Step: 0 OTA; Antenna Position: FIXED; Battery Model #: SNN5683A (rev B); Accessory Model # = MOTPN0670K Pouch / SYN8631A Wishbone Belt Clip

Communication System: GSM 1900; Frequency: 1880 MHz; Duty Cycle: 1:8
Medium: Regular Glycol Body; Medium parameters used: σ = 1.59 mho/m, ε_r = 51.2; ρ = 1000 kg/m^3
DASY4 Configuration:

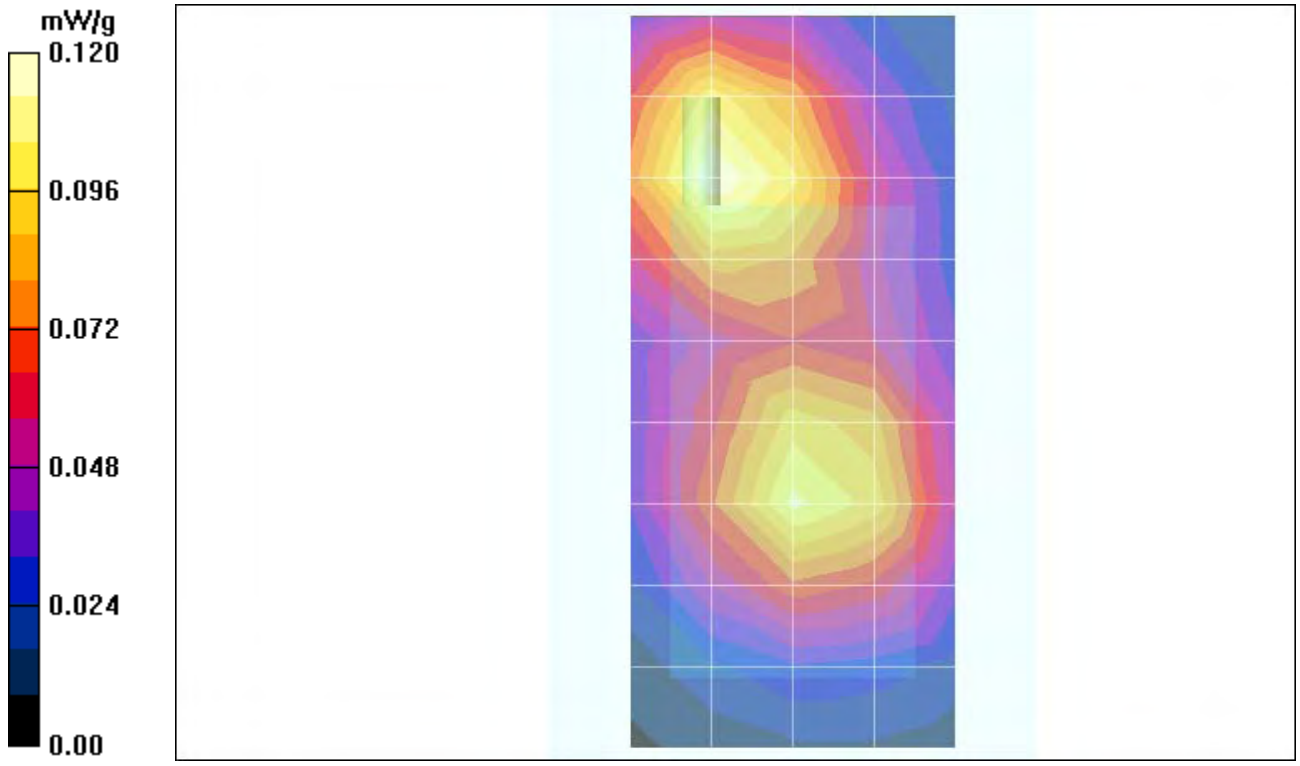
- Probe: ET3DV6 - SN1398; ConvF(4.65, 4.65, 4.65); Calibrated: 2/24/2005
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn316; Calibrated: 1/13/2005
- Phantom: R1: Sect.2, Amy Twin; Type: Amy Twin Flat; Serial: n/a;
- Measurement SW: DASY4, V4.4 Build 3; Postprocessing SW: SEMCAD, V1.8 Build 147

Amy Twin Phone Template/Area Scan - Normal Body (15mm) (12x7x1):

Measurement grid: dx=15mm, dy=15mm; Maximum value of SAR (measured) = 0.120 mW/g

Amy Twin Phone Template/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm,dy=5mm,dz=5mm; Reference Value = 8.88 V/m; Power **Drift = -0.012 dB**
Peak SAR (extrapolated) = 0.177 W/kg; **SAR(1 g) = 0.114 mW/g; SAR(10 g) = 0.071 mW/g**
Maximum value of SAR (measured) = 0.125 mW/g



Date/Time: 4/6/2005 12:22:39 AM

Test Laboratory: Motorola

Serial: TA13602121
Procedure Notes: Ch# 661 / Pwr Step: 0 OTA; Antenna Position: FIXED; Battery Model #: SNN5683A (rev B); Accessory Model # = SYN1109A pouch

Communication System: GSM 1900; Frequency: 1880 MHz; Duty Cycle: 1:8
Medium: Regular Glycol Body; Medium parameters used: σ = 1.59 mho/m, ε_r = 51.2; ρ = 1000 kg/m^3
DASY4 Configuration:

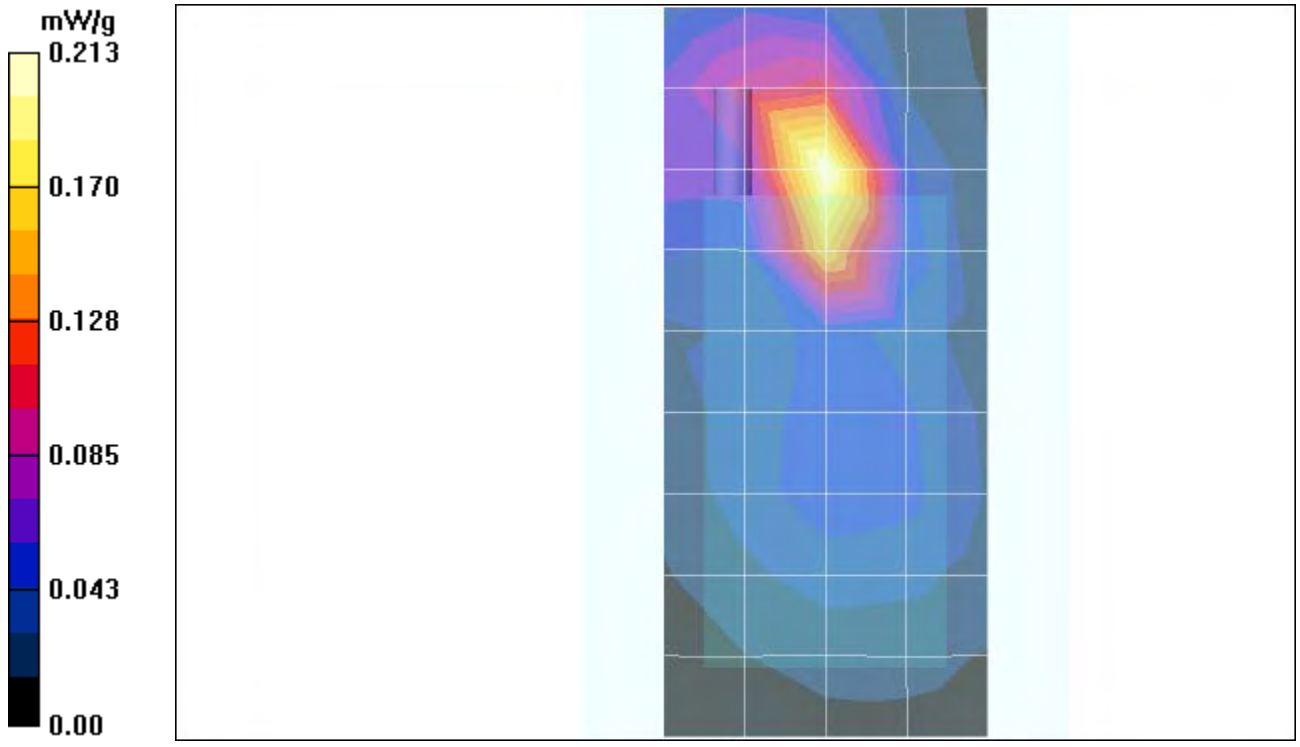
- Probe: ET3DV6 - SN1398; ConvF(4.65, 4.65, 4.65); Calibrated: 2/24/2005
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn316; Calibrated: 1/13/2005
- Phantom: R1: Sect.2, Amy Twin; Type: Amy Twin Flat; Serial: n/a;
- Measurement SW: DASY4, V4.4 Build 3; Postprocessing SW: SEMCAD, V1.8 Build 147

Amy Twin Phone Template/Area Scan - Normal Body (15mm) (12x7x1):

Measurement grid: dx=15mm, dy=15mm; Maximum value of SAR (measured) = 0.213 mW/g

Amy Twin Phone Template/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm,dy=5mm,dz=5mm; Reference Value = 11.5 V/m; **Power Drift = 0.165 dB**
Peak SAR (extrapolated) = 0.316 W/kg; **SAR(1 g) = 0.194 mW/g; SAR(10 g) = 0.101 mW/g**
Maximum value of SAR (measured) = 0.216 mW/g



Date/Time: 4/5/2005 11:11:59 PM

Test Laboratory: Motorola

Serial: TA13602121
Procedure Notes: Ch# 661 / Pwr Step: 0 OTA; Antenna Position: FIXED; Battery
Model #: SNN5683A (rev B); Accessory Model # = MOTPL0686K Pouch

Communication System: GSM 1900; Frequency: 1880 MHz; Duty Cycle: 1:8
Medium: Regular Glycol Body; Medium parameters used: σ = 1.59 mho/m, ε_r = 51.2; ρ = 1000 kg/m^3
DASY4 Configuration:

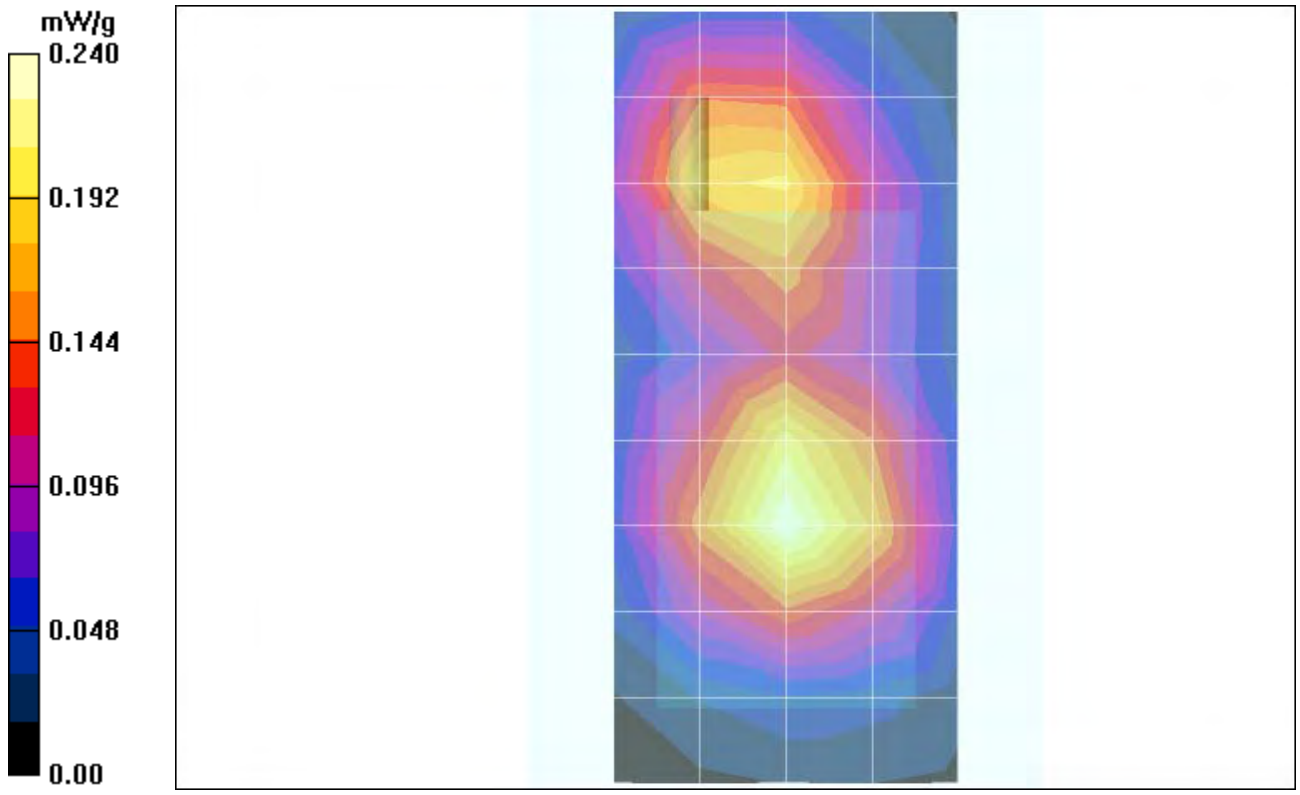
- Probe: ET3DV6 - SN1398; ConvF(4.65, 4.65, 4.65); Calibrated: 2/24/2005
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn316; Calibrated: 1/13/2005
- Phantom: R1: Sect.2, Amy Twin; Type: Amy Twin Flat; Serial: n/a;
- Measurement SW: DASY4, V4.4 Build 3; Postprocessing SW: SEMCAD, V1.8 Build 147

Amy Twin Phone Template/Area Scan - Normal Body (15mm) (12x7x1):

Measurement grid: dx=15mm, dy=15mm; Maximum value of SAR (measured) = 0.240 mW/g

Amy Twin Phone Template/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm,dy=5mm,dz=5mm; Reference Value = 13.2 V/m; **Power Drift = -0.053 dB**
Peak SAR (extrapolated) = 0.339 W/kg; **SAR(1 g) = 0.224 mW/g; SAR(10 g) = 0.139 mW/g**



Date/Time: 3/23/2005 9:41:28 PM

Test Laboratory: Motorola

Serial: TA13602121
Procedure Notes: Ch# frequency hopping / Pwr Step: continuous; Antenna Position: FIXED; Accessory Model: NONE; Battery Model #: SNN5683A; DEVICE POSITION: Front of Phone 15mm from Flat Phantom

Communication System: Bluetooth; Frequency: 2441 MHz; Duty Cycle: 1:1
Medium: 2450 Glycol Body; Medium parameters used: σ = 1.97 mho/m, ε_r = 50.2; ρ = 1000 kg/m^3
DASY4 Configuration:

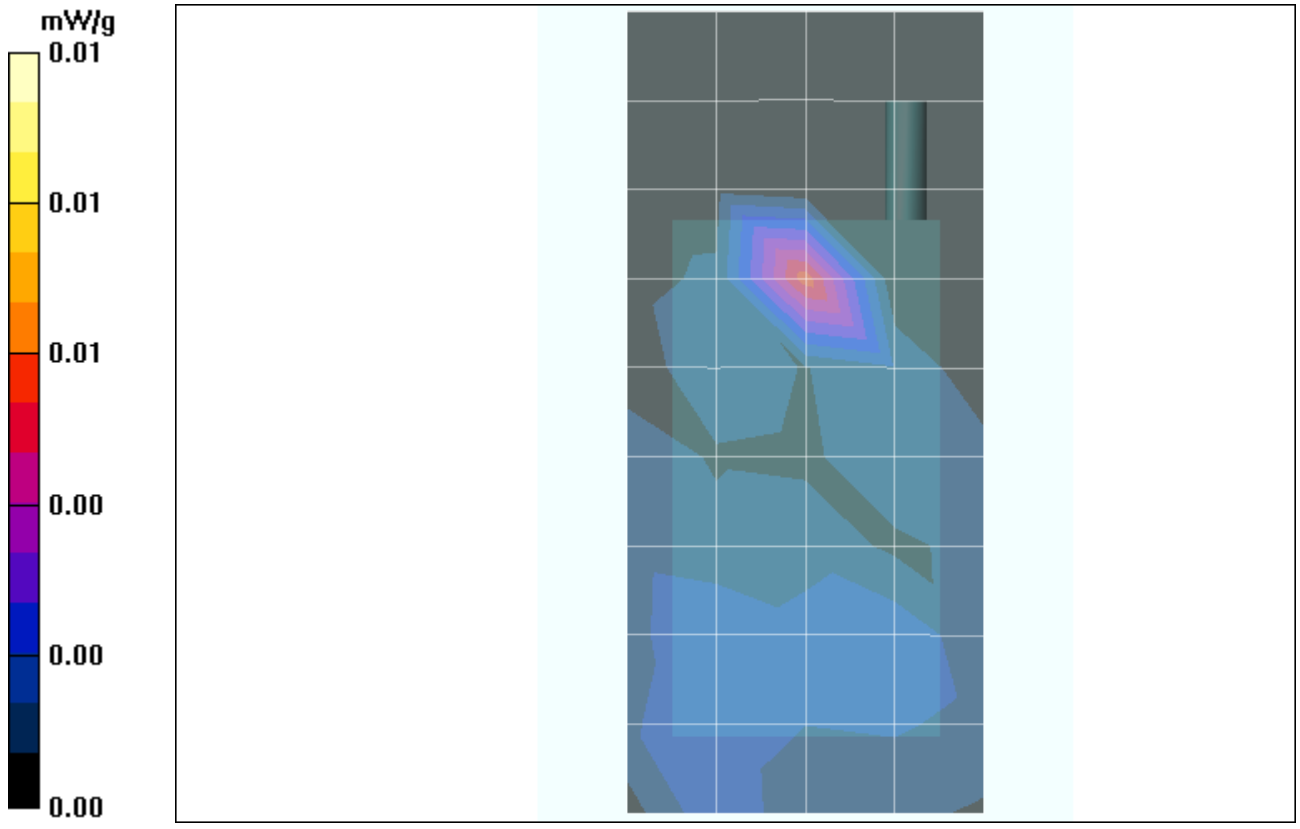
- Probe: ET3DV6 - SN1514; ConvF(4.24, 4.24, 4.24); Calibrated: 7/22/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn365; Calibrated: 9/22/2004
- Phantom: R4 : Sect.2, Amy Twin; Type: Amy Twin Flat; Serial: n/a;
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

Amy Twin Phone Template/Area Scan - Normal Body (15mm) (12x7x1):

Measurement grid: dx=15mm, dy=15mm; Maximum value of SAR (measured) = 0.01 mW/g

Amy Twin Phone Template/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm,dy=5mm,dz=5mm; Reference Value = 1.02 V/m; **Power Drift = -0.049 dB**
Peak SAR (extrapolated) = 0.00 W/kg; **SAR(1 g) = 4.45e-005 mW/g; SAR(10 g) = 4.97e-006 mW/g**
Maximum value of SAR (measured) = 0.00 mW/g



Date/Time: 3/23/2005 10:40:24 PM

Test Laboratory: Motorola

Serial: TA13602121
Procedure Notes: Ch# frequency hopping / Pwr Step: continuous; Antenna Position: FIXED; Accessory Model: NONE; Battery Model #: SNN5683A; DEVICE POSITION: Back of Phone 15mm Away from Flat Phantom

Communication System: Bluetooth; Frequency: 2441 MHz; Duty Cycle: 1:1
Medium: 2450 Glycol Body; Medium parameters used: σ = 1.97 mho/m, ε_r = 50.2; ρ = 1000 kg/m^3
DASY4 Configuration:

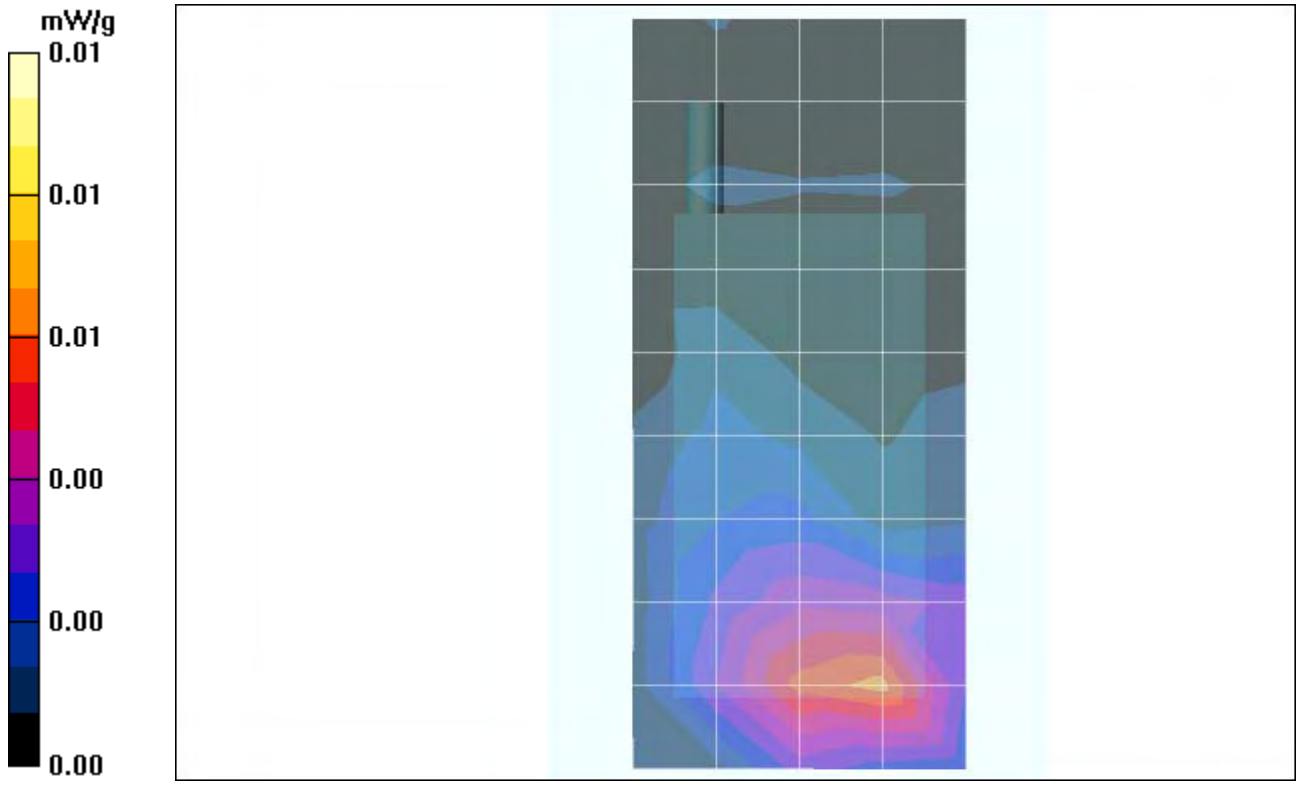
- Probe: ET3DV6 - SN1514; ConvF(4.24, 4.24, 4.24); Calibrated: 7/22/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn365; Calibrated: 9/22/2004
- Phantom: R4 : Sect.2, Amy Twin; Type: Amy Twin Flat; Serial: n/a;
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

Amy Twin Phone Template/Area Scan - Normal Body (15mm) (12x7x1):

Measurement grid: dx=15mm, dy=15mm; Maximum value of SAR (measured) = 0.01 mW/g

Amy Twin Phone Template/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm,dy=5mm,dz=5mm; Reference Value = 1.85 V/m; **Power Drift = 0.087 dB**
Peak SAR (extrapolated) = 0.025 W/kg; **SAR(1 g) = 0.00593 mW/g; SAR(10 g) = 0.00273 mW/g**



Date/Time: 3/23/2005 11:02:42 PM

Test Laboratory: Motorola

Serial: TA1360212
Procedure Notes: Ch# frequency hopping / Pwr Step: continuous; Antenna Position: FIXED; Accessory Model: none; Battery Model SNN5683A; DEVICE POSITION: Back of Phone 25mm Away from Flat Phantom
Communication System: Bluetooth; Frequency: 2441 MHz; Duty Cycle: 1:1
Medium: 2450 Glycol Body; Medium parameters used: σ = 1.97 mho/m, ε_r = 50.2; ρ = 1000 kg/m^3
DASY4 Configuration:

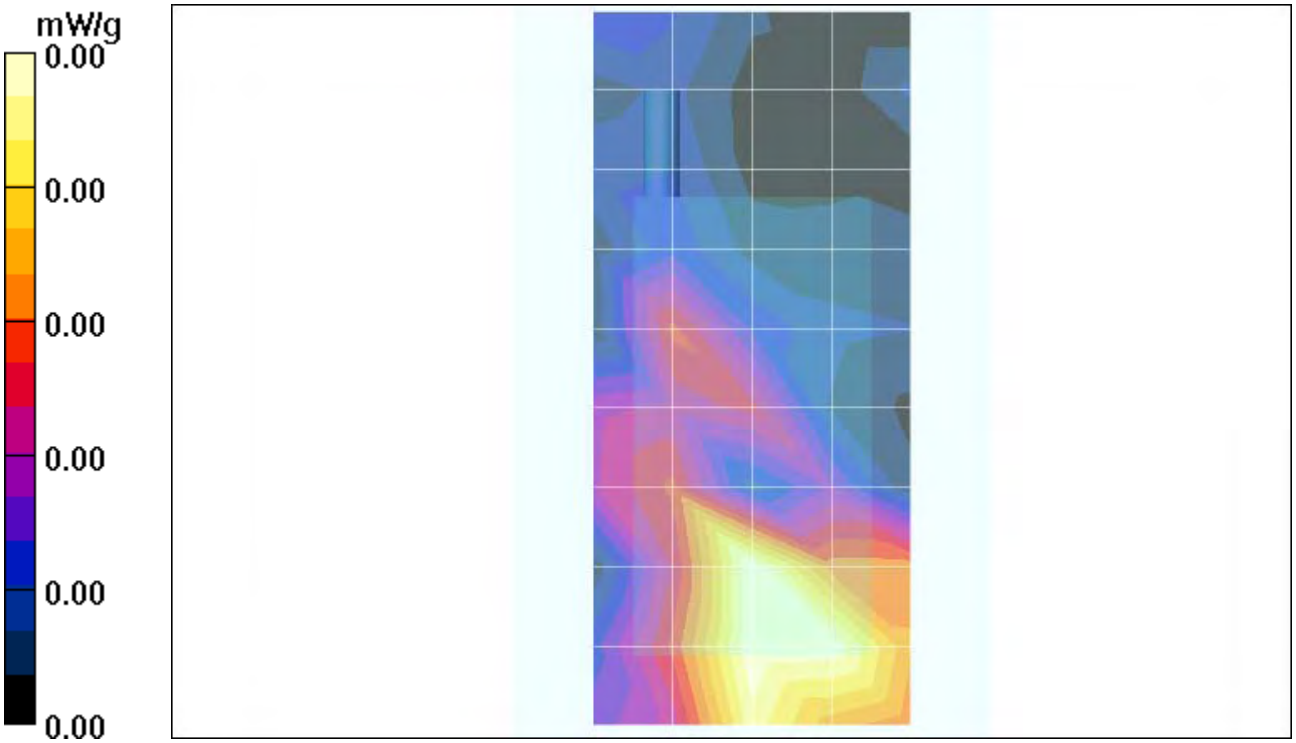
- Probe: ET3DV6 - SN1514; ConvF(4.24, 4.24, 4.24); Calibrated: 7/22/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn365; Calibrated: 9/22/2004
- Phantom: R4 : Sect.2, Amy Twin; Type: Amy Twin Flat; Serial: n/a;
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

Amy Twin Phone Template/Area Scan - Normal Body (15mm) (12x7x1):

Measurement grid: dx=15mm, dy=15mm; Maximum value of SAR (measured) = 0.00 mW/g

Amy Twin Phone Template/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm,dy=5mm,dz=5mm; Reference Value = 1.23 V/m; **Power Drift = -0.296 dB**
Peak SAR (extrapolated) = 0.017 W/kg; **SAR(1 g) = 0.00346 mW/g; SAR(10 g) = 0.00143 mW/g**
Maximum value of SAR (measured) = 0.01 mW/g



Date/Time: 3/29/2005 5:10:02 PM

Test Laboratory: Motorola

Serial: TA13602121
Procedure Notes: Ch# frequency hopping / Pwr Step: continuous; Antenna Position: FIXED; Accessory Model: None; Battery Model #: SNN5704B; DEVICE POSITION: Back of Phone 15mm Away from Flat Phantom

Communication System: Bluetooth; Frequency: 2441 MHz; Duty Cycle: 1:1
Medium: 2450 Glycol Body; Medium parameters used: σ = 1.97 mho/m, ε_r = 50.4; ρ = 1000 kg/m^3
DASY4 Configuration:

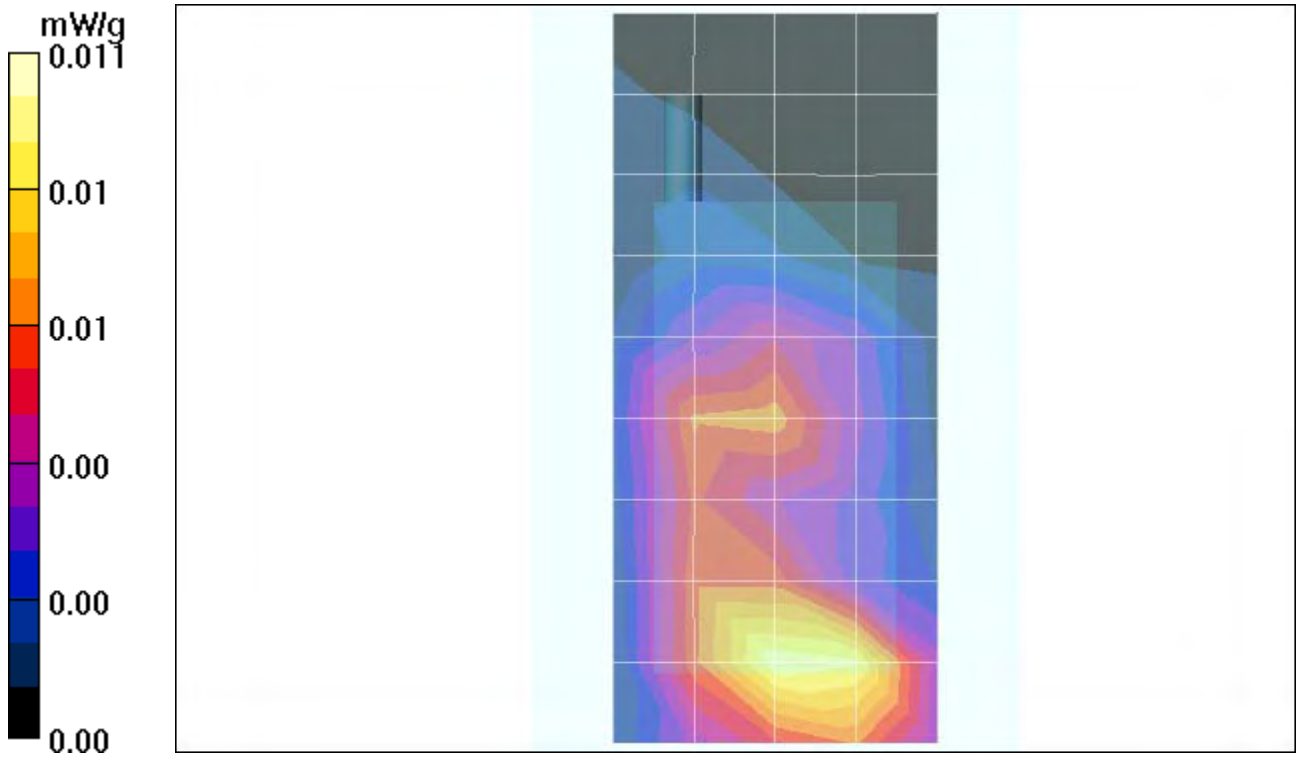
- Probe: ET3DV6 - SN1514; ConvF(4.24, 4.24, 4.24); Calibrated: 7/22/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn365; Calibrated: 9/22/2004
- Phantom: R4 : Sect.2, Amy Twin; Type: Amy Twin Flat; Serial: n/a;
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

Amy Twin Phone Template/Area Scan - Normal Body (15mm) (12x7x1):

Measurement grid: dx=15mm, dy=15mm; Maximum value of SAR (measured) = 0.010 mW/g

Amy Twin Phone Template/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm,dy=5mm,dz=5mm; Reference Value = 2.30 V/m; **Power Drift = 0.062 dB**
Peak SAR (extrapolated) = 0.033 W/kg; **SAR(1 g) = 0.00985 mW/g; SAR(10 g) = 0.0048 mW/g**
Maximum value of SAR (measured) = 0.011 mW/g



Date/Time: 3/29/2005 5:45:47 PM

Test Laboratory: Motorola

Serial: TA13602121
Procedure Notes: Ch# frequency hopping / Pwr Step: continuous; Antenna Position: FIXED; Accessory Model: none; Battery Model #: SNN5683A (rev B); DEVICE POSITION: Back of Phone 15mm Away from Flat Phantom

Communication System: Bluetooth; Frequency: 2441 MHz; Duty Cycle: 1:1
Medium: 2450 Glycol Body; Medium parameters used: σ = 1.97 mho/m, ε_r = 50.4; ρ = 1000 kg/m^3
DASY4 Configuration:

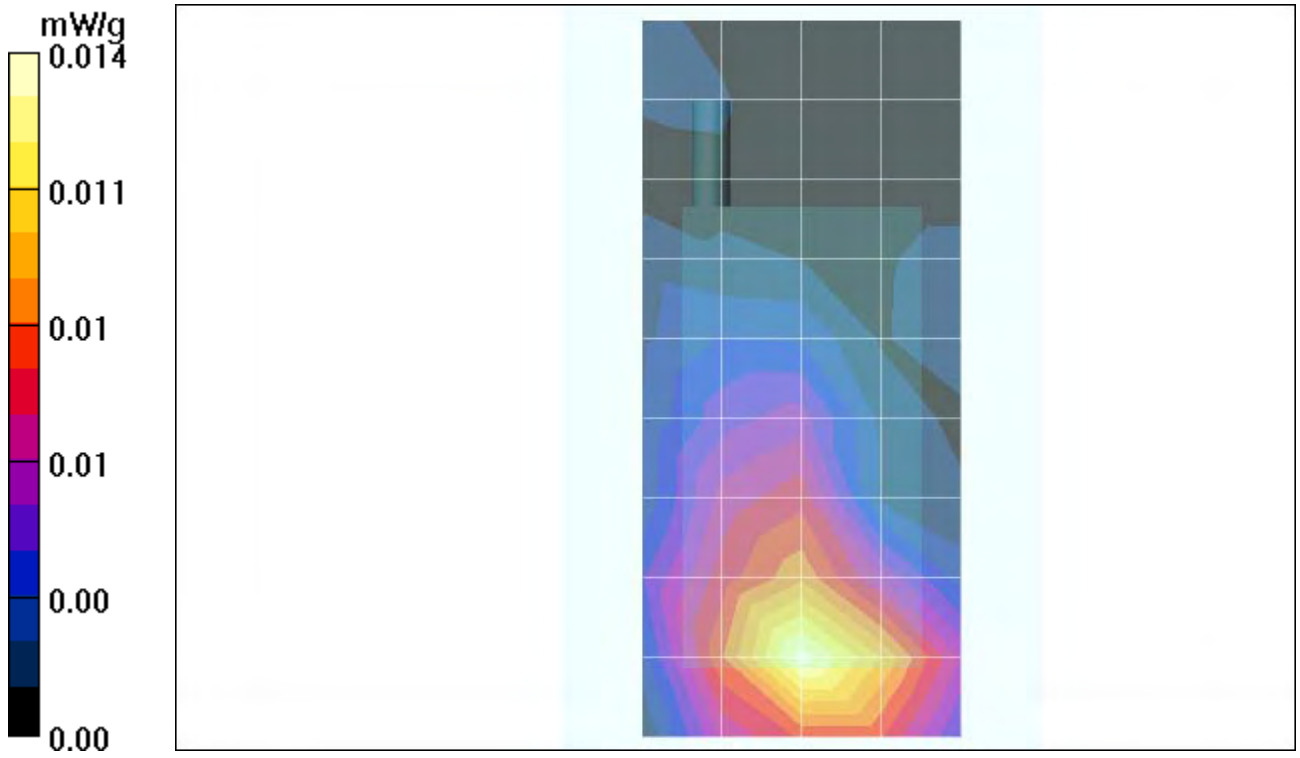
- Probe: ET3DV6 - SN1514; ConvF(4.24, 4.24, 4.24); Calibrated: 7/22/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn365; Calibrated: 9/22/2004
- Phantom: R4 : Sect.2, Amy Twin; Type: Amy Twin Flat; Serial: n/a;
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

Amy Twin Phone Template/Area Scan - Normal Body (15mm) (12x7x1):

Measurement grid: dx=15mm, dy=15mm; Maximum value of SAR (measured) = 0.014 mW/g

Amy Twin Phone Template/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm,dy=5mm,dz=5mm; Reference Value = 2.67 V/m; **Power Drift = 0.011 dB**
Peak SAR (extrapolated) = 0.025 W/kg; **SAR(1 g) = 0.013 mW/g; SAR(10 g) = 0.00659 mW/g**



Date/Time: 4/6/2005 5:53:17 PM

Test Laboratory: Motorola

Serial: TA13602121
Procedure Notes: Ch# frequency hopping / Pwr Step: continuous; Antenna Position: FIXED; Battery Model #: SNN5683A; Accessory Model # = SYN1084A Holster Rotated 90 Degrees

Communication System: Bluetooth; Frequency: 2441 MHz; Duty Cycle: 1:1
Medium: 2450 Glycol Body; Medium parameters used: σ = 1.98 mho/m, ε_r = 51.2; ρ = 1000 kg/m^3
DASY4 Configuration:

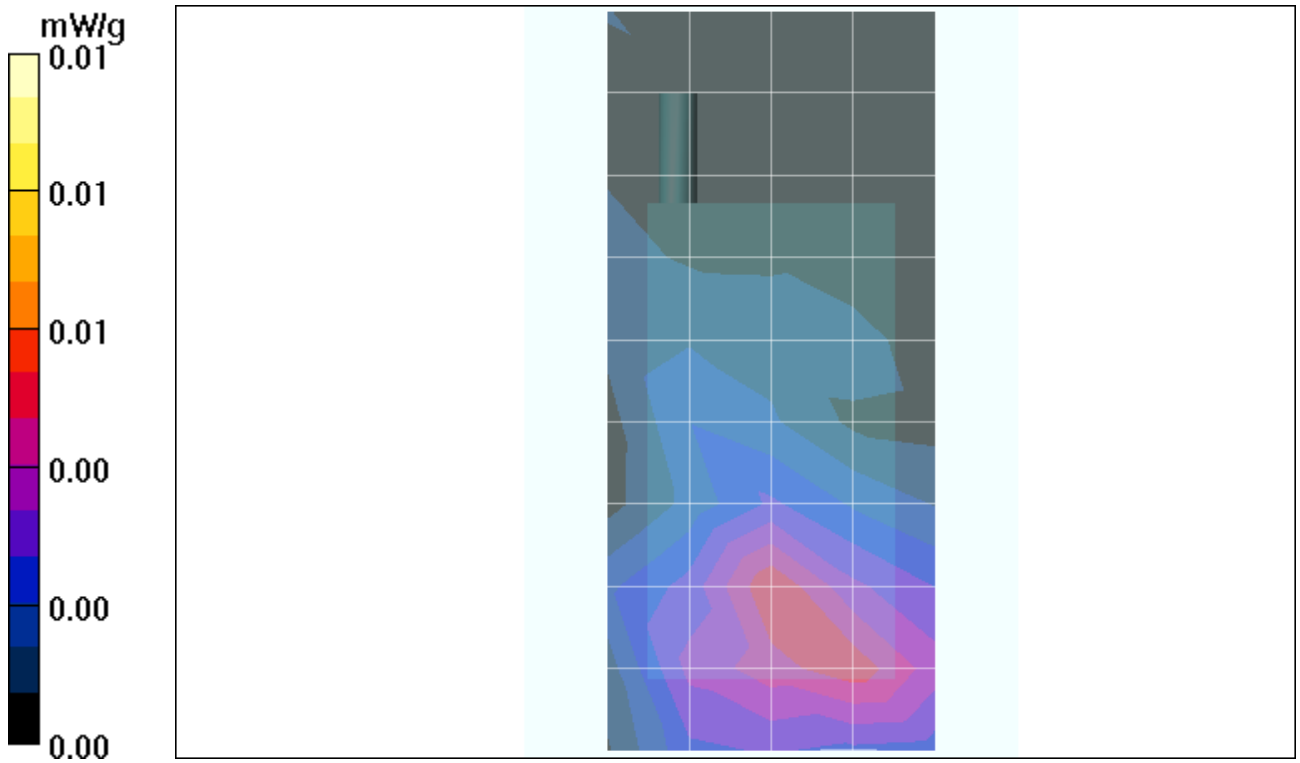
- Probe: ET3DV6 - SN1514; ConvF(4.24, 4.24, 4.24); Calibrated: 7/22/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn365; Calibrated: 9/22/2004
- Phantom: R4 : Sect.2, Amy Twin; Type: Amy Twin Flat; Serial: n/a;
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

Amy Twin Phone Template/Area Scan - Normal Body (15mm) (12x7x1):

Measurement grid: dx=15mm, dy=15mm; Maximum value of SAR (measured) = 0.01 mW/g

Amy Twin Phone Template/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm,dy=5mm,dz=5mm; Reference Value = 1.92 V/m; **Power Drift = 0.202 dB**
Peak SAR (extrapolated) = 0.031 W/kg; **SAR(1 g) = 0.00658 mW/g; SAR(10 g) = 0.00302 mW/g**



Date/Time: 4/6/2005 4:26:02 PM

Test Laboratory: Motorola

Serial: TA13602121
Procedure Notes: Ch# frequency hopping / Pwr Step: continuous; Antenna Position: FIXED; Battery Model #: SNN5683A; Accessory Model # = MOTPN0670K Pouch / SYN8631A Wishbone Belt Clip

Communication System: Bluetooth; Frequency: 2441 MHz; Duty Cycle: 1:1
Medium: 2450 Glycol Body; Medium parameters used: σ = 1.98 mho/m, ε_r = 51.2; ρ = 1000 kg/m^3
DASY4 Configuration:

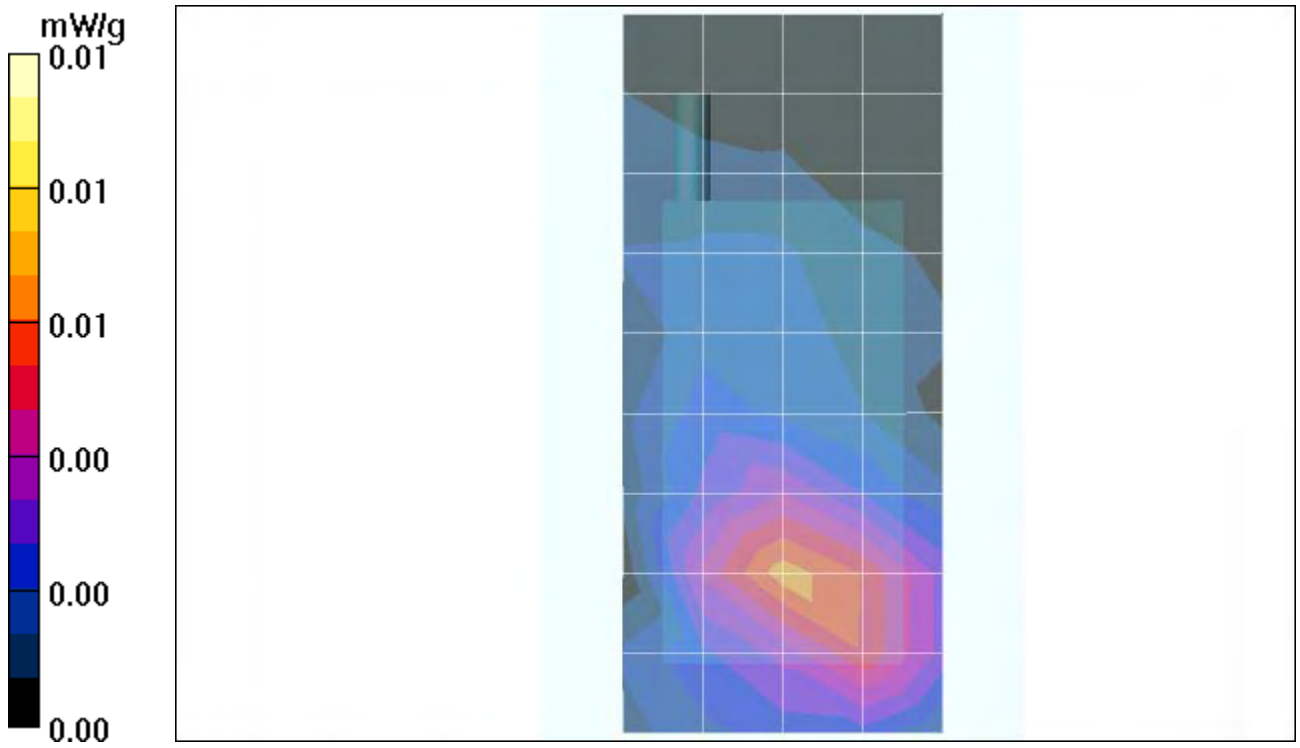
- Probe: ET3DV6 - SN1514; ConvF(4.24, 4.24, 4.24); Calibrated: 7/22/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn365; Calibrated: 9/22/2004
- Phantom: R4 : Sect.2, Amy Twin; Type: Amy Twin Flat; Serial: n/a;
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

Amy Twin Phone Template/Area Scan - Normal Body (15mm) (12x7x1):

Measurement grid: dx=15mm, dy=15mm; Maximum value of SAR (measured) = 0.01 mW/g

Amy Twin Phone Template/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm,dy=5mm,dz=5mm; Reference Value = 1.83 V/m; **Power Drift = -0.031 dB**
Peak SAR (extrapolated) = 0.030 W/kg; **SAR(1 g) = 0.00644 mW/g; SAR(10 g) = 0.00278 mW/g**



Date/Time: 4/6/2005 4:58:20 PM

Test Laboratory: Motorola

Serial: TA13602121
Procedure Notes: Ch# frequency hopping / Pwr Step: continuous; Antenna Position: FIXED;
Battery Model #: SNN5683A; Accessory Model # = SYN1109A pouch

Communication System: Bluetooth; Frequency: 2441 MHz; Duty Cycle: 1:1
Medium: 2450 Glycol Body; Medium parameters used: σ = 1.98 mho/m, ε_r = 51.2; ρ = 1000 kg/m^3
DASY4 Configuration:

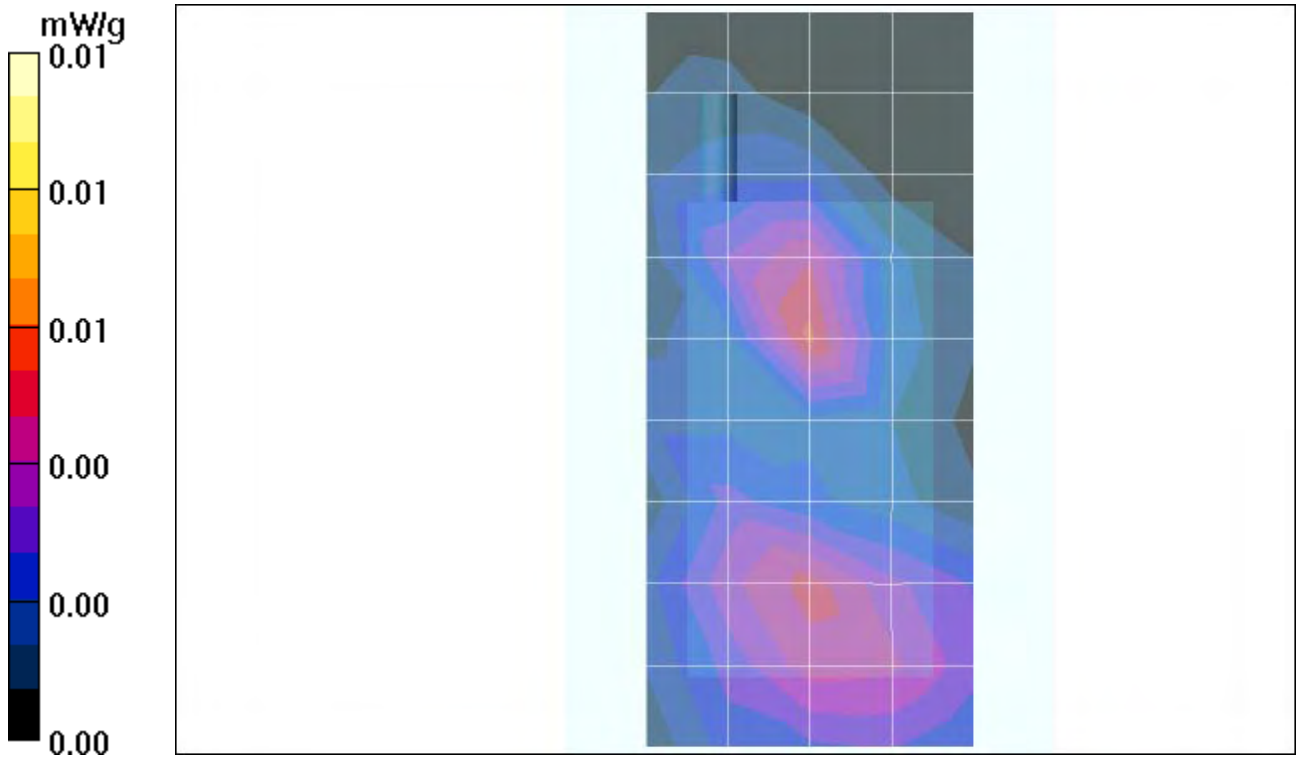
- Probe: ET3DV6 - SN1514; ConvF(4.24, 4.24, 4.24); Calibrated: 7/22/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn365; Calibrated: 9/22/2004
- Phantom: R4 : Sect.2, Amy Twin; Type: Amy Twin Flat; Serial: n/a;
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

Amy Twin Phone Template/Area Scan - Normal Body (15mm) (12x7x1):

Measurement grid: dx=15mm, dy=15mm; Maximum value of SAR (measured) = 0.01 mW/g

Amy Twin Phone Template/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm,dy=5mm,dz=5mm; Reference Value = 1.86 V/m; **Power Drift = 0.023 dB**
Peak SAR (extrapolated) = 0.01 W/kg; **SAR(1 g) = 7.57e-006 mW/g; SAR(10 g) = 1.37e-006 mW/g**



Date/Time: 5/6/2005 1:56:33 PM

Test Laboratory: Motorola

Serial: TA13602121
Procedure Notes: Ch# frequency hopping / Pwr Step: continuous; Antenna Position: FIXED; Battery Model #: SNN5683A; Accessory Model # = MOTPL0686K pouch

Communication System: Bluetooth; Frequency: 2441 MHz; Duty Cycle: 1:1
Medium: 2450 Glycol Body; Medium parameters used: σ = 2.03 mho/m, ε_r = 50.8; ρ = 1000 kg/m^3
DASY4 Configuration:

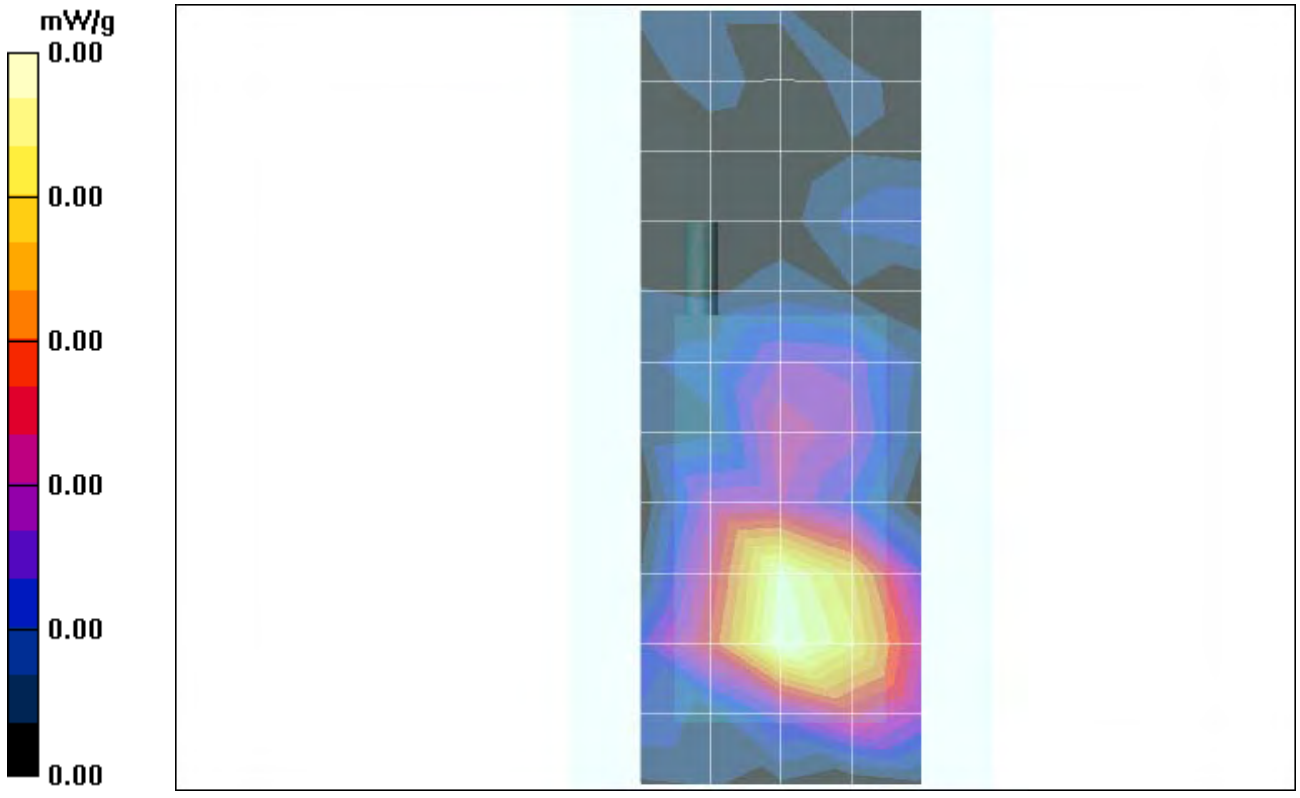
- Probe: ET3DV6 - SN1398; ConvF(4.26, 4.26, 4.26); Calibrated: 2/24/2005
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn316; Calibrated: 1/13/2005
- Phantom: R1: Sect.2, Amy Twin; Type: Amy Twin Flat; Serial: n/a;
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 147

Amy Twin Phone Template/Area Scan - Normal Body (15mm) (13x7x1):

Measurement grid: dx=15mm, dy=15mm; Maximum value of SAR (measured) = 0.00 mW/g

Amy Twin Phone Template/Zoom Scan - to correct max out (7x7x7)/Cube 0:

Measurement grid: dx=5mm,dy=5mm,dz=5mm; Reference Value = 1.17 V/m; **Power Drift = 0.314 dB**
Peak SAR (extrapolated) = 0.029 W/kg; **SAR(1 g) = 0.00598 mW/g; SAR(10 g) = 0.00232 mW/g**
Maximum value of SAR (measured) = 0.01 mW/g



Appendix 4

Probe Calibration Certificate

Calibration Laboratory of
Schmid & Partner
Engineering AG
Zeughausstrasse 43, 8004 Zurich, Switzerland

Client **Motorola PCS**

CALIBRATION CERTIFICATE

Object(s)	ET3DV6R - SN:1397
Calibration procedure(s)	QA CAL-01.v2 Calibration procedure for dosimetric E-field probes
Calibration date:	May 21, 2004
Condition of the calibrated item	In Tolerance (according to the specific calibration document)

This calibration certificate documents the traceability to national standards, which realize the physical units of measurements (SI).
The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.

All calibrations have been conducted in the closed laboratory facility: environment temperature 22 +/- 2 degrees Celsius and humidity < 75%.

Calibration Equipment used (M&TE critical for calibration)

Model Type	ID #	Cal Date (Calibrated by, Certificate No.)	Scheduled Calibration
Power meter EPM E4419B	GB41293874	5-May-04 (METAS, No 251-00388)	May-05
Power sensor E4412A	MY41495277	5-May-04 (METAS, No 251-00388)	May-05
Reference 20 dB Attenuator	SN: 5086 (20b)	3-May-04 (METAS, No 251-00389)	May-05
Fluke Process Calibrator Type 702	SN: 6295803	8-Sep-03 (Sintrel SCS No. E-030020)	Sep-04
Power sensor HP 8481A	MY41092180	18-Sep-02 (SPEAG, in house check Oct-03)	In house check: Oct 05
RF generator HP 8684C	US3642U01700	4-Aug-99 (SPEAG, in house check Aug-02)	In house check: Aug-05
Network Analyzer HP 8753E	US37390585	18-Oct-01 (SPEAG, in house check Oct-03)	In house check: Oct 05

	Name	Function	Signature
Calibrated by:	Nico Vetterli	Technician	
Approved by:	Katja Pokovic	Laboratory Director	

Date issued: May 21, 2004

This calibration certificate is issued as an intermediate solution until the accreditation process (based on ISO/IEC 17025 International Standard) for Calibration Laboratory of Schmid & Partner Engineering AG is completed.

Probe ET3DV6R

SN:1397

Manufactured:	October 24, 1999
Last calibrated:	December 15, 2003
Repaired:	April 23, 2004
Recalibrated:	May 21, 2004

Calibrated for DASY Systems

(Note: non-compatible with DASY2 system!)

DASY - Parameters of Probe: ET3DV6R SN:1397

Sensitivity in Free Space

Diode Compression[A]

NormX	**1.88** $\mu V/(V/m)^2$	DCP X	**95**	mV
NormY	**1.75** $\mu V/(V/m)^2$	DCP Y	**95**	mV
NormZ	**2.02** $\mu V/(V/m)^2$	DCP Z	**95**	mV

Sensitivity in Tissue Simulating Liquid (Conversion Factors)

Plese see Page 7.

Boundary Effect

Head **900 MHz** **Typical SAR gradient: 5 % per mm**

Sensor Center to Phantom Surface Distance		**3.7 mm**	**4.7 mm**
SAR_{be} [%]	Without Correction Algorithm	8.2	4.1
SAR_{be} [%]	With Correction Algorithm	0.0	0.0

Head **1800 MHz** **Typical SAR gradient: 10 % per mm**

Sensor Center to Phantom Surface Distance		**3.7 mm**	**4.7 mm**
SAR_{be} [%]	Without Correction Algorithm	13.1	8.8
SAR_{be} [%]	With Correction Algorithm	0.1	0.0

Sensor Offset

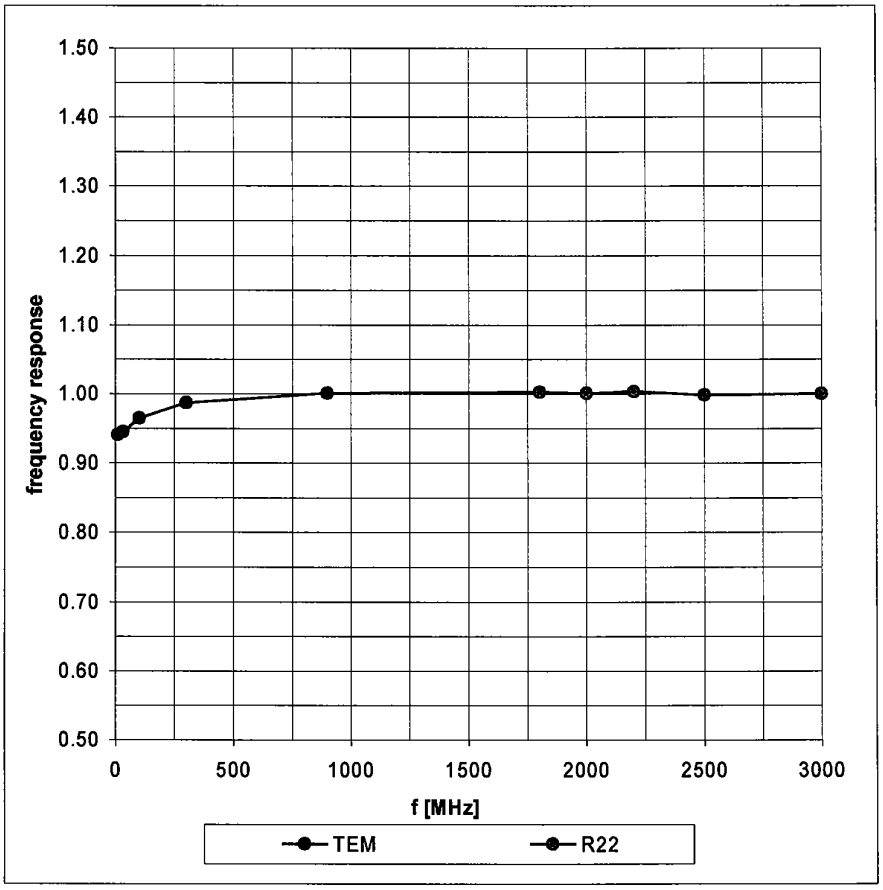
Probe Tip to Sensor Center	**2.7**	mm

The reported uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k=2, which for a normal distribution corresponds to a coverage probability of approximately 95%.

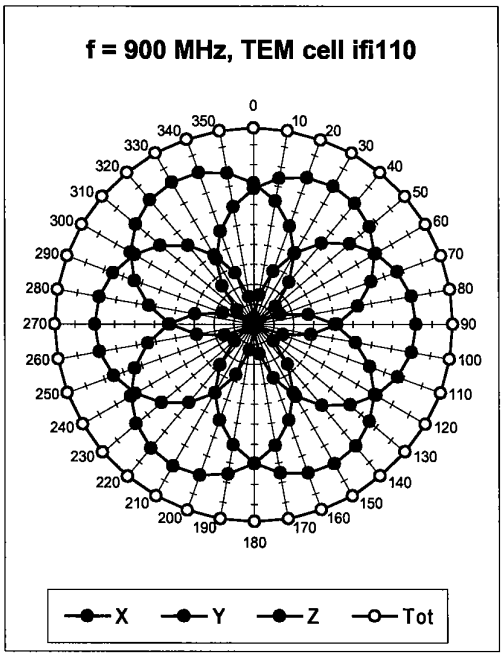
[A] numerical linearization parameter: uncertainty not required

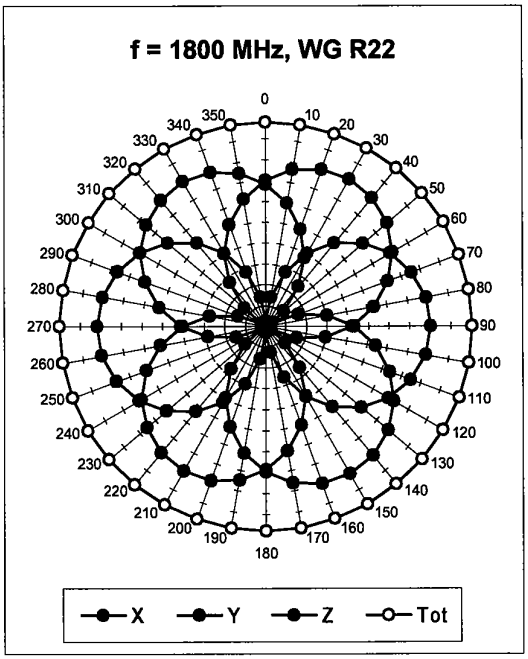
Frequency Response of E-Field

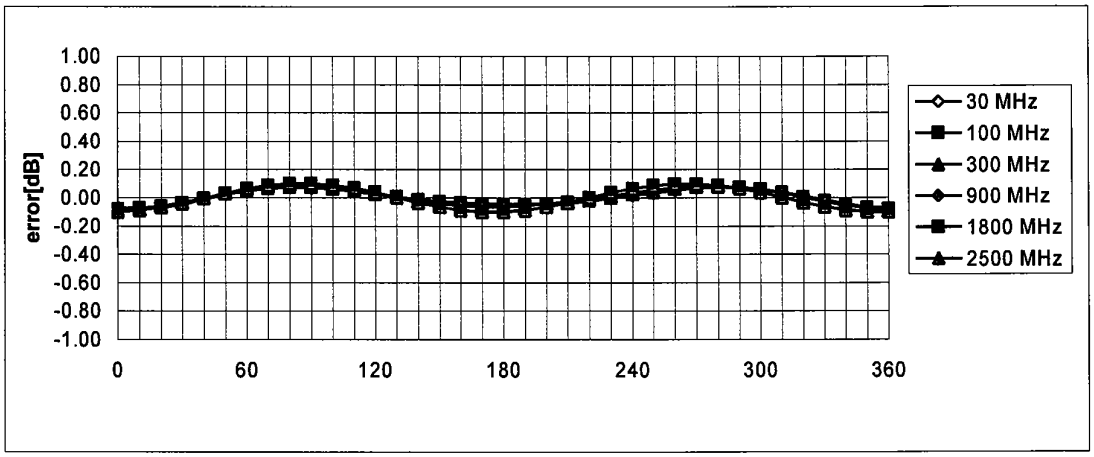
(TEM-Cell:ifi110, Waveguide R22)



Receiving Pattern (ϕ), θ = 0°



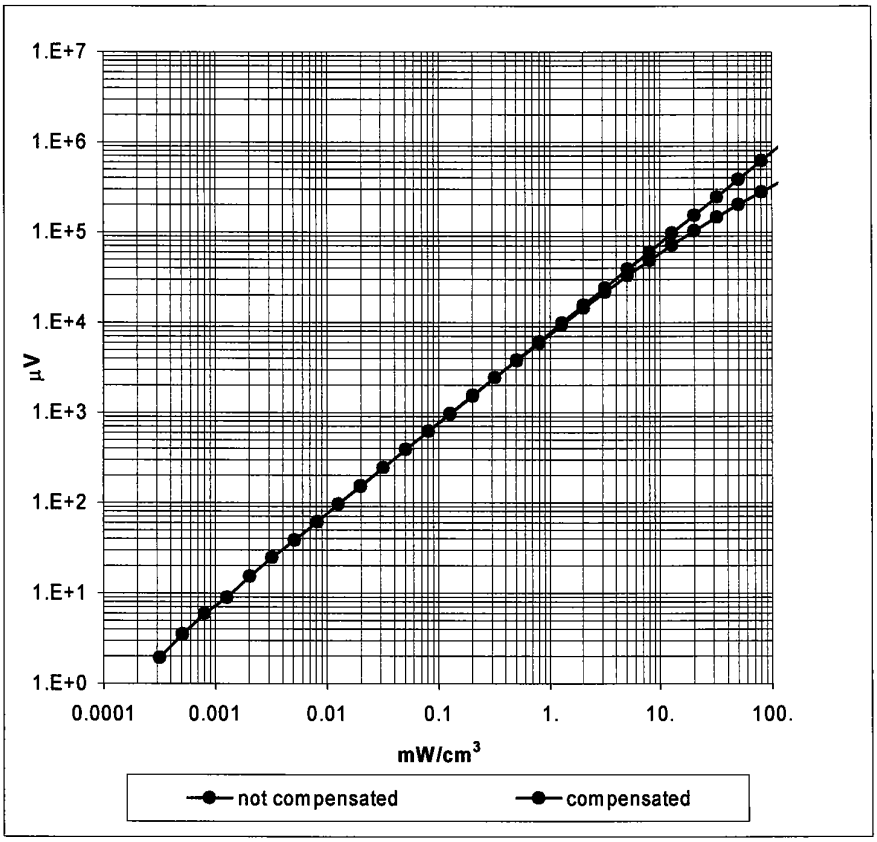


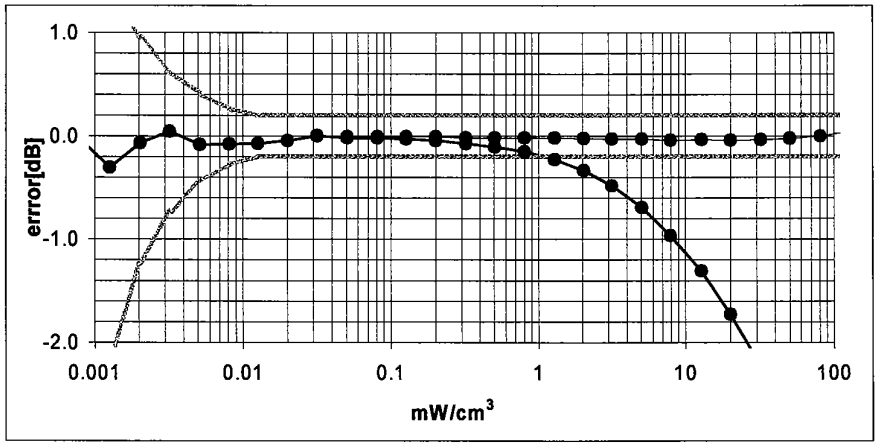


Axial Isotropy Error < ± 0.2 dB

Dynamic Range f(SAR_{head})

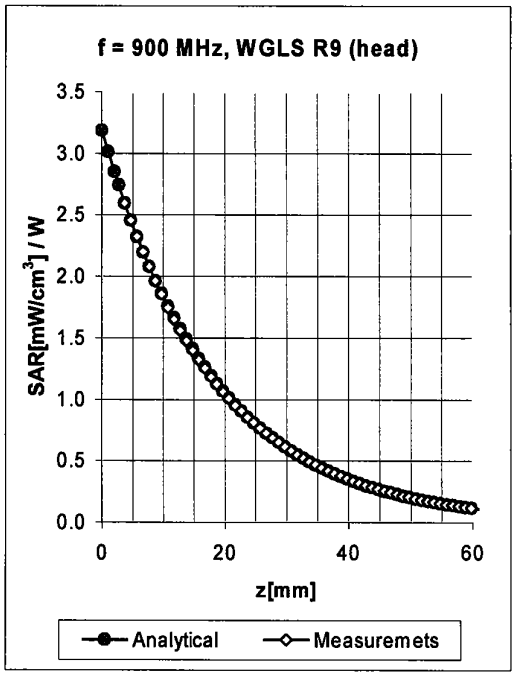
(Waveguide R22)

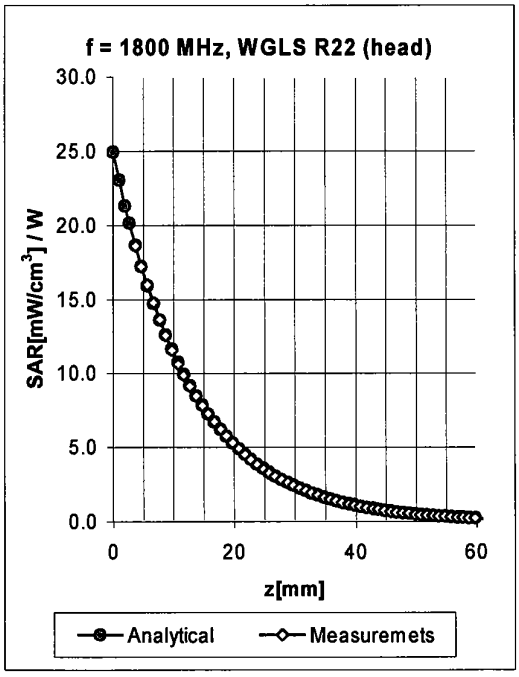




Probe Linearity Error < ± 0.2 dB

Conversion Factor Assessment



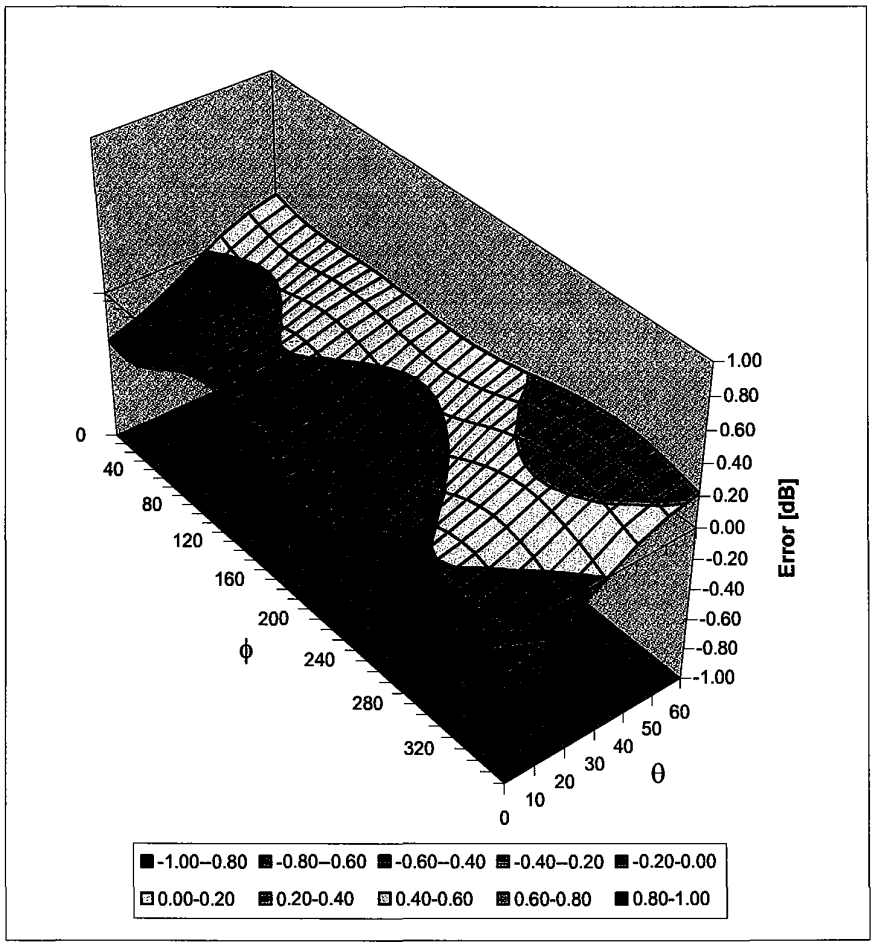


f [MHz]	Validity [MHz][B]	Tissue	Permittivity	Conductivity	Alpha	Depth	ConvF Uncertainty
900	800-1000	Head	41.5 ± 5%	0.97 ± 5%	0.83	1.55	6.10 ± 9.5% (k=2)
1800	1710-1910	Head	40.0 ± 5%	1.40 ± 5%	0.47	2.66	5.09 ± 9.5% (k=2)
1950	1900-2000	Head	40.0 ± 5%	1.40 ± 5%	0.57	2.51	4.80 ± 9.5% (k=2)
900	800-1000	Body	55.0 ± 5%	1.05 ± 5%	0.50	2.19	5.92 ± 9.5% (k=2)
1800	1710-1910	Body	53.3 ± 5%	1.52 ± 5%	0.55	2.84	4.52 ± 9.5% (k=2)
1950	1900-2000	Body	53.3 ± 5%	1.52 ± 5%	0.66	2.48	4.23 ± 9.5% (k=2)

[B] The stated uncertainty of calibration in according to P1528.

Deviation from Isotropy in HSL

Error (θ, ϕ), f = 900 MHz



Spherical Isotropy Error < ± 0.4 dB

Calibration Laboratory of
Schmid & Partner
Engineering AG
Zeughausstrasse 43, 8004 Zurich, Switzerland

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Accredited by the Swiss Federal Office of Metrology and Accreditation
The Swiss Accreditation Service is one of the signatories to the EA Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: SCS 108

Client Motorola Korea

Certificate No: ET3-1398_Feb05

CALIBRATION CERTIFICATE

Object: ET3DV6 - SN:1398

Calibration procedure(s): QA CAL-01.v5
Calibration procedure for dosimetric E-field probes

Calibration date: February 24, 2005

Condition of the calibrated item: In Tolerance

This calibration certificate documents the traceability to national standards, which realize the physical units of measurements (SI).
The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.

All calibrations have been conducted in the closed laboratory facility: environment temperature (22 ± 3)°C and humidity < 70%.

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID #	Cal Date (Calibrated by, Certificate No.)	Scheduled Calibration
Power meter E4419B	GB41293874	5-May-04 (METAS, No. 251-00388)	May-05
Power sensor E4412A	MY41495277	5-May-04 (METAS, No. 251-00388)	May-05
Reference 3 dB Attenuator	SN: S5054 (3c)	10-Aug-04 (METAS, No. 251-00403)	Aug-05
Reference 20 dB Attenuator	SN: S5086 (20b)	3-May-04 (METAS, No. 251-00389)	May-05
Reference 30 dB Attenuator	SN: S5129 (30b)	10-Aug-04 (METAS, No. 251-00404)	Aug-05
Reference Probe ES3DV2	SN: 3013	7-Jan-05 (SPEAG, No. ES3-3013_Jan05)	Jan-06
DAE4	SN: 617	19-Jan-05 (SPEAG, No. DAE4-617_Jan05)	Jan-06

Secondary Standards	ID #	Check Date (in house)	Scheduled Check
Power sensor HP 8481A	MY41092180	18-Sep-02 (SPEAG, in house check Oct-03)	In house check: Oct 05
RF generator HP 8648C	US3642U01700	4-Aug-99 (SPEAG, in house check Dec-03)	In house check: Dec-05
Network Analyzer HP 8753E	US37390585	18-Oct-01 (SPEAG, in house check Nov-04)	In house check: Nov 05

	Name	Function	Signature
Calibrated by:	Nico Vetterli	Laboratory Technician	
Approved by:	Katja Pokovic	Technical Manager	

Issued: February 25, 2005

This calibration certificate shall not be reproduced except in full without written approval of the laboratory.

Calibration Laboratory of
Schmid & Partner
Engineering AG
Zeughausstrasse 43, 8004 Zurich, Switzerland

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The Swiss Accreditation Service is one of the signatories to the EA Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: SCS 108

Glossary:

TSL	tissue simulating liquid
NORMx,y,z	sensitivity in free space
ConF	sensitivity in TSL / NORMx,y,z
DCP	diode compression point
Polarization φ	φ rotation around probe axis
Polarization ϑ	ϑ rotation around an axis that is in the plane normal to probe axis (at measurement center), i.e., $\vartheta = 0$ is normal to probe axis

Calibration is Performed According to the Following Standards:

a) IEEE Std 1528-2003, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", December 2003
b) CENELEC EN 50361, "Basic standard for the measurement of Specific Absorption Rate related to human exposure to electromagnetic fields from mobile phones (300 MHz - 3 GHz), July 2001

Methods Applied and Interpretation of Parameters:

- *NORMx,y,z:* Assessed for E-field polarization $\vartheta = 0$ ($f \leq 900$ MHz in TEM-cell; $f > 1800$ MHz: R22 waveguide). NORMx,y,z are only intermediate values, i.e., the uncertainties of NORMx,y,z does not effect the E^2-field uncertainty inside TSL (see below *ConvF*).
- *NORM(f)x,y,z = NORMx,y,z * frequency_response* (see Frequency Response Chart). This linearization is implemented in DASY4 software versions later than 4.2. The uncertainty of the frequency response is included in the stated uncertainty of *ConvF*.
- *DCPx,y,z:* DCP are numerical linearization parameters assessed based on the data of power sweep (no uncertainty required). DCP does not depend on frequency nor media.
- *ConvF and Boundary Effect Parameters:* Assessed in flat phantom using E-field (or Temperature Transfer Standard for $f \leq 800$ MHz) and inside waveguide using analytical field distributions based on power measurements for $f > 800$ MHz. The same setups are used for assessment of the parameters applied for boundary compensation (alpha, depth) of which typical uncertainty values are given. These parameters are used in DASY4 software to improve probe accuracy close to the boundary. The sensitivity in TSL corresponds to *NORMx,y,z * ConvF* whereby the uncertainty corresponds to that given for *ConvF*. A frequency dependent *ConvF* is used in DASY version 4.4 and higher which allows extending the validity from ± 50 MHz to ± 100 MHz.
- *Spherical isotropy (3D deviation from isotropy)*: in a field of low gradients realized using a flat phantom exposed by a patch antenna.
- *Sensor Offset*: The sensor offset corresponds to the offset of virtual measurement center from the probe tip (on probe axis). No tolerance required.

Probe ET3DV6

SN:1398

Manufactured:	October 24, 1999
Last calibrated:	February 16, 2004
Recalibrated:	February 24, 2005

Calibrated for DASY Systems

(Note: non-compatible with DASY2 system!)

DASY - Parameters of Probe: ET3DV6 SN:1398

Sensitivity in Free Space[A] Diode Compression[B]

NormX	**1.48** ± 10.1%	$\mu V/(V/m)^2$	DCP X	**92** mV
NormY	**1.61** ± 10.1%	$\mu V/(V/m)^2$	DCP Y	**92** mV
NormZ	**1.54** ± 10.1%	$\mu V/(V/m)^2$	DCP Z	**92** mV

Sensitivity in Tissue Simulating Liquid (Conversion Factors)

Please see Page 8.

Boundary Effect

TSL **900 MHz** **Typical SAR gradient: 5 % per mm**

Sensor Center to Phantom Surface Distance		**3.7 mm**	**4.7 mm**
SAR_{be} [%]	Without Correction Algorithm	8.4	4.3
SAR_{be} [%]	With Correction Algorithm	0.6	0.2

TSL **1810 MHz** **Typical SAR gradient: 10 % per mm**

Sensor Center to Phantom Surface Distance		**3.7 mm**	**4.7 mm**
SAR_{be} [%]	Without Correction Algorithm	13.6	9.3
SAR_{be} [%]	With Correction Algorithm	0.9	0.2

Sensor Offset

Probe Tip to Sensor Center	**2.7** mm

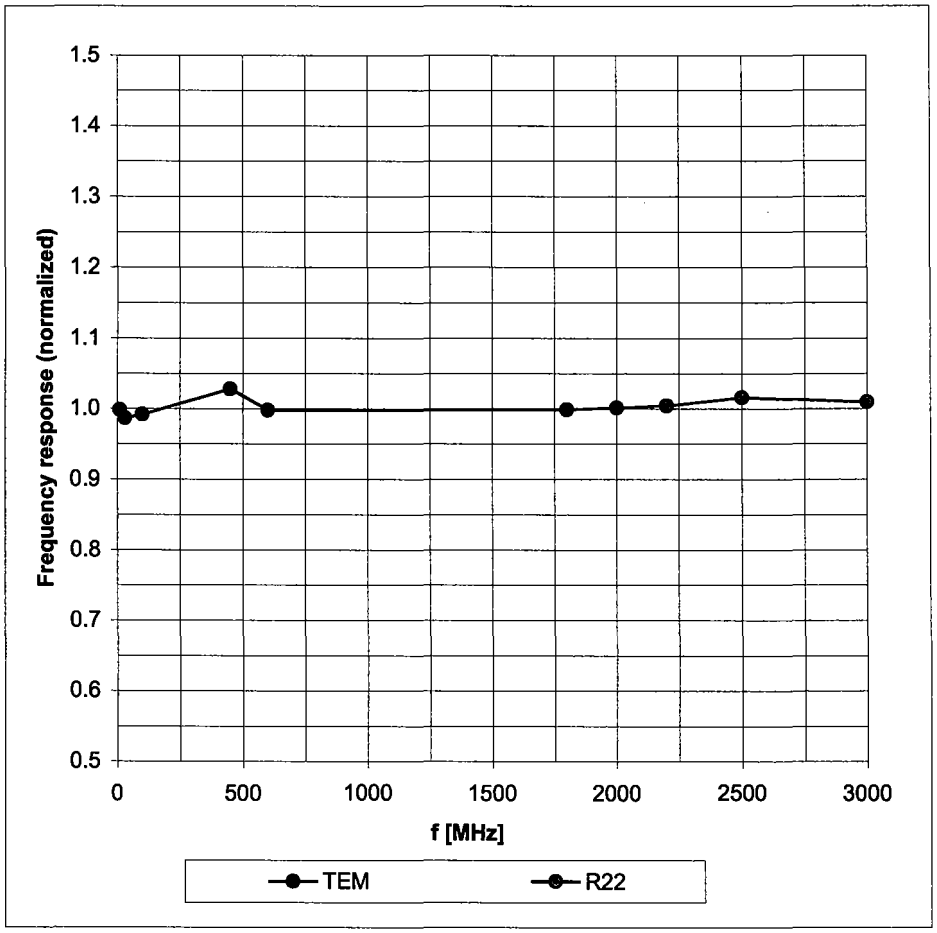
The reported uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k=2, which for a normal distribution corresponds to a coverage probability of approximately 95%.

[A] The uncertainties of NormX,Y,Z do not affect the E^2-field uncertainty inside TSL (see Page 8).

[B] Numerical linearization parameter: uncertainty not required.

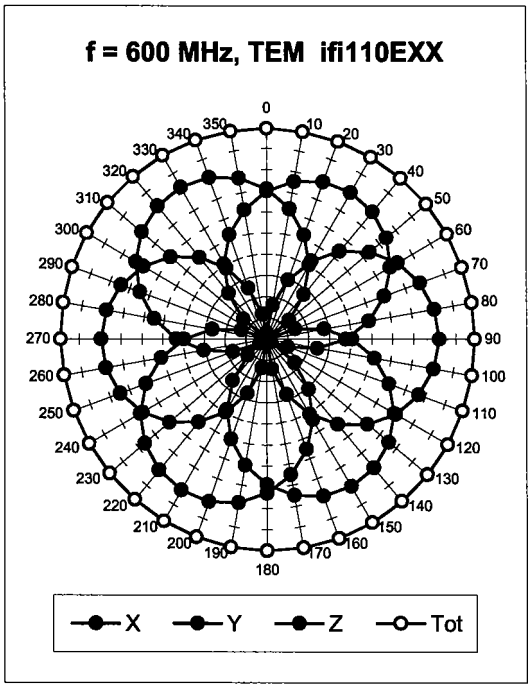
Frequency Response of E-Field

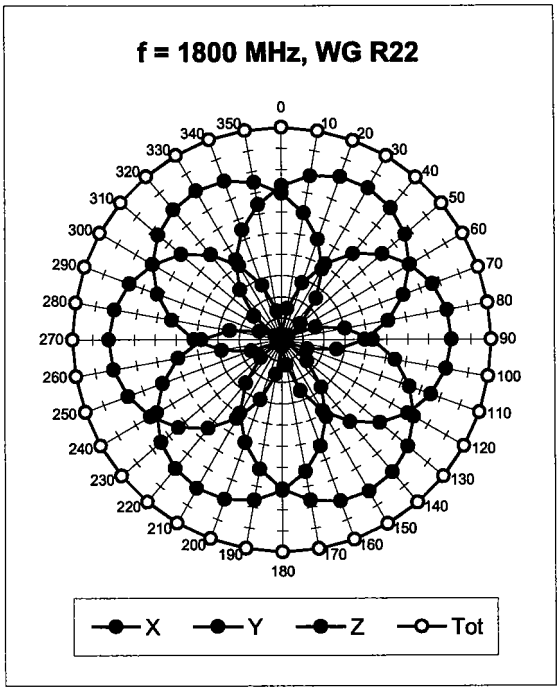
(TEM-Cell:ifi110 EXX, Waveguide: R22)

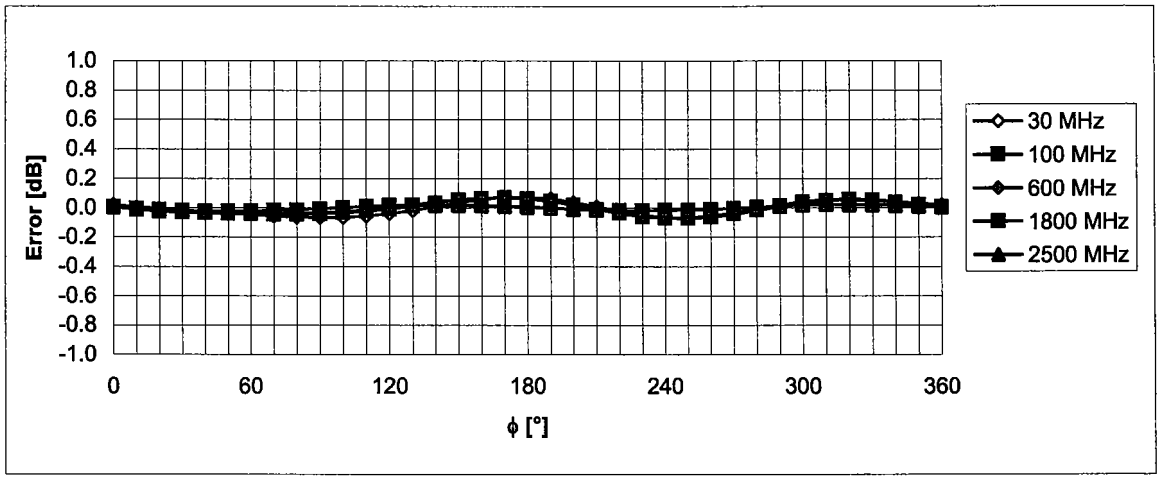


Uncertainty of Frequency Response of E-field: ± 6.3% (k=2)

Receiving Pattern (ϕ), ϑ = 0°



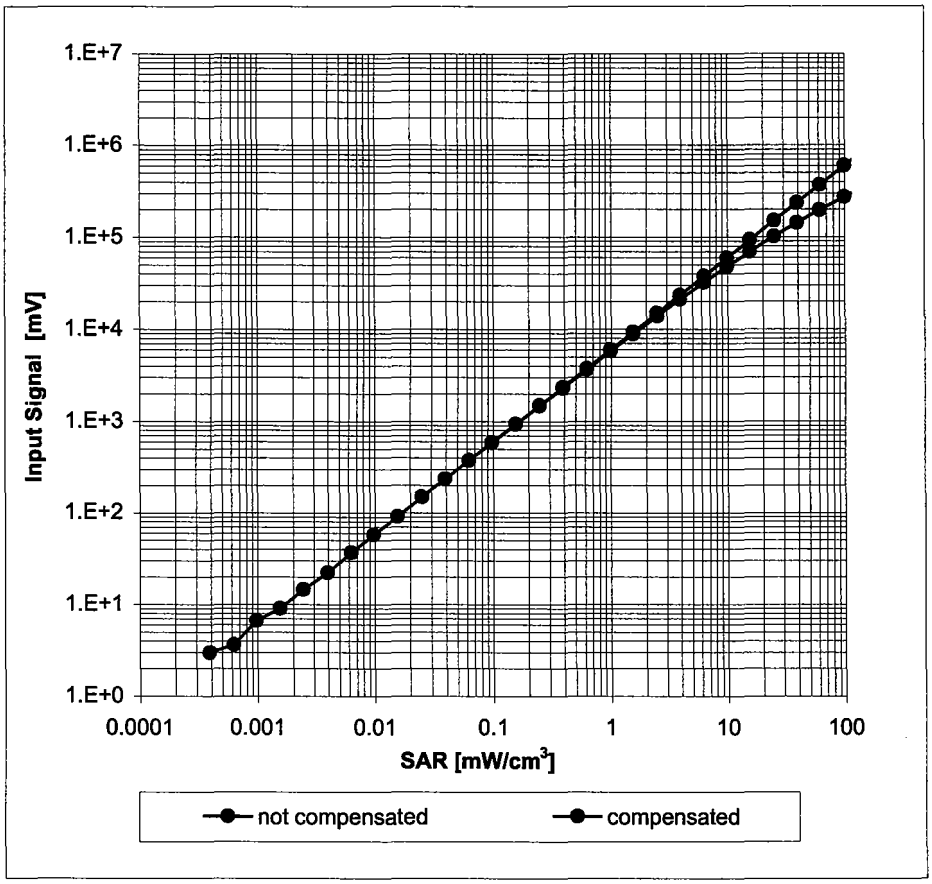


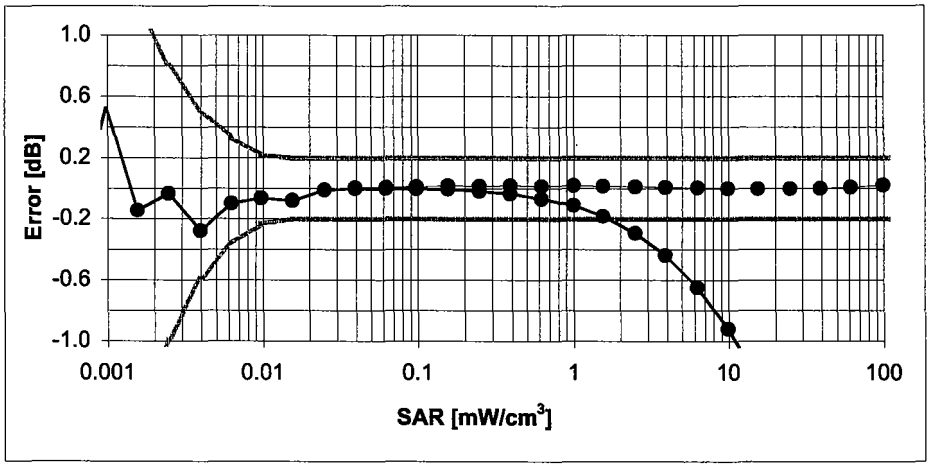


Uncertainty of Axial Isotropy Assessment: ± 0.5% (k=2)

Dynamic Range f(SAR_{head})

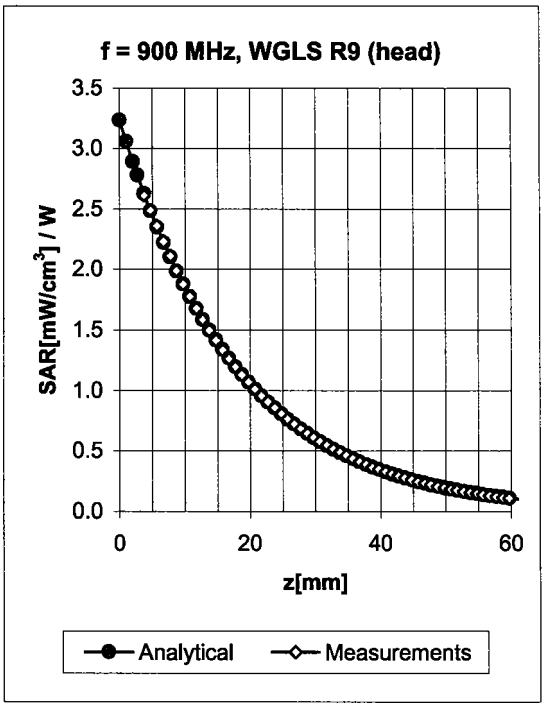
(Waveguide R22, f = 1800 MHz)

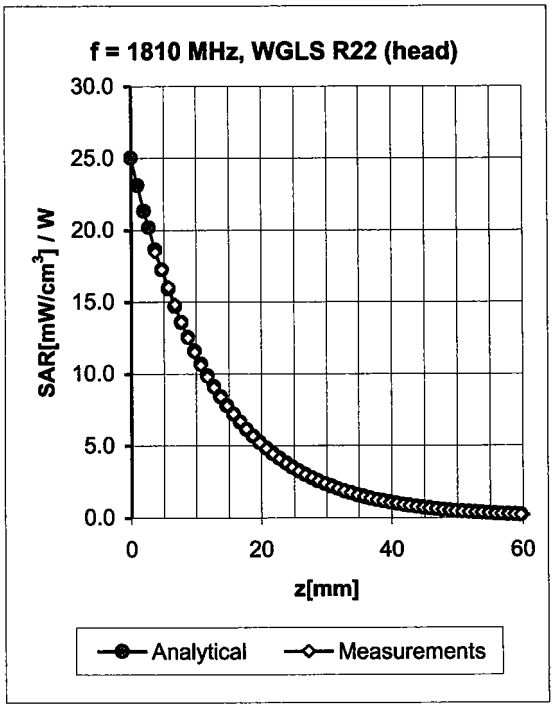




Uncertainty of Linearity Assessment: ± 0.6% (k=2)

Conversion Factor Assessment



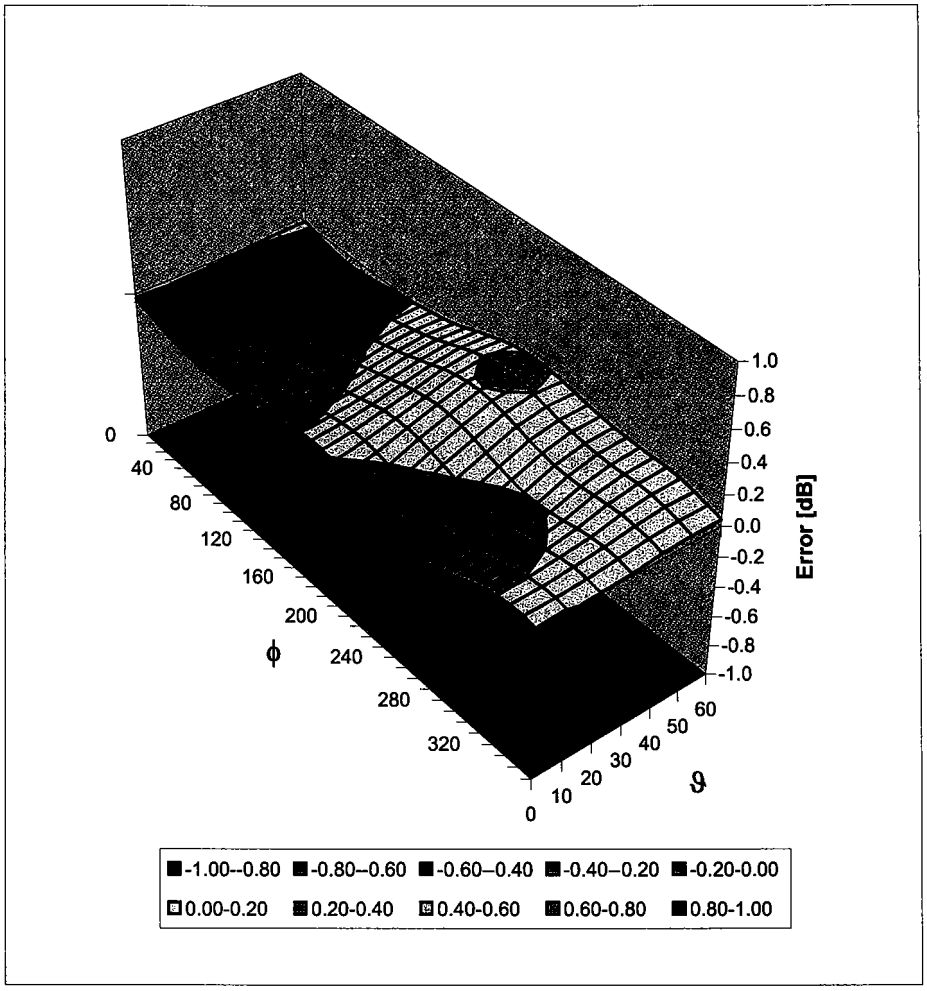


f [MHz]	Validity [MHz][C]	TSL	Permittivity	Conductivity	Alpha	Depth	ConvF Uncertainty
900	± 50 / ± 100	Head	41.5 ± 5%	0.97 ± 5%	1.29	1.35	6.42 ± 11.0% (k=2)
1810	± 50 / ± 100	Head	40.0 ± 5%	1.40 ± 5%	0.61	2.36	5.12 ± 11.0% (k=2)
1950	± 50 / ± 100	Head	40.0 ± 5%	1.40 ± 5%	0.59	2.50	4.87 ± 11.0% (k=2)
2450	± 50 / ± 100	Head	39.2 ± 5%	1.80 ± 5%	0.74	2.11	4.50 ± 11.8% (k=2)
900	± 50 / ± 100	Body	55.0 ± 5%	1.05 ± 5%	1.16	1.50	6.04 ± 11.0% (k=2)
1810	± 50 / ± 100	Body	53.3 ± 5%	1.52 ± 5%	0.60	2.67	4.65 ± 11.0% (k=2)
1950	± 50 / ± 100	Body	53.3 ± 5%	1.52 ± 5%	0.67	2.36	4.43 ± 11.0% (k=2)
2450	± 50 / ± 100	Body	52.7 ± 5%	1.95 ± 5%	0.89	1.79	4.26 ± 11.8% (k=2)

[C] **The validity of ± 100 MHz only applies for DASY v4.4 and higher (see Page 2). The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band.**

Deviation from Isotropy in HSL

Error (ϕ, ϑ), f = 900 MHz



Uncertainty of Spherical Isotropy Assessment: ± 2.6% (k=2)

Calibration Laboratory of
Schmid & Partner
Engineering AG
Zeughausstrasse 43, 8004 Zurich, Switzerland

Client **Motorola PCS**

CALIBRATION CERTIFICATE

Object(s)	ET3DV6 - SN:1514
Calibration procedure(s)	QA CAL-01.v2 Calibration procedure for dosimetric E-field probes
Calibration date:	July 22, 2004
Condition of the calibrated item	In Tolerance (according to the specific calibration document)

This calibration certificate documents the traceability to national standards, which realize the physical units of measurements (SI).
The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.

All calibrations have been conducted in the closed laboratory facility: environment temperature 22 +/- 2 degrees Celsius and humidity < 75%.

Calibration Equipment used (M&TE critical for calibration)

Model Type	ID #	Cal Date (Calibrated by, Certificate No.)	Scheduled Calibration
Power meter EPM E4419B	GB41293874	5-May-04 (METAS, No 251-00388)	May-05
Power sensor E4412A	MY41495277	5-May-04 (METAS, No 251-00388)	May-05
Reference 20 dB Attenuator	SN: 5086 (20b)	3-May-04 (METAS, No 251-00389)	May-05
Fluke Process Calibrator Type 702	SN: 6295803	8-Sep-03 (Sintrel SCS No. S-030020)	Sep-04
Power sensor HP 8481A	MY41092180	18-Sep-02 (SPEAG, in house check Oct03)	In house check: Oct 05
RF generator HP 8684C	US3642U01700	4-Aug-99 (SPEAG, in house check Aug02)	In house check: Aug05
Network Analyzer HP 8753E	US37390585	18-Oct-01 (SPEAG, in house check Oct03)	In house check: Oct 05

	Name	Function	Signature
Calibrated by:	Nico Vetterli	Technician	
Approved by:	Katja Pokovic	Laboratory Director	

Date Issued: July 22, 2004

This calibration certificate is issued as an intermediate solution until the accreditation process (based on ISO/IEC 17025 International Standard) for Calibration Laboratory of Schmid & Partner Engineering AG is completed.

Probe ET3DV6

SN:1514

Manufactured:	November 24, 1999
Last calibrated:	July 31, 2003
Recalibrated:	July 22, 2004

Calibrated for DASY Systems

(Note: non-compatible with DASY2 system!)

DASY - Parameters of Probe: ET3DV6 SN:1514

Sensitivity in Free Space

Diode Compression[A]

NormX	1.71 μV/(V/m)^2	DCP X	93	mV
NormY	1.89 μV/(V/m)^2	DCP Y	93	mV
NormZ	1.81 μV/(V/m)^2	DCP Z	93	mV

Sensitivity in Tissue Simulating Liquid (Conversion Factors)

Please see Page 7.

Boundary Effect

Head **900 MHz** **Typical SAR gradient: 5 % per mm**

Sensor Center to Phantom Surface Distance		3.7 mm	4.7 mm
SAR_{be} [%]	Without Correction Algorithm	10.2	5.3
SAR_{bc} [%]	With Correction Algorithm	0.1	0.3

Head **1800 MHz** **Typical SAR gradient: 10 % per mm**

Sensor Center to Phantom Surface Distance		3.7 mm	4.7 mm
SAR_{be} [%]	Without Correction Algorithm	14.0	9.1
SAR_{be} [%]	With Correction Algorithm	0.1	0.0

Sensor Offset

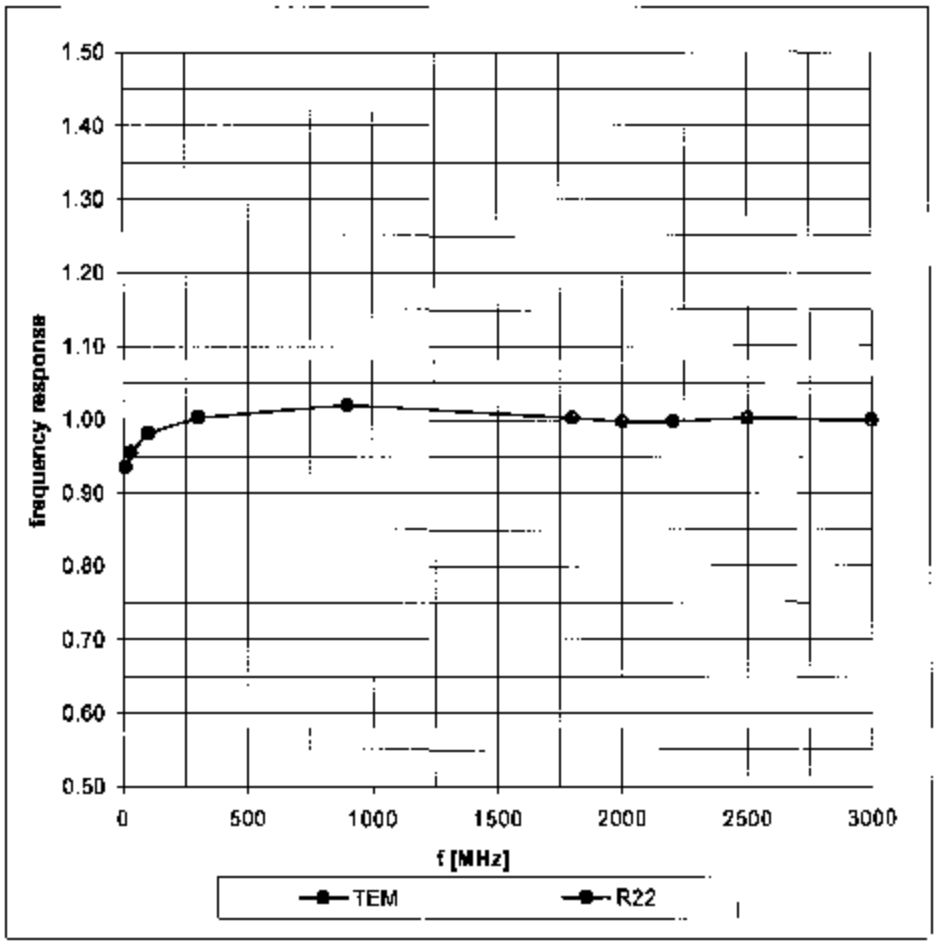
Probe Tip to Sensor Center	2.7	mm

The reported uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k=2, which for a normal distribution corresponds to a coverage probability of approximately 95%.

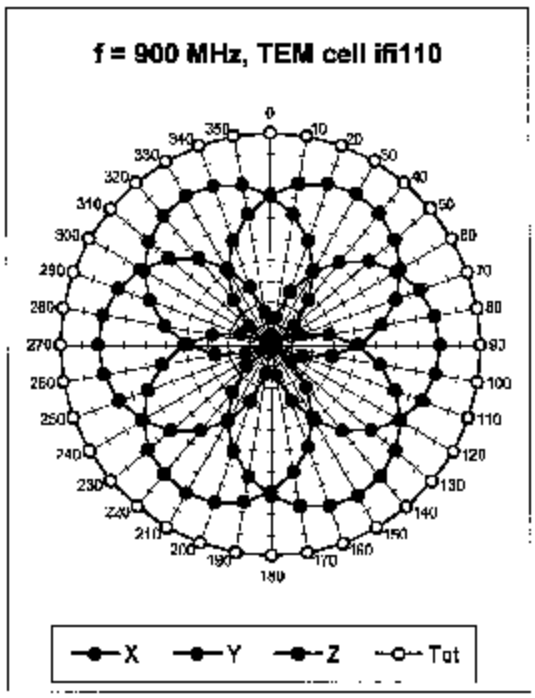
[A] numerical linearization parameter: uncertainty not required

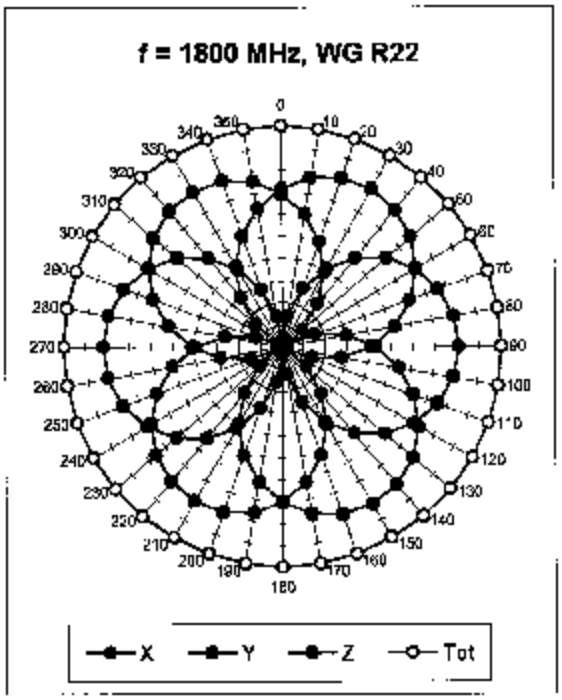
Frequency Response of E-Field

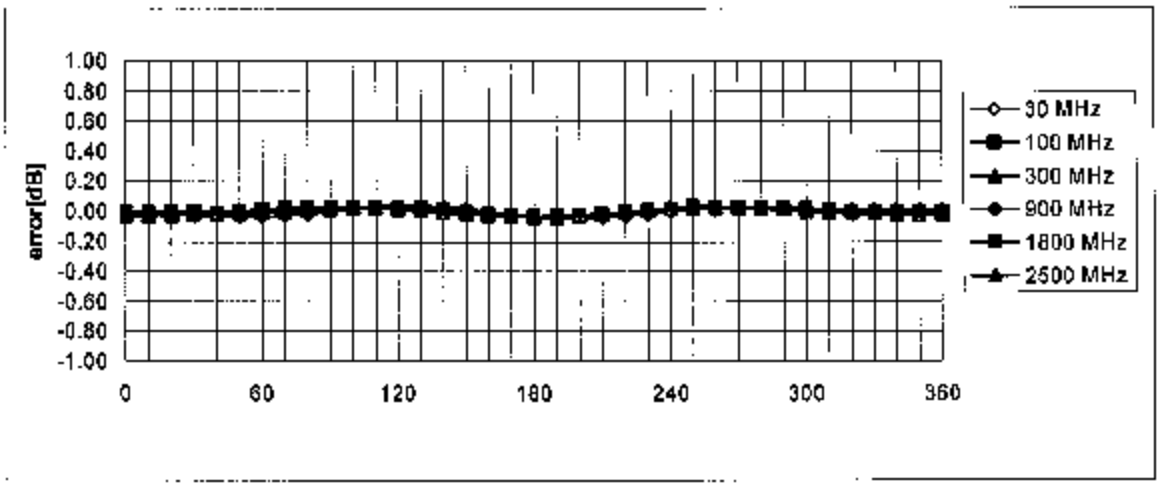
(TEM-Cell:ifi110, Waveguide R22)



Receiving Pattern (ϕ), θ = 0°



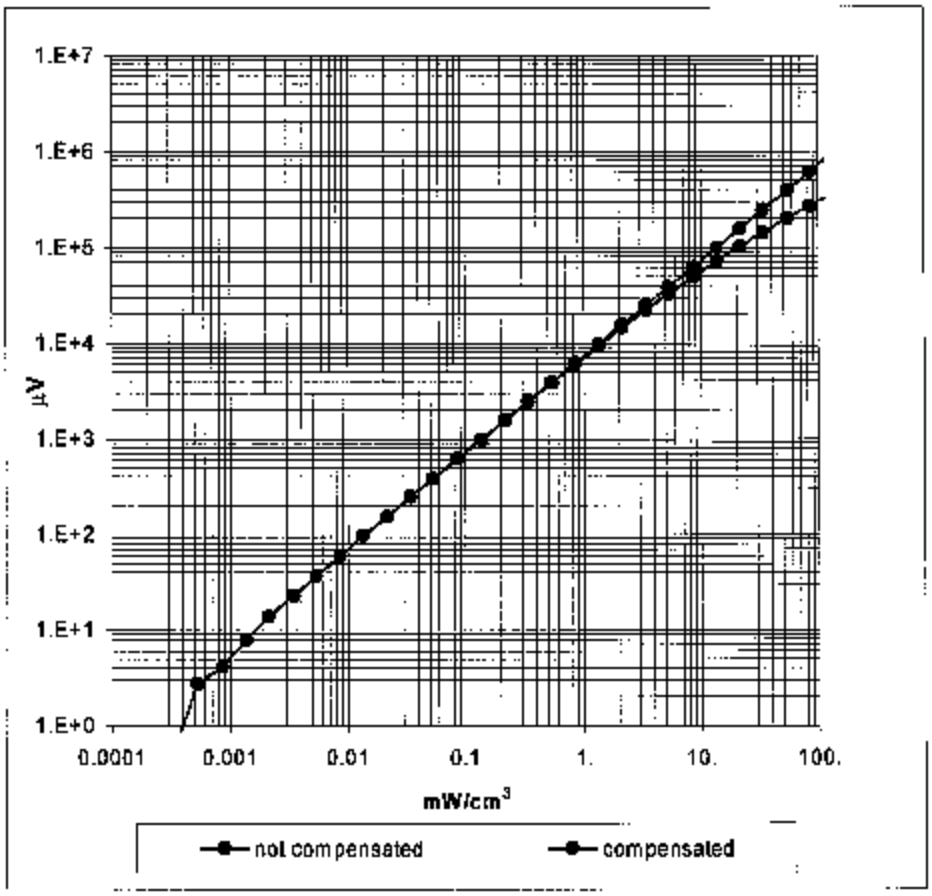


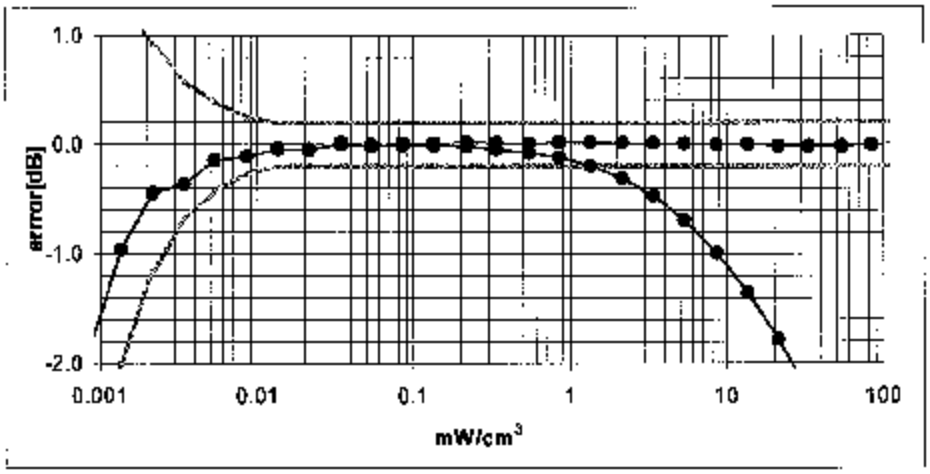


Axial Isotropy Error < ± 0.2 dB

Dynamic Range f(SAR_{head})

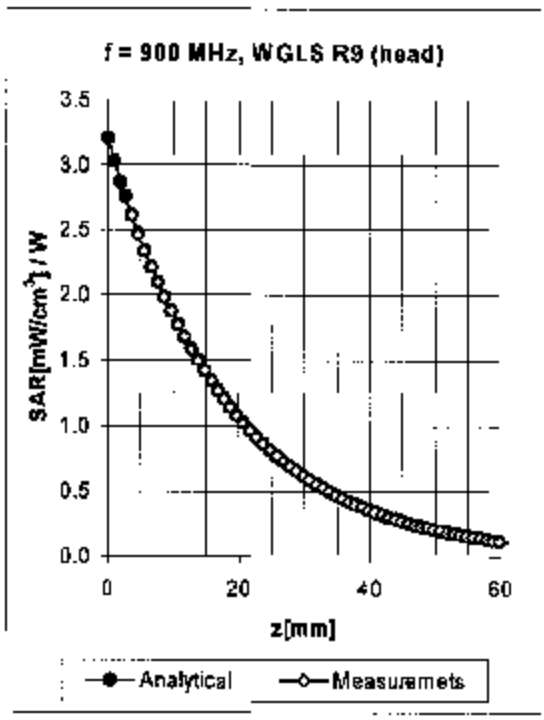
(Waveguide R22)

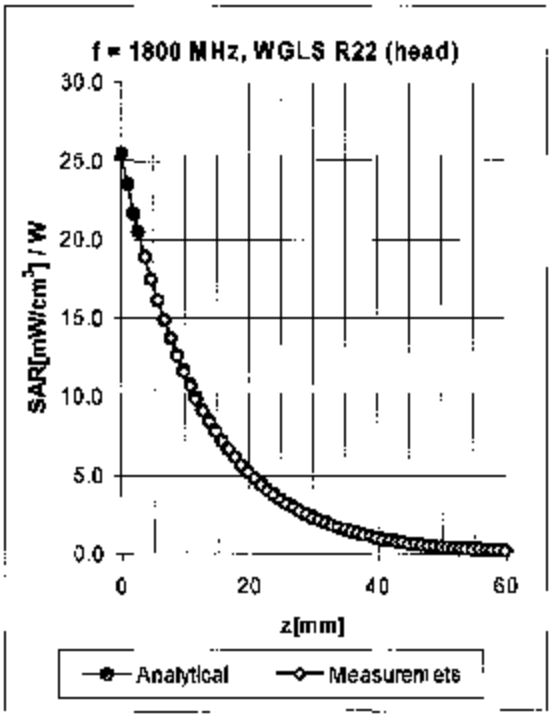




Probe Linearity Error < ± 0.2 dB

Conversion Factor Assessment



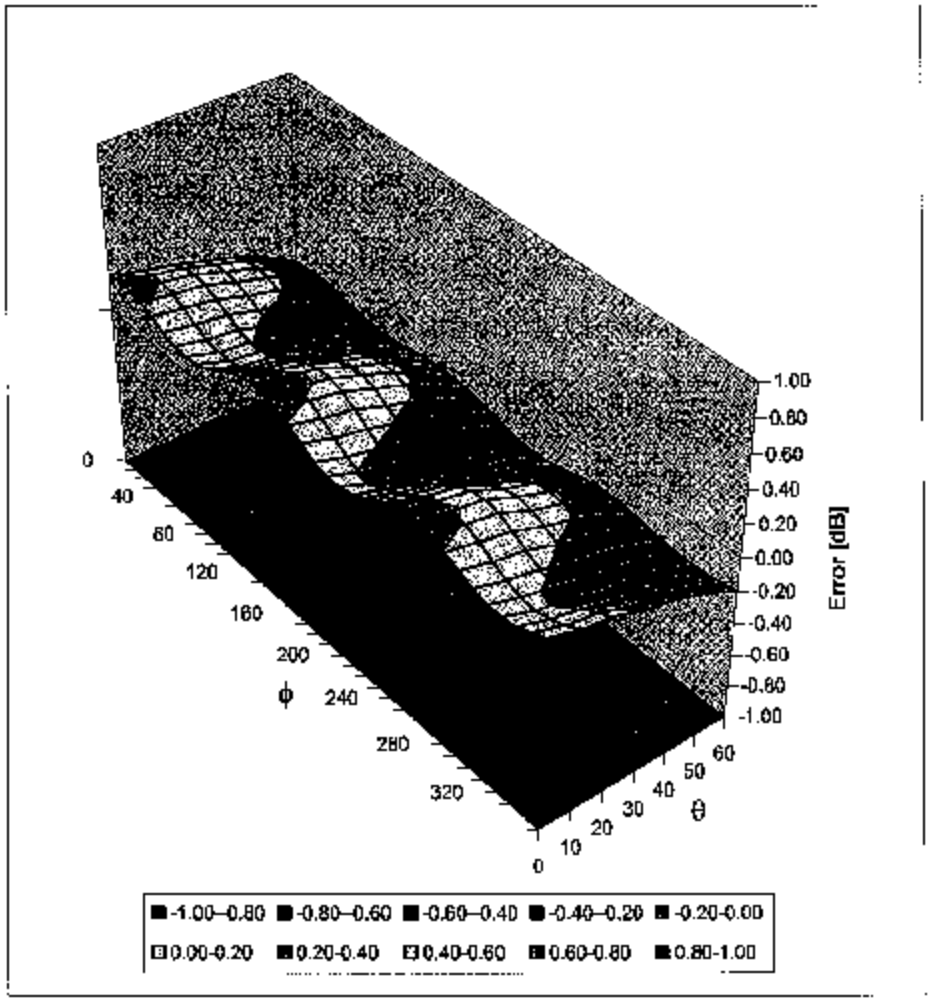


f [MHz]	Validity [MHz][B]	Tissue	Permittivity	Conductivity	Alpha	Depth	ConvF Uncertainty
900	800-1000	Head	41.5 ± 5%	0.97 ± 5%	0.72	1.79	6.08 ± 9.5% (k=2)
1800	1710-1910	Head	40.0 ± 5%	1.40 ± 5%	0.53	2.53	5.03 ± 9.5% (k=2)
1950	1900-2000	Head	40.0 ± 5%	1.40 ± 5%	0.60	2.51	4.74 ± 9.5% (k=2)
2450	2400-2500	Head	39.2 ± 5%	1.80 ± 5%	1.11	1.81	4.46 ± 9.5% (k=2)
900	800-1000	Body	55.0 ± 5%	1.05 ± 5%	0.58	2.10	5.87 ± 9.5% (k=2)
1800	1710-1910	Body	53.3 ± 5%	1.52 ± 5%	0.61	2.67	4.46 ± 9.5% (k=2)
1950	1900-2000	Body	53.3 ± 5%	1.52 ± 5%	0.72	2.39	4.38 ± 9.5% (k=2)
2450	2400-2500	Body	52.7 ± 5%	1.95 ± 5%	1.81	1.30	4.24 ± 9.5% (k=2)

[B] The stated uncertainty of calibration in according to P1528.

Deviation from Isotropy in HSL

Error (θ, φ), f = 900 MHz



Spherical Isotropy Error < ± 0.4 dB

Appendix 5

Measurement Uncertainty Budget

Uncertainty Budget for Device Under Test

a	*b*	*c*	*d*	*e = f(d,k)*	*f*	*g*	*h = c x f / e*	*i = c x g / e*	*k*
Uncertainty Component	**Sec.**	**Tol. (± %)**	**Prob. Dist.**	**Div.**	**c_i (1 g)**	**c_i (10 g)**	**1 g u_i (±%)**	**10 g u_i (±%)**	**v_i**
Measurement System									
Probe Calibration	E.2.1	9.5	N	2.00	1	1	4.8	4.8	∞
Axial Isotropy	E.2.2	4.7	R	1.73	0.707	0.707	1.9	1.9	∞
Spherical Isotropy	E.2.2	9.6	R	1.73	0.707	0.707	3.9	3.9	∞
Boundary Effect	E.2.3	5.8	R	1.73	1	1	3.3	3.3	∞
Linearity	E.2.4	4.7	R	1.73	1	1	2.7	2.7	∞
System Detection Limits	E.2.5	1.0	R	1.73	1	1	0.6	0.6	∞
Readout Electronics	E.2.6	1.0	N	1.00	1	1	1.0	1.0	∞
Response Time	E.2.7	0.8	R	1.73	1	1	0.5	0.5	∞
Integration Time	E.2.8	1.3	R	1.73	1	1	0.8	0.8	∞
RF Ambient Conditions	E.6.1	3.0	R	1.73	1	1	1.7	1.7	∞
Probe Positioner Mechanical Tolerance	E.6.2	0.3	R	1.73	1	1	0.2	0.2	∞
Probe Positioning with respect to Phantom Shell	E.6.3	1.1	R	1.73	1	1	0.6	0.6	∞
Extrapolation, interpolation and Integration Algorithms for Max. SAR Evaluation	E.5	3.9	R	1.73	1	1	2.3	2.3	∞
Test sample Related									
Test Sample Positioning	E.4.2	3.6	N	1.00	1	1	3.6	3.6	29
Device Holder Uncertainty	E.4.1	2.8	N	1.00	1	1	2.8	2.8	8
Output Power Variation - SAR drift measurement	6.6.2	5.0	R	1.73	1	1	2.9	2.9	∞
Phantom and Tissue Parameters									
Phantom Uncertainty (shape and thickness tolerances)	E.3.1	4.0	R	1.73	1	1	2.3	2.3	∞
Liquid Conductivity - deviation from target values	E.3.2	5.0	R	1.73	0.64	0.43	1.8	1.2	∞
Liquid Conductivity - measurement uncertainty	E.3.3	10.0	R	1.73	0.64	0.43	3.7	2.5	∞
Liquid Permittivity - deviation from target values	E.3.2	10.0	R	1.73	0.6	0.49	3.5	2.8	∞
Liquid Permittivity - measurement uncertainty	E.3.3	5.0	R	1.73	0.6	0.49	1.7	1.4	∞
Combined Standard Uncertainty			RSS				11.72	11.09	1363
Expanded Uncertainty (95% CONFIDENCE LEVEL)			k =2				22.98	21.75	

Uncertainty Budget for System Performance Check (dipole & flat phantom)

a	*b*	*c*	*d*	*e = f(d,k)*	*f*	*g*	*h = c x f / e*	*i = c x g / e*	*k*
Uncertainty Component	**Sec.**	**Tol. (± %)**	**Prob. Dist.**	**Div.**	**c_i (1 g)**	**c_i (10 g)**	**1 g u_i (±%)**	**10 g u_i (±%)**	**v_i**
Measurement System									
Probe Calibration	E.2.1	9.5	N	2.00	1	1	4.8	4.8	∞
Axial Isotropy	E.2.2	4.7	R	1.73	1	1	2.7	2.7	∞
Spherical Isotropy	E.2.2	9.6	R	1.73	0	0	0.0	0.0	∞
Boundary Effect	E.2.3	5.8	R	1.73	1	1	3.3	3.3	∞
Linearity	E.2.4	4.7	R	1.73	1	1	2.7	2.7	∞
System Detection Limits	E.2.5	1.0	R	1.73	1	1	0.6	0.6	∞
Readout Electronics	E.2.6	1.0	N	1.00	1	1	1.0	1.0	∞
Response Time	E.2.7	0.0	R	1.73	1	1	0.0	0.0	∞
Integration Time	E.2.8	0.0	R	1.73	1	1	0.0	0.0	∞
RF Ambient Conditions	E.6.1	3.0	R	1.73	1	1	1.7	1.7	∞
Probe Positioner Mechanical Tolerance	E.6.2	0.3	R	1.73	1	1	0.2	0.2	∞
Probe Positioning with respect to Phantom Shell	E.6.3	1.1	R	1.73	1	1	0.6	0.6	∞
Extrapolation, interpolation and Integration Algorithms for Max. SAR Evaluation	E.5	3.9	R	1.73	1	1	2.3	2.3	∞
Dipole									
Dipole Axis to Liquid Distance	8, E.4.2	1.0	R	1.73	1	1	0.6	0.6	∞
Input Power and SAR Drift Measurement	8, 6.6.2	4.7	R	1.73	1	1	2.7	2.7	∞
Phantom and Tissue Parameters									
Phantom Uncertainty (shape and thickness tolerances)	E.3.1	4.0	R	1.73	1	1	2.3	2.3	∞
Liquid Conductivity - deviation from target values	E.3.2	5.0	R	1.73	0.64	0.43	1.8	1.2	∞
Liquid Conductivity - measurement uncertainty	E.3.3	10.0	R	1.73	0.64	0.43	3.7	2.5	∞
Liquid Permittivity - deviation from target values	E.3.2	10.0	R	1.73	0.6	0.49	3.5	2.8	∞
Liquid Permittivity - measurement uncertainty	E.3.3	5.0	R	1.73	0.6	0.49	1.7	1.4	∞
Combined Standard Uncertainty			RSS				10.16	9.43	99999
Expanded Uncertainty (95% CONFIDENCE LEVEL)			*k*=2				19.92	18.48	

Appendix 6

Photographs of the device under test

Figure 1. Front of Phone

Figure 2. Phone Open

Figure 3. Back of Phone

Figure 4. Phone Against the Head Phantom (Cheek Touch)

Figure 5. Phone Against the Head Phantom (15°Tilt)

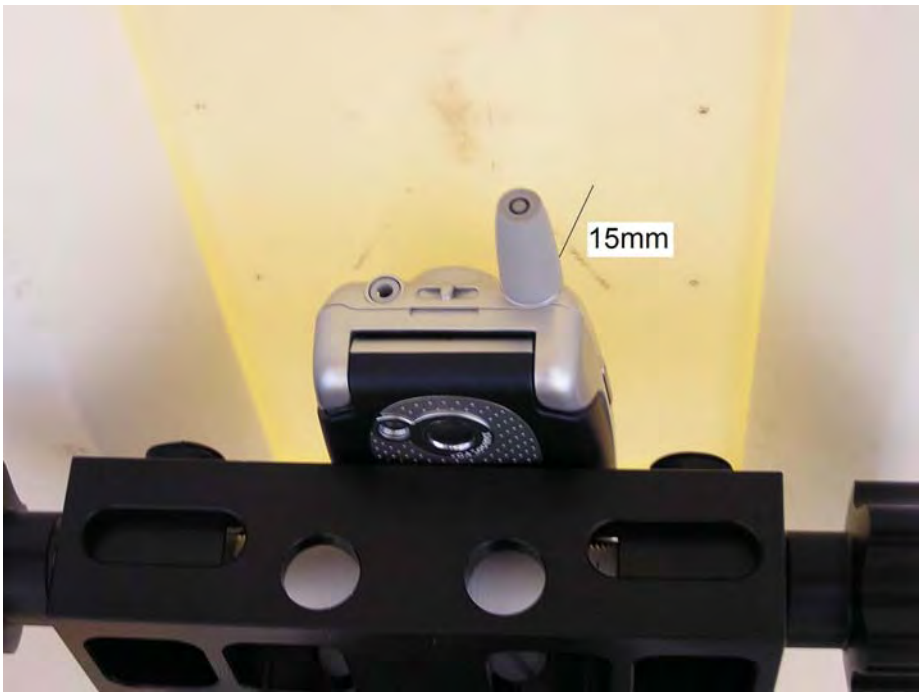


Figure 6. Phone Against the Flat Phantom

Figure 7: SYN1084A Clip

Figure 8: MOTPN0670K case

Figure 9: SYN1109A pouch

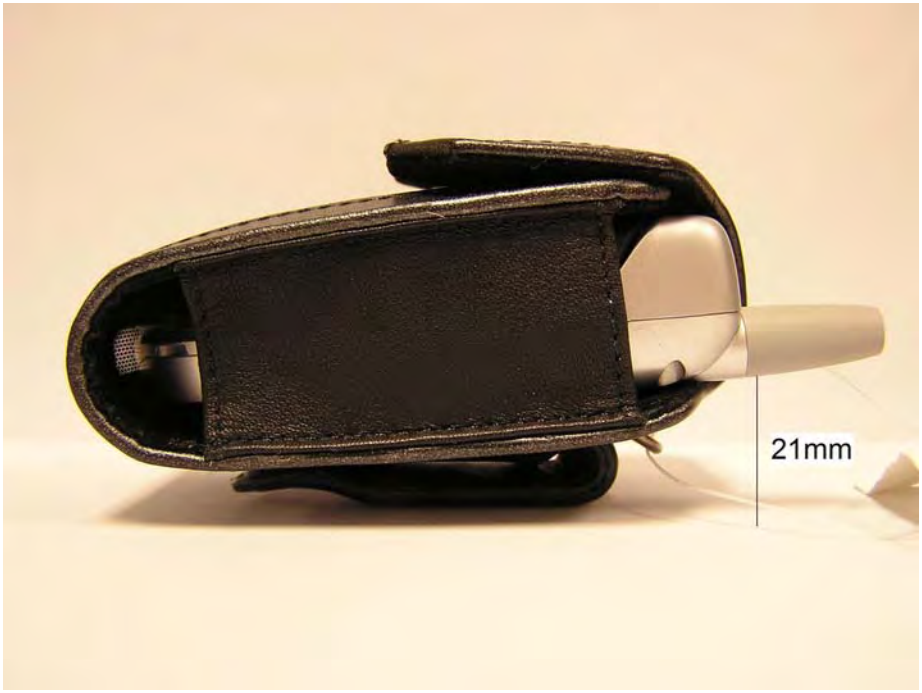


Figure 10: MOTPL0686K Pouch