



Prepared (also subject responsible if other) SEM/CV/PF/P Gerard Hayes and Rodney Dixon		No. REP 2006 004 W300i HWB 02	
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SAR Test Report of Portable Cellular Phone

FCC ID: PY7AF052033 Model : W300i

Date of test: March 29 - April 18, 2006

Date of Report: May 3, 2006

Laboratory: SAR Testing Laboratory Sony Ericsson Mobile Communications, Inc. 7001 Development Drive, P.O. Box 13969, Research Triangle Park, NC, 27709, USA

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Test Responsible: Gerard Hayes *Gerard Hayes 03 May 2006*
Technical Manager

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



Specific Absorption Rate (SAR)
Dielectric parameters
RF power measurement

On the following types of products:
Wireless communications devices. A2LA certificate #1650-01

Statement of Compliance: Sony Ericsson Mobile Communications, Inc declares under its sole responsibility that portable cellular telephone FCC ID PY7AF052033 model W300i 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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This test report shall not be reproduced except in full, without written approval of the laboratory.

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.

Sony Ericsson Mobile Communications encourages all feedback, both positive and negative, on this test report.



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1. Introduction

The Sony Ericsson SAR Laboratory has performed measurements of the maximum potential exposure to the user of portable cellular phone FCC ID PY7AF052033 model W300i (hardware revision B). The Specific Absorption Rate (SAR) of this product was measured. The applicable RF safety guidelines and the SAR measurement specifications used for the test are described in [1].

2. Description of the Device Under Test

2.1 Antenna description

Type	PIFA - Type Antenna	
Location	External plastic loop, near the hinge	
Dimensions	Width	7 mm
	Length	45 mm
	Height	11 mm

2.2 Device description

FCC ID Number / Device Model		PY7AF052033 / W300i / Hardware Rev B					
Serial number		BD30291EZW BD30291DYQ					BD30291E73
Mode(s) of Operation		GSM 800					GSM 1900
Modulation Mode(s)		TDMA					TDMA
Target Value and Factory Tolerance Window for Maximum Output Power Setting GSM Mode: 1/8 Duty Cycle	f_{low}	33.0 dBm +0.2/-1.0 dB					f_{low} 30.1 dBm +0.2/-0.5 dB
	f_{mid}	33.0 dBm +0.2/-1.0 dB					f_{mid} 29.9 dBm +0.2/-0.5 dB
	f_{high}	31.2 dBm +0.2/-0.8 dB					f_{high} 30.0 dBm +/-0.2 dB
GPRS Mode: 2/8 Duty Cycle Target Maximum Output Power Setting (adjusted from GSM mode)	f_{low}	< 29.4 dBm max					f_{low} 30.1 dBm +0.2/-0.5 dB
	f_{mid}	< 29.4 dBm max					f_{mid} 29.9 dBm +0.2/-0.5 dB
	f_{high}	< 29.4 dBm max					f_{high} 30.0 dBm +/-0.2 dB



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EPRS Mode: 2/8 Duty Cycle Target Maximum Output Power Setting (adjusted from GSM mode)	f _{low}	27.0 dBm +/- 1.2 dB					f _{low}	26.0 dBm +/- 1.2 dB
	f _{mid}	27.0 dBm +/- 1.0 dB					f _{mid}	26.0 dBm +/- 1.0 dB
	f _{high}	27.0 dBm +/- 1.2 dB					f _{high}	26.0 dBm +/- 1.2 dB
Calibration Frequency (f _{low} , f _{mid} , f _{high})	f _{high}					f _{high}		
Transmitting Frequency Rang(s)	824-849 MHz					1850-1910 MHz		
Production Unit or Identical Prototype (47 CFR §2.908)	Identical Prototype							
Device Category	Portable							
RF Exposure Limits	General Population / Uncontrolled							



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3. Test Equipment Used

3.1 Dosimetric System

The Sony Ericsson SAR Laboratory utilizes Dosimetric Assessment Systems (Dasy4™) manufactured by Schmid & Partner Engineering AG (SPEAG™), of Zurich Switzerland. The overall RSS uncertainty of the measurement system is $\pm 9.80\%$ (K=1) with an expanded uncertainty of $\pm 19.59\%$ (K=2) for Dasy4™. The measurement uncertainty budget is given in Appendix 5 for both systems. The list of calibrated equipment used for the measurements is shown in the following table.

Description	Serial Number	Cal Due Date
DASY3 DAE V1	345	10-Nov-2006
DASY3 DAE V1	416	10-Nov-2006
E-Field Probe ETDV6	1586	26-May-2006
E-Field Probe ETDV6	1539	22-Nov-2006
Dipole Validation Kit, DV835V2	429	21-Nov-2006
Dipole Validation Kit, DV1900V2	537	15-Nov-2006
S.A.M. Phantom used for 835MHz (Head)	1251	
S.A.M. Phantom used for 835MHz (Body)	1031	
S.A.M. Phantom used for 900MHz (Head and Body)	1251	
S.A.M. Phantom used for 1800MHz (Head and Body)	1335	
S.A.M. Phantom used for 1800MHz (Head and Body)	1054	
S.A.M. Phantom used for 1900MHz (Head)	1335	
S.A.M. Phantom used for 1900MHz (Body)	1020	

3.2 Additional Equipment

Description	Serial Number	Cal Due Date
Signal Generator HP8648C	3537A01598	August 30, 2006
Power Meter 437B	3125U16382	December 5, 2006
Power Meter 437B	3125U13729	June 3, 2006
Power Sensor - 8482H	MY41090240	April 29, 2006
Power Sensor - 8482H	MY41090239	April 29, 2006
Dielectric Probe Kit HP85070B	US33020390	August 29, 2006
Digital Thermometer 61220-601 And Probe (61220-604)	350078	November 9, 2006
Digital Hygrometer/ Thermometer	21242911	November 9, 2006
HP RF Amplifier 8347A	3307A1069	May 4, 2006



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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 dielectric probe kit. These values, along with the temperature of the simulated tissue are shown in the table below. A mass density of $\rho=1\text{g/cm}^3$ was entered into the system in all the cases. It can be seen that the measured parameters are within tolerance of the recommended limits [1]. During all of the tests represented in this report, the ambient temperature of the laboratory was in the range 22.2-24.2°C, the relative humidity was 31.4%- 42.1 %, and the liquid depth above the ear and body reference points was more than 15.0 cm for all the cases. It is seen that the following measured parameters are satisfactory for compliance testing.

f (MHz)	Tissue type	Limits / Measured	Dielectric Parameters		
			ϵ_r	σ (S/m)	Simulated Tissue Temp (°C)
835	Head	Measured, 30-Mar-06	42.67	0.918	23.8
		Recommended Limits	41.50	0.90	20-25
	Body	Measured, 18-Apr-06	52.31	0.989	22
		Recommended Limits	55.20	0.97	20-25
1900	Head	Measured, 16-Apr-06	38.08	1.468	24
		Recommended Limits	40.00	1.40	20-25
	Body	Measured, 17-Apr-06	51.34	1.525	22.5
		Recommended Limits	53.30	1.52	20-25

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

Ingredient	800/900 MHz Head 900MHz Body	800MHz Body	1800/1900 MHz Head 1800MHz Body	1900MHz Body
Sugar	57.99%	56.00%	--	--
DGBE	--	--	44.92%	30.82%
Water	39.72%	41.76%	54.90%	68.89%
Salt	1.18%	0.76%	0.18%	0.29%
HEC	0.92%	1.21%	--	--
Bact.	0.19%	0.27%	--	--



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5. System Accuracy Verification

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

A SAR measurement was performed to see if the measured SAR was within +/- 10% from the target SAR indicated on the dipole certification sheet. These tests were done at 835MHz/900MHz and/or 1800MHz/1900MHz. These frequencies are within 100MHz of the mid-band frequency of the test device, according to [1]. The test was conducted on the same days as the measurement of the DUT. The results from the system accuracy verification are displayed in the table below (SAR values are normalized to 1W forward power delivered to the dipole). During all of the tests represented in this report, the ambient temperature of the laboratory was in the range 22.6-24.6°C, the relative humidity was 30.9%- 38.1 %, and the liquid depth above the ear and body reference points was more than 15.0 cm for all the cases. It is seen that the system is operating within its specification, as the results are within acceptable tolerance of the reference values. The SAR distributions are shown in Appendix 1.

Daily, prior to conducting tests, measurements were made with the RF sources powered off to determine the system noise level. The highest system noise was 0.000487 W/kg, which is below the recommended limit in [1].

f (MHz)	Tissue Type	Description	SAR (W/kg) 1g / 10g		Dielectric Parameters		Tissue Temp (°C)
					ϵ_r	s (S/m)	
835	Head	Measured, 30-Mar-06	9.3	6.1	42.67	0.918	23.8
		Recommended Limits	9.50	6.20	41.50	0.90	20-25
	Body	Measured, 18-Apr-06	9.5	6.2	52.31	0.989	22
		Recommended Limits	9.90	6.46	55.20	0.97	20-25
1900	Head	Measured, 16-Apr-06	42.7	22.4	38.08	1.468	24
		Recommended Limits	39.70	20.50	40.00	1.40	20-25
	Body	Measured, 17-Apr-06	42.3	22.5	51.34	1.525	22.5
		Recommended Limits	40.50	20.89	53.30	1.52	20-25



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6. Test Results

For head measurements (with a 1/8 GSM duty cycle), the sample was operated using test software that allows the control of the transmitter. For body measurements (2/8 EGPRS duty cycle), the test sample was operated using a base station simulator that allows control of the transmitter using the signally software that installed on the phone call. For the purposes of these tests, the unit is commanded to set to the proper channel, transmitter power level and transmit mode of operation. The phone was tested in the configurations stipulated in [1,2]. The phone was positioned into these configurations using the positioner supplied with the DASY 3.1d SAR measurement system.

The Cellular Phone FCC ID PY7AF052033 has the following battery option:
BKB 193 203 (BST-33) Standard Lithium Polymer Battery

The phone was placed in the SAR measurement system with a fully charged battery.

6.1 Head Adjacent Test Results

The SAR results shown in Tables 1 and 2 are maximum SAR values averaged over 1 gram and 10 grams of phantom tissue. Also shown are the measured conducted output powers, the temperature of the test facility during the test, the temperature of the simulated tissue, the measured drift, and the extrapolated SAR. The extrapolated SAR corresponds to the measured SAR scaled to the maximum conducted output power.

During all of the tests represented in this report, the ambient temperature of the laboratory was in the range 22.2-24.2°C, the relative humidity was 31.4%- 42.1 %, and the liquid depth above the ear and body reference points was more than 15.0 cm for all the cases. The SAR measurements were performed using the SAM phantoms listed in section 3.1.

The test conditions indicated as bold numbers in the following table are included in Appendix 2. All other test conditions measured lower SAR values than those included.

Summary of Maximum Extrapolated SAR Results : Head Adjacent			
Frequency	Extrapolated SAR (W/kg) 1 g		Test Configuration
800 GSM	1.46		Right head, cheek/touch position, 849 MHz BST-33 battery
1900 GSM	1.41		Left head, cheek/touch position, 1910 MHz BST-33 battery



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f (MHz)	Channel/ frequency	Conducted Output Power (dBm) GSM 1:8 Duty Cycle	FCC ID PY7AF052033 with Standard Battery BST-33						
			Left Head (Cheek / Touch Position)						Simulant Temp (°C)
			Measured (W/kg) 1g / 10g		Drift (dB)	Extrapolated (W/kg) 1g / 10g		Ambient Temp (°C)	
800 GSM	128 / 824	32.6	0.815	0.519	-0.03	0.815	0.519	24	23.9
	189 / 837	32.8	1.050	0.666	-0.02	1.050	0.666		
	251 / 849	31.4	1.400	0.885	0.00	1.400	0.885		
1900 GSM	512 / 1850	30.0	1.050	0.572	0.08	1.050	0.572	24.1	24
	660/1880	30.1	1.220	0.660	0.06	1.220	0.660		
	810/1910	30.2	1.410	0.760	-0.06	1.410	0.760		
Bluetooth on	810/1910	30.2	1.33	0.710	0.06	1.33	0.710	23.6	23.8
f (MHz)	Channel/ frequency	Conducted Output Power (dBm) GSM 1:8 Duty Cycle	FCC ID PY7AF052033 with Standard Battery BST-33						
			Left Head (15° Tilt Position)						Simulant Temp (°C)
			Measured (W/kg) 1g / 10g		Drift (dB)	Extrapolated (W/kg) 1g / 10g		Ambient Temp (°C)	
800 GSM	128 / 824	32.6	0.182	0.135	0.01	0.182	0.135	24.2	24
	189 / 837	32.8	0.232	0.171	-0.04	0.232	0.171		
	251 / 849	31.4	0.306	0.225	0.03	0.306	0.225		
1900 GSM	512 / 1850	30.0	0.725	0.441	0.01	0.725	0.441	23.9	24
	660/1880	30.1	0.686	0.414	0.01	0.686	0.414		
	810/1910	30.2	0.703	0.419	0.01	0.703	0.419		

Table 1: SAR measurement results for the portable cellular telephone FCC ID PY7AF052033 model W300i at maximum output power with Standard Battery BST-33. Measured against the left head.



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f (MHz)	Channel/ frequency	Conducted Output Power (dBm) GSM 1:8 Duty Cycle	FCC ID PY7AF052033 with Standard Battery BST-33						
			Right Head (Cheek / Touch Position)						
			Measured (W/kg) 1g / 10g		Drift (dB)	Extrapolated (W/kg) 1g / 10g		Ambient Temp (°C)	Simulate Temp (°C)
800 GSM	128 / 824	32.6	0.841	0.543	-0.03	0.841	0.543	23.7	23.8
	189 / 837	32.8	1.090	0.700	-0.05	1.090	0.700		
	251 / 849	31.4	1.46	0.934	-0.03	1.460	0.934		
Bluetooth On	251 / 849	31.4	1.46	0.936	-0.06	1.46	0.936	24.2	24
1900 GSM	512 / 1850	30.0	0.861	0.473	0.020	0.861	0.473	23.8	23.9
	660/1880	30.1	1.030	0.559	0.03	1.030	0.559		
	810/1910	30.2	1.130	0.612	0.02	1.130	0.612		
f (MHz)	Channel/ frequency	Conducted Output Power (dBm) GSM 1:8 Duty Cycle	FCC ID PY7AF052033 with Standard Battery BST-33						
			Right Head (15° Tilt Position)						
			Measured (W/kg) 1g / 10g		Drift (dB)	Extrapolated (W/kg) 1g / 10g		Ambient Temp (°C)	Simulate Temp (°C)
800 GSM	128 / 824	32.6	0.181	0.133	0.01	0.181	0.133	23.8	23.8
	189 / 837	32.8	0.236	0.172	0.03	0.236	0.172		
	251 / 849	31.4	0.319	0.232	-0.02	0.319	0.232		
1900 GSM	512 / 1850	30.0	0.623	0.382	0.01	0.623	0.382	23.6	23.8
	660/1880	30.1	0.616	0.374	-0.08	0.616	0.374		
	810/1910	30.2	0.646	0.389	0.02	0.646	0.389		

Table 2: SAR measurement results for the portable cellular telephone FCC ID PY7AF052033 model W300i at maximum output power with Standard Battery BST-33. Measured against the right head.



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6.2 Body-Worn Test Results

The SAR results shown in Tables 3 and 4 are the maximum SAR values averaged over 1gram and 10 grams of phantom tissue. Also shown are the measured conducted output powers, the temperature of the test facility during the test, the temperature of the simulated tissue after the test, the measured drift and the extrapolated SAR. The extrapolated SAR corresponds to the measured SAR scaled to the maximum conducted output power. During all of the tests represented in this report, the ambient temperature of the laboratory was in the range 22.2-24.2°C, the relative humidity was 31.4%- 42.1 %, and the liquid depth above the ear and body reference points was more than 15.0 cm for all the cases.

A “flat” phantom was used for the body-worn tests. This “flat” phantom corresponds to the flat portion of the SAM phantom. The same device holder described in section 6 was used for positioning the phone. The cellular phone was tested with a headset (HBP-20) connected to the device for all body-worn SAR measurements.

The following body-worn accessories were tested for this phone:

- 15 mm spacer
- ICE26 Carry Case

A full data set output of the test conditions with the highest SAR values from the DASY™ measurement system is included as Appendix 3. These test conditions included are indicated as bold numbers in the following tables. All other test conditions measured lower SAR values than those included.

Summary of Maximum Extrapolated SAR Results: Body-worn			
Frequency	Extrapolated SAR (W/kg) 1 g		Test Configuration
800 GSM	1.39		15mm Spacer Carry Accessory, back of phone facing body, 849 MHz, 2:8 Duty Cycle, BST-33 battery, Bluetooth On
1900 GSM	1.24		ICE-26 Carry Accessory, back of phone facing body, 1910 MHz, 2:8 Duty Cycle BST-33 battery, Bluetooth On



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f (MHz)	Operating Condition	Channel/ frequency	Conduct ed Output Power (dBm)	FCC ID PY7AF052033 with Standard Battery BST-33						
				Body Worn		Carry Accessory: 15mm Spacer				
				Back of phone facing body						
				Measured (W/kg) 1g / 10g	Drift (dB)	Extrapolated (W/kg) 1g / 10g	Ambient Temp (°C)	Simulate Temp (°C)		
Back of phone facing body										
800 GSM	2:8 Duty Cycle	128 / 824	29.4	0.938	0.635	0.08	0.938	0.635	22.2	22
		189 / 837	29.4	1.250	0.848	0.02	1.250	0.848		
		251 / 849	29.4	1.340	0.903	0.00	1.340	0.903		
	Bluetooth On	251 / 849	29.4	1.39	0.936	-0.03	1.39	0.936	22.5	22.5
	1:8 Duty Cycle	251 / 849	31.4	0.631	0.434	0.07	0.631	0.434		
1900 GSM	2:8 Duty Cycle	512 / 1850	30.0	0.864	0.556	0.10	0.864	0.556	22.9	22.5
		660/1880	30.1	1.140	0.722	0.11	1.140	0.722		
		810/1910	30.2	1.21	0.768	-0.01	1.21	0.768		
	Bluetooth On	810/1910	30.2	1.24	0.781	-0.03	1.24	0.781	22.8	22.5
	1:8 Duty Cycle	810/1910	30.2	0.625	0.396	0.10	0.625	0.396		
Front of phone facing body										
800 GSM	2:8 Duty Cycle	128 / 824	29.4	0.195	0.140	0.08	0.195	0.140	22.5	22.3
		189 / 837	29.4	0.327	0.232	0.05	0.327	0.232		
		251 / 849	29.4	0.389	0.274	-0.17	0.389	0.274		
1900 GSM	2:8 Duty Cycle	512 / 1850	30.0	0.315	0.198	0.07	0.315	0.198	23.1	22.8
		660/1880	30.1	0.306	0.189	0.09	0.306	0.189		
		810/1910	30.2	0.236	0.148	0.00	0.236	0.148		

Table 3: SAR measurement results for the portable cellular telephone FCC ID PY7AF052033 model W300i at maximum output power with Standard Battery BST-33. Measured against the body with carry accessory 15mm Spacer.



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f (MHz)	Operating Condition	Channel/ frequency	Condu cted Output Power (dBm)	FCC ID PY7AF052033 with Standard Battery BST-33						
				Body Worn			Carry Accessory: ICE-26 Carry Case			
				Back of phone facing body						
				Measured (W/kg) 1g / 10g	Drift (dB)	Extrapolated (W/kg) 1g / 10g	Ambient Temp (°C)	Simulate Temp (°C)		
Back of phone facing body										
800 GSM	2:8 Duty Cycle	128 / 824	29.4	0.778	0.546	-0.03	0.778	0.546	22.4	22.1
		189 / 837	29.4	0.918	0.639	0.02	0.918	0.639		
		251 / 849	29.4	0.976	0.668	0.05	0.976	0.668		
1900 GSM	2:8 Duty Cycle	512 / 1850	30.0	0.748	0.482	0.04	0.748	0.482	22.8	22.5
		660/1880	30.1	0.872	0.557	0.12	0.872	0.557		
		810/1910	30.2	0.826	0.524	-0.07	0.826	0.524		
Front of phone facing body										
800 GSM	2:8 Duty Cycle	128 / 824	29.4	0.163	0.116	0.08	0.163	0.116	22.5	22.5
		189 / 837	29.4	0.256	0.182	-0.02	0.256	0.182		
		251 / 849	29.4	0.303	0.213	-0.02	0.303	0.213		
1900 GSM	2:8 Duty Cycle	512 / 1850	30.0	0.296	0.187	-0.01	0.296	0.187	23	22.6
		660/1880	30.1	0.350	0.220	-0.12	0.350	0.220		
		810/1910	30.2	0.213	0.135	-0.07	0.213	0.135		

Table 4: SAR measurement results for the portable cellular telephone FCC ID PY7AF052033 model W300i at maximum output power with Standard Battery BST-33. Measured against the body with carry accessory ICE-26.

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References

- [1] FCC, "Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields: Additional Information for Evaluating Compliance of Mobile and Portable Devices with FCC Limits for Human Exposure to Radiofrequency Emissions," Supplement C (Edition 01-01) to OET Bulletin 65 (Edition 97-01).
- [2] IEEE, "Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Body Due to Wireless Communications Devices: Experimental Techniques," Std 1528-200X, Draft 6.5 – August 20, 2001.

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Appendix 1**SAR distribution comparison for the system accuracy verification**



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**835 MHz SAR Distribution of Validation Dipole Antenna
System Performance Check on March 30, 2006 (Using head tissue).
Validation_835Head_429_1251_30Mar06_T01**

File Name: [Validation_835Head_429_1251_30Mar06_T01.da4](#)

Phantom: SAM with CRP (Low Band Head) Phantom section: Flat Section

Probe: ET3DV6 - SN1586ConvF(6.58, 6.58, 6.58) Duty Cycle: 1:1 Frequency: 835 MHz

Medium parameters used: $f = 835 \text{ MHz}$; $s = 0.918 \text{ mho/m}$; $\epsilon_r = 42.7$; $\rho = 1000 \text{ kg/m}^3$

Measurement Standard: DASY4 (High Precision Assessment)

Dipole at 10 mm/Area Scan (61x61x1):

Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (interpolated) = 0.987 mW/g

Dipole at 10 mm/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 33.9 V/m; Power Drift = 0.008 dB

Peak SAR (extrapolated) = 1.38 W/kg

SAR(1 g) = 0.924 mW/g; SAR(10 g) = 0.604 mW/g

Maximum value of SAR (measured) = 1.00 mW/g

Dipole at 10 mm/Zoom Scan 2 (7x7x7)/Cube 0:

Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 33.9 V/m; Power Drift = 0.008 dB

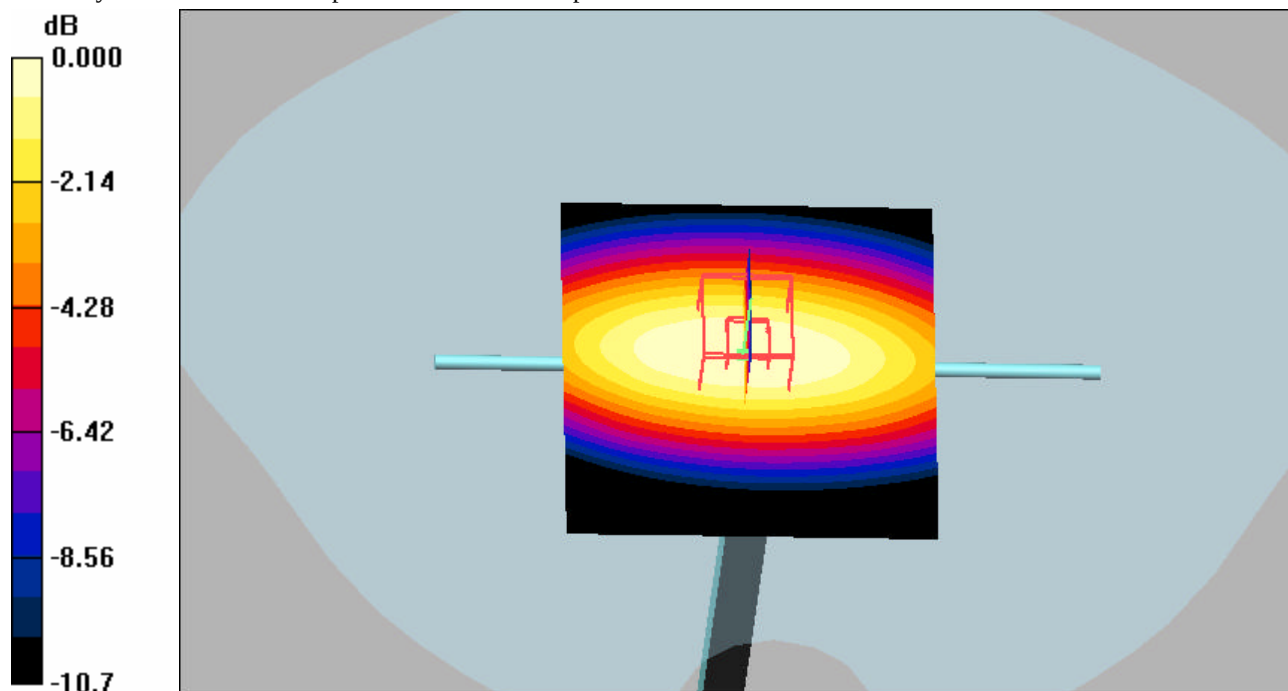
Peak SAR (extrapolated) = 1.33 W/kg

SAR(1 g) = 0.883 mW/g; SAR(10 g) = 0.575 mW/g

Maximum value of SAR (measured) = 0.953 mW/g

Procedure Notes: Pin: before 99.6 mW / after 100mW

Humidity: 32.5% Ambient Temp: 23.7 C Simulant Temp: 23.8 C



0 dB = 0.953mW/g



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835 MHz SAR Distribution of Validation Dipole Antenna
System Performance Check on April 18, 2006 (Using body tissue).
Validation 835Body 429 1031 18Apr06 T01

File Name: [Validation 835Body 429 1031 18Apr06 T01.da4](#)

Phantom: SAM with CRP (Low Band Body) Phantom section: Flat Section

Probe: ET3DV6 - SN1539ConvF(5.88, 5.88, 5.88) Duty Cycle: 1:1 Frequency: 835 MHz

Medium parameters used: $f = 835$ MHz; $s = 0.989$ mho/m; $\epsilon_r = 52.3$; $\rho = 1000$ kg/m³

Measurement Standard: DASY4 (High Precision Assessment)

Dipole at 10 mm/Area Scan (61x61x1):

Measurement grid: $dx=15$ mm, $dy=15$ mm

Maximum value of SAR (interpolated) = 1.02 mW/g

Dipole at 10 mm/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: $dx=5$ mm, $dy=5$ mm, $dz=5$ mm

Reference Value = 33.5 V/m; Power Drift = 0.021 dB

Peak SAR (extrapolated) = 1.39 W/kg

SAR(1 g) = 0.949 mW/g; SAR(10 g) = 0.623 mW/g

Maximum value of SAR (measured) = 1.03 mW/g

Dipole at 10 mm/Zoom Scan 2 (7x7x7)/Cube 0:

Measurement grid: $dx=5$ mm, $dy=5$ mm, $dz=5$ mm

Reference Value = 33.5 V/m; Power Drift = 0.021 dB

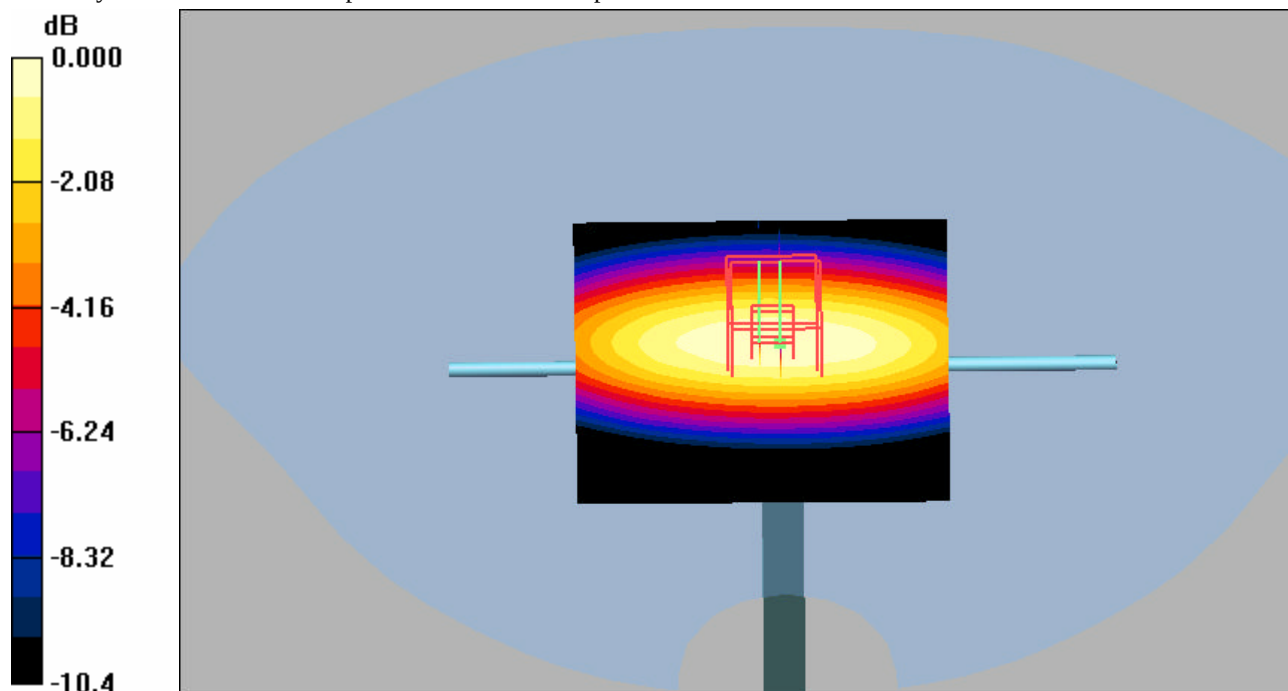
Peak SAR (extrapolated) = 1.40 W/kg

SAR(1 g) = 0.949 mW/g; SAR(10 g) = 0.622 mW/g

Maximum value of SAR (measured) = 1.02 mW/g

Procedure Notes: Pin: before 100mW / after 100mW

Humidity - 40.3% Ambient Temp - 22.2 C Simulant Temp - 22 C



0 dB = 1.02mW/g



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**1900 MHz SAR Distribution of Validation Dipole Antenna
System Performance Check on April 16, 2006 (Using head tissue).
Validation_1900Head_537_1335_16Apr06_T01**

File Name: [Validation_1900Head_537_1335_16Apr06_T01.da4](#)

Phantom: SAM with CRP (High Band Head) Phantom section: Flat Section

Probe: ET3DV6 - SN1539ConvF(4.55, 4.55, 4.55) Duty Cycle: 1:1 Frequency: 1900 MHz

Medium parameters used: $f = 1900$ MHz; $s = 1.47$ mho/m; $\epsilon_r = 38.1$; $\rho = 1000$ kg/m³

Measurement Standard: DASY4 (High Precision Assessment)

Dipole at 10 mm/Area Scan (61x61x1):

Measurement grid: $dx=15$ mm, $dy=15$ mm

Maximum value of SAR (interpolated) = 5.40 mW/g

Dipole at 10 mm/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: $dx=5$ mm, $dy=5$ mm, $dz=5$ mm

Reference Value = 61.2 V/m; Power Drift = 0.033 dB

Peak SAR (extrapolated) = 7.41 W/kg

SAR(1 g) = 4.29 mW/g; SAR(10 g) = 2.26 mW/g

Maximum value of SAR (measured) = 4.87 mW/g

Dipole at 10 mm/Zoom Scan 2 (7x7x7)/Cube 0:

Measurement grid: $dx=5$ mm, $dy=5$ mm, $dz=5$ mm

Reference Value = 61.2 V/m; Power Drift = 0.033 dB

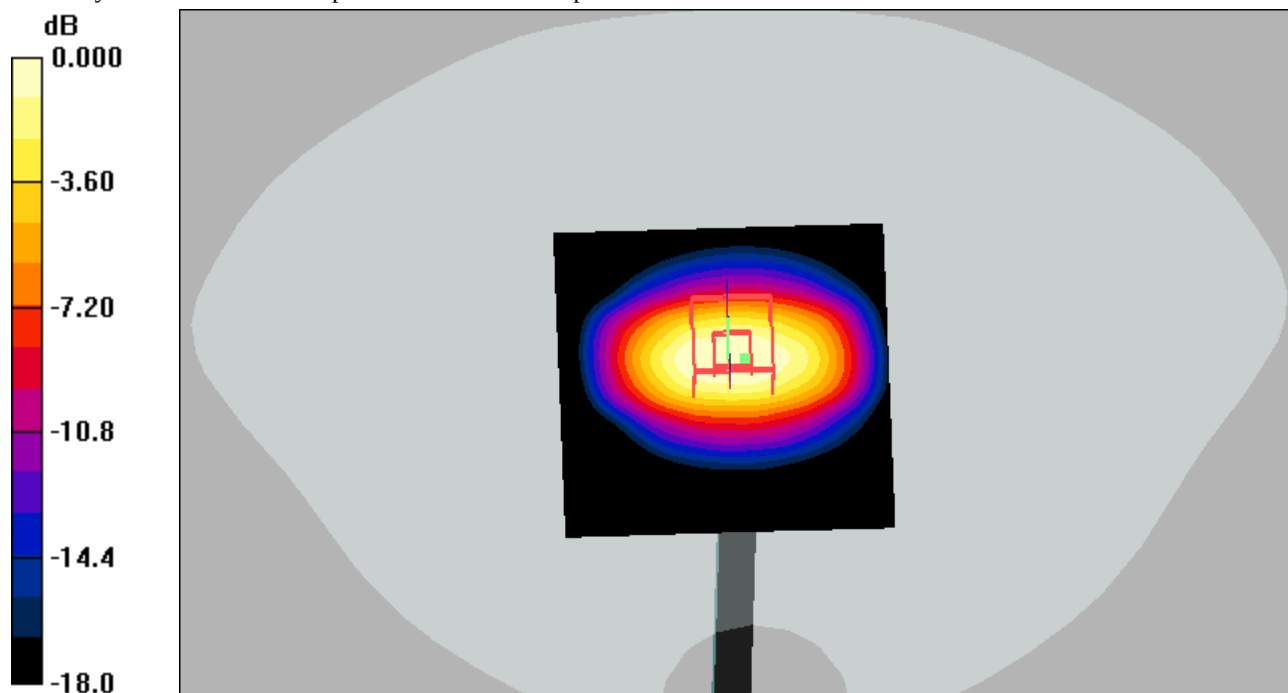
Peak SAR (extrapolated) = 7.35 W/kg

SAR(1 g) = 4.24 mW/g; SAR(10 g) = 2.22 mW/g

Maximum value of SAR (measured) = 4.75 mW/g

Procedure Notes: Pin: before 99.9 mW / after 100.1 mW

Humidity: 36.2% Ambient Temp: 24.1 C Simulant Temp: 24 C



0 dB = 4.75mW/g



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1900 MHz SAR Distribution of Validation Dipole Antenna
System Performance Check on April 17, 2005 (Using body tissue).
Validation_1900Body_537_1020_17Apr06_T01

File Name: [Validation_1900Body_537_1020_17Apr06_T01.da4](#)

Phantom: SAM with CRP (High Band Body) Phantom section: Flat Section

Probe: ET3DV6 - SN1539ConvF(4.12, 4.12, 4.12) Duty Cycle: 1:1 Frequency: 1900 MHz

Medium parameters used: $f = 1900$ MHz; $s = 1.52$ mho/m; $\epsilon_r = 51.3$; $\rho = 1000$ kg/m³

Measurement Standard: DASY4 (High Precision Assessment)

Dipole at 10 mm/Area Scan (61x61x1):

Measurement grid: $dx=15$ mm, $dy=15$ mm

Maximum value of SAR (interpolated) = 5.35 mW/g

Dipole at 10 mm/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: $dx=5$ mm, $dy=5$ mm, $dz=5$ mm

Reference Value = 58.7 V/m; Power Drift = 0.026 dB

Peak SAR (extrapolated) = 7.25 W/kg

SAR(1 g) = 4.25 mW/g; SAR(10 g) = 2.26 mW/g

Maximum value of SAR (measured) = 4.81 mW/g

Dipole at 10 mm/Zoom Scan 2 (7x7x7)/Cube 0:

Measurement grid: $dx=5$ mm, $dy=5$ mm, $dz=5$ mm

Reference Value = 58.7 V/m; Power Drift = 0.026 dB

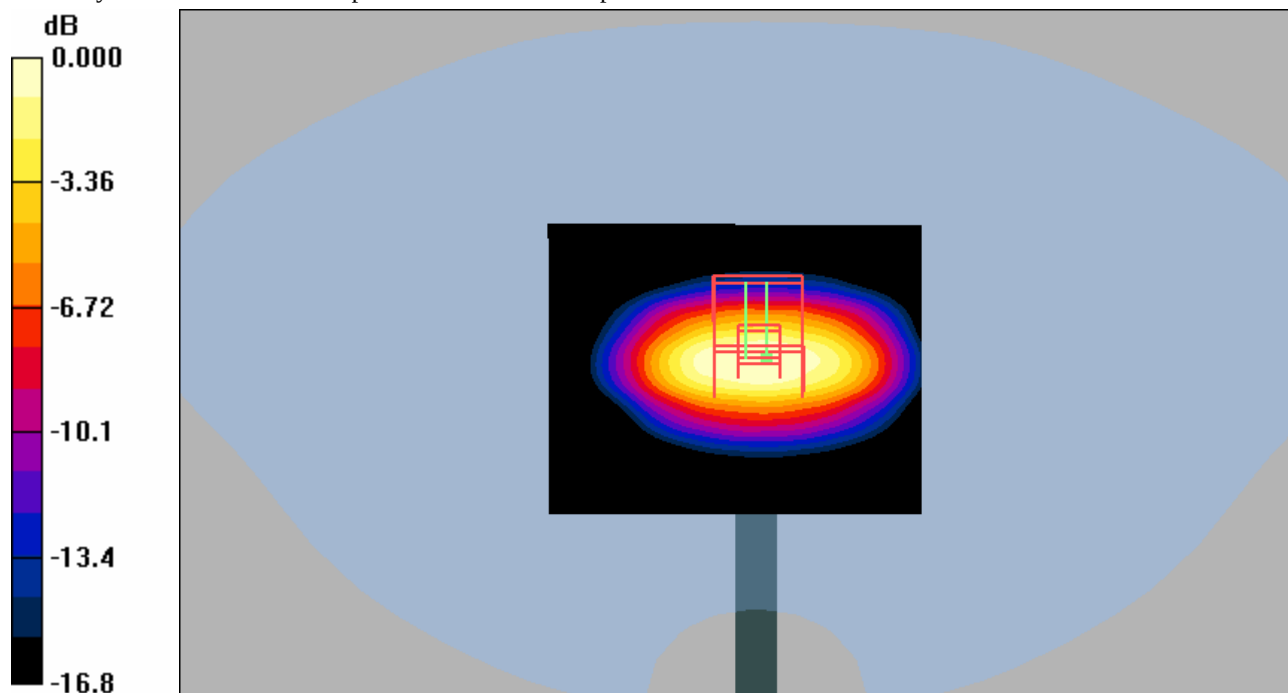
Peak SAR (extrapolated) = 7.10 W/kg

SAR(1 g) = 4.2 mW/g; SAR(10 g) = 2.24 mW/g

Maximum value of SAR (measured) = 4.72 mW/g

Procedure Notes: Pin: before 99.9 mW / after 100 mW

Humidity - 41.1 % Ambient Temp - 22.9 C Simulant Temp - 22.5 C



0 dB = 4.72mW/g

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Appendix 2

SAR distribution plots for Phantom Head Adjacent Use



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800 GSM Band: SAR Distribution and Extrapolation of Maximum SAR**Model: W300i SN: BD30291EZW with Standard Battery: BST-33****Right Side, Cheek/Touch Position.**

Date/Time: 3/30/2006 7:50:22 AM

File Name: [30Mar06 W300i GSM850 1EZW RC01.da4](#)**DUT: W300i**

Program Notes: Battery - BST33 Humidity: 32.5% Ambient Temp: 23.7 C Simulant Temp: 23.8 C

Communication System: GSM 850; Frequency: 849 MHz; Duty Cycle: 1:8.3

Medium: Head 835/900 MHz Medium parameters used (interpolated): $f = 849 \text{ MHz}$; $s = 0.93 \text{ mho/m}$; $\epsilon_r = 42.5$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Right Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1586; ConvF(6.58, 6.58, 6.58); Calibrated: 5/26/2005
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn416; Calibrated: 11/10/2005
- Phantom: SAM with CRP (Low Band Head); Type: SAM; Serial: 1251
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 160

Unnamed procedure 3/Area Scan (51x81x1):Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$ [Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 1.56 mW/g

Unnamed procedure 3/Zoom Scan (7x7x7)/Cube 0:Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 10.4 V/m; Power Drift = -0.034 dB

Peak SAR (extrapolated) = 2.13 W/kg

SAR(1 g) = 1.46 mW/g; SAR(10 g) = 0.934 mW/g[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 1.59 mW/g

Unnamed procedure 3/Zoom Scan (31x31x36)/Cube 0:Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

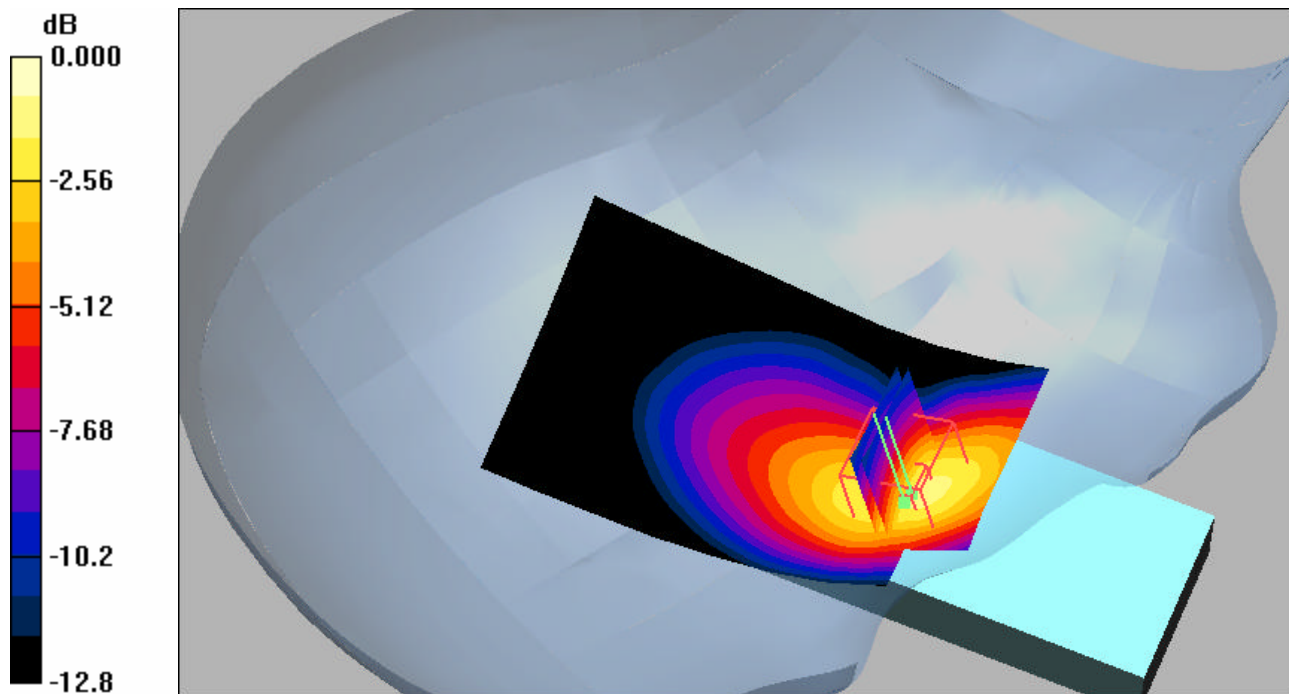
Reference Value = 10.4 V/m; Power Drift = -0.034 dB

[Info: Interpolated medium parameters used for SAR evaluation.](#)

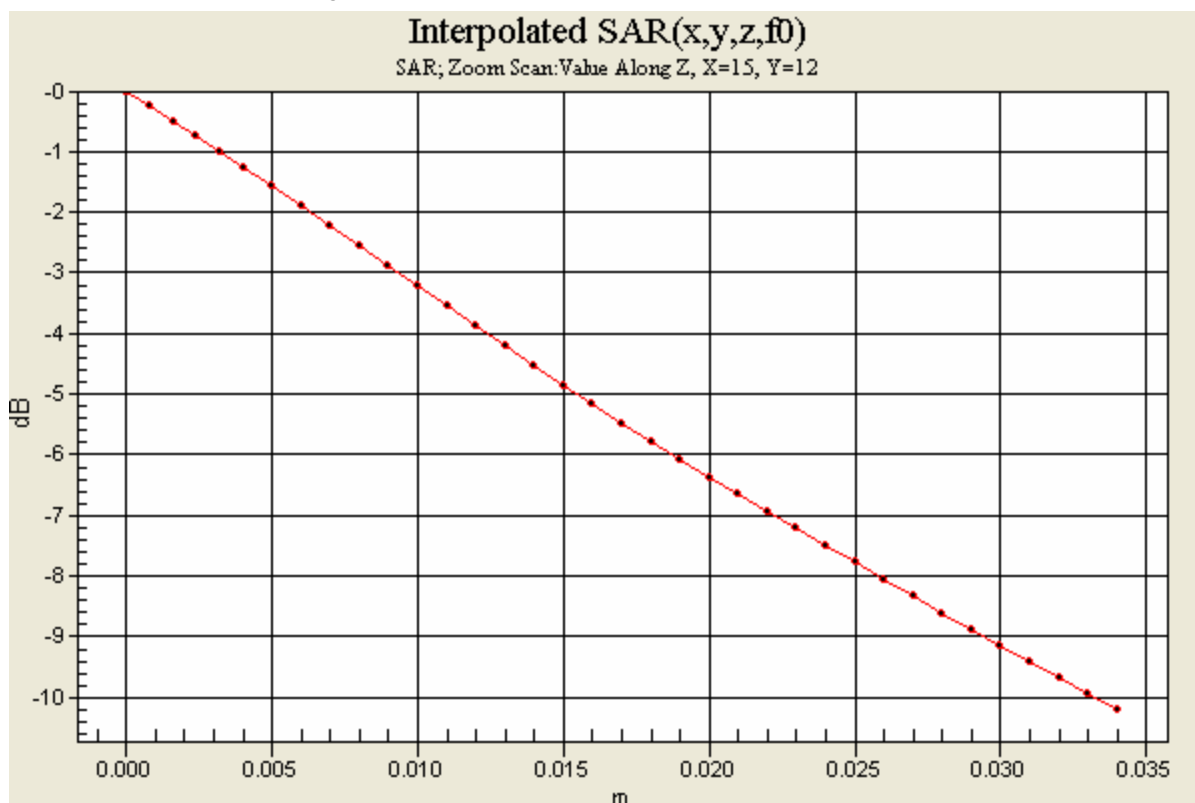
Maximum value of SAR (interpolated) = 2.13 mW/g



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0 dB = 2.13mW/g





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800 GSM Band: Distribution and Extrapolation of Maximum SAR**Model: W300i SN: BD30291EZW with Standard Battery: BST-33****Right Side, Cheek/Tilt Position.**

Date/Time: 3/30/2006 9:17:48 AM

File Name: [30Mar06_W300i_GSM850_1EZW_RT01.da4](#)**DUT: W300i**

Program Notes: Battery - BST33 Humidity - 32.8% Ambient Temp - 23.8 C Simulant Temp - 23.8 C

Communication System: GSM 850; Frequency: 849 MHz; Duty Cycle: 1:8.3

Medium: Head 835/900 MHz Medium parameters used (interpolated): $f = 849 \text{ MHz}$; $s = 0.93 \text{ mho/m}$; $\epsilon_r = 42.5$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Right Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1586; ConvF(6.58, 6.58, 6.58); Calibrated: 5/26/2005
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn416; Calibrated: 11/10/2005
- Phantom: SAM with CRP (Low Band Head); Type: SAM; Serial: 1251
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 160

Unnamed procedure 3/Area Scan (51x81x1):Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$ [Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.342 mW/g

Unnamed procedure 3/Zoom Scan (7x7x7)/Cube 0:Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 10.8 V/m; Power Drift = -0.022 dB

Peak SAR (extrapolated) = 0.417 W/kg

SAR(1 g) = 0.319 mW/g; SAR(10 g) = 0.232 mW/g[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.339 mW/g

Unnamed procedure 3/Zoom Scan (31x31x36)/Cube 0:Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 10.8 V/m; Power Drift = -0.022 dB

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.417 mW/g

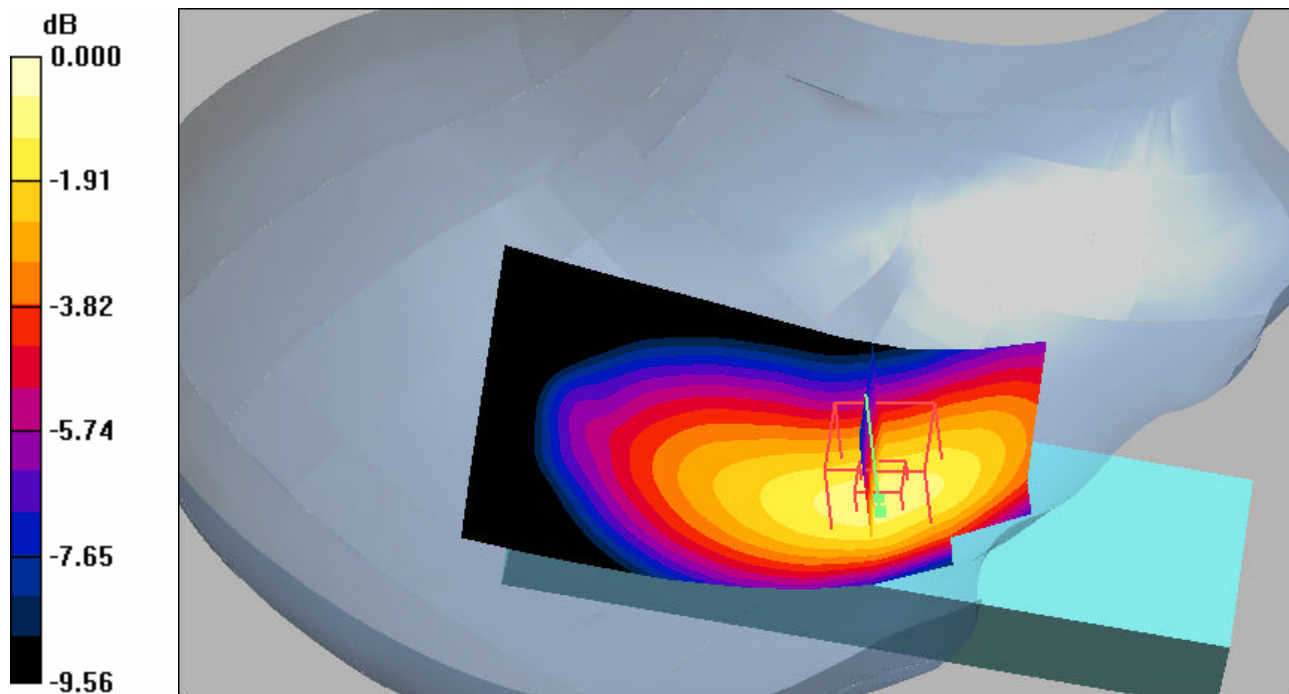


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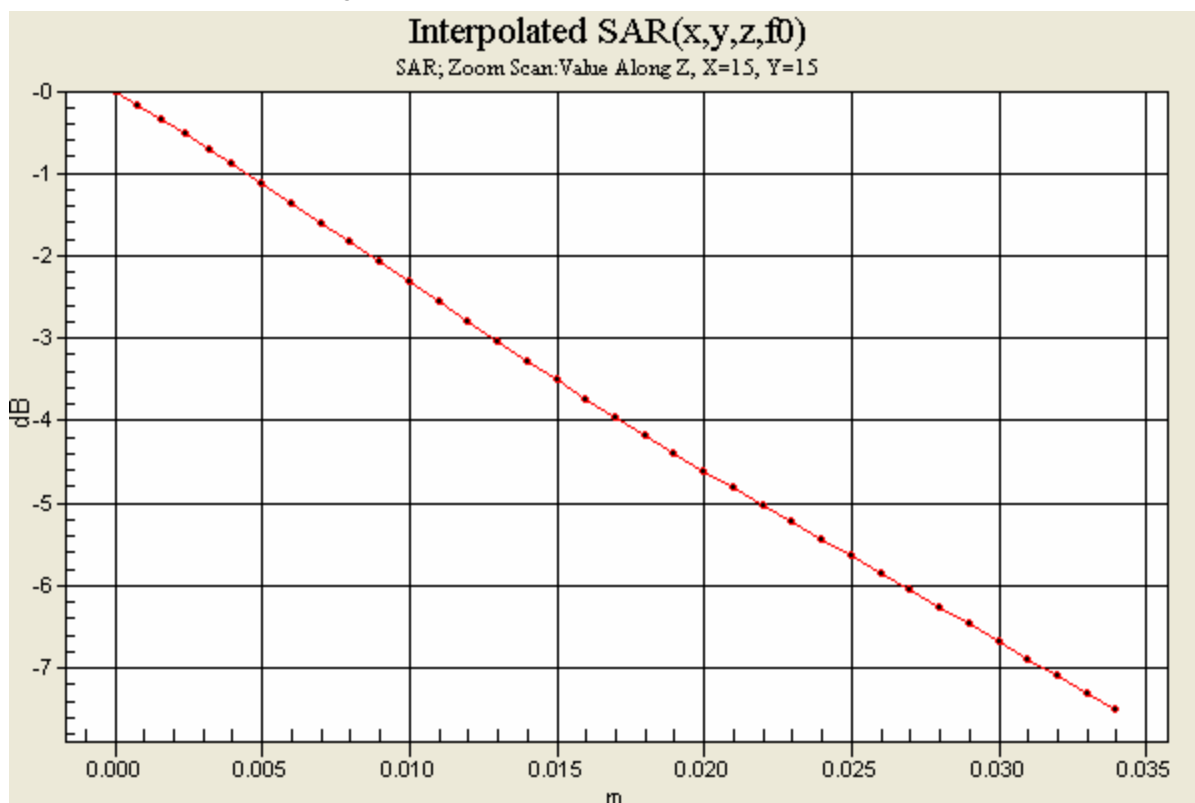
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0 dB = 0.417mW/g





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800 GSM Band: Distribution and Extrapolation of Maximum SAR**Model: W300i SN: BD30291EZW with Standard Battery: BST-33****Left Side, Cheek/Touch Position.**

Date/Time: 3/30/2006 11:01:58 AM

File Name: [30Mar06_W300i_GSM850_1EZW_LC01.da4](#)**DUT: W300i**

Program Notes: Battery - BST33 Humidity - 33 % Ambient Temp - 24 C Simulant Temp - 23.9 C

Communication System: GSM 850; Frequency: 849 MHz; Duty Cycle: 1:8.3

Medium: Head 835/900 MHz Medium parameters used (interpolated): $f = 849 \text{ MHz}$; $s = 0.93 \text{ mho/m}$; $\epsilon_r = 42.5$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Left Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1586; ConvF(6.58, 6.58, 6.58); Calibrated: 5/26/2005
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn416; Calibrated: 11/10/2005
- Phantom: SAM with CRP (Low Band Head); Type: SAM; Serial: 1251
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 160

Unnamed procedure 3/Area Scan (61x81x1):Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$ [Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 1.53 mW/g

Unnamed procedure 3/Zoom Scan (7x7x7)/Cube 0:Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 11.0 V/m; Power Drift = -0.004 dB

Peak SAR (extrapolated) = 2.16 W/kg

SAR(1 g) = 1.4 mW/g; SAR(10 g) = 0.885 mW/g[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 1.52 mW/g

Unnamed procedure 3/Zoom Scan (31x31x36)/Cube 0:Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 11.0 V/m; Power Drift = -0.004 dB

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 2.16 mW/g

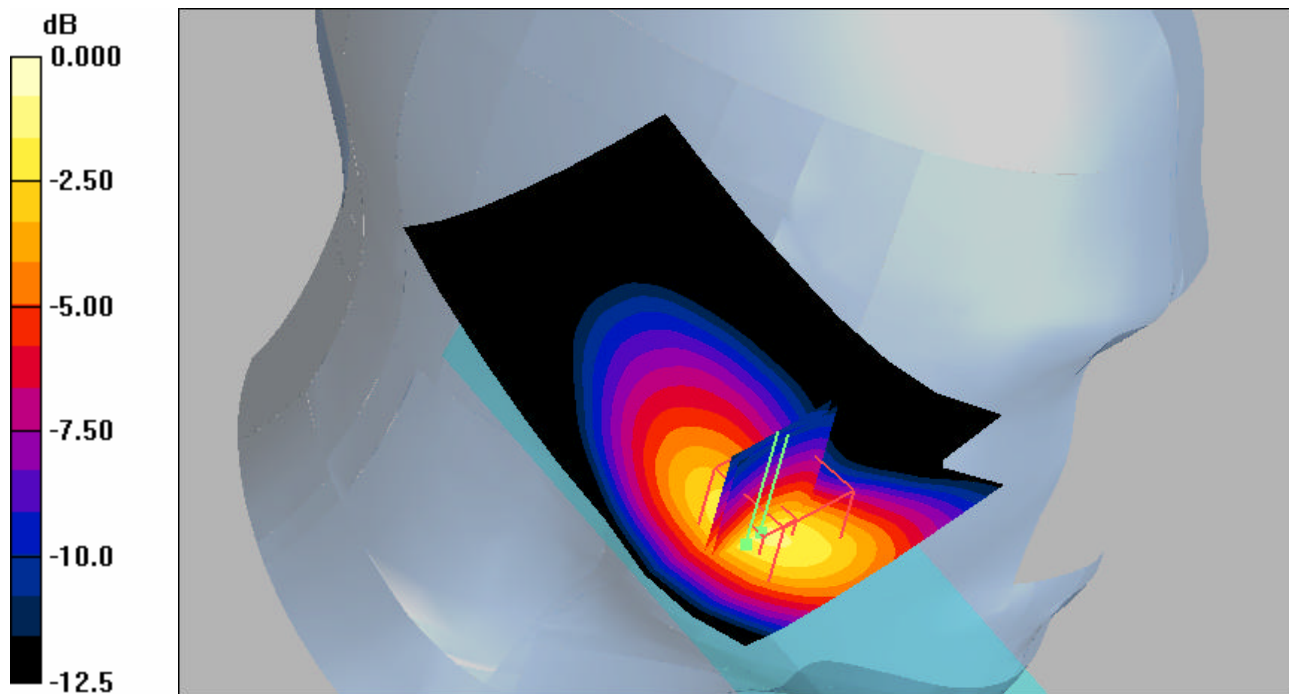


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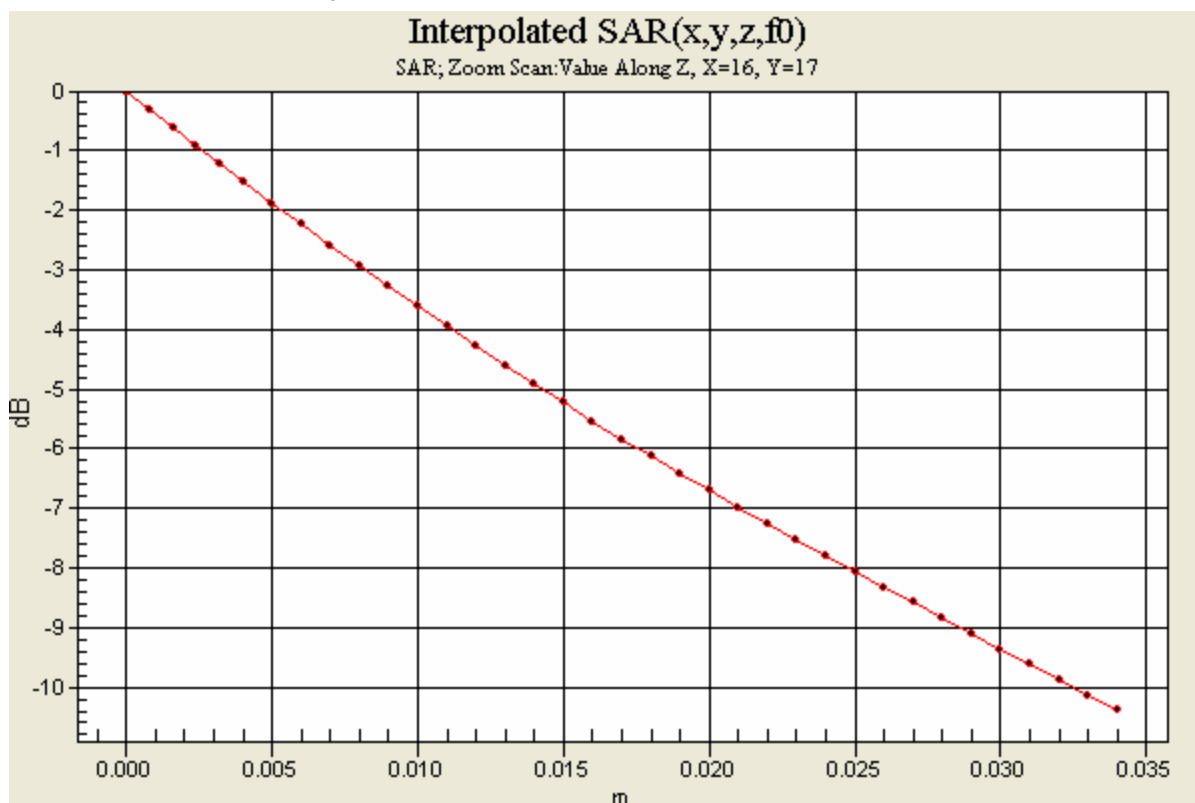
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0 dB = 2.16mW/g





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800 GSM Band: Distribution and Extrapolation of Maximum SAR**Model: W300i SN: BD30291EZW with Standard Battery: BST-33****Left Side, Tilt Position.**

Date/Time: 3/30/2006 12:09:20 PM

File Name: [30Mar06_W300i_GSM850_1EZW_LT01.da4](#)**DUT: W300i**

Program Notes: Battery - BST33 Humidity - 33.4 % Ambient Temp - 24.2 C Simulant Temp - 24 C

Communication System: GSM 850; Frequency: 849 MHz; Duty Cycle: 1:8.3

Medium: Head 835/900 MHz Medium parameters used (interpolated): $f = 849 \text{ MHz}$; $s = 0.93 \text{ mho/m}$; $\epsilon_r = 42.5$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Left Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1586; ConvF(6.58, 6.58, 6.58); Calibrated: 5/26/2005
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn416; Calibrated: 11/10/2005
- Phantom: SAM with CRP (Low Band Head); Type: SAM; Serial: 1251
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 160

Unnamed procedure 3/Area Scan (61x81x1):Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$ [Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.324 mW/g

Unnamed procedure 3/Zoom Scan (7x7x7)/Cube 0:Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 10.8 V/m; Power Drift = 0.026 dB

Peak SAR (extrapolated) = 0.401 W/kg

SAR(1 g) = 0.306 mW/g; SAR(10 g) = 0.225 mW/g[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.325 mW/g

Unnamed procedure 3/Zoom Scan (31x31x36)/Cube 0:Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 10.8 V/m; Power Drift = 0.026 dB

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.401 mW/g

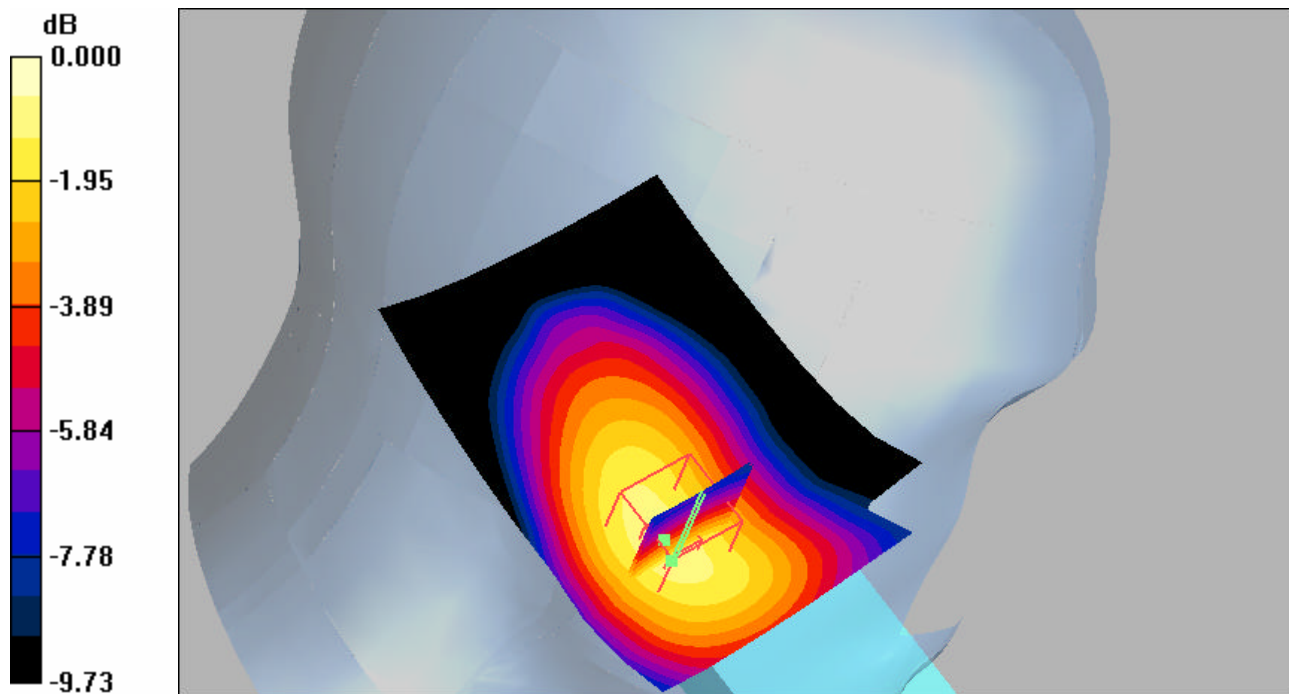


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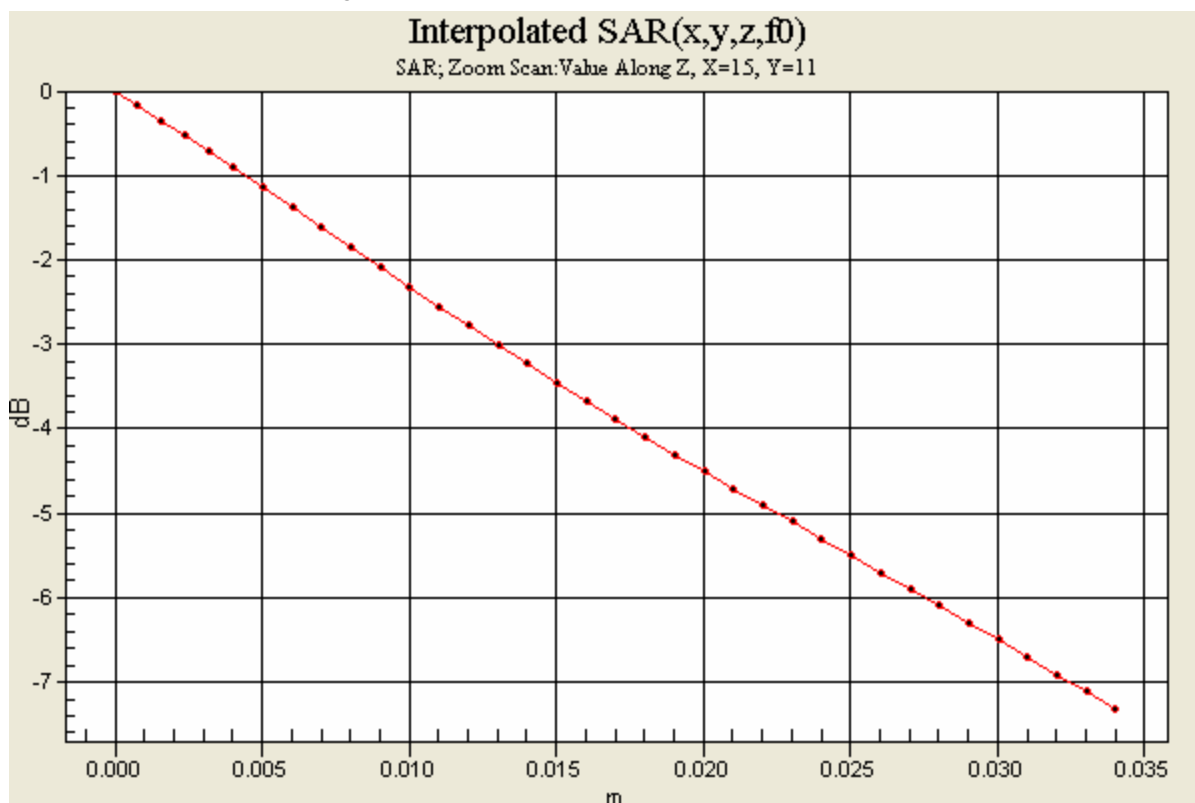
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0 dB = 0.401mW/g





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Approved SEM/CV/PF/P Gerard Hayes	Checked	A	X:\SAR Chamber\FCC reports\W300i\Final Reports\FCCW300i.doc

1900 GSM Band: Distribution and Extrapolation of Maximum SAR**Model: W300i SN: BD30291E73 with Standard Battery: BST-33****Right Side, Cheek/Touch Position.**

Date/Time: 4/16/2006 11:28:21 AM

File Name: [16Apr06 W300i GSM1900 1E73 RC01.da4](#)**DUT: W300i**

Program Notes: Battery - BST33 Humidity - 37.1% Ambient Temp - 23.8 C Simulant Tem - 23.9 C

Communication System: DCS 1900; Frequency: 1909.8 MHz; Duty Cycle: 1:8.3

Medium: Head 1800/1900 MHz Medium parameters used: f = 1910 MHz; s = 1.48 mho/m; $\epsilon_r = 38$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Right Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1539; ConvF(4.55, 4.55, 4.55); Calibrated: 11/22/2005
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn345; Calibrated: 11/10/2005
- Phantom: SAM with CRP (High Band Head); Type: SAM; Serial: TP: 1054
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 160

Unnamed procedure 3/Area Scan (51x81x1):

Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 1.24 mW/g

Unnamed procedure 3/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 27.2 V/m; Power Drift = 0.025 dB

Peak SAR (extrapolated) = 1.87 W/kg

SAR(1 g) = 1.13 mW/g; SAR(10 g) = 0.612 mW/g

Maximum value of SAR (measured) = 1.27 mW/g

Unnamed procedure 3/Zoom Scan (7x7x7)/Cube 1:

Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 27.2 V/m; Power Drift = 0.025 dB

Peak SAR (extrapolated) = 1.14 W/kg

SAR(1 g) = 0.828 mW/g; SAR(10 g) = 0.513 mW/g

Maximum value of SAR (measured) = 0.901 mW/g

Unnamed procedure 3/Zoom Scan (31x31x36)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 27.2 V/m; Power Drift = 0.025 dB

Maximum value of SAR (interpolated) = 1.87 mW/g

Unnamed procedure 3/Zoom Scan (31x31x36)/Cube 1:

Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 27.2 V/m; Power Drift = 0.025 dB

Maximum value of SAR (interpolated) = 1.14 mW/g

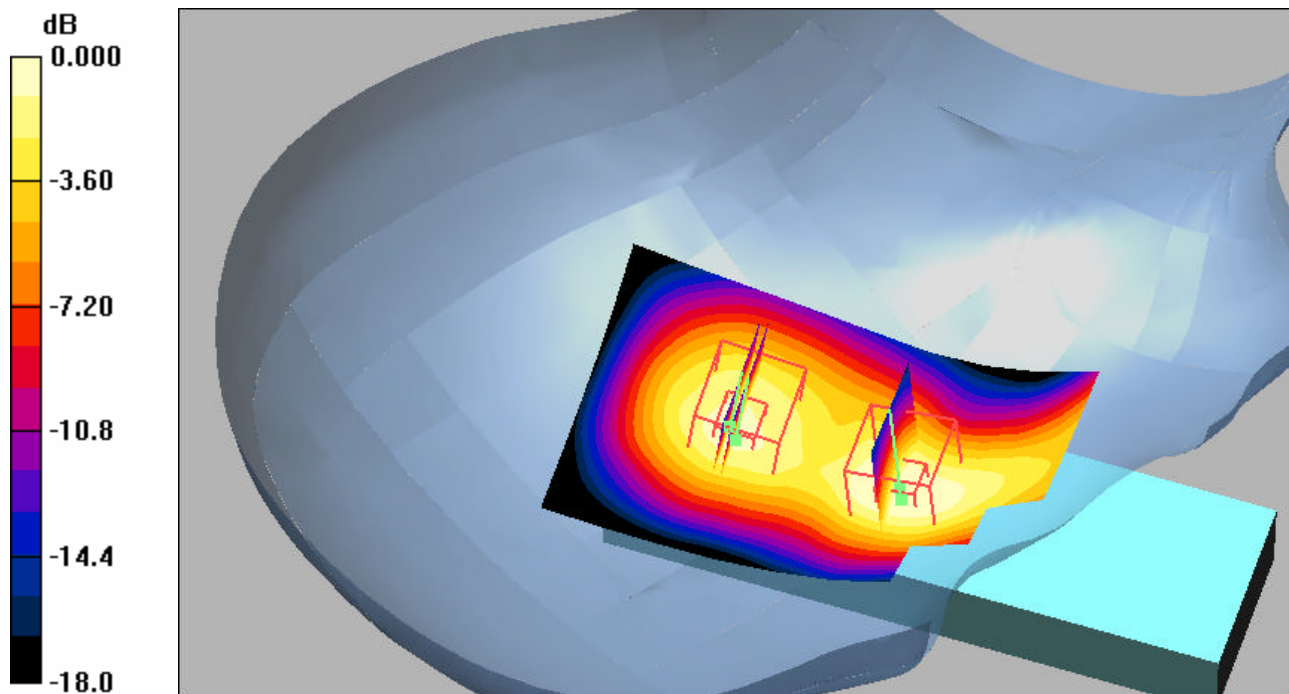


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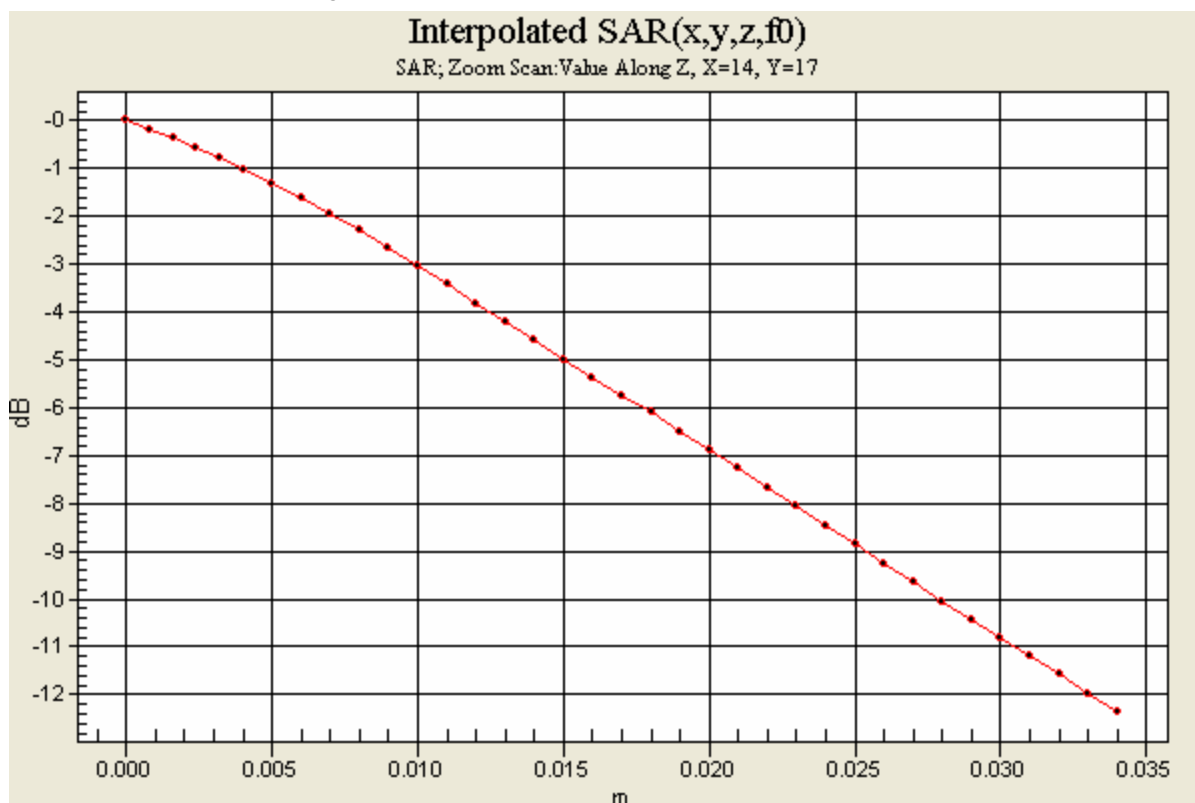
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Prepared (also subject responsible if other) SEM/CV/PF/P Gerard Hayes and Rodney Dixon		No. REP 2006 004 W300i HWB 02	
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0 dB = 1.14mW/g





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1900 GSM Band: Distribution and Extrapolation of Maximum SAR**Model: W300i SN: BD30291E73 with Standard Battery: BST-33****Right Side, Tilt Position.**

Date/Time: 4/16/2006 12:01:19 PM

File Name: [16Apr06_W300i_GSM1900_1E73_RT01.da4](#)**DUT: W300i**

Program Notes: Battery - BST33 Humidity - 37.5% Ambient Temp - 23.6 C Simulant Tem - 23.8 C

Communication System: DCS 1900; Frequency: 1909.8 MHz; Duty Cycle: 1:8.3

Medium: Head 1800/1900 MHz Medium parameters used: $f = 1910 \text{ MHz}$; $s = 1.48 \text{ mho/m}$; $\epsilon_r = 38$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Right Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1539; ConvF(4.55, 4.55, 4.55); Calibrated: 11/22/2005
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn345; Calibrated: 11/10/2005
- Phantom: SAM with CRP (High Band Head); Type: SAM; Serial: TP: 1054
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 160

Unnamed procedure 3/Area Scan (51x81x1):Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (interpolated) = 0.758 mW/g

Unnamed procedure 3/Zoom Scan (7x7x7)/Cube 0:Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 7.06 V/m; Power Drift = 0.018 dB

Peak SAR (extrapolated) = 0.959 W/kg

SAR(1 g) = 0.646 mW/g; SAR(10 g) = 0.389 mW/g

Maximum value of SAR (measured) = 0.703 mW/g

Unnamed procedure 3/Zoom Scan (31x31x36)/Cube 0:Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 7.06 V/m; Power Drift = 0.018 dB

Maximum value of SAR (interpolated) = 0.959 mW/g

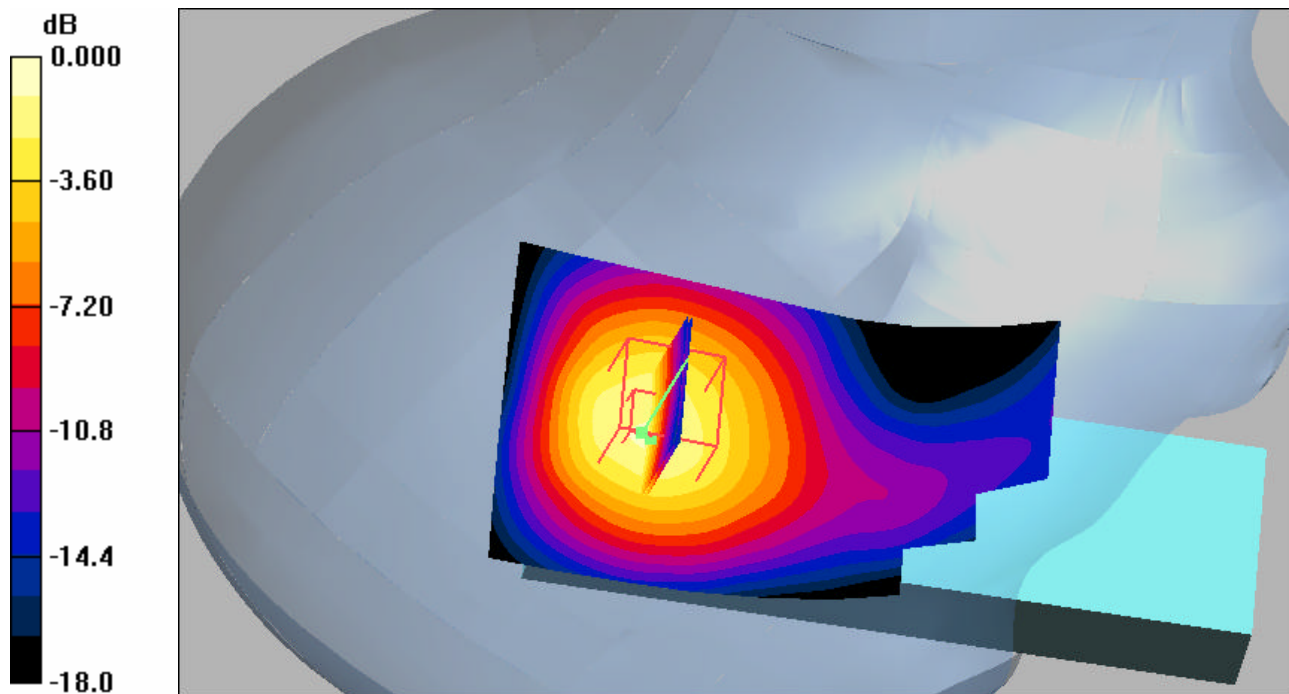


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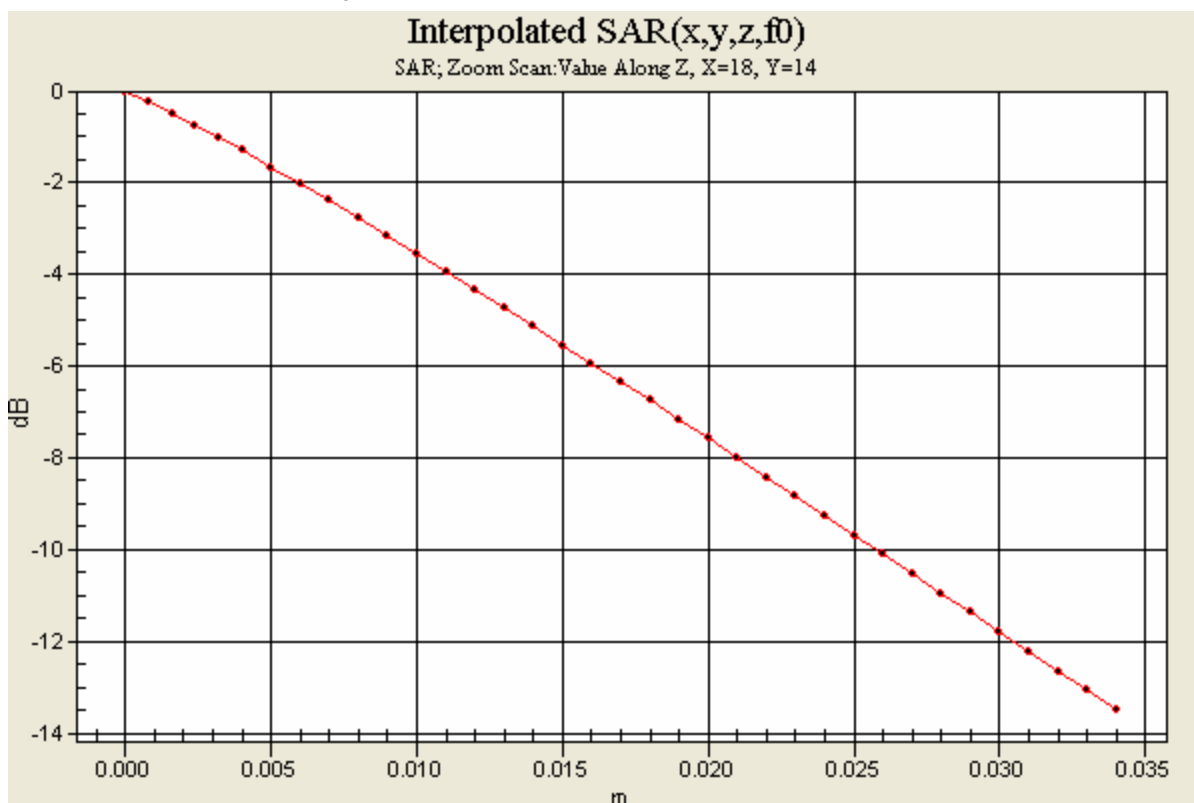
REPORT

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0 dB = 0.959mW/g





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1900 GSM Band: Distribution and Extrapolation of Maximum SAR**Model: W300i SN: BD30291E73 with Standard Battery: BST-33****Left Side, Cheek/Touch Position.**

Date/Time: 4/16/2006 8:25:59 AM

File Name: [16Apr06_W300i_GSM1900_1E73_LC01.da4](#)**DUT: W300i**

Program Notes: Battery - BST-33 Humidity: 36.2% Ambient Temp: 24.1 C Simulant Temp: 24 C

Communication System: DCS 1900; Frequency: 1909.8 MHz; Duty Cycle: 1:8.3

Medium: Head 1800/1900 MHz Medium parameters used: $f = 1910 \text{ MHz}$; $s = 1.48 \text{ mho/m}$; $\epsilon_r = 38$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Left Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1539; ConvF(4.55, 4.55, 4.55); Calibrated: 11/22/2005
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn345; Calibrated: 11/10/2005
- Phantom: SAM with CRP (High Band Head); Type: SAM; Serial: TP: 1054
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 160

Unnamed procedure 3/Area Scan (51x81x1):Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (interpolated) = 1.60 mW/g

Unnamed procedure 3/Zoom Scan (7x7x7)/Cube 0:Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 15.7 V/m; Power Drift = -0.061 dB

Peak SAR (extrapolated) = 2.28 W/kg

SAR(1 g) = 1.41 mW/g; SAR(10 g) = 0.760 mW/g

Maximum value of SAR (measured) = 1.59 mW/g

Unnamed procedure 3/Zoom Scan (7x7x7)/Cube 1:Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 15.7 V/m; Power Drift = -0.061 dB

Peak SAR (extrapolated) = 1.45 W/kg

SAR(1 g) = 1.04 mW/g; SAR(10 g) = 0.643 mW/g

Maximum value of SAR (measured) = 1.15 mW/g

Unnamed procedure 3/Zoom Scan (31x31x36)/Cube 0:Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 15.7 V/m; Power Drift = -0.061 dB

Maximum value of SAR (interpolated) = 2.28 mW/g

Unnamed procedure 3/Zoom Scan (31x31x36)/Cube 1:Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 15.7 V/m; Power Drift = -0.061 dB

Maximum value of SAR (interpolated) = 1.45 mW/g

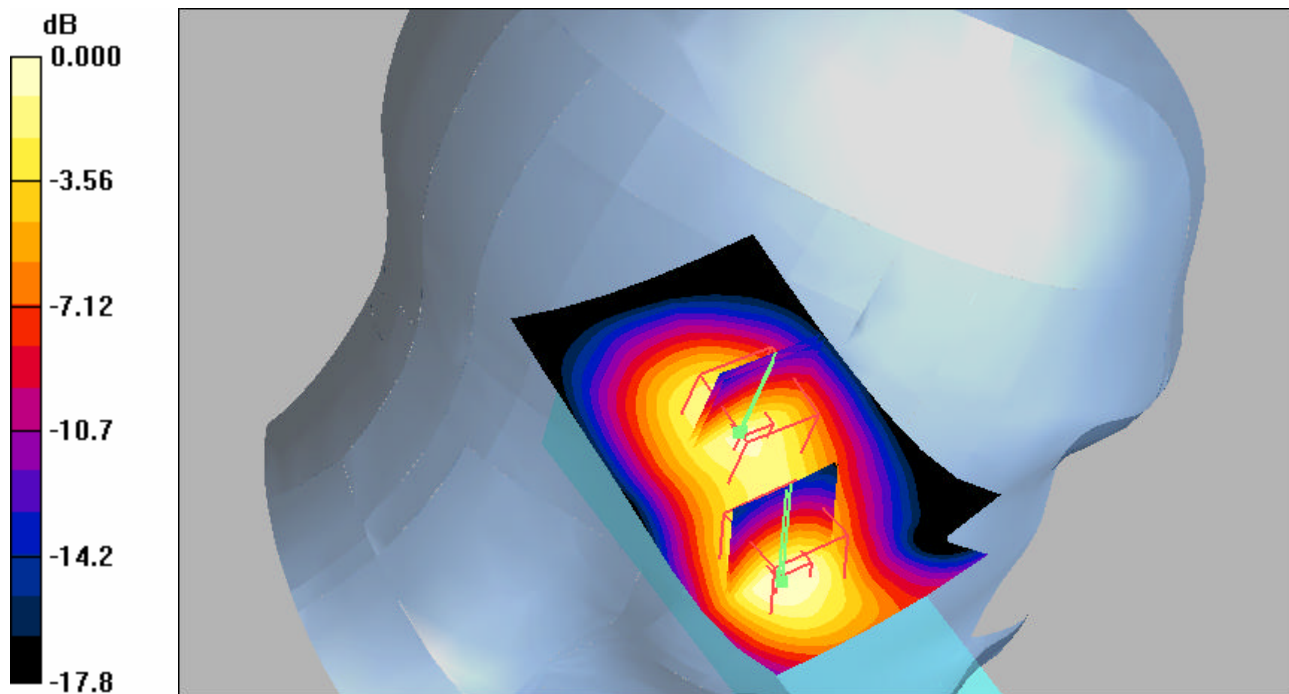


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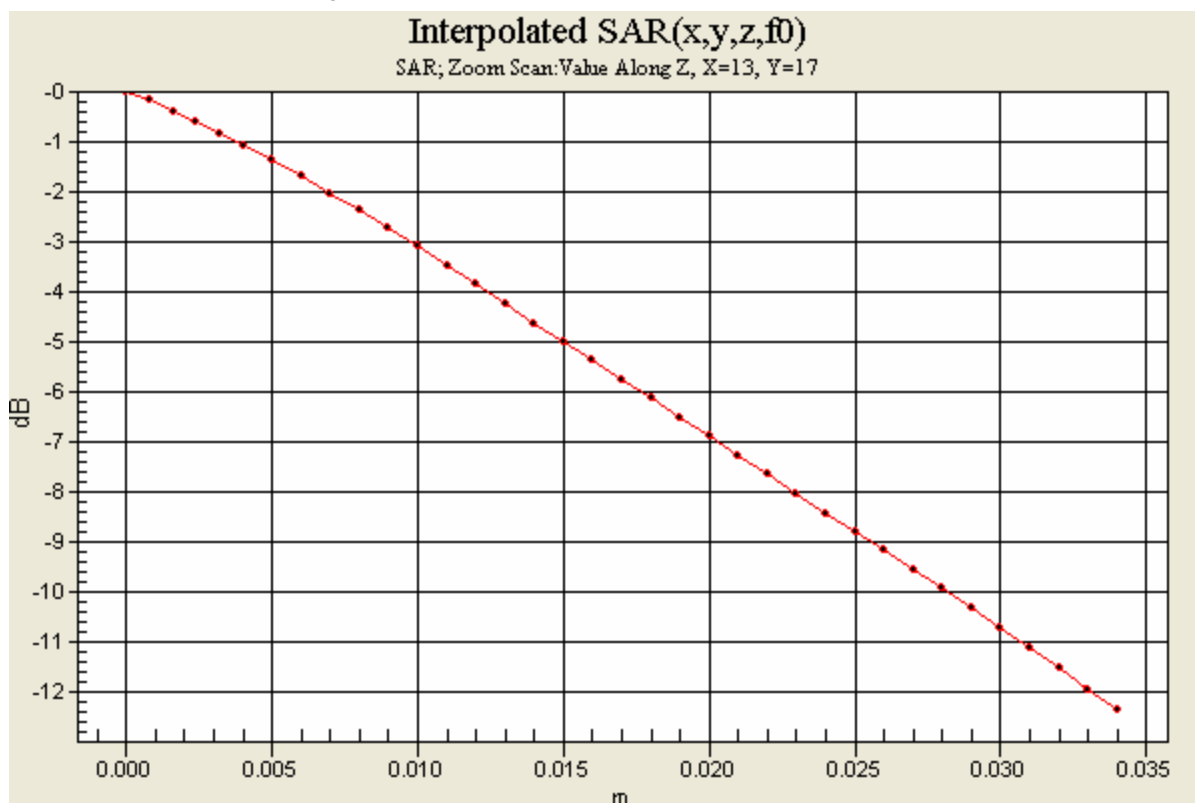
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0 dB = 1.45mW/g





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1900 GSM Band: Distribution and Extrapolation of Maximum SAR**Model: W300i SN: BD30291E73 with Standard Battery: BST-33****Left Side, Tilt Position.**File Name: [16Apr06_W300i_GSM1900_1E73_LT01.da4](#)**DUT: W300i; Type: Sample**

Program Notes: Battery - BST-33 Humidity: 36.9% Ambient Temp: 23.9 C Simulant Temp: 24 C

Communication System: DCS 1900; Frequency: 1850.2 MHz; Duty Cycle: 1:8.3

Medium: Head 1800/1900 MHz Medium parameters used (interpolated): f = 1850.2 MHz; s = 1.42 mho/m; $\epsilon_r = 38.3$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Left Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1539; ConvF(4.55, 4.55, 4.55); Calibrated: 11/22/2005
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn345; Calibrated: 11/10/2005
- Phantom: SAM with CRP (High Band Head); Type: SAM; Serial: TP: 1054
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 160

Unnamed procedure/Area Scan (51x81x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.885 mW/g

Unnamed procedure/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 18.1 V/m; Power Drift = 0.008 dB

Peak SAR (extrapolated) = 1.05 W/kg

SAR(1 g) = 0.725 mW/g; SAR(10 g) = 0.441 mW/g

Maximum value of SAR (measured) = 0.794 mW/g

Unnamed procedure/Zoom Scan (31x31x36)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 18.1 V/m; Power Drift = 0.008 dB

Maximum value of SAR (interpolated) = 1.05 mW/g

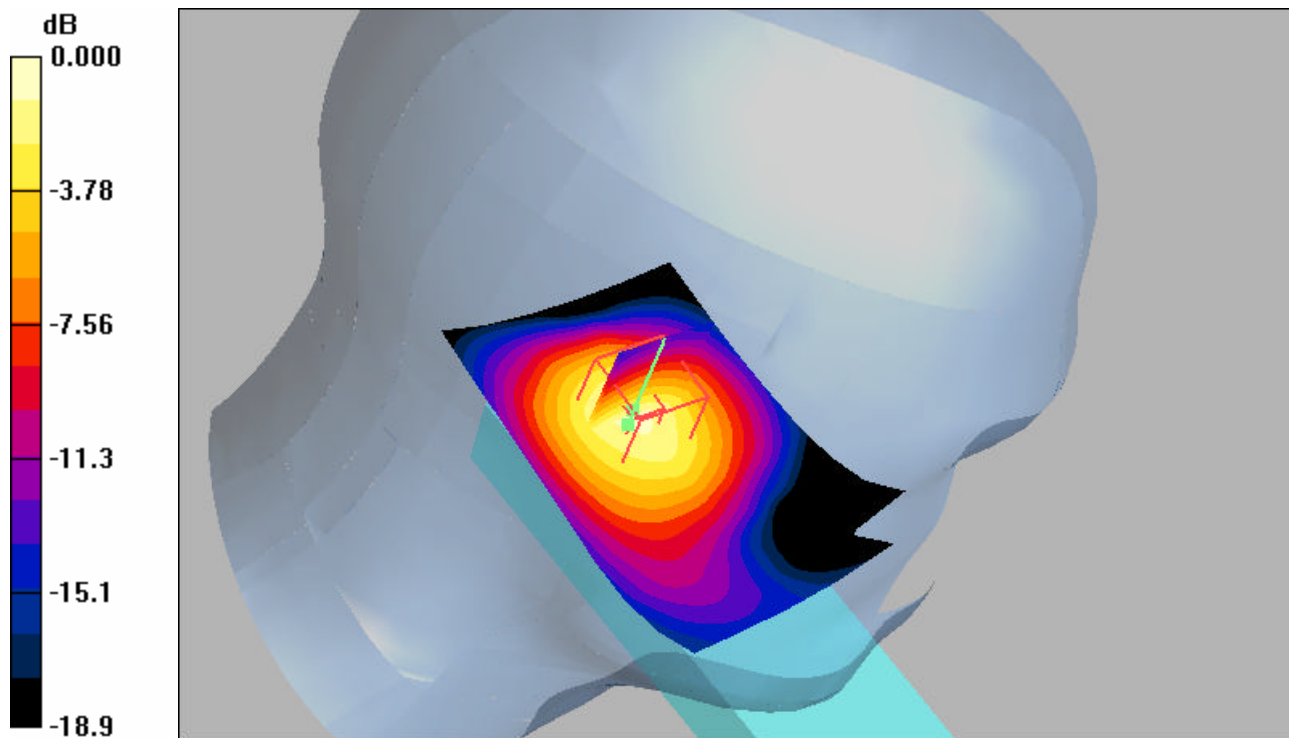


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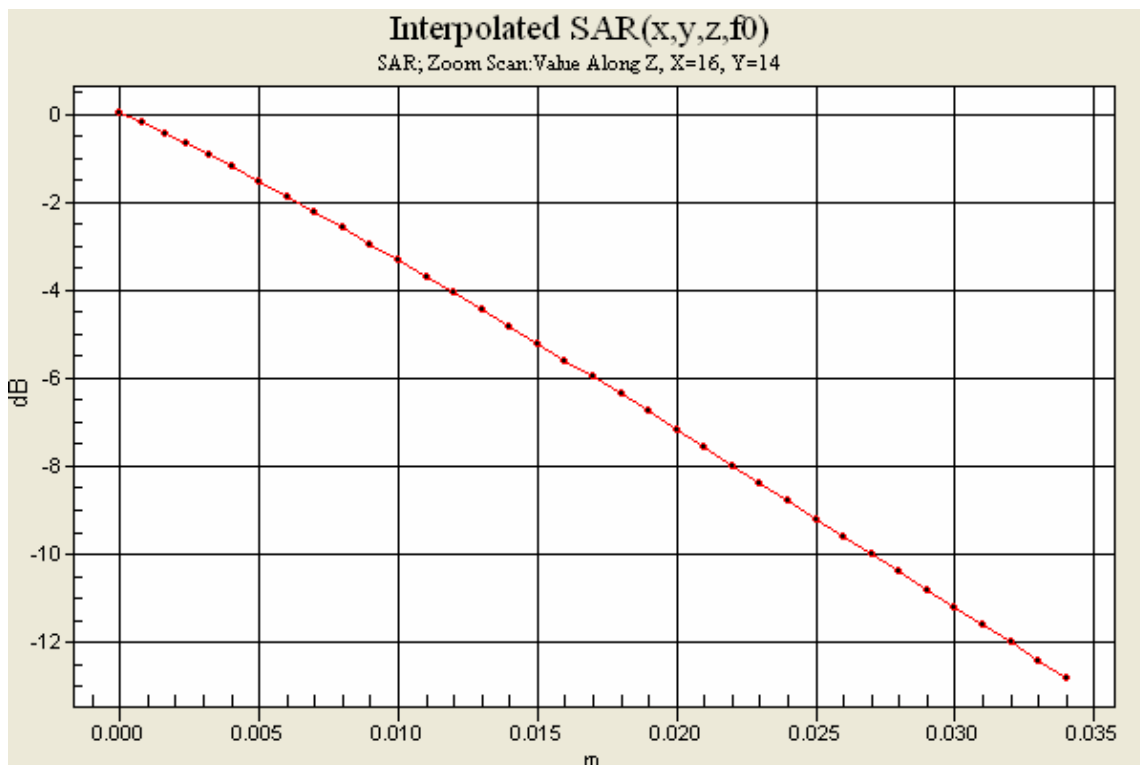
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0 dB = 1.05mW/g



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Appendix 3

SAR distribution plots for Body Worn Configuration



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Distribution of maximum SAR in 800 GSM band. Measured with back of device facing the body using a 15mm Spacer. (Standard Battery, BST-33)

Date/Time: 4/18/2006 9:11:18 AM

File Name: [18Apr06 W300i GSM850 1DYQ 15mm BB01.da4](#)

DUT: W300i body

Program Notes: Battery - BST33 Humidity - 40.3% Ambient Temp - 22.2 C Simulant Temp - 22 C

Communication System: GSM 850 multi-slot Body; Frequency: 849 MHz; Duty Cycle: 1:4.15

Medium: Head 835/900 MHz Medium parameters used (interpolated): $f = 849 \text{ MHz}$; $s = 1 \text{ mho/m}$; $\epsilon_r = 52.2$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1539; ConvF(5.88, 5.88, 5.88); Calibrated: 11/22/2005

- Sensor-Surface: 4mm (Mechanical Surface Detection)

- Electronics: DAE3 Sn345; Calibrated: 11/10/2005

- Phantom: SAM with CRP (Low Band Body); Type: SAM; Serial: TP: 1031

- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 160

Unnamed procedure 3/Area Scan (51x81x1):

Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 1.40 mW/g

Unnamed procedure 3/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 36.1 V/m; Power Drift = -0.003 dB

Peak SAR (extrapolated) = 1.91 W/kg

SAR(1 g) = 1.34 mW/g; SAR(10 g) = 0.903 mW/g

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 1.44 mW/g

Unnamed procedure 3/Zoom Scan (7x7x7)/Cube 1:

Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 36.1 V/m; Power Drift = -0.003 dB

Peak SAR (extrapolated) = 1.93 W/kg

SAR(1 g) = 1.13 mW/g; SAR(10 g) = 0.736 mW/g

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 1.25 mW/g

Unnamed procedure 3/Zoom Scan (31x31x36)/Cube 0:

Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 36.1 V/m; Power Drift = -0.003 dB

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 1.91 mW/g

Unnamed procedure 3/Zoom Scan (31x31x36)/Cube 1:

Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 36.1 V/m; Power Drift = -0.003 dB

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 1.93 mW/g

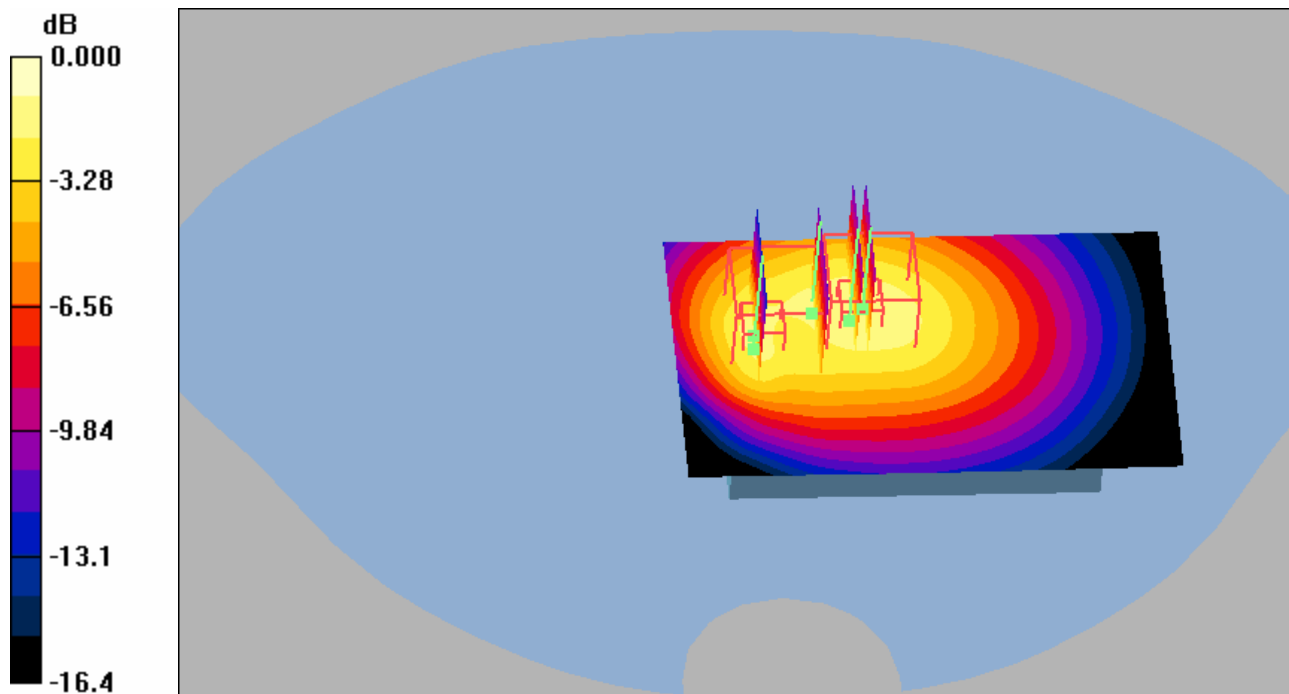


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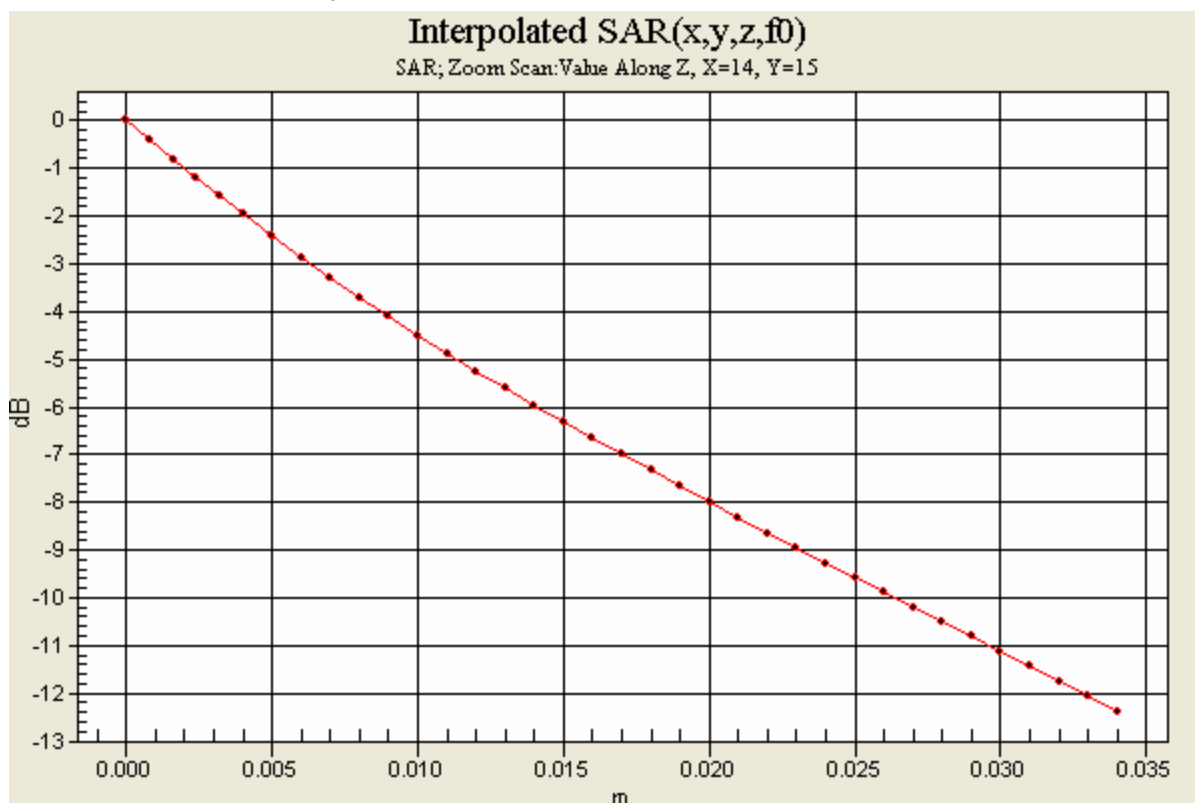
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0 dB = 1.93mW/g





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Distribution of maximum SAR in 800 GSM band. Measured with front of device facing the body using a 15mm Spacer. (Standard Battery, BST-33)

Date/Time: 4/18/2006 11:49:07 AM

File Name: [18Apr06 W300i GSM850 1DYQ 15mm BF01.da4](#)

DUT: W300i body

Program Notes: Battery - BST33 Humidity - 41.5% Ambient Temp - 22.5 C Simulant Temp - 22.3 C

Communication System: GSM 850 multi-slot Body; Frequency: 849 MHz; Duty Cycle: 1:4.15

Medium: Head 835/900 MHz Medium parameters used (interpolated): $f = 849 \text{ MHz}$; $s = 1 \text{ mho/m}$; $\epsilon_r = 52.2$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1539; ConvF(5.88, 5.88, 5.88); Calibrated: 11/22/2005
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn345; Calibrated: 11/10/2005
- Phantom: SAM with CRP (Low Band Body); Type: SAM; Serial: TP: 1031
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 160

Unnamed procedure 3/Area Scan (51x81x1):

Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.415 mW/g

Unnamed procedure 3/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 16.2 V/m; Power Drift = -0.172 dB

Peak SAR (extrapolated) = 0.526 W/kg

SAR(1 g) = 0.389 mW/g; SAR(10 g) = 0.274 mW/g

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.415 mW/g

Unnamed procedure 3/Zoom Scan (31x31x36)/Cube 0:

Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 16.2 V/m; Power Drift = -0.172 dB

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.526 mW/g

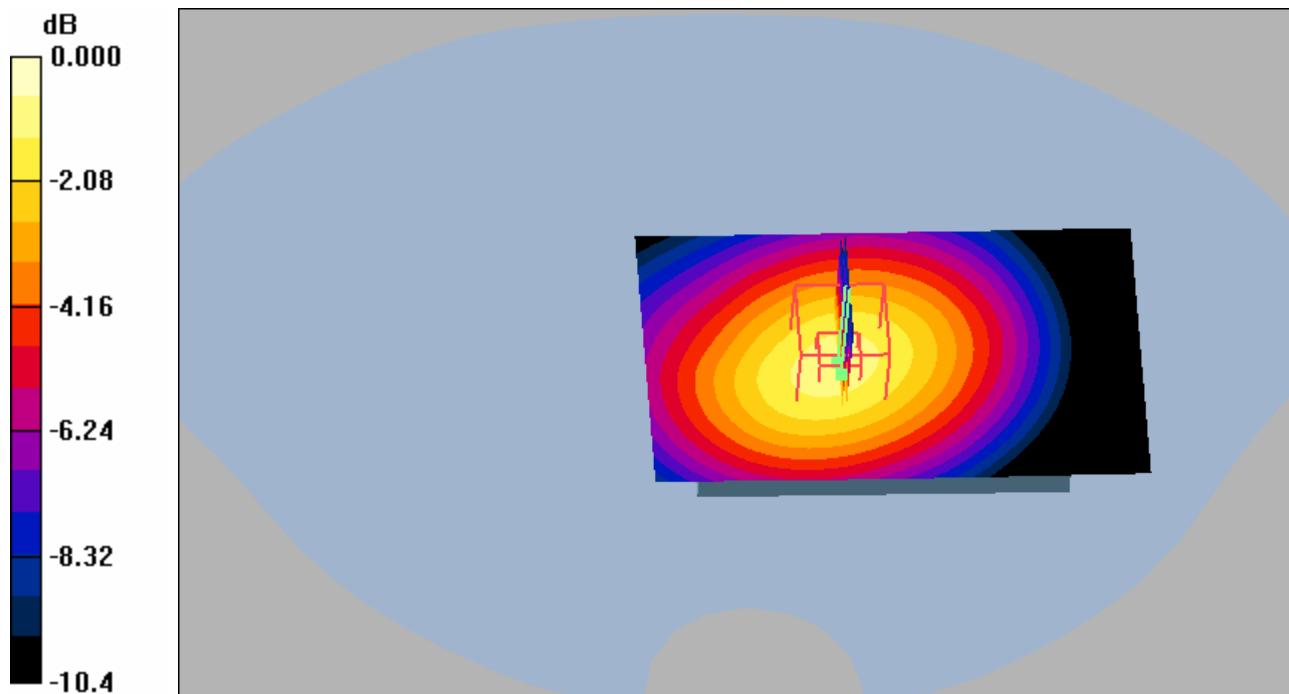


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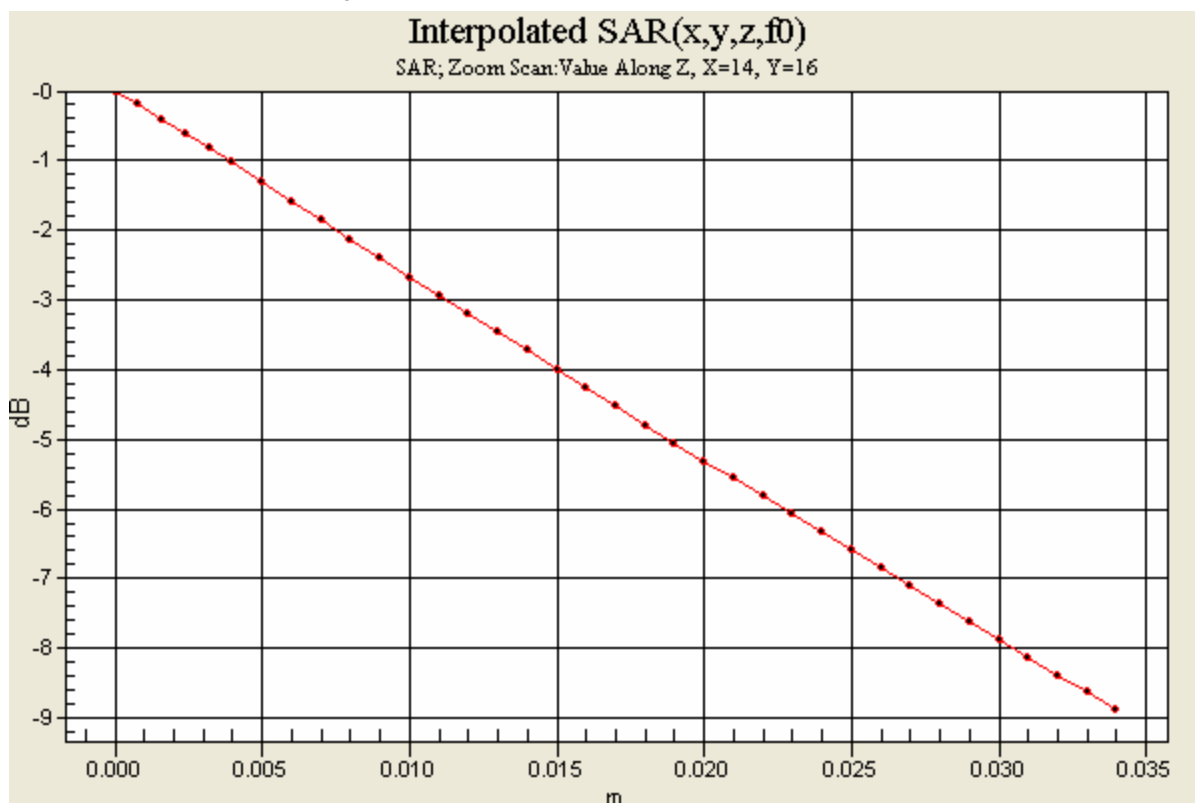
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Prepared (also subject responsible if other) SEM/CV/PF/P Gerard Hayes and Rodney Dixon		No. REP 2006 004 W300i HWB 02	
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0 dB = 0.526mW/g





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Distribution of maximum SAR in 800 GSM band. Measured with back of device facing the body using a 15mm Spacer with Blue Tooth. (Standard Battery BST-33)

Date/Time: 4/18/2006 1:03:26 PM

File Name: [18Apr06_W300i_GSM850_1DYQ_15mm_BT_BB01.da4](#)

DUT: W300i body

Program Notes: Battery - BST33 Humidity - 41.8% Ambient Temp - 22.5 C Simulant Temp - 22.5 C

Communication System: GSM 850 multi-slot Body; Frequency: 849 MHz; Duty Cycle: 1:4.15

Medium: Head 835/900 MHz Medium parameters used (interpolated): $f = 849 \text{ MHz}$; $s = 1 \text{ mho/m}$; $\epsilon_r = 52.2$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1539; ConvF(5.88, 5.88, 5.88); Calibrated: 11/22/2005
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn345; Calibrated: 11/10/2005
- Phantom: SAM with CRP (Low Band Body); Type: SAM; Serial: TP: 1031
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 160

Unnamed procedure 3/Area Scan (51x81x1):

Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 1.47 mW/g

Unnamed procedure 3/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 35.5 V/m; Power Drift = -0.026 dB

Peak SAR (extrapolated) = 2.01 W/kg

SAR(1 g) = 1.39 mW/g; SAR(10 g) = 0.936 mW/g

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 1.49 mW/g

Unnamed procedure 3/Zoom Scan (7x7x7)/Cube 1:

Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 35.5 V/m; Power Drift = -0.026 dB

Peak SAR (extrapolated) = 1.95 W/kg

SAR(1 g) = 1.16 mW/g; SAR(10 g) = 0.761 mW/g

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 1.30 mW/g

Unnamed procedure 3/Zoom Scan (31x31x36)/Cube 0:

Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 35.5 V/m; Power Drift = -0.026 dB

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 2.01 mW/g

Unnamed procedure 3/Zoom Scan (31x31x36)/Cube 1:

Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 35.5 V/m; Power Drift = -0.026 dB

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 1.95 mW/g

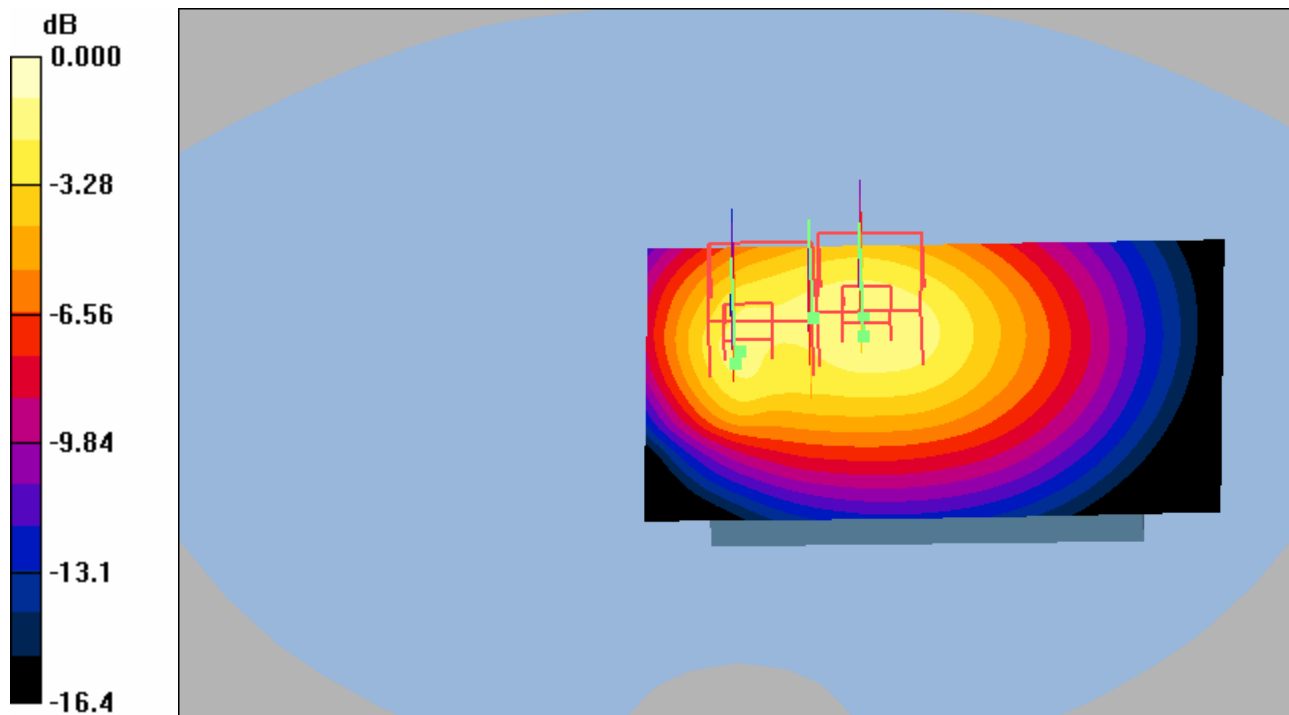


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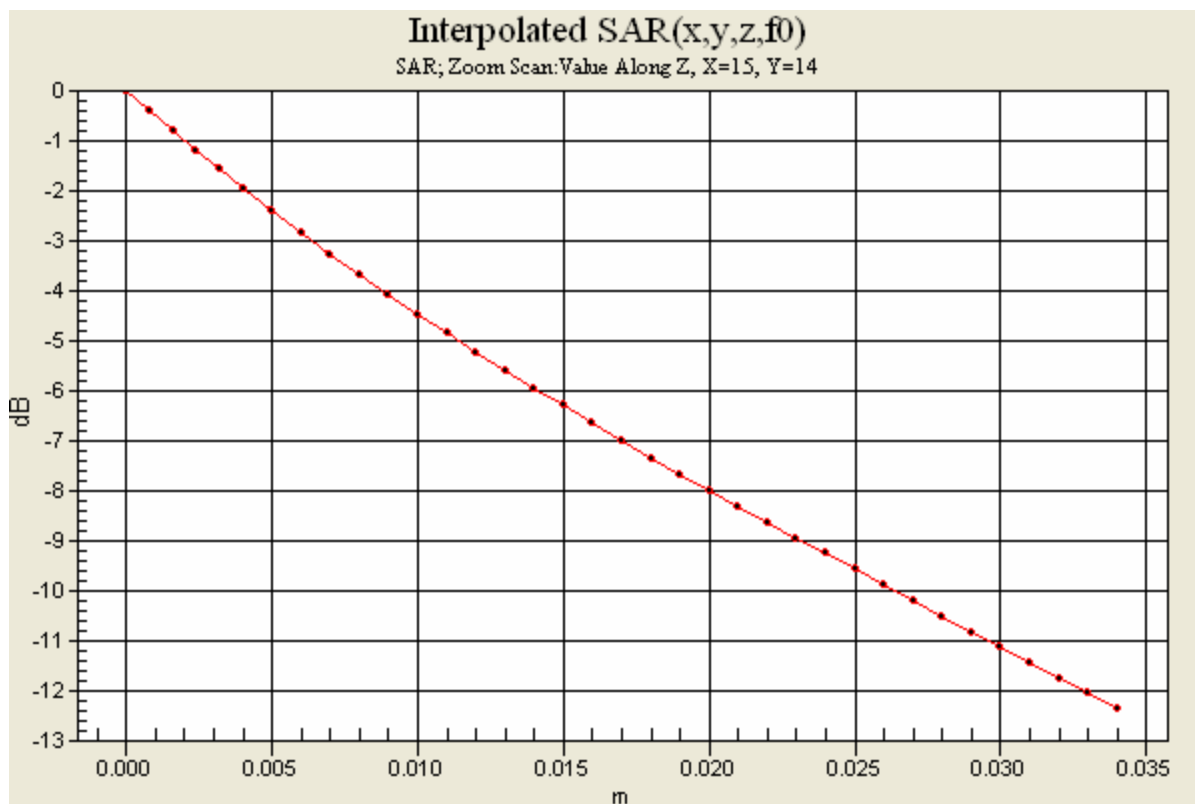
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0 dB = 1.95mW/g





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Distribution of maximum SAR in 1900 GSM band. Measured with back of device facing the body using a 15mm Spacer. (Standard Battery, BST-33)

Date/Time: 4/17/2006 10:57:53 AM

File Name: [17Apr06 W300i GSM1900 1E73 15mm BB01.da4](#)**DUT: W300i body**

Program Notes: Battery - BST33 Humidity - 41.1 % Ambient Temp - 22.9 C Simulant Temp - 22.5 C

Communication System: DCS 1900 Body; Frequency: 1909.8 MHz; Duty Cycle: 1:4.15

Medium: Head 1800/1900 MHz Medium parameters used: $f = 1910 \text{ MHz}$; $s = 1.54 \text{ mho/m}$; $\epsilon_r = 51.3$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1539; ConvF(4.12, 4.12, 4.12); Calibrated: 11/22/2005
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn345; Calibrated: 11/10/2005
- Phantom: SAM with CRP (High Band Body); Type: SAM; Serial: TP: 1020
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 160

Unnamed procedure 3/Area Scan (51x81x1):Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (interpolated) = 1.33 mW/g

Unnamed procedure 3/Zoom Scan (7x7x7)/Cube 0:Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 9.70 V/m; Power Drift = -0.012 dB

Peak SAR (extrapolated) = 1.78 W/kg

SAR(1 g) = 1.21 mW/g; SAR(10 g) = 0.768 mW/g

Maximum value of SAR (measured) = 1.31 mW/g

Unnamed procedure 3/Zoom Scan (31x31x36)/Cube 0:Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 9.70 V/m; Power Drift = -0.012 dB

Maximum value of SAR (interpolated) = 1.78 mW/g

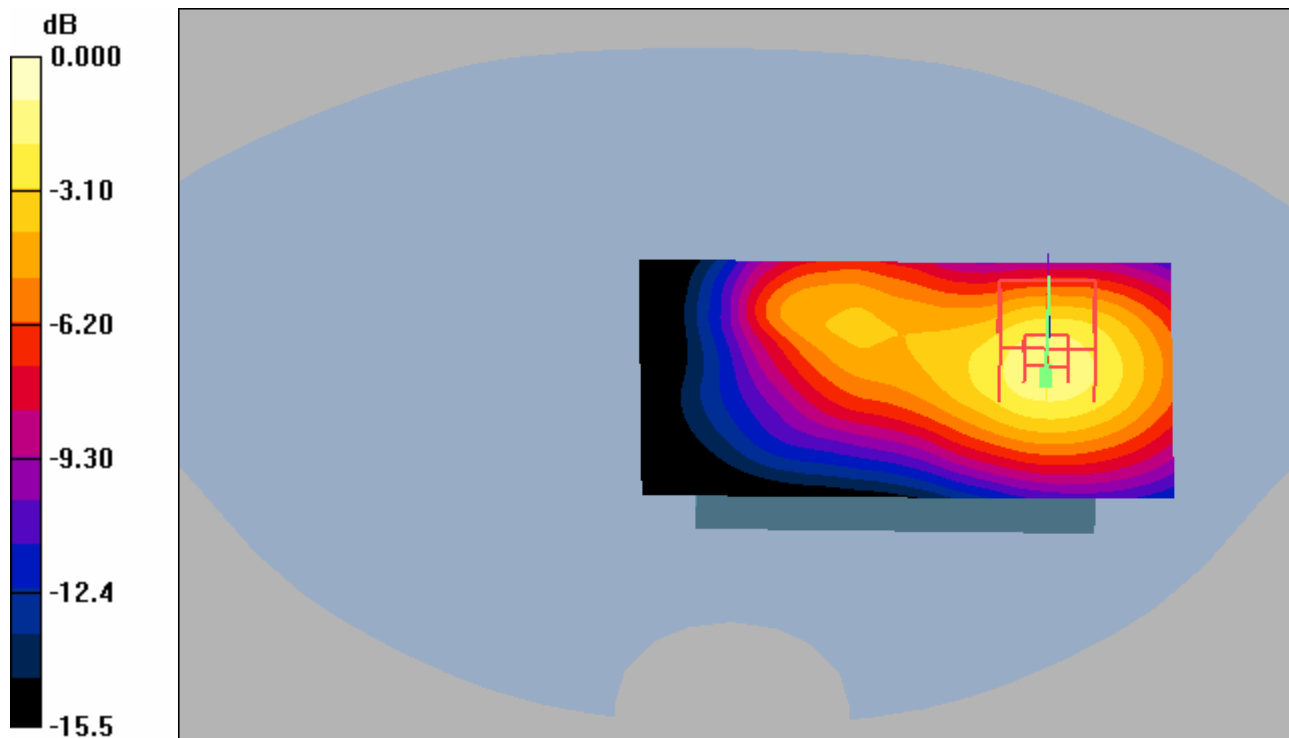


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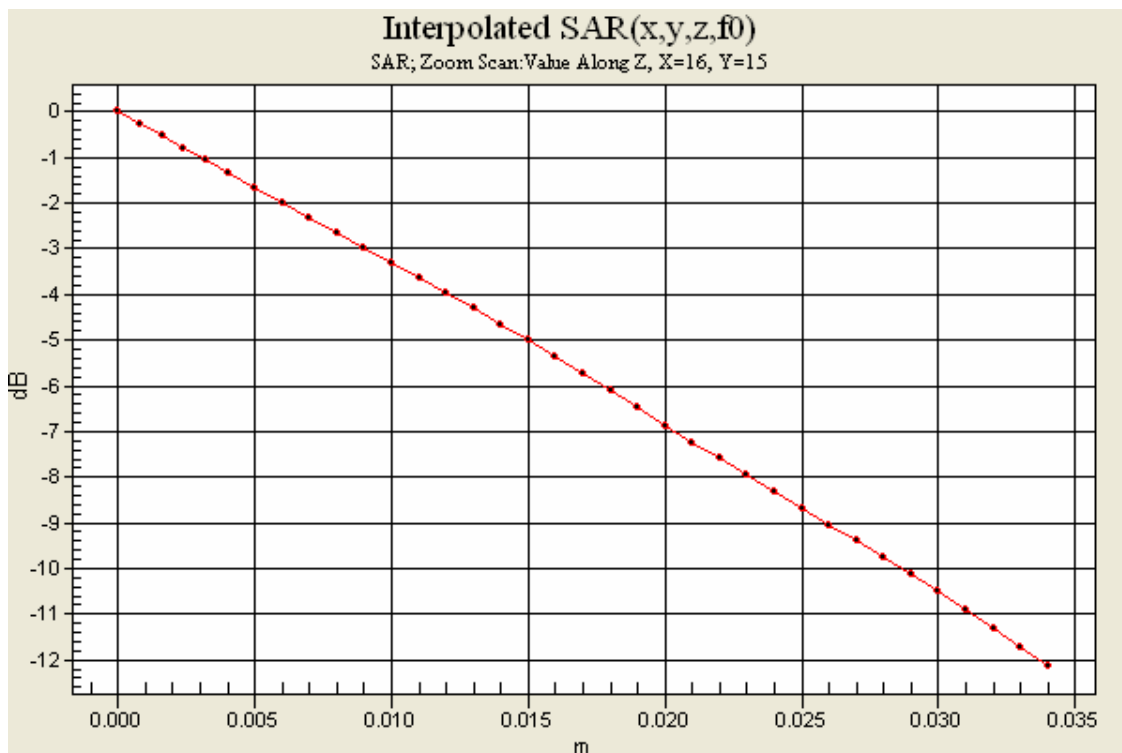
REPORT

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Prepared (also subject responsible if other) SEM/CV/PF/P Gerard Hayes and Rodney Dixon		No. REP 2006 004 W300i HWB 02	
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0 dB = 1.78mW/g





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Distribution of maximum SAR in 1900 GSM band. Measured with back of device facing the body using a 15mm Spacer. (Standard Battery, BST-33) Bluetooth On

File Name: [17Apr06_W300i_GSM1900_1E73_15mm_BT_BB01.da4](#)

DUT: W300i body; Type: Sample

Program Notes: Battery - BST33 Humidity - 41.5 % Ambient Temp - 22.8 C Simulant Temp - 22.5 C

Communication System: DCS 1900 Body; Frequency: 1909.8 MHz; Duty Cycle: 1:4.15

Medium: Head 1800/1900 MHz Medium parameters used: $f = 1910$ MHz; $s = 1.54$ mho/m; $\epsilon_r = 51.3$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1539; ConvF(4.12, 4.12, 4.12); Calibrated: 11/22/2005

- Sensor-Surface: 4mm (Mechanical Surface Detection)

- Electronics: DAE3 Sn345; Calibrated: 11/10/2005

- Phantom: SAM with CRP (High Band Body); Type: SAM; Serial: TP: 1020

- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 160

Unnamed procedure 3/Area Scan (51x81x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 1.33 mW/g

Unnamed procedure 3/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 11.0 V/m; Power Drift = -0.034 dB

Peak SAR (extrapolated) = 1.81 W/kg

SAR(1 g) = 1.24 mW/g; SAR(10 g) = 0.781 mW/g

Maximum value of SAR (measured) = 1.34 mW/g

Unnamed procedure 3/Zoom Scan (31x31x36)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 11.0 V/m; Power Drift = -0.034 dB

Maximum value of SAR (interpolated) = 1.81 mW/g

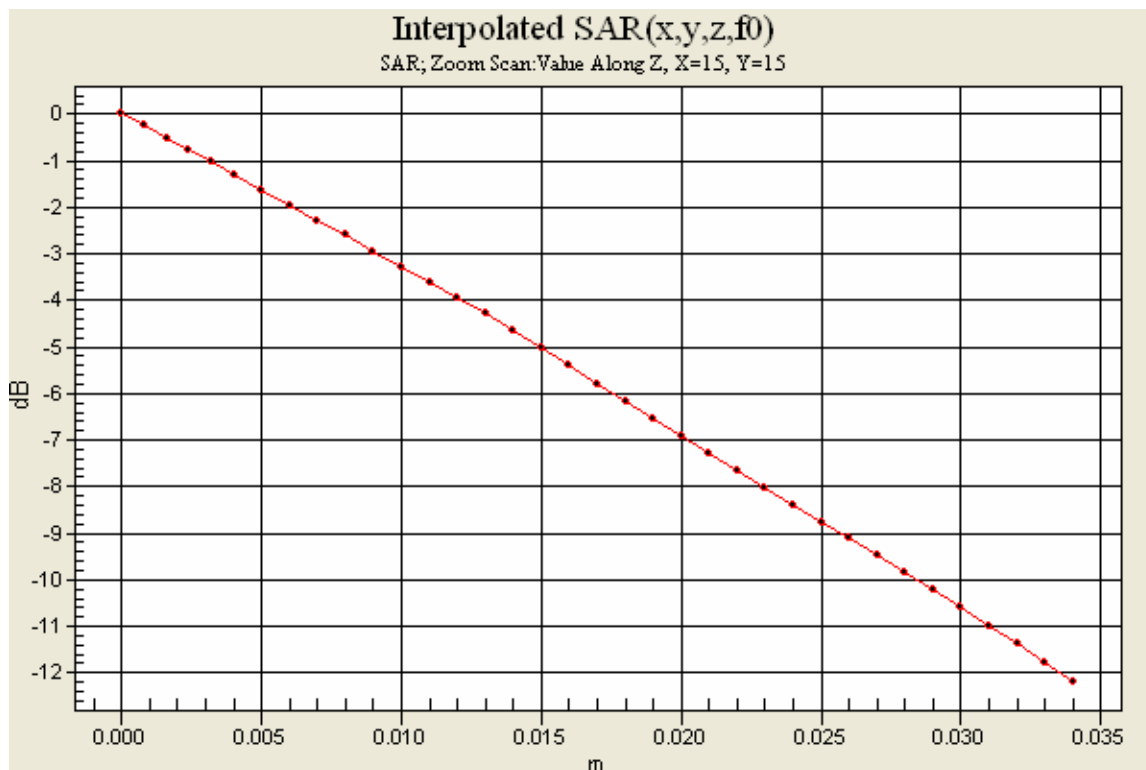
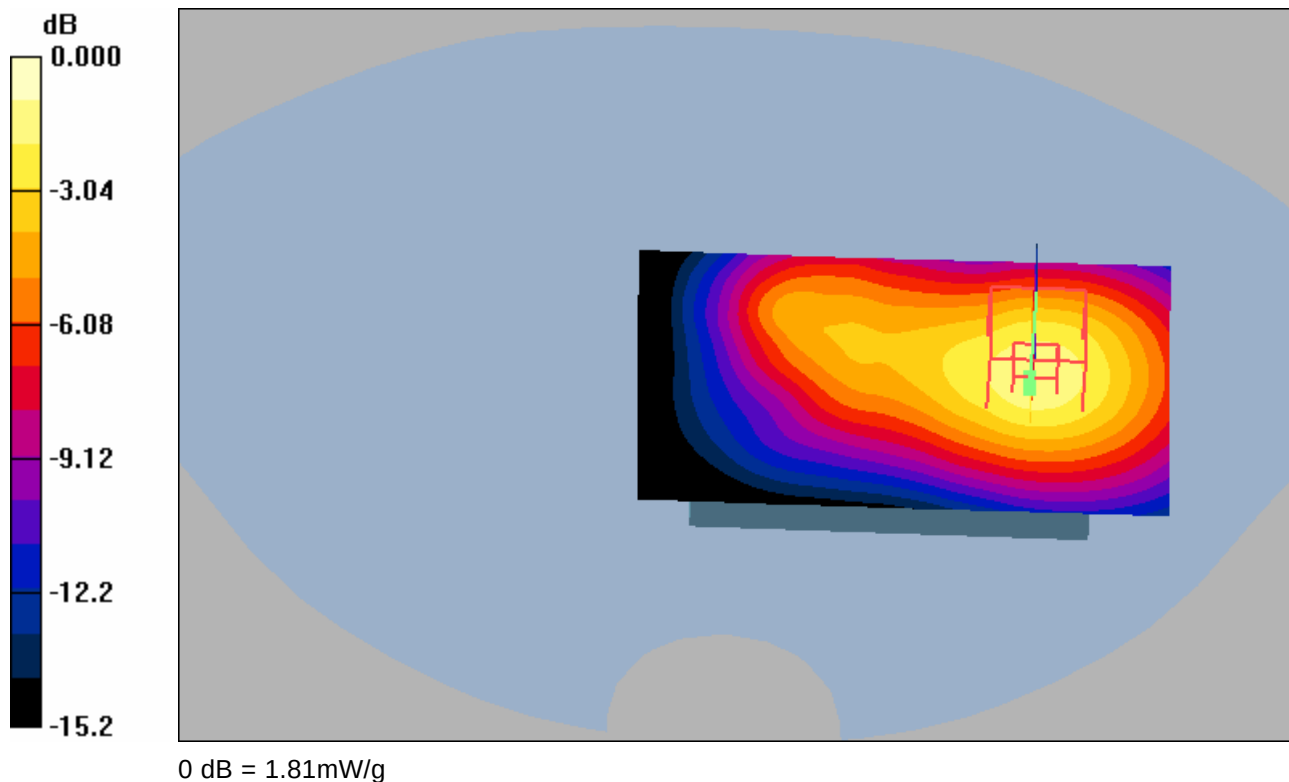


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Distribution of maximum SAR in 1900 GSM band. Measured with front of device facing the body using a 15mm Spacer. (Standard Battery, BST-33)

Date/Time: 4/17/2006 1:07:28 PM

File Name: [17Apr06 W300i GSM1900 1E73 15mm BF01.da4](#)

DUT: W300i body

Program Notes: Battery - BST33 Humidity - 42.1 % Ambient Temp - 23.1 C Simulant Temp - 22.8 C

Communication System: DCS 1900 Body; Frequency: 1850.2 MHz; Duty Cycle: 1:4.15

Medium: Head 1800/1900 MHz Medium parameters used (interpolated): $f = 1850.2 \text{ MHz}$; $s = 1.48 \text{ mho/m}$; $\epsilon_r = 51.5$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1539; ConvF(4.12, 4.12, 4.12); Calibrated: 11/22/2005
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn345; Calibrated: 11/10/2005
- Phantom: SAM with CRP (High Band Body); Type: SAM; Serial: TP: 1020
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 160

Unnamed procedure/Area Scan (51x81x1):

Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.354 mW/g

Unnamed procedure/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 7.24 V/m; Power Drift = 0.066 dB

Peak SAR (extrapolated) = 0.477 W/kg

SAR(1 g) = 0.315 mW/g; SAR(10 g) = 0.198 mW/g

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.341 mW/g

Unnamed procedure/Zoom Scan (31x31x36)/Cube 0:

Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 7.24 V/m; Power Drift = 0.066 dB

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.477 mW/g

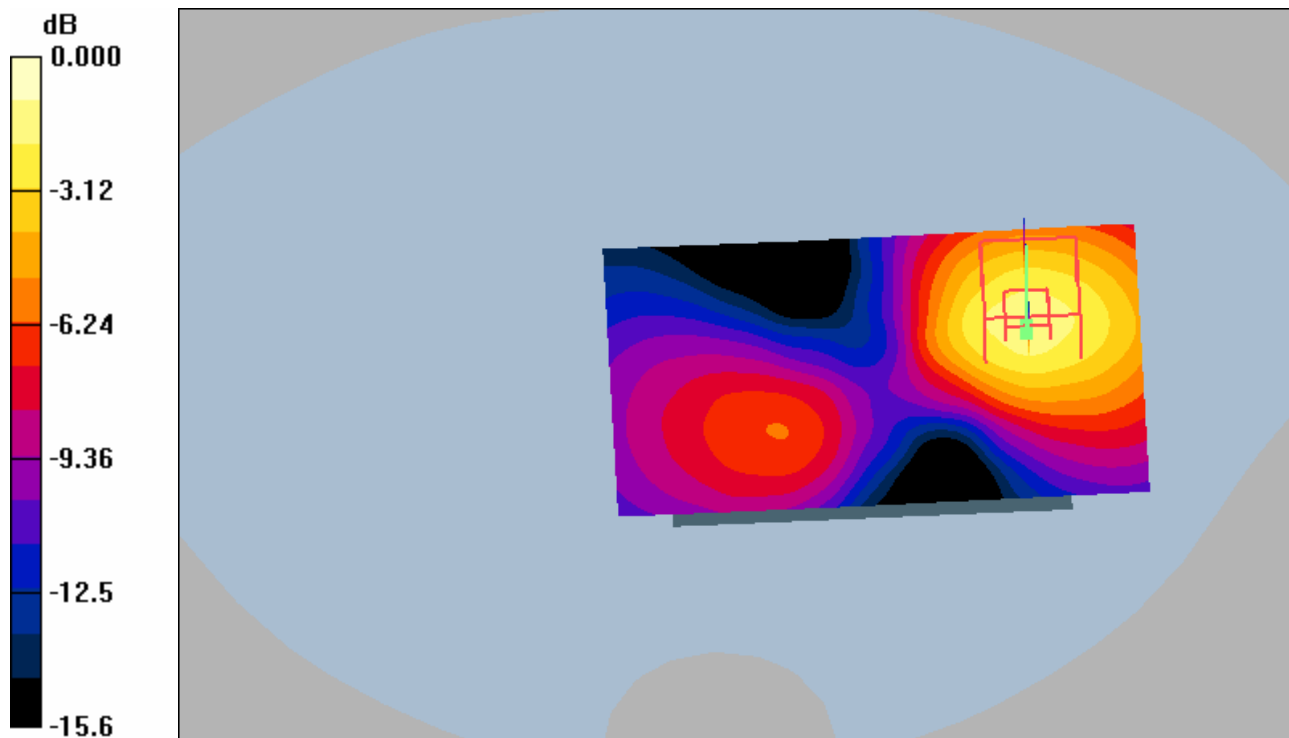


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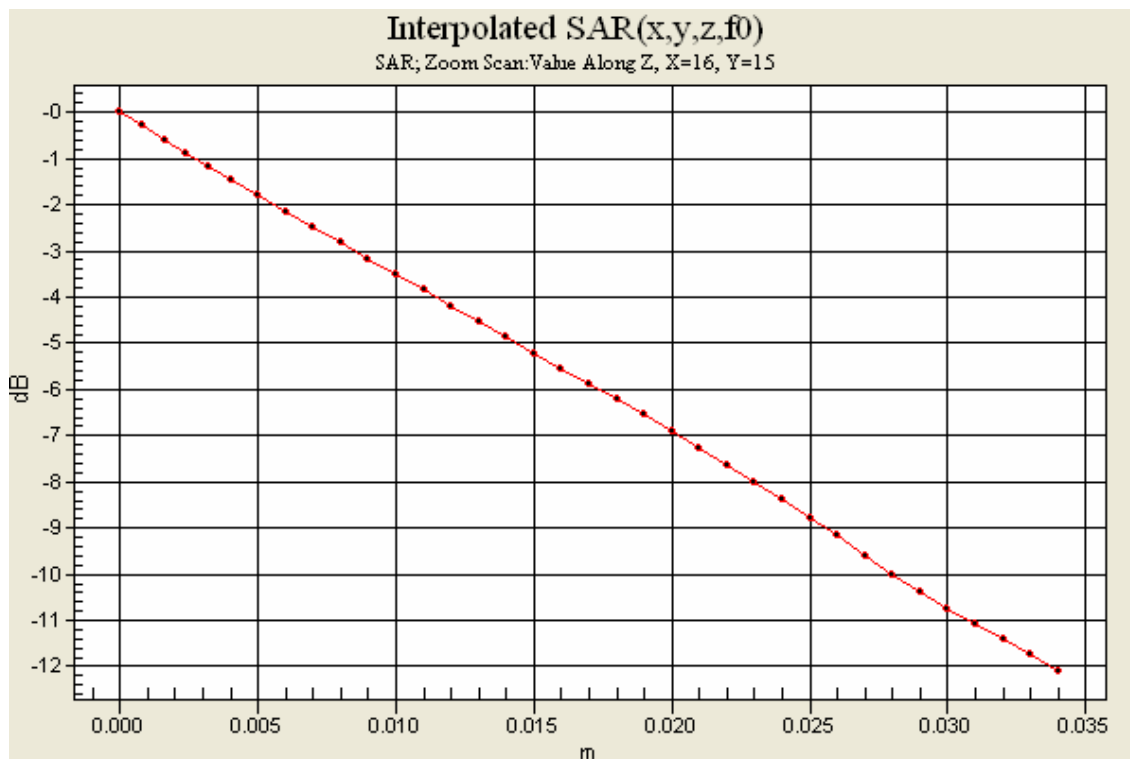
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0 dB = 0.477mW/g





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Approved SEM/CV/PF/P Gerard Hayes	Checked	A	X:\SAR Chamber\FCC reports\W300i\Final Reports\FCCW300i.doc

Distribution of maximum SAR in 800 GSM band. Measured with back of device facing the body using the ICE-26 Carry Case. (Standard Battery, BST-33)

Date/Time: 4/18/2006 9:46:36 AM

File Name: [18Apr06_W300i_GSM850_1DYQ_ICE26_BB01.da4](#)

DUT: W300i body

Program Notes: Battery - BST33 Humidity - 41.1% Ambient Temp - 22.4 C Simulant Temp - 22.1 C

Communication System: GSM 850 multi-slot Body; Frequency: 849 MHz; Duty Cycle: 1:4.15

Medium: Head 835/900 MHz Medium parameters used (interpolated): $f = 849 \text{ MHz}$; $s = 1 \text{ mho/m}$; $\epsilon_r = 52.2$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1539; ConvF(5.88, 5.88, 5.88); Calibrated: 11/22/2005

- Sensor-Surface: 4mm (Mechanical Surface Detection)

- Electronics: DAE3 Sn345; Calibrated: 11/10/2005

- Phantom: SAM with CRP (Low Band Body); Type: SAM; Serial: TP: 1031

- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 160

Unnamed procedure 3/Area Scan (51x81x1):

Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Info: [Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 1.03 mW/g

Unnamed procedure 3/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 28.0 V/m; Power Drift = 0.050 dB

Peak SAR (extrapolated) = 1.35 W/kg

SAR(1 g) = 0.976 mW/g; SAR(10 g) = 0.668 mW/g

Info: [Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 1.04 mW/g

Unnamed procedure 3/Zoom Scan (7x7x7)/Cube 1:

Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 28.0 V/m; Power Drift = 0.050 dB

Peak SAR (extrapolated) = 1.21 W/kg

SAR(1 g) = 0.759 mW/g; SAR(10 g) = 0.491 mW/g

Info: [Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.891 mW/g

Unnamed procedure 3/Zoom Scan (31x31x36)/Cube 0:

Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 28.0 V/m; Power Drift = 0.050 dB

Info: [Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 1.35 mW/g

Unnamed procedure 3/Zoom Scan (31x31x36)/Cube 1:

Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 28.0 V/m; Power Drift = 0.050 dB

Info: [Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 1.21 mW/g

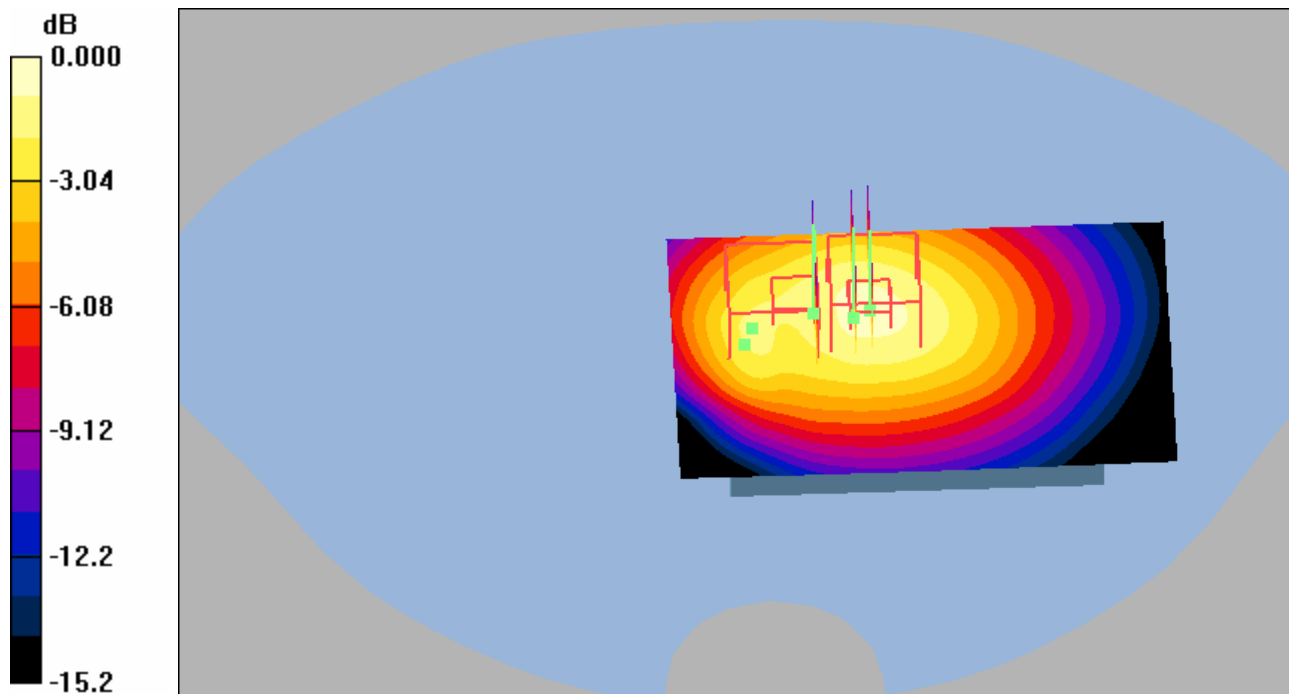


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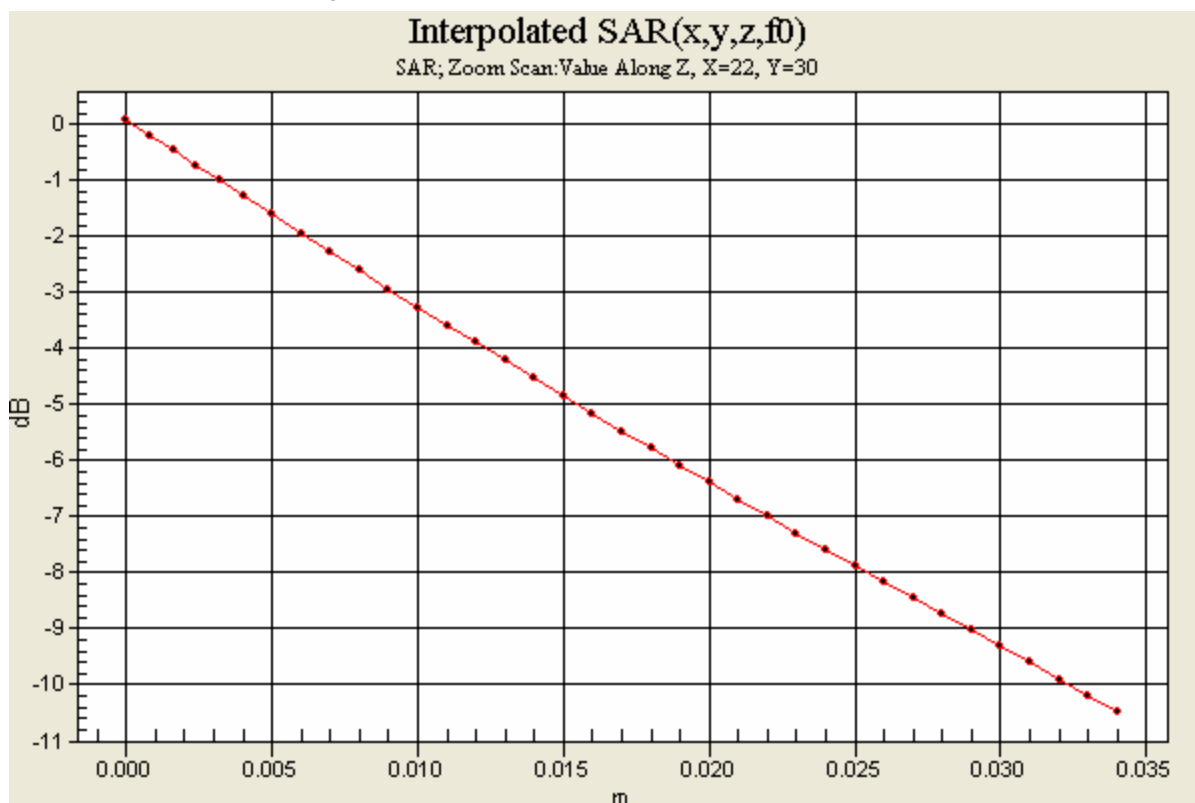
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0 dB = 1.21mW/g





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Distribution of maximum SAR in 800 GSM band. Measured with front of device facing the body using the ICE-26 Carry Case. (Standard Battery, BST-33)

Date/Time: 4/18/2006 12:07:49 PM

File Name: [18Apr06 W300i GSM850 1DYQ ICE26 BF01.da4](#)

DUT: W300i body

Program Notes: Battery - BST33 Humidity - 41.8% Ambient Temp - 22.5 C Simulant Temp - 22.5 C

Communication System: GSM 850 multi-slot Body; Frequency: 849 MHz; Duty Cycle: 1:4.15

Medium: Head 835/900 MHz Medium parameters used (interpolated): $f = 849 \text{ MHz}$; $s = 1 \text{ mho/m}$; $\epsilon_r = 52.2$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1539; ConvF(5.88, 5.88, 5.88); Calibrated: 11/22/2005
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn345; Calibrated: 11/10/2005
- Phantom: SAM with CRP (Low Band Body); Type: SAM; Serial: TP: 1031
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 160

Unnamed procedure 3/Area Scan (51x81x1):

Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.320 mW/g

Unnamed procedure 3/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 13.8 V/m; Power Drift = -0.021 dB

Peak SAR (extrapolated) = 0.403 W/kg

SAR(1 g) = 0.303 mW/g; SAR(10 g) = 0.213 mW/g

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.323 mW/g

Unnamed procedure 3/Zoom Scan (31x31x36)/Cube 0:

Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 13.8 V/m; Power Drift = -0.021 dB

[Info: Interpolated medium parameters used for SAR evaluation.](#)

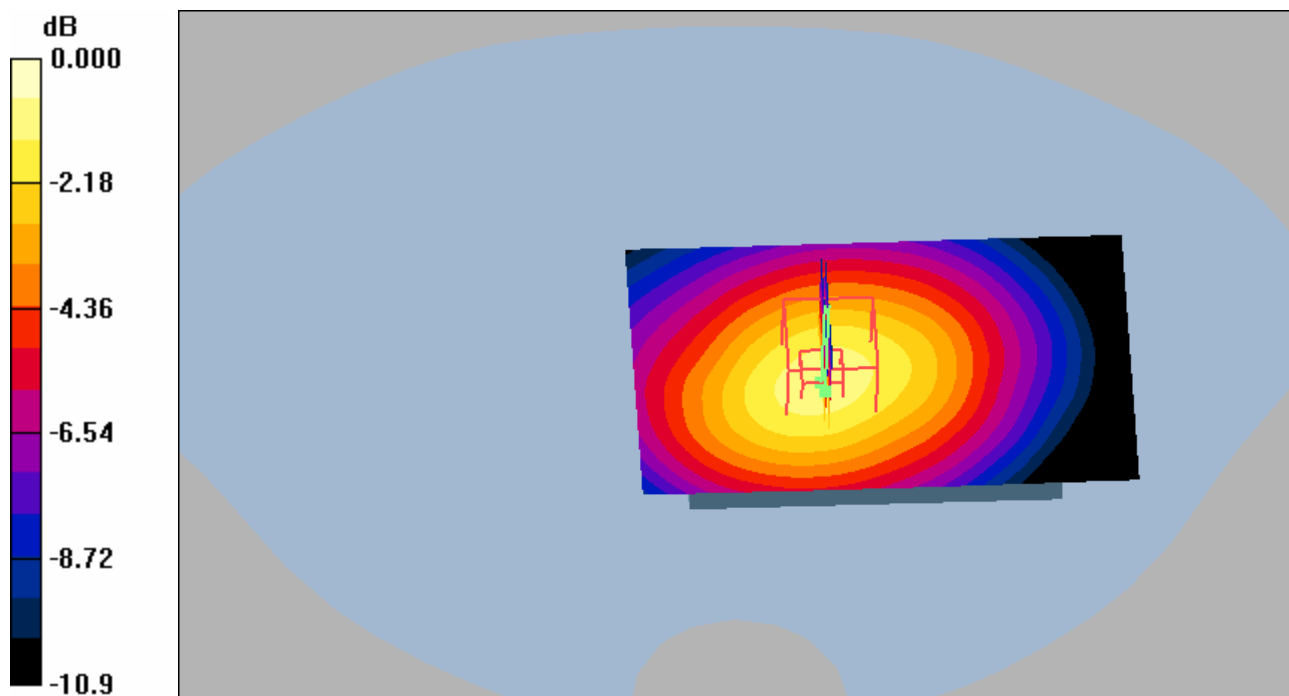
Maximum value of SAR (interpolated) = 0.403 mW/g

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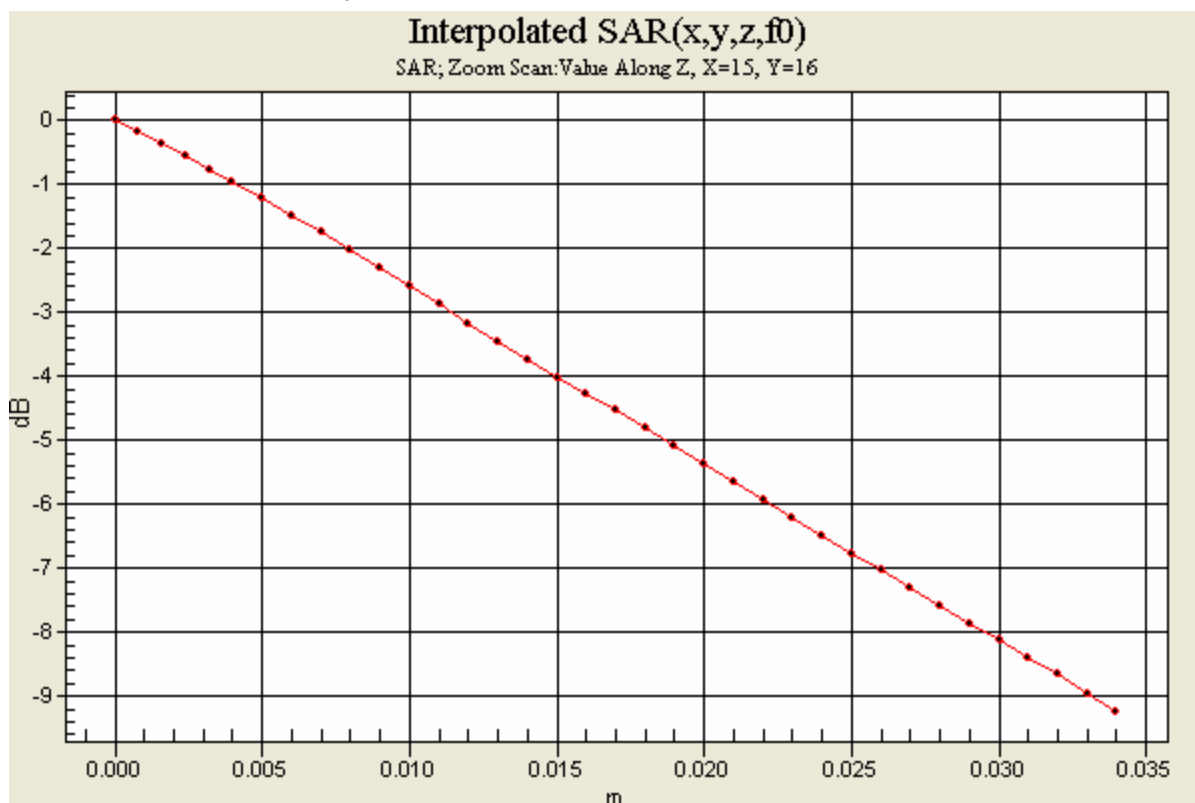
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0 dB = 0.403mW/g





Prepared (also subject responsible if other) SEM/CV/PF/P Gerard Hayes and Rodney Dixon		No. REP 2006 004 W300i HWB 02	
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Distribution of maximum SAR in 1900 GSM band. Measured with back of device facing the body using the ICE-26 Carry Case. (Standard Battery, BST-33)

Date/Time: 4/17/2006 10:06:54 AM

File Name: [17Apr06 W300i GSM1900 1E73 ICE26 BB01.da4](#)

DUT: W300i body

Program Notes: Battery - BST33 Humidity - 41.5 % Ambient Temp - 22.8 C Simulant Temp - 22.5 C

Communication System: DCS 1900 Body; Frequency: 1880 MHz; Duty Cycle: 1:4.15

Medium: Head 1800/1900 MHz Medium parameters used: $f = 1880 \text{ MHz}$; $s = 1.51 \text{ mho/m}$; $\epsilon_r = 51.4$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1539; ConvF(4.12, 4.12, 4.12); Calibrated: 11/22/2005
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn345; Calibrated: 11/10/2005
- Phantom: SAM with CRP (High Band Body); Type: SAM; Serial: TP: 1020
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 160

Unnamed procedure 2/Area Scan (51x81x1):

Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (interpolated) = 0.949 mW/g

Unnamed procedure 2/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 8.51 V/m; Power Drift = 0.122 dB

Peak SAR (extrapolated) = 1.30 W/kg

SAR(1 g) = 0.872 mW/g; SAR(10 g) = 0.557 mW/g

Maximum value of SAR (measured) = 0.938 mW/g

Unnamed procedure 2/Zoom Scan (7x7x7)/Cube 1:

Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 8.51 V/m; Power Drift = 0.122 dB

Peak SAR (extrapolated) = 1.20 W/kg

SAR(1 g) = 0.764 mW/g; SAR(10 g) = 0.479 mW/g

Maximum value of SAR (measured) = 0.871 mW/g

Unnamed procedure 2/Zoom Scan (31x31x36)/Cube 0:

Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 8.51 V/m; Power Drift = 0.122 dB

Maximum value of SAR (interpolated) = 1.30 mW/g

Unnamed procedure 2/Zoom Scan (31x31x36)/Cube 1:

Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 8.51 V/m; Power Drift = 0.122 dB

Maximum value of SAR (interpolated) = 1.20 mW/g

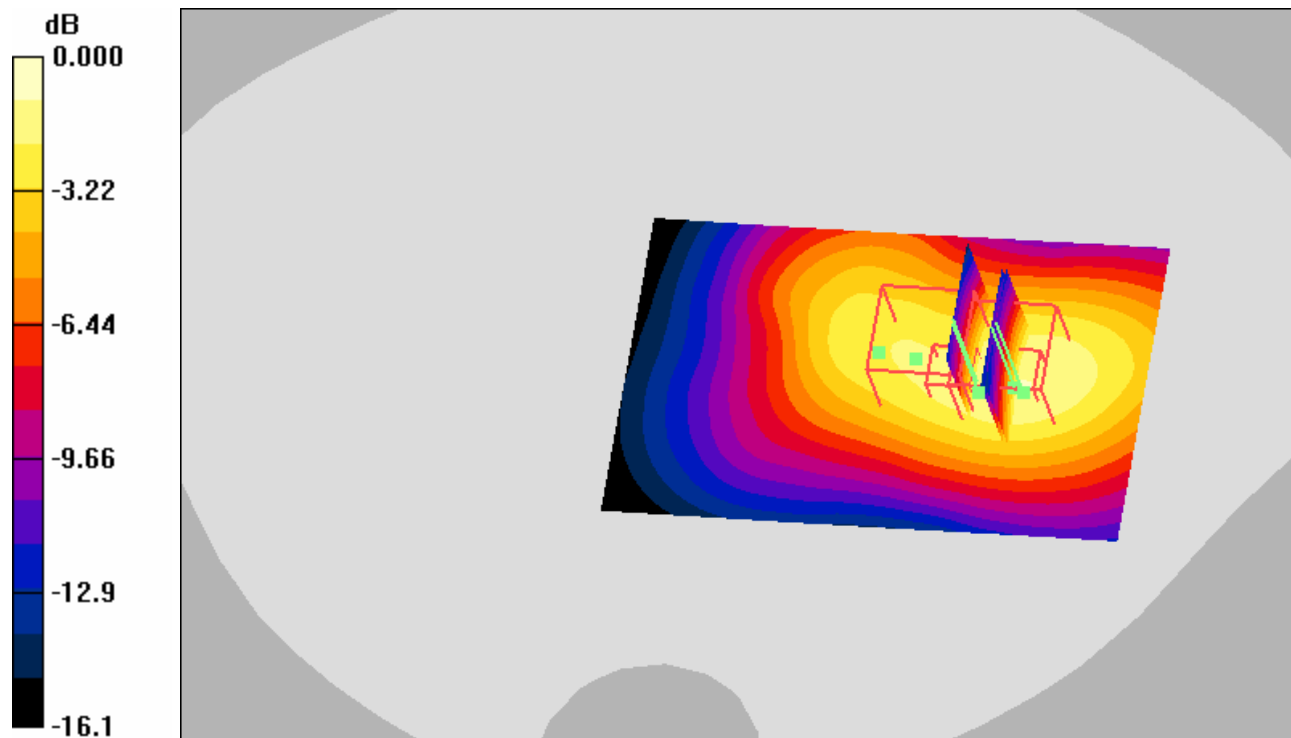


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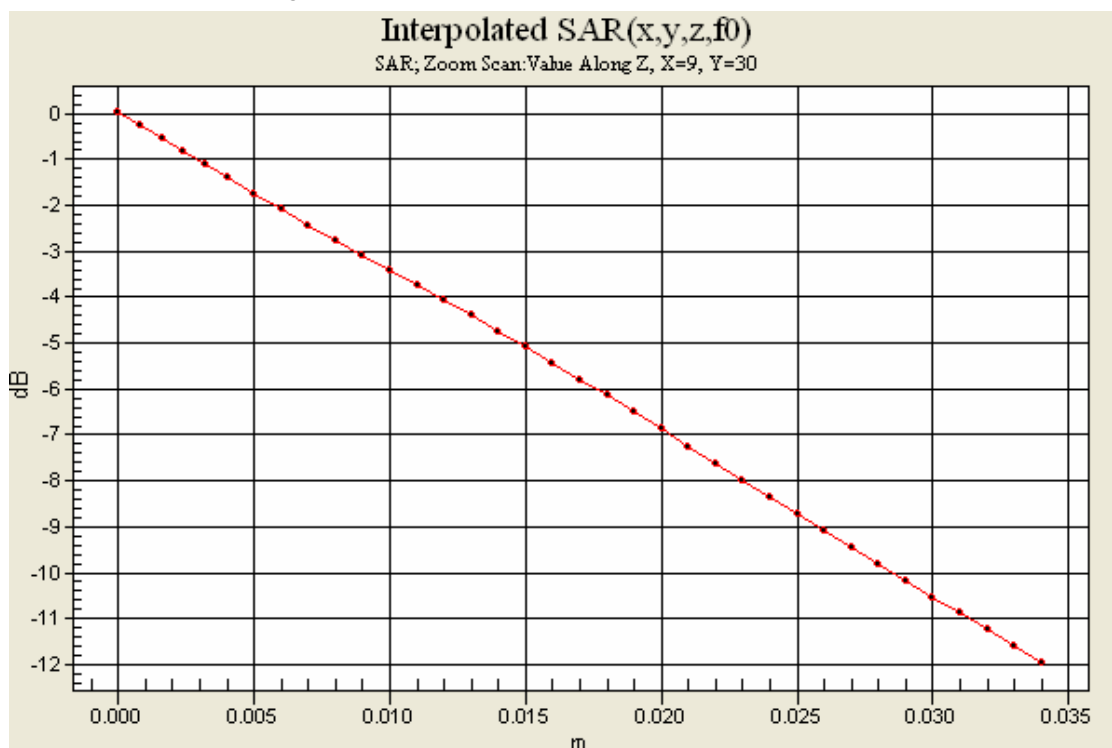
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0 dB = 1.20mW/g



APPLICANT: Sony Ericsson Mobile Communications Inc.

FCC ID: **PY7AF052033**



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Approved SEM/CV/PF/P Gerard Hayes	Checked	A	X:\SAR Chamber\FCC reports\W300i\Final Reports\FCCW300i.doc

Distribution of maximum SAR in 1900 GSM band. Measured with front of device facing the body using the ICE-26 Carry Case. (Standard Battery, BST-33)

Date/Time: 4/17/2006 1:51:52 PM

File Name: [17Apr06 W300i GSM1900 1E73 ICE26 BF01.da4](#)

DUT: W300i body

Program Notes: Battery - BST33 Humidity - 41.9 % Ambient Temp - 23 C Simulant Temp - 22.6 C

Communication System: DCS 1900 Body; Frequency: 1880 MHz; Duty Cycle: 1:4.15

Medium: Head 1800/1900 MHz Medium parameters used: $f = 1880 \text{ MHz}$; $s = 1.51 \text{ mho/m}$; $\epsilon_r = 51.4$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1539; ConvF(4.12, 4.12, 4.12); Calibrated: 11/22/2005
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn345; Calibrated: 11/10/2005
- Phantom: SAM with CRP (High Band Body); Type: SAM; Serial: TP: 1020
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 160

Unnamed procedure 2/Area Scan (51x81x1):

Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (interpolated) = 0.386 mW/g

Unnamed procedure 2/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 9.73 V/m; Power Drift = -0.117 dB

Peak SAR (extrapolated) = 0.549 W/kg

SAR(1 g) = 0.350 mW/g; SAR(10 g) = 0.220 mW/g

Maximum value of SAR (measured) = 0.373 mW/g

Unnamed procedure 2/Zoom Scan (31x31x36)/Cube 0:

Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 9.73 V/m; Power Drift = -0.117 dB

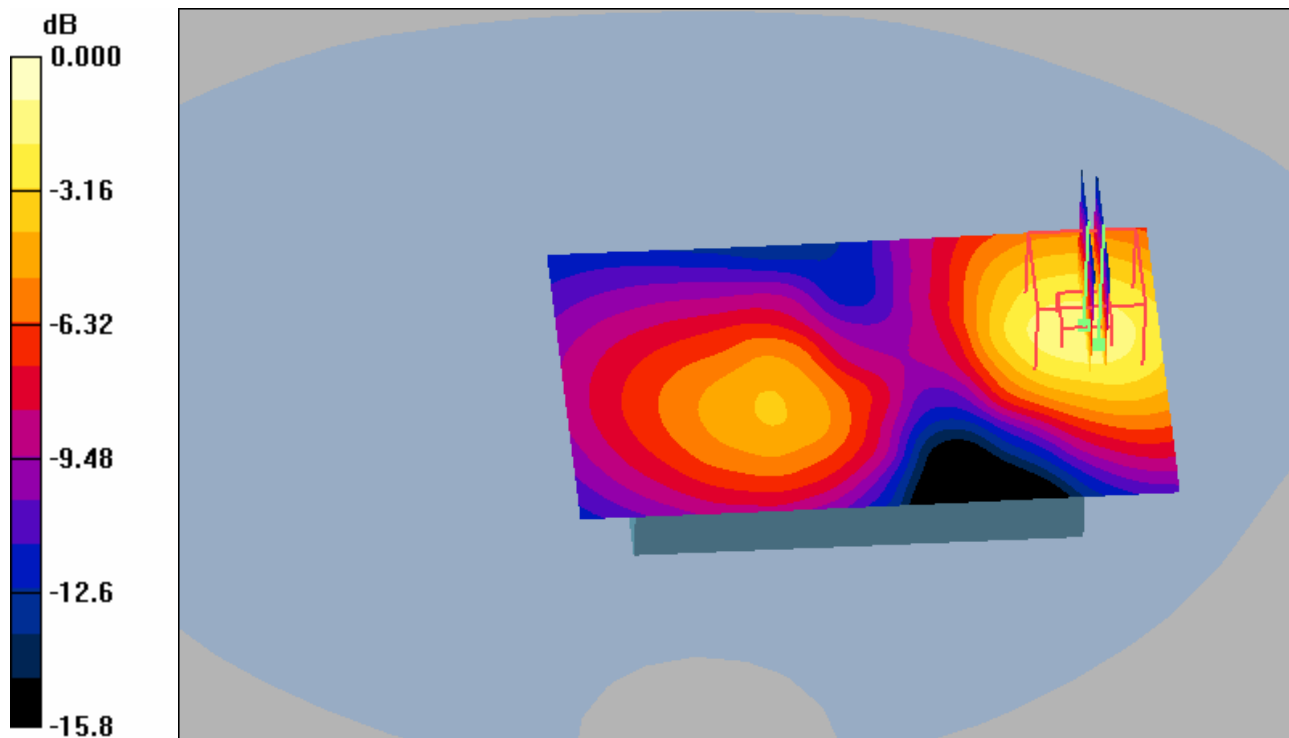
Maximum value of SAR (interpolated) = 0.549 mW/g

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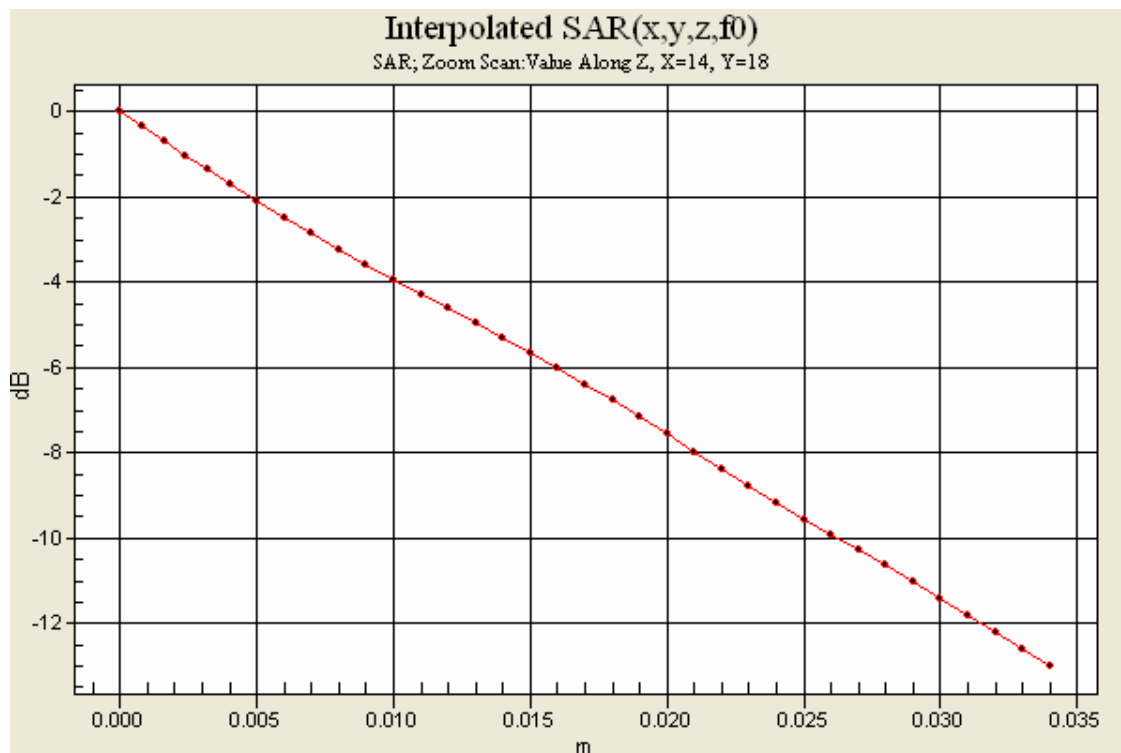
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0 dB = 0.549mW/g



APPLICANT: Sony Ericsson Mobile Communications Inc.

FCC ID: **PY7AF052033**



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Appendix 4

Probe Calibration Certificates



Prepared (also subject responsible if other) SEM/CV/PF/P Gerard Hayes and Rodney Dixon		No. REP 2006 004 W300i HWB 02
Approved SEM/CV/PF/P Gerard Hayes	Checked	A X:\SAR Chamber\FCC reports\W300i\Final Reports\FCCW300i.doc

ET3DV6 SN:1586

May 26, 2005

DASY - Parameters of Probe: ET3DV6 SN:1586**Sensitivity in Free Space^A****Diode Compression^B**

NormX	1.90 ± 10.1%	$\mu V/(V/m)^2$	DCP X	94 mV
NormY	1.84 ± 10.1%	$\mu V/(V/m)^2$	DCP Y	94 mV
NormZ	1.89 ± 10.1%	$\mu V/(V/m)^2$	DCP Z	94 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 _{bs} [%] Without Correction Algorithm	8.4	4.3
SAR _{bs} [%] With Correction Algorithm	0.1	0.2

TSL 1750 MHz Typical SAR gradient: 10 % per mm

Sensor Center to Phantom Surface Distance	3.7 mm	4.7 mm
SAR _{bs} [%] Without Correction Algorithm	12.2	8.2
SAR _{bs} [%] With Correction Algorithm	0.8	0.1

Sensor OffsetProbe 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 E²-field uncertainty inside TSL (see Page 8).^B Numerical linearization parameter: uncertainty not required.

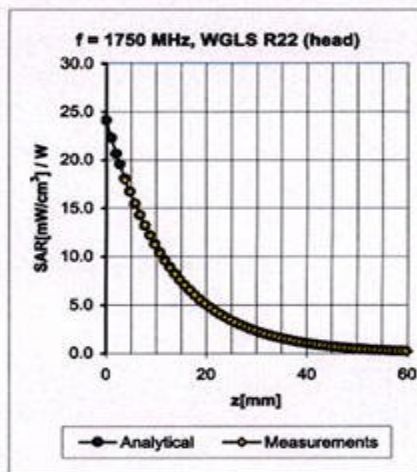
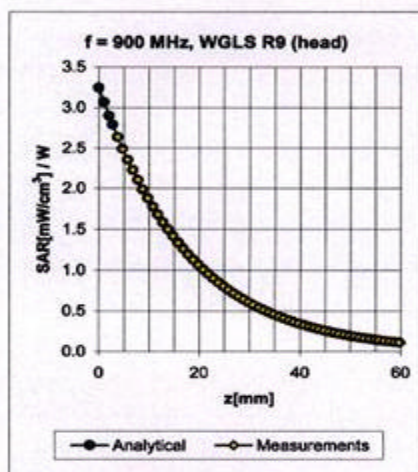


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ET3DV6 SN:1586

May 26, 2005

Conversion Factor Assessment



f [MHz]	Validity [MHz] ^c	TSL	Permittivity	Conductivity	Alpha	Depth	ConvF Uncertainty
835	± 50 / ± 100	Head	41.5 ± 5%	0.90 ± 5%	0.62	1.76	6.58 ± 11.0% (k=2)
900	± 50 / ± 100	Head	41.5 ± 5%	0.97 ± 5%	0.61	1.78	6.46 ± 11.0% (k=2)
1750	± 50 / ± 100	Head	40.1 ± 5%	1.37 ± 5%	0.59	2.26	5.29 ± 11.0% (k=2)
1900	± 50 / ± 100	Head	40.0 ± 5%	1.40 ± 5%	0.56	2.50	5.10 ± 11.0% (k=2)
2450	± 50 / ± 100	Head	39.2 ± 5%	1.80 ± 5%	0.66	2.22	4.58 ± 11.8% (k=2)
835	± 50 / ± 100	Body	55.2 ± 5%	0.97 ± 5%	0.54	1.96	6.51 ± 11.0% (k=2)
900	± 50 / ± 100	Body	55.0 ± 5%	1.05 ± 5%	0.52	2.05	6.21 ± 11.0% (k=2)
1750	± 50 / ± 100	Body	53.4 ± 5%	1.49 ± 5%	0.55	2.76	4.71 ± 11.0% (k=2)
1900	± 50 / ± 100	Body	53.3 ± 5%	1.52 ± 5%	0.56	2.76	4.61 ± 11.0% (k=2)
2450	± 50 / ± 100	Body	52.7 ± 5%	1.95 ± 5%	0.68	2.13	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.



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ET3DV6 SN:1539

November 22, 2005

DASY - Parameters of Probe: ET3DV6 SN:1539**Sensitivity in Free Space^A****Diode Compression^B**

NormX	1.36 ± 10.1%	$\mu\text{V}/(\text{V}/\text{m})^2$	DCP X	89 mV
NormY	1.27 ± 10.1%	$\mu\text{V}/(\text{V}/\text{m})^2$	DCP Y	89 mV
NormZ	1.39 ± 10.1%	$\mu\text{V}/(\text{V}/\text{m})^2$	DCP Z	89 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	8.8	4.7
SAR _{be} [%] With Correction Algorithm	0.1	0.3

TSL 1750 MHz Typical SAR gradient: 10 % per mm

Sensor Center to Phantom Surface Distance	3.7 mm	4.7 mm
SAR _{be} [%] Without Correction Algorithm	13.0	8.4
SAR _{be} [%] With Correction Algorithm	0.8	0.0

Sensor OffsetProbe 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 E²-field uncertainty inside TSL (see Page 8).^B Numerical linearization parameter: uncertainty not required.



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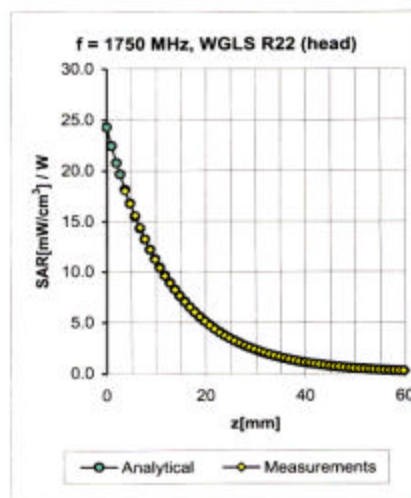
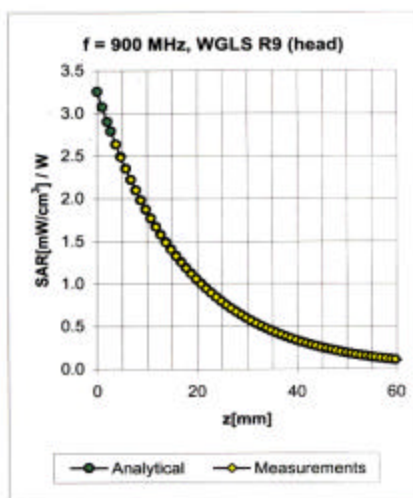
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ET3DV6 SN:1539

November 22, 2005

Conversion Factor Assessment



f [MHz]	Validity [MHz] ^c	TSL	Permittivity	Conductivity	Alpha	Depth	ConvF	Uncertainty
835	± 50 / ± 100	Head	41.5 ± 5%	0.90 ± 5%	0.63	1.80	5.99	± 11.0% (k=2)
900	± 50 / ± 100	Head	41.5 ± 5%	0.97 ± 5%	0.54	1.93	5.86	± 11.0% (k=2)
1750	± 50 / ± 100	Head	40.1 ± 5%	1.37 ± 5%	0.66	2.19	4.76	± 11.0% (k=2)
1900	± 50 / ± 100	Head	40.0 ± 5%	1.40 ± 5%	0.64	2.43	4.55	± 11.0% (k=2)
2450	± 50 / ± 100	Head	39.2 ± 5%	1.80 ± 5%	0.81	2.04	4.06	± 11.8% (k=2)
835	± 50 / ± 100	Body	55.2 ± 5%	0.97 ± 5%	0.56	1.99	5.88	± 11.0% (k=2)
900	± 50 / ± 100	Body	55.0 ± 5%	1.05 ± 5%	0.53	2.08	5.63	± 11.0% (k=2)
1750	± 50 / ± 100	Body	53.4 ± 5%	1.49 ± 5%	0.65	2.48	4.21	± 11.0% (k=2)
1900	± 50 / ± 100	Body	53.3 ± 5%	1.52 ± 5%	0.66	2.48	4.12	± 11.0% (k=2)
2450	± 50 / ± 100	Body	52.7 ± 5%	1.95 ± 5%	1.18	1.35	4.06	± 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.

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Appendix 5**Measurement Uncertainty Budget**



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Table 1: Uncertainty Budget for System Performance Check (Dipole & flat phantom) DASY4 System

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 (k=1)	E2.1	4.7	R	1.73	0.707	0.707	1.9	1.9	∞
Axial Isotropy	E.2.2	9.6	R	1.73	0.707	0.707	3.9	3.9	∞
Hemispherical Isotropy	E.2.2	1.0	R	1.73	1	1	0.6	0.6	∞
Boundary Effect	E.2.3	4.7	R	1.73	1	1	2.7	2.7	∞
Linearity	E.2.4	1.0	R	1.73	1	1	0.6	0.6	∞
System Detection Limits	E.2.5	1.0	N	1	1	1	1.0	1.0	∞
Readout Electronics	E.2.6	0.8	R	1.73	1	1	0.5	0.5	∞
Response Time	E.2.7	2.6	R	1.73	1	1	1.5	1.5	∞
Integration Time	E.2.8	4.7	R	1.73	0.707	0.707	1.9	1.9	∞
RF Ambient Conditions	E.6.1	3.0	R	1.73	1	1	1.7	1.7	∞
Probe Positioner Mechanical Tolerance (corresponds to the mechanical constraints of the robot)	E.6.2	0.4	R	1.73	1	1	0.2	0.2	∞
Probe Positioning with respect to Phantom Shell	E.6.3	2.9	R	1.73	1	1	1.7	1.7	∞
Extrapolation, interpolation and Integration Algorithms for Max. SAR Evaluation	E.5	1.0	R	1.73	1	1	0.6	0.6	∞
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	5.0	R	1.73	1	1	2.9	2.9	∞
Phantom and Tissue Parameters									
Phantom Uncertainty - shell thickness tolerance	E.3.1	4.0	R	1.73	1	1	2.3	2.3	∞
Liquid Conductivity - deviation	E.3.2	4.3	R	1.73	0.64	0.43	1.59	1.07	∞



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from target values (5)									
Liquid Conductivity - measurement uncertainty (6)	E.3.3	6.20	R	1.73	0.64	0.43	2.29	1.54	∞
Liquid Permittivity - deviation from target values (5)	E.3.2	3.7	R	1.73	0.6	0.49	1.28	1.05	∞
Liquid Permittivity - measurement uncertainty (6)	E.3.3	6.08	R	1.73	0.6	0.49	2.11	1.72	∞
Combined Standard Uncertainty			RSS				9.37	9.03	
Expanded Uncertainty (95% C.L.)							18.74	18.05	



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Table 2: Uncertainty Budget for the Device Under Test with DASY4 System

<i>a</i>	<i>b</i>	<i>c</i>	<i>d</i>	$e = f(d,k)$	<i>f</i>	<i>g</i>	$h = c \times f / e$	$i = c \times g / e$	<i>k</i>
Uncertainty Component	Sec.	Tol. ($\pm$ %)	Prob. Dist.	Div.	c_i (1-g)	c_i (10-g)	1-g u_i ($\pm$ %)	10-g u_i ($\pm$ %)	v_i
Measurement System									
Probe Calibration ($k=1$)	E.2.1	4.8	N	1	1	1	4.8	4.8	∞
Axial Isotropy	E.2.2	4.7	R	1.73	0.707	0.707	1.9	1.9	∞
Hemispherical Isotropy	E.2.2	9.6	R	1.73	0.707	0.707	3.9	3.9	∞
Boundary Effect	E.2.3	1.0	R	1.73	1	1	0.6	0.6	∞
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	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	2.6	R	1.73	1	1	1.5	1.5	∞
RF Ambient Conditions	E.6.1	3.0	R	1.73	1	1	1.7	1.7	∞
Probe Positioner Mechanical Tolerance (corresponds to the mechanical constraints of the robot)	E.6.2	0.4	R	1.73	1	1	0.2	0.2	∞
Probe Positioning with respect to Phantom Shell	E.6.3	2.9	R	1.73	1	1	1.7	1.7	∞
Extrapolation, interpolation and Integration Algorithms for Max. SAR Evaluation	E.5	1.0	R	1.73	1	1	0.6	0.6	∞
Test sample Related									
Test Sample Positioning	E.4.2	2.8	N	1	1	1	2.8	2.8	4
Device Holder Uncertainty	E.4.1	1.4	R	1.73	1	1	0.8	0.8	4
Output Power Variation - SAR drift measurement (4)	6.6.2	5.0	R	1.73	1	1	2.9	2.9	∞
Phantom and Tissue Parameters									



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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 (5)	E.3.2	4.3	R	1.73	0.64	0.43	1.6	1.1	∞
Liquid Conductivity - measurement uncertainty (6)	E.3.3	6.20	R	1.73	0.64	0.43	2.3	1.5	∞
Liquid Permittivity - deviation from target values (5)	E.3.2	3.7	R	1.73	0.6	0.49	1.3	1.0	∞
Liquid Permittivity - measurement uncertainty (6)	E.3.3	6.08	R	1.73	0.6	0.49	2.1	1.7	∞
Combined Standard Uncertainty			RSS				9.80	9.47	
Expanded Uncertainty (95% CONFIDENCE LEVEL)			K=2				19.59	18.94	



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Table 3a. Values for e'

Uncertainty Component	Tolerance e ($\pm\%$)	Probability Distribution	Divisor	c_i	Standard Uncertainty ($\pm\%$)	v_i or v_{eff}
Repeatability (n repeats)	0.97	N	1	1	0.97	4
Network analyzer uncertainty sources	8.38	R	1.73	1	4.83	∞
Dielectric Error Sources	5.93	R	1.73	1	3.42	∞
Combined standard uncertainty					6.08	

Table 3b. Values for s

Uncertainty Component	Tolerance e ($\pm\%$)	Probability Distribution	Divisor	c_i	Standard Uncertainty ($\pm\%$)	v_i or v_{eff}
Repeatability (n repeats)	1.85	N	1	1	1.85	4
Network analyzer uncertainty sources	8.38	R	1.73	1	4.83	∞
Dielectric Error Sources	5.93	R	1.73	1	3.42	∞
Combined standard uncertainty					6.20	



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Appendix 6

Photographs of the Device Under Test

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a. Front



b. Back



c. Side

View of Device (Open)



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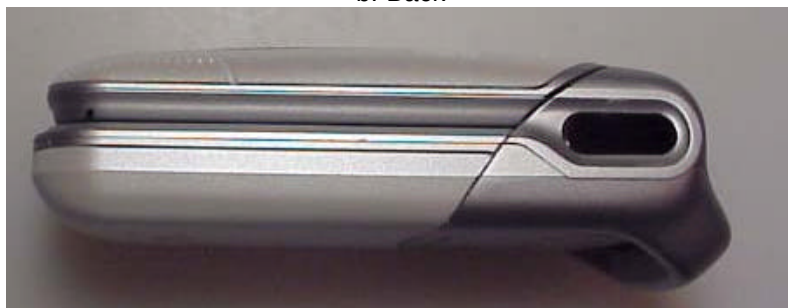
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a. Front



b. Back



c. Side

View of Device (Closed)



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**View of Hands-free Accessory**

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**ICE-26 Carry Case Front View**



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ICE-26 Carry Case Back View



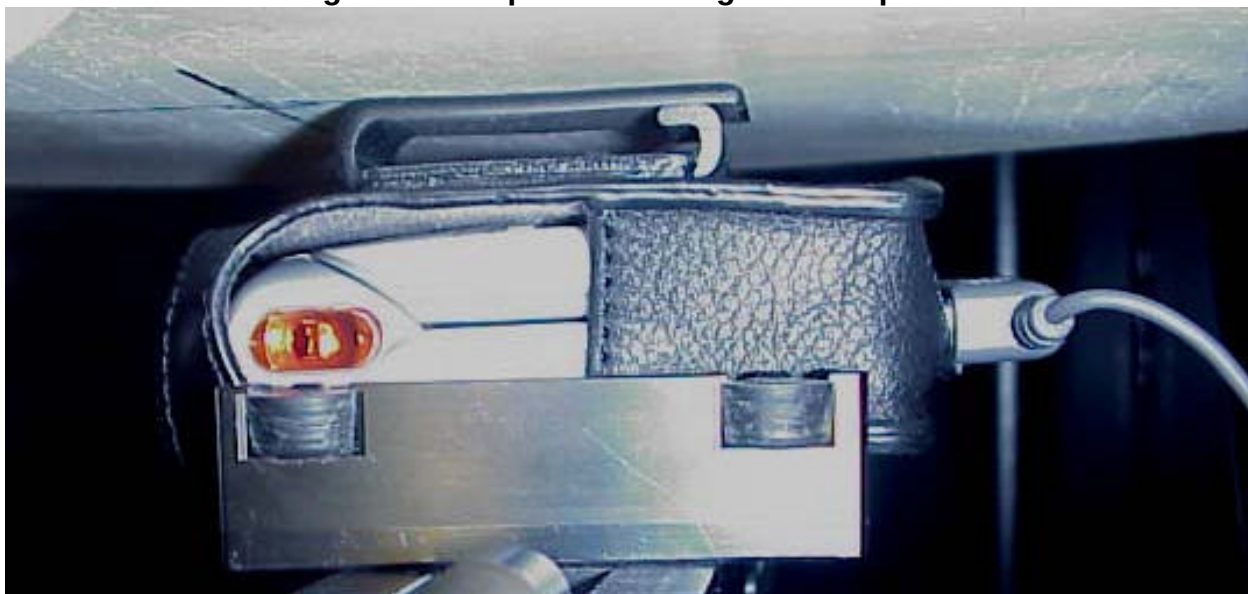
Position of device against head phantom using the "cheek" position



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Position of device against head phantom using the “tilt” position



Position of device against body phantom with ICE26 in front position.



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Position of device against body phantom with ICE26 in back position.



Position of device against body phantom with 15mm in front position.



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Position of device against body phantom with 15mm in back position.