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SEM/CV/PF/P Gerard Hayes and Rodney Dixon		REP 2006 001 Z525A 01	
Approved	Checked		
SEM/CV/PF/P Gerard Hayes		A	X:\SAR Chamber\FCC reports\Z525A\Final

Exhibit 11: SAR Test Report of Portable Cellular Phone
FCC ID: PY7AC052014 Model : Z525A

Date of test:
Date of Report:

August 24 - August 28, 2005
January 29 – February 14, 2006 (PTT Testing)
March 3, 2006

Laboratory:

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

Tested by:

Rodney Dixon
Eng. Technician III, Product Verification Group

Test Responsible:

Gerard Hayes Gerard Hayes 03 March 2006
Technical Manager, Electromechanical Development Group, M2M

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 PY7AC052014 model Z525A 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.

Prepared (also subject responsible if other)	No.	
SEM/CV/PF/P Gerard Hayes and Rodney Dixon	REP 2006 001 Z525A 01	
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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 PY7AC052014 model Z525A. This phone is identical to FCC ID PY7AC052012 model Z520a with added push-to-talk (PTT) functionality that is enabled in GSM Mode with 1/8 duty cycle. 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	40 mm
	Length	30 mm
	Height	8mm

2.2 Device description

FCC ID Number / Device Model	PY7AC052014 / Z525A (formerly FCC ID PY7AC052012 / Z520a)							
Serial number	BD30246HHE BD3ZZYJGGQ		BD302466ZH BD3ZZYJHY5		BD302466ZH BD3ZZYJHY5		BD30246HHE BD3ZZYJJU4	
Mode(s) of Operation	GSM 800		GSM 900		GSM 1800		GSM 1900	
Modulation Mode(s)	TDMA		TDMA		TDMA		TDMA	
Target Value and Factory Tolerance Window for Maximum Output Power Setting	f_{low}	32.2 dBm +0.4/ -1.2 dB	f_{low}	31.3 dBm +0.2/ -0.3 dB	f_{low}	30.0 dBm +0.5/ -1.5 dB	f_{low}	30.0 dBm +0.5/ -1.5 dB
GSM Mode: 1/8 Duty Cycle	f_{mid}	31.7 dBm +0.4/ -0.7 dB	f_{mid}	32.1 dBm +0.5/ -1.1 dB	f_{mid}	30.0 dBm +0.5/ -1.5 dB	f_{mid}	30.0 dBm +0.5/ -1.5 dB
(PTT included in this mode.)	f_{high}	31.7 dBm +0.3/ -0.7 dB	f_{high}	32.3 dBm +0.5/ -1.3 dB	f_{high}	30.0 dBm +0.5/ -1.5 dB	f_{high}	30.0 dBm +0.5/ -1.5 dB
GPRS Mode: 2/8 Duty Cycle	f_{low}	32.2 max	f_{low}	30.8 ±0.3	f_{low}	Same as GSM 1:8	f_{low}	Same as GSM 1:8
Target Maximum Output Power Setting (adjusted from GSM mode)	f_{mid}	31.6 max	f_{mid}	32.2 max	f_{mid}	Same as GSM 1:8	f_{mid}	Same as GSM 1:8
	f_{high}	31.2 ±0.3	f_{high}	32.7 max	f_{high}	Same as GSM 1:8	f_{high}	Same as GSM 1:8
Calibration Frequency (f_{low}, f_{mid}, f_{high})	f_{high}		f_{low}		f_{mid}		f_{mid}	
Transmitting Frequency Rang(s)	824-849 MHz		880-915 MHz		1710-1785 MHz		1850-1910 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 Sony Ericsson SAR Laboratory utilizes Dosimetric Assessment Systems (Dasy3™ v3.1d for body-worn measurements and Dasy4™ for adjacent to head measurements) manufactured by Schmid & Partner Engineering AG (SPEAG™), of Zurich Switzerland. The overall RSS uncertainty of the measurement system is ±10.77% (K=1) with an expanded uncertainty of ±21.55% (K=2) for Dasy3™ v3.1d and ±9.49% (K=1) with an expanded uncertainty of ±18.74% (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
DASY3 DAE V1	417	11-Nov-2006
E-Field Probe ETDV6	1539	22-Nov-2006
E-Field Probe ETDV6	1586	26-May-2006
E-Field Probe ETDV6	1587	26-May-2006
Dipole Validation Kit, DV835V2	438	24-May-2006
Dipole Validation Kit, DV835V2	429	21-Nov-2006
Dipole Validation Kit, DV900V2	035	24-May-2006
Dipole Validation Kit, DV900V2	049	21-Nov-2006
Dipole Validation Kit, DV1800V2	238	11-May-2006
Dipole Validation Kit, DV1800V2	217	15-Nov-2006
Dipole Validation Kit, DV1900V2	536	19-May-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 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

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 ρ=1g/cm3 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 the tests, the ambient temperature of the laboratory was in the range 22.2-24.8°C, the relative humidity was 30.2%- 53.9 %, and the liquid depth above the ear reference points was more than 15.0 cm for all the cases. It is seen that the measured parameters are satisfactory for compliance testing.

f (MHz)	Tissue type	Limits / Measured	Dielectric Parameters		
			e_r	s (S/m)	Simulated Tissue Temp (°C)
835	Head	Measured, 26-Aug-05	41.91	.913	22.6
		Recommended Limits	**41.50**	**0.90**	**20-25**
	Body	Measured, 27-Aug-05	54.21	1.003	22.3
		Recommended Limits	**55.20**	**0.97**	**20-25**
	Head	Measured, 28-Aug-05	40.2	.877	22.2
		Recommended Limits	**41.50**	**0.90**	**20-25**
		Measured, 29-Jan-06	41.37	0.898	24.1
		Measured 14-Feb-06	41.60	0.898	22.5
		Recommended Limits	**41.50**	**0.90**	**20-25**
900	Head	Measured, 24-Aug-05	41.55	.973	23
		Recommended Limits	**41.50**	**.97**	**20-25**
		Measured, 01-Feb-06	40.21	.953	24.5
		Recommended Limits	**41.50**	**.97**	**20-25**
	Body	Measured, 25-Aug-05	39.87	.937	22.1
		Recommended Limits	**41.50**	**.97**	**20-25**
1800	Head	Measured, 27-Aug-05	39.24	1.398	22
		Recommended Limits	**40.00**	**1.40**	**20-25**
		Measured, 31-Jan-06	38.81	1.382	21.7
		Recommended Limits	**40.00**	**1.40**	**20-25**
	Body	Measured, 26-Aug-05	39.1	1.37	21
		Recommended Limits	**40.00**	**1.40**	**20-25**
1900	Head	Measured, 25-Aug-05	38.26	1.469	22
		Recommended Limits	**40.00**	**1.40**	**20-25**
		Measured, 29-Jan-06	38.7	1.47	24.2
		Measured 14-Feb-06	38.8	1.47	23.2
		Recommended Limits	**40.00**	**1.40**	**20-25**
	Body	Measured, 24-Aug-05	51.04	1.507	22.5
		Recommended Limits	**53.30**	**1.52**	**20-25**

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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%	--	--

4. System Accuracy Verification

A system accuracy verification of the DASY3 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 these tests, the ambient temperature of the laboratory was in the range 22.6-24.8 °C, the relative humidity was in the range 30.2 – 51.5 % and the liquid depth above the ear reference points was above 15.0 cm in 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 0.000232 W/kg, which is below the recommended limit in [1].

f (MHz)	Tissue Type	Description	SAR (W/kg) 1g	SAR (W/kg) 10g	Dielectric Parameters e_r	Dielectric Parameters s (S/m)	Tissue Temp (°C)
835	Head	Measured, 26-Aug-05	9.6	6.1	41.91	.913	22.6
		Recommended Limits	**9.50**	**6.20**	**41.50**	**0.90**	**20-25**
		Measured,29-Jan-06	8.9	5.8	41.37	.898	24.1
		Measured 14-Feb-06	9.0	5.9	41.6	0.898	22.5
		Recommended Limits	**9.50**	**6.20**	**41.50**	**0.90**	**20-25**
	Body	Measured, 27-Aug-05	10	6.5	54.21	1.003	22.3
		Recommended Limits	**9.90**	**6.46**	**55.20**	**0.97**	**20-25**
835	Head	Measured, 28-Aug-05	9.8	6.3	40.2	.877	22.2
		Recommended Limits	**9.50**	**6.20**	**41.50**	**0.90**	**20-25**
900	Head	Measured, 24-Aug-05	9.9	6.3	41.55	.973	23
		Recommended Limits	**10.8**	**6.9**	**41.5**	**0.97**	**20-25**
		Measured, 01-Feb-06	10	6.4	40.21	.953	24.5
		Recommended Limits	**10.8**	**6.9**	**41.5**	**0.97**	**20-25**
	Body	Measured, 25-Aug-05	9.8	6.3	39.87	.937	22.1
		Recommended Limits	**10.8**	**6.9**	**41.5**	**0.97**	**20-25**
1800	Head	Measured, 27-Aug-05	36.3	19.6	39.24	1.398	22
		Recommended Limits	**38.1**	**19.80**	**40.00**	**1.40**	**20-25**
		Measured, 31-Jan-06	36.3	19.4	38.81	1.382	21.7
		Recommended Limits	**38.1**	**19.80**	**40.00**	**1.40**	**20-25**
	Body	Measured, 26-Aug-05	35.2	18.9	39.1	1.37	21
		Recommended Limits	**38.1**	**19.80**	**40.00**	**1.40**	**20-25**
1900	Head	Measured, 25-Aug-05	40.3	21.1	38.26	1.469	22
		Recommended Limits	**39.70**	**20.50**	**40.00**	**1.40**	**20-25**
		Measured, 29-Jan-06	40.3	21.1	38.7	1.47	24.2
		Measured 14-Feb-06	41.0	21.3	38.8	1.47	23.2
		Recommended Limits	**39.70**	**20.50**	**40.00**	**1.40**	**20-25**
	Body	Measured, 24-Aug-05	43.2	22.2	51.04	1.507	22.5
		Recommended Limits	**40.50**	**20.89**	**53.30**	**1.52**	**20-25**

~~6.~~5. Test Results

For head measurements (with a 1/8 GSM duty cycle) and 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 PY7AC052014 has the following battery option:
BKB 193 203 (BST-37) 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 through 3 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.

The humidity and ambient temperature of the test facility were in the ranges 30.2 – 54.6 % and 20.6 -24.8°C, respectively. 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)**		**Test Configuration**
	1 g	**10 g**	
800 GSM	1.474	0.937	Left head, cheek/touch position, 824 MHz BST-37 battery
900 GSM	0.602	0.370	Left head, cheek/touch position, 880 MHz BST-37 battery
1800 GSM	0.560	0.288	Right head, cheek/touch position, 1785 MHz BST-37 battery with Bluetooth on
1900 GSM	0.818	0.407	Right head, cheek/touch position, 1880 MHz BST-37 battery

f (MHz)	Channel/ frequency	Conducted Output Power (dBm) GSM 1:8 Duty Cycle	FCC ID PYAC052014 with Standard Battery BST-37 Left 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**	**32.5**	**1.440**	**0.916**	**-0.13**	**1.474**	**0.937**	**23.7**	**22.6**
	189 / 837	32.0	1.430	0.906	0.05	1.463	0.927	23.7	22.6
	251 / 849	31.9	1.200	0.752	-0.03	1.228	0.770	23.7	22.6
Bluetooth on	**128 / 824**	**32.5**	**1.440**	**0.915**	**-0.11**	**1.474**	**0.936**	**22.5**	**23.1**
900 GSM	**975 / 880**	**31.4**	**0.588**	**0.362**	**-0.10**	**0.602**	**0.370**	**22.8**	**23.0**
	38 / 897	32.3	0.537	0.327	-0.09	0.550	0.335	22.8	23.0
	124 / 914	32.5	0.503	0.303	-0.16	0.515	0.310	22.8	23.0
Bluetooth on	**975 / 880**	**31.4**	**0.540**	**0.334**	**-0.06**	**0.553**	**0.342**	**21.9**	**22.3**
1800 GSM	512 / 1710	30.5	0.285	0.151	-0.17	0.285	0.151	22.2	22.0
	699 / 1748	30.4	0.363	0.196	-0.17	0.363	0.196	22.2	22.0
	885 / 1785	**30.4**	**0.375**	**0.199**	**-0.03**	**0.375**	**0.199**	**22.2**	**22.0**
1900 GSM	512 / 1850	30.4	0.515	0.265	-0.10	0.527	0.271	22.2	22.0
	660/1880	**30.3**	**0.523**	**0.264**	**-0.01**	**0.535**	**0.270**	**22.2**	**22.0**
	810/1910	30.3	0.491	0.246	-0.16	0.502	0.252	22.2	22.0

f (MHz)	Channel/ frequency	Conducted Output Power (dBm) GSM 1:8 Duty Cycle	FCC ID PYAC052014 with Standard Battery BST-37 Left 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**	**32.5**	**0.361**	**0.264**	**-0.14**	**0.369**	**0.270**	**24**	**23.2**
	189 / 837	32.0	0.317	0.231	-0.03	0.324	0.236	24	23.2
	251 / 849	31.9	0.296	0.215	-0.15	0.303	0.220	24	23.2
900 GSM	**975 / 880**	**31.4**	**0.149**	**0.108**	**-0.05**	**0.152**	**0.111**	**22.8**	**23.1**
	38 / 897	32.3	0.145	0.105	-0.05	0.148	0.107	22.8	23.1
	124 / 914	32.5	0.144	0.104	-0.06	0.147	0.106	22.8	23.1
1800 GSM	512 / 1710	30.5	0.079	0.052	0.11	0.079	0.052	21.6	20.5
	699 / 1748	**30.4**	**0.089**	**0.058**	**-0.11**	**0.089**	**0.058**	**21.6**	**20.5**
	885 / 1785	30.4	0.078	0.051	-0.06	0.078	0.051	21.6	20.5
1900 GSM	512 / 1850	30.4	0.118	0.073	-0.10	0.121	0.075	21.2	21.1
	660/1880	30.3	0.128	0.079	-0.07	0.131	0.081	21.2	21.1
	810/1910	**30.3**	**0.130**	**0.080**	**-0.13**	**0.133**	**0.082**	**21.2**	**21.1**

Table 1: SAR measurement results for the portable cellular telephone FCC ID PY7AC052014 model Z525A at maximum output power with Standard Battery BST-37. Measured against the left head.

f (MHz)	Channel/ frequency	Conducted Output Power (dBm) GSM 1:8 Duty Cycle	FCC ID PYAC052014 with Standard Battery BST-37 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**	**32.5**	**1.410**	**0.914**	**-0.06**	**1.443**	**0.935**	**22.6**	**22.2**
	189 / 837	32.0	1.240	0.800	0.09	1.269	0.819	22.6	22.2
	251 / 849	31.9	1.070	0.687	-0.05	1.095	0.703	22.6	22.2
900 GSM	**975 / 880**	**31.4**	**0.540**	**0.338**	**0.02**	**0.553**	**0.346**	**22.2**	**22.6**
	38 / 897	32.3	0.494	0.308	0.13	0.506	0.315	22.2	22.6
	124 / 914	32.5	0.459	0.282	0.05	0.470	0.289	22.2	22.6
1800 GSM	512 / 1710	30.5	0.385	0.209	-0.11	0.385	0.209	21.9	21.1
	699 / 1748	30.4	0.459	0.244	0.15	0.459	0.244	21.9	21.1
	885 / 1785	**30.4**	**0.556**	**0.287**	**0.00**	**0.556**	**0.287**	**21.9**	**21.1**
Bluetooth On	**885 / 1785**	**30.4**	**0.560**	**0.288**	**-0.08**	**0.560**	**0.288**	**21.7**	**21.3**
1900 GSM	512 / 1850	30.4	0.742	0.373	0.01	0.759	0.382	20.6	20.6
	660/1880	**30.3**	**0.799**	**0.398**	**-0.02**	**0.818**	**0.407**	**20.6**	**20.6**
	810/1910	30.3	0.704	0.346	-0.18	0.720	0.354	20.6	20.6
Bluetooth On	**660/1880**	**30.3**	**0.787**	**0.389**	**-0.10**	**0.805**	**0.398**	**21.5**	**20.5**

f (MHz)	Channel/ frequency	Conducted Output Power (dBm) GSM 1:8 Duty Cycle	FCC ID PYAC052014 with Standard Battery BST-37 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**	**32.5**	**0.335**	**0.247**	**-0.07**	**0.343**	**0.253**	**22.4**	**22.1**
	189 / 837	32.0	0.294	0.216	0.00	0.301	0.221	22.4	22.1
	251 / 849	31.9	0.268	0.197	-0.05	0.274	0.202	22.4	22.1
900 GSM	**975 / 880**	**31.4**	**0.156**	**0.113**	**0.02**	**0.160**	**0.116**	**21.9**	**22.3**
	38 / 897	32.3	0.153	0.110	0.03	0.157	0.113	21.9	22.3
	124 / 914	32.5	0.150	0.109	-0.07	0.153	0.112	21.9	22.3
1800 GSM	512 / 1710	30.5	0.109	0.068	-0.17	0.109	0.068	21.8	20.9
	699 / 1748	**30.4**	**0.118**	**0.074**	**-0.13**	**0.118**	**0.074**	**21.8**	**20.9**
	885 / 1785	30.4	0.115	0.072	0.16	0.115	0.072	21.8	20.9
1900 GSM	512 / 1850	30.4	0.138	0.085	-0.05	0.141	0.087	21.3	20.7
	660/1880	**30.3**	**0.166**	**0.102**	**-0.06**	**0.170**	**0.104**	**21.3**	**20.7**
	810/1910	30.3	0.144	0.087	-0.116	0.147	0.089	21.3	20.7

Table 2: SAR measurement results for the portable cellular telephone FCC ID PY7AC052014 model Z525A at maximum output power with Standard Battery BST-37. Measured against the right head.

f (MHz)	Channel/ frequency	Conducted Output Power (dBm) GSM 1:8 Duty Cycle	FCC ID PYAC052014 with Standard Battery BST-37 PTT Flat Phantom Open 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**	**0.500**	**0.354**	**-0.02**	**0.500**	**0.354**	24.8	24.1
	189 / 837	32.1	0.485	0.342	-0.01	0.485	0.342		
	251 / 849	32.0	0.404	0.283	-0.08	0.404	0.283		
Bluetooth On	128 / 824	32.6	0.523	0.370	-0.02	0.523	0.370		
900 GSM	975 / 880	31.5	0.166	0.116	0.05	0.166	0.116	24.6	24.5
	38 / 897	32.2	0.184	0.128	0.06	0.184	0.128		
	124 / 914	**32.4**	**0.212**	**0.148**	**0.07**	**0.212**	**0.148**		
Bluetooth On	124 / 914	32.4	0.202	0.141	0.02	0.202	0.141		
1800 GSM	512 / 1710	30.4	0.118	0.072	-0.18	0.121	0.074	24.6	21.7
	699 / 1748	30.4	0.114	0.070	0.02	0.117	0.072		
	885 / 1785	**30.4**	**0.150**	**0.091**	**-0.10**	**0.153**	**0.093**		
Bluetooth On	885 / 1785	30.4	0.147	0.089	-0.00	0.150	0.091		
1900 GSM	512 / 1850	30.4	0.121	0.070	-0.17	0.124	0.072	24.1	24.2
	660/1880	30.2	0.107	0.064	0.02	0.109	0.065		
	810/1910	30.1	0.124	0.073	0.14	0.127	0.075		
Bluetooth On	**810/1910**	**30.1**	**0.118**	**0.068**	**-0.09**	**0.121**	**0.069**		

f (MHz)	Channel/ frequency	Conducted Output Power (dBm) GSM 1:8 Duty Cycle	FCC ID PYAF052014 with Standard Battery BST-37 PTT Flat Phantom / Closed 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	0.191	0.138	0.05	0.191	0.138	24.6	24.2
	189 / 837	32.1	0.160	0.116	-0.12	0.160	0.116		
	251 / 849	32.0	0.137	0.099	-0.01	0.137	0.099		
Bluetooth On	**128 / 824**	**32.6**	**0.190**	**0.138**	**-0.04**	**0.190**	**0.138**		
900 GSM	975 / 880	31.5	0.057	0.040	0.10	0.057	0.040	24.7	24.6
	38 / 897	32.2	0.052	0.037	-0.06	0.052	0.037		
	124 / 914	32.4	0.053	0.038	-0.01	0.053	0.038		
Bluetooth On	**975 / 880**	**31.5**	**0.055**	**0.039**	**-0.06**	**0.055**	**0.039**		
1800 GSM	**512 / 1710**	**30.4**	**0.091**	**0.060**	**-0.02**	**0.093**	**0.061**	22.6	21.5
	699 / 1748	30.4	0.078	0.051	-0.02	0.080	0.052		
	885 / 1785	30.4	0.082	0.052	-0.12	0.084	0.053		
Bluetooth On	512 / 1710	30.4	0.083	0.054	-0.04	0.085	0.055		
1900 GSM	**512 / 1850**	**30.4**	**0.132**	**0.082**	**-0.07**	**0.135**	**0.084**	24.2	24.2
	660/1880	30.2	0.114	0.073	-0.03	0.117	0.075		
	810/1910	30.1	0.118	0.075	-0.06	0.121	0.077		
Bluetooth On	512 / 1850	30.4	0.121	0.075	-0.15	0.124	0.077		

Table 3: SAR measurement results for the portable cellular telephone FCC ID PY7AC052014 model Z525A at maximum output power with Standard Battery BST-37. Measured against the flat phantom.

6.2 Body-Worn Test Results

The SAR results shown in Table 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. The humidity and ambient temperature of the test facility were in the ranges 41.1– 51.5 % and 21.6-23.8°C, respectively.

A "flat" phantom was used for the body-worn tests. This "flat" phantom corresponds to the flat portion of the SAM phantom. The tissue stimulant depth above the ear canal was verified to be above 15.0 cm in all the measurements. 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 accessory was tested for this phone: 20 mm spacer

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)**		**Test Configuration**
	1 g	**10 g**	
800 GSM	1.484	1.043	20MM SPACER Carry Accessory, back of phone facing body, 849 MHz, 2:8 Duty Cycle, BST-37 battery, Bluetooth on
900 GSM	0.475	0.326	20MM SPACER Carry Accessory, back of phone facing body, 880 MHz, 2:8 Duty Cycle, BST-37 battery, Bluetooth On
1800 GSM	0.293	0.180	20MM SPACER Carry Accessory, back of phone facing body, 1785 MHz, 2:8 Duty Cycle, BST-37 battery, Bluetooth on
1900 GSM	0.395	0.243	20MM SPACER Carry Accessory, front of phone facing body, 1850MHz, 2:8 Duty Cycle BST-37 battery, Bluetooth on

f (MHz)	Operating Condition	Channel/ frequency	Conducted Output Power (dBm)	FCC ID PYAC052014 with Standard Battery BST-37 Body Worn Carry Accessory: 20MM 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**	**32.0**	**1.390**	**0.963**	**-0.02**	**1.456**	**1.008**	**22.2**	**22.3**
		189 / 837	31.4	1.160	0.793	-0.04	1.215	0.830	22.2	22.3
		251 / 849	31.4	0.893	0.608	-0.07	0.935	0.637	22.2	22.3
	Bluetooth On	**128 / 824**	**32.0**	**1.450**	**0.996**	**0.02**	**1.484**	**1.043**	**21.8**	**21.8**
	1:8 Duty Cycle	128 / 824	32.5	0.679	0.476	-0.04	0.695	0.498	21.8	21.8
900 GSM	2:8 Duty Cycle	**975 / 880**	**30.9**	**0.453**	**0.311**	**0.01**	**0.474**	**0.326**	**22.4**	**22.1**
		38 / 897	31.9	0.415	0.284	-0.03	0.435	0.297	22.4	22.1
		124 / 914	32.1	0.409	0.281	0.07	0.428	0.294	22.4	22.1
	Bluetooth On	**975 / 880**	**30.9**	**0.454**	**0.310**	**0.03**	**0.475**	**0.325**	**23.8**	**22.7**
	1:8 Duty Cycle	975 / 880	31.4	0.236	0.163	-0.04	0.247	0.163	23.8	22.7
1800 GSM	2:8 Duty Cycle	512 / 1710	30.5	0.215	0.137	-0.10	0.215	0.137	22.2	21.0
		699 / 1748	30.4	0.216	0.137	-0.13	0.216	0.137	22.2	21.0
		885 / 1785	**30.4**	**0.285**	**0.178**	**0.08**	**0.285**	**0.178**	**22.2**	**21.0**
	Bluetooth On	**885 / 1785**	**30.4**	**0.293**	**0.180**	**-0.03**	**0.293**	**0.180**	**22.5**	**21.1**
	1:8 Duty Cycle	885 / 1785	30.4	0.143	0.088	0.07	0.143	0.088	22.5	21.1
1900 GSM	2:8 Duty Cycle	512 / 1850	30.4	0.331	0.206	-0.05	0.339	0.211	22.6	22.2
		660/1880	**30.3**	**0.360**	**0.216**	**0.04**	**0.368**	**0.221**	**22.6**	**22.2**
		810/1910	30.3	0.357	0.213	-0.09	0.365	0.218	22.6	22.2
Front of phone facing body										
800 GSM	2:8 Duty Cycle	**128 / 824**	**32.0**	**0.466**	**0.333**	**0.06**	**0.488**	**0.349**	**21.6**	**21.9**
		189 / 837	31.4	0.399	0.283	-0.13	0.418	0.296	21.6	21.9
		251 / 849	31.3	0.287	0.204	-0.03	0.301	0.214	21.6	21.9
900 GSM	2:8 Duty Cycle	**975 / 880**	**30.9**	**0.148**	**0.105**	**0.02**	**0.155**	**0.110**	**23.3**	**22.3**
		38 / 897	31.9	0.133	0.095	0.09	0.139	0.099	23.3	22.3
		124 / 914	32.1	0.138	0.098	0.05	0.145	0.103	23.3	22.3
1800 GSM	2:8 Duty Cycle	512 / 1710	30.5	0.202	0.129	-0.10	0.202	0.129	22.3	20.4
		699 / 1748	30.4	0.213	0.135	-0.07	0.213	0.135	22.3	20.4
		885 / 1785	**30.4**	**0.280**	**0.173**	**-0.19**	**0.280**	**0.173**	**22.3**	**20.4**
1900 GSM	2:8 Duty Cycle	512 / 1850	30.4	0.326	0.204	-0.13	0.334	0.209	22.5	22.5
		660/1880	30.3	0.328	0.203	-0.04	0.336	0.208	22.5	22.5
		810/1910	**30.3**	**0.386**	**0.237**	**-0.14**	**0.395**	**0.243**	**22.5**	**22.5**
	Bluetooth On	**810/1910**	**30.3**	**0.359**	**0.217**	**-0.10**	**0.367**	**0.222**	**23.1**	**22.9**
	1:8 Duty Cycle	810/1910	30.3	0.177	0.109	-0.02	0.181	0.112	23.1	22.9

Table 4: SAR measurement results for the portable cellular telephone FCC ID PY7AC052014 model Z525A at maximum output power with Standard Battery BST-37. Measured against the body with carry accessory 20MM Spacer.

Prepared (also subject responsible if other)		No.	
SEM/CV/PF/P Gerard Hayes and Rodney Dixon		REP 2006 001 Z525A 01	
Approved	Checked		
SEM/CV/PF/P Gerard Hayes		A	X:\SAR Chamber\FCC reports\Z525A\Final

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).

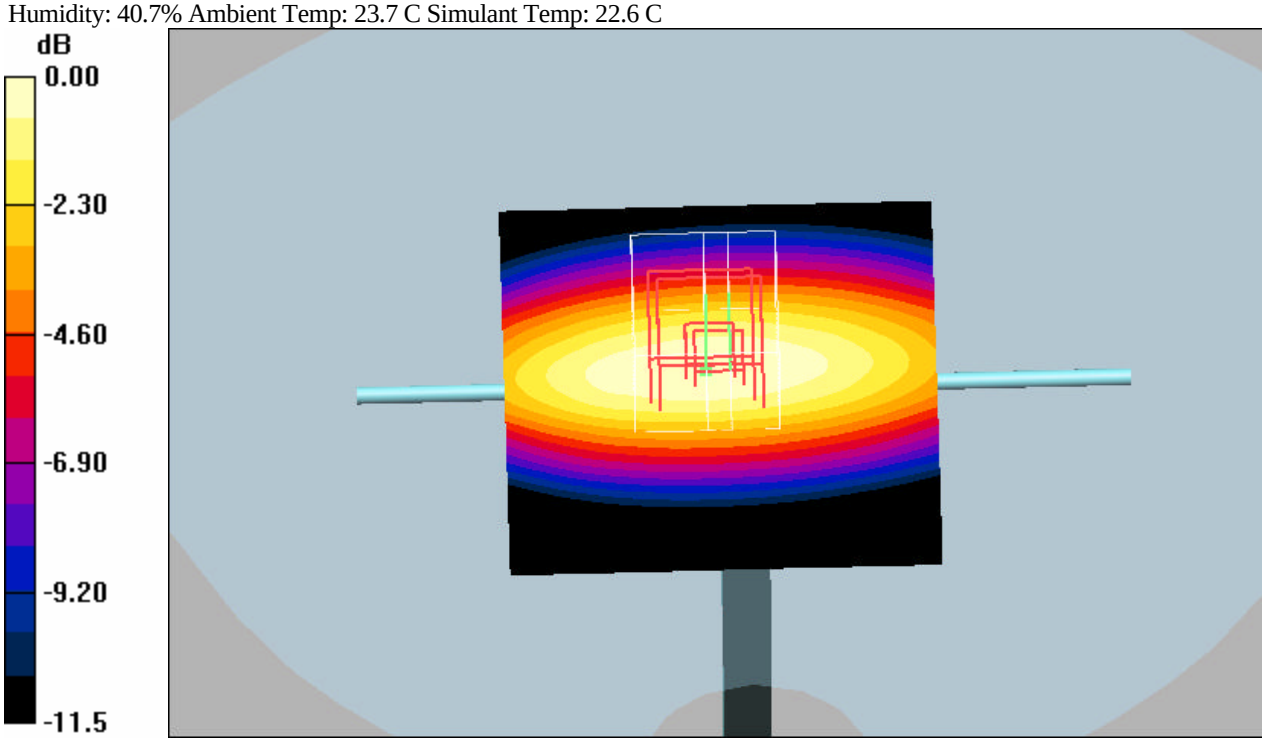
[2] IEEE, "Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Body Due to Wireless Communications Devices: Experimental Techniques," Std 1528-200X, Draft 6.5 – August 20, 2001.

Appendix 1

SAR distribution comparison for the system accuracy verification

Prepared (also subject responsible if other)	No.	
SEM/CV/PF/P Gerard Hayes and Rodney Dixon	REP 2006 001 Z525A 01	
Approved / Checked		
SEM/CV/PF/P Gerard Hayes	A	X:\SAR Chamber\FCC reports\Z525A\Final

835 MHz SAR Distribution of Validation Dipole Antenna
System Performance Check on August 26, 2005 (Using head tissue).
Validation_835Head_438_1251_26Aug05_T01
File Name: Validation_835Head_438_1251_26Aug05_T01.da4
Phantom: SAM with CRP (Low Band Head)Phantom section: Flat Section
Probe: ET3DV6 - SN1586ConvF(6.58, 6.58, 6.58)Duty Cycle: 1:1Frequency: 835 MHz
Medium parameters used: f = 835 MHz; s = 0.913 mho/m; e_r = 41.9; ? = 1000 kg/m^3
Measurement Standard: DASY4 (High Precision Assessment)
Dipole at 10 mm/Area Scan (61x61x1):
Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 1.08 mW/g
Dipole at 10 mm/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 36.0 V/m; Power Drift = -0.013 dB
Peak SAR (extrapolated) = 1.67 W/kg
SAR(1 g) = 1.02 mW/g; SAR(10 g) = 0.629 mW/g
Maximum value of SAR (measured) = 1.11 mW/g
Dipole at 10 mm/Zoom Scan 2 (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 36.0 V/m; Power Drift = -0.013 dB
Peak SAR (extrapolated) = 1.61 W/kg
SAR(1 g) = 0.995 mW/g; SAR(10 g) = 0.614 mW/g
Maximum value of SAR (measured) = 1.06 mW/g
Procedure Notes: Pin: before 99.7mW / after 99.8mW
Humidity: 40.7% Ambient Temp: 23.7 C Simulant Temp: 22.6 C

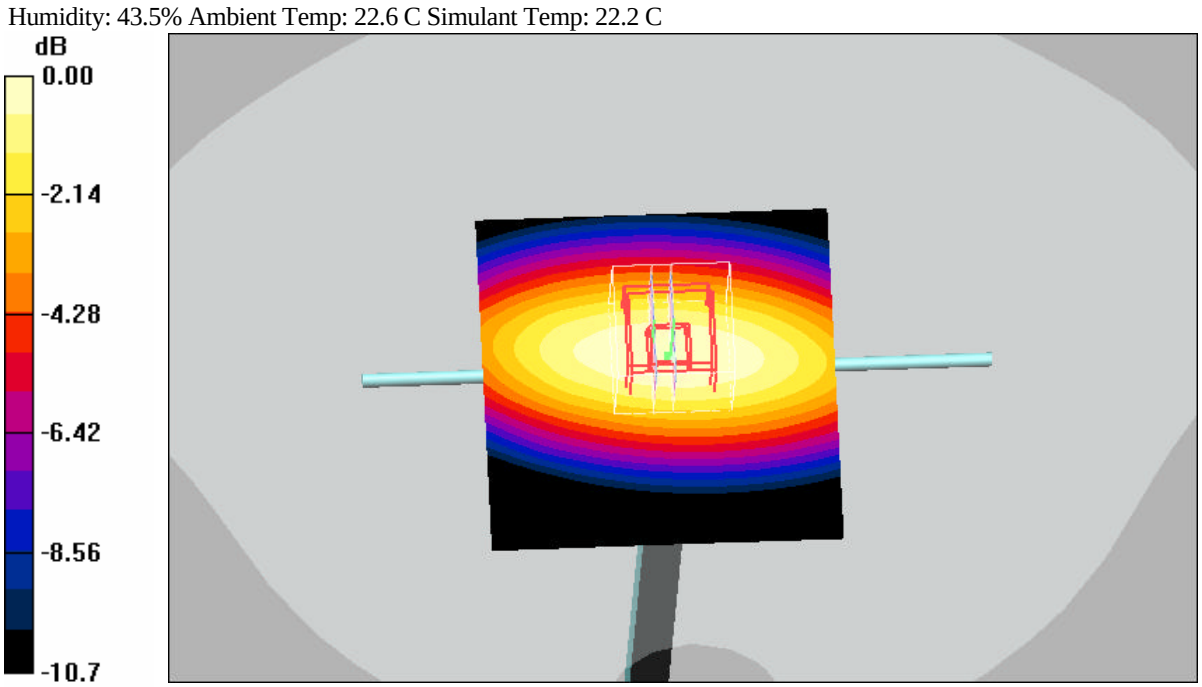


0 dB = 1.06mW/g

Prepared (also subject responsible if other)	No.	
SEM/CV/PF/P Gerard Hayes and Rodney Dixon	REP 2006 001 Z525A 01	
Approved / Checked	A	X:\SAR Chamber\FCC reports\Z525A\Final
SEM/CV/PF/P Gerard Hayes		

835 MHz SAR Distribution of Validation Dipole Antenna
System Performance Check on August 28, 2005 (Using head tissue).
Validation_835Head_438_1251_28Aug05_T01

File Name: Validation_835Head_438_1251_28Aug05_T01.da4
Phantom: SAM with CRP (Low Band Head)Phantom section: Flat Section
Probe: ET3DV6 - SN1586ConvF(6.58, 6.58, 6.58)Duty Cycle: 1:1Frequency: 835 MHz
Medium parameters used: f = 835 MHz; s = 0.877 mho/m; e_r = 40.2; ? = 1000 kg/m^3
Measurement Standard: DASY4 (High Precision Assessment)
Dipole at 10 mm/Area Scan (61x61x1):
Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.951 mW /g
Dipole at 10 mm/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 34.0 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 1.32 W/kg
SAR(1 g) = 0.889 mW/g; SAR(10 g) = 0.579 mW/g
Maximum value of SAR (measured) = 0.955 mW/g
Dipole at 10 mm/Zoom Scan 2 (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 34.0 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 1.31 W/kg
SAR(1 g) = 0.874 mW/g; SAR(10 g) = 0.571 mW/g
Maximum value of SAR (measured) = 0.936 mW/g
Procedure Notes: Pin: before 101.4mW / after 101.2mW
Humidity: 43.5% Ambient Temp: 22.6 C Simulant Temp: 22.2 C



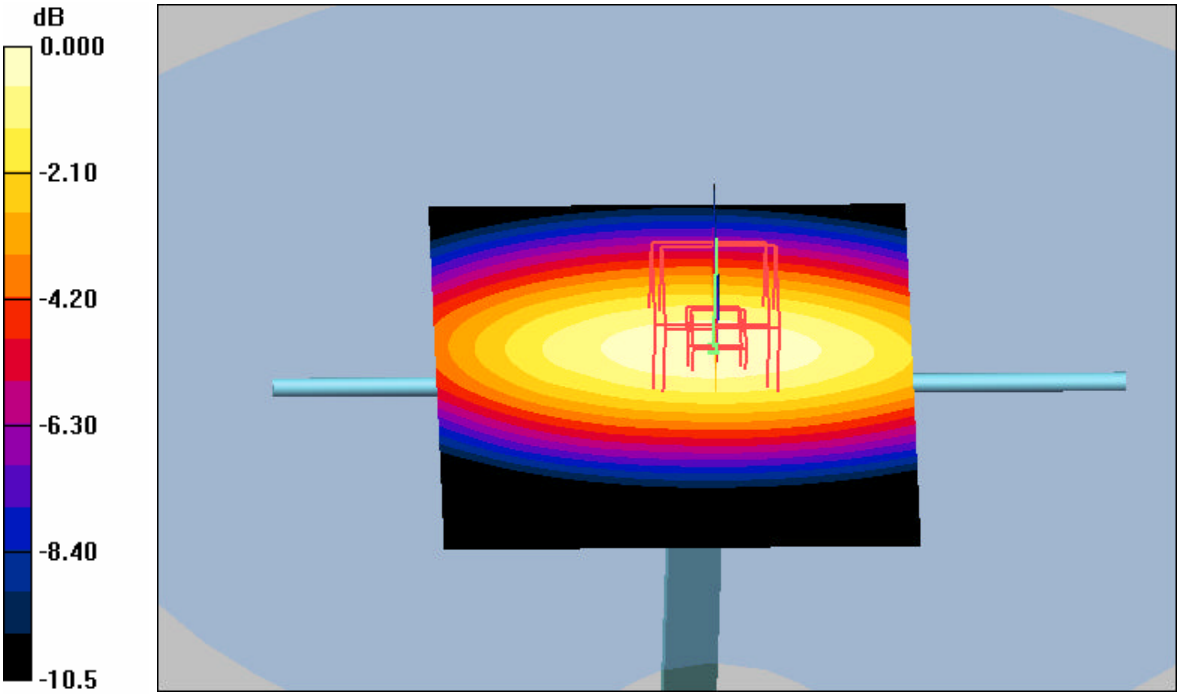
0 dB = 0.936mW/g

Prepared (also subject responsible if other)	No.	
SEM/CV/PF/P Gerard Hayes and Rodney Dixon	REP 2006 001 Z525A 01	
Approved / Checked		
SEM/CV/PF/P Gerard Hayes	A	X:\SAR Chamber\FCC reports\Z525A\Final

835 MHz SAR Distribution of Validation Dipole Antenna
System Performance Check on February 14, 2005 (Using head tissue).

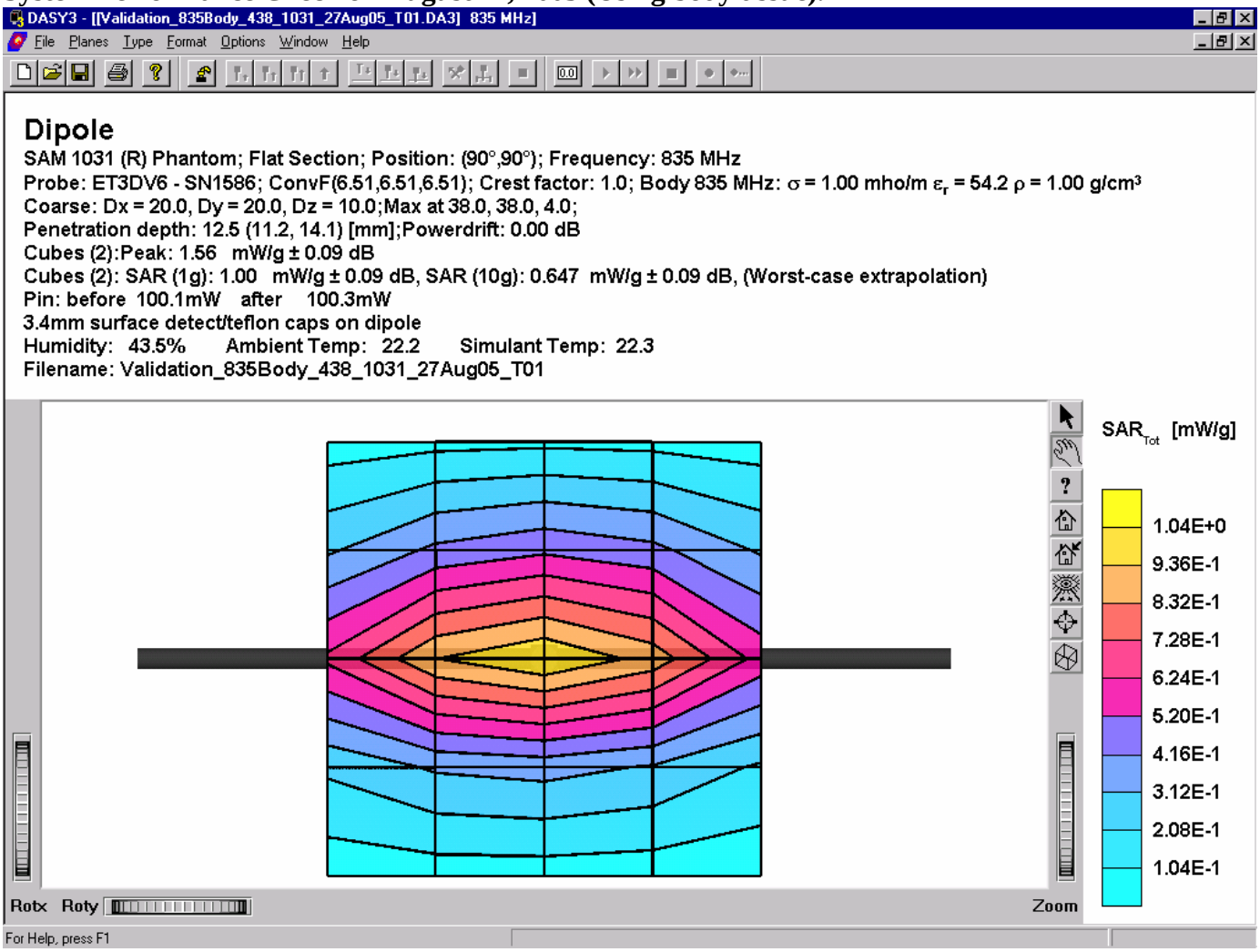
Validation_835Head_429_1251_14Feb06_T01

File Name: Validation_835Head_429_1251_14Feb06_T01.da4
Phantom: SAM with CRP (Low Band Head)Phantom section: Flat Section
Probe: ET3DV6 - SN1586ConvF(6.58, 6.58, 6.58)Duty Cycle: 1:1Frequency: 835 MHz
Medium parameters used: f = 835 MHz; s = 0.898 mho/m; e_r = 41.6; ? = 1000 kg/m^3
Measurement Standard: DASY4 (High Precision Assessment)
Dipole at 10 mm/Area Scan (61x61x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.954 mW/g
Dipole at 10 mm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 33.6 V/m; Power Drift = 0.039 dB
Peak SAR (extrapolated) = 1.34 W/kg
SAR(1 g) = 0.896 mW/g; SAR(10 g) = 0.585 mW/g
Maximum value of SAR (measured) = 0.973 mW/g
Dipole at 10 mm/Zoom Scan 2 (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 33.6 V/m; Power Drift = 0.039 dB
Peak SAR (extrapolated) = 1.36 W/kg
SAR(1 g) = 0.907 mW/g; SAR(10 g) = 0.589 mW/g
Maximum value of SAR (measured) = 0.979 mW/g
Procedure Notes: Pin: before 100.2 mW / after 100.1 mW Humidity: 30.9% Ambient Temp: 23.3 C Simulant Temp: 22.5 C



0 dB = 0.979mW/g

835 MHz SAR Distribution of Validation Dipole Antenna
System Performance Check on August 27, 2005 (Using body tissue).



835 MHz SAR Distribution of Validation Dipole Antenna

System Performance Check on January 29, 2006 PTT (Using head tissue).

Validation_835Head_429_1251_29Jan06_T01

File Name: Validation_835Head_429_1251_29Jan06_T01.da4

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

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

Medium parameters used: f = 835 MHz; s = 0.898 mho/m; e_r = 41.4; ? = 1000 kg/m^3

Measurement Standard: DASY4 (High Precision Assessment)

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

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

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

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

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

Reference Value = 33.4 V/m; Power Drift = 0.011 dB

Peak SAR (extrapolated) = 1.33 W/kg

SAR(1 g) = 0.893 mW/g; SAR(10 g) = 0.583 mW/g

Maximum value of SAR (measured) = 0.966 mW/g

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

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

Reference Value = 33.4 V/m; Power Drift = 0.011 dB

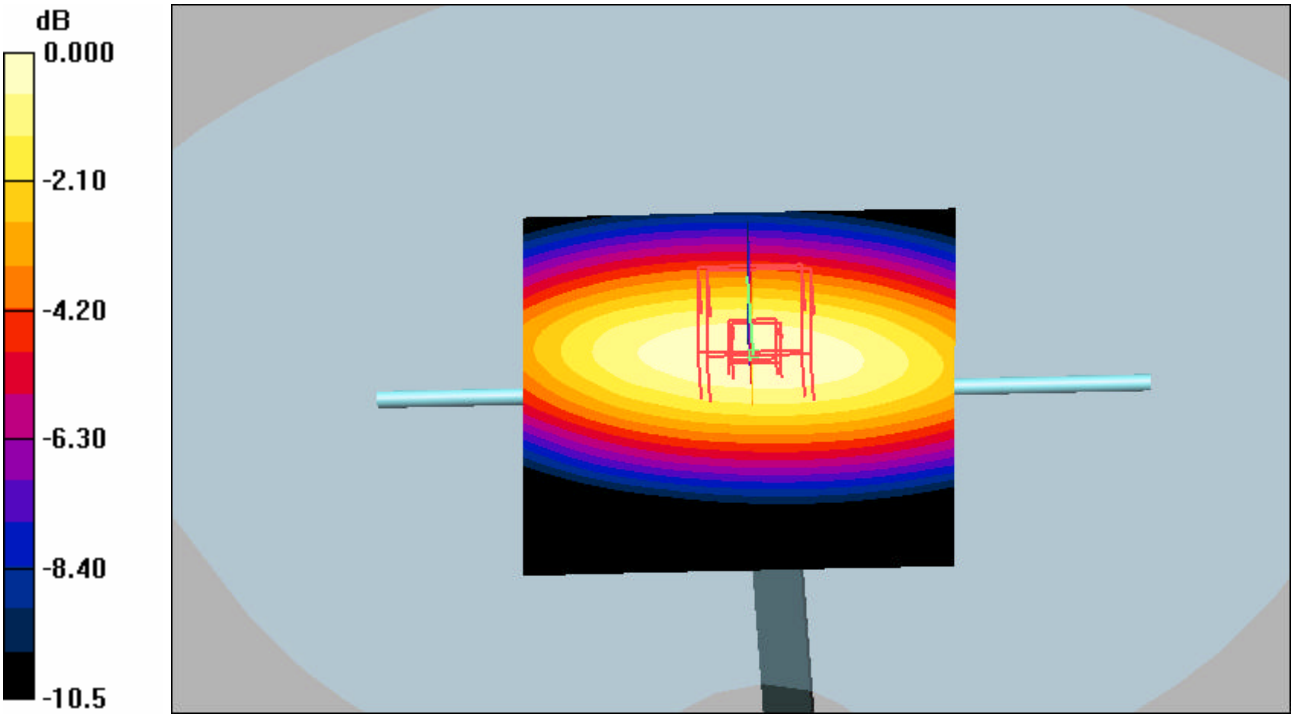
Peak SAR (extrapolated) = 1.32 W/kg

SAR(1 g) = 0.882 mW/g; SAR(10 g) = 0.574 mW/g

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

Procedure Notes: Pin: before 100.6 mW / after 100.8 mW

Humidity: 30.2% Ambient Temp: 24.2 C Simulant Temp: 24.2 C



0 dB = 0.953mW/g

900 MHz SAR Distribution of Validation Dipole Antenna

System Performance Check on August 24, 2005 (Using head tissue).

Validation_900Head_035_1251_24Aug05_T01

File Name: Validation_900Head_035_1251_24Aug05_T01.da4

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

Probe: ET3DV6 - SN1586ConvF(6.46, 6.46, 6.46)Duty Cycle: 1:1Frequency: 900 MHz

Medium parameters used: f = 900 MHz; s = 0.974 mho/m; e_r = 41.6; ? = 1000 kg/m^3

Measurement Standard: DASY4 (High Precision Assessment)

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

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

Maximum value of SAR (interpolated) = 1.09 mW/g

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

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

Reference Value = 34.5 V/m; Power Drift = -0.00 dB

Peak SAR (extrapolated) = 1.52 W/kg

SAR(1 g) = 1.01 mW/g; SAR(10 g) = 0.647 mW/g

Maximum value of SAR (measured) = 1.09 mW/g

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

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

Reference Value = 34.5 V/m; Power Drift = -0.00 dB

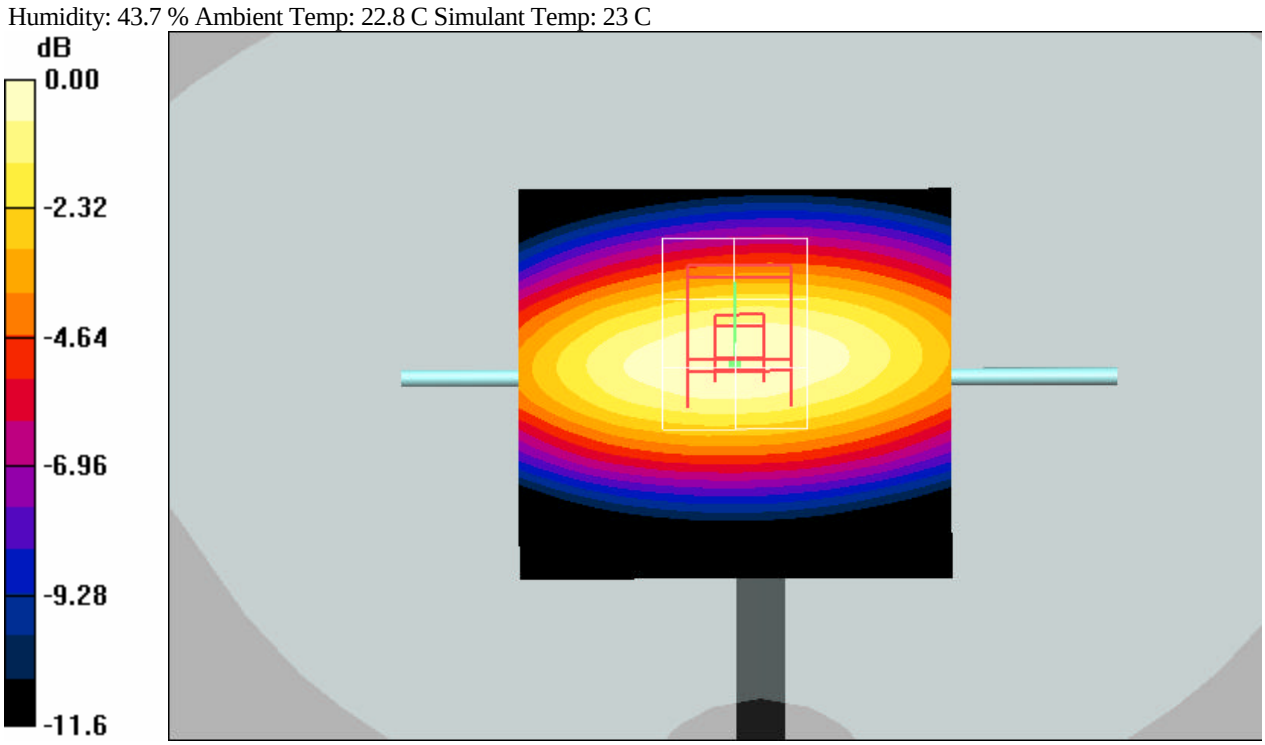
Peak SAR (extrapolated) = 1.50 W/kg

SAR(1 g) = 0.980 mW/g; SAR(10 g) = 0.628 mW/g

Maximum value of SAR (measured) = 1.07 mW/g

Procedure Notes: Pin: before - 100.7 mW after - 100.4 mW

Humidity: 43.7 % Ambient Temp: 22.8 C Simulant Temp: 23 C



0 dB = 1.07mW/g

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900 MHz SAR Distribution of Validation Dipole Antenna
System Performance Check on August 25, 2005 (Using body tissue).

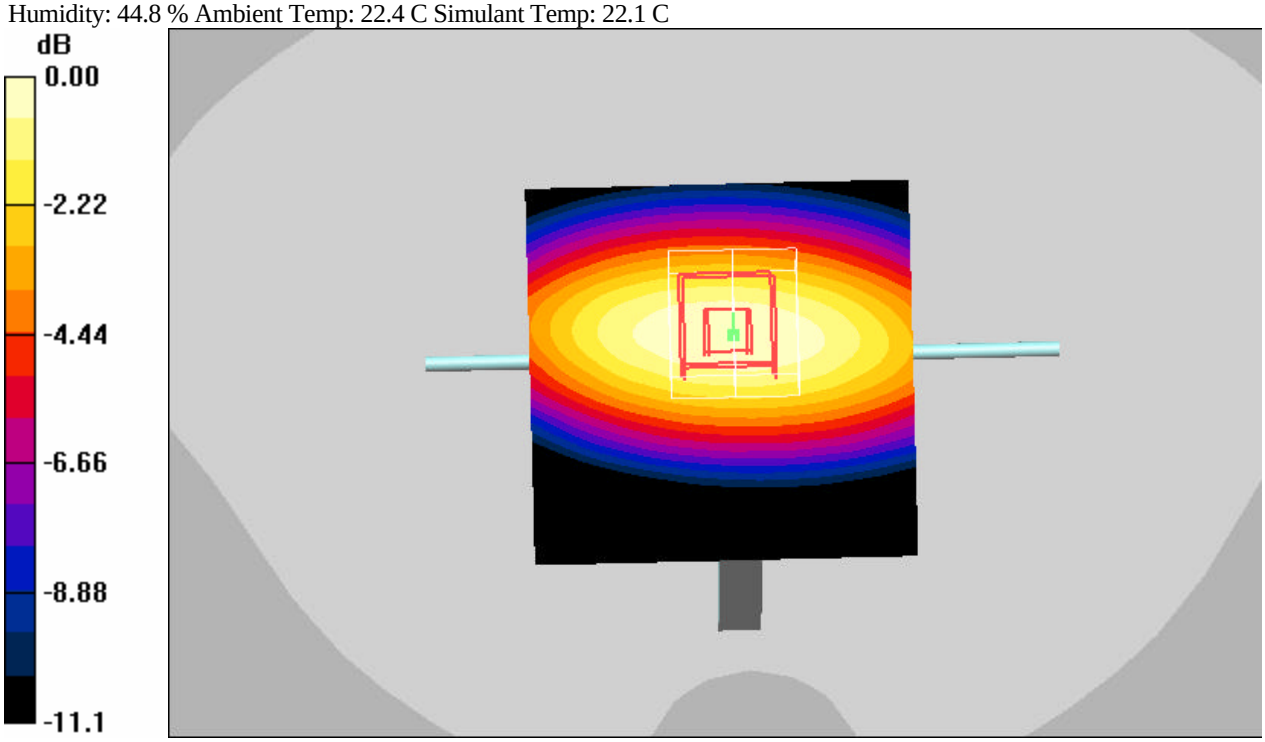
Validation_900Body_035_1251_25Aug05_T01

File Name: Validation_900Body_035_1251_25Aug05_T01.da4
Phantom: SAM with CRP (Low Band Head)Phantom section: Flat Section
Probe: ET3DV6 - SN1586ConvF(6.46, 6.46, 6.46)Duty Cycle: 1:1Frequency: 900 MHz
Medium parameters used: f = 900 MHz; s = 0.938 mho/m; e_r = 39.9; ? = 1000 kg/m^3
Measurement Standard: DASY4 (High Precision Assessment)

Dipole at 10 mm/Area Scan (61x61x1):
Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 1.06 mW/g

Dipole at 10 mm/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 34.4 V/m; Power Drift = 0.056 dB
Peak SAR (extrapolated) = 1.50 W/kg
SAR(1 g) = 0.992 mW/g; SAR(10 g) = 0.635 mW/g
Maximum value of SAR (measured) = 1.08 mW/g

Dipole at 10 mm/Zoom Scan 2 (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 34.4 V/m; Power Drift = 0.056 dB
Peak SAR (extrapolated) = 1.48 W/kg
SAR(1 g) = 0.983 mW/g; SAR(10 g) = 0.630 mW/g
Maximum value of SAR (measured) = 1.06 mW/g
Procedure Notes: Pin: before - 100.5 mW after - 100.6mW
Humidity: 44.8 % Ambient Temp: 22.4 C Simulant Temp: 22.1 C



0 dB = 1.06mW/g

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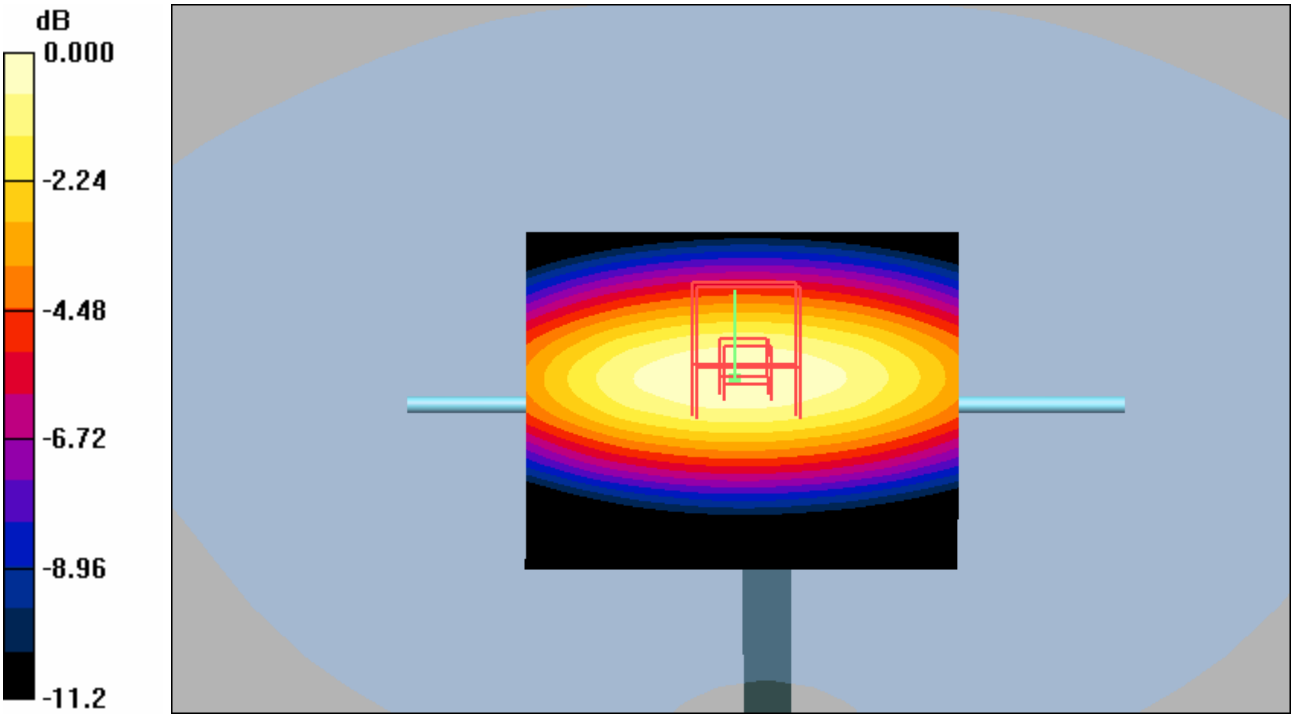
900 MHz SAR Distribution of Validation Dipole Antenna
System Performance Check on February 01, 2006 PTT (Using head tissue).
Validation_900Head_049_1251_01Feb06_T01

File Name: Validation_900Head_049_1251_01Feb06_T01.da4
Phantom: SAM with CRP (Low Band Head)Phantom section: Flat Section
Probe: ET3DV6 - SN1586ConvF(6.46, 6.46, 6.46)Duty Cycle: 1:1Frequency: 900 MHz
Medium parameters used: f = 900 MHz; s = 0.953 mho/m; e_r = 40.2; ? = 1000 kg/m^3
Measurement Standard: DASY4 (High Precision Assessment)
Dipole at 10 mm/Area Scan (61x61x1):
Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 1.08 mW/g
Dipole at 10 mm/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 34.9 V/m; Power Drift = 0.018 dB
Peak SAR (extrapolated) = 1.53 W/kg
SAR(1 g) = 1.01 mW/g; SAR(10 g) = 0.649 mW/g
Maximum value of SAR (measured) = 1.10 mW/g
Dipole at 10 mm/Zoom Scan 2 (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 34.9 V/m; Power Drift = 0.018 dB
Peak SAR (extrapolated) = 1.51 W/kg
SAR(1 g) = 0.995 mW/g; SAR(10 g) = 0.636 mW/g
Maximum value of SAR (measured) = 1.08 mW/g
Procedure Notes: Pin: before - 99.6 mW after - 100.2 mW
Humidity: 30.4 % Ambient Temp: 24.6 C Simulant Temp: 24.5 C



0 dB = 1.08mW/g

1800 MHz SAR Distribution of Validation Dipole Antenna
System Performance Check on August 27, 2005 (Using head tissue).

Validation_1800Head_238_1335_27Aug05_T01

File Name: Validation_1800Head_238_1335_27Aug05_T01.da4

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

Probe: ET3DV6 - SN1587ConvF(5.45, 5.45, 5.45)Duty Cycle: 1:1Frequency: 1800 MHz

Medium parameters used: f = 1800 MHz; s = 1.4 mho/m; e_r = 39.2; ? = 1000 kg/m^3

Measurement Standard: DASY4 (High Precision Assessment)

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

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

Maximum value of SAR (interpolated) = 4.53 mW/g

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

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

Reference Value = 57.0 V/m; Power Drift = 0.013 dB

Peak SAR (extrapolated) = 6.18 W/kg

SAR(1 g) = 3.63 mW/g; SAR(10 g) = 1.96 mW/g

Maximum value of SAR (measured) = 4.10 mW/g

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

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

Reference Value = 57.0 V/m; Power Drift = 0.013 dB

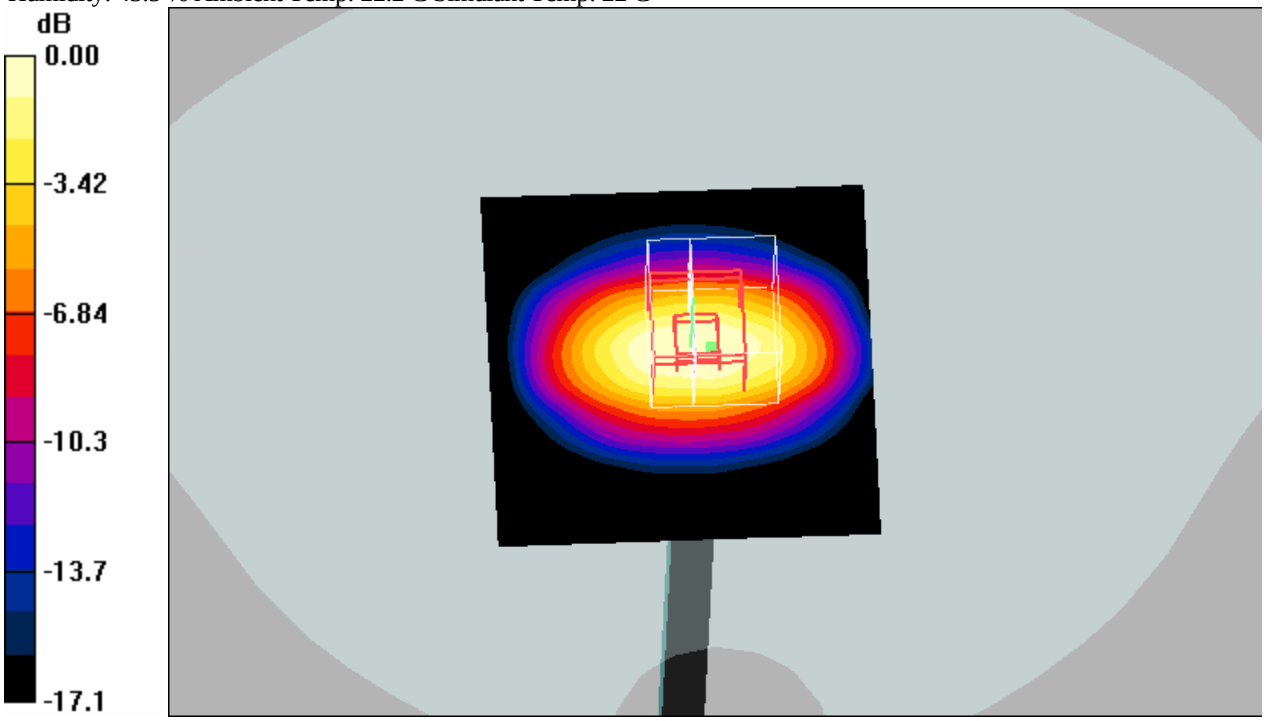
Peak SAR (extrapolated) = 6.19 W/kg

SAR(1 g) = 3.64 mW/g; SAR(10 g) = 1.96 mW/g

Maximum value of SAR (measured) = 4.13 mW/g

Procedure Notes: Pin: before 100.1 mW / after 100.2 mW

Humidity: 43.5 % Ambient Temp: 22.2 C Simulant Temp: 22 C



0 dB = 4.13mW/g

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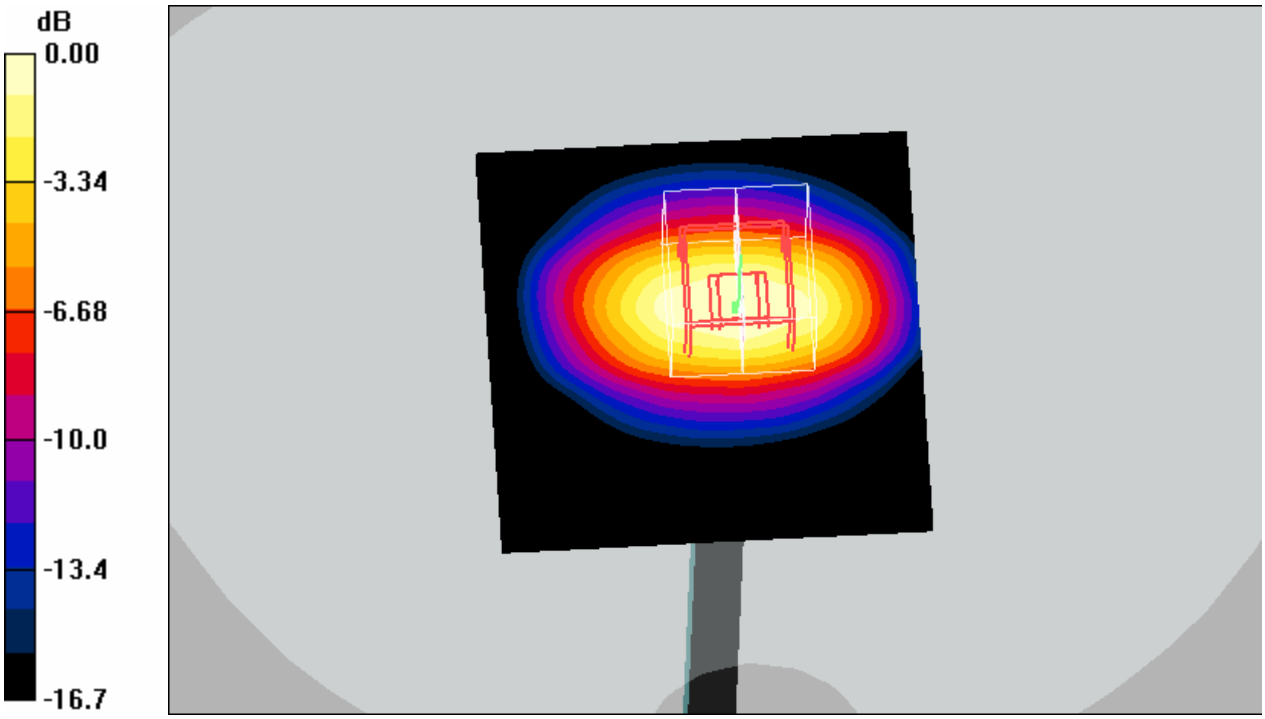
1800 MHz SAR Distribution of Validation Dipole Antenna
System Performance Check on August 26, 2005 (Using body tissue).
Validation_1800Body_238_1335_26Aug05_T01
File Name: Validation_1800Body_238_1335_26Aug05_T01.da4
Phantom: SAM with CRP (High Band Head)Phantom section: Flat Section
Probe: ET3DV6 - SN1587ConvF(5.45, 5.45, 5.45)Duty Cycle: 1:1Frequency: 1800 MHz
Medium parameters used: f = 1800 MHz; s = 1.38 mho/m; e_r = 39.1; ? = 1000 kg/m^3
Measurement Standard: DASY4 (High Precision Assessment)
Dipole at 10 mm/Area Scan (61x61x1):
Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 4.64 mW/g
Dipole at 10 mm/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 55.7 V/m; Power Drift = -0.00 dB
Peak SAR (extrapolated) = 6.16 W/kg
SAR(1 g) = 3.56 mW/g; SAR(10 g) = 1.91 mW/g
Maximum value of SAR (measured) = 4.05 mW/g
Dipole at 10 mm/Zoom Scan 2 (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 55.7 V/m; Power Drift = -0.00 dB
Peak SAR (extrapolated) = 6.11 W/kg
SAR(1 g) = 3.55 mW/g; SAR(10 g) = 1.9 mW/g
Procedure Notes: Pin: before 100.6 mW / after 101.2 mW
Humidity: 51.5 % Ambient Temp: 22.2 C Simulant Temp: 21 C



0 dB = 4.05mW/g

Exhibit 11

1800 MHz SAR Distribution of Validation Dipole Antenna

System Performance Check on January 31, 2006 PTT (Using head tissue).

Validation_1800Head_217_1335_31Jan06_T01

File Name: Validation_1800Head_217_1335_31Jan06_T01.da4

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

Probe: ET3DV6 - SN1539ConvF(4.76, 4.76, 4.76)Duty Cycle: 1:1Frequency: 1800 MHz

Medium parameters used: f = 1800 MHz; s = 1.38 mho/m; e_r = 38.8; ? = 1000 kg/m^3

Measurement Standard: DASY4 (High Precision Assessment)

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

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

Maximum value of SAR (interpolated) = 4.55 mW/g

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

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

Reference Value = 58.1 V/m; Power Drift = -0.009 dB

Peak SAR (extrapolated) = 6.47 W/kg

SAR(1 g) = 3.69 mW/g; SAR(10 g) = 1.97 mW/g

Maximum value of SAR (measured) = 4.11 mW/g

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

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

Reference Value = 58.1 V/m; Power Drift = -0.009 dB

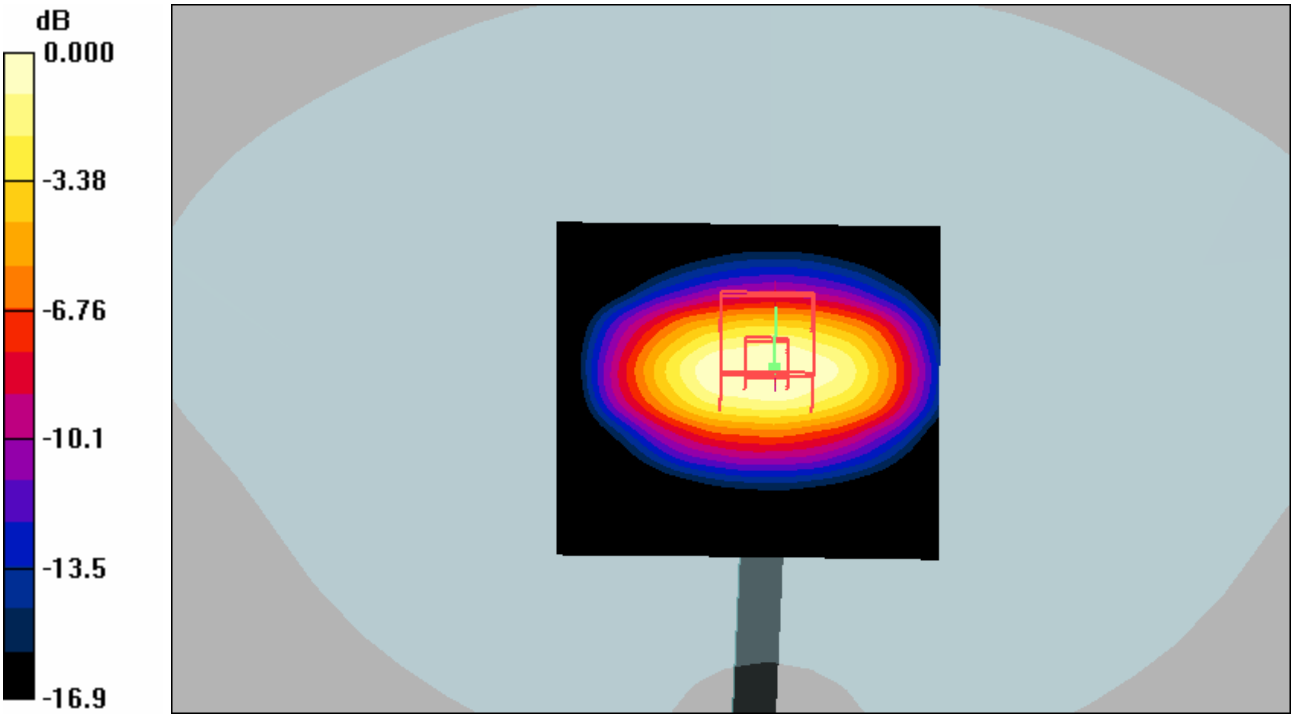
Peak SAR (extrapolated) = 6.29 W/kg

SAR(1 g) = 3.58 mW/g; SAR(10 g) = 1.91 mW/g

Maximum value of SAR (measured) = 4.00 mW/g

Procedure Notes: Pin: before 100.0 mW / after 100.1 mW

Humidity: 31.4% Ambient Temp: 24.6 C Simulant Temp: 21.7 C



0 dB = 4.00mW/g

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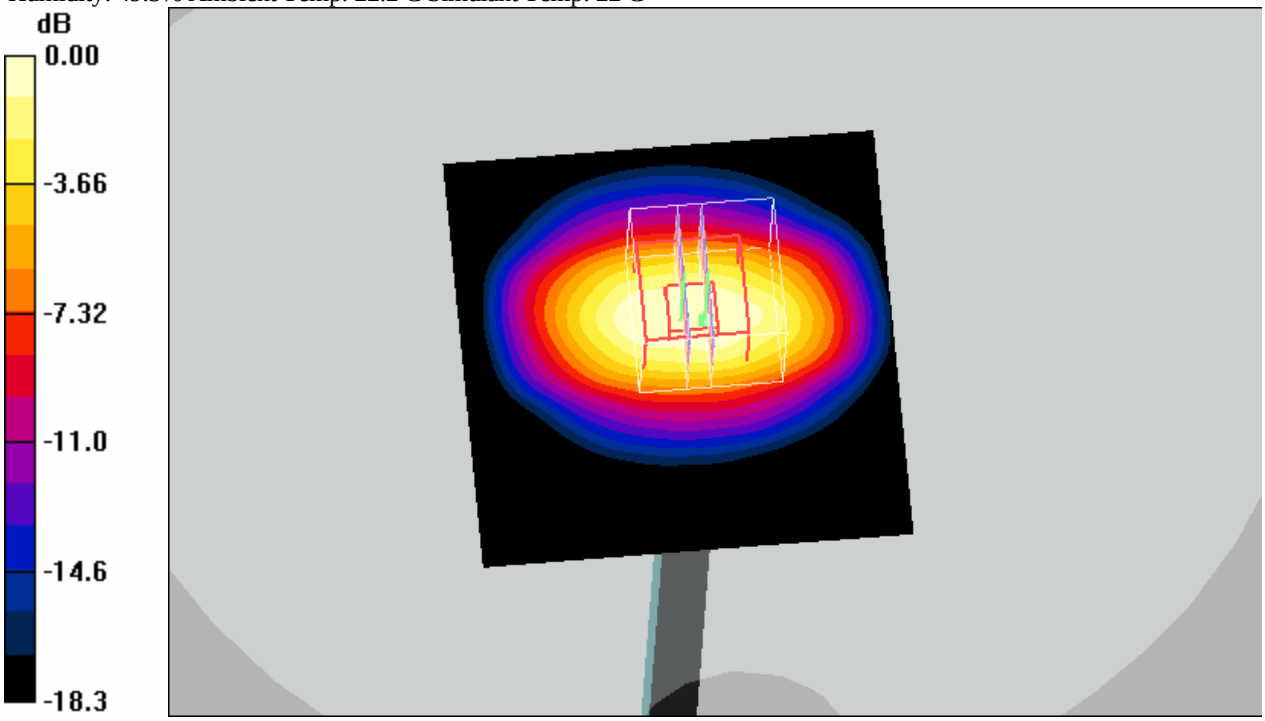
1900 MHz SAR Distribution of Validation Dipole Antenna
System Performance Check on August 25, 2005 (Using head tissue).
Validation_1900Head_536_1335_25Aug05_T01
File Name: Validation_1900Head_536_1335_25Aug05_T01.da4
Phantom: SAM with CRP (High Band Head)Phantom section: Flat Section
Probe: ET3DV6 - SN1587ConvF(5.05, 5.05, 5.05)Duty Cycle: 1:1Frequency: 1900 MHz
Medium parameters used: f = 1900 MHz; s = 1.47 mho/m; e_r = 38.3; ? = 1000 kg/m^3
Measurement Standard: DASY4 (High Precision Assessment)
Dipole at 10 mm/Area Scan (61x61x1):
Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 5.19 mW/g
Dipole at 10 mm/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 58.8 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 7.10 W/kg
SAR(1 g) = 4.04 mW/g; SAR(10 g) = 2.12 mW/g
Maximum value of SAR (measured) = 4.51 mW/g
Dipole at 10 mm/Zoom Scan 2 (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 58.8 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 7.18 W/kg
SAR(1 g) = 4.07 mW/g; SAR(10 g) = 2.12 mW/g
Maximum value of SAR (measured) = 4.58 mW/g
Procedure Notes: Pin: before 100.4 mW / after 100.9 mW
Humidity: 49.5% Ambient Temp: 22.2 C Simulant Temp: 22 C



0 dB = 4.58mW/g

Exhibit 11

1900 MHz SAR Distribution of Validation Dipole Antenna
System Performance Check on February 14, 2006 (Using head tissue).
Validation_1900Head_537_1335_14Feb06_T01

File Name: Validation_1900Head_537_1335_14Feb06_T01.da4

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

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

Medium parameters used: f = 1900 MHz; s = 1.47 mho/m; e_r = 38.8; ? = 1000 kg/m^3

Measurement Standard: DASY4 (High Precision Assessment)

Dipole at 10 mm/Area Scan (61x61x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 5.21 mW/g

Dipole at 10 mm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 59.9 V/m; Power Drift = 0.019 dB

Peak SAR (extrapolated) = 7.36 W/kg

SAR(1 g) = 4.18 mW/g; SAR(10 g) = 2.17 mW/g

Maximum value of SAR (measured) = 4.69 mW/g

Dipole at 10 mm/Zoom Scan 2 (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

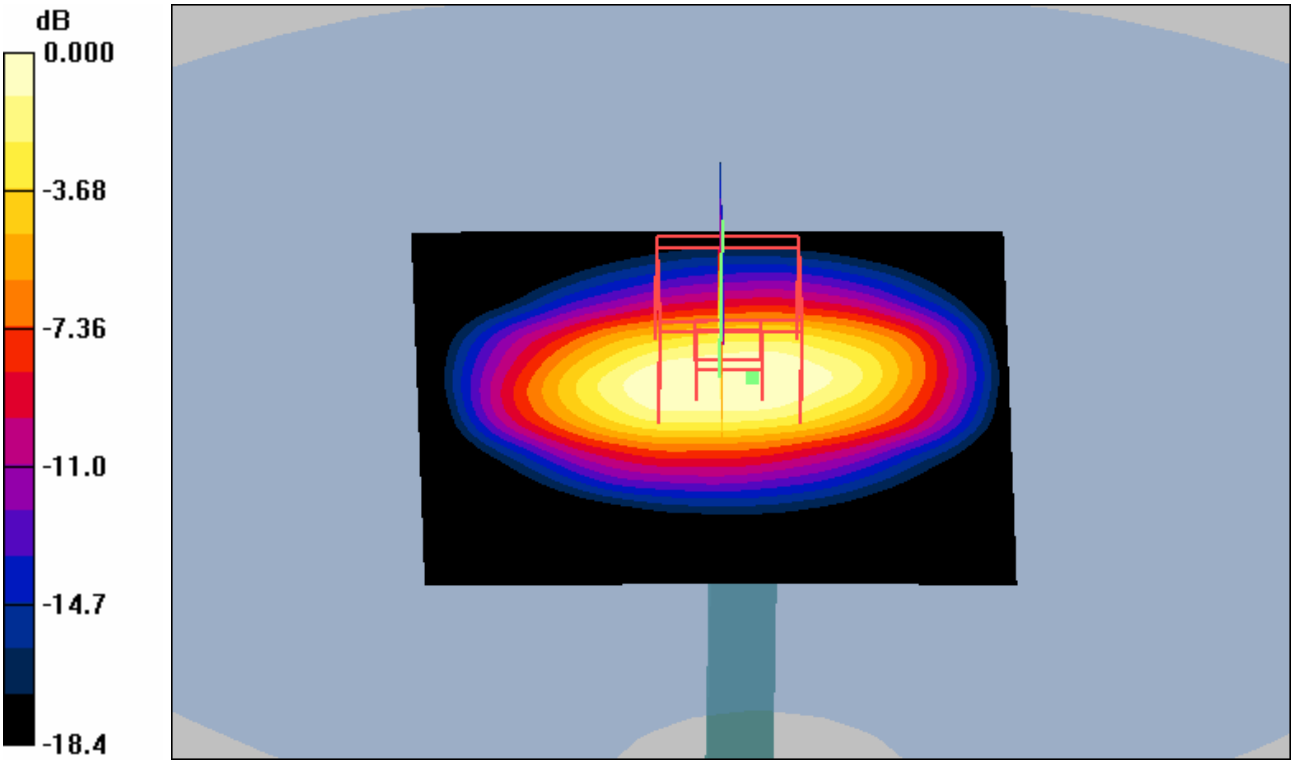
Reference Value = 59.9 V/m; Power Drift = 0.019 dB

Peak SAR (extrapolated) = 7.10 W/kg

SAR(1 g) = 4.03 mW/g; SAR(10 g) = 2.1 mW/g

Maximum value of SAR (measured) = 4.54 mW/g

Procedure Notes: Pin: before 100.1 mW / after 99.9 mW Humidity: 30.3% Ambient Temp: 22.9 C Simulant Temp: 23.2 C



0 dB = 4.54mW/g

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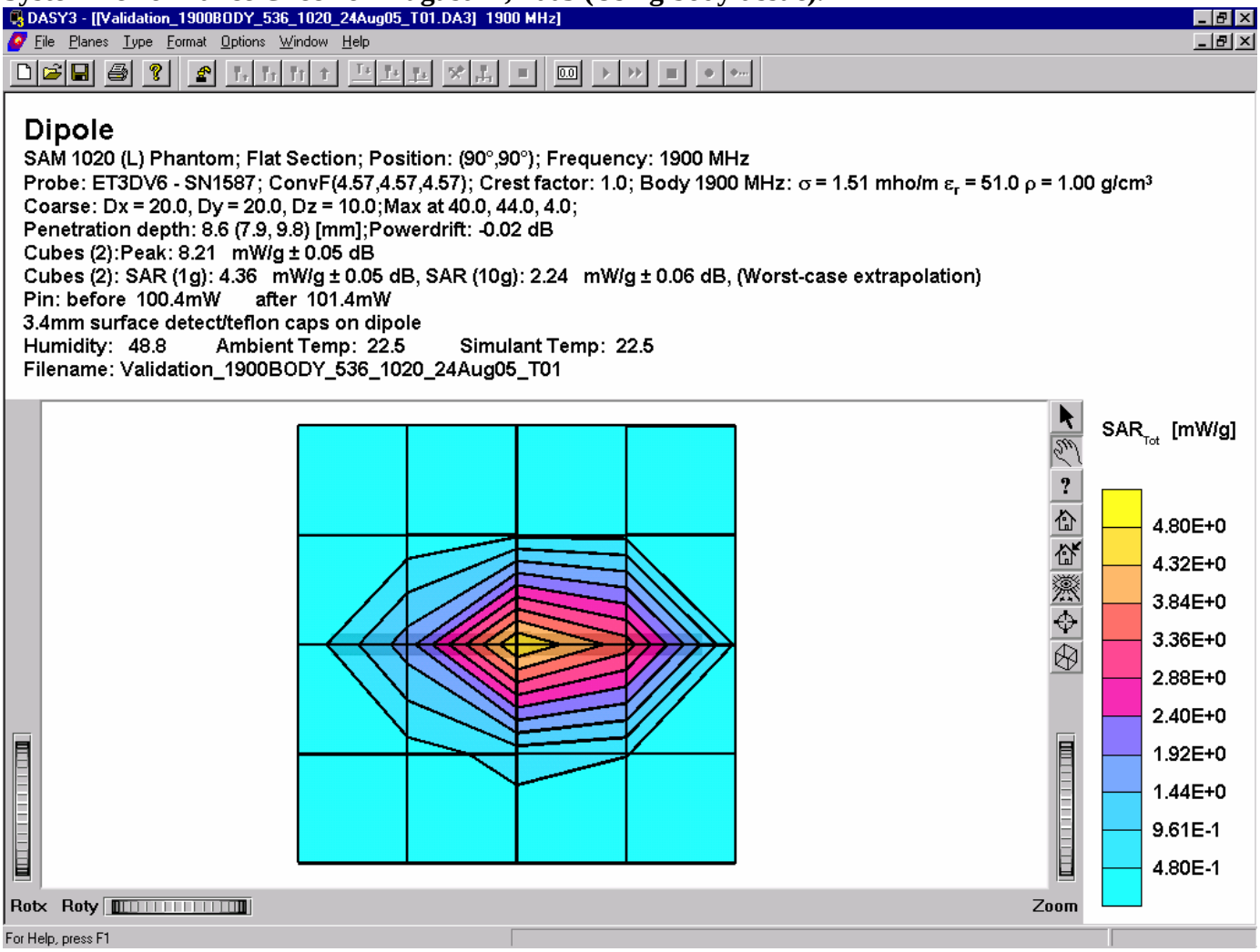
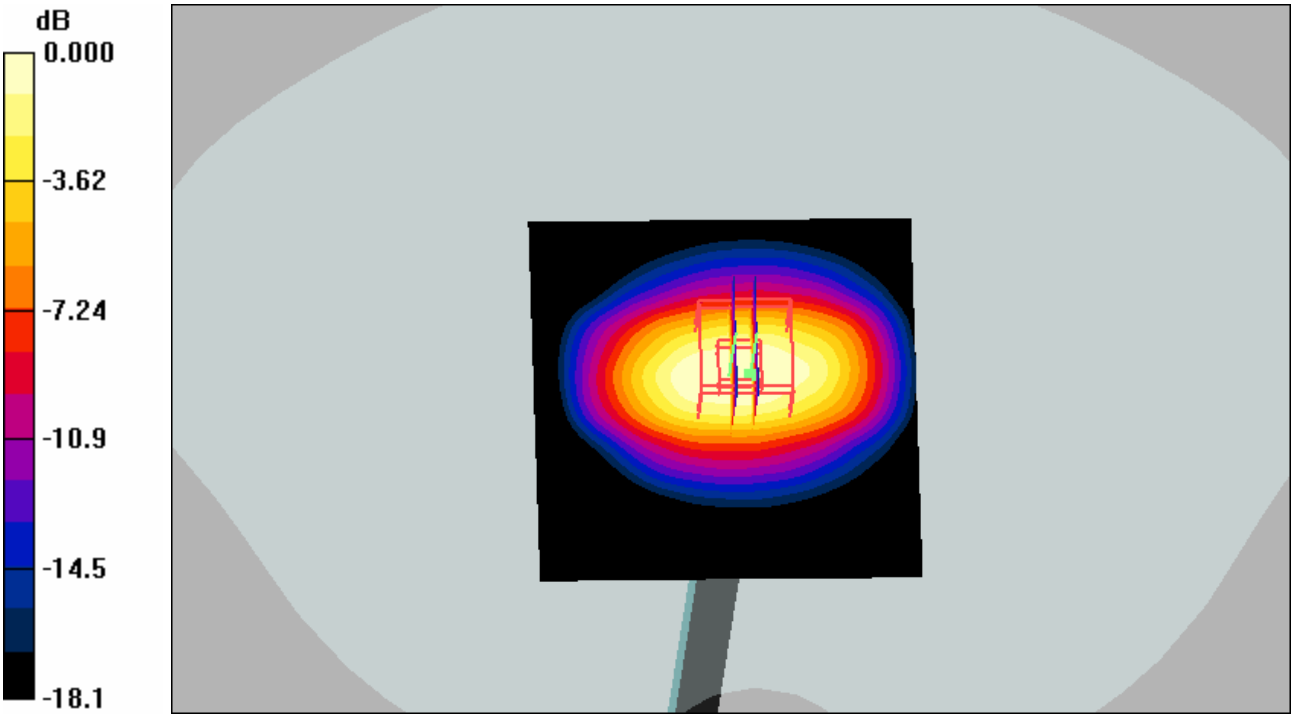
1900 MHz SAR Distribution of Validation Dipole Antenna
System Performance Check on August 24, 2005 (Using body tissue).



1900 MHz SAR Distribution of Validation Dipole Antenna
System Performance Check on January 29, 2006 PTT (Using head tissue).
Validation_1900Head_537_1335_29Jan06_T01

File Name: Validation_1900Head_537_1335_29Jan06_T01.da4
Phantom: SAM with CRP (High Band Head)Phantom section: Flat Section
Probe: ET3DV6 - SN1539ConvF(4.55, 4.55, 4.55)Duty Cycle: 1:1Frequency: 1900 MHz
Medium parameters used: f = 1900 MHz; s = 1.47 mho/m; e_r = 38.7; ? = 1000 kg/m^3
Measurement Standard: DASY4 (High Precision Assessment)
Dipole at 10 mm/Area Scan (61x61x1):
Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 5.16 mW/g
Dipole at 10 mm/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 59.7 V/m; Power Drift = 0.047 dB
Peak SAR (extrapolated) = 7.14 W/kg
SAR(1 g) = 4.1 mW/g; SAR(10 g) = 2.14 mW/g
Maximum value of SAR (measured) = 4.65 mW/g
Dipole at 10 mm/Zoom Scan 2 (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 59.7 V/m; Power Drift = 0.047 dB
Peak SAR (extrapolated) = 6.95 W/kg
SAR(1 g) = 3.99 mW/g; SAR(10 g) = 2.1 mW/g
Maximum value of SAR (measured) = 4.43 mW/g
Procedure Notes: Pin: before 100.2 mW / after 100.4 mW
Humidity: 30.2% Ambient Temp: 24.2 C Simulant Temp: 24.2 C



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0 dB = 4.43mW/g

Appendix 2

SAR distribution plots for Phantom Head Adjacent Use

Prepared (also subject responsible if other)	No.	
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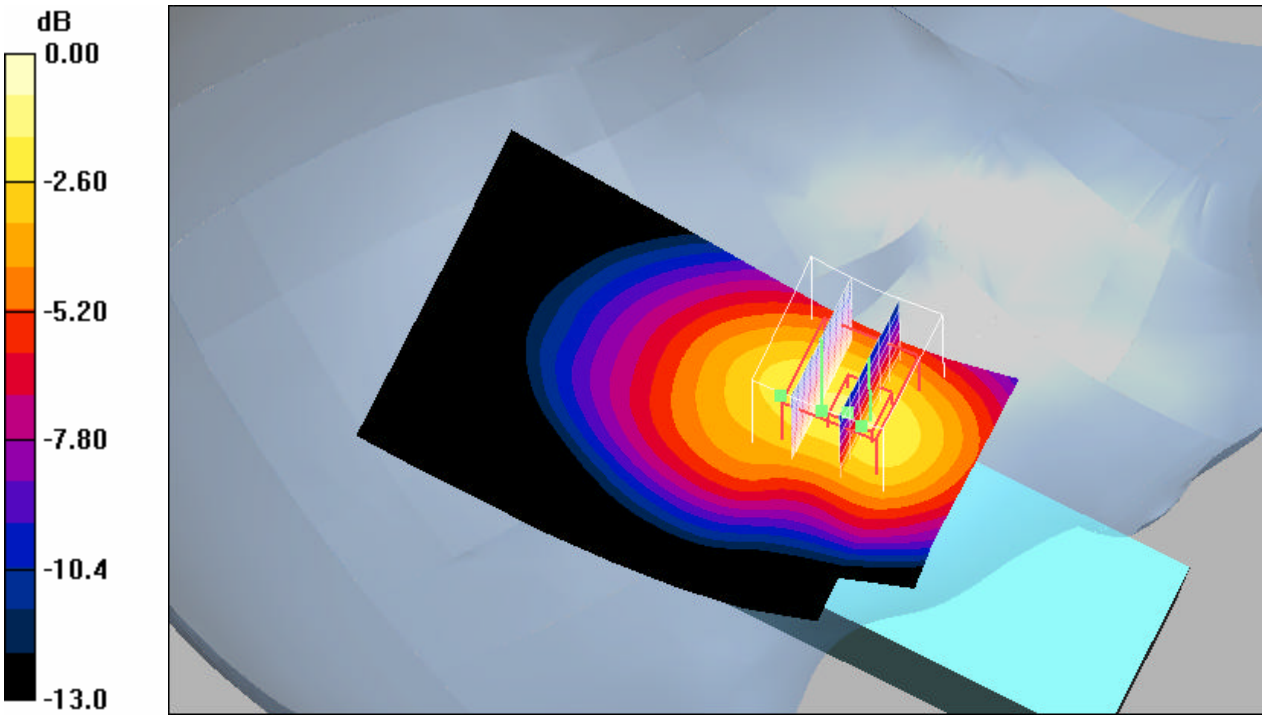
800 GSM Band: SAR Distribution and Extrapolation of Maximum SAR
Model: Z525A SN: BD30246HHE with Standard Battery: BST-37
Right Side, Cheek/Touch Position.

Date/Time: 8/28/2005 10:05:49 AMDate/Time: 8/28/2005 10:11:41 AM
File Name: 28Aug05_Z525A_GSM850_6HHE_RC01.da4
DUT: Z525A
Program Notes: Battery BST-37 Humidity: 43.5% Ambient Temp: 22.6 Simulant Temp: 22.2
Communication System: GSM 850; Frequency: 824 MHz;Duty Cycle: 1:8.3
Medium: Head 835/900 MHzMedium parameters used (interpolated): f = 824 MHz; s = 0.866 mho/m; e_r = 40.3; ? = 1000 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 Sn417; Calibrated: 11/11/2004
- Phantom: SAM with CRP (Low Band Head); Type: SAM; Serial: 1251
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

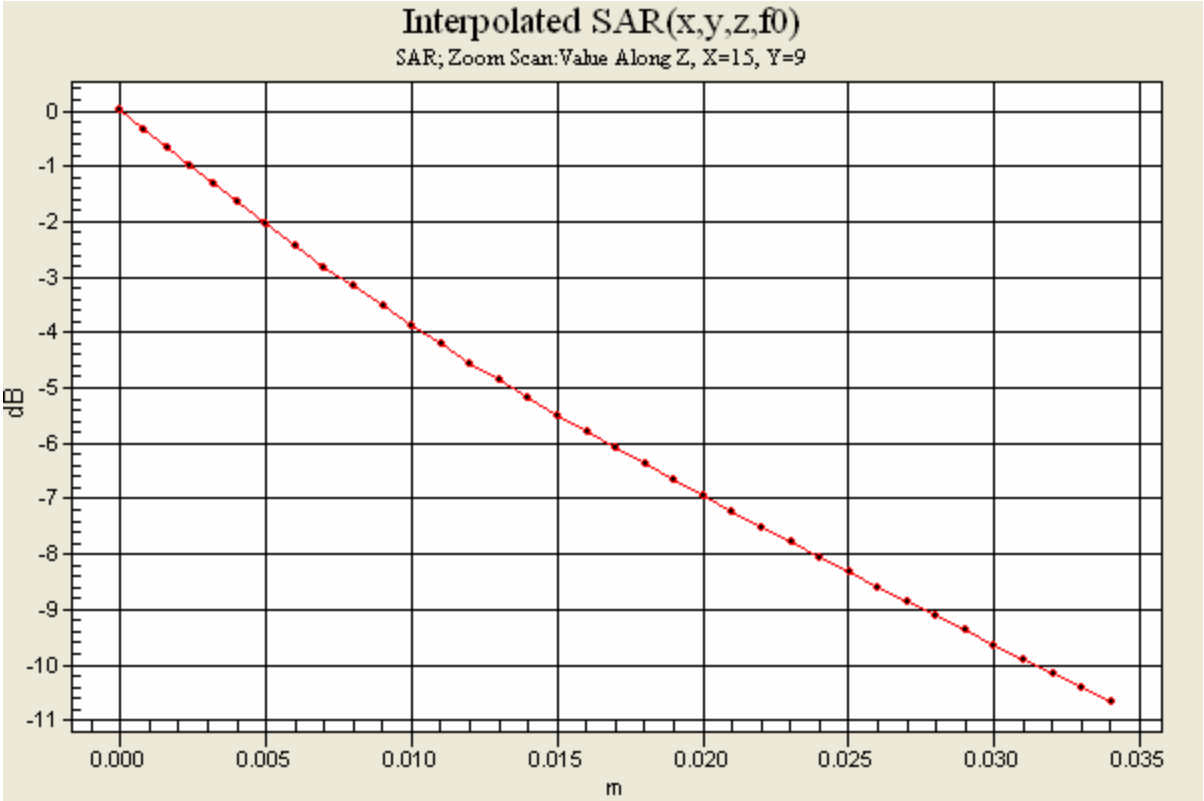
Unnamed procedure/Area Scan (51x81x1):
Measurement grid: dx=15mm, dy=15mm
Info: Interpolated medium parameters used for SAR evaluation!
Maximum value of SAR (interpolated) = 1.54 mW/g

Unnamed procedure/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 12.5 V/m; Power Drift = -0.060 dB
Peak SAR (extrapolated) = 2.23 W/kg
SAR(1 g) = 1.41 mW/g; SAR(10 g) = 0.914 mW/g
Info: Interpolated medium parameters used for SAR evaluation!
Maximum value of SAR (measured) = 1.54 mW/g

Unnamed procedure/Zoom Scan (31x31x36)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 12.5 V/m; Power Drift = -0.060 dB
Info: Interpolated medium parameters used for SAR evaluation!
Maximum value of SAR (interpolated) = 2.23 mW/g


dB
0.00
-2.60
-5.20
-7.80
-10.4
-13.0

0 dB = 2.23mW/g


Interpolated SAR(x,y,z,f0)
SAR; Zoom Scan:Value Along Z, X=15, Y=9
dB
0
-1
-2
-3
-4
-5
-6
-7
-8
-9
-10
-11
0.000
0.005
0.010
0.015
0.020
0.025
0.030
0.035
m

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SEM/CV/PF/P Gerard Hayes and Rodney Dixon		REP 2006 001 Z525A 01	
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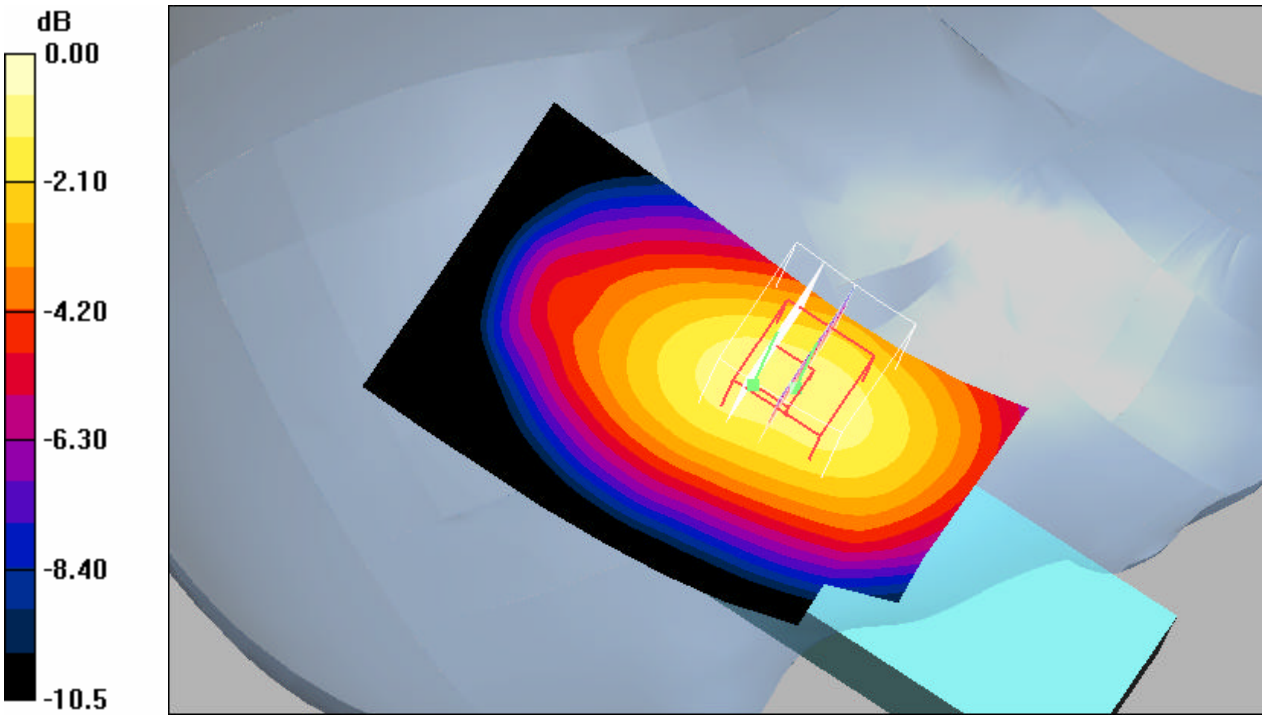
SEM/CV/PF/P Gerard Hayes		A	X:\SAR Chamber\FCC reports\Z525A\Final

800 GSM Band: Distribution and Extrapolation of Maximum SAR
Model: Z525A SN: BD30246HHE with Standard Battery: BST-37
Right Side, Tilt Position.

Date/Time: 8/28/2005 11:48:23 AMDate/Time: 8/28/2005 11:53:57 AM
File Name: 28Aug05_Z525A_GSM850_6HHE_RT01.da4
DUT: Z525A
Program Notes: Battery BST-37 Humidity: 49.7% Ambient Temp: 23 Simulant Temp: 23.9
Communication System: GSM 850; Frequency: 824 MHz;Duty Cycle: 1:8.3
Medium: Head 835/900 MHzMedium parameters used (interpolated): f = 824 MHz; s = 0.866 mho/m; e_r = 40.3; ? = 1000 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 Sn417; Calibrated: 11/11/2004
- Phantom: SAM with CRP (Low Band Head); Type: SAM; Serial: 1251
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

Unnamed procedure/Area Scan (51x81x1):
Measurement grid: dx=15mm, dy=15mm
Info: Interpolated medium parameters used for SAR evaluation!
Maximum value of SAR (interpolated) = 0.357 mW/g
Unnamed procedure/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 12.6 V/m; Power Drift = -0.067 dB
Peak SAR (extrapolated) = 0.431 W/kg
SAR(1 g) = 0.335 mW/g; SAR(10 g) = 0.247 mW/g
Info: Interpolated medium parameters used for SAR evaluation!
Maximum value of SAR (measured) = 0.353 mW/g
Unnamed procedure/Zoom Scan (31x31x36)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 12.6 V/m; Power Drift = -0.067 dB
Info: Interpolated medium parameters used for SAR evaluation!
Maximum value of SAR (interpolated) = 0.431 mW/g



0 dB = 0.431mW/g

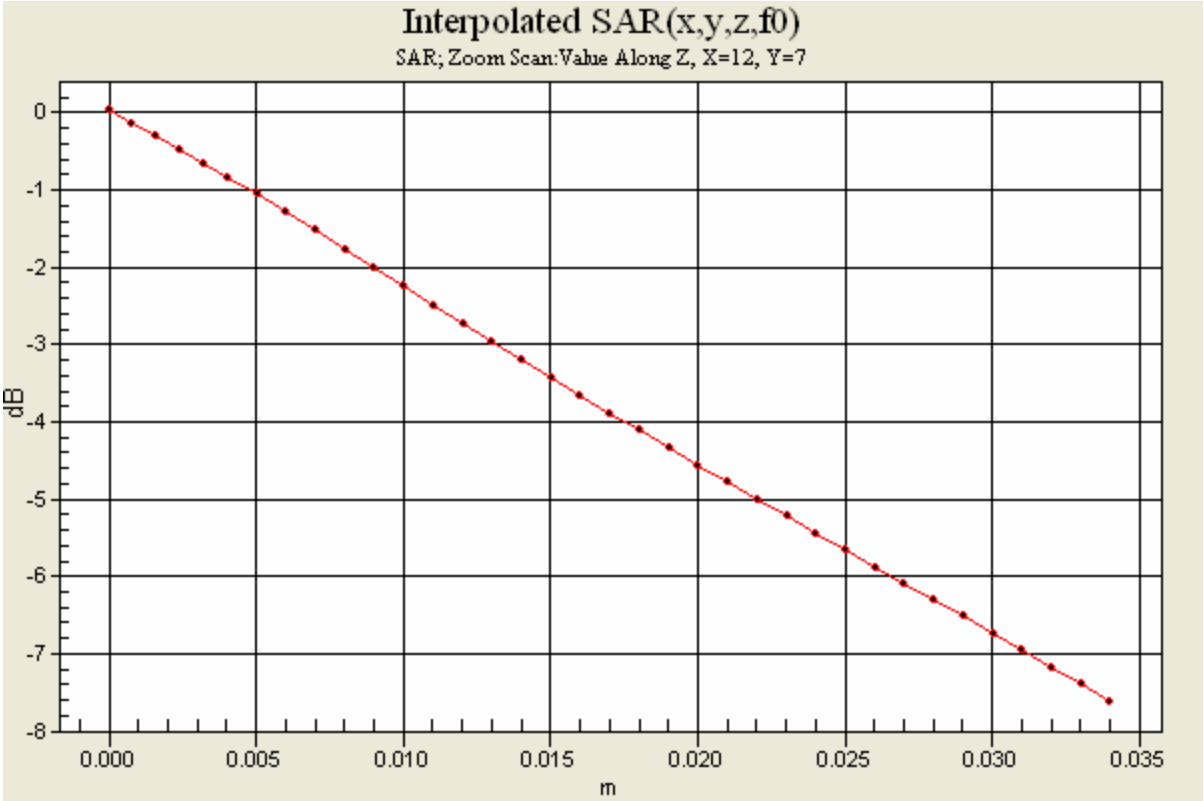


Exhibit 11

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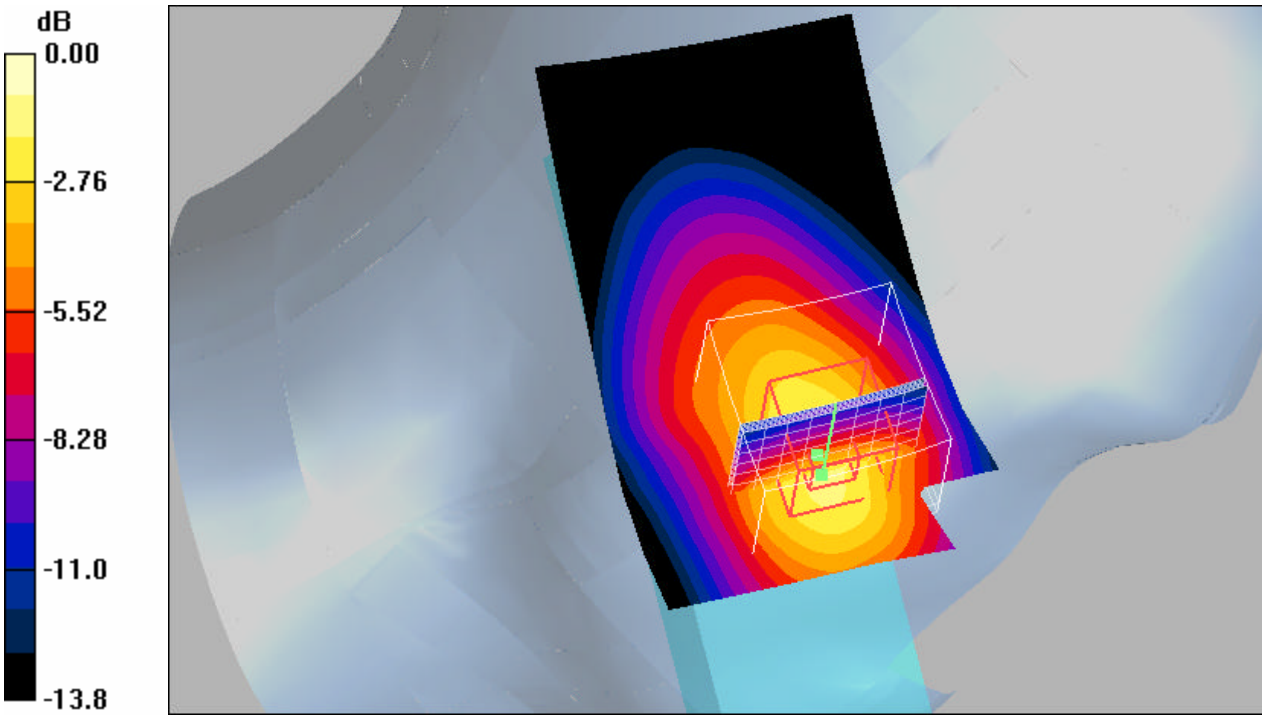
800 GSM Band: Distribution and Extrapolation of Maximum SAR
Model: Z525A SN: BD30246HHE with Standard Battery: BST-37
Left Side, Cheek/Touch Position.

Date/Time: 8/26/2005 12:05:32 PMDate/Time: 8/26/2005 12:11:29 PM
File Name: 26Aug05_Z525A_GSM850_6HHE_LC01.da4
DUT: Z525A
Program Notes: Battery BST-37 Humidity: 40.7% Ambient Temp: 23.7 Simulant Temp: 22.6
Communication System: GSM 850; Frequency: 824 MHz;Duty Cycle: 1:8.3
Medium: Head 835/900 MHzMedium parameters used (interpolated): f = 824 MHz; s = 0.903 mho/m; e_r = 42; ? = 1000 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 Sn417; Calibrated: 11/11/2004
- Phantom: SAM with CRP (Low Band Head); Type: SAM; Serial: 1251
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

Unnamed procedure/Area Scan (51x81x1):
Measurement grid: dx=15mm, dy=15mm
Info: Interpolated medium parameters used for SAR evaluation!
Maximum value of SAR (interpolated) = 1.49 mW/g
Unnamed procedure/Zoom Scan (9x9x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 11.6 V/m; Power Drift = -0.133 dB
Peak SAR (extrapolated) = 2.07 W/kg
SAR(1 g) = 1.44 mW/g; SAR(10 g) = 0.916 mW/g
Info: Interpolated medium parameters used for SAR evaluation!
Maximum value of SAR (measured) = 1.49 mW/g
Unnamed procedure/Zoom Scan (41x41x36)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 11.6 V/m; Power Drift = -0.133 dB
Info: Interpolated medium parameters used for SAR evaluation!
Maximum value of SAR (interpolated) = 2.07 mW/g



0 dB = 2.07mW/g

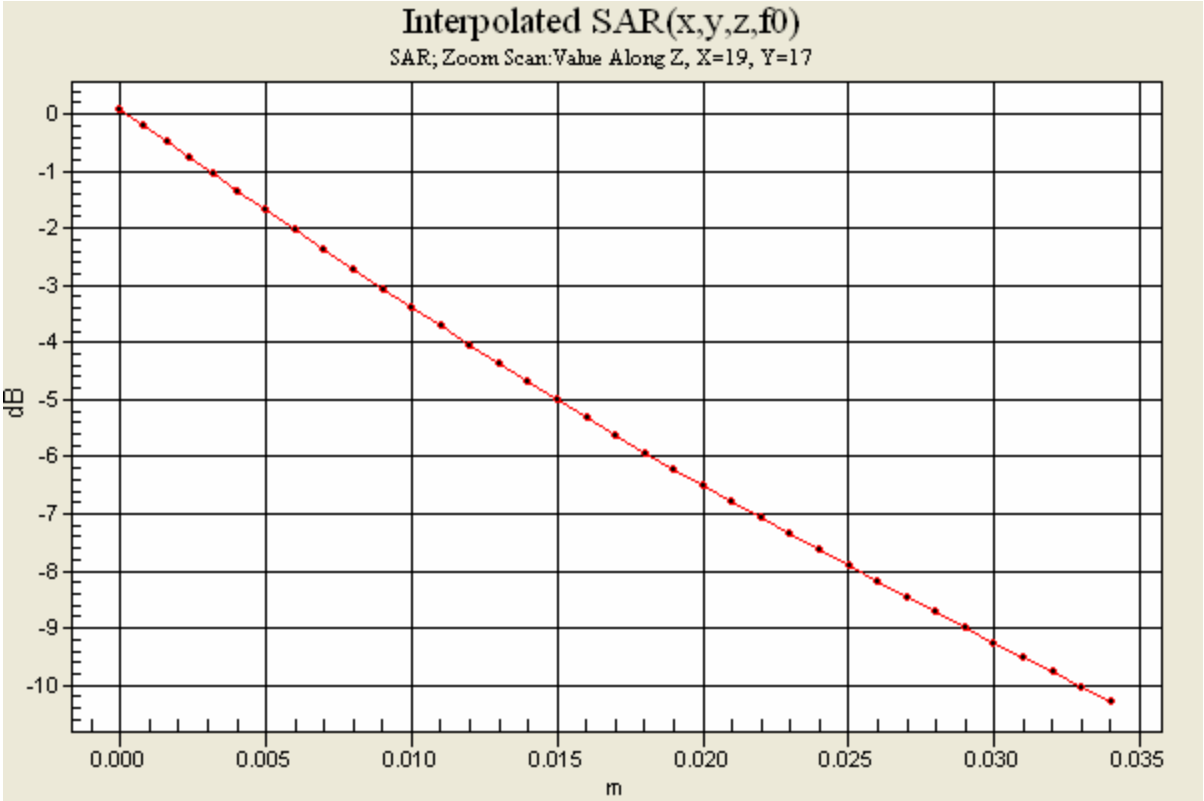


Exhibit 11

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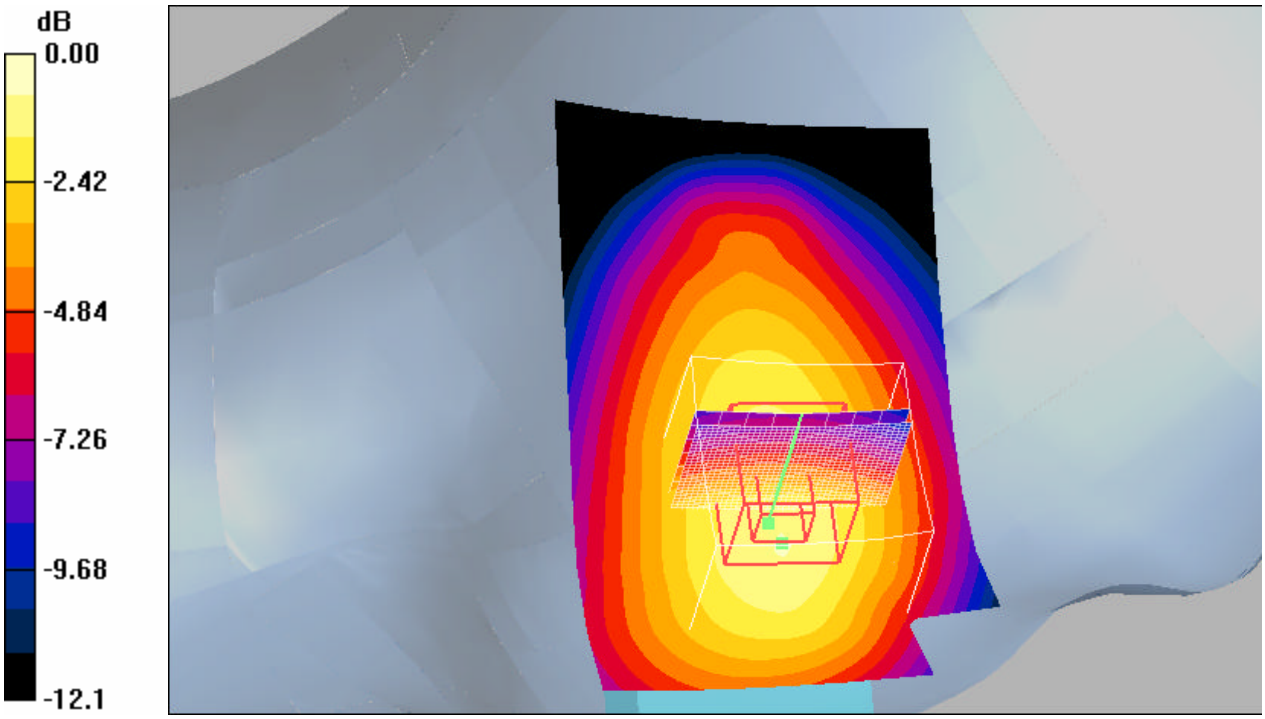
800 GSM Band: Distribution and Extrapolation of Maximum SAR
Model: Z525A SN: BD30246HHE with Standard Battery: BST-37
Left Side, Tilt Position.

Date/Time: 8/26/2005 3:00:27 PMDate/Time: 8/26/2005 3:06:02 PM
File Name: 26Aug05_Z525A_GSM850_6HHE_LT01.da4
DUT: Z525A
Program Notes: Battery BST-37 Humidity: 39.4% Ambient Temp: 24 Simulant Temp: 23.2
Communication System: GSM 850; Frequency: 824 MHz;Duty Cycle: 1:8.3
Medium: Head 835/900 MHzMedium parameters used (interpolated): f = 824 MHz; s = 0.903 mho/m; e_r = 42; ? = 1000 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 Sn417; Calibrated: 11/11/2004
- Phantom: SAM with CRP (Low Band Head); Type: SAM; Serial: 1251
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

Unnamed procedure/Area Scan (51x81x1):
Measurement grid: dx=15mm, dy=15mm
Info: Interpolated medium parameters used for SAR evaluation!
Maximum value of SAR (interpolated) = 0.387 mW/g

Unnamed procedure/Zoom Scan (9x9x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 12.8 V/m; Power Drift = -0.140 dB
Peak SAR (extrapolated) = 0.463 W/kg
SAR(1 g) = 0.361 mW/g; SAR(10 g) = 0.264 mW/g
Info: Interpolated medium parameters used for SAR evaluation!
Maximum value of SAR (measured) = 0.372 mW/g

Unnamed procedure/Zoom Scan (41x41x36)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 12.8 V/m; Power Drift = -0.140 dB
Info: Interpolated medium parameters used for SAR evaluation!
Maximum value of SAR (interpolated) = 0.463 mW/g



0 dB = 0.463mW/g

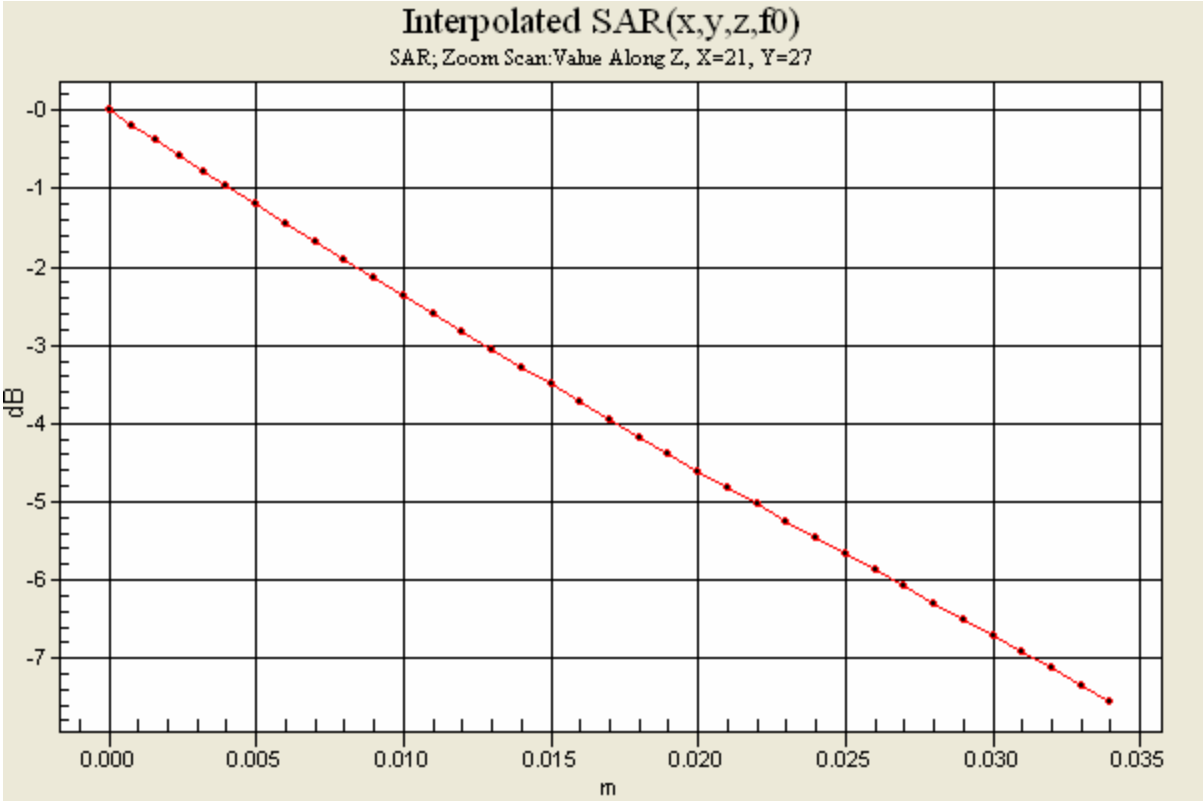


Exhibit 11

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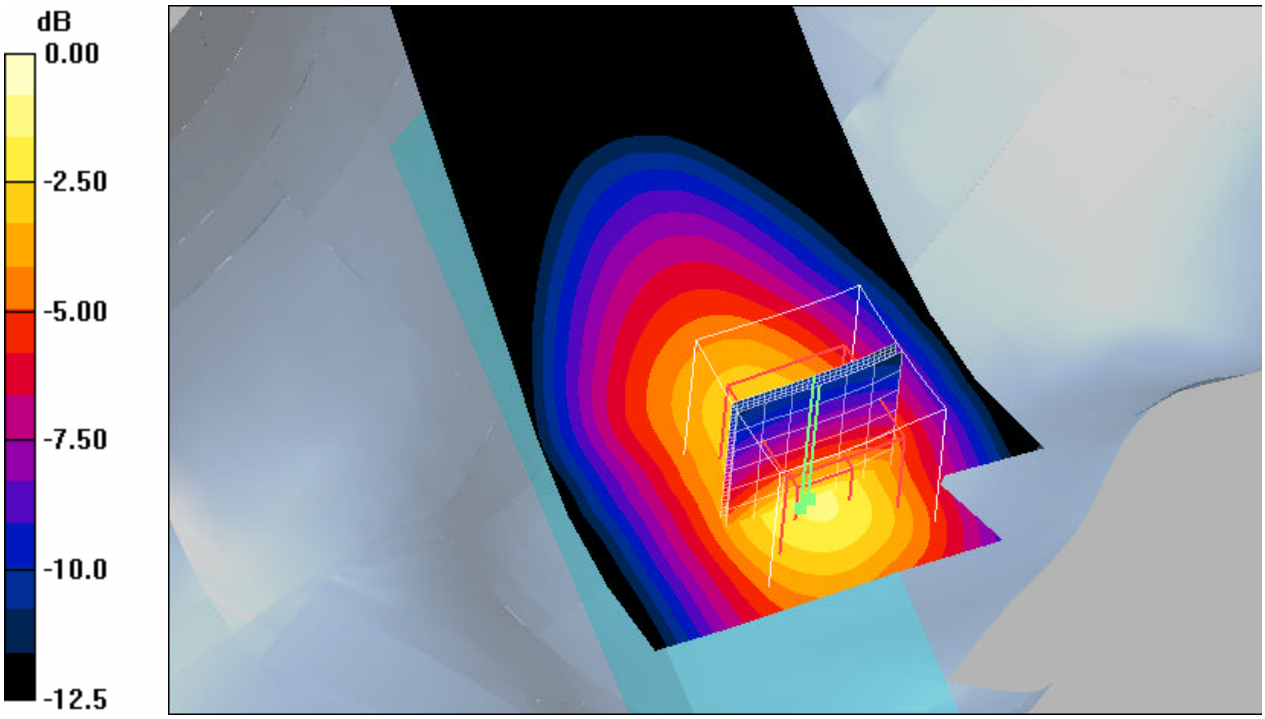
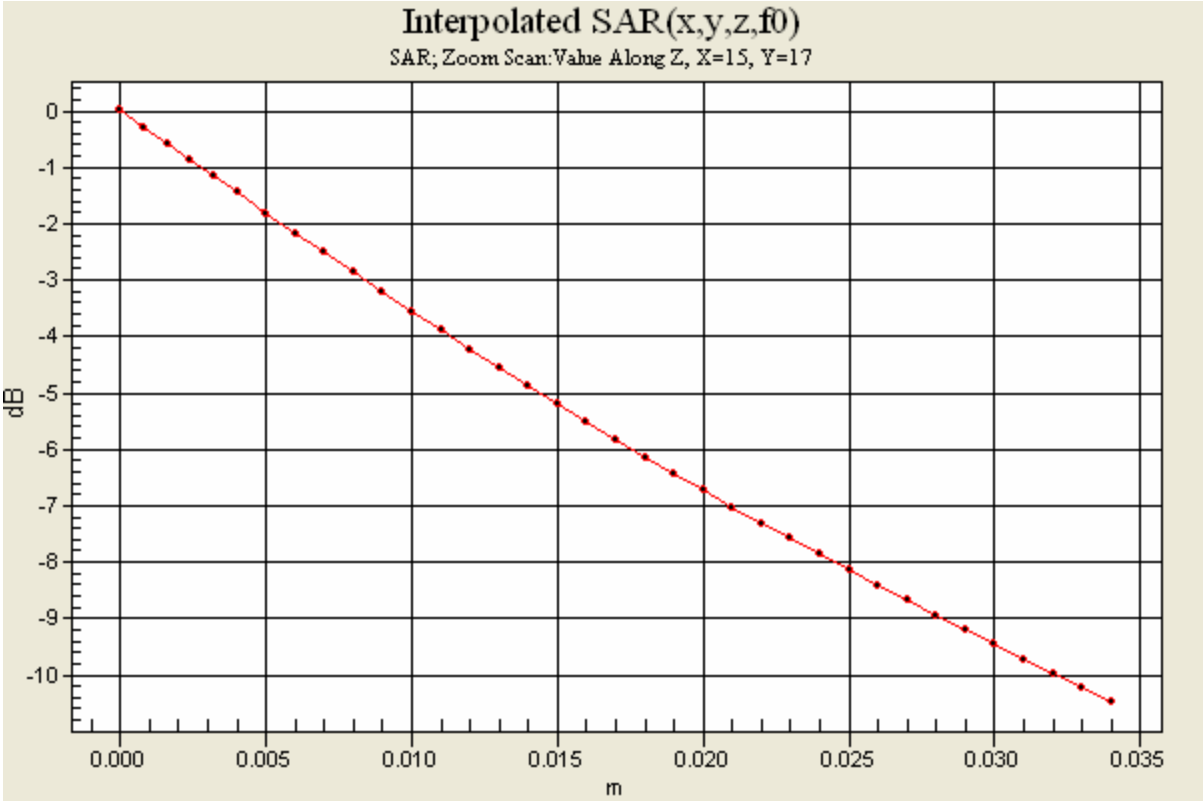
800 GSM Band: Distribution and Extrapolation of Maximum SAR
Model: Z525A SN: BD30246HHE with Standard Battery: BST-37
Left Side, Cheek/Touch Position with Blue Tooth.

Date/Time: 8/28/2005 4:55:11 PMDate/Time: 8/28/2005 5:00:45 PM
File Name: 28Aug05_Z525A_GSM850_6HHE_BT_LC01.da4
DUT: Z525A
Program Notes: Battery BST-37 Humidity: 49.6% Ambient Temp: 22.5 Simulant Temp: 23.1
Communication System: GSM 850; Frequency: 824 MHz;Duty Cycle: 1:8.3
Medium: Head 835/900 MHzMedium parameters used (interpolated): f = 824 MHz; s = 0.866 mho/m; e_r = 40.3; ? = 1000 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 Sn417; Calibrated: 11/11/2004
- Phantom: SAM with CRP (Low Band Head); Type: SAM; Serial: 1251
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

Unnamed procedure/Area Scan (51x81x1):
Measurement grid: dx=15mm, dy=15mm
Info: Interpolated medium parameters used for SAR evaluation!
Maximum value of SAR (interpolated) = 1.53 mW/g
Unnamed procedure/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 9.92 V/m; Power Drift = -0.106 dB
Peak SAR (extrapolated) = 2.14 W/kg
SAR(1 g) = 1.44 mW/g; SAR(10 g) = 0.915 mW/g
Info: Interpolated medium parameters used for SAR evaluation!
Maximum value of SAR (measured) = 1.53 mW/g
Unnamed procedure/Zoom Scan (31x31x36)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 9.92 V/m; Power Drift = -0.106 dB
Info: Interpolated medium parameters used for SAR evaluation!
Maximum value of SAR (interpolated) = 2.14 mW/g



0 dB = 2.14mW/g



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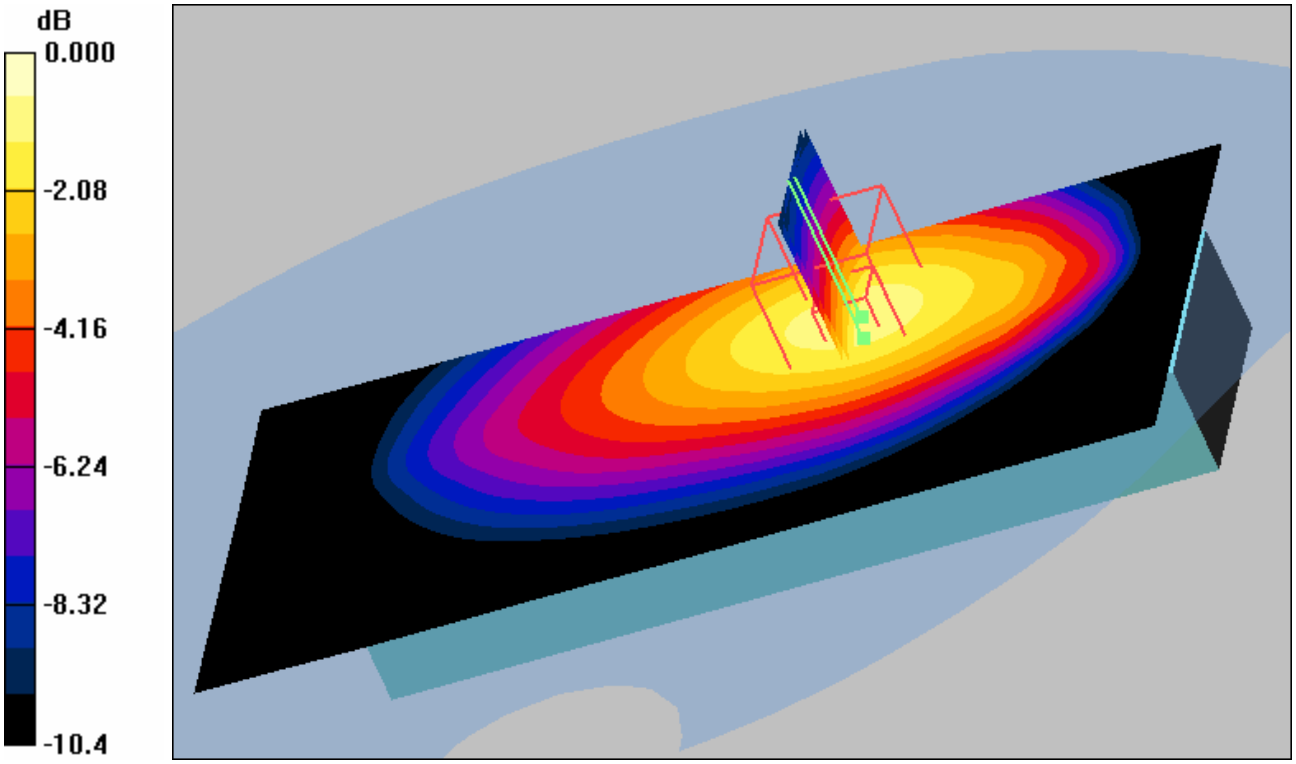
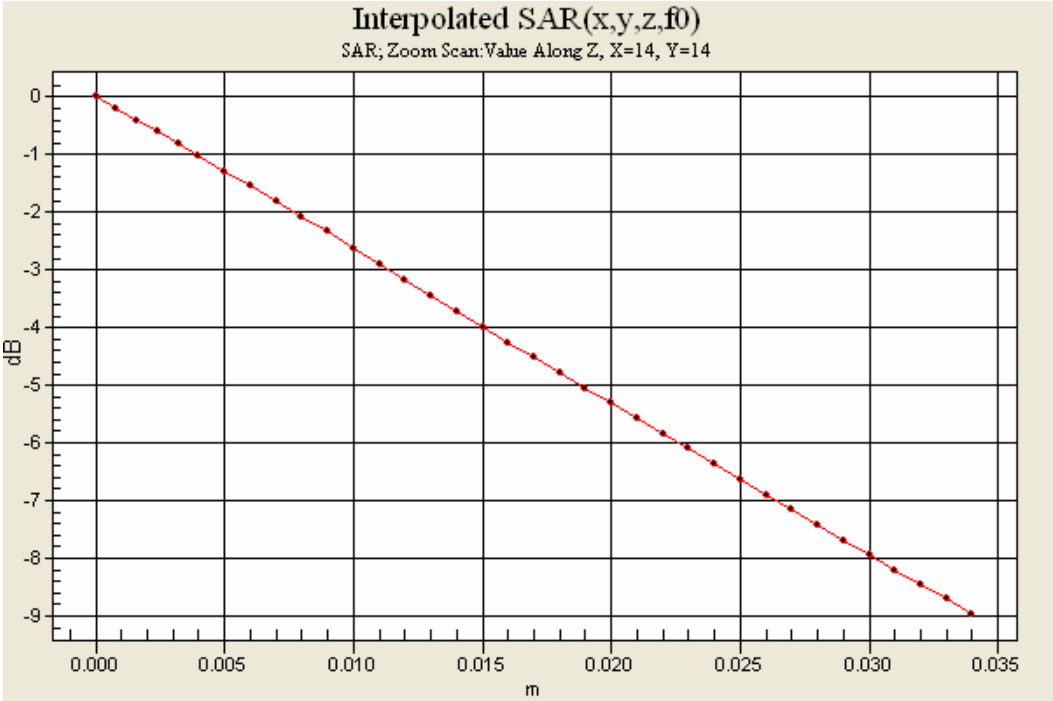
800 GSM Band: SAR Distribution and Extrapolation of Maximum SAR
Model: Z525A SN: BD3ZZYJGGQ with Standard Battery: BST-37

PTT, 25mm Separation, Flat section, Open Position.
File Name: 14Feb06_Z525A_GSM850_JGGQ_open_PTT01.da4
DUT: Z525A
Program Notes: Battery BST-37 Humidity: 30.5% Ambient Temp: 23.5 C Simulant Temp: 22.4 C
Communication System: GSM 850; Frequency: 824 MHz;Duty Cycle: 1:8.3
Medium: Head 835/900 MHzMedium parameters used (interpolated): f = 824 MHz; s = 0.888 mho/m; e_r = 41.8; ? = 1000 kg/m^3
Phantom section: Flat 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/Area Scan (61x121x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.536 mW/g
Unnamed procedure/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 16.5 V/m; Power Drift = -0.021 dB
Peak SAR (extrapolated) = 0.670 W/kg
SAR(1 g) = 0.500 mW/g; SAR(10 g) = 0.354 mW/g
Maximum value of SAR (measured) = 0.529 mW/g
Unnamed procedure/Zoom Scan (31x31x36)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 16.5 V/m; Power Drift = -0.021 dB
Maximum value of SAR (interpolated) = 0.670 mW/g



0 dB = 0.670mW/g



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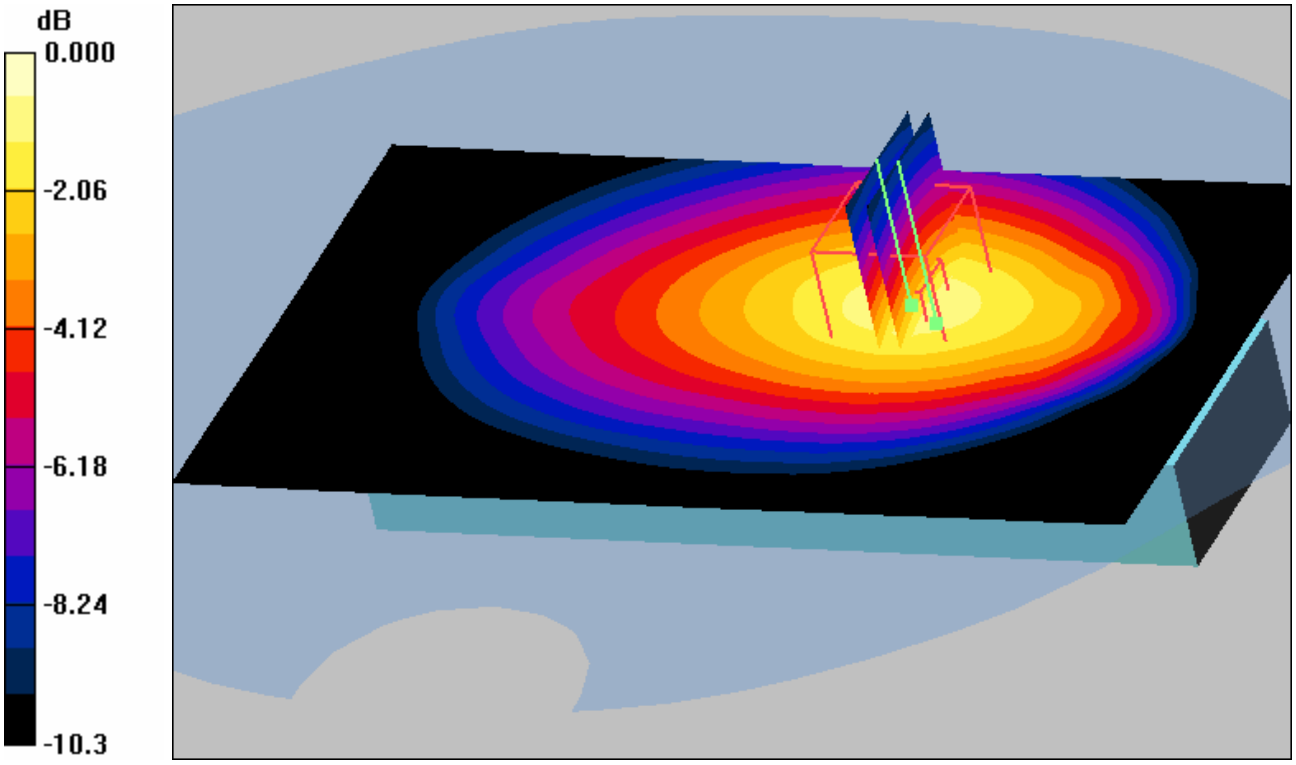
800 GSM Band: SAR Distribution and Extrapolation of Maximum SAR
Model: Z525A SN: BD3ZZYJGGQ with Standard Battery: BST-37
PTT, 25mm Separation, Flat section, Open Position with Bluetooth on.

File Name: 14Feb06_Z525A_GSM850_JGGQ_open_BT_PTT01.da4

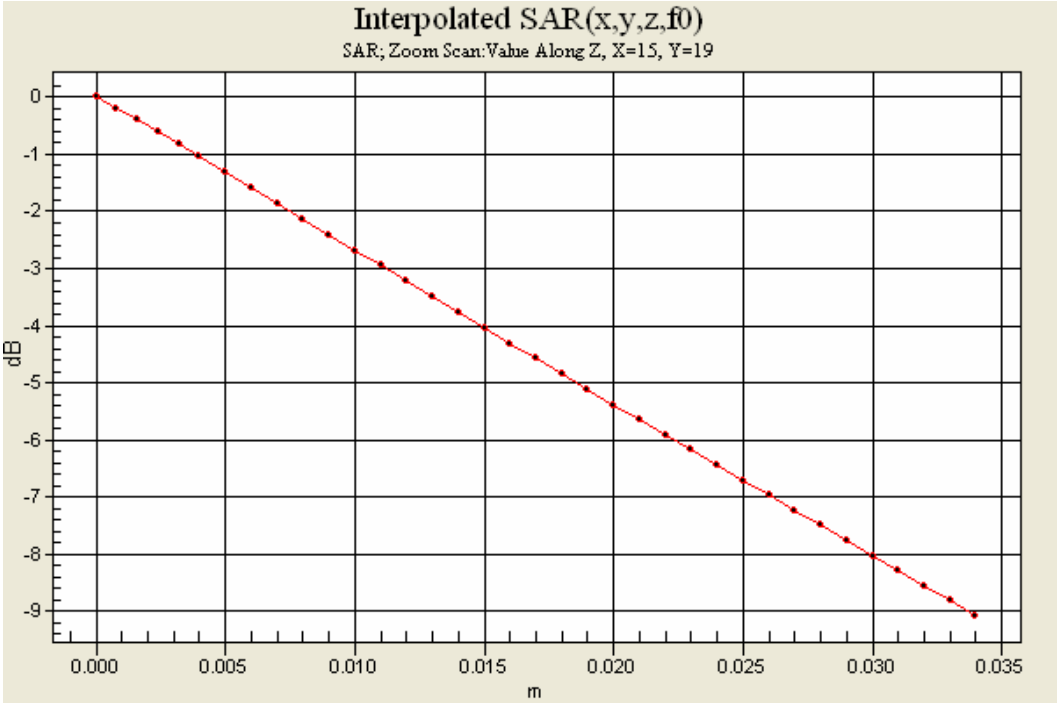
DUT: Z525A

Program Notes: Battery BST-37 Humidity: 30.5% Ambient Temp: 23.5 C Simulant Temp: 22.4 C
Communication System: GSM 850; Frequency: 824 MHz;Duty Cycle: 1:8.3
Medium: Head 835/900 MHzMedium parameters used (interpolated): f = 824 MHz; s = 0.888 mho/m; e_r = 41.8; ? = 1000 kg/m^3
Phantom section: Flat 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/Area Scan (71x121x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.560 mW/g
Unnamed procedure/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 17.5 V/m; Power Drift = -0.023 dB
Peak SAR (extrapolated) = 0.703 W/kg
SAR(1 g) = 0.523 mW/g; SAR(10 g) = 0.370 mW/g
Maximum value of SAR (measured) = 0.555 mW/g
Unnamed procedure/Zoom Scan (31x31x36)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 17.5 V/m; Power Drift = -0.023 dB
Maximum value of SAR (interpolated) = 0.703 mW/g


dB
0.000
-2.06
-4.12
-6.18
-8.24
-10.3

0 dB = 0.703mW/g


Interpolated SAR(x,y,z,f0)
SAR; Zoom Scan:Value Along Z, X=15, Y=19
dB
0
-1
-2
-3
-4
-5
-6
-7
-8
-9
0.000
0.005
0.010
0.015
0.020
0.025
0.030
0.035
m

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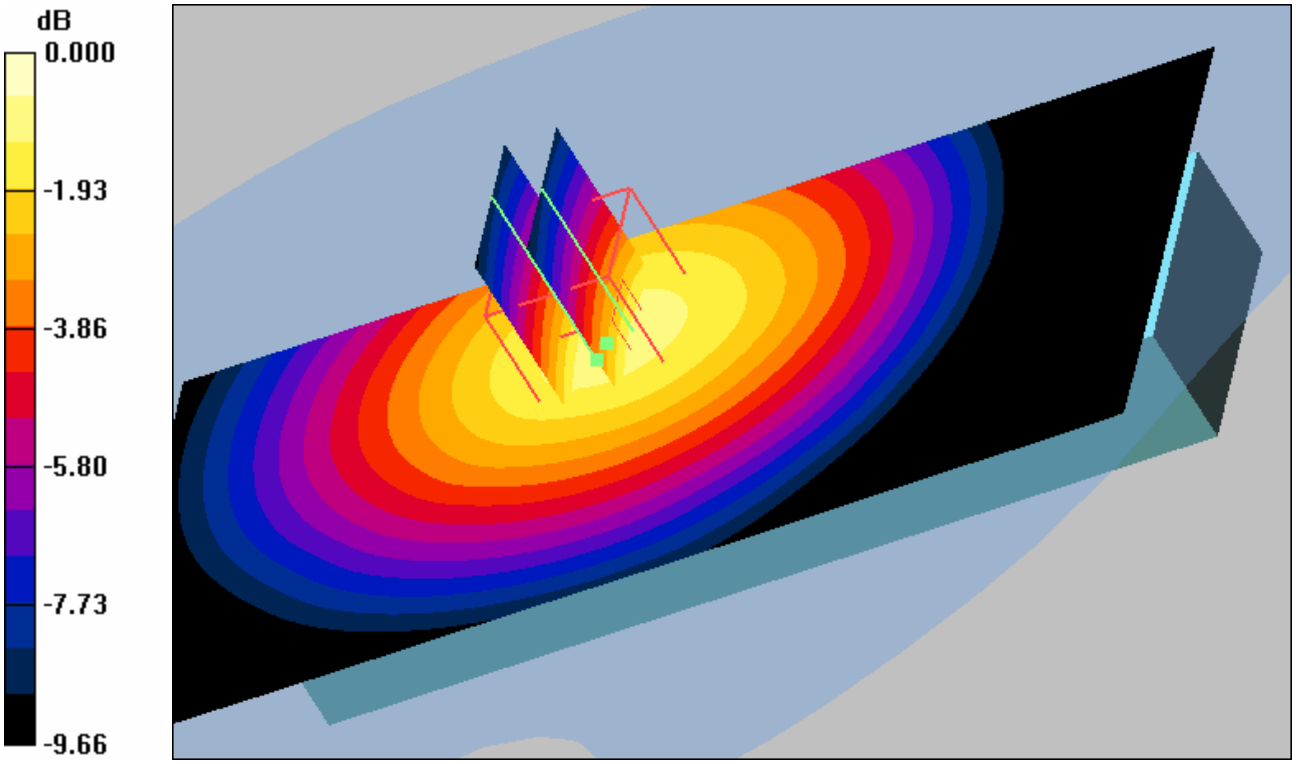
800 GSM Band: SAR Distribution and Extrapolation of Maximum SAR
Model: Z525A SN: BD3ZZYJGGQ with Standard Battery: BST-37
PTT, 25mm Separation, Flat section, Closed Position.

File Name: 14Feb06_Z525A_GSM850_JGGQ_closed_PTT01.da4

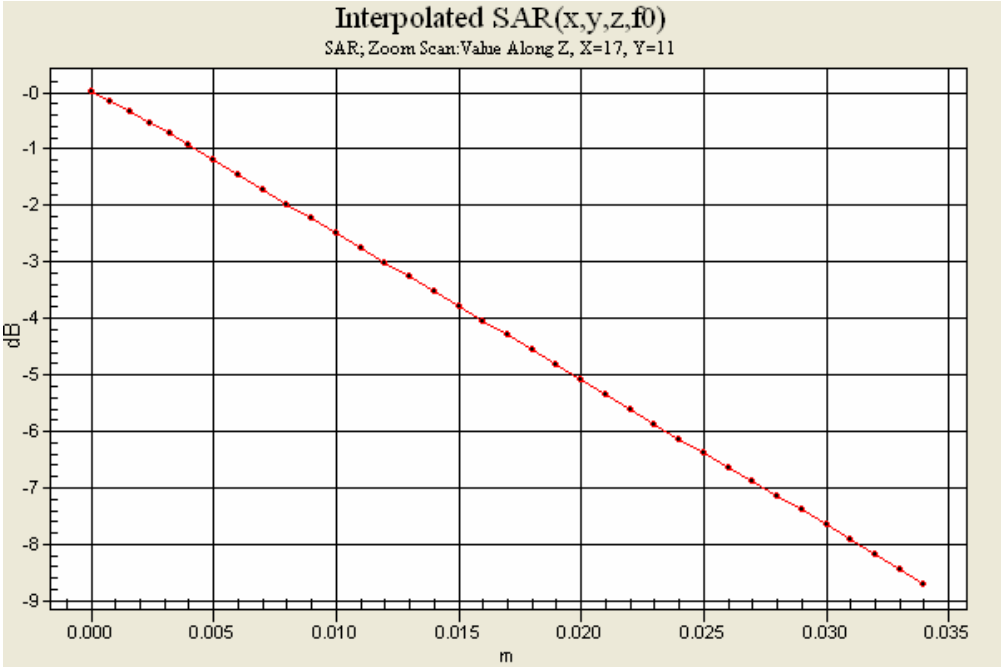
DUT: Z525A

Program Notes: Battery BST-37 Humidity: 30.9% Ambient Temp: 23.3 C Simulant Temp: 22.5 C
Communication System: GSM 850; Frequency: 824 MHz;Duty Cycle: 1:8.3
Medium: Head 835/900 MHzMedium parameters used (interpolated): f = 824 MHz; s = 0.888 mho/m; e_r = 41.8; ? = 1000 kg/m^3
Phantom section: Flat 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/Area Scan (61x121x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.203 mW/g
Unnamed procedure/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 14.0 V/m; Power Drift = 0.046 dB
Peak SAR (extrapolated) = 0.249 W/kg
SAR(1 g) = 0.191 mW/g; SAR(10 g) = 0.138 mW/g
Maximum value of SAR (measured) = 0.201 mW/g
Unnamed procedure/Zoom Scan (31x31x36)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 14.0 V/m; Power Drift = 0.046 dB
Maximum value of SAR (interpolated) = 0.249 mW/g


dB
0.000
-1.93
-3.86
-5.80
-7.73
-9.66

0 dB = 0.249mW/g


Interpolated SAR(x,y,z,f0)
SAR; Zoom Scan:Value Along Z, X=17, Y=11
dB
-0
-1
-2
-3
-4
-5
-6
-7
-8
-9
0.000
0.005
0.010
0.015
0.020
0.025
0.030
0.035
m

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SEM/CV/PF/P Gerard Hayes and Rodney Dixon	REP 2006 001 Z525A 01	
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SEM/CV/PF/P Gerard Hayes	A	X:\SAR Chamber\FCC reports\Z525A\Final

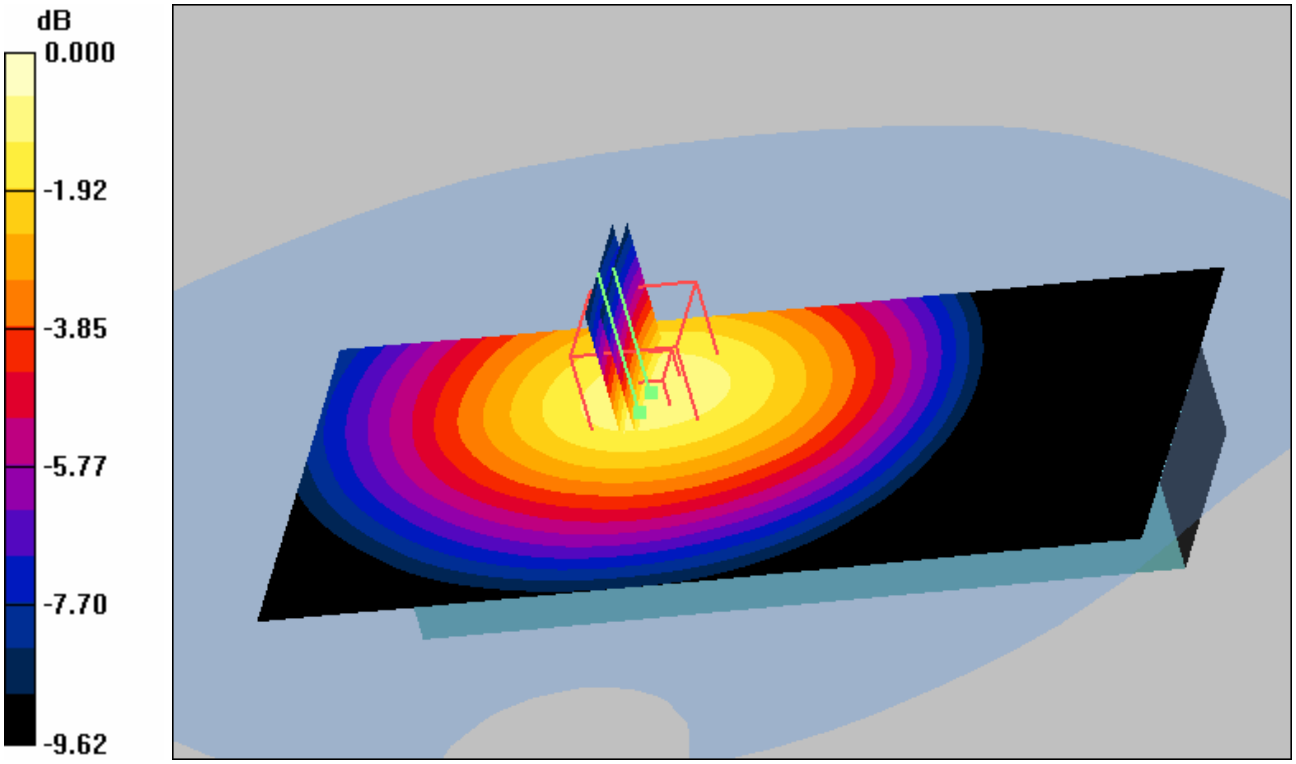
800 GSM Band: SAR Distribution and Extrapolation of Maximum SAR
Model: Z525A SN: BD3ZZYJGGQ with Standard Battery: BST-37
PTT, 25mm Separation, Flat section, Closed Position with Blue Tooth on.

File Name: 14Feb06_Z525A_GSM850_JGGQ_closed_BT_PTT01.da4

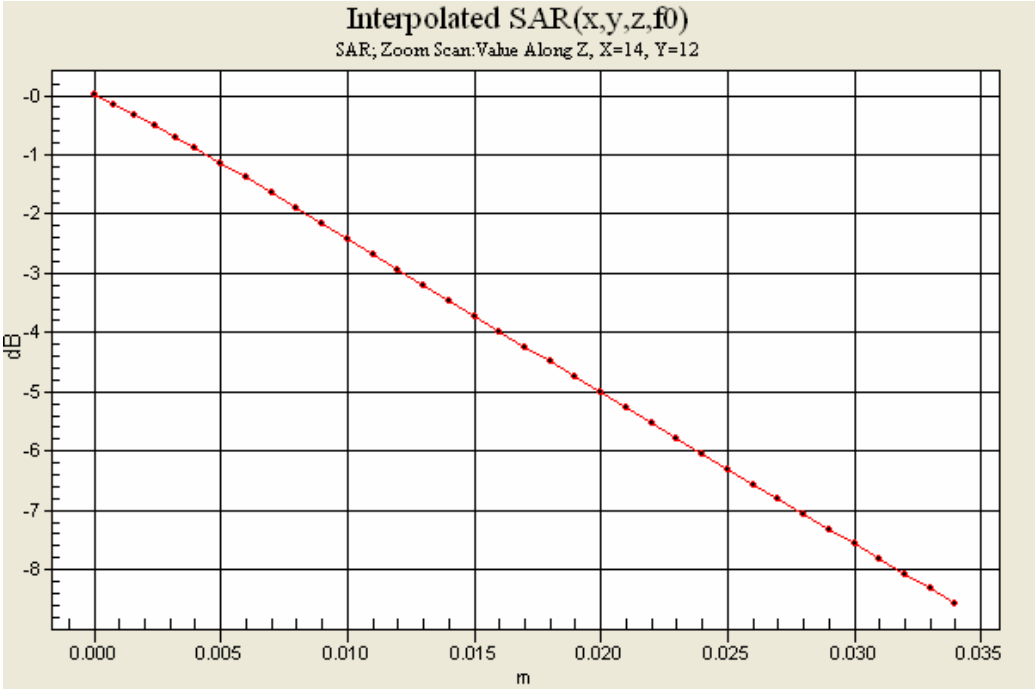
DUT: Z525A

Program Notes: Battery BST-37 Humidity: 30.9% Ambient Temp: 23.3 C Simulant Temp: 22.5 C
Communication System: GSM 850; Frequency: 824 MHz;Duty Cycle: 1:8.3
Medium: Head 835/900 MHzMedium parameters used (interpolated): f = 824 MHz; s = 0.888 mho/m; e_r = 41.8; ? = 1000 kg/m^3
Phantom section: Flat 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/Area Scan (61x121x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.204 mW/g
Unnamed procedure/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 14.5 V/m; Power Drift = -0.039 dB
Peak SAR (extrapolated) = 0.246 W/kg
SAR(1 g) = 0.190 mW/g; SAR(10 g) = 0.138 mW/g
Maximum value of SAR (measured) = 0.201 mW/g
Unnamed procedure/Zoom Scan (31x31x36)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 14.5 V/m; Power Drift = -0.039 dB
Maximum value of SAR (interpolated) = 0.246 mW/g


dB
0.000
-1.92
-3.85
-5.77
-7.70
-9.62

0 dB = 0.246mW/g


Interpolated SAR(x,y,z,f0)
SAR; Zoom Scan:Value Along Z, X=14, Y=12
dB
-0
-1
-2
-3
-4
-5
-6
-7
-8
0.000
0.005
0.010
0.015
0.020
0.025
0.030
0.035
m

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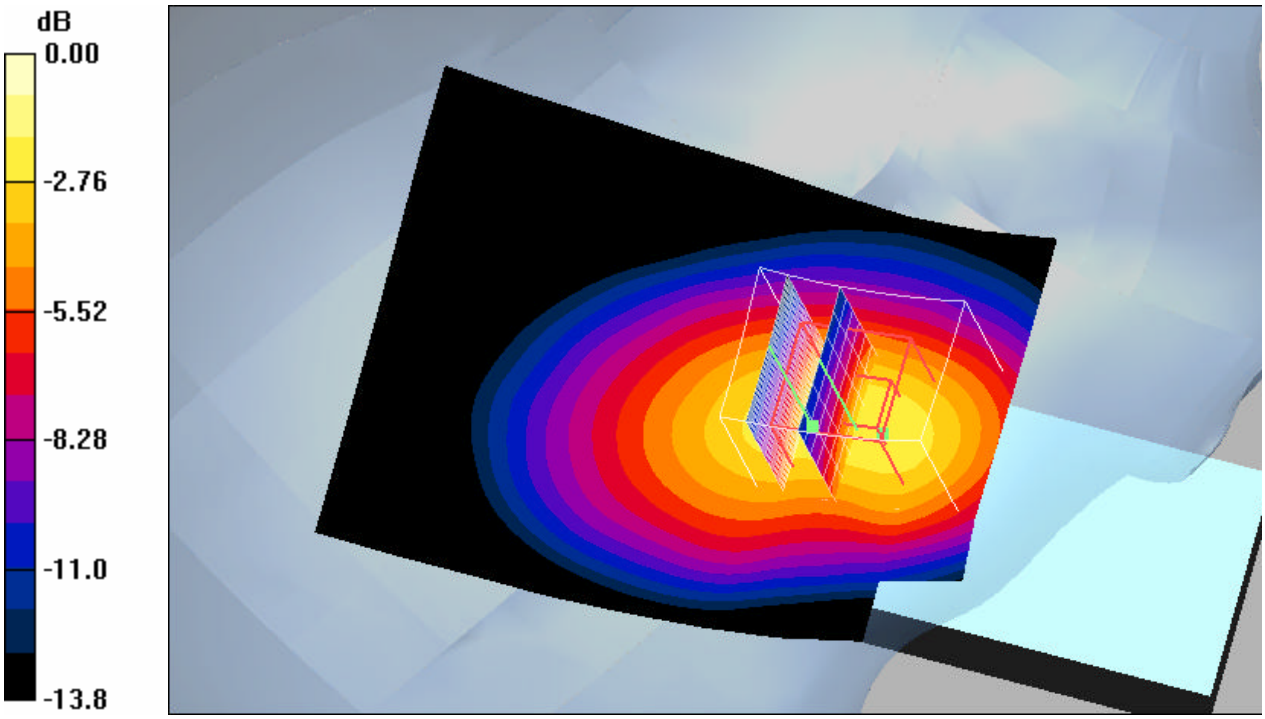
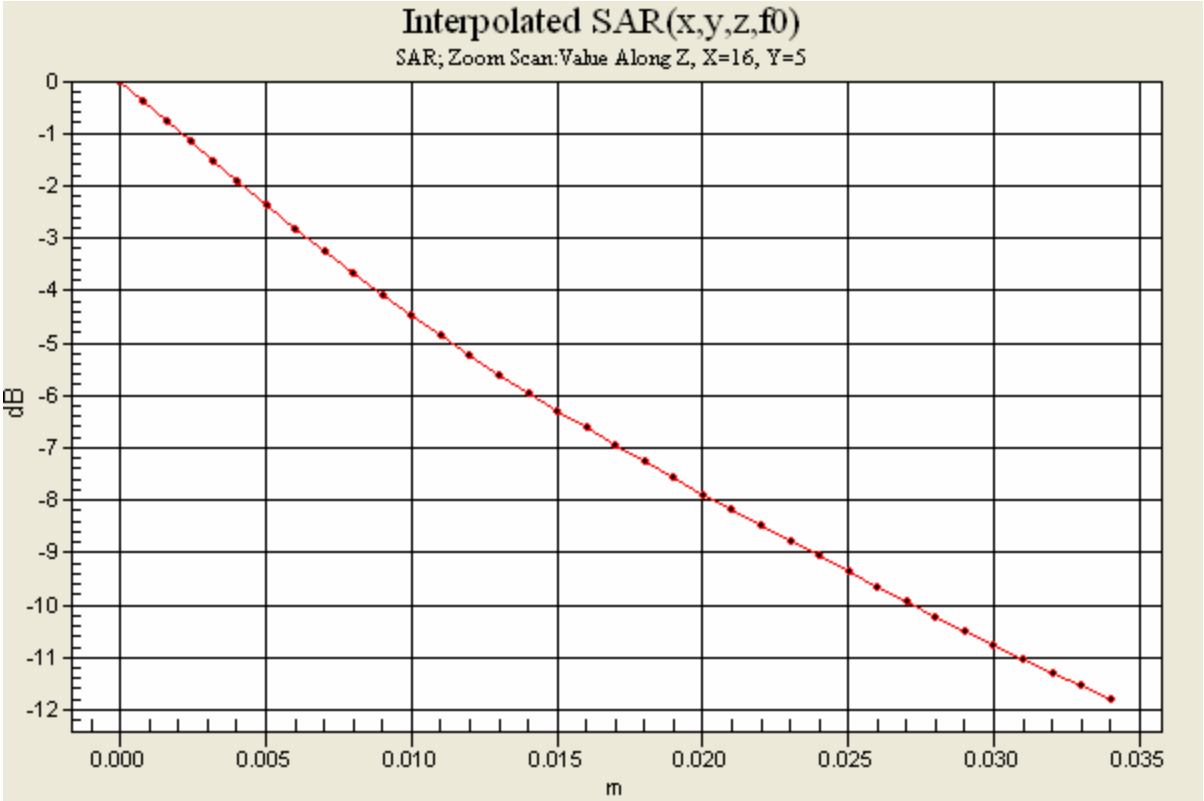
900 GSM Band: SAR Distribution and Extrapolation of Maximum SAR
Model: Z525A SN: BD302466Q7 with Standard Battery: BST-37
Right Side, Cheek/Touch Position.

Date/Time: 8/24/2005 1:18:22 PMDate/Time: 8/24/2005 1:24:52 PM
File Name: 24Aug05_Z525A_GSM900_66Q7_RC01.da4
DUT: Z525A
Program Notes: Battery: BST-37 Humidity: 50.4% Ambient Temp: 22.2 Simulant Temp: 22.6
Communication System: GSM 900; Frequency: 890.2 MHz;Duty Cycle: 1:8.3
Medium: Head 835/900 MHzMedium parameters used (interpolated): f = 890.2 MHz; s = 0.962 mho/m; e_r = 41.6; ? = 1000 kg/m^3
Phantom section: Right Section
DASY4 Configuration:
- Probe: ET3DV6 - SN1586; ConvF(6.46, 6.46, 6.46); Calibrated: 5/26/2005
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn417; Calibrated: 11/11/2004
- Phantom: SAM with CRP (Low Band Head); Type: SAM; Serial: 1251
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

Unnamed procedure/Area Scan (61x81x1):
Measurement grid: dx=15mm, dy=15mm
Info: Interpolated medium parameters used for SAR evaluation!
Maximum value of SAR (interpolated) = 0.568 mW/g
Unnamed procedure/Zoom Scan (7x9x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 6.65 V/m; Power Drift = 0.019 dB
Peak SAR (extrapolated) = 0.891 W/kg
SAR(1 g) = 0.540 mW/g; SAR(10 g) = 0.338 mW/g
Info: Interpolated medium parameters used for SAR evaluation!
Maximum value of SAR (measured) = 0.575 mW/g
Unnamed procedure/Zoom Scan (31x41x36)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 6.65 V/m; Power Drift = 0.019 dB
Info: Interpolated medium parameters used for SAR evaluation!
Maximum value of SAR (interpolated) = 0.891 mW/g


dB
0.00
-2.76
-5.52
-8.28
-11.0
-13.8

0 dB = 0.891mW/g


Interpolated SAR(x,y,z,f0)
SAR; Zoom Scan:Value Along Z, X=16, Y=5
dB
0
-1
-2
-3
-4
-5
-6
-7
-8
-9
-10
-11
-12
0.000
0.005
0.010
0.015
0.020
0.025
0.030
0.035
m

Prepared (also subject responsible if other)	No.	
SEM/CV/PF/P Gerard Hayes and Rodney Dixon	REP 2006 001 Z525A 01	
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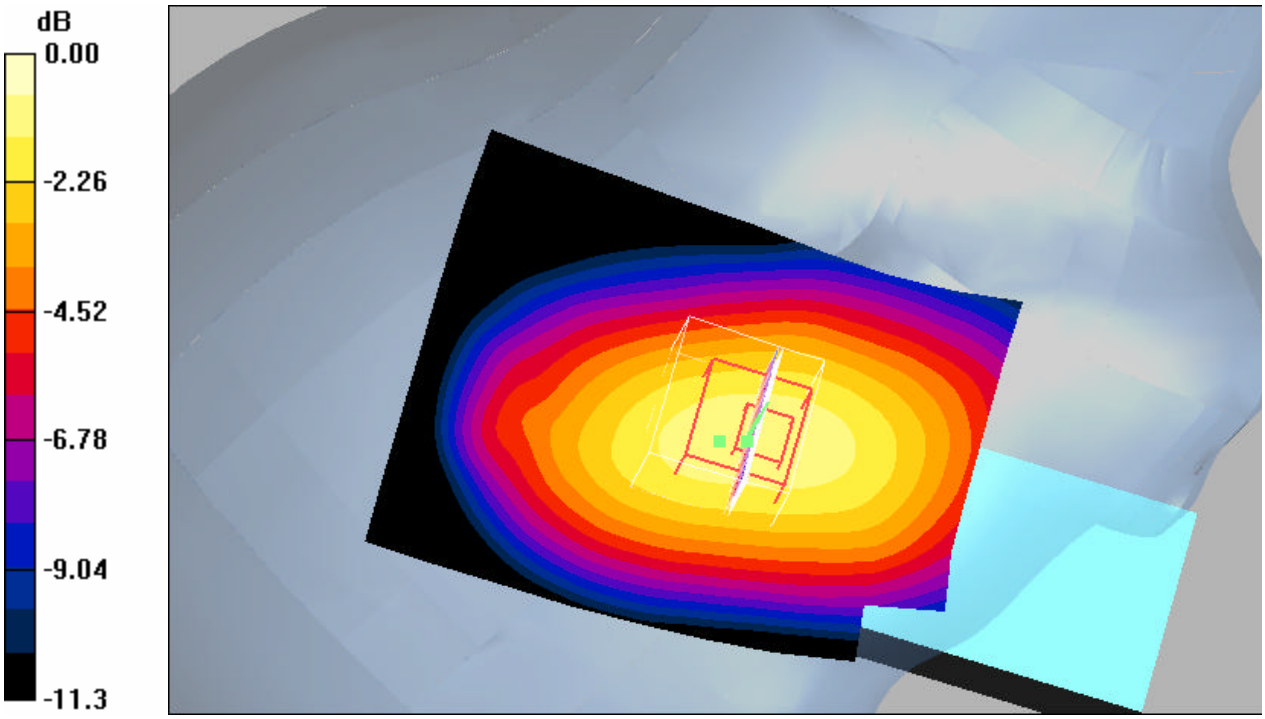
SEM/CV/PF/P Gerard Hayes	A	X:\SAR Chamber\FCC reports\Z525A\Final

900 GSM Band: Distribution and Extrapolation of Maximum SAR
Model: Z525A SN: BD302466Q7 with Standard Battery: BST-37
Right Side, Tilt Position.

Date/Time: 8/24/2005 10:39:22 AMDate/Time: 8/24/2005 10:45:52 AM
File Name: 24Aug05_Z525A_GSM900_66Q7_RT01.da4
DUT: Z525A
Program Notes: Battery: BST-37 Humidity: 49.2% Ambient Temp: 21.9 Simulant Temp: 22.3
Communication System: GSM 900; Frequency: 890.2 MHz;Duty Cycle: 1:8.3
Medium: Head 835/900 MHzMedium parameters used (interpolated): f = 890.2 MHz; s = 0.962 mho/m; e_r = 41.6; ? = 1000 kg/m^3
Phantom section: Right Section
DASY4 Configuration:
- Probe: ET3DV6 - SN1586; ConvF(6.46, 6.46, 6.46); Calibrated: 5/26/2005
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn417; Calibrated: 11/11/2004
- Phantom: SAM with CRP (Low Band Head); Type: SAM; Serial: 1251
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

Unnamed procedure/Area Scan (61x81x1):
Measurement grid: dx=15mm, dy=15mm
Info: Interpolated medium parameters used for SAR evaluation!
Maximum value of SAR (interpolated) = 0.163 mW/g
Unnamed procedure/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 7.93 V/m; Power Drift = 0.021 dB
Peak SAR (extrapolated) = 0.206 W/kg
SAR(1 g) = 0.156 mW/g; SAR(10 g) = 0.113 mW/g
Info: Interpolated medium parameters used for SAR evaluation!
Maximum value of SAR (measured) = 0.165 mW/g
Unnamed procedure/Zoom Scan (31x31x36)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 7.93 V/m; Power Drift = 0.021 dB
Info: Interpolated medium parameters used for SAR evaluation!
Maximum value of SAR (interpolated) = 0.206 mW/g



0 dB = 0.206mW/g

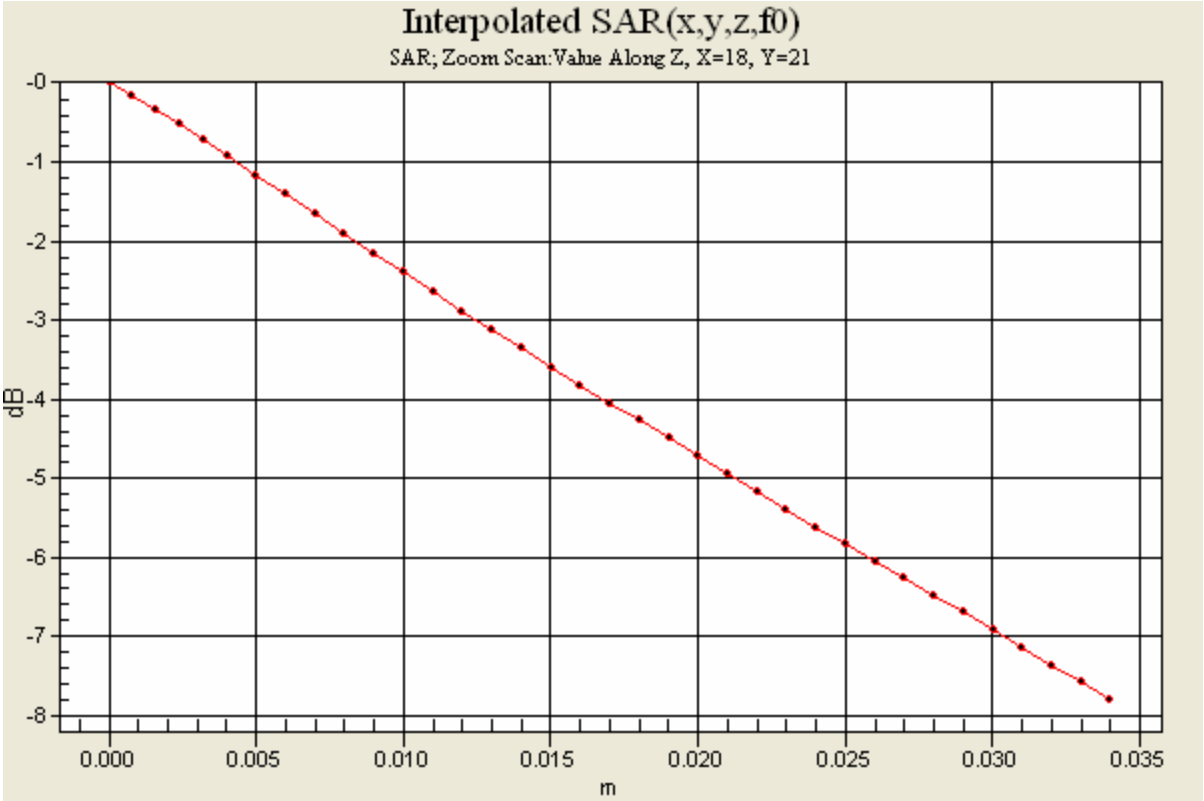


Exhibit 11

Prepared (also subject responsible if other)	No.	
SEM/CV/PF/P Gerard Hayes and Rodney Dixon	REP 2006 001 Z525A 01	
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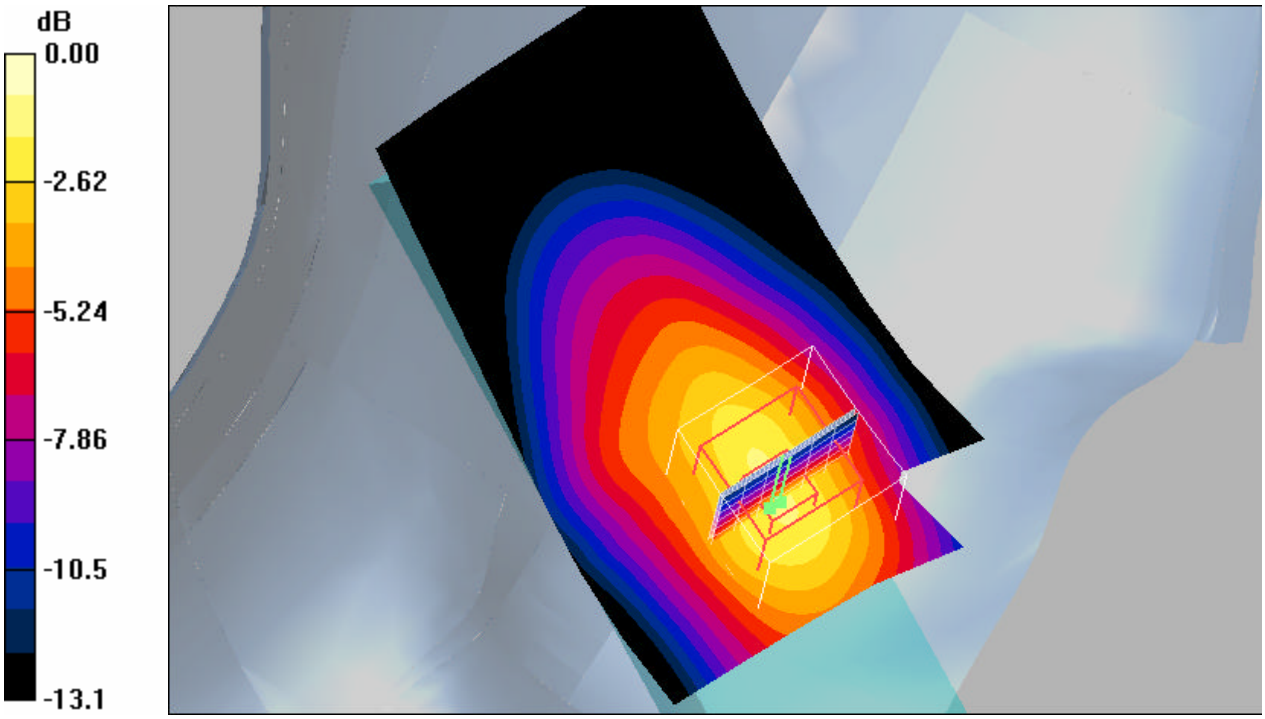
SEM/CV/PF/P Gerard Hayes	A	X:\SAR Chamber\FCC reports\Z525A\Final

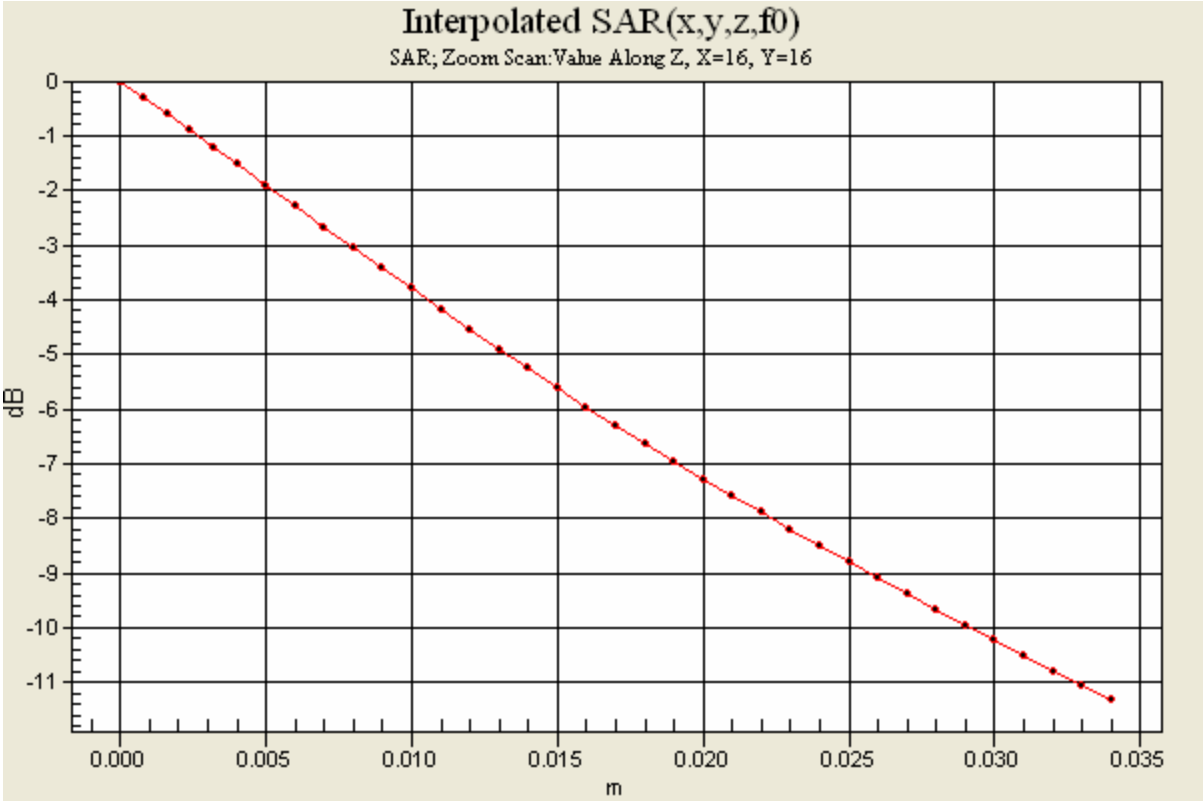
900 GSM Band: Distribution and Extrapolation of Maximum SAR
Model: Z525A SN: BD302466Q7 with Standard Battery: BST-37
Left Side, Cheek/Touch Position.

Date/Time: 8/24/2005 8:19:16 AMDate/Time: 8/24/2005 8:24:51 AM
File Name: 24Aug05_Z525A_GSM900_66Q7_LC01.da4
DUT: Z525A
Program Notes: Battery: BST-37 Humidity: 43.7 % Ambient Temp: 22.8 C Simulant Temp: 23
Communication System: GSM 900; Frequency: 890.2 MHz;Duty Cycle: 1:8.3
Medium: Head 835/900 MHzMedium parameters used (interpolated): f = 890.2 MHz; s = 0.962 mho/m; e_r = 41.6; ? = 1000 kg/m^3
Phantom section: Left Section
DASY4 Configuration:
- Probe: ET3DV6 - SN1586; ConvF(6.46, 6.46, 6.46); Calibrated: 5/26/2005
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn417; Calibrated: 11/11/2004
- Phantom: SAM with CRP (Low Band Head); Type: SAM; Serial: 1251
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

Unnamed procedure/Area Scan (51x81x1):
Measurement grid: dx=15mm, dy=15mm
Info: Interpolated medium parameters used for SAR evaluation!
Maximum value of SAR (interpolated) = 0.616 mW/g
Unnamed procedure/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 6.90 V/m; Power Drift = -0.097 dB
Peak SAR (extrapolated) = 0.892 W/kg
SAR(1 g) = 0.588 mW/g; SAR(10 g) = 0.362 mW/g
Info: Interpolated medium parameters used for SAR evaluation!
Maximum value of SAR (measured) = 0.634 mW/g
Unnamed procedure/Zoom Scan (31x31x36)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 6.90 V/m; Power Drift = -0.097 dB
Info: Interpolated medium parameters used for SAR evaluation!
Maximum value of SAR (interpolated) = 0.892 mW/g


dB
0.00
-2.62
-5.24
-7.86
-10.5
-13.1

0 dB = 0.892mW/g

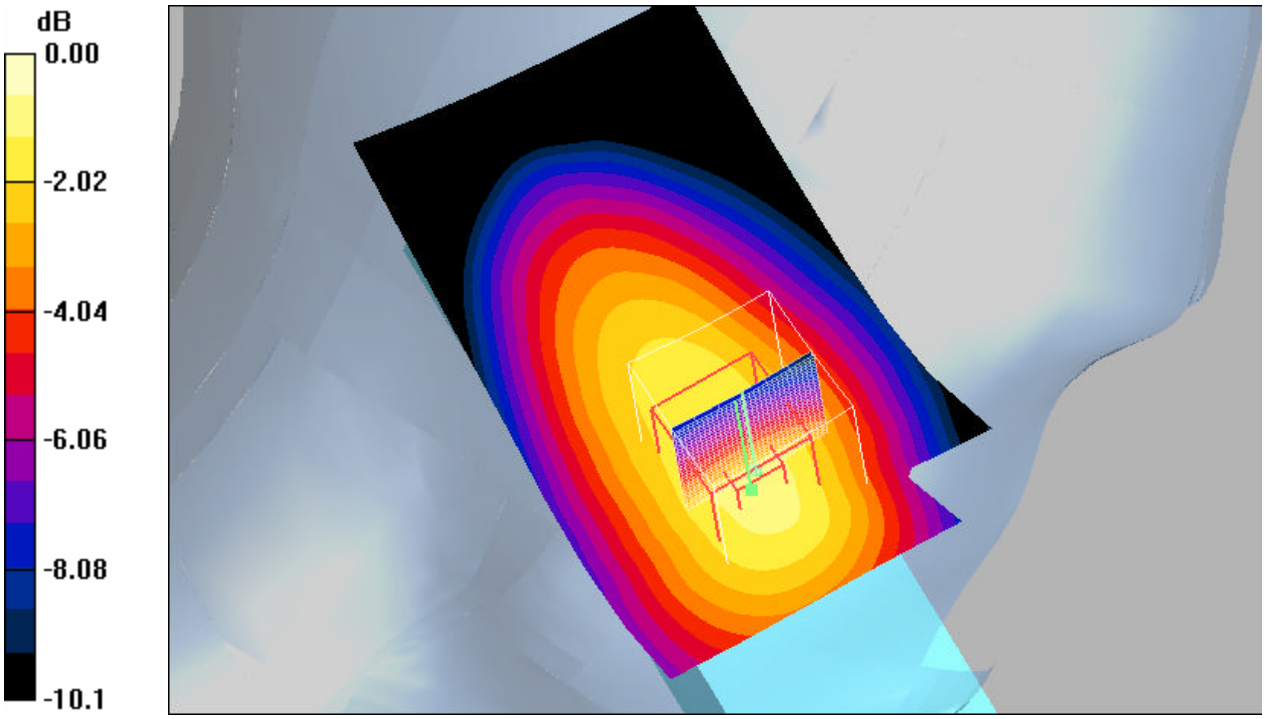

Interpolated SAR(x,y,z,f0)
SAR; Zoom Scan:Value Along Z, X=16, Y=16
dB
0
-1
-2
-3
-4
-5
-6
-7
-8
-9
-10
-11
0.000
0.005
0.010
0.015
0.020
0.025
0.030
0.035
m

Prepared (also subject responsible if other)	No.	
SEM/CV/PF/P Gerard Hayes and Rodney Dixon	REP 2006 001 Z525A 01	
Approved / Checked		
SEM/CV/PF/P Gerard Hayes	A	X:\SAR Chamber\FCC reports\Z525A\Final

900 GSM Band: Distribution and Extrapolation of Maximum SAR
Model: Z525A SN: BD302466Q7 with Standard Battery: BST-37
Left Side, Tilt Position.

Date/Time: 8/24/2005 10:16:28 AMDate/Time: 8/24/2005 10:22:05 AM
File Name: 24Aug05_Z525A_GSM900_66Q7_LT01.da4
DUT: Z525A
Program Notes: Battery: BST-37 Humidity: 48.9 % Ambient Temp: 22.8 C Simulant Temp: 23.1
Communication System: GSM 900; Frequency: 890.2 MHz;Duty Cycle: 1:8.3
Medium: Head 835/900 MHzMedium parameters used (interpolated): f = 890.2 MHz; s = 0.962 mho/m; e_r = 41.6; ? = 1000 kg/m^3
Phantom section: Left Section
DASY4 Configuration:
- Probe: ET3DV6 - SN1586; ConvF(6.46, 6.46, 6.46); Calibrated: 5/26/2005
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn417; Calibrated: 11/11/2004
- Phantom: SAM with CRP (Low Band Head); Type: SAM; Serial: 1251
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

Unnamed procedure/Area Scan (51x81x1):
Measurement grid: dx=15mm, dy=15mm
Info: Interpolated medium parameters used for SAR evaluation!
Maximum value of SAR (interpolated) = 0.161 mW/g
Unnamed procedure/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 6.76 V/m; Power Drift = -0.045 dB
Peak SAR (extrapolated) = 0.199 W/kg
SAR(1 g) = 0.149 mW/g; SAR(10 g) = 0.108 mW/g
Info: Interpolated medium parameters used for SAR evaluation!
Maximum value of SAR (measured) = 0.159 mW/g
Unnamed procedure/Zoom Scan (31x31x36)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 6.76 V/m; Power Drift = -0.045 dB
Info: Interpolated medium parameters used for SAR evaluation!
Maximum value of SAR (interpolated) = 0.199 mW/g



0 dB = 0.199mW/g

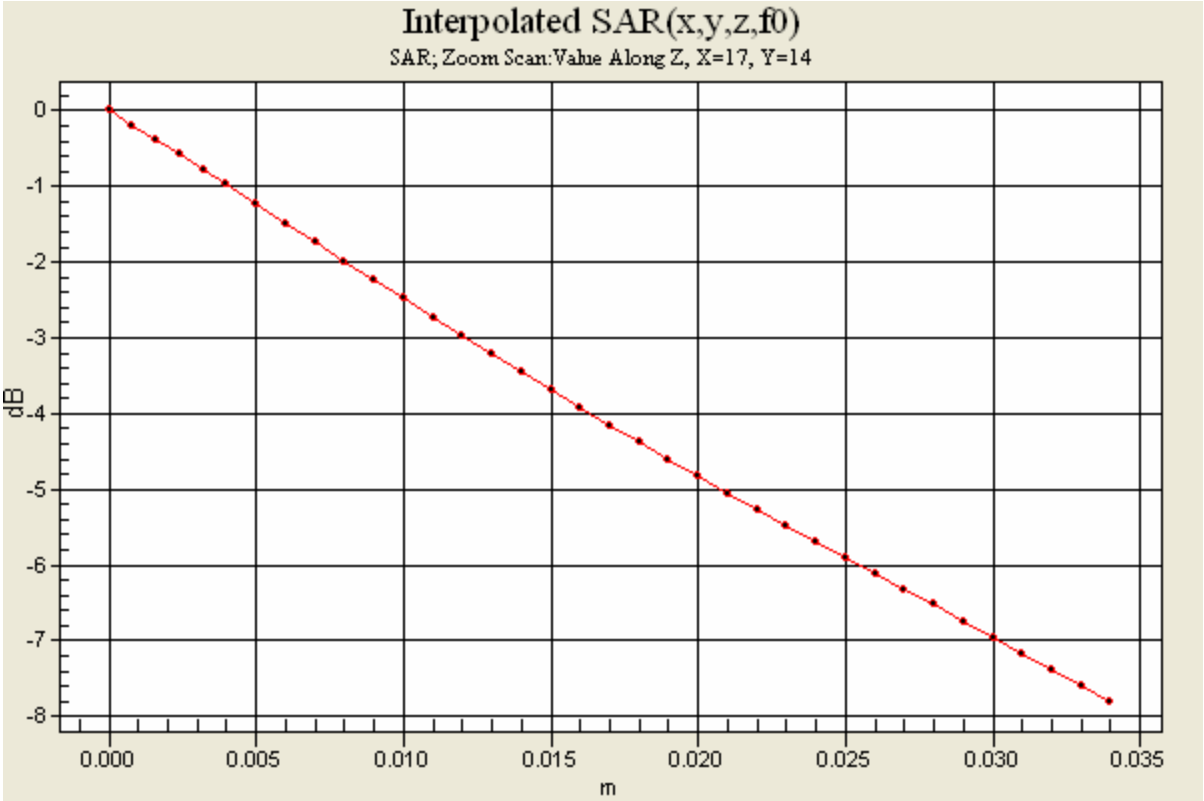


Exhibit 11

Prepared (also subject responsible if other)		No.	
SEM/CV/PF/P Gerard Hayes and Rodney Dixon		REP 2006 001 Z525A 01	
Approved	Checked		
SEM/CV/PF/P Gerard Hayes		A	X:\SAR Chamber\FCC reports\Z525A\Final

900 GSM Band: Distribution and Extrapolation of Maximum SAR
Model: Z525A SN: BD302466Q7 with Standard Battery: BST-37
Left Side, Cheek/Touch Position with Blue Tooth.

Date/Time: 8/24/2005 3:45:11 PMDate/Time: 8/24/2005 3:50:50 PM
File Name: 24Aug05_Z525A_GSM900_66Q7_BT_LC01.da4
DUT: Z525A
Program Notes: Battery: BST-37 Humidity: 49.2% Ambient Temp: 21.9 Simulant Temp: 22.3
Communication System: GSM 900; Frequency: 890.2 MHz;Duty Cycle: 1:8.3
Medium: Head 835/900 MHzMedium parameters used (interpolated): f = 890.2 MHz; s = 0.962 mho/m; e_r = 41.6; ? = 1000 kg/m^3
Phantom section: Left Section
DASY4 Configuration:
- Probe: ET3DV6 - SN1586; ConvF(6.46, 6.46, 6.46); Calibrated: 5/26/2005
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn417; Calibrated: 11/11/2004
- Phantom: SAM with CRP (Low Band Head); Type: SAM; Serial: 1251
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

Unnamed procedure/Area Scan (51x81x1):
Measurement grid: dx=15mm, dy=15mm
Info: Interpolated medium parameters used for SAR evaluation!
Maximum value of SAR (interpolated) = 0.566 mW/g
Unnamed procedure/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 5.35 V/m; Power Drift = -0.062 dB
Peak SAR (extrapolated) = 0.788 W/kg
SAR(1 g) = 0.540 mW/g; SAR(10 g) = 0.334 mW/g
Info: Interpolated medium parameters used for SAR evaluation!
Maximum value of SAR (measured) = 0.552 mW/g
Unnamed procedure/Zoom Scan (31x31x36)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 5.35 V/m; Power Drift = -0.062 dB
Info: Interpolated medium parameters used for SAR evaluation!
Maximum value of SAR (interpolated) = 0.788 mW/g