1(124)

🆢 Sony Ericsson

			I(IZT)
	No.		
	REP 2004 001 Z50	0A 02	
Checked			
		А	X:\SAR Chamber\FCC reports\Z500A\Final Reports\FCCZ500A.doc
			REP 2004 001 Z500A 02

REPORT

Exhibit 11: SAR Test Report of Portable Cellular Phone FCC ID: PY7AF031011 Model : Z500A

Date of test: Date of Report:	June 22- July 29, 2004 July 30, 2004
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 Technician III, Product Verification Group
Test Responsible:	Gerard Hayes Consulting Engineer, Antenna/RF Development Group
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 PY7AF031011 model Z500A 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)

© Sony Ericsson Mobile Communications, Inc. 2004

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.

Song Ericsson 2(124) Prepared (also subject responsible if other) No. SEM/CV/PF/P Gerard Hayes REP 2004 001 Z500A 02 Approved Checked SEM/CV/PF/P Gerard Hayes A

Table of Contents

1. Introduction	3
2. Description of the Device Under Test	3
2.1 Antenna description	3
2.2 Device description	3
3. Test Equipment Used	4
3.1 Dosimetric System	4
3.2 Additional Equipment	4
4. Electrical parameters of the tissue simulating liquid	5
5. System Accuracy Verification	6
6. Test Results	7
6.1 Head Adjacent Test Results	7
6.2 Body-Worn Test Results	12
References	16
Appendix 1: SAR distribution comparison for system accuracy verification	18
Appendix 2: SAR distribution plots for Phantom Head Adjacent Use	29
Appendix 3: SAR distribution plots for Body Worn Configuration	62
Appendix 4: Probe Calibration Certificate	95
Appendix 5: Measurement Uncertainty Budget	106
Appendix 6: Photographs of the device under test	116

Song Ericsson 3(124) Prepared (also subject responsible if other) No. SEM/CV/PF/P Gerard Hayes REP 2004 001 Z500A 02 Approved Checked SEM/CV/PF/P Gerard Hayes A X:\SAR Chamber\FCC reports\Z500A\Final Reports\FCCZ500A.doc

REPORT

1. Introduction

The Sony Ericsson SAR Laboratory has performed measurements of the maximum potential exposure to the user of portable cellular phone FCC ID PY7AF031011 model Z500A. 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

Туре	Internal antenna			
Location	Inside the lower back cover, near the hinge			
	Width	35 mm		
Dimensions	Length	15 mm		
	Height 10mm			
Configuration	PIFA-Type Antenna			

2.2 Device description

FCC ID Number / Device Model	PY7AF031011 / Z500A				
Serial number	BD3017AYMN				
Mode(s) of Operation	G	SM 800		GSM 1900	
Modulation Mode(s)	Г	TDMA		TD	MA
		32.0± 0.6 dBm		$\mathbf{f}_{\mathrm{low}}$	29.7± 0.3 dBm
Target Value and Factory Tolerance Window for Maximum Output Power Setting	f _{mid}	32.0± 0.6 dBm		\mathbf{f}_{mid}	29.5± 0.5 dBm
	\mathbf{f}_{high}	32.0± 0.7 dBm		\mathbf{f}_{high}	29.2± 0.8 dBm
Calibration Frequency (f _{low} , f _{mid} , f _{high})	f_{mid}			f_{low}	
Duty Cycle	1/8 GSM 2/8 EGPRS (Data)				GSM RS (Data)
Transmitting Frequency Rang(s)	824-849 MHz			1850-1910 MHz	
Production Unit or Identical Prototype (47 CFR §2908)	Identical Prototype				
Device Category	Portable				
RF Exposure Limits		General Popul	lation / Uncontrolled		

ど Sony Ericsson

				4(124)
Prepared (also subject responsible if other)		No.		
SEM/CV/PF/P Gerard Hayes		REP 2004 001 Z50	0A 02	
Approved	Checked			
SEM/CV/PF/P Gerard Hayes			А	X:\SAR Chamber\FCC reports\Z500A\Final Reports\FCCZ500A.doc

REPORT

3. Test Equipment Used

3.1 Dosimetric System

The Sony Ericsson SAR Laboratory utilizes Dosimetric Assessment Systems (Dasy3TM v3.1d for body-worn measurements and Dasy4TM for adjacent to head measurements) manufactured by Schmid & Partner Engineering AG (SPEAGTM), of Zurich Switzerland. The overall RSS uncertainty of the measurement system is $\pm 11.33\%$ (K=1) with an expanded uncertainty of $\pm 22.67\%$ (K=2) for Dasy3TM v3.1d and $\pm 10.14\%$ (K=1) with an expanded uncertainty of $\pm 20.27\%$ (K=2) for Dasy4TM. 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	415	10-Dec-2004
DASY3 DAE V1	417	10-Dec-2004
DASY3 DAE V1	431	26-Nov-2004
DASY3 DAE V1	432	24-Nov-2004
E-Field Probe ETDV6	1538	27-May-2005
E-Field Probe ETDV6	1539	16-Dec-2004
E-Field Probe ETDV6	1583	16-Dec-2004
E-Field Probe ETDV6	1586	27-May-2005
Dipole Validation Kit, DV835V2	429	22-Jan-2005
Dipole Validation Kit, DV1800V2	217	21-Jan-2005
Dipole Validation Kit, DV1900V2	536	21-Jan-2005
S.A.M. Phantom used for 835MHz (Head)	1251	
S.A.M. Phantoms used for 835MHz (Body)	1020 / 1031	
S.A.M. Phantom used for 1800MHz (Head)	1054	
S.A.M. Phantom used for 1900MHz (Head)	1054	
S.A.M. Phantoms used for 1900MHz (Body)	1020 / 1030	

3.2 Additional Equipment

Description	Serial Number	Cal Due Date
Signal Generator HP8648C	3537A01598	09-Sep-2005
Power Meter 437B	3125U113481	03-May-2005
Power Meter 437B	3125U13729	08-Jan-2005
Power Sensor - 8482H	MY41090240	12-May-2005
Power Sensor - 8482H	MY41090239	12-May-2005
Network Analyzer HP8752C	3410A3105	17-Sep-2004
Dielectric Probe Kit HP85070B	US33020256	23-Oct-2004
Digital Thermometer 61220-601	350078	10-Nov-2004
Thermometer Probe 61220-604	99172351	10-Nov-2004
Digital Hygrometer/ Thermometer	21242911	10-Nov-2004
AR Power Amplifier 5S1G4	19290	21-Jan-2005

= (A O A)

🎱 Sony Ericsson

<u> </u>				5(124)
Prepared (also subject responsible if other)		No.		
SEM/CV/PF/P Gerard Hayes		REP 2004 001 Z5	500A 02	
Approved	Checked			
SEM/CV/PF/P Gerard Hayes				X:\SAR Chamber\FCC reports\Z500A\Final Reports\FCCZ500A.doc

REPORT

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 $\rho=1g/cm3$ 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 21.7-24.7°C, the relative humidity was 40.8%- 55.1 %, 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.

			Diel	ectric Para	ameters
f (MHz)	Tissue type	Limits / Measured	E _r	σ (S/m)	Simulated Tissue Temp (°C)
		Measured, 22-Jun-04	40.94	0.882	23.5
	Head	Measured, 01-Jul-04	40.53	0.881	21.5
	пеац	Measured, 28-Jul-04	42.07	0.895	22.5
835		Recommended Limits	41.50	0.90	20-25
		Measured, 27-Jun-04	54.93	0.980	22.8
	Body	Measured, 26-Jul-04	54.91	0.977	23.3
	Body	Recommended Limits	55.20	0.97	20-25
		Measured, 21-Jun-04	38.85	1.44	22.6
	Head	Measured, 22-Jul-04	38.10	1.43	22.3
		Recommended Limits	40.00	1.40	20-25
1900		Measured, 25-Jun-04	50.89	1.55	23.0
	Body	Measured, 28-Jun-04	50.68	1.56	22.4
	Body	Measured, 29-Jul-04	51.16	1.51	21.8
		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.

	800MHz	800MHz	1800/1900MHz	1900MHz
Ingredient	Head	Body	Head	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%		

0/404

🍋 Sony Ericsson

				6(124)
Prepared (also subject responsible if other)		No.		
SEM/CV/PF/P Gerard Hayes		REP 2004 001 Z500A 02		
Approved	Checked			
SEM/CV/PF/P Gerard Hayes			А	X:\SAR Chamber\FCC reports\Z500A\Final Reports\FCCZ500A.doc

REPORT

5. 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 $\pm 10\%$ from the target SAR indicated on the dipole certification sheet. These tests were done at 835 MHz 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 the tests, the ambient temperature of the laboratory was in the range 21.5-23.8 °C, the relative humidity was in the range 44.4 – 55.5 % and the liquid depth above the ear reference points was above 150 mm 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 0.0085 W/kg, which is below the recommended limit in [1].

f	Tissue		SAR	(W/kg)		ectric neters	Tissue
(MHz)	Туре	Description	1g /	10g	E _r	σ (S/m)	Temp (°C)
		Measured. 22-Jun-04	8.61	5.63	40.94	0.882	23.5
	TT 1	Measured. 01-Jul-04	8.69	5.67	40.53	0.881	21.5
	Head	Measured, 28-Jul-04	8.99	5.86	42.07	0.895	22.5
835		Recommended Limits	9.50	6.20	41.50	0.90	20-25
	D 1	Measured, 27-Jun-04	9.47	6.20	54.93	0.980	22.8
	Body	Measured, 26-Jul-04	9.45	6.22	54.91	0.977	23.3
		Recommended Limits	9.90	6.46	55.20	0.97	20-25
	Head	Measured, 21-Jun-04	39.60	20.70	38.85	1.44	22.6
		Measured, 22-Jul-04	40.53	21.20	38.10	1.43	22.3
		Recommended Limits	39.70	20.50	40.00	1.40	20-25
1900		Measured, 25-Jun-04	42.98	22.49	50.89	1.55	23.0
	Body	Measured, 28-Jun-04	43.54	22.73	50.68	1.56	22.4
	5	Measured, 29-Jul-04	42.93	22.40	51.16	1.51	21.8
		Recommended Limits	40.50	20.89	53.30	1.52	20-25

ど Sony Ericsson	7(124)
Prepared (also subject responsible if other)	No.
SEM/CV/PF/P Gerard Hayes	REP 2004 001 Z500A 02
Approved Checker	
SEM/CV/PF/P Gerard Hayes	A X:\SAR Chamber\FCC reports\Z500A\Final Reports\FCCZ500A.doc

REPORT

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 PY7AF031011 has the following battery options:

Model #1 – BKB 193 191 (BST-35) Standard Lithium Polymer Battery

Model #2 – BKB 193 174 (BST-30) Alternative/Optional Lithium Ion Battery

Both batteries were used for SAR testing. 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 4 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 21.1-26.5% and 22.9-23.9°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.

Sun	Summary of Maximum Extrapolated SAR Results : Head Adjacent								
Frequency	Extrapolated	SAR (W/kg)	Test Configuration						
	1 g	10 g							
800 GSM	1.25	0.84	Right head, cheek/touch position, 824 MHz BST-35 battery						
1900 GSM	1.45	0.73	Left head, cheek/touch position, 1850 MHz BST-35 battery						

٨

Sony Ericsson

				8(124)
Prepared (also subject responsible if other)		No.		
SEM/CV/PF/P Gerard Hayes		REP 2004 001 Z5	500A 02	
Approved	Checked			
SEM/CV/PF/P Gerard Hayes				X:\SAR Chamber\FCC reports\Z500A\Final Reports\FCCZ500A.doc

	Channel/	Conducted Output Power (dBm)	F	<u>CC ID PYA</u> Left		F031011 with Standard Battery BST-35					
f (MHz)	frequency	GSM 1:8 Duty Cycle	Measure 1g/	d (W/kg) 10g	Drift (dB)	1	ted (W/kg) 10g	Ambi ent l'emp (°C)	Simulate Temp (°C)		
800 GSM	128 / 824	32.3	0.981	0.694	-0.02	1.00	0.71	23.7	22.5		
000 000	189 / 837	32.4	0.759	0.547	-0.02	0.78	0.56	23.7	22.5		
	251 / 849	32.6	0.796	0.563	-0.11	0.81	0.58	23.7	22.5		
1900 GSM	512 / 1850	29.9	1.42	0.713	-0.13	1.45	0.73	23.5	21.7		
1700 0510	660/1880	29.7	1.31	0.675	-0.04	1.34	0.69	23.5	21.7		
	810/1910	29.4	1.11	0.587	-0.06	1.14	0.60	23.5	21.7		
	Channel/ frequency	Conducted Output Power (dBm)	F	<u>CC ID PYA</u> L	<u>F031011</u> eft Head						
f (MHz)	nequency	GSM 1:8 Duty Cycle	Measure 1g /	d (W/kg) 10g	Drift (dB)	1	ted (W/kg) 10g	Ambi ent lemp (°C)	Simulate Temp (°C)		
800 GSM	128 / 824	32.3	0.277	0.21	-0.19	0.28	0.21	24.4	22.6		
000 GSW	189 / 837	32.4	0.3	0.226	-0.05	0.31	0.23	24.4	22.6		
	251 / 849	32.6	0.338	0.253	-0.06	0.35	0.26	24.4	22.6		
1900 GSM	512 / 1850	29.9	0.195	0.123	0.02	0.20	0.13	23.1	21.9		
1900 GSM	660/1880	29.7	0.216	0.135	-0.03	0.22	0.14	23.1	21.9		
	810/1910	29.4	0.176	0.11	-0.04	0.18	0.11	23.1	21.9		

 Table 1: SAR measurement results for the portable cellular telephone FCC ID PY7AF031011 model Z500A at maximum output power with Standard Battery BST-35. Measured against the left head.

FCC ID: **PY7AF031011**

ど Sony Ericsson

				9(124)
Prepared (also subject responsible if other)		No.		
SEM/CV/PF/P Gerard Hayes		REP 2004 001	Z500A 02	2
Approved	Checked			
SEM/CV/PF/P Gerard Hayes			A	X:\SAR Chamber\FCC reports\Z500A\Final Reports\FCCZ500A.doc

		Conducted FCC ID PYAF031011 with Standard Battery BST-35					Г-35		
	Channel/ frequency	Output Power (dBm)		Right	Head	(Cheek / T	ouch Posi	tion)	
f (MHz)	nequency	GSM 1:8 Duty Cycle		d (W/kg) 10g	Drift (dB)	1	ted (W/kg) 10g	Ambi ent l'emp (°C)	Simulate Temp (°C)
800 GSM	128 / 824	32.3	1.22	0.816	-0.09	1.25	0.84	23.5	22.2
800 GSM	189 / 837	32.4	0.959	0.652	0.01	0.98	0.67	23.5	22.2
	251 / 849	32.6	0.959	0.645	-0.10	0.98	0.66	23.5	22.2
1900 GSM	512 / 1850	29.9	1.29	0.673	-0.07	1.32	0.69	22.5	21.7
1900 (1514)	660/1880	29.7	1.19	0.641	-0.04	1.22	0.66	22.5	21.7
	810/1910	29.4	1.08	0.581	-0.04	1.11	0.59	22.5	21.7
	Channel/	Conducted Output Power (dBm)	F		F031011 with Standard Battery BST-35				
f (MHz)	frequency	GSM 1:8 Duty Cycle		d (W/kg) 10g	Drift (dB)		ted (W/kg) 10g	Ambi ent l'emp (°C)	Simulate Temp (°C)
800 GSM	128 / 824	32.3	0.316	0.237	-0.03	0.32	0.24	24.7	22.8
800 GSM	189 / 837	32.4	0.303	0.225	-0.08	0.31	0.23	24.7	22.8
	251 / 849	32.6	0.324	0.241	0.01	0.33	0.25	24.7	22.8
1900 GSM	512 / 1850	29.9	0.197	0.127	0.00	0.20	0.13	23.6	21.8
1900 GSM	660/1880	29.7	0.205	0.129	-0.03	0.21	0.13	23.6	21.8
	810/1910	29.4	1.08	0.102	-0.03	1.11	0.10	23.6	21.8

Table 2: SAR measurement results for the portable cellular telephone FCC ID PY7AF031011 model Z500A at maximum output power with Standard Battery BST-35. Measured against the right head.

ど Sony Ericsson

Prepared (also subject responsible if other) SEM/CV/PF/P Gerard Hayes	No. REP 2004 001 Z50	00A 02		
Approved		Τ		
SEM/CV/PF/P Gerard Hayes				X:\SAR Chamber\FCC reports\Z500A\Final Reports\FCCZ500A.doc

		Conducted	F	CC ID PYA	AF031011	with Opt	tional Batt	ery BST	Г-30
	Channel/ frequency	Output Power (dBm)		Left	Head (Cheek / To	ouch Posit	ion)	
f (MHz)	nequency	GSM 1:8 Duty Cycle		d (W/kg) 10g	Drift (dB)	-	ted (W/kg) 10g	Ambi ent l'emp (°C)	Simulate Temp (°C)
800 GSM	128 / 824	32.3	0.966	0.683	-0.16	0.989	0.699	22.6	22.5
800 GSM	189 / 837	32.4	0.862	0.610	-0.11	0.882	0.624	22.6	22.5
	251 / 849	32.6	0.806	0.571	-0.07	0.825	0.584	22.6	22.5
1900 GSM	512 / 1850	29.9	1.400	0.699	-0.07	1.433	0.715	22.6	21.4
1900 GSM	660/1880	29.7	1.280	0.656	-0.01	1.310	0.671	22.6	21.4
	810/1910	29.4	1.160	0.607	-0.02	1.187	0.621	22.6	21.4
	Channel/ frequency	Conducted Output Power (dBm)	F	<u>CC ID PY</u>	AF031011 eft Head				
f (MHz)	nequency	GSM 1:8 Duty Cycle		d (W/kg) 10g	Drift (dB)	1	ted (W/kg) 10g	Ambi ent l'emp (°C)	Simulate Temp (°C)
800 GSM	128 / 824	32.3	0.310	0.236	-0.06	0.317	0.241	22.7	22.0
800 USW	189 / 837	32.4	0.299	0.227	-0.08	0.306	0.232	22.7	22.0
	251 / 849	32.6	0.267	0.203	-0.04	0.273	0.208	22.7	22.0
1900 GSM	512 / 1850	29.9	0.211	0.132	0.02	0.216	0.135	22.8	21.0
1900 (1510)	660/1880	29.7	0.201	0.125	0.08	0.206	0.128	22.8	21.0
	810/1910	29.4	0.178	0.109	0.06	0.182	0.112	22.8	21.0

Table 3: SAR measurement results for the portable cellular telephone FCC ID PY7AF031011 model Z500A at maximum output power with Optional Battery BST-30. Measured against the left head.

ど Sony Ericsson

Prepared (also subject responsible if other) SEM/CV/PF/P Gerard Hayes	No. REP 2004 001 Z50	00A 02		
Approved		Τ		
SEM/CV/PF/P Gerard Hayes				X:\SAR Chamber\FCC reports\Z500A\Final Reports\FCCZ500A.doc

		Conducted	F	CC ID PYA	F031011	with Opt	ional Batt	ery BST	Г-30
	Channel/ frequency	Output Power (dBm)		Right	Head	<u>(Cheek / T</u>	ouch Posi	tion)	
f (MHz)	nequency	GSM 1:8 Duty Cycle		d (W/kg) 10g	Drift (dB)		ed (W/kg) 10g	Ambi ent l'emp (°C)	Simulate Temp (°C)
800 GSM	128 / 824	32.3	1.100	0.746	-0.12	1.126	0.764	22.3	21.7
800 GSM	189 / 837	32.4	0.982	0.670	-0.04	1.005	0.686	22.3	21.7
	251 / 849	32.6	0.903	0.612	-0.07	0.924	0.626	22.3	21.7
1900 GSM	512 / 1850	29.9	1.300	0.676	-0.20	1.330	0.692	23.0	22.3
1900 (1510)	660/1880	29.7	1.160	0.612	-0.17	1.187	0.626	23.0	22.3
	810/1910	29.4	1.020	0.548	-0.13	1.044	0.561	23.0	22.3
	Channel/ frequency	Conducted Output Power (dBm)	F	<u>CC ID PYA</u> Ri	AF031011 ght Head		ional Batt lt Position		Г-30
f (MHz)	nequency	GSM 1:8 Duty Cycle		d (W/kg) 10g	Drift (dB)		ed (W/kg) 10g	Ambi ent lemp (°C)	Simulate Temp (°C)
800 GSM	128 / 824	32.3	0.292	0.219	-0.11	0.299	0.224	22.3	21.7
800 GSM	189 / 837	32.4	0.288	0.215	-0.01	0.295	0.220	22.3	21.7
	251 / 849	32.6	0.295	0.220	-0.04	0.302	0.225	22.3	21.7
1900 GSM	512 / 1850	29.9	0.191	0.121	-0.03	0.195	0.124	22.7	21.2
1900 (351/1	660/1880	29.7	0.191	0.119	-0.07	0.195	0.122	22.7	21.2
	810/1910	29.4	0.164	0.101	0.08	0.168	0.103	22.7	21.2

Table 4: SAR measurement results for the portable cellular telephone FCC ID PY7AF031011 model Z500A at maximum output power with Optional Battery BST-30. Measured against the right head.

Sony Ericsson Prepared (also subject responsible if other) SEM/CV/PF/P Gerard Hayes Approved SEM/CV/PF/P Gerard Hayes Approved SEM/CV/PF/P Gerard Hayes

REPORT

6.2 Body-Worn Test Results

The SAR results shown in tables 5-8 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 22.3-32.8% and 22.5-23.9°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 accessories were tested for this phone:

-Carry case model ICE-26

-15 mm spacer

A full data set output of the test conditions with the highest SAR values from the DasyTM 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.

S	Summary of Maximum Extrapolated SAR Results: Body-worn								
Frequency	Extrapolated SAR (W/kg) 1 g 10 g		Test Configuration						
800 GSM	0.973	0.649	ICE-26 Carry Accessory, back of phone facing body, 824MHz BST-35 battery						
1900 GSM	0.683	0.641	ICE-26 Carry Accessory, front of phone facing body, 1850MHz BST-35 battery						

٨

Sony Ericsson

Prepared (also subject responsible if other) SEM/CV/PF/P Gerard Hayes		No. REP 2004 001 Z50	0A 02	
Approved	Checked			
SEM/CV/PF/P Gerard Hayes				X:\SAR Chamber\FCC reports\Z500A\Final Reports\FCCZ500A.doc

		Conducted	F	CC ID PYA	F031011	with Star	ndard Batt	tery BS'	Г-35		
		Output Power	Body Wor	Body Worn (PHF: HPB-20)			Carry Accessory: ICE-26				
	Channel/ frequency	(dBm)			Back of	phone faci	ng body				
	nequency	GSM 2:8						Ambi			
f (MHz)		Duty Cycle	Measure	d (W/kg)	Drift	Extrapolat	ed (W/kg)	ent Temp	Simulate Temp		
				10g	(dB)		10g	(°C)	(°C)		
800 GSM	128 / 824	32.3	0.951	0.634	-0.09	0.973	0.649	22.8	22.4		
800 (1514)	189 / 837	32.4	0.802	0.535	-0.03	0.821	0.547	24.0	22.4		
	251 / 849	32.6	0.606	0.403	-0.03	0.620	0.412	24.1	22.3		
1900 GSM	512 / 1850	29.9	0.415	0.269	-0.06	0.425	0.275	23.0	22.8		
1900 (351/4	660/1880	29.7	0.431	0.268	-0.01	0.441	0.274	23.2	22.7		
	810/1910	29.4	0.429	0.271	-0.03	0.439	0.277	24.2	22.6		
		Conducted	F	CC ID PYA	F031011	with Star	idard Batt	tery BS'	Г-35		
	C1 1/	Output Power	Body Wor	n (PHF: H	PB-20)		Carry Accessory: ICE-26				
	Channel/ frequency	(dBm)			Front of	phone faci	ng body	•	-		
		EGPRS 2:8						Ambi			
f (MHz)		Duty Cycle	Measure	d (W/kg)	Drift	Extrapolat	ed (W/kg)	ent Temp	Simulate Temp		
· · · ·				10g	(dB)	1	10g	(°C)	(°C)		
800 GSM	128 / 824	32.3	0.851	0.581	-0.11	0.871	0.595	22.8	22.4		
800 GSM	189 / 837	32.4	0.639	0.427	-0.03	0.654	0.437	24.0	22.4		
	251 / 849	32.6	0.546	0.367	-0.05	0.559	0.376	24.1	22.3		
1900 GSM	512 / 1850	29.9	0.667	0.373	-0.03	0.683	0.382	23.0	22.8		
1900 (1514)	660/1880	29.7	0.488	0.264	0.05	0.499	0.270	23.2	22.7		
	000.2000										

Table 5: SAR measurement results for the portable cellular telephone FCC ID PY7AF031011 model Z500A at maximum output power with Standard Battery BST-35. Measured against the body with carry accessory ICE-26.

ど Sony Ericsson

Prepared (also subject responsible if other) SEM/CV/PF/P Gerard Hayes		^{No.} REP 2004 001 Z5	500A 02	
Approved	Checked			
SEM/CV/PF/P Gerard Hayes				X:\SAR Chamber\FCC reports\Z500A\Final Reports\FCCZ500A.doc

		Conducted	F	CC ID PYA	F031011	with Opt	ional Batt	ery BST	Г-30	
		Output Power	Body Wor	n (PHF: H	PB-20)	Carry Accessory: ICE-26				
	Channel/ frequency	(dBm)			Back of j	phone faci	ng body	-		
	nequency	GSM 2:8						Ambi		
f (MHz)		Duty Cycle	Measure	d (W/kg)	Drift	Extrapolat	ted (W/kg)	ent Temp	Simulate Temp	
- ()				10g	(dB)		10g	(°C)	(°C)	
800 GSM	128 / 824	32.3	0.922	0.617	-0.07	0.943	0.631	23.0	22.8	
800 GSM	189 / 837	32.4	0.703	0.456	-0.05	0.719	0.467	23.0	22.4	
	251 / 849	32.6	0.645	0.424	-0.06	0.660	0.434	22.9	22.1	
1000 CSM	512 / 1850	29.9	0.462	0.279	-0.02	0.473	0.285	22.6	21.8	
1900 GSM	660/1880	29.7	0.445	0.272	-0.03	0.455	0.278	22.4	21.4	
	810/1910	29.4	0.402	0.245	0	0.411	0.251	22.3	21.6	
		Conducted	F	CC ID PYA	F031011	with Opt	ional Batt	ery BST	Г-30	
		Output Power	Body Wor	n (PHF: H	PB-20)	Carry Accessory: ICE-26				
	Channel/ frequency	(dBm)			Front of	of phone facing body				
	nequency	EGPRS 2:8						Ambi		
f (MHz)		Duty Cycle	Maggura	d (W/kg)	Drift	Extrapolat	ted (W/kg)	ent Temp	Simulate Temp	
((((((((((((((((((((((((((((((((((((((10g	(dB)	1	10g	(°C)	(°C)	
200 COM	128 / 824	32.3	0.875	0.599	-0.12	0.90	0.613	22.8	23.3	
800 GSM	189 / 837	32.4	0.765	0.51	-0.05	0.783	0.522	23.0	22.4	
	251 / 849	32.6	0.566	0.379	-0.05	0.579	0.388	22.9	22.1	
1900 GSM	512 / 1850	29.9	0.556	0.318	-0.08	0.569	0.325	22.6	21.8	
1900 GSM	660/1880	29.7	0.476	0.268	-0.07	0.487	0.274	22.4	21.4	
1	810/1910		0.410	0.235			0.240	22.3	21.6	

Table 6: SAR measurement results for the portable cellular telephone FCC ID PY7AF031011 model Z500A at maximum output power with Optional Battery BST-30. Measured against the body with carry accessory ICE-26.

실 Sony Ericsson

Prepared (also subject responsible if other) SEM/CV/PF/P Gerard Hayes		REP 2004 001 Z5	500A 02	
Approved	Checked			
SEM/CV/PF/P Gerard Hayes				X:\SAR Chamber\FCC reports\Z500A\Final Reports\FCCZ500A.doc

			F	CC ID PYA	F031011	with Star	idard Batt	tery BST	Г-35		
		Conducted Output Power	Body Wor	Body Worn (PHF: HPB-20)				Carry Accessory: 15mm			
	Channel/	(dBm)	Spacer								
	frequency	GSM 2:8			Back of j	phone faci	ng body				
		Duty Cycle						Ambi			
f (MHz)		Duty Cycle	Measure	d (W/kg)	Drift	Extrapolat	ed (W/kg)	ent lemp	Simulate Temp		
· · · · ·				10g	(dB)	1g /		(°C)	(°C)		
800 GSM	128 / 824	32.3	0.881	0.581	-0.06	0.902	0.595	24.2	22.8		
800 (1514)	189 / 837	32.4	0.657	0.439	0.03	0.672	0.449	24.6	23.0		
	251 / 849	32.6	0.535	0.357	-0.02	0.547	0.365	24.2	22.6		
1900 GSM	512 / 1850	29.9	0.428	0.265	-0.04	0.438	0.271	22.4	22.3		
1900 GSM	660/1880	29.7	0.425	0.26	0.00	0.435	0.266	22.5	21.7		
	810/1910	29.4	0.438	0.265	-0.02	0.448	0.271	22.6	21.9		
	Channel/	Conducted Output Power (dBm)		CC ID PYA n (PHF: H		11 with Standard Battery BST-35) Carry Accessory: 15mm					
	frequency	(dBiii)	Spacer		Front of	phone faci	ng body				
		EGPRS 2:8 Duty Cycle						Ambi ent			
f (MHz)				d (W/kg)	Drift	Extrapolat	(D)	lemp (°C)	Simulate Temp		
1			Ŭ	10g	(dB)	1g /	U U	(\mathbf{C})	(°C)		
800 GSM	128 / 824	32.3	0.409	10g 0.297	(dB) -0.06	0.419	0.304	24.2	(°C) 22.8		
800 GSM	128 / 824 189 / 837	32.3 32.4	Ŭ		(0	U U	(-)			
800 GSM			0.409	0.297	-0.06	0.419	0.304	24.2	22.8		
	189 / 837	32.4	0.409 0.238	0.297 0.171	-0.06 -0.15	0.419 0.244	0.304 0.175	24.2 24.6	22.8 23.0		
800 GSM 1900 GSM	189 / 837 251 / 849	32.4 32.6	0.409 0.238 0.177	0.297 0.171 0.127	-0.15 0.07	0.419 0.244 0.181	0.304 0.175 0.130	24.2 24.6 24.2	22.8 23.0 22.6		

Table 7: SAR measurement results for the portable cellular telephone FCC ID PY7AF031011 model Z500A at maximum output power with Standard Battery BST-35. Measured against the body with 15mm spacer.

٨

Sony Ericsson

Prepared (also subject responsible if other) SEM/CV/PF/P Gerard Hayes		REP 2004 001 Z50	00A 02	
Approved SEM/CV/PF/P Gerard Hayes	Checked			X:\SAR Chamber\FCC reports\Z500A\Final Reports\FCCZ500A.doc

			F	CC ID PY	AF031011	with Opt	ional Batt	ery BST	Г-30		
		Conducted Output Power	Body Wor	n (PHF: H	Carry Accessory: 15mm						
	Channel/	(dBm)	Spacer								
	frequency	60100			Back of J	phone faci	ng body	•			
		GSM 2:8 Duty Cycle						Ambi			
f (MHz)		Duty Cycle	Measure	d (W/kg)	Drift	Extrapolat	ed (W/kg)	ent Temp	Simulate Temp		
(((((1))))))))))))))))))))))))))))))))				10g	(dB)	1	10g	(°C)	(°C)		
000 CGM	128 / 824	32.3	0.903	0.599	-0.03	0.92	0.613	23.0	22.8		
800 GSM	189 / 837	32.4	0.84	0.555	0.01	0.860	0.568	23.0	22.4		
	251 / 849	32.6	0.521	0.338	-0.17	0.533	0.346	22.9	22.1		
1000 CGM	512 / 1850	29.9	0.427	0.261	-0.01	0.437	0.267	22.3	21.5		
1900 GSM	660/1880	29.7	0.381	0.237	0.01	0.390	0.243	22.4	21.2		
	810/1910	29.4	0.427	0.263	-0.01	0.437	0.269	22.5	21.4		
			FCC ID PYAF031011 with C				ith Optional Battery BST-30				
		Conducted						v			
		Conducted Output Power	Body Wor	CC ID PYA n (PHF: H			ional Batt arry Acces	v			
	Channel/				PB-20)	C	arry Acces	v			
	Channel/ frequency	Output Power (dBm)	Body Wor		PB-20)		arry Acces	ssory: 1			
		Output Power	Body Wor		PB-20)	C	arry Acces	SSOTY: 1			
f (MHz)		Output Power (dBm) EGPRS 2:8	Body Wor Spacer		PB-20)	C	arry Acces ng body	ssory: 1			
f (MHz)		Output Power (dBm) EGPRS 2:8	Body Wor Spacer Measure	n (PHF: H	PB-20) Front of	c phone faci Extrapolat	arry Acces ng body	Ambi ent	15mm		
		Output Power (dBm) EGPRS 2:8	Body Wor Spacer Measure	n (PHF: H	PB-20) Front of Drift	c phone faci Extrapolat	arry Acces ng body eed (W/kg)	Ambi ent iemp	15mm Simulate Temp		
f (MHz) 800 GSM	frequency	Output Power (dBm) EGPRS 2:8 Duty Cycle	Body Wor Spacer Measure	n (PHF: H d (W/kg) 10g	PB-20) Front of Drift (dB)	C phone faci Extrapolat 1g /	arry Acces ng body eed (W/kg) 10g	Ambi ent (°C)	15mm Simulate Temp (°C)		
	frequency 128 / 824	Output Power (dBm) EGPRS 2:8 Duty Cycle 32.3	Body Wor Spacer Measure 1g / 0.324	d (W/kg) 10g 0.233	PB-20) Front of Drift (dB) -0.13	C phone faci Extrapolat 1g / 0.332	arry Acces ng body eed (W/kg) 10g 0.238	Ambi ent Cemp (°C) 23.0	Simulate Temp (°C) 22.8		
800 GSM	frequency 128 / 824 189 / 837	Output Power (dBm) EGPRS 2:8 Duty Cycle 32.3 32.4	Body Wor Spacer Measure 1g / 0.324 0.286	n (PHF: H d (W/kg) 10g 0.233 0.206	PB-20) Front of Drift (dB) -0.13 -0.01	phone faci Extrapolat 1g / 0.332 0.293	arry Acces ng body ared (W/kg) 10g 0.238 0.211	Ambi ent 'emp (°C) 23.0 23.0	15mm Simulate Temp (°C) 22.8 22.4		
	frequency 128 / 824 189 / 837 251 / 849	Output Power (dBm) EGPRS 2:8 Duty Cycle 32.3 32.4 32.6	Body Wor Spacer Measure 1g / 0.324 0.286 0.171	n (PHF: H d (W/kg) 10g 0.233 0.206 0.118	PB-20) Front of Drift (dB) -0.13 -0.01 -0.01	phone faci Extrapolat 1g / 0.332 0.293 0.175	arry Acces ng body and (W/kg) 10g 0.238 0.211 0.121	Ambi ent .emp (°C) 23.0 23.0 22.9	L5mm Simulate Temp (°C) 22.8 22.4 22.1		

 Table 8: SAR measurement results for the portable cellular telephone FCC ID PY7AF031011 model Z500A at maximum output power with Optional Battery BST-30. Measured against the body with 15mm spacer.

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.

실 Sony Ericsson

Prepared (also subject responsible if other) SEM/CV/PF/P Gerard Hayes		^{№.} REP 2004 001 Z50	0A 02	
Approved SEM/CV/PF/P Gerard Hayes	Checked			X:\SAR Chamber\FCC reports\Z500A\Final Reports\FCCZ500A.doc

 Sony Ericsson

 Prepared (also subject responsible if other)

 SEM/CV/PF/P Gerard Hayes

 Approved

 SEM/CV/PF/P Gerard Hayes

 Approved

 Checked

 SEM/CV/PF/P Gerard Hayes

 Approved

 Checked

 Approved

 Checked

 Approved

 Checked

 A

 X:\SAR Chamber\FCC reports\Z500A\Final Reports\FCCZ500A.doc

Appendix 1

SAR distribution comparison for the system accuracy verification

Sony Ericsson

Prepared (also subject responsible if other) SEM/CV/PF/P Gerard Hayes		REP 2004 001 Z50	0A 02	
Approved SEM/CV/PF/P Gerard Hayes	Checked			X:\SAR Chamber\FCC reports\Z500A\Final Reports\FCCZ500A.doc

REPORT

835 MHz SAR Distribution of Validation Dipole Antenna

System Performance Check on June 22, 2004 (Using head tissue).

Phantom: SAM with CRP (Low Band Head)Phantom section: Flat Section Probe: ET3DV6 - SN1586ConvF(6.62, 6.62, 6.62)Duty Cycle: 1:1Frequency: 835 MHz Medium parameters used (interpolated): f = 835 MHz; $\sigma = 0.892$ mho/m; $\varepsilon_r = 41.8$; $\rho = 1000$ kg/m³ Measurement Standard: DASY4 (High Precision Assessment) Dipole at 10 mm/Area Scan (7x7x1): Measurement grid: dx=15mm, dy=15mm

Reference Value = 33.3 V/m; Power Drift = -0.0 dB

Maximum value of SAR (measured) = 0.878 mW/g

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

Reference Value = 33.3 V/m; Power Drift = -0.0 dB Maximum value of SAR (measured) = 0.930 mW/g

Peak SAR (extrapolated) = 1.28 W/kg

SAR(1 g) = 0.857 mW/g; SAR(10 g) = 0.559 mW/g

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

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

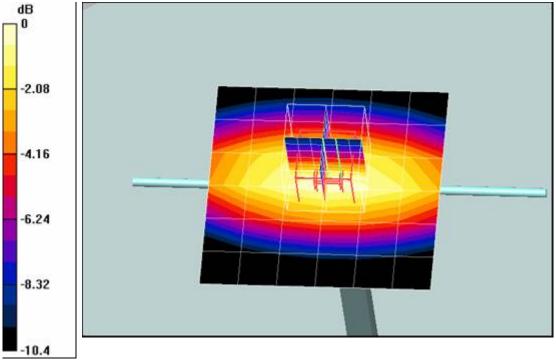
Reference Value = 33.3 V/m; Power Drift = -0.0 dB

Maximum value of SAR (measured) = 0.935 mW/g

Peak SAR (extrapolated) = 1.3 W/kg

SAR(1 g) = 0.864 mW/g; SAR(10 g) = 0.563 mW/g

Procedure Notes: Pin: before 99.0 mW / after 99.0 mW Humidity: 44.4 Ambient Temp: 23.5 Simulant Temp: 22.2 File Name: Validation_835Head_429_1251_22June04_T01.da4



 $0 \, dB = 0.935 mW/g$

Sony Ericsson

Prepared (also subject responsible if other) SEM/CV/PF/P Gerard Hayes		REP 2004 001 Z500	A 02	
Approved	Checked			
SEM/CV/PF/P Gerard Hayes				X:\SAR Chamber\FCC reports\Z500A\Final Reports\FCCZ500A.doc

REPORT

835 MHz SAR Distribution of Validation Dipole Antenna

System Performance Check on July 1, 2004 (Using head tissue).

Phantom: SAM with CRP (Low Band Head)Phantom section: Flat Section Probe: ET3DV6 - SN1586ConvF(6.62, 6.62, 6.62)Duty Cycle: 1:1Frequency: 835 MHz Medium parameters used: f = 835 MHz; $\sigma = 0.878$ mho/m; $\varepsilon_r = 40.4$; $\rho = 1000$ kg/m³ Measurement Standard: DASY4 (High Precision Assessment)

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

Reference Value = 34.1 V/m; Power Drift = -0.1 dBMaximum value of SAR (interpolated) = 0.929 mW/g

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

Reference Value = 34.1 V/m; Power Drift = -0.1 dBMaximum value of SAR (measured) = 0.939 mW/gPeak SAR (extrapolated) = 1.29 W/kg

SAR(1 g) = 0.867 mW/g; SAR(10 g) = 0.567 mW/g

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

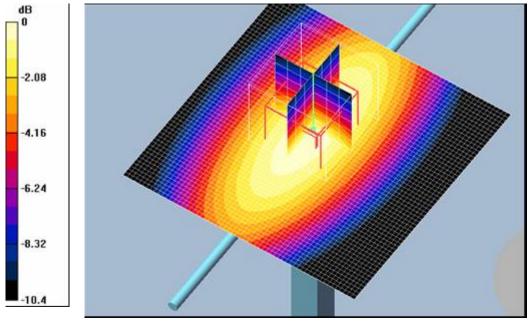
dz=5mm

Reference Value = 34.1 V/m; Power Drift = -0.1 dBMaximum value of SAR (measured) = 0.954 mW/gPeak SAR (extrapolated) = 1.33 W/kg

SAR(1 g) = 0.882 mW/g; SAR(10 g) = 0.576 mW/g

Procedure Notes: Pin: before 101.6 mW / after 101.6 mW Humidity: 54.1 % Ambient Temp: 21.5 C Simulant Temp: 23.1 C

File Name: Validation_835Head_429_1251_01July04_T01.da4



 $0 \, dB = 0.954 \, mW/g$

Sony Ericsson

Prepared (also subject responsible if other) SEM/CV/PF/P Gerard Hayes		No. REP 2004 001 Z50	0A 02	
Approved	Checked			
SEM/CV/PF/P Gerard Hayes			А	X:\SAR Chamber\FCC reports\Z500A\Final Reports\FCCZ500A.doc

REPORT

835 MHz SAR Distribution of Validation Dipole Antenna System Performance Check on July 28, 2004 (Using head tissue).

Validation_835Head_429_1251_28July04_T01

File Name: Validation 835Head 429 1251 28July04 T01.da4 Phantom: SAM with CRP (Low Band Head)Phantom section: Flat Section Probe: ET3DV6 - SN1538ConvF(6.27, 6.27, 6.27)Duty Cycle: 1:1Frequency: 835 MHz Medium parameters used: f = 835 MHz; $\sigma = 0.894$ mho/m; $\varepsilon_r = 42$; $\rho = 1000$ kg/m³ Measurement Standard: DASY4 (High Precision Assessment)

Dipole at 10 mm/Area Scan (61x61x1): Measurement grid: dx=15mm, dy=15mm Reference Value = 34.4 V/m; Power Drift = -0.0 dBMaximum value of SAR (interpolated) = 0.963 mW/g

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

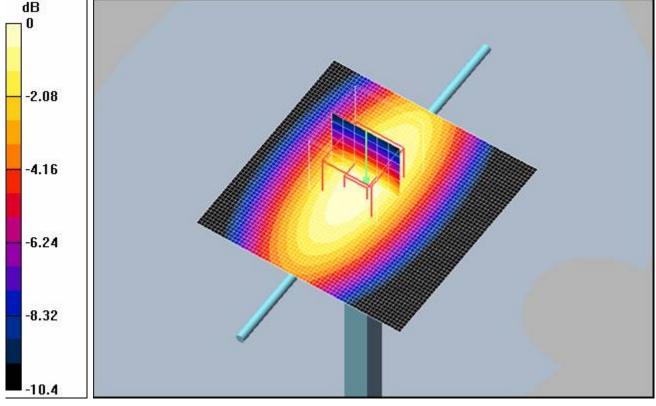
dz=5mm

Reference Value = 34.4 V/m; Power Drift = -0.0 dBMaximum value of SAR (measured) = 0.970 mW/g

Peak SAR (extrapolated) = 1.32 W/kg

SAR(1 g) = 0.899 mW/g; SAR(10 g) = 0.587 mW/g

Procedure Notes: Battery BST-30 Humidity: 51.3 % Ambient Temp: 23.1 C Simulant Temp: 22.5 Pin: before -100.0 mW after - 100.5 mW



 $0 \, dB = 0.970 \, mW/g$

 Song Ericsson

 Prepared (also subject responsible if other)

 SEM/CV/PF/P Gerard Hayes

 Approved

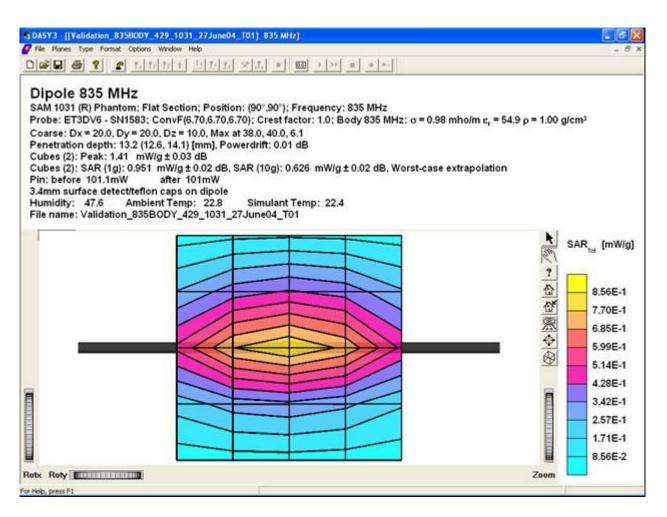
 Checked

 SEM/CV/PF/P Gerard Hayes

 Approved

 Checked

 SEM/CV/PF/P Gerard Hayes



835 MHz SAR distribution of validation dipole antenna from system performance check on June 27, 2004 (Using muscle/body tissue).

ど Sony Ericsson

		REP 2004 001 Z500A 02		
Approved SEM/CV/PF/P Gerard Hayes	Checked			X:\SAR Chamber\FCC reports\Z500A\Final Reports\FCCZ500A.doc

File Planes Type Form	xt Options Window Help	- 8
Probe: ET3DV6 - S Coarse: Dx = 20.0, Penetration depth: Cubes (2): Peak: 1. Cubes (2): SAR (1g Pin: before 99.5 m 3.4mm surface det Humidity: 54.0%	tom; Flat Section; Position: (90°,90°); Frequency: 835 MHz N1583; ConvF(6.70,6.70,6.70); Crest factor: 1.0; Body 835 MHz: σ = 0 Dy = 20.0, Dz = 10.0, Max at 40.0, 40.0, 6.1 13.2 (12.6, 14.1) [mm], Powerdrift: 0.01 dB 40 mW/g ± 0.02 dB)): 0.941 mW/g ± 0.02 dB, SAR (10g): 0.619 mW/g ± 0.02 dB, Worst-c W after 99.6 mW ectitefion caps on dipole	
		SAR ₁₀₁ [mW/g ? 2 2 3 3 4 7.62E-1 5.93E-1 5.93E-1 5.93E-1
		5.93E-1 5.08E-1 4.23E-1 3.39E-1 2.54E-1 1.69E-1 8.47E-2

835 MHz SAR distribution of validation dipole antenna from system performance check on July 26, 2004 (Using muscle/body tissue).

Sony Ericsson

		REP 2004 001 Z500A 02		
Approved	Checked			
SEM/CV/PF/P Gerard Hayes			А	X:\SAR Chamber\FCC reports\Z500A\Final Reports\FCCZ500A.doc

REPORT

1900 MHz SAR Distribution of Validation Dipole Antenna

System Performance Check on June 21, 2004 (Using head tissue).

Phantom: SAM with CRP (High Band Head)Phantom section: Flat Section Probe: ET3DV6 - SN1586ConvF(5.14, 5.14, 5.14)Duty Cycle: 1:1Frequency: 1900 MHz Medium parameters used: f = 1900 MHz; σ = 1.45 mho/m; ϵ_r = 39.1; ρ = 1000 kg/m³ Measurement Standard: DASY4 (High Precision Assessment)

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

Reference Value = 57.7 V/m; Power Drift = 0.008 dBMaximum value of SAR (interpolated) = 4.81 mW/g

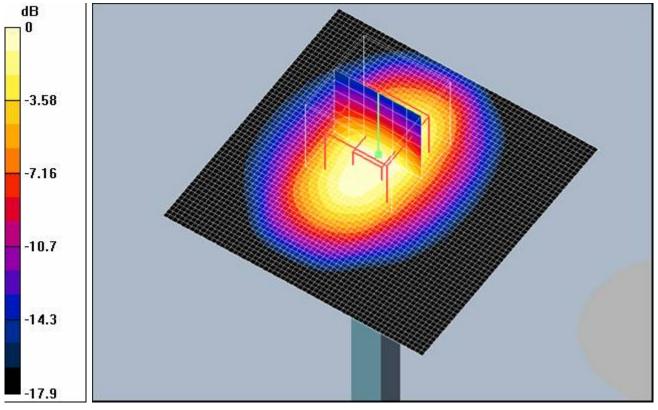
Dipole at 10 mm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 57.7 V/m; Power Drift = 0.008 dBMaximum value of SAR (measured) = 4.29 mW/gPeak SAR (extrapolated) = 6.73 W/kg

SAR(1 g) = 3.81 mW/g; SAR(10 g) = 1.99 mW/g

Procedure Notes: Pin: before 99.4 mW / after 100.1 mW Humidity: 45.1% Ambient Temp: 22.6 C Simulant Temp: 21.9 C

File Name: Validation_1900Head_536_1054_21June04_T01.da4



 $0 \, dB = 4.29 \, mW/g$

Sony Ericsson

· · · · · (·· · · · · · · · · · · · · ·		REP 2004 001 Z500A 02		
Approved SEM/CV/PF/P Gerard Hayes	Checked			X:\SAR Chamber\FCC reports\Z500A\Final Reports\FCCZ500A.doc

REPORT

1900 MHz SAR Distribution of Validation Dipole Antenna

System Performance Check on July 22, 2004 (Using head tissue).

File Name: Validation_1900Head_536_1054_22July04_T01.da4 Phantom: SAM with CRP (High Band Head)Phantom section: Flat Section Probe: ET3DV6 - SN1538ConvF(4.95, 4.95, 4.95)Duty Cycle: 1:1Frequency: 1900 MHz Medium parameters used: f = 1900 MHz; $\sigma = 1.43$ 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=15mm, dy=15mm

Reference Value = 59.6 V/m; Power Drift = 0.0 dB

Maximum value of SAR (interpolated) = 5.05 mW/g

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

dz=5mm

Reference Value = 59.6 V/m; Power Drift = 0.0 dBMaximum value of SAR (measured) = 4.52 mW/g

Peak SAR (extrapolated) = 6.98 W/kg

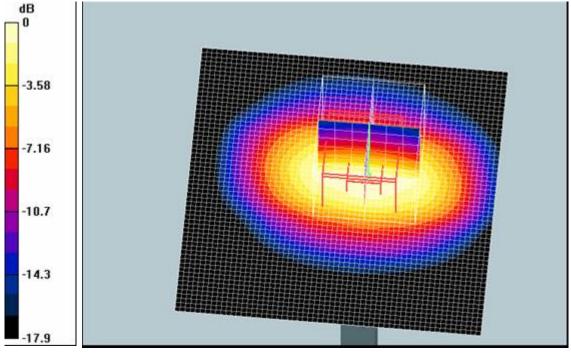
SAR(1 g) = 3.98 mW/g; SAR(10 g) = 2.08 mW/g;

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

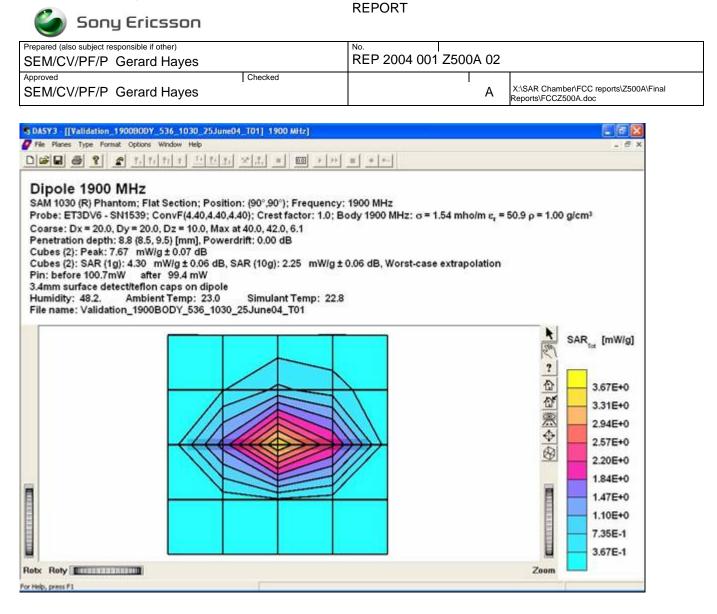
Reference Value = 59.6 V/m; Power Drift = 0.0 dBMaximum value of SAR (measured) = 4.58 mW/gPeak SAR (extrapolated) = 7.19 W/kg

SAR(1 g) = 4.07 mW/g; SAR(10 g) = 2.13 mW/g

Procedure Notes: Pin: before 99.0 mW / after 99.6mW Humidity: 42.8% Ambient Temp: 23 C Simulant Temp: 22.3 C



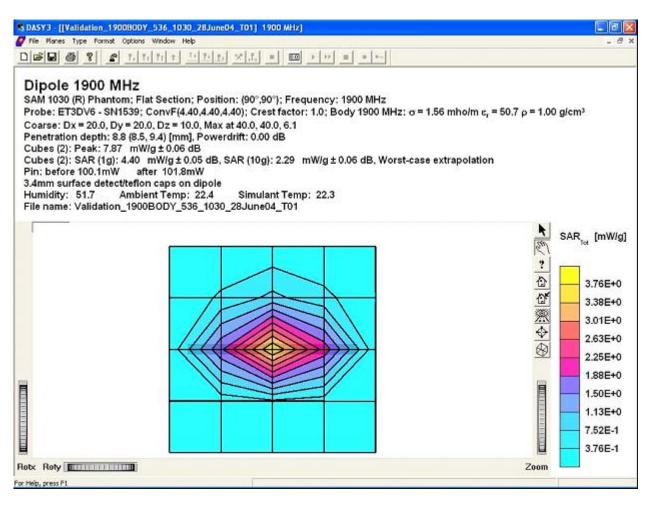
 $0 \, dB = 4.58 \, mW/g$



1900 MHz SAR distribution of validation dipole antenna from system performance check on June 25, 2004 (Using muscle/body tissue).

Sony Ericsson

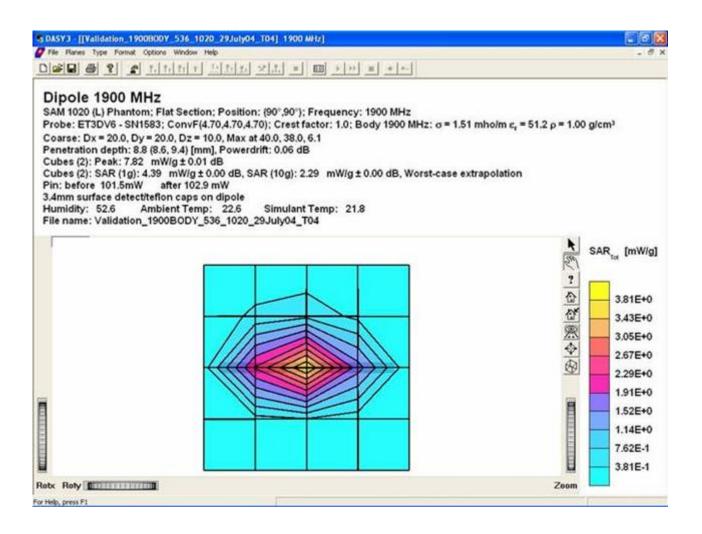
		REP 2004 001 Z500A 02		
Approved SEM/CV/PF/P Gerard Hayes	Checked			X:\SAR Chamber\FCC reports\Z500A\Final Reports\FCCZ500A.doc



1900 MHz SAR distribution of validation dipole antenna from system performance check on June 28, 2004 (Using muscle/body tissue).

Sony Ericsson

		REP 2004 001 Z500A 02		
Approved SEM/CV/PF/P Gerard Hayes	Checked		A	X:\SAR Chamber\FCC reports\Z500A\Final Reports\FCCZ500A.doc



1900 MHz SAR distribution of validation dipole antenna from system performance check on July 29, 2004 (Using muscle/body tissue).

 Sony Ericsson

 Prepared (also subject responsible if other)

 SEM/CV/PF/P Gerard Hayes

 Approved

 Checked

 SEM/CV/PF/P Gerard Hayes

 Approved

 Checked

 Approved

 Checked

 A

 X:\SAR Chamber\FCC reports\Z500A\Final Reports\FCCZ500A.doc

Appendix 2

SAR distribution plots for Phantom Head Adjacent Use

Sony Ericsson

		REP 2004 001 Z500A 02		
Approved SEM/CV/PF/P Gerard Hayes	Checked		A	X:\SAR Chamber\FCC reports\Z500A\Final Reports\FCCZ500A.doc

REPORT

800 GSM Band: SAR Distribution and Extrapolation of Maximum SAR Model: Z500A SN: BD3017AYMN with Standard Battery: BST-35

Right Side, Cheek/Touch Position.

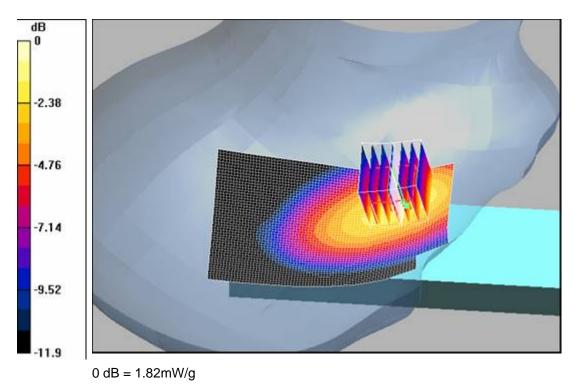
Date/Time: 06/22/04 10:18:54 File Name: 22June04 Z500a GSM850 AYMN RC01.da4 Program Notes: Battery BST-35 Humidity: 44.4 Ambient Temp: 23.5 Simulant Temp: 22.2 Communication System: GSM 850; Frequency: 824 MHz; Duty Cycle: 1:8.3 Medium: Head 835/900 MHz Medium parameters used (interpolated): f = 824 MHz; $\sigma = 0.872$ mho/m; $\varepsilon_r =$ 41.1; $\rho = 1000 \text{ kg/m}^3$ Phantom section: Right Section DASY4 Configuration: - Probe: ET3DV6 - SN1586; ConvF(6.62, 6.62, 6.62); Calibrated: 5/27/2004 - Sensor-Surface: 4mm (Mechanical Surface Detection) - Electronics: DAE3 Sn432; Calibrated: 5/24/2004 - Phantom: SAM with CRP (Low Band Head); Type: SAM; Serial: 1251 - Measurement SW: DASY4, V4.2 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 112 Area Scan (51x81x1): Measurement grid: dx=15mm, dy=15mm Reference Value = 11.3 V/m; Power Drift = -0.1 dBMaximum value of SAR (interpolated) = 1.28 mW/g

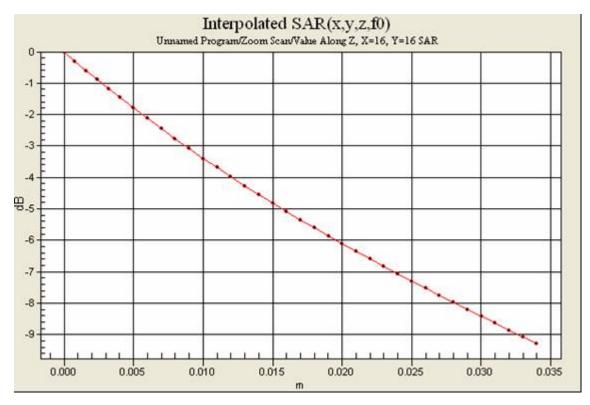
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 11.3 V/m; Power Drift = -0.1 dB Maximum value of SAR (measured) = 1.3 mW/g Peak SAR (extrapolated) = 1.82 W/kg

SAR(1 g) = 1.22 mW/g; SAR(10 g) = 0.816 mW/g

Zoom Scan (31x31x36)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 11.3 V/m; Power Drift = -0.1 dB Maximum value of SAR (interpolated) = 1.82 mW/g

ど Sony Ericsson		REPORT		
Prepared (also subject responsible if other) SEM/CV/PF/P Gerard Hayes		No. REP 2004 001 Z50	0A 02	
Approved SEM/CV/PF/P Gerard Hayes	Checked		A	X:\SAR Chamber\FCC reports\Z500A\Final Reports\FCCZ500A.doc





Sony Ericsson

		REP 2004 001 Z500A 02		
Approved	Checked			
SEM/CV/PF/P Gerard Hayes		А	X:\SAR Chamber\FCC reports\Z500A\Final Reports\FCCZ500A.doc	

REPORT

800 GSM Band: Distribution and Extrapolation of Maximum SAR Model: Z500A SN: BD3017AYMN with Standard Battery: BST-35

Right Side, Tilt Position.

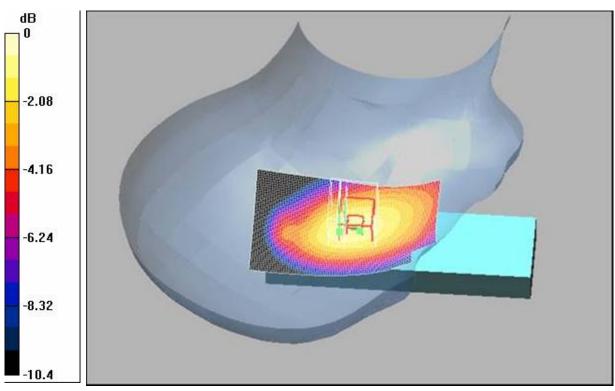
Date/Time: 06/22/04 11:38:27 File Name: 22June04 Z500a GSM850 AYMN RT01.da4 Program Notes: Battery BST-35 Humidity: 46.8 Ambient Temp: 24.7 Simulant Temp: 22.8 Communication System: GSM 850; Frequency: 849 MHz; Duty Cycle: 1:8.3 Medium: Head 835/900 MHz Medium parameters used (interpolated): f = 849 MHz; $\sigma = 0.895$ mho/m; $\varepsilon_r =$ 40.8; $\rho = 1000 \text{ kg/m}^3$ Phantom section: Right Section DASY4 Configuration: - Probe: ET3DV6 - SN1586; ConvF(6.62, 6.62, 6.62); Calibrated: 5/27/2004 - Sensor-Surface: 4mm (Mechanical Surface Detection) - Electronics: DAE3 Sn432: Calibrated: 5/24/2004 - Phantom: SAM with CRP (Low Band Head); Type: SAM; Serial: 1251 - Measurement SW: DASY4, V4.2 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 112 Area Scan (51x81x1): Measurement grid: dx=15mm, dy=15mm Reference Value = 12.7 V/m; Power Drift = 0.0 dBMaximum value of SAR (interpolated) = 0.350 mW/g**Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 12.7 V/m; Power Drift = 0.0 dBMaximum value of SAR (measured) = 0.343 mW/g

Peak SAR (extrapolated) = 0.411 W/kg

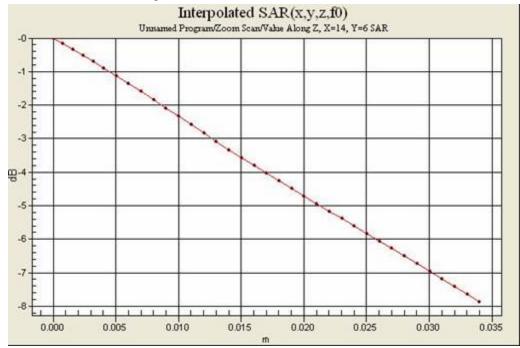
SAR(1 g) = 0.324 mW/g; SAR(10 g) = 0.241 mW/g

Zoom Scan (31x31x36)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 12.7 V/m; Power Drift = 0.0 dB Maximum value of SAR (interpolated) = 0.411 mW/g

ど Sony Ericsson		REPORT		
Prepared (also subject responsible if other) SEM/CV/PF/P Gerard Hayes		REP 2004 001 Z50	DA 02	
Approved SEM/CV/PF/P Gerard Hayes	Checked			X:\SAR Chamber\FCC reports\Z500A\Final Reports\FCCZ500A.doc



 $0 \, dB = 0.411 mW/g$



Sony Ericsson

		REP 2004 001 Z500A 02		
Approved SEM/CV/PF/P Gerard Hayes	Checked		A	X:\SAR Chamber\FCC reports\Z500A\Final Reports\FCCZ500A.doc

REPORT

800 GSM Band: Distribution and Extrapolation of Maximum SAR Model: Z500A SN: BD3017AYMN with Standard Battery: BST-35

Left Side, Cheek/Touch Position.

Date/Time: 06/22/04 14:58:15 File Name: 22June04 Z500a GSM850 AYMN LC01.da4 Program Notes: Battery BST-35 Humidity: 55.1 Ambient Temp: 23.7 Simulant Temp: 22.5 Communication System: GSM 850; Frequency: 824 MHz; Duty Cycle: 1:8.3 Medium: Head 835/900 MHz Medium parameters used (interpolated): f = 824 MHz; $\sigma = 0.872$ mho/m; $\varepsilon_r =$ 41.1; $\rho = 1000 \text{ kg/m}^3$ Phantom section: Left Section DASY4 Configuration: - Probe: ET3DV6 - SN1586; ConvF(6.62, 6.62, 6.62); Calibrated: 5/27/2004 - Sensor-Surface: 4mm (Mechanical Surface Detection) - Electronics: DAE3 Sn432; Calibrated: 5/24/2004 - Phantom: SAM with CRP (Low Band Head); Type: SAM; Serial: 1251 - Measurement SW: DASY4, V4.2 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 112 Area Scan (51x81x1): Measurement grid: dx=15mm, dy=15mm Reference Value = 10.3 V/m; Power Drift = -0.0 dBMaximum value of SAR (interpolated) = 1.06 mW/g**Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 10.3 V/m; Power Drift = -0.0 dB

Reference Value = 10.3 V/m; Power Drift = -0.0 dB Maximum value of SAR (measured) = 1.05 mW/g Peak SAR (extrapolated) = 1.37 W/kg

SAR(1 g) = 0.981 mW/g; SAR(10 g) = 0.694 mW/g

Zoom Scan (31x31x36)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 10.3 V/m; Power Drift = -0.0 dB Maximum value of SAR (interpolated) = 1.37 mW/g

 Song Ericsson

 Prepared (also subject responsible if other)

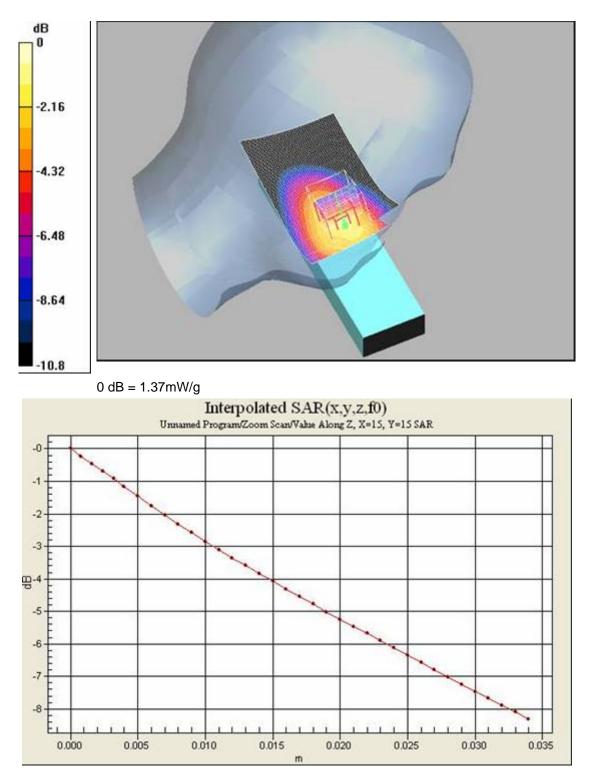
 SEM/CV/PF/P Gerard Hayes

 Approved

 SEM/CV/PF/P Gerard Hayes

 Checked

 SEM/CV/PF/P Gerard Hayes



Sony Ericsson

		REP 2004 001 Z500A 02		
Approved SEM/CV/PF/P Gerard Hayes	Checked			X:\SAR Chamber\FCC reports\Z500A\Final Reports\FCCZ500A.doc

REPORT

800 GSM Band: Distribution and Extrapolation of Maximum SAR Model: Z500A SN: BD3017AYMN with Standard Battery: BST-35 Left Side, Tilt Position.

Date/Time: 06/22/04 13:05:06 File Name: 22June04 Z500a GSM850 AYMN LT01.da4 Program Notes: Battery BST-35 Humidity: 46.6 Ambient Temp: 24.4 Simulant Temp: 22.6 Communication System: GSM 850; Frequency: 849 MHz; Duty Cycle: 1:8.3 Medium: Head 835/900 MHz Medium parameters used (interpolated): f = 849 MHz; $\sigma = 0.895$ mho/m; $\varepsilon_r =$ 40.8; $\rho = 1000 \text{ kg/m}^3$ Phantom section: Left Section DASY4 Configuration: - Probe: ET3DV6 - SN1586; ConvF(6.62, 6.62, 6.62); Calibrated: 5/27/2004 - Sensor-Surface: 4mm (Mechanical Surface Detection) - Electronics: DAE3 Sn432; Calibrated: 5/24/2004 - Phantom: SAM with CRP (Low Band Head); Type: SAM; Serial: 1251 - Measurement SW: DASY4, V4.2 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 112 Area Scan (51x81x1): Measurement grid: dx=15mm, dy=15mm Reference Value = 12.4 V/m; Power Drift = -0.1 dBMaximum value of SAR (interpolated) = 0.359 mW/g**Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 12.4 V/m; Power Drift = -0.1 dBMaximum value of SAR (measured) = 0.356 mW/gPeak SAR (extrapolated) = 0.424 W/kg

SAR(1 g) = 0.338 mW/g; SAR(10 g) = 0.253 mW/g

Zoom Scan (31x31x36)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 12.4 V/m; Power Drift = -0.1 dB Maximum value of SAR (interpolated) = 0.424 mW/g

 Sony Ericsson

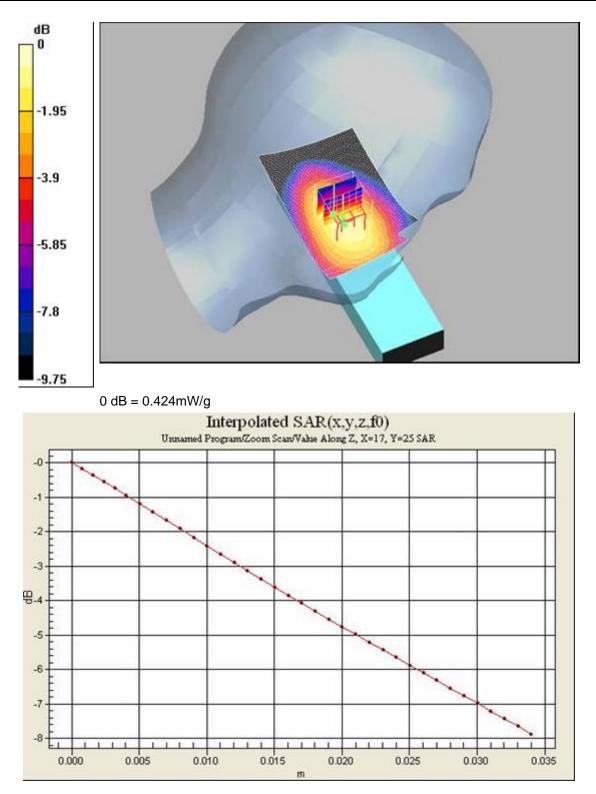
 Prepared (also subject responsible if other)
 No.

 SEM/CV/PF/P Gerard Hayes
 REP 2004 001 Z500A 02

 Approved
 Checked

 SEM/CV/PF/P Gerard Hayes
 A

 X:\SAR Chamber\FCC reports\Z500A\Final Reports\FCC2500A.doc



Sony Ericsson

Prepared (also subject responsible if other) SEM/CV/PF/P Gerard Hayes		REP 2004 001 Z50	0A 02	
Approved SEM/CV/PF/P Gerard Hayes	Checked			X:\SAR Chamber\FCC reports\Z500A\Final Reports\FCCZ500A.doc

REPORT

1900 GSM Band: Distribution and Extrapolation of Maximum SAR Model: Z500A SN: BD3017AYMN with Standard Battery: BST-35 Dield Side Check/Tarach Decidion

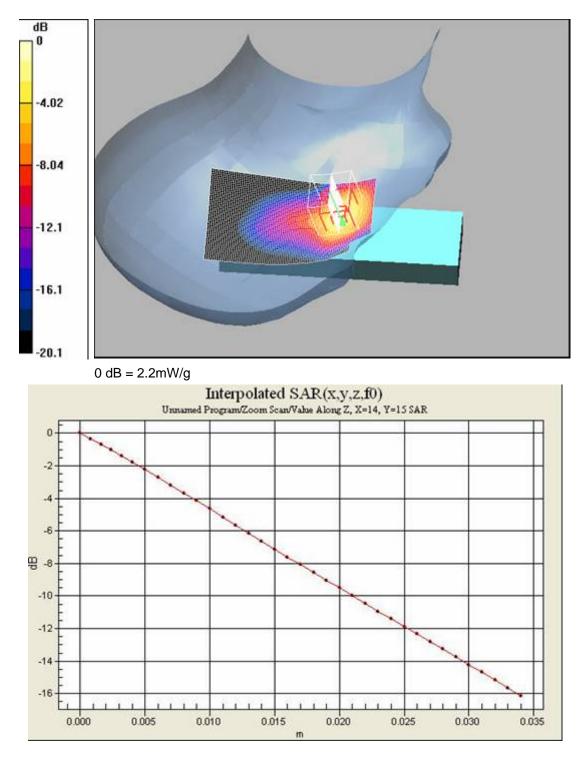
Right Side, Cheek/Touch Position.

Date/Time: 06/21/04 12:47:55 File Name: 21June04 Z500a GSM1900 AYMN RC01.da4 Program Notes: Battery BST-35 Humidity: 41.9 Ambient Temp: 22.5 Simulant Temp: 21.7 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; $\sigma = 1.37$ mho/m; $\varepsilon_r = 39.9$; $\rho = 1000 \text{ kg/m}^3$ Phantom section: Right Section DASY4 Configuration: - Probe: ET3DV6 - SN1586; ConvF(5.14, 5.14, 5.14); Calibrated: 5/27/2004 - Sensor-Surface: 4mm (Mechanical Surface Detection) - Electronics: DAE3 Sn432; Calibrated: 5/24/2004 - Phantom: SAM with CRP (High Band Head); Type: SAM; Serial: TP: 1054 - Measurement SW: DASY4, V4.2 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 112 Area Scan (51x81x1): Measurement grid: dx=15mm, dy=15mm Reference Value = 26.2 V/m; Power Drift = -0.1 dBMaximum value of SAR (interpolated) = 1.3 mW/g**Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 26.2 V/m; Power Drift = -0.1 dBMaximum value of SAR (measured) = 1.47 mW/gPeak SAR (extrapolated) = 2.2 W/kg

SAR(1 g) = 1.29 mW/g; SAR(10 g) = 0.673 mW/g

Zoom Scan (31x31x36)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 26.2 V/m; Power Drift = -0.1 dB Maximum value of SAR (interpolated) = 2.2 mW/g

🍯 Sony Ericsson		REPORT		
Prepared (also subject responsible if other) SEM/CV/PF/P Gerard Hayes		REP 2004 001 Z500	0A 02	
Approved SEM/CV/PF/P Gerard Hayes	Checked			X:\SAR Chamber\FCC reports\Z500A\Final Reports\FCCZ500A.doc



Sony Ericsson

Prepared (also subject responsible if other) SEM/CV/PF/P Gerard Hayes		REP 2004 001 Z50	0A 02	
Approved SEM/CV/PF/P Gerard Hayes	Checked			X:\SAR Chamber\FCC reports\Z500A\Final Reports\FCCZ500A.doc

REPORT

1900 GSM Band: Distribution and Extrapolation of Maximum SAR Model: Z500A SN: BD3017AYMN with Standard Battery: BST-35 Right Side, Tilt Position.

Date/Time: 06/21/04 11:32:29 File Name: 21June04_Z500a_GSM1900_AYMN_RT01.da4 Program Notes: Battery BST-35 Humidity: 40.9 Ambient Temp: 23.6 Simulant Temp: 21.8 Communication System: DCS 1900; Frequency: 1880 MHz; Duty Cycle: 1:8.3 Medium: Head 1800/1900 MHz Medium parameters used: f = 1880 MHz; $\sigma = 1.4$ mho/m; $\epsilon_r = 39.7$; $\rho = 1000$ kg/m³ Phantom section: Right Section DASY4 Configuration: - Probe: ET3DV6 - SN1586; ConvF(5.14, 5.14, 5.14); Calibrated: 5/27/2004 - Sensor-Surface: 4mm (Mechanical Surface Detection) - Electronics: DAE3 Sn432; Calibrated: 5/24/2004 - Phantom: SAM with CRP (High Band Head); Type: SAM; Serial: TP: 1054 - Measurement SW: DASY4, V4.2 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 112 **Area Scan (51x81x1):** Measurement grid: dx=15mm, dy=15mm

Reference Value = 9.63 V/m; Power Drift = -0.0 dBMaximum value of SAR (interpolated) = 0.221 mW/g

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 9.63 V/m; Power Drift = -0.0 dB

Maximum value of SAR (measured) = 0.224 mW/g Peak SAR (extrapolated) = 0.302 W/kg

SAR(1 g) = 0.205 mW/g; SAR(10 g) = 0.129 mW/g

Zoom Scan (31x31x36)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 9.63 V/m; Power Drift = -0.0 dB Maximum value of SAR (interpolated) = 0.302 mW/g

 Sony Ericsson

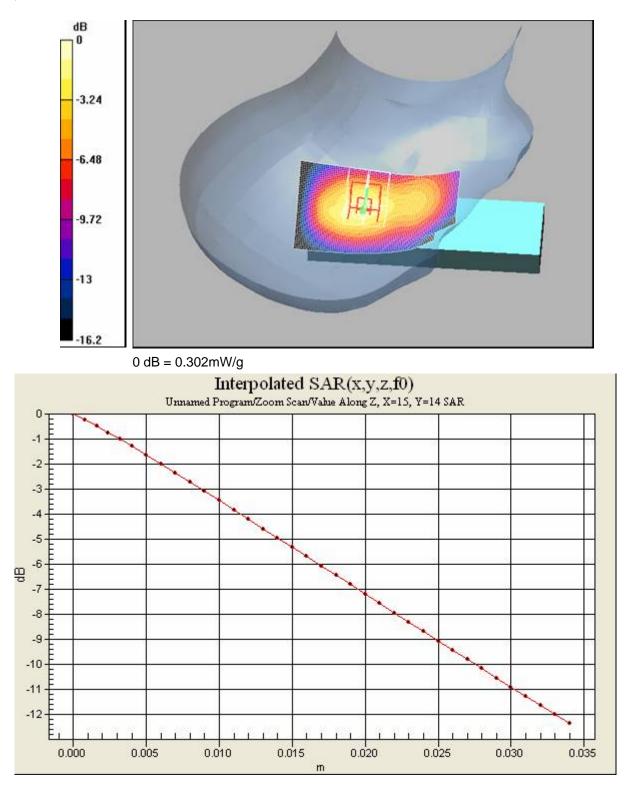
 Prepared (also subject responsible if other)
 No.

 SEM/CV/PF/P Gerard Hayes
 REP 2004 001 Z500A 02

 Approved
 Checked

 SEM/CV/PF/P Gerard Hayes
 A

 X:\SAR Chamber\FCC reports\Z500A\Final Reports\FCCZ500A.doc



Sony Ericsson

Prepared (also subject responsible if other) SEM/CV/PF/P Gerard Hayes		REP 2004 001 Z50	0A 02	
Approved SEM/CV/PF/P Gerard Hayes	Checked			X:\SAR Chamber\FCC reports\Z500A\Final Reports\FCCZ500A.doc

REPORT

1900 GSM Band: Distribution and Extrapolation of Maximum SAR
Model: Z500A SN: BD3017AYMN with Standard Battery: BST-35Left Girls of Control of Maximum SAR
with Standard Battery: BST-35

Left Side, Cheek/Touch Position.

Date/Time: 06/21/04 08:41:22 File Name: 21June04 Z500a GSM1900 AYMN LC01.da4 Program Notes: Battery BST-35 Humidity: 43.9 Ambient Temp: 23.5 Simulant Temp: 21.7 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; $\sigma = 1.37$ mho/m; $\varepsilon_r = 39.9$; $\rho = 1000 \text{ kg/m}^3$ Phantom section: Left Section DASY4 Configuration: - Probe: ET3DV6 - SN1586; ConvF(5.14, 5.14, 5.14); Calibrated: 5/27/2004 - Sensor-Surface: 4mm (Mechanical Surface Detection) - Electronics: DAE3 Sn432; Calibrated: 5/24/2004 - Phantom: SAM with CRP (High Band Head); Type: SAM; Serial: TP: 1054 - Measurement SW: DASY4, V4.2 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 112 Area Scan (51x81x1): Measurement grid: dx=15mm, dy=15mm Reference Value = 27.4 V/m; Power Drift = -0.1 dBMaximum value of SAR (interpolated) = 1.42 mW/g**Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 27.4 V/m; Power Drift = -0.1 dBMaximum value of SAR (measured) = 1.62 mW/gPeak SAR (extrapolated) = 2.5 W/kg

SAR(1 g) = 1.42 mW/g; SAR(10 g) = 0.713 mW/g

Zoom Scan (31x31x36)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 27.4 V/m; Power Drift = -0.1 dB Maximum value of SAR (interpolated) = 2.5 mW/g

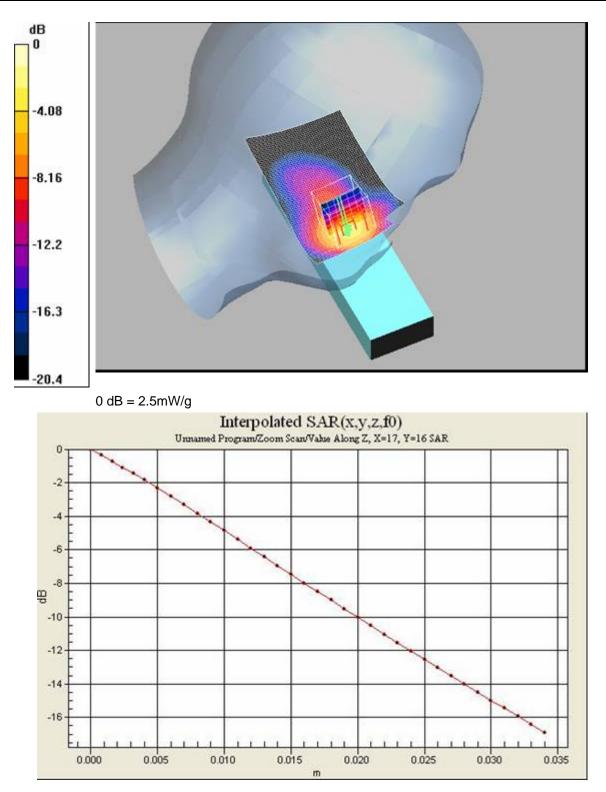
 Sony Ericsson

 Prepared (also subject responsible if other)
 No.

 SEM/CV/PF/P Gerard Hayes
 REP 2004 001 Z500A 02

 Approved
 Checked

 SEM/CV/PF/P Gerard Hayes
 A



Sony Ericsson

Prepared (also subject responsible if other) SEM/CV/PF/P Gerard Hayes		REP 2004 001 Z50	0A 02	
Approved SEM/CV/PF/P Gerard Hayes	Checked			X:\SAR Chamber\FCC reports\Z500A\Final Reports\FCCZ500A.doc

REPORT

1900 GSM Band: Distribution and Extrapolation of Maximum SAR Model: Z500A SN: BD3017AYMN with Standard Battery: BST-35 Left Side, Tilt Position.

Date/Time: 06/21/04 09:58:13 File Name: 21June04_Z500a_GSM1900_AYMN_LT01.da4 Program Notes: Battery BST-35 Humidity: 43.6 Ambient Temp: 23.1 Simulant Temp: 21.9 Communication System: DCS 1900; Frequency: 1880 MHz; Duty Cycle: 1:8.3 Medium: Head 1800/1900 MHz Medium parameters used: f = 1880 MHz; $\sigma = 1.4$ mho/m; $\varepsilon_r = 39.7$; $\rho = 1000$ kg/m³ Phantom section: Left Section DASY4 Configuration: - Probe: ET3DV6 - SN1586; ConvF(5.14, 5.14, 5.14); Calibrated: 5/27/2004 - Sensor-Surface: 4mm (Mechanical Surface Detection) - Electronics: DAE3 Sn432; Calibrated: 5/24/2004 - Phantom: SAM with CRP (High Band Head); Type: SAM; Serial: TP: 1054 - Measurement SW: DASY4, V4.2 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 112 **Area Scan (51x81x1):** Measurement grid: dx=15mm, dy=15mm

Reference Value = 9.27 V/m; Power Drift = -0.0 dBMaximum value of SAR (interpolated) = 0.235 mW/g

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 9.27 V/m; Power Drift = -0.0 dB Maximum value of SAR (measured) = 0.232 mW/g Peak SAR (extrapolated) = 0.312 W/kg

SAR(1 g) = 0.216 mW/g; SAR(10 g) = 0.135 mW/g

Zoom Scan (31x31x36)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 9.27 V/m; Power Drift = -0.0 dB Maximum value of SAR (interpolated) = 0.312 mW/g

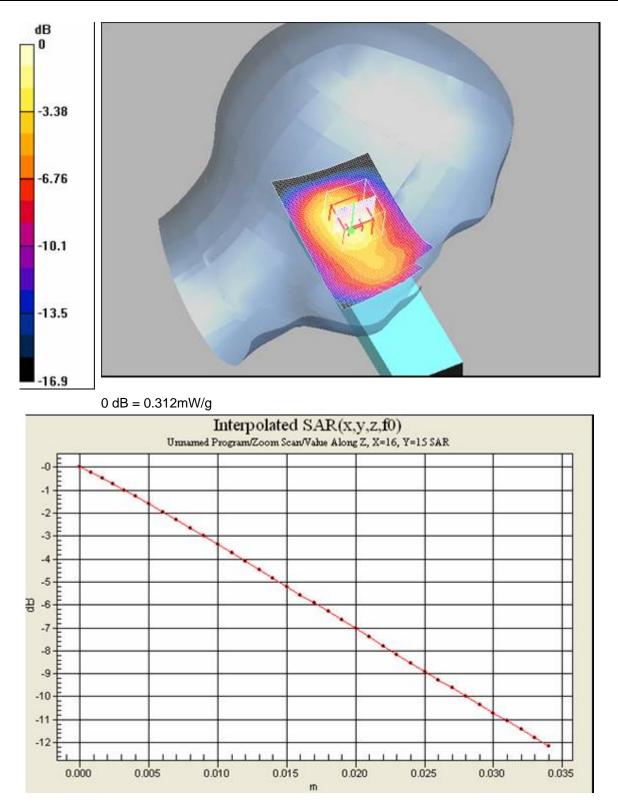
 Sony Ericsson

 Prepared (also subject responsible if other)
 No.

 SEM/CV/PF/P Gerard Hayes
 REP 2004 001 Z500A 02

 Approved
 Checked

 SEM/CV/PF/P Gerard Hayes
 A



Sony Ericsson

Prepared (also subject responsible if other) SEM/CV/PF/P Gerard Hayes		No. REP 2004 001 Z50	0A 02	
Approved SEM/CV/PF/P Gerard Hayes	Checked		A	X:\SAR Chamber\FCC reports\Z500A\Final Reports\FCCZ500A.doc

REPORT

800 GSM Band: Distribution and Extrapolation of Maximum SAR Model: Z500A SN: BD3017AYMN with Optional Battery: BST-30

Right Side, Cheek/Touch Position.

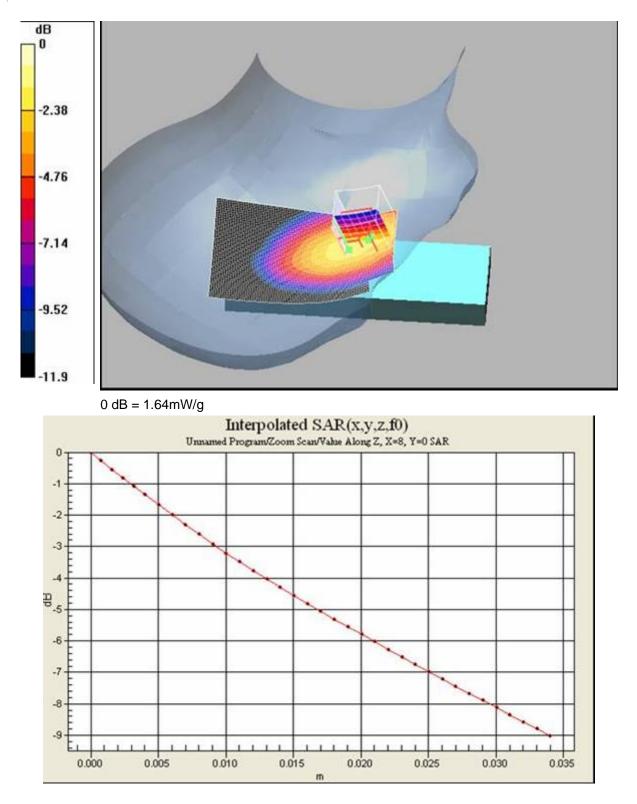
Date/Time: 07/25/04 11:44:38 File Name: 25July04 Z500a GSM850 AYMN RC01.da4 Program Notes: Battery BST-30 Humidity: 54.8 Ambient Temp: 22.1 Simulant Temp: 21.6 Communication System: GSM 850; Frequency: 824 MHz; Duty Cycle: 1:8.3 Medium: Head 835/900 MHz Medium parameters used (interpolated): f = 824 MHz; $\sigma = 0.864$ mho/m; $\varepsilon_r =$ 40.1; $\rho = 1000 \text{ kg/m}^3$ Phantom section: Right Section DASY4 Configuration: - Probe: ET3DV6 - SN1538; ConvF(6.27, 6.27, 6.27); Calibrated: 5/27/2004 - Sensor-Surface: 4mm (Mechanical Surface Detection) - Electronics: DAE3 Sn431; Calibrated: 5/26/2004 - Phantom: SAM with CRP (Low Band Head); Type: SAM; Serial: 1251 - Measurement SW: DASY4, V4.2 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 112 Area Scan (51x81x1): Measurement grid: dx=15mm, dy=15mm Reference Value = 10.9 V/m; Power Drift = -0.0 dBMaximum value of SAR (interpolated) = 1.16 mW/g

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 10.9 V/m; Power Drift = -0.0 dB Maximum value of SAR (measured) = 1.2 mW/g Peak SAR (extrapolated) = 1.64 W/kg

SAR(1 g) = 1.1 mW/g; SAR(10 g) = 0.746 mW/g

Zoom Scan (31x31x36)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 10.9 V/m; Power Drift = -0.0 dB Maximum value of SAR (interpolated) = 1.64 mW/g

🍯 Sony Ericsson		REPORT		
Prepared (also subject responsible if other) SEM/CV/PF/P Gerard Hayes		REP 2004 001 Z50	0A 02	
Approved SEM/CV/PF/P Gerard Hayes	Checked			X:\SAR Chamber\FCC reports\Z500A\Final Reports\FCCZ500A.doc



Sony Ericsson

Prepared (also subject responsible if other) SEM/CV/PF/P Gerard Hayes		REP 2004 001 Z50	0A 02	
Approved SEM/CV/PF/P Gerard Hayes	Checked		A	X:\SAR Chamber\FCC reports\Z500A\Final Reports\FCCZ500A.doc

REPORT

800 GSM Band: Distribution and Extrapolation of Maximum SAR Model: Z500A SN: BD3017AYMN with Optional Battery: BST-30 Dight Side Tilt Desition

Right Side, Tilt Position.

Date/Time: 07/25/04 10:36:19 File Name: 25July04 Z500a GSM850 AYMN RT01.da4 Program Notes: Battery BST-30 Humidity: 53.7 Ambient Temp: 22.3 Simulant Temp: 21.7 Communication System: GSM 850; Frequency: 849 MHz; Duty Cycle: 1:8.3 Medium: Head 835/900 MHz Medium parameters used (interpolated): f = 849 MHz; $\sigma = 0.889$ mho/m; $\varepsilon_r =$ 39.7; $\rho = 1000 \text{ kg/m}^3$ Phantom section: Right Section DASY4 Configuration: - Probe: ET3DV6 - SN1538; ConvF(6.27, 6.27, 6.27); Calibrated: 5/27/2004 - Sensor-Surface: 4mm (Mechanical Surface Detection) - Electronics: DAE3 Sn431; Calibrated: 5/26/2004 - Phantom: SAM with CRP (Low Band Head); Type: SAM; Serial: 1251 - Measurement SW: DASY4, V4.2 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 112 Area Scan (51x81x1): Measurement grid: dx=15mm, dy=15mm Reference Value = 12.5 V/m; Power Drift = -0.0 dBMaximum value of SAR (interpolated) = 0.319 mW/g**Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 12.5 V/m; Power Drift = -0.0 dBMaximum value of SAR (measured) = 0.313 mW/g

Peak SAR (extrapolated) = 0.385 W/kg

SAR(1 g) = 0.295 mW/g; SAR(10 g) = 0.220 mW/g

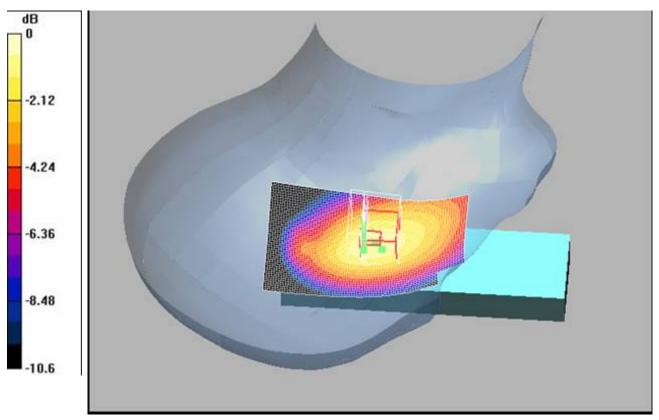
Zoom Scan (31x31x36)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 12.5 V/m; Power Drift = -0.0 dB Maximum value of SAR (interpolated) = 0.385 mW/g

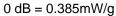
 Prepared (also subject responsible if other)
 No.

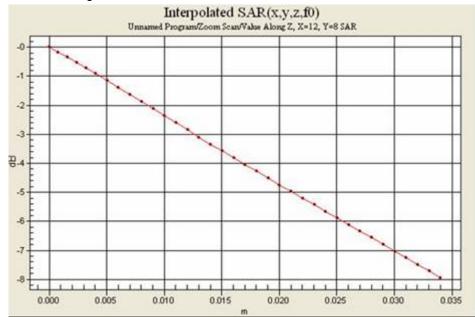
 SEM/CV/PF/P Gerard Hayes
 REP 2004 001 Z500A 02

 Approved
 Checked

 SEM/CV/PF/P Gerard Hayes
 A







Sony Ericsson

Prepared (also subject responsible if other) SEM/CV/PF/P Gerard Hayes		REP 2004 001 Z50	0A 02	
Approved SEM/CV/PF/P Gerard Hayes	Checked		A	X:\SAR Chamber\FCC reports\Z500A\Final Reports\FCCZ500A.doc

REPORT

800 GSM Band: Distribution and Extrapolation of Maximum SAR Model: Z500A SN: BD3017AYMN with Optional Battery: BST-30

Left Side, Cheek/Touch Position.

File Name: 25July04 Z500a GSM850 AYMN LC01.da4 Program Notes: Battery BST-30 Humidity: 52.3 Ambient Temp: 22.6 Simulant Temp: 22.5 Communication System: GSM 850; Frequency: 824 MHz; Duty Cycle: 1:8.3 Medium: Head 835/900 MHz Medium parameters used (interpolated): f = 824 MHz; $\sigma = 0.864$ mho/m; $\varepsilon_r =$ 40.1; $\rho = 1000 \text{ kg/m}^3$ Phantom section: Left Section DASY4 Configuration: - Probe: ET3DV6 - SN1538; ConvF(6.27, 6.27, 6.27); Calibrated: 5/27/2004 - Sensor-Surface: 4mm (Mechanical Surface Detection) - Electronics: DAE3 Sn431; Calibrated: 5/26/2004 - Phantom: SAM with CRP (Low Band Head); Type: SAM; Serial: 1251 - Measurement SW: DASY4, V4.2 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 112 Area Scan (51x81x1): Measurement grid: dx=15mm, dy=15mm Reference Value = 10.5 V/m: Power Drift = -0.2 dBMaximum value of SAR (interpolated) = 1.05 mW/g**Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 10.5 V/m; Power Drift = -0.2 dBMaximum value of SAR (measured) = 1.02 mW/g

Peak SAR (extrapolated) = 1.34 W/kg

SAR(1 g) = 0.966 mW/g; SAR(10 g) = 0.683 mW/g

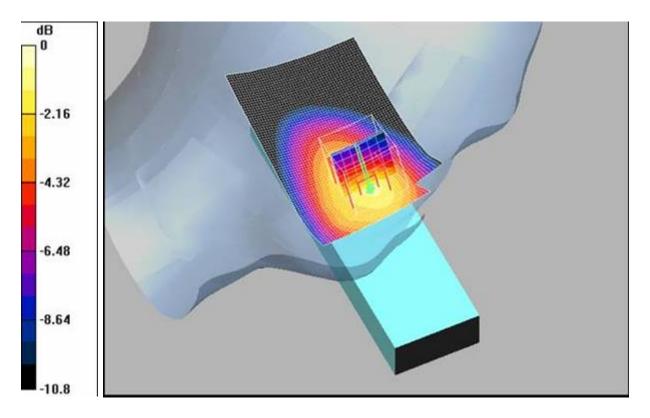
Zoom Scan (31x31x36)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 10.5 V/m; Power Drift = -0.2 dB Maximum value of SAR (interpolated) = 1.34 mW/g

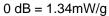
 Prepared (also subject responsible if other)
 No.

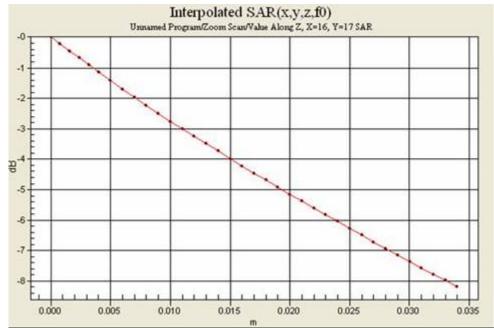
 SEM/CV/PF/P Gerard Hayes
 REP 2004 001 Z500A 02

 Approved
 Checked

 SEM/CV/PF/P Gerard Hayes
 A







Sony Ericsson

Prepared (also subject responsible if other) SEM/CV/PF/P Gerard Hayes		^{№.} REP 2004 001 Z50	0A 02	
Approved SEM/CV/PF/P Gerard Hayes	Checked			X:\SAR Chamber\FCC reports\Z500A\Final Reports\FCCZ500A.doc

REPORT

800 GSM Band: Distribution and Extrapolation of Maximum SAR Model: Z500A SN: BD3017AYMN with Optional Battery: BST-30 Left Side, Tilt Position.

Date/Time: 07/28/04 12:34:24 File Name: 28July04 Z500a GSM850 AYMN LT01.da4 Program Notes: Battery BST-30 Hudmity: 40.8 Ambient Temp: 23.7 Simulant Temp: 22.3 Communication System: GSM 850; Frequency: 824 MHz; Duty Cycle: 1:8.3 Medium: Head 835/900 MHzMedium parameters used (interpolated): f = 824 MHz; $\sigma = 0.884$ mho/m; $\varepsilon_r =$ 42.2; $\rho = 1000 \text{ kg/m}^3$ Phantom section: Left Section DASY4 Configuration: - Probe: ET3DV6 - SN1538; ConvF(6.27, 6.27, 6.27); Calibrated: 5/27/2004 - Sensor-Surface: 4mm (Mechanical Surface Detection) - Electronics: DAE3 Sn431; Calibrated: 5/26/2004 - Phantom: SAM with CRP (Low Band Head); Type: SAM; Serial: 1251 - Measurement SW: DASY4, V4.2 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 112 Area Scan (51x81x1): Measurement grid: dx=15mm, dy=15mm Reference Value = 11.8 V/m; Power Drift = -0.1 dBMaximum value of SAR (interpolated) = 0.328 mW/gZoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 11.8 V/m; Power Drift = -0.1 dBMaximum value of SAR (measured) = 0.324 mW/gPeak SAR (extrapolated) = 0.391 W/kg

SAR(1 g) = 0.310 mW/g; SAR(10 g) = 0.236 mW/g

Zoom Scan (31x31x36)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 11.8 V/m; Power Drift = -0.1 dB Maximum value of SAR (interpolated) = 0.391 mW/g

.7

-8

0.000

0.005

0.010

0.015

 Song Ericsson

 Prepared (also subject responsible if other)

 SEM/CV/PF/P Gerard Hayes

 Approved

 SEM/CV/PF/P Gerard Hayes

 Checked

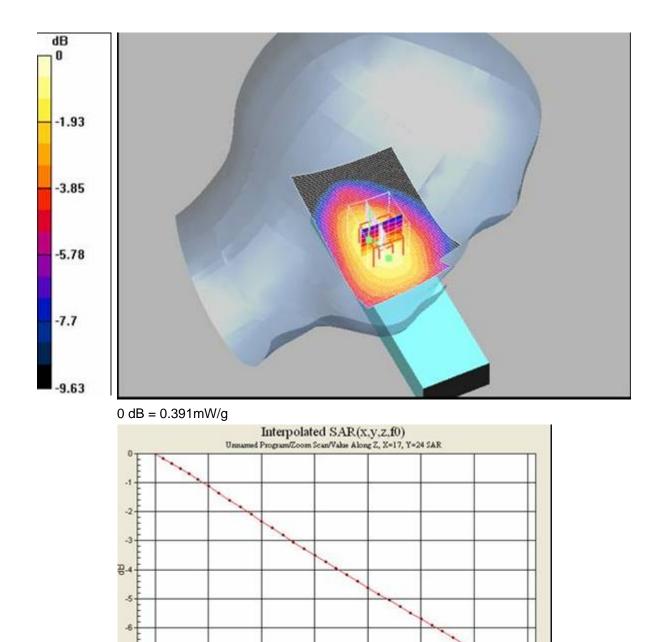
 SEM/CV/PF/P Gerard Hayes

 Approved

 Checked

 A

 X\SAR Chamber\FCC reports\Z500A\Final Reports\FCCZ500A.doc



0.020

0.025

0.030

0.035

Sony Ericsson

Prepared (also subject responsible if other) SEM/CV/PF/P Gerard Hayes		REP 2004 001 Z50	0A 02	
Approved SEM/CV/PF/P Gerard Hayes	Checked			X:\SAR Chamber\FCC reports\Z500A\Final Reports\FCCZ500A.doc

REPORT

1900 GSM Band: Distribution and Extrapolation of Maximum SAR Model: Z500A SN: BD3017AYMN with Optional Battery: BST-30 Dielt Side Check/Terrely Decition

Right Side, Cheek/Touch Position.

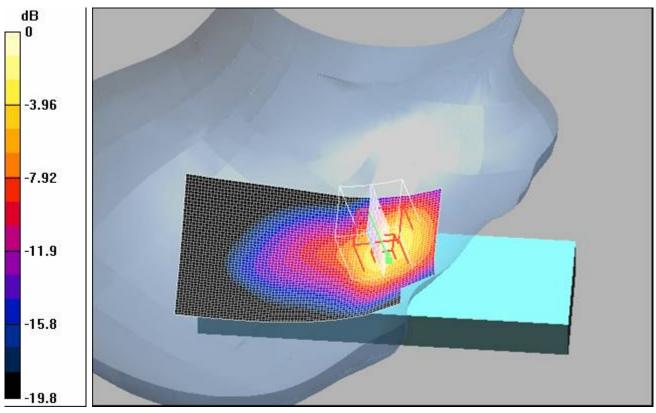
Date/Time: 07/22/04 10:01:29 File Name: 22July04 Z500a GSM1900 AYMN RC01.da4 Program Notes: Battery BST-30 Humidity: 42.8 Ambient Temp: 23 Simulant Temp: 22.3 Communication System: DCS 1900; Frequency: 1850.2 MHz; Duty Cycle: 1:8.3 Medium: Head 1800/1900 MHz Medium parameters used (interpolated): f = 1850.2 MHz; $\sigma = 1.39$ mho/m; $\varepsilon_r = 38.3$; $\rho = 1000 \text{ kg/m}^3$ Phantom section: Right Section DASY4 Configuration: - Probe: ET3DV6 - SN1538; ConvF(4.95, 4.95, 4.95); Calibrated: 5/27/2004 - Sensor-Surface: 4mm (Mechanical Surface Detection) - Electronics: DAE3 Sn431; Calibrated: 5/26/2004 - Phantom: SAM with CRP (High Band Head); Type: SAM; Serial: TP: 1054 - Measurement SW: DASY4, V4.2 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 112 Area Scan (51x81x1): Measurement grid: dx=15mm, dy=15mm Reference Value = 26.5 V/m; Power Drift = -0.2 dBMaximum value of SAR (interpolated) = 1.3 mW/g**Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 26.5 V/m; Power Drift = -0.2 dBMaximum value of SAR (measured) = 1.5 mW/g

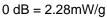
SAR(1 g) = 1.3 mW/g; SAR(10 g) = 0.676 mW/g

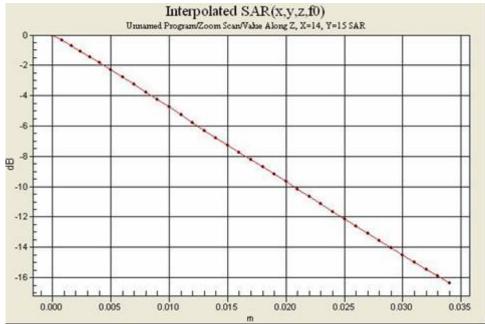
Peak SAR (extrapolated) = 2.28 W/kg

Zoom Scan (31x31x36)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 26.5 V/m; Power Drift = -0.2 dB Maximum value of SAR (interpolated) = 2.28 mW/g

ど Sony Ericsson		REPORT		
Prepared (also subject responsible if other) SEM/CV/PF/P Gerard Hayes		REP 2004 001 Z50	DA 02	
Approved SEM/CV/PF/P Gerard Hayes	Checked			X:\SAR Chamber\FCC reports\Z500A\Final Reports\FCCZ500A.doc







Sony Ericsson

Prepared (also subject responsible if other) SEM/CV/PF/P Gerard Hayes		REP 2004 001 Z50	0A 02	
Approved SEM/CV/PF/P Gerard Hayes	Checked			X:\SAR Chamber\FCC reports\Z500A\Final Reports\FCCZ500A.doc

REPORT

1900 GSM Band: Distribution and Extrapolation of Maximum SAR Model: Z500A SN: BD3017AYMN with Optional Battery: BST-30 Right Side, Tilt Position.

Date/Time: 07/22/04 12:07:06 File Name: 22July04 Z500a GSM1900 AYMN RT01.da4 DUT: Z500a; Type: Sample Program Notes: Battery BST-30 Humidity: 49.7 Ambient Temp: 22.7 Simulant Temp: 21.2 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; $\sigma = 1.39$ mho/m; $\varepsilon_r = 38.3$; $\rho = 1000 \text{ kg/m}^3$ Phantom section: Right Section DASY4 Configuration: - Probe: ET3DV6 - SN1538; ConvF(4.95, 4.95, 4.95); Calibrated: 5/27/2004 - Sensor-Surface: 4mm (Mechanical Surface Detection) - Electronics: DAE3 Sn431; Calibrated: 5/26/2004 - Phantom: SAM with CRP (High Band Head); Type: SAM; Serial: TP: 1054 - Measurement SW: DASY4, V4.2 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 112 Area Scan (51x81x1): Measurement grid: dx=15mm, dy=15mm Reference Value = 9.87 V/m: Power Drift = -0.0 dBMaximum value of SAR (interpolated) = 0.208 mW/g**Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 9.87 V/m; Power Drift = -0.0 dB

Maximum value of SAR (measured) = 0.209 mW/g

Peak SAR (extrapolated) = 0.277 W/kg

SAR(1 g) = 0.191 mW/g; SAR(10 g) = 0.121 mW/g

Zoom Scan (31x31x36)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 9.87 V/m; Power Drift = -0.0 dB Maximum value of SAR (interpolated) = 0.277 mW/g

 Song Ericsson

 Prepared (also subject responsible if other)

 SEM/CV/PF/P Gerard Hayes

 Approved

 Checked

 SEM/CV/PF/P Gerard Hayes

 Approved

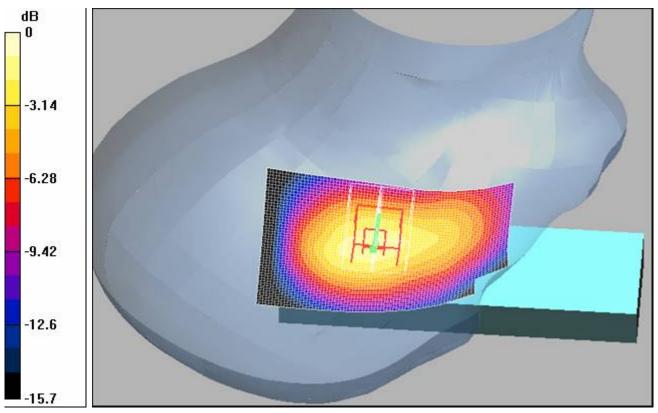
 Checked

 Approved

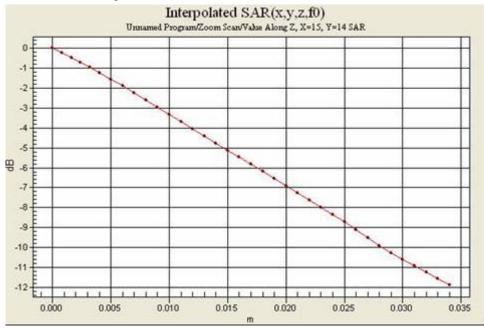
 Checked

 A

 X:\SAR Chamber\FCC reports\Z500A\Final Reports\FCCZ500A.doc



 $0 \, dB = 0.277 mW/g$



Sony Ericsson

Prepared (also subject responsible if other) SEM/CV/PF/P Gerard Hayes		REP 2004 001 Z50	0A 02	
Approved SEM/CV/PF/P Gerard Hayes	Checked			X:\SAR Chamber\FCC reports\Z500A\Final Reports\FCCZ500A.doc

REPORT

1900 GSM Band: Distribution and Extrapolation of Maximum SAR
Model: Z500A SN: BD3017AYMN with Optional Battery: BST-30L & Cit L & Cit L & D & Strip

Left Side, Cheek/Touch Position.

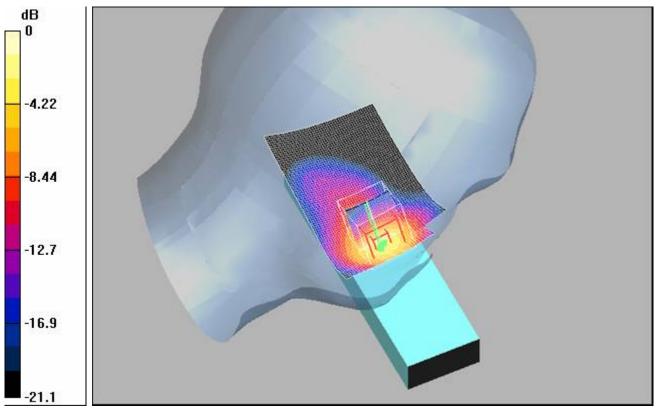
Date/Time: 07/22/04 14:16:19 File Name: 22July04 Z500a GSM1900 AYMN LC01.da4 Program Notes: Battery BST-30 Humidity: 47.2 Ambient Temp: 22.8 Simulant Temp: 21.4 Communication System: DCS 1900; Frequency: 1850.2 MHz; Duty Cycle: 1:8.3 Medium: Head 1800/1900 MHz Medium parameters used (interpolated): f = 1850.2 MHz; $\sigma = 1.39$ mho/m; $\varepsilon_r = 38.3$; $\rho = 1000 \text{ kg/m}^3$ Phantom section: Left Section DASY4 Configuration: - Probe: ET3DV6 - SN1538; ConvF(4.95, 4.95, 4.95); Calibrated: 5/27/2004 - Sensor-Surface: 4mm (Mechanical Surface Detection) - Electronics: DAE3 Sn431; Calibrated: 5/26/2004 - Phantom: SAM with CRP (High Band Head); Type: SAM; Serial: TP: 1054 - Measurement SW: DASY4, V4.2 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 112 Area Scan (51x81x1): Measurement grid: dx=15mm, dy=15mm Reference Value = 24.4 V/m; Power Drift = -0.1 dBMaximum value of SAR (interpolated) = 1.3 mW/g**Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 24.4 V/m; Power Drift = -0.1 dBMaximum value of SAR (measured) = 1.58 mW/g

Peak SAR (extrapolated) = 2.5 W/kg

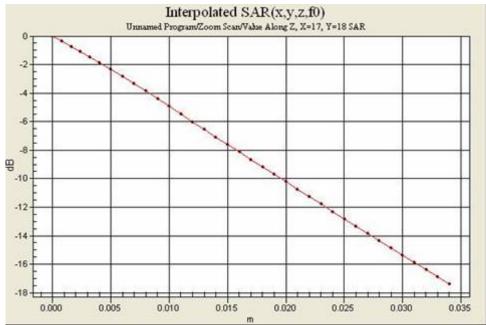
SAR(1 g) = 1.4 mW/g; SAR(10 g) = 0.699 mW/g

Zoom Scan (31x31x36)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 24.4 V/m; Power Drift = -0.1 dB Maximum value of SAR (interpolated) = 2.5 mW/g

ど Sony Ericsson		REPORT		
Prepared (also subject responsible if other) SEM/CV/PF/P Gerard Hayes		No. REP 2004 001 Z50	0A 02	
Approved SEM/CV/PF/P Gerard Hayes	Checked			X:\SAR Chamber\FCC reports\Z500A\Final Reports\FCCZ500A.doc







Sony Ericsson

Prepared (also subject responsible if other) SEM/CV/PF/P Gerard Hayes		REP 2004 001 Z50	0A 02	
Approved SEM/CV/PF/P Gerard Hayes	Checked			X:\SAR Chamber\FCC reports\Z500A\Final Reports\FCCZ500A.doc

REPORT

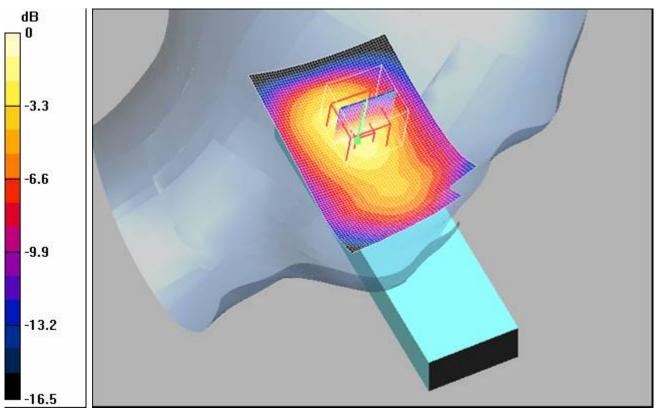
1900 GSM Band: Distribution and Extrapolation of Maximum SAR Model: Z500A SN: BD3017AYMN with Optional Battery: BST-30 Left Side, Tilt Position.

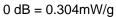
Date/Time: 07/22/04 13:11:15 File Name: 22July04 Z500a GSM1900 AYMN LT01.da4 Program Notes: Battery BST-30 Humidity: 46.8 Ambient Temp: 22.8 Simulant Temp: 21 Communication System: DCS 1900; Frequency: 1850.2 MHz; Duty Cycle: 1:8.3 Medium: Head 1800/1900 MHz Medium parameters used (interpolated): f = 1850.2 MHz; $\sigma = 1.39$ mho/m; $\varepsilon_r = 38.3$; $\rho = 1000 \text{ kg/m}^3$ Phantom section: Left Section DASY4 Configuration: - Probe: ET3DV6 - SN1538; ConvF(4.95, 4.95, 4.95); Calibrated: 5/27/2004 - Sensor-Surface: 4mm (Mechanical Surface Detection) - Electronics: DAE3 Sn431; Calibrated: 5/26/2004 - Phantom: SAM with CRP (High Band Head); Type: SAM; Serial: TP: 1054 - Measurement SW: DASY4, V4.2 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 112 Area Scan (51x81x1): Measurement grid: dx=15mm, dy=15mm Reference Value = 9.67 V/m; Power Drift = 0.0 dBMaximum value of SAR (interpolated) = 0.228 mW/g**Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 9.67 V/m; Power Drift = 0.0 dBMaximum value of SAR (measured) = 0.228 mW/gPeak SAR (extrapolated) = 0.304 W/kg

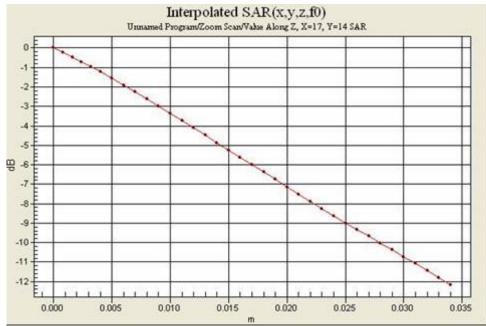
SAR(1 g) = 0.211 mW/g; SAR(10 g) = 0.132 mW/g

Zoom Scan (31x31x36)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 9.67 V/m; Power Drift = 0.0 dB Maximum value of SAR (interpolated) = 0.304 mW/g

ど Sony Ericsson		REPORT		
Prepared (also subject responsible if other) SEM/CV/PF/P Gerard Hayes		REP 2004 001 Z50	0A 02	
Approved SEM/CV/PF/P Gerard Hayes	Checked			X:\SAR Chamber\FCC reports\Z500A\Final Reports\FCCZ500A.doc







 Sony Ericsson

 Prepared (also subject responsible if other)

 SEM/CV/PF/P Gerard Hayes

 Approved

 Checked

 SEM/CV/PF/P Gerard Hayes

 Approved

 Checked

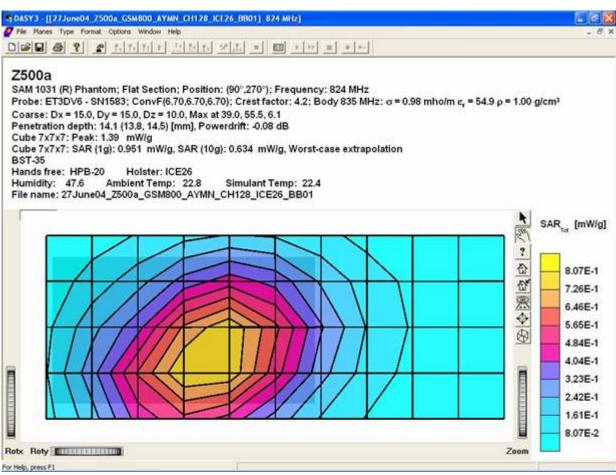
 SEM/CV/PF/P Gerard Hayes

Appendix 3

SAR distribution plots for Body Worn Configuration

Sony Ericsson

Prepared (also subject responsible if other) SEM/CV/PF/P Gerard Hayes		REP 2004 001 Z50	DA 02	
Approved SEM/CV/PF/P Gerard Hayes	Checked			X:\SAR Chamber\FCC reports\Z500A\Final Reports\FCCZ500A.doc



Distribution of maximum SAR in 800 GSM band. Measured with back of device facing the body using carry accessory ICE-26 and hands free accessory HPB-20. (Standard Battery, BST-35)

				REPORT		
	Sony Erics	sson				
	subject responsible if of	,			75004.00	
	PF/P Gerard			REP 2004 001	Z500A 02	- I
oved M/CV/	PF/P Gerard		hecked		A	X:\SAR Chamber\FCC reports\Z500A\Final Reports\FCCZ500A.doc
		00_AYMN_CH128_ICE26_	BB01] Cube 7x7x7]			
	Type Format Options W		t.] _=] @3 (+)>) _=]	(and the fill		- 8 ×
ST-35 inds free imidity:	e: HPB-20 Hol: 47.6 Ambient	ster: ICE26	634 mW/g, Worst-cas mulant Temp: 22.4 128_ICE26_BB01	e extrapolation		
	0.7 [non mana	
10	0.6					
	· · ·					
[6//	0.5	~				
[my	0,4		·····			
SAR tot [mW/g]	0.3	· · · · · · · · · · · · · · · · · · ·	<u></u>			
AF	•		-			
	0.2					
			the second second second second second Report			
(0.1	amanipaana	*******			
(- t					
(0.1	10		•	30	40
(10	, 20 [mm]	•	30	40

SAR Extrapolation to the phantom inner surface. Measured for maximum SAR in 800 GSM band, while back of the phone is against the body using carry accessory ICE-26 and hands free accessory HPB-20. (Standard Battery, BST-35)

SAM 1031 (R) Phantom; Flat Section; Position; (90°,270°); Frequency: 824 MHz; Probe: ET3DV6 - SN1583; ConvF(670,670,670,670); Creat factor: 4.2; Body 835 MHz; o = 0.98 mho/m e, = 54.9 p = 1.00 g/cm³ Coarse: Dx: 150, Dy = 100, Max at 270, 052,6,51 Pentration depth: 17.2 (16.7, 17.7) [mm], Powerdrift: -0.11 dB Cuber 7X77; Pesk: 1.21 mWig Cuber 7X77; Pesk: 1.21 mWig Cuber 7X77; Pesk: 1.21 mWig, SAR (10g): 0.581 mWig, Worst-case extrapolation B3T Bands free: HPB-20 Holster: ICE26 Humidity: 47.6 Ambient Temp: 22.8 Simulant Temp: 22.8 Simulant Temp: 22.6 File name: 27 June04_Z500a_GSM800_AYMN_CH128_ICE26_BF01 SAR _{ne} [mW/g] Image: Comparison of the state of the		REPORT
SEM/CV/PF/P Gerard Hayes REP 2004 001 Z500A 02 Approved Checked A XISAR Chamber/FCC reports/2500A/Final A XISAR Chamber/FCC reports/2500A/Final Reports/2500A/Final Colory J (22)June04_/5002_CSMB00_JYML (11/2_K124_01/0)_02/4 Mitz) Image: Color Web Heb Image: Color Web Ima	🍯 Sony Ericsson	
Approved SEM/CV/PF/P Gerard Hayes A XISAR ChamberFCC reports/2500A/Final Reports/PCC2000A.doc Cover and the second secon		
SEM/CV/PF/P Gerard Hayes A XHAR Chamber/PCC reports/2500A/Final Reports/FCC2500A.doc SMX101 [[7] June04 / 200e, GAMBO AVMM. CH128, IC126, BF01] 874 MHz Image: Convertion of the image: Convertimage: Convertion of the image: Convertimage:		REP 2004 001 Z500A 02
The Name Type Format Option Option<		
SAM 1031 (R) Phantom: Flat Section: Position: (90°,270°): Frequency: 824 MHz Probe: ET3DV6 - SN1583: ConvF(6.70,6.70,6.70; Crest factor: 4.2; Body 835 MHz: or 0.98 mholm r, = 54.9 p = 1.00 g/cm³ Coarse: Dx = 150, Dy = 150, Dz = 100, Max at 27.0, 52.5, 61 Penetration depti: 172.1 (167, 17.7) [mm], Powerdrift: 0.11 dB Cuber XXX7: Peak: 1.21 mWig Cuber XXX7: SAR (10): 0.581 mW/g, SAR (100): 0.581 mW/g, Worst-case extrapolation ST 36 Hundity: x7.5 Hundity: x7.5 A Mologen Temp: 22.3 Simulant Temp: 22.4 File name: 27.June04_Z500a_GSM800_AYMM_CH128_JCE26_BF01 Of a molecular depti d	🖉 File Planes Type Format Options Window Help	
Provide 7.46E-1 6.71E-1 5.22E-1 4.48E-1 5.22E-1 4.48E-1 3.73E-1 2.24E-1 1.49E-1 7.46E-1 6.746E-1 7.46E-1 7.	SAM 1031 (R) Phantom; Flat Section; Position: (90°,270°); Frequency; Probe: ET3DV6 - SN1583; ConvF(6.70,6.70,6.70); Crest factor: 4.2; Bo Coarse: Dx = 15.0, Dy = 15.0, Dz = 10.0, Max at 27.0, 52.5, 6.1 Penetration depth: 17.2 (16.7, 17.7) [mm], Powerdrift: -0.11 dB Cube 7x7x7: Peak: 1.21 mW/g Cube 7x7x7: SAR (1g): 0.851 mW/g, SAR (10g): 0.581 mW/g, Worst-c: BST-35 Hands free: HPB-20 Holster: ICE26 Humidity: 47.6 Ambient Temp: 22.8 Simulant Temp: 22.4	dy 835 MHz: σ = 0.98 mholm e_r = 54.9 ρ = 1.00 g/cm ³ ase extrapolation
ror negy, press r s	Rotx Roty	? ? ? ?
	For Help, press F1	

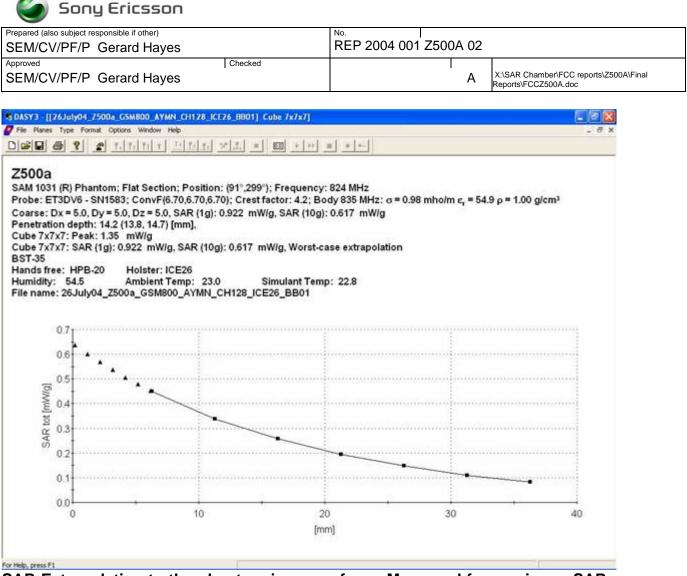
Distribution of maximum SAR in 800 GSM band. Measured with front of device facing the body using carry accessory ICE-26 and hands free accessory HPB-20. (Standard Battery, BST-35)

	ny Ericsson					
· ·	ct responsible if other)			No.		
	P Gerard Hayes			REP 2004 00	1 Z500A 02	
^{ed} I/CV/PF/	P Gerard Hayes	Checked			A	X:\SAR Chamber\FCC reports\Z500A\Final Reports\FCCZ500A.doc
/3 - [[27.June(04_7500a_GSM800_AYMN_C	H128 ICE26 BF011	Cube 7x7x7]			
	Format Options Window Help					- 8 ×
8 8 8	2 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.	비지 저지 ㅋ		a +		
				e extrapolation		
		2.8 Simular	nt Temp: 22.4 CE26_BF01			
ds free: HP hidity: 47.6 name: 27Ju	Ambient Temp: 2	2.8 Simular			1	
ds free: HP nidity: 47.6 name: 27Ju	Ambient Temp: 2	2.8 Simular				
ds free: HP idity: 47.6 name: 27Ju	Ambient Temp: 2	2.8 Simular	CE26_BF01			
ds free: HP idity: 47.6 name: 27Ju	Ambient Temp: 2	2.8 Simular	CE26_BF01			
ds free: HP idity: 47.6 name: 27Ju	Ambient Temp: 2	2.8 Simular	CE26_BF01			
ds free: HP hidity: 47.6 name: 27Ju	Ambient Temp: 2	2.8 Simular	CE26_BF01			
0.7 0.6 0.6 0.6 0.6 0.6 0.6 0.6 0.6 0.6 0.6	Ambient Temp: 2	2.8 Simular	CE26_BF01			
ds free: HP idity: 47.6 name: 27Ju 0.6 0.5 0.5 0.5 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.3 0.2	Ambient Temp: 2	2.8 Simular	CE26_BF01			
ds free: HP idity: 47.6 name: 27Ju 0.6 0.5 0.5 0.5 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4	Ambient Temp: 2	2.8 Simular	CE26_BF01			
ds free: HP hidity: 47.6 name: 27Ju 0.6 0.5 10 0.6 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5	Ambient Temp: 2	2.8 Simular AYMN_CH128_K	CE26_BF01			
ds free: HP hidity: 47.6 name: 27Ju 0.6 0.5 0.5 0.5 0.5 0.5 0.4 0.4 0.4 0.4 0.5 0.5 0.4 0.4 0.4 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5	Ambient Temp: 2	2.8 Simular	CE26_BF01	•	30	4 0
ds free: HP idity: 47.6 name: 27Ju 0.6 0.5 16 Mul pt v V V V V V V V V V V V V V V V V V V V	Ambient Temp: 2	2.8 Simular AYMN_CH128_K	CE26_BF01	•		

SAR Extrapolation to the phantom inner surface. Measured for maximum SAR in 800 GSM band, while front of the phone is against the body using carry accessory ICE-26 and hands free accessory HPB-20. (Standard Battery, BST-35)

		REPORT		
🧉 Sony 🖲	Ericsson			
epared (also subject respon	sible if other)	No.		
EM/CV/PF/P Ge	erard Hayes	REP 2004 001 Z5	00A 02	
oroved EM/CV/PF/P Ge	Checked erard Hayes		A	X:\SAR Chamber\FCC reports\Z500A\Final Reports\FCCZ500A.doc
ASY3 - [[26July04 2500/	a GSM800 AYMN_CH128_ICE26_BB01] 824 MHz]			E 6 X
le Planes Type Format O				- 8 ×
	지하지 사사자 지하는 💷 💌) = +++		
ST-35 lands free: HPB-20	: 0.922 mW/g, SAR (10g): 0.617 mW/g, Wors Holster: ICE26	a-case extrapolation		
Humidity: 54.5 File name: 26July04_Z	Ambient Temp: 23.0 Simulant To 2500a_GSM800_AYMN_CH128_ICE26_BB01			
				SAR _{ref} [mW/g] ?
				? 2 7.87E-1 7.08E-1 6.30E-1 5.51E-1 4.72E-1 3.94E-1 3.94E-1 3.15E-1 2.36E-1
	2500a_GSM800_ÄYMN_CH128_ICE26_BB01			? 7.87E-1 ? 7.08E-1 6.30E-1 5.51E-1 4.72E-1 3.94E-1 3.15E-1 2.36E-1 1.57E-1 1.57E-1

Distribution of maximum SAR in 800 GSM band. Measured with back of device facing the body using carry accessory ICE-26 and hands free accessory HPB-20. (Optional Battery, BST-30)



SAR Extrapolation to the phantom inner surface. Measured for maximum SAR in 800 GSM band, while back of the phone is against the body using carry accessory ICE-26 and hands free accessory HPB-20. (Optional Battery, BST-30)

Sony Ericsson	REPORT
repared (also subject responsible if other)	No.
SEM/CV/PF/P Gerard Hayes	REP 2004 001 Z500A 02
pproved Checked	A X:\SAR Chamber\FCC reports\Z500A\Final
	Reports\FCCZ500A.doc
DASY3 - [[26July04_7500a_GSM800_AYMN_CH128_ICE26_BE01]_824 MHz]	
File Planes Type Format Options Window Help	- 8 ×
Dee e rinni din XI = Do	<u>> >> == == == == == == = = = = = = = = </u>
Cube 7x7x7: Peak: 1.22 mW/g Cube 7x7x7: SAR (1g): 0.875 mW/g, SAR (10g): 0.599 mW/g, W BST-30 Hands free: HPB-20 Holster: ICE26 Humidity: 54 Ambient Temp: 22.8 Simulant' File name: 26July04_Z500a_GSM800_AYMN_CH128_ICE26_BF	Temp: 23.3 F01
	and SAR [IIIWI9]
	SAR _{te} [mW/g] ? 2 7.98E-1 7.18E-1 6.38E-1 6.38E-1 6.38E-1 5.59E-1 4.79E-1 3.99E-1 3.99E-1 3.19E-1 2.39E-1 1.60E-1 1.60E-1
otx Roly	Image: Second state 0.000000 Image: Second state 4.79E-1 3.99E-1 3.19E-1 2.39E-1 2.39E-1

Distribution of maximum SAR in 800 GSM band. Measured with front of device facing the body using carry accessory ICE-26 and hands free accessory HPB-20. (Optional Battery, BST-30)

Sony Ericsson Prepared (also subject responsible if other) No REP 2004 001 Z500A 02 SEM/CV/PF/P Gerard Hayes Approved Checked X:\SAR Chamber\FCC reports\Z500A\Final SEM/CV/PF/P Gerard Hayes A Reports\FCCZ500A.doc 6 🛛 DASY3 - [[26July04_2500a_GSM800_AYMN_CH128_ICE26_BF01] Cube 7x7x7] 🖉 File Planes Type Format Options Window Help -Z500a SAM 1031 (R) Phantom; Flat Section; Position: (91°,299°); Frequency: 824 MHz Probe: ET3DV6 - SN1583; ConvF(6.70,6.70,6.70); Crest factor: 4.2; Body 835 MHz; a = 0.98 mholm r, = 54.9 p = 1.00 g/cm³ Coarse: Dx = 5.0, Dy = 5.0, Dz = 5.0, SAR (1g): 0.875 mW/g, SAR (10g): 0.599 mW/g Penetration depth: 17.2 (16.8, 17.7) [mm]. Cube 7x7x7: Peak: 1.22 mW/g Cube 7x7x7: SAR (1g): 0.875 mW/g, SAR (10g): 0.599 mW/g, Worst-case extrapolation BST-30 Hands free: HPB-20 Holster: ICE26 Humidity: 54 Ambient Temp: 22.8 Simulant Te File name: 26July04_Z500a_GSM800_AYMN_CH128_JCE26_BF01 Simulant Temp: 23.3 0.6 0.5 SAR tot [m///g] 0.3 0.1 0.0 0 10 20 30 40 [mm] For Help, press F1

SAR Extrapolation to the phantom inner surface. Measured for maximum SAR in 800 GSM band, while front of the phone is against the body using carry accessory ICE-26 and hands free accessory HPB-20. (Optional Battery, BST-30)

	REPORT
🍯 Sony Ericsson	
Prepared (also subject responsible if other)	No.
SEM/CV/PF/P Gerard Hayes	REP 2004 001 Z500A 02
Approved Checked	
SEM/CV/PF/P Gerard Hayes	A X:\SAR Chamber\FCC reports\Z500A\Final Reports\FCCZ500A.doc
S DASY3 - [[25June04_2500a_GSM1900_AYMN_CH660_ICE26_BB01] 1880 MH2]	
P File Planes Type Format Options Window Help	_ # ×
	a +
SAM 1030 (R) Phantom; Flat Section; Position: (87°.270°); Frequency: Probe: ET3DV6 - SN1539; ConvF(4.40,4.40,4.40); Crest factor: 4.2; Bo Coarse: Dx = 15.0, Dy = 15.0, Dz = 10.0, Max at 40.5, 45.0, 6.1 Penetration depth: 10.9 (10.8, 10.9) [mm], Powerdrift: -0.01 dB Cube 7x7x7: Peak: 0.760 mW/g Cube 7x7x7: SAR (1g): 0.431 mW/g, SAR (10g): 0.268 mW/g, Worst-ca Z500a SN: BD3017A/YMN w/ Standard Battery BST-35 Hands free: HPB-20 Holster: ICE-26, Back of Phone Facing Body Humidity: 48.6 Ambient Temp: 23.2 Simulant Temp File name: 25June04_Z500a_GSM1900_AYMN_CH660_ICE26_BB01	ase extrapolation (p: 22.7) $SAR_{ret} [mW/g]$
	? 3.67E-1 3.30E-1 2.94E-1 2.57E-1 2.20E-1 1.84E-1 1.47E-1 1.10E-1 7.34E-2 3.67E-2
Rotx Roty	Zoom
For Help, press F1	

Distribution of maximum SAR in 1900 GSM band. Measured with back of device facing the body using carry accessory ICE-26 and hands free accessory HPB-20. (Standard Battery, BST-35)

red (also subject responsible if a	ath a r)	No	
red (also subject responsible if c M/CV/PF/P Gerard	,	REP 2004 001 Z500	DA 02
ved	Checked	1121 2001 001 2000	
M/CV/PF/P Gerard			A X:\SAR Chamber\FCC reports\Z500A\Fina
	Theyes		Reports\FCCZ500A.doc
			- James (2011) (2010)
Y3 - [[25June04_2500a_GSM1 Planes Type Format Options V	900_AYMN_CH660_ICE26_BB01] Cube 7	x7x7]	🖬 🖻 🔜
	ning 고고고 있지 = [100] >	Induction (- 0 X
be 7x7x7: SAR (1d): 0.431	mw/d_SAR (100): 0.268 mw/d_w	orst-case extrapolation	
0a SN: BD3017AYMN w/ nds free: HPB-20 Hol midity: 48.6 Am	Ister: ICE-26, Back of Phone Facing	g Body t Temp: 22.7	
0a SN: BD3017AYMN w/ nds free: HPB-20 Hol nidity: 48.6 Am name: 25June04_Z500a	Standard Battery BST-35 Ister: ICE-26, Back of Phone Facing bient Temp: 23.2 Simulan	g Body t Temp: 22.7	
0a SN: BD3017AYMN w/s nds free: HPB-20 Hol nidity: 48.6 Am name: 25June04_Z500a_	Standard Battery BST-35 Ister: ICE-26, Back of Phone Facing bient Temp: 23.2 Simulan	g Body t Temp: 22.7	
0a SN: BD3017AYMN w/s hds free: HPB-20 Hol midity: 48.6 Am name: 25June04_Z500a_	Standard Battery BST-35 Ister: ICE-26, Back of Phone Facing bient Temp: 23.2 Simulan	g Body t Temp: 22.7	
0a SN: BD3017AYMN w/ nds free: HPB-20 Hol midity: 48.6 Am name: 25June04_Z500a_	Standard Battery BST-35 Ister: ICE-26, Back of Phone Facing bient Temp: 23.2 Simulan	g Body t Temp: 22.7	
0a SN: BD3017AYMN w/ nds free: HPB-20 Hol midity: 48.6 Am name: 25June04_Z500a_	Standard Battery BST-35 Ister: ICE-26, Back of Phone Facing bient Temp: 23.2 Simulan	g Body t Temp: 22.7	
0a SN: BD3017AYMN w/ nds free: HPB-20 Hol midity: 48.6 Am name: 25June04_Z500a_	Standard Battery BST-35 Ister: ICE-26, Back of Phone Facing bient Temp: 23.2 Simulan	g Body t Temp: 22.7	
0a SN: BD3017AYMN w/s hds free: HPB-20 Hol midity: 48.6 Am name: 25June04_Z500a 0.4 0.3 0.4 0.3 0.4 0.3 0.4 0.3 0.4 0.3 0.4 0.3 0.4 0.3 0.4 0.3 0.4 0.3 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4	Standard Battery BST-35 Ister: ICE-26, Back of Phone Facing bient Temp: 23.2 Simulan	g Body t Temp: 22.7	
0a SN: BD3017AYMN w/ nds free: HPB-20 Hol midity: 48.6 Am name: 25June04_Z500a_	Standard Battery BST-35 Ister: ICE-26, Back of Phone Facing bient Temp: 23.2 Simulan	g Body t Temp: 22.7	
0a SN: BD3017AYMN w/s hds free: HPB-20 Hol midity: 48.6 Am name: 25June04_Z500a 0.4 0.3 0.4 0.3 0.4 0.3 0.4 0.3 0.4 0.3 0.4 0.3 0.4 0.3 0.4 0.3 0.4 0.3 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4	Standard Battery BST-35 Ister: ICE-26, Back of Phone Facing bient Temp: 23.2 Simulan	g Body t Temp: 22.7	
0a SN: BD3017AYMN w/s ads free: HPB-20 Hol midity: 48.6 Am name: 25June04_Z500a 0.4 0.3 0.3 0.4 0.3 0.4 0.3 0.4 0.3 0.4 0.3 0.4 0.3 0.4 0.3 0.4 0.3 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4	Standard Battery BST-35 Ister: ICE-26, Back of Phone Facing bient Temp: 23.2 Simulan	g Body t Temp: 22.7	
0a SN: BD3017AYMN w/s hds free: HPB-20 Hol midity: 48.6 Am name: 25June04_Z500a 0.4 0.3 0.4 0.3 0.4 0.3 0.4 0.3 0.4 0.3 0.4 0.3 0.4 0.3 0.4 0.3 0.4 0.3 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4	Standard Battery BST-35 Ister: ICE-26, Back of Phone Facing bient Temp: 23.2 Simulan	g Body t Temp: 22.7	
0a SN: BD3017AYMN w/s ads free: HPB-20 Hol midity: 48.6 Am name: 25June04_Z500a 0.4 0.3 0.4 0.3 0.4 0.3 0.4 0.3 0.4 0.3 0.4 0.3 0.4 0.3 0.4 0.3 0.4 0.0 0.4 0.0 0.4 0.0 0.4 0.0 0.0	Standard Battery BST-35 Ister: ICE-26, Back of Phone Facing bient Temp: 23.2 Simulan _GSM1900_AYMN_CH660_ICE26_E	3 Body t Temp: 22.7 3801	

SAR Extrapolation to the phantom inner surface. Measured for maximum SAR in 1900 GSM band, while back of the phone is against the body using carry accessory ICE-26 and hands free accessory HPB-20. (Standard Battery, BST-35)

Sony Ericsson	
repared (also subject responsible if other) SEM/CV/PF/P Gerard Hayes	No. REP 2004 001 Z500A 02
pproved Checked SEM/CV/PF/P Gerard Hayes	A X:\SAR Chamber\FCC reports\Z500A\Final Reports\FCCZ500A.doc
DASY3 - [[25June04_2500a_GSM1900_AYMN_CH512_ICE26_BF01] 1850 MHz	I E E 🛛
File Planes Type Format Options Window Help	- 8 ×
	<u>22</u> <u>3</u> <u>8</u> <u>8</u>
2500a SN: BD3017AYMN w/ Standard Battery BST-35 Hands free: HPB-20 Holster: ICE-26, Front of Phone Facing E Humidity: 48.2 Ambient Temp: 23.0 Simulant T File name: 25June04_Z500a_GSM1900_AYMN_CH512_ICE26_BF(Femp: 22.8 01
	SAR _{ret} [mW/g]
	? > ? >
ot Refy	? ∴ ? ∴ .4.0E-1 4.73E-1 4.05E-1 3.38E-1 2.70E-1 2.03E-1

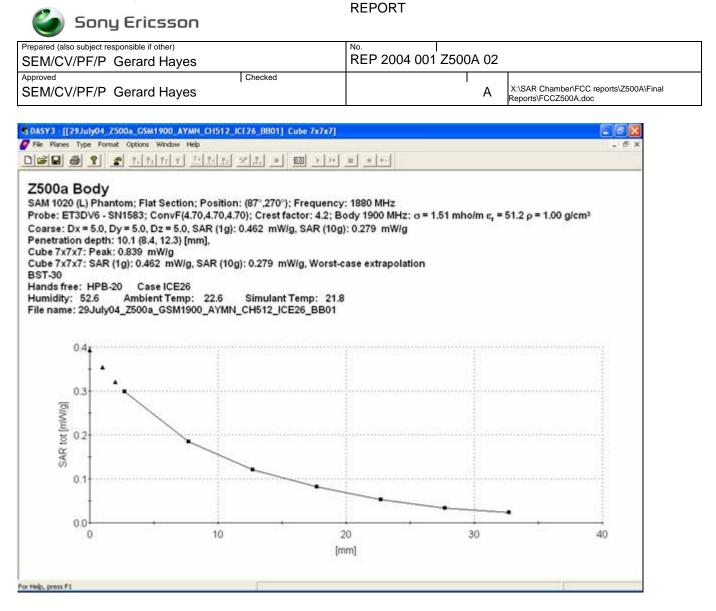
Distribution of maximum SAR in 1900 GSM band. Measured with front of device facing the body using carry accessory ICE-26 and hands free accessory HPB-20. (Standard Battery, BST-35)

ed (also subject responsible if othe	er)	No.		
//CV/PF/P Gerard H	,		4 001 Z500A 02	
/ ^{ed} //CV/PF/P Gerard H	Checked ayes			R Chamber\FCC reports\Z500A\Final s\FCCZ500A.doc
Y3 - [[25.June04_2500a_G5M190 Planes Type Format Options Win	00_AYMN_CH512_ICE26_BF01]	Cube 7x7x7]		
be 7x7x7: Peak: 1.21 mW/g be 7x7x7: SAR (1g): 0.667 i	mW/g, SAR (10g): 0.373 mV	V/g, Worst-case extrapola	ition	
be 7x7x7:SAR (1g):0.667 0a SN:BD3017AYMN w/St ads free:HPB-20 Holst nidity:48.2 Ambi	mW/g, SAR (10g): 0.373 mV tandard Battery BST-35 ter: ICE-26, Front of Phone	Facing Body mulant Temp: 22.8	ition	
be 7x7x7: SAR (1g): 0.667 i 0a SN: BD3017AYMN w/ St ds free: HPB-20 Holst nidity: 48.2 Ambi name: 25June04_Z500a_G	mW/g, SAR (10g): 0.373 mW tandard Battery BST-35 ter: ICE-26, Front of Phone tent Temp: 23.0 Si	Facing Body mulant Temp: 22.8	ition	
0.40 0.30 0.30 0.30 0.40 0.40	mW/g, SAR (10g): 0.373 mW tandard Battery BST-35 ter: ICE-26, Front of Phone tent Temp: 23.0 Si	Facing Body mulant Temp: 22.8	tion	
0.40 0.30 0.30 0.30 0.40 0.40	mW/g, SAR (10g): 0.373 mW tandard Battery BST-35 ter: ICE-26, Front of Phone ient Temp: 23.0 Si	Facing Body mulant Temp: 22.8	tion	
0.40 0.30 0.30 0.30 0.40 0.40	mW/g, SAR (10g): 0.373 mW tandard Battery BST-35 ter: ICE-26, Front of Phone ient Temp: 23.0 Si	Facing Body mulant Temp: 22.8	tion	
0.40 0.40 0.30 0.40 0.30 0.40	mW/g, SAR (10g): 0.373 mW tandard Battery BST-35 ter: ICE-26, Front of Phone ient Temp: 23.0 Si	Facing Body mulant Temp: 22.8	tion	
0.40 0.30 0.30 0.30 0.40 0.40	mW/g, SAR (10g): 0.373 mW tandard Battery BST-35 ter: ICE-26, Front of Phone ient Temp: 23.0 Si	Facing Body mulant Temp: 22.8	tion	
0.40 0.30 0.30 0.40 0.30 0.40	mW/g, SAR (10g): 0.373 mW tandard Battery BST-35 ter: ICE-26, Front of Phone ient Temp: 23.0 Si	Facing Body mulant Temp: 22.8	tion	
0.40 0.30 0.30 0.40 0.30 0.40	mW/g, SAR (10g): 0.373 mW tandard Battery BST-35 ter: ICE-26, Front of Phone ient Temp: 23.0 Si	Facing Body mulant Temp: 22.8	tion	
0.40 0.30 0.20 0.10 0.10	mW/g, SAR (10g): 0.373 mW tandard Battery BST-35 ter: ICE-26, Front of Phone ient Temp: 23.0 Si	Facing Body mulant Temp: 22.8	ntion	40

SAR Extrapolation to the phantom inner surface. Measured for maximum SAR in 1900 GSM band, while front of the phone is against the body using carry accessory ICE-26 and hands free accessory HPB-20. (Standard Battery, BST-35)

Song Ericsson Propried (also subjec responsible if other) No. AREP 2004 001 Z500A 02 Approved Checked SEM/CV/PF/P Gerard Hayes A A XisBAR Chamber/FCC reports/2500A/Field Reported Control (2) Semicor (2) Control (2) Control (2) Control (2) Control (2) Control (2) <th></th> <th>REPORT</th>		REPORT
Prepared (allos subject responsible if other) SEM/CV/PF/P Gerard Hayes Approved Checked Checked Checked A <u>XISAR DamberFCC reports2500A.0c</u> A <u>XISAR DamberFCC reports2500A.0c</u> SEM/CV/PF/P Gerard Hayes A <u>XISAR DamberFCC reports2500A.0c</u> SEM/CV/PF/P Gerard Hayes SEM/CV/PF/P Hayes SEM/	🍊 Sony Ericsson	
SEM/CV/PF/P Gerard Hayes REP 2004 001 Z500A 02 Approved IChecked IA XISAR.Chamber/FCC reports/Z500A/Final SEM/CV/PF/P Gerard Hayes IA XISAR.Chamber/FCC reports/Z500A/coc SCM02 Status Image: Status Image: Status Image: Status SCM02 Status Image: Status Image: Status Image: Status Image: Status SCM02 Status Image:		
Approved A provided the second study of the se		
SEM/CV/PF/P Gerard Hayes A X:same Chamber/PCC reported 32000/VF/mail SEM/CV/PF/P Gerard Hayes I X:same Chamber/PCC reported 32000/VF/mail I X:same Chamber/PCC reported 32000/VF/mail State Type Type Type Type Type Type Type Typ		
Start (129)JulyO4_7500a_65M1900_AYAML_G1512_JC124_B1001] 1550 M4/z The mem the forme (opener Window Help SAM 1020 (L) Phantom; Flat Section; Position; (87°.270°); Frequency; 1880 MHz Probe: ET3DV6 - SN1583; ConvF(470.470.470); Crest factor: 4.2; Body 1900 MHz; o = 1.51 mholm e, = 51.2 p = 1.00 g/cm ³ Coarse: Dx = 150. Dp = 100. Max at 270. 640. 0.7 Prentration depth: 10.1 (8.4, 12.3) [mm], Powerdrift: -0.02 dB Cube 7XX7: Peak: 0.339 mW/g Cube 7XX7: Peak: 0.339 mW/g Cube 7XX7: SAR(1(g): 0.422 mW/g, SAR(10g): 0.279 mW/g, Worst-case extrapolation BST-30 Hands free: HPB-20 Case ICE26 Humidity: 52.6 Ambient Temp: 22.5 Simulant Temp: 21.8 File name: 29JulyO4_2500a_65M1900_AYAML_CH512_ICE26_BB01		∧ X:\SAR Chamber\FCC reports\Z500A\Final
The News Type Format Options Window Help Image: State St	SENVOVITI TO Gerard hayes	Reports\FCCZ500A.doc
The News Type Format Options Window Help Image: State St		
SMM 1020 (L) Phantom; Flat Section; Position; (87°:270°); Frequency; 1880 MHz Probe: ET3DV6 - SN1583; ConvF(4.70,4.70,4.70; Creat tactor: 4.2; Body 1900 MHz; o = 1.51 mholm e, = 51.2 p = 1.00 g/cm³ Coarse: Dv: 15.0, D2 = 10.00, Max at 27.0, 54.0, 2.7 Penetration depth: 10.1 (8.4, 12.3) (mm), Powerdrift: -0.02 dB Cuber 7X7X? Peak: 0.839 mWig Cuber 7X7X? Peak: 0.839 mWig Bunds free: HPB-20 Case ICE26 Humidhy: 52.6 Ambient Temp: 22.6 Simulant Temp: 21.8 File name: 29July04_Z500a_GSM1900_AYMN_CH512_ICE26_BB01 SAR _{xe} [mW/g] Image: Coarse Cite Cite SAR Minite: Coarse Cite SAR Cuber 7X7X: Peak: 0.020 Case ICE26 Humidhy: 52.6 Ambient Temp: 22.6 Simulant Temp: 21.8 File name: 29July04_Z500a_GSM1900_AYMN_CH512_ICE26_BB01 SAR _{xe} [mW/g] Image: Case Cite SAR SAR Image: Case Cite <		0 MHz]
ZSODa Body SAM 1020 (L) Phantom; Flat Section; Position; (87':270''); Frequency: 1880 MHz Probe: ET3DV6 - SN1583; ConvF(4.70.4.70.4.70); Crest factor: 4.2; Body 1900 MHz; or = 1.51 mho/m e, = 51.2 p = 1.00 g/cm ³ Coarse: Dx = 150, Dy = 160, Dz = 100, Max at 27, 0, 54.0, 2.7 Penetration depth: 10:1 (84.12.3) [mm], Powerdrift: -0.02 dB Cube 7X7X7; Peak: 0.839 mW/g Hund Stree: HPB-20 Case ICE26 Hund Mty; S2.6 Ambient Temp: 22.6 Simulant Temp: 21.8 File name: 29.July04_Z500a_GSM1900_AYIMN_CH512_ICE26_BB01 Image: 29.July04_Z500a_GSM1900_AYIMN_CH512_ICE26_BB01 Image: 29.July04_Z500a_GSM1900_AYIMN_CH512_ICE26_BB01 Image: 29.July04_Z500a_GSM1900_AYIMN_CH512_ICE26_BB01 Image: 29.July04_Z500a_GSM1900_AYIMN_CH512_ICE26_BB01 Image: 29.July04_Z500a_GSM1900_AYIMN_CH512_ICE26_BB01 Image: 29.July04_Z500a_GSM1900_IAYIM_CH512_ICE26_BB01 Image: 29.July04_Z500a_GSM1900_IAYIM_CH512_ICE26_BB01 Image: 29.July04_ICE3 Image: 29.July04_ICE3 Image: 29.July04_ICE3 Image: 29.July04_ICE3 Image: 29.July04_ICE3 Image: 29.July04_ICE3		- 0 ×
SAM 1020 (L) Phantom: Flat Section: Position: (87': 270'); Frequency: 1880 MHz Probe: ET3DV6 - SN1583; ConvF(A:T0,A:T0,A:T0,A:T0,A:T0,A:T0,A:T0,A:T0,		
	Probe: ET3DV6 - SN1583; ConvF(4.70,4.70,4.70); Crest factor Coarse: Dx = 15.0, Dy = 15.0, Dz = 10.0, Max at 27.0, 54.0, 2.7 Penetration depth: 10.1 (8.4, 12.3) [mm], Powerdrift: -0.02 dB Cube 7x7x7: Peak: 0.839 mW/g Cube 7x7x7: SAR (19): 0.462 mW/g, SAR (10g): 0.279 mW/g BST-30 Hands free: HPB-20 Case ICE26 Humidity: 52.6 Ambient Temp: 22.6 Simulant Ter	or: 4.2; Body 1900 MHz: σ = 1.51 mho/m r, = 51.2 ρ = 1.00 g/cm ³ g, Worst-case extrapolation mp: 21.8 6_BB01 SAR _{τot} [mW/g] ? b 5.26E-1 4.73E-1 4.21E-1 3.68E-1 3.68E-1 3.68E-1 3.68E-1 1.58E-1 1.58E-1 1.05E-1
For Help, press F1	Rotx Roty	Zoom
	For Help, press F1	

Distribution of maximum SAR in 1900 GSM band. Measured for maximum SAR in 1900 GSM band, while back of the phone is against the body using carry accessory ICE-26 and hands free accessory HPB-20. (Optional Battery, BST-30)



SAR Extrapolation to the phantom inner surface. Measured for maximum SAR in 1900 GSM band, while back of the phone is against the body using carry accessory ICE-26 and hands free accessory HPB-20. (Optional Battery, BST-30)

	REPORT
🎱 Sony Ericsson	
Prepared (also subject responsible if other) SEM/CV/PF/P Gerard Hayes	№. REP 2004 001 Z500A 02
Approved Checked	
SEM/CV/PF/P Gerard Hayes	A X:\SAR Chamber\FCC reports\Z500A\Final
	Reports\FCCZ500A.doc
DASY3 - [[29July04_2500a_GSM1900_AYMN_CH512_ICE26_BF01] 1850 MHz]	E 🗄 🔀
Pile Planes Type Format Options Window Help	- 0 ×
	<u><u> </u></u>
SAM 1020 (L) Phantom; Flat Section; Position: (87°,270°); Frequency Probe: ET3DV6 - SN1583; ConvF(4.70,4.70,4.70); Crest factor: 4.2; B Coarse: Dx = 15.0, Dy = 15.0, Dz = 10.0, Max at 30.0, 94.5, 2.7 Penetration depth: 11.6 (10.2, 12.9) [mm], Powerdrift: -0.07 dB Cube 7x7x7: Peak: 0.933 mW/g Cube 7x7x7: SAR (1g): 0.556 mW/g, SAR (10g): 0.318 mW/g, Worst- BST-30 Hands free: HPB-20 Case ICE26 Humidity: 52.5 Ambient Temp: 22.6 Simulant Temp: 21.3 File name: 29July04_Z500a_GSM1900_AYMN_CH512_ICE26_BF01	Body 1900 MHz: σ = 1.51 mho/m v_r = 51.2 ρ = 1.00 g/cm ³ -case extrapolation
Rotx Roty	Zoom

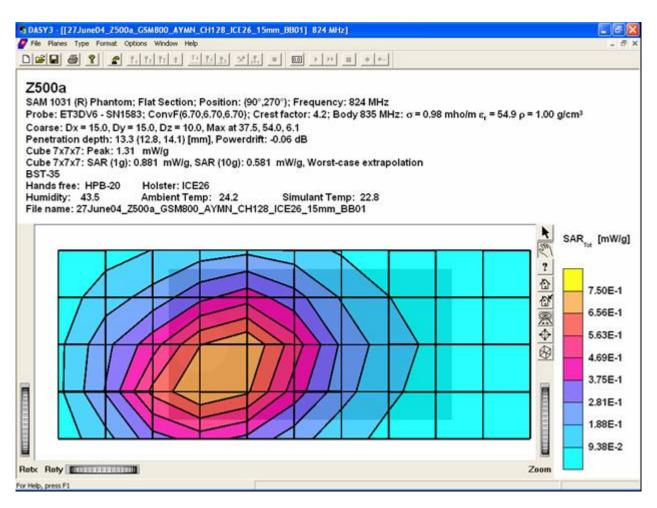
Distribution of maximum SAR in 1900 GSM band. Measured for maximum SAR in 1900 GSM band, while front of the phone is against the body using carry accessory ICE-26 and hands free accessory HPB-20. (Optional Battery, BST-30)

Sony Ericsson Prepared (also subject responsible if other) No REP 2004 001 Z500A 02 SEM/CV/PF/P Gerard Haves Approved Checked X:\SAR Chamber\FCC reports\Z500A\Final SEM/CV/PF/P Gerard Hayes A Reports\FCCZ500A.doc DASY3 - [[29July04_Z500a_GSM1900_AYMN_CH512_ICE26_BF01] Cube 7x7x7] _ 6 X / File Planes Type Format Options Window Help 8× D## @ ? ? Indd HAA XA = @ > H = ** Z500a Body SAM 1020 (L) Phantom; Flat Section; Position: (87°,270°); Frequency: 1880 MHz Probe: ET3DV6 - SN1583; ConvF(4.70,4.70,4.70); Crest factor: 4.2; Body 1900 MHz: σ = 1.51 mho/m c, = 51.2 ρ = 1.00 g/cm³ Coarse: Dx = 5.0, Dy = 5.0, Dz = 5.0, SAR (1g): 0.556 mW/g, SAR (10g): 0.318 mW/g Penetration depth: 11.6 (10.2, 12.9) [mm]. Cube 7x7x7: Peak: 0.933 mW/g Cube 7x7x7: SAR (1g): 0.556 mW/g, SAR (10g): 0.318 mW/g, Worst-case extrapolation BST-30 Hands free: HPB-20 Case ICE26 Ambient Temp: 22.6 Humidity: 52.5 Simulant Temp: 21.8 File name: 29July04_Z500a_GSM1900_AYMN_CH512_ICE26_BF01 0.5 0.4 SAR tot [mW/g] 0.3 0.2 0.1 0.0 0 10 20 30 40 [mm] For Help, press F1

SAR Extrapolation to the phantom inner surface. Measured for maximum SAR in 1900 GSM band, while front of the phone is against the body using carry accessory ICE-26 and hands free accessory HPB-20. (Optional Battery, BST-30)

Sony Ericsson

Prepared (also subject responsible if other) SEM/CV/PF/P Gerard Hayes		REP 2004 001 Z500	0A 02	
Approved SEM/CV/PF/P Gerard Hayes	Checked			X:\SAR Chamber\FCC reports\Z500A\Final Reports\FCCZ500A.doc



Distribution of maximum SAR in 800 GSM band. Measured with back of device facing the body using a 15 mm spacer and hands free accessory HPB-20. (Standard Battery, BST-35)

I (also subject responsible if other)		No.			
CV/PF/P Gerard Haye	S	REP 2004	001 Z500A 02		
t	Checked		[
CV/PF/P Gerard Haye	S		A	X:\SAR Chamber\F0 Reports\FCCZ500A.	CC reports\Z500A\Fina doc
I - [[27.June04_2500a_GSM800_AYM	IN_CH128_ICE26_15mm_BB0	1] Cube 7x7x7]			- 6 🛛
fanes Type Format Options Window H					- @ ×
	브라티 서리 ㅋ 题				
tration depth: 13.3 (12.8, 14.1) 7x7x7: Peak: 1.31 mW/g 7x7x7: SAR (1g): 0.881 mW/g		ı, Worst-case extrapolat	ion		
7x7x7: Peak: 1.31 mW/g 7x7x7: SAR (1g): 0.881 mW/g 35 s free: HPB-20 Holster: IC	, SAR (10g): 0.581 mW/g CE26 'emp: 24.2 Sim	ulant Temp: 22.8	ion		
7x7x7: Peak: 1.31 mW/g 7x7x7: SAR (1g): 0.881 mW/g 35 s free: HPB-20 Holster: IC dity: 43.5 Ambient T ame: 27June04_Z500a_GSM8 0.6	, SAR (10g): 0.581 mW/g CE26 'emp: 24.2 Sim	ulant Temp: 22.8	ion		
7x7x7: Peak: 1.31 mW/g 7x7x7: SAR (1g): 0.881 mW/g 35 s free: HPB-20 Holster: IC dity: 43.5 Ambient T ame: 27June04_Z500a_GSM80	, SAR (10g): 0.581 mW/g CE26 'emp: 24.2 Sim	ulant Temp: 22.8	ion		
7x7x7: Peak: 1.31 mW/g 7x7x7: SAR (1g): 0.881 mW/g 35 s free: HPB-20 Holster: IC dity: 43.5 Ambient T ame: 27June04_Z500a_GSM8/ 0.6	, SAR (10g): 0.581 mW/g CE26 'emp: 24.2 Sim	ulant Temp: 22.8	ion		
7x7x7: Peak: 1.31 mW/g 7x7x7: SAR (1g): 0.881 mW/g 35 s free: HPB-20 Holster: IC dity: 43.5 Ambient T ame: 27June04_Z500a_GSM8/ 0.6	, SAR (10g): 0.581 mW/g CE26 'emp: 24.2 Sim	ulant Temp: 22.8	ion		
7x7x7: Peak: 1.31 mW/g 7x7x7: SAR (1g): 0.881 mW/g 35 s free: HPB-20 Holster: IC dity: 43.5 Ambient T ame: 27June04_Z500a_GSM8/ 0.6	, SAR (10g): 0.581 mW/g CE26 'emp: 24.2 Sim	ulant Temp: 22.8	ion		
7x7x7: Peak: 1.31 mW/g 7x7x7: SAR (1g): 0.881 mW/g 35 s free: HPB-20 Holster: IC dity: 43.5 Ambient T ame: 27June04_Z500a_GSM8/ 0.6 0.6), SAR (10g): 0.581 mW/g CE26 'emp: 24.2 Sim	ulant Temp: 22.8	ion		
7x7x7: Peak: 1.31 mW/g 7x7x7: SAR (1g): 0.881 mW/g 35 s free: HPB-20 Holster: IC dity: 43.5 Ambient T ame: 27June04_Z500a_GSM80 0.6 0.5), SAR (10g): 0.581 mW/g CE26 'emp: 24.2 Sim	ulant Temp: 22.8	ion		
7x7x7: Peak: 1.31 mW/g 7x7x7: SAR (1g): 0.881 mW/g 35 s free: HPB-20 Holster: IC dity: 43.5 Ambient T ame: 27June04_Z500a_GSM80 0.6 0.5), SAR (10g): 0.581 mW/g CE26 'emp: 24.2 Sim	ulant Temp: 22.8	ion		
7x7x7: Peak: 1.31 mW/g 7x7x7: SAR (1g): 0.881 mW/g 35 s free: HPB-20 Holster: IC dity: 43.5 Ambient T ame: 27June04_Z500a_GSM80 0.6 0.6 0.6 0.5 0.4 0.3 0.2 0.1), SAR (10g): 0.581 mW/g CE26 'emp: 24.2 Sim	ulant Temp: 22.8	ion		
7x7x7: Peak: 1.31 mW/g 7x7x7: SAR (1g): 0.881 mW/g 35 s free: HPB-20 Holster: IC dity: 43.5 Ambient T ame: 27June04_Z500a_GSM80 0.6 0.5 0.4 0.5 0.4 0.5 0.4 0.5 0.4), SAR (10g): 0.581 mW/g CE26 'emp: 24.2 Sim	ulant Temp: 22.8	ion 		40

SAR Extrapolation to the phantom inner surface. Measured for maximum SAR in 800 GSM band, while back of the phone is against the body using a 15 mm spacer and hands free accessory HPB-20. (Standard Battery, BST-35)

	REPORT
🍯 Sony Ericsson	
Prepared (also subject responsible if other)	
SEM/CV/PF/P Gerard Hayes	REP 2004 001 Z500A 02
Approved Checked	∧ X:\SAR Chamber\FCC reports\Z500A\Final
SEM/CV/PF/P Gerard Hayes	A X:\SAR Chamber\FCC reports\2500A\Final Reports\FCCZ500A.doc
	· · · · · ·
SDASY3 - [[27June04_2500a_GSM800_AYMN_CH128_ICE26_15mm_BF01] 824 MHz	
🖉 File Planes Type Format Options Window Help	- 8 ×
SAM 1031 (R) Phantom; Flat Section; Position: (90°.270°); Frequency: Probe: ET3DV6 - SN1583; ConvF(6.70,6.70,6.70); Crest factor: 4.2; Bo Coarse: Dx = 15.0, Dy = 15.0, Dz = 10.0, Max at 18.0, 60.0, 6.1 Penetration depth: 17.9 (17.4, 18.4) [mm], Powerdrift: -0.05 dB Cube 7x7x7: Peak: 0.556 mW/g Cube 7x7x7: SAR (1g): 0.409 mW/g, SAR (10g): 0.297 mW/g, Worst-ca BST-35 Hands free: HPB-20 Holster: ICE26 Humidity: 43.5 Ambient Temp: 24.2 Simulant Tem File name: 27June04_Z500a_GSM800_AYMN_CH128_ICE26_15mm_B	dy 835 MHz: σ = 0.98 mho/m ε, = 54.9 ρ = 1.00 g/cm ³ ase extrapolation p: 22.8
	? 3.77E-1 3.39E-1 3.02E-1 2.64E-1
	2,64E-1
	B 2.04E-1 2.26E-1
	1.89E-1
	1.51E-1
	1.13E-1
	1.51E-1 1.13E-1 7.54E-2 3.77E-2
	3.77E-2
Rotx Roty	Zoom
For Help, press F1	

Distribution of maximum SAR in 800 GSM band. Measured with front of device facing the body using a 15 mm spacer and hands free accessory HPB-20. (Standard Battery, BST-35)

		REPORT		
ど Sony Eric	sson			
epared (also subject responsible if o	other)	No.		
SEM/CV/PF/P Gerard	Hayes	REP 2004	4 001 Z500A 02	
pproved	Checked	1		
SEM/CV/PF/P Gerard	Hayes			SAR Chamber\FCC reports\Z500A\Final orts\FCCZ500A.doc
DASY3 - [[27June04_2500a_GSMI	800 AYMN CH128 ICE26 15mm	1 8F011 Cube 7x7x71		E 6 🕅
File Planes Type Format Options 1				_ 8 ×
	비귀 꼬리히 저희 프	ED + >> = +-		
Cube 7x7x7: SAR (1g): 0.409	7 mW/g, SAR (10g): 0.297 n	mwig, worst-case extrapolati	011	
BST-35 Hands free: HPB-20 Ho	Ister: ICE26 bient Temp: 24.2	Simulant Temp: 22.8		
BST-35 Hands free: HPB-20 Ho Humidity: 43.5 Am File name: 27June04_2500a	Ister: ICE26 bient Temp: 24.2	Simulant Temp: 22.8		
BST-35 Hands free: HPB-20 Ho Humidity: 43.5 Am File name: 27June04_Z500a	Ister: ICE26 bient Temp: 24.2	Simulant Temp: 22.8		
BST-35 Hands free: HPB-20 Ho Humidity: 43.5 Am File name: 27June04_Z500a	Ister: ICE26 bient Temp: 24.2	Simulant Temp: 22.8		
BST-35 Hands free: HPB-20 Ho Humidity: 43.5 Am File name: 27June04_Z500a	Ister: ICE26 bient Temp: 24.2	Simulant Temp: 22.8		
BST-35 Hands free: HPB-20 Ho Humidity: 43.5 Am File name: 27June04_Z500a	Ister: ICE26 bient Temp: 24.2	Simulant Temp: 22.8		
BST-35 Hands free: HPB-20 Ho Humidity: 43.5 Am File name: 27June04_Z500a	Ister: ICE26 bient Temp: 24.2	Simulant Temp: 22.8		
BST-35 Hands free: HPB-20 Ho Humidity: 43.5 Am File name: 27June04_Z500a	Ister: ICE26 bient Temp: 24.2	Simulant Temp: 22.8		
BST-35 Hands free: HPB-20 Ho Humidity: 43.5 Am File name: 27June04_Z500a	Ister: ICE26 bient Temp: 24.2	Simulant Temp: 22.8		
BST-35 Hands free: HPB-20 Ho Humidity: 43.5 Am File name: 27June04_Z500a	Ister: ICE26 bient Temp: 24.2	Simulant Temp: 22.8		
BST-35 Hands free: HPB-20 Ho Humidity: 43.5 Am File name: 27June04_Z500a	Ister: ICE26 bient Temp: 24.2	Simulant Temp: 22.8		
BST-35 Hands free: HPB-20 Ho Humidity: 43.5 Am File name: 27June04_2500a	Ister: ICE26 ibient Temp: 24.2 _GSM900_AYMN_CH128_IC	Simulant Temp: 22.8 CE26_15mm_BF01		40

SAR Extrapolation to the phantom inner surface. Measured for maximum SAR in 800 GSM band, while front of the phone is against the body using a 15 mm spacer and hands free accessory HPB-20. (Standard Battery, BST-35)

	REPORT
Sony Ericsson	
epared (also subject responsible if other)	
EM/CV/PF/P Gerard Hayes	REP 2004 001 Z500A 02
EM/CV/PF/P Gerard Hayes	A X:\SAR Chamber\FCC reports\Z500A\Final Reports\FCCZ500A.doc
DASY3 - [[26July04_2500a_G5M800_AYMN_CH128_ICE26_15mr	A THE CASE AND A THE REPORT OF A
File Planes Type Format Options Window Help	Jest and a factorial
2500a	
SAM 1031 (R) Phantom; Flat Section; Position: (90°,27 Stobe: ET3D//6 - SN1583: CopyE/6 70 6 70 6 70; Cree	/70°); Frequency: 824 MHz st factor: 4.2; Body 835 MHz: σ = 0.98 mho/m ε, = 54.9 ρ = 1.00 g/cm³
coarse: Dx = 15.0, Dy = 15.0, Dz = 10.0, Max at 37.5, 55	
enetration depth: 13.7 (13.3, 14.3) [mm], Powerdrift: -	
ube 7x7x7: Peak: 1.33 mW/g ube 7x7x7: SAR (1g): 0.903 mW/g, SAR (10g): 0.599) mW/// Worst-case extranolation
ST-30	ning, norsesase excapolation
	15 mm spacer
lumidity: 53.5 Ambient Temp: 23 S file name: 26July04_Z500a_GSM800_AYMN_CH128_I	Simulant Temp: 22.8 ICE26_15mm_BB01
	SAR _{tel} [mW/g]
	2
	? ② _ 7.47E-1
	? (a) (b) (c) (c) (c) (c) (c) (c) (c) (c
	? 2 7.47E-1 6.72E-1 5.98E-1
	6.72E-1 5.98E-1 5.22E-1
	4.48E-1
	4.48E-1 3.74E-1
	4.48E-1 3.74E-1
	4.48E-1 3.74E-1
	Image: State of the s
	Image: State of the s
k Rety	Image: State of the s

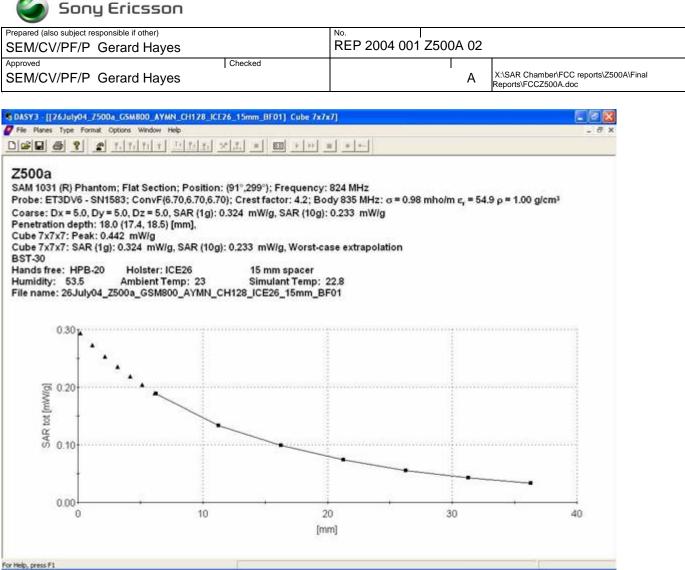
Distribution of maximum SAR in 800 GSM band. Measured with back of device facing the body using a 15 mm spacer and hands free accessory HPB-20. (Optional Battery, BST-30)

ed (also subie	ct responsible if other)		No.			
· ·	P Gerard Hayes			001 Z500A 02		
ed	,	Checked				
I/CV/PF/	P Gerard Hayes			А	X:\SAR Chamber\F Reports\FCCZ500A	CC reports\Z500A\Final
3 - [[26July0	4_7500a_GSM800_AYMN_CH128_R	CE26_15mm_BB01] Cu	be 7x7x7]			- C 🔀
	Format Options Window Help			*		- @ ×
	2 BUILT	<u>× i = m +</u>	>> = +-			
	oth: 13.7 (13.3, 14.3) [mm],					
e 7x7x7:P4 e 7x7x7:S/ -30 dsfree:HF idity: 53.1	eak: 1.33 mW/g AR (1g): 0.903 mW/g, SAR (10 'B-20 Holster: ICE26	15 mm spac Simulant Te	cer mp: 22.8	n		
e 7x7x7: P e 7x7x7: S/ 30 ds free: HF idity: 53.1 hame: 26Ju 0.7 0.6	eak: 1.33 mW/g AR (1g): 0.903 mW/g, SAR (10 'B-20 Holster: ICE26 5 Ambient Temp: 23	15 mm spac Simulant Te	cer mp: 22.8	n		
e 7x7x7: P e 7x7x7: S/ 30 ds free: HF idity: 53.1 hame: 26Ju 0.7 0.6	eak: 1.33 mW/g AR (1g): 0.903 mW/g, SAR (10 'B-20 Holster: ICE26 5 Ambient Temp: 23	15 mm spac Simulant Te	cer mp: 22.8	n		
e 7x7x7: P e 7x7x7: S/ 30 ds free: HF idity: 53.1 hame: 26Ju 0.7 0.6	eak: 1.33 mW/g AR (1g): 0.903 mW/g, SAR (10 'B-20 Holster: ICE26 5 Ambient Temp: 23	15 mm spac Simulant Te	cer mp: 22.8	n		
e 7x7x7: P e 7x7x7: S/ 30 ds free: HF idity: 53.1 hame: 26Ju 0.7 0.6	eak: 1.33 mW/g AR (1g): 0.903 mW/g, SAR (10 'B-20 Holster: ICE26 5 Ambient Temp: 23	15 mm spac Simulant Te	cer mp: 22.8	n		
e 7x7x7: Pi e 7x7x7: Si 30 ds free: HF idity: 53.1 name: 26Ju 0.7 0.6 0.5 0.5 0.5	eak: 1.33 mW/g AR (1g): 0.903 mW/g, SAR (10 'B-20 Holster: ICE26 5 Ambient Temp: 23	15 mm spac Simulant Te	cer mp: 22.8	n		
e 7x7x7: Pie e 7x7x7: Si 30 ds free: HF idity: 53.9 name: 26Ju 0.6 0.5 0.6 0.5 0.6 0.5 0.5 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4	eak: 1.33 mW/g AR (1g): 0.903 mW/g, SAR (10 'B-20 Holster: ICE26 5 Ambient Temp: 23	15 mm spac Simulant Te	cer mp: 22.8	n		
e 7x7x7: Pi e 7x7x7: Si 30 ds free: HF idity: 53.1 name: 26Ju 0.7 0.6 0.5 0.5 0.5 0.5 0.5 0.5	eak: 1.33 mW/g AR (1g): 0.903 mW/g, SAR (10 'B-20 Holster: ICE26 5 Ambient Temp: 23	15 mm spac Simulant Te	cer mp: 22.8	n		
e 7x7x7: Pie e 7x7x7: Si 30 ds free: HF idity: 53.1 name: 26Ju 0.7 0.6 0.5 0.5 0.5 0.5 0.5 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4	eak: 1.33 mW/g AR (1g): 0.903 mW/g, SAR (10 'B-20 Holster: ICE26 5 Ambient Temp: 23 ily04_Z500a_GSM800_AYMN_	15 mm spac Simulant Te	:er mp: 22.8 im_BB01	•		
e 7x7x7: Pi e 7x7x7: Si 30 ds free: HF idity: 53.1 name: 26Ju 0.7 0.6 0.5 0.5 0.5 0.5 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4	eak: 1.33 mW/g AR (1g): 0.903 mW/g, SAR (10 'B-20 Holster: ICE26 5 Ambient Temp: 23	15 mm spac Simulant Te	cer mp: 22.8	n 		40

SAR Extrapolation to the phantom inner surface. Measured for maximum SAR in 800 GSM band, while back of the phone is against the body using a 15 mm spacer and hands free accessory HPB-20. (Optional Battery, BST-30)

00A 02
00A 02
A X:\SAR Chamber\FCC reports\Z500A\Final
Reports\FCCZ500A.doc
- 6 ×
o/m e _r = 54.9 ρ = 1.00 g/cm ³
SAR _{ref} [mW/g] 2.88E-1 2.59E-1 2.30E-1 2.30E-1 2.02E-1 1.73E-1 1.44E-1 1.15E-1 8.64E-2 5.76E-2 2.88E-2

Distribution of maximum SAR in 800 GSM band. Measured with front of device facing the body using a 15 mm spacer and hands free accessory HPB-20. (Optional Battery, BST-30)



SAR Extrapolation to the phantom inner surface. Measured for maximum SAR in 800 GSM band, while front of the phone is against the body using a 15 mm spacer and hands free accessory HPB-20. (Optional Battery, BST-30)

	No.
M/CV/PF/P Gerard Hayes	REP 2004 001 Z500A 02
oved Checked	
M/CV/PF/P Gerard Hayes	A X:\SAR Chamber\FCC reports\Z500A\Final Reports\FCCZ500A.doc
SY3 - [[28June04_2500n_GSM1900_AYMN_CH810_ICE26_15mm_BB01] 1910 MHz	
e Planes Type Format Options Window Help	- 0 ×
	<u>* *-</u>
500a M 1030 (R) Phantom; Flat Section; Position: (87°,270°); Frequency: 1 bebe: ET3DV6 - SN1539; ConvF(4.40,4.40,4.40); Crest factor: 4.2; Bod barse: Dx = 15.0, Dy = 15.0, Dz = 10.0, Max at 40.5, 45.0, 6.1 netration depth; 9.8 (8.9, 11.2) [mm], Powerdrift: -0.02 dB ibe 7x7x7: Peak: 0.765 mW/g ibe 7x7x7: SAR (1g): 0.438 mW/g, SAR (10g): 0.265 mW/g, Worst-cas 00a SN: BD3017AYMN w/ Standard Battery BST-35 nds free: HPB-20 Holster: 15mm Spacer, Back of Phone Facing imidity: 53.8% Ambient Temp: 22.6 C Simulant Temp: e name: 28June04_Z500a_GSM1900_AYMN_CH810_ICE26_15mm_B	ly 1900 MHz: σ = 1.56 mho/m ε _r = 50.7 ρ = 1.00 g/cm ³ se extrapolation I Body 21.9 C
Roty	Zoom

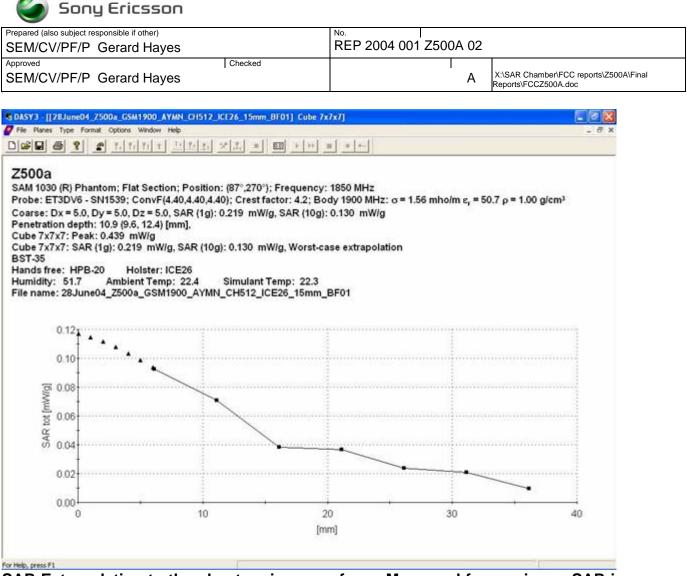
Distribution of maximum SAR in 1900 GSM band. Measured with back of device facing the body using a 15 mm spacer and hands free accessory HPB-20. (Standard Battery, BST-35)

Song Ericsson MCV/PF/P Gerard Hayes REP 2004 001 Z500A 02 ved IChecked I WCV/PF/P Gerard Hayes IChecked I WCV/PF/P Gerard Hayes IChecked I V1 [28Jum04.7500a_GM1900_XVML_CH810_IC126_15mm_B801] Cube 7x7x7) Image: Cube Solution (String Formation (Strin	Coou Cris		REPORT	
WCV/PF/P Gerard Hayes REP 2004 001 Z500A 02 Wd IChecked A XISAR Chamber/FCC.reports/Z50 W/CV/PF/P Gerard Hayes A XISAR Chamber/FCC.reports/Z50 Y12 [[25]June04_Z500a_C5M1900_AVM/-CHB10_KC26_15mm_BB01] Cube 7x7x7] Image: Comparison of the comparison	🔊 Sony eric	sson		
NCV/PF/P Gerard Hayes REP 2004 001 Z500A 02 ed [Checked] A XiSAR Chamber/FCC reports/Z50 Reports/FCC 2500A.doc YJ_[[22:June01.7500a_GSM1900_AYMM_CHB10_K126_15xmm.0001] Cube 7x7x7] Image: Compare Compar	d (also subject responsible if	other)	No	
A XISAR Chamber/FCC reports/250 MCV//PF/P Gerard Hayes A XISAR Chamber/FCC reports/250 Reports/FCC2500A.doc C12 [[12]June04_7500a_GSM1900_AVMLCHB10_K[26_15mm_B001] Cube 7x7x7] Proves Type Format_Optons_Window Heb C T T T T T T T T T T T T T T T T T T T		,		
(J-[12] Unceld, 2500a_CSM1900_AVMN_C1810_IC126_15mm_BB01]_Cube 7x7x7]		,		
3. [[22June01.2500a_G5M1900_AVMALCH810_[C126.15mm_B801] Gube 7x7x7] Prevent Symp Format Options Window Help Image: The Section: Position: [87:270']; Frequency: 1910 MHz et: ET3DV6 - SN1539; ConvF(4.40,4.40,4.04); Crest factor: 4.2; Body 1900 MHz: σ = 1.56 mholm ε _p = 50.7 ρ = 1.00 g/cm ³ resc: Dx = 5.0, Dy = 5.0, Dx = 5.0, SAR [10]: 0.438 mW/g, SAR (10g): 0.265 mW/g eTx7x7; Pask: 0.765 mW/g eTx7x7; Pask: 0.765 mW/g	/CV/PF/P Gerard	Haves		
Proves Type Format Options Window Help		,	Reports/FCC2500A.do	c
Proves Type Format Options Window Help	3 II 38	1000 AVIAL CURIO ACCOL ACTO	0011 5.1. 3.7.71	
DOa 11030 (R) Phantom; Flat Section; Position: (87°,270°); Frequency: 1910 MHz: e: ET3DV6 - SN1539; ConvF(4.40,4.40,4.40); Crest factor: 4.2; Body 1900 MHz: o = 1.56 mho/m e, = 50.7 p = 1.00 g/cm ³ rse: Dx = 5.0, Dy = 5.0, Dz = 5.0, SAR (1g): 0.438 mW/g, SAR (10g): 0.265 mW/g tration depth: 9.8 (8.9, 11.2) [mm]. e 7X7X7: SAR(1g): 0.438 mW/g, SAR (10g): 0.265 mW/g, Worst-case extrapolation a SN: BD3017A/MN w/ Standard Battery BST-35 daf ree: HPB-20 Holster: 15mm Bpacer, Back of Phone Facing Body iddity: 53.8% Ambient Temp: 22.6 C Simulant Temp: 21.9 C name: 28June04_Z500a_GSM1900_AYMN_CH810_ICE26_15mm_BB01 05 0 0 0 0 0 0 0 0 0 0 0 0 0			dolj Cube /x/x/j	- 7 X
DOa 11030 (R) Phantom; Flat Section; Position: (87°:270°); Frequency: 1910 MHz se: ET3DV6 - SN1539; ConvF(4.40,4.40); Creat factor: 4.2; Body 1900 MHz: $\sigma = 1.56$ mholm $e_{\tau} = 50.7 p = 1.00$ g/cm ³ rse: Dx = 5.0, Dy = 5.0, Dz = 5.0, SAR (1g): 0.438 mW/g, SAR (10g): 0.265 mW/g etration depth: 9.8 (8.9, 11.2) [mm], e 7X7X7: Paek: 0.765 mW/g e 7X7X7: SAR (1g): 0.438 mW/g, SAR (10g): 0.265 mW/g, Worst-case extrapolation TX7X8: Paek: 0.765 mW/g e 7X7X7: SAR (1g): 0.438 mW/g, SAR (10g): 0.265 mW/g, Worst-case extrapolation TX7X8: Paek: 0.765 mW/g e 7X7X7: SAR (1g): 0.438 mW/g, SAR (10g): 0.265 mW/g, Worst-case extrapolation TX7X8: Paek: 0.765 mW/g e 7X7X7: SAR (1g): 0.438 mW/g, SAR (10g): 0.265 mW/g, Worst-case extrapolation TA SN: BD3017AYMN w/ Standard Battery BST-35 def ree: HPB-20 Holster: 15mm Spacer, Back of Phone Facing Body idity: 53.8% Ambient Temp: 22.6 C Simulant Temp: 21.9 C name: 28June04_Z500a_GSM1900_AYMN_CH810_ICE26_15mm_BB01 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5				
rse: Dx = 5.0, Dy = 5.0, Dz = 5.0, SAR (1g): 0.438 mW/g, SAR (10g): 0.265 mW/g tration depth: 9.8 (8.9, 11.2) [mm], e 7x7x7: Peak: 0.765 mW/g e 7x7x7: Peak: 0.765 mW/g e 7x7x7: SAR (1g): 0.438 mW/g, SAR (10g): 0.265 mW/g, Worst-case extrapolation a SN: BD3017AYMN w/ Standard Battery BST-35 ds free: HPB-20 Holster: 15mm Spacer, Back of Phone Facing Body idity: 53.8% Ambient Temp: 22.6 C Simulant Temp: 21.9 C hame: 28June04_Z500a_GSM1900_AYMN_CH810_JCE26_15mm_BB01 0.5 0.4 0.5 0.4 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5		t Section; Position: (87°,270°);	Frequency: 1910 MHz	
etration depth: 9.8 (8.9, 11.2) [mm], e 7X7X7: Peak: 0.765 mW/g e 7X7X7: SAR(1g): 0.438 mW/g, SAR (10g): 0.265 mW/g, Worst-case extrapolation ia SN: BD3017AYMN w/ Standard Battery BST-35 ds free: HPB-20 Holster: 15mm Spacer, Back of Phone Facing Body idity: 53.8% Ambient Temp: 22.6 C Simulant Temp: 21.9 C name: 28June04_Z500a_GSM1900_AYMN_CH810_ICE26_15mm_BB01 0.5 0.4 0.5 0.4 0.5 0.4 0.5 0.4 0.5 0.4 0.5 0.4 0.5 0.4 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5				
e 7x7x7: Peak: 0.765 mW/g e 7x7x7: SAR (1g): 0.438 mW/g, SAR (10g): 0.265 mW/g, Worst-case extrapolation a SN: BD3017AYMN w/ Standard Battery BST-35 is free: HPB-20 Holster: 15mm Spacer, Back of Phone Facing Body idity: 53.8% Ambient Temp: 22.6 C Simulant Temp: 21.9 C name: 28June04_Z500a_GSM1900_AYMN_CH810_ICE26_15mm_BB01			SAR (10g): 0.265 mW/g	
e 7x7x7: SAR (1g): 0.438 mW/g, SAR (10g): 0.265 mW/g, Worst-case extrapolation la SN: BD3017AYMN w/ Standard Battery BST.35 ds free: HPB-20 Holster: 15mm Spacer, Back of Phone Facing Body lidity: 53.8% Ambient Temp: 22.6 Simulant Temp: 21.9 C name: 28June04_Z500a_GSM1900_AYMN_CH810_ICE26_15mm_BB01				
ds free: HPB-20 Holster: 15mm Spacer, Back of Phone Facing Body hidity: 53.8% Ambient Temp: 22.6 C Simulant Temp: 21.9 C name: 28June04_Z500a_GSM1900_AYMN_CH810_ICE26_15mm_BB01			/g. Worst-case extrapolation	
hidity: 53.8% Ambient Temp: 22.6 C Simulant Temp: 21.9 C name: 28.June04_Z500a_GSM1900_AYMN_CH810_JCE26_15mm_BB01	a SN: BD3017AYMN w/	Standard Battery BST-35		
name: 28June04_Z500a_GSM1900_AYMN_CH810_JCE26_15mm_BB01	is free: HPB-20 Hr	olster: 15mm Spacer, Back of F	bone Facing Body	
0.5 0.4				
10^{-0}	idity: 53.8% Ambie	ent Temp: 22.6 C Sim	ulant Temp: 21.9 C	
10^{-0}	idity: 53.8% Ambie	ent Temp: 22.6 C Sim	ulant Temp: 21.9 C	
1000000000000000000000000000000000000	idity: 53.8% Ambie name: 28June04_Z500a	ent Temp: 22.6 C Sim	ulant Temp: 21.9 C	
1000000000000000000000000000000000000	idity: 53.8% Ambie name: 28June04_Z500a	ent Temp: 22.6 C Sim	ulant Temp: 21.9 C	1
	idity: 53.8% Amble name: 28June04_Z500a	ent Temp: 22.6 C Sim	ulant Temp: 21.9 C	
	idity: 53.8% Amble name: 28June04_Z500a	ent Temp: 22.6 C Sim	ulant Temp: 21.9 C	
	idity: 53.8% Amble name: 28June04_Z500a	ent Temp: 22.6 C Sim	ulant Temp: 21.9 C	
	idity: 53.8% Amble name: 28June04_Z500a	ent Temp: 22.6 C Sim	ulant Temp: 21.9 C	1 4 5 5 5 5 5 5 5 5 5 5
	idity: 53.8% Amble name: 28June04_Z500a	ent Temp: 22.6 C Sim	ulant Temp: 21.9 C	
	idity: 53.8% Amble name: 28June04_Z500a	ent Temp: 22.6 C Sim	ulant Temp: 21.9 C	
0 10 20 30 40	idity: 53.8% Amble name: 28June04_Z500a	ent Temp: 22.6 C Sim	ulant Temp: 21.9 C	
0 10 20 30 40	idity: 53.8% Amble name: 28June04_Z500a	ent Temp: 22.6 C Sim	ulant Temp: 21.9 C	
0 10 20 30 40	idity: 53.8% Amble name: 28June04_Z500a	ent Temp: 22.6 C Sim	ulant Temp: 21.9 C	
[mm]	idity: 53.8% Amble name: 28June04_Z500a	ent Temp: 22.6 C Sim	ulant Temp: 21.9 C	
7, 7	idity: 53.8% Amble name: 28June04_Z500a	ent Temp: 22.6 C Sim b_GSM1900_AYMN_CH810_ICI	ulant Temp: 21.9 C :26_15mm_BB01	10
	idity: 53.8% Amble name: 28June04_Z500a	ent Temp: 22.6 C Sim b_GSM1900_AYMN_CH810_ICI	ulant Temp: 21.9 C :26_15mm_BB01	10
	dity: 53.8% Ambie ame: 28June04_Z500a	ent Temp: 22.6 C Sim b_GSM1900_AYMN_CH810_ICI	ulant Temp: 21.9 C :26_15mm_BB01	1

SAR Extrapolation to the phantom inner surface. Measured for maximum SAR in 1900 GSM band, while back of the phone is against the body using a 15 mm spacer and hands free accessory HPB-20. (Standard Battery, BST-35)

Sony Ericsson Prepared (also subject responsible if other) No REP 2004 001 Z500A 02 SEM/CV/PF/P Gerard Hayes Approved Checked X:\SAR Chamber\FCC reports\Z500A\Final SEM/CV/PF/P Gerard Hayes А Reports\FCCZ500A.doc S DASY3 - [[28June04_2500a_GSM1900_AYMN_CH512_KE26_15mm_BF01]_1850 MHz] E 18 10 1 File Planes Type Format Options Window Help 8 Z500a SAM 1030 (R) Phantom; Flat Section; Position: (87°,270°); Frequency: 1850 MHz Probe: ET3DV6 - SN1539; ConvF(4.40,4.40,4.40); Crest factor: 4.2; Body 1900 MHz: σ = 1.56 mholm ε, = 50.7 ρ = 1.00 glcm³ Coarse: Dx = 15.0, Dy = 15.0, Dz = 10.0, Max at 37.5, 94.5, 6.1 Penetration depth: 10.9 (9.6, 12.4) [mm], Powerdrift: 0.00 dB Cube 7x7x7: Peak: 0.439 mW/g Cube 7x7x7: SAR (1g): 0.219 mW/g, SAR (10g): 0.130 mW/g, Worst-case extrapolation BST-35 Hands free: HPB-20 Holster: ICE26 Humidity: 51.7 Ambient Temp: 22.4 Simulant Temp: 22.3 File name: 28June04_Z500a_GSM1900_AYMN_CH512_ICE26_15mm_BF01 R SAR_ [mW/g] 2m ? 合位熙令 1.68E-1 1.51E-1 1.34E-1 1.18E-1 8 1.01E-1 8.40E-2 THE OWNER WATCHING TO A DECIMAL OF THE OWNER OF THE OWNER OF THE OWNER OF THE OWNER OWNE OWNER 6.72E-2 5.04E-2 3.36E-2 Ē 1.68E-2 Rotx Roty Zoom For Help, press F1

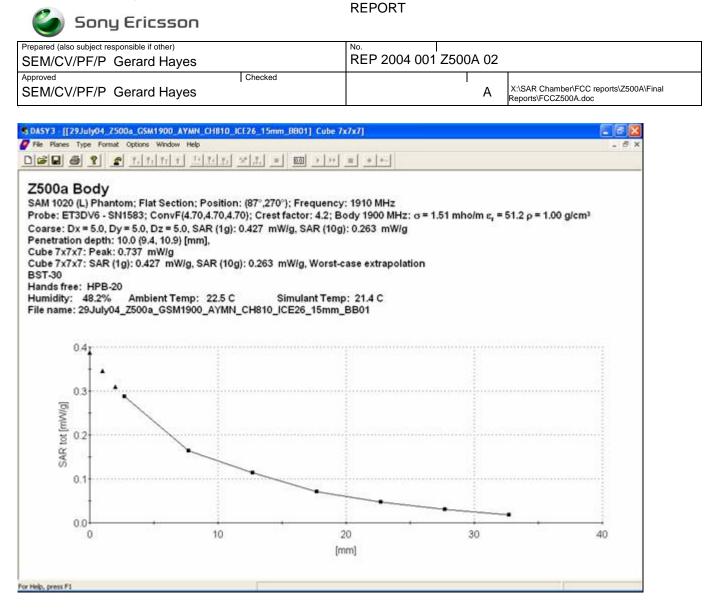
Distribution of maximum SAR in 1900 GSM band. Measured with front of device facing the body using a 15 mm spacer and hands free accessory HPB-20. (Standard Battery, BST-35)



SAR Extrapolation to the phantom inner surface. Measured for maximum SAR in 1900 GSM band, while front of the phone is against the body using a 15 mm spacer and hands free accessory HPB-20. (Standard Battery, BST-35)

Sony Ericsson Prepared (also subject responsible if other) No REP 2004 001 Z500A 02 SEM/CV/PF/P Gerard Hayes Approved Checked X:\SAR Chamber\FCC reports\Z500A\Final SEM/CV/PF/P Gerard Hayes А Reports\FCCZ500A.doc SDASY3 - [[29July04_Z500a_GSM1900_AYMN_CH810_ICE26_15mm_BB01]_1910_MHz] - 🗗 🔀 / File Planes Type Format Options Window Help . 8 × 🍽 📾 🐒 😰 5.5557 브라되 거리 ㅋ 💷 >>> = >>> Z500a Body SAM 1020 (L) Phantom; Flat Section; Position: (87°,270°); Frequency: 1910 MHz Probe: ET3DV6 - SN1583; ConvF(4.70,4.70,4.70); Crest factor: 4.2; Body 1900 MHz: σ = 1.51 mho/m ε, = 51.2 ρ = 1.00 g/cm³ Coarse: Dx = 15.0, Dy = 15.0, Dz = 10.0, Max at 31.5, 55.5, 2.7 Penetration depth: 10.0 (9.4, 10.9) [mm], Powerdrift: -0.01 dB Cube 7x7x7: Peak: 0.737 mW/g Cube 7x7x7: SAR (1g): 0.427 mW/g, SAR (10g): 0.263 mW/g, Worst-case extrapolation BST-30 Hands free: HPB-20 Humidity: 48.2% Ambient Temp: 22.5 C Simulant Temp: 21.4 C File name: 29July04_Z500a_GSM1900_AYMN_CH810_ICE26_15mm_BB01 ٩ SAR [mWig] Su ? 5.31E-1 位 4.78E-1 漂令 4.25E-1 3.72E-1 0 3.19E-1 2.66E-1 2.12E-1 1.59E-1 1.06E-1 E 5.31E-2 Rotx Roty Zoom For Help, press F1

Distribution of maximum SAR in 1900 GSM band. Measured with back of device facing the body using a 15 mm spacer and hands free accessory HPB-20. (Optional Battery, BST-30)



SAR Extrapolation to the phantom inner surface. Measured for maximum SAR in 1900 GSM band, while back of the phone is against the body using a 15 mm spacer and hands free accessory HPB-20. (Optional Battery, BST-30)

Sony Ericsson Prepared (also subject responsible if other) No REP 2004 001 Z500A 02 SEM/CV/PF/P Gerard Hayes Approved Checked X:\SAR Chamber\FCC reports\Z500A\Final SEM/CV/PF/P Gerard Hayes А Reports\FCCZ500A.doc SDASY3 - [[29July04_Z500a_GSM1900_AYMN_CH512_ICE26_15mm_BF01]_1850_MHz] - 🗗 🔀 / File Planes Type Format Options Window Help . 8 × 🍽 📾 🐒 😰 5.5557 브라되 거리 ㅋ 💷 >>> = >>> Z500a Body SAM 1020 (L) Phantom; Flat Section; Position: (87°,270°); Frequency: 1880 MHz Probe: ET3DV6 - SN1583; ConvF(4.70,4.70,4.70); Crest factor: 4.2; Body 1900 MHz: σ = 1.51 mho/m ε, = 51.2 ρ = 1.00 g/cm³ Coarse: Dx = 15.0, Dy = 15.0, Dz = 10.0, Max at 31.5, 88.5, 2.7 Penetration depth: 12.7 (10.3, 15.0) [mm], Powerdrift: -0.04 dB Cube 7x7x7: Peak: 0.323 mW/g Cube 7x7x7: SAR (1g): 0.189 mW/g, SAR (10g): 0.117 mW/g, Worst-case extrapolation BST-30 Hands free: HPB-20 Humidity: 45.1% Ambient Temp: 22.3 C Simulant Temp: 21.5 C File name: 29July04_Z500a_GSM1900_AYMN_CH512_ICE26_15mm_BF01 R SAR [mWig] 20 ? 屳 2.33E-1 位 2.10E-1 漂令 1.86E-1 1.63E-1 0 1.40E-1 1.17E-1 9.32E-2 6.99E-2 4.66E-2 2.33E-2 Rotx Roty Zoom For Help, press F1

REPORT

Distribution of maximum SAR in 1900 GSM band. Measured with front of device facing the body using a 15 mm spacer and hands free accessory HPB-20. (Optional Battery, BST-30)

90.			REPOR		
	ny Ericsson				
	ct responsible if other)				
	P Gerard Hayes		REP 200	04 001 Z500A 02	
		Checked			X:\SAR Chamber\FCC reports\Z500A\Fina
/I/CV/PF/I	P Gerard Hayes			A	Reports\FCCZ500A.doc
	04_2500a_GSM1900_AYMN		01] Cube 7x7x7]		
	Format Options Window Help				- 8 ×
			2 > >> = = + ← < Ω		0.
F-30 ndsfree: HP		N 53 S	g, Worst-case extrapo	lation	
name: 29Ju 0.14	1% Ambient Temp: Jy04_Z500a_GSM1900		lant Temp: 21.5 C 6_15mm_BF01		
name: 29Ju					
0.14 0.12 0.10					
0.14 0.12 0.10 0.10					
0.14 0.12 0.10 0.008 0.08 0.08					
0.14 0.12 0.10 0.008 0.08 0.08					
0.14 0.12 0.10 0.00 0.00 0.04 0.02					
0.14 0.12 0.10 0.10 0.00 0.00 VW 0.06 0.04	Jy04_Z500a_GSM1900				 40
0.14 0.12 0.10 0.00 0.00 0.00 0.00	Jy04_Z500a_GSM1900)_AYMN_CH512_ICE2	6_15mm_BF01		
0.14 0.12 0.10 0.00 0.00 0.00 0.00	Jy04_Z500a_GSM1900)_AYMN_CH512_ICE2	6_15mm_BF01		

SAR Extrapolation to the phantom inner surface. Measured for maximum SAR in 1900 GSM band, while front of the phone is against the body using a 15 mm spacer and hands free accessory HPB-20. (Optional Battery, BST-30)

🎱 Sony Ericsson

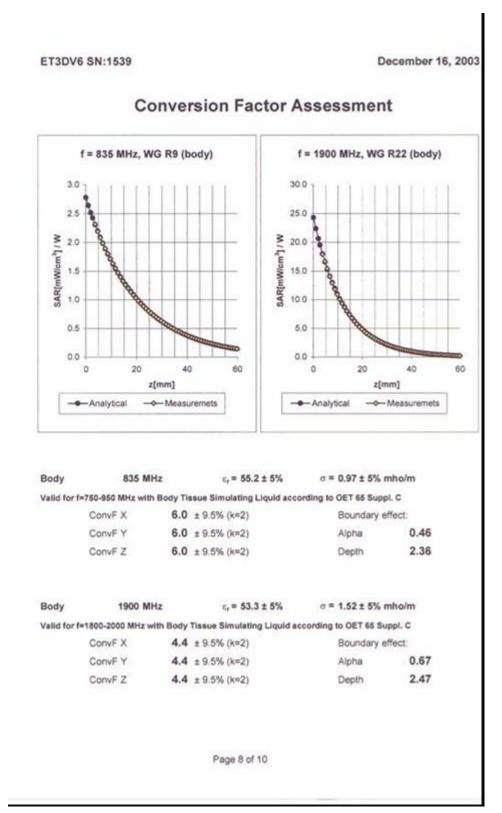
Prepared (also subject responsible if other) SEM/CV/PF/P Gerard Hayes	^{№.} REP 2004 001 Z500A 02				
Approved Check SEM/CV/PF/P Gerard Hayes	A	X:\SAR Chamber\FCC reports\Z500A\Final Reports\FCCZ500A.doc			

Appendix 4

Probe Calibration Certificates

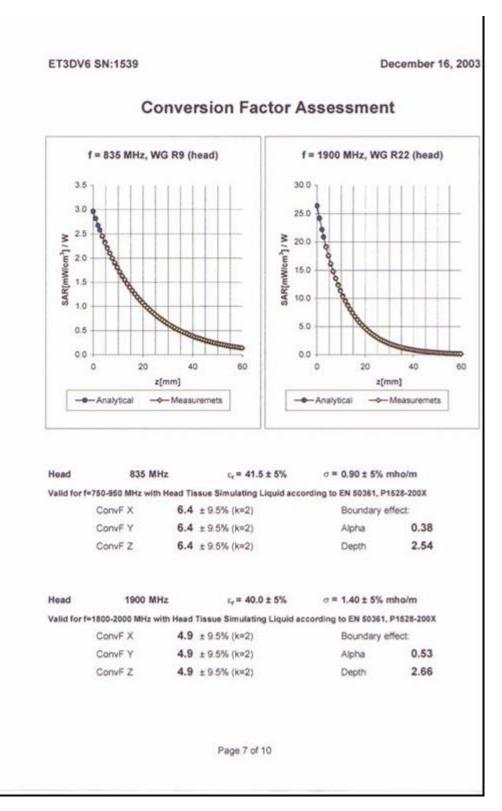
Sony Ericsson Prepared (also subject responsible if other) No. SEM/CV/PF/P Gerard Hayes REP 2004 001 Z500A 02 Approved Checked SEM/CV/PF/P Gerard Hayes A X:\SAR Chamber\FCC reports\Z500A\Final Reports\FCCZ500A.doc

REPORT



Sony Ericsson Prepared (also subject responsible if other) No. SEM/CV/PF/P Gerard Hayes REP 2004 001 Z500A 02 Approved Checked SEM/CV/PF/P Gerard Hayes A X:\SAR Chamber\FCC reports\Z500A\Final Reports\FCCZ500A.doc

REPORT



Sony Ericsson

Prepared (also subject responsible if other) SEM/CV/PF/P Gerard Hayes	REP 2004 001 Z500A 02			
SEM/CV/PF/P Gerard Hayes	Checked		A	X:\SAR Chamber\FCC reports\Z500A\Final Reports\FCCZ500A.doc

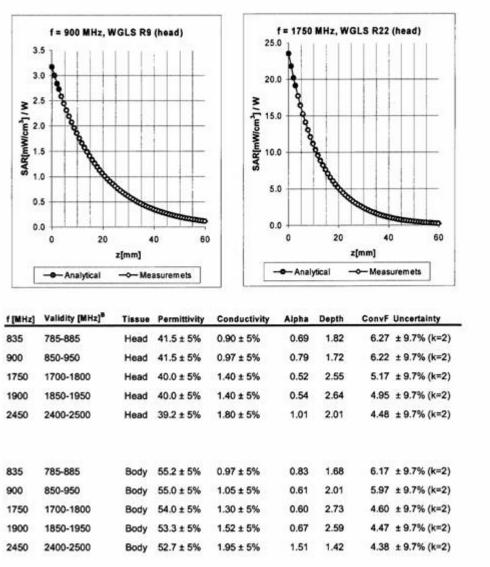
DA	SY - Pa	rame	eters of Pro	abor E	TONCON	1500	
	0. Tu	anne	ters of Pro	obe: E	13DV6 SN	:1539	
Sens	sitivity in F	ree Sp	ace	C	iode Compres	sion	
	NormX		1.32 µV/(V/m)2				
	NormY		1.23 µV/(V/m) ²		DCP X	92	mV
	NormZ		1.35 μV/(V/m) ²		DCP Y	92	mV
	- HOITINE		1.35 hv/(v/m)		DCP Z	92	mV
Sens	itivity in Ti	ssue S	Simulating Liqu	biu			
Head		35 MHz	c, = 41	1.5 ± 5%	c = 0.90 ± 5%	mbolm	
Valid fo	r f=750-950 MH	z with He	ad Tissue Simulatin	g Liquid aced	ording to EN 50361. F	1628-200X	
	ConvF X		6.4 ± 9.5% (k=2)		Boundary		
	ConvF Y		6.4 ± 9.5% (k=2)		Alpha	0.38	
	ConvF Z		6.4 ± 9.5% (k=2)		Depth	2.54	
Head	190	0 MHz	c = 40	.0 ± 5%			
Valid for	f=1800-2000 N	tHz with I	Head Tissue Simulati	ng Liquid ac	c = 1.40 ± 5%	mho/m	
	ConvF X		4.9 ± 9.5% (k=2)		Boundary e		X
	ConvF Y		4.9 ± 9.5% (k=2)		Alpha	0.53	
	ConvF Z		4.9 ± 9.5% (k=2)		Depth	2.66	
					Depart	2.00	
Bound	dary Effect						
Head	83	5 MHz	Tunical CAD				
		JIMITE	Typical SAR g	radient: 5	6 per mm		
	Probe Tip t				1 mm	2 mm	
			t Correction Algorith	nm	10.2	5.7	
	SAR _{ps} [%]	With C	orrection Algorithm		0.4	0.6	
Head	1900	MHz	Typical SAR g	radient: 10	% per mm		
	Probe Tip to	Barrad		and the second second			
			ery Correction Algorith		1 mm	2 mm	
			rrection Algorithm		14.9	10.3	
			And a second regolithm		0.2	0.3	
Sensor	Offset						
	Probe Tip to	Sensor	Center	2.7		m	
	Optical Surf	ace Dete	ction			m	

No. REP 2004 001 Z500A 02 Approved Checked SEM/CV/PF/P Gerard Hayes Checked Approved Checked SEM/CV/PF/P Gerard Hayes A

REPORT

ET3DV6 SN:1538

May 27, 2004



Conversion Factor Assessment

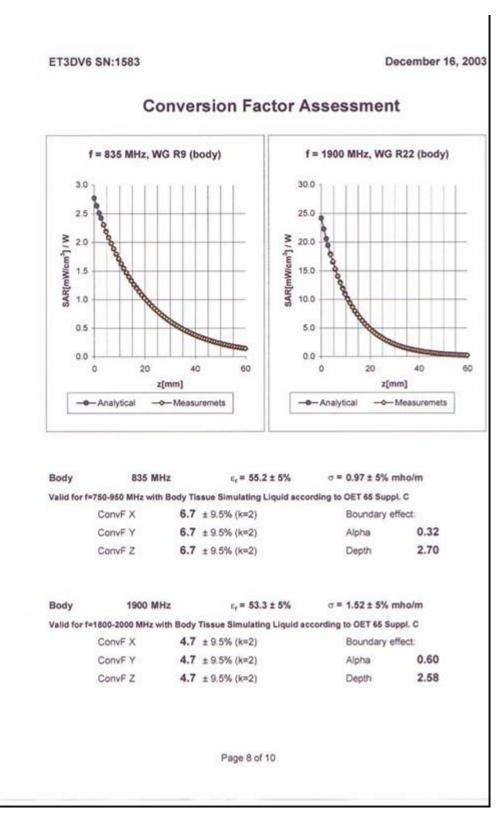
⁸ The total standard uncertainty is calculated as root-sum-square of standard uncertainty of the Conversion Factor at calibration frequency and the standard uncertainty for the indicated frequency band.

Page 7 of 8

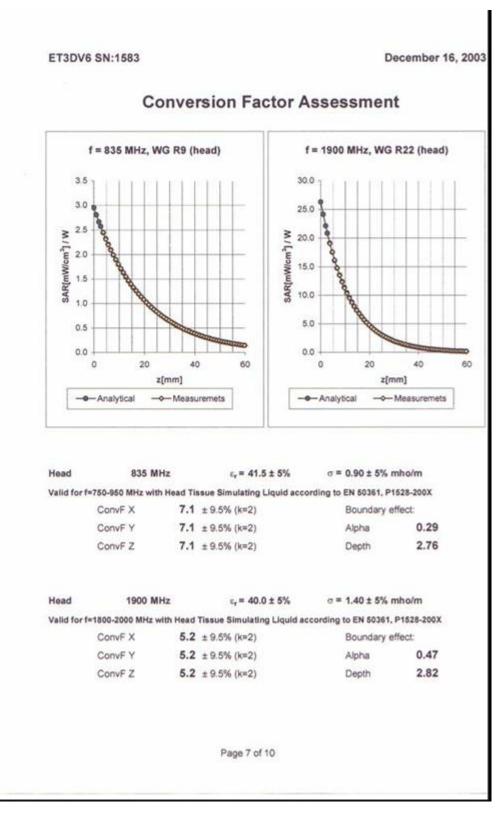
CV/PF/		sible if other) rard Haye	es		No. REP 200	04 001 2	Z500A	02		
CV/PF/	P Ge	erard Haye	es	Checked					AR Chamber\FCC reports ts\FCCZ500A.doc	Z500A\Fina
	ET3D	V6 SN:153	8					May 27,	2004	
	DAS	SY - Pa	ramete	rs of Probe:	ET3DV	6 SN:	1538	E.		
	Sens	itivity in F	ree Spac	e		Diode	Comp	pression	A	
		NormX	1.3	4 μV/(V/m) ²		DCP X	94	mV		
		NormY	1.2	20 μV/(V/m) ²		DCP Y	94	mV		
		NormZ	1.4	11 μV/(V/m) ²		DCP Z	94	mV		
	Sens	itivity in T	issue Sin	ulating Liquid (C	onversio	n Factor	rs)			-
	Plese	see Page 7.								
	Boun	dary Effe	ct							
	Head		900 MHz	Typical SAR gradien	it: 5 % per m	m				
		Sensor Cer	ter to Phant	om Surface Distance		3.7 mm	4.7 mm			
		SAR ₅₆ [%] SAR ₅₆ [%]		t Correction Algorithm		10.2 0.0	5.4 0.1			
	Head	2012/07/2012	1800 MHz	Typical SAR gradien	t: 10 % per	mm				
		200.00 2 0								
		Sensor Cer SAR _{be} [%]		om Surface Distance It Correction Algorithm		3.7 mm 14.4	4.7 mm 9.3			
		SAR _{be} [%]		orrection Algorithm		0.1	0.1			
	Sens	or Offset								
		Probe Tip t	o Sensor Ce	nter	2.7	mm				
		Optical Sur	face Detection	n	in to	lerance				
	meas	urement m	ultiplied by	f measurement is sta the coverage factor probability of approx	k=2, which	for a nor	uncerta mal dist	inty of tribution		
				tainty not required						

Page 3 of 8

Sony Ericsson Prepared (also subject responsible if other) No. SEM/CV/PF/P Gerard Hayes REP 2004 001 Z500A 02 Approved Checked SEM/CV/PF/P Gerard Hayes A



Sony Ericsson Prepared (also subject responsible if other) No. SEM/CV/PF/P Gerard Hayes REP 2004 001 Z500A 02 Approved Checked SEM/CV/PF/P Gerard Hayes A



ど Sony Ericsson

Prepared (also subject responsible if other) SEM/CV/PF/P Gerard Hayes	REP 2004 001 Z500A 02			
	Checked			X:\SAR Chamber\FCC reports\Z500A\Final
SEM/CV/PF/P Gerard Hayes				Reports\FCCZ500A.doc

DA	SV Da						
DA	51 - Pa	rame	ters of	Probe: E	T3DV6 SN	:1583	
Sen	sitivity in F	ree Spa	ace	1	Diode Compre	ssion	
	NormX		.76 µV/(V	//m) ²	DCP X	95	mV
	NormY	1	.95 µV/(V	/m) ²	DCP Y	1221	
	NormZ		.92 µV/(V		DCP Z		mV
Sens	sitivity in Ti	ssue S	imulating	Liquid		100	
Head		35 MHz		r., = 41.5 ± 5%			
Valid fo			d Tissue Sin	rulating Liquid acc	σ = 0.90 ± 5% ording to EN 50361,	mho/m	
	ConvF X		7.1 ± 9.5%	(k=2)	Boundary		
	ConvF Y		7.1 ± 9.5%		Alpha	effect: 0.29	
	ConvF Z		7.1 ± 9.5%		Depth		
Head		0 MHz		c, = 40.0 ± 5%	a = 1.40 ± 5%	mholm	
Valid fo	r f=1800-2000 N	Hz with H	ead Tissue S	imulating Liquid a	ccording to EN 50361	. P1528-200	x
	ConvF X		5.2 ± 9.5%	(k=2)	Boundary		
	ConvF Y		5.2 ±9.5%	(k=2)	Alpha	0.47	
	ConvF Z	1	5.2 ± 9.5%	(k=2)	Depth	2.82	
Bound	dary Effect						
Head	83	5 MHz	Typical	SAR gradient: 5	% per mm		
	Probe Tip 1	o Bounda					
			Correction /	Aloorithm	1 mm 8.8	2 mm	
	SAR _{be} [%]	With Co	rrection Alg	orithm	0.4	5.1	
Head	1900	MHz	Typical	SAR gradient: 10	% per mm		
	Deaks To			1966,1969,6969,696,576,576	CONTRACTOR IN		
	Probe Tip to SAR _{be} [%]				1 mm	2 mm	
	SARbe [%]				14.1	10.1	
~			100000 (A) 20 4 3		0.0	0.3	
Senso	r Offset						
	Probe Tip to			2.7		mm	
	Optical Surf.	ace Detec	tion	1.8	+ 0 0	nm	

楶 Sony Ericsson

Prepared (also subject responsible if other) SEM/CV/PF/P Gerard Hayes	REP 2004 001 Z500A 02				
Approved SEM/CV/PF/P Gerard Hayes	Checked			X:\SAR Chamber\FCC reports\Z500A\Final Reports\FCCZ500A.doc	

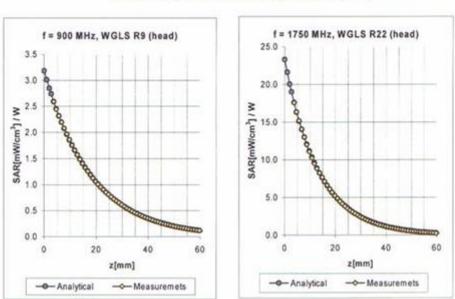
ET3DV6 SM	1:1586						May 27, 20
DASY -	Parar	nete	rs of Probe: E	T3DV	6 SN:	1586	8
Sensitivity	in Free	Spac	e		Diode	Comp	ression ^A
Norr	nX	1.9	1 μV/(V/m) ²		DCP X	95	mV
Norr	nY	1.8	36 μV/(V/m) ²		DCP Y	95	mV
Nom	nZ	1.8	38 μV/(V/m) ²		DCP Z	95	mV
Sensitivity	in Tissu	e Sin	ulating Liquid (Co	version	Factor	s)	
Plese see Pa	ge 7.						
Boundary	Effect						
Head	900	MHz	Typical SAR gradient:	5 % per mi	n		
Sens	or Center to	Phant	om Surface Distance		3.7 mm	4.7 mm	
SAR	e [%]	Withou	t Correction Algorithm		9.3	4.9	
SAR		With C	orrection Algorithm		0.1	0.3	
Head	1800	MHz	Typical SAR gradient:	10 % per n	m		
Sens	or Center to	Phant	om Surface Distance		3.7 mm	4.7 mm	
SAR,	.e [%]	Withou	t Correction Algorithm		11.6	7.7	
SAR,		With C	orrection Algorithm		0.2	0.1	
Sensor Of	fset						
Prob	e Tip to Ser	sor Ce	nter	2.7	mm		
Optic	al Surface	Detectio	n	in tol	erance		
measureme	nt multipl	ied by	measurement is state the coverage factor k= probability of approxim	2, which t	or a nor		
A numerical linear	zatoo parame	ter uncer	tainty not required	76			

Page 3 of 8

ど Sony Ericsson		REPORT			
Prepared (also subject responsible if other)		^{№.} REP 2004 001	7500	A 02	
SEM/CV/PF/P Gerard Hayes		REP 2004 001	2500	A 02	
Approved	Checked				
SEM/CV/PF/P Gerard Hayes					X:\SAR Chamber\FCC reports\Z500A\Final Reports\FCCZ500A.doc

ET3DV6 SN:1586

May 27, 2004



Conversion Factor Assessment

f [MHz]	Validity [MHz] [®]	Tissue	Permittivity	Conductivity	Alpha	Depth	ConvF Uncertainty
835	785-885	Head	41.5 ± 5%	0.90 ± 5%	0.77	1.63	6.62 ± 9.7% (k=2)
900	850-950	Head	41.5 ± 5%	0.97 ± 5%	0.58	1.92	6.49 ± 9.7% (k=2)
1750	1700-1800	Head	40.0 ± 5%	1.40 ± 5%	0.48	2.48	5.32 ± 9.7% (k=2)
1900	1850-1950	Head	40.0 ± 5%	1,40 ± 5%	0.50	2.64	5.14 ± 9.7% (k=2)
2450	2400-2500	Head	39.2 ± 5%	1.80 ± 5%	0.94	1.89	4.56 ± 9.7% (k=2)
835	785-885	Body	55.2 ± 5%	0.97 ± 5%	0.52	2.05	6.32 ± 9.7% (k=2)
900	850-950	Body	55.0 ± 5%	1.05 ± 5%	0.51	2.20	6.16 ± 9.7% (k=2)
1750	1700-1800	Body	53.3 ± 5%	1.52 ± 5%	0.54	2.82	4.60 ± 9.7% (k=2)
1900	1850-1950	Body	53.3 ± 5%	1.52 ± 5%	0.57	2.76	4.53 ± 9.7% (k=2)
2450	2400-2500	Body	52.7 ± 5%	1.95 ± 5%	1.21	1.56	4.36 ± 9.7% (k=2)

* The total standard uncertainty is calculated as root-sum-square of standard uncertainty of the Conversion Factor at calibration frequency and the standard uncertainty for the indicated frequency band.



ど Sony Ericsson

· · · · · · · · · · · · · · · · · · ·		No. REP 2004 001 Z500A 02				
Approved SEM/CV/PF/P Gerard Hayes	Checked		Δ	X:\SAR Chamber\FCC reports\Z500A\Final		
SEIW/CV/II/I Gerald Hayes			Л	Reports\FCCZ500A.doc		

Appendix 5

Measurement Uncertainty Budget

ど Sony Ericsson

Prepared (also subject responsible if other) SEM/CV/PF/P Gerard Hayes		No. REP 2004 001 Z50	0A 02	
Approved SEM/CV/PF/P Gerard Hayes	Checked		A	X:\SAR Chamber\FCC reports\Z500A\Final Reports\FCCZ500A.doc

Table 1a. Uncertainty Budget for System Performance Check (Dipole & flat phantom) DASY3 System

а	b	с	d	e = f(d,k)	f	g	h= cxf/e	i= cxg/e	k
Uncertainty Component	Sec.	Tol. (± %)	Prob. Dist.	Div.	с _і (1-g)	с _і (10-g)	1-g <i>u</i> ; (±%)	10-g <i>u</i> ; (±%)	Vi
Measurement System									
Probe Calibration (k=1)	E2.1	4.8	Ν	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	8
Hemispherical Isotropy	E.2.2	9.6	R	1.73	0.707	0.707	3.9	3.9	8
Boundary Effect	E.2.3	8.3	R	1.73	1	1	4.8	4.8	∞
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	0.0	R	1.73	1	1	0.0	0.0	∞
Integration Time	E.2.8	0.0	R	1.73	1	1	0.0	0.0	∞
RF Ambient Conditions	E.6.1	3.0	R	1.73	1	1	1.7	1.7	00
Probe Positioner Mechanical Tolerance(corresponds to the mechanical constrains of the robot)	E.6.2	0.4	R	1.73	1	1	0.2	0.2	8
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	3.9	R	1.73	1	1	2.3	2.3	×
Dipole									
Dipole Axis to Liquid Distance	8, E.4.2	1.0	R	1.73	1	1	0.6	0.6	×
Input Power and SAR Drift Measurement	8, 6.6.2	5.0	R	1.73	1	1	2.9	2.9	x
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 from target values (5)	E.3.2	4.3	R	1.73	0.64	0.43	1.59	1.07	×

실 Sony Ericsson

		No. REP 2004 001 Z500A 02				
Approved SEM/CV/PF/P Gerard Hayes	Checked		A	X:\SAR Chamber\FCC reports\Z500A\Final Reports\FCCZ500A.doc		

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	8
Liquid Permittivity - measurement uncertainty (6)	E.3.3	6.08	R	1.73	0.6	0.49	2.11	1.72	œ
Combined Standard Uncertainty			RSS				10.61	10.31	
Expanded Uncertainty (95% C.L.)							21.22	20.62	

ど Sony Ericsson

		No. REP 2004 001 Z500A 02				
Approved SEM/CV/PF/P Gerard Hayes	Checked			X:\SAR Chamber\FCC reports\Z500A\Final Reports\FCCZ500A.doc		

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

а	b	с	d	e = f(d,k)	f	g	h= cxf/e	i= cxg/e	k
Uncertainty Component	Sec.	Tol. (± %)	Prob. Dist.	Div.	с _і (1-g)	<i>с</i> і (10-g)	1-g <i>u</i> ; (±%)	10-g <i>u</i> , (±%)	Vi
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	x
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	x
Response Time	E.2.7	2.6	R	1.73	1	1	1.5	1.5	x
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	x
Probe Positioner Mechanical Tolerance(corresponds to the mechanical constrains of the robot)	E.6.2	0.4	R	1.73	1	1	0.2	0.2	x
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	8
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 from target values (5)	E.3.2	4.3	R	1.73	0.64	0.43	1.59	1.07	×
Liquid Conductivity -	E.3.3	6.20	R	1.73	0.64	0.43	2.29	1.54	8

실 Sony Ericsson

Prepared (also subject responsible if other)	No.					
SEM/CV/PF/P Gerard Hayes		REP 2004 001 Z500A 02				
Approved	Checked					
SEM/CV/PF/P Gerard Hayes				X:\SAR Chamber\FCC reports\Z500A\Final Reports\FCCZ500A.doc		

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

ど Sony Ericsson

Prepared (also subject responsible if other) SEM/CV/PF/P Gerard Hayes	REP 2004 001 Z500A 02				
Approved SEM/CV/PF/P Gerard Hayes	Checked			X:\SAR Chamber\FCC reports\Z500A\Final Reports\FCCZ500A.doc	

Table 2a: Uncertainty Budget for the Device Under Test with DASY3 System

а	b	с	d	e = f(d,k)	f	g	h= cxf/e	i= cxg/ e	k
Uncertainty Component	Sec.	Tol. (± %)	Prob. Dist.	Div.	<i>с_і</i> (1-g)	c _i (10-g)	1-g <i>u_i</i> (±%)	10-g <i>u_i</i> (±%)	Vi
Measurement System									
Probe Calibration (<i>k</i> =1)	E2.1	4.8	Ν	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	8
Hemispherical Isotropy	E.2.2	9.6	R	1.73	0.707	0.707	3.9	3.9	∞
Boundary Effect	E.2.3	8.3	R	1.73	1	1	4.8	4.8	8
Linearity	E.2.4	4.7	R	1.73	1	1	2.7	2.7	x
System Detection Limits	E.2.5	1.0	R	1.73	1	1	0.6	0.6	x
Readout Electronics	E.2.6	1.0	Ν	1	1	1	1.0	1.0	x
Response Time	E.2.7	0.8	R	1.73	1	1	0.5	0.5	∞
Integration Time	E.2.8	1.4	R	1.73	1	1	0.8	0.8	x
RF Ambient Conditions	E.6.1	3.0	R	1.73	1	1	1.7	1.7	8
Probe Positioner Mechanical Tolerance(corresponds to the mechanical constrains of the robot)	E.6.2	0.4	R	1.73	1	1	0.2	0.2	8
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	3.9	R	1.73	1	1	2.3	2.3	×
Test sample Related									
Test Sample Positioning	E.4.2	2.1	Ν	1	1	1	2.1	2.1	4
Device Holder Uncertainty	E.4.1	5.7	R	1.73	1	1	3.3	3.3	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									
Phantom Uncertainty (shape and thickness tolerances)	E.3.1	4.0	R	1.73	1	1	2.3	2.3	8

실 Sony Ericsson

		No. REP 2004 001 Z500A 02					
Approved	Checked						
SEM/CV/PF/P Gerard Hayes				X:\SAR Chamber\FCC reports\Z500A\Final Reports\FCCZ500A.doc			

Liquid Conductivity - deviation from target values (5)	E.3.2	4.3	R	1.73	0.64	0.43	1.6	1.1	8
Liquid Conductivity - measurement uncertainty (6)	E.3.3	6.20	R	1.73	0.64	0.43	2.3	1.5	œ
Liquid Permittivity - deviation from target values (5)	E.3.2	3.7	R	1.73	0.6	0.49	1.3	1.0	8
Liquid Permittivity - measurement uncertainty (6)	E.3.3	6.08	R	1.73	0.6	0.49	2.1	1.7	8
Combined Standard Uncertainty			RSS				11.33	11.04	
Expanded Uncertainty									
(95% CONFIDENCE LEVEL)			K=2				22.67	22.08	

ど Sony Ericsson

Prepared (also subject responsible if other) SEM/CV/PF/P Gerard Hayes	REP 2004 001 Z500A 02				
Approved SEM/CV/PF/P Gerard Hayes	Checked			X:\SAR Chamber\FCC reports\Z500A\Final Reports\FCCZ500A.doc	

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

а	Ь	с	d	e = f(d,k)	f	g	h= cxf/e	i= cxg/ e	k
Uncertainty Component	Sec.	Tol. (± %)	Prob. Dist.	Div.	с _і (1-g)	с _і (10-g)	1-g <i>u</i> ; (±%)	10-g <i>u</i> ; (±%)	Vi
Measurement System									
Probe Calibration (<i>k</i> =1)	E2.1	4.8	Ν	1	1	1	4.8	4.8	x
Axial Isotropy	E.2.2	4.7	R	1.73	0.707	0.707	1.9	1.9	x
Hemispherical Isotropy	E.2.2	9.6	R	1.73	0.707	0.707	3.9	3.9	x
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	x
System Detection Limits	E.2.5	1.0	R	1.73	1	1	0.6	0.6	x
Readout Electronics	E.2.6	1.0	Ν	1	1	1	1.0	1.0	x
Response Time	E.2.7	0.8	R	1.73	1	1	0.5	0.5	x
Integration Time	E.2.8	2.6	R	1.73	1	1	1.5	1.5	x
RF Ambient Conditions	E.6.1	3.0	R	1.73	1	1	1.7	1.7	x
Probe Positioner Mechanical Tolerance(corresponds to the mechanical constrains of the robot)	E.6.2	0.4	R	1.73	1	1	0.2	0.2	8
Probe Positioning with respect to Phantom Shell	E.6.3	2.9	R	1.73	1	1	1.7	1.7	x
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	2.1	N	1	1	1	2.1	2.1	4
Device Holder Uncertainty	E.4.1	5.7	R	1.73	1	1	3.3	3.3	4
Output Power Variation - SAR drift measurement (4)	6.6.2	5.0	R	1.73	1	1	2.9	2.9	x
Phantom and Tissue Parameters									
Phantom Uncertainty (shape and thickness tolerances)	E.3.1	4.0	R	1.73	1	1	2.3	2.3	8

실 Sony Ericsson

		No. REP 2004 001 Z500A 02					
Approved	Checked						
SEM/CV/PF/P Gerard Hayes				X:\SAR Chamber\FCC reports\Z500A\Final Reports\FCCZ500A.doc			

Liquid Conductivity - deviation from target values (5)	E.3.2	4.3	R	1.73	0.64	0.43	1.6	1.1	8
Liquid Conductivity - measurement uncertainty (6)	E.3.3	6.20	R	1.73	0.64	0.43	2.3	1.5	œ
Liquid Permittivity - deviation from target values (5)	E.3.2	3.7	R	1.73	0.6	0.49	1.3	1.0	8
Liquid Permittivity - measurement uncertainty (6)	E.3.3	6.08	R	1.73	0.6	0.49	2.1	1.7	8
Combined Standard Uncertainty			RSS				10.14	9.82	
Expanded Uncertainty									
(95% CONFIDENCE LEVEL)			K=2				20.27	19.64	

ど Sony Ericsson

		REP 2004 001 Z500A 02				
Approved	Checked					
SEM/CV/PF/P Gerard Hayes				X:\SAR Chamber\FCC reports\Z500A\Final Reports\FCCZ500A.doc		

Table 3a. Values for $\boldsymbol{\epsilon}'$

Uncertainty Component	Toleranc e (±%)	Probability Distribution	Divisor	C i	Standard Uncertainty (±%)	V _i Or V _{eff}
Repeatability (n repeats)	0.97	Ν	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	8
Combined standard uncertainty					6.08	

Table 3b. Values for σ

Uncertainty Component	Toleranc e (±%)	Probability Distribution	Divisor	C i	Standard Uncertainty (±%)	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	8
Dielectric Error Sources	5.93	R	1.73	1	3.42	8
Combined standard uncertainty					6.20	

 No.
 REP 2004 001 Z500A 02

 Approved
 Checked

 SEM/CV/PF/P Gerard Hayes
 Checked

 Approved
 A

 X:\SAR Chamber\FCC reports\Z500A\Final Reports\FCCZ500A.doc

Appendix 6

Photographs of the Device Under Test

 Sony Ericsson

 Prepared (also subject responsible if other)

 SEM/CV/PF/P Gerard Hayes

 Approved

 SEM/CV/PF/P Gerard Hayes

 Approved

 Checked

 Approved

 Approved

 Checked

 A

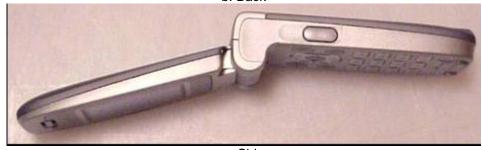
 X:\SAR Chamber\FCC reports\Z500A\Final Reports\FCCZ500A.doc



a. Front



b. Back



c. Side

View of Device (Open)

 No.
 REP 2004 001 Z500A 02

 Approved
 Checked

 SEM/CV/PF/P Gerard Hayes
 Checked

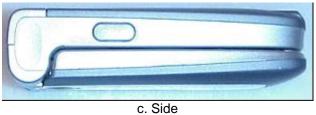
 Approved
 A



a. Front



b. Back



View of Device (Closed)

ど Sony Ericsson		REPORT		
Prepared (also subject responsible if other) SEM/CV/PF/P Gerard Hayes		^{No.} REP 2004 001 Z	2500A 02	
Approved SEM/CV/PF/P Gerard Hayes	Checked			X:\SAR Chamber\FCC reports\Z500A\Final Reports\FCCZ500A.doc



Front View



Back View

Front and Back views of carry accessory model ICE-26.

ど Sony Ericsson		REPORT		
Prepared (also subject responsible if other) SEM/CV/PF/P Gerard Hayes		REP 2004 001 Z	2500A 02	
Approved SEM/CV/PF/P Gerard Hayes	Checked		A	X:\SAR Chamber\FCC reports\Z500A\Final Reports\FCCZ500A.doc



View of Hands-free Accessory HPB-20

🥑 Sony Ericsson					
Prepared (also subject responsible if other) SEM/CV/PF/P Gerard Hayes		^{№.} REP 2004 001 2	7500	∆ 02	
,		TKET 2004 001 2	2000/	N 02	
SEM/CV/PF/P Gerard Hayes	Checked		I		X:\SAR Chamber\FCC reports\Z500A\Final Reports\FCCZ500A.doc



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

 No.
 REP 2004 001 Z500A 02

 Approved
 Checked

 SEM/CV/PF/P Gerard Hayes
 Checked

 Approved
 A

 X:\SAR Chamber\FCC reports\Z500A\Final

 Reports\FCCZ500A.doc



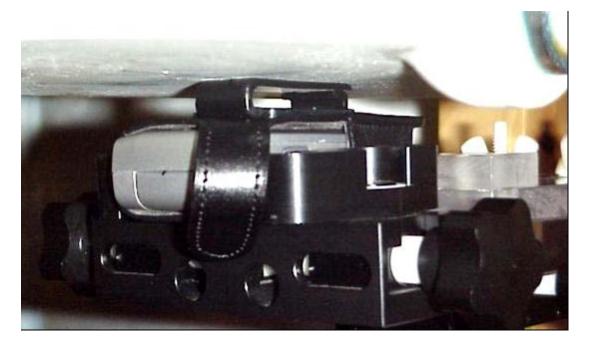
Position of device against head phantom using the "tilt" position

 Prepared (also subject responsible if other)
 No.

 SEM/CV/PF/P Gerard Hayes
 REP 2004 001 Z500A 02

 Approved
 Checked

 SEM/CV/PF/P Gerard Hayes
 A



Position of device against flat phantom using carry accessory ICE-26 with hands free accessory (HPB-20).

🍯 Sony Ericsson		REPORT			
Prepared (also subject responsible if other)		[№] . REP 2004 001	75004	റാ	
SEM/CV/PF/P Gerard Hayes		REF 2004 001	2000A	02	
Approved SEM/CV/PF/P Gerard Hayes	Checked			A	X:\SAR Chamber\FCC reports\Z500A\Final Reports\FCCZ500A.doc



Back of Device Facing Body



Front of Device Facing Body

Position of device against flat phantom using 15mm spacer with hands free accessory (HPB-20).