Prepared (also subject responsible if other)		No.	
SEM/CV/PF/P Rodney Dixon		REP 2009 006 X2 02	
Approved	Checked		
SEM/CV/PF/P Gerard Hayes		A	

Exhibit 11: SAR Test Report of Portable Cellular Phone FCC ID: PY7A3880043 Model: X2

Date of test: July 27 – August 15, 2009
Date of Report: August 20, 2009

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

Tested by: Rodney Dixon
Eng. Technician IV, Global Type Approval

Test Responsible: Gerard Hayes
Technical Manager

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

- Specific Absorption Rate (SAR)
- Dielectric parameters
- RF power measurement

On the following types of products: Wireless communications devices.

A2LA Certificate #1650-01

Statement of Compliance: Sony Ericsson Mobile Communications, Inc declares under its sole responsibility that portable cellular telephone FCC ID PY7A3880043 model X2 to which this declaration relates, is in conformity with the appropriate General Population/Uncontrolled RF exposure standards, recommendations and guidelines (FCC 47 CFR §2.1093). It also declares that the product was tested in accordance with the appropriate measurement standards, guidelines and recommended practices. Any deviations from these standards, guidelines and recommended practices are noted below:

(none)

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Table of Contents

Prepared (also subject responsible if other)		No.	
SEM/CV/PF/P Rodney Dixon		REP 2009 006 X2 02	
Approved	Checked		
SEM/CV/PF/P Gerard Hayes		A	

1. Introduction

The Sony Ericsson SAR Laboratory has performed measurements of the maximum potential exposure to the user of portable cellular phone FCC ID PY7A3880043 model X2. The Specific Absorption Rate (SAR) of this product was measured. The applicable RF safety guidelines and the SAR measurement specifications used for the test are described in [1].

2. Description of the Device Under Test

2.1 Antenna description

Type	Monopole	
Dimensions	Width	11.0 mm
	Length	49.0 mm

2.2 Device description

FCC ID Number / Device Model SEMC Type Number / IC Number	**PY7A3880043 / X2 AAD-3880043-BV / 4170B-A3880043**	
Hardware Revision # Software Revision # Battery Option(s)	**AP1 R1AA037 BST-41**	
Mode(s) of Operation Transmitting Frequency Range		**Serial number of Device Tested**
	GSM/GPRS/EDGE 824-849 MHz	CB511DSB40
	GSM/GPRS/EDGE 1850-1910 MHz	CB511DSBKM
	UMTS/HSDPA Band II (1850-1910 MHz)	CB511DSBKM
	WLAN 2412 – 2472 MHz	CB5110SBGN
Production Unit or Identical Prototype (47 CFR §2..908)	**Identical Prototype**	
Device Category	**Portable**	
RF Exposure Limits	**General Population / Uncontrolled**	

GSM		**850 MHz**	**1900 MHz**
Factory Target Maximum Output Power	**f_{low}**	33.0 dBm	31.0 dBm
	f_{mid}	33.0 dBm	31.0 dBm
	f_{high}	33.0 dBm	31.0 dBm
Calibration Frequency (f_{low}, f_{mid}, f_{high})		f_{low}, f_{mid}, f_{high}	f_{low}, f_{mid}, f_{high}
Duty Cycle		1/8	1/8

Device description (continued)

GPRS		**850 MHz**	**1900 MHz**	
Factory Target Maximum Output Power	f_{low}	30.0 dBm	28.0 dBm	
	f_{mid}	30.0 dBm	28.0 dBm	
	f_{high}	30.0 dBm	28.0 dBm	
Calibration Frequency (f_{low}, f_{mid}, f_{high})		f_{low}, f_{mid}, f_{high}	f_{low}, f_{mid}, f_{high}	
Duty Cycle		1/4	1/4	
EGPRS		**850 MHz**	**1900 MHz**	
Factory Target Maximum Output Power	f_{low}	27.5 dBm	26.5 dBm	
	f_{mid}	27.5 dBm	26.5 dBm	
	f_{high}	27.5 dBm	26.5 dBm	
Calibration Frequency (f_{low}, f_{mid}, f_{high})		f_{low}, f_{mid}, f_{high}	f_{low}, f_{mid}, f_{high}	
Duty Cycle		1/4	1/4	

		850 MHz Band VIII	**1900 MHz Band II**	**2100 MHz Band I**
W-CDMA (Circuit Switched, UMTS Mode)	f_{low}	23.0 dBm	23.0 dBm	23.0 dBm
Factory Target Maximum Output Power RMC 12.2, βc=8, βd=15	f_{mid}	23.0 dBm	23.0 dBm	23.0 dBm
	f_{high}	23.0 dBm	23.0 dBm	23.0 dBm
Calibration Frequency (f_{low}, f_{mid}, f_{high})		f_{low}, f_{mid}, f_{high}	f_{low}, f_{mid}, f_{high}	f_{low}, f_{mid}, f_{high}
Duty Cycle		1/1	1/1	1/1

3. Test Equipment Used

3.1 Dosimetric System

The Sony Ericsson SAR Laboratory utilizes Dosimetric Assessment Systems (Dasy4™) for adjacent to head and body-worn measurements manufactured by Schmid & Partner Engineering AG (SPEAG™), of Zurich Switzerland. The overall RSS uncertainty of the measurement system is ±9.8 % (K=1) with an expanded uncertainty of ±19.5 % (K=2) for Dasy4™. The measurement uncertainty budget is given in Appendix 5 for the system. The list of calibrated equipment used for the measurements is shown in the following table.

Description	Serial Number	Cal Due Date
DASY3 DAE V1	345	Oct-31-2009
DASY3 DAE V1	417	Nov-07-2009
DASY3 DAE V1	415	Oct-31-2009
E-Field Probe ETDV6	1539	Nov-17-2009
E-Field Probe ETDV6	1584	Nov-17-2009
E-Field Probe ETDV6	1587	May-25-2010
Dipole Validation Kit, DV835V2	438	May-25-2010
Dipole Validation Kit, DV1900V2	536	May-26-2010
Dipole Validation Kit, DV2440V2	702	May-20-2010
S.A.M. Phantom used for 835MHz (Head)	1023	
S.A.M. Phantom used for 835MHz (Body)	1031	
S.A.M. Phantom used for 1900MHz (Head)	1054/1335	
S.A.M. Phantom used for 1900MHz (Body)	1020	
S.A.M. Phantom used for 2450MHz (Head and Body)	1251	

3.2 Additional Equipment

Description	Serial Number	Cal Due Date
Signal Generator HP8648C	3443U00433	February 01, 2010
Power Meter 437B	3125U16382	December 04, 2009
Power Meter 437B	3125U16190	May 07, 2010
Power Sensor - 8482H	MY41090241	June 4, 2010
Power Sensor - 8482H	3318A07097	June 04, 2010
Dielectric Probe Kit HP85070B	US33020256	Sept. 11, 2009
Dickson Thermometer TC200	909709	May 4, 2010
Dickson Humidity FH325	9099180	May 07, 2010
HP RF Amplifier 8347A	3307A1069	June 08, 2010

4. Electrical parameters of the tissue simulating liquid

Prior to conducting SAR measurements, the relative permittivity, ε_r, and the conductivity, σ, of the tissue simulating liquids were measured with the dielectric probe kit. These values, along with the temperature of the simulated tissue are shown in the table below. A mass density of ρ=1g/cm3 was entered into the system in all the cases. It can be seen that the measured parameters are within tolerance of the recommended limits [1]. The ambient temperature of the laboratory was maintained within the desired the range and the liquid depth above the ear reference points was above 15.0 cm in all the cases. It is seen that the measured parameters are satisfactory for compliance testing.

f (MHz)	Tissue type	Limits / Measured	Dielectric Parameters		
			ε_r	σ (S/m)	Simulated Tissue Temp (°C)
835	Head	August 2, 2009	42.2	0.9057	23.5
		August 3, 2009	41.84	0.9032	23.5
		Recommended Limits	41.5	0.9	20-25
	Body	July 27, 2009	55.87	0.9648	23
		Recommended Limits	55.2	0.97	20-25
1900	Head	July 26, 2009	38.23	1.45	23
		July 27, 2009	38.04	1.455	23
		July 28, 2009	38.33	1.462	23.2
		Recommended Limits	40	1.4	20-25
	Body	August 15, 2009	52.05	1.536	23
		Recommended Limits	53.3	1.52	20-25
2450	Head	July 30, 2009	39.46	1.909	23
		August 5, 2009	39.33	1.921	23.4
		Recommended Limits	39.2	1.95	20-25
	Body	July 29, 2009	51.83	2.11	23.1
		Recommended Limits	52.7	1.95	20-25

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

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

5. System Accuracy Verification

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

A SAR measurement was performed to see if the measured SAR was within +/- 10% from the numerical target SAR values indicated in the standerds. These tests were done at 835MHz/900MHz and/or 1800MHz/1900MHz. These frequencies are within 100MHz of the mid-band frequency of the test device, according to [1].

The test was conducted on the same days as the measurement of the DUT. The results from the system accuracy verification are displayed in the table below (SAR values are normalized to 1W forward power delivered to the dipole). The ambient temperature of the laboratory was maintained within the desired the range and the liquid depth above the ear reference points was above 15.0 cm in all the cases.

It is seen in the following table that the system is operating within its specification, as the results are within acceptable tolerance of the reference values. The SAR distributions for each dipole measurement are shown in Appendix 1.

f			SAR (W/kg)		Dielectric Parameters		Tissue
(MHz)	Tissue Type	Date Measured	1g	10g	ε_r	σ (S/m)	Temp (°C)
835	Head	Aug-02-09	9.44	6.16	42.2	0.91	23.5
		Aug-03-09	9.29	6.07	41.84	0.90	23.5
		Recommended Limits	**9.50**	**6.20**	**41.50**	**0.90**	**20-25**
	Body	Jul-27-09	10.02	6.61	55.87	0.96	23
		Recommended Limits	**9.90**	**6.46**	**55.20**	**0.97**	**20-25**
1900	Head	Jul-26-09	39.00	20.40	38.23	1.45	23
		Jul-27-09	39.42	20.67	38.04	1.46	23
		Jul-28-09	39.71	20.73	38.33	1.46	23.2
		Aug-01-09	39.99	20.87	39.12	1.47	23.4
		Aug-02-09	39.10	20.40	38.41	1.44	23.5
		Aug-03-09	39.24	20.52	38.42	1.45	23.5
		Aug-04-09	39.82	20.81	38.33	1.46	23.4
		Recommended Limits	**39.7**	**20.5**	**40**	**1.4**	**20-25**
	Body	Aug-15-09	41.74	21.92	52.05	1.54	23
		Recommended Limits	**40.5**	**20.89**	**53.3**	**1.52**	**20-25**
2450	Head	Jul-30-09	55.76	24.99	39.46	1.91	23
		Aug-05-09	55.61	25.00	39.33	1.92	23.4
		Recommended Limits	**52.4**	**24**	**39.8**	**1.95**	**20-25**
	Body	Jul-29-09	57.93	25.69	51.83	2.11	23.1
		Recommended Limits	**54.5**	**25.2**	**52.7**	**1.95**	**20-25**

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 0.0040 W/kg, which is below the recommended limit in [1].

6.0 Test Results

For all measurements, the test sample was operated using a base station simulator (CMU-200) that allows control of the transmitter using the signally software that is installed on the phone. 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 DASY4 SAR measurement system.

HSDPA Considerations

As per TCB/FCC guidance, the conducted power of the device was confirmed in two UMTS circuit switched modes (RMC and Voice), four HSDPA modes, and five HSUPA modes. A CMU-200 was used to establish the call processing and modulation settings and an RF power meter was used for the measurements. For all HSDPA measurements, the following settings were applied:

H-SET3 QPSK, CQI feedback = 2msec, ΔACK = ΔNACK = ΔCQI = 8

The results (including relevant CMU modulation settings) are presented in the Table 6.0. As seen in the table, the conducted power measurements for the HSDPA and HSUPA modes were equal or below the circuit switched modes for each frequency/channel.

Table 6.0: Conducted Power Summary for UMTS – HSDPA and HSUPA Modes

a) HSDPA Settings and Conducted Power

Band II							
	Settings			**Frequency (MHz):**	**1852.4**	**1880**	**1907.6**
	βc	**βd**	**ΔHS**	**max (dBm)**	24.0	23.9	23.8
CS-RMC	8	15	-	**measured (dBm)**	24.0	23.9	23.8
CS-Voice	8	15	-	**measured (dBm)**	24.0	23.9	23.8
HSDPA - 1	2	15	8	**measured (dBm)**	23.8	23.8	23.8
HSDPA - 2	12	15	8	**measured (dBm)**	23.4	23.4	23.4
HSDPA - 3	15	8	8	**measured (dBm)**	23.4	23.4	23.4
HSDPA - 4	15	4	8	**measured (dBm)**	24.0	23.9	23.8

b) HSUPA Setteings

Sub-test	$ß_c$	$ß_d$	ßd (SF)	$ß_c$ / $ß_d$	$ß_{hs}$	$ß_{ec}$	$ß_{ed}$
1	11/15 (3)	15/15 (3)	64	11/15	22/15	209/225	1039/225
2	6/15	15/15	64	6/15	12/15	12/15	94/75
3	15/15	9/15	64	15/9	30/15	30/15	1:47/15 2:47/15
4	2/15	15/15	64	2/15	4/15	2/15	56/75
5	15/15 (4)	15/15 (4)	64	15/15 (4)	30/15	24/15	134/15

Sub-test	$ß_{ec\ (SF)}$	$ß_{ed\ (code)}$	CM (dB)	MPR (dB)	AG Index	E-TFCI
1	4	1	1.0	0.0	20	75
2	4	1	3.0	2.0	12	67
3	4	2	2.0	1.0	15	92
4	4	1	3.0	2.0	17	71
5	4	1	1.0	0.0	21	81

c) **HSUPA Conducted Power (dBm)**

	Band II		
	1852.4 (Band2)	**1880 (Band2)**	**1907.6 (Band2)**
HSUPA - Sub-test 1	23.3	23.3	23.4
HSUPA - Sub-test 2	22.4	22.4	21.9
HSUPA - Sub-test 3	22.7	22.7	22.5
HSUPA - Sub-test 4	22.4	22.3	22.6
HSUPA - Sub-test 5	23.3	23.2	23.5

For head measurements, the units were measured in the following voice modes which correspond to the operating conditions with the highest conducted power:

GSM with a 1/8 duty cycle
UMTS (circuit switched) with RMC=12.2, βc=8, and βd=15

In all configurations, tests were conducted with Bluetooth functionality turned off.

For body measurements, the units were measured in the following data modes which correspond to the operating conditions with the highest conducted power:

E/GPRS (Multislot, Class 10) with a 1/4 duty cycle
UMTS (circuit switched) with RMC=12.2, βc=8, and βd=15

Simultaneous Transmitter (i.e. WLAN, Bluetooth) Considerations

This Bluetooth/WLAN antenna is located at a minimum of 77.2 mm from the cellular antenna. The maximum reported WLAN/Bluetooth conducted power is 17.8 dBm.

The following table summarizes the stand-alone maximum SAR values for the cellular and WLAN operating conditions:

Operating Configuration	**Maximum Cellular SAR** (W/kg, 1-gram average)	**Maximum WLAN SAR** (W/kg, 1-gram average)	**Sum(Cellular + WLAN)** (W/kg, 1-gram average)
Head Adjacent			
Right Open	0.33	0.48	**0.81**
Right Closed	1.19	0.18	**1.37**
Lefft Open	0.45	0.22	**0.67**
Left Closed	0.64	0.18	**0.82**
Body-worn	0.90	0.06	**0.96**

Since the sum of two stand-alone SAR values are below 1.6 W/kg in all test configurations, additional simultaneous transmission considerations (including the processing of volumetric scans) are not required.

For reference, the measured stand-alone SAR values are presented in the following tables:

Head Adjacent, Cellular: Tables 1-8
Head Adjacent, WLAN: Tables 9
Body-worn, Cellular: Tables 10-11
Body-worn, WLAN: Tables 12

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 ambient temperature of the laboratory was maintained within the desired the range and the liquid depth above the ear reference points was above 15.0 cm in all the cases.

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

f(MHz)	Channel/ frequency	Conducted Output Power (dBm)	Left Head (Cheek / Touch Position)						
		GSM 1:8 Duty Cycle	Measured (W/kg) 1g / 10g		Drift (dB)	Extrapolated (W/kg) 1g / 10g		Ambient Temp (°C)	Simulate Temp (°C)
	128 / 824	33.3	0.13	0.10	-0.05	0.14	0.10		
	189 / 837	33.3	0.16	0.12	0.05	0.17	0.12		
800 GSM	251 / 849	33.3	0.21	0.15	-0.01	0.22	0.16	23.6	23.5
	512 / 1850	30.4	0.22	0.15	-0.07	0.22	0.15		
	660/1880	30.5	0.22	0.15	-0.19	0.22	0.15		
1900 GSM	810/1910	30.3	0.27	0.18	-0.02	0.27	0.18	23.6	23.4
f(MHz)	Channel/ frequency	Conducted Output Power (dBm)	Left Head (15° Tilt Position)						
		GSM 1:8 Duty Cycle	Measured (W/kg) 1g / 10g		Drift (dB)	Extrapolated (W/kg) 1g / 10g		Ambient Temp (°C)	Simulate Temp (°C)
	128 / 824	33.3	0.06	0.04	-0.03	0.06	0.04		
	189 / 837	33.3	0.08	0.06	0.00	0.08	0.06		
800 GSM	251 / 849	33.3	0.08	0.06	0.01	0.08	0.06	23.6	23.5
	512 / 1850	30.4	0.18	0.11	0.07	0.18	0.11		
	660/1880	30.5	0.19	0.12	-0.08	0.19	0.12		
1900 GSM	810/1910	30.3	0.23	0.14	-0.03	0.23	0.14	23.6	23.4

Table 1: SAR measurement results for the portable cellular telephone FCC ID PY7A3880043 model X2 at maximum output power with Standard Battery BST-41. Measured closed against the left head in GSM mode.

f(MHz)	Channel/ frequency	Conducted Output Power (dBm) GSM 1:8 Duty Cycle	Right Head (Cheek / Touch Position) Measured (W/kg) 1g	10g	Drift (dB)	Extrapolated (W/kg) 1g	10g	Ambient Temp (°C)	Simulate Temp (°C)
	128 / 824	33.3	0.15	0.10	0.07	0.15	0.10		
	189 / 837	33.3	0.18	0.12	0.03	0.18	0.13		
800 GSM	251 / 849	33.3	0.22	0.15	0.01	0.23	0.15	23.6	23.5
	512 / 1850	30.4	0.34	0.20	0.16	0.34	0.20		
	660/1880	30.5	0.34	0.20	-0.07	0.34	0.20		
1900 GSM	810/1910	30.3	0.43	0.25	0.03	0.43	0.25	23.6	23.4

f(MHz)	Channel/ frequency	Conducted Output Power (dBm) GSM 1:8 Duty Cycle	Right Head (15° Tilt Position) Measured (W/kg) 1g	10g	Drift (dB)	Extrapolated (W/kg) 1g	10g	Ambient Temp (°C)	Simulate Temp (°C)
	128 / 824	33.3	0.08	0.06	0.02	0.08	0.06		
	189 / 837	33.3	0.10	0.07	0.05	0.10	0.08		
800 GSM	251 / 849	33.3	0.08	0.06	0.03	0.09	0.06	23.6	23.5
	512 / 1850	30.4	0.19	0.12	-0.02	0.19	0.12		
	660/1880	30.5	0.20	0.13	0.01	0.20	0.13		
1900 GSM	810/1910	30.3	0.27	0.16	0.03	0.27	0.16	23.6	23.4

Table 2: SAR measurement results for the portable cellular telephone FCC ID PY7A3880043 model X2 at maximum output power with Standard Battery BST-41. Measured closed against the right head in GSM mode.

f(MHz)	Channel/ frequency	Conducted Output Power (dBm)	Left Head (Cheek / Touch Position)						
		GSM 1:8 Duty Cycle	Measured (W/kg) 1g / 10g		Drift (dB)	Extrapolated (W/kg) 1g / 10g		Ambient Temp (°C)	Simulate Temp (°C)
	128 / 824	33.3	0.25	0.18	-0.03	0.27	0.18		
	189 / 837	33.3	0.30	0.20	-0.03	0.31	0.21		
800 GSM	251 / 849	33.3	0.43	0.29	0.05	0.45	0.30	23.6	23.5
	512 / 1850	30.4	0.20	0.11	-0.04	0.20	0.11		
	660/1880	30.5	0.19	0.11	0.02	0.19	0.11		
1900 GSM	810/1910	30.3	0.22	0.12	0.04	0.22	0.12	23.6	23.5
f(MHz)	Channel/ frequency	Conducted Output Power (dBm)	Left Head (15° Tilt Position)						
		GSM 1:8 Duty Cycle	Measured (W/kg) 1g / 10g		Drift (dB)	Extrapolated (W/kg) 1g / 10g		Ambient Temp (°C)	Simulate Temp (°C)
	128 / 824	33.3	0.06	0.05	0.01	0.06	0.05		
	189 / 837	33.3	0.06	0.05	0.08	0.07	0.05		
800 GSM	251 / 849	33.3	0.07	0.05	-0.04	0.07	0.06	23.6	23.5
	512 / 1850	30.4	0.05	0.03	-0.02	0.05	0.03		
	660/1880	30.5	0.05	0.03	0.01	0.05	0.03		
1900 GSM	810/1910	30.3	0.08	0.04	-0.01	0.08	0.04	23.6	23.5

Table 3: SAR measurement results for the portable cellular telephone FCC ID PY7A3880043 model X2 at maximum output power with Standard Battery BST-41. Measured open against the left head in GSM mode.

f(MHz)	Channel/ frequency	Conducted Output Power (dBm) GSM 1:8 Duty Cycle	Right Head (Cheek / Touch Position) Measured (W/kg) 1g / 10g		Drift (dB)	Extrapolated (W/kg) 1g / 10g		Ambient Temp (°C)	Simulate Temp (°C)
	128 / 824	33.3	0.09	0.07	0.10	0.09	0.07		
	189 / 837	33.3	0.10	0.08	0.05	0.11	0.08		
800 GSM	251 / 849	33.3	0.13	0.10	-0.02	0.13	0.10	23.6	23.5
	512 / 1850	30.4	0.08	0.06	-0.16	0.08	0.06		
	660/1880	30.5	0.09	0.06	-0.12	0.09	0.06		
1900 GSM	810/1910	30.3	0.13	0.08	-0.19	0.13	0.08	23.6	23.5
f(MHz)	Channel/ frequency	Conducted Output Power (dBm) GSM 1:8 Duty Cycle	Right Head (15° Tilt Position) Measured (W/kg) 1g / 10g		Drift (dB)	Extrapolated (W/kg) 1g / 10g		Ambient Temp (°C)	Simulate Temp (°C)
	128 / 824	33.3	0.07	0.06	0.03	0.07	0.06		
	189 / 837	33.3	0.08	0.06	0.02	0.08	0.06		
800 GSM	251 / 849	33.3	0.07	0.06	-0.02	0.08	0.06	23.6	23.5
	512 / 1850	30.4	0.06	0.04	0.02	0.06	0.04		
	660/1880	30.5	0.06	0.04	-0.01	0.06	0.04		
1900 GSM	810/1910	30.3	0.08	0.05	-0.03	0.08	0.05	23.6	23.5

Table 4: SAR measurement results for the portable cellular telephone FCC ID PY7A3880043 model X2 at maximum output power with Standard Battery BST-41. Measured open against the right head in GSM mode.

f(MHz)	Channel/ frequency	Conducted Output Power (dBm)	UMTS Left Head Position (Cheek / Touch Position)						
		UMTS Duty Cycle	Measured (W/kg) 1g / 10g		Drift (dB)	Extrapolated (W/kg) 1g / 10g		Ambient Temp (°C)	Simulate Temp (°C)
	9263/1852.6	24	0.61	0.411	-0.03	0.61	0.41		
	9400/1880	23.9	0.633	0.426	-0.03	0.63	0.43		
Band II	9537/1907.4	23.8	0.642	0.423	-0.07	0.64	0.42	23.1	23
f(MHz)	Channel/ frequency	Conducted Output Power (dBm)	UMTS Left Head Position (15° Tilt Position)						
		UMTS Duty Cycle	Measured (W/kg) 1g / 10g		Drift (dB)	Extrapolated (W/kg) 1g / 10g		Ambient Temp (°C)	Simulate Temp (°C)
	9263/1852.6	24	0.442	0.274	0.17	0.44	0.27		
	9400/1880	23.9	0.433	0.263	-0.01	0.43	0.26		
Band II	9537/1907.4	23.8	0.462	0.282	0.01	0.46	0.28	23.1	23

Table 5: UMTS SAR measurement results for the portable cellular telephone FCC ID PY7A3880043 model X2 at maximum output power with Standard Battery BST-41. Measured closed against the left head in UMTS mode.

f(MHz)	Channel/ frequency	Conducted Output Power (dBm)	UMTS Right Head Position (Cheek / Touch Position)						
		UMTS Duty Cycle	Measured (W/kg) 1g / 10g		Drift (dB)	Extrapolated (W/kg) 1g / 10g		Ambient Temp (°C)	Simulate Temp (°C)
	9263/1852.6	24	1.12	0.66	0.11	1.12	0.66		
	9400/1880	23.9	1.11	0.64	-0.07	1.11	0.64		
Band II	9537/1907.4	23.8	1.19	0.68	0.18	1.19	0.68	23.1	23.0
f(MHz)	Channel/ frequency	Conducted Output Power (dBm)	UMTS Right Head Position (15° Tilt Position)						
		UMTS Duty Cycle	Measured (W/kg) 1g / 10g		Drift (dB)	Extrapolated (W/kg) 1g / 10g		Ambient Temp (°C)	Simulate Temp (°C)
	9263/1852.6	24	0.50	0.31	0.03	0.50	0.31		
	9400/1880	23.9	0.49	0.30	0.10	0.49	0.30		
Band II	9537/1907.4	23.8	0.54	0.33	0.01	0.54	0.33	23.1	23.0

Table 6: UMTS SAR measurement results for the portable cellular telephone FCC ID PY7A3880043 model X2 at maximum output power with Standard Battery BST-41. Measured closed against the right head in UMTS mode.

		Conducted Output Power (dBm)	UMTS Left Head Position (Cheek / Touch Position)						
f(MHz)	Channel/ frequency	UMTS Duty Cycle	Measured (W/kg) 1g / 10g		Drift (dB)	Extrapolated (W/kg) 1g / 10g		Ambient Temp (°C)	Simulate Temp (°C)
	9263/1852.6	24	0.449	0.25	-0.13	0.45	0.25		
	9400/1880	23.9	0.421	0.235	-0.04	0.42	0.24		
Band II	9537/1907.4	23.8	0.433	0.24	-0.08	0.43	0.24	23.5	23.2
		Conducted Output Power (dBm)	UMTS Left Head Position (15° Tilt Position)						
f(MHz)	Channel/ frequency	UMTS Duty Cycle	Measured (W/kg) 1g / 10g		Drift (dB)	Extrapolated (W/kg) 1g / 10g		Ambient Temp (°C)	Simulate Temp (°C)
	9263/1852.6	24	0.134	0.0817	0.04	0.13	0.08		
	9400/1880	23.9	0.152	0.093	-0.08	0.15	0.09		
Band II	9537/1907.4	23.8	0.189	0.114	-0.07	0.19	0.11	23.5	23.2

Table 7: UMTS SAR measurement results for the portable cellular telephone FCC ID PY7A3880043 model X2 at maximum output power with Standard Battery BST-41. Measured open against the left head in UMTS mode.

Prepared (also subject responsible if other)	No.	
SEM/CV/PF/P Rodney Dixon	REP 2009 006 X2 02	
Approved / Checked		
SEM/CV/PF/P Gerard Hayes	A	

		Conducted Output Power (dBm)	UMTS Right Head Position (Cheek / Touch Position)						
f(MHz)	Channel/ frequency	UMTS Duty Cycle	Measured (W/kg) 1g / 10g		Drift (dB)	Extrapolated (W/kg) 1g / 10g		Ambient Temp (°C)	Simulate Temp (°C)
	9263/1852.6	24	0.25	0.16	-0.02	0.25	0.16		
	9400/1880	23.9	0.27	0.18	-0.11	0.27	0.18		
Band II	9537/1907.4	23.8	0.33	0.21	-0.05	0.33	0.21	23.5	23.2
		Conducted Output Power (dBm)	UMTS Right Head Position (15° Tilt Position)						
f(MHz)	Channel/ frequency	UMTS Duty Cycle	Measured (W/kg) 1g / 10g		Drift (dB)	Extrapolated (W/kg) 1g / 10g		Ambient Temp (°C)	Simulate Temp (°C)
	9263/1852.6	24	0.14	0.09	0.03	0.14	0.09		
	9400/1880	23.9	0.15	0.10	0.07	0.15	0.10		
Band II	9537/1907.4	23.8	0.19	0.12	0.09	0.19	0.12	23.5	23.2

Table 8: UMTS SAR measurement results for the portable cellular telephone FCC ID PY7A3880043 model X2 at maximum output power with Standard Battery BST-41. Measured open against the right head in UMTS mode.

	Channel/ frequency	Conducted Output Power (dBm)	WLAN Left Head Position (Cheek / Touch Position)				
			Measured (W/kg) 1g / 10g		Drift (dB)	Ambient Temp (°C)	Simulate Temp (°C)
Open	1/2412	17.5	0.17	0.09	0.04		
	6/2437	17.6	0.17	0.08	0.03		
	11/2462	17.8	0.15	0.08	0.14		
	13/2472	17.6	0.19	0.10	0.01	23.3	23.4
Closed	1/2412	17.5	0.12	0.07	0.13		
	6/2437	17.6	0.09	0.05	0.00		
	11/2462	17.8	0.12	0.06	0.09		
	13/2472	17.6	0.09	0.05	0.02	23.2	23
	Channel/ frequency	Conducted Output Power (dBm)	WLAN Left Head Position (15° Tilt Position)				
			Measured (W/kg) 1g / 10g		Drift (dB)	Ambient Temp (°C)	Simulate Temp (°C)
Open	1/2412	17.5	0.22	0.11	0.00		
	6/2437	17.6	0.18	0.09	0.08	23.3	23.4
	11/2462	17.8	0.19	0.09	0.01		
	13/2472	17.6	0.21	0.10	0.06		
Closed	1/2412	17.5	0.18	0.09	0.10		
	6/2437	17.6	0.12	0.06	0.13	23.2	23
	11/2462	17.8	0.17	0.08	0.02		
	13/2472	17.6	0.11	0.05	0.08		

Table 9a: WLAN SAR measurement results for the portable cellular telephone FCC ID PY7A3880043 model X2 at maximum output power with Standard Battery BST-41. Measured open and closed against the left head in WLAN mode.

	Channel/ frequency	Conducted Output Power (dBm)	WLAN Right Head Position (Cheek / Touch Position)				
			Measured (W/kg) 1g / 10g		Drift (dB)	Ambient Temp (°C)	Simulate Temp (°C)
Open	1/2412	17.5	0.48	0.21	-0.12	23	23
	6/2437	17.6	0.25	0.12	0.01		
	11/2462	17.8	0.33	0.15	-0.03		
	13/2472	17.6	0.41	0.19	0.00		
Closed	1/2412	17.5	0.15	0.08	-0.18	23	23
	6/2437	17.6	0.12	0.06	0.10		
	11/2462	17.8	0.10	0.05	-0.03		
	13/2472	17.6	0.10	0.05	-0.09		

	Channel/ frequency	Conducted Output Power (dBm)	WLAN Right Head Position (15° Tilt Position)				
			Measured (W/kg) 1g / 10g		Drift (dB)	Ambient Temp (°C)	Simulate Temp (°C)
Open	1/2412	17.5	0.36	0.16	0.01	23	23
	6/2437	17.6	0.23	0.11	-0.01		
	11/2462	17.8	0.26	0.13	0.08		
	13/2472	17.6	0.35	0.17	0.20		
Closed	1/2412	17.5	0.18	0.09	0.10	23	23
	6/2437	17.6	0.12	0.06	0.13		
	11/2462	17.8	0.17	0.08	0.02		
	13/2472	17.6	0.11	0.05	0.08		

Table 9b: WLAN SAR measurement results for the portable cellular telephone FCC ID PY7A3880043 model X2 at maximum output power with Standard Battery BST-41. Measured open and closed against the right head in WLAN mode.

6.2 Body-Worn Test Results

The SAR results shown in Tables 5 and 6 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.

A “flat” phantom was used for the body-worn tests. This “flat” phantom corresponds to the flat portion of the SAM phantom.

The ambient temperature of the laboratory was maintained within the desired the range and the liquid depth above the ear reference points was above 15.0 cm in all the cases.

The same device holder described in section 6 was used for positioning the phone. The cellular phone was tested with a headset (HBP-20) connected to the device for all body-worn SAR measurements.

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

-15 mm spacer

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

f(MHz)	Operating Condition	Channel/ frequency	Conducted Output Power (dBm)	Body Worn						
				15mm SPACER						
				Measured (W/kg) 1g / 10g		Drift (dB)	Extrapolated (W/kg) 1g / 10g		Ambient Temp (°C)	Simulate Temp (°C)
Back of phone facing body										
800 GSM	2:8 Duty Cycle	128 / 824	30.3	0.37	0.25	-0.13	0.39	0.26	23.1	23
		189 / 837	30.3	0.51	0.35	0.09	0.53	0.37		
		251 / 849	30.3	0.86	0.57	0.04	0.90	0.60		
	1:8 Duty Cycle	251 / 849	30.3	0.43	0.30	0.04	0.45	0.31	23.1	23
1900 GSM	2:8 Duty Cycle	512 / 1850	27.1	0.16	0.10	0.02	0.18	0.11	23.2	23
		660/1880	27	0.16	0.10	-0.02	0.18	0.11		
		810/1910	27	0.40	0.23	0.01	0.44	0.25		
	1:8 Duty Cycle	810/1910	27	0.272	0.161	0.02	0.27	0.16	23.2	23
Front of phone facing body										
800 GSM	2:8 Duty Cycle	128 / 824	30.3	0.17	0.13	0.20	0.18	0.13	23.1	23
		189 / 837	30.3	0.23	0.17	-0.10	0.24	0.18		
		251 / 849	30.3	0.31	0.22	-0.14	0.32	0.23		
1900 GSM	2:8 Duty Cycle	512 / 1850	27.1	0.10	0.06	0.10	0.11	0.07	23.2	23
		660/1880	27	0.13	0.08	-0.04	0.14	0.09		
		810/1910	27	0.18	0.11	0.04	0.20	0.12		

Table 10: SAR measurement results for the portable cellular telephone FCC ID PY7A3880043 model X2 at maximum output power with Standard Battery BST-41. Measured with GSM/GPRS Mode.

f(MHz)	Channel/ frequency	Conducted Output Power (dBm)	15mm SPACER						
			Measured (W/kg) 1g / 10g		Drift (dB)	Extrapolated (W/kg) 1g / 10g		Ambient Temp (°C)	Simulate Temp (°C)
Back of phone facing body									
Band II	9263/1852.6	24	0.61	0.37	-0.08	0.61	0.37	23.2	23.0
	9400/1880	23.9	0.60	0.36	-0.08	0.60	0.36		
	9537/1907.4	23.8	0.63	0.38	-0.11	0.63	0.38		
Front of phone facing body									
Band II	9263/1852.6	24	0.34	0.21	-0.06	0.34	0.21	23.2	23.0
	9400/1880	23.9	0.39	0.24	-0.02	0.39	0.24		
	9537/1907.4	23.8	0.42	0.26	-0.01	0.42	0.26		

Table 11: UMTS SAR measurement results for the portable cellular telephone FCC ID PY7A3880043 model X2 at maximum output power with Standard Battery BST-41. Measured against the body with UMTS/HSDPA Modes.

f(MHz)	Channel/ frequency	Conducted Output Power (dBm)	WLAN Body Worn 15mm SPACER				
			Measured (W/kg) 1g / 10g		Drift (dB)	Ambient Temp (°C)	Simulate Temp (°C)
Back of phone facing body							
WLAN	1/2412	17.5	0.06	0.03	0.14	23.4	23.1
	6/2437	17.6	0.04	0.02	-0.17		
	11/2462	17.8	0.04	0.02	0.12		
	13/2472	17.6	0.05	0.03	0.20		
Front of phone facing body							
WLAN	1/2412	17.5	0.04	0.03	0.01	23.4	23.1
	6/2437	17.6	0.05	0.03	-0.08		
	11/2462	17.8	0.04	0.03	0.13		
	13/2472	17.6	0.05	0.03	0.04		

Table 12: WLAN SAR measurement results for the portable cellular telephone FCC ID PY7A3880043 model X2 at maximum output power with Standard Battery BST-41. Measured against the body with WLAN Modes.

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] IEC 62209-1, “Human exposure to radio frequency fields from hand-held and body-mounted wireless communication devices – Human models, instrumentation, and procedures – Part 1: Procedure to determine the specific absorption rate (SAR) for hand-held devices used in close proximity to the ear (frequency range of 300 MHz to 3 GHz) ”, First Edition 2005-02.

[3] 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 1528-2003, June 2003.

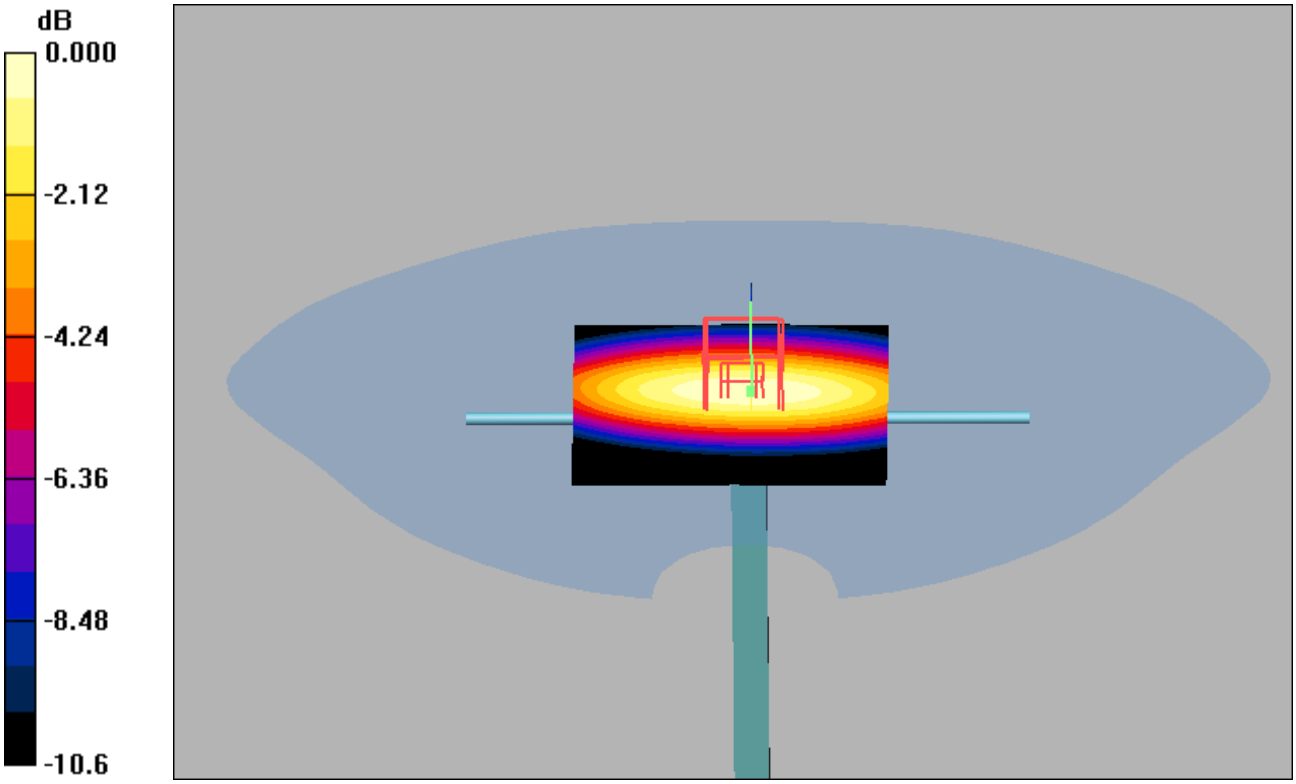
Prepared (also subject responsible if other)	No.	
SEM/CV/PF/P Rodney Dixon	REP 2009 006 X2 02	
Approved / Checked		
SEM/CV/PF/P Gerard Hayes	A	

Appendix 1

SAR distribution comparison for the system accuracy verification

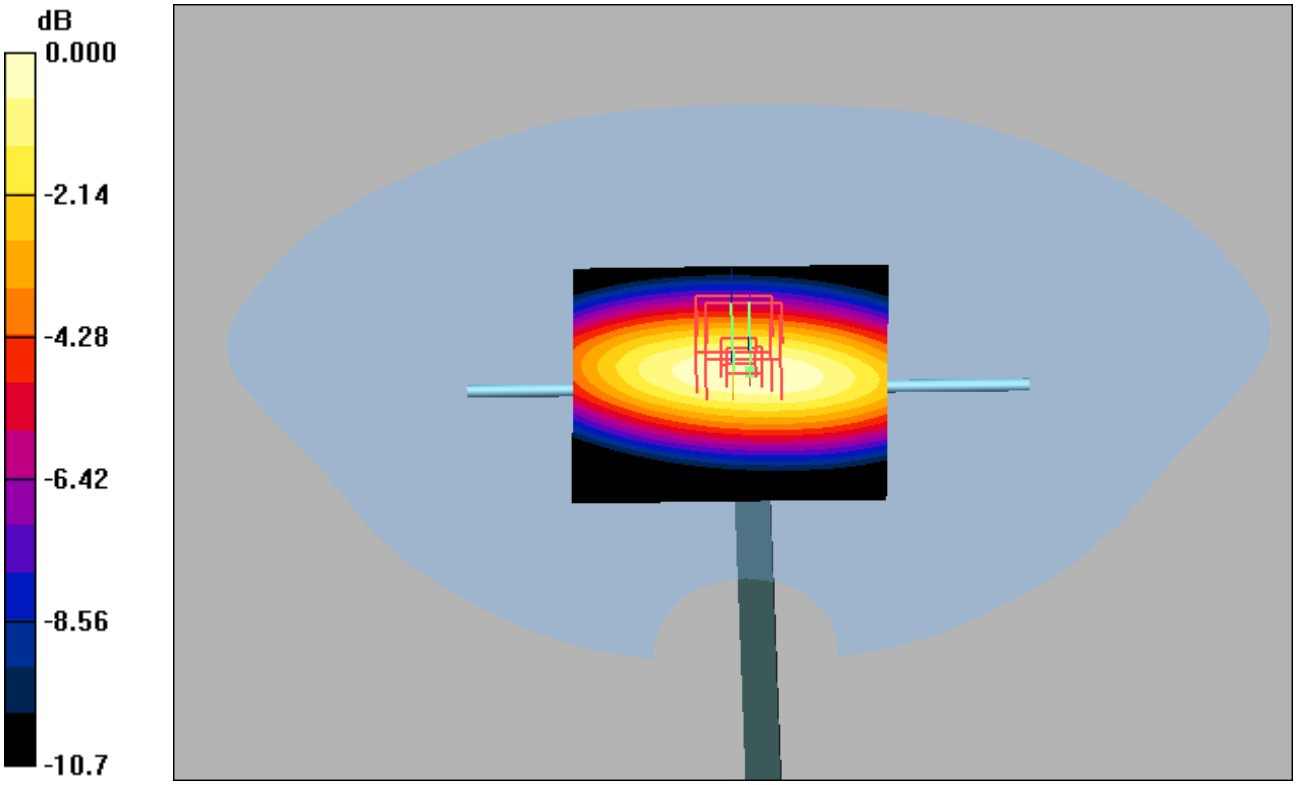
Prepared (also subject responsible if other)	No.	
SEM/CV/PF/P Rodney Dixon	REP 2009 006 X2 02	
Approved / Checked		
SEM/CV/PF/P Gerard Hayes	A	

835 MHz SAR Distribution of Validation Dipole Antenna
System Performance Check.
Validation_835Head_438_1023_02Aug09_T01
File Name: Validation_835Head_438_1023_02Aug09_T01.da4
Phantom: SAM with CRP (Low Band Head)Phantom section: Flat Section
Probe: ET3DV6 - SN1587ConvF(6.39, 6.39, 6.39)Duty Cycle: 1:1Frequency: 835 MHz
Medium parameters used: f = 835 MHz; σ = 0.906 mho/m; ε_r = 42.2; ρ = 1000 kg/m^3
Measurement Standard: DASY4 (High Precision Assessment)
Dipole at 10 mm/Area Scan (61x61x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 1.02 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 = 0.055 dB
Peak SAR (extrapolated) = 1.40 W/kg
SAR(1 g) = 0.945 mW/g; SAR(10 g) = 0.616 mW/g
Maximum value of SAR (measured) = 1.03 mW/g
Dipole at 10 mm/Zoom Scan 2 (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 34.4 V/m; Power Drift = 0.055 dB
Peak SAR (extrapolated) = 1.40 W/kg
SAR(1 g) = 0.953 mW/g; SAR(10 g) = 0.622 mW/g
Procedure Notes: Pin: before 100 mW / after 101 mW
Humidity - 43.4 % Ambient Temp - 23.6 C Simulant Temp - 23.5 C



0 dB = 1.03mW/g

835 MHz SAR Distribution of Validation Dipole Antenna
System Performance Check.
Validation_835Head_438_1023_03Aug09_T01
File Name: Validation_835Head_438_1023_03Aug09_T01.da4
Phantom: SAM with CRP (Low Band Head)Phantom section: Flat Section
Probe: ET3DV6 - SN1587ConvF(6.39, 6.39, 6.39)Duty Cycle: 1:1Frequency: 835 MHz
Medium parameters used: f = 835 MHz; σ = 0.903 mho/m; ε_r = 41.8; ρ = 1000 kg/m^3
Measurement Standard: DASY4 (High Precision Assessment)
Dipole at 10 mm/Area Scan (61x61x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 1.00 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 = 0.017 dB
Peak SAR (extrapolated) = 1.37 W/kg
SAR(1 g) = 0.925 mW/g; SAR(10 g) = 0.604 mW/g
Maximum value of SAR (measured) = 1.00 mW/g
Dipole at 10 mm/Zoom Scan 2 (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 34.4 V/m; Power Drift = 0.017 dB
Peak SAR (extrapolated) = 1.39 W/kg
SAR(1 g) = 0.945 mW/g; SAR(10 g) = 0.618 mW/g
Maximum value of SAR (measured) = 1.01 mW/g
Procedure Notes: Pin: before 100.3 mW / after 101 mW
Humidity - 44.1 % Ambient Temp - 23.6 C Simulant Temp - 23.5 C



0 dB = 1.01mW/g

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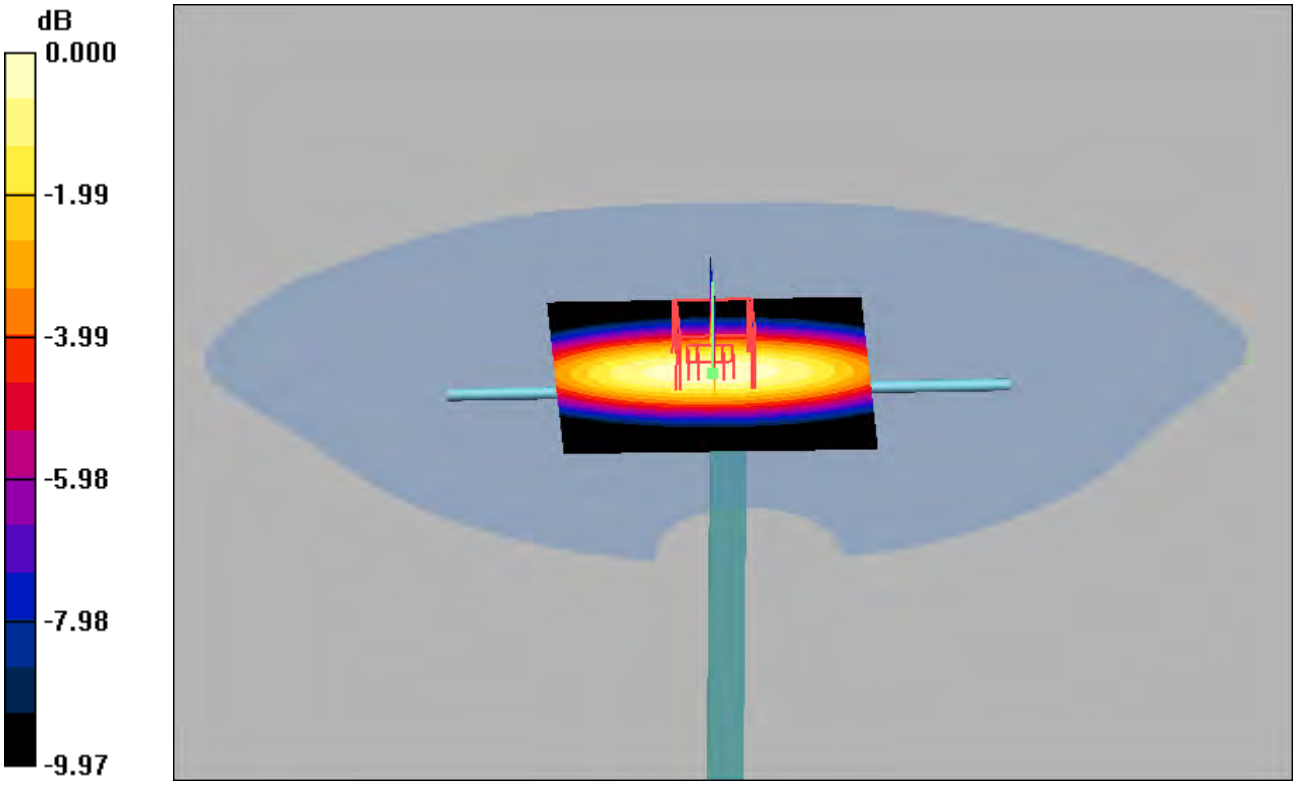
SEM/CV/PF/P Rodney Dixon	REP 2009 006 X2 02	
Approved / Checked		
SEM/CV/PF/P Gerard Hayes	A	

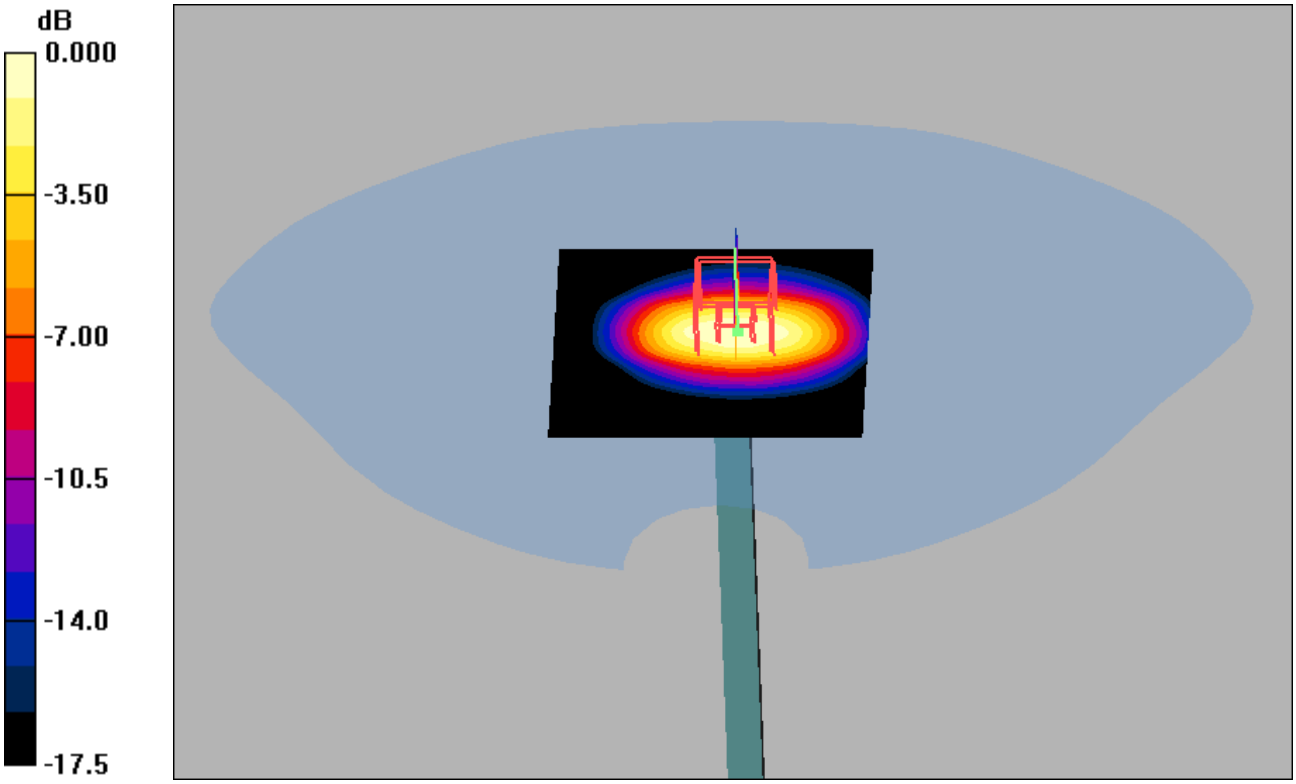
835 MHz SAR Distribution of Validation Dipole Antenna
System Performance Check.
Validation_835Body_438_1031_27July09_T01
File Name: Validation_835Body_438_1031_27July09_T01.da4
Phantom: SAM with CRP (Low Band Body)Phantom section: Flat Section
Probe: ET3DV6 - SN1539ConvF(5.53, 5.53, 5.53)Duty Cycle: 1:1Frequency: 835 MHz
Medium parameters used: f = 835 MHz; σ = 0.965 mho/m; ε_r = 55.9; ρ = 1000 kg/m^3
Measurement Standard: DASY4 (High Precision Assessment)
Dipole at 10 mm/Area Scan (61x61x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 1.07 mW/g
Dipole at 10 mm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 34.5 V/m; Power Drift = 0.102 dB
Peak SAR (extrapolated) = 1.41 W/kg
SAR(1 g) = 0.972 mW/g; SAR(10 g) = 0.636 mW/g
Maximum value of SAR (measured) = 1.05 mW/g
Dipole at 10 mm/Zoom Scan 2 (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 34.5 V/m; Power Drift = 0.102 dB
Peak SAR (extrapolated) = 1.45 W/kg
SAR(1 g) = 1.01 mW/g; SAR(10 g) = 0.671 mW/g
Maximum value of SAR (measured) = 1.09 mW/g
Procedure Notes: Pin: before 99.8 mW / after 98 mW
Humidity - 41.5 % Ambient Temp - 23.1 C Simulant Temp - 23 C



0 dB = 1.09mW/g

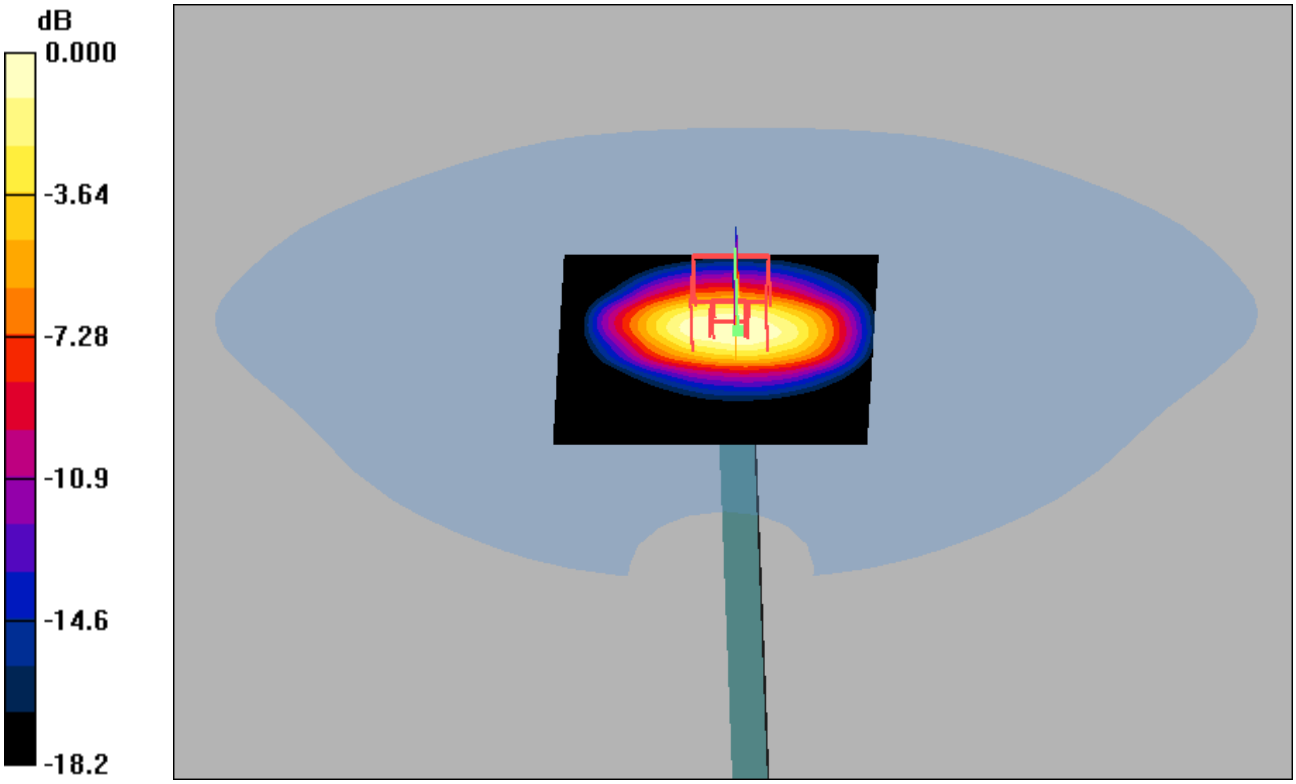
Prepared (also subject responsible if other)	No.	
SEM/CV/PF/P Rodney Dixon	REP 2009 006 X2 02	
Approved / Checked		
SEM/CV/PF/P Gerard Hayes	A	

1900 MHz SAR Distribution of Validation Dipole Antenna
System Performance Check.
Validation_1900Head_537_1335_26July09_T01
File Name: Validation_1900Head_537_1335_26July09_T01.da4
Phantom: SAM with CRP (High Band Head)Phantom section: Flat Section
Probe: ET3DV6 - SN1587ConvF(5.23, 5.23, 5.23)Duty Cycle: 1:1Frequency: 1900 MHz
Medium parameters used: f = 1900 MHz; σ = 1.45 mho/m; ε_r = 38.2; ρ = 1000 kg/m^3
Measurement Standard: DASY4 (High Precision Assessment)
Dipole at 10 mm/Area Scan (61x61x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 4.98 mW/g
Dipole at 10 mm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 59.0 V/m; Power Drift = -0.012 dB
Peak SAR (extrapolated) = 6.78 W/kg
SAR(1 g) = 3.91 mW/g; SAR(10 g) = 2.04 mW/g
Maximum value of SAR (measured) = 4.41 mW/g
Dipole at 10 mm/Zoom Scan 2 (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 59.0 V/m; Power Drift = -0.012 dB
Peak SAR (extrapolated) = 6.78 W/kg
SAR(1 g) = 3.93 mW/g; SAR(10 g) = 2.06 mW/g
Maximum value of SAR (measured) = 4.44 mW/g
Procedure Notes: Pin: before 100 mW / after 101 mW Humidity - 43.7 % Ambient Temp - 22.7 C Simulant Temp - 23 C



0 dB = 4.44mW/g

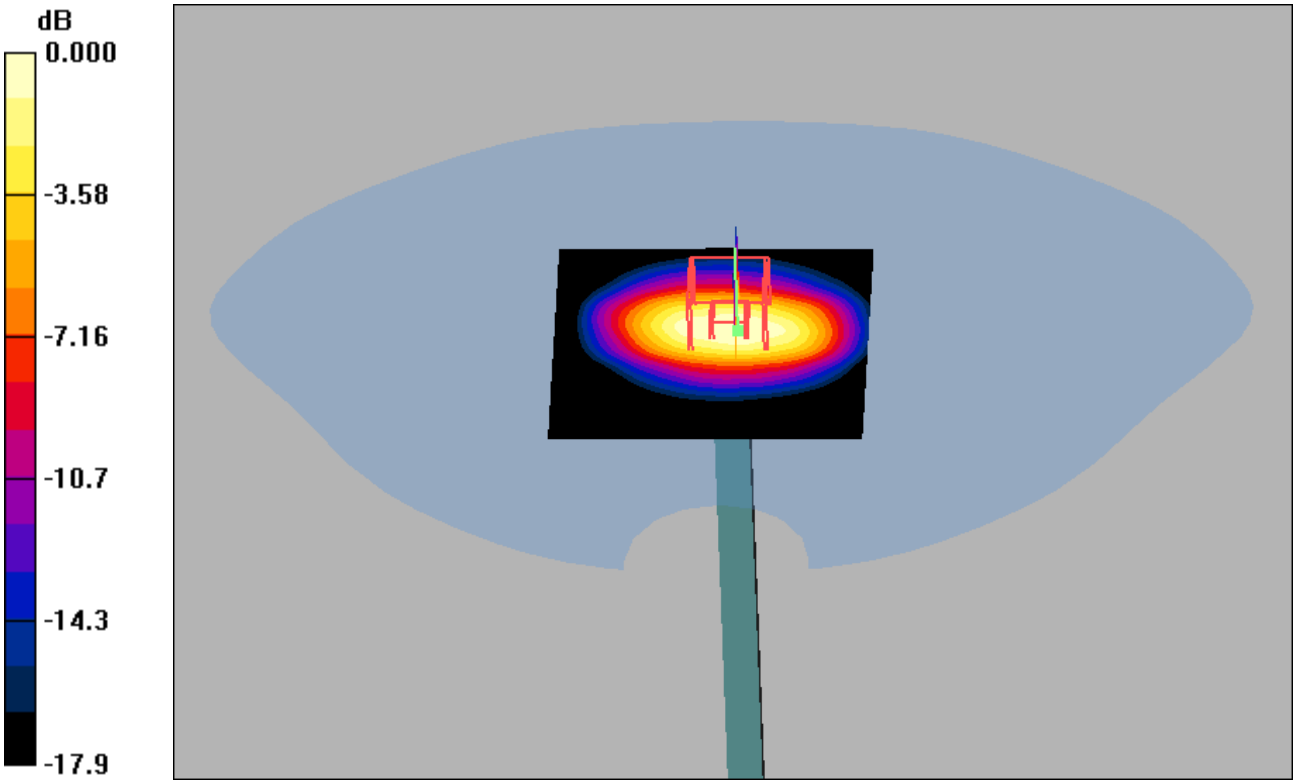
1900 MHz SAR Distribution of Validation Dipole Antenna
System Performance Check.
Validation_1900Head_537_1335_27July09_T01
File Name: Validation_1900Head_537_1335_27July09_T01.da4
Phantom: SAM with CRP (High Band Head)Phantom section: Flat Section
Probe: ET3DV6 - SN1587ConvF(5.23, 5.23, 5.23)Duty Cycle: 1:1Frequency: 1900 MHz
Medium parameters used: f = 1900 MHz; σ = 1.46 mho/m; ε_r = 38; ρ = 1000 kg/m^3
Measurement Standard: DASY4 (High Precision Assessment)
Dipole at 10 mm/Area Scan (61x61x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 4.87 mW/g
Dipole at 10 mm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 55.1 V/m; Power Drift = 0.057 dB
Peak SAR (extrapolated) = 6.86 W/kg
SAR(1 g) = 3.94 mW/g; SAR(10 g) = 2.06 mW/g
Maximum value of SAR (measured) = 4.45 mW/g
Dipole at 10 mm/Zoom Scan 2 (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 55.1 V/m; Power Drift = 0.057 dB
Peak SAR (extrapolated) = 6.99 W/kg
SAR(1 g) = 4.03 mW/g; SAR(10 g) = 2.12 mW/g
Maximum value of SAR (measured) = 4.47 mW/g
Procedure Notes: Pin: before 100.2 mW / after 102 mW Humidity - 41.5 % Ambient Temp - 23.1 C Simulant Temp - 23 C



0 dB = 4.47mW/g

Prepared (also subject responsible if other)	No.	
SEM/CV/PF/P Rodney Dixon	REP 2009 006 X2 02	
Approved / Checked		
SEM/CV/PF/P Gerard Hayes	A	

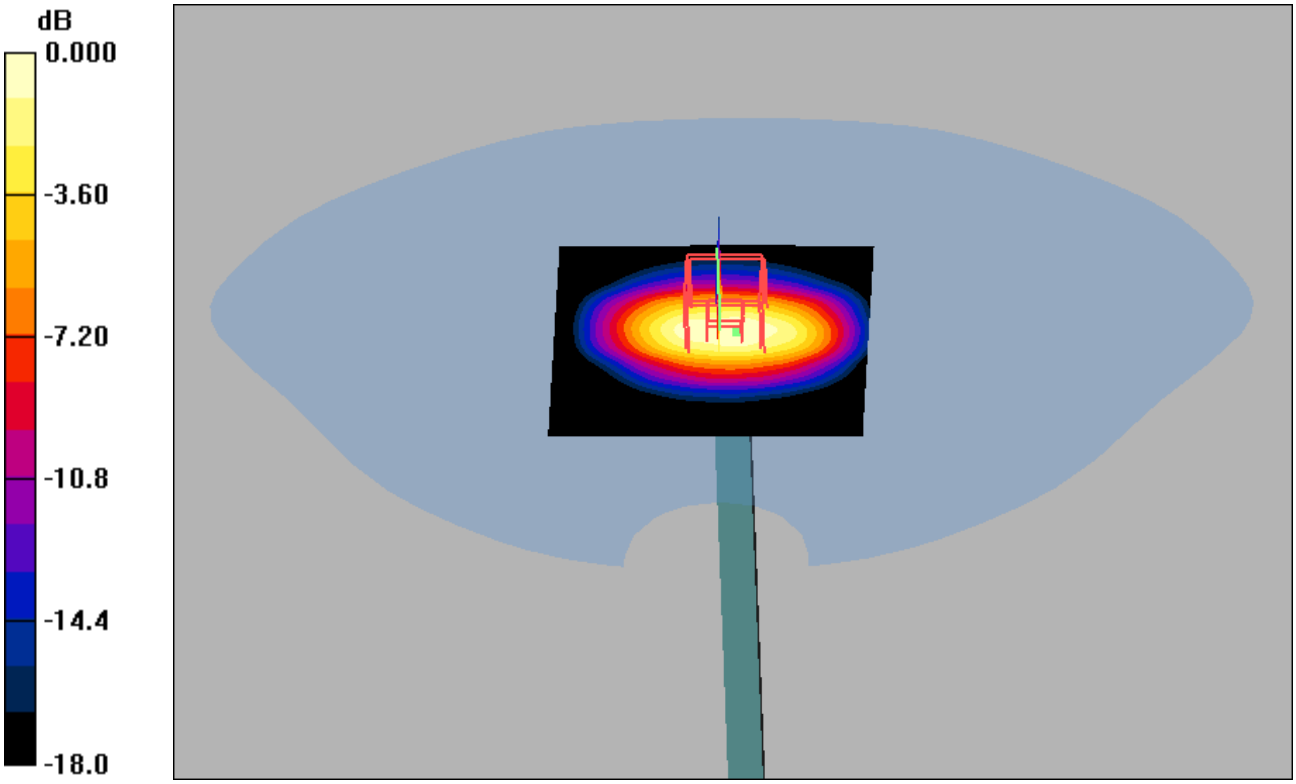
1900 MHz SAR Distribution of Validation Dipole Antenna
System Performance Check.
Validation_1900Head_536_1054_28July09_T01
File Name: Validation_1900Head_536_1054_28July09_T01.da4
Phantom: SAM with CRP (High Band Head)Phantom section: Flat Section
Probe: ET3DV6 - SN1584ConvF(5.1, 5.1, 5.1)Duty Cycle: 1:1Frequency: 1900 MHz
Medium parameters used: f = 1900 MHz; σ = 1.46 mho/m; ε_r = 38.3; ρ = 1000 kg/m^3
Measurement Standard: DASY4 (High Precision Assessment)
Dipole at 10 mm/Area Scan (61x61x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 4.93 mW/g
Dipole at 10 mm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 57.2 V/m; Power Drift = -0.038 dB
Peak SAR (extrapolated) = 7.15 W/kg
SAR(1 g) = 3.91 mW/g; SAR(10 g) = 2.04 mW/g
Maximum value of SAR (measured) = 4.36 mW/g
Dipole at 10 mm/Zoom Scan 2 (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 57.2 V/m; Power Drift = -0.038 dB
Peak SAR (extrapolated) = 7.30 W/kg
SAR(1 g) = 4.02 mW/g; SAR(10 g) = 2.1 mW/g
Maximum value of SAR (measured) = 4.44 mW/g
Procedure Notes: Pin: before 99.7 mW / after 100 mW Humidity - 41.6 % Ambient Temp - 23.5 C Simulant Temp - 23.2 C



0 dB = 4.44mW/g

Prepared (also subject responsible if other)	No.	
SEM/CV/PF/P Rodney Dixon	REP 2009 006 X2 02	
Approved / Checked		
SEM/CV/PF/P Gerard Hayes	A	

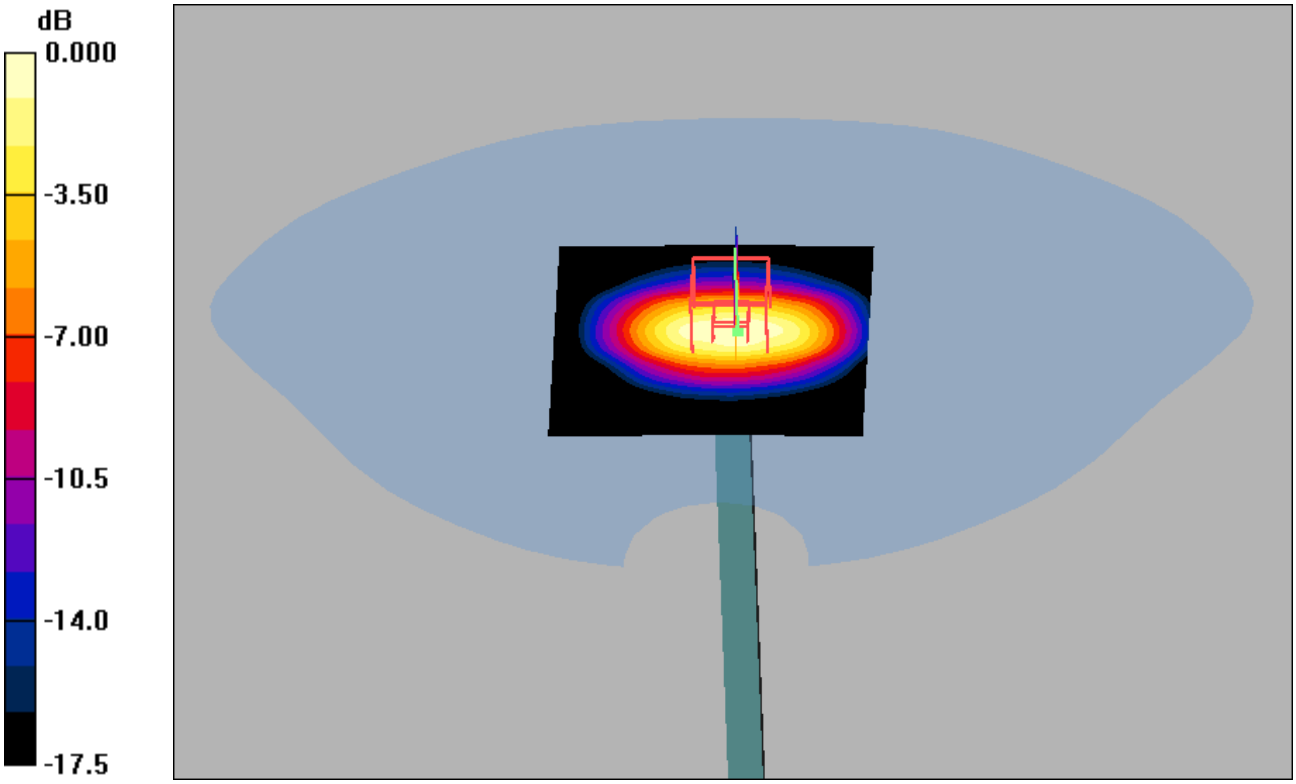
1900 MHz SAR Distribution of Validation Dipole Antenna
System Performance Check.
Validation_1900Head_536_1054_01Aug09_T01
File Name: Validation_1900Head_536_1054_01Aug09_T01.da4
Phantom: SAM with CRP (High Band Head)Phantom section: Flat Section
Probe: ET3DV6 - SN1584ConvF(5.1, 5.1, 5.1)Duty Cycle: 1:1Frequency: 1900 MHz
Medium parameters used: f = 1900 MHz; σ = 1.47 mho/m; ε_r = 39.1; ρ = 1000 kg/m^3
Measurement Standard: DASY4 (High Precision Assessment)
Dipole at 10 mm/Area Scan (61x61x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 4.84 mW/g
Dipole at 10 mm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 56.8 V/m; Power Drift = 0.024 dB
Peak SAR (extrapolated) = 7.09 W/kg
SAR(1 g) = 3.89 mW/g; SAR(10 g) = 2.03 mW/g
Maximum value of SAR (measured) = 4.38 mW/g
Dipole at 10 mm/Zoom Scan 2 (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 56.8 V/m; Power Drift = 0.024 dB
Peak SAR (extrapolated) = 7.61 W/kg
SAR(1 g) = 4.14 mW/g; SAR(10 g) = 2.16 mW/g
Maximum value of SAR (measured) = 4.55 mW/g
Procedure Notes: Pin: before 99.8 mW / after 101 mW Humidity - 42.5 % Ambient Temp - 23.6 C Simulant Temp - 23.4 C



0 dB = 4.55mW/g

Prepared (also subject responsible if other)	No.	
SEM/CV/PF/P Rodney Dixon	REP 2009 006 X2 02	
Approved / Checked		
SEM/CV/PF/P Gerard Hayes	A	

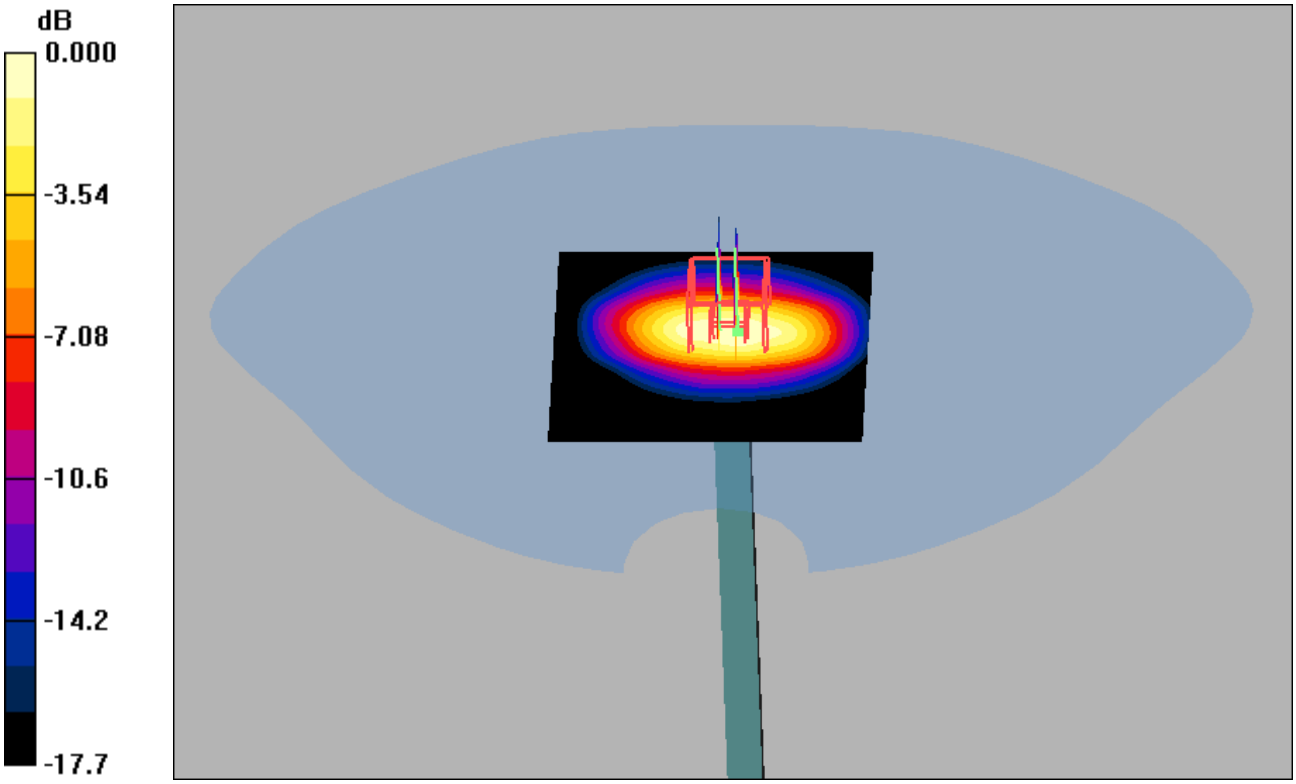
1900 MHz SAR Distribution of Validation Dipole Antenna
System Performance Check.
Validation_1900Head_536_1054_02Aug09_T01
File Name: Validation_1900Head_536_1054_02Aug09_T01.da4
Phantom: SAM with CRP (High Band Head)Phantom section: Flat Section
Probe: ET3DV6 - SN1584ConvF(5.1, 5.1, 5.1)Duty Cycle: 1:1Frequency: 1900 MHz
Medium parameters used: f = 1900 MHz; σ = 1.44 mho/m; ε_r = 38.4; ρ = 1000 kg/m^3
Measurement Standard: DASY4 (High Precision Assessment)
Dipole at 10 mm/Area Scan (61x61x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 4.77 mW/g
Dipole at 10 mm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 56.9 V/m; Power Drift = 0.015 dB
Peak SAR (extrapolated) = 6.93 W/kg
SAR(1 g) = 3.82 mW/g; SAR(10 g) = 1.99 mW/g
Maximum value of SAR (measured) = 4.29 mW/g
Dipole at 10 mm/Zoom Scan 2 (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 56.9 V/m; Power Drift = 0.015 dB
Peak SAR (extrapolated) = 7.34 W/kg
SAR(1 g) = 4.02 mW/g; SAR(10 g) = 2.1 mW/g
Maximum value of SAR (measured) = 4.48 mW/g
Procedure Notes: Pin: before 100 mW / after 100.5 mW Humidity - 43.4 % Ambient Temp - 23.6 C Simulant Temp - 23.5 C



0 dB = 4.48mW/g

Prepared (also subject responsible if other)	No.	
SEM/CV/PF/P Rodney Dixon	REP 2009 006 X2 02	
Approved / Checked		
SEM/CV/PF/P Gerard Hayes	A	

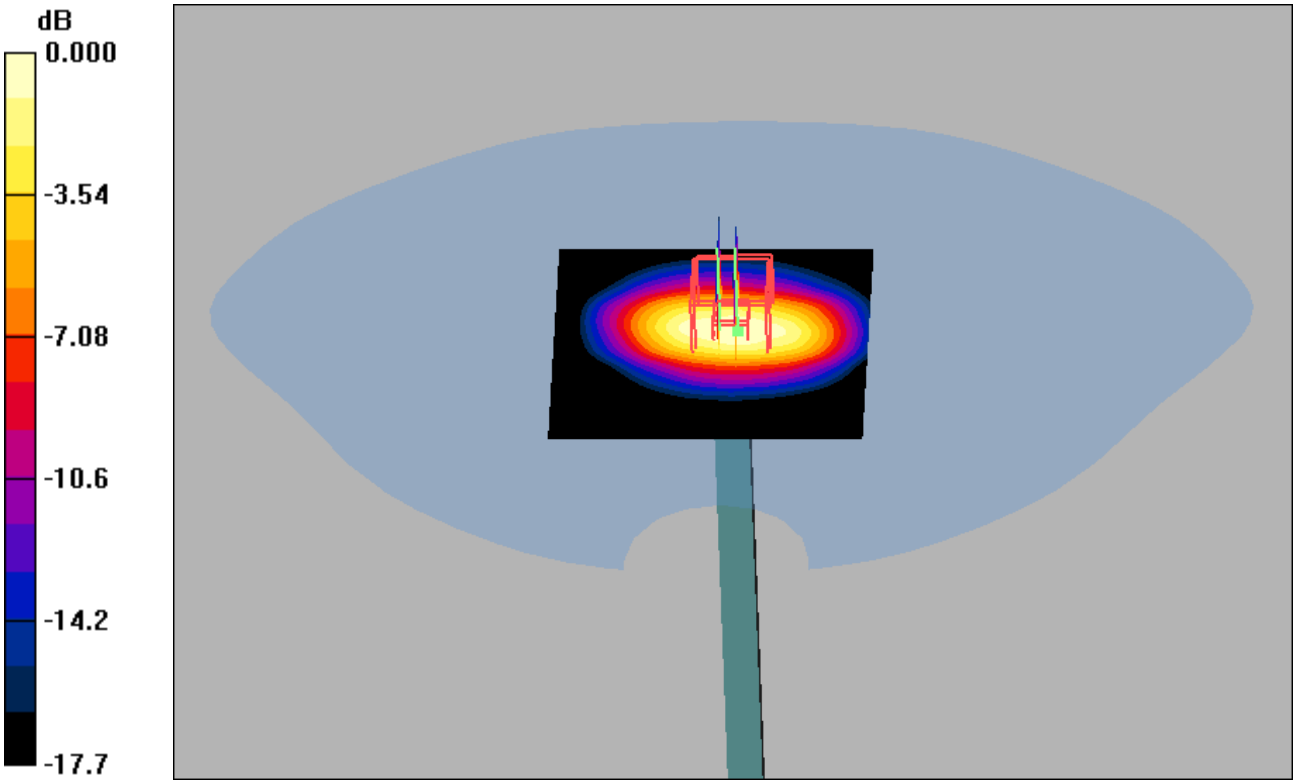
1900 MHz SAR Distribution of Validation Dipole Antenna
System Performance Check.
Validation_1900Head_536_1054_03Aug09_T01
File Name: Validation_1900Head_536_1054_03Aug09_T01.da4
Phantom: SAM with CRP (High Band Head)Phantom section: Flat Section
Probe: ET3DV6 - SN1584ConvF(5.1, 5.1, 5.1)Duty Cycle: 1:1Frequency: 1900 MHz
Medium parameters used: f = 1900 MHz; σ = 1.45 mho/m; ε_r = 38.4; ρ = 1000 kg/m^3
Measurement Standard: DASY4 (High Precision Assessment)
Dipole at 10 mm/Area Scan (61x61x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 4.86 mW/g
Dipole at 10 mm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 56.4 V/m; Power Drift = -0.014 dB
Peak SAR (extrapolated) = 6.93 W/kg
SAR(1 g) = 3.83 mW/g; SAR(10 g) = 2.01 mW/g
Maximum value of SAR (measured) = 4.32 mW/g
Dipole at 10 mm/Zoom Scan 2 (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 56.4 V/m; Power Drift = -0.014 dB
Peak SAR (extrapolated) = 7.41 W/kg
SAR(1 g) = 4.07 mW/g; SAR(10 g) = 2.12 mW/g
Maximum value of SAR (measured) = 4.52 mW/g
Procedure Notes: Pin: before 100.3 mW / after 101 mW Humidity - 44.1 % Ambient Temp - 23.6 C Simulant Temp - 23.5 C



0 dB = 4.52mW/g

Prepared (also subject responsible if other)	No.	
SEM/CV/PF/P Rodney Dixon	REP 2009 006 X2 02	
Approved / Checked		
SEM/CV/PF/P Gerard Hayes	A	

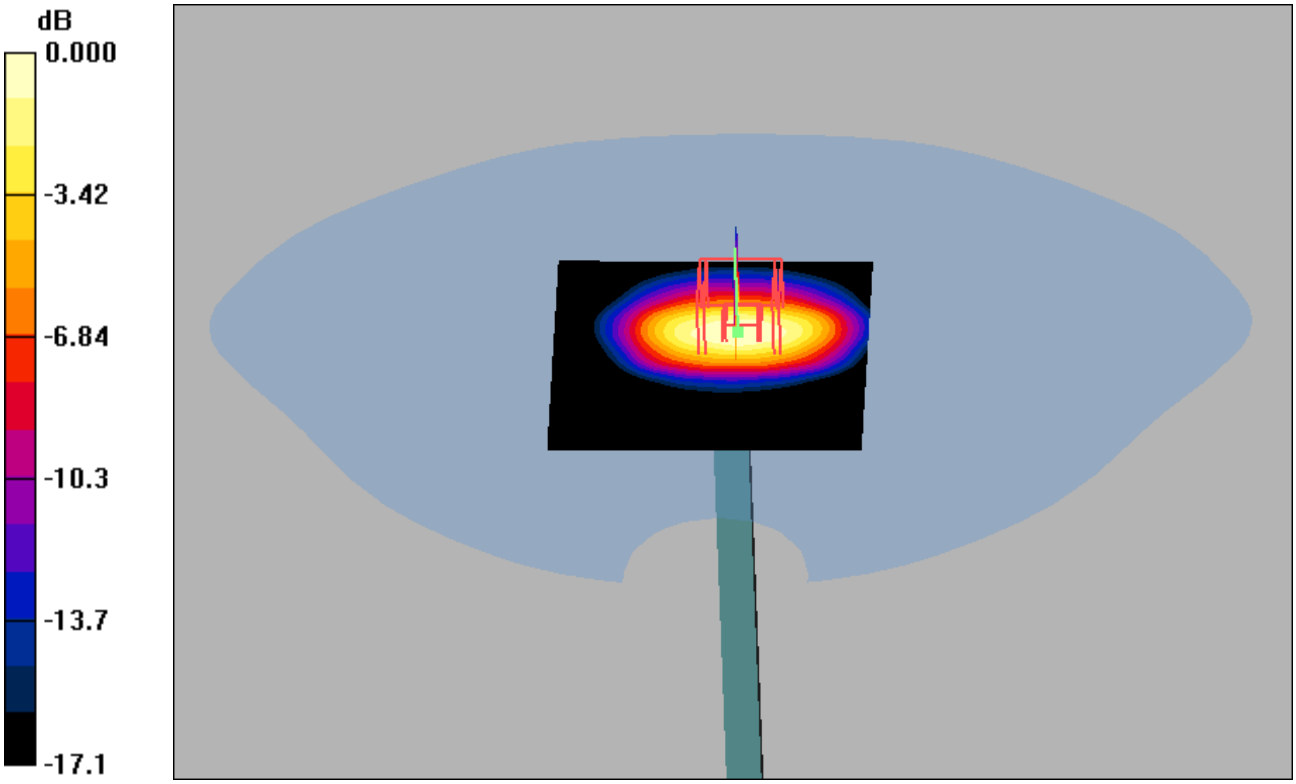
1900 MHz SAR Distribution of Validation Dipole Antenna
System Performance Check.
Validation_1900Head_536_1054_04Aug09_T01
File Name: Validation_1900Head_536_1054_04Aug09_T01.da4
Phantom: SAM with CRP (High Band Head)Phantom section: Flat Section
Probe: ET3DV6 - SN1584ConvF(5.1, 5.1, 5.1)Duty Cycle: 1:1Frequency: 1900 MHz
Medium parameters used: f = 1900 MHz; σ = 1.46 mho/m; ε_r = 38.3; ρ = 1000 kg/m^3
Measurement Standard: DASY4 (High Precision Assessment)
Dipole at 10 mm/Area Scan (61x61x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 4.95 mW/g
Dipole at 10 mm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 57.0 V/m; Power Drift = -0.041 dB
Peak SAR (extrapolated) = 6.99 W/kg
SAR(1 g) = 3.88 mW/g; SAR(10 g) = 2.03 mW/g
Maximum value of SAR (measured) = 4.34 mW/g
Dipole at 10 mm/Zoom Scan 2 (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 57.0 V/m; Power Drift = -0.041 dB
Peak SAR (extrapolated) = 7.51 W/kg
SAR(1 g) = 4.1 mW/g; SAR(10 g) = 2.14 mW/g
Maximum value of SAR (measured) = 4.55 mW/g
Procedure Notes: Pin: before 100 mW / after 100.4 mW Humidity - 43.7 % Ambient Temp - 23.4 C Simulant Temp - 23.4 C



0 dB = 4.55mW/g

Prepared (also subject responsible if other)	No.	
SEM/CV/PF/P Rodney Dixon	REP 2009 006 X2 02	
Approved / Checked		
SEM/CV/PF/P Gerard Hayes	A	

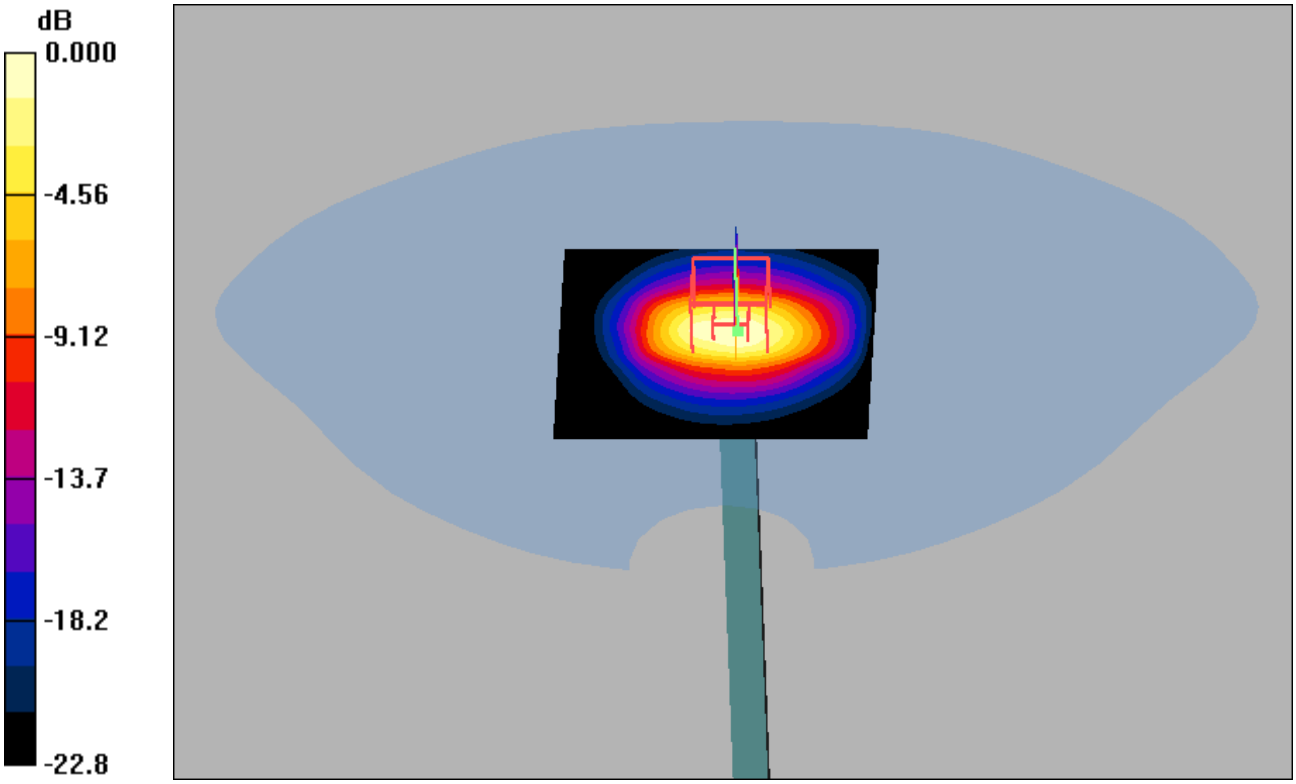
1900 MHz SAR Distribution of Validation Dipole Antenna
System Performance Check.
Validation_1900Body_536_1020_15Aug09_T01
File Name: Validation_1900Body_536_1020_15Aug09_T01.da4
Phantom: SAM with CRP (High Band Body)Phantom section: Flat Section
Probe: ET3DV6 - SN1539ConvF(4.21, 4.21, 4.21)Duty Cycle: 1:1Frequency: 1900 MHz
Medium parameters used: f = 1900 MHz; σ = 1.54 mho/m; ε_r = 52.1; ρ = 1000 kg/m^3
Measurement Standard: DASY4 (High Precision Assessment)
Dipole at 10 mm/Area Scan (61x61x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 5.04 mW/g
Dipole at 10 mm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 49.5 V/m; Power Drift = 0.049 dB
Peak SAR (extrapolated) = 7.60 W/kg
SAR(1 g) = 4.12 mW/g; SAR(10 g) = 2.16 mW/g
Maximum value of SAR (measured) = 4.62 mW/g
Dipole at 10 mm/Zoom Scan 2 (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 49.5 V/m; Power Drift = 0.049 dB
Peak SAR (extrapolated) = 7.74 W/kg
SAR(1 g) = 4.22 mW/g; SAR(10 g) = 2.22 mW/g
Maximum value of SAR (measured) = 4.75 mW/g
Procedure Notes: Pin: before 100.8 mW / after 99 mW Humidity - 41.6 % Ambient Temp - 23.7 C Simulant Temp - 23.3 C



0 dB = 4.75mW/g

Prepared (also subject responsible if other)	No.	
SEM/CV/PF/P Rodney Dixon	REP 2009 006 X2 02	
Approved / Checked		
SEM/CV/PF/P Gerard Hayes	A	

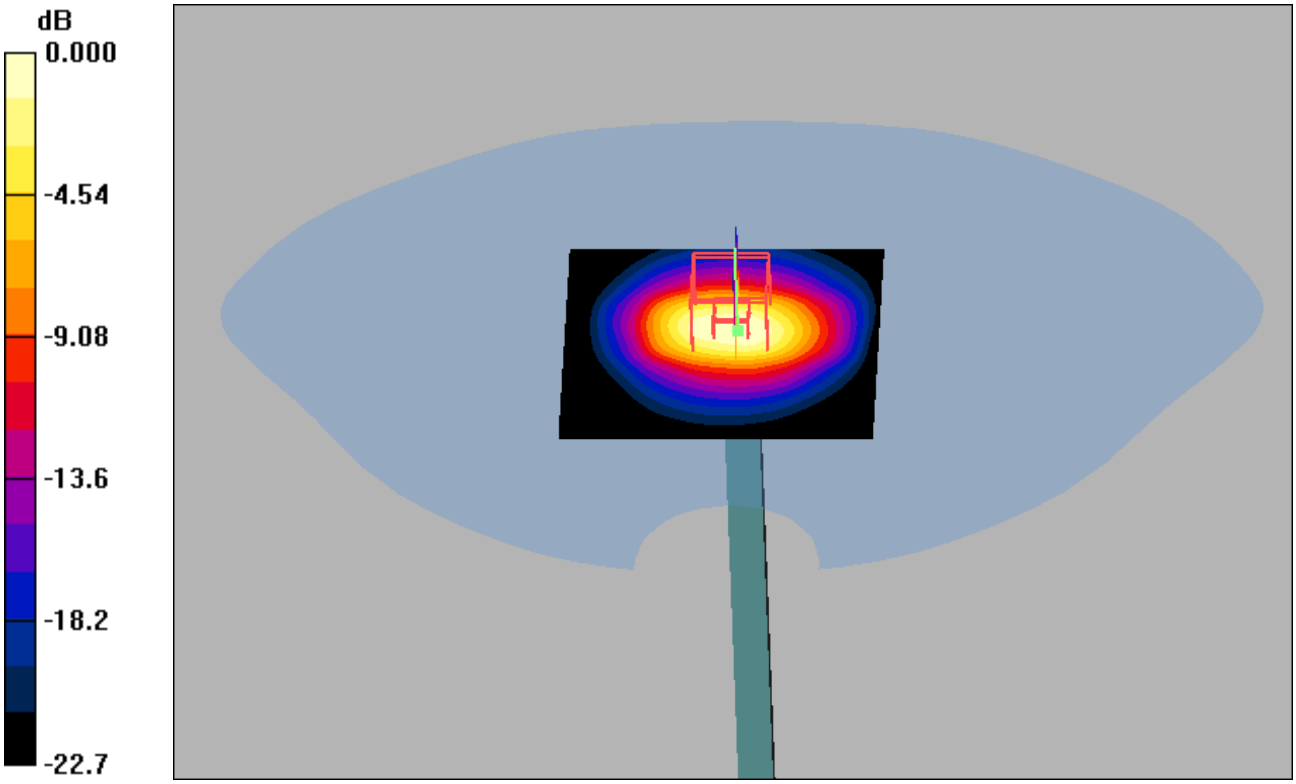
2450 MHz SAR Distribution of Validation Dipole Antenna
System Performance Check.
Validation_2450Head_702_1251_30July09_T01
File Name: Validation_2450Head_702_1251_30July09_T01.da4
Phantom: SAM with CRP (WLAN right phantom)Phantom section: Flat Section
Probe: ET3DV6 - SN1584ConvF(4.51, 4.51, 4.51)Duty Cycle: 1:1Frequency: 2450 MHz
Medium parameters used: f = 2450 MHz; σ = 1.92 mho/m; ε_r = 39.4; ρ = 1000 kg/m^3
Measurement Standard: DASY4 (High Precision Assessment)
Dipole at 10 mm/Area Scan (61x61x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 6.86 mW/g
Dipole at 10 mm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 55.8 V/m; Power Drift = -0.032 dB
Peak SAR (extrapolated) = 12.7 W/kg
SAR(1 g) = 5.21 mW/g; SAR(10 g) = 2.34 mW/g
Maximum value of SAR (measured) = 5.65 mW/g
Dipole at 10 mm/Zoom Scan 2 (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 55.8 V/m; Power Drift = -0.032 dB
Peak SAR (extrapolated) = 14.1 W/kg
SAR(1 g) = 5.68 mW/g; SAR(10 g) = 2.54 mW/g
Maximum value of SAR (measured) = 6.17 mW/g
Procedure Notes: Pin: before 97.4 mW / after 97.9 mW Humidity: 40.9 % Ambient Temp: 23.2 C Simulant Temp: 23 C



0 dB = 6.17mW/g

Prepared (also subject responsible if other)	No.	
SEM/CV/PF/P Rodney Dixon	REP 2009 006 X2 02	
Approved / Checked		
SEM/CV/PF/P Gerard Hayes	A	

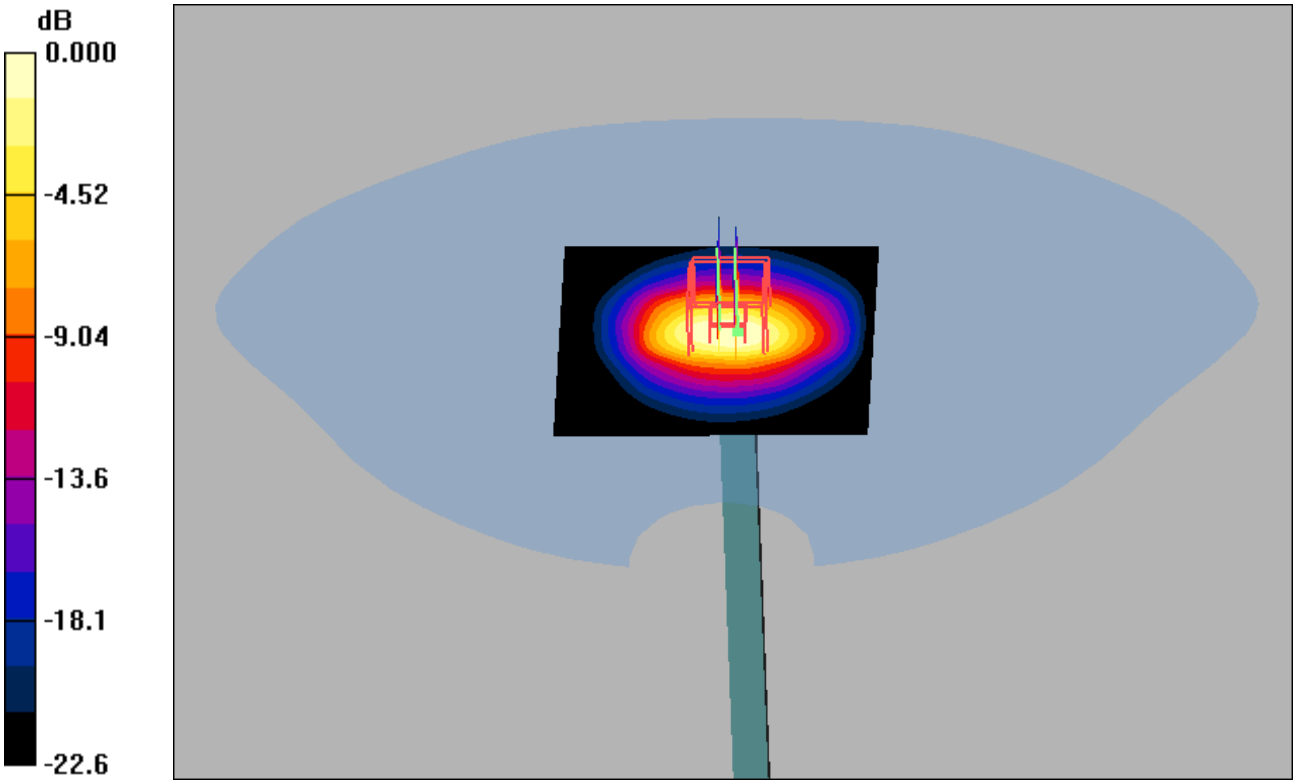
2450 MHz SAR Distribution of Validation Dipole Antenna
System Performance Check.
Validation_2450Head_702_1251_05Aug09_T01
File Name: Validation_2450Head_702_1251_05Aug09_T01.da4
Phantom: SAM with CRP (WLAN right phantom)Phantom section: Flat Section
Probe: ET3DV6 - SN1584ConvF(4.51, 4.51, 4.51)Duty Cycle: 1:1Frequency: 2450 MHz
Medium parameters used: f = 2450 MHz; σ = 1.92 mho/m; ε_r = 39.3; ρ = 1000 kg/m^3
Measurement Standard: DASY4 (High Precision Assessment)
Dipole at 10 mm/Area Scan (61x61x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 6.78 mW/g
Dipole at 10 mm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 55.6 V/m; Power Drift = 0.010 dB
Peak SAR (extrapolated) = 12.9 W/kg
SAR(1 g) = 5.34 mW/g; SAR(10 g) = 2.41 mW/g
Maximum value of SAR (measured) = 5.83 mW/g
Dipole at 10 mm/Zoom Scan 2 (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 55.6 V/m; Power Drift = 0.010 dB
Peak SAR (extrapolated) = 13.9 W/kg
SAR(1 g) = 5.67 mW/g; SAR(10 g) = 2.54 mW/g
Maximum value of SAR (measured) = 5.95 mW/g
Procedure Notes: Pin: before 100 mW / after 98 mW Humidity: 45.7 % Ambient Temp: 23.3 C Simulant Temp: 23.4 C



0 dB = 5.95mW/g

Prepared (also subject responsible if other)	No.	
SEM/CV/PF/P Rodney Dixon	REP 2009 006 X2 02	
Approved / Checked		
SEM/CV/PF/P Gerard Hayes	A	

2450 MHz SAR Distribution of Validation Dipole Antenna
System Performance Check.
Validation_2450Body_702_1251_29July09_T01
File Name: Validation_2450Body_702_1251_29July09_T01.da4
Phantom: SAM with CRP (WLAN right phantom)Phantom section: Flat Section
Probe: ET3DV6 - SN1584ConvF(3.9, 3.9, 3.9)Duty Cycle: 1:1Frequency: 2450 MHz
Medium parameters used: f = 2450 MHz; σ = 2.11 mho/m; ε_r = 51.8; ρ = 1000 kg/m^3
Measurement Standard: DASY4 (High Precision Assessment)
Dipole at 10 mm/Area Scan (61x61x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 6.75 mW/g
Dipole at 10 mm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 54.6 V/m; Power Drift = -0.030 dB
Peak SAR (extrapolated) = 13.9 W/kg
SAR(1 g) = 5.55 mW/g; SAR(10 g) = 2.46 mW/g
Maximum value of SAR (measured) = 6.04 mW/g
Dipole at 10 mm/Zoom Scan 2 (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 54.6 V/m; Power Drift = -0.030 dB
Peak SAR (extrapolated) = 14.4 W/kg
SAR(1 g) = 5.77 mW/g; SAR(10 g) = 2.56 mW/g
Maximum value of SAR (measured) = 6.23 mW/g
Procedure Notes: Pin: before 97.4 mW / after 98 mW Humidity: 41.3 % Ambient Temp: 23.4 C Simulant Temp: 23.1 C



0 dB = 6.23mW/g

Prepared (also subject responsible if other)		No.	
SEM/CV/PF/P Rodney Dixon		REP 2009 006 X2 02	
Approved	Checked		
SEM/CV/PF/P Gerard Hayes		A	

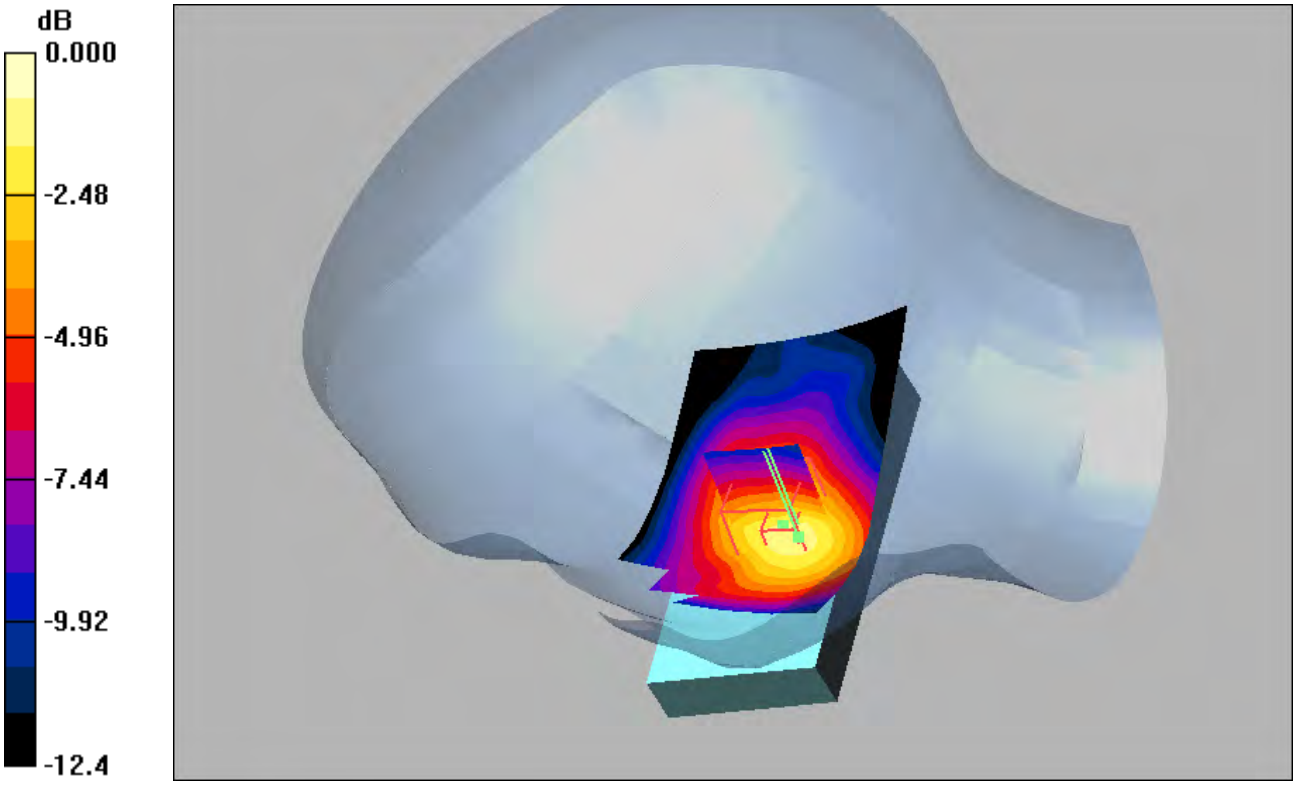
Appendix 2

SAR distribution plots for Phantom Head Adjacent Use

Closed Position

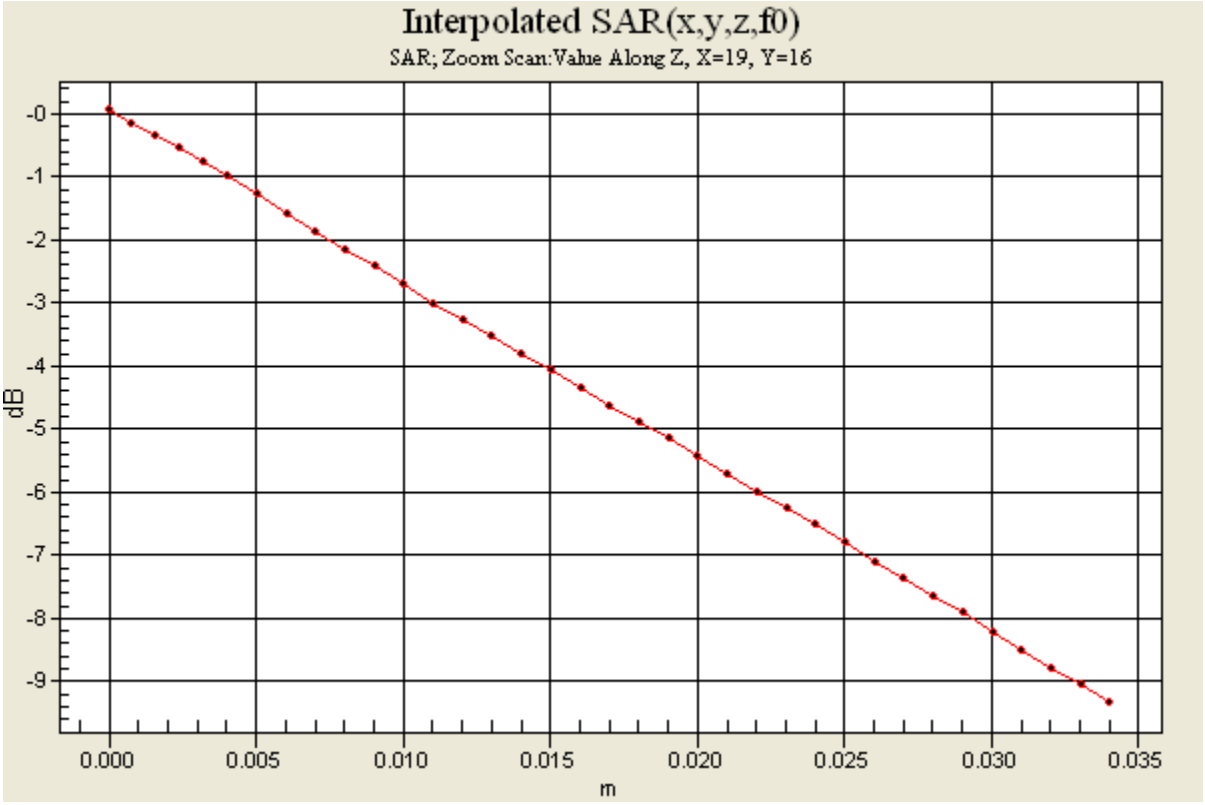
800 GSM Band: SAR Distribution and Extrapolation of Maximum SAR
Model: X2 with Standard Battery: BST-41, Right Cheek Position.
Date/Time: 8/2/2009 2:40:06 PM
File Name: 02Ayg09_X2_GSM850_SB40_RCT01.da4
DUT: Vulcan
Phantom: SAM with CRP (Low Band Head)Phantom section: Right Section
Probe: ET3DV6 - SN1587ConvF(6.39, 6.39, 6.39)
Medium parameters used (interpolated): f = 849 MHz; σ = 0.919 mho/m; ε_r = 42; ρ = 1000 kg/m^3
Measurement Standard: DASY4 (High Precision Assessment)
Program Notes: Battery BST-41 Humidity - 43.4 % Ambient Temp - 23.6 C Simulant Temp - 23.5 C
DASY4 Configuration:
- Probe: ET3DV6 - SN1587; ConvF(6.39, 6.39, 6.39); Calibrated: 5/25/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn345; Calibrated: 10/31/2008
- Phantom: SAM with CRP (Low Band Head); Type: SAM; Serial: 1023
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186
High channel cheek/Area Scan (51x81x1): Measurement grid: dx=15mm, dy=15mm
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.235 mW/g
High channel cheek/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 7.03 V/m; Power Drift = 0.007 dB
Peak SAR (extrapolated) = 0.302 W/kg
SAR(1 g) = 0.218 mW/g; SAR(10 g) = 0.148 mW/g
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.236 mW/g
High channel cheek/Zoom Scan (31x31x36)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 7.03 V/m; Power Drift = 0.007 dB
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.302 mW/g

Prepared (also subject responsible if other)	No.	
SEM/CV/PF/P Rodney Dixon	REP 2009 006 X2 02	
Approved / Checked		
SEM/CV/PF/P Gerard Hayes	A	



0 dB = 0.302mW/g

Prepared (also subject responsible if other)	No.	
SEM/CV/PF/P Rodney Dixon	REP 2009 006 X2 02	
Approved / Checked		
SEM/CV/PF/P Gerard Hayes	A	

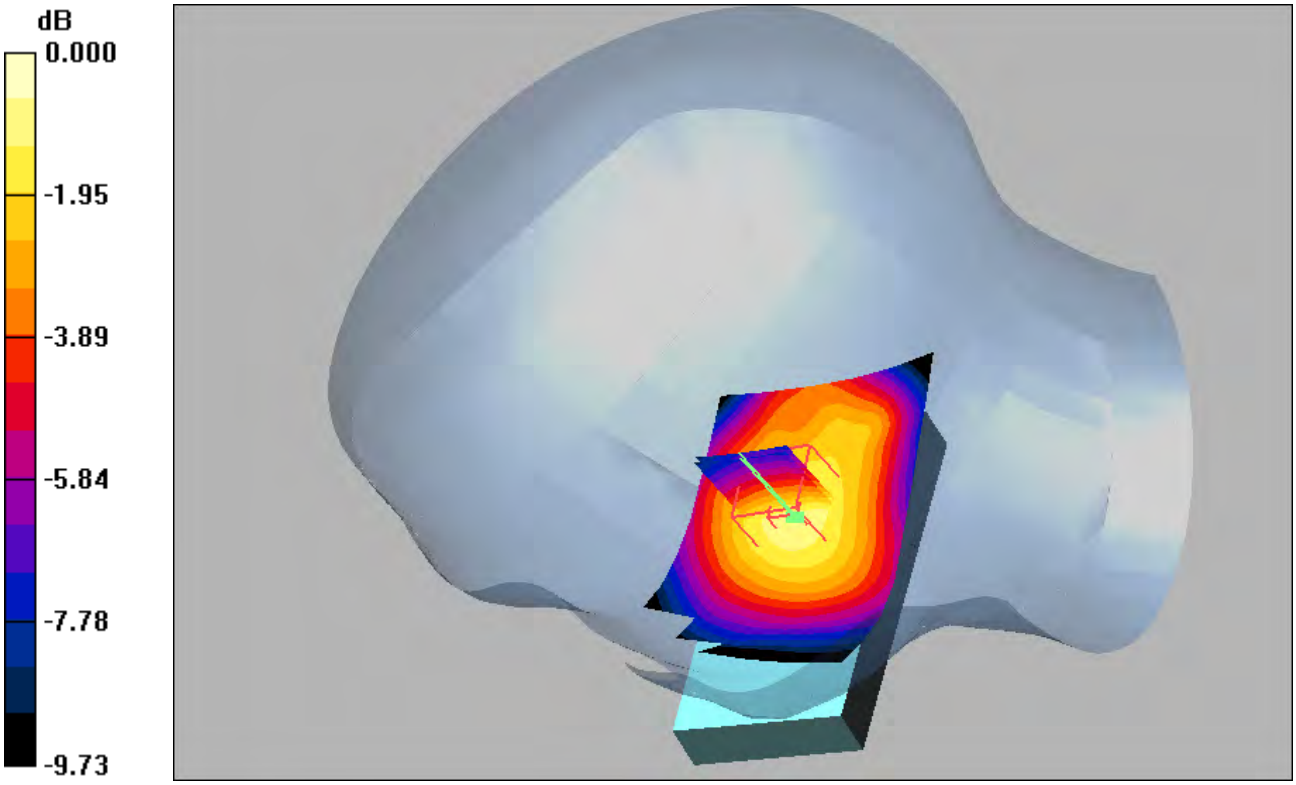


Prepared (also subject responsible if other)	No.	
SEM/CV/PF/P Rodney Dixon	REP 2009 006 X2 02	
Approved / Checked		
SEM/CV/PF/P Gerard Hayes	A	

800 GSM Band: Distribution and Extrapolation of Maximum SAR
Model: X2 with Standard Battery: BST-41, Right Tilt Position.
Date/Time: 8/2/2009 3:22:33 PM
File Name: 02Ayg09_X2_GSM850_SB40_RCT01.da4
DUT: Vulcan
Phantom: SAM with CRP (Low Band Head)Phantom section: Right Section
Probe: ET3DV6 - SN1587ConvF(6.39, 6.39, 6.39)
Medium parameters used (interpolated): f = 836 MHz; σ = 0.907 mho/m; ε_r = 42.2; ρ = 1000 kg/m^3
Measurement Standard: DASY4 (High Precision Assessment)
Program Notes: Battery BST-41 Humidity - 43.4 % Ambient Temp - 23.6 C Simulant Temp - 23.5 C
DASY4 Configuration:
- Probe: ET3DV6 - SN1587; ConvF(6.39, 6.39, 6.39); Calibrated: 5/25/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn345; Calibrated: 10/31/2008
- Phantom: SAM with CRP (Low Band Head); Type: SAM; Serial: 1023
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

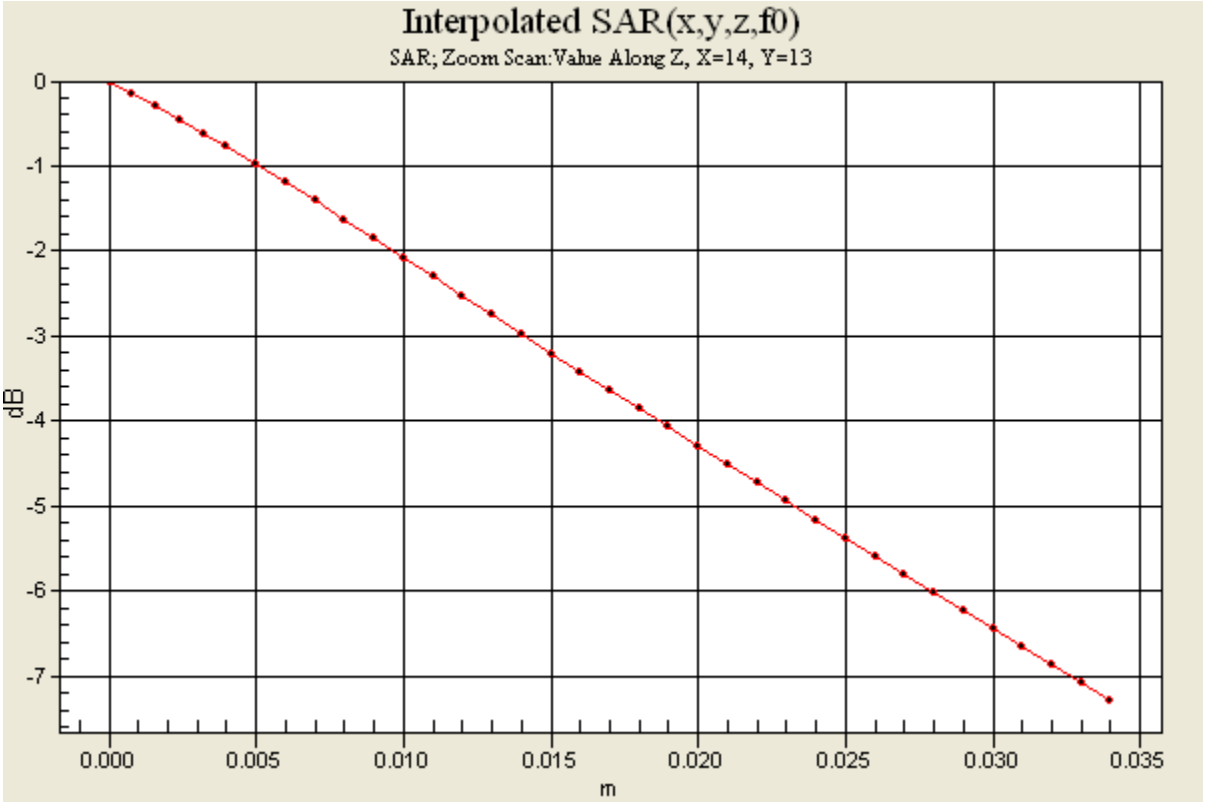
Middle channel tilt/Area Scan (51x81x1): Measurement grid: dx=15mm, dy=15mm
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.104 mW/g
Middle channel tilt/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 9.90 V/m; Power Drift = 0.047 dB
Peak SAR (extrapolated) = 0.124 W/kg
SAR(1 g) = 0.098 mW/g; SAR(10 g) = 0.073 mW/g
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.105 mW/g
Middle channel tilt/Zoom Scan (31x31x36)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 9.90 V/m; Power Drift = 0.047 dB
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.124 mW/g

Prepared (also subject responsible if other)	No.	
SEM/CV/PF/P Rodney Dixon	REP 2009 006 X2 02	
Approved / Checked		
SEM/CV/PF/P Gerard Hayes	A	



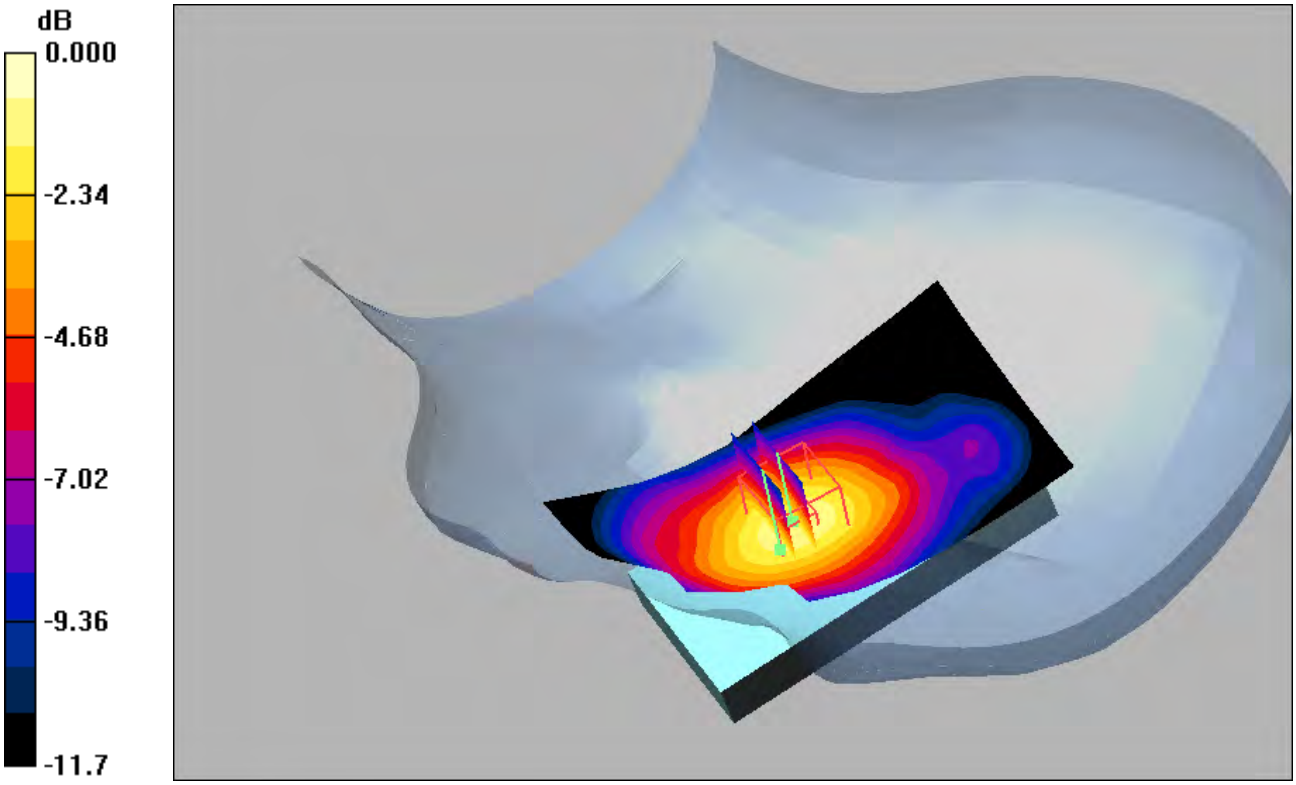
0 dB = 0.124mW/g

Prepared (also subject responsible if other)	No.	
SEM/CV/PF/P Rodney Dixon	REP 2009 006 X2 02	
Approved / Checked		
SEM/CV/PF/P Gerard Hayes	A	

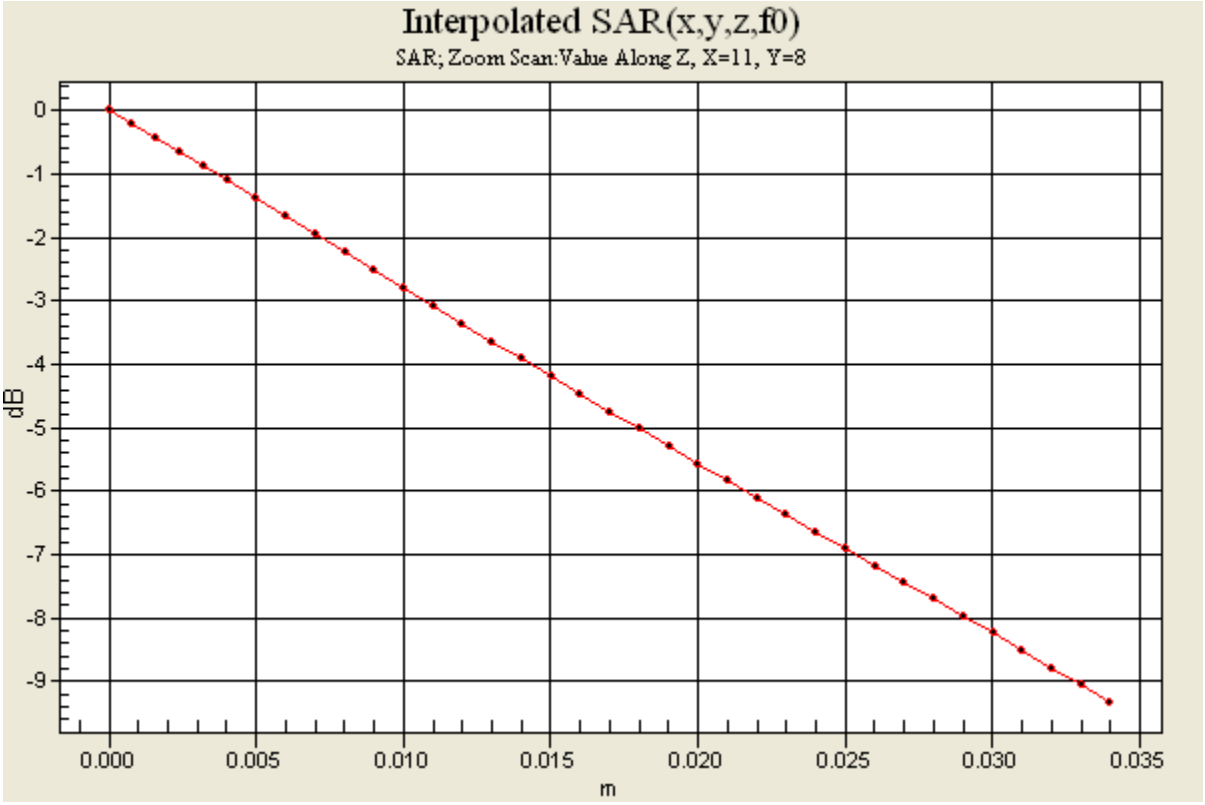


800 GSM Band: Distribution and Extrapolation of Maximum SAR
Model: X2 with Standard Battery: BST-41, Left Cheek Position.
Date/Time: 8/2/2009 11:30:51 AM
File Name: 02Ayg09_X2_GSM850_SB40_LCT01.da4
DUT: Vulcan
Phantom: SAM with CRP (Low Band Head)Phantom section: Left Section
Probe: ET3DV6 - SN1587ConvF(6.39, 6.39, 6.39)
Medium parameters used (interpolated): f = 849 MHz; σ = 0.919 mho/m; ε_r = 42; ρ = 1000 kg/m^3
Measurement Standard: DASY4 (High Precision Assessment)
Program Notes: Battery BST-41 Humidity - 43.4 % Ambient Temp - 23.6 C Simulant Temp - 23.5 C
DASY4 Configuration:
- Probe: ET3DV6 - SN1587; ConvF(6.39, 6.39, 6.39); Calibrated: 5/25/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn345; Calibrated: 10/31/2008
- Phantom: SAM with CRP (Low Band Head); Type: SAM; Serial: 1023
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186
High channel cheek/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.228 mW/g
High channel cheek/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 6.39 V/m; Power Drift = -0.008 dB
Peak SAR (extrapolated) = 0.277 W/kg
SAR(1 g) = 0.208 mW/g; SAR(10 g) = 0.149 mW/g
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.220 mW/g
High channel cheek/Zoom Scan (31x31x36)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 6.39 V/m; Power Drift = -0.008 dB
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.277 mW/g

Prepared (also subject responsible if other)	No.	
SEM/CV/PF/P Rodney Dixon	REP 2009 006 X2 02	
Approved / Checked		
SEM/CV/PF/P Gerard Hayes	A	



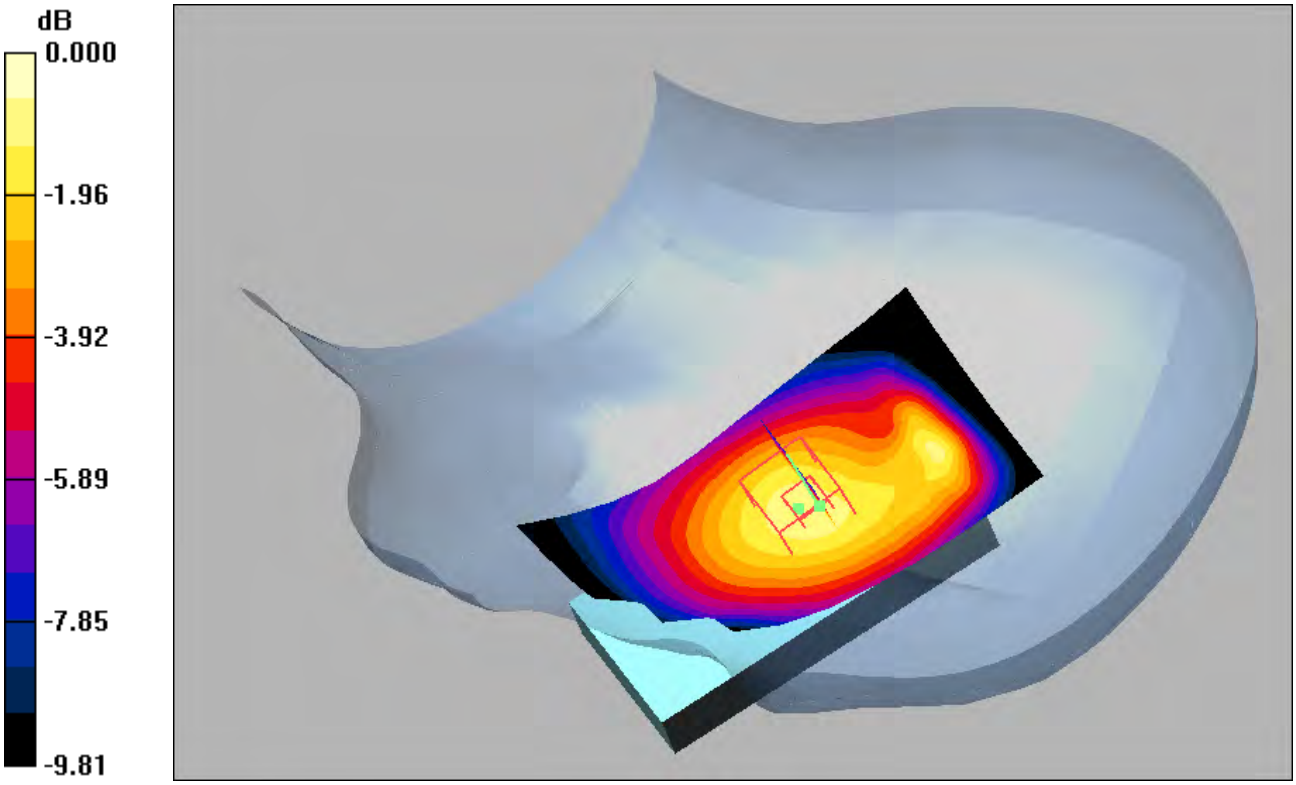
0 dB = 0.277mW/g


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

Prepared (also subject responsible if other)	No.	
SEM/CV/PF/P Rodney Dixon	REP 2009 006 X2 02	
Approved / Checked		
SEM/CV/PF/P Gerard Hayes	A	

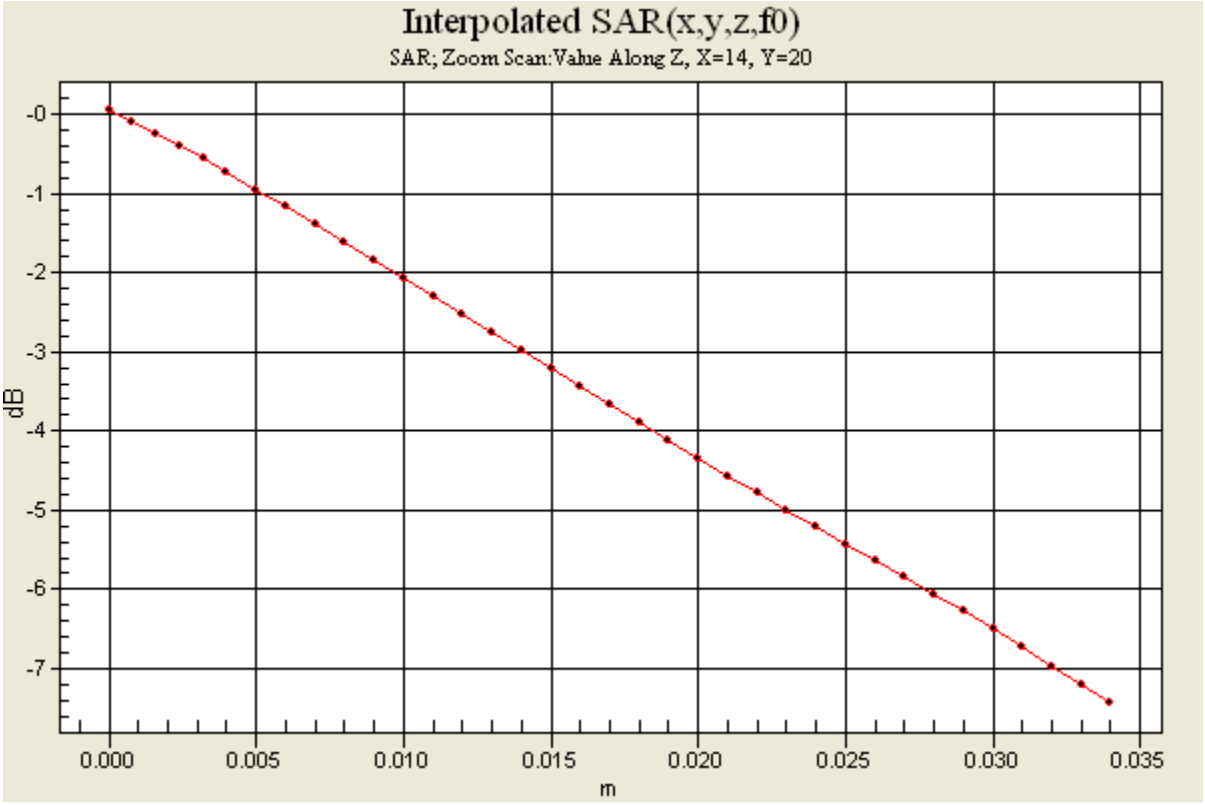
800 GSM Band: Distribution and Extrapolation of Maximum SAR
Model: X2 with Standard Battery: BST-41, Left Tilt Position.
Date/Time: 8/2/2009 12:37:34 PM
File Name: 02Ayg09_X2_GSM850_SB40_LCT01.da4
DUT: Vulcan
Phantom: SAM with CRP (Low Band Head)Phantom section: Left Section
Probe: ET3DV6 - SN1587ConvF(6.39, 6.39, 6.39)
Medium parameters used (interpolated): f = 849 MHz; σ = 0.919 mho/m; ε_r = 42; ρ = 1000 kg/m^3
Measurement Standard: DASY4 (High Precision Assessment)
Program Notes: Battery BST-41 Humidity - 43.4 % Ambient Temp - 23.6 C Simulant Temp - 23.5 C
DASY4 Configuration:
- Probe: ET3DV6 - SN1587; ConvF(6.39, 6.39, 6.39); Calibrated: 5/25/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn345; Calibrated: 10/31/2008
- Phantom: SAM with CRP (Low Band Head); Type: SAM; Serial: 1023
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186
High channel tilt/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.082 mW/g
High channel tilt/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 9.08 V/m; Power Drift = 0.007 dB
Peak SAR (extrapolated) = 0.099 W/kg
SAR(1 g) = 0.078 mW/g; SAR(10 g) = 0.057 mW/g
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.083 mW/g
High channel tilt/Zoom Scan (31x31x36)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 9.08 V/m; Power Drift = 0.007 dB
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.099 mW/g

Prepared (also subject responsible if other)	No.	
SEM/CV/PF/P Rodney Dixon	REP 2009 006 X2 02	
Approved / Checked		
SEM/CV/PF/P Gerard Hayes	A	



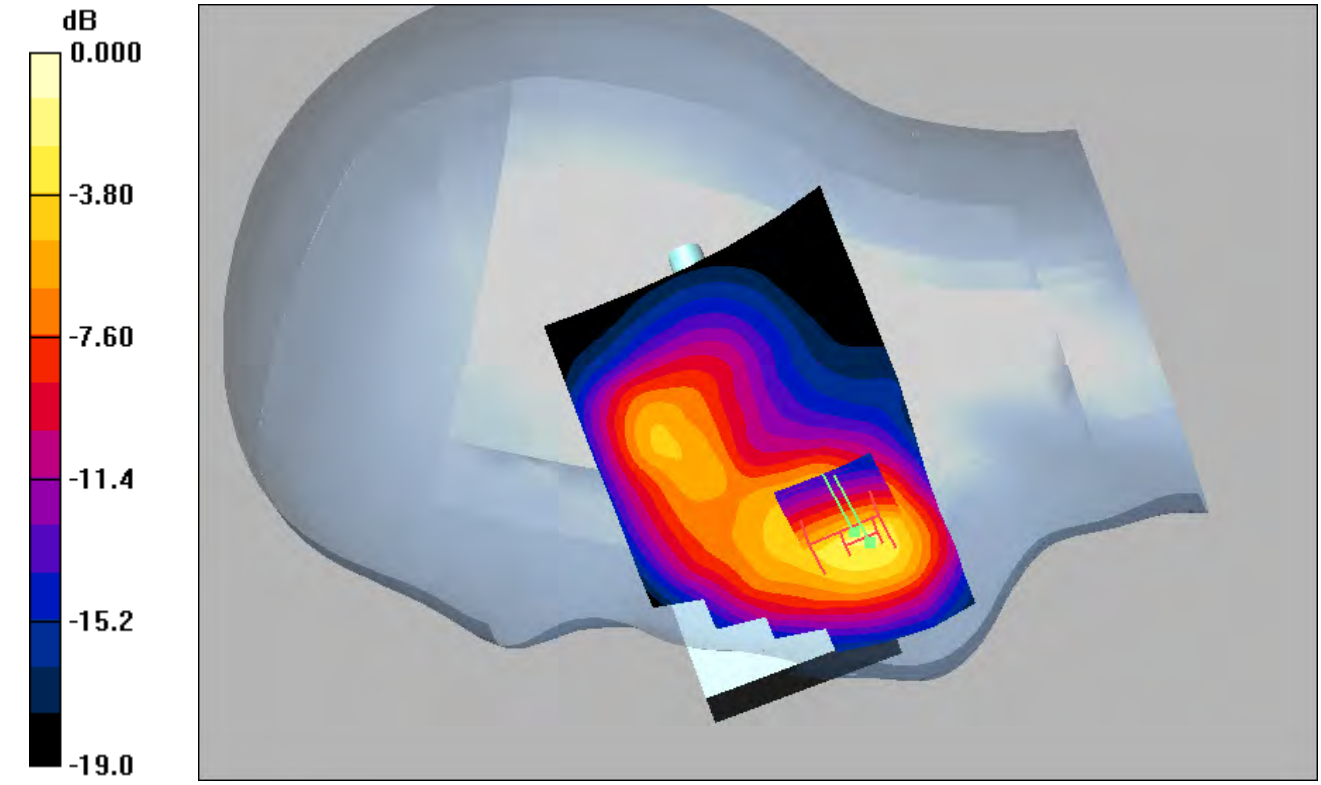
0 dB = 0.099mW/g

Prepared (also subject responsible if other)	No.	
SEM/CV/PF/P Rodney Dixon	REP 2009 006 X2 02	
Approved / Checked		
SEM/CV/PF/P Gerard Hayes	A	

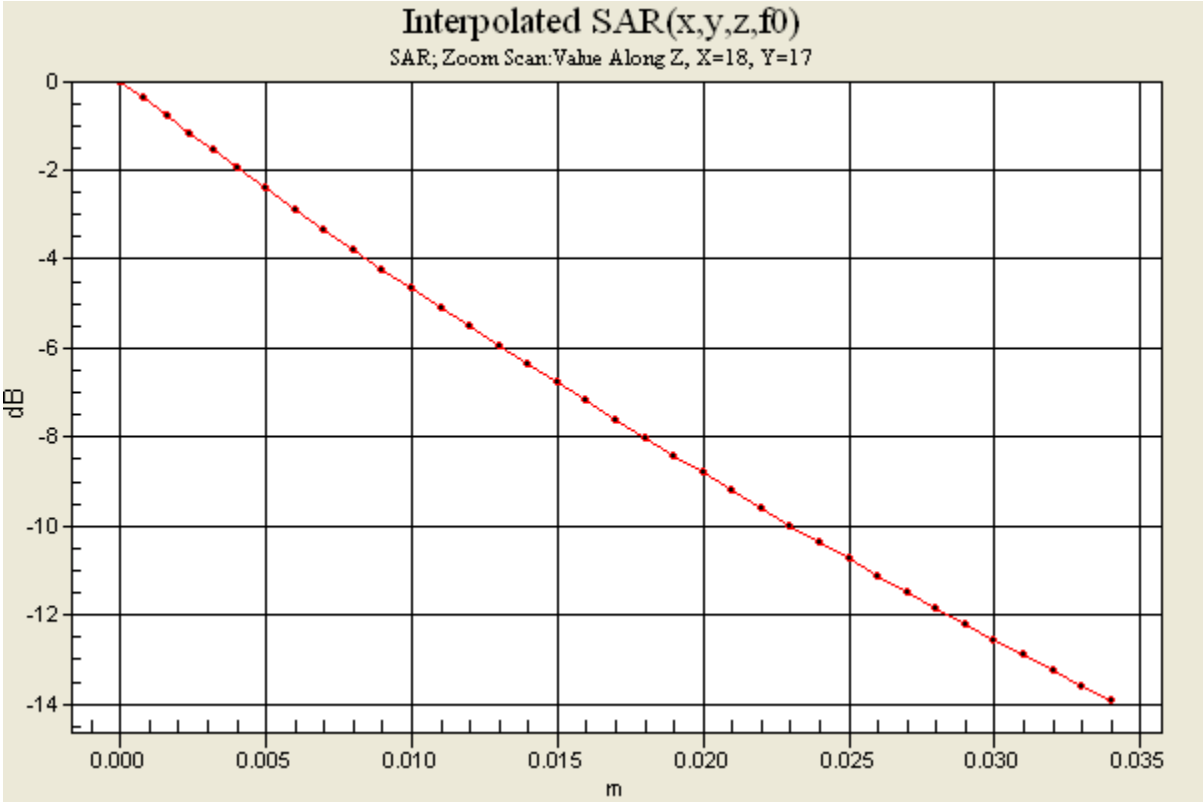


Prepared (also subject responsible if other)	No.	
SEM/CV/PF/P Rodney Dixon	REP 2009 006 X2 02	
Approved / Checked		
SEM/CV/PF/P Gerard Hayes	A	

1900 GSM Band: Distribution and Extrapolation of Maximum SAR
Model: X2 with Standard Battery: BST-41, Right Cheek Position.
Date/Time: 8/1/2009 2:32:33 PM
File Name: 01Aug09_Aino_GSM1900_SBKM_RCT01.da4
DUT: Vulcan Closed
Phantom: SAM with CRP (High Band Head)Phantom section: Right Section
Probe: ET3DV6 - SN1584ConvF(5.1, 5.1, 5.1)
Medium parameters used: f = 1910 MHz; σ = 1.48 mho/m; ε_r = 39.1; ρ = 1000 kg/m^3
Measurement Standard: DASY4 (High Precision Assessment)
Program Notes: Battery - BST-41 Humidity: 42.5 % Ambient Temp: 23.6 C Simulant Temp: 23.4 C
DASY4 Configuration:
- Probe: ET3DV6 - SN1584; ConvF(5.1, 5.1, 5.1); Calibrated: 11/17/2008
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn417; Calibrated: 11/7/2008
- Phantom: SAM with CRP (High Band Head); Type: SAM; Serial: TP: 1335
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186
High channel cheek/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.449 mW/g
High channel cheek/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 7.60 V/m; Power Drift = 0.028 dB
Peak SAR (extrapolated) = 0.755 W/kg
SAR(1 g) = 0.431 mW/g; SAR(10 g) = 0.247 mW/g
Maximum value of SAR (measured) = 0.469 mW/g
High channel cheek/Zoom Scan (31x31x36)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 7.60 V/m; Power Drift = 0.028 dB
Maximum value of SAR (interpolated) = 0.755 mW/g

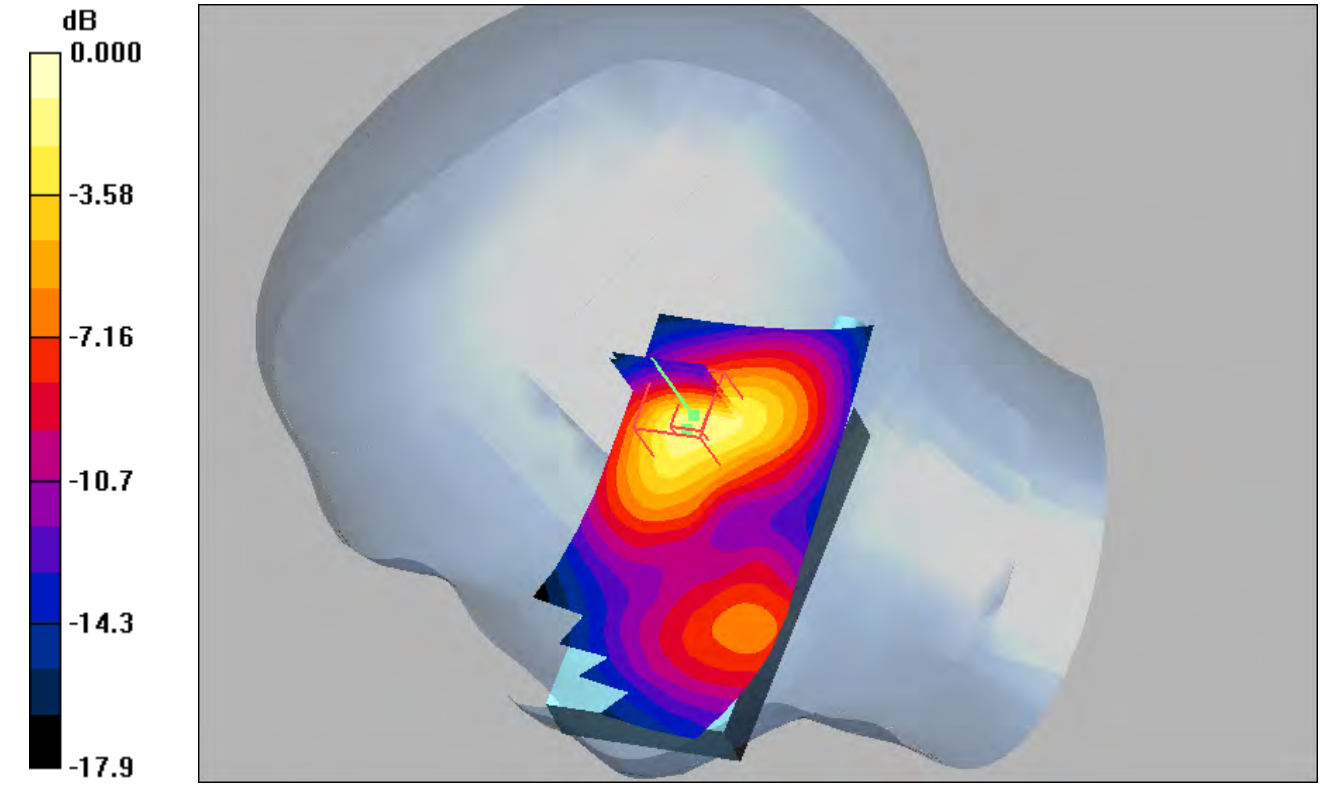


0 dB = 0.755mW/g

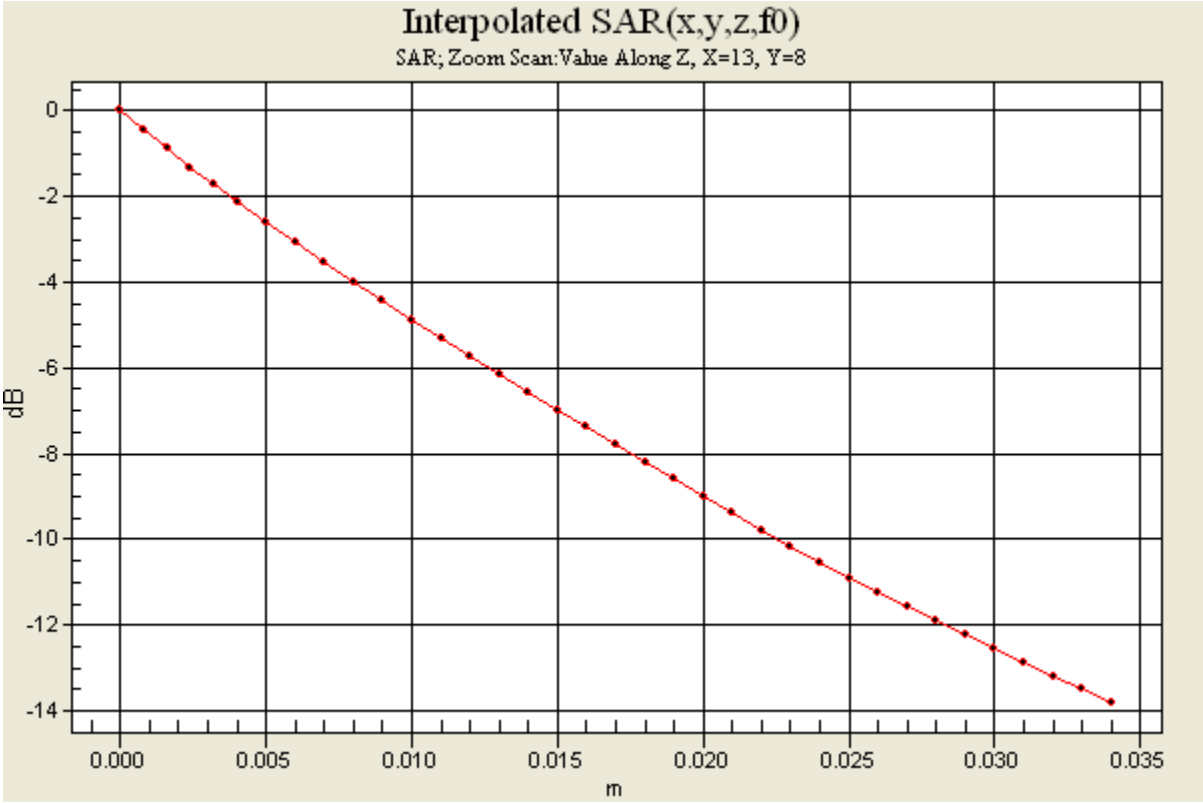

Interpolated SAR(x,y,z,f0)
SAR; Zoom Scan:Value Along Z, X=18, Y=17
dB
0
-2
-4
-6
-8
-10
-12
-14
0.000
0.005
0.010
0.015
0.020
0.025
0.030
0.035
m

Prepared (also subject responsible if other)	No.	
SEM/CV/PF/P Rodney Dixon	REP 2009 006 X2 02	
Approved / Checked		
SEM/CV/PF/P Gerard Hayes	A	

1900 GSM Band: Distribution and Extrapolation of Maximum SAR
Model: X2 with Standard Battery: BST-41, Right Tilt Position.
Date/Time: 8/1/2009 3:40:25 PM
File Name: 01Aug09_Aino_GSM1900_SBKM_RCT01.da4
DUT: Vulcan Closed
Phantom: SAM with CRP (High Band Head)Phantom section: Right Section
Probe: ET3DV6 - SN1584ConvF(5.1, 5.1, 5.1)
Medium parameters used: f = 1910 MHz; σ = 1.48 mho/m; ε_r = 39.1; ρ = 1000 kg/m^3
Measurement Standard: DASY4 (High Precision Assessment)
Program Notes: Battery - BST-41 Humidity: 42.5 % Ambient Temp: 23.6 C Simulant Temp: 23.4 C
DASY4 Configuration:
- Probe: ET3DV6 - SN1584; ConvF(5.1, 5.1, 5.1); Calibrated: 11/17/2008
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn417; Calibrated: 11/7/2008
- Phantom: SAM with CRP (High Band Head); Type: SAM; Serial: TP: 1335
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186
High channel tilt/Area Scan (51x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.327 mW/g
High channel tilt/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 13.5 V/m; Power Drift = 0.026 dB
Peak SAR (extrapolated) = 0.435 W/kg
SAR(1 g) = 0.267 mW/g; SAR(10 g) = 0.162 mW/g
Maximum value of SAR (measured) = 0.287 mW/g
High channel tilt/Zoom Scan (31x31x36)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 13.5 V/m; Power Drift = 0.026 dB
Maximum value of SAR (interpolated) = 0.435 mW/g

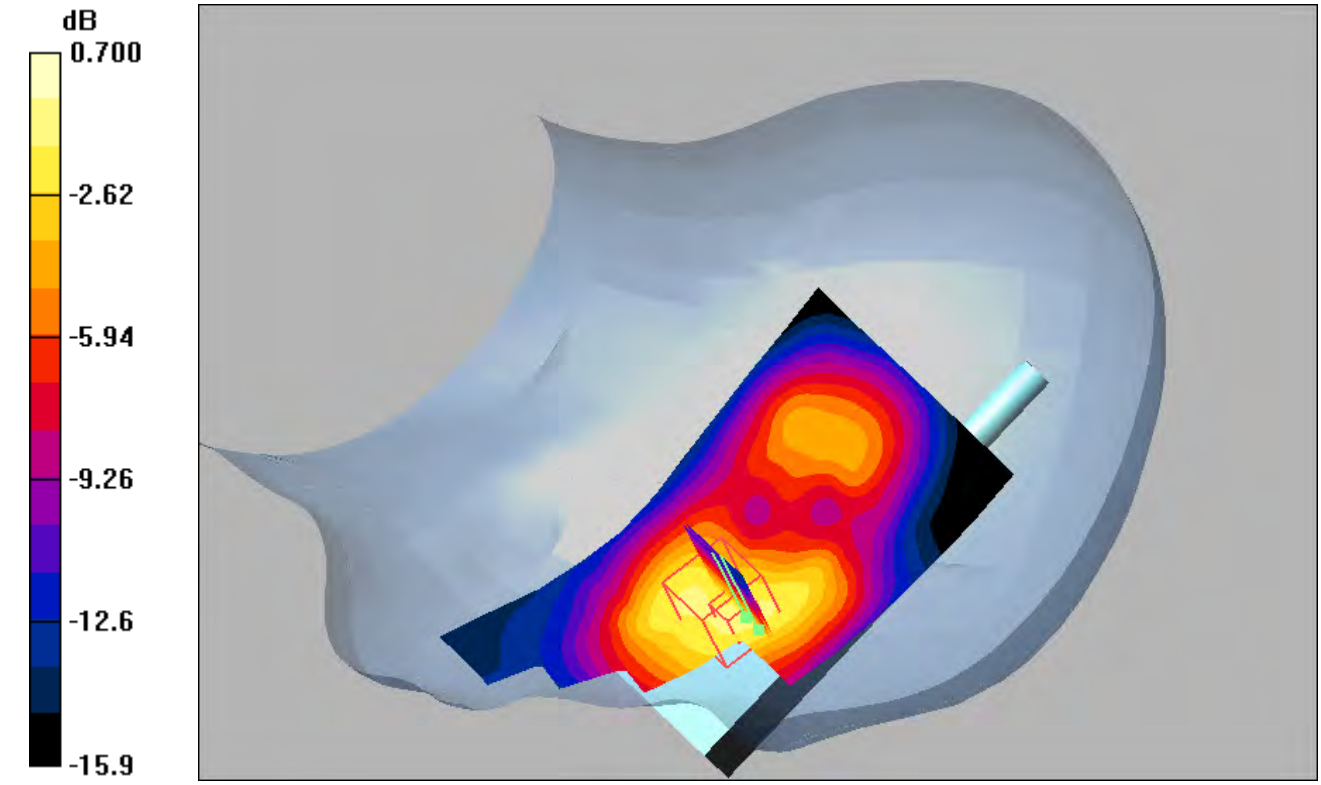


0 dB = 0.435mW/g


Interpolated SAR(x,y,z,f0)
SAR; Zoom Scan:Value Along Z, X=13, Y=8
dB
0
-2
-4
-6
-8
-10
-12
-14
0.000
0.005
0.010
0.015
0.020
0.025
0.030
0.035
m

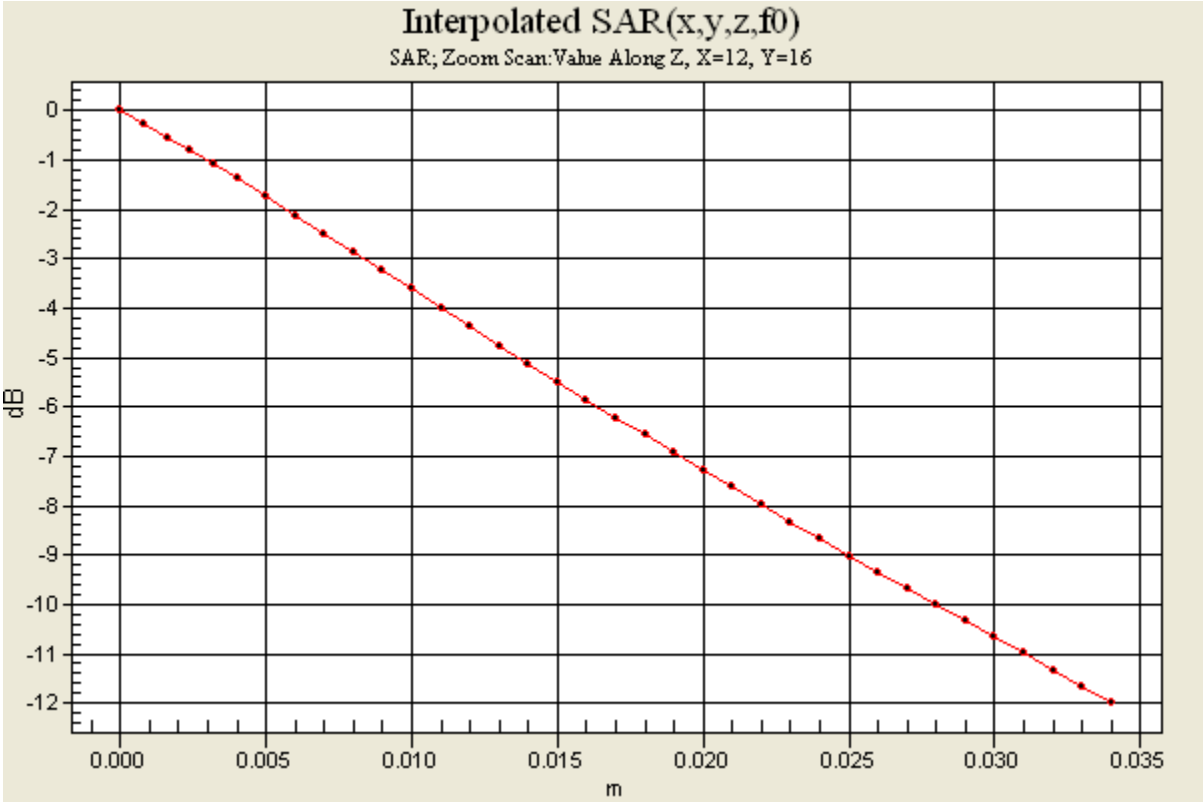
Prepared (also subject responsible if other)	No.	
SEM/CV/PF/P Rodney Dixon	REP 2009 006 X2 02	
Approved / Checked		
SEM/CV/PF/P Gerard Hayes	A	

1900 GSM Band: Distribution and Extrapolation of Maximum SAR
Model: X2 with Standard Battery: BST-41, Left Cheek Position.
Date/Time: 8/1/2009 11:30:19 AM
File Name: 01Aug09_Aino_GSM1900_SBKM_LCT01.da4
DUT: Vulcan Closed
Phantom: SAM with CRP (High Band Head)Phantom section: Left Section
Probe: ET3DV6 - SN1584ConvF(5.1, 5.1, 5.1)
Medium parameters used: f = 1910 MHz; σ = 1.48 mho/m; ε_r = 39.1; ρ = 1000 kg/m^3
Measurement Standard: DASY4 (High Precision Assessment)
Program Notes: Battery - BST-41 Humidity: 42.5 % Ambient Temp: 23.6 C Simulant Temp: 23.4 C
DASY4 Configuration:
- Probe: ET3DV6 - SN1584; ConvF(5.1, 5.1, 5.1); Calibrated: 11/17/2008
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn417; Calibrated: 11/7/2008
- Phantom: SAM with CRP (High Band Head); Type: SAM; Serial: TP: 1335
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186
High channel cheek/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.297 mW/g
High channel cheek/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 9.52 V/m; Power Drift = -0.023 dB
Peak SAR (extrapolated) = 0.389 W/kg
SAR(1 g) = 0.267 mW/g; SAR(10 g) = 0.176 mW/g
Maximum value of SAR (measured) = 0.286 mW/g
High channel cheek/Zoom Scan (31x31x36)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 9.52 V/m; Power Drift = -0.023 dB
Maximum value of SAR (interpolated) = 0.389 mW/g



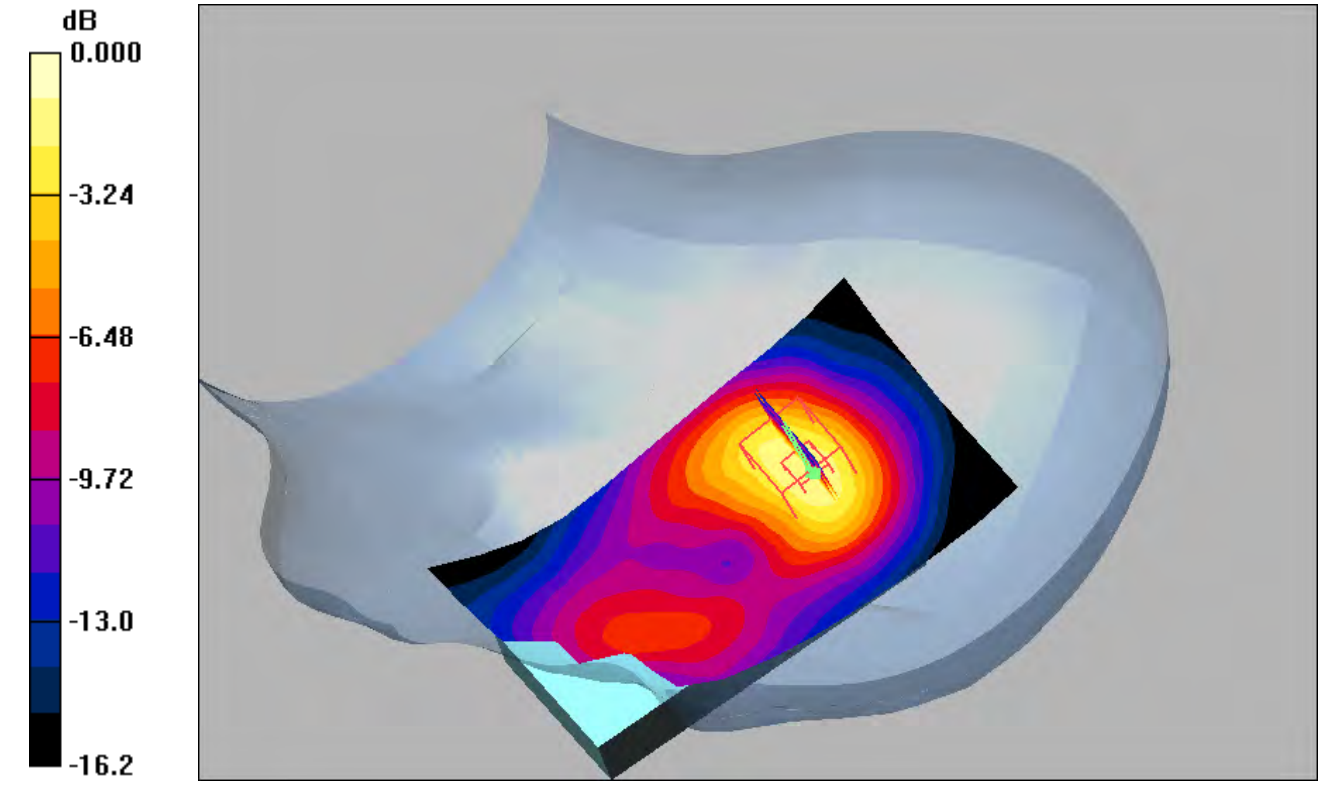
Prepared (also subject responsible if other)		No.	
SEM/CV/PF/P Rodney Dixon		REP 2009 006 X2 02	
Approved	Checked		
SEM/CV/PF/P Gerard Hayes		A	

0 dB = 0.389mW/g



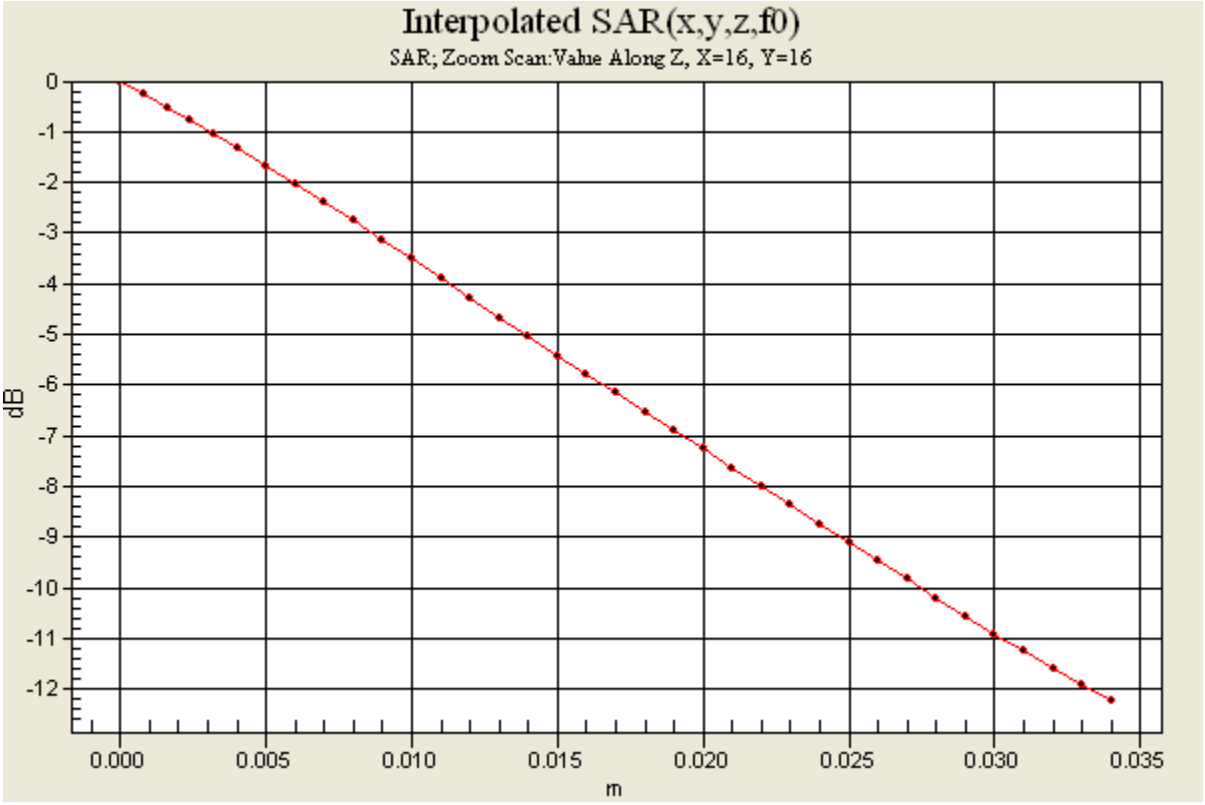
Prepared (also subject responsible if other)	No.	
SEM/CV/PF/P Rodney Dixon	REP 2009 006 X2 02	
Approved / Checked		
SEM/CV/PF/P Gerard Hayes	A	

1900 GSM Band: Distribution and Extrapolation of Maximum SAR
Model: X2 with Standard Battery: BST-41, Left Tilt Position.
Date/Time: 8/1/2009 12:38:48 PM
File Name: 01Aug09_Aino_GSM1900_SBKM_LCT01.da4
DUT: Vulcan Closed
Phantom: SAM with CRP (High Band Head)Phantom section: Left Section
Probe: ET3DV6 - SN1584ConvF(5.1, 5.1, 5.1)
Medium parameters used: f = 1910 MHz; σ = 1.48 mho/m; ε_r = 39.1; ρ = 1000 kg/m^3
Measurement Standard: DASY4 (High Precision Assessment)
Program Notes: Battery - BST-41 Humidity: 42.5 % Ambient Temp: 23.6 C Simulant Temp: 23.4 C
DASY4 Configuration:
- Probe: ET3DV6 - SN1584; ConvF(5.1, 5.1, 5.1); Calibrated: 11/17/2008
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn417; Calibrated: 11/7/2008
- Phantom: SAM with CRP (High Band Head); Type: SAM; Serial: TP: 1335
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186
High channel tilt/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.277 mW/g
High channel tilt/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 13.8 V/m; Power Drift = -0.031 dB
Peak SAR (extrapolated) = 0.351 W/kg
SAR(1 g) = 0.234 mW/g; SAR(10 g) = 0.140 mW/g
Maximum value of SAR (measured) = 0.260 mW/g
High channel tilt/Zoom Scan (31x31x36)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 13.8 V/m; Power Drift = -0.031 dB
Maximum value of SAR (interpolated) = 0.351 mW/g



Prepared (also subject responsible if other)		No.	
SEM/CV/PF/P Rodney Dixon		REP 2009 006 X2 02	
Approved	Checked		
SEM/CV/PF/P Gerard Hayes		A	

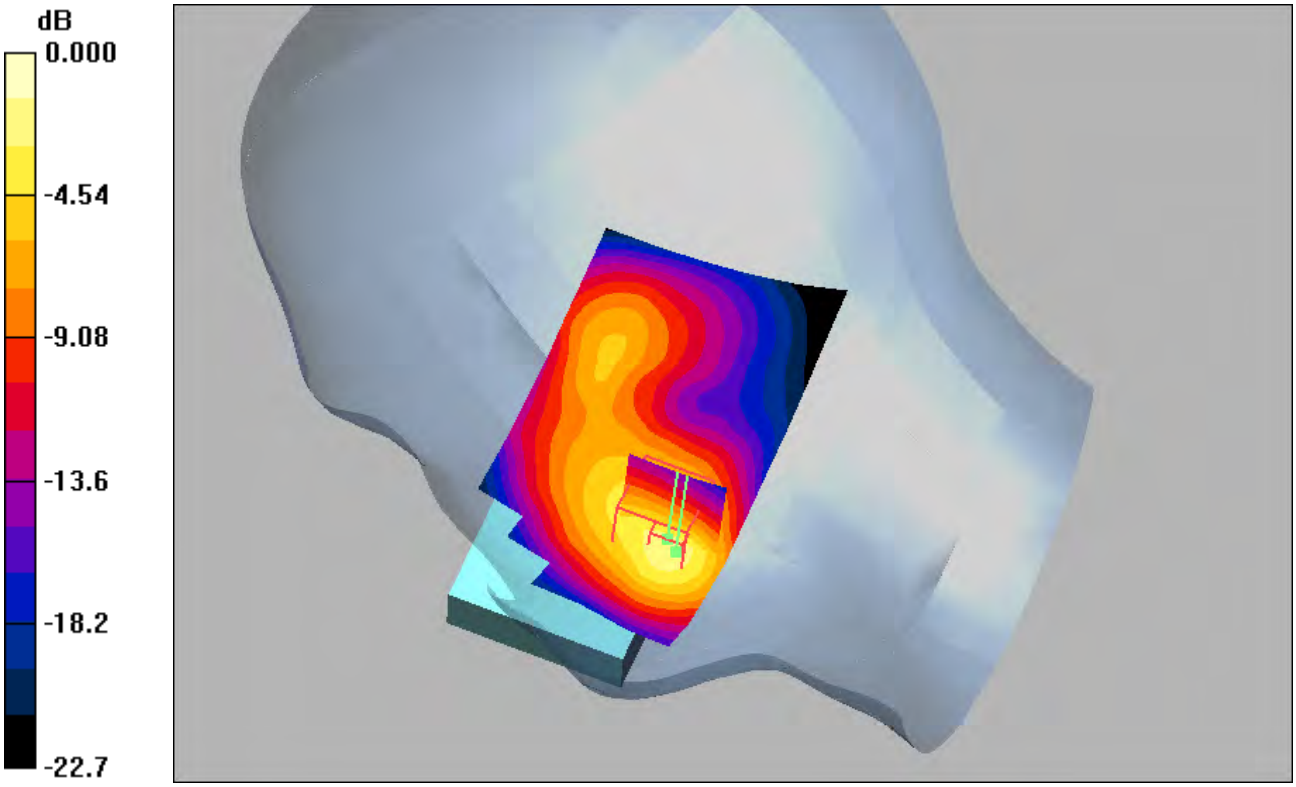
0 dB = 0.351mW/g



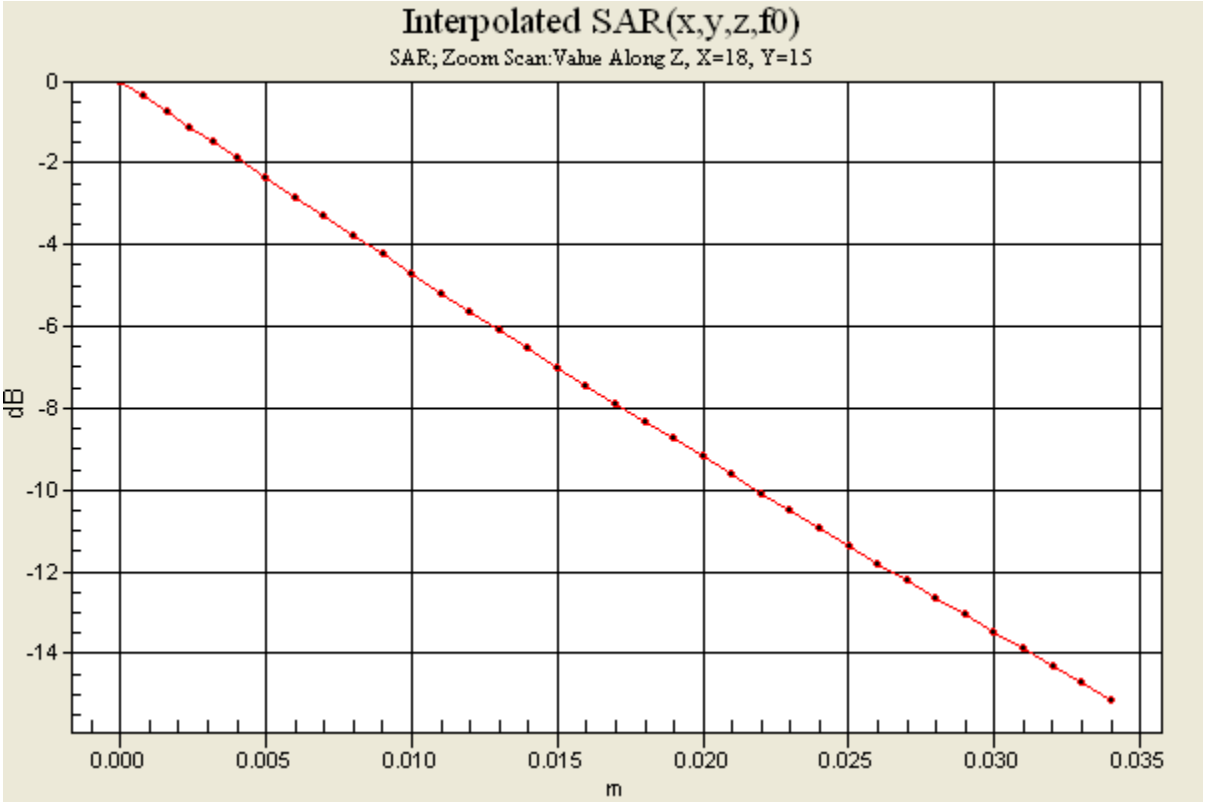
Band II WCDMA Band: Distribution and Extrapolation of Maximum SAR
Model: X2 with Standard Battery: BST-41, Right Cheek Position.
Date/Time: 7/27/2009 11:16:52 AM
File Name: 27July09_X2_B2WCDMA_SBKM_RCT01.da4
DUT: Vulcan
Phantom: SAM with CRP (High Band Head)Phantom section: Right Section
Probe: ET3DV6 - SN1587ConvF(5.23, 5.23, 5.23)
Medium parameters used (interpolated): f = 1907.4 MHz; σ = 1.46 mho/m; ε_r = 38; ρ = 1000 kg/m^3
Measurement Standard: DASY4 (High Precision Assessment)
Program Notes: Battery - BST41 Humidity - 41.5 % Ambient Temp - 23.1 C Simulant Temp - 23 C
DASY4 Configuration:
- Probe: ET3DV6 - SN1587; ConvF(5.23, 5.23, 5.23); Calibrated: 5/25/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn345; Calibrated: 10/31/2008
- Phantom: SAM with CRP (High Band Head); Type: SAM; Serial: TP: 1335
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

High channel cheek/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 1.46 mW/g
High channel cheek/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 13.3 V/m; Power Drift = 0.177 dB
Peak SAR (extrapolated) = 2.07 W/kg
SAR(1 g) = 1.19 mW/g; SAR(10 g) = 0.678 mW/g
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 1.30 mW/g
High channel cheek/Zoom Scan (31x31x36)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 13.3 V/m; Power Drift = 0.177 dB
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 2.07 mW/g

Prepared (also subject responsible if other)	No.	
SEM/CV/PF/P Rodney Dixon	REP 2009 006 X2 02	
Approved / Checked		
SEM/CV/PF/P Gerard Hayes	A	



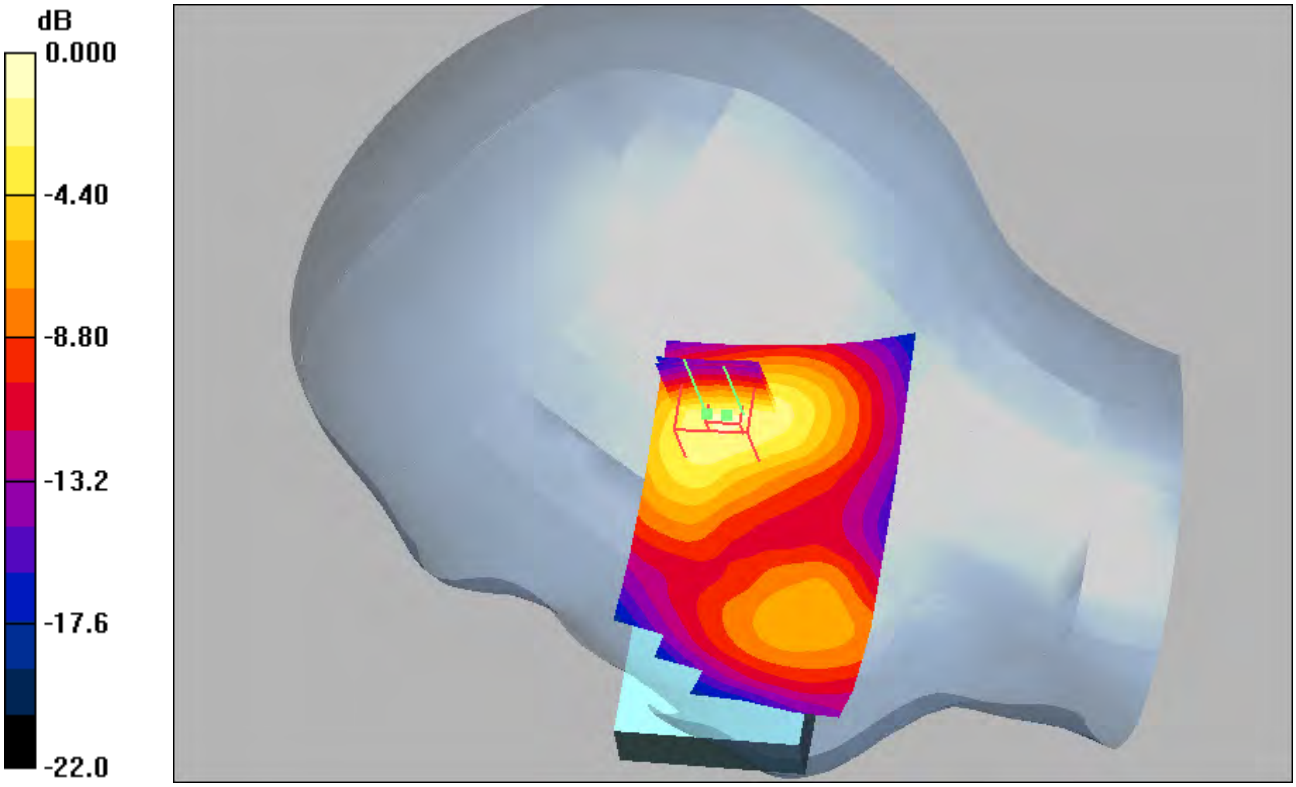
0 dB = 2.07mW/g


Interpolated SAR(x,y,z,f0)
SAR; Zoom Scan:Value Along Z, X=18, Y=15
dB
0
-2
-4
-6
-8
-10
-12
-14
0.000
0.005
0.010
0.015
0.020
0.025
0.030
0.035
m

Band II WCDMA Band: Distribution and Extrapolation of Maximum SAR
Model: X2 with Standard Battery: BST-41, Right Tilt Position.
Date/Time: 7/27/2009 12:30:02 PM
File Name: 27July09_X2_B2WCDMA_SBKM_RCT01.da4
DUT: Vulcan
Phantom: SAM with CRP (High Band Head)Phantom section: Right Section
Probe: ET3DV6 - SN1587ConvF(5.23, 5.23, 5.23)
Medium parameters used (interpolated): f = 1907.4 MHz; σ = 1.46 mho/m; ε_r = 38; ρ = 1000 kg/m^3
Measurement Standard: DASY4 (High Precision Assessment)
Program Notes: Battery - BST41 Humidity - 41.5 % Ambient Temp - 23.1 C Simulant Temp - 23 C
DASY4 Configuration:
- Probe: ET3DV6 - SN1587; ConvF(5.23, 5.23, 5.23); Calibrated: 5/25/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn345; Calibrated: 10/31/2008
- Phantom: SAM with CRP (High Band Head); Type: SAM; Serial: TP: 1335
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

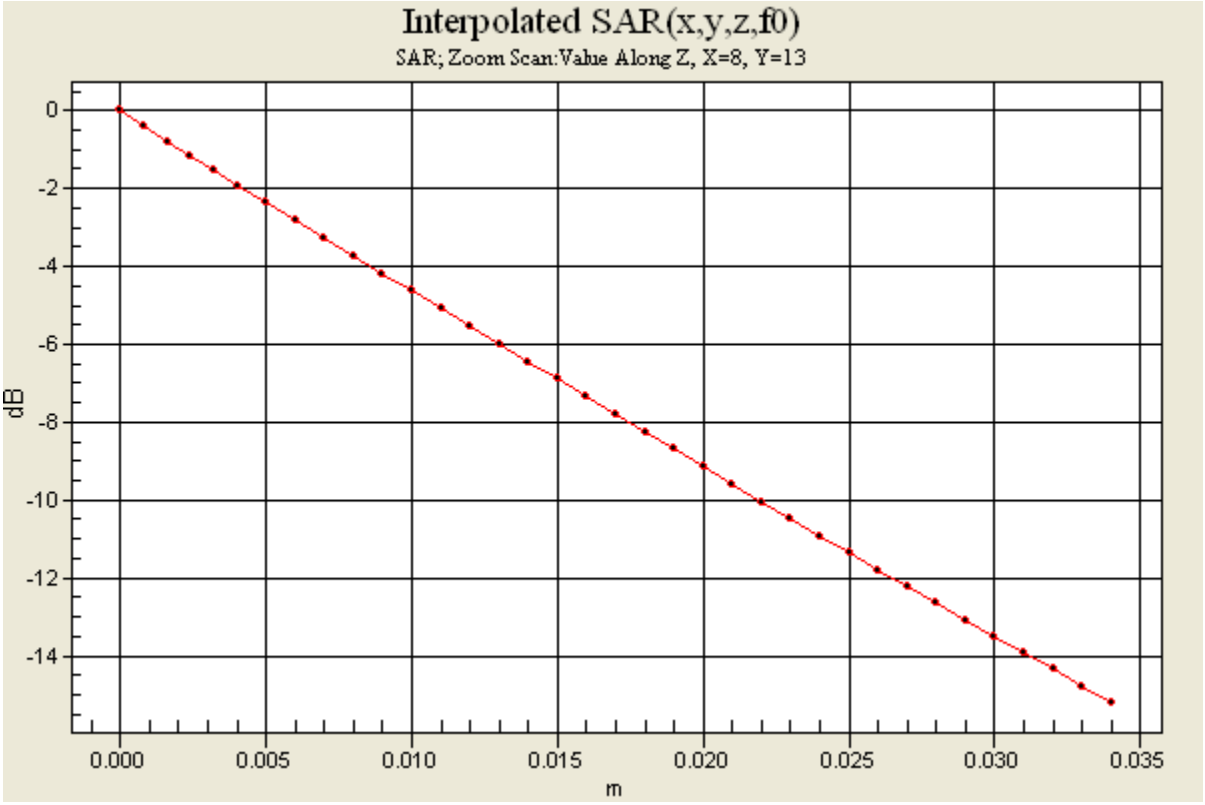
High channel tilt/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.654 mW/g
High channel tilt/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 20.5 V/m; Power Drift = 0.013 dB
Peak SAR (extrapolated) = 0.835 W/kg
SAR(1 g) = 0.538 mW/g; SAR(10 g) = 0.329 mW/g
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.585 mW/g
High channel tilt/Zoom Scan (31x31x36)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 20.5 V/m; Power Drift = 0.013 dB
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.835 mW/g

Prepared (also subject responsible if other)	No.	
SEM/CV/PF/P Rodney Dixon	REP 2009 006 X2 02	
Approved / Checked		
SEM/CV/PF/P Gerard Hayes	A	



0 dB = 0.835mW/g

Prepared (also subject responsible if other)	No.	
SEM/CV/PF/P Rodney Dixon	REP 2009 006 X2 02	
Approved / Checked		
SEM/CV/PF/P Gerard Hayes	A	

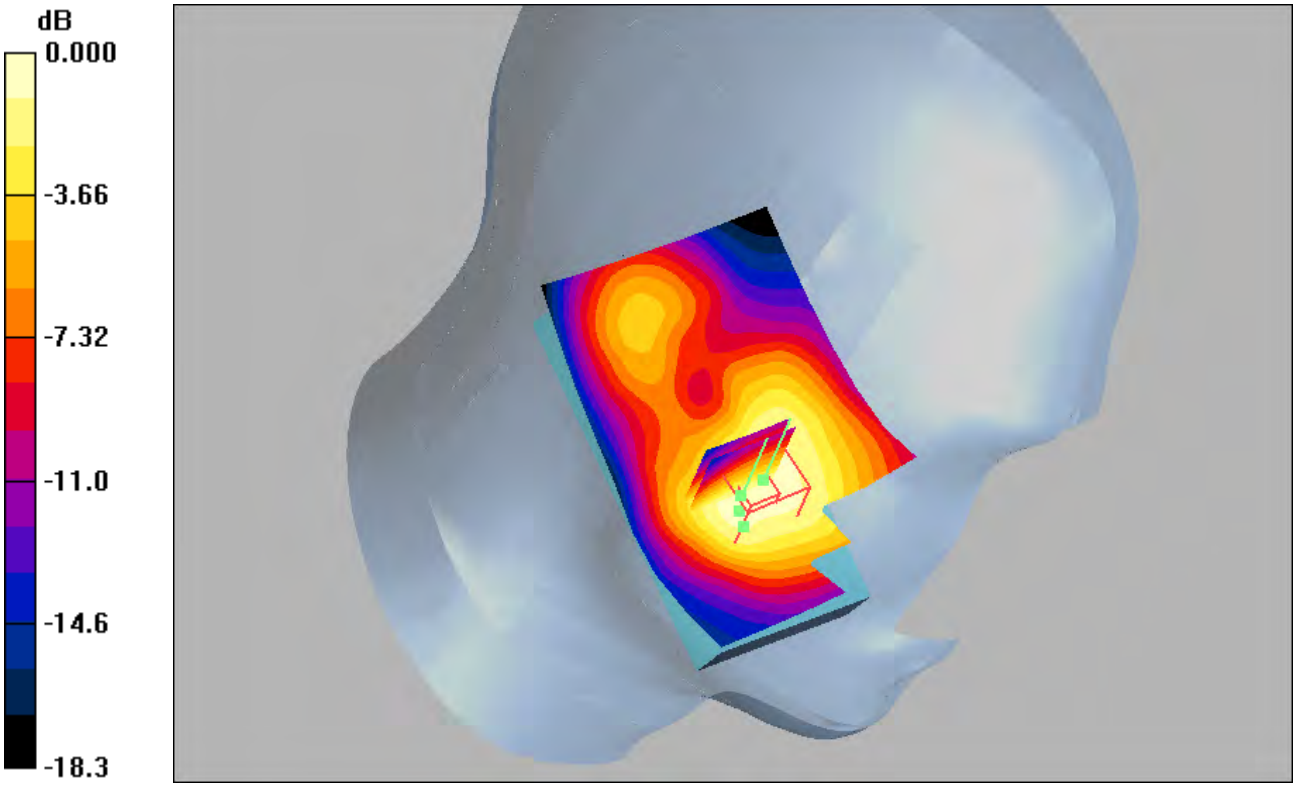


Prepared (also subject responsible if other)	No.	
SEM/CV/PF/P Rodney Dixon	REP 2009 006 X2 02	
Approved / Checked		
SEM/CV/PF/P Gerard Hayes	A	

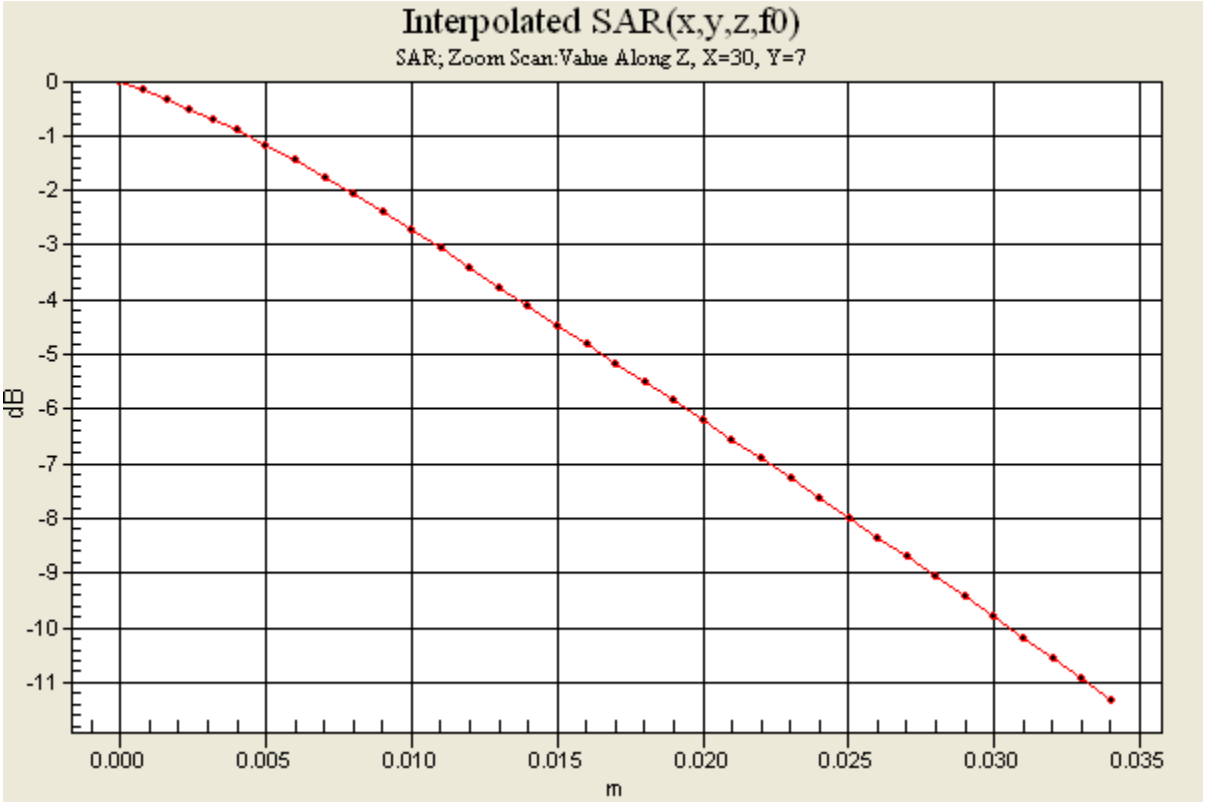
Band II WCDMA Band: Distribution and Extrapolation of Maximum SAR
Model: X2 with Standard Battery: BST-41, Left Cheek Position.
Date/Time: 7/27/2009 8:19:10 AM
File Name: 27July09_X2_B2WCDMA_SBKM_LCT01.da4
DUT: Vulcan
Phantom: SAM with CRP (High Band Head)Phantom section: Left Section
Probe: ET3DV6 - SN1587ConvF(5.23, 5.23, 5.23)
Medium parameters used (interpolated): f = 1907.4 MHz; σ = 1.46 mho/m; ε_r = 38; ρ = 1000 kg/m^3
Measurement Standard: DASY4 (High Precision Assessment)
Program Notes: Battery - BST41 Humidity - 41.5 % Ambient Temp - 23.1 C Simulant Temp - 23 C
DASY4 Configuration:
- Probe: ET3DV6 - SN1587; ConvF(5.23, 5.23, 5.23); Calibrated: 5/25/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn345; Calibrated: 10/31/2008
- Phantom: SAM with CRP (High Band Head); Type: SAM; Serial: TP: 1335
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

High channel cheek/Area Scan (61x81x1): Measurement grid: dx=15mm, dy=15mm
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.737 mW/g
High channel cheek/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 13.2 V/m; Power Drift = -0.075 dB
Peak SAR (extrapolated) = 0.850 W/kg
SAR(1 g) = 0.642 mW/g; SAR(10 g) = 0.423 mW/g
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.683 mW/g
High channel cheek/Zoom Scan (31x31x36)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 13.2 V/m; Power Drift = -0.075 dB
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.850 mW/g

Prepared (also subject responsible if other)	No.	
SEM/CV/PF/P Rodney Dixon	REP 2009 006 X2 02	
Approved / Checked		
SEM/CV/PF/P Gerard Hayes	A	



0 dB = 0.850mW/g

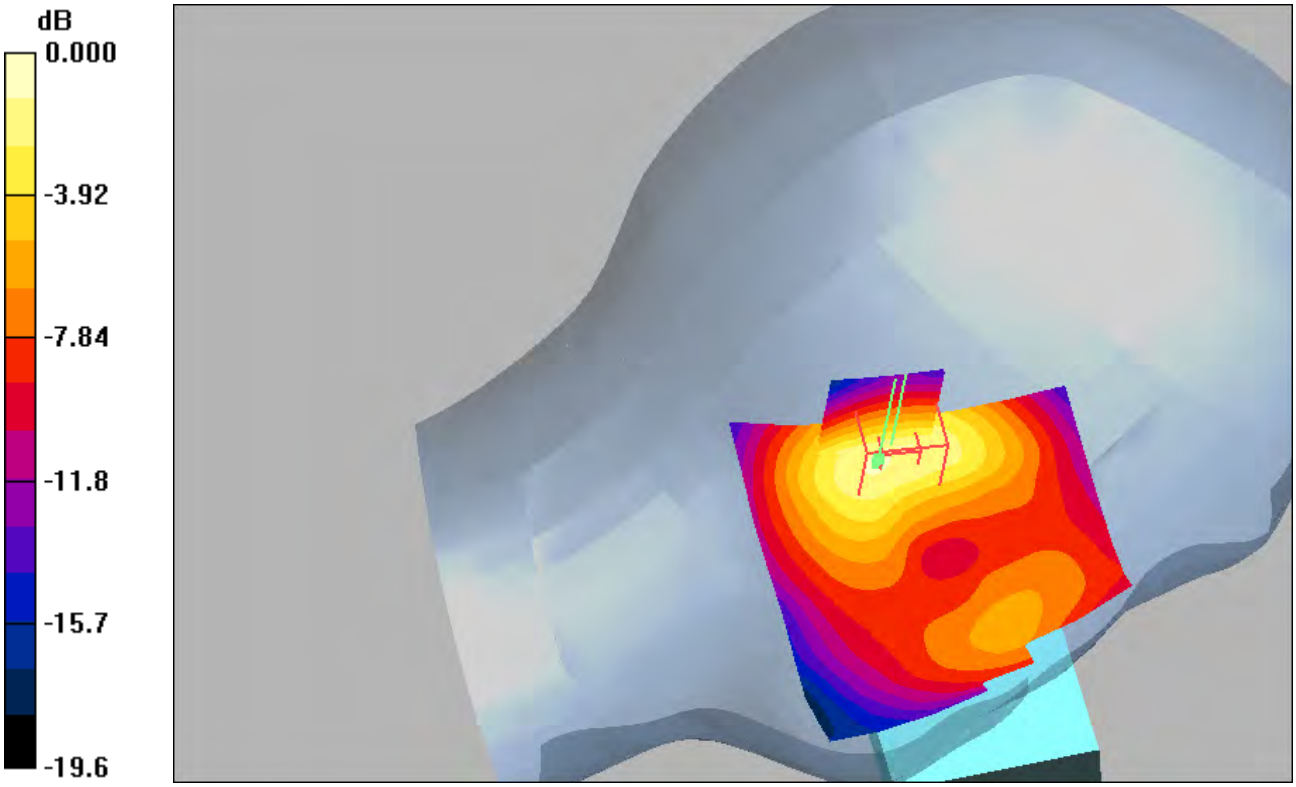

Interpolated SAR(x,y,z,f0)
SAR; Zoom Scan:Value Along Z, X=30, Y=7
dB
0
-1
-2
-3
-4
-5
-6
-7
-8
-9
-10
-11
0.000
0.005
0.010
0.015
0.020
0.025
0.030
0.035
m

Prepared (also subject responsible if other)	No.	
SEM/CV/PF/P Rodney Dixon	REP 2009 006 X2 02	
Approved / Checked		
SEM/CV/PF/P Gerard Hayes	A	

Band II WCDMA Band: Distribution and Extrapolation of Maximum SAR
Model: X2 with Standard Battery: BST-41, Left Tilt Position.
Date/Time: 7/27/2009 10:01:45 AM
File Name: 27July09_X2_B2WCDMA_SBKM_LCT01.da4
DUT: Vulcan
Phantom: SAM with CRP (High Band Head)Phantom section: Left Section
Probe: ET3DV6 - SN1587ConvF(5.23, 5.23, 5.23)
Medium parameters used (interpolated): f = 1907.4 MHz; σ = 1.46 mho/m; ε_r = 38; ρ = 1000 kg/m^3
Measurement Standard: DASY4 (High Precision Assessment)
Program Notes: Battery - BST41 Humidity - 41.5 % Ambient Temp - 23.1 C Simulant Temp - 23 C
DASY4 Configuration:
- Probe: ET3DV6 - SN1587; ConvF(5.23, 5.23, 5.23); Calibrated: 5/25/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn345; Calibrated: 10/31/2008
- Phantom: SAM with CRP (High Band Head); Type: SAM; Serial: TP: 1335
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

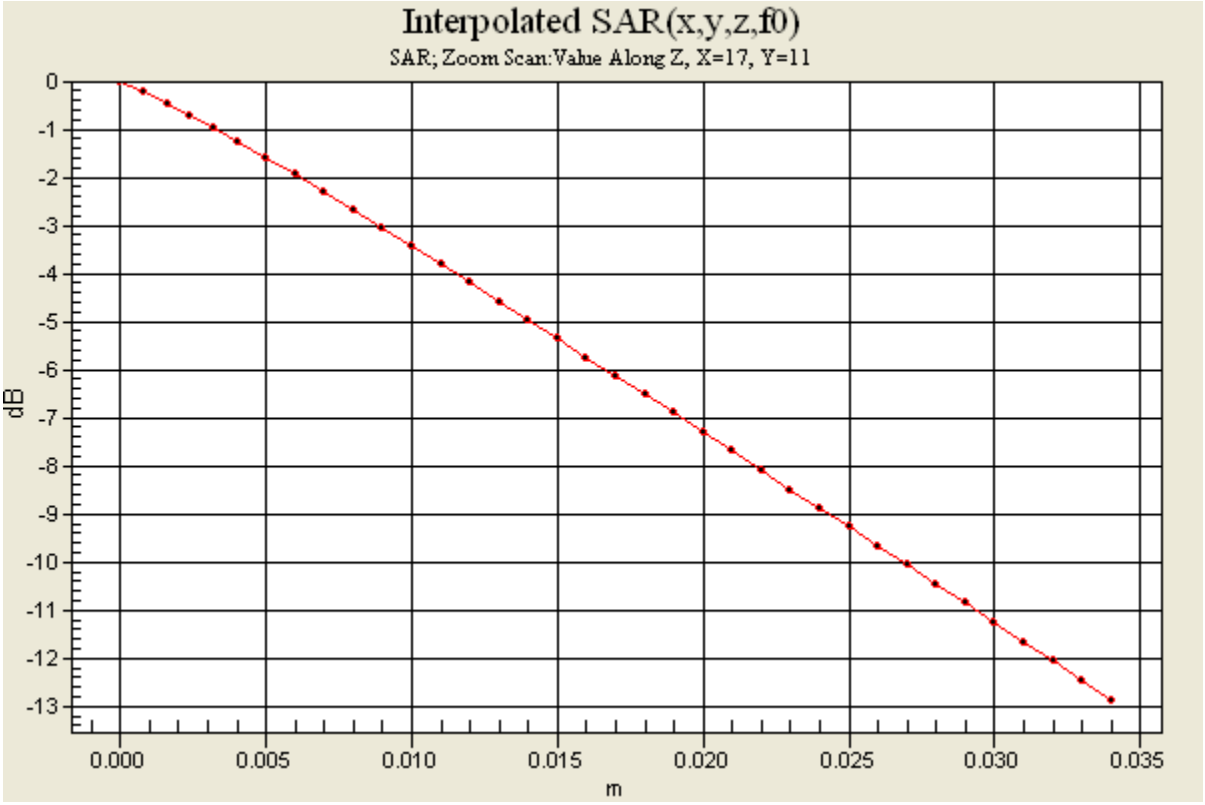
High channel tilt/Area Scan (61x81x1): Measurement grid: dx=15mm, dy=15mm
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.513 mW/g
High channel tilt/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 19.9 V/m; Power Drift = 0.012 dB
Peak SAR (extrapolated) = 0.672 W/kg
SAR(1 g) = 0.462 mW/g; SAR(10 g) = 0.282 mW/g
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.503 mW/g
High channel tilt/Zoom Scan (31x31x36)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 19.9 V/m; Power Drift = 0.012 dB
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.672 mW/g

Prepared (also subject responsible if other)	No.	
SEM/CV/PF/P Rodney Dixon	REP 2009 006 X2 02	
Approved / Checked		
SEM/CV/PF/P Gerard Hayes	A	



0 dB = 0.672mW/g

Prepared (also subject responsible if other)	No.	
SEM/CV/PF/P Rodney Dixon	REP 2009 006 X2 02	
Approved / Checked		
SEM/CV/PF/P Gerard Hayes	A	



Prepared (also subject responsible if other)	No.	
SEM/CV/PF/P Rodney Dixon	REP 2009 006 X2 02	
Approved / Checked		
SEM/CV/PF/P Gerard Hayes	A	

Appendix 2a

SAR distribution plots for Phantom Head Adjacent Use

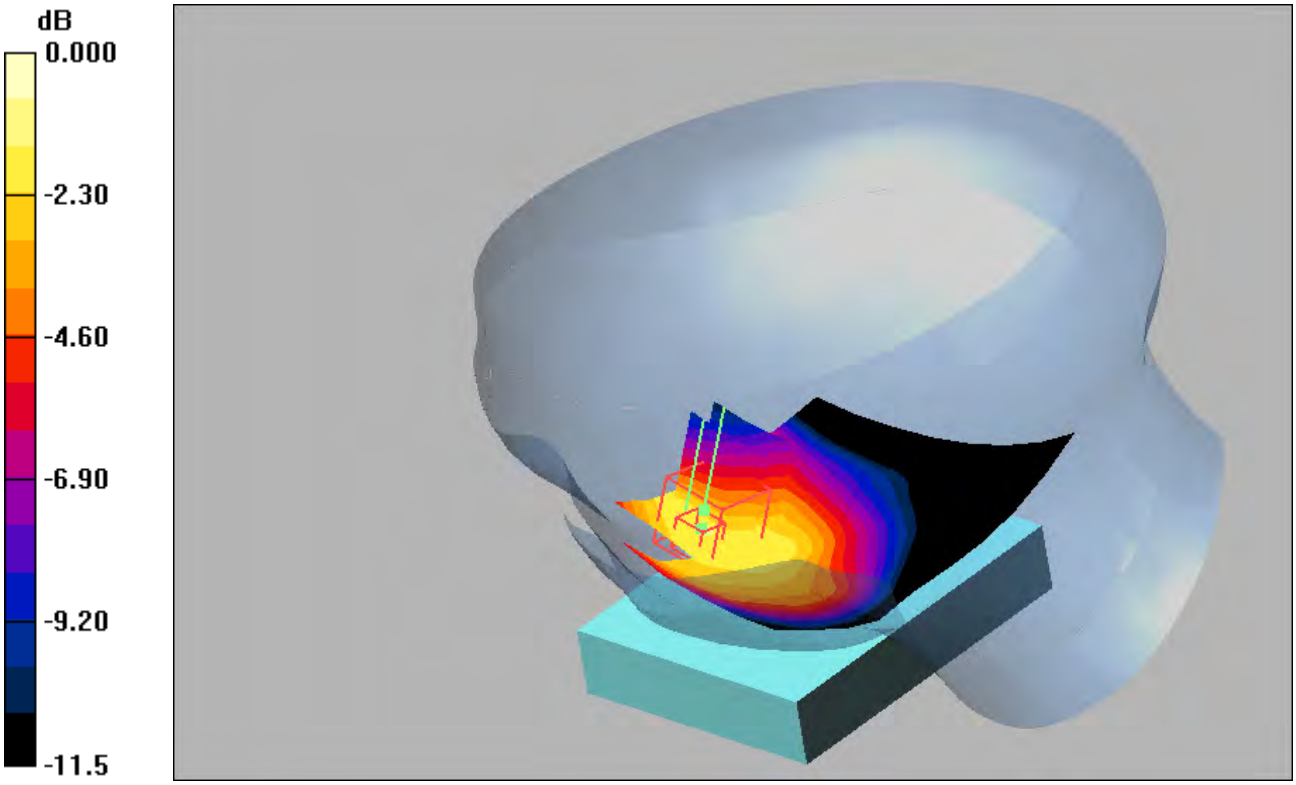
Open Position

Prepared (also subject responsible if other)	No.	
SEM/CV/PF/P Rodney Dixon	REP 2009 006 X2 02	
Approved / Checked		
SEM/CV/PF/P Gerard Hayes	A	

800 GSM Band: SAR Distribution and Extrapolation of Maximum SAR
Model: X2 with Standard Battery: BST-41, Right Cheek Position.
Date/Time: 8/3/2009 3:08:49 PM
File Name: 03Aug09_X2_GSM850_SB40_open_RCT01.da4
DUT: Vulcan open
Phantom: SAM with CRP (Low Band Head)Phantom section: Right Section
Probe: ET3DV6 - SN1587ConvF(6.39, 6.39, 6.39)
Medium parameters used (interpolated): f = 849 MHz; σ = 0.917 mho/m; ε_r = 41.6; ρ = 1000 kg/m^3
Measurement Standard: DASY4 (High Precision Assessment)
Program Notes: Battery BST-41 Humidity - 44.1 % Ambient Temp - 23.6 C Simulant Temp - 23.5 C
DASY4 Configuration:
- Probe: ET3DV6 - SN1587; ConvF(6.39, 6.39, 6.39); Calibrated: 5/25/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn345; Calibrated: 10/31/2008
- Phantom: SAM with CRP (Low Band Head); Type: SAM; Serial: 1023
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

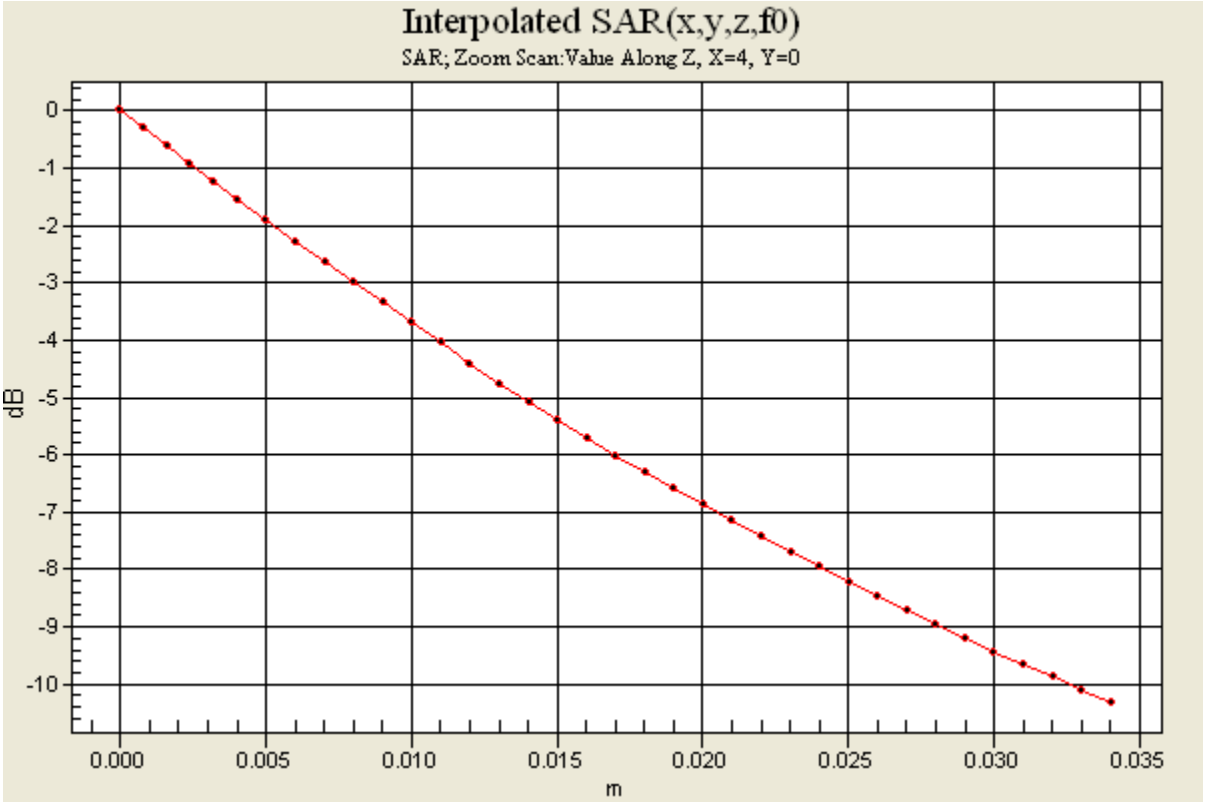
High channel cheek/Area Scan (71x81x1): Measurement grid: dx=15mm, dy=15mm
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.135 mW/g
High channel cheek/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 3.81 V/m; Power Drift = -0.018 dB
Peak SAR (extrapolated) = 0.189 W/kg
SAR(1 g) = 0.127 mW/g; SAR(10 g) = 0.096 mW/g
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.137 mW/g
High channel cheek/Zoom Scan (31x31x36)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 3.81 V/m; Power Drift = -0.018 dB
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.189 mW/g

Prepared (also subject responsible if other)	No.	
SEM/CV/PF/P Rodney Dixon	REP 2009 006 X2 02	
Approved / Checked		
SEM/CV/PF/P Gerard Hayes	A	



0 dB = 0.189mW/g

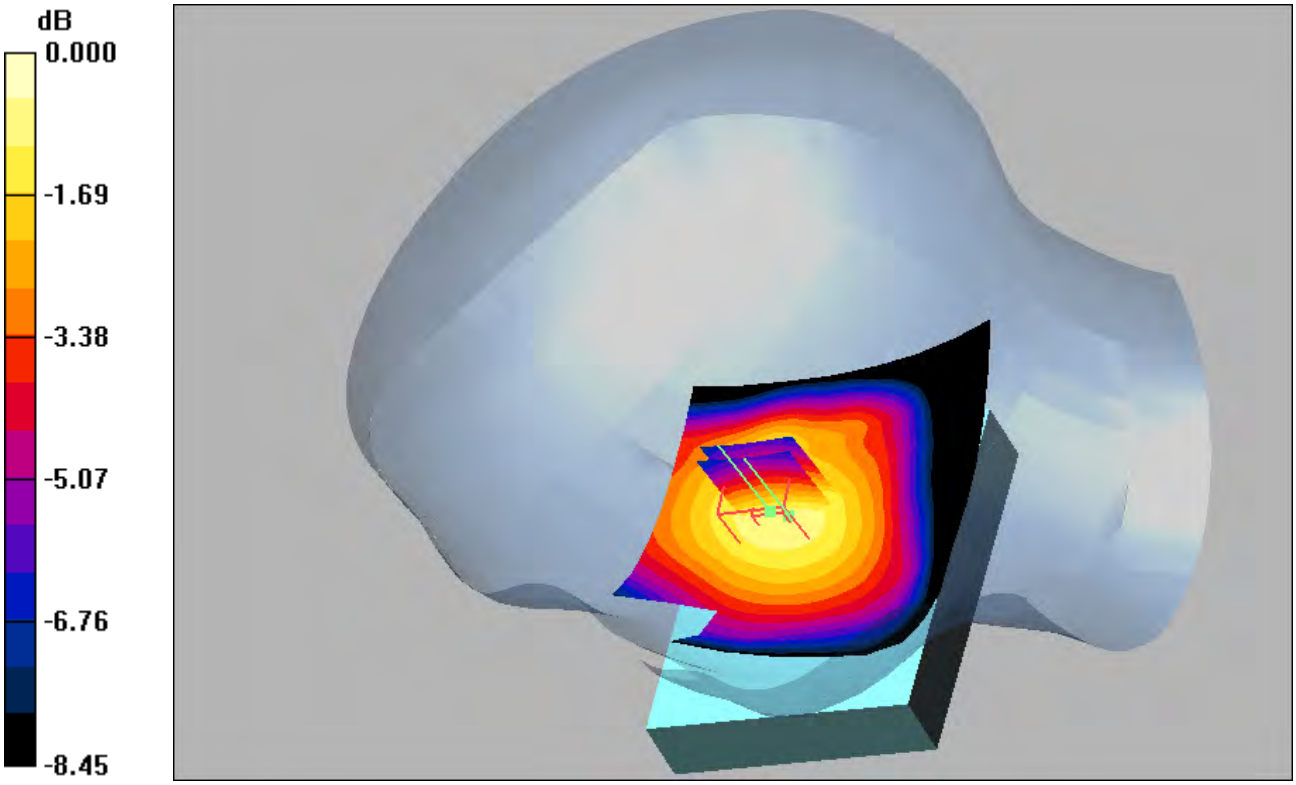
Prepared (also subject responsible if other)		No.	
SEM/CV/PF/P Rodney Dixon		REP 2009 006 X2 02	
Approved	Checked		
SEM/CV/PF/P Gerard Hayes		A	



Prepared (also subject responsible if other)	No.	
SEM/CV/PF/P Rodney Dixon	REP 2009 006 X2 02	
Approved / Checked		
SEM/CV/PF/P Gerard Hayes	A	

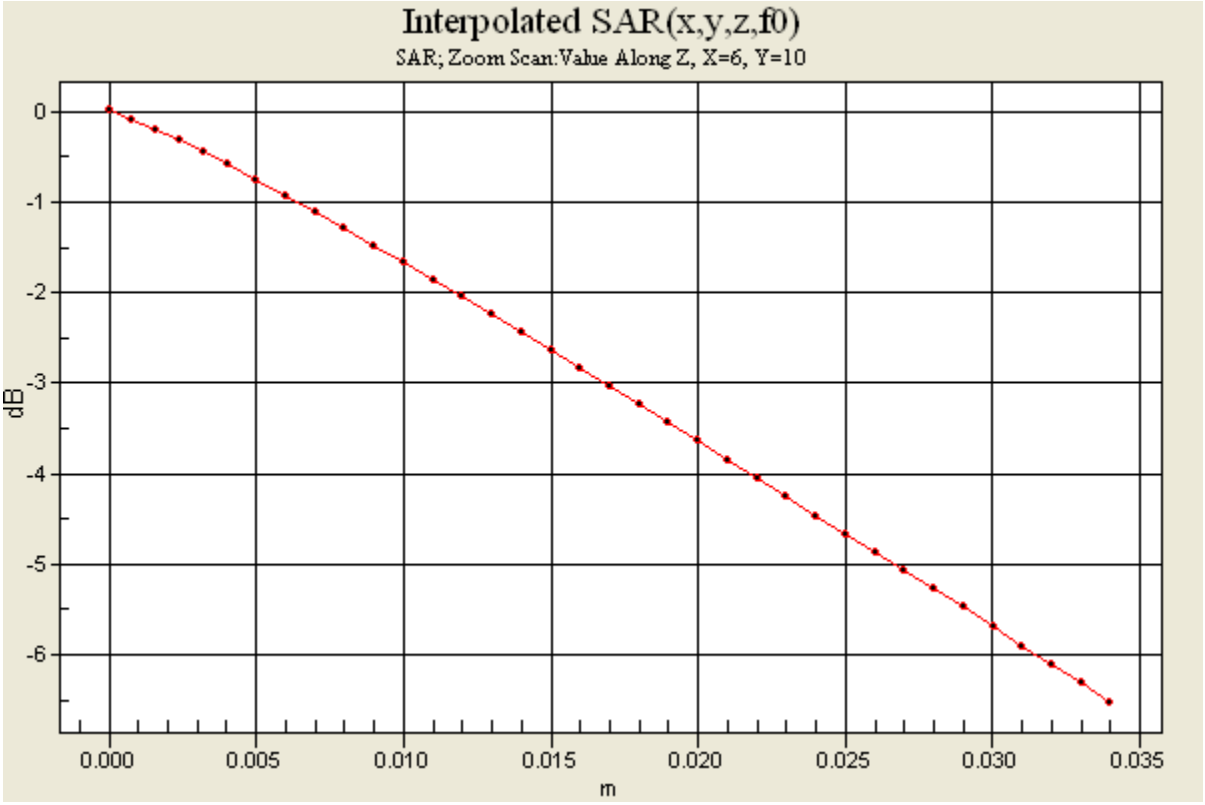
800 GSM Band: Distribution and Extrapolation of Maximum SAR
Model: X2 with Standard Battery: BST-41, Right Tilt Position.
Date/Time: 8/4/2009 7:03:19 AM
File Name: 03Aug09_X2_GSM850_SB40_open_RCT01.da4
DUT: Vulcan open
Phantom: SAM with CRP (Low Band Head)Phantom section: Right Section
Probe: ET3DV6 - SN1587ConvF(6.39, 6.39, 6.39)
Medium parameters used (interpolated): f = 836 MHz; σ = 0.904 mho/m; ε_r = 41.8; ρ = 1000 kg/m^3
Measurement Standard: DASY4 (High Precision Assessment)
Program Notes: Battery BST-41 Humidity - 44.1 % Ambient Temp - 23.6 C Simulant Temp - 23.5 C
DASY4 Configuration:
- Probe: ET3DV6 - SN1587; ConvF(6.39, 6.39, 6.39); Calibrated: 5/25/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn345; Calibrated: 10/31/2008
- Phantom: SAM with CRP (Low Band Head); Type: SAM; Serial: 1023
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186
Middle channel tilt/Area Scan (71x81x1): Measurement grid: dx=15mm, dy=15mm
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.081 mW/g
Middle channel tilt/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 6.87 V/m; Power Drift = 0.018 dB
Peak SAR (extrapolated) = 0.093 W/kg
SAR(1 g) = 0.078 mW/g; SAR(10 g) = 0.061 mW/g
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.083 mW/g
Middle channel tilt/Zoom Scan (31x31x36)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 6.87 V/m; Power Drift = 0.018 dB
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.093 mW/g

Prepared (also subject responsible if other)	No.	
SEM/CV/PF/P Rodney Dixon	REP 2009 006 X2 02	
Approved / Checked		
SEM/CV/PF/P Gerard Hayes	A	



0 dB = 0.093mW/g

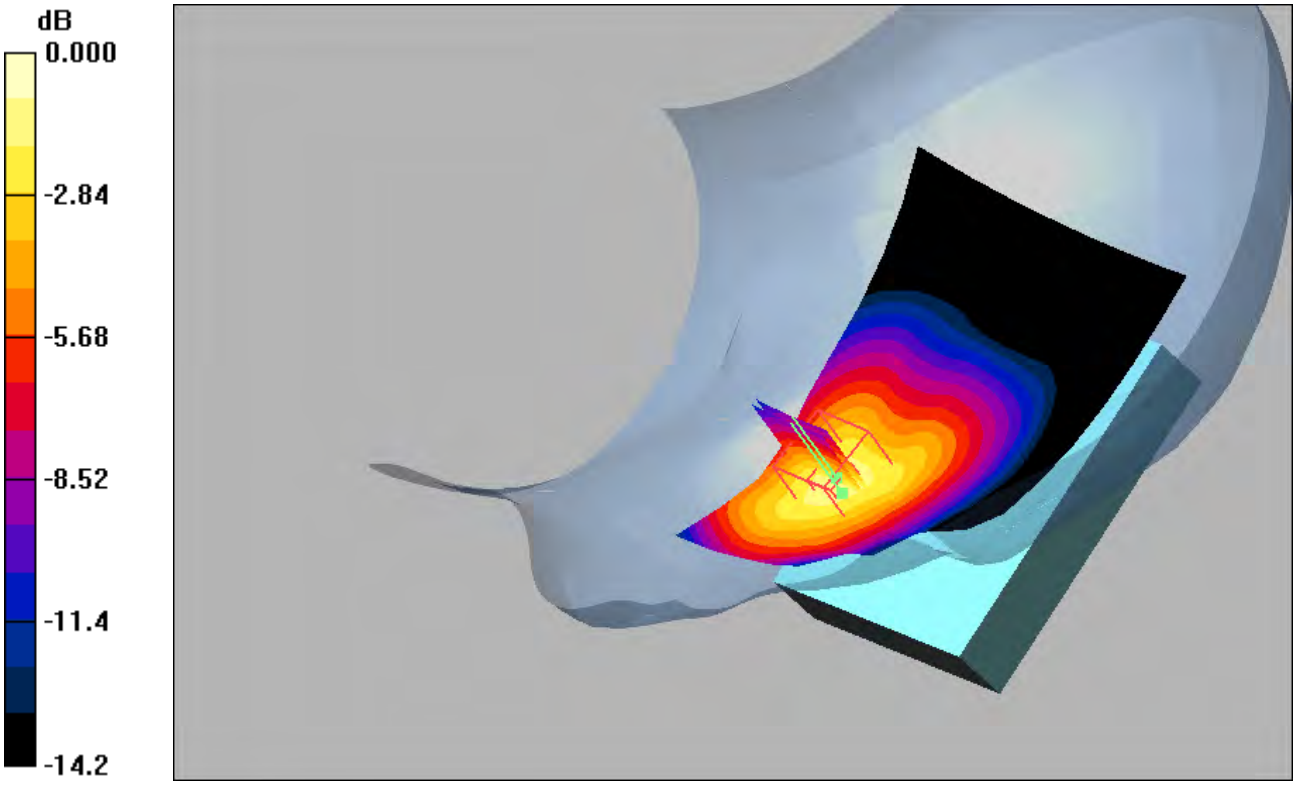
Prepared (also subject responsible if other)	No.	
SEM/CV/PF/P Rodney Dixon	REP 2009 006 X2 02	
Approved / Checked		
SEM/CV/PF/P Gerard Hayes	A	



Prepared (also subject responsible if other)	No.	
SEM/CV/PF/P Rodney Dixon	REP 2009 006 X2 02	
Approved / Checked		
SEM/CV/PF/P Gerard Hayes	A	

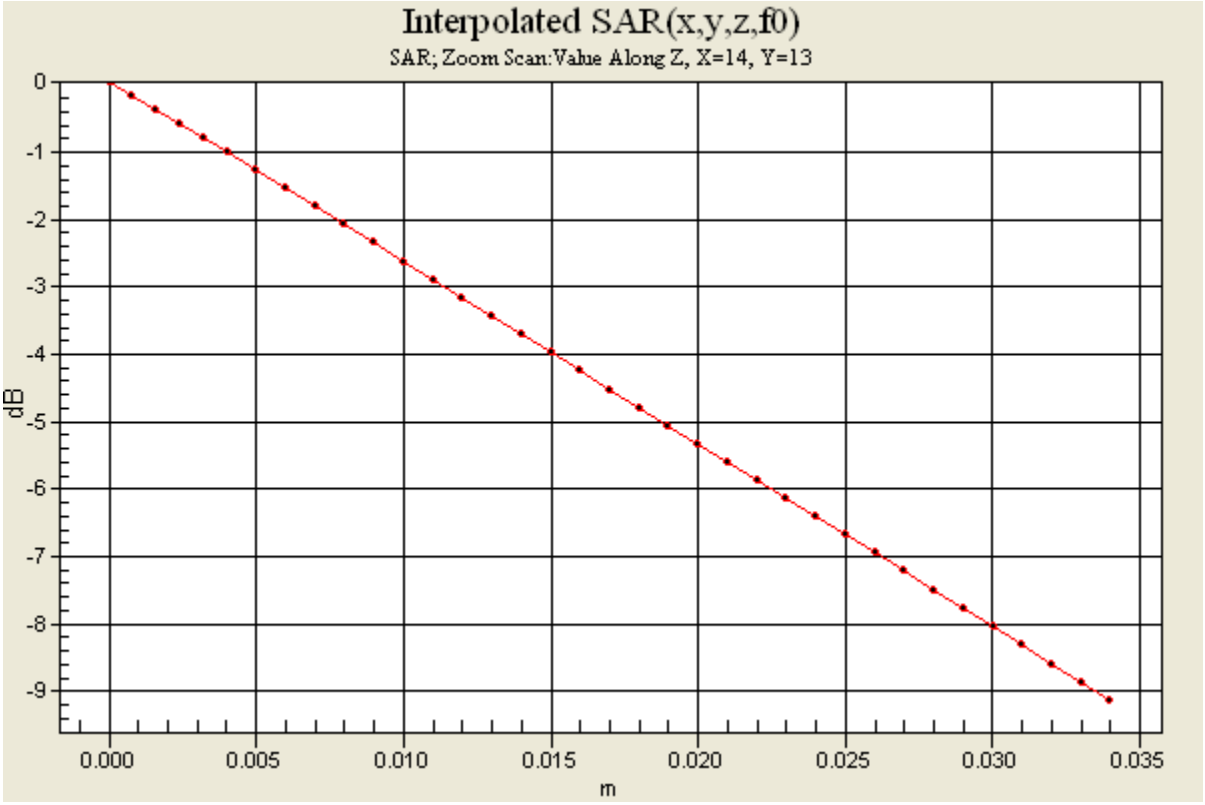
800 GSM Band: Distribution and Extrapolation of Maximum SAR
Model: X2 with Standard Battery: BST-41, Left Cheek Position.
Date/Time: 8/3/2009 12:02:27 PM
File Name: 03Aug09_X2_GSM850_SB40_open_LCT01.da4
DUT: Vulcan open
Phantom: SAM with CRP (Low Band Head)Phantom section: Left Section
Probe: ET3DV6 - SN1587ConvF(6.39, 6.39, 6.39)
Medium parameters used (interpolated): f = 849 MHz; σ = 0.917 mho/m; ε_r = 41.6; ρ = 1000 kg/m^3
Measurement Standard: DASY4 (High Precision Assessment)
Program Notes: Battery BST-41 Humidity - 44.1 % Ambient Temp - 23.6 C Simulant Temp - 23.5 C
DASY4 Configuration:
- Probe: ET3DV6 - SN1587; ConvF(6.39, 6.39, 6.39); Calibrated: 5/25/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn345; Calibrated: 10/31/2008
- Phantom: SAM with CRP (Low Band Head); Type: SAM; Serial: 1023
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186
High channel cheek/Area Scan (71x91x1): Measurement grid: dx=15mm, dy=15mm
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.449 mW/g
High channel cheek/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 3.99 V/m; Power Drift = 0.049 dB
Peak SAR (extrapolated) = 0.598 W/kg
SAR(1 g) = 0.431 mW/g; SAR(10 g) = 0.290 mW/g
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.465 mW/g
High channel cheek/Zoom Scan (31x31x36)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 3.99 V/m; Power Drift = 0.049 dB
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.598 mW/g

Prepared (also subject responsible if other)	No.	
SEM/CV/PF/P Rodney Dixon	REP 2009 006 X2 02	
Approved / Checked		
SEM/CV/PF/P Gerard Hayes	A	



0 dB = 0.598mW/g

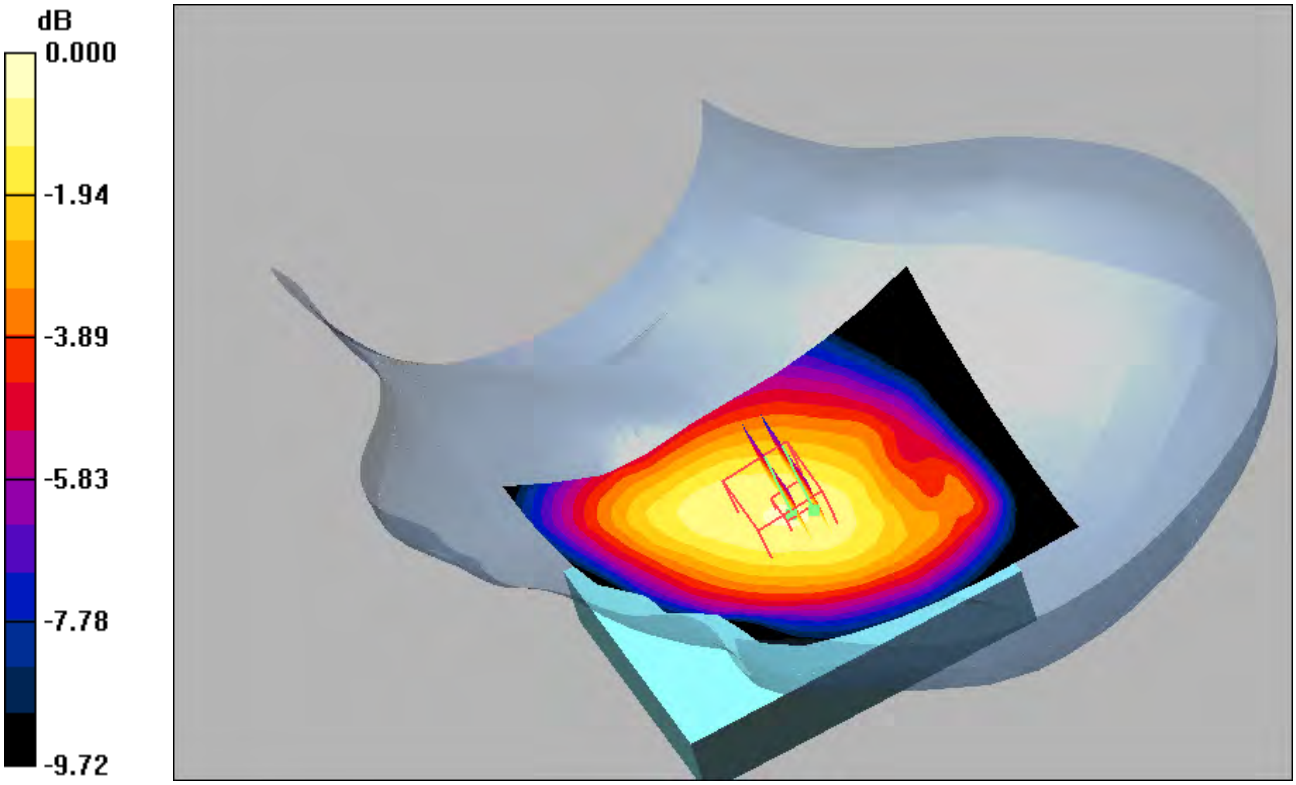
Prepared (also subject responsible if other)	No.	
SEM/CV/PF/P Rodney Dixon	REP 2009 006 X2 02	
Approved / Checked		
SEM/CV/PF/P Gerard Hayes	A	



Prepared (also subject responsible if other)	No.	
SEM/CV/PF/P Rodney Dixon	REP 2009 006 X2 02	
Approved / Checked		
SEM/CV/PF/P Gerard Hayes	A	

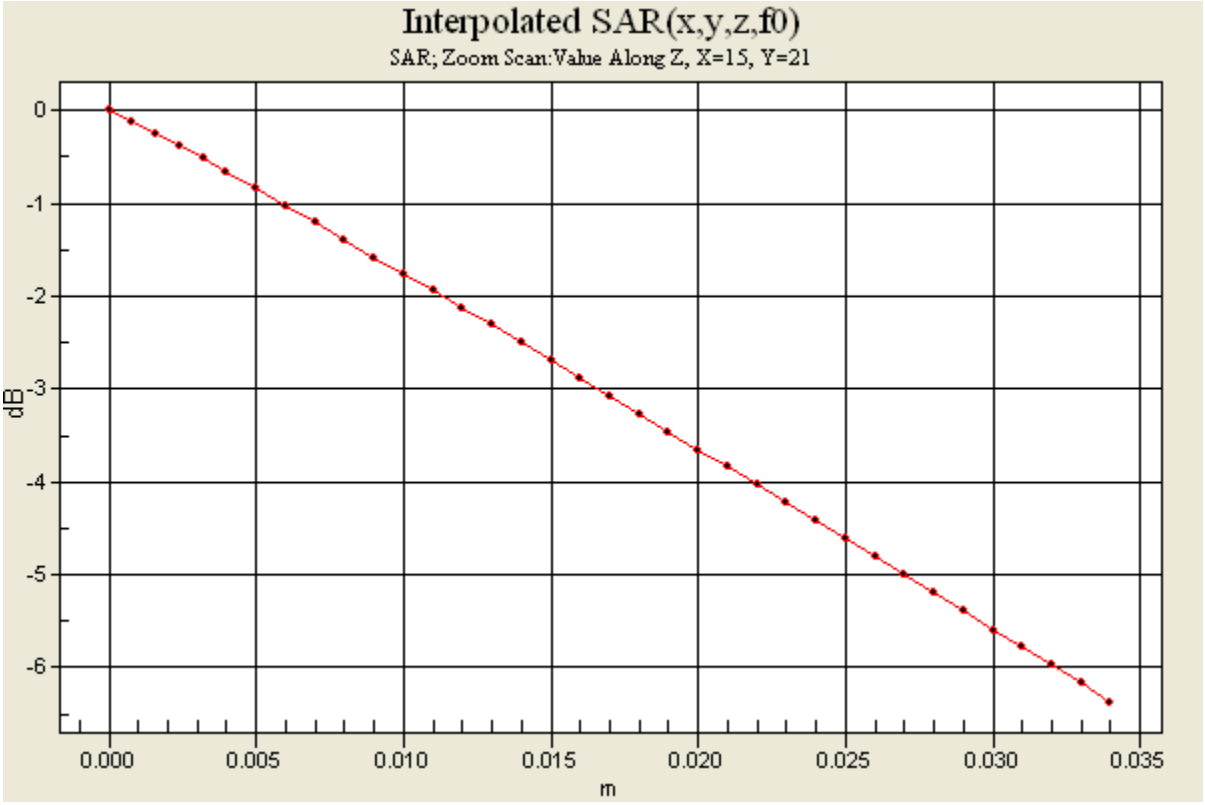
800 GSM Band: Distribution and Extrapolation of Maximum SAR
Model: X2 with Standard Battery: BST-41, Left Tilt Position.
Date/Time: 8/3/2009 1:35:41 PM
File Name: 03Aug09_X2_GSM850_SB40_open_LCT01.da4
DUT: Vulcan open
Phantom: SAM with CRP (Low Band Head)Phantom section: Left Section
Probe: ET3DV6 - SN1587ConvF(6.39, 6.39, 6.39)
Medium parameters used (interpolated): f = 849 MHz; σ = 0.917 mho/m; ε_r = 41.6; ρ = 1000 kg/m^3
Measurement Standard: DASY4 (High Precision Assessment)
Program Notes: Battery BST-41 Humidity - 44.1 % Ambient Temp - 23.6 C Simulant Temp - 23.5 C
DASY4 Configuration:
- Probe: ET3DV6 - SN1587; ConvF(6.39, 6.39, 6.39); Calibrated: 5/25/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn345; Calibrated: 10/31/2008
- Phantom: SAM with CRP (Low Band Head); Type: SAM; Serial: 1023
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186
High channel tilt/Area Scan (71x91x1): Measurement grid: dx=15mm, dy=15mm
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.073 mW/g
High channel tilt/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 6.24 V/m; Power Drift = -0.039 dB
Peak SAR (extrapolated) = 0.083 W/kg
SAR(1 g) = 0.069 mW/g; SAR(10 g) = 0.054 mW/g
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.072 mW/g
High channel tilt/Zoom Scan (31x31x36)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 6.24 V/m; Power Drift = -0.039 dB
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.083 mW/g

Prepared (also subject responsible if other)	No.	
SEM/CV/PF/P Rodney Dixon	REP 2009 006 X2 02	
Approved / Checked		
SEM/CV/PF/P Gerard Hayes	A	

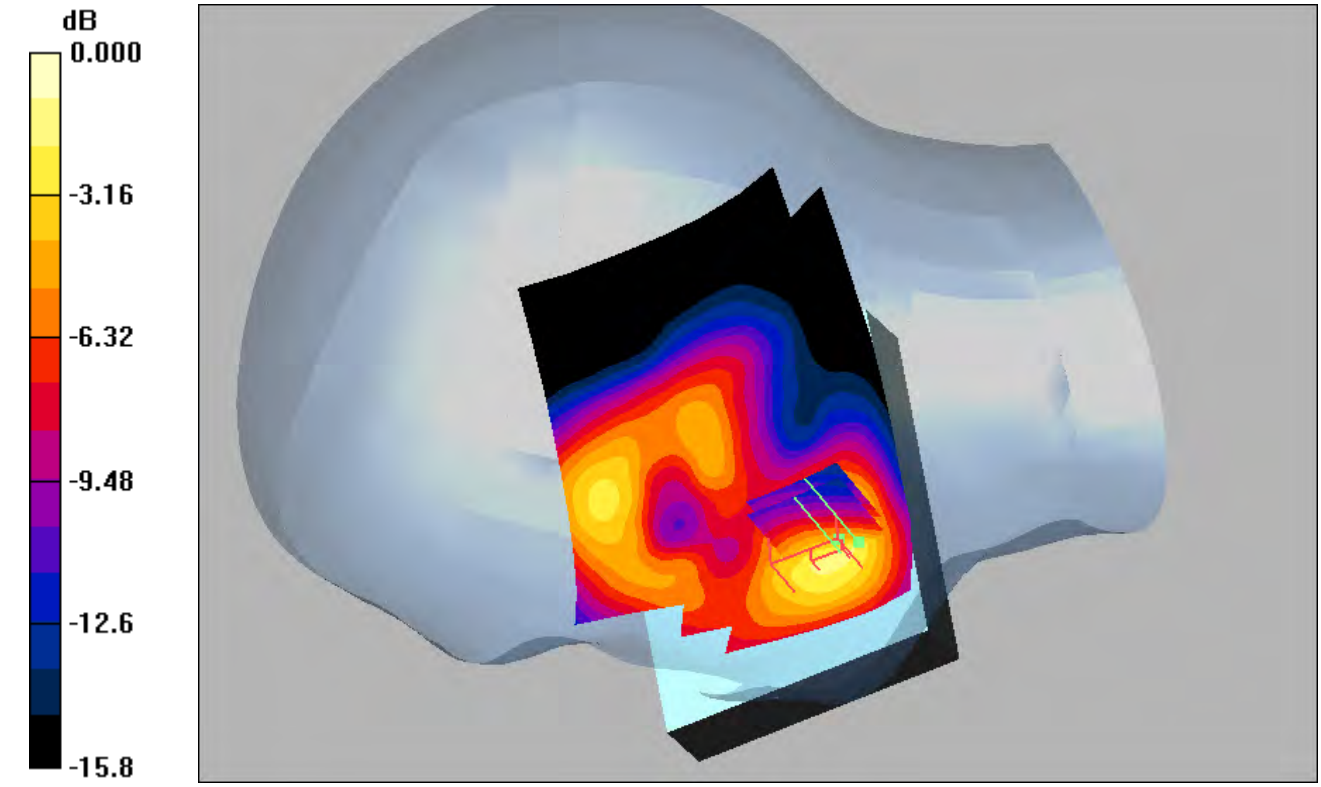


0 dB = 0.083mW/g

Prepared (also subject responsible if other)		No.	
SEM/CV/PF/P Rodney Dixon		REP 2009 006 X2 02	
Approved	Checked		
SEM/CV/PF/P Gerard Hayes		A	

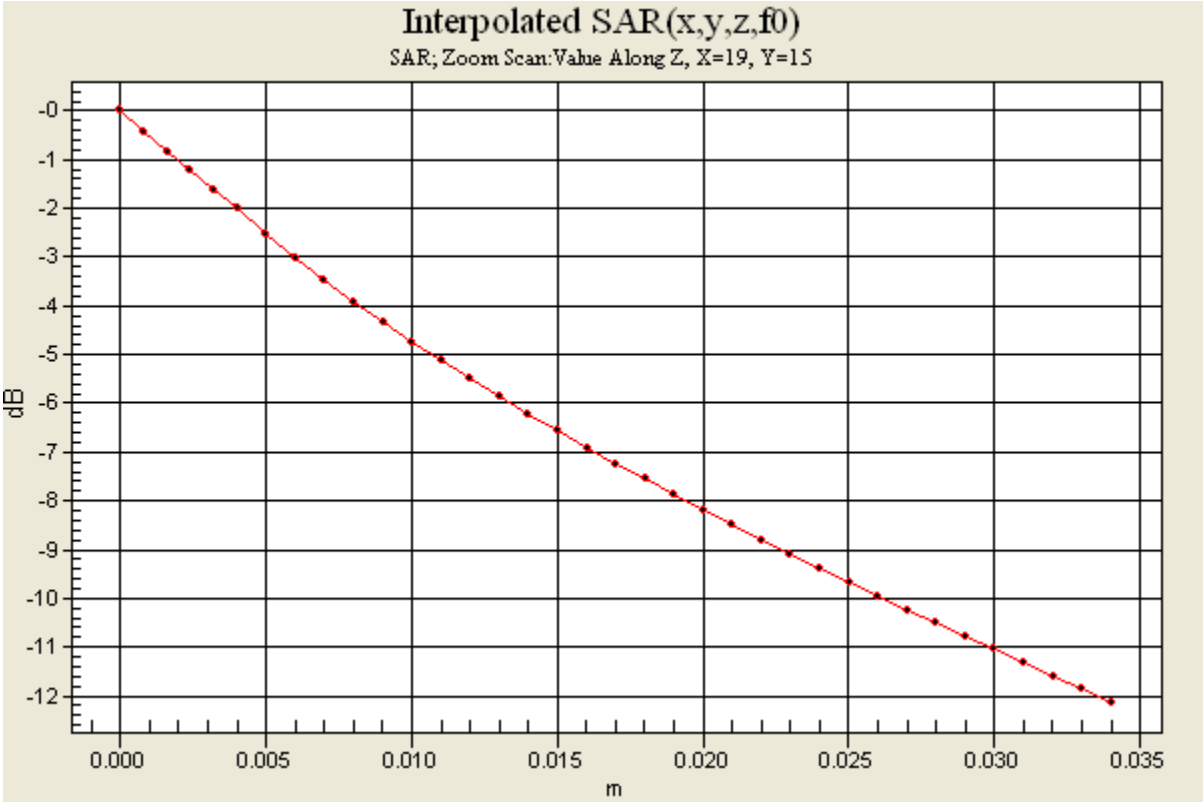


1900 GSM Band: Distribution and Extrapolation of Maximum SAR
Model: X2 with Standard Battery: BST-41, Right Cheek Position.
Date/Time: 8/2/2009 3:10:14 PM
File Name: 02Aug09_Aino_GSM1900_SBKM_open_RCT01.da4
DUT: Vulcan open
Phantom: SAM with CRP (High Band Head)Phantom section: Right Section
Probe: ET3DV6 - SN1584ConvF(5.1, 5.1, 5.1)
Medium parameters used: f = 1910 MHz; σ = 1.45 mho/m; ε_r = 38.4; ρ = 1000 kg/m^3
Measurement Standard: DASY4 (High Precision Assessment)
Program Notes: Battery - BST-41 Humidity: 43.4 % Ambient Temp: 23.6 C Simulant Temp: 23.5 C
DASY4 Configuration:
- Probe: ET3DV6 - SN1584; ConvF(5.1, 5.1, 5.1); Calibrated: 11/17/2008
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn417; Calibrated: 11/7/2008
- Phantom: SAM with CRP (High Band Head); Type: SAM; Serial: TP: 1335
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186
High channel cheek/Area Scan (71x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.139 mW/g
High channel cheek/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 5.13 V/m; Power Drift = -0.187 dB
Peak SAR (extrapolated) = 0.203 W/kg
SAR(1 g) = 0.125 mW/g; SAR(10 g) = 0.081 mW/g
Maximum value of SAR (measured) = 0.134 mW/g
High channel cheek/Zoom Scan (31x31x36)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 5.13 V/m; Power Drift = -0.187 dB
Maximum value of SAR (interpolated) = 0.203 mW/g



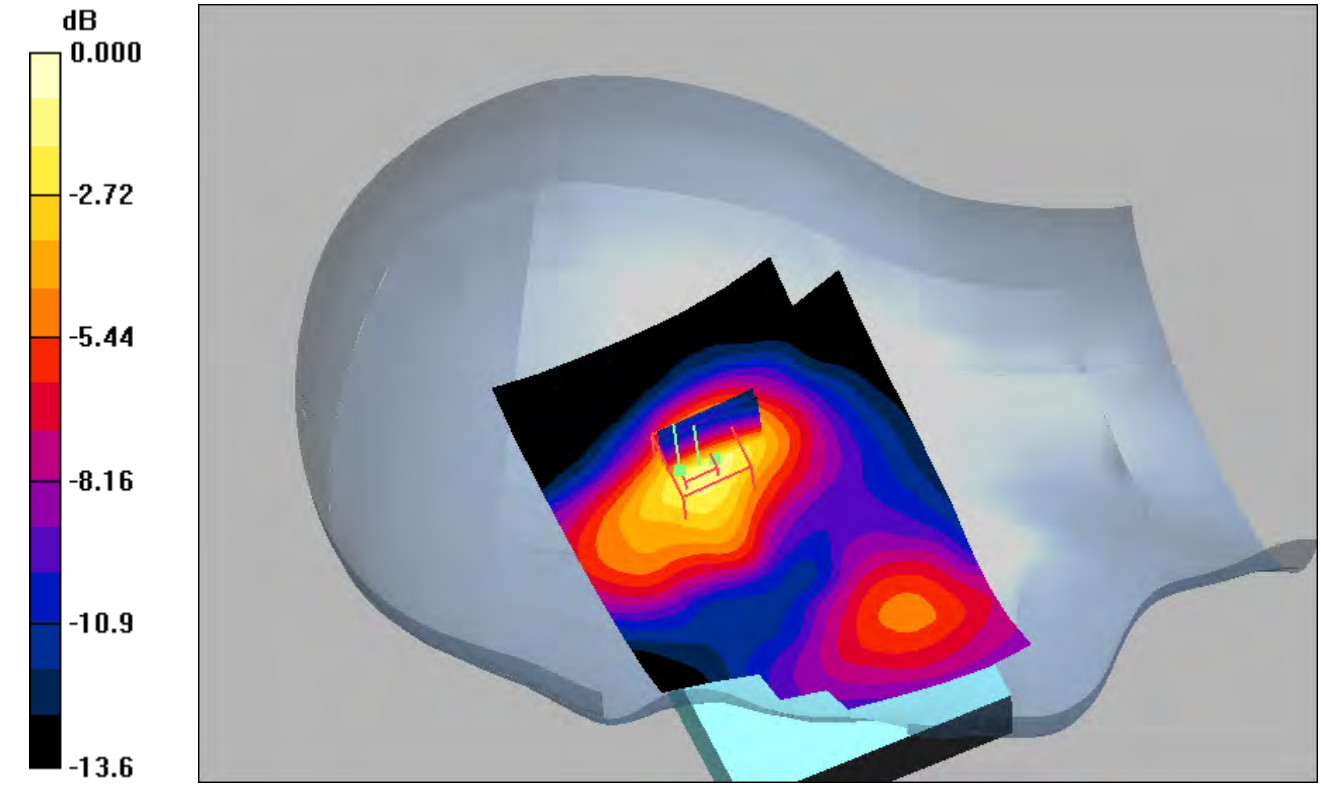
Prepared (also subject responsible if other)		No.	
SEM/CV/PF/P Rodney Dixon		REP 2009 006 X2 02	
Approved	Checked		
SEM/CV/PF/P Gerard Hayes		A	

0 dB = 0.203mW/g

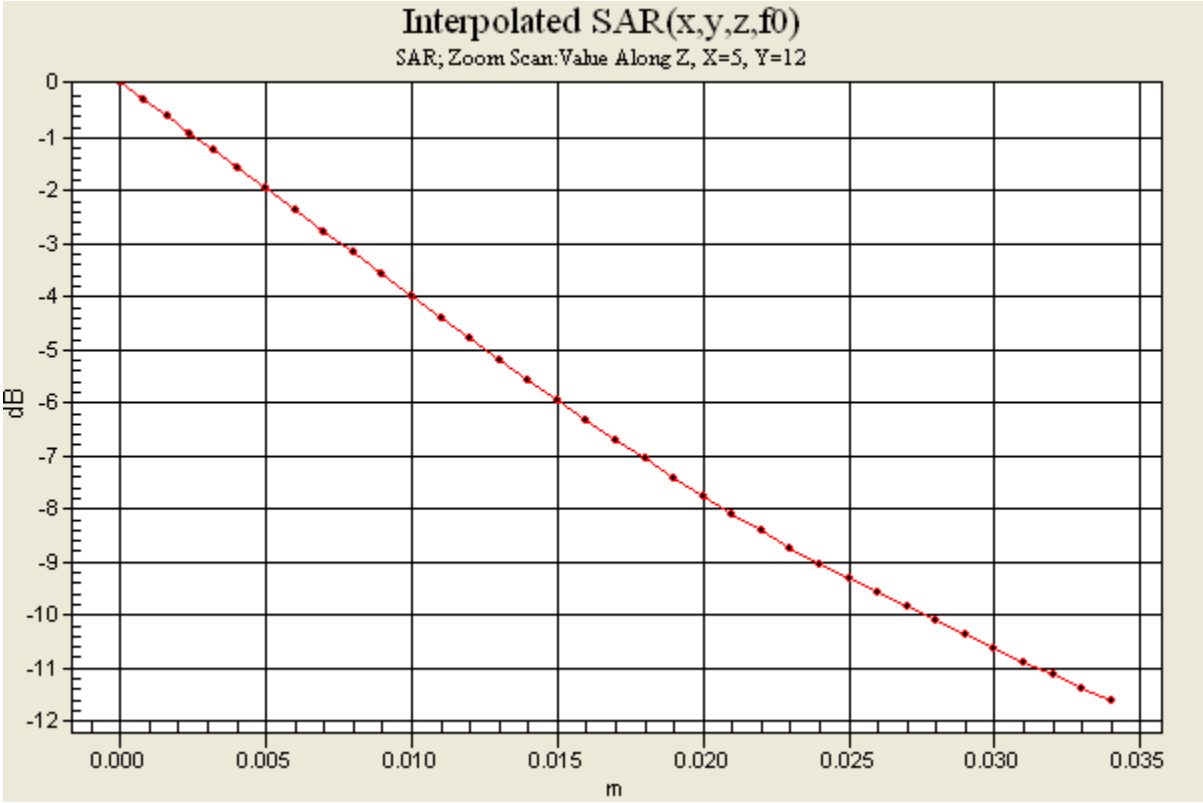


Prepared (also subject responsible if other)	No.	
SEM/CV/PF/P Rodney Dixon	REP 2009 006 X2 02	
Approved / Checked		
SEM/CV/PF/P Gerard Hayes	A	

1900 GSM Band: Distribution and Extrapolation of Maximum SAR
Model: X2 with Standard Battery: BST-41, Right Tilt Position.
Date/Time: 8/2/2009 4:24:23 PM
File Name: 02Aug09_Aino_GSM1900_SBKM_open_RCT01.da4
DUT: Vulcan open
Phantom: SAM with CRP (High Band Head)Phantom section: Right Section
Probe: ET3DV6 - SN1584ConvF(5.1, 5.1, 5.1)
Medium parameters used: f = 1910 MHz; σ = 1.45 mho/m; ε_r = 38.4; ρ = 1000 kg/m^3
Measurement Standard: DASY4 (High Precision Assessment)
Program Notes: Battery - BST-41 Humidity: 43.4 % Ambient Temp: 23.6 C Simulant Temp: 23.5 C
DASY4 Configuration:
- Probe: ET3DV6 - SN1584; ConvF(5.1, 5.1, 5.1); Calibrated: 11/17/2008
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn417; Calibrated: 11/7/2008
- Phantom: SAM with CRP (High Band Head); Type: SAM; Serial: TP: 1335
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186
High channel tilt/Area Scan (71x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.097 mW/g
High channel tilt/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 7.84 V/m; Power Drift = -0.026 dB
Peak SAR (extrapolated) = 0.129 W/kg
SAR(1 g) = 0.083 mW/g; SAR(10 g) = 0.052 mW/g
Maximum value of SAR (measured) = 0.090 mW/g
High channel tilt/Zoom Scan (31x31x36)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 7.84 V/m; Power Drift = -0.026 dB
Maximum value of SAR (interpolated) = 0.129 mW/g



0 dB = 0.129mW/g


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

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SEM/CV/PF/P Rodney Dixon	REP 2009 006 X2 02	
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SEM/CV/PF/P Gerard Hayes	A	

1900 GSM Band: Distribution and Extrapolation of Maximum SAR
Model: X2 with Standard Battery: BST-41, Left Cheek Position.
Date/Time: 8/2/2009 12:13:58 PM
File Name: 02Aug09_Aino_GSM1900_SBKM_open_LCT01.da4
DUT: Vulcan open
Phantom: SAM with CRP (High Band Head)Phantom section: Left Section
Probe: ET3DV6 - SN1584ConvF(5.1, 5.1, 5.1)
Medium parameters used: f = 1910 MHz; σ = 1.45 mho/m; ε_r = 38.4; ρ = 1000 kg/m^3
Measurement Standard: DASY4 (High Precision Assessment)
Program Notes: Battery - BST-41 Humidity: 43.4 % Ambient Temp: 23.6 C Simulant Temp: 23.5 C
DASY4 Configuration:
- Probe: ET3DV6 - SN1584; ConvF(5.1, 5.1, 5.1); Calibrated: 11/17/2008
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn417; Calibrated: 11/7/2008
- Phantom: SAM with CRP (High Band Head); Type: SAM; Serial: TP: 1335
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

High channel cheek/Area Scan (71x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.253 mW/g
High channel cheek/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 5.72 V/m; Power Drift = 0.036 dB
Peak SAR (extrapolated) = 0.352 W/kg
SAR(1 g) = 0.221 mW/g; SAR(10 g) = 0.120 mW/g
Maximum value of SAR (measured) = 0.242 mW/g
High channel cheek/Zoom Scan (31x31x36)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 5.72 V/m; Power Drift = 0.036 dB
Maximum value of SAR (interpolated) = 0.352 mW/g

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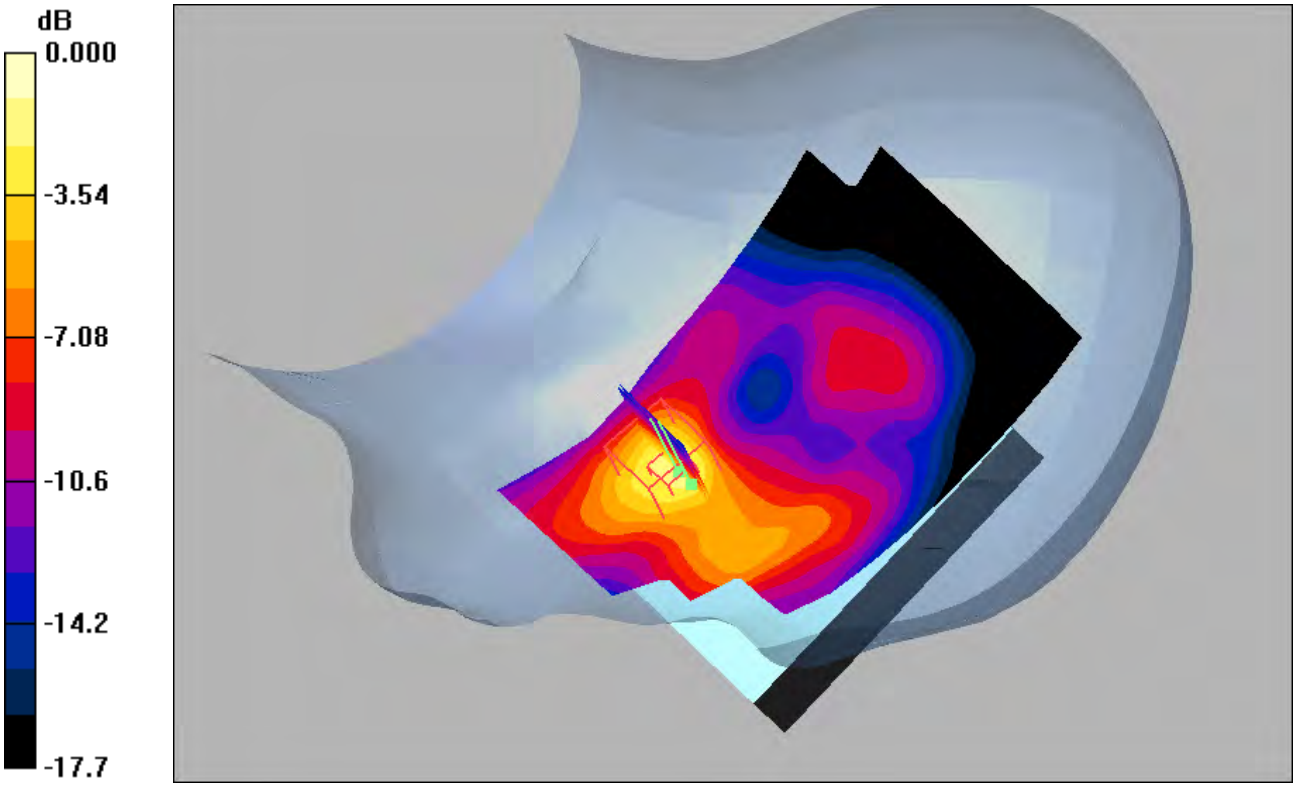
SEM/CV/PF/P Rodney Dixon	REP 2009 006 X2 02	
Approved / Checked		
SEM/CV/PF/P Gerard Hayes	A	



0 dB = 0.352mW/g

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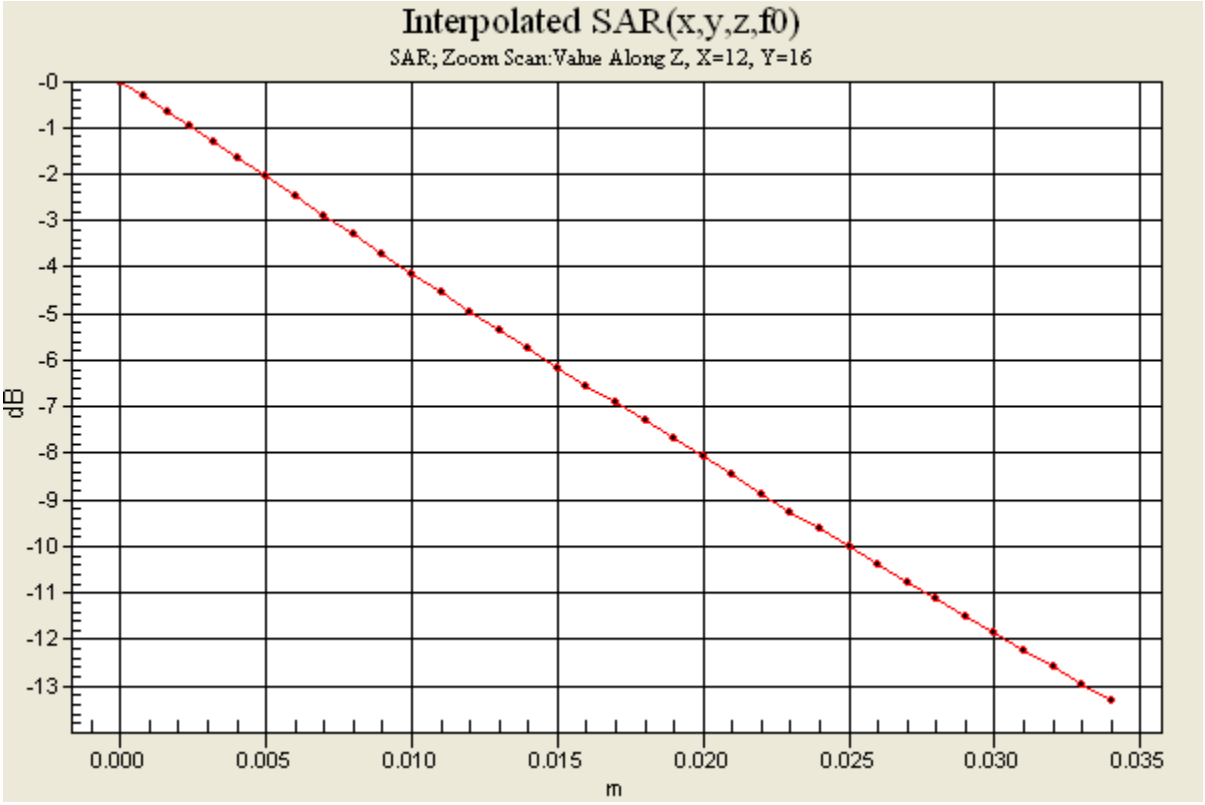
SEM/CV/PF/P Rodney Dixon	REP 2009 006 X2 02	
Approved / Checked		
SEM/CV/PF/P Gerard Hayes	A	



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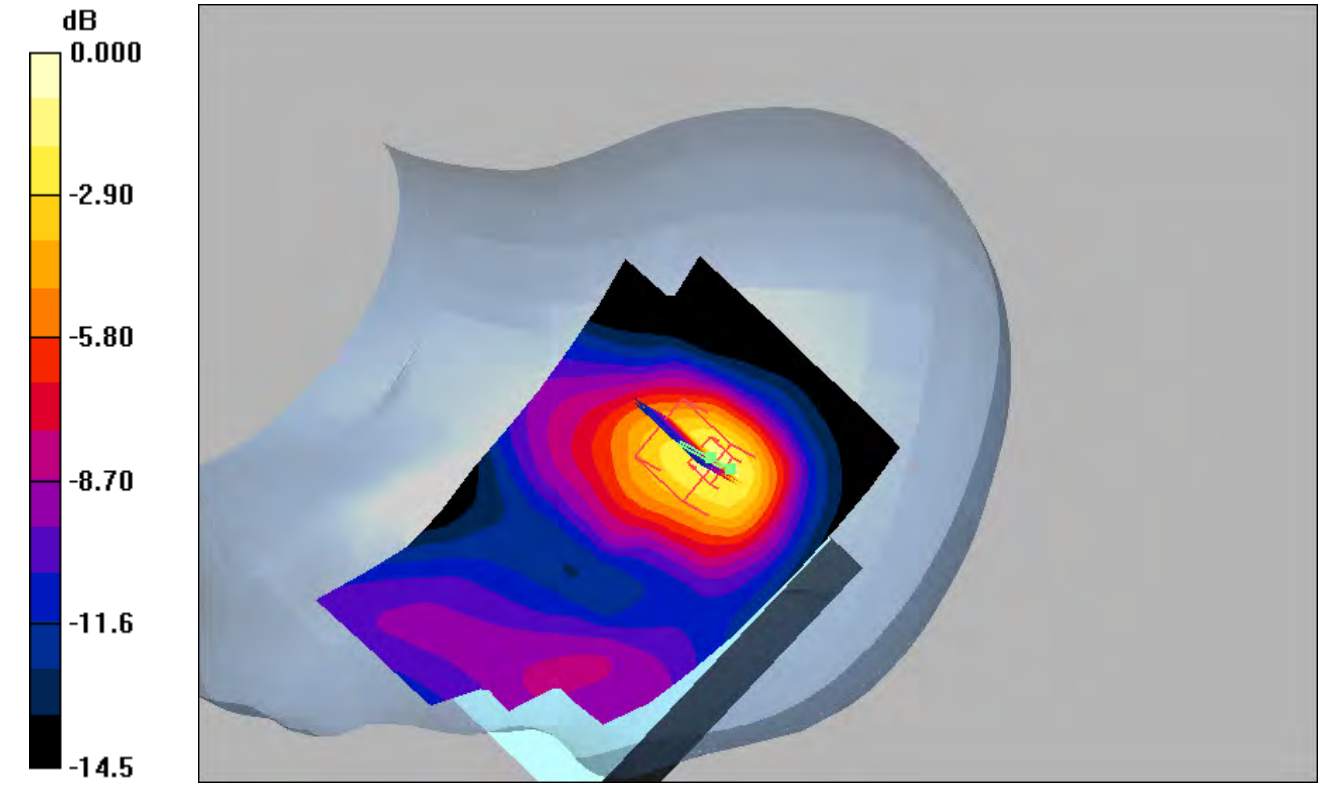
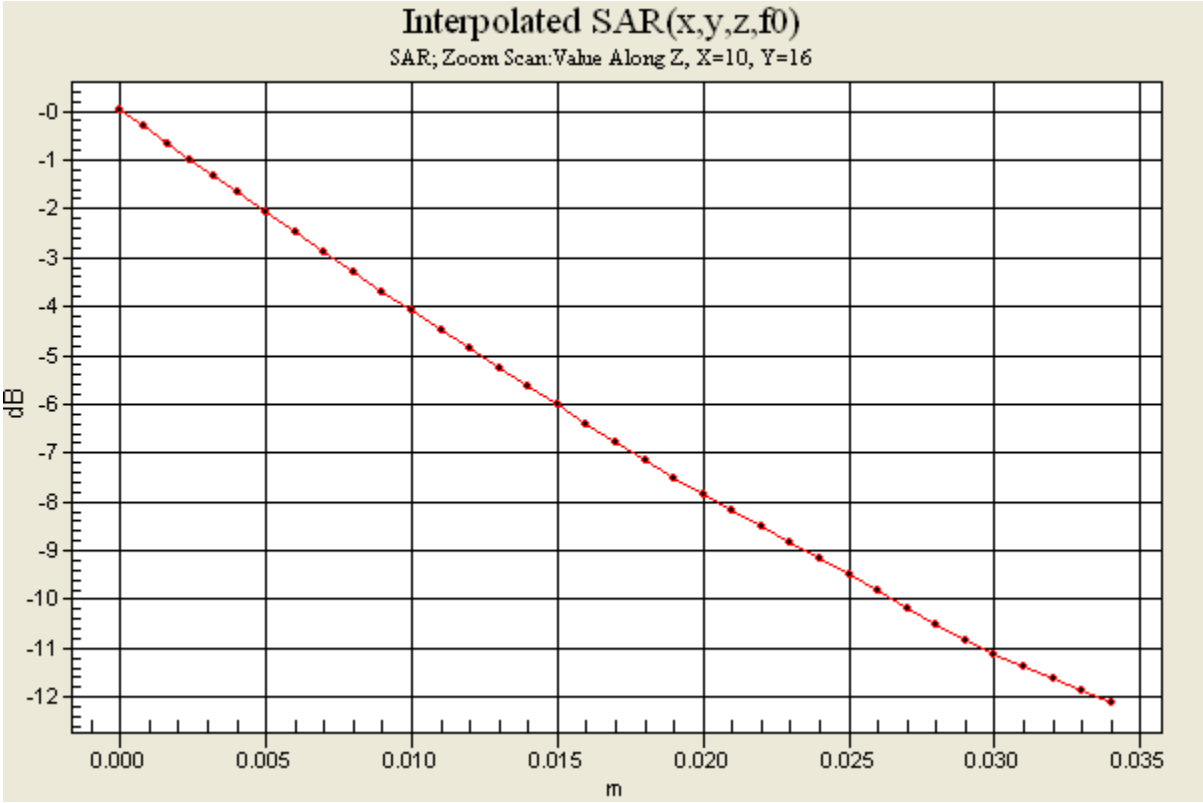
SEM/CV/PF/P Rodney Dixon	REP 2009 006 X2 02	
Approved / Checked		
SEM/CV/PF/P Gerard Hayes	A	

1900 GSM Band: Distribution and Extrapolation of Maximum SAR
Model: X2 with Standard Battery: BST-41, Left Tilt Position.
Date/Time: 8/2/2009 1:46:20 PM
File Name: 02Aug09_Aino_GSM1900_SBKM_open_LCT01.da4
DUT: Vulcan open
Phantom: SAM with CRP (High Band Head)Phantom section: Left Section
Probe: ET3DV6 - SN1584ConvF(5.1, 5.1, 5.1)
Medium parameters used: f = 1910 MHz; σ = 1.45 mho/m; ε_r = 38.4; ρ = 1000 kg/m^3
Measurement Standard: DASY4 (High Precision Assessment)
Program Notes: Battery - BST-41 Humidity: 43.4 % Ambient Temp: 23.6 C Simulant Temp: 23.5 C
DASY4 Configuration:
- Probe: ET3DV6 - SN1584; ConvF(5.1, 5.1, 5.1); Calibrated: 11/17/2008
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn417; Calibrated: 11/7/2008
- Phantom: SAM with CRP (High Band Head); Type: SAM; Serial: TP: 1335
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186
High channel tilt/Area Scan (71x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.086 mW/g
High channel tilt/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 7.82 V/m; Power Drift = -0.009 dB
Peak SAR (extrapolated) = 0.122 W/kg
SAR(1 g) = 0.075 mW/g; SAR(10 g) = 0.044 mW/g
Maximum value of SAR (measured) = 0.084 mW/g
High channel tilt/Zoom Scan (31x31x36)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 7.82 V/m; Power Drift = -0.009 dB
Maximum value of SAR (interpolated) = 0.122 mW/g



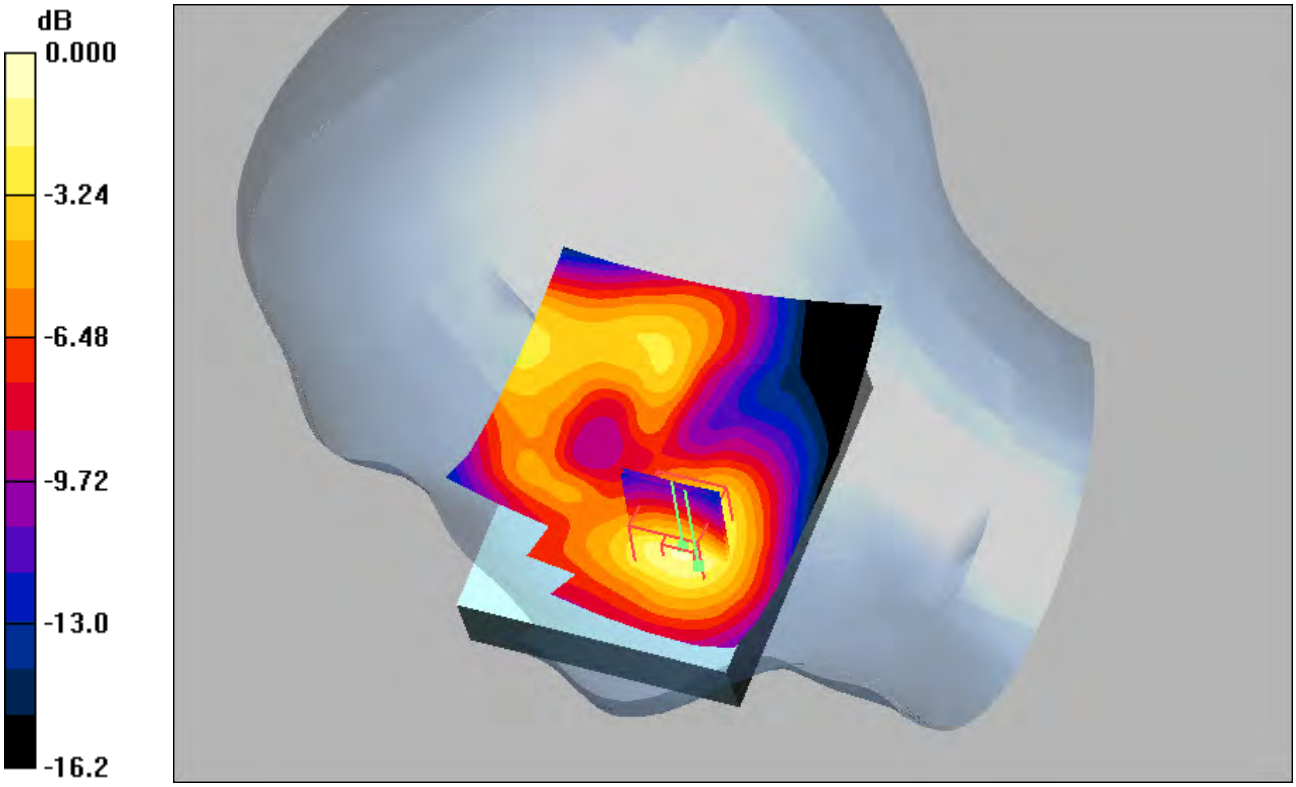
0 dB = 0.122mW/g


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

Prepared (also subject responsible if other)	No.	
SEM/CV/PF/P Rodney Dixon	REP 2009 006 X2 02	
Approved / Checked		
SEM/CV/PF/P Gerard Hayes	A	

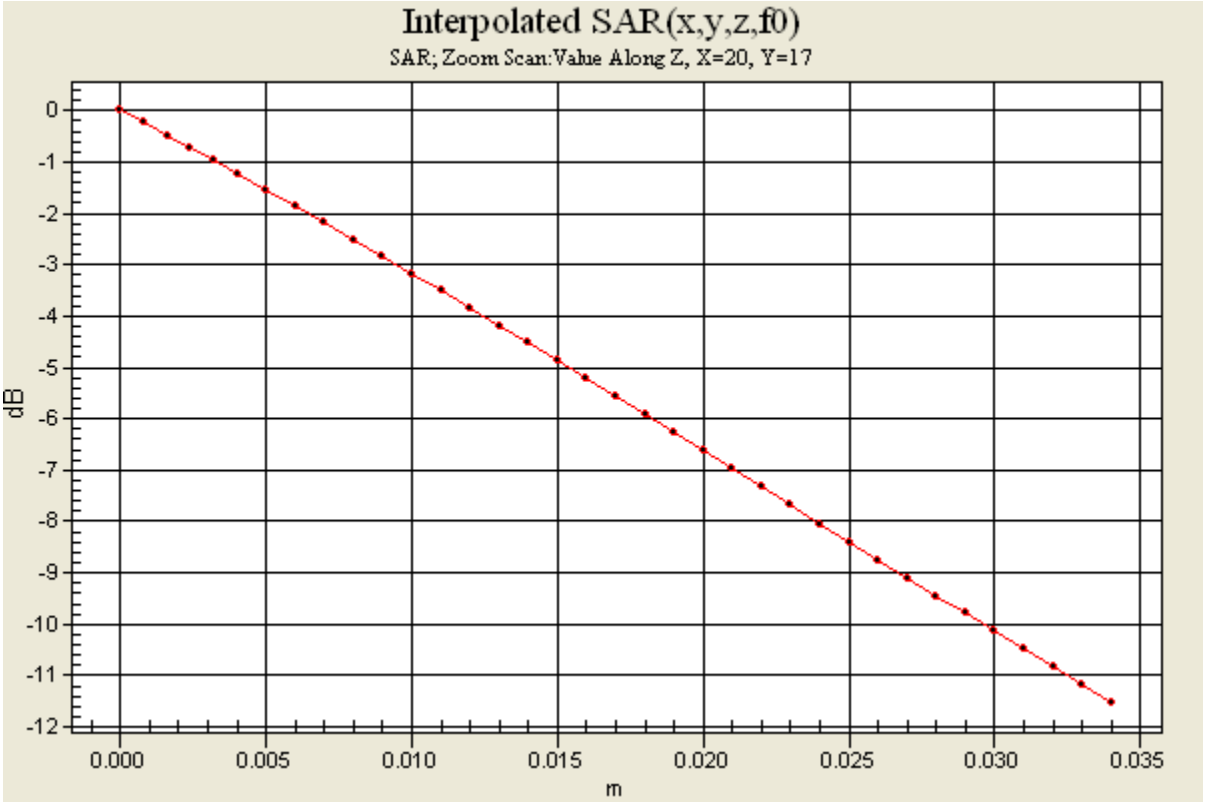
Band II WCDMA Band: Distribution and Extrapolation of Maximum SAR
Model: X2 with Standard Battery: BST-41, Right Cheek Position.
Date/Time: 7/28/2009 10:59:51 AM
File Name: 28July09_X2_B2WCDMA_SBKM_open_RCT01.da4
DUT: Vulcan open
Phantom: SAM with CRP (High Band Head)Phantom section: Right Section
Probe: ET3DV6 - SN1584ConvF(5.1, 5.1, 5.1)
Medium parameters used (interpolated): f = 1907.4 MHz; σ = 1.47 mho/m; ε_r = 38.3; ρ = 1000 kg/m^3
Measurement Standard: DASY4 (High Precision Assessment)
Program Notes: Battery - BST41 Humidity - 41.6 % Ambient Temp - 23.5 C Simulant Temp - 23.2 C
DASY4 Configuration:
- Probe: ET3DV6 - SN1584; ConvF(5.1, 5.1, 5.1); Calibrated: 11/17/2008
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn417; Calibrated: 11/7/2008
- Phantom: SAM with CRP (High Band Head); Type: SAM; Serial: TP: 1335
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186
High channel cheek/Area Scan (71x81x1): Measurement grid: dx=15mm, dy=15mm
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.378 mW/g
High channel cheek/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 9.78 V/m; Power Drift = -0.052 dB
Peak SAR (extrapolated) = 0.451 W/kg
SAR(1 g) = 0.325 mW/g; SAR(10 g) = 0.207 mW/g
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.354 mW/g
High channel cheek/Zoom Scan (31x31x36)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 9.78 V/m; Power Drift = -0.052 dB
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.451 mW/g

Prepared (also subject responsible if other)	No.	
SEM/CV/PF/P Rodney Dixon	REP 2009 006 X2 02	
Approved / Checked		
SEM/CV/PF/P Gerard Hayes	A	



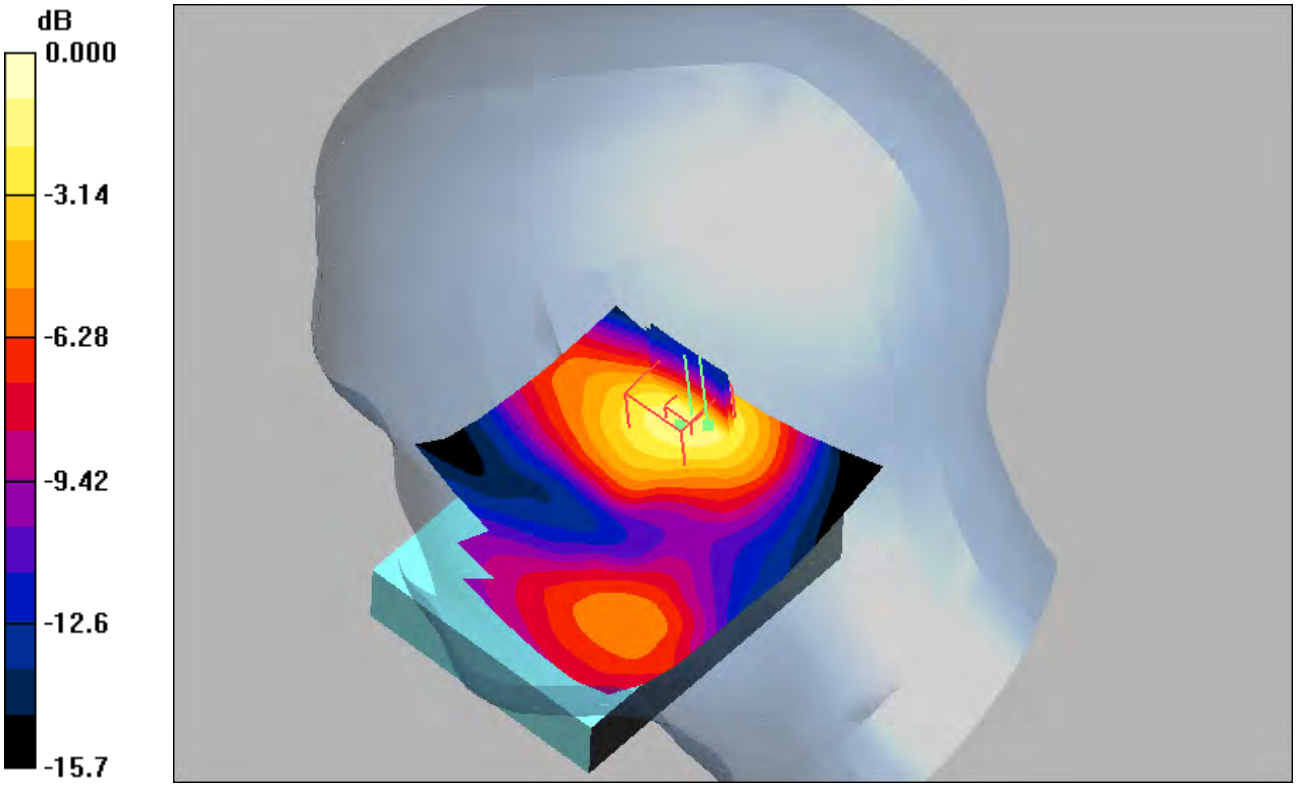
0 dB = 0.451mW/g

Prepared (also subject responsible if other)	No.	
SEM/CV/PF/P Rodney Dixon	REP 2009 006 X2 02	
Approved / Checked		
SEM/CV/PF/P Gerard Hayes	A	



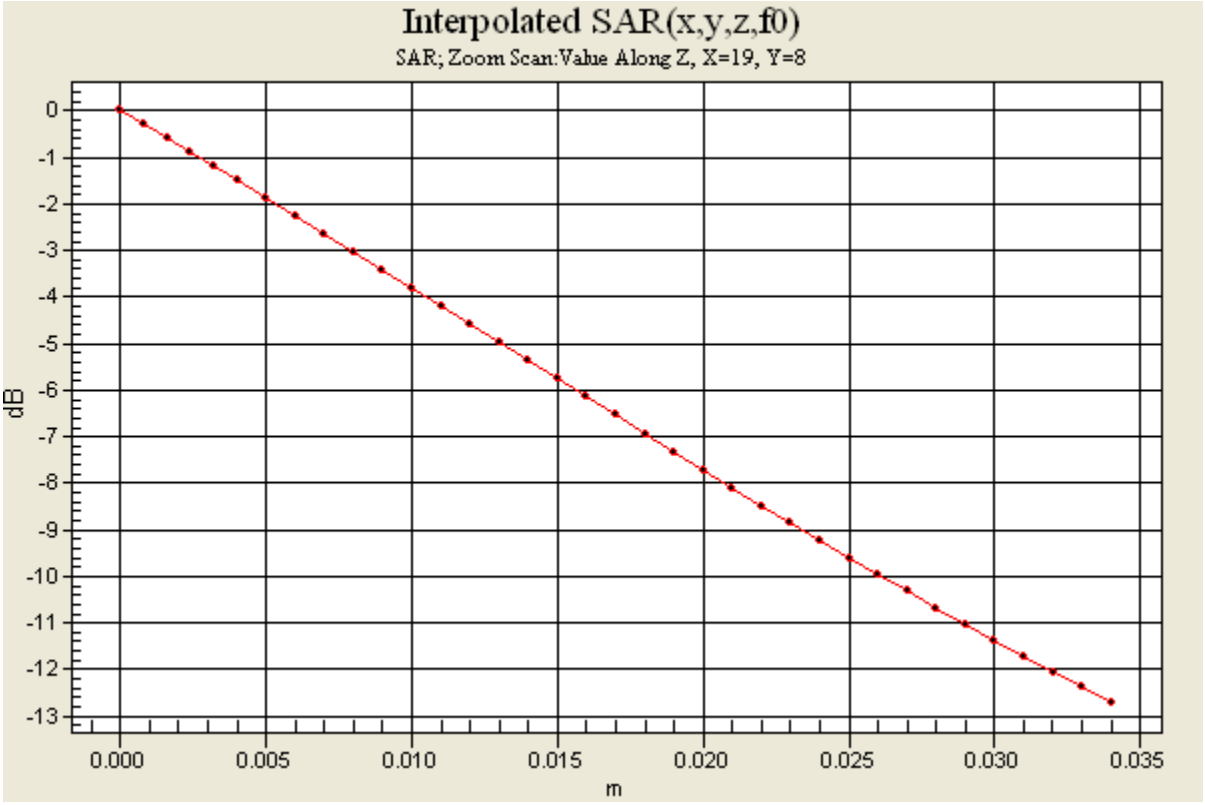
Band II WCDMA Band: Distribution and Extrapolation of Maximum SAR
Model: X2 with Standard Battery: BST-41, Right Tilt Position.
Date/Time: 7/28/2009 12:06:29 PM
File Name: 28July09_X2_B2WCDMA_SBKM_open_RCT01.da4
DUT: Vulcan open
Phantom: SAM with CRP (High Band Head)Phantom section: Right Section
Probe: ET3DV6 - SN1584ConvF(5.1, 5.1, 5.1)
Medium parameters used (interpolated): f = 1907.4 MHz; σ = 1.47 mho/m; ε_r = 38.3; ρ = 1000 kg/m^3
Measurement Standard: DASY4 (High Precision Assessment)
Program Notes: Battery - BST41 Humidity - 41.6 % Ambient Temp - 23.5 C Simulant Temp - 23.2 C
DASY4 Configuration:
- Probe: ET3DV6 - SN1584; ConvF(5.1, 5.1, 5.1); Calibrated: 11/17/2008
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn417; Calibrated: 11/7/2008
- Phantom: SAM with CRP (High Band Head); Type: SAM; Serial: TP: 1335
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186
High channel tilt/Area Scan (71x81x1): Measurement grid: dx=15mm, dy=15mm
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.209 mW/g
High channel tilt/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 11.9 V/m; Power Drift = 0.088 dB
Peak SAR (extrapolated) = 0.285 W/kg
SAR(1 g) = 0.188 mW/g; SAR(10 g) = 0.117 mW/g
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.206 mW/g
High channel tilt/Zoom Scan (31x31x36)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 11.9 V/m; Power Drift = 0.088 dB
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.285 mW/g

Prepared (also subject responsible if other)	No.	
SEM/CV/PF/P Rodney Dixon	REP 2009 006 X2 02	
Approved / Checked		
SEM/CV/PF/P Gerard Hayes	A	



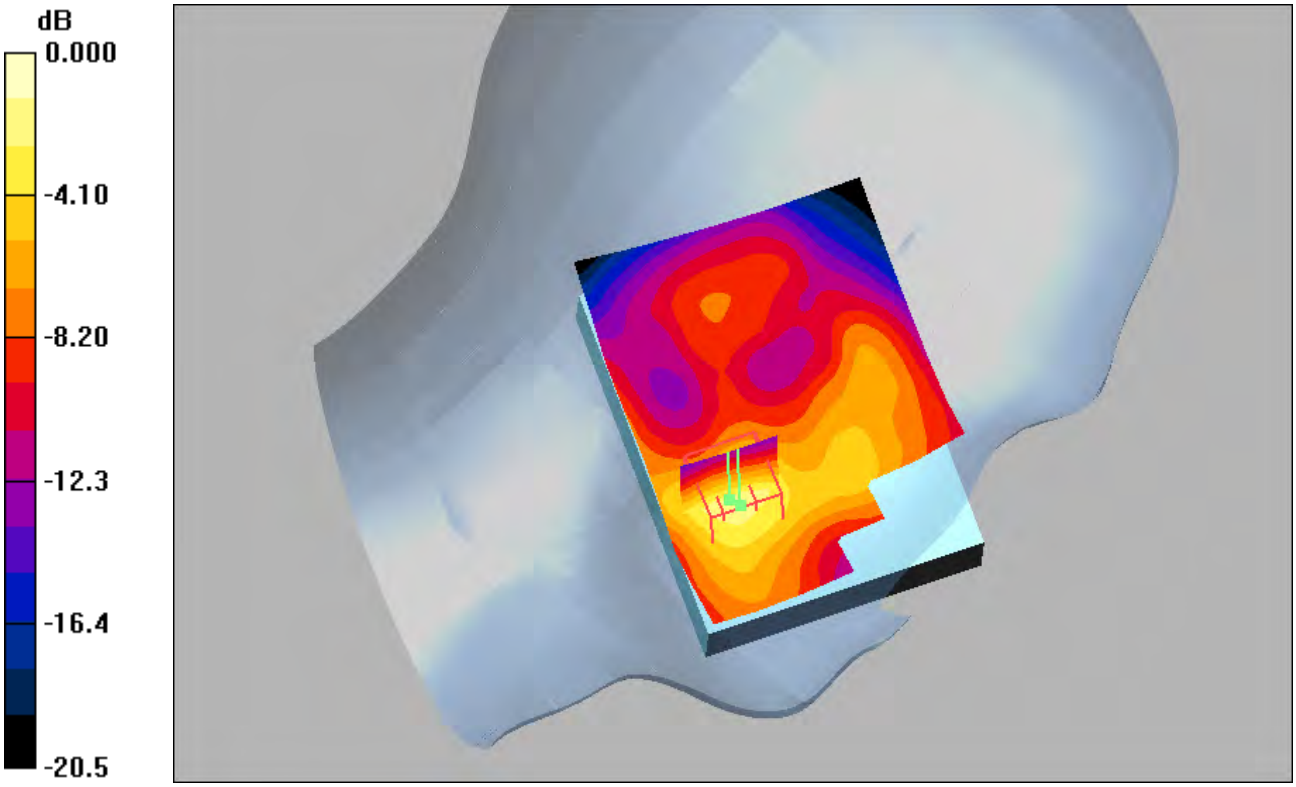
0 dB = 0.285mW/g

Prepared (also subject responsible if other)	No.	
SEM/CV/PF/P Rodney Dixon	REP 2009 006 X2 02	
Approved / Checked		
SEM/CV/PF/P Gerard Hayes	A	



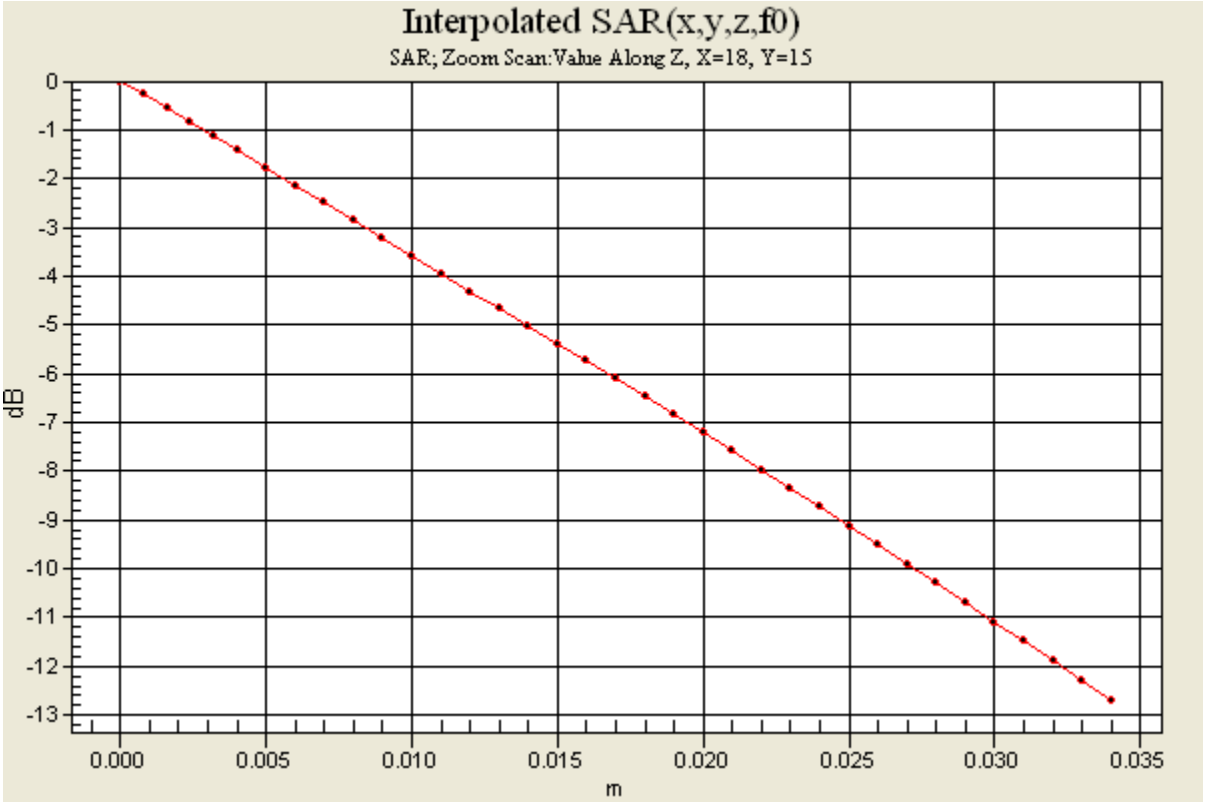
Band II WCDMA Band: Distribution and Extrapolation of Maximum SAR
Model: X2 with Standard Battery: BST-41, Left Cheek Position.
Date/Time: 7/28/2009 7:45:42 AM
File Name: 28July09_X2_B2WCDMA_SBKM_open_LCT01.da4
DUT: Vulcan open
Phantom: SAM with CRP (High Band Head)Phantom section: Left Section
Probe: ET3DV6 - SN1584ConvF(5.1, 5.1, 5.1)
Medium parameters used (interpolated): f = 1852.6 MHz; σ = 1.41 mho/m; ε_r = 38.6; ρ = 1000 kg/m^3
Measurement Standard: DASY4 (High Precision Assessment)
Program Notes: Battery - BST41 Humidity - 41.6 % Ambient Temp - 23.5 C Simulant Temp - 23.2 C
DASY4 Configuration:
- Probe: ET3DV6 - SN1584; ConvF(5.1, 5.1, 5.1); Calibrated: 11/17/2008
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn417; Calibrated: 11/7/2008
- Phantom: SAM with CRP (High Band Head); Type: SAM; Serial: TP: 1335
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186
Low channel cheek/Area Scan (61x81x1): Measurement grid: dx=15mm, dy=15mm
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.489 mW/g
Low channel cheek/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 7.74 V/m; Power Drift = -0.132 dB
Peak SAR (extrapolated) = 0.695 W/kg
SAR(1 g) = 0.449 mW/g; SAR(10 g) = 0.250 mW/g
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.500 mW/g
Low channel cheek/Zoom Scan (31x31x36)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 7.74 V/m; Power Drift = -0.132 dB
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.695 mW/g

Prepared (also subject responsible if other)	No.	
SEM/CV/PF/P Rodney Dixon	REP 2009 006 X2 02	
Approved / Checked		
SEM/CV/PF/P Gerard Hayes	A	



0 dB = 0.695mW/g

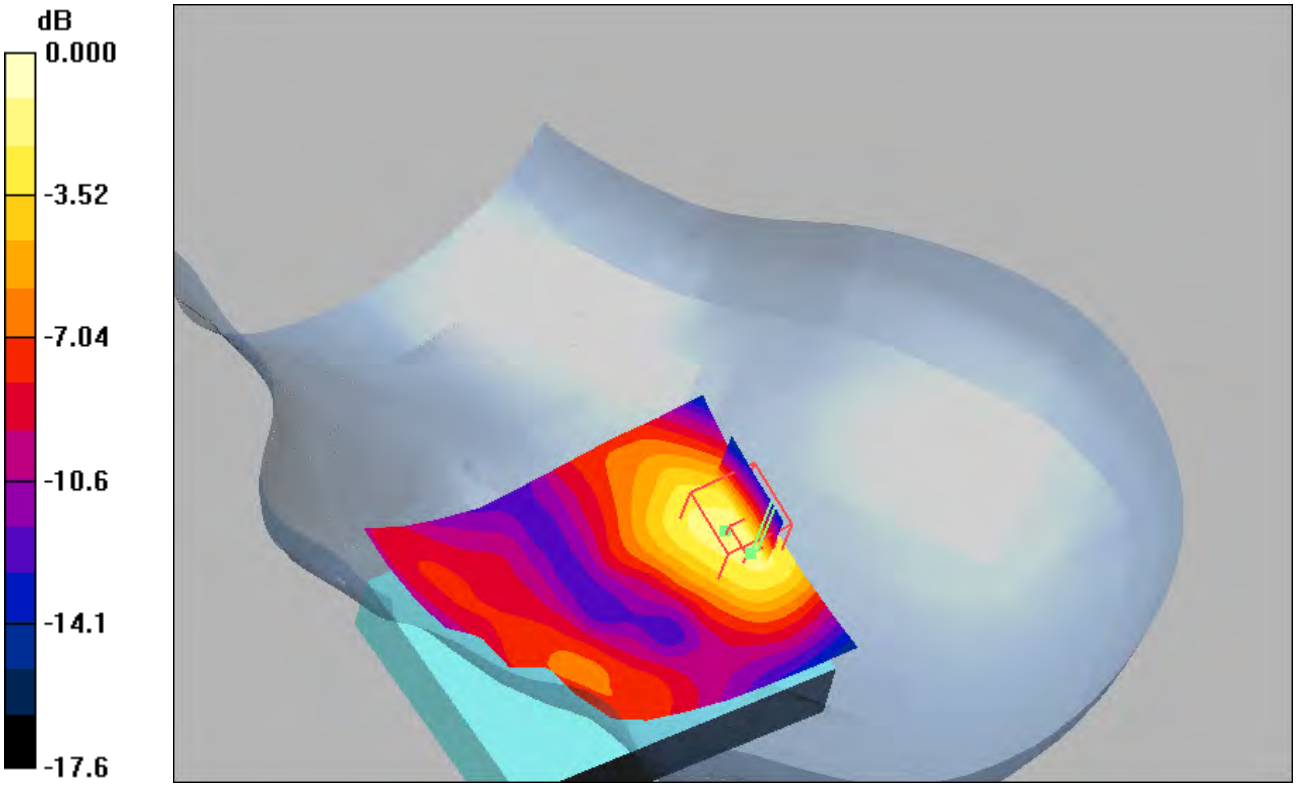
Prepared (also subject responsible if other)		No.	
SEM/CV/PF/P Rodney Dixon		REP 2009 006 X2 02	
Approved	Checked		
SEM/CV/PF/P Gerard Hayes		A	



Prepared (also subject responsible if other)		No.	
SEM/CV/PF/P Rodney Dixon		REP 2009 006 X2 02	
Approved	Checked		
SEM/CV/PF/P Gerard Hayes		A	

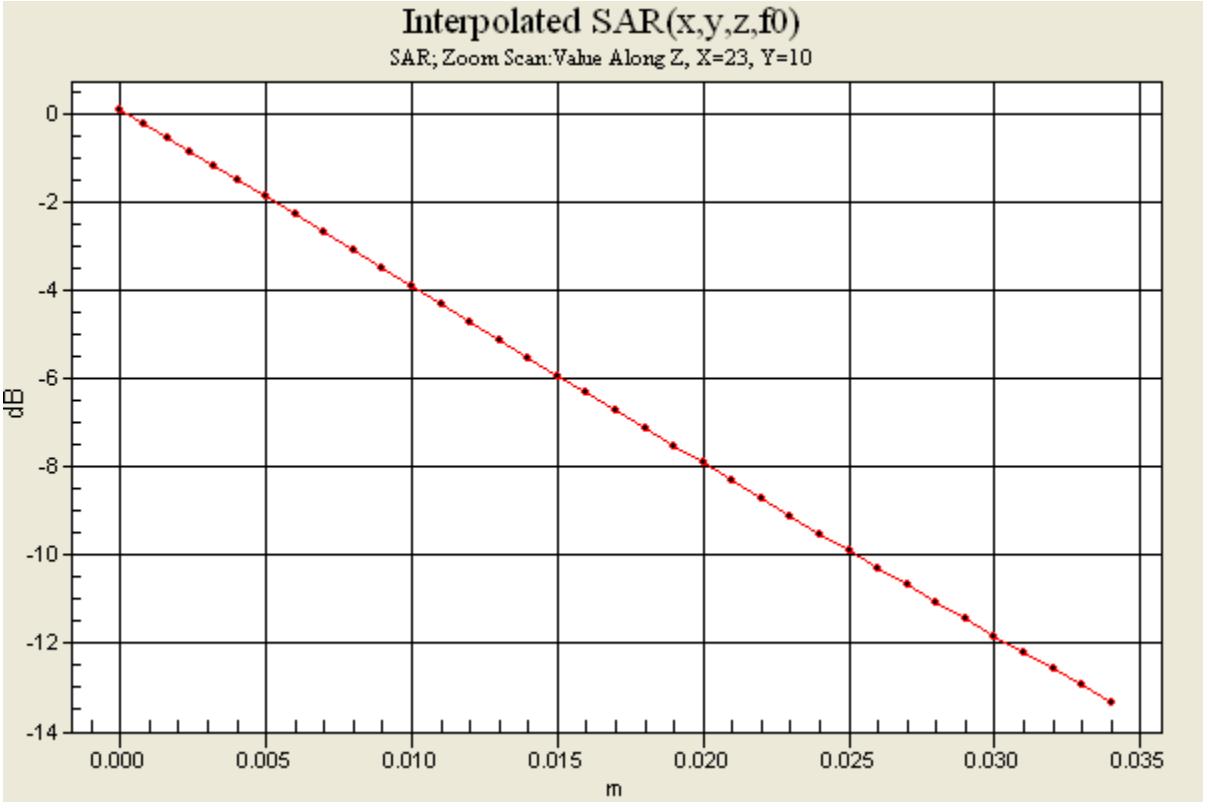
Band II WCDMA Band: Distribution and Extrapolation of Maximum SAR
Model: X2 with Standard Battery: BST-41, Left Tilt Position.
Date/Time: 7/28/2009 9:45:35 AM
File Name: 28July09_X2_B2WCDMA_SBKM_open_LCT01.da4
DUT: Vulcan open
Phantom: SAM with CRP (High Band Head)Phantom section: Left Section
Probe: ET3DV6 - SN1584ConvF(5.1, 5.1, 5.1)
Medium parameters used (interpolated): f = 1907.4 MHz; σ = 1.47 mho/m; ε_r = 38.3; ρ = 1000 kg/m^3
Measurement Standard: DASY4 (High Precision Assessment)
Program Notes: Battery - BST41 Humidity - 41.6 % Ambient Temp - 23.5 C Simulant Temp - 23.2 C
DASY4 Configuration:
- Probe: ET3DV6 - SN1584; ConvF(5.1, 5.1, 5.1); Calibrated: 11/17/2008
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn417; Calibrated: 11/7/2008
- Phantom: SAM with CRP (High Band Head); Type: SAM; Serial: TP: 1335
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186
High channel tilt/Area Scan (61x81x1): Measurement grid: dx=15mm, dy=15mm
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.203 mW/g
High channel tilt/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 12.5 V/m; Power Drift = -0.071 dB
Peak SAR (extrapolated) = 0.299 W/kg
SAR(1 g) = 0.189 mW/g; SAR(10 g) = 0.114 mW/g
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.207 mW/g
High channel tilt/Zoom Scan (31x31x36)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 12.5 V/m; Power Drift = -0.071 dB
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.299 mW/g

Prepared (also subject responsible if other)	No.	
SEM/CV/PF/P Rodney Dixon	REP 2009 006 X2 02	
Approved / Checked		
SEM/CV/PF/P Gerard Hayes	A	



0 dB = 0.299mW/g

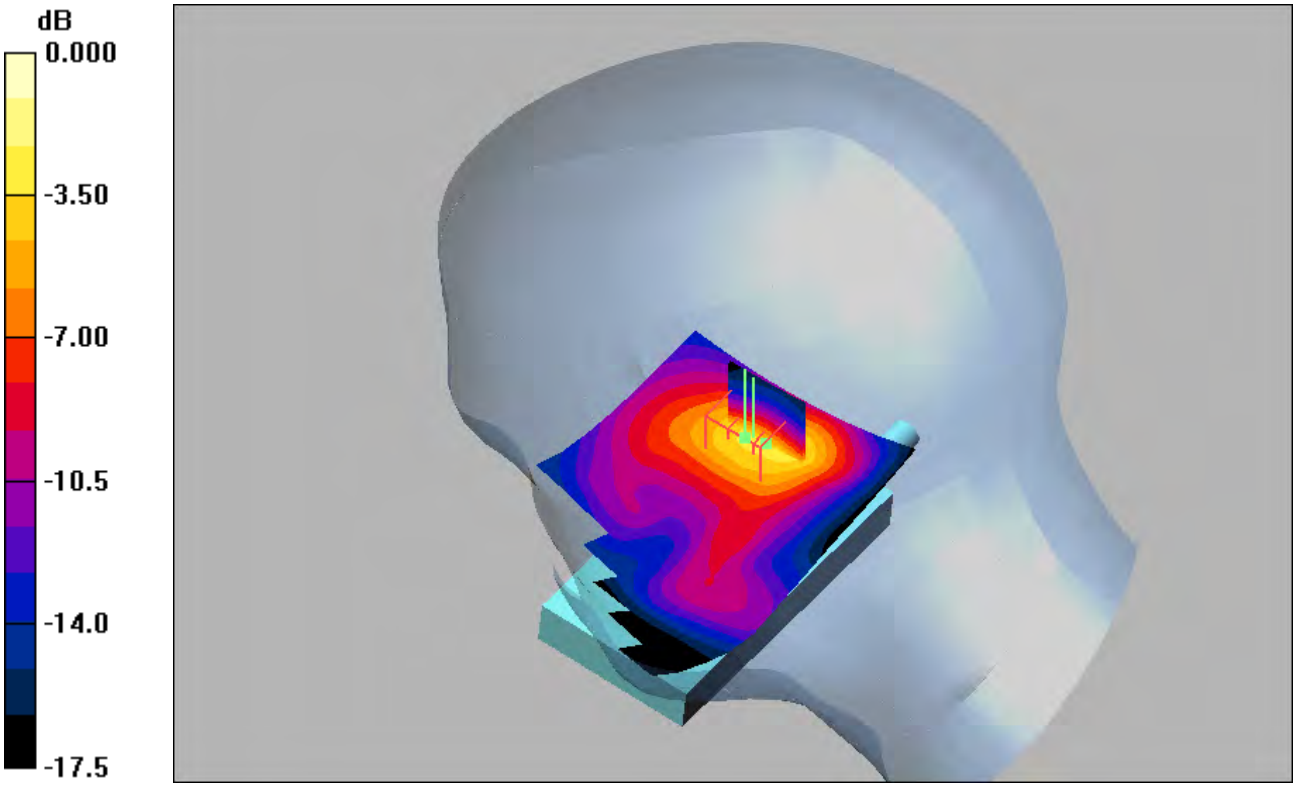
Prepared (also subject responsible if other)	No.	
SEM/CV/PF/P Rodney Dixon	REP 2009 006 X2 02	
Approved / Checked		
SEM/CV/PF/P Gerard Hayes	A	



Prepared (also subject responsible if other)	No.	
SEM/CV/PF/P Rodney Dixon	REP 2009 006 X2 02	
Approved / Checked		
SEM/CV/PF/P Gerard Hayes	A	

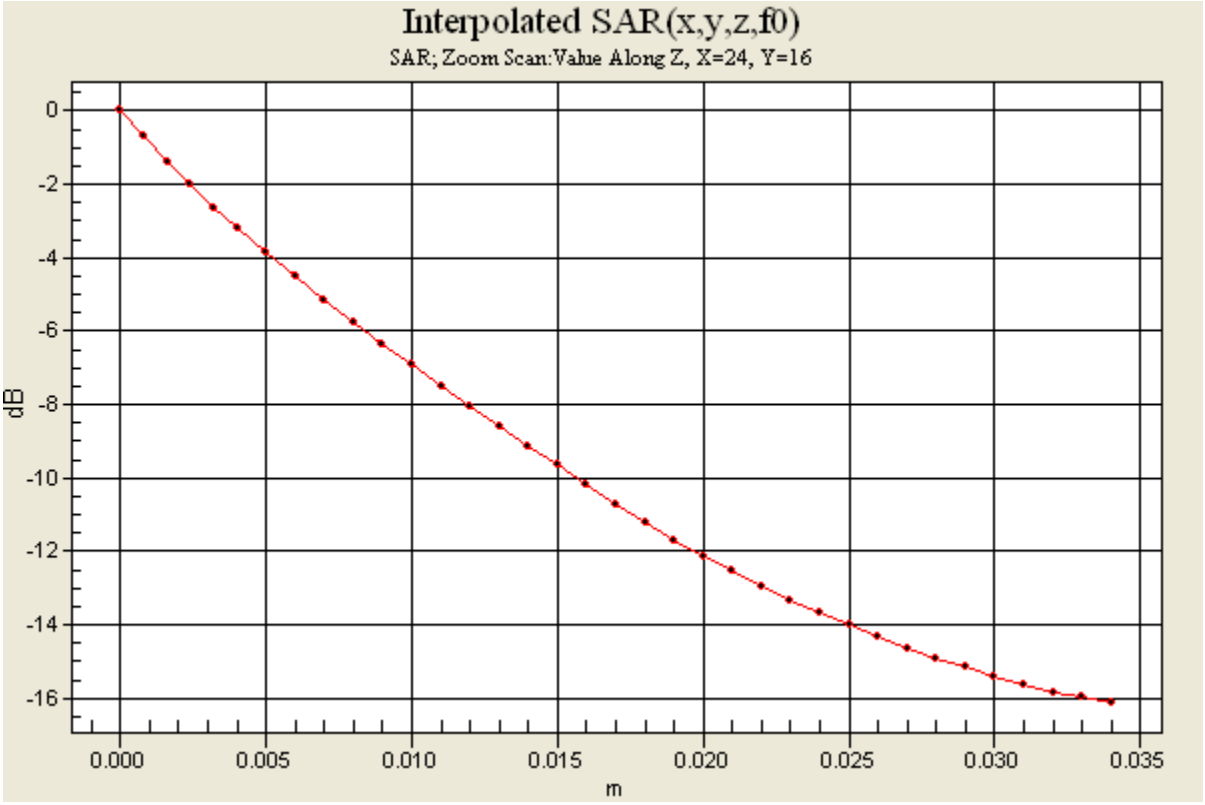
WLAN: Distribution and Extrapolation of Maximum SAR
Model: X2 with Standard Battery: BST-41, Right Check Position.
Date/Time: 7/30/2009 3:11:20 PM
File Name: 30July09_X2_WLAN2450_SBNG_RCT01.da4
DUT: Vulcan Closed
Phantom: SAM with CRP (WLAN right phantom)Phantom section: Right Section
Probe: ET3DV6 - SN1584ConvF(4.51, 4.51, 4.51)
Medium parameters used (interpolated): f = 2412 MHz; σ = 1.88 mho/m; ε_r = 39.6; ρ = 1000 kg/m^3
Measurement Standard: DASY4 (High Precision Assessment)
Program Notes: Battery BST-41 Humidity: 40.9 % Ambient Temp: 23.2 C Simulant Temp: 23 C
DASY4 Configuration:
- Probe: ET3DV6 - SN1584; ConvF(4.51, 4.51, 4.51); Calibrated: 11/17/2008
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn417; Calibrated: 11/7/2008
- Phantom: SAM with CRP (WLAN right phantom); Type: SAM; Serial: 1251
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186
Low channel cheek/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.169 mW/g
Low channel cheek/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 7.73 V/m; Power Drift = -0.176 dB
Peak SAR (extrapolated) = 0.317 W/kg
SAR(1 g) = 0.145 mW/g; SAR(10 g) = 0.076 mW/g
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.161 mW/g
Low channel cheek/Zoom Scan (31x31x36)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 7.73 V/m; Power Drift = -0.176 dB
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.317 mW/g

Prepared (also subject responsible if other)	No.	
SEM/CV/PF/P Rodney Dixon	REP 2009 006 X2 02	
Approved / Checked		
SEM/CV/PF/P Gerard Hayes	A	



0 dB = 0.317mW/g

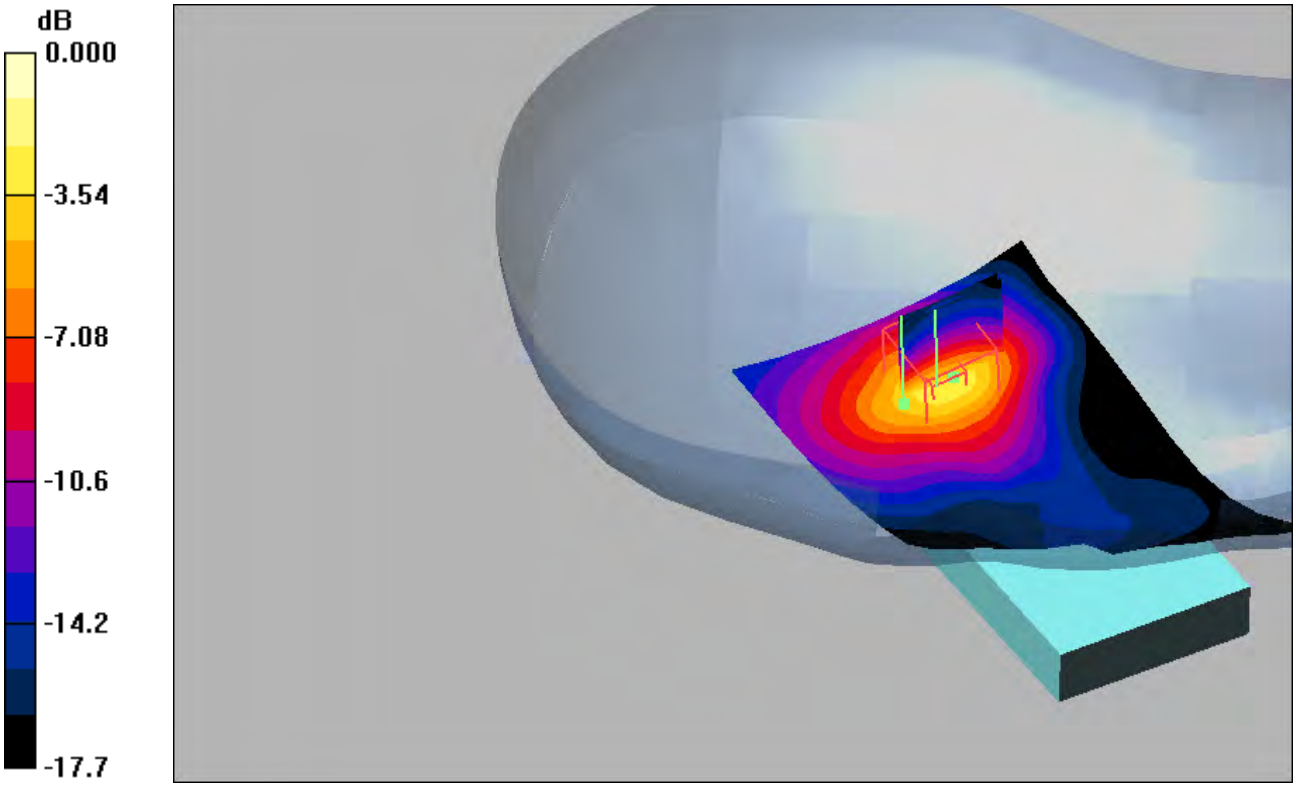
Prepared (also subject responsible if other)	No.	
SEM/CV/PF/P Rodney Dixon	REP 2009 006 X2 02	
Approved / Checked		
SEM/CV/PF/P Gerard Hayes	A	



Prepared (also subject responsible if other)	No.	
SEM/CV/PF/P Rodney Dixon	REP 2009 006 X2 02	
Approved / Checked		
SEM/CV/PF/P Gerard Hayes	A	

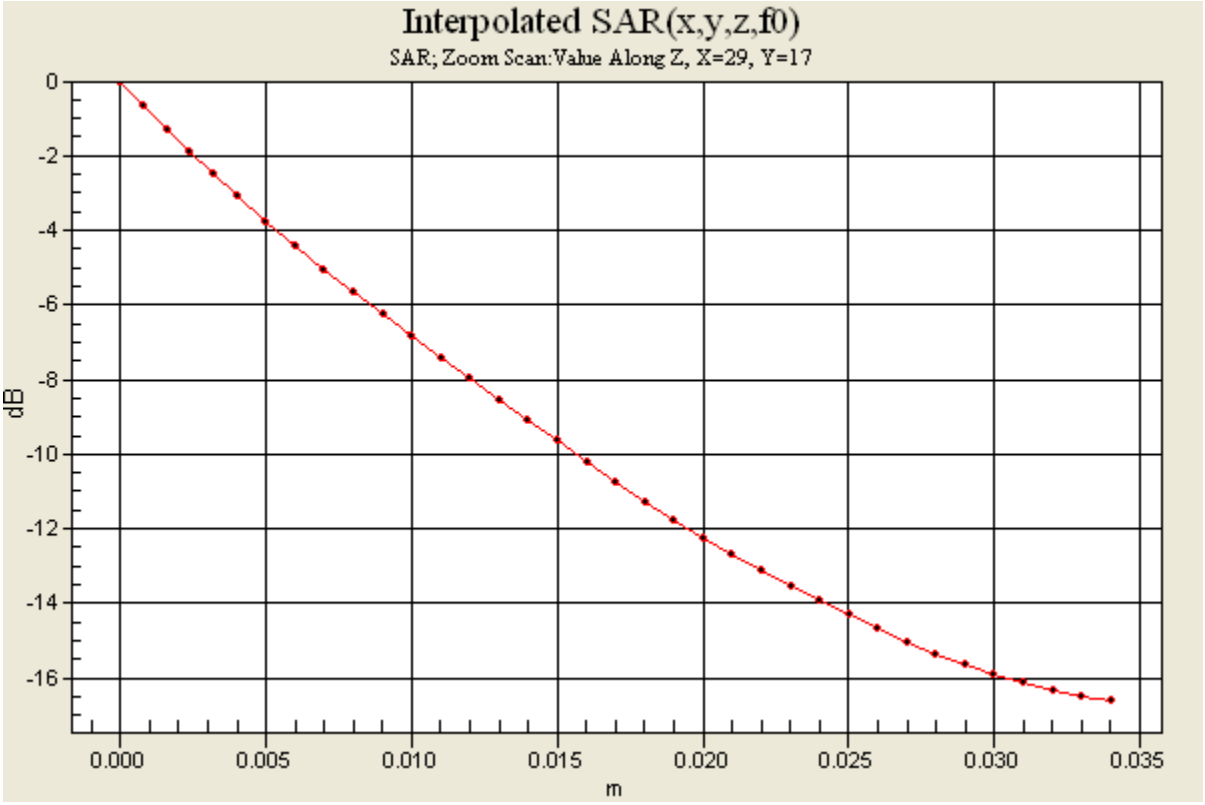
WLAN: Distribution and Extrapolation of Maximum SAR
Model: X2 with Standard Battery: BST-41, Right Tilt Position.
Date/Time: 7/30/2009 3:46:03 PM
File Name: 30July09_X2_WLAN2450_SBNG_RCT01.da4
DUT: Vulcan Closed
Phantom: SAM with CRP (WLAN right phantom)Phantom section: Right Section
Probe: ET3DV6 - SN1584ConvF(4.51, 4.51, 4.51)
Medium parameters used (interpolated): f = 2412 MHz; σ = 1.88 mho/m; ε_r = 39.6; ρ = 1000 kg/m^3
Measurement Standard: DASY4 (High Precision Assessment)
Program Notes: Battery BST-41 Humidity: 40.9 % Ambient Temp: 23.2 C Simulant Temp: 23 C
DASY4 Configuration:
- Probe: ET3DV6 - SN1584; ConvF(4.51, 4.51, 4.51); Calibrated: 11/17/2008
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn417; Calibrated: 11/7/2008
- Phantom: SAM with CRP (WLAN right phantom); Type: SAM; Serial: 1251
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186
Low channel tilt/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.199 mW/g
Low channel tilt/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 10.3 V/m; Power Drift = -0.044 dB
Peak SAR (extrapolated) = 0.373 W/kg
SAR(1 g) = 0.185 mW/g; SAR(10 g) = 0.094 mW/g
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.206 mW/g
Low channel tilt/Zoom Scan (31x31x36)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 10.3 V/m; Power Drift = -0.044 dB
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.373 mW/g

Prepared (also subject responsible if other)	No.	
SEM/CV/PF/P Rodney Dixon	REP 2009 006 X2 02	
Approved / Checked		
SEM/CV/PF/P Gerard Hayes	A	



0 dB = 0.373mW/g

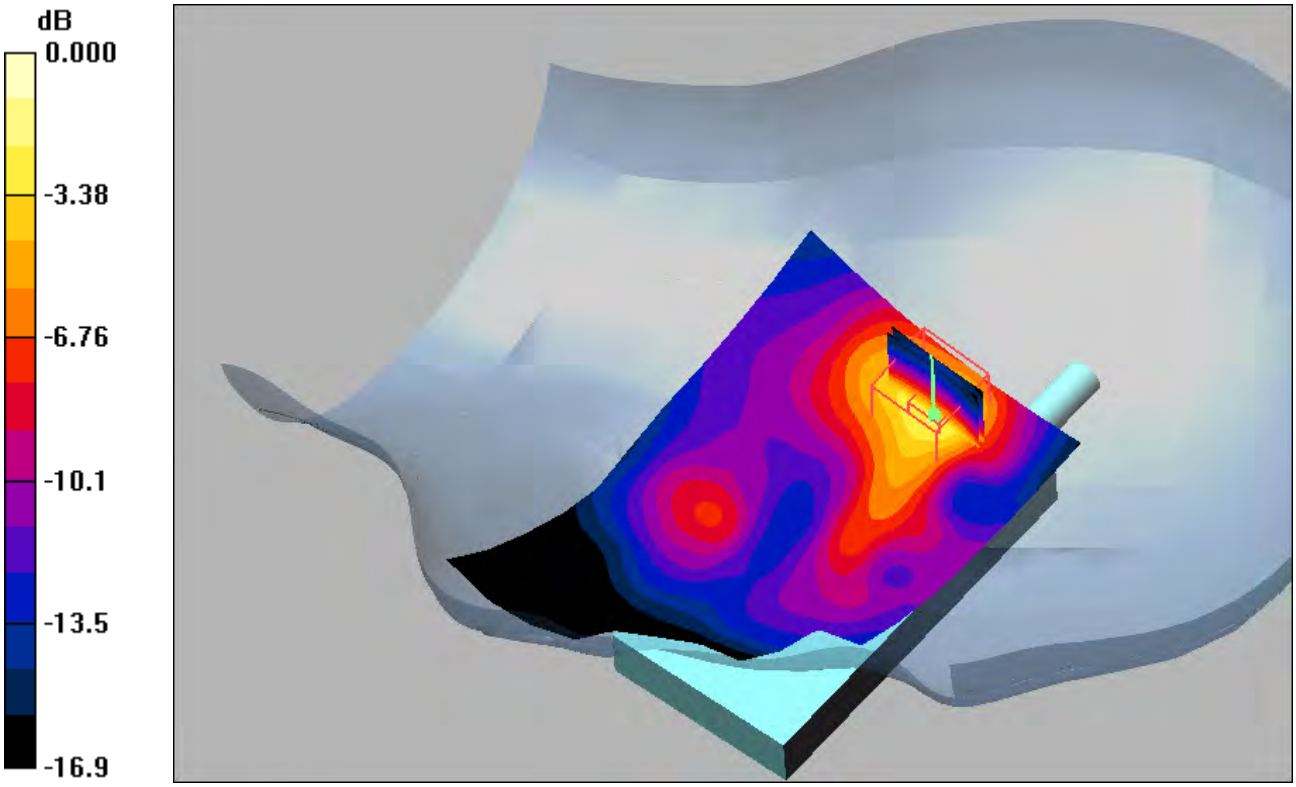
Prepared (also subject responsible if other)	No.	
SEM/CV/PF/P Rodney Dixon	REP 2009 006 X2 02	
Approved / Checked		
SEM/CV/PF/P Gerard Hayes	A	



Prepared (also subject responsible if other)	No.	
SEM/CV/PF/P Rodney Dixon	REP 2009 006 X2 02	
Approved / Checked		
SEM/CV/PF/P Gerard Hayes	A	

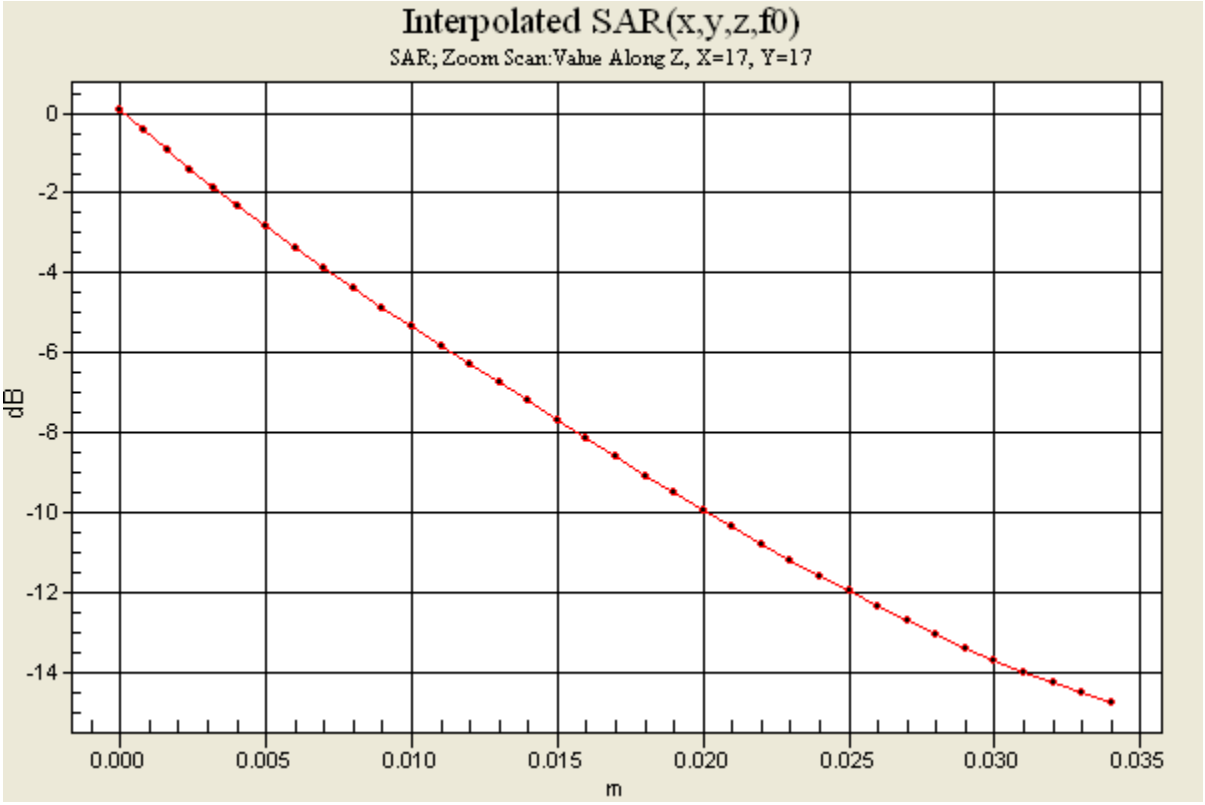
WLAN: Distribution and Extrapolation of Maximum SAR
Model: X2 with Standard Battery: BST-41, Left Check Position.
Date/Time: 7/30/2009 10:16:14 AM
File Name: 30July09_X2_WLAN2450_SBNG_LCT01.da4
DUT: Vulcan Closed
Phantom: SAM with CRP (WLAN right phantom)Phantom section: Left Section
Probe: ET3DV6 - SN1584ConvF(4.51, 4.51, 4.51)
Medium parameters used (interpolated): f = 2412 MHz; σ = 1.88 mho/m; ε_r = 39.6; ρ = 1000 kg/m^3
Measurement Standard: DASY4 (High Precision Assessment)
Program Notes: Battery BST-41 Humidity: 40.9 % Ambient Temp: 23.2 C Simulant Temp: 23 C
DASY4 Configuration:
- Probe: ET3DV6 - SN1584; ConvF(4.51, 4.51, 4.51); Calibrated: 11/17/2008
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn417; Calibrated: 11/7/2008
- Phantom: SAM with CRP (WLAN right phantom); Type: SAM; Serial: 1251
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186
Low channel cheek/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.148 mW/g
Low channel cheek/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 8.65 V/m; Power Drift = 0.127 dB
Peak SAR (extrapolated) = 0.239 W/kg
SAR(1 g) = 0.124 mW/g; SAR(10 g) = 0.066 mW/g
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.136 mW/g
Low channel cheek/Zoom Scan (31x31x36)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 8.65 V/m; Power Drift = 0.127 dB
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.239 mW/g

Prepared (also subject responsible if other)	No.	
SEM/CV/PF/P Rodney Dixon	REP 2009 006 X2 02	
Approved / Checked		
SEM/CV/PF/P Gerard Hayes	A	



0 dB = 0.239mW/g

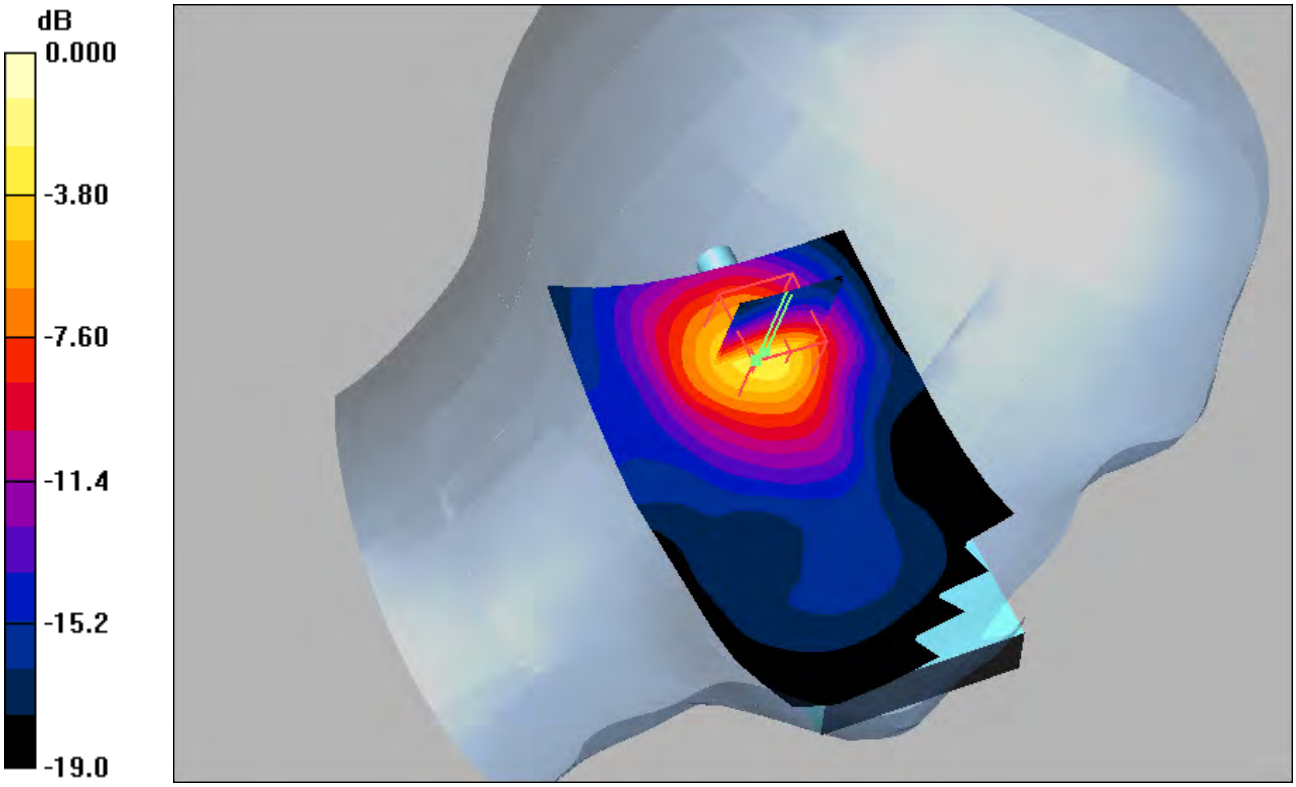
Prepared (also subject responsible if other)		No.	
SEM/CV/PF/P Rodney Dixon		REP 2009 006 X2 02	
Approved	Checked		
SEM/CV/PF/P Gerard Hayes		A	



Prepared (also subject responsible if other)	No.	
SEM/CV/PF/P Rodney Dixon	REP 2009 006 X2 02	
Approved / Checked		
SEM/CV/PF/P Gerard Hayes	A	

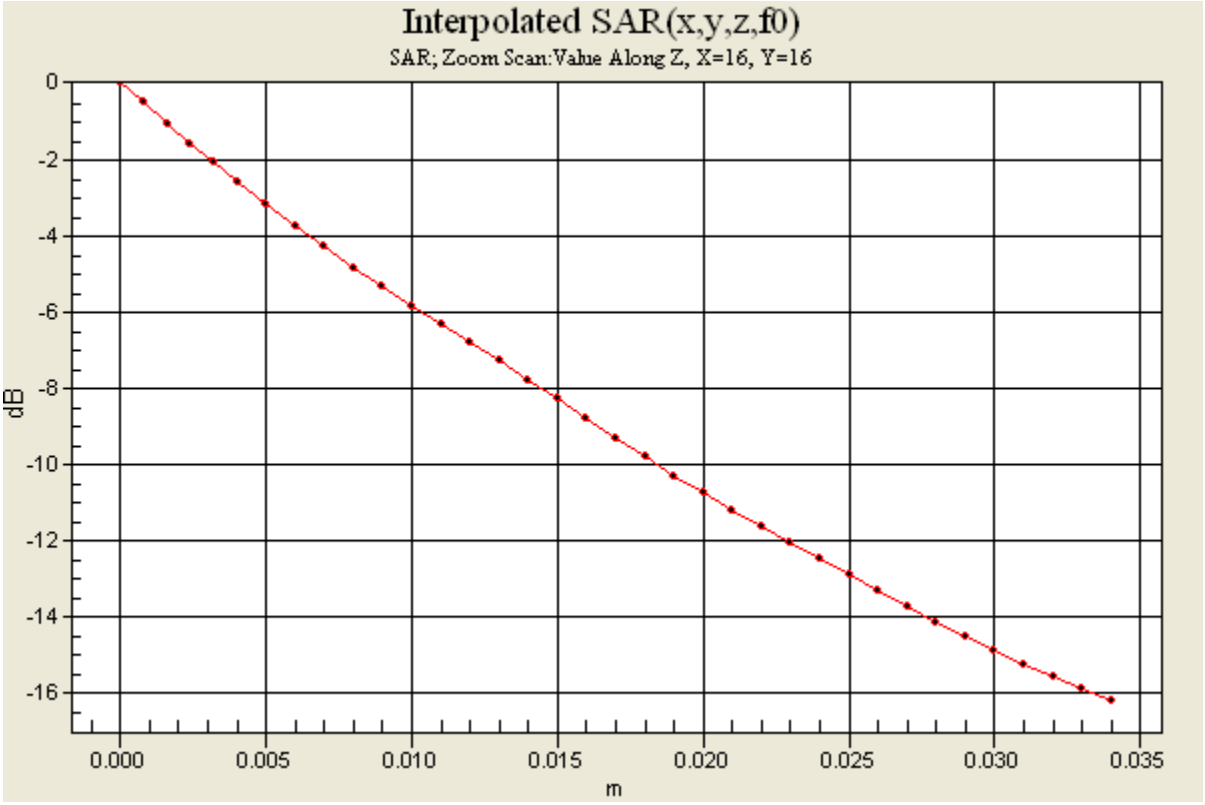
WLAN: Distribution and Extrapolation of Maximum SAR
Model: X2 with Standard Battery: BST-41, Left Tilt Position.
Date/Time: 7/30/2009 10:37:27 AM
File Name: 30July09_X2_WLAN2450_SBNG_LCT01.da4
DUT: Vulcan Closed
Phantom: SAM with CRP (WLAN right phantom)Phantom section: Left Section
Probe: ET3DV6 - SN1584ConvF(4.51, 4.51, 4.51)
Medium parameters used (interpolated): f = 2412 MHz; σ = 1.88 mho/m; ε_r = 39.6; ρ = 1000 kg/m^3
Measurement Standard: DASY4 (High Precision Assessment)
Program Notes: Battery BST-41 Humidity: 40.9 % Ambient Temp: 23.2 C Simulant Temp: 23 C
DASY4 Configuration:
- Probe: ET3DV6 - SN1584; ConvF(4.51, 4.51, 4.51); Calibrated: 11/17/2008
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn417; Calibrated: 11/7/2008
- Phantom: SAM with CRP (WLAN right phantom); Type: SAM; Serial: 1251
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186
Low channel tilt/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.215 mW/g
Low channel tilt/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 10.5 V/m; Power Drift = 0.098 dB
Peak SAR (extrapolated) = 0.374 W/kg
SAR(1 g) = 0.182 mW/g; SAR(10 g) = 0.091 mW/g
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.202 mW/g
Low channel tilt/Zoom Scan (31x31x36)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 10.5 V/m; Power Drift = 0.098 dB
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.374 mW/g

Prepared (also subject responsible if other)	No.	
SEM/CV/PF/P Rodney Dixon	REP 2009 006 X2 02	
Approved / Checked		
SEM/CV/PF/P Gerard Hayes	A	



0 dB = 0.374mW/g

Prepared (also subject responsible if other)		No.	
SEM/CV/PF/P Rodney Dixon		REP 2009 006 X2 02	
Approved	Checked		
SEM/CV/PF/P Gerard Hayes		A	

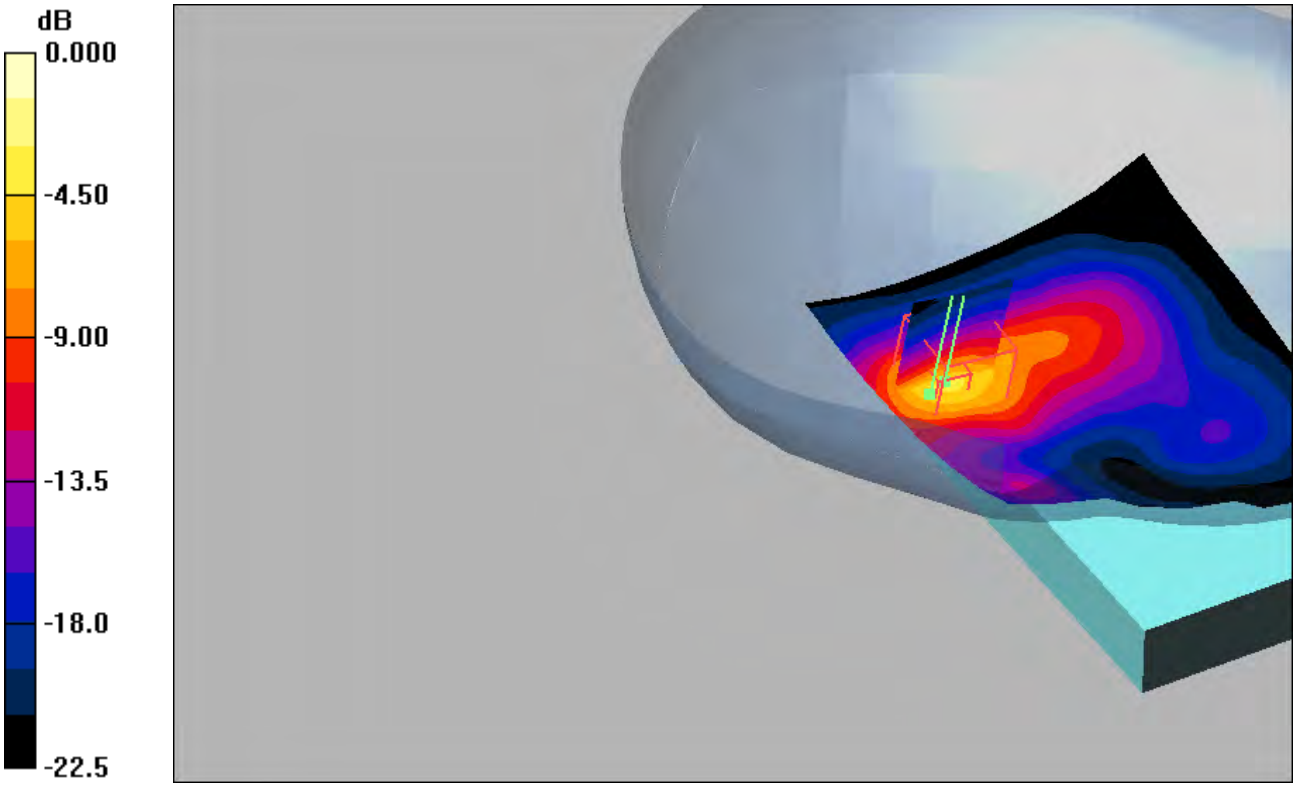


Prepared (also subject responsible if other)		No.	
SEM/CV/PF/P Rodney Dixon		REP 2009 006 X2 02	
Approved	Checked		
SEM/CV/PF/P Gerard Hayes		A	

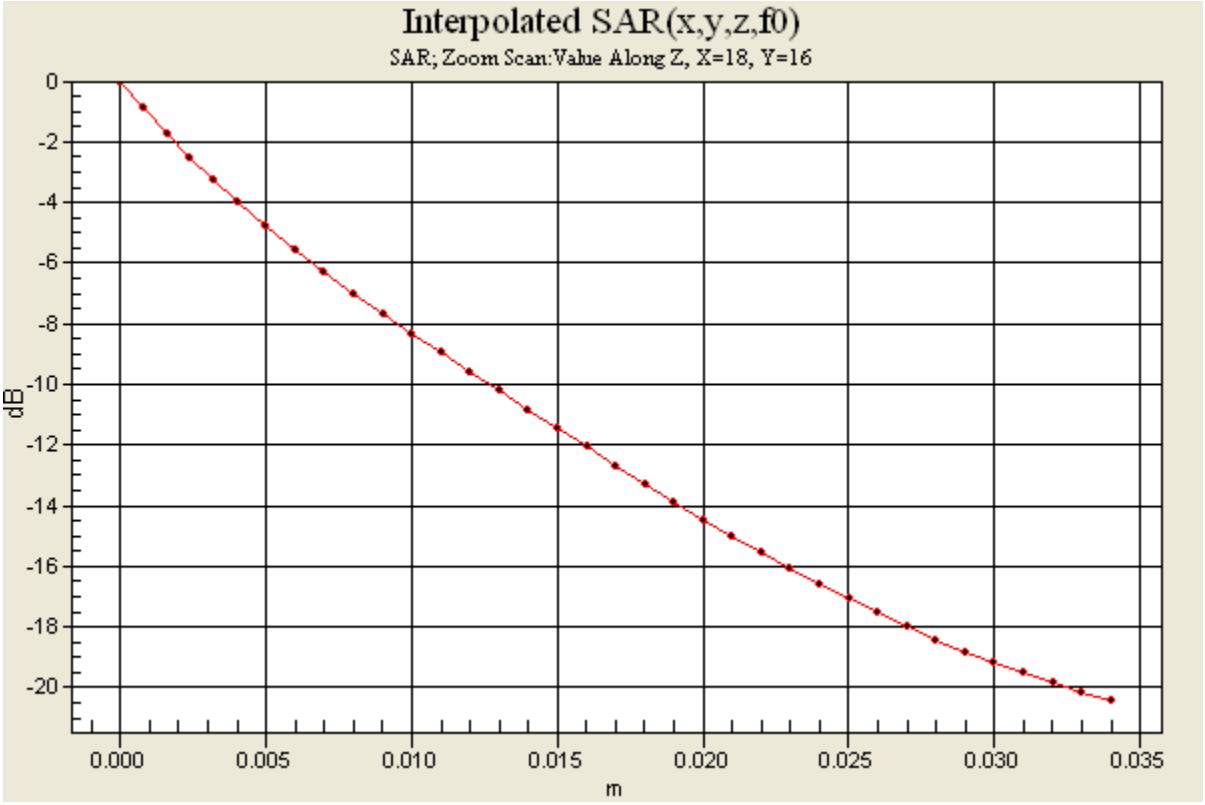
WLAN: Distribution and Extrapolation of Maximum SAR
Model: X2 with Standard Battery: BST-41, Right Check open Position.
Date/Time: 8/5/2009 3:41:44 PM
File Name: 05Aug09_X2_WLAN2450_SBNG_open_RCT01.da4
DUT: Vulcan open
Phantom: SAM with CRP (WLAN right phantom)Phantom section: Right Section
Probe: ET3DV6 - SN1584ConvF(4.51, 4.51, 4.51)
Medium parameters used (interpolated): f = 2412 MHz; σ = 1.87 mho/m; ε_r = 39.5; ρ = 1000 kg/m^3
Measurement Standard: DASY4 (High Precision Assessment)
Program Notes: Battery BST-41 Humidity: 45.7 % Ambient Temp: 23.3 C Simulant Temp: 23.4 C
DASY4 Configuration:
- Probe: ET3DV6 - SN1584; ConvF(4.51, 4.51, 4.51); Calibrated: 11/17/2008
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn417; Calibrated: 11/7/2008
- Phantom: SAM with CRP (WLAN right phantom); Type: SAM; Serial: 1251
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Low channel cheek/Area Scan (71x101x1): Measurement grid: dx=15mm, dy=15mm
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.540 mW/g
Low channel cheek/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 8.19 V/m; Power Drift = -0.124 dB
Peak SAR (extrapolated) = 1.30 W/kg
SAR(1 g) = 0.482 mW/g; SAR(10 g) = 0.211 mW/g
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.542 mW/g
Low channel cheek/Zoom Scan (31x31x36)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 8.19 V/m; Power Drift = -0.124 dB
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 1.30 mW/g

Prepared (also subject responsible if other)	No.	
SEM/CV/PF/P Rodney Dixon	REP 2009 006 X2 02	
Approved / Checked		
SEM/CV/PF/P Gerard Hayes	A	



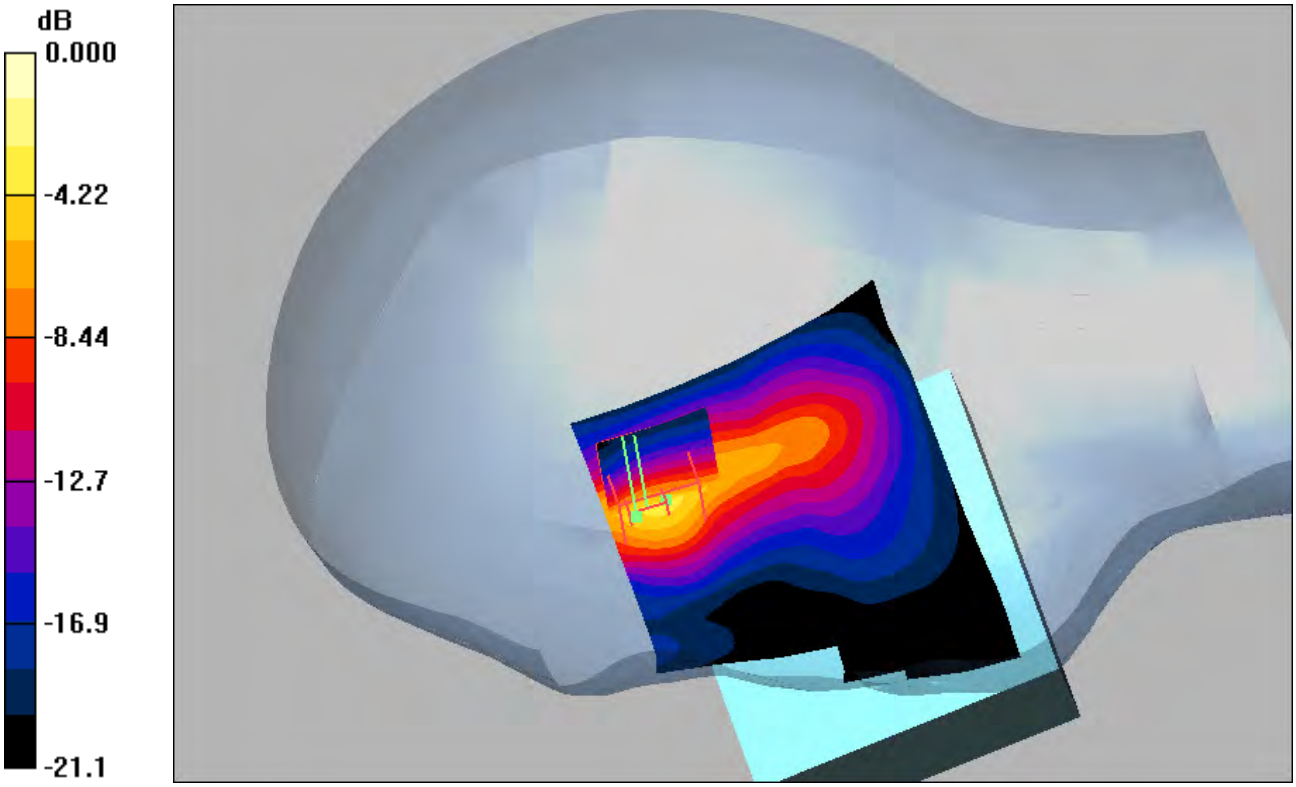
0 dB = 1.30mW/g


Interpolated SAR(x,y,z,f0)
SAR; Zoom Scan:Value Along Z, X=18, Y=16
dB
0
-2
-4
-6
-8
-10
-12
-14
-16
-18
-20
0.000
0.005
0.010
0.015
0.020
0.025
0.030
0.035
m

Prepared (also subject responsible if other)		No.	
SEM/CV/PF/P Rodney Dixon		REP 2009 006 X2 02	
Approved	Checked		
SEM/CV/PF/P Gerard Hayes		A	

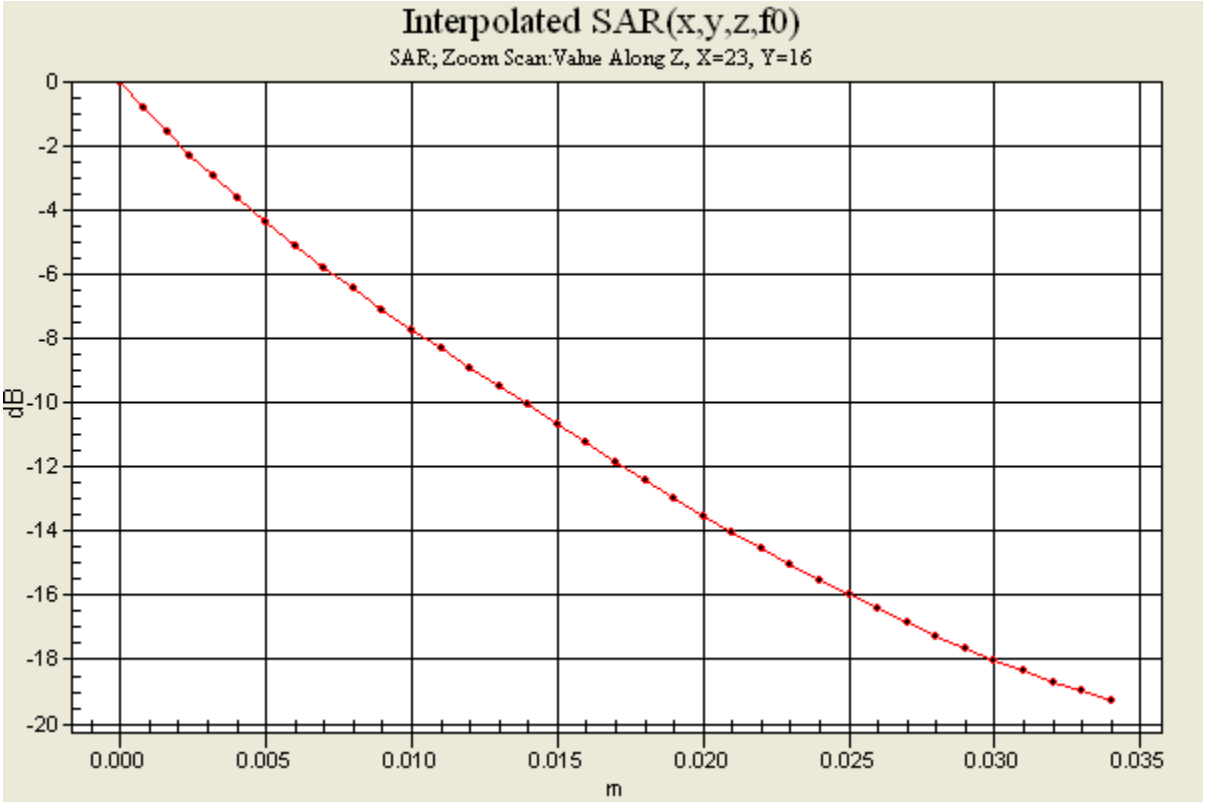
WLAN: Distribution and Extrapolation of Maximum SAR
Model: X2 with Standard Battery: BST-41, Right Tilt open Position.
Date/Time: 8/5/2009 3:11:09 PM
File Name: 05Aug09_X2_WLAN2450_SBNG_open_RCT01.da4
DUT: Vulcan open
Phantom: SAM with CRP (WLAN right phantom)Phantom section: Right Section
Probe: ET3DV6 - SN1584ConvF(4.51, 4.51, 4.51)
Medium parameters used (interpolated): f = 2412 MHz; σ = 1.87 mho/m; ε_r = 39.5; ρ = 1000 kg/m^3
Measurement Standard: DASY4 (High Precision Assessment)
Program Notes: Battery BST-41 Humidity: 45.7 % Ambient Temp: 23.3 C Simulant Temp: 23.4 C
DASY4 Configuration:
- Probe: ET3DV6 - SN1584; ConvF(4.51, 4.51, 4.51); Calibrated: 11/17/2008
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn417; Calibrated: 11/7/2008
- Phantom: SAM with CRP (WLAN right phantom); Type: SAM; Serial: 1251
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186
Low channel tilt/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.379 mW/g
Low channel tilt/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 8.99 V/m; Power Drift = 0.009 dB
Peak SAR (extrapolated) = 0.898 W/kg
SAR(1 g) = 0.355 mW/g; SAR(10 g) = 0.161 mW/g
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.400 mW/g
Low channel tilt/Zoom Scan (31x31x36)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 8.99 V/m; Power Drift = 0.009 dB
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.898 mW/g

Prepared (also subject responsible if other)	No.	
SEM/CV/PF/P Rodney Dixon	REP 2009 006 X2 02	
Approved / Checked		
SEM/CV/PF/P Gerard Hayes	A	



0 dB = 0.898mW/g

Prepared (also subject responsible if other)		No.	
SEM/CV/PF/P Rodney Dixon		REP 2009 006 X2 02	
Approved	Checked		
SEM/CV/PF/P Gerard Hayes		A	

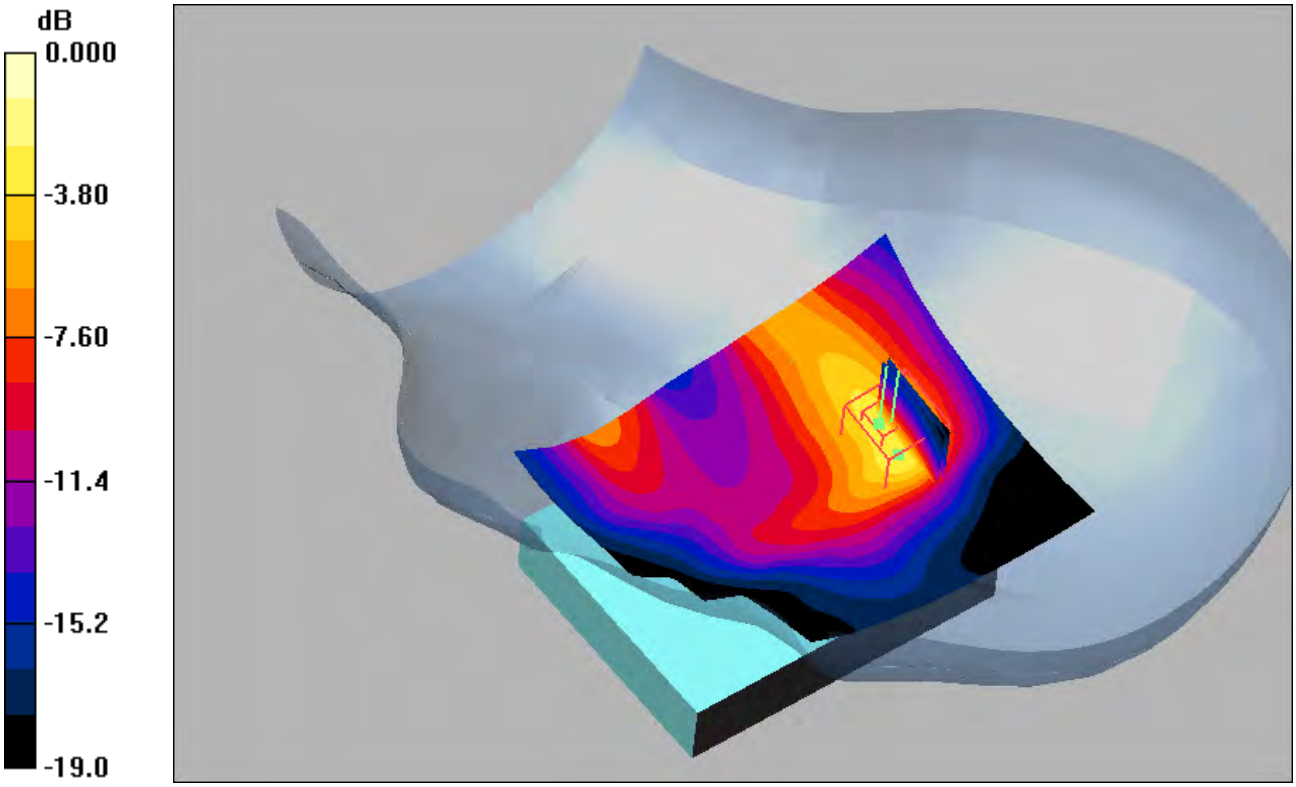


Prepared (also subject responsible if other)		No.	
SEM/CV/PF/P Rodney Dixon		REP 2009 006 X2 02	
Approved	Checked		
SEM/CV/PF/P Gerard Hayes		A	

WLAN: Distribution and Extrapolation of Maximum SAR
Model: X2 with Standard Battery: BST-41, Left Check open Position.
Date/Time: 8/5/2009 8:23:27 AM
File Name: 05Aug09_X2_WLAN2450_SBNG_open_LCT01.da4
DUT: Vulcan open
Phantom: SAM with CRP (WLAN right phantom)Phantom section: Left Section
Probe: ET3DV6 - SN1584ConvF(4.51, 4.51, 4.51)
Medium parameters used (interpolated): f = 2412 MHz; σ = 1.87 mho/m; ε_r = 39.5; ρ = 1000 kg/m^3
Measurement Standard: DASY4 (High Precision Assessment)
Program Notes: Battery BST-41 Humidity: 45.7 % Ambient Temp: 23.3 C Simulant Temp: 23.4 C
DASY4 Configuration:
- Probe: ET3DV6 - SN1584; ConvF(4.51, 4.51, 4.51); Calibrated: 11/17/2008
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn417; Calibrated: 11/7/2008
- Phantom: SAM with CRP (WLAN right phantom); Type: SAM; Serial: 1251
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

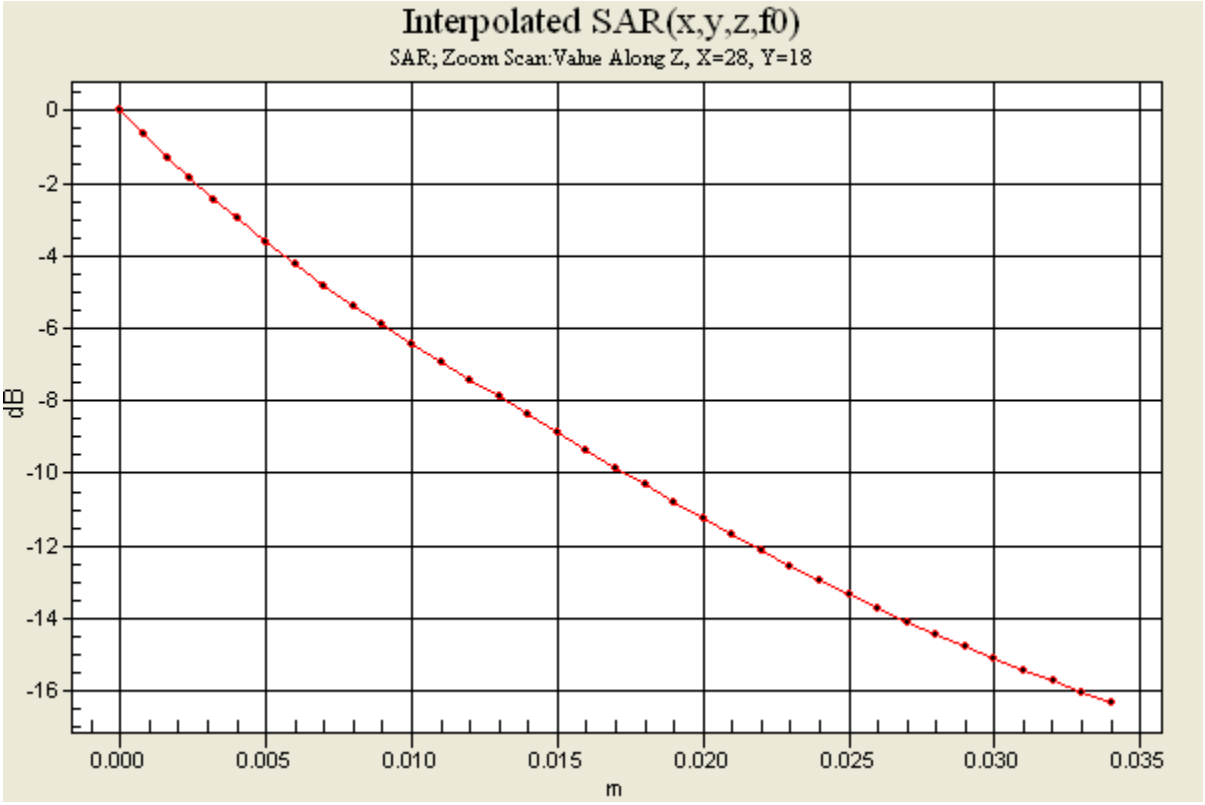
Low channel cheek/Area Scan (71x91x1): Measurement grid: dx=15mm, dy=15mm
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.217 mW/g
Low channel cheek/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 9.83 V/m; Power Drift = 0.041 dB
Peak SAR (extrapolated) = 0.376 W/kg
SAR(1 g) = 0.174 mW/g; SAR(10 g) = 0.090 mW/g
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.184 mW/g
Low channel cheek/Zoom Scan (31x31x36)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 9.83 V/m; Power Drift = 0.041 dB
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.376 mW/g

Prepared (also subject responsible if other)	No.	
SEM/CV/PF/P Rodney Dixon	REP 2009 006 X2 02	
Approved / Checked		
SEM/CV/PF/P Gerard Hayes	A	



0 dB = 0.376mW/g

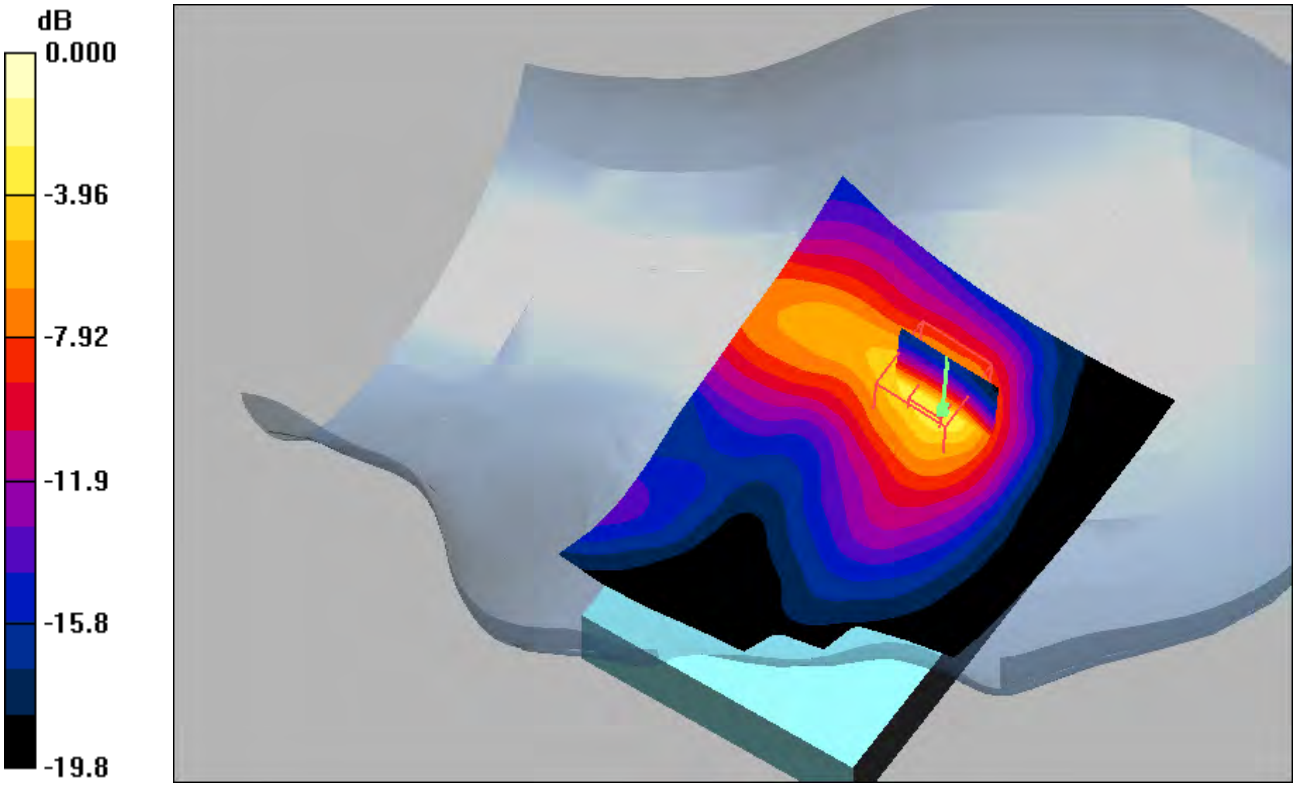
Prepared (also subject responsible if other)		No.	
SEM/CV/PF/P Rodney Dixon		REP 2009 006 X2 02	
Approved	Checked		
SEM/CV/PF/P Gerard Hayes		A	



Prepared (also subject responsible if other)		No.	
SEM/CV/PF/P Rodney Dixon		REP 2009 006 X2 02	
Approved	Checked		
SEM/CV/PF/P Gerard Hayes		A	

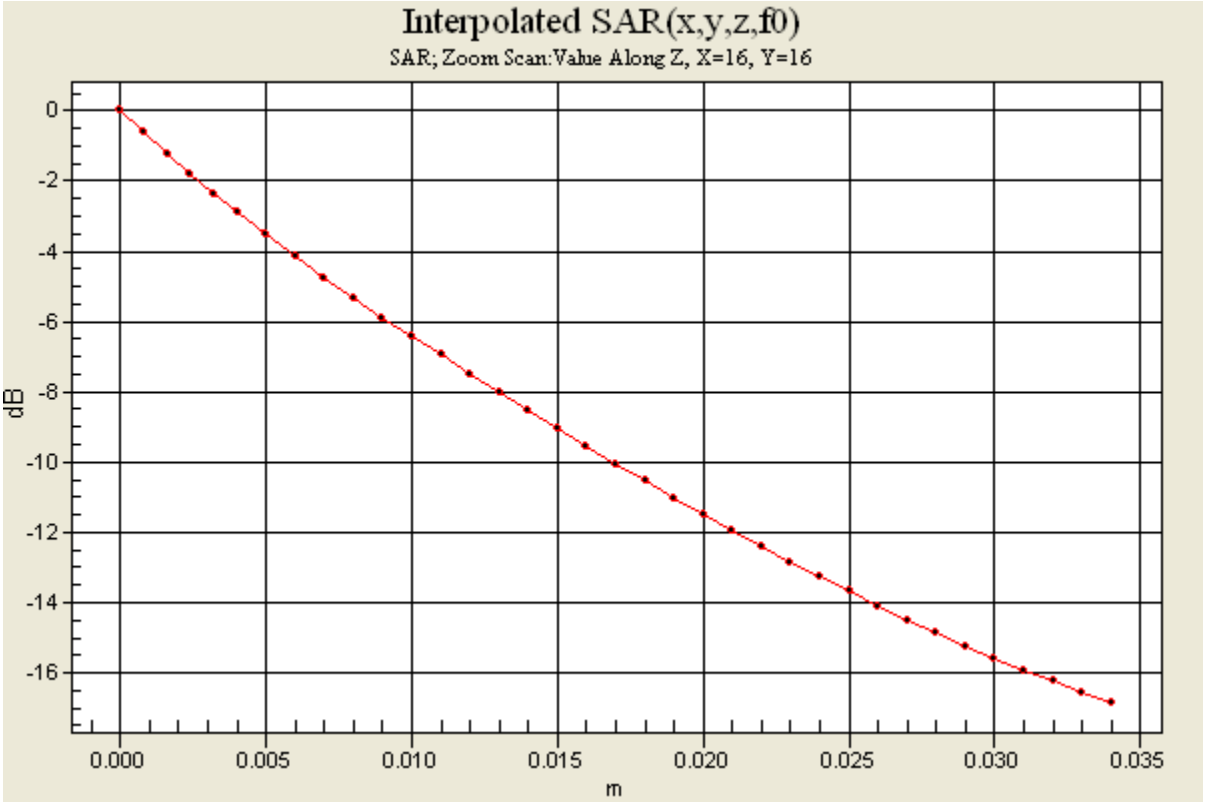
WLAN: Distribution and Extrapolation of Maximum SAR
Model: X2 with Standard Battery: BST-41, Left Tilt open Position.
Date/Time: 8/5/2009 8:45:14 AM
File Name: 05Aug09_X2_WLAN2450_SBNG_open_LCT01.da4
DUT: Vulcan open
Phantom: SAM with CRP (WLAN right phantom)Phantom section: Left Section
Probe: ET3DV6 - SN1584ConvF(4.51, 4.51, 4.51)
Medium parameters used (interpolated): f = 2412 MHz; σ = 1.87 mho/m; ε_r = 39.5; ρ = 1000 kg/m^3
Measurement Standard: DASY4 (High Precision Assessment)
Program Notes: Battery BST-41 Humidity: 45.7 % Ambient Temp: 23.3 C Simulant Temp: 23.4 C
DASY4 Configuration:
- Probe: ET3DV6 - SN1584; ConvF(4.51, 4.51, 4.51); Calibrated: 11/17/2008
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn417; Calibrated: 11/7/2008
- Phantom: SAM with CRP (WLAN right phantom); Type: SAM; Serial: 1251
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186
Low channel tilt/Area Scan (71x91x1): Measurement grid: dx=15mm, dy=15mm
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.264 mW/g
Low channel tilt/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 11.2 V/m; Power Drift = 0.005 dB
Peak SAR (extrapolated) = 0.463 W/kg
SAR(1 g) = 0.216 mW/g; SAR(10 g) = 0.107 mW/g
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.237 mW/g
Low channel tilt/Zoom Scan (31x31x36)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 11.2 V/m; Power Drift = 0.005 dB
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.463 mW/g

Prepared (also subject responsible if other)	No.	
SEM/CV/PF/P Rodney Dixon	REP 2009 006 X2 02	
Approved / Checked		
SEM/CV/PF/P Gerard Hayes	A	



0 dB = 0.463mW/g

Prepared (also subject responsible if other)		No.	
SEM/CV/PF/P Rodney Dixon		REP 2009 006 X2 02	
Approved	Checked		
SEM/CV/PF/P Gerard Hayes		A	



Prepared (also subject responsible if other)		No.	
SEM/CV/PF/P Rodney Dixon		REP 2009 006 X2 02	
Approved	Checked		
SEM/CV/PF/P Gerard Hayes		A	

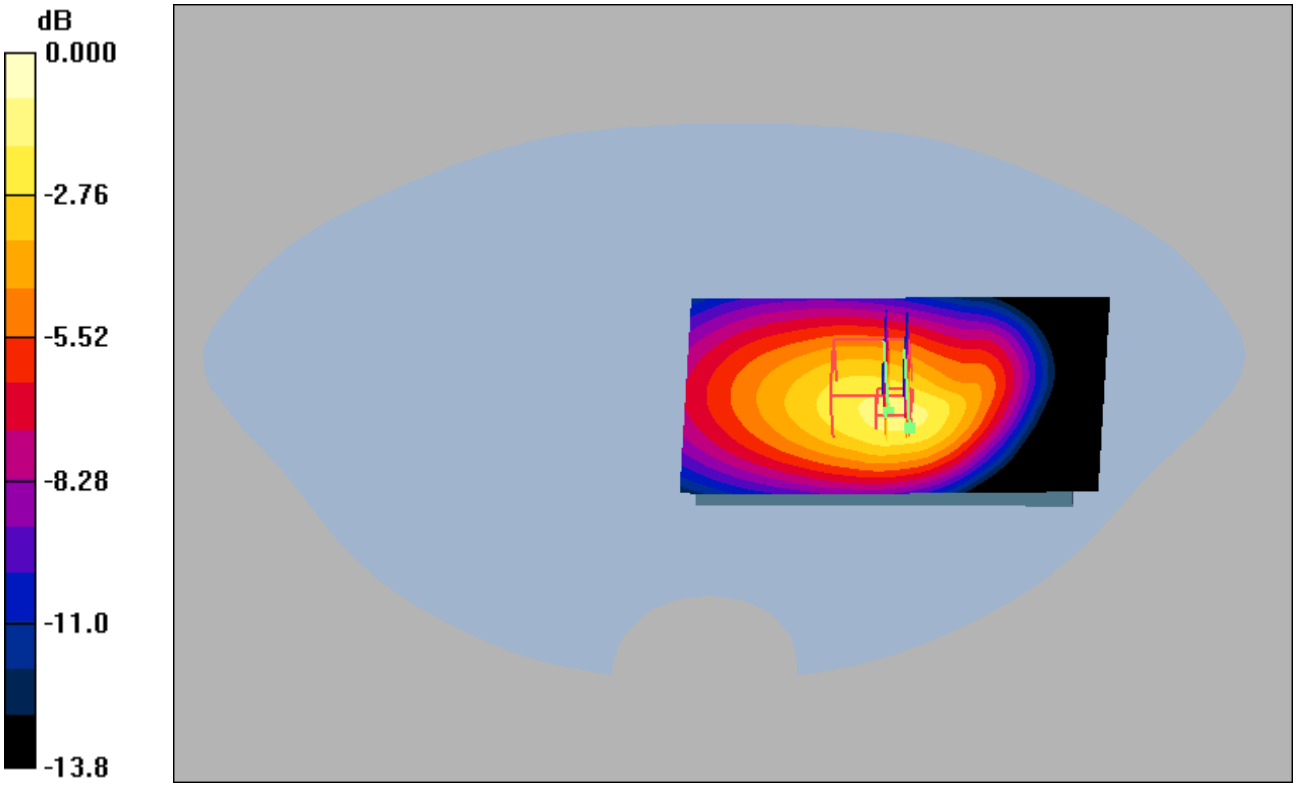
Appendix 3

SAR distribution plots for Body Worn Configuration

Prepared (also subject responsible if other)	No.	
SEM/CV/PF/P Rodney Dixon	REP 2009 006 X2 02	
Approved / Checked		
SEM/CV/PF/P Gerard Hayes	A	

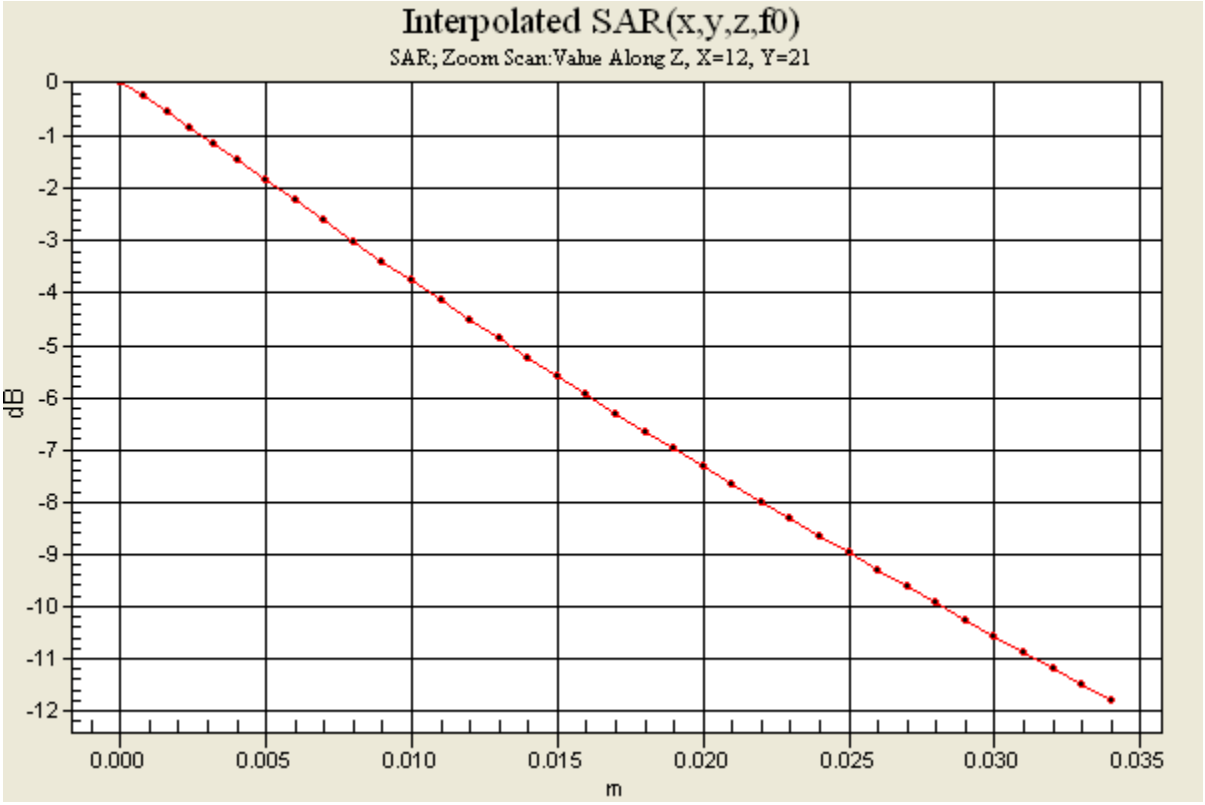
Distribution of maximum SAR in 800 GSM band. Measured with back of device facing the body using a 15mm spacer. (Standard Battery, BST-41)
Date/Time: 7/27/2009 11:00:53 AM
File Name: 27July09_X2_GSM835_SB40_15mm_BBF01.da4
DUT: Vulcan body
Phantom: SAM with CRP (Low Band Body)Phantom section: Flat Section
Probe: ET3DV6 - SN1539ConvF(5.53, 5.53, 5.53)
Medium parameters used (interpolated): f = 849 MHz; σ = 0.978 mho/m; ε_r = 55.7; ρ = 1000 kg/m^3
Measurement Standard: DASY4 (High Precision Assessment)
Program Notes: Battery - BST41 Humidity - 41.5 % Ambient Temp - 23.1 C Simulant Temp - 23 C
DASY4 Configuration:
- Probe: ET3DV6 - SN1539; ConvF(5.53, 5.53, 5.53); Calibrated: 11/17/2008
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn415; Calibrated: 10/31/2008
- Phantom: SAM with CRP (Low Band Body); Type: SAM; Serial: TP: 1031
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186
High channel back/Area Scan (51x81x1): Measurement grid: dx=15mm, dy=15mm
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.947 mW/g
High channel back/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 19.6 V/m; Power Drift = 0.041 dB
Peak SAR (extrapolated) = 1.31 W/kg
SAR(1 g) = 0.859 mW/g; SAR(10 g) = 0.574 mW/g
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.918 mW/g
High channel back/Zoom Scan (31x31x36)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 19.6 V/m; Power Drift = 0.041 dB
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 1.31 mW/g

Prepared (also subject responsible if other)	No.	
SEM/CV/PF/P Rodney Dixon	REP 2009 006 X2 02	
Approved / Checked		
SEM/CV/PF/P Gerard Hayes	A	



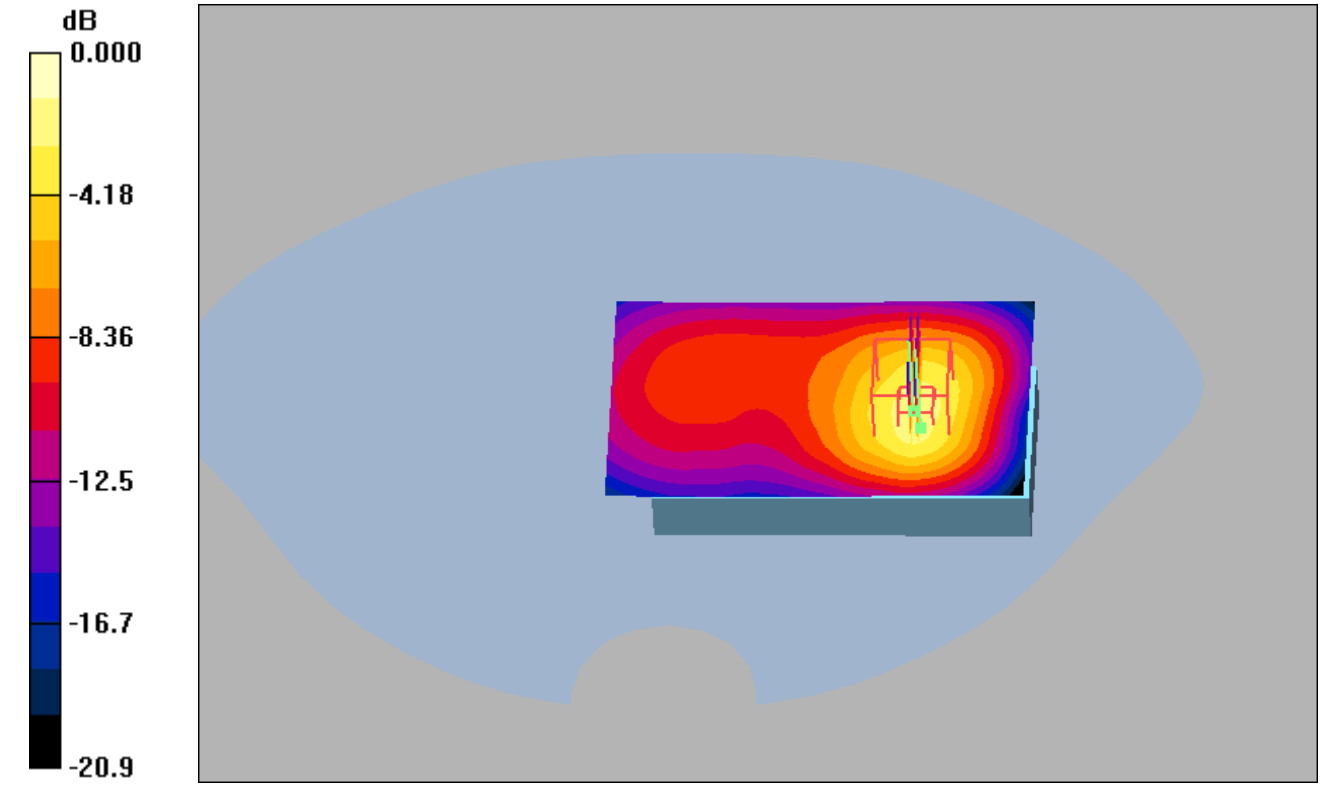
0 dB = 1.31mW/g

Prepared (also subject responsible if other)	No.	
SEM/CV/PF/P Rodney Dixon	REP 2009 006 X2 02	
Approved / Checked		
SEM/CV/PF/P Gerard Hayes	A	



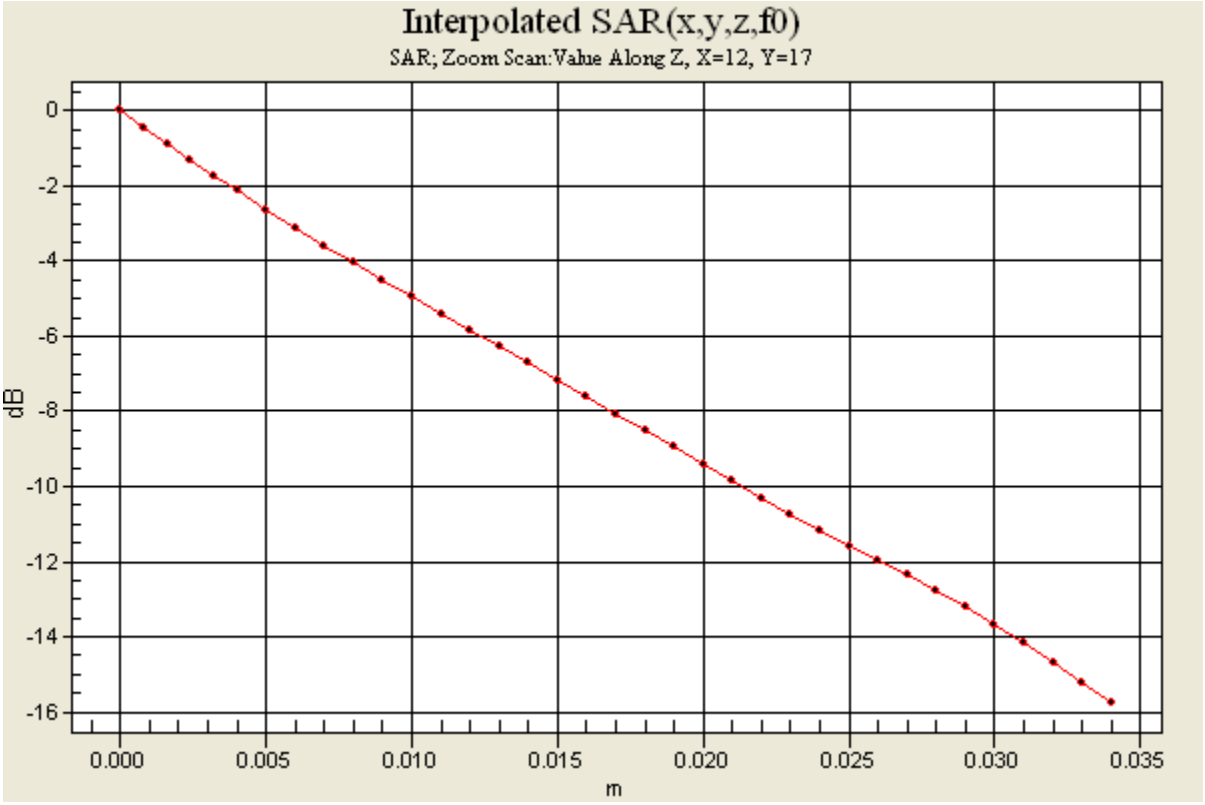
Prepared (also subject responsible if other)	No.	
SEM/CV/PF/P Rodney Dixon	REP 2009 006 X2 02	
Approved / Checked		
SEM/CV/PF/P Gerard Hayes	A	

Distribution of maximum SAR in 1900 GSM band. Measured with back of device facing the body using a 15mm spacer. (Standard Battery, BST-41)
Date/Time: 8/15/2009 1:04:28 PM
File Name: 15Aug09_X2_GSM1900_SBKM_15mm_BBF01.da4
DUT: Vulcan body
Phantom: SAM with CRP (High Band Body)Phantom section: Flat Section
Probe: ET3DV6 - SN1539ConvF(4.21, 4.21, 4.21)
Medium parameters used: f = 1910 MHz; σ = 1.55 mho/m; ε_r = 52; ρ = 1000 kg/m^3
Measurement Standard: DASY4 (High Precision Assessment)
Program Notes: Battery - BST41 Humidity - 40.5 % Ambient Temp - 23.2 C Simulant Temp - 23 C
DASY4 Configuration:
- Probe: ET3DV6 - SN1539; ConvF(4.21, 4.21, 4.21); Calibrated: 11/17/2008
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn415; Calibrated: 10/31/2008
- Phantom: SAM with CRP (High Band Body); Type: SAM; Serial: TP: 1020
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186
High channel back/Area Scan (51x81x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.457 mW/g
High channel back/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 7.45 V/m; Power Drift = 0.006 dB
Peak SAR (extrapolated) = 0.703 W/kg
SAR(1 g) = 0.397 mW/g; SAR(10 g) = 0.229 mW/g
Maximum value of SAR (measured) = 0.432 mW/g
High channel back/Zoom Scan (31x31x36)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 7.45 V/m; Power Drift = 0.006 dB
Maximum value of SAR (interpolated) = 0.703 mW/g



Prepared (also subject responsible if other)		No.	
SEM/CV/PF/P Rodney Dixon		REP 2009 006 X2 02	
Approved	Checked		
SEM/CV/PF/P Gerard Hayes		A	

0 dB = 0.703mW/g

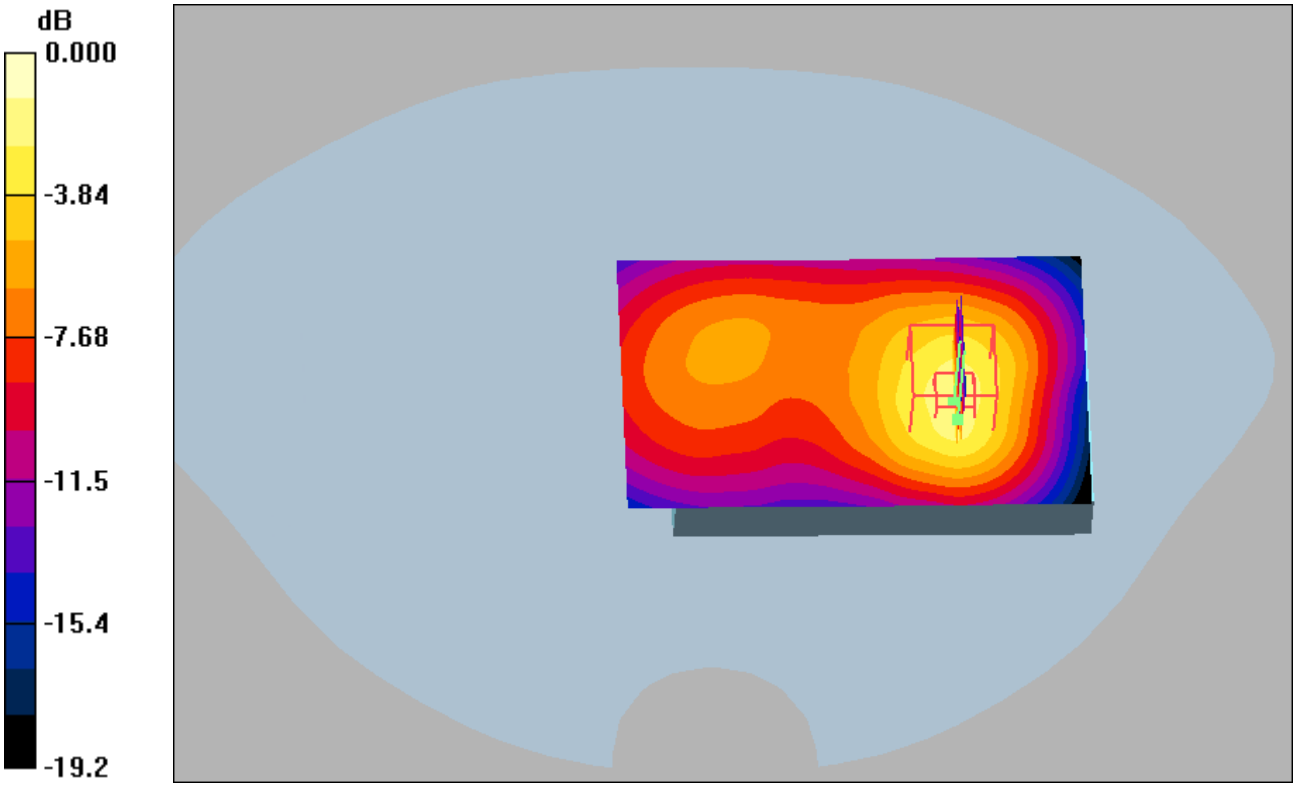


Prepared (also subject responsible if other)	No.	
SEM/CV/PF/P Rodney Dixon	REP 2009 006 X2 02	
Approved / Checked		
SEM/CV/PF/P Gerard Hayes	A	

Distribution of maximum SAR in UMTS Band II (1900 MHz). Measured with back of device facing the body using a 15mm spacer. (Standard Battery, BST-41)
Date/Time: 8/17/2009 7:52:02 AM
File Name: 15Aug09_X2_B2WCDMA_SBKM_15mm_BBF01.da4
DUT: Vulcan body
Phantom: SAM with CRP (High Band Body)Phantom section: Flat Section
Probe: ET3DV6 - SN1539ConvF(4.21, 4.21, 4.21)
Medium parameters used (interpolated): f = 1907.4 MHz; σ = 1.55 mho/m; ε_r = 52; ρ = 1000 kg/m^3
Measurement Standard: DASY4 (High Precision Assessment)
Program Notes: Battery - BST41 Humidity - 40.5 % Ambient Temp - 23.2 C Simulant Temp - 23 C
DASY4 Configuration:
- Probe: ET3DV6 - SN1539; ConvF(4.21, 4.21, 4.21); Calibrated: 11/17/2008
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn415; Calibrated: 10/31/2008
- Phantom: SAM with CRP (High Band Body); Type: SAM; Serial: TP: 1020
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

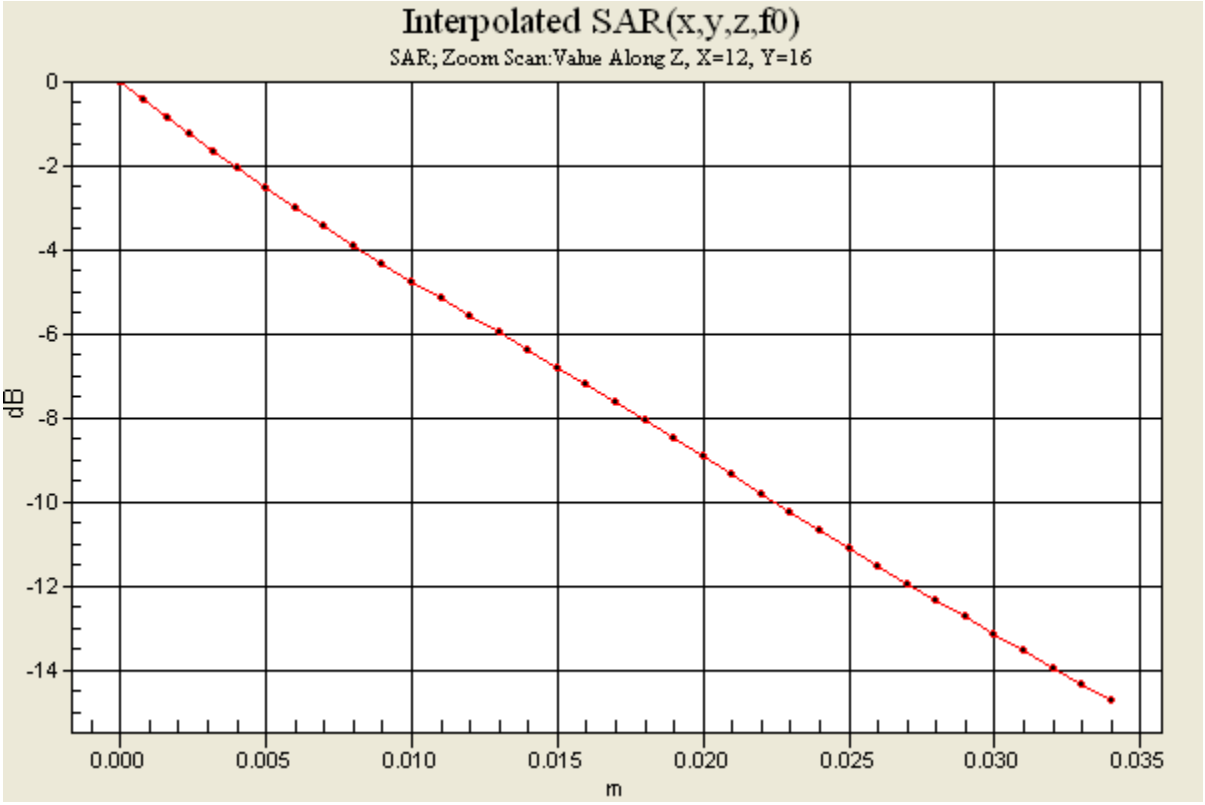
High channel back/Area Scan (51x81x1): Measurement grid: dx=15mm, dy=15mm
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.737 mW/g
High channel back/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 12.5 V/m; Power Drift = -0.107 dB
Peak SAR (extrapolated) = 1.09 W/kg
SAR(1 g) = 0.631 mW/g; SAR(10 g) = 0.378 mW/g
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.680 mW/g
High channel back/Zoom Scan (31x31x36)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 12.5 V/m; Power Drift = -0.107 dB
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 1.09 mW/g

Prepared (also subject responsible if other)	No.	
SEM/CV/PF/P Rodney Dixon	REP 2009 006 X2 02	
Approved / Checked		
SEM/CV/PF/P Gerard Hayes	A	



0 dB = 1.09mW/g

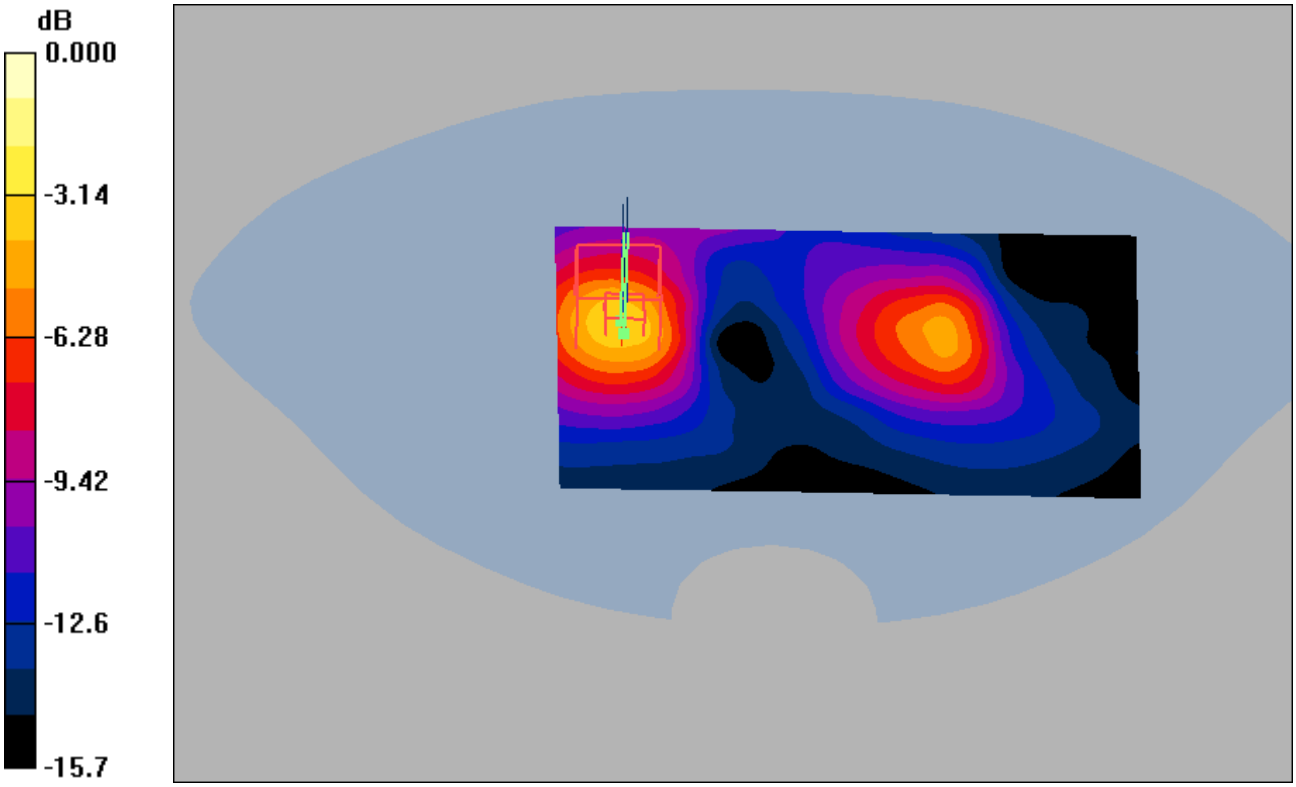
Prepared (also subject responsible if other)		No.	
SEM/CV/PF/P Rodney Dixon		REP 2009 006 X2 02	
Approved	Checked		
SEM/CV/PF/P Gerard Hayes		A	



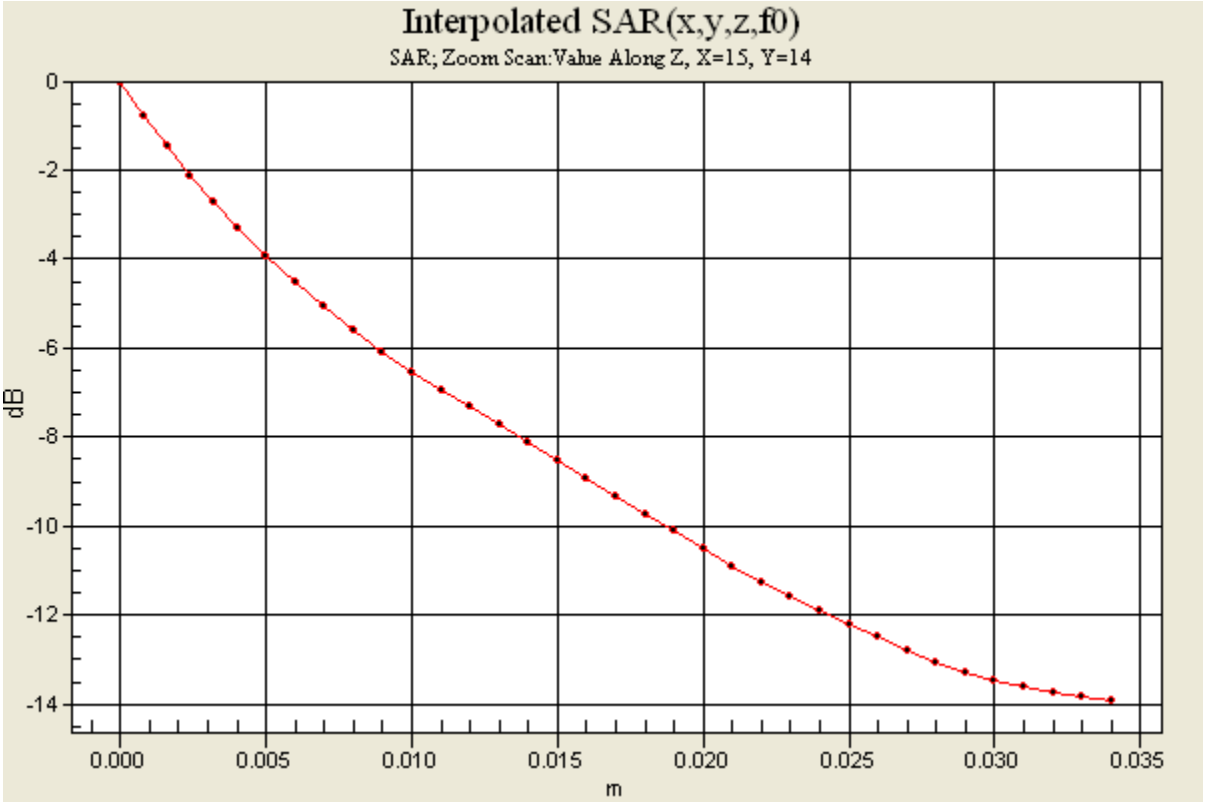
Prepared (also subject responsible if other)	No.	
SEM/CV/PF/P Rodney Dixon	REP 2009 006 X2 02	
Approved / Checked		
SEM/CV/PF/P Gerard Hayes	A	

Distribution of maximum SAR in WLAN. Measured with back of device facing the body using a 15mm spacer. (Standard Battery, BST-41)
Date/Time: 7/29/2009 9:15:58 AM
File Name: 29July09_X2_WLAN2450_SBNG_15mm_BBF01.da4
DUT: Vulcan body
Phantom: SAM with CRP (WLAN right phantom)Phantom section: Flat Section
Probe: ET3DV6 - SN1584ConvF(3.9, 3.9, 3.9)
Medium parameters used (interpolated): f = 2412 MHz; σ = 2.05 mho/m; ε_r = 52; ρ = 1000 kg/m^3
Measurement Standard: DASY4 (High Precision Assessment)
Program Notes: Battery BST-41 Humidity: 41.3 % Ambient Temp: 23.4 C Simulant Temp: 23.1 C
DASY4 Configuration:
- Probe: ET3DV6 - SN1584; ConvF(3.9, 3.9, 3.9); Calibrated: 11/17/2008
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn417; Calibrated: 11/7/2008
- Phantom: SAM with CRP (WLAN right phantom); Type: SAM; Serial: 1251
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186
Low channel back/Area Scan (71x101x1): Measurement grid: dx=15mm, dy=15mm
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.063 mW/g
Low channel back/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 1.54 V/m; Power Drift = 0.141 dB
Peak SAR (extrapolated) = 0.134 W/kg
SAR(1 g) = 0.059 mW/g; SAR(10 g) = 0.032 mW/g
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.063 mW/g
Low channel back/Zoom Scan (31x31x36)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 1.54 V/m; Power Drift = 0.141 dB
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.134 mW/g

Prepared (also subject responsible if other)	No.	
SEM/CV/PF/P Rodney Dixon	REP 2009 006 X2 02	
Approved / Checked		
SEM/CV/PF/P Gerard Hayes	A	



0 dB = 0.134mW/g


Interpolated SAR(x,y,z,f0)
SAR; Zoom Scan:Value Along Z, X=15, Y=14
dB
0
-2
-4
-6
-8
-10
-12
-14
0.000
0.005
0.010
0.015
0.020
0.025
0.030
0.035
m

Prepared (also subject responsible if other)		No.	
SEM/CV/PF/P Rodney Dixon		REP 2009 006 X2 02	
Approved	Checked		
SEM/CV/PF/P Gerard Hayes		A	

Appendix 4

Probe Calibration Certificates

ET3DV6 SN:1539 **November 17, 2008**

DASY - Parameters of Probe: ET3DV6 SN:1539

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

NormX	**1.33** ± 10.1%	$\mu V/(V/m)^2$	DCP X	**84** mV
NormY	**1.30** ± 10.1%	$\mu V/(V/m)^2$	DCP Y	**84** mV
NormZ	**1.40** ± 10.1%	$\mu V/(V/m)^2$	DCP Z	**89** mV

Sensitivity in Tissue Simulating Liquid (Conversion Factors)

Please see Page 8.

Boundary Effect

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

Sensor Center to Phantom Surface Distance		**3.7 mm**	**4.7 mm**
SAR_{be} [%]	Without Correction Algorithm	11.6	7.1
SAR_{be} [%]	With Correction Algorithm	0.8	0.5

TSL **1750 MHz** **Typical SAR gradient: 10 % per mm**

Sensor Center to Phantom Surface Distance		**3.7 mm**	**4.7 mm**
SAR_{be} [%]	Without Correction Algorithm	10.5	6.0
SAR_{be} [%]	With Correction Algorithm	0.9	0.4

Sensor Offset

Probe Tip to Sensor Center	**2.7** mm

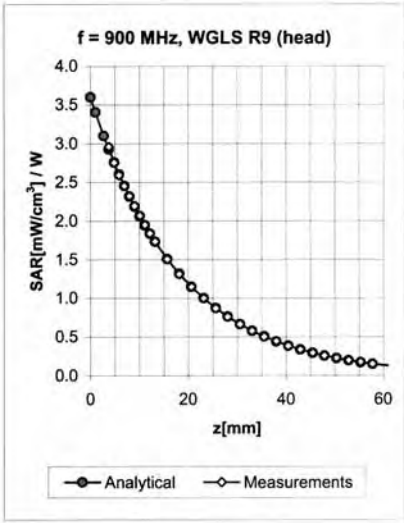
The reported uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k=2, which for a normal distribution corresponds to a coverage probability of approximately 95%.

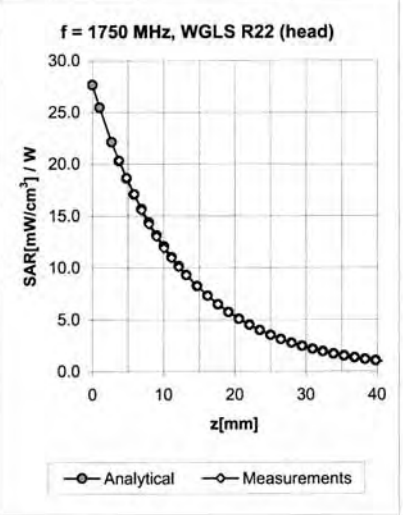
[A] The uncertainties of NormX,Y,Z do not affect the E^2-field uncertainty inside TSL (see Page 8).

[B] Numerical linearization parameter: uncertainty not required.

ET3DV6 SN:1539 **November 17, 2008**

Conversion Factor Assessment





f [MHz]	Validity [MHz][C]	TSL	Permittivity	Conductivity	Alpha	Depth	ConvF Uncertainty
835	± 50 / ± 100	Head	41.5 ± 5%	0.90 ± 5%	0.29	3.10	5.71 ± 11.0% (k=2)
900	± 50 / ± 100	Head	41.5 ± 5%	0.97 ± 5%	0.30	3.22	5.57 ± 11.0% (k=2)
1750	± 50 / ± 100	Head	40.1 ± 5%	1.37 ± 5%	0.99	1.73	4.90 ± 11.0% (k=2)
1900	± 50 / ± 100	Head	40.0 ± 5%	1.40 ± 5%	0.99	1.72	4.65 ± 11.0% (k=2)
2450	± 50 / ± 100	Head	39.2 ± 5%	1.80 ± 5%	0.99	1.42	4.27 ± 11.0% (k=2)
835	± 50 / ± 100	Body	55.2 ± 5%	0.97 ± 5%	0.33	3.02	5.53 ± 11.0% (k=2)
900	± 50 / ± 100	Body	55.0 ± 5%	1.05 ± 5%	0.32	3.42	5.34 ± 11.0% (k=2)
1750	± 50 / ± 100	Body	53.4 ± 5%	1.49 ± 5%	0.99	1.99	4.56 ± 11.0% (k=2)
1900	± 50 / ± 100	Body	53.3 ± 5%	1.52 ± 5%	0.99	1.73	4.21 ± 11.0% (k=2)
2450	± 50 / ± 100	Body	52.7 ± 5%	1.95 ± 5%	0.99	1.46	3.76 ± 11.0% (k=2)

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

ET3DV6 SN:1584 **November 17, 2008**

DASY - Parameters of Probe: ET3DV6 SN:1584

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

NormX	**1.89** ± 10.1%	$\mu V/(V/m)^2$	DCP X	**93** mV
NormY	**1.81** ± 10.1%	$\mu V/(V/m)^2$	DCP Y	**94** mV
NormZ	**1.90** ± 10.1%	$\mu V/(V/m)^2$	DCP Z	**94** mV

Sensitivity in Tissue Simulating Liquid (Conversion Factors)

Please see Page 8.

Boundary Effect

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

Sensor Center to Phantom Surface Distance		**3.7 mm**	**4.7 mm**
SAR_{be} [%]	Without Correction Algorithm	9.9	5.9
SAR_{be} [%]	With Correction Algorithm	0.8	0.6

TSL **1750 MHz** **Typical SAR gradient: 10 % per mm**

Sensor Center to Phantom Surface Distance		**3.7 mm**	**4.7 mm**
SAR_{be} [%]	Without Correction Algorithm	10.7	6.6
SAR_{be} [%]	With Correction Algorithm	0.8	0.5

Sensor Offset

Probe Tip to Sensor Center	**2.7** mm

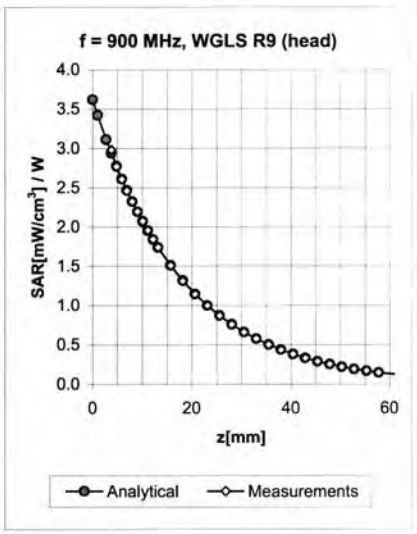
The reported uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k=2, which for a normal distribution corresponds to a coverage probability of approximately 95%.

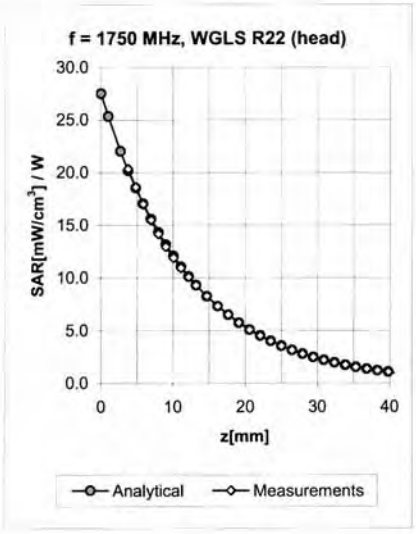
[A] The uncertainties of NormX,Y,Z do not affect the E^2-field uncertainty inside TSL (see Page 8).

[B] Numerical linearization parameter: uncertainty not required.

ET3DV6 SN:1584 **November 17, 2008**

Conversion Factor Assessment





f [MHz]	Validity [MHz][C]	TSL	Permittivity	Conductivity	Alpha	Depth	ConvF Uncertainty
835	± 50 / ± 100	Head	41.5 ± 5%	0.90 ± 5%	0.19	4.09	6.34 ± 11.0% (k=2)
900	± 50 / ± 100	Head	41.5 ± 5%	0.97 ± 5%	0.23	3.46	6.18 ± 11.0% (k=2)
1750	± 50 / ± 100	Head	40.1 ± 5%	1.37 ± 5%	0.89	1.84	5.36 ± 11.0% (k=2)
1900	± 50 / ± 100	Head	40.0 ± 5%	1.40 ± 5%	0.99	1.66	5.10 ± 11.0% (k=2)
2450	± 50 / ± 100	Head	39.2 ± 5%	1.80 ± 5%	0.99	1.27	4.51 ± 11.0% (k=2)
835	± 50 / ± 100	Body	55.2 ± 5%	0.97 ± 5%	0.23	3.72	6.14 ± 11.0% (k=2)
900	± 50 / ± 100	Body	55.0 ± 5%	1.05 ± 5%	0.30	2.92	6.03 ± 11.0% (k=2)
1750	± 50 / ± 100	Body	53.4 ± 5%	1.49 ± 5%	0.99	1.88	4.78 ± 11.0% (k=2)
1900	± 50 / ± 100	Body	53.3 ± 5%	1.52 ± 5%	0.99	1.77	4.46 ± 11.0% (k=2)
2450	± 50 / ± 100	Body	52.7 ± 5%	1.95 ± 5%	0.99	1.35	3.90 ± 11.0% (k=2)

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

ET3DV6 SN:1587 **May 25, 2009**

DASY - Parameters of Probe: ET3DV6 SN:1587

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

NormX	**2.20** ± 10.1%	$\mu V/(V/m)^2$	DCP X	**91** mV
NormY	**1.94** ± 10.1%	$\mu V/(V/m)^2$	DCP Y	**92** mV
NormZ	**1.84** ± 10.1%	$\mu V/(V/m)^2$	DCP Z	**92** mV

Sensitivity in Tissue Simulating Liquid (Conversion Factors)

Please see Page 8.

Boundary Effect

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

Sensor Center to Phantom Surface Distance		**3.7 mm**	**4.7 mm**
SAR_{be} [%]	Without Correction Algorithm	11.3	7.4
SAR_{be} [%]	With Correction Algorithm	0.9	0.7

TSL **1750 MHz** **Typical SAR gradient: 10 % per mm**

Sensor Center to Phantom Surface Distance		**3.7 mm**	**4.7 mm**
SAR_{be} [%]	Without Correction Algorithm	12.5	8.6
SAR_{be} [%]	With Correction Algorithm	0.7	0.3

Sensor Offset

Probe Tip to Sensor Center	**2.7** mm

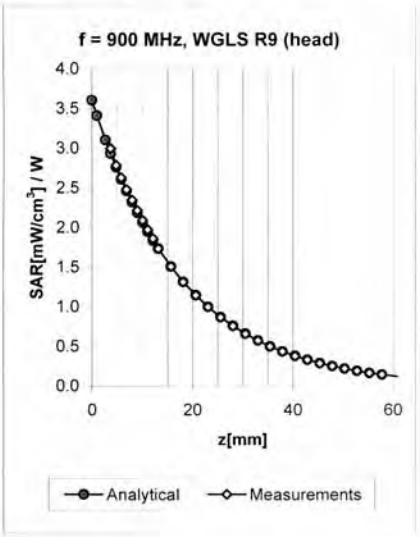
The reported uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k=2, which for a normal distribution corresponds to a coverage probability of approximately 95%.

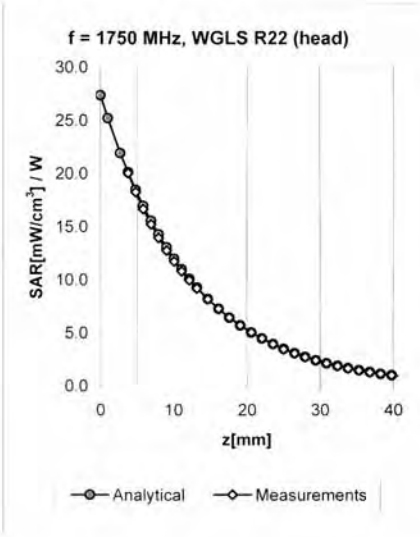
[A] The uncertainties of NormX,Y,Z do not affect the E^2-field uncertainty inside TSL (see Page 8).

[B] Numerical linearization parameter: uncertainty not required.

ET3DV6 SN:1587 **May 25, 2009**

Conversion Factor Assessment





f [MHz]	Validity [MHz][c]	TSL	Permittivity	Conductivity	Alpha	Depth	ConvF Uncertainty
835	± 50 / ± 100	Head	41.5 ± 5%	0.90 ± 5%	0.44	2.15	6.39 ± 11.0% (k=2)
900	± 50 / ± 100	Head	41.5 ± 5%	0.97 ± 5%	0.22	3.75	6.16 ± 11.0% (k=2)
1750	± 50 / ± 100	Head	40.1 ± 5%	1.37 ± 5%	0.50	2.60	5.49 ± 11.0% (k=2)
1900	± 50 / ± 100	Head	40.0 ± 5%	1.40 ± 5%	0.45	2.95	5.23 ± 11.0% (k=2)
2450	± 50 / ± 100	Head	39.2 ± 5%	1.80 ± 5%	0.50	2.30	4.58 ± 11.0% (k=2)
835	± 50 / ± 100	Body	55.2 ± 5%	0.97 ± 5%	0.34	2.60	6.27 ± 11.0% (k=2)
900	± 50 / ± 100	Body	55.0 ± 5%	1.05 ± 5%	0.34	2.69	6.11 ± 11.0% (k=2)
1750	± 50 / ± 100	Body	53.4 ± 5%	1.49 ± 5%	0.60	2.60	4.90 ± 11.0% (k=2)
1900	± 50 / ± 100	Body	53.3 ± 5%	1.52 ± 5%	0.83	2.48	4.58 ± 11.0% (k=2)
2450	± 50 / ± 100	Body	52.7 ± 5%	1.95 ± 5%	0.35	2.00	3.99 ± 11.0% (k=2)

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

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Appendix 5

Measurement Uncertainty Budget

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

a	*b*	*c*	*d*	*e = f(d,k)*	*f*	*g*	*h = c x f / e*	*i = c x g / e*	*k*
Uncertainty Component	**Sec.**	**Tol. (± %)**	**Prob. Dist.**	**Div.**	**c_i (1-g)**	**c_i (10-g)**	**1-g u_i (±%)**	**10-g u_i (±%)**	**v_i**
Measurement System									
Probe Calibration (*k*=1)	E2.1	4.7	R	1.73	0.707	0.707	1.9	1.9	∞
Axial Isotropy	E.2.2	9.6	R	1.73	0.707	0.707	3.9	3.9	∞
Hemispherical Isotropy	E.2.2	1.0	R	1.73	1	1	0.6	0.6	∞
Boundary Effect	E.2.3	4.7	R	1.73	1	1	2.7	2.7	∞
Linearity	E.2.4	1.0	R	1.73	1	1	0.6	0.6	∞
System Detection Limits	E.2.5	1.0	N	1	1	1	1.0	1.0	∞
Readout Electronics	E.2.6	0.8	R	1.73	1	1	0.5	0.5	∞
Response Time	E.2.7	2.6	R	1.73	1	1	1.5	1.5	∞
Integration Time	E.2.8	4.7	R	1.73	0.707	0.707	1.9	1.9	∞
RF Ambient Conditions	E.6.1	3.0	R	1.73	1	1	1.7	1.7	∞
Probe Positioner Mechanical Tolerance(corresponds to the mechanical constrains of the robot)	E.6.2	0.4	R	1.73	1	1	0.2	0.2	∞
Probe Positioning with respect to Phantom Shell	E.6.3	2.9	R	1.73	1	1	1.7	1.7	∞
Extrapolation, interpolation and Integration Algorithms for Max. SAR Evaluation	E.5	1.0	R	1.73	1	1	0.6	0.6	∞
Dipole									
Dipole Axis to Liquid Distance	8, E.4.2	1.0	R	1.73	1	1	0.6	0.6	∞
Input Power and SAR Drift Measurement	8, 6.6.2	5.0	R	1.73	1	1	2.9	2.9	∞
Phantom and Tissue Parameters									
Phantom Uncertainty - shell thickness tolerance	E.3.1	4.0	R	1.73	1	1	2.3	2.3	∞
Liquid Conductivity - deviation from target values (5)	E.3.2	4.3	R	1.73	0.64	0.43	1.59	1.07	∞
Liquid Conductivity - measurement uncertainty (6)	E.3.3	6.20	R	1.73	0.64	0.43	2.29	1.54	∞

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

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

a	*b*	*c*	*d*	*e = f(d,k)*	*f*	*g*	*h = c x f / e*	*i = c x g / e*	*k*
Uncertainty Component	**Sec.**	**Tol. (± %)**	**Prob. Dist.**	**Div.**	**c_i (1-g)**	**c_i (10-g)**	**1-g u_i (±%)**	**10-g u_i (±%)**	**v_i**
Measurement System									
Probe Calibration (*k*=1)	E2.1	4.8	N	1	1	1	4.8	4.8	∞
Axial Isotropy	E.2.2	4.7	R	1.73	0.707	0.707	1.9	1.9	∞
Hemispherical Isotropy	E.2.2	9.6	R	1.73	0.707	0.707	3.9	3.9	∞
Boundary Effect	E.2.3	1.0	R	1.73	1	1	0.6	0.6	∞
Linearity	E.2.4	4.7	R	1.73	1	1	2.7	2.7	∞
System Detection Limits	E.2.5	1.0	R	1.73	1	1	0.6	0.6	∞
Readout Electronics	E.2.6	1.0	N	1	1	1	1.0	1.0	∞
Response Time	E.2.7	0.8	R	1.73	1	1	0.5	0.5	∞
Integration Time	E.2.8	2.6	R	1.73	1	1	1.5	1.5	∞
RF Ambient Conditions	E.6.1	3.0	R	1.73	1	1	1.7	1.7	∞
Probe Positioner Mechanical Tolerance(corresponds to the mechanical constrains of the robot)	E.6.2	0.4	R	1.73	1	1	0.2	0.2	∞
Probe Positioning with respect to Phantom Shell	E.6.3	2.9	R	1.73	1	1	1.7	1.7	∞
Extrapolation, interpolation and Integration Algorithms for Max. SAR Evaluation	E.5	1.0	R	1.73	1	1	0.6	0.6	∞
Test sample Related									
Test Sample Positioning	E.4.2	2.7	N	1	1	1	4.0	4.0	4
Device Holder Uncertainty	E.4.1	1.3	R	1.73	1	1	0.7	0.7	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	∞

Liquid Conductivity - deviation from target values (5)	E.3.2	4.3	R	1.73	0.64	0.43	1.6	1.1	∞
Liquid Conductivity - measurement uncertainty (6)	E.3.3	6.20	R	1.73	0.64	0.43	2.3	1.5	∞
Liquid Permittivity - deviation from target values (5)	E.3.2	3.7	R	1.73	0.6	0.49	1.3	1.0	∞
Liquid Permittivity - measurement uncertainty (6)	E.3.3	6.08	R	1.73	0.6	0.49	2.1	1.7	∞
Combined Standard Uncertainty			RSS				**10.5**	**10.2**	
Expanded Uncertainty (95% CONFIDENCE LEVEL)			K=2				**21.1**	**20.4**	

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Table 3a. Values for ε'

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

Table 3b. Values for σ

Uncertainty Component	Tolerance (±%)	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	∞
Dielectric Error Sources	5.93	R	1.73	1	3.42	∞
Combined standard uncertainty					**6.20**	

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Appendix 6

Photographs of the Device under Test

Closed:

Open:

Side:

15mm Back:

15mm Front:

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

"cheek/touch" position

"cheek/touch" open position

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

"tilt/touch" position

"tilt/touch" open position