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BA/SEMC/CVVBAU Robert Carr

Approved

BA/SEMC/CVVBAU Jon Kenny

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REPORT

No.

CVDVBA11:436.

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**Test Report issued by Accredited SAR Laboratory****for****FCC ID: PY7A3880133 (S51SE)****to****FCC OET BULLETIN 65 SUPPLEMENT C 01-01  
IEEE STD 1528:2003  
IC RSS-102 ISSUE 4****Date of test:** 2011-08-08 to 2011-08-25**Laboratory:** Sony Ericsson SAR Test Laboratory  
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Jon Kenny

**Statement of Compliance**

Sony Ericsson Mobile Communications AB declares under its sole responsibility that the product

***Sony Ericsson Type AAD-3880133-BV; FCC ID PY7A3880133; IC 4170B-A3880133***

to which this declaration relates, is in conformity with the appropriate RF exposure standards recommendations and guidelines. 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)

This laboratory is accredited to ISO/IEC 17025 (SWEDAC accreditation no. 1847).



Laboratories are accredited by the Swedish Board for Accreditation and Conformity Assessment (SWEDAC) under the terms of Swedish legislation. The accredited laboratory activities meet the requirements in SS-EN ISO/IEC 17025 (2005). This report may not be reproduced other than in full, except with the prior written approval of the issuing laboratory.

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

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

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Rev

**A**

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**File**

## Table of contents

<b>1</b>	<b>INTRODUCTION .....</b>	<b>3</b>
<b>2</b>	<b>CUSTOMER DETAILS .....</b>	<b>3</b>
<b>3</b>	<b>DEVICE UNDER TEST.....</b>	<b>3</b>
3.1	ANTENNA DESCRIPTION.....	3
3.2	DEVICE DESCRIPTION .....	4
<b>4</b>	<b>TEST EQUIPMENT.....</b>	<b>6</b>
4.1	DOSIMETRIC SYSTEM .....	6
<b>5</b>	<b>ELECTRICAL PARAMETERS ON THE TISSUE SIMULATING LIQUID .....</b>	<b>7</b>
<b>6</b>	<b>SYSTEM ACCURACY VERIFICATION .....</b>	<b>8</b>
6.1	<i>DIELECTRICS FOR FREQUENCIES TESTED .....</i>	9
<b>7</b>	<b>SAR MEASUREMENT UNCERTAINTY .....</b>	<b>10</b>
<b>8</b>	<b>.....</b>	<b>11</b>
8.1	TEST RESULTS .....	11
8.2	SIMULTANEOUS TRANSMITTERS .....	14
<b>9</b>	<b>REFERENCES.....</b>	<b>15</b>
<b>APPENDIX .....</b>	<b>.....</b>	<b>16</b>
9.1	PHOTOGRAPHS OF THE DEVICE UNDER TEST .....	16
9.2	DEVICE POSITION AT SAM TWIN PHANTOM .....	17
9.3	ATTACHMENTS .....	18



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## 1 Introduction

In this test report, compliance of the Sony Ericsson FCC ID: PY7A3880133 (S51SE) portable telephone with RF safety guidelines is demonstrated. The applicable RF safety guidelines and the SAR measurement specifications used for the test are described in the SAR Measurement Specifications of Wireless Handsets [1].

## 2 Customer details

<b>Company Name:</b>	Sony Ericsson Mob Comm AB
<b>Address:</b>	Nya Vattentorget Lund 22188 Sweden
<b>Contact Name:</b>	Peter Lorentzon

## 3 Device Under Test

### 3.1 Antenna Description

<b>Type</b>	Internal antenna	
<b>Location</b>	Bottom of phone	
<b>Main and WLAN antennas distance</b>	51.0 mm	
<b>Dimensions</b>	Max length	27 mm
	Max width	47 mm
<b>Configuration</b>	PIFA	



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### 3.2 Device Description

Device model	AAD-3880133-BV					
Market name	S51SE					
Serial number (EUT #)	BX902H57Q0 (#20737) BX902H57WZ(#20739) - WLAN					
Mode (EUT #)	GSM 850 (#20737)			GSM1900 (#20737)		
Crest factor	8			8		
Multiple access scheme	TDMA			TDMA		
Channel No.	128	190	251	512	661	885
Measured Power Level [dBm] <sup>1</sup>	33.4	33.4	33.3	30.5	30.3	30.4
Product Maximum power Level [dBm] <sup>1</sup>	33.5	33.5	33.5	30.5	30.5	30.5
Data mode	GPRS			GPRS		
Crest factor	4.15 (2TX)			4.15 (2TX)		
Measured Power Level [dBm] <sup>1</sup>	30.9	30.8	30.8	25.7	25.6	25.6
Product Maximum power Level [dBm] <sup>1</sup>	31.0	31.0	31.0	25.5	25.5	25.5
Crest factor	3.1125 (3TX)			3.1125 (3TX)		
Measured Power Level [dBm] <sup>1</sup>	30.0	30.0	29.9	24.7	24.5	24.3
Product Maximum power Level [dBm] <sup>1</sup>	30.0	30.0	30.0	24.5	24.5	24.5
Crest factor	2.075 (4TX)			2.075 (4TX)		
Measured Power Level [dBm] <sup>1</sup>	28.6	28.6	28.5	23.7	23.7	23.7
Product Maximum power Level [dBm] <sup>1</sup>	28.5	28.5	28.5	23.5	23.5	23.5
Data mode	EDGE			EDGE		
Crest factor	4.15 (2TX)			4.15 (2TX)		
Measured Power Level [dBm] <sup>1</sup>	25.6	25.7	25.6	24.7	24.6	24.6
Product Maximum power Level [dBm] <sup>1</sup>	25.5	25.5	25.5	24.5	24.5	24.5
Crest factor	3.1125 (3TX)			3.1125 (3TX)		
Measured Power Level [dBm] <sup>1</sup>	24.5	24.6	24.5	23.4	23.5	23.3
Product Maximum power Level [dBm] <sup>1</sup>	24.5	24.5	24.5	23.5	23.5	23.5
Crest factor	2.075 (4TX)			2.075 (4TX)		
Measured Power Level [dBm] <sup>1</sup>	23.4	23.5	23.5	22.7	22.5	22.5
Product Maximum power Level [dBm] <sup>1</sup>	23.5	23.5	23.5	22.5	22.5	22.5
Transmitting frequency range [MHz]	824.0 - 849.0			1850.0 - 1910.0		

GPRS Multislot class	12
EDGE class	12
GPRS Capability class	B
BT class and conducted power	Class 1 10 mW
Prototype or production unit	Preproduction
Hardware Version	TP1
Software version	4.0.1.A.0.145 S_atp_Smultron_S_1_0_2 (WLAN #20739)
Device category	Portable
RF exposure environment	General population / uncontrolled



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110907

Rev

A

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WLAN Output Power						
Mode	Max Output Power (dBm) <sup>1</sup>	EUT (#20739) Measured Ave Power (dBm) <sup>1</sup>				
		Ch 1	Ch 6	Ch 11	Ch 13	Ch14
802.11b 1Mbit/sec	17.5	17.7	17.5	17.4	17.7	17.7
802.11b 2Mbit/sec		17.7	17.4	17.4	17.7	17.7
802.11b 5.5Mbit/sec		17.6	17.4	17.4	17.6	17.6
802.11b 11Mbit/sec		17.6	17.3	17.3	17.5	17.6
802.11g 6Mbit/sec		17.7	17.3	17.3	17.6	17.6
802.11g 9Mbit/sec		17.7	17.4	17.4	17.5	17.5
802.11g 12Mbit/sec		17.6	17.3	17.3	17.4	17.5
802.11g 18Mbit/sec		17.7	17.3	17.3	17.5	17.4
802.11g 24Mbit/sec		17.7	17.2	17.3	17.4	17.4
802.11g 36Mbit/sec		17.6	17.3	17.3	17.5	17.4
802.11g 48Mbit/sec		17.6	17.3	17.3	17.5	17.4
802.11g 54Mbit/sec		17.7	17.3	17.2	17.6	17.5
802.11n 65Mbit/sec		17.6	17.3	17.2	17.5	17.5

WLAN Output Power						
Mode	EUT (#20739) Measured Peak Power (dBm) <sup>1</sup>					
	Ch 1	Ch 6	Ch 11	Ch 13	Ch 14	
802.11b 1Mbit/sec	19.7	19.7	19.6	19.9	19.9	
802.11b 2Mbit/sec	19.9	19.6	19.6	19.8	19.8	
802.11b 5.5Mbit/sec	19.7	19.5	19.4	19.6	19.7	
802.11b 11Mbit/sec	19.7	19.4	19.3	19.5	19.6	
802.11g 6Mbit/sec	25.4	24.5	24.6	24.9	24.9	
802.11g 9Mbit/sec	25.3	24.5	24.6	24.9	24.9	
802.11g 12Mbit/sec	25.3	24.5	24.6	24.9	24.9	
802.11g 18Mbit/sec	25.4	24.4	24.6	24.9	25.0	
802.11g 24Mbit/sec	25.2	24.3	24.5	24.7	24.9	
802.11g 36Mbit/sec	25.2	24.3	24.4	24.8	24.9	
802.11g 48Mbit/sec	25.1	24.3	24.4	24.7	24.8	
802.11g 54Mbit/sec	25.2	24.3	24.4	24.7	24.8	
802.11n 65Mbit/sec	25.3	25.4	24.5	24.6	24.8	

<sup>1</sup> These values are supplied by the customer



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## 4 Test equipment

### 4.1 Dosimetric system

SAR measurements were made using the DASY4 professional system (software version 4.7, Build 55) with SAM twin phantom, manufactured by Schmid & Partner Engineering AG (SPEAG). The list of calibrated equipment is given below.

#### SAR System 1

Description	Inventory Number	Due Date
Signal generator HP SMY02	3.110	2012-05
Directional coupler HP778D	15.233	None
Power meter R&S NRVD	FB000511	2012-05
Power sensor R&S NRV-Z5	FB000512	2012-05
Power sensor R&S NRV-Z5	FB000513	2012-05
Network analyzer Agilent 8719D	2.022	2012-05
Dielectric probe kit HP8507C	14.046	Self Cal
R&S CMU200	FB000540	2012-05
DASY4 DAE3	448	2011-11
E-field probe ET3DV6	1610	2011-11

#### SAR System 2&3

Description	Inventory Number	Due Date
Signal generator HP E4433B	1.045	2012-05
Directional coupler HP778D	FB000506	None
Power meter R&S NRVD	4.073	2012-05
Power sensor R&S NRV-Z5	4.074	2012-05
Power sensor R&S NRV-Z5	4.076	2012-05
R&S CMU200	FB000539	2015-05
DASY4 DAE3	415	2011-11
E-field probe ET3DV6	1539	2011-11
DASY4 DAE3	417	2011-11
E-field probe ET3DV6	1584	2011-11

#### Dipoles

Description	Serial Number	Due Date
Dipole Validation Kit, D835V2	438	2012-05
Dipole Validation Kit, D1900V2	539	2012-10
Dipole Validation Kit, D2450V2	721	2012-10



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110907

Rev

A

Reference

File

## 5 Electrical parameters on the tissue simulating liquid

Prior to conducting SAR measurements, the relative permittivity,  $\epsilon_r$ , and the conductivity  $\sigma$ , of the tissue simulating liquids were measured with the dielectric probe kit. These values are shown in the table below. The mass density,  $\rho$ , entered into the DASY4 software is also given. Recommended limits for permittivity  $\epsilon_r$ , conductivity  $\sigma$  and mass density  $\rho$  are also shown.

f [MHz]	Tissue type	Measured / Recommended	Dielectric Parameters		Density
			$\epsilon_r$	$\sigma$ [S/m]	$\rho$ [g/cm <sup>3</sup> ]
835	Head	Measured, 2011-08-10	42.06	0.89	1.00
		Recommended	41.50	0.90	1.00
835	Body	Measured, 2011-08-08	52.50	0.96	1.00
		Recommended	55.20	0.97	1.00
1900	Head	Measured, 2011-08-16	38.04	1.42	1.00
		Recommended	40.00	1.40	1.00
1900	Body	Measured, 2011-08-09	50.88	1.53	1.00
		Recommended	53.30	1.52	1.00
2450	Head	Measured, 2011-08-25	37.39	1.85	1.00
		Recommended	39.20	1.80	1.00
2450	Body	Measured, 2011-08-23	50.23	1.95	1.00
		Recommended	52.70	1.95	1.00



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Rev

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## 6 System accuracy verification

A system accuracy verification of the DASY4 was performed using the dipole validation kit listed in section 4.1. The system verification test was conducted on the same day as the measurement of the DUT. The ambient humidity and temperature of test facility were kept between the range 30-70% and 20.0-25.0 °C respectively. RF noise had been measured in liquid when all RF equipment in lab was switched off. Measured value was 0.0002 mW/g in 1g mass.

f <sub>0</sub> [MHz]	Tissue type	Measured / Reference	SAR [W/kg] 1g	Dielectric Parameters		Density	Liquid T [°C]
				ε <sub>r</sub>	σ [S/m]	ρ [g/cm <sup>3</sup> ]	
835	Head	Measured, 2011-08-10	6.48	42.06	0.89	1.00	22.4
		Reference	6.28	41.50	0.90	1.00	22.0
835	Body	Measured, 2011-08-08	6.68	52.50	0.96	1.00	24.7
		Reference	6.47	55.20	0.97	1.00	22.0
1900	Head	Measured, 2011-08-16	19.28	38.04	1.42	1.00	21.9
		Reference	20.30	40.00	1.40	1.00	22.0
1900	Body	Measured, 2011-08-09	19.68	50.88	1.53	1.00	23.8
		Reference	20.90	53.30	1.52	1.00	22.0
2450	Head	Measured, 2011-08-25	26.28	37.39	1.85	1.00	23.6
		Reference	24.50	39.20	1.80	1.00	22.0
2450	Body	Measured, 2011-08-23	25.60	50.23	1.95	1.00	22.4
		Reference	23.60	52.70	1.95	1.00	22.0



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Date

110907

Rev

A

Reference

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**6.1 Dielectrics for Frequencies Tested**

Band	Ch	Frequency (MHz)	Parameters	
GSM 850 Head	128	824.2	$\epsilon_r$	42.21
			$\sigma$ [S/m]	0.88
	190	836.6	$\epsilon_r$	42.0
			$\sigma$ [S/m]	0.888
	251	848.8	$\epsilon_r$	41.9
			$\sigma$ [S/m]	0.899
GSM 850 Body	128	824.2	$\epsilon_r$	52.8
			$\sigma$ [S/m]	0.94
	190	836.6	$\epsilon_r$	52.6
			$\sigma$ [S/m]	0.953
	251	848.8	$\epsilon_r$	52.5
			$\sigma$ [S/m]	0.964
GSM 1900 Head	512	1850.2	$\epsilon_r$	38.2
			$\sigma$ [S/m]	1.37
	661	1880.0	$\epsilon_r$	38.1
			$\sigma$ [S/m]	1.40
	810	1909.8	$\epsilon_r$	38.03
			$\sigma$ [S/m]	1.43
GSM 1900 Body	512	1850.2	$\epsilon_r$	51.1
			$\sigma$ [S/m]	1.48
	661	1880.0	$\epsilon_r$	51.0
			$\sigma$ [S/m]	1.51
	810	1909.8	$\epsilon_r$	50.9
			$\sigma$ [S/m]	1.54
WLAN Head	1	2412.0	$\epsilon_r$	37.54
			$\sigma$ [S/m]	1.81
	6	2437.0	$\epsilon_r$	37.4
			$\sigma$ [S/m]	1.84
	11	2462.0	$\epsilon_r$	37.34
			$\sigma$ [S/m]	1.87
WLAN Body	1	2412.0	$\epsilon_r$	50.4
			$\sigma$ [S/m]	1.90
	6	2437.0	$\epsilon_r$	50.3
			$\sigma$ [S/m]	1.93
	11	2462.0	$\epsilon_r$	50.2
			$\sigma$ [S/m]	1.97

## 7 SAR measurement uncertainty

### SAR measurement uncertainty evaluation for Sony Ericsson PY7A3880133 (S51SE) phone According to IEEE 1528

Uncertainty Component	Uncert. 1g (%)	Uncert. 10g (%)	Prob. Dist.	Div.	1g mass	
					Ci	Calc (%)
<b>Measurement System</b>						
Probe Calibration*	±5.9	±5.9	N	1	1	±5.9
Axial Isotropy*	±4.7	±4.7	R	√3	0.71	±1.9
Hemispherical Isotropy*	±9.6	±9.6	R	√3	0.71	±3.9
Boundary effect*	±1.0	±1.0	R	√3	1	±0.6
Linearity*	±4.7	±4.7	R	√3	1	±2.7
System Detection limits*	±1.0	±1.0	R	√3	1	±0.6
Readout electronics*	±0.3	±0.3	N	1	1	±0.3
Response time*	±0.8	±0.8	R	√3	1	±0.5
Integration time*	±2.6	±2.6	R	√3	1	±1.5
RF Ambient Conditions (noise)*	±0.1	±0.0	R	√3	1	±0.1
RF Ambient Conditions (Reflections)*	±3.0	±3.0	R	√3	1	±1.7
Probe positioner mech. Tolerance*	±0.4	±0.4	R	√3	1	±0.2
Probe positioning with respect to phantom*	±2.9	±2.9	R	√3	1	±1.7
Extrap, interpolation and integration*	±1.0	±1.0	R	√3	1	±0.6
<i>Measurement System Uncertainty</i>						±8.4
<b>Test Sample Related</b>						
Test sample positioning	±3.7	±1.7	N	1	1	±3.7
Device holder uncertainty	±5.3	±4.7	N	1	1	±5.3
Power drift*	±5.0	±5.0	R	√3	1	±2.9
<i>Test Sample Related Uncertainty</i>						±7.1
<b>Phantom and Tissue Parameters</b>						
Phantom uncertainty*	±4.0	±4.0	R	√3	1	±2.3
Liquid conductivity (target)*	±5.0	±5.0	R	√3	0.64	±1.8
Liquid conductivity (measured)	±2.8	±2.8	N	1	0.64	±1.8
Liquid Permittivity (target)*	±5.0	±5.0	R	√3	0.60	±1.7
Liquid Permittivity (measured)	±3.3	±3.3	N	1	0.60	±2.0
<i>Phantom and Tissue Parameters Uncertainty</i>						±4.3
<b>Combined standard uncertainty (%)</b>						±11.8
<b>Expanded standard uncertainty (%) (k=2)</b>						<b>±23.6</b>



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## 8

### 8.1 Test results

The ambient humidity and temperature of test facility were kept between the range 30-70% and 20.0-25.0 °C respectively. A base station simulator was used to control the device during the SAR measurement. The DUT was supplied with a fully charged battery for each measurement.

For head measurement, the DUT was tested on the right-hand side and the left-hand side of the phantom, in two phone positions, cheek (touch) and tilt (cheek + 15°). The DUT was tested at the lowest, middle and highest frequencies in the transmission band. The measured 1-gram averaged SAR values of the DUT towards the head are provided in Table 1.

For body measurement the DUT was tested with the back (antenna) and front (display) towards the phantom flat section with 15 mm distance in speech mode and 9mm in data mode (Due to product supporting Wi-Fi Hot Spot). For data mode the GPRS slot configuration resulting in the highest SAR was assessed and tested along with 3G and WLAN. For all modes, the device was tested at the lowest, middle and highest frequencies in the transmission band. For portable hands free (PHF) usage the Sony Ericsson head set MH-650 was connected to the DUT. The measured 1-gram averaged SAR values of the DUT towards the body are provided in Table 2 and 3.



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Band	Channel	Measured output power <sup>1</sup> [dBm]	Position	Liquid T [°C]	Measured SAR [W/kg]	
					Left-hand 1g mass	Right-hand 1g mass
GSM 850	128	33.4	Cheek	22.4	0.38	0.40
			Tilt	22.4	-	-
	190	33.4	Cheek	22.4	0.43	0.40
			Tilt	22.4	0.29	0.28
	251	33.3	Cheek	22.4	<b>0.48</b>	0.46
			Tilt	22.4	-	-
GSM 1900	512	30.5	Cheek	21.9	0.54	<b>0.76</b>
			Tilt	21.9	0.59	-
	661	30.3	Cheek	21.9	0.52	0.70
			Tilt	21.9	0.51	0.64
	810	30.4	Cheek	21.9	0.51	0.69
			Tilt	21.9	0.55	-
WLAN 802.11b 1 Mbps	1	17.7	Cheek	23.6	0.25	0.22
			Tilt	23.6	-	-
	6	17.5	Cheek	23.6	<b>0.31</b>	0.24
			Tilt	23.6	0.07	0.04
	11	17.4	Cheek	23.6	0.13	0.15
			Tilt	23.6	-	-

Table 1: SAR measurement result for Sony Ericsson PY7A3880133 telephone at highest possible output power. Measured towards the head.

<sup>1</sup> Measured output values were provided by the customer.



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File

Band	EUT #	Channel	Measured output power <sup>2</sup> [dBm]	Position	Body Distance (mm)	Liquid T [°C]	1g mass [W/kg] Measured SAR
GSM 850	#20737	128	33.4	Speech	15mm	24.7	0.31
			28.6	GPRS 4TX Back	9mm	24.7	0.60
		190	33.4	Speech	15mm	24.7	0.34
			28.6	GPRS 4TX Back	9mm	24.7	0.90
		251	33.4	Speech	15mm	24.7	0.40
				Speech PHF	15mm	24.7	0.35
			28.5	GPRS 4TX Back	9mm	24.7	<b>1.04</b>
				GPRS 4TX Top Edge	9mm	24.7	0.28
				GPRS 4TX Bottom Edge	9mm	24.7	0.06
				GPRS 4TX LHS Edge	9mm	24.7	0.42
				GPRS 4TX RHS Edge	9mm	24.7	0.46
				GPRS 4TX Front	9mm	24.7	0.46
		GSM 1900	#20737	512	30.5	Speech	15mm
Speech PHF	15mm				23.8	0.48	
23.7	GPRS 4TX Back				9mm	23.8	0.74
661	30.3			Speech	15mm	23.8	0.54
	23.7			GPRS 4TX Back	9mm	23.8	0.88
810	30.4			Speech	15mm	23.8	0.50
				GPRS 4TX Back	9mm	23.8	<b>0.89</b>
	23.7			GPRS 4TX Top Edge	9mm	23.8	0.62
				GPRS 4TX LHS Edge	9mm	23.8	0.28
				GPRS 4TX RHS Edge	9mm	23.8	0.07
				GPRS 4TX Front	9mm	23.8	0.19
WLAN 802.11b 1 Mbps	#20739			1	17.7	Back	9mm
		Back	9mm		22.4	<b>0.41</b>	
		6	17.5	Front	9mm	22.4	0.14
				Bottom Edge	9mm	22.4	0.21
			LHS Edge	9mm	22.4	0.15	
			RHS Edge	9mm	22.4	0.03	
		11	17.4	Back	9mm	22.4	0.10

Table 2: SAR measurement result for Sony Ericsson PY7A3880133 telephone at highest possible output power. Measured towards the body.

<sup>2</sup> The measured output power values were provided by the customer.



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Prepared (also subject responsible if other)

BA/SEMC/ CVVBAU Robert Carr

Approved

BA/SEMC/ CVVBAU Jon Kenny

Checked

JK

No.

CVDVBA11:436.

Date

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## 8.2 Simultaneous Transmitters

The EUT supports simultaneous transmission using WLAN and an active cell band. According to the requirements of KDB 648474 the highest cell band must be combined with the corresponding WLAN value. If the resulting SAR value is greater than the limit of 1.6 w/kg the Peak Location Separation Ratio must be calculated. If the peak location separation ratio is <0.3 volume scans must be performed.

The combined simultaneous transmission values for FCC ID: PY7A3880133 (S51SE) can be found in Table 3.

Band	Highest Cell Band SAR (W/Kg)	Corresponding WLAN SAR (W/Kg)	Combined SAR (W/Kg)
GSM 850 Head	0.48	0.31	<b>0.79</b>
GSM1900 Head	0.76	0.24	<b>1.00</b>
GSM 850 Body	1.04	0.41	<b>1.45</b>
GSM 1900 Body	0.89	0.41	<b>1.30</b>

Table 3. Simultaneous transmission combined SAR results for Sony Ericsson PY7A188033 telephone.

The combined results for all bands are below the limit of 1.6 W/Kg. Therefore peak location separation ratio values and volume scan measurements are not required.



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Date

110907

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Reference

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## 9 References

- [ 1 ] R.Plicanic. "SAR Measurement Specification of Wireless Handsets". Sony Ericsson SAR Test Laboratory internal document GUG/N 03:141
- [ 2 ] FCC. "Evaluating Compliance with FCC Guidelines for Human Exposure to Radio Frequency Electromagnetic Fields: Additional Information for Evaluating Compliance of Mobile and Portable Devices with FCC Limits for Human Exposure to Radio Frequency Emissions." Supplement C (Edition 01-01) to OET Bulletin 65 (Edition 97- 01).
- [ 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.
- [ 4 ] IEC 62209-1. "Procedure to measure the Specific Absorption Rate (SAR) for hand-held mobile wireless devices in the frequency range of 300 MHz to 3 GHz". February 2005.
- [ 5 ] FCC KDB648474. "SAR Evaluation Consideration for HANDSETS with Multiple Transmitters and Antenna", April 2008.
- [ 6 ] FCC KDB248227. "SAR Measurement procedure for 802.11a/b/g Transmitters", May 2007.
- [ 7 ] FCC KDB941225. "SAR Evaluation Procedures for Portable Devices with Wireless Router Capabilities." April 2011.

**Company Internal  
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Prepared (also subject responsible if other)

**BA/SEMC/CVVBAU Robert Carr**

Approved

**BA/SEMC/CVVBAU Jon Kenny**

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**File***DUT position towards the body***9.3 Attachments**

- System validation
- Measurement plots for head and body position
- Probe calibration
- Dipole calibration

Date/Time: 8/8/2011 9:18:30 AM

Test Laboratory: Sony Ericsson Mobile Communications

**Validation 835 Body 08-08-2011****DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN:438**

Communication System: CW; Frequency: 835 MHz; Duty Cycle: 1:1

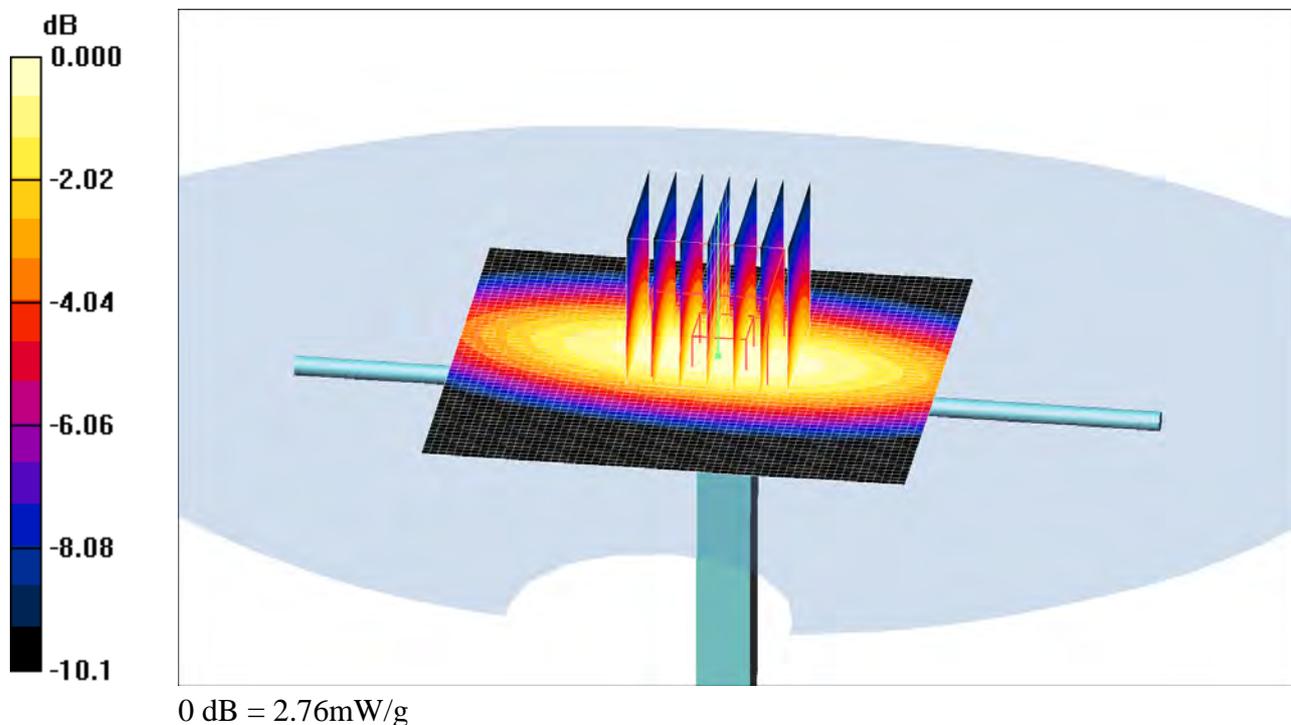
Medium parameters used:  $f = 835.257$  MHz;  $\sigma = 0.951$  mho/m;  $\epsilon_r = 52.6$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Measurement Standard: DASYS4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ET3DV6 - SN1539; ConvF(5.66, 5.66, 5.66); Calibrated: 11/16/2010
  - Sensor-Surface: 4mm (Mechanical Surface Detection)
  - Electronics: DAE3 Sn415; Calibrated: 11/16/2010
  - Phantom: SAM with CRP (Low Band Body); Type: SAM; Serial: TP: 1031
  - Measurement SW: DASYS4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 172
- Unnamed procedure/Area Scan (61x61x1):** Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (interpolated) = 2.73 mW/g
- Unnamed procedure/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm  
Reference Value = 56.4 V/m; Power Drift = -0.039 dB  
Peak SAR (extrapolated) = 3.62 W/kg  
**SAR(1 g) = 2.53 mW/g; SAR(10 g) = 1.67 mW/g**  
Maximum value of SAR (measured) = 2.76 mW/g



Date/Time: 8/10/2011 8:44:22 AM

Test Laboratory: Sony Ericsson Mobile Communications International AB

**Validation-D850-10-08-11****DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN:438**

Communication System: CW; Frequency: 835 MHz; Duty Cycle: 1:1

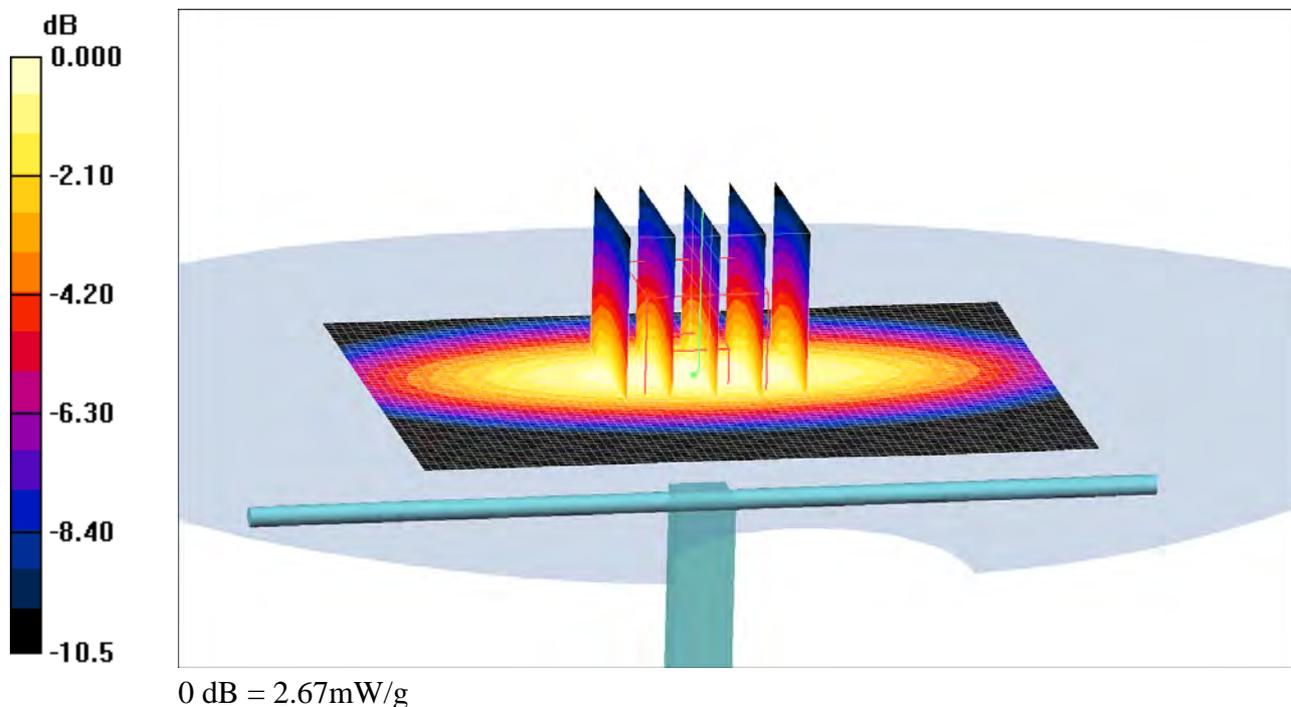
Medium parameters used:  $f = 835.133$  MHz;  $\sigma = 0.888$  mho/m;  $\epsilon_r = 42.1$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Measurement Standard: DAS4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ET3DV6 - SN1610; ConvF(6.32, 6.32, 6.32); Calibrated: 11/16/2010
  - Sensor-Surface: 4mm (Mechanical Surface Detection)
  - Electronics: DAE3 Sn448; Calibrated: 11/17/2010
  - Phantom: SAM-2; Type: SAM; Serial: 1025
  - Measurement SW: DAS4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 172
- d=15mm, Pin=250mW/Area Scan (61x81x1):** Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (interpolated) = 2.62 mW/g
- d=15mm, Pin=250mW/Zoom Scan (7x7x7) (5x5x7)/Cube 0:** Measurement grid:  
dx=8mm, dy=8mm, dz=5mm  
Reference Value = 56.0 V/m; Power Drift = 0.062 dB  
Peak SAR (extrapolated) = 3.56 W/kg  
**SAR(1 g) = 2.46 mW/g; SAR(10 g) = 1.62 mW/g**  
Maximum value of SAR (measured) = 2.67 mW/g



Date/Time: 8/9/2011 8:25:18 AM

Test Laboratory: Sony Ericsson Mobile Communications

**Validation-D1900-09-08-11****DUT: Dipole 1900 MHz; Type: D1900V2; Serial: D1900V2 - SN:539**

Communication System: CW; Frequency: 1900 MHz; Duty Cycle: 1:1

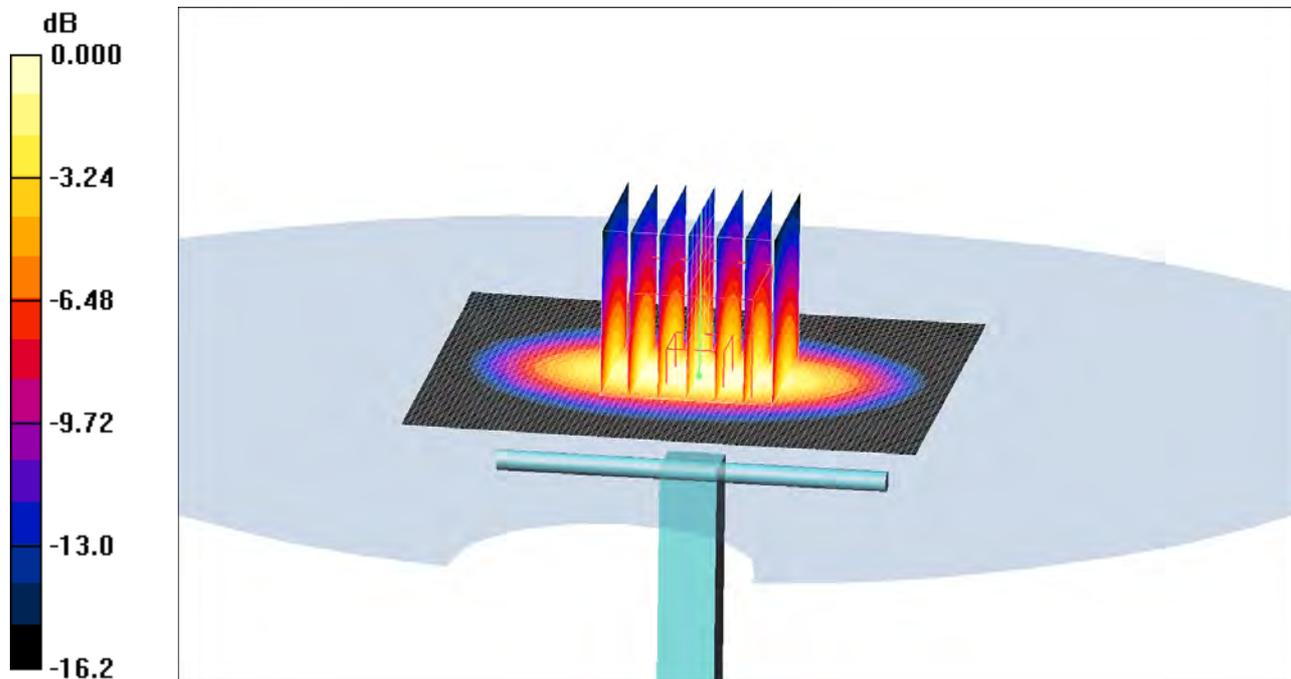
Medium parameters used (interpolated):  $f = 1900$  MHz;  $\sigma = 1.53$  mho/m;  $\epsilon_r = 50.9$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Measurement Standard: DASYS4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ET3DV6 - SN1539; ConvF(4.23, 4.23, 4.23); Calibrated: 11/16/2010
  - Sensor-Surface: 4mm (Mechanical Surface Detection)
  - Electronics: DAE3 Sn415; Calibrated: 11/16/2010
  - Phantom: SAM with CRP (High Band Body); Type: SAM; Serial: TP: 1020
  - Measurement SW: DASYS4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 172
- d=10mm, Pin=250mW/Area Scan (81x91x1):** Measurement grid: dx=10mm, dy=10mm  
Maximum value of SAR (interpolated) = 10.4 mW/g
- d=10mm, Pin=250mW/Zoom Scan (7x7x7) (7x7x7)/Cube 0:** Measurement grid:  
dx=5mm, dy=5mm, dz=5mm  
Reference Value = 90.5 V/m; Power Drift = 0.011 dB  
Peak SAR (extrapolated) = 14.1 W/kg  
**SAR(1 g) = 9.08 mW/g; SAR(10 g) = 4.92 mW/g**  
Maximum value of SAR (measured) = 10.4 mW/g



0 dB = 10.4mW/g

Date/Time: 8/16/2011 8:19:18 AM

Test Laboratory: The name of your organization

**Validation\_1900\_16-08-11****DUT: Dipole 1900 MHz; Type: D1900V2; Serial: D1900V2 - SN:539**

Communication System: CW; Frequency: 1900 MHz; Duty Cycle: 1:1

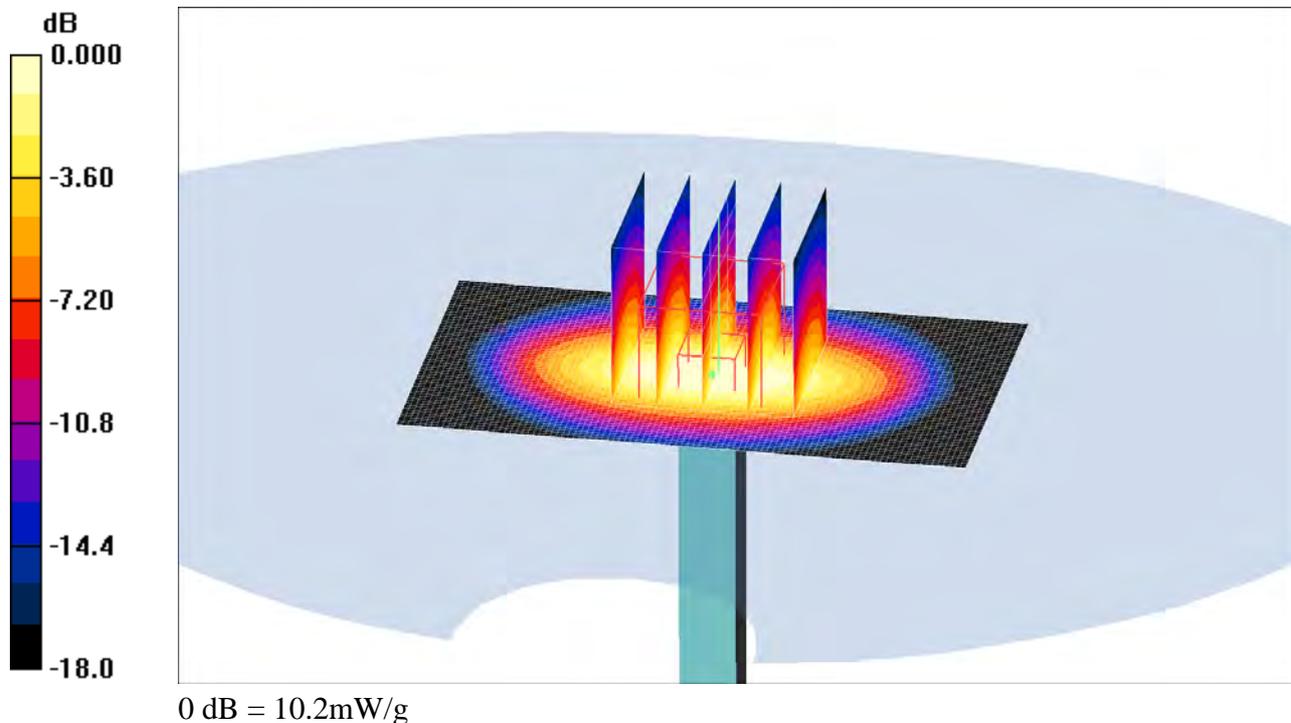
Medium parameters used (interpolated):  $f = 1900$  MHz;  $\sigma = 1.42$  mho/m;  $\epsilon_r = 38.1$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Measurement Standard: DASYS4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ET3DV6 - SN1584; ConvF(5.21, 5.21, 5.21); Calibrated: 11/16/2010
  - Sensor-Surface: 4mm (Mechanical Surface Detection)
  - Electronics: DAE3 Sn417; Calibrated: 11/16/2010
  - Phantom: SAM with CRP (High Band Head); Type: SAM; Serial: TP: 1054
  - Measurement SW: DASYS4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 172
- Unnamed procedure/Area Scan (61x101x1):** Measurement grid: dx=10mm, dy=10mm  
Maximum value of SAR (interpolated) = 10.3 mW/g
- Unnamed procedure/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
Reference Value = 90.4 V/m; Power Drift = 0.032 dB  
Peak SAR (extrapolated) = 15.4 W/kg  
**SAR(1 g) = 9.1 mW/g; SAR(10 g) = 4.82 mW/g**  
Maximum value of SAR (measured) = 10.2 mW/g



Date/Time: 8/23/2011 3:33:38 PM

Test Laboratory: Sony Ericsson Mobile Communications

**Validation-D2450-23-08-11****DUT: Dipole 2450 MHz; Type: D2450V2; Serial: D2450V2 - SN:721**

Communication System: CW; Frequency: 2450 MHz; Duty Cycle: 1:1

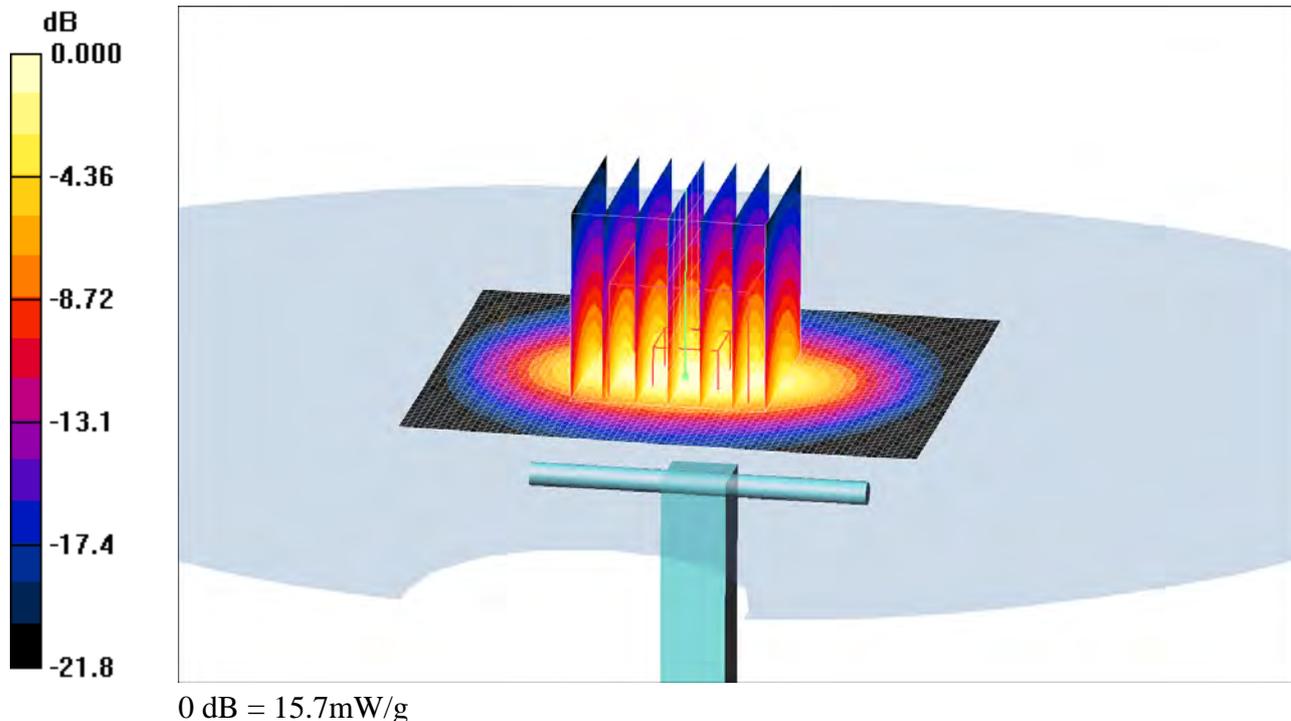
Medium parameters used:  $f = 2450.82$  MHz;  $\sigma = 1.95$  mho/m;  $\epsilon_r = 50.2$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ET3DV6 - SN1539; ConvF(3.87, 3.87, 3.87); Calibrated: 11/16/2010
  - Sensor-Surface: 4mm (Mechanical Surface Detection)
  - Electronics: DAE3 Sn415; Calibrated: 11/16/2010
  - Phantom: WLAN Body SAM; Type: SAM; Serial:
  - Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 172
- d=10mm, Pin=250mW 2/Area Scan (71x81x1):** Measurement grid: dx=10mm, dy=10mm  
Maximum value of SAR (interpolated) = 16.2 mW/g
- d=10mm, Pin=250mW 2/Zoom Scan (7x7x7) (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm  
Reference Value = 92.0 V/m; Power Drift = 0.057 dB  
Peak SAR (extrapolated) = 34.1 W/kg  
**SAR(1 g) = 14.1 mW/g; SAR(10 g) = 6.4 mW/g**  
Maximum value of SAR (measured) = 15.7 mW/g



Date/Time: 8/25/2011 9:53:23 AM

Test Laboratory: Sony Ericsson Mobile Communications

**Validation-D2450-25-08-11****DUT: Dipole 2450 MHz; Type: D2450V2; Serial: D2450V2 - SN:721**

Communication System: CW; Frequency: 2450 MHz; Duty Cycle: 1:1

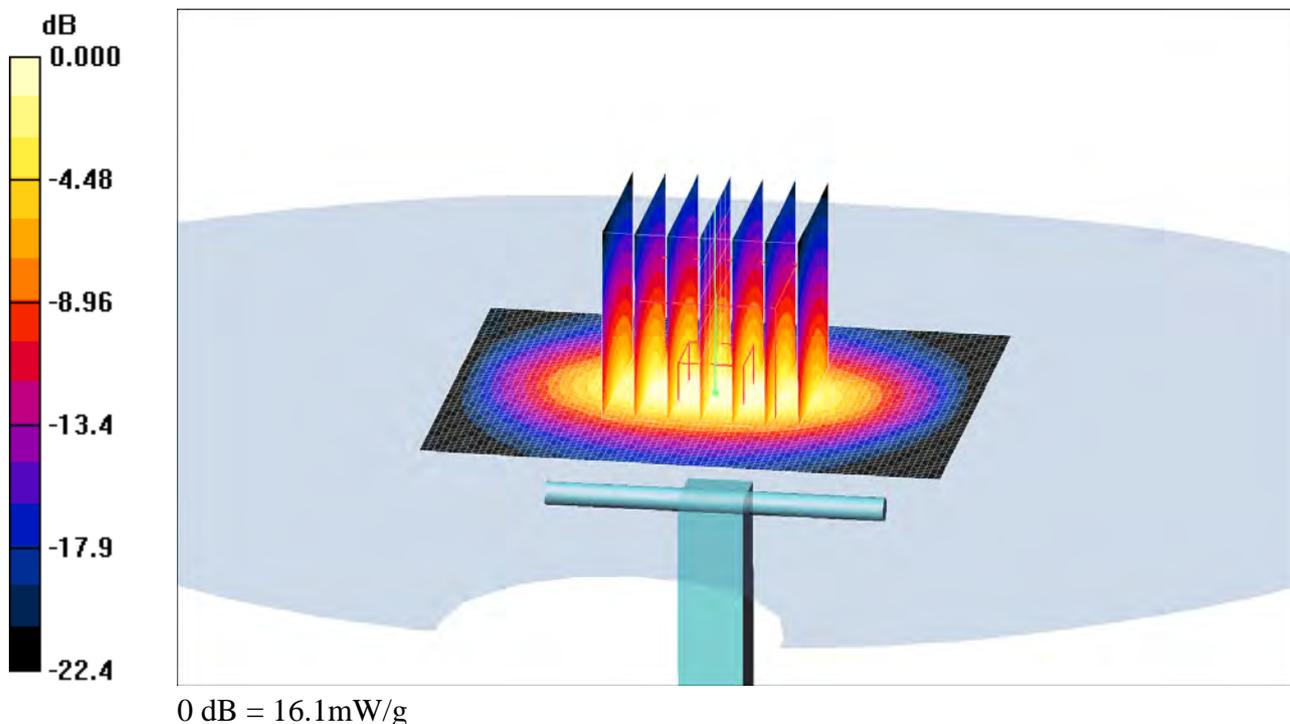
Medium parameters used:  $f = 2450.12$  MHz;  $\sigma = 1.85$  mho/m;  $\epsilon_r = 37.4$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Measurement Standard: DASYS4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ET3DV6 - SN1539; ConvF(4.22, 4.22, 4.22); Calibrated: 11/16/2010
  - Sensor-Surface: 4mm (Mechanical Surface Detection)
  - Electronics: DAE3 Sn415; Calibrated: 11/16/2010
  - Phantom: WLAN (Head) SAM with CRP; Type: SAM; Serial:
  - Measurement SW: DASYS4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 172
- d=10mm, Pin=250mW 2/Area Scan (71x81x1):** Measurement grid: dx=10mm, dy=10mm  
Maximum value of SAR (interpolated) = 15.9 mW/g
- d=10mm, Pin=250mW 2/Zoom Scan (7x7x7) (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm  
Reference Value = 96.3 V/m; Power Drift = 0.056 dB  
Peak SAR (extrapolated) = 31.9 W/kg  
**SAR(1 g) = 14.3 mW/g; SAR(10 g) = 6.57 mW/g**  
Maximum value of SAR (measured) = 16.1 mW/g



Date/Time: 8/10/2011 10:45:35 AM

Test Laboratory: Sony Ericsson Mobile Communications International AB

**Smultron19-LeftHandSide-GSM850-Touch-High****DUT: Smultron; Type: DUT; Serial: #20737**

Communication System: GSM 850; Frequency: 848.8 MHz; Duty Cycle: 1:8.3

Medium parameters used:  $f = 848.8$  MHz;  $\sigma = 0.899$  mho/m;  $\epsilon_r = 41.9$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Left Section

Measurement Standard: DAS4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ET3DV6 - SN1610; ConvF(6.32, 6.32, 6.32); Calibrated: 11/16/2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn448; Calibrated: 11/17/2010
- Phantom: SAM-2; Type: SAM; Serial: 1025
- Measurement SW: DAS4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 172

**Touch 3/Area Scan (81x131x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.512 mW/g

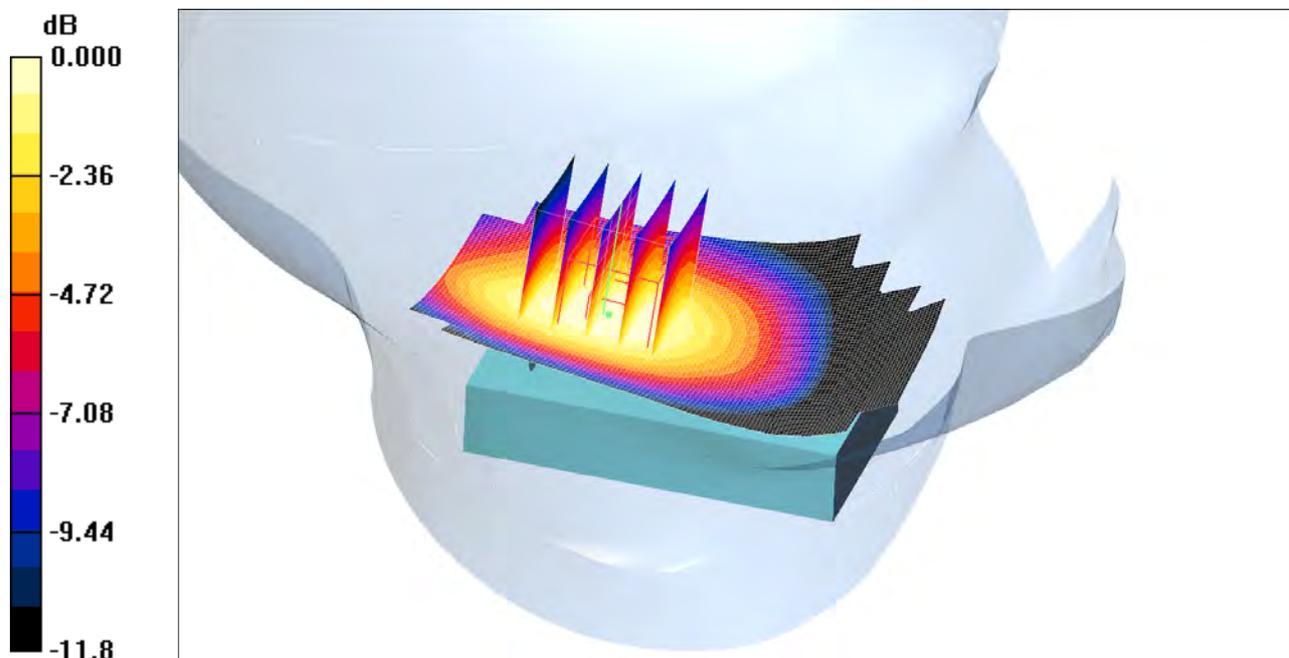
**Touch 3/Zoom Scan (5x5x7) (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 21.8 V/m; Power Drift = -0.060 dB

Peak SAR (extrapolated) = 0.644 W/kg

**SAR(1 g) = 0.482 mW/g; SAR(10 g) = 0.332 mW/g**

Maximum value of SAR (measured) = 0.513 mW/g



0 dB = 0.513mW/g

Date/Time: 8/10/2011 9:42:08 AM

Test Laboratory: Sony Ericsson Mobile Communications International AB

**Smultron19-LeftHandSide-GSM850-Tilt-Mid****DUT: Smultron; Type: DUT; Serial: #20737**

Communication System: GSM 850; Frequency: 836.6 MHz; Duty Cycle: 1:8.3

Medium parameters used (interpolated):  $f = 836.6$  MHz;  $\sigma = 0.888$  mho/m;  $\epsilon_r = 42$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Left Section

Measurement Standard: DAS4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ET3DV6 - SN1610; ConvF(6.32, 6.32, 6.32); Calibrated: 11/16/2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn448; Calibrated: 11/17/2010
- Phantom: SAM-2; Type: SAM; Serial: 1025
- Measurement SW: DAS4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 172

**Tilt/Area Scan (81x131x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.318 mW/g

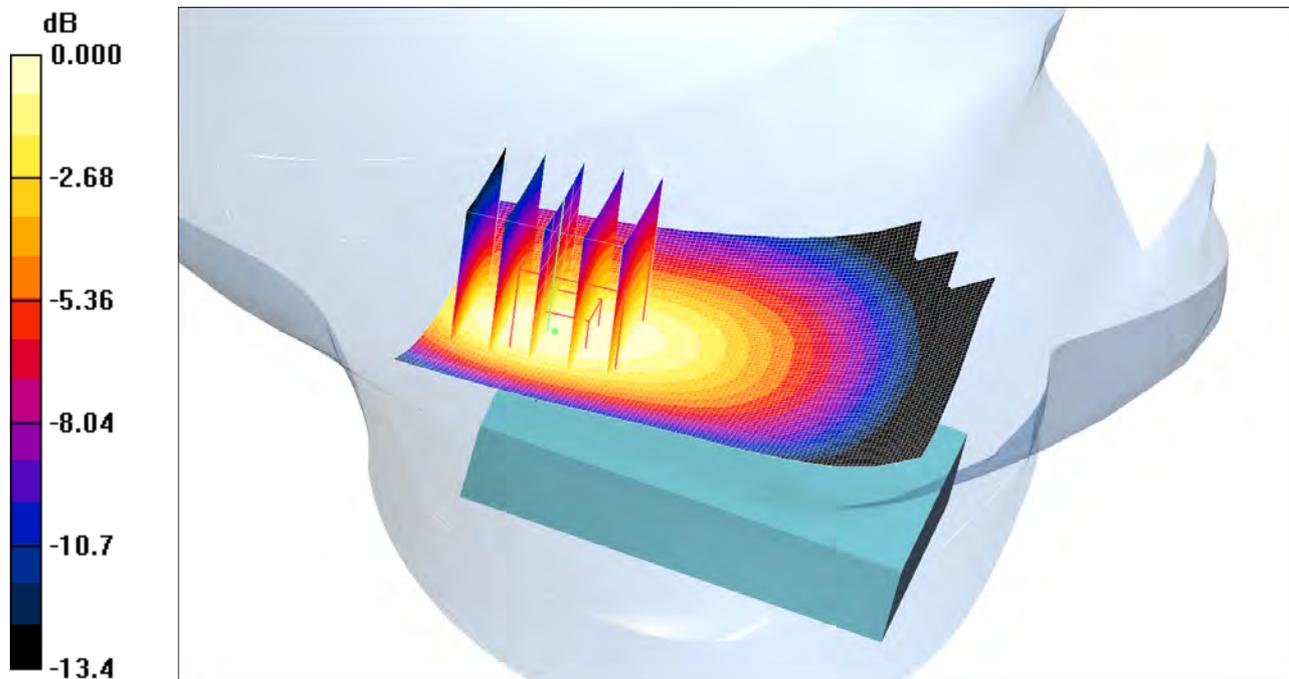
**Tilt/Zoom Scan (5x5x7) (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 19.4 V/m; Power Drift = -0.162 dB

Peak SAR (extrapolated) = 0.464 W/kg

**SAR(1 g) = 0.291 mW/g; SAR(10 g) = 0.192 mW/g**

Maximum value of SAR (measured) = 0.311 mW/g



0 dB = 0.311mW/g

Date/Time: 8/10/2011 12:50:06 PM

Test Laboratory: Sony Ericsson Mobile Communications International AB

**Smultron19-RightHandSide-GSM850-Touch-High****DUT: Smultron; Type: DUT; Serial: #20737**

Communication System: GSM 850; Frequency: 848.8 MHz; Duty Cycle: 1:8.3

Medium parameters used:  $f = 848.8$  MHz;  $\sigma = 0.899$  mho/m;  $\epsilon_r = 41.9$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Right Section

Measurement Standard: DAS4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ET3DV6 - SN1610; ConvF(6.32, 6.32, 6.32); Calibrated: 11/16/2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn448; Calibrated: 11/17/2010
- Phantom: SAM-2; Type: SAM; Serial: 1025
- Measurement SW: DAS4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 172

**Touch 3/Area Scan (81x131x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.496 mW/g

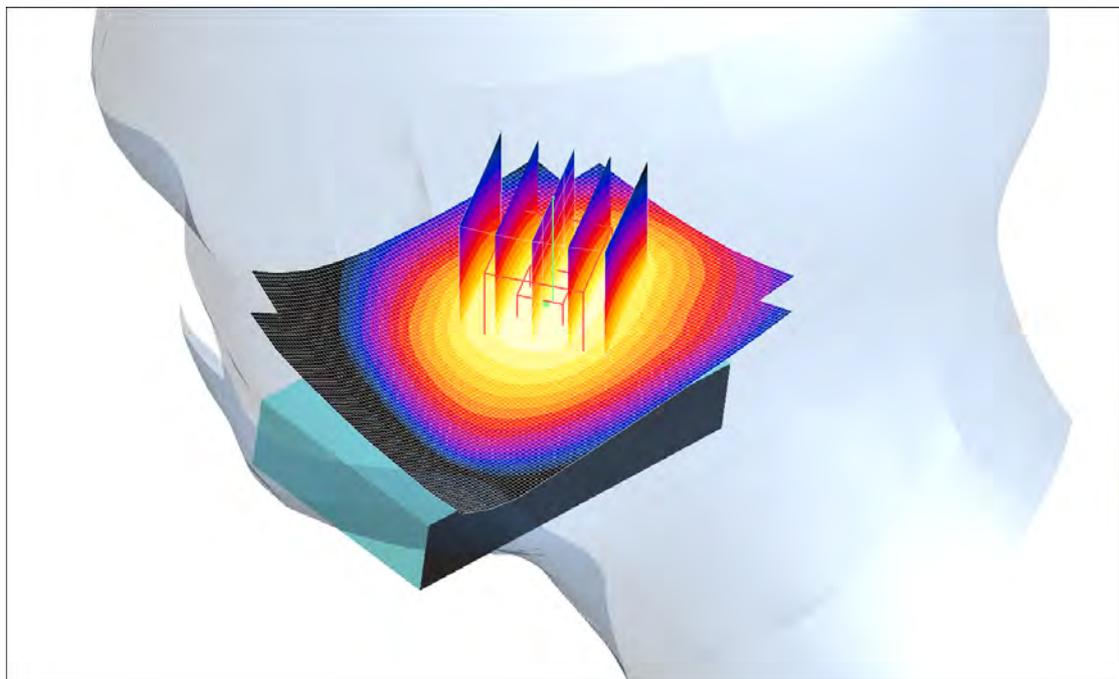
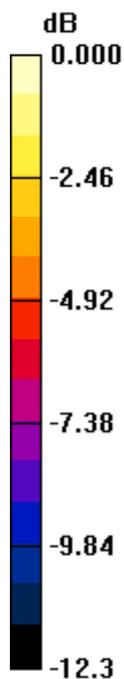
**Touch 3/Zoom Scan (5x5x7) (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 20.9 V/m; Power Drift = 0.023 dB

Peak SAR (extrapolated) = 0.628 W/kg

**SAR(1 g) = 0.464 mW/g; SAR(10 g) = 0.316 mW/g**

Maximum value of SAR (measured) = 0.497 mW/g



0 dB = 0.497mW/g

Date/Time: 8/10/2011 12:00:21 PM

Test Laboratory: Sony Ericsson Mobile Communications International AB

**Smultron19-RightHandSide-GSM850-Tilt-Mid****DUT: Smultron; Type: DUT; Serial: #20737**

Communication System: GSM 850; Frequency: 836.6 MHz; Duty Cycle: 1:8.3

Medium parameters used (interpolated):  $f = 836.6$  MHz;  $\sigma = 0.888$  mho/m;  $\epsilon_r = 42$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Right Section

Measurement Standard: DAS4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ET3DV6 - SN1610; ConvF(6.32, 6.32, 6.32); Calibrated: 11/16/2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn448; Calibrated: 11/17/2010
- Phantom: SAM-2; Type: SAM; Serial: 1025
- Measurement SW: DAS4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 172

**Tilt/Area Scan (81x131x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.310 mW/g

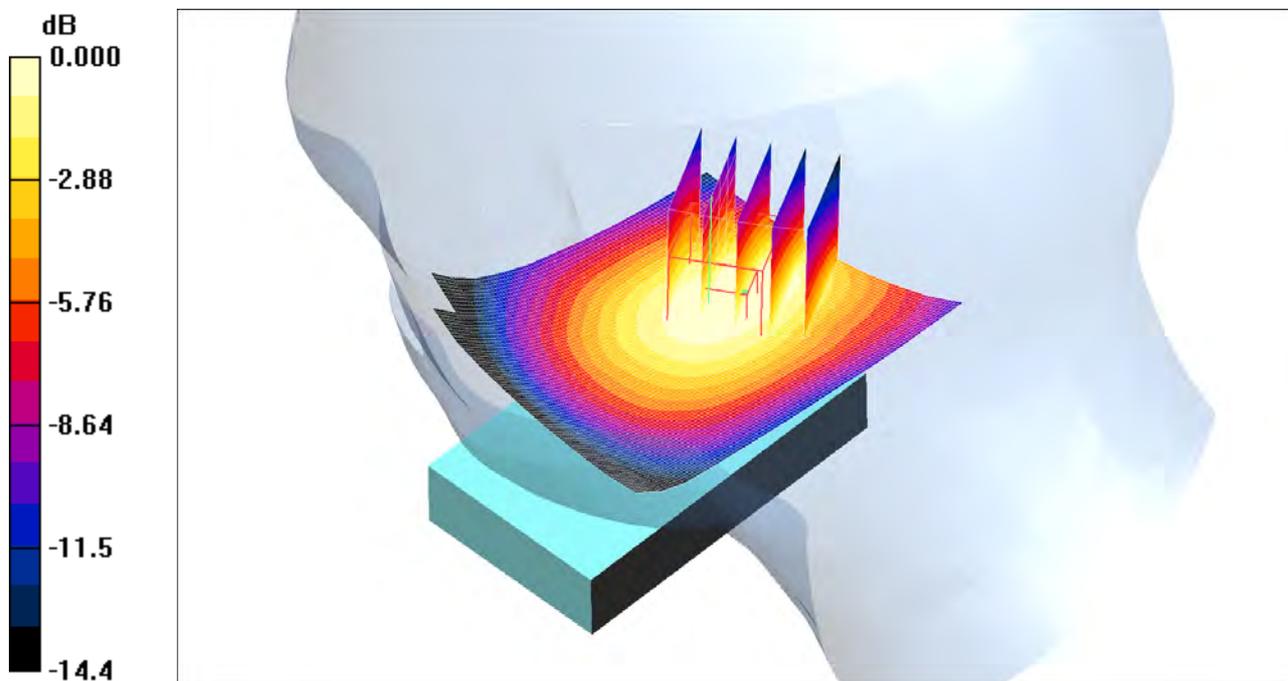
**Tilt/Zoom Scan (5x5x7) (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 18.6 V/m; Power Drift = -0.069 dB

Peak SAR (extrapolated) = 0.431 W/kg

**SAR(1 g) = 0.283 mW/g; SAR(10 g) = 0.187 mW/g**

Maximum value of SAR (measured) = 0.297 mW/g



0 dB = 0.297mW/g

Date/Time: 8/16/2011 10:37:56 AM

Test Laboratory: The name of your organization

**Smultron19-LeftHandSide-GSM1900-Touch-Low****DUT: Smultron; Type: DUT; Serial: #20737**

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

Medium parameters used:  $f = 1850.2$  MHz;  $\sigma = 1.37$  mho/m;  $\epsilon_r = 38.2$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Left Section

Measurement Standard: DAS4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ET3DV6 - SN1584; ConvF(5.21, 5.21, 5.21); Calibrated: 11/16/2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn417; Calibrated: 11/16/2010
- Phantom: SAM with CRP (High Band Head); Type: SAM; Serial: TP: 1054
- Measurement SW: DAS4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 172

**Touch position 2/Area Scan (81x131x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.596 mW/g

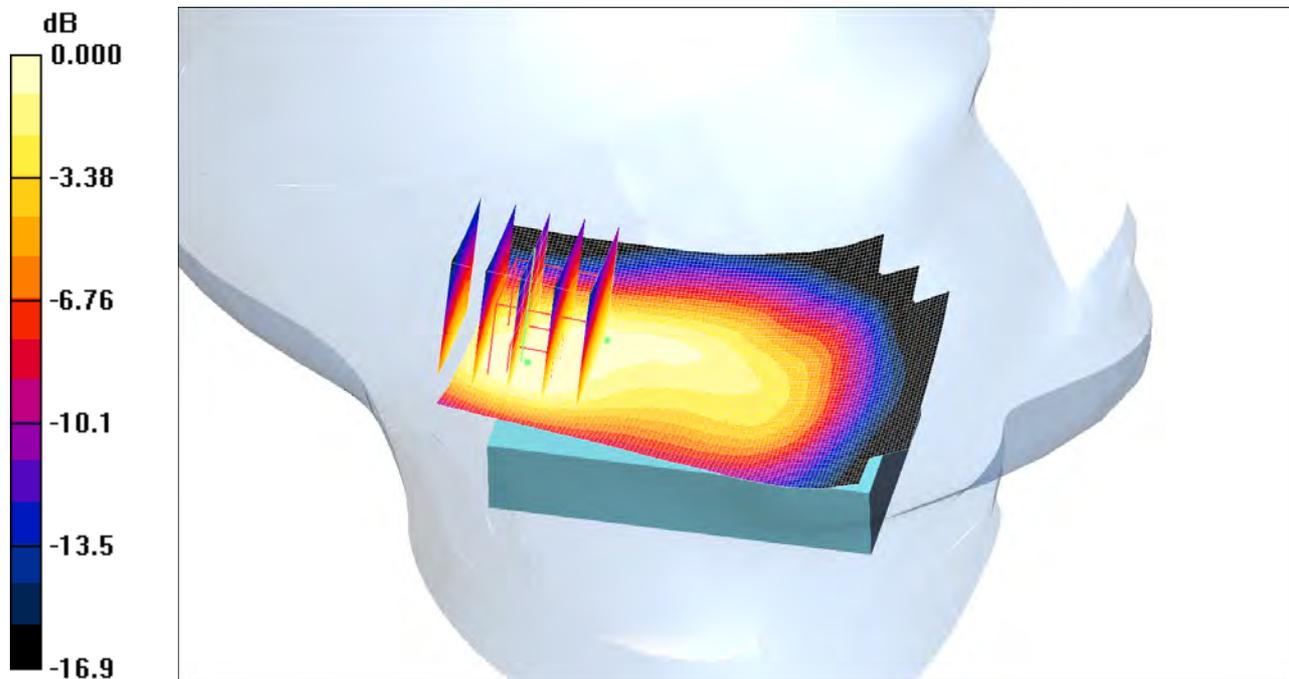
**Touch position 2/Zoom Scan (5x5x7) (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 21.1 V/m; Power Drift = -0.020 dB

Peak SAR (extrapolated) = 0.809 W/kg

**SAR(1 g) = 0.544 mW/g; SAR(10 g) = 0.345 mW/g**

Maximum value of SAR (measured) = 0.586 mW/g



0 dB = 0.586mW/g

Date/Time: 8/16/2011 9:42:02 AM

Test Laboratory: The name of your organization

**Smultron19-LeftHandSide-GSM1900-Tilt-Low****DUT: Smultron; Type: DUT; Serial: #20737**

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

Medium parameters used:  $f = 1850.2$  MHz;  $\sigma = 1.37$  mho/m;  $\epsilon_r = 38.2$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Left Section

Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ET3DV6 - SN1584; ConvF(5.21, 5.21, 5.21); Calibrated: 11/16/2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn417; Calibrated: 11/16/2010
- Phantom: SAM with CRP (High Band Head); Type: SAM; Serial: TP: 1054
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 172

**Tilt position 2/Area Scan (81x131x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.653 mW/g

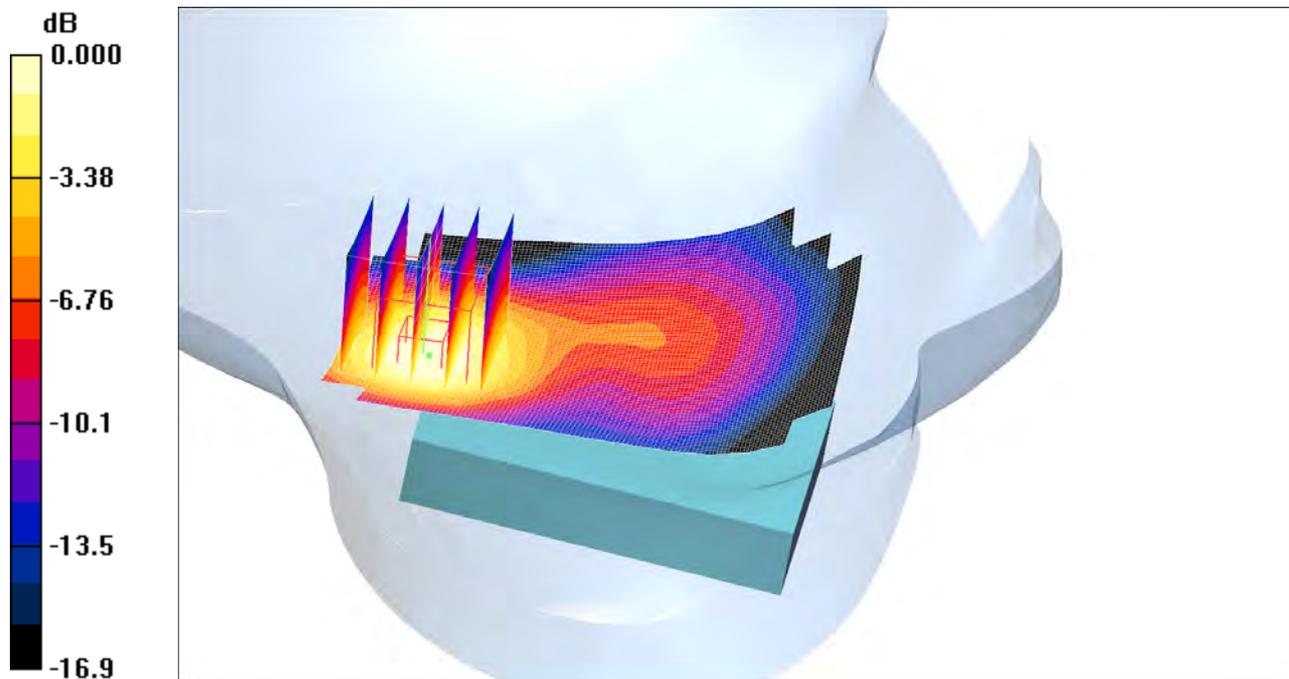
**Tilt position 2/Zoom Scan (5x5x7) (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 21.2 V/m; Power Drift = -0.098 dB

Peak SAR (extrapolated) = 0.903 W/kg

**SAR(1 g) = 0.594 mW/g; SAR(10 g) = 0.351 mW/g**

Maximum value of SAR (measured) = 0.659 mW/g



0 dB = 0.659mW/g

Date/Time: 8/16/2011 1:43:02 PM

Test Laboratory: The name of your organization

**Smultron19-RightHandSide-GSM1900-Touch-Low****DUT: Smultron; Type: DUT; Serial: #20737**

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

Medium parameters used:  $f = 1850.2$  MHz;  $\sigma = 1.37$  mho/m;  $\epsilon_r = 38.2$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Right Section

Measurement Standard: DAS4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ET3DV6 - SN1584; ConvF(5.21, 5.21, 5.21); Calibrated: 11/16/2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn417; Calibrated: 11/16/2010
- Phantom: SAM with CRP (High Band Head); Type: SAM; Serial: TP: 1054
- Measurement SW: DAS4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 172

**Touch position 2/Area Scan (81x131x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.849 mW/g

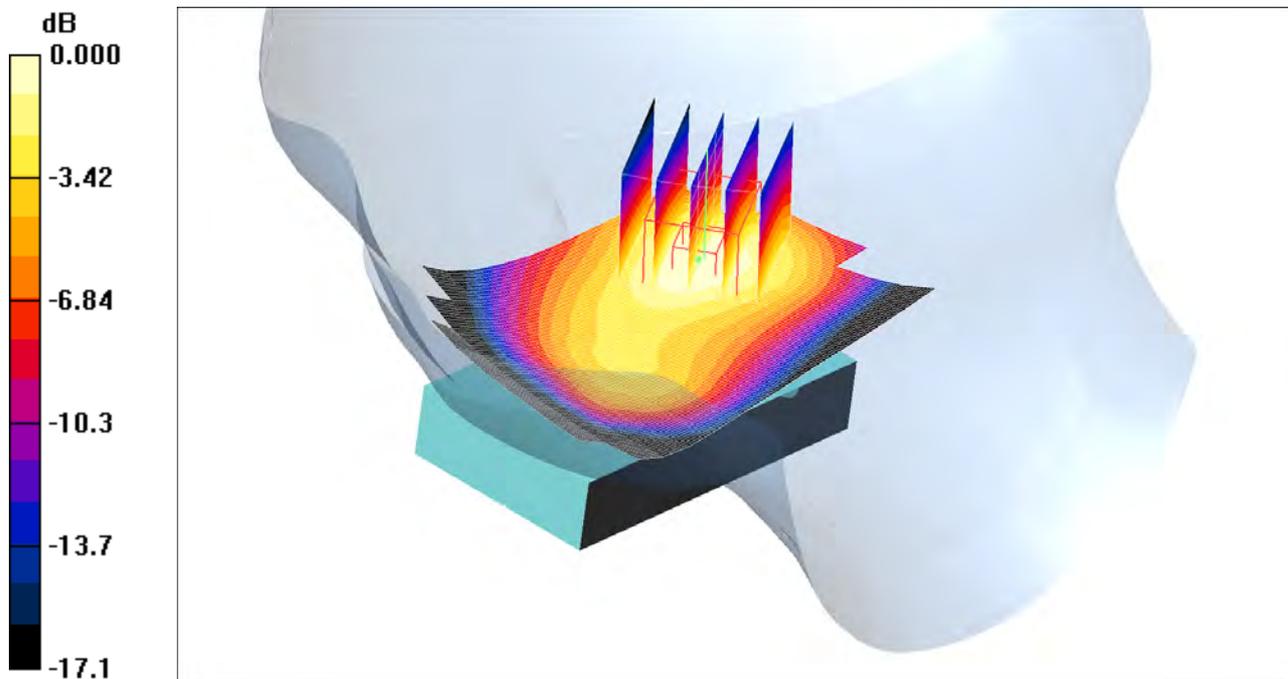
**Touch position 2/Zoom Scan (5x5x7) (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 20.9 V/m; Power Drift = -0.027 dB

Peak SAR (extrapolated) = 1.22 W/kg

**SAR(1 g) = 0.764 mW/g; SAR(10 g) = 0.445 mW/g**

Maximum value of SAR (measured) = 0.837 mW/g



0 dB = 0.837mW/g

Date/Time: 8/16/2011 1:19:34 PM

Test Laboratory: The name of your organization

**Smultron19-RightHandSide-GSM1900-Tilt-Mid****DUT: Smultron; Type: DUT; Serial: #20737**

Communication System: DCS 1900; Frequency: 1880 MHz; Duty Cycle: 1:8.3

Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.4$  mho/m;  $\epsilon_r = 38.1$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Right Section

Measurement Standard: DASYS4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ET3DV6 - SN1584; ConvF(5.21, 5.21, 5.21); Calibrated: 11/16/2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn417; Calibrated: 11/16/2010
- Phantom: SAM with CRP (High Band Head); Type: SAM; Serial: TP: 1054
- Measurement SW: DASYS4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 172

**Tilt position/Area Scan (81x131x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.714 mW/g

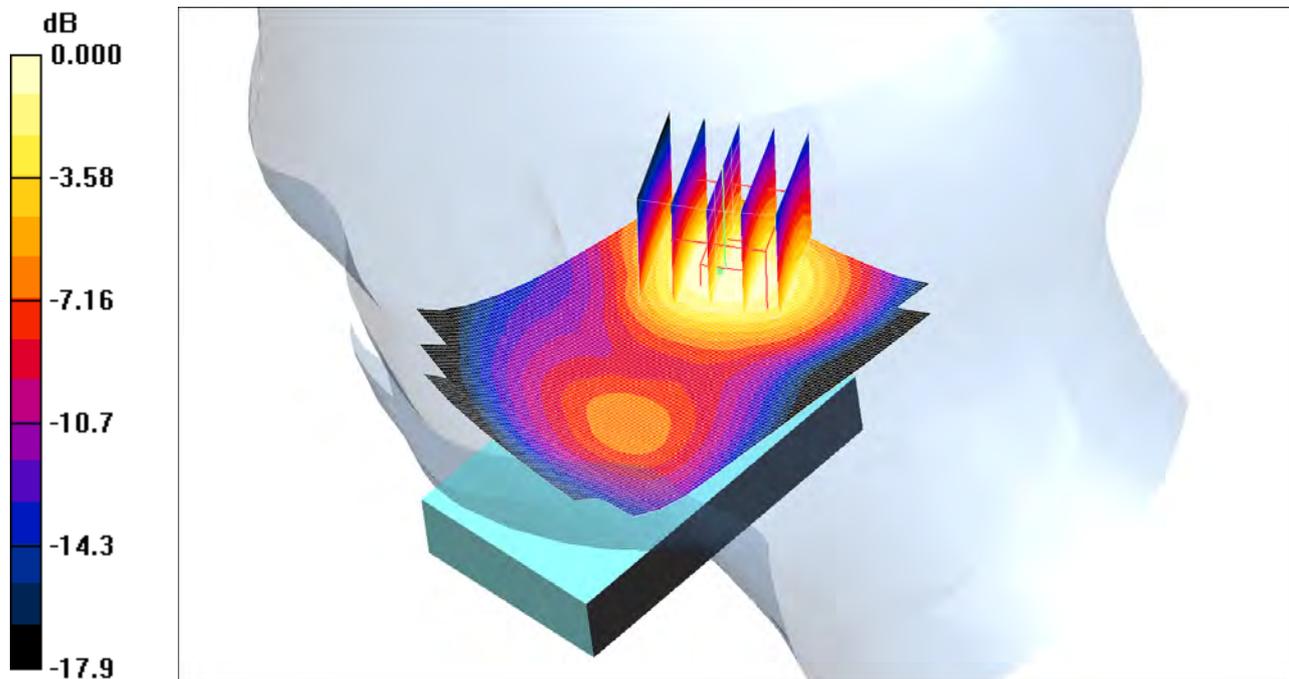
**Tilt position/Zoom Scan (5x5x7) (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 20.7 V/m; Power Drift = 0.234 dB

Peak SAR (extrapolated) = 1.03 W/kg

**SAR(1 g) = 0.643 mW/g; SAR(10 g) = 0.367 mW/g**

Maximum value of SAR (measured) = 0.705 mW/g



0 dB = 0.705mW/g

Date/Time: 8/25/2011 10:52:38 AM

Test Laboratory: Sony Ericsson Mobile Communications

**Smultron19-LeftHandSide-WLAN-Touch -Ch6****DUT: Smultron; Type: DUT; Serial: #20739**

Communication System: WLAN; Frequency: 2437 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 2437.41$  MHz;  $\sigma = 1.84$  mho/m;  $\epsilon_r = 37.4$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Left Section

Measurement Standard: DASYS4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ET3DV6 - SN1539; ConvF(4.22, 4.22, 4.22); Calibrated: 11/16/2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn415; Calibrated: 11/16/2010
- Phantom: WLAN (Head) SAM with CRP; Type: SAM;
- Measurement SW: DASYS4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 172

**Touch position/Area Scan (81x111x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.336 mW/g

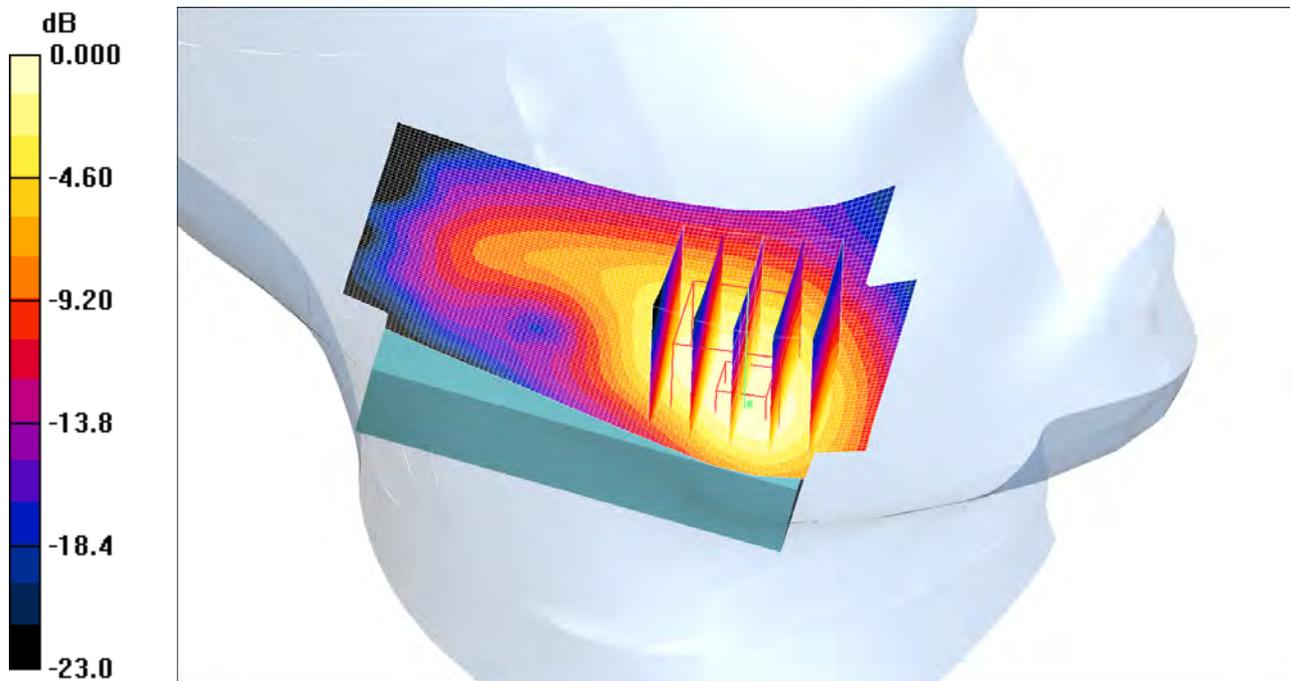
**Touch position/Zoom Scan (5x5x7) (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 3.30 V/m; Power Drift = 0.106 dB

Peak SAR (extrapolated) = 0.664 W/kg

**SAR(1 g) = 0.307 mW/g; SAR(10 g) = 0.166 mW/g**

Maximum value of SAR (measured) = 0.332 mW/g



0 dB = 0.332mW/g

Date/Time: 8/25/2011 11:15:13 AM

Test Laboratory: Sony Ericsson Mobile Communications

**Smultron19-LeftHandSide-WLAN-Tilt-Ch6****DUT: Smultron; Type: DUT; Serial: #20739**

Communication System: WLAN; Frequency: 2437 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 2437.41$  MHz;  $\sigma = 1.84$  mho/m;  $\epsilon_r = 37.4$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Left Section

Measurement Standard: DASYS4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ET3DV6 - SN1539; ConvF(4.22, 4.22, 4.22); Calibrated: 11/16/2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn415; Calibrated: 11/16/2010
- Phantom: WLAN (Head) SAM with CRP; Type: SAM;
- Measurement SW: DASYS4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 172

**Tilt position/Area Scan (81x111x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.075 mW/g

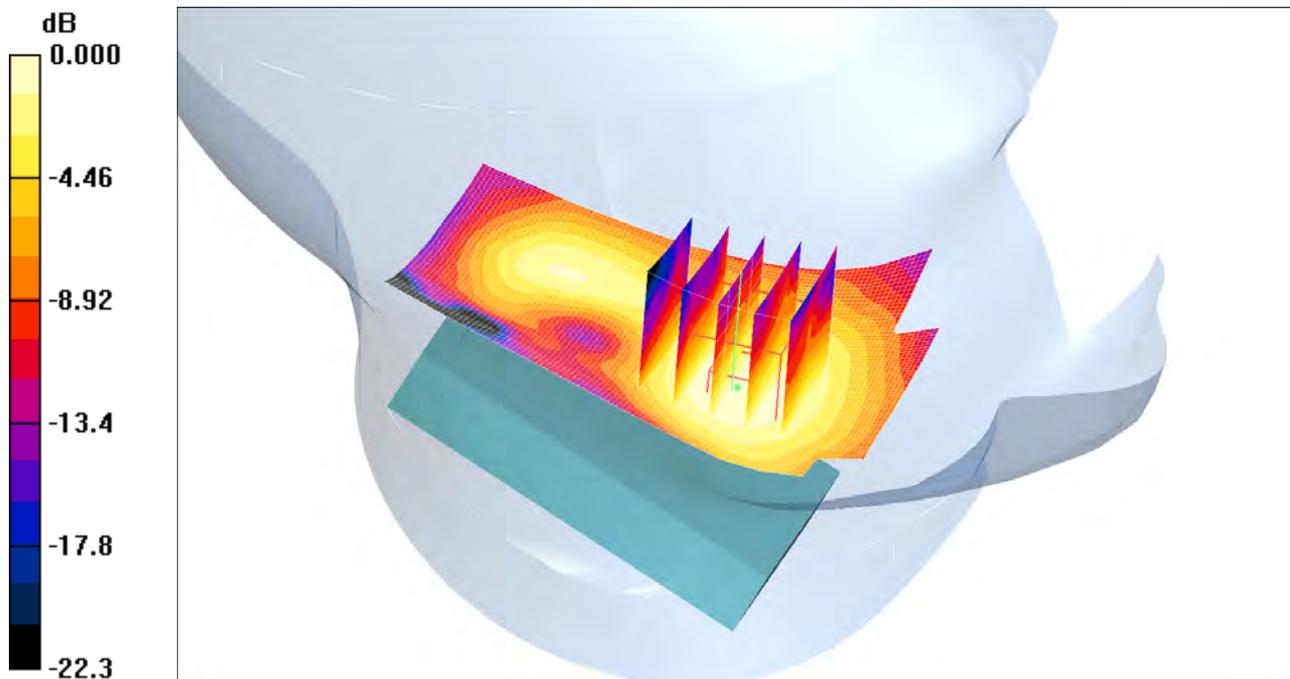
**Tilt position/Zoom Scan (5x5x7) (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 3.95 V/m; Power Drift = 0.010 dB

Peak SAR (extrapolated) = 0.128 W/kg

**SAR(1 g) = 0.068 mW/g; SAR(10 g) = 0.038 mW/g**

Maximum value of SAR (measured) = 0.073 mW/g



0 dB = 0.073mW/g

Date/Time: 8/25/2011 2:27:39 PM

Test Laboratory: Sony Ericsson Mobile Communications

**Smultron19-RightHandSide-WLAN-Touch-Ch6****DUT: Smultron; Type: DUT; Serial: #20739**

Communication System: WLAN; Frequency: 2437 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 2437.41$  MHz;  $\sigma = 1.84$  mho/m;  $\epsilon_r = 37.4$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Right Section

Measurement Standard: DAS4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ET3DV6 - SN1539; ConvF(4.22, 4.22, 4.22); Calibrated: 11/16/2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn415; Calibrated: 11/16/2010
- Phantom: WLAN (Head) SAM with CRP; Type: SAM;
- Measurement SW: DAS4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 172

**Touch position/Area Scan (81x111x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.264 mW/g

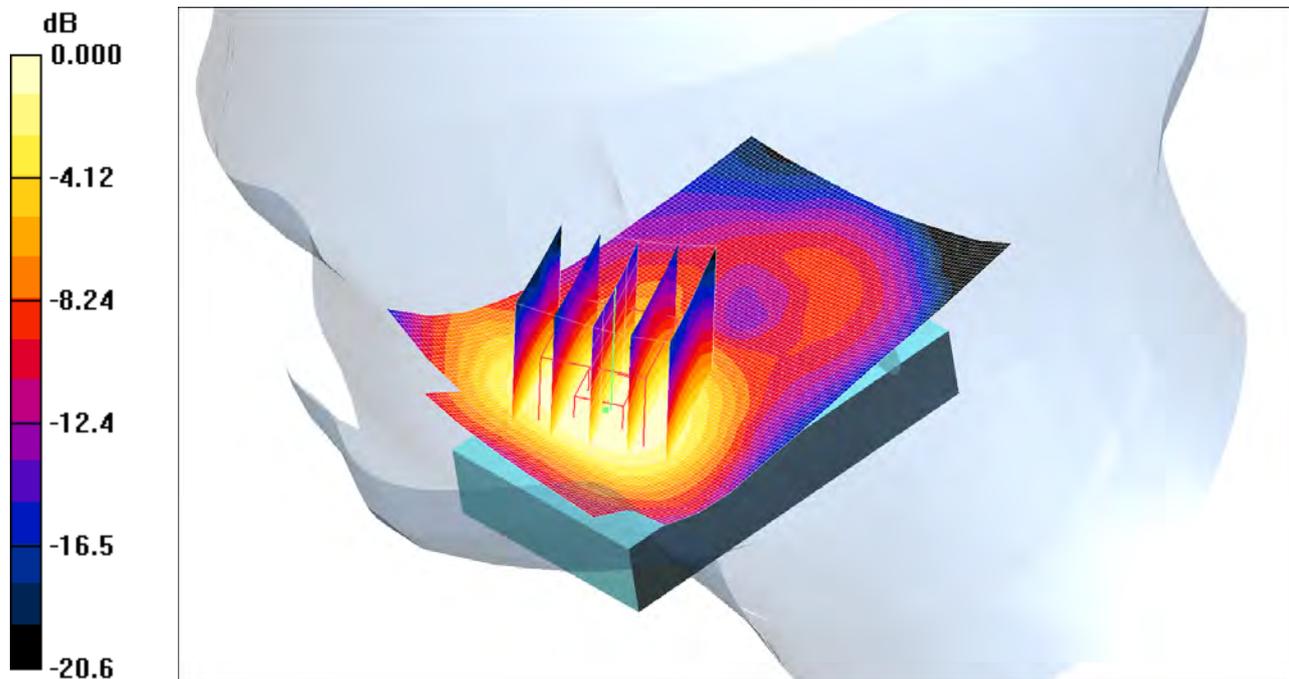
**Touch position/Zoom Scan (5x5x7) (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 4.35 V/m; Power Drift = -0.096 dB

Peak SAR (extrapolated) = 0.416 W/kg

**SAR(1 g) = 0.239 mW/g; SAR(10 g) = 0.136 mW/g**

Maximum value of SAR (measured) = 0.262 mW/g



0 dB = 0.262mW/g

Date/Time: 8/25/2011 2:48:00 PM

Test Laboratory: Sony Ericsson Mobile Communications

**Smultron19-RightHandSide-WLAN-Tilt-Ch6****DUT: Smultron; Type: DUT; Serial: #20739**

Communication System: WLAN; Frequency: 2437 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 2437.41$  MHz;  $\sigma = 1.84$  mho/m;  $\epsilon_r = 37.4$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Right Section

Measurement Standard: DASYS4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ET3DV6 - SN1539; ConvF(4.22, 4.22, 4.22); Calibrated: 11/16/2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn415; Calibrated: 11/16/2010
- Phantom: WLAN (Head) SAM with CRP; Type: SAM;
- Measurement SW: DASYS4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 172

**Tilt position/Area Scan (81x111x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.050 mW/g

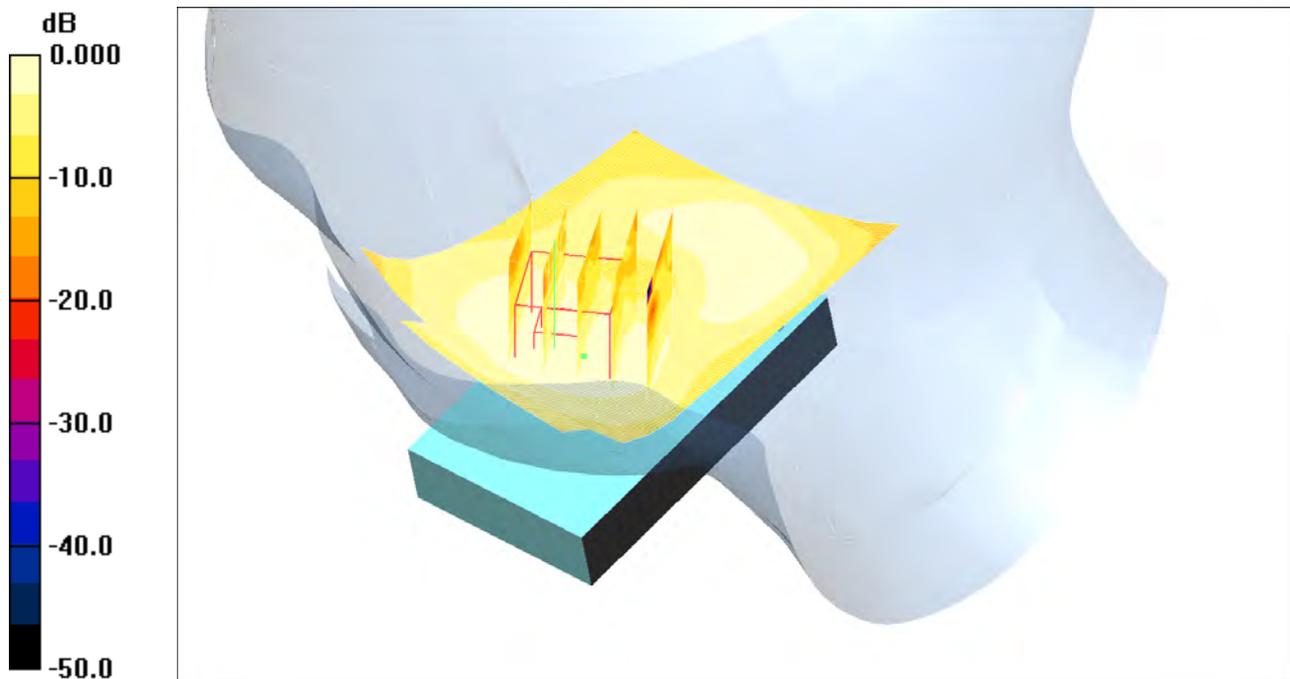
**Tilt position/Zoom Scan (5x5x7) (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 5.07 V/m; Power Drift = -0.228 dB

Peak SAR (extrapolated) = 0.081 W/kg

**SAR(1 g) = 0.045 mW/g; SAR(10 g) = 0.026 mW/g**

Maximum value of SAR (measured) = 0.049 mW/g



0 dB = 0.049mW/g

Date/Time: 8/8/2011 1:37:21 PM

Test Laboratory: Sony Ericsson Mobile Communications

**Smultron19-Body-Flat9mm-GSM850-Data-4Tx-Low****DUT: Smultron; Type: DUT; Serial: #20737**

Communication System: GSM 850; Frequency: 824.2 MHz; Duty Cycle: 1:2.075

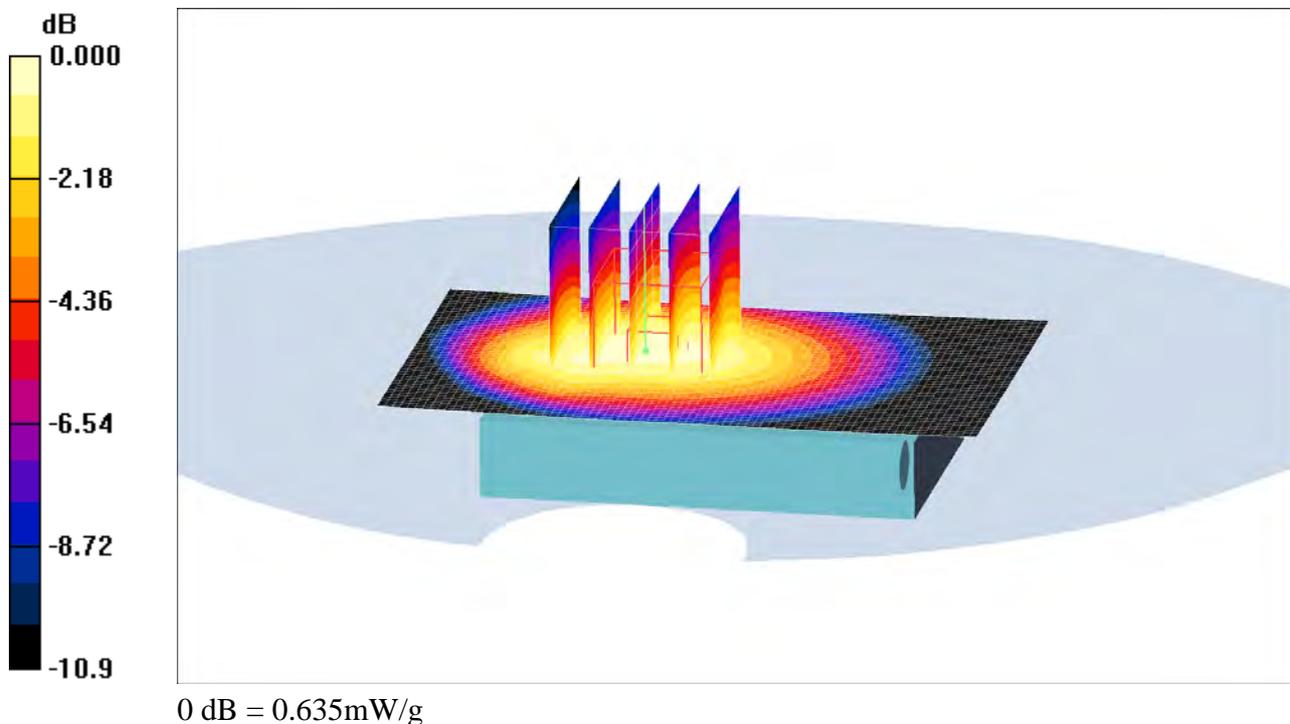
Medium parameters used:  $f = 824.2$  MHz;  $\sigma = 0.94$  mho/m;  $\epsilon_r = 52.8$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Measurement Standard: DAS4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ET3DV6 - SN1539; ConvF(5.66, 5.66, 5.66); Calibrated: 11/16/2010
  - Sensor-Surface: 4mm (Mechanical Surface Detection)
  - Electronics: DAE3 Sn415; Calibrated: 11/16/2010
  - Phantom: SAM with CRP (Low Band Body); Type: SAM; Serial: TP: 1031
  - Measurement SW: DAS4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 172
- Body 2/Area Scan (51x81x1):** Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (interpolated) = 0.582 mW/g
- Body 2/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
Reference Value = 24.8 V/m; Power Drift = 0.157 dB  
Peak SAR (extrapolated) = 0.796 W/kg  
**SAR(1 g) = 0.599 mW/g; SAR(10 g) = 0.423 mW/g**  
Maximum value of SAR (measured) = 0.635 mW/g



Date/Time: 8/8/2011 1:51:44 PM

Test Laboratory: Sony Ericsson Mobile Communications

**Smultron19-Body-Flat9mm-GSM850-Data-4Tx-Mid****DUT: Smultron; Type: DUT; Serial: #20737**

Communication System: GSM 850; Frequency: 836.6 MHz; Duty Cycle: 1:2.075

Medium parameters used:  $f = 836.731$  MHz;  $\sigma = 0.953$  mho/m;  $\epsilon_r = 52.6$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Measurement Standard: DAS4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ET3DV6 - SN1539; ConvF(5.66, 5.66, 5.66); Calibrated: 11/16/2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn415; Calibrated: 11/16/2010
- Phantom: SAM with CRP (Low Band Body); Type: SAM; Serial: TP: 1031
- Measurement SW: DAS4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 172

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

Maximum value of SAR (interpolated) = 0.974 mW/g

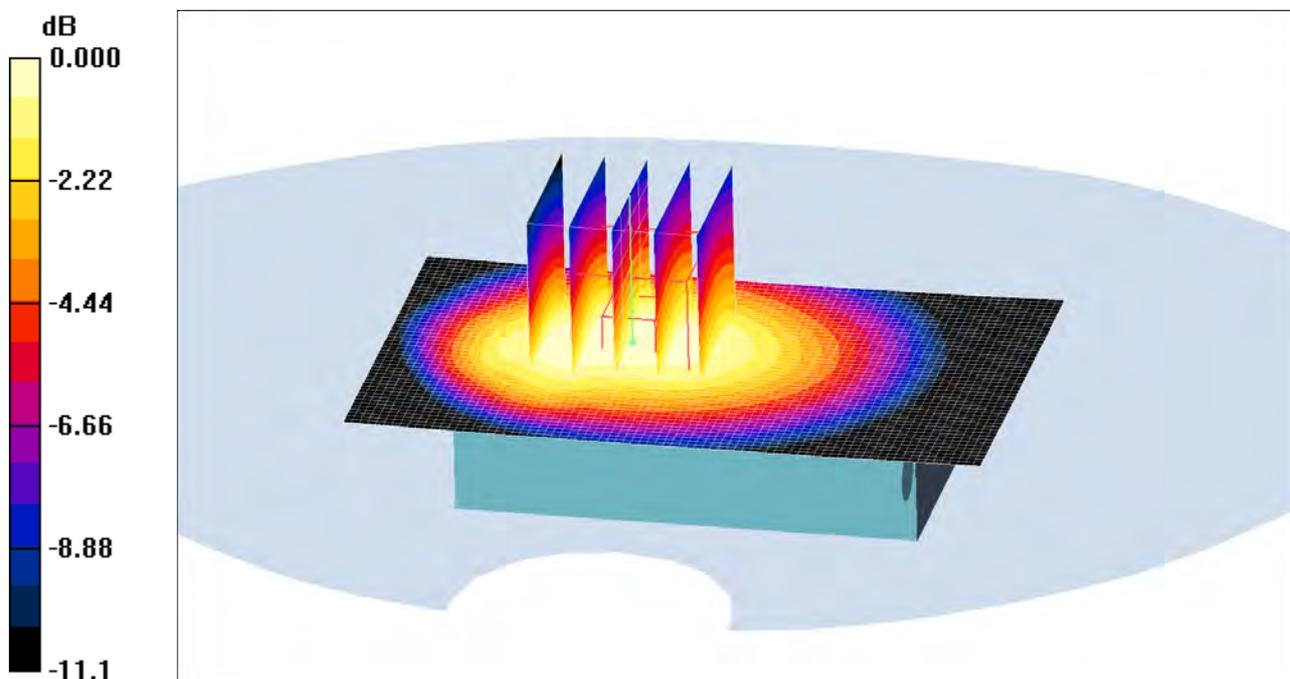
**Body/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 29.4 V/m; Power Drift = 0.194 dB

Peak SAR (extrapolated) = 1.21 W/kg

**SAR(1 g) = 0.898 mW/g; SAR(10 g) = 0.620 mW/g**

Maximum value of SAR (measured) = 0.965 mW/g



0 dB = 0.965mW/g

Date/Time: 8/8/2011 2:07:52 PM

Test Laboratory: Sony Ericsson Mobile Communications

**Smultron19-Body-Flat9mm-GSM850-Data-4Tx-High****DUT: Smultron; Type: DUT; Serial: #20737**

Communication System: GSM 850; Frequency: 848.8 MHz; Duty Cycle: 1:2.075

Medium parameters used (interpolated):  $f = 848.8$  MHz;  $\sigma = 0.964$  mho/m;  $\epsilon_r = 52.5$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Measurement Standard: DASYS4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ET3DV6 - SN1539; ConvF(5.66, 5.66, 5.66); Calibrated: 11/16/2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn415; Calibrated: 11/16/2010
- Phantom: SAM with CRP (Low Band Body); Type: SAM; Serial: TP: 1031
- Measurement SW: DASYS4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 172

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

Maximum value of SAR (interpolated) = 1.26 mW/g

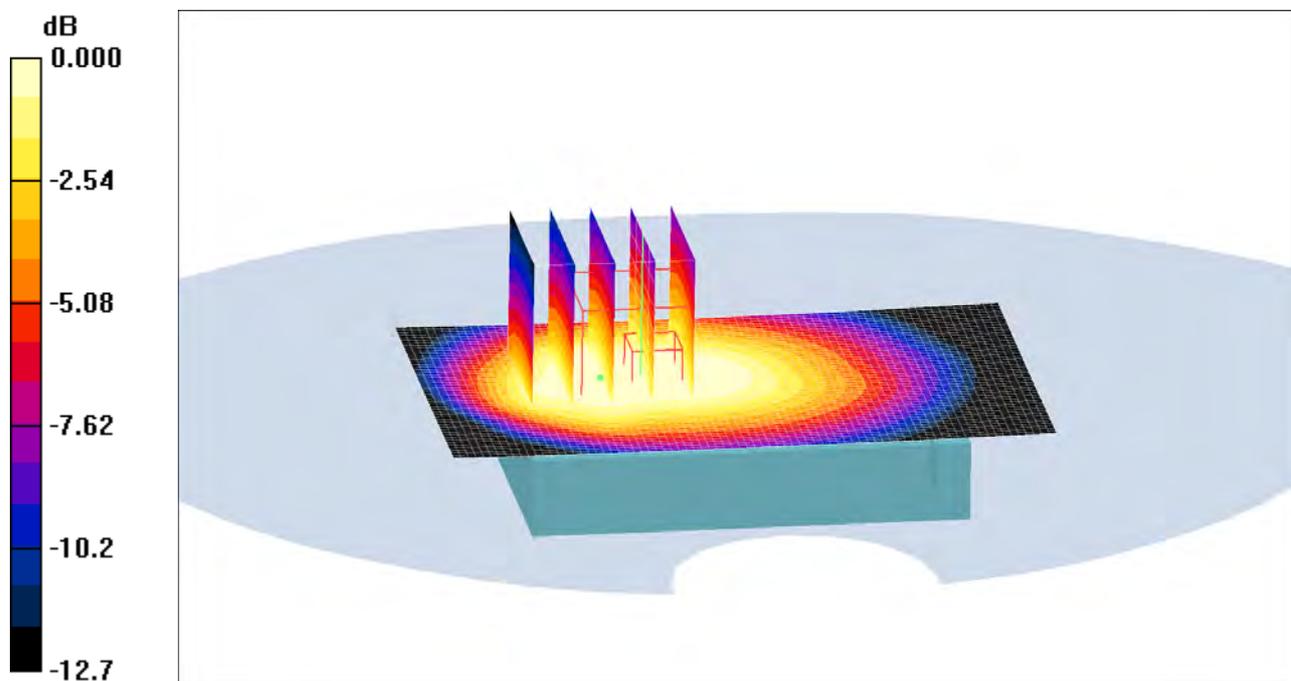
**Body 3/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 34.1 V/m; Power Drift = -0.458 dB

Peak SAR (extrapolated) = 1.40 W/kg

**SAR(1 g) = 1.04 mW/g; SAR(10 g) = 0.710 mW/g**

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



0 dB = 1.09mW/g

Date/Time: 8/9/2011 2:08:51 PM

Test Laboratory: Sony Ericsson Mobile Communications

**Smultron19-Body-Flat9mm-GSM1900-Data-4Tx-Low****DUT: Smultron; Type: DUT; Serial: #20737**

Communication System: GPRS 1900; Frequency: 1850.2 MHz; Duty Cycle: 1:2.075

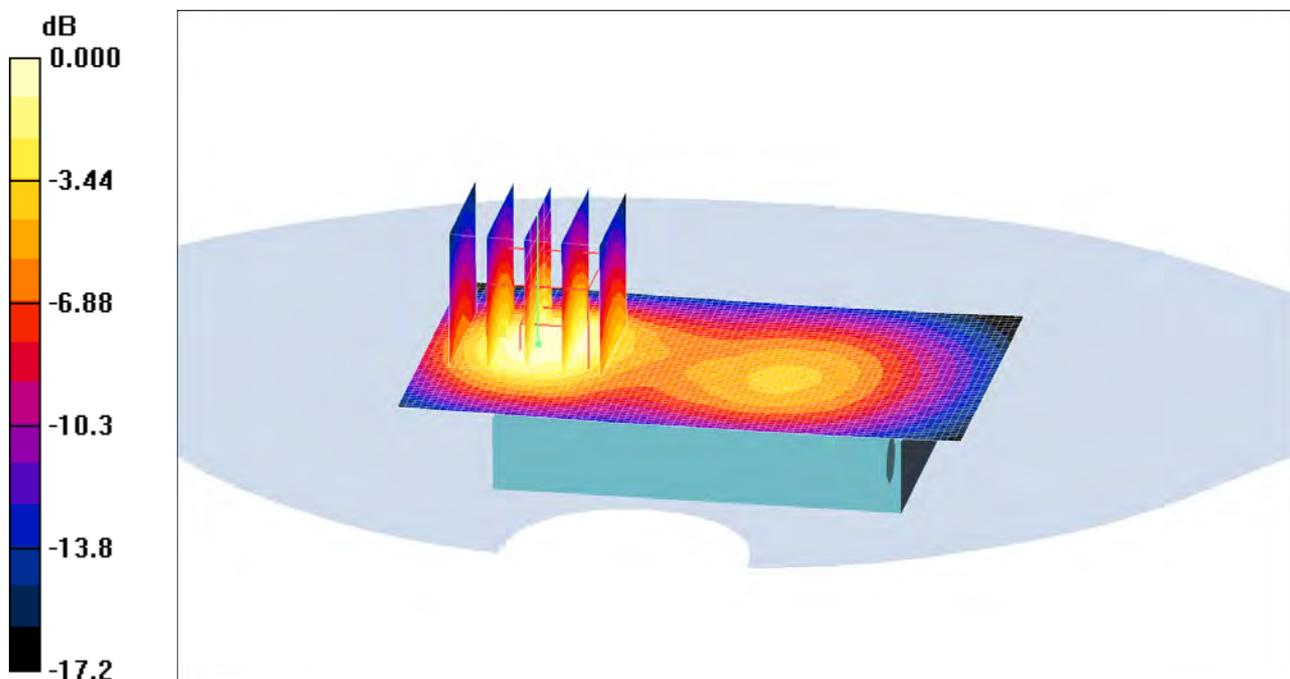
Medium parameters used:  $f = 1850.2$  MHz;  $\sigma = 1.48$  mho/m;  $\epsilon_r = 51.1$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Measurement Standard: DASYS4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ET3DV6 - SN1539; ConvF(4.23, 4.23, 4.23); Calibrated: 11/16/2010
  - Sensor-Surface: 4mm (Mechanical Surface Detection)
  - Electronics: DAE3 Sn415; Calibrated: 11/16/2010
  - Phantom: SAM with CRP (High Band Body); Type: SAM; Serial: TP: 1020
  - Measurement SW: DASYS4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 172
- Body 2/Area Scan (51x81x1):** Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (interpolated) = 0.859 mW/g
- Body 2/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
Reference Value = 13.4 V/m; Power Drift = -0.136 dB  
Peak SAR (extrapolated) = 1.10 W/kg  
**SAR(1 g) = 0.743 mW/g; SAR(10 g) = 0.422 mW/g**  
Maximum value of SAR (measured) = 0.827 mW/g



0 dB = 0.827mW/g

Date/Time: 8/9/2011 1:51:56 PM

Test Laboratory: Sony Ericsson Mobile Communications

**Smultron19-Body-Flat9mm-GSM1900-Data-4Tx-Mid****DUT: Smultron; Type: DUT; Serial: #20737**

Communication System: GPRS 1900; Frequency: 1880 MHz; Duty Cycle: 1:2.075

Medium parameters used (interpolated):  $f = 1880$  MHz;  $\sigma = 1.51$  mho/m;  $\epsilon_r = 51$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Measurement Standard: DAS4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ET3DV6 - SN1539; ConvF(4.23, 4.23, 4.23); Calibrated: 11/16/2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn415; Calibrated: 11/16/2010
- Phantom: SAM with CRP (High Band Body); Type: SAM; Serial: TP: 1020
- Measurement SW: DAS4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 172

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

Maximum value of SAR (interpolated) = 1.08 mW/g

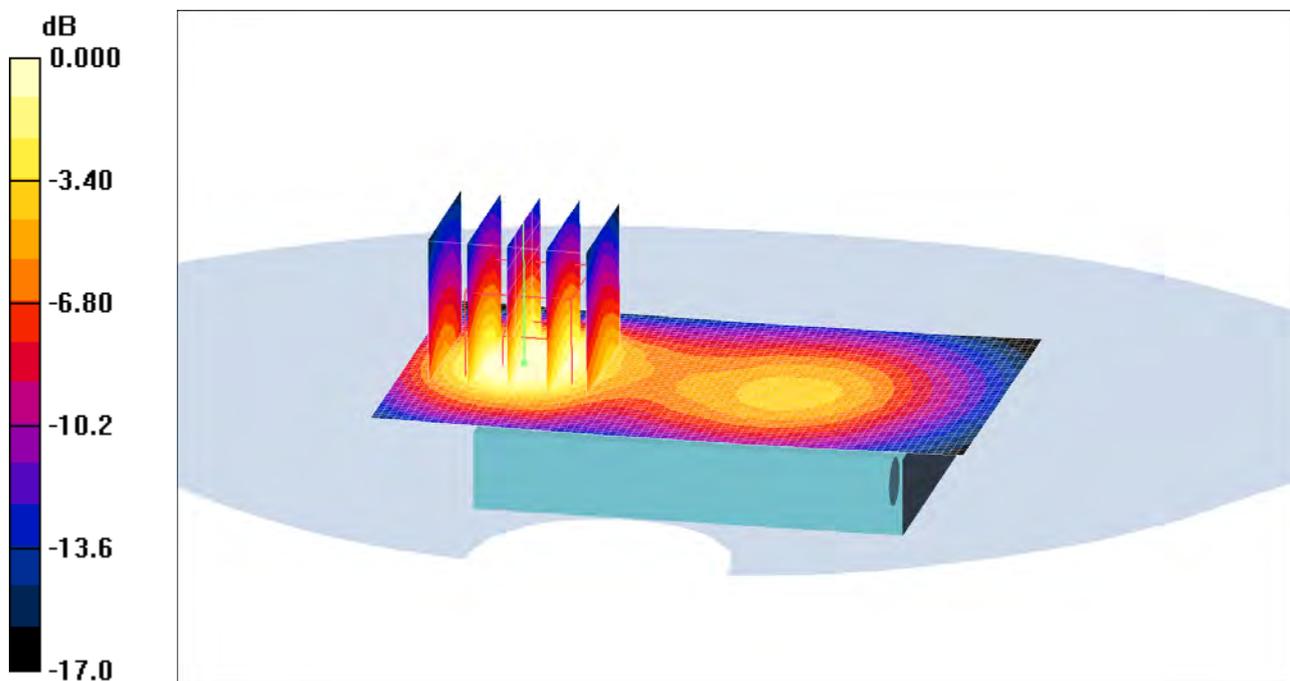
**Body/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 15.2 V/m; Power Drift = -0.153 dB

Peak SAR (extrapolated) = 1.32 W/kg

**SAR(1 g) = 0.884 mW/g; SAR(10 g) = 0.503 mW/g**

Maximum value of SAR (measured) = 0.958 mW/g



0 dB = 0.958mW/g

Date/Time: 8/9/2011 2:23:19 PM

Test Laboratory: Sony Ericsson Mobile Communications

**Smultron19-Body-Flat9mm-GSM1900-Data-4Tx-High****DUT: Smultron; Type: DUT; Serial: #20737**

Communication System: GPRS 1900; Frequency: 1909.8 MHz; Duty Cycle: 1:2.075

Medium parameters used:  $f = 1909.8$  MHz;  $\sigma = 1.54$  mho/m;  $\epsilon_r = 50.9$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Measurement Standard: DASYS4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ET3DV6 - SN1539; ConvF(4.23, 4.23, 4.23); Calibrated: 11/16/2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn415; Calibrated: 11/16/2010
- Phantom: SAM with CRP (High Band Body); Type: SAM; Serial: TP: 1020
- Measurement SW: DASYS4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 172

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

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

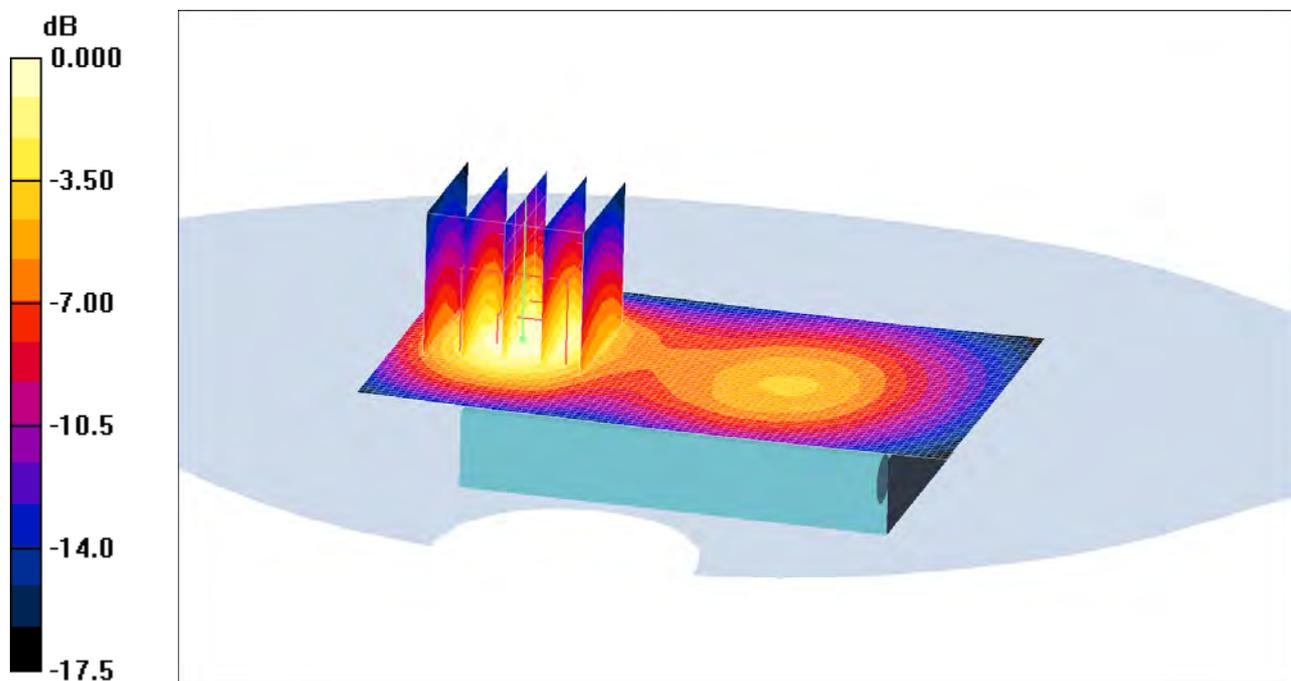
**Body 3/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 13.4 V/m; Power Drift = -0.024 dB

Peak SAR (extrapolated) = 1.34 W/kg

**SAR(1 g) = 0.894 mW/g; SAR(10 g) = 0.499 mW/g**

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



0 dB = 1.00mW/g

Date/Time: 8/24/2011 10:55:21 AM

Test Laboratory: Sony Ericsson Mobile Communications

**Smultron19-Body-Flat10mm-WLAN-Ch1****DUT: Smultron; Type: DUT; Serial: #20739**

Communication System: WLAN; Frequency: 2412 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 2412$  MHz;  $\sigma = 1.9$  mho/m;  $\epsilon_r = 50.4$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Measurement Standard: DAS4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ET3DV6 - SN1539; ConvF(3.87, 3.87, 3.87); Calibrated: 11/16/2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn415; Calibrated: 11/16/2010
- Phantom: WLAN Body SAM; Type: SAM;
- Measurement SW: DAS4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 172

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

Maximum value of SAR (interpolated) = 0.220 mW/g

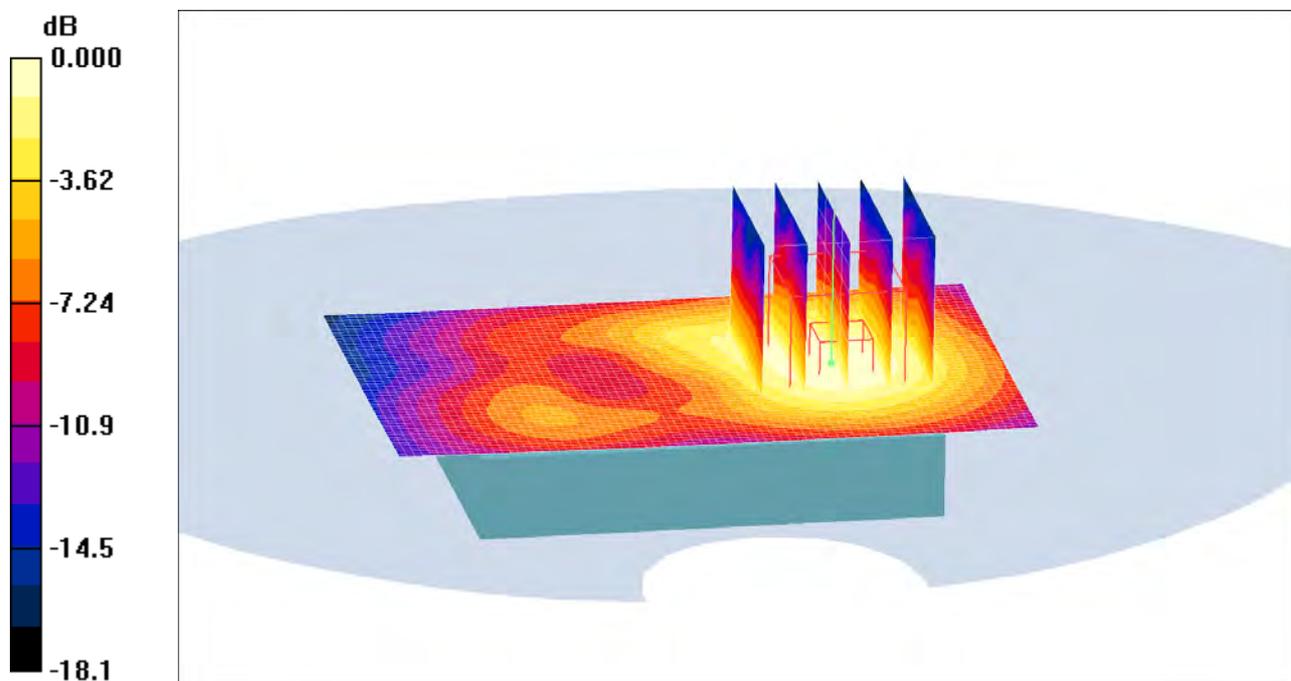
**Body/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 5.24 V/m; Power Drift = 0.106 dB

Peak SAR (extrapolated) = 0.466 W/kg

**SAR(1 g) = 0.208 mW/g; SAR(10 g) = 0.116 mW/g**

Maximum value of SAR (measured) = 0.214 mW/g



0 dB = 0.214mW/g

Date/Time: 8/24/2011 11:13:43 AM

Test Laboratory: Sony Ericsson Mobile Communications

**Smultron19-Body-Flat10mm-WLAN-Ch6****DUT: Smultron; Type: DUT; Serial: #20739**

Communication System: WLAN; Frequency: 2437 MHz; Duty Cycle: 1:1

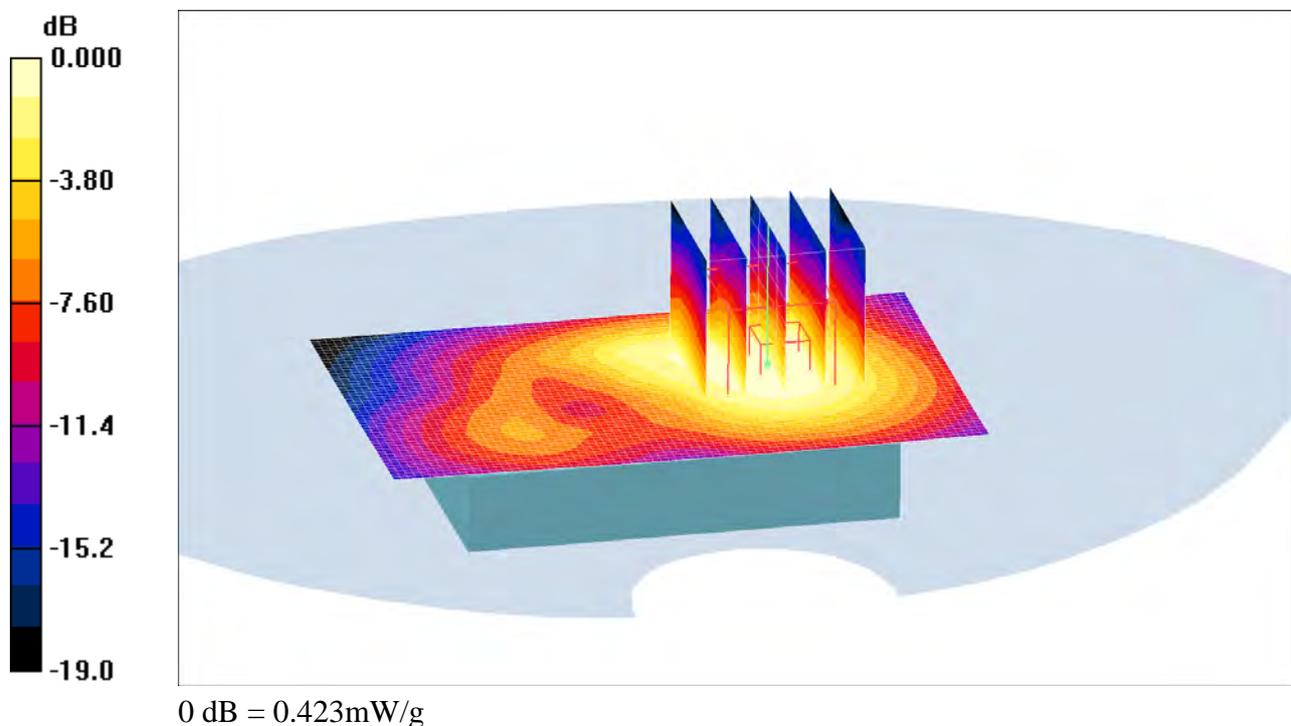
Medium parameters used (interpolated):  $f = 2437$  MHz;  $\sigma = 1.93$  mho/m;  $\epsilon_r = 50.3$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Measurement Standard: DAS4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ET3DV6 - SN1539; ConvF(3.87, 3.87, 3.87); Calibrated: 11/16/2010
  - Sensor-Surface: 4mm (Mechanical Surface Detection)
  - Electronics: DAE3 Sn415; Calibrated: 11/16/2010
  - Phantom: WLAN Body SAM; Type: SAM;
  - Measurement SW: DAS4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 172
- Body 2/Area Scan (51x81x1):** Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (interpolated) = 0.464 mW/g
- Body 2/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
Reference Value = 9.09 V/m; Power Drift = -0.219 dB  
Peak SAR (extrapolated) = 0.947 W/kg  
**SAR(1 g) = 0.408 mW/g; SAR(10 g) = 0.223 mW/g**  
Maximum value of SAR (measured) = 0.423 mW/g



Date/Time: 8/24/2011 11:27:20 AM

Test Laboratory: Sony Ericsson Mobile Communications

**Smultron19-Body-Flat10mm-WLAN-Ch11****DUT: Smultron; Type: DUT; Serial: #20739**

Communication System: WLAN; Frequency: 2462 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated):  $f = 2462$  MHz;  $\sigma = 1.97$  mho/m;  $\epsilon_r = 50.2$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Measurement Standard: DAS4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ET3DV6 - SN1539; ConvF(3.87, 3.87, 3.87); Calibrated: 11/16/2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn415; Calibrated: 11/16/2010
- Phantom: WLAN Body SAM; Type: SAM;
- Measurement SW: DAS4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 172

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

Maximum value of SAR (interpolated) = 0.116 mW/g

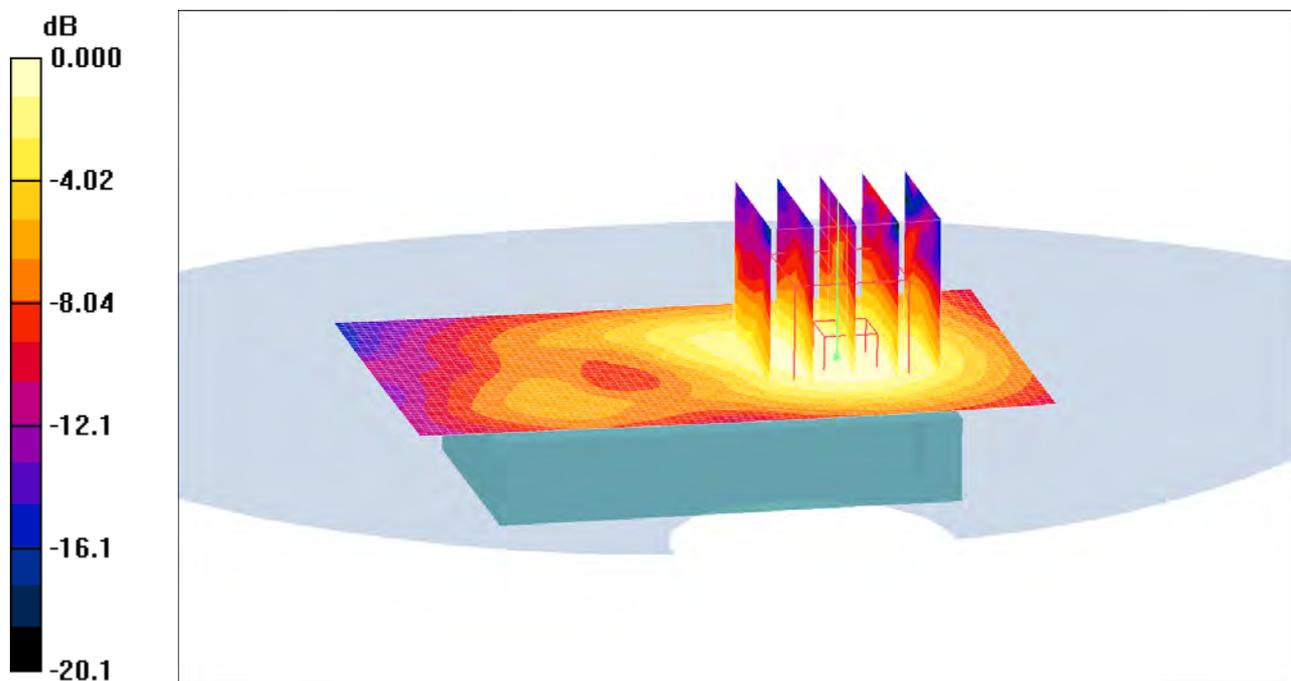
**Body 3/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 4.43 V/m; Power Drift = -0.188 dB

Peak SAR (extrapolated) = 0.201 W/kg

**SAR(1 g) = 0.102 mW/g; SAR(10 g) = 0.057 mW/g**

Maximum value of SAR (measured) = 0.108 mW/g



0 dB = 0.108mW/g