
CONFORMANCE TEST REPORT FOR HUMAN EXPOSURE TO ELECTROMAGNETIC FIELDS

Report No.: SRTC2011-H024-E0033

Product Name: GSM/GPRS/EDGE/WCDMA

Digital Mobile Phone with Bluetooth and WiFi

Marketing Name: one touch 901S

Product Model: yippee 3G_S

Applicant: TCT Mobile Limited

Manufacture: TCT Mobile Limited

Specification: FCC OET Bulletin 65 (Edition 97-01)

Supplement C (Edition 01-01)

47CFR 2.1093

FCC ID: RAD162

The State Radio_monitoring_center Testing Center (SRTC)

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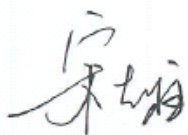
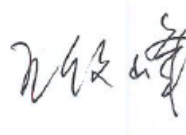
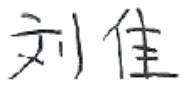
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Executive summary

Test report no.:	SRTC2011-H024-E0033
Product Model:	yippee 3G_S
Date of test:	2011.04.23
Date of report:	2011.05.11
Laboratory:	The State Radio_monitoring_center Testing Center (SRTC)
Test has been Carried out in accordance with:	47CFR §2.1093 Radiofrequency Radiation Exposure Evaluation: Portable Devices FCC OET Bulletin 65 (Edition 97-01), Supplement C (Edition 01-01) Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields RSS-102 Evaluation Procedure for Mobile and Portable Radio Transmitters with Respect to Health Canada's Safety Code 6 for Exposure of Humans to Radio Frequency Fields IEEE 1528 - 2003 IEEE Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Technique
Documentation:	The documentation of the testing performed on the tested devices is archived for 5 years at SRTC

Result summary:

Mode	CH/f(MHz)	Power (dBm)	Position	Sar Limit (1g avg) (mW/g)	Measured value (1g avg)(mW/g)	Result
WCDMA B4	1513/1752.6	22.63	Left cheek	1.6	1.07	PASS

This Test Report Is Issued by: Mr. Song Qizhu Director of the test lab 	Checked by: Mr. Wang Junfeng Deputy director of the test lab 
Tested by: Ms. Liu Jia Test engineer 	Issued date: 2011.06.14

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1. GENERAL INFORMATION

1.1 Notes of the test report

The test report may only be reproduced or published in full. Reproduction or publication of extracts from the report requires the prior written permission of The State Radio_monitoring_center Testing Center (SRTC).

The test results relate only to individual items of the samples which have been tested.

1.2 Information about the testing laboratory

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Contacted person: Gong Zhizhou
Tel: +86-21-61460890
Fax: +86-21-61460602
Email: zhizhou.gong@jrdcom.com

1.5 Test Details

Period of test	2011.04.23
Batteries used in testing	Li-Lon/CAB31L0000C1/BYD LITHIUM BATTERY CO., LTD
	Li-Lon/CAB31L0000C2/SHENZHEN BAK BATTERY CO., LTD
State of sample	production unit
Headsets used in testing	CCB3160A10C2/Lianyun Electronic Technology CO.,LTD.
	CCB3160A10C0/Shen Zhen Ju Wei Electronic Co.,LTD
H/W Version	PIO2
S/W Version	sw523
IMEI	012614000010235
Device class/Multislot class	B/12
DTM	N/A
Notes	As the information described above, there are two different models of battery manufactured by two different companies, and two different models of headset manufactured by two different companies. The relevant tests have been performed in order to verify in which combination case (EUT exercised by only one model of battery and one model of headset) the EUT would have the worst features. So all the tests shown in this test report are performed when the EUT exercised by the battery CAB31L0000C2 and the headset CCB3160A10C2.

1.6 Maximum Results

The maximum measured SAR values for Head configuration and Body Worn configuration are given in section 1.6.1 and 1.6.2 respectively. The device conforms to the requirements of the standard(s) when the maximum measured SAR value is less than or equal to the limit.

1.6.1 GSM

The multi-slot mode configuration level in GPRS and EDGE is the class 12. The configurations including four slot modes below:

1Txslot: 4 downlink and 1 uplink

2Txslots: 3 downlink and 2 uplink

3Txslots: 2 downlink and 3 uplink

4Txslots: 1 downlink and 4 uplink

The DUT's output power was test through the conducted spurious emissions with the four slot modes,and the maximum averaged power was under 2 downlink and 3 uplink mode. Therefore, during GPRS and EDGE test will choice 2 downlink and 3 uplink mode as the basic test mode.

Head Configuration

Mode	CH/f(MHz)	Power (dBm)	Position	Sar Limit (1g avg) (mW/g)	Measured value (1g avg)(mW/g)	Result
GSM850	251/848.8	33.26	Right cheek	1.6	0.957	PASS
GSM1900	512/1850.2	30.07	Right cheek	1.6	0.719	PASS

Body Worn Configuration

Mode	CH/f(MHz)	Power (dBm)	Position	Sar Limit (1g avg) (mW/g)	Measured value (1g avg)(mW/g)	Result
GSM850	189/836.4	33.29	Towards ground	1.6	0.707	PASS
GSM1900	661/1880.0	30.20	Towards ground	1.6	0.431	PASS

1.6.2 WCDMA

The default test configuration is to measure SAR with an established radio link between the DUT and a communication test set using a 12.2 kbps RMC (reference measurement channel) configured in Test Loop Mode 1. The dedicated channel will be set with RMC type, and the transmit power control in ALL UP BITS.

Head Configuration

Mode	CH/f(MHz)	Power (dBm)	Position	Sar Limit (1g avg) (mW/g)	Measured value (1g avg)(mW/g)	Result
WCDMA B4	1513/1752.6	22.63	Left cheek	1.6	1.07	PASS

Body Worn Configuration

Mode	CH/f(MHz)	Power (dBm)	Position	Sar Limit (1g avg) (mW/g)	Measured value (1g avg)(mW/g)	Result
WCDMA B4	1412/1732.4	23.06	Towards ground	1.6	0.758	PASS

1.6.3 Wifi

Head Configuration

Mode	Channel\data rate	Power (dBm)	Position	Sar Limit (1g avg) (mW/g)	Measured value (1g avg)(mW/g)	Result
Wifi	54Mbps/channel 1	22.60	Left tilt	1.6	0.439	PASS

Body Worn Configuration

Mode	Channel\data rate	Power (dBm)	Position	Sar Limit (1g avg) (mW/g)	Measured value (1g avg)(mW/g)	Result
Wifi	54Mbps/channel 1	22.60	Towards ground	1.6	0.135	PASS

2. DESCRIPTION OF THE DEVICE UNDER TEST

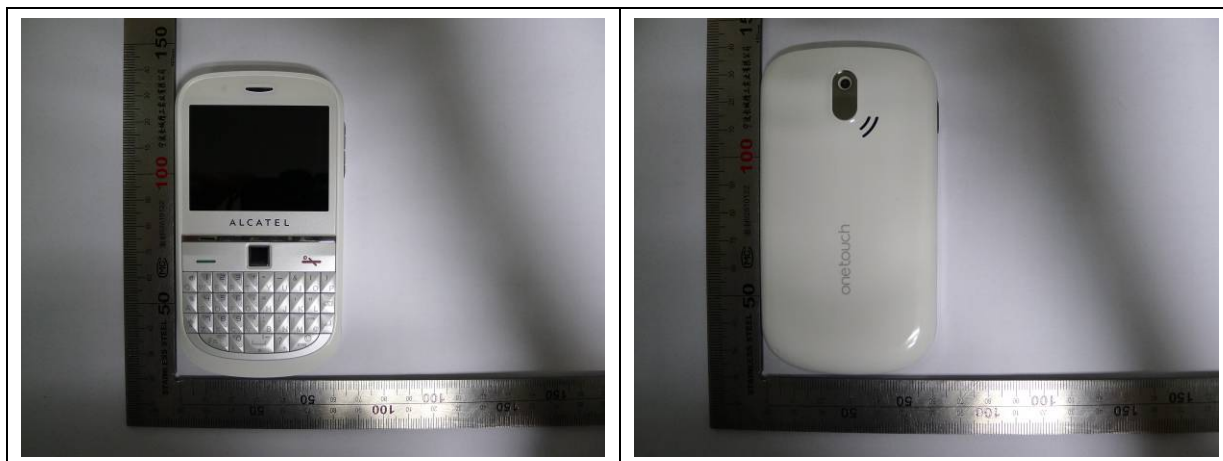
Device category	production unit
Exposure enviroment	General population/uncontrolled

Modes and Bands of operation	GSM850	GSM1900	GPRS	EGPRS	WCDMA B4	WiFi
Modulation Mode	GMSK	GMSK	GMSK	8-PSK /GMSK	QPSK	DBPSK/DQPSK/CCK/BPSK/QPSK/16QAM/64QAM
Duty Cycle	1/8	1/8	1/4	1/2	1/1	1/1
Transmitter Frequency Range(MHz)	824-849	1850-1910	824-849 1850-1910	824-849 1850-1910	1710-1755	2400-2483.5

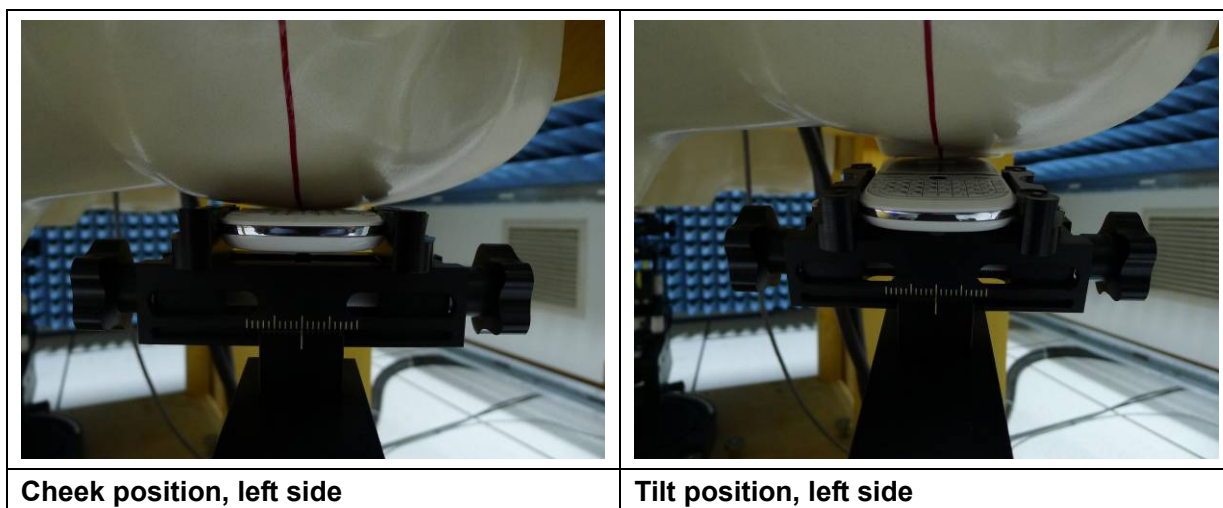
2.1 Description of the Antenna

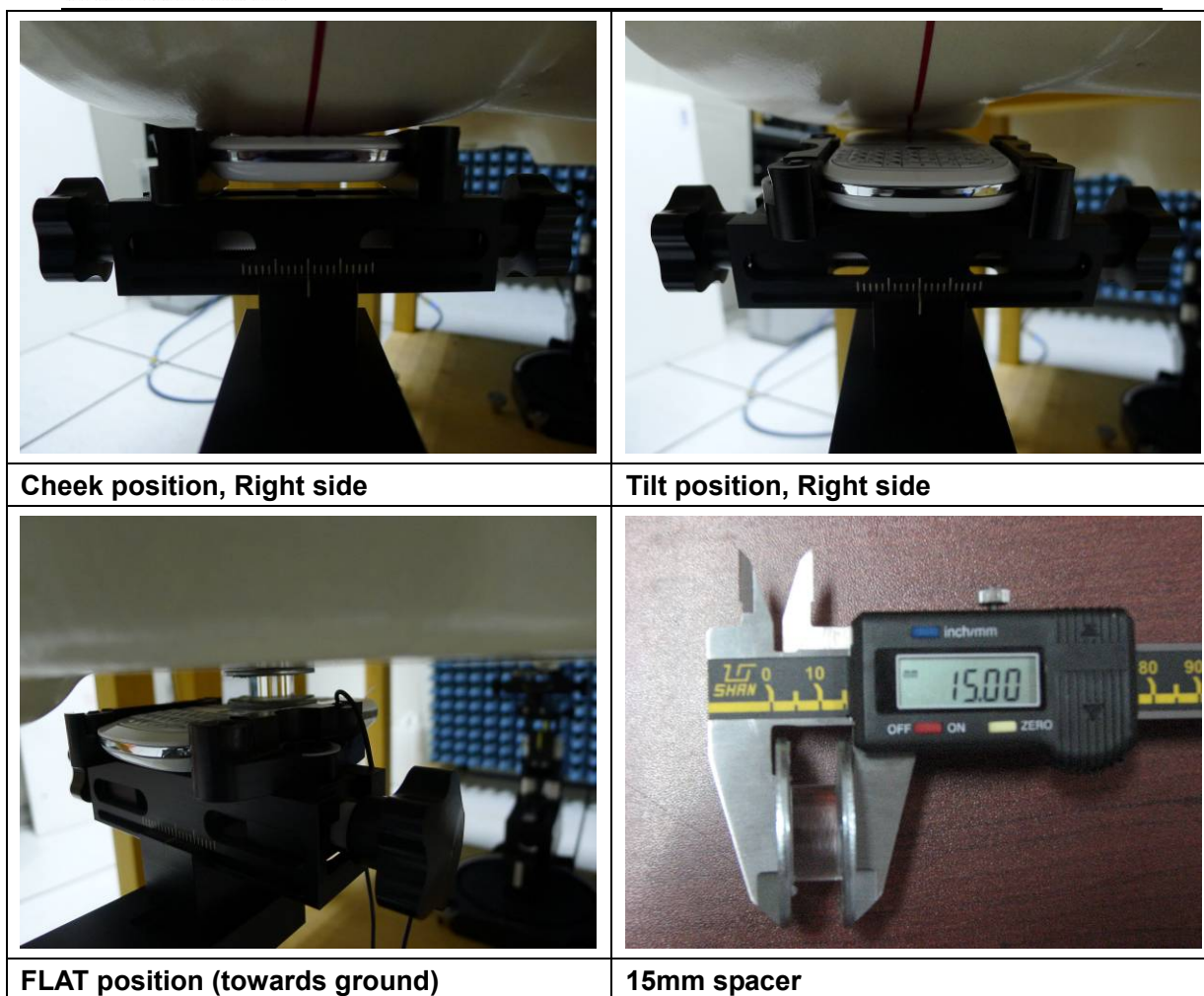
The device has an internal antenna.

2.2 Picture of the EUT



2.3 Test Positions for the Device under test





2.4 Picture to demonstrate the required liquid depth

the liquid depth in the used SAM phantoms



Liquid depth for SAR Measurement

3. TEST CONDITIONS

3.1 Temperature and Humidity

Ambient temperature (° C)	21.0 to 23.0
Ambient humidity (RH %)	30 to 45

3.2 Test Signal, Frequencies and Output Power

The device was put into operation by using a call tester. Communication between the device and the call tester was established by air link.

The device output power was set to maximum power level for all tests; a fully charged battery was used for every test sequence.

In all operating bands the measurements were performed on lowest, middle and highest channels.

3.3 SAR Measurement Set-up

The system is based on a high precision robot (working range greater than 0.9m), which positions the probes with a positional repeatability of better than $\pm 0.02\text{mm}$. Special E- and H-field probes have been developed for measurements close to material discontinuity, the sensors of which are directly loaded with a Schottky diode and connected via highly resistive lines (length =300mm) to the data acquisition unit. A cell controller system contains the power supply, robot controller, teaches pendant (Joystick), and remote control, is used to drive the robot motors.

The PC consists of the Micron Pentium IV computer with Windows 2000 system and SAR Measurement Software DASY4 Professional, A/D interface card, monitor, mouse, and keyboard. The Stäubli Robot is connected to the cell controller to allow software manipulation of the robot.

A data acquisition electronic (DAE) circuit performs the signal amplification, signal multiplexing, AD-conversion, offset measurements, mechanical surface detection, collision detection, etc. is connected to the Electro-optical coupler (EOC). The EOC performs the conversion from the optical into digital electric signal of the DAE and transfers data to the PC plug-in card. The DAE consists of a highly sensitive electrometer-grade preamplifier with auto-zeroing, a channel and gain-switching multiplexer, a fast 16 bit AD-converter and a command decoder and control logic unit. Transmission to the PC-card is accomplished through an optical downlink for data and status information and an optical uplink for commands and clock lines.

The mechanical probe mounting device includes two different sensor systems for frontal and sidewise probe contacts. They are also used for mechanical surface detection and probe collision detection

The robot uses its own controller with a built in VME-bus computer.

4. DESCRIPTION OF THE TEST EQUIPMENT

4.1 Measurement System and Components

The measurements were performed using an automated near-field scanning system, DASY4, manufactured by Schmid & Partner Engineering AG (SPEAG) in Switzerland. The SAR extrapolation algorithm used in all measurements was the 'advanced extrapolation' algorithm.

The following table lists calibration dates of SPEAG components:

Test Equipment	Serial Number	Calibration interval	Calibration expiry
DAE4	720	1year	2012.01.19
Dosimetric E-field Probe ES3DV3	3128	1year	2011.06.22
Dipole Validation Kit, D900V2	171	2 years	2012.06.11
Dipole Validation Kit, D1800V2	2d084	2 years	2012.06.11
DASY4 software Version	4.7	N/A	N/A

Note: the Dipole Calibration interval is 24 months

Additional test equipment used in testing:

Test Equipment	Model	Serial Number	Calibration interval	Calibration expiry
Signal Generator	E4428C	MY45280865	1year	2011.08.20
Amplifier	5S1G4	0323472	N/A	N/A
Power meter	E4417A	MY45101182	1year	2011.08.20
Power Sensor	E4412A	MY41502214	1year	2011.08.20
Power Sensor	E4412A	MY41502130	1year	2011.08.20
Call Tester	8960	GB43194054	1year	2011.08.20
Network Analyzer	8714ET	US40372083	1year	2011.08.20
Dielectric Probe Kit	85070D	US33030365	N/A	N/A

Detailed information of Isotropic E-field Probe Type ES3DV3

Construction	Symmetrical design with triangular core Interleaved sensors Built-in shielding against static charges PEEK enclosure material (resistant to organic solvents, e.g., DGBE)
Calibration	Calibration certificate in Appendix C
Frequency	10 MHz to 4 GHz; Linearity: ± 0.2 dB (30 MHz to 4 GHz)
Optical Surface Detection	± 0.2 mm repeatability in air and clear liquids over diffuse reflecting surfaces
Dimensions	Overall length: 330 mm (Tip: 20 mm) Tip diameter: 3.9 mm (Body: 12 mm)

	Distance from probe tip to dipole centers: 2.0 mm
Dynamic Range	5 μ W/g to > 100 mW/g; Linearity: $\pm$ 0.2 dB
Application	General dosimetry up to 4 GHz Dosimetry in strong gradient fields Compliance tests of mobile phones

4.2 Phantoms

The phantom used for all tests i.e. for both system checks and device testing, was the twinheaded "SAM Phantom", manufactured by SPEAG. The phantom conforms to the requirements of IEEE 1528 - 2003.

System checking was performed using the flat section, whilst Head SAR tests used the left and right head profile sections. Body SAR testing also used the flat section between the head profiles.

The SPEAG device holder (see Section 5.1) was used to position the device in all tests whilst a tripod was used to position the validation dipoles against the flat section of phantom.

4.3 Tissue Simulants

Recommended values for the dielectric parameters of the tissue simulants are given in IEEE 1528 - 2003 and FCC Supplement C to OET Bulletin 65. All tests were carried out using simulants whose dielectric parameters were within $\pm$ 5% of the recommended values. All tests were carried out within 24 hours of measuring the dielectric parameters.

The depth of the tissue simulant was 15.0 $\pm$ 0.5 cm measured from the ear reference point during system checking and device measurements.

4.3.1 Tissue Simulant Recipes

The following recipe(s) were used for Head and Body tissue stimulant(s):

835MHz band

Ingredient	Head (% by weight)	Body (% by weight)
Water	41.45	52.50
Sugar	56.00	45.0
Nacl	1.45	1.40
Cellulose	1.0	1.0
Preventol	0.1	0.10

1800/1900MHz band

Ingredient	Head (% by weight)	Body (% by weight)
Water	44.45	70.17
DGBE	55.24	29.44
Nacl	0.31	0.39

2450MHz band

Ingredient	Head (% by weight)	Body (% by weight)
Water	55.00	68.64
DGBE	45.00	31.37
Nacl	0.00	0.00

4.3.2 System Checking

The manufacturer calibrates the probes annully. Dielectric parameters of the tissue simulants were measured every day using the dielectric probe kit and the network analyser. A system check measurement was made following the determination of the dielectric parameters of the simulant, using the dipole validation kit. A power level of 250 mW was supplied to the dipole antenna, which was placed under the flat section of the twin SAM phantom. The system checking results (dielectric parameters and SAR values) are given in the table below. Test Date is 2011.4.15

System checking,head tissue simulant

		SAR _{1g} [w/kg]	ϵ_r	σ [S/m]	Temperature	
					Ambient[°C]	Liquid[°C]
900MHz	Target Value	10.8	41.5±2.1	0.97±0.05	15-30	-
	Measured Value	10.9	41.5	0.95	24.0	22.3

All SAR values are normalized to 1W forward power

		SAR _{1g} [w/kg]	ϵ_r	σ [S/m]	Temperature	
					Ambient[°C]	Liquid[°C]
1800MHz	Target Value	38.1	40±1.9	1.40±0.07	15-30	-
	Measured Value	38.8	39.4	1.35	24.0	22.3

All SAR values are normalized to 1W forward power

		SAR _{1g} [w/kg]	ϵ_r	σ [S/m]	Temperature	
					Ambient[°C]	Liquid[°C]
2450MHz	Target Value	52.4	39.2±3.92	1.8±0.09	15-30	-
	Measured Value	49.6	37.9	1.88	24.0	22.3

All SAR values are normalized to 1W forward power

Plots of the system checking scans are given in Appendix A.

4.3.3 Tissue Simulants used in the Measurements

For the measurement of the following parameters the HP 85070D dielectric probe kit is used, representing the open-ended coaxial probe measurement procedure. Liquid temperature during the test: 22.3° C。Tested date is 2011.4.15

Head		ϵ_r	σ [S/m]	Temperature	
				Ambient [°C]	Liquid [°C]
850MHz	Recommended Value	41.5±2.1	0.97±0.05	15-30	-
	Measured Value	41.5	0.98	24.0	22.3
1730MHz	Recommended Value	40.1±2.0	1.36±0.07	15-30	-
	Measured Value	39.2	1.41	24.0	22.3
1900MHz	Recommended Value	40±1.9	1.40±0.07	15-30	-
	Measured Value	39.0	1.44	24.0	22.3
2450MHz	Recommended Value	39.2±3.92	1.8±0.09	15-30	-
	Measured Value	37.9	1.88	24.0	22.3

Body		ϵ_r	$\sigma[\text{S/m}]$	Temperature	
				Ambient [°C]	Liquid [°C]
850MHz	Recommended Value	55.0±2.8	1.05±0.05	15-30	-
	Measured Value	54.6	1.00	24.0	22.3
1730	Recommended Value	53.5±2.68	1.48±0.07	15-30	-
	Measured Value	53.2	1.41	24.0	22.3
1900MHz	Recommended Value	53.3±2.7	1.52±0.08	15-30	-
	Measured Value	54.6	1.49	24.0	22.3
2450MHz	Recommended Value	52.7±5.27	1.95±0.0975	15-30	-
	Measured Value	52.9	1.94	24.0	22.3

5. DESCRIPTION OF THE TEST PROCEDURE

5.1 Device Holder

The device was placed in the device holder (illustrated below) that is supplied by SPEAG as an integral part of the Dasy system.



Device holder supplied by SPEAG

5.2 Test positions

5.2.1 Against Phantom Head

Measurements were made in “cheek” and “tilt” positions on both the left hand and right hand sides of the phantom.

The positions used in the measurements were according to IEEE 1528 - 2003 "IEEE Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques".

5.2.2 Body Worn Configuration

The device was placed in the SPEAG holder below the flat section of the phantom. The distance between the device and the phantom was kept at the separation distance using a separate flat spacer that was removed before the start of the measurements. And the distance is 1.5cm. The device was oriented with its antenna facing the phantom since this orientation gives higher results.

5.3 Scan Procedure

First, area scans were used for determination of the field distribution and the approximate location of the local peak SAR values. The SAR distribution is scanned along the inside surface, at least for an area larger than the projection of the handset and antenna. The angle between the probe axis and the surface normal line is recommended but not required to be less than 30°. The SAR distribution is first measured on a 2-D coarse grid. The scan region should cover all areas that are exposed and encompassed by the projection of the handset. It is a 15 mm × 15 mm measurement grid used when two staggered one-dimensional cubic splines are used to estimate the maximum SAR location. Next, a zoom scan, a minimum of 7 x 7x7 points covering a volume of at least 30x30x30mm, was performed around the highest E-field value to determine the averaged SAR value. Drift was determined by measuring the same point at the start of the area scan and again at the end of the zoom scan.

5.4 SAR Averaging Methods

The maximum SAR value was averaged over a cube of tissue using interpolation and extrapolation.

The interpolation, extrapolation and maximum search routines within Dasy4 are all based on the modified Quadratic Shepard's method (Robert J. Renka, "Multivariate Interpolation Of Large Sets Of Scattered Data", University of North Texas ACM Transactions on Mathematical Software, vol. 14, no. 2, June 1988, pp. 139-148).

The interpolation scheme combines a least-square fitted function method with a weighted average method. A trivariate 3-D / bivariate 2-D quadratic function is computed for each measurement point and fitted to neighbouring points by a least-square method. For the zoom scan, inverse distance weighting is incorporated to fit distant points more accurately. The interpolating function is finally calculated as a weighted average of the quadratics.

In the zoom scan, the interpolation function is used to extrapolate the Peak SAR from the deepest measurement points to the inner surface of the phantom.

6. MEASUREMENT UNCERTAINTY

DASY4 Uncertainty Budget								
Error description	Uncertainty value	Prob. Dist.	Div.	(c_i) 1g	(c_i) 10g	Std.Unc (1g).	Std.Unc. (10g)	$(v_i)^{V_{eff}}$
Measurement system								
Probe calibration	±5.9%	N	1	1	1	±5.9%	±5.9%	∞
Axial isotropy	±4.7%	R	$\sqrt{3}$	0.7	0.7	±1.9%	±1.9%	∞
Hemispherical isotropy	±9.6%	R	$\sqrt{3}$	0.7	0.7	±3.9%	±3.9%	∞
Boundary effects	±1.0%	R	$\sqrt{3}$	1	1	±0.6%	±0.6%	∞
Linearity	±4.7%	R	$\sqrt{3}$	1	1	±2.7%	±2.7%	∞
System detection limits	±1.0%	R	$\sqrt{3}$	1	1	±0.6%	±0.6%	∞
Readout electronics	±0.3%	N	1	1	1	±0.3%	±0.3%	∞
Response time	±0.8%	R	$\sqrt{3}$	1	1	±0.5%	±0.5%	∞
Integration time	±2.6%	R	$\sqrt{3}$	1	1	±1.5%	±1.5%	∞
RF ambient noise	±3.0%	R	$\sqrt{3}$	1	1	±1.7%	±1.7%	∞
RF ambient reflections	±3.0%	R	$\sqrt{3}$	1	1	±1.7%	±1.7%	∞
Probe positioner	±0.4%	R	$\sqrt{3}$	1	1	±0.2%	±0.2%	∞
Probe positioning	±2.9%	R	$\sqrt{3}$	1	1	±1.7%	±1.7%	∞
Max.SAR Eval.	±1.0%	R	$\sqrt{3}$	1	1	±0.6%	±0.6%	∞
Test Sample Related								
Device Positioning	±2.9%	N	1	1	1	±2.9%	±2.9%	145
Device holder	±3.6%	N	1	1	1	±3.6%	±3.6%	5
Power drift	±5.0%	R	$\sqrt{3}$	1	1	±2.9%	±2.9%	∞
Phantom and Setup								
Phantom uncertainty	±4.0%	R	$\sqrt{3}$	1	1	±2.3%	±2.3%	∞
Liquid conductivity(target)	±5.0%	R	$\sqrt{3}$	0.64	0.43	±1.8%	±1.2%	∞
Liquid conductivity(meas.)	±2.5%	N	1	0.64	0.43	±1.6%	±1.1%	∞
Liquid conductivity(target)	±5.0%	R	$\sqrt{3}$	0.6	0.49	±1.7%	±1.4%	∞
Liquid conductivity(means.)	±2.5%	N	1	0.6	0.49	±1.5%	±1.2%	∞
Combined std. Uncertainty						±10.9%	±10.7%	387
Expanded STD Uncertainty						±21.9%	±21.4%	

Table 6.1 – Measurement uncertainty evaluation

7. RESULTS

7.1 Test result

In order to determine the largest value of the peak spatial-average SAR of a handset, all device positions, configurations, and operational modes should be tested for each frequency band according to Steps 1 to 3 below.

Step 1: The tests should be performed at the channel that is closest to the center of the transmit frequency band.

Step 2: For the condition providing the highest peak spatial-average SAR determined in Step 1 for each frequency, perform all tests at all other test frequency channels, e.g., lowest and highest frequencies. In addition, for all other conditions (device position, configuration, and operational mode) where the peak spatial-average SAR value determined in Step 1 is within 3 dB of the applicable SAR limit, it is recommended that all other test frequencies should be tested as well.

Step 3: Examine all data to determine the largest value of the peak

The measured Head/body SAR values for the test device are tabulated below:

Mode: GSM 850

f_L (MHz)=824.2MHz

f_M (MHz)=836.4 MHz

f_H (MHz)= 848.8MHz

SAR Values (Head, 850MHz Band)

Limit of SAR (W/kg)	1 g Average
	1.6
Test Case	Measurement Result (mW/g)
	1g Average
Left hand, Touch cheek, f_H	0.83
Left hand, Touch cheek, f_M	0.767
Left hand, Touch cheek, f_L	0.702
Left hand, Tilt 15 Degree, f_H	0.418
Left hand, Tilt 15 Degree, f_M	0.392
Left hand, Tilt 15 Degree, f_L	0.342
Right hand, Touch cheek, f_H	0.957
Right hand, Touch cheek, f_M	0.859
Right hand, Touch cheek, f_L	0.822
Right hand, Tilt 15 Degree, f_H	0.524
Right hand, Tilt 15 Degree, f_M	0.521
Right hand, Tilt 15 Degree, f_L	0.456

So, the maximum SAR is

Phantom Configuration	Device Test Position	SAR(mW/g)/ (10g/1g)		
		f_L (MHz)	f_M (MHz)	f_H (MHz)
Right Side	Cheek	---	---	0.957

Mode: GSM850 (GSM/GPRS/EDGE)

f_L (MHz)=824.2MHz

f_M (MHz)=836.4 MHz

f_H (MHz)= 848.8MHz

SAR Values (body, 850MHz Band)

Limit of SAR (W/kg)	1 g Average	
	1.6	
Test Case	Measurement Result (mW/g)	
	1 g Average	
Towards ground/GSM, with headset 15mm spacer f_H	0.606	
Towards ground/GSM, with headset 15mm spacer f_M	0.707	
Towards ground/GSM, with headset 15mm spacer f_L	0.657	
Towards phantom/GSM, with headset 15mm spacer f_M	0.613	
Towards ground/GPRS, 15mm spacer f_M	0.54	
Towards phantom/GPRS, 15mm spacer f_M	0.479	
Towards ground/EGPRS, 15mm spacer f_M	0.143	
Towards phantom/EGPRS, 15mm spacer f_M	0.121	

During the body testing GPRS/EDGE work at the “2 downlink and 3 uplink”,at this Tx slot RF averaged power is larger than other Tx slots.

So, the maximum SAR is

Phantom Configuration	Device Test Position	SAR(mW/g)		
		f_L (MHz)	f_M (MHz)	f_H (MHz)
Towards Ground/GSM	15mm spacer	---	0.707	---

Mode: GSM1900

f_L (MHz)=1850.2MHz

f_M (MHz)=1880.0MHz

f_H (MHz)=1909.8MHz

SAR Values (Head, 1900MHz Band)

Limit of SAR (W/kg)	1 g Average
	1.6
Test Case	Measurement Result (mW/g)
	1g Average
Left hand, Touch cheek, f_H	0.492
Left hand, Touch cheek, f_M	0.526
Left hand, Touch cheek, f_L	0.551
Left hand, Tilt 15 Degree, f_H	0.204
Left hand, Tilt 15 Degree, f_M	0.195
Left hand, Tilt 15 Degree, f_L	0.218
Right hand, Touch cheek, f_H	0.629
Right hand, Touch cheek, f_M	0.671
Right hand, Touch cheek, f_L	0.719
Right hand, Tilt 15 Degree, f_H	0.183
Right hand, Tilt 15 Degree, f_M	0.173
Right hand, Tilt 15 Degree, f_L	0.186

So, the maximum SAR is

Phantom Configuration	Device Test Position	SAR(mW/g)		
		f_L (MHz)	f_M (MHz)	f_H (MHz)
Right Side	Cheek	0.719	---	---

Mode: GSM1900 (GSM/GPRS/EDGE)

$f_L(\text{MHz})=1850.2\text{MHz}$ $f_M(\text{MHz})=1880.0\text{MHz}$ $f_H(\text{MHz})=1909.8\text{MHz}$

SAR Values (body, 1900MHz Band)

Limit of SAR (W/kg)	1 g Average
	1.6
Test Case	Measurement Result (mW/g)
	1 g Average
Towards ground/GSM, with headset 15mm spacer f_H	0.301
Towards ground/GSM, with headset 15mm spacer f_M	0.431
Towards ground/GSM, with headset 15mm spacer f_L	0.35
Towards phantom/GSM, with headset 15mm spacer f_M	0.3
Towards ground/GPRS, 15mm spacer f_M	0.316
Towards phantom/GPRS, 15mm spacer f_M	0.25
Towards ground/EGPRS, 15mm spacer f_M	0.125
Towards phantom/EGPRS, 15mm spacer f_M	0.129

During the body testing GPRS/EDGE work at the “2 downlink and 3 uplink”, at this Tx slot RF averaged power is larger than other Tx slots.

So, the maximum SAR is

Phantom Configuration	Device Test Position	SAR(mW/g)		
		$f_L(\text{MHz})$	$f_M(\text{MHz})$	$f_H(\text{MHz})$
Towards ground/GSM	15mm spacer	---	0.431	---

Mode: WCDMA B4

$f_L(\text{MHz})=1712.4\text{MHz}$ $f_M(\text{MHz})=1732.4\text{MHz}$ $f_H(\text{MHz})= 1752.6\text{MHz}$

SAR Values (Head, WCDMA B4)

Limit of SAR (W/kg)	1 g Average	
	1.6	
Test Case	Measurement Result (mW/g)	
	1 g Average	
Left hand, Touch cheek, f_H	1.07	
Left hand, Touch cheek, f_M	0.986	
Left hand, Touch cheek, f_L	0.922	
Left hand, Tilt 15 Degree, f_H	0.436	
Left hand, Tilt 15 Degree, f_M	0.45	
Left hand, Tilt 15 Degree, f_L	0.415	
Right hand, Touch cheek, f_H	0.964	
Right hand, Touch cheek, f_M	1.0	
Right hand, Touch cheek, f_L	1.03	
Right hand, Tilt 15 Degree, f_H	0.487	
Right hand, Tilt 15 Degree, f_M	0.479	
Right hand, Tilt 15 Degree, f_L	0.457	

So, the maximum SAR is

Phantom Configuration	Device Test Position	SAR(mW/g)		
		$f_L(\text{MHz})$	$f_M(\text{MHz})$	$f_H(\text{MHz})$
left Side	Cheek	---	---	1.07

Mode: WCDMA B4

$f_L(\text{MHz})=1712.4\text{MHz}$ $f_M(\text{MHz})=1732.4\text{MHz}$ $f_H(\text{MHz})= 1752.6\text{MHz}$

SAR Values (body, WCDMA B4)

Limit of SAR (W/kg)	1 g Average	
	1.6	
Test Case	Measurement Result (mW/g)	
	1 g Average	
Towards ground, 15mm spacer with headset	f_H	0.644
Towards ground, 15mm spacer with headset	f_M	0.758
Towards ground, 15mm spacer with headset	f_L	0.751
Towards phantom,15mm spacer with headset	f_M	0.738

So, the maximum SAR is

Phantom Configuration	Device Test Position	SAR(mW/g)		
		$f_L(\text{MHz})$	$f_M(\text{MHz})$	$f_H(\text{MHz})$
Towards ground	with headset 15mm spacer	---	0.758	---

7.2 Conducted power

Mode	GSM850(Head) Duty cycle: 1:8(12.5%)			GSM1900(Head) Duty cycle: 1:8(12.5%)		
Channel	128	189	251	512	661	810
Frequency(MHz)	824.2	836.4	848.8	1850.2	1880.0	1909.8
Measured Power(dBm)	33.28	33.29	33.26	30.07	30.20	30.22

GPRS/EDGE Measured Power

Mode	GPRS850			GPRS1900		
	EDGE850			EDGE1900		
Channel	128	189	251	512	661	810
Frequency(MHz)	824.2	836.4	848.8	1850.2	1880.0	1909.8
4Downlink1uplink Power(dBm)	33.28	33.24	33.25	30.00	30.13	30.18
	27.40	27.41	27.43	26.02	26.17	26.22
3Downlink2uplink Power(dBm)	31.18	31.14	31.16	27.52	27.64	27.73
	27.40	27.39	27.43	25.99	26.16	26.19
2Downlink3uplink Power(dBm)	30.26	30.25	30.29	26.80	26.92	26.99
	27.80	27.84	27.83	25.97	26.14	26.18
1Downlink4uplink Power(dBm)	27.85	27.86	27.88	24.46	24.56	24.62
	26.35	26.36	26.39	24.40	24.54	24.60

GPRS/EDGE Averaged Power

Mode	GPRS850			GPRS1900		
	EDGE850			EDGE1900		
Channel	128	189	251	512	661	810
Frequency(MHz)	824.2	836.4	848.8	1850.2	1880.0	1909.8
4Downlink1uplink	24.25	24.21	24.22	20.97	21.10	21.15
Power(dBm)	18.37	18.38	18.40	16.99	17.14	17.19
3Downlink2uplink	25.16	25.12	25.14	21.50	21.62	21.71
Power(dBm)	21.38	21.37	21.41	19.97	20.14	20.17
2Downlink3uplink	26.00	26.01	26.05	22.54	22.66	22.73
Power(dBm)	23.54	23.58	23.57	21.71	21.88	21.92
1Downlink4uplink	24.84	24.85	24.87	21.45	24.55	24.61
Power(dBm)	23.34	23.35	23.38	21.39	21.53	21.59

Division Factors(for Measured Power and Averaged Power):

To average the power, the division factor is as follows:

1TX-slot (4Downlink1uplink)= 1 transmit time slot out of 8 time slots=>

conducted power divided by (8/1) => -9.03dB

2TX-slots(3Downlink2uplink) = 2 transmit time slots out of 8 time slots=>

conducted power divided by (8/2) => -6.02dB

3TX-slots (2Downlink3uplink)= 3 transmit time slots out of 8 time slots=>

conducted power divided by (8/3) => -4.26dB

4TX-slots (1Downlink4uplink)= 4 transmit time slots out of 8 time slots=>

conducted power divided by (8/4) => -3.01dB

According to the conducted power as above, the body measurements are performed with 3Txslots(2Downlink3uplink) for GPRS and EGPRS.

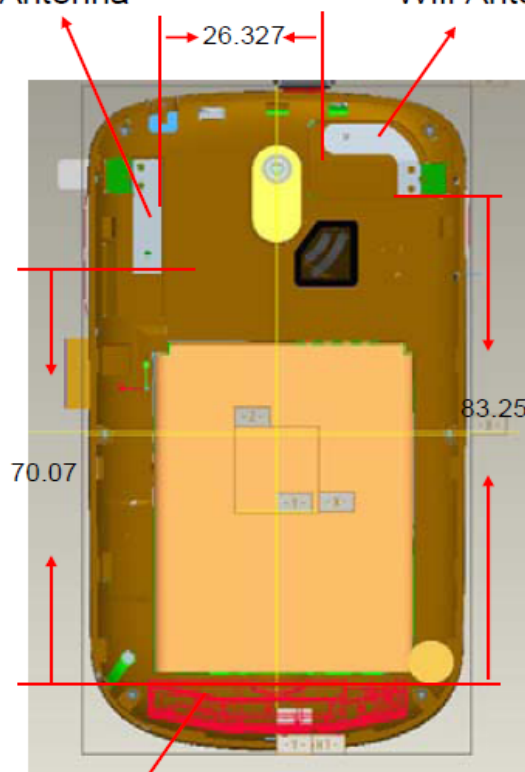
Duty cycle: 1 (100%)

Mode	WCDMA B4		
Channel	1312	1412	1513
Frequency(MHz)	1712.4	1732.4	1752.6
Measured Power(dBm)	23.12	23.06	22.63

7.3 Summary of Measurement Results (Bluetooth and WiFi function)

The distance between BT/WiFi antenna and RF antenna is $> 5\text{cm}$, the distance between BT antenna and WiFi antenna is $> 2.5\text{ cm}$ and $< 5\text{cm}$. The location of the antennas inside mobile phone is shown below:

BT Antenna Wifi Antenna



RF Antenna

The output power of BT antenna is as following:

Channel		Ch 0 2402 MHz	Ch 39 2441 Mhz	Ch 78 2480 MHz
Peak conducted Output power(dBm)	1Mbps/GFSK	9.54	8.90	8.79
	2Mbps/ π /4DQPSK	9.52	8.89	8.65
	3Mbps/8DPSK	9.53	8.89	8.68

The conducted output power of WIFI is as following:

802.11b (dBm)

Duty cycle: 1 (100%)

Channel\data rate	1Mbps	2Mbps	5.5Mbps	11Mbps
1	19.82	19.79	19.36	20.37
6	19.80	20.13	19.84	20.08
11	20.04	20.08	19.57	20.00

802.11g (dBm)

Duty cycle: 1 (100%)

Channel\data rate	6Mbps	9Mbps	12Mbps	18Mbps	24Mbps	36Mbps	48Mbps	54Mbps
1	22.20	22.26	22.25	22.24	22.22	22.25	22.28	22.60
6	22.37	22.41	22.38	22.48	22.47	22.35	22.53	22.39
11	20.15	22.22	22.09	22.24	22.38	22.06	22.15	22.22

Conducted output power threshold for Unlicensed transmitters:

Freq (GHz)	Pref (mW)
2.45	12

1.RF&WIFI

Antenna separation distance > 5cm

RF TX: Stand-alone SAR required

802.11b/g Tx: => Stand-alone SAR required ($P > 2 \times P_{ref}$)

2.BT& RF

Antenna separation distance > 5cm

RF TX: Standard-alone SAR required

BT TX: Standard-alone SAR not required ($P < 2 \times P_{ref}$)

No Simultaneous Transmission SAR(BT SAR=0W/kg)

3.BT&WIFI

Antenna separation distance >2.5 cm and < 5cm
802.11b/g TX: stand-alone SAR required($P > P_{ref}$)
BT TX: stand-alone SAR not required($P < P_{ref}$)
No Simultaneous Transmission (BT SAR=0W/kg)

According to the conducted power measurement result, we can draw the conclusion that: stand-alone SAR for WiFi should be performed. Then, simultaneous transmission SAR for WiFi is considered with measurement results of GSM and WiFi.

SAR is not required for 802.11g channels if the output power is less than 0.25dB higher than that measured on the corresponding 802.11b channels, and for each frequency band, testing at higher data rates and higher order modulations is not required when the maximum average output power for each of these configurations is less than 0.25dB higher than those measured at the lowest data rate. According to the above conducted power, the EUT should be tested for “802.11g, 54Mbps, channel 1”.

SAR Values (WIFI 802.11g - Head)

Limit of SAR (W/kg)	1 g Average
	1.6
Test Case	Measurement Result (W/kg)
	1 g Average
Left hand, Touch cheek, 54Mbps,channel 1	0.436
Left hand, Tilt 15 Degree, 54Mbps,channel 1	0.439
Right hand, Touch cheek, 54Mbps,channel 1	0.436
Right hand, Tilt 15 Degree, 54Mbps,channel 1	0.331

SAR Values (WIFI 802.11g - Body)

Limit of SAR (W/kg)	1 g Average
	1.6
Test Case	Measurement Result (W/kg)
	1 g Average
Toward Ground, 54Mbps,channel 1	0.135
Toward Phantom, 54Mbps,channel 1	0.0954

The sum of SAR values for GSM and WiFi

	MAXIMUM SAR VALUE FOR HEAD	MAXIMUM SAR VALUE FOR BODY
GSM	0.957	0.707
WiFi	0.439	0.135
Sum	1.396	0.842

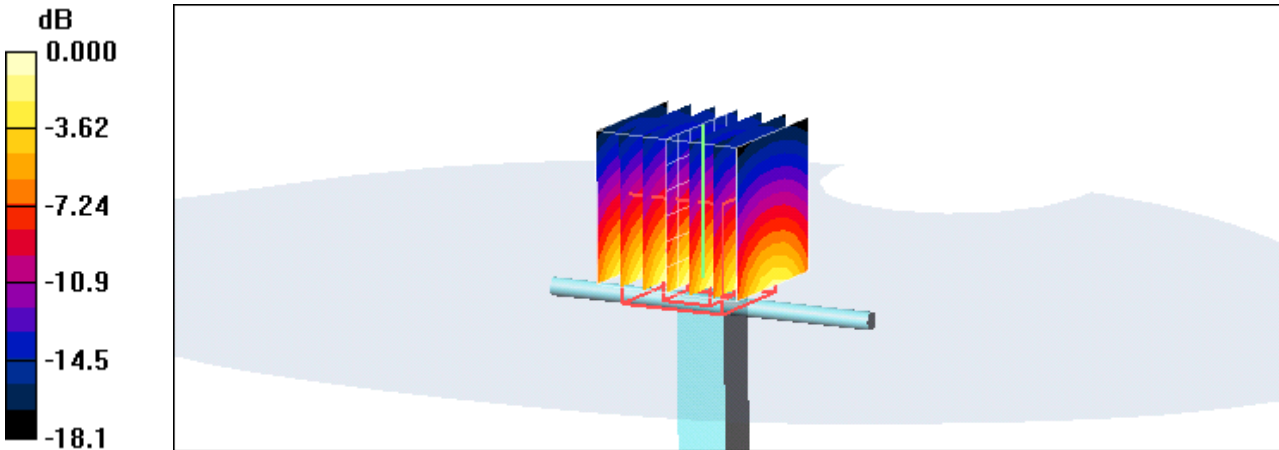
According to the above tables, the sum of SAR values for GSM and WiFi < 1.6W/kg. So simultaneous transmission SAR are not required for WiFi transmitter.

The sum of SAR values for WCDMA and WiFi

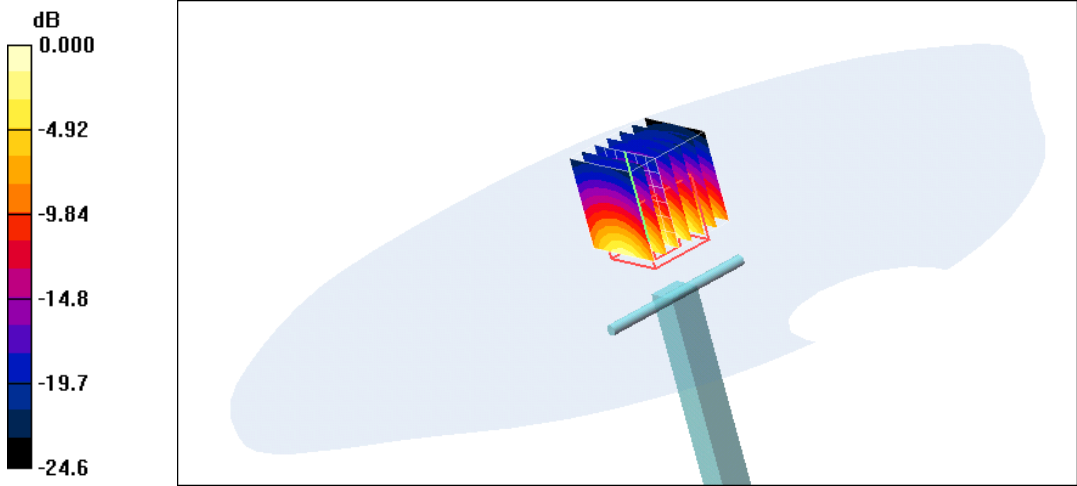
	MAXIMUM SAR VALUE FOR HEAD	MAXIMUM SAR VALUE FOR BODY
WCDMA	1.07	0.758
WiFi	0.439	0.135
Sum	1.509	0.893

According to the above tables, the sum of SAR values for WCDMA and WiFi < 1.6W/kg. So simultaneous transmission SAR are not required for WiFi transmitter.

APPENDIX A: SYSTEM CHECKING SCANS

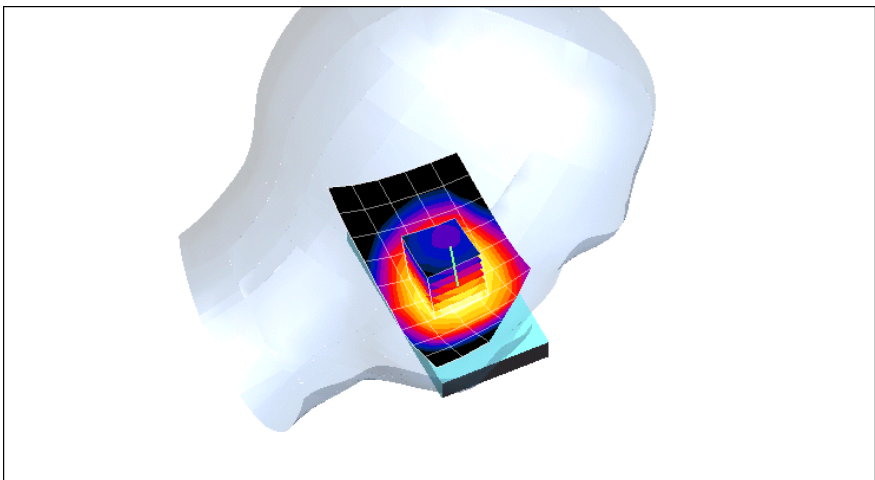
SYSTEM CHECKING SCANS	900MHz
DUT: Dipole 900 MHz; Type: D900V2; Serial: D900V2 - SN:171 Medium parameters used (interpolated): $f = 900 \text{ MHz}$; $\sigma = 0.95 \text{ mho/m}$; $\epsilon_r = 40.7$; $\rho = 1000 \text{ kg/m}^3$ DASY4 Configuration: - Probe: ES3DV3 - SN3128; ConvF(9.03, 9.53, 9.2); Calibrated: 6/22/2010 - Sensor-Surface: 4mm (Mechanical Surface Detection) - Electronics: DAE4 - SN720; Calibrated: 1/19/2011 - Phantom: SAM 1560; Type: SAM; Serial: 1560 - Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186 d=15mm, Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$ Reference Value = 56.3V/m; Power Drift = -0.047 dB Peak SAR (extrapolated) = 4.08 W/kg SAR(1 g) = 2.72 mW/g; SAR(10 g) = 1.62 mW/g Maximum value of SAR (measured) = 2.9 mW/g	
 0 dB = 2.9 mW/g	

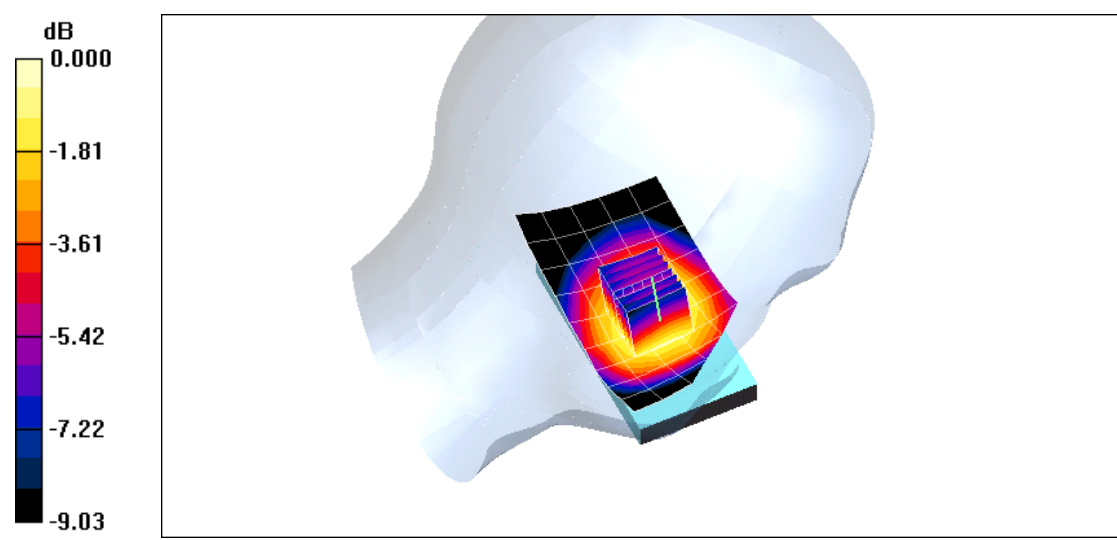
SYSTEM CHECKING SCANS	1800 MHz
DUT: Dipole 1800 MHz; Type: D1800V2; Serial: D1800V2 - SN:2d084 Program Name: System Performance Check at 1800 MHz Communication System: CW; Frequency: 1800 MHz;Duty Cycle: 1:1 Medium parameters used: $f = 1800 \text{ MHz}$; $\sigma = 1.35 \text{ mho/m}$; $\epsilon_r = 39.4$; $\rho = 1000 \text{ kg/m}^3$ Phantom section: Flat Section DASY4 Configuration: - Probe: ES3DV3 - SN3128; ConvF(6.15, 6.5, 6.27); Calibrated: 6/22/2010 - Sensor-Surface: 4mm (Mechanical Surface Detection) - Electronics: DAE4 - SN720; Calibrated: 1/19/2011 - Phantom: SAM 1559; Type: SAM; Serial: 1559 - Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186 d=10mm, Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 90.1 V/m; Power Drift = 0.030 dB Peak SAR (extrapolated) = 17.9 W/kg SAR(1 g) = 9.71 mW/g; SAR(10 g) = 5.08 mW/g Maximum value of SAR (measured) = 10.9 mW/g 0 dB = 10.9 mW/g	

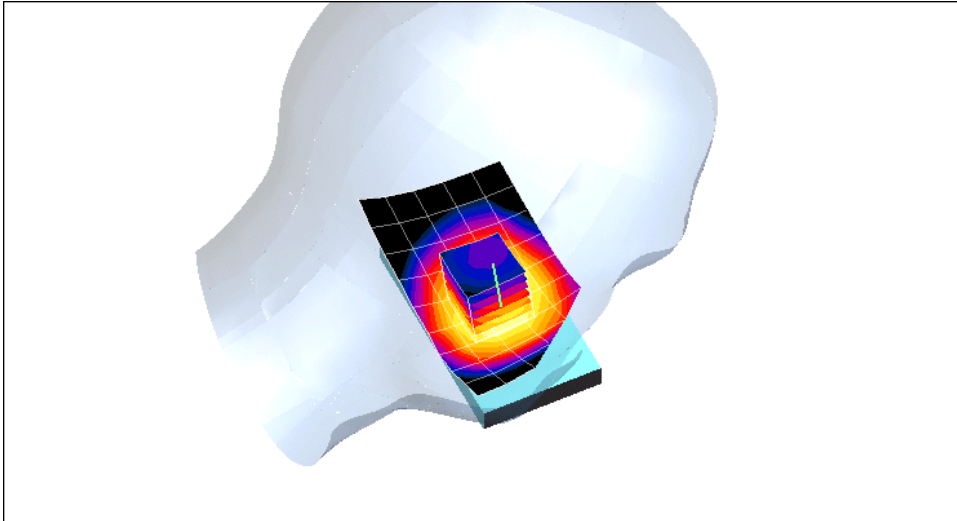
SYSTEM CHECKING SCANS	2450 MHz
DUT: Dipole 2450 MHz; Type: D2450V2; Serial: D2450V2 – SN:738 Program Name: System Performance Check at 1800MHz Communication System: CW; Frequency: 2450 MHz;Duty Cycle: 1:1 Medium parameters used (interpolated): $f = 2450 \text{ MHz}$; $\sigma = 1.88 \text{ mho/m}$; $\epsilon_r = 37.9$; $\rho = 1000 \text{ kg/m}^3$ Phantom section: Flat Section DASY4 Configuration: – Probe: SN3128-HSL2450; ConvF(3.308, 3.487, 3.402); Calibrated: 4/21/2011 – Sensor-Surface: 4mm (Mechanical Surface Detection) – Electronics: DAE – SN720; Calibrated: 1/19/2011 – Phantom: SAM 1559; Type: SAM; Serial: 1559 – Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186 d=10mm, Pin=250mW 3128 2/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 78.0 V/m; Power Drift = 0.070 dB Peak SAR (extrapolated) = 27.3 W/kg SAR(1 g) = 12.4 mW/g; SAR(10 g) = 5.52 mW/g Maximum value of SAR (measured) = 13.9 mW/g	
 0 dB = 13.9mW/g	

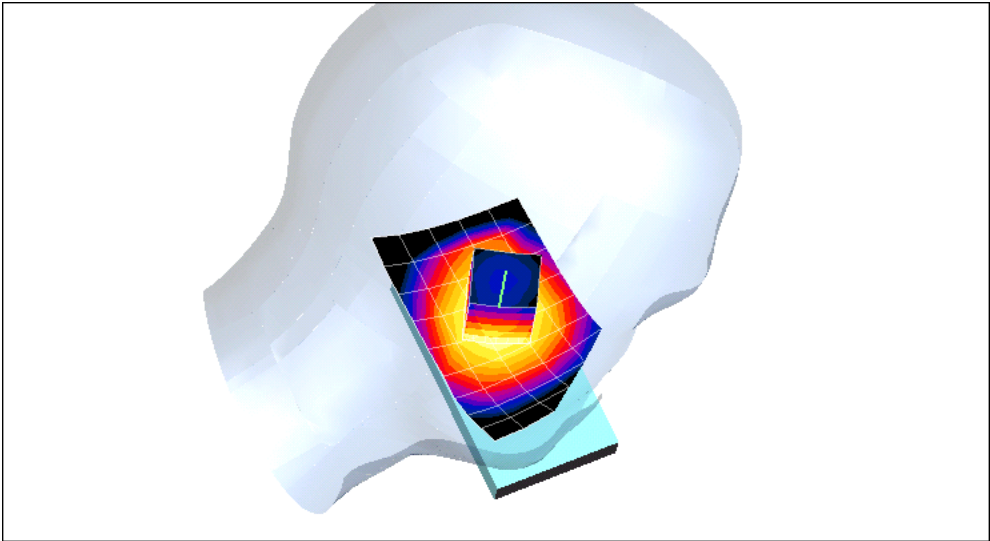
APPENDIX B: MEASUREMENT SCANS

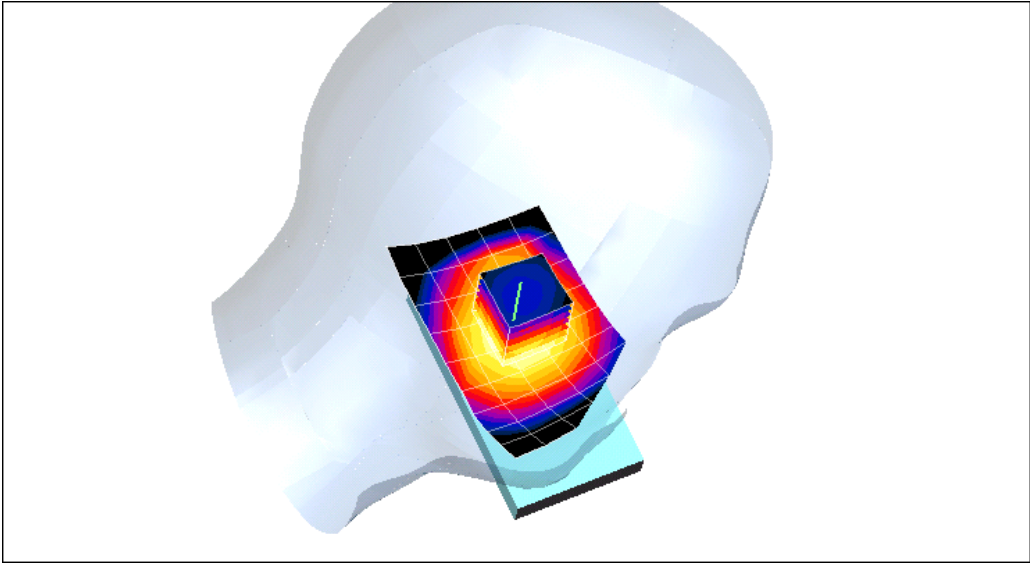
GSM (850MHz/Head)

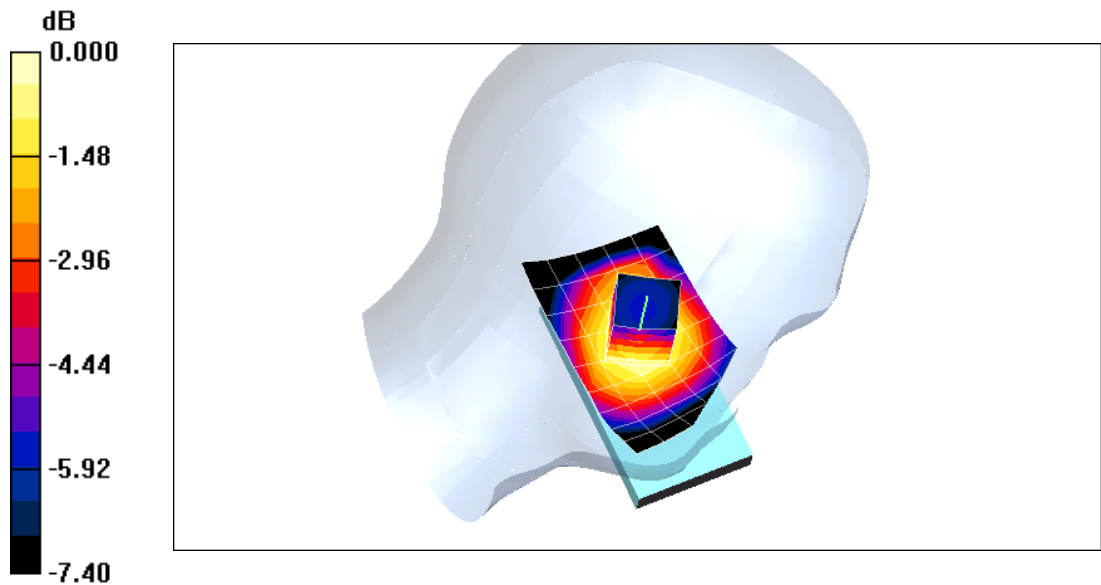
Left Side	Cheek	824.2 MHz
Communication System: GSM 850; Frequency: 824.2 MHz; Duty Cycle: 1:8.3 Medium parameters used (interpolated): $f = 824.2$ MHz; $\sigma = 0.887$ mho/m; $\epsilon_r = 41.8$; $\rho = 1000$ kg/m³ Phantom section: Left Section DASY4 Configuration: - Probe: ES3DV3 - SN3128; ConvF(7.88, 8.3, 8.05); Calibrated: 6/22/2010 - Sensor-Surface: 4mm (Mechanical Surface Detection) - Electronics: DAE - SN720; Calibrated: 1/26/2011 - Phantom: SAM 1560; Type: SAM; Serial: 1560 - Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186 Touch position - Low/Area Scan (6x10x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (measured) = 0.723 mW/g Touch position - Low/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 12.1 V/m; Power Drift = -0.138 dB Peak SAR (extrapolated) = 0.862 W/kg SAR(1 g) = 0.702 mW/g; SAR(10 g) = 0.532 mW/g Maximum value of SAR (measured) = 0.741 mW/g dB 0.000 -1.81 -3.61 -5.42 -7.22 -9.03  0 dB = 0.741 mW/g		

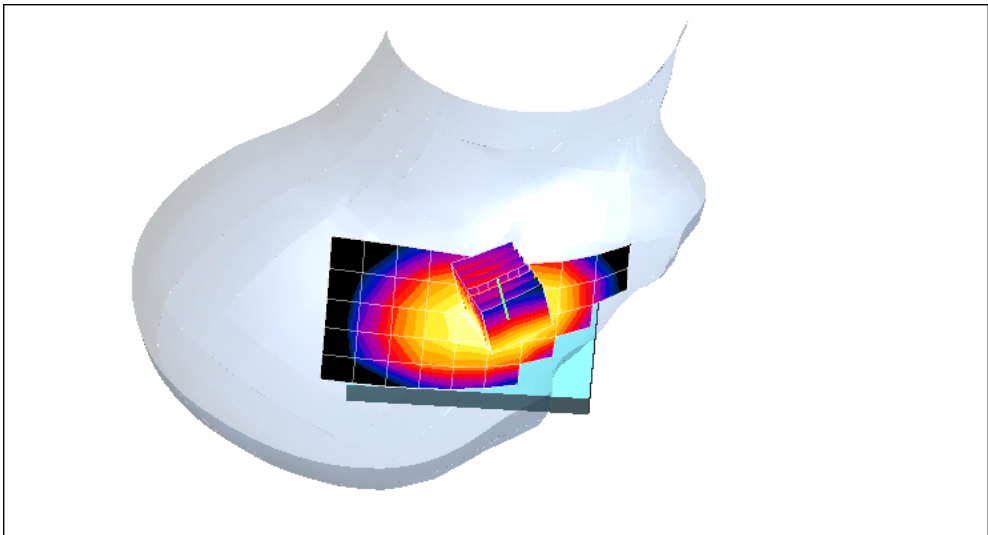
Left Side	Cheek	848.8 MHz
Communication System: GSM 850; Frequency: 848.8 MHz;Duty Cycle: 1:8.3 Medium parameters used (interpolated): $f = 848.8 \text{ MHz}$; $\sigma = 0.907 \text{ mho/m}$; $\epsilon_r = 41.6$; $\rho = 1000 \text{ kg/m}^3$ Phantom section: Left Section DASY4 Configuration: - Probe: ES3DV3 - SN3128; ConvF(7.88, 8.3, 8.05); Calibrated: 6/22/2010 - Sensor-Surface: 4mm (Mechanical Surface Detection) - Electronics: DAE - SN720; Calibrated: 1/26/2011 - Phantom: SAM 1560; Type: SAM; Serial: 1560 - Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186 Touch position - High/Area Scan (6x10x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$ Maximum value of SAR (measured) = 0.841 mW/g Touch position - High/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$ Reference Value = 13.2 V/m; Power Drift = -0.175 dB Peak SAR (extrapolated) = 1.03 W/kg SAR(1 g) = 0.830 mW/g; SAR(10 g) = 0.626 mW/g Maximum value of SAR (measured) = 0.870 mW/g  0 dB = 0.870mW/g		

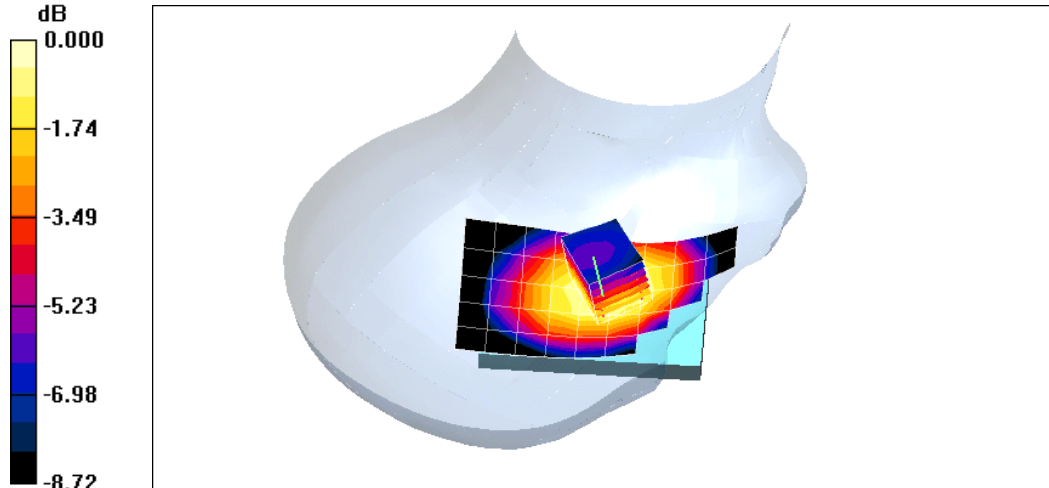
Left Side	Cheek	836.4 MHz
Communication System: GSM 850; Frequency: 836.4 MHz; Duty Cycle: 1:8.3 Medium parameters used (interpolated): $f = 836.4 \text{ MHz}$; $\sigma = 0.897 \text{ mho/m}$; $\epsilon_r = 41.6$; $\rho = 1000 \text{ kg/m}^3$ Phantom section: Left Section DASY4 Configuration: - Probe: ES3DV3 - SN3128; ConvF(7.88, 8.3, 8.05); Calibrated: 6/22/2010 - Sensor-Surface: 4mm (Mechanical Surface Detection) - Electronics: DAE - SN720; Calibrated: 1/26/2011 - Phantom: SAM 1560; Type: SAM; Serial: 1560 - Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186 Touch position - Middle/Area Scan (6x10x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (measured) = 0.787 mW/g Touch position - Middle/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 12.8 V/m; Power Drift = -0.142 dB Peak SAR (extrapolated) = 0.942 W/kg SAR(1 g) = 0.767 mW/g; SAR(10 g) = 0.582 mW/g Maximum value of SAR (measured) = 0.808 mW/g  0 dB = 0.808mW/g		

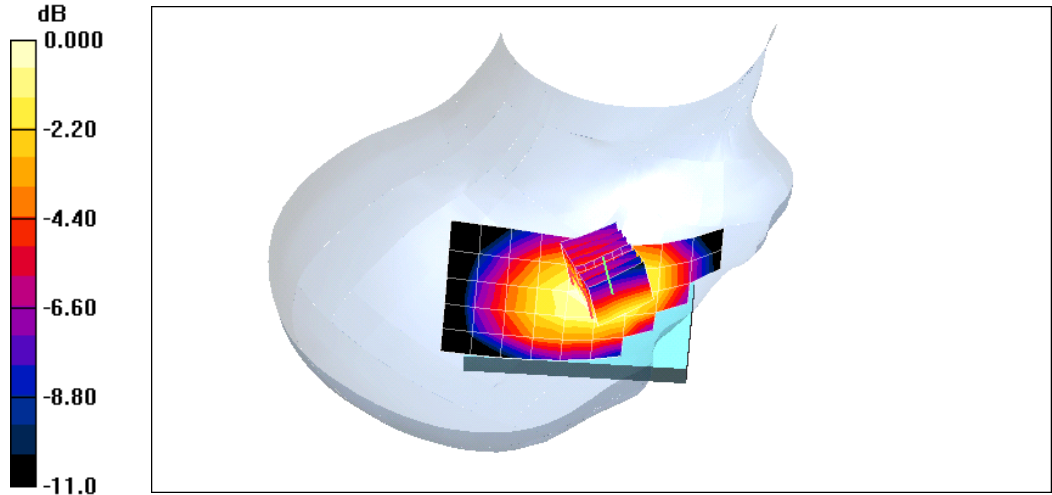
Left Side	Tilt	848.8MHz
Communication System: GSM 850; Frequency: 848.8 MHz;Duty Cycle: 1:8.3 Medium parameters used (interpolated): $f = 848.8 \text{ MHz}$; $\sigma = 0.907 \text{ mho/m}$; $\epsilon_r = 41.6$; $\rho = 1000 \text{ kg/m}^3$ Phantom section: Left Section DASY4 Configuration: - Probe: ES3DV3 - SN3128; ConvF(7.88, 8.3, 8.05); Calibrated: 6/22/2010 - Sensor-Surface: 4mm (Mechanical Surface Detection) - Electronics: DAE - SN720; Calibrated: 1/26/2011 - Phantom: SAM 1560; Type: SAM; Serial: 1560 - Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186 Tilt position - High/Area Scan (6x10x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (measured) = 0.410 mW/g Tilt position - High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 16.5 V/m; Power Drift = -0.029 dB Peak SAR (extrapolated) = 0.522 W/kg SAR(1 g) = 0.418 mW/g; SAR(10 g) = 0.318 mW/g Maximum value of SAR (measured) = 0.437 mW/g  0 dB =0.437mW/g		

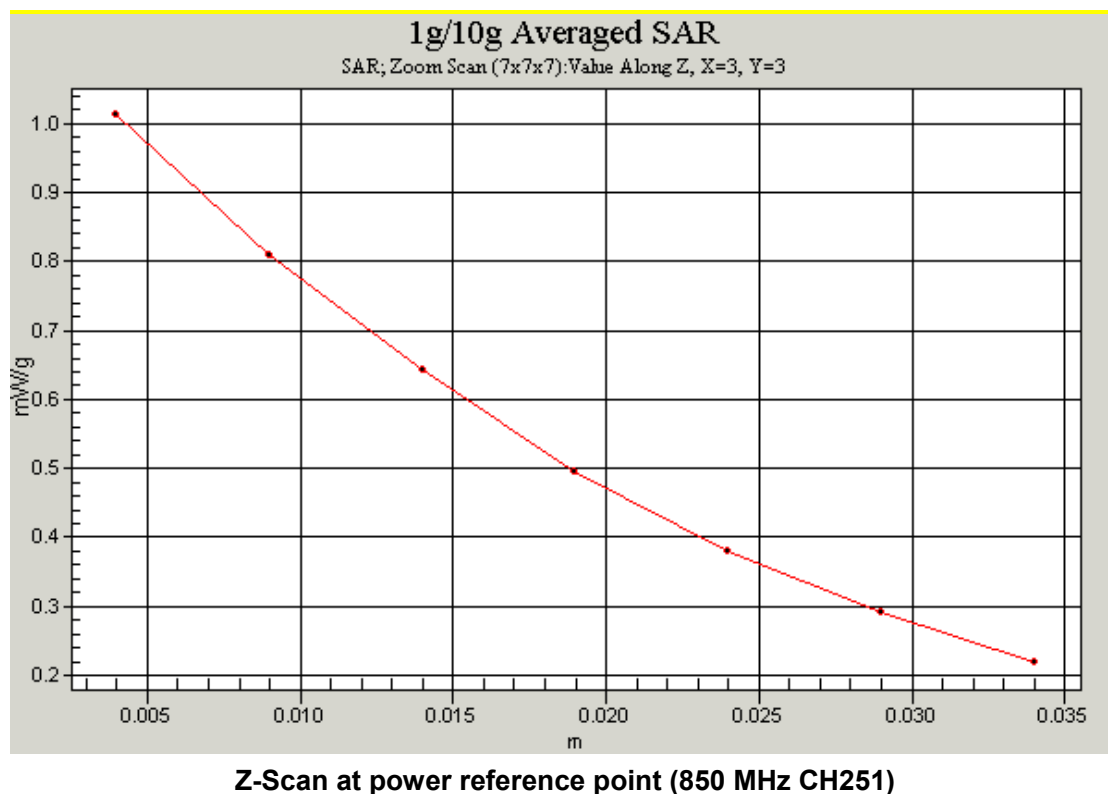
Left Side	Tilt	836.4 MHz
Communication System: GSM 850; Frequency: 836.4 MHz; Duty Cycle: 1:8.3 Medium parameters used (interpolated): $f = 836.4 \text{ MHz}$; $\sigma = 0.897 \text{ mho/m}$; $\epsilon_r = 41.6$; $\rho = 1000 \text{ kg/m}^3$ Phantom section: Left Section DASY4 Configuration: - Probe: ES3DV3 - SN3128; ConvF(7.88, 8.3, 8.05); Calibrated: 6/22/2010 - Sensor-Surface: 4mm (Mechanical Surface Detection) - Electronics: DAE - SN720; Calibrated: 1/26/2011 - Phantom: SAM 1560; Type: SAM; Serial: 1560 - Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186 Tilt position - Middle/Area Scan (6x10x1): Measurement grid: dx=15mm, dy=15mm. Maximum value of SAR (measured) = 0.395 mW/g Tilt position - Middle/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 16.5 V/m; Power Drift = -0.110 dB Peak SAR (extrapolated) = 0.485 W/kg SAR(1 g) = 0.392 mW/g; SAR(10 g) = 0.302 mW/g Maximum value of SAR (measured) = 0.409 mW/g  0 dB = 0.409 mW/g		

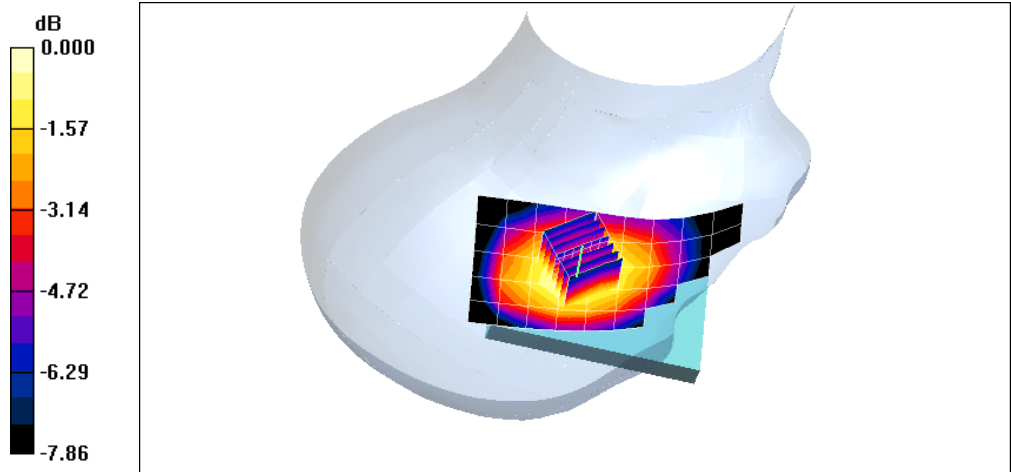
Left Side	Tilt	824.2 MHz
Communication System: GSM 850; Frequency: 824.2 MHz;Duty Cycle: 1:8.3 Medium parameters used (interpolated): $f = 824.2 \text{ MHz}$; $\sigma = 0.887 \text{ mho/m}$; $\epsilon_r = 41.8$; $\rho = 1000 \text{ kg/m}^3$ Phantom section: Left Section DASY4 Configuration: - Probe: ES3DV3 - SN3128; ConvF(7.88, 8.3, 8.05); Calibrated: 6/22/2010 - Sensor-Surface: 4mm (Mechanical Surface Detection) - Electronics: DAE - SN720; Calibrated: 1/26/2011 - Phantom: SAM 1560; Type: SAM; Serial: 1560 - Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186 Tilt position - Low/Area Scan (6x10x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (measured) = 0.341 mW/g Tilt position - Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 15.4 V/m; Power Drift = -0.132 dB Peak SAR (extrapolated) = 0.426 W/kg SAR(1 g) = 0.342 mW/g; SAR(10 g) = 0.266 mW/g Maximum value of SAR (measured) = 0.358 mW/g 		

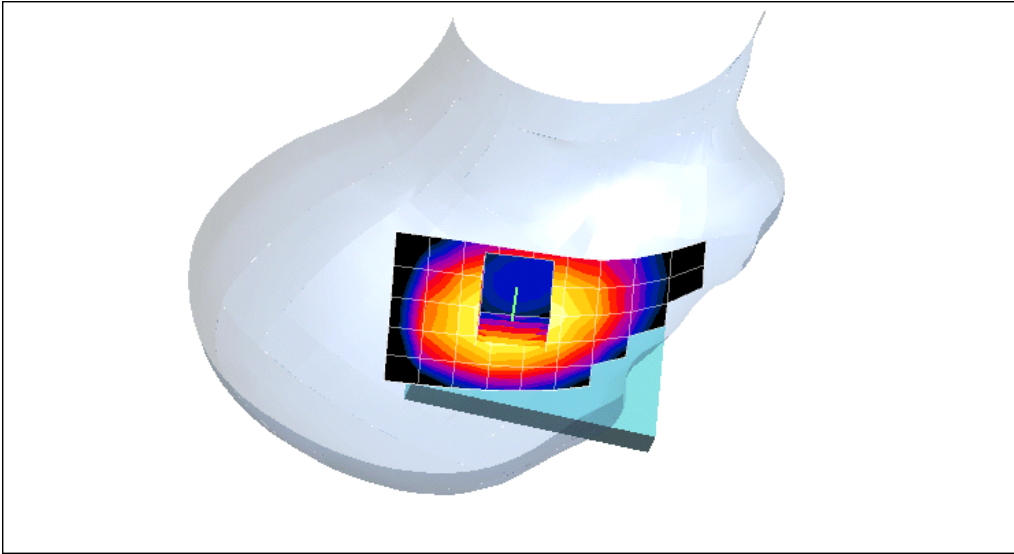
Right Side	Cheek	824.2 MHz
Communication System: GSM 850; Frequency: 824.2 MHz;Duty Cycle: 1:8.3 Medium parameters used (interpolated): $f = 824.2 \text{ MHz}$; $\sigma = 0.887 \text{ mho/m}$; $\epsilon_r = 41.8$; $\rho = 1000 \text{ kg/m}^3$ Phantom section: Right Section DASY4 Configuration: - Probe: ES3DV3 - SN3128; ConvF(7.88, 8.3, 8.05); Calibrated: 6/22/2010 - Sensor-Surface: 4mm (Mechanical Surface Detection) - Electronics: DAE - SN720; Calibrated: 1/26/2011 - Phantom: SAM 1560; Type: SAM; Serial: 1560 - Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186 Touch position - Low/Area Scan (6x10x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$ Maximum value of SAR (measured) = 0.850 mW/g Touch position - Low/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$ Reference Value = 15.5 V/m; Power Drift = -0.176 dB Peak SAR (extrapolated) = 0.991 W/kg SAR(1 g) = 0.822 mW/g; SAR(10 g) = 0.626 mW/g Maximum value of SAR (measured) = 0.867 mW/g dB 0.000 -2.08 -4.16 -6.24 -8.32 -10.4  0 dB = 0.867mW/g		

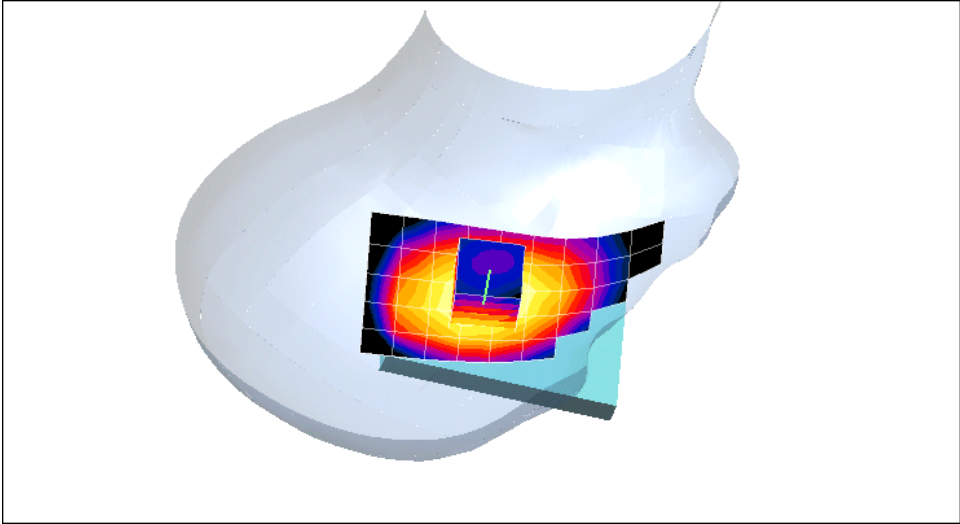
Right Side	Cheek	836.4 MHz
Communication System: GSM 850; Frequency: 836.4 MHz;Duty Cycle: 1:8.3 Medium parameters used (interpolated): $f = 836.4 \text{ MHz}$; $\sigma = 0.897 \text{ mho/m}$; $\epsilon_r = 41.6$; $\rho = 1000 \text{ kg/m}^3$ Phantom section: Right Section DASY4 Configuration: - Probe: ES3DV3 - SN3128; ConvF(7.88, 8.3, 8.05); Calibrated: 6/22/2010 - Sensor-Surface: 4mm (Mechanical Surface Detection) - Electronics: DAE - SN720; Calibrated: 1/26/2011 - Phantom: SAM 1560; Type: SAM; Serial: 1560 - Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186 Touch position - Middle/Area Scan (6x10x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (measured) = 0.908 mW/g Touch position - Middle/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 18.1 V/m; Power Drift = -0.214 dB Peak SAR (extrapolated) = 1.04 W/kg SAR(1 g) = 0.859 mW/g; SAR(10 g) = 0.659 mW/g  0 dB = 0.908mW/g		

Right Side	Cheek	848.8 MHz
Communication System: GSM 850; Frequency: 848.8 MHz; Duty Cycle: 1:8.3 Medium parameters used (interpolated): $f = 848.8 \text{ MHz}$; $\sigma = 0.907 \text{ mho/m}$; $\epsilon_r = 41.6$; $\rho = 1000 \text{ kg/m}^3$ Phantom section: Right Section DASY4 Configuration: - Probe: ES3DV3 - SN3128; ConvF(7.88, 8.3, 8.05); Calibrated: 6/22/2010 - Sensor-Surface: 4mm (Mechanical Surface Detection) - Electronics: DAE - SN720; Calibrated: 1/26/2011 - Phantom: SAM 1560; Type: SAM; Serial: 1560 - Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186 Touch position - High/Area Scan (6x10x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (measured) = 0.986 mW/g Touch position - High/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 16.2 V/m; Power Drift = -0.036 dB Peak SAR (extrapolated) = 1.18 W/kg SAR(1 g) = 0.957 mW/g; SAR(10 g) = 0.722 mW/g Maximum value of SAR (measured) = 1.01 mW/g  0 dB = 1.01mW/g		

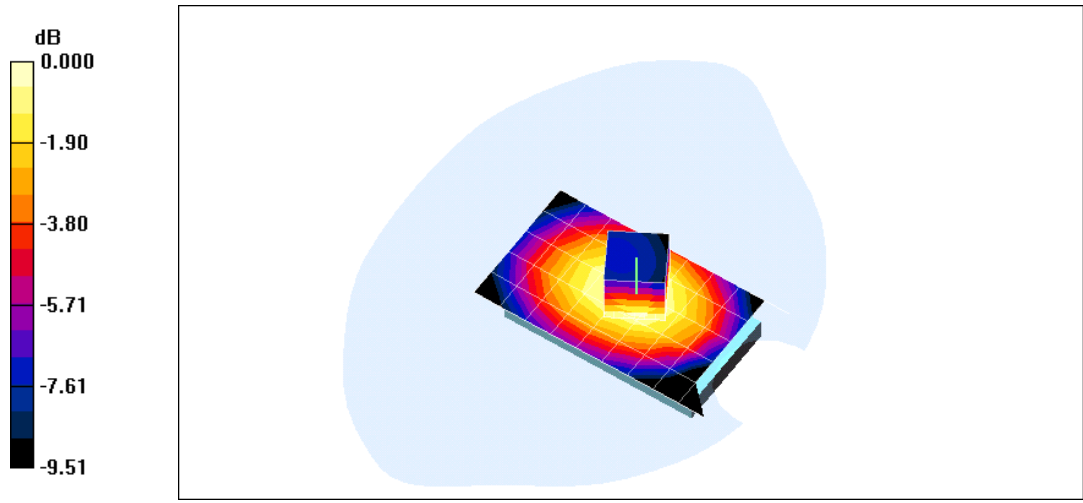


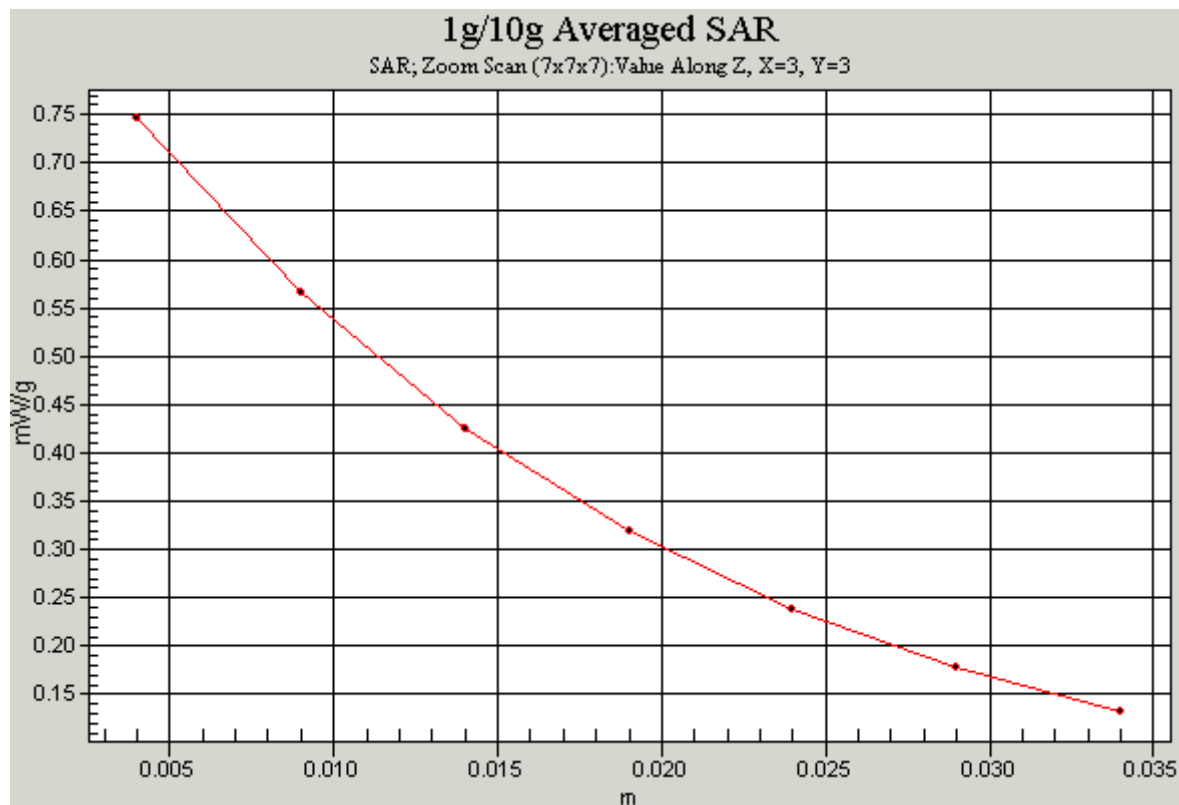
Right Side	Tilt	836.4MHz
Communication System: GSM 850; Frequency: 836.4 MHz;Duty Cycle: 1:8.3 Medium parameters used (interpolated): $f = 836.4 \text{ MHz}$; $\sigma = 0.897 \text{ mho/m}$; $\epsilon_r = 41.6$; $\rho = 1000 \text{ kg/m}^3$ Phantom section: Right Section DASY4 Configuration: - Probe: ES3DV3 - SN3128; ConvF(7.88, 8.3, 8.05); Calibrated: 6/22/2010 - Sensor-Surface: 4mm (Mechanical Surface Detection) - Electronics: DAE - SN720; Calibrated: 1/26/2011 - Phantom: SAM 1560; Type: SAM; Serial: 1560 - Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186 Tilt position - Middle/Area Scan (6x10x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (measured) = 0.520 mW/g Tilt position - Middle/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 19.5 V/m; Power Drift = -0.095 dB Peak SAR (extrapolated) = 0.648 W/kg SAR(1 g) = 0.521 mW/g; SAR(10 g) = 0.396 mW/g Maximum value of SAR (measured) = 0.546 mW/g  0 dB = 0.546 mW/g		

Right Side	Tilt	848.8MHz
Communication System: GSM 850; Frequency: 848.8 MHz;Duty Cycle: 1:8.3 Medium parameters used (interpolated): $f = 848.8 \text{ MHz}$; $\sigma = 0.907 \text{ mho/m}$; $\epsilon_r = 41.6$; $\rho = 1000 \text{ kg/m}^3$ Phantom section: Right Section DASY4 Configuration: - Probe: ES3DV3 - SN3128; ConvF(7.88, 8.3, 8.05); Calibrated: 6/22/2010 - Sensor-Surface: 4mm (Mechanical Surface Detection) - Electronics: DAE - SN720; Calibrated: 1/26/2011 - Phantom: SAM 1560; Type: SAM; Serial: 1560 - Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186 Tilt position - High/Area Scan (6x10x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (measured) = 0.521 mW/g Tilt position - High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 18.7 V/m; Power Drift = 0.149 dB Peak SAR (extrapolated) = 0.662 W/kg SAR(1 g) = 0.524 mW/g; SAR(10 g) = 0.397 mW/g Maximum value of SAR (measured) = 0.553 mW/g  0 dB = 0.553 mW/g		

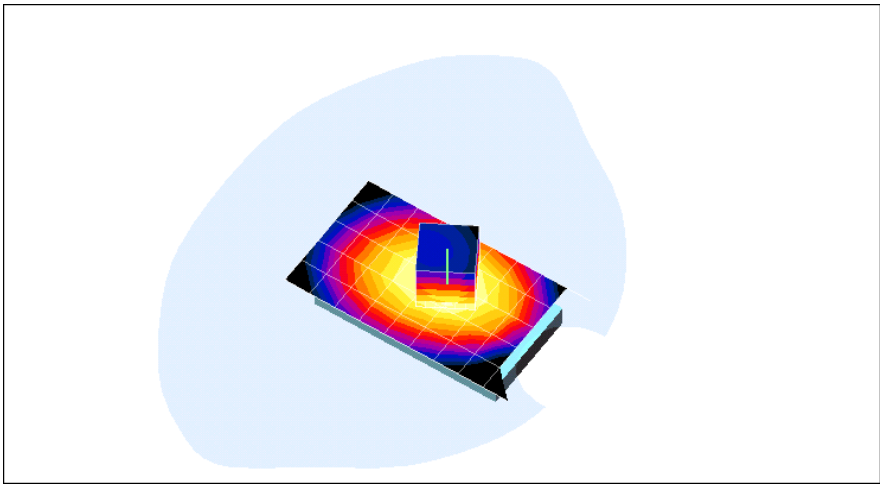
Right Side	Tilt	824.2MHz
Communication System: GSM 850; Frequency: 824.2 MHz;Duty Cycle: 1:8.3 Medium parameters used (interpolated): $f = 824.2 \text{ MHz}$; $\sigma = 0.887 \text{ mho/m}$; $\epsilon_r = 41.8$; $\rho = 1000 \text{ kg/m}^3$ Phantom section: Right Section DASY4 Configuration: - Probe: ES3DV3 - SN3128; ConvF(7.88, 8.3, 8.05); Calibrated: 6/22/2010 - Sensor-Surface: 4mm (Mechanical Surface Detection) - Electronics: DAE - SN720; Calibrated: 1/26/2011 - Phantom: SAM 1560; Type: SAM; Serial: 1560 - Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186 Tilt position - Low/Area Scan (6x10x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (measured) = 0.451 mW/g Tilt position - Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 18.2 V/m; Power Drift = -0.033 dB Peak SAR (extrapolated) = 0.566 W/kg SAR(1 g) = 0.456 mW/g; SAR(10 g) = 0.351 mW/g Maximum value of SAR (measured) = 0.478 mW/g  0 dB = 0.478mW/g		

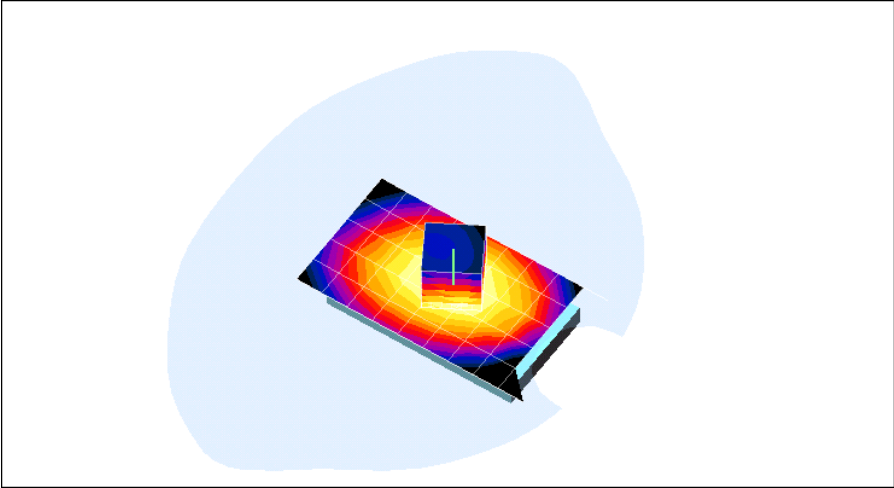
GSM with headset (850MHz/Flat)

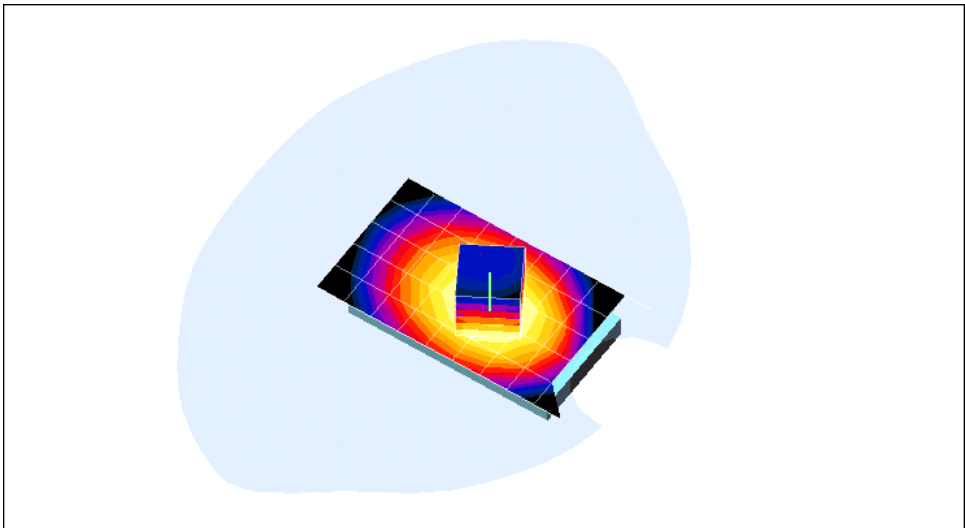
FLAT	Towards ground	836.4 MHz
Communication System: GSM 850; Frequency: 836.4 MHz; Duty Cycle: 1:8.3 Medium parameters used: $f = 836.41 \text{ MHz}$; $\sigma = 0.96 \text{ mho/m}$; $\epsilon_r = 55.9$; $\rho = 1000 \text{ kg/m}^3$ Phantom section: Flat Section DASY4 Configuration: - Probe: ES3DV3 - SN3128; ConvF(6.78, 7.02, 6.8); Calibrated: 6/22/2010 - Sensor-Surface: 4mm (Mechanical Surface Detection) - Electronics: DAE - SN720; Calibrated: 1/19/2011 - Phantom: SAM 1560; Type: SAM; Serial: 1560 - Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186 Towards ground - Middle/Area Scan (6x10x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (measured) = 0.734 mW/g Towards ground - Middle/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 26.1 V/m; Power Drift = -0.061 dB Peak SAR (extrapolated) = 0.919 W/kg SAR(1 g) = 0.707 mW/g; SAR(10 g) = 0.517 mW/g Maximum value of SAR (measured) = 0.746 mW/g  0 dB = 0.746 mW/g		



Z-Scan at power reference point (850 MHz CH189)

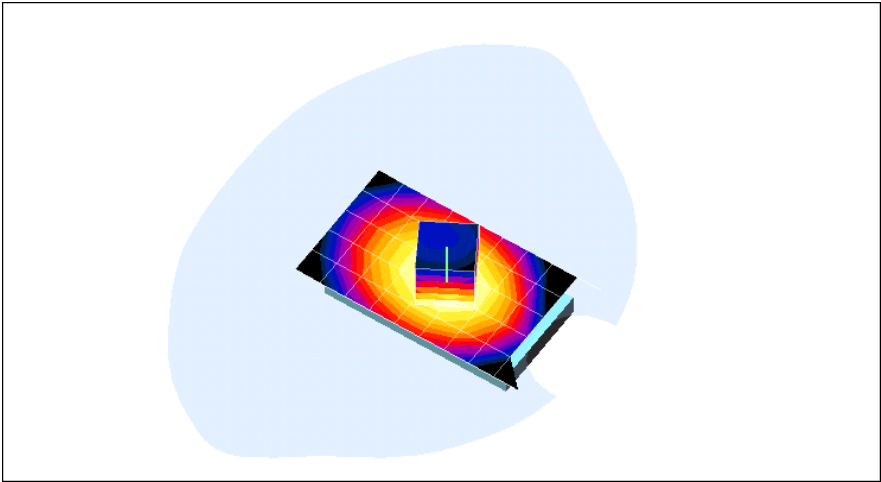
FLAT	Towards ground	824.2 MHz
Communication System: GSM 850; Frequency: 824.2 MHz; Duty Cycle: 1:8.3 Medium parameters used (interpolated): $f = 824.2 \text{ MHz}$; $\sigma = 0.95 \text{ mho/m}$; $\epsilon_r = 56$; $\rho = 1000 \text{ kg/m}^3$ Phantom section: Flat Section DASY4 Configuration: - Probe: ES3DV3 - SN3128; ConvF(6.78, 7.02, 6.8); Calibrated: 6/22/2010 - Sensor-Surface: 4mm (Mechanical Surface Detection) - Electronics: DAE - SN720; Calibrated: 1/19/2011 - Phantom: SAM 1560; Type: SAM; Serial: 1560 - Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186 Towards ground - Low/Area Scan (6x10x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$ Maximum value of SAR (measured) = 0.686 mW/g Towards ground - Low/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$ Reference Value = 24.8 V/m; Power Drift = -0.151 dB Peak SAR (extrapolated) = 0.851 W/kg SAR(1 g) = 0.657 mW/g; SAR(10 g) = 0.480 mW/g Maximum value of SAR (measured) = 0.693 mW/g dB 0.000 -1.91 -3.81 -5.72 -7.62 -9.53  0 dB = 0.693 mW/g		

FLAT	Towards ground	848.8MHz
Communication System: GSM 850; Frequency: 848.8 MHz;Duty Cycle: 1:8.3 Medium parameters used (interpolated): $f = 848.8 \text{ MHz}$; $\sigma = 0.969 \text{ mho/m}$; $\epsilon_r = 55.8$; $\rho = 1000 \text{ kg/m}^3$ Phantom section: Flat Section DASY4 Configuration: - Probe: ES3DV3 - SN3128; ConvF(6.78, 7.02, 6.8); Calibrated: 6/22/2010 - Sensor-Surface: 4mm (Mechanical Surface Detection) - Electronics: DAE - SN720; Calibrated: 1/19/2011 - Phantom: SAM 1560; Type: SAM; Serial: 1560 - Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186 Towards ground - High/Area Scan (6x10x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (measured) = 0.625 mW/g Towards ground - High/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 24.2 V/m; Power Drift = -0.041 dB Peak SAR (extrapolated) = 0.780 W/kg SAR(1 g) = 0.606 mW/g; SAR(10 g) = 0.443 mW/g Maximum value of SAR (measured) = 0.639 mW/g dB 0.000 -1.88 -3.77 -5.65 -7.54 -9.42  0 dB =0.639 mW/g		

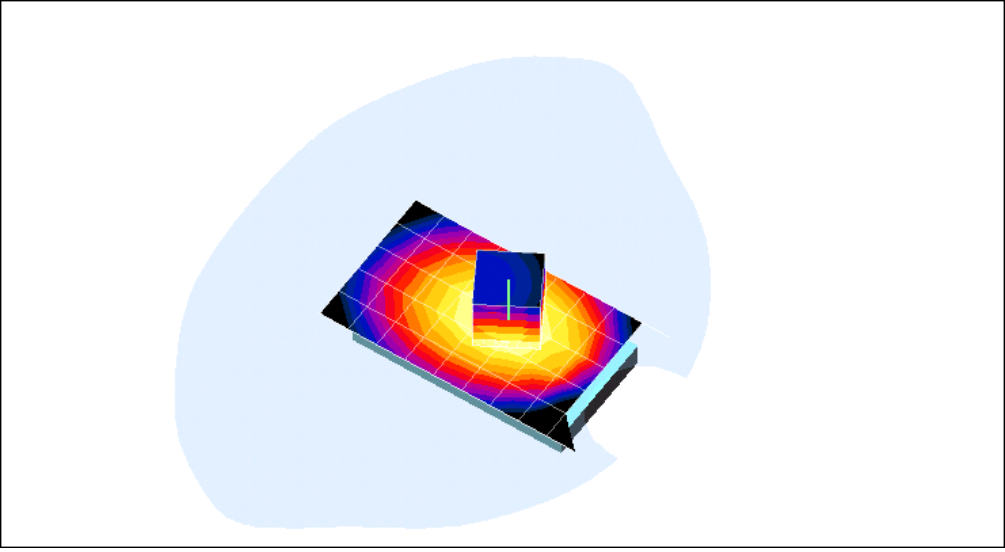
FLAT	Towards phantom	836.4 MHz
Communication System: GSM 850; Frequency: 836.4 MHz; Duty Cycle: 1:8.3 Medium parameters used: $f = 836.41 \text{ MHz}$; $\sigma = 0.96 \text{ mho/m}$; $\epsilon_r = 55.9$; $\rho = 1000 \text{ kg/m}^3$ Phantom section: Flat Section DASY4 Configuration: - Probe: ES3DV3 - SN3128; ConvF(6.78, 7.02, 6.8); Calibrated: 6/22/2010 - Sensor-Surface: 4mm (Mechanical Surface Detection) - Electronics: DAE - SN720; Calibrated: 1/19/2011 - Phantom: SAM 1560; Type: SAM; Serial: 1560 - Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186 Towards plantom - Middle/Area Scan (6x10x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$ Maximum value of SAR (measured) = 0.638 mW/g Towards plantom - Middle/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$ Reference Value = 22.3 V/m; Power Drift = -0.048 dB Peak SAR (extrapolated) = 0.794 W/kg SAR(1 g) = 0.613 mW/g; SAR(10 g) = 0.449 mW/g Maximum value of SAR (measured) = 0.650 mW/g dB 0.000 -1.99 -3.98 -5.97 -7.96 -9.95  0 dB = 0.650 mW/g		

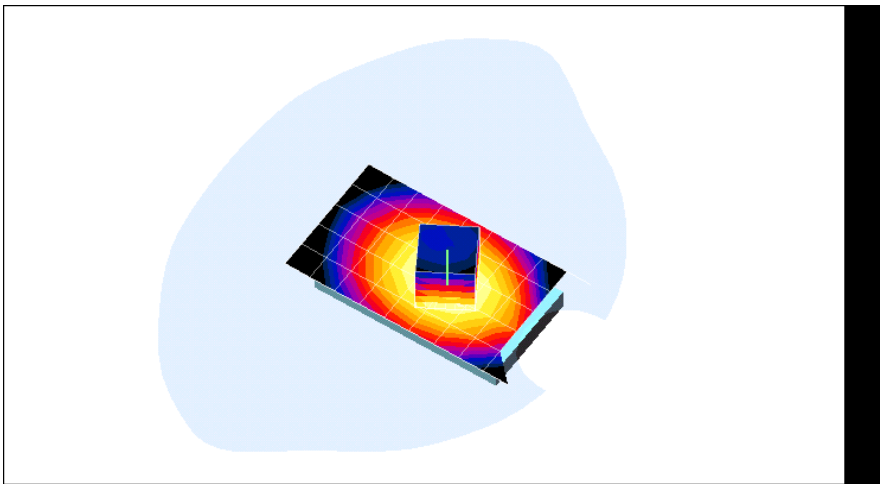
GSM (850MHz with GPRS/Flat)

FLAT	Towards ground	836.4 MHz
Communication System: GSM 850; Frequency: 836.4 MHz; Duty Cycle: 1:8.3 Medium parameters used: $f = 836.41 \text{ MHz}$; $\sigma = 0.96 \text{ mho/m}$; $\epsilon_r = 55.9$; $\rho = 1000 \text{ kg/m}^3$ Phantom section: Flat Section DASY4 Configuration: - Probe: ES3DV3 - SN3128; ConvF(6.78, 7.02, 6.8); Calibrated: 6/22/2010 - Sensor-Surface: 4mm (Mechanical Surface Detection) - Electronics: DAE - SN720; Calibrated: 1/19/2011 - Phantom: SAM 1560; Type: SAM; Serial: 1560 - Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186 Towards ground - Middle GPRS/Area Scan (6x10x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$ Maximum value of SAR (measured) = 0.573 mW/g Towards ground - Middle GPRS/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$ Reference Value = 21.3 V/m; Power Drift = -0.037 dB Peak SAR (extrapolated) = 0.705 W/kg SAR(1 g) = 0.540 mW/g; SAR(10 g) = 0.391 mW/g Maximum value of SAR (measured) = 0.568 mW/g dB 0.000 -1.99 -3.97 -5.96 -7.94 -9.93 0 dB = 0.568mW/g		

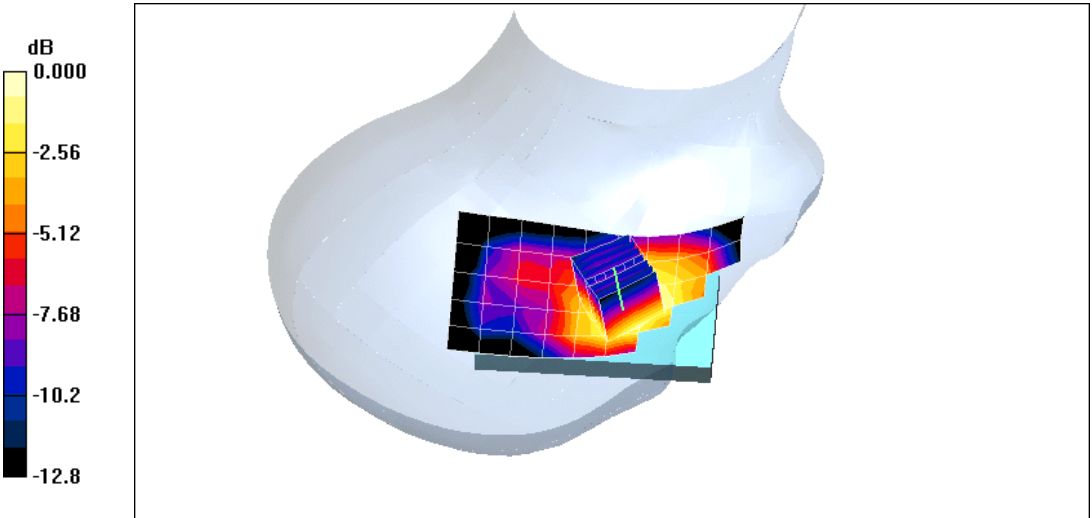
FLAT	Towards phantom	836.4 MHz
Communication System: GSM 850; Frequency: 836.4 MHz; Duty Cycle: 1:8.3 Medium parameters used: $f = 836.41 \text{ MHz}$; $\sigma = 0.96 \text{ mho/m}$; $\epsilon_r = 55.9$; $\rho = 1000 \text{ kg/m}^3$ Phantom section: Flat Section DASY4 Configuration: - Probe: ES3DV3 - SN3128; ConvF(6.78, 7.02, 6.8); Calibrated: 6/22/2010 - Sensor-Surface: 4mm (Mechanical Surface Detection) - Electronics: DAE - SN720; Calibrated: 1/19/2011 - Phantom: SAM 1560; Type: SAM; Serial: 1560 - Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186 Towards phantom - Middle GPRS/Area Scan (6x10x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$ Maximum value of SAR (measured) = 0.482 mW/g Towards phantom - Middle GPRS/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$ Reference Value = 21.2 V/m; Power Drift = 0.013 dB Peak SAR (extrapolated) = 0.606 W/kg SAR(1 g) = 0.479 mW/g; SAR(10 g) = 0.355 mW/g Maximum value of SAR (measured) = 0.504 mW/g dB 0.000 -1.85 -3.70 -5.54 -7.39 -9.24  0 dB = 0.504 mW/g		

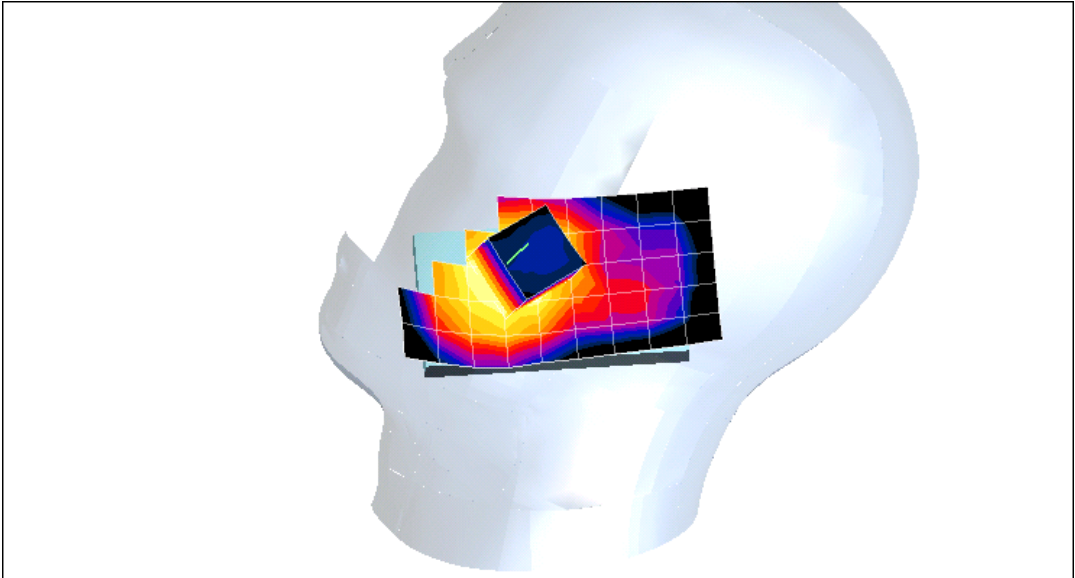
GSM (850MHz with EGPRS/Flat)

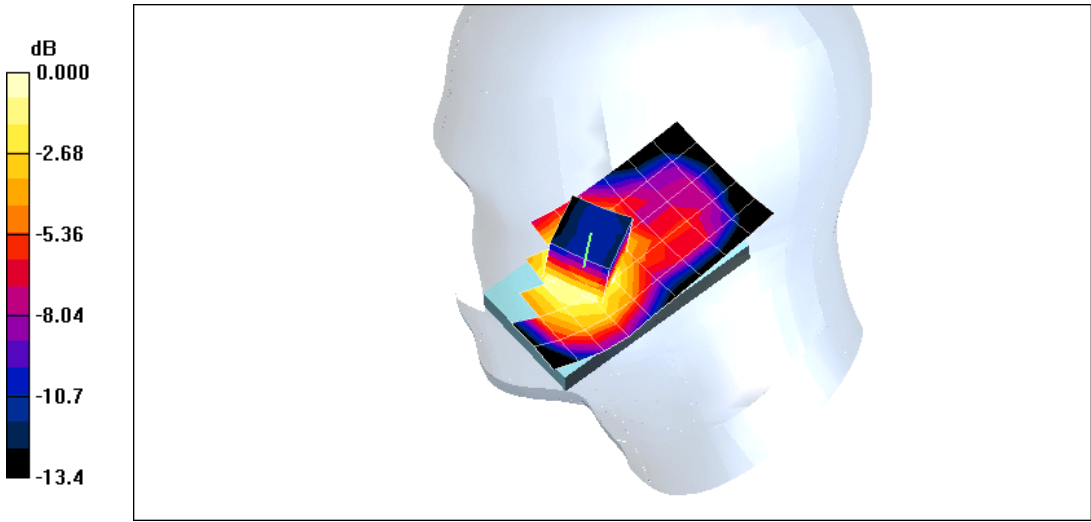
FLAT	Towards ground	836.4 MHz
Communication System: GSM 850; Frequency: 836.4 MHz; Duty Cycle: 1:8.3 Medium parameters used: $f = 836.41 \text{ MHz}$; $\sigma = 0.96 \text{ mho/m}$; $\epsilon_r = 55.9$; $\rho = 1000 \text{ kg/m}^3$ Phantom section: Flat Section DASY4 Configuration: - Probe: ES3DV3 - SN3128; ConvF(6.78, 7.02, 6.8); Calibrated: 6/22/2010 - Sensor-Surface: 4mm (Mechanical Surface Detection) - Electronics: DAE - SN720; Calibrated: 1/19/2011 - Phantom: SAM 1560; Type: SAM; Serial: 1560 - Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186 Towards ground - Middle EDGE/Area Scan (6x10x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$ Maximum value of SAR (measured) = 0.150 mW/g Towards ground - Middle EDGE/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$ Reference Value = 11.0 V/m; Power Drift = 0.028 dB Peak SAR (extrapolated) = 0.192 W/kg SAR(1 g) = 0.143 mW/g; SAR(10 g) = 0.103 mW/g Maximum value of SAR (measured) = 0.153 mW/g  0 dB = 0.153mW/g		

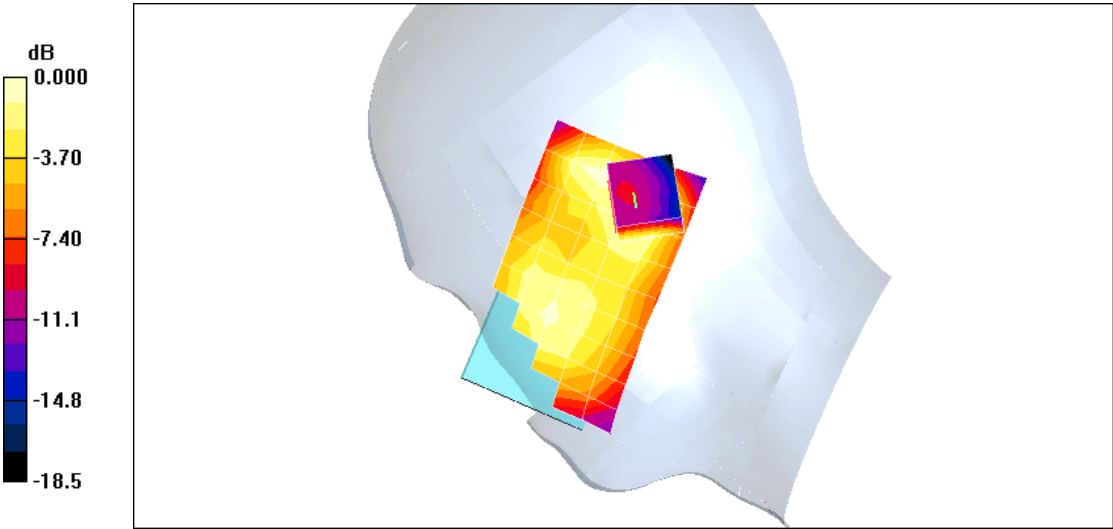
FLAT	Towards phantom	836.4 MHz
Communication System: GSM 850; Frequency: 836.4 MHz; Duty Cycle: 1:8.3 Medium parameters used: $f = 836.41 \text{ MHz}$; $\sigma = 0.96 \text{ mho/m}$; $\epsilon_r = 55.9$; $\rho = 1000 \text{ kg/m}^3$ Phantom section: Flat Section DASY4 Configuration: - Probe: ES3DV3 - SN3128; ConvF(6.78, 7.02, 6.8); Calibrated: 6/22/2010 - Sensor-Surface: 4mm (Mechanical Surface Detection) - Electronics: DAE - SN720; Calibrated: 1/19/2011 - Phantom: SAM 1560; Type: SAM; Serial: 1560 - Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186 Towards phantom - Middle EDGE/Area Scan (6x10x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$ Maximum value of SAR (measured) = 0.126 mW/g Towards phantom - Middle EDGE/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$ Reference Value = 10.0 V/m; Power Drift = 0.000 dB Peak SAR (extrapolated) = 0.155 W/kg SAR(1 g) = 0.121 mW/g; SAR(10 g) = 0.089 mW/g Maximum value of SAR (measured) = 0.128 mW/g  0 dB = 0.128 mW/g		

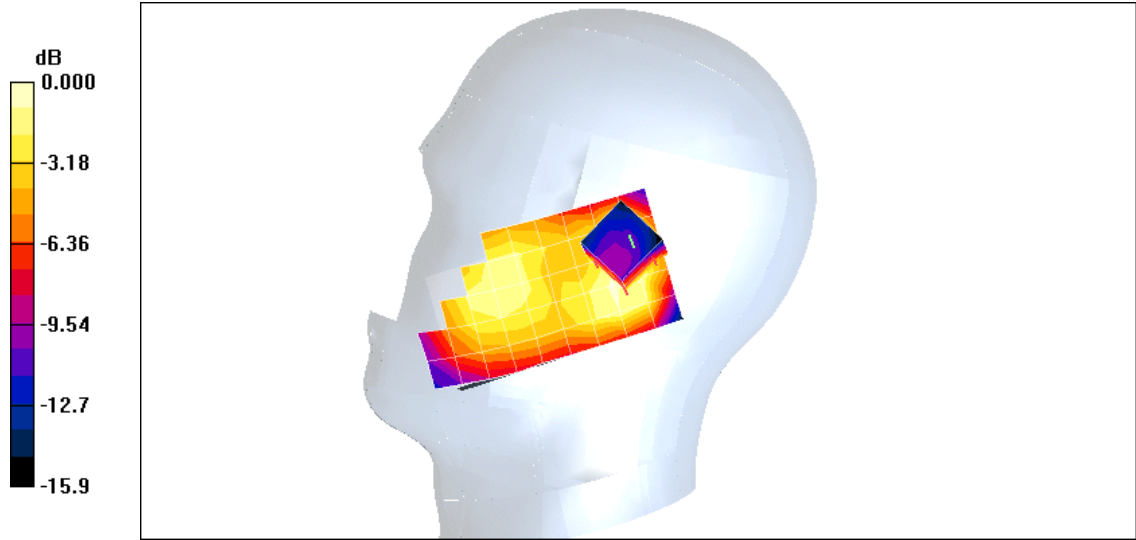
GSM (1900MHz/Head)

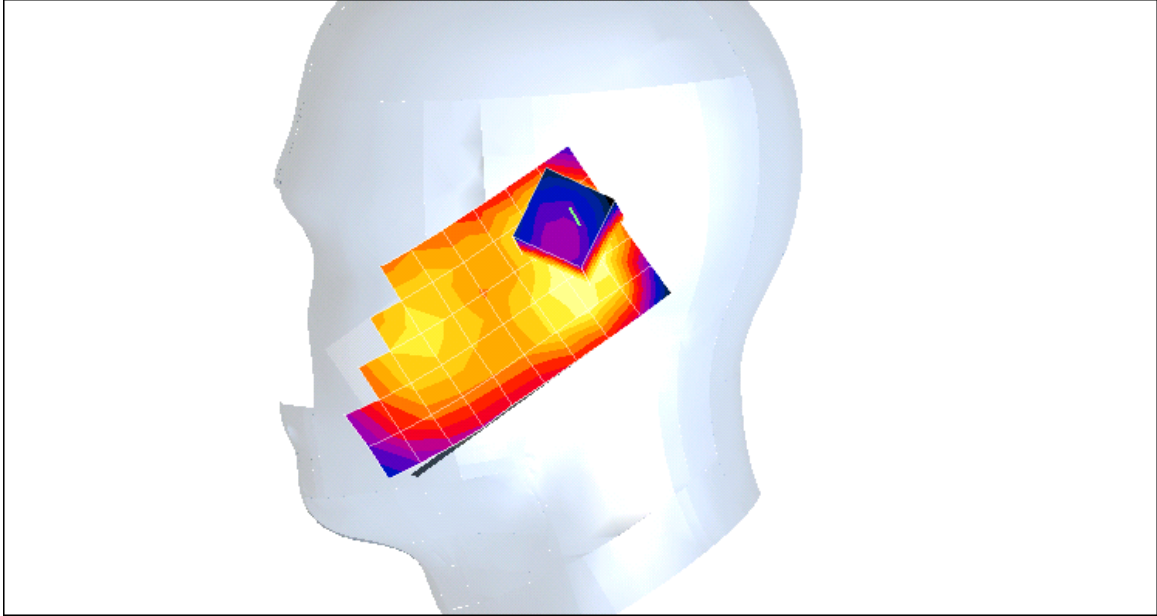
Right Side	Cheek	1850.2 MHz
Communication System: PCS1900; Frequency: 1850.2 MHz; Duty Cycle: 1:8.3 Medium parameters used (interpolated): $f = 1850.2 \text{ MHz}$; $\sigma = 1.41 \text{ mho/m}$; $\epsilon_r = 39.2$; $\rho = 1000 \text{ kg/m}^3$ Phantom section: Right Section DASY4 Configuration: - Probe: ES3DV3 - SN3128; ConvF(4.95, 5.22, 5.06); Calibrated: 6/22/2010 - Sensor-Surface: 4mm (Mechanical Surface Detection) - Electronics: DAE - SN720; Calibrated: 1/26/2011 - Phantom: SAM 1559; Type: SAM; Serial: 1559 - Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186 Touch position - Low/Area Scan (6x10x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (measured) = 0.707 mW/g Touch position - Low/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 9.88 V/m; Power Drift = -0.246 dB Peak SAR (extrapolated) = 1.06 W/kg SAR(1 g) = 0.719 mW/g; SAR(10 g) = 0.466 mW/g Maximum value of SAR (measured) = 0.772 mW/g  0 dB = 0.772mW/g		

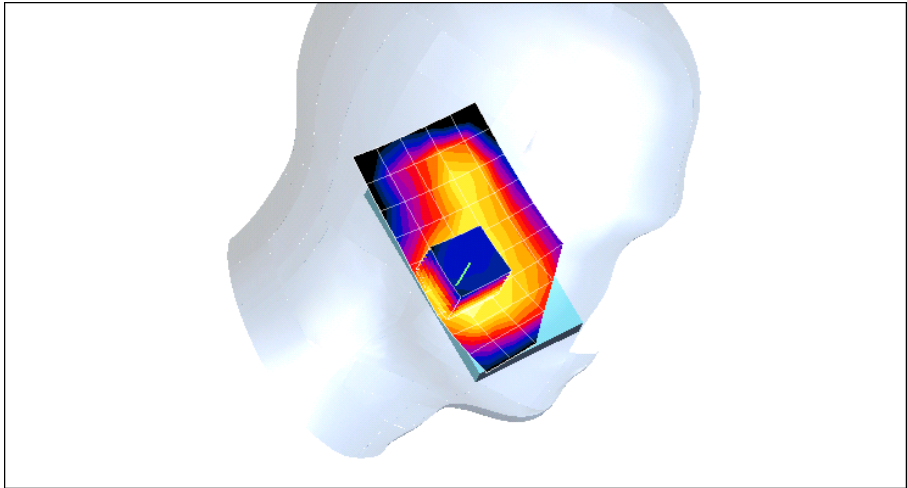
Right Side	Cheek	1880.0 MHz
Communication System: PCS1900; Frequency: 1880 MHz; Duty Cycle: 1:8.3 Medium parameters used: $f = 1880$ MHz; $\sigma = 1.44$ mho/m; $\epsilon_r = 39$; $\rho = 1000$ kg/m³ Phantom section: Right Section DASY4 Configuration: - Probe: ES3DV3 - SN3128; ConvF(4.95, 5.22, 5.06); Calibrated: 6/22/2010 - Sensor-Surface: 4mm (Mechanical Surface Detection) - Electronics: DAE - SN720; Calibrated: 1/26/2011 - Phantom: SAM 1559; Type: SAM; Serial: 1559 - Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186 Touch position - Middle/Area Scan (6x10x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (measured) = 0.675 mW/g Touch position - Middle/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 9.62 V/m; Power Drift = -0.021 dB Peak SAR (extrapolated) = 0.984 W/kg SAR(1 g) = 0.671 mW/g; SAR(10 g) = 0.431 mW/g Maximum value of SAR (measured) = 0.718 mW/g dB 0.000 -2.52 -5.04 -7.56 -10.1 -12.6  0 dB = 0.718/g		

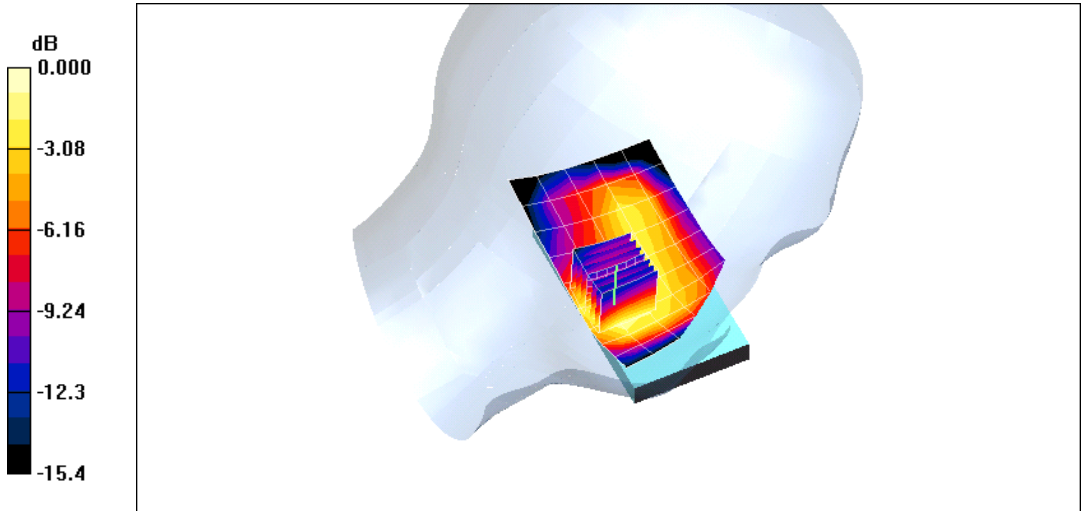
Right Side	Cheek	1909.8 MHz
Communication System: PCS1900; Frequency: 1909.8 MHz; Duty Cycle: 1:8.3 Medium parameters used: $f = 1910 \text{ MHz}$; $\sigma = 1.46 \text{ mho/m}$; $\epsilon_r = 38.8$; $\rho = 1000 \text{ kg/m}^3$ Phantom section: Right Section DASY4 Configuration: - Probe: ES3DV3 - SN3128; ConvF(4.95, 5.22, 5.06); Calibrated: 6/22/2010 - Sensor-Surface: 4mm (Mechanical Surface Detection) - Electronics: DAE - SN720; Calibrated: 1/26/2011 - Phantom: SAM 1559; Type: SAM; Serial: 1559 - Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186 Touch position - High/Area Scan (6x10x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$ Maximum value of SAR (measured) = 0.629 mW/g Touch position - High/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$ Reference Value = 9.84 V/m; Power Drift = -0.044 dB Peak SAR (extrapolated) = 0.934 W/kg SAR(1 g) = 0.629 mW/g; SAR(10 g) = 0.398 mW/g Maximum value of SAR (measured) = 0.680 mW/g  0 dB = 0.680 mW/g		

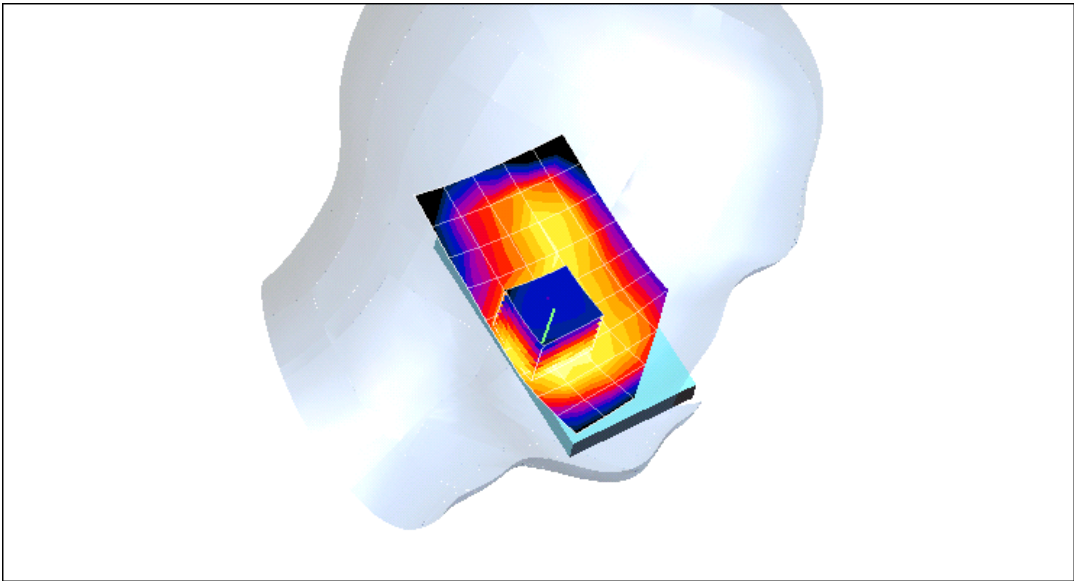
Right Side	Tilt	1850.2 MHz
Communication System: PCS1900; Frequency: 1850.2 MHz; Duty Cycle: 1:8.3 Medium parameters used (interpolated): $f = 1850.2 \text{ MHz}$; $\sigma = 1.41 \text{ mho/m}$; $\epsilon_r = 39.2$; $\rho = 1000 \text{ kg/m}^3$ Phantom section: Right Section DASY4 Configuration: - Probe: ES3DV3 - SN3128; ConvF(4.95, 5.22, 5.06); Calibrated: 6/22/2010 - Sensor-Surface: 4mm (Mechanical Surface Detection) - Electronics: DAE - SN720; Calibrated: 1/26/2011 - Phantom: SAM 1559; Type: SAM; Serial: 1559 - Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186 Tilt position - Low/Area Scan (6x10x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (measured) = 0.189 mW/g Tilt position - Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 11.1 V/m; Power Drift = -0.005 dB Peak SAR (extrapolated) = 0.272 W/kg SAR(1 g) = 0.186 mW/g; SAR(10 g) = 0.118 mW/g Maximum value of SAR (measured) = 0.200 mW/g  0 dB = 0.200mW/g		

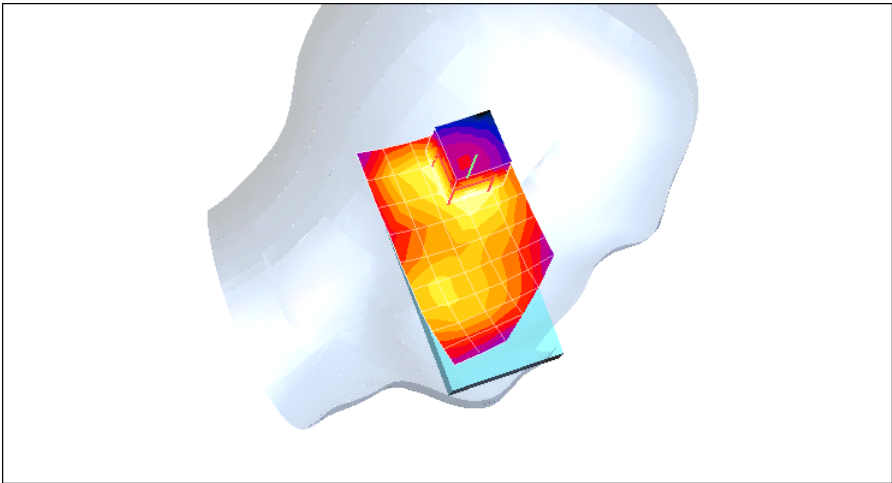
Right Side	Tilt	1880.0 MHz
Communication System: PCS1900; Frequency: 1880 MHz; Duty Cycle: 1:8.3 Medium parameters used: $f = 1880$ MHz; $\sigma = 1.44$ mho/m; $\epsilon_r = 39$; $\rho = 1000$ kg/m³ Phantom section: Right Section DASY4 Configuration: - Probe: ES3DV3 - SN3128; ConvF(4.95, 5.22, 5.06); Calibrated: 6/22/2010 - Sensor-Surface: 4mm (Mechanical Surface Detection) - Electronics: DAE - SN720; Calibrated: 1/26/2011 - Phantom: SAM 1559; Type: SAM; Serial: 1559 - Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186 Tilt position - Middle/Area Scan (6x10x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (measured) = 0.187 mW/g Tilt position - Middle/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 10.9 V/m; Power Drift = 0.010 dB Peak SAR (extrapolated) = 0.269 W/kg SAR(1 g) = 0.173 mW/g; SAR(10 g) = 0.109 mW/gt. Maximum value of SAR (measured) = 0.192 mW/g  0 dB = 0.192g		

Right Side	Tilt	1909.8 MHz
Communication System: PCS1900; Frequency: 1909.8 MHz; Duty Cycle: 1:8.3 Medium parameters used: $f = 1910$ MHz; $\sigma = 1.46$ mho/m; $\epsilon_r = 38.8$; $\rho = 1000$ kg/m³ Phantom section: Right Section DASY4 Configuration: - Probe: ES3DV3 - SN3128; ConvF(4.95, 5.22, 5.06); Calibrated: 6/22/2010 - Sensor-Surface: 4mm (Mechanical Surface Detection) - Electronics: DAE - SN720; Calibrated: 1/26/2011 - Phantom: SAM 1559; Type: SAM; Serial: 1559 - Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186 Tilt position - High/Area Scan (6x10x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (measured) = 0.200 mW/g Tilt position - High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 11.2 V/m; Power Drift = -0.071 dB Peak SAR (extrapolated) = 0.281 W/kg SAR(1 g) = 0.183 mW/g; SAR(10 g) = 0.113 mW/g dB 0.000 -3.26 -6.52 -9.78 -13.0 -16.3  0 dB = 0.200 mW/g		

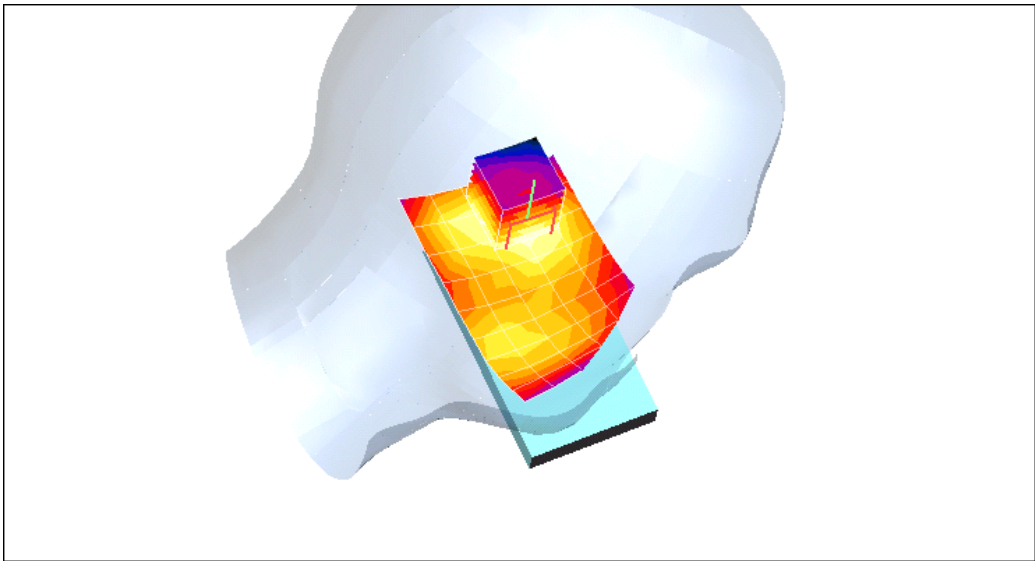
Left Side	Cheek	1850.2 MHz
Communication System: PCS1900; Frequency: 1850.2 MHz; Duty Cycle: 1:8.3 Medium parameters used (interpolated): $f = 1850.2 \text{ MHz}$; $\sigma = 1.41 \text{ mho/m}$; $\epsilon_r = 39.2$; $\rho = 1000 \text{ kg/m}^3$ Phantom section: Left Section DASY4 Configuration: - Probe: ES3DV3 - SN3128; ConvF(4.95, 5.22, 5.06); Calibrated: 6/22/2010 - Sensor-Surface: 4mm (Mechanical Surface Detection) - Electronics: DAE - SN720; Calibrated: 1/19/2011 - Phantom: SAM 1559; Type: SAM; Serial: 1559 - Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186 Touch position - Low/Area Scan (6x10x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (measured) = 0.553 mW/g Touch position - Low/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 12.2 V/m; Power Drift = -0.027 dB Peak SAR (extrapolated) = 0.830 W/kg SAR(1 g) = 0.551 mW/g; SAR(10 g) = 0.343 mW/g Maximum value of SAR (measured) = 0.600 mW/g dB 0.000 -3.02 -6.04 -9.06 -12.1 -15.1  0 dB = 0.600mW/g		

Left Side	Cheek	1880.0 MHz
Communication System: PCS1900; Frequency: 1880 MHz; Duty Cycle: 1:8.3 Medium parameters used: $f = 1880 \text{ MHz}$; $\sigma = 1.44 \text{ mho/m}$; $\epsilon_r = 39$; $\rho = 1000 \text{ kg/m}^3$ Phantom section: Left Section DASY4 Configuration: - Probe: ES3DV3 - SN3128; ConvF(4.95, 5.22, 5.06); Calibrated: 6/22/2010 - Sensor-Surface: 4mm (Mechanical Surface Detection) - Electronics: DAE - SN720; Calibrated: 1/19/2011 - Phantom: SAM 1559; Type: SAM; Serial: 1559 - Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186 Touch position - Middle/Area Scan (6x10x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$ Maximum value of SAR (measured) = 0.538 mW/g Touch position - Middle/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$ Reference Value = 11.4 V/m; Power Drift = -0.085 dB Peak SAR (extrapolated) = 0.803 W/kg SAR(1 g) = 0.526 mW/g; SAR(10 g) = 0.326 mW/g Maximum value of SAR (measured) = 0.572 mW/g  0 dB = 0.572 mW/g		

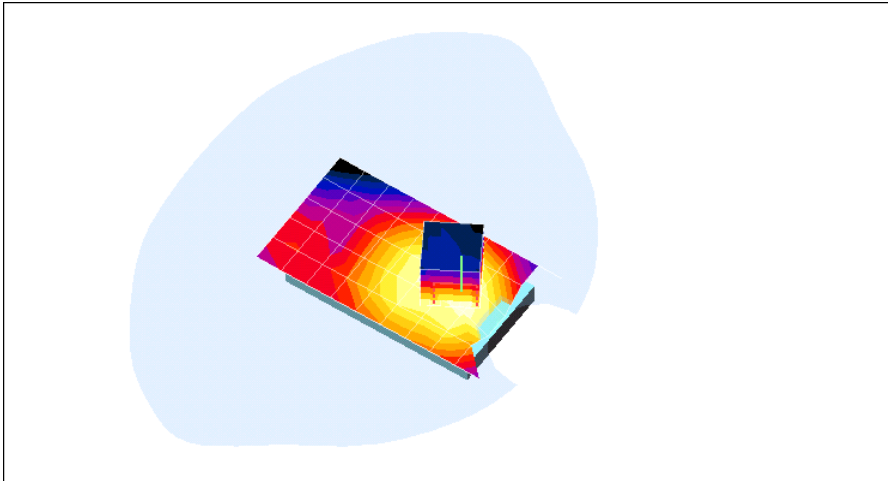
Left Side	Cheek	1909.8 MHz
Communication System: PCS1900; Frequency: 1909.8 MHz; Duty Cycle: 1:8.3 Medium parameters used: $f = 1910 \text{ MHz}$; $\sigma = 1.46 \text{ mho/m}$; $\epsilon_r = 38.8$; $\rho = 1000 \text{ kg/m}^3$ Phantom section: Left Section DASY4 Configuration: - Probe: ES3DV3 - SN3128; ConvF(4.95, 5.22, 5.06); Calibrated: 6/22/2010 - Sensor-Surface: 4mm (Mechanical Surface Detection) - Electronics: DAE - SN720; Calibrated: 1/19/2011 - Phantom: SAM 1559; Type: SAM; Serial: 1559 - Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186 Touch position - High/Area Scan (6x10x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (measured) = 0.506 mW/g Touch position - High/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 11.9 V/m; Power Drift = -0.085 dB Peak SAR (extrapolated) = 0.755 W/kg SAR(1 g) = 0.492 mW/g; SAR(10 g) = 0.303 mW/g Maximum value of SAR (measured) = 0.537 mW/g dB 0.000 -3.14 -6.28 -9.42 -12.6 -15.7  0 dB = 0.537mW/g		

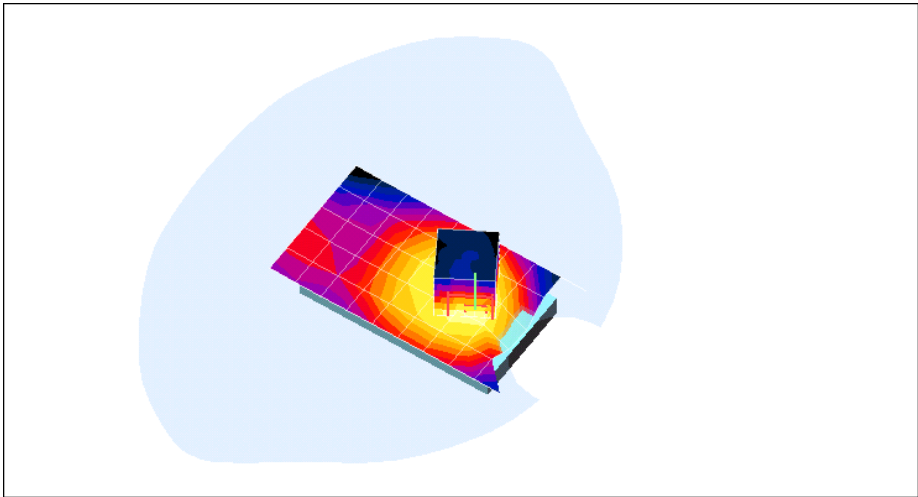
Left Side	Tilt	1850.2 MHz
Communication System: PCS1900; Frequency: 1850.2 MHz; Duty Cycle: 1:8.3 Medium parameters used (interpolated): $f = 1850.2 \text{ MHz}$; $\sigma = 1.41 \text{ mho/m}$; $\epsilon_r = 39.2$; $\rho = 1000 \text{ kg/m}^3$ Phantom section: Left Section DASY4 Configuration: - Probe: ES3DV3 - SN3128; ConvF(4.95, 5.22, 5.06); Calibrated: 6/22/2010 - Sensor-Surface: 4mm (Mechanical Surface Detection) - Electronics: DAE - SN720; Calibrated: 1/19/2011 - Phantom: SAM 1559; Type: SAM; Serial: 1559 - Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186 Tilt position - Low/Area Scan (6x10x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (measured) = 0.219 mW/g Tilt position - Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 11.3 V/m; Power Drift = -0.015 dB Peak SAR (extrapolated) = 0.336 W/kg SAR(1 g) = 0.218 mW/g; SAR(10 g) = 0.130 mW/g Maximum value of SAR (measured) = 0.239 mW/g dB 0.000 -4.10 -8.20 -12.3 -16.4 -20.5  0 dB = 0.239 mW/g		

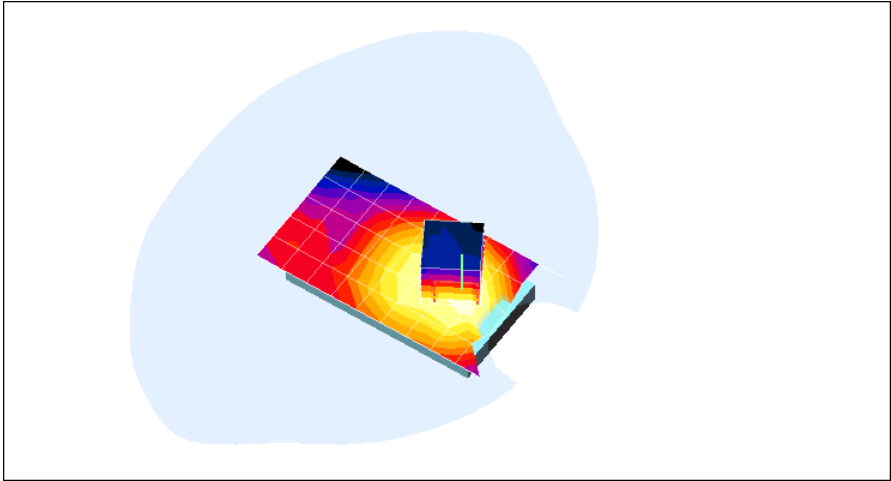
Left Side	Tilt	1880.0 MHz
Communication System: PCS1900; Frequency: 1880 MHz;Duty Cycle: 1:8.3 Medium parameters used: $f = 1880$ MHz; $\sigma = 1.44$ mho/m; $\epsilon_r = 39$; $\rho = 1000$ kg/m³ Phantom section: Left Section DASY4 Configuration: - Probe: ES3DV3 - SN3128; ConvF(4.95, 5.22, 5.06); Calibrated: 6/22/2010 - Sensor-Surface: 4mm (Mechanical Surface Detection) - Electronics: DAE - SN720; Calibrated: 1/19/2011 - Phantom: SAM 1559; Type: SAM; Serial: 1559 - Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186 Tilt position - Middle/Area Scan (6x10x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (measured) = 0.199 mW/g Tilt position - Middle/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 10.9 V/m; Power Drift = -0.086 dB Peak SAR (extrapolated) = 0.298 W/kg SAR(1 g) = 0.195 mW/g; SAR(10 g) = 0.118 mW/g Maximum value of SAR (measured) = 0.215 mW/g 0 dB = 0.215 mW/g		

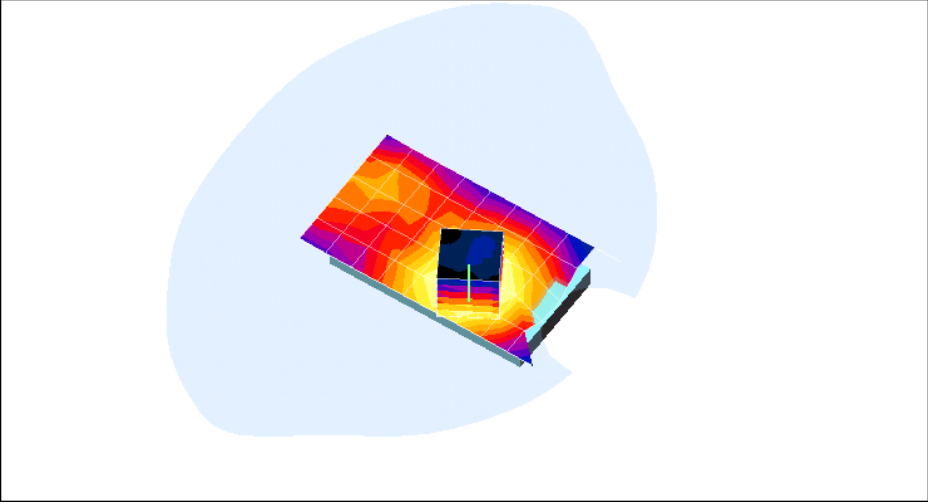
Left Side	Tilt	1909.8 MHz
Communication System: PCS1900; Frequency: 1909.8 MHz; Duty Cycle: 1:8.3 Medium parameters used: $f = 1910 \text{ MHz}$; $\sigma = 1.46 \text{ mho/m}$; $\epsilon_r = 38.8$; $\rho = 1000 \text{ kg/m}^3$ Phantom section: Left Section DASY4 Configuration: - Probe: ES3DV3 - SN3128; ConvF(4.95, 5.22, 5.06); Calibrated: 6/22/2010 - Sensor-Surface: 4mm (Mechanical Surface Detection) - Electronics: DAE - SN720; Calibrated: 1/19/2011 - Phantom: SAM 1559; Type: SAM; Serial: 1559 - Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186 Tilt position - High/Area Scan (6x10x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$ Maximum value of SAR (measured) = 0.214 mW/g Tilt position - High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$ Reference Value = 11.5 V/m; Power Drift = -0.078 dB Peak SAR (extrapolated) = 0.306 W/kg SAR(1 g) = 0.204 mW/g; SAR(10 g) = 0.124 mW/g Maximum value of SAR (measured) = 0.223 mW/g  0 dB = 0.223mW/g		

GSM with headset (1900MHz/Flat)

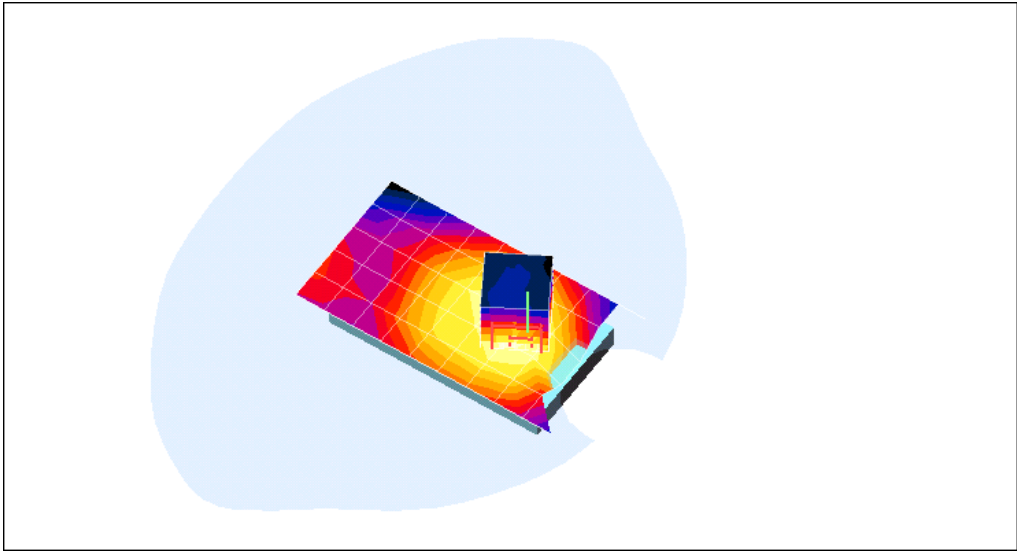
FLAT	Towards ground	1850.2 MHz
Communication System: PCS1900; Frequency: 1850.2 MHz; Duty Cycle: 1:8.3 Medium parameters used (interpolated): $f = 1850.2 \text{ MHz}$; $\sigma = 1.53 \text{ mho/m}$; $\epsilon_r = 53.8$; $\rho = 1000 \text{ kg/m}^3$ Phantom section: Flat Section DASY4 Configuration: - Probe: ES3DV3 - SN3128; ConvF(4.53, 4.79, 4.63); Calibrated: 6/22/2010 - Sensor-Surface: 4mm (Mechanical Surface Detection) - Electronics: DAE - SN720; Calibrated: 1/19/2011 - Phantom: SAM 1559; Type: SAM; Serial: 1559 - Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186 Towards ground - Low/Area Scan (6x10x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (measured) = 0.361 mW/g Towards ground - Low/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 8.57 V/m; Power Drift = -0.098 dB Peak SAR (extrapolated) = 0.555 W/kg SAR(1 g) = 0.350 mW/g; SAR(10 g) = 0.211 mW/g Maximum value of SAR (measured) = 0.382 mW/g dB 0.000 -3.14 -6.28 -9.42 -12.6 -15.7  0 dB = 0.382mW/g		

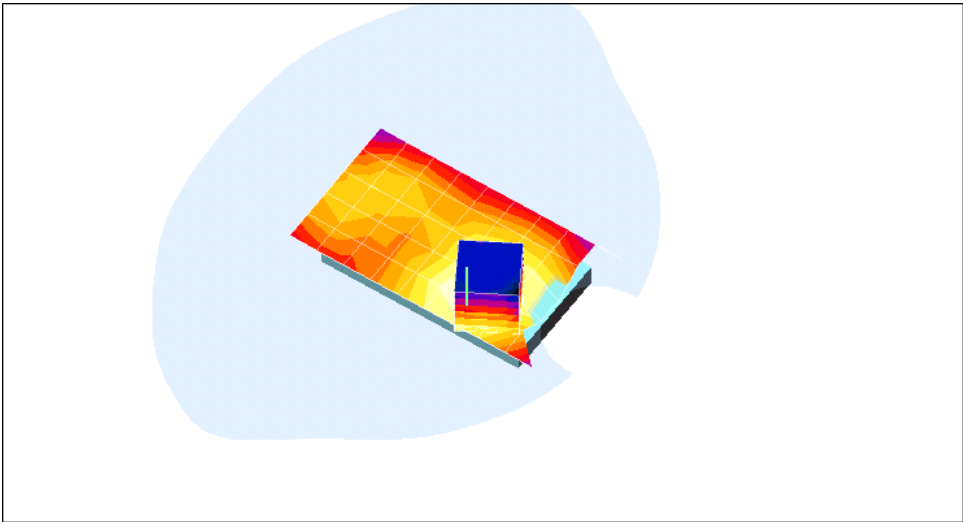
FLAT	Towards ground	1880 MHz
Communication System: PCS1900; Frequency: 1880 MHz;Duty Cycle: 1:8.3 Medium parameters used: $f = 1880 \text{ MHz}$; $\sigma = 1.57 \text{ mho/m}$; $\epsilon_r = 53.5$; $\rho = 1000 \text{ kg/m}^3$ Phantom section: Flat Section DASY4 Configuration: - Probe: ES3DV3 - SN3128; ConvF(4.53, 4.79, 4.63); Calibrated: 6/22/2010 - Sensor-Surface: 4mm (Mechanical Surface Detection) - Electronics: DAE - SN720; Calibrated: 1/19/2011 - Phantom: SAM 1559; Type: SAM; Serial: 1559 - Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186 Towards ground - Middle/Area Scan (6x10x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$ Maximum value of SAR (measured) = 0.451 mW/g Towards ground - Middle/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$ Reference Value = 9.38 V/m; Power Drift = -0.025 dB Peak SAR (extrapolated) = 0.668 W/kg SAR(1 g) = 0.431 mW/g; SAR(10 g) = 0.252 mW/g Maximum value of SAR (measured) = 0.476 mW/g dB 0.000 -3.06 -6.12 -9.18 -12.2 -15.3  0 dB = 0.476mW/g		

FLAT	Towards ground	1909.8 MHz
Communication System: PCS1900; Frequency: 1909.8 MHz; Duty Cycle: 1:8.3 Medium parameters used: $f = 1910 \text{ MHz}$; $\sigma = 1.6 \text{ mho/m}$; $\epsilon_r = 53.5$; $\rho = 1000 \text{ kg/m}^3$ Phantom section: Flat Section DASY4 Configuration: - Probe: ES3DV3 - SN3128; ConvF(4.53, 4.79, 4.63); Calibrated: 6/22/2010 - Sensor-Surface: 4mm (Mechanical Surface Detection) - Electronics: DAE - SN720; Calibrated: 1/19/2011 - Phantom: SAM 1559; Type: SAM; Serial: 1559 - Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186 Towards ground - High/Area Scan (6x10x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$ Maximum value of SAR (measured) = 0.296 mW/g Towards ground - High/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$ Reference Value = 8.64 V/m; Power Drift = 0.026 dB Peak SAR (extrapolated) = 0.490 W/kg SAR(1 g) = 0.301 mW/g; SAR(10 g) = 0.177 mW/g Maximum value of SAR (measured) = 0.328 mW/g dB 0.000 -10.0 -20.0 -30.0 -40.0 -50.0  0 dB = 0.328mW/g		

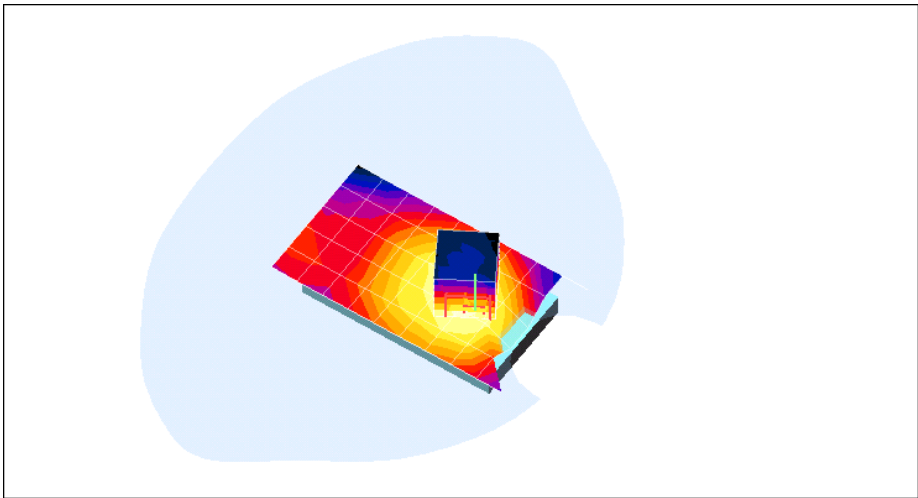
FLAT	Towards Phantom	1880 MHz
Communication System: PCS1900; Frequency: 1880 MHz;Duty Cycle: 1:8.3 Medium parameters used: $f = 1880 \text{ MHz}$; $\sigma = 1.57 \text{ mho/m}$; $\epsilon_r = 53.5$; $\rho = 1000 \text{ kg/m}^3$ Phantom section: Flat Section DASY4 Configuration: - Probe: ES3DV3 - SN3128; ConvF(4.53, 4.79, 4.63); Calibrated: 6/22/2010 - Sensor-Surface: 4mm (Mechanical Surface Detection) - Electronics: DAE - SN720; Calibrated: 1/19/2011 - Phantom: SAM 1559; Type: SAM; Serial: 1559 - Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186 Towards phantom - Middle/Area Scan (6x10x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$ Maximum value of SAR (measured) = 0.317 mW/g Towards phantom - Middle/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$ Reference Value = 7.28 V/m; Power Drift = -0.059 dB Peak SAR (extrapolated) = 0.463 W/kg SAR(1 g) = 0.300 mW/g; SAR(10 g) = 0.190 mW/g Maximum value of SAR (measured) = 0.322 mW/g dB 0.000 -2.84 -5.68 -8.52 -11.4 -14.2  0 dB = 0.322mW/g		

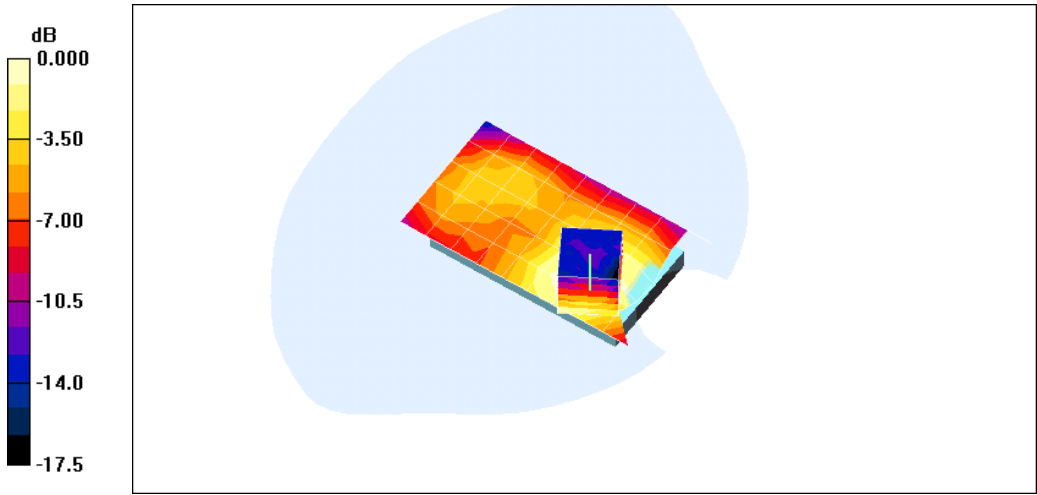
GSM (1900MHz with GPRS/Flat)

FLAT	Towards ground	1880 MHz
Communication System: PCS1900; Frequency: 1880 MHz; Duty Cycle: 1:8.3 Medium parameters used: $f = 1880$ MHz; $\sigma = 1.57$ mho/m; $\epsilon_r = 53.5$; $\rho = 1000$ kg/m³ Phantom section: Flat Section DASY4 Configuration: - Probe: ES3DV3 - SN3128; ConvF(4.53, 4.79, 4.63); Calibrated: 6/22/2010 - Sensor-Surface: 4mm (Mechanical Surface Detection) - Electronics: DAE - SN720; Calibrated: 1/19/2011 - Phantom: SAM 1559; Type: SAM; Serial: 1559 - Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186 Towards ground - Middle GPRS/Area Scan (6x10x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (measured) = 0.331 mW/g Towards ground - Middle GPRS/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 9.20 V/m; Power Drift = -0.038 dB Peak SAR (extrapolated) = 0.481 W/kg SAR(1 g) = 0.316 mW/g; SAR(10 g) = 0.189 mW/g Maximum value of SAR (measured) = 0.343 mW/g dB 0.000 -3.06 -6.12 -9.18 -12.2 -15.3  0 dB = 0.343mW/g		

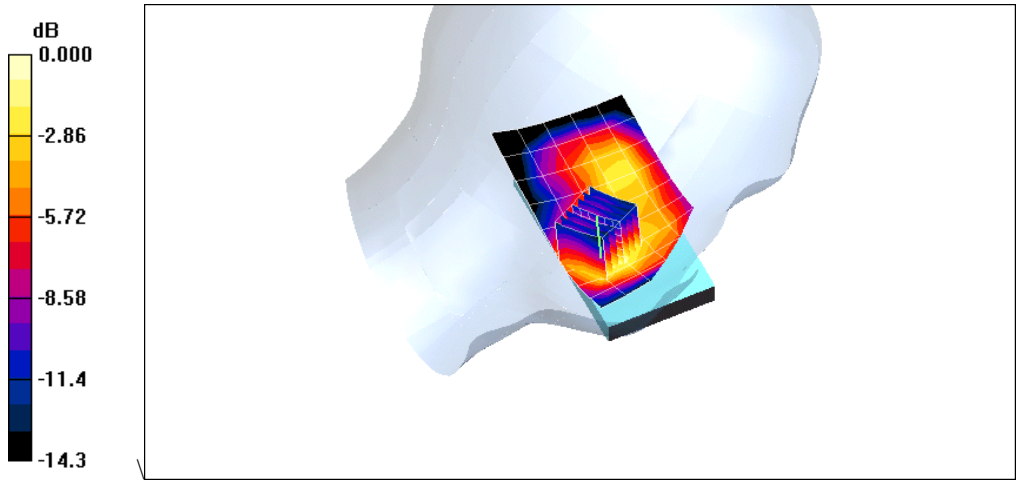
FLAT	Towards phantom	1880 MHz
Communication System: PCS1900; Frequency: 1880 MHz;Duty Cycle: 1:8.3 Medium parameters used: $f = 1880 \text{ MHz}$; $\sigma = 1.57 \text{ mho/m}$; $\epsilon_r = 53.5$; $\rho = 1000 \text{ kg/m}^3$ Phantom section: Flat Section DASY4 Configuration: - Probe: ES3DV3 - SN3128; ConvF(4.53, 4.79, 4.63); Calibrated: 6/22/2010 - Sensor-Surface: 4mm (Mechanical Surface Detection) - Electronics: DAE - SN720; Calibrated: 1/19/2011 - Phantom: SAM 1559; Type: SAM; Serial: 1559 - Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186 Towards phantom - Middle GPRS/Area Scan (6x10x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (measured) = 0.267 mW/g Towards phantom - Middle GPRS/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 7.53 V/m; Power Drift = -0.101 dB Peak SAR (extrapolated) = 0.391 W/kg SAR(1 g) = 0.250 mW/g; SAR(10 g) = 0.159 mW/g Maximum value of SAR (measured) = 0.269 mW/g dB 0.000 -3.40 -6.80 -10.2 -13.6 -17.0  0 dB =0.269mW/g		

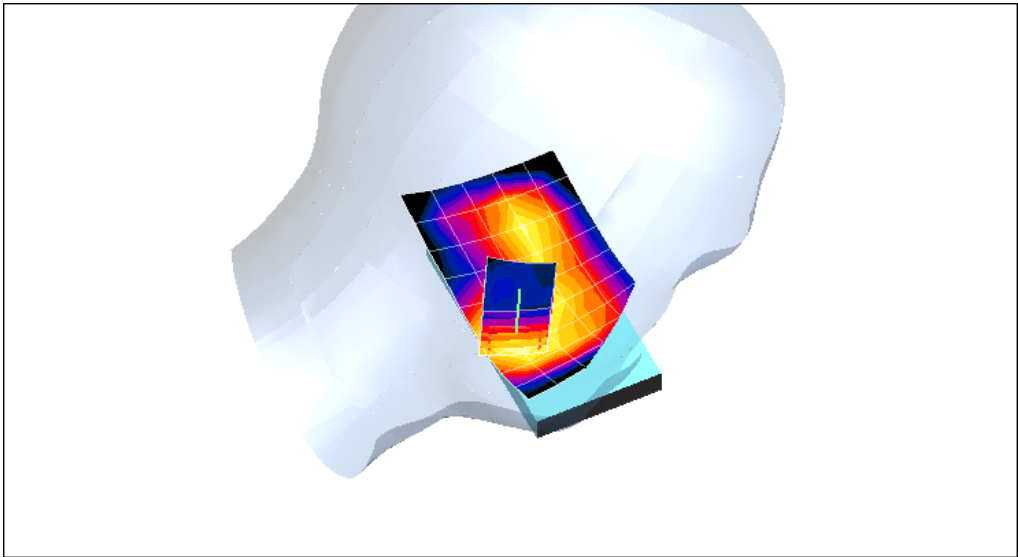
GSM (1900MHz with EGPRS/Flat)

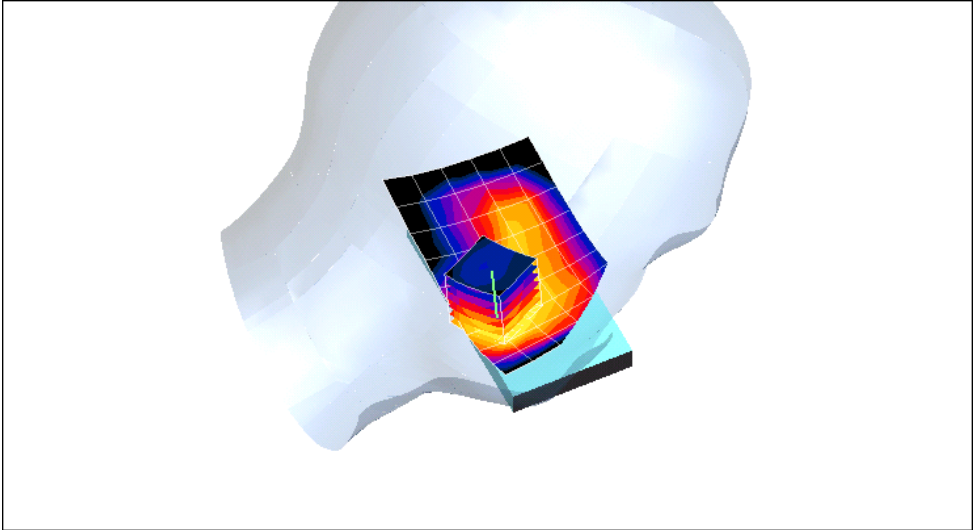
FLAT	Towards ground	1880 MHz
Communication System: PCS1900; Frequency: 1880 MHz; Duty Cycle: 1:8.3 Medium parameters used: $f = 1880$ MHz; $\sigma = 1.57$ mho/m; $\epsilon_r = 53.5$; $\rho = 1000$ kg/m³ Phantom section: Flat Section DASY4 Configuration: - Probe: ES3DV3 - SN3128; ConvF(4.53, 4.79, 4.63); Calibrated: 6/22/2010 - Sensor-Surface: 4mm (Mechanical Surface Detection) - Electronics: DAE - SN720; Calibrated: 1/19/2011 - Phantom: SAM 1559; Type: SAM; Serial: 1559 - Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186 Towards ground - Middle EDGE/Area Scan (6x10x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (measured) = 0.129 mW/g Towards ground - Middle EDGE/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 5.59 V/m; Power Drift = 0.069 dB Peak SAR (extrapolated) = 0.192 W/kg SAR(1 g) = 0.125 mW/g; SAR(10 g) = 0.076 mW/g Maximum value of SAR (measured) = 0.138 mW/g dB 0.000 -3.14 -6.28 -9.42 -12.6 -15.7  0 dB = 0.138mW/g		

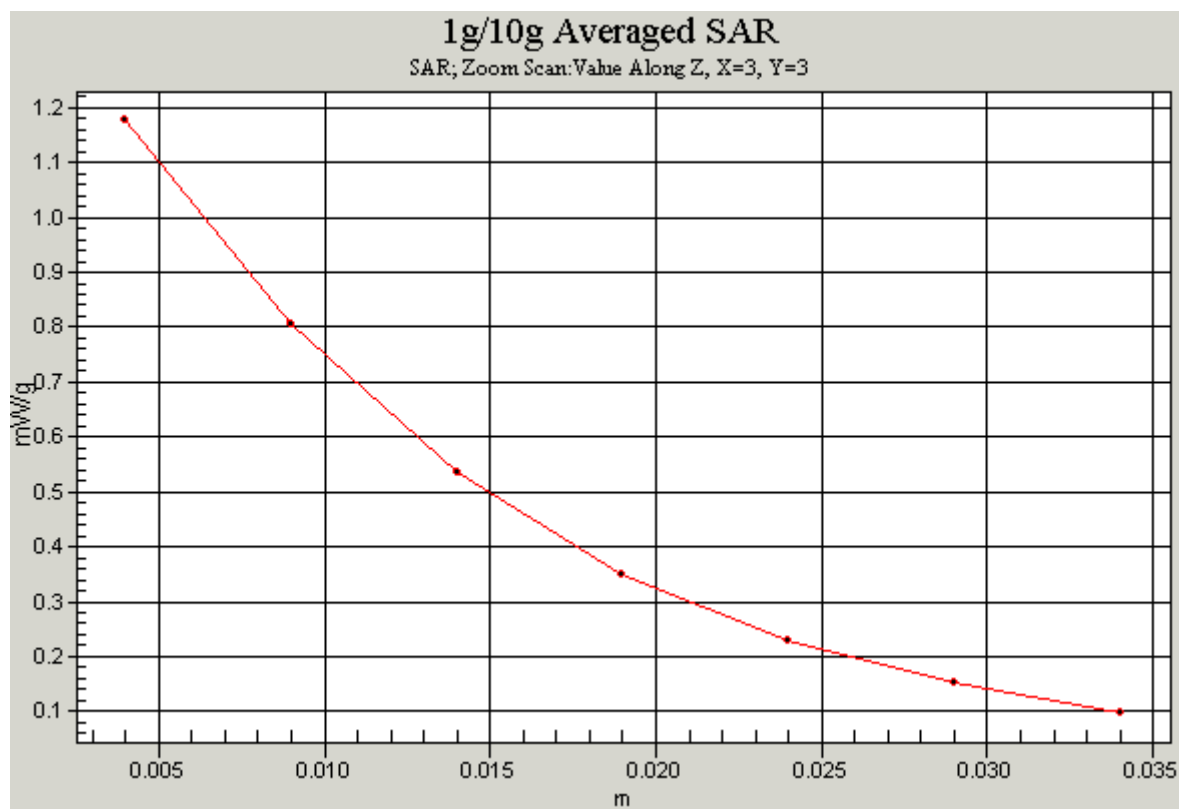
FLAT	Towards phantom	1880 MHz
Communication System: PCS1900; Frequency: 1880 MHz;Duty Cycle: 1:8.3 Medium parameters used: $f = 1880 \text{ MHz}$; $\sigma = 1.57 \text{ mho/m}$; $\epsilon_r = 53.5$; $\rho = 1000 \text{ kg/m}^3$ Phantom section: Flat Section DASY4 Configuration: - Probe: ES3DV3 - SN3128; ConvF(4.53, 4.79, 4.63); Calibrated: 6/22/2010 - Sensor-Surface: 4mm (Mechanical Surface Detection) - Electronics: DAE - SN720; Calibrated: 1/19/2011 - Phantom: SAM 1559; Type: SAM; Serial: 1559 - Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186 Towards phantom - Middle EDGE/Area Scan (6x10x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$ Maximum value of SAR (measured) = 0.135 mW/g Towards phantom - Middle EDGE/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$ Reference Value = 5.32 V/m; Power Drift = 0.003 dB Peak SAR (extrapolated) = 0.202 W/kg SAR(1 g) = 0.129 mW/g; SAR(10 g) = 0.081 mW/g Maximum value of SAR (measured) = 0.140 mW/g  0 dB = 0.140mW/g		

WCDMA B4(Head)

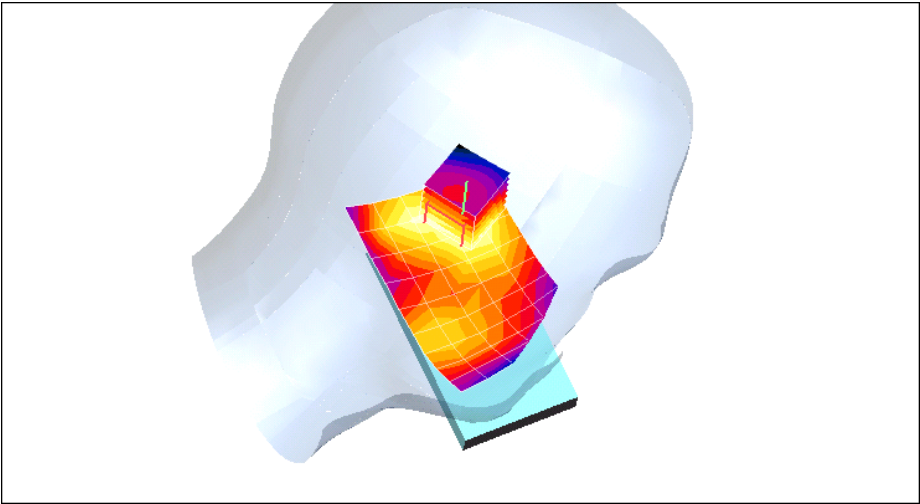
Left Side	Cheek	1712.4
Communication System: wcdma band4; Frequency: 1712.4 MHz;Duty Cycle: 1:1 Medium parameters used (interpolated): $f = 1712.4$ MHz; $\sigma = 1.34$ mho/m; $\epsilon_r = 39.8$; $\rho = 1000$ kg/m³ Phantom section: Left Section DASY4 Configuration: - Probe: ES3DV3 - SN3128; ConvF(6.15, 6.5, 6.27); Calibrated: 6/22/2010 - Sensor-Surface: 4mm (Mechanical Surface Detection) - Electronics: DAE - SN720; Calibrated: 1/26/2011 - Phantom: SAM 1559; Type: SAM; Serial: 1559 - Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186 Touch position - Low /Area Scan (6x10x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (measured) = 0.859 mW/g Touch position - Low /Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 14.9 V/m; Power Drift = 0.017 dB Peak SAR (extrapolated) = 1.38 W/kg SAR(1 g) = 0.922 mW/g; SAR(10 g) = 0.563 mW/g Maximum value of SAR (measured) = 1.02 mW/g  0 dB = 1.02mW/g		

Left Side	Cheek	1732.4 MHz
Communication System: wcdma band4; Frequency: 1732.4 MHz;Duty Cycle: 1:1 Medium parameters used (interpolated): $f = 1732.4 \text{ MHz}$; $\sigma = 1.33 \text{ mho/m}$; $\epsilon_r = 39.7$; $\rho = 1000 \text{ kg/m}^3$ Phantom section: Left Section DASY4 Configuration: - Probe: ES3DV3 - SN3128; ConvF(6.15, 6.5, 6.27); Calibrated: 6/22/2010 - Sensor-Surface: 4mm (Mechanical Surface Detection) - Electronics: DAE - SN720; Calibrated: 1/26/2011 - Phantom: SAM 1559; Type: SAM; Serial: 1559 - Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186 Touch position - Middle/Area Scan (6x10x1): Measurement grid: dx=15mm, dy=15mm. Maximum value of SAR (measured) = 0.966 mW/g Touch position - Middle/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 19.4 V/m; Power Drift = -0.023 dB Peak SAR (extrapolated) = 1.43 W/kg SAR(1 g) = 0.986 mW/g; SAR(10 g) = 0.618 mW/g Maximum value of SAR (measured) = 1.08 mW/g  0 dB =1.08mW/g		

Left Side	Cheek	1752.6 MHz
Communication System: wcdma band4; Frequency: 1752.6 MHz;Duty Cycle: 1:1 Medium parameters used (interpolated): $f = 1752.6 \text{ MHz}$; $\sigma = 1.33 \text{ mho/m}$; $\epsilon_r = 39.7$; $\rho = 1000 \text{ kg/m}^3$ Phantom section: Left Section DASY4 Configuration: - Probe: ES3DV3 - SN3128; ConvF(6.15, 6.5, 6.27); Calibrated: 6/22/2010 - Sensor-Surface: 4mm (Mechanical Surface Detection) - Electronics: DAE - SN720; Calibrated: 1/26/2011 - Phantom: SAM 1559; Type: SAM; Serial: 1559 - Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186 Touch position - High /Area Scan (6x10x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (measured) = 1.12 mW/g Touch position - High /Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 14.3 V/m; Power Drift = 0.034 dB Peak SAR (extrapolated) = 1.55 W/kg SAR(1 g) = 1.07 mW/g; SAR(10 g) = 0.661 mW/g Maximum value of SAR (measured) = 1.18 mW/g  0 dB = 1.18mW/g		

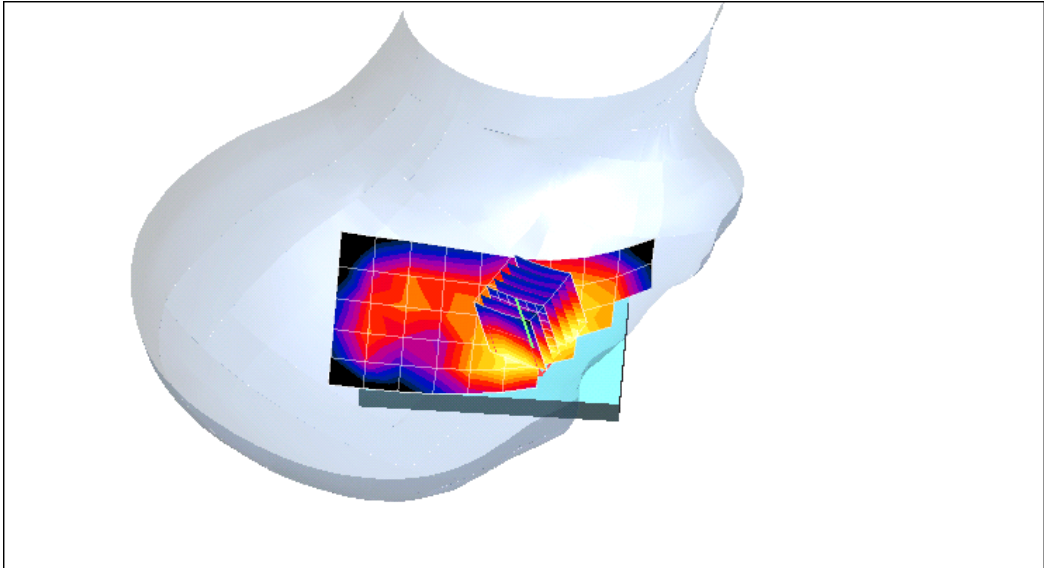


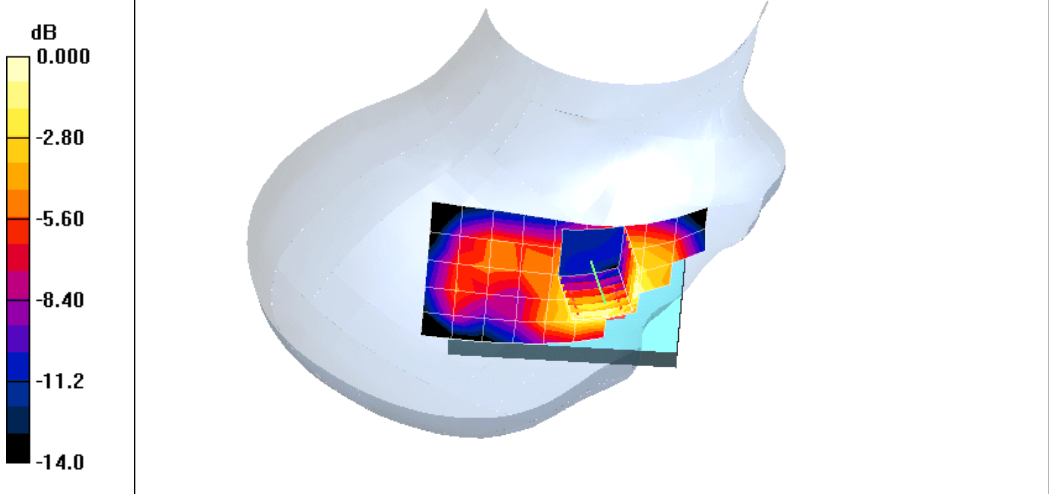
Z-Scan at power reference point (CH1513)

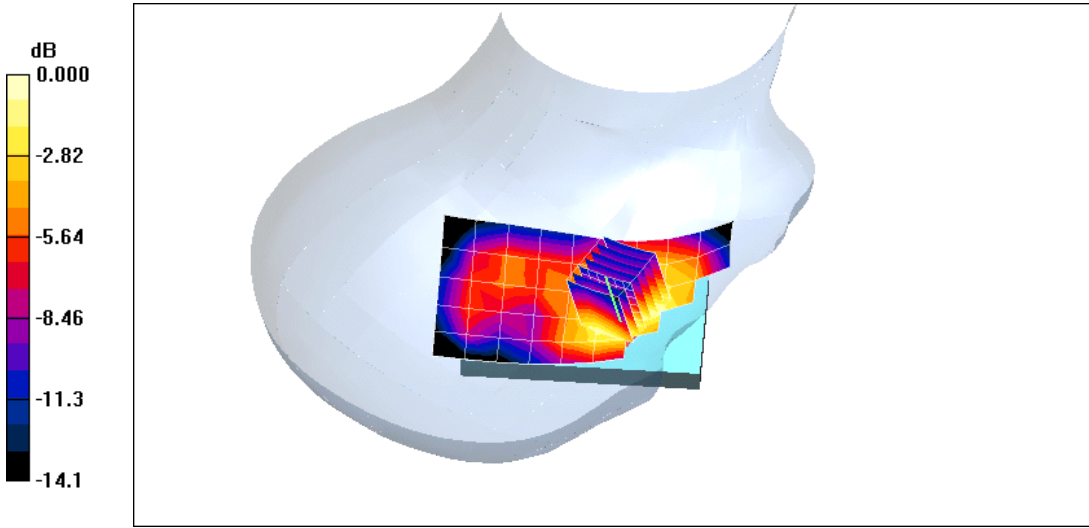
Left Side	Tilt	1752.6 MHz
Communication System: wcdma band4; Frequency: 1752.6 MHz; Duty Cycle: 1:1 Medium parameters used (interpolated): $f = 1752.6 \text{ MHz}$; $\sigma = 1.33 \text{ mho/m}$; $\epsilon_r = 39.7$; $\rho = 1000 \text{ kg/m}^3$ Phantom section: Left Section DASY4 Configuration: - Probe: ES3DV3 - SN3128; ConvF(6.15, 6.5, 6.27); Calibrated: 6/22/2010 - Sensor-Surface: 4mm (Mechanical Surface Detection) - Electronics: DAE - SN720; Calibrated: 1/26/2011 - Phantom: SAM 1559; Type: SAM; Serial: 1559 - Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186 Tilt position - High/Area Scan (6x10x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (measured) = 0.430 mW/g Tilt position - High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 17.9 V/m; Power Drift = -0.221 dB Peak SAR (extrapolated) = 0.619 W/kg SAR(1 g) = 0.436 mW/g; SAR(10 g) = 0.281 mW/g Maximum value of SAR (measured) = 0.471 mW/g dB 0.000 -3.68 -7.36 -11.0 -14.7 -18.4  0 dB = 0.471mW/g		

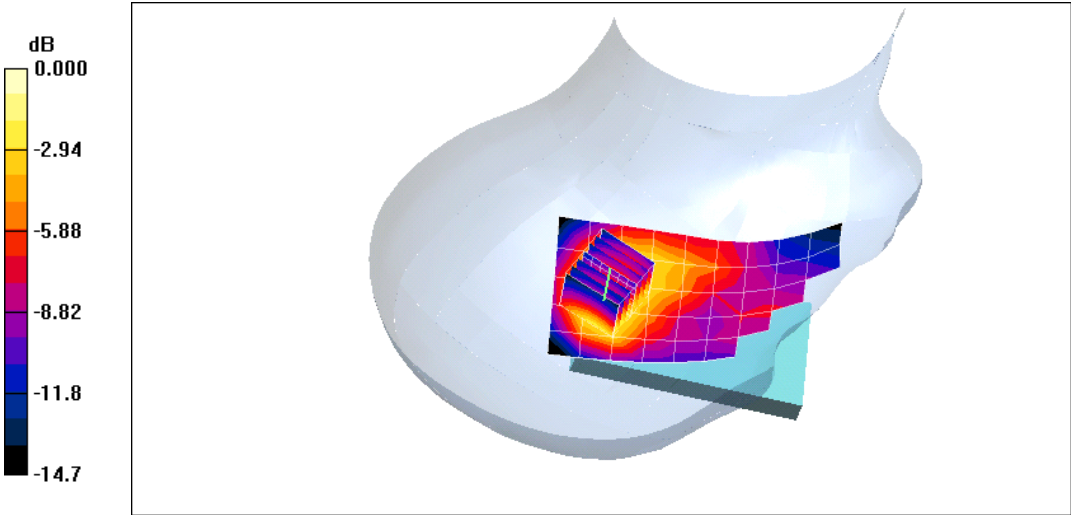
Left Side	Tilt	1712.4 MHz
Communication System: wcdma band4; Frequency: 1712.4 MHz;Duty Cycle: 1:1 Medium parameters used (interpolated): $f = 1712.4 \text{ MHz}$; $\sigma = 1.34 \text{ mho/m}$; $\epsilon_r = 39.8$; $\rho = 1000 \text{ kg/m}^3$ Phantom section: Left Section DASY4 Configuration: - Probe: ES3DV3 - SN3128; ConvF(6.15, 6.5, 6.27); Calibrated: 6/22/2010 - Sensor-Surface: 4mm (Mechanical Surface Detection) - Electronics: DAE - SN720; Calibrated: 1/26/2011 - Phantom: SAM 1559; Type: SAM; Serial: 1559 - Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186 Tilt position - Low/Area Scan (6x10x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (measured) = 0.409 mW/g Tilt position - Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 16.5 V/m; Power Drift = 0.023 dB Peak SAR (extrapolated) = 0.581 W/kg SAR(1 g) = 0.415 mW/g; SAR(10 g) = 0.267 mW/g Maximum value of SAR (measured) = 0.448 mW/g 0 dB =0.448mW/g		

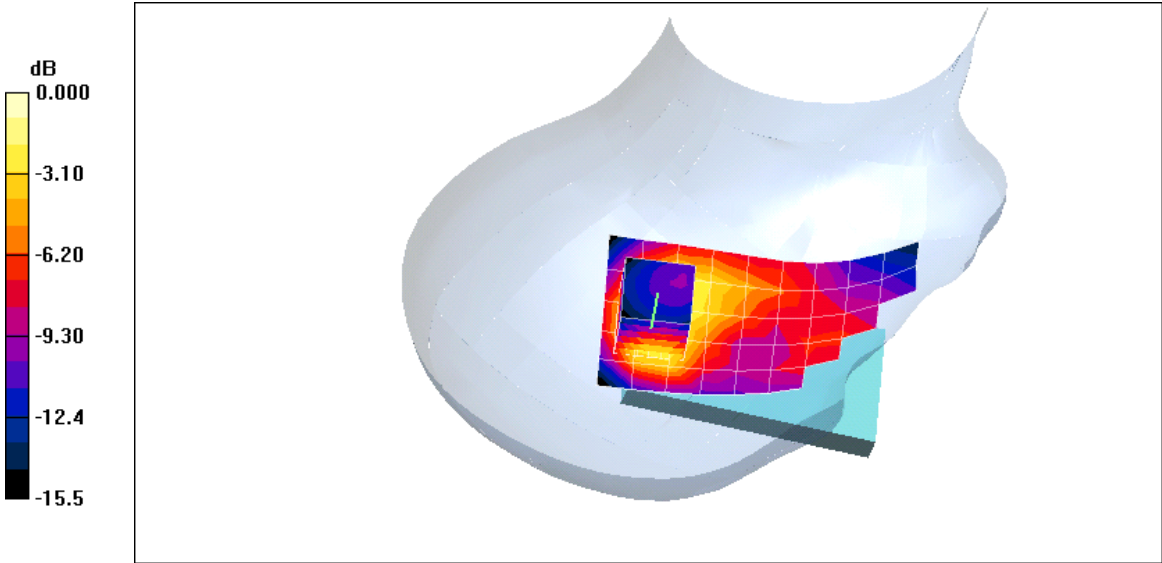
Left Side	Tilt	1732.4MHz
Communication System: wcdma band4; Frequency: 1732.4 MHz;Duty Cycle: 1:1 Medium parameters used (interpolated): $f = 1732.4$ MHz; $\sigma = 1.33$ mho/m; $\epsilon_r = 39.7$; $\rho = 1000$ kg/m³ Phantom section: Left Section DASY4 Configuration: - Probe: ES3DV3 - SN3128; ConvF(6.15, 6.5, 6.27); Calibrated: 6/22/2010 - Sensor-Surface: 4mm (Mechanical Surface Detection) - Electronics: DAE - SN720; Calibrated: 1/26/2011 - Phantom: SAM 1559; Type: SAM; Serial: 1559 - Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186 Tilt position - Middle/Area Scan (6x10x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (measured) = 0.436 mW/g Tilt position - Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 17.0 V/m; Power Drift = -0.009 dB Peak SAR (extrapolated) = 0.635 W/kg SAR(1 g) = 0.450 mW/g; SAR(10 g) = 0.287 mW/gn. Maximum value of SAR (measured) = 0.486 mW/g dB 0.000 -3.20 -6.40 -9.60 -12.8 -16.0 0 dB =0.486mW/g		

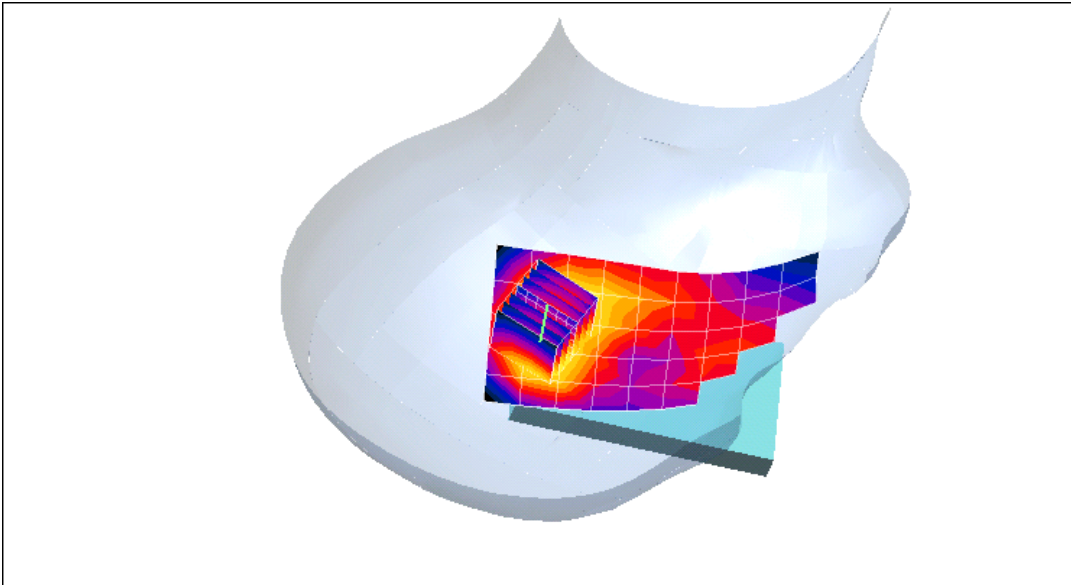
Right Side	Cheek	1712.4 MHz
Communication System: wcdma band4; Frequency: 1712.4 MHz;Duty Cycle: 1:1 Medium parameters used (interpolated): $f = 1712.4 \text{ MHz}$; $\sigma = 1.34 \text{ mho/m}$; $\epsilon_r = 39.8$; $\rho = 1000 \text{ kg/m}^3$ Phantom section: Right Section DASY4 Configuration: - Probe: ES3DV3 - SN3128; ConvF(6.15, 6.5, 6.27); Calibrated: 6/22/2010 - Sensor-Surface: 4mm (Mechanical Surface Detection) - Electronics: DAE - SN720; Calibrated: 1/26/2011 - Phantom: SAM 1559; Type: SAM; Serial: 1559 - Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186 Touch position - Low/Area Scan (6x10x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (measured) = 1.08 mW/g Touch position - Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 16.5 V/m; Power Drift = -0.006 dB Peak SAR (extrapolated) = 1.49 W/kg SAR(1 g) = 1.03 mW/g; SAR(10 g) = 0.655 mW/g Maximum value of SAR (measured) = 1.13 mW/g  0 dB = 1.13mW/g		

Right Side	Cheek	1732.4 MHz
Communication System: wcdma band4; Frequency: 1732.4 MHz; Duty Cycle: 1:1 Medium parameters used (interpolated): $f = 1732.4 \text{ MHz}$; $\sigma = 1.33 \text{ mho/m}$; $\epsilon_r = 39.7$; $\rho = 1000 \text{ kg/m}^3$ Phantom section: Right Section DASY4 Configuration: - Probe: ES3DV3 - SN3128; ConvF(6.15, 6.5, 6.27); Calibrated: 6/22/2010 - Sensor-Surface: 4mm (Mechanical Surface Detection) - Electronics: DAE - SN720; Calibrated: 1/26/2011 - Phantom: SAM 1559; Type: SAM; Serial: 1559 - Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186 Touch position - Middle/Area Scan (6x10x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (measured) = 1.05 mW/g Touch position - Middle/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 15.8 V/m; Power Drift = -0.023 dB Peak SAR (extrapolated) = 1.45 W/kg SAR(1 g) = 1.000 mW/g; SAR(10 g) = 0.629 mW/g Maximum value of SAR (measured) = 1.07 mW/g  0 dB = 1.07mW/g		

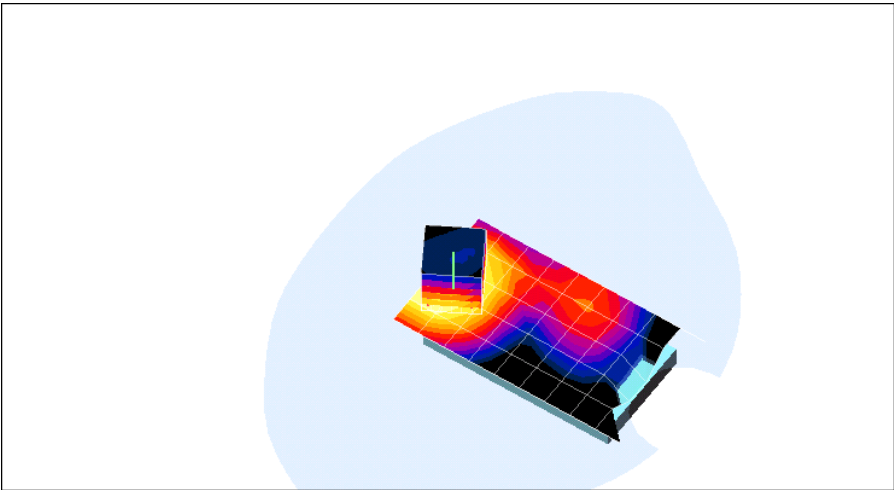
Right Side	Cheek	1752.6 MHz
Communication System: wcdma band4; Frequency: 1752.6 MHz; Duty Cycle: 1:1 Medium parameters used (interpolated): $f = 1752.6 \text{ MHz}$; $\sigma = 1.33 \text{ mho/m}$; $\epsilon_r = 39.7$; $\rho = 1000 \text{ kg/m}^3$ Phantom section: Right Section DASY4 Configuration: - Probe: ES3DV3 - SN3128; ConvF(6.15, 6.5, 6.27); Calibrated: 6/22/2010 - Sensor-Surface: 4mm (Mechanical Surface Detection) - Electronics: DAE - SN720; Calibrated: 1/26/2011 - Phantom: SAM 1559; Type: SAM; Serial: 1559 - Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186 Touch position - High/Area Scan (6x10x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (measured) = 1.00 mW/g Touch position - High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 15.0 V/m; Power Drift = 0.016 dB Peak SAR (extrapolated) = 1.40 W/kg SAR(1 g) = 0.964 mW/g; SAR(10 g) = 0.609 mW/g Maximum value of SAR (measured) = 1.04 mW/g  0 dB = 1.04mW/g		

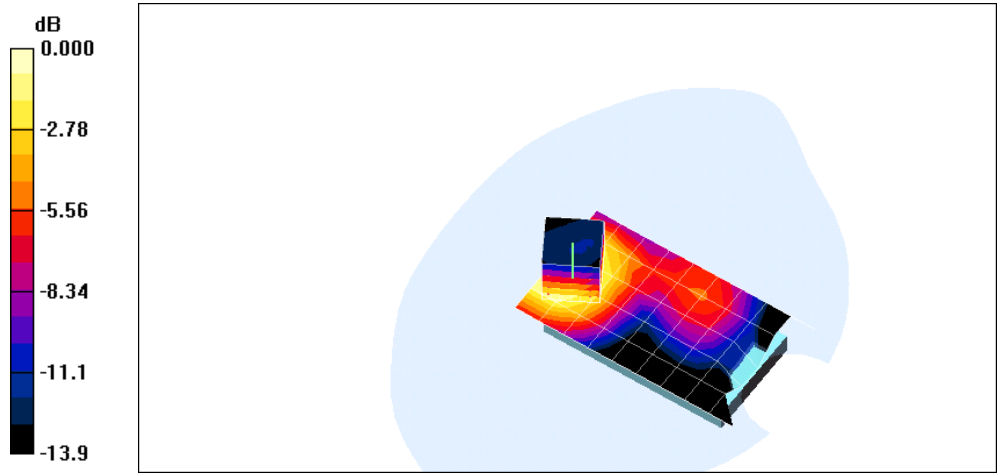
Right Side	Tilt	1712.4 MHz
Communication System: wcdma band4; Frequency: 1712.4 MHz; Duty Cycle: 1:1 Medium parameters used (interpolated): $f = 1712.4 \text{ MHz}$; $\sigma = 1.34 \text{ mho/m}$; $\epsilon_r = 39.8$; $\rho = 1000 \text{ kg/m}^3$ Phantom section: Right Section DASY4 Configuration: - Probe: ES3DV3 – SN3128; ConvF(6.15, 6.5, 6.27); Calibrated: 6/22/2010 - Sensor-Surface: 4mm (Mechanical Surface Detection) - Electronics: DAE – SN720; Calibrated: 1/26/2011 - Phantom: SAM 1559; Type: SAM; Serial: 1559 - Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186 Tilt position – Low/Area Scan (6x10x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (measured) = 0.426 mW/g Tilt position – Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 19.4 V/m; Power Drift = -0.003 dB Peak SAR (extrapolated) = 0.669 W/kg SAR(1 g) = 0.457 mW/g; SAR(10 g) = 0.285 mW/g Maximum value of SAR (measured) = 0.501 mW/g  0 dB = 0.501 mW/g		

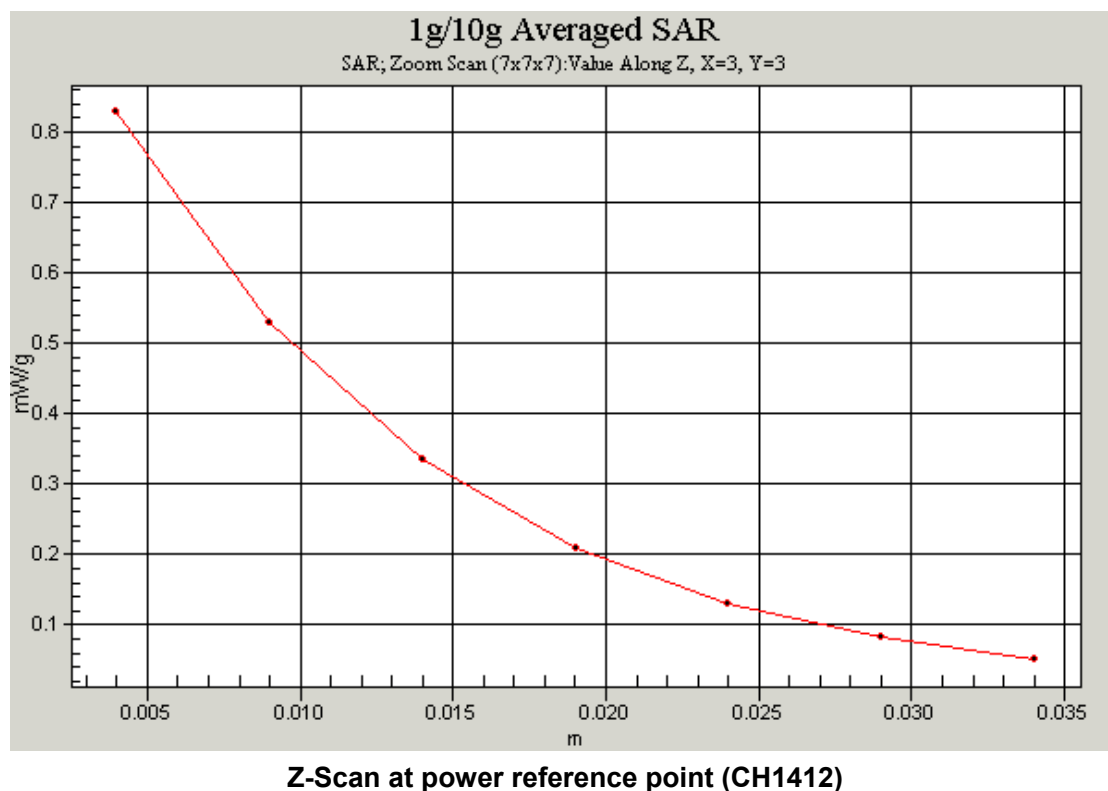
Right Side	Tilt	1732.4 MHz
Communication System: wcdma band4; Frequency: 1732.4 MHz;Duty Cycle: 1:1 Medium parameters used (interpolated): $f = 1732.4 \text{ MHz}$; $\sigma = 1.33 \text{ mho/m}$; $\epsilon_r = 39.7$; $\rho = 1000 \text{ kg/m}^3$ Phantom section: Right Section DASY4 Configuration: - Probe: ES3DV3 - SN3128; ConvF(6.15, 6.5, 6.27); Calibrated: 6/22/2010 - Sensor-Surface: 4mm (Mechanical Surface Detection) - Electronics: DAE - SN720; Calibrated: 1/26/2011 - Phantom: SAM 1559; Type: SAM; Serial: 1559 - Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186 Tilt position - Middle/Area Scan (6x10x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (measured) = 0.428 mW/g Tilt position - Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 20.2 V/m; Power Drift = 0.006 dB Peak SAR (extrapolated) = 0.715 W/kg SAR(1 g) = 0.479 mW/g; SAR(10 g) = 0.296 mW/g Maximum value of SAR (measured) = 0.535 mW/g  0 dB = 0.535mW/g		

Right Side	Tilt	1752.6MHz
Communication System: wcdma band4; Frequency: 1752.6 MHz;Duty Cycle: 1:1 Medium parameters used (interpolated): $f = 1752.6 \text{ MHz}$; $\sigma = 1.33 \text{ mho/m}$; $\epsilon_r = 39.7$; $\rho = 1000 \text{ kg/m}^3$ Phantom section: Right Section DASY4 Configuration: - Probe: ES3DV3 - SN3128; ConvF(6.15, 6.5, 6.27); Calibrated: 6/22/2010 - Sensor-Surface: 4mm (Mechanical Surface Detection) - Electronics: DAE - SN720; Calibrated: 1/26/2011 - Phantom: SAM 1559; Type: SAM; Serial: 1559 - Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186 Tilt position - High/Area Scan (6x10x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (measured) = 0.426 mW/g Tilt position - High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 20.4 V/m; Power Drift = 0.008 dB Peak SAR (extrapolated) = 0.734 W/kg SAR(1 g) = 0.487 mW/g; SAR(10 g) = 0.299 mW/g Maximum value of SAR (measured) = 0.544 mW/g  0 dB = 0.544 mW/g		

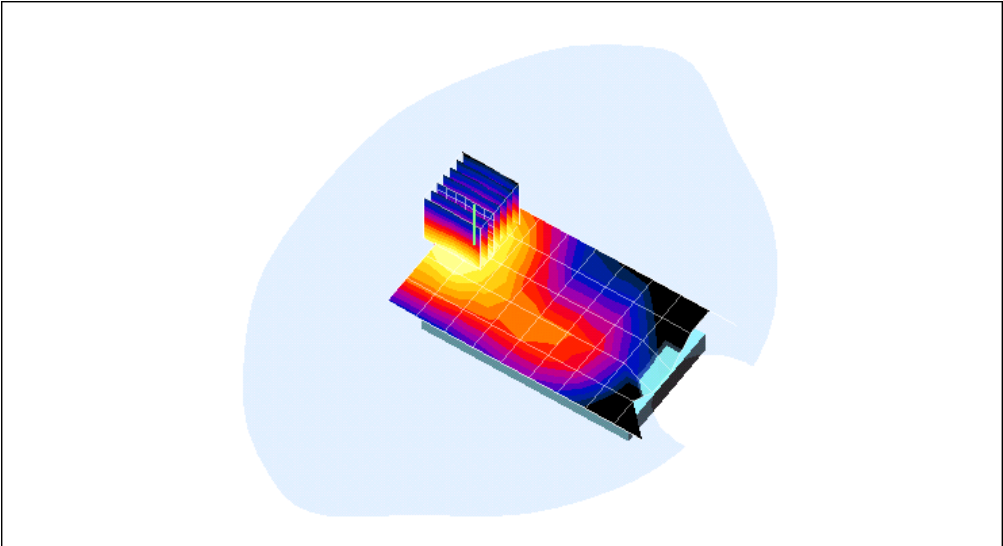
WCDMA B4 with headset (Flat)

FLAT	Towards ground	1712.4 MHz
Communication System: wcdma band4; Frequency: 1712.4 MHz; Duty Cycle: 1:1 Medium parameters used (interpolated): $f = 1712.4 \text{ MHz}$; $\sigma = 1.39 \text{ mho/m}$; $\epsilon_r = 54$; $\rho = 1000 \text{ kg/m}^3$ Phantom section: Flat Section DASY4 Configuration: - Probe: ES3DV3 - SN3128; ConvF(5.7, 6.02, 5.82); Calibrated: 6/22/2010 - Sensor-Surface: 4mm (Mechanical Surface Detection) - Electronics: DAE - SN720; Calibrated: 1/26/2011 - Phantom: SAM 1559; Type: SAM; Serial: 1559 - Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186 Towards ground - Low/Area Scan (6x10x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (measured) = 0.804 mW/g Towards ground - Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 13.2 V/m; Power Drift = -0.013 dB Peak SAR (extrapolated) = 1.14 W/kg SAR(1 g) = 0.751 mW/g; SAR(10 g) = 0.464 mW/g Maximum value of SAR (measured) = 0.814 mW/g dB 0.000 -2.76 -5.52 -8.28 -11.0 -13.8  0 dB = 0.814mW/g		

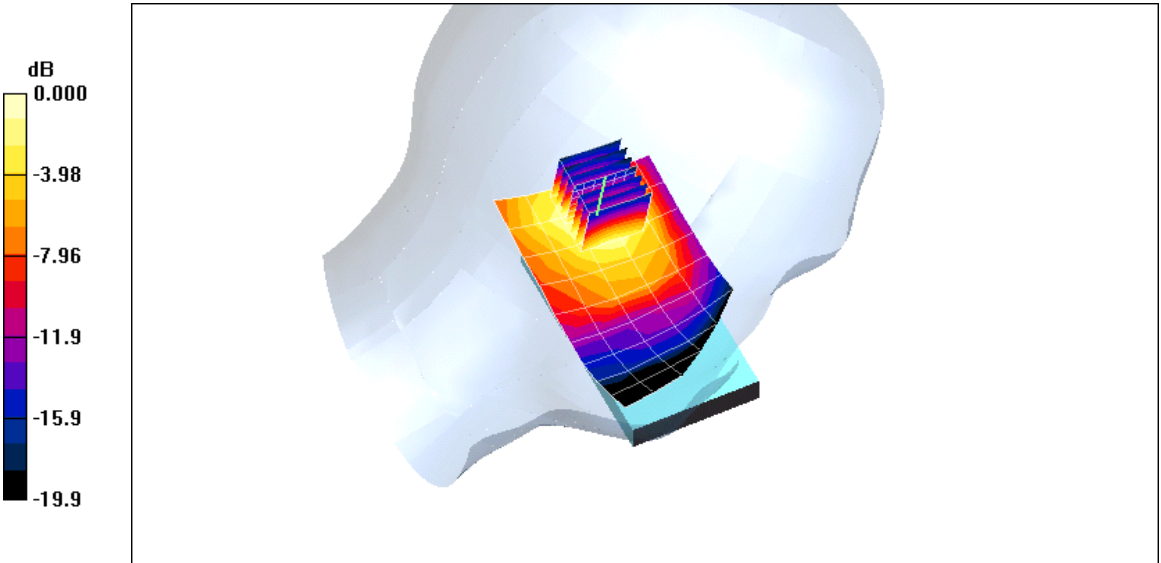
FLAT	Towards ground	1732.4 MHz
Communication System: wcdma band4; Frequency: 1732.4 MHz;Duty Cycle: 1:1 Medium parameters used (interpolated): $f = 1732.4 \text{ MHz}$; $\sigma = 1.41 \text{ mho/m}$; $\epsilon_r = 54$; $\rho = 1000 \text{ kg/m}^3$ Phantom section: Flat Section DASY4 Configuration: - Probe: ES3DV3 - SN3128; ConvF(5.7, 6.02, 5.82); Calibrated: 6/22/2010 - Sensor-Surface: 4mm (Mechanical Surface Detection) - Electronics: DAE - SN720; Calibrated: 1/26/2011 - Phantom: SAM 1559; Type: SAM; Serial: 1559 - Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186 Towards ground - Middle/Area Scan (6x10x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$ Maximum value of SAR (measured) = 0.818 mW/g Towards ground - Middle/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$ Reference Value = 11.2 V/m; Power Drift = -0.134 dB Peak SAR (extrapolated) = 1.15 W/kg SAR(1 g) = 0.758 mW/g; SAR(10 g) = 0.471 mW/g Maximum value of SAR (measured) = 0.828 mW/g  0 dB = 0.828mW/g		

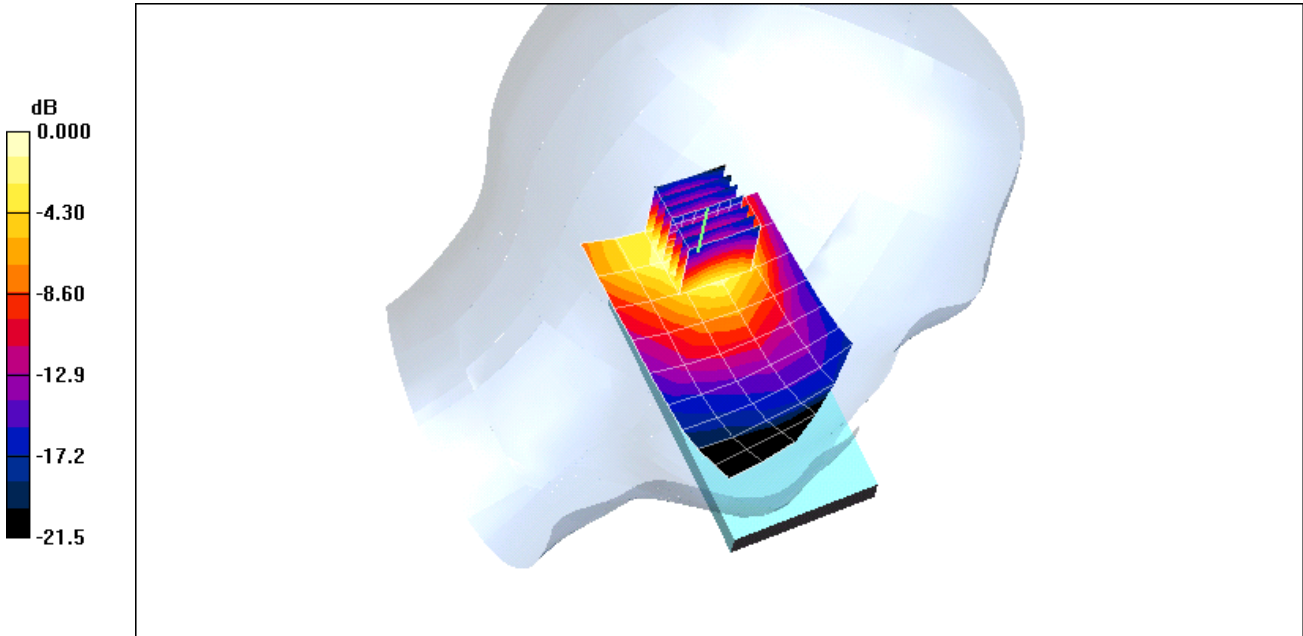


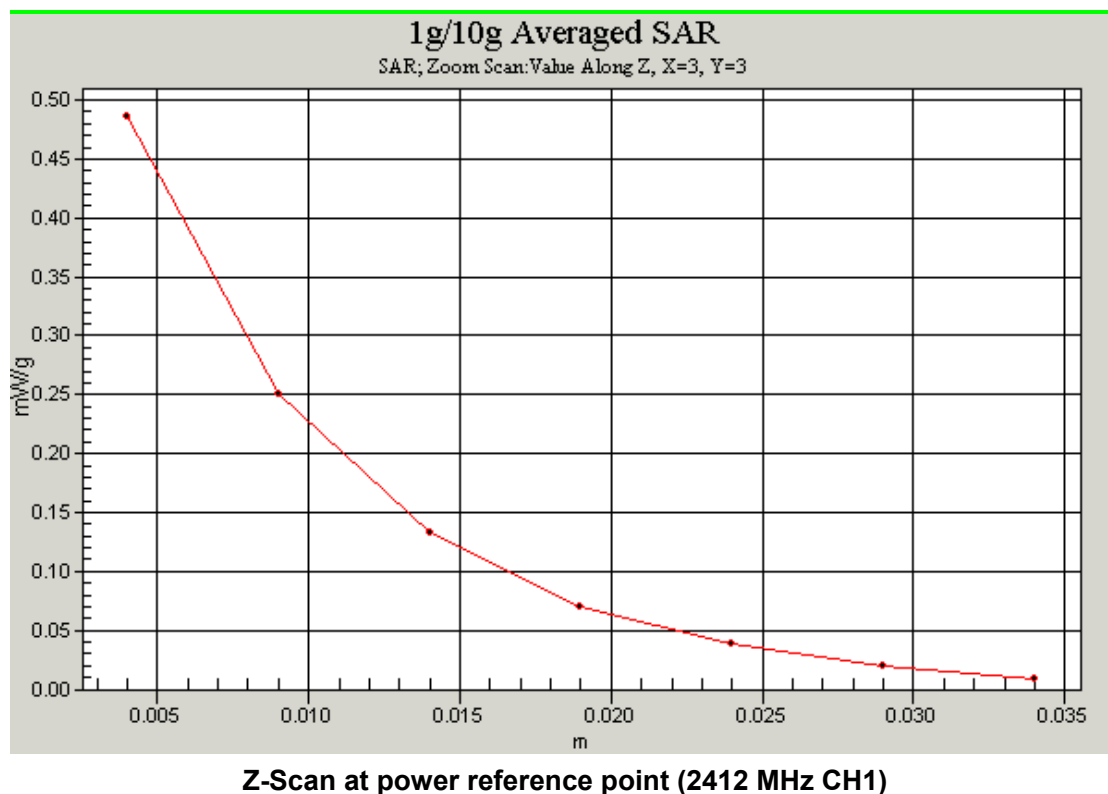
FLAT	Towards ground	1752.6 MHz
Communication System: wcdma band4; Frequency: 1752.6 MHz; Duty Cycle: 1:1 Medium parameters used (interpolated): $f = 1752.6 \text{ MHz}$; $\sigma = 1.43 \text{ mho/m}$; $\epsilon_r = 53.9$; $\rho = 1000 \text{ kg/m}^3$ Phantom section: Flat Section DASY4 Configuration: - Probe: ES3DV3 - SN3128; ConvF(5.7, 6.02, 5.82); Calibrated: 6/22/2010 - Sensor-Surface: 4mm (Mechanical Surface Detection) - Electronics: DAE - SN720; Calibrated: 1/26/2011 - Phantom: SAM 1559; Type: SAM; Serial: 1559 - Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186 Towards ground - High/Area Scan (6x10x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (measured) = 0.645 mW/g Towards ground - High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 15.2 V/m; Power Drift = 0.013 dB Peak SAR (extrapolated) = 0.964 W/kg SAR(1 g) = 0.644 mW/g; SAR(10 g) = 0.407 mW/g Maximum value of SAR (measured) = 0.692 mW/g dB 0.000 -2.70 -5.40 -8.10 -10.8 -13.5 0 dB = 0.692 mW/g		

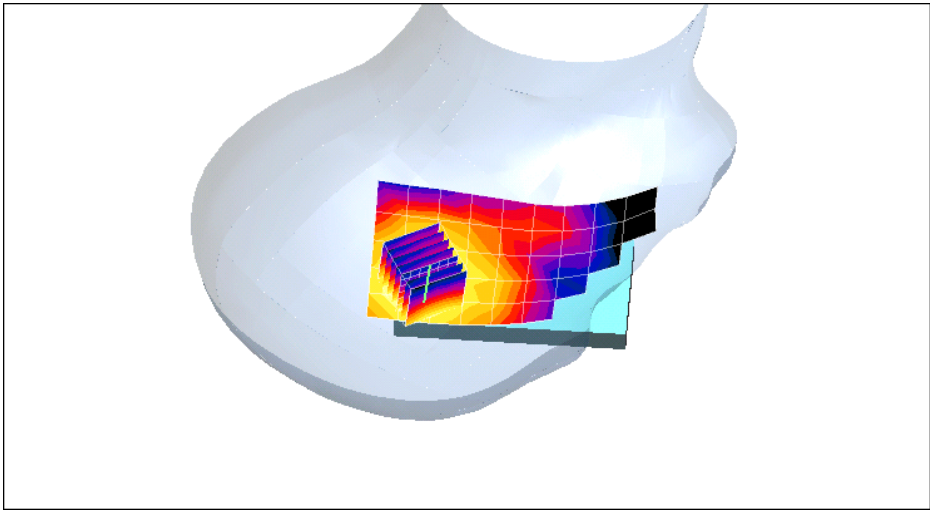
FLAT	Towards phantom	1732.4 MHz
Communication System: wcdma band4; Frequency: 1732.4 MHz; Duty Cycle: 1:1 Medium parameters used (interpolated): $f = 1732.4 \text{ MHz}$; $\sigma = 1.41 \text{ mho/m}$; $\epsilon_r = 54$; $\rho = 1000 \text{ kg/m}^3$ Phantom section: Flat Section DASY4 Configuration: - Probe: ES3DV3 - SN3128; ConvF(5.7, 6.02, 5.82); Calibrated: 6/22/2010 - Sensor-Surface: 4mm (Mechanical Surface Detection) - Electronics: DAE - SN720; Calibrated: 1/26/2011 - Phantom: SAM 1559; Type: SAM; Serial: 1559 - Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186 Towards phantom - Middle/Area Scan (6x10x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (measured) = 0.752 mW/g Towards phantom - Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 13.3 V/m; Power Drift = -0.102 dB Peak SAR (extrapolated) = 1.11 W/kg SAR(1 g) = 0.738 mW/g; SAR(10 g) = 0.461 mW/g Maximum value of SAR (measured) = 0.791 mW/g dB 0.000 -2.78 -5.56 -8.34 -11.1 -13.9  0 dB = 0.791 mW/g		

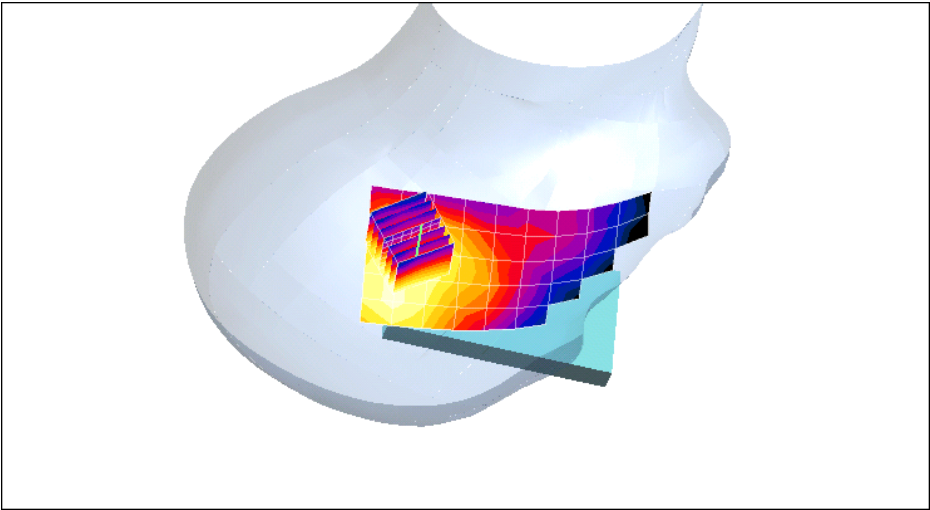
WiFi (Head)

Left Side	Cheek	2412 MHz
Communication System: Wifi 2450; Frequency: 2412 MHz; Duty Cycle: 1:1 Medium parameters used (interpolated): $f = 2412 \text{ MHz}$; $\sigma = 1.85 \text{ mho/m}$; $\epsilon_r = 38.1$; $\rho = 1000 \text{ kg/m}^3$ Phantom section: Left Section DASY4 Configuration: - Probe: SN3128-HSL2450; ConvF(3.308, 3.487, 3.402); Calibrated: 4/21/2011 - Sensor-Surface: 4mm (Mechanical Surface Detection) - Electronics: DAE - SN720; Calibrated: 1/26/2011 - Phantom: SAM 1559; Type: SAM; Serial: 1559 - Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186 Touch position - Low/Area Scan (6x10x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$ Maximum value of SAR (measured) = 0.409 mW/g Touch position - Low/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$ Reference Value = 16.7 V/m; Power Drift = -0.109 dB Peak SAR (extrapolated) = 0.834 W/kg SAR(1 g) = 0.436 mW/g; SAR(10 g) = 0.233 mW/g Maximum value of SAR (measured) = 0.475 mW/g  0 dB = 0.475mW/g		

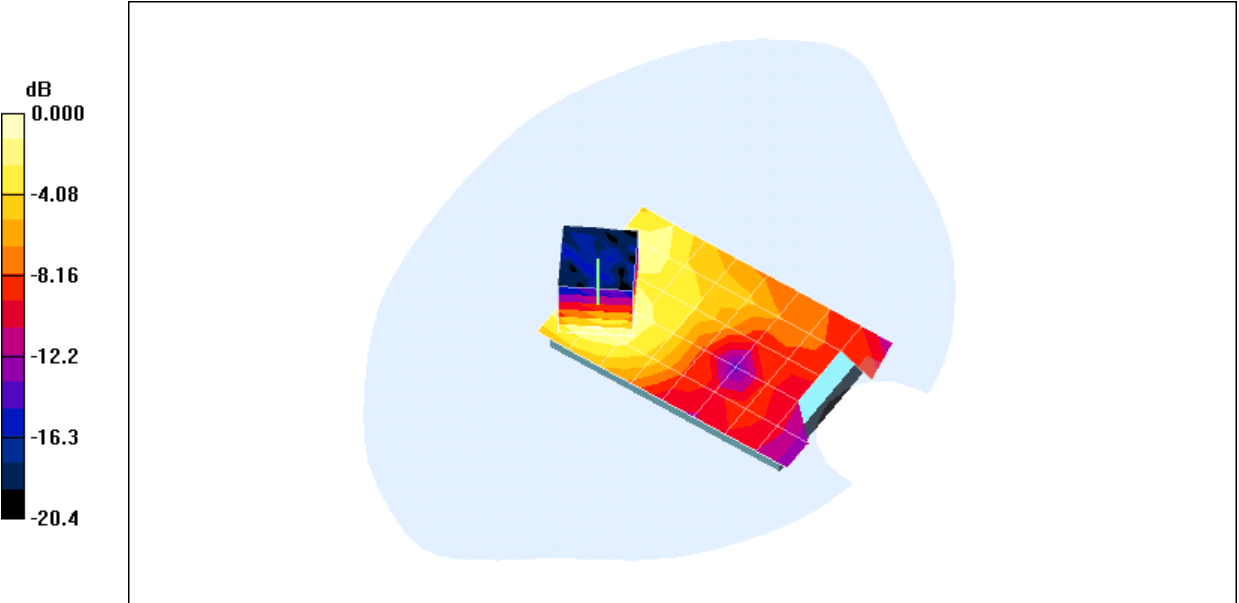
Left Side	Tilt	2412 MHz
Communication System: Wifi 2450; Frequency: 2412 MHz; Duty Cycle: 1:1 Medium parameters used (interpolated): $f = 2412 \text{ MHz}$; $\sigma = 1.85 \text{ mho/m}$; $\epsilon_r = 38.1$; $\rho = 1000 \text{ kg/m}^3$ Phantom section: Left Section DASY4 Configuration: - Probe: SN3128-HSL2450; ConvF(3.308, 3.487, 3.402); Calibrated: 4/21/2011 - Sensor-Surface: 4mm (Mechanical Surface Detection) - Electronics: DAE - SN720; Calibrated: 1/26/2011 - Phantom: SAM 1559; Type: SAM; Serial: 1559 - Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186 Tilt position - Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$ Reference Value = 16.1 V/m; Power Drift = -0.063 dB Peak SAR (extrapolated) = 0.839 W/kg SAR(1 g) = 0.439 mW/g; SAR(10 g) = 0.231 mW/g Maximum value of SAR (measured) = 0.487 mW/g		
 0 dB = 0.487mW/g		

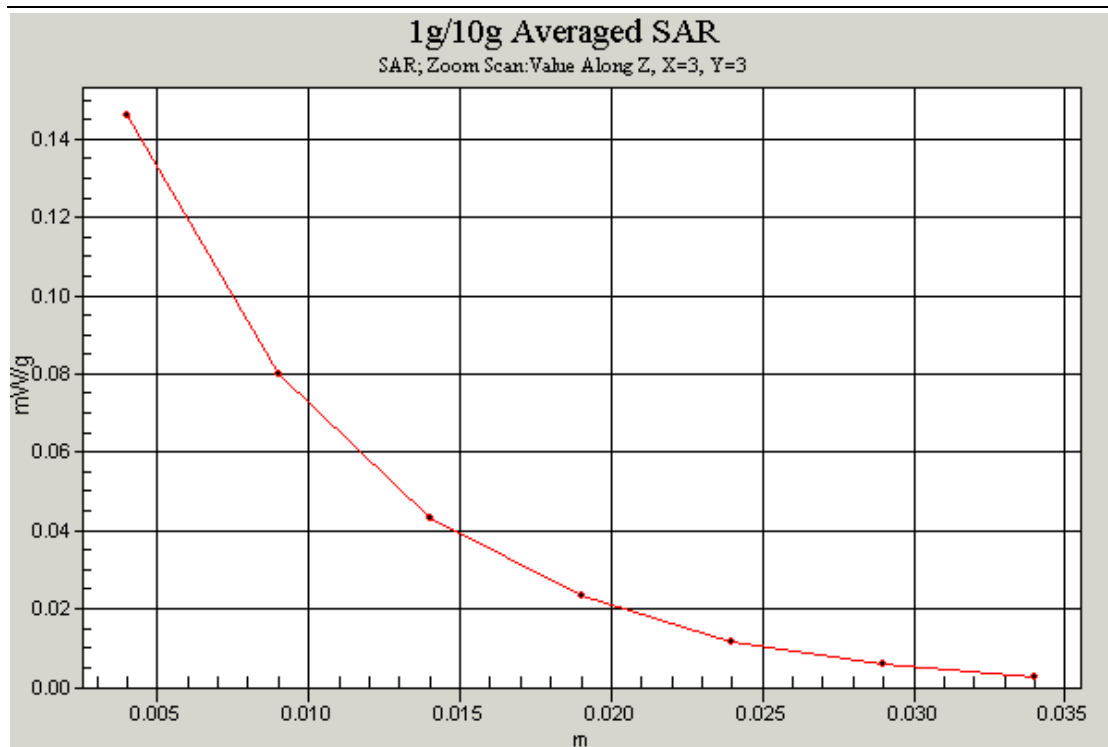


Right Side	Cheek	2412MHz
Communication System: Wifi 2450; Frequency: 2412 MHz; Duty Cycle: 1:1 Medium parameters used (interpolated): $f = 2412 \text{ MHz}$; $\sigma = 1.85 \text{ mho/m}$; $\epsilon_r = 38.1$; $\rho = 1000 \text{ kg/m}^3$ Phantom section: Right Section DASY4 Configuration: - Probe: SN3128-HSL2450; ConvF(3.308, 3.487, 3.402); Calibrated: 4/21/2011 - Sensor-Surface: 4mm (Mechanical Surface Detection) - Electronics: DAE - SN720; Calibrated: 1/26/2011 - Phantom: SAM 1559; Type: SAM; Serial: 1559 - Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186 Touch position - Low/Area Scan (6x10x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$. Maximum value of SAR (measured) = 0.412 mW/g Touch position - Low/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$ Reference Value = 14.2 V/m; Power Drift = 0.008 dB Peak SAR (extrapolated) = 0.910 W/kg SAR(1 g) = 0.436 mW/g; SAR(10 g) = 0.223 mW/g Maximum value of SAR (measured) = 0.479 mW/g  0 dB = 0.479 mW/g		

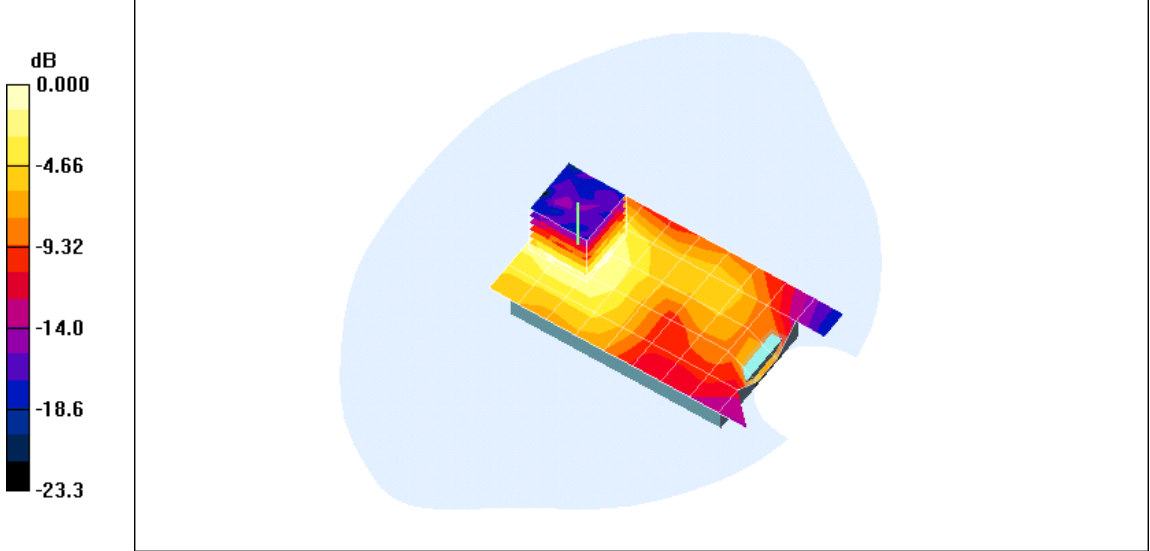
Right Side	Tilt	2412MHz
Communication System: Wifi 2450; Frequency: 2412 MHz;Duty Cycle: 1:1 Medium parameters used (interpolated): $f = 2412 \text{ MHz}$; $\sigma = 1.85 \text{ mho/m}$; $\epsilon_r = 38.1$; $\rho = 1000 \text{ kg/m}^3$ Phantom section: Right Section DASY4 Configuration: - Probe: SN3128-HSL2450; ConvF(3.308, 3.487, 3.402); Calibrated: 4/21/2011 - Sensor-Surface: 4mm (Mechanical Surface Detection) - Electronics: DAE - SN720; Calibrated: 1/26/2011 - Phantom: SAM 1559; Type: SAM; Serial: 1559 - Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186 Tilt position - Low/Area Scan (6x10x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$. Maximum value of SAR (measured) = 0.307 mW/g Tilt position - Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$ Reference Value = 14.4 V/m; Power Drift = -0.123 dB Peak SAR (extrapolated) = 0.619 W/kg SAR(1 g) = 0.331 mW/g; SAR(10 g) = 0.180 mW/g Maximum value of SAR (measured) = 0.358 mW/g dB 0.000 -4.46 -8.92 -13.4 -17.8 -22.3  0 dB = 0.358 mW/g		

WiFi with headset (Flat)

FLAT	Towards ground	2412 MHz
Communication System: Wifi 2450; Frequency: 2412 MHz;Duty Cycle: 1:1 Medium parameters used (interpolated): $f = 2412 \text{ MHz}$; $\sigma = 1.86 \text{ mho/m}$; $\epsilon_r = 53.1$; $\rho = 1000 \text{ kg/m}^3$ Phantom section: Flat Section DASY4 Configuration: - Probe: ES3DV3 - SN3128; ConvF(4.58, 4.859, 4.673); Calibrated: 6/23/2010 - Sensor-Surface: 4mm (Mechanical Surface Detection) - Electronics: DAE - SN720; Calibrated: 1/26/2011 - Phantom: SAM 1559; Type: SAM; Serial: 1559 - Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186 Towards ground - Low/Area Scan (6x9x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$ Maximum value of SAR (measured) = 0.136 mW/g Towards ground - Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$ Reference Value = 6.24 V/m; Power Drift = 0.080 dB Peak SAR (extrapolated) = 0.242 W/kg SAR(1 g) = 0.135 mW/g; SAR(10 g) = 0.074 mW/g Maximum value of SAR (measured) = 0.146 mW/g  0 dB = 0.146mW/g		



Z-Scan at power reference point (2400MHz CH1)

FLAT	Towards phantom	2412MHz
Communication System: Wifi 2450; Frequency: 2412 MHz;Duty Cycle: 1:1 Medium parameters used (interpolated): $f = 2412 \text{ MHz}$; $\sigma = 1.86 \text{ mho/m}$; $\epsilon_r = 53.1$; $\rho = 1000 \text{ kg/m}^3$ Phantom section: Flat Section DASY4 Configuration: - Probe: ES3DV3 - SN3128; ConvF(4.58, 4.859, 4.673); Calibrated: 6/23/2010 - Sensor-Surface: 4mm (Mechanical Surface Detection) - Electronics: DAE - SN720; Calibrated: 1/26/2011 - Phantom: SAM 1559; Type: SAM; Serial: 1559 - Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186 Towards phantom - Low/Area Scan (6x10x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (measured) = 0.102 mW/g Towards phantom - Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 5.43 V/m; Power Drift = 0.012 dB Peak SAR (extrapolated) = 0.172 W/kg SAR(1 g) = 0.095 mW/g; SAR(10 g) = 0.054 mW/g Maximum value of SAR (measured) = 0.104 mW/g  0 dB = 0.104mW/g		