





# SAR TEST REPORT

Report No.: SAI

SAR2010-003

Product:

Archos 7 home tablet

Model No.:

7700

**Brand Name:** 

**Archos** 

Applicant:

Archos SA

FCC ID

SOV7700

Issued by:

Shenzhen Electronic Product Quality

Lab Location:

Electronic Testing Building, Shahe Road

Shenzhen, 518055, P. R. China

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Fax: 86 755 26627238



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# **SAR Test Report**

Product ...... Archos 7 home tablet

Model No. ..... 7700

Brand Name..... Archos

Applicant ...... Archos SA

Applicant Address ...... 12Rue Ampere ZI 91430 Igny, France

Manufacturer .....: SHENZHEN YIFANG DIGITAL TECHNOLOGY

CO.,LTD.

Manufacturer Address ......: Building NO.22,23,Fifth Region, Baiwangxin Industrial

Park , Songbai Rd., Nanshan, Shenzhen 518108, China

Rating..... 5Vdc 2.0A

Test Standards ..... ANSI C95.1-1999

FCC OET Bulletin 65 (Edition 97-01), Supplement C

(Edition 01-01)

Test Result..... PASS

Signature, Date

Reviewed by .....:

>may li Masch. 31. 2000

Signature, Date

Approved by .....:

Signature, Date



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This Test Report consists of the following Annexes:

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#### 1. GENERAL CONDITIONS

- 1.1 This report only refers to the item that has undergone the test.
- 1.2 This report standalone dose not constitute or imply by its own an approval of the product by the certification Bodies or competent Authorities.
- 1.3 This document is only valid if complete; no partial reproduction can be made without written approval of Shenzhen Electronic Product Quality Testing Center.
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#### 2. Administrative Date

#### 2.1. Identification of the Responsible Testing Laboratory

Company Name: ShenZhen Electronic Product Quality Testing Center

**Department:** Testing Department

Address: Electronic Testing Building, ShaHe Road, NanShan District,

ShenZhen, P. R. China

**Telephone:** +86-755-26628676

**Fax:** +86-755-26627238

**Responsible Test Lab** 

Managers:

Mr. Wu Li'an

#### 2.2. Identification of the Responsible Testing Location(s)

Company Name: ShenZhen Electronic Product Quality Testing Center

Address: Electronic Testing Building, ShaHe Road, NanShan District,

ShenZhen, P. R. China

**Organization Item** 

S.E.T Report No.: SAR2010-003

S.E.T Project Leader: Mr. Li Sixiong

S.E.T Responsible for

accreditation scope:

Mr. Wu Li'an

**Start of Testing:** 2010-03-26

**End of Testing:** 2010-03-31

#### 2.4. Identification of Applicant

**Company Name:** 

Archos SA

Address:

12Rue Ampere ZI 91430 Igny, France

Contact person:

Telephone:

Fax:

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#### 2.5. Identification of Manufacture

Company Name: SHENZHEN YIFANG DIGITAL TECHNOLOGY CO.,LTD.

Address: Building NO.22,23,Fifth Region, Baiwangxin Industrial

Park ,Songbai Rd., Nanshan, Shenzhen 518108,China

Contact person:

Telephone:

Fax:

Notes: This data is based on the information by the applicant.

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#### 3. Equipment Under Test (EUT)

#### 3.1.Identification of the Equipment under Test

**Brand Name:** Archos

**Type Name:** 7700

Marking Name: 7700

WiFi(2450MHz band)802.11b/g

Test frequency Channel 1(2412.00MHz), channel

6(2437.00MHz), channel 11(2462.00MHz)

Accessories Charger Battery

**General description:** Battery type --

**Battery** 

specification

Antenna type Build inside

Operation mode Call established

Modulation mode DSSS(802.11b) OFDM(802.11g)

#### **NOTE:**

1. The EUT is a model of WiFi Mobile Station ("MS" for short in this report) operating in 2450MHz band. We have tested two surface of the EUT taking shortest to the WiFi antenna.

2. Please refer to Appendix C for the photographs of the EUT. For a more detailed features description about the EUT, please refer to User's Manual.

#### 3.2. Identification of all used Test Sample of the Equipment under Test

EUT Code	Hardware Version	Software Version
1#		

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#### 4 OPERATIONAL CONDITIONS DURING TEST

#### 4.1 Schematic Test Configuration

During SAR test, EUT is in Traffic Mode (Channel Allocated) at Normal Voltage Condition. A communication link is set up with a System Simulator (SS) by air link, and a call is established.

The TCH is allocated to 1, 6 and 11 respectively in the case of WiFi 2450 MHz. The EUT is commanded to operate at maximum transmitting power.

The EUT shall use its internal transmitter. The antenna(s), battery and accessories shall be those specified by the manufacturer. The EUT battery must be fully charged and checked periodically during the test to ascertain uniform power output. If a wireless link is used, the antenna connected to the output of the base station simulator shall be placed at least 50 cm away from the handset.

The signal transmitted by the simulator to the antenna feeding point shall be lower than the output power level of the handset by at least 35 dB.

#### 4.2 SAR Measurement System

The SAR measurement system being used is the IndexSAR SARA2 system, which consists of a

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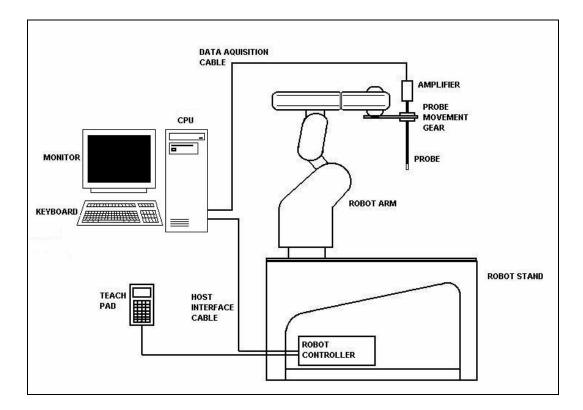


Figure 1. SAR Lab Test Measurement Set-up

Mitsubishi RV-E2 6-axis robot arm and controller, IndexSAR probe and amplifier and SAM phantom Head Shape. The system is controlled remotely from a PC, which contains the software to control the robot and data acquisition equipment. The software also displays the data obtained from test scans.

In operation, the system first does an area (2D) scan at a fixed depth within the liquid from the inside wall of the phantom. When the maximum SAR point has been found, the system will then carry out a 3D scan centred at that point to determine volume averaged SAR level.

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#### 4.2.1 Robot system specification

The robot is used to articulate the probe to programmed positions inside the phantom head to obtain the SAR readings from the DUT.



#### **Robot and Stand**

Type Mitsubishi Movemaster RV-2A / 6 axis vertical

articulated robot

Dimensions (robot) Height: 790mm (in home position)

Dimensions (robot stand) 1010L x 450W x 820H mm

Weight Approx. 36 kg
Position repeatability +/- 0.04mm

Drive Method AC servomotor

Expandability Extra axis expansion capability for probe

calibration applications E-Field probe



#### **Robot Controller Unit**

Type CR1 - 571

Dimensions 212W x 290D x 151H mm

Weight 8 kg

Power source single-phase 100 - 240 VAC

#### 4.2.2 Probe and amplifier specification

#### IXP-050 Indexsar isotropic immersible SAR probe

The probes are constructed using three orthogonal dipole sensors arranged on an interlocking, triangular prism core. The probes have built-in shielding against static charges and are contained within a PEEK cylindrical enclosure material at the tip (showed in figure 2). The system uses diode compression potential (DCP) to determine SAR values for different types of modulation. Crest factor is not used for determining SAR values. The DCP for different types of modulation is determined during the probe calibration procedure.

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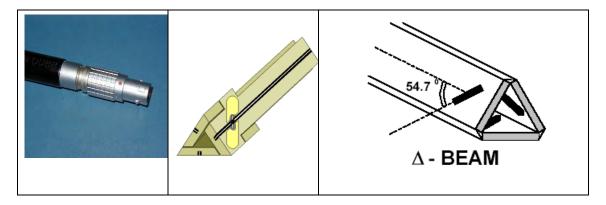
## **E-filed Probe** Three orthogonal dipole sensors arranged on **Type** triangular, interlocking substrates Overall length: 350mm Tip length: 10mm Body diameter: 12mm **Dimensions** Tip diameter: 5mm Distance from probe tip to dipole centers: 2.5mm Lemo 6 pole latching connector for interfacing to Interfacing high impedance amplifier +/- 0.5dB in brain liquids (rotation about probe axis) typically +/- 0.15dB Isotropy +/- 0.5dB in brain liquids (rotation normal to probe axis) Indexsar calibration in brain tissue simulating Calibration liquids at frequency of 850MHz,900MHz, 1800MHz ,1900MHz and 2450MHz. **Dynamic** 0.001W/kg to 100W/kg in liquid. Linearity +/-0.2W/kg Range



Figure 2. Specification and characterisation parameters of indexsar probe

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#### **IFA-010 Amplifier**

The amplifier unit has a multi-pole connector to connect to the probe and a multiplexer selects between the 3-channel single-ended inputs. A 16-bit AtoD converter with programmable gain is used along with an on-board micro-controller with non-volatile firmware. Battery life is around 150 hours and data are transferred to the PC via 3m of duplex optical fibre and a self-powered RS232 to optical converter.



#### **Probe Amplifier and PC Interface**

Type High impedance inputs with 3 independent x,y,z sensor

channels giving simultaneous measurement data every 2ms. Reads true average of modulated signals without the need

for duty cycle corrections

Ranges Software selectable of x1 to 63

Cable Optical cable with self-powered 9 way RS232 converter.

3m cable length supplied as standard.

Other lengths to order.

Power Requirements 2 x AAA batteries giving approximately 100 hours usage.



#### 'Word' report format

The results of each frequency scan are presented in a Microsoft 'Word' document with all the necessary measurement parameters automatically tabulated. Users can customise the layout and in some cases language changes are possible.

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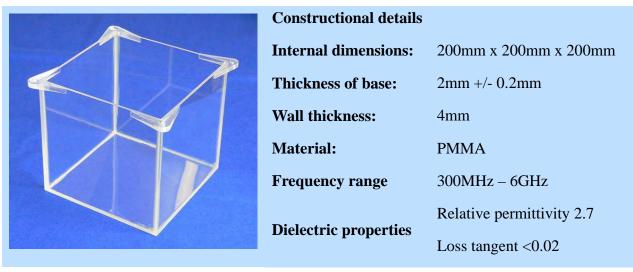


#### 4.2.3 Phantoms and simulant liquid

#### 4.2.3.1 Box phantom

The box phantom used for body testing and for validation is manufactured from Perspex.

#### IXB - 070 Specification and characterisation parameters



**Tissue-simulant volume required for 150mm depth** (6 litres)

#### 4.2.3.2 Simulant liquids

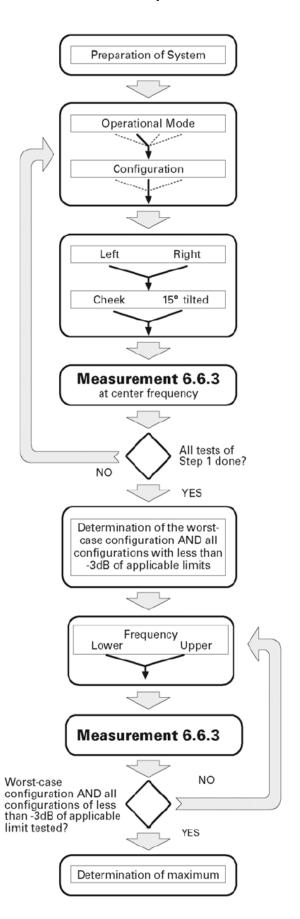
**S**imulant liquids that are used for testing at frequencies of WiFi 2450MHz, which are made mainly of sugar, salt and water solutions may be left in the phantoms. Approximately 7litres are needed for an upright head compared to about 27litres for a horizontal bath phantom.

Ingredients	Frequency(MHz)		
(% by weight)	24	50	
Tissue Type	Head	Body	
Water	56	56	
Salt(NaCl)	0.0	0.0	
Sugar	0.0	0.0	
HEC	0.0	0.0	
Bacterial de	0.0	0.0	
DGBE	0.0	0.0	
Acticide SPX	0.0	0.0	
Dielectric Constant	0.0	0.0	
Oxidised Mineral Oil	44	44	

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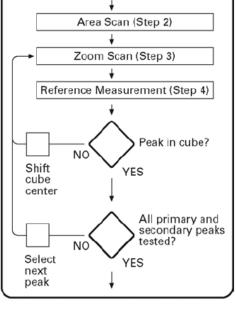


#### 4.2.3 SAR measurement procedure



# Reference Measurement (Step 1) Area Scan (Step 2) Zoom Scan (Step 3)

Measurement 6.6.3



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Channel		I	Left		Right				
	Ch	Cheek Tilt		Ch	eek	Т	ilt		
	Retracted Extended		Retracted	Extended	Retracted Extended		Retracted Extended		
Mode 1:									
High			S2(-1.4dB)	S2(-0.4dB)			S2(-2.2dB)	S2(-1.4dB)	
Middle	S1(-4dB)	S1(-4dB)	S1(-1.5dB)	S1(-0.5dB)	S1(-5dB)	S1(-5dB)	S1(-2.5dB)	S1(-1.5dB)	
Low			S2(-1.3dB)	S2(-0.7dB)			S2(-2.7dB)	S2(-0.6dB)	
Mode 2:									
High			S2(-2.7dB)	S2(-1.1dB)					
Middle	S1(-5dB)	S1(-5dB)	S1(-2.5dB)	S1(-1dB)	S1(-6dB)	S1(-6dB)	S1(-5dB)	S1(-5dB)	
Low			S2(-2.2dB)	S2(-0.8dB)					

After an area scan has been done at a fixed distance of 8mm from the surface of the phantom on the source side, a 3D scan is set up around the location of the maximum spot SAR. First, a point within the scan area is visited by the probe and a SAR reading taken at the start of testing. At the end of testing, the probe is returned to the same point and a second reading is taken. Comparison between these start and end readings enables the power drift during measurement to be assessed.

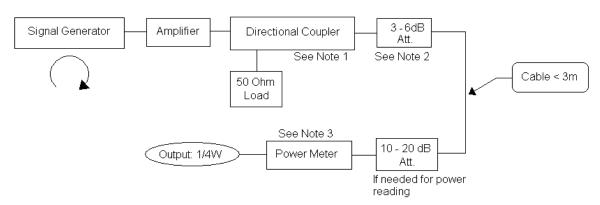
Above is the scanning procedure flow chart and table from the IEEE p1528 standard. This is the procedure for which all compliant testing should be carried out to ensure that all variations of the device position and transmission behaviour are tested.

#### 4.2.4 Validation testing using box phantoms

The following procedure, recommended for performing validation tests using box phantoms is based on the procedures described in the draft IEEE standard P1528. Setup according to the setup diagram below:

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With the SG and Amp and with directional coupler in place, set up the source signal at the relevant frequency and use a power meter to measure the power at the end of the SMA cable that you intend to connect to the balanced dipole. Adjust the SG to make this, say, 0.25W (24 dBm). If this level is too high to read directly with the power meter sensor, insert a calibrated attenuator (e.g. 10 or 20 dB) and make a suitable correction to the power meter reading.

Note 1: In this method, the directional coupler is used for monitoring rather than setting the exact feed power level. If, however, the directional coupler is used for power measurement, you should check the frequency range and power rating of the coupler and measure the coupling factor (referred to output) at the test frequency using a VNA.

Note 2: Remember that the use of a 3dB attenuator (as shown in Figure 8.1 of P1528) means that you need an RF amplifier of 2 times greater power for the same feed power. The other issue is the cable length. You might get up to 1dB of loss per meter of cable, so the cable length after the coupler needs to be quite short.

Note 3: For the validation testing done using CW signals, most power meters are suitable. However, if you are measuring the output of a modulated signal from either a signal generator or a handset, you must ensure that the power meter correctly reads the modulated signals.

4.2.4.1 Setting up the box phantom for validation testing

The main purpose of the box phantom is for the system. By placing the box phantom in place upright head, using the box phantom dipole holder can now be used to check that the probe and giving accurate readings.



validation of of the the system software are

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#### 4.2.4.2 Equipments and results of validation testing

#### Equipments:

name	Type and specification
Signal generator	SML02
Directional coupler	450MHz-3GHz
Amplifier	3W 502(10-2500MHz)
Reference dipole	IXD-090 antenna

#### Results:

Frequency	Target value (1g)	Test value (1g)		
2450MHz	52.4 W/kg		52.344 W/kg (Body)	

#### 4.2.5 SARA2 Interpolation and Extrapolation schemes

SARA2 software contains support for both 2D cubic B-spline interpolation as well as 3D cubic B-spline interpolation. In addition, for extrapolation purposes, a general n-th order polynomial fitting routine is implemented following a singular value decomposition algorithm. A 4th order polynomial fit is used by default for data extrapolation, but a linear-logarithmic fitting function can be selected as an option. The polynomial fitting procedures have been tested by comparing the fitting coefficients generated by the SARA2 procedures with those obtained using the polynomial fit functions of Microsoft Excel when applied to the same test input data.

#### 4.2.6 Interpolation of 2D area scan

The 2D cubic B-spline interpolation is used after the initial area scan at fixed distance from the phantom shell wall. The initial scan data are collected with approx. 10mm spatial resolution and spline interpolation is used to find the location of the local maximum to within a 1mm resolution for positioning the subsequent 3D scanning.

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#### 4.2.7 Extrapolation of 3D scan

For the 3D scan, data are collected on a spatially regular 3D grid having (by default) 6.4 mm steps in the lateral dimensions and 3.5 mm steps in the depth direction (away from the source). SARA2 enables full control over the selection of alternative step sizes in all directions.

The digitised shape of the head is available to the SARA2 software, which decides which points in the 3D array are sufficiently well within the shell wall to be 'visited' by the SAR probe. After the data collection, the data are extrapolated in the depth direction to assign values to points in the 3D array closer to the shell wall. A notional extrapolation value is also assigned to the first point outside the shell wall so that subsequent interpolation schemes will be applicable right up to the shell wall boundary.

#### 4.2.8 Interpolation of 3D scan and volume averaging

The procedure used for defining the shape of the volumes used for SAR averaging in the SARA2 software follow the method of adapting the surface of the 'cube' to conform with the curved inner surface of the phantom. This is called, here, the conformal scheme.

For each row of data in the depth direction, the data are extrapolated and interpolated to less than 1mm spacing and average values are calculated from the phantom surface for the row of data over distances corresponding to the requisite depth for 10g and 1g cubes. This results in two 2D arrays of data, which are then cubic B-spline interpolated to sub mm lateral resolution. A search routine then moves an averaging square around through the 2D array and records the maximum value of the corresponding 1g and 10g volume averages. For the definition of the surface in this procedure, the digitized position of the head shell surface is used for measurement in head-shaped phantoms. For measurements in rectangular, box phantoms, the distance between the phantom wall and the closest set of gridded data points is entered into the software. For measurements in box-shaped phantoms, this distance is under the control of the user. The effective distance must be greater than 2.5mm as this is the tip-sensor distance and to avoid interface proximity effects, it should be at least 5mm. A value of 6 or 8mm is recommended. This distance is called **dbe**.

For automated measurements inside the head, the distance cannot be less than 2.5mm, which is the radius of the probe tip and to avoid interface proximity effects, a minimum clearance distance of x mm is retained. The actual value of dbe will vary from point to point depending upon how the spatially regular 3D grid points fit within the shell. The greatest separation is when a grid point is just not visited due to the probe tip dimensions. In this case the distance could be as large as the step-size plus the minimum clearance distance (i.e with x=5 and a step size of 3.5, dbe will be between 3.5 and 8.5mm).

The default step size (dstep) used is 3.5mm, but this is under user-control. The compromise is with time of scan, so it is not practical to make it much smaller or scan times become long and power-drop influences become larger.

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The robot positioning system specification for the repeatability of the positioning (dss) is +/-0.04mm.

The phantom shell is made by an industrial moulding process from the CAD files of the SAM shape, with both internal and external moulds. For the upright phantoms, the external shape is subsequently digitized on a Mitutoyo CMM machine (Euro an ultrasonic sensor indicate that the shell thickness (dph) away from the ear is 2.0 +/- 0.1mm. The ultrasonic measurements were calibrated using additional mechanical measurements on available cut surfaces of the phantom shells. See support document IXS-020x.

For the upright phantom, the alignment is based upon registration of the rotation axis of the phantom on its 253mm diameter baseplate bearing and the position of the probe axis when commanded to go to the axial position. A laser alignment tool is provided (procedure detailed elsewhere). This enables the registration of the phantom tip (dmis) to be assured to within approx. 0.2mm. This alignment is done with reference to the actual probe tip after installation and probe alignment. The rotational positioning of the phantom is variable – offering advantages for special studies, but locating pins ensure accurate repositioning at the principal positions (LH and RH ears).

# 4.2.9 Probe anisotropy and boundary proximity influence correction software (Virtual Probe Miniaturization VPM software)

Indexsar Report IXS0223 provides a background to the factors affecting measurements at high frequencies when using SAR probes of size 8 – 5mm tip diameter. Although the Indexsar probes are at the smaller end of this range, SAR probes are not isotropic in 5GHz phantom field gradients and ad

1) At >5GHz, the SAR field decays to 1/e of its value within 3-4mm of the surface of a phantom with a source adjacent. So, measurements are significantly affected by small errors in the separation distances employed between the probe and the phantom surface. The distance between the probe tip and the plane of the sensors should be allowed for using the same value as th at declared in the probe calibration document. Distances between the probe tip and phantom surface should be measured accurately to 0.1mm. The best way to assure this is to use the robot to position the probe in light contact with the phantom wall and then to withdraw the probe by the selected amount under robot control.

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- 2) The preferred test geometry at 5GHz is for testing at the bottom of an open phantom. If tests at the side of a phantom are performed, it will be necessary to apply VPM corrections as described below. In either case, careful monitoring of probe spacing from the phantom is required. Probe isotropy is improved for measuring fields polarized either normal to or parallel to the probe axis. If the source polarization is known, this arrangement should be established, if possible.
- 3) The probe calibration factors including boundary correction terms should be carefully entered from the calibration document. The probe calibration factors require that the probe be oriented in a known rotational position. The red spot on the Indexsar probe should be aligned facing away from the robot arm.
- 4) The latest SARA2 software (VPM editions) contain support for correcting for probe anisotropy in strong field gradients and include a procedure for correcting for boundary proximity influences. As noted above, the probe has to be oriented in a given rotational position and some familiarity with the new measurement procedures is necessary. The calculations can be performed either with or without the extended correction schemes applied.
- 5) If boundary corrections are used, it may be preferable to go rather closer to the phantom surface than is usually recommended and to perform scans using small steps between the measurement planes so that good data on the SAR profiles are collected within the first 10mm of the phantom depth.

#### 4.2.10 The FCC Measurement Procedure(Body-worn and other configurations)

Body-worn operating configurations should be tested with the belt-clips and holsters attached to the device and positioned against a flat phantom in normal use configurations. Devices with a headset output should be tested with a headset connected to the device. Both the physical spacing to the body of the user as dictated by the accessory and the materials used in an accessory affect the SAR produced by the transmitting device. For purpose of determining test requirements, accessories may be divided into two categories: those that do not contain metallic components and those that do.

When multiple accessories that do not contain metallic components are supplied with the device, the device may be tested with only the accessory that dictates the closest spacing to the body. When multiple accessories that contain metallic components are supplied with the device, the device must be tested with each accessory that contains a unique metallic component. If multiple accessories share an identical metallic component (e.g., the same metallic belt-clip used with different holsters with no other metallic components), only the accessory that dictates the closest spacing to the body must be tested.

Body-worn accessories may not always be supplied or available as options for some devices that are intended to be authorized for body-worn use. A separation distance of 1.5 cm between the back of the device and a flat phantom is recommended for testing body-worn SAR compliance under

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such circumstances. Other separation distances may be used, but they should not exceed 2.5 cm. In these cases, the device may use body-worn accessories that provide a separation distance greater than that tested for the device provided however that the accessory contains no metallic components..

In order for users to be aware of the body-worn operating requirements for meeting RF exposure compliance, operating instructions and caution statements should be included in the manual. The information should allow users to make informed decisions on the type of body-worn accessories and operating configurations that are appropriate for the device. The following are *examples* of typical statements that provide end-users with the necessary information about body-worn accessories:

1. For a product that has the potential to be used in a body worn configuration and has been tested and certified with a specific accessory device(s):

"For body worn operation, this phone has been tested and meets the FCC RF exposure guidelines when used with the (*manufacturer name*) accessories supplied or designated for this product. Use of other accessories may not ensure compliance with FCC RF exposure guidelines."

2. For a product that has the potential to be used in a body worn configuration and has not been certified with a specific accessory device(s):

"For body worn operation, this phone has been tested and meets FCC RF exposure guidelines when used with an accessory that contains no metal and that positions the handset a minimum of (specified distance) from the body. Use of other accessories may not ensure compliance with FCC RF exposure guidelines."

3. For a product that has the potential to be used in a body worn configuration with future manufacturer designed accessories:

"For body worn operation, this phone has been tested and meets the FCC RF exposure guidelines when used with a (*manufacturer name*) accessory designated for this product or when used with an accessory that contains no metal and that positions the handset a minimum of (specified distance) from the body."

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#### 5.1 Applicable Limit Regulations

**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

**ANSI C95.1–1999:** IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz.

It specifies the maximum exposure limit of **1.6 W/kg** as averaged over any 1 gram of tissue for portable devices being used within 20 cm of the user in the uncontrolled environment.

#### **5.2 Applicable Measurement Standards**

**IEEE 1528–2003:** Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Body Due to Wireless Communications Devices: Experimental Techniques.

They specify the measurement method for demonstration of compliance with the SAR limits for such equipments.

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#### **6 LABORATORY ENVIRONMENT**

### **Table: The Ambient Conditions during SAR Test**

Temperature	Min. = 15 $^{\circ}$ C, Max. = 30 $^{\circ}$ C
Relative humidity	Min. = 30%, Max. = 70%
Ground system resistance	< 0.5 Ω

Ambient noise is checked and found very low and in compliance with requirement of standards.

Reflection of surrounding objects is minimized and in compliance with requirement of standards.

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#### 7.1 Dielectric Performance

The measured 1-gram averaged SAR values of the device against the head and the body are provided in Tables 1 and 2 respectively. The humidity and ambient temperature of test facility were 54% ~60% and 23.0 °C ~23.8°C respectively. The SAM head phantom (SN 0381 SH) were full of the head tissue simulating liquid. The depth of the body tissue was 15.1cm. The back of the device is against the bottom of the flat phantom.

For body-worn measurements, the device was tested against flat phantom representing the user body. Under measurement phone was put on in the belt holder.

Table 2: Dielectric Performance of Body Tissue Simulating Liquid

Temperature: 23.0~23.8°C, humidity: 54~60%.									
/ Frequency Permittivity ε Conductivity σ (S/n									
Target value	245MHz	52.7	1.95						
Validation value	2450MHz	53.11	1.904						
(March 27)	2.001/11/12	33.11							

#### 7.2 Summary of Measurement Results (WiFi 2450MHz Band)

Table 3: SAR Values (WiFi 2450MHz Band 802.11b), Measured against the head.

Temperature: 23.0~23.8°C, humidity: 54~60%.				
Limit of SAD (W/lrg)	1 g Average			
Limit of SAR (W/kg)	1,	.6		
Test Case	Measurement Result (W/k			
	1 g Average	Power level		
	(W/kg)	(dBm)		
Side, Channel 1(Position 1)	0.442	15.81		
Side, Channel 6(Position 1)	0.449	15.32		

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Side , Channel 11(Position 1)	0.432	15.14
Side, Channel 1(Position 2)	0.931	15.81
Side, Channel 6(Position 2)	0.939	15.32
Side , Channel 11(Position 2)	0.806	15.14

Table 4: SAR Values (WIFI 2450MHz Band 802.11g), Measured against the body

Temperature: 23.0~23.9° C, humidity: 55~62%.					
Limit of SAR (W/kg)	1 g Average				
Ellint of OAR (W/Kg)	1	.6			
T O	Measurement Result (W/kg)				
Test Case	1 g Average	Power level			
	(W/kg)	(dBm)			
Side, Channel 1(Position 1)	0.434	13.18			
Side, Channel 6(Position 1)	0.401	12.89			
Side , Channel 11(Position 1)	0.392	12.58			
Side, Channel 1(Position 2)	0.691	13.18			
Side, Channel 6(Position 2)	0.670	12.89			
Side , Channel 11(Position 2)	0.686	12.58			

Position 1 - bottom of EUT touch Phamton

Position 2 - the edge contained antenna which closest to Human body when in used.

#### 7.3 Conclusion

Localized Specific Absorption Rate (SAR) of this portable wireless device has been measured in all cases requested by the relevant standards cited in Clause 5.2 of this report. Maximum localized SAR is **below** exposure limits specified in the relevant standards cited in Clause 5.1 of this test report.

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# **8 Measurement Uncertainty**

Measurement uncertainty values were evaluated for SAR measurements performed by SET. The uncertainty values for components specified in FCC supplement C(01-01) to OET Bulletin 65(97-01) were evaluated according to the procedures of IEEE P1528/D1.2 April 21,2003, NIST 1297 1994 edition and ISO Guide to the Expression of Uncertainty in Measurements(GUM).

N o	Uncertainty Component	Туре	Uncertaint y Value (%)	Probability Distributio	k	Ci	Standard Uncertaint y (%) <i>ui</i> (%)	Degree of freedom V <sub>eff</sub> or v <sub>i</sub>		
	Measurement System									
1	-Probe Calibration	В	3.6	N	1	1	3.60	8		
2	—Axial isotropy	В	4.23	R	$\sqrt{3}$	$\sqrt{1-cp}$	0.00	<b>∞</b>		
3	-Hemispherical Isotropy	В	10.7	R	$\sqrt{3}$	√cp	6.18	∞		
4	—Boundary Effect	В	1.7	R	$\sqrt{3}$	1	0.98	∞		
5	—Linearity	В	2.98	R	$\sqrt{3}$	1	1.69	∞		
6	—System Detection Limits	В	0.00	R	$\sqrt{3}$	1	0.00	∞		
7	Readout Electronics	В	0.00	N	1	1	0.00	∞		
8	Response Time	В	0.00	R	$\sqrt{3}$	1	0.00	∞		
9	-Integration Time	В	0.00	R	$\sqrt{3}$	1	0.00	∞		
10	RF Ambient Conditions	В	0.00	R	$\sqrt{3}$	1	0.00	∞		
11	-Probe Position Mechanical tolerance	В	1.14	R	$\sqrt{3}$	1	0.33	∞		
12	-Probe Position with respect to Phantom Shell	В	2.86	R	$\sqrt{3}$	1	0.83	∞		

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	l. <b>E.</b> ₽				_				
13	—Extrapolation, Interpolation and Integration Algorithms for Max. SAR evaluation	В	3.6	R	$\sqrt{3}$	1	2.08	∞	
	Uncertainties of the DUT								
14	-Position of the DUT	Α	0.00	N	1	1	0.00	0	
15	-Holder of the DUT	Α	0.00	N	1	1	0.00	0	
16	Output Power Variation     SAR drift measurement	В	5.0	R	$\sqrt{3}$	1	2.89	∞	
	Phantom and Tissue Param	eters							
17	—Phantom     Uncertainty(shape and thickness tolerances)	В	1.43	R	$\sqrt{3}$	1	0.83	∞	
18	-Liquid Conductivity Target -tolerance	В	5.0	R	$\sqrt{3}$	0.7	2.02	8	
19	- Liquid Conductivity -measurement Uncertainty)	В	2.0	R	$\sqrt{3}$	0.7	0.81	∞	
20	-Liquid Permittivity Target tolerance	В	5.0	R	$\sqrt{3}$	0.6	1.73	8	
21	- Liquid Permittivity - measurement uncertainty	В	1.0	R	$\sqrt{3}$	0.6	0.35	∞	
Con	nbined Standard Uncertainty			RSS			±8.95%		
	nanded uncertainty Infidence interval of 95 %)			K= 2.003935			±17.9%		

# 9 MAIN TEST INSTRUMENTS

No.	EQUIPMENT	TYPE	Due Date
1	E-Field SAR Probe	IXP-050 (SN 0201)	2010-05-26
2	Six-axis AC Servo industrial robot	RV-2A (SN AN406018)	2010-05-26
3	Mobile Phone Tester	CMU200	2010-05-26
4	System Validation Dipole 2450MHZ	IXD-245 (SN 0104)	2010-05-26
5	Probe Amplifier and PC Interface	IFA-010 (SN 0027)	2010-05-26
6	Box Phantom	IXB-070	2010-05-26

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#### **ANNEX A**

of

# **ShenZhen Electronic Product Quality Testing Center**

# CONFORMANCE TEST REPORT FOR HUMAN EXPOSURE TO ELECTROMAGNETIC FIELDS

#### **SAR2010-003**

**Archos SA** 

**Archos 7 home tablet** 

**Accreditation Certificate** 

This Annex consists of 2 pages

**Date of Report: 2010-03-27** 

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China National Accreditation Service for Conformity Assessment

#### LABORATORY ACCREDITATION CERTIFICATE

(No. CNAS L1659)

China National Accreditation Service for Conformity Assessment has accredited

Shenzhen Electronic Product Quality Testing Center (CQCS Testing Co. Ltd.)

Electronic Testing Building Wenguang Road, Shahe West, Xili Town, Nanshan District, Shenzhen, Guangdong, China

to ISO/IEC 17025:1999 General Requirements for the Competence of Testing and Calibration Laboratories(CNAS-CL01 Accreditation Criteria for the Competence of Testing and Calibration Laboratories) for the competence in the field of testing and calibration.

The scope of accreditation is detailed in the attached schedule bearing the same accreditation number as above. The schedule forms an integral part of this certificate.

Date of Issue: 2007-01-17 Date of Expiry: 2009-10-08

Date of Initial Accreditation: 1999-08-03

有季华

Signed on behalf of China National Accreditation Service for Conformity Assessment

China National Accreditation Service for Conformity Assessment(CNAS) is authorized by Certification and Accreditation Administration of the People's Republic of China (CNCA) to operate the national accreditation systems for conformity assessment. CNAS is the signatory to International Laboratory Accreditation Cooperation Multilateral Recognition Arrangement (ILAC MRA), and the signatory to Asia Pacific Laboratory Accreditation Cooperation Multilateral Recognition Arrangement (APLAC MRA).

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#### **ANNEX B**

of

# **ShenZhen Electronic Product Quality Testing Center**

# CONFORMANCE TEST REPORT FOR HUMAN EXPOSURE TO ELECTROMAGNETIC FIELDS

## SAR2010-003

**Archos SA** 

**Archos 7 home tablet** 

**Type Name: 7700** 

**Hardware Version:** --

**Software Version:** --

#### **TEST LAYOUT**

This Annex consists of 5 pages

**Date of Report: 2010-03-27** 

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Fig.1 SARA2 System Test Layout

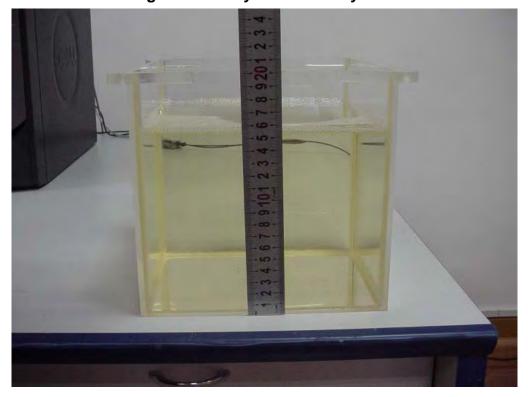


Fig.2 the depth of body tissue

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Fig.3 EUT Position 1(against the bottom)



Fig.4 EUT Position 2(against the bottom)

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#### **ANNEX C**

of

# **ShenZhen Electronic Product Quality Testing Center**

# CONFORMANCE TEST REPORT FOR HUMAN EXPOSURE TO ELECTROMAGNETIC FIELDS

### **SAR2010-003**

**Archos SA** 

**Archos 7 home tablet** 

**Type Name: 7700** 

Hardware Version: --

**Software Version:** --

**Sample Photographs** 

This Annex consists of 5 pages

**Date of Report: 2010-03-27** 

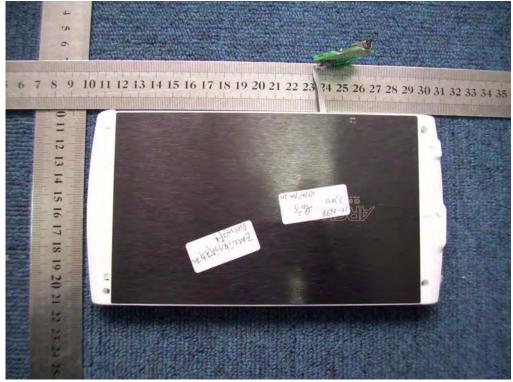
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## 1. Photograph of the Equipment under Test

### 1.1. Appearance





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#### ANNEX D

of

# **ShenZhen Electronic Product Quality Testing Center**

# CONFORMANCE TEST REPORT FOR HUMAN EXPOSURE TO ELECTROMAGNETIC FIELDS

### **SAR2010-003**

Archos SA

**Archos 7 home tablet** 

**Type Name: 7700** 

**Hardware Version:** --

**Software Version:** --

**Graph Test Results** 

This Annex consists of 17 pages

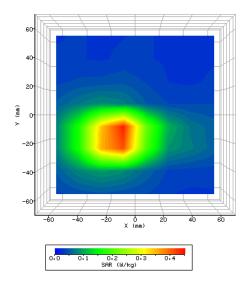
**Date of Report: 2010-03-27** 

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### **SAR Test 802.11b Position 1 (Bottom Channel)**

System / software:	SARA2 / 2.54 VPM	Input Power Drift:	0.01dB
Date / Time:	2010-3-27 11:20:26	DUT Battery Model/No:	
Filename:	P1_BODY802.11B_CH	Probe Serial Number:	0201
	ANNEL1.txt		
Ambient Temperature:	20.6°C	Liquid Simulant:	BODY LIQUID
Device Under Test:	EUT	Relative Permittivity:	53.11
Relative Humidity:	55%	Conductivity:	1.904
Phantom S/No:	HeadBox75mm.csv	Liquid Temperature:	20.6°C
Phantom Rotation:	0°	Max SAR Y-axis	-17.14 mm
		Location:	
DUT Position:	BODY	Max SAR Z-axis	-478.50 mm
		Location:	
Antenna	BUILD INSIDE	Max E Field:	20.80 V/m
Configuration:			
Test Frequency:	2450MHz	SAR 1g:	0.442 W/kg
Air Factors:	354 / 376 / 470	SAR 10g:	0.259 W/kg
Conversion Factors:	.442 / .442 / .442	SAR Start:	0.141 W/kg
Type of Modulation:	DSSS	SAR End:	0.142 W/kg
Modn. Duty Cycle:	1	SAR Drift during Scan:	1.20 %
Diode Compression	20 / 20 / 20	Probe battery last	(2.90V)
Factors (V*200):		changed:	
Input Power Level:	MAX POWER	Extrapolation:	poly4

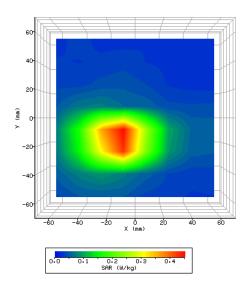


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### SAR Test 802.11b Position 1 (Middle Channel)

		T	T
System / software:	SARA2 / 2.54 VPM	Input Power Drift:	0.02dB
Date / Time:	2010-3-27 10:33:18	DUT Battery Model/No:	
Filename:	P1_BODY802.11B	Probe Serial Number:	0201
	_CHANNEL 6.txt		
Ambient Temperature:	20.6°C	Liquid Simulant:	BODY LIQUID
Device Under Test:	EUT	Relative Permittivity:	53.11
Relative Humidity:	55%	Conductivity:	1.904
Phantom S/No:	HeadBox75mm.csv	Liquid Temperature:	20.6°C
Phantom Rotation:	0°	Max SAR Y-axis	-22.48 mm
		Location:	
DUT Position:	BODY	Max SAR Z-axis	-478.50 mm
		Location:	
Antenna	BUILD INSIDE	Max E Field:	20.17 V/m
Configuration:			
Test Frequency:	2450MHz	SAR 1g:	0.449 W/kg
Air Factors:	354 / 376 / 470	SAR 10g:	0.263 W/kg
Conversion Factors:	.442 / .442 / .442	SAR Start:	0.141 W/kg
Type of Modulation:	DSSS	SAR End:	0.144 W/kg
Modn. Duty Cycle:	1	SAR Drift during Scan:	1.82 %
Diode Compression	20 / 20 / 20	Probe battery last	(2.90V)
Factors (V*200):		changed:	
Input Power Level:	MAX POWER	Extrapolation:	poly4

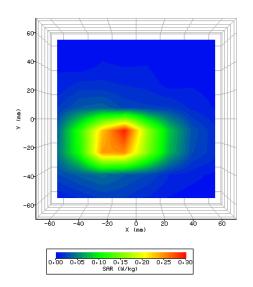


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### SAR Test 802.11b Position 1 (Top Channel)

System / software:	SARA2 / 2.54 VPM	Input Power Drift:	0.02dB
Date / Time:	2010-3-27 10:42:58	DUT Battery Model/No:	
Filename:	P1_BODY802.11B	Probe Serial Number:	0201
	_CHANNEL13.txt		
Ambient Temperature:	20.6°C	Liquid Simulant:	BODY LIQUID
Device Under Test:	EUT	Relative Permittivity:	53.11
Relative Humidity:	55%	Conductivity:	1.904
Phantom S/No:	HeadBox75mm.csv	Liquid Temperature:	20.6°C
Phantom Rotation:	0°	Max SAR Y-axis	-17.14 mm
		Location:	
DUT Position:	BODY	Max SAR Z-axis	-478.50 mm
		Location:	
Antenna	BUILD INSIDE	Max E Field:	19.65 V/m
Configuration:			
Test Frequency:	2450MHz	SAR 1g:	0.432 W/kg
Air Factors:	354 / 376 / 470	SAR 10g:	0.250 W/kg
Conversion Factors:	.442 / .442 / .442	SAR Start:	0.081 W/kg
Type of Modulation:	DSSS	SAR End:	0.080 W/kg
Modn. Duty Cycle:	1	SAR Drift during Scan:	1.41 %
Diode Compression	20 / 20 / 20	Probe battery last	(2.90V)
Factors (V*200):		changed:	
Input Power Level:	MAX POWER	Extrapolation:	poly4

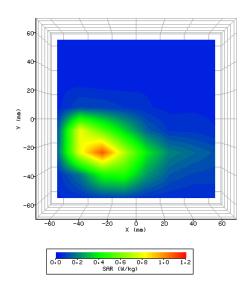


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### SAR Test 802.11b Position 2 (Bottom Channel)

System / software:	SARA2 / 2.54 VPM	Input Power Drift:	0.02dB
Date / Time:	2010-3-27 9:20:48	DUT Battery Model/No:	
Filename:	P2_BODY502.11B_CH	Probe Serial Number:	0201
	ANNEL1.txt		
Ambient Temperature:	20.6°C	Liquid Simulant:	BODY LIQUID
Device Under Test:	EUT	Relative Permittivity:	53.11
Relative Humidity:	55%	Conductivity:	1.904
Phantom S/No:	HeadBox75mm.csv	Liquid Temperature:	20.6°C
Phantom Rotation:	0°	Max SAR Y-axis	-18.67 mm
		Location:	
DUT Position:	BODY	Max SAR Z-axis	-478.50 mm
		Location:	
Antenna	BUILD INSIDE	Max E Field:	29.57 V/m
Configuration:			
Test Frequency:	2450MHz	SAR 1g:	0.931 W/kg
Air Factors:	354 / 376 / 470	SAR 10g:	0.587 W/kg
Conversion Factors:	.442 / .442 / .442	SAR Start:	0.335 W/kg
Type of Modulation:	DSSS	SAR End:	0.343 W/kg
Modn. Duty Cycle:	1	SAR Drift during Scan:	2.63 %
Diode Compression	20 / 20 / 20	Probe battery last	(2.90V)
Factors (V*200):		changed:	
Input Power Level:	MAX POWER	Extrapolation:	poly4

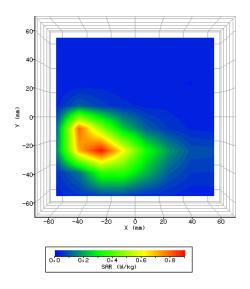


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### **SAR Test 802.11b Position 2 (Middle Channel)**

System / software:	SARA2 / 2.54 VPM	Input Power Drift:	0.03dB
Date / Time:	2010-3-27 9:31:23	DUT Battery Model/No:	
Filename:	P2_BODY802.11B_CH	Probe Serial Number:	0201
	ANNEL6.txt		
Ambient Temperature:	20.6°C	Liquid Simulant:	BODY LIQUID
Device Under Test:	EUT	Relative Permittivity:	53.11
Relative Humidity:	55%	Conductivity:	1.904
Phantom S/No:	HeadBox75mm.csv	Liquid Temperature:	20.6°C
Phantom Rotation:	0°	Max SAR Y-axis	-16.95 mm
		Location:	
DUT Position:	BODY	Max SAR Z-axis	-478.50 mm
		Location:	
Antenna	BUILD INSIDE	Max E Field:	29.25 V/m
Configuration:			
Test Frequency:	2450MHz	SAR 1g:	0.939 W/kg
Air Factors:	354 / 376 / 470	SAR 10g:	0.543 W/kg
Conversion Factors:	.442 / .442 / .442	SAR Start:	0.263 W/kg
Type of Modulation:	DSSS	SAR End:	0.271 W/kg
Modn. Duty Cycle:	1	SAR Drift during Scan:	2.79 %
Diode Compression	20 / 20 / 20	Probe battery last	(2.90V)
Factors (V*200):		changed:	
Input Power Level:	MAX POWER	Extrapolation:	poly4

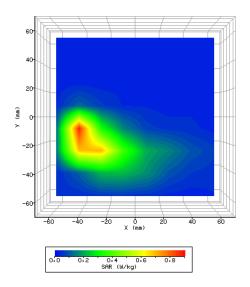


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## SAR Test 802.11b Position 2 (Top Channel)

System / software:	SARA2 / 2.54 VPM	Input Power Drift:	0.02dB
Date / Time:	2010-3-27 9:41:46	DUT Battery Model/No:	
Filename:	P2_BODY802.11B_CH	Probe Serial Number:	0201
	ANNEL13.txt		
Ambient Temperature:	20.6°C	Liquid Simulant:	BODY LIQUID
Device Under Test:	EUT	Relative Permittivity:	53.11
Relative Humidity:	55%	Conductivity:	1.904
Phantom S/No:	HeadBox75mm.csv	Liquid Temperature:	20.6°C
Phantom Rotation:	0°	Max SAR Y-axis	-18.86 mm
		Location:	
DUT Position:	BODY	Max SAR Z-axis	-478.50 mm
		Location:	
Antenna	BUILD INSIDE	Max E Field:	26.84 V/m
Configuration:			
Test Frequency:	2450MHz	SAR 1g:	0.806 W/kg
Air Factors:	354 / 376 / 470	SAR 10g:	0.436 W/kg
Conversion Factors:	.442 / .442 / .442	SAR Start:	0.215 W/kg
Type of Modulation:	DSSS	SAR End:	0.215 W/kg
Modn. Duty Cycle:	1	SAR Drift during Scan:	0.56 %
Diode Compression	20 / 20 / 20	Probe battery last	(2.90V)
Factors (V*200):		changed:	
Input Power Level:	MAX POWER	Extrapolation:	poly4

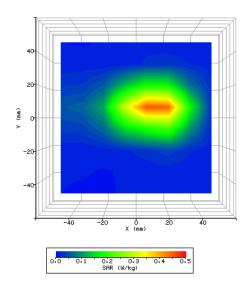


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## **SAR Test 802.11g Position 1 (Bottom Channel)**

System / software:	SARA2 / 2.54 VPM	Input Power Drift:	0.03dB
Date / Time:	2010-3-27 16:45:52	DUT Battery Model/No:	
Filename:	P1_802.11G_BODY_C	Probe Serial Number:	0201
	HANNEL1.txt		
Ambient Temperature:	20.6°C	Liquid Simulant:	BODY LIQUID
Device Under Test:	EUT	Relative Permittivity:	53.11
Relative Humidity:	55%	Conductivity:	1.904
Phantom S/No:	HeadBox75mm.csv	Liquid Temperature:	20.6°C
Phantom Rotation:	0°	Max SAR Y-axis	7.14 mm
		Location:	
DUT Position:	BODY	Max SAR Z-axis	-478.00 mm
		Location:	
Antenna	BUILD INSIDE	Max E Field:	19.62 V/m
Configuration:			
Test Frequency:	2450MHz	SAR 1g:	0.434 W/kg
Air Factors:	354 / 376 / 470	SAR 10g:	0.237 W/kg
Conversion Factors:	.442 / .442 / .442	SAR Start:	0.091 W/kg
Type of Modulation:	OFDM	SAR End:	0.096 W/kg
Modn. Duty Cycle:	1	SAR Drift during Scan:	4.64 %
Diode Compression	20 / 20 / 20	Probe battery last	(2.90V)
Factors (V*200):		changed:	
Input Power Level:	MAX POWER	Extrapolation:	poly4

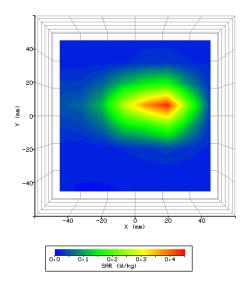


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## **SAR Test 802.11g Position 1 (Middle Channel)**

Г		I	
System / software:	SARA2 / 2.54 VPM	Input Power Drift:	0.03dB
Date / Time:	2010-3-27 16:57:02	DUT Battery Model/No:	
Filename:	P1_802.11G_BODY_C	Probe Serial Number:	0201
	HANNEL6.txt		
Ambient Temperature:	20.6°C	Liquid Simulant:	BODY LIQUID
Device Under Test:	EUT	Relative Permittivity:	53.11
Relative Humidity:	55%	Conductivity:	1.904
Phantom S/No:	HeadBox75mm.csv	Liquid Temperature:	20.6°C
Phantom Rotation:	0°	Max SAR Y-axis	7.14 mm
		Location:	
DUT Position:	BODY	Max SAR Z-axis	-478.00 mm
		Location:	
Antenna	BUILD INSIDE	Max E Field:	19.30 V/m
Configuration:			
Test Frequency:	2450MHz	SAR 1g:	0.401 W/kg
Air Factors:	354 / 376 / 470	SAR 10g:	0.210 W/kg
Conversion Factors:	.442 / .442 / .442	SAR Start:	0.082 W/kg
Type of Modulation:	OFDM	SAR End:	0.085 W/kg
Modn. Duty Cycle:	1	SAR Drift during Scan:	3.67 %
Diode Compression	20 / 20 / 20	Probe battery last	(2.90V)
Factors (V*200):		changed:	
Input Power Level:	MAX POWER	Extrapolation:	poly4

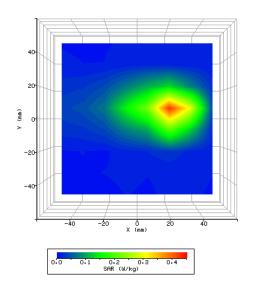


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## **SAR Test 802.11g Position 1 (Top Channel)**

System / software:	SARA2 / 2.54 VPM	Input Power Drift:	0.02dB
Date / Time:	2010-3-27 17:06:56	DUT Battery Model/No:	0.0242
		-	0004
Filename:	P1_802.11G_BODY_C	Probe Serial Number:	0201
	HANNEL13.txt		
Ambient Temperature:	20.6°C	Liquid Simulant:	BODY LIQUID
Device Under Test:	EUT	Relative Permittivity:	53.11
Relative Humidity:	55%	Conductivity:	1.904
Phantom S/No:	HeadBox75mm.csv	Liquid Temperature:	20.6°C
Phantom Rotation:	0°	Max SAR Y-axis	5.71 mm
		Location:	
DUT Position:	BODY	Max SAR Z-axis	-478.00 mm
		Location:	
Antenna	BUILD INSIDE	Max E Field:	18.68 V/m
Configuration:			
Test Frequency:	2450MHz	SAR 1g:	0.392 W/kg
Air Factors:	354 / 376 / 470	SAR 10g:	0.189 W/kg
Conversion Factors:	.442 / .442 / .442	SAR Start:	0.069 W/kg
Type of Modulation:	OFDM	SAR End:	0.070 W/kg
Modn. Duty Cycle:	1	SAR Drift during Scan:	2.11 %
Diode Compression	20 / 20 / 20	Probe battery last	(2.90V)
Factors (V*200):		changed:	
Input Power Level:	MAX POWER	Extrapolation:	poly4

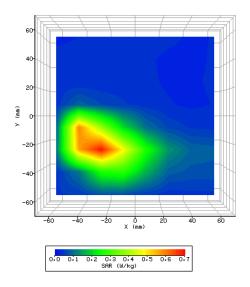


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## **SAR Test 802.11g Position 2 (Bottom Channel)**

System / software:	SARA2 / 2.54 VPM	Input Power Drift:	0.03dB
Date / Time:	2010-3-27 10:17:55	DUT Battery Model/No:	
Filename:	P2_802.11G_BODY_ch	Probe Serial Number:	0201
	annel1.txt		
Ambient Temperature:	20.6°C	Liquid Simulant:	BODY LIQUID
Device Under Test:	EUT	Relative Permittivity:	53.11
Relative Humidity:	55%	Conductivity:	1.904
Phantom S/No:	HeadBox75mm.csv	Liquid Temperature:	20.6°C
Phantom Rotation:	0°	Max SAR Y-axis	7.14 mm
		Location:	
DUT Position:	BODY	Max SAR Z-axis	-478.00 mm
		Location:	
Antenna	BUILD INSIDE	Max E Field:	26.51 V/m
Configuration:			
Test Frequency:	2450MHz	SAR 1g:	0.691 W/kg
Air Factors:	354 / 376 / 470	SAR 10g:	0.410 W/kg
Conversion Factors:	.442 / .442 / .442	SAR Start:	0.198 W/kg
Type of Modulation:	OFDM	SAR End:	0.197 W/kg
Modn. Duty Cycle:	1	SAR Drift during Scan:	0.14 %
Diode Compression	20 / 20 / 20	Probe battery last	(2.90V)
Factors (V*200):		changed:	
Input Power Level:	MAX POWER	Extrapolation:	poly4

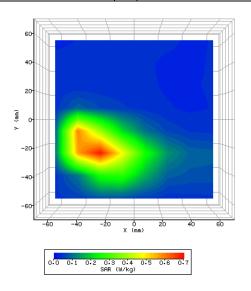


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## **SAR Test 802.11g Position 2 (Middle Channel)**

		T	T
System / software:	SARA2 / 2.54 VPM	Input Power Drift:	0.02dB
Date / Time:	2010-3-27 10:05:47	DUT Battery Model/No:	
Filename:	P2_802.11G_BODY_ch	Probe Serial Number:	0201
	annel6.txt		
Ambient Temperature:	20.6°C	Liquid Simulant:	BODY LIQUID
<b>Device Under Test:</b>	EUT	Relative Permittivity:	53.11
Relative Humidity:	55%	Conductivity:	1.904
Phantom S/No:	HeadBox75mm.csv	Liquid Temperature:	20.6°C
Phantom Rotation:	0°	Max SAR Y-axis	-22.29 mm
		Location:	
<b>DUT Position:</b>	BODY	Max SAR Z-axis	-478.50 mm
		Location:	
Antenna	BUILD INSIDE	Max E Field:	25.16 V/m
Configuration:			
Test Frequency:	2450MHz	SAR 1g:	0.670 W/kg
Air Factors:	354 / 376 / 470	SAR 10g:	0.395 W/kg
Conversion Factors:	.442 / .442 / .442	SAR Start:	0.206 W/kg
Type of Modulation:	OFDM	SAR End:	0.210 W/kg
Modn. Duty Cycle:	1	SAR Drift during Scan:	3.51 %
Diode Compression	20 / 20 / 20	Probe battery last	(2.90V)
Factors (V*200):		changed:	
Input Power Level:	MAX POWER	Extrapolation:	poly4

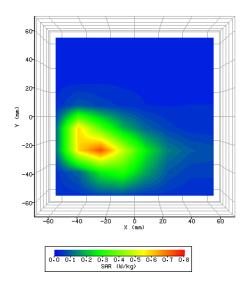


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## **SAR Test 802.11g Position 2 (Top Channel)**

System / software:	SARA2 / 2.54 VPM	Input Power Drift:	0.03dB
Date / Time:	2010-3-27 9:54:31	DUT Battery Model/No:	
Filename:	P2_802.11G_BODY_ch	Probe Serial Number:	0201
	annel13.txt		
Ambient Temperature:	20.6°C	Liquid Simulant:	BODY LIQUID
Device Under Test:	EUT	Relative Permittivity:	53.11
Relative Humidity:	55%	Conductivity:	1.904
Phantom S/No:	HeadBox75mm.csv	Liquid Temperature:	20.6°C
Phantom Rotation:	0°	Max SAR Y-axis	-16.95 mm
		Location:	
DUT Position:	BODY	Max SAR Z-axis	-478.50 mm
		Location:	
Antenna	BUILD INSIDE	Max E Field:	25.27 V/m
Configuration:			
Test Frequency:	2450MHz	SAR 1g:	0.686 W/kg
Air Factors:	354 / 376 / 470	SAR 10g:	0.403 W/kg
Conversion Factors:	.442 / .442 / .442	SAR Start:	0.205 W/kg
Type of Modulation:	OFDM	SAR End:	0.212 W/kg
Modn. Duty Cycle:	1	SAR Drift during Scan:	3.69 %
Diode Compression	20 / 20 / 20	Probe battery last	(2.90V)
Factors (V*200):		changed:	
Input Power Level:	MAX POWER	Extrapolation:	poly4

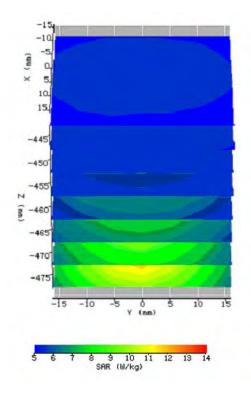


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# **Annex E: System Performance Check Data**

System / software:	SARA2 / 2.40 VPM	Input Power Drift:	0.01dB
Date / Time:	2010-3-27 7:29:45	DUT Battery Model/No:	
Filename:	System Cheek_Body	Probe Serial Number:	0201
	_2450MHz.txt		
Ambient Temperature:	20.4°C	Liquid Simulant:	BODY LIQUID
Device Under Test:	IXD-245antenna (250mw)	Relative Permittivity:	53.11
Relative Humidity:	57%	Conductivity:	1.904
Phantom S/No:	HeadBox75mm.csv	Liquid Temperature:	20.6°C
Phantom Rotation:	0°	Max SAR X-axis Location:	0.00 mm
DUT Position:	2450_Body	Max SAR Y-axis Location:	0.00 mm
Antenna Configuration:	IXD-080antenna	Max E Field:	79.08 V/m
Test Frequency:	2450MHz	SAR 1g:	13.086 W/kg
Air Factors:	354 / 376 / 470	SAR 10g:	6.037 W/kg
Conversion Factors:	.442 / .442 / .442	SAR Start:	1.647 W/kg
Type of Modulation:	/	SAR End:	1.648 W/kg
Modn. Duty Cycle:	1	SAR Drift during Scan:	0.93 %
Diode Compression Factors (V*200):	20 / 20 / 20	Probe battery last changed:	(2.90V)
Input Power Level:	24dBm	Extrapolation:	poly4



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