

SAR TEST REPORT
FOR
Elitegroup Computer Systems Co., Ltd.
7" Pocketable Pad
Model No.: (1)MICA-07XXXXXXXXXX (2)TB7XXXXXX
FCC ID: WL6TB71A-W
Brand: (1)ADVANTECH (2)ECS

Prepared for : Elitegroup Computer Systems Co., Ltd.
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Taipei, Taiwan

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TEST REPORT VERIFICATION

Applicant : Elitegroup Computer Systems Co., Ltd.
Manufacturer : Elitegroup Computer Systems Co., Ltd.
EUT Description : 7" Pocketable Pad
FCC ID : WL6TB71A-W
(A) Model No. : (1)MICA-07XXXXXXXXXX
(2)TB7XXXXXX
(B) Serial No. : N/A
(C) Brand : (1)ADVANTECH (2)ECS
(D) Power Supply : DC 3.7V (Battery) or DC 5V (USB)
(E) Test Voltage : DC 3.7V (Via Battery)

Measurement Standards Used:

FCC 47 CFR Part 2 (§2.1093)

IEEE 1528-2003

FCC OET Bulletin 65 Supplement C, June 2001

(Measurement: KDB 248227, KDB 447498 D01, KDB 865664 D01 v01r02)

The device described above was tested by AUDIX Technology Corporation. The measurement results were contained in this test report and AUDIX Technology Corporation was assumed full responsibility for the accuracy and completeness of these measurements. Also, this report shows that the EUT to be technically compliance with the FCC OET Bulletin 65 Supplement C & IEEE 1528 requirements.

This report applies to above tested sample only and shall not be reproduced in part without written approval of AUDIX Technology Corporation.

Date of Test: 2014. 05. 06 ~ 06. 26

Date of Report: 2014. 06. 26

Producer: _____

(Tina Huang/Administrator)

Signatory: _____

(Ben Cheng/Manager)

1. DESCRIPTION OF REVISION HISTORY

Edition No.	Date of Revision	Revision Summary	Report Number
0	2014. 06. 26	Original Report.	EM-SA140001

2. GENERAL INFORMATION

2.1. Description of Device (EUT)

Product	7" Pocketable Pad
Model Number	(1)MICA-07XXXXXXXXXX (2)TB7XXXXXX (The X in the model name can be 0 to 9, A to Z, a to z, "-", "_", "\", "/" or blank, for marketing use only.) Above two models difference in brand and model name, others are the same. The model TB71A-W is test in this report
Serial Number	N/A
Brand Name	(1)ADVANTECH (2)ECS
Applicant	Elitegroup Computer Systems Co., Ltd. No. 239, Sec. 2, Ti Ding Blvd., Taipei, Taiwan
Manufacturer	Elitegroup Computer Systems Co., Ltd. No. 239, Sec. 2, Ti Ding Blvd., Taipei, Taiwan
SAR Evaluation (Total SAR 1g)	2.4GHz: 0.147W/kg (Head) ; 0.275W/kg (Body) 5GHz: 0.165W/kg (Head); 1.220W/kg (Body) BT: 0.098W/kg (Body)
FCC ID	WL6TB71A-W
Fundamental Range	802.11b/g/n-HT20: 2412MHz ~ 2462MHz 802.11a: 5180MHz ~ 5240MHz (UNII Band I) and 5260MHz ~ 5320MHz (UNII Band II) and 5500MHz ~ 5700MHz (UNII Band III) and 5745MHz ~ 5825MHz (UNII Band IV) UNII Band II & Band III (DFS Function, Slave/no In service monitor, no Ad-Hoc mode) 802.11n-HT20: 2412MHz ~ 2462MHz and 5180MHz ~ 5240MHz (UNII Band I) and 5260MHz ~ 5320MHz (UNII Band II) and 5500MHz ~ 5700MHz (UNII Band III) and 5745MHz ~ 5825MHz (UNII Band IV) UNII Band II & Band III (DFS Function, Slave/no In service monitor, no Ad-Hoc mode) 802.11n-HT40: 5190MHz ~ 5230MHz (UNII Band I) and 5270MHz ~ 5310MHz (UNII Band II) and 5510MHz ~ 5670MHz (UNII Band III) and 5755MHz ~ 5795MHz (UNII Band IV) UNII Band II & Band III (DFS Function, Slave/no In service monitor, no Ad-Hoc mode) Bluetooth and BLE: 2402MHz ~ 2480MHz NFC: 13.56MHz GPS: 1575.42MHz

Frequency Channel	802.11b/g: 11 channels 802.11a: UNII Band I: 4 channels UNII Band II: 4 channels UNII Band III: 8 channels UNII Band IV: 5 channels 802.11n-HT20: 2.4GHz: 11 channels 2.4G UNI Band I: 4channels UNII Band II: 4 channels UNII Band III: 8 channels UNII Band IV: 5 channels 802.11n-HT40: UNII Band I: 2 channels UNII Band II: 2 channels UNII Band III: 3 channels UNII Band IV: 2 channels Bluetooth: 79 channels BLE: 40 channels NFC: 1 Channel
Radio Technology	802.11b: DSSS Modulation (DBPSK/DQPSK/CCK) 802.11g: OFDM Modulation (BPSK/QPSK/16QAM/64QAM) 802.11a: OFDM Modulation (BPSK/QPSK/16QAM/64QAM) 802.11n: OFDM Modulation (MIMO) (BPSK/QPSK/16QAM/64QAM) Bluetooth: FHSS (GFSK, π /4DQPSK, 8-DPSK) BLE: GFSK NFC: ASK
Data Transfer Rate	802.11b: 1/2/5.5/11Mbps 802.11a/g: 6/9/12/18/24/36/48/54Mbps 802.11n: up to 300Mbps BT: 1/2/3Mbps BLE: 1Mbps
Date of Receipt of Sample	2014. 04. 21
Date of Test	2014. 05. 06~ 06. 26

2.2. Antenna Information

Antenna Part Number	Manufacture	Antenna Type	Peak Gain W/ Cable loss (dBi)			
			Frequency (MHz)		Max Gain (Peak) (dBi)	
Wi-Fi Antenna						
WLAN/BT Antenna: E22-003-007-037-8014b (Main)	INNETECH (Tianjin) Electronics Co. Ltd.	PCB Antenna	2400	5180	1.33	-1.53
			2412	5190	1.92	-1.53
			2417	5310	2.07	0.66
			2422	5320	2.19	0.05
			2427	5500	2.44	-0.19
			2432	5510	2.59	-0.41
			2437	5670	2.78	-1.57
			2442	5700	2.83	-3.16
			2447	5745	2.87	-3.55
			2450	5765	2.78	-2.70
			2452	5785	2.76	-2.93
			2457	5805	2.68	-3.46
			2462	5825	2.47	-3.15
			2467		2.38	
			2472		2.52	
			2500		2.17	
WLAN Antenna: E22-003-007-037-8014b (AUX)	INNETECH (Tianjin) Electronics Co. Ltd.	PCB Antenna	2400	5180	3.08	0.61
			2412	5190	3.43	0.39
			2417	5310	3.10	0.91
			2422	5320	3.07	0.14
			2427	5500	2.78	-0.35
			2432	5510	2.68	-0.40
			2437	5670	2.63	-0.62
			2442	5700	2.49	-1.25
			2447	5745	2.68	-1.02
			2450	5765	2.60	0.06
			2452	5785	2.77	-0.30
			2457	5805	2.75	-0.23
			2462	5825	2.82	-0.09
			2467		2.77	
			2472		2.68	
			2500		2.58	
GPS Antenna	INNETECH (Tianjin) Electronics Co. Ltd.	PCB Antenna	1565		-3.38	
			1575		-2.87	
			1585		-3.25	
			1597		-2.42	
			1602		-2.22	
			1606		-1.98	
			1616		-1.37	

2.3. Description of Key Component Lists

Item		Supplier	Description	Character
System		Microsoft	Windows 8	---
Main Board		ECS	TB71A-W	
LCD Module		CPTF	CLAT070WP0D	7 inch CPT 800x1280 -10 point touch
CPU		Intel	Intel® Atom™ Processor Bay Trail	T Z3770, 1.46GHz Burst frequency 2.39GHz (Socket: BGA1380)
GPU		Intel	---	HD Graphics
Memory		Hynix	H9CCNNN8KTMLBR-N TM	LP DDR3 2GB (up to 4G)
SSD		Sandisk	SDIN8DE4-32G	eMMC 32GB
Battery Pack		Sunwoda	MICA-071	3.7V / 4100 mAh /15.17Wh
Front Camera		LiteON	NL89A141	sensor Sony IMX175 .8MP
Rear Camera		LiteON	13P2SF206	sensor OV2722, 2MP
Barcode Scanner		Itermec	ED30	Decode Board + EA31 Imager
Touch Pad		CPTF	CLAA070WP03	--
WLAN+BT Combo Module		MITSUMI	DWM-W095A	WLAN: 2.412GHz to 2.472GHz 5.18GHz to 5.85GHz BT4.0+BLE: 2.402GHz to 2.480GHz
NFC		NXP	PN544PC	13.56MHz
GNSS		MITSUMI	SPG-SF102	GPS: 1575.42MHz GLONASS: 1598.0625 to 1605.375 MHz
WLAN/ BT Antenna	Main	INNTECH ELECTRONICS	e22-003-007-037-8014b	Laser Direct Structuring (LDS) Antenna on frame
	AUX	INNTECH ELECTRONICS	e22-003-007-037-8014b	Laser Direct Structuring (LDS) Antenna on frame
Stylus Pen		FO	BLACK/#8513.	CAPACITIVE TOUCH PEN
USB Charger		Chicony	W12-010N3A	I/P: 100-240V~, 50-60Hz, 0.3A O/P: 5V, 2A
Docking		AdvanTech	MICA-071-DCRE	DC 5V
		ECS	DOCKING TB71A-W	DC 5V
Docking Power Adapter		Asian	WA-20A05FU	I/P: 100-240V~, 0.6A, 50-60Hz O/P: 5V, 4A
		Power Cord: Non-Shielded, Undetached, 1.8m, Bonded a ferrite core		
USB Charge Docking Cable		Shielded, Detachable, 1.2m		
HDMI Docking Cable		Shielded, Detachable, 0.17m		
USB3.0 Docking Cable		Shielded, Detachable, 0.23m		

Remark: For a more detailed features description, please refer to the manufacturer's specifications or the user manual.

2.4. Test Environment

Ambient conditions in the laboratory:

Item	Require	Actual
Temperature (°C)	18-25	22 ± 2
Humidity (%RH)	30-70	48 ± 2

2.5. Description of Test Facility

Name of Firm : **AUDIX Technology Corporation**
EMC Department
No. 53-11, Dingfu, Linkou Dist.,
New Taipei City 244, Taiwan, R.O.C.

Test Site : No. 53-11, Dingfu, Linkou Dist.,
New Taipei City 244, Taiwan, R.O.C.

NVLAP Lab. Code : 200077-0

TAF Accreditation No : 1724

2.6. Measurement Uncertainty

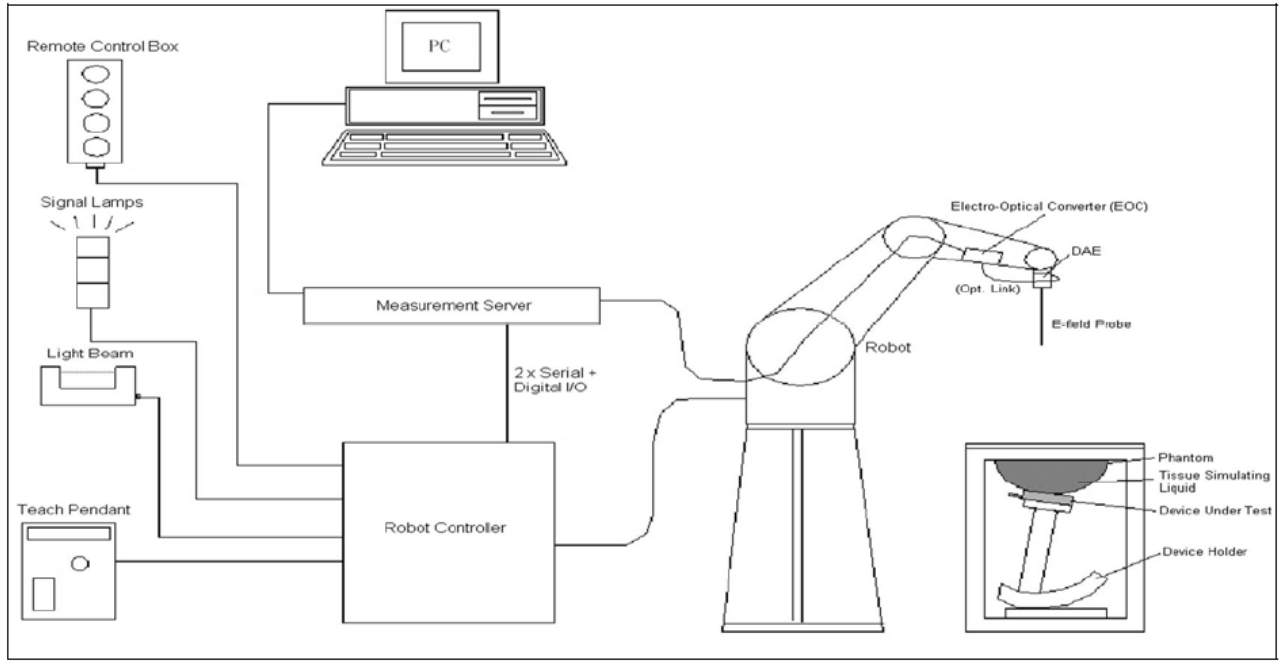
DASY5 Uncertainty Measurement uncertainty for 300 MHz to 3 GHz averaged over 1 gram / 10 gram.								
Error Description	Uncert. value	Prob. Dist.	Div.	(ci) 1g	(ci) 10g	Std. Unc. (1g)	Std. Unc. (10g)	(vi) v_{eff}
Measurement System								
Probe Calibration	±6.0%	N	1	1	1	±6.0%	±6.0%	∞
Axial Isotropy	±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 Permittivity (target)	±5.0%	R	$\sqrt{3}$	0.6	0.49	±1.7%	±1.4%	∞
Liquid Permittivity (meas.)	±2.5%	N	1	0.6	0.49	±1.5%	±1.2%	∞
Combined Std. Uncertainty						±11%	±10.8%	387
Expanded STD Uncertainty						±22%	±21.5%	

3. TEST EQUIPMENT

Item	Type	Manufacturer	Model No.	Serial No.	Cal. Due Date
1.	Stäubli Robot TX90 XL	Stäubli	TX90	F12/5K9SA1/A 101	N/A
2.	Controller	SPEAG	CS8c	N/A	N/A
3.	SAM Twin Phantom	SPEAG	QD000 P40 CD	TP 1515	N/A
4.	Device Holder	SPEAG	N/A	N/A	N/A
5.	Data Acquisition Electronic	SPEAG	DAE4	1337	2014. 09. 22
6.	E-Field Probe	SPEAG	EX3DV4	3855	2014. 09. 25
7.	SAR Software	SPEAG	DASY52	V52.8.2.843	N/A
8.	ENA Network Analyzer	Agilent	E5071C-480	Y46214331	2014. 08. 30
9.	Signal Generator	Aglient	N5181A	MY50143917	2014. 09. 04
10.	Dual Channel PK Power Meter	Aglient	N1912A	MY52180007	2014. 09. 08
11.	Power Sensor	Aglient	N8481H	MY52080006	2014. 09. 08
12.	Dipole Antenna	SPEAG	D2450V2	888	2015. 09. 12
13.	Dipole Antenna	SPEAG	D5GHzV2	1124	2015. 09. 12
14.	Dipole Antenna	SPEAG	D5GHzV2	1040	2014. 07. 02

4. SAR MEASUREMENT SYSTEM

4.1. DASY5 System Description



The DASY5 system for performing compliance tests consists of the following items:

- ◆ A standard high precision 6-axis robot with controller, teach pendant and software. An arm extension for accommodating the data acquisition electronics (DAE).
- ◆ A data acquisition electronics (DAE) which performs the signal amplification, signal multiplexing, AD-conversion, offset measurements, mechanical surface detection, collision detection, etc. The unit is battery powered with standard or rechargeable batteries. The signal is optically transmitted to the EOC.
- ◆ The Electro-optical converter (EOC) performs the conversion from optical to electrical signals for the digital communication to the DAE. To use optical surface detection, a special version of the EOC is required. The EOC signal is transmitted to the measurement server.
- ◆ The Light Beam used is for probe alignment. This improves the (absolute) accuracy of the probe positioning.
- ◆ A computer running WinXP and the DASY5 software.
- ◆ Remote control and teach pendant as well as additional circuitry for robot safety such as warning lamps, etc.
- ◆ The phantom, the device holder and other accessories according to the targeted measurement.

4.1.1. Applications

Predefined procedures and evaluations for automated compliance testing with all worldwide standards, e.g., IEEE 1528, OET 65, IEC 62209-1, IEC 62209-2, EN 50360, EN 50383 and others.

4.1.2. Area Scans

Area scans are defined prior to the measurement process being executed with a user defined variable spacing between each measurement point (integral) allowing low uncertainty measurements to be conducted. Scans defined for FCC applications utilize a 10mm² step integral, with 1mm interpolation used to locate the peak SAR area used for zoom scan assessments.

When an Area Scan has measured all reachable points, it computes the field maxima found in the scanned area, within a range of the global maximum. The range (in dB) is specified in the standards for compliance testing. For example, a 2 dB range is required in IEEE 1528-2003, EN 50361 and IEC 62209 standards, whereby 3 dB is a requirement when compliance is assessed in accordance with the ARIB standard (Japan).

4.1.3. Zoom Scan (Cube Scan Averaging)

Zoom Scans are used to assess the peak spatial SAR values within a cubic averaging volume containing 1 g and 10 g of simulated tissue. A density of 1000 kg/m³ is used to represent the head and body tissue density and not the phantom liquid density, in order to be consistent with the definition of the liquid dielectric properties, i.e. the side length of the 1 g cube is 10mm, with the side length of the 10 g cube 21,5mm.

The zoom scan integer steps can be user defined so as to reduce uncertainty, but normal practice for typical test applications (including FCC) utilize a physical step of 5x5x7 (8mmx8mmx5mm) providing a volume of 32mm in the X & Y axis, and 30mm in the Z axis.

4.1.4. Uncertainty of Inter-/Extrapolation and Averaging

In order to evaluate the uncertainty of the interpolation, extrapolation and averaged SAR calculation algorithms of the Postprocessor, DASY5 allows the generation of measurement grids which are artificially predefined by analytically based test functions. Therefore, the grids of area scans and zoom scans can be filled with uncertainty test data, according to the SAR benchmark functions of IEEE 1528. The three analytical functions shown in equations as below are used to describe the possible range of the expected SAR distributions for the tested handsets.

The field gradients are covered by the spatially flat distribution f1, the spatially steep distribution f3 and f2 accounts for H-field cancellation on the phantom/tissue surface.

$$f_1(x, y, z) = Ae^{-\frac{z}{a}} \cos^2 \left(\frac{\pi}{2} \frac{\sqrt{x'^2 + y'^2}}{5a} \right)$$

$$f_2(x, y, z) = Ae^{-\frac{z}{a}} \frac{a^2}{a^2 + x'^2} \left(3 - e^{-\frac{2z}{a}} \right) \cos^2 \left(\frac{\pi}{2} \frac{y'}{3a} \right)$$

$$f_3(x, y, z) = A \frac{a^2}{\frac{a^2}{4} + x'^2 + y'^2} \left(e^{-\frac{2z}{a}} + \frac{a^2}{2(a + 2z)^2} \right)$$

4.2. DASY5 E-Field Probe

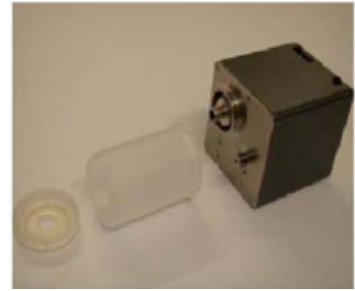
The SAR measurement is conducted with the dosimetric probe manufactured by SPEAG. The probe is specially designed and calibrated for use in liquid with high permittivity. The dosimetric probe has special calibration in liquid at different frequency. SPEAG conducts the probe calibration in compliance with international and national standards (e.g. IEEE 1528, EN 62209-1, IEC 62209, etc.) under ISO 17025. The calibration data are in Appendix D.

4.2.1. Isotropic E-Field Probe Specification

Model	Ex3DV4		
Construction	Symmetrical design with triangular core Built-in shielding against static charges PEEK enclosure material (resistant to organic solvents, e.g., DGBE)		
Frequency	10 MHz to 6 GHz Linearity: ± 0.2 dB (30 MHz to 6 GHz)		
Directivity	± 0.3 dB in HSL (rotation around probe axis) ± 0.5 dB in tissue material (rotation normal to probe axis)		
Dynamic Range	10 μ W/g to 100 mW/g Linearity: ± 0.2 dB (noise: typically < 1 μ W/g)		
Dimensions	Overall length: 330 mm (Tip: 20 mm) Tip diameter: 2.5 mm (Body: 12 mm) Typical distance from probe tip to dipole centers: 1 mm		
Application	High precision dosimetric measurements in any exposure scenario (e.g., very strong gradient fields). Only probe which enables compliance testing for frequencies up to 6 GHz with precision of better 30%.		

4.2.2. Boundary Detection Unit and Probe Mounting Device

The DASY probes use a precise connector and an additional holder for the probe, consisting of a plastic tube and a flexible silicon ring to center the probe. The connector at the DAE is flexibly mounted and held in the default position with magnets and springs. Two switching systems in the connector mount detect frontal and lateral probe collisions and trigger the necessary software response.



4.2.3. DATA Acquisition Electronics (DAE) and Measurement Server

The data acquisition electronics (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 measurement server is accomplished through an optical downlink for data and status information as well as an optical uplink for commands and the clock. The input impedance of the DAE4 is 200M Ohm; the inputs are symmetrical and floating. Common mode rejection is above 80dB.



4.2.4. DATA Acquisition Electronics (DAE) and Measurement Server

The data acquisition electronics (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 measurement server is accomplished through an optical downlink for data and status information as well as an optical uplink for commands and the clock. The input impedance of the DAE4 is 200M Ohm; the inputs are symmetrical and floating. Common mode rejection is above 80dB.



The DASY5 measurement server is based on a PC/104 CPU board with a 400MHz intel ULV Celeron, 128MB chipdisk and 128MB RAM. The necessary circuits for communication with the DAE electronics box, as well as the 16 bit AD converter system for optical detection and digital I/O interface are contained on the DASY5 I/O board, which is directly connected to the PC/104 bus of the CPU board.



4.3. Robot

The DASY5 system uses the high precision robots TX90 XL type out of the newer series from Stäubli SA (France). For the 6-axis controller DASY5 system, the CS8C robot controller version from Stäubli is used.

The XL robot series have many features that are important for our application:

- ◆ High precision (repeatability 0.02 mm)
- ◆ High reliability (industrial design)
- ◆ Jerk-free straight movements
- ◆ Low ELF interference (the closed metallic construction shields against motor control fields)
- ◆ 6-axis controller



4.4. Light Beam Unit

The light beam switch allows automatic "tooling" of the probe. During the process, the actual position of the probe tip with respect to the robot arm is measured, as well as the probe length and the horizontal probe offset. The software then corrects all movements, such that the robot coordinates are valid for the probe tip.

The repeatability of this process is better than 0.1 mm. If a position has been taught with an aligned probe, the same position will be reached with another aligned probe within 0.1 mm, even if the other probe has different dimensions. During probe rotations, the probe tip will keep its actual position.



4.5. Device Holder

The DASY5 device holder is designed to cope with different positions given in the standard. It has two scales for the device rotation (with respect to the body axis) and the device inclination (with respect to the line between the ear reference points). The rotation center for both scales is the ear reference point (EPR).

Thus the device needs no repositioning when changing the angles.

The DASY5 device holder has been made out of low-loss POM material having the following dielectric parameters: relative permittivity $\epsilon_r = 3$ and loss tangent $\delta = 0.02$. The amount of dielectric material has been reduced in the closest vicinity of the device, since measurements have suggested that the influence of the clamp on the test results could thus be lowered.



4.6. SAM Twin Phantom

The SAM twin phantom is a fiberglass shell phantom with 2mm shell thickness (except the ear region where shell thickness increases to 6mm). It has three measurement areas:

- ◆ Left head
- ◆ Right head
- ◆ Flat phantom

The bottom plate contains three pair of bolts for locking the device holder. The device holder positions are adjusted to the standard measurement positions in the three sections. A white cover is provided to tap the phantom during off-periods to prevent water evaporation and changes in the liquid parameters. On the phantom top, three reference markers are provided to identify the phantom position with respect to the robot.



5. TISSUE SIMULATING LIQUID

5.1. The composition of the tissue simulating liquid

INGREDIENT (% Weight)	2450MHz Head	2450MHz Body
Water	62.7	73.2
Salt	0.50	0.04
Sugar	0.00	0.00
HEC	0.00	0.00
Preventol	0.00	0.00
DGBE	0.00	26.7

INGREDIENT (% Weight)	5GHz Head	5GHz Body
X-100	35	27
Water	63	72
DGBE	2	1

5.2. Tissue Calibration Result

The dielectric parameters of the liquids were verified prior to the SAR evaluation using Aligent Dielectric Probe Kit and Aligent E5071C Vector Network Analyzer.

Head Tissue Simulate Measurement				
Frequency [MHz]	Description	Dielectric Parameters		Tissue Temp. [°C]
		ϵ_r	σ [s/m]	
2450MHz	Reference result ± 5% window	39.2 37.240 to 41.160	1.8 1.710 to 1.890	N/A
	2014. 05. 08	38.892	1.865	22.2

Head Tissue Simulate Measurement				
Frequency [MHz]	Description	Dielectric Parameters		Tissue Temp. [°C]
		ϵ_r	σ [s/m]	
5200MHz	Reference result ± 5% window	35.3 33.535 to 37.065	5.27 5.007 to 5.534	N/A
	2014. 05. 07	36.111	5.007	21.7

Head Tissue Simulate Measurement				
Frequency [MHz]	Description	Dielectric Parameters		Tissue Temp. [°C]
		ϵ_r	σ [s/m]	
5300MHz	Reference result ± 5% window	35.3 33.535 to 37.065	5.27 5.007 to 5.534	N/A
	2014. 05. 07	36.111	5.008	21.7

Head Tissue Simulate Measurement				
Frequency [MHz]	Description	Dielectric Parameters		Tissue Temp. [°C]
		ϵ_r	σ [s/m]	
5500MHz	Reference result ± 5% window	35.3 33.535 to 37.065	5.27 5.007 to 5.534	N/A
	2014. 05. 07	35.572	5.191	21.8

Head Tissue Simulate Measurement				
Frequency [MHz]	Description	Dielectric Parameters		Tissue Temp. [°C]
		ϵ_r	σ [s/m]	
5800MHz	Reference result ± 5% window	35.3 33.535 to 37.065	5.27 5.007 to 5.534	N/A
	2014. 05. 07	35.045	5.524	21.6

Body Tissue Simulate Measurement				
Frequency [MHz]	Description	Dielectric Parameters		Tissue Temp. [°C]
		ϵ_r	σ [s/m]	
2450MHz	Reference result $\pm 5\%$ window	52.7 50.065 to 55.335	1.95 1.8525 to 2.0475	N/A
	2014. 05. 08	51.481	1.988	21.2
	2014. 06. 26	53.183	1.973	22.1

Body Tissue Simulate Measurement				
Frequency [MHz]	Description	Dielectric Parameters		Tissue Temp. [°C]
		ϵ_r	σ [s/m]	
5200MHz	Reference result $\pm 5\%$ window	48.2 45.79 to 50.61	6.00 5.70 to 6.30	N/A
	2014. 05. 06	47.281	5.703	21.8

Body Tissue Simulate Measurement				
Frequency [MHz]	Description	Dielectric Parameters		Tissue Temp. [°C]
		ϵ_r	σ [s/m]	
5300MHz	Reference result $\pm 5\%$ window	48.2 45.79 to 50.61	6.00 5.70 to 6.30	N/A
	2014. 05. 06	47.281	5.727	21.7

Body Tissue Simulate Measurement				
Frequency [MHz]	Description	Dielectric Parameters		Tissue Temp. [°C]
		ϵ_r	σ [s/m]	
5500MHz	Reference result $\pm 5\%$ window	48.2 45.79 to 50.61	6.00 5.70 to 6.30	N/A
	2014. 05. 06	46.751	5.749	21.7

Body Tissue Simulate Measurement				
Frequency [MHz]	Description	Dielectric Parameters		Tissue Temp. [°C]
		ϵ_r	σ [s/m]	
5800MHz	Reference result $\pm 5\%$ window	48.2 45.79 to 50.61	6.00 5.70 to 6.30	N/A
	2014. 05. 06	46.167	6.185	21.7

5.3. Tissue Dielectric Parameters for Head and Body Phantoms

The head tissue dielectric parameters recommended by the IEEE SCC-34/SC-2 in P1528 have been incorporated in the following table. These head parameters are derived from planar layer models simulating the highest expected SAR for the dielectric properties and tissue thickness variations in a human head. Other head and body tissue parameters that have not been specified in P1528 are derived from the tissue dielectric parameters computed from the 4-Cole-Cole equations described in Reference [12] and extrapolated according to the head parameters specified in P1528.

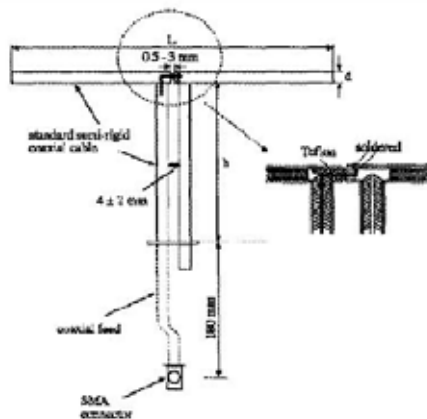
Target Frequency [MHz]	Head		Body	
	ϵ_r	σ [s/m]	ϵ_r	σ [s/m]
150	52.3	0.76	61.9	0.80
300	445.3	0.87	58.2	0.92
450	43.5	0.87	56.7	0.94
835	41.5	0.90	55.2	0.97
900	41.5	0.97	55.0	1.05
915	41.5	0.98	55.0	1.06
1450	40.5	1.20	54.0	1.30
1610	40.3	1.29	53.8	1.40
1800-2000	40.0	1.40	53.3	1.52
2450	39.2	1.80	52.7	1.95
3000	38.5	2.40	52.0	2.73
5800	35.3	5.27	48.2	6.00

(ϵ_r = relative permittivity, σ = conductivity and $\rho = 1000 \text{ kg/m}^3$)

6. SAR MEASUREMENT PROCEDURE

6.1. SAR System Check

6.1.1. Dipoles



The dipoles used is based on the IEEE-1528 standard, and is complied with mechanical and electrical specifications in line with the requirements of both IEEE and FCC Supplement C. the table below provides details for the mechanical and electrical specifications for the dipoles.

Frequency	L (mm)	h (mm)	d (mm)
2450MHz	53.5	30.4	3.6

6.1.2. System Check Result

System Performance Check at WLAN					
Dipole Kit: D2450V2 (Head)					
Frequency [MHz]	Description	SAR [w/kg] 1g	SAR [w/kg] 10g	Tissue Temp. [°C]	Lab Temp.[°C]
2450MHz	Reference result ± 10% window	13.10 11.79 to 14.41	6.10 5.49 to 6.71	N/A	N/A
	2014. 05. 08	13.4	6.11	22.2	23.0
Note: All SAR values are normalized to 1W forward power.					

System Performance Check at WLAN					
Dipole Kit: D5GHzV2, S/N: 1040 (Head)					
Frequency [MHz]	Description	SAR [w/kg] 1g	SAR [w/kg] 10g	Tissue Temp. [°C]	Lab Temp.[°C]
5200MHz	Reference result ± 10% window	7.86 7.074 to 8.646	2.24 2.016 to 2.464	N/A	N/A
	2014. 05. 07	7.83	2.21	21.7	22.8
Note: All SAR values are normalized to 1W forward power.					

System Performance Check at WLAN					
Dipole Kit: D5GHzV2, S/N: 1040 (Head)					
Frequency [MHz]	Description	SAR [w/kg] 1g	SAR [w/kg] 10g	Tissue Temp. [°C]	Lab Temp.[°C]
5300MHz	Reference result ± 10% window	8.21 7.389 to 9.031	2.35 2.115 to 2.585	N/A	N/A
	2014. 05. 07	7.93	2.25	21.7	22.8
Note: All SAR values are normalized to 1W forward power.					

System Performance Check at WLAN					
Dipole Kit: D5GHzV2, S/N: 1040 (Head)					
Frequency [MHz]	Description	SAR [w/kg] 1g	SAR [w/kg] 10g	Tissue Temp. [°C]	Lab Temp.[°C]
5600MHz	Reference result ± 10% window	8.19 7.371 to 9.009	2.33 2.097 to 2.563	N/A	N/A
	2014. 05. 07	8.16	2.27	21.7	22.8
Note: All SAR values are normalized to 1W forward power.					

System Performance Check at WLAN					
Dipole Kit: D5GHzV2, S/N: 1040 (Head)					
Frequency [MHz]	Description	SAR [w/kg] 1g	SAR [w/kg] 10g	Tissue Temp. [°C]	Lab Temp.[°C]
5800MHz	Reference result ± 10% window	7.79 7.011 to 8.569	2.21 1.989 to 2.431	N/A	N/A
	2014. 05. 07	8.09	2.28	21.7	22.8
Note: All SAR values are normalized to 1W forward power.					

System Performance Check at WLAN					
Dipole Kit: D2450V2 (Body)					
Frequency [MHz]	Description	SAR [w/kg] 1g	SAR [w/kg] 10g	Tissue Temp. [°C]	Lab Temp.[°C]
2450MHz	Reference result ± 10% window	12.9 11.61 to 14.19	6.02 5.418 to 6.622	N/A	N/A
	2014. 05. 08	13.0	5.98	22.2	23.0
	2014. 06. 26	12.2	5.64	22.1	23.0
Note: All SAR values are normalized to 1W forward power.					

System Performance Check at WLAN					
Dipole Kit: D5GHzV2, S/N 1124 (Body)					
Frequency [MHz]	Description	SAR [w/kg] 1g	SAR [w/kg] 10g	Tissue Temp. [°C]	Lab Temp.[°C]
5200MHz	Reference result ± 10% window	7.54 6.786 to 8.294	2.11 1.899 to 2.321	N/A	N/A
	2014. 05. 06	7.17	2.04	21.7	23.1
Note: All SAR values are normalized to 1W forward power.					

System Performance Check at WLAN					
Dipole Kit: D5GHzV2, S/N: 1040 (Body)					
Frequency [MHz]	Description	SAR [w/kg] 1g	SAR [w/kg] 10g	Tissue Temp. [°C]	Lab Temp.[°C]
5300MHz	Reference result ± 10% window	7.65 6.885 to 8.415	2.14 1.926 to 2.354	N/A	N/A
	2014. 05. 06	7.86	2.13	21.7	23.1
Note: All SAR values are normalized to 1W forward power.					

System Performance Check at WLAN					
Dipole Kit: D5GHzV2, S/N 1124 (Body)					
Frequency [MHz]	Description	SAR [w/kg] 1g	SAR [w/kg] 10g	Tissue Temp. [°C]	Lab Temp.[°C]
5600MHz	Reference result ± 10% window	8.1 7.29 to 8.91	2.24 2.016 to 2.464	N/A	N/A
	2014. 05. 06	7.62	2.16	21.7	23.1
Note: All SAR values are normalized to 1W forward power.					

System Performance Check at WLAN					
Dipole Kit: D5GHzV2, S/N 1124 (Body)					
Frequency [MHz]	Description	SAR [w/kg] 1g	SAR [w/kg] 10g	Tissue Temp. [°C]	Lab Temp.[°C]
5800MHz	Reference result ± 10% window	7.46 6.714 to 8.206	2.06 1.854 to 2.266	N/A	N/A
	2014. 05. 06	7.40	2.09	21.7	23.1
Note: All SAR values are normalized to 1W forward power.					

6.1.3. SAR System Check Data

System Performance Check Mode: Head, WLAN (2450MHz)

Date: 5/8/2014

Test Laboratory: Audix_SAR Lab

System Check_H2450

DUT: Dipole 2450 MHz D2450V2; Type: D2450V2; Serial: D2450V2 - SN:888

Communication System: CW; Communication System Band: D2450 (2450.0 MHz); Frequency: 2450 MHzDuty Cycle: 1:1

Medium parameters used: $f = 2450$ MHz; $\sigma = 1.865$ S/m; $\epsilon_r = 38.892$; $\rho = 1000$ kg/m³ ;

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3855; ConvF(7.4, 7.4, 7.4); Calibrated: 9/26/2013;
- Sensor-Surface: 2mm (Mechanical Surface Detection), $z = 1.0, 21.0$
- Electronics: DAE4 Sn1337; Calibrated: 9/23/2013
- Phantom: SAM with CRP v5.0; Type: QD000P40CD; Serial: SN1706
- DASY52 52.8.4(1052); SEMCAD X 14.6.8(7028)

Pin=250mW/Area Scan (9x9x1): Measurement grid: dx=12mm, dy=12mm

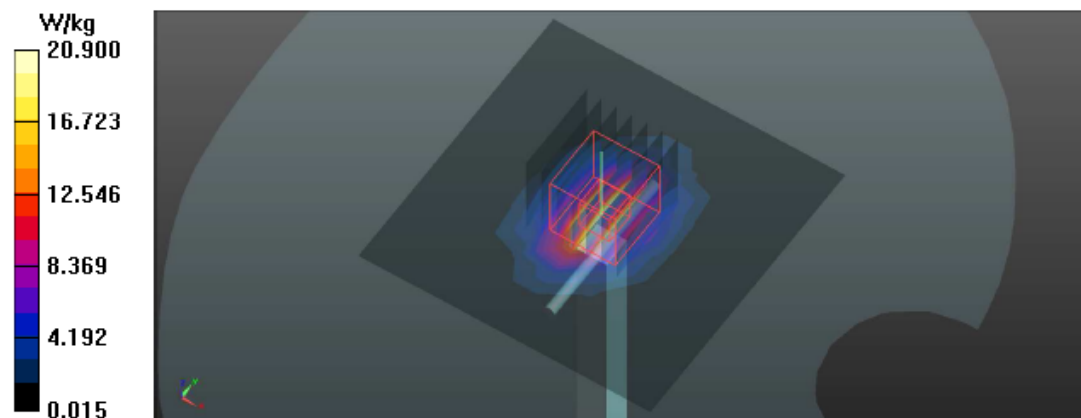
Maximum value of SAR (measured) = 20.9 W/kg

Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 107.9 V/m; Power Drift = -0.07 dB

Peak SAR (extrapolated) = 28.7 W/kg

SAR(1 g) = 13.4 W/kg; SAR(10 g) = 6.11 W/kg



System Performance Check Mode: Head, WLAN (5200MHz)

Date: 5/7/2014

Test Laboratory: Audix_SAR Lab

System Check_H5200

DUT: Dipole D5GHzV2; Type: D5GHzV2; Serial: D5GHzV2 - SN:1040

Communication System: CW; Communication System Band: D5GHz (5000.0 - 6000.0 MHz);
Frequency: 5200 MHzDuty Cycle: 1:1

Medium parameters used: $f = 5200 \text{ MHz}$; $\sigma = 5.007 \text{ S/m}$; $\epsilon_r = 36.111$; $\rho = 1000 \text{ kg/m}^3$;

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3855; ConvF(5.52, 5.52, 5.52); Calibrated: 9/26/2013;
- Sensor-Surface: 2mm (Mechanical Surface Detection), $z = 1.0, 21.0$
- Electronics: DAE4 Sn1337; Calibrated: 9/23/2013
- Phantom: SAM with CRP v5.0; Type: QD000P40CD; Serial: SN1706
- DASY52 52.8.4(1052); SEMCAD X 14.6.8(7028)

Pin=100mW/Area Scan (10x10x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (measured) = 12.7 W/kg

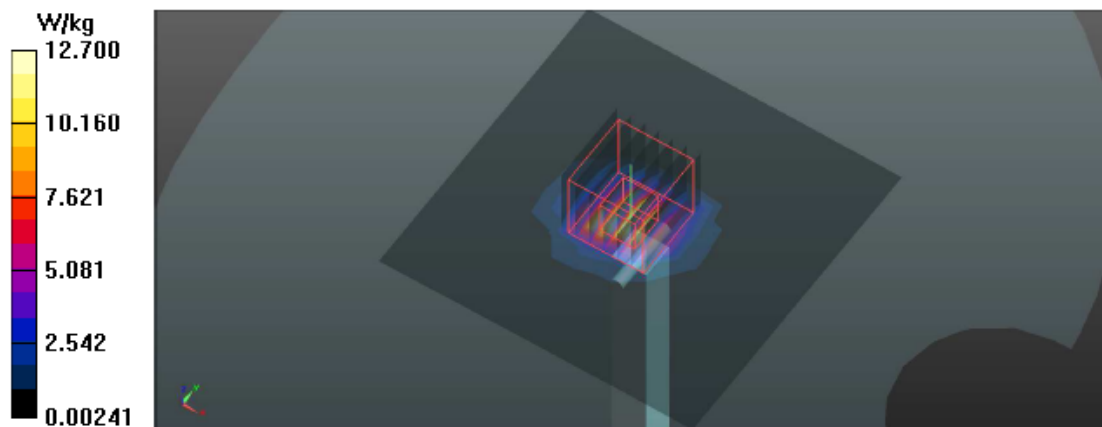
Pin=100mW/Zoom Scan (7x7x12)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2\text{mm}$

Reference Value = 58.551 V/m; Power Drift = 0.08 dB

Peak SAR (extrapolated) = 34.3 W/kg

SAR(1 g) = 7.83 W/kg; SAR(10 g) = 2.21 W/kg

Maximum value of SAR (measured) = 16.5 W/kg



System Performance Check Mode: Head, WLAN (5300MHz)

Date: 5/7/2014

Test Laboratory: Audix_SAR Lab

System Check_H5300

DUT: Dipole D5GHzV2; Type: D5GHzV2; Serial: D5GHzV2 - SN:1040

Communication System: CW (0); Communication System Band: D5GHz (5000.0 - 6000.0 MHz);
Frequency: 5200 MHzDuty Cycle: 1:1

Medium parameters used: $f = 5200$ MHz; $\sigma = 5.008$ S/m; $\epsilon_r = 36.111$; $\rho = 1000$ kg/m³ ;

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3855; ConvF(5.19, 5.19, 5.19); Calibrated: 9/26/2013;
- Sensor-Surface: 2mm (Mechanical Surface Detection), $z = 1.0, 21.0$
- Electronics: DAE4 Sn1337; Calibrated: 9/23/2013
- Phantom: SAM with CRP v5.0; Type: QD000P40CD; Serial: SN1706
- DASY52 52.8.4(1052); SEMCAD X 14.6.8(7028)

Pin=100mW/Area Scan (10x10x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 13.0 W/kg

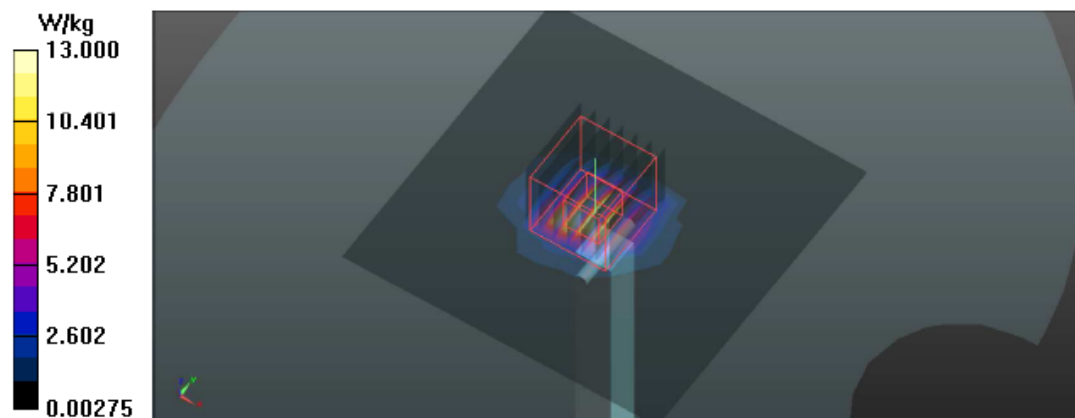
Pin=100mW/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 59.339 V/m; Power Drift = 0.09 dB

Peak SAR (extrapolated) = 33.9 W/kg

SAR(1 g) = 7.93 W/kg; SAR(10 g) = 2.25 W/kg

Maximum value of SAR (measured) = 16.1 W/kg



System Performance Check Mode: Head, WLAN (5500MHz)

Date: 5/7/2014

Test Laboratory: Audix_SAR Lab

System Check_H5500

DUT: Dipole D5GHzV2; Type: D5GHzV2; Serial: D5GHzV2 - SN:1040

Communication System: UID 0, CW (0); Communication System Band: D5GHz (5000.0 - 6000.0 MHz); Frequency: 5500 MHzDuty Cycle: 1:1

Medium parameters used: $f = 5500$ MHz; $\sigma = 5.191$ S/m; $\epsilon_r = 35.572$; $\rho = 1000$ kg/m³;

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3855; ConvF(4.68, 4.68, 4.68); Calibrated: 9/26/2013;
- Sensor-Surface: 2mm (Mechanical Surface Detection), $z = 1.0, 21.0$
- Electronics: DAE4 Sn1337; Calibrated: 9/23/2013
- Phantom: SAM with CRP v5.0; Type: QD000P40CD; Serial: SN1706
- DASY52 52.8.4(1052); SEMCAD X 14.6.8(7028)

Pin=100mW/Area Scan (10x10x1); Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 10.2 W/kg

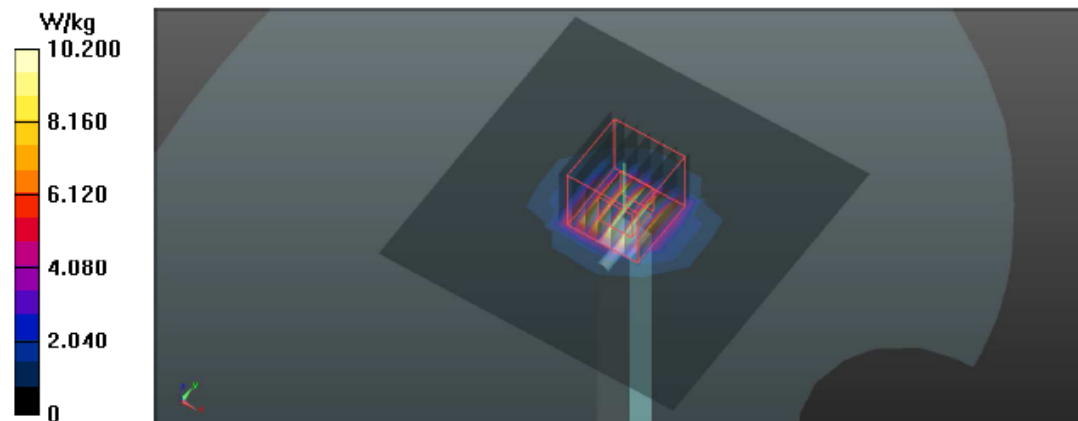
Pin=100mW/Zoom Scan (7x7x12)/Cube 0; Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 61.451 V/m; Power Drift = -0.01 dB

Peak SAR (extrapolated) = 37.1 W/kg

SAR(1 g) = 8.16 W/kg; SAR(10 g) = 2.27 W/kg

Maximum value of SAR (measured) = 17.0 W/kg



System Performance Check Mode: Head, WLAN (5800MHz)

Date: 5/7/2014

Test Laboratory: Audix_SAR Lab

System Check_H5800

DUT: Dipole D5GHzV2; Type: D5GHzV2; Serial: D5GHzV2 - SN:1040

Communication System: UID 0, CW (0); Communication System Band: D5GHz (5000.0 - 6000.0 MHz); Frequency: 5800 MHz Duty Cycle: 1:1

Medium parameters used: $f = 5800 \text{ MHz}$; $\sigma = 5.524 \text{ S/m}$; $\epsilon_r = 35.045$; $\rho = 1000 \text{ kg/m}^3$;

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3855; ConvF(5.01, 5.01, 5.01); Calibrated: 9/26/2013;
- Sensor-Surface: 2mm (Mechanical Surface Detection), $z = 1.0, 21.0$
- Electronics: DAE4 Sn1337; Calibrated: 9/23/2013
- Phantom: SAM with CRP v5.0; Type: QD000P40CD; Serial: SN1706
- DASY52 52.8.4(1052); SEMCAD X 14.6.8(7028)

Pin=100mW/Area Scan (10x10x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (measured) = 10.1 W/kg

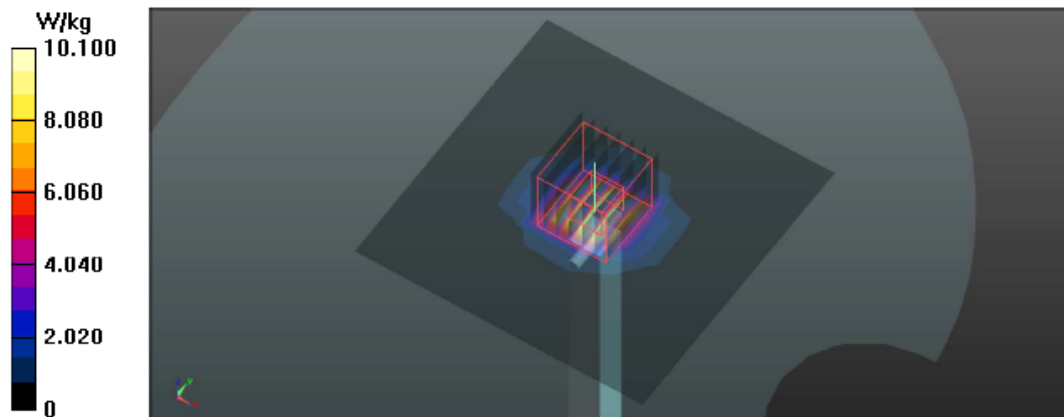
Pin=100mW/Zoom Scan (7x7x12)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2\text{mm}$

Reference Value = 60.048 V/m; Power Drift = -0.01 dB

Peak SAR (extrapolated) = 37.0 W/kg

SAR(1 g) = 8.09 W/kg; SAR(10 g) = 2.28 W/kg

Maximum value of SAR (measured) = 17.3 W/kg



System Performance Check Mode: Body, WLAN (2450MHz)

Date: 5/8/2014

Test Laboratory: Audix_SAR Lab

System Check_B2450

DUT: Dipole 2450 MHz D2450V2; Type: D2450V2; Serial: D2450V2 - SN:888

Communication System: CW; Communication System Band: D2450 (2450.0 MHz); Frequency: 2450 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2450 \text{ MHz}$; $\sigma = 1.988 \text{ S/m}$; $\epsilon_r = 51.481$; $\rho = 1000 \text{ kg/m}^3$;

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3855; ConvF(7.69, 7.69, 7.69); Calibrated: 9/26/2013;
- Sensor-Surface: 2mm (Mechanical Surface Detection), $z = -9.0, 31.0$
- Electronics: DAE4 Sn1337; Calibrated: 9/23/2013
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:1170
- DASY52 52.8.4(1052); SEMCAD X 14.6.8(7028)

Pin=250mW/Area Scan (9x9x1): Measurement grid: $dx=12\text{mm}$, $dy=12\text{mm}$

Maximum value of SAR (measured) = 20.0 W/kg

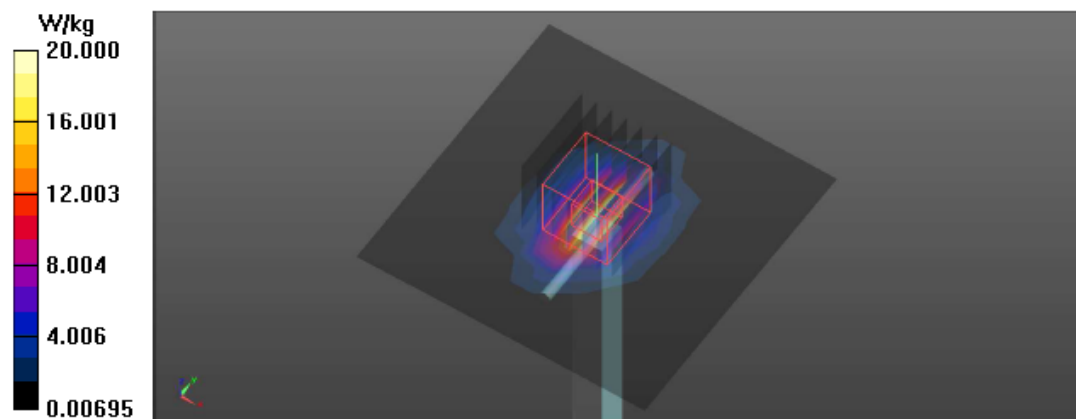
Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 101.6 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 27.2 W/kg

SAR(1 g) = 13 W/kg; SAR(10 g) = 5.98 W/kg

Maximum value of SAR (measured) = 20.1 W/kg



System Performance Check Mode: Body, WLAN (2450MHz)

Date: 6/26/2014

Test Laboratory: Audix_SAR Lab

System Check_B2450

DUT: Dipole 2450 MHz D2450V2; Type: D2450V2; Serial: D2450V2 - SN:888

Communication System: CW; Frequency: 2450 MHz

Medium parameters used: $f = 2450$ MHz; $\sigma = 1.973$ S/m; $\epsilon_r = 53.183$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3855; ConvF(7.69, 7.69, 7.69); Calibrated: 9/26/2013;
- Sensor-Surface: 2mm (Mechanical Surface Detection), $z = 1.0, 31.0$
- Electronics: DAE4 Sn1337; Calibrated: 9/23/2013
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:1170
- DASYS 52.8.4(1052); SEMCAD X 14.6.8(7028)

Pin=250mW/Area Scan (9x9x1): Measurement grid: $dx=12$ mm, $dy=12$ mm

Maximum value of SAR (measured) = 18.4 W/kg

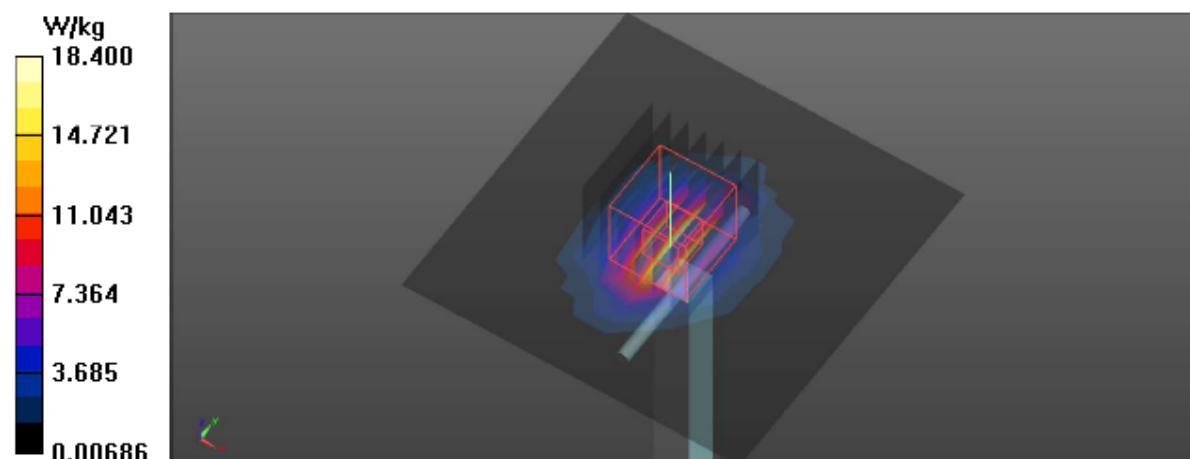
Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5$ mm, $dy=5$ mm, $dz=5$ mm

Reference Value = 97.085 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 25.5 W/kg

SAR(1 g) = 12.2 W/kg; SAR(10 g) = 5.64 W/kg

Maximum value of SAR (measured) = 18.7 W/kg



System Performance Check Mode: Body, WLAN (5200MHz)

Date: 5/6/2014

Test Laboratory: Audix_SAR Lab

System Check_B5200

DUT: Dipole D5GHzV2; Type: D5GHzV2; Serial: D5GHzV2 - SN:1124

Communication System: CW; Communication System Band: D5GHz (5000.0 - 6000.0 MHz);
Frequency: 5200 MHzDuty Cycle: 1:1

Medium parameters used: $f = 5200 \text{ MHz}$; $\sigma = 5.703 \text{ S/m}$; $\epsilon_r = 47.281$; $\rho = 1000 \text{ kg/m}^3$;

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3855; ConvF(4.76, 4.76, 4.76); Calibrated: 9/26/2013;
- Sensor-Surface: 2mm (Mechanical Surface Detection), $z = -9.0, 21.0$
- Electronics: DAE4 Sn1337; Calibrated: 9/23/2013
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:1170
- DASY52 52.8.4(1052); SEMCAD X 14.6.8(7028)

Pin=100mW/Area Scan (10x10x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (measured) = 10.8 W/kg

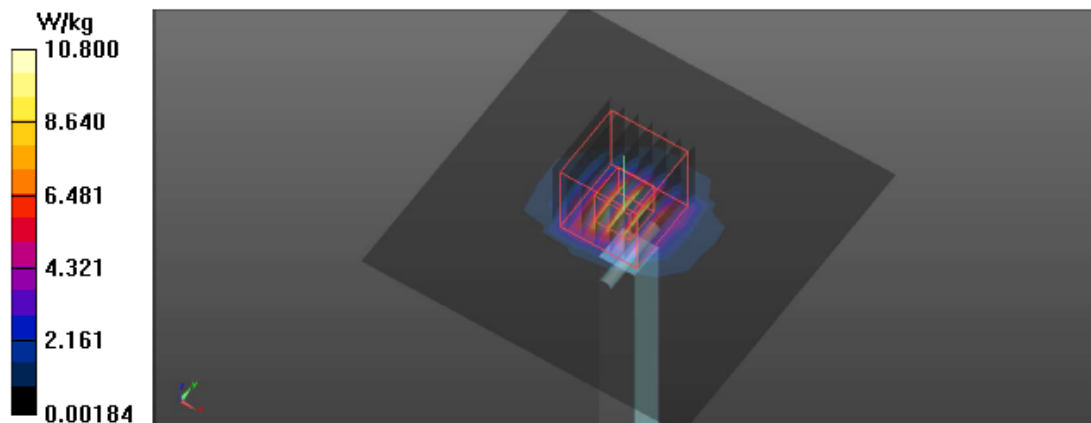
Pin=100mW/Zoom Scan (7x7x12)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2\text{mm}$

Reference Value = 56.468 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 27.0 W/kg

SAR(1 g) = 7.17 W/kg; SAR(10 g) = 2.04 W/kg

Maximum value of SAR (measured) = 14.8 W/kg



System Performance Check Mode: Body, WLAN (5300MHz)

Date: 5/6/2014

Test Laboratory: Audix_SAR Lab

System Check_B5300

DUT: Dipole D5GHzV2; Type: D5GHzV2; Serial: D5GHzV2 - SN:1040

Communication System: CW; Communication System Band: D5GHz (5000.0 - 6000.0 MHz);

Frequency: 5200 MHzDuty Cycle: 1:1

Medium parameters used: $f = 5300 \text{ MHz}$; $\sigma = 5.727 \text{ S/m}$; $\epsilon_r = 47.281$; $\rho = 1000 \text{ kg/m}^3$;

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3855; ConvF(4.36, 4.36, 4.36); Calibrated: 9/26/2013;
- Sensor-Surface: 2mm (Mechanical Surface Detection), $z = -9.0, 21.0$
- Electronics: DAE4 Sn1337; Calibrated: 9/23/2013
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:1170
- DASY52 52.8.4(1052); SEMCAD X 14.6.8(7028)

Pin=100mW/Area Scan (10x10x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (measured) = 10.1 W/kg

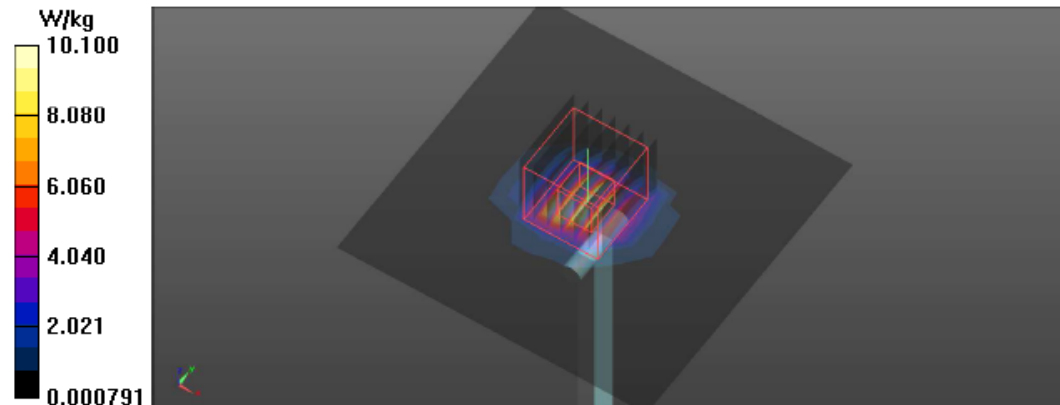
Pin=100mW/Zoom Scan (7x7x12)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2\text{mm}$

Reference Value = 55.835 V/m; Power Drift = 0.08 dB

Peak SAR (extrapolated) = 27.5 W/kg

SAR(1 g) = 7.86 W/kg; SAR(10 g) = 2.13 W/kg

Maximum value of SAR (measured) = 14.4 W/kg



System Performance Check Mode: Body, WLAN (5500MHz)

Date: 5/6/2014

Test Laboratory: Audix_SAR Lab

System Check_B5500

DUT: Dipole D5GHzV2; Type: D5GHzV2; Serial: D5GHzV2 - SN:1124

Communication System: CW; Communication System Band: D5GHz (5000.0 - 6000.0 MHz);
Frequency: 5500 MHzDuty Cycle: 1:1

Medium parameters used: $f = 5500$ MHz; $\sigma = 5.749$ S/m; $\epsilon_r = 46.751$; $\rho = 1000$ kg/m³ ;

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3855; ConvF(4.12, 4.12, 4.12); Calibrated: 9/26/2013;
- Sensor-Surface: 2mm (Mechanical Surface Detection), $z = -9.0, 21.0$
- Electronics: DAE4 Sn1337; Calibrated: 9/23/2013
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:1170
- DASY52 52.8.4(1052); SEMCAD X 14.6.8(7028)

Pin=100mW/Area Scan (10x10x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 11.1 W/kg

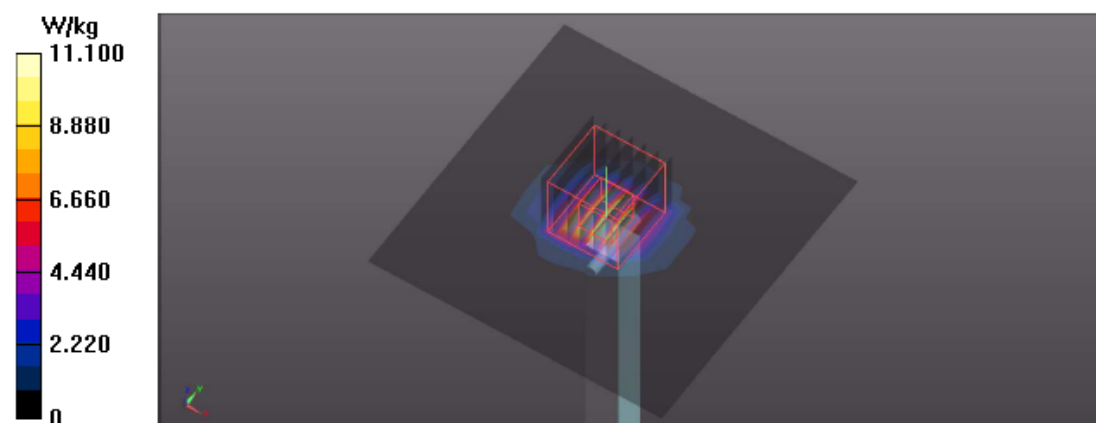
Pin=100mW/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 56.826 V/m; Power Drift = 0.09 dB

Peak SAR (extrapolated) = 30.9 W/kg

SAR(1 g) = 7.62 W/kg; SAR(10 g) = 2.16 W/kg

Maximum value of SAR (measured) = 16.1 W/kg



System Performance Check Mode: Body, WLAN (5800MHz)

Date: 5/6/2014

Test Laboratory: Audix_SAR Lab

System Check_B5800

DUT: Dipole D5GHzV2; Type: D5GHzV2; Serial: D5GHzV2 - SN:1124

Communication System: CW; Communication System Band: D5GHz (5000.0 - 6000.0 MHz);
Frequency: 5800 MHzDuty Cycle: 1:1

Medium parameters used: $f = 5800 \text{ MHz}$; $\sigma = 6.185 \text{ S/m}$; $\epsilon_r = 46.167$; $\rho = 1000 \text{ kg/m}^3$;

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3855; ConvF(4.25, 4.25, 4.25); Calibrated: 9/26/2013;
- Sensor-Surface: 2mm (Mechanical Surface Detection), $z = -9.0, 21.0$
- Electronics: DAE4 Sn1337; Calibrated: 9/23/2013
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:1170
- DASY52 52.8.4(1052); SEMCAD X 14.6.8(7028)

Pin=100mW/Area Scan (10x10x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (measured) = 11.2 W/kg

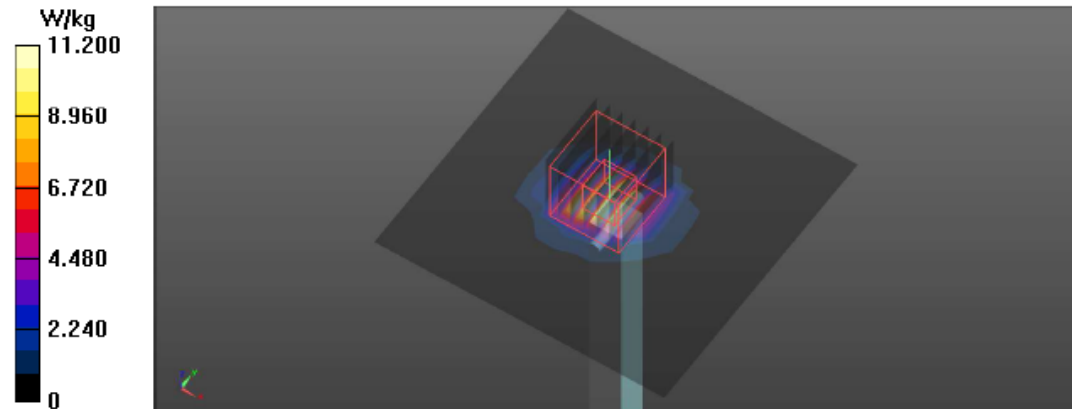
Pin=100mW/Zoom Scan (7x7x12)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2\text{mm}$

Reference Value = 56.153 V/m; Power Drift = 0.00 dB

Peak SAR (extrapolated) = 30.0 W/kg

SAR(1 g) = 7.4 W/kg; SAR(10 g) = 2.09 W/kg

Maximum value of SAR (measured) = 15.8 W/kg



6.2. SAR Measurement Procedure

The Dasy5 calculates SAR using the following equation,

$$SAR = \frac{\sigma |E|^2}{\rho}$$

σ : represents the simulated tissue conductivity

ρ : represents the tissue density

The EUT is set to transmit at the required power in line with product specification, at each frequency relating to the LOW, MID, and HIGH channel settings.

Pre-scans are made on the device to establish the location for the transmitting antenna, using a large area scan in either air or tissue simulation fluid.

The EUT is placed against the Universal Phantom where the maximum area scan dimensions are larger than the physical size of the resonating antenna. When the scan size is not large enough to cover the peak SAR distribution, it is modified by either extending the area scan size in both the X and Y directions, or the device is shifted within the predefined area.

The area scan is then run to establish the peak SAR location (interpolated resolution set at 1mm²) which is then used to orient the center of the zoom scan. The zoom scan is then executed and the 1g and 10g averages are derived from the zoom scan volume (interpolated resolution set at 1mm³).

6.3. SAR Exposure Limits

SAR assessments have been made in line with the requirements of IEEE-1528, FCC Supplement C, and comply with ANSI/IEEE C95.1-1992 “Uncontrolled Environments” limits. These limits apply to a location which is deemed as “Uncontrolled Environment” which can be described as a situation where the general public may be exposed to an RF source with no prior knowledge or control over their exposure.

Limits for General Population/Uncontrolled Exposure (W/kg)

Type Exposure	Uncontrolled Environment Limit
Spatial Peak SAR (1g cube tissue for brain or body)	1.60 W/kg
Spatial Average SAR (whole body)	0.08 W/kg
Spatial Peak SAR (10g for hands, feet, ankles and wrist)	4.00 W/kg

6.4. Conducted Power Measurement

Test Date: 2014. 05. 02 Temperature: 26°C Humidity: 50%

6.4.1. For WLAN Mode

Type of Network	Channel	Frequency (MHz)	Average Output Power (dBm)
802.11b	CH 1	2412	15.28
	CH 6	2437	15.31
	CH 11	2462	15.71

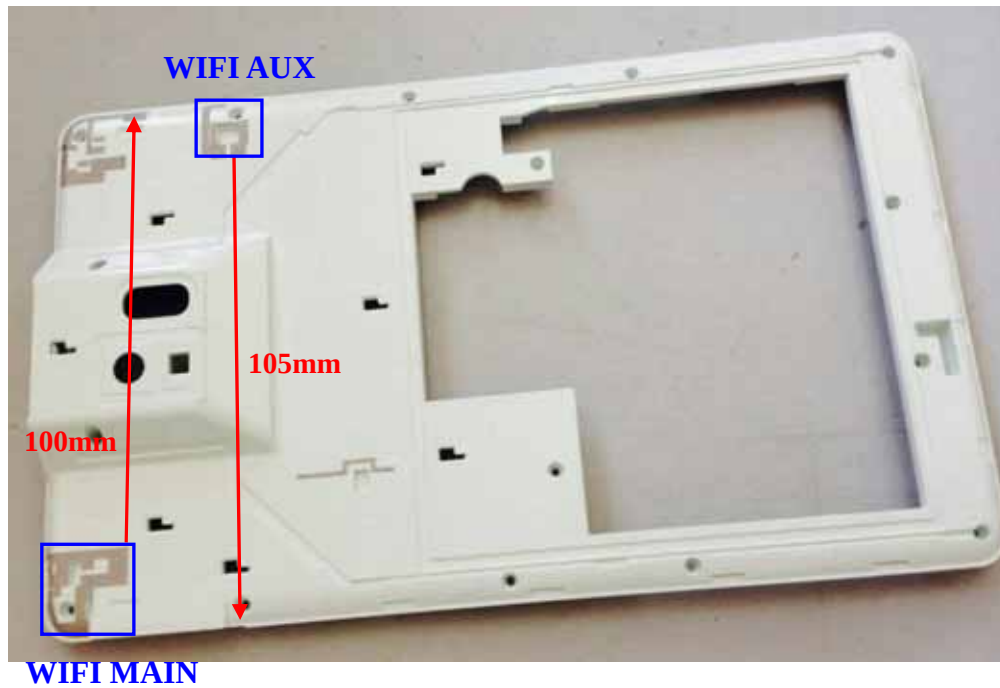
Type of Network	Channel	Frequency (MHz)	Average Output Power (dBm)		
			Chain 0	Chain 1	Total
802.11g	CH 1	2412	12.53	12.48	15.52
	CH 6	2437	14.23	14.45	17.35
	CH 11	2462	13.90	14.27	17.10
802.11a	UNII Band I	CH 36	12.88	12.21	15.57
		CH 40	12.65	12.17	15.43
		CH 48	12.72	12.92	15.83
	UNII Band II	CH 52	13.82	12.79	16.35
		CH 56	13.81	12.96	16.42
		CH 60	13.91	12.97	16.48
		CH 64	14.05	12.05	16.17
	UNII Band III	CH 100	12.10	12.51	15.32
		CH 116	12.11	12.96	15.57
		CH 140	11.66	12.44	15.08
	UNII Band IV	CH 149	13.28	12.36	15.85
		CH 157	12.49	11.51	15.04
		CH 165	12.46	11.38	14.96

Type of Network		Channel	Frequency (MHz)	Average Output Power (dBm)		
				Chain 0	Chain 1	Total
802.11n-HT20		CH 1	2412	14.21	13.58	16.92
		CH 6	2437	14.29	13.58	16.96
		CH 11	2462	13.42	13.19	16.32
802.11n-HT20	UNII Band I	CH 36	5180	12.47	11.97	15.24
		CH 40	5200	13.01	12.25	15.66
		CH 48	5240	12.77	11.65	15.26
	UNII Band II	CH 52	5260	12.77	11.69	15.27
		CH 56	5280	13.15	11.72	15.50
		CH 64	5320	13.14	11.79	15.53
	UNII Band III	CH 100	5500	11.69	12.31	15.02
		CH 116	5580	12.10	12.78	15.46
		CH 140	5700	11.69	12.44	15.09
	UNII Band IV	CH 149	5745	13.36	12.17	15.82
		CH 157	5785	12.79	11.85	15.36
		CH 165	5825	12.41	11.48	14.98
802.11n-HT40	UNII Band I	CH 38	5190	12.75	12.73	15.75
		CH 46	5230	12.69	12.68	15.70
	UNII Band II	CH 54	5270	12.45	12.73	15.60
		CH 62	5310	12.44	12.95	15.71
	UNII Band III	CH 102	5510	12.15	11.79	14.98
		CH 118	5590	12.44	11.69	15.09
		CH 134	5670	12.49	11.68	15.11
	UNII Band IV	CH 151	5755	12.08	12.38	15.24
		CH 159	5795	11.81	11.89	14.86

6.4.2. For BT Mode

Type of Modulation	Channel	Frequency (MHz)	Peak Output Power (dBm)
8-DPSK	CH 0	2402	-0.992
	CH 39	2441	-2.259
	CH 78	2480	-2.079
GFSK	CH 0	2402	9.611
	CH 39	2441	10.896
	CH 78	2480	10.841

6.5. Exposure Positions Consideration



6.6. SAR Test Result

6.6.1. Test Position: Head

Test Date: 2014. 05. 08 Temperature : 23°C Humidity : 25%

For WLAN Mode

Liquid Temperature : 22.2°C				Depth of Liquid: > 15cm		
Test Mode: 2.4GHz (Head)						
Test Position: Head	Antenna Position	Frequency		Conducted power (dBm)	SAR 1g (W/kg)	Limit (W/kg)
		Channel	MHz			
802.11b						
Right Cheek	Fixed	11	2462	15.71	0.046	1.6
Right Tilted	Fixed	11	2462	15.71	0.052	1.6
Left Cheek	Fixed	11	2462	15.71	0.147	1.6
Left Tilted	Fixed	11	2462	15.71	0.101	1.6
802.11g						
Right Cheek	Fixed	6	2437	17.35	0.037	1.6
Right Tilted	Fixed	6	2437	17.35	0.041	1.6
Left Cheek	Fixed	6	2437	17.35	0.119	1.6
Left Tilted	Fixed	6	2437	17.35	0.083	1.6

Date: 5/8/2014

P1 802.11b_Right Cheek_Ch11_Ant-Main

DUT: TB71A-W

Communication System: WIFI 2.4G 802.11B; Communication System Band: 802.11B; Frequency: 2462 MHzDuty Cycle: 1:1

Medium parameters used: $f = 2462$ MHz; $\sigma = 1.877$ S/m; $\epsilon_r = 38.843$; $\rho = 1000$ kg/m³ ;

Phantom section: Right Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3855; ConvF(7.4, 7.4, 7.4); Calibrated: 9/26/2013;
- Sensor-Surface: 2mm (Mechanical Surface Detection), $z = 1.0, 21.0$
- Electronics: DAE4 Sn1337; Calibrated: 9/23/2013
- Phantom: SAM with CRP v5.0; Type: QD000P40CD; Serial: SN1706
- DASY52 52.8.4(1052); SEMCAD X 14.6.8(7028)

Area Scan (9x12x1): Measurement grid: $dx=20$ mm, $dy=20$ mm

Maximum value of SAR (measured) = 0.0516 W/kg

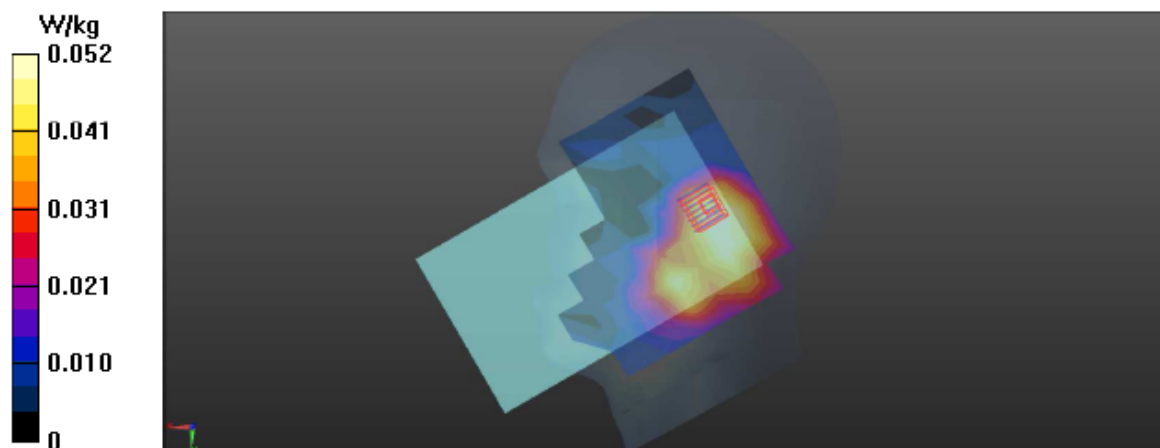
Zoom Scan (7x7x9)/Cube 0: Measurement grid: $dx=4$ mm, $dy=4$ mm, $dz=2.5$ mm

Reference Value = 5.170 V/m; Power Drift = 0.87 dB

Peak SAR (extrapolated) = 0.0850 W/kg

SAR(1 g) = 0.046 W/kg; SAR(10 g) = 0.028 W/kg

Maximum value of SAR (measured) = 0.0611 W/kg



Date: 5/8/2014

Test Laboratory: Audix_SAR Lab

P2 802.11b_Right Tilted_Ch11_Ant-Main

DUT: TB71A-W

Communication System: WIFI 2.4G 802.11B; Communication System Band: 802.11B; Frequency: 2462 MHzDuty Cycle: 1:1

Medium parameters used: $f = 2462 \text{ MHz}$; $\sigma = 1.877 \text{ S/m}$; $\epsilon_r = 38.843$; $\rho = 1000 \text{ kg/m}^3$;

Phantom section: Right Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3855; ConvF(7.4, 7.4, 7.4); Calibrated: 9/26/2013;
- Sensor-Surface: 2mm (Mechanical Surface Detection), $z = 1.0, 21.0$
- Electronics: DAE4 Sn1337; Calibrated: 9/23/2013
- Phantom: SAM with CRP v5.0; Type: QD000P40CD; Serial: SN1706
- DASY52 52.8.4(1052); SEMCAD X 14.6.8(7028)

Area Scan (9x12x1): Measurement grid: $dx=20\text{mm}$, $dy=20\text{mm}$

Maximum value of SAR (measured) = 0.0437 W/kg

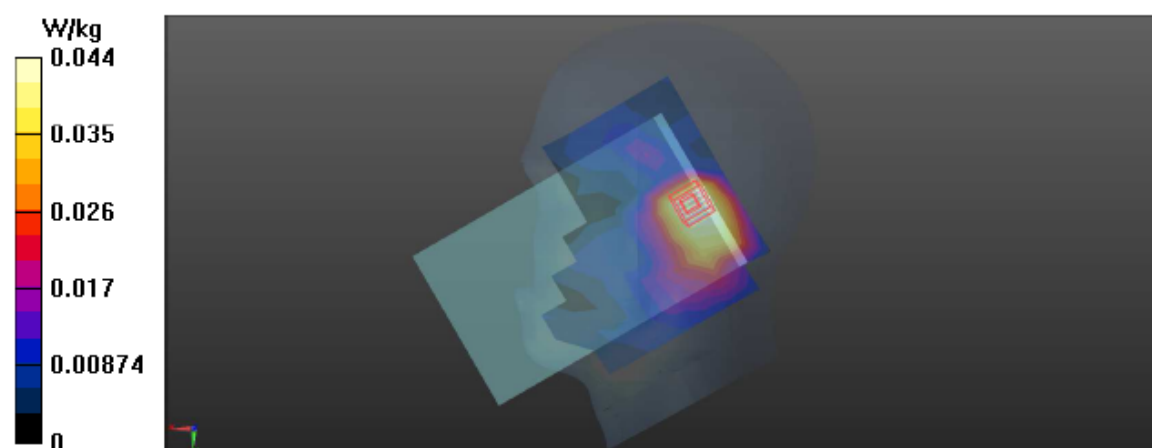
Zoom Scan (7x7x9)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2.5\text{mm}$

Reference Value = 5.680 V/m; Power Drift = 0.71 dB

Peak SAR (extrapolated) = 0.0860 W/kg

SAR(1 g) = 0.052 W/kg; SAR(10 g) = 0.030 W/kg

Maximum value of SAR (measured) = 0.0702 W/kg



Date: 5/8/2014

P3 802.11b_Left Cheek_Ch11_Ant-Main

DUT: TB71A-W

Communication System: WIFI 2.4G 802.11B; Communication System Band: 802.11B; Frequency: 2462 MHzDuty Cycle: 1:1

Medium parameters used: $f = 2462 \text{ MHz}$; $\sigma = 1.877 \text{ S/m}$; $\epsilon_r = 38.843$; $\rho = 1000 \text{ kg/m}^3$;

Phantom section: Left Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3855; ConvF(7.4, 7.4, 7.4); Calibrated: 9/26/2013;
- Sensor-Surface: 2mm (Mechanical Surface Detection), $z = 1.0, 21.0$
- Electronics: DAE4 Sn1337; Calibrated: 9/23/2013
- Phantom: SAM with CRP v5.0; Type: QD000P40CD; Serial: SN1706
- DASY52 52.8.4(1052); SEMCAD X 14.6.8(7028)

Area Scan (9x12x1): Measurement grid: $dx=20\text{mm}$, $dy=20\text{mm}$

Maximum value of SAR (measured) = 0.157 W/kg

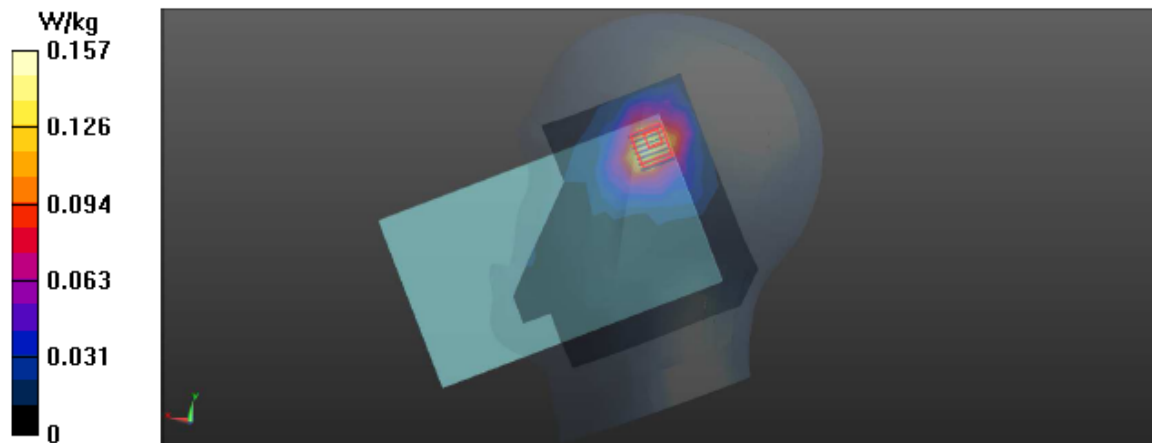
Zoom Scan (7x7x9)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2.5\text{mm}$

Reference Value = 4.811 V/m; Power Drift = 0.67 dB

Peak SAR (extrapolated) = 0.301 W/kg

SAR(1 g) = 0.147 W/kg; SAR(10 g) = 0.073 W/kg

Maximum value of SAR (measured) = 0.221 W/kg



Date: 5/8/2014

Test Laboratory: Audix_SAR Lab

P4 802.11b_Left Tilted_Ch11_Ant-Main

DUT: TB71A-W

Communication System: WIFI 2.4G 802.11B; Communication System Band: 802.11B; Frequency: 2462 MHzDuty Cycle: 1:1

Medium parameters used: $f = 2462$ MHz; $\sigma = 1.877$ S/m; $\epsilon_r = 38.843$; $\rho = 1000$ kg/m³ ;

Phantom section: Left Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3855; ConvF(7.4, 7.4, 7.4); Calibrated: 9/26/2013;
- Sensor-Surface: 2mm (Mechanical Surface Detection), $z = 1.0, 21.0$
- Electronics: DAE4 Sn1337; Calibrated: 9/23/2013
- Phantom: SAM with CRP v5.0; Type: QD000P40CD; Serial: SN1706
- DASY52 52.8.4(1052); SEMCAD X 14.6.8(7028)

Area Scan (9x12x1): Measurement grid: $dx=20$ mm, $dy=20$ mm

Maximum value of SAR (measured) = 0.0959 W/kg

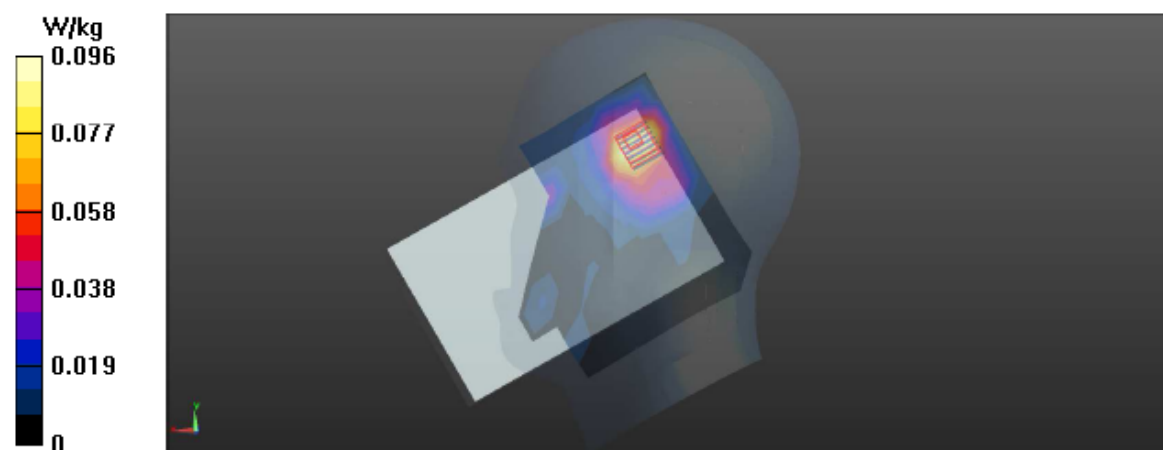
Zoom Scan (7x7x9)/Cube 0: Measurement grid: $dx=4$ mm, $dy=4$ mm, $dz=2.5$ mm

Reference Value = 5.716 V/m; Power Drift = 0.47 dB

Peak SAR (extrapolated) = 0.220 W/kg

SAR(1 g) = 0.101 W/kg; SAR(10 g) = 0.048 W/kg

Maximum value of SAR (measured) = 0.148 W/kg



Date: 5/8/2014

Test Laboratory: Audix_SAR Lab

P5 802.11g_Right Cheek_Ch6_Ant-Mimo

DUT: TB71A-W

Communication System: WIFI 2.4G 802.11G; Communication System Band: 802.11G; Frequency: 2437 MHzDuty Cycle: 1:1

Medium parameters used: $f = 2437$ MHz; $\sigma = 1.851$ S/m; $\epsilon_r = 38.909$; $\rho = 1000$ kg/m³ ;

Phantom section: Right Section

Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3855; ConvF(7.4, 7.4, 7.4); Calibrated: 9/26/2013;
- Sensor-Surface: 2mm (Mechanical Surface Detection), $z = 1.0, 21.0$
- Electronics: DAE4 Sn1337; Calibrated: 9/23/2013
- Phantom: SAM with CRP v5.0; Type: QD000P40CD; Serial: SN1706
- DASYS2 52.8.4(1052); SEMCAD X 14.6.8(7028)

Area Scan (9x12x1): Measurement grid: $dx=20$ mm, $dy=20$ mm

Maximum value of SAR (measured) = 0.0385 W/kg

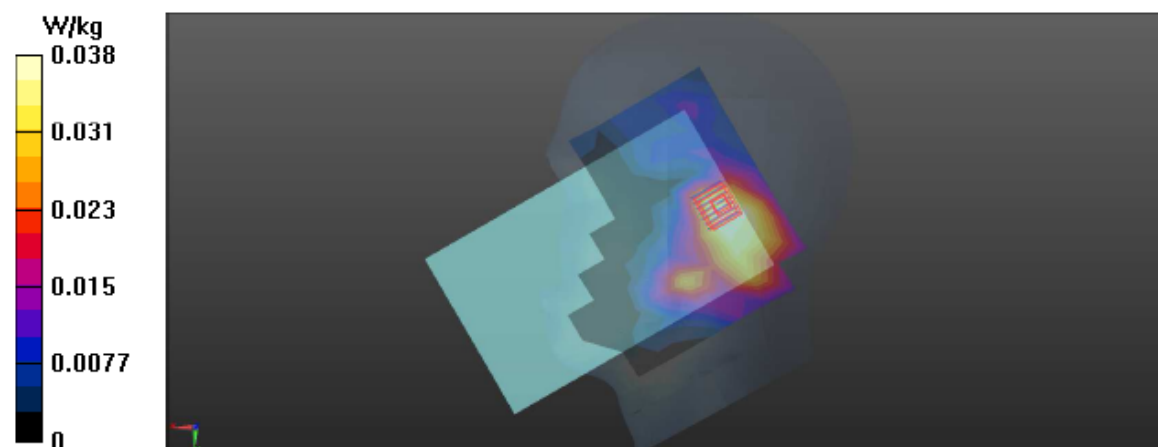
Zoom Scan (7x7x9)/Cube 0: Measurement grid: $dx=4$ mm, $dy=4$ mm, $dz=2.5$ mm

Reference Value = 4.902 V/m; Power Drift = 0.81 dB

Peak SAR (extrapolated) = 0.0630 W/kg

SAR(1 g) = 0.037 W/kg; SAR(10 g) = 0.023 W/kg

Maximum value of SAR (measured) = 0.0525 W/kg



Date: 5/8/2014

Test Laboratory: Audix_SAR Lab

P6 802.11g_Right Tilted_Ch6_Ant-Mimo

DUT: TB71A-W

Communication System: WIFI 2.4G 802.11G; Communication System Band: 802.11G; Frequency: 2437 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2437$ MHz; $\sigma = 1.851$ S/m; $\epsilon_r = 38.909$; $\rho = 1000$ kg/m³;

Phantom section: Right Section

Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3855; ConvF(7.4, 7.4, 7.4); Calibrated: 9/26/2013;
- Sensor-Surface: 2mm (Mechanical Surface Detection), $z = 1.0, 21.0$
- Electronics: DAE4 Sn1337; Calibrated: 9/23/2013
- Phantom: SAM with CRP v5.0; Type: QD000P40CD; Serial: SN1706
- DASYS 52.8.4(1052); SEMCAD X 14.6.8(7028)

Area Scan (9x12x1): Measurement grid: $dx=20$ mm, $dy=20$ mm

Maximum value of SAR (measured) = 0.0406 W/kg

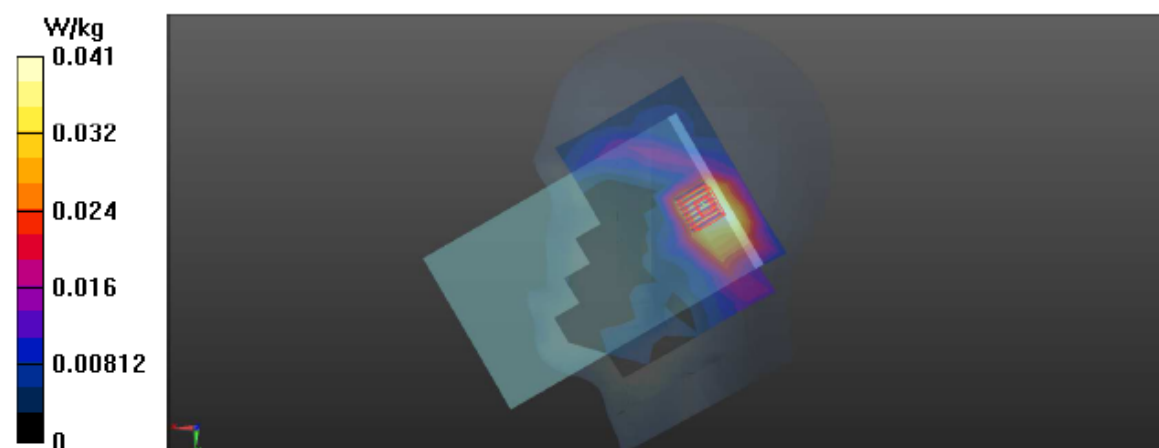
Zoom Scan (7x7x9)/Cube 0: Measurement grid: $dx=4$ mm, $dy=4$ mm, $dz=2.5$ mm

Reference Value = 5.690 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 0.0710 W/kg

SAR(1 g) = 0.041 W/kg; SAR(10 g) = 0.024 W/kg

Maximum value of SAR (measured) = 0.0579 W/kg



Date: 5/8/2014

Test Laboratory: Audix_SAR Lab

P7 802.11g_Left Cheek_Ch6_Ant-Mimo

DUT: TB71A-W

Communication System: WIFI 2.4G 802.11G; Communication System Band: 802.11G; Frequency: 2437 MHzDuty Cycle: 1:1

Medium parameters used: $f = 2437$ MHz; $\sigma = 1.851$ S/m; $\epsilon_r = 38.909$; $\rho = 1000$ kg/m³ ;

Phantom section: Left Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3855; ConvF(7.4, 7.4, 7.4); Calibrated: 9/26/2013;
- Sensor-Surface: 2mm (Mechanical Surface Detection), $z = 1.0, 21.0$
- Electronics: DAE4 Sn1337; Calibrated: 9/23/2013
- Phantom: SAM with CRP v5.0; Type: QD000P40CD; Serial: SN1706
- DASY52 52.8.4(1052); SEMCAD X 14.6.8(7028)

Area Scan (9x12x1): Measurement grid: $dx=20$ mm, $dy=20$ mm

Maximum value of SAR (measured) = 0.135 W/kg

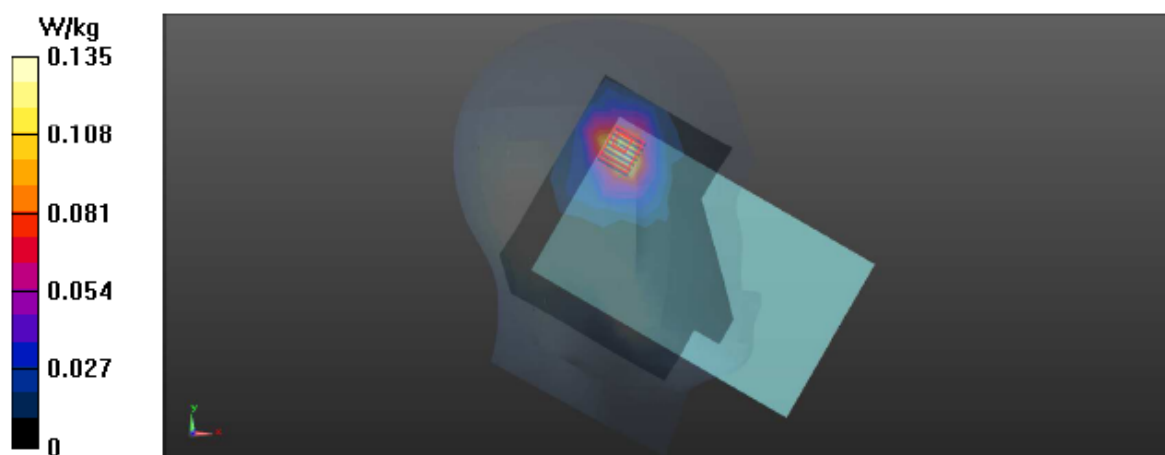
Zoom Scan (7x7x9)/Cube 0: Measurement grid: $dx=4$ mm, $dy=4$ mm, $dz=2.5$ mm

Reference Value = 4.467 V/m; Power Drift = 0.85 dB

Peak SAR (extrapolated) = 0.240 W/kg

SAR(1 g) = 0.119 W/kg; SAR(10 g) = 0.060 W/kg

Maximum value of SAR (measured) = 0.179 W/kg



Date: 5/8/2014

Test Laboratory: Audix_SAR Lab

P8 802.11g_Left Tilted_Ch6_Ant-Mimo

DUT: TB71A-W

Communication System: WIFI 2.4G 802.11G; Communication System Band: 802.11G; Frequency: 2437 MHzDuty Cycle: 1:1

Medium parameters used: $f = 2437 \text{ MHz}$; $\sigma = 1.851 \text{ S/m}$; $\epsilon_r = 38.909$; $\rho = 1000 \text{ kg/m}^3$;

Phantom section: Left Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3855; ConvF(7.4, 7.4, 7.4); Calibrated: 9/26/2013;
- Sensor-Surface: 2mm (Mechanical Surface Detection), $z = 1.0, 21.0$
- Electronics: DAE4 Sn1337; Calibrated: 9/23/2013
- Phantom: SAM with CRP v5.0; Type: QD000P40CD; Serial: SN1706
- DASY52 52.8.4(1052); SEMCAD X 14.6.8(7028)

Area Scan (9x12x1): Measurement grid: $dx=20\text{mm}$, $dy=20\text{mm}$

Maximum value of SAR (measured) = 0.0871 W/kg

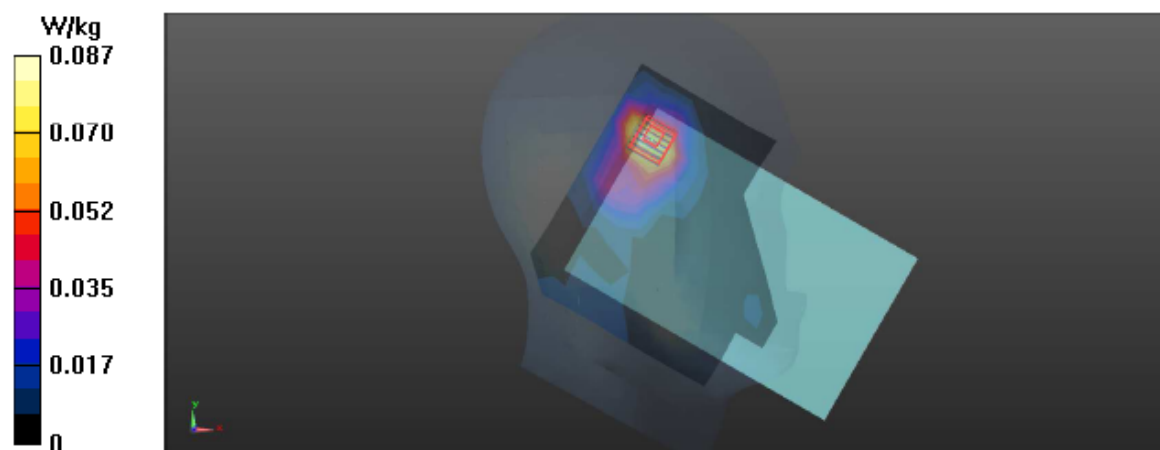
Zoom Scan (7x7x9)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2.5\text{mm}$

Reference Value = 5.649 V/m; Power Drift = 0.43 dB

Peak SAR (extrapolated) = 0.164 W/kg

SAR(1 g) = 0.083 W/kg; SAR(10 g) = 0.042 W/kg

Maximum value of SAR (measured) = 0.124 W/kg



Test Date: 2014. 05. 07 Temperature : 22.8°C Humidity : 25%

Liquid Temperature : 21.7°C				Depth of Liquid: > 15cm		
Test Mode: 5GHz (Head)						
Test Position: Head	Antenna Position	Frequency		Conducted power (dBm)	SAR 1g (W/kg)	Limit (W/kg)
		Channel	MHz			
802.11a (UNII Band I)						
Right Cheek	Fixed	48	5240	15.83	0.077	1.6
Right Tilted	Fixed	48	5240	15.83	0.083	1.6
Left Cheek	Fixed	48	5240	15.83	0.108	1.6
Left Tilted	Fixed	48	5240	15.83	0.113	1.6
802.11a (UNII Band II)						
Right Cheek	Fixed	60	5300	16.48	0.066	1.6
Right Tilted	Fixed	60	5300	16.48	0.126	1.6
Left Cheek	Fixed	60	5300	16.48	0.097	1.6
Left Tilted	Fixed	60	5300	16.48	0.109	1.6
802.11a (UNII Band III)						
Right Cheek	Fixed	116	5580	15.57	0.093	1.6
Right Tilted	Fixed	116	5580	15.57	0.097	1.6
Left Cheek	Fixed	116	5580	15.57	0.133	1.6
Left Tilted	Fixed	116	5580	15.57	0.131	1.6
802.11a (UNII Band IV)						
Right Cheek	Fixed	149	5745	15.85	0.109	1.6
Right Tilted	Fixed	149	5745	15.85	0.142	1.6
Left Cheek	Fixed	149	5745	15.85	0.135	1.6
Left Tilted	Fixed	149	5745	15.85	0.165	1.6

Date: 5/7/2014

Test Laboratory: Audix_SAR Lab

P9 802.11a_Right Cheek_Ch48_Ant-Mimo

DUT: TB71A-W

Communication System: WIFI 5G 802.11a; Communication System Band: B1; Frequency: 5240 MHz
Duty Cycle: 1:1

Medium parameters used: $f = 5240$ MHz; $\sigma = 4.626$ S/m; $\epsilon_r = 36.513$; $\rho = 1000$ kg/m³ ;

Phantom section: Right Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3855; ConvF(5.52, 5.52, 5.52); Calibrated: 9/26/2013;
- Sensor-Surface: 2mm (Mechanical Surface Detection), $z = 1.0, 21.0$
- Electronics: DAE4 Sn1337; Calibrated: 9/23/2013
- Phantom: SAM with CRP v5.0; Type: QD000P40CD; Serial: SN1706
- DASY52 52.8.4(1052); SEMCAD X 14.6.8(7028)

Area Scan (18x24x1): Measurement grid: $dx=10$ mm, $dy=10$ mm

Maximum value of SAR (measured) = 0.120 W/kg

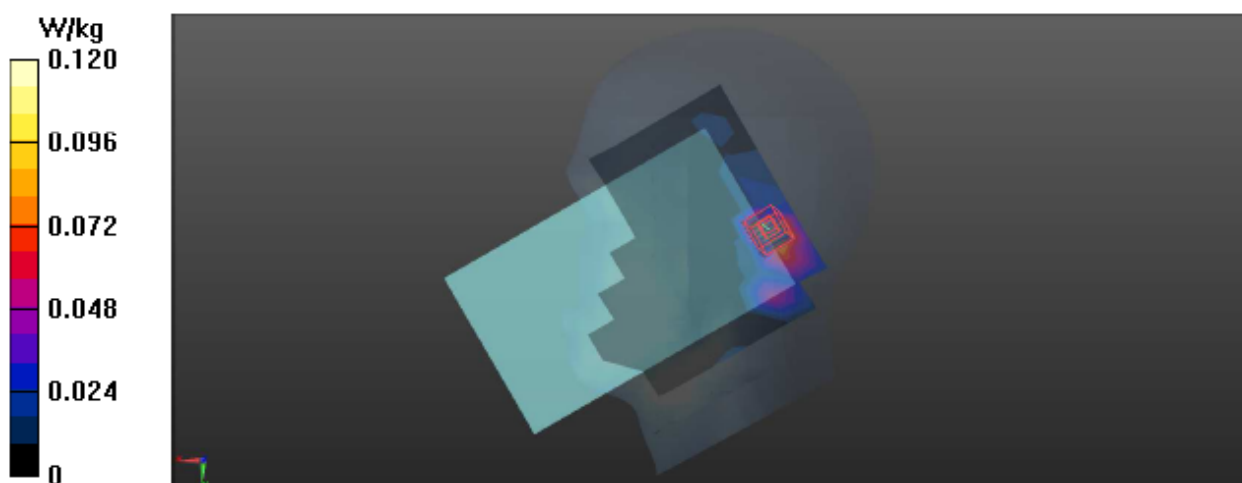
Zoom Scan (7x7x9)/Cube 0: Measurement grid: $dx=4$ mm, $dy=4$ mm, $dz=2.5$ mm

Reference Value = 2.816 V/m; Power Drift = 1.00 dB

Peak SAR (extrapolated) = 0.229 W/kg

SAR(1 g) = 0.077 W/kg; SAR(10 g) = 0.035 W/kg

Maximum value of SAR (measured) = 0.138 W/kg



Date: 5/7/2014

Test Laboratory: Audix_SAR Lab

P10 802.11a_Right Tilted_Ch48_Ant-Mimo

DUT: TB71A-W

Communication System: WIFI 5G 802.11a; Communication System Band: B1; Frequency: 5240 MHz
Duty Cycle: 1:1

Medium parameters used: $f = 5240$ MHz; $\sigma = 4.626$ S/m; $\epsilon_r = 36.513$; $\rho = 1000$ kg/m³ ;

Phantom section: Right Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3855; ConvF(5.52, 5.52, 5.52); Calibrated: 9/26/2013;
- Sensor-Surface: 2mm (Mechanical Surface Detection), $z = 1.0, 21.0$
- Electronics: DAE4 Sn1337; Calibrated: 9/23/2013
- Phantom: SAM with CRP v5.0; Type: QD000P40CD; Serial: SN1706
- DASY52 52.8.4(1052); SEMCAD X 14.6.8(7028)

Area Scan (18x24x1): Measurement grid: $dx=10$ mm, $dy=10$ mm

Maximum value of SAR (measured) = 0.149 W/kg

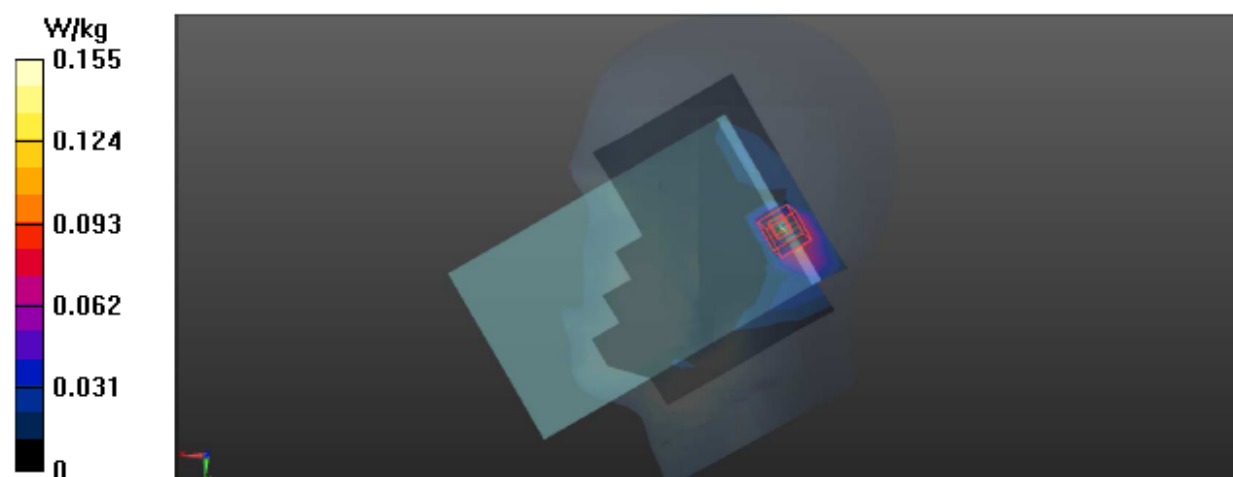
Zoom Scan (7x7x9)/Cube 0: Measurement grid: $dx=4$ mm, $dy=4$ mm, $dz=2.5$ mm

Reference Value = 2.563 V/m; Power Drift = 0.40 dB

Peak SAR (extrapolated) = 0.273 W/kg

SAR(1 g) = 0.083 W/kg; SAR(10 g) = 0.036 W/kg

Maximum value of SAR (measured) = 0.155 W/kg



Date: 5/7/2014

Test Laboratory: Audix_SAR Lab

P11 802.11a_Left Cheek_Ch48_Ant-Mimo

DUT: TB71A-W

Communication System: WIFI 5G 802.11a; Communication System Band: B1; Frequency: 5240 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5240$ MHz; $\sigma = 4.626$ S/m; $\epsilon_r = 36.513$; $\rho = 1000$ kg/m³;

Phantom section: Left Section

Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3855; ConvF(5.52, 5.52, 5.52); Calibrated: 9/26/2013;
- Sensor-Surface: 2mm (Mechanical Surface Detection), $z = 1.0, 21.0$
- Electronics: DAE4 Sn1337; Calibrated: 9/23/2013
- Phantom: SAM with CRP v5.0; Type: QD000P40CD; Serial: SN1706
- DASYS 52.8.4(1052); SEMCAD X 14.6.8(7028)

Area Scan (18x24x1): Measurement grid: $dx=10$ mm, $dy=10$ mm

Maximum value of SAR (measured) = 0.146 W/kg

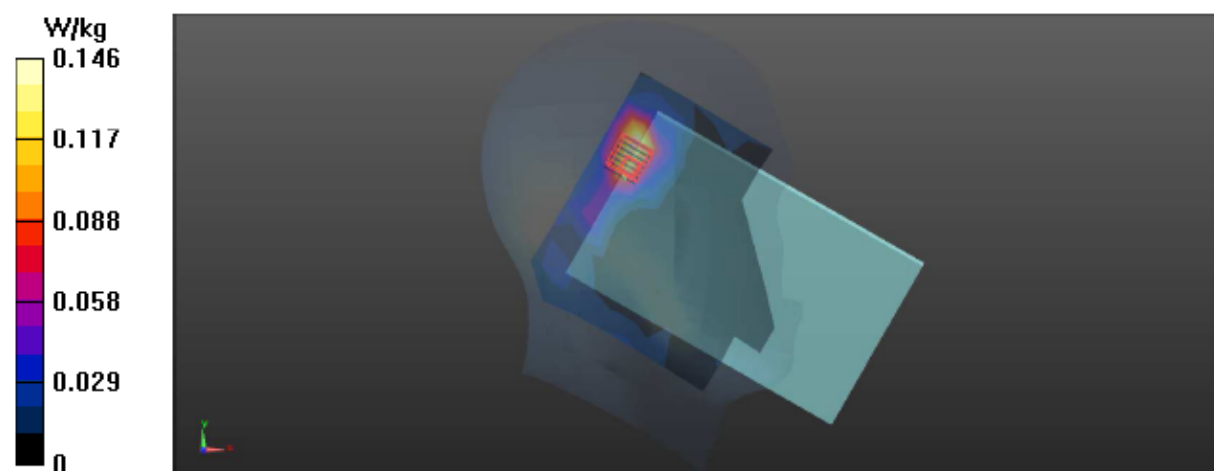
Zoom Scan (7x7x9)/Cube 0: Measurement grid: $dx=4$ mm, $dy=4$ mm, $dz=2.5$ mm

Reference Value = 3.896 V/m; Power Drift = 0.27 dB

Peak SAR (extrapolated) = 0.411 W/kg

SAR(1 g) = 0.108 W/kg; SAR(10 g) = 0.041 W/kg

Maximum value of SAR (measured) = 0.210 W/kg



Date: 5/8/2014

Test Laboratory: Audix_SAR Lab

P47 802.11a_Left Tilted_Ch48_Ant-Mimo

DUT: TB71A-W

Communication System: WIFI 5G 802.11a; Communication System Band: B1; Frequency: 5240 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5240$ MHz; $\sigma = 4.626$ S/m; $\epsilon_r = 36.513$; $\rho = 1000$ kg/m³ ;

Phantom section: Left Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3855; ConvF(5.52, 5.52, 5.52); Calibrated: 9/26/2013;
- Sensor-Surface: 2mm (Mechanical Surface Detection), $z = 1.0, 21.0$
- Electronics: DAE4 Sn1337; Calibrated: 9/23/2013
- Phantom: SAM with CRP v5.0; Type: QD000P40CD; Serial: SN1706
- DASY52 52.8.4(1052); SEMCAD X 14.6.8(7028)

Area Scan (18x24x1): Measurement grid: $dx=10$ mm, $dy=10$ mm

Maximum value of SAR (measured) = 0.147 W/kg

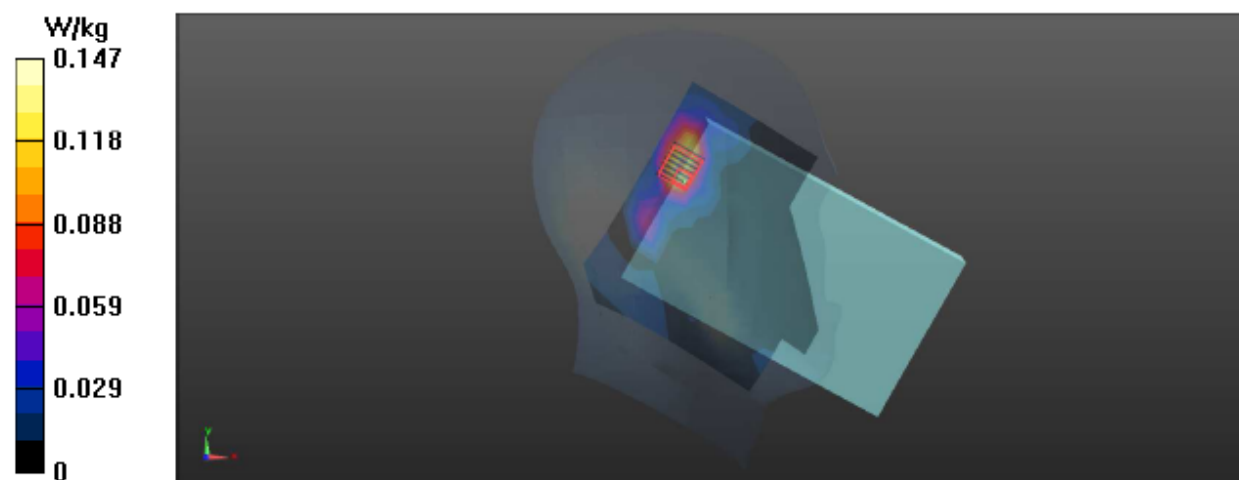
Zoom Scan (7x7x9)/Cube 0: Measurement grid: $dx=4$ mm, $dy=4$ mm, $dz=2.5$ mm

Reference Value = 2.889 V/m; Power Drift = 1.40 dB

Peak SAR (extrapolated) = 0.933 W/kg

SAR(1 g) = 0.113 W/kg; SAR(10 g) = 0.033 W/kg

Maximum value of SAR (measured) = 0.218 W/kg



Date: 5/7/2014

Test Laboratory: Audix_SAR Lab

P12 802.11a_Right Cheek_Ch60_Ant-Mimo

DUT: TB71A-W

Communication System: WIFI 5G 802.11a; Communication System Band: B2; Frequency: 5300 MHz
Duty Cycle: 1:1

Medium parameters used: $f = 5300$ MHz; $\sigma = 4.634$ S/m; $\epsilon_r = 36.576$; $\rho = 1000$ kg/m³ ;

Phantom section: Right Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3855; ConvF(5.19, 5.19, 5.19); Calibrated: 9/26/2013;
- Sensor-Surface: 2mm (Mechanical Surface Detection), $z = 1.0, 21.0$
- Electronics: DAE4 Sn1337; Calibrated: 9/23/2013
- Phantom: SAM with CRP v5.0; Type: QD000P40CD; Serial: SN1706
- DASY52 52.8.4(1052); SEMCAD X 14.6.8(7028)

Area Scan (18x24x1): Measurement grid: $dx=10$ mm, $dy=10$ mm

Maximum value of SAR (measured) = 0.113 W/kg

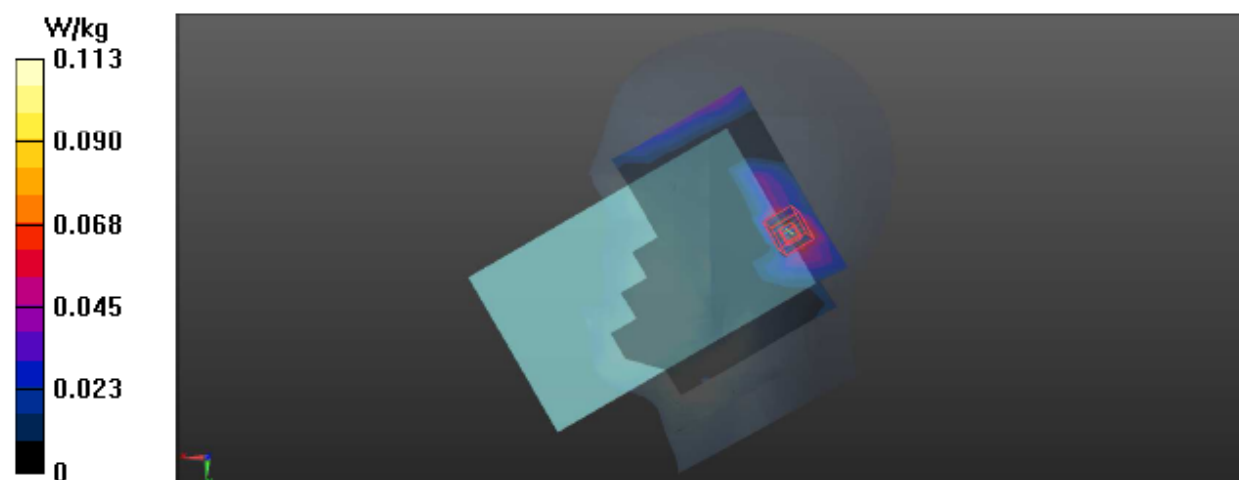
Zoom Scan (7x7x9)/Cube 0: Measurement grid: $dx=4$ mm, $dy=4$ mm, $dz=2.5$ mm

Reference Value = 4.786 V/m; Power Drift = -0.43 dB

Peak SAR (extrapolated) = 0.225 W/kg

SAR(1 g) = 0.066 W/kg; SAR(10 g) = 0.027 W/kg

Maximum value of SAR (measured) = 0.126 W/kg



Date: 5/7/2014

Test Laboratory: Audix_SAR Lab

P13 802.11a_Right Tilted_Ch60_Ant-Mimo

DUT: TB71A-W

Communication System: WIFI 5G 802.11a; Communication System Band: B2; Frequency: 5300 MHz
Duty Cycle: 1:1

Medium parameters used: $f = 5300$ MHz; $\sigma = 4.634$ S/m; $\epsilon_r = 36.576$; $\rho = 1000$ kg/m³;

Phantom section: Right Section

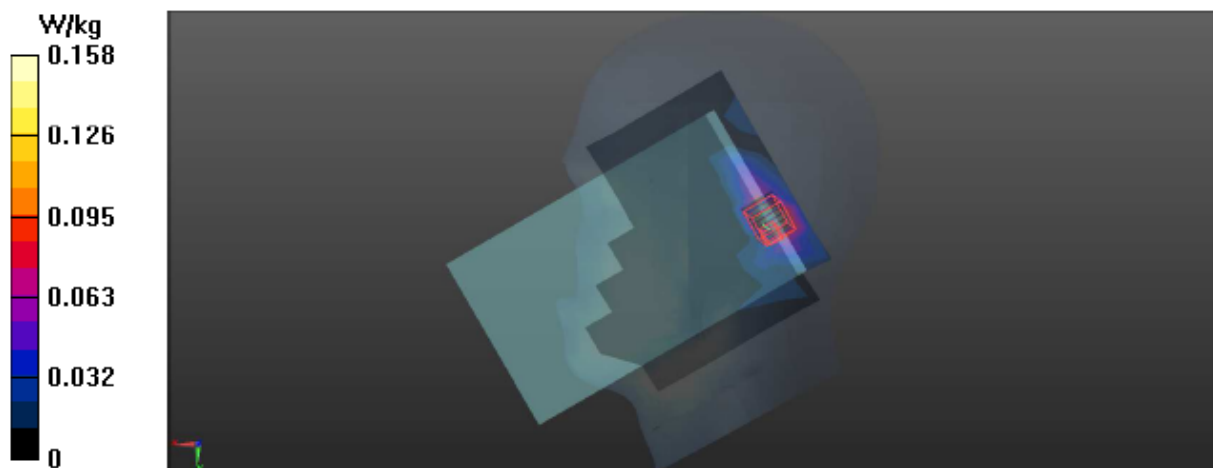
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3855; ConvF(5.19, 5.19, 5.19); Calibrated: 9/26/2013;
- Sensor-Surface: 2mm (Mechanical Surface Detection), $z = 1.0, 21.0$
- Electronics: DAE4 Sn1337; Calibrated: 9/23/2013
- Phantom: SAM with CRP v5.0; Type: QD000P40CD; Serial: SN1706
- DASY52 52.8.4(1052); SEMCAD X 14.6.8(7028)

Area Scan (18x24x1): Measurement grid: $dx=10$ mm, $dy=10$ mm
Maximum value of SAR (measured) = 0.158 W/kg

Zoom Scan (7x7x9)/Cube 0: Measurement grid: $dx=4$ mm, $dy=4$ mm, $dz=2.5$ mm
Reference Value = 3.709 V/m; Power Drift = 0.79 dB
Peak SAR (extrapolated) = 0.497 W/kg
SAR(1 g) = 0.126 W/kg; SAR(10 g) = 0.049 W/kg
Maximum value of SAR (measured) = 0.219 W/kg



Date: 5/7/2014

Test Laboratory: Audix_SAR Lab

P14 802.11a_Left Cheek_Ch60_Ant-Mimo

DUT: TB71A-W

Communication System: WIFI 5G 802.11a; Communication System Band: B2; Frequency: 5300 MHz
Duty Cycle: 1:1

Medium parameters used: $f = 5300$ MHz; $\sigma = 4.634$ S/m; $\epsilon_r = 36.576$; $\rho = 1000$ kg/m³ ;

Phantom section: Left Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3855; ConvF(5.19, 5.19, 5.19); Calibrated: 9/26/2013;
- Sensor-Surface: 2mm (Mechanical Surface Detection), $z = 1.0, 21.0$
- Electronics: DAE4 Sn1337; Calibrated: 9/23/2013
- Phantom: SAM with CRP v5.0; Type: QD000P40CD; Serial: SN1706
- DASY52 52.8.4(1052); SEMCAD X 14.6.8(7028)

Area Scan (18x24x1): Measurement grid: $dx=10$ mm, $dy=10$ mm

Maximum value of SAR (measured) = 0.141 W/kg

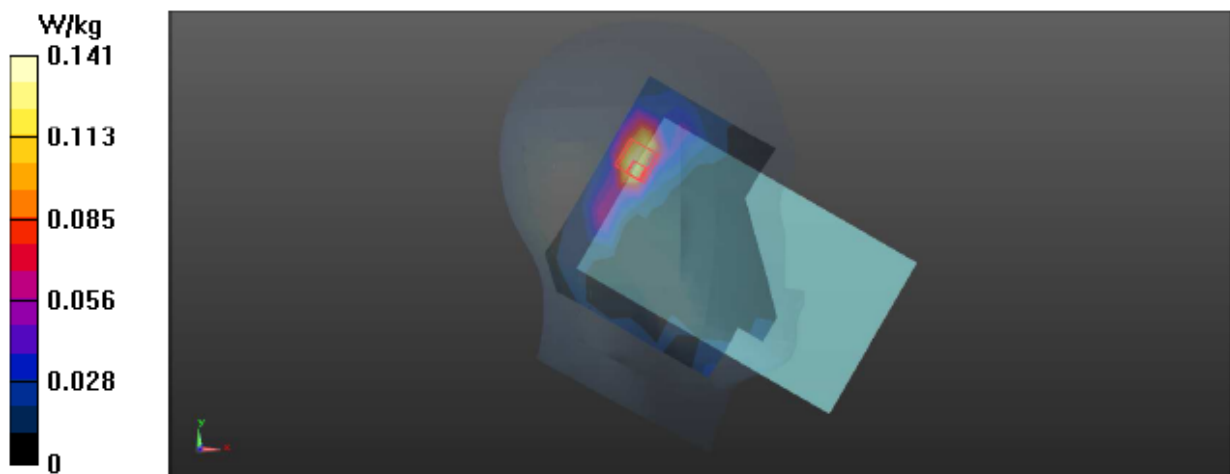
Zoom Scan (7x7x9)/Cube 0: Measurement grid: $dx=4$ mm, $dy=4$ mm, $dz=2.5$ mm

Reference Value = 4.548 V/m; Power Drift = -0.16 dB

Peak SAR (extrapolated) = 0.370 W/kg

SAR(1 g) = 0.097 W/kg; SAR(10 g) = 0.030 W/kg

Maximum value of SAR (measured) = 0.202 W/kg



Date: 5/7/2014

Test Laboratory: Audix_SAR Lab

P15 802.11a_Left Tilted_Ch60_Ant-Mimo

DUT: TB71A-W

Communication System: WIFI 5G 802.11a; Communication System Band: B2; Frequency: 5300 MHz
Duty Cycle: 1:1

Medium parameters used: $f = 5300$ MHz; $\sigma = 4.634$ S/m; $\epsilon_r = 36.576$; $\rho = 1000$ kg/m³ ;

Phantom section: Left Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3855; ConvF(5.19, 5.19, 5.19); Calibrated: 9/26/2013;
- Sensor-Surface: 2mm (Mechanical Surface Detection), $z = 1.0, 21.0$
- Electronics: DAE4 Sn1337; Calibrated: 9/23/2013
- Phantom: SAM with CRP v5.0; Type: QD000P40CD; Serial: SN1706
- DASY52 52.8.4(1052); SEMCAD X 14.6.8(7028)

Area Scan (18x24x1): Measurement grid: $dx=10$ mm, $dy=10$ mm

Maximum value of SAR (measured) = 0.137 W/kg

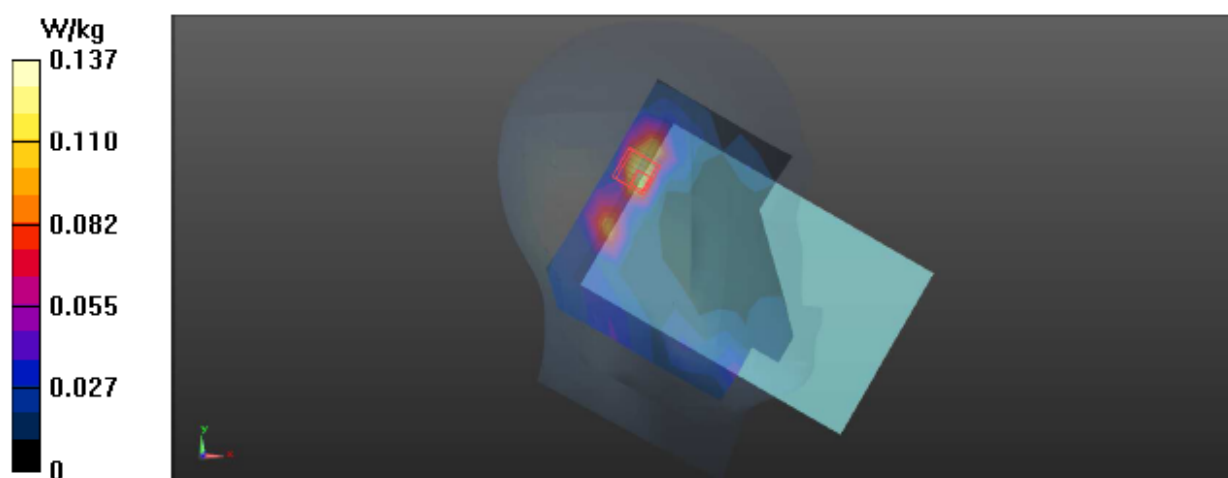
Zoom Scan (7x7x9)/Cube 0: Measurement grid: $dx=4$ mm, $dy=4$ mm, $dz=2.5$ mm

Reference Value = 3.021 V/m; Power Drift = 0.58 dB

Peak SAR (extrapolated) = 0.416 W/kg

SAR(1 g) = 0.109 W/kg; SAR(10 g) = 0.037 W/kg

Maximum value of SAR (measured) = 0.210 W/kg



Date: 5/7/2014

Test Laboratory: Audix_SAR Lab

P16 802.11a_Right Cheek_Ch116_Ant-Mimo

DUT: TB71A-W

Communication System: WIFI 5G 802.11a; Communication System Band: B3; Frequency: 5580 MHz
Duty Cycle: 1:1

Medium parameters used: $f = 5580$ MHz; $\sigma = 4.956$ S/m; $\epsilon_r = 35.962$; $\rho = 1000$ kg/m³ ;

Phantom section: Right Section

Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3855; ConvF(4.68, 4.68, 4.68); Calibrated: 9/26/2013;
- Sensor-Surface: 2mm (Mechanical Surface Detection), $z = 1.0, 21.0$
- Electronics: DAE4 Sn1337; Calibrated: 9/23/2013
- Phantom: SAM with CRP v5.0; Type: QD000P40CD; Serial: SN1706
- DASYS 52.8.4(1052); SEMCAD X 14.6.8(7028)

Area Scan (18x24x1): Measurement grid: $dx=10$ mm, $dy=10$ mm

Maximum value of SAR (measured) = 0.187 W/kg

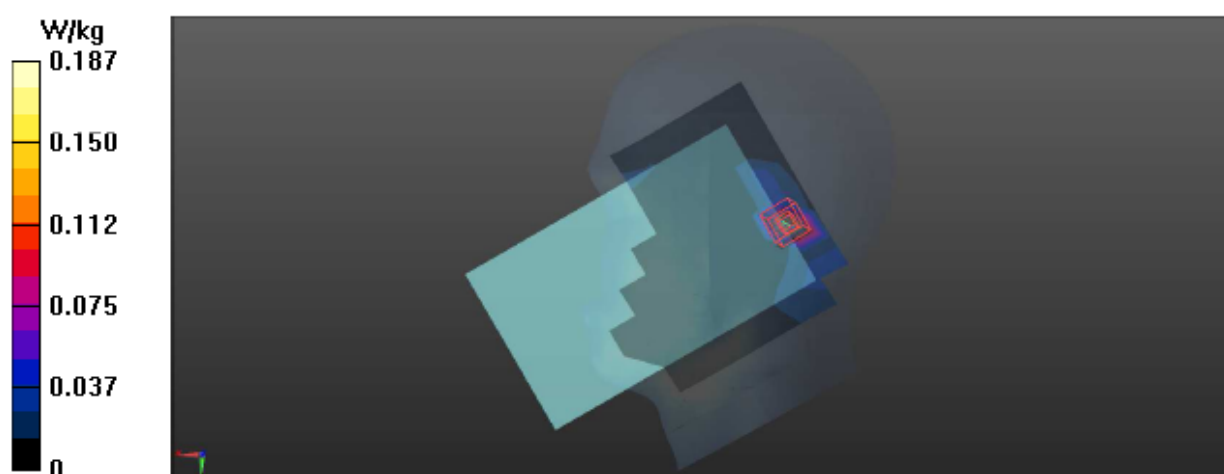
Zoom Scan (7x7x9)/Cube 0: Measurement grid: $dx=4$ mm, $dy=4$ mm, $dz=2.5$ mm

Reference Value = 5.299 V/m; Power Drift = -0.30 dB

Peak SAR (extrapolated) = 0.367 W/kg

SAR(1 g) = 0.093 W/kg; SAR(10 g) = 0.033 W/kg

Maximum value of SAR (measured) = 0.194 W/kg



Date: 5/7/2014

Test Laboratory: Audix_SAR Lab

P17 802.11a_Right Tilted_Ch116_Ant-Mimo

DUT: TB71A-W

Communication System: WIFI 5G 802.11a; Communication System Band: B3; Frequency: 5580 MHz
Duty Cycle: 1:1

Medium parameters used: $f = 5580$ MHz; $\sigma = 4.956$ S/m; $\epsilon_r = 35.962$; $\rho = 1000$ kg/m³;

Phantom section: Right Section

Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3855; ConvF(4.68, 4.68, 4.68); Calibrated: 9/26/2013;
- Sensor-Surface: 2mm (Mechanical Surface Detection), $z = 1.0, 21.0$
- Electronics: DAE4 Sn1337; Calibrated: 9/23/2013
- Phantom: SAM with CRP v5.0; Type: QD000P40CD; Serial: SN1706
- DASYS 52.8.4(1052); SEMCAD X 14.6.8(7028)

Area Scan (18x24x1): Measurement grid: $dx=10$ mm, $dy=10$ mm

Maximum value of SAR (measured) = 0.166 W/kg

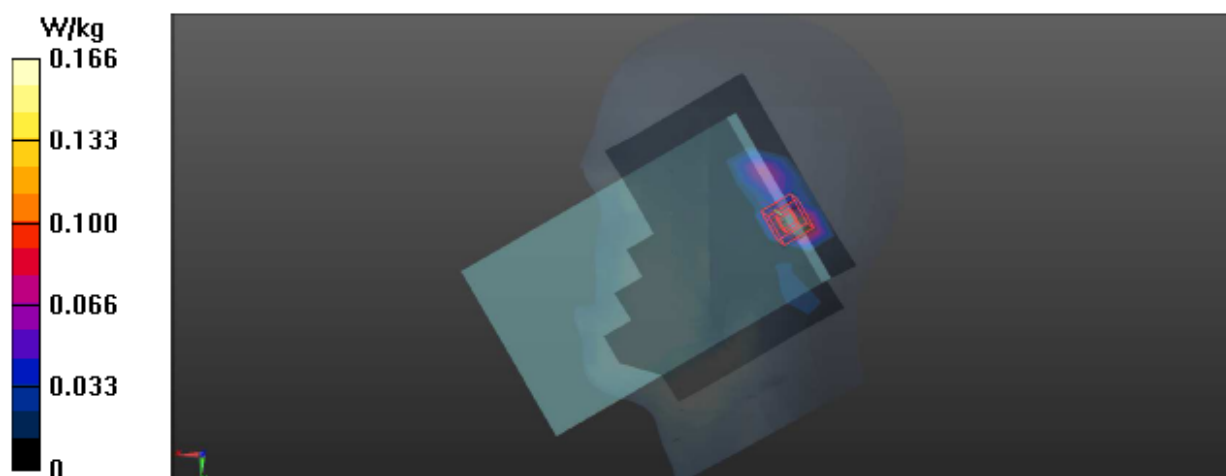
Zoom Scan (7x7x9)/Cube 0: Measurement grid: $dx=4$ mm, $dy=4$ mm, $dz=2.5$ mm

Reference Value = 4.022 V/m; Power Drift = 0.69 dB

Peak SAR (extrapolated) = 0.332 W/kg

SAR(1 g) = 0.097 W/kg; SAR(10 g) = 0.035 W/kg

Maximum value of SAR (measured) = 0.227 W/kg



Date: 5/7/2014

Test Laboratory: Audix_SAR Lab

P18 802.11a_Left Cheek_Ch116_Ant-Mimo**DUT: TB71A-W**

Communication System: WIFI 5G 802.11a; Communication System Band: B3; Frequency: 5580 MHz
Duty Cycle: 1:1

Medium parameters used: $f = 5580$ MHz; $\sigma = 4.956$ S/m; $\epsilon_r = 35.962$; $\rho = 1000$ kg/m³ ;

Phantom section: Left Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3855; ConvF(4.68, 4.68, 4.68); Calibrated: 9/26/2013;
- Sensor-Surface: 2mm (Mechanical Surface Detection), $z = 1.0, 21.0$
- Electronics: DAE4 Sn1337; Calibrated: 9/23/2013
- Phantom: SAM with CRP v5.0; Type: QD000P40CD; Serial: SN1706
- DASY52 52.8.4(1052); SEMCAD X 14.6.8(7028)

Area Scan (18x24x1): Measurement grid: $dx=10$ mm, $dy=10$ mm

Maximum value of SAR (measured) = 0.232 W/kg

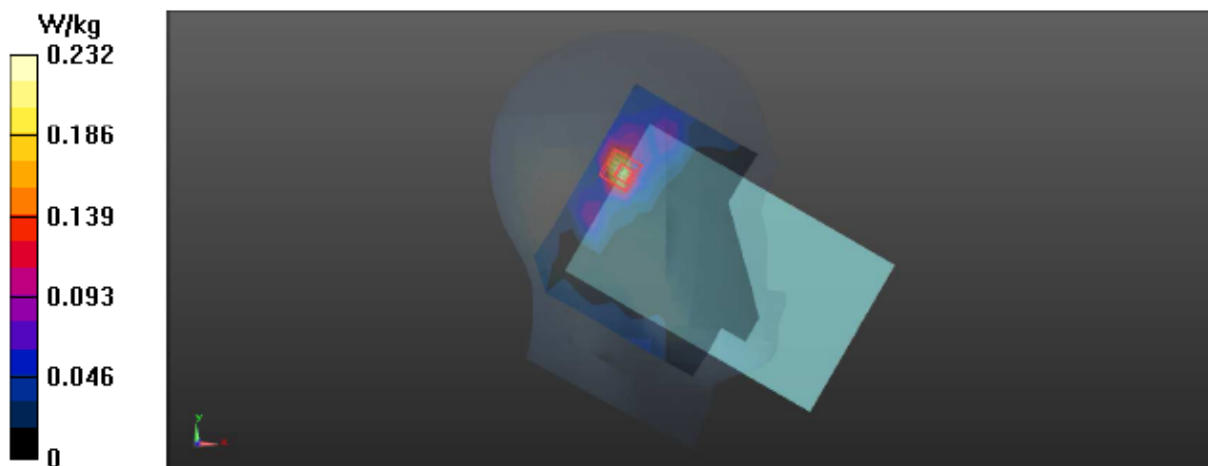
Zoom Scan (7x7x9)/Cube 0: Measurement grid: $dx=4$ mm, $dy=4$ mm, $dz=2.5$ mm

Reference Value = 5.332 V/m; Power Drift = -0.43 dB

Peak SAR (extrapolated) = 0.500 W/kg

SAR(1 g) = 0.133 W/kg; SAR(10 g) = 0.037 W/kg

Maximum value of SAR (measured) = 0.296 W/kg



Date: 5/7/2014

Test Laboratory: Audix_SAR Lab

P19 802.11a_Left Tilted_Ch116_Ant-Mimo**DUT: TB71A-W**

Communication System: WIFI 5G 802.11a; Communication System Band: B3; Frequency: 5580 MHz
Duty Cycle: 1:1

Medium parameters used: $f = 5580$ MHz; $\sigma = 4.956$ S/m; $\epsilon_r = 35.962$; $\rho = 1000$ kg/m³ ;

Phantom section: Left Section

Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3855; ConvF(4.68, 4.68, 4.68); Calibrated: 9/26/2013;
- Sensor-Surface: 2mm (Mechanical Surface Detection), $z = 1.0, 21.0$
- Electronics: DAE4 Sn1337; Calibrated: 9/23/2013
- Phantom: SAM with CRP v5.0; Type: QD000P40CD; Serial: SN1706
- DASY52 52.8.4(1052); SEMCAD X 14.6.8(7028)

Area Scan (18x24x1): Measurement grid: $dx=10$ mm, $dy=10$ mm

Maximum value of SAR (measured) = 0.177 W/kg

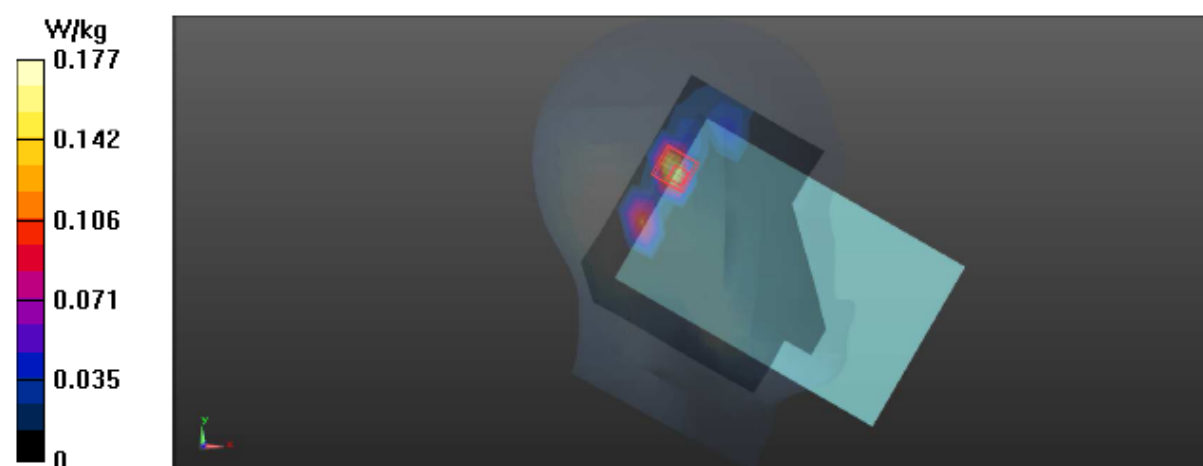
Zoom Scan (7x7x9)/Cube 0: Measurement grid: $dx=4$ mm, $dy=4$ mm, $dz=2.5$ mm

Reference Value = 4.007 V/m; Power Drift = 0.64 dB

Peak SAR (extrapolated) = 0.515 W/kg

SAR(1 g) = 0.131 W/kg; SAR(10 g) = 0.034 W/kg

Maximum value of SAR (measured) = 0.281 W/kg



Date: 5/7/2014

Test Laboratory: Audix_SAR Lab

P20 802.11a_Right Cheek_Ch149_Ant-Mimo

DUT: TB71A-W

Communication System: WIFI 5G 802.11a; Communication System Band: B4; Frequency: 5745 MHz
Duty Cycle: 1:1

Medium parameters used: $f = 5745$ MHz; $\sigma = 5.087$ S/m; $\epsilon_r = 36.288$; $\rho = 1000$ kg/m³ ;

Phantom section: Right Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3855; ConvF(5.01, 5.01, 5.01); Calibrated: 9/26/2013;
- Sensor-Surface: 2mm (Mechanical Surface Detection), $z = 1.0, 21.0$
- Electronics: DAE4 Sn1337; Calibrated: 9/23/2013
- Phantom: SAM with CRP v5.0; Type: QD000P40CD; Serial: SN1706
- DASY52 52.8.4(1052); SEMCAD X 14.6.8(7028)

Area Scan (18x24x1): Measurement grid: $dx=10$ mm, $dy=10$ mm

Maximum value of SAR (measured) = 0.212 W/kg

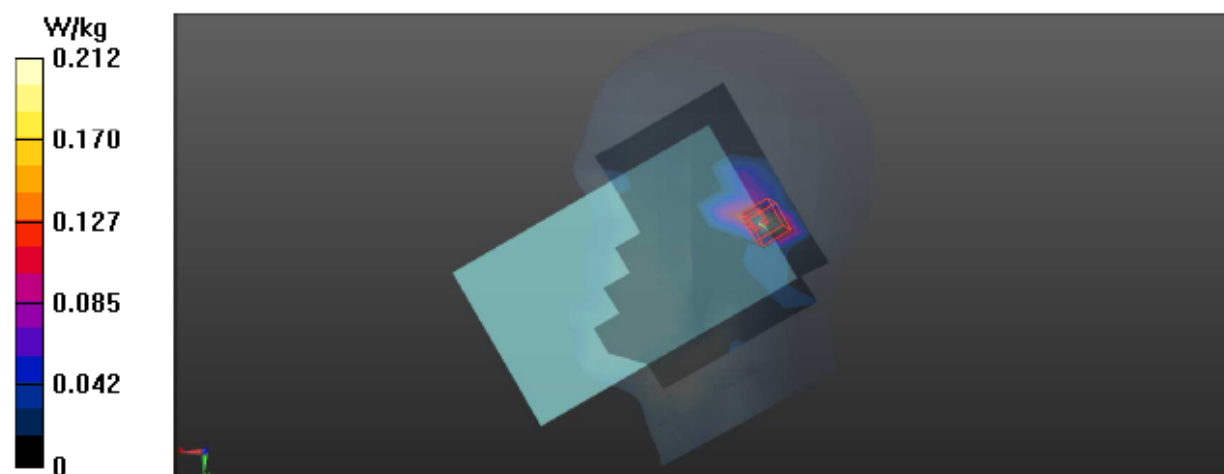
Zoom Scan (7x7x9)/Cube 0: Measurement grid: $dx=4$ mm, $dy=4$ mm, $dz=2.5$ mm

Reference Value = 4.661 V/m; Power Drift = 1.46 dB

Peak SAR (extrapolated) = 1.19 W/kg

SAR(1 g) = 0.109 W/kg; SAR(10 g) = 0.015 W/kg

Maximum value of SAR (measured) = 0.257 W/kg



Date: 5/7/2014

Test Laboratory: Audix_SAR Lab

P21 802.11a_Right Tilted_Ch149_Ant-Mimo

DUT: TB71A-W

Communication System: WIFI 5G 802.11a; Communication System Band: B4; Frequency: 5745 MHz
Duty Cycle: 1:1

Medium parameters used: $f = 5745$ MHz; $\sigma = 5.087$ S/m; $\epsilon_r = 36.288$; $\rho = 1000$ kg/m³ ;

Phantom section: Right Section

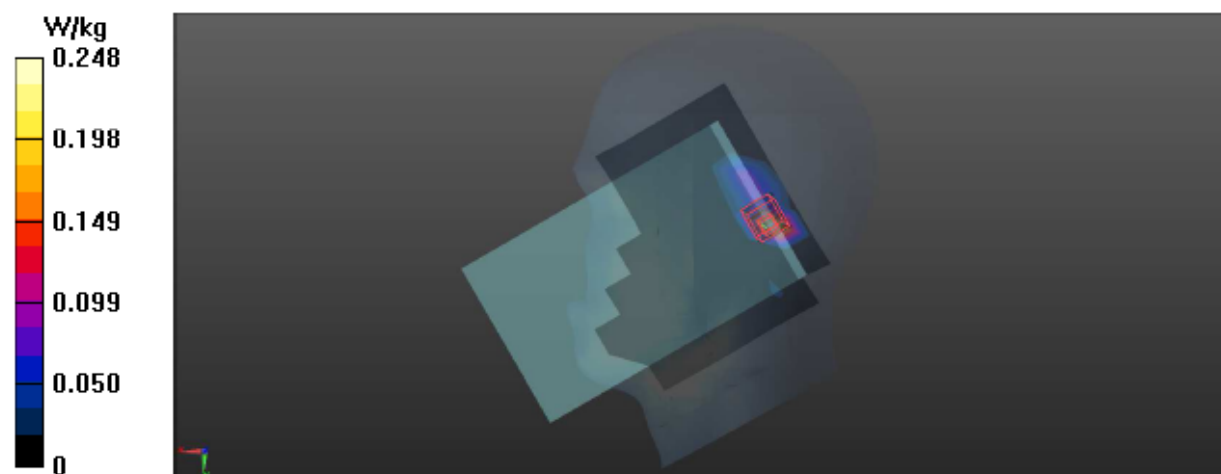
Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3855; ConvF(5.01, 5.01, 5.01); Calibrated: 9/26/2013;
- Sensor-Surface: 2mm (Mechanical Surface Detection), $z = 1.0, 21.0$
- Electronics: DAE4 Sn1337; Calibrated: 9/23/2013
- Phantom: SAM with CRP v5.0; Type: QD000P40CD; Serial: SN1706
- DASYS 52.8.4(1052); SEMCAD X 14.6.8(7028)

Area Scan (18x24x1): Measurement grid: $dx=10$ mm, $dy=10$ mm
Maximum value of SAR (measured) = 0.248 W/kg

Zoom Scan (7x7x9)/Cube 0: Measurement grid: $dx=4$ mm, $dy=4$ mm, $dz=2.5$ mm
Reference Value = 4.117 V/m; Power Drift = 0.25 dB
Peak SAR (extrapolated) = 0.575 W/kg
SAR(1 g) = 0.142 W/kg; SAR(10 g) = 0.051 W/kg
Maximum value of SAR (measured) = 0.307 W/kg



Date: 5/7/2014

Test Laboratory: Audix_SAR Lab

P22 802.11a_Left Cheek_Ch149_Ant-Mimo

DUT: TB71A-W

Communication System: WIFI 5G 802.11a; Communication System Band: B4; Frequency: 5745 MHz
Duty Cycle: 1:1

Medium parameters used: $f = 5745$ MHz; $\sigma = 5.087$ S/m; $\epsilon_r = 36.288$; $\rho = 1000$ kg/m³ ;

Phantom section: Left Section

Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3855; ConvF(5.01, 5.01, 5.01); Calibrated: 9/26/2013;
- Sensor-Surface: 2mm (Mechanical Surface Detection), $z = 1.0, 21.0$
- Electronics: DAE4 Sn1337; Calibrated: 9/23/2013
- Phantom: SAM with CRP v5.0; Type: QD000P40CD; Serial: SN1706
- DASY52 52.8.4(1052); SEMCAD X 14.6.8(7028)

Area Scan (18x24x1): Measurement grid: $dx=10$ mm, $dy=10$ mm

Maximum value of SAR (measured) = 0.237 W/kg

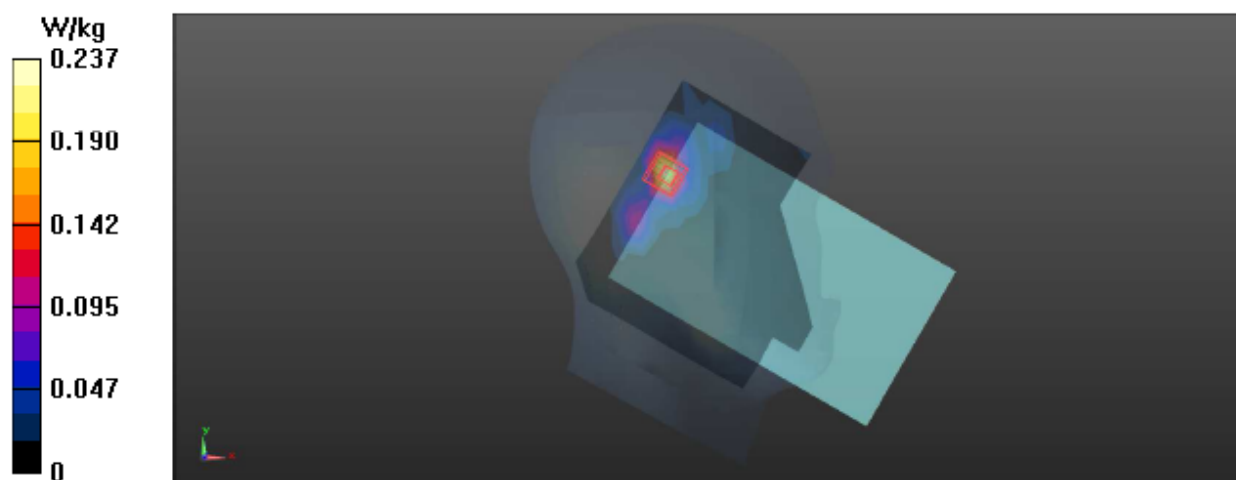
Zoom Scan (7x7x9)/Cube 0: Measurement grid: $dx=4$ mm, $dy=4$ mm, $dz=2.5$ mm

Reference Value = 4.814 V/m; Power Drift = -0.78 dB

Peak SAR (extrapolated) = 0.571 W/kg

SAR(1 g) = 0.135 W/kg; SAR(10 g) = 0.036 W/kg

Maximum value of SAR (measured) = 0.321 W/kg



Date: 5/7/2014

Test Laboratory: Audix_SAR Lab

P23 802.11a_Left Tilted_Ch149_Ant-Mimo

DUT: TB71A-W

Communication System: WIFI 5G 802.11a; Communication System Band: B4; Frequency: 5745 MHz
Duty Cycle: 1:1

Medium parameters used: $f = 5745$ MHz; $\sigma = 5.087$ S/m; $\epsilon_r = 36.288$; $\rho = 1000$ kg/m³;

Phantom section: Left Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3855; ConvF(5.01, 5.01, 5.01); Calibrated: 9/26/2013;
- Sensor-Surface: 2mm (Mechanical Surface Detection), $z = 1.0, 21.0$
- Electronics: DAE4 Sn1337; Calibrated: 9/23/2013
- Phantom: SAM with CRP v5.0; Type: QD000P40CD; Serial: SN1706
- DASY52 52.8.4(1052); SEMCAD X 14.6.8(7028)

Area Scan (18x24x1): Measurement grid: $dx=10$ mm, $dy=10$ mm

Maximum value of SAR (measured) = 0.229 W/kg

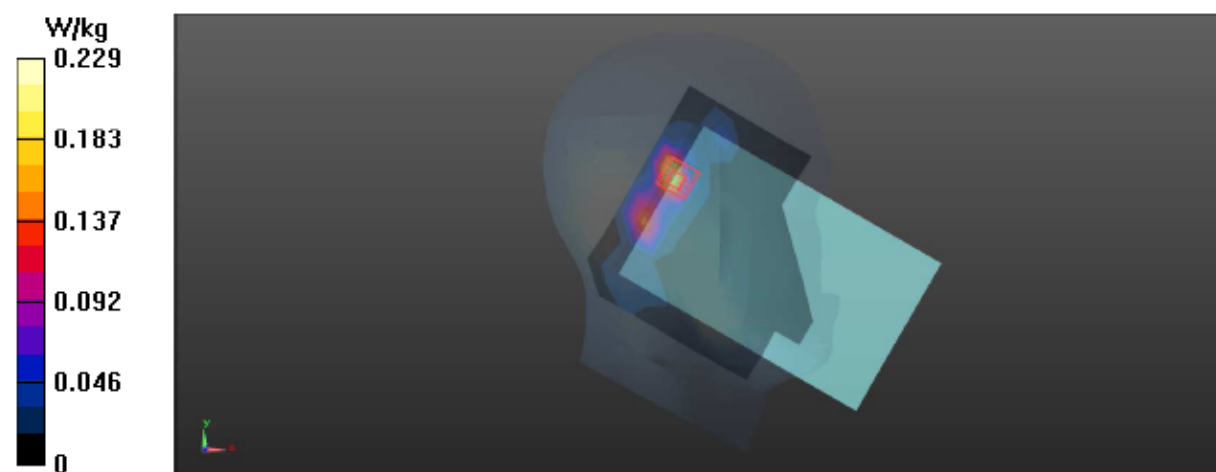
Zoom Scan (7x7x9)/Cube 0: Measurement grid: $dx=4$ mm, $dy=4$ mm, $dz=2.5$ mm

Reference Value = 4.966 V/m; Power Drift = 0.70 dB

Peak SAR (extrapolated) = 0.669 W/kg

SAR(1 g) = 0.165 W/kg; SAR(10 g) = 0.047 W/kg

Maximum value of SAR (measured) = 0.372 W/kg



6.6.2. Test Position: Body

Test Date: 2014. 05. 08 Temperature : 23°C Humidity : 25%

For WLAN Mode

Liquid Temperature : 22.2°C				Depth of Liquid: > 15cm		
Test Mode: 2.4GHz (Body)						
Test Position: Body	Antenna Position	Frequency		Conducted power (dBm)	SAR 1g (W/kg)	Limit (W/kg)
		Channel	MHz			
802.11b						
Top Side of Panel	Fixed	11	2462	15.71	0.275	1.6
Back of Panel	Fixed	11	2462	15.71	0.053	1.6
Right Side of Panel	Fixed	11	2462	15.71	0.171	1.6
802.11g						
Top Side of Panel	Fixed	6	2437	17.35	0.270	1.6
Back of Panel	Fixed	6	2437	17.35	0.047	1.6
Right Side of Panel	Fixed	6	2437	17.35	0.166	1.6
Left Side of Panel	Fixed	6	2437	17.35	0.079	1.6

Date: 5/8/2014

Test Laboratory: Audix_SAR Lab

P24 802.11b_Top Side of Panel_0cm_Ch6_Ant-Main

DUT: TB71A-W

Communication System: WIFI 2.4G 802.11B; Communication System Band: 802.11B; Frequency: 2462 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2462$ MHz; $\sigma = 2.004$ S/m; $\epsilon_r = 51.44$; $\rho = 1000$ kg/m³ ;

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3855; ConvF(7.69, 7.69, 7.69); Calibrated: 9/26/2013;
- Sensor-Surface: 2mm (Mechanical Surface Detection), $z = -9.0, 31.0$
- Electronics: DAE4 Sn1337; Calibrated: 9/23/2013
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:1170
- DASY52 52.8.4(1052); SEMCAD X 14.6.8(7028)

Area Scan (8x9x1): Measurement grid: $dx=20$ mm, $dy=20$ mm

Maximum value of SAR (measured) = 0.252 W/kg

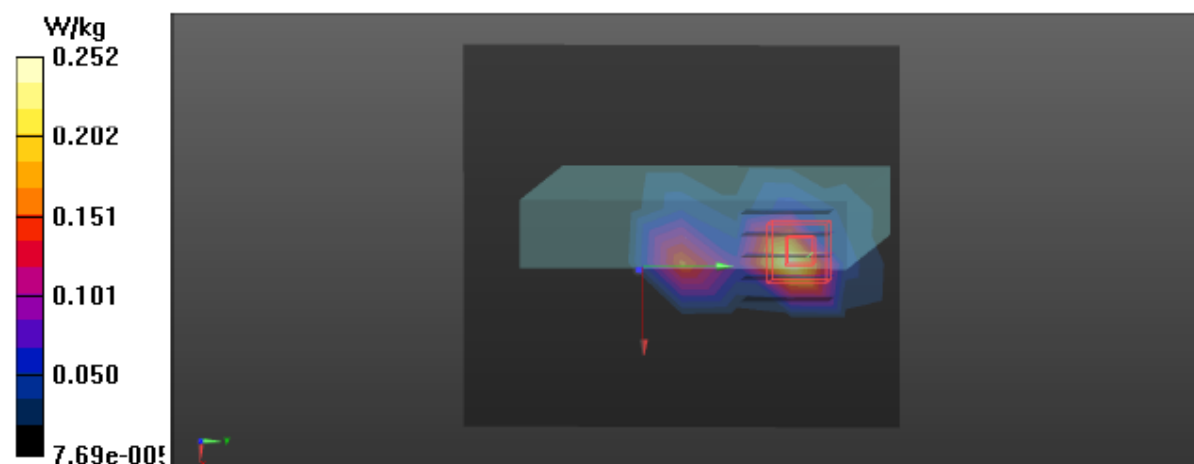
Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8$ mm, $dy=8$ mm, $dz=5$ mm

Reference Value = 9.510 V/m; Power Drift = 0.27 dB

Peak SAR (extrapolated) = 0.673 W/kg

SAR(1 g) = 0.275 W/kg; SAR(10 g) = 0.103 W/kg

Maximum value of SAR (measured) = 0.405 W/kg



Date: 5/8/2014

Test Laboratory: Audix_SAR Lab

P25 802.11b_Back of Panel_0cm_Ch6_Ant-Main

DUT: TB71A-W

Communication System: WIFI 2.4G 802.11B; Communication System Band: 802.11B; Frequency: 2462 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2462$ MHz; $\sigma = 2.004$ S/m; $\epsilon_r = 51.44$; $\rho = 1000$ kg/m³;

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3855; ConvF(7.69, 7.69, 7.69); Calibrated: 9/26/2013;
- Sensor-Surface: 2mm (Mechanical Surface Detection), $z = -9.0, 31.0$
- Electronics: DAE4 Sn1337; Calibrated: 9/23/2013
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:1170
- DASY52 52.8.4(1052); SEMCAD X 14.6.8(7028)

Area Scan (9x13x1): Measurement grid: $dx=20$ mm, $dy=20$ mm

Maximum value of SAR (measured) = 0.0485 W/kg

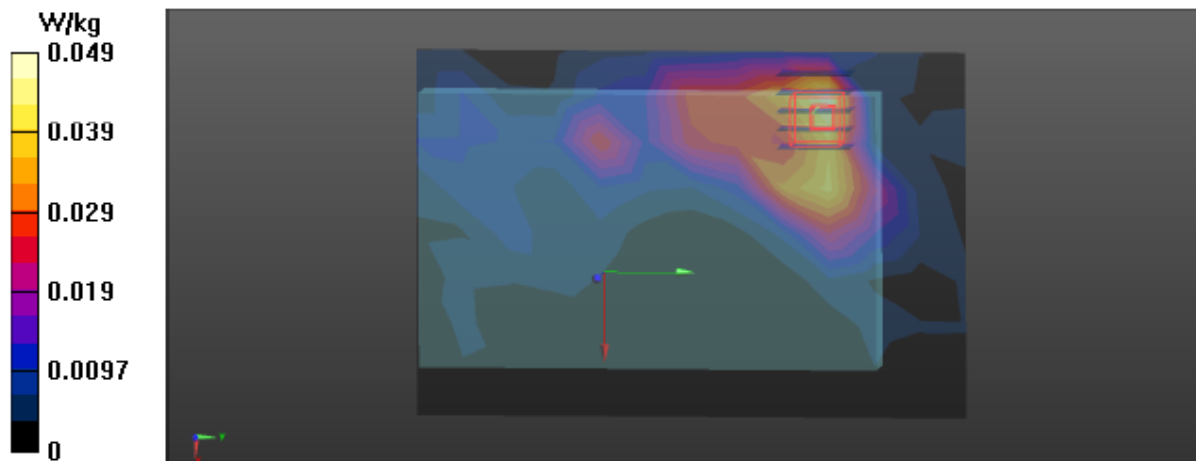
Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8$ mm, $dy=8$ mm, $dz=5$ mm

Reference Value = 1.010 V/m; Power Drift = 0.71 dB

Peak SAR (extrapolated) = 0.111 W/kg

SAR(1 g) = 0.053 W/kg; SAR(10 g) = 0.026 W/kg

Maximum value of SAR (measured) = 0.0726 W/kg



Date: 5/8/2014

Test Laboratory: Audix_SAR Lab

P26 802.11b_Right Side of Panel_0cm_Ch6_Ant-Main

DUT: TB71A-W

Communication System: WIFI 2.4G 802.11B; Communication System Band: 802.11B; Frequency: 2462 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2462$ MHz; $\sigma = 2.004$ S/m; $\epsilon_r = 51.44$; $\rho = 1000$ kg/m³;

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3855; ConvF(7.69, 7.69, 7.69); Calibrated: 9/26/2013;
- Sensor-Surface: 2mm (Mechanical Surface Detection), $z = -9.0, 31.0$
- Electronics: DAE4 Sn1337; Calibrated: 9/23/2013
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:1170
- DASY52 52.8.4(1052); SEMCAD X 14.6.8(7028)

Area Scan (8x13x1): Measurement grid: $dx=20$ mm, $dy=20$ mm

Maximum value of SAR (measured) = 0.149 W/kg

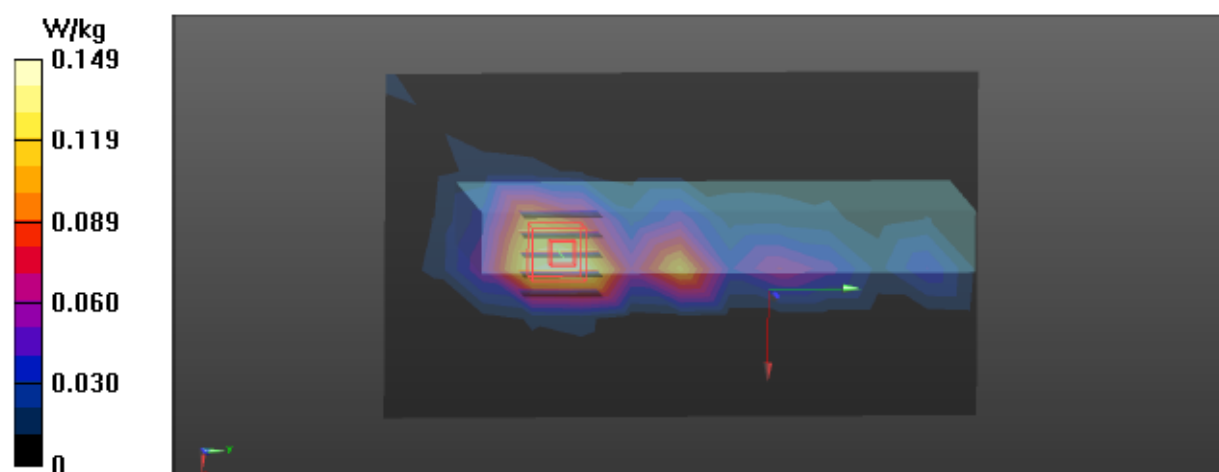
Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8$ mm, $dy=8$ mm, $dz=5$ mm

Reference Value = 4.684 V/m; Power Drift = 0.87 dB

Peak SAR (extrapolated) = 0.333 W/kg

SAR(1 g) = 0.171 W/kg; SAR(10 g) = 0.088 W/kg

Maximum value of SAR (measured) = 0.249 W/kg



Date: 5/8/2014

Test Laboratory: Audix_SAR Lab

P27 802.11g_Top Side of Panel_0cm_Ch6_Ant-Mimo

DUT: TB71A-W

Communication System: WIFI 2.4G 802.11G; Communication System Band: 802.11G; Frequency: 2437 MHzDuty Cycle: 1:1

Medium parameters used: $f = 2437$ MHz; $\sigma = 1.97$ S/m; $\epsilon_r = 51.529$; $\rho = 1000$ kg/m³ ;

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3855; ConvF(7.69, 7.69, 7.69); Calibrated: 9/26/2013;
- Sensor-Surface: 2mm (Mechanical Surface Detection), $z = -9.0, 31.0$
- Electronics: DAE4 Sn1337; Calibrated: 9/23/2013
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:1170
- DASY52 52.8.4(1052); SEMCAD X 14.6.8(7028)

Area Scan (7x9x1): Measurement grid: $dx=20$ mm, $dy=20$ mm

Maximum value of SAR (measured) = 0.440 W/kg

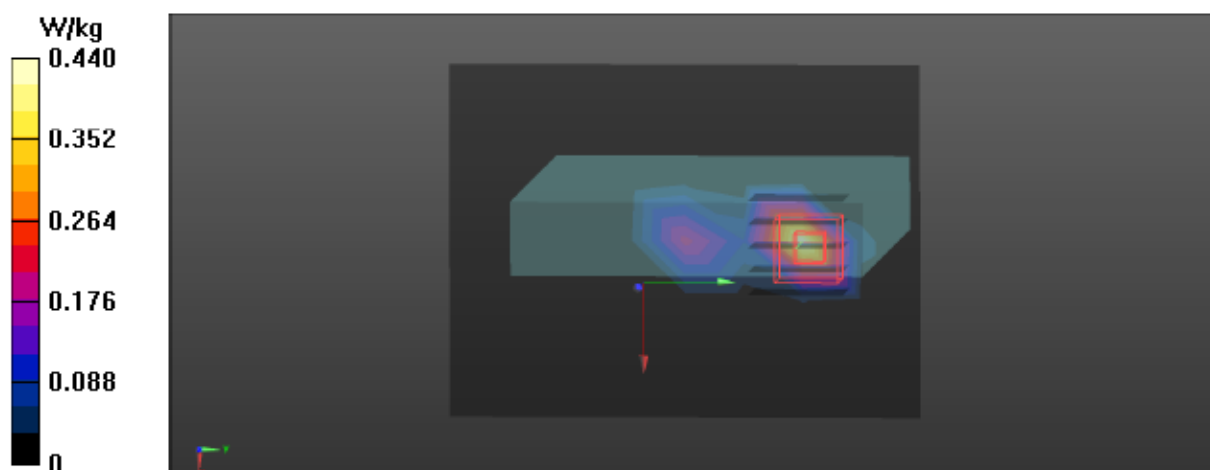
Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8$ mm, $dy=8$ mm, $dz=5$ mm

Reference Value = 10.054 V/m; Power Drift = -0.13 dB

Peak SAR (extrapolated) = 0.660 W/kg

SAR(1 g) = 0.270 W/kg; SAR(10 g) = 0.098 W/kg

Maximum value of SAR (measured) = 0.437 W/kg



Date: 5/8/2014

Test Laboratory: Audix_SAR Lab

P28 802.11g_Back of Panel_0cm_Ch6_Ant-Mimo

DUT: TB71A-W

Communication System: WIFI 2.4G 802.11G; Communication System Band: 802.11G; Frequency: 2437 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2437$ MHz; $\sigma = 1.97$ S/m; $\epsilon_r = 51.529$; $\rho = 1000$ kg/m³;

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3855; ConvF(7.69, 7.69, 7.69); Calibrated: 9/26/2013;
- Sensor-Surface: 2mm (Mechanical Surface Detection), $z = -9.0, 31.0$
- Electronics: DAE4 Sn1337; Calibrated: 9/23/2013
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:1170
- DASY52 52.8.4(1052); SEMCAD X 14.6.8(7028)

Area Scan (9x13x1): Measurement grid: $dx=20$ mm, $dy=20$ mm

Maximum value of SAR (measured) = 0.0452 W/kg

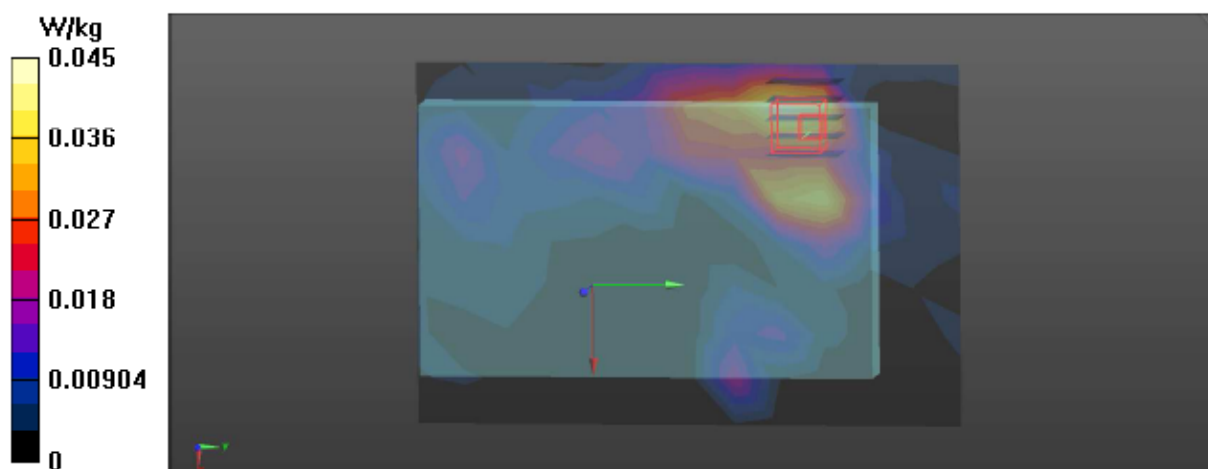
Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8$ mm, $dy=8$ mm, $dz=5$ mm

Reference Value = 0.327 V/m; Power Drift = 0.73 dB

Peak SAR (extrapolated) = 0.106 W/kg

SAR(1 g) = 0.047 W/kg; SAR(10 g) = 0.023 W/kg

Maximum value of SAR (measured) = 0.0687 W/kg



Date: 5/8/2014

Test Laboratory: Audix_SAR Lab

P29 802.11g_Right Side of Panel_0cm_Ch6_Ant-Mimo

DUT: TB71A-W

Communication System: WIFI 2.4G 802.11G; Communication System Band: 802.11G; Frequency: 2437 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2437$ MHz; $\sigma = 1.97$ S/m; $\epsilon_r = 51.529$; $\rho = 1000$ kg/m³ ;

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3855; ConvF(7.69, 7.69, 7.69); Calibrated: 9/26/2013;
- Sensor-Surface: 2mm (Mechanical Surface Detection), $z = -9.0, 31.0$
- Electronics: DAE4 Sn1337; Calibrated: 9/23/2013
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:1170
- DASY52 52.8.4(1052); SEMCAD X 14.6.8(7028)

Area Scan (7x13x1): Measurement grid: $dx=20$ mm, $dy=20$ mm

Maximum value of SAR (measured) = 0.250 W/kg

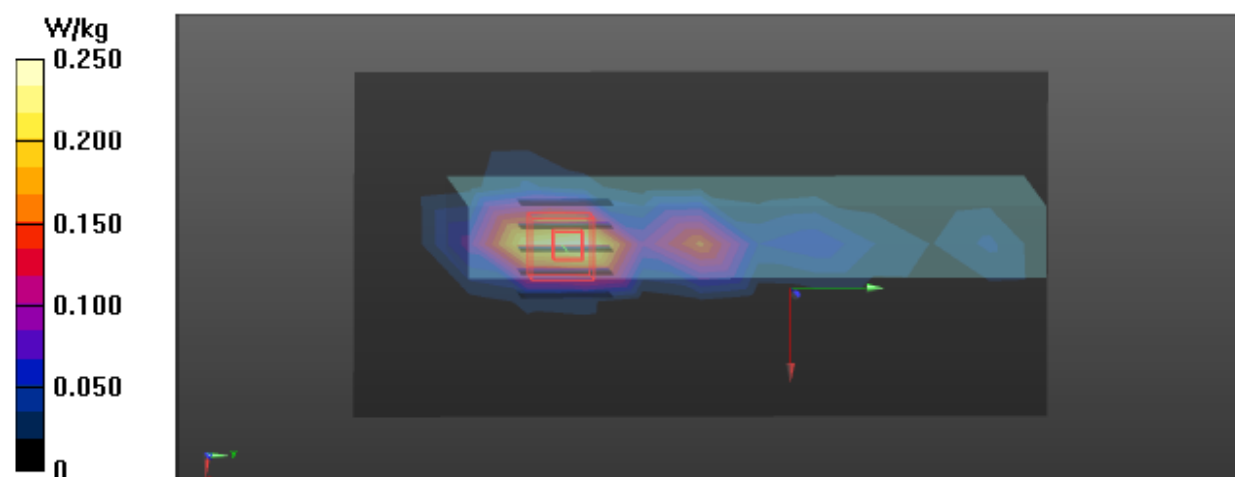
Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8$ mm, $dy=8$ mm, $dz=5$ mm

Reference Value = 5.050 V/m; Power Drift = 0.40 dB

Peak SAR (extrapolated) = 0.323 W/kg

SAR(1 g) = 0.166 W/kg; SAR(10 g) = 0.082 W/kg

Maximum value of SAR (measured) = 0.246 W/kg



Date: 5/8/2014

Test Laboratory: Audix_SAR Lab

P42 802.11g_Left Side of Panel_0cm_Ch6_Ant-Mimo

DUT: TB71A-W

Communication System: WIFI 2.4G 802.11G; Communication System Band: 802.11G; Frequency: 2437 MHzDuty Cycle: 1:1

Medium parameters used: $f = 2437$ MHz; $\sigma = 1.97$ S/m; $\epsilon_r = 51.529$; $\rho = 1000$ kg/m³;

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3855; ConvF(7.69, 7.69, 7.69); Calibrated: 9/26/2013;
- Sensor-Surface: 2mm (Mechanical Surface Detection), $z = -9.0, 31.0$
- Electronics: DAE4 Sn1337; Calibrated: 9/23/2013
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:1170
- DASY52 52.8.4(1052); SEMCAD X 14.6.8(7028)

Area Scan (7x13x1): Measurement grid: $dx=20$ mm, $dy=20$ mm

Maximum value of SAR (measured) = 0.113 W/kg

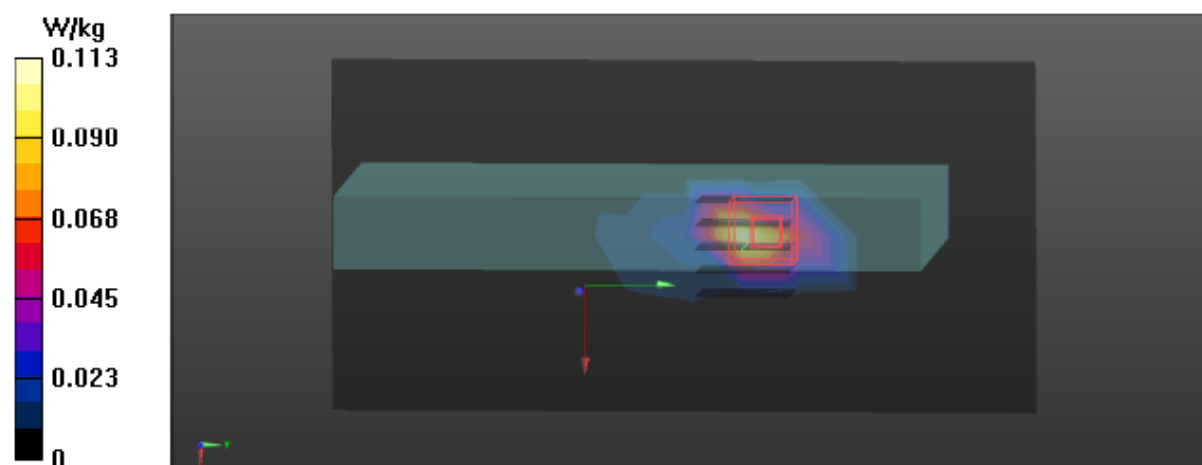
Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8$ mm, $dy=8$ mm, $dz=5$ mm

Reference Value = 2.772 V/m; Power Drift = 0.41 dB

Peak SAR (extrapolated) = 0.207 W/kg

SAR(1 g) = 0.079 W/kg; SAR(10 g) = 0.027 W/kg

Maximum value of SAR (measured) = 0.110 W/kg



Test Date: 2014. 05. 06 Temperature : 23.1°C Humidity : 25%

Liquid Temperature : 21.7°C				Depth of Liquid: > 15cm		
Test Mode: 5GHz (Body)						
Test Position: Body	Antenna Position	Frequency		Conducted power (dBm)	SAR 1g (W/kg)	Limit (W/kg)
		Channel	MHz			
802.11a (UNII Band I)						
Top Side of Panel	Fixed	48	5240	15.83	0.425	1.6
Back of Panel	Fixed	48	5240	15.83	0.187	1.6
Right Side of Panel	Fixed	48	5240	15.83	0.115	1.6
Left Side of Panel	Fixed	48	5240	15.83	0.104	1.6
802.11a (UNII Band II)						
Top Side of Panel	Fixed	60	5300	16.48	0.443	1.6
Back of Panel	Fixed	60	5300	16.48	0.160	1.6
Right Side of Panel	Fixed	60	5300	16.48	0.085	1.6
Left Side of Panel	Fixed	60	5300	16.48	0.366	1.6
802.11a (UNII Band III)						
Top Side of Panel	Fixed	116	5580	15.57	0.387	1.6
Back of Panel	Fixed	116	5580	15.57	0.191	1.6
Right Side of Panel	Fixed	116	5580	15.57	0.065	1.6
Left Side of Panel	Fixed	116	5580	15.57	1.180	1.6
Left Side of Panel	Fixed	104	5520	15.51	1.150	1.6
Left Side of Panel	Fixed	136	5680	15.36	1.130	1.6
802.11a (UNII Band IV)						
Top Side of Panel	Fixed	149	5745	15.85	0.377	1.6
Back of Panel	Fixed	149	5745	15.85	0.173	1.6
Right Side of Panel	Fixed	149	5745	15.85	0.042	1.6
Left Side of Panel	Fixed	149	5745	15.85	1.130	1.6
Left Side of Panel	Fixed	157	5785	15.04	1.190	1.6
Left Side of Panel	Fixed	165	5825	14.96	1.220	1.6

Date: 5/6/2014

Test Laboratory: Audix_SAR Lab

P30 802.11a_Top Side of Panel_0cm_Ch48_Ant-Mimo

DUT: TB71A-W

Communication System: WIFI 5G 802.11a; Communication System Band: B1; Frequency: 5240 MHz
Duty Cycle: 1:1

Medium parameters used: $f = 5240$ MHz; $\sigma = 5.404$ S/m; $\epsilon_r = 47.237$; $\rho = 1000$ kg/m³;

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3855; ConvF(4.76, 4.76, 4.76); Calibrated: 9/26/2013;
- Sensor-Surface: 2mm (Mechanical Surface Detection), $z = -9.0, 21.0$
- Electronics: DAE4 Sn1337; Calibrated: 9/23/2013
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:1170
- DASY52 52.8.4(1052); SEMCAD X 14.6.8(7028)

Area Scan (14x18x1): Measurement grid: $dx=10$ mm, $dy=10$ mm

Maximum value of SAR (measured) = 0.391 W/kg

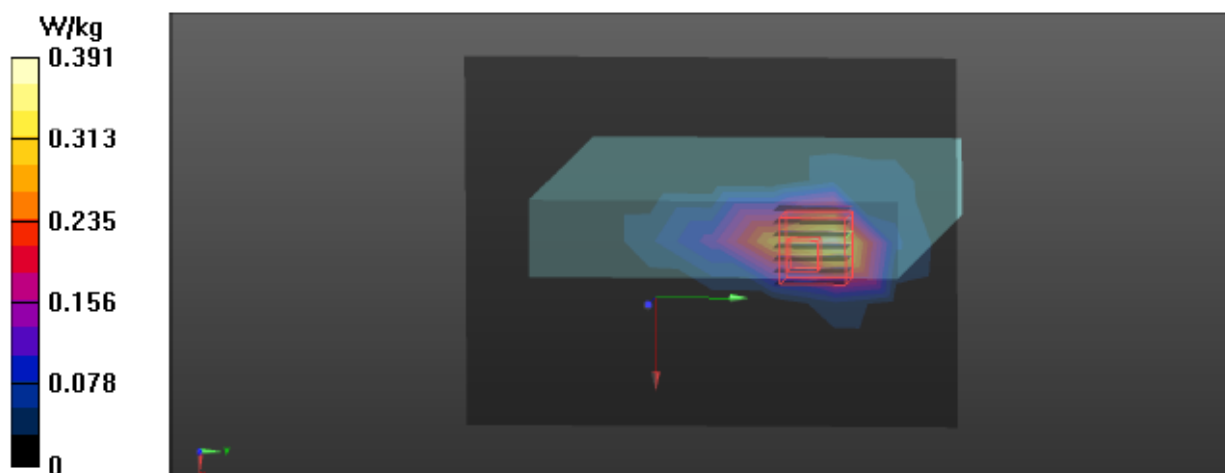
Zoom Scan (7x7x9)/Cube 0: Measurement grid: $dx=4$ mm, $dy=4$ mm, $dz=2.5$ mm

Reference Value = 4.663 V/m; Power Drift = 1.36 dB

Peak SAR (extrapolated) = 3.05 W/kg

SAR(1 g) = 0.425 W/kg; SAR(10 g) = 0.125 W/kg

Maximum value of SAR (measured) = 1.48 W/kg



Date: 5/6/2014

Test Laboratory: Audix_SAR Lab

P31 802.11a_Back of Panel_0cm_Ch48_Ant-Mimo

DUT: TB71A-W

Communication System: WIFI 5G 802.11a; Communication System Band: B1; Frequency: 5240 MHz
Duty Cycle: 1:1

Medium parameters used: $f = 5240$ MHz; $\sigma = 5.404$ S/m; $\epsilon_r = 47.237$; $\rho = 1000$ kg/m³;

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3855; ConvF(4.76, 4.76, 4.76); Calibrated: 9/26/2013;
- Sensor-Surface: 2mm (Mechanical Surface Detection), $z = -9.0, 21.0$
- Electronics: DAE4 Sn1337; Calibrated: 9/23/2013
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:1170
- DASY52 52.8.4(1052); SEMCAD X 14.6.8(7028)

Area Scan (18x26x1): Measurement grid: $dx=10$ mm, $dy=10$ mm

Maximum value of SAR (measured) = 0.188 W/kg

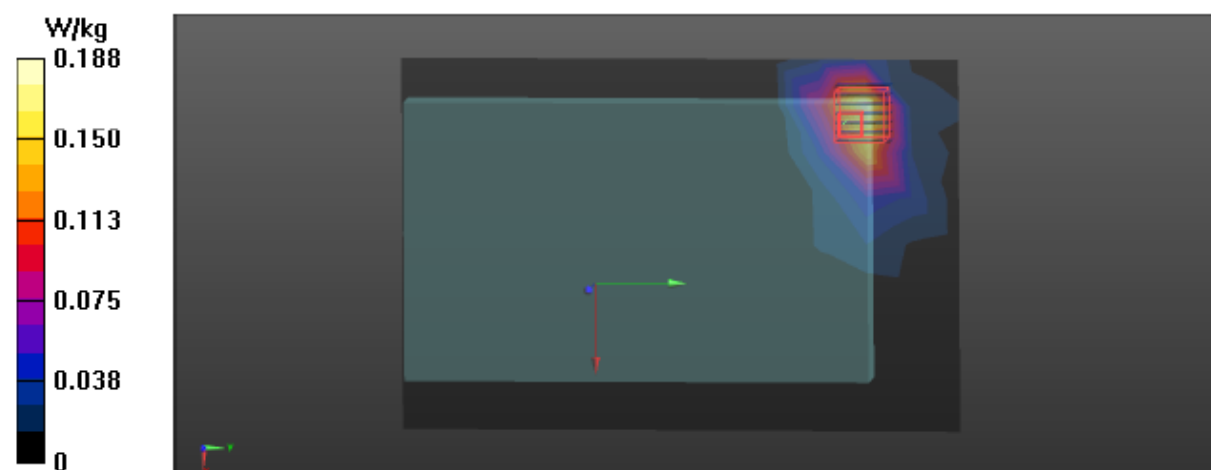
Zoom Scan (7x7x9)/Cube 0: Measurement grid: $dx=4$ mm, $dy=4$ mm, $dz=2.5$ mm

Reference Value = 0 V/m; Power Drift = 0.00 dB

Peak SAR (extrapolated) = 0.656 W/kg

SAR(1 g) = 0.187 W/kg; SAR(10 g) = 0.064 W/kg

Maximum value of SAR (measured) = 0.334 W/kg



Date: 5/6/2014

Test Laboratory: Audix_SAR Lab

P32 802.11a_Right Side of Panel_0cm_Ch48_Ant-Mimo

DUT: TB71A-W

Communication System: WIFI 5G 802.11a; Communication System Band: B1; Frequency: 5240 MHz
Duty Cycle: 1:1

Medium parameters used: $f = 5240$ MHz; $\sigma = 5.404$ S/m; $\epsilon_r = 47.237$; $\rho = 1000$ kg/m³;

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3855; ConvF(4.76, 4.76, 4.76); Calibrated: 9/26/2013;
- Sensor-Surface: 2mm (Mechanical Surface Detection), $z = -9.0, 21.0$
- Electronics: DAE4 Sn1337; Calibrated: 9/23/2013
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:1170
- DASY52 52.8.4(1052); SEMCAD X 14.6.8(7028)

Area Scan (14x26x1): Measurement grid: $dx=10$ mm, $dy=10$ mm

Maximum value of SAR (measured) = 0.151 W/kg

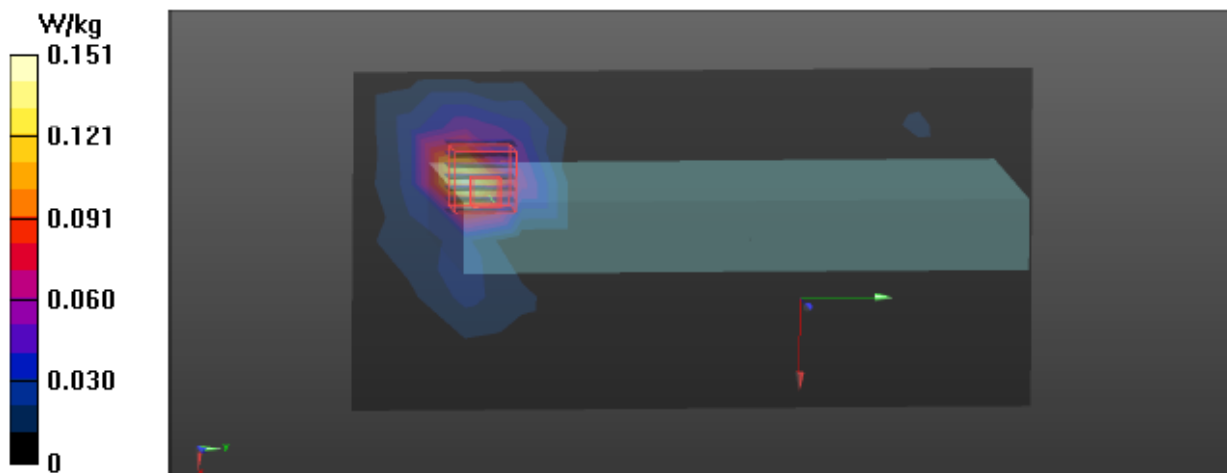
Zoom Scan (7x7x9)/Cube 0: Measurement grid: $dx=4$ mm, $dy=4$ mm, $dz=2.5$ mm

Reference Value = 0 V/m; Power Drift = 0.00 dB

Peak SAR (extrapolated) = 0.370 W/kg

SAR(1 g) = 0.115 W/kg; SAR(10 g) = 0.040 W/kg

Maximum value of SAR (measured) = 0.221 W/kg



Date: 5/6/2014

Test Laboratory: Audix_SAR Lab

P43 802.11a_Left Side of Panel_0cm_Ch48_Ant-Mimo

DUT: TB71A-W

Communication System: WIFI 5G 802.11a; Communication System Band: B1; Frequency: 5240 MHz
Duty Cycle: 1:1

Medium parameters used: $f = 5240$ MHz; $\sigma = 5.404$ S/m; $\epsilon_r = 47.237$; $\rho = 1000$ kg/m³;

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3855; ConvF(4.76, 4.76, 4.76); Calibrated: 9/26/2013;
- Sensor-Surface: 2mm (Mechanical Surface Detection), $z = -9.0, 21.0$
- Electronics: DAE4 Sn1337; Calibrated: 9/23/2013
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:1170
- DASY52 52.8.4(1052); SEMCAD X 14.6.8(7028)

Area Scan (14x26x1): Measurement grid: $dx=10$ mm, $dy=10$ mm

Maximum value of SAR (measured) = 0.0174 W/kg

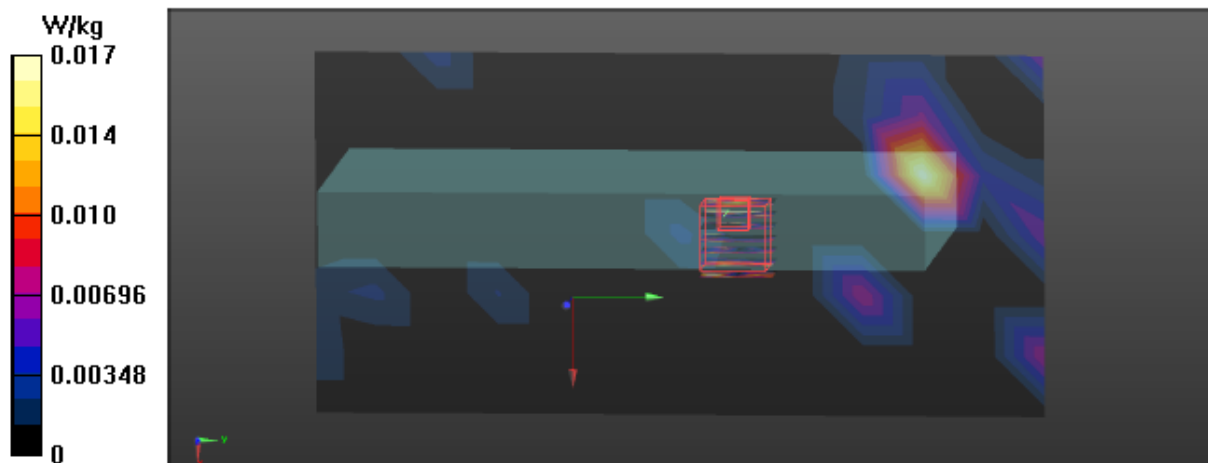
Zoom Scan (7x7x9)/Cube 0: Measurement grid: $dx=4$ mm, $dy=4$ mm, $dz=2.5$ mm

Reference Value = 0 V/m; Power Drift = 0.00 dB

Peak SAR (extrapolated) = 0.908 W/kg

SAR(1 g) = 0.104 W/kg; SAR(10 g) = 0.012 W/kg

Maximum value of SAR (measured) = 0.447 W/kg



Date: 5/6/2014

Test Laboratory: Audix_SAR Lab

P33 802.11a_Top Side of Panel_0cm_Ch60_Ant-Mimo

DUT: TB71A-W

Communication System: WIFI 5G 802.11a; Communication System Band: B2; Frequency: 5300 MHz
Duty Cycle: 1:1

Medium parameters used: $f = 5300$ MHz; $\sigma = 5.462$ S/m; $\epsilon_r = 47.107$; $\rho = 1000$ kg/m³ ;

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3855; ConvF(4.36, 4.36, 4.36); Calibrated: 9/26/2013;
- Sensor-Surface: 2mm (Mechanical Surface Detection), $z = -9.0, 21.0$
- Electronics: DAE4 Sn1337; Calibrated: 9/23/2013
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:1170
- DASY52 52.8.4(1052); SEMCAD X 14.6.8(7028)

Area Scan (14x18x1): Measurement grid: $dx=10$ mm, $dy=10$ mm

Maximum value of SAR (measured) = 0.482 W/kg

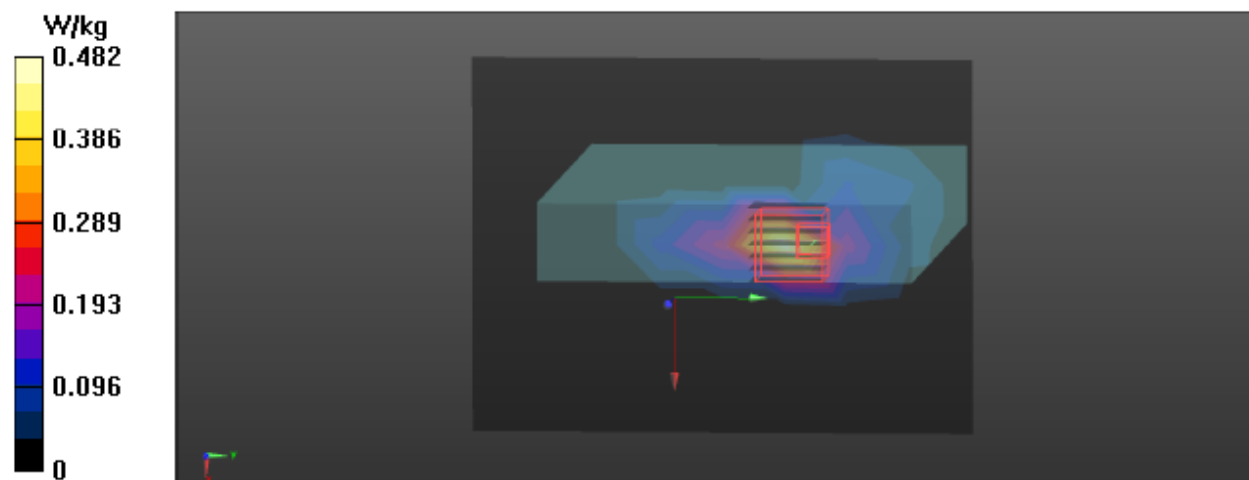
Zoom Scan (7x7x9)/Cube 0: Measurement grid: $dx=4$ mm, $dy=4$ mm, $dz=2.5$ mm

Reference Value = 6.790 V/m; Power Drift = 1.13 dB

Peak SAR (extrapolated) = 1.77 W/kg

SAR(1 g) = 0.443 W/kg; SAR(10 g) = 0.121 W/kg

Maximum value of SAR (measured) = 0.976 W/kg



Date: 5/6/2014

Test Laboratory: Audix_SAR Lab

P34 802.11a_Back of Panel_0cm_Ch60_Ant-Mimo

DUT: TB71A-W

Communication System: WIFI 5G 802.11a; Communication System Band: B2; Frequency: 5300 MHz
Duty Cycle: 1:1

Medium parameters used: $f = 5300$ MHz; $\sigma = 5.462$ S/m; $\epsilon_r = 47.107$; $\rho = 1000$ kg/m³ ;

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3855; ConvF(4.36, 4.36, 4.36); Calibrated: 9/26/2013;
- Sensor-Surface: 2mm (Mechanical Surface Detection), $z = -9.0, 21.0$
- Electronics: DAE4 Sn1337; Calibrated: 9/23/2013
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:1170
- DASYS 52.8.4(1052); SEMCAD X 14.6.8(7028)

Area Scan (18x26x1): Measurement grid: $dx=10$ mm, $dy=10$ mm

Maximum value of SAR (measured) = 0.204 W/kg

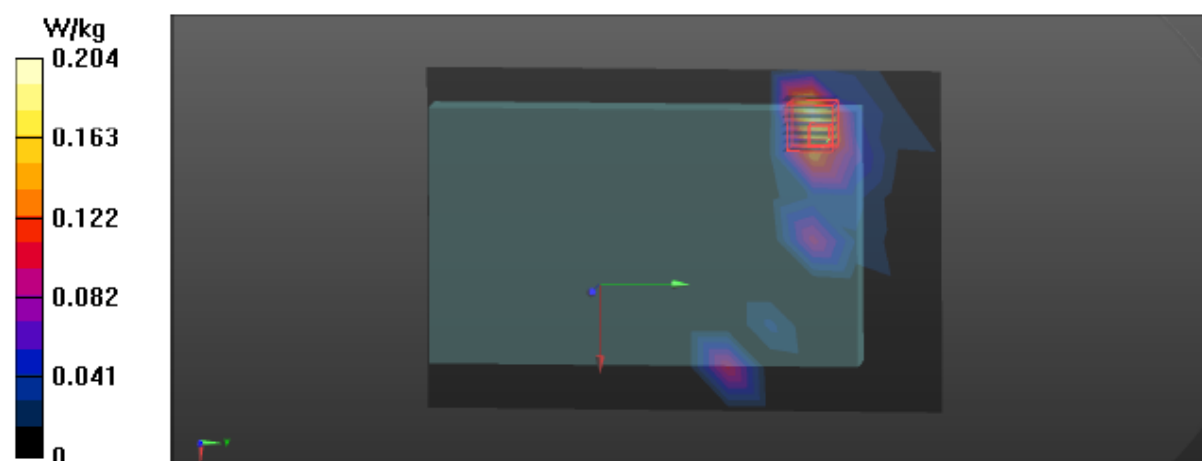
Zoom Scan (7x7x9)/Cube 0: Measurement grid: $dx=4$ mm, $dy=4$ mm, $dz=2.5$ mm

Reference Value = 0 V/m; Power Drift = 0.00 dB

Peak SAR (extrapolated) = 0.548 W/kg

SAR(1 g) = 0.160 W/kg; SAR(10 g) = 0.061 W/kg

Maximum value of SAR (measured) = 0.289 W/kg



Date: 5/6/2014

Test Laboratory: Audix_SAR Lab

P35 802.11a_Right Side of Panel_0cm_Ch60_Ant-Mimo

DUT: TB71A-W

Communication System: WIFI 5G 802.11a; Communication System Band: B2; Frequency: 5300 MHz
Duty Cycle: 1:1

Medium parameters used: $f = 5300$ MHz; $\sigma = 5.462$ S/m; $\epsilon_r = 47.107$; $\rho = 1000$ kg/m³ ;

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3855; ConvF(4.36, 4.36, 4.36); Calibrated: 9/26/2013;
- Sensor-Surface: 2mm (Mechanical Surface Detection), $z = -9.0, 21.0$
- Electronics: DAE4 Sn1337; Calibrated: 9/23/2013
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:1170
- DASY52 52.8.4(1052); SEMCAD X 14.6.8(7028)

Area Scan (14x26x1): Measurement grid: $dx=10$ mm, $dy=10$ mm

Maximum value of SAR (measured) = 0.134 W/kg

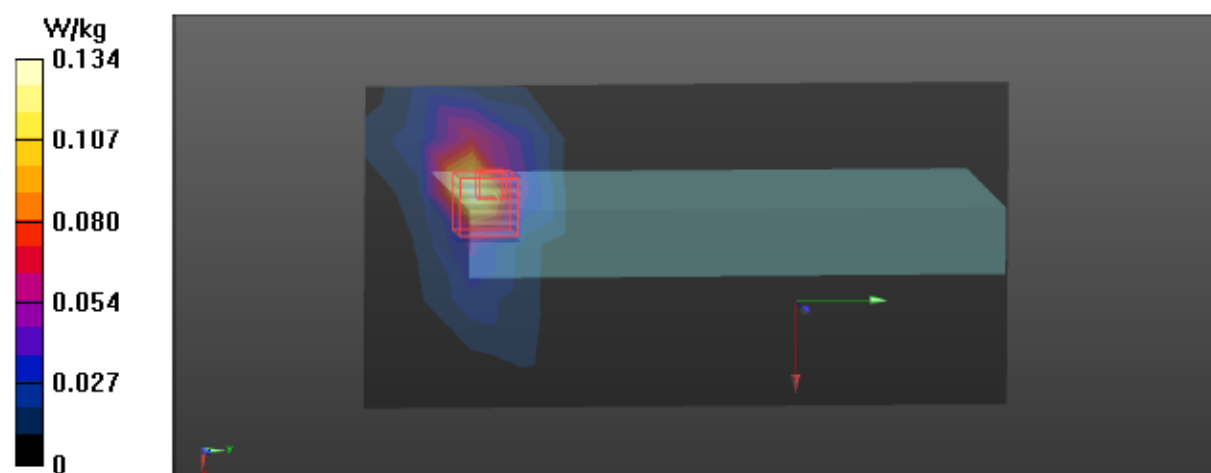
Zoom Scan (7x7x9)/Cube 0: Measurement grid: $dx=4$ mm, $dy=4$ mm, $dz=2.5$ mm

Reference Value = 0 V/m; Power Drift = 0.00 dB

Peak SAR (extrapolated) = 0.296 W/kg

SAR(1 g) = 0.085 W/kg; SAR(10 g) = 0.022 W/kg

Maximum value of SAR (measured) = 0.186 W/kg



Date: 5/6/2014

Test Laboratory: Audix_SAR Lab

P44 802.11a_Left Side of Panel_0cm_Ch60_Ant-Mimo

DUT: TB71A-W

Communication System: WIFI 5G 802.11a; Communication System Band: B2; Frequency: 5300 MHz
Duty Cycle: 1:1

Medium parameters used: $f = 5300$ MHz; $\sigma = 5.462$ S/m; $\epsilon_r = 47.107$; $\rho = 1000$ kg/m³;

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3855; ConvF(4.36, 4.36, 4.36); Calibrated: 9/26/2013;
- Sensor-Surface: 2mm (Mechanical Surface Detection), $z = -9.0, 21.0$
- Electronics: DAE4 Sn1337; Calibrated: 9/23/2013
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:1170
- DASY52 52.8.4(1052); SEMCAD X 14.6.8(7028)

Area Scan (14x26x1): Measurement grid: $dx=10$ mm, $dy=10$ mm

Maximum value of SAR (measured) = 0.888 W/kg

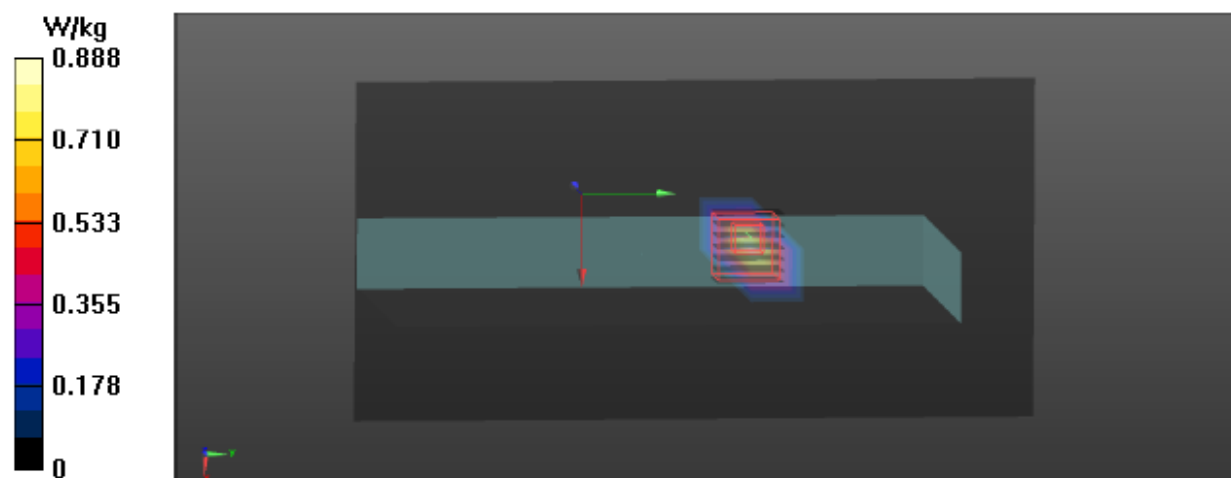
Zoom Scan (7x7x9)/Cube 0: Measurement grid: $dx=4$ mm, $dy=4$ mm, $dz=2.5$ mm

Reference Value = 0 V/m; Power Drift = 0.00 dB

Peak SAR (extrapolated) = 1.89 W/kg

SAR(1 g) = 0.366 W/kg; SAR(10 g) = 0.053 W/kg

Maximum value of SAR (measured) = 1.10 W/kg



Date: 5/6/2014

Test Laboratory: Audix_SAR Lab

P36 802.11a_Top Side of Panel_0cm_Ch116_Ant-Mimo

DUT: TB71A-W

Communication System: WIFI 5G 802.11a; Communication System Band: B3; Frequency: 5580 MHz
Duty Cycle: 1:1

Medium parameters used: $f = 5580$ MHz; $\sigma = 5.876$ S/m; $\epsilon_r = 46.577$; $\rho = 1000$ kg/m³ ;

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3855; ConvF(4.12, 4.12, 4.12); Calibrated: 9/26/2013;
- Sensor-Surface: 2mm (Mechanical Surface Detection), $z = -9.0, 21.0$
- Electronics: DAE4 Sn1337; Calibrated: 9/23/2013
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:1170
- DASY52 52.8.4(1052); SEMCAD X 14.6.8(7028)

Area Scan (14x18x1): Measurement grid: $dx=10$ mm, $dy=10$ mm

Maximum value of SAR (measured) = 0.553 W/kg

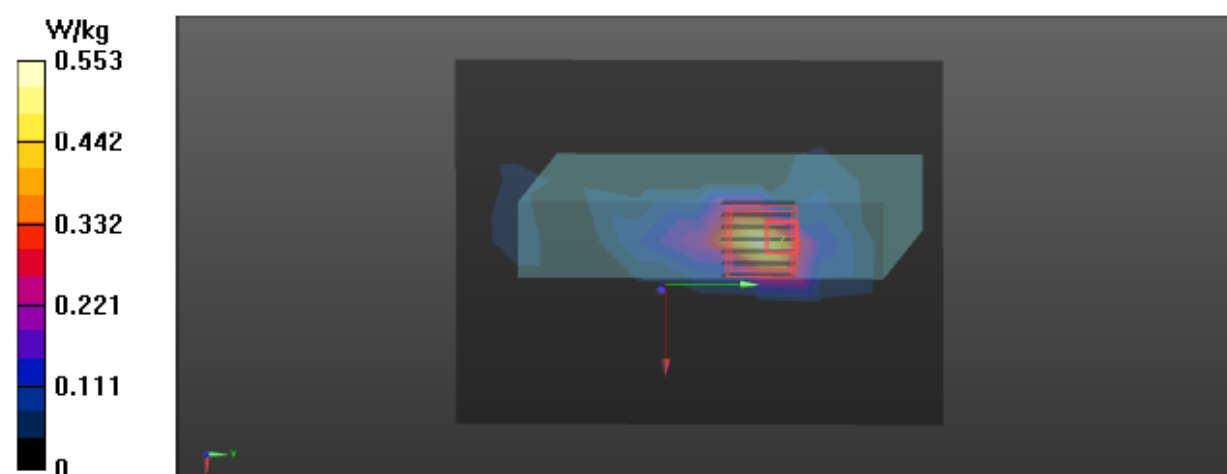
Zoom Scan (7x7x9)/Cube 0: Measurement grid: $dx=4$ mm, $dy=4$ mm, $dz=2.5$ mm

Reference Value = 6.972 V/m; Power Drift = 1.21 dB

Peak SAR (extrapolated) = 2.54 W/kg

SAR(1 g) = 0.387 W/kg; SAR(10 g) = 0.110 W/kg

Maximum value of SAR (measured) = 0.821 W/kg



Date: 5/6/2014

Test Laboratory: Audix_SAR Lab

P37 802.11a_Back of Panel_0cm_Ch116_Ant-Mimo

DUT: TB71A-W

Communication System: WIFI 5G 802.11a; Communication System Band: B3; Frequency: 5580 MHz
Duty Cycle: 1:1

Medium parameters used: $f = 5580$ MHz; $\sigma = 5.876$ S/m; $\epsilon_r = 46.577$; $\rho = 1000$ kg/m³ ;

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3855; ConvF(4.12, 4.12, 4.12); Calibrated: 9/26/2013;
- Sensor-Surface: 2mm (Mechanical Surface Detection), $z = -9.0, 21.0$
- Electronics: DAE4 Sn1337; Calibrated: 9/23/2013
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:1170
- DASY52 52.8.4(1052); SEMCAD X 14.6.8(7028)

Area Scan (18x26x1): Measurement grid: $dx=10$ mm, $dy=10$ mm

Maximum value of SAR (measured) = 0.387 W/kg

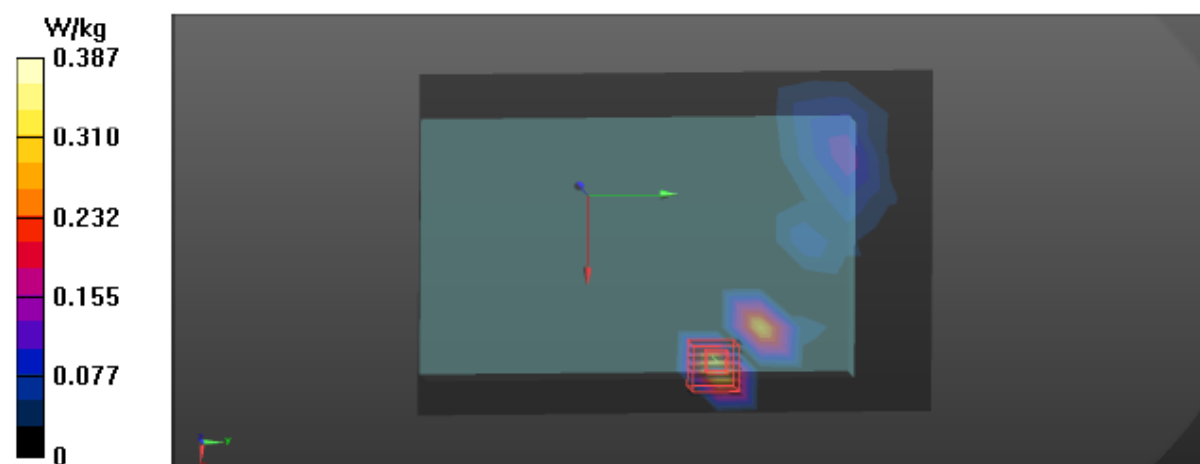
Zoom Scan (7x7x9)/Cube 0: Measurement grid: $dx=4$ mm, $dy=4$ mm, $dz=2.5$ mm

Reference Value = 0 V/m; Power Drift = 0.025 dB

Peak SAR (extrapolated) = 0.729 W/kg

SAR(1 g) = 0.191 W/kg; SAR(10 g) = 0.051 W/kg

Maximum value of SAR (measured) = 0.443 W/kg



Date: 5/6/2014

Test Laboratory: Audix_SAR Lab

P38 802.11a_Right Side of Panel_0cm_Ch116_Ant-Mimo

DUT: TB71A-W

Communication System: WIFI 5G 802.11a; Communication System Band: B3; Frequency: 5580 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5580$ MHz; $\sigma = 5.876$ S/m; $\epsilon_r = 46.577$; $\rho = 1000$ kg/m³;

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3855; ConvF(4.12, 4.12, 4.12); Calibrated: 9/26/2013;
- Sensor-Surface: 2mm (Mechanical Surface Detection), $z = -9.0, 21.0$
- Electronics: DAE4 Sn1337; Calibrated: 9/23/2013
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:1170
- DASYS 52.8.4(1052); SEMCAD X 14.6.8(7028)

Area Scan (14x26x1): Measurement grid: $dx=10$ mm, $dy=10$ mm

Maximum value of SAR (measured) = 0.0783 W/kg

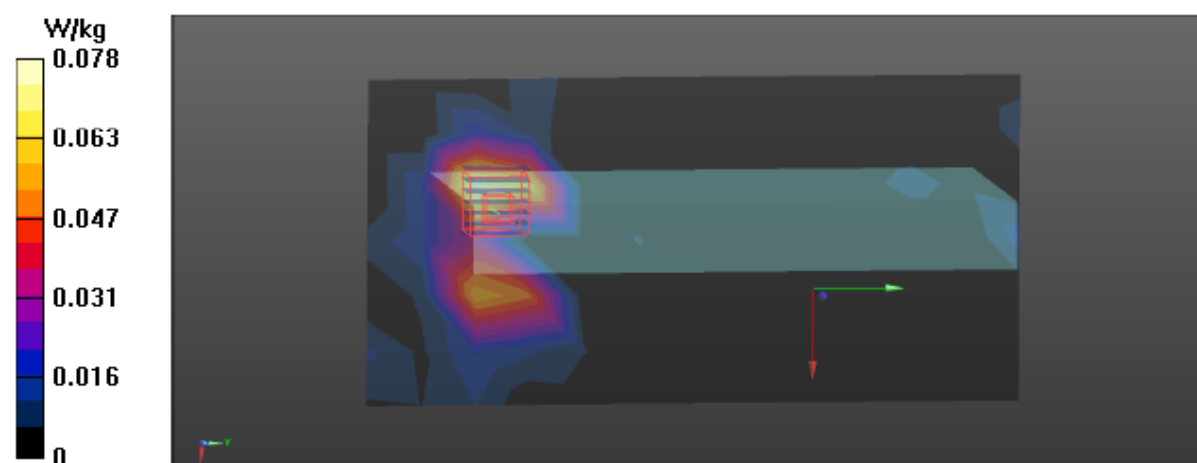
Zoom Scan (7x7x9)/Cube 0: Measurement grid: $dx=4$ mm, $dy=4$ mm, $dz=2.5$ mm

Reference Value = 0 V/m; Power Drift = 0.057 dB

Peak SAR (extrapolated) = 0.327 W/kg

SAR(1 g) = 0.065 W/kg; SAR(10 g) = 0.023 W/kg

Maximum value of SAR (measured) = 0.128 W/kg



Date: 5/6/2014

Test Laboratory: Audix_SAR Lab

P45 802.11a_Left Side of Panel_0cm_Ch116_Ant-Mimo

DUT: TB71A-W

Communication System: WIFI 5G 802.11a; Communication System Band: B3; Frequency: 5580 MHz
Duty Cycle: 1:1

Medium parameters used: $f = 5580$ MHz; $\sigma = 5.876$ S/m; $\epsilon_r = 46.577$; $\rho = 1000$ kg/m³ ;

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3855; ConvF(4.12, 4.12, 4.12); Calibrated: 9/26/2013;
- Sensor-Surface: 2mm (Mechanical Surface Detection), $z = -9.0, 21.0$
- Electronics: DAE4 Sn1337; Calibrated: 9/23/2013
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:1170
- DASYS 52.8.4(1052); SEMCAD X 14.6.8(7028)

Area Scan (14x26x1): Measurement grid: $dx=10$ mm, $dy=10$ mm

Maximum value of SAR (measured) = 1.21 W/kg

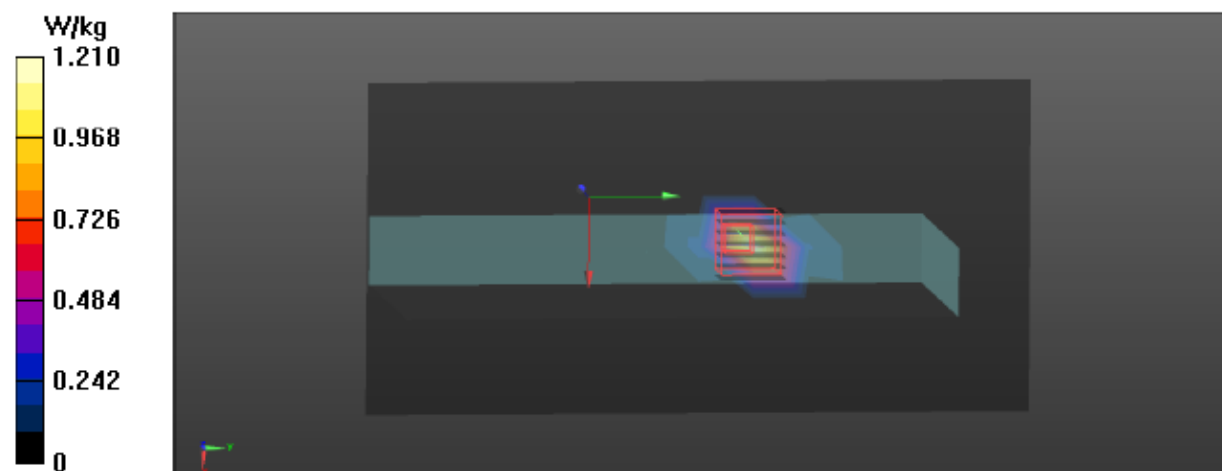
Zoom Scan (7x7x9)/Cube 0: Measurement grid: $dx=4$ mm, $dy=4$ mm, $dz=2.5$ mm

Reference Value = 2.840 V/m; Power Drift = -0.40 dB

Peak SAR (extrapolated) = 12.2 W/kg

SAR(1 g) = 1.18 W/kg; SAR(10 g) = 0.189 W/kg

Maximum value of SAR (measured) = 3.02 W/kg



Date: 5/6/2014

Test Laboratory: Audix_SAR Lab

P50 802.11a_Left Side of Panel_0cm_Ch104_Ant-Mimo

DUT: TB71A-W

Communication System: WIFI 5G 802.11a; Communication System Band: B3; Frequency: 5520 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5520$ MHz; $\sigma = 5.767$ S/m; $\epsilon_r = 46.661$; $\rho = 1000$ kg/m³ ;

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3855; ConvF(4.29, 4.29, 4.29); Calibrated: 9/26/2013;
- Sensor-Surface: 2mm (Mechanical Surface Detection), $z = -9.0, 21.0$
- Electronics: DAE4 Sn1337; Calibrated: 9/23/2013
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:1170
- DASYS 52.8.4(1052); SEMCAD X 14.6.8(7028)

Area Scan (14x26x1): Measurement grid: $dx=10$ mm, $dy=10$ mm

Maximum value of SAR (measured) = 2.44 W/kg

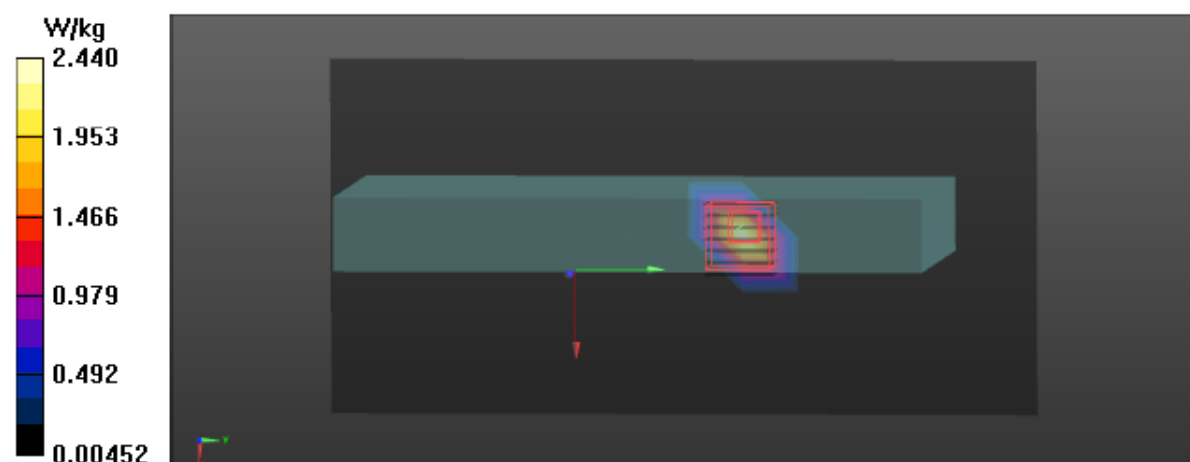
Zoom Scan (7x7x9)/Cube 0: Measurement grid: $dx=4$ mm, $dy=4$ mm, $dz=2.5$ mm

Reference Value = 3.818 V/m; Power Drift = -0.13 dB

Peak SAR (extrapolated) = 7.94 W/kg

SAR(1 g) = 1.15 W/kg; SAR(10 g) = 0.194 W/kg

Maximum value of SAR (measured) = 3.38 W/kg



Date: 5/6/2014

Test Laboratory: Audix_SAR Lab

P51 802.11a_Left Side of Panel_0cm_Ch136_Ant-Mimo

DUT: TB71A-W

Communication System: WIFI 5G 802.11a; Communication System Band: B3; Frequency: 5680 MHz
Duty Cycle: 1:1

Medium parameters used: $f = 5680$ MHz; $\sigma = 6.015$ S/m; $\epsilon_r = 46.375$; $\rho = 1000$ kg/m³ ;

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3855; ConvF(4.12, 4.12, 4.12); Calibrated: 9/26/2013;
- Sensor-Surface: 2mm (Mechanical Surface Detection), $z = -9.0, 21.0$
- Electronics: DAE4 Sn1337; Calibrated: 9/23/2013
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:1170
- DASY52 52.8.4(1052); SEMCAD X 14.6.8(7028)

Area Scan (14x26x1): Measurement grid: $dx=10$ mm, $dy=10$ mm

Maximum value of SAR (measured) = 1.24 W/kg

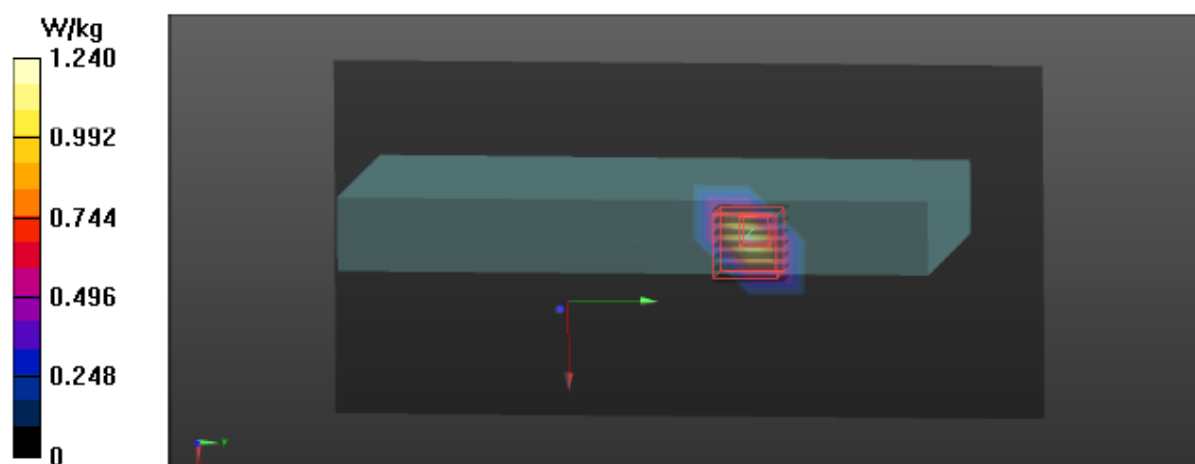
Zoom Scan (7x7x9)/Cube 0: Measurement grid: $dx=4$ mm, $dy=4$ mm, $dz=2.5$ mm

Reference Value = 3.673 V/m; Power Drift = -0.00 dB

Peak SAR (extrapolated) = 8.27 W/kg

SAR(1 g) = 1.13 W/kg; SAR(10 g) = 0.168 W/kg

Maximum value of SAR (measured) = 3.25 W/kg



Date: 5/6/2014

Test Laboratory: Audix_SAR Lab

P39 802.11a_Top Side of Panel_0cm_Ch149_Ant-Mimo

DUT: TB71A-W

Communication System: WIFI 5G 802.11a; Communication System Band: B4; Frequency: 5745 MHz
Duty Cycle: 1:1

Medium parameters used: $f = 5745$ MHz; $\sigma = 6.086$ S/m; $\epsilon_r = 46.241$; $\rho = 1000$ kg/m³;

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3855; ConvF(4.25, 4.25, 4.25); Calibrated: 9/26/2013;
- Sensor-Surface: 2mm (Mechanical Surface Detection), $z = -9.0, 21.0$
- Electronics: DAE4 Sn1337; Calibrated: 9/23/2013
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:1170
- DASY52 52.8.4(1052); SEMCAD X 14.6.8(7028)

Area Scan (14x18x1): Measurement grid: $dx=10$ mm, $dy=10$ mm

Maximum value of SAR (measured) = 0.538 W/kg

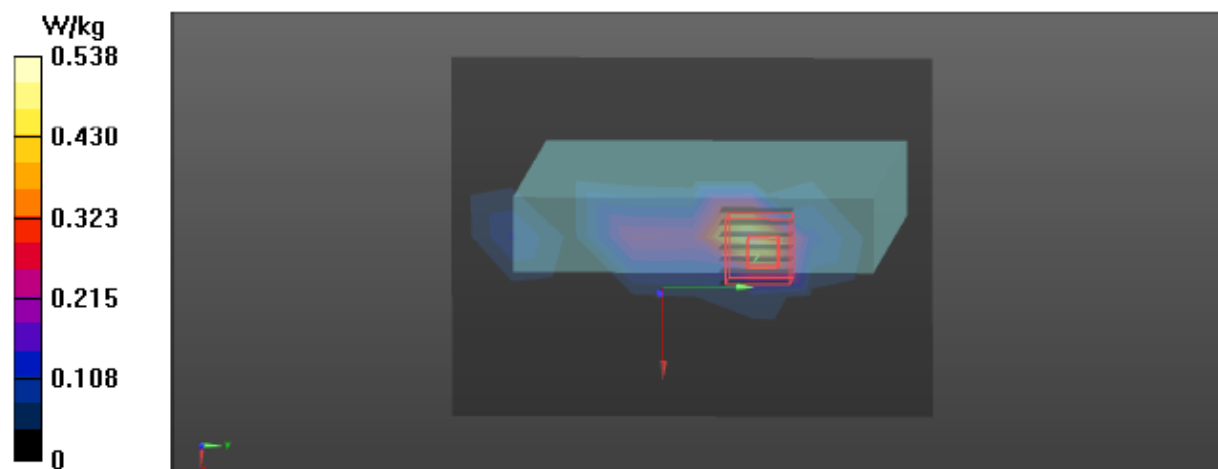
Zoom Scan (7x7x9)/Cube 0: Measurement grid: $dx=4$ mm, $dy=4$ mm, $dz=2.5$ mm

Reference Value = 7.004 V/m; Power Drift = -0.14 dB

Peak SAR (extrapolated) = 1.67 W/kg

SAR(1 g) = 0.377 W/kg; SAR(10 g) = 0.119 W/kg

Maximum value of SAR (measured) = 0.764 W/kg



Date: 5/6/2014

Test Laboratory: Audix_SAR Lab

P40 802.11a_Back of Panel_0cm_Ch149_Ant-Mimo

DUT: TB71A-W

Communication System: WIFI 5G 802.11a; Communication System Band: B4; Frequency: 5745 MHz
Duty Cycle: 1:1

Medium parameters used: $f = 5745$ MHz; $\sigma = 6.086$ S/m; $\epsilon_r = 46.241$; $\rho = 1000$ kg/m³ ;

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3855; ConvF(4.25, 4.25, 4.25); Calibrated: 9/26/2013;
- Sensor-Surface: 2mm (Mechanical Surface Detection), $z = -9.0, 21.0$
- Electronics: DAE4 Sn1337; Calibrated: 9/23/2013
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:1170
- DASY52 52.8.4(1052); SEMCAD X 14.6.8(7028)

Area Scan (18x26x1): Measurement grid: $dx=10$ mm, $dy=10$ mm

Maximum value of SAR (measured) = 0.348 W/kg

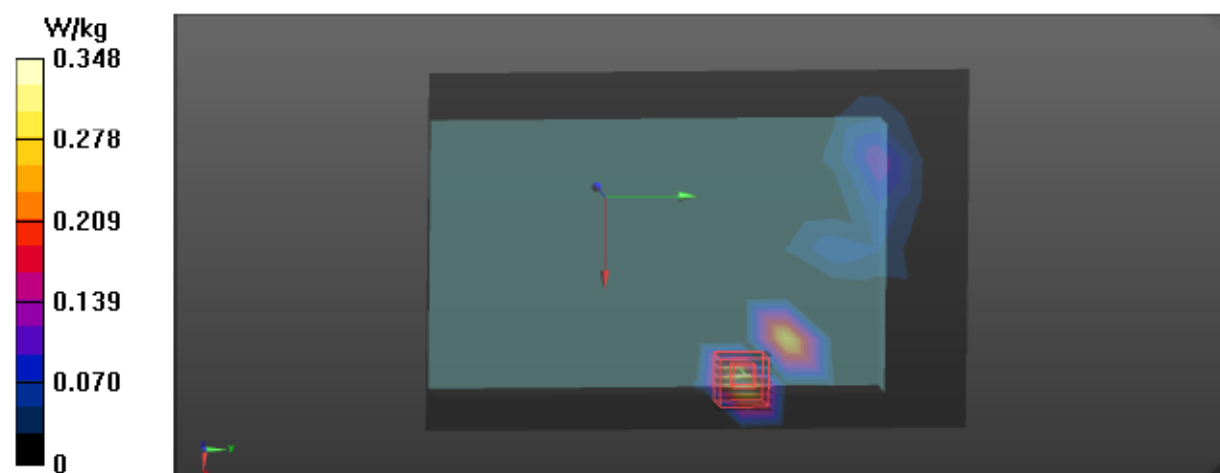
Zoom Scan (7x7x9)/Cube 0: Measurement grid: $dx=4$ mm, $dy=4$ mm, $dz=2.5$ mm

Reference Value = 0 V/m; Power Drift = 0.033 dB

Peak SAR (extrapolated) = 0.778 W/kg

SAR(1 g) = 0.173 W/kg; SAR(10 g) = 0.048 W/kg

Maximum value of SAR (measured) = 0.394 W/kg



Date: 5/6/2014

Test Laboratory: Audix_SAR Lab

P41 802.11a_Right Side of Panel_0cm_Ch149_Ant-Mimo**DUT: TB71A-W**

Communication System: WIFI 5G 802.11a; Communication System Band: B4; Frequency: 5745 MHz
Duty Cycle: 1:1

Medium parameters used: $f = 5745$ MHz; $\sigma = 6.086$ S/m; $\epsilon_r = 46.241$; $\rho = 1000$ kg/m³;

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3855; ConvF(4.25, 4.25, 4.25); Calibrated: 9/26/2013;
- Sensor-Surface: 2mm (Mechanical Surface Detection), $z = -9.0, 21.0$
- Electronics: DAE4 Sn1337; Calibrated: 9/23/2013
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:1170
- DASY52 52.8.4(1052); SEMCAD X 14.6.8(7028)

Area Scan (14x26x1): Measurement grid: $dx=10$ mm, $dy=10$ mm

Maximum value of SAR (measured) = 0.0560 W/kg

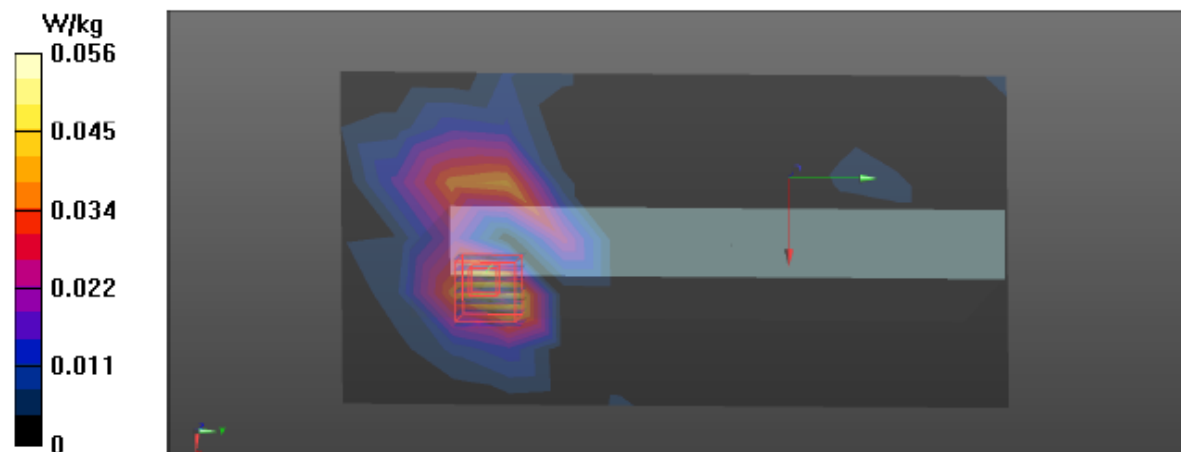
Zoom Scan (7x7x9)/Cube 0: Measurement grid: $dx=4$ mm, $dy=4$ mm, $dz=2.5$ mm

Reference Value = 0 V/m; Power Drift = 0.00 dB

Peak SAR (extrapolated) = 0.165 W/kg

SAR(1 g) = 0.042 W/kg; SAR(10 g) = 0.016 W/kg

Maximum value of SAR (measured) = 0.0794 W/kg



Date: 5/6/2014

Test Laboratory: Audix_SAR Lab

P46 802.11a_Left Side of Panel_0cm_Ch149_Ant-Mimo

DUT: TB71A-W

Communication System: WIFI 5G 802.11a; Communication System Band: B4; Frequency: 5745 MHz
Duty Cycle: 1:1

Medium parameters used: $f = 5745$ MHz; $\sigma = 6.086$ S/m; $\epsilon_r = 46.241$; $\rho = 1000$ kg/m³ ;

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3855; ConvF(4.25, 4.25, 4.25); Calibrated: 9/26/2013;
- Sensor-Surface: 2mm (Mechanical Surface Detection), $z = -9.0, 21.0$
- Electronics: DAE4 Sn1337; Calibrated: 9/23/2013
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:1170
- DASY52 52.8.4(1052); SEMCAD X 14.6.8(7028)

Area Scan (14x26x1): Measurement grid: $dx=10$ mm, $dy=10$ mm

Maximum value of SAR (measured) = 2.31 W/kg

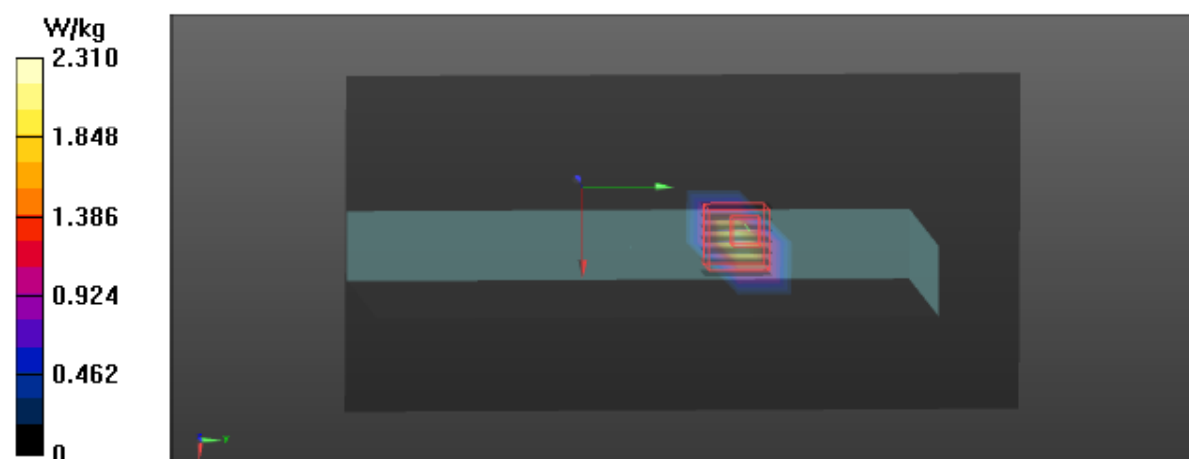
Zoom Scan (7x7x9)/Cube 0: Measurement grid: $dx=4$ mm, $dy=4$ mm, $dz=2.5$ mm

Reference Value = 1.769 V/m; Power Drift = 0.97 dB

Peak SAR (extrapolated) = 8.38 W/kg

SAR(1 g) = 1.13 W/kg; SAR(10 g) = 0.174 W/kg

Maximum value of SAR (measured) = 2.91 W/kg



Date: 5/6/2014

Test Laboratory: Audix_SAR Lab

P48 802.11a_Left Side of Panel_0cm_Ch157_Ant-Mimo

DUT: TB71A-W

Communication System: WIFI 5G 802.11a; Communication System Band: B4; Frequency: 5785 MHz
Duty Cycle: 1:1

Medium parameters used: $f = 5785$ MHz; $\sigma = 6.161$ S/m; $\epsilon_r = 46.176$; $\rho = 1000$ kg/m³ ;

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3855; ConvF(4.25, 4.25, 4.25); Calibrated: 9/26/2013;
- Sensor-Surface: 2mm (Mechanical Surface Detection), $z = -9.0, 21.0$
- Electronics: DAE4 Sn1337; Calibrated: 9/23/2013
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:1170
- DASY52 52.8.4(1052); SEMCAD X 14.6.8(7028)

Area Scan (14x26x1): Measurement grid: $dx=10$ mm, $dy=10$ mm

Maximum value of SAR (measured) = 2.25 W/kg

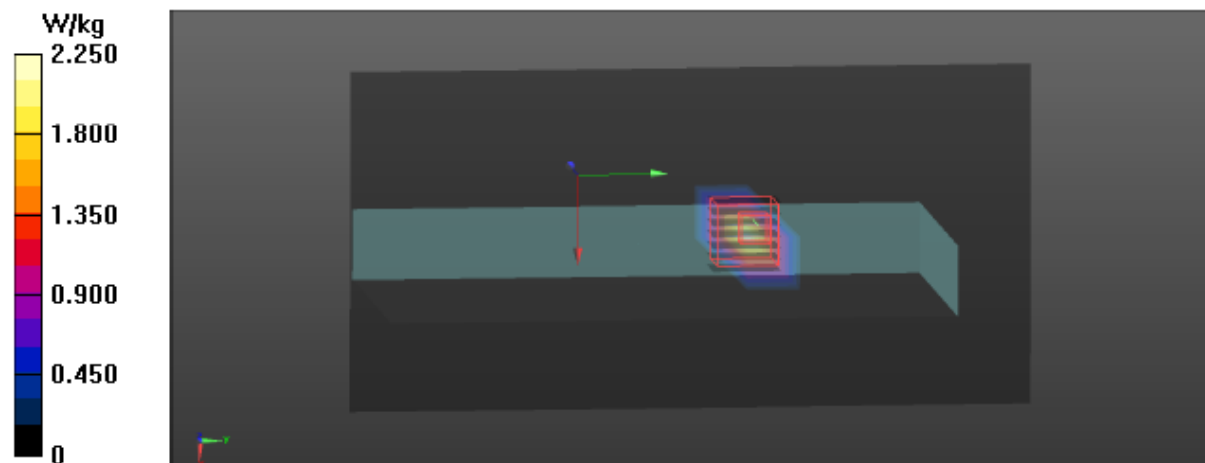
Zoom Scan (7x7x9)/Cube 0: Measurement grid: $dx=4$ mm, $dy=4$ mm, $dz=2.5$ mm

Reference Value = 0 V/m; Power Drift = 0.012 dB

Peak SAR (extrapolated) = 13.6 W/kg

SAR(1 g) = 1.19 W/kg; SAR(10 g) = 0.187 W/kg

Maximum value of SAR (measured) = 3.04 W/kg



Date: 5/6/2014

Test Laboratory: Audix_SAR Lab

P49 802.11a_Left Side of Panel_0cm_Ch165_Ant-Mimo

DUT: TB71A-W

Communication System: WIFI 5G 802.11a; Communication System Band: B4; Frequency: 5825 MHz
Duty Cycle: 1:1

Medium parameters used: $f = 5825$ MHz; $\sigma = 6.21$ S/m; $\epsilon_r = 46.142$; $\rho = 1000$ kg/m³ ;

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3855; ConvF(4.25, 4.25, 4.25); Calibrated: 9/26/2013;
- Sensor-Surface: 2mm (Mechanical Surface Detection), $z = -9.0, 21.0$
- Electronics: DAE4 Sn1337; Calibrated: 9/23/2013
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:1170
- DASYS 52.8.4(1052); SEMCAD X 14.6.8(7028)

Area Scan (14x26x1): Measurement grid: $dx=10$ mm, $dy=10$ mm

Maximum value of SAR (measured) = 1.26 W/kg

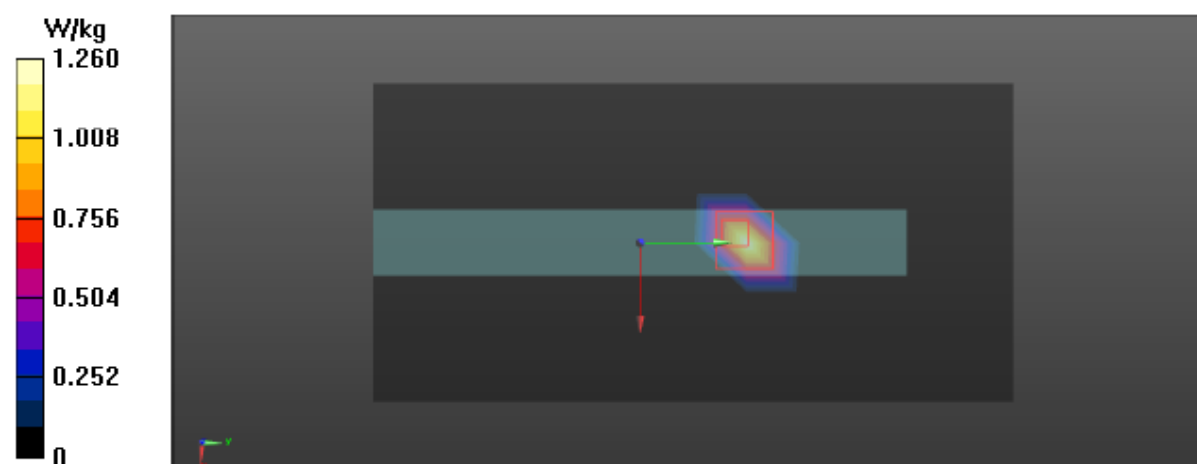
Zoom Scan (7x7x9)/Cube 0: Measurement grid: $dx=4$ mm, $dy=4$ mm, $dz=2.5$ mm

Reference Value = 0 V/m; Power Drift = 0.001 dB

Peak SAR (extrapolated) = 7.33 W/kg

SAR(1 g) = 1.22 W/kg; SAR(10 g) = 0.172 W/kg

Maximum value of SAR (measured) = 3.49 W/kg



For BT Mode

Liquid Temperature : 22.1°C				Depth of Liquid: > 15cm		
Test Mode: 2.4GHz (GFSK)						
Test Position: Body	Antenna Position	Frequency		Conducted power (dBm)	SAR 1g (W/kg)	Limit (W/kg)
		Channel	MHz			
Top Side of Panel	Fixed	39	2441	10.896	0.094	1.6
Back of Panel	Fixed	39	2441	10.896	0.014	1.6
Right Side of Panel	Fixed	39	2441	10.896	0.072	1.6

Date: 6/26/2014

Test Laboratory: Audix_SAR Lab

P50 BT_Top Side of Panel_0cm_Ch39_Ant-Main

DUT: TB71A-W

Communication System: UID 0, BT (0); Frequency: 2441 MHz

Medium parameters used: $f = 2441$ MHz; $\sigma = 1.961$ S/m; $\epsilon_r = 53.204$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3855; ConvF(7.69, 7.69, 7.69); Calibrated: 9/26/2013;
- Sensor-Surface: 2mm (Mechanical Surface Detection), $z = -9.0, 31.0$
- Electronics: DAE4 Sn1337; Calibrated: 9/23/2013
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:1170
- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

Area Scan (7x9x1): Measurement grid: $dx=20$ mm, $dy=20$ mm

Maximum value of SAR (measured) = 0.150 W/kg

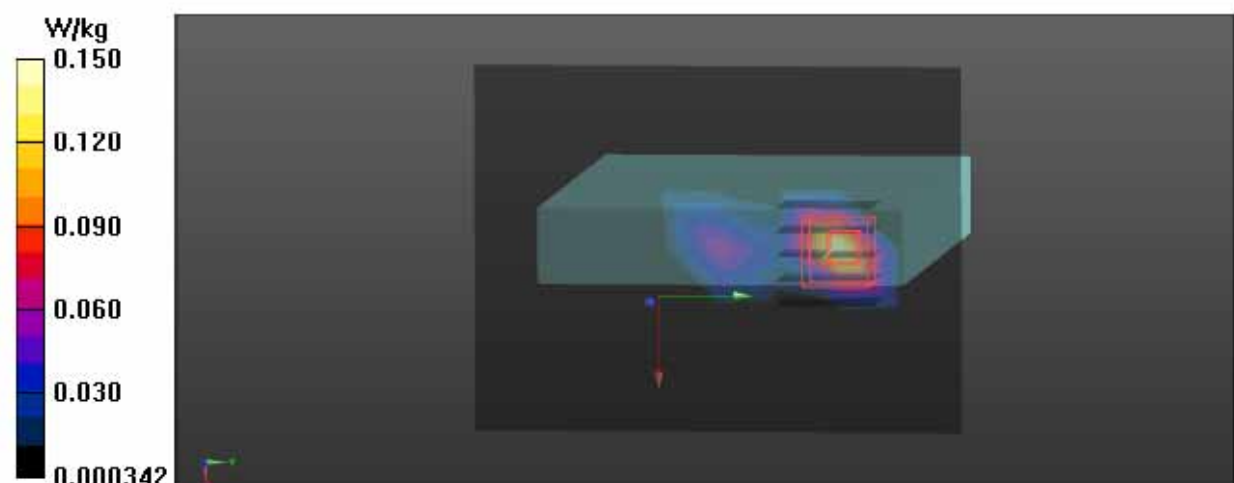
Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8$ mm, $dy=8$ mm, $dz=5$ mm

Reference Value = 5.955 V/m; Power Drift = -0.10 dB

Peak SAR (extrapolated) = 0.243 W/kg

SAR(1 g) = 0.094 W/kg; SAR(10 g) = 0.035 W/kg

Maximum value of SAR (measured) = 0.141 W/kg



Date: 6/26/2014

Test Laboratory: Audix_SAR Lab

P51 BT_Back of Panel_0cm_Ch39_Ant-Main

DUT: TB71A-W

Communication System: UID 0, BT (0); Frequency: 2441 MHz

Medium parameters used: $f = 2441$ MHz; $\sigma = 1.961$ S/m; $\epsilon_r = 53.204$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3855; ConvF(7.69, 7.69, 7.69); Calibrated: 9/26/2013;
- Sensor-Surface: 2mm (Mechanical Surface Detection), $z = -9.0, 31.0$
- Electronics: DAE4 Sn1337; Calibrated: 9/23/2013
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:1170
- DASYS 52.8.7(1137); SEMCAD X 14.6.10(7164)

Area Scan (9x13x1): Measurement grid: $dx=20$ mm, $dy=20$ mm

Maximum value of SAR (measured) = 0.0168 W/kg

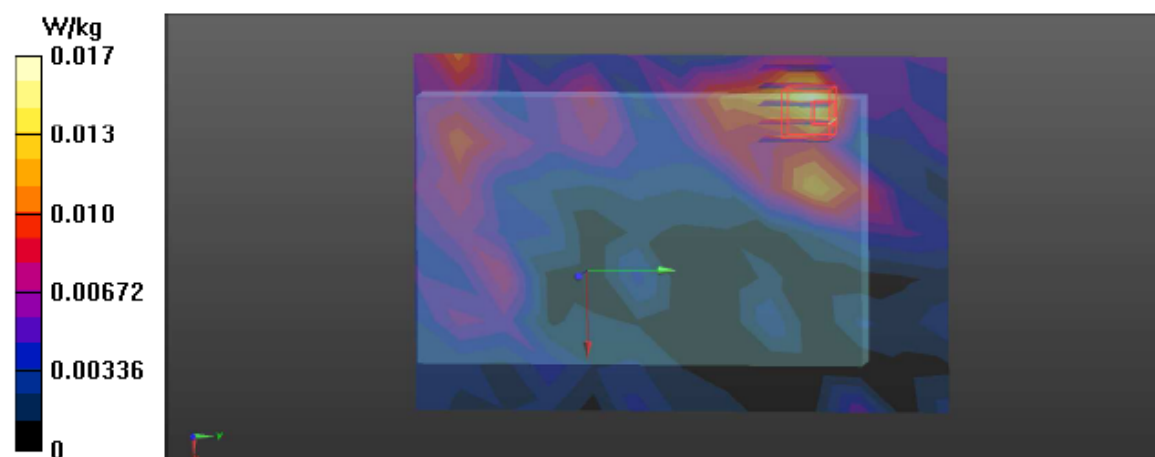
Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8$ mm, $dy=8$ mm, $dz=5$ mm

Reference Value = 0.597 V/m; Power Drift = 0.39 dB

Peak SAR (extrapolated) = 0.0260 W/kg

SAR(1 g) = 0.014 W/kg; SAR(10 g) = 0.00883 W/kg

Maximum value of SAR (measured) = 0.0198 W/kg



Date: 6/26/2014

Test Laboratory: Audix_SAR Lab

P52 BT_Right Side of Panel_0cm_Ch39_Ant-Main**DUT: TB71A-W**

Communication System: UID 0, BT (0); Frequency: 2441 MHz

Medium parameters used: $f = 2441$ MHz; $\sigma = 1.961$ S/m; $\epsilon_r = 53.204$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3855; ConvF(7.69, 7.69, 7.69); Calibrated: 9/26/2013;
- Sensor-Surface: 2mm (Mechanical Surface Detection), $z = -9.0, 31.0$
- Electronics: DAE4 Sn1337; Calibrated: 9/23/2013
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:1170
- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

Area Scan (7x13x1): Measurement grid: $dx=20$ mm, $dy=20$ mm

Maximum value of SAR (measured) = 0.0870 W/kg

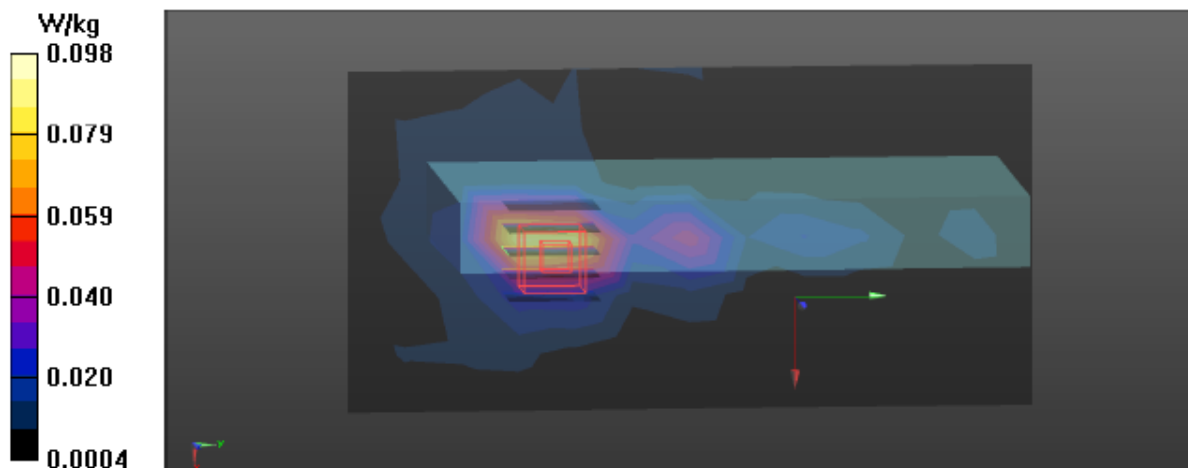
Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8$ mm, $dy=8$ mm, $dz=5$ mm

Reference Value = 2.582 V/m; Power Drift = 1.06 dB

Peak SAR (extrapolated) = 0.142 W/kg

SAR(1 g) = 0.072 W/kg; SAR(10 g) = 0.038 W/kg

Maximum value of SAR (measured) = 0.0982 W/kg



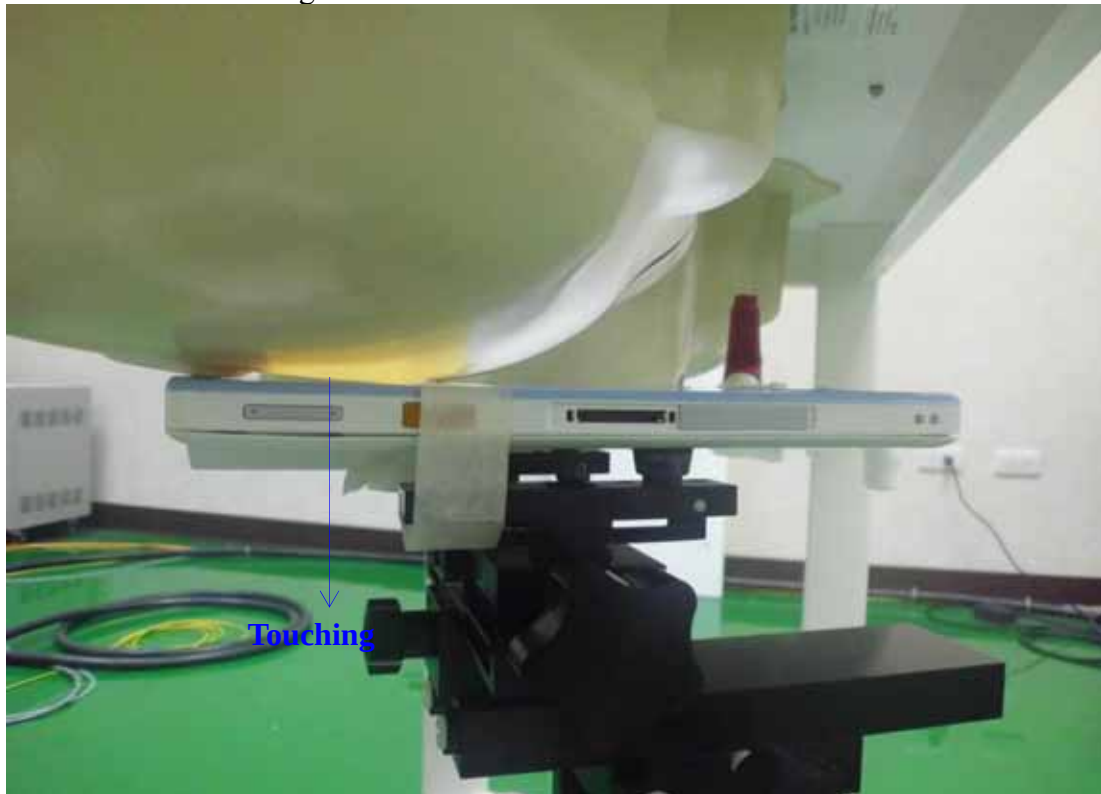
6.7. Simultaneous Multi-band Transmission Analysis

Test Mode		Total SAR 1g	Limit
WLAN 2.4G (Max)	BT (Max)		
0.275 W/kg	0.094W/kg	0.369 W/kg	1.6 W/kg

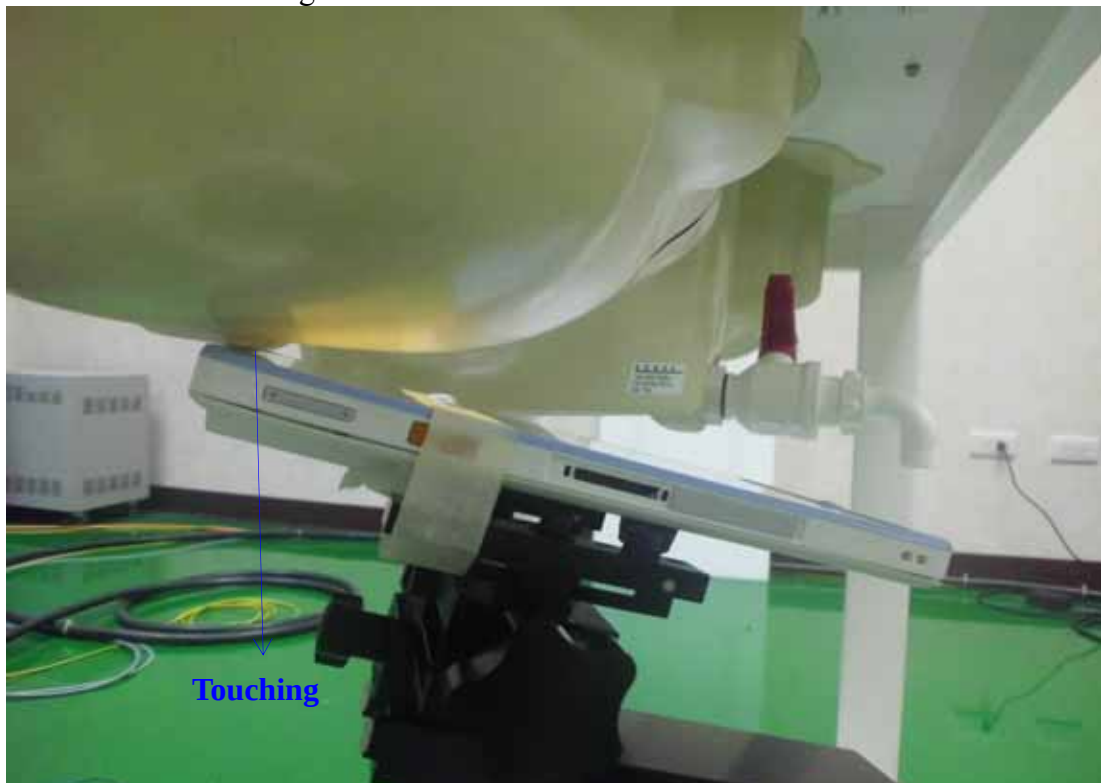
Test Mode		Total SAR 1g	Limit
WLAN 5G (Max)	BT (Max)		
1.220 W/kg	0.094 W/kg	1.314 W/kg	1.6 W/kg

7. PHOTOGRAPHS OF MEASUREMENT

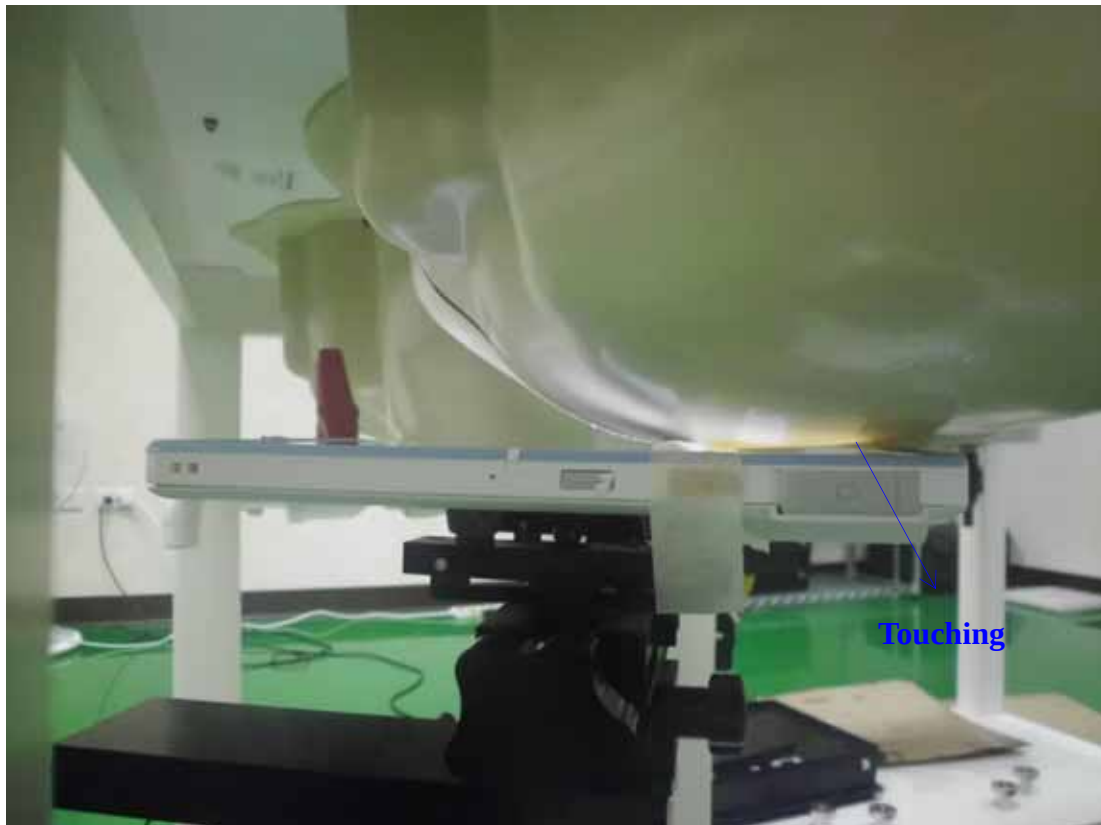
Test Position: Right Cheek



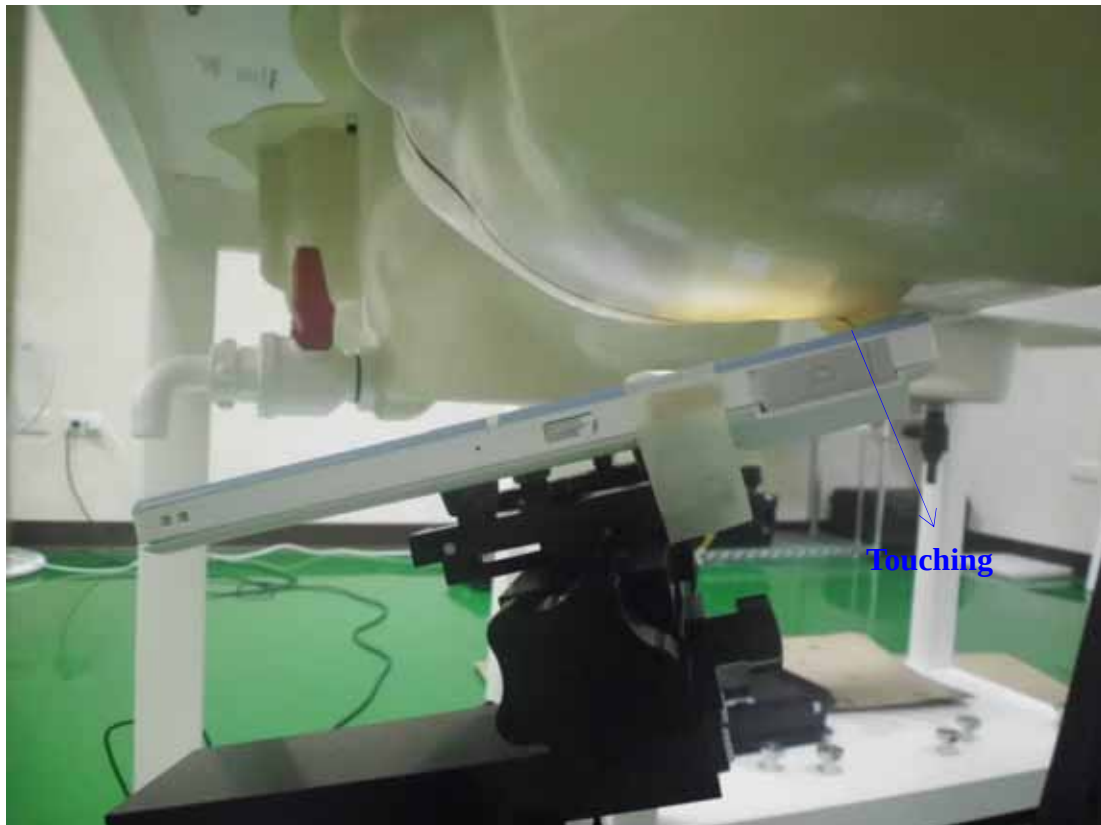
Test Position: Right Tilted



Test Position: Left Cheek



Test Position: Left Tilted



Test Position: Top Side of Panel



Test Position: Back of Panel



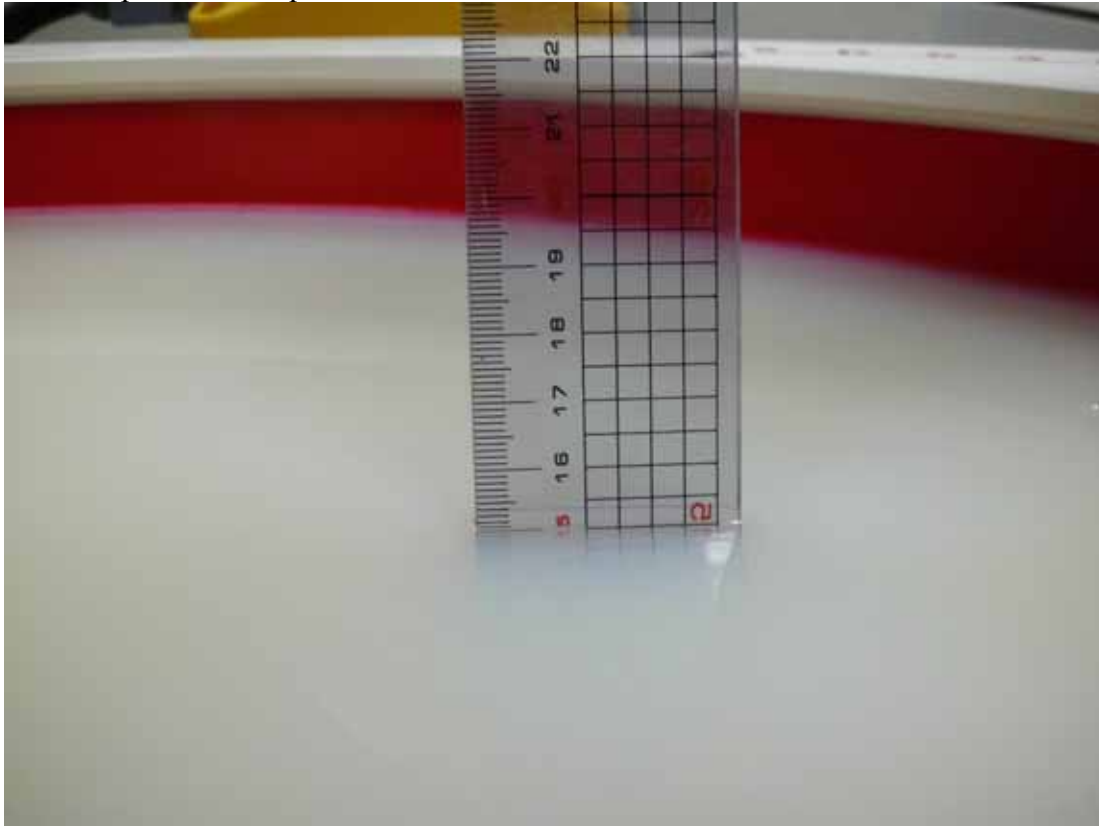
Test Position: Right Side of Panel



Test Position: Left Side of Panel



Depth of the Liquid in the Phantom-Zoom In



APPENDIX I

Test Equipment Calibration Data