

SAR TEST REPORT (15.407)

REPORT NO.: SA970131L13A-1

MODEL NO.: WL-606

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1. CERTIFICATION

PRODUCT: 3Com Wireless Dual Band 11n USB Adapter

MODEL: WL-606

BRAND: 3Com

APPLICANT: 3Com Corporation

TESTED: Jul. 13 ~ Jul. 16, 2009

TEST SAMPLE: ENGINEERING SAMPLE

STANDARDS: FCC Part 2 (Section 2.1093)

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

RSS-102

The above equipment (model: WL-606) has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's EMC characteristics under the conditions specified in this report.

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Andrea Hsia / Specialist

TECHNICAL
ACCEPTANCE : James Fan , **DATE** : Jul. 30, 2009
Responsible for RF James Fan / Engineer

APPROVED BY : Gary Chang , **DATE** : Jul. 30, 2009
Gary Chang / Assistant Manager

2. GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF EUT

PRODUCT	3Com Wireless Dual Band 11n USB Adapter
MODEL NO.	WL-606
FCC ID	O9C-WL606
POWER SUPPLY	5.0Vdc from host equipment
MODULATION TYPE	64QAM, 16QAM, QPSK, BPSK for OFDM
MODULATION TECHNOLOGY	OFDM
TRANSFER RATE	802.11a: 54.0/ 48.0/ 36.0/ 24.0/ 18.0/ 12.0/ 9.0/ 6.0Mbps Draft 802.11n: up to 300.0Mbps
FREQUENCY RANGE	5180 ~ 5320MHz & 5500 ~ 5700MHz
NUMBER OF CHANNEL	5180 ~ 5320MHz: 8 for 802.11a, draft 802.11n (20MHz) 4 for draft 802.11n (40MHz) 5500 ~ 5700MHz: 11 for 802.11a, draft 802.11n (20MHz) 5 for draft 802.11n (40MHz)
CHANNEL FREQUENCIES UNDER TEST AND ITS CONDUCTED OUTPUT POWER	Refer to Note 5 as below
AVERAGE SAR (1g)	1.050W/kg
ANTENNA TYPE	Refer to note as below
DATA CABLE	NA
I/O PORTS	USB
ASSOCIATED DEVICES	NA

NOTE:

1. The EUT is a 3Com Wireless Dual Band 11n USB Adapter. The functions of EUT listed as below:

	REFERENCE REPORT
WLAN 802.11b/g, draft 802.11n	SA970131L13A
WLAN 802.11a, draft 802.11n (5745~5825 MHz)	
WLAN 802.11a, draft 802.11n (5180~5320MHz & 5500 ~5700MHz)	SA970131L13A-1

2. The following antennas are used in this EUT.

TYPE	GAIN (dBi)	
	2.4GHz	5.0GHz
Printed (Antenna 1)	2.83	4.25
Printed (Antenna 2)	3.73	4.99

3. The frequency bands used in this EUT are listed as follows:

Frequency Band (MHz)	2412~2462	5180~5320	5500~5700	5745~5825
802.11b	√			
802.11g	√			
802.11a		√	√	√
Draft 802.11n (20MHz)	√	√	√	√
Draft 802.11n (40MHz)	√	√	√	√

4. The EUT incorporates a MIMO function. Physically, the EUT provides two completed transmitters and two receivers.

MODULATION MODE	TX FUNCTION
802.11b	1TX
802.11g	1TX
802.11a	1TX
Draft 802.11n (20MHz)	2TX
Draft 802.11n (40MHz)	2TX

5. The Channel Frequencies under test and it's conducted output power as below:

802.11a	Main Ant.	Aux. Ant.	Draft 802.11n (20MHz)	Total Conducted Power
5180	35.810mW	31.842mW	5180	45.085mW
5200	31.989mW	28.379mW	5200	45.554mW
5220	31.405mW	28.119mW	5220	44.621mW
5240	32.211mW	28.576mW	5240	45.085mW
5260	31.842mW	28.708mW	5260	56.759mW
5280	31.696mW	30.269mW	5280	48.076mW
5300	32.434mW	31.769mW	5300	48.044mW
5320	32.063mW	31.046mW	5320	48.115mW
5500	28.379mW	25.468mW	5500	45.189mW
5520	28.314mW	25.235mW	5520	41.165mW
5540	28.119mW	24.210mW	5540	40.322mW
5560	28.184mW	23.933mW	5560	40.228mW
5580	28.510mW	25.527mW	5580	40.788mW
5600	28.774mW	28.249mW	5600	45.450mW
5620	28.642mW	27.416mW	5620	47.410mW
5640	27.925mW	23.496mW	5640	46.268mW
5660	27.990mW	23.768mW	5660	45.899mW
5680	28.445mW	24.774mW	5680	47.674mW
5700	28.576mW	25.235mW	5700	48.121mW
Draft 802.11n (40MHz)	Total Conducted Power		Draft 802.11n (40MHz)	Total Conducted Power
5190	40.414mW		5550	42.535mW
5230	40.835mW		5590	45.450mW
5270	45.033mW		5630	44.723mW
5310	40.600mW		5670	50.974mW
5510	42.970mW			

6. The above EUT information was declared by manufacturer and for more detailed features description please refers to the manufacturer's specifications or User's Manual.

2.2 GENERAL DESCRIPTION OF APPLIED STANDARDS

According to the specifications of the manufacturer, this product must comply with the requirements of the following standards:

FCC Part 2 (2.1093)

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

RSS-102

IEEE 1528-2003

All test items have been performed and recorded as per the above standards.

2.3 GENERAL INFORMATION OF THE SAR SYSTEM

DASY4 (**software 4.7 Build 80**) consists of high precision robot, probe alignment sensor, phantom, robot controller, controlled measurement server and near-field probe. The robot includes six axes that can move to the precision position of the DASY4 software defined. The DASY4 software can define the area that is detected by the probe. The robot is connected to controlled box. Controlled measurement server is connected to the controlled robot box. The DAE includes amplifier, signal multiplexing, AD converter, offset measurement and surface detection. It is connected to the Electro-optical coupler (ECO). The ECO performs the conversion from the optical into digital electric signal of the DAE and transfers data to the PC.

EX3DV3 ISOTROPIC E-FIELD PROBE (FREQUENCY BAND 5 ~ 6GHz)

DIMENSIONS

Overall length: 330 mm (Tip Length: 20 mm)
Tip diameter: 2.5 mm (Body diameter: 12 mm)
Distance from probe tip to dipole centers: 1.0 mm

APPLICATION

General dosimetric measurements range 5 ~ 6 GHz.
Fast automatic scanning in arbitrary phantoms (EX3DV3)

NOTE

1. The Probe parameters have been calibrated by the SPEAG. Please reference "APPENDIX D" for the Calibration Certification Report.
2. For frequencies above 800 MHz, calibration in a rectangular wave-guide is used, because wave-guide size is manageable.
3. For frequencies below 800 MHz, temperature transfer calibration is used because the wave-guide size becomes relatively large.

TWIN SAM V4.0

CONSTRUCTION

The shell corresponds to the specifications of the Specific Anthropomorphic Mannequin (SAM) phantom defined in IEEE 1528-2003, EN 62209-1 and IEC 62209. It enables the dosimetric evaluation of left and right hand phone usage as well as body mounted usage at the flat phantom region. A cover prevents evaporation of the liquid. Reference markings on the phantom allow the complete setup of all predefined phantom positions and measurement grids by manually teaching three points with the robot.

SHELL THICKNESS

$2 \pm 0.2\text{mm}$

FILLING VOLUME

Approx. 25liters

DIMENSIONS

Height: 810mm; Length: 1000mm; Width: 500mm

SYSTEM VALIDATION KITS:

CONSTRUCTION

Symmetrical dipole with I/4 balun enables measurement of feedpoint impedance with NWA matched for use near flat phantoms filled with brain simulating solutions. Includes distance holder and tripod adaptor

CALIBRATION

Calibrated SAR value for specified position and input power at the flat phantom in brain simulating solutions

FREQUENCY

5200, 5500MHz

RETURN LOSS

> 20dB at specified validation position

POWER CAPABILITY

> 100W ($f < 1\text{GHz}$); > 40W ($f > 1\text{GHz}$)

OPTIONS

Dipoles for other frequencies or solutions and other calibration conditions upon request

DEVICE HOLDER FOR SAM TWIN PHANTOM

CONSTRUCTION

The device holder for the mobile phone device 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 centers for both scales is the ear reference point (ERP). Thus the device needs no repositioning when changing the angles. The holder has been made out of low-loss POM material having the following dielectric parameters: relative permittivity $\varepsilon = 3$ 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. The device holder for the portable device makes up of the polyethylene foam. The dielectric parameters of material close to the dielectric parameters of the air.

DATA ACQUISITION ELECTRONICS

CONSTRUCTION

The data acquisition electronics (DAE3) consists of a highly sensitive electrometer grade preamplifier with auto-zeroing, a channel and gain-switching multiplex, 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 mechanical probe is mounting device includes two different sensor systems for frontal and sideways probe contacts. They are used for mechanical surface detection and probe collision detection. The input impedance of the DAE3 box is 200M Ω ; the inputs are symmetrical and floating. Common mode rejection is above 80 dB.

2.4 GENERAL DESCRIPTION OF THE SPATIAL PEAK SAR EVALUATION

The DASY4 post-processing software (SEMCAD) automatically executes the following procedures to calculate the field units from the micro-volt readings at the probe connector. The parameters used in the evaluation are stored in the configuration modules of the software:

Probe parameters:	- Sensitivity	Norm _i , a _{i0} , a _{i1} , a _{i2}
	- Conversion factor	ConvF _i
	- Diode compression point	dcp _i
Device parameters:	- Frequency	F
	- Crest factor	Cf
Media parameters:	- Conductivity	σ
	- Density	ρ

The first step of the evaluation is a linearization of the filtered input signal to account for the compression characteristics of the detector diode. The compensation depends on the input signal, the diode type and the DC-transmission factor from the diode to the evaluation electronics. If the exciting field is pulsed, the crest factor of the signal must be known to correctly compensate for peak power. The formula for each channel can be given as:

$$V_i = U_i + U_i^2 \cdot \frac{cf}{dcp_i}$$

V _i	=compensated signal of channel i	(i = x, y, z)
U _i	=input signal of channel i	(i = x, y, z)
Cf	=crest factor of exciting field	(DASY parameter)
dcp _i	=diode compression point	(DASY parameter)

From the compensated input signals the primary field data for each channel can be evaluated:

$$\text{E-field probes: } E_i = \sqrt{\frac{V_i}{\text{Norm}_i \cdot \text{ConvF}}}$$

$$\text{H-field probes: } H_i = \sqrt{V_i} \cdot \frac{a_{i0} + a_{i1}f + a_{i2}f^2}{f}$$

V_i	=compensated signal of channel i	(i = x, y, z)
Norm_i	=sensor sensitivity of channel i $\mu\text{V}/(\text{V/m})^2$ for E-field Probes	(i = x, y, z)
ConvF	= sensitivity enhancement in solution	
a_{ij}	= sensor sensitivity factors for H-field probes	
f	= carrier frequency [GHz]	
E_i	= electric field strength of channel i in V/m	
H_i	= magnetic field strength of channel i in A/m	

The RSS value of the field components gives the total field strength (Hermitian magnitude):

$$E_{tot} = \sqrt{E_x^2 + E_y^2 + E_z^2}$$

The primary field data are used to calculate the derived field units.

$$\text{SAR} = E_{tot}^2 \cdot \frac{\sigma}{\rho \cdot 1'000}$$

SAR	= local specific absorption rate in mW/g
E_{tot}	= total field strength in V/m
σ	= conductivity in [mho/m] or [Siemens/m]
ρ	= equivalent tissue density in g/cm ³

Note that the density is set to 1, to account for actual head tissue density rather than the density of the tissue simulating liquid. The entire evaluation of the spatial peak values is performed within the Post-processing engine (SEMCAD). The system always gives the maximum values for the 1g and 10g cubes. The algorithm to find the cube with highest averaged SAR is divided into the following stages:

1. The extraction of the measured data (grid and values) from the Zoom Scan
2. The calculation of the SAR value at every measurement point based on all stored data (A/D values and measurement parameters)
3. The generation of a high-resolution mesh within the measured volume
4. The interpolation of all measured values from the measurement grid to the high-resolution grid
5. The extrapolation of the entire 3-D field distribution to the phantom surface over the distance from sensor to surface
6. The calculation of the averaged SAR within masses of 1g and 10g.

The probe is calibrated at the center of the dipole sensors that is located 1 to 2.7mm away from the probe tip. During measurements, the probe stops shortly above the phantom surface, depending on the probe and the surface detecting system. Both distances are included as parameters in the probe configuration file. The software always knows exactly how far away the measured point is from the surface. As the probe cannot directly measure at the surface, the values between the deepest measured point and the surface must be extrapolated. The angle between the probe axis and the surface normal line is less than 30 degree.

The maximum search is automatically performed after each area scan measurement. It is based on splines in two or three dimensions. The procedure can find the maximum for most SAR distributions even with relatively large grid spacing. After the area scanning measurement, the probe is automatically moved to a position at the interpolated maximum. The following scan can directly use this position for reference, e.g., for a finer resolution grid or the cube evaluations. The 1g and 10g peak evaluations are only available for the predefined cube 7 x 7 x 7 scans. The routines are verified and optimized for the grid dimensions used in these cube measurements. The measured volume of 30 x 30 x 30mm contains about 30g of tissue. The first procedure is an extrapolation (incl. boundary correction) to get the points between the lowest measured plane and the surface. The next step uses 3D interpolation to get all points within the measured volume in a 1mm grid (42875 points). In the last step, a 1g cube is placed numerically into the volume and its averaged SAR is calculated. This cube is moved around until the highest averaged SAR is found. If the highest SAR is found at the edge of the measured volume, the system will issue a warning: higher SAR values might be found outside of the measured volume. In that case the cube measurement can be repeated, using the new interpolated maximum as the center.

3. DESCRIPTION OF SUPPORT UNITS

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

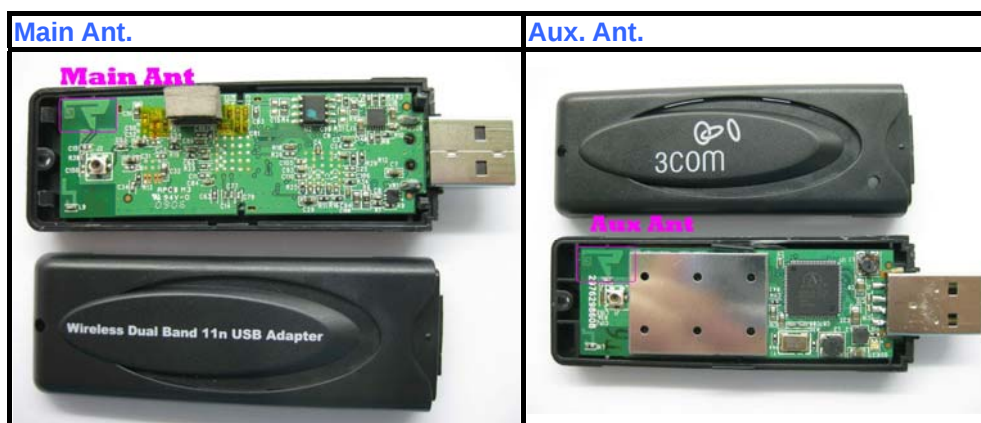
NO.	PRODUCT	BRAND	MODEL NO.	SERIAL NO.	FCC ID
1	NOTEBOOK	DELL	PP18L	29144041120	CXSMM01BRD02D330

NO.	SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS
1	NA

NOTE: The length of USB cable is 11.6 inch. USB cable does not affect device radiating characteristics and output power

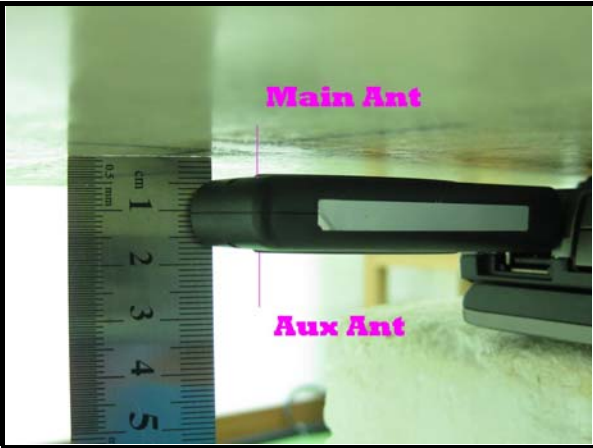
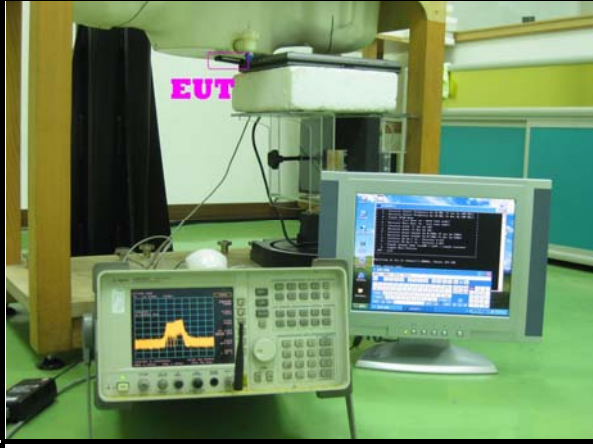
4. DESCRIPTION OF TEST MODES AND CONFIGURATIONS

4.1. DESCRIPTION OF ANTENNA LOCATION



4.2. DESCRIPTION OF ASSESSMENT POSITION

The following test configurations have been applied in this test report:

	
A The bottom of the EUT faces to the phantom with 5mm-separation distance.	B The right edge of the EUT faces to the phantom with 5mm-separation distance.
	
C The front of the EUT faces to the phantom with 5mm-separation distance.	D The left edge of the EUT faces to the phantom with 5mm-separation distance.
	
SETUP PHOTO	

4.3. DESCRIPTION OF TEST MODE

Test tool is ART provided by client. It can control EUT to transmit continuously at specific channel, output power level, data rates and 100 % duty signal.

The EUT supports 1tx transmitting and 2 TX transmitting mode. When EUT operates under 1 TX mode, Main antenna or AUX antenna is used to transmission. Therefore, 2 configurations will be tested under 1 TX mode. One is Main antenna and the other is AUX antenna transmitting. Main and AUX antenna will be transmitted under 2 TX mode.

Per 248227 D01 SAR meas for 802 11 a b g v01r02

Antenna selection of 1 TX mode

Main and AUX antenna are tested on highest output power channel of 11a. According to test result can find that SAR of AUX antenna is higher than Main antenna and less than 1.2 W/ kg .Therefore, only AUX antenna will be tested on required test channels.

Data rate selection

Comparing output power of all modulations and data rates of each mode can find the lowest data rates has max output power. Therefore, EUT will set under lowest data rates to test.

Per 447498 D01 Mobile Portable RF Exposure v03r03

Test channel selection

When 1-g SAR for the highest output channel of 5150~5250 and 5250~5350 MHz is less than 0.8 W/kg and Peak SAR is less than 1.6 W/kg, testing for the other channels is not tested.

ITEM	TEST MODE	MODULATION	ASSESSMENT POSITION	TESTED CHANNEL	REMARK
1	802.11a Band I	BPSK	A	36, 40, 48	Aux. Ant.
2	802.11a Band I	BPSK		36	Main Ant.
3	802.11a Band II	BPSK		60	Aux. Ant.
4	802.11a Band II	BPSK		60	Main Ant.
5	802.11a Band III	BPSK		100, 104, 116, 120, 124, 136, 140	Aux. Ant.
6	802.11a Band III	BPSK		120	Main Ant.
7	Draft 802.11n (20MHz) Band I	BPSK		36, 40, 48	-
8	Draft 802.11n (20MHz) Band II	BPSK		52	-
9	Draft 802.11n (20MHz) Band III	BPSK		100, 104, 116, 120, 124, 136, 140	-
10	Draft 802.11n (40MHz) Band I	BPSK		38, 46	-
11	Draft 802.11n (40MHz) Band II	BPSK		54, 62	-
12	Draft 802.11n (40MHz) Band III	BPSK		102, 118, 134	-
13	802.11a Band I	BPSK	B	36	Aux. Ant.
14	802.11a Band I	BPSK		36	Main Ant.
15	802.11a Band II	BPSK		60	Aux. Ant.
16	802.11a Band II	BPSK		60	Main Ant.
17	802.11a Band III	BPSK		100, 104, 116, 120, 124, 136, 140	Aux. Ant.
18	802.11a Band III	BPSK		120	Main Ant.
19	Draft 802.11n (20MHz) Band I	BPSK		40	-
20	Draft 802.11n (20MHz) Band II	BPSK		52	-
21	Draft 802.11n (20MHz) Band III	BPSK		100, 104, 116, 120, 124, 136, 140	-
22	Draft 802.11n (40MHz) Band I	BPSK		46	-
23	Draft 802.11n (40MHz) Band II	BPSK		54	-
24	Draft 802.11n (40MHz) Band III	BPSK		102, 118, 134	-

ITEM	TEST MODE	MODULATION	ASSESSMENT POSITION	TESTED CHANNEL	REMARK
25	802.11a Band I	BPSK	C	36	Aux. Ant.
26	802.11a Band I	BPSK		36	Main Ant.
27	802.11a Band II	BPSK		60	Aux. Ant.
28	802.11a Band II	BPSK		60	Main Ant.
29	802.11a Band III	BPSK		100, 104, 116, 120, 124, 136, 140	Aux. Ant.
30	802.11a Band III	BPSK		120	Main Ant.
31	Draft 802.11n (20MHz) Band I	BPSK		36, 40, 48	-
32	Draft 802.11n (20MHz) Band II	BPSK		52	-
33	Draft 802.11n (20MHz) Band III	BPSK		100, 104, 116, 120, 124, 136, 140	-
34	Draft 802.11n (40MHz) Band I	BPSK		38, 46	-
35	Draft 802.11n (40MHz) Band II	BPSK		54, 62	-
36	Draft 802.11n (40MHz) Band III	BPSK		102, 118, 134	-
37	802.11a Band I	BPSK		36	Aux. Ant.
38	802.11a Band I	BPSK		36	Main Ant.
39	802.11a Band II	BPSK		60	Aux. Ant.
40	802.11a Band II	BPSK		60	Main Ant.
41	802.11a Band III	BPSK		100, 104, 116, 120, 124, 136, 140	Main Ant.
42	802.11a Band III	BPSK		120	Aux. Ant.
43	Draft 802.11n (20MHz) Band I	BPSK		40	-
44	Draft 802.11n (20MHz) Band II	BPSK		52	-
45	Draft 802.11n (20MHz) Band III	BPSK		100, 104, 116, 120, 124, 136, 140	-
46	Draft 802.11n (40MHz) Band I	BPSK		46	-
47	Draft 802.11n (40MHz) Band II	BPSK		54	-
48	Draft 802.11n (40MHz) Band III	BPSK		102, 118, 134	-

4.4. SUMMARY OF TEST RESULTS

ITEM		1	2	3	4	5	6	7	8	9
TEST MODE		802.11a						DRAFT 802.11n (20MHz)		
CHAN.	FREQ. (MHz)	MEASURED VALUE OF 1g SAR (W/kg)								
36	5180	1.050	0.611	-	-	-	-	0.991	-	-
40	5200	0.930	-	-	-	-	-	0.927	-	-
48	5240	0.794	-	-	-	-	-	0.863	-	-
52	5260	-	-	-	-	-	-	-	0.715	-
60	5300	-	-	0.729	0.375	-	-	-	-	-
100	5500	-	-	-	-	0.724	-	-	-	0.836
104	5520	-	-	-	-	0.654	-	-	-	0.723
116	5580	-	-	-	-	0.686	-	-	-	0.703
120	5600	-	-	-	-	0.700	0.483	-	-	0.934
124	5620	-	-	-	-	0.692	-	-	-	0.908
136	5680	-	-	-	-	0.851	-	-	-	0.927
140	5700	-	-	-	-	0.719	-	-	-	0.945

ITEM	10	11	12
TEST MODE	DRAFT 802.11n (40MHz)		
CHAN.	FREQ. (MHz)	MEASURED VALUE OF 1g SAR (W/kg)	
38	5190	0.996	-
46	5230	0.871	-
54	5270	-	0.951
62	5310	-	0.812
102	5510	-	-
118	5590	-	-
134	5670	-	-



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ITEM		13	14	15	16	17	18	19	20	21
TEST MODE		802.11a						DRAFT 802.11n (20MHz)		
CHAN.	FREQ. (MHz)	MEASURED VALUE OF 1g SAR (W/kg)								
36	5180	0.675	0.350	-	-	-	-	-	-	-
40	5200	-	-	-	-	-	-	0.626	-	-
48	5240	-	-	-	-	-	-	-	-	-
52	5260	-	-	-	-	-	-	-	0.569	-
60	5300	-	-	0.513	0.220	-	-	-	-	-
100	5500	-	-	-	-	0.572	-	-	-	0.575
104	5520	-	-	-	-	0.501	-	-	-	0.549
116	5580	-	-	-	-	0.519	-	-	-	0.554
120	5600	-	-	-	-	0.488	0.180	-	-	0.574
124	5620	-	-	-	-	0.609	-	-	-	0.588
136	5680	-	-	-	-	0.519	-	-	-	0.616
140	5700	-	-	-	-	0.582	-	-	-	0.603

ITEM	22	23	24
TEST MODE	DRAFT 802.11n (40MHz)		
CHAN.	FREQ. (MHz)	MEASURED VALUE OF 1g SAR (W/kg)	
38	5190	-	-
46	5230	0.596	-
54	5270	0.589	-
62	5310	-	-
102	5510	-	0.469
118	5590	-	0.579
134	5670	-	0.566



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ITEM		25	26	27	28	29	30	31	32	33
TEST MODE		802.11a						DRAFT 802.11n (20MHz)		
CHAN.	FREQ. (MHz)	MEASURED VALUE OF 1g SAR (W/kg)								
36	5180	0.746	0.668	-	-	-	-	0.905	-	-
40	5200	-	-	-	-	-	-	0.848	-	-
48	5240	-	-	-	-	-	-	0.772	-	-
52	5260	-	-	-	-	-	-	-	0.734	-
60	5300	-	-	0.558	0.491	-	-	-	-	-
100	5500	-	-	-	-	0.413	-	-	-	0.681
104	5520	-	-	-	-	0.374	-	-	-	0.600
116	5580	-	-	-	-	0.344	-	-	-	0.578
120	5600	-	-	-	-	0.363	0.459	-	-	0.586
124	5620	-	-	-	-	0.344	-	-	-	0.585
136	5680	-	-	-	-	0.415	-	-	-	0.630
140	5700	-	-	-	-	0.348	-	-	-	0.567

ITEM	34	35	36
TEST MODE	DRAFT 802.11n (40MHz)		
CHAN.	FREQ. (MHz)	MEASURED VALUE OF 1g SAR (W/kg)	
38	5190	0.834	-
46	5230	0.813	-
54	5270	-	0.924
62	5310	-	0.961
102	5510	-	0.639
118	5590	-	0.780
134	5670	-	0.775

ITEM		37	38	39	40	41	42	43	44	45
TEST MODE		802.11a						DRAFT 802.11n (20MHz)		
CHAN.	FREQ. (MHz)	MEASURED VALUE OF 1g SAR (W/kg)								
36	5180	0.362	0.626	-	-	-	-	-	-	-
40	5200	-	-	-	-	-	-	0.454	-	-
48	5240	-	-	-	-	-	-	-	-	-
52	5260	-	-	-	-	-	-	-	0.443	-
60	5300	-	-	0.235	0.535	-	-	-	-	-
100	5500	-	-	-	-	0.738	-	-	-	0.603
104	5520	-	-	-	-	0.681	-	-	-	0.548
116	5580	-	-	-	-	0.700	-	-	-	0.560
120	5600	-	-	-	-	0.718	0.142	-	-	0.557
124	5620	-	-	-	-	0.556	-	-	-	0.549
136	5680	-	-	-	-	0.587	-	-	-	0.622
140	5700	-	-	-	-	0.626	-	-	-	0.638

ITEM	46	47	48
TEST MODE	DRAFT 802.11n (40MHz)		
CHAN.	FREQ. (MHz)	MEASURED VALUE OF 1g SAR (W/kg)	
38	5190	-	-
46	5230	0.600	-
54	5270	-	0.377
62	5310	-	-
102	5510	-	0.428
118	5590	-	0.614
134	5670	-	0.605

NOTE: The worst value has been marked by boldface.

4.5. CHECK FOR SCAN RESOLUTION

COMPARE WITH DIFFERENT SCAN RESOLUTION

With EUT hold on the worst case configuration (Low channel in test mode 1) with no any change in position or setting, 2 scans with different resolutions are performed to evaluate the impact on the SAR value.

Test data as below:

SCAN RESOLUTION (mm)	SAR VALUE (W/kg)
4.30	1.05
2.15	1.03

CONCLUSION: No meaningful change detected.

5. TEST RESULTS

5.1 TEST PROCEDURES

Use the software to control the EUT channel and transmission power. Then record the conducted power before the testing. Place the EUT to the specific test location. After the testing, must writing down the conducted power of the EUT into the report. The SAR value was calculated via the 3D spline interpolation algorithm that has been implemented in the software of DASY4 SAR measurement system manufactured and calibrated by SPEAG. According to the IEEE 1528 standards, the recommended procedure for assessing the peak spatial-average SAR value consists of the following steps:

- Power reference measurement
- Verification of the power reference measurement
- Area scan
- Zoom scan
- Power reference measurement

The area scan was performed for the highest spatial SAR location. The zoom scan with 30mm x 30mm x 30mm volume was performed for SAR value averaged over 1g and 10g spatial volumes.



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In the zoom scan, the distance between the measurement point at the probe sensor location (geometric center behind the probe tip) and the phantom surface is 3mm and maintained at a constant distance of $\pm 0.5\text{mm}$ during a zoom scan to determine peak SAR locations. The distance is 3mm between the first measurement point and the bottom surface of the phantom. The secondary measurement point to the bottom surface of the phantom is with 8mm separation distance. The cube size is $7 \times 7 \times 7$ points consists of 343 points and the grid space is 5mm.

The measurement time is 0.5s at each point of the zoom scan. The probe boundary effect compensation shall be applied during the SAR test. Because of the tip of the probe to the Phantom surface separated distances are longer than half a tip probe diameter.

In the area scan, the separation distance is 3mm between the each measurement point and the phantom surface. The scan size shall be included the transmission portion of the EUT. The measurement time is the same as the zoom scan. At last the reference power drift shall be less than $\pm 5\%$.



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5.2 MEASURED SAR RESULTS

ENVIRONMENTAL CONDITION		Air Temperature : 23.5°C, Liquid Temperature : 22.5°C Humidity : 61%RH					
TESTED BY		Sam Onn		DATE		Jul. 13, 2009	
CHAN.	FREQ. (MHz)	TEST MODE	CONDUCTED POWER (mW)		POWER DRIFT (%)	DEVICE TEST POSITION MODE	MEASURED 1g SAR (W/kg)
			BEGIN TEST	AFTER TEST			
36	5180	802.11a	31.842	31.648	-0.61	1	1.050
40	5200	802.11a	28.379	28.163	-0.76	1	0.930
48	5240	802.11a	28.576	28.322	-0.89	1	0.794
36	5180	802.11a	35.810	35.481	-0.92	2	0.611
60	5300	802.11a	31.769	31.435	-1.05	3	0.729
60	5300	802.11a	32.434	32.067	-1.13	4	0.375
100	5500	802.11a	25.468	25.152	-1.24	5	0.724
104	5520	802.11a	25.235	24.887	-1.38	5	0.654
116	5580	802.11a	25.527	25.154	-1.46	5	0.686
120	5600	802.11a	28.249	27.805	-1.57	5	0.700
124	5620	802.11a	27.416	26.964	-1.65	5	0.692
136	5680	802.11a	24.774	24.338	-1.76	5	0.851
140	5700	802.11a	25.235	24.763	-1.87	5	0.719
120	5600	802.11a	28.774	28.216	-1.94	6	0.483

NOTE:

1. Test configuration of each mode is described in section 3.
2. In this testing, the limit for General Population Spatial Peak averaged over 1g, **1.6 W/kg**, is applied.
3. Please see the Appendix A for the data.
4. The variation of the EUT conducted power measured before and after SAR testing should not over 5%.



A D T

ENVIRONMENTAL CONDITION			Air Temperature : 23.5°C, Liquid Temperature : 22.5°C Humidity : 58%RH				
TESTED BY			Sam Onn		DATE	Jul. 13, 2009	
CHAN.	FREQ. (MHz)	TEST MODE	CONDUCTED POWER (mW)		POWER DRIFT (%)	DEVICE TEST POSITION MODE	MEASURED 1g SAR (W/kg)
			BEGIN TEST	AFTER TEST			
36	5180	DRAFT 802.11n (20MHz)	45.085	44.071	-2.25	7	0.991
40	5200	DRAFT 802.11n (20MHz)	45.554	44.470	-2.38	7	0.927
48	5240	DRAFT 802.11n (20MHz)	45.085	43.976	-2.46	7	0.863
52	5260	DRAFT 802.11n (20MHz)	56.759	55.300	-2.57	8	0.715
100	5500	DRAFT 802.11n (20MHz)	45.189	44.005	-2.62	9	0.836
104	5520	DRAFT 802.11n (20MHz)	41.165	40.041	-2.73	9	0.723
116	5580	DRAFT 802.11n (20MHz)	40.788	39.621	-2.86	9	0.703
120	5600	DRAFT 802.11n (20MHz)	45.45	44.118	-2.93	9	0.934
124	5620	DRAFT 802.11n (20MHz)	47.41	45.950	-3.08	9	0.908
136	5680	DRAFT 802.11n (20MHz)	47.674	46.168	-3.16	9	0.927
140	5700	DRAFT 802.11n (20MHz)	48.121	46.547	-3.27	9	0.945

NOTE:

1. Test configuration of each mode is described in section 3.
2. In this testing, the limit for General Population Spatial Peak averaged over 1g, **1.6 W/kg**, is applied.
3. Please see the Appendix A for the data.
4. The variation of the EUT conducted power measured before and after SAR testing should not over 5%.



A D T

ENVIRONMENTAL CONDITION			Air Temperature : 23.5°C, Liquid Temperature : 22.5°C Humidity : 58%RH				
TESTED BY			Sam Onn		DATE	Jul. 13, 2009	
CHAN.	FREQ. (MHz)	TEST MODE	CONDUCTED POWER (mW)		POWER DRIFT (%)	DEVICE TEST POSITION MODE	MEASURED 1g SAR (W/kg)
			BEGIN TEST	AFTER TEST			
38	5190	DRAFT 802.11n (40MHz)	40.414	38.951	-3.62	10	0.996
46	5230	DRAFT 802.11n (40MHz)	40.835	39.300	-3.76	10	0.871
54	5270	DRAFT 802.11n (20MHz)	45.033	43.313	-3.82	11	0.951
62	5310	DRAFT 802.11n (20MHz)	40.600	38.992	-3.96	11	0.812
102	5510	DRAFT 802.11n (20MHz)	42.970	41.247	-4.01	12	0.849
118	5590	DRAFT 802.11n (20MHz)	45.450	43.573	-4.13	12	0.944
134	5670	DRAFT 802.11n (20MHz)	50.974	48.746	-4.37	12	0.928

NOTE:

1. Test configuration of each mode is described in section 3.
2. In this testing, the limit for General Population Spatial Peak averaged over 1g, **1.6 W/kg**, is applied.
3. Please see the Appendix A for the data.
4. The variation of the EUT conducted power measured before and after SAR testing should not over 5%.



A D T

ENVIRONMENTAL CONDITION			Air Temperature : 23.1°C, Liquid Temperature : 22.3°C Humidity : 60%RH				
TESTED BY			Sam Onn		DATE		Jul. 14, 2009
CHAN.	FREQ. (MHz)	TEST MODE	CONDUCTED POWER (mW)		POWER DRIFT (%)	DEVICE TEST POSITION MODE	MEASURED 1g SAR (W/kg)
			BEGIN TEST	AFTER TEST			
36	5180	802.11a	31.842	31.447	-1.24	13	0.675
36	5180	802.11a	35.810	35.312	-1.39	14	0.350
60	5300	802.11a	31.769	31.315	-1.43	15	0.513
60	5300	802.11a	32.434	31.935	-1.54	16	0.220
100	5500	802.11a	25.468	25.040	-1.68	17	0.572
104	5520	802.11a	25.235	24.798	-1.73	17	0.501
116	5580	802.11a	25.527	25.062	-1.82	17	0.519
120	5600	802.11a	28.249	27.695	-1.96	17	0.488
124	5620	802.11a	27.416	26.854	-2.05	17	0.609
136	5680	802.11a	24.774	24.236	-2.17	17	0.519
140	5700	802.11a	25.235	24.670	-2.24	17	0.582
120	5600	802.11a	28.774	28.092	-2.37	18	0.180

NOTE:

1. Test configuration of each mode is described in section 3.
2. In this testing, the limit for General Population Spatial Peak averaged over 1g, **1.6 W/kg**, is applied.
3. Please see the Appendix A for the data.
4. The variation of the EUT conducted power measured before and after SAR testing should not over 5%.

ENVIRONMENTAL CONDITION			Air Temperature : 23.1°C, Liquid Temperature : 22.3°C Humidity : 60%RH				
TESTED BY			Sam Onn		DATE	Jul. 14, 2009	
CHAN.	FREQ. (MHz)	TEST MODE	CONDUCTED POWER (mW)		POWER DRIFT (%)	DEVICE TEST POSITION MODE	MEASURED 1g SAR (W/kg)
			BEGIN TEST	AFTER TEST			
40	5200	DRAFT 802.11n (20MHz)	45.554	44.356	-2.63	19	0.626
52	5260	DRAFT 802.11n (20MHz)	56.759	55.187	-2.77	20	0.569
100	5500	DRAFT 802.11n (20MHz)	45.189	43.901	-2.85	21	0.575
104	5520	DRAFT 802.11n (20MHz)	41.165	39.959	-2.93	21	0.549
116	5580	DRAFT 802.11n (20MHz)	40.788	39.556	-3.02	21	0.554
120	5600	DRAFT 802.11n (20MHz)	45.450	44.014	-3.16	21	0.574
124	5620	DRAFT 802.11n (20MHz)	47.410	45.860	-3.27	21	0.588
136	5680	DRAFT 802.11n (20MHz)	47.674	46.091	-3.32	21	0.616
140	5700	DRAFT 802.11n (20MHz)	48.121	46.456	-3.46	21	0.603

NOTE:

1. Test configuration of each mode is described in section 3.
2. In this testing, the limit for General Population Spatial Peak averaged over 1g, **1.6 W/kg**, is applied.
3. Please see the Appendix A for the data.
4. The variation of the EUT conducted power measured before and after SAR testing should not over 5%.



A D T

ENVIRONMENTAL CONDITION			Air Temperature : 23.1°C, Liquid Temperature : 22.3°C Humidity : 60%RH				
TESTED BY			Sam Onn		DATE	Jul. 14, 2009	
CHAN.	FREQ. (MHz)	TEST MODE	CONDUCTED POWER (mW)		POWER DRIFT (%)	DEVICE TEST POSITION MODE	MEASURED 1g SAR (W/kg)
			BEGIN TEST	AFTER TEST			
46	5230	DRAFT 802.11n (40MHz)	40.835	39.361	-3.61	22	0.596
54	5270	DRAFT 802.11n (20MHz)	45.033	43.340	-3.76	23	0.589
102	5510	DRAFT 802.11n (20MHz)	42.970	41.329	-3.82	24	0.469
118	5590	DRAFT 802.11n (20MHz)	45.450	43.650	-3.96	24	0.579
134	5670	DRAFT 802.11n (20MHz)	50.974	48.894	-4.08	24	0.566

NOTE:

1. Test configuration of each mode is described in section 3.
2. In this testing, the limit for General Population Spatial Peak averaged over 1g, **1.6 W/kg**, is applied.
3. Please see the Appendix A for the data.
4. The variation of the EUT conducted power measured before and after SAR testing should not over 5%.



A D T

ENVIRONMENTAL CONDITION			Air Temperature : 23.3°C, Liquid Temperature : 22.5°C Humidity : 61%RH				
TESTED BY			Sam Onn		DATE		Jul. 15, 2009
CHAN.	FREQ. (MHz)	TEST MODE	CONDUCTED POWER (mW)		POWER DRIFT (%)	DEVICE TEST POSITION MODE	MEASURED 1g SAR (W/kg)
			BEGIN TEST	AFTER TEST			
36	5180	802.11a	31.842	31.597	-0.77	25	0.746
36	5180	802.11a	35.810	35.513	-0.83	26	0.668
60	5300	802.11a	31.769	31.467	-0.95	27	0.558
60	5300	802.11a	32.434	32.093	-1.05	28	0.491
100	5500	802.11a	25.468	25.178	-1.14	29	0.413
104	5520	802.11a	25.235	24.925	-1.23	29	0.374
116	5580	802.11a	25.527	25.180	-1.36	29	0.344
120	5600	802.11a	28.249	27.842	-1.44	29	0.363
124	5620	802.11a	27.416	26.988	-1.56	29	0.344
136	5680	802.11a	24.774	24.373	-1.62	29	0.415
140	5700	802.11a	25.235	24.796	-1.74	29	0.348
120	5600	802.11a	28.774	28.247	-1.83	30	0.459

NOTE:

1. Test configuration of each mode is described in section 3.
2. In this testing, the limit for General Population Spatial Peak averaged over 1g, **1.6 W/kg**, is applied.
3. Please see the Appendix A for the data.
4. The variation of the EUT conducted power measured before and after SAR testing should not over 5%.



A D T

ENVIRONMENTAL CONDITION			Air Temperature : 23.3°C, Liquid Temperature : 22.5°C Humidity : 61%RH				
TESTED BY			Sam Onn		DATE		Jul. 15, 2009
CHAN.	FREQ. (MHz)	TEST MODE	CONDUCTED POWER (mW)		POWER DRIFT (%)	DEVICE TEST POSITION MODE	MEASURED 1g SAR (W/kg)
			BEGIN TEST	AFTER TEST			
36	5180	DRAFT 802.11n (20MHz)	45.085	44.125	-2.13	31	0.905
40	5200	DRAFT 802.11n (20MHz)	45.554	44.543	-2.22	31	0.848
48	5240	DRAFT 802.11n (20MHz)	45.085	44.026	-2.35	31	0.772
52	5260	DRAFT 802.11n (20MHz)	56.759	55.385	-2.42	32	0.734
100	5500	DRAFT 802.11n (20MHz)	45.189	44.028	-2.57	33	0.681
104	5520	DRAFT 802.11n (20MHz)	41.165	40.078	-2.64	33	0.600
116	5580	DRAFT 802.11n (20MHz)	40.788	39.654	-2.78	33	0.578
120	5600	DRAFT 802.11n (20MHz)	45.450	44.118	-2.93	33	0.586
124	5620	DRAFT 802.11n (20MHz)	47.410	45.973	-3.03	33	0.585
136	5680	DRAFT 802.11n (20MHz)	47.674	46.163	-3.17	33	0.630
140	5700	DRAFT 802.11n (20MHz)	48.121	46.552	-3.26	33	0.567

NOTE:

1. Test configuration of each mode is described in section 3.
2. In this testing, the limit for General Population Spatial Peak averaged over 1g, **1.6 W/kg**, is applied.
3. Please see the Appendix A for the data.
4. The variation of the EUT conducted power measured before and after SAR testing should not over 5%.



A D T

ENVIRONMENTAL CONDITION			Air Temperature : 23.3°C, Liquid Temperature : 22.5°C Humidity : 61%RH				
TESTED BY			Sam Onn		DATE	Jul. 15, 2009	
CHAN.	FREQ. (MHz)	TEST MODE	CONDUCTED POWER (mW)		POWER DRIFT (%)	DEVICE TEST POSITION MODE	MEASURED 1g SAR (W/kg)
			BEGIN TEST	AFTER TEST			
38	5190	DRAFT 802.11n (40MHz)	40.414	39.028	-3.43	34	0.834
46	5230	DRAFT 802.11n (40MHz)	40.835	39.398	-3.52	34	0.813
54	5270	DRAFT 802.11n (40MHz)	45.033	43.380	-3.67	35	0.924
62	5310	DRAFT 802.11n (20MHz)	40.600	39.029	-3.87	35	0.761
102	5510	DRAFT 802.11n (20MHz)	42.970	41.286	-3.92	36	0.639
118	5590	DRAFT 802.11n (20MHz)	45.450	43.600	-4.07	36	0.780
134	5670	DRAFT 802.11n (20MHz)	50.974	48.838	-4.19	36	0.775

NOTE:

1. Test configuration of each mode is described in section 3.
2. In this testing, the limit for General Population Spatial Peak averaged over 1g, **1.6 W/kg**, is applied.
3. Please see the Appendix A for the data.
4. The variation of the EUT conducted power measured before and after SAR testing should not over 5%.



A D T

ENVIRONMENTAL CONDITION			Air Temperature : 23.4°C, Liquid Temperature : 22.2°C Humidity : 58%RH				
TESTED BY			Sam Onn		DATE		Jul. 16, 2009
CHAN.	FREQ. (MHz)	TEST MODE	CONDUCTED POWER (mW)		POWER DRIFT (%)	DEVICE TEST POSITION MODE	MEASURED 1g SAR (W/kg)
			BEGIN TEST	AFTER TEST			
36	5180	802.11a	31.842	31.406	-1.37	37	0.362
36	5180	802.11a	35.810	35.287	-1.46	38	0.626
60	5300	802.11a	31.769	31.286	-1.52	39	0.235
60	5300	802.11a	32.434	31.886	-1.69	40	0.535
100	5500	802.11a	28.379	27.888	-1.73	41	0.738
104	5520	802.11a	28.314	27.793	-1.84	41	0.681
116	5580	802.11a	28.510	27.954	-1.95	41	0.700
120	5600	802.11a	28.774	28.190	-2.03	41	0.718
124	5620	802.11a	28.642	28.020	-2.17	41	0.556
136	5680	802.11a	28.445	27.802	-2.26	41	0.587
140	5700	802.11a	28.576	27.907	-2.34	41	0.626
120	5600	802.11a	28.249	27.554	-2.46	42	0.142

NOTE:

1. Test configuration of each mode is described in section 3.
2. In this testing, the limit for General Population Spatial Peak averaged over 1g, **1.6 W/kg**, is applied.
3. Please see the Appendix A for the data.
4. The variation of the EUT conducted power measured before and after SAR testing should not over 5%.

ENVIRONMENTAL CONDITION			Air Temperature : 23.4°C, Liquid Temperature : 22.2°C Humidity : 58%RH				
TESTED BY			Sam Onn		DATE	Jul. 22, 2009	
CHAN.	FREQ. (MHz)	TEST MODE	CONDUCTED POWER (mW)		POWER DRIFT (%)	DEVICE TEST POSITION MODE	MEASURED 1g SAR (W/kg)
			BEGIN TEST	AFTER TEST			
40	5200	DRAFT 802.11n (20MHz)	45.554	44.310	-2.73	43	0.454
52	5260	DRAFT 802.11n (20MHz)	56.759	55.124	-2.88	44	0.443
100	5500	DRAFT 802.11n (20MHz)	45.189	43.860	-2.94	45	0.603
104	5520	DRAFT 802.11n (20MHz)	41.165	39.901	-3.07	45	0.548
116	5580	DRAFT 802.11n (20MHz)	40.788	39.511	-3.13	45	0.560
120	5600	DRAFT 802.11n (20MHz)	45.450	43.968	-3.26	45	0.557
124	5620	DRAFT 802.11n (20MHz)	47.410	45.808	-3.38	45	0.549
136	5680	DRAFT 802.11n (20MHz)	47.674	46.044	-3.42	45	0.622
140	5700	DRAFT 802.11n (20MHz)	48.121	46.413	-3.55	45	0.638

NOTE:

1. Test configuration of each mode is described in section 3.
2. In this testing, the limit for General Population Spatial Peak averaged over 1g, **1.6 W/kg**, is applied.
3. Please see the Appendix A for the data.
4. The variation of the EUT conducted power measured before and after SAR testing should not over 5%.



A D T

ENVIRONMENTAL CONDITION			Air Temperature : 23.4°C, Liquid Temperature : 22.2°C Humidity : 58%RH				
TESTED BY			Sam Onn		DATE	Jul. 16, 2009	
CHAN.	FREQ. (MHz)	TEST MODE	CONDUCTED POWER (mW)		POWER DRIFT (%)	DEVICE TEST POSITION MODE	MEASURED 1g SAR (W/kg)
			BEGIN TEST	AFTER TEST			
46	5230	DRAFT 802.11n (40MHz)	40.835	39.377	-3.57	46	0.6
54	5270	DRAFT 802.11n (20MHz)	45.033	43.376	-3.68	47	0.377
102	5510	DRAFT 802.11n (20MHz)	42.970	41.350	-3.77	48	0.428
118	5590	DRAFT 802.11n (20MHz)	45.450	43.696	-3.86	48	0.614
134	5670	DRAFT 802.11n (20MHz)	50.974	48.950	-3.97	48	0.605

NOTE:

1. Test configuration of each mode is described in section 3.
2. In this testing, the limit for General Population Spatial Peak averaged over 1g, **1.6 W/kg**, is applied.
3. Please see the Appendix A for the data.
4. The variation of the EUT conducted power measured before and after SAR testing should not over 5%.

5.3 SAR LIMITS

HUMAN EXPOSURE	SAR (W/kg)	
	(GENERAL POPULATION / UNCONTROLLED EXPOSURE ENVIRONMENT)	(OCCUPATIONAL / CONTROLLED EXPOSURE ENVIRONMENT)
Spatial Average (whole body)	0.08	0.4
Spatial Peak (averaged over 1 g)	1.6	8.0
Spatial Peak (hands / wrists / feet / ankles averaged over 10 g)	4.0	20.0

NOTE:

1. This limits accord to 47 CFR 2.1093 – Safety Limit.
2. The EUT property been complied with the partial body exposure limit under the general population environment.

5.4 RECIPES FOR TISSUE SIMULATING LIQUIDS

For the measurement of the field distribution inside the SAM phantom, the phantom must be filled with 25 liters of tissue simulation liquid.

The following ingredients are used :

- **WATER-** Deionized water (pure H₂O), resistivity ≥ 16 M - as basis for the liquid
- **SUGAR-** Refined sugar in crystals, as available in food shops - to reduce relative permittivity
- **SALT-** Pure NaCl - to increase conductivity
- **CELLULOSE-** Hydroxyethyl-cellulose, medium viscosity (75-125mPa.s, 2% in water, 20°C),
CAS # 54290 - to increase viscosity and to keep sugar in solution
- **PRESERVATIVE-** Preventol D-7 Bayer AG, D-51368 Leverkusen, CAS # 55965-84-9 - to prevent the spread of bacteria and molds
- **DGMBE-** Diethylenglycol-monobuthyl ether (DGMBE), Fluka Chemie GmbH, CAS # 112-34-5 - to reduce relative permittivity

THE INFORMATION FOR 5GHz SIMULATING LIQUID

The 5GHz liquids was purchased from SPEAG.

Body liquid model: HSL 5800, P/N: SL AAH 5800 AA

Head liquid model: M 5800, P/N: SL AAM 580 AD

5GHz liquids contain the following ingredients:

Water 64 - 78%

Mineral Oil 11 - 18%

Emulsifiers 9 - 15%

Additives and Salt 2 - 3%

Testing the liquids using the Agilent Network Analyzer E5071C and Agilent Dielectric Probe Kit 85070D. The testing procedure is following as

1. Turn Network Analyzer on and allow at least 30min. warm up.
2. Mount dielectric probe kit so that interconnecting cable to Network Analyzer will not be moved during measurements or calibration.
3. Pour de-ionized water and measure water temperature ($\pm 1^\circ$).
4. Set water temperature in Agilent-Software (Calibration Setup).
5. Perform calibration.
6. Validate calibration with dielectric material of known properties (e.g. polished ceramic slab with $>8\text{mm}$ thickness $\epsilon' = 10.0$, $\epsilon'' = 0.0$). If measured parameters do not fit within tolerance, repeat calibration (± 0.2 for ϵ' : ± 0.1 for ϵ'').
7. Conductivity can be calculated from ϵ'' by $\sigma = \omega \epsilon_0 \epsilon'' = \epsilon'' f [\text{GHz}] / 18$.
8. Measure liquid shortly after calibration. Repeat calibration every hour.
9. Stir the liquid to be measured. Take a sample ($\sim 50\text{ml}$) with a syringe from the center of the liquid container.
10. Pour the liquid into a small glass flask. Hold the syringe at the bottom of the flask to avoid air bubbles.
11. Put the dielectric probe in the glass flask. Check that there are no air bubbles in front of the opening in the dielectric probe kit.
12. Perform measurements.
13. Adjust medium parameters in DASY4 for the frequencies necessary for the measurements ('Setup Config', select medium (e.g. Brain 900MHz) and press 'Option'-button.
14. Select the current medium for the frequency of the validation (e.g. Setup Medium Brain 900MHz).



A D T

FOR WLAN 5GHz BAND SIMULATING LIQUID

LIQUID TYPE		MSL-5800		
SIMULATING LIQUID TEMP.		22.5		
TEST DATE		Jul. 13, 2009		
TESTED BY		Sam Onn		
FREQ. (MHz)	LIQUID PARAMETER	STANDARD VALUE	MEASUREMENT VALUE	ERROR PERCENTAGE (%)
5180	Permittivity (ε)	49.00	49.40	0.82
5190		49.00	49.40	0.82
5200		49.00	49.30	0.61
5230		49.00	49.30	0.61
5240		49.00	49.30	0.61
5260		48.90	49.20	0.61
5270		48.90	49.20	0.61
5300		48.90	49.20	0.61
5310		48.90	49.20	0.61
5320		48.90	49.10	0.41
5500		48.60	48.80	0.41
5510		48.60	48.70	0.21
5520		48.60	48.70	0.21
5580		48.50	48.60	0.21
5590		48.50	48.50	0.00
5600		48.50	48.50	0.00
5620		48.40	48.50	0.21
5670		48.40	48.40	0.00
5680		48.40	48.40	0.00
5700		48.30	48.30	0.00
Dielectric Parameters Required at 22°C				



A D T

LIQUID TYPE		MSL-5800		
SIMULATING LIQUID TEMP.		22.5		
TEST DATE		Jul. 13, 2009		
TESTED BY		Sam Onn		
FREQ. (MHz)	LIQUID PARAMETER	STANDARD VALUE	MEASUREMENT VALUE	ERROR PERCENTAGE (%)
5180	Conductivity (σ) S/m	5.28	5.23	-0.95
5190		5.29	5.24	-0.95
5200		5.30	5.25	-0.94
5230		5.33	5.30	-0.56
5240		5.35	5.31	-0.75
5260		5.37	5.34	-0.56
5270		5.38	5.35	-0.56
5300		5.42	5.39	-0.55
5310		5.43	5.41	-0.37
5320		5.44	5.42	-0.37
5500		5.65	5.68	0.53
5510		5.66	5.69	0.53
5520		5.67	5.71	0.71
5580		5.74	5.80	1.05
5590		5.75	5.81	1.04
5600		5.77	5.82	0.87
5620		5.79	5.85	1.04
5670		5.85	5.93	1.37
5680		5.86	5.95	1.54
5700		5.88	5.98	1.70
Dielectric Parameters Required at 22°C				



A D T

LIQUID TYPE		MSL-5800		
SIMULATING LIQUID TEMP.		22.3		
TEST DATE		Jul. 14, 2009		
TESTED BY		Sam Onn		
FREQ. (MHz)	LIQUID PARAMETER	STANDARD VALUE	MEASUREMENT VALUE	ERROR PERCENTAGE (%)
5180	Permittivity (ε)	49.00	49.70	1.43
5190		49.00	49.70	1.43
5200		49.00	49.60	1.22
5230		49.00	49.60	1.22
5240		49.00	49.60	1.22
5260		48.90	49.50	1.23
5270		48.90	49.50	1.23
5300		48.90	49.50	1.23
5310		48.90	49.50	1.23
5320		48.90	49.40	1.02
5500		48.60	49.10	1.03
5510		48.60	49.00	0.82
5520		48.60	49.00	0.82
5580		48.50	48.90	0.82
5590		48.50	48.80	0.62
5600		48.50	48.80	0.62
5620		48.40	48.80	0.83
5670		48.40	48.70	0.62
5680		48.40	48.70	0.62
5700		48.30	48.60	0.62
Dielectric Parameters Required at 22°C				



A D T

LIQUID TYPE		MSL-5800		
SIMULATING LIQUID TEMP.		22.3		
TEST DATE		Jul. 14, 2009		
TESTED BY		Sam Onn		
FREQ. (MHz)	LIQUID PARAMETER	STANDARD VALUE	MEASUREMENT VALUE	ERROR PERCENTAGE (%)
5180	Conductivity (σ) S/m	5.28	5.21	-1.33
5190		5.29	5.22	-1.32
5200		5.30	5.23	-1.32
5230		5.33	5.28	-0.94
5240		5.35	5.29	-1.12
5260		5.37	5.32	-0.93
5270		5.38	5.33	-0.93
5300		5.42	5.37	-0.92
5310		5.43	5.39	-0.74
5320		5.44	5.40	-0.74
5500		5.65	5.66	0.18
5510		5.66	5.67	0.18
5520		5.67	5.69	0.35
5580		5.74	5.78	0.70
5590		5.75	5.79	0.70
5600		5.77	5.80	0.52
5620		5.79	5.83	0.69
5670		5.85	5.91	1.03
5680		5.86	5.93	1.19
5700		5.88	5.96	1.36
Dielectric Parameters Required at 22°C				



A D T

LIQUID TYPE		MSL-5800		
SIMULATING LIQUID TEMP.		22.5		
TEST DATE		Jul. 15, 2009		
TESTED BY		Sam Onn		
FREQ. (MHz)	LIQUID PARAMETER	STANDARD VALUE	MEASUREMENT VALUE	ERROR PERCENTAGE (%)
5180	Permittivity (ε)	49.00	49.20	0.41
5190		49.00	49.20	0.41
5200		49.00	49.10	0.20
5230		49.00	49.10	0.20
5240		49.00	49.10	0.20
5260		48.90	49.00	0.20
5270		48.90	49.00	0.20
5300		48.90	49.00	0.20
5310		48.90	49.00	0.20
5320		48.90	48.90	0.00
5500		48.60	48.60	0.00
5510		48.60	48.50	-0.21
5520		48.60	48.50	-0.21
5580		48.50	48.40	-0.21
5590		48.50	48.30	-0.41
5600		48.50	48.30	-0.41
5620		48.40	48.30	-0.21
5670		48.40	48.20	-0.41
5680		48.40	48.20	-0.41
5700		48.30	48.10	-0.41
Dielectric Parameters Required at 22°C				



A D T

LIQUID TYPE		MSL-5800		
SIMULATING LIQUID TEMP.		22.5		
TEST DATE		Jul. 15, 2009		
TESTED BY		Sam Onn		
FREQ. (MHz)	LIQUID PARAMETER	STANDARD VALUE	MEASUREMENT VALUE	ERROR PERCENTAGE (%)
5180	Conductivity (σ) S/m	5.28	5.25	-0.57
5190		5.29	5.26	-0.57
5200		5.30	5.27	-0.57
5230		5.33	5.32	-0.19
5240		5.35	5.33	-0.37
5260		5.37	5.36	-0.19
5270		5.38	5.37	-0.19
5300		5.42	5.41	-0.18
5310		5.43	5.43	0.00
5320		5.44	5.44	0.00
5500		5.65	5.70	0.88
5510		5.66	5.71	0.88
5520		5.67	5.73	1.06
5580		5.74	5.82	1.39
5590		5.75	5.83	1.39
5600		5.77	5.84	1.21
5620		5.79	5.87	1.38
5670		5.85	5.95	1.71
5680		5.86	5.97	1.88
5700		5.88	6.00	2.04
Dielectric Parameters Required at 22°C				



A D T

LIQUID TYPE		MSL-5800		
SIMULATING LIQUID TEMP.		22.2		
TEST DATE		Jul. 16, 2009		
TESTED BY		Sam Onn		
FREQ. (MHz)	LIQUID PARAMETER	STANDARD VALUE	MEASUREMENT VALUE	ERROR PERCENTAGE (%)
5180	Permittivity (ε)	49.00	48.60	-0.82
5190		49.00	48.60	-0.82
5200		49.00	48.50	-1.02
5230		49.00	48.50	-1.02
5240		49.00	48.50	-1.02
5260		48.90	48.40	-1.02
5270		48.90	48.40	-1.02
5300		48.90	48.40	-1.02
5310		48.90	48.40	-1.02
5320		48.90	48.30	-1.23
5500		48.60	48.00	-1.23
5510		48.60	47.90	-1.44
5520		48.60	47.90	-1.44
5580		48.50	47.80	-1.44
5590		48.50	47.70	-1.65
5600		48.50	47.70	-1.65
5620		48.40	47.70	-1.45
5670		48.40	47.60	-1.65
5680		48.40	47.60	-1.65
5700		48.30	47.50	-1.66
Dielectric Parameters Required at 22°C				



A D T

LIQUID TYPE		MSL-5800		
SIMULATING LIQUID TEMP.		22.2		
TEST DATE		Jul. 16, 2009		
TESTED BY		Sam Onn		
FREQ. (MHz)	LIQUID PARAMETER	STANDARD VALUE	MEASUREMENT VALUE	ERROR PERCENTAGE (%)
5180	Conductivity (σ) S/m	5.28	5.20	-1.52
5190		5.29	5.21	-1.51
5200		5.30	5.22	-1.51
5230		5.33	5.27	-1.13
5240		5.35	5.28	-1.31
5260		5.37	5.31	-1.12
5270		5.38	5.32	-1.12
5300		5.42	5.36	-1.11
5310		5.43	5.38	-0.92
5320		5.44	5.39	-0.92
5500		5.65	5.65	0.00
5510		5.66	5.66	0.00
5520		5.67	5.68	0.18
5580		5.74	5.77	0.52
5590		5.75	5.78	0.52
5600		5.77	5.79	0.35
5620		5.79	5.82	0.52
5670		5.85	5.90	0.85
5680		5.86	5.92	1.02
5700		5.88	5.95	1.19
Dielectric Parameters Required at 22°C				



5.5 TEST EQUIPMENT FOR TISSUE PROPERTY

ITEM	NAME	BRAND	TYPE	SERIES NO.	DATE OF CALIBRATION	DUE DATE OF CALIBRATION
1	Network Analyzer	Agilent	E8358A	US41480538	Nov. 26, 2008	Nov. 27, 2009
2	Dielectric Probe	Agilent	85070D	US01440176	NA	NA

NOTE:

1. Before starting, all test equipment shall be warmed up for 30min.
2. The tolerance ($k=1$) specified by Agilent for general dielectric measurements, deriving from inaccuracies in the calibration data, analyzer drift, and random errors, are usually $\pm 2.5\%$ and $\pm 5\%$ for measured permittivity and conductivity, respectively. However, the tolerances for the conductivity is smaller for material with large loss tangents, i.e., less than $\pm 2.5\%$ ($k=1$). It can be substantially smaller if more accurate methods are applied.

6. SYSTEM VALIDATION

The system validation was performed in the flat phantom with equipment listed in the following table. Since the SAR value is calculated from the measured electric field, dielectric constant and conductivity of the body tissue and the SAR is proportional to the square of the electric field. So, the SAR value will be also proportional to the RF power input to the system validation dipole under the same test environment. In our system validation test, 250mW RF input power was used.

6.1 TEST EQUIPMENT

ITEM	NAME	BRAND	TYPE	SERIES NO.	DATE OF CALIBRATION	DUE DATE OF CALIBRATION
1	SAM Phantom	S & P	QD000 P40 CA	TP-1150	NA	NA
2	Signal Generator	Anritsu	E8257C	MY43320668	Dec. 31, 2008	Dec. 30, 2009
3	E-Field Probe	S & P	EX3DV3	3504	Jan. 21, 2009	Jan. 21, 2010
4	DAE	S & P	DAE	510	Jan. 21, 2009	Jan. 21, 2010
5	Robot Positioner	Staubli Unimation	NA	NA	NA	NA
6	Validation Dipole	S & P	D5GHzV2	1019	Feb. 20, 2009	Feb. 19, 2010

NOTE: Before starting the measurement, all test equipment shall be warmed up for 30min.

6.2 TEST PROCEDURE

Before the system performance check, we need only to tell the system which components (probe, medium, and device) are used for the system performance check; the system will take care of all parameters. The dipole must be placed beneath the flat section of the SAM Twin Phantom with the correct distance holder in place. The distance holder should touch the phantom surface with a light pressure at the reference marking (little cross) and be oriented parallel to the long side of the phantom. Accurate positioning is not necessary, since the system will search for the peak SAR location, except that the dipole arms should be parallel to the surface. The device holder for mobile phones can be left in place but should be rotated away from the dipole.

1. The "Power Reference Measurement" and "Power Drift Measurement" jobs are located at the beginning and end of the batch process. They measure the field drift at one single point in the liquid over the complete procedure. The indicated drift is mainly the variation of the amplifier output power. If it is too high (above ± 0.1 dB), the system performance check should be repeated; some amplifiers have very high drift during warm-up. A stable amplifier gives drift results in the DASY system below ± 0.02 dB.
2. The "Surface Check" job tests the optical surface detection system of the DASY system by repeatedly detecting the surface with the optical and mechanical surface detector and comparing the results. The output gives the detecting heights of both systems, the difference between the two systems and the standard deviation of the detection repeatability. Air bubbles or refraction in the liquid due to separation of the sugar-water mixture gives poor repeatability (above ± 0.1 mm). In that case it is better to abort the system performance check and stir the liquid.

3. The "Area Scan" job measures the SAR above the dipole on a plane parallel to the surface. It is used to locate the approximate location of the peak SAR. The proposed scan uses large grid spacing for faster measurement; due to the symmetric field, the peak detection is reliable. If a finer graphic is desired, the grid spacing can be reduced. Grid spacing and orientation have no influence on the SAR result.
4. The "Zoom Scan" job measures the field in a volume around the peak SAR value assessed in the previous "Area Scan" job (for more information see the application note on SAR evaluation).

About the validation dipole positioning uncertainty, the constant and low loss dielectric spacer is used to establish the correct distance between the top surface of the dipole and the bottom surface of the phantom, the error component introduced by the uncertainty of the distance between the liquid (i.e., phantom shell) and the validation dipole in the DASY4 system is less than $\pm 0.1\text{mm}$.

$$SAR_{\text{tolerance}} [\%] = 100 \times \left(\frac{(a + d)^2}{a^2} - 1 \right)$$

As the closest distance is 10mm, the resulting tolerance $SAR_{\text{tolerance}} [\%]$ is $< 2\%$.

6.3 VALIDATION RESULTS

SYSTEM VALIDATION TEST OF SIMULATING LIQUID					
FREQUENCY (MHz)	REQUIRED SAR (mW/g)	MEASURED SAR (mW/g)	DEVIATION (%)	SEPARATION DISTANCE	TESTED DATE
MSL5200	7.69 (1g)	7.81	1.56	10mm	Jul. 13, 2009
MSL5500	8.30 (1g)	8.28	-0.24	10mm	Jul. 13, 2009
MSL5200	7.69 (1g)	7.92	2.99	10mm	Jul. 14, 2009
MSL5500	8.30 (1g)	8.41	1.33	10mm	Jul. 14, 2009
MSL5200	7.69 (1g)	7.76	0.91	10mm	Jul. 15, 2009
MSL5500	8.30 (1g)	8.28	-0.24	10mm	Jul. 15, 2009
MSL5200	7.69 (1g)	7.90	2.73	10mm	Jul. 16, 2009
MSL5500	8.30 (1g)	8.35	0.60	10mm	Jul. 16, 2009
TESTED BY	Sam Onn				

NOTE: Please see Appendix for the photo of system validation test.

6.4 SYSTEM VALIDATION UNCERTAINTIES

In the table below, the system validation uncertainty with respect to the analytically assessed SAR value of a dipole source as given in the IEEE 1528 standard is given. This uncertainty is smaller than the expected uncertainty for mobile phone measurements due to the simplified setup and the symmetric field distribution.

Error Description	Tolerance (±%)	Probability Distribution	Divisor	(C _i)		Standard Uncertainty (±%)		(v _i)
				(1g)	(10g)	(1g)	(10g)	
Measurement System								
Probe Calibration	6.55	Normal	1	1	1	6.55	6.55	∞
Axial Isotropy	4.70	Rectangular	√3	0.7	0.7	1.90	1.90	∞
Hemispherical Isotropy	9.60	Rectangular	√3	0.7	0.7	3.88	3.88	∞
Boundary effects	2.00	Rectangular	√3	1	1	1.15	1.15	∞
Linearity	4.70	Rectangular	√3	1	1	2.71	2.71	∞
System Detection Limits	1.00	Rectangular	√3	1	1	0.58	0.58	∞
Readout Electronics	0.30	Normal	1	1	1	0.30	0.30	∞
Response Time	0.80	Rectangular	√3	1	1	0.46	0.46	∞
Integration Time	2.60	Rectangular	√3	1	1	1.50	1.50	∞
RF Ambient Noise	3.00	Rectangular	√3	1	1	1.73	1.73	∞
RF Ambient Reflections	3.00	Rectangular	√3	1	1	1.73	1.73	∞
Probe Positioner	0.80	Rectangular	√3	1	1	0.46	0.46	∞
Probe Positioning	9.90	Rectangular	√3	1	1	5.72	5.72	∞
Max. SAR Eval.	4.00	Rectangular	√3	1	1	2.31	2.31	∞
Dipole Related								
Dipole Axis to Liquid Distance	2.00	Rectangular	√3	1	1	1.15	1.15	145
Input Power Drift	5.00	Rectangular	√3	1	1	2.89	2.89	∞
Phantom and Tissue parameters								
Phantom Uncertainty	4.00	Rectangular	√3	1	1	2.31	2.31	∞
Liquid Conductivity (target)	5.00	Rectangular	√3	0.64	0.43	1.85	1.24	∞
Liquid Conductivity (measurement)	3.33	Normal	1	0.64	0.43	2.13	1.43	∞
Liquid Permittivity (target)	5.00	Rectangular	√3	0.6	0.49	1.73	1.41	∞
Liquid Permittivity (measurement)	2.75	Normal	1	0.6	0.49	1.65	1.35	∞
Combined Standard Uncertainty						12.08	11.82	
Coverage Factor for 95%						Kp=2		
Expanded Uncertainty (K=2)						24.17	23.65	

NOTE: About the system validation uncertainty assessment, please reference the section 7.

7. MEASUREMENT SAR PROCEDURE UNCERTAINTIES

The assessment of spatial peak SAR of the hand handheld devices is according to IEEE 1528 / EN 62209-1. All testing situation shall be met below these requirements.

- The system is used by an experienced engineer who follows the manual and the guidelines taught during the training provided by SPEAG.
- The probe has been calibrated within the requested period and the stated uncertainty for the relevant frequency bands does not exceed 4.8% ($k=1$).
- The validation dipole has been calibrated within the requested period and the system performance check has been successful.
- The DAE unit has been calibrated within the within the requested period.
- The minimum distance between the probe sensor and inner phantom shell is selected to be between 4 and 5mm.
- The operational mode of the DUT is CW, CDMA, FDMA or TDMA (GSM, DCS, PCS, IS136 and PDC) and the measurement/integration time per point is >500 ms.
- The dielectric parameters of the liquid have been assessed using Agilent 85070D dielectric probe kit or a more accurate method.
- The dielectric parameters are within 5% of the target values.
- The DUT has been positioned as described in section 3.

7.1. PROBE CALIBRATION UNCERTAINTY

SPEAG conducts the probe calibration in compliance with international and national standards (e.g. IEEE 1528, EN 62209-1, IEC 62209, etc.) under ISO17025. The uncertainties are stated on the calibration certificate. For the most relevant frequency bands, these values do not exceed 4.8% ($k=1$). If evaluations of other bands are performed for which the uncertainty exceeds these values, the uncertainty tables given in the summary have to be revised accordingly.

7.2. ISOTROPY UNCERTAINTY

The axial isotropy tolerance accounts for probe rotation around its axis while the hemispherical isotropy error includes all probe orientations and field polarizations. These parameters are assessed by SPEAG during initial calibration. In 2001, SPEAG further tightened its quality controls and warrants that the maximal deviation from axial isotropy is $\pm 0.20\text{dB}$, while the maximum deviation of hemispherical isotropy is $\pm 0.40\text{dB}$, corresponding to $\pm 4.7\%$ and $\pm 9.6\%$, respectively. A weighting factor of c_p equal to 0.5 can be applied, since the axis of the probe deviates less than 30 degrees from the normal surface orientation.

7.3. BOUNDARY EFFECT UNCERTAINTY

The effect can be estimated according to the following error approximation formula

$$SAR_{tolerance} [\%] = SAR_{be} [\%] \times \frac{(d_{be} + d_{step})^2}{2d_{step}} e^{\frac{d_{be}}{\delta/2}}$$

$$d_{be} + d_{step} < 10\text{mm}$$

The parameter d_{be} is the distance in mm between the surface and the closest measurement point used in the averaging process; d_{step} is the separation distance in mm between the first and second measurement points; δ is the minimum penetration depth in mm within the head tissue equivalent liquids (i.e., $\delta = 13.95\text{mm}$ at 3GHz); SAR_{be} is the deviation between the measured SAR value at the distance d_{be} from the boundary and the wave-guide analytical value SAR_{ref} . DASY4 applies a boundary effect compensation algorithm according to IEEE 1528, which is possible since the axis of the probe never deviates more than 30 degrees from the normal surface orientation. $SAR_{be} [\%]$ is assessed during the calibration process and SPEAG warrants that the uncertainty at distances larger than 4mm is always less than 1%. In summary, the worst case boundary effect SAR tolerance [%] for scanning distances larger than 4mm is $< \pm 0.8\%$.

7.4. PROBE LINEARITY UNCERTAINTY

Field probe linearity uncertainty includes errors from the assessment and compensation of the diode compression effects for CW and pulsed signals with known duty cycles. This error is assessed using the procedure described in IEEE 1528 / EN 62209-1. For SPEAG field probes, the measured difference between CW and pulsed signals, with pulse frequencies between 10Hz and 1kHz and duty cycles between 1 and 100, is $< \pm 0.20\text{dB}$ ($< \pm 4.7\%$).

7.5. READOUT ELECTRONICS UNCERTAINTY

All uncertainties related to the probe readout electronics (DAE unit), including the gain and linearity of the instrumentation amplifier, its loading effect on the probe, and accuracy of the signal conversion algorithm, have been assessed accordingly to IEEE 1528 / EN 62209-1. The combination (root-sum-square RSS method) of these components results in an overall maximum error of $\pm 1.0\%$.

7.6. RESPONSE TIME UNCERTAINTY

The time response of the field probes is assessed by exposing the probe to a well-controlled electric field producing SAR larger than 2.0W/kg at the tissue medium surface. The signal response time is evaluated as the time required by the system to reach 90% of the expected final value after an on/of switch of the power source. Analytically, it can be expressed as:

$$SAR_{tolerance} [\%] = 100 \times \left(\frac{T_m}{T_m + \tau e^{-T_m/\tau}} - 1 \right)$$

where T_m is 500 ms, i.e., the time between measurement samples, and τ the time constant. The response time τ of SPEAG's probes is $< 5\text{ms}$. In the current implementation, DASY4 waits longer than 100 ms after having reached the grid point before starting a measurement, i.e., the response time uncertainty is negligible.

7.7. INTEGRATION TIME UNCERTAINTY

If the device under test does not emit a CW signal, the integration time applied to measure the electric field at a specific point may introduce additional uncertainties due to the discretization and can be assessed as follows

$$SAR_{tolerance} [\%] = 100 \times \sum_{all\ sub-frames} \frac{t_{frame}}{t_{integration}} \frac{slot_{idle}}{slot_{total}}$$

The tolerances for the different systems are given in Table 7.1, whereby the worst-case $SAR_{tolerance}$ is 2.6%.

System	$SAR_{tolerance} \%$
CW	0
CDMA*	0
WCDMA*	0
FDMA	0
IS-136	2.6
PDC	2.6
GSM/DCS/PCS	1.7
DECT	1.9
Worst-Case	2.6

TABLE 7.1

7.8. PROBE POSITIONER MECHANICAL TOLERANCE

The mechanical tolerance of the field probe positioner can introduce probe positioning uncertainties. The resulting SAR uncertainty is assessed by comparing the SAR obtained according to the specifications of the probe positioner with respect to the actual position defined by the geometric center of the probe sensors. The tolerance is determined as:

$$SAR_{tolerance} [\%] = 100 \times \frac{d_{ph}}{\delta/2}$$

The specified repeatability of the RX robot family used in DASY4 systems is $\pm 25\mu\text{m}$. The absolute accuracy for short distance movements is better than $\pm 0.1\text{mm}$, i.e., the $SAR_{tolerance} [\%]$ is better than 1.5% (rectangular).

7.9. PROBE POSITIONING

The probe positioning procedures affect the tolerance of the separation distance between the probe tip and the phantom surface as:

$$SAR_{tolerance} [\%] = 100 \times \frac{d_{ph}}{\delta/2}$$

where d_{ph} is the maximum deviation of the distance between the probe tip and the phantom surface. The optical surface detection has a precision of better than 0.2mm, resulting in an $SAR_{tolerance} [\%]$ of <2.9% (rectangular distribution). Since the mechanical detection provides better accuracy, 2.9% is a worst-case figure for DASY4 system.

7.10. PHANTOM UNCERTAINTY

The SAR measurement uncertainty due to SPEAG phantom shell production tolerances has been evaluated using

$$SAR_{tolerance} [\%] \cong 100 \times \frac{2d}{a}, \quad d \ll a$$

For a maximum deviation d of the inner and outer shell of the phantom from that specified in the CAD file of $\pm 0.2\text{mm}$, and a 10mm spacing a between source and tissue liquid, the calculated phantom uncertainty is $\pm 4.0\%$.

7.11. DASY4 UNCERTAINTY BUDGET

Error Description	Tolerance (±%)	Probability Distribution	Divisor	(C _i)		Standard Uncertainty (±%)		(v _i)
				(1g)	(10g)	(1g)	(10g)	
Measurement Equipment								
Probe Calibration	6.55	Normal	1	1	1	6.55	6.55	∞
Axial Isotropy	4.70	Rectangular	√3	0.7	0.7	1.90	1.90	∞
Hemispherical Isotropy	9.60	Rectangular	√3	0.7	0.7	3.88	3.88	∞
Boundary effects	2.00	Rectangular	√3	1	1	1.15	1.15	∞
Linearity	4.70	Rectangular	√3	1	1	2.71	2.71	∞
System Detection Limits	1.00	Rectangular	√3	1	1	0.58	0.58	∞
Readout Electronics	0.30	Normal	1	1	1	0.30	0.30	∞
Response Time	0.80	Rectangular	√3	1	1	0.46	0.46	∞
Integration Time	2.60	Rectangular	√3	1	1	1.50	1.50	∞
RF Ambient Noise	3.00	Rectangular	√3	1	1	1.73	1.73	∞
RF Ambient Reflections	3.00	Rectangular	√3	1	1	1.73	1.73	∞
Probe Positioner	0.80	Rectangular	√3	1	1	0.46	0.46	∞
Probe Positioning	9.90	Rectangular	√3	1	1	5.72	5.72	∞
Max. SAR Eval.	4.00	Rectangular	√3	1	1	2.31	2.31	∞
Test Sample Related								
Device Positioning	0.79	Normal	1	1	1	0.79	0.79	10
Device Holder	3.60	Normal	1	1	1	3.60	3.60	5
Power Drift	5.00	Rectangular	√3	1	1	2.89	2.89	∞
Phantom and Tissue parameters								
Phantom Uncertainty	4.00	Rectangular	√3	1	1	2.31	2.31	∞
Liquid Conductivity (target)	5.00	Rectangular	√3	0.64	0.43	1.85	1.24	∞
Liquid Conductivity (measurement)	3.33	Normal	1	0.64	0.43	2.13	1.43	∞
Liquid Permittivity (target)	5.00	Rectangular	√3	0.6	0.49	1.73	1.41	∞
Liquid Permittivity (measurement)	2.75	Normal	1	0.6	0.49	1.65	1.35	∞
Combined Standard Uncertainty						12.58	12.33	
Coverage Factor for 95%						Kp=2		
Expanded Uncertainty (K=2)						25.16	24.66	

TABLE 7.2

The table 7.2: Worst-Case uncertainty budget for DASY4 assessed according to IEEE 1528. The budget is valid for the frequency range 300MHz ~ 3GHz and represents a worst-case analysis. For specific tests and configurations, the uncertainty could be considerable smaller.

8. INFORMATION ON THE TESTING LABORATORIES

We, Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch, were founded in 1988 to provide our best service in EMC, Radio, Telecom and Safety consultation. Our laboratories are accredited and approved by the following approval agencies according to ISO/IEC 17025.

USA	FCC, NVLAP
GERMANY	TUV Rheinland
JAPAN	VCCI
NORWAY	NEMKO
CANADA	INDUSTRY CANADA, CSA
R.O.C.	TAF, BSMI, NCC
NETHERLANDS	Telefication
SINGAPORE	GOST-ASIA (MOU)
RUSSIA	CERTIS (MOU)

Copies of accreditation certificates of our laboratories obtained from approval agencies can be downloaded from our web site: www.adt.com.tw/index.5/phtml. If you have any comments, please feel free to contact us at the following:

Linko EMC/RF Lab:

Tel: 886-2-26052180

Fax: 886-2-26051924

Hsin Chu EMC/RF Lab:

Tel: 886-3-5935343

Fax: 886-3-5935342

Hwa Ya EMC/RF/Safety/Telecom Lab:

Tel: 886-3-3183232

Fax: 886-3-3185050

Web Site: www.adt.com.tw

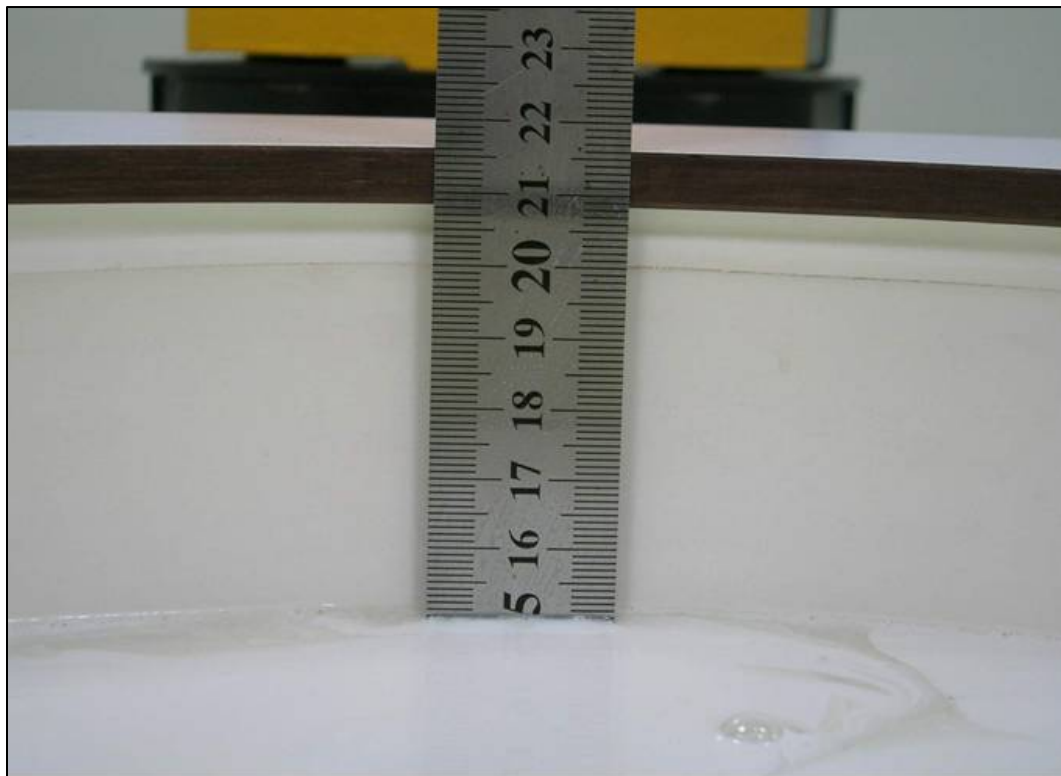
The address and road map of all our labs can be found in our web site also.

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APPENDIX A: TEST DATA

Liquid Level Photo

MSL 5800MHz D=150mm



Date/Time: 2009/7/13 02:35:21

Test Laboratory: Bureau Veritas ADT

M01-11a-Ch36

DUT: 3Com Wireless Dual Band 11n USB Adapter ; Type: WL-606

Communication System: 802.11a ; Frequency: 5180 MHz ; Duty Cycle: 1:1 ; Modulation type: BPSK
 Medium: MSL5800 Medium parameters used: $f = 5180$ MHz; $\sigma = 5.23$ mho/m; $\epsilon_r = 49.4$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section ; Separation distance : 5 mm (The bottom side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV3 - SN3504 ; ConvF(4.38, 4.38, 4.38) ; Calibrated: 2009/1/21
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510 ; Calibrated: 2009/1/21
- Phantom: SAM 12 ; Type: SAM V4.0 ; Serial: TP 1202
- Measurement SW: DASY4, V4.7 Build 80 ; Postprocessing SW: SEMCAD, V1.8 Build 186

Low Channel 36/Area Scan (6x10x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 1.45 mW/g

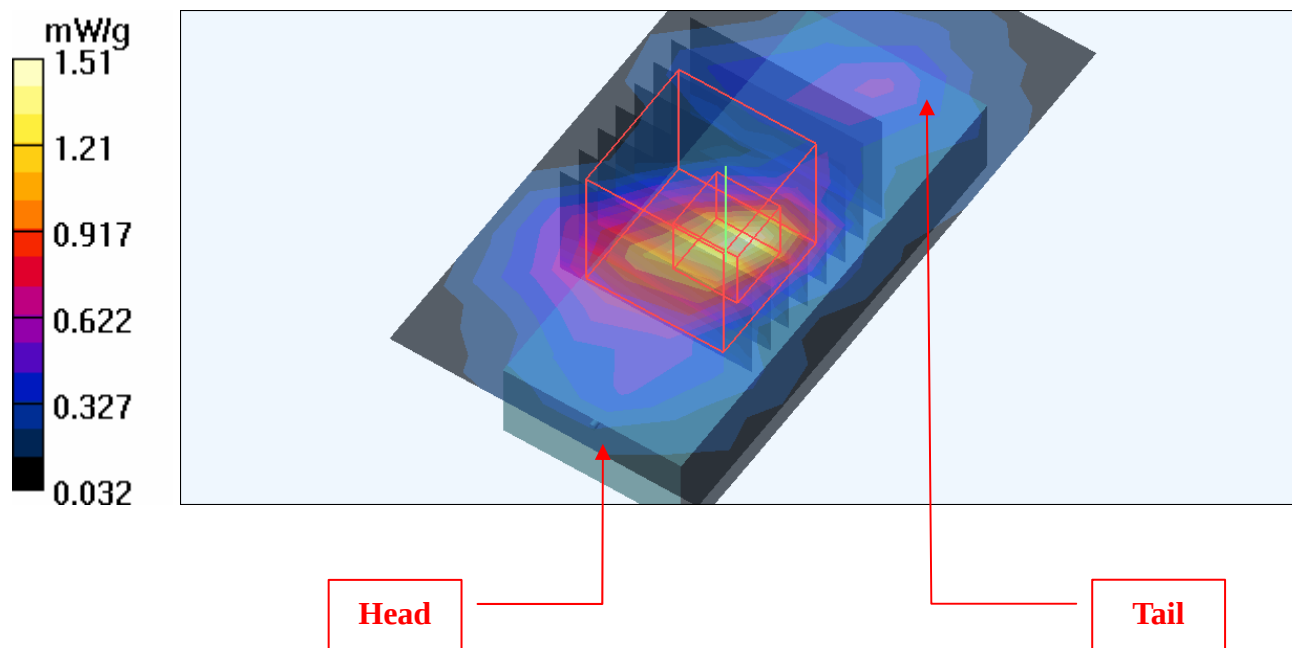
Low Channel 36/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

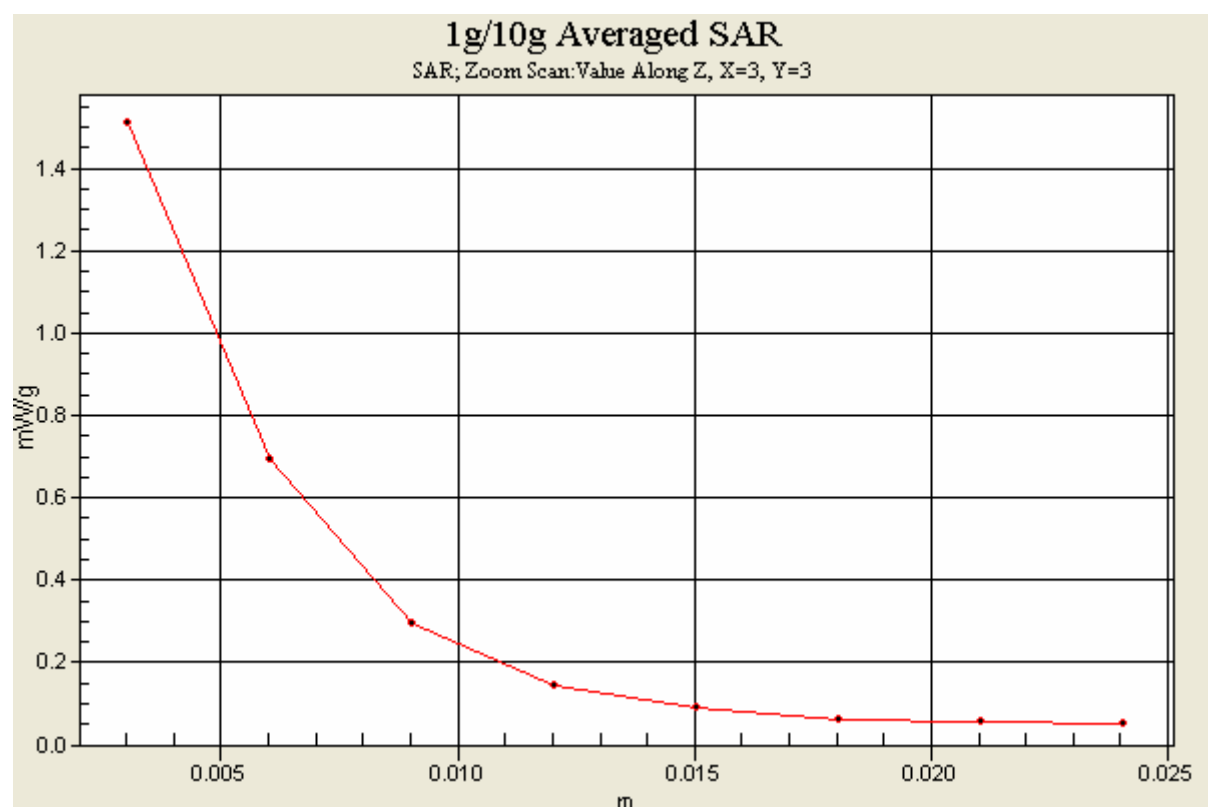
Reference Value = 9.74 V/m

Peak SAR (extrapolated) = 3.18 W/kg

SAR(1 g) = **1.05 mW/g**; SAR(10 g) = 0.412 mW/g

Maximum value of SAR (measured) = 1.51 mW/g





Date/Time: 2009/7/13 01:48:51

Test Laboratory: Bureau Veritas ADT

M01-11a-Ch40

DUT: 3Com Wireless Dual Band 11n USB Adapter ; Type: WL-606

Communication System: 802.11a ; Frequency: 5200 MHz ; Duty Cycle: 1:1 ; Modulation type: BPSK
 Medium: MSL5800 Medium parameters used: $f = 5200$ MHz; $\sigma = 5.25$ mho/m; $\epsilon_r = 49.3$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section ; Separation distance : 5 mm (The bottom side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV3 - SN3504 ; ConvF(4.38, 4.38, 4.38) ; Calibrated: 2009/1/21
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510 ; Calibrated: 2009/1/21
- Phantom: SAM 12 ; Type: SAM V4.0 ; Serial: TP 1202
- Measurement SW: DASY4, V4.7 Build 80 ; Postprocessing SW: SEMCAD, V1.8 Build 186

Mid Channel 40/Area Scan (6x10x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 1.23 mW/g

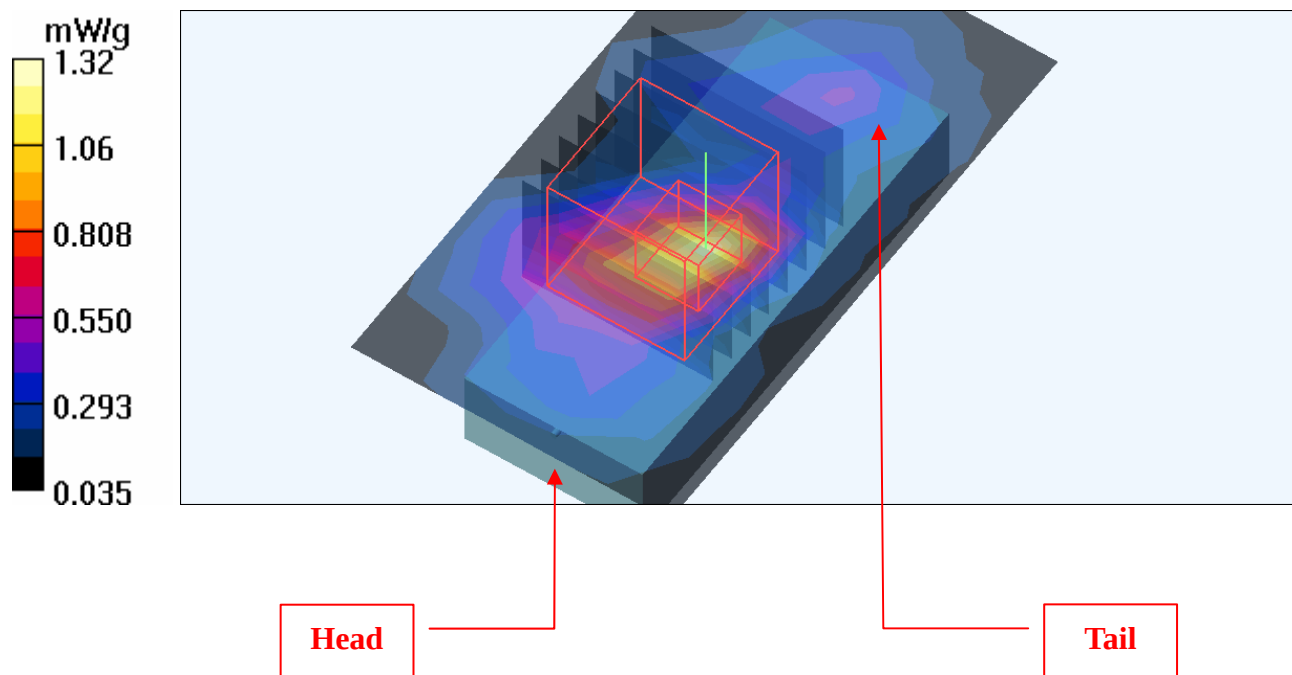
Mid Channel 40/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 8.85 V/m

Peak SAR (extrapolated) = 3.09 W/kg

SAR(1 g) = **0.930 mW/g**; SAR(10 g) = 0.344 mW/g

Maximum value of SAR (measured) = 1.32 mW/g



Date/Time: 2009/7/13 03:01:19

Test Laboratory: Bureau Veritas ADT

M01-11a-Ch48

DUT: 3Com Wireless Dual Band 11n USB Adapter ; Type: WL-606

Communication System: 802.11a ; Frequency: 5240 MHz ; Duty Cycle: 1:1 ; Modulation type: BPSK
Medium: MSL5800 Medium parameters used: $f = 5240$ MHz; $\sigma = 5.31$ mho/m; $\epsilon_r = 49.3$; $\rho = 1000$ kg/m³
Phantom section: Flat Section ; Separation distance : 5 mm (The bottom side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV3 - SN3504 ; ConvF(4.38, 4.38, 4.38) ; Calibrated: 2009/1/21
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510 ; Calibrated: 2009/1/21
- Phantom: SAM 12 ; Type: SAM V4.0 ; Serial: TP 1202
- Measurement SW: DASY4, V4.7 Build 80 ; Postprocessing SW: SEMCAD, V1.8 Build 186

High Channel 48/Area Scan (6x10x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 1.10 mW/g

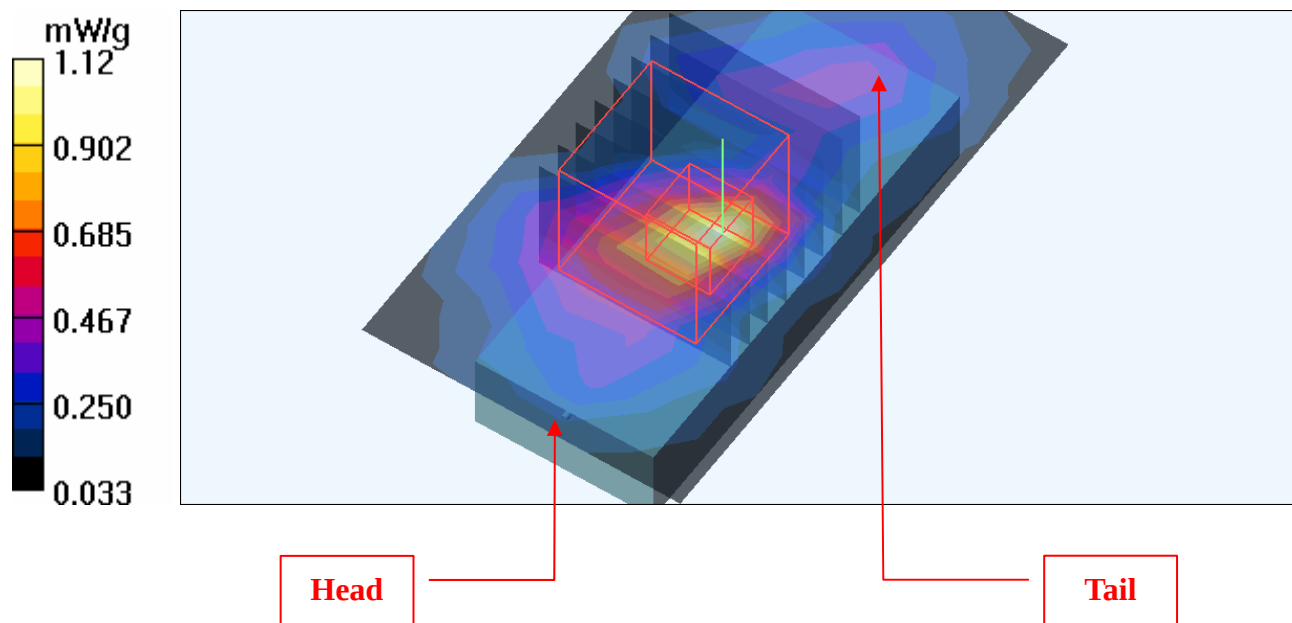
High Channel 48/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 8.30 V/m

Peak SAR (extrapolated) = 2.59 W/kg

SAR(1 g) = **0.794 mW/g**; SAR(10 g) = 0.288 mW/g

Maximum value of SAR (measured) = 1.12 mW/g



Date/Time: 2009/7/13 02:11:09

Test Laboratory: Bureau Veritas ADT

M02-11a-Ch36 / Main

DUT: 3Com Wireless Dual Band 11n USB Adapter ; Type: WL-606

Communication System: 802.11a ; Frequency: 5180 MHz ; Duty Cycle: 1:1 ; Modulation type: BPSK
Medium: MSL5800 Medium parameters used: $f = 5180$ MHz; $\sigma = 5.23$ mho/m; $\epsilon_r = 49.4$; $\rho = 1000$ kg/m³
Phantom section: Flat Section ; Separation distance : 5 mm (The bottom side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV3 - SN3504 ; ConvF(4.38, 4.38, 4.38) ; Calibrated: 2009/1/21
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510 ; Calibrated: 2009/1/21
- Phantom: SAM 12 ; Type: SAM V4.0 ; Serial: TP 1202
- Measurement SW: DASY4, V4.7 Build 80 ; Postprocessing SW: SEMCAD, V1.8 Build 186

Low Channel 36/Area Scan (6x10x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.850 mW/g

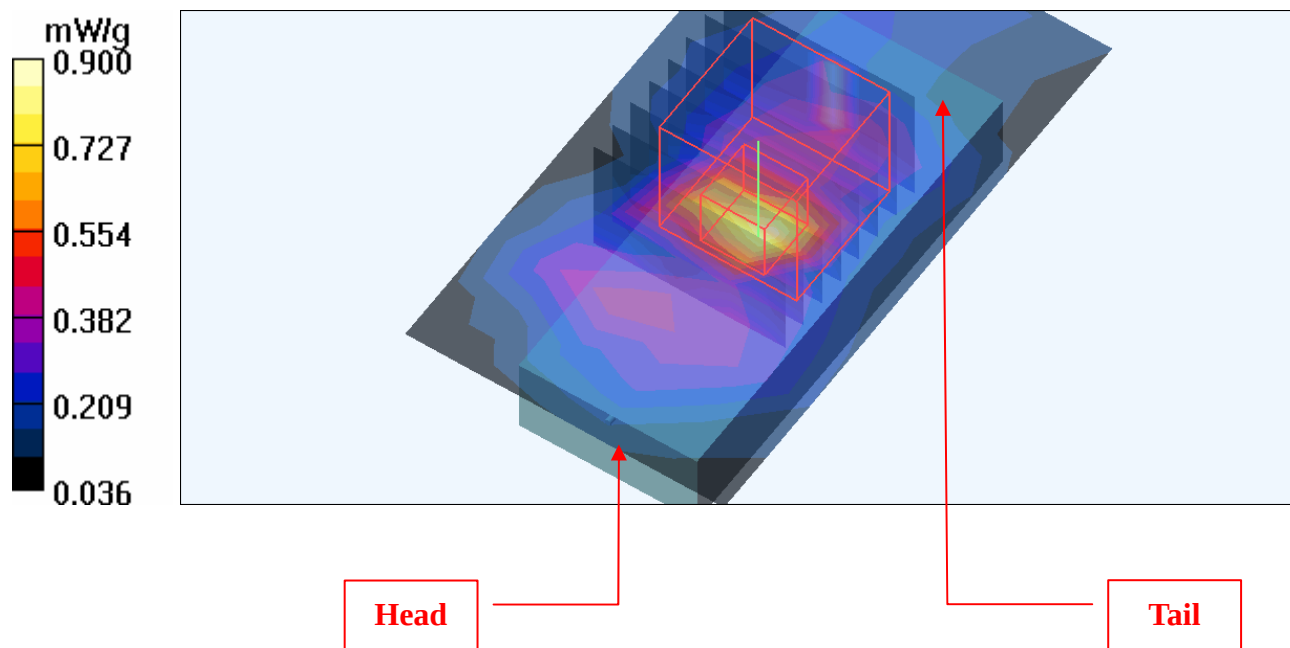
Low Channel 36/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 7.80 V/m

Peak SAR (extrapolated) = 2.08 W/kg

SAR(1 g) = **0.611 mW/g**; SAR(10 g) = 0.235 mW/g

Maximum value of SAR (measured) = 0.900 mW/g



Date/Time: 2009/7/13 03:26:12

Test Laboratory: Bureau Veritas ADT

M03-11a-Ch60

DUT: 3Com Wireless Dual Band 11n USB Adapter ; Type: WL-606

Communication System: 802.11a ; Frequency: 5300 MHz ; Duty Cycle: 1:1 ; Modulation type: BPSK
Medium: MSL5800 Medium parameters used: $f = 5300$ MHz; $\sigma = 5.39$ mho/m; $\epsilon_r = 49.2$; $\rho = 1000$ kg/m³
Phantom section: Flat Section ; Separation distance : 5 mm (The bottom side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV3 - SN3504 ; ConvF(4.06, 4.06, 4.06) ; Calibrated: 2009/1/21
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510 ; Calibrated: 2009/1/21
- Phantom: SAM 12 ; Type: SAM V4.0 ; Serial: TP 1202
- Measurement SW: DASY4, V4.7 Build 80 ; Postprocessing SW: SEMCAD, V1.8 Build 186

Mid Channel 60/Area Scan (6x10x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.968 mW/g

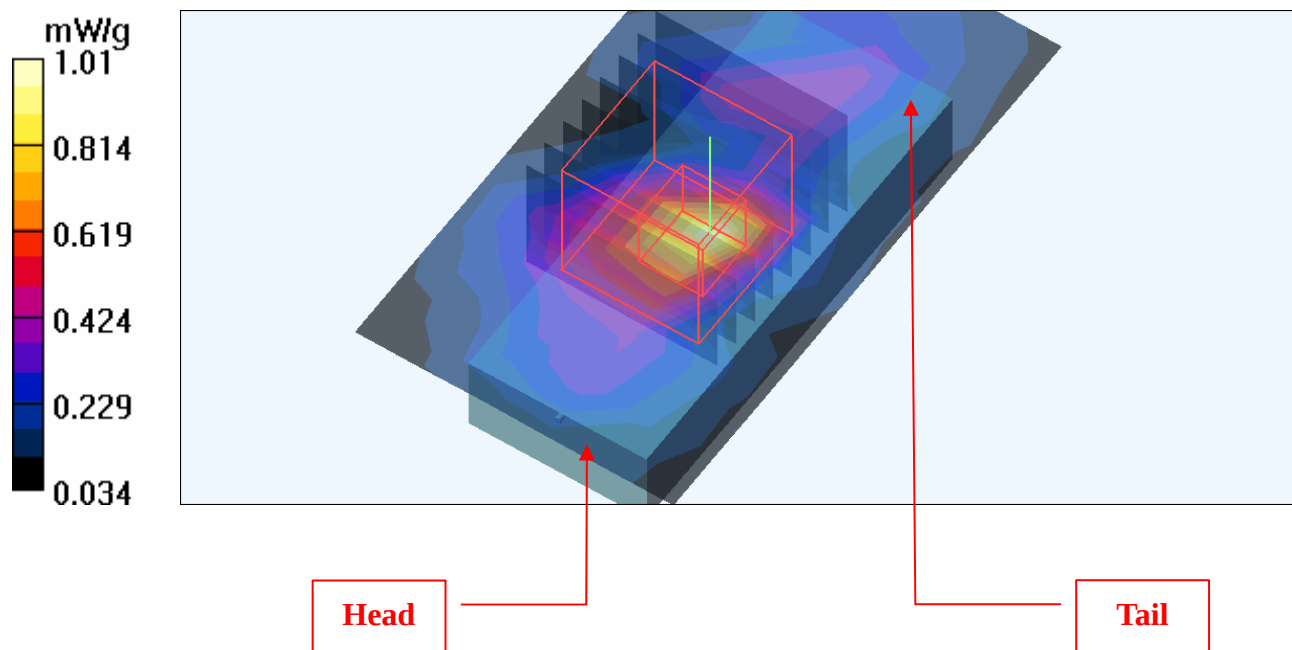
Mid Channel 60/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 8.40 V/m

Peak SAR (extrapolated) = 2.60 W/kg

SAR(1 g) = **0.729 mW/g**; SAR(10 g) = 0.268 mW/g

Maximum value of SAR (measured) = 1.01 mW/g



Date/Time: 2009/7/13 03:54:24

Test Laboratory: Bureau Veritas ADT

M04-11a-Ch60 / Main

DUT: 3Com Wireless Dual Band 11n USB Adapter ; Type: WL-606

Communication System: 802.11a ; Frequency: 5300 MHz ; Duty Cycle: 1:1 ; Modulation type: BPSK
 Medium: MSL5800 Medium parameters used: $f = 5300$ MHz; $\sigma = 5.39$ mho/m; $\epsilon_r = 49.2$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section ; Separation distance : 5 mm (The bottom side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV3 - SN3504 ; ConvF(4.06, 4.06, 4.06) ; Calibrated: 2009/1/21
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510 ; Calibrated: 2009/1/21
- Phantom: SAM 12 ; Type: SAM V4.0 ; Serial: TP 1202
- Measurement SW: DASY4, V4.7 Build 80 ; Postprocessing SW: SEMCAD, V1.8 Build 186

Mid Channel 60/Area Scan (6x10x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.482 mW/g

Mid Channel 60/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 6.07 V/m

Peak SAR (extrapolated) = 1.36 W/kg

SAR(1 g) = 0.375 mW/g; SAR(10 g) = 0.164 mW/g

Maximum value of SAR (measured) = 0.528 mW/g

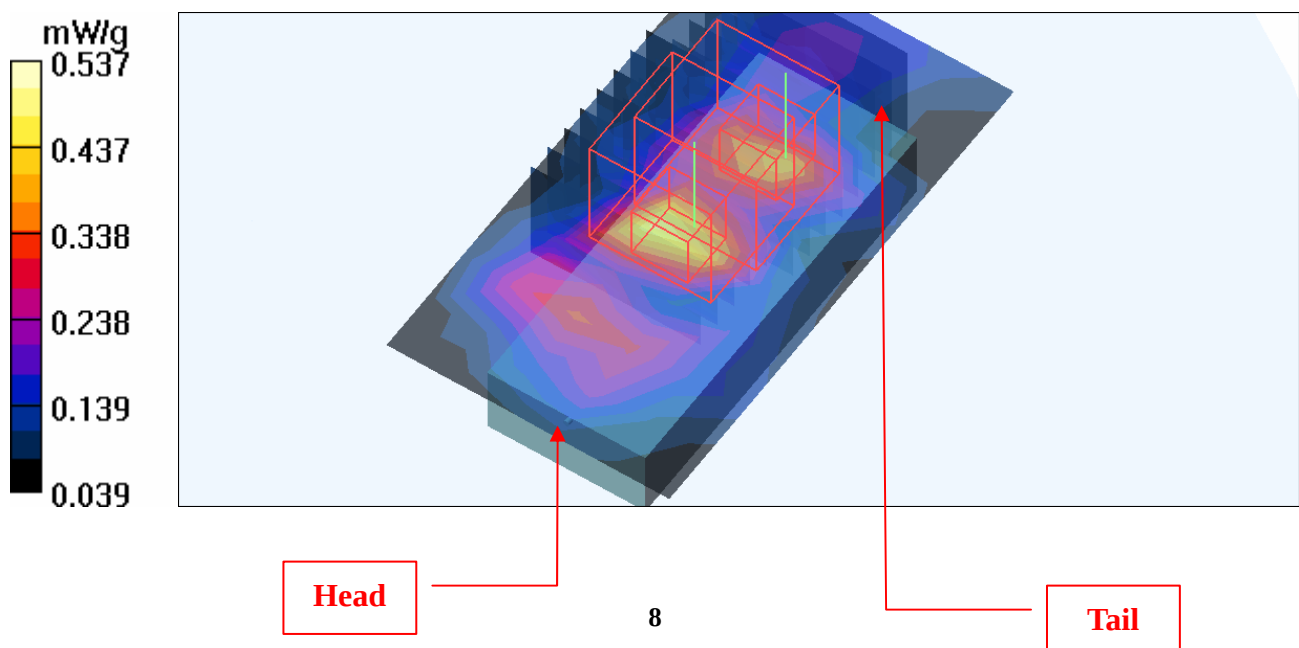
Mid Channel 60/Zoom Scan (8x8x8)/Cube 1: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 6.07 V/m

Peak SAR (extrapolated) = 1.39 W/kg

SAR(1 g) = 0.325 mW/g; SAR(10 g) = 0.154 mW/g

Maximum value of SAR (measured) = 0.537 mW/g



Date/Time: 2009/7/13 05:33:01

Test Laboratory: Bureau Veritas ADT

M05-11a-Ch100

DUT: 3Com Wireless Dual Band 11n USB Adapter ; Type: WL-606

Communication System: 802.11a ; Frequency: 5500 MHz ; Duty Cycle: 1:1 ; Modulation type: BPSK
 Medium: MSL5800 Medium parameters used: $f = 5500$ MHz; $\sigma = 5.68$ mho/m; $\epsilon_r = 48.8$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section ; Separation distance : 5 mm (The bottom side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV3 - SN3504 ; ConvF(3.98, 3.98, 3.98) ; Calibrated: 2009/1/21
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510 ; Calibrated: 2009/1/21
- Phantom: SAM 12 ; Type: SAM V4.0 ; Serial: TP 1202
- Measurement SW: DASY4, V4.7 Build 80 ; Postprocessing SW: SEMCAD, V1.8 Build 186

Low Channel 100/Area Scan (6x10x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.904 mW/g

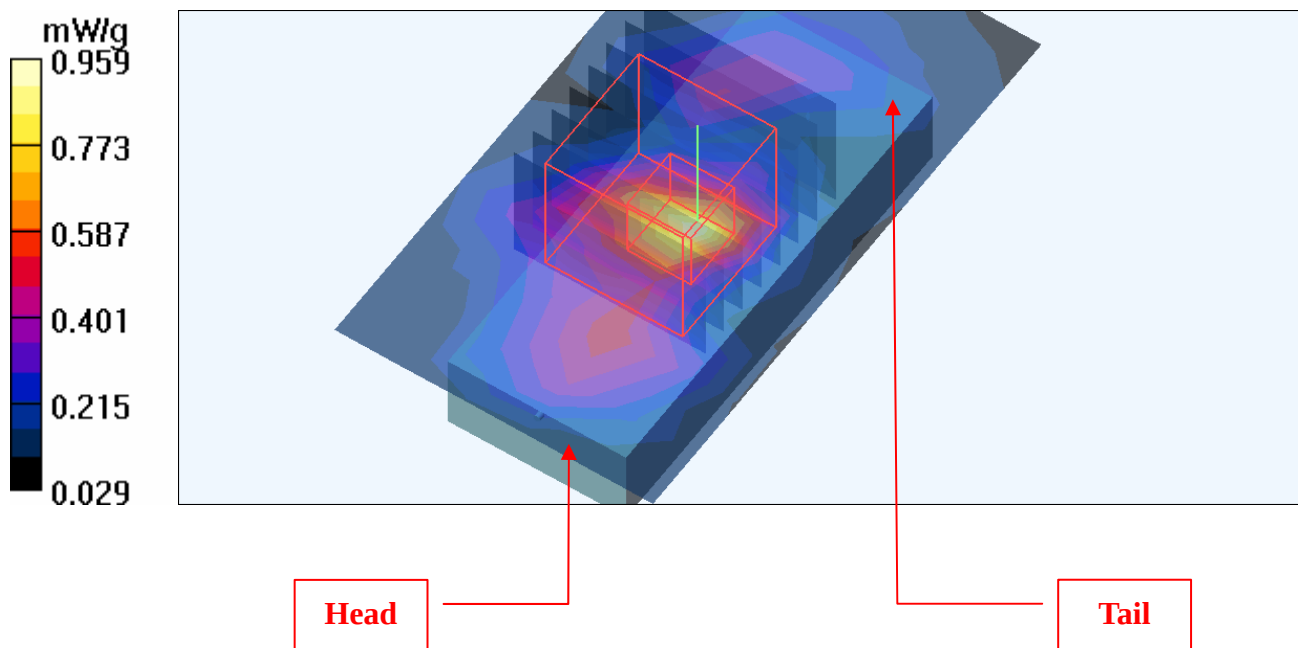
Low Channel 100/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 8.53 V/m

Peak SAR (extrapolated) = 3.09 W/kg

SAR(1 g) = **0.724 mW/g**; SAR(10 g) = 0.269 mW/g

Maximum value of SAR (measured) = 0.959 mW/g



Date/Time: 2009/7/13 06:07:17

Test Laboratory: Bureau Veritas ADT

M05-11a-Ch104

DUT: 3Com Wireless Dual Band 11n USB Adapter ; Type: WL-606

Communication System: 802.11a ; Frequency: 5520 MHz ; Duty Cycle: 1:1 ; Modulation type: BPSK
Medium: MSL5800 Medium parameters used: $f = 5520$ MHz; $\sigma = 5.71$ mho/m; $\epsilon_r = 48.7$; $\rho = 1000$ kg/m³
Phantom section: Flat Section ; Separation distance : 5 mm (The bottom side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV3 - SN3504 ; ConvF(3.98, 3.98, 3.98) ; Calibrated: 2009/1/21
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510 ; Calibrated: 2009/1/21
- Phantom: SAM 12 ; Type: SAM V4.0 ; Serial: TP 1202
- Measurement SW: DASY4, V4.7 Build 80 ; Postprocessing SW: SEMCAD, V1.8 Build 186

Mid Channel 104/Area Scan (6x10x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.858 mW/g

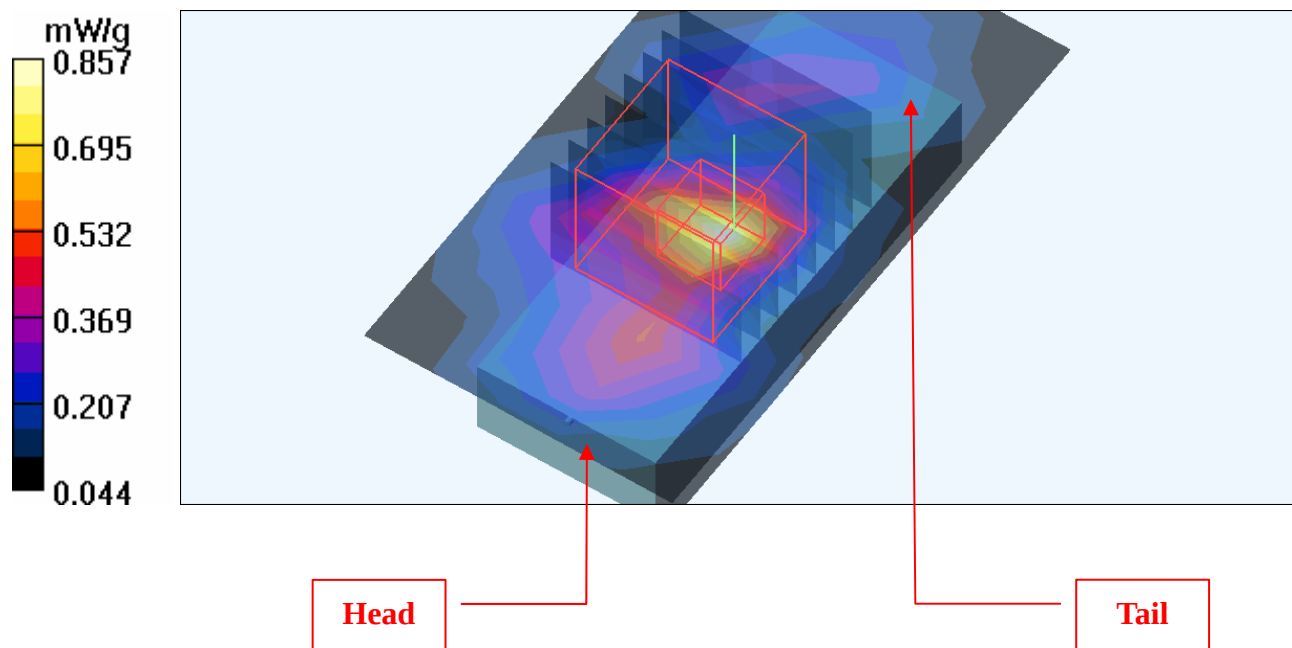
Mid Channel 104/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 8.05 V/m

Peak SAR (extrapolated) = 2.69 W/kg

SAR(1 g) = **0.654 mW/g**; SAR(10 g) = 0.257 mW/g

Maximum value of SAR (measured) = 0.857 mW/g



Date/Time: 2009/7/13 06:39:30

Test Laboratory: Bureau Veritas ADT

M05-11a-Ch116

DUT: 3Com Wireless Dual Band 11n USB Adapter ; Type: WL-606

Communication System: 802.11a ; Frequency: 5580 MHz ; Duty Cycle: 1:1 ; Modulation type: BPSK
 Medium: MSL5800 Medium parameters used: $f = 5580$ MHz; $\sigma = 5.8$ mho/m; $\epsilon_r = 48.6$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section ; Separation distance : 5 mm (The bottom side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV3 - SN3504 ; ConvF(3.91, 3.91, 3.91) ; Calibrated: 2009/1/21
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510 ; Calibrated: 2009/1/21
- Phantom: SAM 12 ; Type: SAM V4.0 ; Serial: TP 1202
- Measurement SW: DASY4, V4.7 Build 80 ; Postprocessing SW: SEMCAD, V1.8 Build 186

Mid Channel 116/Area Scan (6x10x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.922 mW/g

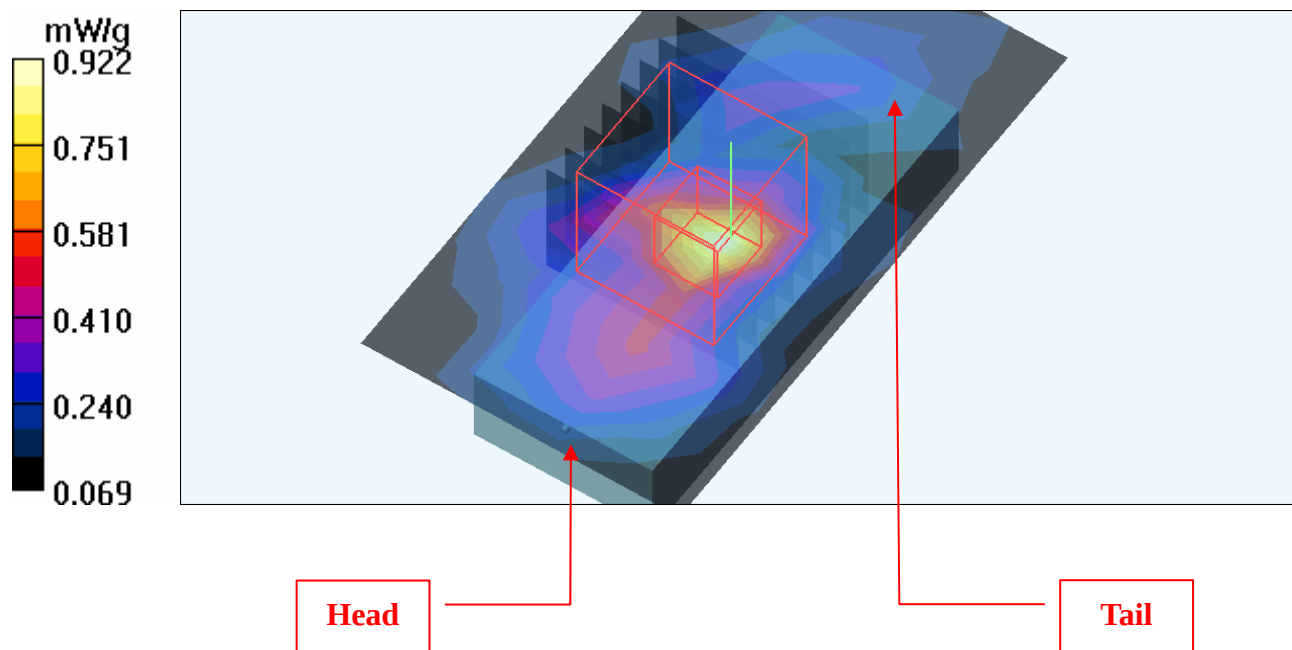
Mid Channel 116/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 7.76 V/m

Peak SAR (extrapolated) = 2.84 W/kg

SAR(1 g) = **0.686 mW/g**; SAR(10 g) = 0.264 mW/g

Maximum value of SAR (measured) = 0.900 mW/g



Date/Time: 2009/7/13 04:23:54

Test Laboratory: Bureau Veritas ADT

M05-11a-Ch120

DUT: 3Com Wireless Dual Band 11n USB Adapter ; Type: WL-606

Communication System: 802.11a ; Frequency: 5600 MHz ; Duty Cycle: 1:1 ; Modulation type: BPSK
 Medium: MSL5800 Medium parameters used: $f = 5600$ MHz; $\sigma = 5.82$ mho/m; $\epsilon_r = 48.5$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section ; Separation distance : 5 mm (The bottom side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV3 - SN3504 ; ConvF(3.91, 3.91, 3.91) ; Calibrated: 2009/1/21
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510 ; Calibrated: 2009/1/21
- Phantom: SAM 12 ; Type: SAM V4.0 ; Serial: TP 1202
- Measurement SW: DASY4, V4.7 Build 80 ; Postprocessing SW: SEMCAD, V1.8 Build 186

Mid Channel 120/Area Scan (6x10x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.936 mW/g

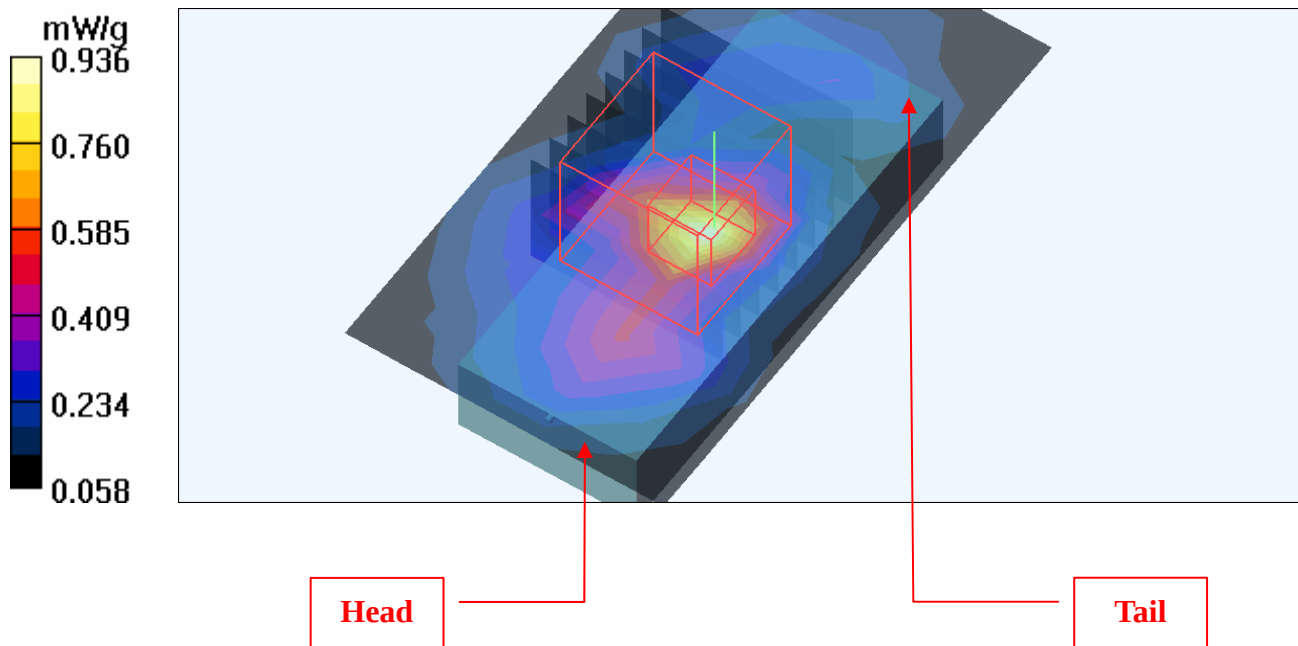
Mid Channel 120/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 7.78 V/m

Peak SAR (extrapolated) = 3.27 W/kg

SAR(1 g) = **0.700 mW/g**; SAR(10 g) = 0.266 mW/g

Maximum value of SAR (measured) = 0.899 mW/g



Date/Time: 2009/7/13 07:02:20

Test Laboratory: Bureau Veritas ADT

M05-11a-Ch124

DUT: 3Com Wireless Dual Band 11n USB Adapter ; Type: WL-606

Communication System: 802.11a ; Frequency: 5620 MHz ; Duty Cycle: 1:1 ; Modulation type: BPSK
 Medium: MSL5800 Medium parameters used: $f = 5620$ MHz; $\sigma = 5.85$ mho/m; $\epsilon_r = 48.5$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section ; Separation distance : 5 mm (The bottom side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV3 - SN3504 ; ConvF(3.91, 3.91, 3.91) ; Calibrated: 2009/1/21
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510 ; Calibrated: 2009/1/21
- Phantom: SAM 12 ; Type: SAM V4.0 ; Serial: TP 1202
- Measurement SW: DASY4, V4.7 Build 80 ; Postprocessing SW: SEMCAD, V1.8 Build 186

Mid Channel 124/Area Scan (6x10x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.998 mW/g

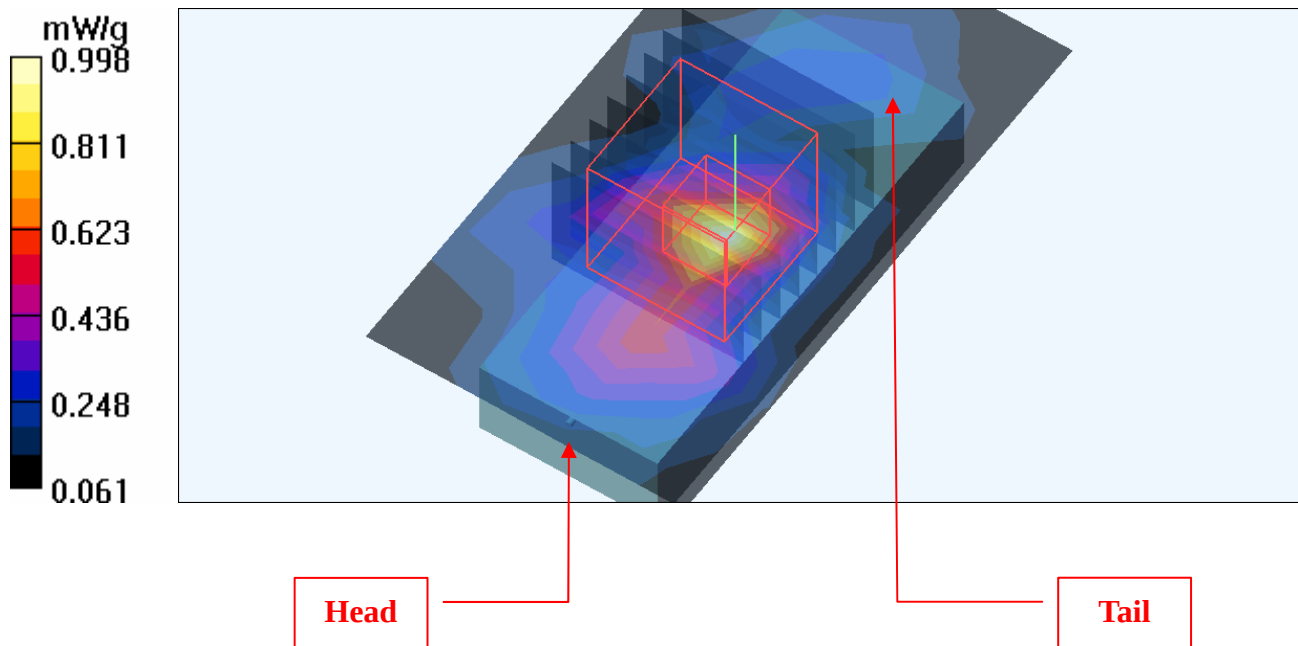
Mid Channel 124/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 7.74 V/m

Peak SAR (extrapolated) = 2.86 W/kg

SAR(1 g) = **0.692 mW/g**; SAR(10 g) = 0.274 mW/g

Maximum value of SAR (measured) = 0.937 mW/g



Date/Time: 2009/7/13 07:26:17

Test Laboratory: Bureau Veritas ADT

M05-11a-Ch136

DUT: 3Com Wireless Dual Band 11n USB Adapter ; Type: WL-606

Communication System: 802.11a ; Frequency: 5680 MHz ; Duty Cycle: 1:1 ; Modulation type: BPSK
Medium: MSL5800 Medium parameters used: $f = 5680$ MHz; $\sigma = 5.95$ mho/m; $\epsilon_r = 48.4$; $\rho = 1000$ kg/m³
Phantom section: Flat Section ; Separation distance : 5 mm (The bottom side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV3 - SN3504 ; ConvF(3.91, 3.91, 3.91) ; Calibrated: 2009/1/21
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510 ; Calibrated: 2009/1/21
- Phantom: SAM 12 ; Type: SAM V4.0 ; Serial: TP 1202
- Measurement SW: DASY4, V4.7 Build 80 ; Postprocessing SW: SEMCAD, V1.8 Build 186

Mid Channel 136/Area Scan (6x10x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 1.14 mW/g

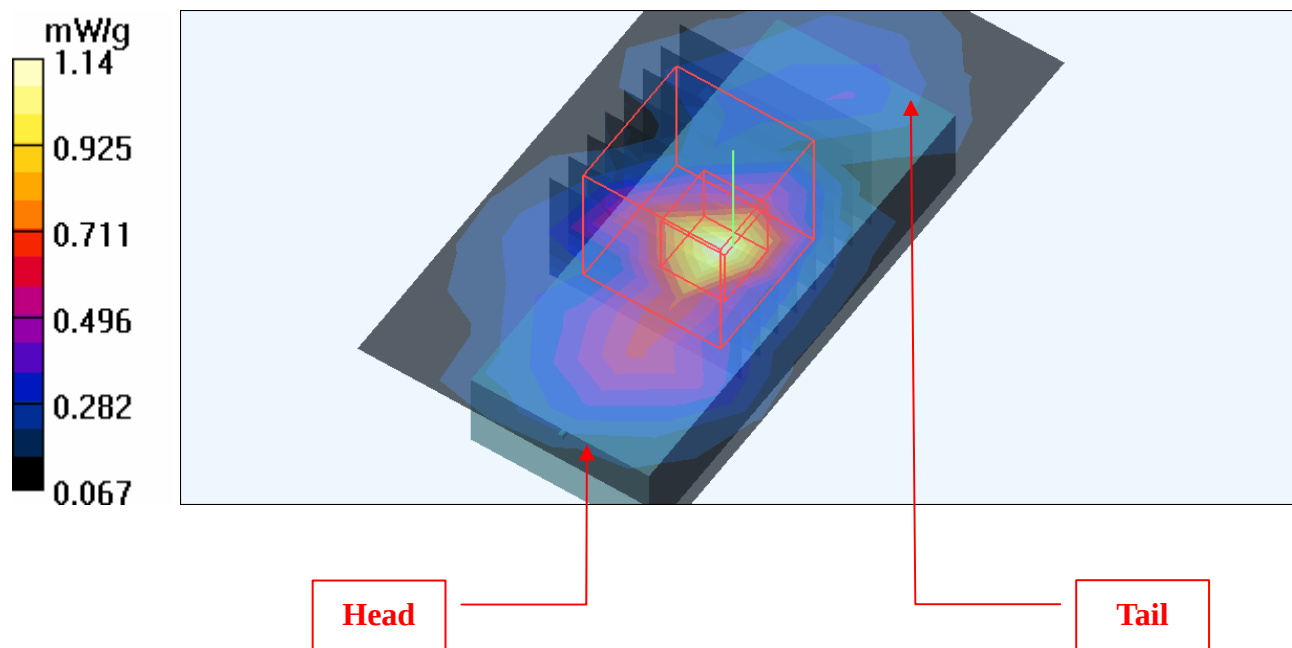
Mid Channel 136/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 8.19 V/m

Peak SAR (extrapolated) = 3.45 W/kg

SAR(1 g) = **0.851 mW/g**; SAR(10 g) = 0.325 mW/g

Maximum value of SAR (measured) = 1.11 mW/g



Date/Time: 2009/7/13 07:48:43

Test Laboratory: Bureau Veritas ADT

M05-11a-Ch140

DUT: 3Com Wireless Dual Band 11n USB Adapter ; Type: WL-606

Communication System: 802.11a ; Frequency: 5700 MHz ; Duty Cycle: 1:1 ; Modulation type: BPSK
Medium: MSL5800 Medium parameters used: $f = 5700$ MHz; $\sigma = 5.98$ mho/m; $\epsilon_r = 48.3$; $\rho = 1000$ kg/m³
Phantom section: Flat Section ; Separation distance : 5 mm (The bottom side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV3 - SN3504 ; ConvF(3.91, 3.91, 3.91) ; Calibrated: 2009/1/21
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510 ; Calibrated: 2009/1/21
- Phantom: SAM 12 ; Type: SAM V4.0 ; Serial: TP 1202
- Measurement SW: DASY4, V4.7 Build 80 ; Postprocessing SW: SEMCAD, V1.8 Build 186

High Channel 140/Area Scan (6x10x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.948 mW/g

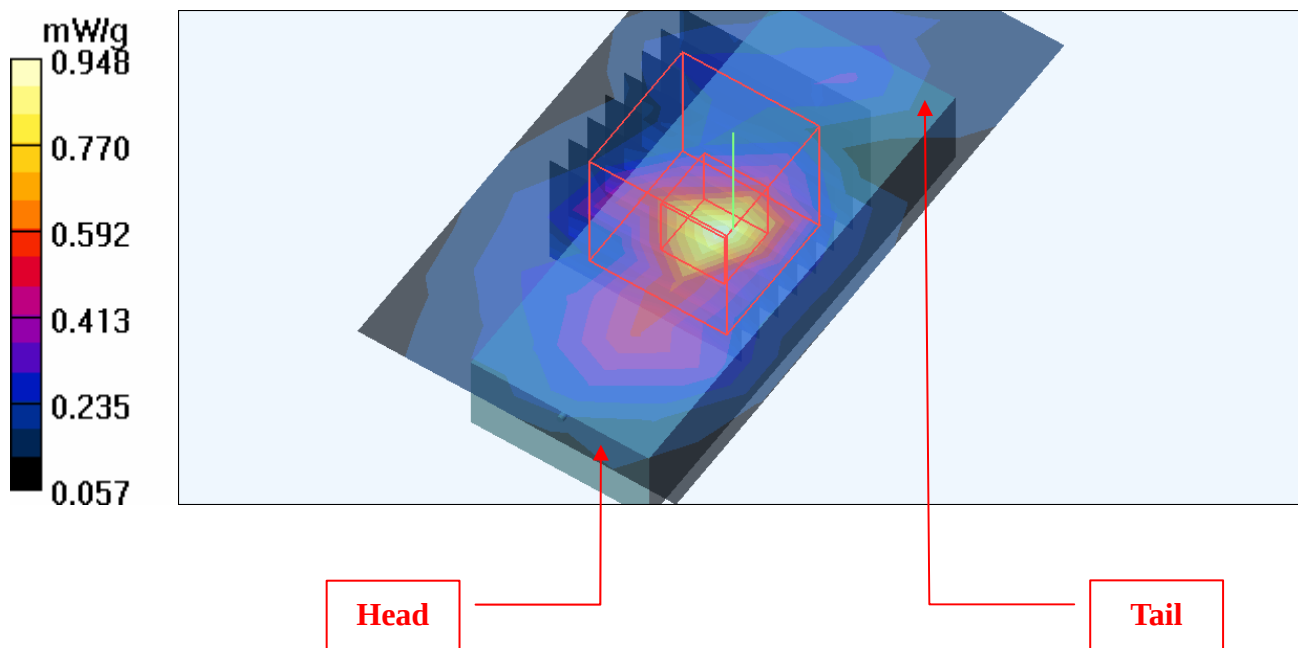
High Channel 140/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 7.34 V/m

Peak SAR (extrapolated) = 3.48 W/kg

SAR(1 g) = **0.719 mW/g**; SAR(10 g) = 0.275 mW/g

Maximum value of SAR (measured) = 0.937 mW/g



Date/Time: 2009/7/13 05:06:16

Test Laboratory: Bureau Veritas ADT

M06-11a-Ch120 / Main

DUT: 3Com Wireless Dual Band 11n USB Adapter ; Type: WL-606

Communication System: 802.11a ; Frequency: 5600 MHz ; Duty Cycle: 1:1 ; Modulation type: BPSK
Medium: MSL5800 Medium parameters used: $f = 5600$ MHz; $\sigma = 5.82$ mho/m; $\epsilon_r = 48.5$; $\rho = 1000$ kg/m³
Phantom section: Flat Section ; Separation distance : 5 mm (The bottom side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV3 - SN3504 ; ConvF(3.91, 3.91, 3.91) ; Calibrated: 2009/1/21
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510 ; Calibrated: 2009/1/21
- Phantom: SAM 12 ; Type: SAM V4.0 ; Serial: TP 1202
- Measurement SW: DASY4, V4.7 Build 80 ; Postprocessing SW: SEMCAD, V1.8 Build 186

Mid Channel 120/Area Scan (6x10x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.587 mW/g

Mid Channel 120/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 6.03 V/m

Peak SAR (extrapolated) = 2.61 W/kg

SAR(1 g) = 0.483 mW/g; SAR(10 g) = 0.193 mW/g

Maximum value of SAR (measured) = 0.699 mW/g

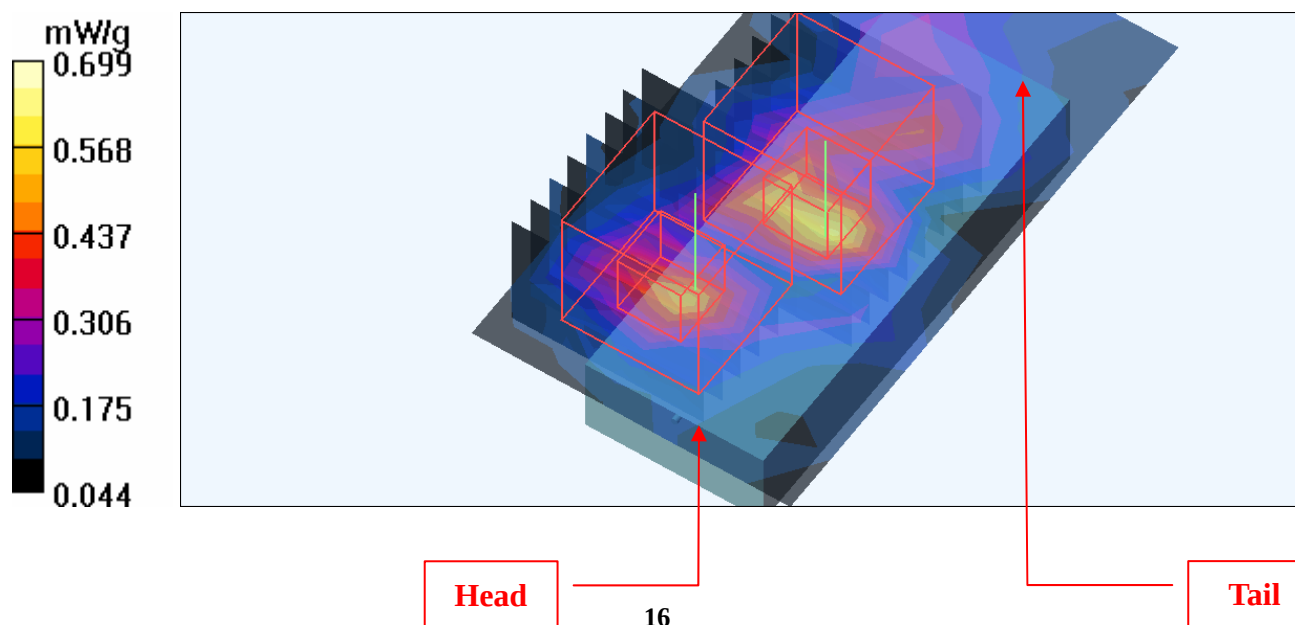
Mid Channel 120/Zoom Scan (8x8x8)/Cube 1: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 6.03 V/m

Peak SAR (extrapolated) = 2.56 W/kg

SAR(1 g) = 0.455 mW/g; SAR(10 g) = 0.177 mW/g

Maximum value of SAR (measured) = 0.571 mW/g



Date/Time: 2009/7/13 10:05:30

Test Laboratory: Bureau Veritas ADT

M07-11aN 20M-Ch36

DUT: 3Com Wireless Dual Band 11n USB Adapter ; Type: WL-606

Communication System: 11n 5G span20 ; Frequency: 5180 MHz ; Duty Cycle: 1:1 ; Modulation type: BPSK

Medium: MSL5800 Medium parameters used: $f = 5180$ MHz; $\sigma = 5.23$ mho/m; $\epsilon_r = 49.4$; $\rho = 1000$ kg/m³
Phantom section: Flat Section ; Separation distance : 5 mm (The bottom side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV3 - SN3504 ; ConvF(4.38, 4.38, 4.38) ; Calibrated: 2009/1/21
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510 ; Calibrated: 2009/1/21
- Phantom: SAM 12 ; Type: SAM V4.0 ; Serial: TP 1202
- Measurement SW: DASY4, V4.7 Build 80 ; Postprocessing SW: SEMCAD, V1.8 Build 186

Low Channel 36/Area Scan (6x10x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 1.35 mW/g

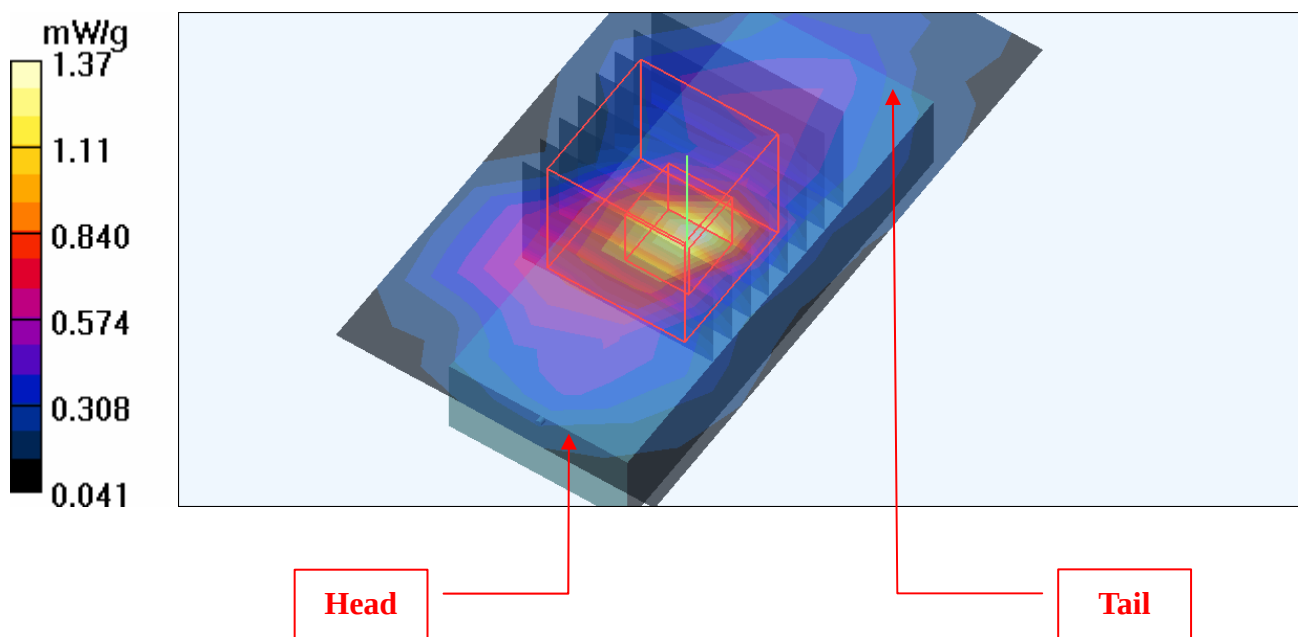
Low Channel 36/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 9.52 V/m

Peak SAR (extrapolated) = 3.26 W/kg

SAR(1 g) = 0.991 mW/g; SAR(10 g) = 0.369 mW/g

Maximum value of SAR (measured) = 1.37 mW/g



Date/Time: 2009/7/13 09:41:33

Test Laboratory: Bureau Veritas ADT

M07-11aN 20M-Ch40

DUT: 3Com Wireless Dual Band 11n USB Adapter ; Type: WL-606

Communication System: 11n 5G span20 ; Frequency: 5200 MHz ; Duty Cycle: 1:1 ; Modulation type: BPSK

Medium: MSL5800 Medium parameters used: $f = 5200$ MHz; $\sigma = 5.25$ mho/m; $\epsilon_r = 49.3$; $\rho = 1000$ kg/m³
Phantom section: Flat Section ; Separation distance : 5 mm (The bottom side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV3 - SN3504 ; ConvF(4.38, 4.38, 4.38) ; Calibrated: 2009/1/21
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510 ; Calibrated: 2009/1/21
- Phantom: SAM 12 ; Type: SAM V4.0 ; Serial: TP 1202
- Measurement SW: DASY4, V4.7 Build 80 ; Postprocessing SW: SEMCAD, V1.8 Build 186

Mid Channel 40/Area Scan (6x10x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 1.29 mW/g

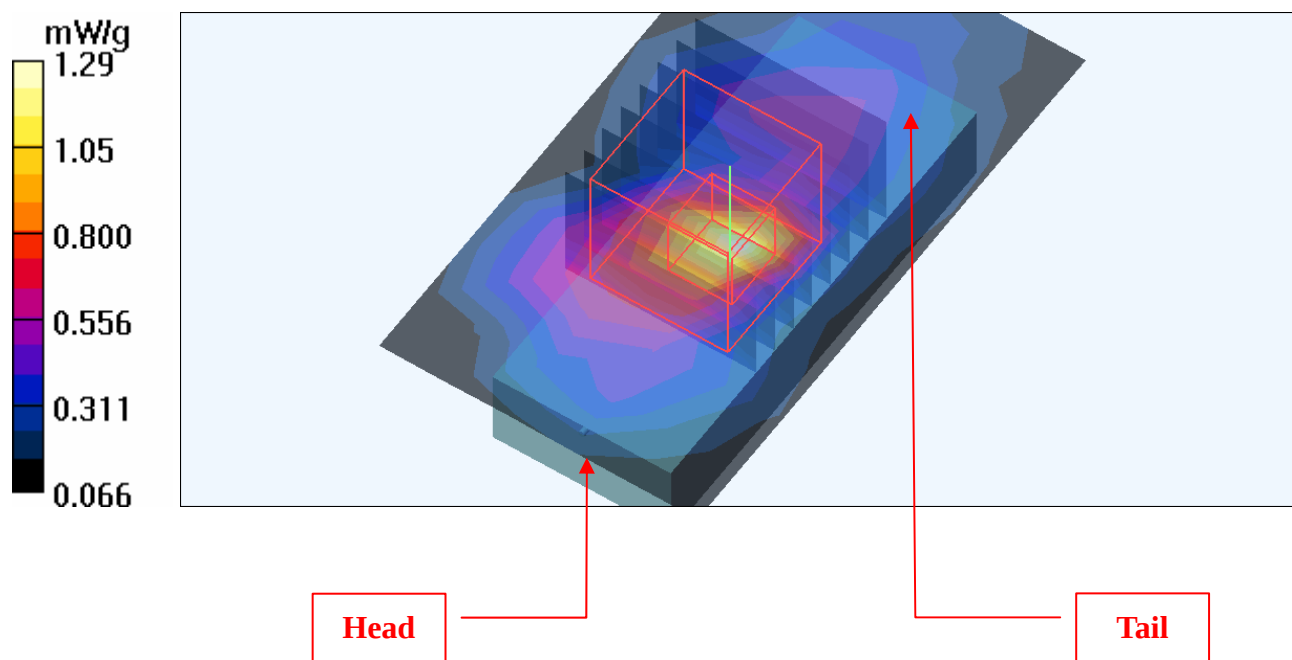
Mid Channel 40/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 9.18 V/m

Peak SAR (extrapolated) = 2.97 W/kg

SAR(1 g) = 0.927 mW/g; SAR(10 g) = 0.350 mW/g

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



Date/Time: 2009/7/13 10:27:52

Test Laboratory: Bureau Veritas ADT

M07-11aN 20M-Ch48

DUT: 3Com Wireless Dual Band 11n USB Adapter ; Type: WL-606

Communication System: 11n 5G span20 ; Frequency: 5240 MHz ; Duty Cycle: 1:1 ; Modulation type: BPSK

Medium: MSL5800 Medium parameters used: $f = 5240$ MHz; $\sigma = 5.31$ mho/m; $\epsilon_r = 49.3$; $\rho = 1000$ kg/m³
Phantom section: Flat Section ; Separation distance : 5 mm (The bottom side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV3 - SN3504 ; ConvF(4.38, 4.38, 4.38) ; Calibrated: 2009/1/21
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510 ; Calibrated: 2009/1/21
- Phantom: SAM 12 ; Type: SAM V4.0 ; Serial: TP 1202
- Measurement SW: DASY4, V4.7 Build 80 ; Postprocessing SW: SEMCAD, V1.8 Build 186

High Channel 48/Area Scan (6x10x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 1.18 mW/g

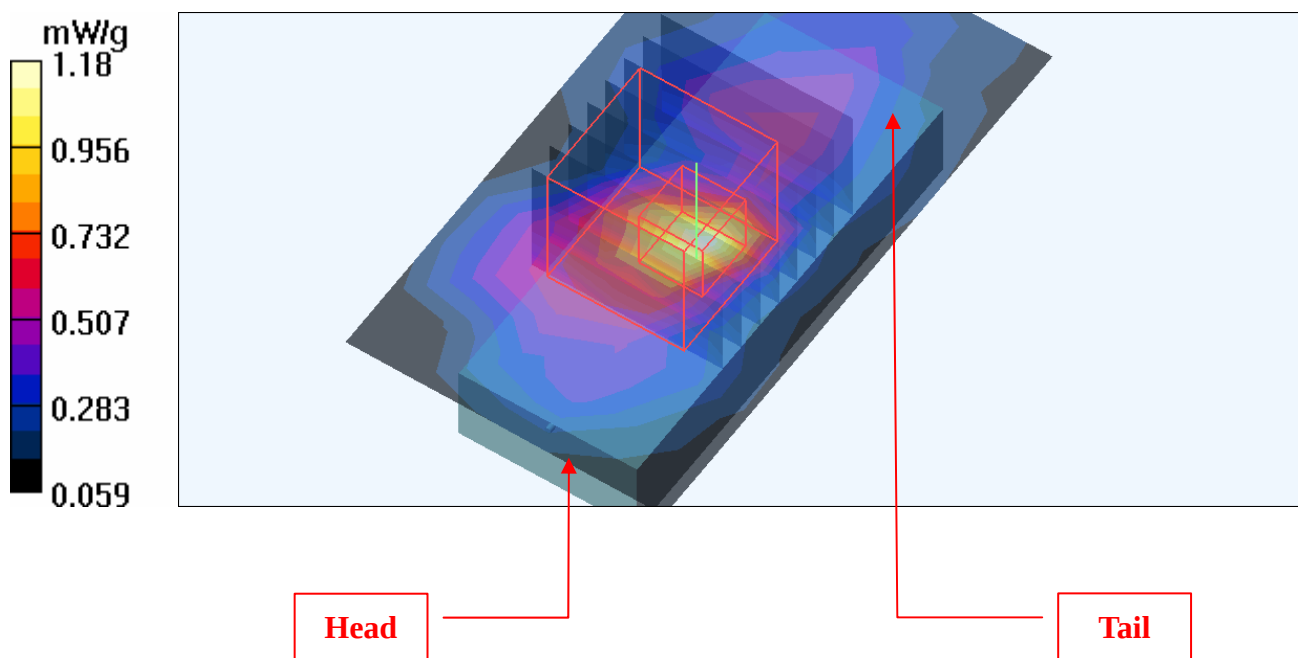
High Channel 48/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 9.00 V/m

Peak SAR (extrapolated) = 3.08 W/kg

SAR(1 g) = 0.863 mW/g; SAR(10 g) = 0.329 mW/g

Maximum value of SAR (measured) = 1.17 mW/g



Date/Time: 2009/7/13 10:53:09

Test Laboratory: Bureau Veritas ADT

M08-11aN 20M-Ch52

DUT: 3Com Wireless Dual Band 11n USB Adapter ; Type: WL-606

Communication System: 11n 5G span20 ; Frequency: 5260 MHz ; Duty Cycle: 1:1 ; Modulation type: BPSK

Medium: MSL5800 Medium parameters used: $f = 5260$ MHz; $\sigma = 5.34$ mho/m; $\epsilon_r = 49.2$; $\rho = 1000$ kg/m³
Phantom section: Flat Section ; Separation distance : 5 mm (The bottom side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV3 - SN3504 ; ConvF(4.06, 4.06, 4.06) ; Calibrated: 2009/1/21
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510 ; Calibrated: 2009/1/21
- Phantom: SAM 12 ; Type: SAM V4.0 ; Serial: TP 1202
- Measurement SW: DASY4, V4.7 Build 80 ; Postprocessing SW: SEMCAD, V1.8 Build 186

Low Channel 52/Area Scan (6x10x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.975 mW/g

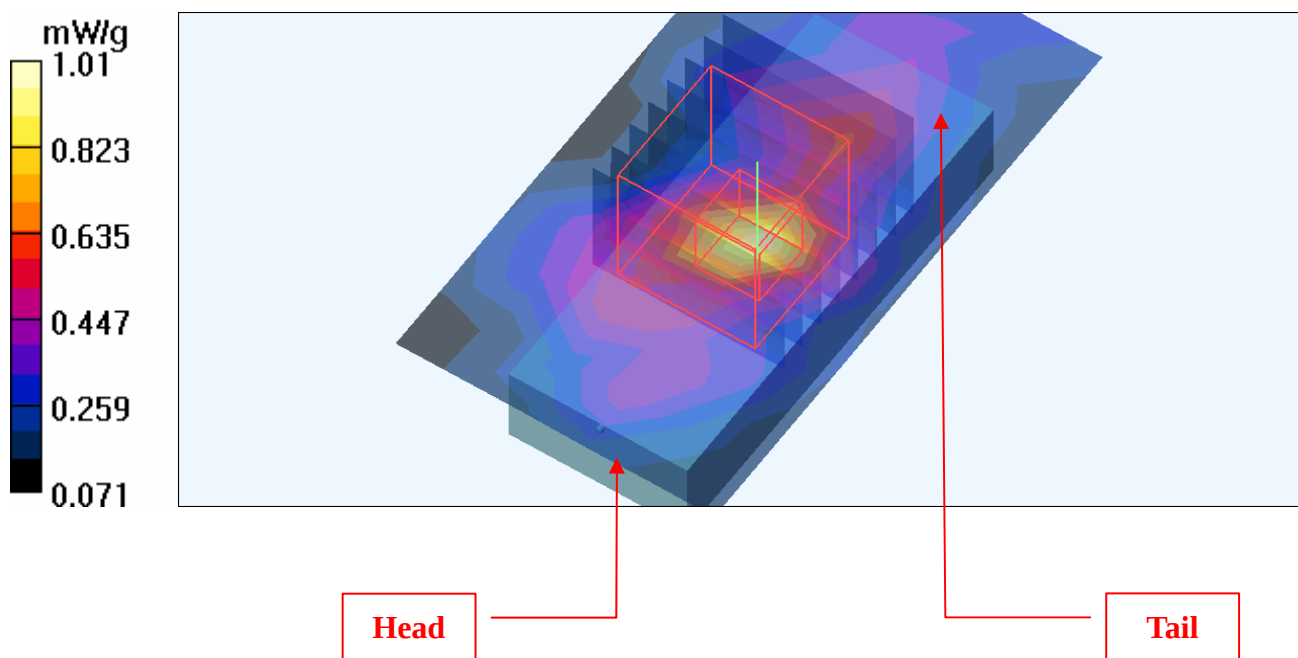
Low Channel 52/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 8.44 V/m

Peak SAR (extrapolated) = 1.99 W/kg

SAR(1 g) = 0.715 mW/g; SAR(10 g) = 0.307 mW/g

Maximum value of SAR (measured) = 1.01 mW/g



Date/Time: 2009/7/13 11:44:09

Test Laboratory: Bureau Veritas ADT

M09-11aN 20M-Ch100

DUT: 3Com Wireless Dual Band 11n USB Adapter ; Type: WL-606

Communication System: 11n 5G span20 ; Frequency: 5500 MHz ; Duty Cycle: 1:1 ; Modulation type: BPSK

Medium: MSL5800 Medium parameters used: $f = 5500$ MHz; $\sigma = 5.68$ mho/m; $\epsilon_r = 48.8$; $\rho = 1000$ kg/m³
Phantom section: Flat Section ; Separation distance : 5 mm (The bottom side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV3 - SN3504 ; ConvF(3.98, 3.98, 3.98) ; Calibrated: 2009/1/21
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510 ; Calibrated: 2009/1/21
- Phantom: SAM 12 ; Type: SAM V4.0 ; Serial: TP 1202
- Measurement SW: DASY4, V4.7 Build 80 ; Postprocessing SW: SEMCAD, V1.8 Build 186

Low Channel 100/Area Scan (6x10x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 1.16 mW/g

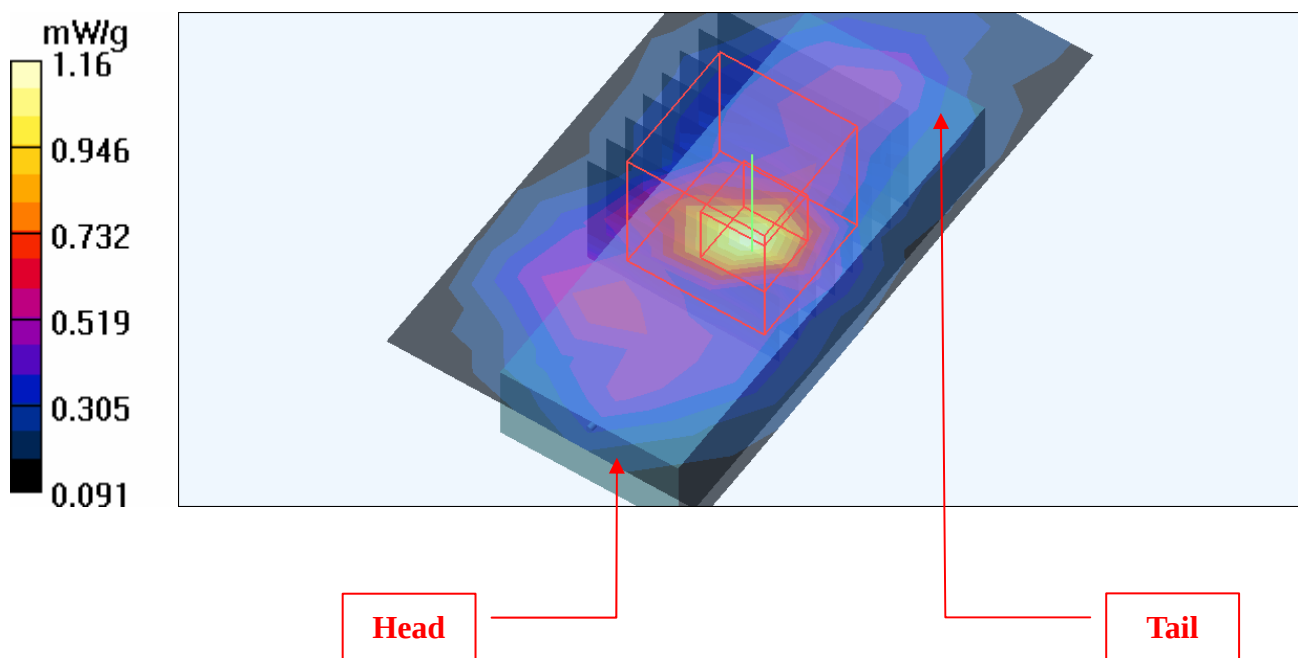
Low Channel 100/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 8.92 V/m

Peak SAR (extrapolated) = 2.91 W/kg

SAR(1 g) = 0.836 mW/g; SAR(10 g) = 0.340 mW/g

Maximum value of SAR (measured) = 1.10 mW/g



Date/Time: 2009/7/13 12:12:35

Test Laboratory: Bureau Veritas ADT

M09-11aN 20M-Ch104

DUT: 3Com Wireless Dual Band 11n USB Adapter ; Type: WL-606

Communication System: 11n 5G span20 ; Frequency: 5520 MHz ; Duty Cycle: 1:1 ; Modulation type: BPSK

Medium: MSL5800 Medium parameters used: $f = 5520$ MHz; $\sigma = 5.71$ mho/m; $\epsilon_r = 48.7$; $\rho = 1000$ kg/m³
Phantom section: Flat Section ; Separation distance : 5 mm (The bottom side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV3 - SN3504 ; ConvF(3.98, 3.98, 3.98) ; Calibrated: 2009/1/21
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510 ; Calibrated: 2009/1/21
- Phantom: SAM 12 ; Type: SAM V4.0 ; Serial: TP 1202
- Measurement SW: DASY4, V4.7 Build 80 ; Postprocessing SW: SEMCAD, V1.8 Build 186

Mid Channel 104/Area Scan (6x10x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 1.01 mW/g

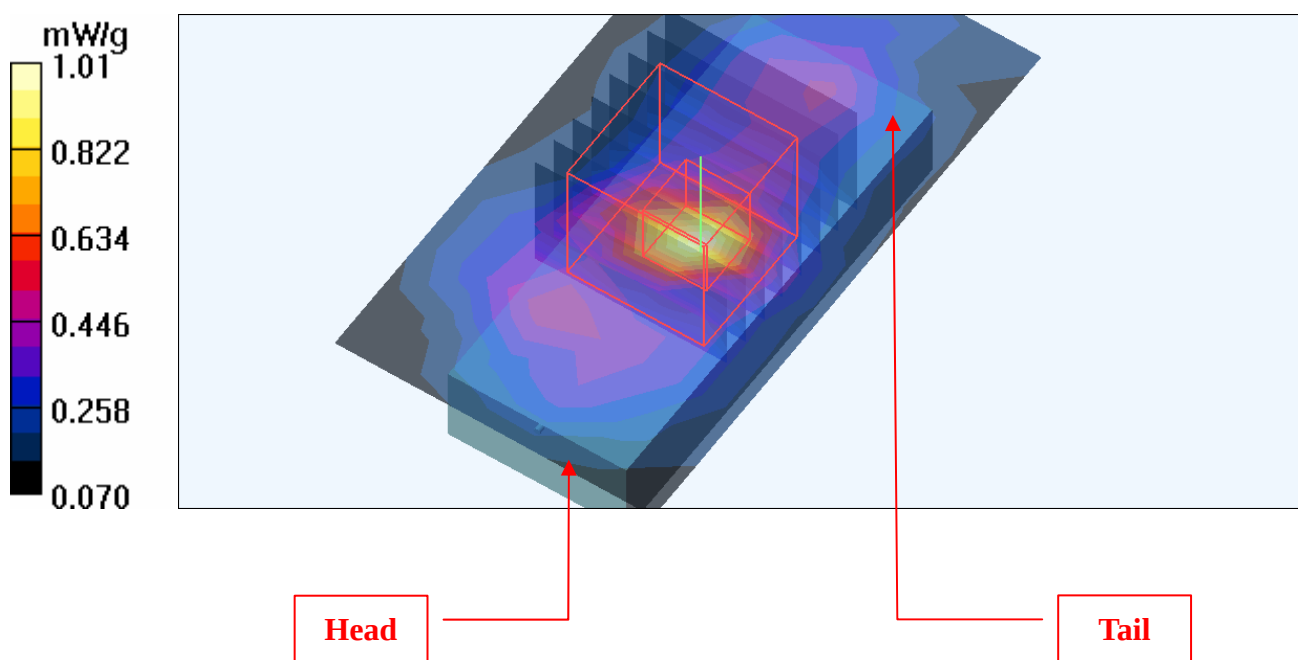
Mid Channel 104/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 8.36 V/m

Peak SAR (extrapolated) = 2.39 W/kg

SAR(1 g) = 0.723 mW/g; SAR(10 g) = 0.287 mW/g

Maximum value of SAR (measured) = 0.972 mW/g



Date/Time: 2009/7/13 13:07:26

Test Laboratory: Bureau Veritas ADT

M09-11aN 20M-Ch116

DUT: 3Com Wireless Dual Band 11n USB Adapter ; Type: WL-606

Communication System: 11n 5G span20 ; Frequency: 5580 MHz ; Duty Cycle: 1:1 ; Modulation type: BPSK

Medium: MSL5800 Medium parameters used: $f = 5580$ MHz; $\sigma = 5.8$ mho/m; $\epsilon_r = 48.6$; $\rho = 1000$ kg/m³
Phantom section: Flat Section ; Separation distance : 5 mm (The bottom side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV3 - SN3504 ; ConvF(3.91, 3.91, 3.91) ; Calibrated: 2009/1/21
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510 ; Calibrated: 2009/1/21
- Phantom: SAM 12 ; Type: SAM V4.0 ; Serial: TP 1202
- Measurement SW: DASY4, V4.7 Build 80 ; Postprocessing SW: SEMCAD, V1.8 Build 186

Mid Channel 116/Area Scan (6x10x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.979 mW/g

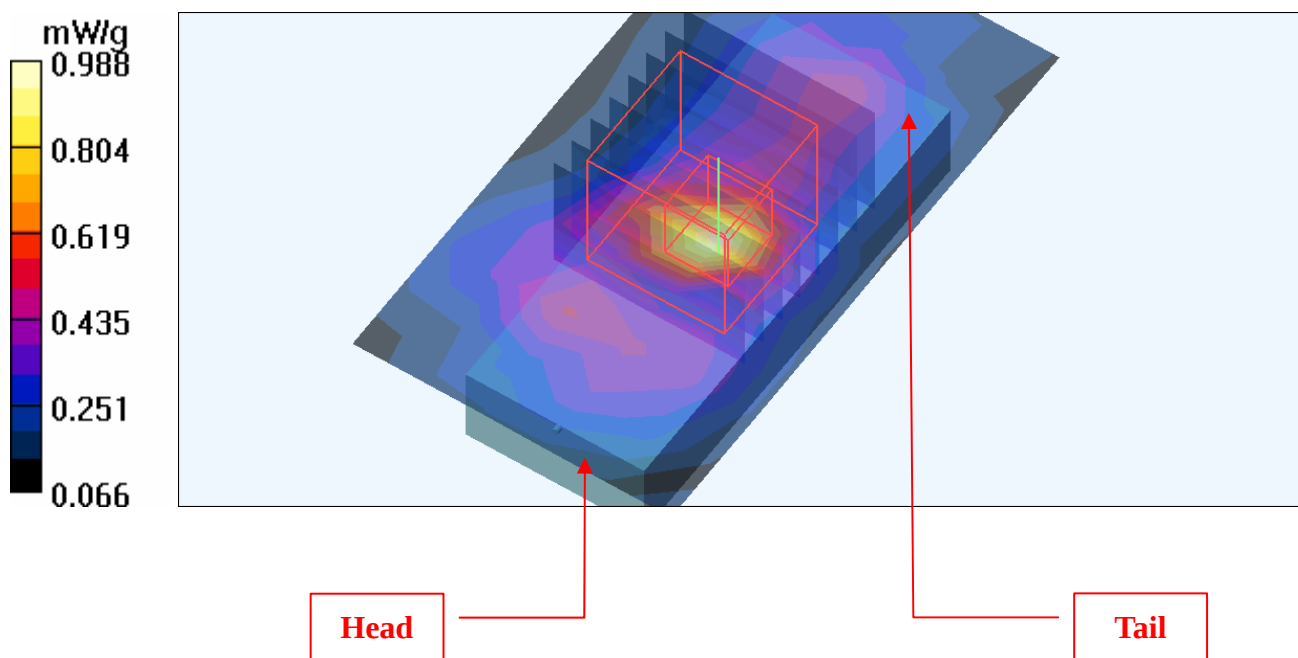
Mid Channel 116/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 8.28 V/m

Peak SAR (extrapolated) = 2.26 W/kg

SAR(1 g) = 0.703 mW/g; SAR(10 g) = 0.285 mW/g

Maximum value of SAR (measured) = 0.988 mW/g



Date/Time: 2009/7/13 14:01:06

Test Laboratory: Bureau Veritas ADT

M09-11aN 20M-Ch120

DUT: 3Com Wireless Dual Band 11n USB Adapter ; Type: WL-606

Communication System: 11n 5G span20 ; Frequency: 5600 MHz ; Duty Cycle: 1:1 ; Modulation type: BPSK

Medium: MSL5800 Medium parameters used: $f = 5600$ MHz; $\sigma = 5.82$ mho/m; $\epsilon_r = 48.5$; $\rho = 1000$ kg/m³
Phantom section: Flat Section ; Separation distance : 5 mm (The bottom side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV3 - SN3504 ; ConvF(3.91, 3.91, 3.91) ; Calibrated: 2009/1/21
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510 ; Calibrated: 2009/1/21
- Phantom: SAM 12 ; Type: SAM V4.0 ; Serial: TP 1202
- Measurement SW: DASY4, V4.7 Build 80 ; Postprocessing SW: SEMCAD, V1.8 Build 186

Mid Channel 120/Area Scan (6x10x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 1.31 mW/g

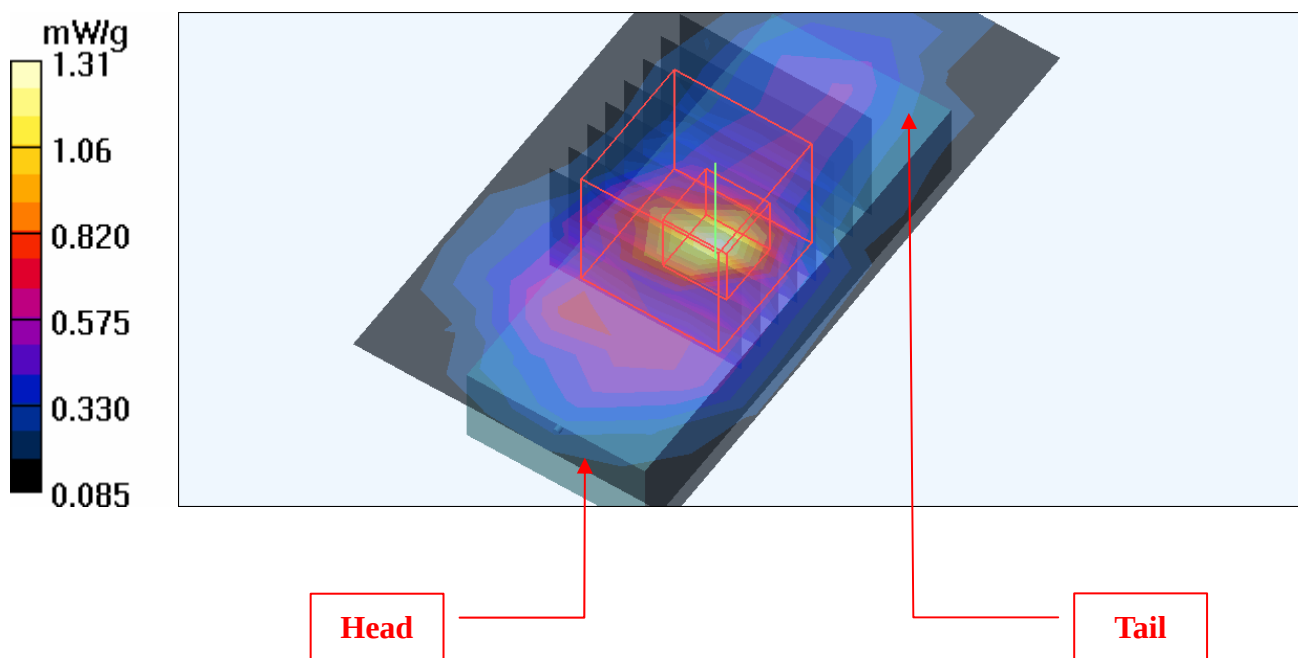
Mid Channel 120/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 9.12 V/m

Peak SAR (extrapolated) = 3.62 W/kg

SAR(1 g) = 0.934 mW/g; SAR(10 g) = 0.356 mW/g

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



Date/Time: 2009/7/13 14:28:47

Test Laboratory: Bureau Veritas ADT

M09-11aN 20M-Ch124

DUT: 3Com Wireless Dual Band 11n USB Adapter ; Type: WL-606

Communication System: 11n 5G span20 ; Frequency: 5620 MHz ; Duty Cycle: 1:1 ; Modulation type: BPSK

Medium: MSL5800 Medium parameters used: $f = 5620$ MHz; $\sigma = 5.85$ mho/m; $\epsilon_r = 48.5$; $\rho = 1000$ kg/m³
Phantom section: Flat Section ; Separation distance : 5 mm (The bottom side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV3 - SN3504 ; ConvF(3.91, 3.91, 3.91) ; Calibrated: 2009/1/21
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510 ; Calibrated: 2009/1/21
- Phantom: SAM 12 ; Type: SAM V4.0 ; Serial: TP 1202
- Measurement SW: DASY4, V4.7 Build 80 ; Postprocessing SW: SEMCAD, V1.8 Build 186

Mid Channel 124/Area Scan (6x10x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 1.29 mW/g

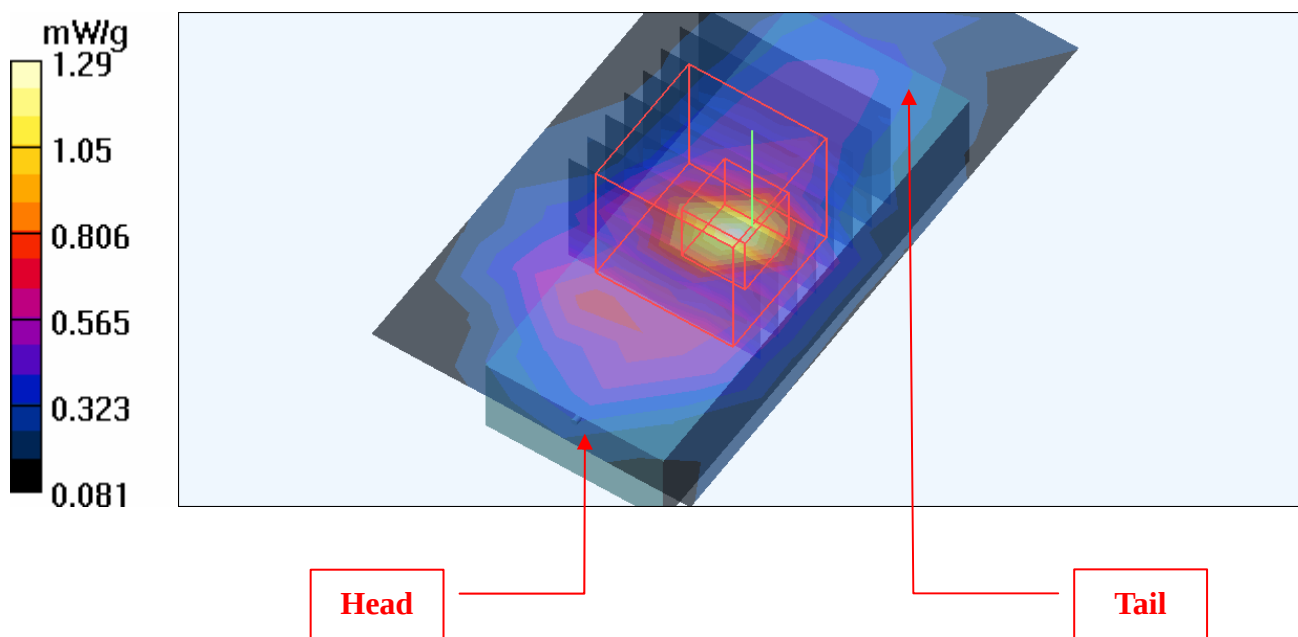
Mid Channel 124/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 9.08 V/m

Peak SAR (extrapolated) = 3.58 W/kg

SAR(1 g) = 0.908 mW/g; SAR(10 g) = 0.357 mW/g

Maximum value of SAR (measured) = 1.22 mW/g



Date/Time: 2009/7/13 14:51:23

Test Laboratory: Bureau Veritas ADT

M09-11aN 20M-Ch136

DUT: 3Com Wireless Dual Band 11n USB Adapter ; Type: WL-606

Communication System: 11n 5G span20 ; Frequency: 5680 MHz ; Duty Cycle: 1:1 ; Modulation type: BPSK

Medium: MSL5800 Medium parameters used: $f = 5680$ MHz; $\sigma = 5.95$ mho/m; $\epsilon_r = 48.4$; $\rho = 1000$ kg/m³
Phantom section: Flat Section ; Separation distance : 5 mm (The bottom side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV3 - SN3504 ; ConvF(3.91, 3.91, 3.91) ; Calibrated: 2009/1/21
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510 ; Calibrated: 2009/1/21
- Phantom: SAM 12 ; Type: SAM V4.0 ; Serial: TP 1202
- Measurement SW: DASY4, V4.7 Build 80 ; Postprocessing SW: SEMCAD, V1.8 Build 186

Mid Channel 136/Area Scan (6x10x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 1.31 mW/g

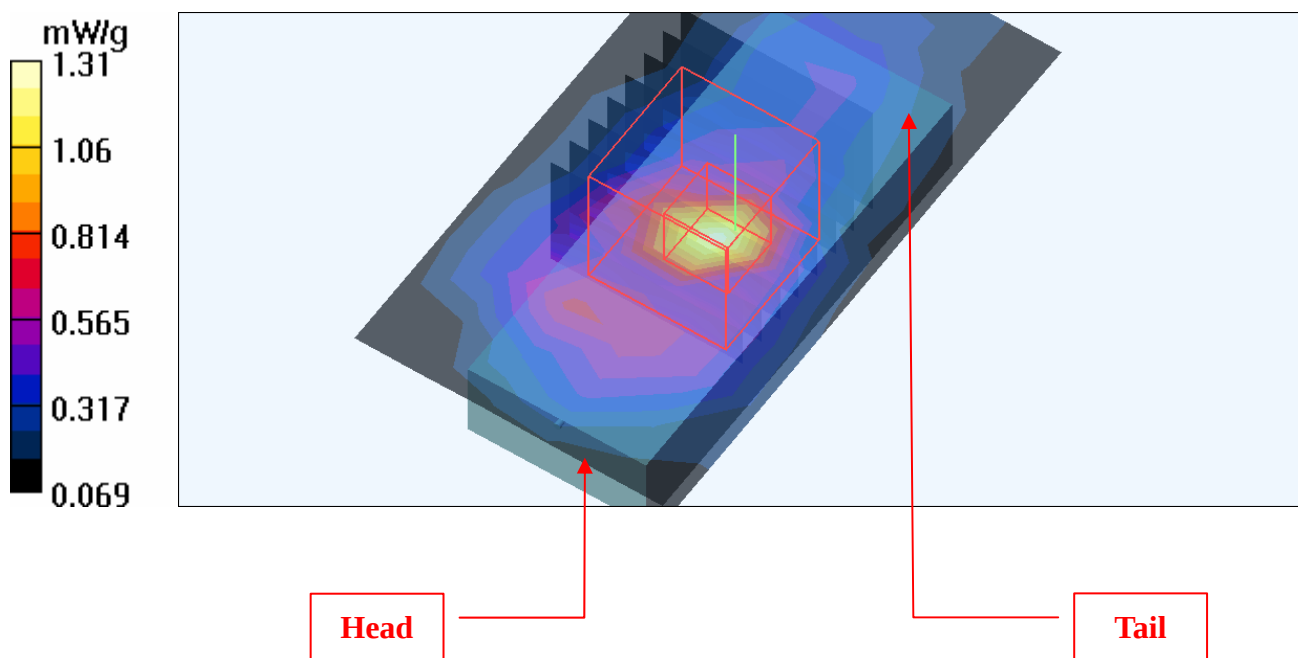
Mid Channel 136/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 8.76 V/m

Peak SAR (extrapolated) = 3.64 W/kg

SAR(1 g) = 0.927 mW/g; SAR(10 g) = 0.361 mW/g

Maximum value of SAR (measured) = 1.25 mW/g



Date/Time: 2009/7/13 15:14:48

Test Laboratory: Bureau Veritas ADT

M09-11aN 20M-Ch140

DUT: 3Com Wireless Dual Band 11n USB Adapter ; Type: WL-606

Communication System: 11n 5G span20 ; Frequency: 5700 MHz ; Duty Cycle: 1:1 ; Modulation type: BPSK

Medium: MSL5800 Medium parameters used: $f = 5700$ MHz; $\sigma = 5.98$ mho/m; $\epsilon_r = 48.3$; $\rho = 1000$ kg/m³
Phantom section: Flat Section ; Separation distance : 5 mm (The bottom side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV3 - SN3504 ; ConvF(3.91, 3.91, 3.91) ; Calibrated: 2009/1/21
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510 ; Calibrated: 2009/1/21
- Phantom: SAM 12 ; Type: SAM V4.0 ; Serial: TP 1202
- Measurement SW: DASY4, V4.7 Build 80 ; Postprocessing SW: SEMCAD, V1.8 Build 186

High Channel 140/Area Scan (6x10x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 1.33 mW/g

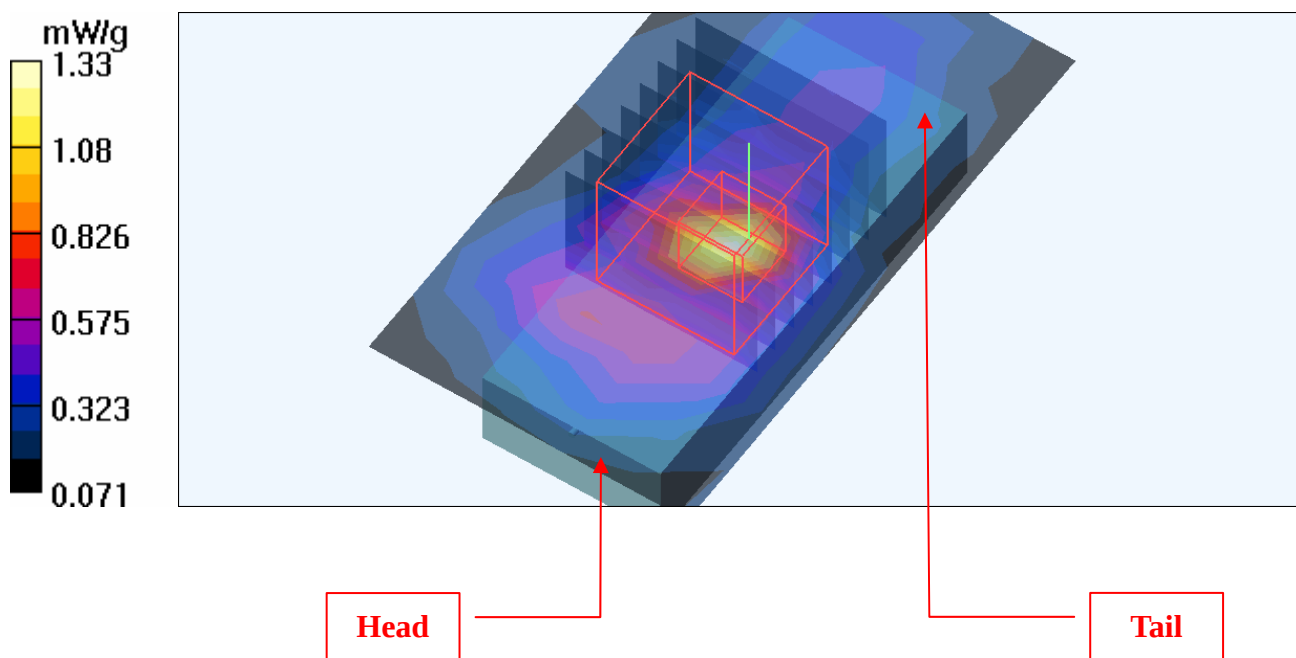
High Channel 140/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 8.55 V/m

Peak SAR (extrapolated) = 3.97 W/kg

SAR(1 g) = 0.945 mW/g; SAR(10 g) = 0.373 mW/g

Maximum value of SAR (measured) = 1.25 mW/g



Date/Time: 2009/7/13 16:57:39

Test Laboratory: Bureau Veritas ADT

M10-11aN 40M-Ch38

DUT: 3Com Wireless Dual Band 11n USB Adapter ; Type: WL-606

Communication System: 11n 5G span40 ; Frequency: 5190 MHz ; Duty Cycle: 1:1 ; Modulation type: BPSK

Medium: MSL5800 Medium parameters used: $f = 5190$ MHz; $\sigma = 5.24$ mho/m; $\epsilon_r = 49.4$; $\rho = 1000$ kg/m³
Phantom section: Flat Section ; Separation distance : 5 mm (The bottom side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV3 - SN3504 ; ConvF(4.38, 4.38, 4.38) ; Calibrated: 2009/1/21
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510 ; Calibrated: 2009/1/21
- Phantom: SAM 12 ; Type: SAM V4.0 ; Serial: TP 1202
- Measurement SW: DASY4, V4.7 Build 80 ; Postprocessing SW: SEMCAD, V1.8 Build 186

Low Channel 38/Area Scan (6x10x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 1.33 mW/g

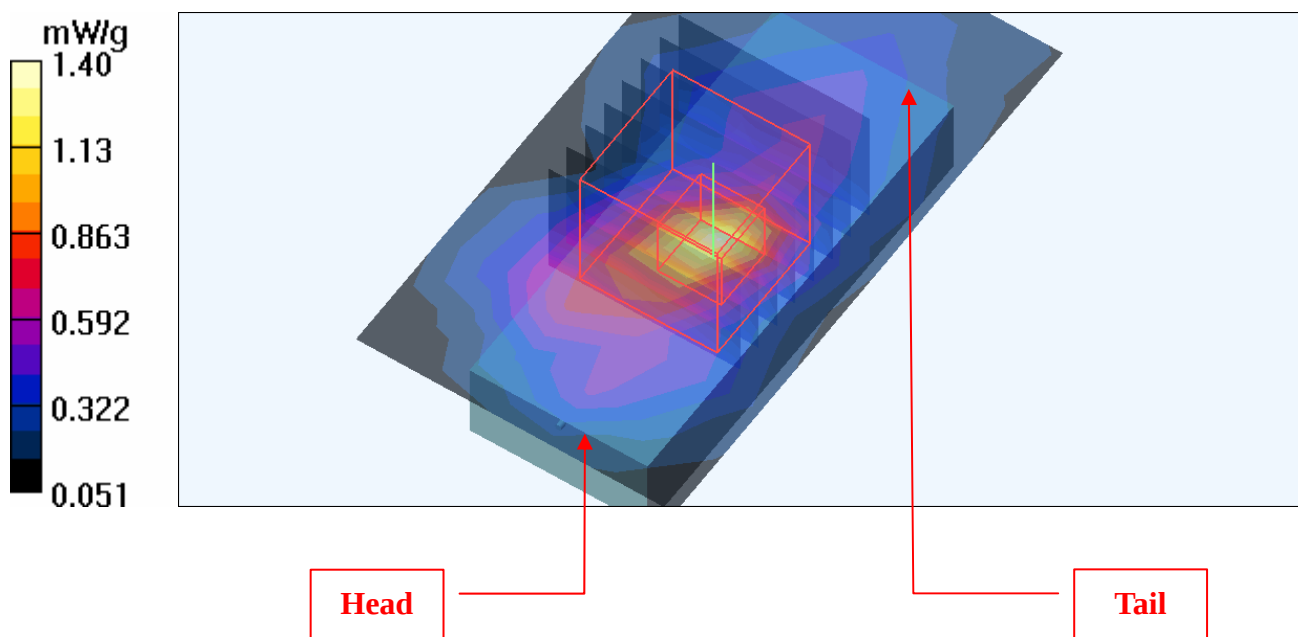
Low Channel 38/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 10.2 V/m

Peak SAR (extrapolated) = 3.37 W/kg

SAR(1 g) = 0.996 mW/g; SAR(10 g) = 0.385 mW/g

Maximum value of SAR (measured) = 1.40 mW/g



Date/Time: 2009/7/13 17:20:56

Test Laboratory: Bureau Veritas ADT

M10-11aN 40M-Ch46

DUT: 3Com Wireless Dual Band 11n USB Adapter ; Type: WL-606

Communication System: 11n 5G span40 ; Frequency: 5230 MHz ; Duty Cycle: 1:1 ; Modulation type: BPSK

Medium: MSL5800 Medium parameters used: $f = 5230$ MHz; $\sigma = 5.3$ mho/m; $\epsilon_r = 49.3$; $\rho = 1000$ kg/m³
Phantom section: Flat Section ; Separation distance : 5 mm (The bottom side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV3 - SN3504 ; ConvF(4.38, 4.38, 4.38) ; Calibrated: 2009/1/21
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510 ; Calibrated: 2009/1/21
- Phantom: SAM 12 ; Type: SAM V4.0 ; Serial: TP 1202
- Measurement SW: DASY4, V4.7 Build 80 ; Postprocessing SW: SEMCAD, V1.8 Build 186

High Channel 46/Area Scan (6x10x1): Measurement grid: dx=10mm, dy=10mm

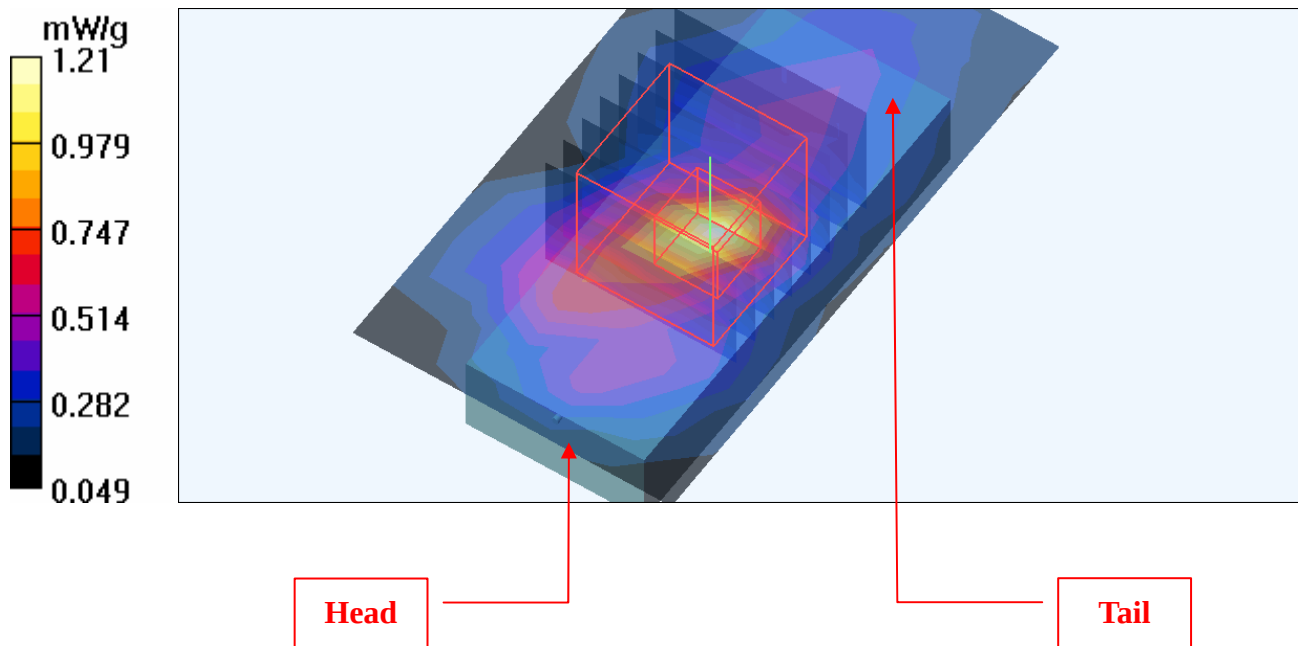
Maximum value of SAR (measured) = 1.21 mW/g

High Channel 46/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 9.58 V/m

Peak SAR (extrapolated) = 2.74 W/kg

SAR(1 g) = **0.871 mW/g**; SAR(10 g) = 0.341 mW/g



Date/Time: 2009/7/13 17:44:22

Test Laboratory: Bureau Veritas ADT

M11-11aN 40M-Ch54

DUT: 3Com Wireless Dual Band 11n USB Adapter ; Type: WL-606

Communication System: 11n 5G span40 ; Frequency: 5270 MHz ; Duty Cycle: 1:1 ; Modulation type: BPSK

Medium: MSL5800 Medium parameters used: $f = 5270$ MHz; $\sigma = 5.35$ mho/m; $\epsilon_r = 49.2$; $\rho = 1000$ kg/m³
Phantom section: Flat Section ; Separation distance : 5 mm (The bottom side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV3 - SN3504 ; ConvF(4.06, 4.06, 4.06) ; Calibrated: 2009/1/21
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510 ; Calibrated: 2009/1/21
- Phantom: SAM 12 ; Type: SAM V4.0 ; Serial: TP 1202
- Measurement SW: DASY4, V4.7 Build 80 ; Postprocessing SW: SEMCAD, V1.8 Build 186

Low Channel 54/Area Scan (6x10x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 1.29 mW/g

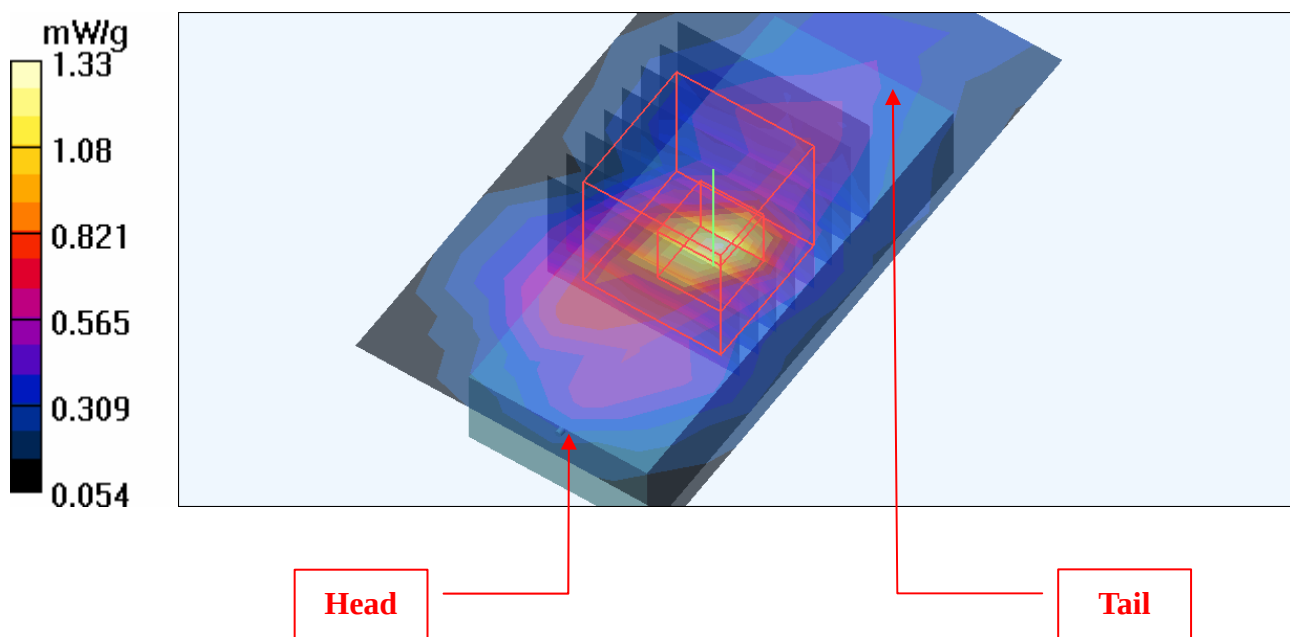
Low Channel 54/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 10.0 V/m

Peak SAR (extrapolated) = 3.37 W/kg

SAR(1 g) = 0.951 mW/g; SAR(10 g) = 0.372 mW/g

Maximum value of SAR (measured) = 1.33 mW/g



Date/Time: 2009/7/13 18:21:58

Test Laboratory: Bureau Veritas ADT

M11-11aN 40M-Ch62

DUT: 3Com Wireless Dual Band 11n USB Adapter ; Type: WL-606

Communication System: 11n 5G span40 ; Frequency: 5310 MHz ; Duty Cycle: 1:1 ; Modulation type: BPSK

Medium: MSL5800 Medium parameters used: $f = 5310 \text{ MHz}$; $\sigma = 5.41 \text{ mho/m}$; $\epsilon_r = 49.2$; $\rho = 1000 \text{ kg/m}^3$
Phantom section: Flat Section ; Separation distance : 5 mm (The bottom side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV3 - SN3504 ; ConvF(4.06, 4.06, 4.06) ; Calibrated: 2009/1/21
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510 ; Calibrated: 2009/1/21
- Phantom: SAM 12 ; Type: SAM V4.0 ; Serial: TP 1202
- Measurement SW: DASY4, V4.7 Build 80 ; Postprocessing SW: SEMCAD, V1.8 Build 186

High Channel 62/Area Scan (6x10x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

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

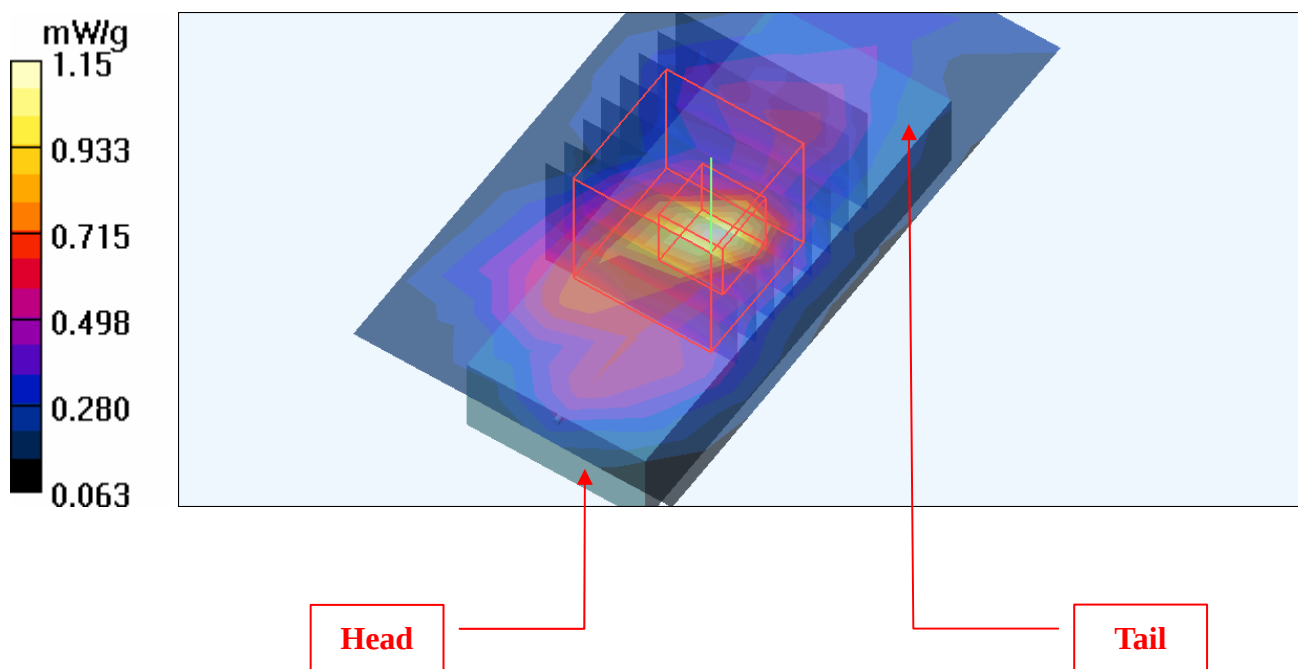
High Channel 62/Zoom Scan (8x8x8)/Cube 0: Measurement grid: $dx=4.3\text{mm}$, $dy=4.3\text{mm}$, $dz=3\text{mm}$

Reference Value = 9.29 V/m

Peak SAR (extrapolated) = 2.31 W/kg

SAR(1 g) = 0.812 mW/g; SAR(10 g) = 0.316 mW/g

Maximum value of SAR (measured) = 1.15 mW/g



Date/Time: 2009/7/13 18:47:36

Test Laboratory: Bureau Veritas ADT

M12-11aN 40M-Ch102

DUT: 3Com Wireless Dual Band 11n USB Adapter ; Type: WL-606

Communication System: 11n 5G span40 ; Frequency: 5510 MHz ; Duty Cycle: 1:1 ; Modulation type: BPSK

Medium: MSL5800 Medium parameters used: $f = 5510$ MHz; $\sigma = 5.69$ mho/m; $\epsilon_r = 48.7$; $\rho = 1000$ kg/m³
Phantom section: Flat Section ; Separation distance : 5 mm (The bottom side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV3 - SN3504 ; ConvF(3.98, 3.98, 3.98) ; Calibrated: 2009/1/21
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510 ; Calibrated: 2009/1/21
- Phantom: SAM 12 ; Type: SAM V4.0 ; Serial: TP 1202
- Measurement SW: DASY4, V4.7 Build 80 ; Postprocessing SW: SEMCAD, V1.8 Build 186

Low Channel 102/Area Scan (6x10x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 1.18 mW/g

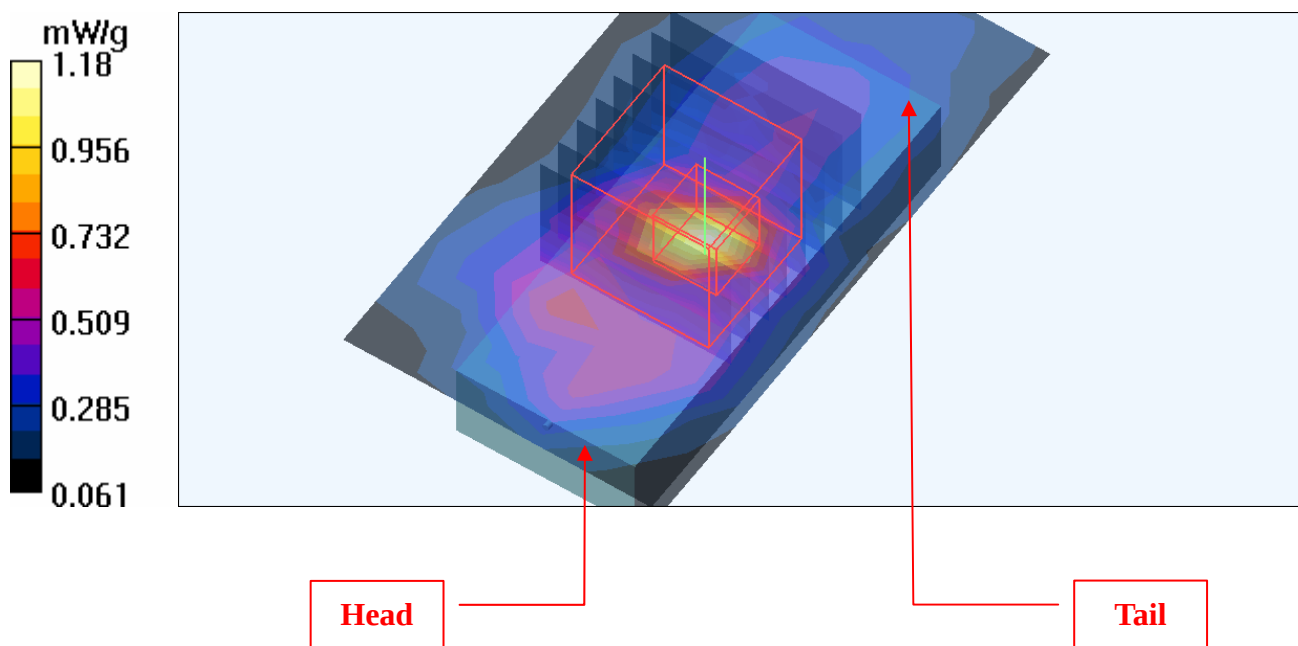
Low Channel 102/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 9.39 V/m

Peak SAR (extrapolated) = 3.24 W/kg

SAR(1 g) = 0.849 mW/g; SAR(10 g) = 0.331 mW/g

Maximum value of SAR (measured) = 1.11 mW/g



Date/Time: 2009/7/13 19:12:46

Test Laboratory: Bureau Veritas ADT

M12-11aN 40M-Ch118

DUT: 3Com Wireless Dual Band 11n USB Adapter ; Type: WL-606

Communication System: 11n 5G span40 ; Frequency: 5590 MHz ; Duty Cycle: 1:1 ; Modulation type: BPSK

Medium: MSL5800 Medium parameters used: $f = 5590$ MHz; $\sigma = 5.81$ mho/m; $\epsilon_r = 48.5$; $\rho = 1000$ kg/m³
Phantom section: Flat Section ; Separation distance : 5 mm (The bottom side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV3 - SN3504 ; ConvF(3.91, 3.91, 3.91) ; Calibrated: 2009/1/21
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510 ; Calibrated: 2009/1/21
- Phantom: SAM 12 ; Type: SAM V4.0 ; Serial: TP 1202
- Measurement SW: DASY4, V4.7 Build 80 ; Postprocessing SW: SEMCAD, V1.8 Build 186

Mid Channel 118/Area Scan (6x10x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 1.36 mW/g

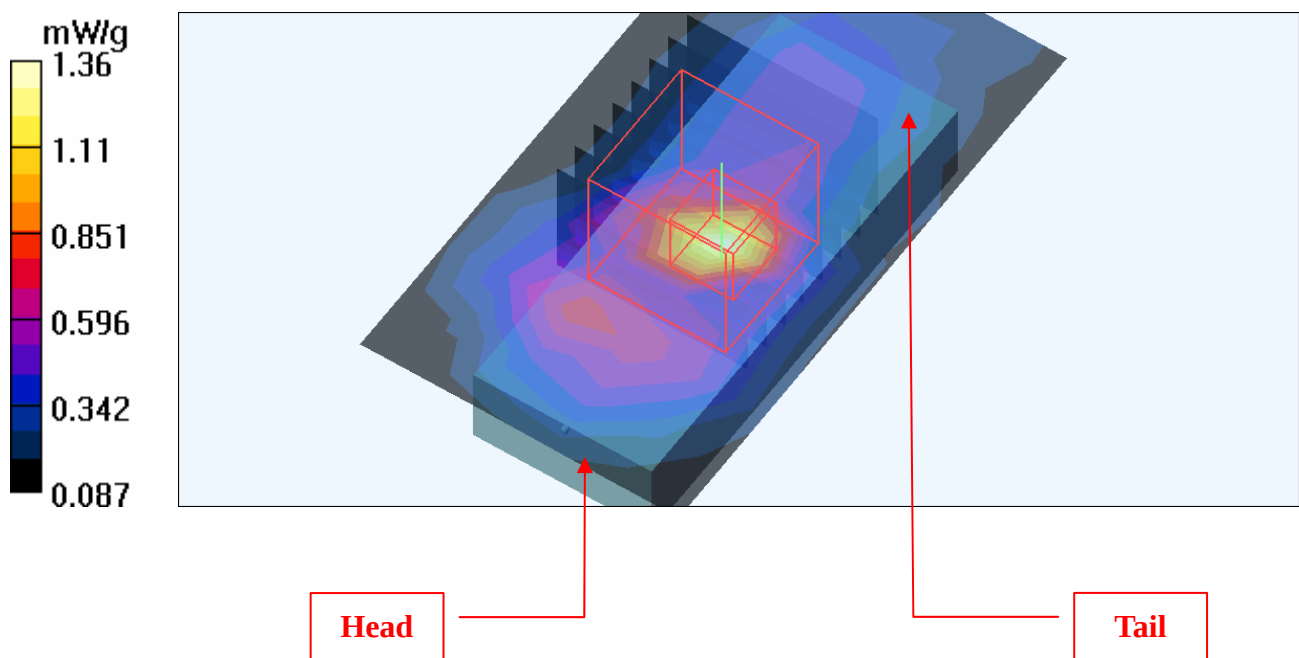
Mid Channel 118/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 9.48 V/m

Peak SAR (extrapolated) = 3.58 W/kg

SAR(1 g) = 0.944 mW/g; SAR(10 g) = 0.362 mW/g

Maximum value of SAR (measured) = 1.27 mW/g



Date/Time: 2009/7/13 19:49:10

Test Laboratory: Bureau Veritas ADT

M12-11aN 40M-Ch134

DUT: 3Com Wireless Dual Band 11n USB Adapter ; Type: WL-606

Communication System: 11n 5G span40 ; Frequency: 5670 MHz ; Duty Cycle: 1:1 ; Modulation type: BPSK

Medium: MSL5800 Medium parameters used: $f = 5670$ MHz; $\sigma = 5.93$ mho/m; $\epsilon_r = 48.4$; $\rho = 1000$ kg/m³
Phantom section: Flat Section ; Separation distance : 5 mm (The bottom side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV3 - SN3504 ; ConvF(3.91, 3.91, 3.91) ; Calibrated: 2009/1/21
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510 ; Calibrated: 2009/1/21
- Phantom: SAM 12 ; Type: SAM V4.0 ; Serial: TP 1202
- Measurement SW: DASY4, V4.7 Build 80 ; Postprocessing SW: SEMCAD, V1.8 Build 186

High Channel 134/Area Scan (6x10x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 1.35 mW/g

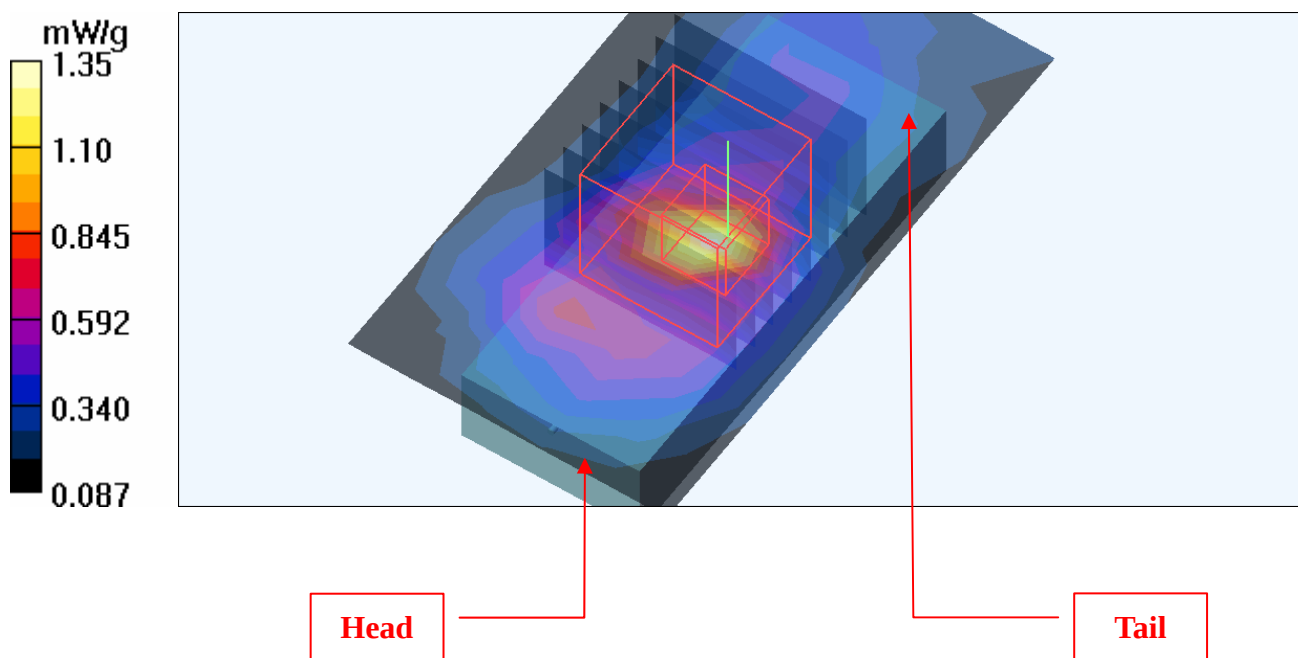
High Channel 134/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 8.86 V/m

Peak SAR (extrapolated) = 3.61 W/kg

SAR(1 g) = 0.928 mW/g; SAR(10 g) = 0.356 mW/g

Maximum value of SAR (measured) = 1.27 mW/g



Date/Time: 2009/7/14 02:51:12

Test Laboratory: Bureau Veritas ADT

M13-11a-Ch36

DUT: 3Com Wireless Dual Band 11n USB Adapter ; Type: WL-606

Communication System: 802.11a ; Frequency: 5180 MHz ; Duty Cycle: 1:1 ; Modulation type: BPSK
 Medium: MSL5800 Medium parameters used: $f = 5180 \text{ MHz}$; $\sigma = 5.21 \text{ mho/m}$; $\epsilon_r = 49.7$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section ; Separation distance : 5 mm (The right edge side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV3 - SN3504 ; ConvF(4.38, 4.38, 4.38) ; Calibrated: 2009/1/21
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510 ; Calibrated: 2009/1/21
- Phantom: SAM 12 ; Type: SAM V4.0 ; Serial: TP 1202
- Measurement SW: DASY4, V4.7 Build 80 ; Postprocessing SW: SEMCAD, V1.8 Build 186

Low Channel 36/Area Scan (6x10x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (measured) = 0.843 mW/g

Low Channel 36/Zoom Scan (8x8x8)/Cube 0: Measurement grid: $dx=4.3\text{mm}$, $dy=4.3\text{mm}$, $dz=3\text{mm}$

Reference Value = 6.89 V/m

Peak SAR (extrapolated) = 2.09 W/kg

SAR(1 g) = 0.641 mW/g; SAR(10 g) = 0.282 mW/g

Maximum value of SAR (measured) = 0.886 mW/g

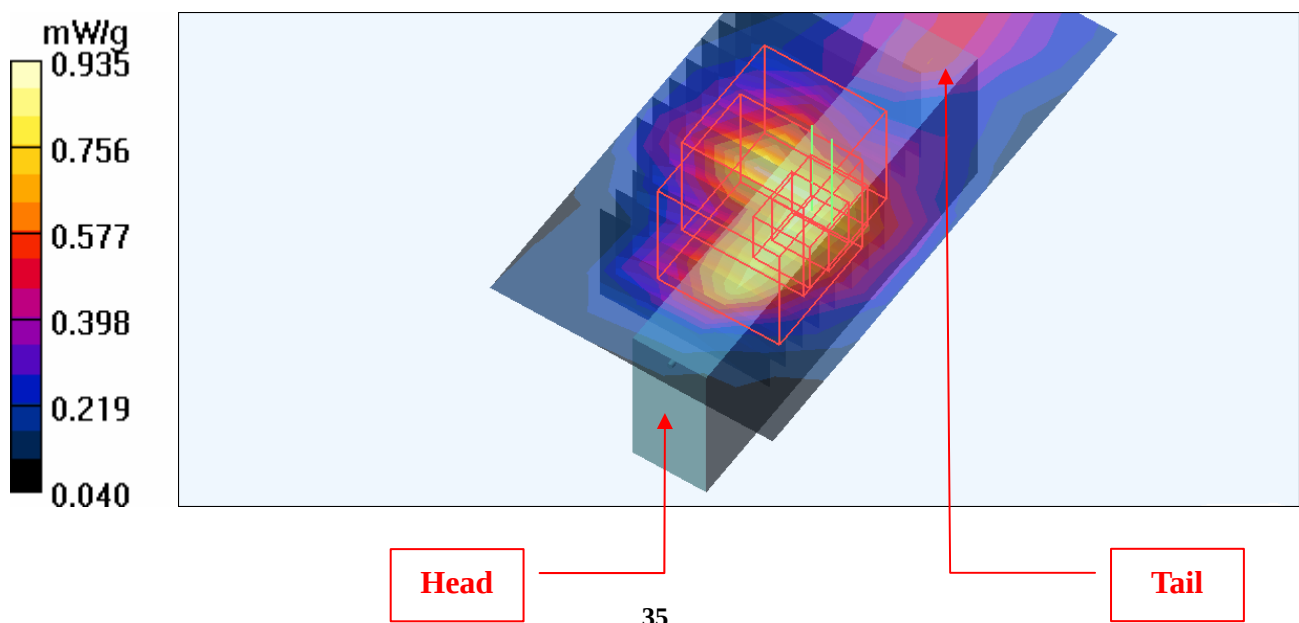
Mid Channel 40/Zoom Scan (8x8x8)/Cube 1: Measurement grid: $dx=4.3\text{mm}$, $dy=4.3\text{mm}$, $dz=3\text{mm}$

Reference Value = 6.89 V/m

Peak SAR (extrapolated) = 2.23 W/kg

SAR(1 g) = 0.675 mW/g; SAR(10 g) = 0.314 mW/g

Maximum value of SAR (measured) = 0.935 mW/g



Date/Time: 2009/7/14 03:30:37

Test Laboratory: Bureau Veritas ADT

M14-11a-Ch36 / Main

DUT: 3Com Wireless Dual Band 11n USB Adapter ; Type: WL-606

Communication System: 802.11a ; Frequency: 5180 MHz ; Duty Cycle: 1:1 ; Modulation type: BPSK
 Medium: MSL5800 Medium parameters used: $f = 5180 \text{ MHz}$; $\sigma = 5.21 \text{ mho/m}$; $\epsilon_r = 49.7$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section ; Separation distance : 5 mm (The right edge side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV3 - SN3504 ; ConvF(4.38, 4.38, 4.38) ; Calibrated: 2009/1/21
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510 ; Calibrated: 2009/1/21
- Phantom: SAM 12 ; Type: SAM V4.0 ; Serial: TP 1202
- Measurement SW: DASY4, V4.7 Build 80 ; Postprocessing SW: SEMCAD, V1.8 Build 186

Low Channel 36/Area Scan (6x11x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (measured) = 0.470 mW/g

Low Channel 36/Zoom Scan (8x8x8)/Cube 0: Measurement grid: $dx=4.3\text{mm}$, $dy=4.3\text{mm}$, $dz=3\text{mm}$

Reference Value = 6.22 V/m

Peak SAR (extrapolated) = 0.871 W/kg

SAR(1 g) = 0.350 mW/g; SAR(10 g) = 0.166 mW/g

Maximum value of SAR (measured) = 0.480 mW/g

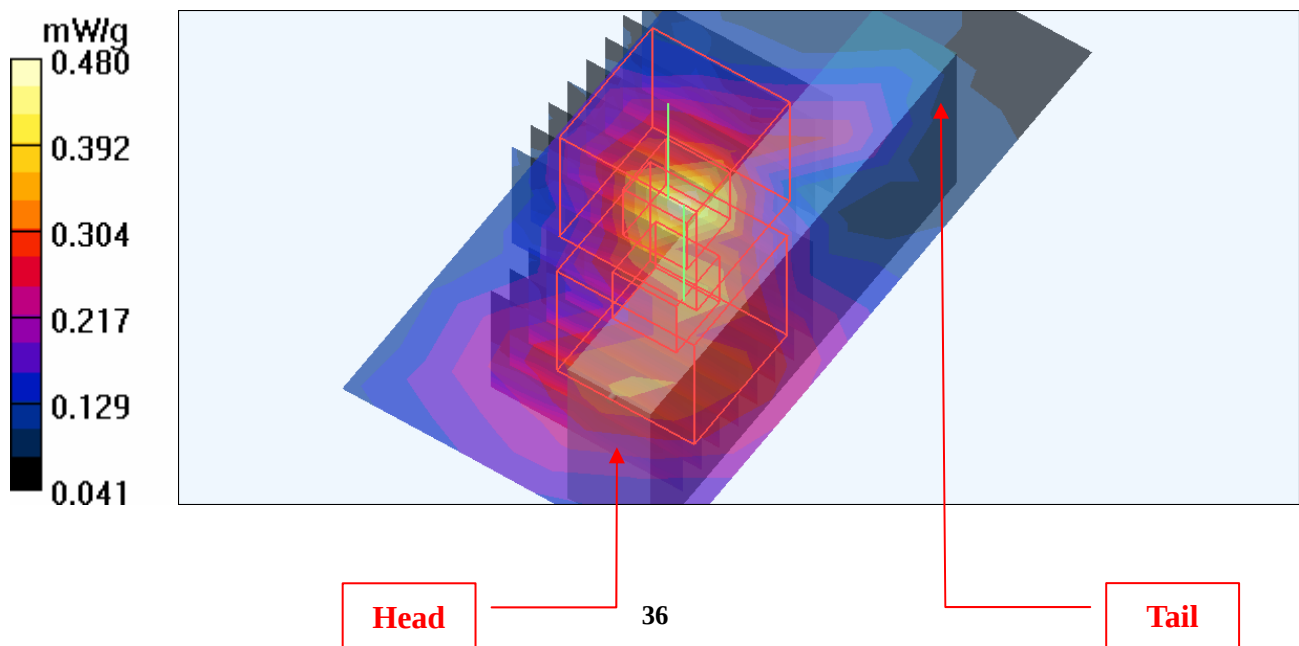
Low Channel 36/Zoom Scan (8x8x8)/Cube 1: Measurement grid: $dx=4.3\text{mm}$, $dy=4.3\text{mm}$, $dz=3\text{mm}$

Reference Value = 6.22 V/m

Peak SAR (extrapolated) = 0.818 W/kg

SAR(1 g) = 0.254 mW/g; SAR(10 g) = 0.152 mW/g

Maximum value of SAR (measured) = 0.432 mW/g



Date/Time: 2009/7/14 04:10:45

Test Laboratory: Bureau Veritas ADT

M15-11a-Ch60

DUT: 3Com Wireless Dual Band 11n USB Adapter ; Type: WL-606

Communication System: 802.11a ; Frequency: 5300 MHz ; Duty Cycle: 1:1 ; Modulation type: BPSK
 Medium: MSL5800 Medium parameters used: $f = 5300 \text{ MHz}$; $\sigma = 5.37 \text{ mho/m}$; $\epsilon_r = 49.5$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section ; Separation distance : 5 mm (The right edge side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV3 - SN3504 ; ConvF(4.06, 4.06, 4.06) ; Calibrated: 2009/1/21
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510 ; Calibrated: 2009/1/21
- Phantom: SAM 12 ; Type: SAM V4.0 ; Serial: TP 1202
- Measurement SW: DASY4, V4.7 Build 80 ; Postprocessing SW: SEMCAD, V1.8 Build 186

Mid Channel 60/Area Scan (6x10x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

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

Mid Channel 60/Zoom Scan (8x8x8)/Cube 0: Measurement grid: $dx=4.3\text{mm}$, $dy=4.3\text{mm}$, $dz=3\text{mm}$

Reference Value = 6.56 V/m

Peak SAR (extrapolated) = 1.87 W/kg

SAR(1 g) = 0.505 mW/g; SAR(10 g) = 0.244 mW/g

Maximum value of SAR (measured) = 0.723 mW/g

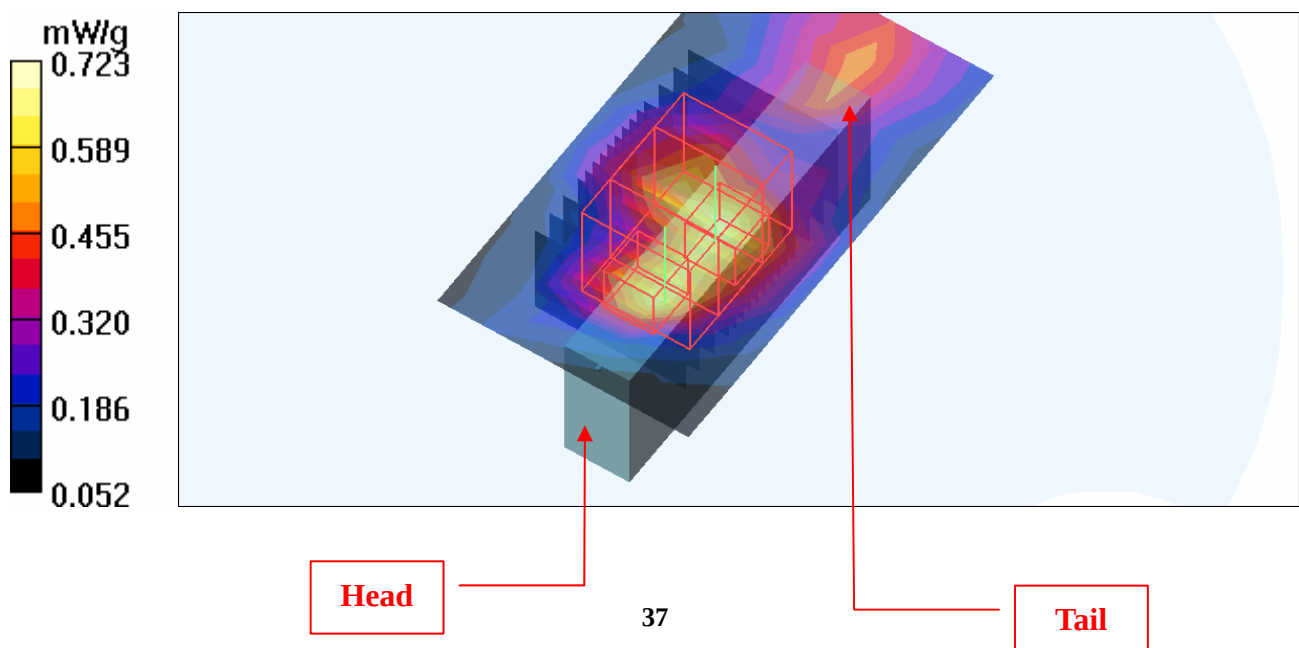
Mid Channel 60/Zoom Scan (8x8x8)/Cube 1: Measurement grid: $dx=4.3\text{mm}$, $dy=4.3\text{mm}$, $dz=3\text{mm}$

Reference Value = 6.56 V/m

Peak SAR (extrapolated) = 1.57 W/kg

SAR(1 g) = 0.513 mW/g; SAR(10 g) = 0.248 mW/g

Maximum value of SAR (measured) = 0.695 mW/g



Date/Time: 2009/7/14 04:53:55

Test Laboratory: Bureau Veritas ADT

M16-11a-Ch60 / Main

DUT: 3Com Wireless Dual Band 11n USB Adapter ; Type: WL-606

Communication System: 802.11a ; Frequency: 5300 MHz ; Duty Cycle: 1:1 ; Modulation type: BPSK
 Medium: MSL5800 Medium parameters used: $f = 5300$ MHz; $\sigma = 5.37$ mho/m; $\epsilon_r = 49.5$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section ; Separation distance : 5 mm (The right edge side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV3 - SN3504 ; ConvF(4.06, 4.06, 4.06) ; Calibrated: 2009/1/21
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510 ; Calibrated: 2009/1/21
- Phantom: SAM 12 ; Type: SAM V4.0 ; Serial: TP 1202
- Measurement SW: DASY4, V4.7 Build 80 ; Postprocessing SW: SEMCAD, V1.8 Build 186

Mid Channel 60/Area Scan (6x11x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.259 mW/g

Mid Channel 60/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 6.61 V/m

Peak SAR (extrapolated) = 0.681 W/kg

SAR(1 g) = 0.220 mW/g; SAR(10 g) = 0.125 mW/g

Maximum value of SAR (measured) = 0.271 mW/g

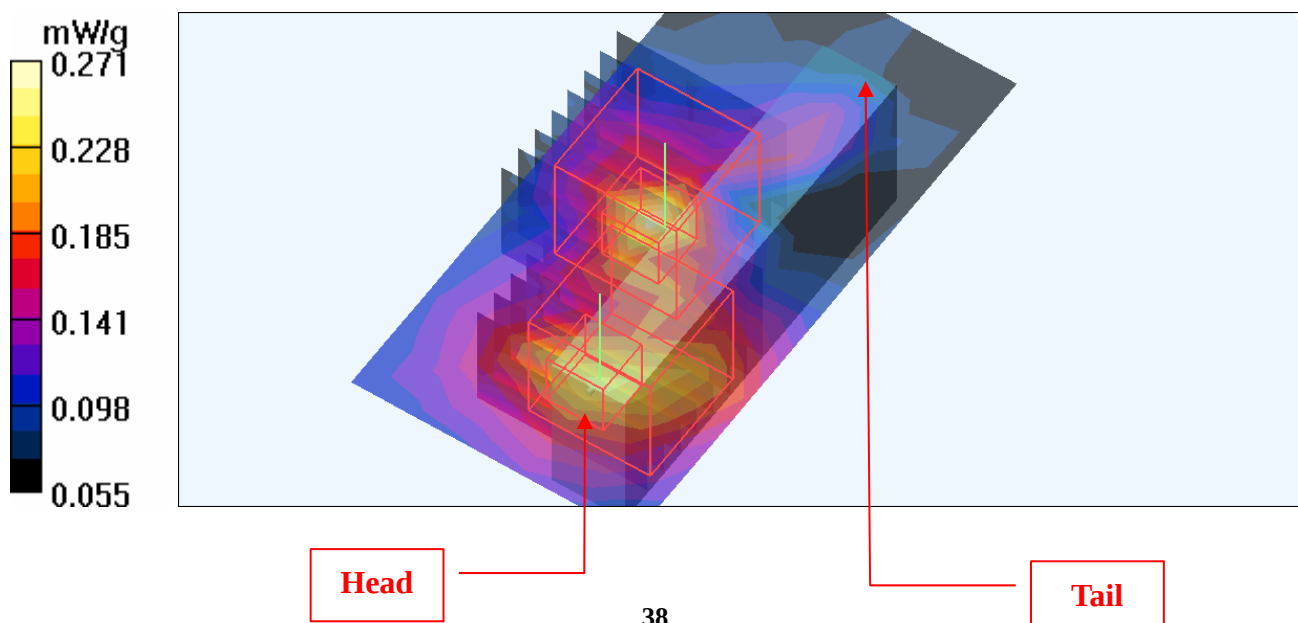
Mid Channel 60/Zoom Scan (8x8x8)/Cube 1: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 6.61 V/m

Peak SAR (extrapolated) = 0.599 W/kg

SAR(1 g) = 0.195 mW/g; SAR(10 g) = 0.116 mW/g

Maximum value of SAR (measured) = 0.243 mW/g



Date/Time: 2009/7/14 06:56:43

Test Laboratory: Bureau Veritas ADT

M17-11a-Ch100

DUT: 3Com Wireless Dual Band 11n USB Adapter ; Type: WL-606

Communication System: 802.11a ; Frequency: 5500 MHz ; Duty Cycle: 1:1 ; Modulation type: BPSK
 Medium: MSL5800 Medium parameters used: $f = 5500$ MHz; $\sigma = 5.66$ mho/m; $\epsilon_r = 49.1$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section ; Separation distance : 5 mm (The right edge side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV3 - SN3504 ; ConvF(3.98, 3.98, 3.98) ; Calibrated: 2009/1/21
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510 ; Calibrated: 2009/1/21
- Phantom: SAM 12 ; Type: SAM V4.0 ; Serial: TP 1202
- Measurement SW: DASY4, V4.7 Build 80 ; Postprocessing SW: SEMCAD, V1.8 Build 186

Low Channel 100/Area Scan (6x10x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.622 mW/g

Low Channel 100/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 6.80 V/m

Peak SAR (extrapolated) = 3.06 W/kg

SAR(1 g) = 0.572 mW/g; SAR(10 g) = 0.238 mW/g

Maximum value of SAR (measured) = 0.721 mW/g

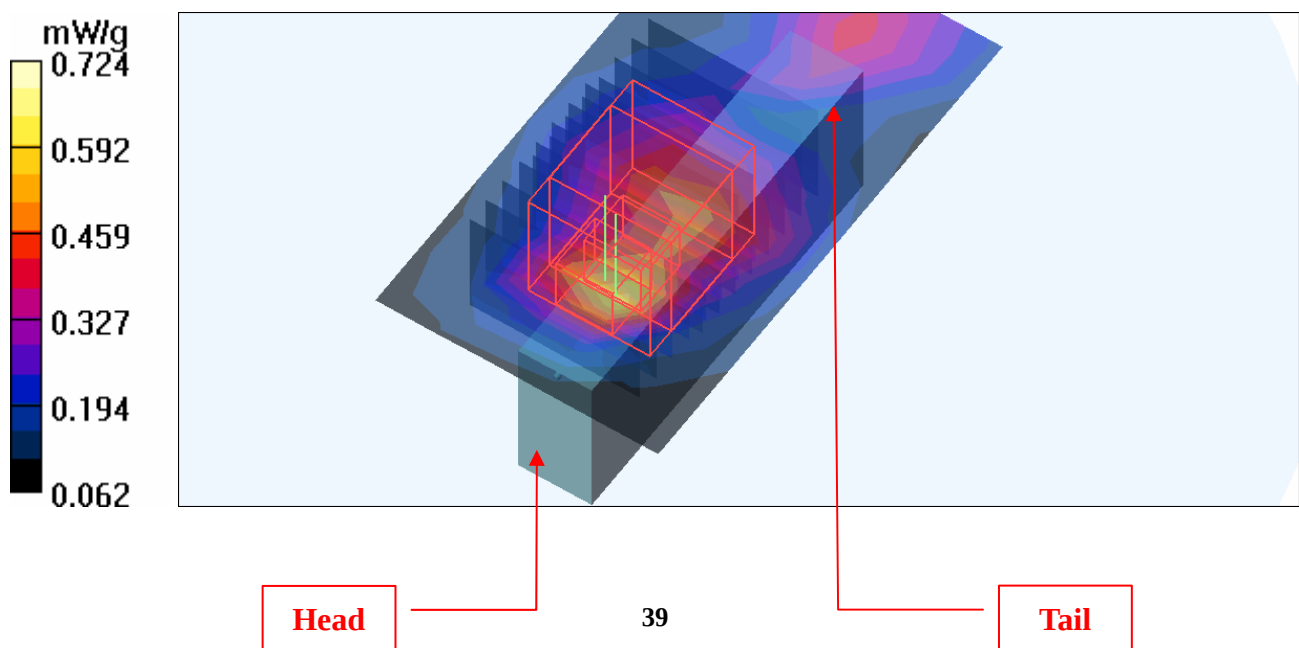
Low Channel 100/Zoom Scan (8x8x8)/Cube 1: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 6.80 V/m

Peak SAR (extrapolated) = 2.75 W/kg

SAR(1 g) = 0.473 mW/g; SAR(10 g) = 0.229 mW/g

Maximum value of SAR (measured) = 0.724 mW/g



Date/Time: 2009/7/14 07:42:32

Test Laboratory: Bureau Veritas ADT

M17-11a-Ch104

DUT: 3Com Wireless Dual Band 11n USB Adapter ; Type: WL-606

Communication System: 802.11a ; Frequency: 5520 MHz ; Duty Cycle: 1:1 ; Modulation type: BPSK
 Medium: MSL5800 Medium parameters used: $f = 5520$ MHz; $\sigma = 5.69$ mho/m; $\epsilon_r = 49$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section ; Separation distance : 5 mm (The right edge side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV3 - SN3504 ; ConvF(3.98, 3.98, 3.98) ; Calibrated: 2009/1/21
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510 ; Calibrated: 2009/1/21
- Phantom: SAM 12 ; Type: SAM V4.0 ; Serial: TP 1202
- Measurement SW: DASY4, V4.7 Build 80 ; Postprocessing SW: SEMCAD, V1.8 Build 186

Mid Channel 104/Area Scan (6x10x1): Measurement grid: $dx=10$ mm, $dy=10$ mm
 Maximum value of SAR (measured) = 0.558 mW/g

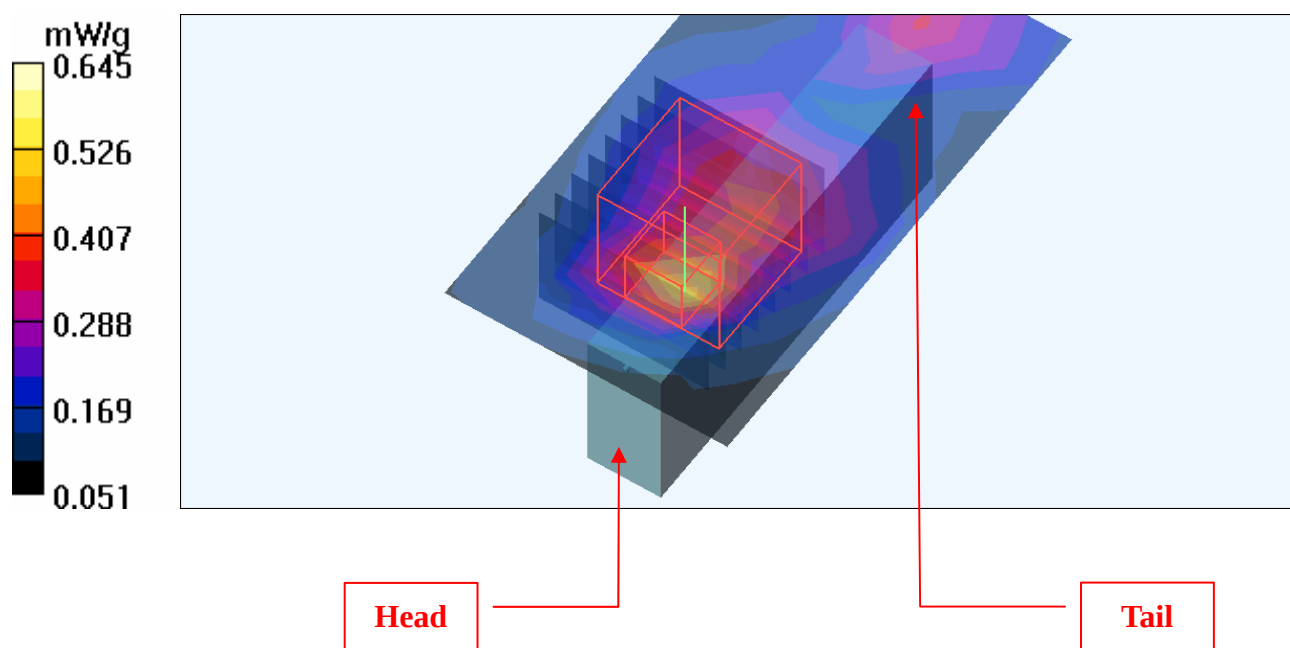
Mid Channel 104/Zoom Scan (8x8x8)/Cube 0: Measurement grid: $dx=4.3$ mm, $dy=4.3$ mm, $dz=3$ mm

Reference Value = 6.62 V/m

Peak SAR (extrapolated) = 2.64 W/kg

SAR(1 g) = 0.501 mW/g; SAR(10 g) = 0.212 mW/g

Maximum value of SAR (measured) = 0.645 mW/g



Date/Time: 2009/7/14 08:05:56

Test Laboratory: Bureau Veritas ADT

M17-11a-Ch116

DUT: 3Com Wireless Dual Band 11n USB Adapter ; Type: WL-606

Communication System: 802.11a ; Frequency: 5580 MHz ; Duty Cycle: 1:1 ; Modulation type: BPSK
 Medium: MSL5800 Medium parameters used: $f = 5580$ MHz; $\sigma = 5.78$ mho/m; $\epsilon_r = 48.9$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section ; Separation distance : 5 mm (The right edge side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV3 - SN3504 ; ConvF(3.91, 3.91, 3.91) ; Calibrated: 2009/1/21
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510 ; Calibrated: 2009/1/21
- Phantom: SAM 12 ; Type: SAM V4.0 ; Serial: TP 1202
- Measurement SW: DASY4, V4.7 Build 80 ; Postprocessing SW: SEMCAD, V1.8 Build 186

Mid Channel 116/Area Scan (6x10x1): Measurement grid: dx=10mm, dy=10mm
 Maximum value of SAR (measured) = 0.536 mW/g

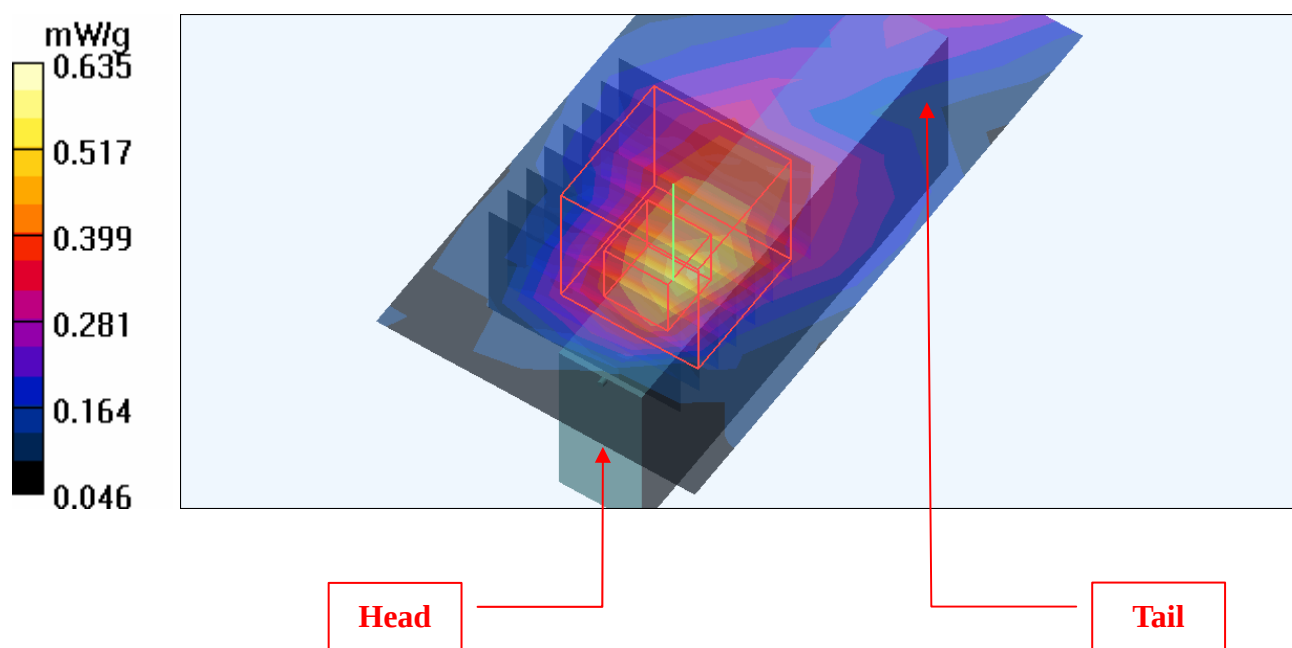
Mid Channel 116/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 6.01 V/m

Peak SAR (extrapolated) = 2.80 W/kg

SAR(1 g) = 0.519 mW/g; SAR(10 g) = 0.217 mW/g

Maximum value of SAR (measured) = 0.635 mW/g



Date/Time: 2009/7/14 05:42:09

Test Laboratory: Bureau Veritas ADT

M17-11a-Ch120

DUT: 3Com Wireless Dual Band 11n USB Adapter ; Type: WL-606

Communication System: 802.11a ; Frequency: 5600 MHz ; Duty Cycle: 1:1 ; Modulation type: BPSK
 Medium: MSL5800 Medium parameters used: $f = 5600$ MHz; $\sigma = 5.8$ mho/m; $\epsilon_r = 48.8$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section ; Separation distance : 5 mm (The right edge side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV3 - SN3504 ; ConvF(3.91, 3.91, 3.91) ; Calibrated: 2009/1/21
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510 ; Calibrated: 2009/1/21
- Phantom: SAM 12 ; Type: SAM V4.0 ; Serial: TP 1202
- Measurement SW: DASY4, V4.7 Build 80 ; Postprocessing SW: SEMCAD, V1.8 Build 186

Mid Channel 120/Area Scan (6x10x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.574 mW/g

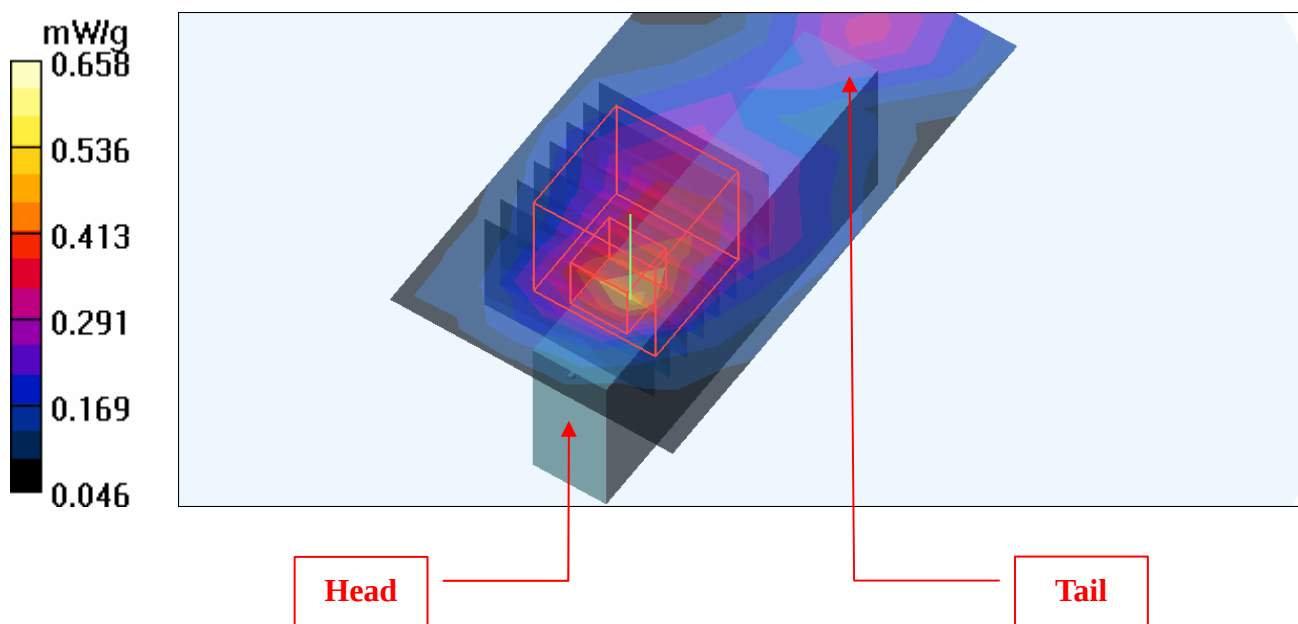
Mid Channel 120/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 6.67 V/m

Peak SAR (extrapolated) = 1.75 W/kg

SAR(1 g) = **0.488 mW/g**; SAR(10 g) = 0.213 mW/g

Maximum value of SAR (measured) = 0.658 mW/g



Date/Time: 2009/7/14 08:30:23

Test Laboratory: Bureau Veritas ADT

M17-11a-Ch124

DUT: 3Com Wireless Dual Band 11n USB Adapter ; Type: WL-606

Communication System: 802.11a ; Frequency: 5620 MHz ; Duty Cycle: 1:1 ; Modulation type: BPSK
 Medium: MSL5800 Medium parameters used: $f = 5620$ MHz; $\sigma = 5.83$ mho/m; $\epsilon_r = 48.8$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section ; Separation distance : 5 mm (The right edge side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV3 - SN3504 ; ConvF(3.91, 3.91, 3.91) ; Calibrated: 2009/1/21
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510 ; Calibrated: 2009/1/21
- Phantom: SAM 12 ; Type: SAM V4.0 ; Serial: TP 1202
- Measurement SW: DASY4, V4.7 Build 80 ; Postprocessing SW: SEMCAD, V1.8 Build 186

Mid Channel 124/Area Scan (6x10x1): Measurement grid: dx=10mm, dy=10mm
 Maximum value of SAR (measured) = 0.585 mW/g

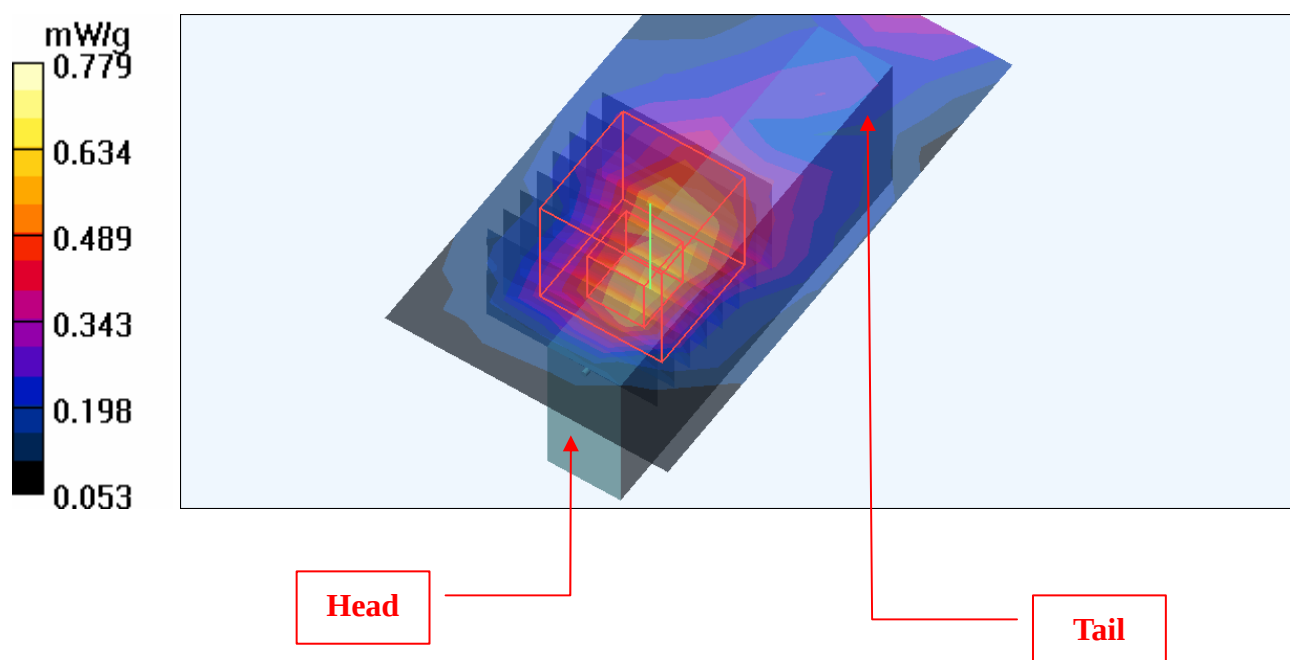
Mid Channel 124/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 7.68 V/m

Peak SAR (extrapolated) = 3.09 W/kg

SAR(1 g) = 0.609 mW/g; SAR(10 g) = 0.254 mW/g

Maximum value of SAR (measured) = 0.779 mW/g



Date/Time: 2009/7/14 08:56:34

Test Laboratory: Bureau Veritas ADT

M17-11a-Ch136

DUT: 3Com Wireless Dual Band 11n USB Adapter ; Type: WL-606

Communication System: 802.11a ; Frequency: 5680 MHz ; Duty Cycle: 1:1 ; Modulation type: BPSK
 Medium: MSL5800 Medium parameters used: $f = 5680$ MHz; $\sigma = 5.93$ mho/m; $\epsilon_r = 48.7$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section ; Separation distance : 5 mm (The right edge side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV3 - SN3504 ; ConvF(3.91, 3.91, 3.91) ; Calibrated: 2009/1/21
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510 ; Calibrated: 2009/1/21
- Phantom: SAM 12 ; Type: SAM V4.0 ; Serial: TP 1202
- Measurement SW: DASY4, V4.7 Build 80 ; Postprocessing SW: SEMCAD, V1.8 Build 186

Mid Channel 136/Area Scan (6x10x1): Measurement grid: dx=10mm, dy=10mm
 Maximum value of SAR (measured) = 0.549 mW/g

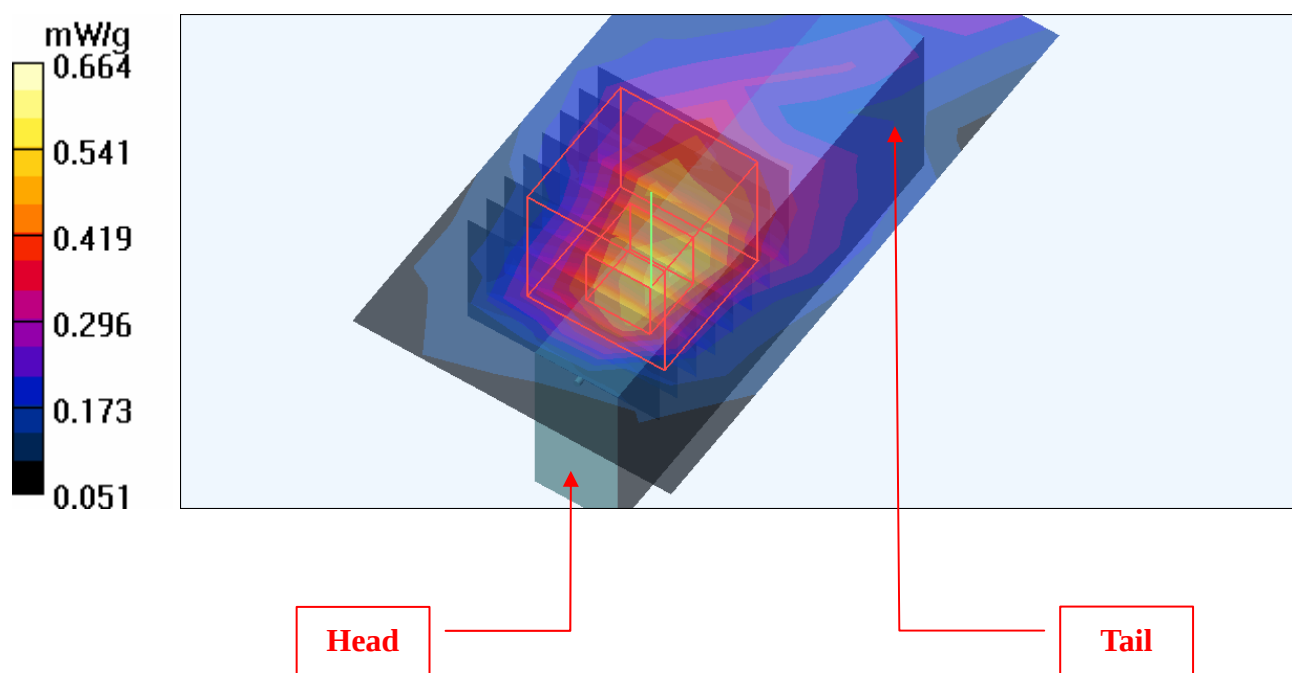
Mid Channel 136/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 6.91 V/m

Peak SAR (extrapolated) = 2.56 W/kg

SAR(1 g) = 0.519 mW/g; SAR(10 g) = 0.223 mW/g

Maximum value of SAR (measured) = 0.664 mW/g



Date/Time: 2009/7/14 09:19:35

Test Laboratory: Bureau Veritas ADT

M17-11a-Ch140

DUT: 3Com Wireless Dual Band 11n USB Adapter ; Type: WL-606

Communication System: 802.11a ; Frequency: 5700 MHz ; Duty Cycle: 1:1 ; Modulation type: BPSK
 Medium: MSL5800 Medium parameters used: $f = 5700$ MHz; $\sigma = 5.96$ mho/m; $\epsilon_r = 48.6$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section ; Separation distance : 5 mm (The right edge side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV3 - SN3504 ; ConvF(3.91, 3.91, 3.91) ; Calibrated: 2009/1/21
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510 ; Calibrated: 2009/1/21
- Phantom: SAM 12 ; Type: SAM V4.0 ; Serial: TP 1202
- Measurement SW: DASY4, V4.7 Build 80 ; Postprocessing SW: SEMCAD, V1.8 Build 186

High Channel 140/Area Scan (6x10x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.590 mW/g

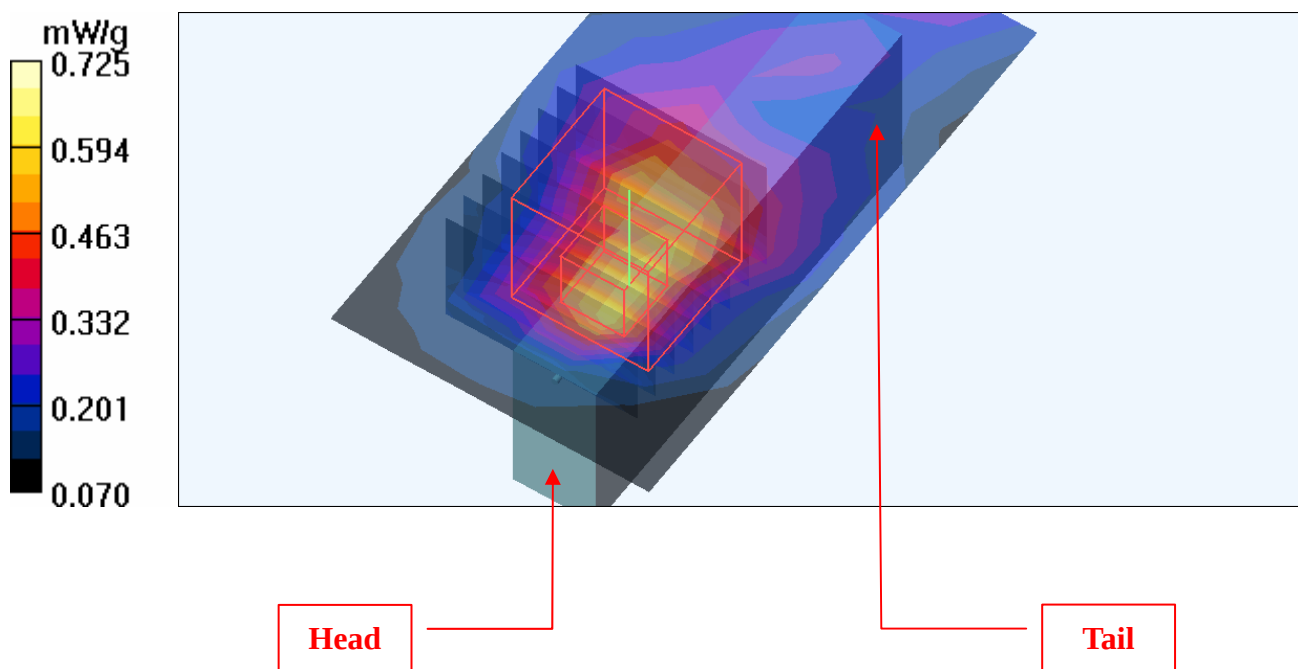
High Channel 140/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 7.78 V/m

Peak SAR (extrapolated) = 2.80 W/kg

SAR(1 g) = **0.582 mW/g**; SAR(10 g) = 0.260 mW/g

Maximum value of SAR (measured) = 0.725 mW/g



Date/Time: 2009/7/14 06:09:08

Test Laboratory: Bureau Veritas ADT

M18-11a-Ch120 / Main

DUT: 3Com Wireless Dual Band 11n USB Adapter ; Type: WL-606

Communication System: 802.11a ; Frequency: 5600 MHz ; Duty Cycle: 1:1 ; Modulation type: BPSK
Medium: MSL5800 Medium parameters used: $f = 5600$ MHz; $\sigma = 5.8$ mho/m; $\epsilon_r = 48.8$; $\rho = 1000$ kg/m³
Phantom section: Flat Section ; Separation distance : 5 mm (The right edge side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV3 - SN3504 ; ConvF(3.91, 3.91, 3.91) ; Calibrated: 2009/1/21
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510 ; Calibrated: 2009/1/21
- Phantom: SAM 12 ; Type: SAM V4.0 ; Serial: TP 1202
- Measurement SW: DASY4, V4.7 Build 80 ; Postprocessing SW: SEMCAD, V1.8 Build 186

Mid Channel 120/Area Scan (6x11x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.215 mW/g

Mid Channel 120/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 6.11 V/m

Peak SAR (extrapolated) = 0.511 W/kg

SAR(1 g) = 0.180 mW/g; SAR(10 g) = 0.113 mW/g

Maximum value of SAR (measured) = 0.221 mW/g

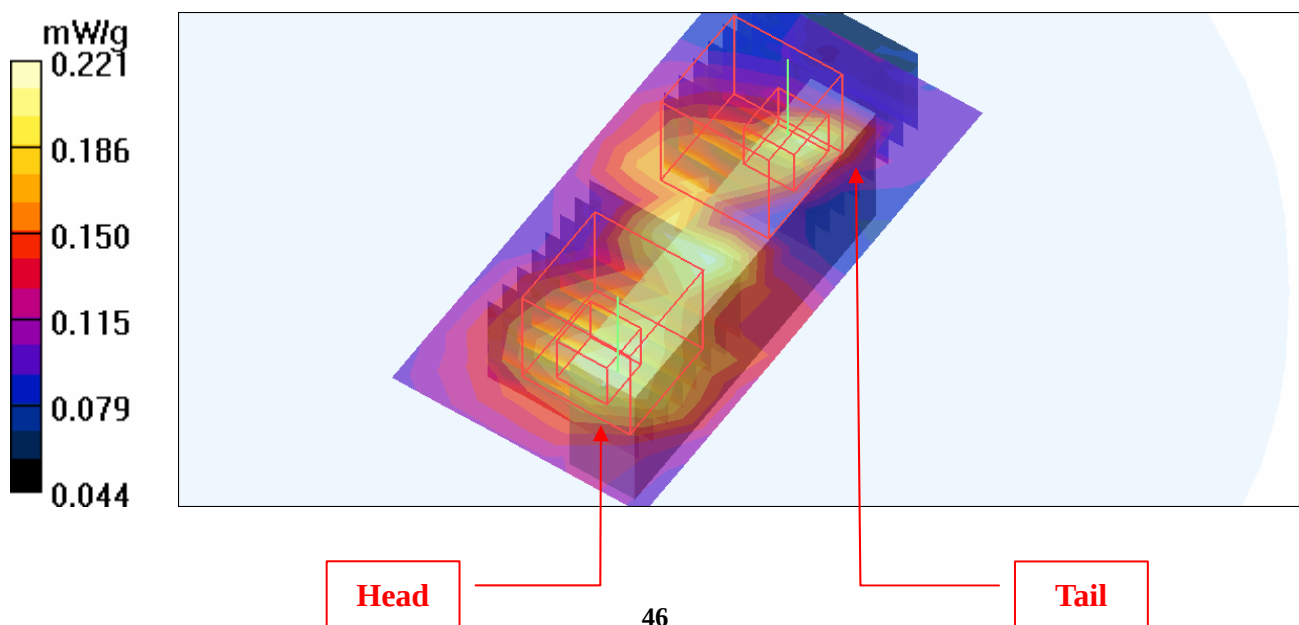
Mid Channel 120/Zoom Scan (8x8x8)/Cube 1: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 6.11 V/m

Peak SAR (extrapolated) = 0.683 W/kg

SAR(1 g) = 0.169 mW/g; SAR(10 g) = 0.103 mW/g

Maximum value of SAR (measured) = 0.217 mW/g



Date/Time: 2009/7/14 11:49:35

Test Laboratory: Bureau Veritas ADT

M19-11aN 20M-Ch40

DUT: 3Com Wireless Dual Band 11n USB Adapter ; Type: WL-606

Communication System: 11n 5G span20 ; Frequency: 5200 MHz ; Duty Cycle: 1:1 ; Modulation type: BPSK

Medium: MSL5800 Medium parameters used: $f = 5200$ MHz; $\sigma = 5.23$ mho/m; $\epsilon_r = 49.6$; $\rho = 1000$ kg/m³

Phantom section: Flat Section ; Separation distance : 5 mm (The right edge side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV3 - SN3504 ; ConvF(4.38, 4.38, 4.38) ; Calibrated: 2009/1/21
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510 ; Calibrated: 2009/1/21
- Phantom: SAM 12 ; Type: SAM V4.0 ; Serial: TP 1202
- Measurement SW: DASY4, V4.7 Build 80 ; Postprocessing SW: SEMCAD, V1.8 Build 186

Mid Channel 40/Area Scan (6x10x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.792 mW/g

Mid Channel 40/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 8.45 V/m

Peak SAR (extrapolated) = 2.22 W/kg

SAR(1 g) = 0.626 mW/g; SAR(10 g) = 0.319 mW/g

Maximum value of SAR (measured) = 0.818 mW/g

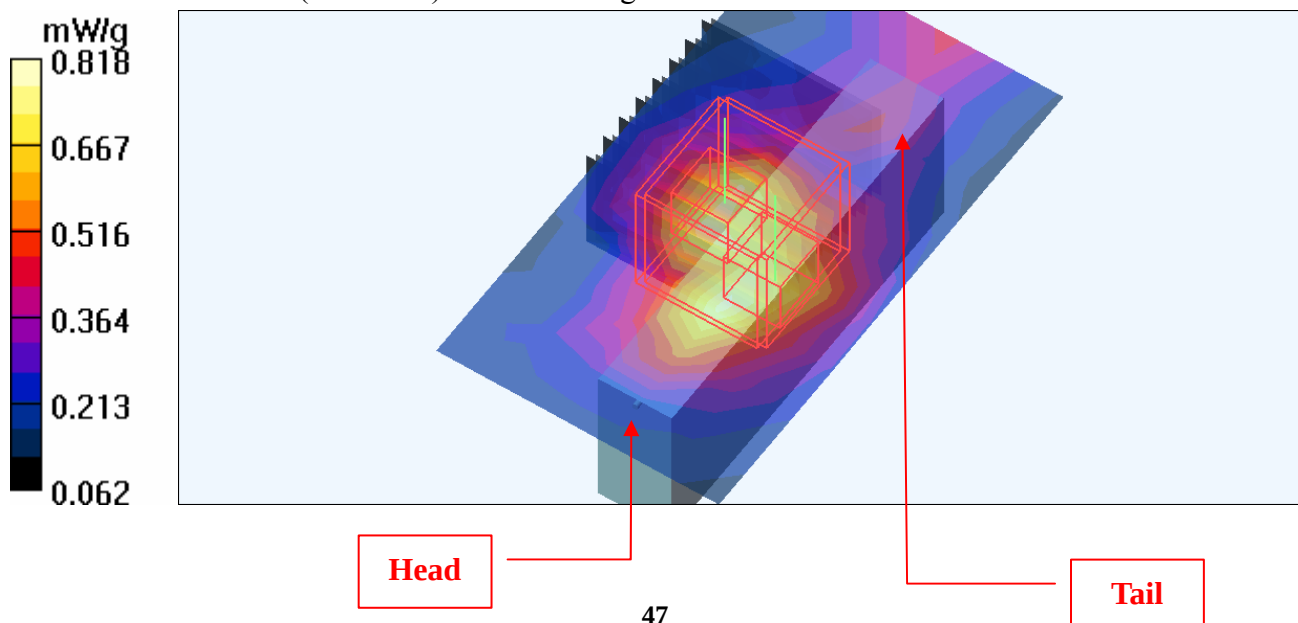
Mid Channel 40/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 8.45 V/m

Peak SAR (extrapolated) = 2.16 W/kg

SAR(1 g) = 0.608 mW/g; SAR(10 g) = 0.308 mW/g

Maximum value of SAR (measured) = 0.794 mW/g



Date/Time: 2009/7/14 12:35:00

Test Laboratory: Bureau Veritas ADT

M20-11aN 20M-Ch52

DUT: 3Com Wireless Dual Band 11n USB Adapter ; Type: WL-606

Communication System: 11n 5G span20 ; Frequency: 5260 MHz ; Duty Cycle: 1:1 ; Modulation type: BPSK

Medium: MSL5800 Medium parameters used: $f = 5260$ MHz; $\sigma = 5.32$ mho/m; $\epsilon_r = 49.5$; $\rho = 1000$ kg/m³

Phantom section: Flat Section ; Separation distance : 5 mm (The right edge side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV3 - SN3504 ; ConvF(4.06, 4.06, 4.06) ; Calibrated: 2009/1/21
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510 ; Calibrated: 2009/1/21
- Phantom: SAM 12 ; Type: SAM V4.0 ; Serial: TP 1202
- Measurement SW: DASY4, V4.7 Build 80 ; Postprocessing SW: SEMCAD, V1.8 Build 186

Low Channel 52/Area Scan (6x10x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.755 mW/g

Low Channel 52/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 8.15 V/m

Peak SAR (extrapolated) = 2.51 W/kg

SAR(1 g) = 0.569 mW/g; SAR(10 g) = 0.301 mW/g

Maximum value of SAR (measured) = 0.760 mW/g

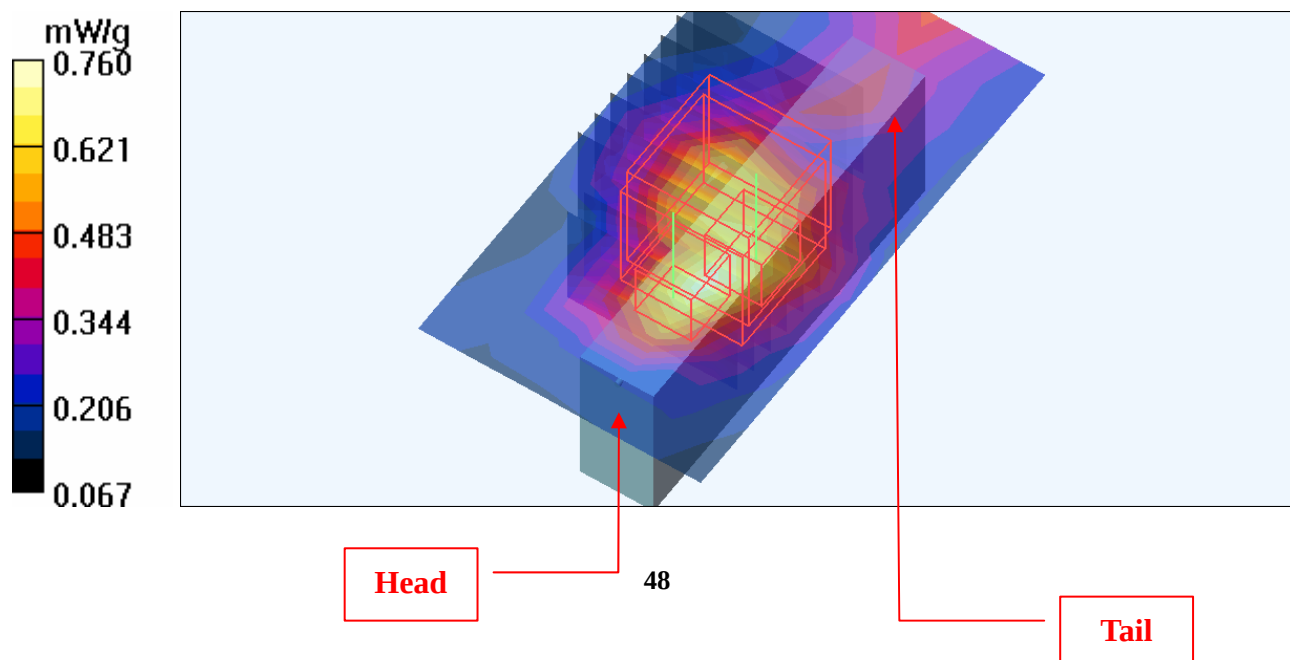
Low Channel 52/Zoom Scan (8x8x8)/Cube 1: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 8.15 V/m

Peak SAR (extrapolated) = 2.15 W/kg

SAR(1 g) = 0.552 mW/g; SAR(10 g) = 0.285 mW/g

Maximum value of SAR (measured) = 0.732 mW/g



Date/Time: 2009/7/14 13:56:30

Test Laboratory: Bureau Veritas ADT

M21-11aN 20M-Ch100

DUT: 3Com Wireless Dual Band 11n USB Adapter ; Type: WL-606

Communication System: 11n 5G span20 ; Frequency: 5500 MHz ; Duty Cycle: 1:1 ; Modulation type: BPSK

Medium: MSL5800 Medium parameters used: $f = 5500$ MHz; $\sigma = 5.66$ mho/m; $\epsilon_r = 49.1$; $\rho = 1000$ kg/m³

Phantom section: Flat Section ; Separation distance : 5 mm (The right edge side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV3 - SN3504 ; ConvF(3.98, 3.98, 3.98) ; Calibrated: 2009/1/21
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510 ; Calibrated: 2009/1/21
- Phantom: SAM 12 ; Type: SAM V4.0 ; Serial: TP 1202
- Measurement SW: DASY4, V4.7 Build 80 ; Postprocessing SW: SEMCAD, V1.8 Build 186

Low Channel 100/Area Scan (6x10x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.684 mW/g

Low Channel 100/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 8.26 V/m

Peak SAR (extrapolated) = 2.36 W/kg

SAR(1 g) = 0.575 mW/g; SAR(10 g) = 0.269 mW/g

Maximum value of SAR (measured) = 0.730 mW/g

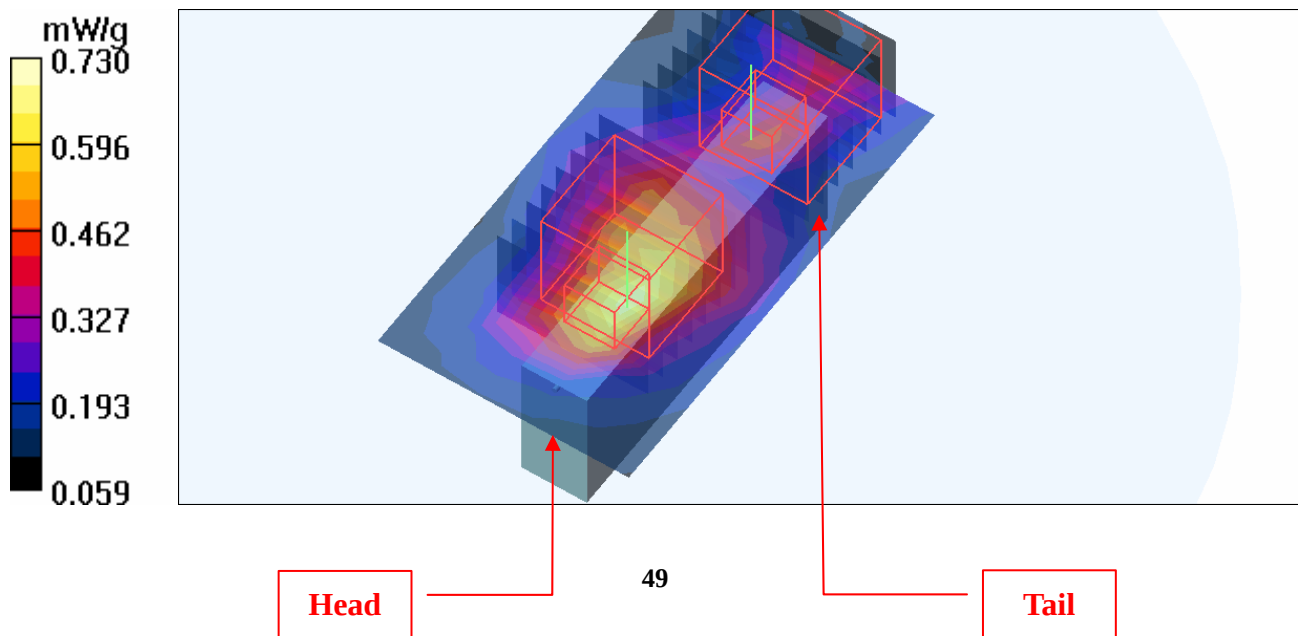
Low Channel 100/Zoom Scan (8x8x8)/Cube 1: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 8.26 V/m

Peak SAR (extrapolated) = 1.47 W/kg

SAR(1 g) = 0.317 mW/g; SAR(10 g) = 0.177 mW/g

Maximum value of SAR (measured) = 0.445 mW/g



Date/Time: 2009/7/14 14:37:17

Test Laboratory: Bureau Veritas ADT

M21-11aN 20M-Ch104

DUT: 3Com Wireless Dual Band 11n USB Adapter ; Type: WL-606

Communication System: 11n 5G span20 ; Frequency: 5520 MHz ; Duty Cycle: 1:1 ; Modulation type: BPSK

Medium: MSL5800 Medium parameters used: $f = 5520$ MHz; $\sigma = 5.69$ mho/m; $\epsilon_r = 49$; $\rho = 1000$ kg/m³

Phantom section: Flat Section ; Separation distance : 5 mm (The right edge side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV3 - SN3504 ; ConvF(3.98, 3.98, 3.98) ; Calibrated: 2009/1/21
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510 ; Calibrated: 2009/1/21
- Phantom: SAM 12 ; Type: SAM V4.0 ; Serial: TP 1202
- Measurement SW: DASY4, V4.7 Build 80 ; Postprocessing SW: SEMCAD, V1.8 Build 186

Mid Channel 104/Area Scan (6x10x1): Measurement grid: $dx=10$ mm, $dy=10$ mm

Maximum value of SAR (measured) = 0.602 mW/g

Mid Channel 104/Zoom Scan (8x8x8)/Cube 0: Measurement grid: $dx=4.3$ mm, $dy=4.3$ mm, $dz=3$ mm

Reference Value = 7.98 V/m

Peak SAR (extrapolated) = 2.42 W/kg

SAR(1 g) = 0.549 mW/g; SAR(10 g) = 0.252 mW/g

Maximum value of SAR (measured) = 0.680 mW/g

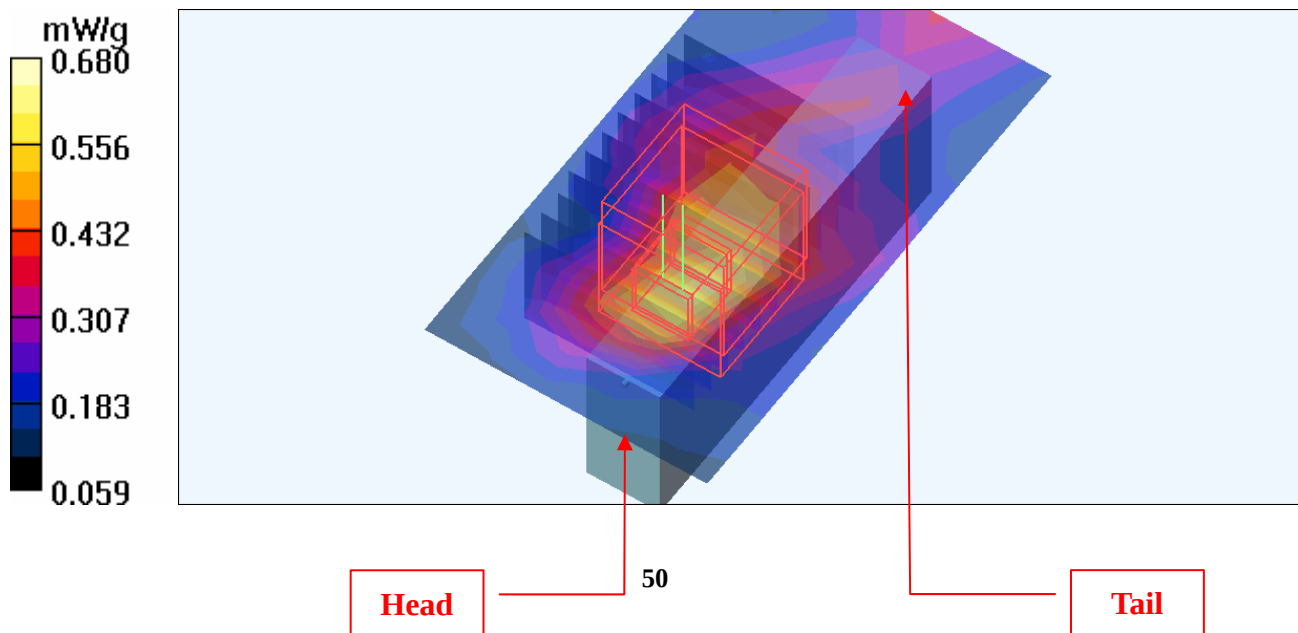
Mid Channel 104/Zoom Scan (8x8x8)/Cube 0: Measurement grid: $dx=4.3$ mm, $dy=4.3$ mm, $dz=3$ mm

Reference Value = 7.98 V/m

Peak SAR (extrapolated) = 2.28 W/kg

SAR(1 g) = 0.518 mW/g; SAR(10 g) = 0.232 mW/g

Maximum value of SAR (measured) = 0.642 mW/g



Date/Time: 2009/7/14 15:16:04

Test Laboratory: Bureau Veritas ADT

M21-11aN 20M-Ch116

DUT: 3Com Wireless Dual Band 11n USB Adapter ; Type: WL-606

Communication System: 11n 5G span20 ; Frequency: 5580 MHz ; Duty Cycle: 1:1 ; Modulation type: BPSK

Medium: MSL5800 Medium parameters used: $f = 5580$ MHz; $\sigma = 5.78$ mho/m; $\epsilon_r = 48.9$; $\rho = 1000$ kg/m³

Phantom section: Flat Section ; Separation distance : 5 mm (The right edge side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV3 - SN3504 ; ConvF(3.91, 3.91, 3.91) ; Calibrated: 2009/1/21
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510 ; Calibrated: 2009/1/21
- Phantom: SAM 12 ; Type: SAM V4.0 ; Serial: TP 1202
- Measurement SW: DASY4, V4.7 Build 80 ; Postprocessing SW: SEMCAD, V1.8 Build 186

Mid Channel 116/Area Scan (6x10x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.629 mW/g

Mid Channel 116/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 7.97 V/m

Peak SAR (extrapolated) = 2.83 W/kg

SAR(1 g) = 0.554 mW/g; SAR(10 g) = 0.260 mW/g

Maximum value of SAR (measured) = 0.715 mW/g

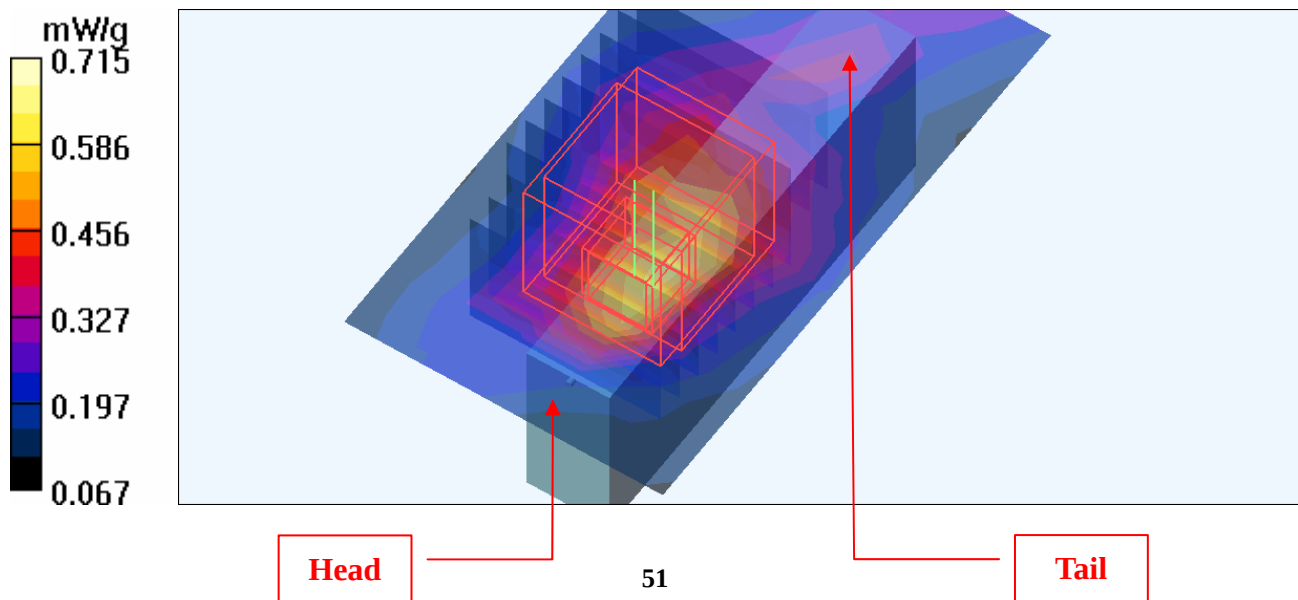
Mid Channel 116/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 7.97 V/m

Peak SAR (extrapolated) = 2.59 W/kg

SAR(1 g) = 0.507 mW/g; SAR(10 g) = 0.238 mW/g

Maximum value of SAR (measured) = 0.654 mW/g



Date/Time: 2009/7/14 13:16:43

Test Laboratory: Bureau Veritas ADT

M21-11aN 20M-Ch120

DUT: 3Com Wireless Dual Band 11n USB Adapter ; Type: WL-606

Communication System: 11n 5G span20 ; Frequency: 5600 MHz ; Duty Cycle: 1:1 ; Modulation type: BPSK

Medium: MSL5800 Medium parameters used: $f = 5600$ MHz; $\sigma = 5.8$ mho/m; $\epsilon_r = 48.8$; $\rho = 1000$ kg/m³

Phantom section: Flat Section ; Separation distance : 5 mm (The right edge side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV3 - SN3504 ; ConvF(3.91, 3.91, 3.91) ; Calibrated: 2009/1/21
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510 ; Calibrated: 2009/1/21
- Phantom: SAM 12 ; Type: SAM V4.0 ; Serial: TP 1202
- Measurement SW: DASY4, V4.7 Build 80 ; Postprocessing SW: SEMCAD, V1.8 Build 186

Mid Channel 120/Area Scan (6x10x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.660 mW/g

Mid Channel 120/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 8.09 V/m

Peak SAR (extrapolated) = 2.54 W/kg

SAR(1 g) = 0.574 mW/g; SAR(10 g) = 0.265 mW/g

Maximum value of SAR (measured) = 0.727 mW/g

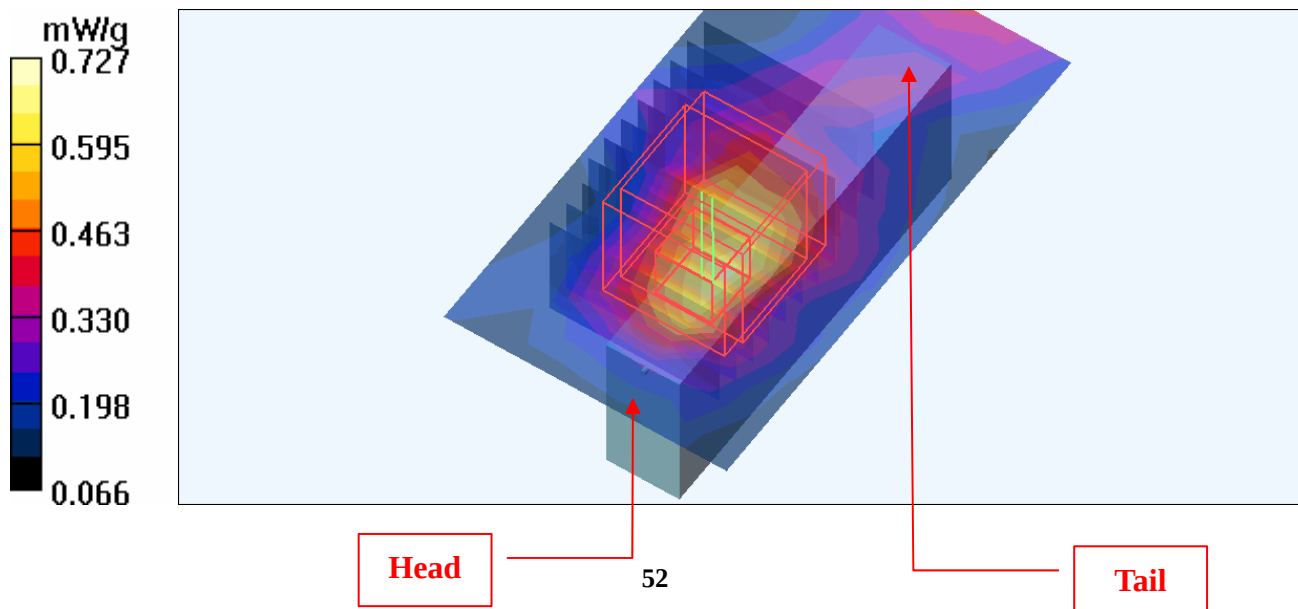
Mid Channel 120/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 8.09 V/m

Peak SAR (extrapolated) = 2.41 W/kg

SAR(1 g) = 0.545 mW/g; SAR(10 g) = 0.249 mW/g

Maximum value of SAR (measured) = 0.691 mW/g



Date/Time: 2009/7/14 15:55:19

Test Laboratory: Bureau Veritas ADT

M21-11aN 20M-Ch124

DUT: 3Com Wireless Dual Band 11n USB Adapter ; Type: WL-606

Communication System: 11n 5G span20 ; Frequency: 5620 MHz ; Duty Cycle: 1:1 ; Modulation type: BPSK

Medium: MSL5800 Medium parameters used: $f = 5620$ MHz; $\sigma = 5.83$ mho/m; $\epsilon_r = 48.8$; $\rho = 1000$ kg/m³

Phantom section: Flat Section ; Separation distance : 5 mm (The right edge side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV3 - SN3504 ; ConvF(3.91, 3.91, 3.91) ; Calibrated: 2009/1/21
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510 ; Calibrated: 2009/1/21
- Phantom: SAM 12 ; Type: SAM V4.0 ; Serial: TP 1202
- Measurement SW: DASY4, V4.7 Build 80 ; Postprocessing SW: SEMCAD, V1.8 Build 186

Mid Channel 124/Area Scan (6x10x1): Measurement grid: dx=10mm, dy=10mm

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

Mid Channel 124/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 8.15 V/m

Peak SAR (extrapolated) = 3.56 W/kg

SAR(1 g) = 0.588 mW/g; SAR(10 g) = 0.266 mW/g

Maximum value of SAR (measured) = 0.673 mW/g

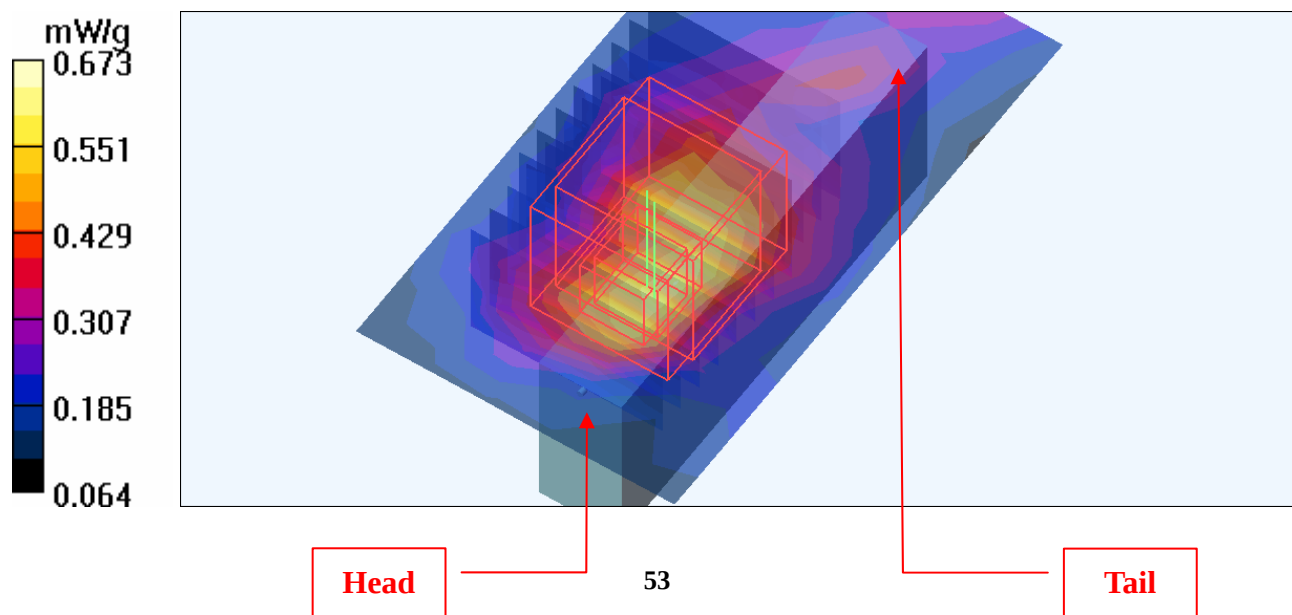
Mid Channel 124/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 8.15 V/m

Peak SAR (extrapolated) = 3.43 W/kg

SAR(1 g) = 0.567 mW/g; SAR(10 g) = 0.256 mW/g

Maximum value of SAR (measured) = 0.649 mW/g



Date/Time: 2009/7/14 16:35:52

Test Laboratory: Bureau Veritas ADT

M21-11aN 20M-Ch136

DUT: 3Com Wireless Dual Band 11n USB Adapter ; Type: WL-606

Communication System: 11n 5G span20 ; Frequency: 5680 MHz ; Duty Cycle: 1:1 ; Modulation type: BPSK

Medium: MSL5800 Medium parameters used: $f = 5680$ MHz; $\sigma = 5.93$ mho/m; $\epsilon_r = 48.7$; $\rho = 1000$ kg/m³

Phantom section: Flat Section ; Separation distance : 5 mm (The right edge side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV3 - SN3504 ; ConvF(3.91, 3.91, 3.91) ; Calibrated: 2009/1/21
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510 ; Calibrated: 2009/1/21
- Phantom: SAM 12 ; Type: SAM V4.0 ; Serial: TP 1202
- Measurement SW: DASY4, V4.7 Build 80 ; Postprocessing SW: SEMCAD, V1.8 Build 186

Mid Channel 136/Area Scan (6x10x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.620 mW/g

Mid Channel 136/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 8.58 V/m

Peak SAR (extrapolated) = 3.27 W/kg

SAR(1 g) = 0.616 mW/g; SAR(10 g) = 0.278 mW/g

Maximum value of SAR (measured) = 0.753 mW/g

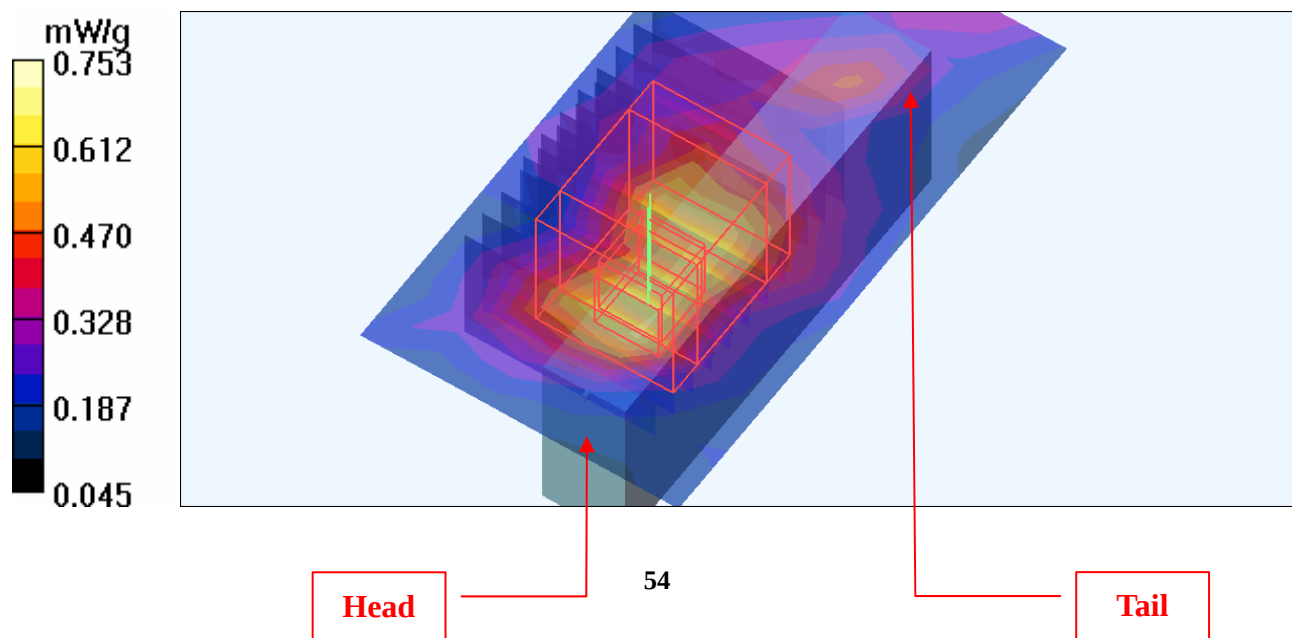
Mid Channel 136/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 8.58 V/m

Peak SAR (extrapolated) = 3.17 W/kg

SAR(1 g) = 0.598 mW/g; SAR(10 g) = 0.268 mW/g

Maximum value of SAR (measured) = 0.731 mW/g



Date/Time: 2009/7/14 18:16:34

Test Laboratory: Bureau Veritas ADT

M21-11aN 20M-Ch140

DUT: 3Com Wireless Dual Band 11n USB Adapter ; Type: WL-606

Communication System: 11n 5G span20 ; Frequency: 5700 MHz ; Duty Cycle: 1:1 ; Modulation type: BPSK

Medium: MSL5800 Medium parameters used: $f = 5700$ MHz; $\sigma = 5.96$ mho/m; $\epsilon_r = 48.6$; $\rho = 1000$ kg/m³

Phantom section: Flat Section ; Separation distance : 5 mm (The right edge side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV3 - SN3504 ; ConvF(3.91, 3.91, 3.91) ; Calibrated: 2009/1/21
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510 ; Calibrated: 2009/1/21
- Phantom: SAM 12 ; Type: SAM V4.0 ; Serial: TP 1202
- Measurement SW: DASY4, V4.7 Build 80 ; Postprocessing SW: SEMCAD, V1.8 Build 186

High Channel 140/Area Scan (6x10x1): Measurement grid: $dx=10$ mm, $dy=10$ mm

Maximum value of SAR (measured) = 0.566 mW/g

High Channel 140/Zoom Scan (8x8x8)/Cube 0: Measurement grid: $dx=4.3$ mm, $dy=4.3$ mm, $dz=3$ mm

Reference Value = 8.33 V/m

Peak SAR (extrapolated) = 3.24 W/kg

SAR(1 g) = 0.603 mW/g; SAR(10 g) = 0.278 mW/g

Maximum value of SAR (measured) = 0.751 mW/g

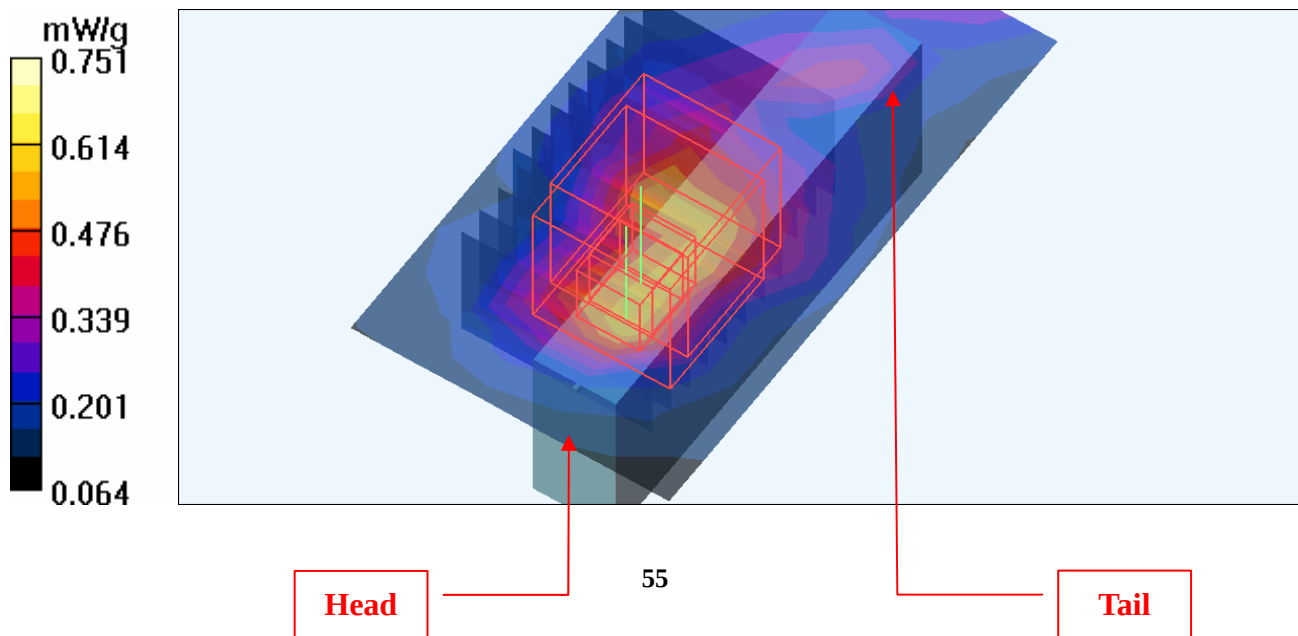
High Channel 140/Zoom Scan (8x8x8)/Cube 1: Measurement grid: $dx=4.3$ mm, $dy=4.3$ mm, $dz=3$ mm

Reference Value = 8.33 V/m

Peak SAR (extrapolated) = 2.40 W/kg

SAR(1 g) = 0.543 mW/g; SAR(10 g) = 0.251 mW/g

Maximum value of SAR (measured) = 0.707 mW/g



Date/Time: 2009/7/14 17:44:48

Test Laboratory: Bureau Veritas ADT

M22-11aN 40M-Ch46

DUT: 3Com Wireless Dual Band 11n USB Adapter ; Type: WL-606

Communication System: 11n 5G span40 ; Frequency: 5230 MHz ; Duty Cycle: 1:1 ; Modulation type: BPSK

Medium: MSL5800 Medium parameters used: $f = 5230$ MHz; $\sigma = 5.28$ mho/m; $\epsilon_r = 49.6$; $\rho = 1000$ kg/m³

Phantom section: Flat Section ; Separation distance : 5 mm (The right edge side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV3 - SN3504 ; ConvF(4.38, 4.38, 4.38) ; Calibrated: 2009/1/21
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510 ; Calibrated: 2009/1/21
- Phantom: SAM 12 ; Type: SAM V4.0 ; Serial: TP 1202
- Measurement SW: DASY4, V4.7 Build 80 ; Postprocessing SW: SEMCAD, V1.8 Build 186

High Channel 46/Area Scan (6x10x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.756 mW/g

High Channel 46/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 8.27 V/m

Peak SAR (extrapolated) = 1.96 W/kg

SAR(1 g) = 0.596 mW/g; SAR(10 g) = 0.297 mW/g

Maximum value of SAR (measured) = 0.813 mW/g

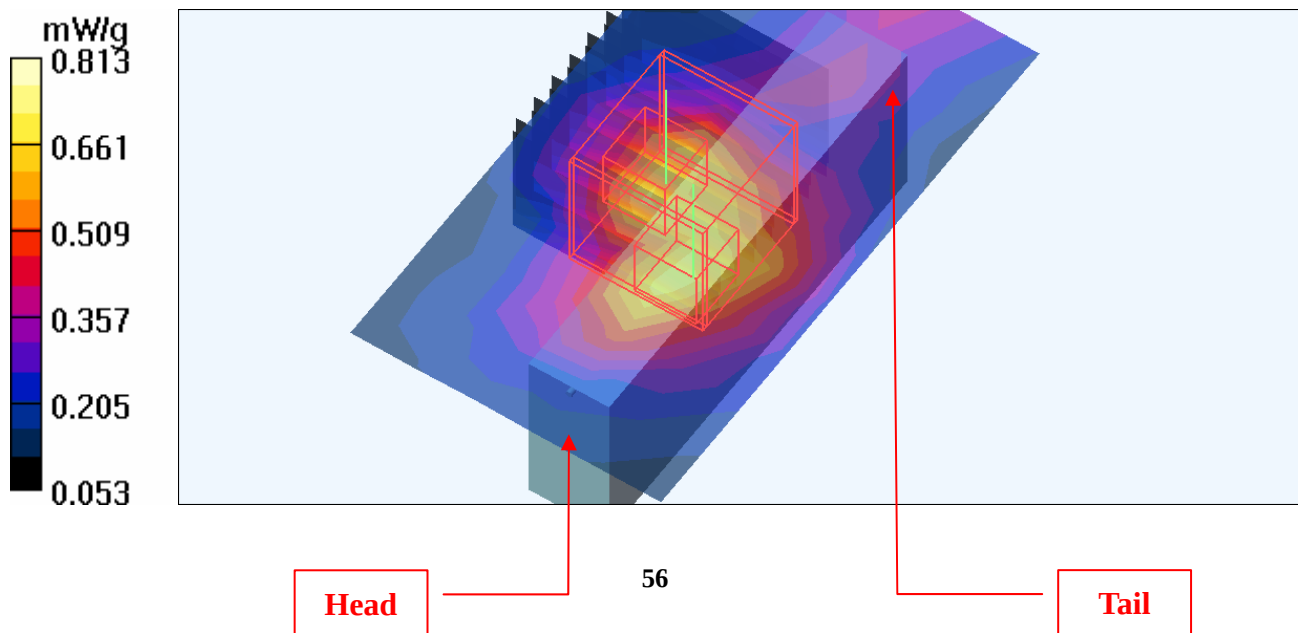
High Channel 46/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 8.27 V/m

Peak SAR (extrapolated) = 1.73 W/kg

SAR(1 g) = 0.526 mW/g; SAR(10 g) = 0.257 mW/g

Maximum value of SAR (measured) = 0.718 mW/g



Date/Time: 2009/7/14 18:25:00

Test Laboratory: Bureau Veritas ADT

M23-11aN 40M-Ch54

DUT: 3Com Wireless Dual Band 11n USB Adapter ; Type: WL-606

Communication System: 11n 5G span40 ; Frequency: 5270 MHz ; Duty Cycle: 1:1 ; Modulation type: BPSK

Medium: MSL5800 Medium parameters used: $f = 5270$ MHz; $\sigma = 5.33$ mho/m; $\epsilon_r = 49.5$; $\rho = 1000$ kg/m³

Phantom section: Flat Section ; Separation distance : 5 mm (The right edge side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV3 - SN3504 ; ConvF(4.06, 4.06, 4.06) ; Calibrated: 2009/1/21
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510 ; Calibrated: 2009/1/21
- Phantom: SAM 12 ; Type: SAM V4.0 ; Serial: TP 1202
- Measurement SW: DASY4, V4.7 Build 80 ; Postprocessing SW: SEMCAD, V1.8 Build 186

Low Channel 54/Area Scan (6x10x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.735 mW/g

Low Channel 54/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 8.34 V/m

Peak SAR (extrapolated) = 2.42 W/kg

SAR(1 g) = 0.589 mW/g; SAR(10 g) = 0.302 mW/g

Maximum value of SAR (measured) = 0.761 mW/g

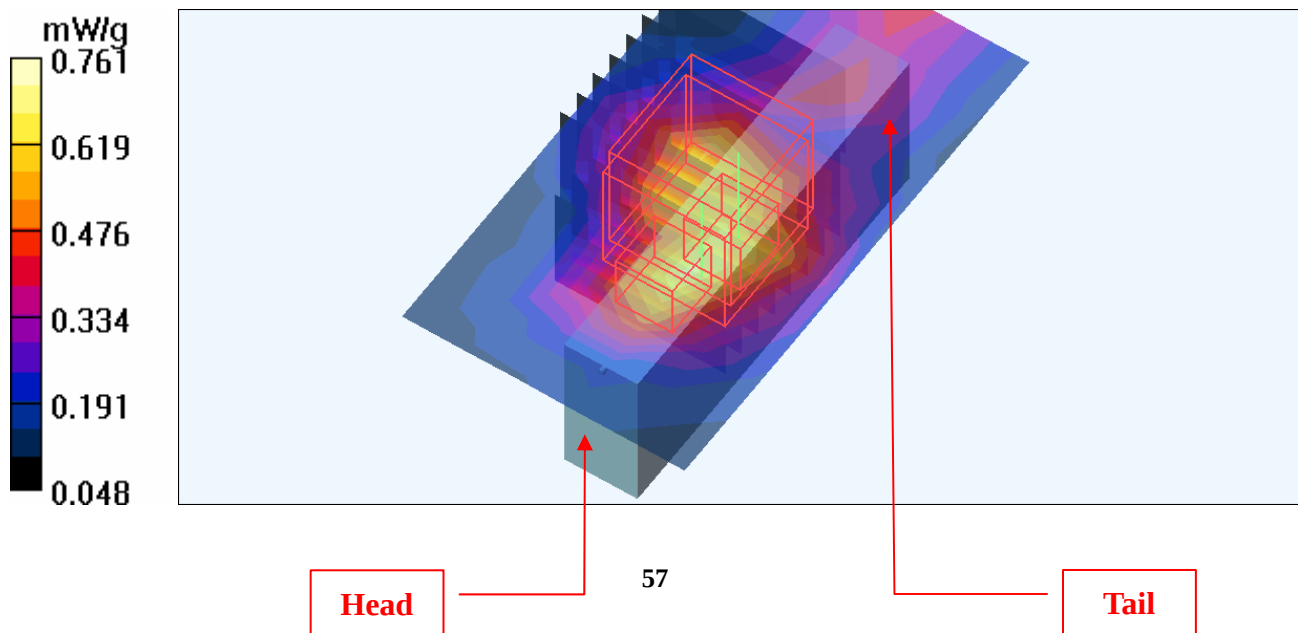
Low Channel 54/Zoom Scan (8x8x8)/Cube 1: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 8.34 V/m

Peak SAR (extrapolated) = 2.03 W/kg

SAR(1 g) = 0.537 mW/g; SAR(10 g) = 0.291 mW/g

Maximum value of SAR (measured) = 0.710 mW/g



Date/Time: 2009/7/14 19:06:47

Test Laboratory: Bureau Veritas ADT

M24-11aN 40M-Ch102

DUT: 3Com Wireless Dual Band 11n USB Adapter ; Type: WL-606

Communication System: 11n 5G span40 ; Frequency: 5510 MHz ; Duty Cycle: 1:1 ; Modulation type: BPSK

Medium: MSL5800 Medium parameters used: $f = 5510 \text{ MHz}$; $\sigma = 5.67 \text{ mho/m}$; $\epsilon_r = 49$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section ; Separation distance : 5 mm (The right edge side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV3 - SN3504 ; ConvF(3.98, 3.98, 3.98) ; Calibrated: 2009/1/21
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510 ; Calibrated: 2009/1/21
- Phantom: SAM 12 ; Type: SAM V4.0 ; Serial: TP 1202
- Measurement SW: DASY4, V4.7 Build 80 ; Postprocessing SW: SEMCAD, V1.8 Build 186

Low Channel 102/Area Scan (6x10x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (measured) = 0.614 mW/g

Low Channel 102/Zoom Scan (8x8x8)/Cube 0: Measurement grid: $dx=4.3\text{mm}$, $dy=4.3\text{mm}$, $dz=3\text{mm}$

Reference Value = 7.89 V/m

Peak SAR (extrapolated) = 1.91 W/kg

SAR(1 g) = 0.469 mW/g; SAR(10 g) = 0.238 mW/g

Maximum value of SAR (measured) = 0.612 mW/g

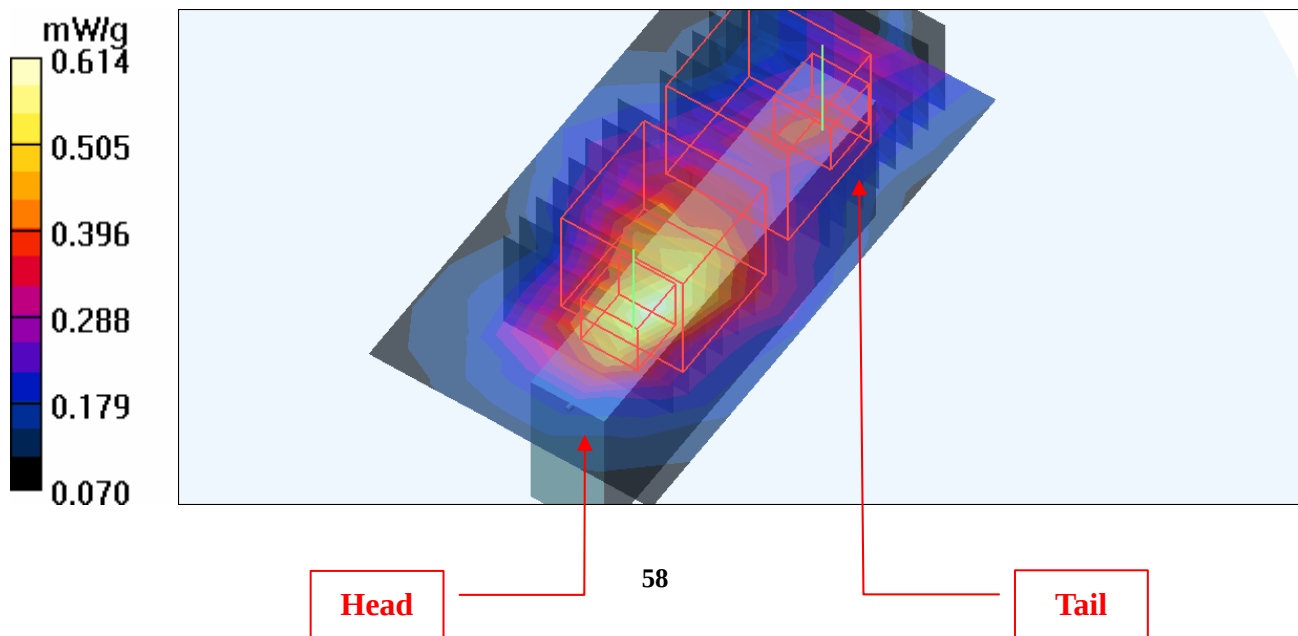
Low Channel 102/Zoom Scan (8x8x8)/Cube 1: Measurement grid: $dx=4.3\text{mm}$, $dy=4.3\text{mm}$, $dz=3\text{mm}$

Reference Value = 7.89 V/m

Peak SAR (extrapolated) = 0.579 W/kg

SAR(1 g) = 0.205 mW/g; SAR(10 g) = 0.137 mW/g

Maximum value of SAR (measured) = 0.288 mW/g



Date/Time: 2009/7/14 20:37:10

Test Laboratory: Bureau Veritas ADT

M24-11aN 40M-Ch118

DUT: 3Com Wireless Dual Band 11n USB Adapter ; Type: WL-606

Communication System: 11n 5G span40 ; Frequency: 5590 MHz ; Duty Cycle: 1:1 ; Modulation type: BPSK

Medium: MSL5800 Medium parameters used: $f = 5590$ MHz; $\sigma = 5.79$ mho/m; $\epsilon_r = 48.8$; $\rho = 1000$ kg/m³

Phantom section: Flat Section ; Separation distance : 5 mm (The right edge side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV3 - SN3504 ; ConvF(3.91, 3.91, 3.91) ; Calibrated: 2009/1/21
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510 ; Calibrated: 2009/1/21
- Phantom: SAM 12 ; Type: SAM V4.0 ; Serial: TP 1202
- Measurement SW: DASY4, V4.7 Build 80 ; Postprocessing SW: SEMCAD, V1.8 Build 186

Mid Channel 118/Area Scan (6x10x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.625 mW/g

Mid Channel 118/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 8.40 V/m

Peak SAR (extrapolated) = 2.40 W/kg

SAR(1 g) = 0.579 mW/g; SAR(10 g) = 0.275 mW/g

Maximum value of SAR (measured) = 0.697 mW/g

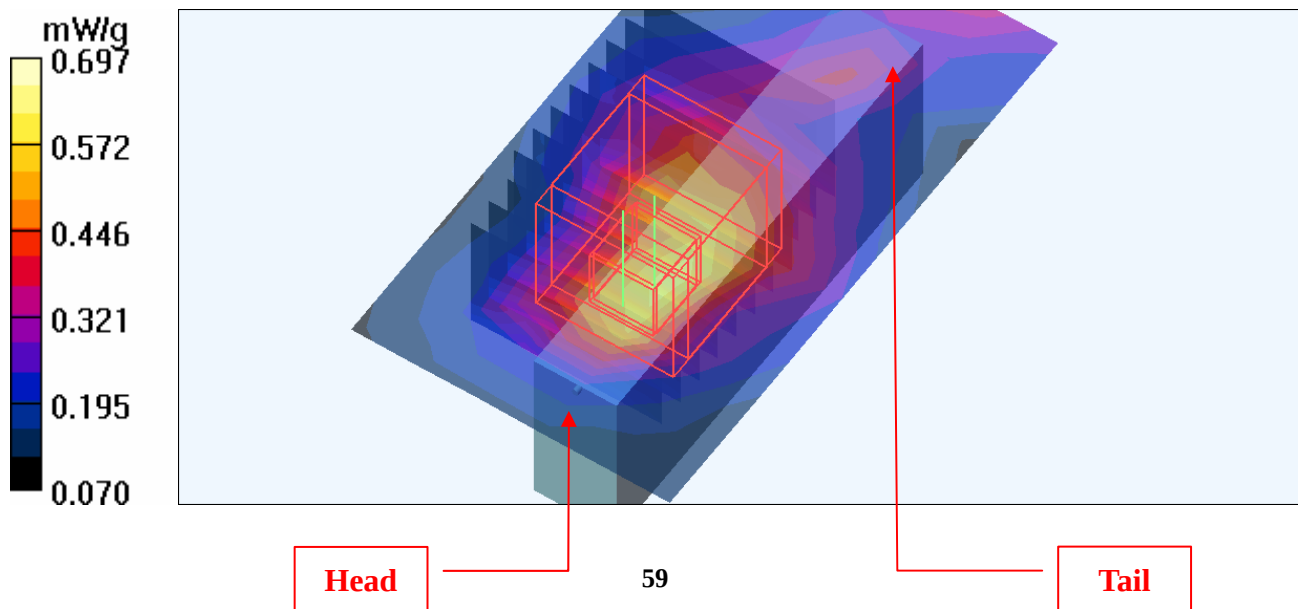
Mid Channel 118/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 8.40 V/m

Peak SAR (extrapolated) = 2.33 W/kg

SAR(1 g) = 0.563 mW/g; SAR(10 g) = 0.265 mW/g

Maximum value of SAR (measured) = 0.678 mW/g



Date/Time: 2009/7/14 21:45:54

Test Laboratory: Bureau Veritas ADT

M24-11aN 40M-Ch134

DUT: 3Com Wireless Dual Band 11n USB Adapter ; Type: WL-606

Communication System: 11n 5G span40 ; Frequency: 5670 MHz ; Duty Cycle: 1:1 ; Modulation type: BPSK

Medium: MSL5800 Medium parameters used: $f = 5670$ MHz; $\sigma = 5.91$ mho/m; $\epsilon_r = 48.7$; $\rho = 1000$ kg/m³

Phantom section: Flat Section ; Separation distance : 5 mm (The right edge side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV3 - SN3504 ; ConvF(3.91, 3.91, 3.91) ; Calibrated: 2009/1/21
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510 ; Calibrated: 2009/1/21
- Phantom: SAM 12 ; Type: SAM V4.0 ; Serial: TP 1202
- Measurement SW: DASY4, V4.7 Build 80 ; Postprocessing SW: SEMCAD, V1.8 Build 186

High Channel 134/Area Scan (6x10x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.595 mW/g

High Channel 134/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 8.38 V/m

Peak SAR (extrapolated) = 2.59 W/kg

SAR(1 g) = 0.566 mW/g; SAR(10 g) = 0.270 mW/g

Maximum value of SAR (measured) = 0.690 mW/g

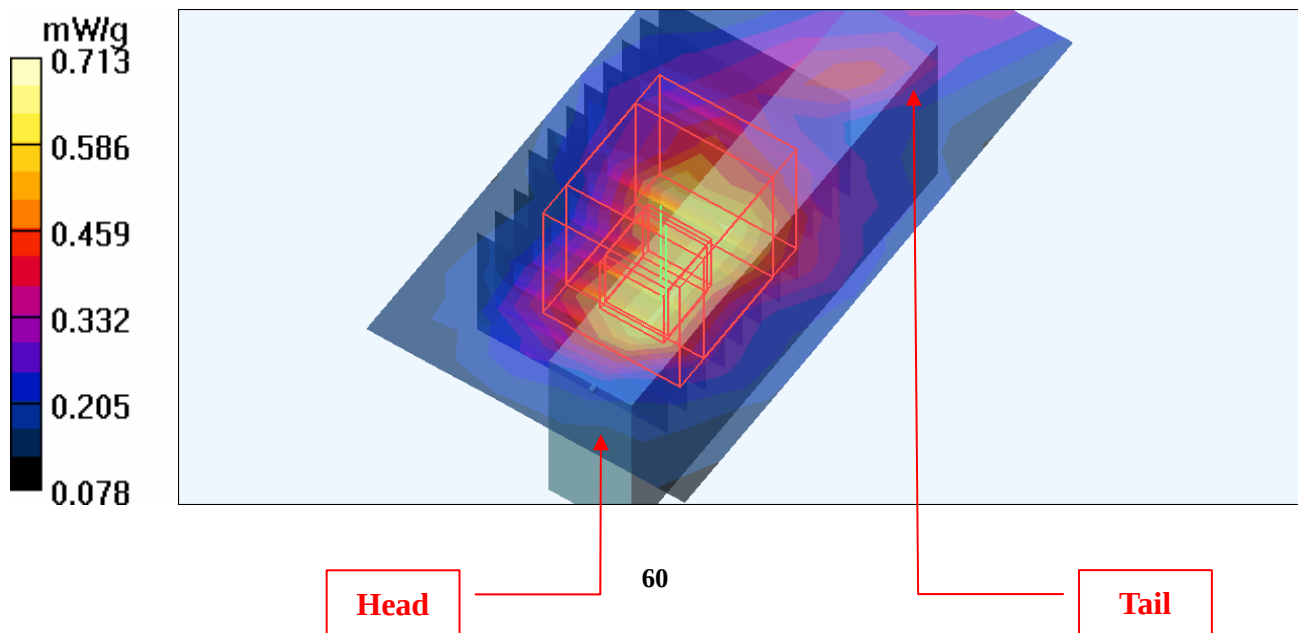
High Channel 134/Zoom Scan (8x8x8)/Cube 1: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 8.38 V/m

Peak SAR (extrapolated) = 2.50 W/kg

SAR(1 g) = 0.558 mW/g; SAR(10 g) = 0.261 mW/g

Maximum value of SAR (measured) = 0.713 mW/g



Date/Time: 2009/7/15 02:06:45

Test Laboratory: Bureau Veritas ADT

M25-11a-Ch36

DUT: 3Com Wireless Dual Band 11n USB Adapter ; Type: WL-606

Communication System: 802.11a ; Frequency: 5180 MHz ; Duty Cycle: 1:1 ; Modulation type: BPSK
Medium: MSL5800 Medium parameters used: $f = 5180 \text{ MHz}$; $\sigma = 5.25 \text{ mho/m}$; $\epsilon_r = 49.2$; $\rho = 1000 \text{ kg/m}^3$
Phantom section: Flat Section ; Separation distance : 5 mm (The front side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV3 - SN3504 ; ConvF(4.38, 4.38, 4.38) ; Calibrated: 2009/1/21
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510 ; Calibrated: 2009/1/21
- Phantom: SAM 12 ; Type: SAM V4.0 ; Serial: TP 1202
- Measurement SW: DASY4, V4.7 Build 80 ; Postprocessing SW: SEMCAD, V1.8 Build 186

Low Channel 36/Area Scan (6x10x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (measured) = 0.987 mW/g

Low Channel 36/Zoom Scan (8x8x8)/Cube 0: Measurement grid: $dx=4.3\text{mm}$, $dy=4.3\text{mm}$, $dz=3\text{mm}$

Reference Value = 7.22 V/m

Peak SAR (extrapolated) = 2.17 W/kg

SAR(1 g) = 0.746 mW/g; SAR(10 g) = 0.269 mW/g

Maximum value of SAR (measured) = 1.07 mW/g

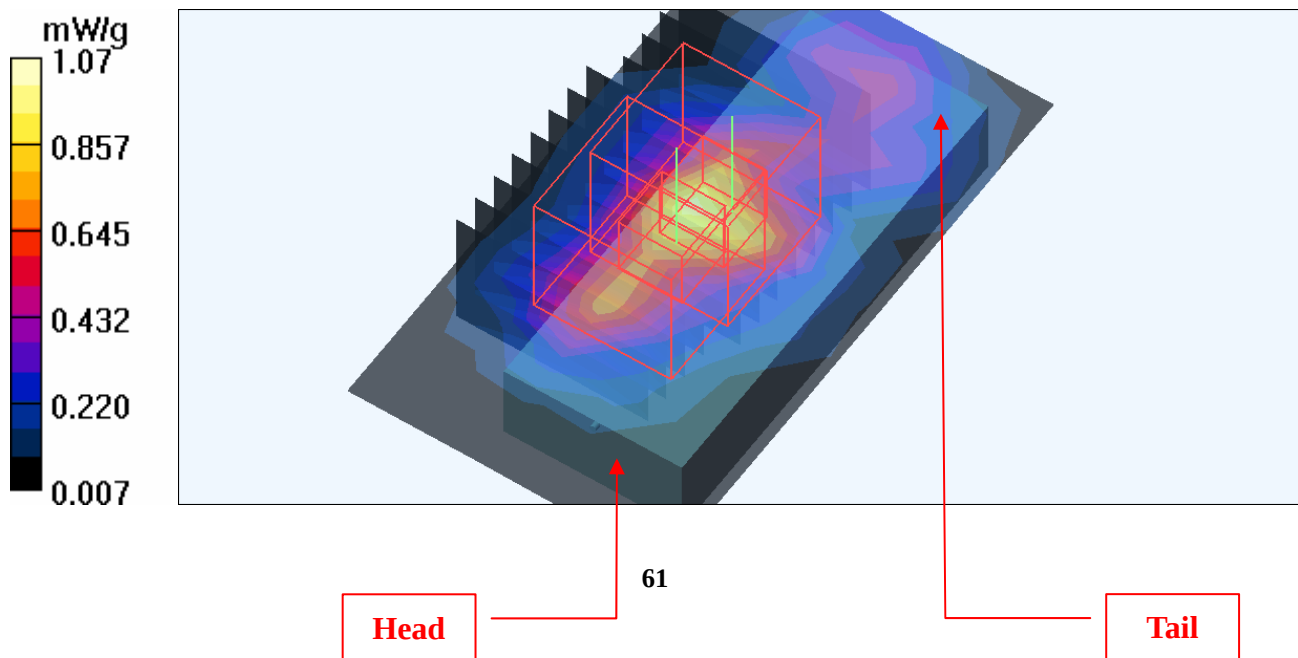
Low Channel 36/Zoom Scan (8x8x8)/Cube 1: Measurement grid: $dx=4.3\text{mm}$, $dy=4.3\text{mm}$, $dz=3\text{mm}$

Reference Value = 7.22 V/m

Peak SAR (extrapolated) = 1.96 W/kg

SAR(1 g) = 0.570 mW/g; SAR(10 g) = 0.223 mW/g

Maximum value of SAR (measured) = 1.02 mW/g



Date/Time: 2009/7/15 02:32:52

Test Laboratory: Bureau Veritas ADT

M26-11a-Ch36 / Main

DUT: 3Com Wireless Dual Band 11n USB Adapter ; Type: WL-606

Communication System: 802.11a ; Frequency: 5180 MHz ; Duty Cycle: 1:1 ; Modulation type: BPSK
Medium: MSL5800 Medium parameters used: $f = 5180$ MHz; $\sigma = 5.25$ mho/m; $\epsilon_r = 49.2$; $\rho = 1000$ kg/m³
Phantom section: Flat Section ; Separation distance : 5 mm (The front side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV3 - SN3504 ; ConvF(4.38, 4.38, 4.38) ; Calibrated: 2009/1/21
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510 ; Calibrated: 2009/1/21
- Phantom: SAM 12 ; Type: SAM V4.0 ; Serial: TP 1202
- Measurement SW: DASY4, V4.7 Build 80 ; Postprocessing SW: SEMCAD, V1.8 Build 186

Low Channel 36/Area Scan (6x10x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.904 mW/g

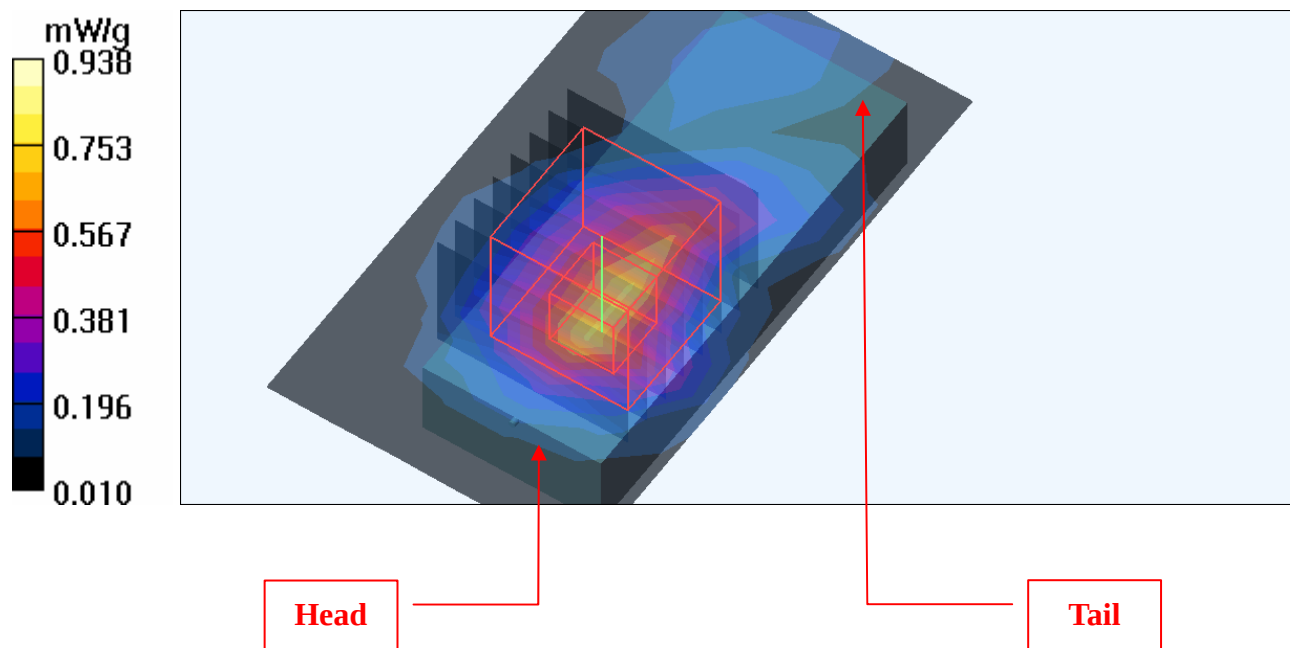
Low Channel 36/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 8.18 V/m

Peak SAR (extrapolated) = 1.91 W/kg

SAR(1 g) = **0.668 mW/g**; SAR(10 g) = 0.260 mW/g

Maximum value of SAR (measured) = 0.938 mW/g



Date/Time: 2009/7/15 03:07:01

Test Laboratory: Bureau Veritas ADT

M27-11a-Ch60

DUT: 3Com Wireless Dual Band 11n USB Adapter ; Type: WL-606

Communication System: 802.11a ; Frequency: 5300 MHz ; Duty Cycle: 1:1 ; Modulation type: BPSK
Medium: MSL5800 Medium parameters used: $f = 5300$ MHz; $\sigma = 5.41$ mho/m; $\epsilon_r = 49$; $\rho = 1000$ kg/m³
Phantom section: Flat Section ; Separation distance : 5 mm (The front side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV3 - SN3504 ; ConvF(4.06, 4.06, 4.06) ; Calibrated: 2009/1/21
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510 ; Calibrated: 2009/1/21
- Phantom: SAM 12 ; Type: SAM V4.0 ; Serial: TP 1202
- Measurement SW: DASY4, V4.7 Build 80 ; Postprocessing SW: SEMCAD, V1.8 Build 186

Mid Channel 60/Area Scan (6x10x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.725 mW/g

Mid Channel 60/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 6.96 V/m

Peak SAR (extrapolated) = 1.68 W/kg

SAR(1 g) = 0.558 mW/g; SAR(10 g) = 0.199 mW/g

Maximum value of SAR (measured) = 0.812 mW/g

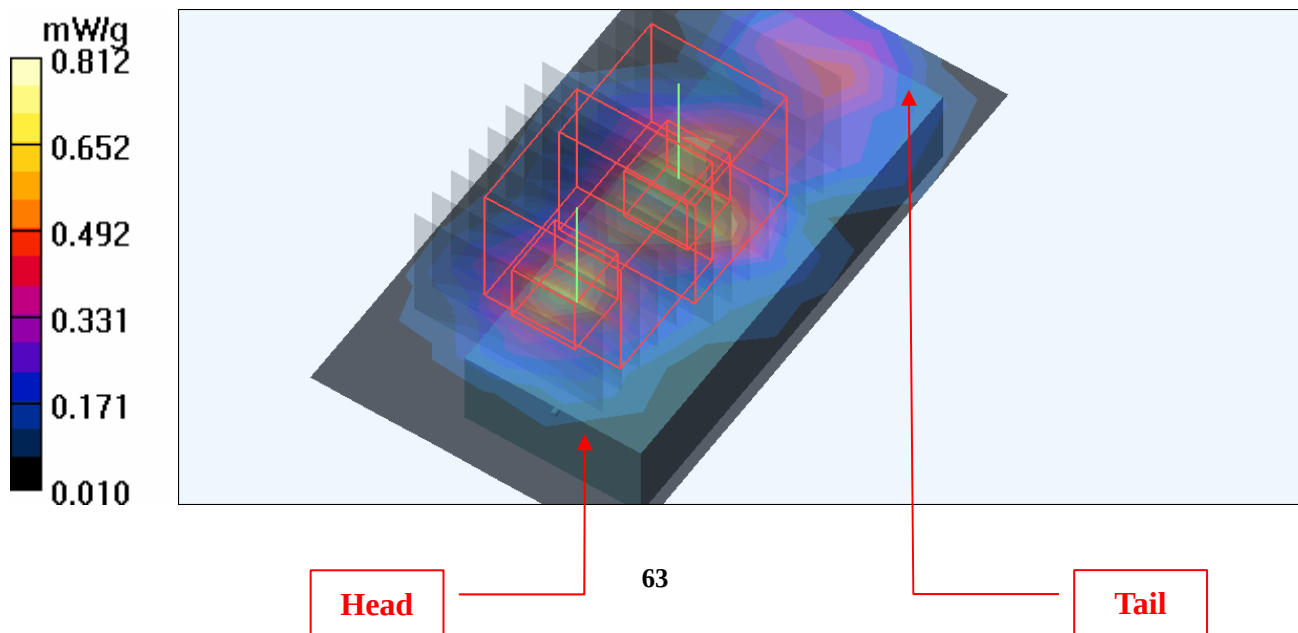
Mid Channel 60/Zoom Scan (8x8x8)/Cube 1: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 6.96 V/m

Peak SAR (extrapolated) = 1.58 W/kg

SAR(1 g) = 0.462 mW/g; SAR(10 g) = 0.167 mW/g

Maximum value of SAR (measured) = 0.671 mW/g



Date/Time: 2009/7/15 03:35:34

Test Laboratory: Bureau Veritas ADT

M28-11a-Ch60 / Main

DUT: 3Com Wireless Dual Band 11n USB Adapter ; Type: WL-606

Communication System: 802.11a ; Frequency: 5300 MHz ; Duty Cycle: 1:1 ; Modulation type: BPSK
Medium: MSL5800 Medium parameters used: $f = 5300$ MHz; $\sigma = 5.41$ mho/m; $\epsilon_r = 49$; $\rho = 1000$ kg/m³
Phantom section: Flat Section ; Separation distance : 5 mm (The front side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV3 - SN3504 ; ConvF(4.06, 4.06, 4.06) ; Calibrated: 2009/1/21
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510 ; Calibrated: 2009/1/21
- Phantom: SAM 12 ; Type: SAM V4.0 ; Serial: TP 1202
- Measurement SW: DASY4, V4.7 Build 80 ; Postprocessing SW: SEMCAD, V1.8 Build 186

Mid Channel 60/Area Scan (6x10x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.686 mW/g

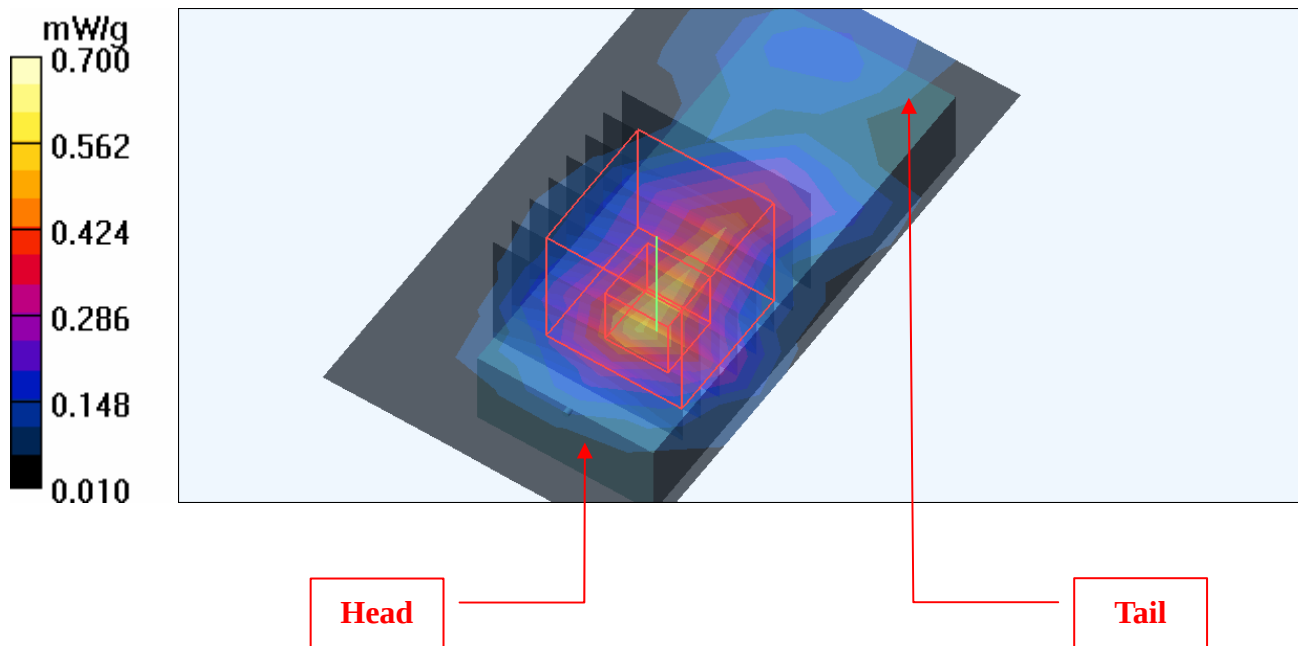
Mid Channel 60/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 7.03 V/m

Peak SAR (extrapolated) = 1.46 W/kg

SAR(1 g) = **0.491 mW/g**; SAR(10 g) = 0.187 mW/g

Maximum value of SAR (measured) = 0.700 mW/g



Date/Time: 2009/7/15 05:44:33

Test Laboratory: Bureau Veritas ADT

M29-11a-Ch100

DUT: 3Com Wireless Dual Band 11n USB Adapter ; Type: WL-606

Communication System: 802.11a ; Frequency: 5500 MHz ; Duty Cycle: 1:1 ; Modulation type: BPSK
Medium: MSL5800 Medium parameters used: $f = 5500$ MHz; $\sigma = 5.7$ mho/m; $\epsilon_r = 48.6$; $\rho = 1000$ kg/m³
Phantom section: Flat Section ; Separation distance : 5 mm (The front side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV3 - SN3504 ; ConvF(3.98, 3.98, 3.98) ; Calibrated: 2009/1/21
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510 ; Calibrated: 2009/1/21
- Phantom: SAM 12 ; Type: SAM V4.0 ; Serial: TP 1202
- Measurement SW: DASY4, V4.7 Build 80 ; Postprocessing SW: SEMCAD, V1.8 Build 186

Low Channel 100/Area Scan (6x10x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.611 mW/g

Low Channel 100/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 6.54 V/m

Peak SAR (extrapolated) = 1.50 W/kg

SAR(1 g) = 0.413 mW/g; SAR(10 g) = 0.141 mW/g

Maximum value of SAR (measured) = 0.585 mW/g

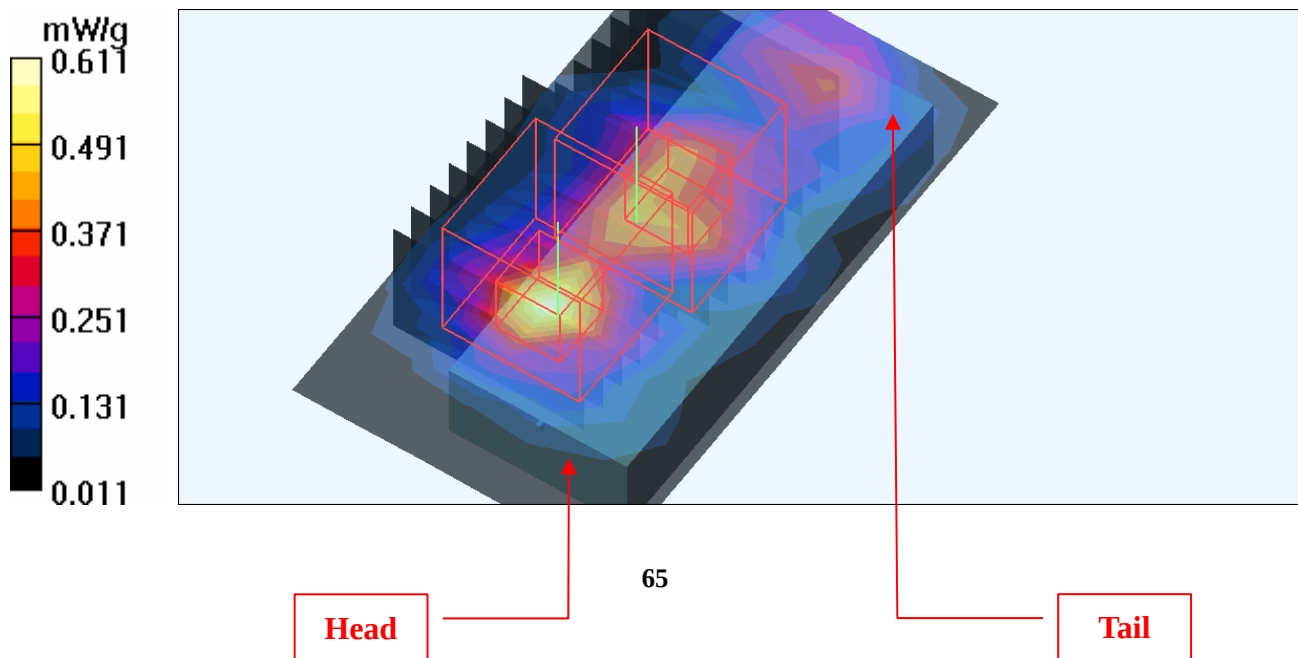
Low Channel 100/Zoom Scan (8x8x8)/Cube 1: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 6.54 V/m

Peak SAR (extrapolated) = 1.29 W/kg

SAR(1 g) = 0.375 mW/g; SAR(10 g) = 0.136 mW/g

Maximum value of SAR (measured) = 0.527 mW/g



Date/Time: 2009/7/15 06:25:56

Test Laboratory: Bureau Veritas ADT

M29-11a-Ch104

DUT: 3Com Wireless Dual Band 11n USB Adapter ; Type: WL-606

Communication System: 802.11a ; Frequency: 5520 MHz ; Duty Cycle: 1:1 ; Modulation type: BPSK
Medium: MSL5800 Medium parameters used: $f = 5520$ MHz; $\sigma = 5.73$ mho/m; $\epsilon_r = 48.5$; $\rho = 1000$ kg/m³
Phantom section: Flat Section ; Separation distance : 5 mm (The front side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV3 - SN3504 ; ConvF(3.98, 3.98, 3.98) ; Calibrated: 2009/1/21
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510 ; Calibrated: 2009/1/21
- Phantom: SAM 12 ; Type: SAM V4.0 ; Serial: TP 1202
- Measurement SW: DASY4, V4.7 Build 80 ; Postprocessing SW: SEMCAD, V1.8 Build 186

Mid Channel 104/Area Scan (6x10x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.567 mW/g

Mid Channel 104/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 6.13 V/m

Peak SAR (extrapolated) = 1.30 W/kg

SAR(1 g) = 0.374 mW/g; SAR(10 g) = 0.130 mW/g

Maximum value of SAR (measured) = 0.526 mW/g

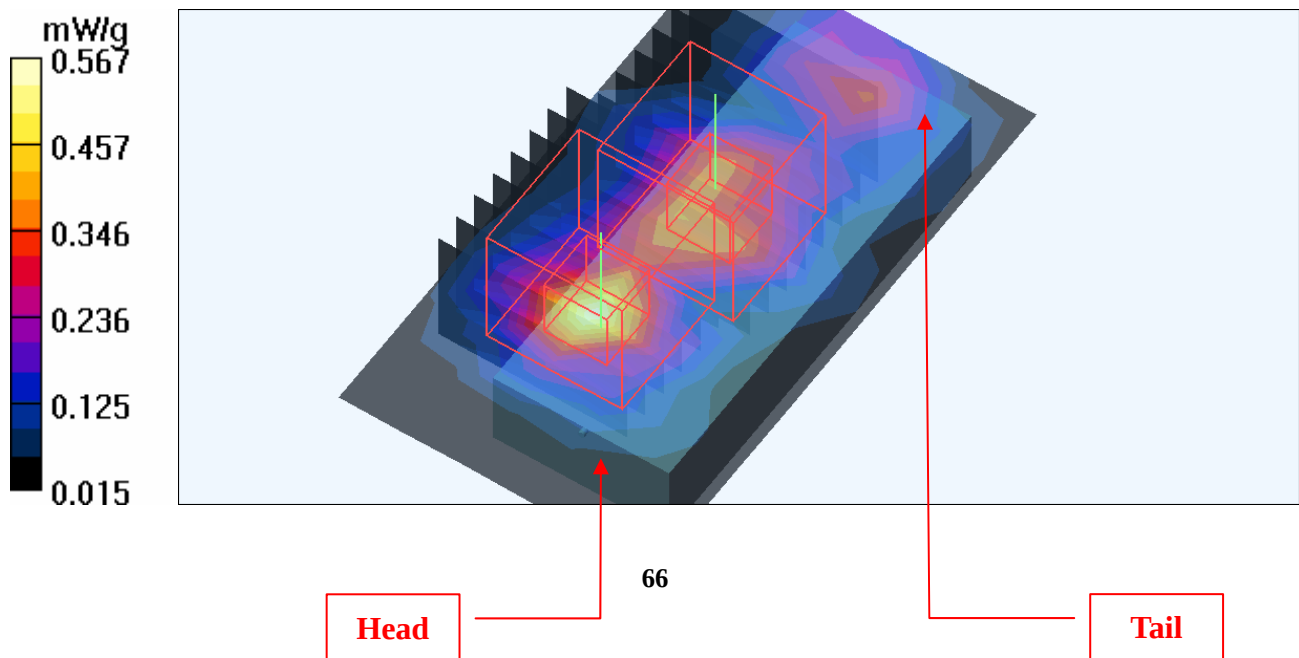
Mid Channel 104/Zoom Scan (8x8x8)/Cube 1: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 6.13 V/m

Peak SAR (extrapolated) = 1.07 W/kg

SAR(1 g) = 0.330 mW/g; SAR(10 g) = 0.122 mW/g

Maximum value of SAR (measured) = 0.469 mW/g



Date/Time: 2009/7/15 07:06:17

Test Laboratory: Bureau Veritas ADT

M29-11a-Ch116

DUT: 3Com Wireless Dual Band 11n USB Adapter ; Type: WL-606

Communication System: 802.11a ; Frequency: 5580 MHz ; Duty Cycle: 1:1 ; Modulation type: BPSK
Medium: MSL5800 Medium parameters used: $f = 5580$ MHz; $\sigma = 5.82$ mho/m; $\epsilon_r = 48.4$; $\rho = 1000$ kg/m³
Phantom section: Flat Section ; Separation distance : 5 mm (The front side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV3 - SN3504 ; ConvF(3.91, 3.91, 3.91) ; Calibrated: 2009/1/21
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510 ; Calibrated: 2009/1/21
- Phantom: SAM 12 ; Type: SAM V4.0 ; Serial: TP 1202
- Measurement SW: DASY4, V4.7 Build 80 ; Postprocessing SW: SEMCAD, V1.8 Build 186

Mid Channel 116/Area Scan (6x10x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.484 mW/g

Mid Channel 116/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 5.70 V/m

Peak SAR (extrapolated) = 1.22 W/kg

SAR(1 g) = 0.344 mW/g; SAR(10 g) = 0.121 mW/g

Maximum value of SAR (measured) = 0.499 mW/g

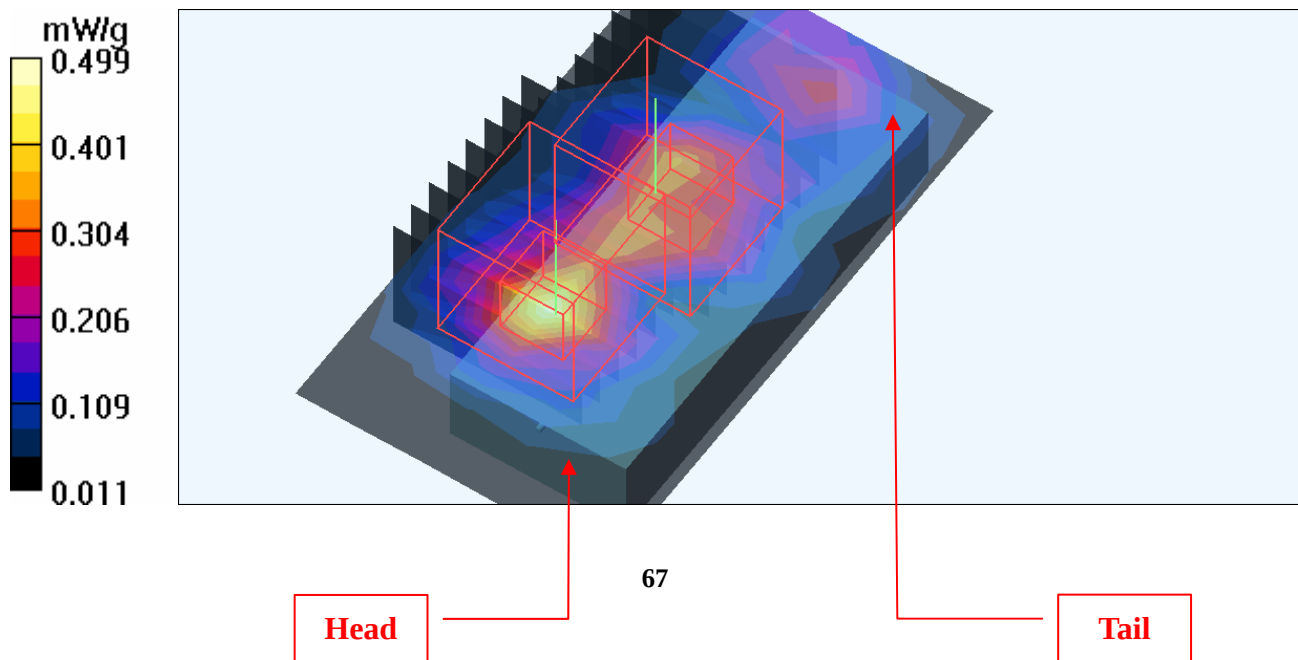
Mid Channel 116/Zoom Scan (8x8x8)/Cube 1: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 5.70 V/m

Peak SAR (extrapolated) = 0.965 W/kg

SAR(1 g) = 0.294 mW/g; SAR(10 g) = 0.110 mW/g

Maximum value of SAR (measured) = 0.410 mW/g



Date/Time: 2009/7/15 04:25:39

Test Laboratory: Bureau Veritas ADT

M29-11a-Ch120

DUT: 3Com Wireless Dual Band 11n USB Adapter ; Type: WL-606

Communication System: 802.11a ; Frequency: 5600 MHz ; Duty Cycle: 1:1 ; Modulation type: BPSK
Medium: MSL5800 Medium parameters used: $f = 5600$ MHz; $\sigma = 5.84$ mho/m; $\epsilon_r = 48.3$; $\rho = 1000$ kg/m³
Phantom section: Flat Section ; Separation distance : 5 mm (The front side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV3 - SN3504 ; ConvF(3.91, 3.91, 3.91) ; Calibrated: 2009/1/21
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510 ; Calibrated: 2009/1/21
- Phantom: SAM 12 ; Type: SAM V4.0 ; Serial: TP 1202
- Measurement SW: DASY4, V4.7 Build 80 ; Postprocessing SW: SEMCAD, V1.8 Build 186

Mid Channel 120/Area Scan (6x10x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.505 mW/g

Mid Channel 120/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 5.94 V/m

Peak SAR (extrapolated) = 1.33 W/kg

SAR(1 g) = 0.363 mW/g; SAR(10 g) = 0.127 mW/g

Maximum value of SAR (measured) = 0.516 mW/g

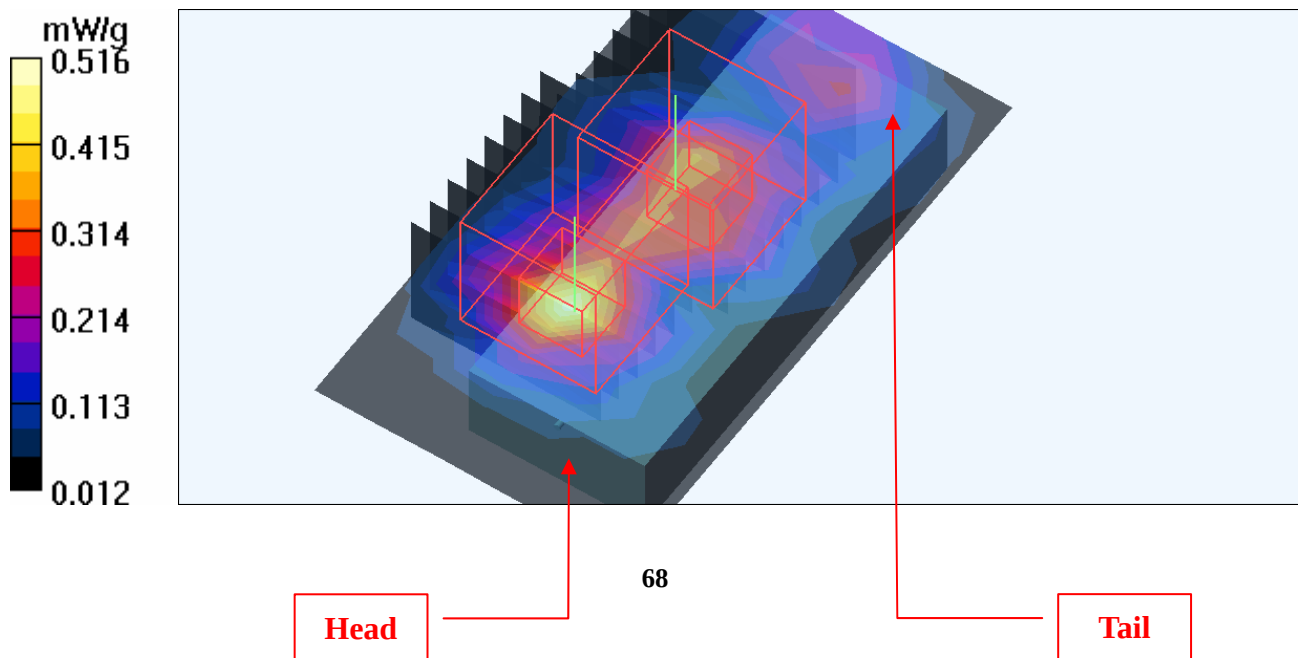
Mid Channel 120/Zoom Scan (8x8x8)/Cube 1: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 5.94 V/m

Peak SAR (extrapolated) = 0.994 W/kg

SAR(1 g) = 0.296 mW/g; SAR(10 g) = 0.111 mW/g

Maximum value of SAR (measured) = 0.417 mW/g



Date/Time: 2009/7/15 07:46:05

Test Laboratory: Bureau Veritas ADT

M29-11a-Ch124

DUT: 3Com Wireless Dual Band 11n USB Adapter ; Type: WL-606

Communication System: 802.11a ; Frequency: 5620 MHz ; Duty Cycle: 1:1 ; Modulation type: BPSK
Medium: MSL5800 Medium parameters used: $f = 5620$ MHz; $\sigma = 5.87$ mho/m; $\epsilon_r = 48.3$; $\rho = 1000$ kg/m³
Phantom section: Flat Section ; Separation distance : 5 mm (The front side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV3 - SN3504 ; ConvF(3.91, 3.91, 3.91) ; Calibrated: 2009/1/21
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510 ; Calibrated: 2009/1/21
- Phantom: SAM 12 ; Type: SAM V4.0 ; Serial: TP 1202
- Measurement SW: DASY4, V4.7 Build 80 ; Postprocessing SW: SEMCAD, V1.8 Build 186

Mid Channel 124/Area Scan (6x10x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.495 mW/g

Mid Channel 124/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 5.85 V/m

Peak SAR (extrapolated) = 1.27 W/kg

SAR(1 g) = 0.344 mW/g; SAR(10 g) = 0.123 mW/g

Maximum value of SAR (measured) = 0.484 mW/g

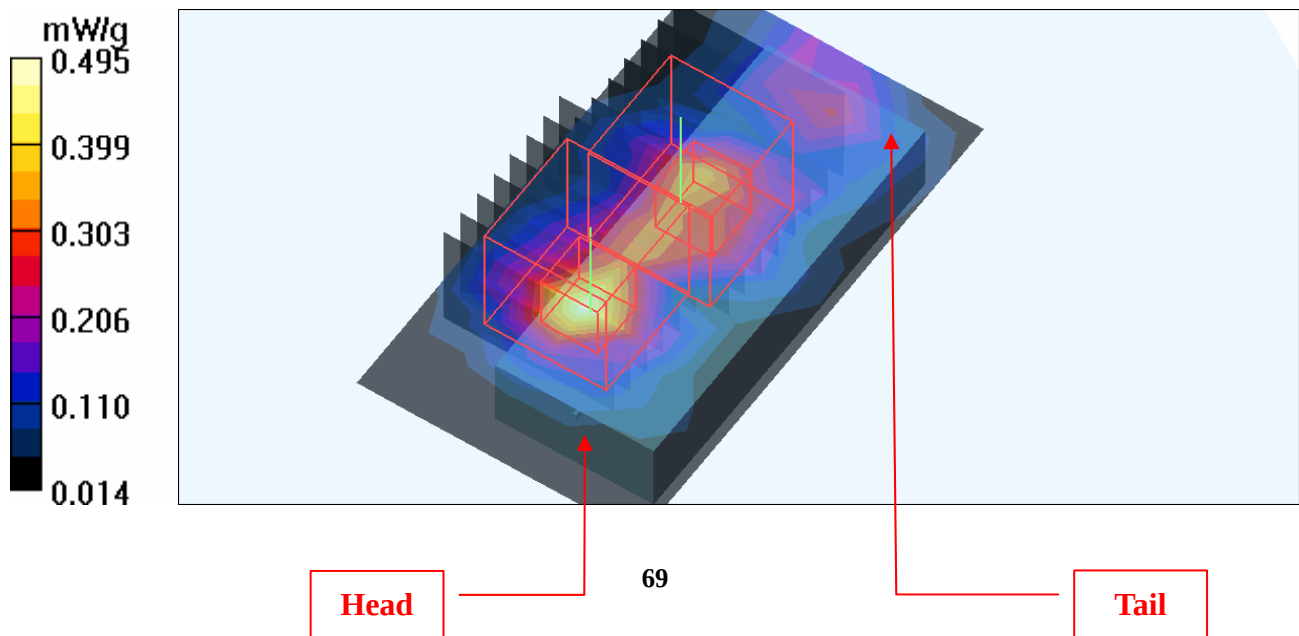
Mid Channel 124/Zoom Scan (8x8x8)/Cube 1: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 5.85 V/m

Peak SAR (extrapolated) = 1.05 W/kg

SAR(1 g) = 0.303 mW/g; SAR(10 g) = 0.110 mW/g

Maximum value of SAR (measured) = 0.428 mW/g



Date/Time: 2009/7/15 08:27:49

Test Laboratory: Bureau Veritas ADT

M29-11a-Ch136

DUT: 3Com Wireless Dual Band 11n USB Adapter ; Type: WL-606

Communication System: 802.11a ; Frequency: 5680 MHz ; Duty Cycle: 1:1 ; Modulation type: BPSK
Medium: MSL5800 Medium parameters used: $f = 5680$ MHz; $\sigma = 5.97$ mho/m; $\epsilon_r = 48.2$; $\rho = 1000$ kg/m³
Phantom section: Flat Section ; Separation distance : 5 mm (The front side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV3 - SN3504 ; ConvF(3.91, 3.91, 3.91) ; Calibrated: 2009/1/21
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510 ; Calibrated: 2009/1/21
- Phantom: SAM 12 ; Type: SAM V4.0 ; Serial: TP 1202
- Measurement SW: DASY4, V4.7 Build 80 ; Postprocessing SW: SEMCAD, V1.8 Build 186

Mid Channel 136/Area Scan (6x10x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.583 mW/g

Mid Channel 136/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 6.27 V/m

Peak SAR (extrapolated) = 1.49 W/kg

SAR(1 g) = 0.415 mW/g; SAR(10 g) = 0.152 mW/g

Maximum value of SAR (measured) = 0.587 mW/g

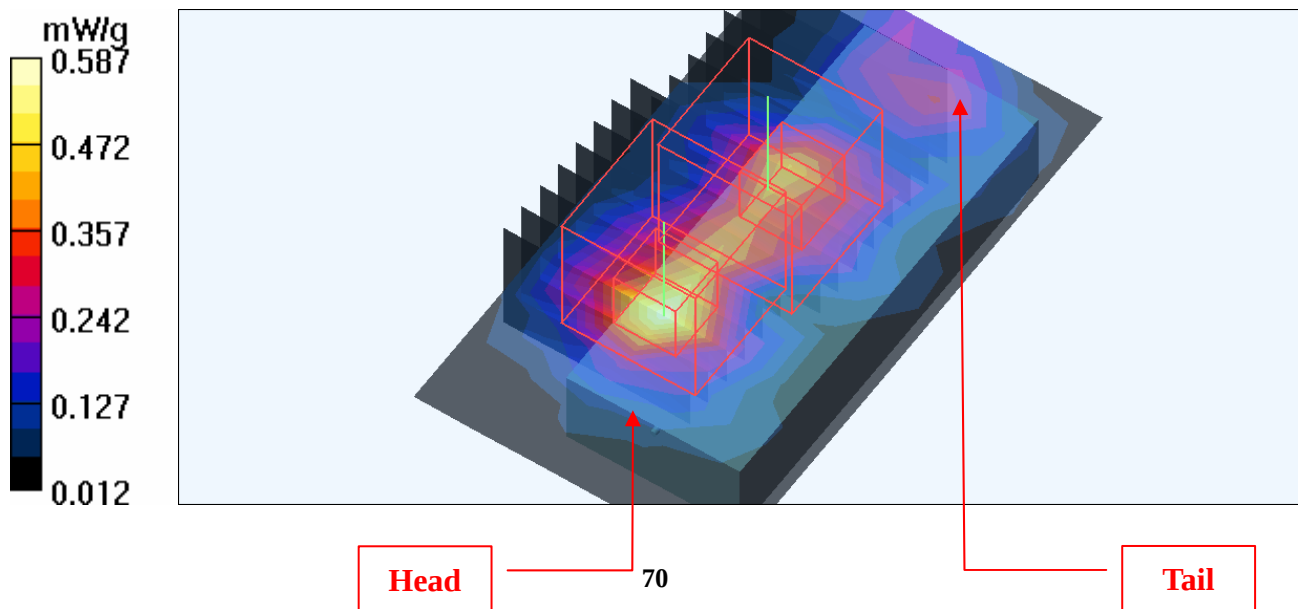
Mid Channel 136/Zoom Scan (8x8x8)/Cube 1: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 6.27 V/m

Peak SAR (extrapolated) = 1.14 W/kg

SAR(1 g) = 0.337 mW/g; SAR(10 g) = 0.128 mW/g

Maximum value of SAR (measured) = 0.458 mW/g



Date/Time: 2009/7/15 09:07:28

Test Laboratory: Bureau Veritas ADT

M29-11a-Ch140

DUT: 3Com Wireless Dual Band 11n USB Adapter ; Type: WL-606

Communication System: 802.11a ; Frequency: 5700 MHz ; Duty Cycle: 1:1 ; Modulation type: BPSK
Medium: MSL5800 Medium parameters used: $f = 5700$ MHz; $\sigma = 6$ mho/m; $\epsilon_r = 48.1$; $\rho = 1000$ kg/m³
Phantom section: Flat Section ; Separation distance : 5 mm (The front side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV3 - SN3504 ; ConvF(3.91, 3.91, 3.91) ; Calibrated: 2009/1/21
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510 ; Calibrated: 2009/1/21
- Phantom: SAM 12 ; Type: SAM V4.0 ; Serial: TP 1202
- Measurement SW: DASY4, V4.7 Build 80 ; Postprocessing SW: SEMCAD, V1.8 Build 186

High Channel 140/Area Scan (6x10x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.478 mW/g

High Channel 140/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 5.33 V/m

Peak SAR (extrapolated) = 1.32 W/kg

SAR(1 g) = 0.348 mW/g; SAR(10 g) = 0.122 mW/g

Maximum value of SAR (measured) = 0.498 mW/g

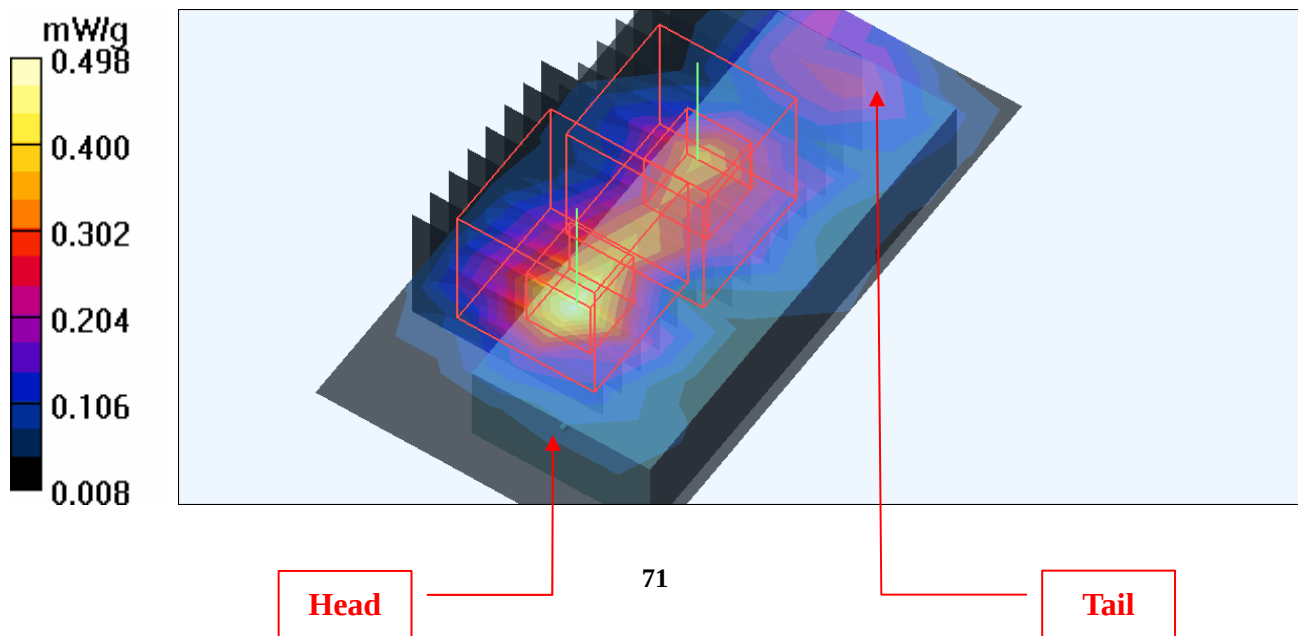
High Channel 140/Zoom Scan (8x8x8)/Cube 1: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 5.33 V/m

Peak SAR (extrapolated) = 1.03 W/kg

SAR(1 g) = 0.278 mW/g; SAR(10 g) = 0.102 mW/g

Maximum value of SAR (measured) = 0.387 mW/g



Date/Time: 2009/7/15 05:05:02

Test Laboratory: Bureau Veritas ADT

M30-11a-Ch120 / Main

DUT: 3Com Wireless Dual Band 11n USB Adapter ; Type: WL-606

Communication System: 802.11a ; Frequency: 5600 MHz ; Duty Cycle: 1:1 ; Modulation type: BPSK
Medium: MSL5800 Medium parameters used: $f = 5600$ MHz; $\sigma = 5.84$ mho/m; $\epsilon_r = 48.3$; $\rho = 1000$ kg/m³
Phantom section: Flat Section ; Separation distance : 5 mm (The front side of the EUT to the Phantom)

DASY4 Configuration:

- Probe: EX3DV3 - SN3504 ; ConvF(3.91, 3.91, 3.91) ; Calibrated: 2009/1/21
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510 ; Calibrated: 2009/1/21
- Phantom: SAM 12 ; Type: SAM V4.0 ; Serial: TP 1202
- Measurement SW: DASY4, V4.7 Build 80 ; Postprocessing SW: SEMCAD, V1.8 Build 186

Mid Channel 120/Area Scan (6x10x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.650 mW/g

Mid Channel 120/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 6.68 V/m

Peak SAR (extrapolated) = 1.50 W/kg

SAR(1 g) = 0.459 mW/g; SAR(10 g) = 0.170 mW/g

Maximum value of SAR (measured) = 0.645 mW/g

Mid Channel 120/Zoom Scan (8x8x8)/Cube 1: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 6.68 V/m

Peak SAR (extrapolated) = 1.46 W/kg

SAR(1 g) = 0.332 mW/g; SAR(10 g) = 0.133 mW/g

Maximum value of SAR (measured) = 0.556 mW/g

