TEST REPORT

1. Applicant

Name	: Datalogic ADC s.r.l
Address	: Via S. Vitalino, 13 – Calderara di Reno – 40012 (Bologna) - ITALY

2. Products

Name	: Mobile Computer
Model	: Lynx
Manufacturer	: POINT MOBILE CO.,LTD

3. Test Standard   : FCC 47 CFR § 2.1093
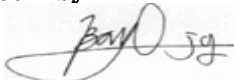
4. Test Method   : IEEE 1528, OET Bulletin 65, Supplement C(July 2001)

5. Test Results   : Positive

6. Date of Application   : June 29, 2012

7. Date of Issue   : September 21, 2012

Tested by

Jong-gon Ban

Telecommunication Center
Senior Engineer

Approved by

Jeong-min Kim

Telecommunication Center
Manager

The test results contained apply only to the test sample(s) supplied by the applicant, and this test report shall not be reproduced in full or in part without approval of the KTL in advance.

Korea Testing Laboratory

TABLE OF CONTENTS

1. GENERAL INFORMATIONS

1.1. Applicant (Client)

Name	Datalogic ADC s.r.l.
Address	Via S. Vitalino, 13 – Calderara di Reno – 40012 (Bologna) - ITALY
Contact Person	Ruggero Cacioppo
Telephone No.	+39 051 314 73 93
E-mail address	Ruggero.cacioppo@datalogic.com
Manufacturer	POINT MOBILE CO.,LTD
Manufacturer Address	B-9F, Kabul great valley, 60-5, Gasan-dong, Geumcheon-gu, Seoul, Korea

1.2. Feature of Equipment (EUT)

FCC ID & Model Number	FCC ID : U4G0073, Model Name : LYNX	
IC Number & Model Number	IC Number : 3862E-0073, Model Number : LYNX 00N0WI-1Q1-MEN0	
Series Model Description	Bluetooth, WiFi, Reader 1D, Numeric	Lynx 00N0LD-1N0-MEN0
	Bluetooth, WiFi, Reader 2D, Numeric, Camera	Lynx 00N0WI-1N1-MEN0
	Bluetooth, WiFi, Reader 1D, QWERTY	Lynx 00N0LD-1Q0-MEN0
	Bluetooth, WiFi, Reader 2D, QWERTY, Camera	Lynx 00N0WI-1Q1-MEN0
Test Sample	**Bluetooth, WiFi, Reader 2D, QWERTY, Camera**	
RF Features	Bluetooth: BR(GFSK), EDR(π /4DQPSK, 8DPSK)	
	WLAN : 802.11b/g/n (BPSK/QPSK/CCK/16-QAM/64-QAM)	
Tx Frequency Range	BT : 2402MHz ~ 2480MHz	
	WLAN : 2412MHz ~ 2462MHz	
Antenna Type	Internal Antenna	
Scan engine	1D laser / 2D imager	
Keypad and buttons	Numeric (32 keys) / Qwerty (51 keys)	
AC/DC Adapter	Input : 100 -240 V 50/60 Hz 0.4 A, Output : DC 5.0 V, 1800 mA,	
Battery	Li-ion, 3.7 V, 1800 mAh (3600mAh optional)	
H/W & S/W version	H/W Ver. : 8 S/W Ver. : 50.00.53 B5	
Maximum 1g SAR	**WiFi Head : 0.163 mW/g, WiFi Body : 0.149 mW/g**	

1.3. Testing Laboratory

Testing Place	Korea Testing Labortory (KTL) 723, Haean-ro, Sangnok-gu, Ansan-si, Gyeonggi-do, KOREA (426-910)
FCC registration number	408324
Industry Canada filing number	6298A
Test Engineer	Jong-gon Ban
Telephone number	+82 31 5000 133
Facsimile number	+82 31 5000 149
E-mail address	banjg@ktl.re.kr
Other Comments	-

2. SAR DEFINITION

Specific Absorption Rate (SAR) is defined as the time derivative (rate) of the incremental energy (dU) absorbed by (dissipated in) an incremental mass (dm) contained in a volume element (dV) of a given density(p). It is also defined as the rate of RF energy absortion per unit mass at a point in an absorbing body. (see Figure.1)

$$SAR = \frac{d}{dt}\left(\frac{dU}{dm}\right) = \frac{d}{dt}\left(\frac{dU}{pdv}\right)$$

Figure 1. SAR Mathematical Equation

SAR is expressed in units of Watts per Kilogram (W/kg).

$$SAR = \sigma E^2 / p$$

Where :

σ = conductivity of the tissue-simulant material (S/m)

p = mass density of the tissue-simulant material (kg/m^3)

E = Total RMS electric field strength (V/m)

Note: The primary factors that control rate or energy absortion were found to be the wavelength of the incident field in realtions to the dimensions and geometry of the irradiated organism, the orientation of the organism in relation to the polarity of field vectors, the presence of reflectinf surfaces, and whether conductive contact is made by the organism with a ground plane.[4]

3. DESCRIPTION OF SAR MEASUREMENT SYSTEM

3.1. SAR Measurement System

These measurements are performed using the DASY4 automated dosimetric assessment system. It is made by Schmid & Partner Engineering AG (SPEAG) in Zurich, Switzerland and consists of high precision robotics system (Staubli), robot controller, measurement server, Measurement computer, near-field probe, probe alignment sensor, and the SAM twin phantom containing the brain equivalent material. The robot is a six-axis industrial robot performing precise movements to position the probe to the location (points) of maximum electromagnetic field (EMF) (see Fig.2).
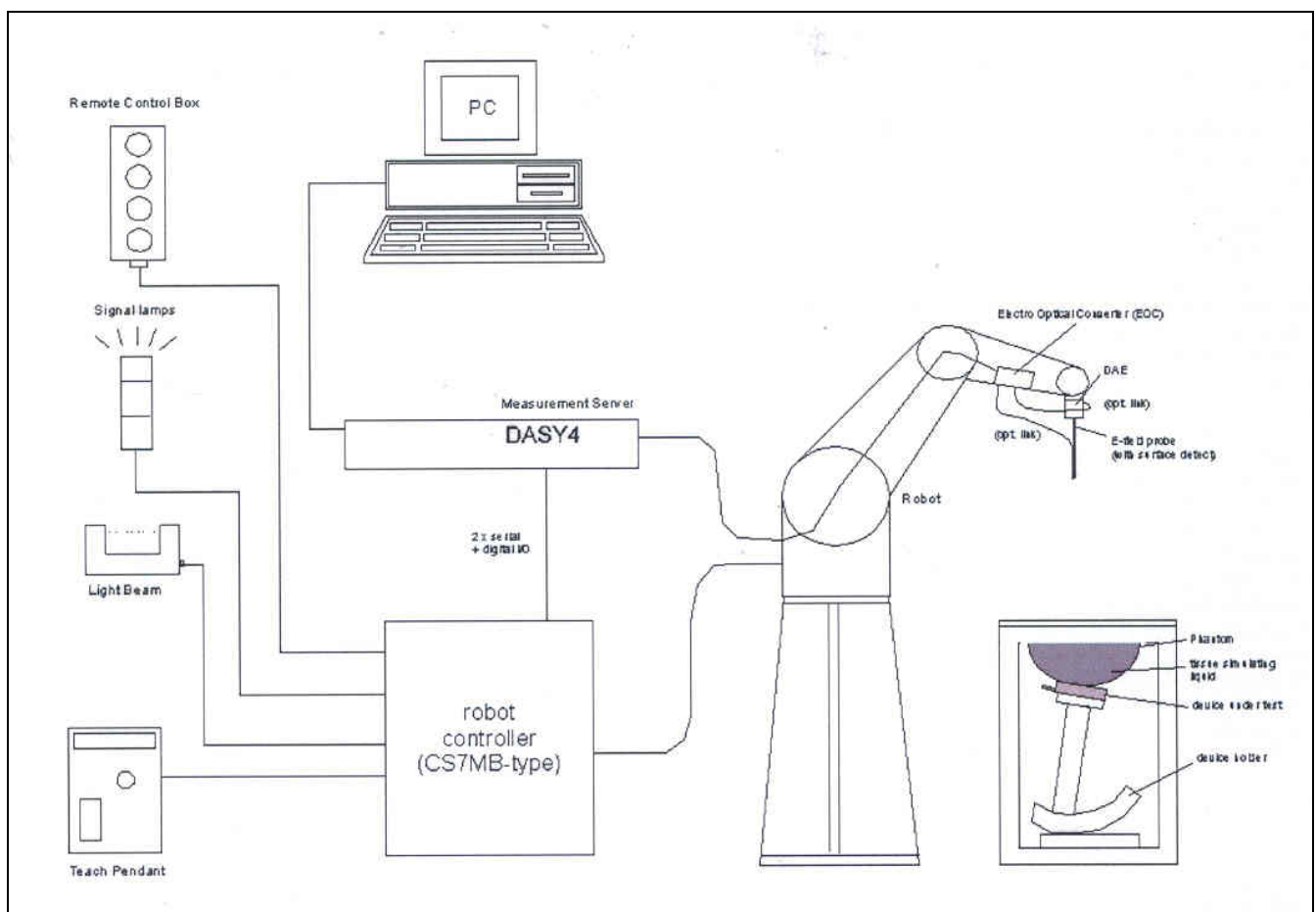

Figure 2. SAR Measurement System

The DAE4 consists of a highly sensitive electrometer-grade preamplifier with auto-zeroing, a channel and gain-switching multiplexer, a fast 16 bit AD-converter and a command decoder and control logic unit. Transmission to the PC-card is accomplished through an optical downlink for data and status information and an optical uplink for commands and clock lines. The mechanical probe mounting device includes two different sensor systems for frontal and sidewise probe contacts. They are also used for mechanical surface detection and probe collision detection. The robot uses its own controller with a built in VME-bus computer. The system is described in detail in [5].

3.2. E-Field Probe Type and Performance

The SAR measurements were conducted with the dosimetric probe designed in the classical triangular configuration [5] and optimised for dosimetric evaluation. The probe has been is constructed using the thick film technique; with printed resistive lines on ceramic substrates. The probe is equipped with an optical mortifier line ending at the front of the probe tip. It is connected to the EOC box on the robot arm and provides an automatic detection of the phantom surface. Half of the fibers are connected to a pulsed infrared transmitter, the other half to a synchronized receiver. As the probe approaches the surface, the reflection from the surface produces a coupling from the transmitting to the receiving fibers. This reflection increases first during the approach, reaches a maximum and then decreases. If the probe is flatly touching the surface, the coupling is zero. The distance of the coupling maximum to the surface is independent of the surface reflectivity and largely independent of the surface to probe angle. The DASY4 software reads the reflection during a software approach and looks for the maximum using a 2nd order fitting. The approach is stopped at reaching the maximum.

Figure 3. Probe and DAE

Probe Specifications

Construction   Symmetrical design with triangular core
                Built-in optical fiber for surface detection System
                Built-in shielding against static charges

Calibration   In air from 10 MHz to 2.5 GHz
                In brain and muscle simulating tissue at
                Frequencies of 450 MHz, 900 MHz and 1.8 GHz (accuracy 8%)

Frequency   10 MHz to > 6 GHz; Linearity: 0.2 dB (30 MHz to 3 GHz)

Directivity   0.2 dB in brain tissue (rotation around probe axis)
                0.4 dB in brain tissue (rotation normal probe axis)

Dynamic   5 uW/g to > 100 mW/g;
Range Linearity 0.2 dB
Surface   0.2 mm repeatability in air and clear liquids
Detection   Over diffuse reflecting surfaces.

Dimensions   Overall length: 337 mm
                Tip length: 10 mm
                Body diameter: 10 mm
                Tip diameter: 4 mm
                Distance from probe tip to dipole centers: 2.7 mm

Figure 4. E-Field Probe

Application   General dissymmetry up to 3 GHz
                Compliance tests of mobile phones/ Fast automatic scanning in arbitrary phantoms

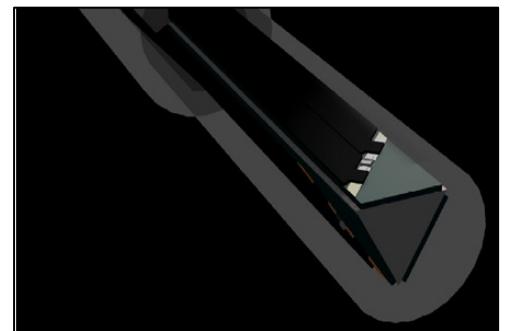## 3.3. Probe Calibration Process (Dosimetric Assessment Procedure)

Each probe is calibrated according to a dosimetric assessment procedure described [6] with an accuracy better than +/- 10%. The spherical isotropy was evaluated with the procedure described in [7] and found to be better than +/- 0.25dB. The sensitivity parameters (NornX, NornY, NornZ), the diode compression parameter (DCP) and the conversion factor (ConvF) of the probe is tested.

The free space E-field from amplified probe outputs is determined in a test chamber. This is performed in a TEM cell for frequencies bellow 1 GHz, and in a waveguide above 1 GHz for free space. For the free space calibration, the probe is placed in the volumetric center of the cavity and at the proper orientation with the field. The probe is then rotated 360 degrees.

E-field temperature correlation calibration is performed in a flat phantom filled with the appropriate simulated brain tissue. The measured free space E-field in the medium correlates to temperature rise in a dielectric medium. For temperature correlation calibration a RF transparent thermistor-based temperature probe is used in conjunction with the E-field probe.

$$SAR = C\frac{\Delta T}{\Delta t}$$

where:

Δt = exposure time (30 seconds),

C = heat capacity of tissue (brain or muscle),

ΔT = temperature increase due to RF exposure.

SAR is proportional to $\Delta T/\Delta t$, the initial rate of tissue heating, before thermal diffusion takes place. Now it's possible to quantify the electric field in the simulated tissue by equating the thermally derived SAR to the E- field;

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

where:

σ = simulated tissue conductivity,

ρ = Tissue density (1.25 g/cm³ for brain tissue)
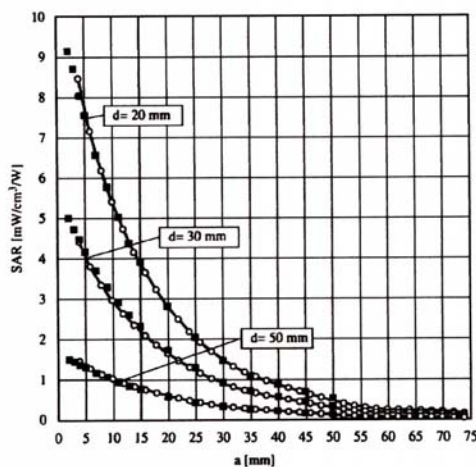

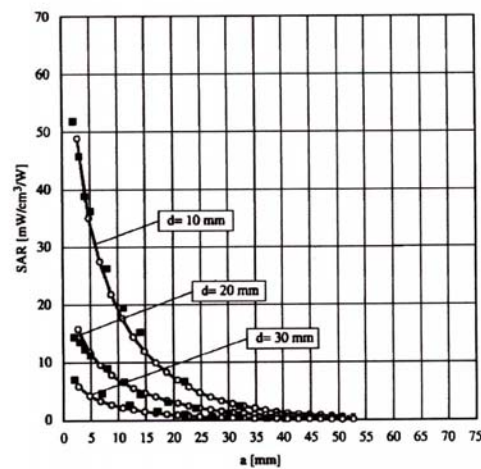Figure B.1. E-Field and Temperature measurements at 900MHz[5]

Figure B.2. E -field and temperature measurements at 1.8GHz[5]

3.4. Data Acquisition Electronics

The data acquisition electronics (DAE4) consists of a highly sensitive electrometer-grade preamplifier with auto-zeroing, a channel and gain switching multiplexer, a fast 16 bit AD-converter and a command decoder and control logic unit. The input impedance of the DAE4 box is 200 Mohm; the inputs are symmetrical and floating. Common mode rejection is above 80dB.Transmission to the PC-card 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-mounting device includes two different sensor systems for frontal and sideways probe contacts. They are used for mechanical surface detection and probe collision detection.

3.5. Phantom Properties

Figure 5. SAM twin phantom
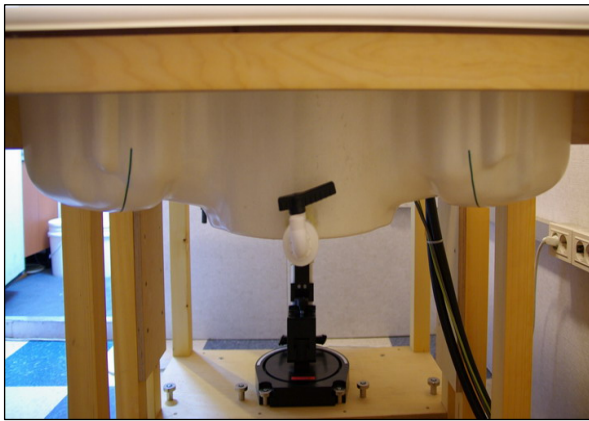
The SAM Phantom is constructed of a fiberglass shell integrated in a wooden table. The shape of the shell is based on data from an anatomical study designed to determine the maximum exposure in at least 90% of all users [9][10]. It enables the dosimetric evaluation of left and right hand phone usage as well as body mounted usage at the flat phantom region. A cover prevents the 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 in the robot.

Phantom Properties	Requirement for specific EUT	Measured
Depth of Phantom	> 150 mm	200 mm
Width of flat section	> 10 cm (Twice EUT Width)	20 cm
Length of flat section	> 26 cm (Twice EUT Length)	30 cm
Thickness of flat section	2 mm ± 0.2 mm	2.08 ~ 2.20 mm

Table 1. Flat Section Properties of SAM Twin Phantom

3.6. Device Holder for DASY4

In combination with the SAM Phantom V4.0, the Mounting Device(POM) enables the rotation of the mounted transmitter in spherical coordinates whereby the rotation points is the ear opening. The devices can be easily, accurately, and repeatable positioned according to the FCC CENELEC specifications. The device holder can be locked at different phantom locations(left head, right head, flat phantom).

Note: A simulating human hand is not used due to the complex anatomical and geometrical structure of the hand that may produced infinite number of configurations [10]. To produce the Worst-case condition (the hand absorbs antenna output power), the hand is omitted during the tests.

Figure 6. Device Holder

3.7. Brain & Muscle Simulating Mixture Characteristic

The brain and muscle mixtures consist of a viscous gel using hydroxethylcellulose (HEC) gelling agent and saline solution (see Table 2). Preservation with bacteriacide is added and visual inspection is made to make sure air bubbles are not trapped during the mixing process. The mixture is calibrated to obtain proper dielectric constant (permittivity) and conductivity of the desired tissue. The mixture characterizations used for the brain and muscle tissue simulating liquids are according to the data by C. Gabriel and G. Hartsgrove [11].

Ingredients	2450 MHz Brain	2450 MHz Muscle
Water	55.0%	68.64%
Sugar	-	-
Salt	-	-
DGBE	45.0%	31.36%
Bacteriacide	-	-
HEC	-	-

Table 2 : Composition of Tissue Equivalent Matter

4. SYSTEM VERIFICATION

4.1. Tissue Verification

The dielectric parameters of the brain and muscle simulating liquid were measured prior to SAR assessment using the HP85070D dielectric probe kit and Agilent 8753D Network Analyzer. The actual dielectric parameters are shown in the following table.

Freq. [MHz]	Liquid	Date	Liquid Temp [°C]	parameters	Target Value	Measured Value	Deviation (%)	Limit (%)
2450	Head	2012.09.20	22.1	εr	39.2	39.3	+0.3	± 5
				σ	1.80	1.81	+0.6	± 5
	Body	2012.07.04	21.9	εr	52.7	52.6	-0.2	± 5
				σ	1.95	1.99	+2.1	± 5

Table 3 : Measured Simulating Liquid Dielectric Values

The humidity and dielectric/ambient temperatures are recorded during the assessment of the tissue material dielectric parameters. The difference between the ambient temperature of the liquid during the dielectric measurement and the temperature during tests was less than |2|°C.

4.2. System Validation

Figure 7. Validation setup

Prior to the SAR assessment, the system validation kit was used to verify that the DASY4 was operating within its specifications. The validation dipoles are highly symmetric and matched at the centre frequency for the specified liquid and distance to the phantom. The accurate distance between the liquid surface and the dipole centre is achieved with a distance holder that snaps onto the dipole.

System validation is performed by feeding a known power level into a reference dipole, set at a know distance from the phantom.

The measured SAR is compared to the theoretically derived level. The reference SAR values are derived using a reference dipole and flat phantom suitable. The forward power into the reference dipole for each SAR validation was adjusted to 250 mW.

These reference SAR values are normalized to 1 W. The measured 1g(10g) SAR should be within 10 % of the expected target reference values shown in table 4 below.

Frequency (MHz) /Head or Body	System Validation Kit	Date	Targeted SAR10g (mW/g)	Measured SAR 10 g (mW/g)	Deviation (%)
2450 Head	D2450V2 S/N: 746	2012.09.20	52.4	54.0	+3.1
2450 Body	D2450V2 S/N: 746	2012.07.04	52.4	56.8	+8.4

Table 4 : Deviation from Reference Validation Values

5.SAR MEASUREMENT PROCEDURE USING DASY4

The SAR evaluation was performed with the SPEAG DASY4 system. A summary of the procedure follows ;

a) A measurement of the SAR value at a fixed location is used as a reference value for assessing the power drop of the EUT. The SAR at this point is measured at the start of the test and then again at the end of the test.

b) The SAR distribution at the exposed side of the phantom is measured at a distance of 3.9 mm from the inner surface of the shell. The area covers the entire dimension of the EUT and the horizontal grid spacing is 15 mm x 15 mm(or 20mm x 20mm). The actual Area Scan has dimensions surrounding the test device. Based on this data, the area of the maximum absorption is determined by Spline interpolation.

c) Around this point, a volume is assessed by measuring 5 x 5 x 7 (7 x 7 x 7) points. On the basis of this data set, the spatial peak SAR value is evaluated with the following procedure;

(i) The data at the surface are extrapolated, since the centre of the dipoles is 2.7 mm away from the tip of the probe and the distance between the surface and the lowest measuring point is 1.2 mm. The extrapolation is based on a least square algorithm[13]. A polynomial of the fourth order is calculated through the points in z-axes. This polynomial is then used to evaluate the points between the surface and the probe tip.

(ii) The maximum interpolated value is searched with a straightforward algorithm. Around this maximum the SAR values averaged over the spatial volumes (1 g and 10 g) are computed using the 3D-Spline interpolation algorithm. The 3D-Spline is composed of three one-dimensional splines with the "Not a knot"- condition (in x, y and z-direction)[13][14]. The volume is integrated with the trapezoidal-algorithm. One thousand points (10 x 10 x 10) are interpolated to calculate the averages.

(iii) All neighbouring volumes are evaluated until no neighbouring volume with a higher average value is found.

(iv) The SAR value at the same location as in Step (a) is again measured (If the value changed by more than 5%, the evaluation is repeated.)

6.DESCRIPTION OF TEST POSITION

Body-worn operating configurations are tested without the belt-clips and holsters attached to the device and positioned against a flat phantom in a normal use configuration.

Accessories for Body-worn operation configurations are divided into two categories: those that do not contain metallic components and those that do contain metallic components. When multiple accessories that do not contain metallic components are supplied with the device, the device is tested with only the accessory that dictates the closest spacing to the body. Then multiple accessories that contain metallic components are tested with the device with each accessory. If multiple accessories share an identical metallic component(i.e. the same metallic belt-clip used with different holsters with no other metallic components) only the accessory that dictates the closest spacing to the body is tested.

Body-worn accessories may not always be supplied or available as options for some devices intended to be authorized for body-worn use. In this case, a test configuration with a separation distance between the device and the flat phantom is used. Test position spacing was documented.

Transmitters that are designed to operate in front of a person's face, as the push-to-talk configurations, are test for SAR compliance with the front of the device positioned to face the flat phantom in brain fluid. For devices that are carried next to the body such as a shoulder, waist or chest-worn transmitters, SAR compliance is tested with the accessories, including headsets and microphones, attached to the device and positioned against a flat phantom in a normal use configuration.

In all cases SAR measurements are performed to investigate the worst-case positioning. Worst-case positioning is then documented and used to perform Body SAR testing.

In this test case, this device is not used in the Head position. So only the body SAR was measured and reported.

7.MEASUREMENT UNCERTAINTY

The uncertainty analysis is based on the template listed in the IEEE 1528 for both EUT SAR tests. The measurement uncertainty of a specific device is evaluated independently and the total uncertainty for both evaluations (95 % confidence level) must be less than 25 %.

Uncertainty Component	Uncertainty value (%)	Probability Distribution	Divisor	c_i	c_i^2	Standard Uncertainty(%)	Standard Uncertainty^2	(Standard Uncertainty^2) x c_i^2	v_i
Measurement System									
Probe Calibration (k=1)	5.90	Normal	1	1	1	5.90	34.81	34.81	∞
Axial Isotropy	4.70	Rectangular	√3	0.7	0.49	2.71	7.34	3.60	∞
Hemispherical Isotropy	9.60	Rectangular	√3	0.7	0.49	5.54	30.69	15.04	∞
Linearity	4.70	Rectangular	√3	1	1	2.71	7.34	7.34	∞
System Detection Limits	1.00	Rectangular	√3	1	1	0.58	0.34	0.34	∞
Boundary Effect	1.00	Rectangular	√3	1	1	0.58	0.34	0.34	∞
Response Time	0.80	Rectangular	√3	1	1	0.46	0.21	0.21	∞
RF Ambient conditions	3.00	Rectangular	√3	1	1	1.73	3.00	3.00	∞
Readout Electronics	0.30	Normal	1	1	1	0.30	0.09	0.09	∞
Integration time	2.60	Rectangular	√3	1	1	1.50	2.25	2.25	∞
Probe positioner	0.40	Rectangular	√3	1	1	0.23	0.05	0.05	∞
Probe positioning	2.90	Rectangular	√3	1	1	1.67	2.79	2.79	∞
Max. SAR evaluation	1.00	Rectangular	√3	1	1	0.58	0.34	0.34	∞
Test Sample Related						Sub total	70.20		
Device Positioning	1.59	Normal	1	1	1	1.59	2.53	2.53	9
Device Holder Uncertainty	3.60	Normal	1	1	1	3.60	12.96	12.96	∞
Power Drift	5.00	Rectangular	√3	1	1	2.89	8.35	8.35	∞
Phantom and setup						Sub total	23.84		
Phantom Uncertainty	4.00	Rectangular	√3	1	1	2.31	5.33	5.33	∞
Liquid Conductivity – target value	5.00	Rectangular	√3	0.5	0.25	2.89	8.33	2.08	∞
Liquid Conductivity – Measurement value	2.50	Normal	1	0.5	0.25	2.50	6.25	1.56	∞
Liquid Permittivity – target value	5.00	Rectangular	√3	0.5	0.25	2.89	8.33	2.08	∞
Liquid Pemittivity – Measurement value	2.50	Normal	1	0.5	0.25	2.50	6.25	1.56	∞
						Sub total	12.63		
Combined standard Uncertainty (%)						± 10.33	106.67		–
Expanded Uncertainty	(95% CONFIDENCE LEVEL,K=2)							± 20.66	

Table 5. Uncertainty Budget of DASY4

8.FCC RF Exposure Limits

HUMAN EXPOSURE	UNCONTROLLED ENVIRONMENT General Population (W/Kg) or (mW/g)	CONTROLLED ENVIRONMENT Occupational (W/Kg) or (mW/g)
SPATIAL PEAK SAR (Brain)	1.60	8.00
SPATIAL AVERAGE SAR (Whole Body)	0.08	0.40
SPATIAL PEAK SAR (Hand / Feet / Ankle / Wrist)	4.00	20.00

Table. 6 Safety Limits for Partial Body Exposure

NOTE :

* The Spatial Peak value of the SAR averaged over any 1 gram of tissue (defined as a tissue volume in the shape of a cube) and over the appropriate averaging time.

Uncontrolled Environments are defined as locations where there is the exposure of individuals who have no knowledge or control of their exposure.

Controlled Environments are defined as locations where there is exposure that may be incurred by persons who are aware of the potential for exposure, (i.e.as a result of employment or occupation).

9.RF CONDUCTED POWERS

WiFi mode	Worst Power Data Rate [Mbps]	Conducted Powers (dBm)		
		2412MHz	2437MHz	2462MHz
802.11b	1	11.63	11.81	11.54
	2	11.90	11.98	12.13
	5.5	13.63	13.52	13.42
	11	14.61	15.22	14.58
802.11g	6	11.41	12.25	11.75
	9	11.83	13.11	11.22
	12	14.92	14.62	14.91
	18	12.27	12.94	11.77
	24	12.05	12.31	11.87
	36	12.01	12.21	11.53
	48	11.81	11.29	11.07
	54	12.34	12.29	12.30
802.11n	MCS0	11.34	11.94	11.28
	MCS1	12.45	12.85	11.89
	MCS2	11.70	11.99	11.21
	MCS3	11.42	11.76	11.37
	MCS4	11.51	12.12	11.40
	MCS5	11.78	12.22	11.93
	MCS6	11.34	12.69	11.53
	MCS7	11.55	11.57	11.35

For 2.4GHz, Per KDB publication 447498 4) b) procedures testing was required if the maximum average output power in mW was greater than 60/f (GHz). So 802.11n mode and Bluetooth mode were not investigated since the average output powers were not greater than 60/f threshold.

10.SAR MEASUREMENT RESULTS

10.1. WiFi Head SAR Measurement Results

· Date of Test: September 20, 2012 · Liquid Temperature (C) : 22.1

· Ambient Temperature (C): 22.0 · Humidity (%): 45

Mode	Device facing phantom	Distance to phantom	Frequency		Power		SAR 1g (mW/g)
			MHz	CH	Ref. [V/m]	Drift [dB]	
802.11b	LEFT CHEEK TOUCH	Internal Antenna	2437	6	7.59	0.065	0.108
	LEFT EAR TILT	Internal Antenna	2437	6	9.08	0.041	0.145
	RIGHT CHEEK TOUCH	Internal Antenna	2437	6	8.03	0.157	0.128
	RIGHT EAR TILT	Internal Antenna	2437	6	9.25	-0.008	**0.163**
802.11g	LEFT CHEEK TOUCH	Internal Antenna	2437	6	4.42	0.158	0.037
	LEFT EAR TILT	Internal Antenna	2437	6	5.50	0.083	0.052
	RIGHT CHEEK TOUCH	Internal Antenna	2437	6	4.96	0.096	0.049
	RIGHT EAR TILT	Internal Antenna	2437	6	5.76	0.023	0.063

NOTES:

1. The test data reported are the worst-case SAR value with the position set in a typical configuration

2. All modes of operation were investigated and the worst-case are reported.

3. Justification for reduced test configurations: per FCC/OET Supplement C (July,2001), if the SAR measured at the middle channel for each test configuration (Left, right, cheek/touch, tilt/ear, extended and retracted) is at least 3.0 dB lower than the SAR limit, testing at the high and low channels is optional for such test configuration(s).

4. Battery was fully charged for all readings.

5. Test Signal Call mode: WiFi test mode tool in the EUT.

6. Power reference Values are recorded at the beginning and end of each measurement.

7. Depth of simulation Tissue is 15.0 cm ± 0.2 cm

10.2. WiFi Body SAR Measurement Results

· Date of Test: July 4, 2012

· Ambient Temperature (C): 22.0

· Liquid Temperature (C) : 21.9

· Humidity (%): 46

Mode	Device facing phantom	Distance to phantom	Frequency		Power		SAR 1g (mW/g)
			MHz	CH	Ref. [V/m]	Drift [dB]	
802.11b	Front	15mm	2437	6	4.53	+0.054	0.059
	Rear	15mm	2437	6	7.55	0.112	0.149
802.11g	Front	15mm	2437	6	3.06	0.092	0.032
	Rear	15mm	2437	6	5.17	0.136	0.068

NOTES:

1. The test data reported are the worst-case SAR value with the position set in a typical configuration

2. All modes of operation were investigated and the worst-case are reported.

3. Justification for reduced test configurations: per FCC/OET Supplement C (July,2001), if the SAR measured at the middle channel for each test configuration (Left, right, cheek/touch, tilt/ear, extended and retracted) is at least 3.0 dB lower than the SAR limit, testing at the high and low channels is optional for such test configuration(s).

4. Battery was fully charged for all readings.

5. Test Signal Call mode: WiFi test mode tool in the EUT.

6. Duty Cycle is 1:1

7. Power reference Values are recorded at the beginning and end of each measurement.

8. Depth of simulation Tissue is 15.0 cm ± 0.2 cm

11.CONCLUSION

The SAR evaluation indicates that LYNX complies with the RF radiation exposure limits of the FCC/IC.

These measurements were taken to simulate the RF effects of RF exposure under worst-case conditions.

Precise laboratory measures were taken to assure repeatability of the tests. The results and statements relate only to the item(s) tested.

12. EQUIPMENT LIST AND CALIBRATION DETAILS

Equipment Type	Manufacturer	Model Number	Serial Number	Calibration Due	Used For this Test
Robot - Six Axes	Staubli	RX60	N/A	N/A	☒
Robot Remote Control	SPEAG	CS7MB	F03/5U96A1/C/01	N/A	☒
SAM Twin Phantom	SPEAG	TP1276	QD000P40CA	N/A	☒
Flat Phantom V4.4	SPEAG	QD000P44BA, BB	1001, higher	N/A	☐
Data Acquisition Electronics	SPEAG	DAE4	559	2013.01.23	☒
Probe E-Field	SPEAG	ES3DV2	3020	2013.01.26	☒
Antenna Dipole 835 MHz	SPEAG	D835V2	481	2013.03.15	☐
Antenna Dipole 900 MHz	SPEAG	D900V2	194	2013.11.18	☐
Antenna Dipole 1800 MHz	SPEAG	D1800V2	2d066	2014.01.26	☐
Antenna Dipole 1900 MHz	SPEAG	D1900V2	5d038	2013.04.19	☐
Antenna Dipole 1950 MHz	SPEAG	D1950V2	1027	2014.01.24	☐
Antenna Dipole 2450 MHz	SPEAG	D2450V2	746	2014.01.24	☒
High power RF Amplifier	EMPOWER	2057-BBS3Q5KCK	1002D/C0321	2013.02.15	☒
Digital Communication Tester	R&S	CMU200	110019	2013.01.31	☐
Signal Generator	Agilent	8648C	3629U00868	2013.02.07	☒
RF Power Meter Dual	Hewlett Packard	E4419A	GB37170495	2013.02.08	☒
RF Power Sensor 0.01 - 18 GHz	Hewlett Packard	8481A	US37299851	2013.02.16	☒
RF Power Sensor 0.01 - 18 GHz	Hewlett Packard	8481A	3318A92872	2013.02.16	☒
S-Parameter Network Analyzer	Agilent	8753D	3410A07251	2013.03.13	☒
Dual Directional Coupler	Hewlett Packard	778D	1144AO4576	2013.02.13	☐
Directional Coupler	Agilent	773D	MY28390213	2013.02.13	☒
Bluetooth Test Set	Anritsu	MT8852B	6K00006994	2013.01.28	☐

APPENDIX A. SAR PLOTS

- Test Laboratory: KTL

- D2450V2: HEAD 2450MHz Validation

- Test Date: September 20, 2012

- Measured Liquid Temperature: 22.1 ℃, Ambient Temperature: 22.0 ℃

Communication System: CW; Frequency: 2450 MHz;Duty Cycle: 1:1
Medium: HSL2450 Medium parameters used: f = 2450 MHz; σ = 1.79 mho/m; ε_r = 39.1; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ES3DV2 - SN3020; ConvF(4.22, 4.22, 4.22); Calibrated: 2012-01-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn559; Calibrated: 2012-01-23
- Phantom: SAM Twin Phantom_1800MHz; Type: SAM; Serial: TP-1433
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Area Scan (61x71x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 16.9 mW/g

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 93.2 V/m; Power Drift = 0.013 dB
Peak SAR (extrapolated) = 29.0 W/kg
SAR(1 g) = 13.5 mW/g; SAR(10 g) = 6.13 mW/g
Maximum value of SAR (measured) = 15.2 mW/g

0 dB = 15.2mW/g

723 Haean-ro, Sa-dong, Sangnok-gu, Ansan-si, 426-910 Korea
http:://www.ktl.re.kr
Tel: +82-31-500-0133
Fax: +82-31-500-0149

- Test Laboratory: KTL

- Model: LYNX 00N0WI-1Q1-MEN0

- Position: WiFi 802.11b_2437MHz Left Cheek Touch

- Test Date: September 20, 2012

- Measured Liquid Temperature: 22.1 ℃, Ambient Temperature: 22.0 ℃

Communication System: WLAN; Frequency: 2437 MHz;Duty Cycle: 1:1
Medium: HSL2450 Medium parameters used: f = 2437 MHz; σ = 1.81 mho/m; ε_r = 39.3; ρ = 1000 kg/m^3
Phantom section: Left Section
Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ES3DV2 - SN3020; ConvF(4.22, 4.22, 4.22); Calibrated: 2012-01-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn559; Calibrated: 2012-01-23
- Phantom: SAM Twin Phantom_1800MHz; Type: SAM; Serial: TP-1433
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Area Scan (41x71x1): Measurement grid: dx=20mm, dy=20mm
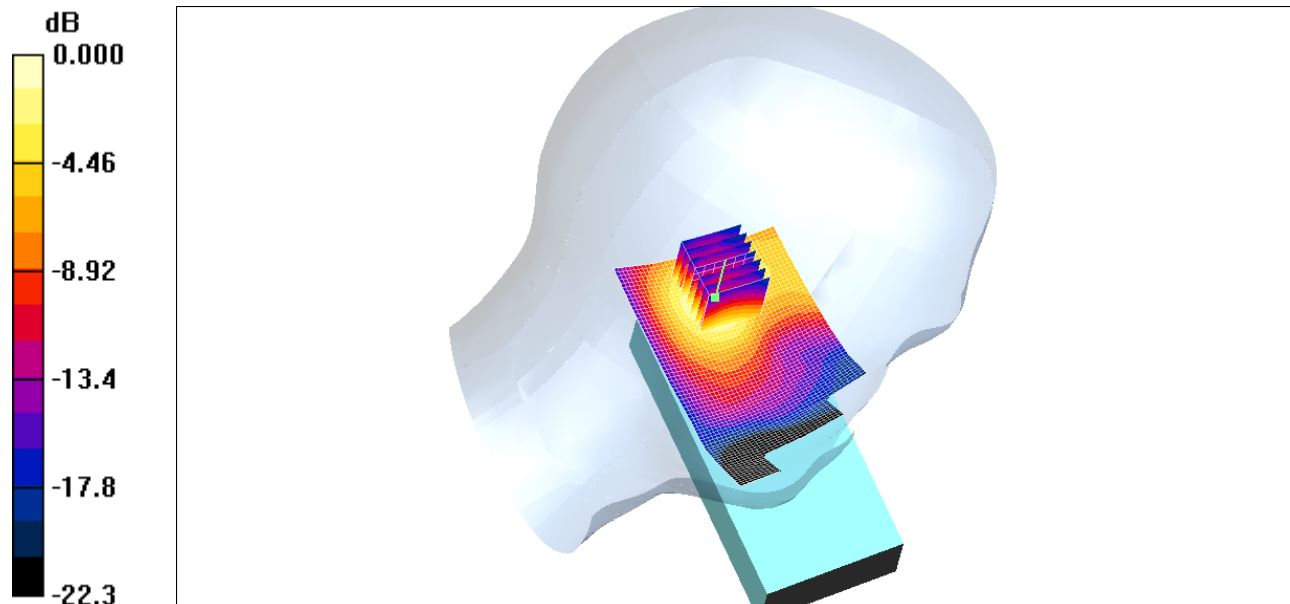Maximum value of SAR (interpolated) = 0.114 mW/g

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 7.59 V/m; Power Drift = 0.065 dB
Peak SAR (extrapolated) = 0.199 W/kg
SAR(1 g) = 0.108 mW/g; SAR(10 g) = 0.059 mW/g
Maximum value of SAR (measured) = 0.116 mW/g
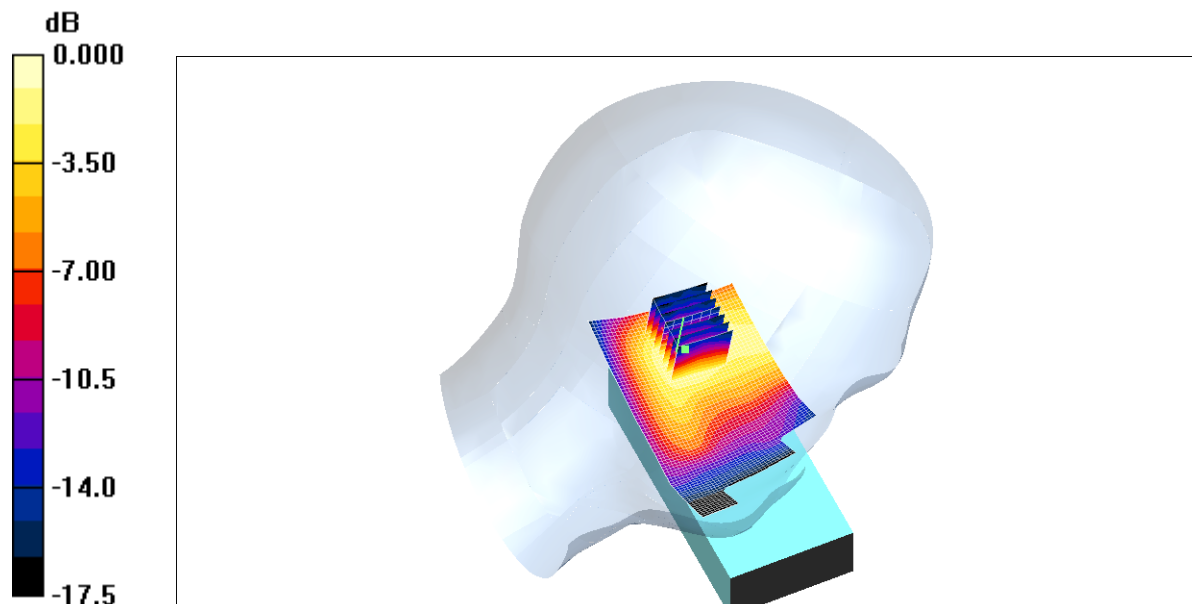
0 dB = 0.116 mW/g

- Test Laboratory: KTL

- Model: LYNX 00N0WI-1Q1-MEN0

- Position: WiFi 802.11b_2437MHz Left Ear Tilt

- Test Date: September 20, 2012

- Measured Liquid Temperature: 22.1 ℃, Ambient Temperature: 22.0 ℃

Communication System: WLAN; Frequency: 2437 MHz; Duty Cycle: 1:1
Medium: HSL2450 Medium parameters used: f = 2437 MHz; σ = 1.81 mho/m; ε_r = 39.3; ρ = 1000 kg/m^3
Phantom section: Left Section
Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ES3DV2 - SN3020; ConvF(4.22, 4.22, 4.22); Calibrated: 2012-01-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn559; Calibrated: 2012-01-23
- Phantom: SAM Twin Phantom_1800MHz; Type: SAM; Serial: TP-1433
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Area Scan (41x71x1): Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 0.148 mW/g

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 9.08 V/m; Power Drift = 0.041 dB
Peak SAR (extrapolated) = 0.284 W/kg
SAR(1 g) = 0.145 mW/g; SAR(10 g) = 0.076 mW/g
Maximum value of SAR (measured) = 0.161 mW/g

0dB = 0.161 mW/g

- Test Laboratory: KTL

- Model: LYNX 00N0WI-1Q1-MEN0

- Position: WiFi 802.11b_2437MHz Right Cheek Touch

- Test Date: September 20, 2012

- Measured Liquid Temperature: 22.1 ℃, Ambient Temperature: 22.0 ℃

Communication System: WLAN; Frequency: 2437 MHz;Duty Cycle: 1:1
Medium: HSL2450 Medium parameters used: f = 2437 MHz; σ = 1.81 mho/m; ε_r = 39.3; ρ = 1000 kg/m^3
Phantom section: Right Section
Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ES3DV2 - SN3020; ConvF(4.22, 4.22, 4.22); Calibrated: 2012-01-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn559; Calibrated: 2012-01-23
- Phantom: SAM Twin Phantom_1800MHz; Type: SAM; Serial: TP-1433
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Area Scan (41x71x1): Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 0.153 mW/g

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
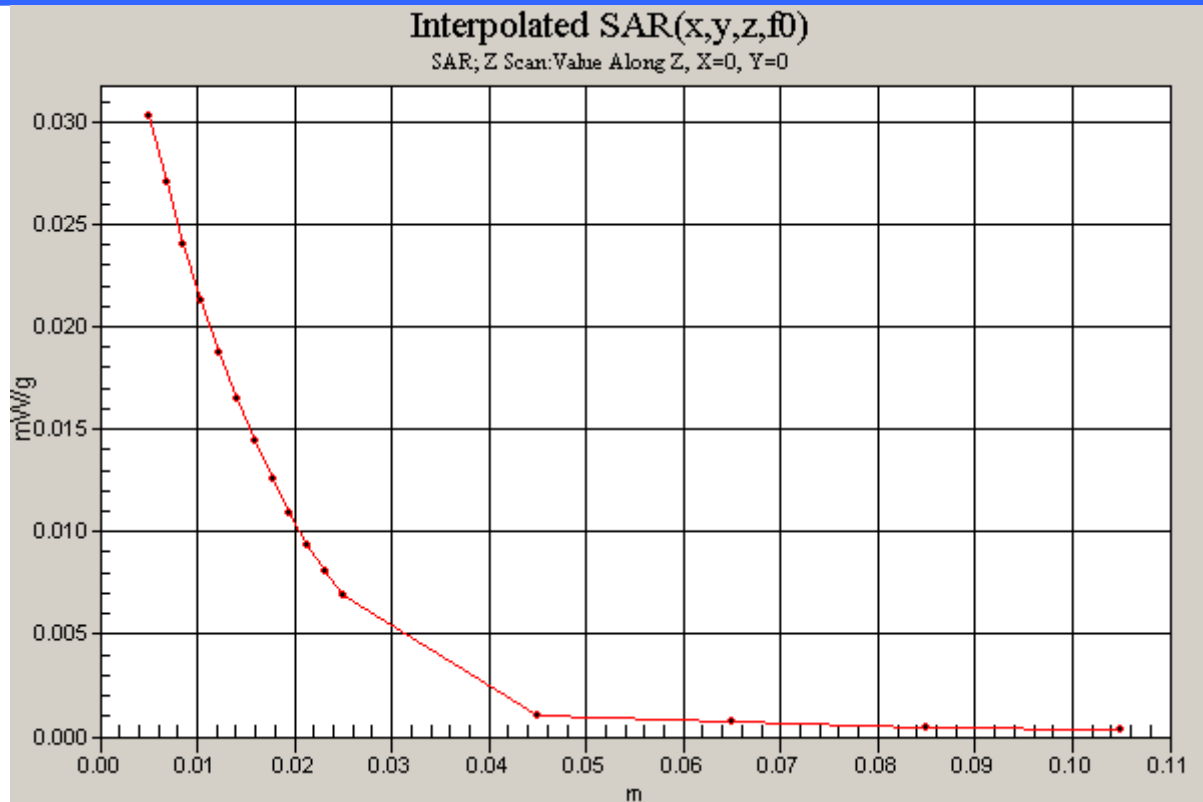Reference Value = 8.03 V/m; Power Drift = 0.157 dB
Peak SAR (extrapolated) = 0.235 W/kg
SAR(1 g) = 0.128 mW/g; SAR(10 g) = 0.072 mW/g
Maximum value of SAR (measured) = 0.137 mW/g
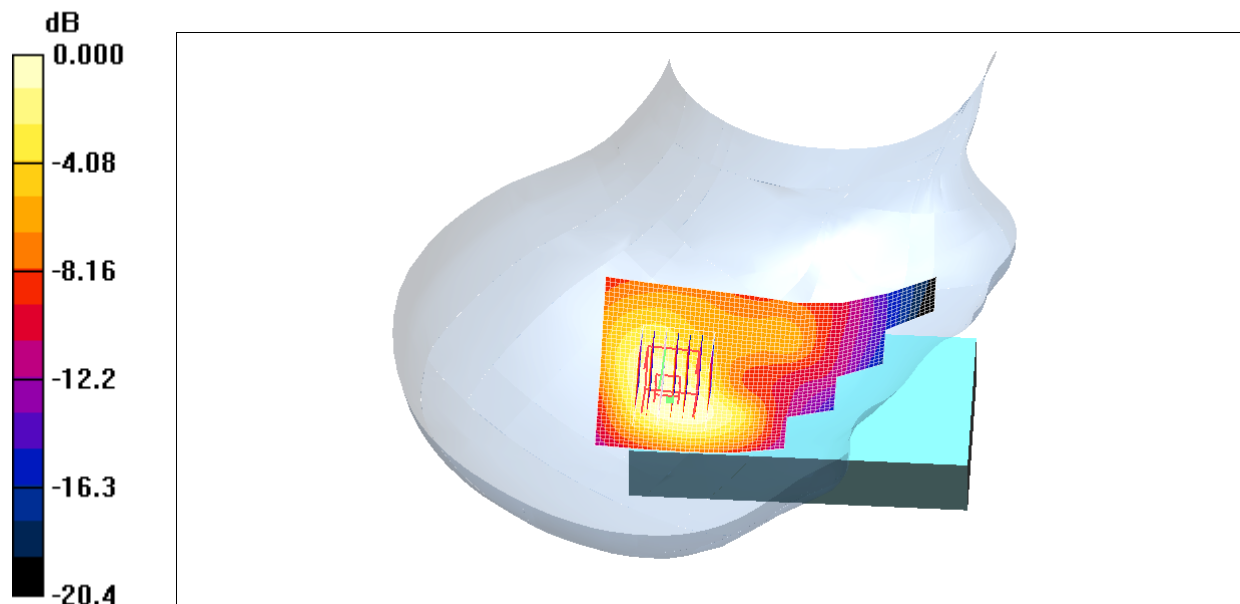
0dB = 0.137 mW/g

- Test Laboratory: KTL

- Model: LYNX 00N0WI-1Q1-MEN0

- Position: WiFi 802.11b_2437MHz Right Ear Tilt

- Test Date: September 20, 2012

- Measured Liquid Temperature: 22.1 ℃, Ambient Temperature: 22.0 ℃

Communication System: WLAN; Frequency: 2437 MHz;Duty Cycle: 1:1
Medium: HSL2450 Medium parameters used: f = 2437 MHz; σ = 1.81 mho/m; ε_r = 39.3; ρ = 1000 kg/m^3
Phantom section: Right Section
Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ES3DV2 - SN3020; ConvF(4.22, 4.22, 4.22); Calibrated: 2012-01-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE4 Sn559; Calibrated: 2012-01-23
- Phantom: SAM Twin Phantom_1800MHz; Type: SAM; Serial: TP-1433
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Area Scan (41x71x1): Measurement grid: dx=20mm, dy=20mm
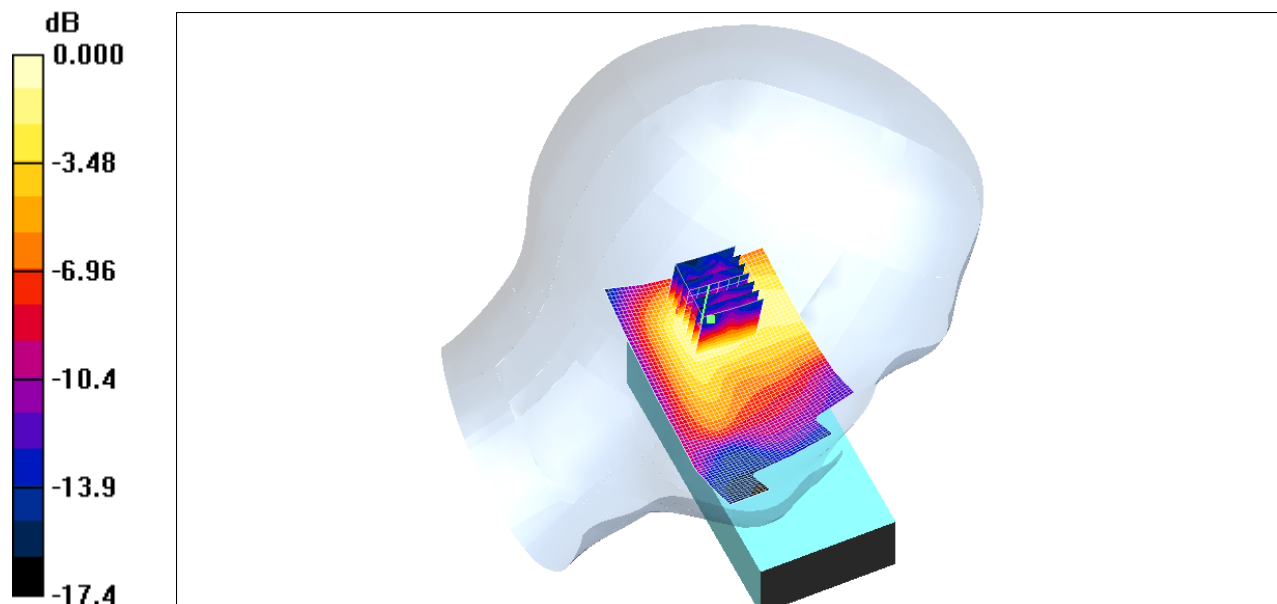Maximum value of SAR (interpolated) = 0.173 mW/g

Z Scan (1x1x16): Measurement grid: dx=20mm, dy=20mm, dz=20mm
Maximum value of SAR (interpolated) = 0.030 mW/g

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 9.25 V/m; Power Drift = -0.008 dB
Peak SAR (extrapolated) = 0.302 W/kg
SAR(1 g) = 0.163 mW/g; SAR(10 g) = 0.085 mW/g
Maximum value of SAR (measured) = 0.179 mW/g

dB
0.000
-4.26
-8.52
-12.8
-17.0
-21.3

0dB = 0.179 mW/g

Interpolated SAR(x,y,z,f0)
SAR; Z Scan:Value Along Z, X=0, Y=0

- Test Laboratory: KTL

- Model: LYNX 00N0WI-1Q1-MEN0

- Position: WiFi 802.11g_2437MHz Left Cheek Touch

- Test Date: September 20, 2012

- Measured Liquid Temperature: 22.1 ℃, Ambient Temperature: 22.0 ℃

Communication System: WLAN; Frequency: 2437 MHz;Duty Cycle: 1:1
Medium: HSL2450 Medium parameters used: f = 2437 MHz; σ = 1.81 mho/m; $ε_r$ = 39.3; ρ = 1000 kg/m^3
Phantom section: Left Section
Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ES3DV2 - SN3020; ConvF(4.22, 4.22, 4.22); Calibrated: 2012-01-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn559; Calibrated: 2012-01-23
- Phantom: SAM Twin Phantom_1800MHz; Type: SAM; Serial: TP-1433
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Area Scan (41x71x1): Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 0.037 mW/g

**Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 4.42 V/m; Power Drift = 0.158 dB
Peak SAR (extrapolated) = 0.069 W/kg
SAR(1 g) = 0.037 mW/g; SAR(10 g) = 0.020 mW/g
Maximum value of SAR (measured) = 0.040 mW/g

0dB = 0.040 mW/g

723 Haean-ro, Sa-dong, Sangnok-gu, Ansan-si, 426-910 Korea
http::/www.ktl.re.kr
Tel: +82-31-500-0133
Fax: +82-31-500-0149

- Test Laboratory: KTL

- Model: LYNX 00N0WI-1Q1-MEN0

- Position: WiFi 802.11g_2437MHz Left Ear Tilt

- Test Date: September 20, 2012

- Measured Liquid Temperature: 22.1 ℃, Ambient Temperature: 22.0 ℃

Communication System: WLAN; Frequency: 2437 MHz;Duty Cycle: 1:1
Medium: HSL2450 Medium parameters used: f = 2437 MHz; σ = 1.81 mho/m; ε_r = 39.3; ρ = 1000 kg/m^3
Phantom section: Left Section
Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ES3DV2 - SN3020; ConvF(4.22, 4.22, 4.22); Calibrated: 2012-01-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn559; Calibrated: 2012-01-23
- Phantom: SAM Twin Phantom_1800MHz; Type: SAM; Serial: TP-1433
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Area Scan (41x71x1): Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 0.054 mW/g

**Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 5.50 V/m; Power Drift = 0.083 dB
Peak SAR (extrapolated) = 0.098 W/kg
SAR(1 g) = 0.052 mW/g; SAR(10 g) = 0.027 mW/g
Maximum value of SAR (measured) = 0.057 mW/g
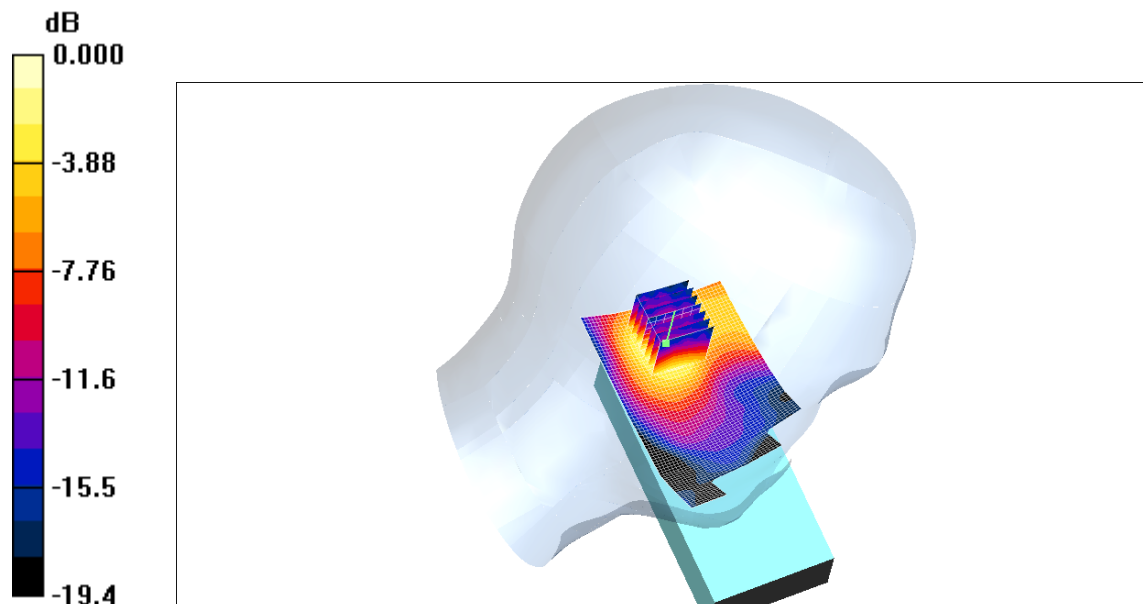
0dB = 0.057 mW/g

- Test Laboratory: KTL

- Model: LYNX 00N0WI-1Q1-MEN0

- Position: WiFi 802.11g_2437MHz Right Cheek Touch

- Test Date: September 20, 2012

- Measured Liquid Temperature: 22.1 ℃, Ambient Temperature: 22.0 ℃

Communication System: WLAN; Frequency: 2437 MHz;Duty Cycle: 1:1
Medium: HSL2450 Medium parameters used: f = 2437 MHz; σ = 1.81 mho/m; ε_r = 39.3; ρ = 1000 kg/m^3
Phantom section: Right Section
Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ES3DV2 - SN3020; ConvF(4.22, 4.22, 4.22); Calibrated: 2012-01-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn559; Calibrated: 2012-01-23
- Phantom: SAM Twin Phantom_1800MHz; Type: SAM; Serial: TP-1433
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Area Scan (41x71x1): Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 0.055 mW/g

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 4.96 V/m; Power Drift = 0.096 dB
Peak SAR (extrapolated) = 0.085 W/kg
SAR(1 g) = 0.049 mW/g; SAR(10 g) = 0.027 mW/g
Maximum value of SAR (measured) = 0.053 mW/g
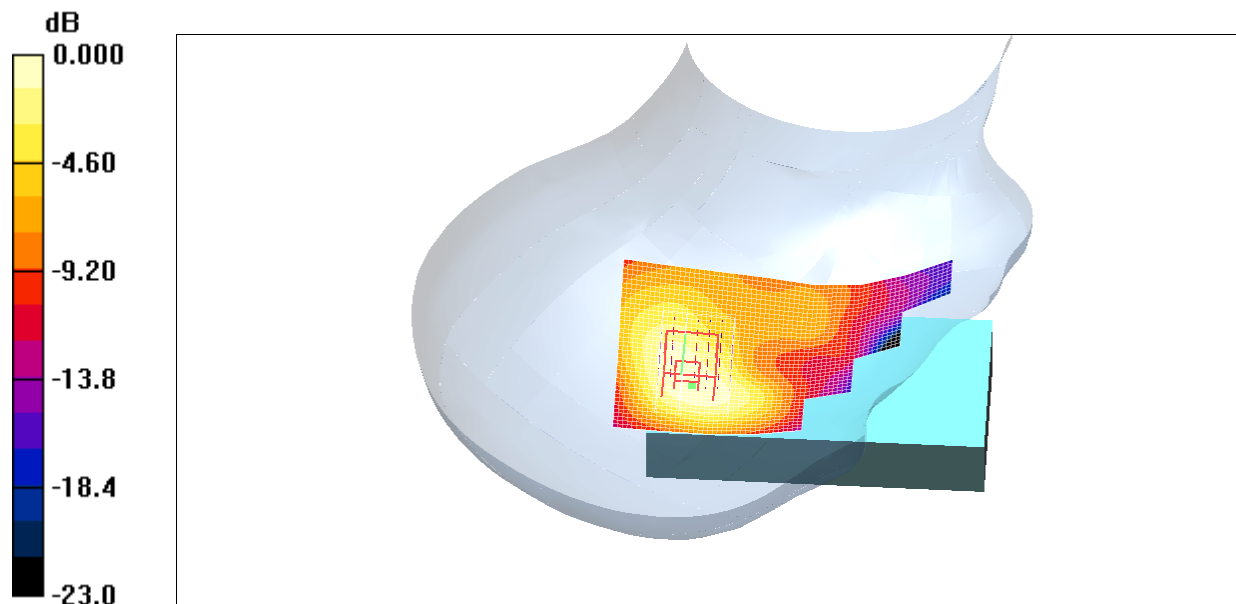
0dB = 0.053 mW/g

- Test Laboratory: KTL

- Model: LYNX 00N0WI-1Q1-MEN0

- Position: WiFi 802.11g_2437MHz Right Ear Tilt

- Test Date: September 20, 2012

- Measured Liquid Temperature: 22.1 ℃, Ambient Temperature: 22.0 ℃

Communication System: WLAN; Frequency: 2437 MHz;Duty Cycle: 1:1
Medium: HSL2450 Medium parameters used: f = 2437 MHz; σ = 1.81 mho/m; ε_r = 39.3; ρ = 1000 kg/m^3
Phantom section: Right Section
Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ES3DV2 - SN3020; ConvF(4.22, 4.22, 4.22); Calibrated: 2012-01-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn559; Calibrated: 2012-01-23
- Phantom: SAM Twin Phantom_1800MHz; Type: SAM; Serial: TP-1433
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Area Scan (41x71x1): Measurement grid: dx=20mm, dy=20mm
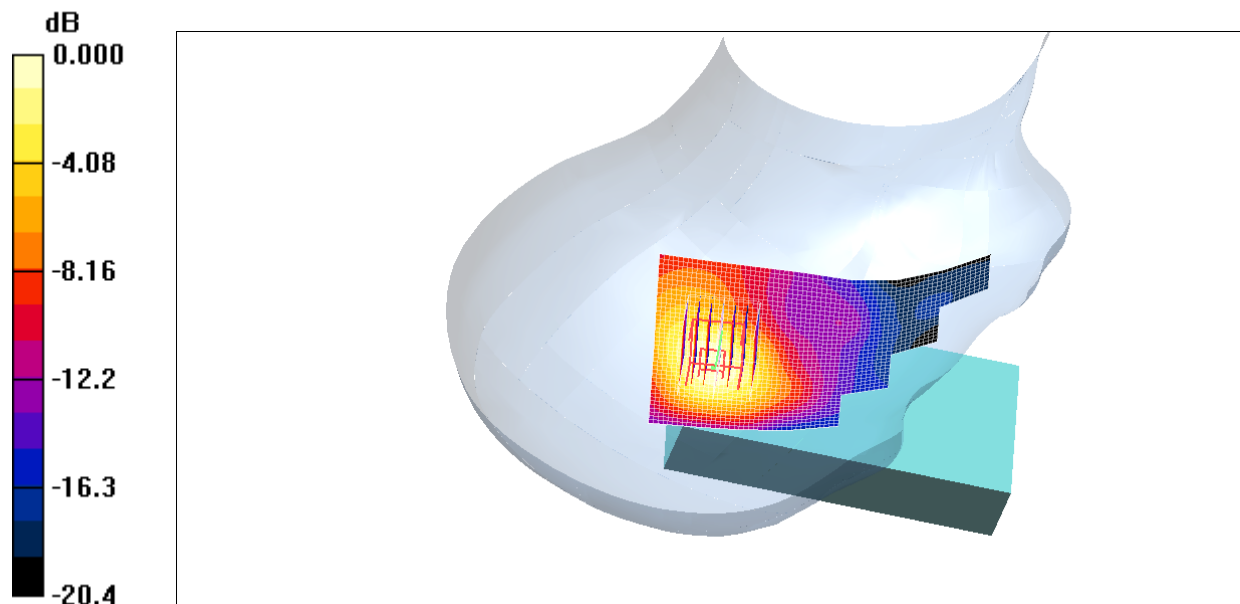Maximum value of SAR (interpolated) = 0.066 mW/g

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 5.76 V/m; Power Drift = 0.023 dB
Peak SAR (extrapolated) = 0.118 W/kg
SAR(1 g) = 0.063 mW/g; SAR(10 g) = 0.033 mW/g
Maximum value of SAR (measured) = 0.069 mW/g

0dB = 0.069 mW/g

- Test Laboratory: KTL

- D2450V2: BODY 2450MHz Validation

- Test Date: July 4, 2012

- Measured Liquid Temperature: 21.9 ℃, Ambient Temperature: 22.0 ℃

Communication System: CW; Frequency: 2450 MHz;Duty Cycle: 1:1
Medium: 2450D Medium parameters used: f = 2450 MHz; σ = 1.99 mho/m; ε_r = 52.6; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ES3DV2 - SN3020; ConvF(3.95, 3.95, 3.95); Calibrated: 2012-01-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn559; Calibrated: 2012-01-23
- Phantom: SAM Twin Phantom_1800MHz; Type: SAM; Serial: TP-1433
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Area Scan (61x71x1): Measurement grid: dx=15mm, dy=15mm
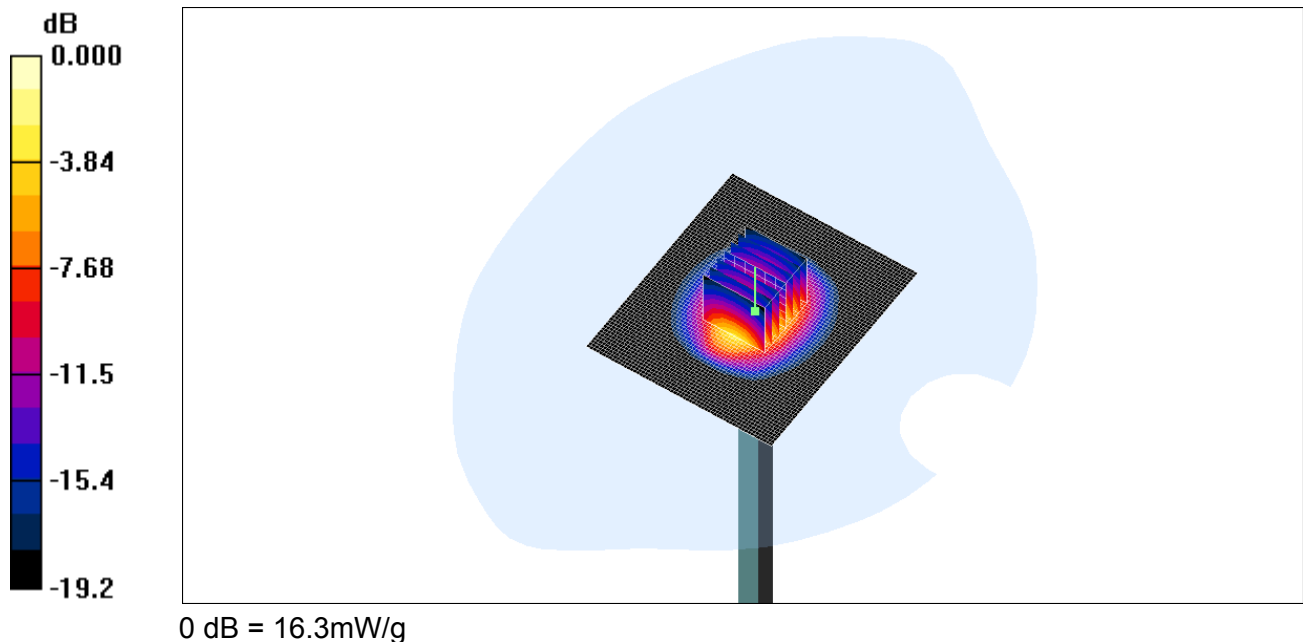Maximum value of SAR (interpolated) = 18.1 mW/g

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 91.3 V/m; Power Drift = -0.085 dB
Peak SAR (extrapolated) = 27.7 W/kg
SAR(1 g) = 14.2 mW/g; SAR(10 g) = 6.87 mW/g
Maximum value of SAR (measured) = 16.3 mW/g

dB

0.000

-3.84

-7.68

-11.5

-15.4

-19.2

0 dB = 16.3mW/g

- Test Laboratory: KTL

- Model: Lynx

- Position: WiFi 802.11b_2437MHz <u>Body Front to phantom</u>

- Test Date: July 4, 2012

- Measured Liquid Temperature: 21.9 ℃, Ambient Temperature: 22.0 ℃

Communication System: WLAN; Frequency: 2437 MHz;Duty Cycle: 1:1
Medium: 2450D Medium parameters used: f = 2437 MHz; σ = 1.95 mho/m; ε_r = 52.5; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ES3DV2 - SN3020; ConvF(3.95, 3.95, 3.95); Calibrated: 2012-01-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn559; Calibrated: 2012-01-23
- Phantom: SAM Twin Phantom_1800MHz; Type: SAM; Serial: TP-1433
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Front 802.11b/Area Scan (41x71x1): Measurement grid: dx=20mm, dy=20mm
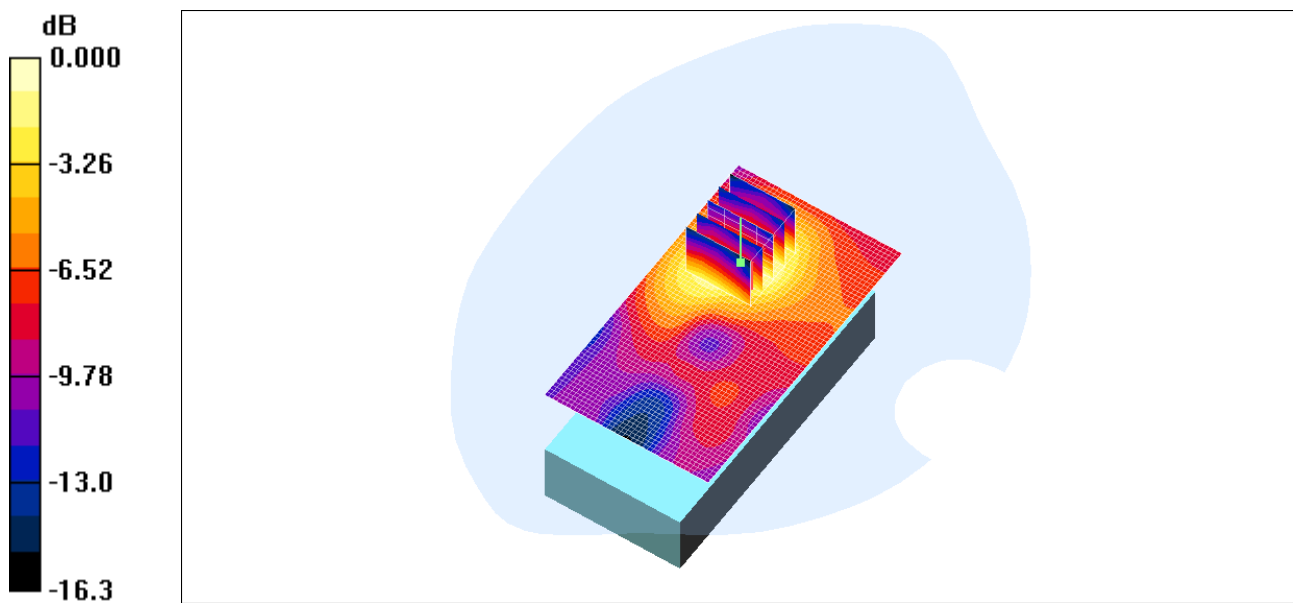Maximum value of SAR (interpolated) = 0.065 mW/g

Front 802.11b/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 4.53 V/m; Power Drift = 0.054 dB
Peak SAR (extrapolated) = 0.098 W/kg
SAR(1 g) = 0.059 mW/g; SAR(10 g) = 0.036 mW/g
Maximum value of SAR (measured) = 0.064 mW/g

0 dB = 0.064mW/g

- Test Laboratory: KTL

- Model: Lynx

- Position: WiFi 802.11b_2437MHz <u>Body Rear to phantom</u>

- Test Date: July 4, 2012

- Measured Liquid Temperature: 21.9 ℃, Ambient Temperature: 22.0 ℃

Communication System: WLAN; Frequency: 2437 MHz;Duty Cycle: 1:1
Medium: 2450D Medium parameters used: f = 2437 MHz; σ = 1.95 mho/m; ε_r = 52.5; ρ = 1000 kg/m³
Phantom section: Flat Section
Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ES3DV2 - SN3020; ConvF(3.95, 3.95, 3.95); Calibrated: 2012-01-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE4 Sn559; Calibrated: 2012-01-23
- Phantom: SAM Twin Phantom_1800MHz; Type: SAM; Serial: TP-1433
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Area Scan (41x71x1): Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 0.159 mW/g

Z Scan (1x1x16): Measurement grid: dx=20mm, dy=20mm, dz=20mm
Maximum value of SAR (interpolated) = 0.042 mW/g

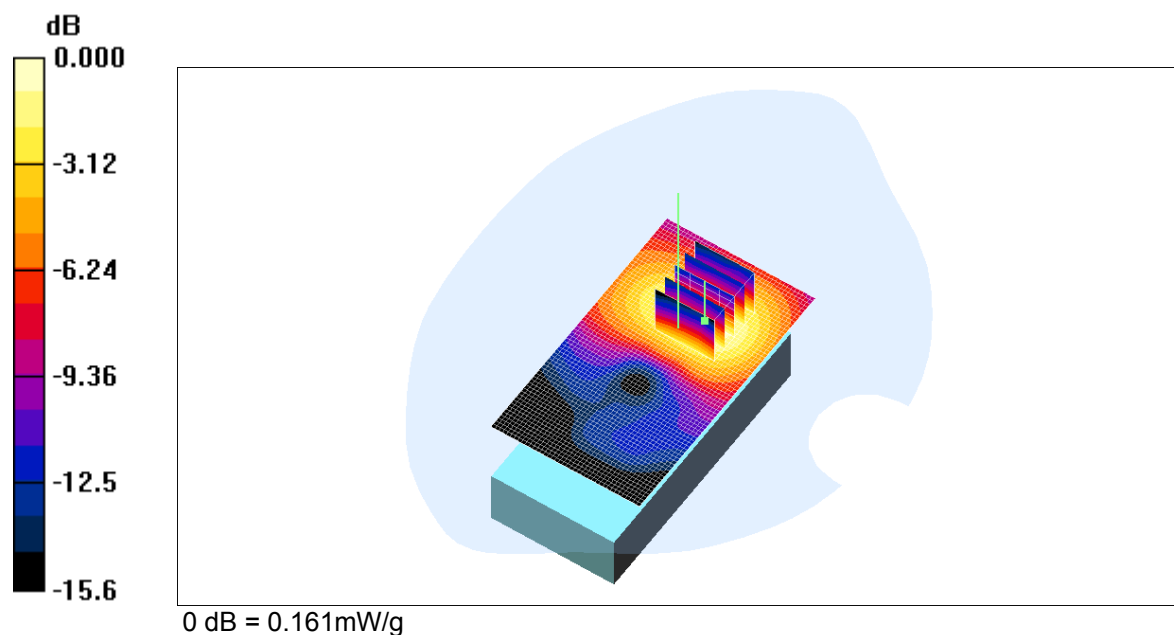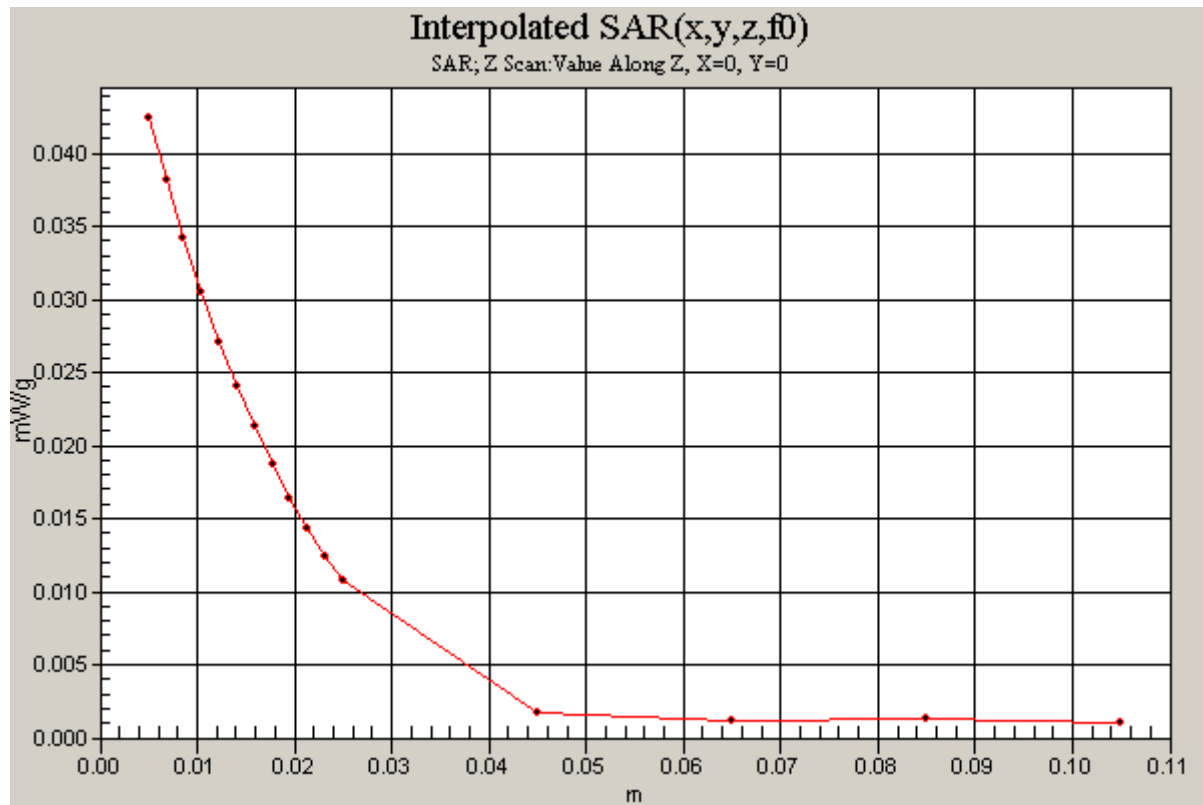**Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 7.55 V/m; Power Drift = 0.112 dB
Peak SAR (extrapolated) = 0.246 W/kg
SAR(1 g) = 0.149 mW/g; SAR(10 g) = 0.090 mW/g
Maximum value of SAR (measured) = 0.161 mW/g

dB

0.000
-3.12
-6.24
-9.36
-12.5
-15.6

0 dB = 0.161mW/g

- Test Laboratory: KTL

- Model: Lynx

- Position: WiFi 802.11g_2437MHz <u>Body Front to phantom</u>

- Test Date: July 4, 2012

- Measured Liquid Temperature: 21.9 ℃, Ambient Temperature: 22.0 ℃

Communication System: WLAN; Frequency: 2437 MHz;Duty Cycle: 1:1
Medium: 2450D Medium parameters used: f = 2437 MHz; σ = 1.95 mho/m; ε_r = 52.5; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ES3DV2 - SN3020; ConvF(3.95, 3.95, 3.95); Calibrated: 2012-01-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn559; Calibrated: 2012-01-23
- Phantom: SAM Twin Phantom_1800MHz; Type: SAM; Serial: TP-1433
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Area Scan (41x71x1): Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 0.037 mW/g

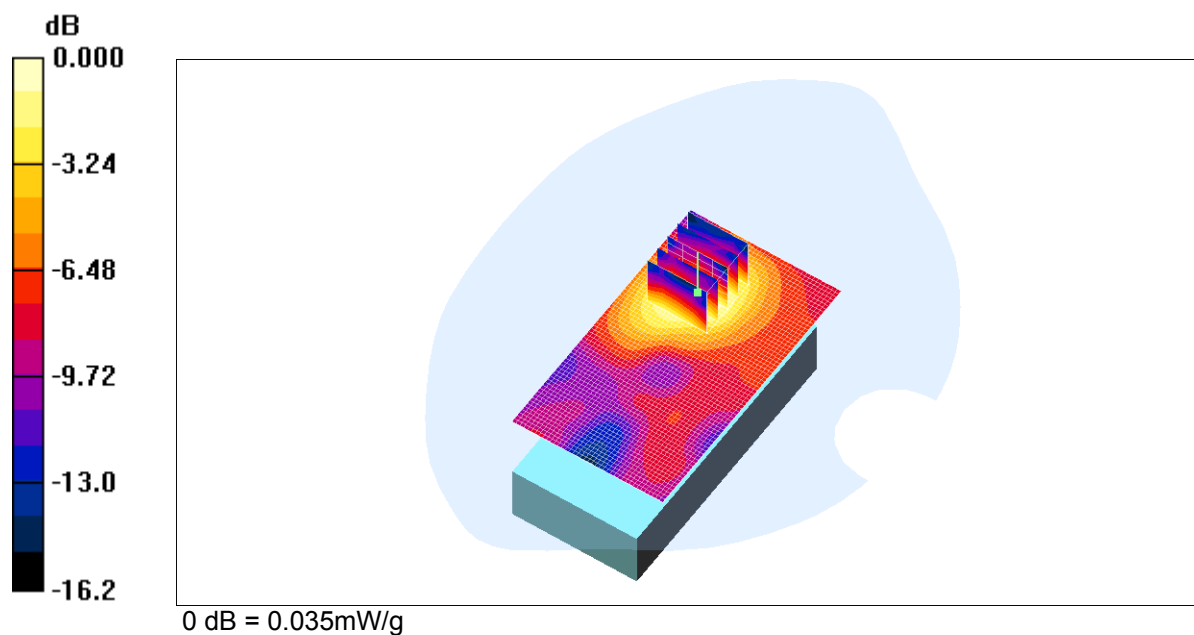**Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 3.06 V/m; Power Drift = 0.092 dB
Peak SAR (extrapolated) = 0.052 W/kg
SAR(1 g) = 0.032 mW/g; SAR(10 g) = 0.019 mW/g
Maximum value of SAR (measured) = 0.035 mW/g

dB
0.000
-3.24
-6.48
-9.72
-13.0
-16.2

0 dB = 0.035mW/g

- Test Laboratory: KTL

- Model: Lynx

- Position: WiFi 802.11g_2437MHz Body Rear to phantom

- Test Date: July 4, 2012

- Measured Liquid Temperature: 21.9 ℃, Ambient Temperature: 22.0 ℃

Communication System: WLAN; Frequency: 2437 MHz;Duty Cycle: 1:1
Medium: 2450D Medium parameters used: f = 2437 MHz; σ = 1.95 mho/m; $ε_r$ = 52.5; ρ = 1000 kg/m³
Phantom section: Flat Section
Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ES3DV2 - SN3020; ConvF(3.95, 3.95, 3.95); Calibrated: 2012-01-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn559; Calibrated: 2012-01-23
- Phantom: SAM Twin Phantom_1800MHz; Type: SAM; Serial: TP-1433
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Area Scan (41x71x1): Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 0.074 mW/g

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 5.17 V/m; Power Drift = 0.136 dB
Peak SAR (extrapolated) = 0.111 W/kg
SAR(1 g) = 0.068 mW/g; SAR(10 g) = 0.041 mW/g
Maximum value of SAR (measured) = 0.073 mW/g

0 dB = 0.073mW/g