



# SAR COLLOCATED REPORT

## - WLAN 802.11a + MOBILE

**REPORT NO.:** SA981105L04-4

**MODEL NO.:** MC75A6

**RECEIVED:** Nov. 06, 2009

**TESTED:** Apr. 25 ~ Apr. 27, 2010

**ISSUED:** Jun. 14, 2010

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# 1. CERTIFICATION

**PRODUCT:** EDA (Enterprise Digital Assistant)  
**MODEL:** MC75A6  
**BRAND:** Symbol  
**APPLICANT:** Symbol Technologies, Inc.  
**TESTED:** Apr. 25 ~ Apr. 27, 2010  
**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: MC75A6) have 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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 Pettie Chen / Specialist

**TECHNICAL ACCEPTANCE** : Mason Chang , **DATE** : Jun. 14, 2010  
 Responsible for RF Mason Chang / Engineer

**APPROVED BY** : Gary Chang , **DATE** : Jun. 14, 2010  
 Gary Chang / Assistant Manager

REVISED VERSION	REVISED DATE	DESCRIPTION
Ver. 1	May 1, 2010	1. Reduce output power of WLAN. 2. TX diversity function is disabled by software. Only main antenna can transmit.
Ver. 2	Jun. 09, 2010	Modified the general information
Ver. 3	Jun. 14, 2010	Modified the type error
Ver. 4	Jun. 14, 2010	Modified the description about test report

## 2. GENERAL INFORMATION

### 2.1 GENERAL DESCRIPTION OF EUT

<b>PRODUCT</b>	EDA (Enterprise Digital Assistant)
<b>MODEL NO.</b>	MC75A6
<b>FCC ID</b>	H9PMC75A6
<b>POWER SUPPLY</b>	3.7Vdc (Li-ion battery) 5.4Vdc (Adapter)
<b>CLASSIFICATION</b>	Portable device, production unit
<b>MODULATION TYPE</b>	<b>WLAN 802.11b</b> : CCK, DQPSK, DBPSK <b>WLAN 802.11g</b> : 64QAM, 16QAM, QPSK, BPSK <b>WLAN 802.11a</b> : 64QAM, 16QAM, QPSK, BPSK <b>Mobile</b> : GMSK, 8PSK, BPSK
<b>OPERATING FREQUENCY</b>	<b>WLAN</b> <b>802.11b/g</b> : 2412 ~ 2472MHz <b>802.11a</b> : 5180 ~ 5320MHz, 5500 ~ 5700MHz <b>Mobile</b> : 824 ~ 849MHz, 1850 ~ 1910MHz MHz
<b>MAXIMUM SAR (1g)</b>	1.5W/kg
<b>ANTENNA TYPE</b>	<b>WLAN 802.11a</b> : inverted F antenna (Main) Planar inverted antenna (Aux.) <b>Mobile</b> : Monopole antenna
<b>MAX. ANTENNA GAIN</b>	<b>WLAN</b> : inverted F 2.4GHz: -4.39dBi 5GHz: 2.05dBi Planar inverted 2.4GHz: 2.31dBi 5GHz: 3.29dBi <b>Mobile</b> : 850MHz: -0.54 dBi 1900MHz:1.28 dBi
<b>DATA CABLE</b>	Refer to NOTE as below
<b>I/O PORTS</b>	Refer to user's manual
<b>ACCESSORY DEVICES</b>	Battery

**NOTE:**

1. The EUT is an EDA (Enterprise Digital Assistant). The test data are separated into following test reports:

	REFERENCE REPORT
SAR test report-247 2.4G WLAN	SA981105L04
SAR test report-247 5G WLAN	
SAR test report-407 5G WLAN	SA981105L04-1
SAR test report-247 BLUETOOTH	SA981105L04-2
SAR test report-GSM 850 / WCDMA 850	SA981105L04-3
SAR test report-GSM 1900 / WCDMA 1900	
SAR collocated report-WLAN 802.11a + MOBILE	SA981105L04-4
SAR collocated report-simultaneously Voice and data mode	SA981105L04-5
SAR collocated report- simultaneously WLAN 802.11 a + Voice and data mode	SA981105L04-6
SAR supplement report-preliminary and worst case finding supplement data	SA981105L04-7

2. The models identified as below are identical to each other except of the following options:  
 - Keypad: Numeric / QWERTY  
 - Barcode reader: 1D laser scanner / BB Imager

BRAND	MODEL	DESCRIPTION
Symbol	MC75A6	HSDPA 1D Numeric
Symbol	MC75A6	HSDPA 1D QWERTY
Symbol	MC75A6	HSDPA BB Numeric
Symbol	MC75A6	HSDPA BB QWERTY

3. The EUT uses the following Li-ion batteries:

BATTERY 1 (1.5X)	
BRAND:	MOTOROLA
PART NUMBER:	82-71364-05 Rev D
RATING:	3.7Vdc, 3600mAh, 13.3Wh

BATTERY 2 (2.5X)	
BRAND:	MOTOROLA
PART NUMBER:	82-71364-06 Rev C
RATING:	3.7Vdc, 4800mAh, 17.7Wh

\*The applicant defined the normal working voltage of the battery is from 3.7Vdc to 4.2Vdc.

4. The communicated functions of EUT listed as below:

		850MHz	1900MHz	With 802.11a/b/g + Bluetooth
2G	GSM	√	√	
	GPRS	√	√	
	E-GPRS	√	√	
3G	WCDMA	√	√	
	HSDPA	√	√	

5. The following accessories are for optional units only.

PRODUCT	BRAND	MODEL	DESCRIPTION
RS232 charging cable	Motorola	25-102776-01R	1.2m non-shielded cable with one core
USB charging cable	Motorola	25-102775-01R	1.5m shielded cable with one core
Headset	Motorola	50-11300-050R	VR10 headset 0.8m non-shielded cable with one core
Power Supply Adaptor	Motorola	EADP-16BB A	I/P: 100-240Vac, 50-60Hz, 0.4A O/P: 5.4Vdc, 3A 1.8m non-shielded cable without core
Fabric holster	Motorola	SG-MC7521215-01R	Contain metal
Ridged holster	Motorola	SG-MC7011110-02R	Contain metal

6. Hardware version: EVT1A.

7. Software version: BSP\_21.03.

8. The above EUT information was declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications or user's manual.

## 2.2 SAR MEASUREMENT CONDITIONS FOR WCDMA

The following procedures were followed according to FCC "SAR Measurement Procedure for 3G Devices", October 2007.

### ➤ Output Power Verification

Maximum output power is verified on the High, Middle and Low channels according to the procedures described in section 5.2 of 3GPP TS 34.121, using the appropriate RMC or AMR with TPC (transmit power control) set to all "1's" for WCDMA/HSDPA or applying the required inner loop power control procedures to maintain maximum output power while HSUPA is active. Results for all applicable physical channel configurations (DPCCH, DPDCHn and spreading codes, HSDPA, HSPA) should be tabulated in the SAR report. All configurations that are not supported by the DUT or cannot be measured due to technical or equipment limitations should be clearly identified.

### ➤ Head SAR Measurement

SAR for head exposure configurations in voice mode is measured using a 12.2 kbps RMC with TPC bits configured to all "1's". SAR in AMR configurations is not required when the maximum average output of each RF channel for 12.2 kbps AMR is less than ¼ dB higher than that measured in 12.2 kbps RMC. Otherwise, SAR is measured on the maximum output channel in 12.2 kbps AMR with a 3.4 kbps SRB (signaling radio bearer) using the exposure configuration that results in the highest SAR in 12.2 kbps RMC for that RF channel.

➤ **Body SAR Measurements**

SAR for body exposure configurations in voice and data modes is measured using a 12.2 kbps RMC with TPC bits configured to all “1’s”. SAR for other spreading codes and multiple DPDCHn, when supported by the DUT, are not required when the maximum average output of each RF channel, for each spreading code and DPDCHn configuration, are less than ¼ dB higher than those measured in 12.2 kbps RMC. Otherwise, SAR is measured on the maximum output channel with an applicable RMC configuration for the corresponding spreading code or DPDCHn using the exposure configuration that results in the highest SAR with 12.2 kbps RMC. When more than 2 DPDCHn are supported by the DUT, it may be necessary to configure additional DPDCHn for a DUT using FTM (Factory Test Mode) or other chipset based test approaches with parameters similar to those used in 384 kbps and 768 kbps RMC.

➤ **Handsets with Release 5 HSDPA**

Body SAR is not required for handsets with HSDPA capabilities when the maximum average output of each RF channel with HSDPA active is less than ¼ dB higher than that measured without HSDPA using 12.2 kbps RMC and the maximum SAR for 12.2 kbps RMC is ≤ 75% of the SAR limit. Otherwise, SAR is measured for HSDPA, using the additional body SAR procedures in the “Release 5 HSDPA Data Devices” section of this document, on the maximum output channel with the body exposure configuration that results in the highest SAR in 12.2 kbps RMC for that RF channel. Handsets with both HSDPA and HSUPA should be tested according to Release 6 HSPA test procedures.

## **2.3 GENERAL DESCRIPTION OF APPLIED STANDARDS**

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

**FCC 47 CFR 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.

## 2.4 GENERAL INFORMATION OF THE SAR SYSTEM

**DASY5 (software 5.0 Build 125)** 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 DASY5 software defined. The DASY5 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

<b>CONSTRUCTION</b>	Symmetrical design with triangular core Built-in shielding against static charges PEEK enclosure material (resistant to organic solvents, e.g., DGBE)
<b>FREQUENCY</b>	10 MHz to > 6 GHz Linearity: $\pm 0.2$ dB (30 MHz to 6 GHz)
<b>DIRECTIVITY</b>	$\pm 0.3$ dB in HSL (rotation around probe axis) $\pm 0.5$ dB in tissue material (rotation normal to probe axis)
<b>DYNAMIC RANGE</b>	10 $\mu$ W/g to > 100 mW/g Linearity: $\pm 0.2$ dB (noise: typically < 1 $\mu$ W/g)
<b>DIMENSIONS</b>	Overall length: 330 mm (Tip: 20 mm) Tip diameter: 2.5 mm (Body: 12 mm) Typical distance from probe tip to dipole centers: 1 mm
<b>APPLICATION</b>	High precision dosimetric measurements in any exposure scenario (e.g., very strong gradient fields). Only probe which enables compliance testing for frequencies up to 6 GHz with precision of better 30%.

#### NOTE

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



## **TWIN SAM V4.0**

<b>CONSTRUCTION</b>	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.
<b>SHELL THICKNESS</b>	2 ± 0.2mm
<b>FILLING VOLUME</b>	Approx. 25liters
<b>DIMENSIONS</b>	Height: 810mm; Length: 1000mm; Width: 500mm

### **SYSTEM VALIDATION KITS:**

<b>CONSTRUCTION</b>	Symmetrical dipole with 1/4 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
<b>CALIBRATION</b>	Calibrated SAR value for specified position and input power at the flat phantom in brain simulating solutions
<b>FREQUENCY</b>	850MHz, 1900MHz
<b>RETURN LOSS</b>	> 20dB at specified validation position
<b>POWER CAPABILITY</b>	> 100W (f < 1GHz); > 40W (f > 1GHz)
<b>OPTIONS</b>	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  $\epsilon = 3$  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 $\Omega$ ; the inputs are symmetrical and floating. Common mode rejection is above 80 dB.

## 2.5 TEST EQUIPMENT

### FOR SAR MEASUREMENT

ITEM	NAME	BRAND	TYPE	SERIES NO.	DATE OF CALIBRATION	DUE DATE OF CALIBRATION
1	SAM Phantom	S & P	QD000 P40 CA	TP-1485	NA	NA
2	Signal Generator	Anritsu	68247B	984703	May 21, 2009	May 20, 2010
3	E-Field Probe	S & P	EX3DV3	3504	Jan. 26, 2010	Jan. 25, 2011
4	DAE	S & P	DAE	510	Dec. 16, 2009	Dec. 15, 2010
5	Robot Positioner	Staubli Unimation	NA	NA	NA	NA
6	Validation Dipole	S & P	D2450V2	737	Feb. 19, 2010	Feb. 18, 2011
7			D5GHzV2	1018	Jan. 22, 2010	Jan. 21, 2011
8			D1900V2	5d036	Feb. 23, 2010	Feb. 22, 2011

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

### FOR TISSUE PROPERTY

ITEM	NAME	BRAND	TYPE	SERIES NO.	DATE OF CALIBRATION	DUE DATE OF CALIBRATION
1	Network Analyzer	Agilent	E8358A	US41480538	Dec. 03, 2009	Dec. 02, 2010
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.

## 2.6 GENERAL DESCRIPTION OF THE SPATIAL PEAK SAR EVALUATION

The DASY5 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 <sub>i</sub> , a <sub>i0</sub> , a <sub>i1</sub> , a <sub>i2</sub>
	- Conversion factor	ConvF <sub>i</sub>
	- Diode compression point	dcp <sub>i</sub>
Device parameters:	- Frequency	F
	- Crest factor	Cf
Media parameters:	- Conductivity	$\sigma$
	- Density	$\rho$

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 <sub>i</sub>	=compensated signal of channel i	(i = x, y, z)
U <sub>i</sub>	=input signal of channel i	(i = x, y, z)
Cf	=crest factor of exciting field	(DASY parameter)
dcp <sub>i</sub>	=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)  
 $\text{Norm}_i$  = sensor sensitivity of channel i  $\mu\text{V}/(\text{V/m})^2$  for (i = x, y, z)  
 E-field Probes  
 $\text{ConvF}$  = 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.

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

- $\text{SAR}$  = local specific absorption rate in mW/g  
 $E_{tot}$  = total field strength in V/m  
 $\sigma$  = conductivity in [mho/m] or [Siemens/m]  
 $\rho$  = equivalent tissue density in g/cm<sup>3</sup>

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 1 g and 10 g 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 1 g and 10 g.

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.

In the Area Scan, the gradient of the interpolation function is evaluated to find all the extreme of the SAR distribution. The uncertainty on the locations of the extreme is less than 1/20 of the grid size. Only local maximum within -2 dB of the global maximum are searched and passed for the Cube Scan measurement. In the Cube Scan, the interpolation function is used to extrapolate the Peak SAR from the lowest measurement points to the inner phantom surface (the extrapolation distance). The uncertainty increases with the extrapolation distance. To keep the uncertainty within 1% for the 1 g and 10 g cubes, the extrapolation distance should not be larger than 5mm.

### 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.
1	Universal Radio Communication Tester	R&S	CMU200	NA

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

**NOTE:**

1. All power cords of the above support units are non shielded (1.8m).
2. Item 1 was provided by the client.

## 4. DESCRIPTION OF TEST POSITION

### 4.1 DESCRIPTION OF TEST POSITION

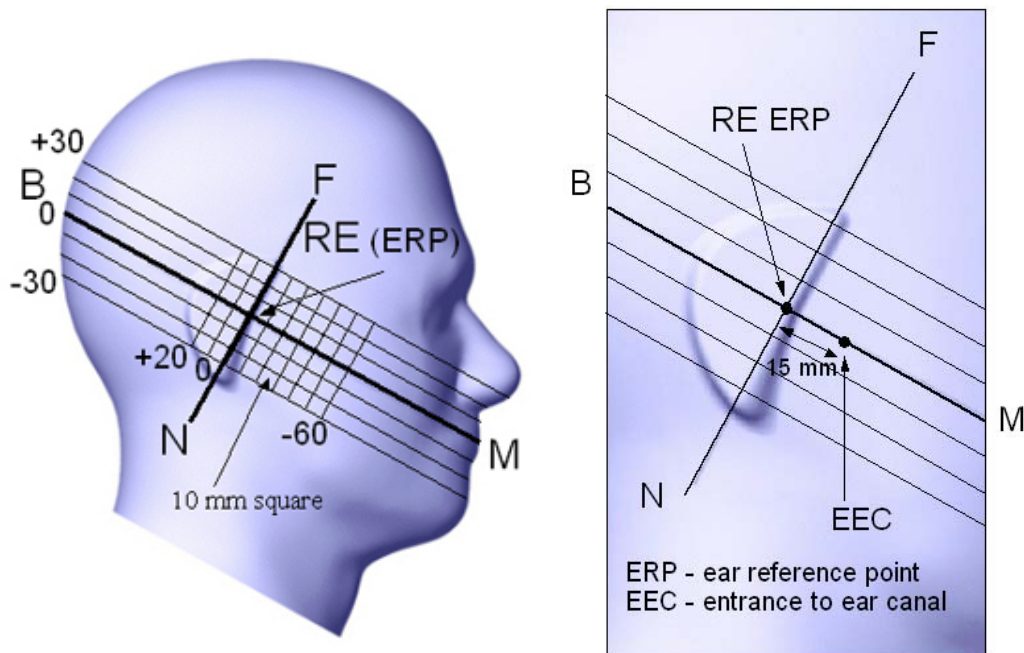


FIGURE 3.1

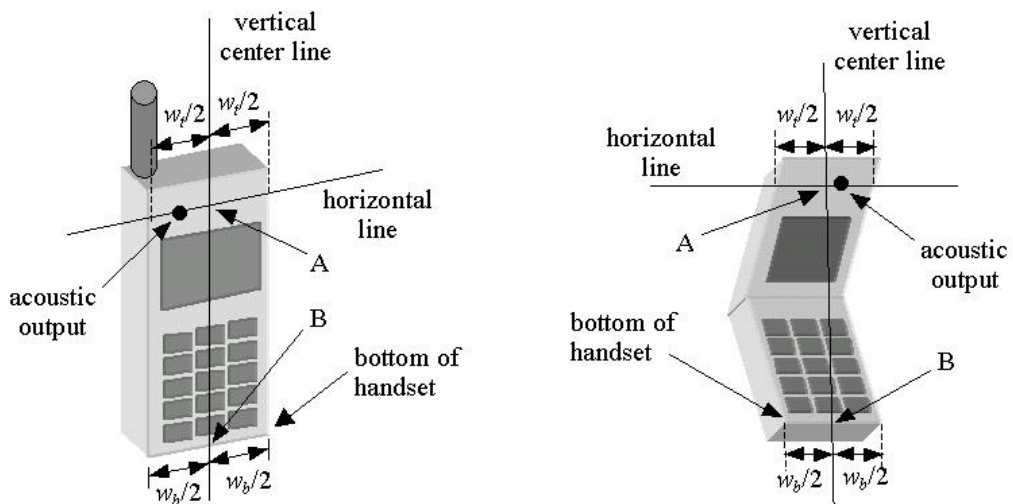


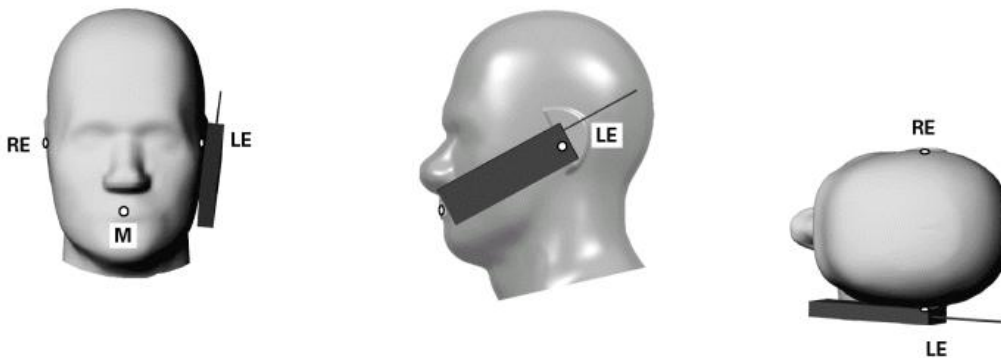
FIGURE 3.1a

FIGURE 3.1b



#### 4.1.1 TOUCH/CHEEK TEST POSITION

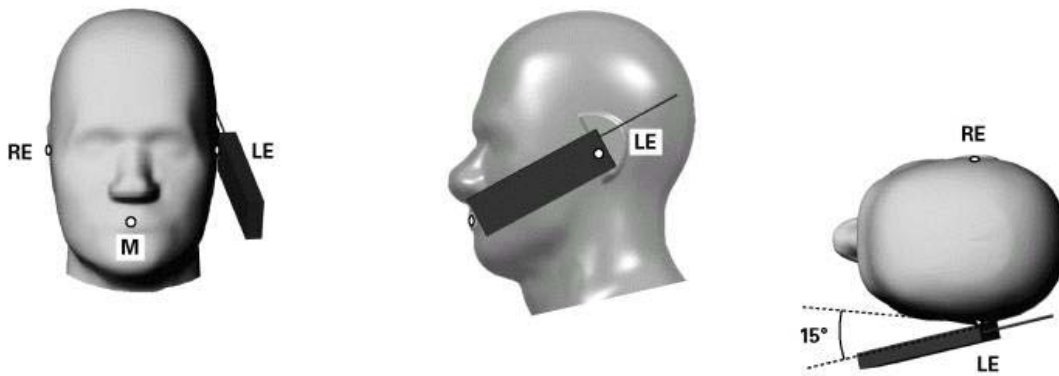
The head position in Figure 3.1, the ear reference points ERP are 15mm above entrance to ear canal along the B-M line. The line N-F (Neck-Front) is perpendicular to the B-M (Back Mouth) line. The handset device in Figure 3.1a and 3.1b, The vertical centerline pass through two points on the front side of handset: the midpoint of the width  $w_t$  of the handset at the level of the acoustic output (point A) and the midpoint of the width  $w_b$  of the bottom of the handset (point B). The vertical centerline is perpendicular to the horizontal line and pass through the center of the acoustic output. The point A touches the ERP and the vertical centerline of the handset is parallel to the B-M line. While maintaining the point A contact with the ear(ERP), rotate the handset about the line NF until any point on handset is in contact with the cheek of the phantom



**TOUCH/CHEEK POSITION FIGURE**

#### 4.1.2 TILT TEST POSITION

Adjust the device in the cheek position. While maintaining a point of the handset contact in the ear, move the bottom of the handset away from the mouth by an angle of 15 degrees.



**TILT POSITION FIGURE**

#### 4.1.3 BODY-WORN CONFIGURATION

The handset device attached the belt clip or the holster. The keypad face of the handset is against with the bottom of the flat phantom face and the bottom of the keypad face contact to the bottom of the flat phantom.

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

## 5. SIMULTANEOUS TRANSMISSION EVALUATION

### 5.1 BODY POSITION

Value of below table is the max value of each TX band.

TX band	Max SAR value (W/kg)
2.4GHz	0.028
5GHz	0.052
850 MHz	0.137
1900 MHz	0.148

#### **Combined SAR value of simultaneous transmission**

Combined SAR value is sum of the max SAR value of each single TX band  
4 combined modes and SAR value are as below

- 1)  $2.4\text{GHz} + 850\text{MHz} = 0.165$
- 2)  $2.4\text{GHz} + 1900\text{MHz} = 0.176$
- 3)  $5\text{GHz} + 850\text{MHz} = 0.189$
- 4)  $5\text{GHz} + 1900\text{MHz} = 0.2$

Values of all modes are less than 1.6 W/kg, SAR test for simultaneous transmission at body position is not necessary.

## 5.2 HEAD POSITION

SAR values of each mode are shown on below table.

Mode	Channel / Frequency	RIGHT HEAD		LEFT HEAD	
		CHEEK	TILT	CHEEK	TILT
WCDMA 850	Ch 4182: 825.6MHz	0.517	0.536	0.560	0.639
GSM 850	Ch 190: 836.6MHz	0.385	0.398	0.433	0.465
WCDMA 1900	Ch 9262: 1852.4MHz	0.605	0.731	1.020	1.210
	Ch 9400: 1880.0MHz	0.708	0.873	1.220	1.320
	Ch 9538: 1907.6MHz	0.689	0.839	1.060	1.290
PCS 1900	Ch 661: 1880.0MHz	0.408	0.454	0.534	0.679
802.11b	Ch 6: 2437.0MHz	0.293	0.236	0.347	0.294
802.11g	Ch 6: 2437.0MHz	0.259	0.222	0.349	0.284
802.11a	Ch 40: 5200.0MHz	0.276	0.262	0.290	0.284
	Ch 64: 5320MHz	0.503	0.542	0.559	0.596
	Ch 100: 5500MHz	0.379	0.392	0.384	0.399
	Ch 104: 5520MHz	0.338	0.348	0.363	0.374
	Ch 116: 5580MHz	0.370	0.382	0.293	0.329
	Ch 120: 5600MHz	0.395	0.339	0.342	0.343
	Ch 124: 5620MHz	0.456	0.460	0.338	0.366
	Ch 136: 5680MHz	0.390	0.383	0.392	0.384
	Ch 140: 5700MHz	0.299	0.295	0.256	0.268
	Ch 165: 5825MHz	0.358	0.358	0.367	0.380

## Combined SAR value of simultaneous transmission

The EUT supports mobile phone and WLAN function.

Mobile phone function supports GSM 850/WCDMA 850/PCS 1900/WCDMA1900, but only one mode can active at a time.

WLAN function supports 802.11b / 802.11g / 802.11a, but only one mode can active at time

Therefore, there will be 12 modes of simultaneous transmission.

Combined SAR value is sum of the max SAR value of each single TX mode which show on table of P20

For example

$$\text{WCDMA 850} + 802.11\text{b} = 0.517 + 0.293 = 0.81$$

Simultaneous transmission mode		RIGHT HEAD		LEFT HEAD	
		CHEEK	TILT	CHEEK	TILT
WCDMA 850	802.11b	0.81	0.772	0.907	0.933
WCDMA 850	802.11g	0.776	0.758	0.909	0.923
WCDMA 850	802.11a	1.02	1.078	1.119	1.235
GSM 850	802.11b	0.678	0.634	0.78	0.759
GSM 850	802.11g	0.644	0.62	0.782	0.749
GSM 850	802.11a	0.888	0.94	0.992	1.061
WCDMA 1900	802.11b	1.001	1.109	1.567	1.614
WCDMA 1900	802.11g	0.967	1.095	1.569	1.604
WCDMA 1900	802.11a	1.211	1.415	1.779	1.916
PCS 1900	802.11b	0.701	0.69	0.881	0.973
PCS 1900	802.11g	0.667	0.676	0.883	0.963
PCS 1900	802.11a	0.911	0.996	1.093	1.275

Per above table, values of most modes are less than 1.6W/kg.  
Values of 4 combined modes are higher than 1.6. W/kg

- 1) WCDMA1900+802.11b at LEFT TILT POSITION
- 2) WCDMA1900+802.11g at LEFT TILT POSITION
- 3) WCDMA1900+802.11a at LEFT CHEEK POSITION
- 4) WCDMA1900+802.11a at LEFT TILT POSITION

4 combined modes need to check detail for finding the test channel of simultaneous transmission

## Test channel for simultaneous transmission

### 1) WCDMA 1900 + 802.11b mode at LEFT TILT POSITION

Below table shows the combined SAR value of WCDMA 1900 + 802.11b mode

		LEFT HEAD
	WCDMA 1900	TILT
802.11b CH6	9262	1.504
802.11b CH6	9400	1.614
802.11b CH6	9538	1.584

Combined SAR value of 11b ch6 + WCDMA1900 ch9400 is higher than 1.6 W/kg. Therefore, this configuration needs to do volume scan test

Test channels are 11b ch6 & WCDMA 1900 ch9400

### 2) WCDMA 1900 + 802.11g mode at LEFT TILT POSITION

Below table shows the combined SAR value of WCDMA 1900 + 802.11g mode

		LEFT HEAD
	WCDMA 1900	TILT
802.11g CH6	9262	1.494
802.11g CH6	9400	1.604
802.11g CH6	9538	1.574

Combined SAR value of 11g ch6 + WCDMA1900 middle channel is higher than 1.6 W/kg. Therefore, this configuration needs to do volume scan test

Test channels are 11g ch6 & WCDMA 1900 ch9400

### 3) WCDMA1900+802.11a at LEFT CHEEK POSITION

Below table shows the combined SAR value of WCDMA 1900 + 802.11a mode

802.11a	WCDMA 1900 Ch9262	WCDMA 1900 Ch9400	WCDMA 1900 Ch9538
40	1.31	1.51	1.35
64	1.579	1.779	1.619
100	1.404	1.604	1.444
104	1.383	1.583	1.423
116	1.313	1.513	1.353
120	1.362	1.562	1.402
124	1.358	1.558	1.398
136	1.412	1.612	1.452
140	1.288	1.488	1.328
165	1.387	1.587	1.427

Combined SAR values of following 4 modes are higher than 1.6 W/kg,

- 1)11a ch64 + WCDMA ch9400
- 2)11a ch64 + WCDMA ch9538
- 3)11a ch100 + WCDMA ch9400
- 4)11a ch136 + WCDMA ch9400

Therefore, 4 configurations need to do volume scan test

Test channel are 11a ch64/100/136 & WCDMA 1900 ch9400/9538

#### 4) WCDMA1900+802.11a at LEFT TILT POSITION

Below table shows the combined SAR value of WCDMA 1900 + 802.11a mode

	WCDMA 1900 Ch9262	WCDMA 1900 Ch9400	WCDMA 1900 Ch9538
40	1.494	1.604	1.574
64	1.806	1.916	1.886
100	1.609	1.719	1.689
104	1.584	1.694	1.664
116	1.539	1.649	1.619
120	1.553	1.663	1.633
124	1.576	1.686	1.656
136	1.594	1.704	1.674
140	1.478	1.588	1.558
165	1.59	1.7	1.67

Combined SAR values of following 19 modes are higher than 1.6 W/kg and 1 mode is very close to 1.6 W/kg

Mo1~M02 (SAR value > 1.6 W/kg)

11a ch64 /100+ WCDMA 1900 ch9262

M03 (SAR value is close to 1.6W/kg)

11a ch136 +WCDMA 1900 ch9262

M04~M12 (SAR value > 1.6 W/kg)

11a ch40/64/100/104/116/120/124/136/165 + WCDMA 1900 ch9400

M13~M20 (SAR value > 1.6 W/kg)

11a ch64/100/104/116/120/124/136/165 +WDMA 1900 ch9538

Therefore, 20 configurations need to do volume scan test

Test channels are

11a ch40 / 64 / 100 / 104 / 116 / 120 / 124 / 136 / 165

WCDMA 1900 ch9262 / 9400 / 9538



## 6. TEST RESULTS

### 6.1 TEST PROCEDURES

The EUT makes a phone call to the communication simulator station. Establish the simulation communication configuration rather the actual communication. Then the EUT could continuous the transmission mode. Adjust the PCL of the base station could controlled the EUT to transmitted the maximum output power. The base station also could control the transmission channel. The SAR value was calculated via the 3D spline interpolation algorithm that has been implemented in the software of DASY5 SAR measurement system manufactured and calibrated by SPEAG. According to the IEEE 1528 / EN 62209-1, 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
- Volume scan
- Power reference measurement

Volume Scans are used to assess peak SAR and averaged SAR measurement in largely extended 3-dimensional volumes within any phantom. This measurement does not need any previous area scan

In the volume scan, the distance between the measurement point at the probe sensor location (geometric center behind the probe tip) and the phantom surface is 2.5mm. The scan size is 18 x 16 x 9 points and the grid space is 4mm.

The measurement time is 0.5s at each point of the volume 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

#### Multiband Data Extractions

In order to extract and process measurements within different frequency bands, the SEMCAD X Postprocessor allows the user to combine and subsequently superpose these measurement data using the Tools menu. Using combined Multi Band Averaged SAR of tools menu to get the multiband SAR value.

## 6.2 MEASURED SAR RESULTS

**Configuration: Barcode reader: BB Imager, 1.5x Battery**

### Volume Scan SAR

HEAD POSITION	LEFT	
	CHEEK	TILT
<b>WCDMA 1900</b>		
Ch 9262: 1852.4MHz	X	1.27
Ch 9400: 1880.0MHz	1.23	1.33
Ch 9538: 1907.6MHz	1.16	1.24
<b>802.11b</b>		
Ch 6: 2437.0MHz	X	0.260
<b>802.11g</b>		
Ch 6: 2437.0MHz	X	0.279
<b>802.11a</b>		
Ch 40: 5200MHz	X	0.270
Ch 64: 5320MHz	0.501	0.565
Ch 100: 5500MHz	0.459	0.481
Ch 104: 5520MHz	X	0.367
Ch 116: 5580MHz	X	0.329
Ch 120: 5600MHz	X	0.366
Ch 124: 5620MHz	X	0.380
Ch 136: 5680MHz	0.328	0.352
Ch 165: 5825MHz	X	0.358

**NOTE:**

1. Test configuration of each mode is described in section 4.1.
2. In this testing, the limit for General Population Spatial Peak averaged over **1g, 1.6W/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. Temperature of Liquid is 22±1°C
6. X means volume SAR test is not necessary. Please check p25

## Multiband SAR

### 1) WCDMA 1900 + 802.11b mode at LEFT TILT POSITION

Volume SAR of WCDMA 1900 Ch 9400: 1880.0MHz	Volume SAR of 802.11b Ch 6: 2437.0MHz	Multi band SAR
1.33	0.260	1.42

### 2) WCDMA 1900 + 802.11g mode at LEFT TILT POSITION

Volume SAR of WCDMA 1900 Ch 9400: 1880.0MHz	Volume SAR of 802.11g Ch 6: 2437.0MHz	Multi band SAR
1.33	0.279	1.48

### 3) WCDMA1900 + 802.11a at LEFT CHEEK POSITION

Volume SAR of WCDMA 1900 Ch 9400: 1880.0MHz	Volume SAR of 802.11a		Multi band SAR
1.23	Ch 64: 5320MHz	0.501	1.33
	Ch 100: 5500Mhz	0.459	1.25
	Ch 136: 5680MHz	0.328	1.23

Volume SAR of WCDMA 1900 Ch 9538: 1907.6MHz	Volume SAR of 802.11a ch 64: 5320MHz	Multi band SAR
1.16	0.501	1.32



**4) WCDMA1900 + 802.11a at LEFT TILT POSITION**

Volume SAR of WCDMA 1900 Ch 9262: 1852.4MHz	Volume SAR of 802.11a		Multi band SAR
1.27	Ch 64: 5320MHz	0.565	1.46
	Ch 100: 5500MHz	0.481	1.50
	Ch 136: 5680MHz	0.352	1.30

Volume SAR of WCDMA 1900 Ch 9400: 1880.0MHz	Volume SAR of 802.11a		Multi band SAR
1.33	Ch 40: 5200MHz	0.270	1.38
	Ch 64: 5320MHz	0.565	1.50
	Ch 100: 5500MHz	0.481	1.49
	Ch 104: 5520MHz	0.367	1.36
	Ch 116: 5580MHz	0.329	1.34
	Ch 120: 5600MHz	0.366	1.35
	Ch 124: 5620MHz	0.380	1.36
	Ch 136: 5680MHz	0.352	1.35
	Ch 165: 5825MHz	0.358	1.40

Volume SAR of WCDMA 1900 Ch 9538: 1907.6MHz	Volume SAR of 802.11 a		Multi band SAR
1.24	Ch 64: 5320MHz	0.565	1.44
	Ch 100: 5500MHz	0.481	1.48
	Ch 104: 5520MHz	0.367	1.27
	Ch 116: 5580MHz	0.329	1.25
	Ch 120: 5600MHz	0.366	1.26
	Ch 124: 5620MHz	0.380	1.28
	Ch 136: 5680MHz	0.352	1.26
	Ch 165: 5825MHz	0.358	1.40

### 6.3 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 are some common ingredients :

- **WATER-** Deionized water (pure H<sub>2</sub>O), resistivity  $\approx 16$  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 RECIPES FOR 2450MHz SIMULATING LIQUID TABLE**

INGREDIENT	HEAD SIMULATING LIQUID 2450MHz (HSL-2450)	MUSCLE SIMULATING LIQUID 2450MHz (MSL-2450)
Water	45%	69.83%
DGMBE	55%	30.17%
Salt	NA	NA
Dielectric Parameters at 22°C	f= 2450MHz $\epsilon = 39.2 \pm 5\%$ $\sigma = 1.80 \pm 5\%$ S/m	f= 2450MHz $\epsilon = 52.7 \pm 5\%$ $\sigma = 1.95 \pm 5\%$ S/m

**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%

**THE RECIPES FOR 1900MHz SIMULATING LIQUID TABLE**

INGREDIENT	HEAD SIMULATING LIQUID 1900MHz (HSL-1900)	MUSCLE SIMULATING LIQUID 1900MHz (MSL-1900)
Water	55.24%	70.16%
DGMBE	44.45%	29.44%
Salt	0.306%	00.39%
Dielectric Parameters at 22°C	f= 1900MHz ε= 40.0 ± 5% σ= 1.40 ± 5% S/m	f= 1900MHz ε= 53.3 ± 5% σ= 1.52 ± 5% S/m

Testing the liquids using the Agilent Network Analyzer E8358A 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 ( $\pm 0.2$  for  $\epsilon'$ :  $\pm 0.1$  for  $\epsilon''$ ).
7. Conductivity can be calculated from  $\epsilon''$  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 DASY5 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).

### FOR 1900 BAND SIMULATING LIQUID

<b>LIQUID TYPE</b>		HSL-1900			
<b>SIMULATING LIQUID TEMP.</b>		22.8			
<b>TEST DATE</b>		Apr. 25, 2010			
<b>TESTED BY</b>		Dylan Chiou			
FREQ. (MHz)	LIQUID PARAMETER	STANDARD VALUE	MEASUREMENT VALUE	ERROR PERCENTAGE (%)	LIMIT( % )
1852.4	Permittivity ( $\epsilon$ )	40.00	40.8	2.00	±5
1880.00		40.00	40.9	2.25	
1900.00		40.00	40.9	2.25	
1907.6		40.00	40.9	2.25	
1852.4	Conductivity ( $\sigma$ ) S/m	1.40	1.39	-0.71	
1880.00		1.40	1.43	2.14	
1900.00		1.40	1.44	2.86	
1907.6		1.40	1.46	4.29	

### FOR 2.4GHz BAND SIMULATING LIQUID

<b>LIQUID TYPE</b>		HSL-2450			
<b>SIMULATING LIQUID TEMP.</b>		22.6			
<b>TEST DATE</b>		Apr. 25, 2010			
<b>TESTED BY</b>		Dylan Chiou			
FREQ. (MHz)	LIQUID PARAMETER	STANDARD VALUE	MEASUREMENT VALUE	ERROR PERCENTAGE (%)	LIMIT( % )
2437	Permittivity ( $\epsilon$ )	39.2	40.6	3.57	±5
2450		39.2	40.5	3.32	
2437	Conductivity ( $\sigma$ ) S/m	1.79	1.86	3.91	
2450		1.80	1.88	4.44	



**FOR 5GHz BAND SIMULATING LIQUID**

<b>LIQUID TYPE</b>		HSL-5800			
<b>SIMULATING LIQUID TEMP.</b>		22.7			
<b>TEST DATE</b>		Apr.26, 2010			
<b>TESTED BY</b>		Dylan Chiou			
<b>FREQ. (MHz)</b>	<b>LIQUID PARAMETER</b>	<b>STANDARD VALUE</b>	<b>MEASUREMENT VALUE</b>	<b>ERROR PERCENTAGE (%)</b>	<b>LIMIT( % )</b>
5200	Permittivity ( $\epsilon$ )	35.99	36.8	2.25	±5
5320		35.85	36.6	2.10	
5500		35.64	36.3	1.84	
5520		35.62	36.3	1.91	
5580		35.55	36.1	1.54	
5600		35.53	36.1	1.61	
5620		35.51	36.1	1.67	
5680		35.44	36.0	1.59	
5800		35.30	35.8	1.42	
5825		35.30	35.7	1.13	
5200		Conductivity ( $\sigma$ ) S/m	4.66	4.66	
5320	4.78		4.80	0.46	
5500	4.96		5.02	1.16	
5520	4.98		5.04	1.14	
5580	5.04		5.12	1.50	
5600	5.07		5.14	1.48	
5620	5.09		5.17	1.66	
5680	5.15		5.24	1.81	
5800	5.27		5.39	2.28	
5825	5.30		5.42	2.26	



A D T

**FOR 5GHz BAND SIMULATING LIQUID**

<b>LIQUID TYPE</b>		HSL-5800			
<b>SIMULATING LIQUID TEMP.</b>		22.8			
<b>TEST DATE</b>		Apr.27, 2010			
<b>TESTED BY</b>		Dylan Chiou			
<b>FREQ. (MHz)</b>	<b>LIQUID PARAMETER</b>	<b>STANDARD VALUE</b>	<b>MEASUREMENT VALUE</b>	<b>ERROR PERCENTAGE (%)</b>	<b>LIMIT( % )</b>
5200	Permittivity ( $\epsilon$ )	35.99	36.9	2.53	±5
5320		35.85	36.7	2.38	
5500		35.64	36.5	2.40	
5520		35.62	36.4	2.19	
5580		35.55	36.3	2.11	
5600		35.53	36.3	2.17	
5620		35.51	36.2	1.96	
5680		35.44	36.1	1.87	
5800		35.30	35.9	1.70	
5825		35.30	35.9	1.70	
5200		Conductivity ( $\sigma$ ) S/m	4.66	4.68	
5320	4.78		4.82	0.88	
5500	4.96		5.04	1.56	
5520	4.98		5.06	1.55	
5580	5.04		5.14	1.89	
5600	5.07		5.16	1.88	
5620	5.09		5.19	2.05	
5680	5.15		5.26	2.20	
5800	5.27		5.41	2.66	
5825	5.30		5.44	2.64	

## 6.4 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.

### 6.4.1 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  $\pm 0.1$  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  $\pm 0.02$ 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  $\pm 0.1$ 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 DASY5 system is less than  $\pm 0.1$ mm.

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

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

## 6.4.2 VALIDATION RESULTS

SYSTEM VALIDATION TEST OF SIMULATING LIQUID					
FREQUENCY (MHz)	REQUIRED SAR (mW/g)	MEASURED SAR (mW/g)	DEVIATION (%)	SEPARATION DISTANCE	TESTED DATE
HSL 1900	10.0	10.42	4.20	10	Apr. 25, 2010
HSL 2450	13.5	13.8	2.22	10	Apr. 25, 2010
HSL 5200	7.95	8.44	6.16	10	Apr. 26, 2010
HSL 5500	8.46	8.83	4.37	10	Apr. 26, 2010
HSL 5800	7.78	8.21	5.53	10	Apr. 26, 2010
HSL 5200	7.95	7.99	0.50	10	Apr. 27, 2010
HSL 5500	8.46	8.42	-0.47	10	Apr. 27, 2010
HSL 5800	7.78	8.25	6.04	10	Apr. 27, 2010
<b>TESTED BY</b>	Dylan Chiou				

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

## 6.5 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 <sub>i</sub> )		Standard Uncertainty (±%)		(v <sub>i</sub> )
				(1g)	(10g)	(1g)	(10g)	
<b>Measurement System</b>								
Probe Calibration	6.55	Normal	1	1	1	6.55	6.55	∞
Axial Isotropy	0.50	Rectangular	√3	0.7	0.7	0.20	0.20	∞
Hemispherical Isotropy	2.60	Rectangular	√3	0.7	0.7	1.05	1.05	∞
Boundary effects	2.00	Rectangular	√3	1	1	1.15	1.15	∞
Linearity	0.60	Rectangular	√3	1	1	0.35	0.35	∞
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	∞
<b>Dipole Related</b>								
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	∞
<b>Phantom and Tissue parameters</b>								
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)	4.44	Normal	1	0.64	0.43	2.84	1.91	∞
Liquid Permittivity (target)	5.00	Rectangular	√3	0.6	0.49	1.73	1.41	∞
Liquid Permittivity (measurement)	3.57	Normal	1	0.6	0.49	2.14	1.75	∞
<b>Combined Standard Uncertainty</b>						11.26	10.86	
<b>Coverage Factor for 95%</b>						Kp=2		
<b>Expanded Uncertainty (K=2)</b>						22.51	21.71	



## 7. 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 according to ISO/IEC 17025.

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](http://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:**

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Fax: 886-3-3185050

**Web Site:** [www.adt.com.tw](http://www.adt.com.tw)

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

---END---

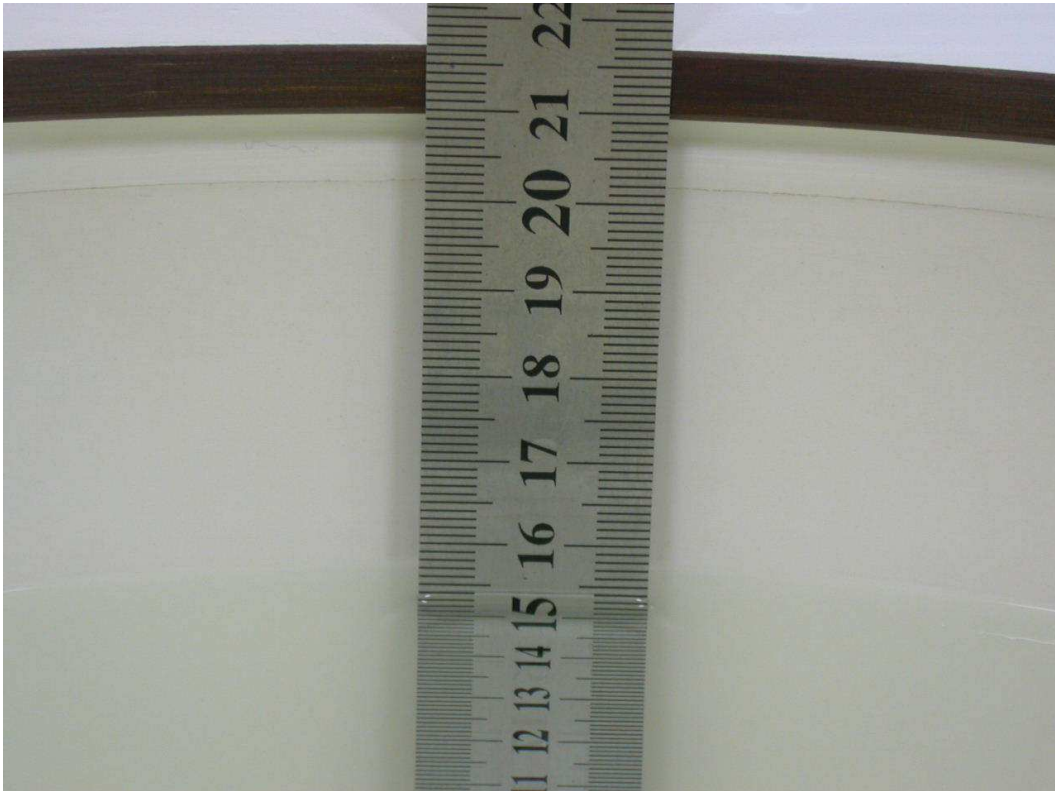
# APPENDIX A: TEST DATA FOR VOLUME SCAN

Liquid Level Photo

**Tissue HSL1900MHz D=151mm**

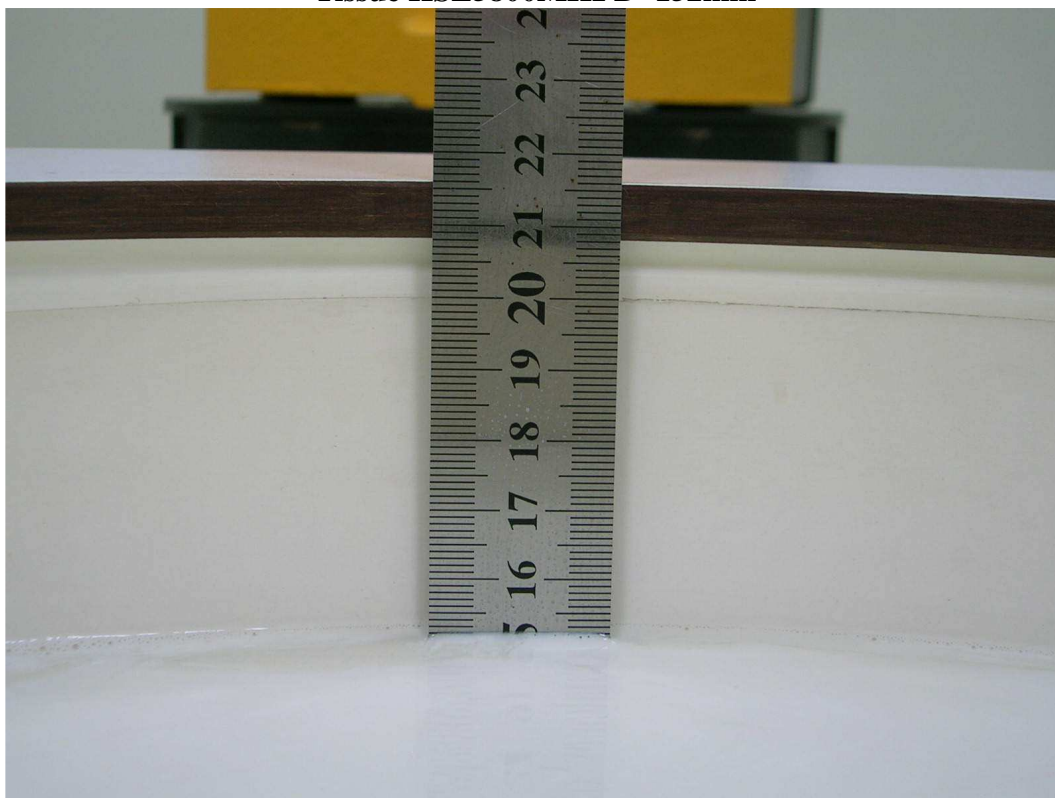


**Tissue HSL2450MHz D=154mm**





**Tissue HSL5800MHz D=152mm**



**Tissue HSL5800MHz D=151mm**



Test Laboratory: Bureau Veritas ADT

## M01-A6-2D-Left Head Cheek WCDMA1900 Ch9400 Volume

**DUT: EDA ; Type: MC75A6**

Communication System: UMTS\_3G ; Frequency: 1880 MHz ; Duty Cycle: 1:1

Medium: HSL1900 Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.43$  mho/m;  $\epsilon_r = 40.9$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Left Section ; DUT test position : Cheek ; Modulation type: BPSK

DASY5 Configuration:

- Probe: EX3DV3 - SN3504; ConvF(8.2, 8.2, 8.2); Calibrated: 2010/1/26
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: 2009/12/16
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1485
- Measurement SW: DASY5, V5.2 Build 157;

**Configuration/11a ch9400/Volume Scan (18x16x9):** Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

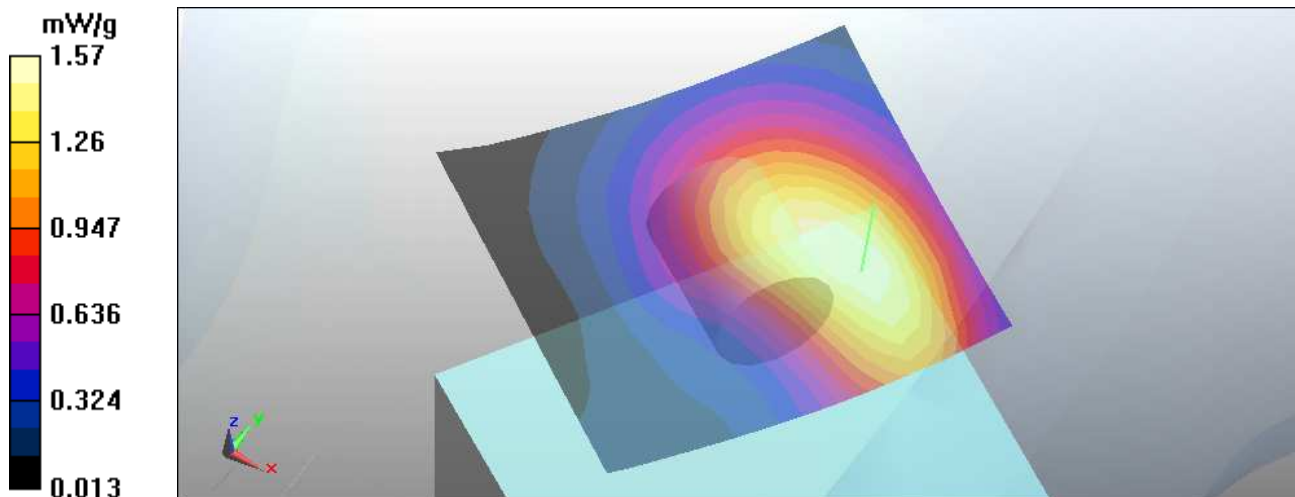
Reference Value = 18.6 V/m; Power Drift = 0.035 dB

Peak SAR (extrapolated) = 2.03 W/kg

**SAR(1 g) = 1.23 mW/g; SAR(10 g) = 0.709 mW/g**

Total Absorbed Power = 0.0290623 W

Maximum value of SAR (measured) = 1.57 mW/g



Test Laboratory: Bureau Veritas ADT

## M02-A6-2D-Left Head Cheek WCDMA1900 Ch9538 Volume

**DUT: EDA ; Type: MC75A6**

Communication System: UMTS\_3G ; Frequency: 1907.6 MHz ; Duty Cycle: 1:1

Medium: HSL1900 Medium parameters used:  $f = 1907.6$  MHz;  $\sigma = 1.46$  mho/m;  $\epsilon_r = 40.9$ ;  $\rho = 1000$  kg/m<sup>3</sup> Phantom section: Left Section ; DUT test position : Cheek ; Modulation type: BPSK

DASY5 Configuration:

- Probe: EX3DV3 - SN3504; ConvF(8.2, 8.2, 8.2); Calibrated: 2010/1/26
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: 2009/12/16
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1485
- Measurement SW: DASY5, V5.2 Build 157;

**Configuration/11a ch9538/Volume Scan (18x16x9):** Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

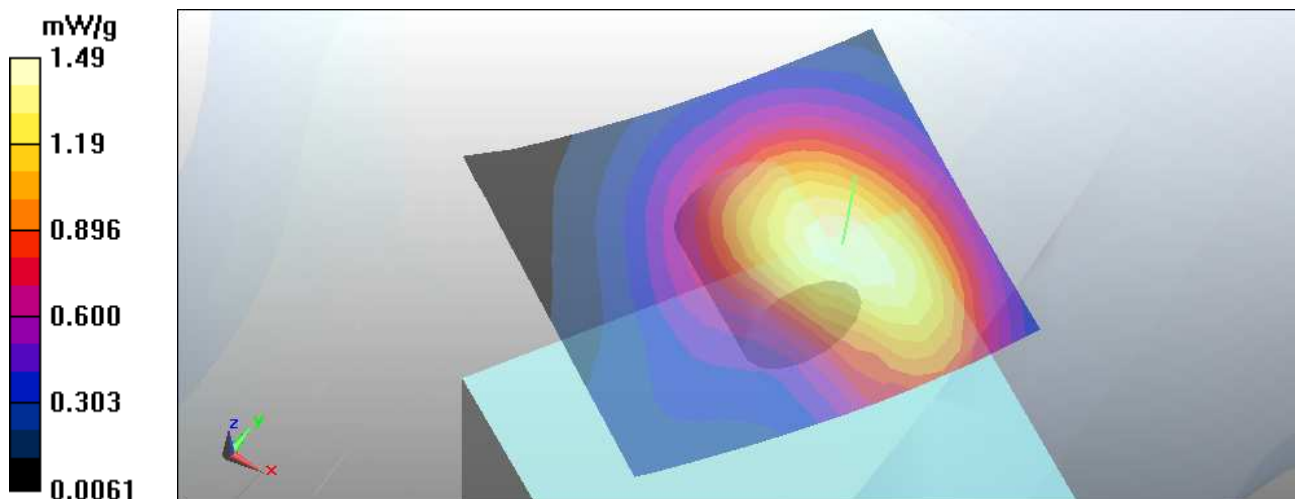
Reference Value = 20.1 V/m; Power Drift = -0.063 dB

Peak SAR (extrapolated) = 1.93 W/kg

**SAR(1 g) = 1.16 mW/g; SAR(10 g) = 0.667 mW/g**

Total Absorbed Power = 0.0290863 W

Maximum value of SAR (measured) = 1.49 mW/g



Test Laboratory: Bureau Veritas ADT

## M03-A6-2D-Left Head Tilt WCDMA1900 Ch9262 Volume

**DUT: EDA ; Type: MC75A6**

Communication System: UMTS\_3G ; Frequency: 1852.4 MHz ; Duty Cycle: 1:1

Medium: HSL1900 Medium parameters used:  $f = 1852.4$  MHz;  $\sigma = 1.39$  mho/m;  $\epsilon_r = 40.8$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Left Section ; DUT test position : Cheek ; Modulation type: BPSK

DASY5 Configuration:

- Probe: EX3DV3 - SN3504; ConvF(8.2, 8.2, 8.2); Calibrated: 2010/1/26
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: 2009/12/16
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1485
- Measurement SW: DASY5, V5.2 Build 157;

**Configuration/11a ch9262 Volume/Volume Scan (18x16x9):** Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

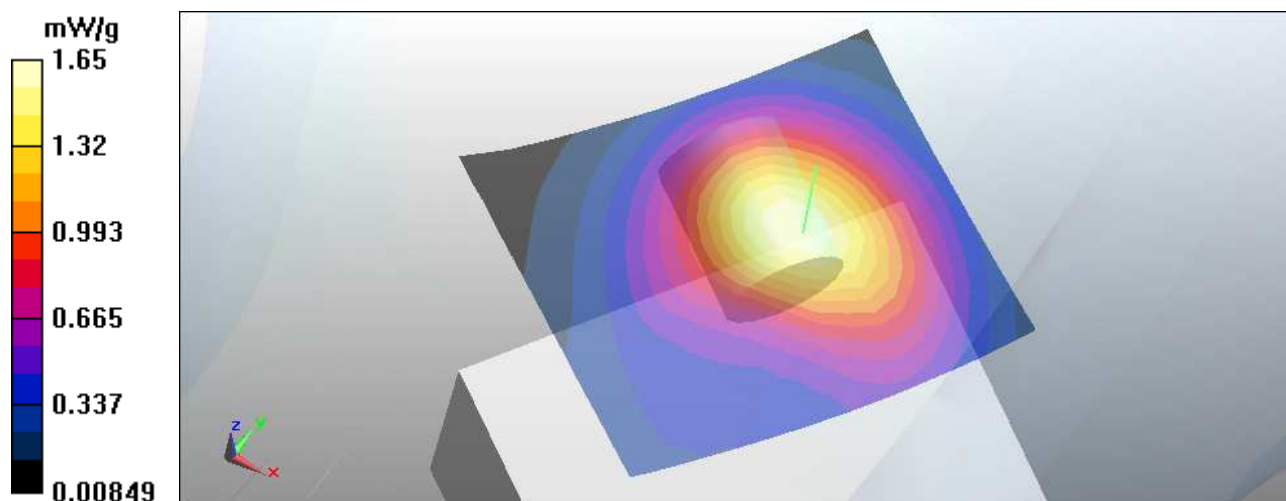
Reference Value = 21.7 V/m; Power Drift = 0.302 dB

Peak SAR (extrapolated) = 2.17 W/kg

**SAR(1 g) = 1.27 mW/g; SAR(10 g) = 0.716 mW/g**

Total Absorbed Power = 0.0297412 W

Maximum value of SAR (measured) = 1.65 mW/g



Test Laboratory: Bureau Veritas ADT

## M04-A6-2D-Left Head Tilt WCDMA1900 Ch9400 Volume

**DUT: EDA ; Type: MC75A6**

Communication System: UMTS\_3G ; Frequency: 1880 MHz ; Duty Cycle: 1:1

Medium: HSL1900 Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.43$  mho/m;  $\epsilon_r = 40.9$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Left Section ; DUT test position : Cheek ; Modulation type: BPSK

DASY5 Configuration:

- Probe: EX3DV3 - SN3504; ConvF(8.2, 8.2, 8.2); Calibrated: 2010/1/26
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: 2009/12/16
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1485
- Measurement SW: DASY5, V5.2 Build 157;

**Configuration/11a ch9400 Volume/Volume Scan (18x16x9):** Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

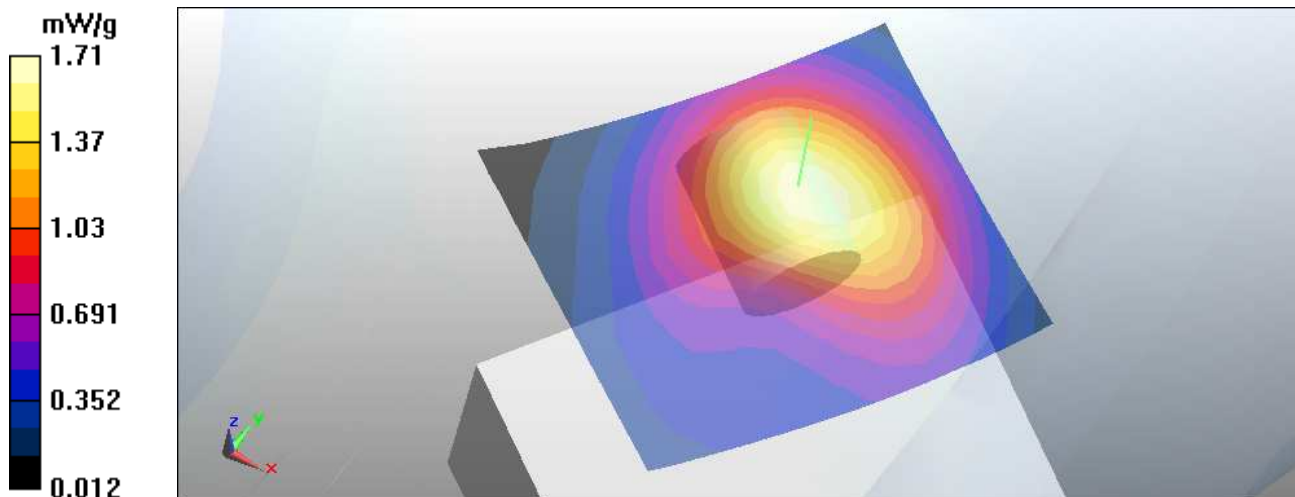
Reference Value = 22.5 V/m; Power Drift = -0.674 dB

Peak SAR (extrapolated) = 2.24 W/kg

**SAR(1 g) = 1.33 mW/g; SAR(10 g) = 0.757 mW/g**

Total Absorbed Power = 0.0334996 W

Maximum value of SAR (measured) = 1.71 mW/g



Test Laboratory: Bureau Veritas ADT

## M05-A6-2D-Left Head Tilt WCDMA1900 Ch9538 Volume

**DUT: EDA ; Type: MC75A6**

Communication System: UMTS\_3G ; Frequency: 1907.6 MHz ; Duty Cycle: 1:1

Medium: HSL1900 Medium parameters used:  $f = 1907.6$  MHz;  $\sigma = 1.46$  mho/m;  $\epsilon_r = 40.9$ ;  $\rho = 1000$  kg/m<sup>3</sup> Phantom section: Left Section ; DUT test position : Cheek ; Modulation type: BPSK

DASY5 Configuration:

- Probe: EX3DV3 - SN3504; ConvF(8.2, 8.2, 8.2); Calibrated: 2010/1/26
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: 2009/12/16
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1485
- Measurement SW: DASY5, V5.2 Build 157;

**Configuration/11a ch9538 Volume/Volume Scan (18x16x9):** Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

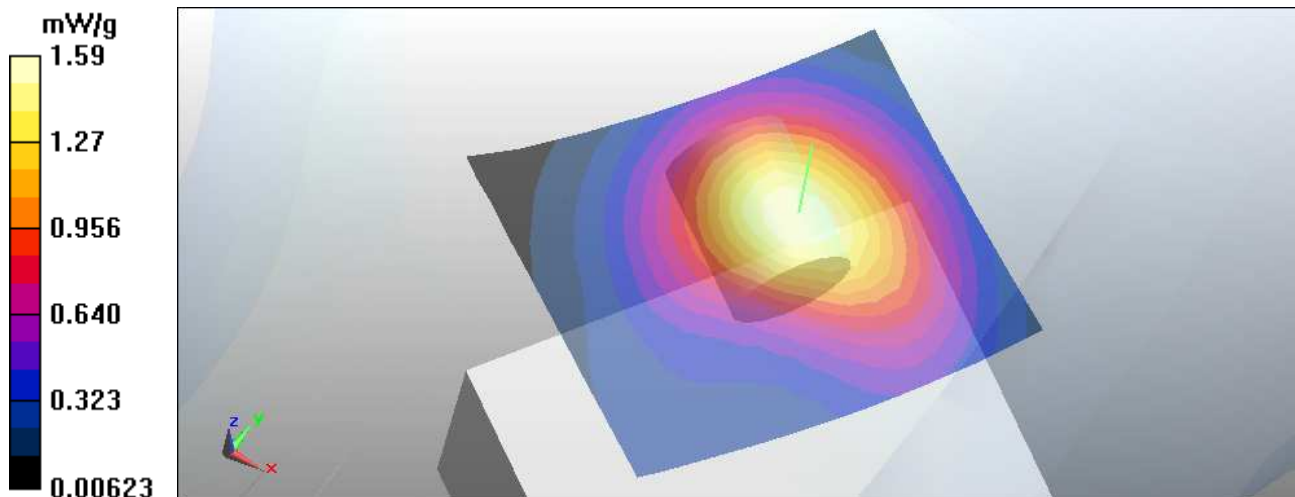
Reference Value = 20.7 V/m; Power Drift = -0.062 dB

Peak SAR (extrapolated) = 2.09 W/kg

**SAR(1 g) = 1.24 mW/g; SAR(10 g) = 0.697 mW/g**

Total Absorbed Power = 0.028818 W

Maximum value of SAR (measured) = 1.59 mW/g



Test Laboratory: Bureau Veritas ADT

## M06-A6-2D-Left Head Tilt 11B Ch6 Volume

**DUT: EDA ; Type: MC75A6**

Communication System: WiFi ; Frequency: 2437 MHz ; Duty Cycle: 1:1

Medium: HSL2450 Medium parameters used:  $f = 2437$  MHz;  $\sigma = 1.86$  mho/m;  $\epsilon_r = 40.6$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Left Section ; DUT test position : Cheek ; Modulation type: BPSK

DASY5 Configuration:

- Probe: EX3DV3 - SN3504; ConvF(7.77, 7.77, 7.77); Calibrated: 2010/1/26
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: 2009/12/16
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1485
- Measurement SW: DASY5, V5.2 Build 157;

**Configuration/11b ch6/Volume Scan (18x16x9):** Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

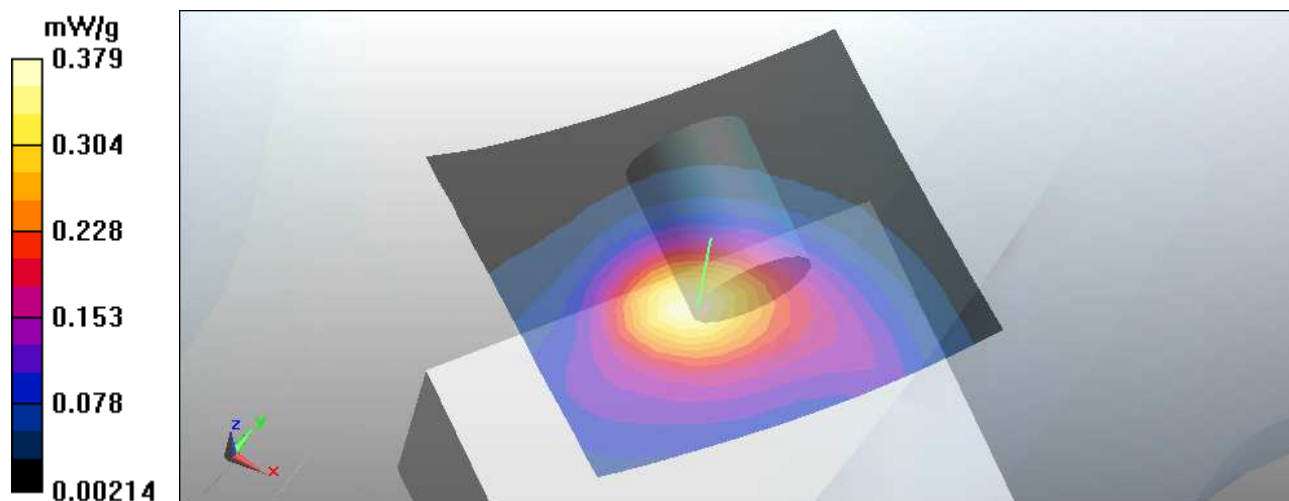
Reference Value = 15.5 V/m; Power Drift = -0.099 dB

Peak SAR (extrapolated) = 0.576 W/kg

**SAR(1 g) = 0.260 mW/g; SAR(10 g) = 0.118 mW/g**

Total Absorbed Power = 0.00382857 W

Maximum value of SAR (measured) = 0.379 mW/g



Test Laboratory: Bureau Veritas ADT

## M07-A6-2D-Left Head Tilt 11G Ch6 Volume

**DUT: EDA ; Type: MC75A6**

Communication System: WiFi ; Frequency: 2437 MHz ; Duty Cycle: 1:1

Medium: HSL2450 Medium parameters used:  $f = 2437$  MHz;  $\sigma = 1.86$  mho/m;  $\epsilon_r = 40.6$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Left Section ; DUT test position : Cheek ; Modulation type: BPSK

DASY5 Configuration:

- Probe: EX3DV3 - SN3504; ConvF(7.77, 7.77, 7.77); Calibrated: 2010/1/26
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: 2009/12/16
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1485
- Measurement SW: DASY5, V5.2 Build 157;

**Configuration/ch6 Volume/Volume Scan (18x16x9):** Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

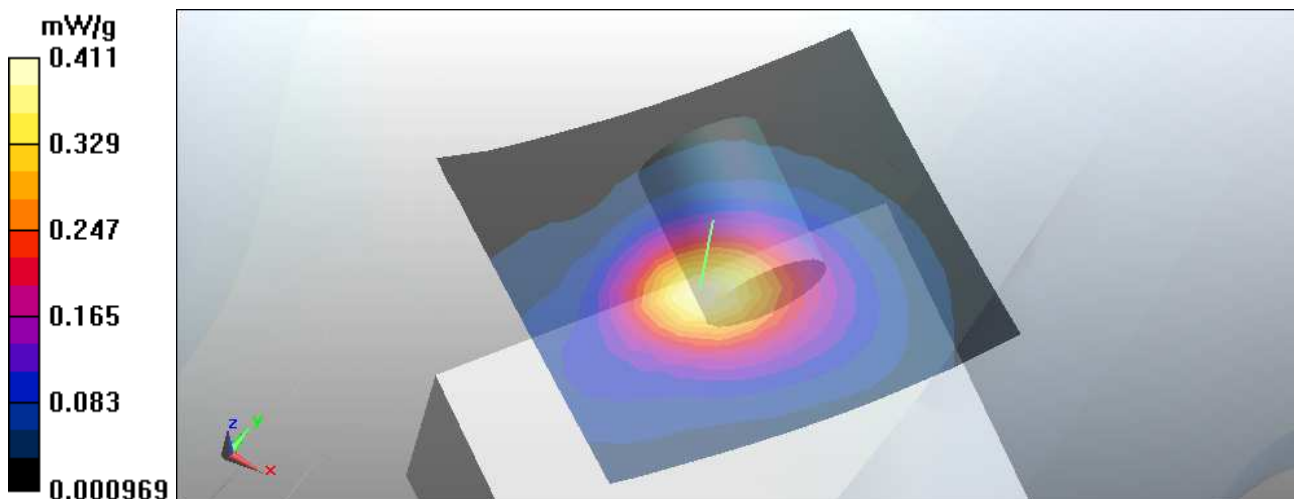
Reference Value = 14.5 V/m; Power Drift = 0.048 dB

Peak SAR (extrapolated) = 0.616 W/kg

**SAR(1 g) = 0.279 mW/g; SAR(10 g) = 0.122 mW/g**

Total Absorbed Power = 0.00352693 W

Maximum value of SAR (measured) = 0.411 mW/g





Test Laboratory: Bureau Veritas ADT

## M08-A6-2D-Left Head Cheek 11A Ch64 Volume

**DUT: EDA ; Type: MC75A6**

Communication System: WiFi ; Frequency: 5320 MHz ; Duty Cycle: 1:1

Medium: HSL5800 Medium parameters used:  $f = 5320$  MHz;  $\sigma = 4.8$  mho/m;  $\epsilon_r = 36.6$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Left Section ; DUT test position : Cheek ; Modulation type: BPSK

DASY5 Configuration:

- Probe: EX3DV3 - SN3504; ConvF(4.62, 4.62, 4.62); Calibrated: 2010/1/26
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: 2009/12/16
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1485
- Measurement SW: DASY5, V5.2 Build 157;

**Configuration/11a ch64 Volume/Volume Scan (18x16x9):** Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

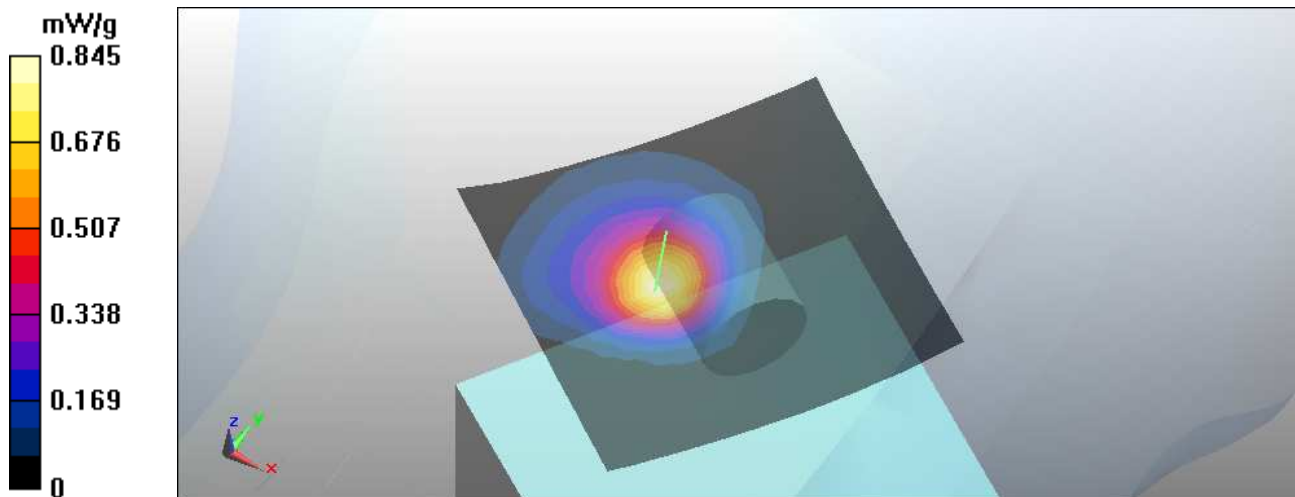
Reference Value = 9.81 V/m; Power Drift = 0.282 dB

Peak SAR (extrapolated) = 1.8 W/kg

**SAR(1 g) = 0.501 mW/g; SAR(10 g) = 0.169 mW/g**

Total Absorbed Power = 0.00350357 W

Maximum value of SAR (measured) = 0.845 mW/g



Test Laboratory: Bureau Veritas ADT

## M09-A6-2D-Left Head Cheek 11A-Ch100 Volume

**DUT: EDA ; Type: MC75A6**

Communication System: WiFi ; Frequency: 5500 MHz ; Duty Cycle: 1:1

Medium: HSL5800 Medium parameters used:  $f = 5500$  MHz;  $\sigma = 5.02$  mho/m;  $\epsilon_r = 36.3$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Left Section ; DUT test position : Cheek ; Modulation type: BPSK

DASY5 Configuration:

- Probe: EX3DV3 - SN3504; ConvF(4.51, 4.51, 4.51); Calibrated: 2010/1/26
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: 2009/12/16
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1485
- Measurement SW: DASY5, V5.2 Build 157;

**Configuration/11a ch100 Volume/Volume Scan (18x16x9):** Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

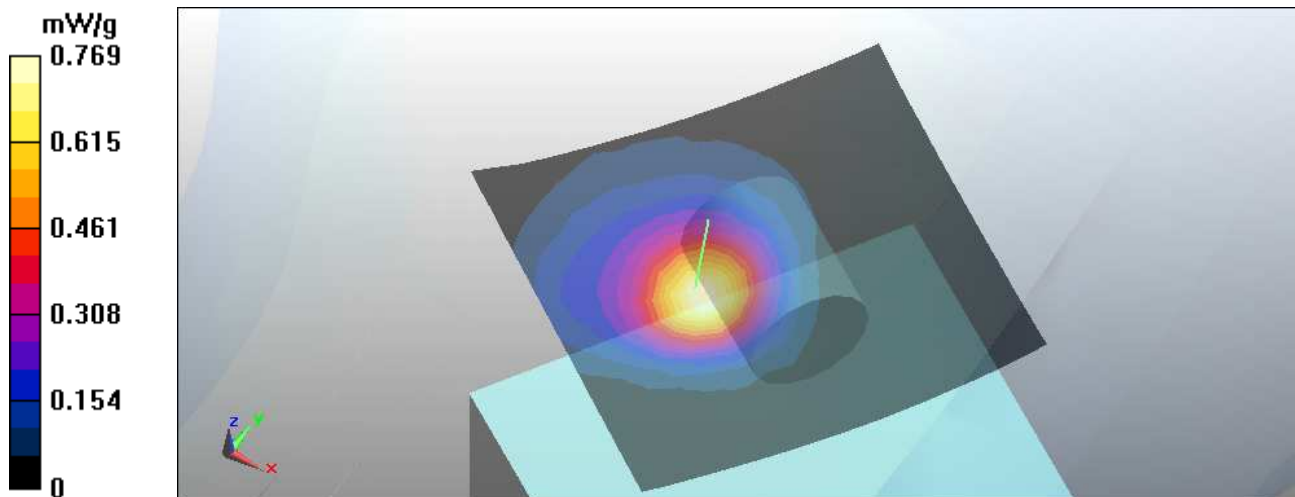
Reference Value = 11.8 V/m; Power Drift = 0.213 dB

Peak SAR (extrapolated) = 1.63 W/kg

**SAR(1 g) = 0.459 mW/g; SAR(10 g) = 0.150 mW/g**

Total Absorbed Power = 0.00303877 W

Maximum value of SAR (measured) = 0.769 mW/g



Test Laboratory: Bureau Veritas ADT

## M10-A6-2D-Left Head Cheek 11A-Ch136 Volume

**DUT: EDA ; Type: MC75A6**

Communication System: WiFi ; Frequency: 5680 MHz ; Duty Cycle: 1:1

Medium: HSL5800 Medium parameters used:  $f = 5680$  MHz;  $\sigma = 5.24$  mho/m;  $\epsilon_r = 36$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Left Section ; DUT test position : Cheek ; Modulation type: BPSK

DASY5 Configuration:

- Probe: EX3DV3 - SN3504; ConvF(4.25, 4.25, 4.25); Calibrated: 2010/1/26
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: 2009/12/16
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1485
- Measurement SW: DASY5, V5.2 Build 157;

**Configuration/11a Ch136 Volume/Volume Scan (18x16x9):** Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

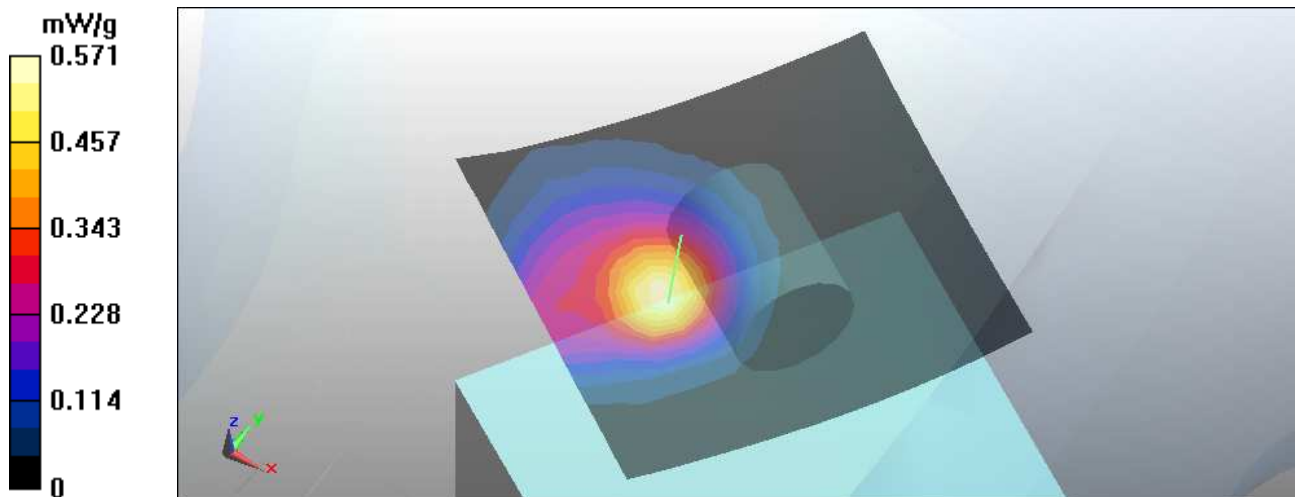
Reference Value = 8.08 V/m; Power Drift = 0.600 dB

Peak SAR (extrapolated) = 1.11 W/kg

**SAR(1 g) = 0.328 mW/g; SAR(10 g) = 0.116 mW/g**

Total Absorbed Power = 0.00258261 W

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



Test Laboratory: Bureau Veritas ADT

## M11-A6-2D-Left Head Tilt 11A Ch40 Volume

**DUT: EDA ; Type: MC75A6**

Communication System: WiFi ; Frequency: 5200 MHz ; Duty Cycle: 1:1

Medium: HSL5800 Medium parameters used:  $f = 5200$  MHz;  $\sigma = 4.66$  mho/m;  $\epsilon_r = 36.8$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Left Section ; DUT test position : Cheek ; Modulation type: BPSK

DASY5 Configuration:

- Probe: EX3DV3 - SN3504; ConvF(4.87, 4.87, 4.87); Calibrated: 2010/1/26
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: 2009/12/16
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1485
- Measurement SW: DASY5, V5.2 Build 157;

**Configuration/11a ch40 Volume/Volume Scan (18x16x9):** Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

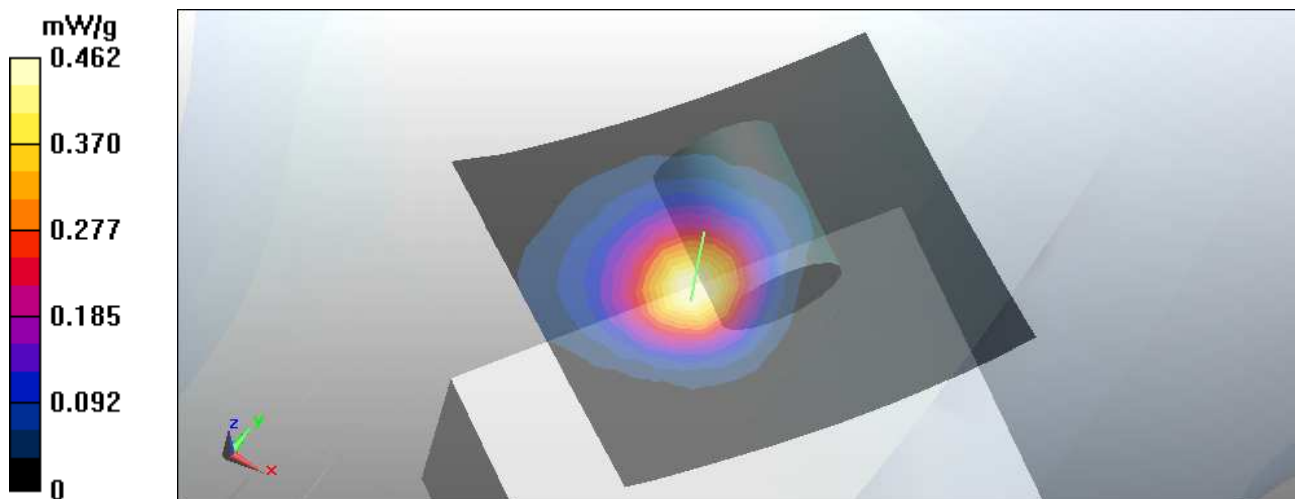
Reference Value = 9.66 V/m; Power Drift = -0.083 dB

Peak SAR (extrapolated) = 0.865 W/kg

**SAR(1 g) = 0.270 mW/g; SAR(10 g) = 0.086 mW/g**

Total Absorbed Power = 0.00140964 W

Maximum value of SAR (measured) = 0.462 mW/g



Test Laboratory: Bureau Veritas ADT

## M12-A6-2D-Left Head Tilt 11A Ch64 Volume

**DUT: EDA ; Type: MC75A6**

Communication System: WiFi ; Frequency: 5320 MHz ; Duty Cycle: 1:1

Medium: HSL5800 Medium parameters used:  $f = 5320$  MHz;  $\sigma = 4.8$  mho/m;  $\epsilon_r = 36.6$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Left Section ; DUT test position : Cheek ; Modulation type: BPSK

DASY5 Configuration:

- Probe: EX3DV3 - SN3504; ConvF(4.62, 4.62, 4.62); Calibrated: 2010/1/26
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: 2009/12/16
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1485
- Measurement SW: DASY5, V5.2 Build 157;

**Configuration/11a ch64 Volume/Volume Scan (18x16x9):** Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

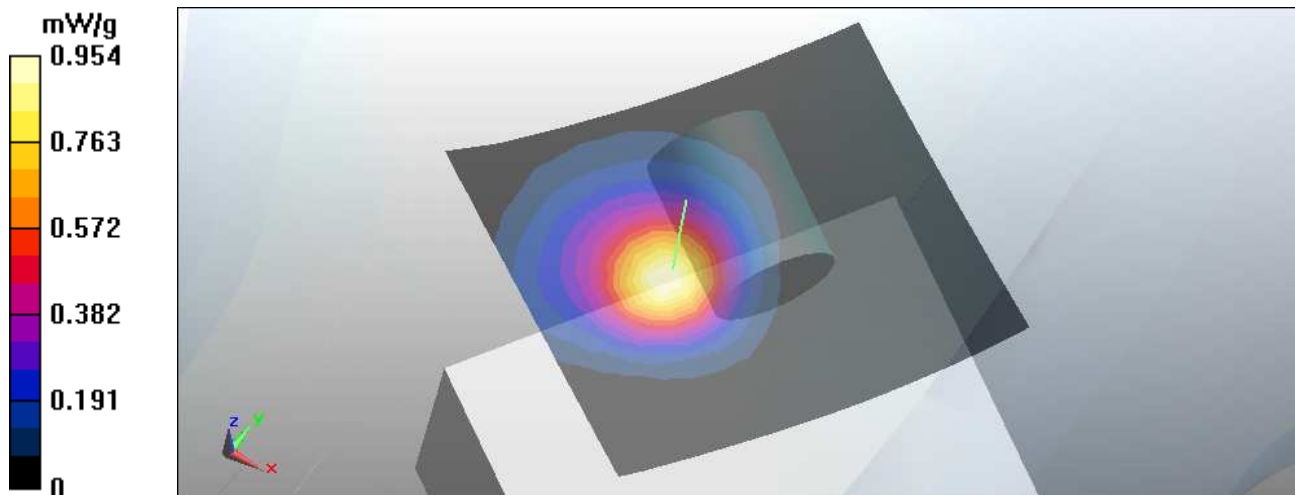
Reference Value = 12.5 V/m; Power Drift = -0.270 dB

Peak SAR (extrapolated) = 1.96 W/kg

**SAR(1 g) = 0.565 mW/g; SAR(10 g) = 0.184 mW/g**

Total Absorbed Power = 0.00333433 W

Maximum value of SAR (measured) = 0.954 mW/g



Test Laboratory: Bureau Veritas ADT

## M13-A6-2D-Left Head Tilt 11A-Ch100 Volume

**DUT: EDA ; Type: MC75A6**

Communication System: WiFi ; Frequency: 5500 MHz ; Duty Cycle: 1:1

Medium: HSL5800 Medium parameters used:  $f = 5500$  MHz;  $\sigma = 5.02$  mho/m;  $\epsilon_r = 36.3$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Left Section ; DUT test position : Cheek ; Modulation type: BPSK

DASY5 Configuration:

- Probe: EX3DV3 - SN3504; ConvF(4.51, 4.51, 4.51); Calibrated: 2010/1/26
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: 2009/12/16
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1485
- Measurement SW: DASY5, V5.2 Build 157;

**Configuration/11a ch100 Volume/Volume Scan (18x16x9):** Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

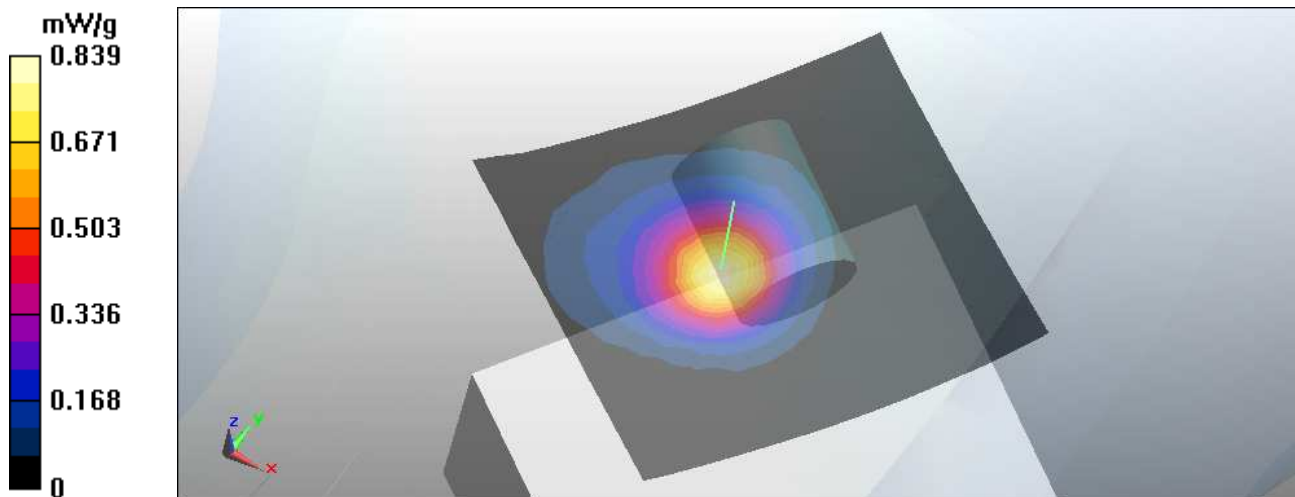
Reference Value = 11.7 V/m; Power Drift = -0.378 dB

Peak SAR (extrapolated) = 1.72 W/kg

**SAR(1 g) = 0.481 mW/g; SAR(10 g) = 0.147 mW/g**

Total Absorbed Power = 0.00250387 W

Maximum value of SAR (measured) = 0.839 mW/g



Test Laboratory: Bureau Veritas ADT

## M14-A6-2d-Left Head Tilt 11A-Ch104 Volume

**DUT: EDA ; Type: MC75A6**

Communication System: WiFi ; Frequency: 5520 MHz ; Duty Cycle: 1:1

Medium: HSL5800 Medium parameters used:  $f = 5520$  MHz;  $\sigma = 5.04$  mho/m;  $\epsilon_r = 36.3$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Left Section ; DUT test position : Cheek ; Modulation type: BPSK

DASY5 Configuration:

- Probe: EX3DV3 - SN3504; ConvF(4.51, 4.51, 4.51); Calibrated: 2010/1/26
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: 2009/12/16
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1485
- Measurement SW: DASY5, V5.2 Build 157;

**Configuration/11a Ch104 Volume/Volume Scan (18x16x9):** Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

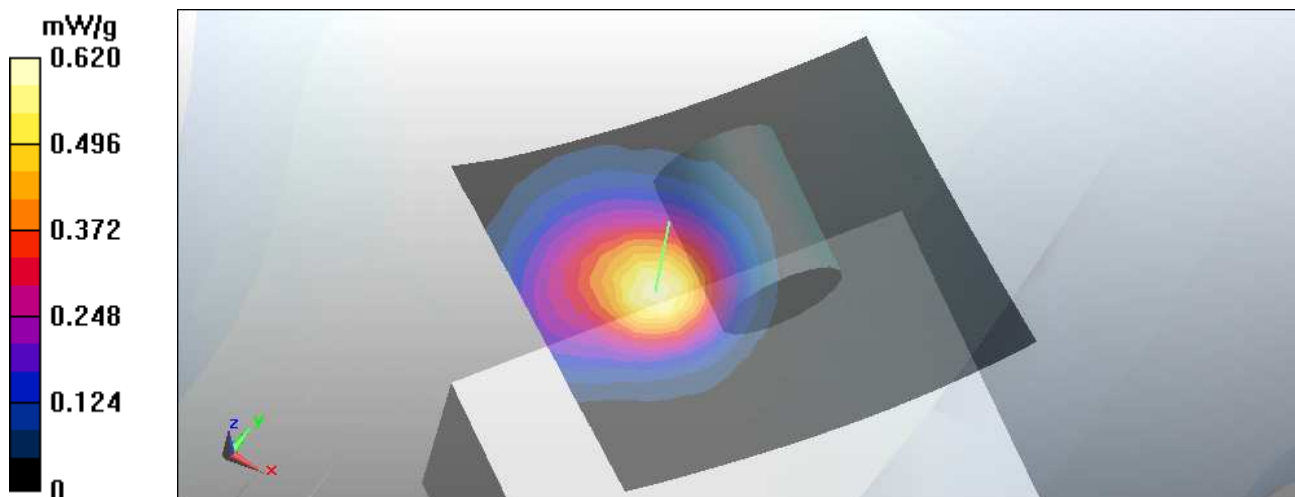
Reference Value = 8.59 V/m; Power Drift = 0.00423 dB

Peak SAR (extrapolated) = 1.26 W/kg

**SAR(1 g) = 0.367 mW/g; SAR(10 g) = 0.128 mW/g**

Total Absorbed Power = 0.00244766 W

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



Test Laboratory: Bureau Veritas ADT

## M15-A6-2D-Left Head Tilt 11A-Ch116 Volume

**DUT: EDA ; Type: MC75A6**

Communication System: WiFi ; Frequency: 5580 MHz ; Duty Cycle: 1:1

Medium: HSL5800 Medium parameters used:  $f = 5580$  MHz;  $\sigma = 5.14$  mho/m;  $\epsilon_r = 36.3$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Left Section ; DUT test position : Cheek ; Modulation type: BPSK

DASY5 Configuration:

- Probe: EX3DV3 - SN3504; ConvF(4.25, 4.25, 4.25); Calibrated: 2010/1/26
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: 2009/12/16
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1485
- Measurement SW: DASY5, V5.2 Build 157;

**Configuration/11a Ch116 Volume/Volume Scan (18x16x9):** Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

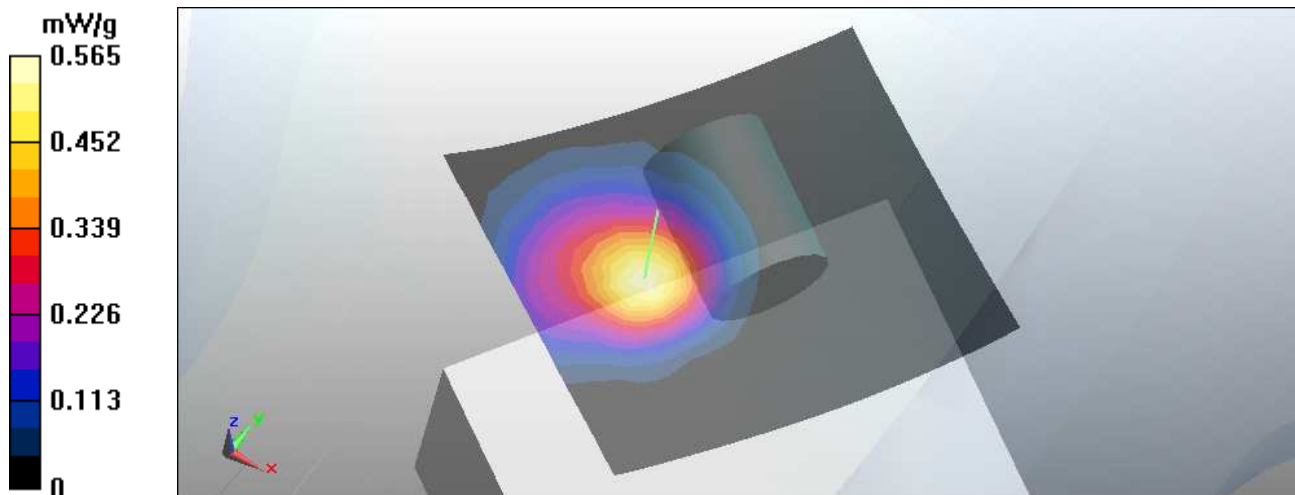
Reference Value = 7.91 V/m; Power Drift = -0.078 dB

Peak SAR (extrapolated) = 1.56 W/kg

**SAR(1 g) = 0.329 mW/g; SAR(10 g) = 0.111 mW/g**

Total Absorbed Power = 0.00200976 W

Maximum value of SAR (measured) = 0.565 mW/g





Test Laboratory: Bureau Veritas ADT

## M16-A6-2D-Left Head Tilt 11A-Ch120 Volume

**DUT: EDA ; Type: MC75A6**

Communication System: WiFi ; Frequency: 5600 MHz ; Duty Cycle: 1:1

Medium: HSL5800 Medium parameters used:  $f = 5600$  MHz;  $\sigma = 5.16$  mho/m;  $\epsilon_r = 36.3$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Left Section ; DUT test position : Cheek ; Modulation type: BPSK

DASY5 Configuration:

- Probe: EX3DV3 - SN3504; ConvF(4.25, 4.25, 4.25); Calibrated: 2010/1/26
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: 2009/12/16
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1485
- Measurement SW: DASY5, V5.2 Build 157;

**Configuration/11a Ch120 Volume/Volume Scan (18x16x9):** Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

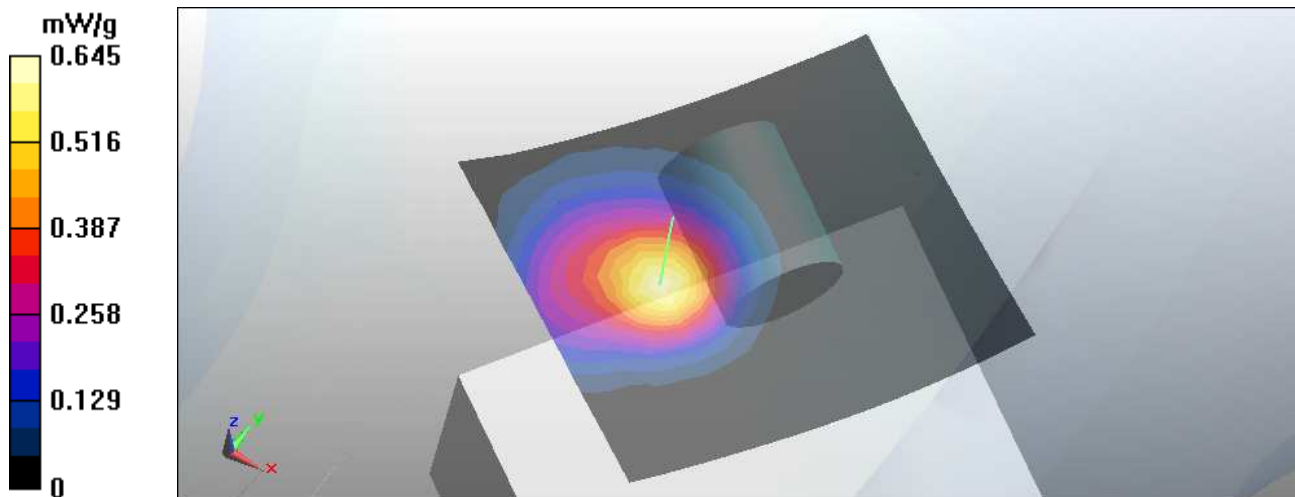
Reference Value = 8.44 V/m; Power Drift = 0.043 dB

Peak SAR (extrapolated) = 1.2 W/kg

**SAR(1 g) = 0.366 mW/g; SAR(10 g) = 0.127 mW/g**

Total Absorbed Power = 0.00232275 W

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



Test Laboratory: Bureau Veritas ADT

## M17-A6-2D-Left Head Tilt 11A-Ch124 Volume

**DUT: EDA ; Type: MC75A6**

Communication System: WiFi ; Frequency: 5620 MHz ; Duty Cycle: 1:1

Medium: HSL5800 Medium parameters used:  $f = 5620$  MHz;  $\sigma = 5.19$  mho/m;  $\epsilon_r = 36.2$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Left Section ; DUT test position : Cheek ; Modulation type: BPSK

DASY5 Configuration:

- Probe: EX3DV3 - SN3504; ConvF(4.25, 4.25, 4.25); Calibrated: 2010/1/26
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: 2009/12/16
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1485
- Measurement SW: DASY5, V5.2 Build 157;

**Configuration/11a Ch124 Volume/Volume Scan (18x16x9):** Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

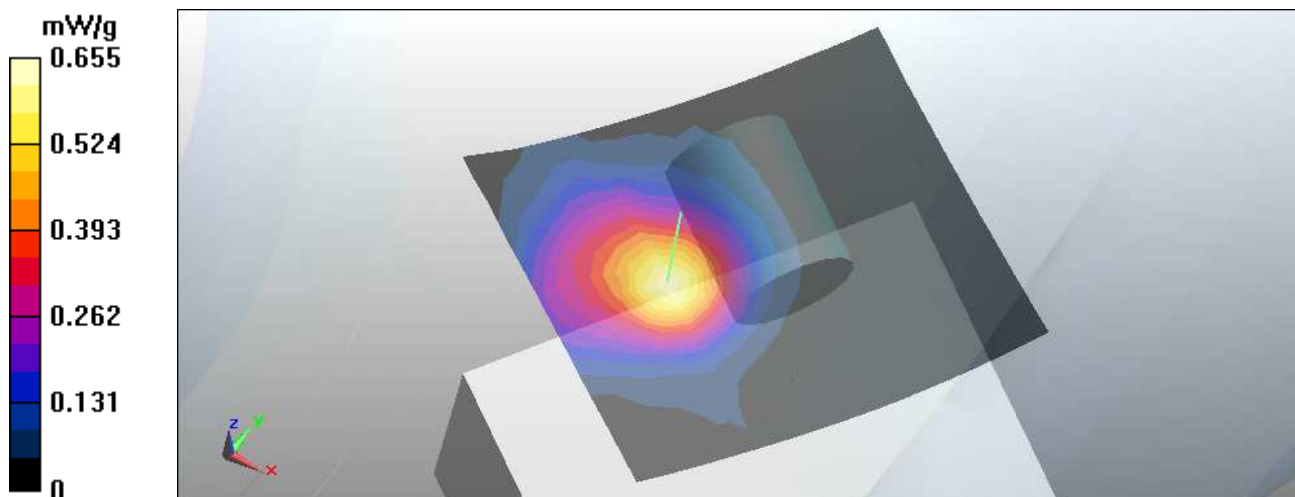
Reference Value = 8.44 V/m; Power Drift = 0.052 dB

Peak SAR (extrapolated) = 1.57 W/kg

**SAR(1 g) = 0.380 mW/g; SAR(10 g) = 0.134 mW/g**

Total Absorbed Power = 0.00254415 W

Maximum value of SAR (measured) = 0.655 mW/g



Test Laboratory: Bureau Veritas ADT

## M18-A6-2D-Left Head Tilt 11A-Ch136 Volume

**DUT: EDA ; Type: MC75A6**

Communication System: WiFi ; Frequency: 5680 MHz ; Duty Cycle: 1:1

Medium: HSL5800 Medium parameters used:  $f = 5680$  MHz;  $\sigma = 5.26$  mho/m;  $\epsilon_r = 36.1$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Left Section ; DUT test position : Cheek ; Modulation type: BPSK

DASY5 Configuration:

- Probe: EX3DV3 - SN3504; ConvF(4.25, 4.25, 4.25); Calibrated: 2010/1/26
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: 2009/12/16
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1485
- Measurement SW: DASY5, V5.2 Build 157;

**Configuration/11a Ch136 Volume/Volume Scan (18x16x9):** Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

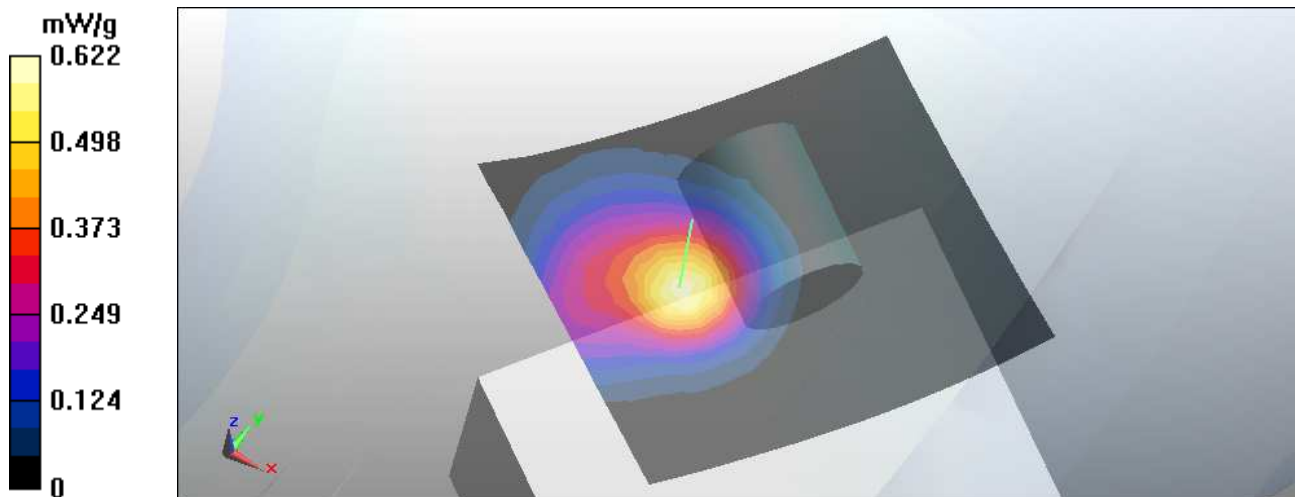
Reference Value = 8.52 V/m; Power Drift = 0.154 dB

Peak SAR (extrapolated) = 1.19 W/kg

**SAR(1 g) = 0.352 mW/g; SAR(10 g) = 0.119 mW/g**

Total Absorbed Power = 0.00246817 W

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



Test Laboratory: Bureau Veritas ADT

## M19-A6-2D-Left Head Tilt 11A-Ch165 Volume

**DUT: EDA ; Type: MC75A6**

Communication System: WiFi ; Frequency: 5825 MHz ; Duty Cycle: 1:1

Medium: HSL5800 Medium parameters used:  $f = 5825$  MHz;  $\sigma = 5.44$  mho/m;  $\epsilon_r = 35.9$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Left Section ; DUT test position : Cheek ; Modulation type: BPSK

DASY5 Configuration:

- Probe: EX3DV3 - SN3504; ConvF(4.53, 4.53, 4.53); Calibrated: 2010/1/26
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: 2009/12/16
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1485
- Measurement SW: DASY5, V5.2 Build 157;

**Configuration/11a ch165 Volume/Volume Scan (18x16x9):** Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

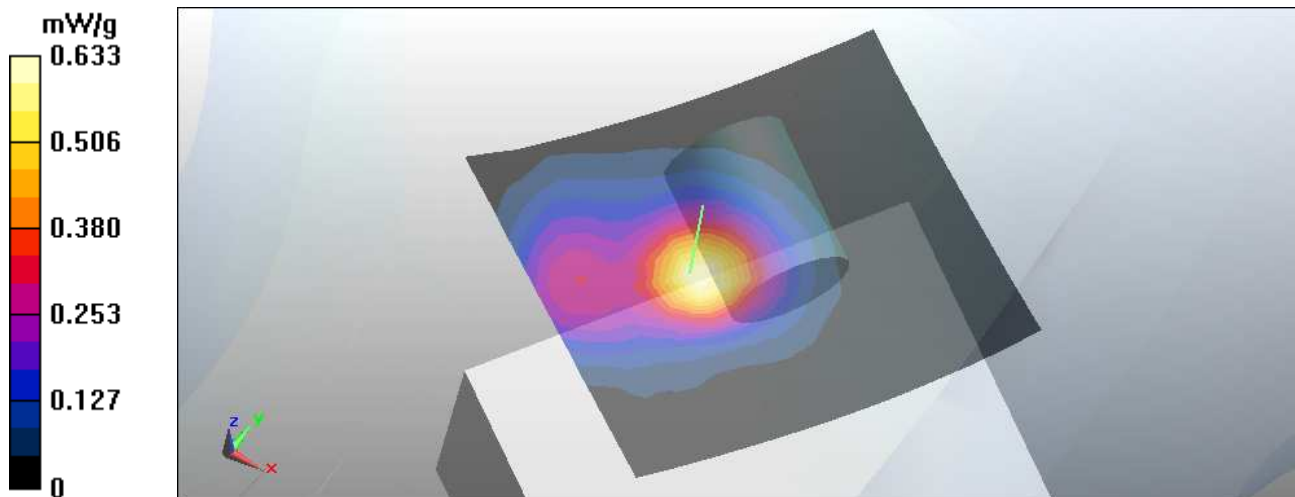
Reference Value = 9.73 V/m; Power Drift = -0.059 dB

Peak SAR (extrapolated) = 1.26 W/kg

**SAR(1 g) = 0.358 mW/g; SAR(10 g) = 0.112 mW/g**

Total Absorbed Power = 0.00257345 W

Maximum value of SAR (measured) = 0.633 mW/g



Test Laboratory: Bureau Veritas ADT

## System Performance Check-HSL1900

**DUT: Dipole 1900 MHz ; Type: D1900V2 ; Serial: 5d036 ; Test Frequency: 1900 MHz**

Communication System: CW ; Frequency: 1900 MHz; Duty Cycle: 1:1; Modulation type: CW

Medium: HSL1900; Medium parameters used:  $f = 1900$  MHz;  $\sigma = 1.44$  mho/m;  $\epsilon_r = 40.9$ ;  $\rho = 1000$  kg/m<sup>3</sup> ;

Liquid level : 151 mm

Phantom section: Flat Section ; Separation distance : 10 mm (The feetpoint of the dipole to the Phantom)

Air temp. : 23.1 degrees ; Liquid temp. : 22.8 degrees

DASY5 Configuration:

- Probe: EX3DV3 - SN3504; ConvF(8.2, 8.2, 8.2); Calibrated: 2010/1/26
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: 2009/12/16
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1485
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

**d=10mm, Pin=250 mW, dist=3.0mm/Area Scan (7x7x1):** Measurement grid: dx=15mm, dy=15mm

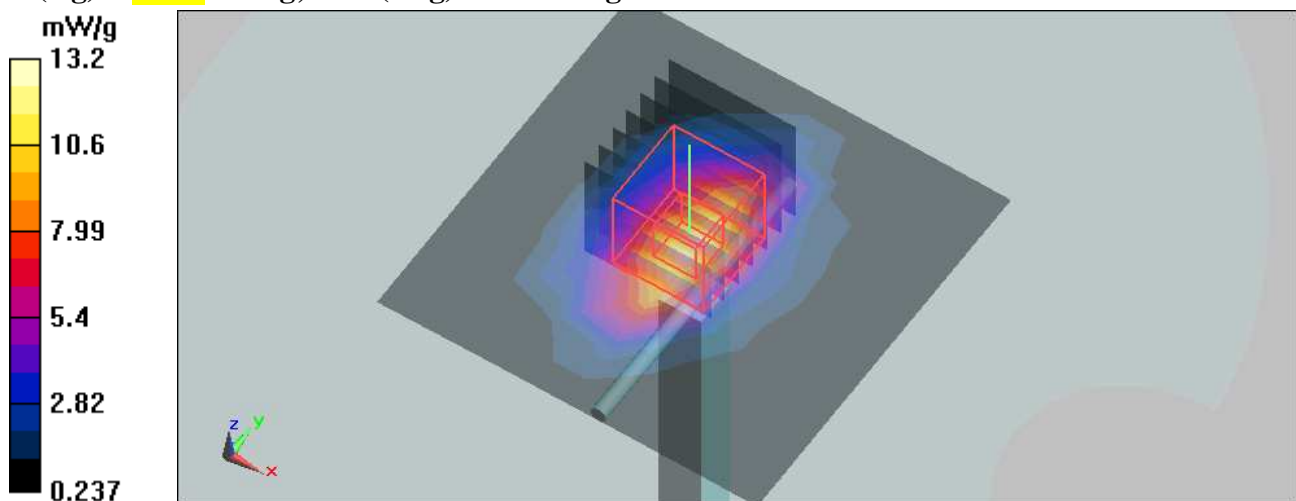
Maximum value of SAR (measured) = 13.2 mW/g

**d=10mm, Pin=250 mW, dist=3.0mm/Zoom Scan (7x7x7) (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 96.8 V/m; Power Drift = -0.0051 dB

Peak SAR (extrapolated) = 19.4 W/kg

SAR(1 g) = **10.42 mW/g**; SAR(10 g) = 5.4 mW/g



Test Laboratory: Bureau Veritas ADT

## System Performance Check-HSL2450 MHz

**DUT: Dipole 2450 MHz ; Type: D2450V2 ; Serial: 737 ; Test Frequency: 2450 MHz**

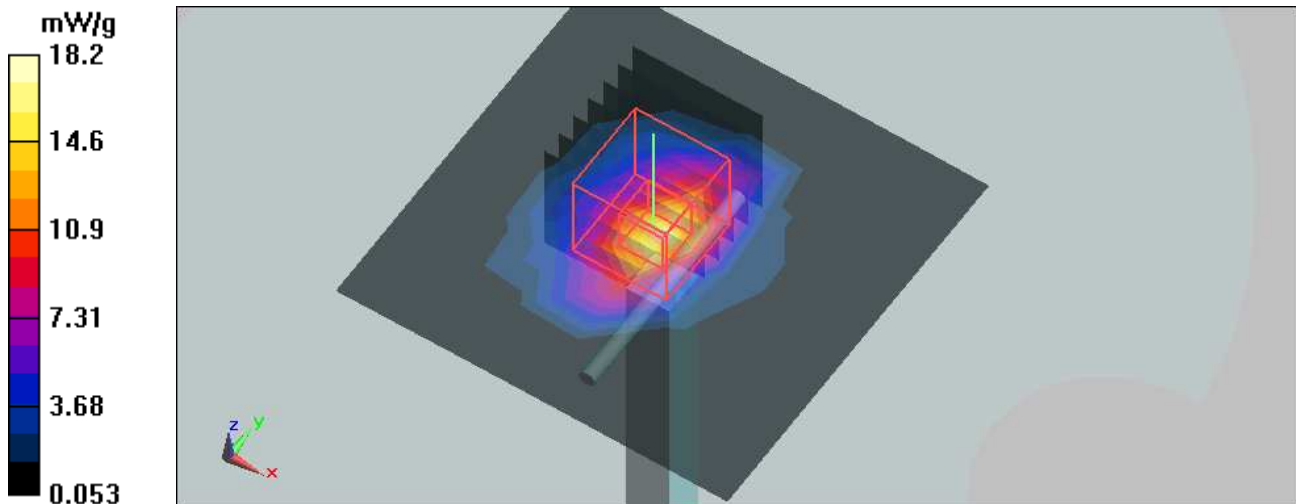
Communication System: CW ; Frequency: 2450 MHz; Duty Cycle: 1:1; Modulation type: CW  
 Medium: HSL2450; Medium parameters used:  $f = 2450$  MHz;  $\sigma = 1.88$  mho/m;  $\epsilon_r = 40.5$ ;  $\rho = 1000$  kg/m<sup>3</sup> ;  
 Liquid level : 154 mm  
 Phantom section: Flat Section ; Separation distance : 10 mm (The feetpoint of the dipole to the Phantom)  
 Air temp. : 23 degrees ; Liquid temp. : 22.6 degrees

DASY5 Configuration:

- Probe: EX3DV3 - SN3504; ConvF(7.77, 7.77, 7.77); Calibrated: 2010/1/26
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: 2009/12/16
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1485
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

**d=10mm, Pin=250 mW, dist=3.0mm/Area Scan (7x7x1):** Measurement grid: dx=15mm, dy=15mm  
 Maximum value of SAR (measured) = 17.6 mW/g

**d=10mm, Pin=250 mW, dist=3.0mm/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm  
 Reference Value = 98.2 V/m; Power Drift = 0.012 dB  
 Peak SAR (extrapolated) = 30.3 W/kg  
**SAR(1 g) = 13.8 mW/g; SAR(10 g) = 6.21 mW/g**  
 Maximum value of SAR (measured) = 18.3 mW/g



Test Laboratory: Bureau Veritas ADT

## System Performance Check-HSL 5200MHz-0426

**DUT: Dipole D5GHzV2 ; Type: D5GHzV2 ; Serial: 1018 ; Test Frequency: 5200 MHz**

Communication System: CW-5GHz ; Frequency: 5200 MHz; Duty Cycle: 1:1; Modulation type: CW  
 Medium: HSL5800; Medium parameters used:  $f = 5200$  MHz;  $\sigma = 4.66$  mho/m;  $\epsilon_r = 36.8$ ;  $\rho = 1000$  kg/m<sup>3</sup> ;  
 Liquid level : 152 mm

Phantom section: Flat Section ; Separation distance : 10 mm (The feetpoint of the dipole to the Phantom)  
 Air temp. : 23.2 degrees ; Liquid temp. : 22.7 degrees

DASY5 Configuration:

- Probe: EX3DV3 - SN3504; ConvF(4.87, 4.87, 4.87); Calibrated: 2010/1/26
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: 2009/12/16
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1485
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

**d=10mm, Pin=100mW, f=5200 MHz/Area Scan (10x10x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 13.5 mW/g

**d=10mm, Pin=100mW, f=5200 MHz/Zoom Scan (4x4x2.5mm), dist=2mm (8x8x10)/Cube**

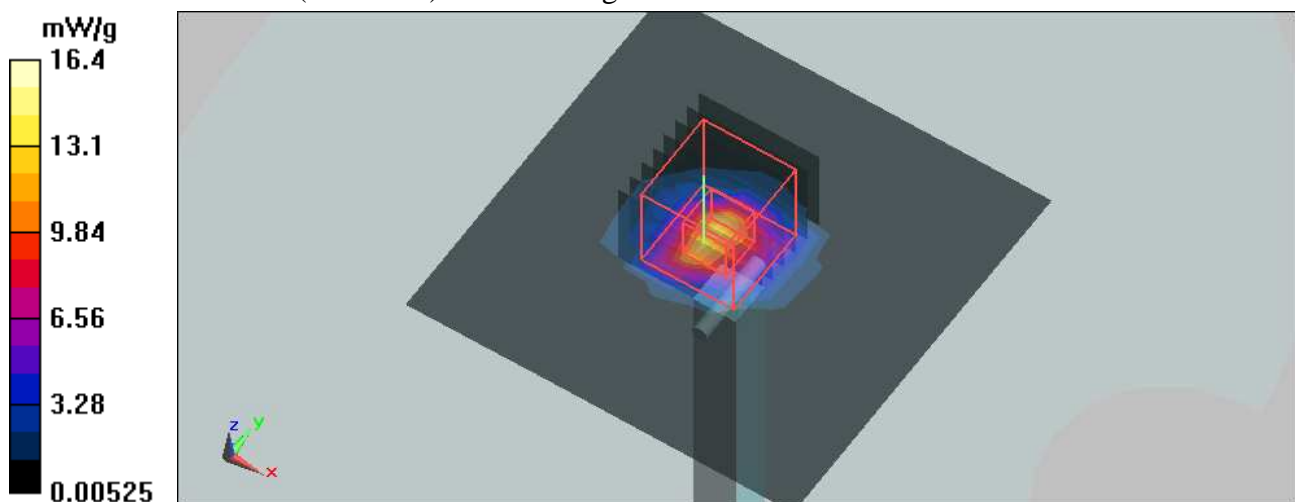
**0:** Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

Reference Value = 64.8 V/m; Power Drift = 0.035 dB

Peak SAR (extrapolated) = 31.2 W/kg

**SAR(1 g) = 8.44 mW/g; SAR(10 g) = 2.43 mW/g**

Maximum value of SAR (measured) = 16.4 mW/g



Test Laboratory: Bureau Veritas ADT

### System Performance Check-HSL 5500MHz-0426

**DUT: Dipole D5GHzV2 ; Type: D5GHzV2 ; Serial: 1018 ; Test Frequency: 5500 MHz**

Communication System: CW-5GHz ; Frequency: 5500 MHz; Duty Cycle: 1:1; Modulation type: CW  
 Medium: HSL5800; Medium parameters used:  $f = 5500$  MHz;  $\sigma = 5.02$  mho/m;  $\epsilon_r = 36.3$ ;  $\rho = 1000$  kg/m<sup>3</sup> ;  
 Liquid level : 152 mm  
 Phantom section: Flat Section ; Separation distance : 10 mm (The feetpoint of the dipole to the Phantom) Air temp. : 23.2 degrees ; Liquid temp. : 22.7 degrees

DASY5 Configuration:

- Probe: EX3DV3 - SN3504; ConvF(4.51, 4.51, 4.51); Calibrated: 2010/1/26
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: 2009/12/16
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1485
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

**d=10mm, Pin=100mW, f=5500 MHz/Area Scan (10x10x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 13.9 mW/g

**d=10mm, Pin=100mW, f=5500 MHz/Zoom Scan (4x4x2.5mm), dist=2mm (8x8x10)/Cube**

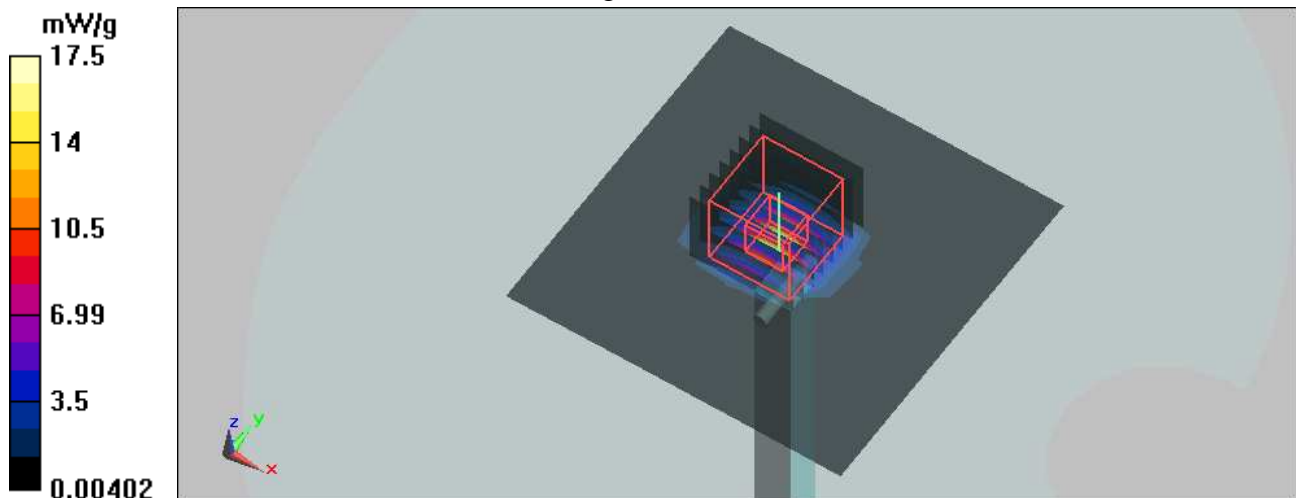
**0:** Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

Reference Value = 64 V/m; Power Drift = 0.110 dB

Peak SAR (extrapolated) = 33.5 W/kg

**SAR(1 g) = 8.83 mW/g; SAR(10 g) = 2.52 mW/g**

Maximum value of SAR (measured) = 17.5 mW/g





Test Laboratory: Bureau Veritas ADT

### System Performance Check-HSL 5800MHz-0426

**DUT: Dipole D5GHzV2 ; Type: D5GHzV2 ; Serial: 1018 ; Test Frequency: 5800 MHz**

Communication System: CW-5GHz ; Frequency: 5800 MHz; Duty Cycle: 1:1; Modulation type: CW  
 Medium: HSL5800; Medium parameters used:  $f = 5800$  MHz;  $\sigma = 5.39$  mho/m;  $\epsilon_r = 35.8$ ;  $\rho = 1000$  kg/m<sup>3</sup> ;  
 Liquid level : 152 mm  
 Phantom section: Flat Section ; Separation distance : 10 mm (The feetpoint of the dipole to the Phantom)  
 Air temp. : 23.2 degrees ; Liquid temp. : 22.7 degrees

DASY5 Configuration:

- Probe: EX3DV3 - SN3504; ConvF(4.53, 4.53, 4.53); Calibrated: 2010/1/26
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: 2009/12/16
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1485
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

**d=10mm, Pin=100mW, f=5800 MHz/Area Scan (10x10x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 13.5 mW/g

**d=10mm, Pin=100mW, f=5800 MHz/Zoom Scan (4x4x2.5mm), dist=2mm (8x8x10)/Cube**

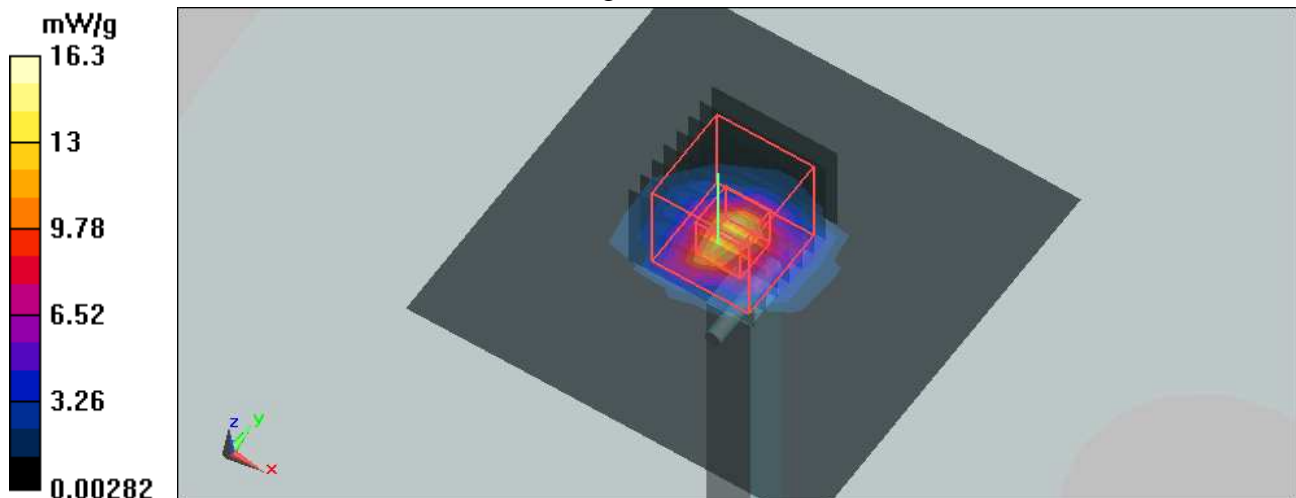
**0:** Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

Reference Value = 60.2 V/m; Power Drift = 0.025 dB

Peak SAR (extrapolated) = 33.7 W/kg

**SAR(1 g) = 8.21 mW/g; SAR(10 g) = 2.34 mW/g**

Maximum value of SAR (measured) = 16.3 mW/g



Test Laboratory: Bureau Veritas ADT

### System Performance Check-HSL 5200MHz-0427

**DUT: Dipole D5GHzV2 ; Type: D5GHzV2 ; Serial: 1018 ; Test Frequency: 5200 MHz**

Communication System: CW-5GHz ; Frequency: 5200 MHz; Duty Cycle: 1:1; Modulation type: CW  
 Medium: HSL5800; Medium parameters used:  $f = 5200$  MHz;  $\sigma = 4.68$  mho/m;  $\epsilon_r = 36.9$ ;  $\rho = 1000$  kg/m<sup>3</sup> ;  
 Liquid level : 151 mm  
 Phantom section: Flat Section ; Separation distance : 10 mm (The feetpoint of the dipole to the Phantom)  
 Air temp. : 23.2 degrees ; Liquid temp. : 22.8 degrees

DASY5 Configuration:

- Probe: EX3DV3 - SN3504; ConvF(4.87, 4.87, 4.87); Calibrated: 2010/1/26
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: 2009/12/16
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1485
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

**d=10mm, Pin=100mW, f=5200 MHz/Area Scan (10x10x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 12.5 mW/g

**d=10mm, Pin=100mW, f=5200 MHz/Zoom Scan (4x4x2.5mm), dist=2mm (8x8x10)/Cube**

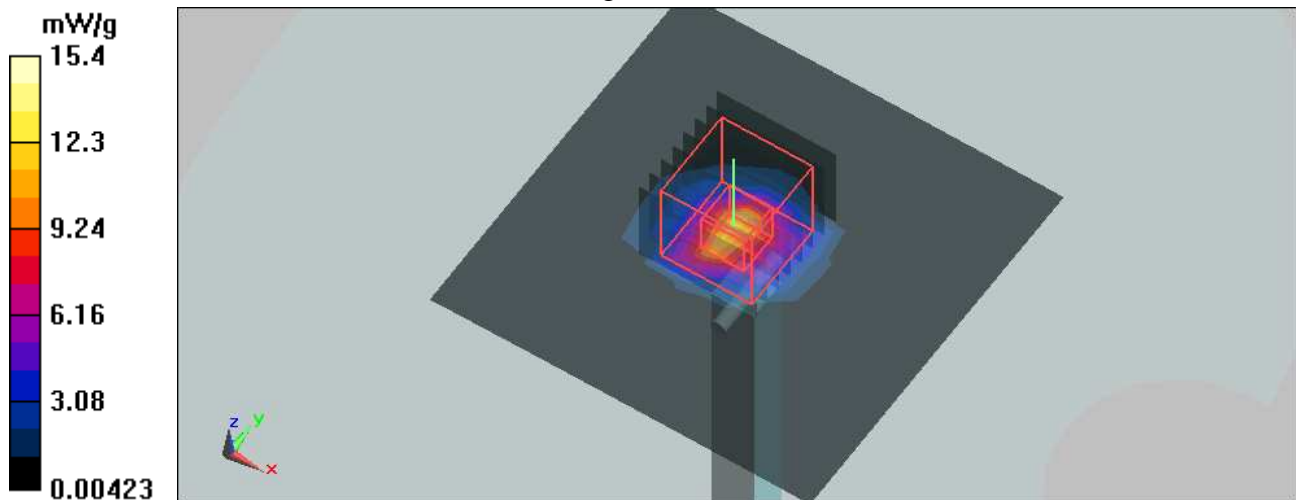
**0:** Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

Reference Value = 61.5 V/m; Power Drift = 0.152 dB

Peak SAR (extrapolated) = 29.1 W/kg

**SAR(1 g) = 7.99 mW/g; SAR(10 g) = 2.3 mW/g**

Maximum value of SAR (measured) = 15.4 mW/g



Test Laboratory: Bureau Veritas ADT

### System Performance Check-HSL 5500MHz-0427

**DUT: Dipole D5GHzV2 ; Type: D5GHzV2 ; Serial: 1018 ; Test Frequency: 5500 MHz**

Communication System: CW-5GHz ; Frequency: 5500 MHz; Duty Cycle: 1:1; Modulation type: CW  
 Medium: HSL5800; Medium parameters used:  $f = 5500$  MHz;  $\sigma = 5.04$  mho/m;  $\epsilon_r = 36.5$ ;  $\rho = 1000$  kg/m<sup>3</sup> ;  
 Liquid level : 151 mm  
 Phantom section: Flat Section ; Separation distance : 10 mm (The feetpoint of the dipole to the Phantom)  
 Air temp. : 23.2 degrees ; Liquid temp. : 22.8 degrees

DASY5 Configuration:

- Probe: EX3DV3 - SN3504; ConvF(4.51, 4.51, 4.51); Calibrated: 2010/1/26
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: 2009/12/16
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1485
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

**d=10mm, Pin=100mW, f=5500 MHz/Area Scan (10x10x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 13.3 mW/g

**d=10mm, Pin=100mW, f=5500 MHz/Zoom Scan (4x4x2.5mm), dist=2mm (8x8x10)/Cube**

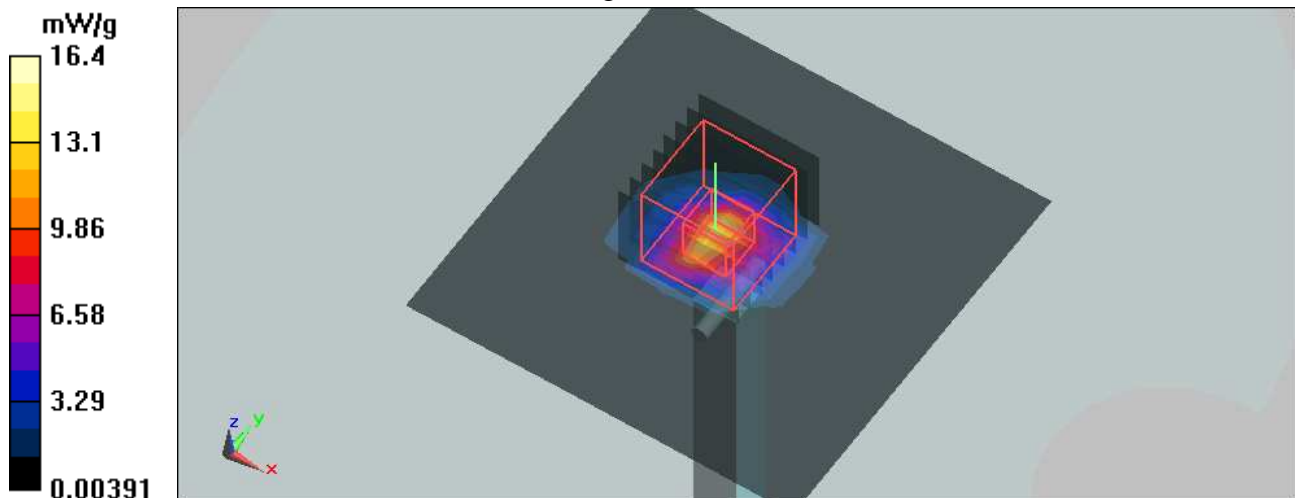
**0:** Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

Reference Value = 62 V/m; Power Drift = 0.160 dB

Peak SAR (extrapolated) = 31.6 W/kg

**SAR(1 g) = 8.42 mW/g; SAR(10 g) = 2.39 mW/g**

Maximum value of SAR (measured) = 16.4 mW/g



Test Laboratory: Bureau Veritas ADT

### System Performance Check-HSL 5800MHz-2

**DUT: Dipole D5GHzV2 ; Type: D5GHzV2 ; Serial: 1018 ; Test Frequency: 5800 MHz**

Communication System: CW-5GHz ; Frequency: 5800 MHz; Duty Cycle: 1:1; Modulation type: CW  
 Medium: HSL5800; Medium parameters used:  $f = 5800$  MHz;  $\sigma = 5.41$  mho/m;  $\epsilon_r = 35.9$ ;  $\rho = 1000$  kg/m<sup>3</sup> ;  
 Liquid level : 151 mm  
 Phantom section: Flat Section ; Separation distance : 10 mm (The feetpoint of the dipole to the Phantom)  
 Air temp. : 23.2 degrees ; Liquid temp. : 22.8 degrees

DASY5 Configuration:

- Probe: EX3DV3 - SN3504; ConvF(4.53, 4.53, 4.53); Calibrated: 2010/1/26
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: 2009/12/16
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1485
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

**d=10mm, Pin=100mW, f=5800 MHz/Area Scan (10x10x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 13.4 mW/g

**d=10mm, Pin=100mW, f=5800 MHz/Zoom Scan (4x4x2.5mm), dist=2mm (8x8x10)/Cube**

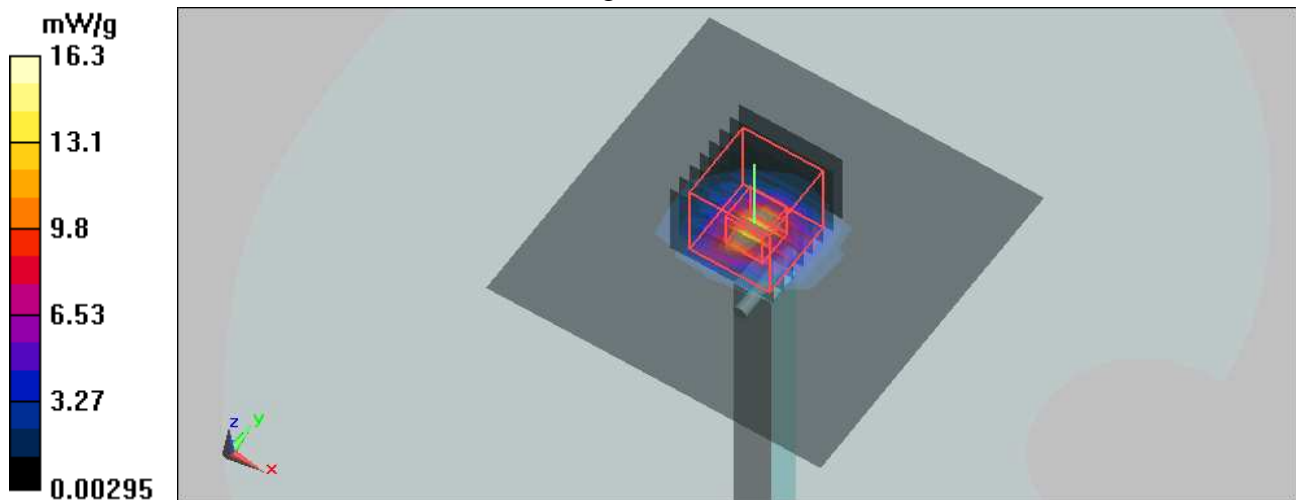
**0:** Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

Reference Value = 60.7 V/m; Power Drift = -0.00542 dB

Peak SAR (extrapolated) = 33.8 W/kg

**SAR(1 g) = 8.25 mW/g; SAR(10 g) = 2.34 mW/g**

Maximum value of SAR (measured) = 16.3 mW/g





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## APPENDIX A: TEST DATA FOR MULTIBAND

## M01-A6-2D-Left Head Tilt WCDMA1900 Ch9400 + 11B Ch6

### DASY Configuration for Program/WCDMA 1900 Ch9400:

Date/Time: 2010/4/25

Test Laboratory: Bureau Veritas ADT

**DUT: EDA; Type: MC75A6**

Communication System: UMTS\_3G; Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: HSL1900 Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.43$  mho/m;  $\epsilon_r = 40.9$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Left Section

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

- Probe: EX3DV3 - SN3504; ConvF(8.2, 8.2, 8.2); Calibrated: 2010/1/26
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: 2009/12/16
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1485
- Measurement SW: DASY5, V5.2 Build 157

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### DASY Configuration for Program/11B Ch6:

Date/Time: 2010/4/25

Test Laboratory: Bureau Veritas ADT

**DUT: EDA; Type: MC75A6**

Communication System: WiFi; Frequency: 2437 MHz; Duty Cycle: 1:1

Medium: HSL2450 Medium parameters used:  $f = 2437$  MHz;  $\sigma = 1.86$  mho/m;  $\epsilon_r = 40.6$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Left Section

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

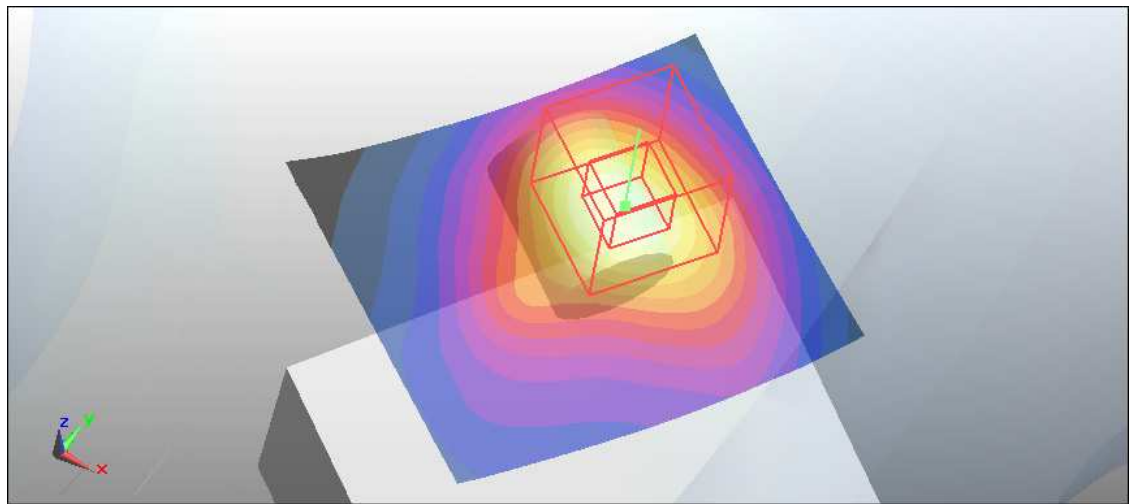
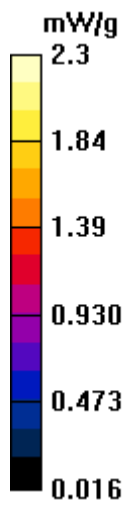
- Probe: EX3DV3 - SN3504; ConvF(7.77, 7.77, 7.77); Calibrated: 2010/1/26
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: 2009/12/16
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1485
- Measurement SW: DASY5, V5.2 Build 157

---

### Multi Band Result:

SAR(1 g) = **1.42** mW/g; SAR(10 g) = 0.813 mW/g

Maximum value of SAR (measured) = 2.3 mW/g



## **M02-A6-2D-Left Head Tilt WCDMA1900 Ch9400 +11G Ch6**

### **DASY Configuration for Program/WCDMA 1900 Ch9400:**

Date/Time: 2010/4/25

Test Laboratory: Bureau Veritas ADT

**DUT: EDA; Type: MC75A6**

Communication System: UMTS\_3G; Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: HSL1900 Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.43$  mho/m;  $\epsilon_r = 40.9$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Left Section

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

- Probe: EX3DV3 - SN3504; ConvF(8.2, 8.2, 8.2); Calibrated: 2010/1/26
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: 2009/12/16
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1485
- Measurement SW: DASY5, V5.2 Build 157

---

### **DASY Configuration for Program/11G Ch6:**

Date/Time: 2010/4/25

Test Laboratory: Bureau Veritas ADT

**DUT: EDA; Type: MC75A6**

Communication System: WiFi; Frequency: 2437 MHz; Duty Cycle: 1:1

Medium: HSL2450 Medium parameters used:  $f = 2437$  MHz;  $\sigma = 1.86$  mho/m;  $\epsilon_r = 40.6$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Left Section

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

- Probe: EX3DV3 - SN3504; ConvF(7.77, 7.77, 7.77); Calibrated: 2010/1/26
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: 2009/12/16
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1485
- Measurement SW: DASY5, V5.2 Build 157

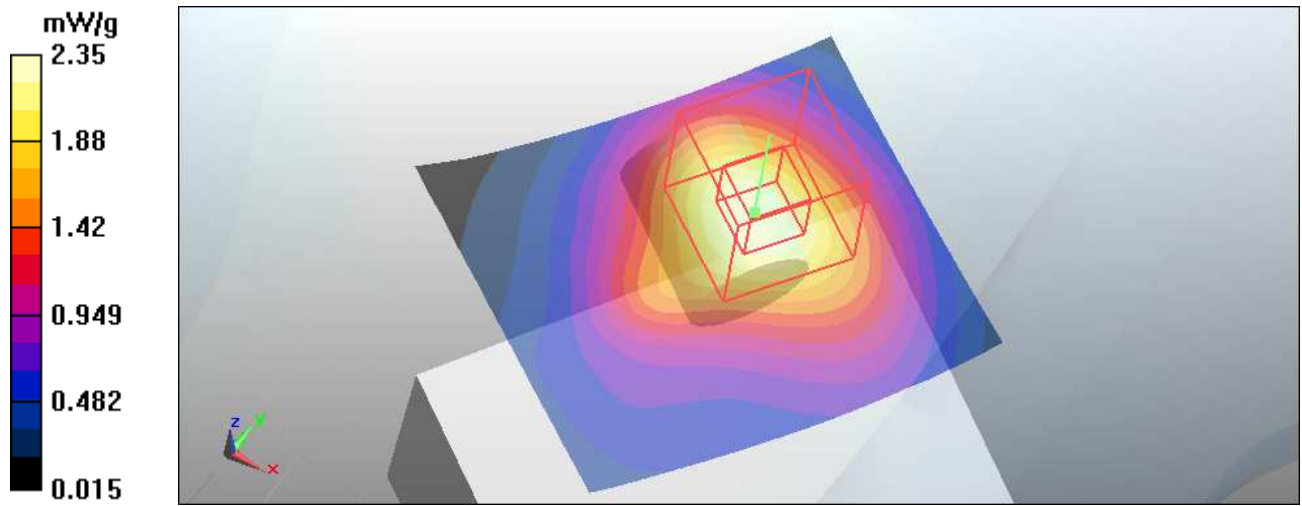
---

### **Multi Band Result:**

**SAR(1 g) = 1.48 mW/g; SAR(10 g) = 0.838 mW/g**

Maximum value of SAR (measured) = 2.35 mW/g





## M03-A6-2D-Left Head Cheek WCDMA1900 + 11A Ch64

### DASY Configuration for Program/WCDMA 1900 Ch9400:

Date/Time: 2010/4/25

Test Laboratory: Bureau Veritas ADT

**DUT: EDA; Type: MC75A6**

Communication System: UMTS\_3G; Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: HSL1900 Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.43$  mho/m;  $\epsilon_r = 40.9$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Left Section

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

- Probe: EX3DV3 - SN3504; ConvF(8.2, 8.2, 8.2); Calibrated: 2010/1/26
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: 2009/12/16
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1485
- Measurement SW: DASY5, V5.2 Build 157

---

### DASY Configuration for Program/11A Ch64:

Date/Time: 2010/4/26

Test Laboratory: Bureau Veritas ADT

**DUT: EDA; Type: MC75A6**

Communication System: WiFi; Frequency: 5320 MHz; Duty Cycle: 1:1

Medium: HSL5800 Medium parameters used:  $f = 5320$  MHz;  $\sigma = 4.8$  mho/m;  $\epsilon_r = 36.6$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Left Section

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

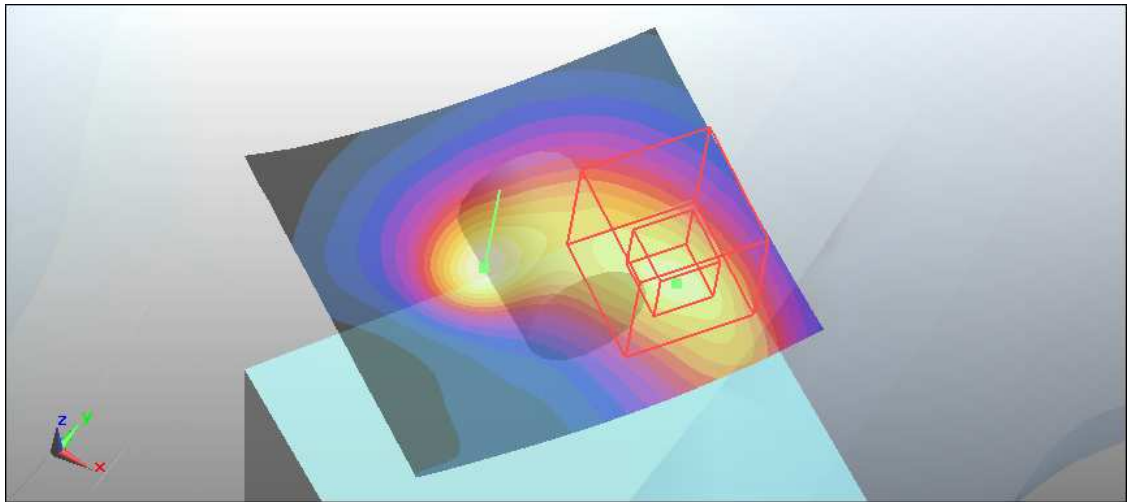
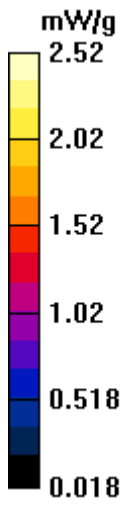
- Probe: EX3DV3 - SN3504; ConvF(4.62, 4.62, 4.62); Calibrated: 2010/1/26
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: 2009/12/16
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1485
- Measurement SW: DASY5, V5.2 Build 157

---

### Multi Band Result:

SAR(1 g) = **1.33** mW/g; SAR(10 g) = 0.725 mW/g

Maximum value of SAR (measured) = 2.52 mW/g



## M04-A6-2D-Left Head Cheek WCDMA1900 + 11A Ch100

### DASY Configuration for Program/WCDMA 1900 Ch9400:

Date/Time: 2010/4/25

Test Laboratory: Bureau Veritas ADT

**DUT: EDA; Type: MC75A6**

Communication System: UMTS\_3G; Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: HSL1900 Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.43$  mho/m;  $\epsilon_r = 40.9$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Left Section

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

- Probe: EX3DV3 - SN3504; ConvF(8.2, 8.2, 8.2); Calibrated: 2010/1/26
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: 2009/12/16
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1485
- Measurement SW: DASY5, V5.2 Build 157

---

### DASY Configuration for Program/11a Ch100:

Date/Time: 2010/4/26

Test Laboratory: Bureau Veritas ADT

**DUT: EDA; Type: MC75A6**

Communication System: WiFi; Frequency: 5500 MHz; Duty Cycle: 1:1

Medium: HSL5800 Medium parameters used:  $f = 5500$  MHz;  $\sigma = 5.02$  mho/m;  $\epsilon_r = 36.3$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Left Section

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

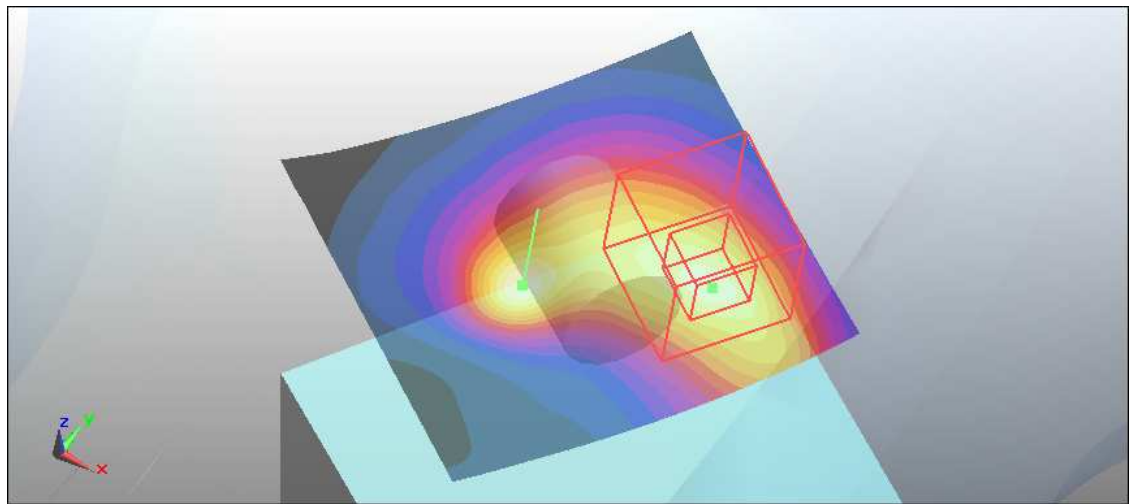
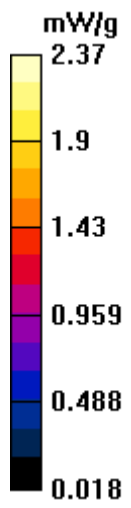
- Probe: EX3DV3 - SN3504; ConvF(4.51, 4.51, 4.51); Calibrated: 2010/1/26
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: 2009/12/16
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1485
- Measurement SW: DASY5, V5.2 Build 157

---

### Multi Band Result:

SAR(1 g) = **1.25** mW/g; SAR(10 g) = 0.725 mW/g

Maximum value of SAR (measured) = 2.37 mW/g



## **M05-A6-2D-Left Head Cheek WCDMA1900 + 11A Ch136**

### **DASY Configuration for Program/WCDMA 1900 Ch9400:**

Date/Time: 2010/4/25

Test Laboratory: Bureau Veritas ADT

**DUT: EDA; Type: MC75A6**

Communication System: UMTS\_3G; Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: HSL1900 Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.43$  mho/m;  $\epsilon_r = 40.9$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Left Section

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

- Probe: EX3DV3 - SN3504; ConvF(8.2, 8.2, 8.2); Calibrated: 2010/1/26
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: 2009/12/16
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1485
- Measurement SW: DASY5, V5.2 Build 157

---

### **DASY Configuration for Program/11a Ch136:**

Date/Time: 2010/4/26

Test Laboratory: Bureau Veritas ADT

**DUT: EDA; Type: MC75A6**

Communication System: WiFi; Frequency: 5680 MHz; Duty Cycle: 1:1

Medium: HSL5800 Medium parameters used:  $f = 5680$  MHz;  $\sigma = 5.24$  mho/m;  $\epsilon_r = 36$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Left Section

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

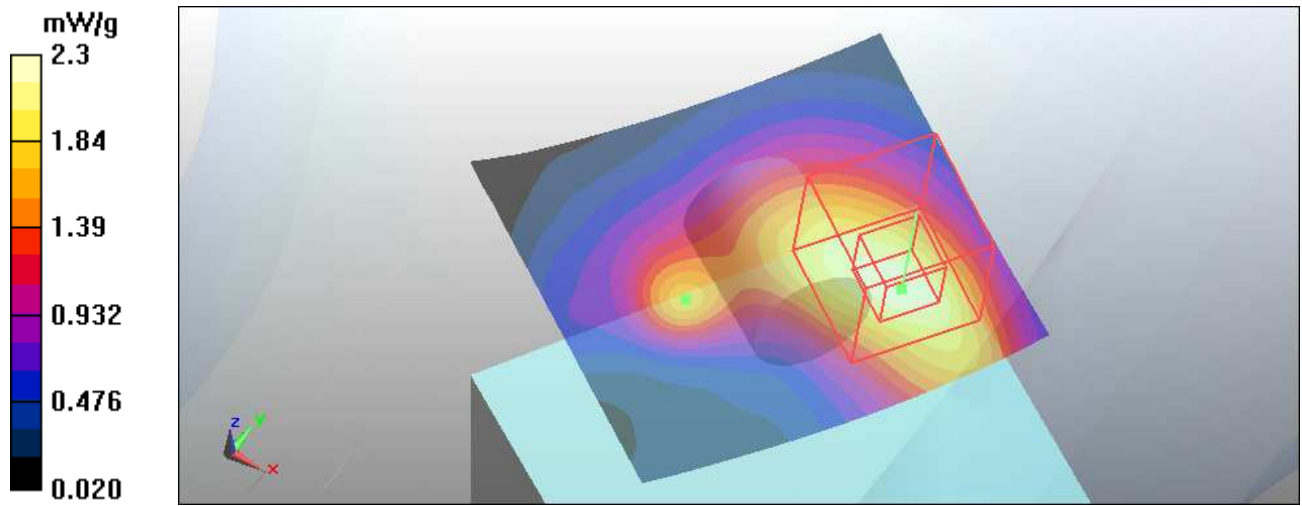
- Probe: EX3DV3 - SN3504; ConvF(4.25, 4.25, 4.25); Calibrated: 2010/1/26
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: 2009/12/16
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1485
- Measurement SW: DASY5, V5.2 Build 157

---

### **Multi Band Result:**

**SAR(1 g) = 1.23 mW/g; SAR(10 g) = 0.717 mW/g**

Maximum value of SAR (measured) = 2.3 mW/g



## M06-A6-2D-Left Head Cheek WCDMA1900 Ch9538 Volume + 11A Ch 64

### DASY Configuration for Program/WCDMA 1900 Ch9538::

Date/Time: 2010/4/25

Test Laboratory: Bureau Veritas ADT

**DUT: EDA; Type: MC75A6**

Communication System: UMTS\_3G; Frequency: 1907.6 MHz; Duty Cycle: 1:1

Medium: HSL1900 Medium parameters used:  $f = 1907.6$  MHz;  $\sigma = 1.46$  mho/m;  $\epsilon_r = 40.9$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Left Section

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

- Probe: EX3DV3 - SN3504; ConvF(8.2, 8.2, 8.2); Calibrated: 2010/1/26
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: 2009/12/16
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1485
- Measurement SW: DASY5, V5.2 Build 157

---

### DASY Configuration for Program/11A Ch64:

Date/Time: 2010/4/26

Test Laboratory: Bureau Veritas ADT

**DUT: EDA; Type: MC75A6**

Communication System: WiFi; Frequency: 5320 MHz; Duty Cycle: 1:1

Medium: HSL5800 Medium parameters used:  $f = 5320$  MHz;  $\sigma = 4.8$  mho/m;  $\epsilon_r = 36.6$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Left Section

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

- Probe: EX3DV3 - SN3504; ConvF(4.62, 4.62, 4.62); Calibrated: 2010/1/26
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: 2009/12/16
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1485
- Measurement SW: DASY5, V5.2 Build 157

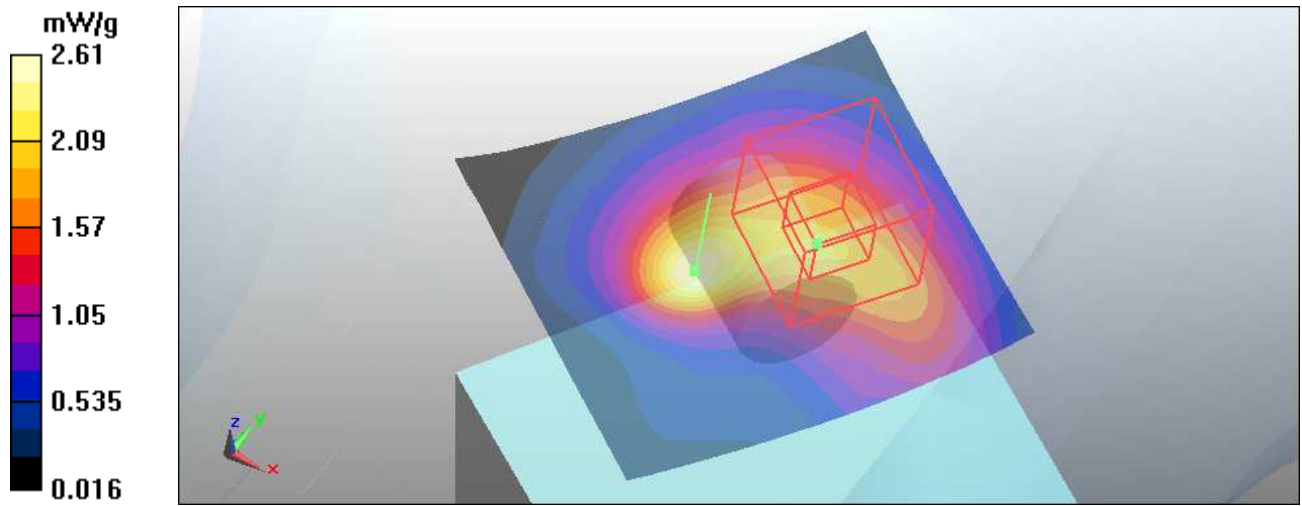
---

### Multi Band Result:

**SAR(1 g) = 1.32 mW/g; SAR(10 g) = 0.698 mW/g**

Maximum value of SAR (measured) = 2.61 mW/g





## M07-A6-2D-Left Head Tilt WCDMA1900 Ch9262 + 11A Ch64

### DASY Configuration for Program/WCDMA 1900 Ch9262:

Date/Time: 2010/4/25

Test Laboratory: Bureau Veritas ADT

**DUT: EDA; Type: MC75A6**

Communication System: UMTS\_3G; Frequency: 1852.4 MHz; Duty Cycle: 1:1

Medium: HSL1900 Medium parameters used:  $f = 1852.4$  MHz;  $\sigma = 1.39$  mho/m;  $\epsilon_r = 40.8$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Left Section

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

- Probe: EX3DV3 - SN3504; ConvF(8.2, 8.2, 8.2); Calibrated: 2010/1/26
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: 2009/12/16
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1485
- Measurement SW: DASY5, V5.2 Build 157

---

### DASY Configuration for Program/11A Ch64:

Date/Time: 2010/4/26

Test Laboratory: Bureau Veritas ADT

**DUT: EDA; Type: MC75A6**

Communication System: WiFi; Frequency: 5320 MHz; Duty Cycle: 1:1

Medium: HSL5800 Medium parameters used:  $f = 5320$  MHz;  $\sigma = 4.8$  mho/m;  $\epsilon_r = 36.6$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Left Section

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

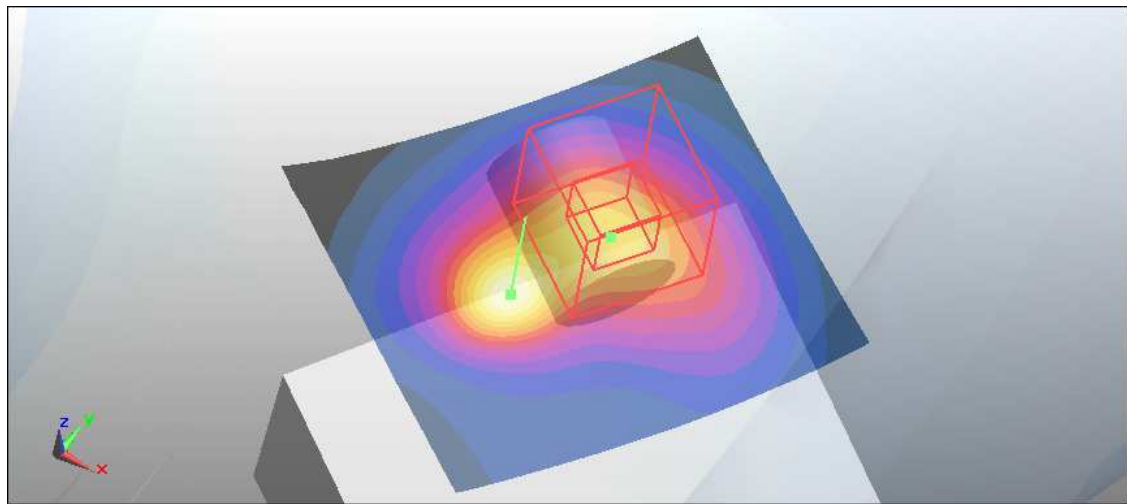
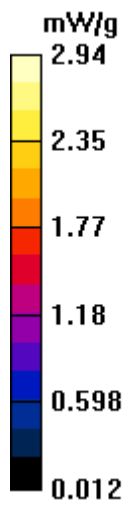
- Probe: EX3DV3 - SN3504; ConvF(4.62, 4.62, 4.62); Calibrated: 2010/1/26
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: 2009/12/16
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1485
- Measurement SW: DASY5, V5.2 Build 157

---

### Multi Band Result:

**SAR(1 g) = 1.46 mW/g; SAR(10 g) = 0.771 mW/g**

Maximum value of SAR (measured) = 2.94 mW/g



## M08-A6-2D-Left Head Tilt WCDMA1900 Ch9262 + 11A Ch100

### DASY Configuration for Program/WCDMA 1900 Ch9262:

Date/Time: 2010/4/25

Test Laboratory: Bureau Veritas ADT

**DUT: EDA; Type: MC75A6**

Communication System: UMTS\_3G; Frequency: 1852.4 MHz; Duty Cycle: 1:1

Medium: HSL1900 Medium parameters used:  $f = 1852.4$  MHz;  $\sigma = 1.39$  mho/m;  $\epsilon_r = 40.8$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Left Section

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

- Probe: EX3DV3 - SN3504; ConvF(8.2, 8.2, 8.2); Calibrated: 2010/1/26
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: 2009/12/16
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1485
- Measurement SW: DASY5, V5.2 Build 157

---

### DASY Configuration for Program/11A Ch100:

Date/Time: 2010/4/26

Test Laboratory: Bureau Veritas ADT

**DUT: EDA; Type: MC75A6**

Communication System: WiFi; Frequency: 5500 MHz; Duty Cycle: 1:1

Medium: HSL5800 Medium parameters used:  $f = 5500$  MHz;  $\sigma = 5.02$  mho/m;  $\epsilon_r = 36.3$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Left Section

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

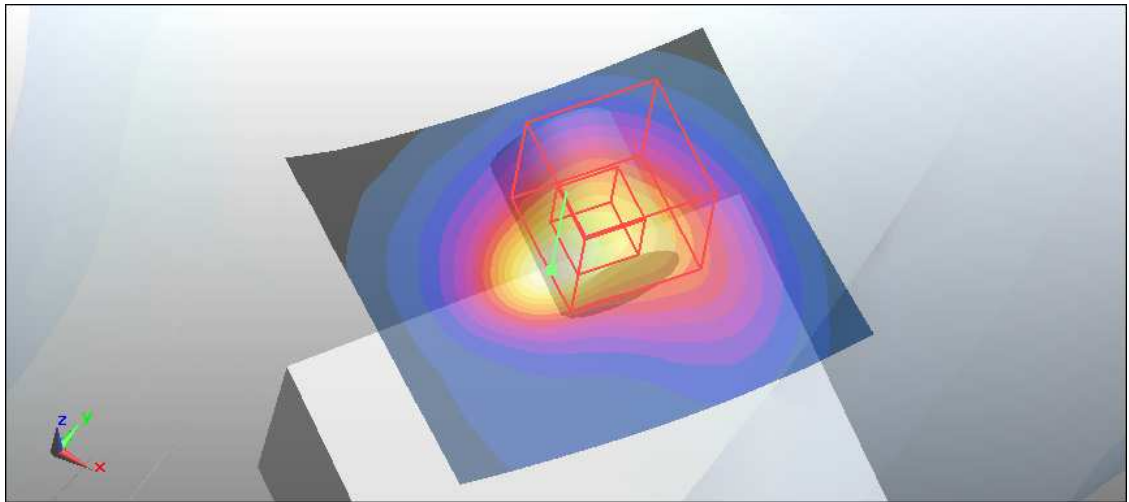
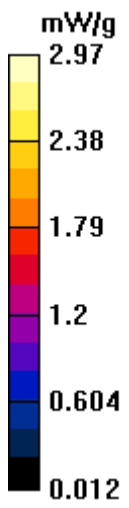
- Probe: EX3DV3 - SN3504; ConvF(4.51, 4.51, 4.51); Calibrated: 2010/1/26
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: 2009/12/16
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1485
- Measurement SW: DASY5, V5.2 Build 157

---

### Multi Band Result:

**SAR(1 g) = 1.5 mW/g; SAR(10 g) = 0.823 mW/g**

Maximum value of SAR (measured) = 2.97 mW/g



## M09-A6-2D-Left Head Tilt WCDMA1900 Ch9262 +11A Ch136

### DASY Configuration for Program/WCDMA 1900 Ch9262:

Date/Time: 2010/4/25

Test Laboratory: Bureau Veritas ADT

**DUT: EDA; Type: MC75A6**

Communication System: UMTS\_3G; Frequency: 1852.4 MHz; Duty Cycle: 1:1

Medium: HSL1900 Medium parameters used:  $f = 1852.4$  MHz;  $\sigma = 1.39$  mho/m;  $\epsilon_r = 40.8$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Left Section

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

- Probe: EX3DV3 - SN3504; ConvF(8.2, 8.2, 8.2); Calibrated: 2010/1/26
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: 2009/12/16
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1485
- Measurement SW: DASY5, V5.2 Build 157

---

### DASY Configuration for Program/11A Ch136:

Date/Time: 2010/4/27

Test Laboratory: Bureau Veritas ADT

**DUT: EDA; Type: MC75A6**

Communication System: WiFi; Frequency: 5680 MHz; Duty Cycle: 1:1

Medium: HSL5800 Medium parameters used:  $f = 5680$  MHz;  $\sigma = 5.26$  mho/m;  $\epsilon_r = 36.1$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Left Section

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

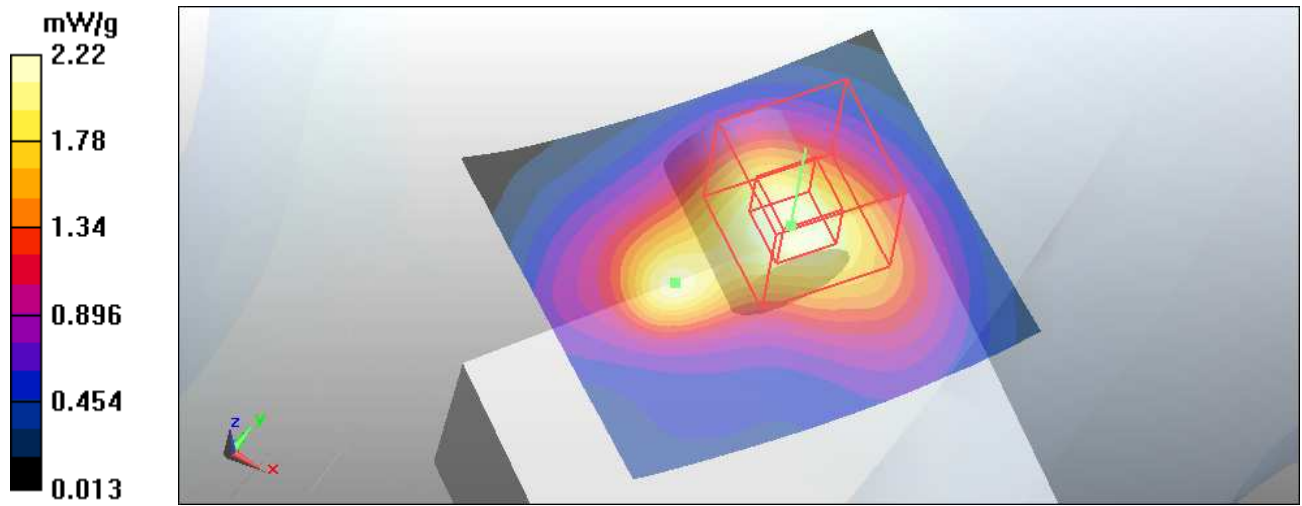
- Probe: EX3DV3 - SN3504; ConvF(4.25, 4.25, 4.25); Calibrated: 2010/1/26
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: 2009/12/16
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1485
- Measurement SW: DASY5, V5.2 Build 157

---

### Multi Band Result:

**SAR(1 g) = 1.3 mW/g; SAR(10 g) = 0.739 mW/g**

Maximum value of SAR (measured) = 2.22 mW/g



## **M10-A6-2D-Left Head Tilt WCDMA1900 Ch9400 + 11A Ch40**

### **DASY Configuration for Program/WCDMA 1900 Ch9400:**

Date/Time: 2010/4/25

Test Laboratory: Bureau Veritas ADT

**DUT: EDA; Type: MC75A6**

Communication System: UMTS\_3G; Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: HSL1900 Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.43$  mho/m;  $\epsilon_r = 40.9$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Left Section

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

- Probe: EX3DV3 - SN3504; ConvF(8.2, 8.2, 8.2); Calibrated: 2010/1/26
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: 2009/12/16
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1485
- Measurement SW: DASY5, V5.2 Build 157

---

### **DASY Configuration for Program/11A Ch40:**

Date/Time: 2010/4/26

Test Laboratory: Bureau Veritas ADT

**DUT: EDA; Type: MC75A6**

Communication System: WiFi; Frequency: 5200 MHz; Duty Cycle: 1:1

Medium: HSL5800 Medium parameters used:  $f = 5200$  MHz;  $\sigma = 4.66$  mho/m;  $\epsilon_r = 36.8$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Left Section

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

- Probe: EX3DV3 - SN3504; ConvF(4.87, 4.87, 4.87); Calibrated: 2010/1/26
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: 2009/12/16
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1485
- Measurement SW: DASY5, V5.2 Build 157

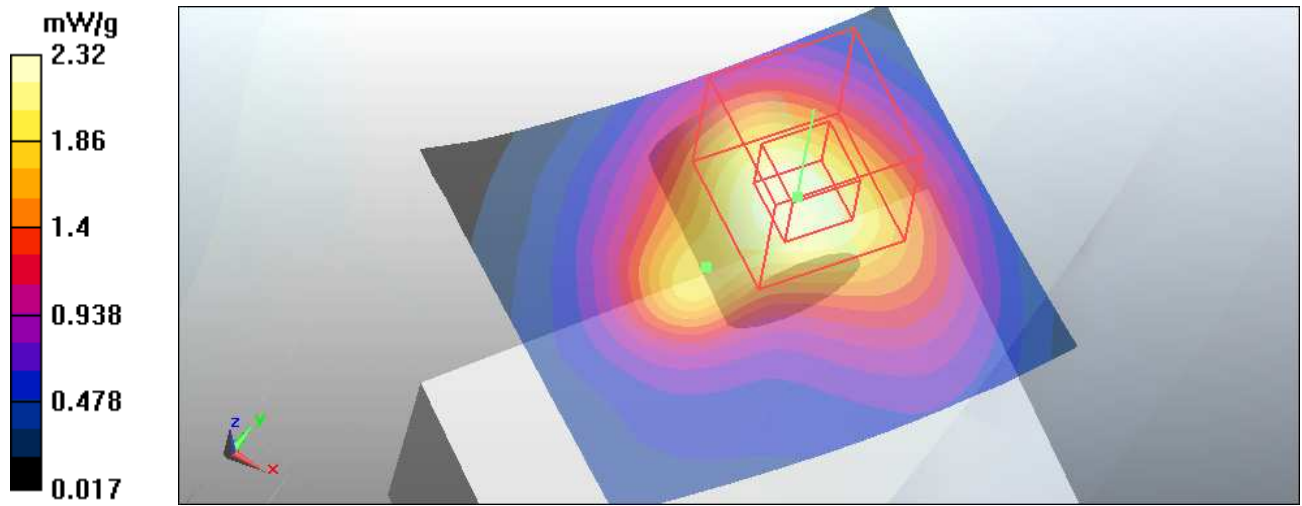
---

### **Multi Band Result:**

**SAR(1 g) = 1.38 mW/g; SAR(10 g) = 0.788 mW/g**

Maximum value of SAR (measured) = 2.32 mW/g





## M11-A6-2D-Left Head Tilt WCDMA1900 Ch9400 + 11A Ch64

### DASY Configuration for Program/WCDMA 1900 Ch9400:

Date/Time: 2010/4/25

Test Laboratory: Bureau Veritas ADT

**DUT: EDA; Type: MC75A6**

Communication System: UMTS\_3G; Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: HSL1900 Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.43$  mho/m;  $\epsilon_r = 40.9$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Left Section

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

- Probe: EX3DV3 - SN3504; ConvF(8.2, 8.2, 8.2); Calibrated: 2010/1/26
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: 2009/12/16
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1485
- Measurement SW: DASY5, V5.2 Build 157

---

### DASY Configuration for Program/11A Ch64:

Date/Time: 2010/4/26

Test Laboratory: Bureau Veritas ADT

**DUT: EDA; Type: MC75A6**

Communication System: WiFi; Frequency: 5320 MHz; Duty Cycle: 1:1

Medium: HSL5800 Medium parameters used:  $f = 5320$  MHz;  $\sigma = 4.8$  mho/m;  $\epsilon_r = 36.6$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Left Section

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

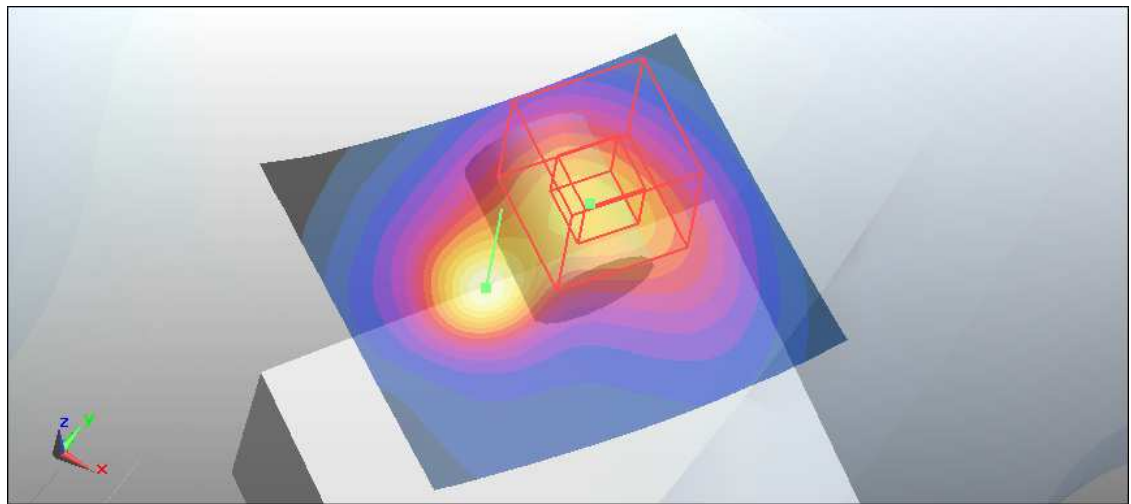
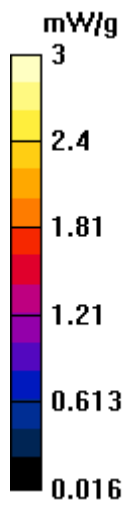
- Probe: EX3DV3 - SN3504; ConvF(4.62, 4.62, 4.62); Calibrated: 2010/1/26
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: 2009/12/16
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1485
- Measurement SW: DASY5, V5.2 Build 157

---

### Multi Band Result:

SAR(1 g) = **1.5** mW/g; SAR(10 g) = 0.836 mW/g

Maximum value of SAR (measured) = 3 mW/g



## M12-A6-2D-Left Head Tilt WCDMA1900 Ch9400 + 11A Ch100

### DASY Configuration for Program/WCDMA 1900 Ch9400:

Date/Time: 2010/4/25

Test Laboratory: Bureau Veritas ADT

**DUT: EDA; Type: MC75A6**

Communication System: UMTS\_3G; Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: HSL1900 Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.43$  mho/m;  $\epsilon_r = 40.9$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Left Section

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

- Probe: EX3DV3 - SN3504; ConvF(8.2, 8.2, 8.2); Calibrated: 2010/1/26
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: 2009/12/16
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1485
- Measurement SW: DASY5, V5.2 Build 157

---

### DASY Configuration for Program/11A Ch100:

Date/Time: 2010/4/26

Test Laboratory: Bureau Veritas ADT

**DUT: EDA; Type: MC75A6**

Communication System: WiFi; Frequency: 5500 MHz; Duty Cycle: 1:1

Medium: HSL5800 Medium parameters used:  $f = 5500$  MHz;  $\sigma = 5.02$  mho/m;  $\epsilon_r = 36.3$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Left Section

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

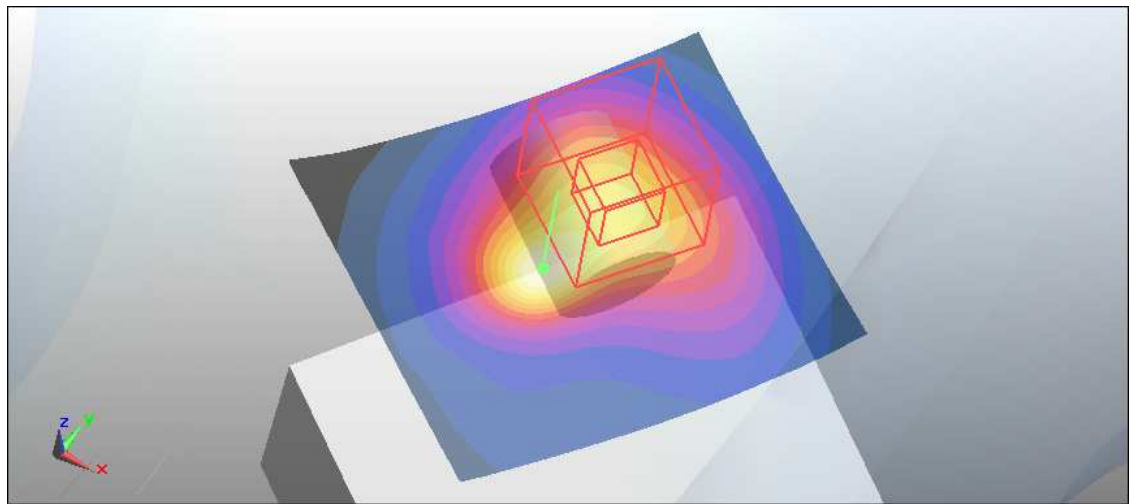
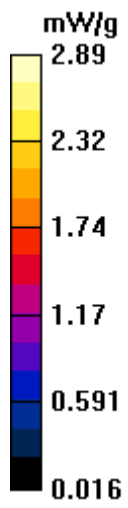
- Probe: EX3DV3 - SN3504; ConvF(4.51, 4.51, 4.51); Calibrated: 2010/1/26
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: 2009/12/16
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1485
- Measurement SW: DASY5, V5.2 Build 157

---

### Multi Band Result:

SAR(1 g) = **1.49** mW/g; SAR(10 g) = 0.827 mW/g

Maximum value of SAR (measured) = 2.89 mW/g



## M13-A6-2D-Left Head Tilt WCDMA1900 Ch9400 + 11A Ch104

### DASY Configuration for Program/WCDMA 1900 Ch9400:

Date/Time: 2010/4/25

Test Laboratory: Bureau Veritas ADT

**DUT: EDA; Type: MC75A6**

Communication System: UMTS\_3G; Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: HSL1900 Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.43$  mho/m;  $\epsilon_r = 40.9$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Left Section

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

- Probe: EX3DV3 - SN3504; ConvF(8.2, 8.2, 8.2); Calibrated: 2010/1/26
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: 2009/12/16
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1485
- Measurement SW: DASY5, V5.2 Build 157

---

### DASY Configuration for Program/11A Ch104:

Date/Time: 2010/4/26

Test Laboratory: Bureau Veritas ADT

**DUT: EDA; Type: MC75A6**

Communication System: WiFi; Frequency: 5520 MHz; Duty Cycle: 1:1

Medium: HSL5800 Medium parameters used:  $f = 5520$  MHz;  $\sigma = 5.04$  mho/m;  $\epsilon_r = 36.3$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Left Section

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

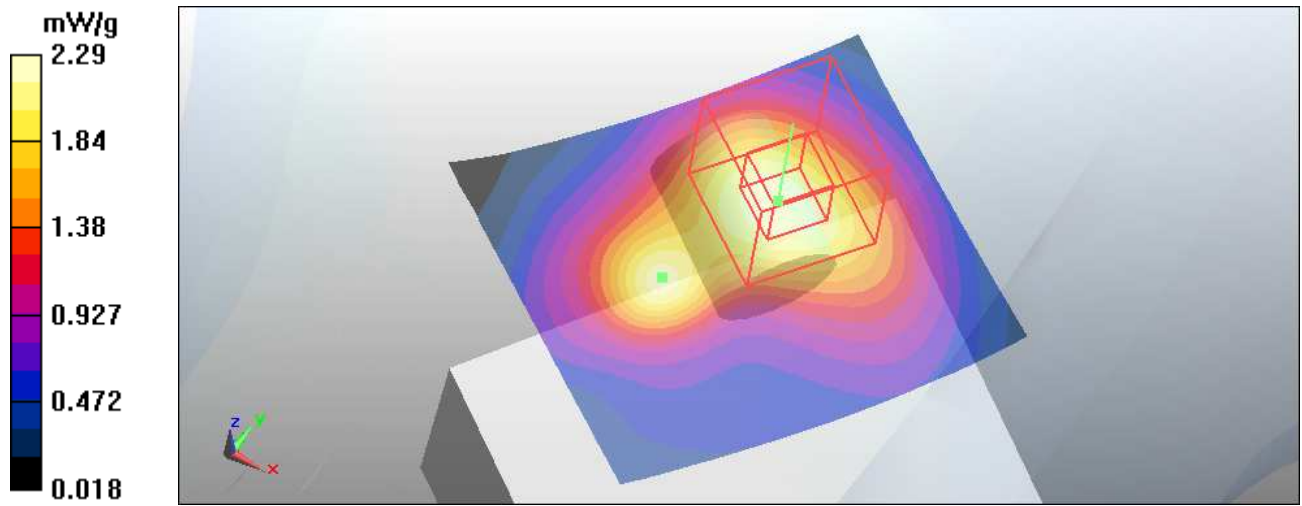
- Probe: EX3DV3 - SN3504; ConvF(4.51, 4.51, 4.51); Calibrated: 2010/1/26
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: 2009/12/16
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1485
- Measurement SW: DASY5, V5.2 Build 157

---

### Multi Band Result:

SAR(1 g) = **1.36** mW/g; SAR(10 g) = 0.776 mW/g

Maximum value of SAR (measured) = 2.29 mW/g



## M14-A6-2D-Left Head Tilt WCDMA1900 Ch9400 + 11A Ch116

### DASY Configuration for Program/WCDMA 1900 Ch9400:

Date/Time: 2010/4/25

Test Laboratory: Bureau Veritas ADT

**DUT: EDA; Type: MC75A6**

Communication System: UMTS\_3G; Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: HSL1900 Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.43$  mho/m;  $\epsilon_r = 40.9$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Left Section

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

- Probe: EX3DV3 - SN3504; ConvF(8.2, 8.2, 8.2); Calibrated: 2010/1/26
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: 2009/12/16
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1485
- Measurement SW: DASY5, V5.2 Build 157

---

### DASY Configuration for Program/11A Ch116:

Date/Time: 2010/4/27

Test Laboratory: Bureau Veritas ADT

**DUT: EDA; Type: MC75A6**

Communication System: WiFi; Frequency: 5580 MHz; Duty Cycle: 1:1

Medium: HSL5800 Medium parameters used:  $f = 5580$  MHz;  $\sigma = 5.14$  mho/m;  $\epsilon_r = 36.3$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Left Section

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

- Probe: EX3DV3 - SN3504; ConvF(4.25, 4.25, 4.25); Calibrated: 2010/1/26
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: 2009/12/16
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1485
- Measurement SW: DASY5, V5.2 Build 157

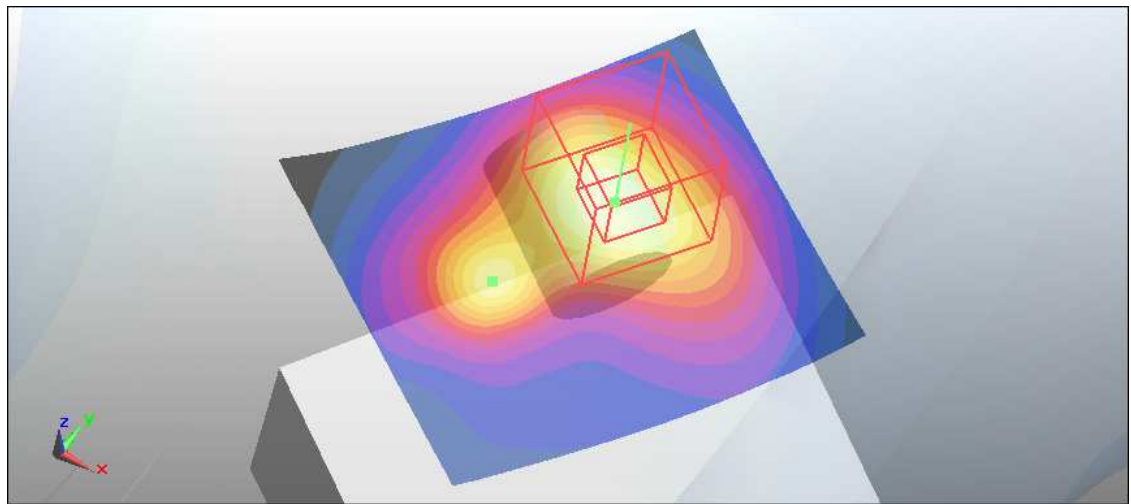
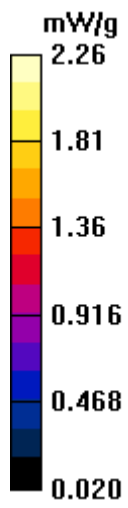
---

### Multi Band Result:

SAR(1 g) = **1.34** mW/g; SAR(10 g) = 0.769 mW/g

Maximum value of SAR (measured) = 2.26 mW/g





## M15-A6-2D-Left Head Tilt WCDMA1900 Ch9400 + 11A Ch120

### DASY Configuration for Program/WCDMA 1900 Ch9400:

Date/Time: 2010/4/25

Test Laboratory: Bureau Veritas ADT

**DUT: EDA; Type: MC75A6**

Communication System: UMTS\_3G; Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: HSL1900 Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.43$  mho/m;  $\epsilon_r = 40.9$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Left Section

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

- Probe: EX3DV3 - SN3504; ConvF(8.2, 8.2, 8.2); Calibrated: 2010/1/26
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: 2009/12/16
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1485
- Measurement SW: DASY5, V5.2 Build 157

---

### DASY Configuration for Program/11A Ch120:

Date/Time: 2010/4/27

Test Laboratory: Bureau Veritas ADT

**DUT: EDA; Type: MC75A6**

Communication System: WiFi; Frequency: 5600 MHz; Duty Cycle: 1:1

Medium: HSL5800 Medium parameters used:  $f = 5600$  MHz;  $\sigma = 5.16$  mho/m;  $\epsilon_r = 36.3$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Left Section

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

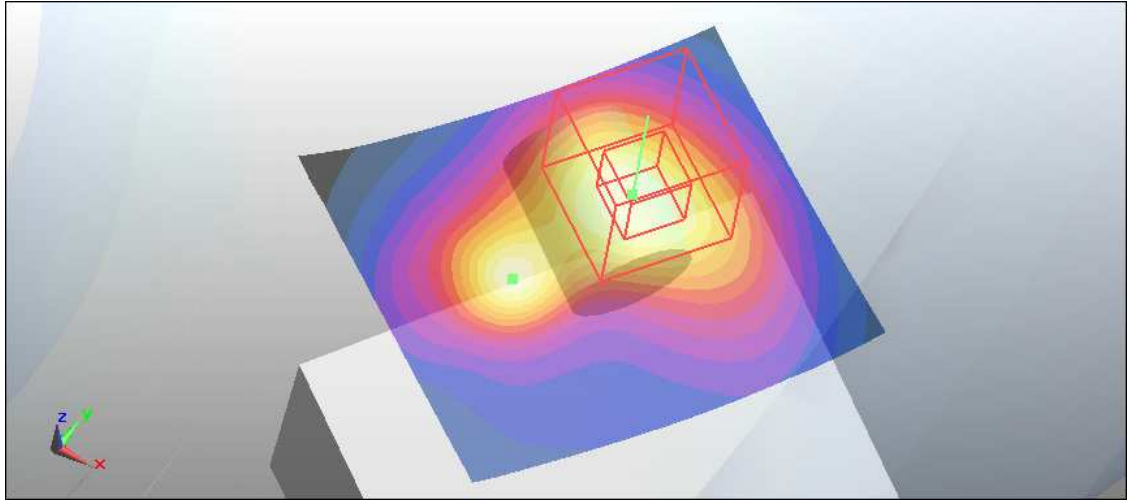
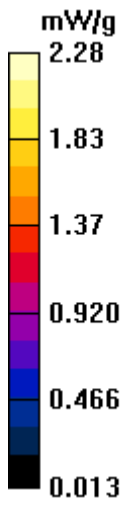
- Probe: EX3DV3 - SN3504; ConvF(4.25, 4.25, 4.25); Calibrated: 2010/1/26
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: 2009/12/16
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1485
- Measurement SW: DASY5, V5.2 Build 157

---

### Multi Band Result:

SAR(1 g) = **1.35** mW/g; SAR(10 g) = 0.773 mW/g

Maximum value of SAR (measured) = 2.28 mW/g



## M16-A6-2D-Left Head Tilt WCDMA1900 Ch9400 + 11A Ch124

### DASY Configuration for Program/WCDMA 1900 Ch9400:

Date/Time: 2010/4/25

Test Laboratory: Bureau Veritas ADT

**DUT: EDA; Type: MC75A6**

Communication System: UMTS\_3G; Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: HSL1900 Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.43$  mho/m;  $\epsilon_r = 40.9$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Left Section

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

- Probe: EX3DV3 - SN3504; ConvF(8.2, 8.2, 8.2); Calibrated: 2010/1/26
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: 2009/12/16
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1485
- Measurement SW: DASY5, V5.2 Build 157

---

### DASY Configuration for Program/11A Ch124:

Date/Time: 2010/4/27

Test Laboratory: Bureau Veritas ADT

**DUT: EDA; Type: MC75A6**

Communication System: WiFi; Frequency: 5620 MHz; Duty Cycle: 1:1

Medium: HSL5800 Medium parameters used:  $f = 5620$  MHz;  $\sigma = 5.19$  mho/m;  $\epsilon_r = 36.2$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Left Section

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

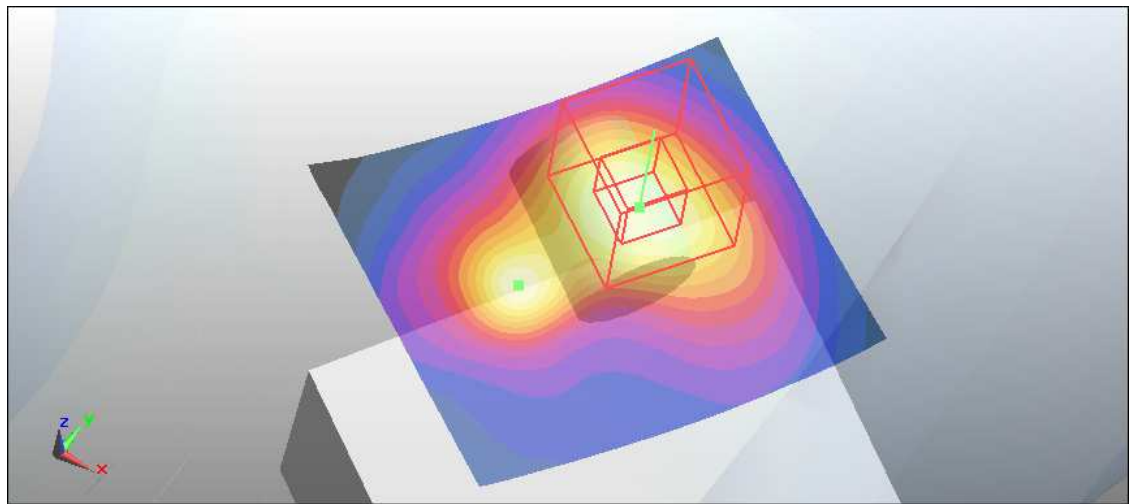
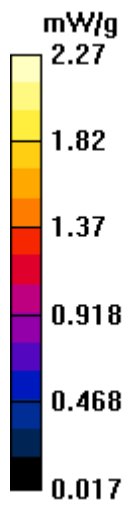
- Probe: EX3DV3 - SN3504; ConvF(4.25, 4.25, 4.25); Calibrated: 2010/1/26
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: 2009/12/16
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1485
- Measurement SW: DASY5, V5.2 Build 157

---

### Multi Band Result:

SAR(1 g) = **1.36** mW/g; SAR(10 g) = 0.786 mW/g

Maximum value of SAR (measured) = 2.27 mW/g



## M17-A6-2D-Left Head Tilt WCDMA1900 Ch9400 + 11A Ch136

### DASY Configuration for Program/WCDMA 1900 Ch9400:

Date/Time: 2010/4/25

Test Laboratory: Bureau Veritas ADT

**DUT: EDA; Type: MC75A6**

Communication System: UMTS\_3G; Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: HSL1900 Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.43$  mho/m;  $\epsilon_r = 40.9$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Left Section

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

- Probe: EX3DV3 - SN3504; ConvF(8.2, 8.2, 8.2); Calibrated: 2010/1/26
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: 2009/12/16
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1485
- Measurement SW: DASY5, V5.2 Build 157

---

### DASY Configuration for Program/11A Ch136:

Date/Time: 2010/4/27

Test Laboratory: Bureau Veritas ADT

**DUT: EDA; Type: MC75A6**

Communication System: WiFi; Frequency: 5680 MHz; Duty Cycle: 1:1

Medium: HSL5800 Medium parameters used:  $f = 5680$  MHz;  $\sigma = 5.26$  mho/m;  $\epsilon_r = 36.1$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Left Section

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

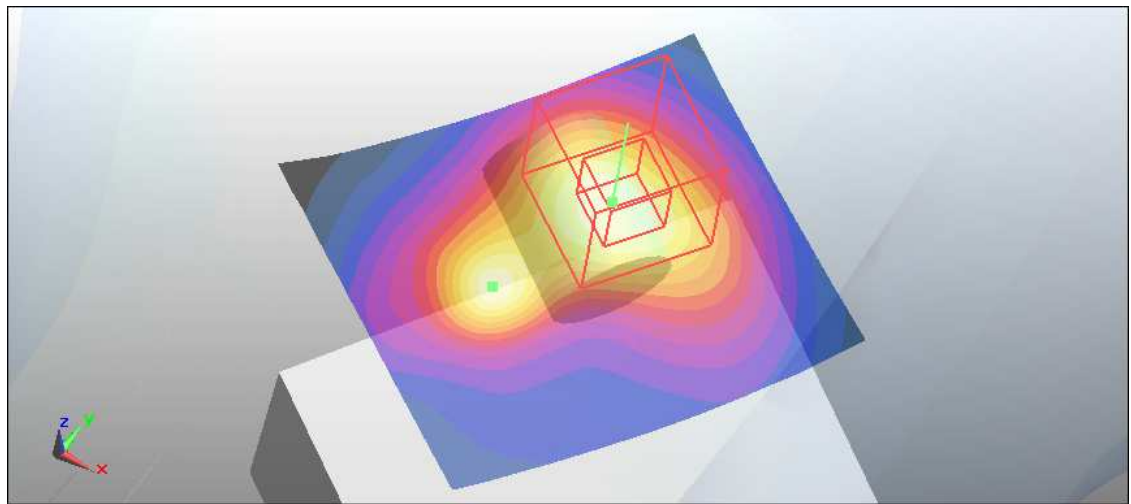
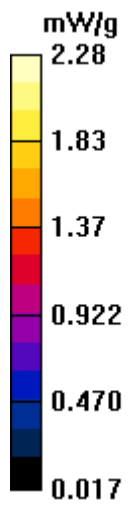
- Probe: EX3DV3 - SN3504; ConvF(4.25, 4.25, 4.25); Calibrated: 2010/1/26
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: 2009/12/16
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1485
- Measurement SW: DASY5, V5.2 Build 157

---

### Multi Band Result:

SAR(1 g) = **1.35** mW/g; SAR(10 g) = 0.774 mW/g

Maximum value of SAR (measured) = 2.28 mW/g



## M18-A6-2D-Left Head Tilt WCDMA1900 Ch9400 + 11A Ch165

### DASY Configuration for Program/WCDMA 1900 Ch9400:

Date/Time: 2010/4/25

Test Laboratory: Bureau Veritas ADT

**DUT: EDA; Type: MC75A6**

Communication System: UMTS\_3G; Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: HSL1900 Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.43$  mho/m;  $\epsilon_r = 40.9$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Left Section

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

- Probe: EX3DV3 - SN3504; ConvF(8.2, 8.2, 8.2); Calibrated: 2010/1/26
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: 2009/12/16
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1485
- Measurement SW: DASY5, V5.2 Build 157

---

### DASY Configuration for Program/11A Ch165:

Date/Time: 2010/4/27

Test Laboratory: Bureau Veritas ADT

**DUT: EDA; Type: MC75A6**

Communication System: WiFi; Frequency: 5825 MHz; Duty Cycle: 1:1

Medium: HSL5800 Medium parameters used:  $f = 5825$  MHz;  $\sigma = 5.44$  mho/m;  $\epsilon_r = 35.9$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Left Section

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

- Probe: EX3DV3 - SN3504; ConvF(4.53, 4.53, 4.53); Calibrated: 2010/1/26
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: 2009/12/16
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1485
- Measurement SW: DASY5, V5.2 Build 157

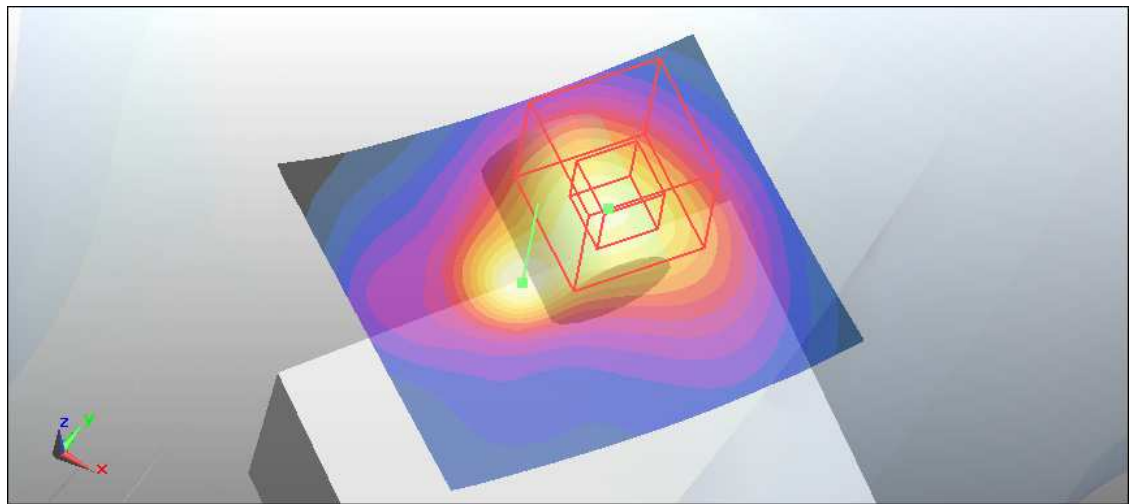
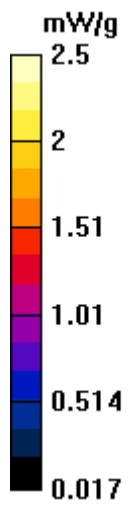
---

### Multi Band Result:

SAR(1 g) = **1.4** mW/g; SAR(10 g) = 0.806 mW/g

Maximum value of SAR (measured) = 2.5 mW/g





## M19-A6-2D-Left Head Tilt WCDMA1900 Ch9538 + 11A Ch64

### DASY Configuration for Program/WCDMA 1900 Ch9538::

Date/Time: 2010/4/25

Test Laboratory: Bureau Veritas ADT

**DUT: EDA; Type: MC75A6**

Communication System: UMTS\_3G; Frequency: 1907.6 MHz; Duty Cycle: 1:1

Medium: HSL1900 Medium parameters used:  $f = 1907.6$  MHz;  $\sigma = 1.46$  mho/m;  $\epsilon_r = 40.9$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Left Section

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

- Probe: EX3DV3 - SN3504; ConvF(8.2, 8.2, 8.2); Calibrated: 2010/1/26
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: 2009/12/16
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1485
- Measurement SW: DASY5, V5.2 Build 157

---

### DASY Configuration for Program/11A Ch64:

Date/Time: 2010/4/26

Test Laboratory: Bureau Veritas ADT

**DUT: EDA; Type: MC75A6**

Communication System: WiFi; Frequency: 5320 MHz; Duty Cycle: 1:1

Medium: HSL5800 Medium parameters used:  $f = 5320$  MHz;  $\sigma = 4.8$  mho/m;  $\epsilon_r = 36.6$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Left Section

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

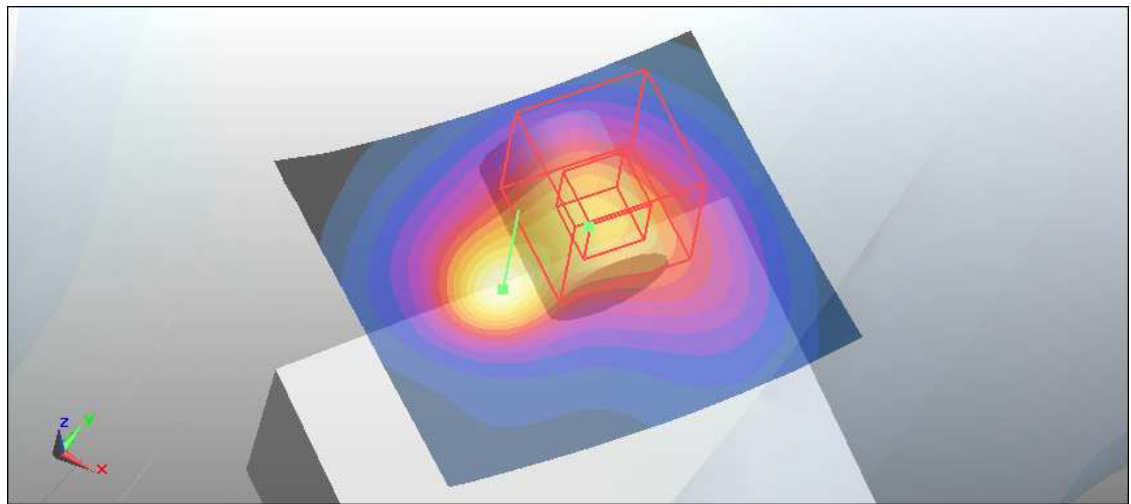
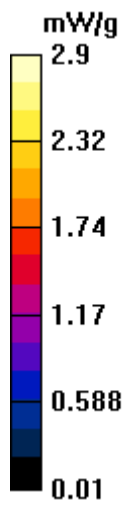
- Probe: EX3DV3 - SN3504; ConvF(4.62, 4.62, 4.62); Calibrated: 2010/1/26
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: 2009/12/16
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1485
- Measurement SW: DASY5, V5.2 Build 157

---

### Multi Band Result:

**SAR(1 g) = 1.44 mW/g; SAR(10 g) = 0.755 mW/g**

Maximum value of SAR (measured) = 2.9 mW/g



## M20-A6-2D-Left Head Tilt WCDMA1900 Ch9538 + 11A Ch100

### DASY Configuration for Program/WCDMA 1900 Ch9538::

Date/Time: 2010/4/25

Test Laboratory: Bureau Veritas ADT

**DUT: EDA; Type: MC75A6**

Communication System: UMTS\_3G; Frequency: 1907.6 MHz; Duty Cycle: 1:1

Medium: HSL1900 Medium parameters used:  $f = 1907.6$  MHz;  $\sigma = 1.46$  mho/m;  $\epsilon_r = 40.9$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Left Section

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

- Probe: EX3DV3 - SN3504; ConvF(8.2, 8.2, 8.2); Calibrated: 2010/1/26
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: 2009/12/16
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1485
- Measurement SW: DASY5, V5.2 Build 157

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### DASY Configuration for Program/11A Ch100:

Date/Time: 2010/4/26

Test Laboratory: Bureau Veritas ADT

**DUT: EDA; Type: MC75A6**

Communication System: WiFi; Frequency: 5500 MHz; Duty Cycle: 1:1

Medium: HSL5800 Medium parameters used:  $f = 5500$  MHz;  $\sigma = 5.02$  mho/m;  $\epsilon_r = 36.3$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Left Section

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

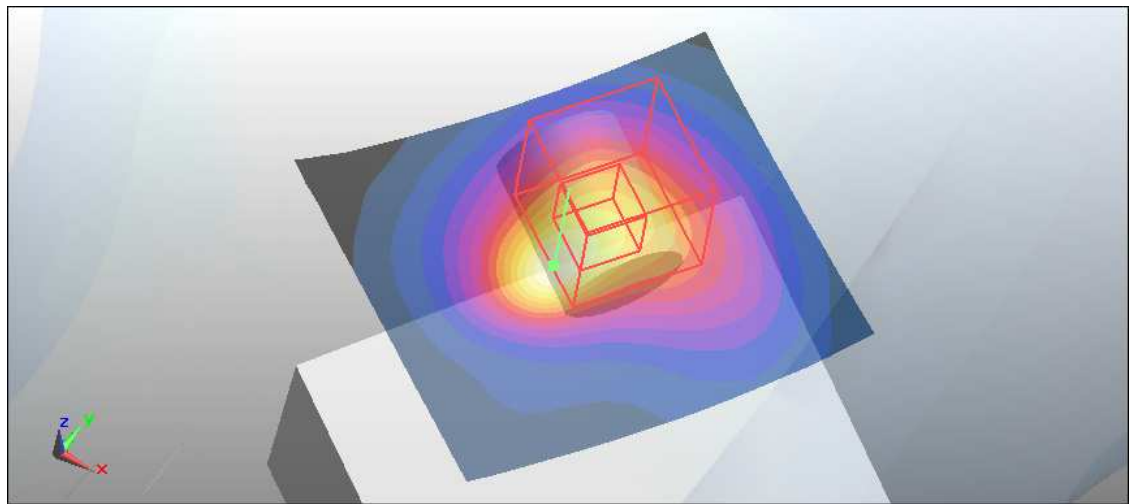
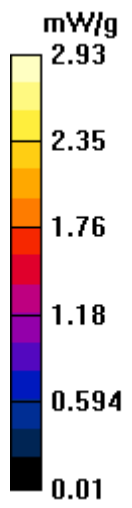
- Probe: EX3DV3 - SN3504; ConvF(4.51, 4.51, 4.51); Calibrated: 2010/1/26
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: 2009/12/16
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1485
- Measurement SW: DASY5, V5.2 Build 157

---

### Multi Band Result:

SAR(1 g) = **1.48** mW/g; SAR(10 g) = 0.792 mW/g

Maximum value of SAR (measured) = 2.93 mW/g



## M21-A6-2D-Left Head Tilt WCDMA1900 Ch9538 + 11A Ch 104

### DASY Configuration for Program/WCDMA 1900 Ch9538:

Date/Time: 2010/4/25

Test Laboratory: Bureau Veritas ADT

**DUT: EDA; Type: MC75A6**

Communication System: UMTS\_3G; Frequency: 1907.6 MHz; Duty Cycle: 1:1

Medium: HSL1900 Medium parameters used:  $f = 1907.6$  MHz;  $\sigma = 1.46$  mho/m;  $\epsilon_r = 40.9$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Left Section

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

- Probe: EX3DV3 - SN3504; ConvF(8.2, 8.2, 8.2); Calibrated: 2010/1/26
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: 2009/12/16
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1485
- Measurement SW: DASY5, V5.2 Build 157

---

### DASY Configuration for Program/11A Ch104:

Date/Time: 2010/4/26

Test Laboratory: Bureau Veritas ADT

**DUT: EDA; Type: MC75A6**

Communication System: WiFi; Frequency: 5520 MHz; Duty Cycle: 1:1

Medium: HSL5800 Medium parameters used:  $f = 5520$  MHz;  $\sigma = 5.04$  mho/m;  $\epsilon_r = 36.3$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Left Section

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

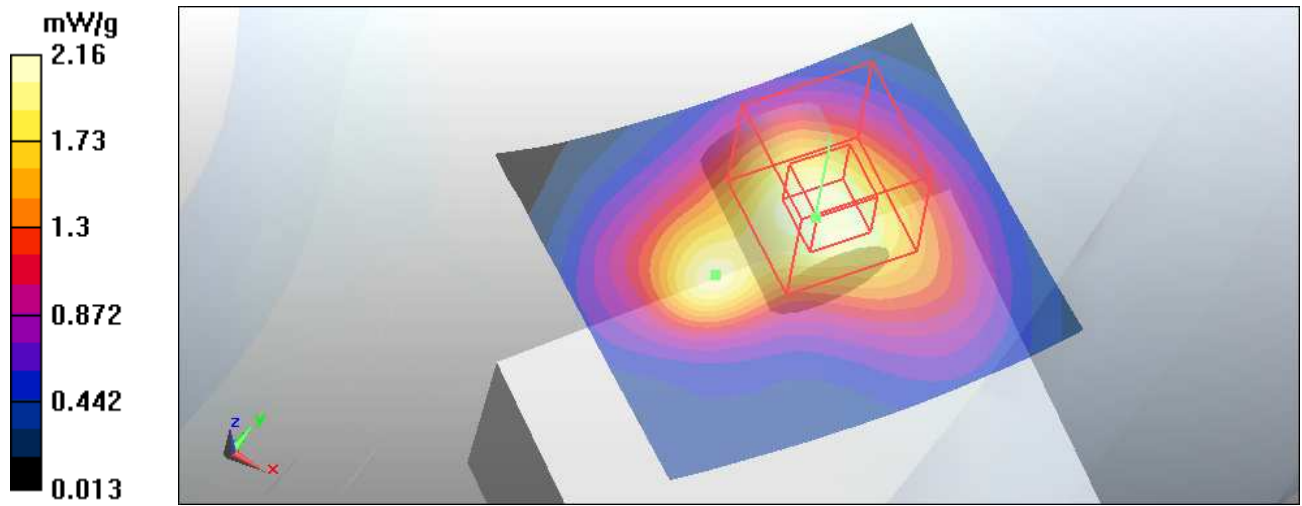
- Probe: EX3DV3 - SN3504; ConvF(4.51, 4.51, 4.51); Calibrated: 2010/1/26
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: 2009/12/16
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1485
- Measurement SW: DASY5, V5.2 Build 157

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### Multi Band Result:

**SAR(1 g) = 1.27 mW/g; SAR(10 g) = 0.722 mW/g**

Maximum value of SAR (measured) = 2.16 mW/g



## M22-A6-2D-Left Head Tilt WCDMA1900 Ch9538 + 11A Ch 116

### DASY Configuration for Program/WCDMA 1900 Ch9538::

Date/Time: 2010/4/25

Test Laboratory: Bureau Veritas ADT

**DUT: EDA; Type: MC75A6**

Communication System: UMTS\_3G; Frequency: 1907.6 MHz; Duty Cycle: 1:1

Medium: HSL1900 Medium parameters used:  $f = 1907.6$  MHz;  $\sigma = 1.46$  mho/m;  $\epsilon_r = 40.9$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Left Section

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

- Probe: EX3DV3 - SN3504; ConvF(8.2, 8.2, 8.2); Calibrated: 2010/1/26
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: 2009/12/16
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1485
- Measurement SW: DASY5, V5.2 Build 157

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### DASY Configuration for Program/11A Ch116:

Date/Time: 2010/4/27

Test Laboratory: Bureau Veritas ADT

**DUT: EDA; Type: MC75A6**

Communication System: WiFi; Frequency: 5580 MHz; Duty Cycle: 1:1

Medium: HSL5800 Medium parameters used:  $f = 5580$  MHz;  $\sigma = 5.14$  mho/m;  $\epsilon_r = 36.3$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Left Section

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

- Probe: EX3DV3 - SN3504; ConvF(4.25, 4.25, 4.25); Calibrated: 2010/1/26
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: 2009/12/16
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1485
- Measurement SW: DASY5, V5.2 Build 157

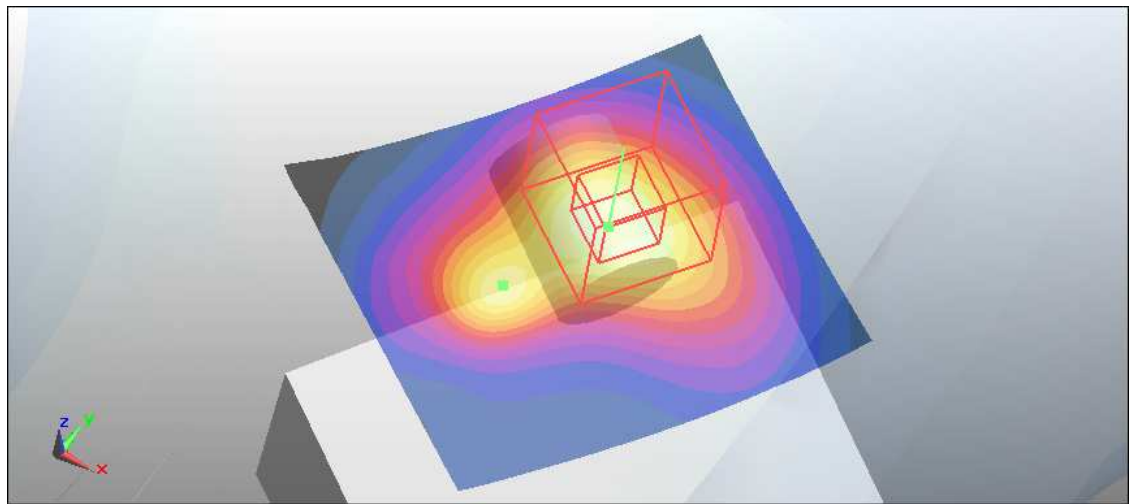
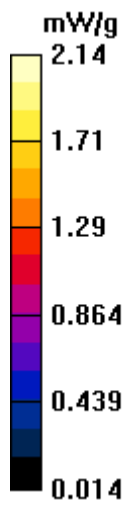
---

### Multi Band Result:

SAR(1 g) = **1.25** mW/g; SAR(10 g) = 0.713 mW/g

Maximum value of SAR (measured) = 2.14 mW/g





## M23-A6-2D-Left Head Tilt WCDMA1900 Ch9538 + 11A Ch120

### DASY Configuration for Program/WCDMA 1900 Ch9538::

Date/Time: 2010/4/25

Test Laboratory: Bureau Veritas ADT

**DUT: EDA; Type: MC75A6**

Communication System: UMTS\_3G; Frequency: 1907.6 MHz; Duty Cycle: 1:1

Medium: HSL1900 Medium parameters used:  $f = 1907.6$  MHz;  $\sigma = 1.46$  mho/m;  $\epsilon_r = 40.9$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Left Section

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

- Probe: EX3DV3 - SN3504; ConvF(8.2, 8.2, 8.2); Calibrated: 2010/1/26
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: 2009/12/16
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1485
- Measurement SW: DASY5, V5.2 Build 157

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### DASY Configuration for Program/11A Ch120:

Date/Time: 2010/4/27

Test Laboratory: Bureau Veritas ADT

**DUT: EDA; Type: MC75A6**

Communication System: WiFi; Frequency: 5600 MHz; Duty Cycle: 1:1

Medium: HSL5800 Medium parameters used:  $f = 5600$  MHz;  $\sigma = 5.16$  mho/m;  $\epsilon_r = 36.3$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Left Section

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

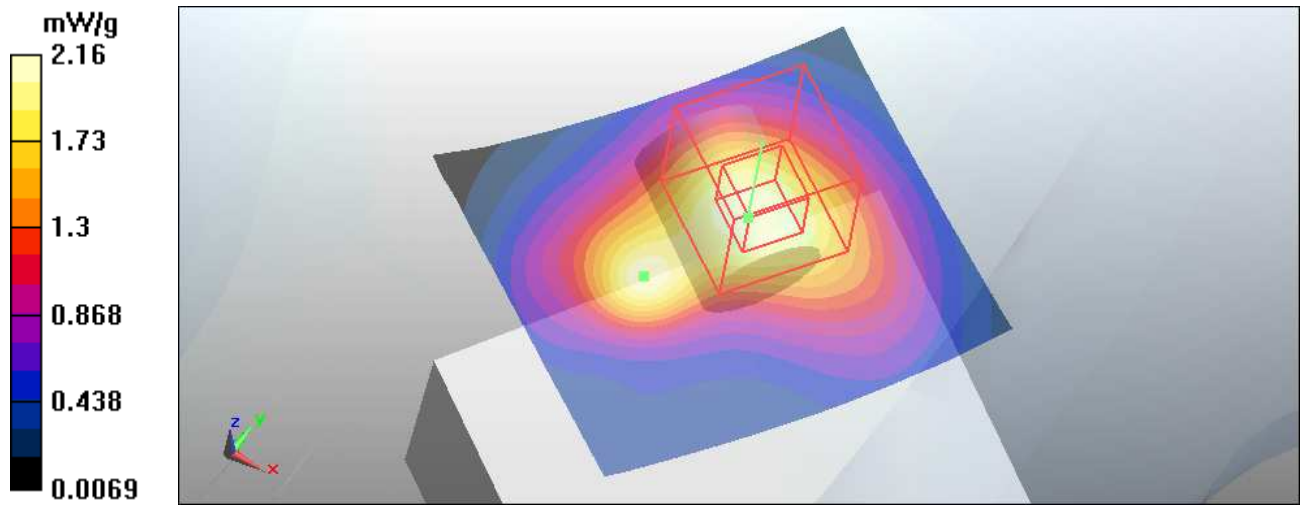
- Probe: EX3DV3 - SN3504; ConvF(4.25, 4.25, 4.25); Calibrated: 2010/1/26
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: 2009/12/16
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1485
- Measurement SW: DASY5, V5.2 Build 157

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### Multi Band Result:

**SAR(1 g) = 1.26 mW/g; SAR(10 g) = 0.720 mW/g**

Maximum value of SAR (measured) = 2.16 mW/g



## M24-A6-2D-Left Head Tilt WCDMA1900 Ch9538 + 11A Ch 124

### DASY Configuration for Program/WCDMA 1900 Ch9538:

Date/Time: 2010/4/25

Test Laboratory: Bureau Veritas ADT

**DUT: EDA; Type: MC75A6**

Communication System: UMTS\_3G; Frequency: 1907.6 MHz; Duty Cycle: 1:1

Medium: HSL1900 Medium parameters used:  $f = 1907.6$  MHz;  $\sigma = 1.46$  mho/m;  $\epsilon_r = 40.9$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Left Section

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

- Probe: EX3DV3 - SN3504; ConvF(8.2, 8.2, 8.2); Calibrated: 2010/1/26
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: 2009/12/16
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1485
- Measurement SW: DASY5, V5.2 Build 157

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### DASY Configuration for Program/11A Ch124:

Date/Time: 2010/4/27

Test Laboratory: Bureau Veritas ADT

**DUT: EDA; Type: MC75A6**

Communication System: WiFi; Frequency: 5620 MHz; Duty Cycle: 1:1

Medium: HSL5800 Medium parameters used:  $f = 5620$  MHz;  $\sigma = 5.19$  mho/m;  $\epsilon_r = 36.2$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Left Section

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

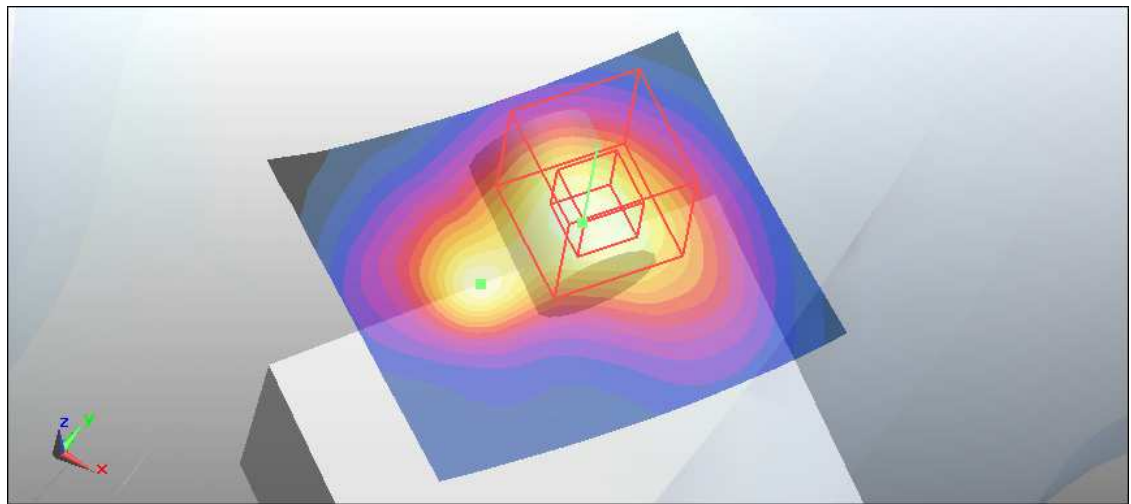
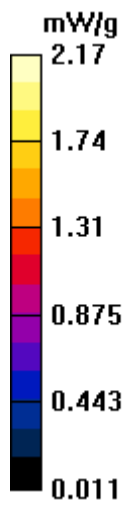
- Probe: EX3DV3 - SN3504; ConvF(4.25, 4.25, 4.25); Calibrated: 2010/1/26
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: 2009/12/16
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1485
- Measurement SW: DASY5, V5.2 Build 157

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### Multi Band Result:

**SAR(1 g) = 1.28 mW/g; SAR(10 g) = 0.734 mW/g**

Maximum value of SAR (measured) = 2.17 mW/g



## M25-A6-2D-Left Head Tilt WCDMA1900 Ch9538 + 11A Ch 136

### DASY Configuration for Program/WCDMA 1900 Ch9538::

Date/Time: 2010/4/25

Test Laboratory: Bureau Veritas ADT

**DUT: EDA; Type: MC75A6**

Communication System: UMTS\_3G; Frequency: 1907.6 MHz; Duty Cycle: 1:1

Medium: HSL1900 Medium parameters used:  $f = 1907.6$  MHz;  $\sigma = 1.46$  mho/m;  $\epsilon_r = 40.9$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Left Section

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

- Probe: EX3DV3 - SN3504; ConvF(8.2, 8.2, 8.2); Calibrated: 2010/1/26
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: 2009/12/16
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1485
- Measurement SW: DASY5, V5.2 Build 157

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### DASY Configuration for Program/11A Ch136:

Date/Time: 2010/4/27

Test Laboratory: Bureau Veritas ADT

**DUT: EDA; Type: MC75A6**

Communication System: WiFi; Frequency: 5680 MHz; Duty Cycle: 1:1

Medium: HSL5800 Medium parameters used:  $f = 5680$  MHz;  $\sigma = 5.26$  mho/m;  $\epsilon_r = 36.1$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Left Section

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

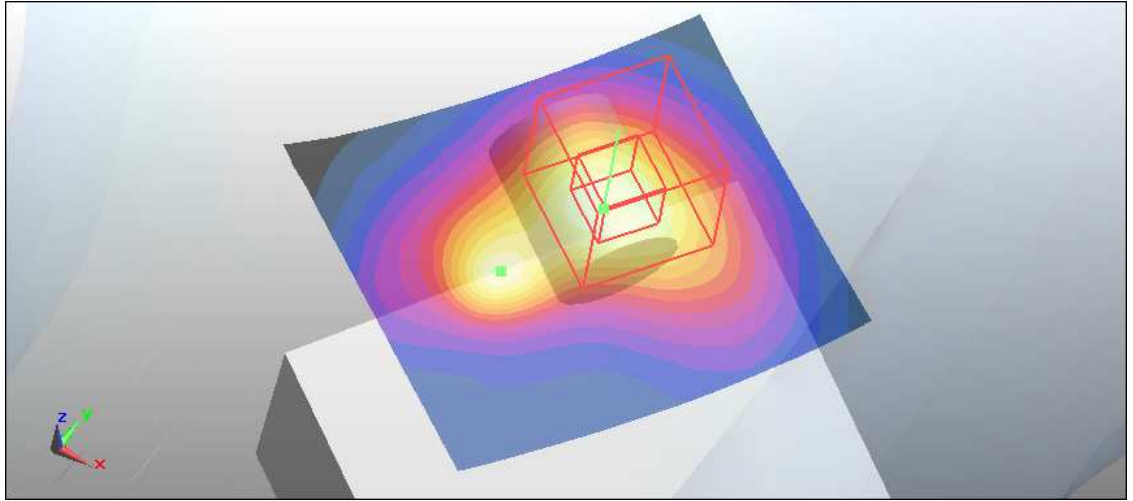
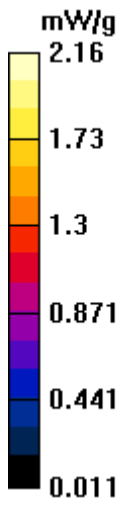
- Probe: EX3DV3 - SN3504; ConvF(4.25, 4.25, 4.25); Calibrated: 2010/1/26
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: 2009/12/16
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1485
- Measurement SW: DASY5, V5.2 Build 157

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### Multi Band Result:

SAR(1 g) = **1.26** mW/g; SAR(10 g) = 0.720 mW/g

Maximum value of SAR (measured) = 2.16 mW/g



## M26-A6-2D-Left Head Tilt WCDMA1900 Ch9538 + 11A Ch165

### DASY Configuration for Program/WCDMA 1900 Ch9538:

Date/Time: 2010/4/25

Test Laboratory: Bureau Veritas ADT

**DUT: EDA; Type: MC75A6**

Communication System: UMTS\_3G; Frequency: 1907.6 MHz; Duty Cycle: 1:1

Medium: HSL1900 Medium parameters used:  $f = 1907.6$  MHz;  $\sigma = 1.46$  mho/m;  $\epsilon_r = 40.9$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Left Section

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

- Probe: EX3DV3 - SN3504; ConvF(8.2, 8.2, 8.2); Calibrated: 2010/1/26
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: 2009/12/16
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1485
- Measurement SW: DASY5, V5.2 Build 157

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### DASY Configuration for Program/11A Ch165:

Date/Time: 2010/4/27

Test Laboratory: Bureau Veritas ADT

**DUT: EDA; Type: MC75A6**

Communication System: WiFi; Frequency: 5825 MHz; Duty Cycle: 1:1

Medium: HSL5800 Medium parameters used:  $f = 5825$  MHz;  $\sigma = 5.44$  mho/m;  $\epsilon_r = 35.9$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Left Section

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

- Probe: EX3DV3 - SN3504; ConvF(4.53, 4.53, 4.53); Calibrated: 2010/1/26
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: 2009/12/16
- Phantom: SAM with CRP; Type: SAM; Serial: TP-1485
- Measurement SW: DASY5, V5.2 Build 157

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### Multi Band Result:

**SAR(1 g) = 1.4 mW/g; SAR(10 g) = 0.767 mW/g**

Maximum value of SAR (measured) = 2.47 mW/g



