



Accredited testing laboratory

CNAS Registration number: L0310

**Report On SAR Test of HUAWEI IDEOS X6;
HSPA/UMTS/GPRS/GSM/EDGE Mobile Phone with Bluetooth; IDEOS X6
M/N: HUAWEI U9000/U9000**

Test report no. : SYBH(Z-SAR)023122010-2
Type identification : HUAWEI U9000/U9000
FCC ID : QISU9000
IC : 6369A-U9000
Test specification : IEEE 1528-2003
: ANSI C95.1-1999
: RSS-102 issue 4 (2010)
: OET Bulletin 65 Supplement C



Table of Contents

1 General Information 3

1.1 Notes 3

1.1.1 Statement of Compliance 3

1.2 Testing laboratory 4

1.3 Applicant and Manufacturer 4

1.4 Application details 4

1.5 Test item 5

1.5.1 EUT Description 6

1.6 Test specification(s) 6

1.6.1 RF exposure limits 7

1.7 Operating conditions during test 8

1.7.1 General description of test procedures 8

1.7.2 GSM/GPRS/EGPRS/DTM Test Configurations 8

1.7.3 WCDMA/HSPDA/HSUPA Test Configurations 9

2 Technical test 12

2.1 Summary of test results 12

2.2 Test environment 12

2.3 Measurement and test set-up 12

2.4 Measurement system 13

2.4.1 System Description 13

2.4.2 Test environment 14

2.4.3 Probe description 14

2.4.4 Phantom description 15

2.4.5 Device holder description 15

2.4.6 Scanning procedure 16

2.4.7 Spatial Peak SAR Evaluation 17

2.4.8 Data Storage and Evaluation 18

2.4.9 Test equipment utilized 20

2.4.10 Tissue simulating liquids: dielectric properties 21

2.4.11 Tissue simulating liquids: parameters 22

2.4.12 Measurement uncertainty evaluation for SAR test 23

2.4.13 Measurement uncertainty evaluation for system validation 24

2.4.14 System check 25

2.4.15 Validation procedure 26

2.5 Test Results 27

2.5.1 Conducted power measurements 27

2.5.2 Conducted power results 28

2.5.3 Test results (Head and Body SAR) 32

2.5.4 Extrapolated SAR Values 38

2.5.5 Multiple Transmitter Information 39

Annex 1 System performance verification 43

Annex 2 Measurement results (printout from DASY TM) 52

Annex 2.1 PCS 1900 MHz Head 52

Annex 2.2 PCS 1900 MHz Body 65

Annex 2.3 GSM 850 MHz Head 84

Annex 2.4 GSM 850 MHz Body 97

Annex 2.5 WCDMA 1900 MHz Head 116

Annex 2.6 WCDMA 1900 MHz Body 122

Annex 2.7 WCDMA 1700 MHz Head 129

Annex 2.8 WCDMA 1700 MHz Body 135

Annex 2.9 Z-axis scans 142

Annex 3 WiFi Measurement Result 190

Annex 4 Calibration parameters 190

Annex 5 Photo documentation 191

Annex 5.1 Test Facility 191

Annex 5.2 Test Positions 192

Annex 5.3 Liquid depth 197



1 General Information

1.1 Notes

The test results of this test report relate exclusively to the test item specified in 1.5. The HUAWEI does not assume responsibility for any conclusions and generalisations drawn from the test results with regard to other specimens or samples of the type of the equipment represented by the test item. The test report may only be reproduced or published in full. Reproduction or publication of extracts from the report requires the prior written approval of HUAWEI.

1.1.1 Statement of Compliance

The SAR values found for the HUAWEI U9000/U9000 are below the maximum recommended levels of 1.6 W/Kg as averaged over any 1 g tissue according to the FCC rule §2.1093, the ANSI/IEEE C 95.1:1999, the NCRP Report Number 86 for uncontrolled environment, according to the Health Canada's Safety Code 6 and the Industry Canada Radio Standards Specification RSS-102 for General Population/Uncontrolled exposure.

For body worn operation, this device has been tested and meets FCC RF exposure guidelines when used with any accessory that contains no metal and that positions the handset a minimum of 15 mm from the body. Use of other accessories may not ensure compliance with FCC RF exposure guidelines. The measurement together with the test system set-up is described in chapter 2.3 of this test report. A detailed description of the equipment under test can be found in chapter 1.5.

Test engineer:

2011-01-13	Luo Yusheng	
Date	Name	Signature

Reviewed by:

2011-01-13	Hu Zhongxun	
Date	Name	Signature

Approved by:

2011-01-13	Liu Chunlin	
Date	Name	Signature



1.2 Testing laboratory

Huawei Technologies Co.,Ltd.
Street: Bantian, Longgang District, Shenzhen
Country: P.R.China

Telephone: +86-755-28785513
Fax: +86-755-36834474

E-mail: huzhongxun@huawei.com
Internet: www.huawei.com

State of accreditation: The Test laboratory (area of testing) is accredited according to
ISO/IEC 17025.
CNAS Registration number: L0310

1.3 Applicant and Manufacturer

Name: HUAWEI TECHNOLOGIES CO., LTD

Street: Huawei Base, Bantian, Longgang District
Town: Shenzhen
Country: P.R.China

Contact: Wang Wei
Telephone: 0755-28780808

1.4 Application details

Date of receipt of application:	2010-11-30
Date of receipt of test item:	2010-11-13
Start/Date of test:	2010-12-14
End of test:	2011-01-13

1.5 Test item

Device Information:			
DUT Name:	HUAWEI IDEOS X6; HSPA/UMTS/GPRS/GSM/EDGE Mobile Phone with Bluetooth; IDEOS X6		
Type Identification:	HUAWEI U9000/U9000		
FCC ID :	QISU9000		
IC:	6369A-U9000		
IMEI No:	353273049996800		
Device Type :	portable device		
Exposure Category:	uncontrolled environment / general population		
Test device Production Information	production unit		
Device Operating Configurations:			
Operating Mode(s)	GSM850/1900,WCDMA AWS/1900,(Tested); Bluetooth, WIFI (Tested) .		
Test Modulation	GSM(GMSK), WCDMA(QPSK)		
Dive Class	A		
(E)GPRS Multislot Class (12)	Max Number of Timeslots in Uplink	4	
	Max Number of Timeslots in Downlink	4	
	Max Total Timeslot	5	
DTM Multislot Class (11)	Max Number of Timeslots in Uplink	3	
	Max Number of Timeslots in Downlink	4	
	Max Total Timeslot	5	
Operating Frequency Range(s)	Band	Tx (MHz)	Rx (MHz)
	GSM 1900	1850.2 ~1909.8	1930.2 ~1989.8
	GSM850	824.2 ~ 848.8	869.2 ~893.8
	WCDMA Band II	1852.4 ~1907.6	1932.4 ~1987.6
	WCDMA Band IV	1712.4~1752.6	2112.4~2152.6
Power Class :	1, tested with power level 0 (GSM 1900)		
	4, tested with power level 5 (GSM 850)		
	3, tested with power control all up bits(WCDMA Band II)		
	3, tested with power control all up bits(WCDMA Band IV)		
Test Channels (low-mid-high) :	512-661-810 (GSM 1900)		
	128-190-251(GSM 850)		
	9262-9400-9538(WCDMA Band II)		
	1312-1413-1513(WCDMA Band IV)		
Hardware Version :	PR2.32		
Software Version :	U9000V100R001C00B100		
Antenna Type :	Integrated antenna		
Accessories/Body-worn Configurations:	Stereo headset		
Battery Options :	Huawei Technologies Co., Ltd. Rechargeable Li-ion Battery Model: HHB4Z1; Rated capacity: 1400mAh Nominal Voltage: --- +3.7V; Charging Voltage: --- +4.2V; S/N: /		
Charger Options:	Manufacturer: Huawei Technologies Co., Ltd. AC/DC Adapter Model : HW-050100U1W Input Voltage: ~100-240V 50/60Hz 0.2A Output Voltage: 5V --- 1A; Rated Power: 5W S/N: HKAA72398918		

Table 1: Device information and operating configurations



1.5.1 EUT Description

HUAWEI IDEOS X6; HSPA/UMTS/GPRS/GSM/EDGE Mobile Phone with Bluetooth; IDEOS X6-HUAWEI U9000/U9000 is subscriber equipment in the WCDMA/GSM system. The HSPA/UMTS frequency band is Band I, Band II, Band IV and Band VIII, only Band II and Band IV can be used in this report. The GSM/GPRS/EDGE frequency band includes GSM850 and GSM900 and DCS1800 and PCS1900, but only GSM850 and PCS1900MHz band test data included in this report. The Mobile Phone implements such functions as RF signal receiving/transmitting, HSPA/UMTS and GSM/GPRS/EDGE protocol processing, voice, video, MMS service, GPS and WIFI etc. Externally it provides micro SD card interface, earphone port (to provide voice service) and USIM card interface. It also provides Bluetooth module to synchronize data between a PC and the phone, or to use the built-in modem of the phone to access the Internet with a PC, or to exchange data with other Bluetooth devices.

1.6 Test specification(s)

Supplement C (Edition 01-01) to OET Bulletin 65 (Edition 97-01)

IEEE 1528-2003 (April 21, 2003): Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques

RSS-102: Radio Frequency Exposure Compliance of Radiocommunication Apparatus (All Frequency Bands (Issue 4 of March 2010)

Canada's Safety Code 6: Limits of Human Exposure to Radiofrequency Electromagnetic Fields in the Frequency Range from 3 kHz to 300 GHz (99-EHD-237)

IEEE Std C95.3 – 1991, IEEE Recommended Practice for the Measurement of Potentially Hazardous Electromagnetic Fields – RF and Microwave.

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

EN62209-2: (2010) Human exposure to radio frequency fields from hand-held and body-mounted wireless communication devices – Human models, instrumentation, and procedures – Part 2: Procedure to determine the specific absorption rate (SAR) for wireless communication devices used in close proximity to the human body (frequency range of 30 MHz to 6 GHz) (IEC 62209-2:Ed1.0(2010-3))

941225 D01 SAR test for 3G devices v02 ,Published on Nov 13 2009

941225 D03 SAR Test Reduction GSM GPRS EDGE vo1 ,Published on Nov 13 2009

941225 D04 SAR Test Reduction GSM DTM ,Published on Jan 27 2010

648474 D01 SAR Evaluation Considerations for Handsets with Multiple Transmitters and Antennas

1.6.1 RF exposure limits

Human Exposure	Uncontrolled Environment General Population	Controlled Environment Occupational
Spatial Peak SAR* (Brain)	1.60 Mw/g	8.00 Mw/g
Spatial Average SAR** (Whole Body)	0.08 Mw/g	0.40 Mw/g
Spatial Peak SAR*** (Hands/Feet/Ankle/Wrist)	4.00 Mw/g	20.00 Mw/g

Table 2: RF exposure limits

The limit applied in this test report is shown in **bold** letters

Notes:

- * The Spatial Peak value of the SAR averaged over any 1 gram of tissue (defined as a tissue volume in the shape of a cube) and over the appropriate averaging time
- ** The Spatial Average value of the SAR averaged over the whole body.
- *** The Spatial Peak value of the SAR averaged over any 10 grams of tissue (defined as a tissue volume in the shape of a cube) and over the appropriate averaging time.

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

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

1.7 Operating conditions during test

1.7.1 General description of test procedures

The DUT is tested using a CMU200 communications tester as controller unit to set test channels and maximum output power to the DUT, as well as for measuring the conducted peak power.

Test positions as described in the tables above are in accordance with the specified test standard.

Tests in body position are performed with the maximum number of timeslots in uplink.

Tests in head position are performed in voice mode with 1 timeslot unless GPRS function allows parallel voice and data traffic on 2 or more timeslots.

Conducted output power was measured using an integrated RF connector and attached RF cable.

1.7.2 GSM/GPRS/EGPRS/DTM Test Configurations

SAR tests for GSM 850 and GSM 1900, a communication link is set up with a base station by air link. Using CMU200 the power lever is set to “5” and “0” in SAR of GSM 850 and GSM 1900. The tests in the band of GSM 850 and GSM 1900 are performed in the mode of GPRS/EGPRS/DTM function. Since the GPRS class is 12 for this EUT, it has at most 4 timeslots in uplink and at most 4 timeslots in downlink, the maximum total timeslot is 5. The EGPRS class is 12 for this EUT, it has at most 4 timeslots in uplink, and at most 4 timeslots in downlink, the maximum total timeslot is 5. The DTM class is 11 for this EUT, it has at most 3 timeslots in uplink, and at most 4 timeslots in downlink, the maximum total timeslot is 5.

When SAR tests for EGPRS mode is necessary, GMSK modulation should be used to minimize SAR measurement error due to higher peak-to-average power (PAR) ratios inherent in 8-PSK.

According to specification 3GPP TS 51.010, the maximum power of the GSM can do the power reduction for the multi-slot. The allowed power reduction in the multi-slot configuration is as following:

GSM1900 Number of timeslots in uplink assignment	Reduction of maximum output power, (Db)		
	GPRS (GMSK)	EGPRS (8PSK)	EGPRS (GMSK)
1	0	0	0
2	3	3	3
3	4.8	4.8	4.8
4	6	6	6

Table 3: The allowed power reduction in the multi-slot configuration of GSM1900

GSM850 Number of timeslots in uplink assignment	Reduction of maximum output power, (Db)		
	GPRS (GMSK)	EGPRS (8PSK)	EGPRS (GMSK)
1	0	0	0
2	3	3	3
3	4.8	4.8	4.8
4	6	6	6

Table 4: The allowed power reduction in the multi-slot configuration of GSM850

SAR for DTM may be evaluated either with the device operating in DTM using one CS plus the maximum PS timeslots or by summing the single timeslot CS and multislot PS SAR. A communication testset with DTM support is necessary to configure the test device for DTM SAR measurements.

Alternatively, the single slot CS GSM/GMSK voice-mode SAR for head and body-worn use should be added respectively to the PS (E)GPRS multislot data-mode SAR applicable to such head and body operating conditions to demonstrate SAR compliance for DTM.

1.7.3 WCDMA/HSPDA/HSUPA Test Configurations

1) WCDMA

As the SAR body tests for WCDMA Band II and WCDMA Band IV, we established the radio link through call processing. The maximum output power were verified on high, middle and low channels for each test band according to 3GPP TS 34.121 with the following configuration:

- 1) 12.2kbps RMC, 64,144,384 kbps RMC with TPC set to 'all 1'.
- 2) Test loop Mode 1.

For the output power, the configurations for the DPCCH and DPDCH₁ are as followed (EUT do not support the DPDCH_{2-n})

	Channel Bit Rate (kbps)	Channel Symbol Rate (ksps)	Spreading Factor	Spreading Code Number	Bits/Slot
DPCCH	15	15	256	0	10
DPDCH ₁	15	15	256	64	10
	30	30	128	32	20
	60	60	64	16	40
	120	120	32	8	80
	240	240	16	4	160
	480	480	8	2	320
	960	960	4	1	640
DPDCH _n	960	960	4	1, 2, 3	640

SAR for body exposure configurations is measured using the 12.2 kbps RMC with the TPC bits configured to all "1s". SAR for other spreading codes and multiple DPDCH_n, when supported by the EUT, are not required when the maximum average outputs of each RF channel, for each spreading code and DPDCH_n configuration, are less than ¼ Db higher than those measured in 12.2 kbps RMC.

2) HSDPA

SAR for body exposure configurations is measured according to the "Body SAR Measurements" procedures of 3G device. In addition, body SAR is also measured for HSDPA when the maximum average outputs of each RF channel with HSDPA active is at ¼ Db higher than that measured without HSDPA using 12.2kbps RMC or the maximum SAR 12.2kbps RMC is above 75% of the SAR limit. Body SAR for HSDPA is measured using an FRC with H-Set 1 in Sub-test 1 and a 12.2kbps RMC configured in Test Loop Mode 1, using the highest body SAR configuration in 12.2 kbps RMC without HSDPA.

HSDPA should be configured according to UE category of a test device. The number of HS-DSCH/ HS-PDSCHs, HAPRQ processes, minimum inter-TTI interval, transport block sizes and RV coding sequence are defined by the H-set. To maintain a consistent test configuration and stable transmission condition, QPSK is used in the H-set for SAR testing. HS-DPCCH should be configured with a CQI feedback cycle of 4ms with a CQI repetition factor of 2 to maintain a constant rate of active CQI slots. The β_c and β_d gain factors for DPCCH and DPDCH were set according to the values in the below table, β_{hs} for HS-DPCCH is set automatically to the correct value when ΔACK , $\Delta NACK$, $\Delta CQI = 8$. The variation of the β_c / β_d ratio causes a power reduction at sub-tests 2 – 4.

Sub-test	β_c	β_d	β_d (SF)	β_c / β_d	β_{hs} (1)	CM(Db)(2)
1	2/15	15/15	64	2/15	4/15	0.0
2	12/15(3)	15/15(3)	64	12/15(3)	24/15	1.0
3	15/15	8/15	64	15/8	30/15	1.5
4	15/15	4/15	64	15/4	30/15	1.5

Note 1: ΔACK , $\Delta NACK$ and $\Delta CQI = 8$. $A_{hs} = \beta_{hs} / \beta_c = 30/15$. $\beta_{hs} = 30/15 * \beta_c$

Note 2: CM = 1 for $\beta_c / \beta_d = 12/15$, $\beta_{hs} / \beta_c = 24/15$

Note 3: For subtest 2 the β_c / β_d ratio of 12/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signaled gain factors for the reference TFC (TF1, TF1) to $\beta_c = 11/15$ and $\beta_d = 15/15$

Table 5: Sub-tests for UMTS Release 5 HSDPA

The measurements were performed with a Fixed Reference Channel (FRC) and H-Set 1 QPSK.

Parameter	Value
Nominal average inf. Bit rate	534 kbit/s
Inter-TTI Distance	3 TTI's
Number of HARQ Processes	2 Processes
Information Bit Payload	3202 Bits
MAC-d PDU size	336 Bits
Number Code Blocks	1 Block
Binary Channel Bits Per TTI	4800 Bits
Total Available SMLs in UE	19200 SMLs
Number of SMLs per HARQ Process	9600 SMLs
Coding Rate	0.67
Number of Physical Channel Codes	5

Table 6: settings of required H-Set 1 QPSK acc. To 3GPP 34.121

HS-DSCH Category	Maximum HS-DSCH Codes Received	Minimum Inter-TTI Interval	Maximum HS-DSCH Transport Block Bits/HS-DSCH TTI	Total Soft Channel Bits
1	5	3	7298	19200
2	5	3	7298	28800
3	5	2	7298	28800
4	5	2	7298	38400
5	5	1	7298	57600
6	5	1	7298	67200
7	10	1	14411	115200
8	10	1	14411	134400
9	15	1	25251	172800
10	15	1	27952	172800
11	5	2	3630	14400
12	5	1	3630	28800
13	15	1	34800	259200
14	15	1	42196	259200
15	15	1	23370	345600
16	15	1	27952	345600

Table 7: HSDPA UE category

3) HSUPA

Body SAR is also measured for HSDPA when the maximum average outputs of each RF channel with HSDPA active is at ¼ Db higher than that measured without HSDPA using 12.2kbps RMC or the maximum SAR 12.2kbps RMC is above 75% of the SAR limit. Body SAR for HSPA is measured with E-DCH Sub-test 5, using H-set 1 and QPSK for FRC and 12.2kbps RMC configured in Test Loop Mode 1 with power control algorithm 2, according to the highest body SAR configuration in 12.2 kbps RMC without HSPA.



Due to inner loop power control requirements in HSDPA, a commercial communication test set should be used for the output power and SAR tests. The 12.2 kbps RMC, FRC H-set 1 and E-DCH configurations for HSDPA should be configured according to the β values indicated below as well as other applicable procedures described in the 'WCDMA Handset' and 'Release 5 HSDPA Data Device' sections of 3G device.

Sub-test	β_c	β_d	β_d (SF)	β_c/β_d	$\beta_{hs}^{(1)}$	β_{ec}	β_{ed}	β_{ec} (SF)	β_{ed} (code)	CM ⁽²⁾ (Db)	MPR (Db)	AG ⁽⁴⁾ Index	E-TFCI
1	11/15 ⁽³⁾	15/15 ⁽³⁾	64	11/15 ⁽³⁾	22/15	209/225	1039/225	4	1	1.0	0.0	20	75
2	6/15	15/15	64	6/15	12/15	12/15	94/75	4	1	3.0	2.0	12	67
3	15/15	9/15	64	15/9	30/15	30/15	$\beta_{ed1}:47/15$ $\beta_{ed2}:47/15$	4	2	2.0	1.0	15	92
4	2/15	15/15	64	2/15	4/15	2/15	56/75	4	1	3.0	2.0	17	71
5	15/15 ⁽⁴⁾	15/15 ⁽⁴⁾	64	15/15 ⁽⁴⁾	30/15	24/15	134/15	4	1	1.0	0.0	21	81

Note 1: Δ ACK, Δ NACK and Δ CQI = 8 . $A_{hs} = \beta_{hs}/\beta_c = 30/15$. $\beta_{hs} = 30/15 * \beta_c$
 Note 2: CM = 1 for $\beta_c/\beta_d = 12/15$, $\beta_{hs}/\beta_c = 24/15$. For all other combinations of DPDCH, DPCCH, HS-DPCCH, E-DPDCH and E-DPCCH the MPR is based on the relative CM difference
 Note 3 : For subtest 1 the β_c/β_d ratio of 11/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signalled gain factors for the reference TFC (TF1,TF1) to $\beta_c = 10/15$ and $\beta_d = 15/15$
 Note 4 : For subtest 5 the β_c/β_d ratio of 15/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signalled gain factors for the reference TFC (TF1,TF1) to $\beta_c = 14/15$ and $\beta_d = 15/15$
 Note 5 : Testing UE using E-DPDCH Physical Layer category 1 Sub-test 3 is not required according to TS 25.306 Table 5.1g
 Note 6: β_{ed} can not be set directly; it is set by Absolute Grant Value.

Table 8: Subtests for UMTS Release 6 HSUPA

UE E-DCH Category	Maximum E-DCH Codes Transmitted	Number of HARQ Processes	E-DCH TTI(ms)	Minimum Spreading Factor	Maximum E-DCH Transport Block Bits	Max Rate (Mbps)
1	1	4	10	4	7110	0.7296
2	2	8	2	4	2798	1.4592
	2	4	10	4	14484	
3	2	4	10	4	14484	1.4592
4	2	8	2	2	5772	2.9185
	2	4	10	2	20000	2.00
5	2	4	10	2	20000	2.00
6 (No DPDCH)	4	8	10	2SF2&2SF4	11484	5.76
	4	4	2		20000	2.00
7 (No DPDCH)	4	8	2	2SF2&2SF4	22996	?
	4	4	10		20000	?

NOTE: When 4 codes are transmitted in parallel, two codes shall be transmitted with SF2 and two with SF4. UE categories 1 to 6 support QPSK only. UE category 7 supports QPSK and 16QAM.(TS25.306-7.3.0)

Table 9: HSUPA UE category

2 Technical test

2.1 Summary of test results

Band	SAR _{1g} (W/kg)		Test Result
	Head	Body	
GSM 1900	0.578	0.629	PASS
GSM 850	0.759	1.111	
WCDMA Band II	0.680	0.770	
WCDMA Band IV	0.533	1.190	
WiFi 2450	0.956	0.107	

Table 10: The Maximum SAR1g Values for Head and Body position

Band		Maximum Conducted Power (dBm)	Maximum Average Power (dBm)
GSM 1900	GSM	29.45	20.45
	GPRS	27.06	21.06
	EGPRS (GMSK)	24.02	21.02
	EGPRS (8PSK)	22.55	16.55
GSM850	GSM	32.46	23.46
	GPRS	32.46	23.46
	EGPRS (GMSK)	32.48	23.48
	EGPRS (8PSK)	20.64	17.64
WCDMA1900	RMC (QPSK)	23.04	/
	HSDPA (QPSK)	22.77	/
	HSUPA (QPSK)	22.66	/
WCDMA850	RMC (QPSK)	23.07	/
	HSDPA (QPSK)	22.59	/
	HSUPA (QPSK)	21.86	/
WiFi 2450	802.11b	19.10	17.97
	802.11g	17.98	9.93

Table 11: The Maximum Power and Average Power

2.2 Test environment

General Environment conditions in the test area are as follows:

Ambient temperature:	20°C – 24°C
Tissue simulating liquid:	20°C – 24°C
Humidity:	30% – 70%

Exact temperature values for each test are shown in the table(s) under 2.5. and/or on the measurement plots.

2.3 Measurement and test set-up

The measurement system is described in chapter 2.4.

The test setup for the system validation can be found in chapter 2.4.14.

A description of positioning and test signal control can be found in chapter 2.5 together with the test results.

2.4.2 Test environment

The DASY5 measurement system is placed at the head end of a room with dimensions: 4.5 x 4 x 3 m³, the SAM phantom is placed in a distance of 1.3 m from the side walls and 1.1m from the rear wall.

Picture 1 of the photo documentation shows a complete view of the test environment. The system allows the measurement of SAR values larger than 0.005 mW/g.

2.4.3 Probe description

Isotropic E-Field Probe EX3DV4 for Dosimetric Measurements

Technical data according to manufacturer information	
Construction	Symmetrical design with triangular core Built-in optical fiber for surface detection system Built-in shielding against static charges PEEK enclosure material (resistant to organic solvents, e.g., glycolether)
Calibration	In air from 10 MHz to 2.5 GHz In head tissue simulating liquid (HSL) at 900 (800-1000) MHz and 1.8 GHz (1700-1910 MHz) (accuracy $\pm 11\%$; k=2) Calibration for other liquids and frequencies upon request
Frequency	10 MHz to 3 GHz (dosimetry); Linearity: ± 0.2 dB (30 MHz to 3 GHz)
Directivity	± 0.2 dB in HSL (rotation around probe axis) ± 0.4 dB in HSL (rotation normal to probe axis)
Dynamic range	5 μ W/g to > 100 mW/g; Linearity: ± 0.2 dB
Optical Surface Detection	± 0.2 mm repeatability in air and clear liquids over diffuse reflecting surfaces (EX3DV4 only)
Dimensions	Overall length: 337 mm Tip length: 9 mm Body diameter: 10 mm Tip diameter: 2.5 mm Distance from probe tip to dipole centers: 1.0 mm
Application	General dosimetry up to 3 GHz Compliance tests of mobile phones Fast automatic scanning in arbitrary phantoms (EX3DV4)

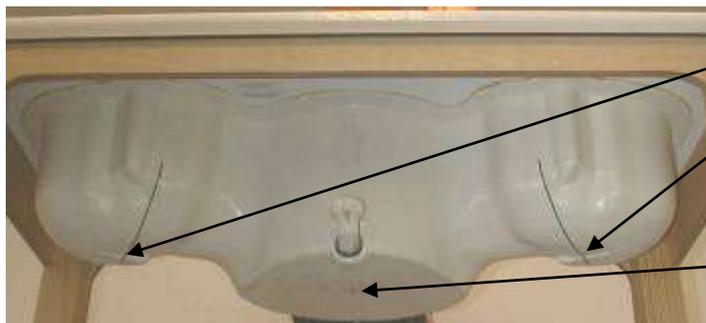
Isotropic E-Field Probe ES3DV3 for Dosimetric Measurements

Technical data according to manufacturer information	
Construction	Symmetrical design with triangular core Interleaved sensors Built-in shielding against static charges PEEK enclosure material (resistant to organic solvents, e.g., DGBE)
Calibration	ISO/IEC 17025 calibration service available.
Frequency	10 MHz to 4 GHz; Linearity: ± 0.2 dB (30 MHz to 4 GHz)
Directivity	± 0.2 dB in HSL (rotation around probe axis) ± 0.3 dB in tissue material (rotation normal to probe axis)
Dynamic range	5 μ W/g to > 100 mW/g; Linearity: ± 0.2 dB
Dimensions	Overall length: 330 mm (Tip: 20 mm) Tip diameter: 3.9 mm (Body: 12 mm) Distance from probe tip to dipole centers: 2.0 mm
Application	General dosimetry up to 4 GHz Dosimetry in strong gradient fields

2.4.4 Phantom description

The used SAM Phantom meets the requirements specified in Edition 01-01 of Supplement C to OET Bulletin 65 for Specific Absorption Rate (SAR) measurements.

The phantom consists of a fibreglass shell integrated in a wooden table. It allows left-hand and right-hand head as well as body-worn measurements with a maximum liquid depth of 18 cm in head position and 22 cm in planar position (body measurements). The thickness of the Phantom shell is 2 mm +/- 0.1 mm.



ear reference point right hand side

ear reference point left hand side

reference point flat position

2.4.5 Device holder description

The DASY5 device holder has two scales for device rotation (with respect to the body axis) and the device inclination (with respect to the line between the ear openings). The plane between the ear openings and the mouth tip has a rotation angle of 65°. The bottom plate contains three pair of bolts for locking the device holder. The device holder positions are adjusted to the standard measurement positions in the three sections. This device holder is used for standard mobile phones or PDA's only. If necessary an additional support of polystyrene material is used.



Larger DUT's (e.g. notebooks) cannot be tested using this device holder. Instead a support of bigger polystyrene cubes and thin polystyrene plates is used to position the DUT in all relevant positions to find and measure spots with maximum SAR values.

Therefore those devices are normally only tested at the flat part of the SAM.

2.4.6 Scanning procedure

The DASY5 installation includes predefined files with recommended procedures for measurements and validation. They are read-only document files and destined as fully defined but unmeasured masks. All test positions (head or body-worn) are tested with the same configuration of test steps differing only in the grid definition for the different test positions.

- The „reference“ and „drift“ measurements 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 DUT's output power and should vary max. +/- 5 %.
- The „surface check“ measurement tests the optical surface detection system of the DASY5 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 $\pm 0.1\text{mm}$). To prevent wrong results tests are only executed when the liquid is free of air bubbles. The difference between the optical surface detection and the actual surface depends on the probe and is specified with each probe. (It does not depend on the surface reflectivity or the probe angle to the surface within $\pm 30^\circ$.)
- The „area scan“ measures the SAR above the DUT or verification dipole on a parallel plane to the surface. It is used to locate the approximate location of the peak SAR with 2D spline interpolation. The robot performs a stepped movement along one grid axis while the local electrical field strength is measured by the probe. The probe is touching the surface of the SAM during acquisition of measurement values. The standard scan uses large grid spacing for faster measurement. Standard grid spacing for head measurements is 15 mm in x- and y- dimension. If a finer resolution is needed, the grid spacing can be reduced. Grid spacing and orientation have no influence on the SAR result. For special applications where the standard scan method does not find the peak SAR within the grid, e.g. mobile phones with flip cover, the grid can be adapted in orientation. Results of this coarse scan are shown in annex 2.
- A „7x7x7 zoom scan“ measures the field in a volume around the 2D peak SAR value acquired in the previous „coarse“ scan. This is a fine 7x7 grid where the robot additionally moves the probe in 7 steps along the z-axis away from the bottom of the Phantom. Grid spacing for the cube measurement is 5 mm in x and y-direction and 5 mm in z-direction. DASY5 is also able to perform repeated zoom scans if more than 1 peak is found during area scan. In this document, the evaluated peak 1g and 10g averaged SAR values are shown in the 2D-graphics in annex 2. Test results relevant for the specified standard (see chapter 1.6.) are shown in table form in chapter 2.5.
- A Z-axis scan measures the total SAR value at the x-and y-position of the maximum SAR value found during the cube 7x7x7 scan. The probe is moved away in z-direction from the bottom of the SAM phantom in 2mm steps. This measurement shows the continuity of the liquid and can - depending in the field strength – also show the liquid depth. A z-axis scan of the measurement with maximum SAR value is shown in annex 2.

2.4.7 Spatial Peak SAR Evaluation

The spatial peak SAR - value for 1 and 10 g is evaluated after the Cube measurements have been done. The basis of the evaluation are the SAR values measured at the points of the fine cube grid consisting of 7 x 7 x 7 points. The algorithm that finds the maximal averaged volume is separated into three different stages.

- The data between the dipole center of the probe and the surface of the phantom are extrapolated. This data cannot be measured since the center of the dipole is 2.7 mm away from the tip of the probe and the distance between the surface and the lowest measuring point is about 1 mm (see probe calibration sheet). The extrapolated data from a cube measurement can be visualized by selecting 'Graph Evaluated'.
- The maximum interpolated value is searched with a straight-forward algorithm. Around this maximum the SAR - values averaged over the spatial volumes (1g or 10 g) are computed using the 3d-spline interpolation algorithm. If the volume cannot be evaluated (i.e., if a part of the grid was cut off by the boundary of the measurement area) the evaluation will be started on the corners of the bottom plane of the cube.
- All neighboring volumes are evaluated until no neighboring volume with a higher average value is found.

Extrapolation

The extrapolation is based on a least square algorithm [W. Gander, Computermathematik, p.168-180]. Through the points in the first 3 cm along the z-axis, polynomials of order four are calculated. These polynomials are then used to evaluate the points between the surface and the probe tip. The points, calculated from the surface, have a distance of 1 mm from each other.

Interpolation

The interpolation of the points is done with a 3d-Spline. The 3d-Spline is composed of three one-dimensional splines with the "Not a knot"-condition [W. Gander, Computermathematik, p.141-150] (x, y and z -direction) [Numerical Recipes in C, Second Edition, p.123ff].

Volume Averaging

At First the size of the cube is calculated. Then the volume is integrated with the trapezoidal algorithm. 8000 points (20x20x20) are interpolated to calculate the average.

Advanced Extrapolation

DASY5 uses the advanced extrapolation option which is able to compensate boundary effects on E-field probes.



2.4.8 Data Storage and Evaluation

Data Storage

The DASY5 software stores the acquired data from the data acquisition electronics as raw data (in microvolt readings from the probe sensors), together with all necessary software parameters for the data evaluation (probe calibration data, liquid parameters and device frequency and modulation data) in measurement files with the extension ".DA4". The software evaluates the desired unit and format for output each time the data is visualized or exported. This allows verification of the complete software setup even after the measurement and allows correction of incorrect parameter settings. For example, if a measurement has been performed with a wrong crest factor parameter in the device setup, the parameter can be corrected afterwards and the data can be re-evaluated.

The measured data can be visualized or exported in different units or formats, depending on the selected probe type ([V/m], [A/m], [°C], [mW/g], [mW/cm²], [dBrel], etc.). Some of these units are not available in certain situations or show meaningless results, e.g., a SAR output in a lossless media will always be zero. Raw data can also be exported to perform the evaluation with other software packages.

Data Evaluation by SEMCAD

The SEMCAD software automatically executes the following procedures to calculate the field units from the microvolt readings at the probe connector. The parameters used in the evaluation are stored in the configuration modules of the software:

Probe parameters:	- Sensitivity	Norm _i , a ₁₀ , a ₁₁ , a ₁₂
	- Conversion factor	ConvF _i
	- Diode compression point	Dcpi
Device parameters:	- Frequency	f
	- Crest factor	cf
Media parameters:	- Conductivity	σ
	- Density	ρ

These parameters must be set correctly in the software. They can be found in the component documents or they can be imported into the software from the configuration files issued for the DASY5 components. In the direct measuring mode of the multimeter option, the parameters of the actual system setup are used. In the scan visualization and export modes, the parameters stored in the corresponding document files are used.

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:

$$V_i = U_i + U_i^2 \cdot cf/dcp_i$$

with V_i = compensated signal of channel i (i = x, y, z)
 U_i = input signal of channel i (i = x, y, z)
 cf = crest factor of exciting field (DASY parameter)
 dcp_i = diode compression point (DASY parameter)

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

E-field probes:
$$E_i = (V_i / Norm_i \cdot ConvF)^{1/2}$$

H-field probes:
$$H_i = (V_i)^{1/2} \cdot (a_{i0} + a_{i1}f + a_{i2}f^2)/f$$

with V_i = compensated signal of channel i (i = x, y, z)
 $Norm_i$ = sensor sensitivity of channel i (i = x, y, z)
 [mV/(V/m)²] for E-field Probes
 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):

$$E_{tot} = (E_x^2 + E_y^2 + E_z^2)^{1/2}$$

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

$$SAR = (E_{tot}^2 \cdot \sigma) / (\rho \cdot 1000)$$

with SAR = local specific absorption rate in mW/g
 E_{tot} = total field strength in V/m
 σ = conductivity in [mho/m] or [Siemens/m]
 ρ = equivalent tissue density in g/cm³

Note that the density is normally set to 1 (or 1.06), to account for actual brain density rather than the density of the simulation liquid. The power flow density is calculated assuming the excitation field to be a free space field.

$$P_{pwe} = E_{tot}^2 / 3770 \quad \text{or} \quad P_{pwe} = H_{tot}^2 \cdot 37.7$$

with P_{pwe} = equivalent power density of a plane wave in mW/cm²
 E_{tot} = total electric field strength in V/m
 H_{tot} = total magnetic field strength in A/m

2.4.9 Test equipment utilized

This table gives a complete overview of the SAR measurement equipment

Devices used during the test described in chapter 2.5 are marked

	Manufacturer	Device	Type	Serial number	Date of last calibration)*
<input type="checkbox"/>	Schmid & Partner Engineering AG	Dosimetric E-Field Probe	ES3DV3	3168	2009-12-18
<input checked="" type="checkbox"/>	Schmid & Partner Engineering AG	Dosimetric E-Field Probe	EX3DV4	3736	2010-11-16
<input checked="" type="checkbox"/>	Schmid & Partner Engineering AG	835 MHz System Validation Dipole	D835V2	4d095	2009-05-25
<input type="checkbox"/>	Schmid & Partner Engineering AG	900 MHz System Validation Dipole	D900V2	1d063	2009-05-26
<input checked="" type="checkbox"/>	Schmid & Partner Engineering AG	1800 MHz System Validation Dipole	D1800V2	2d157	2009-05-27
<input checked="" type="checkbox"/>	Schmid & Partner Engineering AG	1900 MHz System Validation Dipole	D1900V2	5d091	2009-05-28
<input type="checkbox"/>	Schmid & Partner Engineering AG	2000 MHz System Validation Dipole	D2000V2	1036	2009-05-29
<input checked="" type="checkbox"/>	Schmid & Partner Engineering AG	Data acquisition electronics	DAE4	851	2010-06-30
<input type="checkbox"/>	Schmid & Partner Engineering AG	Data acquisition electronics	DAE4	852	2009-12-18
<input checked="" type="checkbox"/>	Schmid & Partner Engineering AG	Software	DASY 5 V5.0	N/A	N/A
<input checked="" type="checkbox"/>	Schmid & Partner Engineering AG	Twin Phantom	SAM1	TP-1475	N/A
<input checked="" type="checkbox"/>	Schmid & Partner Engineering AG	Twin Phantom	SAM2	TP-1474	N/A
<input checked="" type="checkbox"/>	Rohde & Schwarz	Universal Radio Communication Tester	CMU 200	111379	2010-08-11
<input checked="" type="checkbox"/>	Agilent)*	Network Analyser 300 kHz to 8.5 GHz	E5071B	MY42404956	2010-03-08
<input checked="" type="checkbox"/>	Agilent	Dielectric Probe Kit	85070E	2484	N/A
<input checked="" type="checkbox"/>	Agilent	Signal Generator	N5181A	MY47420989	2010-03-08
<input checked="" type="checkbox"/>	MINI-CIRCUITS	Amplifier	ZHL-42W	QA0746001	N/A
<input checked="" type="checkbox"/>	Agilent	Power Meter	E4417A	MY45101339	2010-05-19
<input checked="" type="checkbox"/>	Agilent	Power Meter Sensor	E9321A	MY44420359	2010-05-19

Note: The calibration interval of validation dipoles is 3 years.

)*: Network analyzer probe calibration against air, distilled water and a shorting block performed before measuring liquid parameters.

2.4.10 Tissue simulating liquids: dielectric properties

The following materials are used for producing the tissue-equivalent materials.

(liquids used for tests described in chapter 2.5. are marked with ☒) :

Ingredients (% of weight)	Frequency (MHz)					
	<input type="checkbox"/> 450	<input checked="" type="checkbox"/> 835	<input type="checkbox"/> 900	<input checked="" type="checkbox"/> 1800	<input checked="" type="checkbox"/> 1900	<input type="checkbox"/> 2450
frequency band	<input type="checkbox"/> 450	<input checked="" type="checkbox"/> 835	<input type="checkbox"/> 900	<input checked="" type="checkbox"/> 1800	<input checked="" type="checkbox"/> 1900	<input type="checkbox"/> 2450
Tissue Type	Head	Head	Head	Head	Head	Head
Water	38.56	41.45	40.92	52.64	54.9	62.7
Salt (NaCl)	3.95	1.45	1.48	0.36	0.18	0.5
Sugar	56.32	56.0	56.5	0.0	0.0	0.0
HEC	0.98	1.0	1.0	0.0	0.0	0.0
Bactericide	0.19	0.1	0.1	0.0	0.0	0.0
Triton X-100	0.0	0.0	0.0	0.0	0.0	36.8
DGBE	0.0	0.0	0.0	47.0	44.92	0.0

Table 12: Head tissue dielectric properties

Ingredients (% of weight)	Frequency (MHz)					
	<input type="checkbox"/> 450	<input checked="" type="checkbox"/> 835	<input type="checkbox"/> 900	<input checked="" type="checkbox"/> 1800	<input checked="" type="checkbox"/> 1900	<input type="checkbox"/> 2450
frequency band	<input type="checkbox"/> 450	<input checked="" type="checkbox"/> 835	<input type="checkbox"/> 900	<input checked="" type="checkbox"/> 1800	<input checked="" type="checkbox"/> 1900	<input type="checkbox"/> 2450
Tissue Type	Body	Body	Body	Body	Body	Body
Water	51.16	52.4	56.0	69.91	69.91	73.2
Salt (NaCl)	1.49	1.40	0.76	0.13	0.13	0.04
Sugar	46.78	45.0	41.76	0.0	0.0	0.0
HEC	0.52	1.0	1.21	0.0	0.0	0.0
Bactericide	0.05	0.1	0.27	0.0	0.0	0.0
Triton X-100	0.0	0.0	0.0	0.0	0.0	0.0
DGBE	0.0	0.0	0.0	29.96	29.96	26.7

Table 13: Body tissue dielectric properties

Salt: 99+% Pure Sodium Chloride

Sugar: 98+% Pure Sucrose

Water: De-ionized, 16MΩ+ resistivity

HEC: Hydroxyethyl Cellulose

DGBE: 99+% Di(ethylene glycol) butyl ether, [2-(2-butoxyethoxy)ethanol]

Triton X-100(ultra pure): Polyethylene glycol mono [4-(1,1,3,3-tetramethylbutyl)phenyl]ether

Note : Due to their availability body tissue simulating liquids as defined by FCC OET Bulletin 65 Supplement C are generally used for body worn SAR testing according to European standards.

2.4.11 Tissue simulating liquids: parameters

Used Target Frequency [MHz]	Target Head Tissue		Measured Head Tissue		Measured Date
	Permittivity (+/-5%)	Conductivity [S/m] (+/-5%)	Permittivity	Conductivity [S/m]	
1900	40.0	1.40	38.4	1.35	2010-12-16
1900	40.0	1.40	38.7	1.37	2010-12-17
1800	40.0	1.40	38.4	1.40	2010-12-14
835	41.5	0.90	42.2	0.87	2010-12-16
835	41.5	0.90	42.1	0.86	2010-12-16

Table 14: Parameter of the head tissue simulating liquid

Used Target Frequency [MHz]	Target Body Tissue		Measured Body Tissue		Measured Date
	Permittivity (+/-5%)	Conductivity [S/m] (+/-5%)	Permittivity	Conductivity [S/m]	
1900	53.3	1.52	52.2	1.52	2010-12-15
1900	53.3	1.52	52.8	1.48	2010-12-15
1800	53.3	1.52	52.8	1.51	2010-12-20
835	55.2	0.97	53.2	0.95	2010-12-18

Table 15:Parameter of the body tissue simulating liquid

Note: The dielectric properties have been measured using the contact probe method at 22°C.

2.4.12 Measurement uncertainty evaluation for SAR test

The overall combined measurement uncertainty of the measurement system is $\pm 10.7\%$ ($K=1$).

The expanded uncertainty ($k=2$) is assessed to be $\pm 21.4\%$

This measurement uncertainty budget is suggested by IEEE P1528 and determined by Schmid & Partner Engineering AG. The breakdown of the individual uncertainties is as follows:

Error Sources	Uncertainty Value	Probability Distribution	Divisor	c_i 1g	c_i 10g	Standard Uncertainty 1g	Standard Uncertainty 10g	v_i^2 or v_{eff}
Measurement System								
Probe calibration	$\pm 5.9\%$	Normal	1	1	1	$\pm 5.9\%$	$\pm 5.9\%$	∞
Axial isotropy	$\pm 4.7\%$	Rectangular	$\sqrt{3}$	0.7	0.7	$\pm 1.9\%$	$\pm 1.9\%$	∞
Hemispherical isotropy	$\pm 9.6\%$	Rectangular	$\sqrt{3}$	0.7	0.7	$\pm 3.9\%$	$\pm 3.9\%$	∞
Spatial resolution	$\pm 0.0\%$	Rectangular	$\sqrt{3}$	1	1	$\pm 0.0\%$	$\pm 0.0\%$	∞
Boundary effects	$\pm 1.0\%$	Rectangular	$\sqrt{3}$	1	1	$\pm 0.6\%$	$\pm 0.6\%$	∞
Probe linearity	$\pm 4.7\%$	Rectangular	$\sqrt{3}$	1	1	$\pm 2.7\%$	$\pm 2.7\%$	∞
System detection limits	$\pm 1.0\%$	Rectangular	$\sqrt{3}$	1	1	$\pm 0.6\%$	$\pm 0.6\%$	∞
Readout electronics	$\pm 0.3\%$	Normal	1	1	1	$\pm 0.3\%$	$\pm 0.3\%$	∞
Response time	$\pm 0.8\%$	Rectangular	$\sqrt{3}$	1	1	$\pm 0.5\%$	$\pm 0.5\%$	∞
Integration time	$\pm 2.6\%$	Rectangular	$\sqrt{3}$	1	1	$\pm 1.5\%$	$\pm 1.5\%$	∞
RF ambient conditions	$\pm 3.0\%$	Rectangular	$\sqrt{3}$	1	1	$\pm 1.7\%$	$\pm 1.7\%$	∞
Probe positioner	$\pm 0.4\%$	Rectangular	$\sqrt{3}$	1	1	$\pm 0.2\%$	$\pm 0.2\%$	∞
Probe positioning	$\pm 2.9\%$	Rectangular	$\sqrt{3}$	1	1	$\pm 1.7\%$	$\pm 1.7\%$	∞
Max. SAR evaluation	$\pm 1.0\%$	Rectangular	$\sqrt{3}$	1	1	$\pm 0.6\%$	$\pm 0.6\%$	∞
Test Sample Related								
Device positioning	$\pm 2.9\%$	Normal	1	1	1	$\pm 2.9\%$	$\pm 2.9\%$	145
Device holder uncertainty	$\pm 3.6\%$	Normal	1	1	1	$\pm 3.6\%$	$\pm 3.6\%$	5
Power drift	$\pm 5.0\%$	Rectangular	$\sqrt{3}$	1	1	$\pm 2.9\%$	$\pm 2.9\%$	∞
Phantom and Set-up								
Phantom uncertainty	$\pm 4.0\%$	Rectangular	$\sqrt{3}$	1	1	$\pm 2.3\%$	$\pm 2.3\%$	∞
Liquid conductivity (target)	$\pm 5.0\%$	Rectangular	$\sqrt{3}$	0.64	0.43	$\pm 1.8\%$	$\pm 1.2\%$	∞
Liquid conductivity (meas.)	$\pm 2.5\%$	Normal	1	0.64	0.43	$\pm 1.6\%$	$\pm 1.1\%$	∞
Liquid permittivity (target)	$\pm 5.0\%$	Rectangular	$\sqrt{3}$	0.6	0.49	$\pm 1.7\%$	$\pm 1.4\%$	∞
Liquid permittivity (meas.)	$\pm 2.5\%$	Normal	1	0.6	0.49	$\pm 1.5\%$	$\pm 1.2\%$	∞
Combined Uncertainty						$\pm 10.9\%$	$\pm 10.7\%$	387
Expanded Std. Uncertainty						$\pm 21.9\%$	$\pm 21.4\%$	

Table 16: Measurement uncertainties

2.4.13 Measurement uncertainty evaluation for system validation

The overall combined measurement uncertainty of the measurement system is $\pm 9.2\%$ ($K=1$).

The expanded uncertainty ($k=2$) is assessed to be $\pm 18.4\%$

This measurement uncertainty budget is suggested by IEEE P1528 and determined by Schmid & Partner Engineering AG. The breakdown of the individual uncertainties is as follows:

Error Sources	Uncertainty Value	Probability Distribution	Divisor	c_i 1g	c_i 10g	Standard Uncertainty 1g	Standard Uncertainty 10g	v_i^2 or v_{eff}
Measurement System								
Probe calibration	$\pm 5.9\%$	Normal	1	1	1	$\pm 5.9\%$	$\pm 5.9\%$	∞
Axial isotropy	$\pm 4.7\%$	Rectangular	$\sqrt{3}$	1	1	$\pm 2.7\%$	$\pm 2.7\%$	∞
Hemispherical isotropy	$\pm 9.6\%$	Rectangular	$\sqrt{3}$	0.7	0.7	$\pm 0.0\%$	$\pm 0.0\%$	∞
Boundary effects	$\pm 1.0\%$	Rectangular	$\sqrt{3}$	1	1	$\pm 0.6\%$	$\pm 0.6\%$	∞
Probe linearity	$\pm 4.7\%$	Rectangular	$\sqrt{3}$	1	1	$\pm 2.7\%$	$\pm 2.7\%$	∞
System detection limits	$\pm 1.0\%$	Rectangular	$\sqrt{3}$	1	1	$\pm 0.6\%$	$\pm 0.6\%$	∞
Readout electronics	$\pm 0.3\%$	Normal	1	1	1	$\pm 0.3\%$	$\pm 0.3\%$	∞
Response time	$\pm 0.0\%$	Rectangular	$\sqrt{3}$	1	1	$\pm 0.0\%$	$\pm 0.0\%$	∞
Integration time	$\pm 0.0\%$	Rectangular	$\sqrt{3}$	1	1	$\pm 0.0\%$	$\pm 0.0\%$	∞
RF ambient conditions	$\pm 1.0\%$	Rectangular	$\sqrt{3}$	1	1	$\pm 0.6\%$	$\pm 0.6\%$	∞
Probe positioner	$\pm 0.4\%$	Rectangular	$\sqrt{3}$	1	1	$\pm 0.2\%$	$\pm 0.2\%$	∞
Probe positioning	$\pm 2.9\%$	Rectangular	$\sqrt{3}$	1	1	$\pm 1.7\%$	$\pm 1.7\%$	∞
Max. SAR evaluation	$\pm 1.0\%$	Rectangular	$\sqrt{3}$	1	1	$\pm 0.6\%$	$\pm 0.6\%$	∞
Dipole								
Deviation of experimental dipole	$\pm 5.5\%$	Rectangular	$\sqrt{3}$	1	1	$\pm 3.2\%$	$\pm 3.2\%$	∞
Dipole axis to liquid distance	$\pm 2.0\%$	Rectangular	1	1	1	$\pm 1.2\%$	$\pm 1.2\%$	∞
Power drift	$\pm 4.7\%$	Rectangular	$\sqrt{3}$	1	1	$\pm 2.7\%$	$\pm 2.7\%$	∞
Phantom and Set-up								
Phantom uncertainty	$\pm 4.0\%$	Rectangular	$\sqrt{3}$	1	1	$\pm 2.3\%$	$\pm 2.3\%$	∞
Liquid conductivity (target)	$\pm 5.0\%$	Rectangular	$\sqrt{3}$	0.64	0.43	$\pm 1.8\%$	$\pm 1.2\%$	∞
Liquid conductivity (meas.)	$\pm 2.5\%$	Normal	1	0.64	0.43	$\pm 1.6\%$	$\pm 1.1\%$	∞
Liquid permittivity (target)	$\pm 5.0\%$	Rectangular	$\sqrt{3}$	0.6	0.49	$\pm 1.7\%$	$\pm 1.4\%$	∞
Liquid permittivity (meas.)	$\pm 2.5\%$	Normal	1	0.6	0.49	$\pm 1.5\%$	$\pm 1.2\%$	∞
Combined Uncertainty						$\pm 9.5\%$	$\pm 9.2\%$	
Expanded Std. Uncertainty						$\pm 18.9\%$	$\pm 18.4\%$	

Table 17: Measurement uncertainties

2.4.14 System check

The system check is performed for verifying the accuracy of the complete measurement system and performance of the software. The system validation is performed with tissue equivalent material according to IEEE P1528 (described above). The following table shows validation results for all frequency bands and tissue liquids used during the tests of the test item described in chapter 1.5. (graphic plot(s) see annex 1).

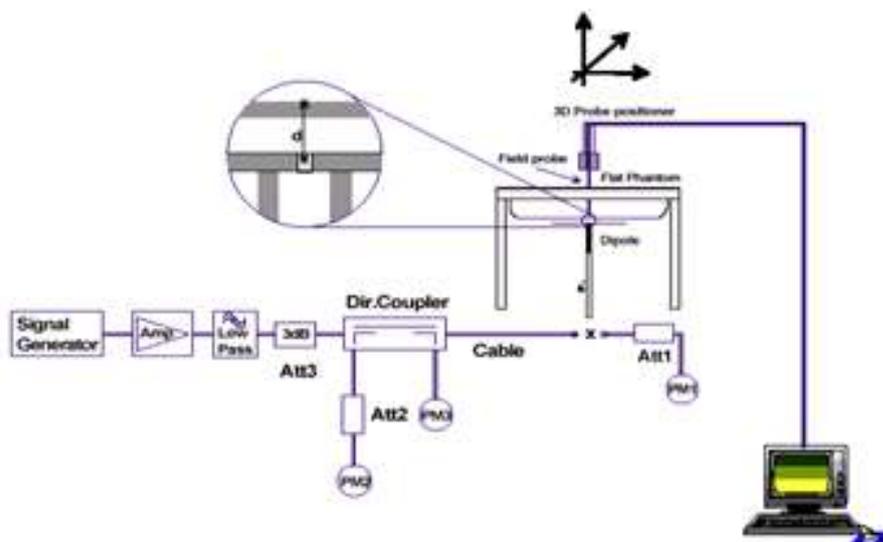
Validation Kit	Frequency	Target SAR _{1g} (250 mW) (+/- 10%)	Target SAR _{10g} (250 mW) (+/- 10%)	Measured SAR _{1g}	Measured SAR _{10g}	Measured date
D1900V2 S/N: 5d091	1900 MHz Head	9.60mW/g	5.10mW/g	10.1mW/g	5.22mW/g	2010-12-16
D1900V2 S/N: 5d091	1900 MHz Head	9.60mW/g	5.10mW/g	10.5mW/g	5.4mW/g	2010-12-17
D1900V2 S/N: 5d091	1900 MHz Body	10.1mW/g	5.27mW/g	10.9mW/g	5.6mW/g	2010-12-15
D1900V2 S/N: 5d091	1900 MHz Body	10.1mW/g	5.27mW/g	10.8mW/g	5.52mW/g	2010-12-15
D1800V2 S/N: 2d157	1800 MHz Head	9.23mW/g	4.9mW/g	8.83mW/g	4.59mW/g	2010-12-14
D1800V2 S/N: 2d157	1800 MHz Body	9.60mW/g	5.13mW/g	9.91mW/g	5.25mW/g	2010-12-20
D835V2 S/N: 4d095	835 MHz Head	2.29mW/g	1.50mW/g	2.14mW/g	1.42mW/g	2010-12-16
D835V2 S/N: 4d095	835 MHz Head	2.29mW/g	1.50mW/g	2.09mW/g	1.38mW/g	2010-12-19
D835V2 S/N: 4d095	835 MHz Body	2.49mW/g	1.62mW/g	2.43mW/g	1.61mW/g	2010-12-18

Table 18:Results system Check

2.4.15 Validation procedure

The validation is performed by using a validation dipole which is positioned parallel to the planar part of the SAM phantom at the reference point. The distance of the dipole to the SAM phantom is determined by a plexiglass spacer. The dipole is connected to the signal source consisting of signal generator and amplifier via a directional coupler, N-connector cable and adaption to SMA. It is fed with a power of 250 mW. To adjust this power a power meter is used. The power sensor is connected to the cable before the validation to measure the power at this point and do adjustments at the signal generator. At the outputs of the directional coupler both return loss as well as forward power are controlled during the validation to make sure that emitted power at the dipole is kept constant. This can also be checked by the power drift measurement after the test (result on plot).

Validation results have to be equal or near the values determined during dipole calibration (target SAR in table above) with the relevant liquids and test system.



2.5 Test Results

2.5.1 Conducted power measurements

For the measurements a Rohde & Schwarz Radio Communication Tester CMU 200 was used. The output power was measured using an integrated RF connector and attached RF cable. The conducted output power was also checked before and after each SAR measurement. The resulting power values were within a 0.2 dB tolerance of the values shown below.

Note: CMU200 measures GSM peak and average output power for active timeslots.
For SAR the timebased average power is relevant. The difference in between depends on the duty cycle of the TDMA signal :

No. of timeslots	1	2	3	4
Duty Cycle	1 : 8	1: 4	1 : 2.66	1 : 2
timebased avg. power compared to slotted avg. power	- 9 dB	- 6 dB	- 4.25 dB	- 3 dB

The signalling modes differ as follows:

mode	coding scheme	modulation
GPRS	CS1 to CS4	GMSK
EDGE	MCS1 to MCS4	GMSK
EDGE	MCS5 to MCS9	8PSK

Apart from modulation change (GMSK/8PSK) coding schemes differ in code rate without influence on the RF signal. Therefore one coding scheme per mode was selected for conducted power measurements.

2.5.2 Conducted power results

GSM 1900 MHz

GSM1900		Conducted power (dBm)			Averaged power(dBm)		
		Channel 512	Channel 661	Channel 810	Channel 512	Channel 661	Channel 810
Before test		29.44	29.45	29.44	20.44	20.45	20.44
After test		29.42	29.44	29.45	20.42	20.44	20.45
GSM1900 GPRS (GMSK)		Conducted power (dBm)			Averaged power(dBm)		
		Channel 512	Channel 661	Channel 810	Channel 512	Channel 661	Channel 810
1TX slot	Before test	29.48	29.51	29.49	20.48	20.51	20.49
	After test	29.49	29.50	29.47	20.49	20.50	20.47
2 TX slots	Before test	27.01	27.04	27.04	21.01	21.04	21.04
	After test	27.00	27.05	27.06	21.00	21.05	21.06
3 TX slots	Before test	25.20	25.25	25.27	20.95	21.00	21.02
	After test	25.19	25.23	25.25	20.94	20.98	21.00
4 TX slots	Before test	24.03	24.05	24.02	21.03	21.05	21.02
	After test	24.02	24.04	24.03	21.02	21.04	21.03
GSM1900 EGPRS (GMSK)		Conducted power (dBm)			Averaged power(dBm)		
		Channel 512	Channel 661	Channel 810	Channel 512	Channel 661	Channel 810
1TX slot	Before test	29.23	29.27	29.26	20.23	20.27	20.26
	After test	29.23	29.25	29.25	20.23	20.25	20.25
2 TX slots	Before test	26.89	26.85	26.80	20.89	20.85	20.80
	After test	26.88	26.84	26.79	20.88	20.84	20.79
3 TX slots	Before test	25.16	25.10	25.24	20.91	20.85	20.99
	After test	25.15	25.11	25.25	20.90	20.86	21.00
4 TX slots	Before test	23.70	24.00	23.80	20.70	21.00	20.80
	After test	23.71	24.02	23.78	20.71	21.02	20.78
GSM1900 EGPRS (8PSK)		Conducted power (dBm)			Averaged power(dBm)		
		Channel 512	Channel 661	Channel 810	Channel 512	Channel 661	Channel 810
1TX slot	Before test	25.02	24.96	24.85	16.02	15.96	15.85
	After test	25.01	24.95	24.84	16.01	15.95	15.84
2 TX slots	Before test	22.38	22.32	22.54	16.38	16.32	16.54
	After test	22.36	22.33	22.55	16.36	16.33	16.55
3 TX slots	Before test	20.73	20.66	20.38	16.48	16.41	16.13
	After test	20.72	20.65	20.36	16.47	16.40	16.11
4 TX slots	Before test	19.35	19.28	19.40	16.35	16.28	16.40
	After test	19.34	19.27	19.38	16.34	16.27	16.38

Table 19: Test results conducted power measurement GSM1900MHz

GSM 850 MHz

GSM850		Conducted power (dBm)			Averaged power(dBm)		
		Channel 128	Channel 190	Channel 251	Channel 128	Channel 190	Channel 251
Before test		32.46	32.10	32.16	23.46	23.10	23.16
After test		32.45	32.11	32.15	23.45	23.11	23.15
GSM850 GPRS (GMSK)		Conducted power (dBm)			Averaged power(dBm)		
		Channel 128	Channel 190	Channel 251	Channel 128	Channel 190	Channel 251
1TX slot	Before test	32.43	32.46	32.12	23.43	23.46	23.12
	After test	32.42	32.44	32.10	23.42	23.44	23.10
2 TX slots	Before test	29.18	29.36	29.45	23.18	23.36	23.45
	After test	29.17	29.35	29.44	23.17	23.35	23.44
3 TX slots	Before test	26.73	26.87	27.01	22.48	22.62	22.76
	After test	26.72	26.88	27.02	22.47	22.63	22.77
4 TX slots	Before test	25.66	25.63	25.56	22.66	22.63	22.56
	After test	25.64	25.61	25.55	22.64	22.61	22.55
GSM850 EGPRS (GMSK)		Conducted power (dBm)			Averaged power(dBm)		
		Channel 128	Channel 190	Channel 251	Channel 128	Channel 190	Channel 251
1TX slot	Before test	32.39	32.44	32.48	23.39	23.44	23.48
	After test	32.38	32.43	32.46	23.38	23.43	23.46
2 TX slots	Before test	29.17	29.35	29.43	23.17	23.35	23.43
	After test	29.15	29.34	29.42	23.15	23.34	23.42
3 TX slots	Before test	26.73	26.93	27.06	22.48	22.68	22.81
	After test	26.72	26.94	27.04	22.47	22.69	22.79
4 TX slots	Before test	25.66	25.63	25.75	22.66	22.63	22.75
	After test	25.65	25.62	25.74	22.65	22.62	22.74
GSM850 EGPRS (8PSK)		Conducted power (dBm)			Averaged power(dBm)		
		Channel 128	Channel 190	Channel 251	Channel 128	Channel 190	Channel 251
1TX slot	Before test	25.99	25.99	25.99	16.99	16.99	16.99
	After test	25.97	25.97	25.98	16.97	16.97	16.98
2 TX slots	Before test	23.1	23.11	23.12	17.10	17.11	17.12
	After test	23.12	23.10	23.11	17.12	17.10	17.11
3 TX slots	Before test	21.77	21.78	21.76	17.52	17.53	17.51
	After test	21.75	21.76	21.75	17.50	17.51	17.50
4 TX slots	Before test	20.64	20.57	20.41	17.64	17.57	17.41
	After test	20.63	20.56	20.40	17.63	17.56	17.40

Table 20: Test results conducted power measurement GSM850MHz

WCDMA Band II [HSDPA/ HSUPA]

WCDMA Band II		Conducted Power (dBm)		
		Channel 9262	Channel 9400	Channel 9538
12.2kbps RMC	Before test	22.71	22.69	22.72
	After test	22.70	22.67	22.71
64kbps RMC	Before test	22.67	22.65	22.76
	After test	22.65	22.64	22.75
144kbps RMC	Before test	22.68	22.68	22.79
	After test	22.70	22.69	22.77
384kbps RMC	Before test	22.74	22.95	23.04
	After test	22.73	22.97	23.03
WCDMA Band II +HSDPA		Conducted Power (dBm)		
		Channel 9262	Channel 9400	Channel 9538
Sub Test - 1	Before test	22.73	22.43	22.77
	After test	22.71	22.43	22.76
Sub Test - 2	Before test	22.51	22.50	22.74
	After test	22.52	22.52	22.72
Sub Test - 3	Before test	22.04	21.98	22.21
	After test	22.02	21.97	22.20
Sub Test - 4	Before test	22.00	22.06	22.18
	After test	22.01	22.04	22.17
WCDMA Band II +HSUPA		Conducted Power (dBm)		
		Channel 9262	Channel 9400	Channel 9538
Sub Test - 1	Before test	21.56	22.47	22.66
	After test	21.58	22.49	22.65
Sub Test - 2	Before test	21.14	21.08	21.13
	After test	21.13	21.09	21.12
Sub Test - 3	Before test	21.30	21.23	21.39
	After test	21.28	21.22	21.37
Sub Test - 4	Before test	21.42	21.46	21.66
	After test	21.40	21.45	21.65
Sub Test - 5	Before test	22.03	21.84	22.01
	After test	22.02	21.83	22.02

Table 21: Conducted power measurement result (WCDMA 1900)

WCDMA Band IV [HSDPA/ HSUPA]

WCDMA Band IV		Conducted Power (dBm)		
		Channel 1312	Channel 1413	Channel 1513
12.2kbps RMC	Before test	22.84	23.07	22.70
	After test	22.83	23.06	22.68
64kbps RMC	Before test	22.82	23.05	22.69
	After test	22.82	23.05	22.69
144kbps RMC	Before test	22.86	23.05	22.78
	After test	22.83	23.03	22.76
384kbps RMC	Before test	22.87	23.04	22.75
	After test	22.85	23.03	22.77
WCDMA Band IV +HSDPA		Conducted Power (dBm)		
		Channel 1312	Channel 1413	Channel 1513
Sub Test - 1	Before test	22.53	22.55	22.59
	After test	22.53	22.54	22.57
Sub Test - 2	Before test	22.46	22.56	22.59
	After test	22.44	22.55	22.58
Sub Test - 3	Before test	22.00	22.01	22.07
	After test	22.02	22.03	22.05
Sub Test - 4	Before test	21.98	22.11	22.08
	After test	21.98	22.12	22.07
WCDMA Band IV +HSUPA		Conducted Power (dBm)		
		Channel 1312	Channel 1413	Channel 1513
Sub Test - 1	Before test	21.86	21.86	21.86
	After test	21.84	21.86	21.84
Sub Test - 2	Before test	20.97	20.68	20.78
	After test	20.95	20.69	20.77
Sub Test - 3	Before test	21.01	21.06	21.09
	After test	21.00	21.04	21.08
Sub Test - 4	Before test	21.47	21.50	21.57
	After test	21.47	21.52	21.55
Sub Test - 5	Before test	21.54	21.69	21.61
	After test	21.53	21.68	21.63

Table 22:Conducted power measurement result (WCDMA 1700)

Note: 1) The maximum average power numbers are marks in bold.

2) To verify if the output changes within the tolerance before and after each SAR test, please see the power drift of each test in chapter 2.6.

3) For SAR testing, the EUT was set to multislot class based on the maximum averaged conducted power.



2.5.3 Test results (Head and Body SAR)

GSM 1900 (GSM/GPRS)

The table contains the measured SAR values averaged over a mass of 1 g

Channel / frequency	Position	Left hand position	Right hand position	Power Drift (dB)	Limit	Liquid temperature
U9000,GSM						
661 /1880.0 MHz	cheek	0.150 W/kg	0.223 W/kg	0.059/0.187	1.6 W/kg	21.6/21.6 °C
661 / 1880.0 MHz	tilted15°	0.114 W/kg	0.125 W/kg	-0.185/-0.133	1.6 W/kg	21.6/21.6 °C
810 / 1909.8 MHz	cheek	--- W/kg	0.281 W/kg	---/-0.172	1.6 W/kg	---/21.6 °C
512 / 1850.2 MHz	cheek	--- W/kg	0.214 W/kg	---/-0.071	1.6 W/kg	---/21.6 °C
U9000,GPRS 1TS						
661 /1880.0 MHz	cheek	0.144 W/kg	0.216 W/kg	-0.081/-0.165	1.6 W/kg	21.6/21.6 °C
661 / 1880.0 MHz	tilted15°	0.107 W/kg	0.121 W/kg	0.066/-0.176	1.6 W/kg	21.6/21.6 °C
810 / 1909.8 MHz	cheek	--- W/kg	0.297 W/kg	---/-0.043	1.6 W/kg	---/21.6 °C
512 / 1850.2 MHz	cheek	--- W/kg	0.233 W/kg	---/0.088	1.6 W/kg	---/21.6 °C
U9000,EGPRS 1TS						
810 / 1909.8 MHz	cheek	--- W/kg	0.275 W/kg	---/-0.083	1.6 W/kg	---/21.6 °C

Table 23:Test results (Head SAR GSM1900MHz)

The table contains the measured SAR values averaged over a mass of 1 g

Channel / frequency	Position	Body worn	Power Drift (dB)	Limit	Liquid temperature
U9000,GPRS					
661 / 1880.0 MHz	front 1TS	0.188 W/kg	-0.175	1.6 W/kg	21.8 °C
661 / 1880.0 MHz	rear 1TS	0.272 W/kg	-0.032	1.6 W/kg	21.8 °C
661 / 1880.0 MHz	rear 2TS	0.254 W/kg	0.175	1.6 W/kg	21.8 °C
661 / 1880.0 MHz	rear 3TS	0.251 W/kg	-0.069	1.6 W/kg	21.8 °C
661 / 1880.0 MHz	rear 4TS	0.248 W/kg	0.032	1.6 W/kg	21.8 °C
810 / 1909.8 MHz	rear 1TS	0.307 W/kg	0.001	1.6 W/kg	21.8 °C
512 / 1850.2 MHz	rear 1TS	0.257 W/kg	-0.178	1.6 W/kg	21.8 °C
U9000,EGPRS					
661 / 1880.0 MHz	rear 1TS	0.236 W/kg	0.027	1.6 W/kg	21.8 °C
661 / 1880.0 MHz	rear 2TS	0.213 W/kg	-0.005	1.6 W/kg	21.8 °C
661 / 1880.0 MHz	rear 3TS	0.198 W/kg	0.113	1.6 W/kg	21.8 °C
661 / 1880.0 MHz	rear 4TS	0.196 W/kg	-0.096	1.6 W/kg	21.8 °C
810 / 1909.8 MHz	rear 1TS	0.265 W/kg	-0.134	1.6 W/kg	21.8 °C
512 / 1850.2 MHz	rear 1TS	0.219 W/kg	-0.048	1.6 W/kg	21.8 °C
U9000, Speech Mode with Headset					

810 / 1909.8 MHz	rear	0.314 W/kg	-0.085	1.6 W/kg	21.8 °C
U9000, Speech Mode with Bluetooth Headset					
810 / 1909.8 MHz	rear	0.321 W/kg	0.160	1.6 W/kg	21.8 °C
U9000, Speech Mode					
661 / 1880.0 MHz	front	0.172 W/kg	-0.169	1.6 W/kg	21.8 °C
661 / 1880.0 MHz	rear	0.254 W/kg	-0.084	1.6 W/kg	21.8 °C
810 / 1909.8 MHz	rear	0.287 W/kg	-0.048	1.6 W/kg	21.8 °C
512 / 1850.2 MHz	rear	0.242 W/kg	0.144	1.6 W/kg	21.8 °C

Table 24:Test results (Body SAR GSM1900MHz)

Note: 1) The value with blue colour is the maximum SAR value of each test band.

2) Upper and lower frequencies were measured at the worst position.

3) The SAR test shall be performed at the high, middle and low frequency channels of each operating mode. If the SAR measured at mid-band channel for each test configuration is at least 3.0 dB lower than the SAR limit (< 0.8 W/kg), testing at the high and low channels is optional.

4) Tests in body position were performed with 15 mm air gap between DUT and SAM to simulate the use of a non-metallic belt-clip or holster.

5) The addition body test was performed at worst case.

GSM 1900 with DTM Mode

Limit of SAR (W/kg)		CS	1-slot GPRS	Combined SAR Values
				CS+GPRS
Test Position	Channel	1g Average (W/kg)	1g Average (W/kg)	1g Average(W/kg)
Test Position of Head				
Left hand touched	Middle	0.150	0.144	0.294
Left hand tilted15°	Middle	0.114	0.107	0.221
Right hand touched	Low	0.214	0.233	0.447
Right hand touched	Middle	0.223	0.216	0.439
Right hand touched	High	0.281	0.297	0.578
Right hand tilted15°	Middle	0.125	0.121	0.246
Test Position of Body(distance 15mm)				
Front	Middle	0.172	0.188	0.360
Rear	Low	0.242	0.257	0.499
Rear	Middle	0.254	0.272	0.526
Rear	High	0.287	0.307	0.594
Test Position of Body(distance 15mm and CS Mode with Headset)				
Rear	High	0.314	0.307	0.621
Test Position of Body(distance 15mm and CS Mode with Bluetooth Headset)				
Rear	High	0.321	0.307	0.629

Table 25:Test results (GSM1900MHz with DTM Mode)

Note: 1) The value with blue colour is the maximum SAR value of each test band.

4) SAR values of DTM mode are the sum of CS mode and GPRS mode.

5) Test GPRS Mode in head position based on the timeslot of Max SAR value in body position.

GSM 850 (GSM/GPRS)

The table contains the measured SAR values averaged over a mass of 1 g						
Channel / frequency	Position	Left hand position	Right hand position	Power Drift (dB)	Limit	Liquid temperature
U9000,GSM						
190 / 836.6 MHz	cheek	0.323 W/kg	0.289 W/kg	0.106/-0.158	1.6 W/kg	21.4/21.4 °C
190 / 836.6 MHz	tilted15°	0.185 W/kg	0.194 W/kg	-0.060/-0.084	1.6 W/kg	21.4/21.4 °C
251 / 848.8MHz	cheek	0.384 W/kg	--- W/kg	-0.132/---	1.6 W/kg	---/21.4 °C
128 / 824.2MHz	cheek	0.329 W/kg	--- W/kg	-0.186/---	1.6 W/kg	---/21.4 °C
U9000,GPRS 1TS						
190 / 836.6 MHz	cheek	0.310 W/kg	0.281 W/kg	-0.084/0.073	1.6 W/kg	21.4/21.4 °C
190 / 836.6 MHz	tilted15°	0.191 W/kg	0.178 W/kg	0.163/-0.035	1.6 W/kg	21.4/21.4 °C
251 / 848.8MHz	cheek	0.375 W/kg	--- W/kg	-0.057/---	1.6 W/kg	---/21.4 °C
128 / 824.2MHz	cheek	0.297 W/kg	--- W/kg	0.032/---	1.6 W/kg	---/21.4 °C
U9000,EGPRS 1TS						
251 / 848.8MHz	cheek	0.375 W/kg	--- W/kg	-0.072/---	1.6 W/kg	---/21.4 °C

Table 26:Test results (Head SAR GSM850MHz)

The table contains the measured SAR values averaged over a mass of 1 g					
Channel / frequency	Position	Body worn	Power Drift (dB)	Limit	Liquid temperature
U9000,GPRS					
190 / 836.6 MHz	front 1TS	0.345 W/kg	-0.123	1.6 W/kg	21.5 °C
190 / 836.6 MHz	rear 1TS	0.490 W/kg	-0.061	1.6 W/kg	21.5 °C
190 / 836.6 MHz	rear 2TS	0.446 W/kg	0.186	1.6 W/kg	21.5 °C
190 / 836.6 MHz	rear 3TS	0.367 W/kg	0.113	1.6 W/kg	21.5 °C
190 / 836.6 MHz	rear 4TS	0.365 W/kg	0.081	1.6 W/kg	21.5 °C
251 / 848.8MHz	rear 1TS	0.518 W/kg	-0.135	1.6 W/kg	21.5 °C
128 / 824.2MHz	rear 1TS	0.482 W/kg	0.169	1.6 W/kg	21.5 °C
U9000,EGPRS					
190 / 836.6 MHz	rear 1TS	0.503 W/kg	-0.134	1.6 W/kg	21.5 °C
190 / 836.6 MHz	rear 2TS	0.436 W/kg	0.176	1.6 W/kg	21.5 °C
190 / 836.6 MHz	rear 3TS	0.377 W/kg	-0.103	1.6 W/kg	21.5 °C
190 / 836.6 MHz	rear 4TS	0.372 W/kg	0.069	1.6 W/kg	21.5 °C
251 / 848.8MHz	rear 1TS	0.527 W/kg	-0.178	1.6 W/kg	21.5 °C
128 / 824.2MHz	rear 1TS	0.495 W/kg	-0.076	1.6 W/kg	21.5 °C
U9000, Speech Mode with Headset					
251 / 848.8MHz	rear	0.442 W/kg	-0.163	1.6 W/kg	21.5 °C

U9000, Speech Mode with Bluetooth Headset					
251 / 848.8MHz	rear	0.580 W/kg	-0.196	1.6 W/kg	21.5 °C
U9000, Speech Mode					
190 / 836.6 MHz	front	0.355 W/kg	0.039	1.6 W/kg	21.5 °C
190 / 836.6 MHz	rear	0.522 W/kg	-0.014	1.6 W/kg	21.5 °C
251 / 848.8MHz	rear	0.593 W/kg	0.176	1.6 W/kg	21.5 °C
128 / 824.2MHz	rear	0.508 W/kg	-0.151	1.6 W/kg	21.5 °C

Table 27: Test results (Body SAR GSM850MHz)

Note: 1) The value with blue colour is the maximum SAR value of each test band.

2) Upper and lower frequencies were measured at the worst position.

3) The SAR test shall be performed at the high, middle and low frequency channels of each operating mode. If the SAR measured at mid-band channel for each test configuration is at least 3.0 dB lower than the SAR limit (< 0.8 W/kg), testing at the high and low channels is optional.

4) Tests in body position were performed with 15 mm air gap between DUT and SAM to simulate the use of a non-metallic belt-clip or holster.

5) The addition body test was performed at worst case.

GSM 850 with DTM

Limit of SAR (W/kg)		CS	1-slot GPRS	Combined SAR Values
				CS+GPRS
Test Position	Channel	1g Average(W/kg)	1g Average(W/kg)	1g Average(W/kg)
Test Position of Head				
Left hand touched	Low	0.329	0.297	0.626
Left hand touched	Middle	0.323	0.310	0.633
Left hand touched	High	0.384	0.375	0.759
Left hand tilted15°	Middle	0.185	0.191	0.376
Right hand touched	Middle	0.289	0.281	0.570
Right hand tilted15°	Middle	0.194	0.178	0.372
Test Position of Body(distance 15mm)				
Front	Middle	0.355	0.345	0.700
Rear	Low	0.508	0.482	0.990
Rear	Middle	0.522	0.490	1.012
Rear	High	0.593	0.518	1.111
Test Position of Body(distance 15mm and CS Mode with Headset)				
Rear	High	0.442	0.518	0.960
Test Position of Body(distance 15mm and CS Mode with Bluetooth Headset)				
Rear	High	0.580	0.518	1.098

Table 28: Test results (GSM850MHz with DTM Mode)

Note: 1) The value with blue colour is the maximum SAR value of each test band.

2) SAR values of DTM mode are the sum of CS mode and GPRS mode.

3) Test GPRS Mode in head position based on the timeslot of Max SAR value in body position.

WCDMA 1900

The table contains the measured SAR values averaged over a mass of 1 g						
Channel / frequency	Position	Left hand position	Right hand position	Power Drift (dB)	Limit	Liquid temperature
U9000 with RMC						
9400 /1880 MHz	cheek	0.299 W/kg	0.435 W/kg	-0.157/-0.011	1.6 W/kg	21.7/21.7 °C
9400 /1880 MHz	tilted15°	0.233 W/kg	0.244 W/kg	-0.023/0.022	1.6 W/kg	21.7/21.7 °C
9538 /1907.6 MHz	cheek	--- W/kg	0.603 W/kg	---/0.091	1.6 W/kg	---/21.7 °C
9262 /1852.4 MHz	cheek	--- W/kg	0.680 W/kg	---/-0.138	1.6 W/kg	---/21.7 °C

Table 29:Test results (Head SAR WCDMA 1900MHz)

The table contains the measured SAR values averaged over a mass of 1g					
Channel / frequency	Position	Body worn	Power Drift (dB)	Limit	Liquid temperature
U9000, with RMC					
9400 /1880 MHz	front	0.330 W/kg	-0.127	1.6 W/kg	21.6 °C
9400 /1880 MHz	rear	0.485 W/kg	0.010	1.6 W/kg	21.6 °C
9538 /1907.6 MHz	rear	0.587 W/kg	-0.103	1.6 W/kg	21.6 °C
9262 /1852.4 MHz	rear	0.770 W/kg	-0.029	1.6 W/kg	21.6 °C
U9000, with HSDPA					
9262 /1852.4 MHz	rear	0.700 W/kg	0.094	1.6 W/kg	21.6 °C
U9000,Speech Mode with Headset					
9262 /1852.4 MHz	rear	0.720 W/kg	0.072	1.6 W/kg	21.6 °C
U9000, Speech Mode with Bluetooth Headset					
9262 /1852.4 MHz	rear	0.761 W/kg	0.090	1.6 W/kg	21.6 °C

Table 30:Test results (Body SAR WCDMA 1900MHz)

- Note: 1) The value with blue colour is the maximum SAR value of each test band.
 2) Upper and lower frequencies were measured at the worst position.
 3) The SAR test shall be performed at the high, middle and low frequency channels of each operating mode. If the SAR measured at mid-band channel for each test configuration is at least 3.0 dB lower than the SAR limit (< 0.8 W/kg), testing at the high and low channels is optional.
 4) Tests in body position were performed with 15 mm air gap between DUT and SAM to simulate the use of a non-metallic belt-clip or holster.
 5) The addition body test was performed at worst case.

WCDMA 1700

The table contains the measured SAR values averaged over a mass of 1 g						
Channel / frequency	Position	Left hand position	Right hand position	Power Drift (dB)	Limit	Liquid temperature
U9000 with RMC						
1413 /1732.6 MHz	cheek	0.358 W/kg	0.519 W/kg	-0.126/0.039	1.6 W/kg	21.6/21.6 °C
1413 /1732.6 MHz	tilted15°	0.295 W/kg	0.336 W/kg	-0.151/0.059	1.6 W/kg	21.6/21.6 °C
1513 /1752.6 MHz	cheek	--- W/kg	0.533 W/kg	---/0.060	1.6 W/kg	21.6/21.6 °C
1312 /1712.4 MHz	cheek	--- W/kg	0.494 W/kg	---/-0.162	1.6 W/kg	21.6/21.6 °C

Table 31:Test results (Head SAR WCDMA 1700MHz)

The table contains the measured SAR values averaged over a mass of 1g					
Channel / frequency	Position	Body worn	Power Drift (dB)	Limit	Liquid temperature
U9000, with RMC					
1413 /1732.6 MHz	front	0.452 W/kg	-0.091	1.6 W/kg	21.6 °C
1413 /1732.6 MHz	rear	1.190 W/kg	-0.032	1.6 W/kg	21.6 °C
1513 /1752.6 MHz	rear	0.893 W/kg	-0.135	1.6 W/kg	21.6 °C
1312 /1712.4 MHz	rear	1.110 W/kg	-0.026	1.6 W/kg	21.6 °C
U9000, with HSDPA					
1413 /1732.6 MHz	rear	1.040 W/kg	-0.185	1.6 W/kg	21.6 °C
U9000,Speech Mode with Headset					
1413 /1732.6 MHz	rear	1.010 W/kg	-0.072	1.6 W/kg	21.6 °C
U9000, Speech Mode with Bluetooth Headset					
1413 /1732.6 MHz	rear	1.040 W/kg	0.099	1.6 W/kg	21.6 °C

Table 32:Test results (Body SAR WCDMA 1700MHz)

- Note: 1) The value with blue colour is the maximum SAR value of each test band.
 2) Upper and lower frequencies were measured at the worst position.
 3) The SAR test shall be performed at the high, middle and low frequency channels of each operating mode. If the SAR measured at mid-band channel for each test configuration is at least 3.0 dB lower than the SAR limit (< 0.8 W/kg), testing at the high and low channels is optional.
 4) Tests in body position were performed with 15 mm air gap between DUT and SAM to simulate the use of a non-metallic belt-clip or holster.
 5) The addition body test was performed at worst case.

2.5.4 Extrapolated SAR Values

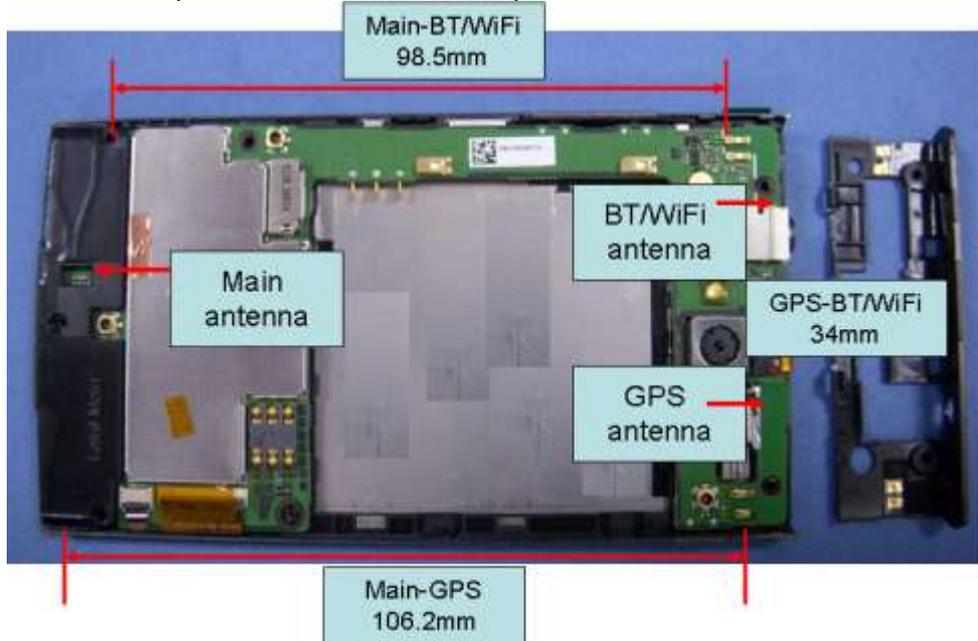
Limit of SAR (W/kg)		Conducted Power	1g Average		Tune-up procedures maximum Power(dBm)	1g Average 1.6
Worst Case			Measurement Result(dBm)	Measurement Result(W/kg)		
Test Position	Channel					
Head GSM1900						
Right hand touched	High	29.44	0.281	29.8	0.305	
Head GPRS1900(1 timeslots uplink)						
Right hand touched	High	29.49	0.297	29.8	0.319	
Body GPRS1900 (1 timeslots uplink)						
Rear	High	29.49	0.307	29.8	0.330	
Body EGPRS1900 (1 timeslots uplink)						
Rear	High	29.26	0.265	29.8	0.300	
Body GSM1900 (with Bluetooth Headset)						
Rear	High	29.44	0.321	29.8	0.349	
Body GSM1900						
Rear	High	29.44	0.287	29.8	0.312	
Head GSM850						
Left hand touched	High	32.16	0.384	32.8	0.445	
Head GPRS850(1 timeslots uplink)						
Left hand touched	High	32.12	0.375	32.8	0.439	
Body GPRS850 (1 timeslots uplink)						
Rear	High	32.12	0.518	32.8	0.606	
Body EGPRS850 (1 timeslots uplink)						
Rear	High	32.48	0.527	32.8	0.567	
Body GSM850 (with Bluetooth Headset)						
Rear	High	32.16	0.580	32.8	0.672	
Body GSM850						
Rear	High	32.16	0.593	32.8	0.687	
Head WCDMA1900 (RMC)						
Right hand touched	Low	22.71	0.680	23.2	0.761	
Body WCDMA1900 (RMC)						
Rear	Low	22.71	0.770	23.2	0.862	
Body WCDMA1900 (HSDPA)						
Rear	Low	22.73	0.700	23.2	0.780	
Head WCDMA1700 (RMC)						
Right hand touched	High	22.70	0.533	23.2	0.598	
Body WCDMA1700 (RMC)						
Rear	Middle	23.07	1.190	23.2	1.226	
Body WCDMA1700 (HSDPA)						
Rear	Middle	22.55	1.040	23.2	1.208	

Table 33: Extrapolated SAR Values of highest measured SAR (HSDPA/UMTS/GPRS/GSM)

2.5.5 Multiple Transmitter Information

BT/ WiFi Function

The closest distance between BT/WiFi antenna and main antenna is 9.85cm>5cm, and the location of the antennas inside mobile phone is shown as below picture:



The output power of BT antenna is as following:

Channel	Ch 0 2402 MHz	Ch 39 2441 Mhz	Ch 78 2480 MHz
Peak Conducted Output Power(dBm)	-0.16	-0.28	-0.53

The output power of WiFi antenna is as following:

Mode	Data rate (Mbps)		Channel	AV Power (dBm)	PK Power (dBm)
11b	1	Result	1	14.25	16.70
	2	Result	1	14.37	16.75
	5.5	Result	1	14.98	16.85
	11	Result	1	14.55	16.81
11g	6	Result	1	8.60	16.98
	9	Result	1	8.55	17.20
	12	Result	1	8.58	16.96
	18	Result	1	8.52	17.36
	24	Result	1	8.58	17.02
	36	Result	1	8.56	17.02
	48	Result	1	8.50	17.14
	54	Result	1	8.47	17.41
11n HT20	6.5	Result	1	8.00	17.10
	13	Result	1	7.80	17.10
	19.5	Result	1	7.90	17.00



	26	Result	1	8.00	17.00
	39	Result	1	7.80	16.9
	52	Result	1	7.90	17.10
	58.5	Result	1	7.90	17.00
	65	Result	1	7.80	17.10
11b	1	Result	6	17.13	19.12
	2	Result	6	17.17	19.15
	5.5	Result	6	17.97	19.10
	11	Result	6	17.57	19.26
11g	6	Result	6	9.63	18.27
	9	Result	6	9.63	18.18
	12	Result	6	9.65	18.21
	18	Result	6	9.61	18.18
	24	Result	6	9.64	18.05
	36	Result	6	9.61	18.24
	48	Result	6	9.55	18.10
	54	Result	6	9.51	18.01
11n HT20	6.5	Result	6	8.20	17.10
	13	Result	6	8.20	17.00
	19.5	Result	6	8.20	17.20
	26	Result	6	8.20	17.20
	39	Result	6	8.10	17.30
	52	Result	6	8.10	17.10
	58.5	Result	6	8.10	17.30
	65	Result	6	8.20	17.20
11b	1	Result	11	16.85	18.84
	2	Result	11	16.90	18.87
	5.5	Result	11	17.68	18.84
	11	Result	11	17.26	18.91
11g	6	Result	11	9.93	17.98
	9	Result	11	9.78	17.92
	12	Result	11	9.83	18.06
	18	Result	11	9.84	17.89
	24	Result	11	9.88	17.97
	36	Result	11	9.82	18.17
	48	Result	11	9.73	17.83
	54	Result	11	9.67	17.86
11n HT20	6.5	Result	11	9.20	17.70
	13	Result	11	9.20	17.70
	19.5	Result	11	9.10	17.60
	26	Result	11	9.20	17.80
	39	Result	11	9.00	17.70
	52	Result	11	9.00	17.70
	58.5	Result	11	9.1	17.80
	65	Result	11	9.0	17.60

Table 34:Conducted power measurement result (BT/WiFi)

Stand-alone SAR

According to the output power measurement results and the distance between BT/WiFi antenna and GSM/WCDMA antenna we can draw the conclusion that:

stand-alone SAR evaluation is not required for BT, Because the output power of BT unlicensed transmitter is $\leq 2 \cdot P_{Ref}$ (24mW) and its antenna(s) is ≥ 5.0 cm from other antennas.

stand-alone SAR evaluation is required for WiFi, and test data is as below table, Because the output power of WiFi is $\geq 2 \cdot P_{Ref}$ (24mW) and its antenna(s) is ≥ 5.0 cm from other antennas.

Test Case of Head			Result(W/kg)		
Band	Test Position	Channel	10g Average	1g Average	Power Drift
802.11b	Left Touch cheek	High	0.324	0.753	0.094
		Middle	0.401	0.956	0.097
		Low	0.239	0.546	0.146
	Left Tilt 15 Degree	Middle	0.271	0.682	-0.020
	Right Touch cheek	Middle	0.216	0.432	0.051
	Right Tilt 15 Degree	Middle	0.187	0.372	-0.013
Test Case of Body			Result(W/kg)		
Band	Test Position	Channel	10g Average	1g Average	Power Drift
802.11b	Test Case of Body with 802.11b				
	Towards Ground	Middle	0.038	0.073	0.153
	Towards Phantom	High	0.055	0.104	-0.024
		Middle	0.057	0.107	-0.014
		Low	0.034	0.065	-0.001
	Worst case position of 802.11b with earphone				
Towards Phantom	Middle	0.051	0.097	0.015	

Note:

- 1) SAR data taken from Annex 3 WiFi Measurement Result/Appendix to test report no. RZA1101-0049.
- 2) The value with blue colour is the maximum SAR value of each test band.
- 3) Upper and lower frequencies were measured at the worst position.
- 4) The SAR test shall be performed at the high, middle and low frequency channels of each operating mode. If the SAR measured at mid-band channel for each test configuration is at least 3.0 dB lower than the SAR limit (< 0.8 W/kg), testing at the high and low channels is optional.
- 5) Tests in body position were performed with 15 mm air gap between DUT and SAM to simulate the use of a non-metallic belt-clip or holster.
- 6) KDB 24227-SAR is not required for 802.11g/n channels when the maximum average output power is less than 0.25dB higher than that measured on the corresponding 802.11b channels.

Simultaneous SAR

About BT, because stand-alone SAR are not required for BT, Simultaneous Transmission SAR evaluation is not required for GSM/WCDMA& BT .

About WiFi, Because the out power of WiFi antenna is > 5cm from other antenna, and the sum of the 1-g SAR is < 1.6 W/kg as below table, Simultaneous Transmission SAR evaluation is not required for GSM/WCDMA & WiFi.

Test Configuration	Max.1g SAR result		Combined 1g SAR value	Remark
	WiFi	GSM/WCDMA		
Head, Left Cheek	0.956	0.384	1.340	Σ 1gram SAR <1.6W/kg
Head, Left tilted15°	0.682	0.295	0.977	
Head, Right Cheek	0.432	0.680	1.112	
Head, Right tilted15°	0.372	0.336	0.708	
Body, front (Towards Phantom)	0.107	0.452	0.559	
Body, rear (Towards Ground)	0.073	1.190	1.263	

Note: 1) This product don't support simultaneous transmission for DTM mode & WiFi.

2) Combined Max. 1g SAR value of WiFi and GSM/WCDMA in the each same position.

Annex 1 System performance verification

Date/Time: 2010-12-16 22:39:39

SystemPerformanceCheck-D1900 Head**DUT: Dipole 1900 MHz; Type: D1900V2; Serial: D1900V2 - SN: 5d091**

Communication System: CW; Frequency: 1900 MHz

Medium parameters used: $f = 1900$ MHz; $\sigma = 1.35$ mho/m; $\epsilon_r = 38.4$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

i Probe: EX3DV4 - SN3736; ConvF(7.61, 7.76, 8.09); Calibrated: 2010-11-16

i Sensor-Surface: 4mm (Mechanical Surface Detection)

i Electronics: DAE4 Sn851; Calibrated: 2010-6-30

i Phantom: SAM1; Type: SAM; Serial: TP-1475

i Measurement SW: DASYS5, V5.2 Build 157; Postprocessing SW: SEMCAD X, V14.2 Build 2Version 14.2.2 (1685) (Deployment Build)

Configuration/d=10mm, Pin=250mW/Area Scan (5x8x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 10.6 mW/g

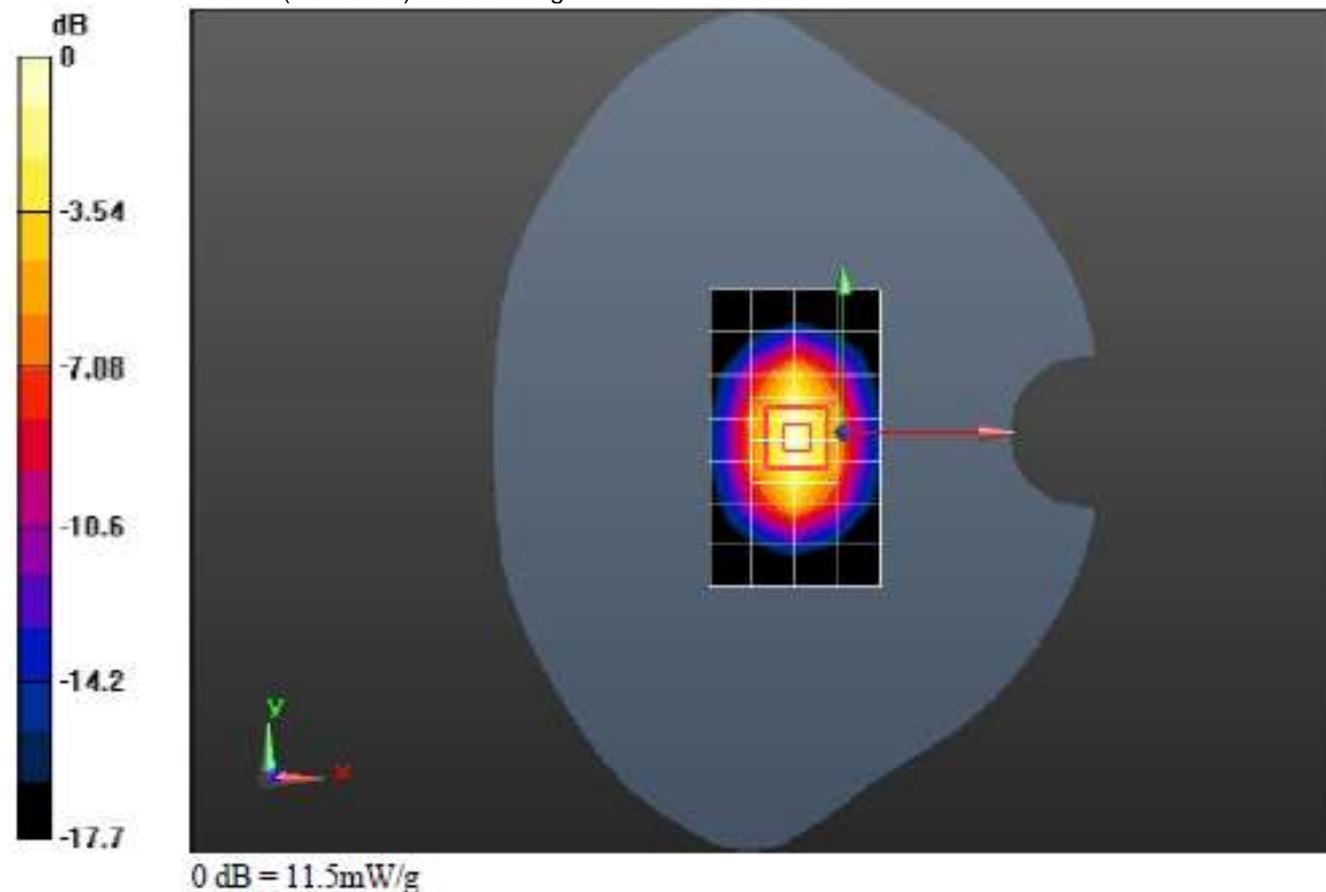
Configuration/d=10mm, Pin=250mW/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 93.7 V/m; Power Drift = -0.056 dB

Peak SAR (extrapolated) = 18.3 W/kg

SAR(1 g) = 10.1 mW/g; SAR(10 g) = 5.22 mW/g

Maximum value of SAR (measured) = 11.5 mW/g

**Additional information:**

position or distance of DUT to SAM (if not standard head positions) :

ambient temperature: 22.0°C; liquid temperature: 21.6°C

SystemPerformanceCheck-D1900 Head

DUT: Dipole 1900 MHz; Type: D1900V2; Serial: D1900V2 - SN: 5d091

Communication System: CW; Frequency: 1900 MHz

Medium parameters used: $f = 1900$ MHz; $\sigma = 1.37$ mho/m; $\epsilon_r = 38.7$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

Probe: EX3DV4 - SN3736; ConvF(7.61, 7.76, 8.09); Calibrated: 2010-11-16

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn851; Calibrated: 2010-6-30

Phantom: SAM1; Type: SAM; Serial: TP-1475

Measurement SW: DASYS5, V5.2 Build 157; Postprocessing SW: SEMCAD X, V14.2 Build 2Version 14.2.2 (1685) (Deployment Build)

Configuration/d=10mm, Pin=250mW/Area Scan (5x8x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 11.3 mW/g

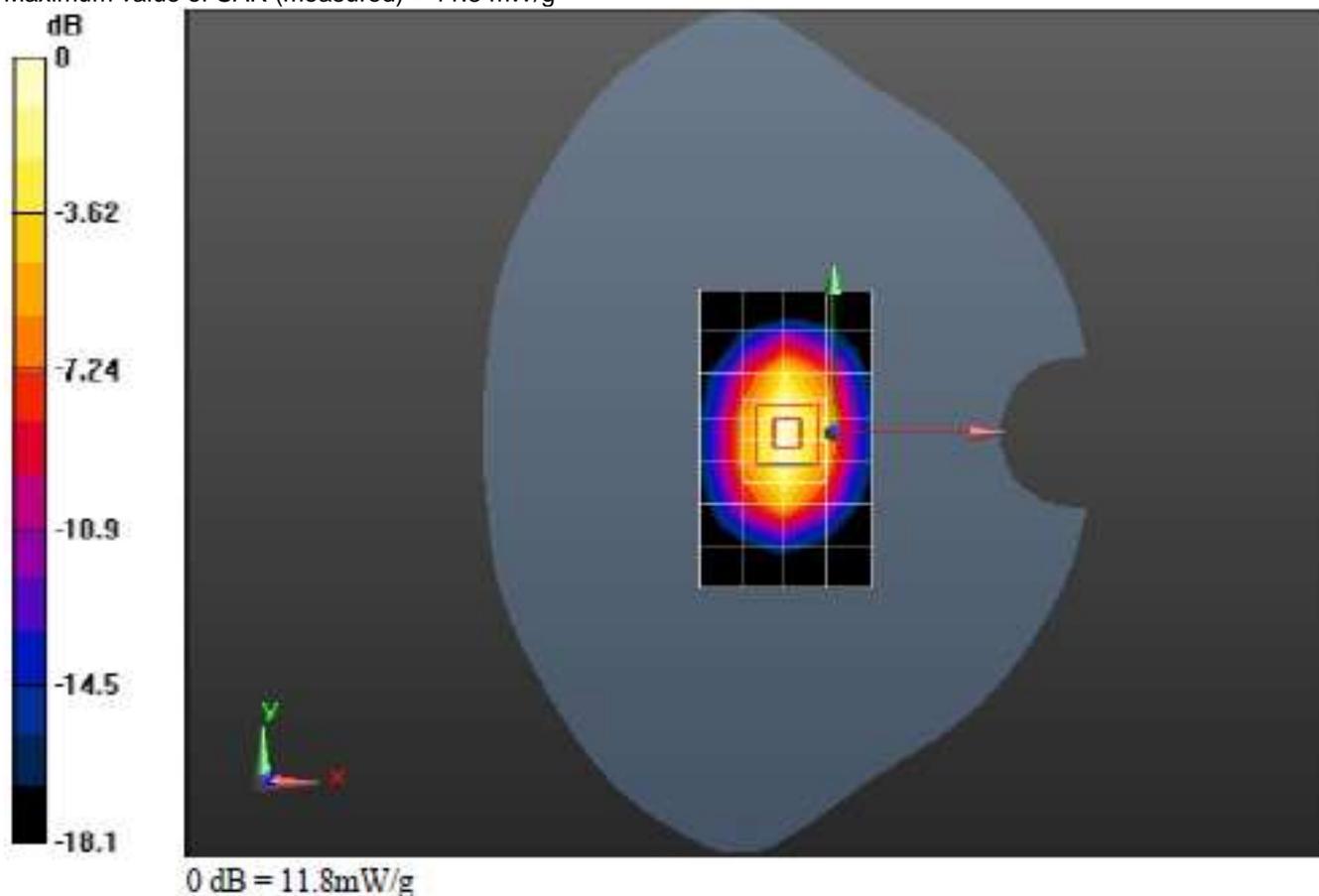
Configuration/d=10mm, Pin=250mW/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 94.6 V/m; Power Drift = -0.055 dB

Peak SAR (extrapolated) = 19.2 W/kg

SAR(1 g) = 10.5 mW/g; SAR(10 g) = 5.4 mW/g

Maximum value of SAR (measured) = 11.8 mW/g



Additional information:

position or distance of DUT to SAM (if not standard head positions) :

ambient temperature: 22.0°C; liquid temperature: 21.6°C

SystemPerformanceCheck-D1900 Body

DUT: Dipole 1900 MHz; Type: D1900V2; Serial: D1900V2 - SN: 5d091

Communication System: CW; Frequency: 1900 MHz

Medium parameters used: $f = 1900$ MHz; $\sigma = 1.52$ mho/m; $\epsilon_r = 52.2$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

Probe: EX3DV4 - SN3736; ConvF(6.81, 6.96, 7.3); Calibrated: 2010-11-16

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn851; Calibrated: 2010-6-30

Phantom: SAM1; Type: SAM; Serial: TP-1475

Measurement SW: DASYS5, V5.2 Build 157; Postprocessing SW: SEMCAD X, V14.2 Build 2Version 14.2.2 (1685) (Deployment Build)

Configuration/d=10mm, Pin=250mW/Area Scan (5x8x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 10.8 mW/g

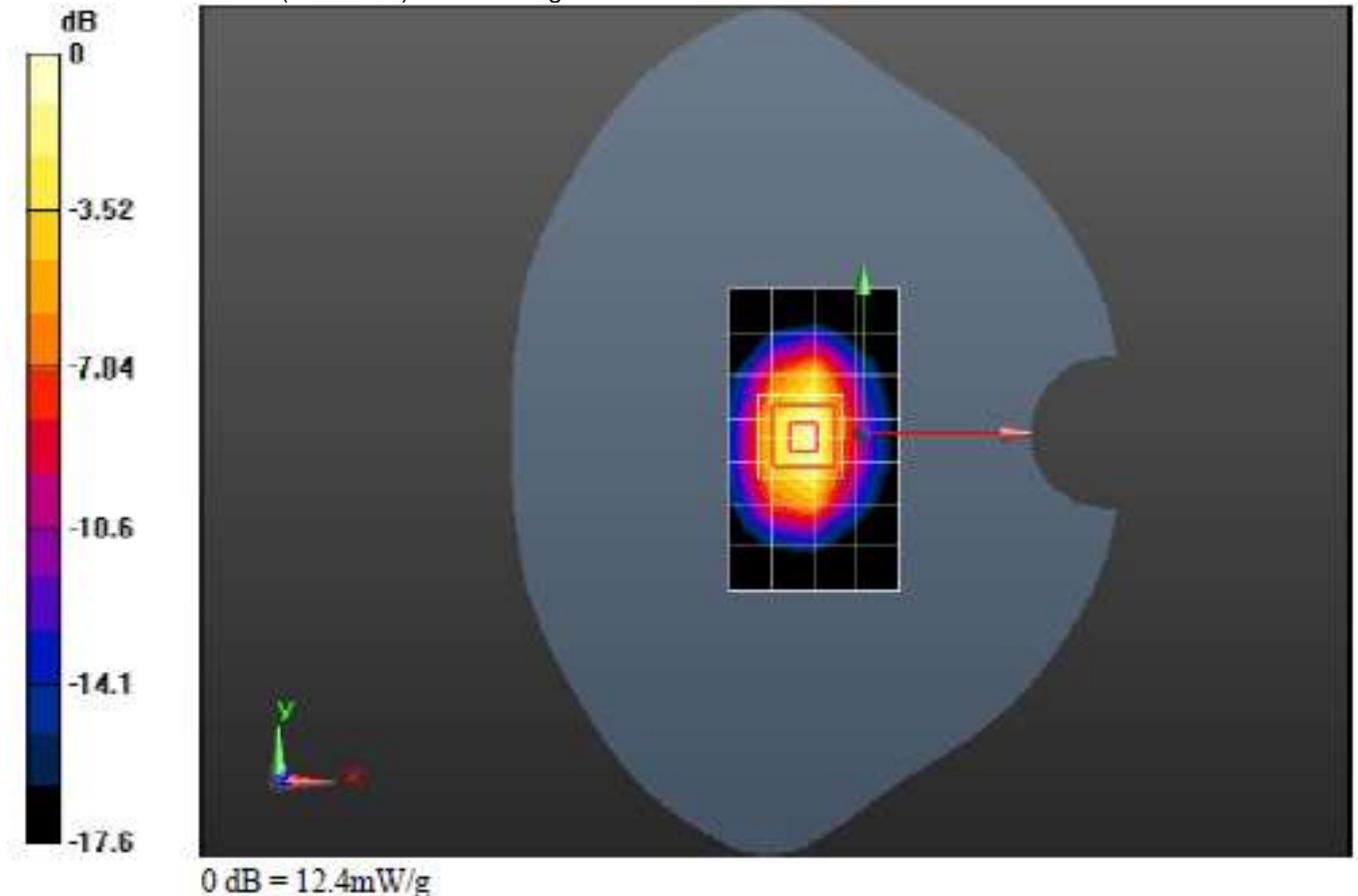
Configuration/d=10mm, Pin=250mW/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 87.1 V/m; Power Drift = 0.044 dB

Peak SAR (extrapolated) = 20 W/kg

SAR(1 g) = 10.9 mW/g; SAR(10 g) = 5.6 mW/g

Maximum value of SAR (measured) = 12.4 mW/g



Additional information:

position or distance of DUT to SAM (if not standard head positions) :

ambient temperature: 22.2°C; liquid temperature: 21.8°C

SystemPerformanceCheck-D1900 Body**DUT: Dipole 1900 MHz; Type: D1900V2; Serial: D1900V2 - SN: 5d091**

Communication System: CW; Frequency: 1900 MHz

Medium parameters used: $f = 1900$ MHz; $\sigma = 1.48$ mho/m; $\epsilon_r = 52.8$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

| Probe: EX3DV4 - SN3736; ConvF(6.81, 6.96, 7.3); Calibrated: 2010-11-16

| Sensor-Surface: 4mm (Mechanical Surface Detection)

| Electronics: DAE4 Sn851; Calibrated: 2010-6-30

| Phantom: SAM1; Type: SAM; Serial: TP-1475

| Measurement SW: DASYS5, V5.2 Build 157; Postprocessing SW: SEMCAD X, V14.2 Build 2Version 14.2.2 (1685) (Deployment Build)

Configuration/d=10mm, Pin=250mW/Area Scan (5x8x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 11.7 mW/g

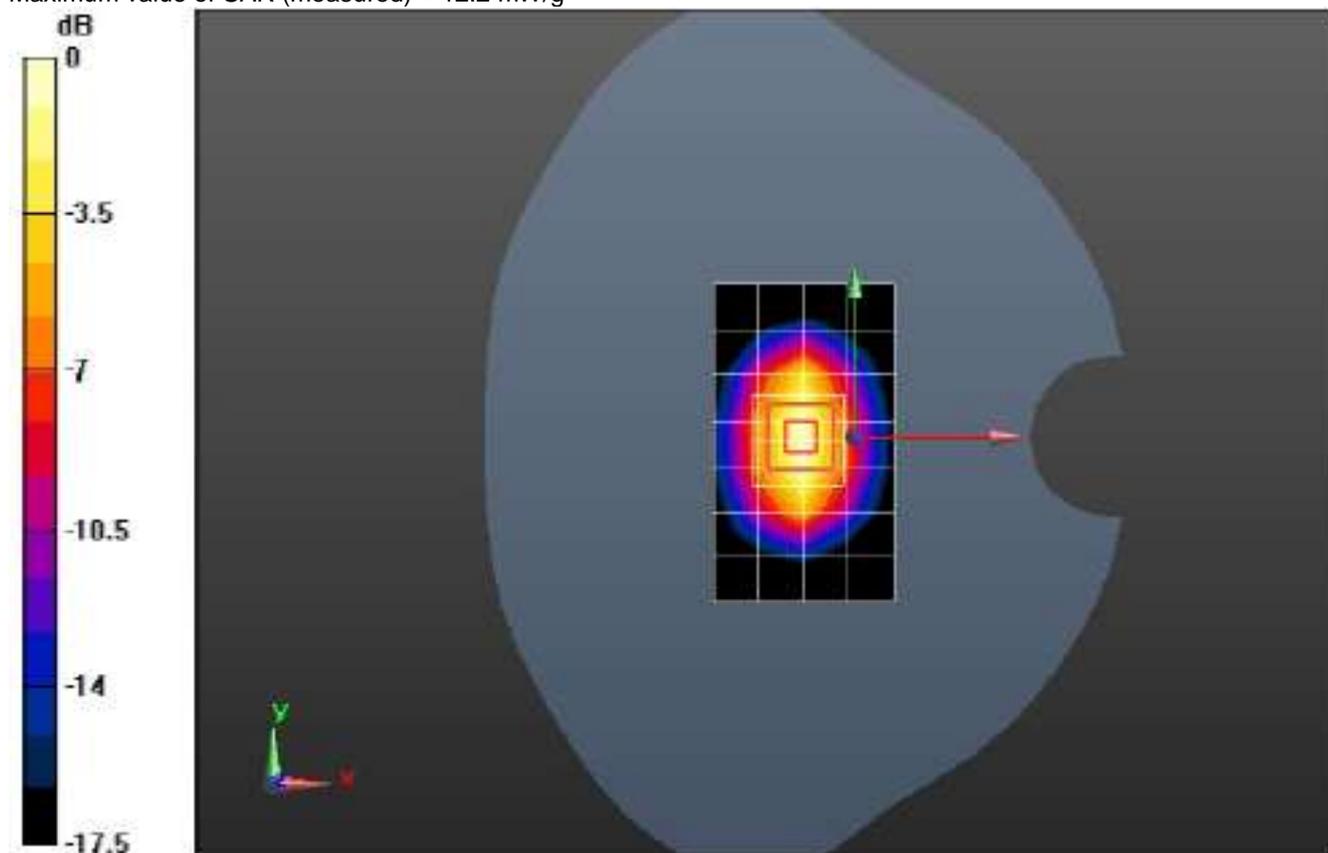
Configuration/d=10mm, Pin=250mW/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 92.2 V/m; Power Drift = -0.046 dB

Peak SAR (extrapolated) = 19.7 W/kg

SAR(1 g) = 10.8 mW/g; SAR(10 g) = 5.52 mW/g

Maximum value of SAR (measured) = 12.2 mW/g



0 dB = 12.2mW/g

Additional information:

position or distance of DUT to SAM (if not standard head positions) :

ambient temperature: 22.2°C; liquid temperature: 21.8°C

SystemPerformanceCheck-D1800 Head

DUT: Dipole 1800 MHz; Type: D1800V2; Serial: D1800V2 - SN: 2d157

Communication System: CW; Frequency: 1800 MHz

Medium parameters used: $f = 1800$ MHz; $\sigma = 1.4$ mho/m; $\epsilon_r = 38.4$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

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

DASY5 Configuration:

Probe: EX3DV4 - SN3736; ConvF(8.34, 8.45, 8.84); Calibrated: 2010-11-16

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn851; Calibrated: 2010-6-30

Phantom: SAM2; Type: SAM; Serial: TP-1474

Measurement SW: DASYS, V5.2 Build 157; Postprocessing SW: SEMCAD X, V14.2 Build 2Version 14.2.2 (1685) (Deployment Build)

Configuration/d=10mm, Pin=250mW/Area Scan (5x7x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 9.51 mW/g

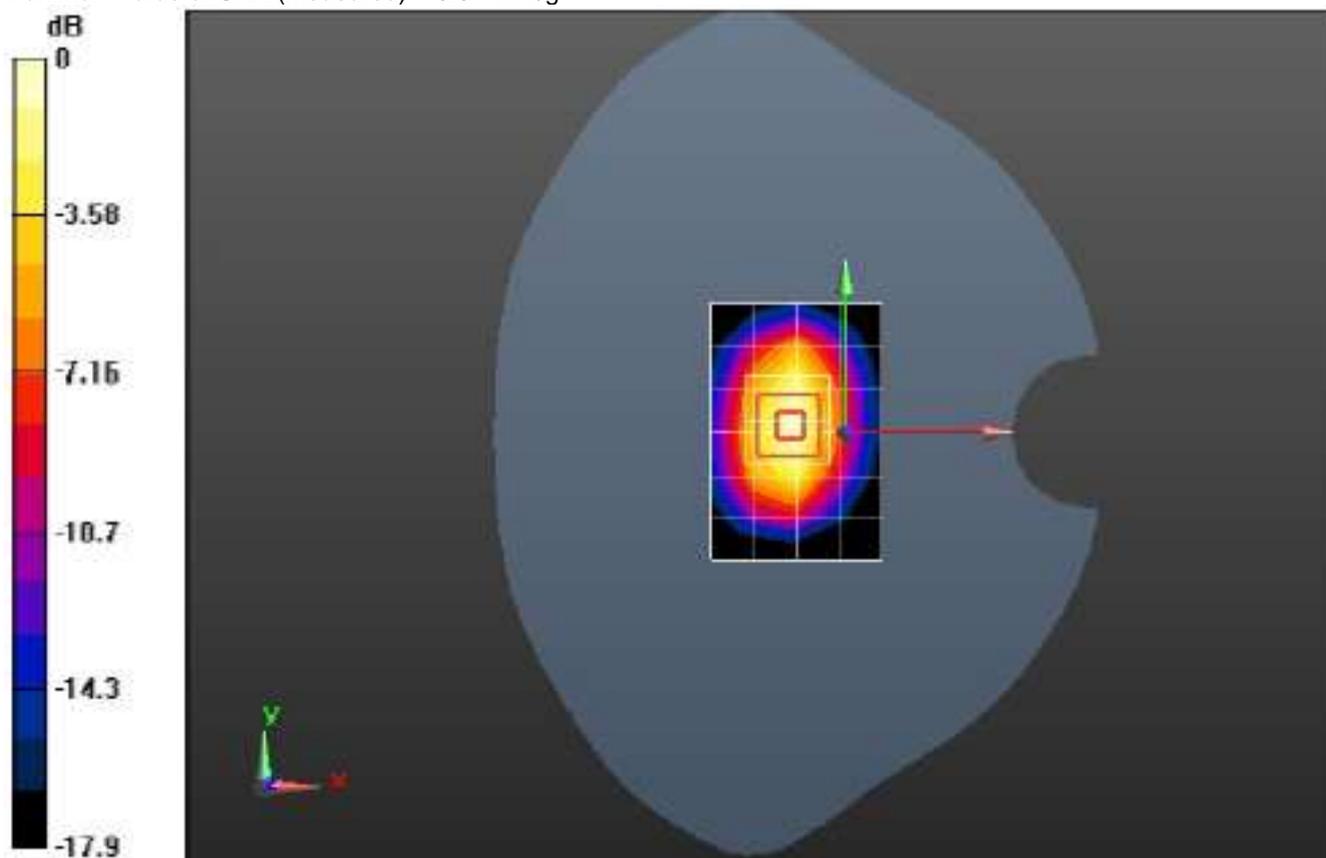
Configuration/d=10mm, Pin=250mW/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 84.1 V/m; Power Drift = 0.011 dB

Peak SAR (extrapolated) = 15.8 W/kg

SAR(1 g) = 8.83 mW/g; SAR(10 g) = 4.59 mW/g

Maximum value of SAR (measured) = 9.94 mW/g



0 dB = 9.94mW/g

Additional information:

position or distance of DUT to SAM (if not standard head positions) :

ambient temperature: 22.2°C; liquid temperature: 21.6°C

SystemPerformanceCheck-D1800 Body

DUT: Dipole 1800 MHz; Type: D1800V2; Serial: D1800V2 - SN: 2d157

Communication System: CW; Frequency: 1800 MHz

Medium parameters used: $f = 1800$ MHz; $\sigma = 1.51$ mho/m; $\epsilon_r = 52.8$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

Probe: EX3DV4 - SN3736; ConvF(7.74, 7.87, 8.26); Calibrated: 2010-11-16

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn851; Calibrated: 2010-6-30

Phantom: SAM1; Type: SAM; Serial: TP-1475

Measurement SW: DASYS5, V5.2 Build 157; Postprocessing SW: SEMCAD X, V14.2 Build 2Version 14.2.2 (1685) (Deployment Build)

Configuration/d=10mm, Pin=250mW/Area Scan (5x7x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 10.9 mW/g

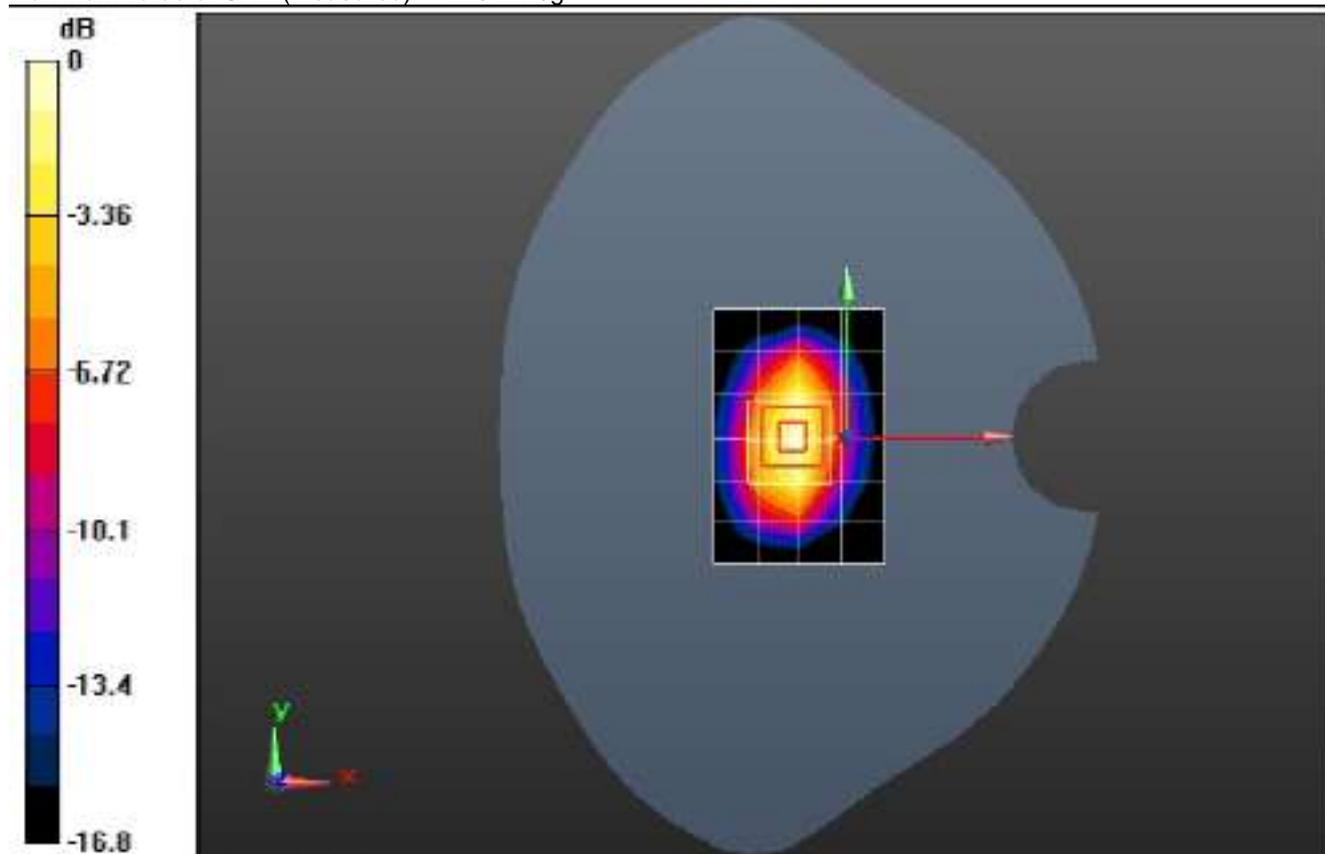
Configuration/d=10mm, Pin=250mW/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 86.8 V/m; Power Drift = 0.119 dB

Peak SAR (extrapolated) = 16.8 W/kg

SAR(1 g) = 9.91 mW/g; SAR(10 g) = 5.25 mW/g

Maximum value of SAR (measured) = 11.3 mW/g



0 dB = 11.3mW/g

Additional information:

position or distance of DUT to SAM (if not standard head positions) :

ambient temperature: 22.2°C; liquid temperature: 21.6°C

SystemPerformanceCheck-D835 Head

DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN:4d059

Communication System: CW; Frequency: 835 MHz

Medium parameters used: $f = 835$ MHz; $\sigma = 0.871$ mho/m; $\epsilon_r = 42.2$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

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

DASY5 Configuration:

Probe: EX3DV4 - SN3736; ConvF(9.26, 9.51, 9.97); Calibrated: 2010-11-16

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn851; Calibrated: 2010-6-30

Phantom: SAM2; Type: SAM; Serial: TP-1474

Measurement SW: DASYS, V5.2 Build 157; Postprocessing SW: SEMCAD X, V14.2 Build 2Version 14.2.2 (1685) (Deployment Build)

Configuration/d=15mm, Pin=250mW/Area Scan (6x11x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 2.11 mW/g

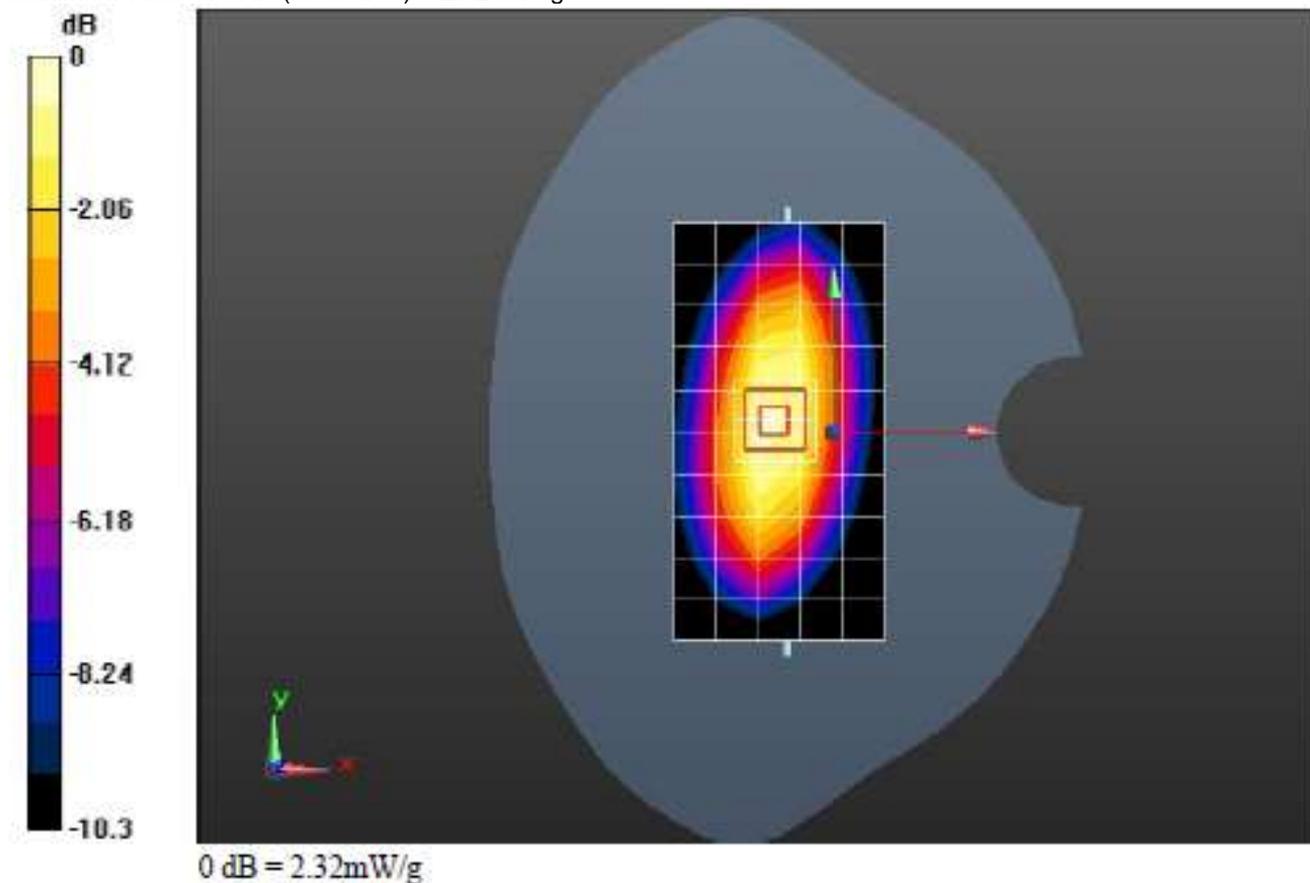
Configuration/d=15mm, Pin=250mW/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 50.9 V/m; Power Drift = 0.029 dB

Peak SAR (extrapolated) = 3.09 W/kg

SAR(1 g) = 2.14 mW/g; SAR(10 g) = 1.42 mW/g

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



Additional information:

position or distance of DUT to SAM (if not standard head positions) :

ambient temperature: 22.0°C; liquid temperature: 21.4°C

SystemPerformanceCheck-D835 Head

DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN:4d059

Communication System: CW; Frequency: 835 MHz

Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 0.864 \text{ mho/m}$; $\epsilon_r = 42.1$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

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

DASY5 Configuration:

Probe: EX3DV4 - SN3736; ConvF(9.26, 9.51, 9.97); Calibrated: 2010-11-16

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn851; Calibrated: 2010-6-30

Phantom: SAM2; Type: SAM; Serial: TP-1474

Measurement SW: DASYS, V5.2 Build 157; Postprocessing SW: SEMCAD X, V14.2 Build 2Version 14.2.2 (1685) (Deployment Build)

Configuration/d=15mm, Pin=250mW/Area Scan (6x11x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 2.06 mW/g

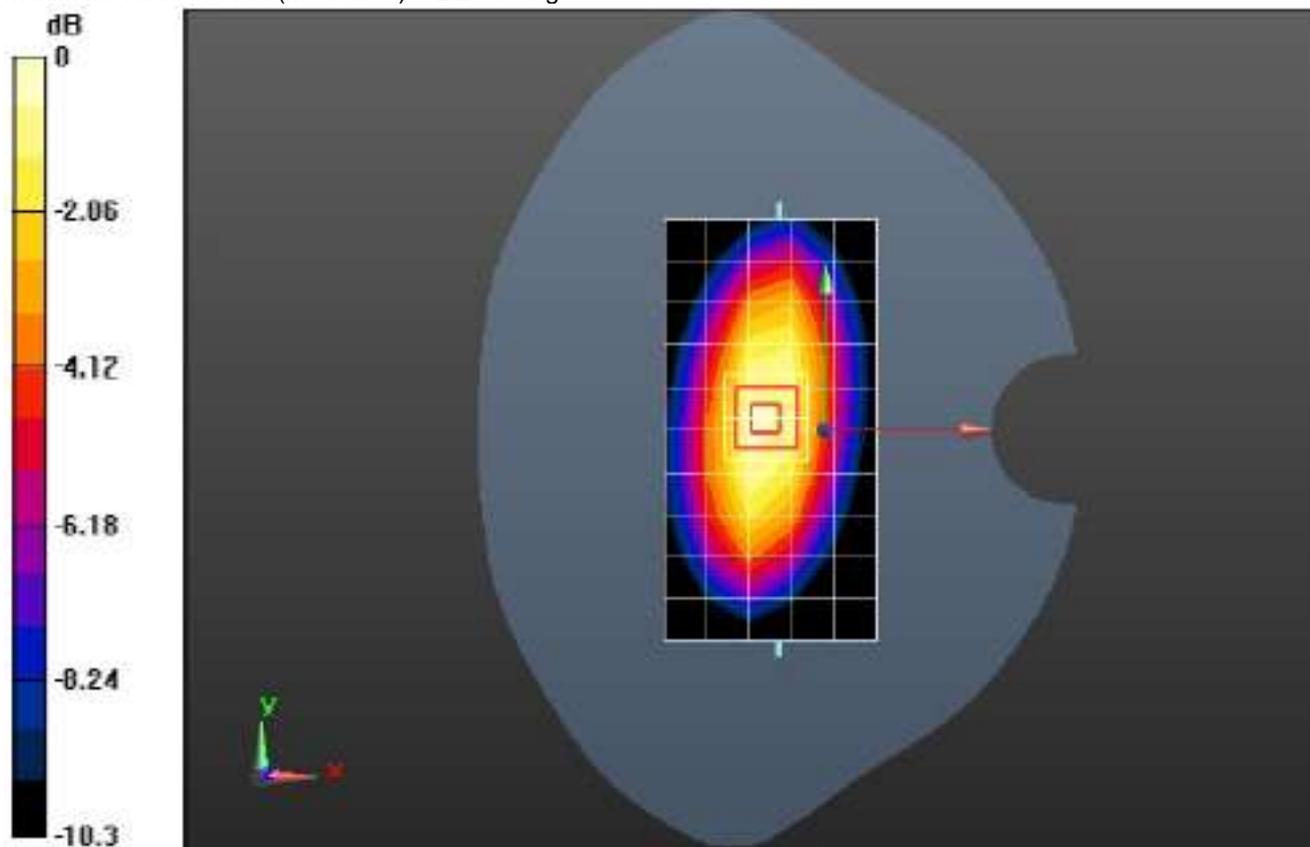
Configuration/d=15mm, Pin=250mW/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 50.4 V/m; Power Drift = 0.029 dB

Peak SAR (extrapolated) = 3 W/kg

SAR(1 g) = 2.09 mW/g; SAR(10 g) = 1.38 mW/g

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



0 dB = 2.26mW/g

Additional information:

position or distance of DUT to SAM (if not standard head positions) :

ambient temperature: 22.0°C; liquid temperature: 21.4°C

SystemPerformanceCheck-D835 Body

DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN:4d059

Communication System: CW; Frequency: 835 MHz

Medium parameters used: $f = 835$ MHz; $\sigma = 0.954$ mho/m; $\epsilon_r = 53.2$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

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

DASY5 Configuration:

Probe: EX3DV4 - SN3736; ConvF(8.79, 8.99, 9.47); Calibrated: 2010-11-16

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn851; Calibrated: 2010-6-30

Phantom: SAM1; Type: SAM; Serial: TP-1475

Measurement SW: DASY5, V5.2 Build 157; Postprocessing SW: SEMCAD X, V14.2 Build 2Version 14.2.2 (1685) (Deployment Build)

Configuration/d=15mm, Pin=250mW/Area Scan (6x11x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 2.58 mW/g

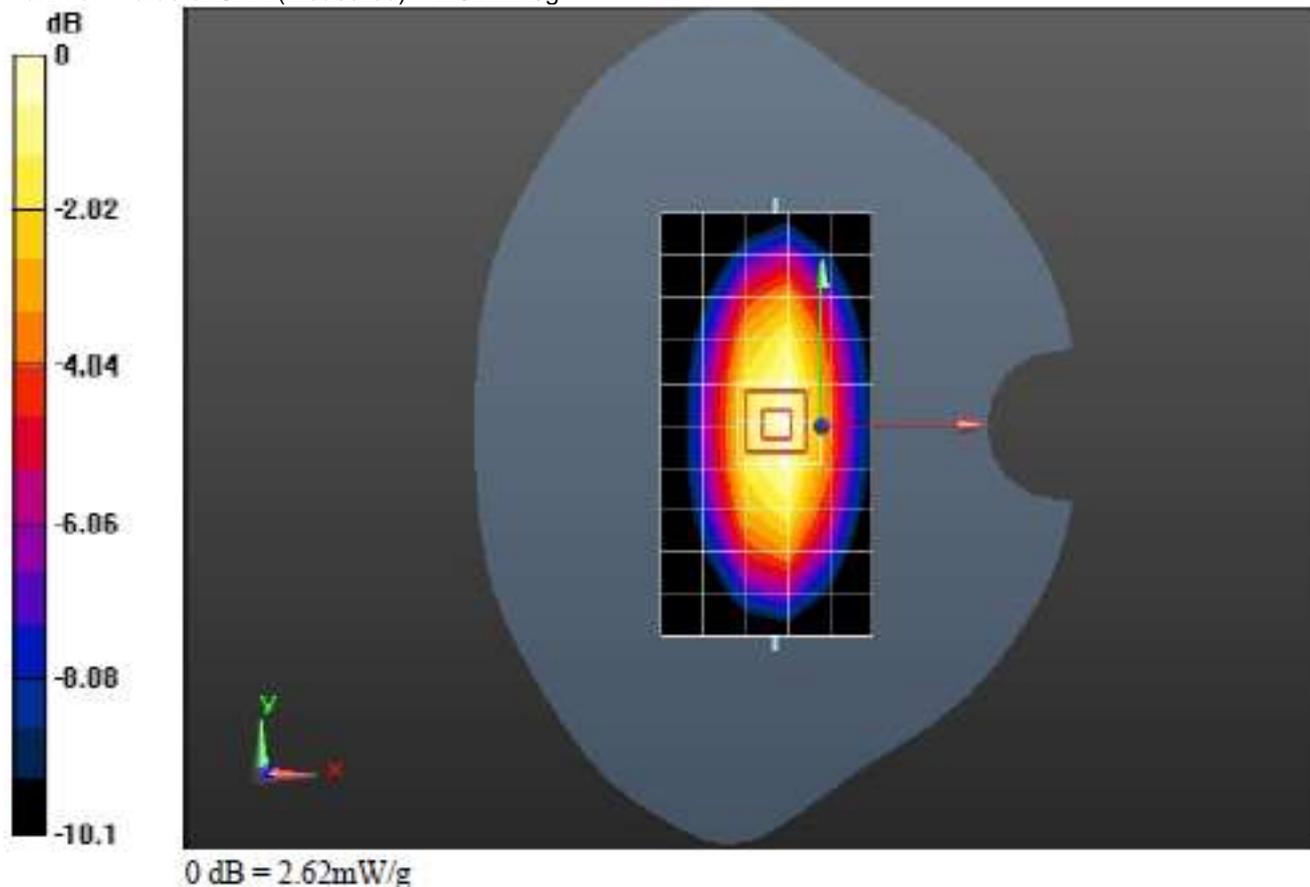
Configuration/d=15mm, Pin=250mW/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 53.7 V/m; Power Drift = -0.087 dB

Peak SAR (extrapolated) = 3.48 W/kg

SAR(1 g) = 2.43 mW/g; SAR(10 g) = 1.61 mW/g

Maximum value of SAR (measured) = 2.62 mW/g



Additional information:

position or distance of DUT to SAM (if not standard head positions) :

ambient temperature: 22.0°C; liquid temperature: 21.5°C

Annex 2 Measurement results (printout from DASY TM)

Annex 2.1 PCS 1900 MHz Head

Date/Time: 2010-12-17 4:21:56

P1528_OET65_EN62209- LeftHandSide touched –GSM1900 Middle

DUT: HUAWEI U9000/U9000

Communication System: HW-GSM/GPRS/EDGE 1TS; Frequency: 1880 MHz

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.35$ mho/m; $\epsilon_r = 38.8$; $\rho = 1000$ kg/m³

Phantom section: Left Section

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

DASY5 Configuration:

Probe: EX3DV4 - SN3736; ConvF(7.61, 7.76, 8.09); Calibrated: 2010-11-16

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn851; Calibrated: 2010-6-30

Phantom: SAM1; Type: SAM; Serial: TP-1475

Measurement SW: DASY5, V5.2 Build 157; Postprocessing SW: SEMCAD X, V14.2 Build 2Version 14.2.2 (1685) (Deployment Build)

U9000/head/Area Scan (11x17x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.167 mW/g

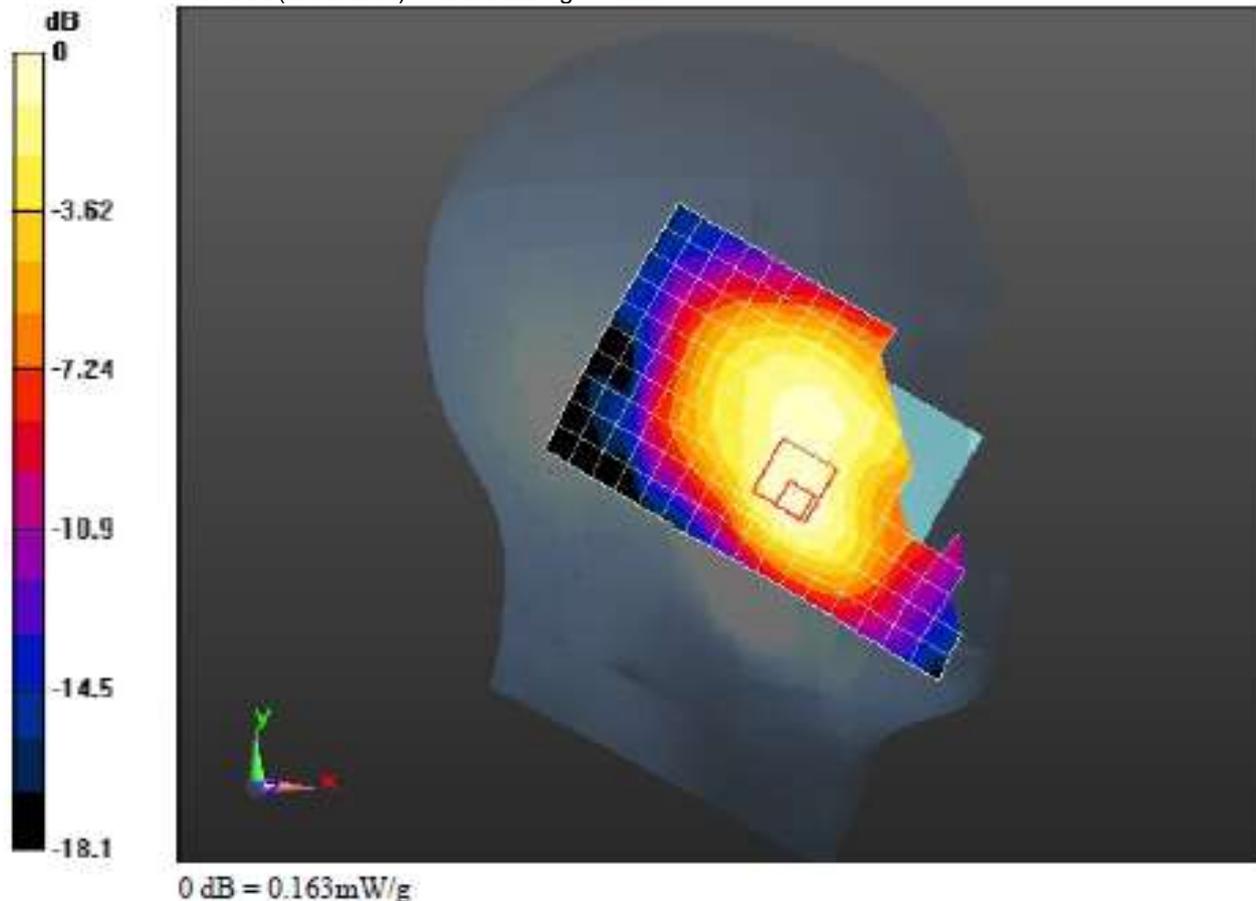
U9000/head/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 2.57 V/m; Power Drift = 0.059 dB

Peak SAR (extrapolated) = 0.225 W/kg

SAR(1 g) = 0.150 mW/g; SAR(10 g) = 0.095 mW/g

Maximum value of SAR (measured) = 0.163 mW/g



Additional information:

position or distance of DUT to SAM (if not standard head positions) :

ambient temperature: 22.0°C; liquid temperature: 21.6°C

P1528_OET65_EN62209- LeftHandSide tilted 15° –GSM1900 Middle

DUT: HUAWEI U9000/U9000

Communication System: HW-GSM/GPRS/EDGE 1TS; Frequency: 1880 MHz
Medium parameters used: $f = 1880$ MHz; $\sigma = 1.35$ mho/m; $\epsilon_r = 38.8$; $\rho = 1000$ kg/m³
Phantom section: Left Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: EX3DV4 - SN3736; ConvF(7.61, 7.76, 8.09); Calibrated: 2010-11-16
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn851; Calibrated: 2010-6-30
- Phantom: SAM1; Type: SAM; Serial: TP-1475
- Measurement SW: DASY5, V5.2 Build 157; Postprocessing SW: SEMCAD X, V14.2 Build 2Version 14.2.2 (1685) (Deployment Build)

U9000/head/Area Scan (11x17x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.122 mW/g

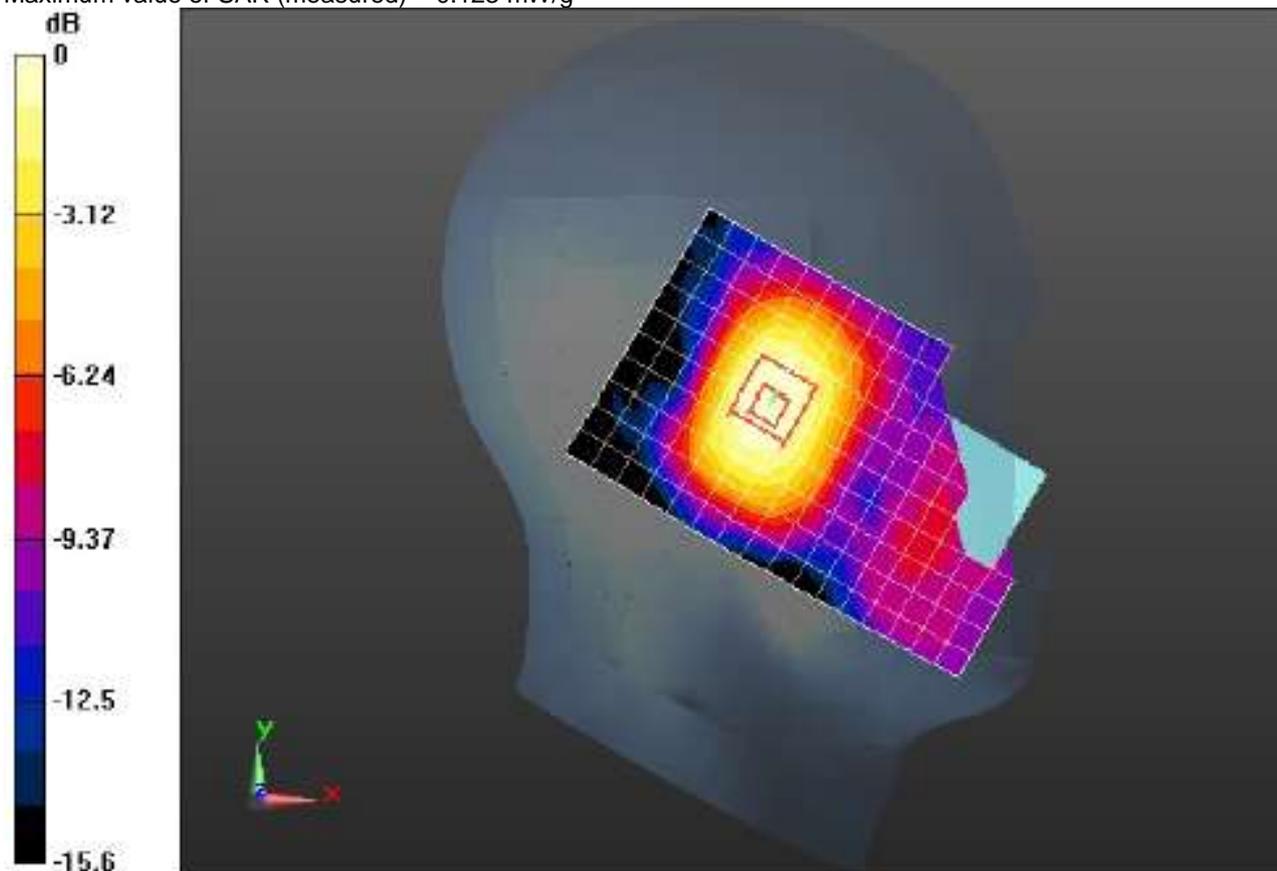
U9000/head/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 5.28 V/m; Power Drift = -0.185 dB

Peak SAR (extrapolated) = 0.168 W/kg

SAR(1 g) = 0.114 mW/g; SAR(10 g) = 0.074 mW/g

Maximum value of SAR (measured) = 0.123 mW/g



0 dB = 0.123mW/g

Additional information:

position or distance of DUT to SAM (if not standard head positions) :
ambient temperature: 22.0°C; liquid temperature: 21.6°C

**P1528_OET65_EN62209- RightHandSide touched –GSM1900 Middle
DUT: HUAWEI U9000/U9000**

Communication System: HW-GSM/GPRS/EDGE 1TS; Frequency: 1880 MHz
Medium parameters used: $f = 1880$ MHz; $\sigma = 1.33$ mho/m; $\epsilon_r = 38.4$; $\rho = 1000$ kg/m³
Phantom section: Right Section
Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- | Probe: EX3DV4 - SN3736; ConvF(7.61, 7.76, 8.09); Calibrated: 2010-11-16
- | Sensor-Surface: 4mm (Mechanical Surface Detection)
- | Electronics: DAE4 Sn851; Calibrated: 2010-6-30
- | Phantom: SAM1; Type: SAM; Serial: TP-1475
- | Measurement SW: DASYS5, V5.2 Build 157; Postprocessing SW: SEMCAD X, V14.2 Build 2Version 14.2.2 (1685) (Deployment Build)

U9000/head/Area Scan (8x12x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.224 mW/g

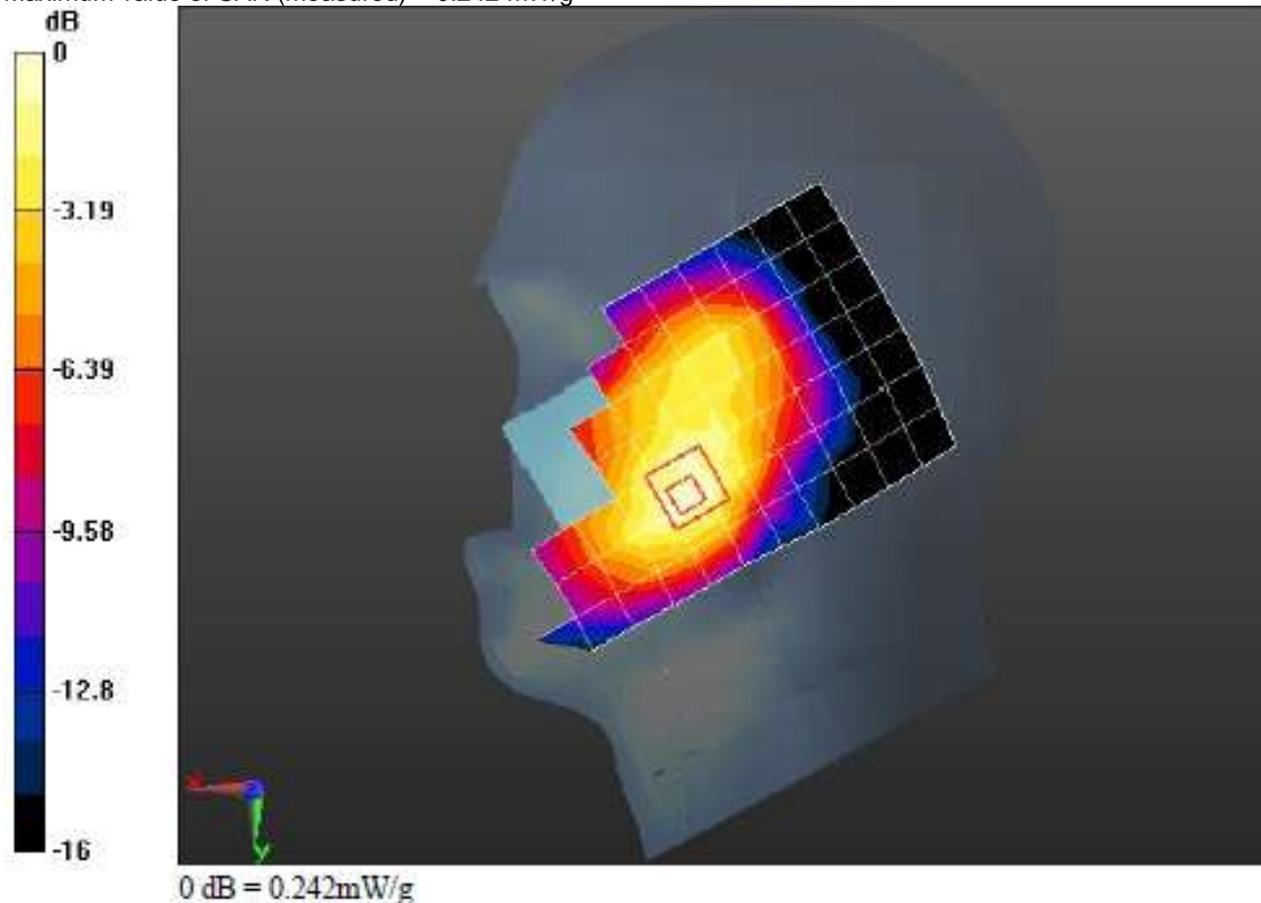
U9000/head/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 2.98 V/m; Power Drift = 0.187 dB

Peak SAR (extrapolated) = 0.330 W/kg

SAR(1 g) = 0.223 mW/g; SAR(10 g) = 0.141 mW/g

Maximum value of SAR (measured) = 0.242 mW/g



Additional information:

position or distance of DUT to SAM (if not standard head positions) :
ambient temperature: 22.0°C; liquid temperature: 21.6°C

P1528_OET65_EN62209- RightHandSide tilted 15° –GSM1900 Middle

DUT: HUAWEI U9000/U9000

Communication System: HW-GSM/GPRS/EDGE 1TS; Frequency: 1880 MHz
Medium parameters used: $f = 1880$ MHz; $\sigma = 1.33$ mho/m; $\epsilon_r = 38.4$; $\rho = 1000$ kg/m³
Phantom section: Right Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: EX3DV4 - SN3736; ConvF(7.61, 7.76, 8.09); Calibrated: 2010-11-16
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn851; Calibrated: 2010-6-30
- Phantom: SAM1; Type: SAM; Serial: TP-1475
- Measurement SW: DASY5, V5.2 Build 157; Postprocessing SW: SEMCAD X, V14.2 Build 2Version 14.2.2 (1685) (Deployment Build)

U9000/head/Area Scan (8x12x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.131 mW/g

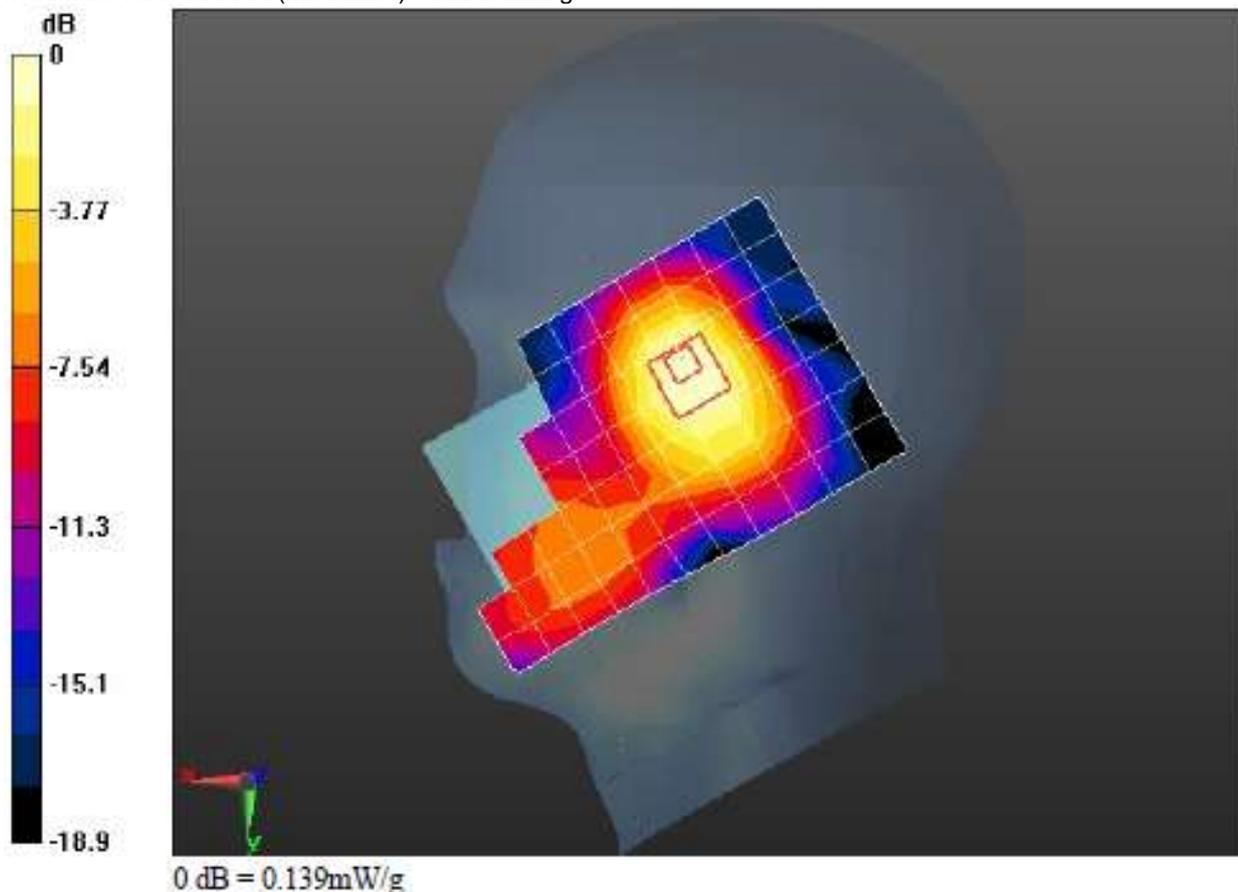
U9000/head/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 5.42 V/m; Power Drift = -0.133 dB

Peak SAR (extrapolated) = 0.188 W/kg

SAR(1 g) = 0.125 mW/g; SAR(10 g) = 0.078 mW/g

Maximum value of SAR (measured) = 0.139 mW/g



Additional information:

position or distance of DUT to SAM (if not standard head positions) :
ambient temperature: 22.0°C; liquid temperature: 21.6°C

P1528_OET65_EN62209- RightHandSide touched –GSM1900 High

DUT: HUAWEI U9000/U9000

Communication System: HW-GSM/GPRS/EDGE 1TS; Frequency: 1909.8 MHz

Medium parameters used: $f = 1910$ MHz; $\sigma = 1.35$ mho/m; $\epsilon_r = 38.3$; $\rho = 1000$ kg/m³

Phantom section: Right Section

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

DASY5 Configuration:

Probe: EX3DV4 - SN3736; ConvF(7.61, 7.76, 8.09); Calibrated: 2010-11-16

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn851; Calibrated: 2010-6-30

Phantom: SAM1; Type: SAM; Serial: TP-1475

Measurement SW: DASY5, V5.2 Build 157; Postprocessing SW: SEMCAD X, V14.2 Build 2Version 14.2.2 (1685) (Deployment Build)

U9000/head/Area Scan (8x12x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.292 mW/g

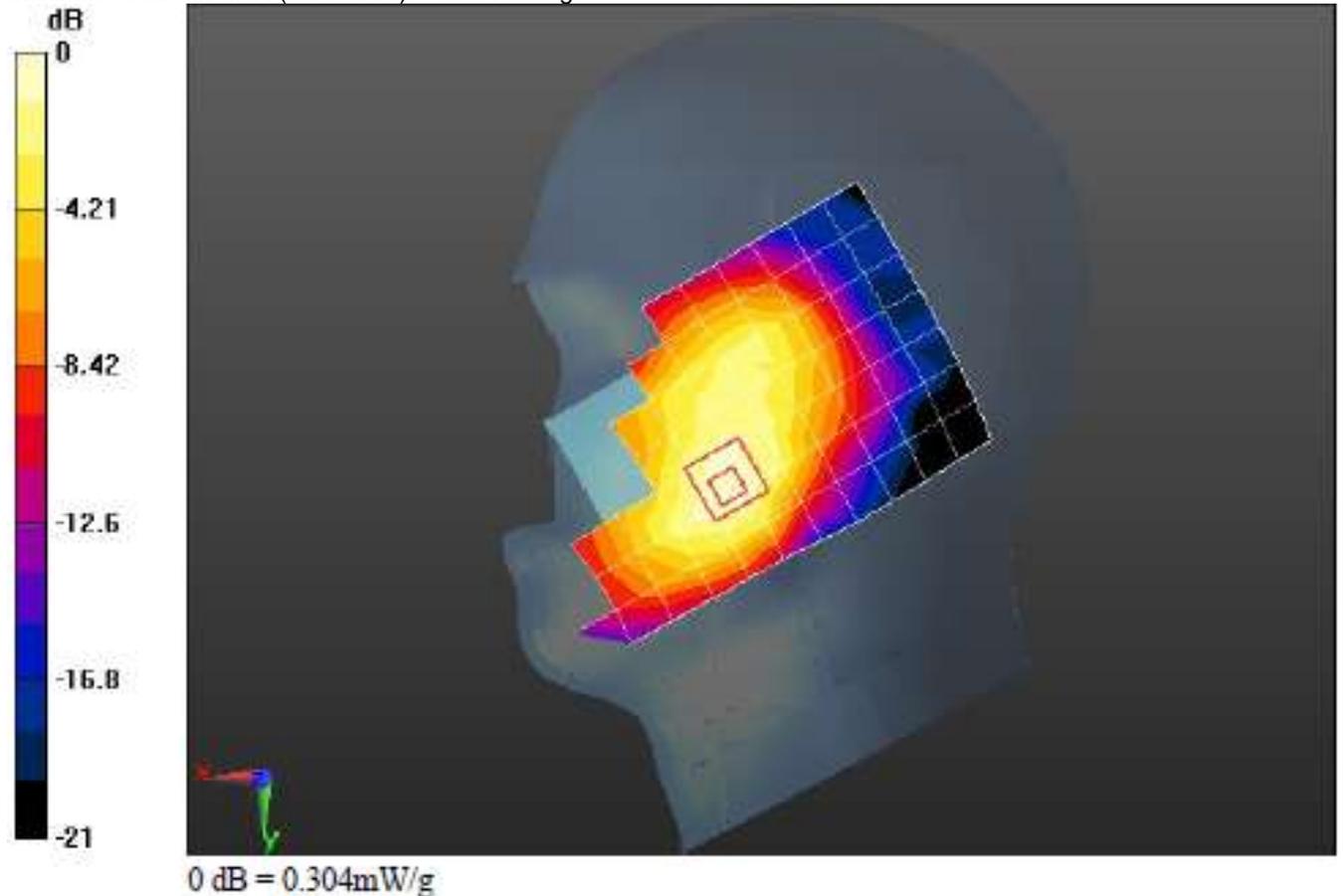
U9000/head/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 3.39 V/m; Power Drift = -0.172 dB

Peak SAR (extrapolated) = 0.422 W/kg

SAR(1 g) = 0.281 mW/g; SAR(10 g) = 0.176 mW/g

Maximum value of SAR (measured) = 0.304 mW/g



Additional information:

position or distance of DUT to SAM (if not standard head positions) :

ambient temperature: 22.0°C; liquid temperature: 21.6°C

**P1528_OET65_EN62209-RightHandSide touched –GSM1900 Low
DUT: HUAWEI U9000/U9000**

Communication System: HW-GSM/GPRS/EDGE 1TS; Frequency: 1850.2 MHz
Medium parameters used (interpolated): $f = 1850.2$ MHz; $\sigma = 1.33$ mho/m; $\epsilon_r = 38.5$; $\rho = 1000$ kg/m³
Phantom section: Right Section
Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: EX3DV4 - SN3736; ConvF(7.61, 7.76, 8.09); Calibrated: 2010-11-16
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn851; Calibrated: 2010-6-30
- Phantom: SAM1; Type: SAM; Serial: TP-1475
- Measurement SW: DASYS5, V5.2 Build 157; Postprocessing SW: SEMCAD X, V14.2 Build 2Version 14.2.2 (1685) (Deployment Build)

U9000/head/Area Scan (8x12x1): Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

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

U9000/head/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

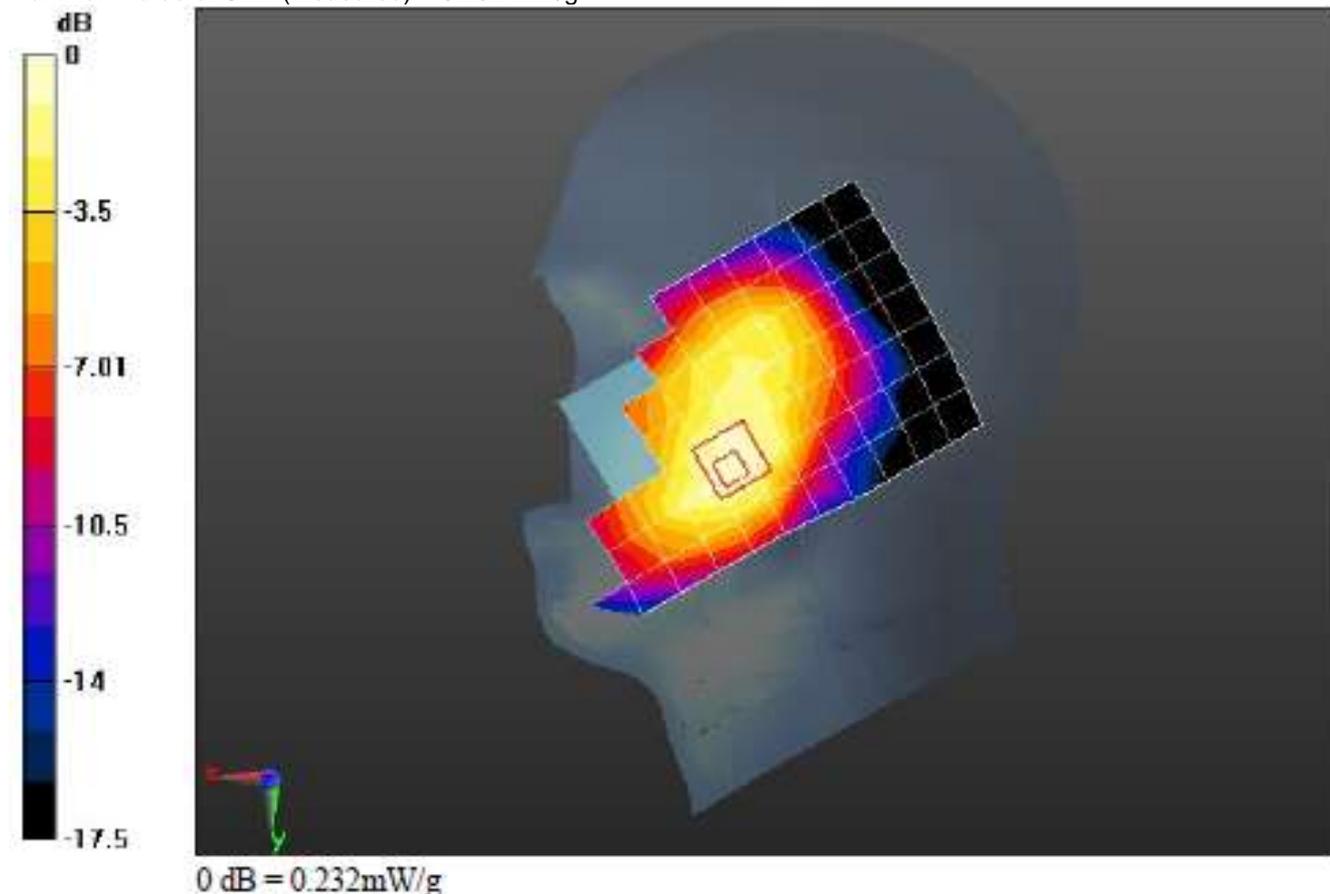
Reference Value = 3.25 V/m; Power Drift = -0.071 dB

Peak SAR (extrapolated) = 0.316 W/kg

SAR(1 g) = 0.214 mW/g; SAR(10 g) = 0.137 mW/g

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.232 mW/g



Additional information:

position or distance of DUT to SAM (if not standard head positions) :
ambient temperature: 22.0°C; liquid temperature: 21.6°C

P1528_OET65_EN62209- LeftHandSide touched –GSM1900 GPRS 1TS Middle

DUT: HUAWEI U9000/U9000

Communication System: HW-GSM/GPRS/EDGE 1TS; Frequency: 1880 MHz

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.35$ mho/m; $\epsilon_r = 38.8$; $\rho = 1000$ kg/m³

Phantom section: Left Section

Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

Probe: EX3DV4 - SN3736; ConvF(7.61, 7.76, 8.09); Calibrated: 2010-11-16

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn851; Calibrated: 2010-6-30

Phantom: SAM1; Type: SAM; Serial: TP-1475

Measurement SW: DASYS5, V5.2 Build 157; Postprocessing SW: SEMCAD X, V14.2 Build 2Version 14.2.2 (1685) (Deployment Build)

U9000/Head/Area Scan (12x17x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.156 mW/g

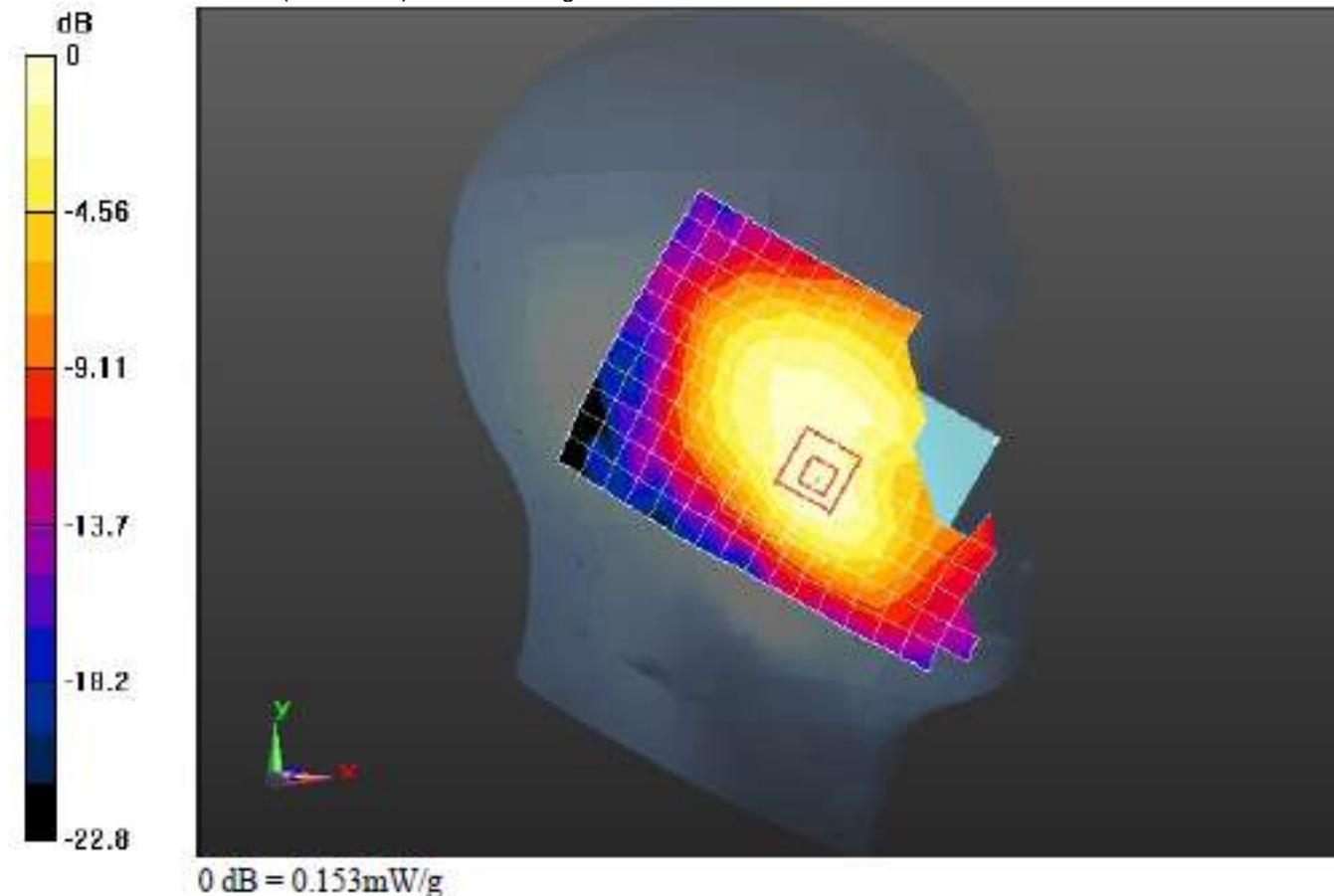
U9000/Head/Zoom Scan (6x6x6)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=8mm

Reference Value = 2.6 V/m; Power Drift = -0.081 dB

Peak SAR (extrapolated) = 0.213 W/kg

SAR(1 g) = 0.144 mW/g; SAR(10 g) = 0.092 mW/g

Maximum value of SAR (measured) = 0.153 mW/g



Additional information:

position or distance of DUT to SAM (if not standard head positions) :

ambient temperature: 22.0°C; liquid temperature: 21.6°C

P1528_OET65_EN62209- LeftHandSide tilted 15° –GSM1900 GPRS 1TS Middle

DUT: HUAWEI U9000/U9000

Communication System: HW-GSM/GPRS/EDGE 1TS; Frequency: 1880 MHz

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.35$ mho/m; $\epsilon_r = 38.8$; $\rho = 1000$ kg/m³

Phantom section: Left Section

Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

Probe: EX3DV4 - SN3736; ConvF(7.61, 7.76, 8.09); Calibrated: 2010-11-16

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn851; Calibrated: 2010-6-30

Phantom: SAM1; Type: SAM; Serial: TP-1475

Measurement SW: DASYS5, V5.2 Build 157; Postprocessing SW: SEMCAD X, V14.2 Build 2Version 14.2.2 (1685) (Deployment Build)

U9000/Head/Area Scan (12x17x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.114 mW/g

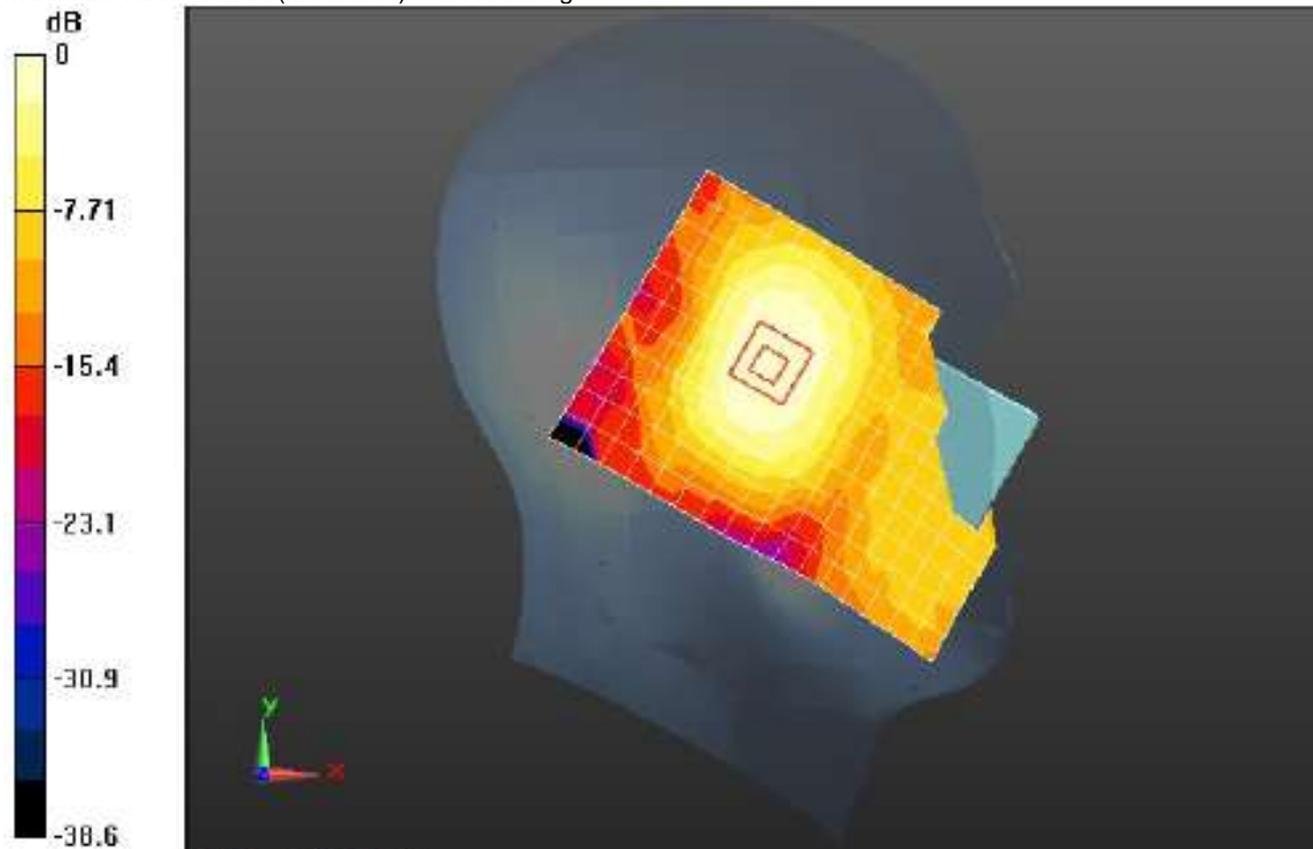
U9000/Head/Zoom Scan (6x6x6)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=8mm

Reference Value = 4.53 V/m; Power Drift = 0.066 dB

Peak SAR (extrapolated) = 0.155 W/kg

SAR(1 g) = 0.107 mW/g; SAR(10 g) = 0.070 mW/g

Maximum value of SAR (measured) = 0.115 mW/g



0 dB = 0.115mW/g

Additional information:

position or distance of DUT to SAM (if not standard head positions) :

ambient temperature: 22.0°C; liquid temperature: 21.6°C

**P1528_OET65_EN62209- RightHandSide touched –GSM1900 GPRS 1TS Middle
DUT: HUAWEI U9000/U9000**

Communication System: HW-GSM/GPRS/EDGE 1TS; Frequency: 1880 MHz
Medium parameters used: $f = 1880$ MHz; $\sigma = 1.35$ mho/m; $\epsilon_r = 38.8$; $\rho = 1000$ kg/m³
Phantom section: Right Section
Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: EX3DV4 - SN3736; ConvF(7.61, 7.76, 8.09); Calibrated: 2010-11-16
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn851; Calibrated: 2010-6-30
- Phantom: SAM1; Type: SAM; Serial: TP-1475
- Measurement SW: DASYS5, V5.2 Build 157; Postprocessing SW: SEMCAD X, V14.2 Build 2Version 14.2.2 (1685) (Deployment Build)

U9000/Head/Area Scan (11x17x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.238 mW/g

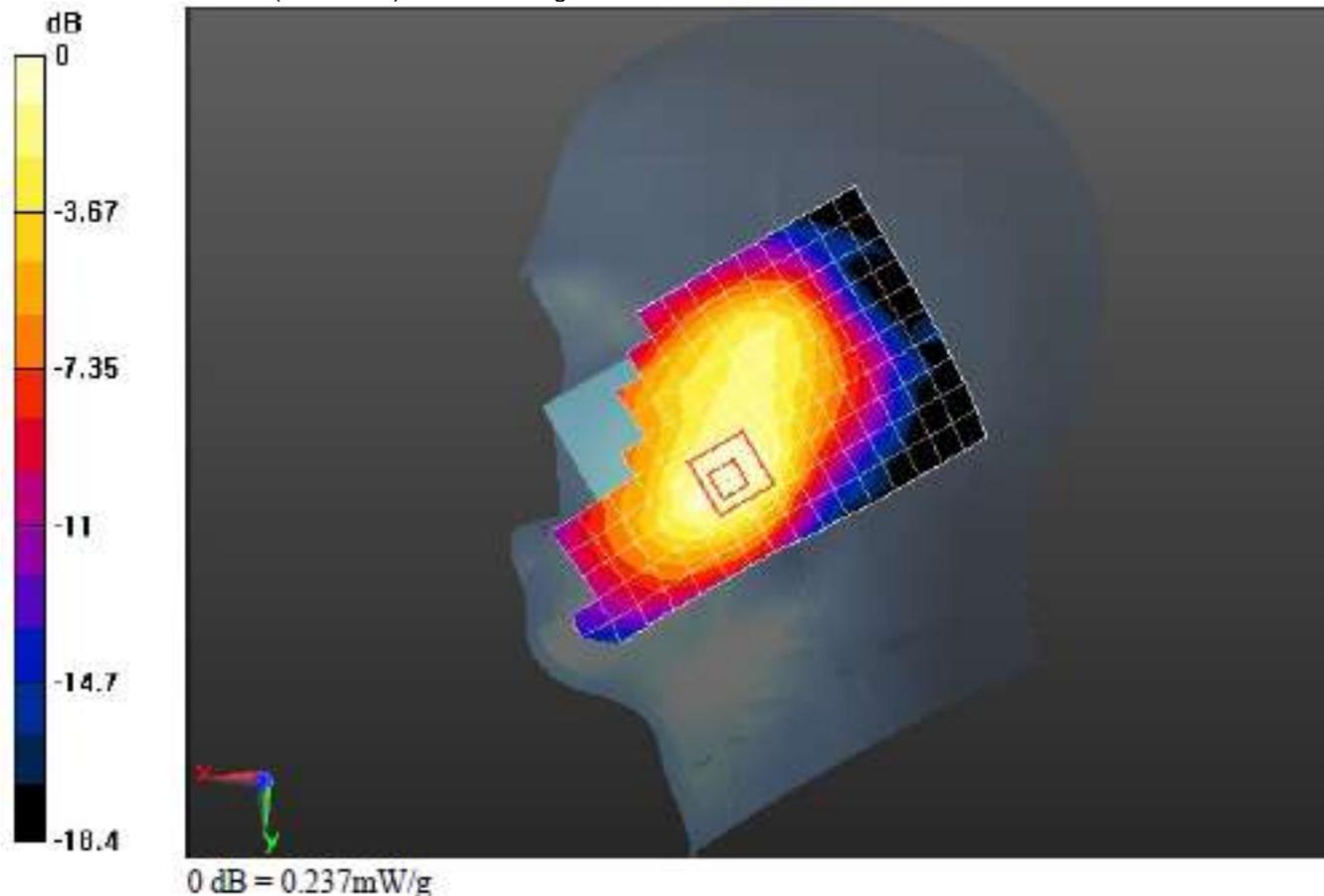
U9000/Head/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 2.87 V/m; Power Drift = -0.165 dB

Peak SAR (extrapolated) = 0.325 W/kg

SAR(1 g) = 0.216 mW/g; SAR(10 g) = 0.135 mW/g

Maximum value of SAR (measured) = 0.237 mW/g



Additional information:

position or distance of DUT to SAM (if not standard head positions) :
ambient temperature: 22.0°C; liquid temperature: 21.6°C

P1528_OET65_EN62209- RightHandSide tilted 15° –GSM1900 GPRS 1TS Middle

DUT: HUAWEI U9000/U9000

Communication System: HW-GSM/GPRS/EDGE 1TS; Frequency: 1880 MHz

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.35$ mho/m; $\epsilon_r = 38.8$; $\rho = 1000$ kg/m³

Phantom section: Right Section

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

DASY5 Configuration:

Probe: EX3DV4 - SN3736; ConvF(7.61, 7.76, 8.09); Calibrated: 2010-11-16

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn851; Calibrated: 2010-6-30

Phantom: SAM1; Type: SAM; Serial: TP-1475

Measurement SW: DASY5, V5.2 Build 157; Postprocessing SW: SEMCAD X, V14.2 Build 2Version 14.2.2 (1685) (Deployment Build)

U9000/Head/Area Scan (8x12x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.116 mW/g

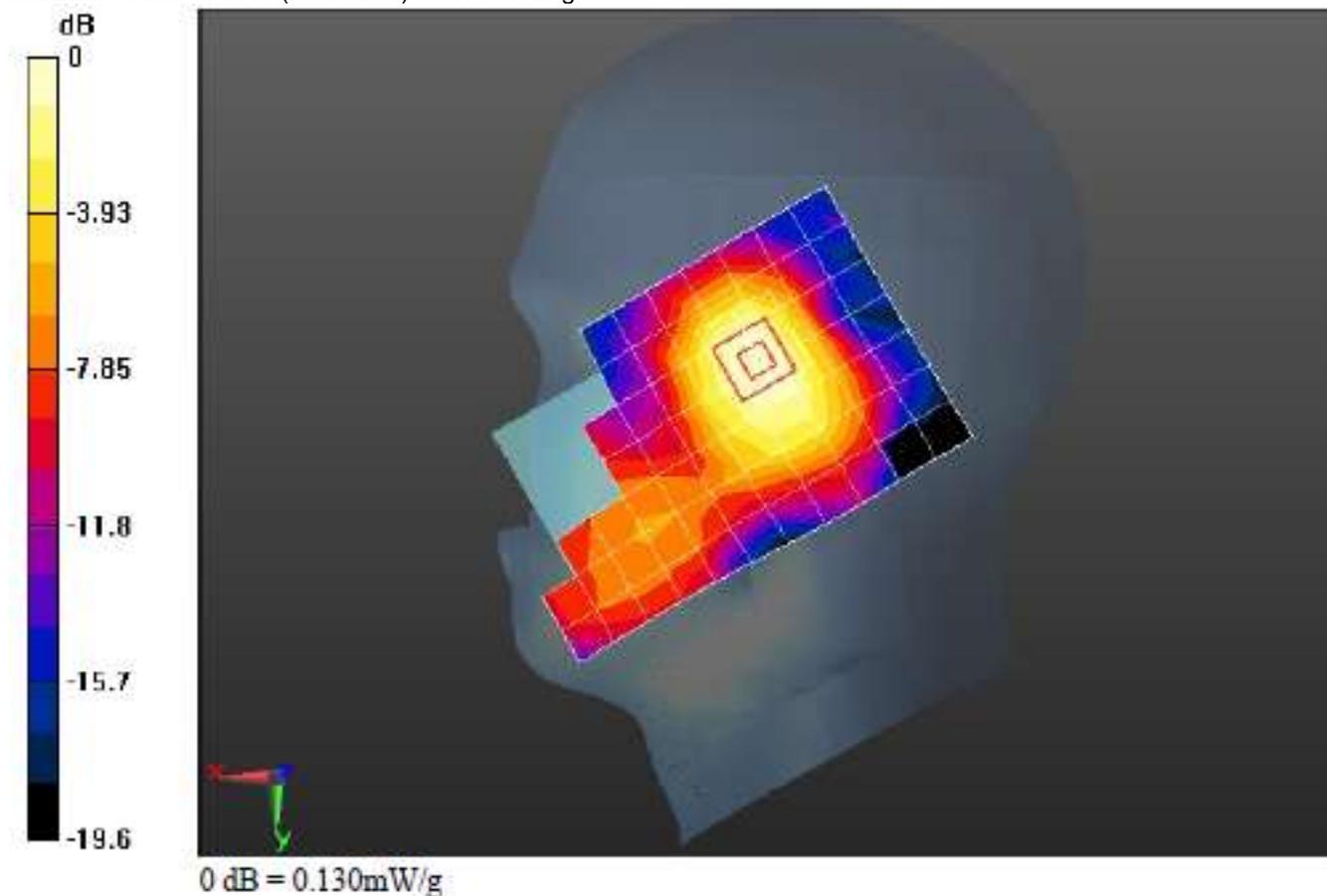
U9000/Head/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 5.54 V/m; Power Drift = -0.176 dB

Peak SAR (extrapolated) = 0.174 W/kg

SAR(1 g) = 0.121 mW/g; SAR(10 g) = 0.077 mW/g

Maximum value of SAR (measured) = 0.130 mW/g



Additional information:

position or distance of DUT to SAM (if not standard head positions) :

ambient temperature: 22.0°C; liquid temperature: 21.6°C

P1528_OET65_EN62209- RightHandSide touched –GSM1900 GPRS 1TS High**DUT: HUAWEI U9000/U9000**

Communication System: HW-GSM/GPRS/EDGE 1TS; Frequency: 1909.8 MHz

Medium parameters used: $f = 1910$ MHz; $\sigma = 1.38$ mho/m; $\epsilon_r = 38.7$; $\rho = 1000$ kg/m³

Phantom section: Right Section

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

DASY5 Configuration:

| Probe: EX3DV4 - SN3736; ConvF(7.61, 7.76, 8.09); Calibrated: 2010-11-16

| Sensor-Surface: 4mm (Mechanical Surface Detection)

| Electronics: DAE4 Sn851; Calibrated: 2010-6-30

| Phantom: SAM1; Type: SAM; Serial: TP-1475

| Measurement SW: DASY5, V5.2 Build 157; Postprocessing SW: SEMCAD X, V14.2 Build 2Version 14.2.2 (1685) (Deployment Build)

U9000/Head/Area Scan (8x12x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.273 mW/g

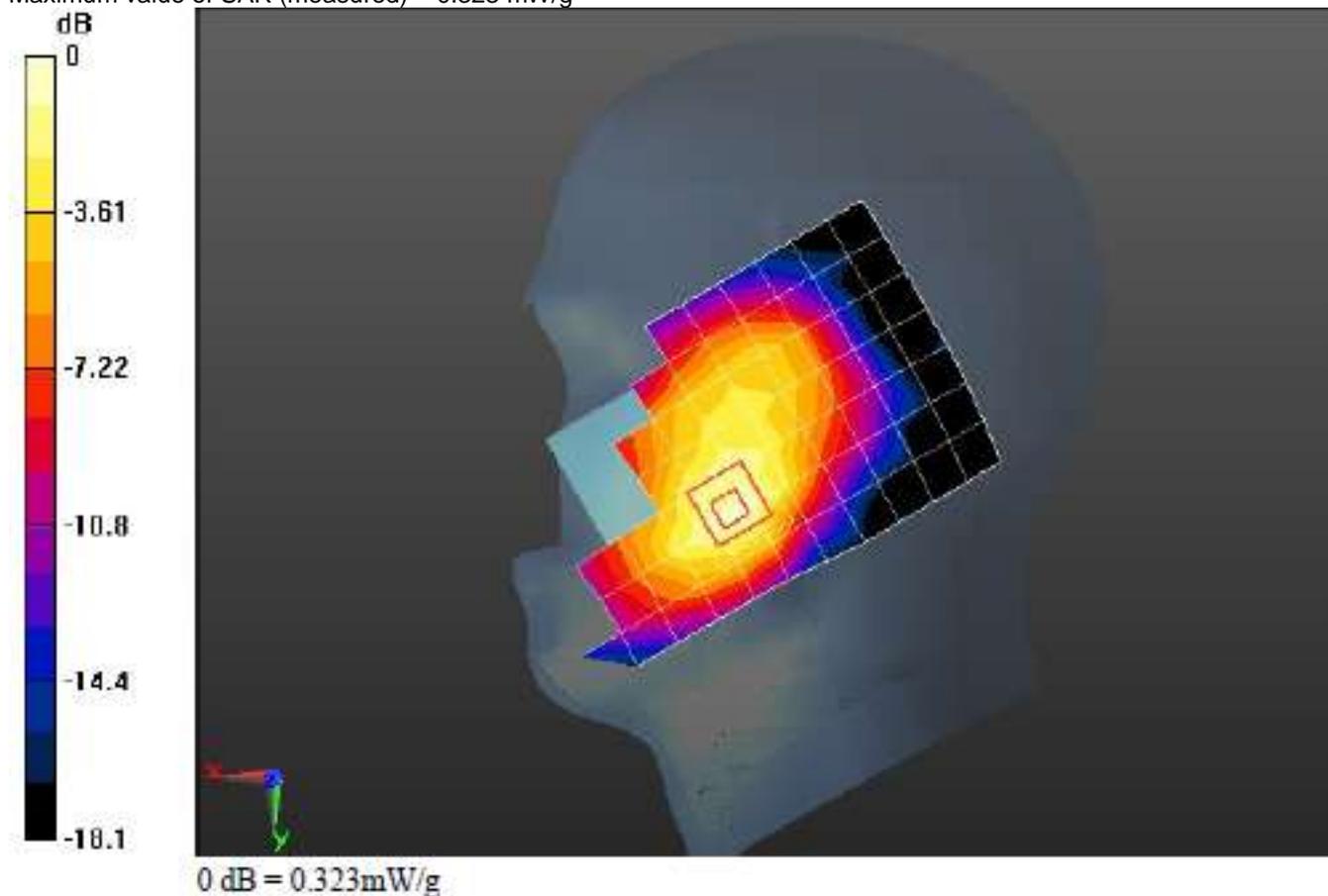
U9000/Head/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 3 V/m; Power Drift = -0.043 dB

Peak SAR (extrapolated) = 0.455 W/kg

SAR(1 g) = 0.297 mW/g; SAR(10 g) = 0.182 mW/g

Maximum value of SAR (measured) = 0.323 mW/g

**Additional information:**

position or distance of DUT to SAM (if not standard head positions) :

ambient temperature: 22.0°C; liquid temperature: 21.6°C

**P1528_OET65_EN62209-RightHandSide touched –GSM1900 GPRS 1TS Low
DUT: HUAWEI U9000/U9000**

Communication System: HW-GSM/GPRS/EDGE 1TS; Frequency: 1850.2 MHz
Medium parameters used (interpolated): $f = 1850.2$ MHz; $\sigma = 1.34$ mho/m; $\epsilon_r = 38.9$; $\rho = 1000$ kg/m³
Phantom section: Right Section
Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- | Probe: EX3DV4 - SN3736; ConvF(7.61, 7.76, 8.09); Calibrated: 2010-11-16
- | Sensor-Surface: 4mm (Mechanical Surface Detection)
- | Electronics: DAE4 Sn851; Calibrated: 2010-6-30
- | Phantom: SAM1; Type: SAM; Serial: TP-1475
- | Measurement SW: DASYS5, V5.2 Build 157; Postprocessing SW: SEMCAD X, V14.2 Build 2Version 14.2.2 (1685) (Deployment Build)

U9000/Head/Area Scan (8x12x1): Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.233 mW/g

U9000/Head/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

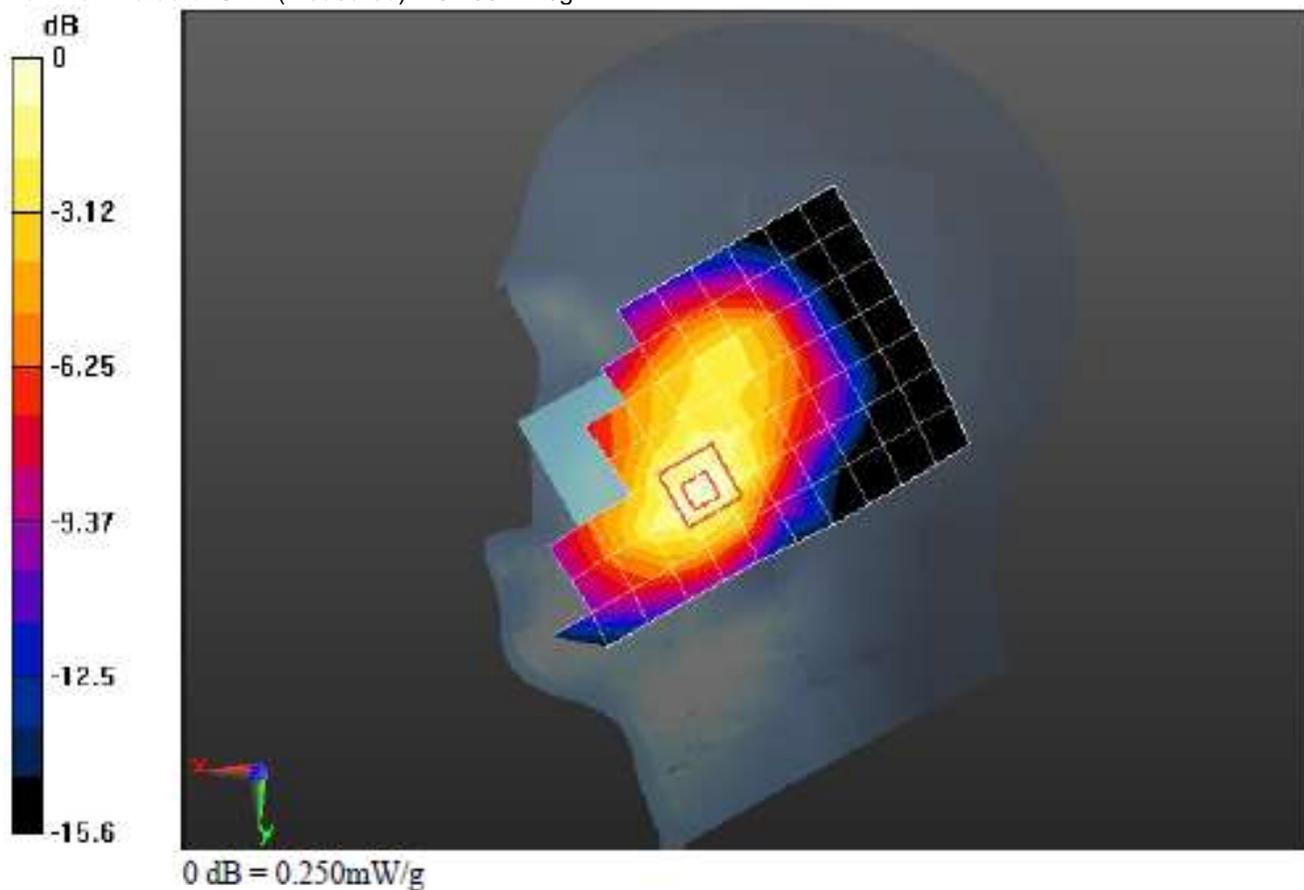
Reference Value = 2.92 V/m; Power Drift = 0.088 dB

Peak SAR (extrapolated) = 0.361 W/kg

SAR(1 g) = 0.233 mW/g; SAR(10 g) = 0.147 mW/g

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.250 mW/g



Additional information:

position or distance of DUT to SAM (if not standard head positions) :
ambient temperature: 22.0°C; liquid temperature: 21.6°C

**P1528_OET65_EN62209-RightHandSide touched –GSM1900 EGPRS 1TS High
DUT: HUAWEI U9000/U9000**

Communication System: HW-GSM/GPRS/EDGE 1TS; Frequency: 1909.8 MHz
Medium parameters used: $f = 1910$ MHz; $\sigma = 1.38$ mho/m; $\epsilon_r = 38.7$; $\rho = 1000$ kg/m³
Phantom section: Right Section
Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- | Probe: EX3DV4 - SN3736; ConvF(7.61, 7.76, 8.09); Calibrated: 2010-11-16
- | Sensor-Surface: 4mm (Mechanical Surface Detection)
- | Electronics: DAE4 Sn851; Calibrated: 2010-6-30
- | Phantom: SAM1; Type: SAM; Serial: TP-1475
- | Measurement SW: DASYS5, V5.2 Build 157; Postprocessing SW: SEMCAD X, V14.2 Build 2Version 14.2.2 (1685) (Deployment Build)

U9000/Head/Area Scan (8x12x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.280 mW/g

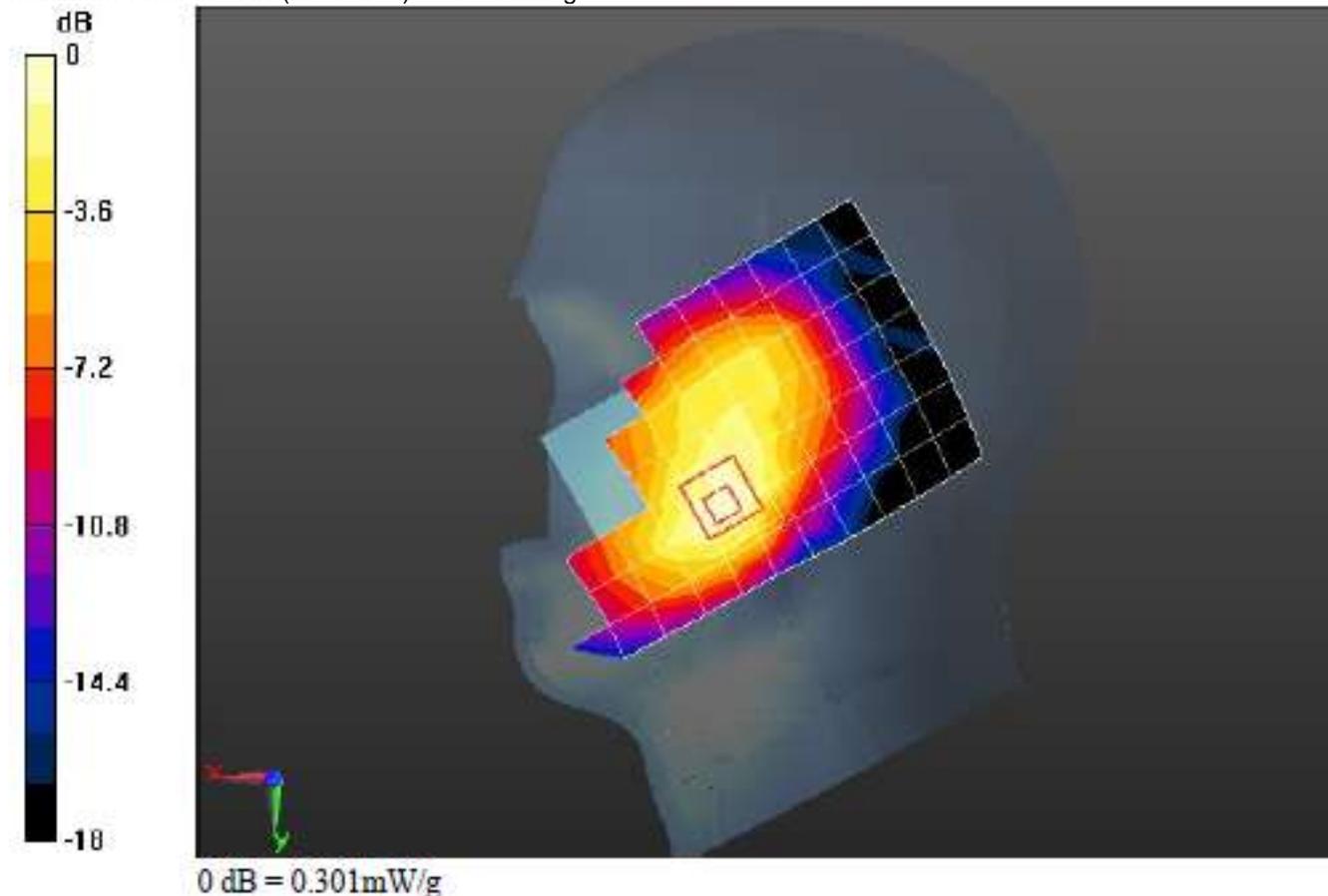
U9000/Head/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 3.47 V/m; Power Drift = -0.083 dB

Peak SAR (extrapolated) = 0.415 W/kg

SAR(1 g) = 0.275 mW/g; SAR(10 g) = 0.171 mW/g

Maximum value of SAR (measured) = 0.301 mW/g



Additional information:

position or distance of DUT to SAM (if not standard head positions) :
ambient temperature: 22.0°C; liquid temperature: 21.6°C

Annex 2.2 PCS 1900 MHz Body

Date/Time: 2010-12-16 6:02:28

**P1528_OET65_EN62209- towards phantom- GSM1900 GPRS 1TS Middle
DUT: HUAWEI U9000/U9000**

Communication System: HW-GSM/GPRS/EDGE 1TS; Frequency: 1880 MHz

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.54$ mho/m; $\epsilon_r = 53.7$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

i Probe: EX3DV4 - SN3736; ConvF(6.81, 6.96, 7.3); Calibrated: 2010-11-16

i Sensor-Surface: 4mm (Mechanical Surface Detection)

i Electronics: DAE4 Sn851; Calibrated: 2010-6-30

i Phantom: SAM1; Type: SAM; Serial: TP-1475

i Measurement SW: DASYS5, V5.2 Build 157; Postprocessing SW: SEMCAD X, V14.2 Build 2Version 14.2.2 (1685)
(Deployment Build)**U9000/Body/Area Scan (11x17x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.198 mW/g

U9000/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 4.85 V/m; Power Drift = -0.175 dB

Peak SAR (extrapolated) = 0.282 W/kg

SAR(1 g) = 0.188 mW/g; SAR(10 g) = 0.120 mW/g

Maximum value of SAR (measured) = 0.204 mW/g

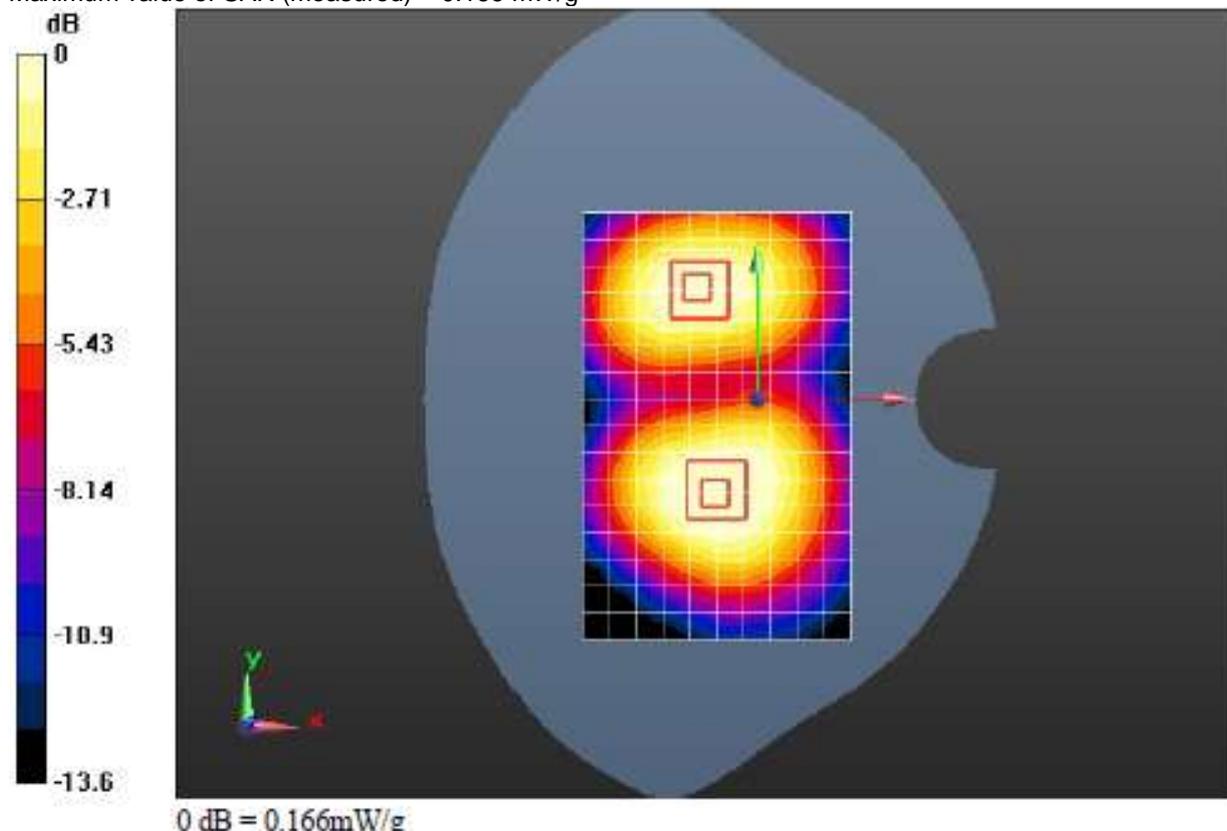
U9000/Body/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 4.85 V/m; Power Drift = -0.175 dB

Peak SAR (extrapolated) = 0.219 W/kg

SAR(1 g) = 0.155 mW/g; SAR(10 g) = 0.101 mW/g

Maximum value of SAR (measured) = 0.166 mW/g

**Additional information:**

position or distance of DUT to SAM (if not standard head positions) :15 mm

ambient temperature: 22.3°C; liquid temperature: 21.8°C

**P1528_OET65_EN62209- towards ground- GSM1900 GPRS 1TS Middle
DUT: HUAWEI U9000/U9000**

Communication System: HW-GSM/GPRS/EDGE 1TS; Frequency: 1880 MHz
Medium parameters used: $f = 1880$ MHz; $\sigma = 1.54$ mho/m; $\epsilon_r = 53.7$; $\rho = 1000$ kg/m³
Phantom section: Flat Section
Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- ▮ Probe: EX3DV4 - SN3736; ConvF(6.81, 6.96, 7.3); Calibrated: 2010-11-16
- ▮ Sensor-Surface: 4mm (Mechanical Surface Detection)
- ▮ Electronics: DAE4 Sn851; Calibrated: 2010-6-30
- ▮ Phantom: SAM1; Type: SAM; Serial: TP-1475
- ▮ Measurement SW: DASYS5, V5.2 Build 157; Postprocessing SW: SEMCAD X, V14.2 Build 2Version 14.2.2 (1685) (Deployment Build)

U9000/Body/Area Scan (8x12x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.290 mW/g

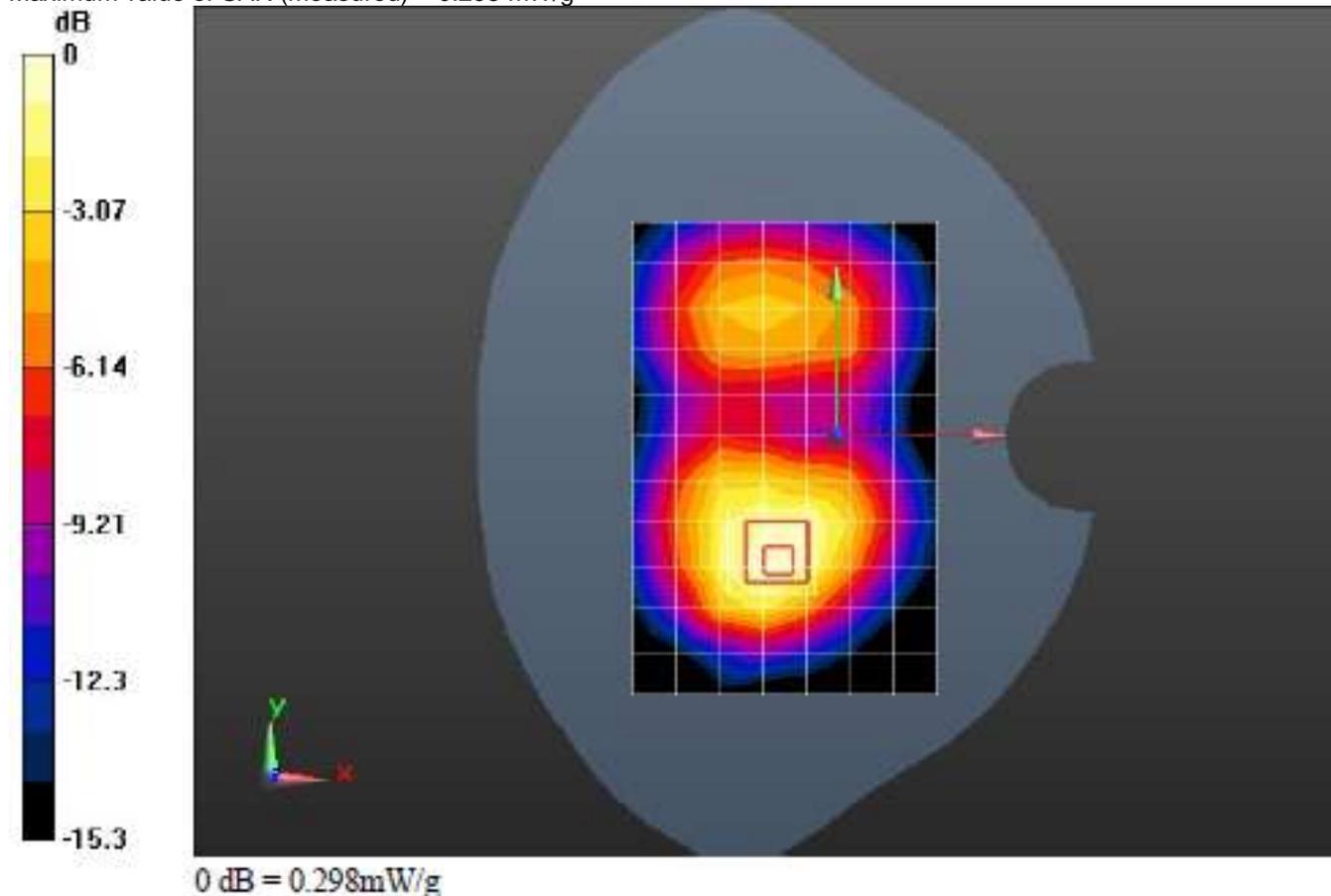
U9000/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 5.31 V/m; Power Drift = -0.032 dB

Peak SAR (extrapolated) = 0.431 W/kg

SAR(1 g) = 0.272 mW/g; SAR(10 g) = 0.163 mW/g

Maximum value of SAR (measured) = 0.298 mW/g



Additional information:

position or distance of DUT to SAM (if not standard head positions) :15 mm

ambient temperature: 22.3°C; liquid temperature: 21.8°C

P1528_OET65_EN62209- towards ground- GSM1900 GPRS 2TS Middle

DUT: HUAWEI U9000/U9000

Communication System: HW-GSM/GPRS/EDGE 2TS; Frequency: 1880 MHz

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.54$ mho/m; $\epsilon_r = 53.7$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

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

DASY5 Configuration:

Probe: EX3DV4 - SN3736; ConvF(6.81, 6.96, 7.3); Calibrated: 2010-11-16

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn851; Calibrated: 2010-6-30

Phantom: SAM1; Type: SAM; Serial: TP-1475

Measurement SW: DASYS, V5.2 Build 157; Postprocessing SW: SEMCAD X, V14.2 Build 2Version 14.2.2 (1685) (Deployment Build)

U9000/Body/Area Scan (8x12x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.273 mW/g

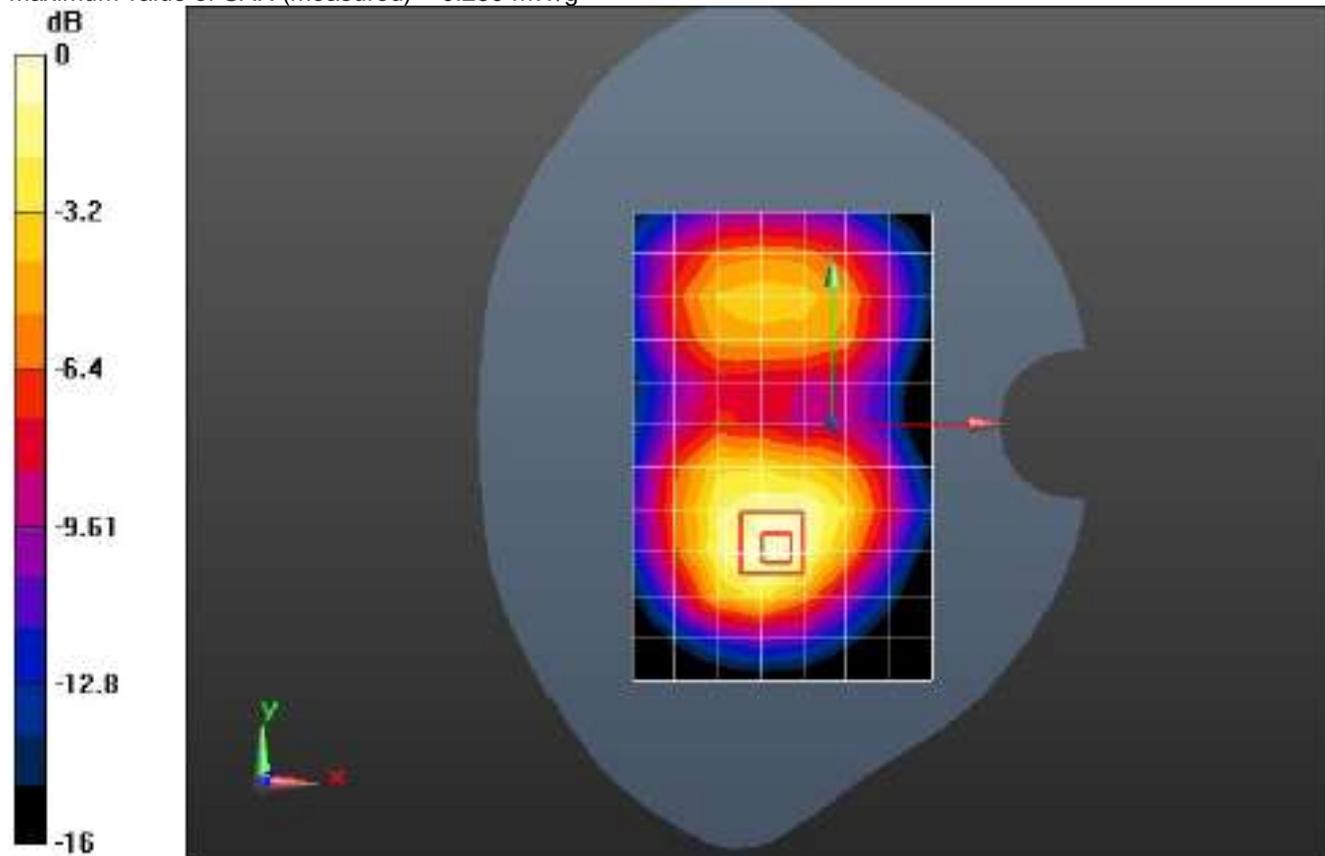
U9000/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 5.05 V/m; Power Drift = 0.175 dB

Peak SAR (extrapolated) = 0.398 W/kg

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

Maximum value of SAR (measured) = 0.280 mW/g



0 dB = 0.280mW/g

Additional information:

position or distance of DUT to SAM (if not standard head positions) :15 mm

ambient temperature: 22.3°C; liquid temperature: 21.8°C

P1528_OET65_EN62209- towards ground- GSM1900 GPRS 3TS Middle

DUT: HUAWEI U9000/U9000

Communication System: HW-GSM/GPRS/EDGE 3TS; Frequency: 1880 MHz
Medium parameters used: $f = 1880$ MHz; $\sigma = 1.54$ mho/m; $\epsilon_r = 53.7$; $\rho = 1000$ kg/m³
Phantom section: Flat Section
Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: EX3DV4 - SN3736; ConvF(6.81, 6.96, 7.3); Calibrated: 2010-11-16
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn851; Calibrated: 2010-6-30
- Phantom: SAM1; Type: SAM; Serial: TP-1475
- Measurement SW: DASYS5, V5.2 Build 157; Postprocessing SW: SEMCAD X, V14.2 Build 2/Version 14.2.2 (1685) (Deployment Build)

U9000/Body/Area Scan (8x12x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.270 mW/g

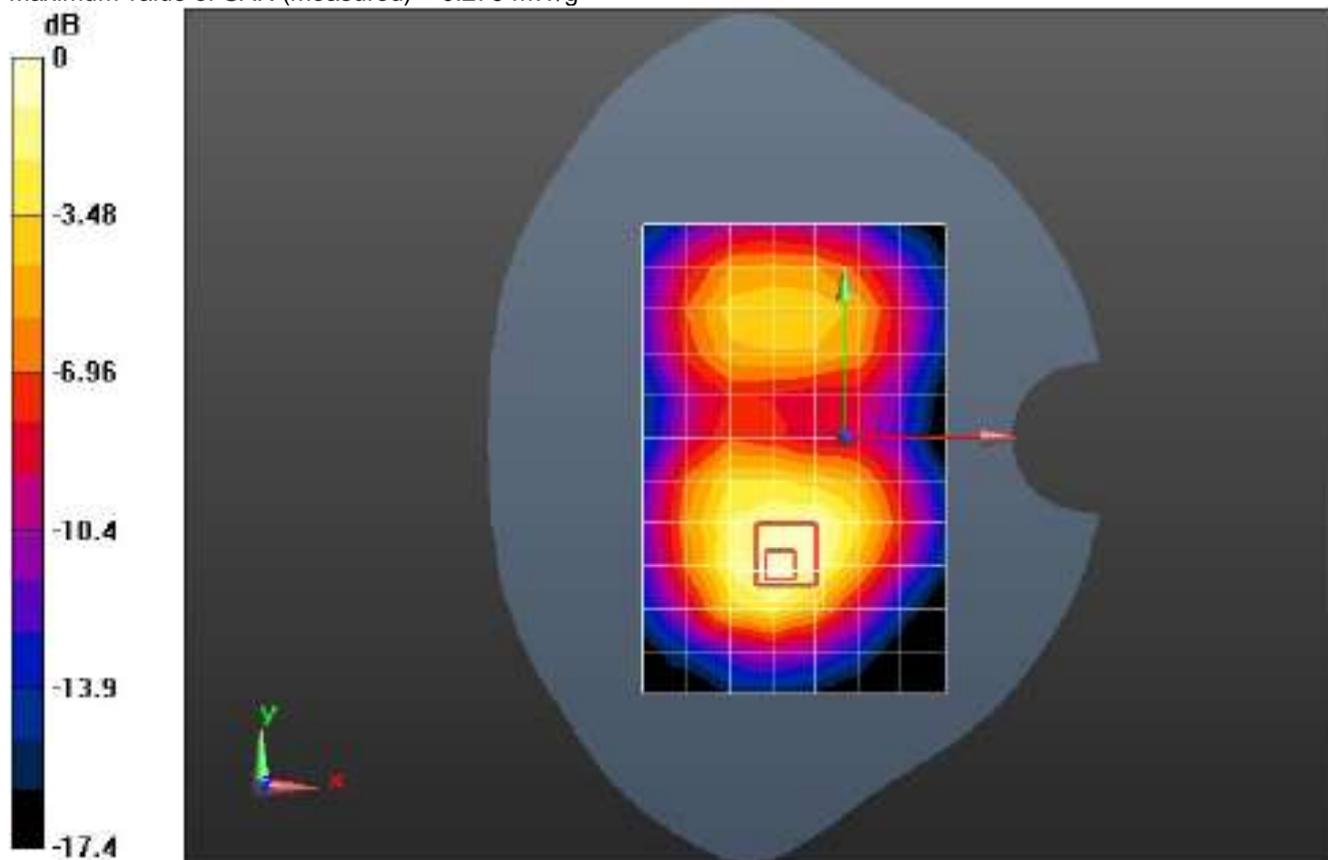
U9000/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 5.13 V/m; Power Drift = -0.068 dB

Peak SAR (extrapolated) = 0.398 W/kg

SAR(1 g) = 0.251 mW/g; SAR(10 g) = 0.152 mW/g

Maximum value of SAR (measured) = 0.276 mW/g



0 dB = 0.276mW/g

Additional information:

position or distance of DUT to SAM (if not standard head positions) :15 mm

ambient temperature: 22.3°C; liquid temperature: 21.8°C

P1528_OET65_EN62209- towards ground- GSM1900 GPRS 4TS Middle

DUT: HUAWEI U9000/U9000

Communication System: HW-GSM/GPRS/EDGE 4TS; Frequency: 1880 MHz

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.54$ mho/m; $\epsilon_r = 53.7$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

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

DASY5 Configuration:

Probe: EX3DV4 - SN3736; ConvF(6.81, 6.96, 7.3); Calibrated: 2010-11-16

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn851; Calibrated: 2010-6-30

Phantom: SAM1; Type: SAM; Serial: TP-1475

Measurement SW: DASYS, V5.2 Build 157; Postprocessing SW: SEMCAD X, V14.2 Build 2/Version 14.2.2 (1685) (Deployment Build)

U9000/Body/Area Scan (8x12x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.270 mW/g

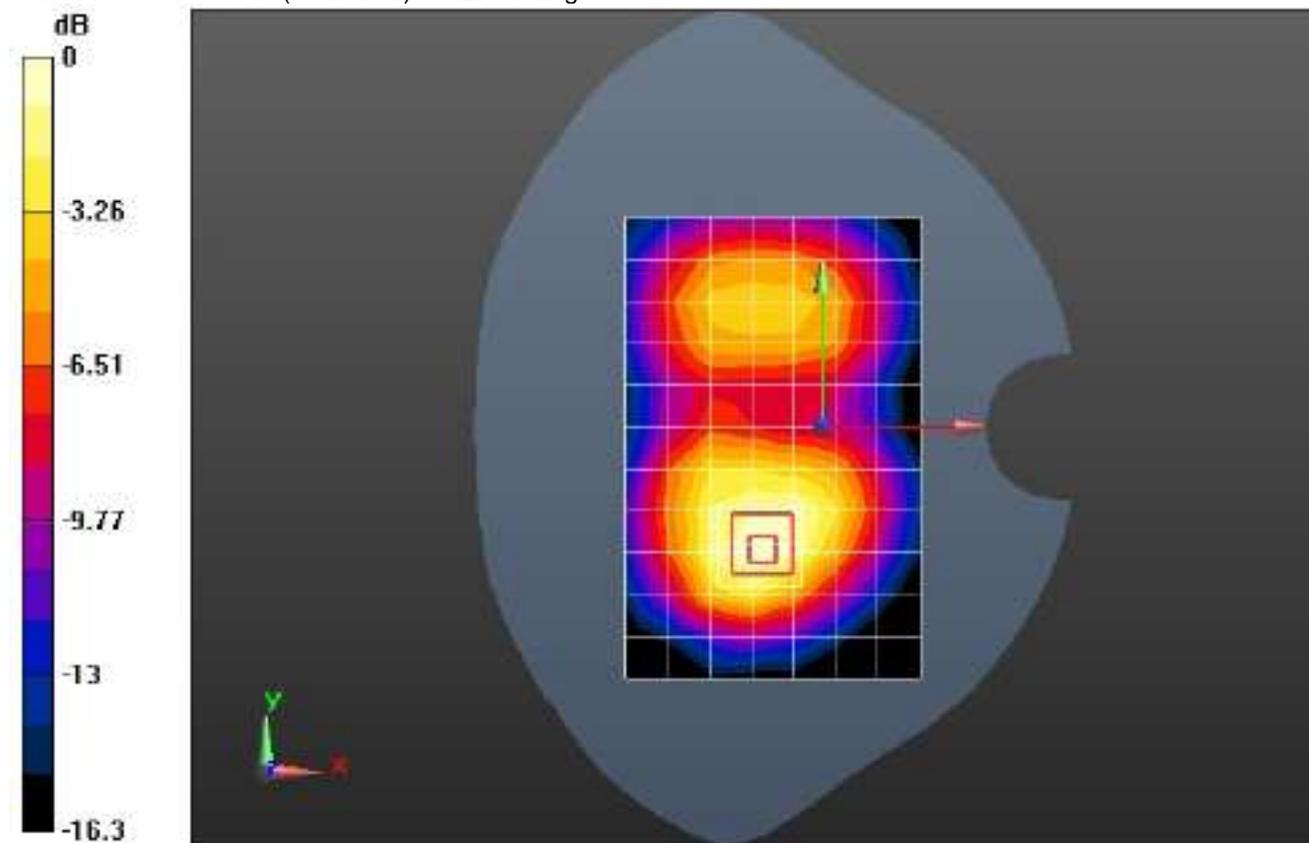
U9000/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 5.01 V/m; Power Drift = 0.032 dB

Peak SAR (extrapolated) = 0.393 W/kg

SAR(1 g) = 0.248 mW/g; SAR(10 g) = 0.148 mW/g

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



0 dB = 0.271mW/g

Additional information:

position or distance of DUT to SAM (if not standard head positions) :15 mm

ambient temperature: 22.3°C; liquid temperature: 21.8°C

P1528_OET65_EN62209- towards ground- GSM1900 GPRS 1TS High DUT: HUAWEI U9000/U9000

Communication System: HW-GSM/GPRS/EDGE 1TS; Frequency: 1909.8 MHz
Medium parameters used: $f = 1910$ MHz; $\sigma = 1.58$ mho/m; $\epsilon_r = 53.6$; $\rho = 1000$ kg/m³
Phantom section: Flat Section
Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: EX3DV4 - SN3736; ConvF(6.81, 6.96, 7.3); Calibrated: 2010-11-16
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn851; Calibrated: 2010-6-30
- Phantom: SAM1; Type: SAM; Serial: TP-1475
- Measurement SW: DASYS5, V5.2 Build 157; Postprocessing SW: SEMCAD X, V14.2 Build 2Version 14.2.2 (1685) (Deployment Build)

U9000/Body/Area Scan (8x12x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.323 mW/g

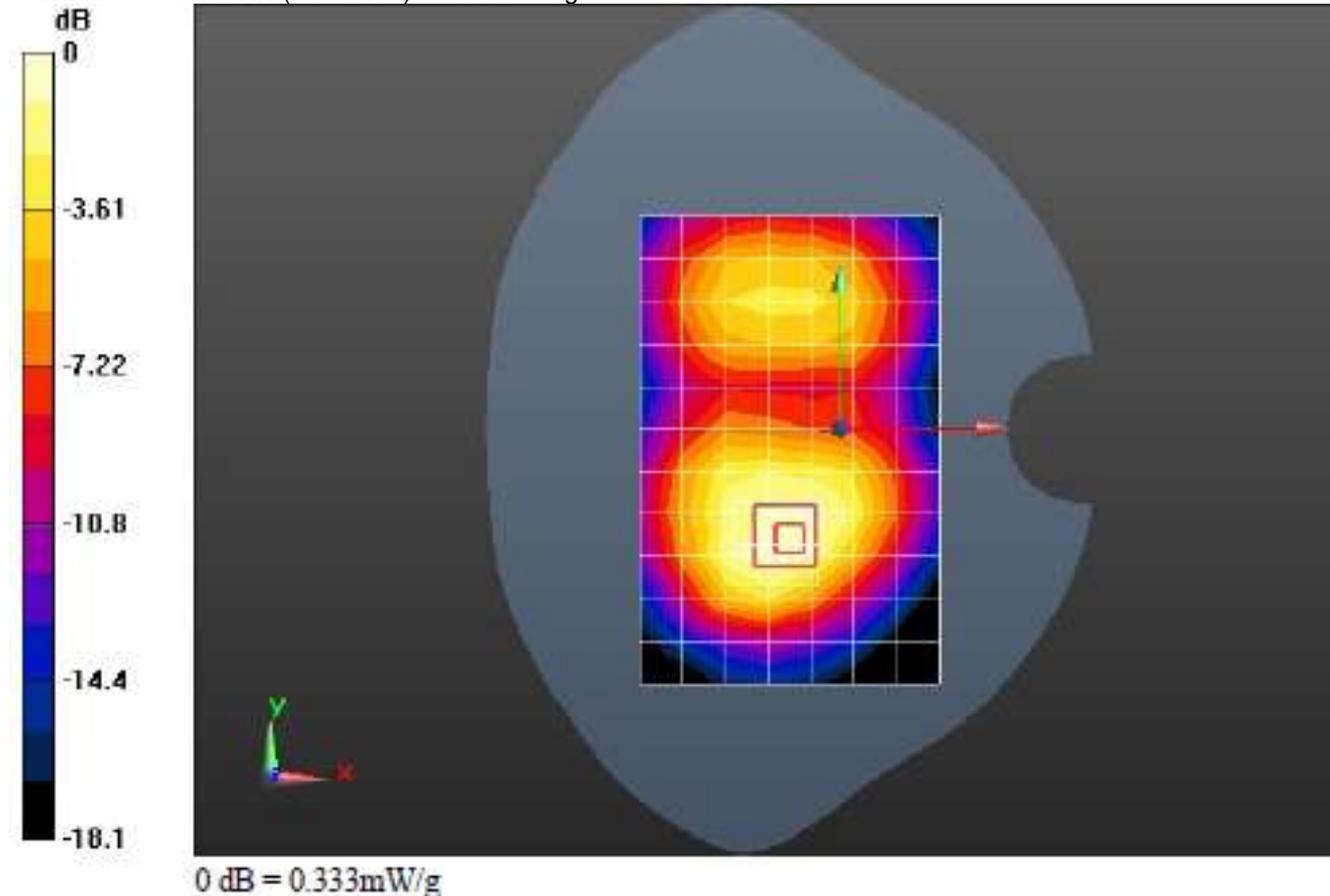
U9000/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 6.3 V/m; Power Drift = 0.00114 dB

Peak SAR (extrapolated) = 0.514 W/kg

SAR(1 g) = 0.307 mW/g; SAR(10 g) = 0.182 mW/g

Maximum value of SAR (measured) = 0.333 mW/g



Additional information:

position or distance of DUT to SAM (if not standard head positions) :15 mm

ambient temperature: 22.3°C; liquid temperature: 21.8°C

**P1528_OET65_EN62209- towards ground- GSM1900 GPRS 1TS Low
DUT: HUAWEI U9000/U9000**

Communication System: HW-GSM/GPRS/EDGE 1TS; Frequency: 1850.2 MHz
Medium parameters used (interpolated): $f = 1850.2$ MHz; $\sigma = 1.5$ mho/m; $\epsilon_r = 53.8$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

Probe: EX3DV4 - SN3736; ConvF(6.81, 6.96, 7.3); Calibrated: 2010-11-16

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn851; Calibrated: 2010-6-30

Phantom: SAM1; Type: SAM; Serial: TP-1475

Measurement SW: DASYS5, V5.2 Build 157; Postprocessing SW: SEMCAD X, V14.2 Build 2Version 14.2.2 (1685) (Deployment Build)

U9000/Body/Area Scan (8x12x1): Measurement grid: dx=15mm, dy=15mm

Info: [Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.279 mW/g

U9000/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

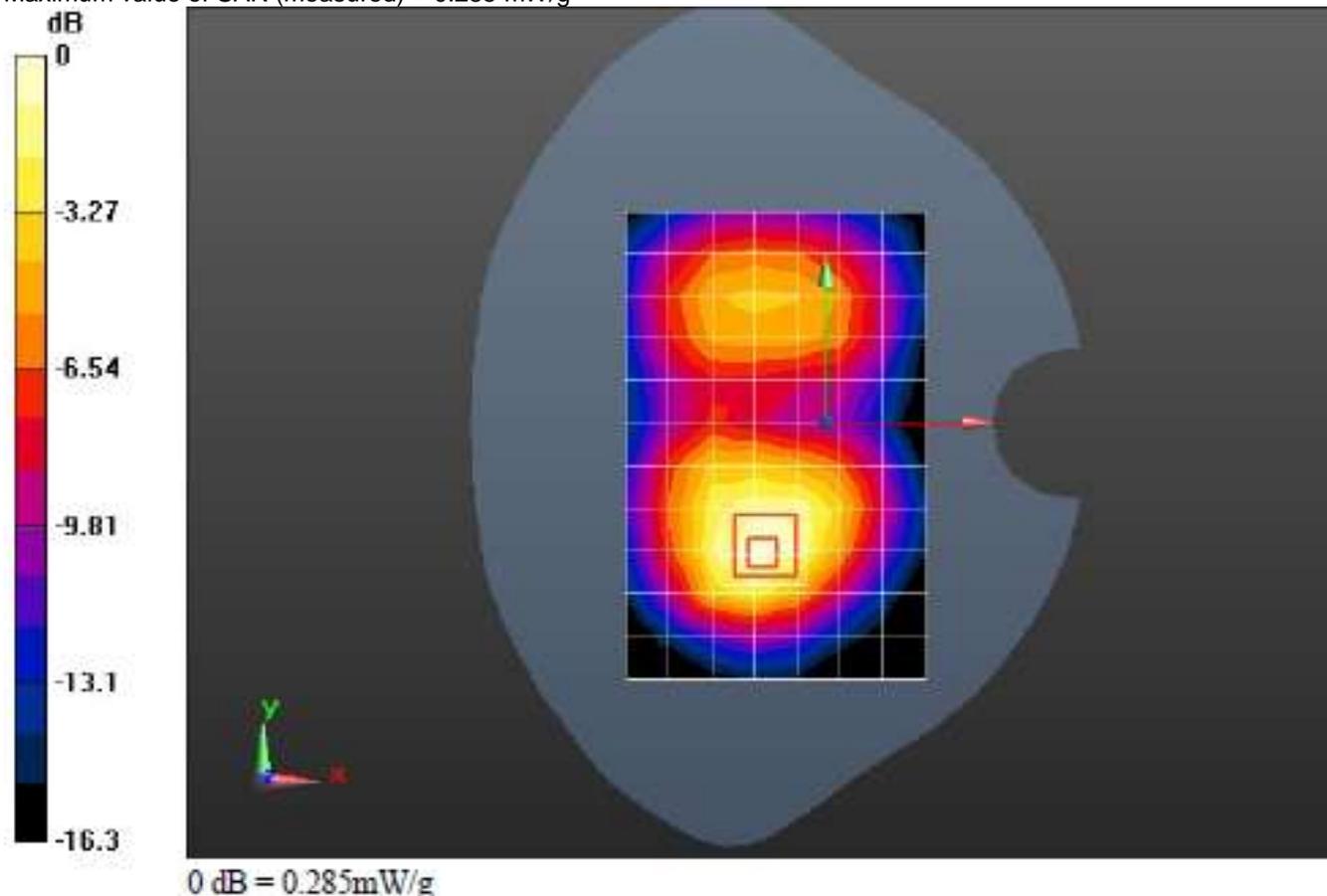
Reference Value = 4.97 V/m; Power Drift = -0.178 dB

Peak SAR (extrapolated) = 0.410 W/kg

SAR(1 g) = 0.257 mW/g; SAR(10 g) = 0.153 mW/g

Info: [Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.285 mW/g



Additional information:

position or distance of DUT to SAM (if not standard head positions) :15 mm

ambient temperature: 22.3°C; liquid temperature: 21.8°C

**P1528_OET65_EN62209- towards ground- GSM1900 EGPRS 1TS Middle
DUT: HUAWEI U9000/U9000**

Communication System: HW-GSM/GPRS/EDGE 1TS; Frequency: 1880 MHz
Medium parameters used: $f = 1880$ MHz; $\sigma = 1.54$ mho/m; $\epsilon_r = 53.7$; $\rho = 1000$ kg/m³
Phantom section: Flat Section
Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- ▮ Probe: EX3DV4 - SN3736; ConvF(6.81, 6.96, 7.3); Calibrated: 2010-11-16
- ▮ Sensor-Surface: 4mm (Mechanical Surface Detection)
- ▮ Electronics: DAE4 Sn851; Calibrated: 2010-6-30
- ▮ Phantom: SAM1; Type: SAM; Serial: TP-1475
- ▮ Measurement SW: DASYS5, V5.2 Build 157; Postprocessing SW: SEMCAD X, V14.2 Build 2Version 14.2.2 (1685) (Deployment Build)

U9000/Body/Area Scan (11x17x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.248 mW/g

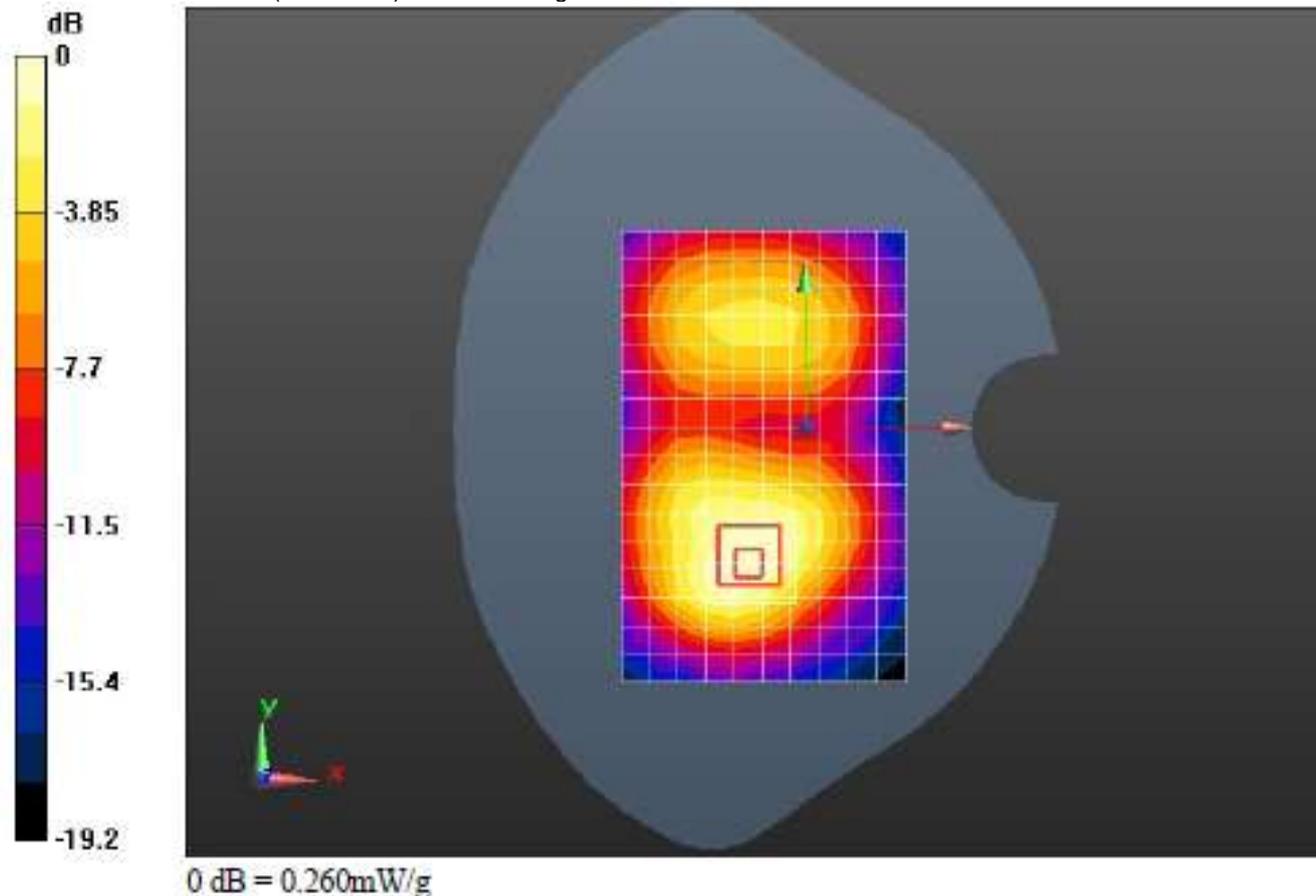
U9000/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 4.23 V/m; Power Drift = 0.027 dB

Peak SAR (extrapolated) = 0.379 W/kg

SAR(1 g) = 0.236 mW/g; SAR(10 g) = 0.142 mW/g

Maximum value of SAR (measured) = 0.260 mW/g



Additional information:

position or distance of DUT to SAM (if not standard head positions) :15 mm

ambient temperature: 22.3°C; liquid temperature: 21.8°C

**P1528_OET65_EN62209- towards ground- GSM1900 EGPRS 2TS Middle
DUT: HUAWEI U9000/U9000**

Communication System: HW-GSM/GPRS/EDGE 2TS; Frequency: 1880 MHz
Medium parameters used: $f = 1880$ MHz; $\sigma = 1.54$ mho/m; $\epsilon_r = 53.7$; $\rho = 1000$ kg/m³
Phantom section: Flat Section
Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: EX3DV4 - SN3736; ConvF(6.81, 6.96, 7.3); Calibrated: 2010-11-16
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn851; Calibrated: 2010-6-30
- Phantom: SAM1; Type: SAM; Serial: TP-1475
- Measurement SW: DASYS, V5.2 Build 157; Postprocessing SW: SEMCAD X, V14.2 Build 2Version 14.2.2 (1685) (Deployment Build)

U9000/Body/Area Scan (11x17x1): Measurement grid: dx=10mm, dy=10mm

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

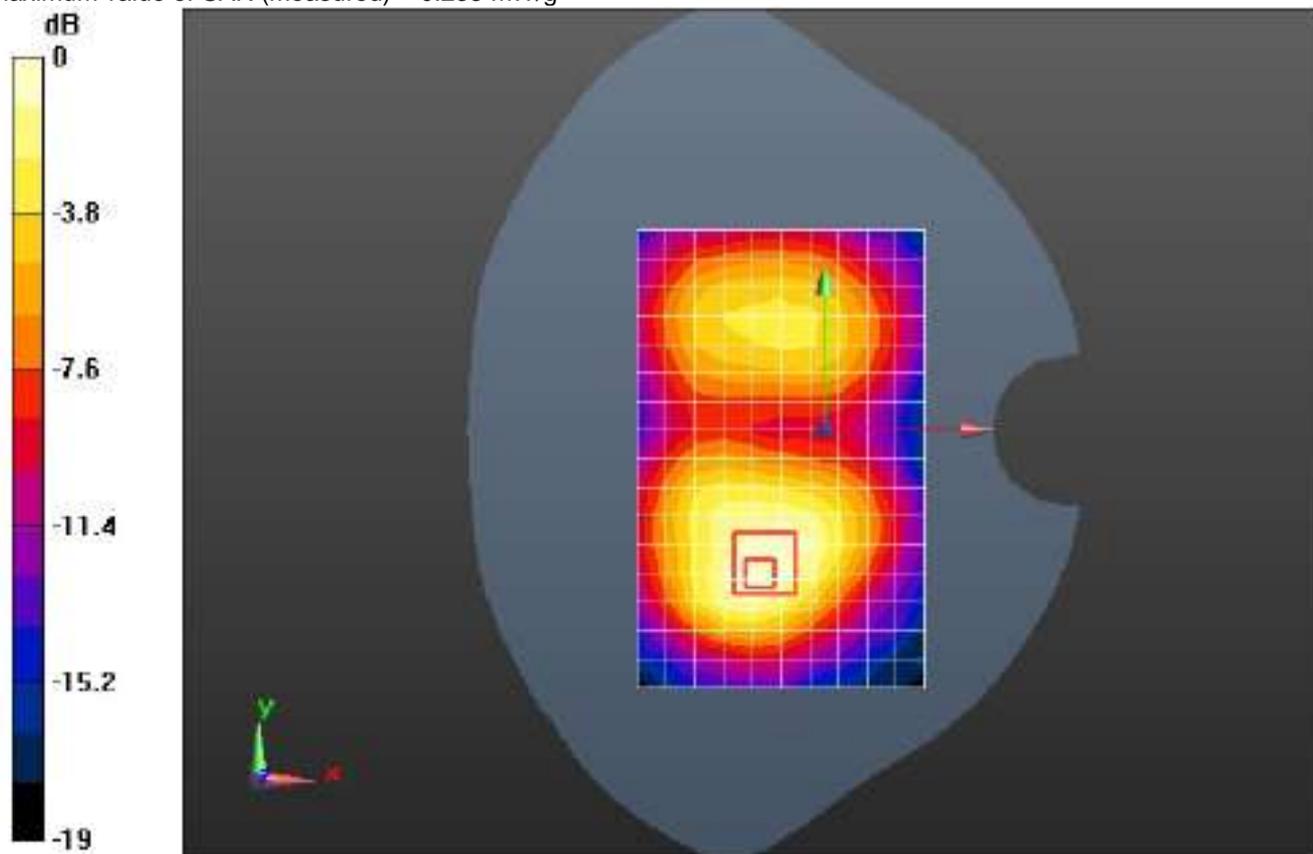
U9000/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 4.02 V/m; Power Drift = -0.00477 dB

Peak SAR (extrapolated) = 0.337 W/kg

SAR(1 g) = 0.213 mW/g; SAR(10 g) = 0.127 mW/g

Maximum value of SAR (measured) = 0.233 mW/g



0 dB = 0.233mW/g

Additional information:

position or distance of DUT to SAM (if not standard head positions) :15 mm

ambient temperature: 22.3°C; liquid temperature: 21.8°C

**P1528_OET65_EN62209- towards ground- GSM1900 EGPRS 3TS Middle
DUT: HUAWEI U9000/U9000**

Communication System: HW-GSM/GPRS/EDGE 3TS; Frequency: 1880 MHz
Medium parameters used: $f = 1880$ MHz; $\sigma = 1.54$ mho/m; $\epsilon_r = 53.7$; $\rho = 1000$ kg/m³
Phantom section: Flat Section
Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: EX3DV4 - SN3736; ConvF(6.81, 6.96, 7.3); Calibrated: 2010-11-16
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn851; Calibrated: 2010-6-30
- Phantom: SAM1; Type: SAM; Serial: TP-1475
- Measurement SW: DASYS5, V5.2 Build 157; Postprocessing SW: SEMCAD X, V14.2 Build 2Version 14.2.2 (1685) (Deployment Build)

U9000/Body/Area Scan (11x17x1): Measurement grid: dx=10mm, dy=10mm

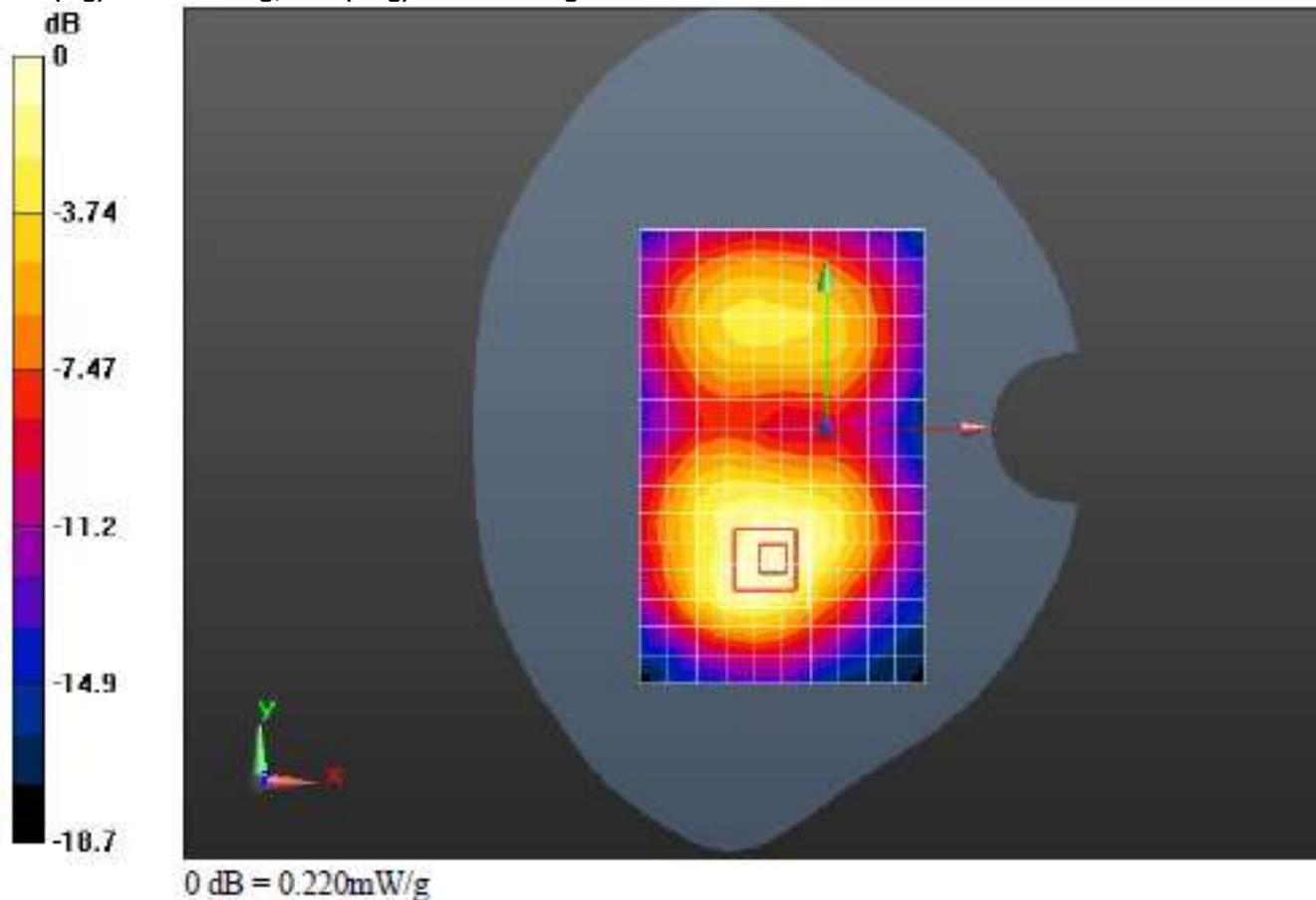
Maximum value of SAR (measured) = 0.220 mW/g

U9000/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 3.9 V/m; Power Drift = 0.133 dB

Peak SAR (extrapolated) = 0.317 W/kg

SAR(1 g) = 0.198 mW/g; SAR(10 g) = 0.119 mW/g



Additional information:

position or distance of DUT to SAM (if not standard head positions) :15 mm
ambient temperature: 22.3°C; liquid temperature: 21.8°C

**P1528_OET65_EN62209- towards ground- GSM1900 EGPRS 4TS Middle
DUT: HUAWEI U9000/U9000**

Communication System: HW-GSM/GPRS/EDGE 4TS; Frequency: 1880 MHz
Medium parameters used: $f = 1880$ MHz; $\sigma = 1.54$ mho/m; $\epsilon_r = 53.7$; $\rho = 1000$ kg/m³
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: EX3DV4 - SN3736; ConvF(6.81, 6.96, 7.3); Calibrated: 2010-11-16
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn851; Calibrated: 2010-6-30
- Phantom: SAM1; Type: SAM; Serial: TP-1475
- Measurement SW: DASY5, V5.2 Build 157; Postprocessing SW: SEMCAD X, V14.2 Build 2Version 14.2.2 (1685) (Deployment Build)

U9000/Body/Area Scan (11x17x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.203 mW/g

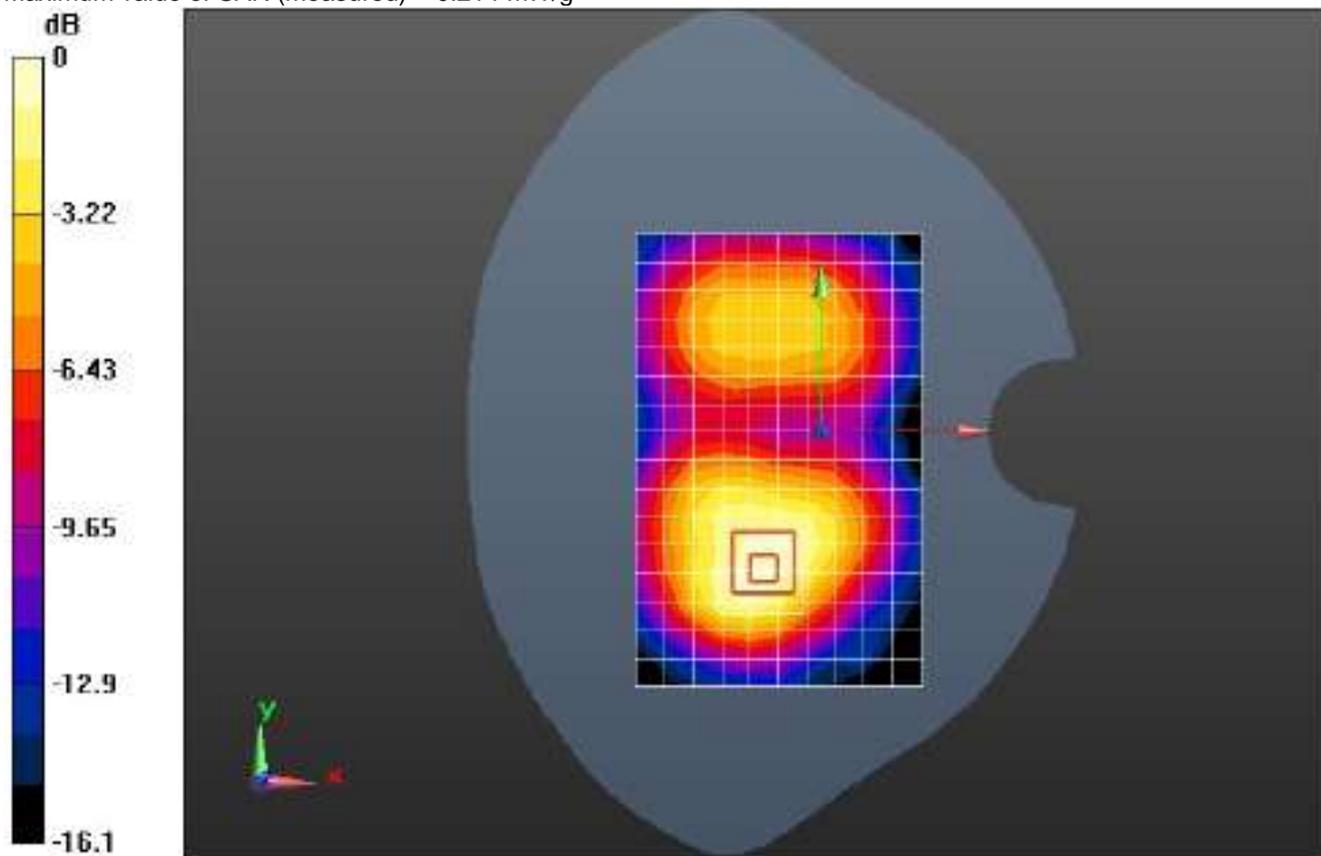
U9000/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 3.88 V/m; Power Drift = -0.096 dB

Peak SAR (extrapolated) = 0.311 W/kg

SAR(1 g) = 0.196 mW/g; SAR(10 g) = 0.118 mW/g

Maximum value of SAR (measured) = 0.214 mW/g



0 dB = 0.214mW/g

Additional information:

position or distance of DUT to SAM (if not standard head positions) :15 mm

ambient temperature: 22.3°C; liquid temperature: 21.8°C

P1528_OET65_EN62209- towards ground- GSM1900 EGPRS 1TS High DUT: HUAWEI U9000/U9000

Communication System: HW-GSM/GPRS/EDGE 1TS; Frequency: 1909.8 MHz
Medium parameters used: $f = 1910$ MHz; $\sigma = 1.58$ mho/m; $\epsilon_r = 53.6$; $\rho = 1000$ kg/m³
Phantom section: Flat Section
Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: EX3DV4 - SN3736; ConvF(6.81, 6.96, 7.3); Calibrated: 2010-11-16
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn851; Calibrated: 2010-6-30
- Phantom: SAM1; Type: SAM; Serial: TP-1475
- Measurement SW: DASYS5, V5.2 Build 157; Postprocessing SW: SEMCAD X, V14.2 Build 2Version 14.2.2 (1685) (Deployment Build)

U9000/Body/Area Scan (11x17x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.281 mW/g

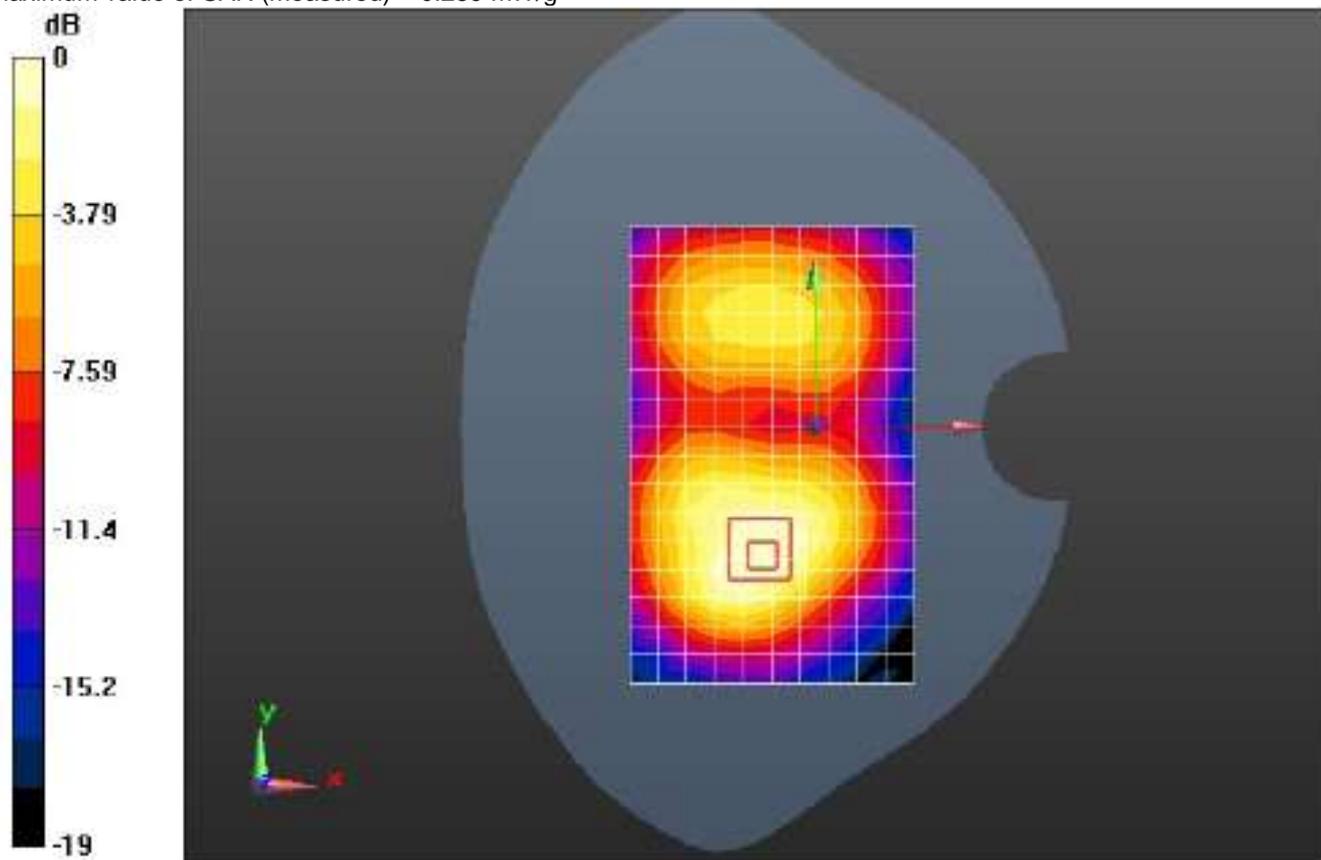
U9000/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 4.55 V/m; Power Drift = -0.134 dB

Peak SAR (extrapolated) = 0.449 W/kg

SAR(1 g) = 0.265 mW/g; SAR(10 g) = 0.159 mW/g

Maximum value of SAR (measured) = 0.289 mW/g



0 dB = 0.289mW/g

Additional information:

position or distance of DUT to SAM (if not standard head positions) :15 mm
ambient temperature: 22.3°C; liquid temperature: 21.8°C

P1528_OET65_EN62209- towards ground- GSM1900 EGPRS 1TS Low**DUT: HUAWEI U9000/U9000**

Communication System: HW-GSM/GPRS/EDGE 1TS; Frequency: 1850.2 MHz

Medium parameters used (interpolated): $f = 1850.2$ MHz; $\sigma = 1.5$ mho/m; $\epsilon_r = 53.8$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

| Probe: EX3DV4 - SN3736; ConvF(6.81, 6.96, 7.3); Calibrated: 2010-11-16

| Sensor-Surface: 4mm (Mechanical Surface Detection)

| Electronics: DAE4 Sn851; Calibrated: 2010-6-30

| Phantom: SAM1; Type: SAM; Serial: TP-1475

| Measurement SW: DASYS5, V5.2 Build 157; Postprocessing SW: SEMCAD X, V14.2 Build 2/Version 14.2.2 (1685) (Deployment Build)

U9000/Body/Area Scan (11x17x1): Measurement grid: dx=10mm, dy=10mm[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.238 mW/g

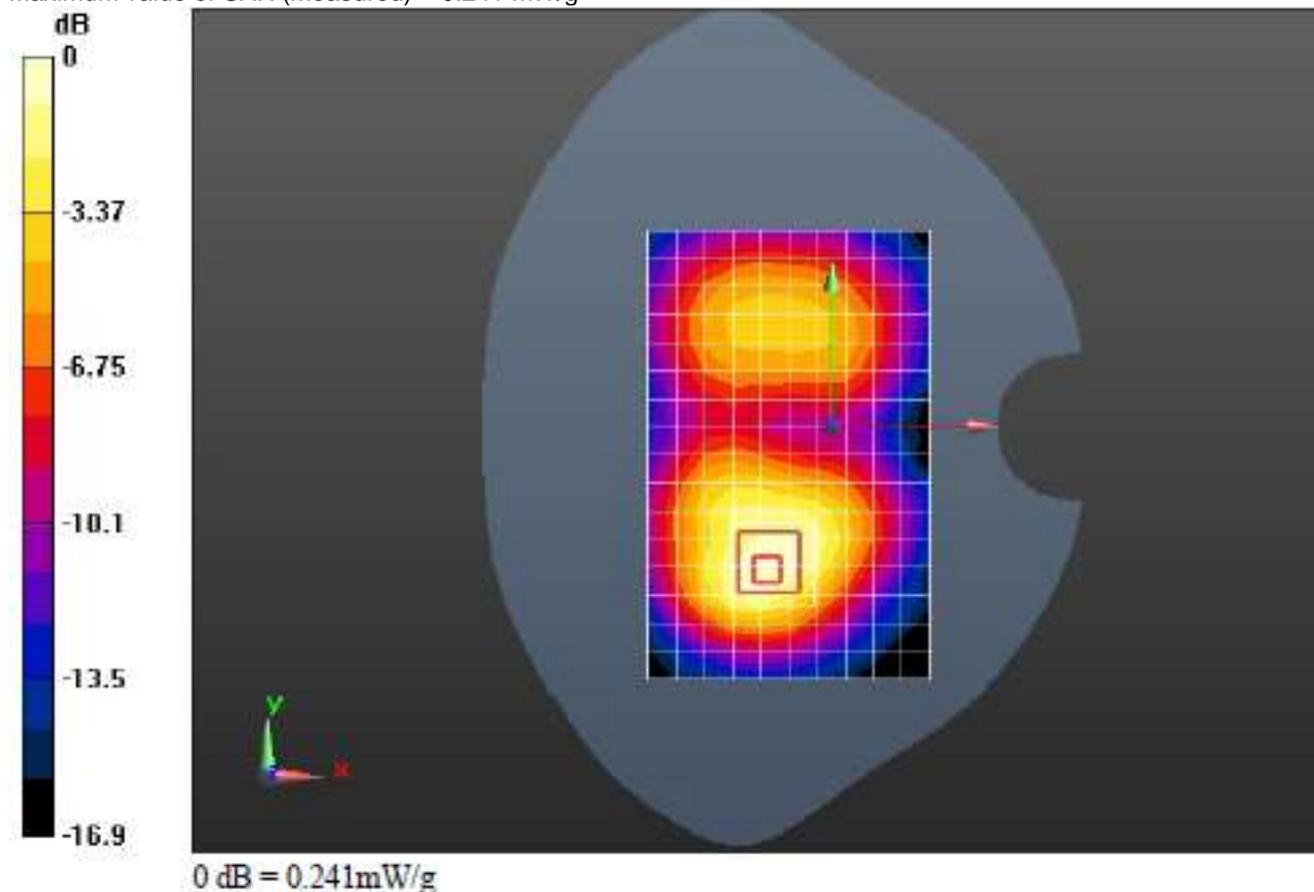
U9000/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 4.16 V/m; Power Drift = -0.048 dB

Peak SAR (extrapolated) = 0.344 W/kg

SAR(1 g) = 0.219 mW/g; SAR(10 g) = 0.131 mW/g[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.241 mW/g

**Additional information:**

position or distance of DUT to SAM (if not standard head positions) :15 mm

ambient temperature: 22.3°C; liquid temperature: 21.8°C

P1528_OET65_EN62209- towards ground- GSM1900 with Headset High DUT: HUAWEI U9000/U9000

Communication System: HW-GSM/GPRS/EDGE 1TS; Frequency: 1909.8 MHz
Medium parameters used: $f = 1910$ MHz; $\sigma = 1.58$ mho/m; $\epsilon_r = 53.6$; $\rho = 1000$ kg/m³
Phantom section: Flat Section
Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- | Probe: EX3DV4 - SN3736; ConvF(6.81, 6.96, 7.3); Calibrated: 2010-11-16
- | Sensor-Surface: 4mm (Mechanical Surface Detection)
- | Electronics: DAE4 Sn851; Calibrated: 2010-6-30
- | Phantom: SAM1; Type: SAM; Serial: TP-1475
- | Measurement SW: DASYS5, V5.2 Build 157; Postprocessing SW: SEMCAD X, V14.2 Build 2Version 14.2.2 (1685) (Deployment Build)

U9000/Body/Area Scan (11x17x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.335 mW/g

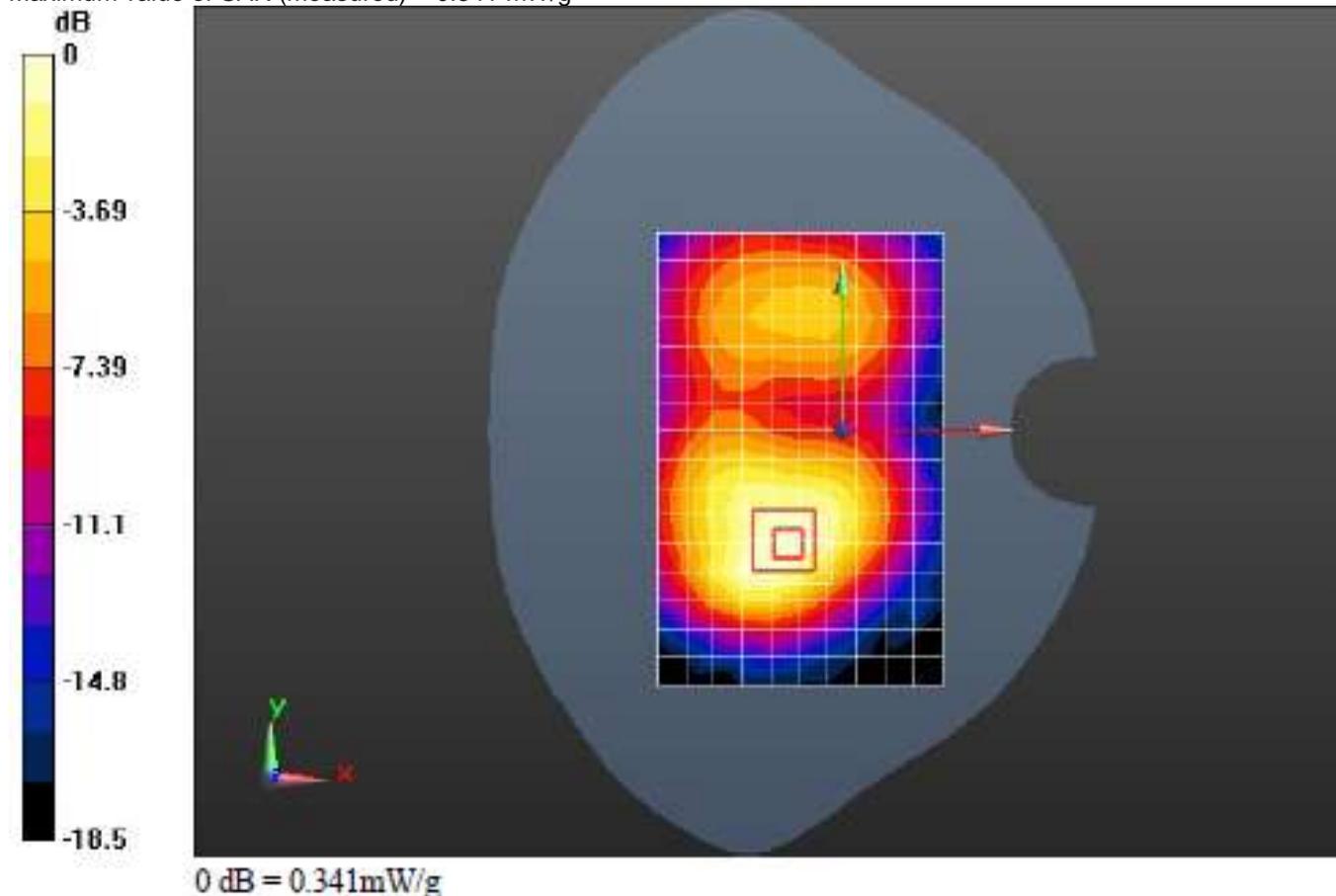
U9000/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 5.78 V/m; Power Drift = -0.085 dB

Peak SAR (extrapolated) = 0.535 W/kg

SAR(1 g) = 0.314 mW/g; SAR(10 g) = 0.182 mW/g

Maximum value of SAR (measured) = 0.341 mW/g



Additional information:

position or distance of DUT to SAM (if not standard head positions) :15 mm

ambient temperature: 22.3°C; liquid temperature: 21.8°C

P1528_OET65_EN62209- towards ground- GSM1900 with Bluetooth Headset High

DUT: HUAWEI U9000/U9000

Communication System: HW-GSM/GPRS/EDGE 1TS; Frequency: 1909.8 MHz

Medium parameters used: $f = 1910$ MHz; $\sigma = 1.58$ mho/m; $\epsilon_r = 53.6$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

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

DASY5 Configuration:

Probe: EX3DV4 - SN3736; ConvF(6.81, 6.96, 7.3); Calibrated: 2010-11-16

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn851; Calibrated: 2010-6-30

Phantom: SAM1; Type: SAM; Serial: TP-1475

Measurement SW: DASY5, V5.2 Build 157; Postprocessing SW: SEMCAD X, V14.2 Build 2Version 14.2.2 (1685) (Deployment Build)

U9000/Body/Area Scan (11x17x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.328 mW/g

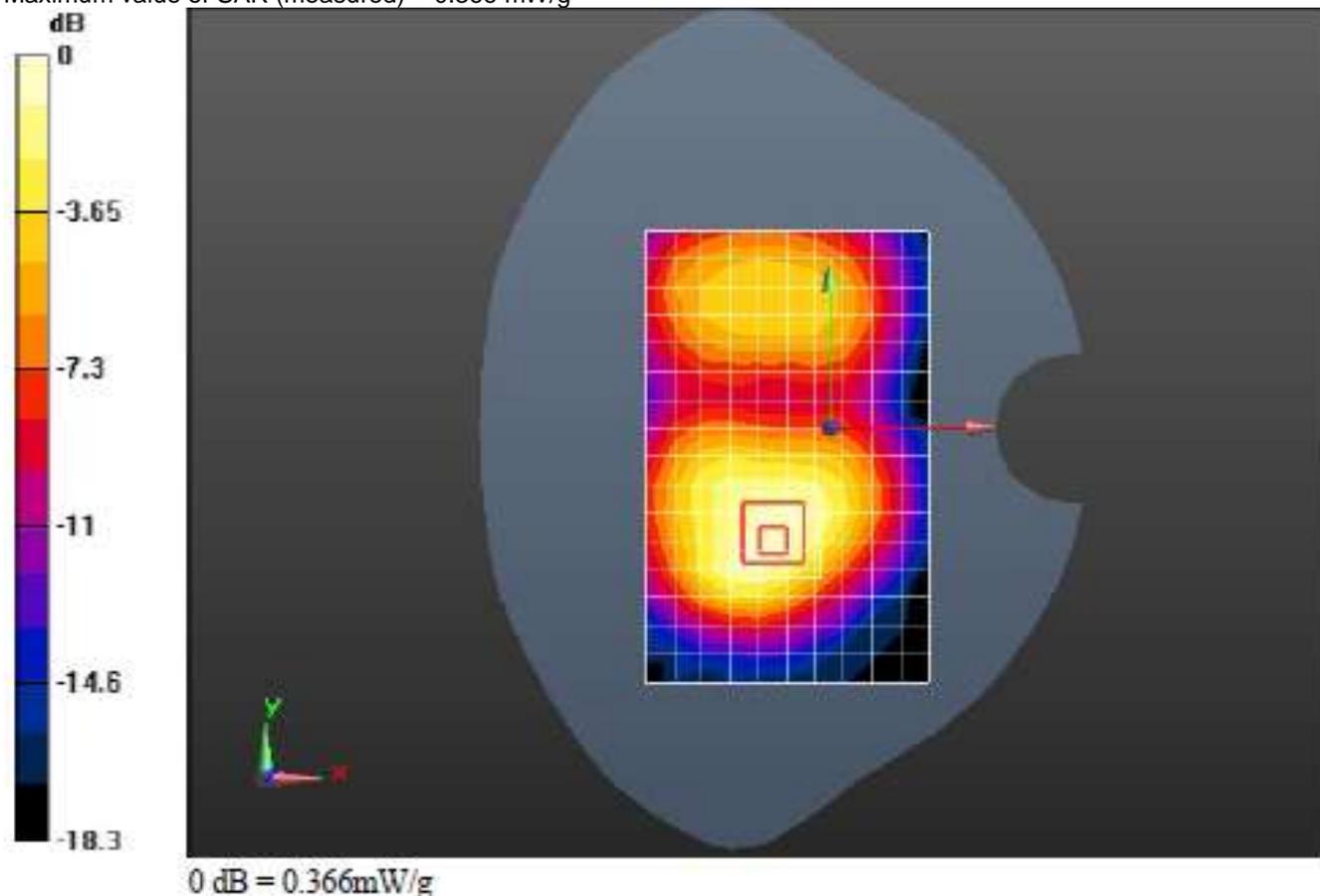
U9000/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 6.28 V/m; Power Drift = 0.160 dB

Peak SAR (extrapolated) = 0.543 W/kg

SAR(1 g) = 0.321 mW/g; SAR(10 g) = 0.189 mW/g

Maximum value of SAR (measured) = 0.366 mW/g



Additional information:

position or distance of DUT to SAM (if not standard head positions) :15 mm

ambient temperature: 22.3°C; liquid temperature: 21.8°C

P1528_OET65_EN62209- towards phantom- GSM1900 Middle

DUT: HUAWEI U9000/U9000

Communication System: HW-GSM/GPRS/EDGE 1TS; Frequency: 1880 MHz

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.55$ mho/m; $\epsilon_r = 51.9$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

Probe: EX3DV4 - SN3736; ConvF(6.81, 6.96, 7.3); Calibrated: 2010-11-16

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn851; Calibrated: 2010-6-30

Phantom: SAM2; Type: SAM; Serial: TP-1474

Measurement SW: DASYS5, V5.2 Build 157; Postprocessing SW: SEMCAD X, V14.2 Build 2Version 14.2.2 (1685) (Deployment Build)

U9000/Body/Area Scan (8x12x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.166 mW/g

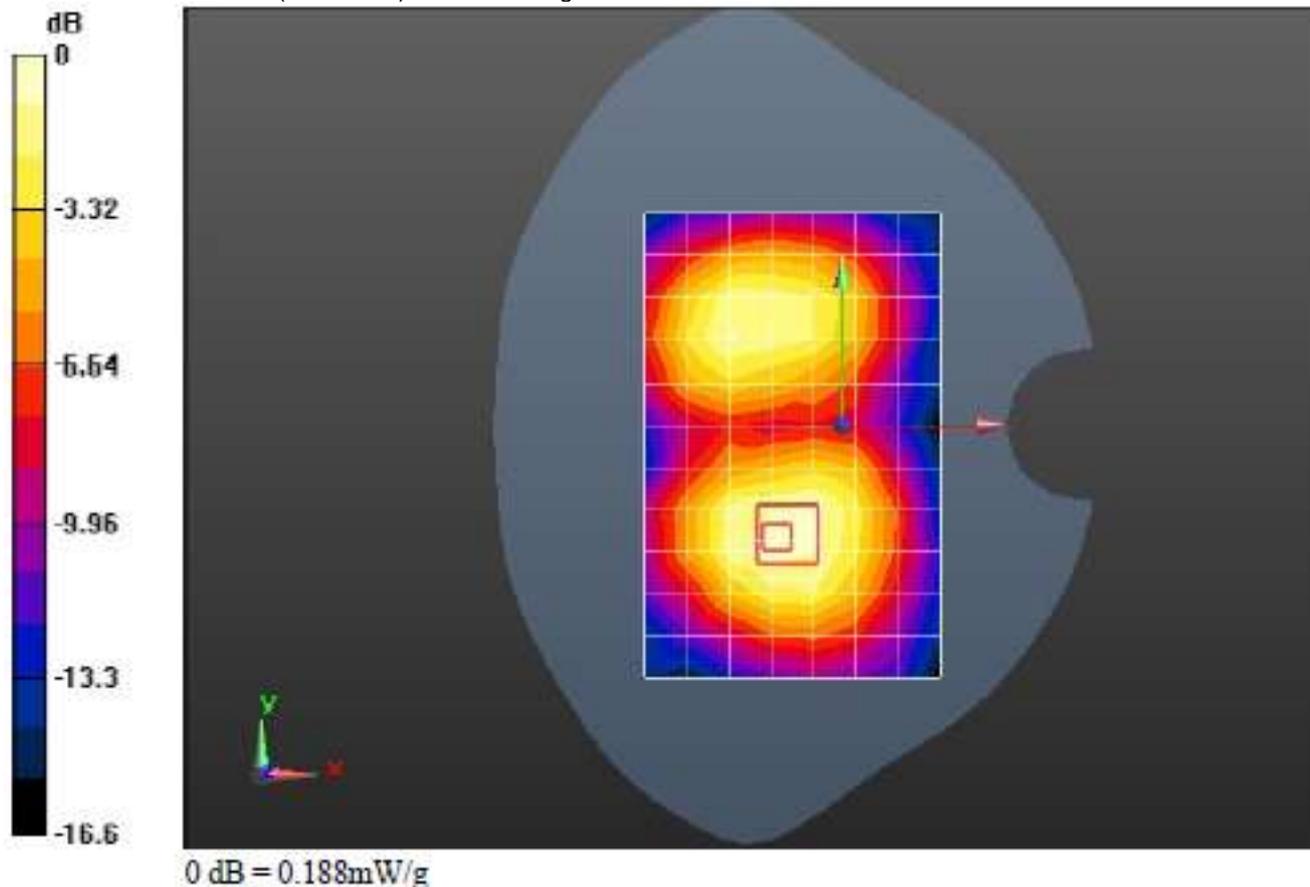
U9000/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 4.23 V/m; Power Drift = -0.169 dB

Peak SAR (extrapolated) = 0.276 W/kg

SAR(1 g) = 0.172 mW/g; SAR(10 g) = 0.104 mW/g

Maximum value of SAR (measured) = 0.188 mW/g



Additional information:

position or distance of DUT to SAM (if not standard head positions) :15 mm

ambient temperature: 22.3°C; liquid temperature: 21.8°C

P1528_OET65_EN62209- towards ground- GSM1900 Middle
DUT: HUAWEI U9000/U9000

Communication System: HW-GSM/GPRS/EDGE 1TS; Frequency: 1880 MHz
Medium parameters used: $f = 1880$ MHz; $\sigma = 1.55$ mho/m; $\epsilon_r = 51.9$; $\rho = 1000$ kg/m³
Phantom section: Flat Section
Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- | Probe: EX3DV4 - SN3736; ConvF(6.81, 6.96, 7.3); Calibrated: 2010-11-16
- | Sensor-Surface: 4mm (Mechanical Surface Detection)
- | Electronics: DAE4 Sn851; Calibrated: 2010-6-30
- | Phantom: SAM2; Type: SAM; Serial: TP-1474
- | Measurement SW: DASYS5, V5.2 Build 157; Postprocessing SW: SEMCAD X, V14.2 Build 2Version 14.2.2 (1685) (Deployment Build)

U9000/Body/Area Scan (8x12x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.266 mW/g

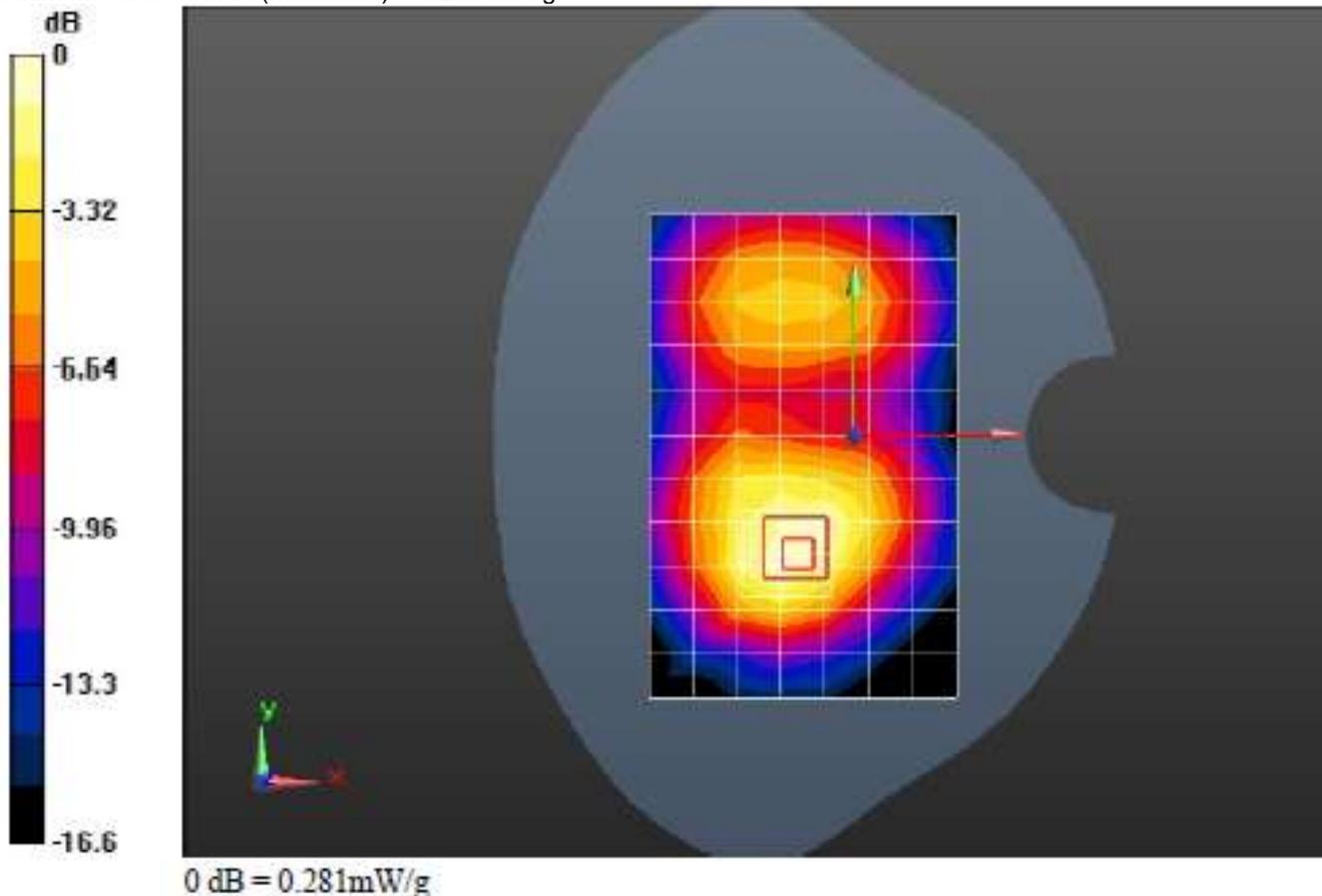
U9000/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 5.95 V/m; Power Drift = -0.084 dB

Peak SAR (extrapolated) = 0.404 W/kg

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

Maximum value of SAR (measured) = 0.281 mW/g



Additional information:

position or distance of DUT to SAM (if not standard head positions) :15 mm

ambient temperature: 22.3°C; liquid temperature: 21.8°C

P1528_OET65_EN62209- towards ground- GSM1900 High

DUT: HUAWEI U9000/U9000

Communication System: HW-GSM/GPRS/EDGE 1TS; Frequency: 1909.8 MHz

Medium parameters used: $f = 1910$ MHz; $\sigma = 1.58$ mho/m; $\epsilon_r = 51.9$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

Probe: EX3DV4 - SN3736; ConvF(6.81, 6.96, 7.3); Calibrated: 2010-11-16

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn851; Calibrated: 2010-6-30

Phantom: SAM2; Type: SAM; Serial: TP-1474

Measurement SW: DASYS5, V5.2 Build 157; Postprocessing SW: SEMCAD X, V14.2 Build 2Version 14.2.2 (1685) (Deployment Build)

U9000/Body/Area Scan (8x12x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.315 mW/g

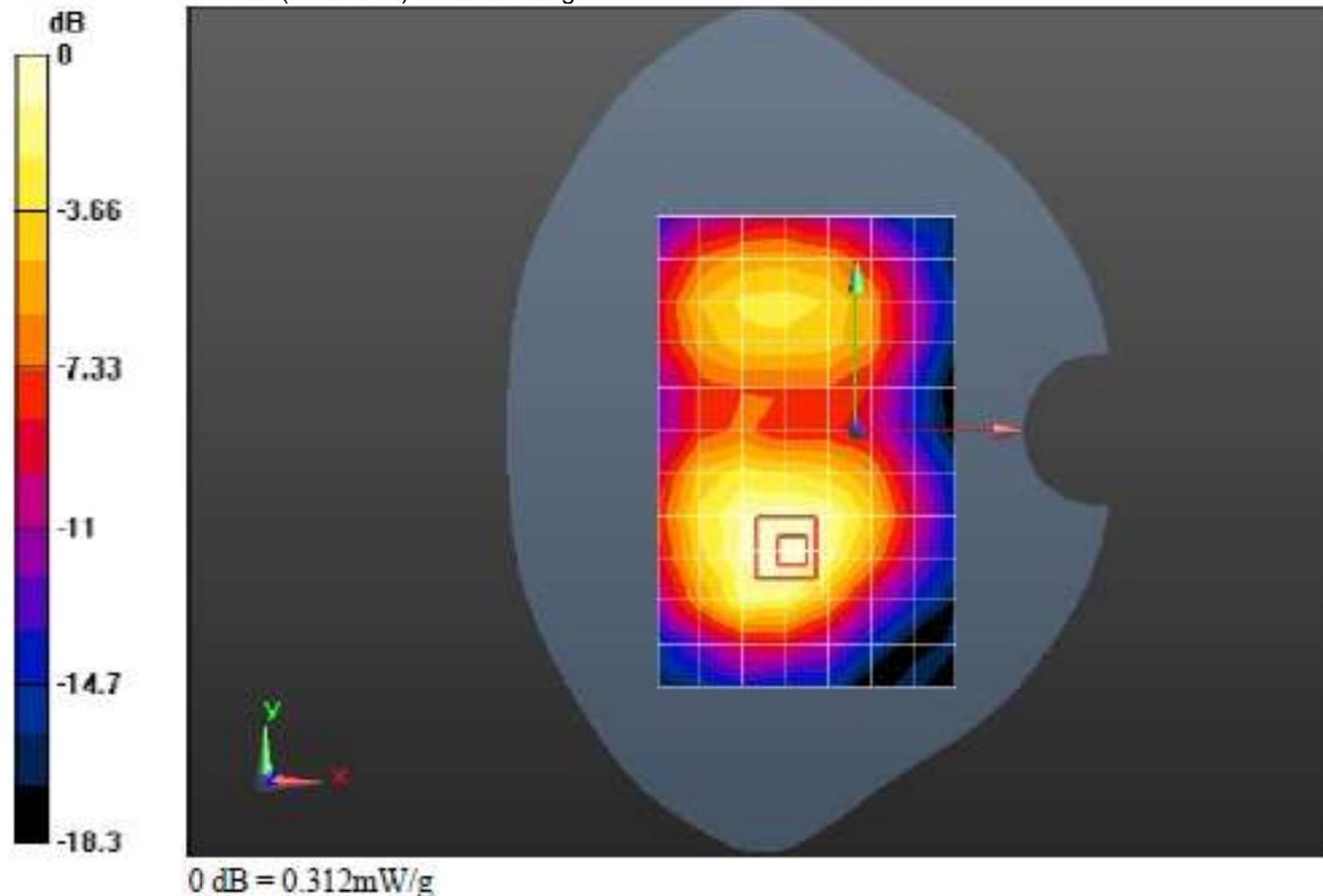
U9000/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 5.22 V/m; Power Drift = -0.048 dB

Peak SAR (extrapolated) = 0.485 W/kg

SAR(1 g) = 0.287 mW/g; SAR(10 g) = 0.170 mW/g

Maximum value of SAR (measured) = 0.312 mW/g



Additional information:

position or distance of DUT to SAM (if not standard head positions) :15 mm

ambient temperature: 22.3°C; liquid temperature: 21.8°C

P1528_OET65_EN62209- towards ground- GSM1900 Low

DUT: HUAWEI U9000/U9000

Communication System: HW-GSM/GPRS/EDGE 1TS; Frequency: 1850.2 MHz

Medium parameters used (interpolated): $f = 1850.2$ MHz; $\sigma = 1.52$ mho/m; $\epsilon_r = 52.1$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

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

DASY5 Configuration:

Probe: EX3DV4 - SN3736; ConvF(6.81, 6.96, 7.3); Calibrated: 2010-11-16

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn851; Calibrated: 2010-6-30

Phantom: SAM2; Type: SAM; Serial: TP-1474

Measurement SW: DASYS, V5.2 Build 157; Postprocessing SW: SEMCAD X, V14.2 Build 2Version 14.2.2 (1685) (Deployment Build)

U9000/Body/Area Scan (8x12x1): Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.267 mW/g

U9000/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

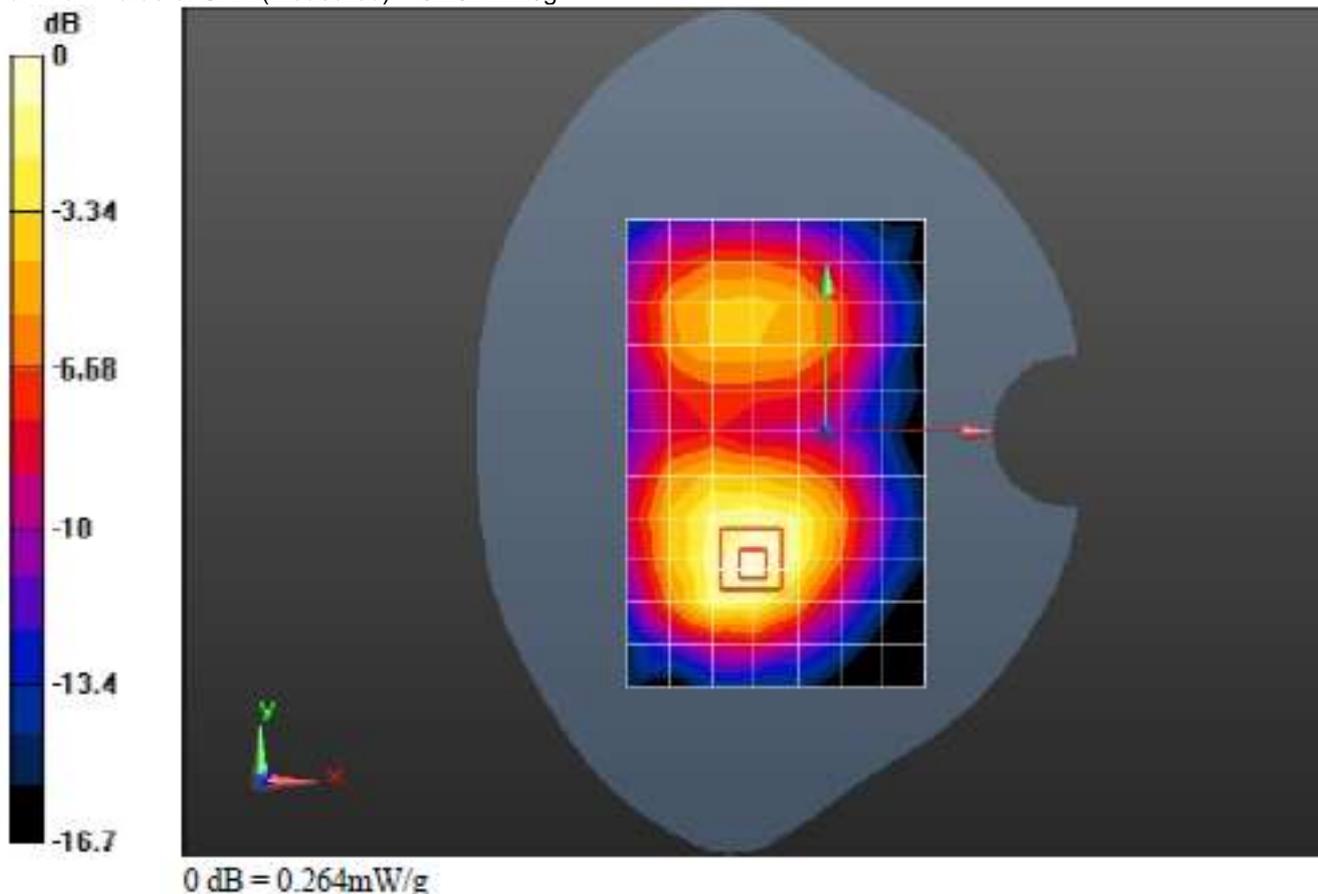
Reference Value = 4.55 V/m; Power Drift = 0.062 dB

Peak SAR (extrapolated) = 0.383 W/kg

SAR(1 g) = 0.242 mW/g; SAR(10 g) = 0.144 mW/g

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.264 mW/g



Additional information:

position or distance of DUT to SAM (if not standard head positions) :15 mm

ambient temperature: 22.3°C; liquid temperature: 21.8°C

Annex 2.3 GSM 850 MHz Head

Date/Time: 2010-12-16 16:13:18

P1528_OET65_EN62209- LeftHandSide touched –GSM850 Middle**DUT: HUAWEI U9000/U9000**

Communication System: HW-GSM/GPRS/EDGE 1TS; Frequency: 836.6 MHz

Medium parameters used (interpolated): $f = 836.6$ MHz; $\sigma = 0.872$ mho/m; $\epsilon_r = 42.2$; $\rho = 1000$ kg/m³

Phantom section: Left Section

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

DASY5 Configuration:

Probe: EX3DV4 - SN3736; ConvF(9.26, 9.51, 9.97); Calibrated: 2010-11-16

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn851; Calibrated: 2010-6-30

Phantom: SAM2; Type: SAM; Serial: TP-1474

Measurement SW: DASY5, V5.2 Build 157; Postprocessing SW: SEMCAD X, V14.2 Build 2Version 14.2.2 (1685) (Deployment Build)

U9000/head/Area Scan (8x12x1): Measurement grid: dx=15mm, dy=15mmInfo: [Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.321 mW/g

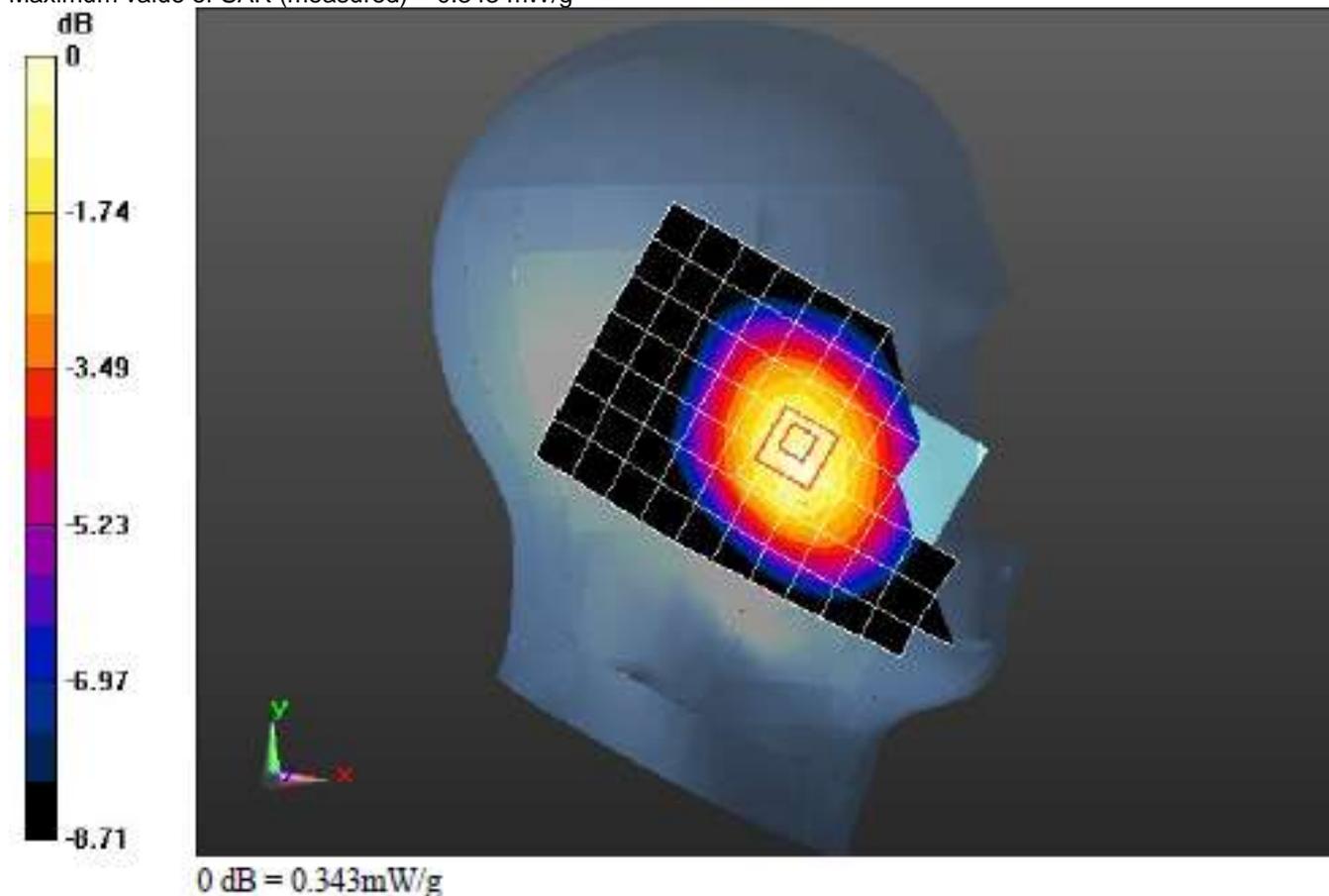
U9000/head/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 5.44 V/m; Power Drift = 0.106 dB

Peak SAR (extrapolated) = 0.390 W/kg

SAR(1 g) = 0.323 mW/g; SAR(10 g) = 0.243 mW/gInfo: [Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.343 mW/g

**Additional information:**

position or distance of DUT to SAM (if not standard head positions) :

ambient temperature: 22.0°C; liquid temperature: 21.4°C

P1528_OET65_EN62209- LeftHandSide tilted 15° –GSM850 Middle

DUT: HUAWEI U9000/U9000

Communication System: HW-GSM/GPRS/EDGE 1TS; Frequency: 836.6 MHz

Medium parameters used (interpolated): $f = 836.6$ MHz; $\sigma = 0.872$ mho/m; $\epsilon_r = 42.2$; $\rho = 1000$ kg/m³

Phantom section: Left Section

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

DASY5 Configuration:

Probe: EX3DV4 - SN3736; ConvF(9.26, 9.51, 9.97); Calibrated: 2010-11-16

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn851; Calibrated: 2010-6-30

Phantom: SAM2; Type: SAM; Serial: TP-1474

Measurement SW: DASY5, V5.2 Build 157; Postprocessing SW: SEMCAD X, V14.2 Build 2Version 14.2.2 (1685) (Deployment Build)

U9000/head/Area Scan (8x12x1): Measurement grid: dx=15mm, dy=15mm

Info: [Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.202 mW/g

U9000/head/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

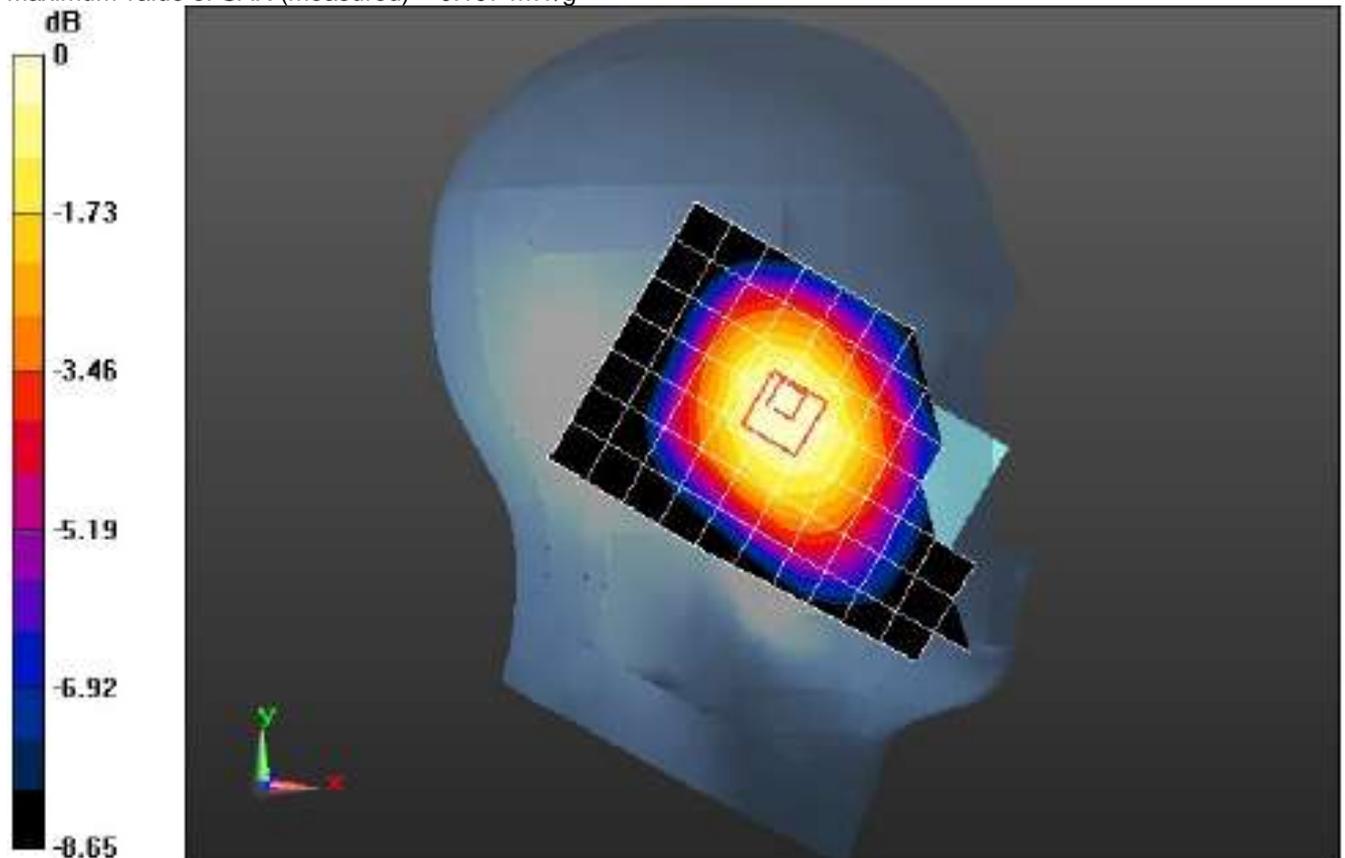
Reference Value = 8.37 V/m; Power Drift = -0.060 dB

Peak SAR (extrapolated) = 0.225 W/kg

SAR(1 g) = 0.185 mW/g; SAR(10 g) = 0.144 mW/g

Info: [Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.197 mW/g



0 dB = 0.197mW/g

Additional information:

position or distance of DUT to SAM (if not standard head positions) :

ambient temperature: 22.0°C; liquid temperature: 21.4°C

P1528_OET65_EN62209- RightHandSide touched –GSM850 Middle**DUT: HUAWEI U9000/U9000**

Communication System: HW-GSM/GPRS/EDGE 1TS; Frequency: 836.6 MHz

Medium parameters used (interpolated): $f = 836.6$ MHz; $\sigma = 0.872$ mho/m; $\epsilon_r = 42.2$; $\rho = 1000$ kg/m³

Phantom section: Right Section

Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

| Probe: EX3DV4 - SN3736; ConvF(9.26, 9.51, 9.97); Calibrated: 2010-11-16

| Sensor-Surface: 4mm (Mechanical Surface Detection)

| Electronics: DAE4 Sn851; Calibrated: 2010-6-30

| Phantom: SAM2; Type: SAM; Serial: TP-1474

| Measurement SW: DASYS5, V5.2 Build 157; Postprocessing SW: SEMCAD X, V14.2 Build 2Version 14.2.2 (1685) (Deployment Build)

U9000/head/Area Scan (8x12x1): Measurement grid: dx=15mm, dy=15mm[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.321 mW/g

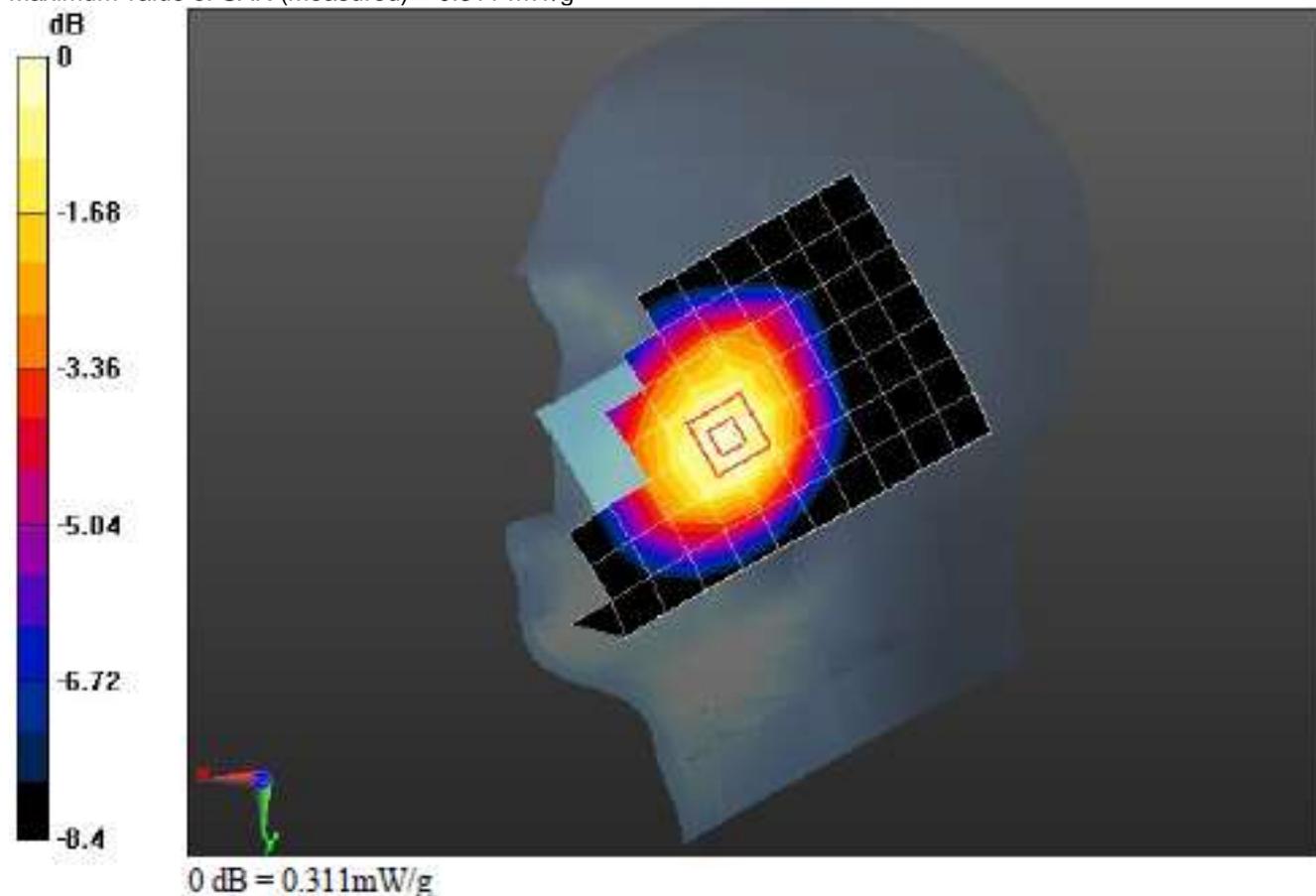
U9000/head/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 4.58 V/m; Power Drift = -0.158 dB

Peak SAR (extrapolated) = 0.352 W/kg

SAR(1 g) = 0.289 mW/g; SAR(10 g) = 0.217 mW/g[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.311 mW/g

**Additional information:**

position or distance of DUT to SAM (if not standard head positions) :

ambient temperature: 22.0°C; liquid temperature: 21.4°C

P1528_OET65_EN62209- RightHandSide tilted 15° –GSM850 Middle

DUT: HUAWEI U9000/U9000

Communication System: HW-GSM/GPRS/EDGE 1TS; Frequency: 836.6 MHz

Medium parameters used (interpolated): $f = 836.6$ MHz; $\sigma = 0.872$ mho/m; $\epsilon_r = 42.2$; $\rho = 1000$ kg/m³

Phantom section: Right Section

Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

Probe: EX3DV4 - SN3736; ConvF(9.26, 9.51, 9.97); Calibrated: 2010-11-16

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn851; Calibrated: 2010-6-30

Phantom: SAM2; Type: SAM; Serial: TP-1474

Measurement SW: DASYS5, V5.2 Build 157; Postprocessing SW: SEMCAD X, V14.2 Build 2Version 14.2.2 (1685) (Deployment Build)

U9000/head/Area Scan (8x12x1): Measurement grid: dx=15mm, dy=15mm

Info: [Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.194 mW/g

U9000/head/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

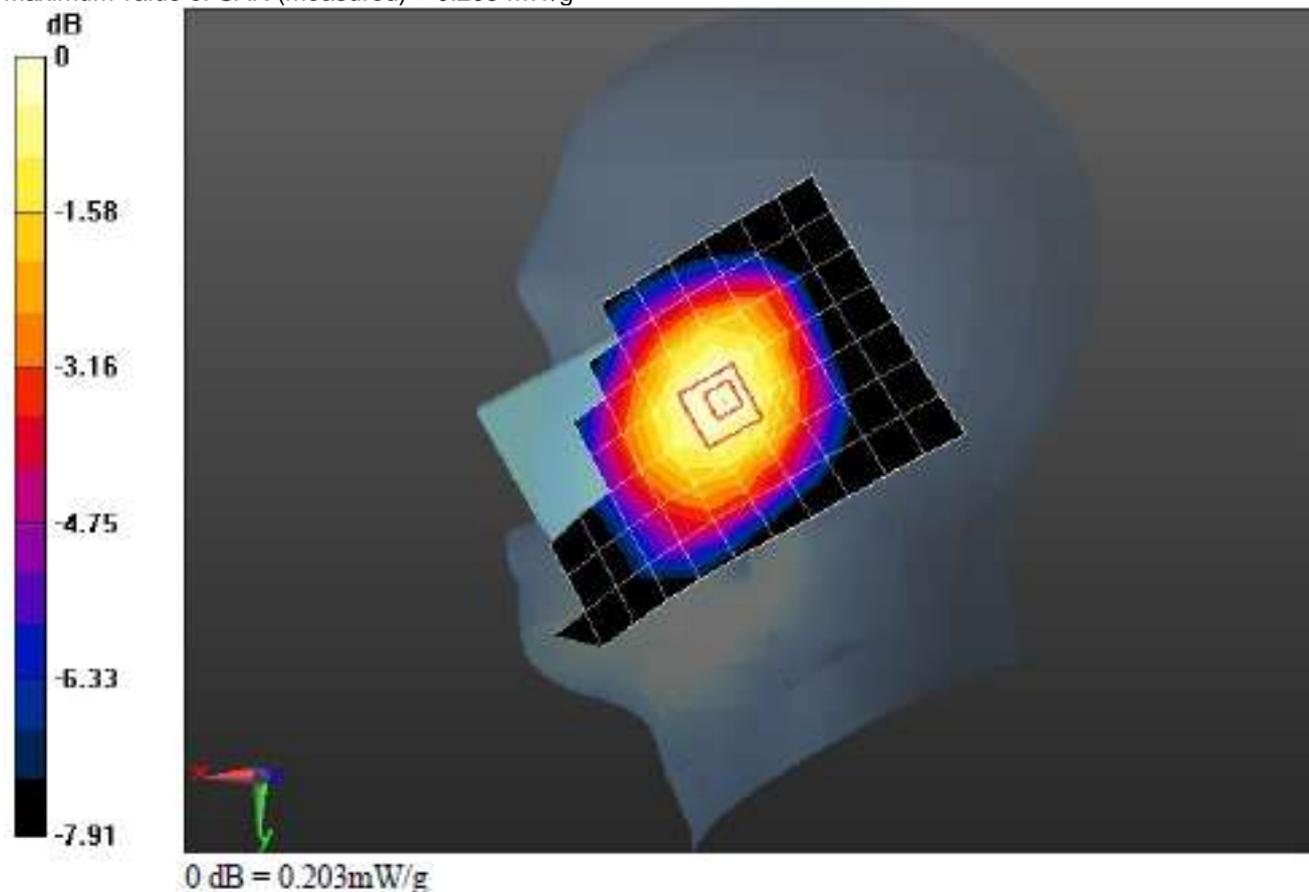
Reference Value = 7.74 V/m; Power Drift = -0.084 dB

Peak SAR (extrapolated) = 0.230 W/kg

SAR(1 g) = 0.194 mW/g; SAR(10 g) = 0.151 mW/g

Info: [Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.203 mW/g



Additional information:

position or distance of DUT to SAM (if not standard head positions) :

ambient temperature: 22.0°C; liquid temperature: 21.4°C

P1528_OET65_EN62209- LeftHandSide touched –GSM850 High

DUT: HUAWEI U9000/U9000

Communication System: HW-GSM/GPRS/EDGE 1TS; Frequency: 848.8 MHz

Medium parameters used (interpolated): $f = 848.6$ MHz; $\sigma = 0.883$ mho/m; $\epsilon_r = 42$; $\rho = 1000$ kg/m³

Phantom section: Left Section

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

DASY5 Configuration:

Probe: EX3DV4 - SN3736; ConvF(9.26, 9.51, 9.97); Calibrated: 2010-11-16

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn851; Calibrated: 2010-6-30

Phantom: SAM2; Type: SAM; Serial: TP-1474

Measurement SW: DASY5, V5.2 Build 157; Postprocessing SW: SEMCAD X, V14.2 Build 2Version 14.2.2 (1685) (Deployment Build)

U9000/head/Area Scan (8x12x1): Measurement grid: dx=15mm, dy=15mm

Info: [Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.408 mW/g

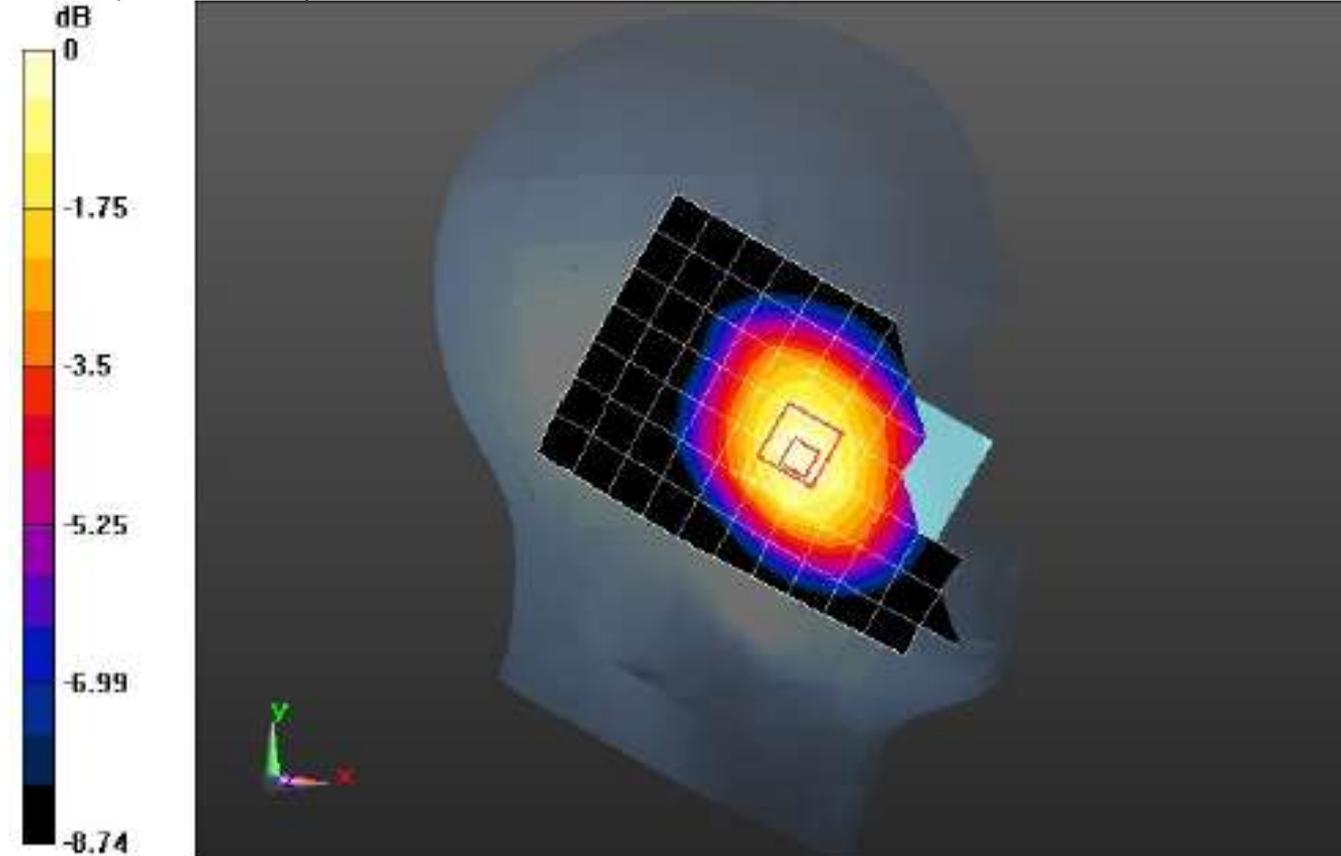
U9000/head/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 5.85 V/m; Power Drift = -0.132 dB

Peak SAR (extrapolated) = 0.472 W/kg

SAR(1 g) = 0.384 mW/g; SAR(10 g) = 0.292 mW/g

Info: [Interpolated medium parameters used for SAR evaluation.](#)



0 dB = 0.408mW/g

Additional information:

position or distance of DUT to SAM (if not standard head positions) :

ambient temperature: 22.0°C; liquid temperature: 21.4°C

**P1528_OET65_EN62209- LeftHandSide touched –GSM850 Low
DUT: HUAWEI U9000/U9000**

Communication System: HW-GSM/GPRS/EDGE 1TS; Frequency: 824.2 MHz
Medium parameters used: $f = 825$ MHz; $\sigma = 0.861$ mho/m; $\epsilon_r = 42.3$; $\rho = 1000$ kg/m³
Phantom section: Left Section
Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- | Probe: EX3DV4 - SN3736; ConvF(9.26, 9.51, 9.97); Calibrated: 2010-11-16
- | Sensor-Surface: 4mm (Mechanical Surface Detection)
- | Electronics: DAE4 Sn851; Calibrated: 2010-6-30
- | Phantom: SAM2; Type: SAM; Serial: TP-1474
- | Measurement SW: DASYS, V5.2 Build 157; Postprocessing SW: SEMCAD X, V14.2 Build 2Version 14.2.2 (1685) (Deployment Build)

U9000/head/Area Scan (8x12x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.346 mW/g

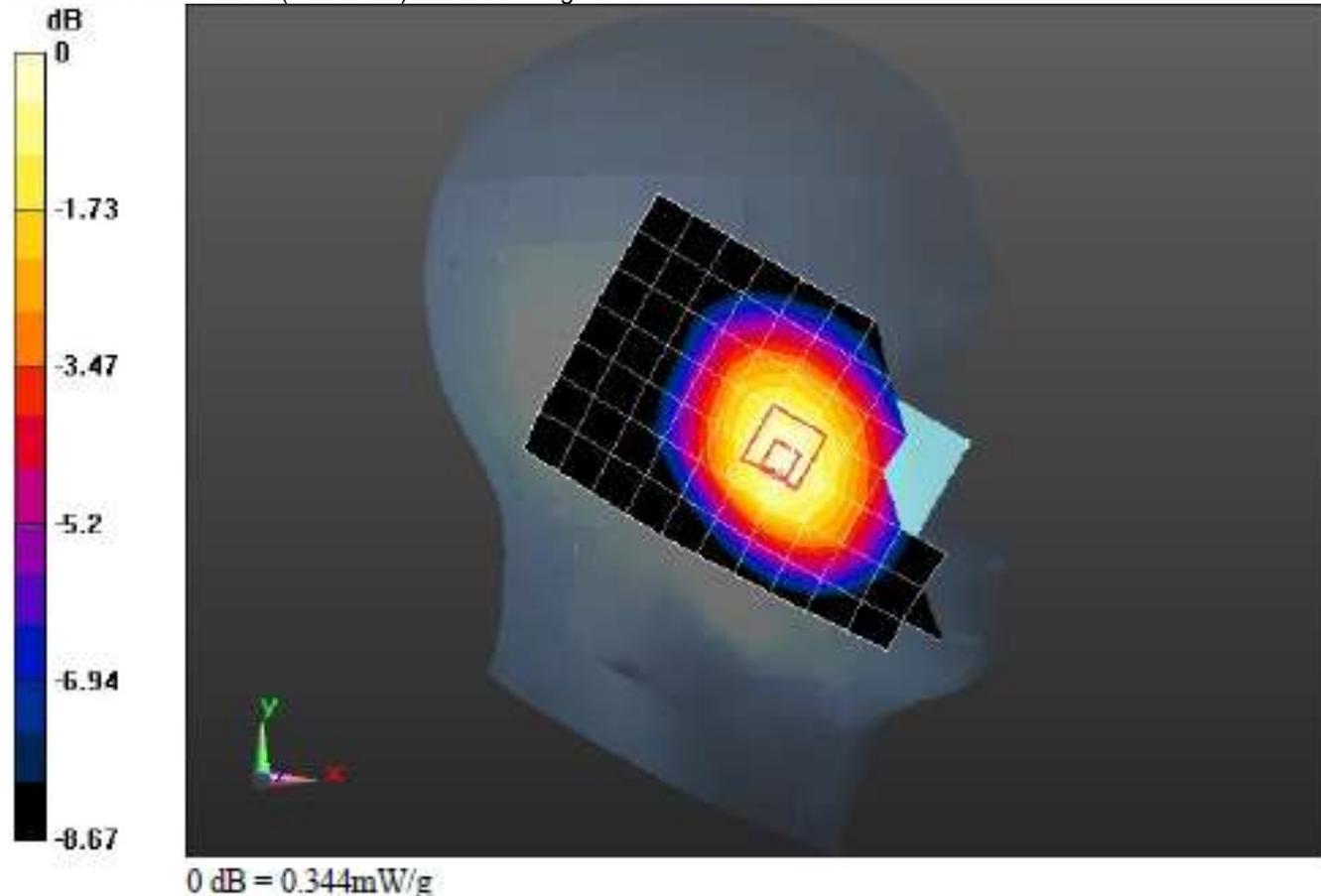
U9000/head/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 5.42 V/m; Power Drift = -0.186 dB

Peak SAR (extrapolated) = 0.412 W/kg

SAR(1 g) = 0.329 mW/g; SAR(10 g) = 0.251 mW/g

Maximum value of SAR (measured) = 0.344 mW/g



Additional information:

position or distance of DUT to SAM (if not standard head positions) :
ambient temperature: 22.0°C; liquid temperature: 21.4°C

P1528_OET65_EN62209- LeftHandSide touched –GSM850 GPRS 1TS Middle

DUT: HUAWEI U9000/U9000

Communication System: HW-GSM/GPRS/EDGE 1TS; Frequency: 836.6 MHz

Medium parameters used (interpolated): $f = 836.6$ MHz; $\sigma = 0.866$ mho/m; $\epsilon_r = 42$; $\rho = 1000$ kg/m³

Phantom section: Left Section

Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

Probe: EX3DV4 - SN3736; ConvF(9.26, 9.51, 9.97); Calibrated: 2010-11-16

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn851; Calibrated: 2010-6-30

Phantom: SAM2; Type: SAM; Serial: TP-1474

Measurement SW: DASYS5, V5.2 Build 157; Postprocessing SW: SEMCAD X, V14.2 Build 2Version 14.2.2 (1685) (Deployment Build)

U9000/head/Area Scan (8x12x1): Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.322 mW/g

U9000/head/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

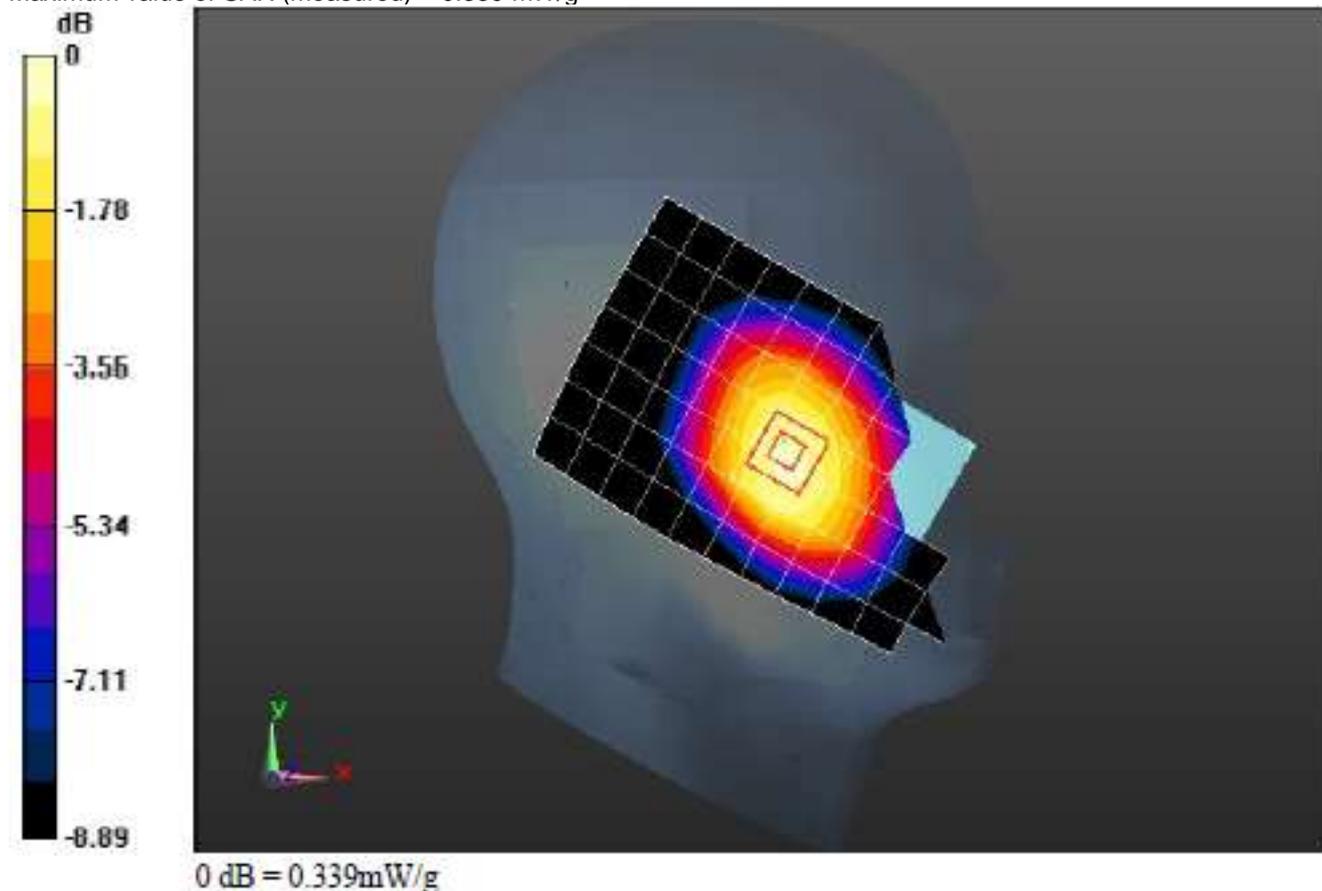
Reference Value = 5.83 V/m; Power Drift = -0.084 dB

Peak SAR (extrapolated) = 0.385 W/kg

SAR(1 g) = 0.310 mW/g; SAR(10 g) = 0.236 mW/g

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.339 mW/g



Additional information:

position or distance of DUT to SAM (if not standard head positions) :

ambient temperature: 22.0°C; liquid temperature: 21.4°C

**P1528_OET65_EN62209- LeftHandSide tilted 15° –GSM850 GPRS 1TS Middle
DUT: HUAWEI U9000/U9000**

Communication System: HW-GSM/GPRS/EDGE 1TS; Frequency: 836.6 MHz
Medium parameters used (interpolated): $f = 836.6$ MHz; $\sigma = 0.866$ mho/m; $\epsilon_r = 42$; $\rho = 1000$ kg/m³
Phantom section: Left Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: EX3DV4 - SN3736; ConvF(9.26, 9.51, 9.97); Calibrated: 2010-11-16
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn851; Calibrated: 2010-6-30
- Phantom: SAM2; Type: SAM; Serial: TP-1474
- Measurement SW: DASY5, V5.2 Build 157; Postprocessing SW: SEMCAD X, V14.2 Build 2Version 14.2.2 (1685) (Deployment Build)

U9000/head/Area Scan (8x12x1): Measurement grid: dx=15mm, dy=15mm

Info: [Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.195 mW/g

U9000/head/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

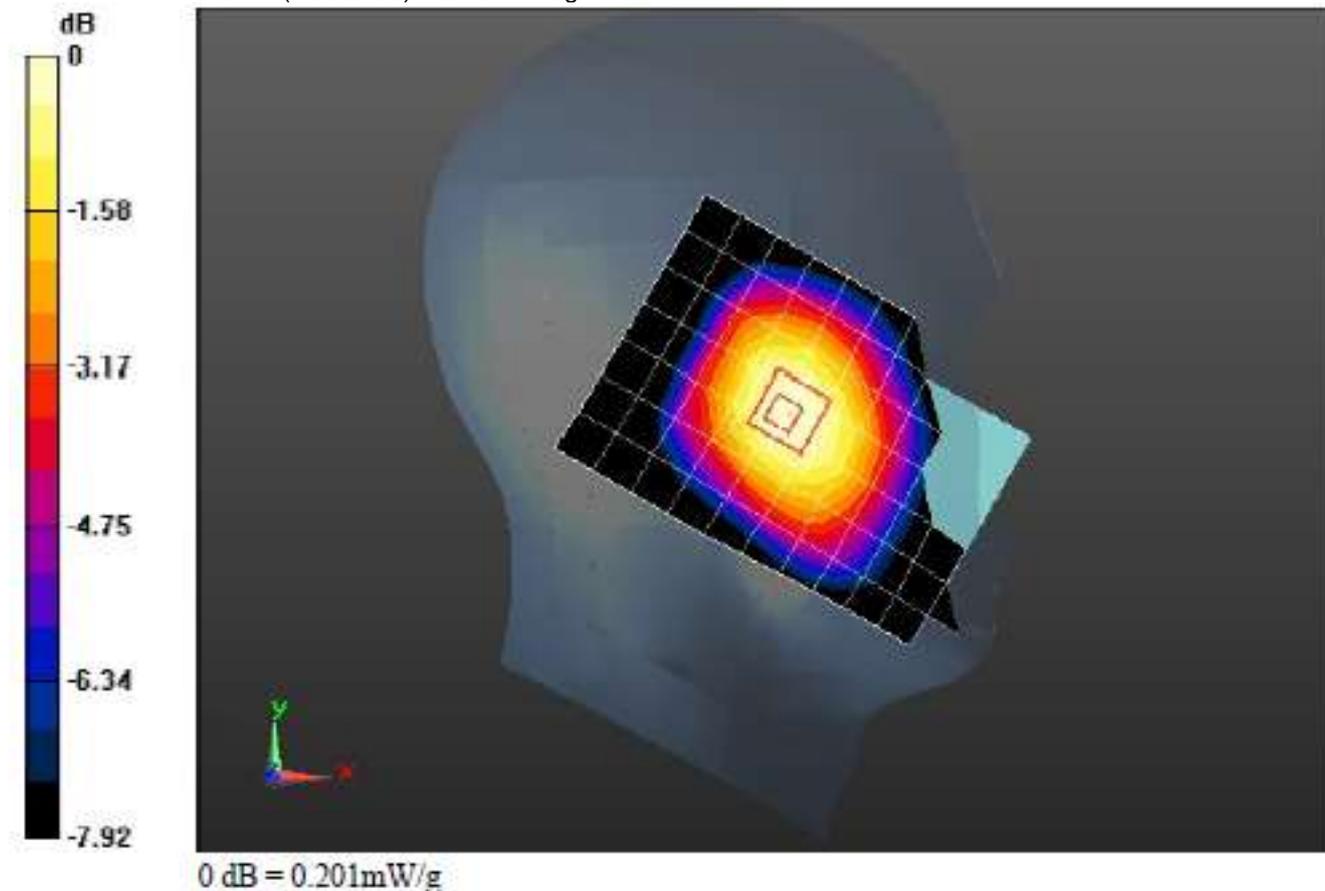
Reference Value = 8.65 V/m; Power Drift = 0.163 dB

Peak SAR (extrapolated) = 0.234 W/kg

SAR(1 g) = 0.191 mW/g; SAR(10 g) = 0.149 mW/g

Info: [Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.201 mW/g



Additional information:

position or distance of DUT to SAM (if not standard head positions) :
ambient temperature: 22.0°C; liquid temperature: 21.4°C

Date/Time: 2010-12-19 15:58:38

P1528_OET65_EN62209- RightHandSide touched –GSM850 GPRS 1TS Middle

DUT: HUAWEI U9000/U9000

Communication System: HW-GSM/GPRS/EDGE 1TS; Frequency: 836.6 MHz

Medium parameters used (interpolated): $f = 836.6$ MHz; $\sigma = 0.866$ mho/m; $\epsilon_r = 42$; $\rho = 1000$ kg/m³

Phantom section: Right Section

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

DASY5 Configuration:

Probe: EX3DV4 - SN3736; ConvF(9.26, 9.51, 9.97); Calibrated: 2010-11-16

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn851; Calibrated: 2010-6-30

Phantom: SAM2; Type: SAM; Serial: TP-1474

Measurement SW: DASYS, V5.2 Build 157; Postprocessing SW: SEMCAD X, V14.2 Build 2Version 14.2.2 (1685) (Deployment Build)

U9000/head/Area Scan (8x12x1): Measurement grid: dx=15mm, dy=15mm

Info: [Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.296 mW/g

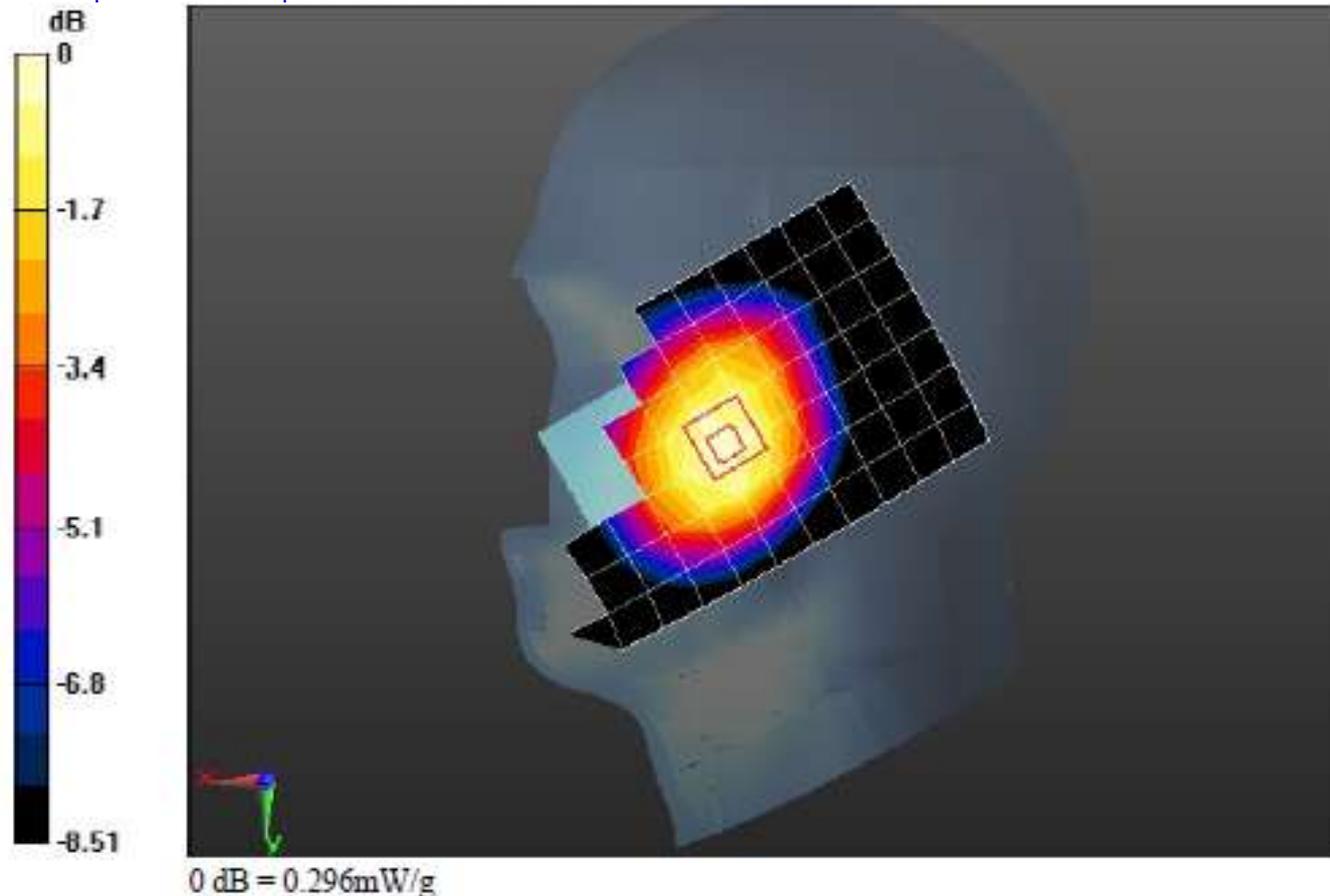
U9000/head/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 4.46 V/m; Power Drift = 0.072 dB

Peak SAR (extrapolated) = 0.332 W/kg

SAR(1 g) = 0.281 mW/g; SAR(10 g) = 0.216 mW/g

Info: [Interpolated medium parameters used for SAR evaluation.](#)



Additional information:

position or distance of DUT to SAM (if not standard head positions) :

ambient temperature: 22.0°C; liquid temperature: 21.4°C

P1528_OET65_EN62209- RightHandSide tilted 15° –GSM850 GPRS 1TS Middle**DUT: HUAWEI U9000/U9000**

Communication System: HW-GSM/GPRS/EDGE 1TS; Frequency: 836.6 MHz

Medium parameters used (interpolated): $f = 836.6$ MHz; $\sigma = 0.866$ mho/m; $\epsilon_r = 42$; $\rho = 1000$ kg/m³

Phantom section: Right Section

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

DASY5 Configuration:

| Probe: EX3DV4 - SN3736; ConvF(9.26, 9.51, 9.97); Calibrated: 2010-11-16

| Sensor-Surface: 4mm (Mechanical Surface Detection)

| Electronics: DAE4 Sn851; Calibrated: 2010-6-30

| Phantom: SAM2; Type: SAM; Serial: TP-1474

| Measurement SW: DASYS, V5.2 Build 157; Postprocessing SW: SEMCAD X, V14.2 Build 2Version 14.2.2 (1685) (Deployment Build)

U9000/head/Area Scan (8x12x1): Measurement grid: dx=15mm, dy=15mm[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.178 mW/g

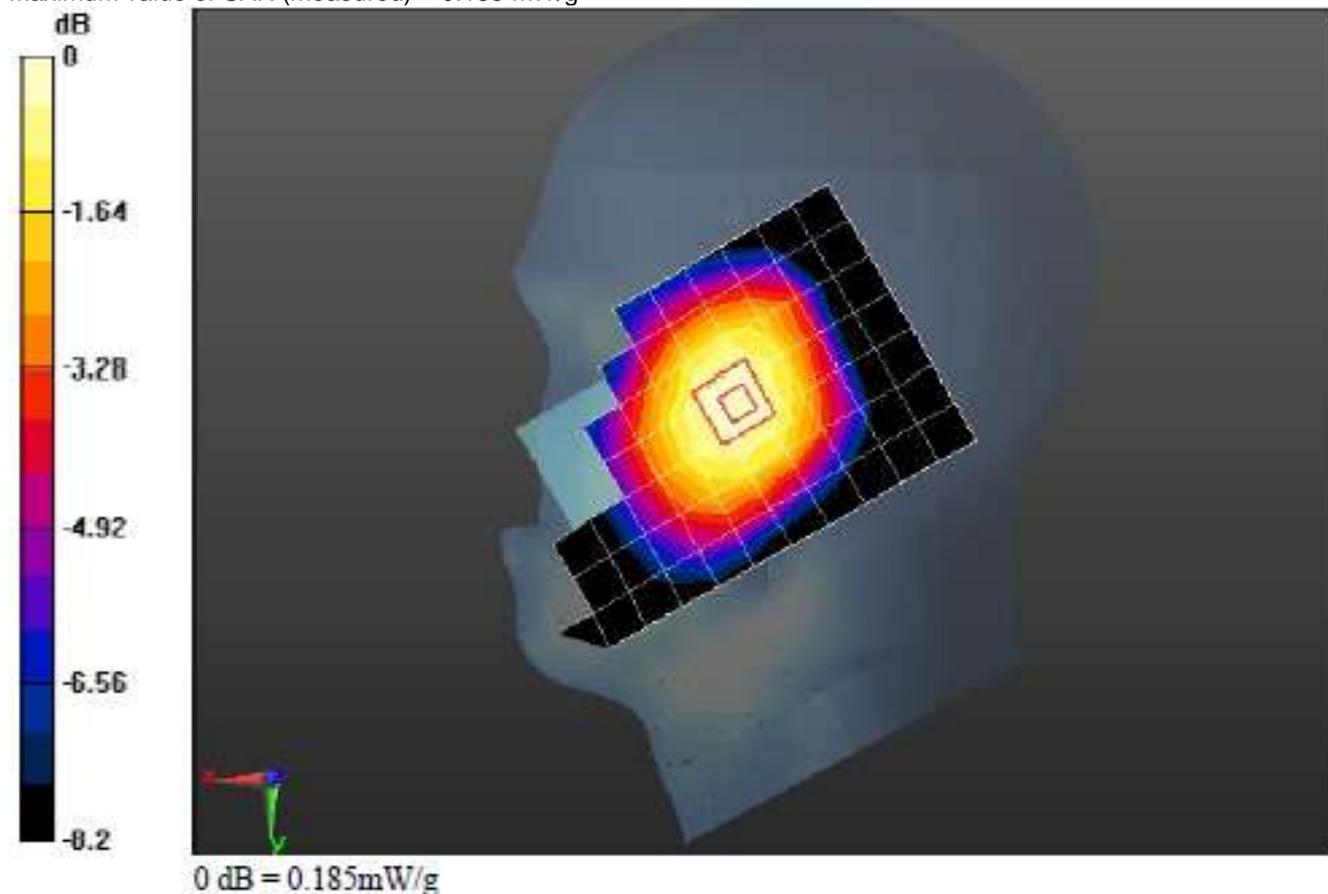
U9000/head/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 7.65 V/m; Power Drift = -0.035 dB

Peak SAR (extrapolated) = 0.221 W/kg

SAR(1 g) = 0.178 mW/g; SAR(10 g) = 0.140 mW/g[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.185 mW/g

**Additional information:**

position or distance of DUT to SAM (if not standard head positions) :

ambient temperature: 22.0°C; liquid temperature: 21.4°C

P1528_OET65_EN62209- LeftHandSide touched –GSM850 GPRS 1TS High

DUT: HUAWEI U9000/U9000

Communication System: HW-GSM/GPRS/EDGE 1TS; Frequency: 848.8 MHz

Medium parameters used (interpolated): $f = 848.8$ MHz; $\sigma = 0.873$ mho/m; $\epsilon_r = 41.8$; $\rho = 1000$ kg/m³

Phantom section: Left Section

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

DASY5 Configuration:

Probe: EX3DV4 - SN3736; ConvF(9.26, 9.51, 9.97); Calibrated: 2010-11-16

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn851; Calibrated: 2010-6-30

Phantom: SAM2; Type: SAM; Serial: TP-1474

Measurement SW: DASY5, V5.2 Build 157; Postprocessing SW: SEMCAD X, V14.2 Build 2/Version 14.2.2 (1685) (Deployment Build)

U9000/head/Area Scan (8x12x1): Measurement grid: dx=15mm, dy=15mm

Info: [Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.390 mW/g

U9000/head/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

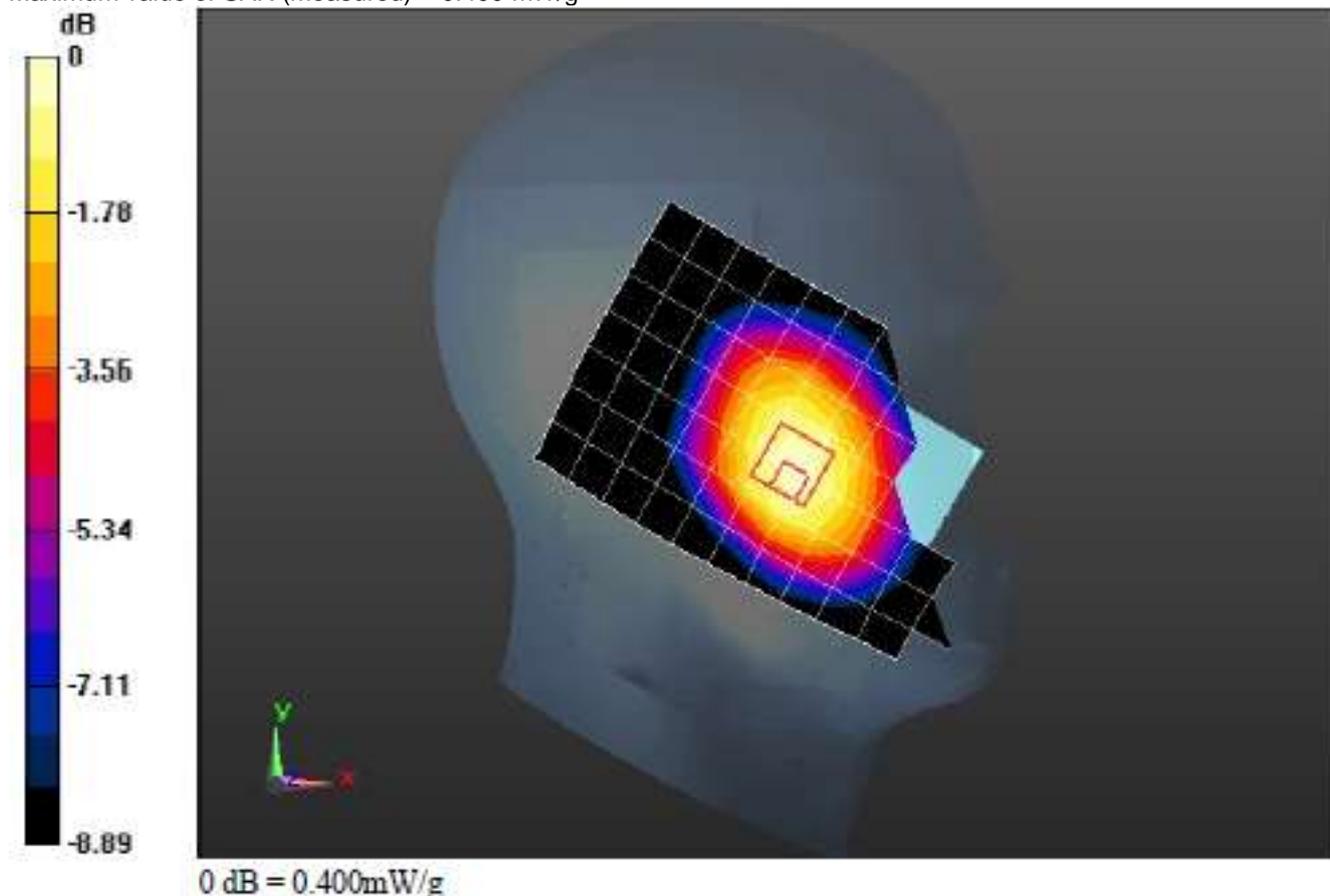
Reference Value = 5.44 V/m; Power Drift = -0.057 dB

Peak SAR (extrapolated) = 0.493 W/kg

SAR(1 g) = 0.375 mW/g; SAR(10 g) = 0.285 mW/g

Info: [Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.400 mW/g



Additional information:

position or distance of DUT to SAM (if not standard head positions) :

ambient temperature: 22.0°C; liquid temperature: 21.4°C

**P1528_OET65_EN62209- LeftHandSide touched –GSM850 GPRS 1TS Low
DUT: HUAWEI U9000/U9000**

Communication System: HW-GSM/GPRS/EDGE 1TS; Frequency: 824.2 MHz
Medium parameters used: $f = 825$ MHz; $\sigma = 0.863$ mho/m; $\epsilon_r = 42.1$; $\rho = 1000$ kg/m³
Phantom section: Left Section

Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

Probe: EX3DV4 - SN3736; ConvF(9.26, 9.51, 9.97); Calibrated: 2010-11-16

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn851; Calibrated: 2010-6-30

Phantom: SAM2; Type: SAM; Serial: TP-1474

Measurement SW: DASYS5, V5.2 Build 157; Postprocessing SW: SEMCAD X, V14.2 Build 2Version 14.2.2 (1685)
(Deployment Build)

U9000/head/Area Scan (8x12x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.305 mW/g

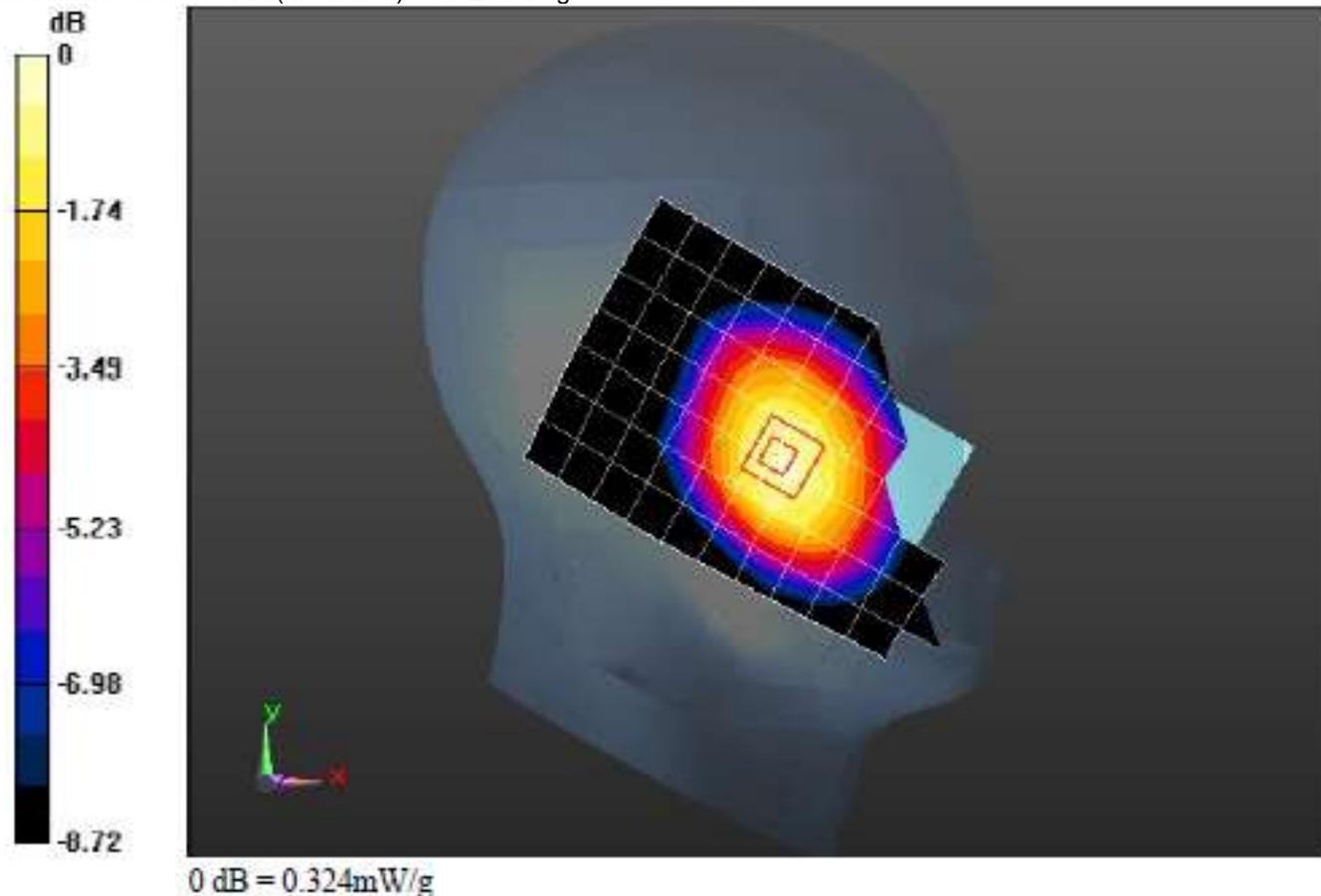
U9000/head/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 5 V/m; Power Drift = 0.032 dB

Peak SAR (extrapolated) = 0.363 W/kg

SAR(1 g) = 0.297 mW/g; SAR(10 g) = 0.226 mW/g

Maximum value of SAR (measured) = 0.324 mW/g



Additional information:

position or distance of DUT to SAM (if not standard head positions) :

ambient temperature: 22.0°C; liquid temperature: 21.4°C

P1528_OET65_EN62209- LeftHandSide touched –GSM850 EGPRS 1TS High**DUT: HUAWEI U9000/U9000**

Communication System: HW-GSM/GPRS/EDGE 1TS; Frequency: 848.8 MHz

Medium parameters used (interpolated): $f = 848.8$ MHz; $\sigma = 0.873$ mho/m; $\epsilon_r = 41.8$; $\rho = 1000$ kg/m³

Phantom section: Left Section

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

DASY5 Configuration:

| Probe: EX3DV4 - SN3736; ConvF(9.26, 9.51, 9.97); Calibrated: 2010-11-16

| Sensor-Surface: 4mm (Mechanical Surface Detection)

| Electronics: DAE4 Sn851; Calibrated: 2010-6-30

| Phantom: SAM2; Type: SAM; Serial: TP-1474

| Measurement SW: DASY5, V5.2 Build 157; Postprocessing SW: SEMCAD X, V14.2 Build 2Version 14.2.2 (1685) (Deployment Build)

U9000/head/Area Scan (8x12x1): Measurement grid: dx=15mm, dy=15mm[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.392 mW/g

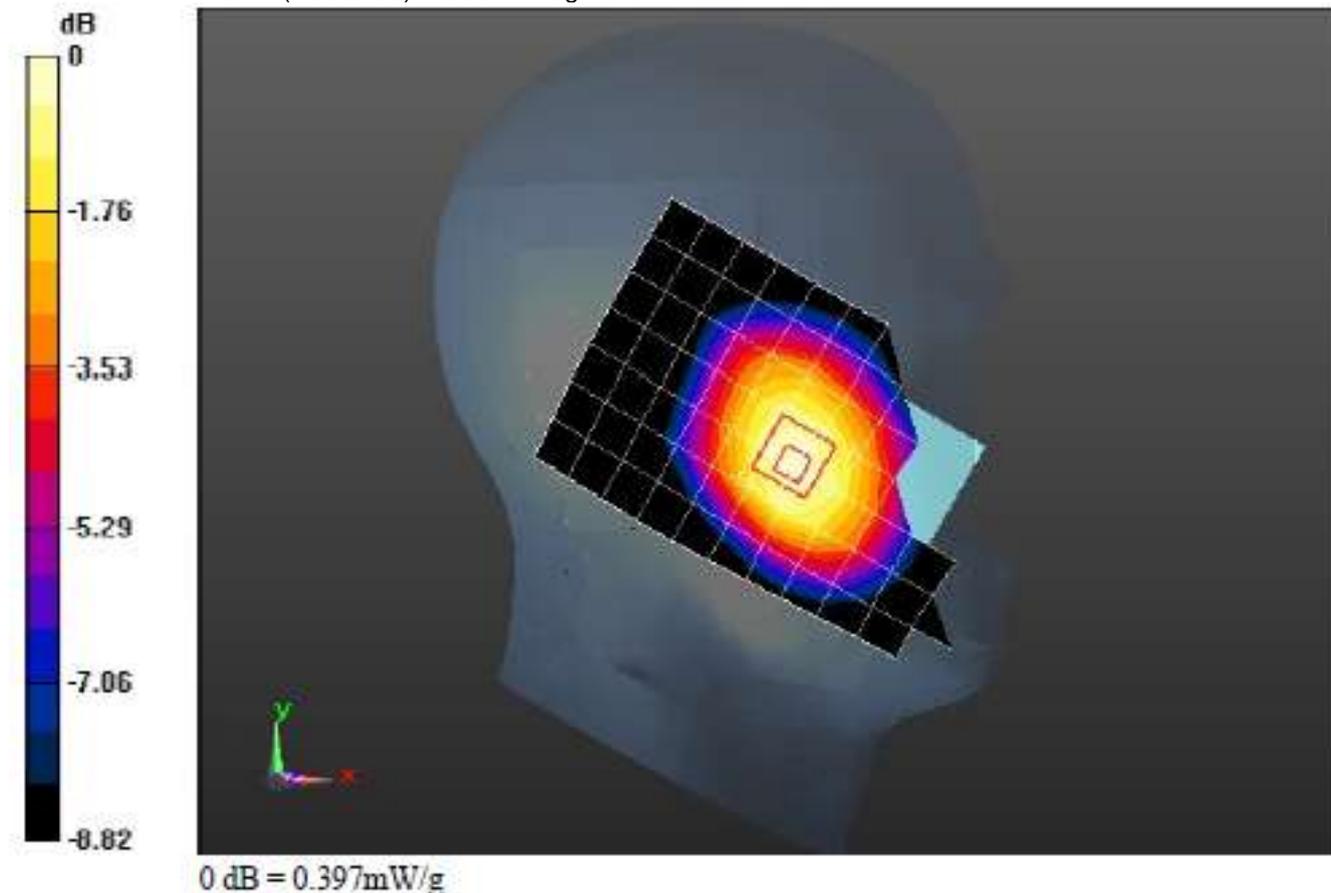
U9000/head/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 5.53 V/m; Power Drift = -0.072 dB

Peak SAR (extrapolated) = 0.461 W/kg

SAR(1 g) = 0.375 mW/g; SAR(10 g) = 0.285 mW/g[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.397 mW/g

**Additional information:**

position or distance of DUT to SAM (if not standard head positions) :

ambient temperature: 22.0°C; liquid temperature: 21.4°C

Annex 2.4 GSM 850 MHz Body

Date/Time: 2010-12-18 11:00:03

P1528_OET65_EN62209- towards phantom- GSM850 GPRS 1TS Middle**DUT: HUAWEI U9000/U9000**

Communication System: HW-GSM/GPRS/EDGE 1TS; Frequency: 836.6 MHz

Medium parameters used (interpolated): $f = 836.6$ MHz; $\sigma = 0.955$ mho/m; $\epsilon_r = 53.1$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

i Probe: EX3DV4 - SN3736; ConvF(8.79, 8.99, 9.47); Calibrated: 2010-11-16

i Sensor-Surface: 4mm (Mechanical Surface Detection)

i Electronics: DAE4 Sn851; Calibrated: 2010-6-30

i Phantom: SAM1; Type: SAM; Serial: TP-1475

i Measurement SW: DASYS5, V5.2 Build 157; Postprocessing SW: SEMCAD X, V14.2 Build 2Version 14.2.2 (1685) (Deployment Build)

U9000/Body/Area Scan (11x17x1): Measurement grid: dx=10mm, dy=10mm[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.360 mW/g

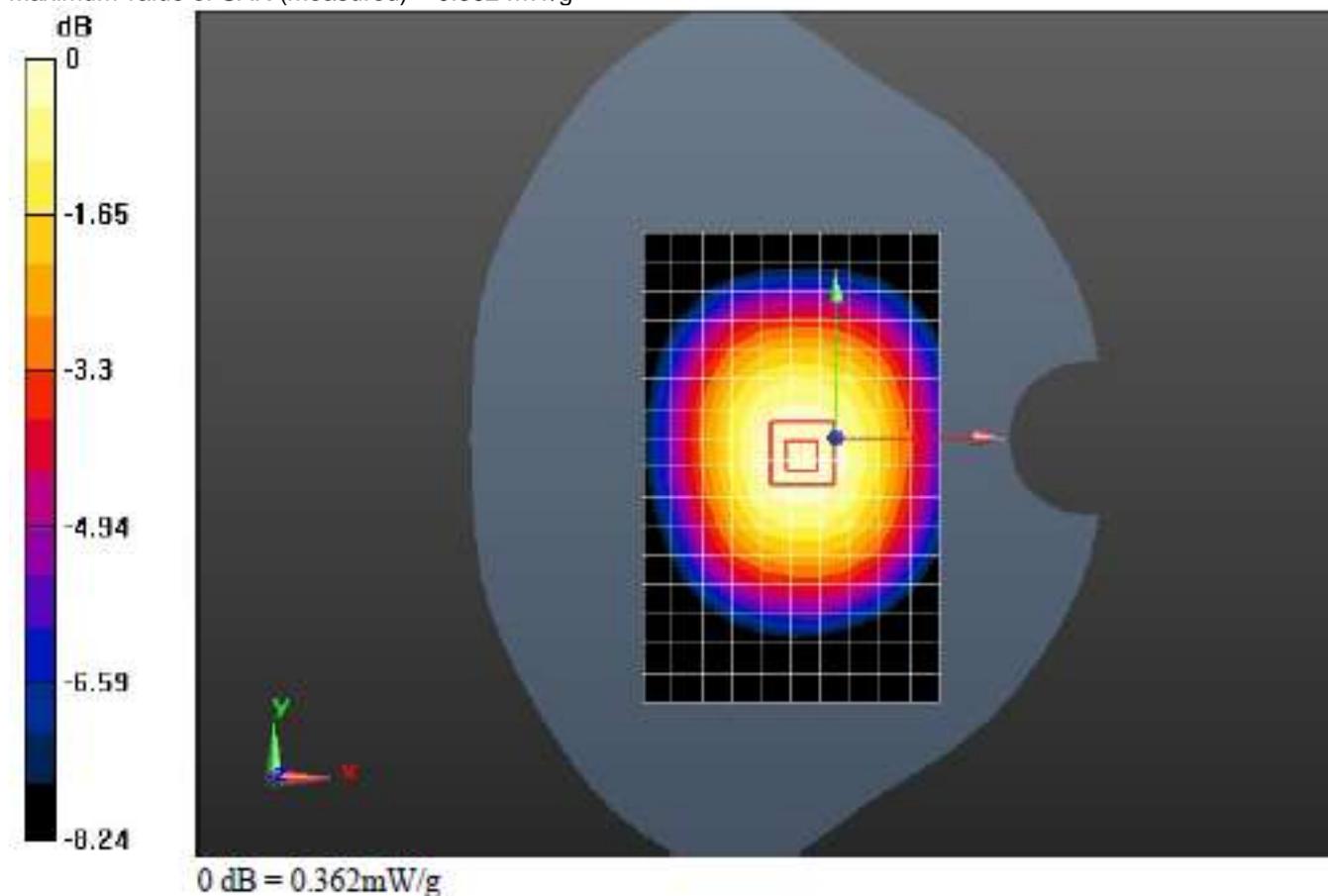
U9000/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 19.5 V/m; Power Drift = -0.123 dB

Peak SAR (extrapolated) = 0.421 W/kg

SAR(1 g) = 0.345 mW/g; SAR(10 g) = 0.263 mW/g[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.362 mW/g

**Additional information:**

position or distance of DUT to SAM (if not standard head positions) :15 mm

ambient temperature: 22.0°C; liquid temperature: 21.5°C

**P1528_OET65_EN62209- towards ground- GSM850 GPRS 1TS Middle
DUT: HUAWEI U9000/U9000**

Communication System: HW-GSM/GPRS/EDGE 1TS; Frequency: 836.6 MHz
Medium parameters used (interpolated): $f = 836.6$ MHz; $\sigma = 0.955$ mho/m; $\epsilon_r = 53.1$; $\rho = 1000$ kg/m³
Phantom section: Flat Section
Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- | Probe: EX3DV4 - SN3736; ConvF(8.79, 8.99, 9.47); Calibrated: 2010-11-16
- | Sensor-Surface: 4mm (Mechanical Surface Detection)
- | Electronics: DAE4 Sn851; Calibrated: 2010-6-30
- | Phantom: SAM1; Type: SAM; Serial: TP-1475
- | Measurement SW: DASYS, V5.2 Build 157; Postprocessing SW: SEMCAD X, V14.2 Build 2Version 14.2.2 (1685) (Deployment Build)

U9000/Body/Area Scan (11x17x1): Measurement grid: dx=10mm, dy=10mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.520 mW/g

U9000/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

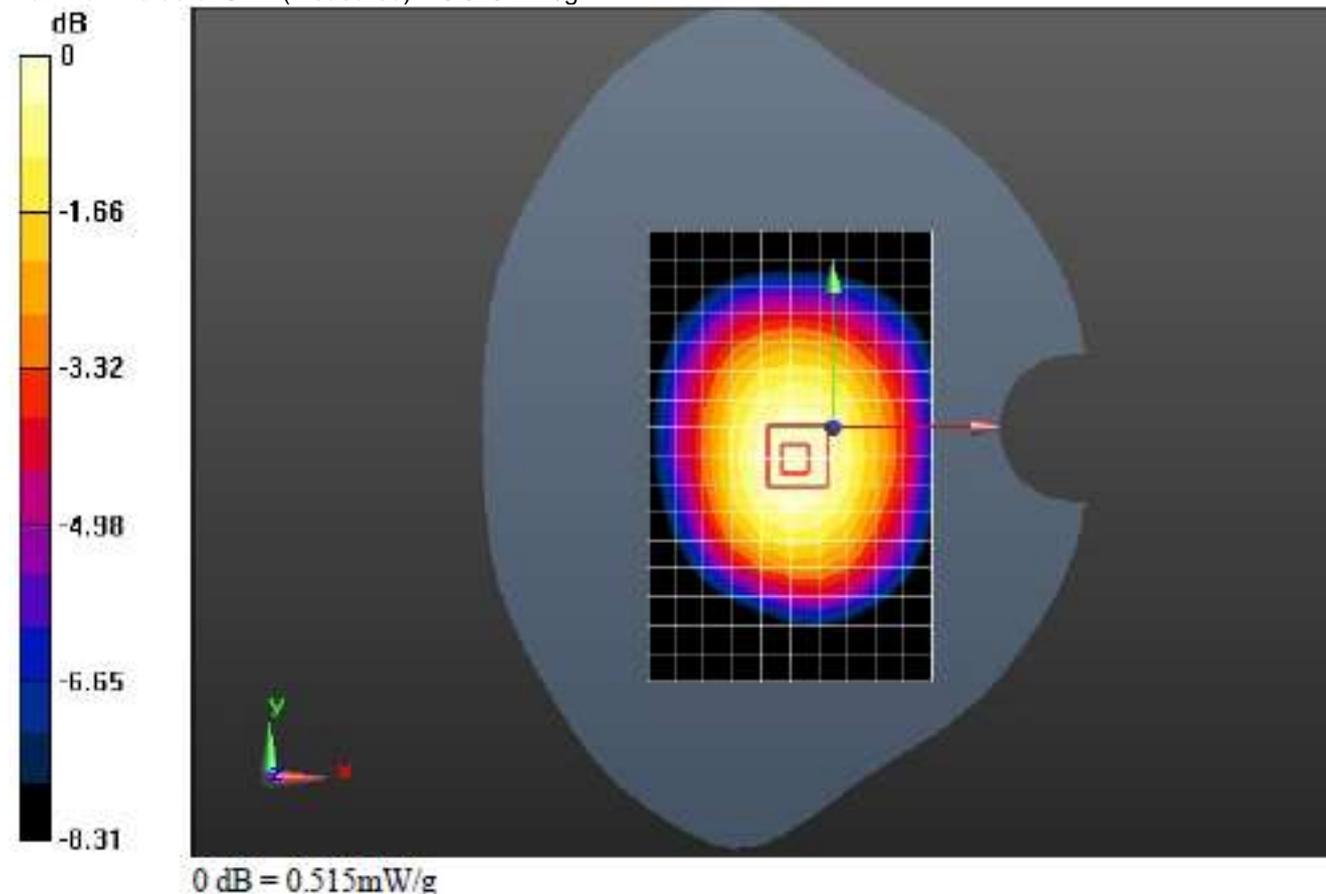
Reference Value = 23 V/m; Power Drift = -0.061 dB

Peak SAR (extrapolated) = 0.603 W/kg

SAR(1 g) = 0.490 mW/g; SAR(10 g) = 0.372 mW/g

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.515 mW/g



Additional information:

position or distance of DUT to SAM (if not standard head positions) :15 mm
ambient temperature: 22.0°C; liquid temperature: 21.5°C

P1528_OET65_EN62209- towards ground- GSM850 GPRS 2TS Middle
DUT: HUAWEI U9000/U9000

Communication System: HW-GSM/GPRS/EDGE 2TS; Frequency: 836.6 MHz

Medium parameters used (interpolated): $f = 836.6$ MHz; $\sigma = 0.955$ mho/m; $\epsilon_r = 53.1$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

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

DASY5 Configuration:

| Probe: EX3DV4 - SN3736; ConvF(8.79, 8.99, 9.47); Calibrated: 2010-11-16

| Sensor-Surface: 4mm (Mechanical Surface Detection)

| Electronics: DAE4 Sn851; Calibrated: 2010-6-30

| Phantom: SAM1; Type: SAM; Serial: TP-1475

| Measurement SW: DASY5, V5.2 Build 157; Postprocessing SW: SEMCAD X, V14.2 Build 2/Version 14.2.2 (1685) (Deployment Build)

U9000/Body/Area Scan (11x17x1): Measurement grid: dx=10mm, dy=10mmInfo: [Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.489 mW/g

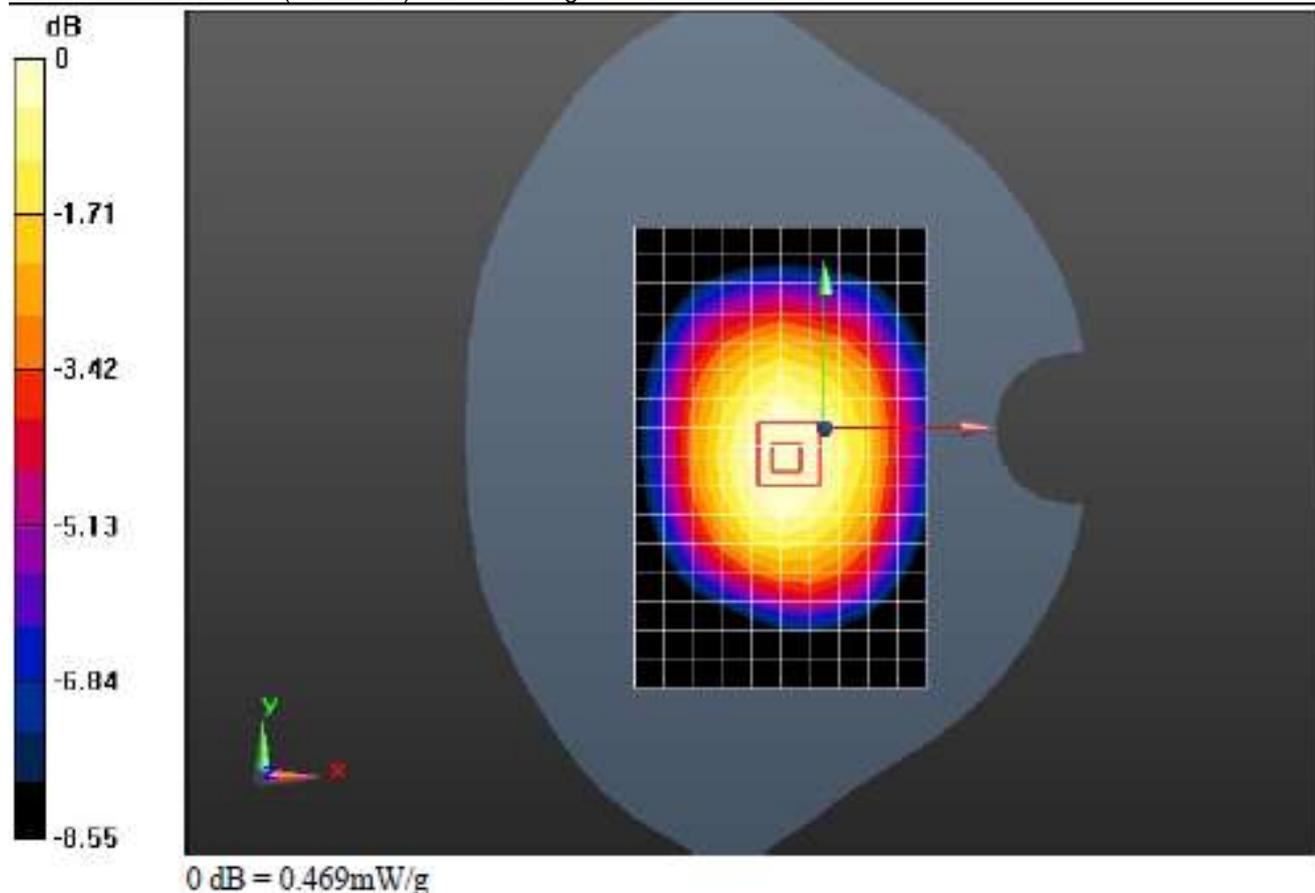
U9000/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 21.4 V/m; Power Drift = 0.186 dB

Peak SAR (extrapolated) = 0.546 W/kg

SAR(1 g) = 0.446 mW/g; SAR(10 g) = 0.342 mW/gInfo: [Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.469 mW/g

**Additional information:**

position or distance of DUT to SAM (if not standard head positions) :15 mm

ambient temperature: 22.0°C; liquid temperature: 21.5°C

P1528_OET65_EN62209- towards ground- GSM850 GPRS 3TS Middle**DUT: HUAWEI U9000/U9000**

Communication System: HW-GSM/GPRS/EDGE 3TS; Frequency: 836.6 MHz

Medium parameters used (interpolated): $f = 836.6$ MHz; $\sigma = 0.955$ mho/m; $\epsilon_r = 53.1$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

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

DASY5 Configuration:

| Probe: EX3DV4 - SN3736; ConvF(8.79, 8.99, 9.47); Calibrated: 2010-11-16

| Sensor-Surface: 4mm (Mechanical Surface Detection)

| Electronics: DAE4 Sn851; Calibrated: 2010-6-30

| Phantom: SAM1; Type: SAM; Serial: TP-1475

| Measurement SW: DASY5, V5.2 Build 157; Postprocessing SW: SEMCAD X, V14.2 Build 2/Version 14.2.2 (1685) (Deployment Build)

U9000/Body/Area Scan (11x17x1): Measurement grid: dx=10mm, dy=10mm[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.401 mW/g

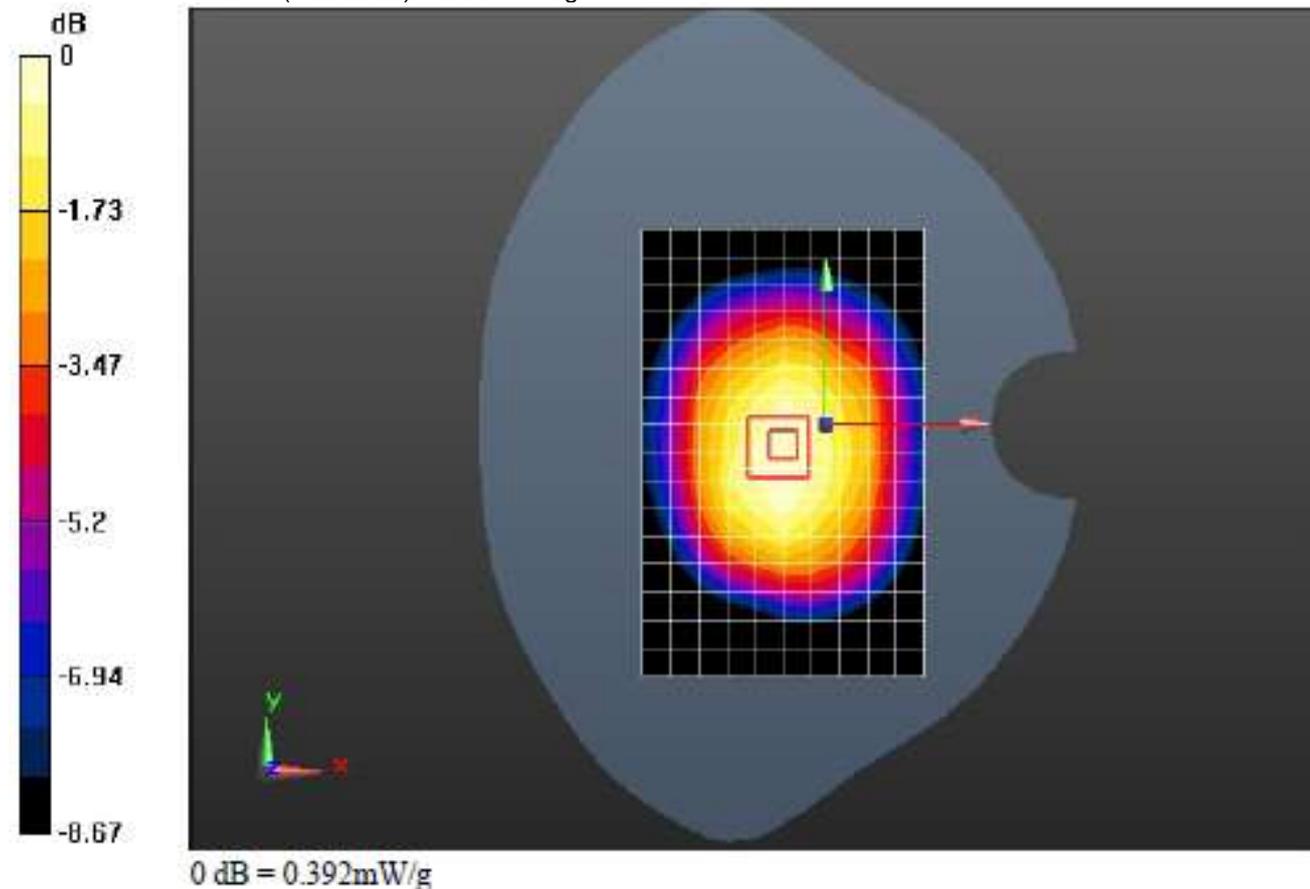
U9000/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 19.7 V/m; Power Drift = 0.113 dB

Peak SAR (extrapolated) = 0.460 W/kg

SAR(1 g) = 0.367 mW/g; SAR(10 g) = 0.280 mW/g[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.392 mW/g

**Additional information:**

position or distance of DUT to SAM (if not standard head positions) :15 mm

ambient temperature: 22.0°C; liquid temperature: 21.5°C

**P1528_OET65_EN62209- towards ground- GSM850 GPRS 4TS Middle
DUT: HUAWEI U9000/U9000**

Communication System: HW-GSM/GPRS/EDGE 4TS; Frequency: 836.6 MHz
Medium parameters used (interpolated): $f = 836.6$ MHz; $\sigma = 0.955$ mho/m; $\epsilon_r = 53.1$; $\rho = 1000$ kg/m³
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: EX3DV4 - SN3736; ConvF(8.79, 8.99, 9.47); Calibrated: 2010-11-16
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn851; Calibrated: 2010-6-30
- Phantom: SAM1; Type: SAM; Serial: TP-1475
- Measurement SW: DASY5, V5.2 Build 157; Postprocessing SW: SEMCAD X, V14.2 Build 2Version 14.2.2 (1685) (Deployment Build)

U9000/Body/Area Scan (10x16x1): Measurement grid: dx=10mm, dy=10mm

Info: [Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.376 mW/g

U9000/Body/Zoom Scan (6x6x6)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=8mm

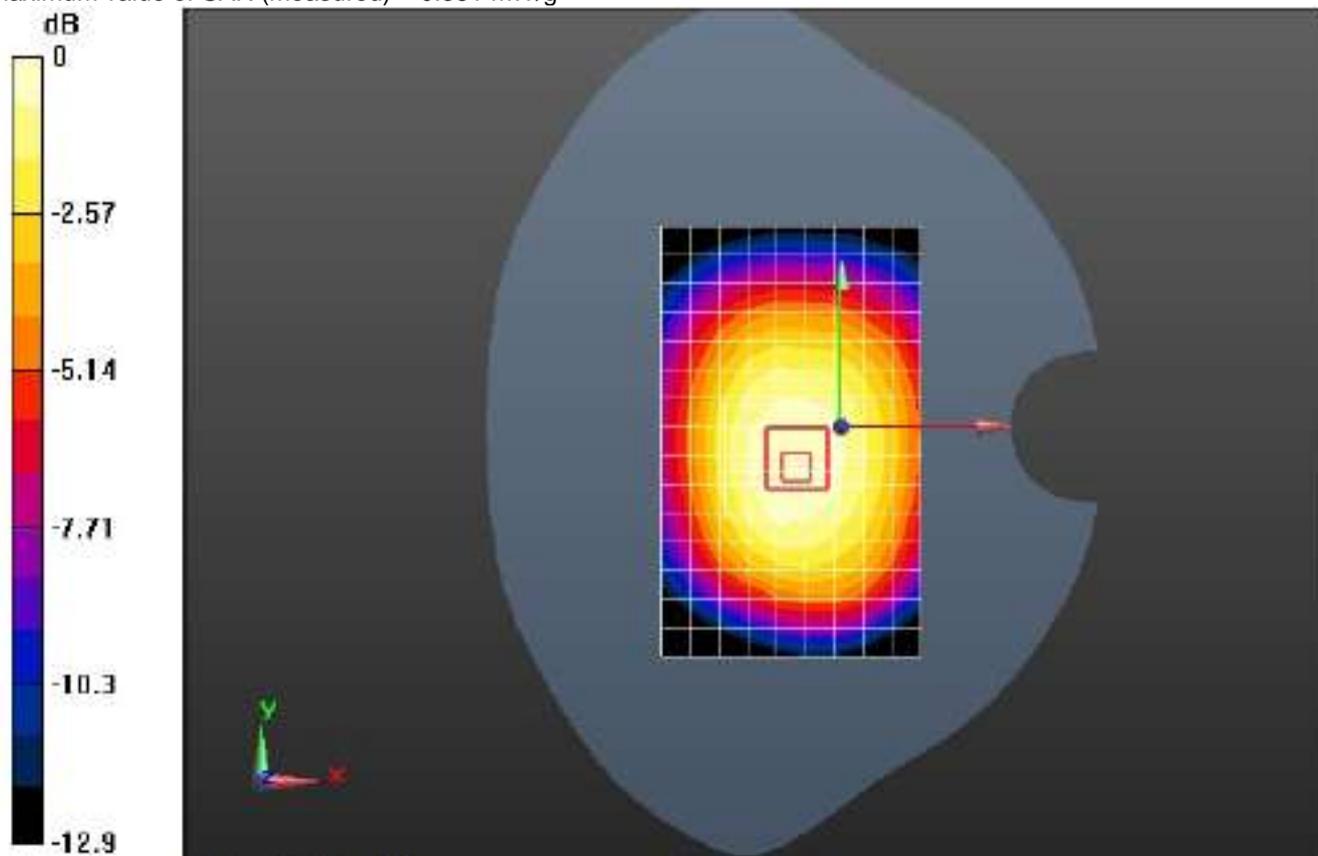
Reference Value = 19.4 V/m; Power Drift = 0.018 dB

Peak SAR (extrapolated) = 0.452 W/kg

SAR(1 g) = 0.365 mW/g; SAR(10 g) = 0.277 mW/g

Info: [Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.381 mW/g



0 dB = 0.381mW/g

Additional information:

position or distance of DUT to SAM (if not standard head positions) :15 mm
ambient temperature: 22.0°C; liquid temperature: 21.5°C

**P1528_OET65_EN62209- towards ground- GSM850 GPRS 1TS High
DUT: HUAWEI U9000/U9000**

Communication System: HW-GSM/GPRS/EDGE 1TS; Frequency: 848.8MHz
Medium parameters used (interpolated): $f = 848.8$ MHz; $\sigma = 0.967$ mho/m; $\epsilon_r = 52.8$; $\rho = 1000$ kg/m³
Phantom section: Flat Section
Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: EX3DV4 - SN3736; ConvF(8.79, 8.99, 9.47); Calibrated: 2010-11-16
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn851; Calibrated: 2010-6-30
- Phantom: SAM1; Type: SAM; Serial: TP-1475
- Measurement SW: DASYS, V5.2 Build 157; Postprocessing SW: SEMCAD X, V14.2 Build 2Version 14.2.2 (1685) (Deployment Build)

U9000/Body/Area Scan (8x12x1): Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.519 mW/g

U9000/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

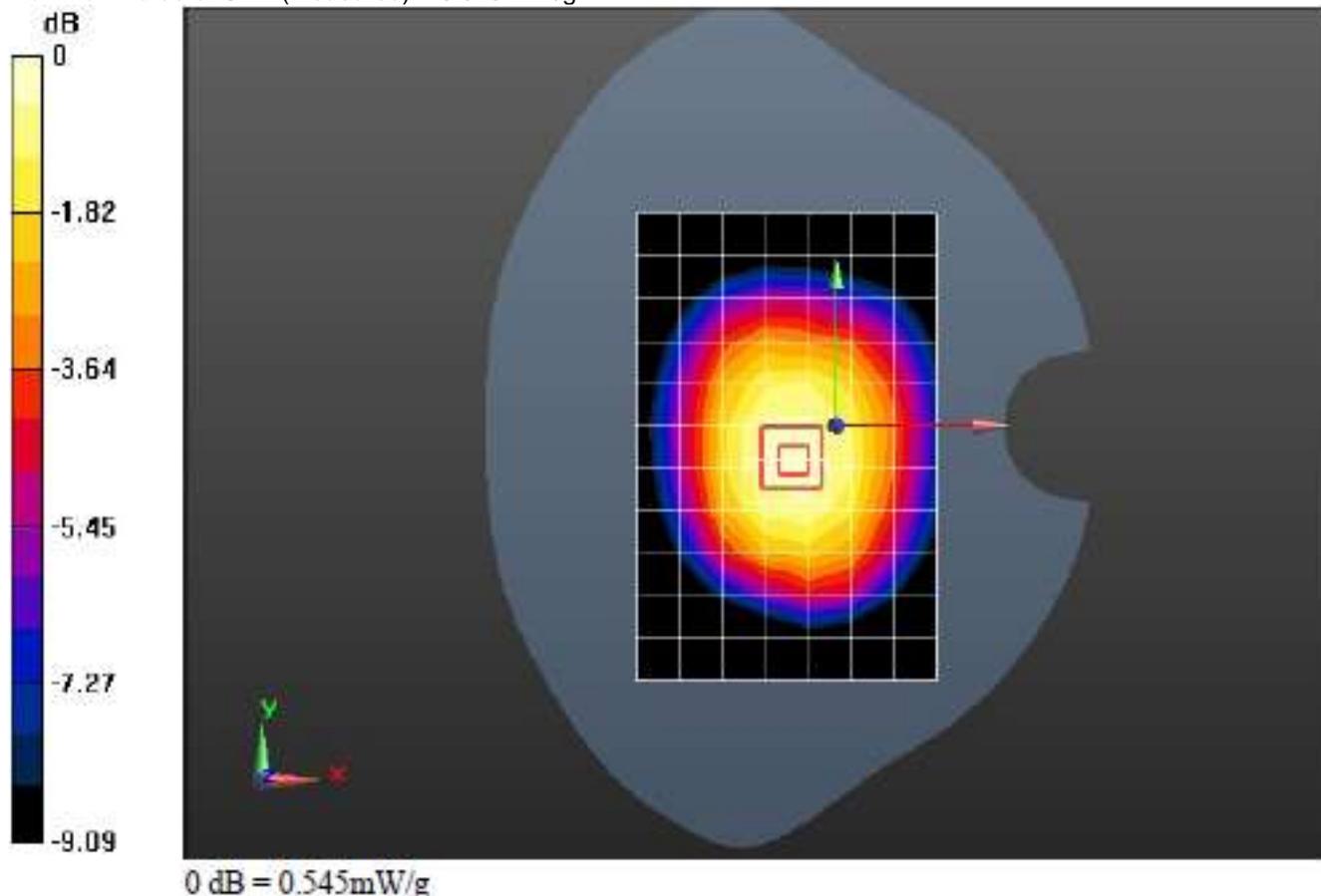
Reference Value = 23.7 V/m; Power Drift = -0.135 dB

Peak SAR (extrapolated) = 0.643 W/kg

SAR(1 g) = 0.518 mW/g; SAR(10 g) = 0.392 mW/g

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.545 mW/g



Additional information:

position or distance of DUT to SAM (if not standard head positions) :15 mm
ambient temperature: 22.0°C; liquid temperature: 21.5°C

**P1528_OET65_EN62209- towards ground- GSM850 GPRS 1TS Low
DUT: HUAWEI U9000/U9000**

Communication System: HW-GSM/GPRS/EDGE 1TS; Frequency: 824.2 MHz
Medium parameters used: $f = 825$ MHz; $\sigma = 0.948$ mho/m; $\epsilon_r = 53.1$; $\rho = 1000$ kg/m³
Phantom section: Flat Section
Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: EX3DV4 - SN3736; ConvF(8.79, 8.99, 9.47); Calibrated: 2010-11-16
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn851; Calibrated: 2010-6-30
- Phantom: SAM1; Type: SAM; Serial: TP-1475
- Measurement SW: DASYS, V5.2 Build 157; Postprocessing SW: SEMCAD X, V14.2 Build 2Version 14.2.2 (1685) (Deployment Build)

U9000/Body/Area Scan (8x12x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.459 mW/g

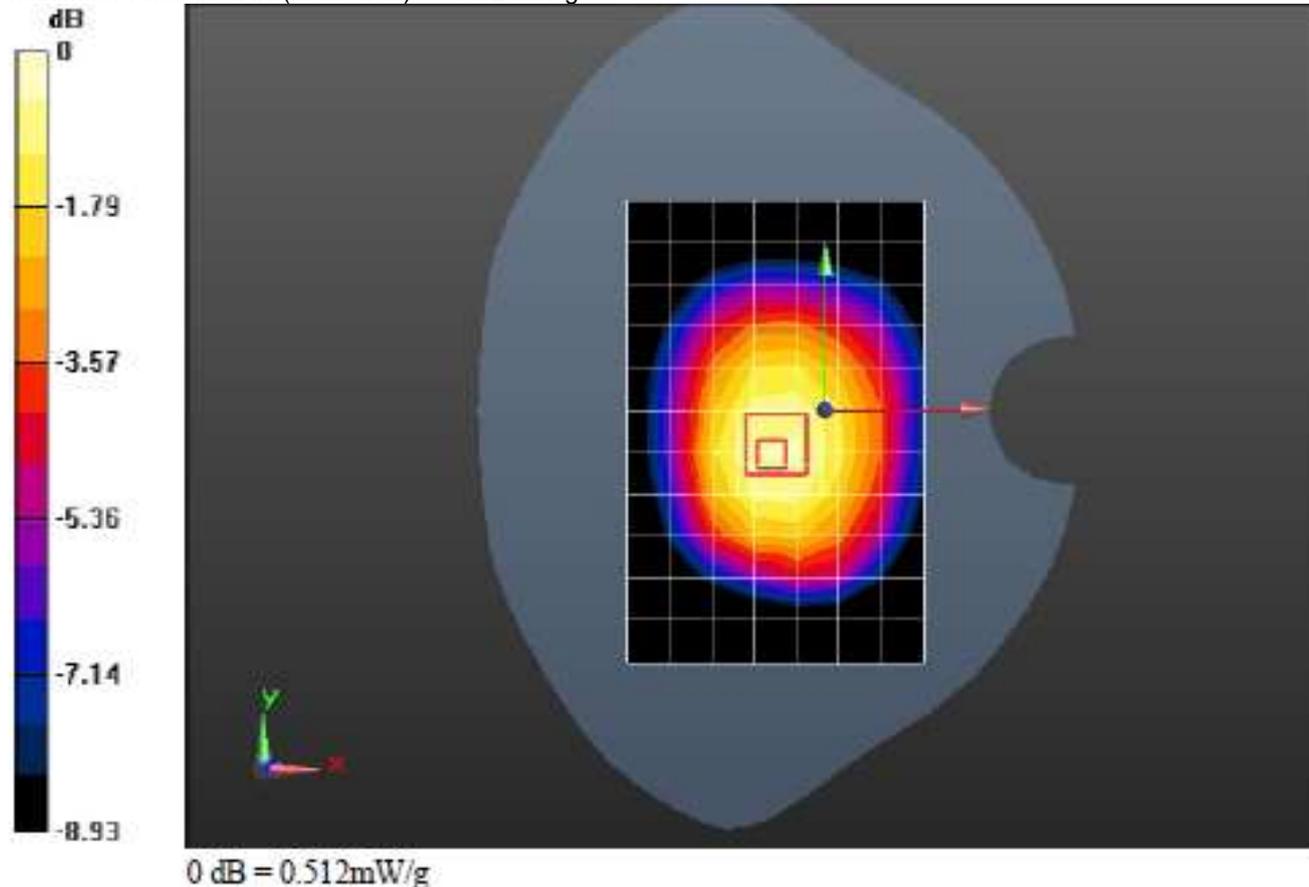
U9000/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 21.9 V/m; Power Drift = 0.169 dB

Peak SAR (extrapolated) = 0.605 W/kg

SAR(1 g) = 0.482 mW/g; SAR(10 g) = 0.360 mW/g

Maximum value of SAR (measured) = 0.512 mW/g



Additional information:

position or distance of DUT to SAM (if not standard head positions) :15 mm

ambient temperature: 22.0°C; liquid temperature: 21.5°C

**P1528_OET65_EN62209- towards ground- GSM850 EGPRS 1TS Middle
DUT: HUAWEI U9000/U9000**

Communication System: HW-GSM/GPRS/EDGE 1TS; Frequency: 836.6 MHz
Medium parameters used (interpolated): $f = 836.6$ MHz; $\sigma = 0.955$ mho/m; $\epsilon_r = 53.1$; $\rho = 1000$ kg/m³
Phantom section: Flat Section
Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: EX3DV4 - SN3736; ConvF(8.79, 8.99, 9.47); Calibrated: 2010-11-16
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn851; Calibrated: 2010-6-30
- Phantom: SAM1; Type: SAM; Serial: TP-1475
- Measurement SW: DASYS, V5.2 Build 157; Postprocessing SW: SEMCAD X, V14.2 Build 2Version 14.2.2 (1685) (Deployment Build)

U9000/Body/Area Scan (8x12x1): Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.551 mW/g

U9000/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

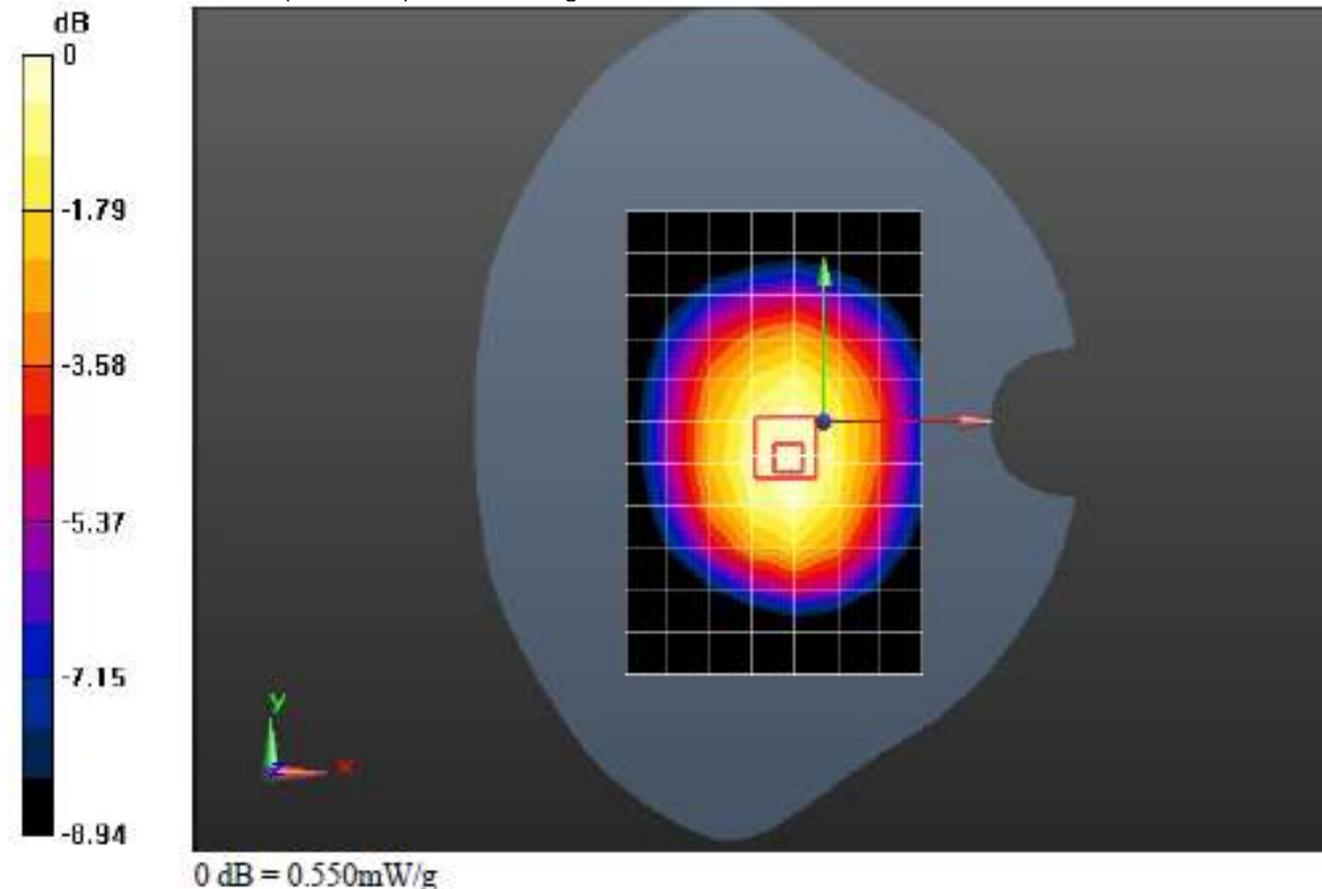
Reference Value = 22.9 V/m; Power Drift = -0.134 dB

Peak SAR (extrapolated) = 0.648 W/kg

SAR(1 g) = 0.503 mW/g; SAR(10 g) = 0.373 mW/g

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.550 mW/g



Additional information:

position or distance of DUT to SAM (if not standard head positions) :15 mm
ambient temperature: 22.0°C; liquid temperature: 21.5°C

P1528_OET65_EN62209- towards ground- GSM850 EGPRS 2TS Middle**DUT: HUAWEI U9000/U9000**

Communication System: HW-GSM/GPRS/EDGE 2TS; Frequency: 836.6 MHz

Medium parameters used (interpolated): $f = 836.6$ MHz; $\sigma = 0.955$ mho/m; $\epsilon_r = 53.1$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

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

DASY5 Configuration:

| Probe: EX3DV4 - SN3736; ConvF(8.79, 8.99, 9.47); Calibrated: 2010-11-16

| Sensor-Surface: 4mm (Mechanical Surface Detection)

| Electronics: DAE4 Sn851; Calibrated: 2010-6-30

| Phantom: SAM1; Type: SAM; Serial: TP-1475

| Measurement SW: DASY5, V5.2 Build 157; Postprocessing SW: SEMCAD X, V14.2 Build 2/Version 14.2.2 (1685) (Deployment Build)

U9000/Body/Area Scan (8x12x1): Measurement grid: dx=15mm, dy=15mm[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.453 mW/g

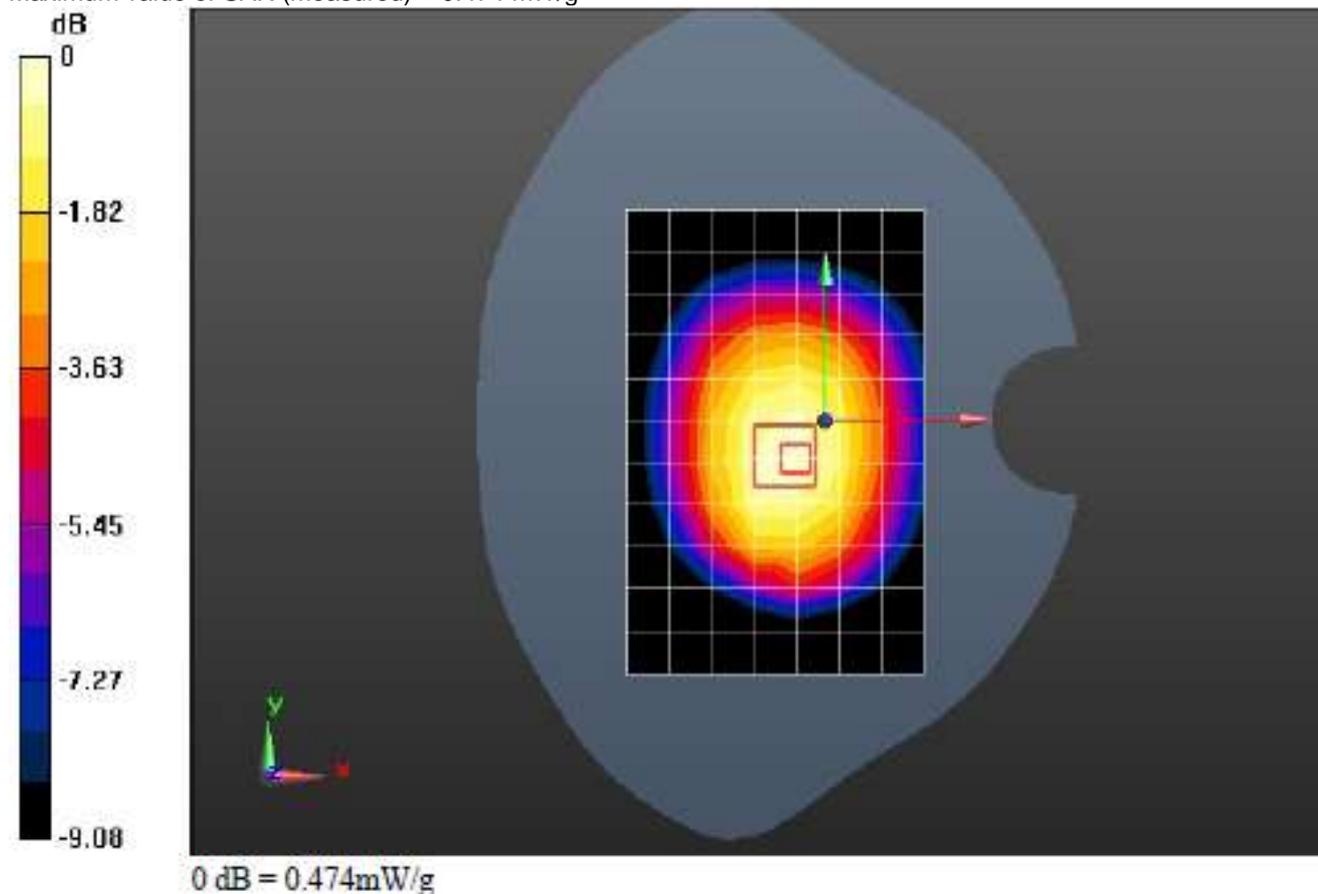
U9000/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 21.3 V/m; Power Drift = 0.176 dB

Peak SAR (extrapolated) = 0.556 W/kg

SAR(1 g) = 0.436 mW/g; SAR(10 g) = 0.325 mW/g[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.474 mW/g

**Additional information:**

position or distance of DUT to SAM (if not standard head positions) :15 mm

ambient temperature: 22.0°C; liquid temperature: 21.5°C

P1528_OET65_EN62209- towards ground- GSM850 EGPRS 3TS Middle

DUT: HUAWEI U9000/U9000

Communication System: HW-GSM/GPRS/EDGE 3TS; Frequency: 836.6 MHz

Medium parameters used (interpolated): $f = 836.6$ MHz; $\sigma = 0.955$ mho/m; $\epsilon_r = 53.1$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

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

DASY5 Configuration:

Probe: EX3DV4 - SN3736; ConvF(8.79, 8.99, 9.47); Calibrated: 2010-11-16

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn851; Calibrated: 2010-6-30

Phantom: SAM1; Type: SAM; Serial: TP-1475

Measurement SW: DASY5, V5.2 Build 157; Postprocessing SW: SEMCAD X, V14.2 Build 2Version 14.2.2 (1685) (Deployment Build)

U9000/Body/Area Scan (8x12x1): Measurement grid: dx=15mm, dy=15mm

Info: [Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.386 mW/g

U9000/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

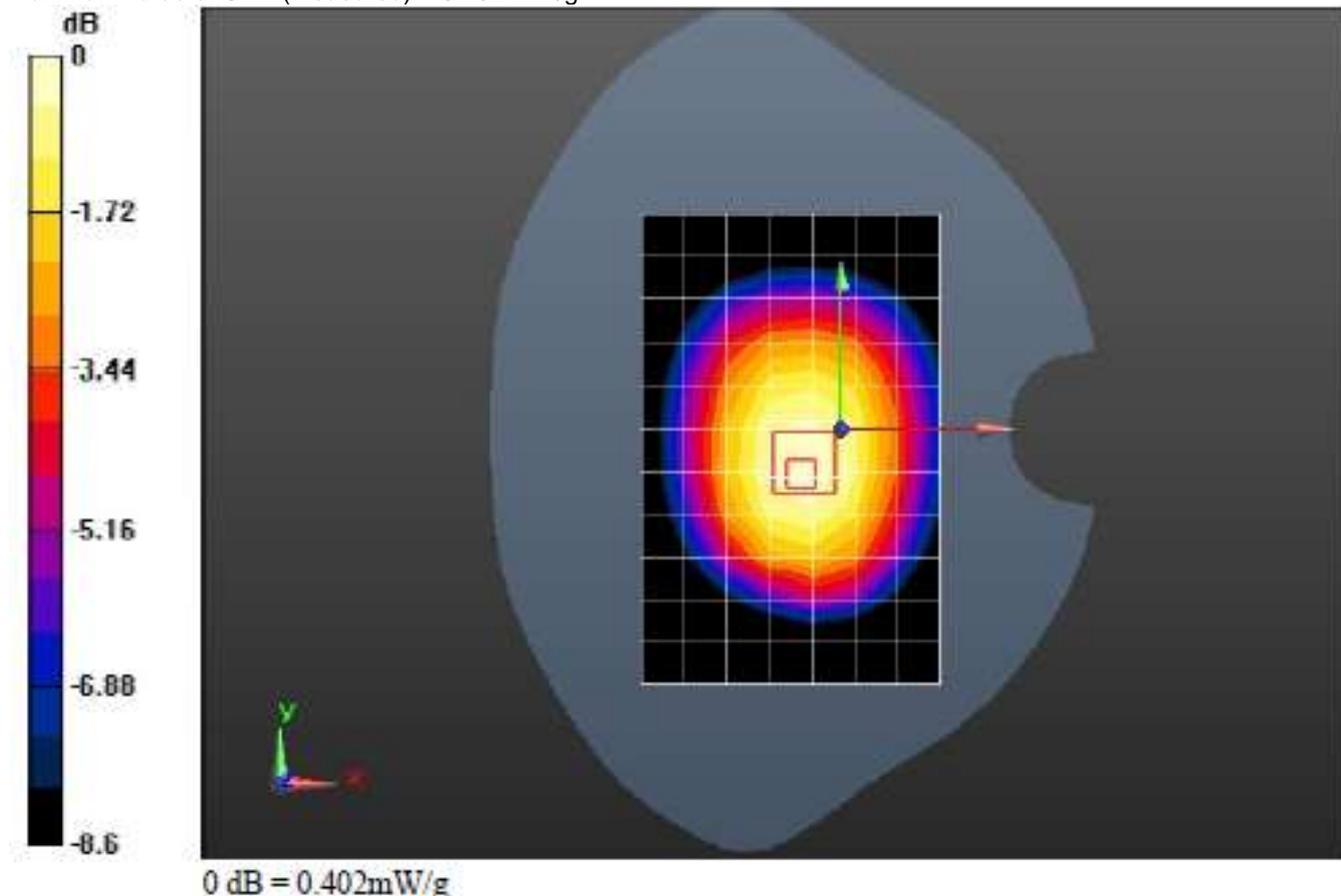
Reference Value = 20 V/m; Power Drift = -0.103 dB

Peak SAR (extrapolated) = 0.471 W/kg

SAR(1 g) = 0.377 mW/g; SAR(10 g) = 0.286 mW/g

Info: [Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.402 mW/g



Additional information:

position or distance of DUT to SAM (if not standard head positions) :15 mm

ambient temperature: 22.0°C; liquid temperature: 21.5°C

P1528_OET65_EN62209- towards ground- GSM850 EGPRS 4TS Middle**DUT: HUAWEI U9000/U9000**

Communication System: HW-GSM/GPRS/EDGE 4TS; Frequency: 836.6 MHz

Medium parameters used (interpolated): $f = 836.6$ MHz; $\sigma = 0.955$ mho/m; $\epsilon_r = 53.1$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

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

DASY5 Configuration:

| Probe: EX3DV4 - SN3736; ConvF(8.79, 8.99, 9.47); Calibrated: 2010-11-16

| Sensor-Surface: 4mm (Mechanical Surface Detection)

| Electronics: DAE4 Sn851; Calibrated: 2010-6-30

| Phantom: SAM1; Type: SAM; Serial: TP-1475

| Measurement SW: DASY5, V5.2 Build 157; Postprocessing SW: SEMCAD X, V14.2 Build 2/Version 14.2.2 (1685) (Deployment Build)

U9000/Body/Area Scan (8x12x1): Measurement grid: dx=15mm, dy=15mm[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.390 mW/g

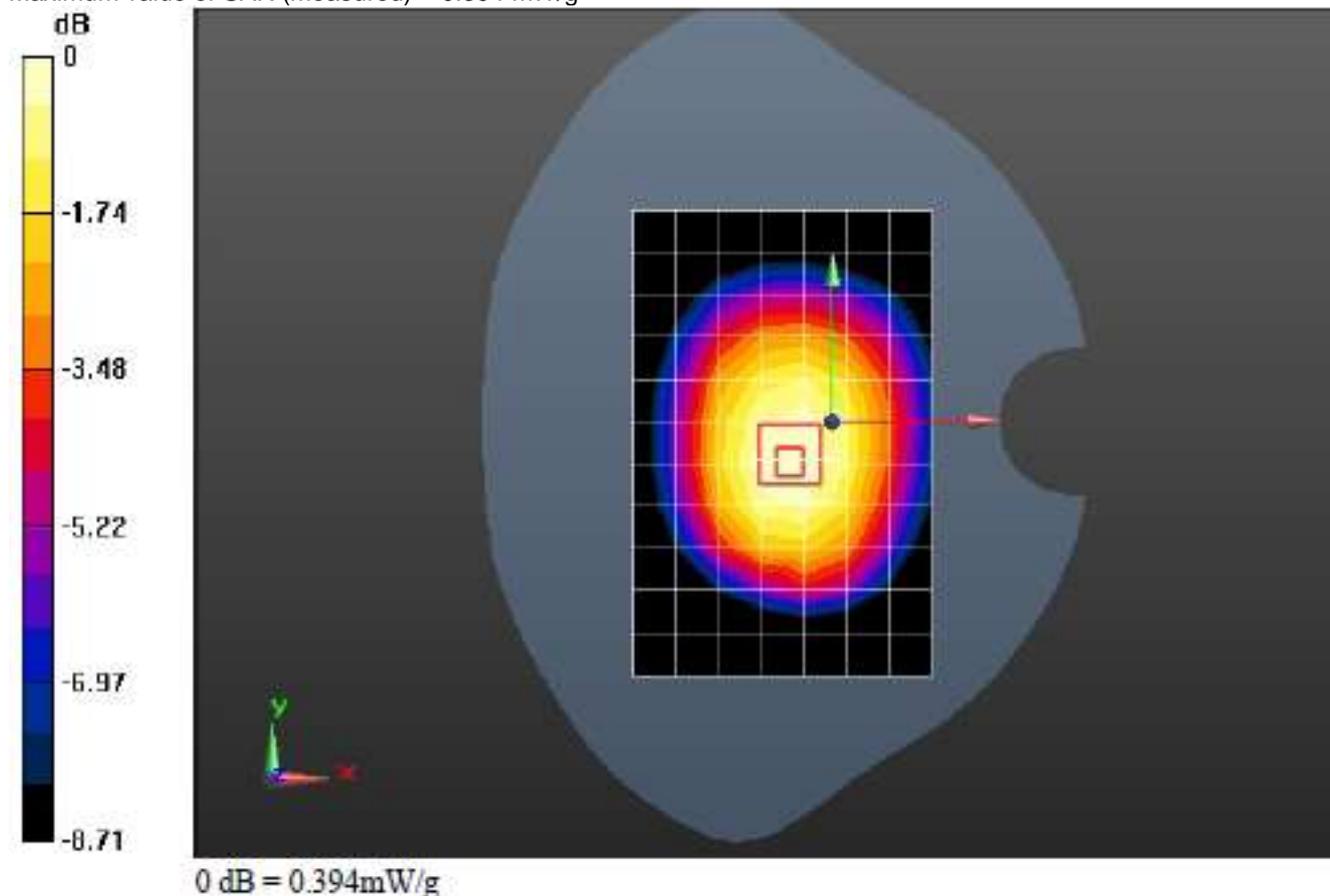
U9000/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 19.8 V/m; Power Drift = 0.069 dB

Peak SAR (extrapolated) = 0.464 W/kg

SAR(1 g) = 0.372 mW/g; SAR(10 g) = 0.280 mW/g[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.394 mW/g

**Additional information:**

position or distance of DUT to SAM (if not standard head positions) :15 mm

ambient temperature: 22.0°C; liquid temperature: 21.5°C

P1528_OET65_EN62209- towards ground- GSM850 EGPRS 1TS High**DUT: HUAWEI U9000/U9000**

Communication System: HW-GSM/GPRS/EDGE 1TS; Frequency: 848.8MHz

Medium parameters used (interpolated): $f = 848.8$ MHz; $\sigma = 0.967$ mho/m; $\epsilon_r = 52.8$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

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

DASY5 Configuration:

| Probe: EX3DV4 - SN3736; ConvF(8.79, 8.99, 9.47); Calibrated: 2010-11-16

| Sensor-Surface: 4mm (Mechanical Surface Detection)

| Electronics: DAE4 Sn851; Calibrated: 2010-6-30

| Phantom: SAM1; Type: SAM; Serial: TP-1475

| Measurement SW: DASY5, V5.2 Build 157; Postprocessing SW: SEMCAD X, V14.2 Build 2/Version 14.2.2 (1685) (Deployment Build)

U9000/Body/Area Scan (8x12x1): Measurement grid: dx=15mm, dy=15mm[Info: Interpolated medium parameters used for SAR evaluation.](#)

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

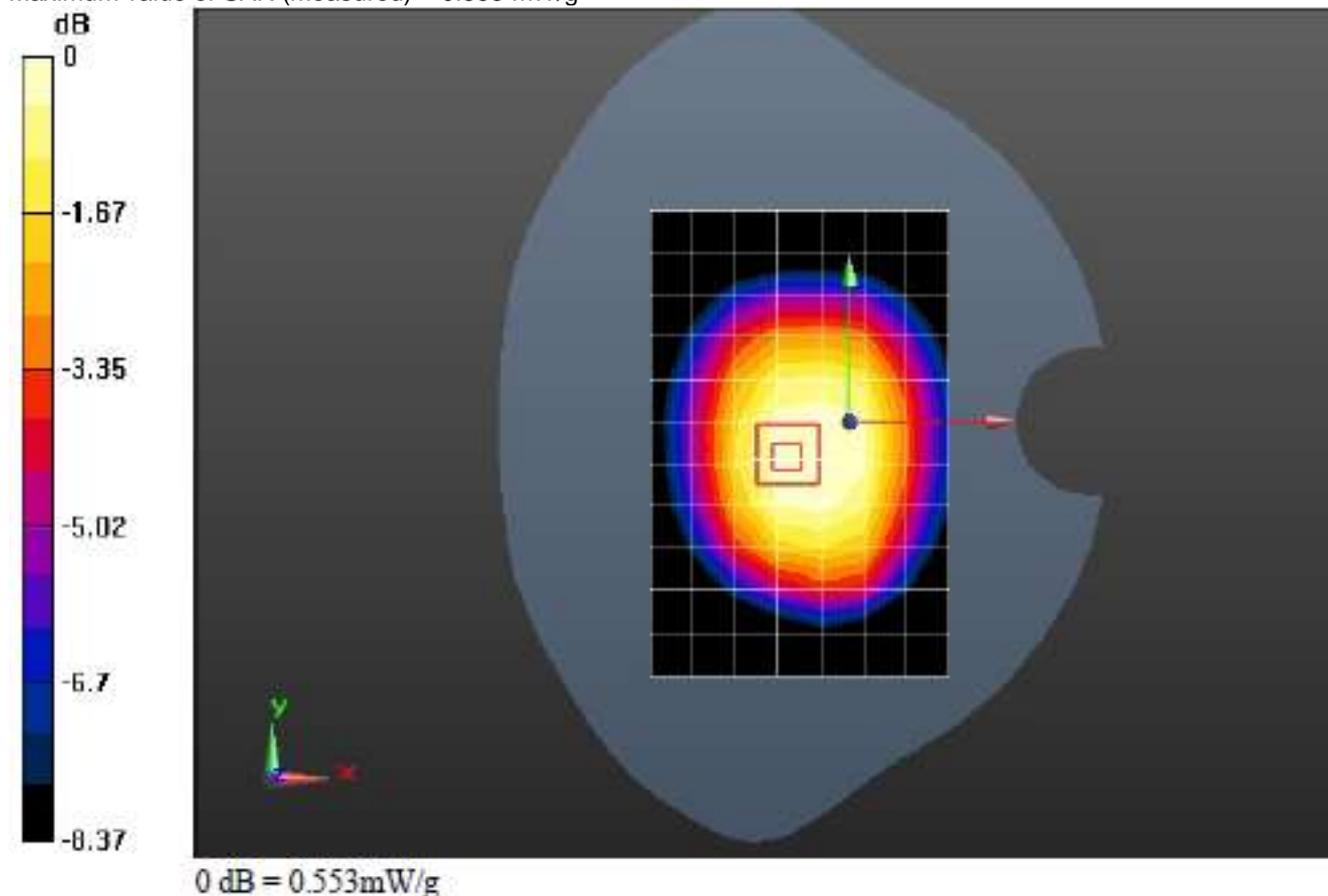
U9000/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 24 V/m; Power Drift = -0.178 dB

Peak SAR (extrapolated) = 0.647 W/kg

SAR(1 g) = 0.527 mW/g; SAR(10 g) = 0.402 mW/g[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.553 mW/g

**Additional information:**

position or distance of DUT to SAM (if not standard head positions) :15 mm

ambient temperature: 22.0°C; liquid temperature: 21.5°C

P1528_OET65_EN62209- towards ground- GSM850 EGPRS 1TS Low

DUT: HUAWEI U9000/U9000

Communication System: HW-GSM/GPRS/EDGE 1TS; Frequency: 824.2 MHz

Medium parameters used: $f = 825$ MHz; $\sigma = 0.948$ mho/m; $\epsilon_r = 53.1$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

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

DASY5 Configuration:

Probe: EX3DV4 - SN3736; ConvF(8.79, 8.99, 9.47); Calibrated: 2010-11-16

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn851; Calibrated: 2010-6-30

Phantom: SAM1; Type: SAM; Serial: TP-1475

Measurement SW: DASYS, V5.2 Build 157; Postprocessing SW: SEMCAD X, V14.2 Build 2Version 14.2.2 (1685) (Deployment Build)

U9000/Body/Area Scan (8x12x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.512 mW/g

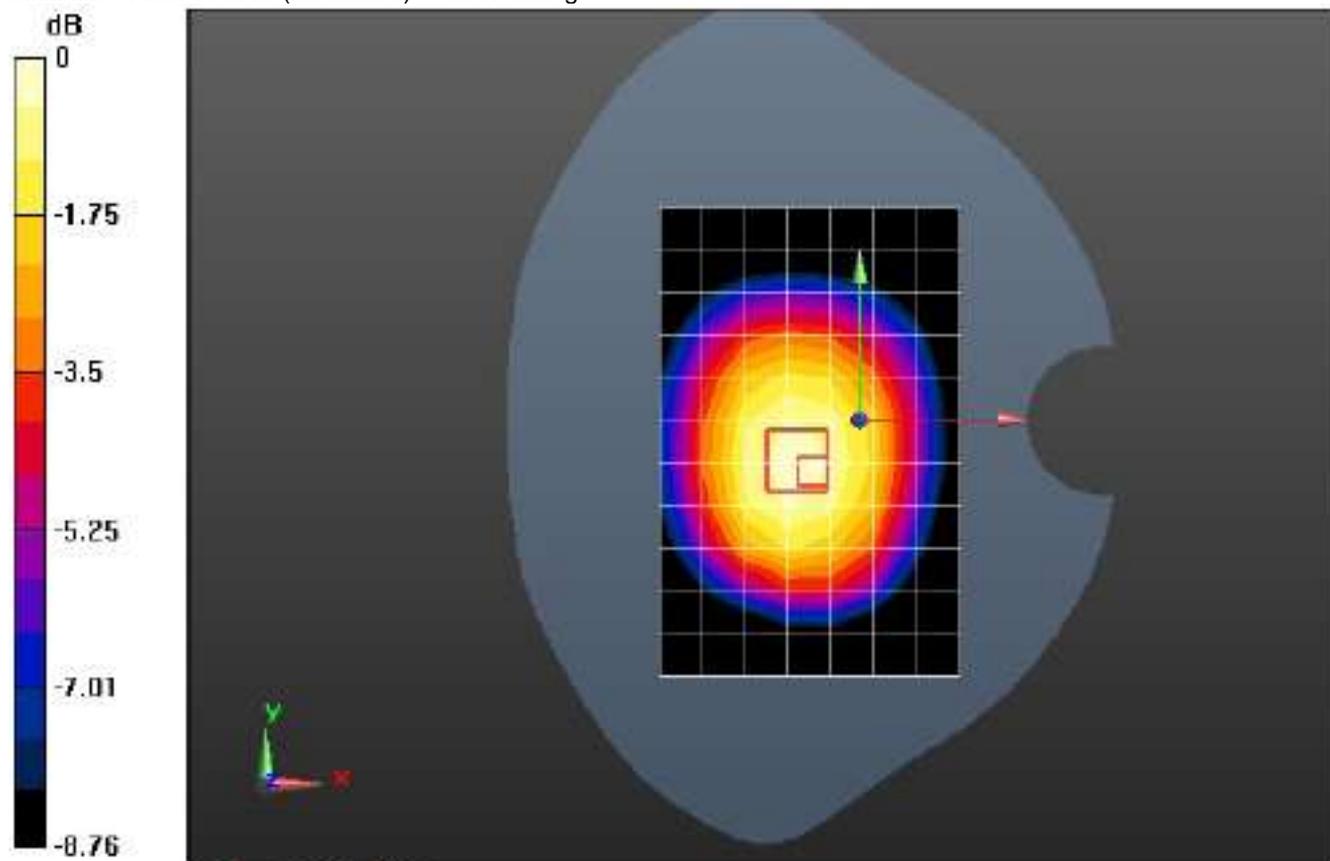
U9000/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 22.5 V/m; Power Drift = -0.076 dB

Peak SAR (extrapolated) = 0.628 W/kg

SAR(1 g) = 0.495 mW/g; SAR(10 g) = 0.377 mW/g

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



0 dB = 0.537mW/g

Additional information:

position or distance of DUT to SAM (if not standard head positions) :15 mm

ambient temperature: 22.0°C; liquid temperature: 21.5°C

**P1528_OET65_EN62209- towards ground- GSM850 with Headset High
DUT: HUAWEI U9000/U9000**

Communication System: HW-GSM/GPRS/EDGE 1TS; Frequency: 848.8 MHz

Medium parameters used (interpolated): $f = 848.8\text{MHz}$; $\sigma = 0.967\text{ mho/m}$; $\epsilon_r = 52.8$; $\rho = 1000\text{ kg/m}^3$

Phantom section: Flat Section

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

DASY5 Configuration:

Probe: EX3DV4 - SN3736; ConvF(8.79, 8.99, 9.47); Calibrated: 2010-11-16

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn851; Calibrated: 2010-6-30

Phantom: SAM1; Type: SAM; Serial: TP-1475

Measurement SW: DASYS, V5.2 Build 157; Postprocessing SW: SEMCAD X, V14.2 Build 2Version 14.2.2 (1685) (Deployment Build)

U9000/Body/Area Scan (8x12x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Info: [Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.451 mW/g

U9000/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

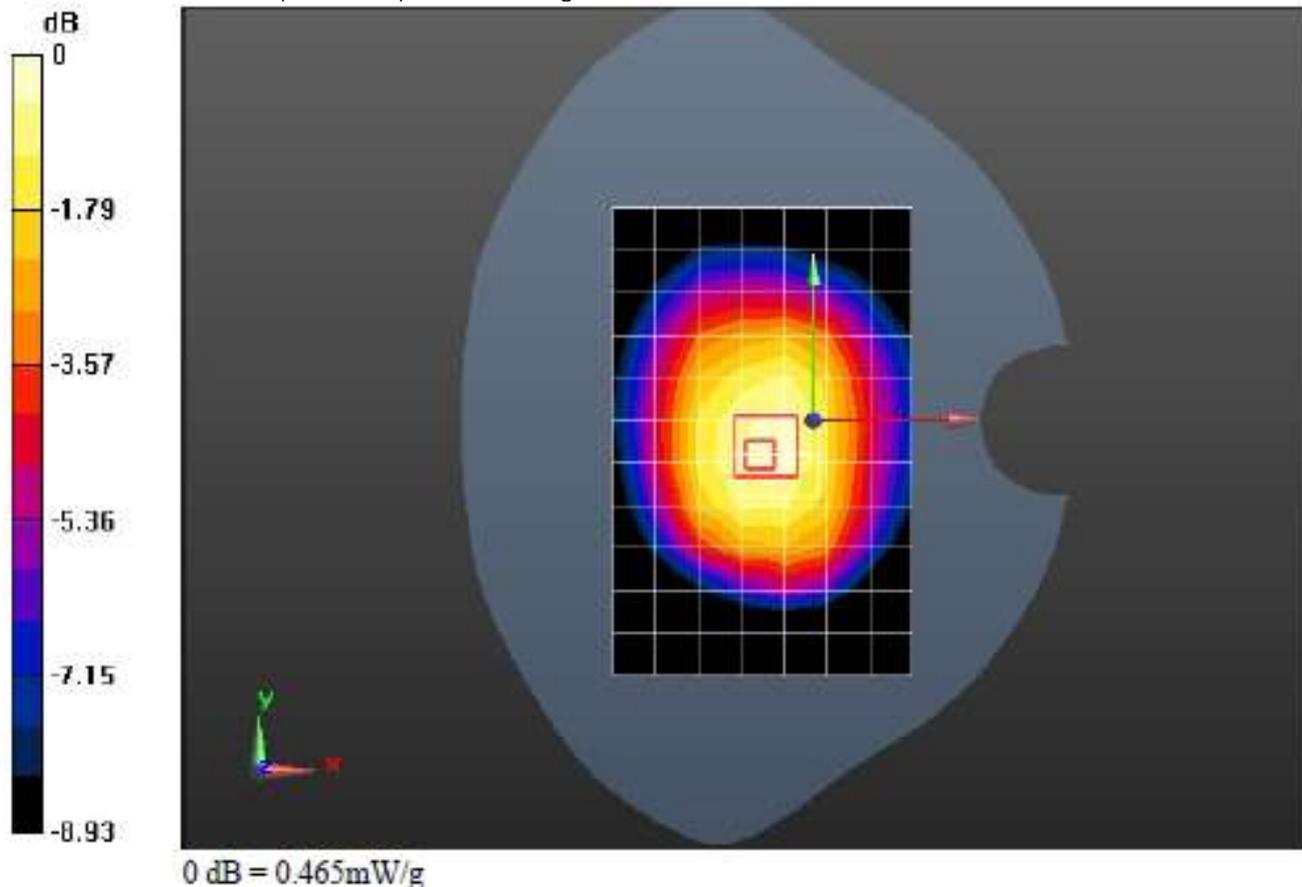
Reference Value = 22.1 V/m ; Power Drift = -0.163 dB

Peak SAR (extrapolated) = 0.556 W/kg

SAR(1 g) = 0.442 mW/g ; SAR(10 g) = 0.332 mW/g

Info: [Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.465 mW/g



Additional information:

position or distance of DUT to SAM (if not standard head positions) :15 mm

ambient temperature: 22.0°C ; liquid temperature: 21.5°C

P1528_OET65_EN62209- towards ground- GSM850 with Bluetooth Headset High**DUT: HUAWEI U9000/U9000**

Communication System: HW-GSM/GPRS/EDGE 1TS; Frequency: 848.8 MHz

Medium parameters used (interpolated): $f = 848.8$ MHz; $\sigma = 0.967$ mho/m; $\epsilon_r = 52.8$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

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

DASY5 Configuration:

| Probe: EX3DV4 - SN3736; ConvF(8.79, 8.99, 9.47); Calibrated: 2010-11-16

| Sensor-Surface: 4mm (Mechanical Surface Detection)

| Electronics: DAE4 Sn851; Calibrated: 2010-6-30

| Phantom: SAM1; Type: SAM; Serial: TP-1475

| Measurement SW: DASY5, V5.2 Build 157; Postprocessing SW: SEMCAD X, V14.2 Build 2/Version 14.2.2 (1685) (Deployment Build)

U9000/Body/Area Scan (8x12x1): Measurement grid: dx=15mm, dy=15mm[Info: Interpolated medium parameters used for SAR evaluation.](#)

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

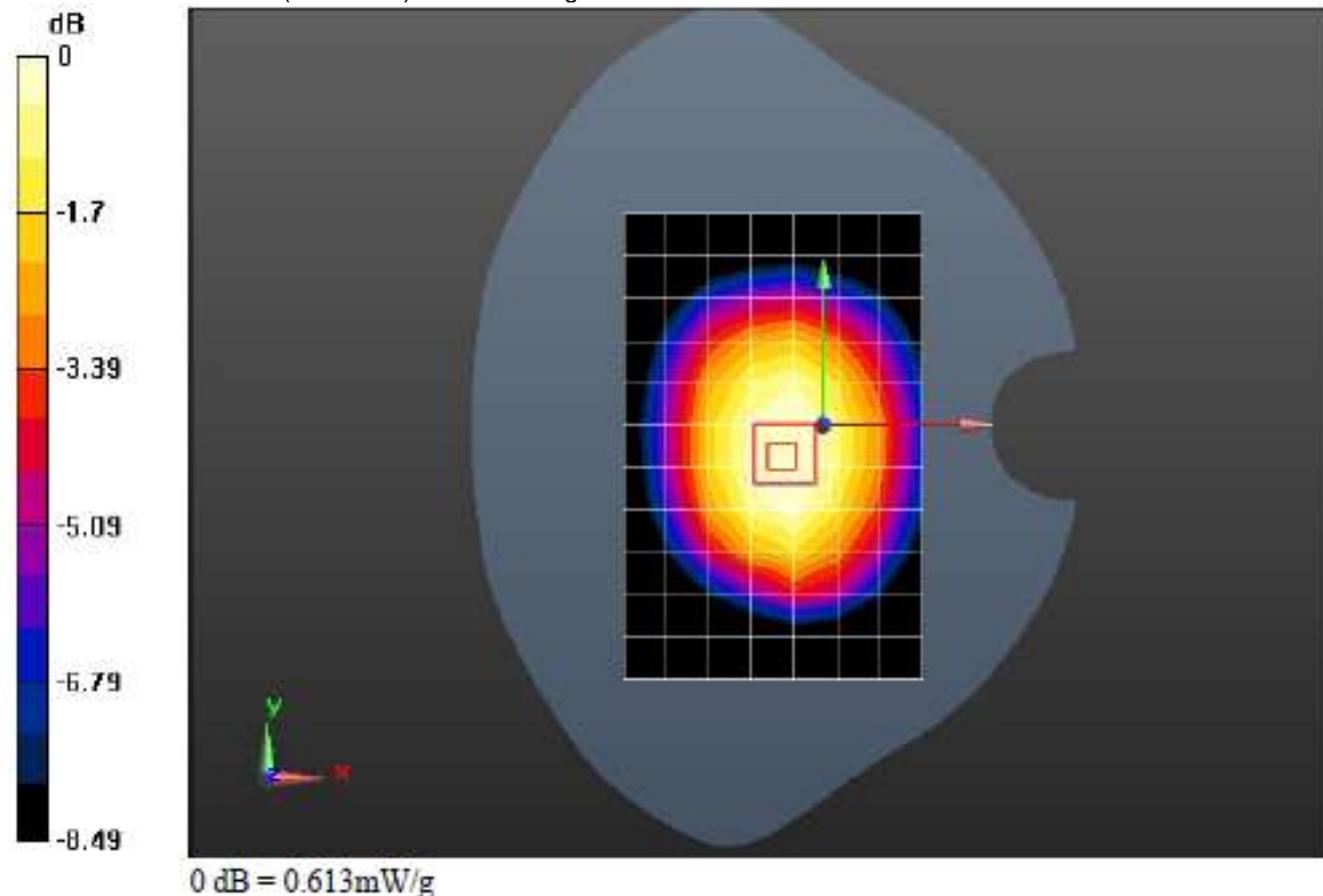
U9000/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 26.2 V/m; Power Drift = -0.196 dB

Peak SAR (extrapolated) = 0.720 W/kg

SAR(1 g) = 0.580 mW/g; SAR(10 g) = 0.442 mW/g[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.613 mW/g

**Additional information:**

position or distance of DUT to SAM (if not standard head positions) :15 mm

ambient temperature: 22.0°C; liquid temperature: 21.5°C

P1528_OET65_EN62209- towards phantom- GSM850 Middle

DUT: HUAWEI U9000/U9000

Communication System: HW-GSM/GPRS/EDGE 1TS; Frequency: 824.2 MHz

Medium parameters used: $f = 825$ MHz; $\sigma = 0.948$ mho/m; $\epsilon_r = 53.1$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

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

DASY5 Configuration:

Probe: EX3DV4 - SN3736; ConvF(8.79, 8.99, 9.47); Calibrated: 2010-11-16

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn851; Calibrated: 2010-6-30

Phantom: SAM1; Type: SAM; Serial: TP-1475

Measurement SW: DASYS, V5.2 Build 157; Postprocessing SW: SEMCAD X, V14.2 Build 2Version 14.2.2 (1685) (Deployment Build)

U9000/Body/Area Scan (8x12x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.366 mW/g

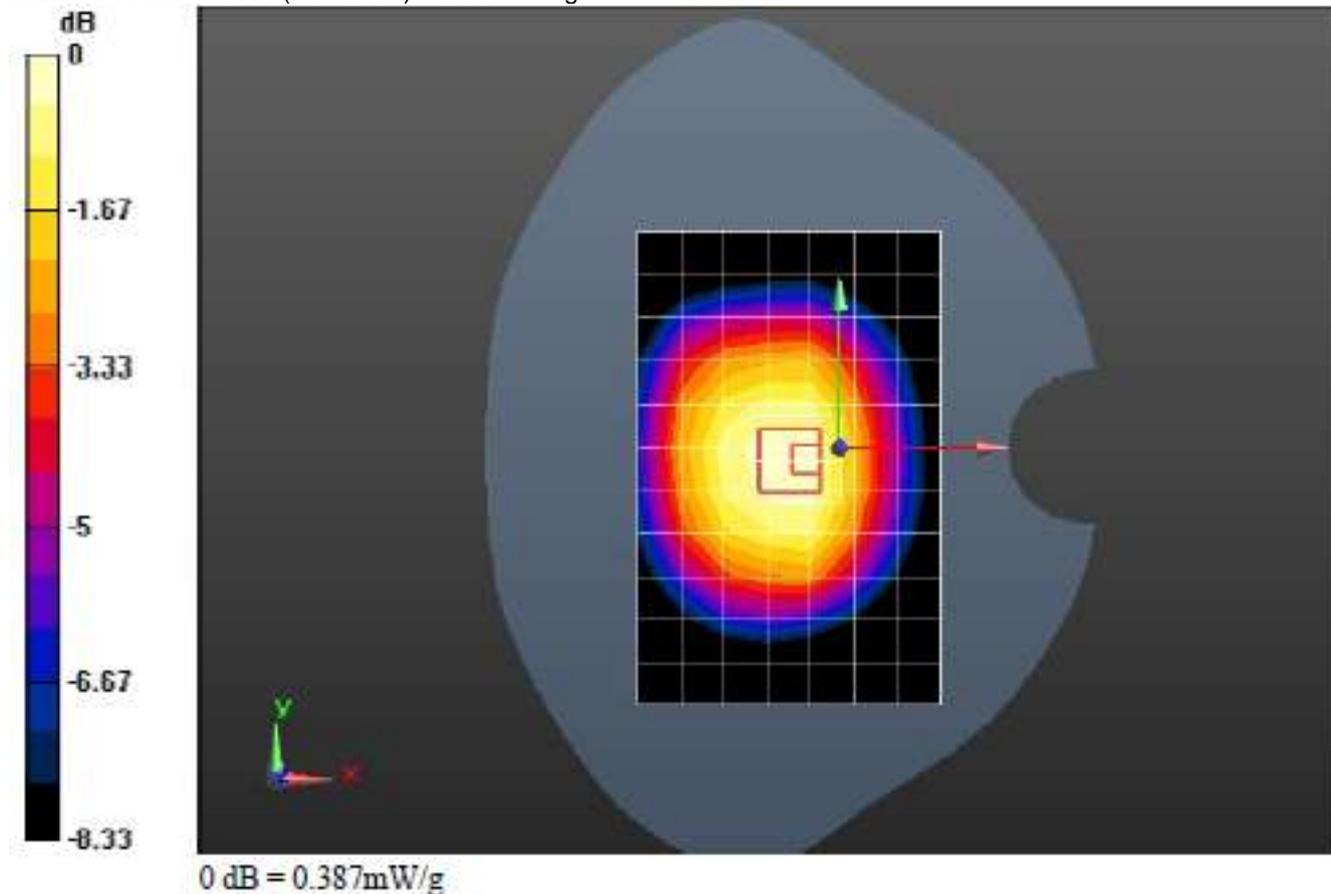
U9000/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 19.6 V/m; Power Drift = 0.039 dB

Peak SAR (extrapolated) = 0.455 W/kg

SAR(1 g) = 0.355 mW/g; SAR(10 g) = 0.269 mW/g

Maximum value of SAR (measured) = 0.387 mW/g



Additional information:

position or distance of DUT to SAM (if not standard head positions) :15 mm

ambient temperature: 22.0°C; liquid temperature: 21.5°C

P1528_OET65_EN62209- towards ground- GSM850 Middle

DUT: HUAWEI U9000/U9000

Communication System: HW-GSM/GPRS/EDGE 1TS; Frequency: 836.6 MHz

Medium parameters used (interpolated): $f = 836.6$ MHz; $\sigma = 0.955$ mho/m; $\epsilon_r = 53.1$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

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

DASY5 Configuration:

Probe: EX3DV4 - SN3736; ConvF(8.79, 8.99, 9.47); Calibrated: 2010-11-16

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn851; Calibrated: 2010-6-30

Phantom: SAM1; Type: SAM; Serial: TP-1475

Measurement SW: DASY5, V5.2 Build 157; Postprocessing SW: SEMCAD X, V14.2 Build 2Version 14.2.2 (1685) (Deployment Build)

U9000/Body/Area Scan (8x12x1): Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.545 mW/g

U9000/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

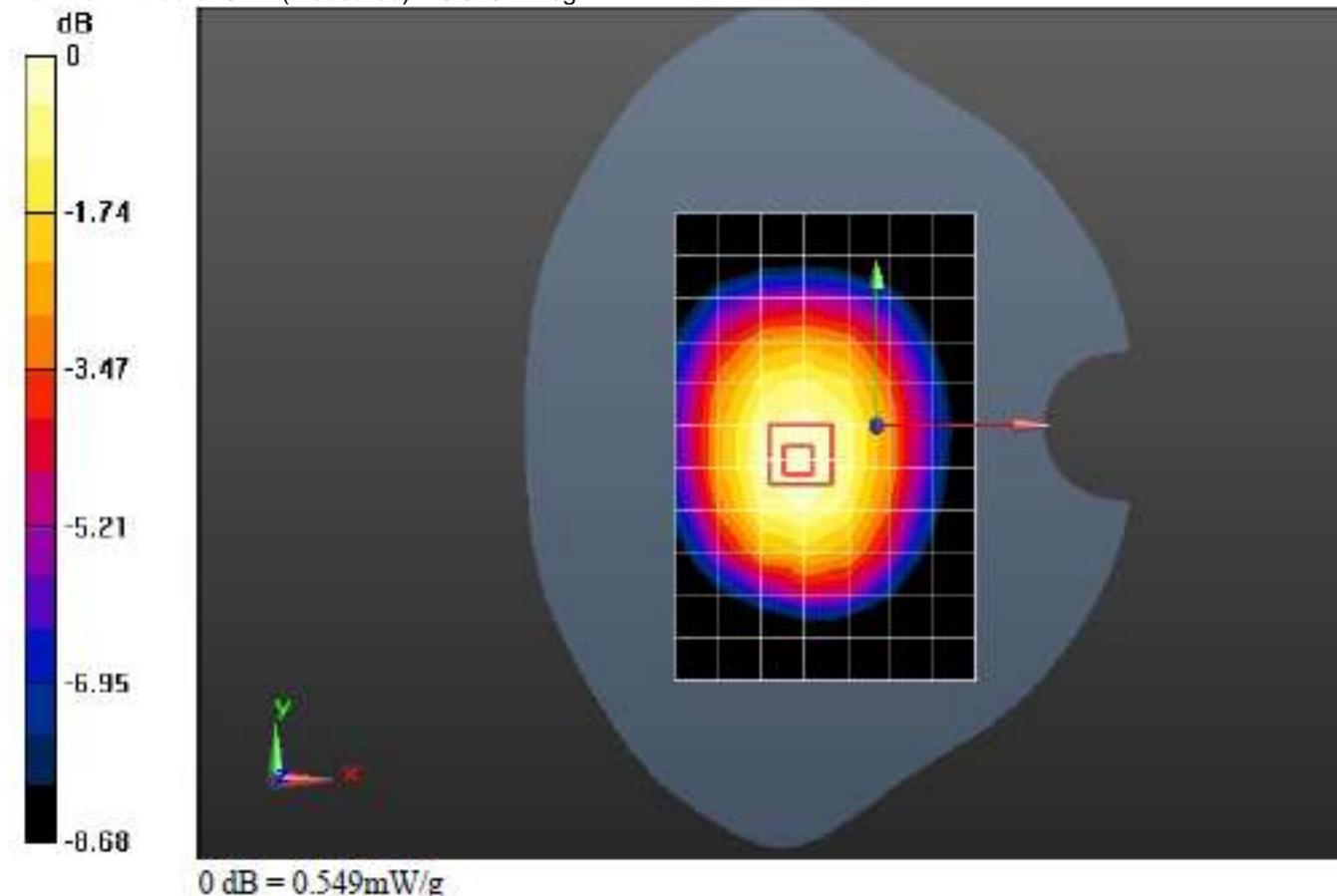
Reference Value = 23.1 V/m; Power Drift = -0.014 dB

Peak SAR (extrapolated) = 0.645 W/kg

SAR(1 g) = 0.522 mW/g; SAR(10 g) = 0.397 mW/g

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.549 mW/g



Additional information:

position or distance of DUT to SAM (if not standard head positions) :15 mm

ambient temperature: 22.0°C; liquid temperature: 21.5°C

P1528_OET65_EN62209- towards ground- GSM850 High

DUT: HUAWEI U9000/U9000

Communication System: HW-GSM/GPRS/EDGE 1TS; Frequency: 848.8MHz

Medium parameters used (interpolated): $f = 848.8$ MHz; $\sigma = 0.967$ mho/m; $\epsilon_r = 52.8$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

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

DASY5 Configuration:

Probe: EX3DV4 - SN3736; ConvF(8.79, 8.99, 9.47); Calibrated: 2010-11-16

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn851; Calibrated: 2010-6-30

Phantom: SAM1; Type: SAM; Serial: TP-1475

Measurement SW: DASY5, V5.2 Build 157; Postprocessing SW: SEMCAD X, V14.2 Build 2Version 14.2.2 (1685) (Deployment Build)

U9000/Body/Area Scan (11x17x1): Measurement grid: dx=10mm, dy=10mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.526 mW/g

U9000/Body/Zoom Scan (6x6x6)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=8mm

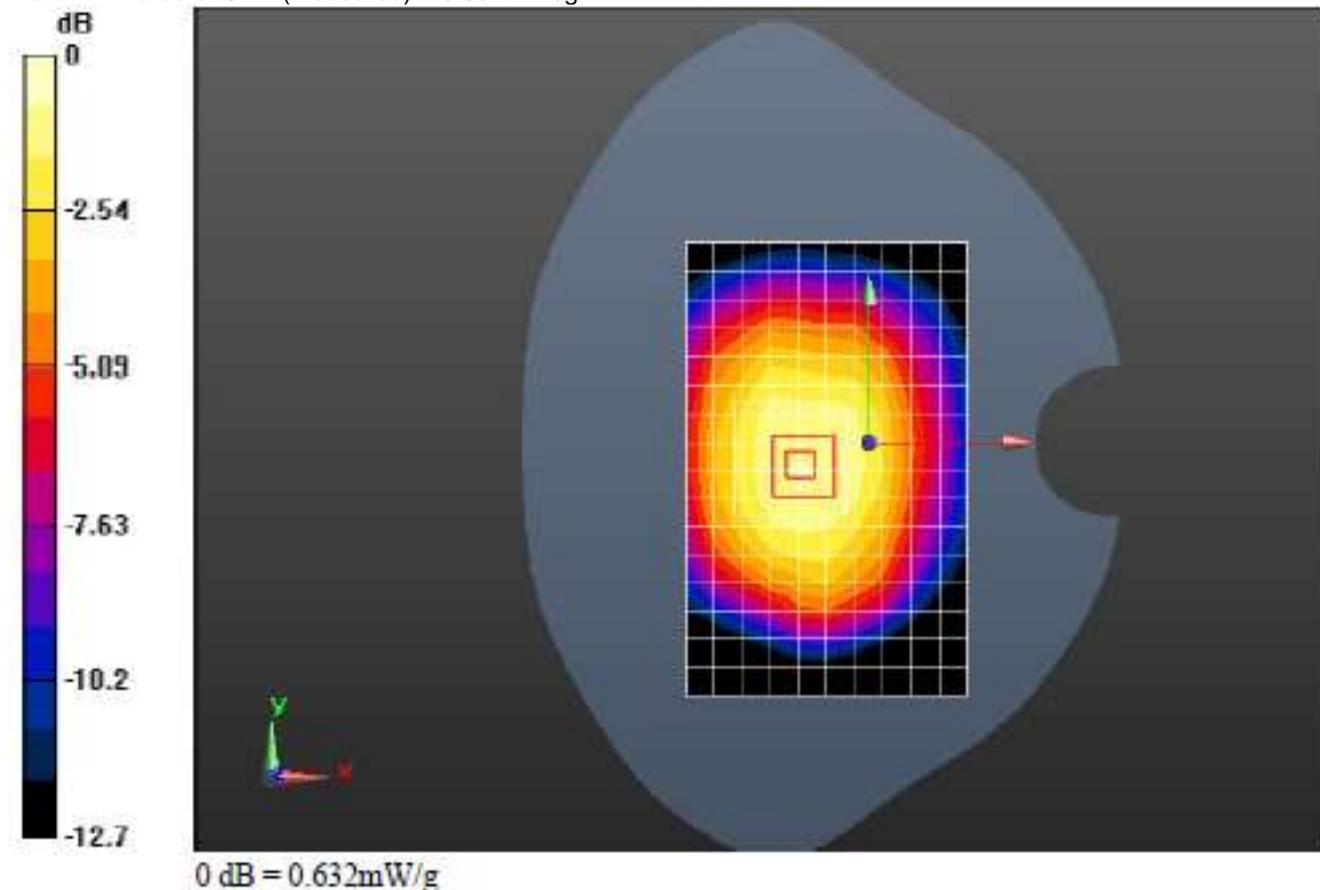
Reference Value = 24.9 V/m; Power Drift = 0.176 dB

Peak SAR (extrapolated) = 0.759 W/kg

SAR(1 g) = 0.593 mW/g; SAR(10 g) = 0.436 mW/g

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.632 mW/g



Additional information:

position or distance of DUT to SAM (if not standard head positions) :15 mm

ambient temperature: 22.0°C; liquid temperature: 21.5°C

P1528_OET65_EN62209- towards ground- GSM850 Low

DUT: HUAWEI U9000/U9000

Communication System: HW-GSM/GPRS/EDGE 1TS; Frequency: 824.2 MHz

Medium parameters used: $f = 825$ MHz; $\sigma = 0.948$ mho/m; $\epsilon_r = 53.1$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

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

DASY5 Configuration:

Probe: EX3DV4 - SN3736; ConvF(8.79, 8.99, 9.47); Calibrated: 2010-11-16

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn851; Calibrated: 2010-6-30

Phantom: SAM1; Type: SAM; Serial: TP-1475

Measurement SW: DASY5, V5.2 Build 157; Postprocessing SW: SEMCAD X, V14.2 Build 2Version 14.2.2 (1685) (Deployment Build)

U9000/Body/Area Scan (11x17x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.522 mW/g

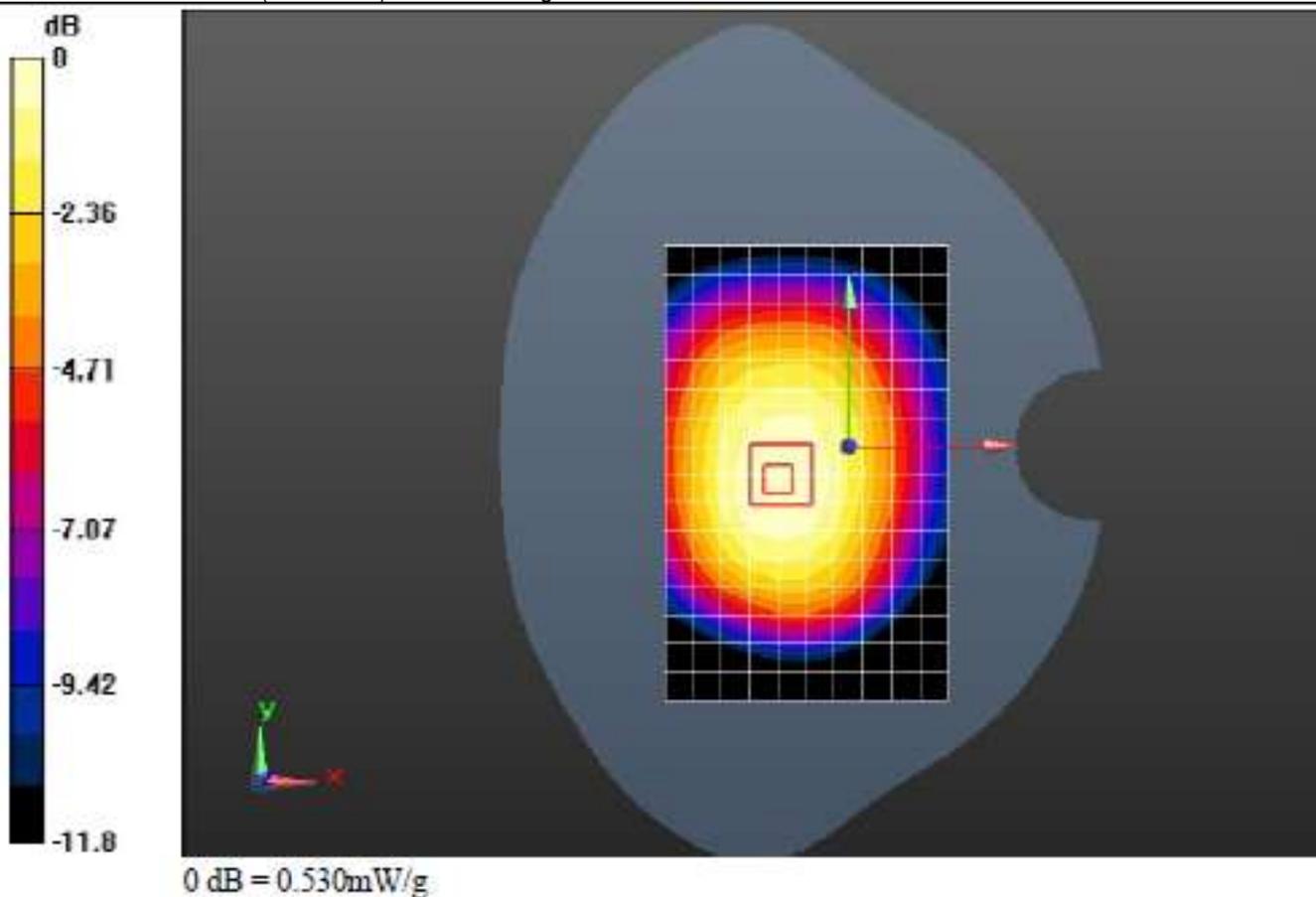
U9000/Body/Zoom Scan (6x6x6)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=8mm

Reference Value = 23.4 V/m; Power Drift = -0.151 dB

Peak SAR (extrapolated) = 0.628 W/kg

SAR(1 g) = 0.508 mW/g; SAR(10 g) = 0.387 mW/g

Maximum value of SAR (measured) = 0.530 mW/g



Additional information:

position or distance of DUT to SAM (if not standard head positions) :15 mm

ambient temperature: 22.0°C; liquid temperature: 21.5°C

Annex 2.5 WCDMA 1900 MHz Head

Date/Time: 2010-12-17 10:02:56

P1528_OET65_EN62209- LeftHandSide touched –WCDMA1900 Middle

DUT: HUAWEI U9000/U9000

Communication System: HW-UMTS-FDD; Frequency: 1880 MHz

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.35$ mho/m; $\epsilon_r = 38.8$; $\rho = 1000$ kg/m³

Phantom section: Left Section

Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

Probe: EX3DV4 - SN3736; ConvF(7.61, 7.76, 8.09); Calibrated: 2010-11-16

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn851; Calibrated: 2010-6-30

Phantom: SAM1; Type: SAM; Serial: TP-1475

Measurement SW: DASYS5, V5.2 Build 157; Postprocessing SW: SEMCAD X, V14.2 Build 2Version 14.2.2 (1685) (Deployment Build)

U9000/Head/Area Scan (11x17x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.321 mW/g

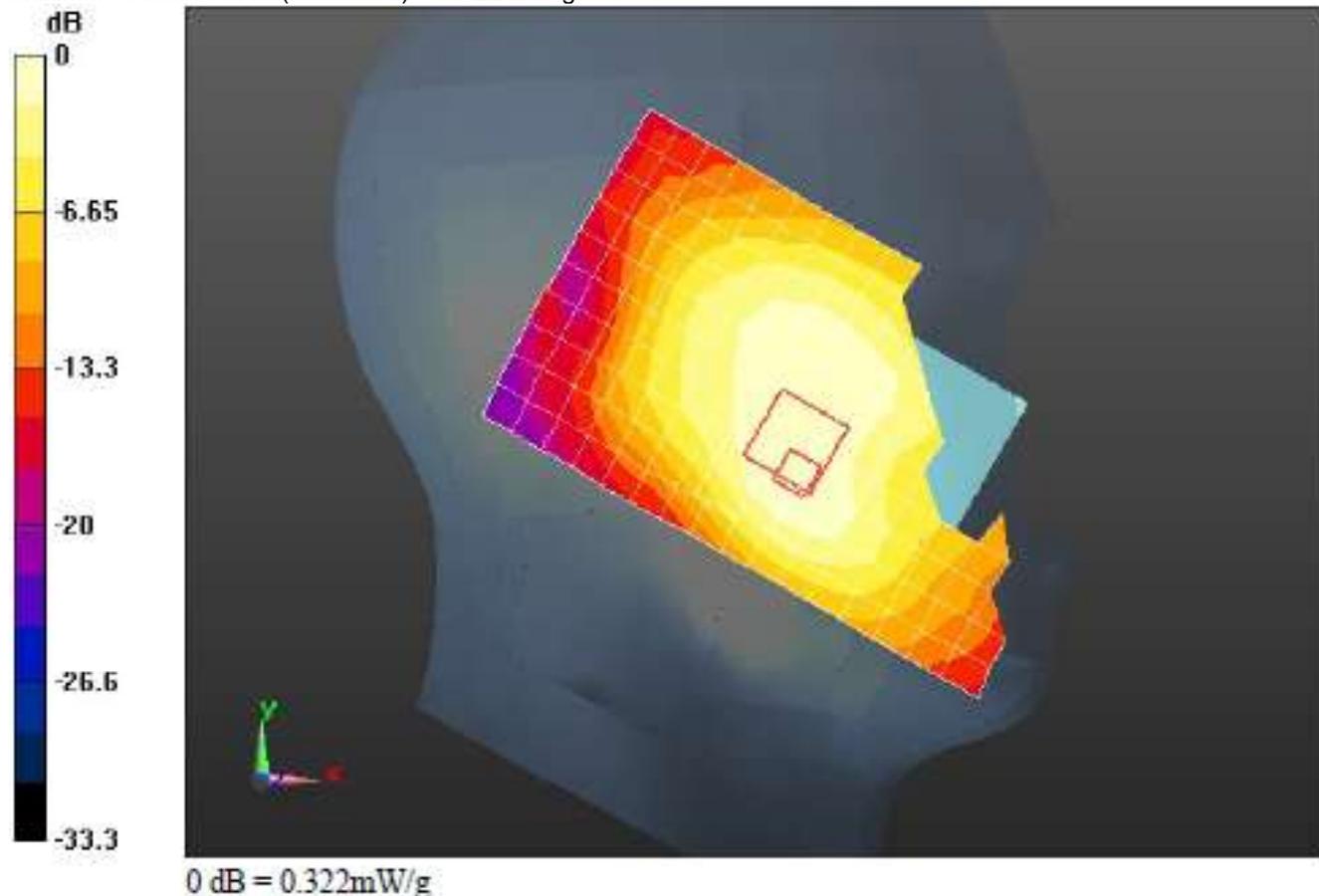
U9000/Head/Zoom Scan (6x6x6)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=8mm

Reference Value = 3.5 V/m; Power Drift = -0.157 dB

Peak SAR (extrapolated) = 0.447 W/kg

SAR(1 g) = 0.299 mW/g; SAR(10 g) = 0.194 mW/g

Maximum value of SAR (measured) = 0.322 mW/g



Additional information:

position or distance of DUT to SAM (if not standard head positions) :

ambient temperature: 22.2°C; liquid temperature: 21.7°C

**P1528_OET65_EN62209- LeftHandSide tilted 15° -WCDMA1900 Middle
DUT: HUAWEI U9000/U9000**

Communication System: HW-UMTS-FDD; Frequency: 1880 MHz
Medium parameters used: $f = 1880$ MHz; $\sigma = 1.35$ mho/m; $\epsilon_r = 38.8$; $\rho = 1000$ kg/m³
Phantom section: Left Section
Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: EX3DV4 - SN3736; ConvF(7.61, 7.76, 8.09); Calibrated: 2010-11-16
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn851; Calibrated: 2010-6-30
- Phantom: SAM1; Type: SAM; Serial: TP-1475
- Measurement SW: DASYS5, V5.2 Build 157; Postprocessing SW: SEMCAD X, V14.2 Build 2Version 14.2.2 (1685) (Deployment Build)

U9000/Head/Area Scan (11x17x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.240 mW/g

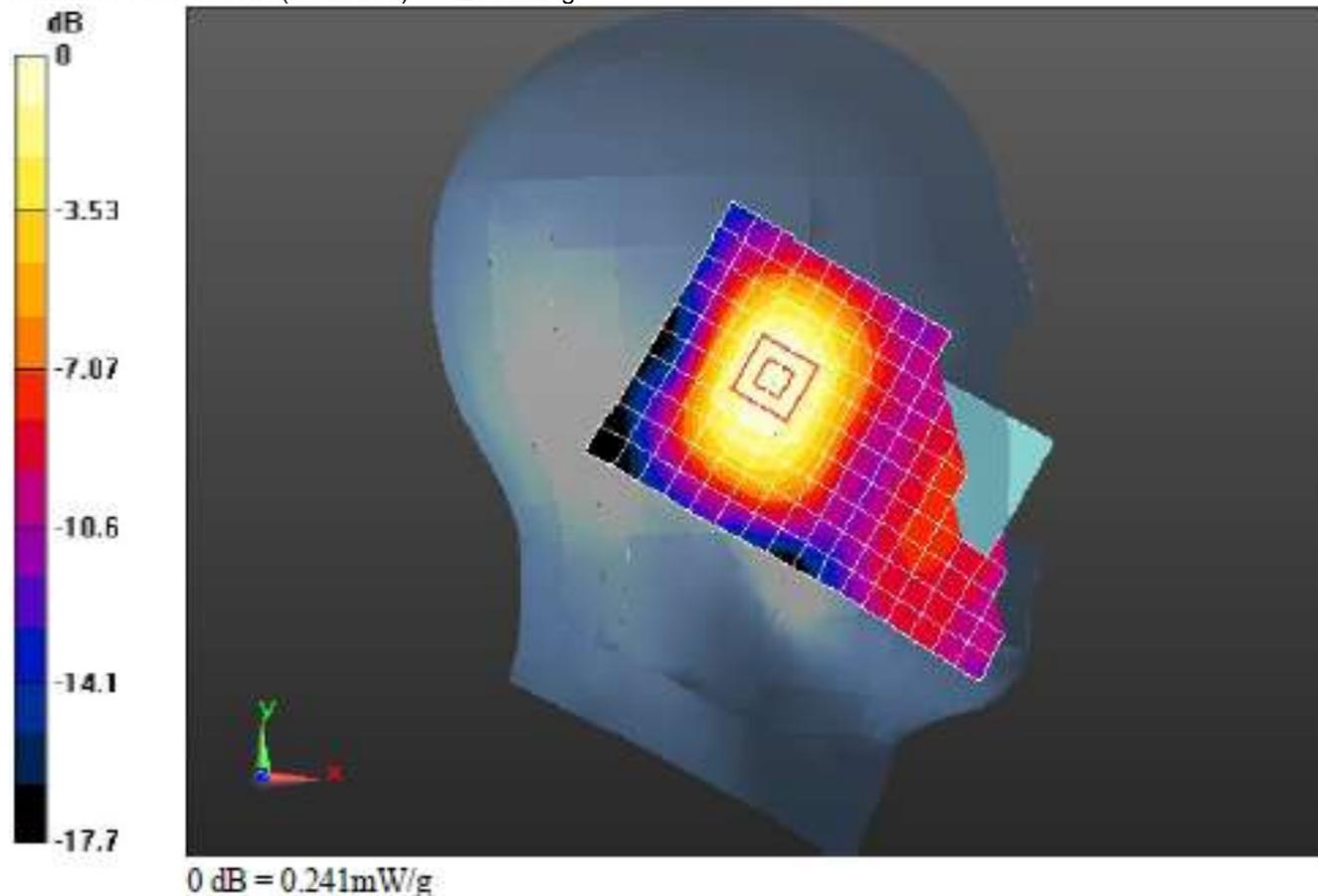
U9000/Head/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 7.2 V/m; Power Drift = -0.023 dB

Peak SAR (extrapolated) = 0.318 W/kg

SAR(1 g) = 0.223 mW/g; SAR(10 g) = 0.144 mW/g

Maximum value of SAR (measured) = 0.241 mW/g



Additional information:

position or distance of DUT to SAM (if not standard head positions) :
ambient temperature: 22.2°C; liquid temperature: 21.7°C

**P1528_OET65_EN62209- RightHandSide touched –WCDMA1900 Middle
DUT: HUAWEI U9000/U9000**

Communication System: HW-UMTS-FDD; Frequency: 1880 MHz
Medium parameters used: $f = 1880$ MHz; $\sigma = 1.35$ mho/m; $\epsilon_r = 38.8$; $\rho = 1000$ kg/m³
Phantom section: Right Section
Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- | Probe: EX3DV4 - SN3736; ConvF(7.61, 7.76, 8.09); Calibrated: 2010-11-16
- | Sensor-Surface: 4mm (Mechanical Surface Detection)
- | Electronics: DAE4 Sn851; Calibrated: 2010-6-30
- | Phantom: SAM1; Type: SAM; Serial: TP-1475
- | Measurement SW: DASYS5, V5.2 Build 157; Postprocessing SW: SEMCAD X, V14.2 Build 2Version 14.2.2 (1685) (Deployment Build)

U9000/Head/Area Scan (11x17x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.466 mW/g

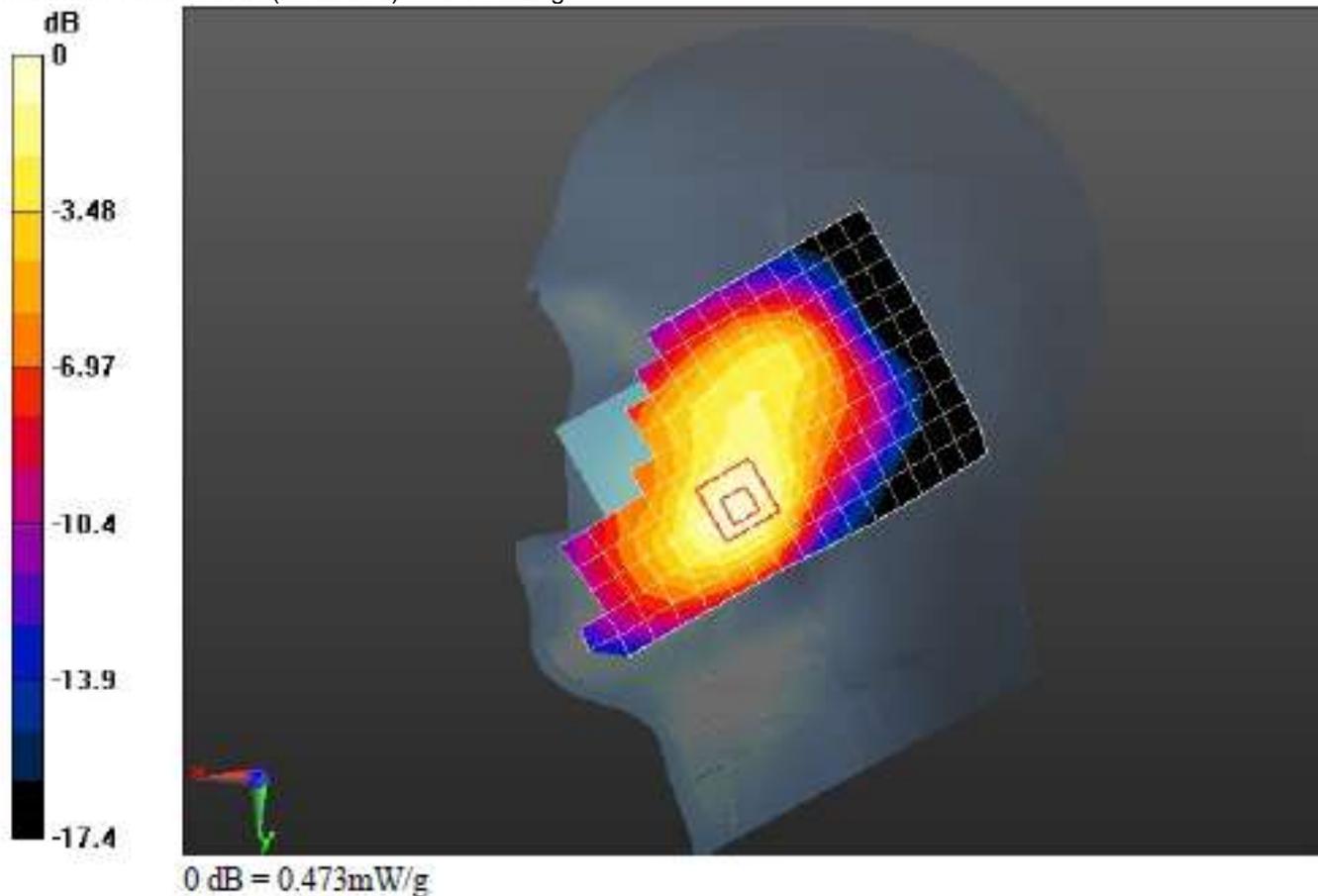
U9000/Head/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 3.85 V/m; Power Drift = -0.011 dB

Peak SAR (extrapolated) = 0.641 W/kg

SAR(1 g) = 0.435 mW/g; SAR(10 g) = 0.273 mW/g

Maximum value of SAR (measured) = 0.473 mW/g



Additional information:

position or distance of DUT to SAM (if not standard head positions) :
ambient temperature: 22.2°C; liquid temperature: 21.7°C

**P1528_OET65_EN62209- RightHandSide tilted 15° -WCDMA1900 Middle
DUT: HUAWEI U9000/U9000**

Communication System: HW-UMTS-FDD; Frequency: 1880 MHz
Medium parameters used: $f = 1880$ MHz; $\sigma = 1.35$ mho/m; $\epsilon_r = 38.8$; $\rho = 1000$ kg/m³
Phantom section: Right Section
Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: EX3DV4 - SN3736; ConvF(7.61, 7.76, 8.09); Calibrated: 2010-11-16
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn851; Calibrated: 2010-6-30
- Phantom: SAM1; Type: SAM; Serial: TP-1475
- Measurement SW: DASYS, V5.2 Build 157; Postprocessing SW: SEMCAD X, V14.2 Build 2Version 14.2.2 (1685) (Deployment Build)

U9000/Head/Area Scan (11x17x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.258 mW/g

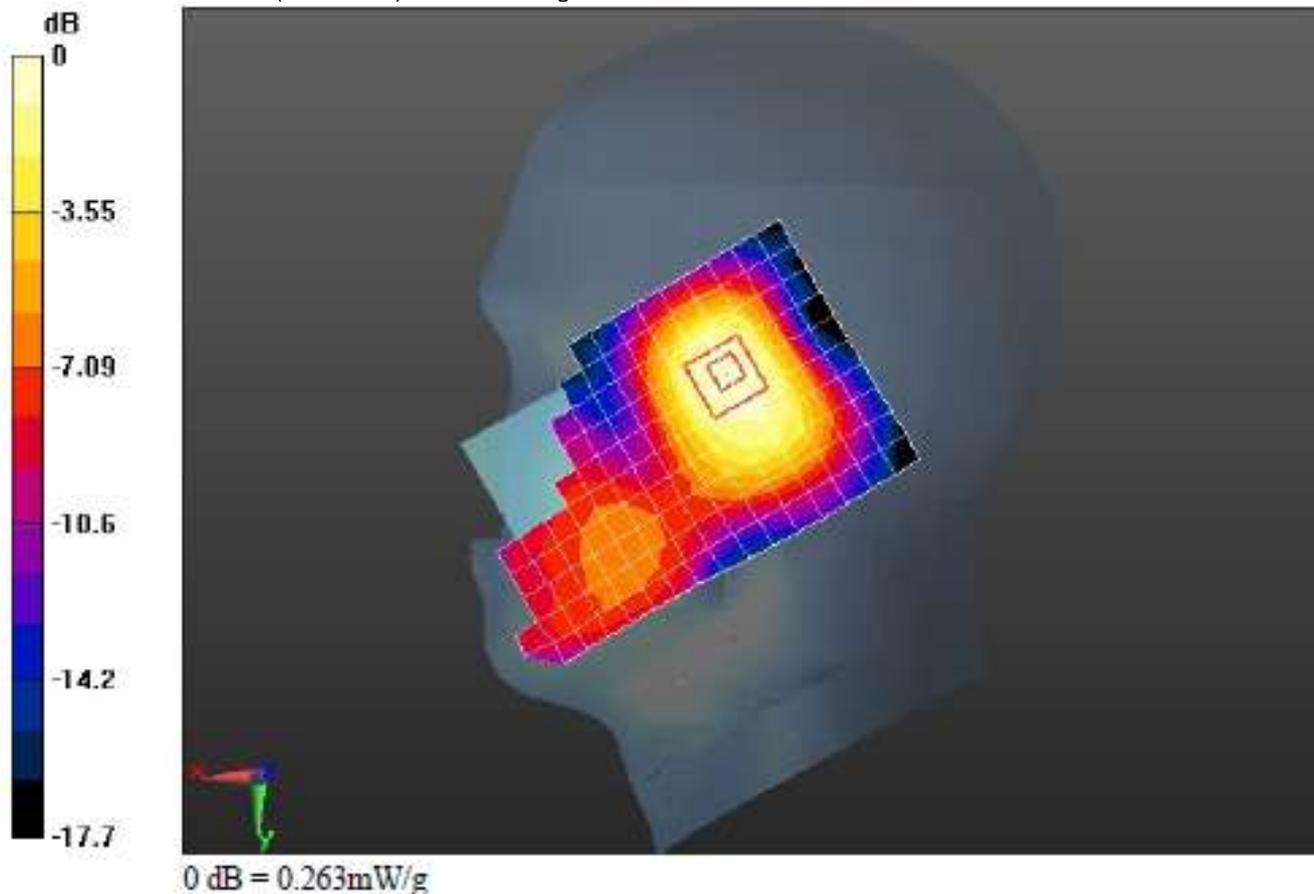
U9000/Head/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 7.43 V/m; Power Drift = 0.022 dB

Peak SAR (extrapolated) = 0.344 W/kg

SAR(1 g) = 0.244 mW/g; SAR(10 g) = 0.156 mW/g

Maximum value of SAR (measured) = 0.263 mW/g



Additional information:

position or distance of DUT to SAM (if not standard head positions) :
ambient temperature: 22.2°C; liquid temperature: 21.7°C

**P1528_OET65_EN62209- RightHandSide touched –WCDMA1900 High
DUT: HUAWEI U9000/U9000**

Communication System: HW-UMTS-FDD; Frequency: 1907.6 MHz
Medium parameters used (interpolated): $f = 1907.6$ MHz; $\sigma = 1.38$ mho/m; $\epsilon_r = 38.7$; $\rho = 1000$ kg/m³
Phantom section: Right Section
Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- | Probe: EX3DV4 - SN3736; ConvF(7.61, 7.76, 8.09); Calibrated: 2010-11-16
- | Sensor-Surface: 4mm (Mechanical Surface Detection)
- | Electronics: DAE4 Sn851; Calibrated: 2010-6-30
- | Phantom: SAM1; Type: SAM; Serial: TP-1475
- | Measurement SW: DASYS5, V5.2 Build 157; Postprocessing SW: SEMCAD X, V14.2 Build 2Version 14.2.2 (1685) (Deployment Build)

U9000/Head/Area Scan (11x17x1): Measurement grid: dx=10mm, dy=10mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.648 mW/g

U9000/Head/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

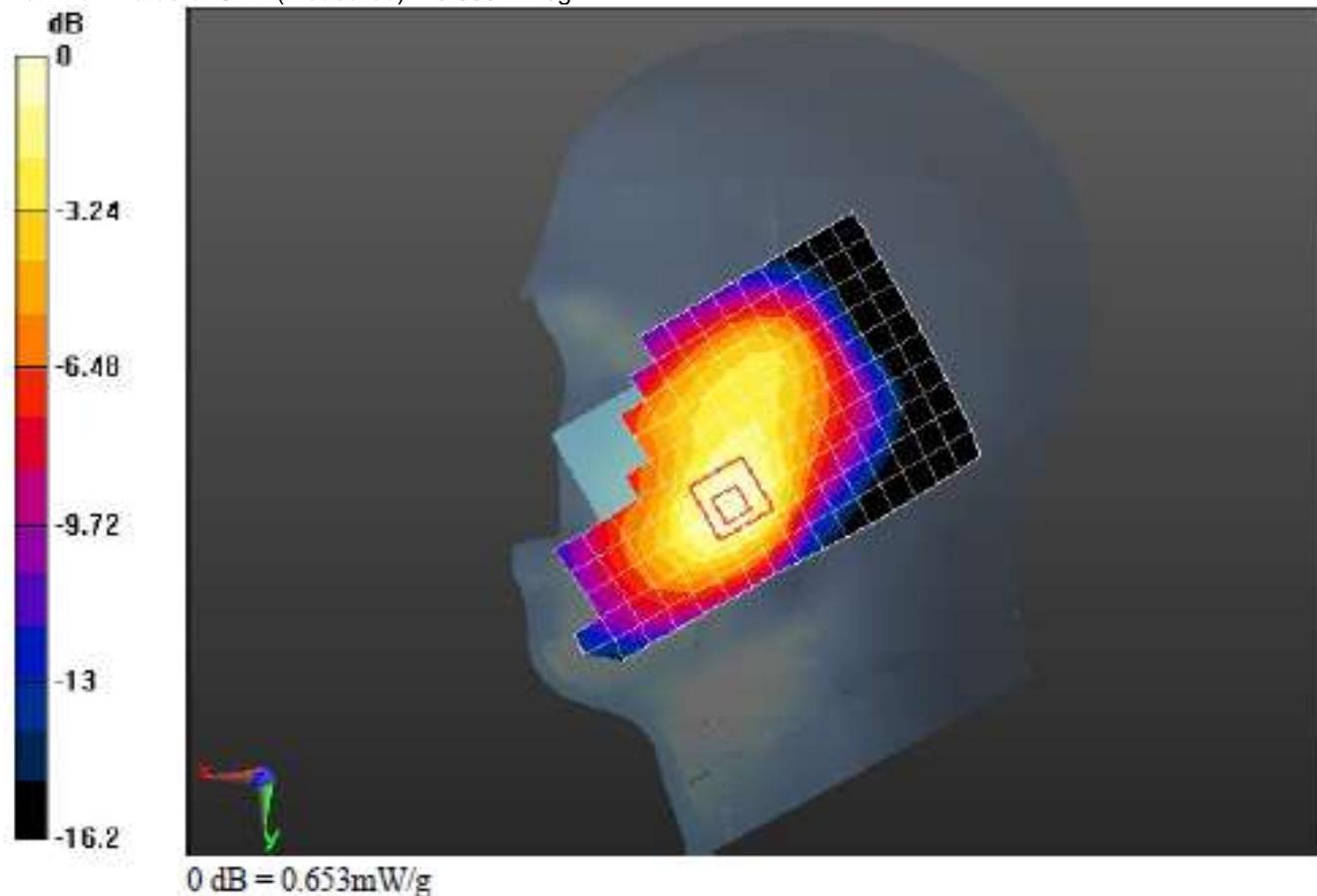
Reference Value = 4.28 V/m; Power Drift = 0.091 dB

Peak SAR (extrapolated) = 0.912 W/kg

SAR(1 g) = 0.603 mW/g; SAR(10 g) = 0.375 mW/g

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.653 mW/g



Additional information:

position or distance of DUT to SAM (if not standard head positions) :
ambient temperature: 22.2°C; liquid temperature: 21.7°C