SAR TEST REPORT

Equipment Under Test	Industrial PDA phone
Model Name	M3 ORANGE
The addition of model name	CR4100
Company Name	M3 Mobile
Company Address	Dongwon-Bldg,725-30 Yeoksam-Dong, Gangnam-Gu, Seoul, Korea
Date of Receipt	2010.11.22
Date of Test(s)	2010.11.30 ,12.01,12.03
Date of Issue	2010.12.15

Standards:

FCC OET 65 supplement C, ANSI / IEEE C95.1, C95.3, IEEE 1528

In the configuration tested, the EUT complied with the standards specified above.

Remarks:

This report details the results of the testing carried out on one sample, the results contained in this test report do not relate to other samples of the same product. The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report.

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Tested by : **Antony Wu** **Date** : **2010.12.15**
Engineer

Approved by : **Kelly Tsai** **Date** : **2010.12.15**
Supervisor

Version

Version No.	Date	Description
1.0	Dec. 10, 2010	Initial issue of report
1.1	Dec. 14, 2010	Modify 1st issue of report
1.2	Dec. 15, 2010	Modify 2rd issue of report

Contents

1. General Information

1.1 Testing Laboratory

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1.2 Details of Applicant

Company Name	M3 Mobile
Company Address	Dongwon-Bldg,725-30 Yeoksam-Dong, Gangnam-Gu, Seoul, Korea
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1.3 Description of EUT

EUT Name	Industrial PDA phone
Model Name	M3 ORANGE
The addition of model name	CR4100
IMEI Code	354114012000840
FCC ID	U7XM3ORANGE
Mode of Operation	GSM/GPRS/WLAN802.11b&g&a band

Modulation Mode	GMSK/8PSK/CCK/OFDM		
Duty Cycle	GSM	GPRS&EGPRS (2multi-slot)	WLAN 802.11b &g&a
	1/8	1/4	1
Maximum RF Conducted Power (Average)	GSM 850	GSM 1900	
	32.5dBm	29.6dBm	
	WLAN 802.11b	WLAN 802.11g	WLAN 802.11a
	19.53dBm	23.95dBm	22.03dBm
TX Frequency Range (MHz)	GSM 850	GSM 1900	
	824.2- 848.8	1850.2- 1909.8	
	WLAN 802.11b	WLAN 802.11g	WLAN 802.11a
	2412- 2462	2412- 2462	5180- 5825
Channel Number (ARFCN)	GSM 850	GSM 1900	
	128-251	512-810	
	WLAN 802.11b	WLAN 802.11g	WLAN 802.11a
	1-11	1-11	36-165
VOIP Function	No		
Battery Type	3.7 V Lithium-Ion		
Antenna Type	Internal Antenna		
Max. SAR Measured (1 g)	GSM850		
	Head	Body	
	0.147 mW/g (At GSM 850 Right Head (Cheek Position)_ 128 channel_repeated with Memory card)	**0.382 mW/g** (At GSM 850 Body_ 251 channel_repeated with Memory card)	

<table>
<tr><td rowspan="11">Max. SAR Measured (1 g)</td><td colspan="2">GSM1900</td></tr>
<tr><td>Head</td><td>Body</td></tr>
<tr><td>0.044 mW/g
(At GSM 1900 Right Head (Cheek Position)_ 512 channel)</td><td>0.145 mW/g
(At GSM 1900 Body_810 channel)</td></tr>
<tr><td colspan="2">WLAN 802.11 b</td></tr>
<tr><td colspan="2">Body</td></tr>
<tr><td colspan="2">0.035 mW/g
(At WLAN 802.11b Body_1 channel)</td></tr>
<tr><td colspan="2">WLAN 802.11 g</td></tr>
<tr><td colspan="2">Body</td></tr>
<tr><td colspan="2">0.032 mW/g
(At WLAN 802.11g Body_ 6 channel)</td></tr>
<tr><td colspan="2">WLAN 802.11 a</td></tr>
<tr><td colspan="2">Body</td></tr>
<tr><td colspan="2">0.177 mW/g
(At WLAN 802.11a Body_ 116 channel _repeated with Memory card)</td></tr>
</table>

#. Conducted power table:

	GSM 850 (Average)			GSM 1900 (Average)		
Mode\ARFCN	128	190	251	512	661	810
GSM	32.4	32.5	32.5	27.6	28.8	29.6
EGPRS 10	27.3	27.4	27.4	22.4	23.3	24.0
GPRS 10	30.7	30.8	30.9	25.7	26.8	27.5

EUT Mode	Frequency (MHz)	CH	Average Power (dBm)
WLAN802.11b	2412	1	19.21
	2437	6	19.53
	2462	11	19.47
EUT Mode	**Frequency (MHz)**	**CH**	**Average Power (dBm)**
WLAN802.11g	2412	1	23.17
	2437	6	23.95
	2462	11	23.70
EUT Mode	**Frequency (MHz)**	**CH**	**Average Power (dBm)**
WLAN802.11a	5180	36	11.60
	5200	40	10.42
	5240	48	10.20
	5260	52	10.24
	5300	60	10.14
	5320	64	10.56
	5500	100	9.83
	5580	116	11.81
	5700	140	11.50
	5745	149	21.08
	5785	157	22.03
	5825	165	21.76

1.4 Test Environment

Ambient Temperature: 22±2° C
Tissue Simulating Liquid: 22±2° C

1.5 Operation description

General:

1. The EUT is controlled by using a Radio Communication Tester (Agilent 8960), and the communication between the EUT and the tester is established by air link.
2. Measurements are performed respectively on the lowest, middle and highest channels of the operating band(s). The EUT is set to maximum power level during all tests, and at the beginning of each test the battery is fully charged.
3. The WLAN transmitter is controlled by chip-specific software installed in this PDA phone, to make the EUT transmit at max power.
4. During the SAR testing, the DASY5 system checks power drift by comparing the e-field strength of one specific location measured at the beginning with that measured at the end of the SAR testing.
5. Testing Head SAR at lowest, middle and highest channel for all bands with LET/LEC/RET/REC conditions.
6. Testing body-worn SAR by separating **1.5cm** between the back of the EUT and the flat phantom in GPRS mode.

Additional configuration(Head):

7. For highest SAR configuration in this band repeated with external Memory card inside.

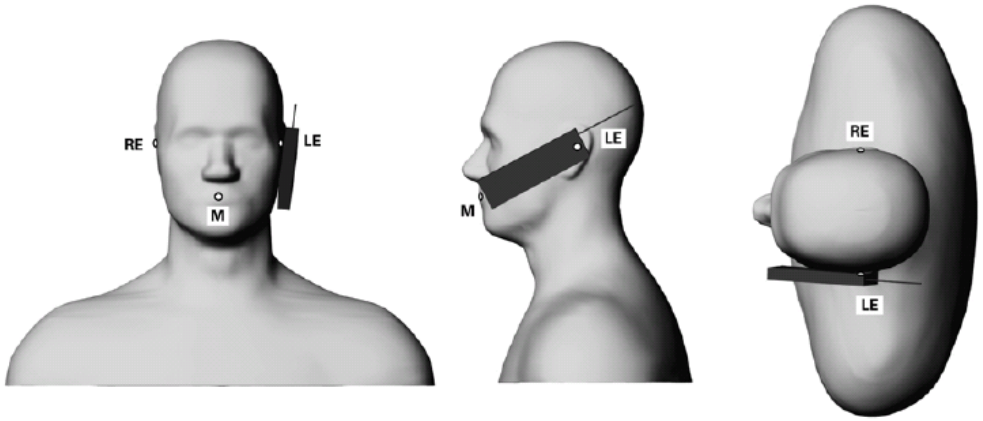
Additional configuration(Body):

8. Testing body-worn SAR with Handset and with Bluetooth transmitter OFF by separating **1.5cm** between the front of the EUT and the flat phantom in GPRS mode.
9. For highest SAR configuration in this band repeated with external Memory card inside.
10. For highest SAR configuration in this band repeated with EGPRS mode.

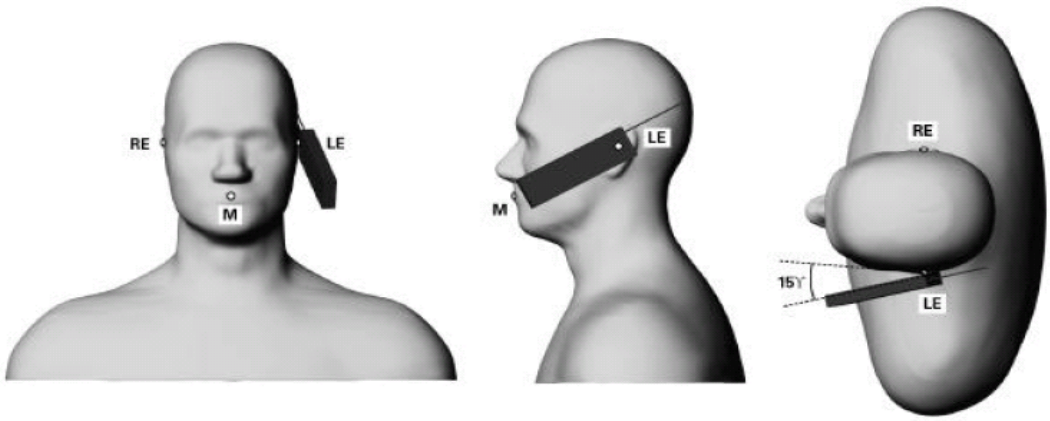
SAR evaluation considerations for handsets with multiple transmitters:

11. The maximum SAR value for licensed transmitter happens on GPRS 850 band, Body Position, channel 128 repeated with Memory card. the value is **0.382W/kg(1g)**. And the max SAR value for un-licensed transmitter WLAN 802.11a happens on Body Position, channel 116 repeated with Memory card. The SAR value is **0.177W/kg (1g)**. The summation of the 1g SAR is 0.382+0.177 = **0.559 W/kg, which lower than the limit 1.6W/kg. No simultaneous transmission SAR evaluation is necessary.**

1.6 Positioning Procedure



Phone position 1, “cheek” or “touch” position. The reference points for the right ear (RE), left ear (LE) and mouth (M), which define the reference plane for phone Positioning



Phone position 2," tilted position. The reference points for the right ear (RE), left ear (LE) and mouth (M), which define the reference plane for phone positioning

Cheek/Touch Position:

the handset was brought toward the mouth of the head phantom by pivoting against the ear reference point until any point of the mouthpiece or keypad touched the phantom.

Ear/Tilt Position:

With the phone aligned in the Cheek/Touch position, the handset was tilted away from the mouth with respect to the test device reference point by 15 degrees.

1.7 Evaluation Procedures

The entire evaluation of the spatial peak values is performed within the Post-processing engine (SEMCAD). The system always gives the maximum values for the 1 g and 10 g cubes. The algorithm to find the cube with highest averaged SAR is divided into the following stages:

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

6. The calculation of the averaged SAR within masses of 1g and 10g.The probe is calibrated at the center of the dipole sensors that is located 1 to 2.7mm away from the probe tip. During measurements, the probe stops shortly above the phantom surface, depending on the probe and the surface detecting system. Both distances are included as parameters in the probe configuration file. The software always knows exactly how far away the measured point is from the surface. As the probe cannot directly measure at the surface, the values between the deepest measured point and the surface must be extrapolated. The angle between the probe axis and the surface normal line is less than 30 degree.

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

   The maximum search is automatically performed after each area scan measurement. It is based on splines in two or three dimensions. The procedure can find the maximum for most SAR distributions even with relatively large grid spacing. After the area scanning measurement, the probe is automatically moved to a position at the interpolated maximum. The following scan can directly use this position for reference, e.g., for a finer resolution grid or the cube evaluations. The 1g and 10g peak evaluations are only available for the predefined cube 7x7x7 scans.

   The routines are verified and optimized for the grid dimensions used in these cube measurements. The measured volume of 30x30x30mm contains about 30g of tissue. The first procedure is an extrapolation (incl. Boundary correction) to get the points between the lowest measured plane and the surface. The next step uses 3D interpolation to get all points within the measured volume. In the last step, a 1g cube is placed numerically into the volume and its averaged SAR is calculated. This cube is the moved around until the highest averaged SAR is found.

If the highest SAR is found at the edge of the measured volume, the system will issue a warning: higher SAR values might be found outside of the measured volume. In that case the cube measurement can be repeated, using the new interpolated maximum as the center.

1.8 The SAR Measurement System

A photograph of the SAR measurement System is given in Fig. a. This SAR Measurement System uses a Computer-controlled 3-D stepper motor system (SPEAG DASY 5 professional system). A Model EX3DV4 field probe is used to determine the internal electric fields. The SAR can be obtained from the equation $SAR = \sigma (|Ei|^2)/ \rho$ where σ and ρ are the conductivity and mass density of the tissue-simulant.

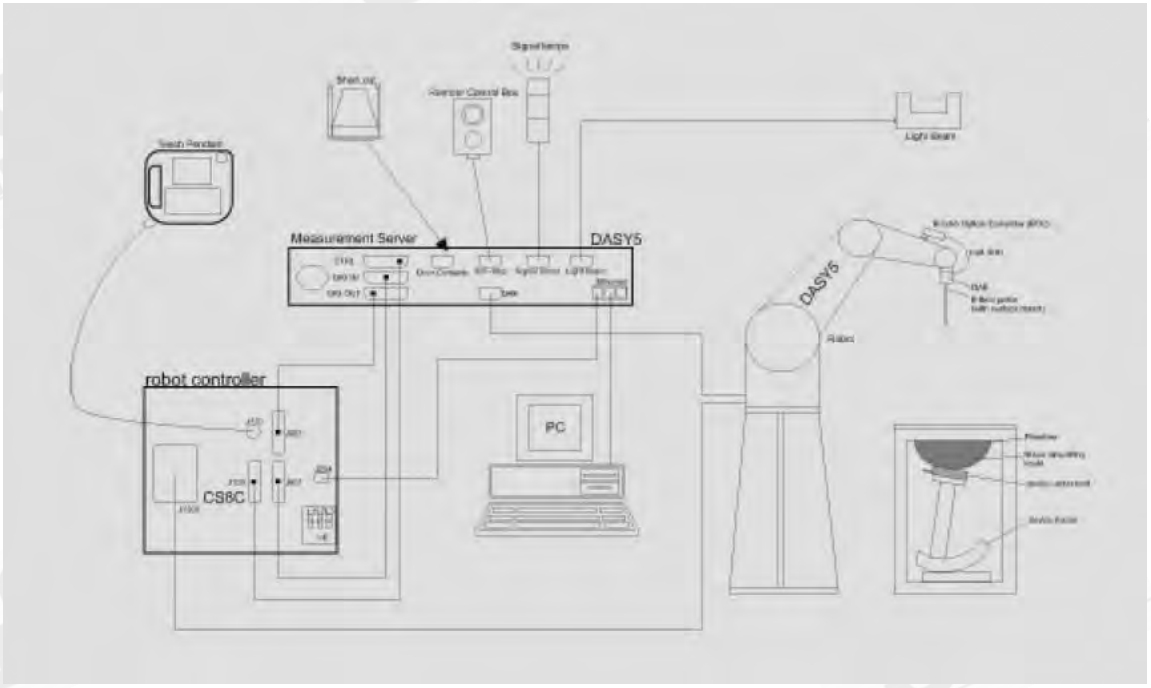


Fig.a The block diagram of SAR system

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

- A standard high precision 6-axis robot (Staubli RX family) with controller, teach pendant and software. An arm extension is for accommodating the data acquisition electronics (DAE).

- A dosimetric probe, i.e., an isotropic E-field probe optimized and calibrated for usage In Tissue simulating liquid. The probe is equipped with an optical surface detector system.
- A data acquisition electronics (DAE) which performs the signal amplification, signal multiplexing, AD-conversion, offset measurements, mechanical surface detection, collision detection, etc. The unit is battery powered with standard or rechargeable batteries. The signal is optically transmitted to the EOC.
- The Electro-optical converter (EOC) performs the conversion between optical and electrical of the signals for the digital communication to the DAE and for the analog signal from the optical surface detection. The EOC is connected to the measurement server.
- The function of the measurement server is to perform the time critical tasks such as signal filtering, control of the robot operation and fast movement interrupts.
- A probe alignment unit which improves the (absolute) accuracy of the probe positioning.
  - A computer operating Windows 2000 or Windows XP.
  - DASY5 software.
- Remote control with teach pendant and additional circuitry for robot safety such as warning lamps, etc.
  - The SAM twin phantom enabling testing left-hand and right-hand usage.
  - The device holder for handheld mobile phones.
  - Tissue simulating liquid mixed according to the given recipes.
  - Validation dipole kits allowing to validate the proper functioning of the system.

1.9 System Components

EX3DV4 E-Field Probe

Construction:	Symmetrical design with triangular core Built-in shielding against static charges PEEK enclosure material (resistant to organic solvents, e.g., DGBE)	 EX3DV4 E-Field Probe
Calibration:	Basic Broad Band Calibration in air Conversion Factors (CF) for HSL850/1900/2450/5200/5500/5800 Additional CF for other liquids and frequencies upon request	
Frequency:	10 MHz to > 6 GHz; Linearity: ± 0.6 dB (30 MHz to 6 GHz)	
Directivity:	± 0.3 dB in HSL (rotation around probe axis) ± 0.5 dB in tissue material (rotation normal to probe axis)	
Dynamic Range:	10 µW/g to > 100 mW/g Linearity: ± 0.2 dB (noise: typically < 1 µW/g)	
Dimensions:	Overall length: 330 mm (Tip: 20 mm) Tip diameter: 2.5 mm (Body: 12 mm) Typical distance from probe tip to dipole centers: 1 mm	
Application:	High precision dosimetric measurements in any exposure scenario (e.g., very strong gradient fields). Only probe which enables compliance testing for frequencies up to 6 GHz with precision of better 30%.	

SAM PHANTOM V4.0C

Construction:	The shell corresponds to the specifications of the Specific Anthropomorphic Mannequin (SAM) phantom defined in IEEE 1528-200X, CENELEC 50361 and IEC 62209. It enables the dosimetric evaluation of left and right hand phone usage as well as body mounted usage at the flat phantom region. A cover prevents evaporation of the liquid. Reference markings on the phantom allow the complete setup of all predefined phantom positions and measurement grids by manually teaching three points with the robot.
Shell Thickness:	2 ± 0.2 mm
Filling Volume:	Approx. 25 liters
Dimensions:	Height: 850 mm; Length: 1000 mm; Width: 500 mm

DEVICE HOLDER

Construction	In combination with the Twin SAM Phantom V4.0/V4.0C or Twin SAM, the Mounting Device (made from POM) enables the rotation of the mounted transmitter in spherical coordinates, whereby the rotation point is the ear opening. The devices can be easily and accurately positioned according to IEC, IEEE, CENELEC, FCC or other specifications. The device holder can be locked at different phantom locations (left head, right head, flat phantom).

Device Holder

1.10 SAR System Verification

The microwave circuit arrangement for system verification is sketched in Fig. b. The daily system accuracy verification occurs within the flat section of the SAM phantom. A SAR measurement was performed to see if the measured SAR was within +/-5% from the target SAR values. These tests were done at 850/1900/2450/5200/5500/5800 MHz. The tests were conducted on the same days as the measurement of the DUT. The obtained results from the system accuracy verification are displayed in the table 1. During the tests, the ambient temperature of the laboratory was in the range 22.1°C, the relative humidity was in the range 62% and the liquid depth above the ear reference points was above 15 cm in all the cases. It is seen that the system is operating within its specification, as the results are within acceptable tolerance of the reference values.

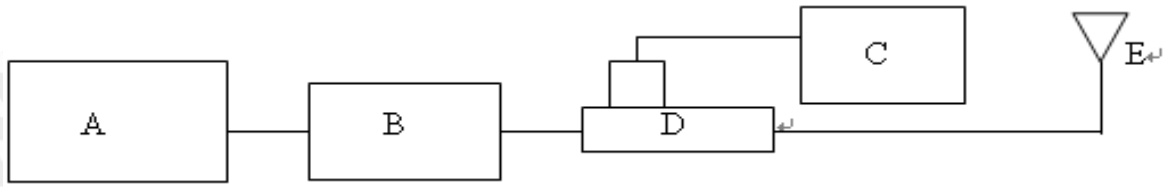
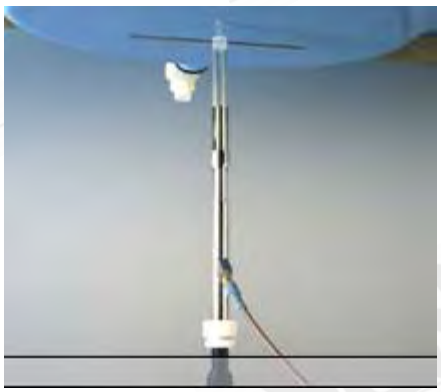


Fig.b The block diagram of SAR system verification

A. Agilent Model 8648D Signal Generator
B. Mini circuits Model ZHL-42 Amplifier
C. Agilent Model U2001B Power Sensor
D. Agilent Model 778D & 777D Dual directional coupling
E. Reference dipole antenna



Photograph of the dipole Antenna

Validation Kit	Frequency (MHz)	Target SAR (1g) (Pin=250mW)	Measured SAR (1g)	Measured Date
D835V2 S/N: 4d063	835 MHz (Head)	2.42 mW/g	2.45 mW/g	2010/11/30
D835V2 S/N: 4d063	835 MHz (Body)	2.53 mW/g	2.53 mW/g	2010/11/30
D1900V2 S/N: 5d027	1900 MHz (Head)	9.91 mW/g	10.2 mW/g	2010/12/01
D1900V2 S/N: 5d027	1900 MHz (Body)	10.1 mW/g	10.1 mW/g	2010/12/01
D2450V2 S/N: 727	2450 MHz (Body)	13.4 mW/g	13.2 mW/g	2010/12/03
D5200V2 S/N: 1023	5200 MHz (Body)	8.02 mW/g	8.28 mW/g	2010/12/03
D5500V2 S/N: 1023	5500 MHz (Body)	8.49 mW/g	8.36 mW/g	2010/12/03
D5800V2 S/N: 1023	5800 MHz (Body)	7.37 mW/g	7.07 mW/g	2010/12/03

Table 1. System validation (follow manufacture target value)

1.11 Tissue Simulant Fluid for the Frequency Band

The dielectric properties for this Head-simulant fluid were measured by using the HP Model 85070D Dielectric Probe (rates frequency band 200 MHz to 20 GHz) in conjuncation with HP 8753D Network Analyzer (30 KHz-6000MHz) by using a procedure detailed in Section V.

All dielectric parameters of tissue simulates were measured within 24 hours of SAR measurements. The depth of the tissue timulant in the ear reference point of the phantom was 15cm±5mm during all tests. (Appendix Fig .2)

Frequency (MHz)	Tissue type	Measurement date/ Limits	Dielectric Parameters		
			ρ	σ (S/m)	Simulated Tissue Temperature(° C)
850	Head	Measured, 2010.11.30	42.4	0.899	21.7
		Recommended Limits	39.62-43.79	0.86-0.96	20-24
850	Body	Measured, 2010.11.30	53.8	1.01	21.7
		Recommended Limits	51.49-56.91	0.93-1.03	20-24
1900	Head	Measured, 2010.12.01	39.6	1.44	21.7
		Recommended Limits	38.48-42.53	1.34-1.48	20-24
1900	Body	Measured, 2010.12.01	52.9	1.55	21.7
		Recommended Limits	52.06-57.54	1.45-1.61	20-24
2450	Body	Measured, 2010.12.03	52.5	1.97	21.7
		Recommended Limits	51.49-56.91	1.91-2.11	20-24
5200	Body	Measured, 2010.12.03	48.8	5.35	21.7
		Recommended Limits	45.13-49.88	5.24-5.80	20-24
5500	Body	Measured, 2010.12.03	47.8	5.78	21.7
		Recommended Limits	44.46-49.14	5.60-6.18	20-24
5800	Body	Measured, 2010.12.03	46.9	6.21	21.7
		Recommended Limits	43.80-48.41	5.95-6.57	20-24

Table 2. Dielectric Parameters of Tissue Simulant Fluid

1.12 Test Standards and Limits

According to FCC 47CFR §2.1093(d) The limits to be used for evaluation are based generally on criteria published by the American National Standards Institute (ANSI) for localized specific absorption rate (“SAR”) in Section 4.2 of “IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields,3 kHz to 300 GHz,” ANSI/IEEE C95.1–1992, Copyright 1992 by the Institute of Electrical and Electronics Engineers, Inc., New York, New York 10017. These criteria for SAR evaluation are similar to those recommended by the National Council on Radiation Protection and Measurements (NCRP) in “Biological Effects and Exposure Criteria for Radio frequency Electromagnetic Fields,” NCRP Report No. 86, Section 17.4.5. Copyright NCRP, 1986, Bethesda, Maryland 20814. SAR is a measure of the rate of energy absorption due to exposure to an RF transmitting source. SAR values have been related to threshold levels for potential biological hazards. The criteria to be used are specified in paragraphs (d)(1) and (d)(2) of this section and shall apply for portable devices transmitting in the frequency range from 100 kHz to 6 GHz. Portable devices that transmit at frequencies above 6 GHz are to be evaluated in terms of the MPE limits specified in § 1.1310 of this chapter.

Measurements and calculations to demonstrate compliance with MPE field strength or power density limits for devices operating above 6 GHz should be made at a minimum distance of 5 cm from the radiating source.

(1) Limits for Occupational/Controlled exposure: 0.4 W/kg as averaged over the whole-body and spatial peak SAR not exceeding 8 W/kg as averaged over any 1 gram of tissue (defined as a tissue volume in the shape of a cube). Exceptions are the hands, wrists, feet and ankles where the spatial peak SAR shall not exceed 20 W/kg, as averaged over an 10 grams of tissue (defined as a tissue volume in the shape of a cube). Occupational/Controlled limits apply when persons are exposed as a consequence of their employment provided these persons are fully aware of and exercise control over their exposure. Awareness of exposure can be accomplished by use of warning labels or by specific training or education through appropriate means, such as an RF safety program in a work environment.

(2) Limits for General Population/Uncontrolled exposure: 0.08 W/kg as averaged over the whole-body and spatial peak SAR not exceeding 1.6 W/kg as averaged over any 1 gram of tissue (defined as a tissue volume in the shape of a cube). Exceptions are the hands, wrists, feet and ankles where the spatial peak SAR shall not exceed 4 W/kg, as averaged over any 10 grams of tissue (defined as a tissue volume in the shape of a cube).

General Population/Uncontrolled limits apply when the general public may be exposed, or when persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or do not exercise control over their exposure.

Warning labels placed on consumer devices such as cellular telephones will not be sufficient reason to allow these devices to be evaluated subject to limits for occupational/controlled exposure in paragraph (d)(1) of this section.(Table .6)

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

Table 4. RF exposure limits

Notes:
1. Uncontrolled environments are defined as locations where there is potential exposure of individuals who have no knowledge or control of their potential exposure.
2. Controlled environments are defined as locations where there is potential exposure of individuals who have knowledge of their potential exposure and can exercise control over their exposure.

2. Summary of Results

GSM 850 MHZ

Right Head (Cheek Position)						
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[˚C]	Liquid Temp[˚C]
850 MHz	128	824.2	32.4dBm	0.144	22.1	21.7
	190	836.6	32.5dBm	0.133	22.1	21.7
	251	848.8	32.5dBm	0.087	22.1	21.7
Right Head (Cheek Position)_repeated with Memory card						
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[˚C]	Liquid Temp[˚C]
850 MHz	128	824.2	32.4dBm	**0.147**	22.1	21.7
Left Head (Cheek Position)						
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[˚C]	Liquid Temp[˚C]
850 MHz	128	824.2	32.4dBm	0.117	22.1	21.7
	190	836.6	32.5dBm	0.112	22.1	21.7
	251	848.8	32.5dBm	0.076	22.1	21.7
Right Head (15° Tilt Position)						
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[˚C]	Liquid Temp[˚C]
850 MHz	128	824.2	32.4dBm	0.123	22.1	21.7
	190	836.6	32.5dBm	0.118	22.1	21.7
	251	848.8	32.5dBm	0.079	22.1	21.7
Left Head (15° Tilt Position)						
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[˚C]	Liquid Temp[˚C]
850 MHz	128	824.2	32.4dBm	0.091	22.1	21.7
	190	836.6	32.5dBm	0.102	22.1	21.7
	251	848.8	32.5dBm	0.067	22.1	21.7

Body worn (testing in GPRS mode)						
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[˚C]	Liquid Temp[˚C]
850 MHz	128	824.2	30.7dBm	0.376	22.1	21.7
	190	836.6	30.8dBm	0.371	22.1	21.7
	251	848.8	30.9dBm	0.276	22.1	21.7
Body worn (testing in GPRS mode)_repeated for EUT front to phantom						
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[˚C]	Liquid Temp[˚C]
850 MHz	128	824.2	30.7dBm	0.153	22.1	21.7
Body worn (testing in GPRS mode)_repeated with Memory card						
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[˚C]	Liquid Temp[˚C]
850 MHz	128	824.2	30.7dBm	**0.382**	22.1	21.7
Body worn (testing in GPRS mode)_repeated with EGPRS mode						
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[˚C]	Liquid Temp[˚C]
850 MHz	128	824.2	27.3 dBm	0.101	22.1	21.7

PCS 1900 MHZ

Right Head (Cheek Position)						
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[˚C]	Liquid Temp[˚C]
1900 MHz	512	1850.2	27.6dBm	0.044	22.1	21.7
	661	1880	28.8dBm	0.038	22.1	21.7
	810	1909.8	29.6dBm	0.036	22.1	21.7
Left Head (Cheek Position)						
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[˚C]	Liquid Temp[˚C]
1900 MHz	512	1850.2	27.6dBm	0.030	22.1	21.7
	661	1880	28.8dBm	0.019	22.1	21.7
	810	1909.8	29.6dBm	0.020	22.1	21.7

Right Head (15° Tilt Position)						
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[˚C]	Liquid Temp[˚C]
1900 MHz	512	1850.2	27.6dBm	0.038	22.1	21.7
	661	1880	28.8dBm	0.035	22.1	21.7
	810	1909.8	29.6dBm	0.034	22.1	21.7
Left Head (15° Tilt Position)						
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[˚C]	Liquid Temp[˚C]
1900 MHz	512	1850.2	27.6dBm	0.031	22.1	21.7
	661	1880	28.8dBm	0.026	22.1	21.7
	810	1909.8	29.6dBm	0.029	22.1	21.7
Body worn (testing in GPRS mode)						
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[˚C]	Liquid Temp[˚C]
1900 MHz	512	1850.2	25.7dBm	0.137	22.1	21.7
	661	1880	26.8dBm	0.128	22.1	21.7
	810	1909.8	27.5dBm	0.145	22.1	21.7

WLAN802.11 b

Body worn						
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[˚C]	Liquid Temp[˚C]
WLAN 802.11b	1	2412	19.21dBm	0.035	22.1	21.7
	6	2437	19.53dBm	0.035	22.1	21.7
	11	2462	19.47dBm	0.033	22.1	21.7

WLAN 802.11 g

Body worn						
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[˚C]	Liquid Temp[˚C]
WLAN 802.11g	1	2412	23.17dBm	0.024	22.1	21.7
	6	2437	23.95dBm	0.032	22.1	21.7
	11	2462	23.70dBm	0.030	22.1	21.7

WLAN 802.11 a 5.2G

Body worn						
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[˚C]	Liquid Temp[˚C]
WLAN 802.11a	36	5180	11.60dBm	0.028	22.1	21.7
	40	5200	10.42dBm	0.051	22.1	21.7
	48	5240	10.20dBm	0.054	22.1	21.7
	52	5260	10.24dBm	0.059	22.1	21.7
	60	5300	10.14dBm	0.074	22.1	21.7
	64	5320	10.56dBm	0.085	22.1	21.7

WLAN 802.11 a 5.5G

WLAN 802.11a	100	5500	9.83dBm	0.129	22.1	21.7
	116	5600	11.81dBm	0.171	22.1	21.7
	140	5700	11.50dBm	0.163	22.1	21.7
Body worn _repeated for EUT front to phantom						
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[˚C]	Liquid Temp[˚C]
WLAN 802.11a	116	5600	11.81dBm	0.024	22.1	21.7

Body worn _repeated with Memory card						
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[˚C]	Liquid Temp[˚C]
WLAN 802.11a	116	5600	11.81dBm	0.177	22.1	21.7

WLAN 802.11 a 5.8G

WLAN 802.11a	149	5745	21.08dBm	0.161	22.1	21.7
	157	5785	22.03dBm	0.154	22.1	21.7
	165	5825	21.76dBm	0.149	22.1	21.7

3. Instruments List

Manufacturer	Device	Type	Serial number	Calibrated Date	Next calibration Date
Schmid & Partner Engineering AG	Dosimetric E-Field Probe	EX3DV4	3703	Dec.30.2009	Dec.29.2010
Schmid & Partner Engineering AG	835/1900/2450/5200/5500/5800MHz System Validation Dipole	D835V2	4d063	May.21.2010	May.20.2011
		D1900V2	5d027	Apr.28.2010	Apr.27.2011
		D2450V2	727	Apr.29.2010	Apr.28.2011
		D5GV2	1023	Jan.21.2010	Jan.20.2011
Schmid & Partner Engineering AG	Data acquisition Electronics	DAE4	856	May.20.2010	May.19.2011
Schmid & Partner Engineering AG	Software	DASY 5 V5.0 Build 125	N/A	Calibration isn't necessary	Calibration isn't necessary
Schmid & Partner Engineering AG	Phantom	SAM	N/A	Calibration isn't necessary	Calibration isn't necessary
Agilent	Network Analyzer	8753D	3410A05547	Mar.30.2010	Mar.29.2011
Agilent	Dielectric Probe Kit	85070D	US01440168	Calibration isn't necessary	Calibration isn't necessary
Agilent	Dual-directional coupler	778D	50313	Aug.25.2010	Aug.24.2011
		777D	50114	Aug.25.2010	Aug.24.2011
Agilent	RF Signal Generator	8648D	3847M00432	Jun.04.2010	Jun.03.2011
Agilent	Power Sensor	U2001B	MY48100169	Apr.30.2010	Apr.29.2011

Agilent	Radio Communication Test	E5515c	GB44051912	Jul.27.2010	Jul.26.2011

4. Measurements

Date: 2010/11/30

RE Cheek_CH128

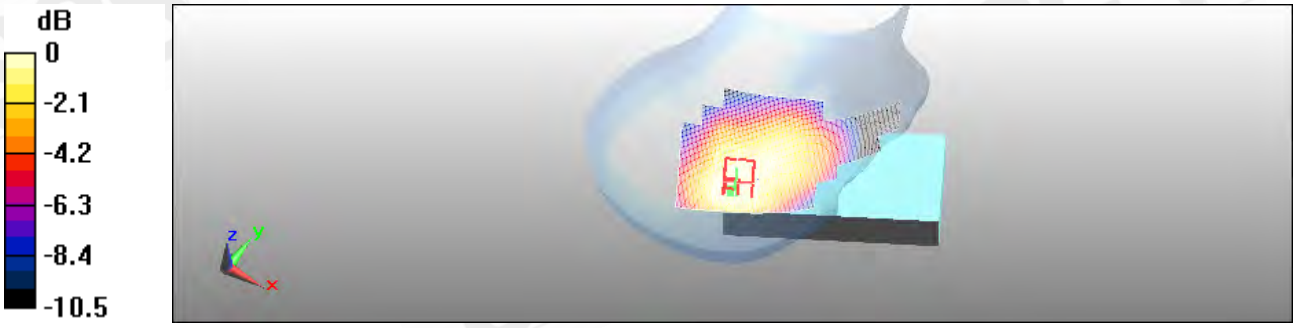
DUT: M3 ORANGE
Communication System: Generic GSM; Frequency: 824.2 MHz;
Medium parameters used: f = 824.2 MHz; σ = 0.886 mho/m; ε_r = 42.6; ρ = 1000 kg/m^3
Phantom section: Right Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY5 Configuration:

- Probe: EX3DV4 - SN3703; ConvF(8.87, 8.87, 8.87); Calibrated: 12/30/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2010/5/20
- Phantom: SAM2; Type: SAM;
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

Configuration/RE Cheek/Area Scan (71x141x1): Measurement grid:
dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.159 mW/g

Configuration/RE Cheek/Zoom Scan (7x7x7)/Cube 0: Measurement grid:
dx=8mm, dy=8mm, dz=5mm
Reference Value = 11.7 V/m; Power Drift = -0.040 dB
Peak SAR (extrapolated) = 0.208 W/kg

SAR(1 g) = 0.144 mW/g; SAR(10 g) = 0.101 mW/g
Maximum value of SAR (measured) = 0.152 mW/g



0 dB = 0.152mW/g

Date: 2010/11/30

RE Cheek_CH190

DUT: M3 ORANGE

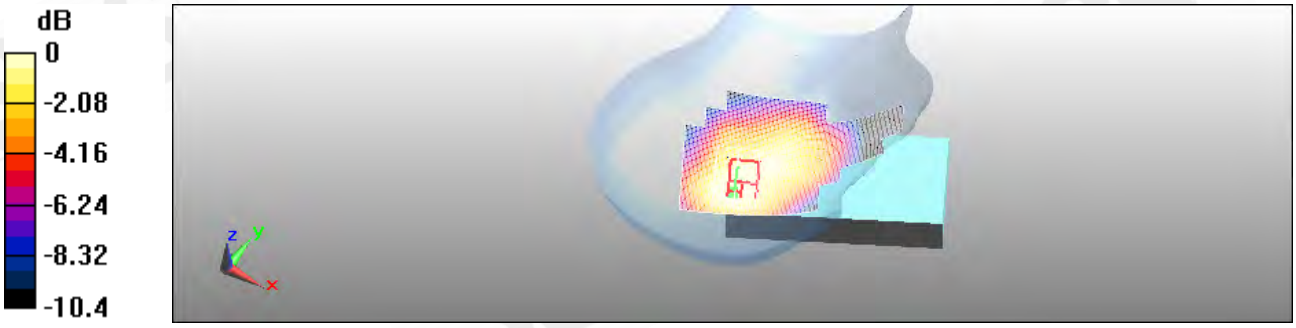
Communication System: Generic GSM; Frequency: 836.6 MHz;
Medium parameters used: f = 837 MHz; σ = 0.898 mho/m; ε_r = 42.4; ρ = 1000 kg/m^3
Phantom section: Right Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY5 Configuration:

- Probe: EX3DV4 - SN3703; ConvF(8.87, 8.87, 8.87); Calibrated: 12/30/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2010/5/20
- Phantom: SAM2; Type: SAM;
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

Configuration/RE Cheek/Area Scan (71x141x1): Measurement grid:
dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.143 mW/g

Configuration/RE Cheek/Zoom Scan (7x7x7)/Cube 0: Measurement grid:
dx=8mm, dy=8mm, dz=5mm
Reference Value = 11 V/m; Power Drift = 0.047 dB
Peak SAR (extrapolated) = 0.190 W/kg

SAR(1 g) = 0.133 mW/g; SAR(10 g) = 0.094 mW/g
Maximum value of SAR (measured) = 0.140 mW/g



0 dB = 0.140mW/g

Date: 2010/11/30

RE Cheek_CH251

DUT: M3 ORANGE

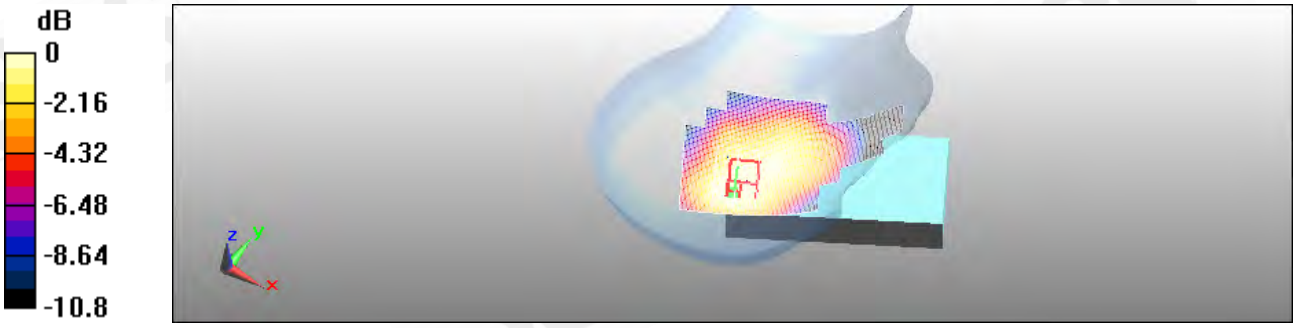
Communication System: Generic GSM; Frequency: 848.6 MHz;
Medium parameters used: f = 849 MHz; σ = 0.91 mho/m; ε_r = 42.3; ρ = 1000 kg/m^3
Phantom section: Right Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY5 Configuration:

- Probe: EX3DV4 - SN3703; ConvF(8.87, 8.87, 8.87); Calibrated: 12/30/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2010/5/20
- Phantom: SAM2; Type: SAM;
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

Configuration/RE Cheek/Area Scan (71x141x1): Measurement grid:
dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.093 mW/g

Configuration/RE Cheek/Zoom Scan (7x7x7)/Cube 0: Measurement grid:
dx=8mm, dy=8mm, dz=5mm
Reference Value = 8.92 V/m; Power Drift = 0.066 dB
Peak SAR (extrapolated) = 0.129 W/kg

SAR(1 g) = 0.087 mW/g; SAR(10 g) = 0.062 mW/g
Maximum value of SAR (measured) = 0.093 mW/g



0 dB = 0.093mW/g

Date: 2010/11/30

RE Cheek_CH128_repeated with Memory card

DUT: M3 ORANGE

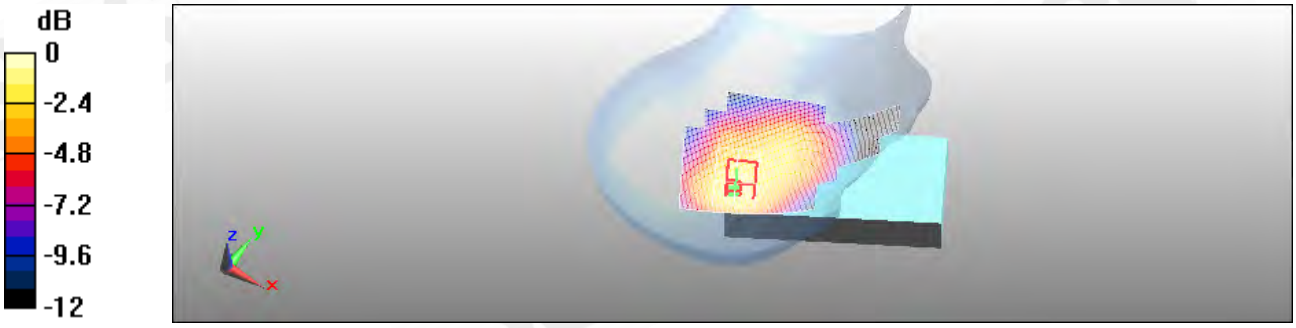
Communication System: Generic GSM; Frequency: 824.2 MHz;
Medium parameters used: f = 824.2 MHz; σ = 0.886 mho/m; ε_r = 42.6; ρ = 1000 kg/m^3
Phantom section: Right Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY5 Configuration:

- Probe: EX3DV4 - SN3703; ConvF(8.87, 8.87, 8.87); Calibrated: 12/30/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2010/5/20
- Phantom: SAM2; Type: SAM;
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

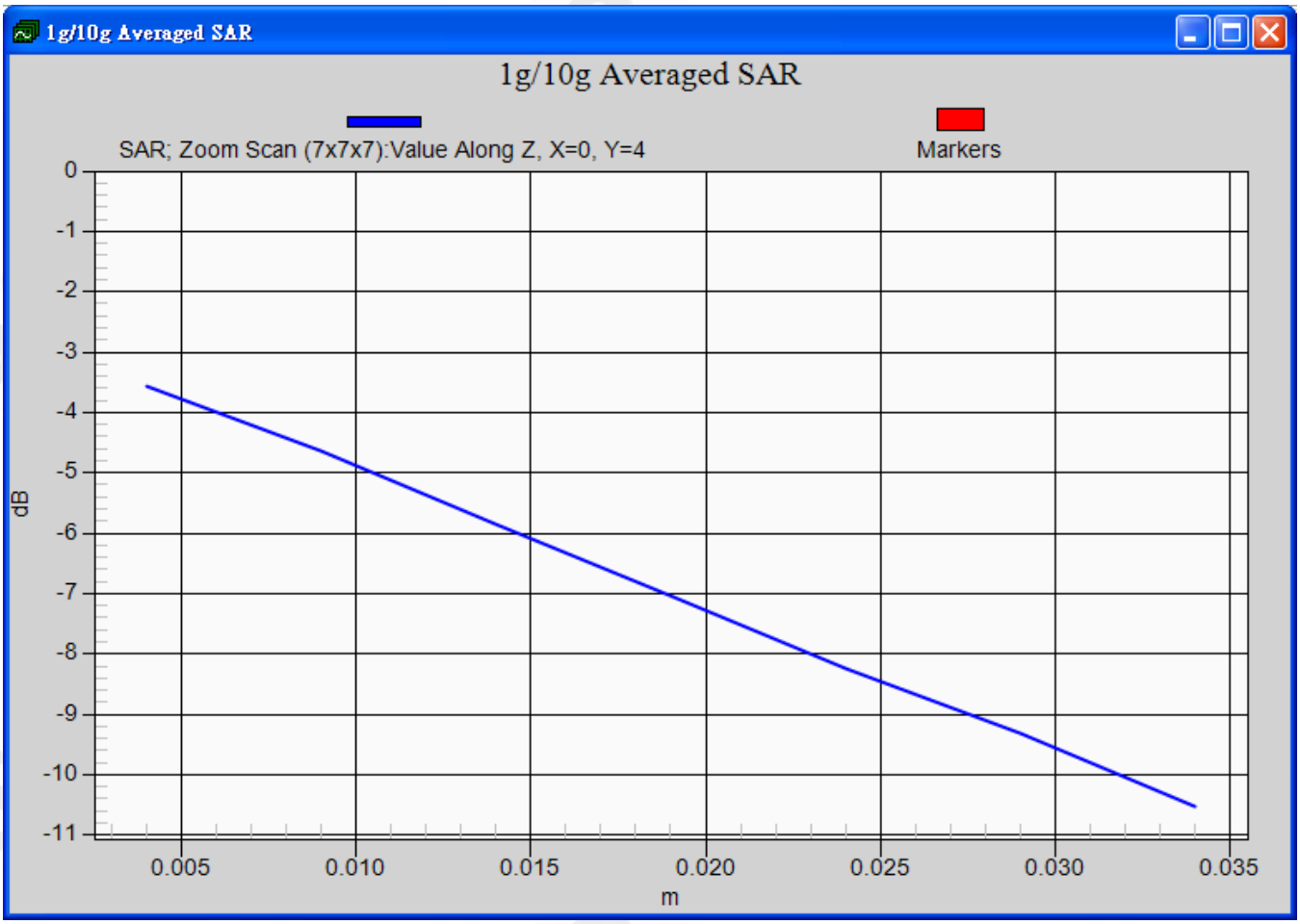
Configuration/RE Cheek/Area Scan (71x141x1): Measurement grid:
dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.156 mW/g

Configuration/RE Cheek/Zoom Scan (7x7x7)/Cube 0: Measurement grid:
dx=8mm, dy=8mm, dz=5mm
Reference Value = 11.7 V/m; Power Drift = -0.034 dB
Peak SAR (extrapolated) = 0.213 W/kg

SAR(1 g) = 0.147 mW/g; SAR(10 g) = 0.103 mW/g
Maximum value of SAR (measured) = 0.205 mW/g



0 dB = 0.205mW/g



Date: 2010/11/30

LE Cheek_CH128

DUT: M3 ORANGE

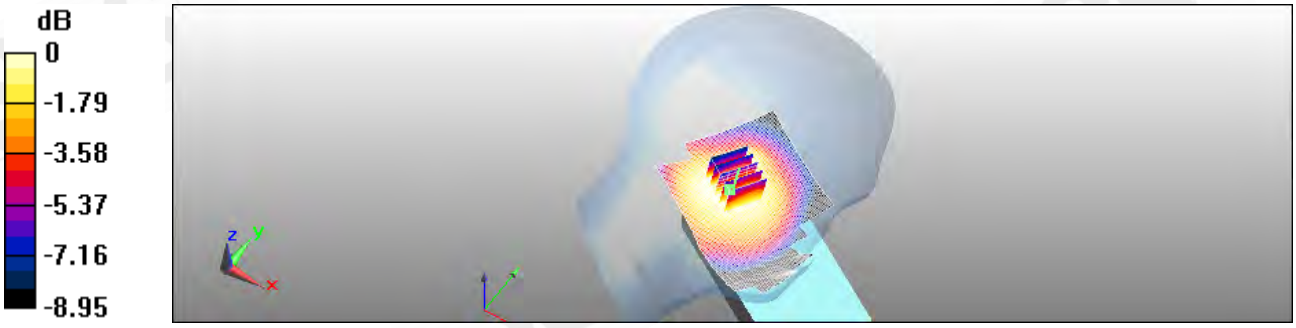
Communication System: Generic GSM; Frequency: 824.2 MHz;
Medium parameters used: f = 824.2 MHz; σ = 0.886 mho/m; ε_r = 42.6; ρ = 1000 kg/m^3
Phantom section: Left Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY5 Configuration:

- Probe: EX3DV4 - SN3703; ConvF(8.87, 8.87, 8.87); Calibrated: 12/30/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2010/5/20
- Phantom: SAM2; Type: SAM;
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

Configuration/LE Cheek/Area Scan (71x141x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.126 mW/g

Configuration/LE Cheek/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 11.6 V/m; Power Drift = -0.097 dB
Peak SAR (extrapolated) = 0.152 W/kg

SAR(1 g) = 0.117 mW/g; SAR(10 g) = 0.090 mW/g
Maximum value of SAR (measured) = 0.122 mW/g



0 dB = 0.122mW/g

Date: 2010/11/30

LE Cheek_CH190

DUT: M3 ORANGE

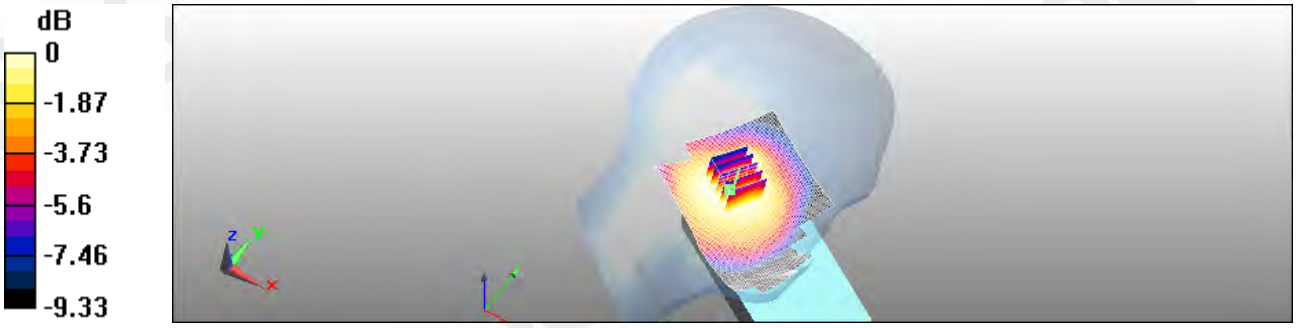
Communication System: Generic GSM; Frequency: 836.6 MHz;
Medium parameters used: f = 837 MHz; σ = 0.898 mho/m; ε_r = 42.4; ρ = 1000 kg/m^3
Phantom section: Left Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY5 Configuration:

- Probe: EX3DV4 - SN3703; ConvF(8.87, 8.87, 8.87); Calibrated: 12/30/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2010/5/20
- Phantom: SAM2; Type: SAM;
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

Configuration/LE Cheek/Area Scan (71x141x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.120 mW/g

Configuration/LE Cheek/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 10.9 V/m; Power Drift = -0.011 dB
Peak SAR (extrapolated) = 0.146 W/kg

SAR(1 g) = 0.112 mW/g; SAR(10 g) = 0.086 mW/g
Maximum value of SAR (measured) = 0.117 mW/g



0 dB = 0.117mW/g

Date: 2010/11/30

LE Cheek_CH251

DUT: M3 ORANGE

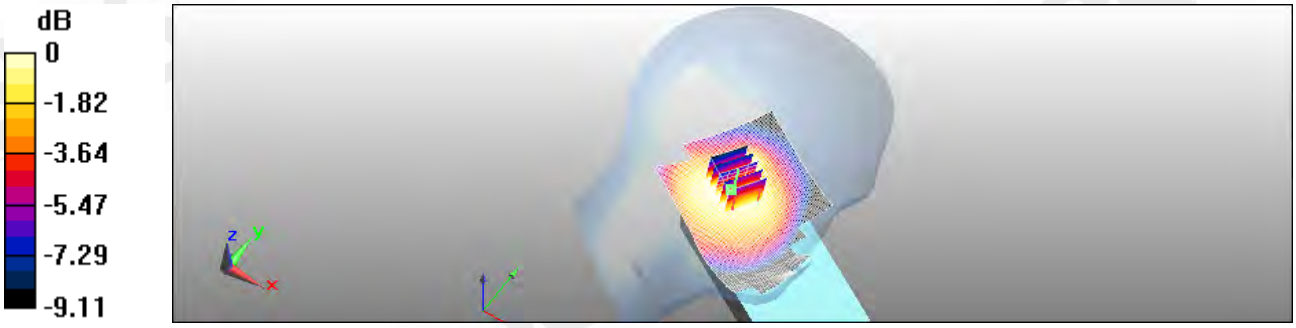
Communication System: Generic GSM; Frequency: 848.6 MHz;
Medium parameters used: f = 849 MHz; σ = 0.91 mho/m; ε_r = 42.3; ρ = 1000 kg/m^3
Phantom section: Left Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY5 Configuration:

- Probe: EX3DV4 - SN3703; ConvF(8.87, 8.87, 8.87); Calibrated: 12/30/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2010/5/20
- Phantom: SAM2; Type: SAM;
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

Configuration/LE Cheek/Area Scan (71x141x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.079 mW/g

Configuration/LE Cheek/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 8.82 V/m; Power Drift = 0.071 dB
Peak SAR (extrapolated) = 0.098 W/kg

SAR(1 g) = 0.076 mW/g; SAR(10 g) = 0.058 mW/g
Maximum value of SAR (measured) = 0.080 mW/g



0 dB = 0.080mW/g

Date: 2010/11/30

RE Tilt_CH128

DUT: M3 ORANGE

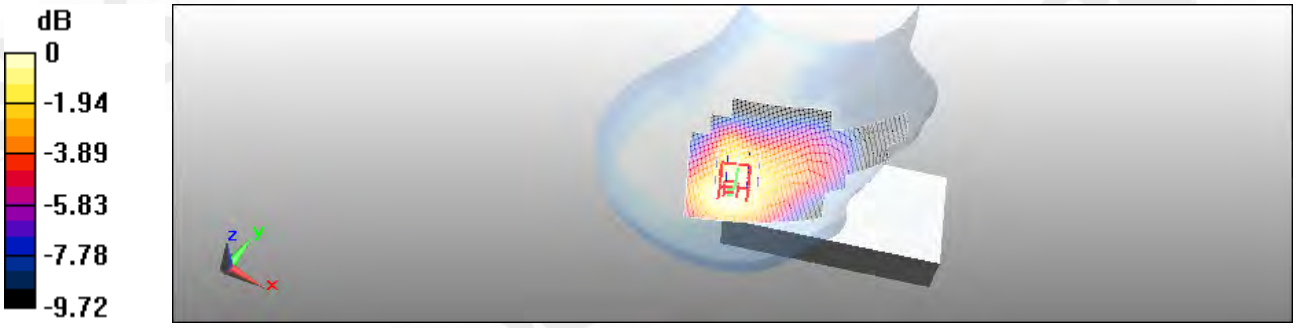
Communication System: Generic GSM; Frequency: 824.2 MHz;
Medium parameters used: f = 824.2 MHz; σ = 0.886 mho/m; ε_r = 42.6; ρ = 1000 kg/m^3
Phantom section: Right Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY5 Configuration:

- Probe: EX3DV4 - SN3703; ConvF(8.87, 8.87, 8.87); Calibrated: 12/30/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2010/5/20
- Phantom: SAM2; Type: SAM;
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

Configuration/RE Tilt/Area Scan (71x141x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.132 mW/g

Configuration/RE Tilt/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 11.2 V/m; Power Drift = -0.051 dB
Peak SAR (extrapolated) = 0.175 W/kg

SAR(1 g) = 0.123 mW/g; SAR(10 g) = 0.086 mW/g
Maximum value of SAR (measured) = 0.129 mW/g



0 dB = 0.129mW/g

Date: 2010/11/30

RE Tilt_CH190

DUT: M3 ORANGE

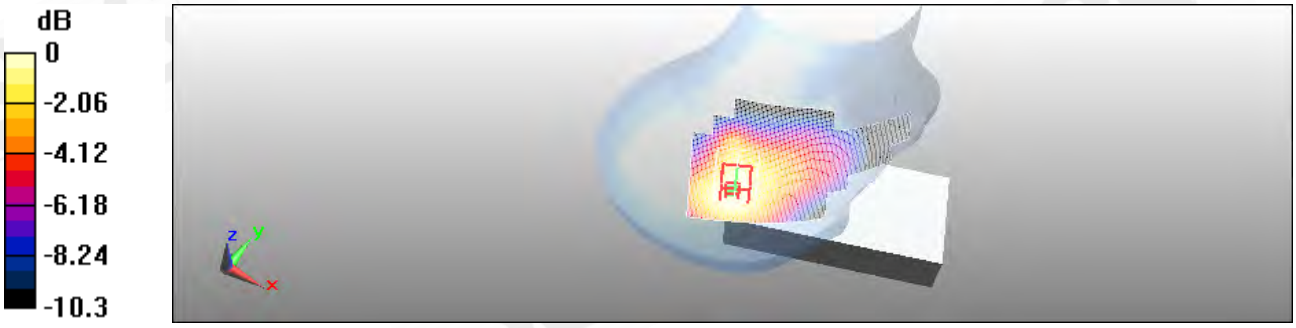
Communication System: Generic GSM; Frequency: 836.6 MHz;
Medium parameters used: f = 837 MHz; σ = 0.898 mho/m; ε_r = 42.4; ρ = 1000 kg/m^3
Phantom section: Right Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY5 Configuration:

- Probe: EX3DV4 - SN3703; ConvF(8.87, 8.87, 8.87); Calibrated: 12/30/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2010/5/20
- Phantom: SAM2; Type: SAM;
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

Configuration/RE Tilt/Area Scan (71x141x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.127 mW/g

Configuration/RE Tilt/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 10.9 V/m; Power Drift = -0.029 dB
Peak SAR (extrapolated) = 0.167 W/kg

SAR(1 g) = 0.118 mW/g; SAR(10 g) = 0.082 mW/g
Maximum value of SAR (measured) = 0.124 mW/g



0 dB = 0.124mW/g

Date: 2010/11/30

RE Tilt_CH251

DUT: M3 ORANGE

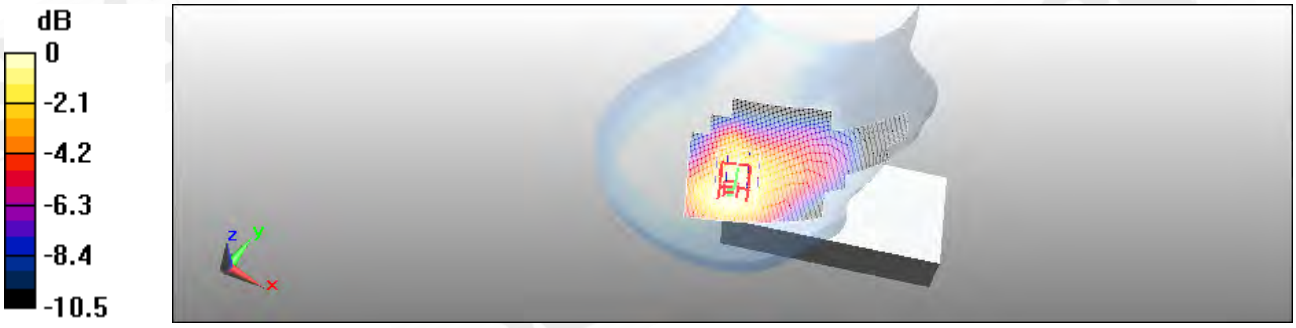
Communication System: Generic GSM; Frequency: 848.6 MHz;
Medium parameters used: f = 849 MHz; σ = 0.91 mho/m; ε_r = 42.3; ρ = 1000 kg/m^3
Phantom section: Right Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY5 Configuration:

- Probe: EX3DV4 - SN3703; ConvF(8.87, 8.87, 8.87); Calibrated: 12/30/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2010/5/20
- Phantom: SAM2; Type: SAM;
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

Configuration/RE Tilt/Area Scan (71x141x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.085 mW/g

Configuration/RE Tilt/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 8.85 V/m; Power Drift = 0.047 dB
Peak SAR (extrapolated) = 0.115 W/kg

SAR(1 g) = 0.079 mW/g; SAR(10 g) = 0.055 mW/g
Maximum value of SAR (measured) = 0.084 mW/g



0 dB = 0.084mW/g

Date: 2010/11/30

LE Tilt_CH128

DUT: M3 ORANGE

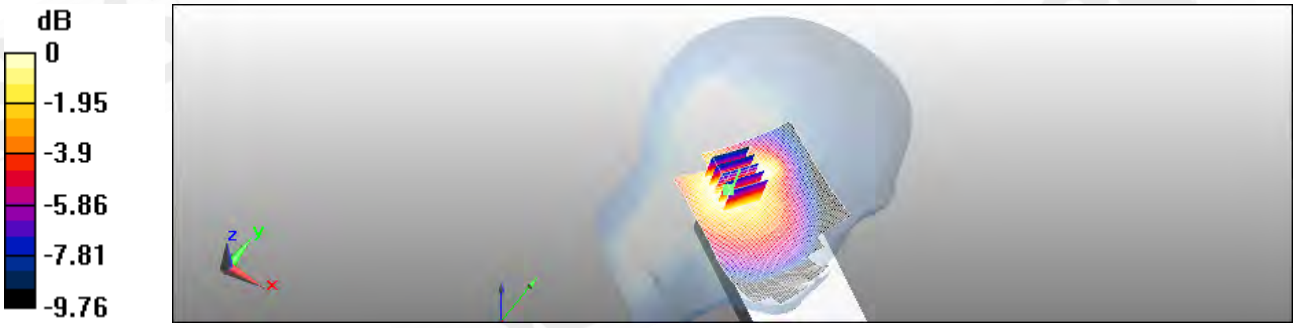
Communication System: Generic GSM; Frequency: 824.2 MHz;
Medium parameters used: f = 824.2 MHz; σ = 0.886 mho/m; ε_r = 42.6; ρ = 1000 kg/m^3
Phantom section: Left Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY5 Configuration:

- Probe: EX3DV4 - SN3703; ConvF(8.87, 8.87, 8.87); Calibrated: 12/30/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2010/5/20
- Phantom: SAM2; Type: SAM;
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

Configuration/LE Tilt/Area Scan (71x141x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.098 mW/g

Configuration/LE Tilt/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 10.1 V/m; Power Drift = -0.047 dB
Peak SAR (extrapolated) = 0.126 W/kg

SAR(1 g) = 0.091 mW/g; SAR(10 g) = 0.064 mW/g
Maximum value of SAR (measured) = 0.096 mW/g



0 dB = 0.096mW/g

Date: 2010/11/30

LE Tilt_CH190

DUT: M3 ORANGE

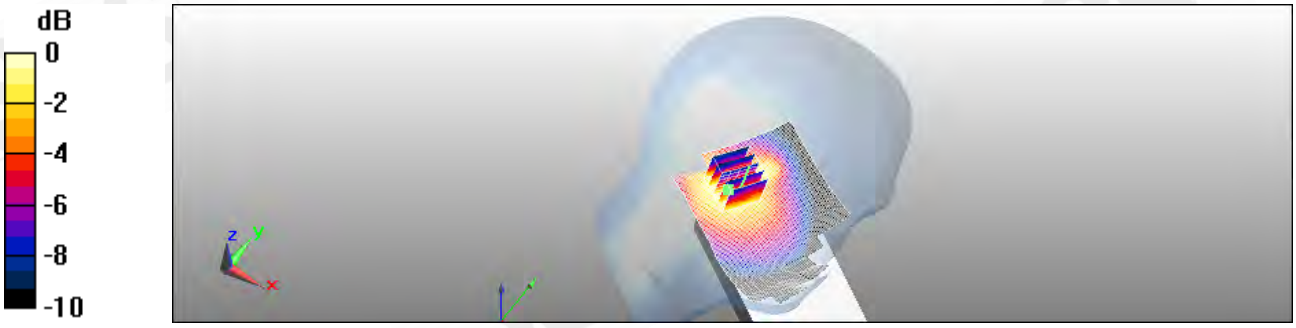
Communication System: Generic GSM; Frequency: 836.6 MHz;
Medium parameters used: f = 837 MHz; σ = 0.898 mho/m; ε_r = 42.4; ρ = 1000 kg/m^3
Phantom section: Left Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY5 Configuration:

- Probe: EX3DV4 - SN3703; ConvF(8.87, 8.87, 8.87); Calibrated: 12/30/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2010/5/20
- Phantom: SAM2; Type: SAM;
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

Configuration/LE Tilt/Area Scan (71x141x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.095 mW/g

Configuration/LE Tilt/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 9.96 V/m; Power Drift = 0.183 dB
Peak SAR (extrapolated) = 0.153 W/kg

SAR(1 g) = 0.102 mW/g; SAR(10 g) = 0.071 mW/g
Maximum value of SAR (measured) = 0.112 mW/g



0 dB = 0.112mW/g

Date: 2010/11/30

LE Tilt_CH251

DUT: M3 ORANGE

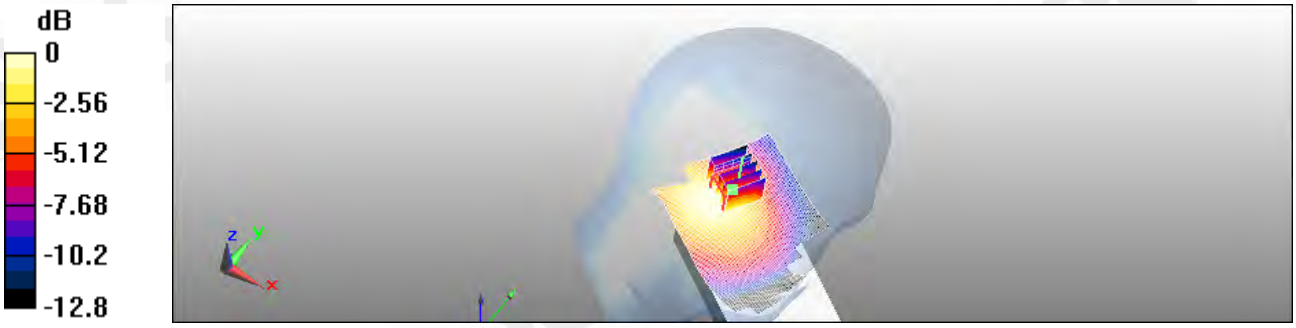
Communication System: Generic GSM; Frequency: 848.6 MHz;
Medium parameters used: f = 849 MHz; σ = 0.91 mho/m; ε_r = 42.3; ρ = 1000 kg/m^3
Phantom section: Left Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY5 Configuration:

- Probe: EX3DV4 - SN3703; ConvF(8.87, 8.87, 8.87); Calibrated: 12/30/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2010/5/20
- Phantom: SAM2; Type: SAM;
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

Configuration/LE Tilt/Area Scan (71x141x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.073 mW/g

Configuration/LE Tilt/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 8.62 V/m; Power Drift = -0.119 dB
Peak SAR (extrapolated) = 0.127 W/kg

SAR(1 g) = 0.067 mW/g; SAR(10 g) = 0.044 mW/g
Maximum value of SAR (measured) = 0.074 mW/g



0 dB = 0.074mW/g

Date: 2010/11/30

Body_CH128

DUT: M3 ORANGE

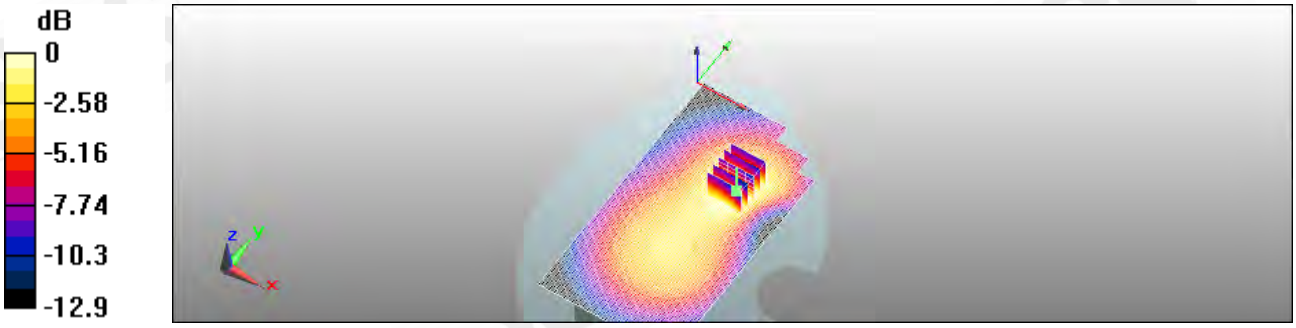
Communication System: GPRS(Class 10); Frequency: 824.2 MHz;
Medium parameters used: f = 824.2 MHz; σ = 0.994 mho/m; ε_r = 53.8; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY5 Configuration:

- Probe: EX3DV4 - SN3703; ConvF(8.74, 8.74, 8.74); Calibrated: 12/30/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2010/5/20
- Phantom: SAM2; Type: SAM;
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

Configuration/Body/Area Scan (81x151x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.407 mW/g

Configuration/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 15.6 V/m; Power Drift = -0.101 dB
Peak SAR (extrapolated) = 0.553 W/kg

SAR(1 g) = 0.376 mW/g; SAR(10 g) = 0.249 mW/g
Maximum value of SAR (measured) = 0.400 mW/g



0 dB = 0.400mW/g

Date: 2010/11/30

Body_CH190

DUT: M3 ORANGE

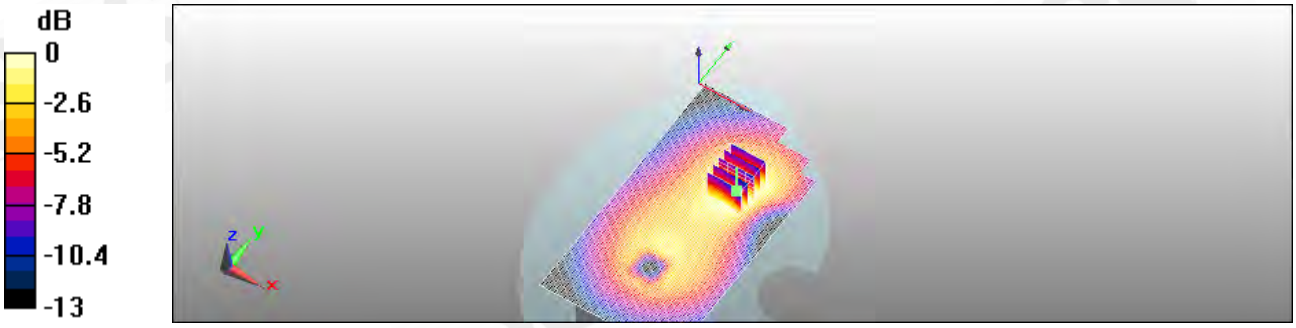
Communication System: GPRS(Class 10); Frequency: 836.6 MHz;
Medium parameters used: f = 837 MHz; σ = 1.01 mho/m; ε_r = 53.7; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY5 Configuration:

- Probe: EX3DV4 - SN3703; ConvF(8.74, 8.74, 8.74); Calibrated: 12/30/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2010/5/20
- Phantom: SAM2; Type: SAM;
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

Configuration/Body/Area Scan (81x151x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.401 mW/g

Configuration/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 14.6 V/m; Power Drift = -0.088 dB
Peak SAR (extrapolated) = 0.540 W/kg

SAR(1 g) = 0.371 mW/g; SAR(10 g) = 0.246 mW/g
Maximum value of SAR (measured) = 0.392 mW/g



0 dB = 0.392mW/g

Date: 2010/11/30

Body_CH251

DUT: M3 ORANGE

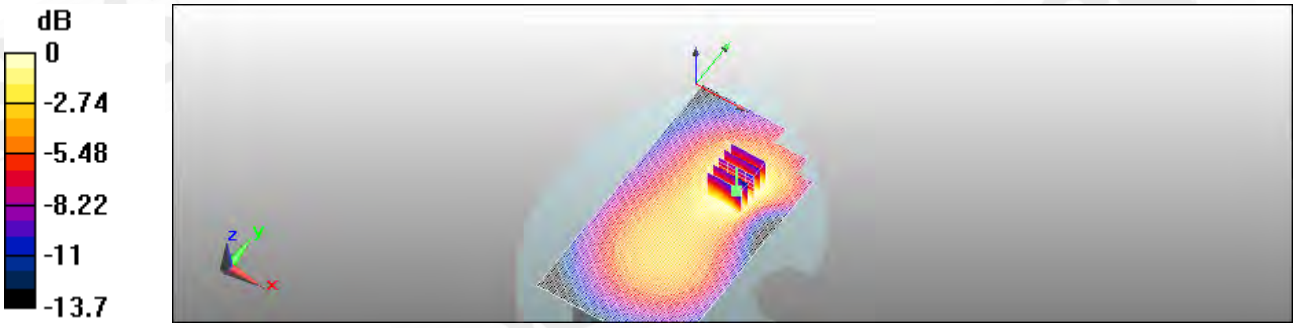
Communication System: GPRS(Class 10); Frequency: 848.8 MHz;
Medium parameters used: f = 849 MHz; σ = 1.02 mho/m; ε_r = 53.6; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY5 Configuration:

- Probe: EX3DV4 - SN3703; ConvF(8.74, 8.74, 8.74); Calibrated: 12/30/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2010/5/20
- Phantom: SAM2; Type: SAM;
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

Configuration/Body/Area Scan (81x151x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.303 mW/g

Configuration/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 12.1 V/m; Power Drift = -0.026 dB
Peak SAR (extrapolated) = 0.376 W/kg

SAR(1 g) = 0.276 mW/g; SAR(10 g) = 0.182 mW/g
Maximum value of SAR (measured) = 0.298 mW/g



0 dB = 0.298mW/g

Date: 2010/11/30

Body_CH128_repeated for EUT front to phantom

DUT: M3 ORANGE

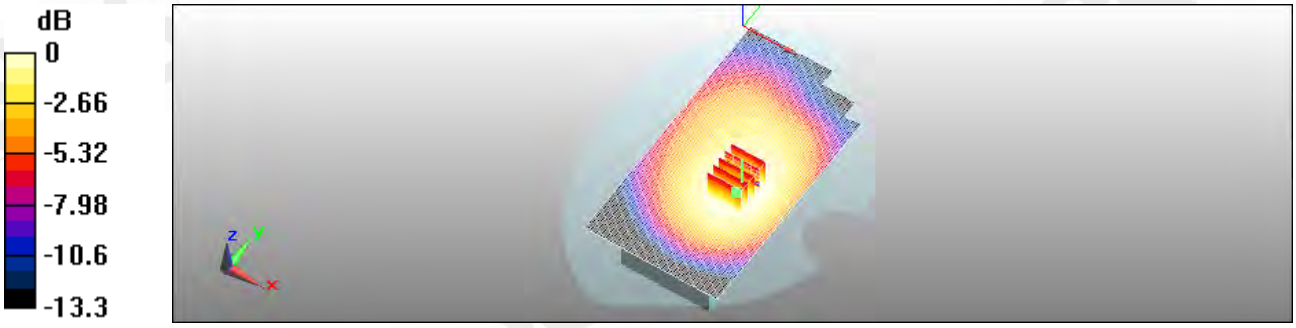
Communication System: GPRS(Class 10); Frequency: 824.2 MHz;
Medium parameters used: f = 824.2 MHz; σ = 0.994 mho/m; ε_r = 53.8; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY5 Configuration:

- Probe: EX3DV4 - SN3703; ConvF(8.74, 8.74, 8.74); Calibrated: 12/30/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2010/5/20
- Phantom: SAM2; Type: SAM;
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

Configuration/Body/Area Scan (81x151x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.166 mW/g

Configuration/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 12.2 V/m; Power Drift = -0.114 dB
Peak SAR (extrapolated) = 0.187 W/kg

SAR(1 g) = 0.153 mW/g; SAR(10 g) = 0.117 mW/g
Maximum value of SAR (measured) = 0.161 mW/g



0 dB = 0.161mW/g

Date: 2010/11/30

Body_CH128_repeated with Memory card

DUT: M3 ORANGE

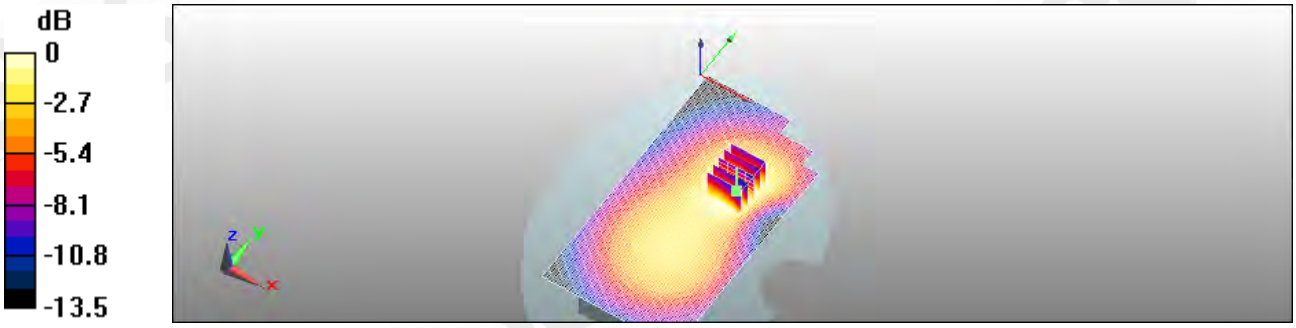
Communication System: GPRS(Class 10); Frequency: 824.2 MHz;
Medium parameters used: f = 824.2 MHz; σ = 0.994 mho/m; ε_r = 53.8; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY5 Configuration:

- Probe: EX3DV4 - SN3703; ConvF(8.74, 8.74, 8.74); Calibrated: 12/30/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2010/5/20
- Phantom: SAM2; Type: SAM;
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

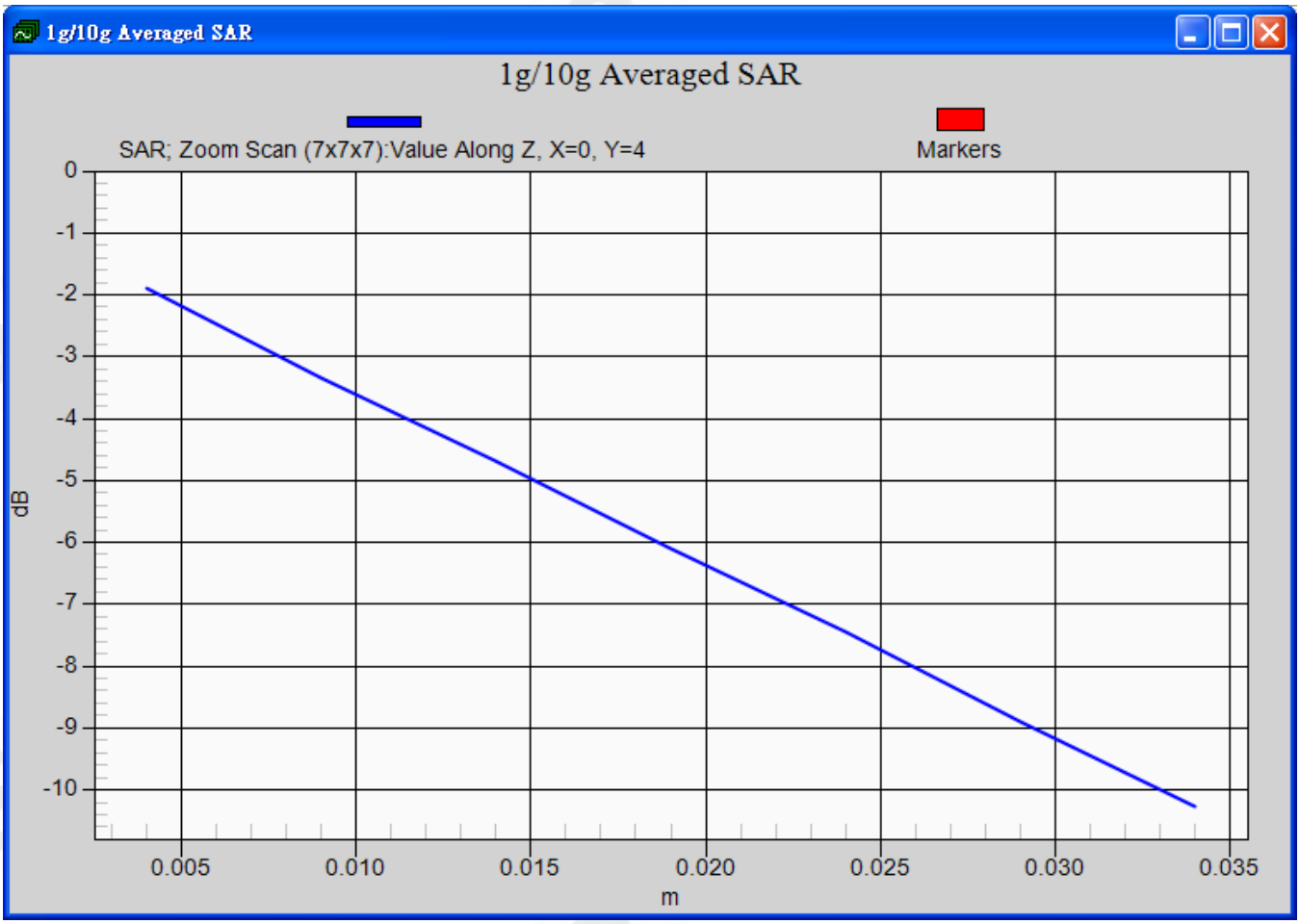
Configuration/Body/Area Scan (81x151x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.451 mW/g

Configuration/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 16.4 V/m; Power Drift = -0.073 dB
Peak SAR (extrapolated) = 0.554 W/kg

SAR(1 g) = 0.382 mW/g; SAR(10 g) = 0.255 mW/g
Maximum value of SAR (measured) = 0.408 mW/g



0 dB = 0.408mW/g



Date: 2010/11/30

Body_CH128_repeated with EGPRS mode

DUT: M3 ORANGE

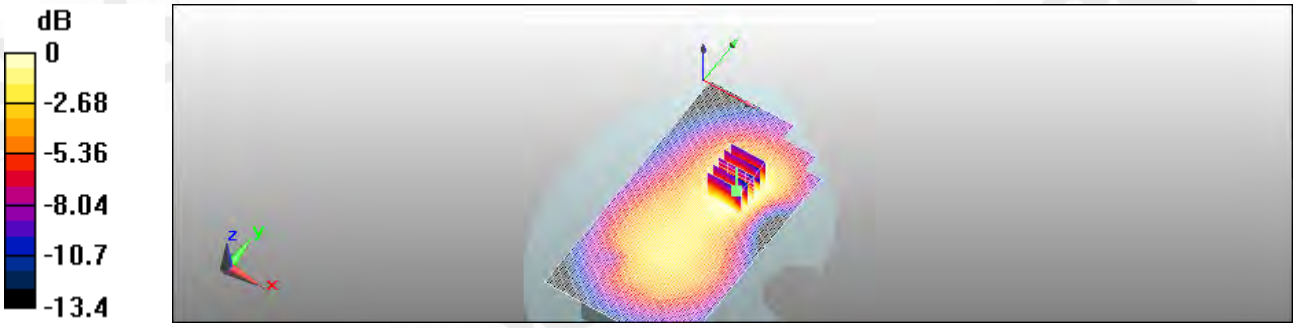
Communication System: GPRS(Class 10); Frequency: 824.2 MHz;
Medium parameters used: f = 824.2 MHz; σ = 0.994 mho/m; ε_r = 53.8; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY5 Configuration:

- Probe: EX3DV4 - SN3703; ConvF(8.74, 8.74, 8.74); Calibrated: 12/30/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2010/5/20
- Phantom: SAM2; Type: SAM;
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

Configuration/Body/Area Scan (81x151x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.112 mW/g

Configuration/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 7.99 V/m; Power Drift = -0.083 dB
Peak SAR (extrapolated) = 0.146 W/kg

SAR(1 g) = 0.101 mW/g; SAR(10 g) = 0.067 mW/g
Maximum value of SAR (measured) = 0.106 mW/g



0 dB = 0.106mW/g

Date: 2010/12/01

RE Cheek_CH512

DUT: M3 ORANGE

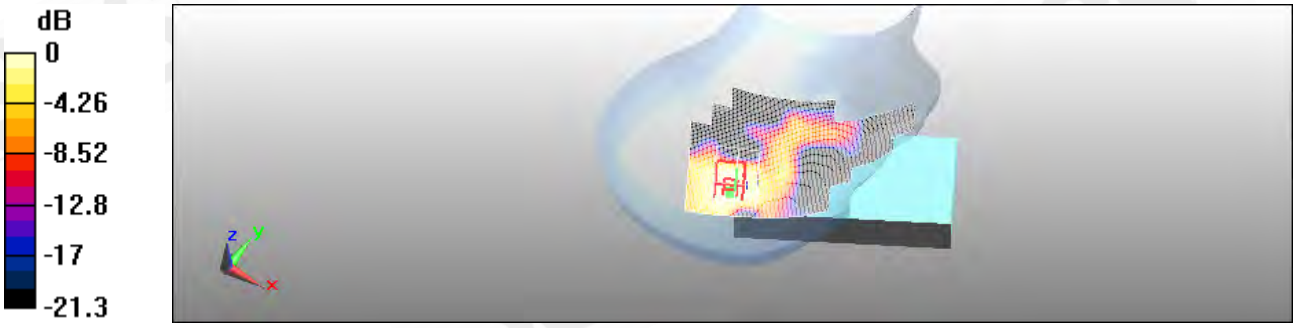
Communication System: Generic GSM; Frequency: 1850.2 MHz;
Medium parameters used: f = 1850.2 MHz; σ = 1.39 mho/m; ε_r = 40; ρ = 1000 kg/m^3
Phantom section: Right Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY5 Configuration:

- Probe: EX3DV4 - SN3703; ConvF(7.44, 7.44, 7.44); Calibrated: 12/30/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2010/5/20
- Phantom: SAM2; Type: SAM;
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

Configuration/RE Cheek/Area Scan (71x141x1): Measurement grid:
dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.056 mW/g

Configuration/RE Cheek/Zoom Scan (7x7x7)/Cube 0: Measurement grid:
dx=8mm, dy=8mm, dz=5mm
Reference Value = 4.14 V/m; Power Drift = 0.169 dB
Peak SAR (extrapolated) = 0.076 W/kg

SAR(1 g) = 0.044 mW/g; SAR(10 g) = 0.025 mW/g
Maximum value of SAR (measured) = 0.048 mW/g



0 dB = 0.048mW/g

Date: 2010/12/01

RE Cheek_CH661

DUT: M3 ORANGE

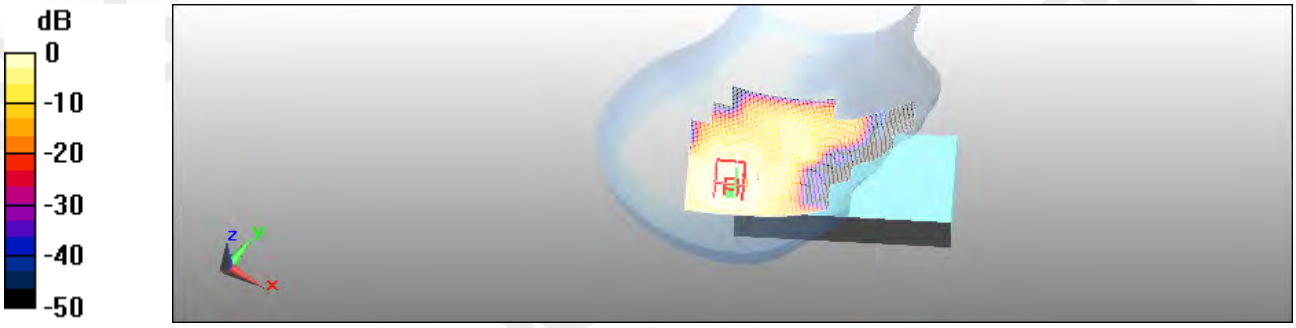
Communication System: Generic GSM; Frequency: 1880 MHz;
Medium parameters used: f = 1880 MHz; σ = 1.43 mho/m; ε_r = 39.8; ρ = 1000 kg/m^3
Phantom section: Right Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY5 Configuration:

- Probe: EX3DV4 - SN3703; ConvF(7.44, 7.44, 7.44); Calibrated: 12/30/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2010/5/20
- Phantom: SAM2; Type: SAM;
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

Configuration/RE Cheek/Area Scan (71x141x1): Measurement grid:
dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.039 mW/g

Configuration/RE Cheek/Zoom Scan (7x7x7)/Cube 0: Measurement grid:
dx=8mm, dy=8mm, dz=5mm
Reference Value = 3.91 V/m; Power Drift = 0.00194 dB
Peak SAR (extrapolated) = 0.068 W/kg

SAR(1 g) = 0.038 mW/g; SAR(10 g) = 0.021 mW/g
Maximum value of SAR (measured) = 0.041 mW/g



0 dB = 0.041mW/g

Date: 2010/12/01

RE Cheek_CH810

DUT: M3 ORANGE

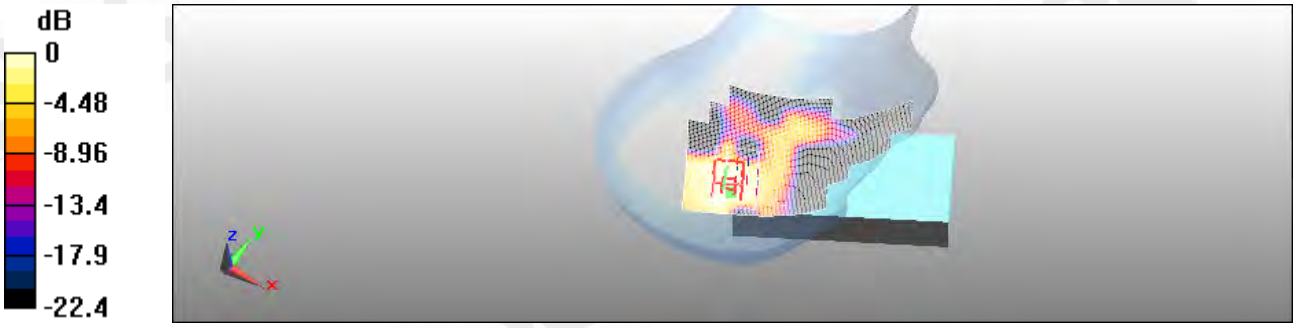
Communication System: Generic GSM; Frequency: 1909.8 MHz;
Medium parameters used: f = 1910 MHz; σ = 1.46 mho/m; ε_r = 39.5; ρ = 1000 kg/m^3
Phantom section: Right Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY5 Configuration:

- Probe: EX3DV4 - SN3703; ConvF(7.44, 7.44, 7.44); Calibrated: 12/30/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2010/5/20
- Phantom: SAM2; Type: SAM;
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

Configuration/RE Cheek/Area Scan (71x141x1): Measurement grid:
dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.045 mW/g

Configuration/RE Cheek/Zoom Scan (7x7x7)/Cube 0: Measurement grid:
dx=8mm, dy=8mm, dz=5mm
Reference Value = 3.9 V/m; Power Drift = 0.109 dB
Peak SAR (extrapolated) = 0.065 W/kg

SAR(1 g) = 0.036 mW/g; SAR(10 g) = 0.020 mW/g
Maximum value of SAR (measured) = 0.040 mW/g



0 dB = 0.040mW/g

Date: 2010/12/01

LE Cheek_CH512

DUT: M3 ORANGE

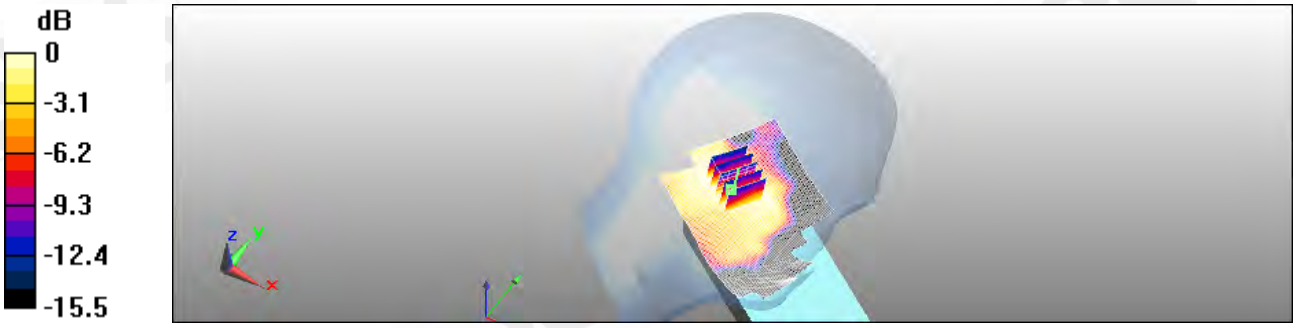
Communication System: Generic GSM; Frequency: 1850.2 MHz;
Medium parameters used: f = 1850.2 MHz; σ = 1.39 mho/m; ε_r = 40; ρ = 1000 kg/m^3
Phantom section: Left Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY5 Configuration:

- Probe: EX3DV4 - SN3703; ConvF(7.44, 7.44, 7.44); Calibrated: 12/30/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2010/5/20
- Phantom: SAM2; Type: SAM;
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

Configuration/LE Cheek/Area Scan (71x141x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.032 mW/g

Configuration/LE Cheek/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 4.97 V/m; Power Drift = -0.113 dB
Peak SAR (extrapolated) = 0.048 W/kg

SAR(1 g) = 0.030 mW/g; SAR(10 g) = 0.018 mW/g
Maximum value of SAR (measured) = 0.032 mW/g



0 dB = 0.032mW/g

Date: 2010/12/01

LE Cheek_CH661

DUT: M3 ORANGE

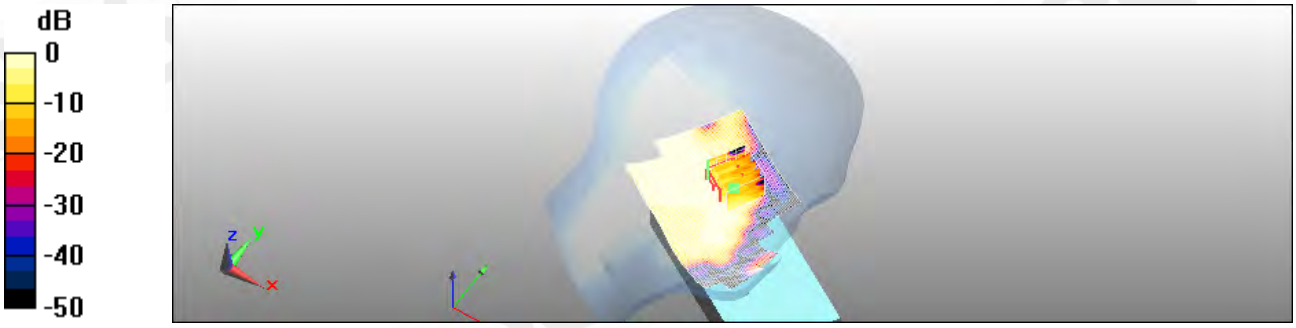
Communication System: Generic GSM; Frequency: 1880 MHz;
Medium parameters used: f = 1880 MHz; σ = 1.43 mho/m; ε_r = 39.8; ρ = 1000 kg/m^3
Phantom section: Left Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY5 Configuration:

- Probe: EX3DV4 - SN3703; ConvF(7.44, 7.44, 7.44); Calibrated: 12/30/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2010/5/20
- Phantom: SAM2; Type: SAM;
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

Configuration/LE Cheek/Area Scan (71x141x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.028 mW/g

Configuration/LE Cheek/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 3.99 V/m; Power Drift = 0.115 dB
Peak SAR (extrapolated) = 0.036 W/kg

SAR(1 g) = 0.019 mW/g; SAR(10 g) = 0.011 mW/g
Maximum value of SAR (measured) = 0.024 mW/g



0 dB = 0.024mW/g

Date: 2010/12/01

LE Cheek_CH810

DUT: M3 ORANGE

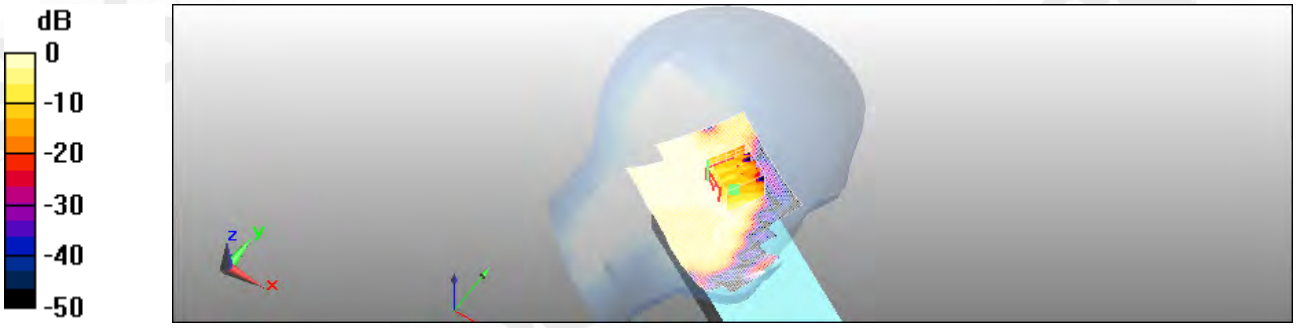
Communication System: Generic GSM; Frequency: 1909.8 MHz;
Medium parameters used: f = 1910 MHz; σ = 1.46 mho/m; ε_r = 39.5; ρ = 1000 kg/m^3
Phantom section: Left Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY5 Configuration:

- Probe: EX3DV4 - SN3703; ConvF(7.44, 7.44, 7.44); Calibrated: 12/30/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2010/5/20
- Phantom: SAM2; Type: SAM;
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

Configuration/LE Cheek/Area Scan (71x141x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.029 mW/g

Configuration/LE Cheek/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 3.94 V/m; Power Drift = 0.154 dB
Peak SAR (extrapolated) = 0.037 W/kg

SAR(1 g) = 0.020 mW/g; SAR(10 g) = 0.011 mW/g
Maximum value of SAR (measured) = 0.024 mW/g



0 dB = 0.024mW/g

Date: 2010/12/01

RE Tilt_CH512

DUT: M3 ORANGE

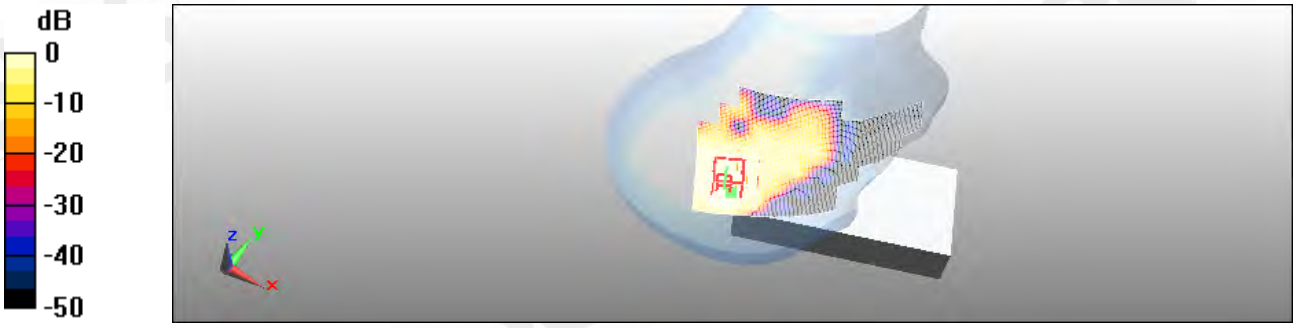
Communication System: Generic GSM; Frequency: 1850.2 MHz;
Medium parameters used: f = 1850.2 MHz; σ = 1.39 mho/m; ε_r = 40; ρ = 1000 kg/m^3
Phantom section: Right Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY5 Configuration:

- Probe: EX3DV4 - SN3703; ConvF(7.44, 7.44, 7.44); Calibrated: 12/30/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2010/5/20
- Phantom: SAM2; Type: SAM;
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

Configuration/RE Tilt/Area Scan (71x141x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.042 mW/g

Configuration/RE Tilt/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 3.95 V/m; Power Drift = -0.203 dB
Peak SAR (extrapolated) = 0.067 W/kg

SAR(1 g) = 0.038 mW/g; SAR(10 g) = 0.021 mW/g
Maximum value of SAR (measured) = 0.041 mW/g



0 dB = 0.041mW/g

Date: 2010/12/01

RE Tilt_CH661

DUT: M3 ORANGE

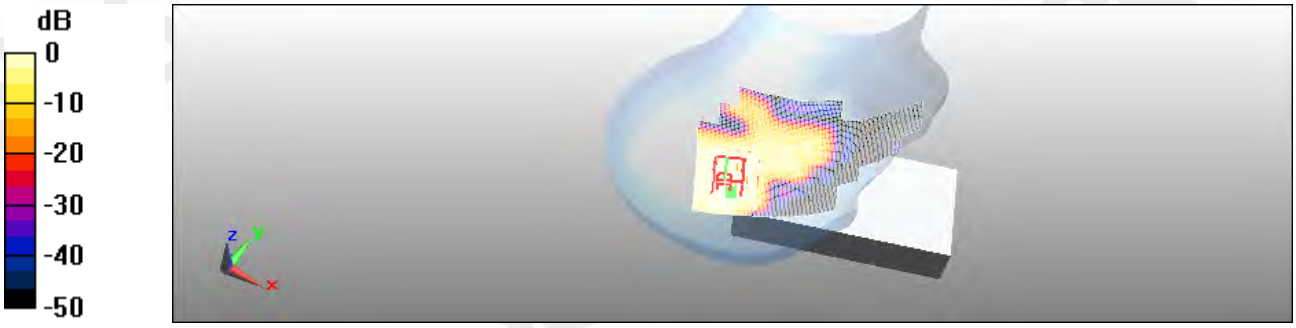
Communication System: Generic GSM; Frequency: 1880 MHz;
Medium parameters used: f = 1880 MHz; σ = 1.43 mho/m; ε_r = 39.8; ρ = 1000 kg/m^3
Phantom section: Right Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY5 Configuration:

- Probe: EX3DV4 - SN3703; ConvF(7.44, 7.44, 7.44); Calibrated: 12/30/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2010/5/20
- Phantom: SAM2; Type: SAM;
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

Configuration/RE Tilt/Area Scan (71x141x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.039 mW/g

Configuration/RE Tilt/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 3.63 V/m; Power Drift = 0.108 dB
Peak SAR (extrapolated) = 0.060 W/kg

SAR(1 g) = 0.035 mW/g; SAR(10 g) = 0.019 mW/g
Maximum value of SAR (measured) = 0.038 mW/g



0 dB = 0.038mW/g

Date: 2010/12/01

RE Tilt_CH810

DUT: M3 ORANGE

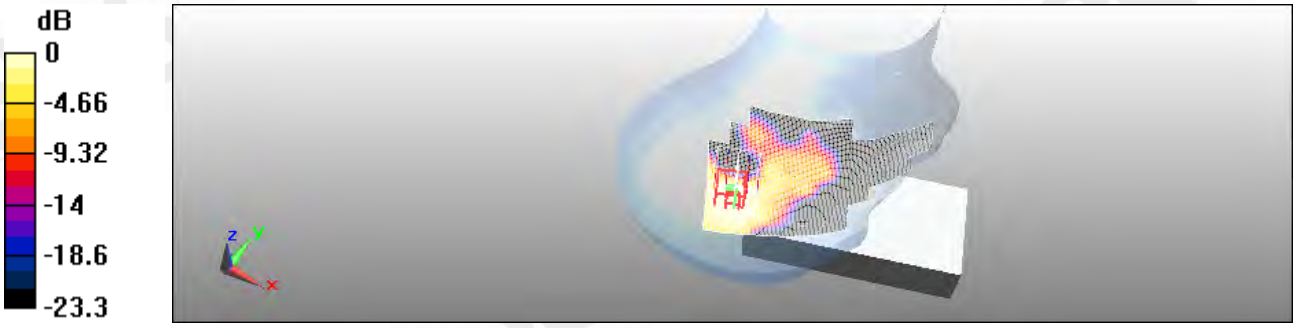
Communication System: Generic GSM; Frequency: 1909.8 MHz;
Medium parameters used: f = 1910 MHz; σ = 1.46 mho/m; ε_r = 39.5; ρ = 1000 kg/m^3
Phantom section: Right Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY5 Configuration:

- Probe: EX3DV4 - SN3703; ConvF(7.44, 7.44, 7.44); Calibrated: 12/30/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2010/5/20
- Phantom: SAM2; Type: SAM;
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

Configuration/RE Tilt/Area Scan (71x141x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.044 mW/g

Configuration/RE Tilt/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 3.64 V/m; Power Drift = 0.015 dB
Peak SAR (extrapolated) = 0.063 W/kg

SAR(1 g) = 0.034 mW/g; SAR(10 g) = 0.019 mW/g
Maximum value of SAR (measured) = 0.037 mW/g



0 dB = 0.037mW/g

Date: 2010/12/01

LE Tilt_CH512

DUT: M3 ORANGE

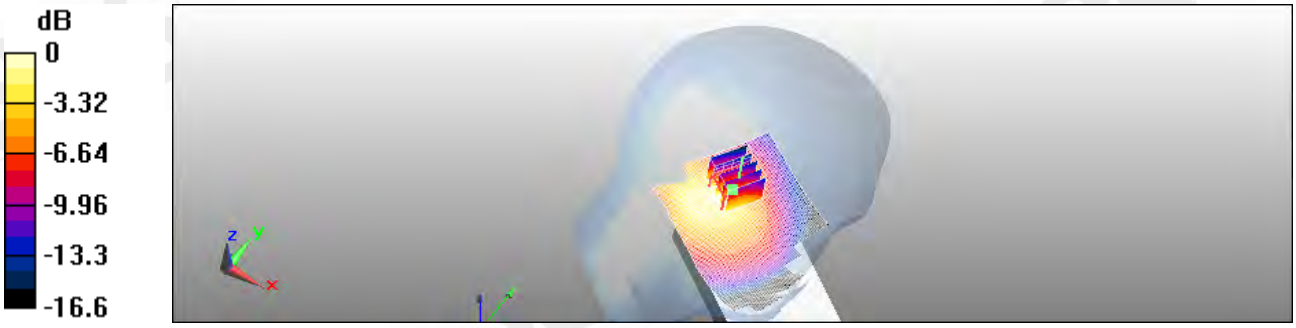
Communication System: Generic GSM; Frequency: 1850.2 MHz;
Medium parameters used: f = 1850.2 MHz; σ = 1.39 mho/m; ε_r = 40; ρ = 1000 kg/m^3
Phantom section: Left Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY5 Configuration:

- Probe: EX3DV4 - SN3703; ConvF(7.44, 7.44, 7.44); Calibrated: 12/30/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2010/5/20
- Phantom: SAM2; Type: SAM;
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

Configuration/LE Tilt/Area Scan (71x141x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.033 mW/g

Configuration/LE Tilt/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 4.63 V/m; Power Drift = -0.020 dB
Peak SAR (extrapolated) = 0.049 W/kg

SAR(1 g) = 0.031 mW/g; SAR(10 g) = 0.019 mW/g
Maximum value of SAR (measured) = 0.033 mW/g



0 dB = 0.033mW/g

Date: 2010/12/01

LE Tilt_CH661

DUT: M3 ORANGE

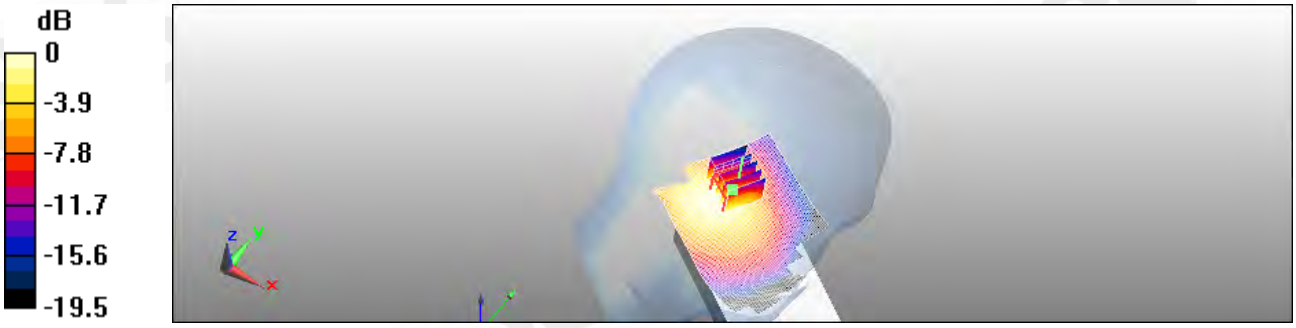
Communication System: Generic GSM; Frequency: 1880 MHz;
Medium parameters used: f = 1880 MHz; σ = 1.43 mho/m; ε_r = 39.8; ρ = 1000 kg/m^3
Phantom section: Left Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY5 Configuration:

- Probe: EX3DV4 - SN3703; ConvF(7.44, 7.44, 7.44); Calibrated: 12/30/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2010/5/20
- Phantom: SAM2; Type: SAM;
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

Configuration/LE Tilt/Area Scan (71x141x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.028 mW/g

Configuration/LE Tilt/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 4.27 V/m; Power Drift = -0.142 dB
Peak SAR (extrapolated) = 0.042 W/kg

SAR(1 g) = 0.026 mW/g; SAR(10 g) = 0.016 mW/g
Maximum value of SAR (measured) = 0.028 mW/g



0 dB = 0.028mW/g

Date: 2010/12/01

LE Tilt_CH810

DUT: M3 ORANGE

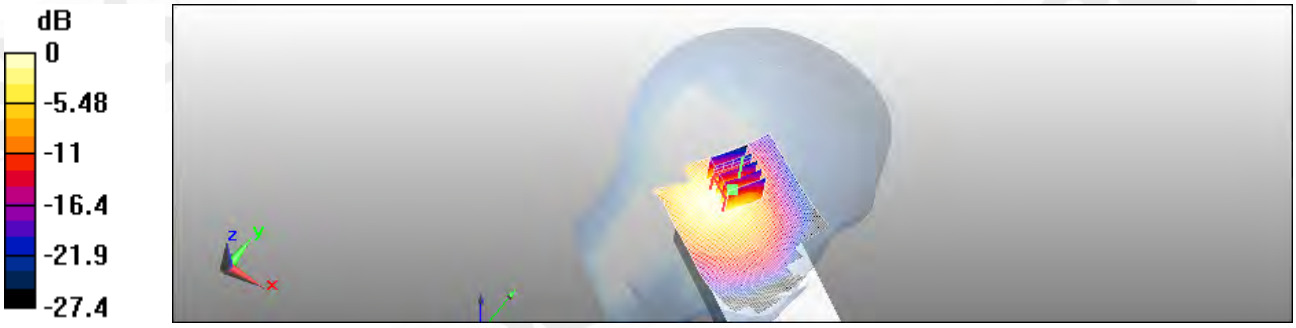
Communication System: Generic GSM; Frequency: 1909.8 MHz;
Medium parameters used: f = 1910 MHz; σ = 1.46 mho/m; ε_r = 39.5; ρ = 1000 kg/m^3
Phantom section: Left Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY5 Configuration:

- Probe: EX3DV4 - SN3703; ConvF(7.44, 7.44, 7.44); Calibrated: 12/30/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2010/5/20
- Phantom: SAM2; Type: SAM;
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

Configuration/LE Tilt/Area Scan (71x141x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.031 mW/g

Configuration/LE Tilt/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 3.95 V/m; Power Drift = 0.094 dB
Peak SAR (extrapolated) = 0.048 W/kg

SAR(1 g) = 0.029 mW/g; SAR(10 g) = 0.017 mW/g
Maximum value of SAR (measured) = 0.031 mW/g



0 dB = 0.031mW/g

Date: 2010/12/01

Body_CH512

DUT: M3 ORANGE

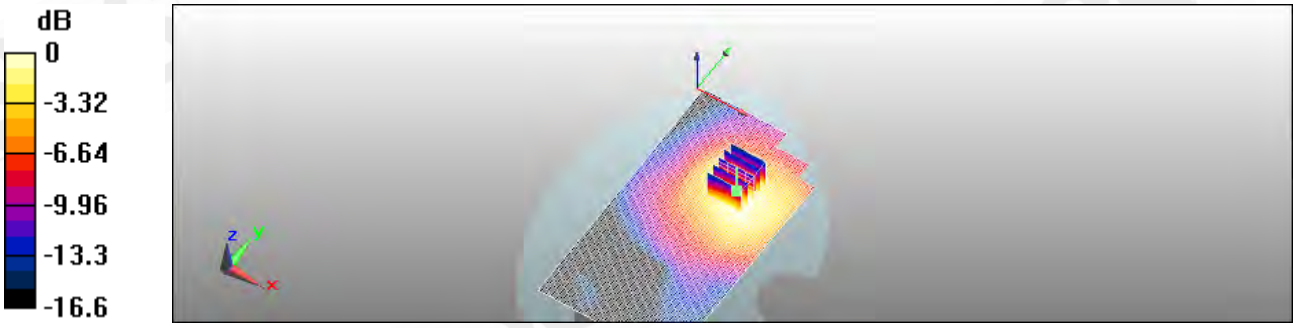
Communication System: GPRS(Class 10); Frequency: 1850.2 MHz;
Medium parameters used: f = 1850.2 MHz; σ = 1.5 mho/m; ε_r = 52.9; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY5 Configuration:

- Probe: EX3DV4 - SN3703; ConvF(7.26, 7.26, 7.26); Calibrated: 12/30/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2010/5/20
- Phantom: SAM2; Type: SAM;
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

Configuration/Body/Area Scan (81x151x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.147 mW/g

Configuration/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 4.12 V/m; Power Drift = -0.130 dB
Peak SAR (extrapolated) = 0.218 W/kg

SAR(1 g) = 0.137 mW/g; SAR(10 g) = 0.083 mW/g
Maximum value of SAR (measured) = 0.150 mW/g



0 dB = 0.150mW/g

Date: 2010/12/01

Body_CH661

DUT: M3 ORANGE

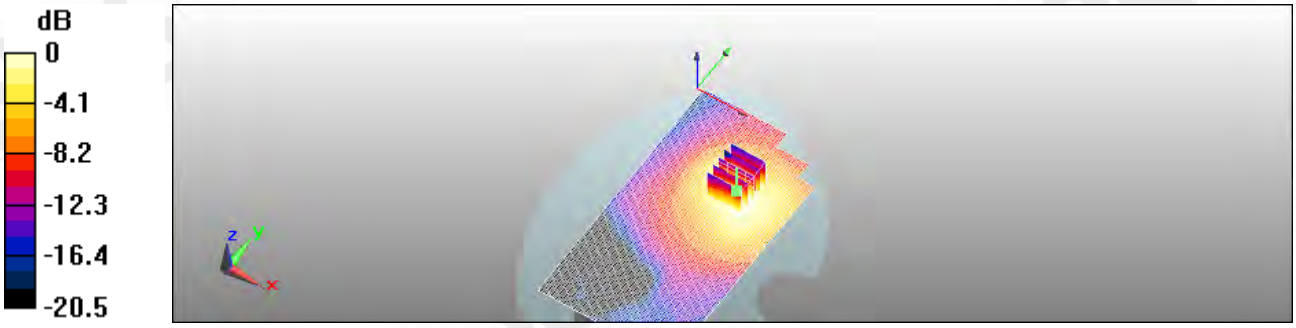
Communication System: GPRS(Class 10); Frequency: 1880 MHz;
Medium parameters used: f = 1880 MHz; σ = 1.54 mho/m; ε_r = 52.8; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY5 Configuration:

- Probe: EX3DV4 - SN3703; ConvF(7.26, 7.26, 7.26); Calibrated: 12/30/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2010/5/20
- Phantom: SAM2; Type: SAM;
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

Configuration/Body/Area Scan (81x151x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.136 mW/g

Configuration/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 3.54 V/m; Power Drift = 0.112 dB
Peak SAR (extrapolated) = 0.213 W/kg

SAR(1 g) = 0.128 mW/g; SAR(10 g) = 0.077 mW/g
Maximum value of SAR (measured) = 0.141 mW/g



0 dB = 0.141mW/g

Date: 2010/12/01

Body_CH810

DUT: M3 ORANGE

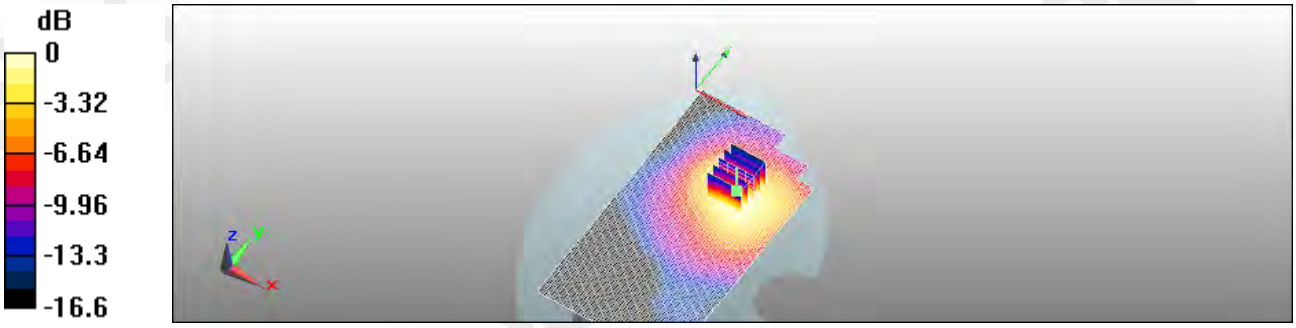
Communication System: GPRS(Class 10); Frequency: 1909.8 MHz;
Medium parameters used: f = 1910 MHz; σ = 1.55 mho/m; ε_r = 52.9; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY5 Configuration:

- Probe: EX3DV4 - SN3703; ConvF(7.26, 7.26, 7.26); Calibrated: 12/30/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2010/5/20
- Phantom: SAM2; Type: SAM;
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

Configuration/Body/Area Scan (81x151x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.157 mW/g

Configuration/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 3.48 V/m; Power Drift = -0.150 dB
Peak SAR (extrapolated) = 0.229 W/kg

SAR(1 g) = 0.145 mW/g; SAR(10 g) = 0.087 mW/g
Maximum value of SAR (measured) = 0.159 mW/g



0 dB = 0.159mW/g

Date: 2010/12/03

Body_WLAN802.11 b_CH1

DUT: M3 ORANGE

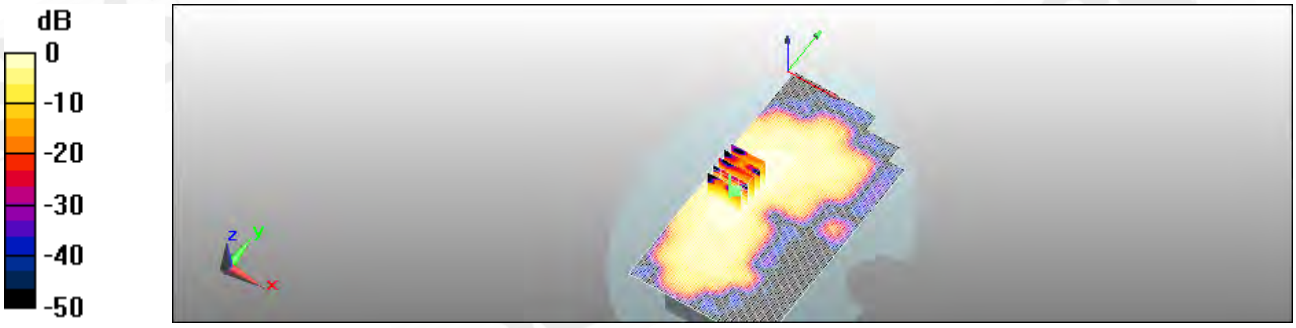
Communication System: WLAN802.11 b & g & n(20M)(40M); Frequency: 2412 MHz;
Medium parameters used: f = 2412 MHz; σ = 1.93 mho/m; ε_r = 53; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY5 Configuration:

- Probe: EX3DV4 - SN3703; ConvF(6.95, 6.95, 6.95); Calibrated: 12/30/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2010/5/20
- Phantom: SAM2; Type: SAM;
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

Configuration/Body/Area Scan (81x151x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.036 mW/g

Configuration/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 0.716 V/m; Power Drift = 0.12 dB
Peak SAR (extrapolated) = 0.057 W/kg

SAR(1 g) = 0.035 mW/g; SAR(10 g) = 0.018 mW/g
Maximum value of SAR (measured) = 0.041 mW/g



0 dB = 0.041mW/g

Date: 2010/12/03

Body_WLAN802.11 b_CH6

DUT: M3 ORANGE

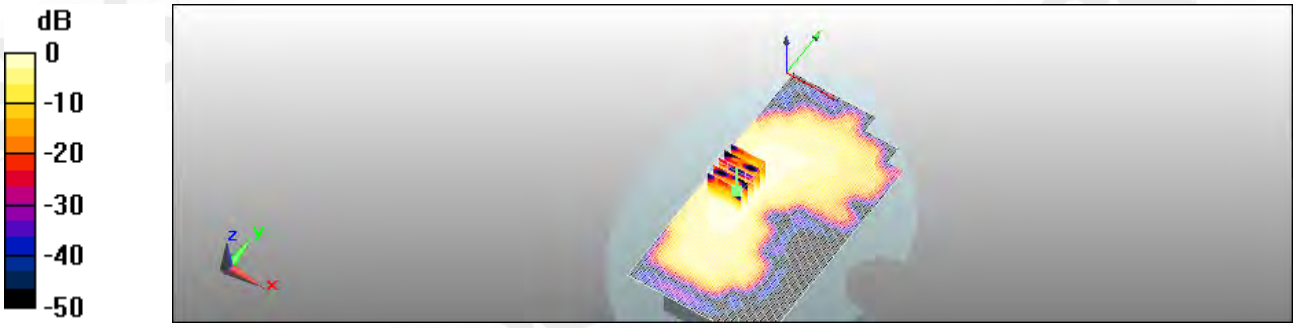
Communication System: WLAN802.11 b & g & n(20M)(40M); Frequency: 2437 MHz;
Medium parameters used: f = 2437 MHz; σ = 1.95 mho/m; ε_r = 52.8; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY5 Configuration:

- Probe: EX3DV4 - SN3703; ConvF(6.95, 6.95, 6.95); Calibrated: 12/30/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2010/5/20
- Phantom: SAM2; Type: SAM;
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

Configuration/Body/Area Scan (81x151x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.039 mW/g

Configuration/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 1.23 V/m; Power Drift = -0.178 dB
Peak SAR (extrapolated) = 0.064 W/kg

SAR(1 g) = 0.035 mW/g; SAR(10 g) = 0.018 mW/g
Maximum value of SAR (measured) = 0.039 mW/g



0 dB = 0.039mW/g

Date: 2010/12/03

Body_WLAN802.11 b_CH11

DUT: M3 ORANGE

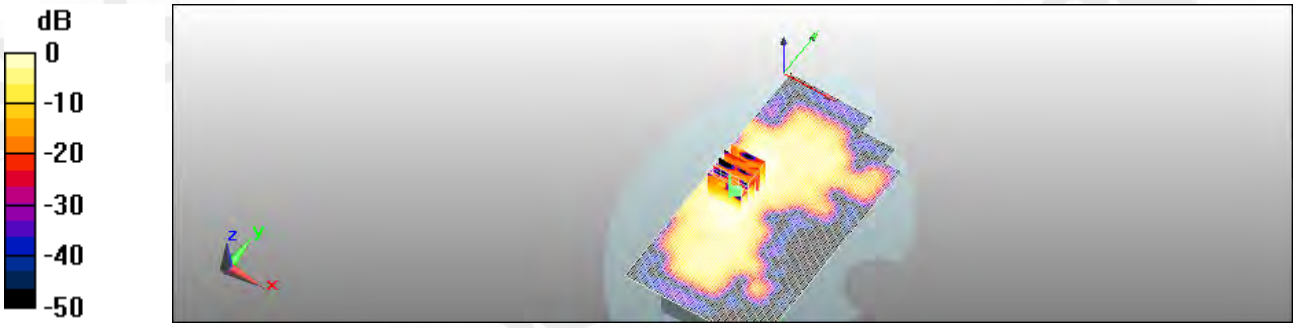
Communication System: WLAN802.11 b & g & n(20M)(40M); Frequency: 2462 MHz;
Medium parameters used: f = 2462 MHz; σ = 1.98 mho/m; ε_r = 52.2; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY5 Configuration:

- Probe: EX3DV4 - SN3703; ConvF(6.95, 6.95, 6.95); Calibrated: 12/30/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2010/5/20
- Phantom: SAM2; Type: SAM;
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

Configuration/Body/Area Scan (81x151x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.037 mW/g

Configuration/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 1.88 V/m; Power Drift = -0.037 dB
Peak SAR (extrapolated) = 0.081 W/kg

SAR(1 g) = 0.033 mW/g; SAR(10 g) = 0.016 mW/g
Maximum value of SAR (measured) = 0.039 mW/g



0 dB = 0.039mW/g

Date: 2010/12/03

Body_WLAN802.11 g_CH1

DUT: M3 ORANGE

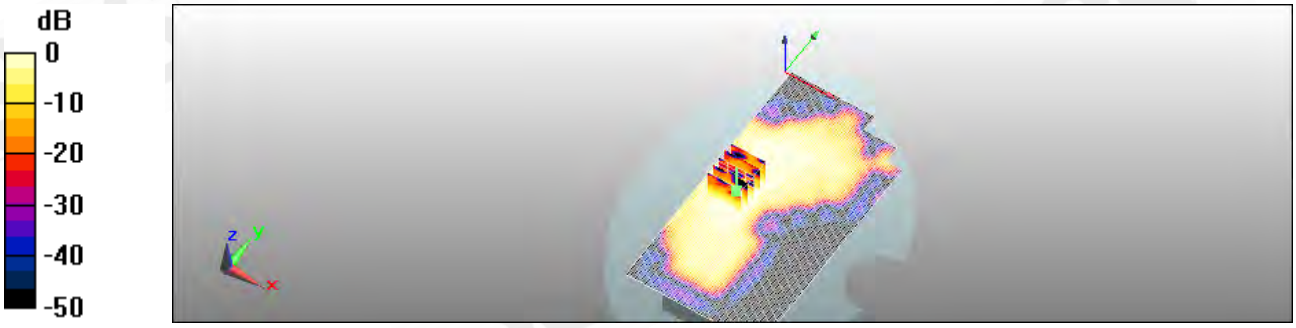
Communication System: WLAN802.11 b & g & n(20M)(40M); Frequency: 2412 MHz;
Medium parameters used: f = 2412 MHz; σ = 1.93 mho/m; ε_r = 53; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY5 Configuration:

- Probe: EX3DV4 - SN3703; ConvF(6.95, 6.95, 6.95); Calibrated: 12/30/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2010/5/20
- Phantom: SAM2; Type: SAM;
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

Configuration/Body/Area Scan (81x151x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.028 mW/g

Configuration/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 0.789 V/m; Power Drift = 0.08 dB
Peak SAR (extrapolated) = 0.042 W/kg

SAR(1 g) = 0.024 mW/g; SAR(10 g) = 0.012 mW/g
Maximum value of SAR (measured) = 0.028 mW/g



0 dB = 0.028mW/g

Date: 2010/12/03

Body_WLAN802.11 g_CH6

DUT: M3 ORANGE

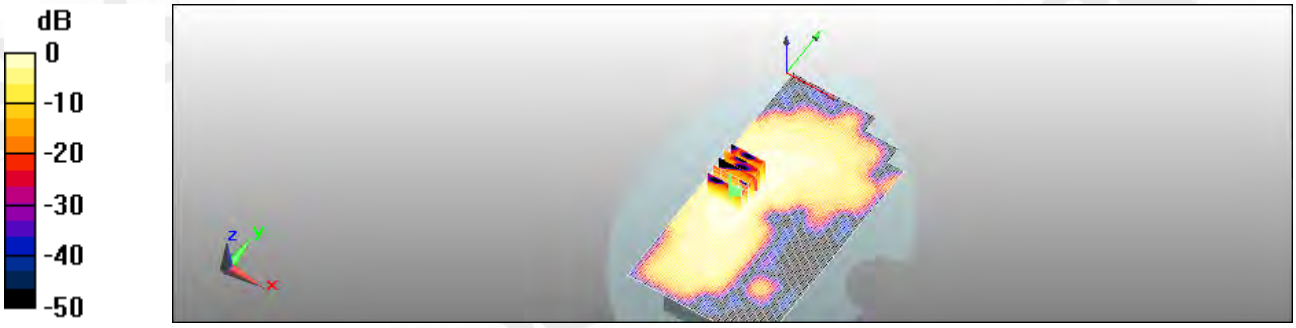
Communication System: WLAN802.11 b & g & n(20M)(40M); Frequency: 2437 MHz;
Medium parameters used: f = 2437 MHz; σ = 1.95 mho/m; ε_r = 52.8; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY5 Configuration:

- Probe: EX3DV4 - SN3703; ConvF(6.95, 6.95, 6.95); Calibrated: 12/30/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2010/5/20
- Phantom: SAM2; Type: SAM;
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

Configuration/Body/Area Scan (81x151x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.037 mW/g

Configuration/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 1.18 V/m; Power Drift = -0.11 dB
Peak SAR (extrapolated) = 0.056 W/kg

SAR(1 g) = 0.032 mW/g; SAR(10 g) = 0.017 mW/g
Maximum value of SAR (measured) = 0.036 mW/g



0 dB = 0.036mW/g

Date: 2010/12/03

Body_WLAN802.11 g_CH11

DUT: M3 ORANGE

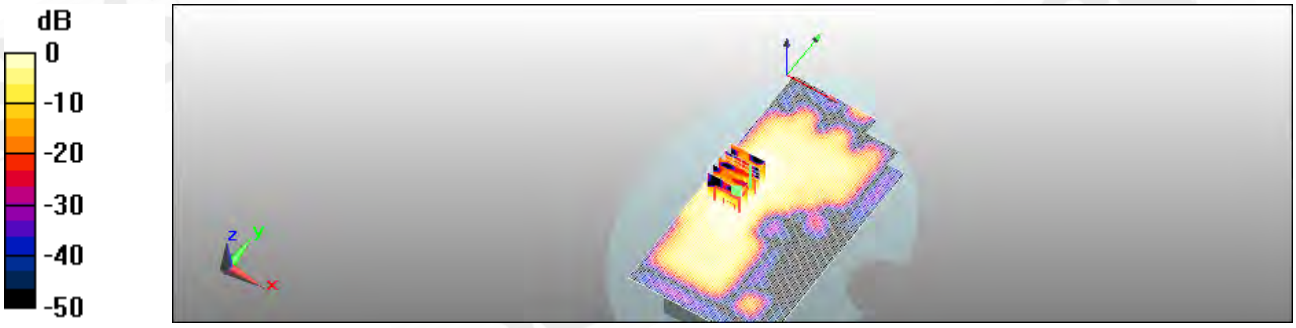
Communication System: WLAN802.11 b & g & n(20M)(40M); Frequency: 2462 MHz;
Medium parameters used: f = 2462 MHz; σ = 1.98 mho/m; ε_r = 52.2; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY5 Configuration:

- Probe: EX3DV4 - SN3703; ConvF(6.95, 6.95, 6.95); Calibrated: 12/30/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2010/5/20
- Phantom: SAM2; Type: SAM;
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

Configuration/Body/Area Scan (81x151x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.035 mW/g

Configuration/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 1.02 V/m; Power Drift = -0.025 dB
Peak SAR (extrapolated) = 0.111 W/kg

SAR(1 g) = 0.030 mW/g; SAR(10 g) = 0.015 mW/g
Maximum value of SAR (measured) = 0.032 mW/g



0 dB = 0.032mW/g

Date: 2010/12/03

Body_WLAN802.11 a_CH36

DUT: M3 ORANGE

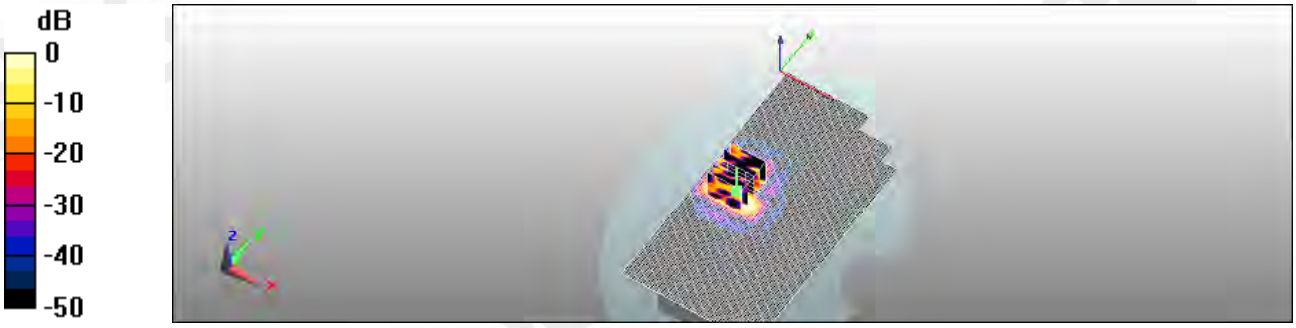
Communication System: WLAN 802.11n/a(5G) FCC; Frequency: 5180 MHz;
Medium parameters used: f = 5180 MHz; σ = 5.33 mho/m; ε_r = 48.8; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY5 Configuration:

- Probe: EX3DV4 - SN3703; ConvF(3.99, 3.99, 3.99); Calibrated: 12/30/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2010/5/20
- Phantom: SAM2; Type: SAM;
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

Configuration/Body/Area Scan (81x151x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.054 mW/g

Configuration/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 2.38 V/m; Power Drift = -0.025 dB
Peak SAR (extrapolated) = 0.136 W/kg

SAR(1 g) = 0.028 mW/g; SAR(10 g) = 0.00691 mW/g
Maximum value of SAR (measured) = 0.032 mW/g



0 dB = 0.032mW/g

Date: 2010/12/03

Body_WLAN802.11 a_CH40

DUT: M3 ORANGE

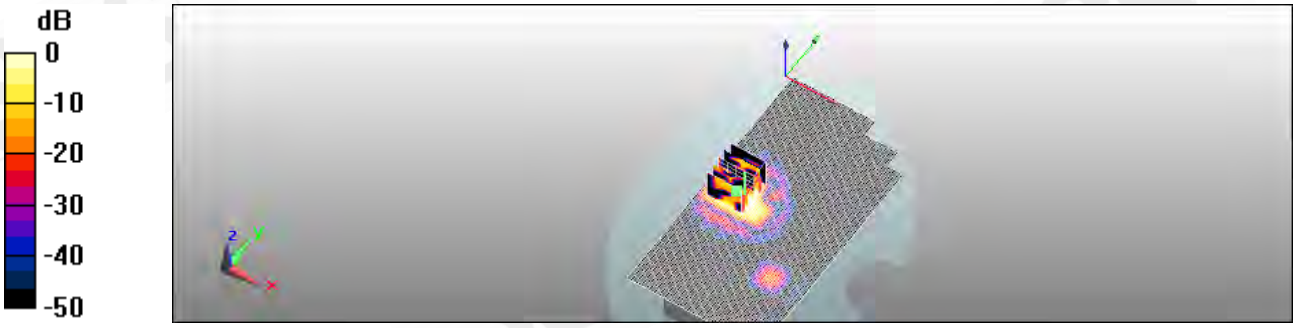
Communication System: WLAN 802.11n/a(5G) FCC; Frequency: 5200 MHz;
Medium parameters used: f = 5200 MHz; σ = 5.35 mho/m; ε_r = 48.8; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY5 Configuration:

- Probe: EX3DV4 - SN3703; ConvF(3.99, 3.99, 3.99); Calibrated: 12/30/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2010/5/20
- Phantom: SAM2; Type: SAM;
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

Configuration/Body/Area Scan (81x151x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.048 mW/g

Configuration/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 1.18 V/m; Power Drift = 0.190 dB
Peak SAR (extrapolated) = 0.238 W/kg

SAR(1 g) = 0.051 mW/g; SAR(10 g) = 0.020 mW/g
Maximum value of SAR (measured) = 0.042 mW/g



0 dB = 0.042mW/g

Date: 2010/12/03

Body_WLAN802.11a_CH48

DUT: M3 ORANGE

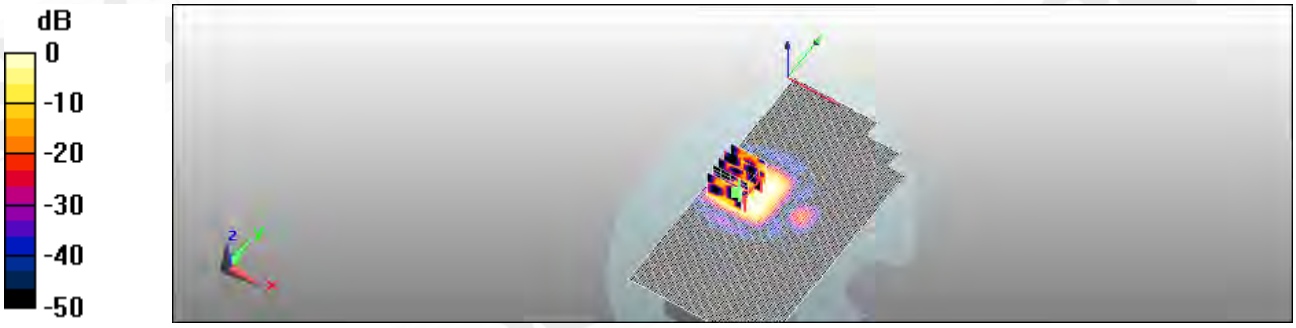
Communication System: WLAN 802.11n/a(5G) FCC; Frequency: 5240 MHz;
Medium parameters used: f = 5240 MHz; σ = 5.42 mho/m; ε_r = 48.7; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY5 Configuration:

- Probe: EX3DV4 - SN3703; ConvF(3.99, 3.99, 3.99); Calibrated: 12/30/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2010/5/20
- Phantom: SAM2; Type: SAM;
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

Configuration/Body/Area Scan (81x151x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.139 mW/g

Configuration/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 0.976 V/m; Power Drift = 0.136 dB
Peak SAR (extrapolated) = 0.254 W/kg

SAR(1 g) = 0.054 mW/g; SAR(10 g) = 0.022 mW/g
Maximum value of SAR (measured) = 0.042 mW/g



0 dB = 0.042mW/g

Date: 2010/12/03

Body_WLAN802.11a_CH52

DUT: M3 ORANGE

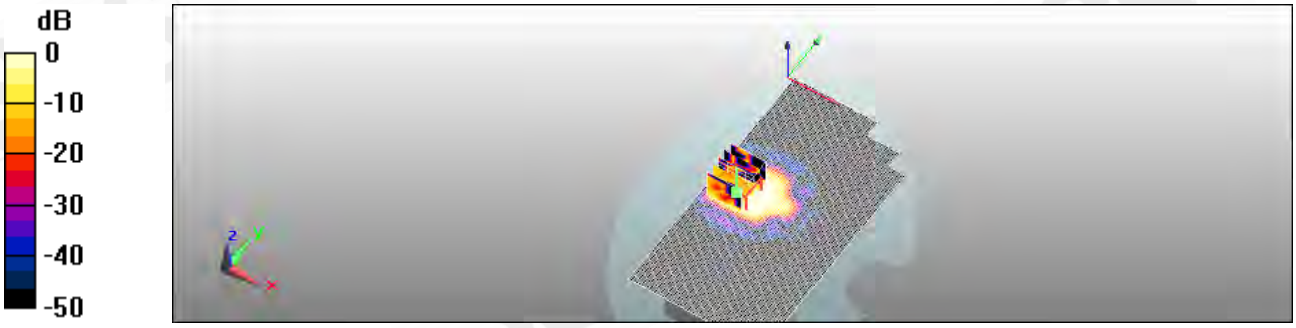
Communication System: WLAN 802.11n/a(5G) FCC; Frequency: 5260 MHz;
Medium parameters used: f = 5260 MHz; σ = 5.42 mho/m; ε_r = 48.7; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY5 Configuration:

- Probe: EX3DV4 - SN3703; ConvF(3.77, 3.77, 3.77); Calibrated: 12/30/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2010/5/20
- Phantom: SAM2; Type: SAM;
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

Configuration/Body/Area Scan (81x151x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.161 mW/g

Configuration/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 1.27 V/m; Power Drift = 0.136 dB
Peak SAR (extrapolated) = 0.277 W/kg

SAR(1 g) = 0.059 mW/g; SAR(10 g) = 0.025 mW/g
Maximum value of SAR (measured) = 0.046 mW/g



0 dB = 0.046mW/g

Date: 2010/12/03

Body_WLAN802.11a_CH60

DUT: M3 ORANGE

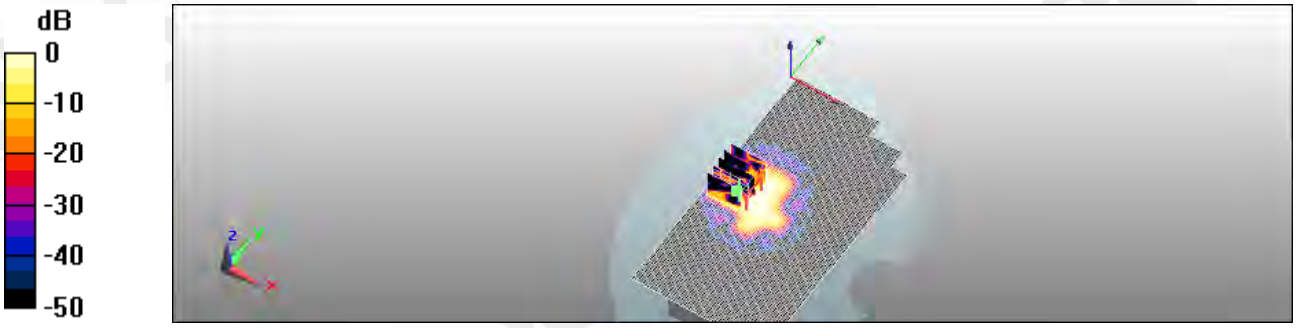
Communication System: WLAN 802.11n/a(5G) FCC; Frequency: 5300 MHz;
Medium parameters used: f = 5300 MHz; σ = 5.49 mho/m; ε_r = 48.6; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY5 Configuration:

- Probe: EX3DV4 - SN3703; ConvF(3.77, 3.77, 3.77); Calibrated: 12/30/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2010/5/20
- Phantom: SAM2; Type: SAM;
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

Configuration/Body/Area Scan (81x151x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.133 mW/g

Configuration/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 1.37 V/m; Power Drift = 0.107 dB
Peak SAR (extrapolated) = 0.344 W/kg

SAR(1 g) = 0.074 mW/g; SAR(10 g) = 0.030 mW/g
Maximum value of SAR (measured) = 0.057 mW/g



0 dB = 0.057mW/g

Date: 2010/12/03

Body_WLAN802.11a_CH64

DUT: M3 ORANGE

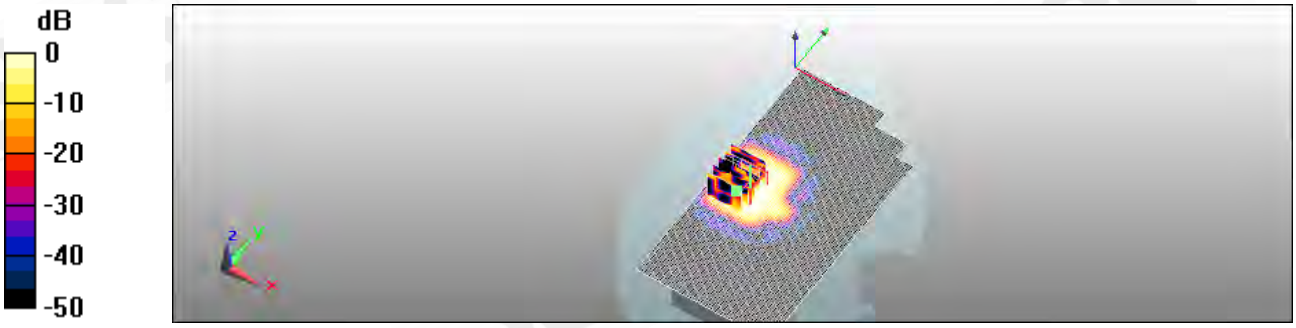
Communication System: WLAN 802.11n/a(5G) FCC; Frequency: 5320 MHz;
Medium parameters used: f = 5320 MHz; σ = 5.51 mho/m; ε_r = 48.5; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY5 Configuration:

- Probe: EX3DV4 - SN3703; ConvF(3.77, 3.77, 3.77); Calibrated: 12/30/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2010/5/20
- Phantom: SAM2; Type: SAM;
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

Configuration/Body/Area Scan (81x151x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.092 mW/g

Configuration/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 1.75 V/m; Power Drift = -0.075 dB
Peak SAR (extrapolated) = 0.389 W/kg

SAR(1 g) = 0.085 mW/g; SAR(10 g) = 0.035 mW/g
Maximum value of SAR (measured) = 0.072 mW/g



0 dB = 0.072mW/g

Date: 2010/12/03

Body_WLAN802.11a_CH100

DUT: M3 ORANGE

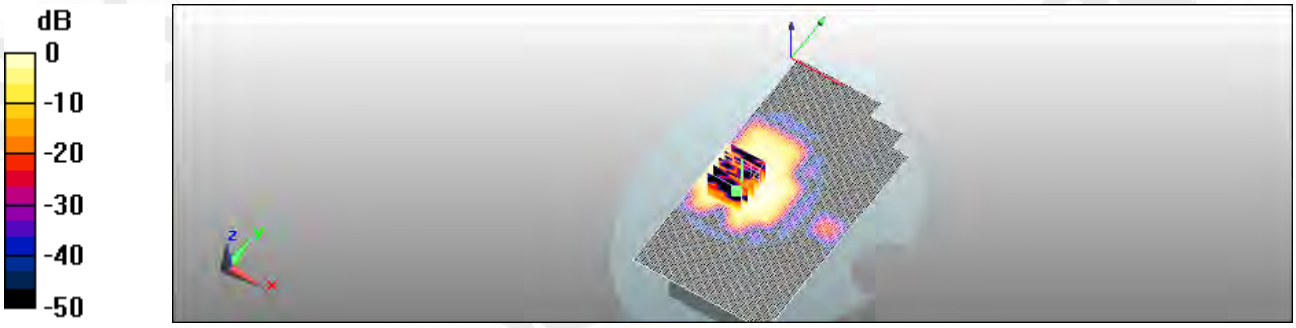
Communication System: WLAN 802.11n/a(5G) FCC; Frequency: 5500 MHz;
Medium parameters used: f = 5500 MHz; σ = 5.78 mho/m; ε_r = 47.8; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY5 Configuration:

- Probe: EX3DV4 - SN3703; ConvF(3.55, 3.55, 3.55); Calibrated: 12/30/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2010/5/20
- Phantom: SAM2; Type: SAM;
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

Configuration/Body/Area Scan (81x151x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.144 mW/g

Configuration/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 2.31 V/m; Power Drift = 0.117 dB
Peak SAR (extrapolated) = 0.344 W/kg

SAR(1 g) = 0.129 mW/g; SAR(10 g) = 0.055 mW/g
Maximum value of SAR (measured) = 0.140 mW/g



0 dB = 0.140mW/g

Date: 2010/12/03

Body_WLAN802.11a_CH116

DUT: M3 ORANGE

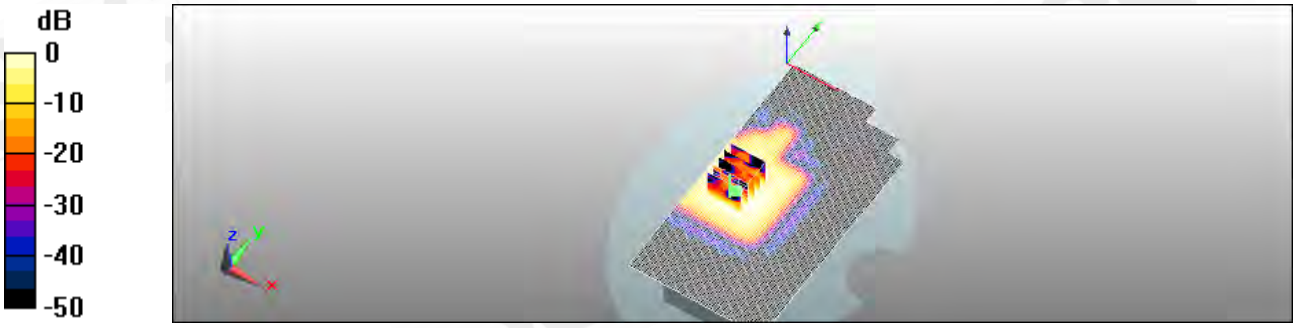
Communication System: WLAN 802.11n/a(5G) FCC; Frequency: 5580 MHz;
Medium parameters used: f = 5580 MHz; σ = 5.89 mho/m; ε_r = 47.6; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY5 Configuration:

- Probe: EX3DV4 - SN3703; ConvF(3.55, 3.55, 3.55); Calibrated: 12/30/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2010/5/20
- Phantom: SAM2; Type: SAM;
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

Configuration/Body/Area Scan (81x151x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.194 mW/g

Configuration/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 2.62 V/m; Power Drift = 0.103 dB
Peak SAR (extrapolated) = 0.424 W/kg

SAR(1 g) = 0.171 mW/g; SAR(10 g) = 0.074 mW/g
Maximum value of SAR (measured) = 0.189 mW/g



0 dB = 0.189mW/g

Date: 2010/12/03

Body_WLAN802.11a_CH140

DUT: M3 ORANGE

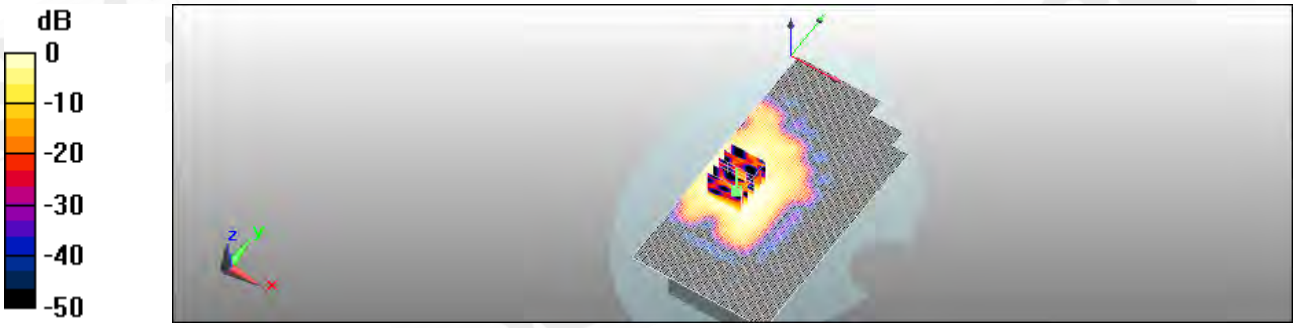
Communication System: WLAN 802.11n/a(5G) FCC; Frequency: 5700 MHz;
Medium parameters used: f = 5700 MHz; σ = 6.06 mho/m; ε_r = 47.2; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY5 Configuration:

- Probe: EX3DV4 - SN3703; ConvF(3.55, 3.55, 3.55); Calibrated: 12/30/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2010/5/20
- Phantom: SAM2; Type: SAM;
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

Configuration/Body/Area Scan (81x151x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.184 mW/g

Configuration/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 2.87 V/m; Power Drift = 0.095 dB
Peak SAR (extrapolated) = 0.412 W/kg

SAR(1 g) = 0.163 mW/g; SAR(10 g) = 0.069 mW/g
Maximum value of SAR (measured) = 0.182 mW/g



0 dB = 0.182mW/g

Date: 2010/12/03

Body_WLAN802.11a_CH116_repeated for EUT front to phantom

DUT: M3 ORANGE

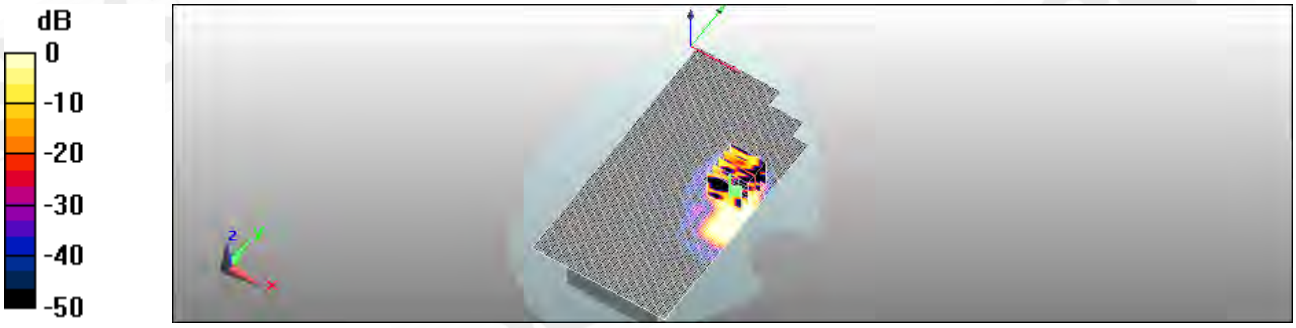
Communication System: WLAN 802.11n/a(5G) FCC; Frequency: 5580 MHz;
Medium parameters used: f = 5580 MHz; σ = 5.89 mho/m; ε_r = 47.6; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY5 Configuration:

- Probe: EX3DV4 - SN3703; ConvF(3.55, 3.55, 3.55); Calibrated: 12/30/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2010/5/20
- Phantom: SAM2; Type: SAM;
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

Configuration/Body/Area Scan (81x151x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.067 mW/g

Configuration/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 0.796 V/m; Power Drift = -0.133 dB
Peak SAR (extrapolated) = 0.114 W/kg

SAR(1 g) = 0.024 mW/g; SAR(10 g) = 0.00843 mW/g
Maximum value of SAR (measured) = 0.019 mW/g



0 dB = 0.019mW/g

Date: 2010/12/03

Body_WLAN802.11a_CH116_repeated with Memory card

DUT: M3 ORANGE

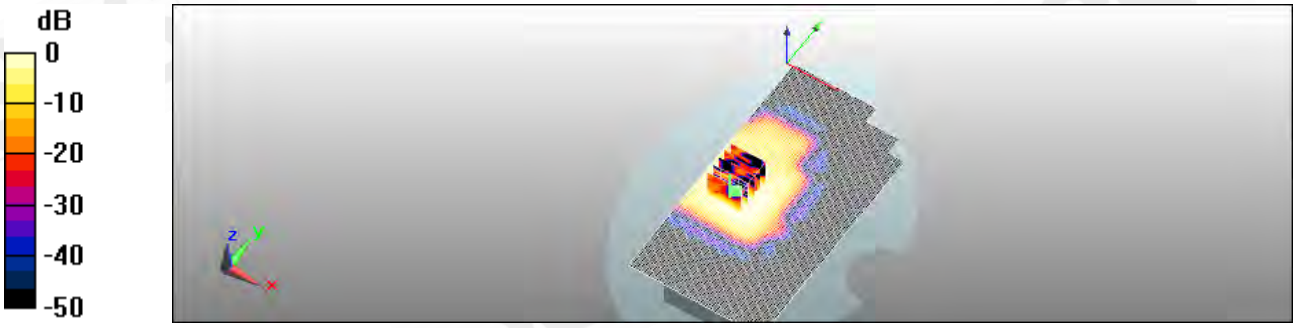
Communication System: WLAN 802.11n/a(5G) FCC; Frequency: 5580 MHz;
Medium parameters used: f = 5580 MHz; σ = 5.89 mho/m; ε_r = 47.6; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY5 Configuration:

- Probe: EX3DV4 - SN3703; ConvF(3.55, 3.55, 3.55); Calibrated: 12/30/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2010/5/20
- Phantom: SAM2; Type: SAM;
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

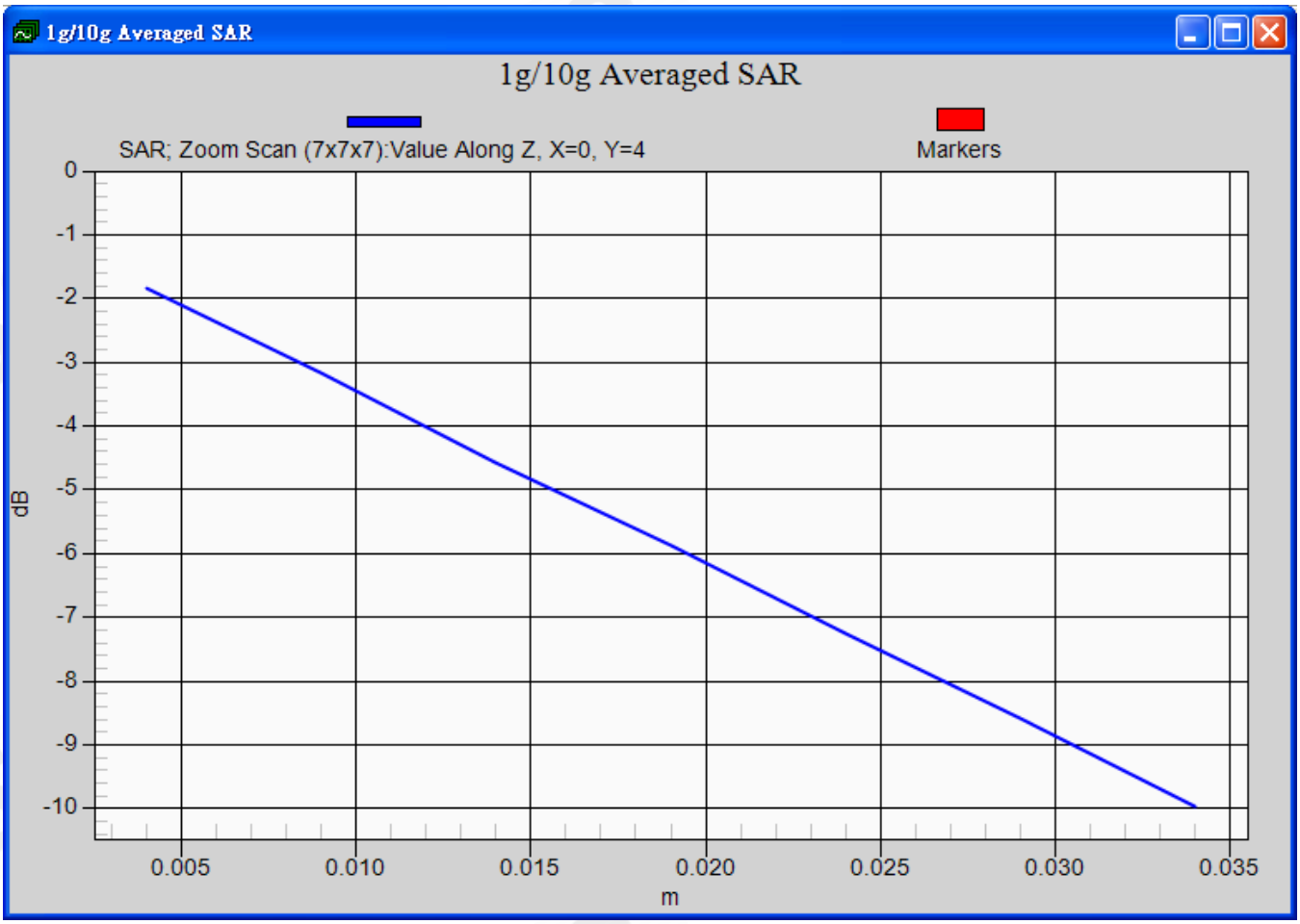
Configuration/Body/Area Scan (81x151x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.192 mW/g

Configuration/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 3.17 V/m; Power Drift = -0.089 dB
Peak SAR (extrapolated) = 0.441 W/kg

SAR(1 g) = 0.177 mW/g; SAR(10 g) = 0.075 mW/g
Maximum value of SAR (measured) = 0.200 mW/g



0 dB = 0.200mW/g



Date: 2010/12/03

Body_WLAN802.11a_CH149

DUT: M3 ORANGE

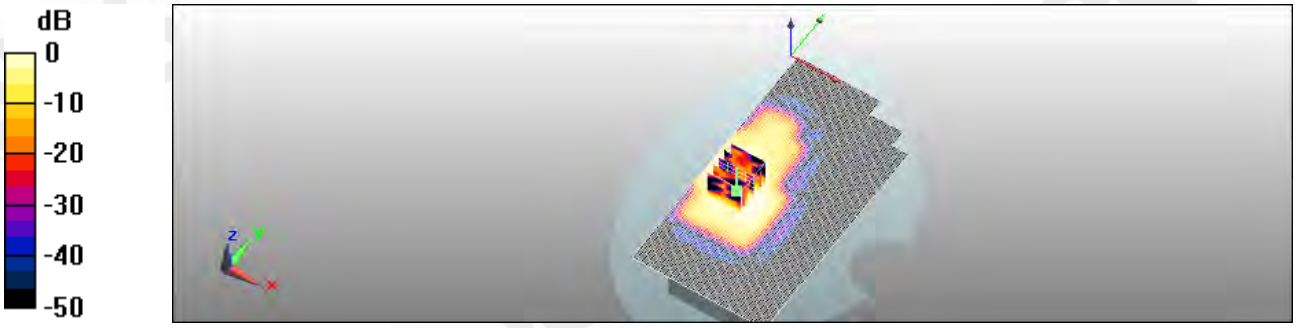
Communication System: WLAN 802.11n/a(5G) FCC; Frequency: 5745 MHz;
Medium parameters used: f = 5745 MHz; σ = 6.12 mho/m; ε_r = 47; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY5 Configuration:

- Probe: EX3DV4 - SN3703; ConvF(3.8, 3.8, 3.8); Calibrated: 12/30/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2010/5/20
- Phantom: SAM2; Type: SAM;
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

Configuration/Body/Area Scan (81x151x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.166 mW/g

Configuration/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 2.93 V/m; Power Drift = -0.199 dB
Peak SAR (extrapolated) = 0.493 W/kg

SAR(1 g) = 0.161 mW/g; SAR(10 g) = 0.068 mW/g
Maximum value of SAR (measured) = 0.177 mW/g



0 dB = 0.177mW/g

Date: 2010/12/03

Body_WLAN802.11a_CH157

DUT: M3 ORANGE

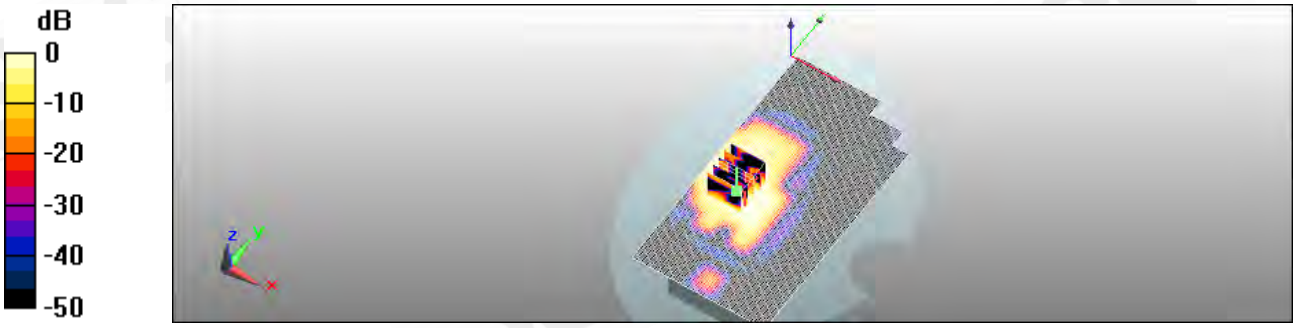
Communication System: WLAN 802.11n/a(5G) FCC; Frequency: 5785 MHz;
Medium parameters used: f = 5785 MHz; σ = 6.18 mho/m; ε_r = 46.9; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY5 Configuration:

- Probe: EX3DV4 - SN3703; ConvF(3.8, 3.8, 3.8); Calibrated: 12/30/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2010/5/20
- Phantom: SAM2; Type: SAM;
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

Configuration/Body/Area Scan (81x151x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.165 mW/g

Configuration/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 2.9 V/m; Power Drift = 0.036 dB
Peak SAR (extrapolated) = 0.417 W/kg

SAR(1 g) = 0.154 mW/g; SAR(10 g) = 0.066 mW/g
Maximum value of SAR (measured) = 0.168 mW/g



0 dB = 0.168mW/g

Date: 2010/12/03

Body_WLAN802.11a_CH165

DUT: M3 ORANGE

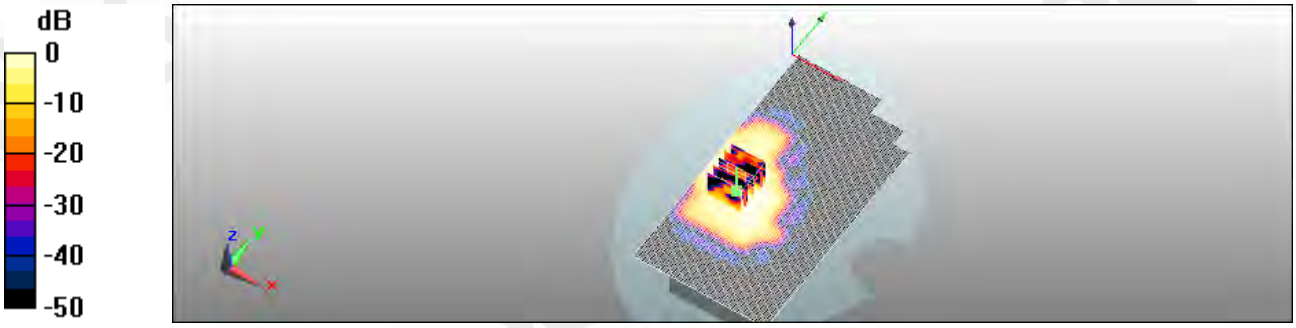
Communication System: WLAN 802.11n/a(5G) FCC; Frequency: 5825 MHz;
Medium parameters used: f = 5825 MHz; σ = 6.24 mho/m; ε_r = 46.8; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY5 Configuration:

- Probe: EX3DV4 - SN3703; ConvF(3.8, 3.8, 3.8); Calibrated: 12/30/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2010/5/20
- Phantom: SAM2; Type: SAM;
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

Configuration/Body/Area Scan (81x151x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.152 mW/g

Configuration/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 3.18 V/m; Power Drift = 0.112 dB
Peak SAR (extrapolated) = 0.495 W/kg

SAR(1 g) = 0.149 mW/g; SAR(10 g) = 0.064 mW/g
Maximum value of SAR (measured) = 0.157 mW/g



0 dB = 0.157mW/g

5. System Verification

Date: 2010/11/30

DUT: Dipole 835 MHz

Communication System: CW; Frequency: 835 MHz;
Medium parameters used: f = 835 MHz; σ = 0.899 mho/m; ε_r = 42.4; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

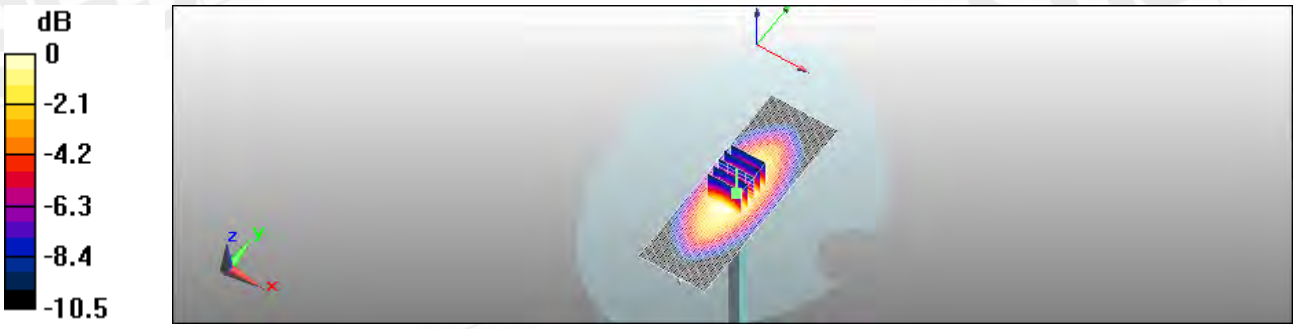
DASY5 Configuration:

- Probe: EX3DV4 - SN3703; ConvF(8.87, 8.87, 8.87); Calibrated: 12/30/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2010/5/20
- Phantom: SAM2; Type: SAM;
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

Configuration/d=15mm, Pin=250mW, dist=4mm : Measurement grid:
dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 2.87 mW/g

Configuration/d=15mm, Pin=250mW, dist=4mm : Measurement grid:
dx=8mm, dy=8mm, dz=5mm
Reference Value = 58.2 V/m; Power Drift = -0.021 dB
Peak SAR (extrapolated) = 3.61 W/kg

SAR(1 g) = 2.45 mW/g; SAR(10 g) = 1.61 mW/g
Maximum value of SAR (measured) = 2.86 mW/g



0 dB = 2.86mW/g

Date: 2010/11/30

DUT: Dipole 835 MHz

Communication System: CW; Frequency: 835 MHz;
Medium parameters used: f = 835 MHz; σ = 1.01 mho/m; ε_r = 53.8; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

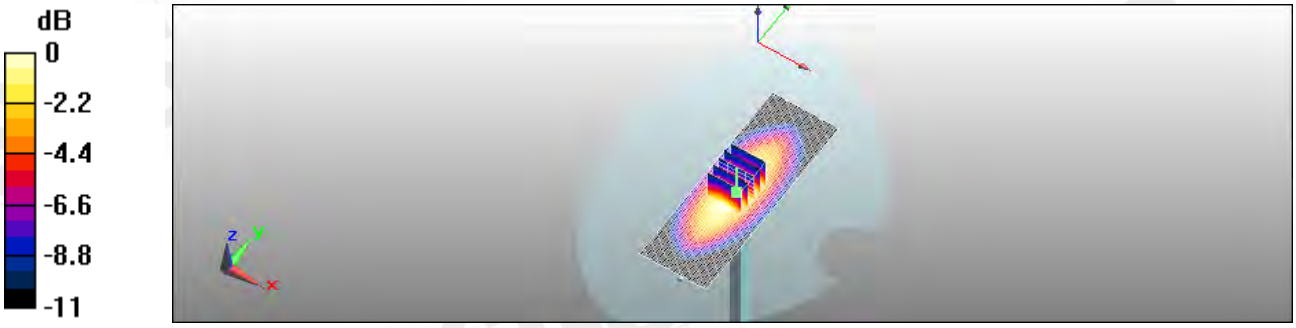
DASY5 Configuration:

- Probe: EX3DV4 - SN3703; ConvF(8.74, 8.74, 8.74); Calibrated: 12/30/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2010/5/20
- Phantom: SAM2; Type: SAM;
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

Configuration/d=15mm, Pin=250mW, dist=4mm : Measurement grid:
dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 2.99 mW/g

Configuration/d=15mm, Pin=250mW, dist=4mm : Measurement grid:
dx=8mm, dy=8mm, dz=5mm
Reference Value = 56.2 V/m; Power Drift = 0.00591 dB
Peak SAR (extrapolated) = 3.89 W/kg

SAR(1 g) = 2.53 mW/g; SAR(10 g) = 1.62 mW/g
Maximum value of SAR (measured) = 3 mW/g



0 dB = 3mW/g

Date: 2010/12/01

DUT: Dipole 1900 MHz

Communication System: CW; Frequency: 1900 MHz;
Medium parameters used: f = 1900 MHz; σ = 1.44 mho/m; ε_r = 39.6; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

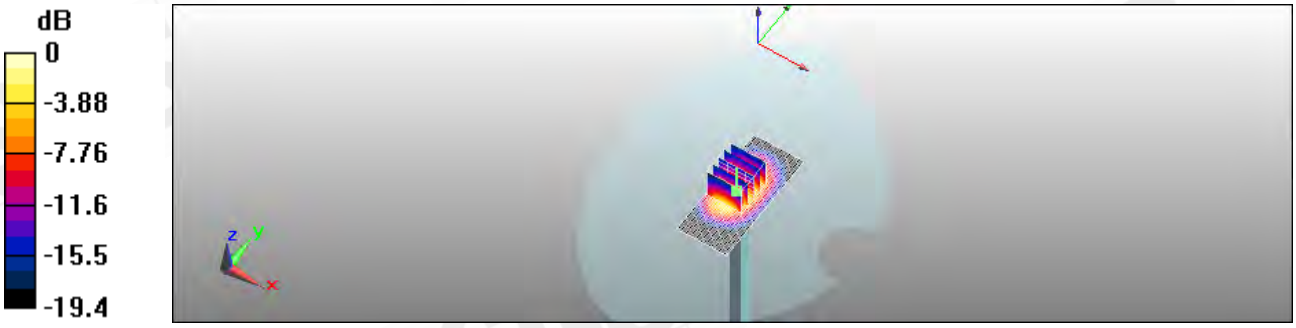
DASY5 Configuration:

- Probe: EX3DV4 - SN3703; ConvF(7.44, 7.44, 7.44); Calibrated: 12/30/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2010/5/20
- Phantom: SAM2; Type: SAM;
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

Configuration/d=10mm, Pin=250mW, dist=4mm: Measurement grid:
dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 12.1 mW/g

Configuration/d=10mm, Pin=250mW, dist=4mm: Measurement grid:
dx=8mm, dy=8mm, dz=5mm
Reference Value = 95.1 V/m; Power Drift = 0.023 dB
Peak SAR (extrapolated) = 19.7 W/kg

SAR(1 g) = 10.2 mW/g; SAR(10 g) = 5.03 mW/g
Maximum value of SAR (measured) = 12.4 mW/g



0 dB = 12.4mW/g

Date: 2010/12/01

DUT: Dipole 1900 MHz

Communication System: CW; Frequency: 1900 MHz;
Medium parameters used: f = 1900 MHz; σ = 1.55 mho/m; ε_r = 52.9; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

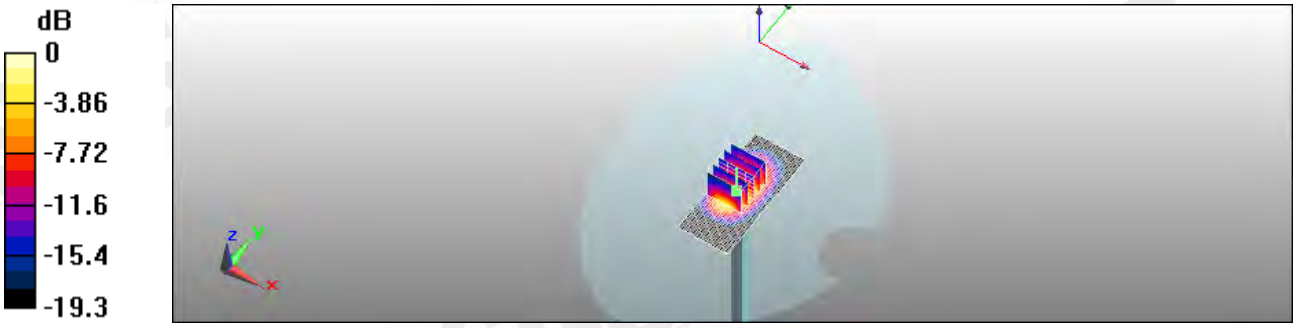
DASY5 Configuration:

- Probe: EX3DV4 - SN3703; ConvF(7.26, 7.26, 7.26); Calibrated: 12/30/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2010/5/20
- Phantom: SAM2; Type: SAM;
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

Configuration/d=10mm, Pin=250mW, dist=4mm: Measurement grid:
dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 12.7 mW/g

Configuration/d=10mm, Pin=250mW, dist=4mm: Measurement grid:
dx=8mm, dy=8mm, dz=5mm
Reference Value = 93 V/m; Power Drift = 0.022 dB
Peak SAR (extrapolated) = 19.9 W/kg

SAR(1 g) = 10.1 mW/g; SAR(10 g) = 4.9 mW/g
Maximum value of SAR (measured) = 12.4 mW/g



0 dB = 12.4mW/g

Date: 2010/12/03

DUT: Dipole 2450 MHz

Communication System: CW; Frequency: 2450 MHz;
Medium parameters used: f = 2450 MHz; σ = 1.97 mho/m; ε_r = 52.5; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

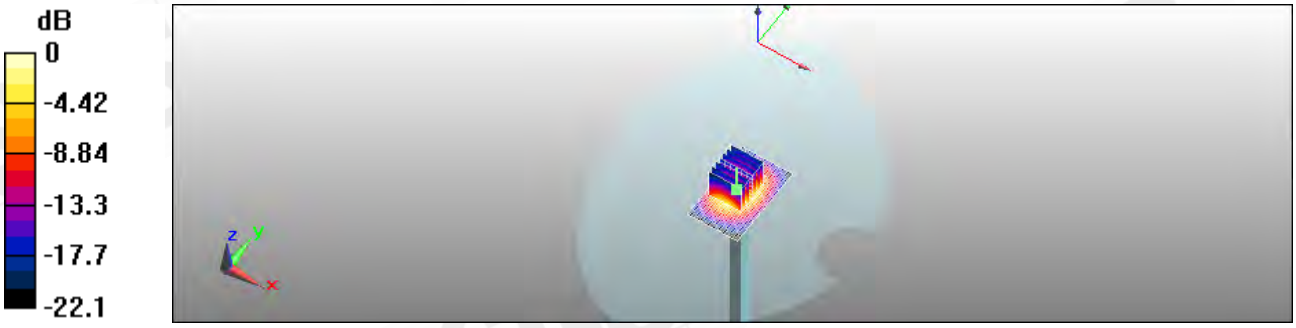
DASY5 Configuration:

- Probe: EX3DV4 - SN3703; ConvF(6.95, 6.95, 6.95); Calibrated: 12/30/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2010/5/20
- Phantom: SAM2; Type: SAM;
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

Configuration/d=10mm, Pin=250mW, dist=4mm : Measurement grid:
dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 16 mW/g

Configuration/d=10mm, Pin=250mW, dist=4mm : Measurement grid:
dx=5mm, dy=5mm, dz=5mm
Reference Value = 93.2 V/m; Power Drift = 0.032 dB
Peak SAR (extrapolated) = 28.8 W/kg

SAR(1 g) = 13.2 mW/g; SAR(10 g) = 6.21 mW/g
Maximum value of SAR (measured) = 15.1 mW/g



0 dB = 15.1mW/g

Date: 2010/12/03

DUT: Dipole 5200Hz

Communication System: CW; Frequency: 5200 MHz;
Medium parameters used: f = 5200 MHz; σ = 5.35 mho/m; ε_r = 48.8; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

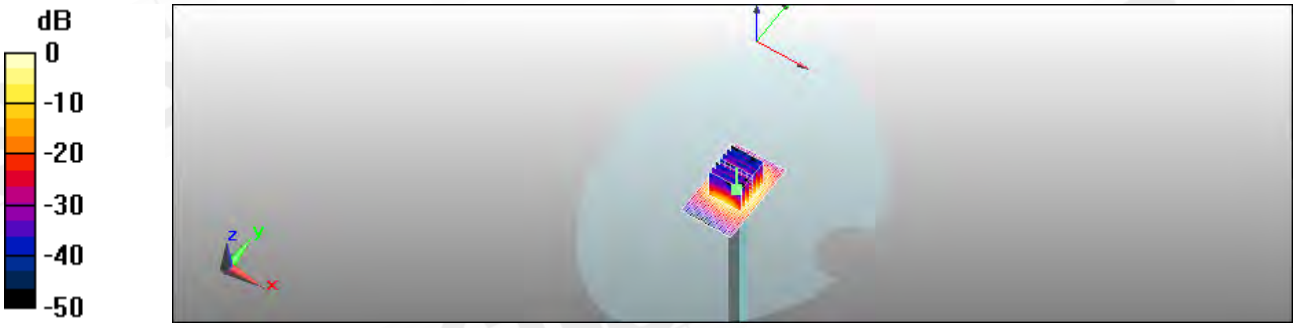
DASY5 Configuration:

- Probe: EX3DV4 - SN3703; ConvF(3.99, 3.99, 3.99); Calibrated: 12/30/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2010/5/20
- Phantom: SAM2; Type: SAM;
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

Configuration/d=10mm, Pin=250mW, dist=4mm : Measurement grid:
dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 12.8 mW/g

Configuration/d=10mm, Pin=250mW, dist=4mm : Measurement grid:
dx=5mm, dy=5mm, dz=5mm
Reference Value = 50.8 V/m; Power Drift = -0.100 dB
Peak SAR (extrapolated) = 33.4 W/kg

SAR(1 g) = 8.28 mW/g; SAR(10 g) = 2.2 mW/g
Maximum value of SAR (measured) = 10 mW/g



0 dB = 10mW/g

Date: 2010/12/03

DUT: Dipole 5500MHz

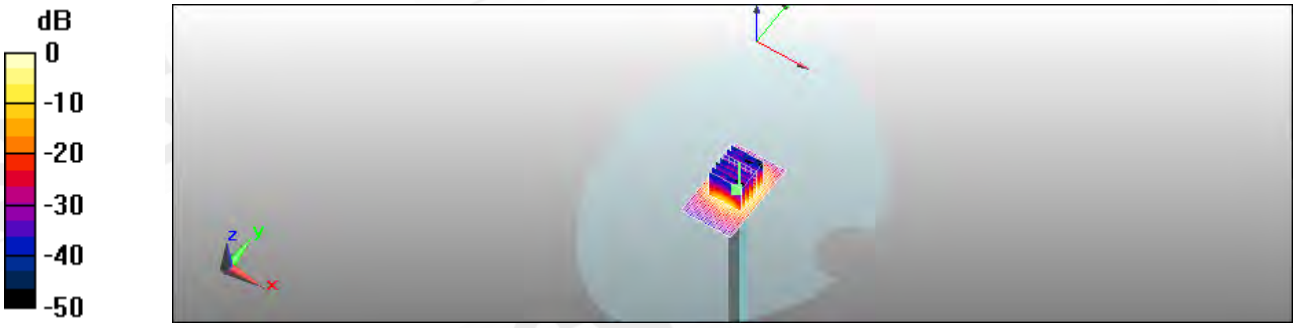
Communication System: CW; Frequency: 5500 MHz;
Medium parameters used: f = 5500 MHz; σ = 5.78 mho/m; ε_r = 47.8; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY5 Configuration:

- Probe: EX3DV4 - SN3703; ConvF(3.55, 3.55, 3.55); Calibrated: 12/30/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2010/5/20
- Phantom: SAM2; Type: SAM;
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

Configuration/d=10mm, Pin=250mW, dist=4mm : Measurement grid:
dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 12.9 mW/g

Configuration/d=10mm, Pin=250mW, dist=4mm : Measurement grid:
dx=5mm, dy=5mm, dz=5mm
Reference Value = 55.2 V/m; Power Drift = -0.136 dB
Peak SAR (extrapolated) = 38.9 W/kg

SAR(1 g) = 8.36 mW/g; SAR(10 g) = 2.72 mW/g
Maximum value of SAR (measured) = 10.92 mW/g



0 dB = 10.92mW/g

Date: 2010/12/03

DUT: Dipole 5800MHz

Communication System: CW; Frequency: 5800 MHz;
Medium parameters used: f = 5800 MHz; σ = 6.21 mho/m; ε_r = 46.9; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

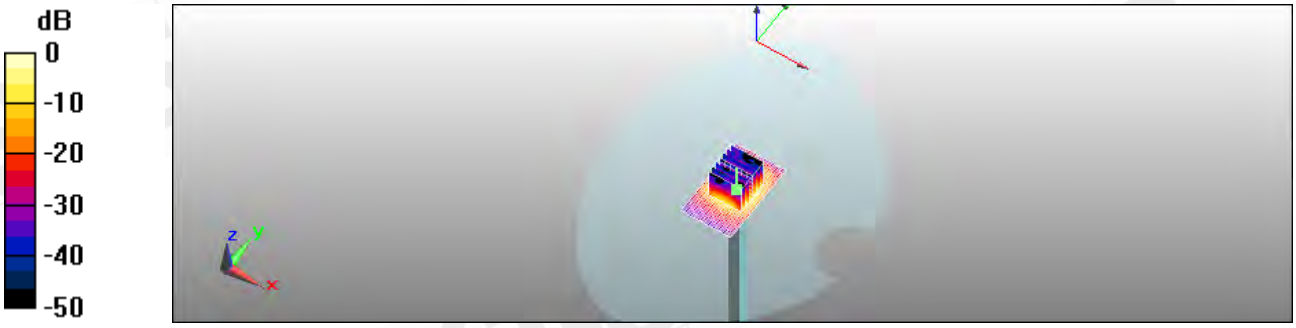
DASY5 Configuration:

- Probe: EX3DV4 - SN3703; ConvF(3.8, 3.8, 3.8); Calibrated: 12/30/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2010/5/20
- Phantom: SAM2; Type: SAM;
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

Configuration/d=10mm, Pin=250mW, dist=4mm : Measurement grid:
dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 11.9 mW/g

Configuration/d=10mm, Pin=250mW, dist=4mm : Measurement grid:
dx=5mm, dy=5mm, dz=5mm
Reference Value = 46 V/m; Power Drift = -0.033 dB
Peak SAR (extrapolated) = 31.5 W/kg

SAR(1 g) = 7.07 mW/g; SAR(10 g) = 2.12 mW/g
Maximum value of SAR (measured) = 8.84 mW/g



0 dB = 8.84mW/g

6. DAE & Probe Calibration certificate

Calibration Laboratory of
Schmid & Partner
Engineering AG
Zeughausstrasse 43, 8004 Zurich, Switzerland

S Schweizerischer Kalibrierdienst
C Service suisse d'étalonnage
S Servizio svizzero di taratura
S Swiss Calibration Service

Accredited by the Swiss Accreditation Service (SAS)
The Swiss Accreditation Service is one of the signatories to the EA Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: SCS 108

Client SGS-TW (Auden)

Certificate No: DAE4-856_May10

CALIBRATION CERTIFICATE

Object	DAE4 - SD 000 D04 BJ - SN: 856
Calibration procedure(s)	QA CAL-06.v21 Calibration procedure for the data acquisition electronics (DAE)
Calibration date:	May 20, 2010

This calibration certificate documents the traceability to national standards, which realize the physical units of measurements (SI).
The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.

All calibrations have been conducted in the closed laboratory facility: environment temperature (22 ± 3)°C and humidity < 70%.

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID #	Cal Date (Certificate No.)	Scheduled Calibration
Keithley Multimeter Type 2001	SN: 0810278	1-Oct-09 (No: 9055)	Oct-10
Secondary Standards	**ID #**	**Check Date (in house)**	**Scheduled Check**
Calibrator Box V1.1	SE UMS 006 AB 1004	05-Jun-09 (in house check)	In house check: Jun-10

	Name	Function	Signature
Calibrated by:	Dominique Steffen	Technician	
Approved by:	Fin Bomholt	R&D Director	i.V.

Issued: May 20, 2010

This calibration certificate shall not be reproduced except in full without written approval of the laboratory.

Certificate No: DAE4-856_May10 Page 1 of 5

Calibration Laboratory of
Schmid & Partner
Engineering AG
Zeughausstrasse 43, 8004 Zurich, Switzerland

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S Swiss Calibration Service

Accredited by the Swiss Accreditation Service (SAS)
The Swiss Accreditation Service is one of the signatories to the EA Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: SCS 108

Client SGS (Auden)

Certificate No: EX3-3703_Dec09

CALIBRATION CERTIFICATE

Object EX3DV4 - SN:3703

Calibration procedure(s) QA CAL-01.v6, QA CAL-14.v3, QA CAL-23.v3 and QA CAL-25.v2
Calibration procedure for dosimetric E-field probes

Calibration date: December 30, 2009

This calibration certificate documents the traceability to national standards, which realize the physical units of measurements (SI).
The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.

All calibrations have been conducted in the closed laboratory facility: environment temperature (22 ± 3)°C and humidity < 70%.

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID #	Cal Date (Certificate No.)	Scheduled Calibration
Power meter E4419B	GB41293874	1-Apr-09 (No. 217-01030)	Apr-10
Power sensor E4412A	MY41495277	1-Apr-09 (No. 217-01030)	Apr-10
Power sensor E4412A	MY41498087	1-Apr-09 (No. 217-01030)	Apr-10
Reference 3 dB Attenuator	SN: S5054 (3c)	31-Mar-09 (No. 217-01026)	Mar-10
Reference 20 dB Attenuator	SN: S5086 (20b)	31-Mar-09 (No. 217-01028)	Mar-10
Reference 30 dB Attenuator	SN: S5129 (30b)	31-Mar-09 (No. 217-01027)	Mar-10
Reference Probe ES3DV2	SN: 3013	2-Jan-09 (No. ES3-3013_Jan09)	Jan-10
DAE4	SN: 660	29-Sep-09 (No. DAE4-660_Sep09)	Sep-10

Secondary Standards	ID #	Check Date (in house)	Scheduled Check
RF generator HP 8648C	US3642U01700	4-Aug-99 (in house check Oct-09)	In house check: Oct-11
Network Analyzer HP 8753E	US37390585	18-Oct-01 (in house check Oct-09)	In house check: Oct10

	Name	Function	Signature
Calibrated by:	Katja Pokovic	Technical Manager	
Approved by:	Niels Kuster	Quality Manager	

Issued: December 30, 2009

Calibration Laboratory of
Schmid & Partner
Engineering AG
Zeughausstrasse 43, 8004 Zurich, Switzerland

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The Swiss Accreditation Service is one of the signatories to the EA Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: SCS 108

Glossary:

TSL	tissue simulating liquid
NORMx,y,z	sensitivity in free space
ConvF	sensitivity in TSL / NORMx,y,z
DCP	diode compression point
CF	crest factor (1/duty_cycle) of the RF signal
A, B, C	modulation dependent linearization parameters
Polarization φ	φ rotation around probe axis
Polarization ϑ	ϑ rotation around an axis that is in the plane normal to probe axis (at measurement center), i.e., ϑ = 0 is normal to probe axis

Calibration is Performed According to the Following Standards:

a) IEEE Std 1528-2003, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", December 2003
b) IEC 62209-1, "Procedure to measure the Specific Absorption Rate (SAR) for hand-held devices used in close proximity to the ear (frequency range of 300 MHz to 3 GHz)", February 2005

Methods Applied and Interpretation of Parameters:

- *NORMx,y,z:* Assessed for E-field polarization ϑ = 0 (f ≤ 900 MHz in TEM-cell; f > 1800 MHz: R22 waveguide). NORMx,y,z are only intermediate values, i.e., the uncertainties of NORMx,y,z does not effect the E^2-field uncertainty inside TSL (see below *ConvF*).
- *NORM(f)x,y,z = NORMx,y,z * frequency_response* (see Frequency Response Chart). This linearization is implemented in DASY4 software versions later than 4.2. The uncertainty of the frequency response is included in the stated uncertainty of *ConvF*.
- *DCPx,y,z:* DCP are numerical linearization parameters assessed based on the data of power sweep with CW signal (no uncertainty required). DCP does not depend on frequency nor media.
- *Ax,y,z; Bx,y,z; Cx,y,z, VRx,y,z: A, B, C* are numerical linearization parameters assessed based on the data of power sweep for specific modulation signal. The parameters do not depend on frequency nor media. *VR* is the maximum calibration range expressed in RMS voltage across the diode.
- *ConvF and Boundary Effect Parameters:* Assessed in flat phantom using E-field (or Temperature Transfer Standard for f ≤ 800 MHz) and inside waveguide using analytical field distributions based on power measurements for f > 800 MHz. The same setups are used for assessment of the parameters applied for boundary compensation (alpha, depth) of which typical uncertainty values are given. These parameters are used in DASY4 software to improve probe accuracy close to the boundary. The sensitivity in TSL corresponds to *NORMx,y,z * ConvF* whereby the uncertainty corresponds to that given for *ConvF*. A frequency dependent *ConvF* is used in DASY version 4.4 and higher which allows extending the validity from ± 50 MHz to ± 100 MHz.
- *Spherical isotropy (3D deviation from isotropy)*: in a field of low gradients realized using a flat phantom exposed by a patch antenna.
- *Sensor Offset*: The sensor offset corresponds to the offset of virtual measurement center from the probe tip (on probe axis). No tolerance required.

Probe EX3DV4

SN:3703

Manufactured: July 21, 2009
Calibrated: December 30, 2009

Calibrated for DASY Systems

(Note: non-compatible with DASY2 system!)

EX3DV4 SN:3703 December 30, 2009

DASY - Parameters of Probe: EX3DV4 SN:3703

Basic Calibration Parameters

	Sensor X	Sensor Y	Sensor Z	Unc (k=2)
Norm ($\mu V/(V/m)^2$)[A]	0.52	0.52	0.53	± 10.1%
DCP (mV)[B]	92.6	88.0	91.6	

Modulation Calibration Parameters

UID	Communication System Name	PAR		A dB	B dBuV	C	VR mV	Unc[E] (k=2)
10000	CW	0.00	X	0.00	0.00	1.00	300	± 1.5%
			Y	0.00	0.00	1.00	300	
			Z	0.00	0.00	1.00	300	

The reported uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k=2, which for a normal distribution corresponds to a coverage probability of approximately 95%.

[A] The uncertainties of NormX,Y,Z do not affect the E^2-field uncertainty inside TSL (see Pages 5 and 6).

[B] Numerical linearization parameter: uncertainty not required.

[E] Uncertainty is determined using the maximum deviation from linear response applying recatangular distribution and is expressed for the square of the field value.

DASY - Parameters of Probe: EX3DV4 SN:3703

Calibration Parameter Determined in Head Tissue Simulating Media

f [MHz]	Validity [MHz][C]	Permittivity	Conductivity	ConvF X	ConvF Y	ConvF Z	Alpha	Depth	Unc (k=2)
835	± 50 / ± 100	41.5 ± 5%	0.90 ± 5%	8.87	8.87	8.87	0.58	0.66	± 11.0%
900	± 50 / ± 100	41.5 ± 5%	0.97 ± 5%	8.62	8.62	8.62	0.52	0.68	± 11.0%
1750	± 50 / ± 100	40.1 ± 5%	1.37 ± 5%	7.73	7.73	7.73	0.67	0.64	± 11.0%
1900	± 50 / ± 100	40.0 ± 5%	1.40 ± 5%	7.44	7.44	7.44	0.67	0.66	± 11.0%
2000	± 50 / ± 100	40.0 ± 5%	1.40 ± 5%	7.26	7.26	7.26	0.70	0.65	± 11.0%
2450	± 50 / ± 100	39.2 ± 5%	1.80 ± 5%	6.80	6.80	6.80	0.43	0.83	± 11.0%
5200	± 50 / ± 100	36.0 ± 5%	4.66 ± 5%	4.68	4.68	4.68	0.38	1.80	± 13.1%
5300	± 50 / ± 100	35.9 ± 5%	4.76 ± 5%	4.36	4.36	4.36	0.35	1.80	± 13.1%
5600	± 50 / ± 100	35.5 ± 5%	5.07 ± 5%	4.01	4.01	4.01	0.45	1.80	± 13.1%
5800	± 50 / ± 100	35.3 ± 5%	5.27 ± 5%	3.95	3.95	3.95	0.50	1.80	± 13.1%

[C] The validity of ± 100 MHz only applies for DASY v4.4 and higher (see Page 2). The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band.

DASY - Parameters of Probe: EX3DV4 SN:3703

Calibration Parameter Determined in Body Tissue Simulating Media

f [MHz]	Validity [MHz][C]	Permittivity	Conductivity	ConvF X	ConvF Y	ConvF Z	Alpha	Depth	Unc (k=2)
835	± 50 / ± 100	55.2 ± 5%	0.97 ± 5%	8.74	8.74	8.74	0.65	0.72	± 11.0%
900	± 50 / ± 100	55.0 ± 5%	1.05 ± 5%	8.58	8.58	8.58	0.64	0.72	± 11.0%
1750	± 50 / ± 100	53.4 ± 5%	1.49 ± 5%	7.75	7.75	7.75	0.66	0.66	± 11.0%
1900	± 50 / ± 100	53.3 ± 5%	1.52 ± 5%	7.26	7.26	7.26	0.54	0.74	± 11.0%
2000	± 50 / ± 100	53.3 ± 5%	1.52 ± 5%	7.28	7.28	7.28	0.49	0.78	± 11.0%
2450	± 50 / ± 100	52.7 ± 5%	1.95 ± 5%	6.95	6.95	6.95	0.37	0.87	± 11.0%
5200	± 50 / ± 100	49.0 ± 5%	5.30 ± 5%	3.99	3.99	3.99	0.55	1.90	± 13.1%
5300	± 50 / ± 100	48.5 ± 5%	5.42 ± 5%	3.77	3.77	3.77	0.55	1.90	± 13.1%
5600	± 50 / ± 100	48.5 ± 5%	5.77 ± 5%	3.55	3.55	3.55	0.60	1.90	± 13.1%
5800	± 50 / ± 100	48.2 ± 5%	6.00 ± 5%	3.80	3.80	3.80	0.60	1.90	± 13.1%

[C] The validity of ± 100 MHz only applies for DASY v4.4 and higher (see Page 2). The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band.

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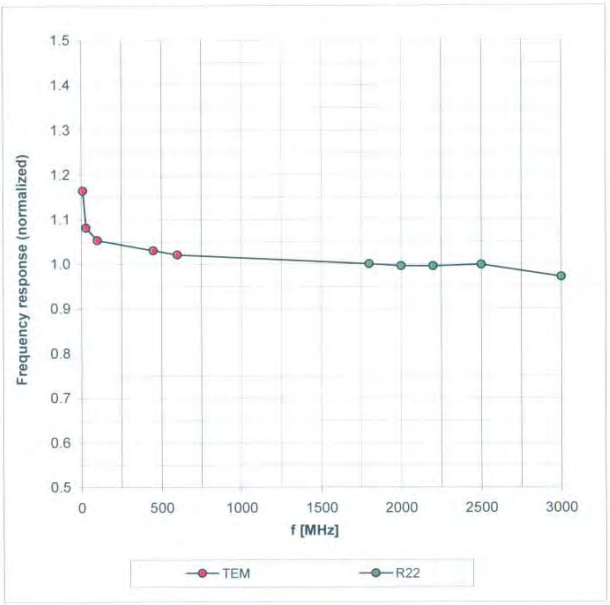
Frequency Response of E-Field

(TEM-Cell:ifi110 EXX, Waveguide: R22)



Uncertainty of Frequency Response of E-field: ± 6.3% (k=2)

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