
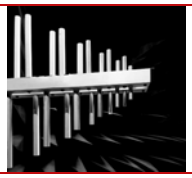
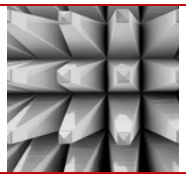

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TEST REPORT

Test Report No.: 1-6965/13-21-02-A

ilac-MRA DAkkS Deutsche Akkreditierungsstelle D-PL-12076-01-01

Testing Laboratory

CETECOM ICT Services GmbH
Untertürkheimer Straße 6 – 10
66117 Saarbrücken/Germany
Phone: + 49 681 5 98 - 0
Fax: + 49 681 5 98 - 9075
Internet: http://www.cetecom.com
e-mail: ict@cetecom.com

Accredited Test Laboratory:
The testing laboratory (area of testing) is accredited according to DIN EN ISO/IEC 17025 (2005) by the Deutsche Akkreditierungsstelle GmbH (DAkkS)
The accreditation is valid for the scope of testing procedures as stated in the accreditation certificate with the registration number: D-PL-12076-01-01

Applicant

Sony Mobile Communications AB
Nya Vattentornet
22188 Lund/SWEDEN

Phone: +46 46 19 30 00

Contact: Mikael Nilsson
e-mail: Micke.nilsson@sonymobile.com
Phone: +46 7 03 22 75 03
Fax: -/-

Manufacturer

Sony Mobile Communications AB
Nya Vattentornet
22188 Lund/SWEDEN

Test Standard/s

IEEE 1528-2003	Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR)in the Human Head from Wireless Communications Devices: Measurement Techniques
RSS-102 Issue 4	Radio Frequency Exposure Compliance of Radiocommunication Apparatus (All Frequency Bands)

For further applied test standards please refer to section 3 of this test report.

Test Item

Kind of test item:	Smart Phone with WPC cover
Device type:	portable device
Model name:	**PM-0740-BV / AI-0070**
S/N serial number:	CB5A1W1HSZ / CB5A1W1HRP
FCC-ID:	PY7PM-0740
IMEI-Number:	004402451795086
Hardware status:	AP1.1
Software status:	17.1.A.0.407
Frequency:	see technical details
Antenna:	integrated antenna
Battery option:	Integrated Li-polymer battery 3.7V
Accessories:	WPC cover (AI-0070)
Test sample status:	identical prototype
Exposure category:	general population / uncontrolled environment

This test report is electronically signed and valid without handwriting signature. For verification of the electronic signatures, the public keys can be requested at the testing laboratory.

Test Report authorised:

cn=Oleksandr Hnatovskiy,
o=CETECOM ICT, ou=HNA-100728,
email=Oleksandr.Hnatovskiy@cete
com.com, c=DE
2014.06.20 11:21:47 +02'00'

Oleksandr Hnatovskiy
Testing Manager

Test performed:

cn=Holger Medrow,
o=CETECOM ICT Services
GmbH, ou=MED-131202,
email=holger.medrow@cete
com.com, c=DE
2014.06.20 11:24:38 +02'00'

Holger Medrow
Agent

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2 General information

2.1 Notes and disclaimer

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2.2 Application details

Date of receipt of order:	2014-06-10
Date of receipt of test item:	2014-06-10
Start of test:	2014-06-10
End of test:	2014-06-13
Person(s) present during the test:	

2.3 Statement of compliance

The SAR values found for the PM-0740-BV / AI-0070 Smart Phone with WPC cover are below the maximum recommended levels of 1.6 W/Kg as averaged over any 1 g tissue according to the FCC rule §2.1093, the ANSI/IEEE C 95.1:1992, the NCRP Report Number 86 for uncontrolled environment, according to the Health Canada's Safety Code 6 and the Industry Canada Radio Standards Specification RSS-102 for General Population/Uncontrolled exposure.
For body worn operation, this device has been tested and meets FCC RF exposure guidelines when used with any accessory that contains no metal and that positions the handset a minimum of 15 mm from the body. Use of other accessories may not ensure compliance with FCC RF exposure guidelines.
According to KDB pub 941225 D06 this device has been tested with 10 mm distance to the phantom for operation in WLAN hot spot mode.
According to FCC KDB 648474 D03 the handset has been tested according to all applicable SAR test procedures using the normal battery cover (without the wireless charging hardware, see test report 1-6965/13-04-24). The highest SAR measured for each wireless technology (1xRTT, EVDO, WCDMA, GSM, Wi-Fi etc.), frequency band, operating mode (different modes/configurations within each wireless technology) and exposure condition (head, body-worn accessory, hotspot mode etc.) ware repeated using the wireless charging battery cover.

2.4 Technical details

Band tested for this test report	Technology	Lowest transmit frequency/MHz	Highest transmit frequency/MHz	Lowest receive Frequency/MHz	Highest receive Frequency/MHz	Kind of modulation	Power Class	Tested power control level	GPRS/EGPRS mobile station class	GPRS/EGPRS multislot class	(E)GPRS voice mode or DTM	Test channel low	Test channel middle	Test channel high	Maximum output power/dBm)*
☐	GSM	880.2	914.8	925.2	959.8	GMSK 8-PSK	4 E2	5	A	33	11	975	37	124	--
☐	GSM DCS	1710.2	1784.8	1805.2	1879.8	GMSK 8-PSK	1 E2	0	A	33	11	512	698	885	--
☒	GSM cellular	824.2	848.8	869.2	893.8	GMSK 8-PSK	4 E2	5	A	33	11	128	190	251	33.3
☒	GSM PCS	1850.2	1909.8	1930.2	1989.8	GMSK 8-PSK	1 E2	0	A	33	11	512	661	810	30.1
☐	UMTS FDD I	1922.4	1977.6	2112.4	2167.6	QPSK	3	max	--	--	--	9612	9750	9888	--
☒	UMTS FDD II	1852.4	1907.6	1932.4	1987.6	QPSK	3	max	--	--	--	9262	9400	9538	24.0
☒	UMTS FDD IV	1712.4	1752.6	2112.4	2152.6	QPSK	3	max	--	--	--	1312	1412	1513	22.5
☒	UMTS FDD V	826.4	846.6	871.4	891.6	QPSK	3	max	--	--	--	4132	4182	4233	24.4
☐	UMTS FDD VIII	882.4	912.6	927.4	957.6	QPSK	3	max	--	--	--	2712	2788	2863	--
☐	LTE FDD 1	1920	1980	2110	2170	QPSK	3	max	--	--	--	18100	18300	18500	--
☒	LTE FDD 2	1850	1910	1930	1990	QPSK	3	max	--	--	--	18700	18900	19100	23.7
☐	LTE FDD 3	1710	1785	1805	1880	QPSK	3	max	--	--	--	19300	19575	19850	--
☒	LTE FDD 4	1710	1755	2110	2155	QPSK	3	max	--	--	--	20050	20175	20300	22.3
☒	LTE FDD 5	824	849	869	894	QPSK	3	max	--	--	--	20450	20525	20600	23.8
☒	LTE FDD 7	2500	2570	2620	2690	QPSK	3	max	--	--	--	20850	21100	21350	20.7
☐	LTE FDD 8	880	915	925	960	QPSK	3	max	--	--	--	21500	21625	21750	--
☒	LTE FDD 13	777	787	746	756	QPSK	3	max	--	--	--	23205	23230	23255	23.9
☒	LTE FDD 17	704	716	734	746	QPSK	3	max	--	--	--	23780	23790	23800	23.7
☐	LTE FDD 20	832	862	791	821	QPSK	3	max	--	--	--	24250	24300	24350	--
☐	WLAN	2412	2472	2412	2472	CCK OFDM	--	max	--	--	--	1	7	13	--
☒	WLAN US	2412	2462	2412	2462		--	max	--	--	--	1	6	11	16.0
☐	WLAN	5180	5240	5180	5240	OFDM	--	max	--	--	--	36	--	--	15.9
☒	WLAN	5260	5320	5260	5320	OFDM	--	max	--	--	--	52	60	64	16.0
☐	WLAN	5500	5700	5500	5700	OFDM	--	max	--	--	--	--	116	--	17.4
☒	WLAN	5745	5825	5745	5825	OFDM	--	max	--	--	--	--	--	165	14.1
☒	BT	2402	2480	2402	2480	GFSK	3	max	--	--	--	0	39	78	8.47

)*: measured slotted peak power for GSM, averaged max. RMS power for UMTS, LTE, WLAN and BT.

Features:

GSM bands 2.5	(GPRS, EDGE) class A, Multislot class 33 (max 4 TS Uplink, max 5 TS downlink, max. 6 TS active) DTM class 11 (max 3 TS uplink, max 4 TS downlink, max 5 TS active)
Rel 9 HSDPA UE	cat 24 bands 2, 4, 5 (QPSK, 16QAM, 64QAM, no MIMO, dual cell, 42.2 Mbps)
Rel 9 HSPA UE	cat: 6 bands 2,4,5 (QPSK, no 16QAM, 5.76 Mbps)
Rel 10 LTE UE	cat: 4 bands 2,5,7,13,17 (QPSK, 16QAM, no MIMO, 50Mbps uplink) Maximum TTI bundling: 4
BT BR / BT LE	
ANT+	
RFID 13.56 MHz	

2.5 Transmitter and Antenna Operating Configurations

Simultaneous transmission conditions		
GSM / GPRS / EDGE / DTM	+	BT/BLE[1]
GSM / GPRS / EDGE / DTM	+	WLAN 2.4GHz
GSM / GPRS / EDGE / DTM	+	WLAN 5GHz
UMTS / HSPA	+	BT/BLE
UMTS / HSPA	+	WLAN 2.4GHz
UMTS / HSPA	+	WLAN 5GHz
LTE	+	BT/BLE
LTE	+	WLAN 2.4GHz
LTE	+	WLAN 5GHz
GSM / GPRS / EDGE / DTM	+	BT + WLAN 5GHz
UMTS / HSPA	+	BT + WLAN 5GHz
LTE	+	BT + WLAN 5GHz

Table 1: Simultaneous transmission conditions

Note: BT and WLAN can be active at the same time, but only with interleaving of packages switched on board level. That means that they don't transmit at the same time.

BLE[1] - Bluetooth low energy

3 Test standards/ procedures references

Test Standard	Version	Test Standard Description
IEEE 1528-2003	2003-04	Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques
IEEE 1528-2013	2014-06	Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques
RSS-102 Issue 4	2010-03	Radio Frequency Exposure Compliance of Radiocommunication Apparatus (All Frequency Bands)
Canada's Safety Code No. 6	99-EHD-237	Limits of Human Exposure to Radiofrequency Electromagnetic Fields in the Frequency Range from 3 kHz to 300 GHz
IEEE Std. C95-3	2002	IEEE Recommended Practice for the Measurement of Potentially Hazardous Electromagnetic Fields – RF and Microwave
IEEE Std. C95-1	1992	IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz.
IEC 62209-2	2010	Human exposure to radio frequency fields from hand-held and bodymounted wireless communication devices. Human models, instrumentation, and procedures. Procedure to determine the specific absorption rate (SAR) for wireless communication devices used in close proximity to the human body (frequency range of 30 MHz to 6 GHz)

FCC KDBs:

KDB 865664D01v01	May 28, 2013	FCC OET SAR measurement requirements 100 MHz to 6 GHz
KDB 865664D02v01	May 28, 2013	RF Exposure Compliance Reporting and Documentation Considerations
KDB 447498D01v05	February 7, 2014	Mobile and Portable Devices RF Exposure Procedures and Equipment Authorization Policies
KDB 648474D03v01	**May 28, 2013**	**Evaluation and Approval Considerations for Wireless Handsets with Specific Wireless Charging Battery Covers**
KDB 648474D04v01	May 28, 2013	SAR Evaluation Considerations for Wireless Handsets
KDB 941225D01v02	April 10, 2007	SAR Measurements Procedures for 3G Devices
KDB 941225D02v01	December 14, 2009	3GPP R6 HSPA and R7 HSPA+ SAR Guidance
KDB 941225D02v02	May 28, 2013	SAR Guidance for HSPA, HSPA+, DC-HSDPA and 1x-Advanced
KDB 941225D05v02	May 28, 2013	SAR for LTE Devices
KDB 941225D03v01	December, 2008	SAR Test Reduction Procedure for GSM/GPRS/EDGE
KDB 941225D06v01	May 28, 2013	SAR Evaluation Procedures for Portable Devices with Wireless Router Capabilities
KDB 248227D01v01	May, 2007	SAR Measurement Procedures for 802.11 a/b/g Transmitters
KDB 450824D01v01	January, 2007	SAR Probe Calibration and System Verification considerations for measurements from 150 MHz to 3 GHz
KDB 450824D01v01	March 4, 2012	Dipole Requirements for SAR System Validation and Verification

3.1 RF exposure limits

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

Table 2: RF exposure limits

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

Notes:

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

** The Spatial Average value of the SAR averaged over the whole body.

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

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

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

4 Summary of Measurement Results

☒	**No deviations from the technical specifications ascertained**
☐	Deviations from the technical specifications ascertained

Maximum SAR value reported for 1g (W/kg) from test report 1-6965/13-04-24

		PCE	DTS	UNII
head		**1.338**	**0.321**	**0.519**
body worn 15 mm distance		**0.486**	**0.166**	**0.578**
hotspot operation 10 mm distance		**0.821**	**0.219**	not supported
collocated situations	**ΣSAR evaluation**	**1.579**		
	$SPLSR_i \leq 0.040$	**0.031**		

Note: The SAR results from device with WPC cover is not exceeded the maximum SAR results with device without WPC cover.
No hotspot mode function on WLAN 5GHz, therefore SAR testing is not necessary

5 Test Environment

Ambient temperature: 20 – 24 °C
Tissue Simulating liquid: 20 – 24 °C

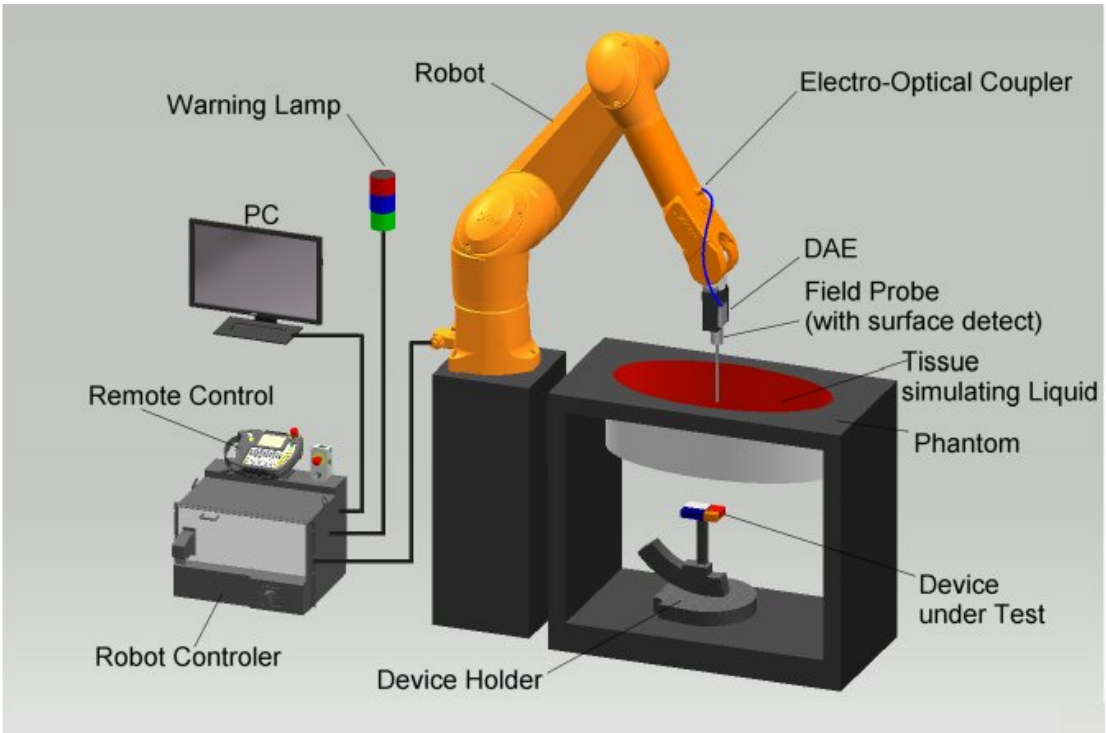
Relative humidity content: 40 – 50 %
Air pressure: not relevant for this kind of testing
Power supply: 230 V / 50 Hz

Exact temperature values for each test are shown in the table(s) under 7.1 and/or on the measurement plots.

6 Test Set-up

6.1 Measurement system

6.1.1 System Description



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

- A standard high precision 6-axis robot (Stäubli RX/TX family) with controller and software. An arm extension 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.

- A data acquisition electronic (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 Coupler (EOC) performs the conversion from the optical into a digital electric signal of the DAE. The EOC is connected to the DASY measurement server.
- The DASY measurement server, which performs all real-time data evaluation for field measurements and surface detection, controls robot movements and handles safety operation. A computer operating Windows 7.
- DASY software and SEMCAD data evaluation software.
- Remote control with teach panel and additional circuitry for robot safety such as warning lamps, etc.
- The generic twin phantom enabling the testing of left-hand and right-hand usage.
- The triple flat and eli phantom for the testing of handheld and body-mounted wireless devices.
- The device holder for handheld mobile phones and mounting device adaptor for laptops
- Tissue simulating liquid mixed according to the given recipes.
- System check dipoles allowing to validate the proper functioning of the system.

6.1.2 Test environment

The DASY measurement system is placed in a laboratory room within an environment which avoids influence on SAR measurements by ambient electromagnetic fields and any reflection from the environment. The pictures at the beginning of the photo documentation show a complete view of the test environment. The system allows the measurement of SAR values larger than 0.005 mW/g.

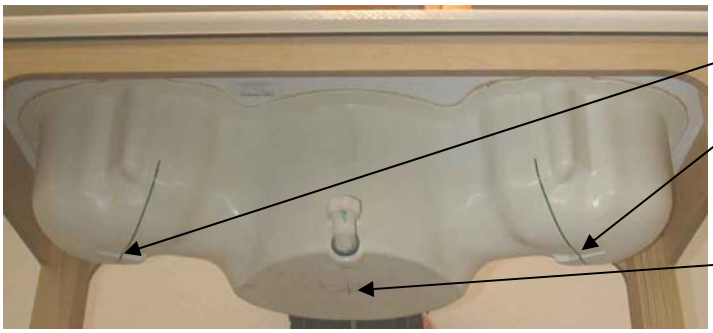
6.1.3 Probe description

Isotropic E-Field Probe ET3DV6 for Dosimetric Measurements

Technical data according to manufacturer information	
Construction	Symmetrical design with triangular core Built-in optical fiber for surface detection system Built-in shielding against static charges PEEK enclosure material (resistant to organic solvents, e.g., glycolether)
Calibration	In air from 10 MHz to 2.5 GHz In head tissue simulating liquid (HSL) at 900 (800-1000) MHz and 1.8 GHz (1700-1910 MHz) (accuracy ± 9.5%; k=2) Calibration for other liquids and frequencies upon request
Frequency	10 MHz to 3 GHz (dosimetry); Linearity: ± 0.2 dB (30 MHz to 3 GHz)
Directivity	± 0.2 dB in HSL (rotation around probe axis) ± 0.4 dB in HSL (rotation normal to probe axis)
Dynamic range	5 µW/g to > 100 mW/g; Linearity: ± 0.2 dB
Optical Surface Detection	± 0.2 mm repeatability in air and clear liquids over diffuse reflecting surfaces (ET3DV6 only)
Dimensions	Overall length: 330 mm Tip length: 16 mm Body diameter: 12 mm Tip diameter: 6.8 mm Distance from probe tip to dipole centers: 2.7 mm
Application	General dosimetry up to 3 GHz Compliance tests of mobile phones Fast automatic scanning in arbitrary phantoms (ET3DV6)

6.1.4 Phantom description

The used SAM Phantom meets the requirements specified in FCC KDB865664 D01 for Specific Absorption Rate (SAR) measurements.
The phantom consists of a fibreglass shell integrated in a wooden table. It allows left-hand and right-hand head as well as body-worn measurements with a maximum liquid depth of 18 cm in head position and 22 cm in planar position (body measurements). The thickness of the Phantom shell is 2 mm +/- 0.1 mm.



Triple Modular Phantom consists of three identical modules which can be installed and removed separately without emptying the liquid. It includes three reference points for phantom installation. Covers prevent evaporation of the liquid. Phantom material is resistant to DGBE based tissue simulating liquids.

6.1.5 Device holder description

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

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

6.1.6 Scanning procedure

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

- The „reference“ and „drift“ measurements are located at the beginning and end of the batch process. They measure the field drift at one single point in the liquid over the complete procedure. The indicated drift is mainly the variation of the DUT’s output power and should vary max. +/- 5 %.

- The highest integrated SAR value is the main concern in compliance test applications. These values can mostly be found at the inner surface of the phantom and cannot be measured directly due to the sensor offset in the probe. To extrapolate the surface values, the measurement distances to the surface must be known accurately. A distance error of 0.5mm could produce SAR errors of 6% at 1800 MHz. Using predefined locations for measurements is not accurate enough. Any shift of the phantom (e.g., slight deformations after filling it with liquid) would produce high uncertainties. For an automatic and accurate detection of the phantom surface, the DASY5 system uses the mechanical surface detection. The detection is always at touch, but the probe will move backward from the surface the indicated distance before starting the measurement.

- The „area scan“ measures the SAR above the DUT or verification dipole on a parallel plane to the surface. It is used to locate the approximate location of the peak SAR with 2D spline interpolation. The robot performs a stepped movement along one grid axis while the local electrical field strength is measured by the probe. The probe is touching the surface of the SAM during acquisition of measurement values. The scan uses different grid spacings for different frequency measurements. Standard grid spacing for head measurements in frequency ranges ≤ 2GHz is 15 mm in x- and y-dimension. For higher frequencies a finer resolution is needed, thus for the grid spacing is reduced according the following table:

Area scan grid spacing for different frequency ranges	
Frequency range	Grid spacing
≤ 2 GHz	≤ 15 mm
2 – 4 GHz	≤ 12 mm
4 – 6 GHz	≤ 10 mm

Grid spacing and orientation have no influence on the SAR result. For special applications where the standard scan method does not find the peak SAR within the grid, e.g. mobile phones with flip cover, the grid can be adapted in orientation. Results of this coarse scan are shown in annex B.

- A „zoom scan” measures the field in a volume around the 2D peak SAR value acquired in the previous „coarse“ scan. It uses a fine meshed grid where the robot moves the probe in steps along all the 3 axis (x,y and z-axis) starting at the bottom of the Phantom. The grid spacing for the cube measurement is varied according to the measured frequency range, the dimensions are given in the following table:

Zoom scan grid spacing and volume for different frequency ranges			
Frequency range	Grid spacing for x, y axis	Grid spacing for z axis	Minimum zoom scan volume
≤ 2 GHz	≤ 8 mm	≤ 5 mm	≥ 30 mm
2 – 3 GHz	≤ 5 mm	≤ 5 mm	≥ 28 mm
3 – 4 GHz	≤ 5 mm	≤ 4 mm	≥ 28 mm
4 – 5 GHz	≤ 4 mm	≤ 3 mm	≥ 25 mm
5 – 6 GHz	≤ 4 mm	≤ 2 mm	≥ 22 mm

DASY is also able to perform repeated zoom scans if more than 1 peak is found during area scan. In this document, the evaluated peak 1g and 10g averaged SAR values are shown in the 2D-graphics in annex B. Test results relevant for the specified standard (see section 3) are shown in table form in section 7.

6.1.7 Spatial Peak SAR Evaluation

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

- The data between the dipole center of the probe and the surface of the phantom are extrapolated. This data cannot be measured since the center of the dipole is 1 to 2.7 mm away from the tip of the probe and the distance between the surface and the lowest measuring point is about 1 mm (see probe calibration sheet). The extrapolated data from a cube measurement can be visualized by selecting 'Graph Evaluated'.

- The maximum interpolated value is searched with a straight-forward algorithm. Around this maximum the SAR - values averaged over the spatial volumes (1g or 10 g) are computed using the 3d-spline interpolation algorithm. If the volume cannot be evaluated (i.e., if a part of the grid was cut off by the boundary of the measurement area) the evaluation will be started on the corners of the bottom plane of the cube.

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

Extrapolation

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

Interpolation

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

Volume Averaging

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

Advanced Extrapolation

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

6.1.8 Data Storage and Evaluation

Data Storage

The DASY software stores the acquired data from the data acquisition electronics as raw data (in microvolt readings from the probe sensors), together with all necessary software parameters for the data evaluation (probe calibration data, liquid parameters and device frequency and modulation data) in measurement files with the extension ".DA4", ".DA5x". The software evaluates the desired unit and format for output each time the data is visualized or exported. This allows verification of the complete software setup even after the measurement and allows correction of incorrect parameter settings. For example, if a measurement has been performed with a wrong crest factor parameter in the device setup, the parameter can be corrected afterwards and the data can be re-evaluated.

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

Data Evaluation by SEMCAD

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

Probe parameters:	- Sensitivity	$Norm_i$, a_{i0}, a_{i1}, a_{i2}
	- Conversion factor	$ConvF_i$
	- Diode compression point	Dcpi
Device parameters:	- Frequency	f
	- Crest factor	cf
Media parameters:	- Conductivity	σ
	- Density	ρ

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

The first step of the evaluation is a linearization of the filtered input signal to account for the compression characteristics of the detector diode. The compensation depends on the input signal, the diode type and the DC-transmission factor from the diode to the evaluation electronics.

If the exciting field is pulsed, the crest factor of the signal must be known to correctly compensate for peak power. The formula for each channel can be given as:

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

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

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

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

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

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

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

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

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

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

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

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

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

with	P_{pwe}	= equivalent power density of a plane wave in mW/cm^2
	E_{tot}	= total electric field strength in V/m
	H_{tot}	= total magnetic field strength in A/m

6.1.9 Tissue simulating liquids: dielectric properties

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

(Liquids used for tests described in section 7. are marked with ☒) :

Ingredients (% of weight)	**Frequency (MHz)**								
frequency band	☐ 450	☒ 750	☒ 835	☐ 900	☐ 1450	☒ 1750	☒ 1900	☒ 2450	☒ 5000
Tissue Type	Head	Head	Head	Head	Head	Head	Head	Head	Head
Water	38.56	41.1	41.45	40.92	52.64	52.64	54.9	62.7	64 - 78
Salt (NaCl)	3.95	1.4	1.45	1.48	0.61	0.36	0.18	0.5	2 - 3
Sugar	56.32	57.0	56.0	56.5	0.0	0.0	0.0	0.0	0.0
HEC	0.98	0.2	1.0	1.0	0.0	0.0	0.0	0.0	0.0
Bactericide	0.19	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0
Triton X-100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36.8	0.0
DGBE	0.0	0.0	0.0	0.0	46.75	47.0	44.92	0.0	0.0
Emulsifiers	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9 - 15
Mineral Oil	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11 - 18

Table 3: Head tissue dielectric properties

Ingredients (% of weight)	**Frequency (MHz)**								
frequency band	☐ 450	☒ 750	☒ 835	☐ 900	☐ 1450	☒ 1750	☒ 1900	☒ 2450	☒ 5000
Tissue Type	Body	Body	Body	Body	Body	Body	Body	Body	Body
Water	51.16	51.7	52.4	56.0	70.97	69.91	69.91	73.2	64 - 78
Salt (NaCl)	1.49	0.9	1.40	0.76	0.43	0.13	0.13	0.04	2 - 3
Sugar	46.78	47.2	45.0	41.76	0.0	0.0	0.0	0.0	0.0
HEC	0.52	0.0	1.0	1.21	0.0	0.0	0.0	0.0	0.0
Bactericide	0.05	0.1	0.1	0.27	0.0	0.0	0.0	0.0	0.0
Triton X-100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DGBE	0.0	0.0	0.0	0.0	28.60	29.96	29.96	26.7	0.0
Emulsifiers	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9 - 15
Mineral Oil	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11 - 18

Table 4: Body tissue dielectric properties

Salt: 99+% Pure Sodium Chloride
Water: De-ionized, 16MΩ+ resistivity
Sugar: 98+% Pure Sucrose
HEC: Hydroxyethyl Cellulose
DGBE: 99+% Di(ethylene glycol) butyl ether, [2-(2-butoxyethoxy)ethanol]
Triton X-100(ultra pure): Polyethylene glycol mono [4-(1,1,3,3-tetramethylbutyl)phenyl]ether

6.1.10 Tissue simulating liquids: parameters

Liquid **HSL**	Freq. (MHz)	Target head tissue		Measurement **head** tissue					Measurement date
		Permittivity	Conductivity [S/m]	Permittivity	Dev. %	Conductivity ε"	Conductivity [S/m]	Dev. %	
750	709	42.15	0.89	42.2	0.1%	21.71	0.86	-3.8%	2014-06-12
	750	41.94	0.89	41.7	-0.6%	21.50	0.90	0.4%	
	782	41.78	0.90	41.1	-1.6%	21.30	0.93	3.4%	
850/900	835	41.50	0.90	41.9	0.9%	20.18	0.94	4.1%	2014-06-11
	844	41.50	0.91	41.7	0.5%	20.16	0.95	4.0%	
	847	41.50	0.91	41.7	0.4%	20.13	0.95	3.9%	
	849	41.50	0.92	41.7	0.4%	20.11	0.95	3.8%	
1750	1712	40.13	1.35	40.6	1.3%	13.90	1.32	-1.9%	2014-06-11
	1720	40.11	1.35	40.5	1.1%	13.80	1.32	-2.5%	
	1750	40.07	1.37	40.5	1.0%	14.06	1.37	-0.2%	
1900	1880	40.00	1.40	39.9	-0.2%	13.13	1.37	-1.9%	2014-06-11
	1900	40.00	1.40	39.9	-0.3%	13.21	1.40	-0.3%	
	1908	40.00	1.40	39.9	-0.4%	13.24	1.41	0.4%	
	1910	40.00	1.40	39.9	-0.3%	13.24	1.41	0.5%	
2450	2437	39.22	1.79	39.0	-0.5%	13.23	1.79	0.3%	2014-06-12
	2441	39.22	1.79	39.0	-0.5%	13.24	1.80	0.3%	
	2450	39.20	1.80	39.0	-0.6%	13.25	1.81	0.3%	
2600	2510	39.12	1.87	38.8	-0.8%	13.43	1.88	0.5%	
	2600	39.01	1.96	38.3	-1.7%	13.64	1.97	0.5%	
5GHz	5800	35.30	5.27	35.4	0.2%	15.85	5.11	-3.0%	2014-06-12
	5825	35.27	5.30	35.4	0.5%	15.64	5.07	-4.3%	

Table 5: Parameter of the head tissue simulating liquid

Liquid **MSL**	Freq. (MHz)	Target **body** tissue		Measurement **body** tissue					Measurement date
		Permittivity	Conductivity [S/m]	Permittivity	Dev. %	Conductivity ε"	Conductivity [S/m]	Dev. %	
750	709	55.69	0.96	55.7	0.0%	23.81	0.94	-2.2%	2014-06-12
	711	55.68	0.96	55.7	0.0%	23.84	0.94	-1.8%	
	750	55.53	0.96	55.2	-0.6%	23.37	0.97	1.2%	
	782	55.41	0.97	54.6	-1.4%	23.11	1.01	4.1%	
	784	55.40	0.97	54.6	-1.5%	23.08	1.01	4.2%	
850/900	824	55.24	0.97	54.1	-2.0%	21.93	1.01	3.7%	2014-06-10
	825	55.24	0.97	54.1	-2.1%	21.93	1.01	3.8%	
	835	55.20	0.97	54.0	-2.2%	21.85	1.01	4.6%	
	844	55.17	0.98	53.9	-2.4%	21.77	1.02	4.2%	
1750	1720	53.51	1.47	52.3	-2.2%	15.48	1.48	0.8%	2014-06-11
	1732	53.48	1.48	52.4	-2.0%	15.51	1.49	1.2%	
	1750	53.43	1.49	52.3	-2.1%	15.83	1.54	3.5%	
1900	1852	53.30	1.52	52.7	-1.2%	14.31	1.47	-3.0%	2014-06-11
	1860	53.30	1.52	52.6	-1.3%	14.26	1.48	-2.9%	
	1880	53.30	1.52	52.8	-1.0%	14.33	1.50	-1.4%	
	1900	53.30	1.52	52.6	-1.4%	14.46	1.53	0.6%	
	1910	53.30	1.52	52.5	-1.6%	14.27	1.52	-0.2%	
2450	2437	52.72	1.94	50.4	-4.3%	14.75	2.00	3.2%	2014-06-11
	2450	52.70	1.95	50.5	-4.3%	14.77	2.01	3.2%	
	2462	52.68	1.97	50.6	-4.0%	14.92	2.04	3.9%	
2600	2510	52.62	2.04	50.4	-4.2%	14.93	2.08	2.4%	
	2560	52.56	2.11	50.2	-4.5%	15.04	2.14	1.7%	
	2600	52.51	2.16	50.0	-4.8%	15.23	2.20	1.8%	
5GHz	5200	49.01	5.30	48.4	-1.3%	18.04	5.22	-1.6%	2014-06-12
	5300	48.88	5.42	48.0	-1.7%	18.23	5.37	-0.8%	

Table 6: Parameter of the body tissue simulating liquid
Note: The dielectric properties have been measured using the contact probe method at 22°C.

6.1.11 Measurement uncertainty evaluation for SAR test

Relative DASY5 Uncertainty Budget for SAR Tests								
According to IEEE 1528/2011 and IEC62209-1/2011 (0.3-3GHz range)								
Error Description	Uncertainty Value	Probability Distribution	Divisor	c_i	c_i	Standard Uncertainty		v_i^2 or v_{eff}
				(1g)	(10g)	± %, (1g)	± %, (10g)	
Measurement System								
Probe calibration	± 6.0 %	Normal	1	1	1	± 6.0 %	± 6.0 %	∞
Axial isotropy	± 4.7 %	Rectangular	√ 3	0.7	0.7	± 1.9 %	± 1.9 %	∞
Hemispherical isotropy	± 9.6 %	Rectangular	√ 3	0.7	0.7	± 3.9 %	± 3.9 %	∞
Boundary effects	± 1.0 %	Rectangular	√ 3	1	1	± 0.6 %	± 0.6 %	∞
Probe linearity	± 4.7 %	Rectangular	√ 3	1	1	± 2.7 %	± 2.7 %	∞
System detection limits	± 1.0 %	Rectangular	√ 3	1	1	± 0.6 %	± 0.6 %	∞
Modulation Response	± 2.4 %	Rectangular	√ 3	1	1	± 1.4 %	± 1.4 %	∞
Readout electronics	± 0.3 %	Normal	1	1	1	± 0.3 %	± 0.3 %	∞
Response time	± 0.8 %	Rectangular	√ 3	1	1	± 0.5 %	± 0.5 %	∞
Integration time	± 2.6 %	Rectangular	√ 3	1	1	± 1.5 %	± 1.5 %	∞
RF ambient noise	± 3.0 %	Rectangular	√ 3	1	1	± 1.7 %	± 1.7 %	∞
RF ambient reflections	± 3.0 %	Rectangular	√ 3	1	1	± 1.7 %	± 1.7 %	∞
Probe positioner	± 0.4 %	Rectangular	√ 3	1	1	± 0.2 %	± 0.2 %	∞
Probe positioning	± 2.9 %	Rectangular	√ 3	1	1	± 1.7 %	± 1.7 %	∞
Max. SAR evaluation	± 2.0 %	Rectangular	√ 3	1	1	± 1.2 %	± 1.2 %	∞
Test Sample Related								
Device positioning	± 2.9 %	Normal	1	1	1	± 2.9 %	± 2.9 %	145
Device holder uncertainty	± 3.6 %	Normal	1	1	1	± 3.6 %	± 3.6 %	5
Power drift	± 5.0 %	Rectangular	√ 3	1	1	± 2.9 %	± 2.9 %	∞
Phantom and Set-up								
Phantom uncertainty	± 6.1 %	Rectangular	√ 3	1	1	± 3.5 %	± 3.5 %	∞
SAR correction	± 1.9 %	Rectangular	√ 3	1	0.84	± 1.1 %	± 0.9 %	∞
Liquid conductivity (meas.)	± 5.0 %	Rectangular	√ 3	0.78	0.71	± 2.3 %	± 2.0 %	∞
Liquid permittivity (meas.)	± 5.0 %	Rectangular	√ 3	0.26	0.26	± 0.8 %	± 0.8 %	∞
Temp. Unc. - Conductivity	± 3.4 %	Rectangular	√ 3	0.78	0.71	± 1.5 %	± 1.4 %	∞
Temp. Unc. - Permittivity	± 0.4 %	Rectangular	√ 3	0.23	0.26	± 0.1 %	± 0.1 %	∞
Combined Uncertainty						± 11.3 %	± 11.3 %	330
Expanded Std. Uncertainty						± **22.7** %	± **22.5** %	

Table 7: Measurement uncertainties
Worst-Case uncertainty budget for DASY5 assessed according to IEEE 1528/2011 and IEC 62209-1/2011 draft standards. The budget is valid for the frequency range 300MHz -3 GHz and represents a worst-case analysis. For specific tests and configurations, the uncertainty could be considerable smaller.

Relative DASY5 Uncertainty Budget for SAR Tests								
According to IEC62209-2/2010 (30 MHz - 6 GHz range)								
Error Description	Uncertainty Value	Probability Distribution	Divisor	c_i	c_i	Standard Uncertainty		v_i^2 or v_{eff}
				(1g)	(10g)	± %, (1g)	± %, (10g)	
Measurement System								
Probe calibration	± 6.6 %	Normal	1	1	1	± 6.6 %	± 6.6 %	∞
Axial isotropy	± 4.7 %	Rectangular	√ 3	0.7	0.7	± 1.9 %	± 1.9 %	∞
Hemispherical isotropy	± 9.6 %	Rectangular	√ 3	0.7	0.7	± 3.9 %	± 3.9 %	∞
Boundary effects	± 2.0 %	Rectangular	√ 3	1	1	± 1.2 %	± 1.2 %	∞
Probe linearity	± 4.7 %	Rectangular	√ 3	1	1	± 2.7 %	± 2.7 %	∞
System detection limits	± 1.0 %	Rectangular	√ 3	1	1	± 0.6 %	± 0.6 %	∞
Modulation Response	± 2.4 %	Rectangular	√ 3	1	1	± 1.4 %	± 1.4 %	∞
Readout electronics	± 0.3 %	Normal	1	1	1	± 0.3 %	± 0.3 %	∞
Response time	± 0.8 %	Rectangular	√ 3	1	1	± 0.5 %	± 0.5 %	∞
Integration time	± 2.6 %	Rectangular	√ 3	1	1	± 1.5 %	± 1.5 %	∞
RF ambient noise	± 3.0 %	Rectangular	√ 3	1	1	± 1.7 %	± 1.7 %	∞
RF ambient reflections	± 3.0 %	Rectangular	√ 3	1	1	± 1.7 %	± 1.7 %	∞
Probe positioner	± 0.8 %	Rectangular	√ 3	1	1	± 0.5 %	± 0.5 %	∞
Probe positioning	± 6.7 %	Rectangular	√ 3	1	1	± 3.9 %	± 3.9 %	∞
Post-processing	± 4.0 %	Rectangular	√ 3	1	1	± 2.3 %	± 2.3 %	∞
Test Sample Related								
Device positioning	± 2.9 %	Normal	1	1	1	± 2.9 %	± 2.9 %	145
Device holder uncertainty	± 3.6 %	Normal	1	1	1	± 3.6 %	± 3.6 %	5
Power drift	± 5.0 %	Rectangular	√ 3	1	1	± 2.9 %	± 2.9 %	∞
Phantom and Set-up								
Phantom uncertainty	± 7.9 %	Rectangular	√ 3	1	1	± 4.6 %	± 4.6 %	∞
SAR correction	± 1.9 %	Rectangular	√ 3	1	0.84	± 1.1 %	± 0.9 %	∞
Liquid conductivity (meas.)	± 5.0 %	Rectangular	√ 3	0.78	0.71	± 2.3 %	± 2.0 %	∞
Liquid permittivity (meas.)	± 5.0 %	Rectangular	√ 3	0.26	0.26	± 0.8 %	± 0.8 %	∞
Temp. Unc. - Conductivity	± 3.4 %	Rectangular	√ 3	0.78	0.71	± 1.5 %	± 1.4 %	∞
Temp. Unc. - Permittivity	± 0.4 %	Rectangular	√ 3	0.23	0.26	± 0.1 %	± 0.1 %	∞
Combined Uncertainty						± 12.7 %	± 12.6 %	330
Expanded Std. Uncertainty						± **25.4** %	± **25.3** %	

Table 8: Measurement uncertainties. Worst-Case uncertainty budget for DASY5 assessed according to according to IEC 62209-2/2010 standard. The budget is valid for the frequency range 30MHz - 6 GHz and represents a worst-case analysis. For specific tests and configurations, the uncertainty could be considerable smaller.

Relative DASY5 Uncertainty Budget for SAR Tests								
According to IEEE 1528-2003, IEC 62209-1 for the 3-6 GHz range								
Error Description	Uncertainty Value	Probability Distribution	Divisor	c_i (1g)	c_i (10g)	Standard Uncertainty ± %, (1g)	Standard Uncertainty ± %, (10g)	v_i^2 or v_{eff}
Measurement System								
Probe calibration	± 6.6 %	Normal	1	1	1	± 6.6 %	± 6.6 %	∞
Axial isotropy	± 4.7 %	Rectangular	√ 3	0.7	0.7	± 1.9 %	± 1.9 %	∞
Hemispherical isotropy	± 9.6 %	Rectangular	√ 3	0.7	0.7	± 3.9 %	± 3.9 %	∞
Boundary effects	± 2.0 %	Rectangular	√ 3	1	1	± 1.2 %	± 1.2 %	∞
Probe linearity	± 4.7 %	Rectangular	√ 3	1	1	± 2.7 %	± 2.7 %	∞
System detection limits	± 1.0 %	Rectangular	√ 3	1	1	± 0.6 %	± 0.6 %	∞
Readout electronics	± 0.3 %	Normal	1	1	1	± 0.3 %	± 0.3 %	∞
Response time	± 0.8 %	Rectangular	√ 3	1	1	± 0.5 %	± 0.5 %	∞
Integration time	± 2.6 %	Rectangular	√ 3	1	1	± 1.5 %	± 1.5 %	∞
RF ambient noise	± 3.0 %	Rectangular	√ 3	1	1	± 1.7 %	± 1.7 %	∞
RF ambient reflections	± 3.0 %	Rectangular	√ 3	1	1	± 1.7 %	± 1.7 %	∞
Probe positioner	± 0.8 %	Rectangular	√ 3	1	1	± 0.5 %	± 0.5 %	∞
Probe positioning	± 6.7 %	Rectangular	√ 3	1	1	± 3.9 %	± 3.9 %	∞
Max. SAR evaluation	± 4.0 %	Rectangular	√ 3	1	1	± 2.3 %	± 2.3 %	∞
Test Sample Related								
Device positioning	± 2.9 %	Normal	1	1	1	± 2.9 %	± 2.9 %	145
Device holder uncertainty	± 3.6 %	Normal	1	1	1	± 3.6 %	± 3.6 %	5
Power drift	± 5.0 %	Rectangular	√ 3	1	1	± 2.9 %	± 2.9 %	∞
Phantom and Set-up								
Phantom uncertainty	± 4.0 %	Rectangular	√ 3	1	1	± 2.3 %	± 2.3 %	∞
Liquid conductivity (target)	± 5.0 %	Rectangular	√ 3	0.64	0.43	± 1.8 %	± 1.2 %	∞
Liquid conductivity (meas.)	± 5.0 %	Rectangular	√ 3	0.64	0.43	± 1.8 %	± 1.2 %	∞
Liquid permittivity (target)	± 5.0 %	Rectangular	√ 3	0.6	0.49	± 1.7 %	± 1.4 %	∞
Liquid permittivity (meas.)	± 5.0 %	Rectangular	√ 3	0.6	0.49	± 1.7 %	± 1.4 %	∞
Combined Uncertainty						± 12.1 %	± 11.9 %	330
Expanded Std. Uncertainty						± **24.3** %	± **23.8** %	

Table 9: Measurement uncertainties
Worst-Case uncertainty budget for DASY5 valid for 3G communication signals and frequency range 3 - 6 GHz. Probe calibration error reflects uncertainty of the EX3D probe. For specific tests and configurations, the uncertainty could be considerable smaller.

Relative DASY5 Uncertainty Budget for SAR Tests								
According to IEEE 1528/2011 and IEC62209-1/2011 (3-6GHz range)								
Error Description	Uncertainty Value	Probability Distribution	Divisor	c_i	c_i	Standard Uncertainty		v_i^2 or v_{eff}
				(1g)	(10g)	± %, (1g)	± %, (10g)	
Measurement System								
Probe calibration	± 6.6 %	Normal	1	1	1	± 6.6 %	± 6.6 %	∞
Axial isotropy	± 4.7 %	Rectangular	√ 3	0.7	0.7	± 1.9 %	± 1.9 %	∞
Hemispherical isotropy	± 9.6 %	Rectangular	√ 3	0.7	0.7	± 3.9 %	± 3.9 %	∞
Boundary effects	± 2.0 %	Rectangular	√ 3	1	1	± 1.2 %	± 1.2 %	∞
Probe linearity	± 4.7 %	Rectangular	√ 3	1	1	± 2.7 %	± 2.7 %	∞
System detection limits	± 1.0 %	Rectangular	√ 3	1	1	± 0.6 %	± 0.6 %	∞
Modulation Response	± 2.4 %	Rectangular	√ 3	1	1	± 1.4 %	± 1.4 %	∞
Readout electronics	± 0.3 %	Normal	1	1	1	± 0.3 %	± 0.3 %	∞
Response time	± 0.8 %	Rectangular	√ 3	1	1	± 0.5 %	± 0.5 %	∞
Integration time	± 2.6 %	Rectangular	√ 3	1	1	± 1.5 %	± 1.5 %	∞
RF ambient noise	± 3.0 %	Rectangular	√ 3	1	1	± 1.7 %	± 1.7 %	∞
RF ambient reflections	± 3.0 %	Rectangular	√ 3	1	1	± 1.7 %	± 1.7 %	∞
Probe positioner	± 0.8 %	Rectangular	√ 3	1	1	± 0.5 %	± 0.5 %	∞
Probe positioning	± 6.7 %	Rectangular	√ 3	1	1	± 3.9 %	± 3.9 %	∞
Max. SAR evaluation	± 4.0 %	Rectangular	√ 3	1	1	± 2.3 %	± 2.3 %	∞
Test Sample Related								
Device positioning	± 2.9 %	Normal	1	1	1	± 2.9 %	± 2.9 %	145
Device holder uncertainty	± 3.6 %	Normal	1	1	1	± 3.6 %	± 3.6 %	5
Power drift	± 5.0 %	Rectangular	√ 3	1	1	± 2.9 %	± 2.9 %	∞
Phantom and Set-up								
Phantom uncertainty	± 6.6 %	Rectangular	√ 3	1	1	± 3.8 %	± 3.8 %	∞
SAR correction	± 1.9 %	Rectangular	√ 3	1	0.84	± 1.1 %	± 0.9 %	∞
Liquid conductivity (meas.)	± 5.0 %	Rectangular	√ 3	0.78	0.71	± 2.3 %	± 2.0 %	∞
Liquid permittivity (meas.)	± 5.0 %	Rectangular	√ 3	0.26	0.26	± 0.8 %	± 0.8 %	∞
Temp. Unc. - Conductivity	± 3.4 %	Rectangular	√ 3	0.78	0.71	± 1.5 %	± 1.4 %	∞
Temp. Unc. - Permittivity	± 0.4 %	Rectangular	√ 3	0.23	0.26	± 0.1 %	± 0.1 %	∞
Combined Uncertainty						± 12.4 %	± 12.4 %	330
Expanded Std. Uncertainty						± **24.9** %	± **24.8** %	

Table 10: Measurement uncertainties
Worst-Case uncertainty budget for DASY5 assessed according to IEEE 1528/2011 and IEC 62209-1/2011 draft standards. The budget is valid for the frequency range 3GHz -6GHz and represents a worst-case analysis. For specific tests and configurations, the uncertainty could be considerable smaller.

6.1.12 Measurement uncertainty evaluation for System Check

Uncertainty of a System Performance Check with DASY5 System for the 0.3 - 3 GHz range								
Source of uncertainty	Uncertainty Value	Probability Distribution	Divisor	c_i (1g)	c_i (10g)	Standard Uncertainty ± %, (1g)	Standard Uncertainty ± %, (10g)	v_i^2 or v_{eff}
Measurement System								
Probe calibration	± 6.0 %	Normal	1	1	1	± 6.0 %	± 6.0 %	∞
Axial isotropy	± 4.7 %	Rectangular	√ 3	0.7	0.7	± 1.9 %	± 1.9 %	∞
Hemispherical isotropy	± 0.0 %	Rectangular	√ 3	0.7	0.7	± 0.0 %	± 0.0 %	∞
Boundary effects	± 1.0 %	Rectangular	√ 3	1	1	± 0.6 %	± 0.6 %	∞
Probe linearity	± 4.7 %	Rectangular	√ 3	1	1	± 2.7 %	± 2.7 %	∞
System detection limits	± 1.0 %	Rectangular	√ 3	1	1	± 0.6 %	± 0.6 %	∞
Readout electronics	± 0.3 %	Normal	1	1	1	± 0.3 %	± 0.3 %	∞
Response time	± 0.0 %	Rectangular	√ 3	1	1	± 0.0 %	± 0.0 %	∞
Integration time	± 0.0 %	Rectangular	√ 3	1	1	± 0.0 %	± 0.0 %	∞
RF ambient conditions	± 3.0 %	Rectangular	√ 3	1	1	± 1.7 %	± 1.7 %	∞
Probe positioner	± 0.4 %	Rectangular	√ 3	1	1	± 0.2 %	± 0.2 %	∞
Probe positioning	± 2.9 %	Rectangular	√ 3	1	1	± 1.7 %	± 1.7 %	∞
Max. SAR evaluation	± 1.0 %	Rectangular	√ 3	1	1	± 0.6 %	± 0.6 %	∞
Test Sample Related								
Dev. of experimental dipole	± 0.0 %	Rectangular	√ 3	1	1	± 0.0 %	± 0.0 %	∞
Source to liquid distance	± 2.0 %	Rectangular	√ 3	1	1	± 1.2 %	± 1.2 %	∞
Power drift	± 3.4 %	Rectangular	√ 3	1	1	± 2.0 %	± 2.0 %	∞
Phantom and Set-up								
Phantom uncertainty	± 4.0 %	Rectangular	√ 3	1	1	± 2.3 %	± 2.3 %	∞
SAR correction	± 1.9 %	Rectangular	√ 3	1	0.84	± 1.1 %	± 0.9 %	∞
Liquid conductivity (meas.)	± 5.0 %	Normal	1	0.78	0.71	± 3.9 %	± 3.6 %	∞
Liquid permittivity (meas.)	± 5.0 %	Normal	1	0.26	0.26	± 1.3 %	± 1.3 %	∞
Temp. unc. - Conductivity	± 1.7 %	Rectangular	√ 3	0.78	0.71	± 0.8 %	± 0.7 %	∞
Temp. unc. - Permittivity	± 0.3 %	Rectangular	√ 3	0.23	0.26	± 0.0 %	± 0.0 %	∞
Combined Uncertainty						± 9.1 %	± 8.9 %	330
Expanded Std. Uncertainty						± **18.2** %	± **17.9** %	

Table 11: Measurement uncertainties of the System Check with DASY5 (0.3-3GHz)

Uncertainty of a System Performance Check with DASY5 System for the 3 - 6 GHz range								
Source of uncertainty	Uncertainty Value	Probability Distribution	Divisor	c_i (1g)	c_i (10g)	Standard Uncertainty ± %, (1g)	Standard Uncertainty ± %, (10g)	v_i^2 or v_{eff}
Measurement System								
Probe calibration	± 6.6 %	Normal	1	1	1	± 6.6 %	± 6.6 %	∞
Axial isotropy	± 4.7 %	Rectangular	√ 3	0.7	0.7	± 1.9 %	± 1.9 %	∞
Hemispherical isotropy	± 0.0 %	Rectangular	√ 3	0.7	0.7	± 0.0 %	± 0.0 %	∞
Boundary effects	± 1.0 %	Rectangular	√ 3	1	1	± 0.6 %	± 0.6 %	∞
Probe linearity	± 4.7 %	Rectangular	√ 3	1	1	± 2.7 %	± 2.7 %	∞
System detection limits	± 1.0 %	Rectangular	√ 3	1	1	± 0.6 %	± 0.6 %	∞
Readout electronics	± 0.3 %	Normal	1	1	1	± 0.3 %	± 0.3 %	∞
Response time	± 0.0 %	Rectangular	√ 3	1	1	± 0.0 %	± 0.0 %	∞
Integration time	± 0.0 %	Rectangular	√ 3	1	1	± 0.0 %	± 0.0 %	∞
RF ambient conditions	± 3.0 %	Rectangular	√ 3	1	1	± 1.7 %	± 1.7 %	∞
Probe positioner	± 0.8 %	Rectangular	√ 3	1	1	± 0.5 %	± 0.5 %	∞
Probe positioning	± 6.7 %	Rectangular	√ 3	1	1	± 3.9 %	± 3.9 %	∞
Max. SAR evaluation	± 1.0 %	Rectangular	√ 3	1	1	± 0.6 %	± 0.6 %	∞
Test Sample Related								
Dev. of experimental dipole	± 0.0 %	Rectangular	√ 3	1	1	± 0.0 %	± 0.0 %	∞
Source to liquid distance	± 2.0 %	Rectangular	√ 3	1	1	± 1.2 %	± 1.2 %	∞
Power drift	± 3.4 %	Rectangular	√ 3	1	1	± 2.0 %	± 2.0 %	∞
Phantom and Set-up								
Phantom uncertainty	± 4.0 %	Rectangular	√ 3	1	1	± 2.3 %	± 2.3 %	∞
SAR correction	± 1.9 %	Rectangular	√ 3	1	0.84	± 1.1 %	± 0.9 %	∞
Liquid conductivity (meas.)	± 5.0 %	Normal	1	0.78	0.71	± 3.9 %	± 3.6 %	∞
Liquid permittivity (meas.)	± 5.0 %	Normal	1	0.26	0.26	± 1.3 %	± 1.3 %	∞
Temp. unc. - Conductivity	± 1.7 %	Rectangular	√ 3	0.78	0.71	± 0.8 %	± 0.7 %	∞
Temp. unc. - Permittivity	± 0.3 %	Rectangular	√ 3	0.23	0.26	± 0.0 %	± 0.0 %	∞
Combined Uncertainty						± 10.1 %	± 10.0 %	330
Expanded Std. Uncertainty						± **20.2** %	± **19.9** %	

Table 12: Measurement uncertainties of the System Check with DASY5 (3-6GHz)

Note: Worst case probe calibration uncertainty has been applied for all probes used during the measurements.

6.1.13 System check

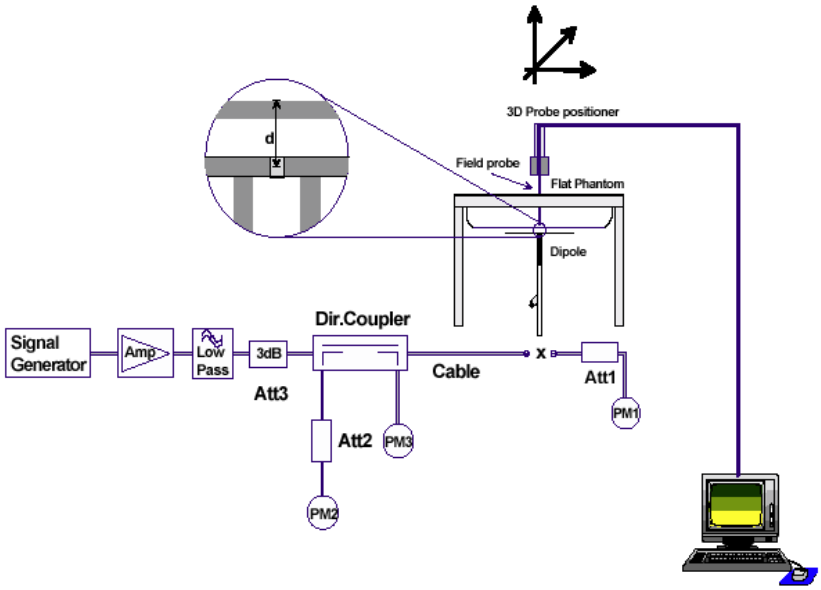
The system check is performed for verifying the accuracy of the complete measurement system and performance of the software. The system check is performed with tissue equivalent material according to IEEE 1528. The following table shows system check results for all frequency bands and tissue liquids used during the tests (plot(s) see annex A).

System performence check (1000 mW)								
System validation Kit	Frequency	Target SAR_{1g} /mW/g (+/- 10%)	Target SAR_{10g} /mW/g (+/- 10%)	Measured SAR_{1g} mW/g	SAR_{1g} dev. %	Measured SAR_{10g} mW/g	SAR_{10g} dev. %	Measured date
D750V3 S/N: 1041	750 MHz head	8.52	5.56	8.98	5.4%	5.87	5.6%	2014-06-12
D750V3 S/N: 1041	750 MHz body	8.75	5.79	9.02	3.1%	6.00	3.6%	2014-06-12
D835V2 S/N: 4d153	835 MHz head	9.58	6.21	10.30	7.5%	6.74	8.5%	2014-06-11
D835V2 S/N: 4d153	835 MHz head	9.58	6.21	9.53	-0.5%	6.29	1.3%	2014-06-13
D835V2 S/N: 4d153	835 MHz body	9.40	6.12	9.93	5.6%	6.64	8.5%	2014-06-10
D835V2 S/N: 4d153	835 MHz body	9.40	6.12	9.07	-3.5%	6.04	-1.3%	2014-06-11
D1750V2 S/N: 1093	1750 MHz head	36.60	19.30	36.50	-0.3%	20.20	4.7%	2014-06-11
D1750V2 S/N: 1093	1750 MHz head	36.60	19.30	36.50	-0.3%	19.80	2.6%	2014-06-13
D1750V2 S/N: 1093	1750 MHz body	37.90	20.30	36.40	-4.0%	20.30	0.0%	2014-06-11
D1900V2 S/N: 5d009	1900 MHz head	40.10	21.00	39.30	-2.0%	21.60	2.9%	2014-06-11
D1900V2 S/N: 5d009	1900 MHz body	40.90	21.70	38.10	-6.8%	20.80	-4.1%	2014-06-11
D2450V2 S/N: 710	2450 MHz head	51.50	24.00	54.10	5.0%	25.20	5.0%	2014-06-13
D2450V2 S/N: 710	2450 MHz body	51.20	23.90	53.10	3.7%	24.70	3.3%	2014-06-13
D2600V2 S/N: 1040	2600 MHz head	58.00	26.10	57.70	-0.5%	25.90	-0.8%	2014-06-12
D2600V2 S/N: 1040	2600 MHz body	56.80	25.40	55.10	-3.0%	24.80	-2.4%	2014-06-11
D5GHzV2 S/N: 1055	5800 MHz head	80.10	22.70	77.60	-3.1%	21.90	-3.5%	2014-06-13
D5GHzV2 S/N: 1055	5200 MHz body	74.20	20.80	71.20	-4.0%	20.10	-3.4%	2014-06-13

Table 13: Results system check

6.1.14 System check procedure

The system check is performed by using a validation dipole which is positioned parallel to the planar part of the SAM phantom at the reference point. The distance of the dipole to the SAM phantom is determined by a plexiglass spacer. The dipole is connected to the signal source consisting of signal generator and amplifier via a directional coupler, N-connector cable and adaption to SMA. It is fed with a power of 1000 mW for frequencies below 2 GHz or 100 mW for frequencies above 2 GHz. To adjust this power a power meter is used. The power sensor is connected to the cable before the system check to measure the power at this point and do adjustments at the signal generator. At the outputs of the directional coupler both return loss as well as forward power are controlled during the validation to make sure that emitted power at the dipole is kept constant. This can also be checked by the power drift measurement after the test (result on plot).
System check results have to be equal or near the values determined during dipole calibration (target SAR in table above) with the relevant liquids and test system.



6.1.15 System validation

The system validation is performed in a similar way as a system check. It needs to be performed once a SAR measurement system has been established and allows an evaluation of the system accuracy with all components used together with the specified system. It has to be repeated at least once a year or when new system components are used (DAE, probe, phantom, dipole, liquid type).
In addition to the procedure used during system check a system validation also includes checks of probe isotropy, probe modulation factor and RF signal.

The following table lists the system validations relevant for this test report:

Probe Calibration Point f / MHz	Test System	DASY SW	Dipole Type / SN	Probe Type / SN	Calibrated signal type(s)	DAE unit Type / SN	Validation done	
							Head tissue simulant	Body tissue simulant
2450	Saarbrücken / SAR-1	V52.8.7	D2450V2 / 710	ES3DV3 / 3320	CW	DAE3 / 413	2014-05	2014-05
5800	Saarbrücken / SAR-1	V52.8.7	D5GHzV2 / 1055	EX3DV4 / 3944	CW	DAE3/ 413	2013-06	2013-06
750	Saarbrücken / SAR-2	V52.8.7	D750V2 / 1041	ET3DV6 / 1558	CW	DAE3/ 477	2014-05	2014-05
835	Saarbrücken / SAR-2	V52.8.7	D835V2 / 4d153	ET3DV6 / 1558	CW	DAE3/ 477	2014-05	2014-05
1750	Saarbrücken / SAR-2	V52.8.7	D1750V2 / 1093	ET3DV6 / 1558	CW	DAE3/ 477	2014-05	2014-05
1900	Saarbrücken / SAR-2	V52.8.7	D1900V2 / 5d009	ET3DV6 / 1558	CW	DAE3/ 477	2014-05	2014-05
2450	Saarbrücken / SAR-2	V52.8.7	D2450V2 / 710	ET3DV6 / 1558	CW	DAE3/ 477	2014-05	2014-05
2600	Saarbrücken / SAR-2	V52.8.7	D2600V2 / 1040	ES3DV3 / 3944	CW	DAE3/ 477	2014-06	2014-06
5200	Saarbrücken / SAR-2	V52.8.7	D5GHzV2 / 1055	EX3DV4 / 3944	CW	DAE3/ 477	2013-06	2013-06
835	Saarbrücken / SAR-3	V52.8.7	D835V2 / 4d153	ES3DV3 / 3326	CW	DAE4/ 1387	2013-09	2013-10
1750	Saarbrücken / SAR-3	V52.8.7	D1750V2 / 1093	ES3DV3 / 3326	CW	DAE4/ 1387	2013-09	2013-10
2600	Saarbrücken / SAR-3	V52.8.7	D2600V2 / 1040	ES3DV3 / 3944	CW	DAE4/ 1387	2013-11	2013-11

7 Detailed Test Results

7.1 Conducted power measurements

See results in the test report 1-6965/13-04-24

7.2 SAR test results

7.2.1 Results overview

measured / extrapolated SAR numbers - Head - GSM 850 MHz - DTM										
Ch.	Freq. (MHz)	time slots	Position	cond. P_{max} (dBm)		SAR_{1g} results(W/kg)		SAR_{10g} (W/kg)		liquid (°C)
				declared**	measured	Measured	Extrapolated	measured	extrap.	
251	848.8	2	right cheek	31.0	30.7	**0.672**	**0.720**	**0.489**	**0.524**	22.0
251	848.8	2	right cheek	31.0	30.7	0.402	0.431	0.293	0.314	22.5

Table 14: Test results head SAR GSM 850MHz (see SAR plot Annex B.1:GSM 850page 58)

measured / extrapolated SAR numbers - hotspot mode - GSM 850 MHz										
Ch.	Freq. (MHz)	time slots	dist. (mm)	Position	cond. P_{max} (dBm)		SAR_{1g} results(W/kg)		SAR_{10g} (W/kg)		liquid (°C)
					declared**	measured	measured	extrapolated	meas.	extrap.	
128	824.2	2	10	rear	31.0	31.0	**0.496**	0.496	**0.383**	0.383	22.6
128	824.2	2	10	rear	31.0	31.0	0.255	0.255	0.190	0.190	22.4

Table 15: Test results hotspot mode SAR GSM 850MHz (see SAR plot Annex B.1:GSM 850page 58)

measured / extrapolated SAR numbers - Body worn - GSM 850 MHz										
Ch.	Freq. (MHz)	time slots	dist. (mm)	Position	cond. P_{max} (dBm)		SAR_{1g} results(W/kg)		SAR_{10g} (W/kg)		liquid (°C)
					declared**	measured	measured	extrapolated	meas.	extrap.	
128	824.2	2	15	front	31.0	31.0	**0.431**	**0.431**	**0.329**	**0.329**	22.6
128	824.2	2	15	front	31.0	31.0	0.266	0.266	0.200	0.200	22.4

Table 16: Test results body worn SAR GSM 850 MHz (see SAR plot Annex B.1:GSM 850page 58)
** - maximum possible output power declared by manufacturer
Yellow marked are the highest SAR measured results from test report 1-6965/13-04-24

measured / extrapolated SAR numbers - Head - GSM 1900 MHz - DTM										
Ch.	Freq. (MHz)	time slots	Position	cond. P_{max} (dBm)		SAR_{1g} results(W/kg)		SAR_{10g} (W/kg)		liquid (°C)
				declared**	measured	measured	extrapolated	meas.	extrap.	
810	1910	3	right cheek	26.5	26.4	**0.530**	**0.542**	**0.291**	**0.298**	21.5
810	1910	3	right cheek	26.5	26.4	0.572	0.585	0.315	0.322	22.5

Table 17: Test results head SAR GSM 1900MHz (see SAR plot Annex B.2: GSM 1900 page 61)

measured / extrapolated SAR numbers - hotspot mode - GSM 1900 MHz											
Ch.	Freq. (MHz)	time slots	dist. (mm)	Position	cond. P_{max} (dBm)		SAR_{1g} results(W/kg)		SAR_{10g} (W/kg)		liquid (°C)
					declared**	measured	measured	extrap.	meas.	extrap.	
810	1910	4	10	front	25.5	25.3	**0.559**	**0.585**	**0.359**	**0.376**	21.7
810	1910	4	10	front	25.5	25.3	0.312	0.327	0.172	0.180	22.3

Table 18: Test results hotspot mode SAR GSM 1900 MHz (see SAR plot Annex B.2: GSM 1900 page 61)

measured / extrapolated SAR numbers - Body worn - GSM 1900 MHz											
Ch.	Freq. (MHz)	time slots	dist. (mm)	Position	cond. P_{max} (dBm)		SAR_{1g} results(W/kg)		SAR_{10g} (W/kg)		liquid (°C)
					declared**	measured	measured	extrap.	meas.	extrap.	
810	1909.8	4	15	front	25.5	25.3	**0.374**	**0.392**	**0.224**	**0.235**	21.7
810	1909.8	4	15	front	25.5	25.3	0.243	0.254	0.158	0.165	22.3

Table 19: Test results body worn SAR GSM 1900 MHz (see SAR plot Annex B.2: GSM 1900 page 61)
** - maximum possible output power declared by manufacturer
Yellow marked are the highest SAR measured results from test report 1-6965/13-04-24

measured / extrapolated SAR numbers - Head - UMTS FDD II 1880 MHz									
Ch.	Freq. (MHz)	Position	cond. P_{max} (dBm)		SAR_{1g} results(W/kg)		SAR_{10g} (W/kg)		liquid (°C)
			declared**	measured	measured	extrapolated	meas.	extrap.	
9538	1907.6	right cheek	24.0	23.7	**0.513**	**0.550**	**0.282**	**0.302**	21.9
9538	1907.6	right cheek	24.0	23.7	0.718	0.769	0.395	0.423	22.5

Table 20: Test results head SAR UMTS FDD II 1880 MHz (see SAR plot Annex B.3: UMTS FDD II page 64)

measured / extrapolated SAR numbers - hotspot mode - UMTS FDD II 1880 MHz											
Ch.	Freq. (MHz)	test condition	dist. (mm)	Position	cond. P_{max} (dBm)		SAR_{1g} results(W/kg)		SAR_{10g} (W/kg)		liquid (°C)
					declared**	measured	measured	extrapolated	meas.	extrap.	
9262	1852.4	RMC	10	front	24.0	24.0	**0.713**	**0.713**	**0.454**	**0.454**	21.7
9262	1852.4	RMC	10	front	24.0	24.0	0.431	0.431	0.244	0.244	22.3

Table 21: Test results hotspot mode SAR UMTS FDD II 1880 MHz (see SAR plot Annex B.3: UMTS FDD II page 64)

measured / extrapolated SAR numbers - Body worn - UMTS FDD II 1880 MHz											
Ch.	Freq. (MHz)	test condition	dist. (mm)	Position	cond. P_{max} (dBm)		SAR_{1g} results(W/kg)		SAR_{10g} (W/kg)		liquid (°C)
					declared**	measured	measured	extrapolated	meas.	extrap.	
9262	1852.4	RMC	15	front	24.0	24.0	**0.388**	**0.388**	**0.253**	**0.253**	21.7
9262	1852.4	RMC	15	front	24.0	24.0	0.247	0.247	0.162	0.162	22.3

Table 22: Test results body worn SAR UMTS FDD II 1880 MHz (see SAR plot Annex B.3: UMTS FDD II page 64)

measured / extrapolated SAR numbers - Head - UMTS FDD IV 1700 MHz									
Ch.	Freq. (MHz)	Position	cond. P_{max} (dBm)		SAR_{1g} results(W/kg)		SAR_{10g} (W	SAR_{10g}	liquid (°C)
			declared**	measured	measured	extrapolated	meas.	extrap.	
1412	1732.4	left cheek	22.5	22.5	**1.310**	1.310	**0.591**	0.591	21.7
1312	1712.4	left cheek	22.5	22.1	0.636	0.697	0.332	0.364	22.5

Table 23: Test results head SAR UMTS FDD IV 1700 MHz (see SAR plot Annex B.4: UMTS FDD IV page 67)

measured / extrapolated SAR numbers - hotspot mode - UMTS FDD IV 1700 MHz											
Ch.	Freq. (MHz)	test condition	distance (mm)	Position	cond. P_{max} (dBm)		SAR_{1g} results(W/kg)		SAR_{10g} (W	SAR_{10g} (W	liquid (°C)
					declared**	measured	measured	extrapolated	meas.	extrap.	
1412	1732.4	RMC	10	left edge	22.5	22.5	**0.744**	**0.744**	**0.394**	0.394	21.9
1412	1732.4	RMC	10	left edge	22.5	22.5	0.175	0.175	0.101	0.101	22.4

Table 24: Test results hotspot mode SAR UMTS FDD IV 1700 MHz (see SAR plot Annex B.4: UMTS FDD IV page 67)

measured / extrapolated SAR numbers - Body worn - UMTS FDD IV 1700 MHz											
Ch.	Freq. (MHz)	test condition	distance (mm)	Position	cond. P_{max} (dBm)		SAR_{1g} results(W/kg)		SAR_{10g} (W	SAR_{10g} (W	liquid (°C)
					declared**	measured	measured	extrapolated	meas.	extrap.	
1413	1732.4	RMC	15	rear	22.5	22.5	**0.364**	0.364	**0.239**	**0.239**	21.9
1412	1732.4	RMC	15	rear	22.5	22.5	0.182	0.182	0.121	0.121	22.4

Table 25: Test results body worn SAR UMTS FDD IV 1700 MHz (see SAR plot Annex B.4: UMTS FDD IV page 67)

** - maximum possible output power declared by manufacturer

Yellow marked are the highest SAR measured results from test report 1-6965/13-04-24

measured / extrapolated SAR numbers - Head - UMTS FDD V 850 MHz									
Ch.	Freq. (MHz)	Position	cond. P_{max} (dBm)		SAR_{1g} results(W/kg)		SAR_{10g} (W/kg)		liquid (°C)
			declared**	measured	measured	extrapolated	meas.	extrap.	
4233	846.6	right cheek	24.5	24.3	**0.493**	**0.516**	**0.351**	**0.368**	22.4
4233	846.6	right cheek	24.5	24.3	0.420	0.440	0.306	0.320	22.5

Table 26: Test results head SAR UMTS FDD V 850 MHz (see SAR plot Annex B.5: UMTS FDD V page 70)

measured / extrapolated SAR numbers - hotspot mode - UMTS FDD V 850 MHz											
Ch.	Freq. (MHz)	test condition	dist. (mm)	Position	cond. P_{max} (dBm)		SAR_{1g} results(W/kg)		SAR_{10g} (W/kg)		liquid (°C)
					declared**	measured	measured	extrapolated	meas.	extrap.	
4132	826.4	RMC	10	rear	24.5	24.3	**0.346**	**0.362**	**0.270**	**0.283**	21.6
4132	826.4	RMC	10	rear	24.5	24.3	0.242	0.253	0.182	0.191	22.4

Table 27: Test results hotspot mode SAR UMTS FDD V 850 MHz (see SAR plot Annex B.5: UMTS FDD V page 70)

measured / extrapolated SAR numbers - Body worn - UMTS FDD V 850 MHz											
Ch.	Freq. (MHz)	test condition	dist. (mm)	Position	cond. P_{max} (dBm)		SAR_{1g} results(W/kg)		SAR_{10g} (W/kg)		liquid (°C)
					declared**	measured	measured	extrapolated	meas.	extrap.	
4132	826.4	RMC	15	rear	24.5	24.3	**0.282**	**0.295**	**0.213**	**0.223**	21.6
4132	826.4	RMC	15	rear	24.5	24.3	0.213	0.223	0.159	0.166	22.4

Table 28: Test results body worn SAR UMTS FDD V 850 MHz (see SAR plot Annex B.5: UMTS FDD V page 70)

measured / extrapolated SAR numbers - Head - LTE FDD 2 1900 MHz										
Ch.	Freq. (MHz)	RB Offset	Position	cond. P_{max} (dBm)		SAR_{1g} results(W/kg)		SAR_{10g} (W/kg)		liquid (°C)
				declared**	measured	measured	xtrapolate	meas.	extrap.	
20MHz BW/1RB/QPSK										
18900	1880	low	left cheek	24.0	23.1	**0.607**	**0.747**	**0.330**	**0.406**	21.8
18900	1880	low	left cheek	24.0	23.1	0.367	0.452	0.200	0.246	22.5

Table 29: Test results head SAR LTE FDD 2 1900 MHz (see SAR plot in Annex B.6: LTE FDD 2 page 73)

measured / extrapolated SAR numbers - hotspot mode - LTE FDD 2 1900 MHz											
Ch.	Freq. (MHz)	RB offset	dist. (mm)	Position	cond. P_{max} (dBm)		SAR_{1g} results(W/kg)		SAR_{10g} (W/kg)		liquid (°C)
					declared**	measured	measured	extrap.	meas.	extrap.	
20MHz BW/1RB/QPSK											
18700	1860	low	10	rear	24.0	23.4	**0.715**	**0.821**	**0.401**	**0.460**	22.3
18700	1860	low	10	rear	24.0	23.4	0.266	0.305	0.161	0.185	22.3

Table 30: Test results hotspot mode SAR LTE FDD 2 1900 MHz (see SAR plot in Annex B.6: LTE FDD 2 page 73)

** - maximum possible output power declared by manufacturer

Yellow marked are the highest SAR measured results from test report 1-6965/13-04-24

measured / extrapolated SAR numbers - Body worn - LTE FDD 2 1900 MHz											
Ch.	Freq. (MHz)	RB offset	dist. (mm)	Position	cond. P_{max} (dBm)		SAR_{1g} results(W/kg)		SAR_{10g} (W/kg)		liquid (°C)
					declared**	measured	measured	xtrapolate	meas.	extrap.	
20MHz BW/1RB/QPSK											
18900	1880	low	15	front	24.0	23.1	**0.395**	**0.486**	**0.264**	**0.325**	22.3
18900	1880	low	15	front	24.0	23.1	0.185	0.228	0.122	0.150	22.3

Table 31: Test results body worn SAR LTE FDD 2 1900 MHz (see SAR plot in Annex B.6: LTE FDD 2 page 73)

measured / extrapolated SAR numbers - Head - LTE FDD 4 1750 MHz										
Ch.	Freq. (MHz)	RB offset	Position	cond. P_{max} (dBm)		SAR_{1g} results(W/kg)		SAR_{10g} (W/kg)		liquid (°C)
				declared**	measured	measured	xtrapolate	meas.	extrap.	
20MHz BW/1RB/QPSK										
20050	1720.0	low	left cheek	22.5	22.3	**1.040**	**1.089**	**0.494**	**0.517**	22.3
20050	1720.0	low	left cheek	22.5	22.3	0.524	0.549	0.274	0.287	22.5

Table 32: Test results head SAR LTE FDD 4 1750 MHz (see SAR plot in Annex B.7: LTE FDD 4 page 76)

measured / extrapolated SAR numbers - hotspot mode - LTE FDD 4 1750 MHz											
Ch.	Freq. (MHz)	RB offset	dist. (mm)	Position	cond. P_{max} (dBm)		SAR_{1g} results(W/kg)		SAR_{10g} (W/kg)		liquid (°C)
					declared**	measured	measured	xtrapolate	meas.	extrap.	
20MHz BW/1RB/QPSK											
20050	1720.0	low	10	left edge	22.5	22.3	**0.617**	**0.646**	**0.328**	**0.343**	22.2
20050	1720.0	low	10	left edge	22.5	22.3	0.243	0.254	0.136	0.142	22.4

Table 33: Test results hotspot mode SAR LTE FDD 4 1750 MHz (see SAR plot in Annex B.7: LTE FDD 4 page 76)

measured / extrapolated SAR numbers - Body worn - LTE FDD 4 1750 MHz											
Ch.	Freq. (MHz)	RB offset	dist. (mm)	Position	cond. P_{max} (dBm)		SAR_{1g} results(W/kg)		SAR_{10g} (W/kg)		liquid (°C)
					declared**	measured	measured	xtrapolate	meas.	extrap.	
20MHz BW/1RB/QPSK											
20175	1732.5	high	15	rear	22.5	22.1	**0.330**	**0.362**	**0.217**	**0.238**	22.2
20175	1732.5	high	15	rear	22.5	22.1	0.179	0.196	0.118	0.129	22.4

Table 34: Test results body worn SAR LTE FDD 4 1750 MHz (see SAR plot in Annex B.7: LTE FDD 4 page 76)

measured / extrapolated SAR numbers - Head - LTE FDD 5 850 MHz										
Ch.	Freq. (MHz)	RB offset	Position	cond. P_{max} (dBm)		SAR_{1g} results(W/kg)		SAR_{10g} (W/kg)		liquid (°C)
				declared**	measured	measured	xtrapolate	meas.	extrap.	
10MHz BW/1RB/QPSK										
20600	844.0	low	right cheek	24.0	23.7	**0.439**	**0.470**	**0.320**	**0.343**	22.5
20600	844.0	low	right cheek	24.0	23.7	0.321	0.344	0.236	0.253	22.6

Table 35: Test results head SAR LTE FDD 5 850 MHz (see SAR plot in Annex B.8: LTE FDD 5 page 79)
** - maximum possible output power declared by manufacturer
Yellow marked are the highest SAR measured results from test report 1-6965/13-04-24

measured / extrapolated SAR numbers - hotspot mode - LTE FDD 5 850 MHz											
Ch.	Freq. (MHz)	RB offset	dist. (mm)	Position	cond. P_{max} (dBm)		SAR_{1g} results(W/kg)		SAR_{10g} (W/kg)		liquid (°C)
					declared**	measured	measured	xtrapolate	meas.	extrap.	
10MHz BW/1RB/QPSK											
20600	844.0	low	10	rear	24.0	23.7	**0.316**	**0.339**	**0.243**	**0.260**	21.6
20600	844.0	low	10	rear	24.0	23.7	0.215	0.230	0.160	0.171	22.4

Table 36: Test results hotspot mode SAR LTE FDD 5 850 MHz (see SAR plot in Annex B.8: LTE FDD 5 page 79)

measured / extrapolated SAR numbers - Body worn - LTE FDD 5 850 MHz											
Ch.	Freq. (MHz)	RB offset	dist. (mm)	Position	cond. P_{max} (dBm)		SAR_{1g} results(W/kg)		SAR_{10g} (W/kg)		liquid (°C)
					declared**	measured	measured	xtrapolate	meas.	extrap.	
10MHz BW/1RB/QPSK											
20600	844.0	low	15	rear	24.0	23.7	**0.237**	**0.254**	**0.179**	**0.192**	21.6
20600	844.0	low	15	rear	24.0	23.7	0.173	0.185	0.129	0.138	22.4

Table 37: Test results body worn SAR LTE FDD 5 850 MHz (see SAR plot in Annex B.8: LTE FDD 5 page 79)

measured / extrapolated SAR numbers - Head - LTE FDD 7 2600 MHz										
Ch.	Freq. (MHz)	RB offset	Position	cond. P_{max} (dBm)		SAR_{1g} results(W/kg)		SAR_{10g}	SAR_{10g} (	liquid (°C)
				declared**	measured	measured	xtrapolate	meas.	extrap.	
20MHz BW/1RB/QPSK										
20850	2510	high	right cheek	20.7	20.6	**1.240**	**1.269**	**0.446**	0.456	22.5
20850	2510	high	right cheek	20.7	20.6	0.854	0.874	0.302	0.309	22.1

Table 38: Test results head SAR LTE FDD 7 2600 MHz (see SAR plot in Annex B.9: LTE FDD 7 page 82)

measured / extrapolated SAR numbers - hotspot mode - LTE FDD 7 2600 MHz											
Ch.	Freq. (MHz)	RB offset	dist. (mm)	Position	cond. P_{max} (dBm)		SAR_{1g} results(W/kg)		SAR_{10g} (	SAR_{10g}	liquid (°C)
					declared**	measured	measured	xtrapolate	meas.	extrap.	
20MHz BW/1RB/QPSK											
20850	2510	high	10	right edge	20.7	20.2	**0.677**	**0.760**	0.304	**0.341**	22.2
20850	2510	high	10	right edge	20.7	20.2	0.320	0.359	0.150	0.168	22.5

Table 39: Test results hotspot mode SAR LTE FDD 7 2600 MHz (see SAR plot in Annex B.9: LTE FDD 7 page 82)

measured / extrapolated SAR numbers - Body worn - LTE FDD 7 2600 MHz											
Ch.	Freq. (MHz)	RB offset	dist. (mm)	Position	cond. P_{max} (dBm)		SAR_{1g} results(W/kg)		SAR_{10g} (W/kg)		liquid (°C)
					declared**	measured	measured	xtrapolate	meas.	extrap.	
20MHz BW/1RB/QPSK											
21350	2560	low	15	rear	20.7	20.6	**0.288**	**0.295**	**0.152**	**0.156**	22.2
21350	2560	low	15	rear	20.7	20.6	0.133	0.136	0.077	0.079	22.5

Table 40: Test results body worn SAR LTE FDD 7 2600 MHz (see SAR plot in Annex B.9: LTE FDD 7 page 82)

** - maximum possible output power declared by manufacturer

Yellow marked are the highest SAR measured results from test report 1-6965/13-04-24

measured / extrapolated SAR numbers - Head - LTE FDD 13 700 MHz										
Ch.	Freq. (MHz)	RB offset	Position	cond. P_{max} (dBm)		SAR_{1g} results(W/kg)		SAR_{10g} (W/kg)		liquid
				declared**	measured	measured	xtrapolate	meas.	extrap.	(°C)
10MHz BW/1RB/QPSK										
23230	782.0	low	right cheek	24.0	23.9	**0.289**	**0.296**	**0.214**	**0.219**	22.5
23230	782.0	low	right cheek	24.0	23.9	0.320	0.327	0.234	0.239	22.1

Table 41: Test results head SAR LTE FDD 13 700 MHz (see SAR plot in Annex B.10: LTE FDD 13 page 85)

measured / extrapolated SAR numbers - hotspot mode - LTE FDD 13 700 MHz											
Ch.	Freq. (MHz)	RB offset	dist. (mm)	Position	cond. P_{max} (dBm)		SAR_{1g} results(W/kg)		SAR_{10g} (W/kg)		liquid (°C)
					declared**	measured	measured	xtrapolate	meas.	extrap.	
10MHz BW/1RB/QPSK											
23230	782.0	low	10	front	24.0	23.9	**0.292**	**0.299**	**0.235**	**0.240**	22.6
23230	782.0	low	10	front	24.0	23.9	0.300	0.307	0.233	0.238	22.0

Table 42: Test results hotspot mode SAR LTE FDD 13 700 MHz (see SAR plot in Annex B.10: LTE FDD 13 page 85)

measured / extrapolated SAR numbers - Body worn - LTE FDD 13 700 MHz											
Ch.	Freq. (MHz)	RB offset	dist. (mm)	Position	cond. P_{max} (dBm)		SAR_{1g} results(W/kg)		SAR_{10g} (W/kg)		liquid (°C)
					declared**	measured	measured	xtrapolate	meas.	extrap.	
5MHz BW/1RB/QPSK											
23255	784.5	high	15	front	24.0	23.9	**0.340**	**0.348**	**0.258**	**0.264**	22.6
23255	784.5	high	15	front	24.0	23.9	0.252	0.258	0.188	0.192	22.0

Table 43: Test results body worn SAR LTE FDD 13 700 MHz (see SAR plot in Annex B.10: LTE FDD 13 page 85)

measured / extrapolated SAR numbers - Head - LTE FDD 17 700 MHz										
Ch.	Freq. (MHz)	RB offset	Position	cond. P_{max} (dBm)		SAR_{1g} results(W/kg)		SAR_{10g} (W/kg)		liquid
				declared**	measured	measured	xtrapolate	measure	xtrapolate	(°C)
10MHz BW/1RB/QPSK										
23780	709	mid	right cheek	24.0	23.5	**0.051**	**0.057**	**0.038**	**0.043**	22.5
23780	709	mid	right cheek	24.0	23.5	0.074	0.083	0.056	0.063	22.1

Table 44: Test results head SAR LTE FDD 17 700 MHz (see SAR plot in Annex B.11: LTE FDD 17 page 88)

measured / extrapolated SAR numbers - hotspot mode - LTE FDD 17 700 MHz											
Ch.	Freq. (MHz)	RB offset	dist. (mm)	Position	cond. P_{max} (dBm)		SAR_{1g} results(W/kg)		SAR_{10g} (W/kg)		liquid (°C)
					declared**	measured	measured	xtrapolate	meas.	extrap.	
10MHz BW/1RB/QPSK											
23800	711	low	10	rear	24.0	23.5	**0.112**	**0.126**	**0.087**	**0.097**	22.6
23800	711	low	10	rear	24.0	23.5	0.073	0.082	0.056	0.062	22.0

Table 45: Test results hotspot mode SAR LTE FDD 17 700 MHz (see SAR plot in Annex B.11: LTE FDD 17 page 88)

** - maximum possible output power declared by manufacturer

Yellow marked are the highest SAR measured results from test report 1-6965/13-04-24

measured / extrapolated SAR numbers - Body worn - LTE FDD 17 700 MHz											
Ch.	Freq. (MHz)	RB offset	dist. (mm)	Position	cond. P_{max} (dBm)		SAR_{1g} results(W/kg)		SAR_{10g} (W/kg)		liquid (°C)
					declared**	measured	measured	xtrapolate	meas.	extrap.	
10MHz BW/1RB/QPSK											
23780	709	mid	15	front	24.0	23.5	**0.070**	**0.078**	**0.056**	**0.062**	22.6
23780	709	mid	15	front	24.0	23.5	0.062	0.069	0.048	0.054	22.0

Table 46: Test results body worn SAR LTE FDD 17 700 MHz (see SAR plot in Annex B.11: LTE FDD 17 page 88)

measured / extrapolated SAR numbers - Head - WLAN 2450 MHz									
Ch.	Freq. (MHz)	Position	cond. P_{max} (dBm)		SAR_{1g} results(W/kg)		SAR_{10g} (W/kg)		liquid
			declared**	measured	measured	extrapolated	meas.	extrap.	(°C)
6	2437	left cheek	16.4	15.9	**0.286**	**0.321**	**0.130**	**0.146**	20.9
6	2437	left cheek	16.4	15.9	0.170	0.191	0.074	0.083	22.3

Table 47: Test results head SAR WLAN 2450 MHz (see SAR plot in Annex B.12: WLAN 2450MHz page 91)

measured / extrapolated SAR numbers - hotspot mode - WLAN 2450 MHz											
Ch.	Freq. (MHz)	Test condition	dist. (mm)	Position	cond. P_{max} (dBm)		SAR_{1g} results(W/kg)		SAR_{10g} (W/kg)		liquid (°C)
					declared**	measured	measured	extrap.	meas.	extrap.	
6	2437	1Mbit/s	10	rear	16.4	15.9	**0.195**	**0.219**	**0.094**	**0.105**	21.9
6	2437	1Mbit/s	10	rear	16.4	15.9	0.159	0.178	0.081	0.091	22.4

Table 48: Test results hotspot mode SAR WLAN 2450 MHz see SAR plot in Annex B.12: WLAN 2450MHz page 91)

** - maximum possible output power declared by manufacturer

Yellow marked are the highest SAR measured results from test report 1-6965/13-04-24

measured / extrapolated SAR numbers - Body worn - WLAN 2450 MHz											
Ch.	Freq. (MHz)	Test condition	dist. (mm)	Position	cond. P_{max} (dBm)		SAR_{1g} results(W/kg)		SAR_{10g} (W/kg)		liquid (°C)
					declared**	measured	measured	extrap.	measured	extrap.	
11	2462	1Mbit/s	15	rear	14.9	14.5	**0.151**	**0.166**	**0.072**	**0.079**	21.9
11	2462	1Mbit/s	15	rear	14.9	14.5	0.039	0.043	0.021	0.023	22.4

Table 49: Test results body worn SAR WLAN 2450 MHz (see SAR plot in Annex B.12: WLAN 2450MHz page 91)

measured / extrapolated SAR numbers - Head - WLAN 5 GHz									
Ch.	Freq. (MHz)	Position	cond. P_{max} (dBm)		SAR_{1g} results(W/kg)		SAR_{10g} (W/kg)		liquid
			declared**	measured	measured	extrapolated	meas.	extrap.	(°C)
165	5825	left cheek	14.4	14.1	**0.484**	**0.519**	**0.151**	**0.162**	22.3
165	5825	left cheek	14.4	14.1	0.246	0.264	0.071	0.076	22.1

Table 50: Test results head SAR WLAN 5 GHz (see SAR plot in Annex B.13: WLAN 5GHzpage 94)

measured / extrapolated SAR numbers - Body worn - WLAN 5 GHz											
Ch.	Freq. (MHz)	Test condition	dist. (mm)	Position	cond. P_{max} (dBm)		SAR_{1g} results(W/kg)		SAR_{10g} (W/kg)		liquid (°C)
					declared**	measured	measured	extrap.	meas.	extrap.	
60	5300	6Mbit/s	15	rear	16.7	16.0	**0.578**	**0.679**	**0.198**	**0.233**	22.0
60	5300	6Mbit/s	15	rear	16.7	16.0	0.541	0.636	0.217	0.255	22.5

Table 51: Test results body worn SAR WLAN 5 GHz (see SAR plot in Annex B.13: WLAN 5GHzpage 94)

measured / extrapolated SAR numbers - Head - Bluetooth 2450 MHz									
Ch.	Freq. (MHz)	Position	cond. P_{max} (dBm)		SAR_{1g} results(W/kg)		SAR_{10g} (W/kg)		liquid
			declared**	measured	measured	extrap.	meas.	extrap.	(°C)
39	2441	left cheek	10.30	8.47	**0.026**	**0.039**	**0.012**	**0.018**	22.5
39	2441	left cheek	10.30	8.47	0.018	0.027	0.007	0.011	22.3

Table 52: Test results head SAR Bluetooth 2.4 GHz (see SAR plot in Annex B.14: Bluetooth 2.4GHz page 96)

** - maximum possible output power declared by manufacturer

Yellow marked are the highest SAR measured results from test report 1-6965/13-04-24

7.2.2 General description of test procedures

- The DUT is tested using CMU 200 and CMW 500 communications testers as controller unit to set test channels and maximum output power to the DUT, as well as for measuring the conducted peak power.
- Test positions as described in the tables above are in accordance with the specified test standard.
- The device with WPC cover was tested according to FCC KDB 648474 D03 Wireless Chargers Battery Cover v01r02 to all applicable SAR test procedures using the normal battery cover (without the wireless charging hardware see **test report 1-6965/13-04-24**). The **highest SAR measured** for each wireless technology (LTE, WCDMA, GSM, Wi-Fi etc.), frequency band, operating mode (different modes/configurations within each wireless technology) and exposure condition (head, body-worn accessory, hotspot mode etc.) ware repeated using the wireless charging battery cover.

8 Test equipment and ancillaries used for tests

To simplify the identification of the test equipment and/or ancillaries which were used, the reporting of the relevant test cases only refer to the test item number as specified in the table below.

Equipment	Type	Manufacturer	Serial No.	Last Calibration	Frequency (months)
Dosimetric E-Field Probe	ET3DV6	Schmid & Partner Engineering AG	1558	August 22, 2013	12
Dosimetric E-Field Probe	ES3DV3		3320	May 09, 2014	12
Dosimetric E-Field Probe	ES3DV3		3326	September 02, 2013	12
Dosimetric E-Field Probe	EX3DV4		3944	August 02, 2013	12
750 MHz System Validation Dipole	D750V3		1041	August 15, 2013	24
835 MHz System Validation Dipole	D835V2		4d153	June 06, 2013	24
1750 MHz System Validation Dipole	D1750V2		1093	June 06, 2013	24
1900 MHz System Validation Dipole	D1900V2		5d009	May 15, 2013	24
2450 MHz System Validation Dipole	D2450V2		710	August 13, 2012	24
2600 MHz System Validation Dipole	D2600V2		1040	August 15, 2013	24
5 GHz System Validation Dipole	D5GHzV 2		1055	August 19, 2013	24
Data acquisition electronics	DAE3V1		408	September 30, 2013	12
Data acquisition electronics	DAE3V1		413	May 22, 2014	12
Data acquisition electronics	DAE3V1		477	May 14, 2014	12
Data acquisition electronics	DAE4		1387	August 28, 2013	12
Software	DASY52 52.8.7		---	N/A	--
Triple Modular Flat Phantom V5.1	QD 000 P51 C		1154	N/A	--
SAM Twin Phantom V5.0	QD 000 P40 C		1813	N/A	--
Universal Radio Communication Tester	CMU 200	Rohde & Schwarz	106826	January 27, 2014	24
Universal Radio Communication Tester	CMW500	Rohde & Schwarz	102375	January 16, 2013	24
Network Analyser 300 kHz to 6 GHz	8753ES	Hewlett Packard)*	US39174436	January 28, 2014	24
Dielectric Probe Kit	85070C	Hewlett Packard	US99360146	N/A	12
Signal Generator	8671B	Hewlett Packard	2823A00656	January 22, 2014	24
Amplifier	25S1G4 (25 Watt)	Amplifier Reasearch	20452	N/A	--
Power Meter	NRP	Rohde & Schwarz	101367	January 21, 2014	24
Power Meter Sensor	NRP Z22	Rohde & Schwarz	100227	January 21, 2014	12
Power Meter Sensor	NRP Z22	Rohde & Schwarz	100234	January 21, 2014	12
Directional Coupler	778D	Hewlett Packard	19171	January 21, 2014	12

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

9 Observations

No observations exceeding those reported with the single test cases have been made.

Annex A: System performance check

Date/Time: 12.06.2014 15:32:46

SystemPerformanceCheck-D750 head 2014-06-12

DUT: Dipole 750 MHz; Type: D750V3; Serial: 1041

Communication System: UID 0, CW (0); Communication System Band: D750 (750.0 MHz); Frequency: 750 MHz; Communication System PAR: 0 dB; PMF: 1

Medium parameters used: f = 750 MHz; σ = 0.897 S/m; ε_r = 41.695; ρ = 1000 kg/m^3

Phantom section: Flat Section

Measurement Standard: DASY5

DASY5 Configuration:

- Probe: ET3DV6 - SN1558; ConvF(6.15, 6.15, 6.15); Calibrated: 22.08.2013;
- Sensor-Surface: 4mm (Mechanical Surface Detection), z = 2.7, 32.7
- Electronics: DAE3 Sn477; Calibrated: 14.05.2014
- Phantom: SAM front; Type: QD000P40CC; Serial: TP-1042
- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

HSL750/d=15mm, Pin=1000 mW, dist=4.0mm/Area Scan (51x51x1): Interpolated

grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 9.57 W/kg

HSL750/d=15mm, Pin=1000 mW, dist=4.0mm/Zoom Scan (7x8x7)/Cube 0:

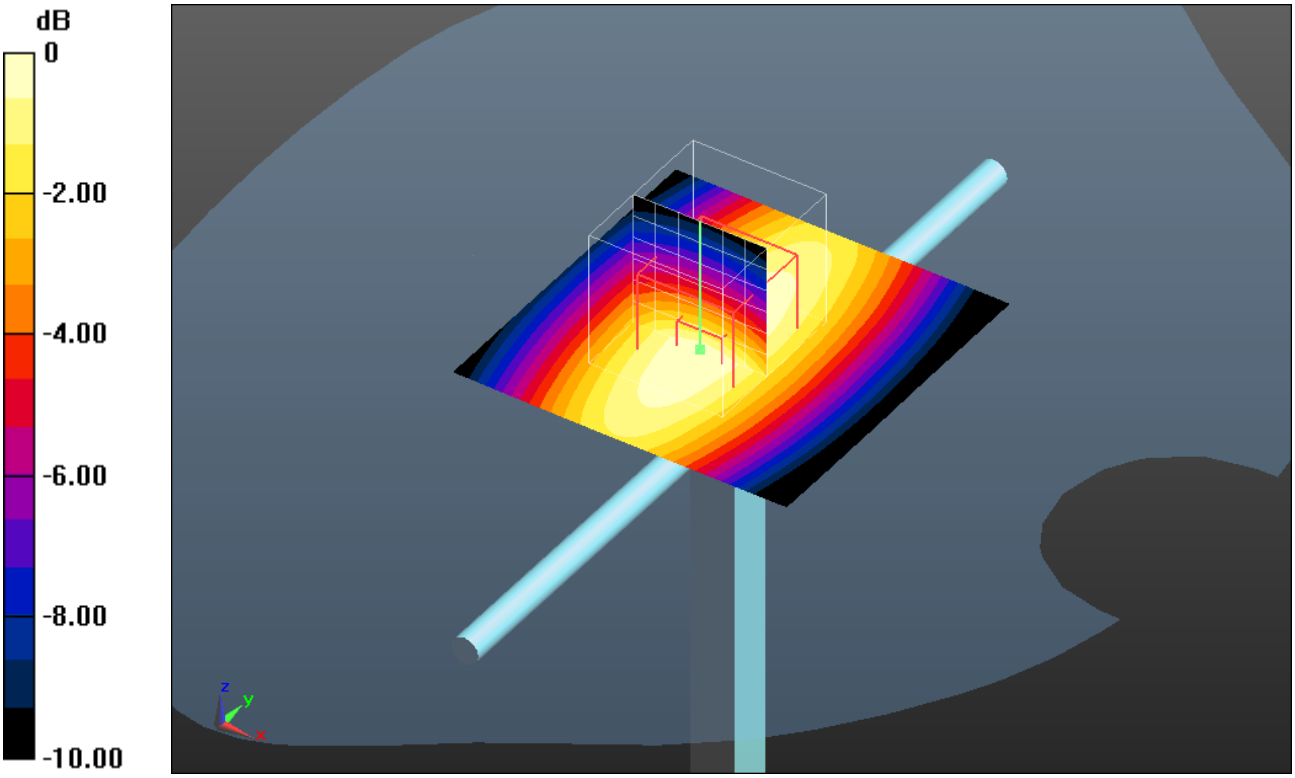
Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 107.5 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 13.5 W/kg

SAR(1 g) = 8.98 W/kg; SAR(10 g) = 5.87 W/kg

Maximum value of SAR (measured) = 9.74 W/kg



0 dB = 9.74 W/kg = 9.89 dBW/kg

Additional information:

ambient temperature: 23.0°C; liquid temperature: 22.1°C

Date/Time: 12.06.2014 14:57:19

SystemPerformanceCheck-D750 body 2014-06-12

DUT: Dipole 750 MHz; Type: D750V3; Serial: 1041

Communication System: UID 0, CW (0); Communication System Band: D750 (750.0 MHz); Frequency: 750 MHz; Communication System PAR: 0 dB; PMF: 1

Medium parameters used: f = 750 MHz; σ = 0.968 S/m; ε_r = 55.669; ρ = 1000 kg/m^3

Phantom section: Center Section

Measurement Standard: DASY5

DASY5 Configuration:

- Probe: ET3DV6 - SN1558; ConvF(5.73, 5.73, 5.73); Calibrated: 22.08.2013;
- Sensor-Surface: 4mm (Mechanical Surface Detection), z = 2.7, 32.7
- Electronics: DAE3 Sn477; Calibrated: 14.05.2014
- Phantom: Triple Flat Phantom 5.1C; Type: QD 000 P51 CA; Serial: 1154
- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

MSL750/d=15mm, Pin=1000 mW, dist=4.0mm/Area Scan (51x51x1):

Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 9.62 W/kg

MSL750/d=15mm, Pin=1000 mW, dist=4.0mm/Zoom Scan (7x7x7)/Cube 0:

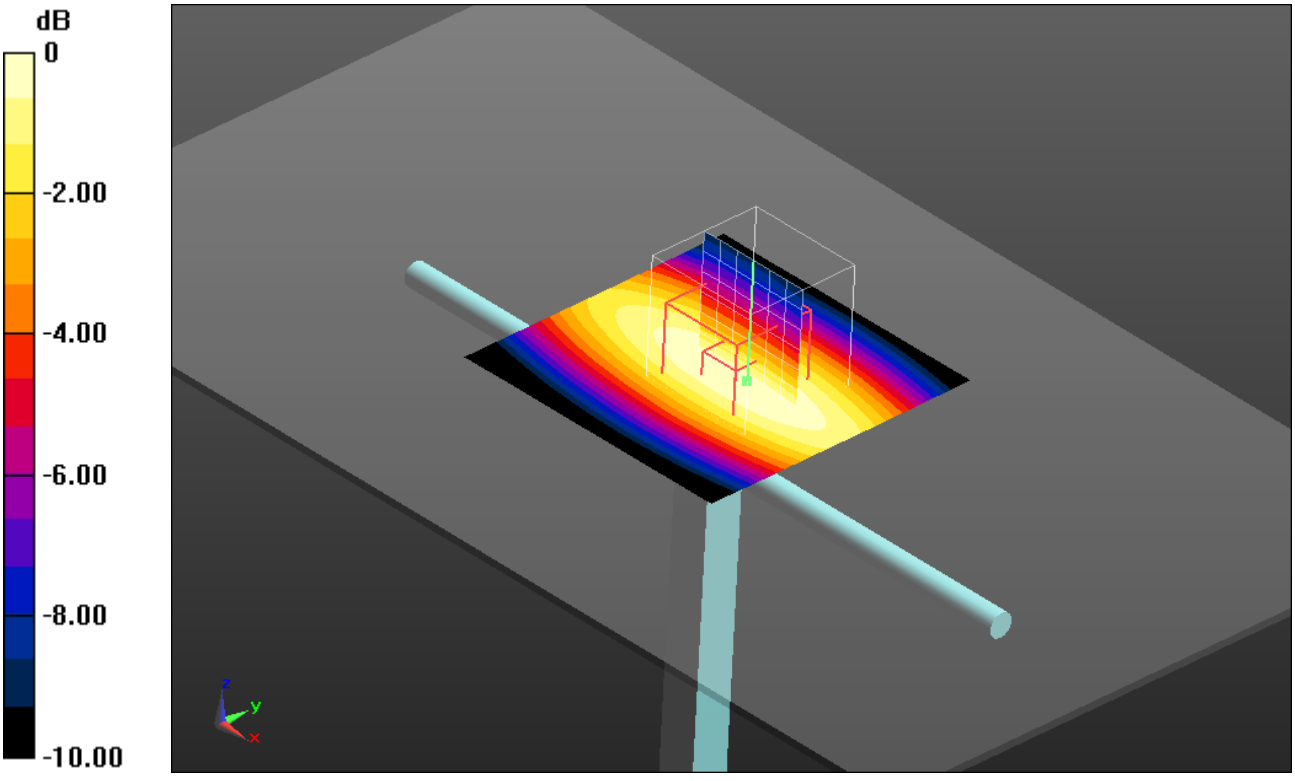
Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 104.5 V/m; Power Drift = -0.04 dB

Peak SAR (extrapolated) = 12.9 W/kg

SAR(1 g) = 9.02 W/kg; SAR(10 g) = 6 W/kg

Maximum value of SAR (measured) = 9.74 W/kg



0 dB = 9.74 W/kg = 9.89 dBW/kg

Additional information:

ambient temperature: 22.9°C; liquid temperature: 22.0°C

Date/Time: 11.06.2014 16:51:10

SystemPerformanceCheck-D835 head 2014-06-11

DUT: Dipole 835 MHz; Type: D835V2; Serial: 4d153

Communication System: UID 0, CW (0); Communication System Band: D835 (835.0 MHz); Frequency: 835 MHz; Communication System PAR: 0 dB; PMF: 1

Medium parameters used: f = 835 MHz; σ = 0.937 S/m; ε_r = 41.86; ρ = 1000 kg/m^3

Phantom section: Flat Section

Measurement Standard: DASY5

DASY5 Configuration:

- Probe: ET3DV6 - SN1558; ConvF(5.89, 5.89, 5.89); Calibrated: 22.08.2013;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection), z = 2.7, 32.7
- Electronics: DAE3 Sn477; Calibrated: 14.05.2014
- Phantom: SAM front; Type: QD000P40CC; Serial: TP-1042
- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

HSL835/d=15mm, Pin=1000 mW, dist=4.0mm/Area Scan (51x51x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 10.9 W/kg

HSL835/d=15mm, Pin=1000 mW, dist=4.0mm/Zoom Scan (7x7x7)/Cube 0:

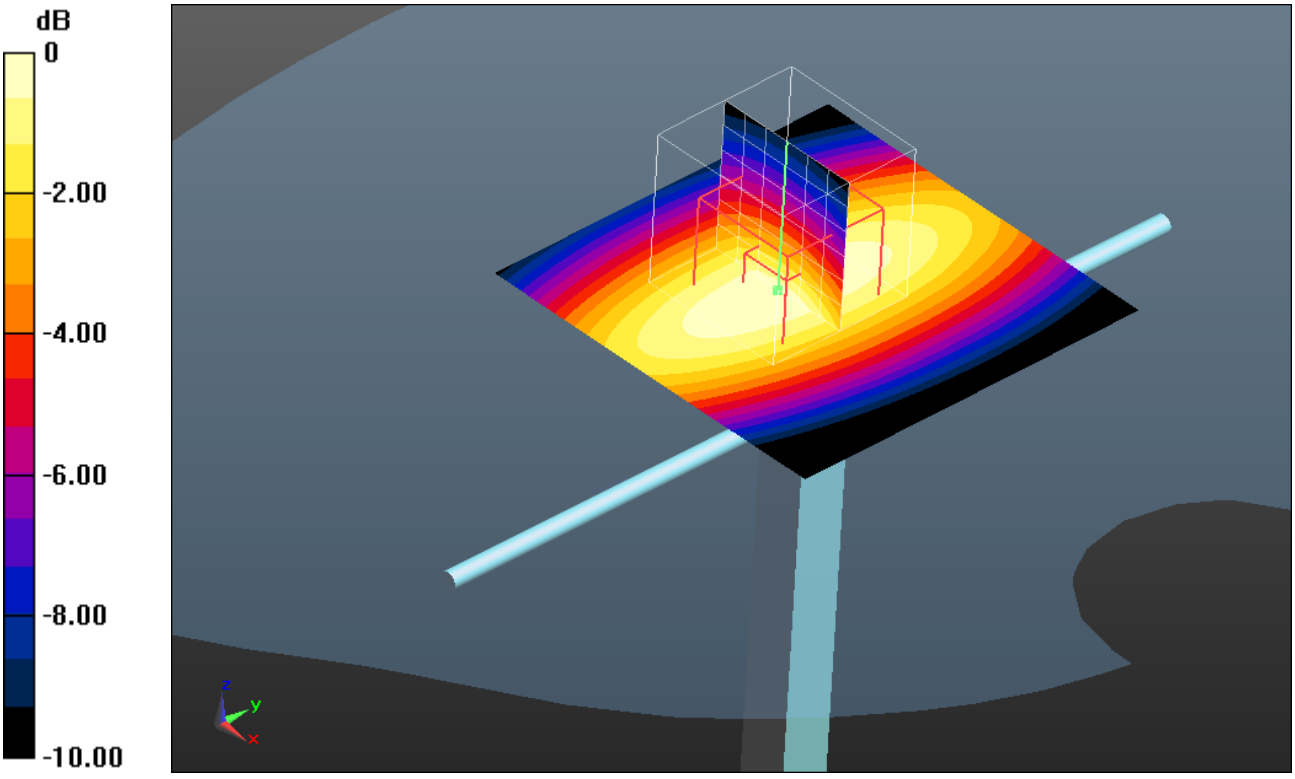
Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 110.2 V/m; Power Drift = 0.05 dB

Peak SAR (extrapolated) = 15.1 W/kg

SAR(1 g) = 10.3 W/kg; SAR(10 g) = 6.74 W/kg

Maximum value of SAR (measured) = 11.1 W/kg



0 dB = 11.1 W/kg = 10.45 dBW/kg

Additional information:

ambient temperature: 23.8°C; liquid temperature: 22.5°C

Date/Time: 6/13/2014 9:40:49 AM

SystemPerformanceCheck-D835 head 2014-06-13

DUT: Dipole 835 MHz; Type: D835V2; Serial: 4d153

Communication System: UID 0, CW (0); Communication System Band: D835 (835.0 MHz); Frequency: 835 MHz; Communication System PAR: 0 dB; PMF: 1

Medium parameters used: f = 835 MHz; σ = 0.937 S/m; ε_r = 41.86; ρ = 1000 kg/m^3

Phantom section: Flat Section

Measurement Standard: DASY5

DASY5 Configuration:

- Probe: ES3DV3 - SN3326; ConvF(6.25, 6.25, 6.25); Calibrated: 9/2/2013;
- Sensor-Surface: 4mm (Mechanical Surface Detection), z = 2.0, 32.0
- Electronics: DAE4 Sn1387; Calibrated: 8/28/2013
- Phantom: SAM front; Type: QD000P40CC; Serial: TP:1041
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

HSL835/d=15mm, Pin=1000 mW, dist=4.0mm/Area Scan (51x51x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 10.2 W/kg

HSL835/d=15mm, Pin=1000 mW, dist=4.0mm/Zoom Scan (7x7x7)/Cube 0:

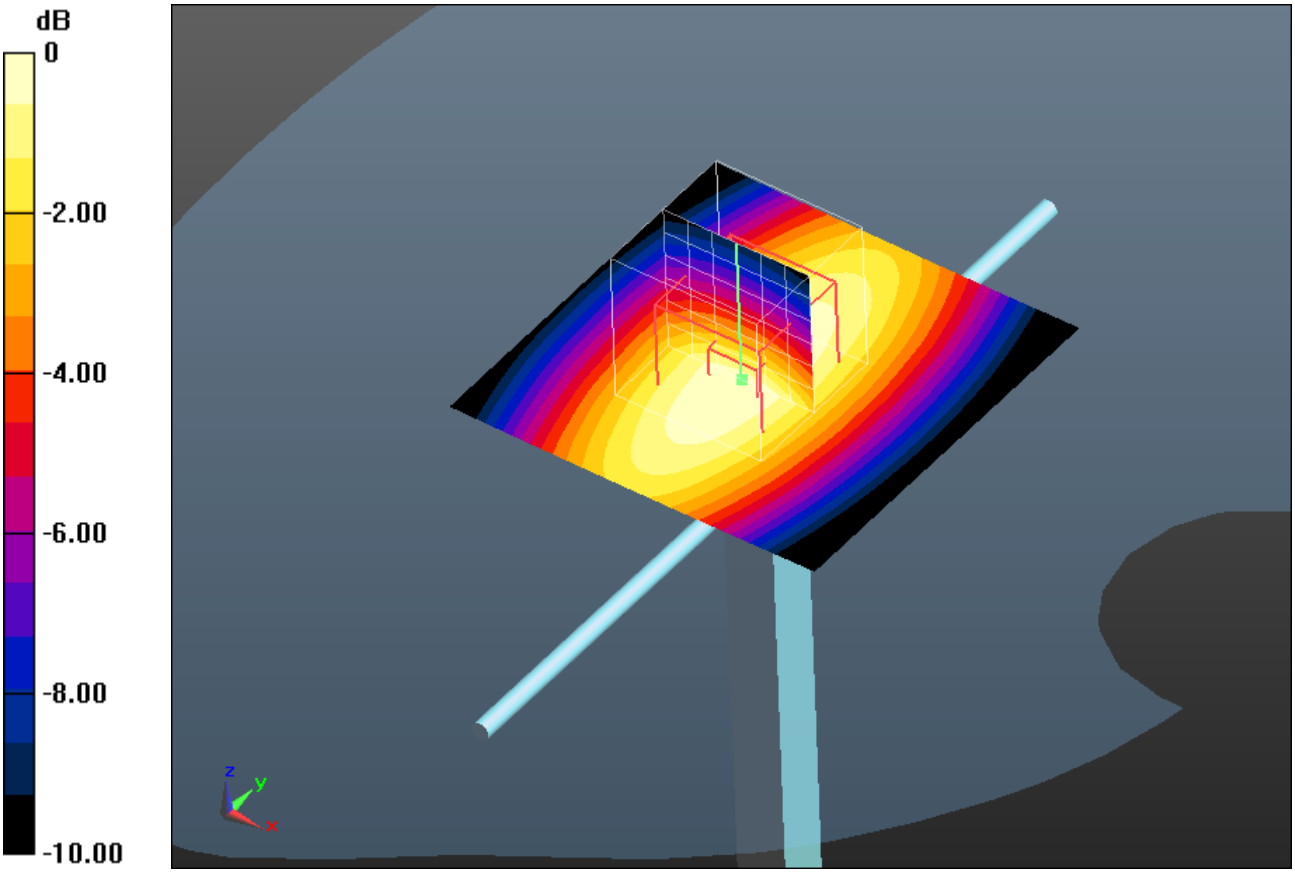
Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 106.9 V/m; Power Drift = -0.05 dB

Peak SAR (extrapolated) = 13.9 W/kg

SAR(1 g) = 9.53 W/kg; SAR(10 g) = 6.29 W/kg

Maximum value of SAR (measured) = 10.3 W/kg



0 dB = 10.3 W/kg = 10.13 dBW/kg

Additional information:

ambient temperature: 23.4°C; liquid temperature: 22.6°C

Date/Time: 10.06.2014 15:16:12

SystemPerformanceCheck-D835 body 2014-06-10

DUT: Dipole 835 MHz; Type: D835V2; Serial: 4d153

Communication System: UID 0, CW (0); Communication System Band: D835 (835.0 MHz); Frequency: 835 MHz; Communication System PAR: 0 dB; PMF: 1

Medium parameters used: f = 835 MHz; σ = 1.015 S/m; ε_r = 53.98; ρ = 1000 kg/m^3

Phantom section: Center Section

Measurement Standard: DASY5

DASY5 Configuration:

- Probe: ET3DV6 - SN1558; ConvF(5.64, 5.64, 5.64); Calibrated: 22.08.2013;
- Sensor-Surface: 4mm (Mechanical Surface Detection), z = 2.7, 32.7
- Electronics: DAE3 Sn477; Calibrated: 14.05.2014
- Phantom: Triple Flat Phantom 5.1C; Type: QD 000 P51 CA; Serial: 1154
- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

MSL835/d=15mm, Pin=1000mW/Area Scan (51x51x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 10.8 W/kg

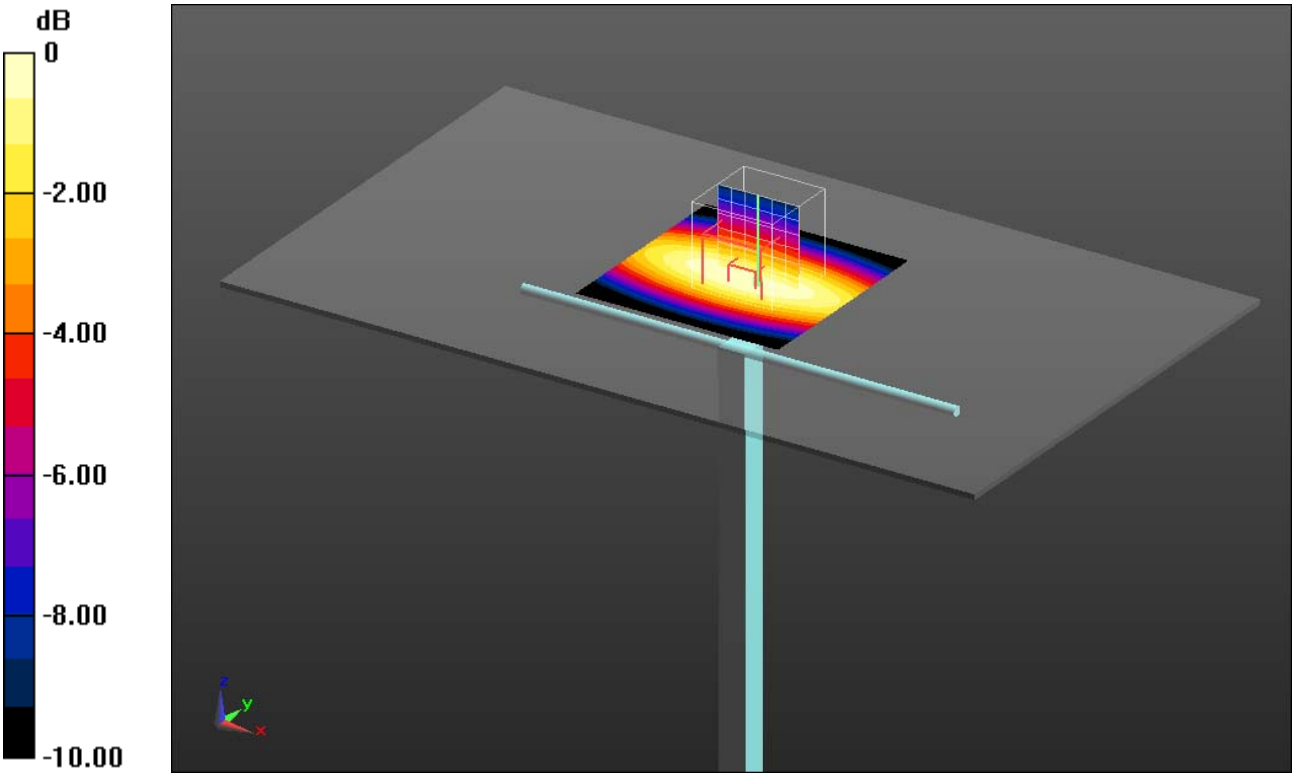
MSL835/d=15mm, Pin=1000mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 109.4 V/m; Power Drift = -0.14 dB

Peak SAR (extrapolated) = 13.7 W/kg

SAR(1 g) = 9.93 W/kg; SAR(10 g) = 6.64 W/kg

Maximum value of SAR (measured) = 10.7 W/kg



0 dB = 10.7 W/kg = 10.29 dBW/kg

Additional information:

ambient temperature: 23.0°C; liquid temperature: 22.4°C

Date/Time: 11.06.2014 11:05:18

SystemPerformanceCheck-D835 body 2014-06-11

DUT: Dipole 835 MHz; Type: D835V2; Serial: 4d153

Communication System: UID 0, CW (0); Communication System Band: D835 (835.0 MHz); Frequency: 835 MHz; Communication System PAR: 0 dB; PMF: 1

Medium parameters used: f = 835 MHz; σ = 1.015 S/m; ε_r = 53.98; ρ = 1000 kg/m^3

Phantom section: Center Section

Measurement Standard: DASY5

DASY5 Configuration:

- Probe: ET3DV6 - SN1558; ConvF(5.64, 5.64, 5.64); Calibrated: 22.08.2013;
- Sensor-Surface: 4mm (Mechanical Surface Detection), z = 2.7, 32.7
- Electronics: DAE3 Sn477; Calibrated: 14.05.2014
- Phantom: Triple Flat Phantom 5.1C; Type: QD 000 P51 CA; Serial: 1154
- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

MSL835/d=15mm, Pin=1000 mW, dist=4.0mm/Area Scan (51x51x1):

Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 9.62 W/kg

MSL835/d=15mm, Pin=1000 mW, dist=4.0mm/Zoom Scan (8x7x7)/Cube 0:

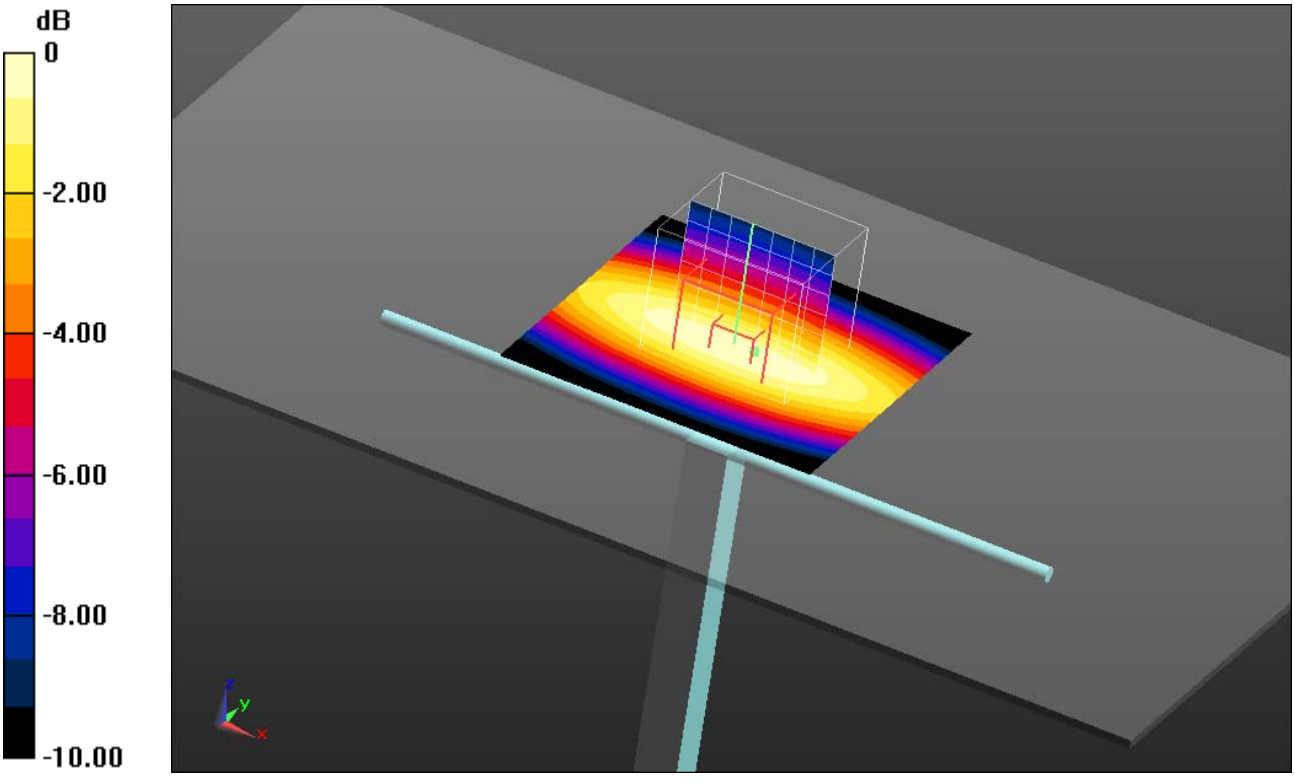
Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 103.6 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 12.6 W/kg

SAR(1 g) = 9.07 W/kg; SAR(10 g) = 6.04 W/kg

Maximum value of SAR (measured) = 9.84 W/kg



0 dB = 9.84 W/kg = 9.93 dBW/kg

Additional information:

ambient temperature: 23.6°C; liquid temperature: 22.4°C

Date/Time: 11.06.2014 21:21:29

SystemPerformanceCheck-D1750 head 2014-06-11

DUT: Dipole 1750 MHz; Type: D1750V2; Serial: 1093

Communication System: UID 0, CW (0); Communication System Band: D1750 (1750.0 MHz); Frequency: 1750 MHz; Communication System PAR: 0 dB; PMF: 1

Medium parameters used: f = 1750 MHz; σ = 1.369 S/m; ε_r = 40.491; ρ = 1000 kg/m^3

Phantom section: Flat Section

Measurement Standard: DASY5

DASY5 Configuration:

- Probe: ET3DV6 - SN1558; ConvF(4.93, 4.93, 4.93); Calibrated: 22.08.2013;
- Sensor-Surface: 4mm (Mechanical Surface Detection), z = 2.7, 32.7
- Electronics: DAE3 Sn477; Calibrated: 14.05.2014
- Phantom: SAM front; Type: QD000P40CC; Serial: TP-1042
- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

HSL1750/d=10mm, Pin=1000mW/Area Scan (51x51x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 46.3 W/kg

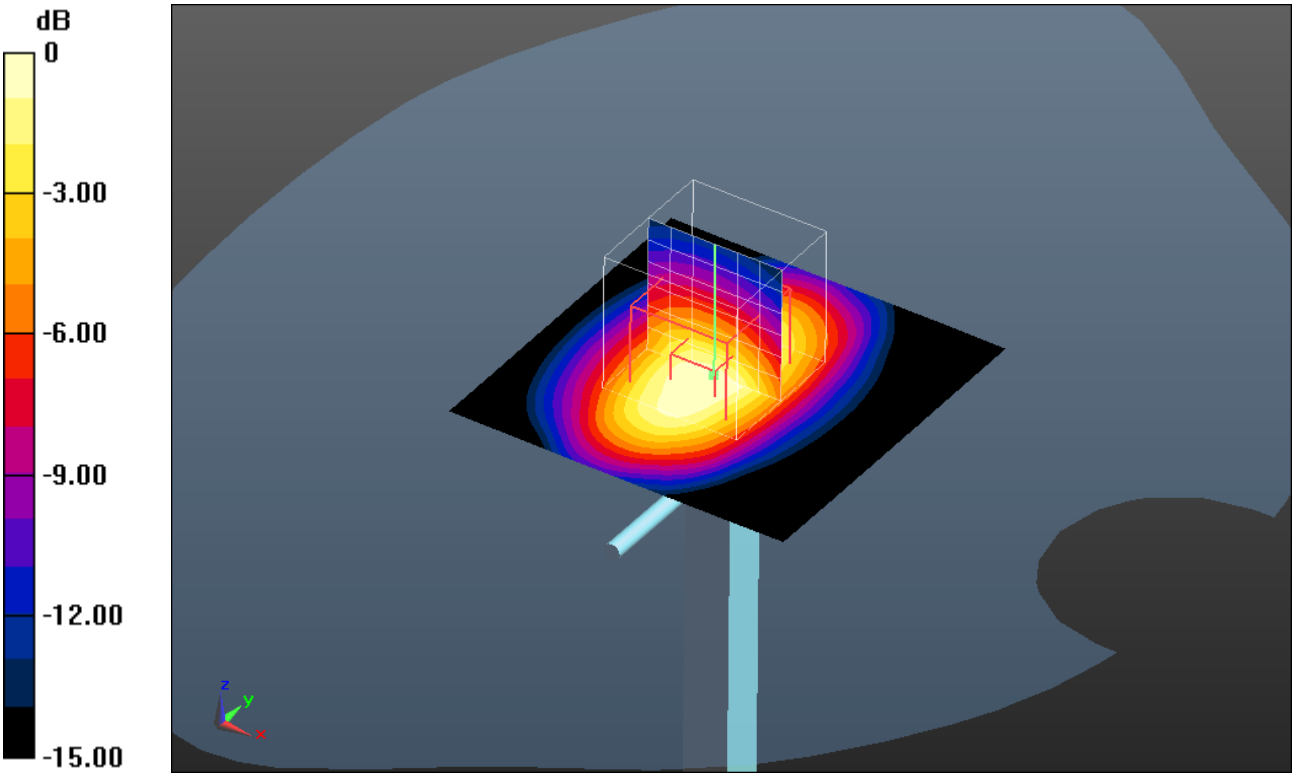
HSL1750/d=10mm, Pin=1000mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 178.4 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 59.1 W/kg

SAR(1 g) = 36.5 W/kg; SAR(10 g) = 20.2 W/kg

Maximum value of SAR (measured) = 41.2 W/kg



0 dB = 41.2 W/kg = 16.15 dBW/kg

Additional information:

ambient temperature: 23.3°C; liquid temperature: 22.5°C

Date/Time: 6/13/2014 12:02:08 PM

SystemPerformanceCheck-D1750 head 2014-06-13

DUT: Dipole 1750 MHz; Type: D1750V2; Serial: 1093

Communication System: UID 0, CW (0); Communication System Band: D1750 (1750.0 MHz); Frequency: 1750 MHz; Communication System PAR: 0 dB; PMF: 1

Medium parameters used: f = 1750 MHz; σ = 1.369 S/m; ε_r = 40.491; ρ = 1000 kg/m^3

Phantom section: Flat Section

Measurement Standard: DASY5

DASY5 Configuration:

- Probe: ES3DV3 - SN3326; ConvF(5.4, 5.4, 5.4); Calibrated: 9/2/2013;
- Sensor-Surface: 4mm (Mechanical Surface Detection), z = 2.0, 32.0
- Electronics: DAE4 Sn1387; Calibrated: 8/28/2013
- Phantom: SAM front; Type: QD000P40CC; Serial: TP:1041
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

HSL1750/d=10mm, Pin=1000mW/Area Scan (51x51x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 45.3 W/kg

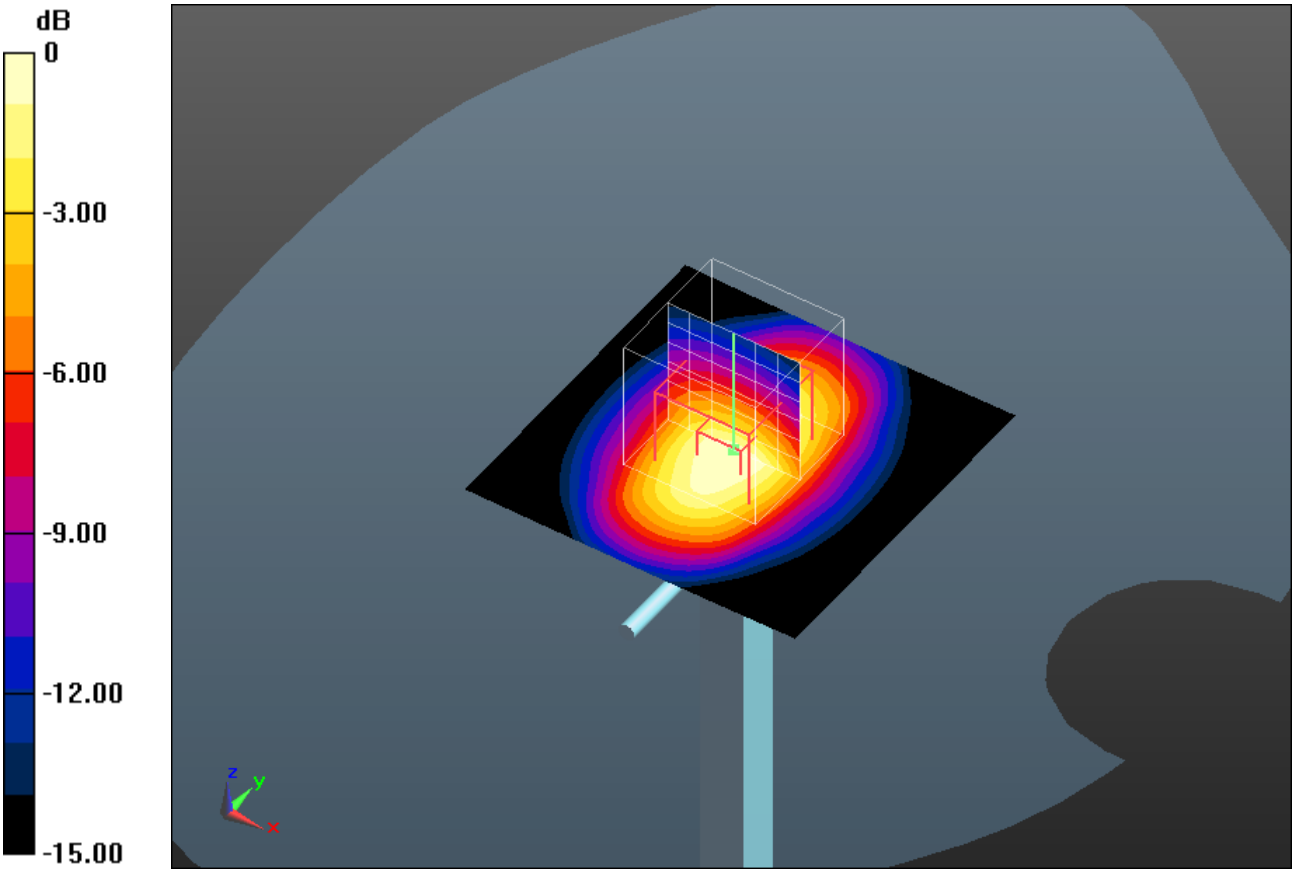
HSL1750/d=10mm, Pin=1000mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 176.2 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 64.1 W/kg

SAR(1 g) = 36.5 W/kg; SAR(10 g) = 19.8 W/kg

Maximum value of SAR (measured) = 41.0 W/kg



0 dB = 41.0 W/kg = 16.13 dBW/kg

Additional information:

ambient temperature: 23.0°C; liquid temperature: 22.3°C

Date/Time: 11.06.2014 15:55:33

SystemPerformanceCheck-D1750 body 2014-06-11

DUT: Dipole 1750 MHz; Type: D1750V2; Serial: 1093

Communication System: UID 0, CW (0); Communication System Band: D1750 (1750.0 MHz); Frequency: 1750 MHz; Communication System PAR: 0 dB; PMF: 1

Medium parameters used: f = 1750 MHz; σ = 1.541 S/m; ε_r = 52.336; ρ = 1000 kg/m^3

Phantom section: Center Section

Measurement Standard: DASY5

DASY5 Configuration:

- Probe: ET3DV6 - SN1558; ConvF(4.41, 4.41, 4.41); Calibrated: 22.08.2013;
- Sensor-Surface: 4mm (Mechanical Surface Detection), z = 2.7, 32.7
- Electronics: DAE3 Sn477; Calibrated: 14.05.2014
- Phantom: Triple Flat Phantom 5.1C; Type: QD 000 P51 CA; Serial: 1154
- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

MSL1750/d=10mm, Pin=1000mW/Area Scan (51x51x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 50.7 W/kg

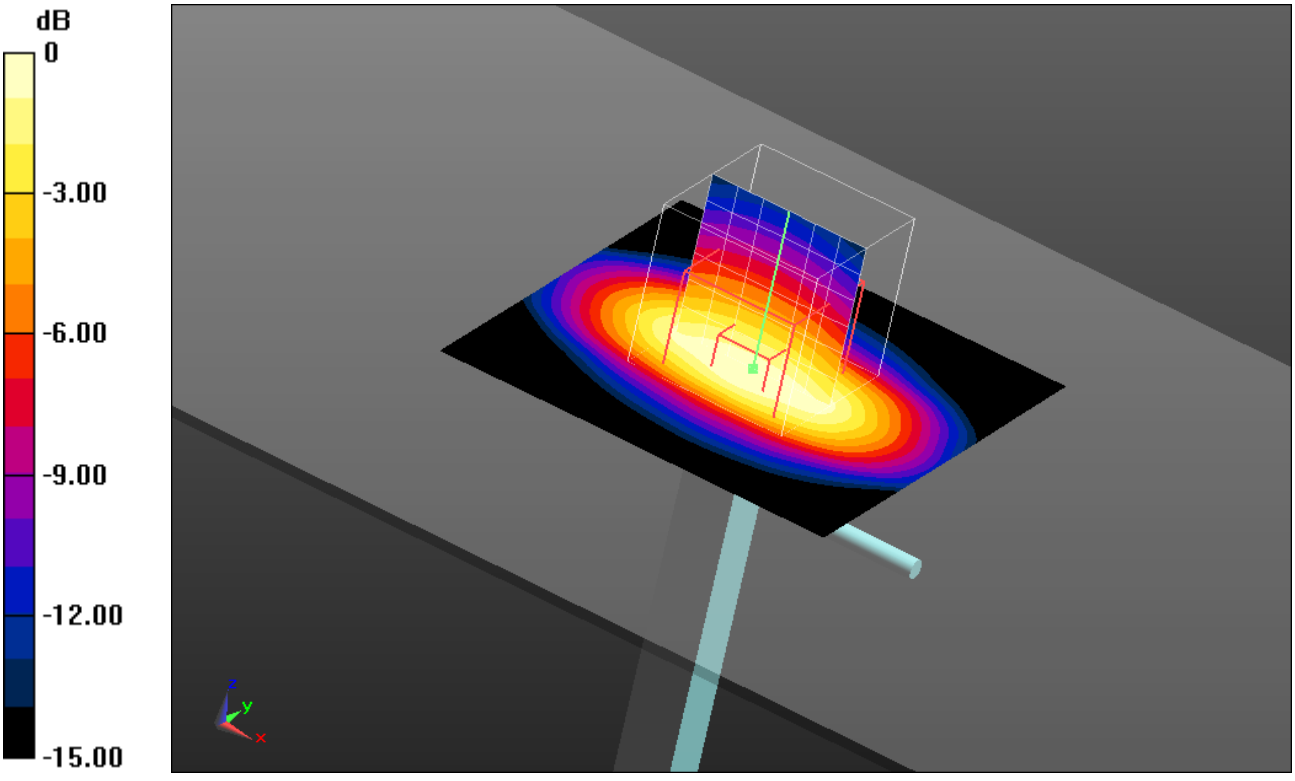
MSL1750/d=10mm, Pin=1000mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 177.8 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 55.4 W/kg

SAR(1 g) = 36.4 W/kg; SAR(10 g) = 20.3 W/kg

Maximum value of SAR (measured) = 41.4 W/kg



0 dB = 41.4 W/kg = 16.17 dBW/kg

Additional information:

ambient temperature: 23.7°C; liquid temperature: 22.4°C

Date/Time: 11.06.2014 14:13:44

SystemPerformanceCheck-D1900 head 2014-06-11

DUT: Dipole 1900 MHz; Type: D1900V2; Serial: 5d009

Communication System: UID 0, CW (0); Communication System Band: D1900 (1900.0 MHz); Frequency: 1900 MHz; Communication System PAR: 0 dB; PMF: 1

Medium parameters used: f = 1900 MHz; σ = 1.396 S/m; ε_r = 39.877; ρ = 1000 kg/m^3

Phantom section: Flat Section

Measurement Standard: DASY5

DASY5 Configuration:

- Probe: ET3DV6 - SN1558; ConvF(4.75, 4.75, 4.75); Calibrated: 22.08.2013;
- Sensor-Surface: 4mm (Mechanical Surface Detection), z = 2.7, 32.7
- Electronics: DAE3 Sn477; Calibrated: 14.05.2014
- Phantom: SAM front; Type: QD000P40CC; Serial: TP-1042
- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

HSL1900/d=10mm, Pin=1000 mW, dist=4.0mm/Area Scan (51x51x1):

Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 54.4 W/kg

HSL1900/d=10mm, Pin=1000 mW, dist=4.0mm/Zoom Scan (7x7x7)/Cube 0:

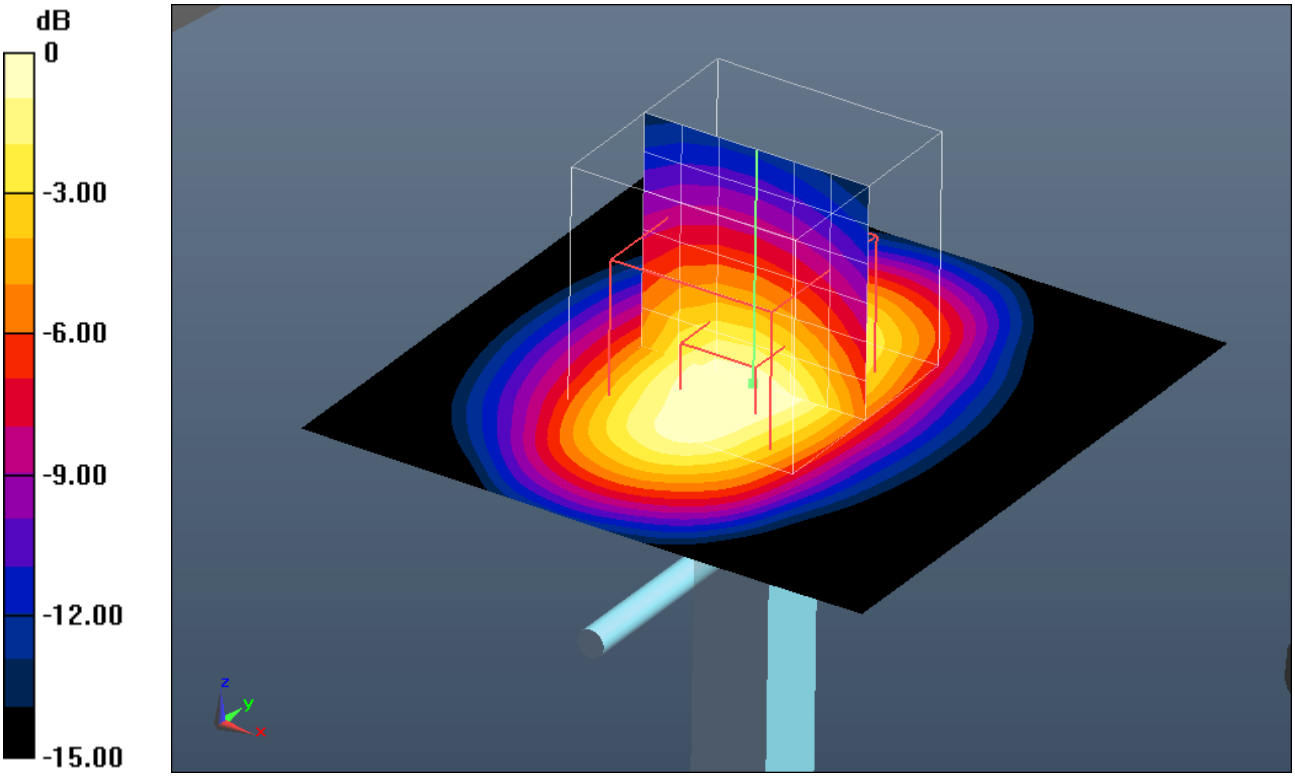
Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 190.0 V/m; Power Drift = -0.08 dB

Peak SAR (extrapolated) = 63.9 W/kg

SAR(1 g) = 39.3 W/kg; SAR(10 g) = 21.6 W/kg

Maximum value of SAR (measured) = 44.3 W/kg



0 dB = 44.3 W/kg = 16.46 dBW/kg

Additional information:

ambient temperature: 23.6°C; liquid temperature: 22.5°C

Date/Time: 11.06.2014 11:44:36

SystemPerformanceCheck-D1900 body 2014-06-11

DUT: Dipole 1900 MHz; Type: D1900V2; Serial: 5d009

Communication System: UID 0, CW (0); Communication System Band: D1900 (1900.0 MHz); Frequency: 1900 MHz; Communication System PAR: 0 dB; PMF: 1

Medium parameters used: f = 1900 MHz; σ = 1.544 S/m; ε_r = 52.407; ρ = 1000 kg/m^3

Phantom section: Center Section

Measurement Standard: DASY5

DASY5 Configuration:

- Probe: ET3DV6 - SN1558; ConvF(4.21, 4.21, 4.21); Calibrated: 22.08.2013;
- Sensor-Surface: 4mm (Mechanical Surface Detection), z = 2.7, 32.7
- Electronics: DAE3 Sn477; Calibrated: 14.05.2014
- Phantom: Triple Flat Phantom 5.1C; Type: QD 000 P51 CA; Serial: 1154
- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

MSL1900/d=10mm, Pin=1000 mW, dist=4.0mm/Area Scan (51x51x1):

Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 53.8 W/kg

MSL1900/d=10mm, Pin=1000 mW, dist=4.0mm/Zoom Scan (7x7x7)/Cube 0:

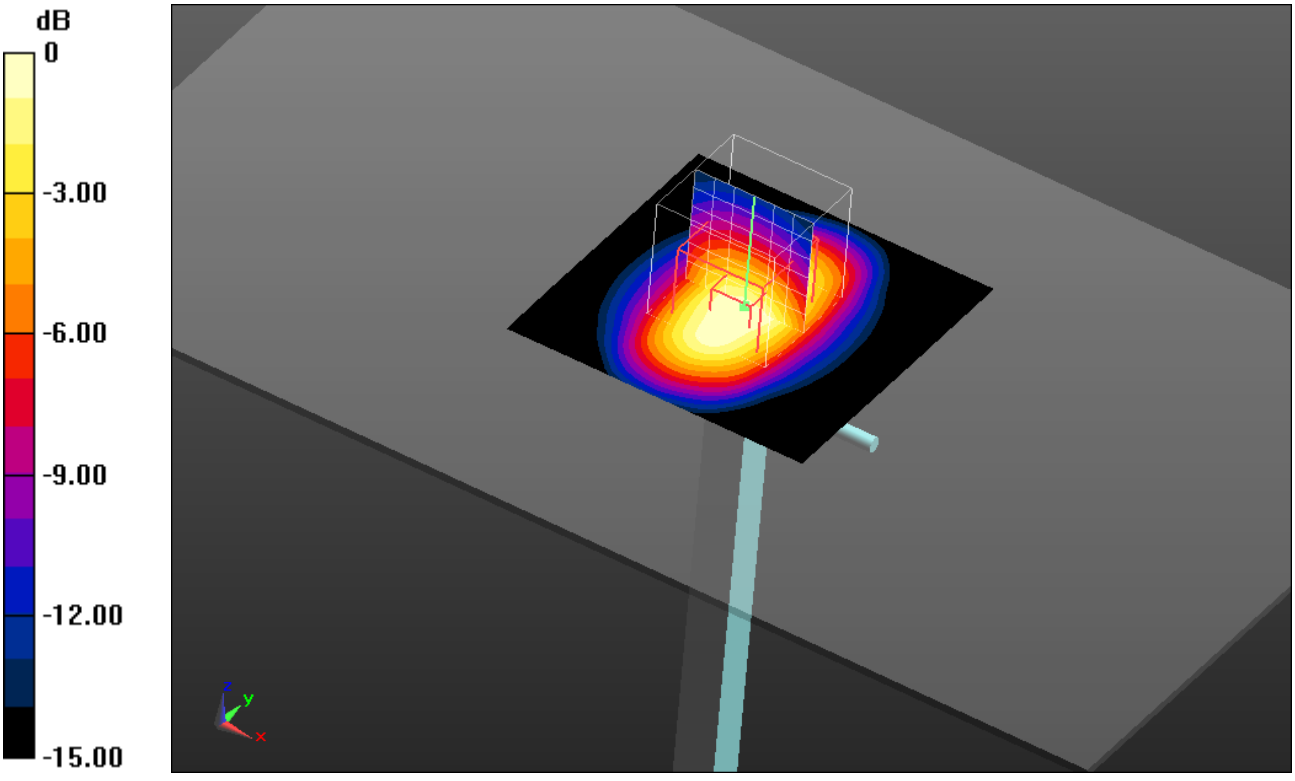
Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 180.6 V/m; Power Drift = -0.03 dB

Peak SAR (extrapolated) = 61.9 W/kg

SAR(1 g) = 38.1 W/kg; SAR(10 g) = 20.8 W/kg

Maximum value of SAR (measured) = 43.2 W/kg



0 dB = 43.2 W/kg = 16.35 dBW/kg

Additional information:

ambient temperature: 23.4°C; liquid temperature: 22.3°C

Date/Time: 13.06.2014 08:43:09

SystemPerformanceCheck-D2450 head 2014-06-13

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: 710

Communication System: UID 0, CW (0); Communication System Band: D2450 (2450.0 MHz); Frequency: 2450 MHz; Communication System PAR: 0 dB; PMF: 1

Medium parameters used: f = 2450 MHz; σ = 1.806 S/m; ε_r = 38.955; ρ = 1000 kg/m^3

Phantom section: Flat Section

Measurement Standard: DASY5

DASY5 Configuration:

- Probe: ES3DV3 - SN3320; ConvF(4.4, 4.4, 4.4); Calibrated: 09.05.2014;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection), z = 2.0, 32.0
- Electronics: DAE3 Sn413; Calibrated: 22.05.2014
- Phantom: SAM; Type: QD000P40C; Serial: TP1150
- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

HSL2450/d=10mm, Pin=1000 mW, dist=4.0mm 2/Area Scan (81x81x1):

Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 65.8 W/kg

HSL2450/d=10mm, Pin=1000 mW, dist=4.0mm 2/Zoom Scan (7x7x7)/Cube 0:

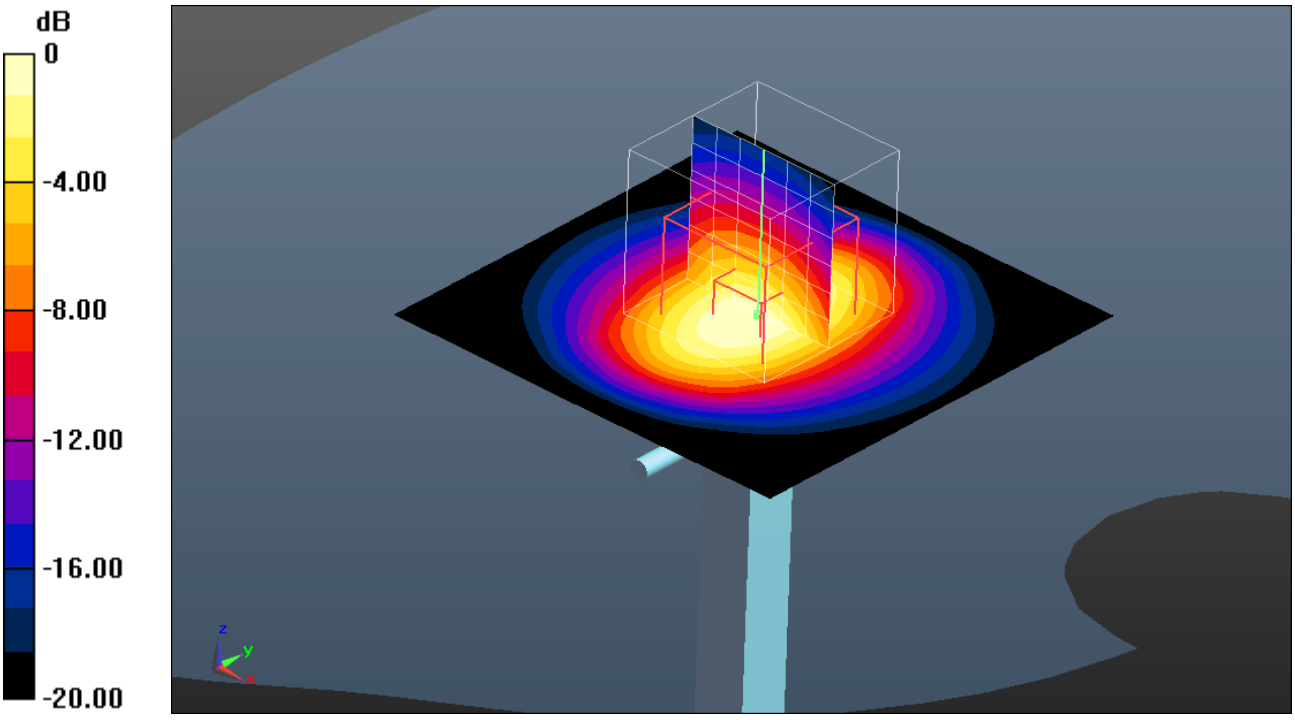
Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 186.6 V/m; Power Drift = -0.05 dB

Peak SAR (extrapolated) = 113 W/kg

SAR(1 g) = 54.1 W/kg; SAR(10 g) = 25.2 W/kg

Maximum value of SAR (measured) = 62.0 W/kg



0 dB = 62.0 W/kg = 17.92 dBW/kg

Additional information:

ambient temperature: 23.3°C; liquid temperature: 22.3°C

Date/Time: 13.06.2014 10:47:17

SystemPerformanceCheck-D2450 body 2014-06-13

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: 710

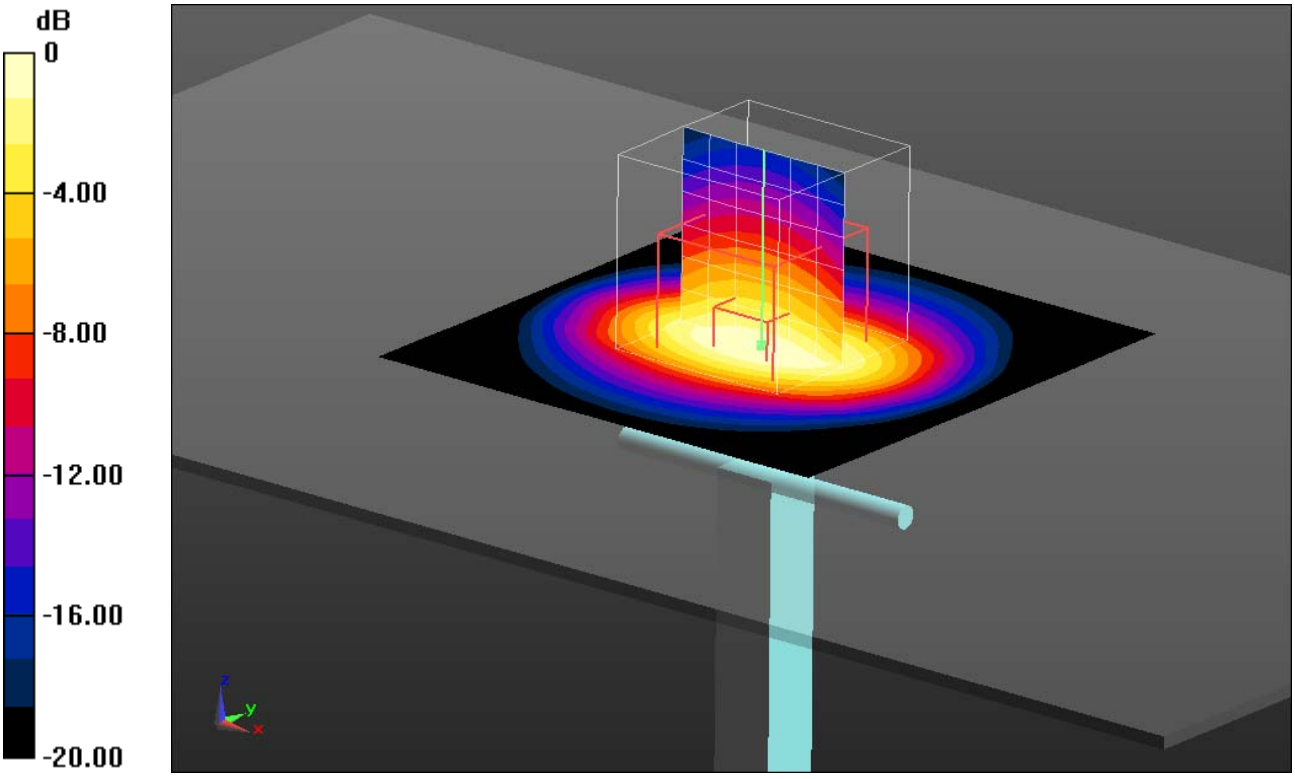
Communication System: UID 0, CW (0); Communication System Band: D2450 (2450.0 MHz); Frequency: 2450 MHz; Communication System PAR: 0 dB; PMF: 1
Medium parameters used: f = 2450 MHz; σ = 2.013 S/m; ε_r = 50.456; ρ = 1000 kg/m^3
Phantom section: Center Section
Measurement Standard: DASY5
DASY5 Configuration:
- Probe: ET3DV6 - SN1558; ConvF(3.81, 3.81, 3.81); Calibrated: 22.08.2013;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection), z = 2.7, 32.7
- Electronics: DAE3 Sn477; Calibrated: 14.05.2014
- Phantom: Triple Flat Phantom 5.1C; Type: QD 000 P51 CA; Serial: 1154
- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

MSL2450/d=10mm, Pin=1000 mW, dist=4.0mm/Area Scan (81x81x1):

Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 63.9 W/kg

MSL2450/d=10mm, Pin=1000 mW, dist=4.0mm/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 176.5 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 123 W/kg
SAR(1 g) = 53.1 W/kg; SAR(10 g) = 24.7 W/kg
Maximum value of SAR (measured) = 58.4 W/kg



0 dB = 58.4 W/kg = 17.66 dBW/kg

Additional information:
ambient temperature: 23.4°C; liquid temperature: 22.4°C

Date/Time: 12.06.2014 16:00:54

SystemPerformanceCheck-D2600 head 2014-06-12

DUT: Dipole 2600 MHz; Type: D2600V2; Serial: 1040

Communication System: UID 0, CW (0); Communication System Band: D2600 (2600.0 MHz); Frequency: 2600 MHz; Communication System PAR: 0 dB; PMF: 1

Medium parameters used: f = 2600 MHz; σ = 1.974 S/m; ε_r = 38.339; ρ = 1000 kg/m^3

Phantom section: Flat Section

Measurement Standard: DASY5

DASY5 Configuration:

- Probe: EX3DV4 - SN3944; ConvF(7.43, 7.43, 7.43); Calibrated: 02.08.2013;
- Sensor-Surface: 2mm (Mechanical Surface Detection), z = 1.0, 31.0
- Electronics: DAE3 Sn413; Calibrated: 22.05.2014
- Phantom: SAM; Type: QD000P40C; Serial: TP1150
- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

HSL2450_2600/d=10mm, Pin=1000 mW, dist=2.0mm/Area Scan (81x81x1):

Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 90.8 W/kg

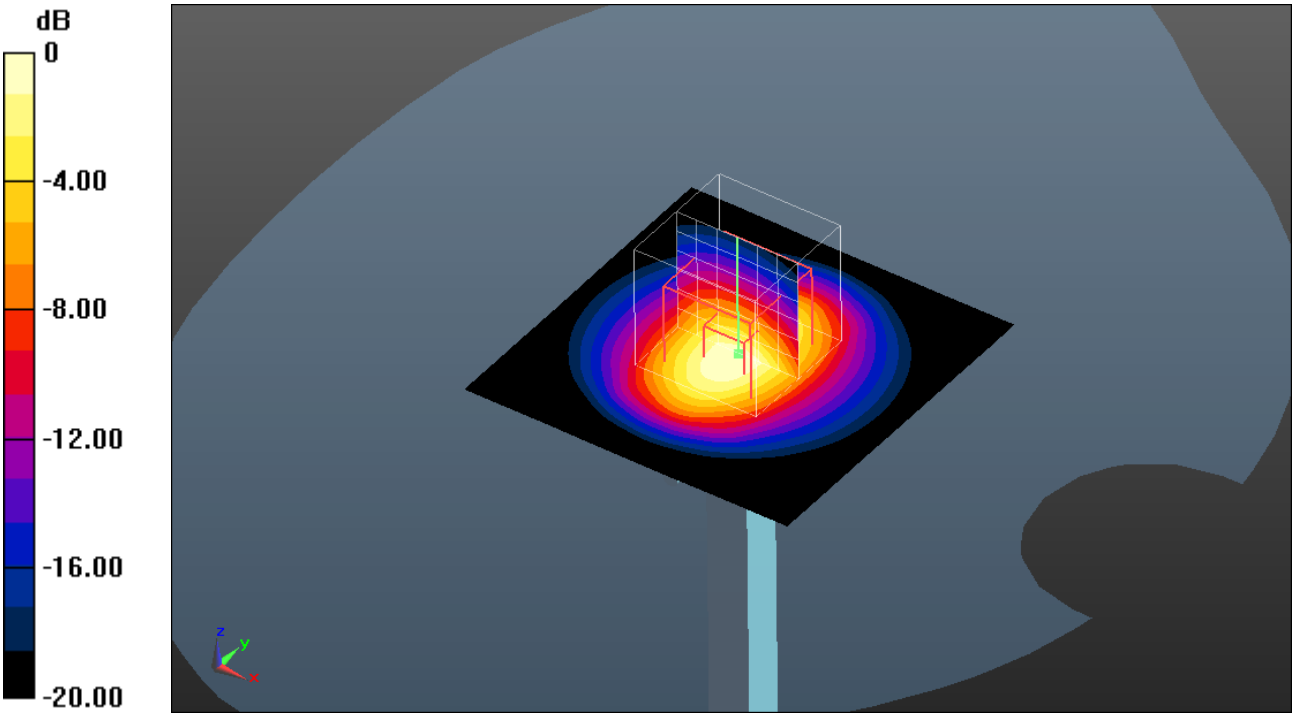
HSL2450_2600/d=10mm, Pin=1000 mW, dist=2.0mm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 215.1 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 122 W/kg

SAR(1 g) = 57.7 W/kg; SAR(10 g) = 25.9 W/kg

Maximum value of SAR (measured) = 89.4 W/kg



0 dB = 89.4 W/kg = 19.51 dBW/kg

Additional information:

ambient temperature: 22.9°C; liquid temperature: 22.1°C

Date/Time: 6/11/2014 9:08:04 AM

SystemPerformanceCheck-D2600 body 2014-06-11

DUT: Dipole 2600 MHz; Type: D2600V2; Serial: 1040

Communication System: UID 0, CW (0); Communication System Band: D2600 (2600.0 MHz); Frequency: 2600 MHz; Communication System PAR: 0 dB; PMF: 1

Medium parameters used: f = 2600 MHz; σ = 2.203 S/m; ε_r = 49.972; ρ = 1000 kg/m^3

Phantom section: Center Section

Measurement Standard: DASY5

DASY5 Configuration:

- Probe: EX3DV4 - SN3944; ConvF(7.27, 7.27, 7.27); Calibrated: 8/2/2013;
- Sensor-Surface: 2mm (Mechanical Surface Detection), z = 1.0, 31.0
- Electronics: DAE4 Sn1387; Calibrated: 8/28/2013
- Phantom: Triple Flat Phantom 5.1C; Type: QD 000 P51 CA; Serial: 1154
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

MSL2450_2600/d=10mm, Pin=1000 mW, dist=2.0mm/Area Scan (81x81x1):

Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 88.1 W/kg

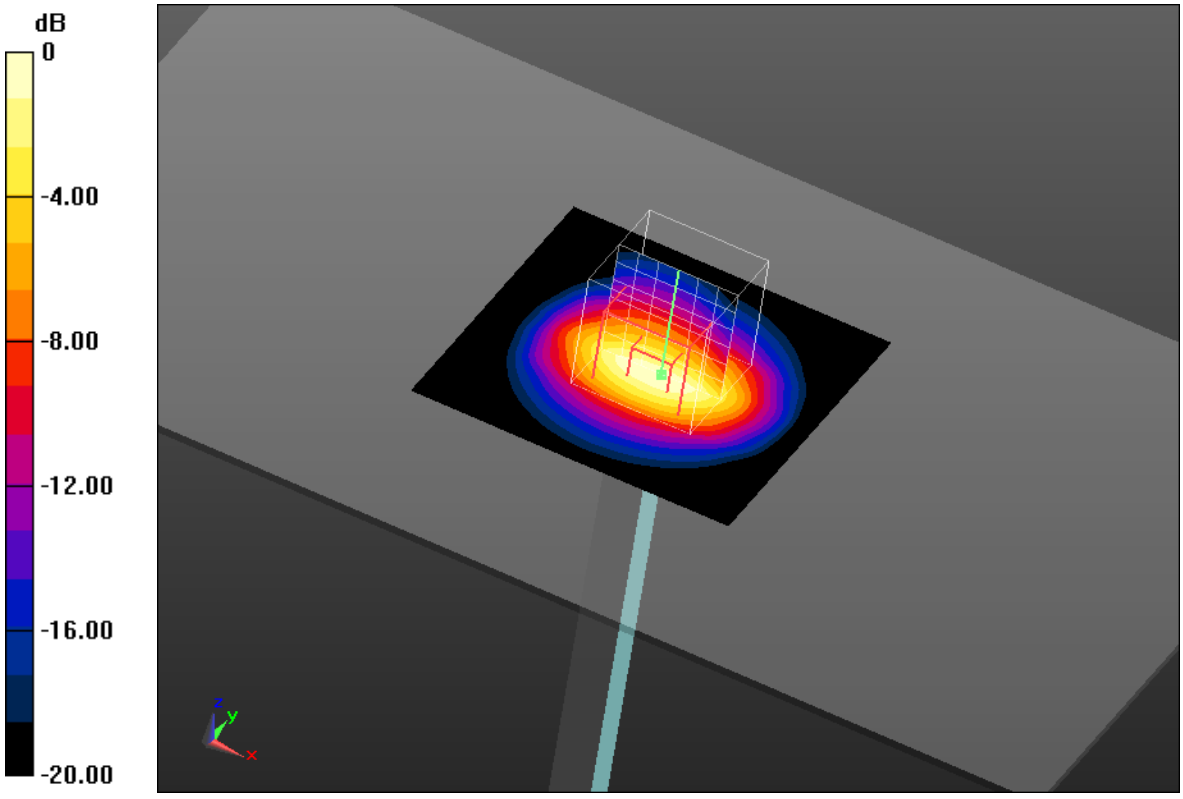
MSL2450_2600/d=10mm, Pin=1000 mW, dist=2.0mm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 199.7 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 117 W/kg

SAR(1 g) = 55.1 W/kg; SAR(10 g) = 24.8 W/kg

Maximum value of SAR (measured) = 85.6 W/kg



0 dB = 85.6 W/kg = 19.32 dBW/kg

Additional information:

ambient temperature: 23.8°C; liquid temperature: 22.5°C

Date/Time: 13.06.2014 16:11:44

SystemPerformanceCheck-D5GHz head 2014-06-13

DUT: Dipole 5 GHz; Type: D5GHzV2; Serial: 1055

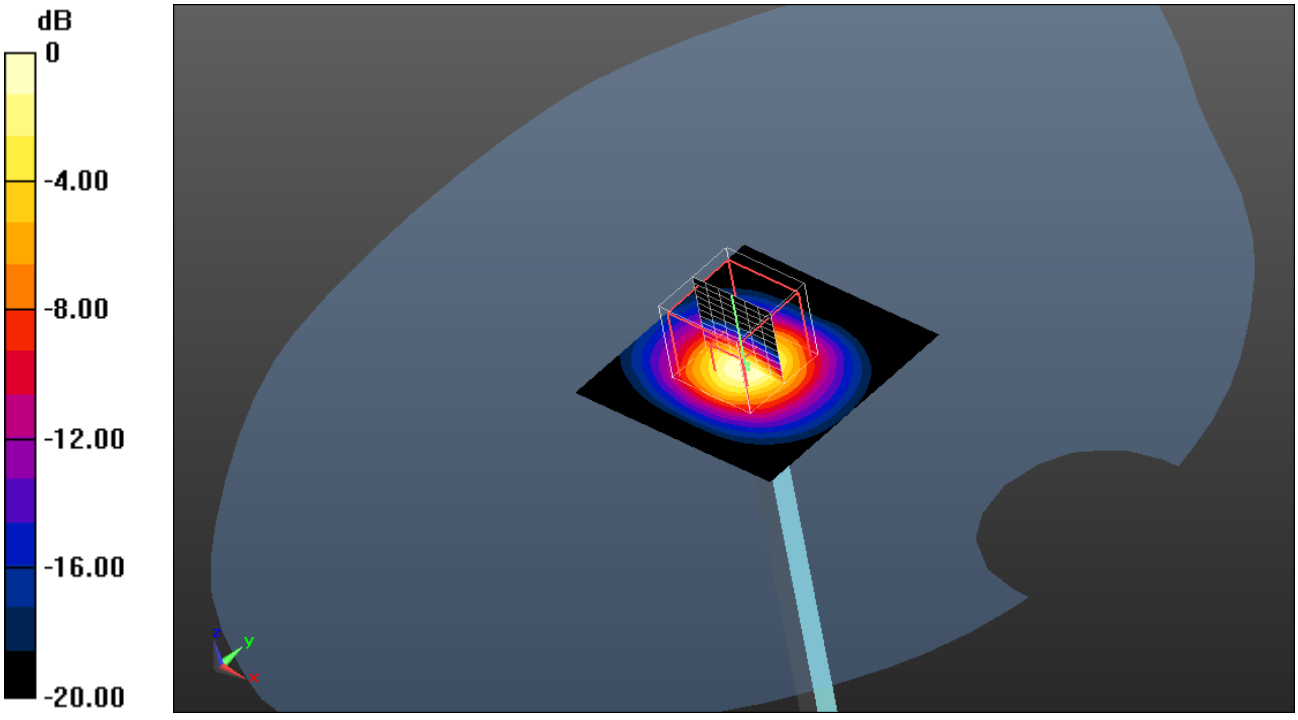
Communication System: UID 0, CW (0); Communication System Band: D5GHz (5000.0 - 6000.0 MHz);
Frequency: 5800 MHz; Communication System PAR: 0 dB; PMF: 1
Medium parameters used: f = 5800 MHz; σ = 5.114 S/m; ε_r = 35.361; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5
DASY5 Configuration:
- Probe: EX3DV4 - SN3944; ConvF(4.75, 4.75, 4.75); Calibrated: 02.08.2013;
- Sensor-Surface: 2mm (Mechanical Surface Detection), z = 1.0, 23.0
- Electronics: DAE3 Sn413; Calibrated: 22.05.2014
- Phantom: SAM; Type: QD000P40C; Serial: TP1150
- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

HSL 5GHz/d=10mm, Pin=100mW 5.8GHz/Area Scan (61x61x1): Interpolated grid:

dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 18.0 W/kg

HSL 5GHz/d=10mm, Pin=100mW 5.8GHz/Zoom Scan (7x7x12)/Cube 0:

Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 59.917 V/m; Power Drift = -0.09 dB
Peak SAR (extrapolated) = 36.0 W/kg
SAR(1 g) = 7.76 W/kg; SAR(10 g) = 2.19 W/kg
Maximum value of SAR (measured) = 16.5 W/kg



0 dB = 16.5 W/kg = 12.17 dBW/kg

Additional information:
ambient temperature: 22.3°C; liquid temperature: 22.1°C

Date/Time: 13.06.2014 13:41:29

SystemPerformanceCheck-D5GHz body 2014-06-13

DUT: Dipole 5 GHz; Type: D5GHzV2; Serial: 1055

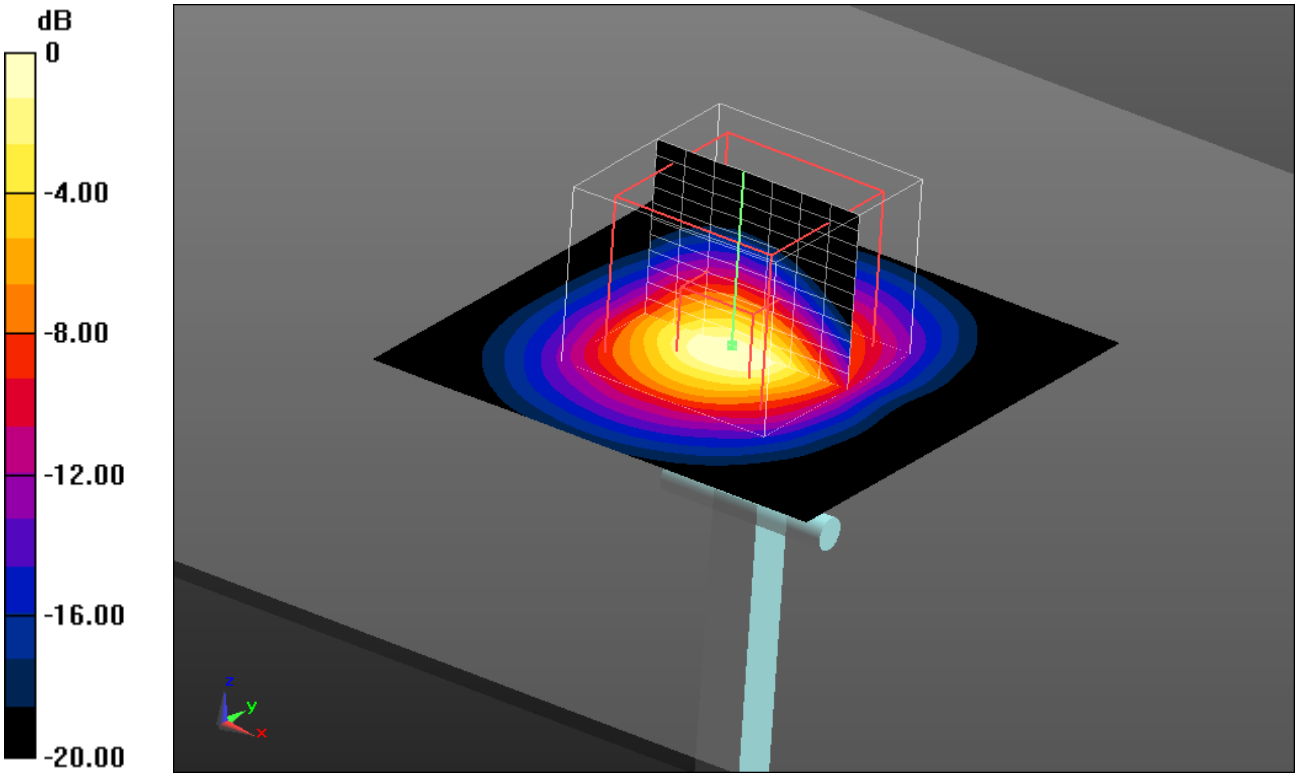
Communication System: UID 0, CW (0); Communication System Band: D5GHz (5000.0 - 6000.0 MHz);
Frequency: 5200 MHz; Communication System PAR: 0 dB; PMF: 1
Medium parameters used: f = 5200 MHz; σ = 5.217 S/m; ε_r = 48.385; ρ = 1000 kg/m^3
Phantom section: Center Section
Measurement Standard: DASY5
DASY5 Configuration:
- Probe: EX3DV4 - SN3944; ConvF(4.47, 4.47, 4.47); Calibrated: 02.08.2013;
- Sensor-Surface: 2mm (Mechanical Surface Detection), z = 1.0, 23.0
- Electronics: DAE3 Sn477; Calibrated: 14.05.2014
- Phantom: Triple Flat Phantom 5.1C; Type: QD 000 P51 CA; Serial: 1154
- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

MSL 5GHz/d=10mm, Pin=100mW 5.2GHz/Area Scan (61x61x1): Interpolated grid:

dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 16.0 W/kg

MSL 5GHz/d=10mm, Pin=100mW 5.2GHz/Zoom Scan (8x8x12)/Cube 0:

Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 59.485 V/m; Power Drift = -0.13 dB
Peak SAR (extrapolated) = 27.2 W/kg
SAR(1 g) = 7.12 W/kg; SAR(10 g) = 2.01 W/kg
Maximum value of SAR (measured) = 14.5 W/kg



0 dB = 14.5 W/kg = 11.61 dBW/kg

Additional information:
ambient temperature: 23.7°C; liquid temperature: 22.4°C

Annex B: DASY5 measurement results

Annex B.1: GSM 850

Date/Time: 6/11/2014 5:12:06 PM

IEEE1528-head

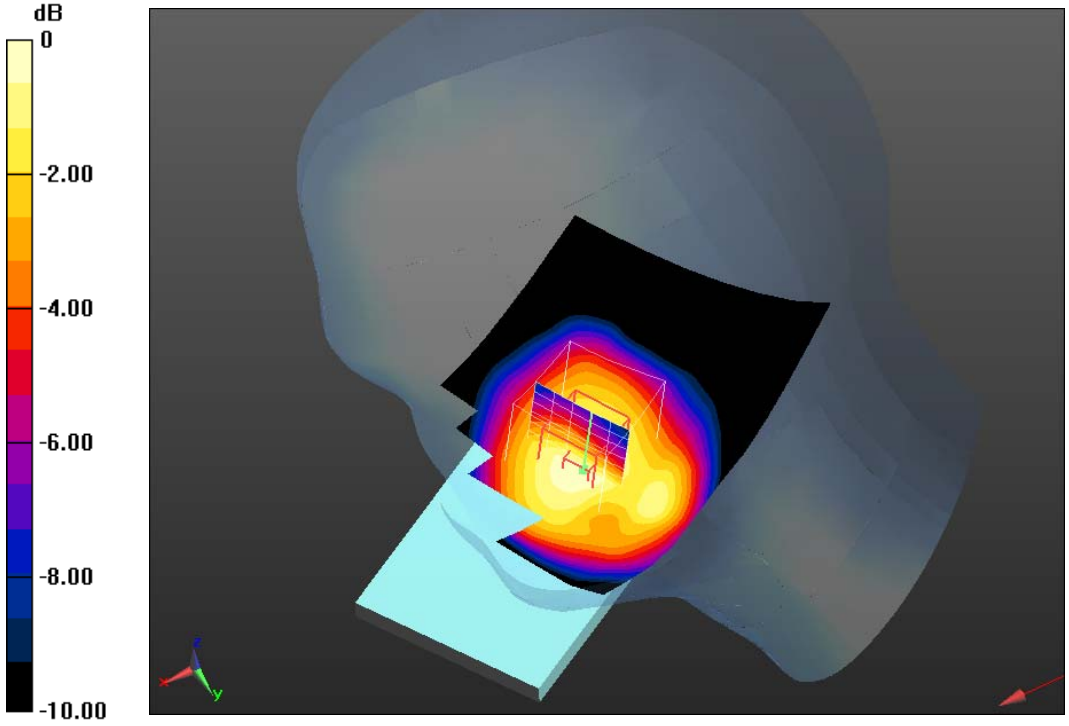
DUT: Sony; Type: PM-0740-BV; Serial: CB5A1W1HSZ
Communication System: UID 0, GSM/GPRS 2TS (0); Communication System Band: GSM 850; Frequency: 848.8 MHz; Communication System PAR: 6.021 dB; PMF: 2.00009
Medium parameters used: f = 849 MHz; σ = 0.95 S/m; ε_r = 41.656; ρ = 1000 kg/m^3
Phantom section: Right Section
Measurement Standard: DASY5
DASY5 Configuration:
- Probe: ET3DV6 - SN1558; ConvF(5.89, 5.89, 5.89); Calibrated: 8/22/2013;
- Sensor-Surface: 4mm (Mechanical Surface Detection), z = 2.7, 32.7
- Electronics: DAE3 Sn477; Calibrated: 5/14/2014
- Phantom: SAM front; Type: QD000P40CC; Serial: TP-1042
- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7331)

GSM 850 - Right-Hand-Side - HSL 835/Touch Position - High DTM - 2TS/Area Scan (71x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.417 W/kg

GSM 850 - Right-Hand-Side - HSL 835/Touch Position - High DTM - 2TS/Zoom Scan (6x6x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 21.62 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 0.553 W/kg
SAR(1 g) = 0.402 W/kg; SAR(10 g) = 0.293 W/kg
Maximum value of SAR (measured) = 0.432 W/kg



0 dB = 0.432 W/kg = -3.65 dBW/kg

Additional information:
ambient temperature: 23.8°C; liquid temperature: 22.5°C

Date/Time: 10.06.2014 16:46:18

FCC-body

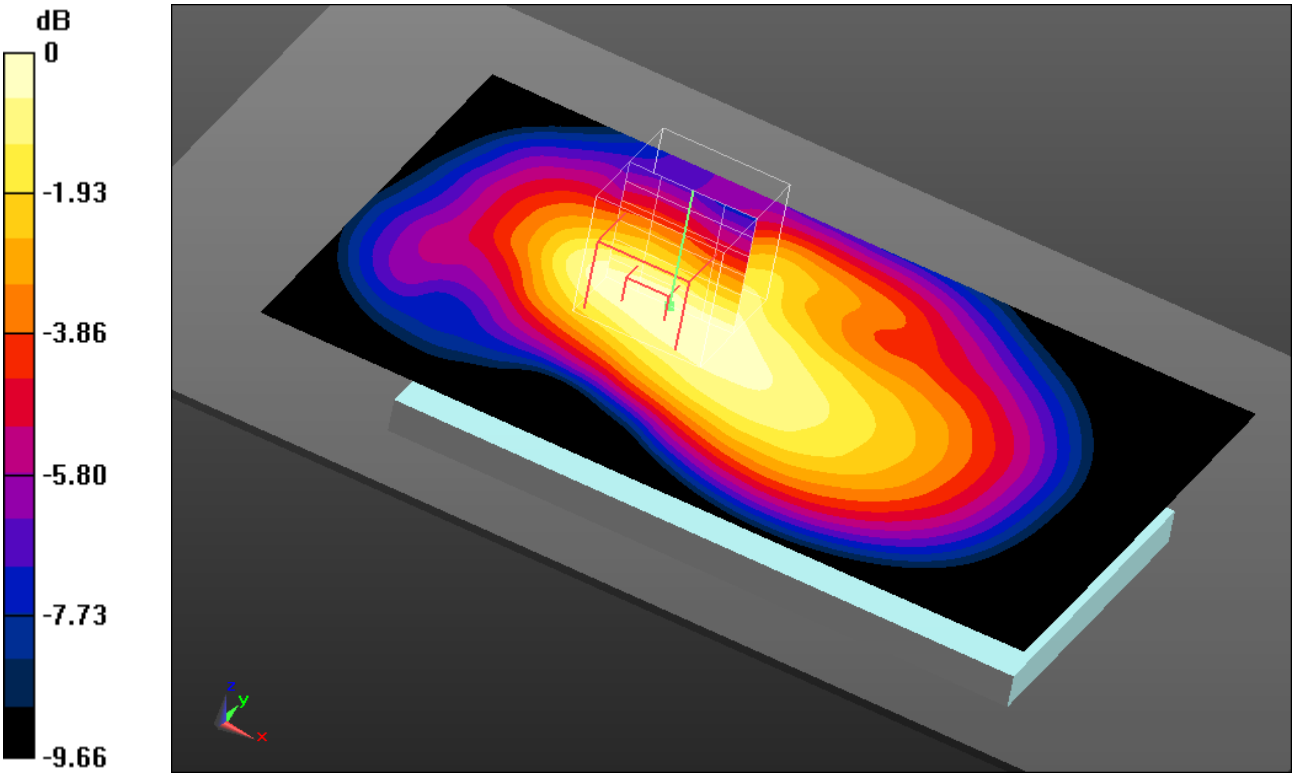
DUT: Sony; Type: PM-0740-BV; Serial: CB5A1W1HSZ
Communication System: UID 0, GSM/GPRS 2TS (0); Communication System Band: GSM 850; Frequency: 824.2 MHz; Communication System PAR: 6.021 dB; PMF: 2.00009
Medium parameters used (interpolated): f = 824.2 MHz; σ = 1.006 S/m; ε_r = 54.107; ρ = 1000 kg/m^3
Phantom section: Center Section
Measurement Standard: DASY5
DASY5 Configuration:
- Probe: ET3DV6 - SN1558; ConvF(5.64, 5.64, 5.64); Calibrated: 22.08.2013;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection), z = 2.7, 32.7
- Electronics: DAE3 Sn477; Calibrated: 14.05.2014
- Phantom: Triple Flat Phantom 5.1C; Type: QD 000 P51 CA; Serial: 1154
- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

GSM 850 - hotspot - MSL835/Rear Low 10mm/Area Scan (71x121x1):

Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.267 W/kg

GSM 850 - hotspot - MSL835/Rear Low 10mm/Zoom Scan (5x5x7)/Cube 0:

Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 17.098 V/m; Power Drift = -0.09 dB
Peak SAR (extrapolated) = 0.302 W/kg
SAR(1 g) = 0.255 W/kg; SAR(10 g) = 0.190 W/kg
Maximum value of SAR (measured) = 0.270 W/kg



0 dB = 0.270 W/kg = -5.69 dBW/kg

Additional information:
position or distance of DUT to SAM: 10mm
ambient temperature: 23.0°C; liquid temperature: 22.4°C

Date/Time: 10.06.2014 16:28:37

FCC-body

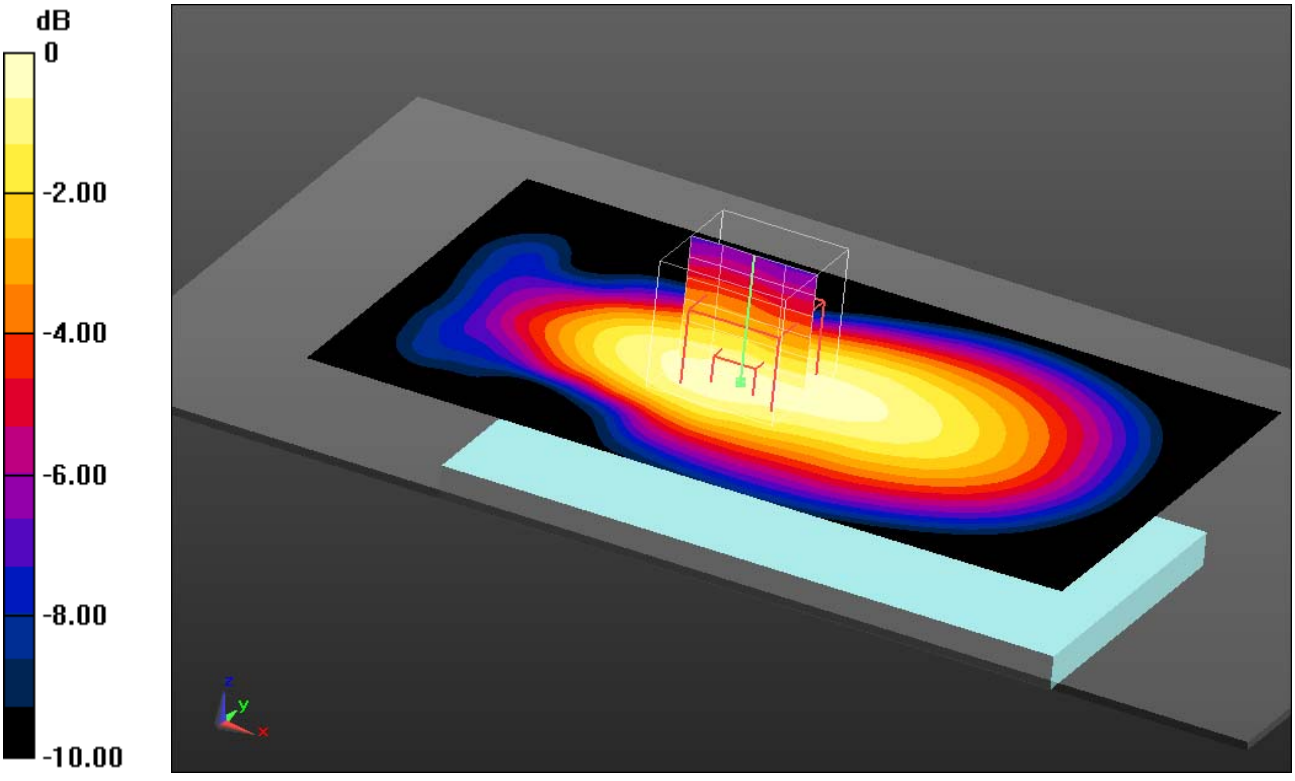
DUT: Sony; Type: PM-0740-BV; Serial: CB5A1W1HSZ
Communication System: UID 0, GSM/GPRS 2TS (0); Communication System Band: GSM 850; Frequency: 824.2 MHz; Communication System PAR: 6.021 dB; PMF: 2.00009
Medium parameters used (interpolated): f = 824.2 MHz; σ = 1.006 S/m; ε_r = 54.107; ρ = 1000 kg/m^3
Phantom section: Center Section
Measurement Standard: DASY5
DASY5 Configuration:
- Probe: ET3DV6 - SN1558; ConvF(5.64, 5.64, 5.64); Calibrated: 22.08.2013;
- Sensor-Surface: 4mm (Mechanical Surface Detection), z = 2.7, 32.7
- Electronics: DAE3 Sn477; Calibrated: 14.05.2014
- Phantom: Triple Flat Phantom 5.1C; Type: QD 000 P51 CA; Serial: 1154
- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

GSM 850 - body worn - MSL835/Front Low 15mm/Area Scan (71x121x1):

Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.270 W/kg

GSM 850 - body worn - MSL835/Front Low 15mm/Zoom Scan (5x5x7)/Cube 0:

Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 17.444 V/m; Power Drift = -0.17 dB
Peak SAR (extrapolated) = 0.318 W/kg
SAR(1 g) = 0.266 W/kg; SAR(10 g) = 0.200 W/kg
Maximum value of SAR (measured) = 0.281 W/kg



0 dB = 0.281 W/kg = -5.51 dBW/kg

Additional information:
position or distance of DUT to SAM: 15mm
ambient temperature: 23.0°C; liquid temperature: 22.4°C

Annex B.2: GSM 1900

Date/Time: 6/11/2014 2:33:33 PM

IEEE1528-head

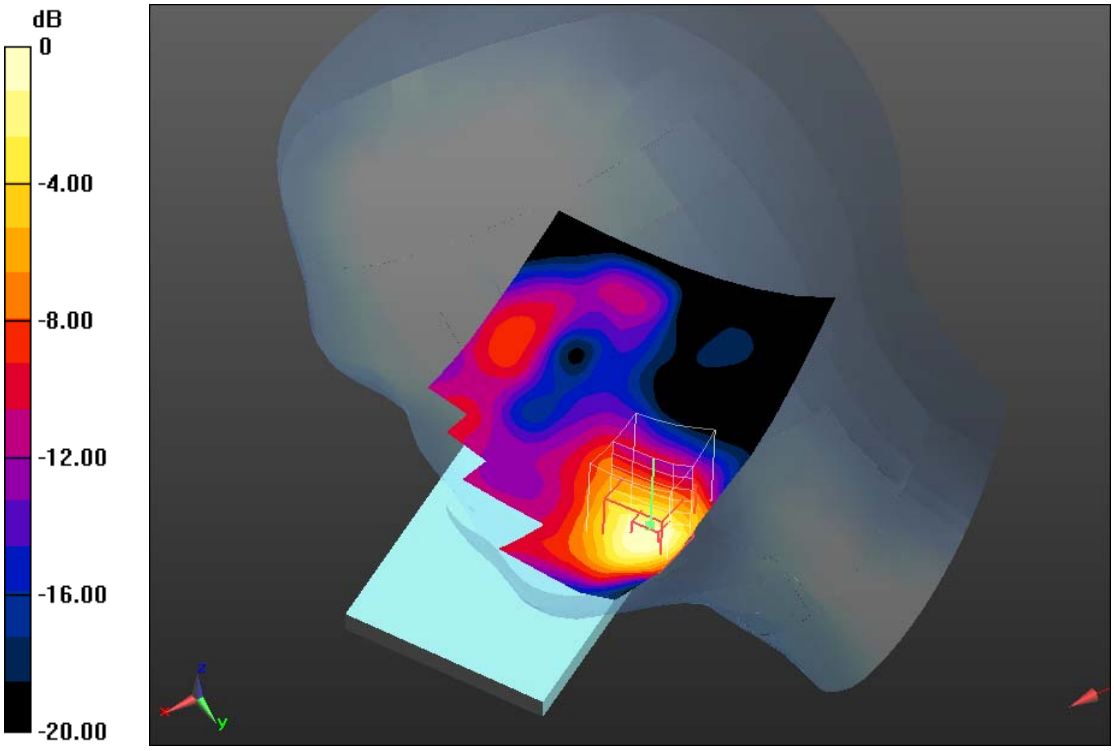
DUT: Sony; Type: PM-0740-BV; Serial: CB5A1W1HSZ
Communication System: UID 0, GSM/GPRS 3TS (0); Communication System Band: GSM 1900; Frequency: 1909.8 MHz; Communication System PAR: 4.314 dB; PMF: 1.64324
Medium parameters used: f = 1910 MHz; σ = 1.407 S/m; ε_r = 39.861; ρ = 1000 kg/m^3
Phantom section: Right Section
Measurement Standard: DASY5
DASY5 Configuration:
- Probe: ET3DV6 - SN1558; ConvF(4.75, 4.75, 4.75); Calibrated: 8/22/2013;
- Sensor-Surface: 4mm (Mechanical Surface Detection), z = 2.7, 32.7
- Electronics: DAE3 Sn477; Calibrated: 5/14/2014
- Phantom: SAM front; Type: QD000P40CC; Serial: TP-1042
- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7331)

GSM 1900 - Right-Hand-Side - HSL 1900/Touch Position - High DTM - 3TS/Area Scan (71x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.706 W/kg

GSM 1900 - Right-Hand-Side - HSL 1900/Touch Position - High DTM - 3TS/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 22.32 V/m; Power Drift = -0.16 dB
Peak SAR (extrapolated) = 0.942 W/kg
SAR(1 g) = 0.572 W/kg; SAR(10 g) = 0.315 W/kg
Maximum value of SAR (measured) = 0.643 W/kg



0 dB = 0.643 W/kg = -1.92 dBW/kg

Additional information:
ambient temperature: 23.6°C; liquid temperature: 22.5°C

Date/Time: 11.06.2014 13:21:40

FCC-body

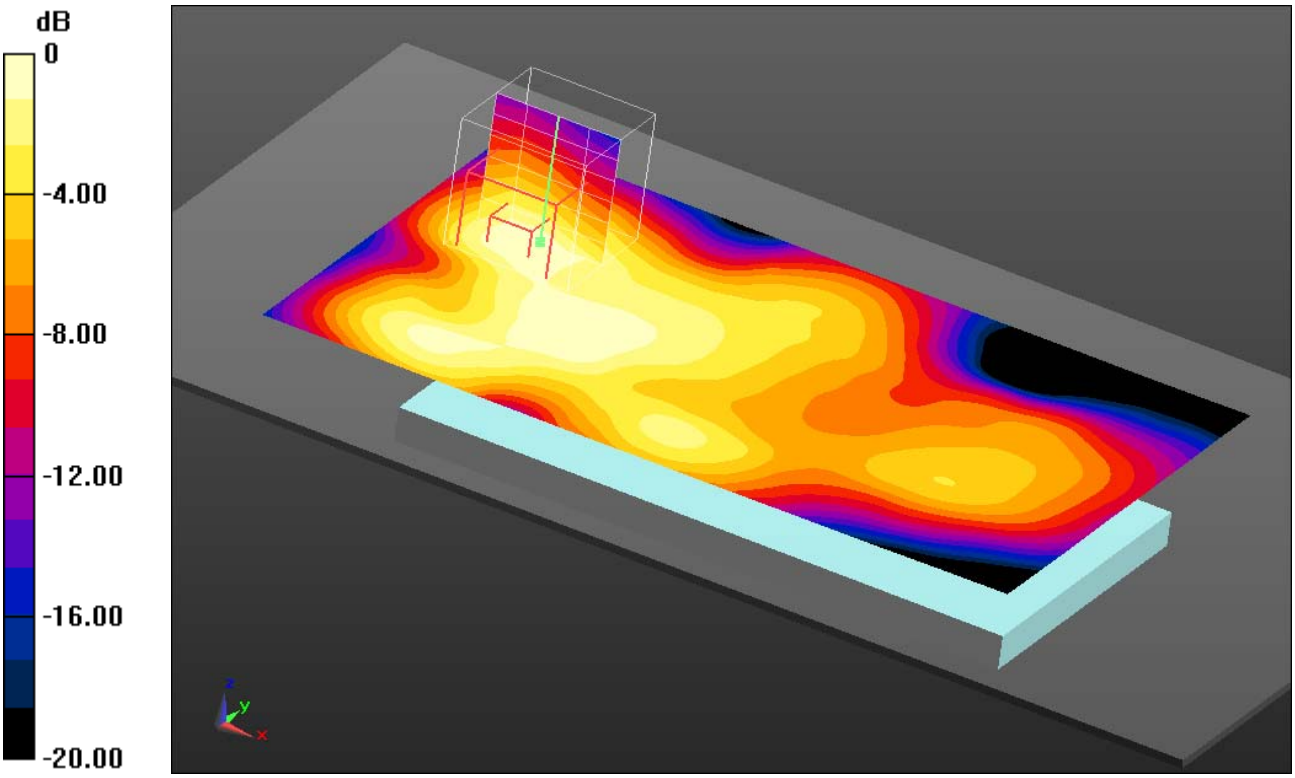
DUT: Sony; Type: PM-0740-BV; Serial: CB5A1W1HSZ
Communication System: UID 0, GSM/GPRS 4TS (0); Communication System Band: GSM 1900; Frequency: 1909.8 MHz; Communication System PAR: 3.01 dB; PMF: 1.41416
Medium parameters used: f = 1910 MHz; σ = 1.535 S/m; ε_r = 52.314; ρ = 1000 kg/m^3
Phantom section: Center Section
Measurement Standard: DASY5
DASY5 Configuration:
- Probe: ET3DV6 - SN1558; ConvF(4.21, 4.21, 4.21); Calibrated: 22.08.2013;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection), z = 2.7, 32.7
- Electronics: DAE3 Sn477; Calibrated: 14.05.2014
- Phantom: Triple Flat Phantom 5.1C; Type: QD 000 P51 CA; Serial: 1154
- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

GSM 1900 - hotspot - MSL1900/Front Low 10mm/Area Scan (71x121x1):

Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.341 W/kg

GSM 1900 - hotspot - MSL1900/Front Low 10mm/Zoom Scan (5x5x7)/Cube 0:

Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 15.837 V/m; Power Drift = -0.06 dB
Peak SAR (extrapolated) = 0.538 W/kg
SAR(1 g) = 0.312 W/kg; SAR(10 g) = 0.172 W/kg
Maximum value of SAR (measured) = 0.332 W/kg



0 dB = 0.332 W/kg = -4.79 dBW/kg

Additional information:
position or distance of DUT to SAM: 10mm
ambient temperature: 23.4°C; liquid temperature: 22.3°C

Date/Time: 11.06.2014 13:07:45

FCC-body

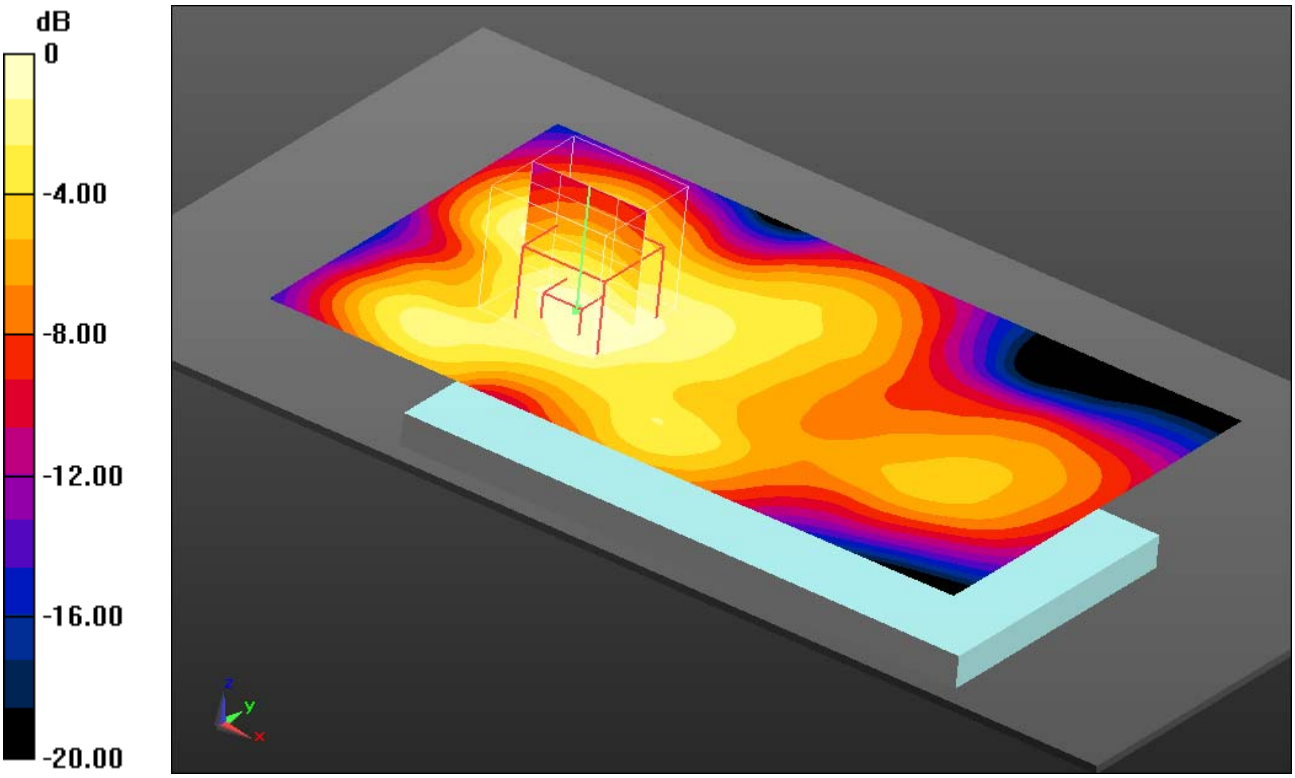
DUT: Sony; Type: PM-0740-BV; Serial: CB5A1W1HSZ
Communication System: UID 0, GSM/GPRS 4TS (0); Communication System Band: GSM 1900; Frequency: 1909.8 MHz; Communication System PAR: 3.01 dB; PMF: 1.41416
Medium parameters used: f = 1910 MHz; σ = 1.535 S/m; ε_r = 52.314; ρ = 1000 kg/m^3
Phantom section: Center Section
Measurement Standard: DASY5
DASY5 Configuration:
- Probe: ET3DV6 - SN1558; ConvF(4.21, 4.21, 4.21); Calibrated: 22.08.2013;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection), z = 2.7, 32.7
- Electronics: DAE3 Sn477; Calibrated: 14.05.2014
- Phantom: Triple Flat Phantom 5.1C; Type: QD 000 P51 CA; Serial: 1154
- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

GSM 1900 - body worn - MSL1900/Front Low 15mm/Area Scan (71x121x1):

Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.252 W/kg

GSM 1900 - body worn - MSL1900/Front Low 15mm/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 13.435 V/m; Power Drift = 0.05 dB
Peak SAR (extrapolated) = 0.345 W/kg
SAR(1 g) = 0.243 W/kg; SAR(10 g) = 0.158 W/kg
Maximum value of SAR (measured) = 0.255 W/kg



0 dB = 0.255 W/kg = -5.93 dBW/kg

Additional information:
position or distance of DUT to SAM: 15mm
ambient temperature: 23.4°C; liquid temperature: 22.3°C

Annex B.3: UMTS FDD II

Date/Time: 6/11/2014 2:53:07 PM

IEEE1528-head

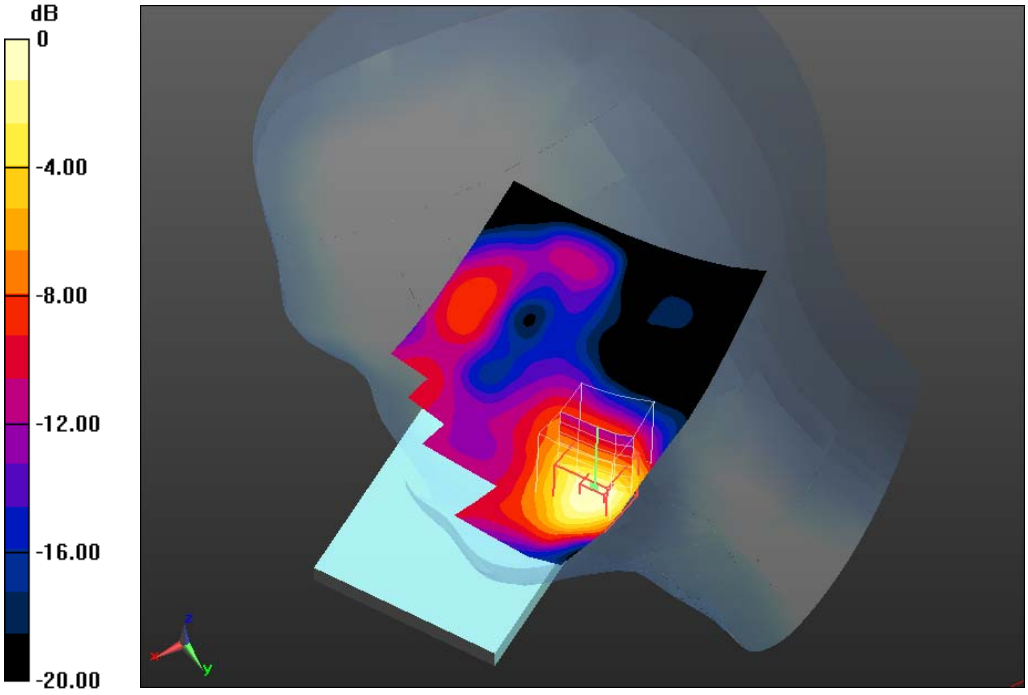
DUT: Sony; Type: PM-0740-BV; Serial: CB5A1W1HSZ
Communication System: UID 0, UMTS FDD (0); Communication System Band: UMTS FDD II; Frequency: 1907.6 MHz; Communication System PAR: 0 dB; PMF: 1
Medium parameters used: f = 1908 MHz; σ = 1.405 S/m; ε_r = 39.859; ρ = 1000 kg/m^3
Phantom section: Right Section
Measurement Standard: DASY5
DASY5 Configuration:
- Probe: ET3DV6 - SN1558; ConvF(4.75, 4.75, 4.75); Calibrated: 8/22/2013;
- Sensor-Surface: 4mm (Mechanical Surface Detection), z = 2.7, 32.7
- Electronics: DAE3 Sn477; Calibrated: 5/14/2014
- Phantom: SAM front; Type: QD000P40CC; Serial: TP-1042
- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7331)

UMTS FDD II - Right-Hand-Side - HSL 1900/Touch Position - High/Area Scan (71x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.878 W/kg

UMTS FDD II - Right-Hand-Side - HSL 1900/Touch Position - High/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 24.91 V/m; Power Drift = -0.07 dB
Peak SAR (extrapolated) = 1.19 W/kg
SAR(1 g) = 0.718 W/kg; SAR(10 g) = 0.395 W/kg
Maximum value of SAR (measured) = 0.807 W/kg



0 dB = 0.807 W/kg = -0.93 dBW/kg

Additional information:
ambient temperature: 23.6°C; liquid temperature: 22.5°C

Date/Time: 11.06.2014 12:21:48

FCC-body

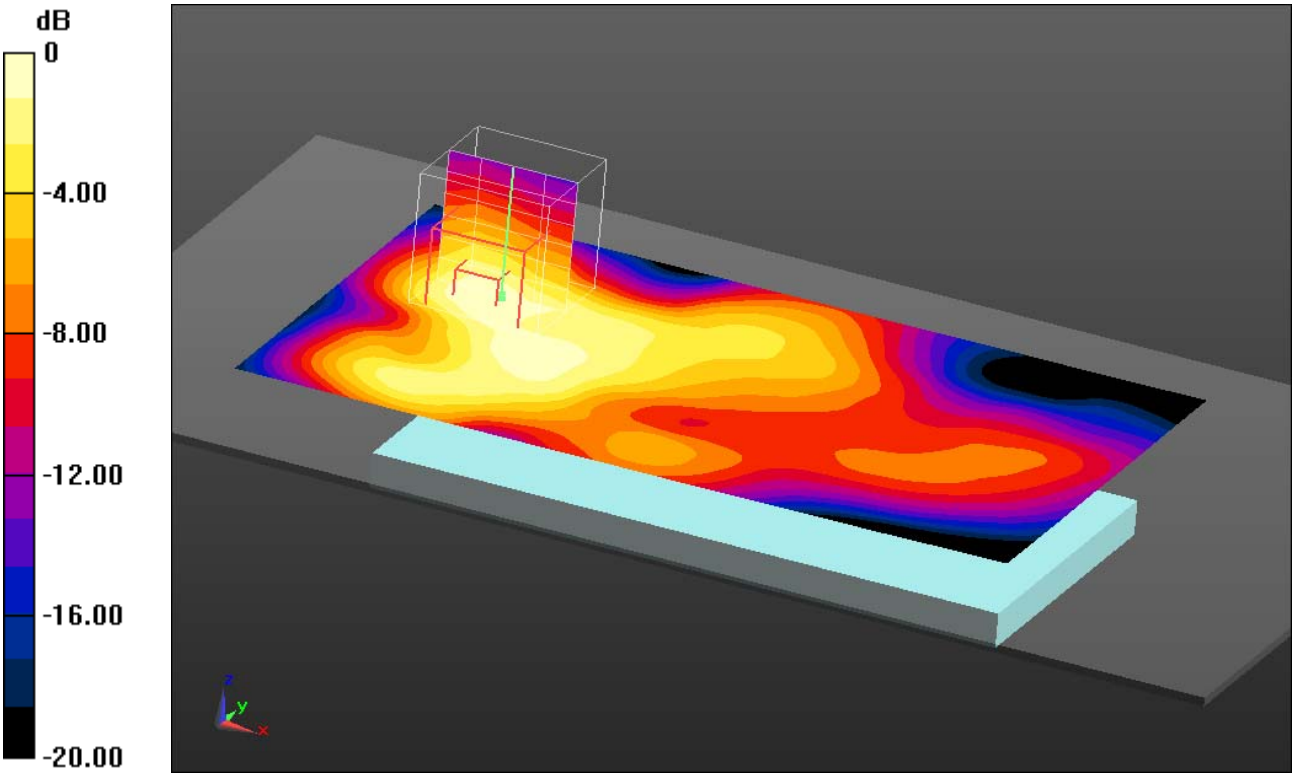
DUT: Sony; Type: PM-0740-BV; Serial: CB5A1W1HSZ
Communication System: UID 0, UMTS FDD (0); Communication System Band: UMTS FDD II; Frequency: 1852.4 MHz; Communication System PAR: 0 dB; PMF: 1
Medium parameters used (interpolated): f = 1852.4 MHz; σ = 1.479 S/m; ε_r = 52.52; ρ = 1000 kg/m^3
Phantom section: Center Section
Measurement Standard: DASY5
DASY5 Configuration:
- Probe: ET3DV6 - SN1558; ConvF(4.21, 4.21, 4.21); Calibrated: 22.08.2013;
- Sensor-Surface: 4mm (Mechanical Surface Detection), z = 2.7, 32.7
- Electronics: DAE3 Sn477; Calibrated: 14.05.2014
- Phantom: Triple Flat Phantom 5.1C; Type: QD 000 P51 CA; Serial: 1154
- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

UMTS FDD II - hotspot - MSL1900/Front Low 10mm/Area Scan (71x121x1):

Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.528 W/kg

UMTS FDD II - hotspot - MSL1900/Front Low 10mm/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 18.087 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 0.726 W/kg
SAR(1 g) = 0.431 W/kg; SAR(10 g) = 0.244 W/kg
Maximum value of SAR (measured) = 0.460 W/kg



0 dB = 0.460 W/kg = -3.37 dBW/kg

Additional information:
position or distance of DUT to SAM: 10mm
ambient temperature: 23.4°C; liquid temperature: 22.3°C

Date/Time: 11.06.2014 12:41:47

FCC-body

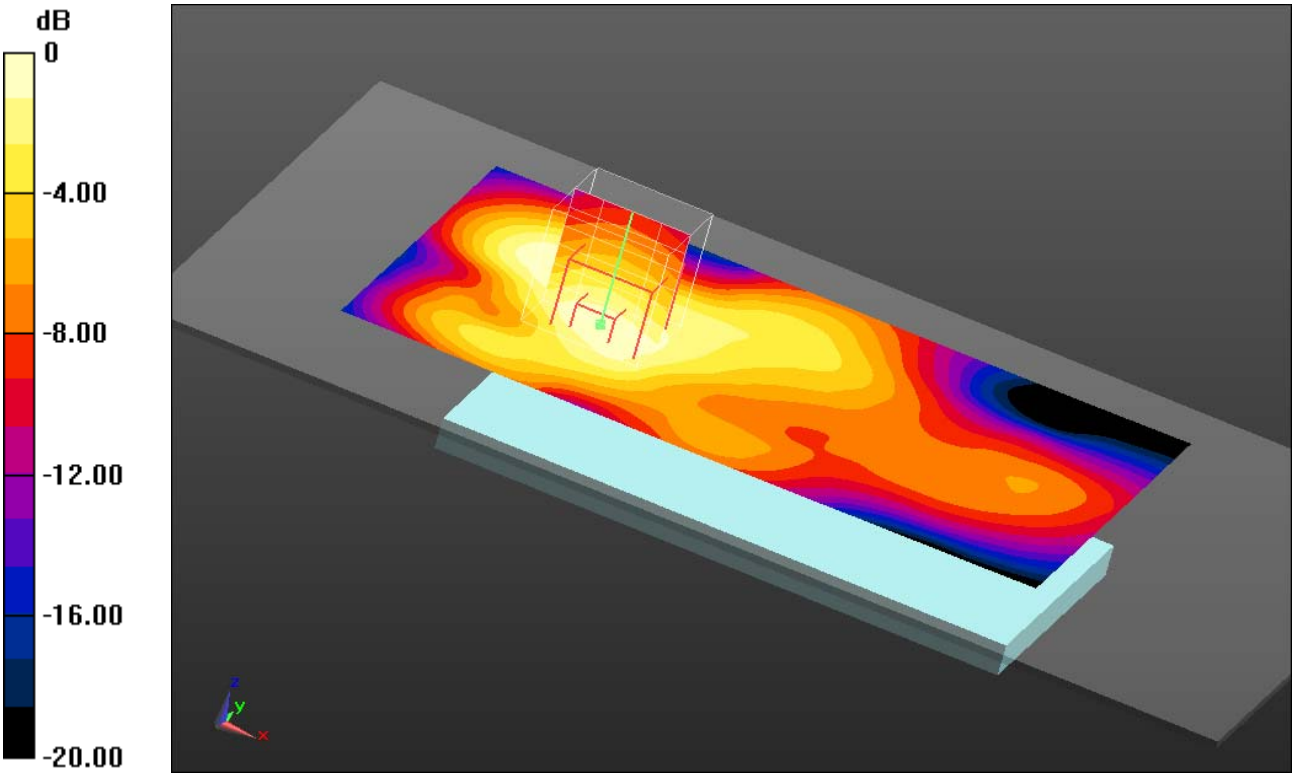
DUT: Sony; Type: PM-0740-BV; Serial: CB5A1W1HSZ
Communication System: UID 0, UMTS FDD (0); Communication System Band: UMTS FDD II; Frequency: 1852.4 MHz; Communication System PAR: 0 dB; PMF: 1
Medium parameters used (interpolated): f = 1852.4 MHz; σ = 1.479 S/m; ε_r = 52.52; ρ = 1000 kg/m^3
Phantom section: Center Section
Measurement Standard: DASY5
DASY5 Configuration:
- Probe: ET3DV6 - SN1558; ConvF(4.21, 4.21, 4.21); Calibrated: 22.08.2013;
- Sensor-Surface: 4mm (Mechanical Surface Detection), z = 2.7, 32.7
- Electronics: DAE3 Sn477; Calibrated: 14.05.2014
- Phantom: Triple Flat Phantom 5.1C; Type: QD 000 P51 CA; Serial: 1154
- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

UMTS FDD II - body worn - MSL1900/Front Low 15mm/Area Scan (71x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.269 W/kg

UMTS FDD II - body worn - MSL1900/Front Low 15mm/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 14.179 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 0.353 W/kg
SAR(1 g) = 0.247 W/kg; SAR(10 g) = 0.162 W/kg
Maximum value of SAR (measured) = 0.262 W/kg



0 dB = 0.262 W/kg = -5.82 dBW/kg

Additional information:
position or distance of DUT to SAM: 15mm
ambient temperature: 23.4°C; liquid temperature: 22.3°C

Annex B.4: UMTS FDD IV

Date/Time: 11.06.2014 20:07:19

IEEE1528-head

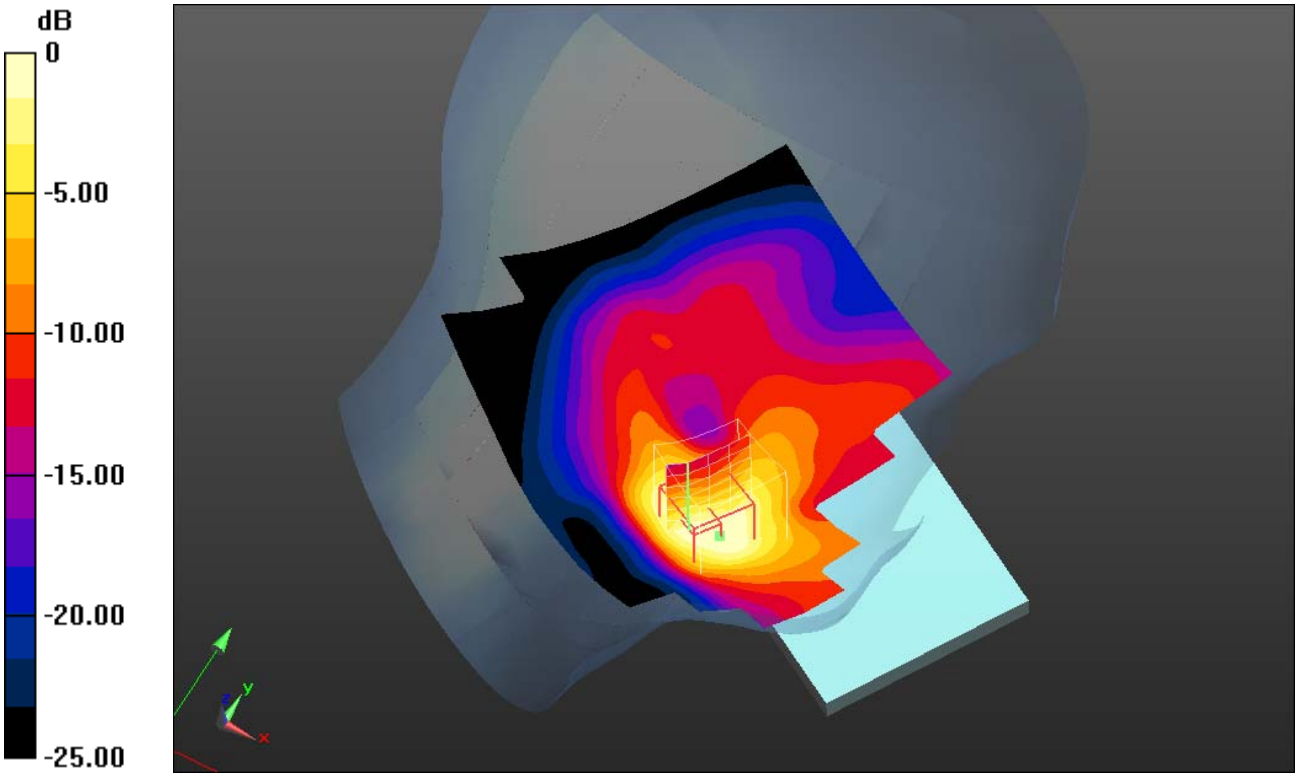
DUT: Sony; Type: PM-0740-BV; Serial: CB5A1W1HSZ
Communication System: UID 0, UMTS FDD (0); Communication System Band: UMTS FDD IV; Frequency: 1712.4 MHz; Communication System PAR: 0 dB; PMF: 1
Medium parameters used (interpolated): f = 1712.4 MHz; σ = 1.323 S/m; ε_r = 40.624; ρ = 1000 kg/m^3
Phantom section: Left Section
Measurement Standard: DASY5
DASY5 Configuration:
- Probe: ET3DV6 - SN1558; ConvF(4.93, 4.93, 4.93); Calibrated: 22.08.2013;
- Sensor-Surface: 4mm (Mechanical Surface Detection), z = 2.7, 32.7
- Electronics: DAE3 Sn477; Calibrated: 14.05.2014
- Phantom: SAM front; Type: QD000P40CC; Serial: TP-1042
- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

UMTS FDD IV - Left-Hand-Side HSL 1750/Touch Position - Mid/Area Scan (71x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.629 W/kg

UMTS FDD IV - Left-Hand-Side HSL 1750/Touch Position - Mid/Zoom Scan (6x6x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 21.247 V/m; Power Drift = 0.10 dB
Peak SAR (extrapolated) = 1.27 W/kg
SAR(1 g) = 0.636 W/kg; SAR(10 g) = 0.332 W/kg
Maximum value of SAR (measured) = 0.756 W/kg



0 dB = 0.756 W/kg = -1.21 dBW/kg

Additional information:
ambient temperature: 23.3°C; liquid temperature: 22.5°C

Date/Time: 11.06.2014 15:41:47

FCC-body

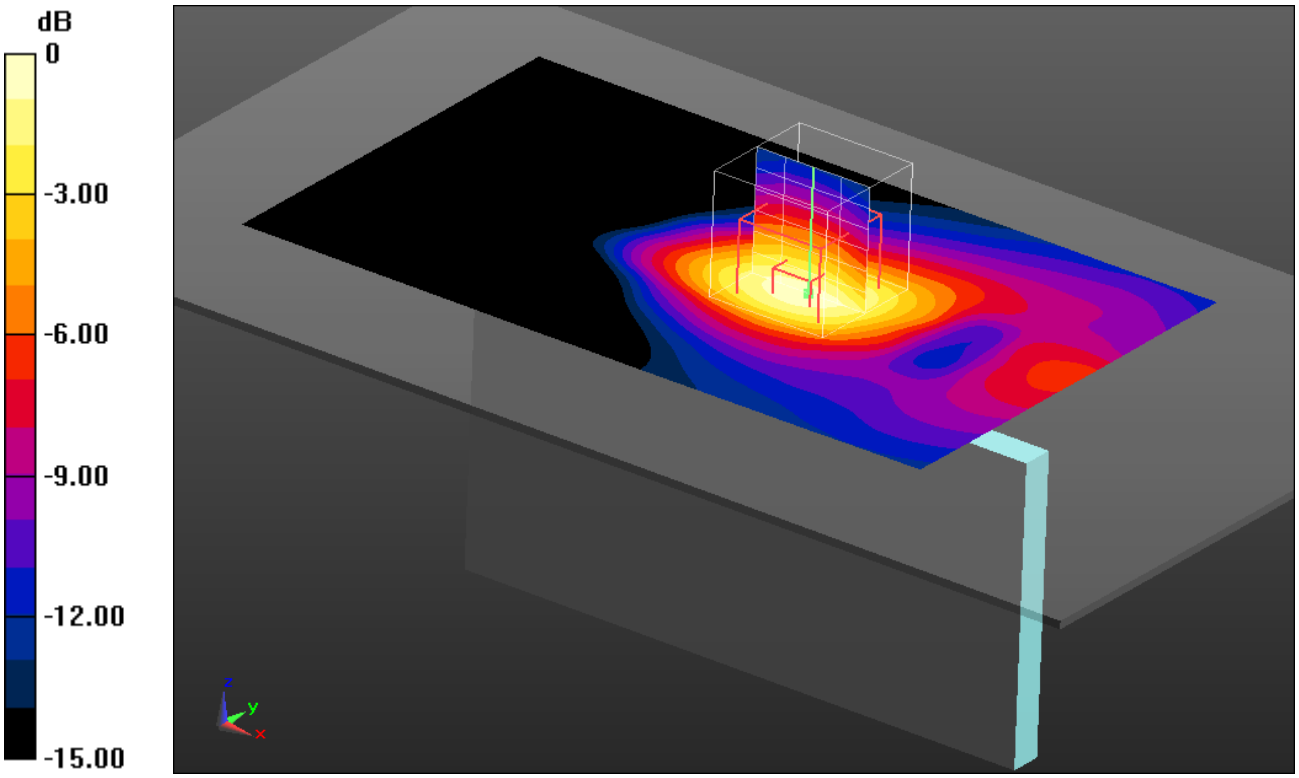
DUT: Sony; Type: PM-0740-BV; Serial: CB5A1W1HSZ
Communication System: UID 0, UMTS FDD (0); Communication System Band: UMTS FDD IV; Frequency: 1732.4 MHz; Communication System PAR: 0 dB; PMF: 1
Medium parameters used (interpolated): f = 1732.4 MHz; σ = 1.495 S/m; ε_r = 52.427; ρ = 1000 kg/m^3
Phantom section: Center Section
Measurement Standard: DASY5
DASY5 Configuration:
- Probe: ET3DV6 - SN1558; ConvF(4.41, 4.41, 4.41); Calibrated: 22.08.2013;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection), z = 2.7, 32.7
- Electronics: DAE3 Sn477; Calibrated: 14.05.2014
- Phantom: Triple Flat Phantom 5.1C; Type: QD 000 P51 CA; Serial: 1154
- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

UMTS IV - hotspot - MSL1750/Left Middle 10mm/Area Scan (71x121x1):

Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.188 W/kg

UMTS IV - hotspot - MSL1750/Left Middle 10mm/Zoom Scan (5x5x7)/Cube 0:

Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 10.788 V/m; Power Drift = 0.07 dB
Peak SAR (extrapolated) = 0.270 W/kg
SAR(1 g) = 0.175 W/kg; SAR(10 g) = 0.101 W/kg
Maximum value of SAR (measured) = 0.198 W/kg



0 dB = 0.198 W/kg = -7.03 dBW/kg

Additional information:
position or distance of DUT to SAM: 10mm
ambient temperature: 23.7°C; liquid temperature: 22.4°C

Date/Time: 11.06.2014 15:25:48

FCC-body

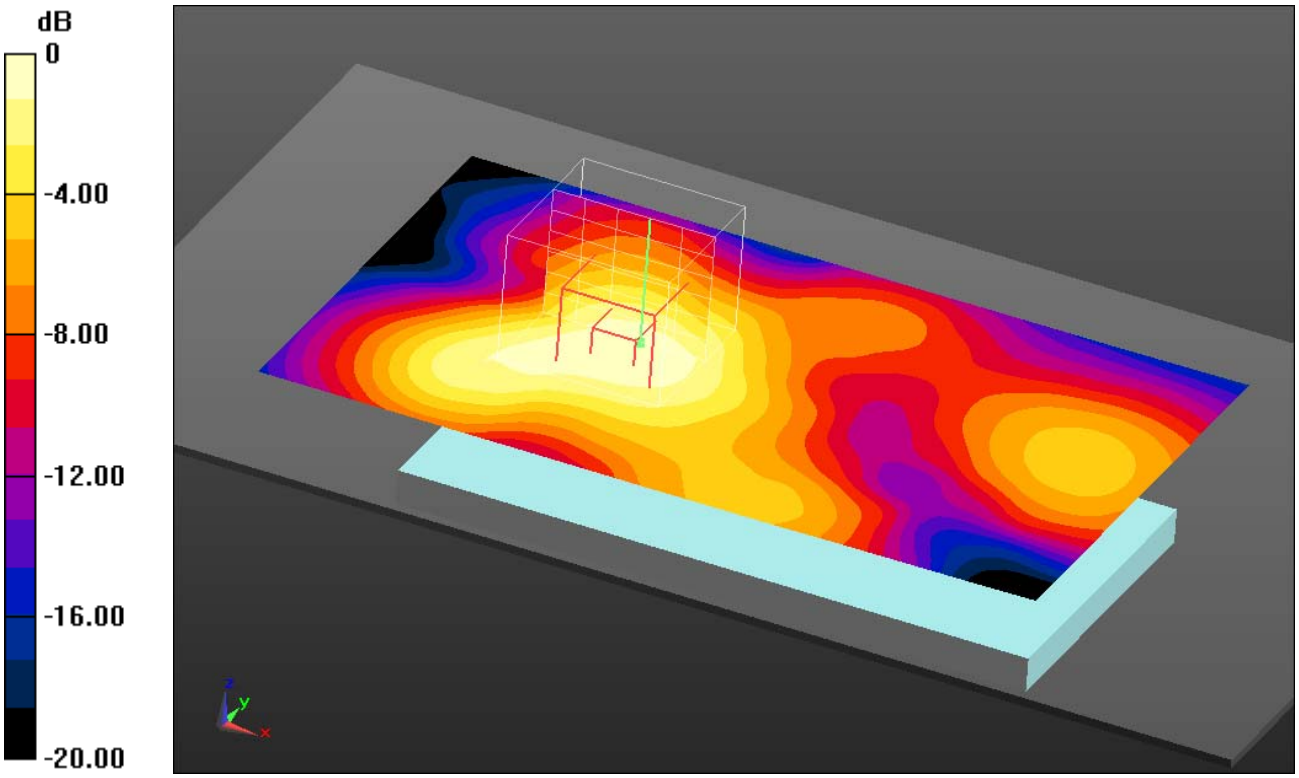
DUT: Sony; Type: PM-0740-BV; Serial: CB5A1W1HSZ
Communication System: UID 0, UMTS FDD (0); Communication System Band: UMTS FDD IV; Frequency: 1732.4 MHz; Communication System PAR: 0 dB; PMF: 1
Medium parameters used (interpolated): f = 1732.4 MHz; σ = 1.495 S/m; ε_r = 52.427; ρ = 1000 kg/m^3
Phantom section: Center Section
Measurement Standard: DASY5
DASY5 Configuration:
- Probe: ET3DV6 - SN1558; ConvF(4.41, 4.41, 4.41); Calibrated: 22.08.2013;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection), z = 2.7, 32.7
- Electronics: DAE3 Sn477; Calibrated: 14.05.2014
- Phantom: Triple Flat Phantom 5.1C; Type: QD 000 P51 CA; Serial: 1154
- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

UMTS IV - body worn - MSL1750/Rear Middle 15mm/Area Scan (71x121x1):

Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.198 W/kg

UMTS IV - body worn - MSL1750/Rear Middle 15mm/Zoom Scan (6x6x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 12.286 V/m; Power Drift = -0.07 dB
Peak SAR (extrapolated) = 0.242 W/kg
SAR(1 g) = 0.182 W/kg; SAR(10 g) = 0.121 W/kg
Maximum value of SAR (measured) = 0.192 W/kg



0 dB = 0.192 W/kg = -7.17 dBW/kg

Additional information:
position or distance of DUT to SAM: 15mm
ambient temperature: 23.7°C; liquid temperature: 22.4°C

Annex B.5: UMTS FDD V

Date/Time: 6/11/2014 5:38:53 PM

IEEE1528-head

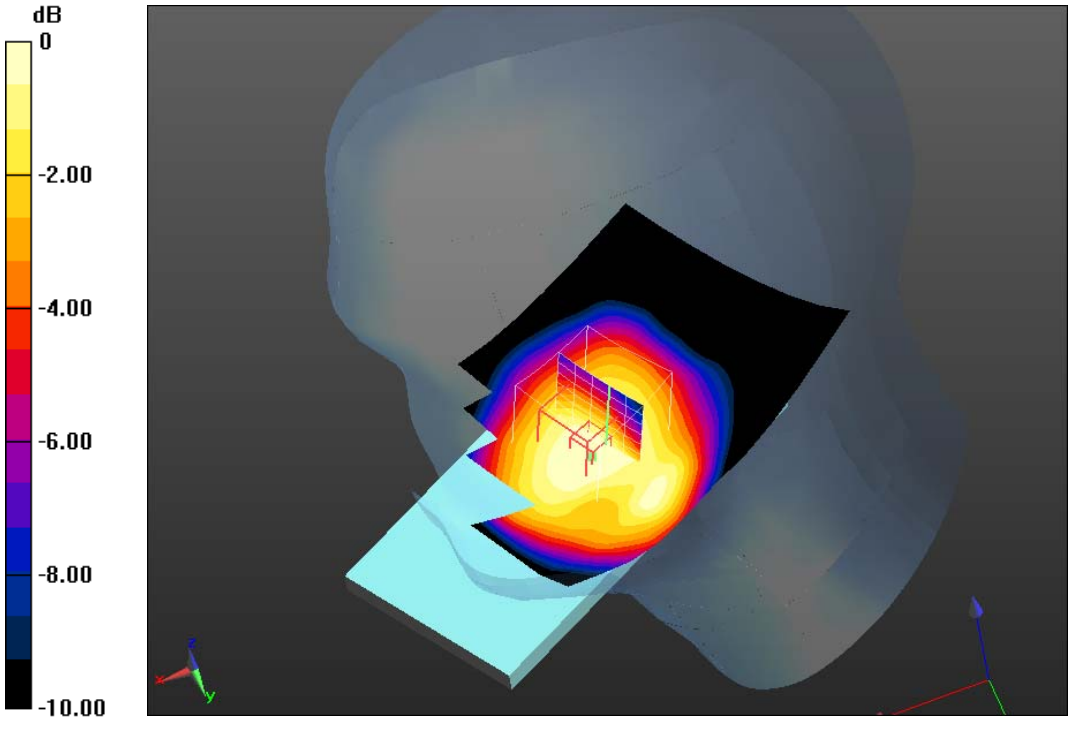
DUT: Sony; Type: PM-0740-BV; Serial: CB5A1W1HSZ
Communication System: UID 0, UMTS FDD (0); Communication System Band: UMTS FDD V; Frequency: 846.6 MHz; Communication System PAR: 0 dB; PMF: 1
Medium parameters used: f = 847 MHz; σ = 0.949 S/m; ε_r = 41.663; ρ = 1000 kg/m^3
Phantom section: Right Section
Measurement Standard: DASY5
DASY5 Configuration:
- Probe: ET3DV6 - SN1558; ConvF(5.89, 5.89, 5.89); Calibrated: 8/22/2013;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection), z = 2.7, 32.7
- Electronics: DAE3 Sn477; Calibrated: 5/14/2014
- Phantom: SAM front; Type: QD000P40CC; Serial: TP-1042
- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7331)

UMTS FDD V - Right-Hand-Side - HSL 835/Touch Position - High/Area Scan (71x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.463 W/kg

UMTS FDD V - Right-Hand-Side - HSL 835/Touch Position - High/Zoom Scan (6x6x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 22.80 V/m; Power Drift = -0.08 dB
Peak SAR (extrapolated) = 0.553 W/kg
SAR(1 g) = 0.420 W/kg; SAR(10 g) = 0.306 W/kg
Maximum value of SAR (measured) = 0.445 W/kg



0 dB = 0.445 W/kg = -3.52 dBW/kg

Additional information:
ambient temperature: 23.8°C; liquid temperature: 22.5°C

Date/Time: 10.06.2014 17:03:22

FCC-body

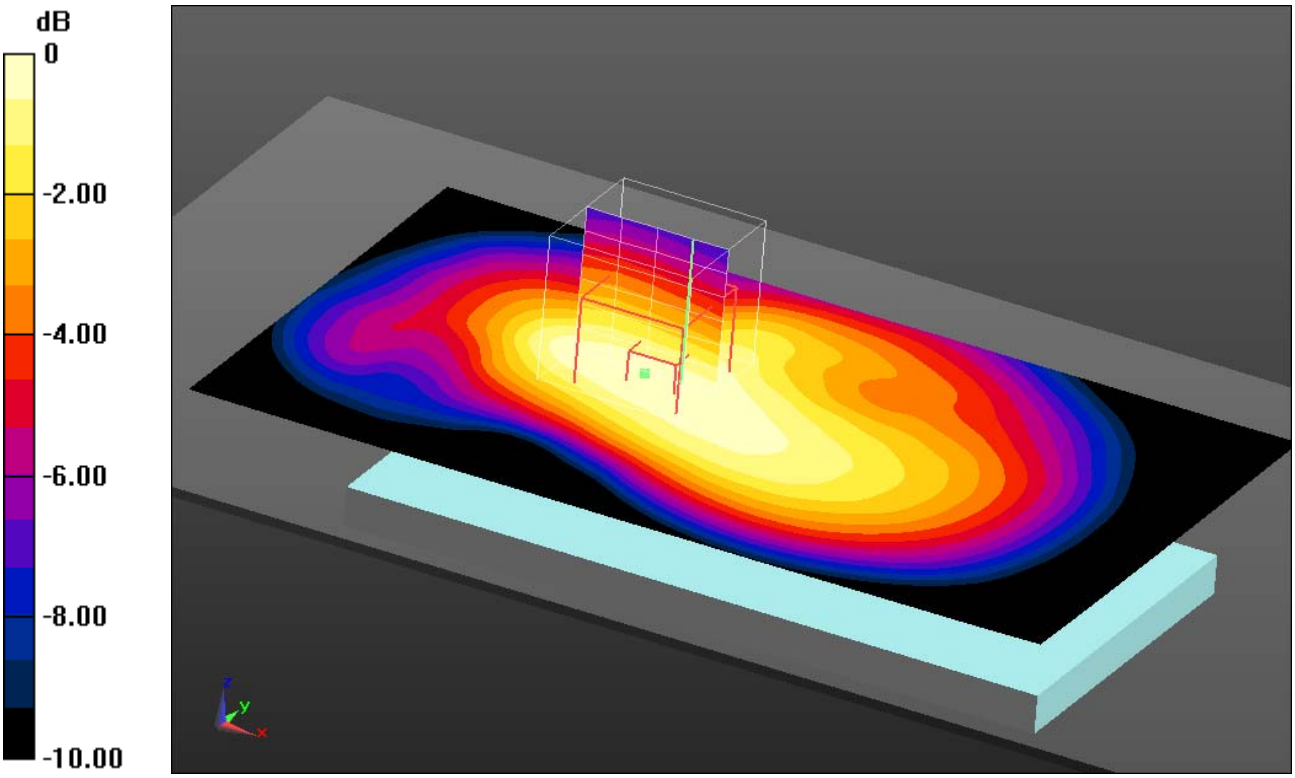
DUT: Sony; Type: PM-0740-BV; Serial: CB5A1W1HSZ
Communication System: UID 0, UMTS FDD (0); Communication System Band: UMTS FDD V; Frequency: 826.4 MHz; Communication System PAR: 0 dB; PMF: 1
Medium parameters used (interpolated): f = 826.4 MHz; σ = 1.008 S/m; ε_r = 54.076; ρ = 1000 kg/m^3
Phantom section: Center Section
Measurement Standard: DASY5
DASY5 Configuration:
- Probe: ET3DV6 - SN1558; ConvF(5.64, 5.64, 5.64); Calibrated: 22.08.2013;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection), z = 2.7, 32.7
- Electronics: DAE3 Sn477; Calibrated: 14.05.2014
- Phantom: Triple Flat Phantom 5.1C; Type: QD 000 P51 CA; Serial: 1154
- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

UMTS FDD V - hotspot - MSL835/Rear Low 10mm/Area Scan (71x121x1):

Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.260 W/kg

UMTS FDD V - hotspot - MSL835/Rear Low 10mm/Zoom Scan (5x5x7)/Cube 0:

Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 16.628 V/m; Power Drift = -0.09 dB
Peak SAR (extrapolated) = 0.297 W/kg
SAR(1 g) = 0.242 W/kg; SAR(10 g) = 0.182 W/kg
Maximum value of SAR (measured) = 0.255 W/kg



0 dB = 0.255 W/kg = -5.93 dBW/kg

Additional information:
position or distance of DUT to SAM: 10mm
ambient temperature: 23.0°C; liquid temperature: 22.4°C

Date/Time: 10.06.2014 17:18:09

FCC-body

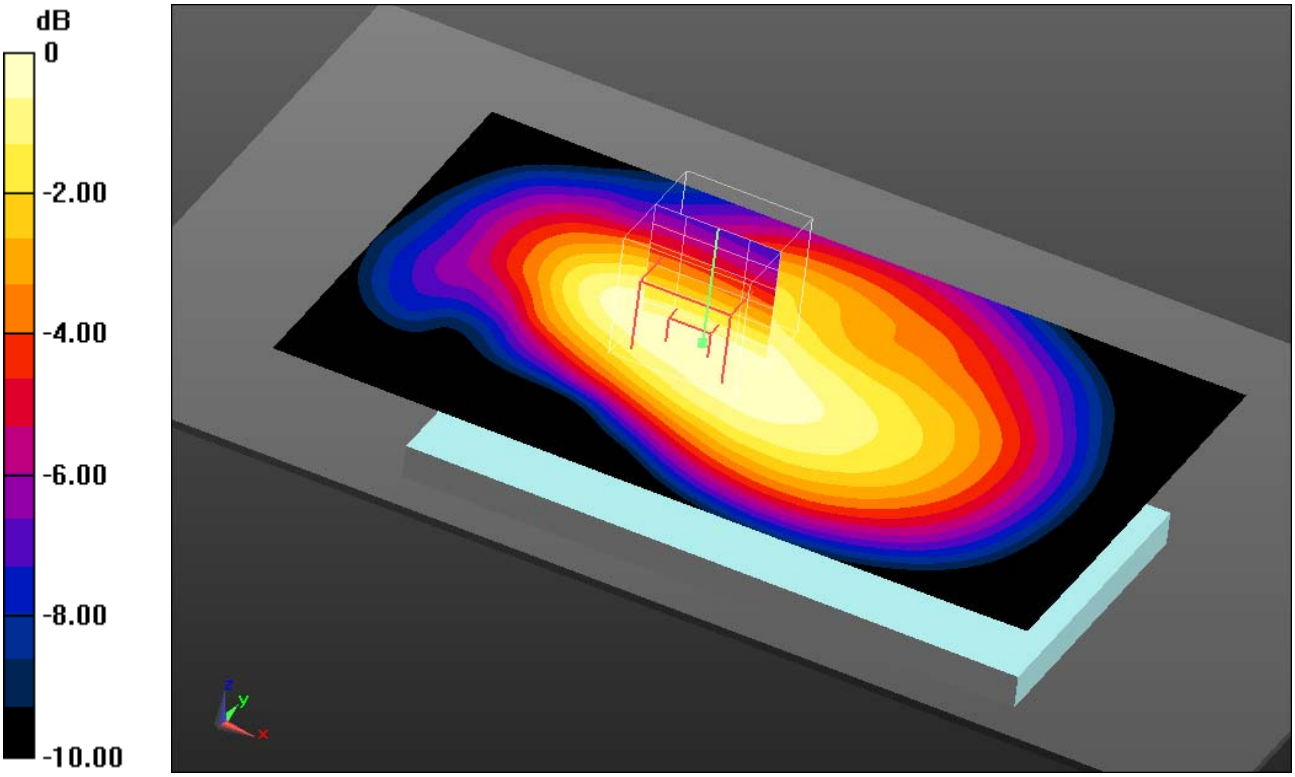
DUT: Sony; Type: PM-0740-BV; Serial: CB5A1W1HSZ
Communication System: UID 0, UMTS FDD (0); Communication System Band: UMTS FDD V; Frequency: 826.4 MHz; Communication System PAR: 0 dB; PMF: 1
Medium parameters used (interpolated): f = 826.4 MHz; σ = 1.008 S/m; ε_r = 54.076; ρ = 1000 kg/m^3
Phantom section: Center Section
Measurement Standard: DASY5
DASY5 Configuration:
- Probe: ET3DV6 - SN1558; ConvF(5.64, 5.64, 5.64); Calibrated: 22.08.2013;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection), z = 2.7, 32.7
- Electronics: DAE3 Sn477; Calibrated: 14.05.2014
- Phantom: Triple Flat Phantom 5.1C; Type: QD 000 P51 CA; Serial: 1154
- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

UMTS FDD V - body worn - MSL835/Rear Low 15mm/Area Scan (71x121x1):

Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.227 W/kg

UMTS FDD V - body worn - MSL835/Rear Low 15mm/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 15.564 V/m; Power Drift = 0.00 dB
Peak SAR (extrapolated) = 0.257 W/kg
SAR(1 g) = 0.213 W/kg; SAR(10 g) = 0.159 W/kg
Maximum value of SAR (measured) = 0.225 W/kg



0 dB = 0.225 W/kg = -6.48 dBW/kg

Additional information:
position or distance of DUT to SAM: 15mm
ambient temperature: 23.0°C; liquid temperature: 22.4°C

Annex B.6: LTE FDD 2

Date/Time: 11.06.2014 19:11:59

IEEE1528-head

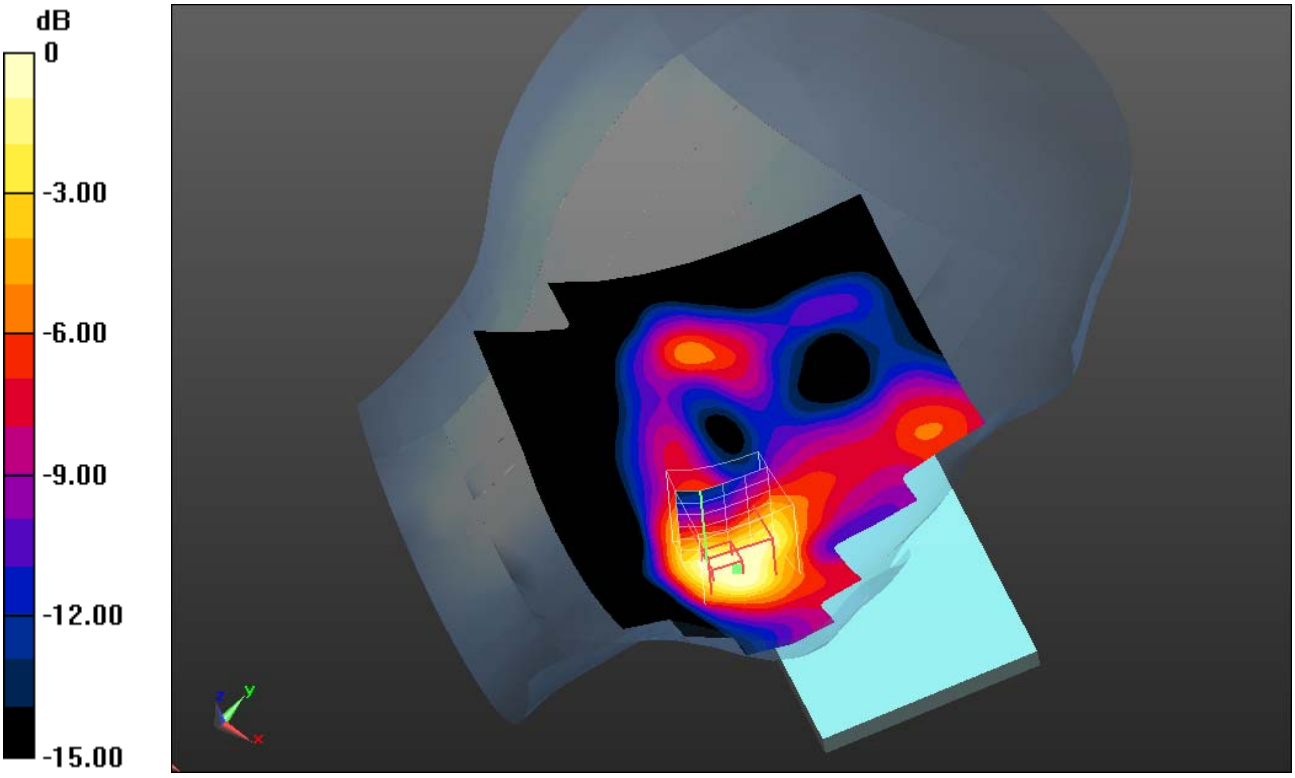
DUT: Sony; Type: PM-0740-BV; Serial: CB5A1W1HSZ
Communication System: UID 0, LTE FDD (0); Communication System Band: LTE 2 (1900MHz); Frequency: 1880 MHz; Communication System PAR: 0 dB; PMF: 1
Medium parameters used: f = 1880 MHz; σ = 1.373 S/m; ε_r = 39.932; ρ = 1000 kg/m^3
Phantom section: Left Section
Measurement Standard: DASY5
DASY5 Configuration:
- Probe: ET3DV6 - SN1558; ConvF(4.75, 4.75, 4.75); Calibrated: 22.08.2013;
- Sensor-Surface: 4mm (Mechanical Surface Detection), z = 2.7, 32.7
- Electronics: DAE3 Sn477; Calibrated: 14.05.2014
- Phantom: SAM front; Type: QD000P40CC; Serial: TP-1042
- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

LTE FDD 2 - Left-Hand-Side HSL1900/Touch Position - 20MHz BW - 1RB - 0RB offset -Low/Area Scan (91x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.411 W/kg

LTE FDD 2 - Left-Hand-Side HSL1900/Touch Position - 20MHz BW - 1RB - 0RB offset -Low/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 15.915 V/m; Power Drift = 0.05 dB
Peak SAR (extrapolated) = 0.671 W/kg
SAR(1 g) = 0.367 W/kg; SAR(10 g) = 0.200 W/kg
Maximum value of SAR (measured) = 0.390 W/kg



0 dB = 0.390 W/kg = -4.09 dBW/kg

Additional information:
ambient temperature: 23.6°C; liquid temperature: 22.5°C

Date/Time: 11.06.2014 17:37:15

FCC-body

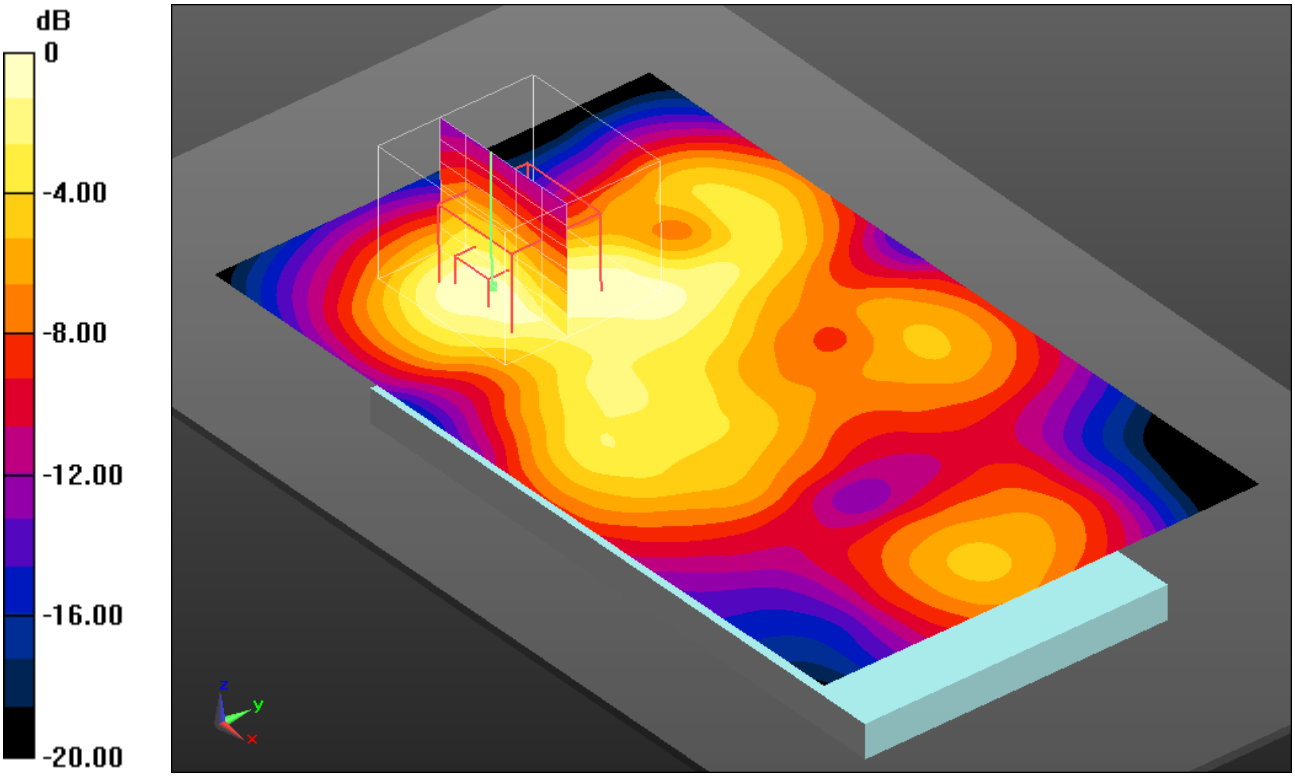
DUT: Sony; Type: PM-0740-BV; Serial: CB5A1W1HSZ
Communication System: UID 0, LTE FDD (0); Communication System Band: LTE 2 (1900MHz); Frequency: 1860 MHz; Communication System PAR: 0 dB; PMF: 1
Medium parameters used: f = 1860 MHz; σ = 1.476 S/m; ε_r = 52.597; ρ = 1000 kg/m^3
Phantom section: Center Section
Measurement Standard: DASY5
DASY5 Configuration:
- Probe: ET3DV6 - SN1558; ConvF(4.21, 4.21, 4.21); Calibrated: 22.08.2013;
- Sensor-Surface: 4mm (Mechanical Surface Detection), z = 2.7, 32.7
- Electronics: DAE3 Sn477; Calibrated: 14.05.2014
- Phantom: Triple Flat Phantom 5.1C; Type: QD 000 P51 CA; Serial: 1154
- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

LTE FDD 2 - hotspot - MSL1900/Rear - Low - 10mm - 20MHz BW - 1RB - 0RB offset/Area Scan (71x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.322 W/kg

LTE FDD 2 - hotspot - MSL1900/Rear - Low - 10mm - 20MHz BW - 1RB - 0RB offset/Zoom Scan (6x6x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 14.080 V/m; Power Drift = -0.06 dB
Peak SAR (extrapolated) = 0.411 W/kg
SAR(1 g) = 0.266 W/kg; SAR(10 g) = 0.161 W/kg
Maximum value of SAR (measured) = 0.296 W/kg



0 dB = 0.296 W/kg = -5.29 dBW/kg

Additional information:
position or distance of DUT to SAM: 10mm
ambient temperature: 23.4°C; liquid temperature: 22.3°C

Date/Time: 11.06.2014 16:56:44

FCC-body

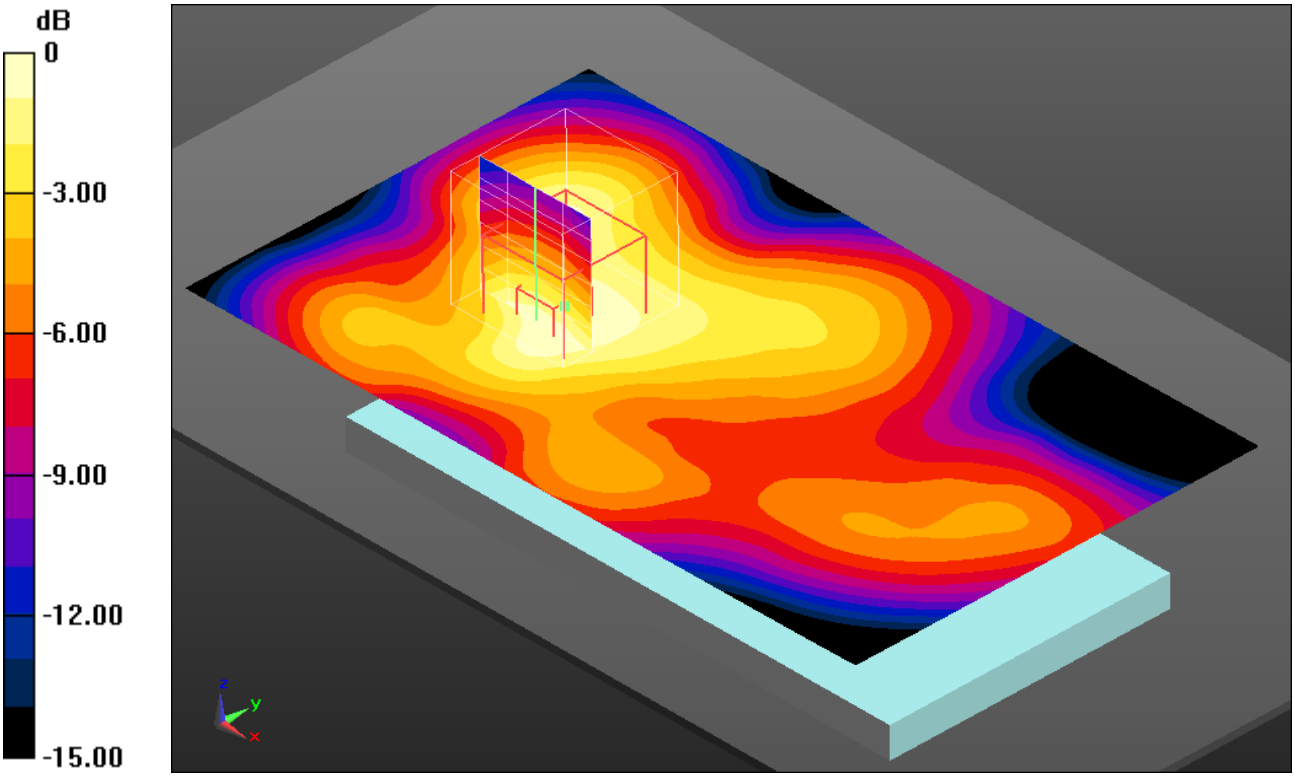
DUT: Sony; Type: PM-0740-BV; Serial: CB5A1W1HSZ
Communication System: UID 0, LTE FDD (0); Communication System Band: LTE 2 (1900MHz); Frequency: 1880 MHz; Communication System PAR: 0 dB; PMF: 1
Medium parameters used: f = 1880 MHz; σ = 1.499 S/m; ε_r = 52.759; ρ = 1000 kg/m^3
Phantom section: Center Section
Measurement Standard: DASY5
DASY5 Configuration:
- Probe: ET3DV6 - SN1558; ConvF(4.21, 4.21, 4.21); Calibrated: 22.08.2013;
- Sensor-Surface: 4mm (Mechanical Surface Detection), z = 2.7, 32.7
- Electronics: DAE3 Sn477; Calibrated: 14.05.2014
- Phantom: Triple Flat Phantom 5.1C; Type: QD 000 P51 CA; Serial: 1154
- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

LTE FDD 2 - body worn - MSL1900/Front - Middle - 15mm - 20MHz BW - 1RB - 0RB offset/Area Scan (71x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.193 W/kg

LTE FDD 2 - body worn - MSL1900/Front - Middle - 15mm - 20MHz BW - 1RB - 0RB offset/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 12.205 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 0.265 W/kg
SAR(1 g) = 0.185 W/kg; SAR(10 g) = 0.122 W/kg
Maximum value of SAR (measured) = 0.195 W/kg



0 dB = 0.195 W/kg = -7.10 dBW/kg

Additional information:
position or distance of DUT to SAM: 15mm
ambient temperature: 23.4°C; liquid temperature: 22.3°C

Annex B.7: LTE FDD 4

Date/Time: 11.06.2014 23:13:26

IEEE1528-head

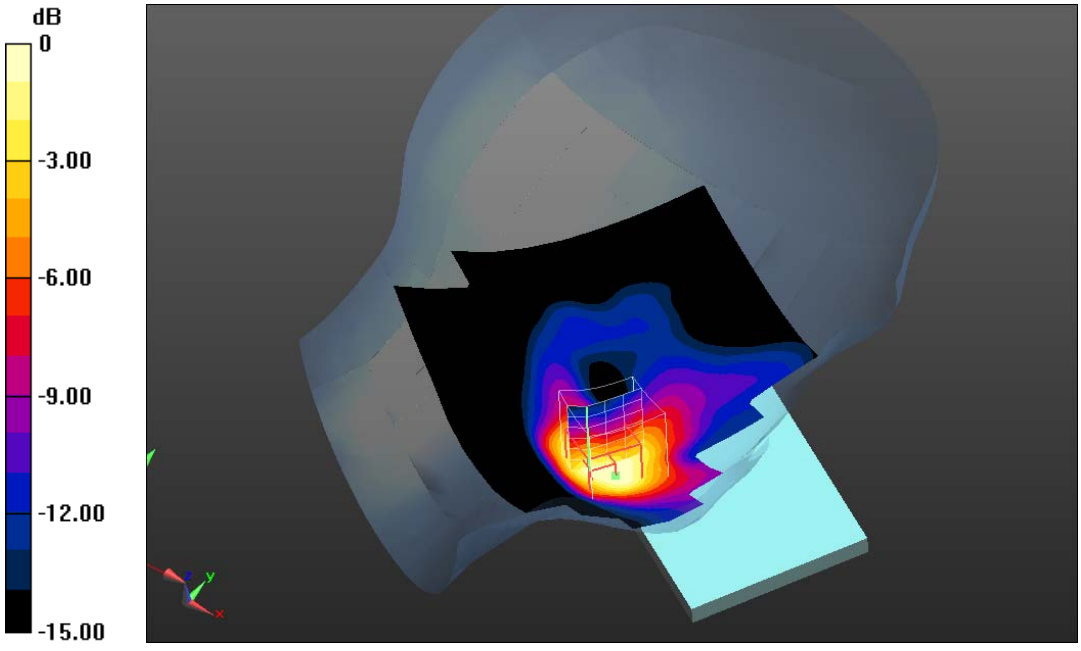
DUT: Sony; Type: PM-0740-BV; Serial: CB5A1W1HSZ
Communication System: UID 0, LTE FDD (0); Communication System Band: LTE 4 (1700MHz); Frequency: 1720 MHz; Communication System PAR: 0 dB; PMF: 1
Medium parameters used: f = 1720 MHz; σ = 1.321 S/m; ε_r = 40.542; ρ = 1000 kg/m^3
Phantom section: Left Section
Measurement Standard: DASY5
DASY5 Configuration:
- Probe: ET3DV6 - SN1558; ConvF(4.93, 4.93, 4.93); Calibrated: 22.08.2013;
- Sensor-Surface: 4mm (Mechanical Surface Detection), z = 2.7, 32.7
- Electronics: DAE3 Sn477; Calibrated: 14.05.2014
- Phantom: SAM front; Type: QD000P40CC; Serial: TP-1042
- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

LTE FDD 4 - Left-Hand-Side HSL1750/Touch Position - 20MHz BW - 1RB - 0RB offset -Low/Area Scan (91x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.591 W/kg

LTE FDD 4 - Left-Hand-Side HSL1750/Touch Position - 20MHz BW - 1RB - 0RB offset -Low/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 19.872 V/m; Power Drift = 0.05 dB
Peak SAR (extrapolated) = 0.985 W/kg
SAR(1 g) = 0.524 W/kg; SAR(10 g) = 0.274 W/kg
Maximum value of SAR (measured) = 0.579 W/kg



0 dB = 0.579 W/kg = -2.37 dBW/kg

Additional information:
ambient temperature: 23.3°C; liquid temperature: 22.5°C

Date/Time: 11.06.2014 23:33:44

FCC-body

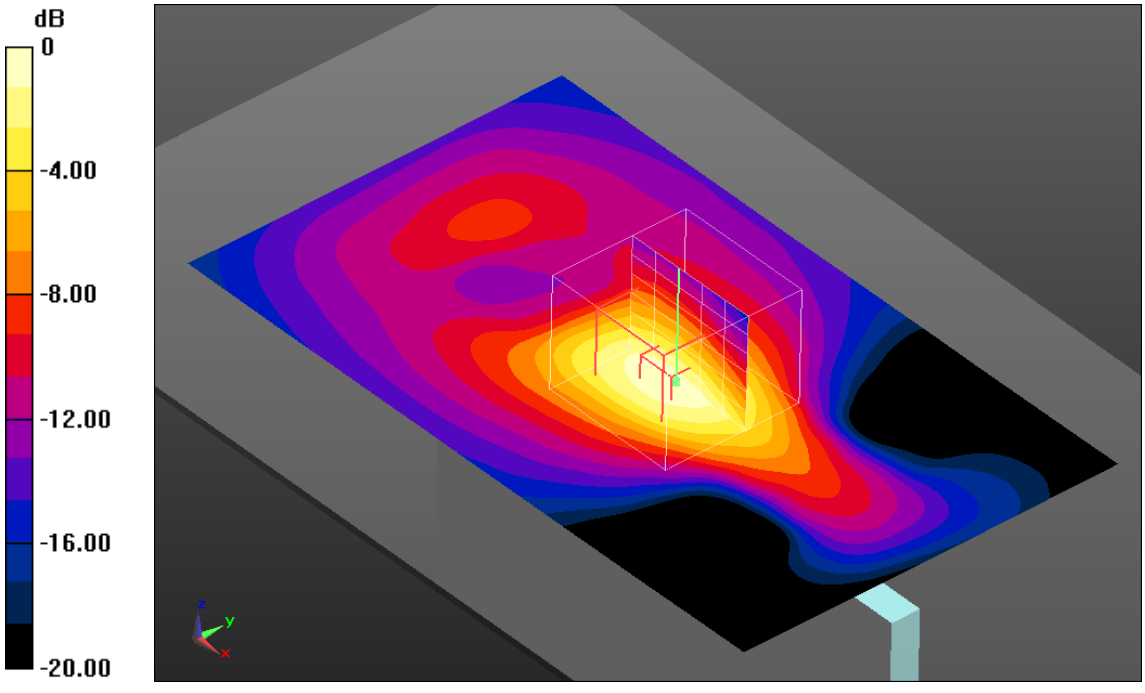
DUT: Sony; Type: PM-0740-BV; Serial: CB5A1W1HSZ
Communication System: UID 0, LTE FDD (0); Communication System Band: LTE 4 (1700MHz); Frequency: 1720 MHz; Communication System PAR: 0 dB; PMF: 1
Medium parameters used: f = 1720 MHz; σ = 1.481 S/m; ε_r = 52.339; ρ = 1000 kg/m^3
Phantom section: Center Section
Measurement Standard: DASY5
DASY5 Configuration:
- Probe: ET3DV6 - SN1558; ConvF(4.41, 4.41, 4.41); Calibrated: 22.08.2013;
- Sensor-Surface: 4mm (Mechanical Surface Detection), z = 2.7, 32.7
- Electronics: DAE3 Sn477; Calibrated: 14.05.2014
- Phantom: Triple Flat Phantom 5.1C; Type: QD 000 P51 CA; Serial: 1154
- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

LTE FDD 4 - hotspot - MSL1750/Left Edge - Low - 10mm - 20MHz BW - 1RB - 0RB offset/Area Scan (71x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.261 W/kg

LTE FDD 4 - hotspot - MSL1750/Left Edge - Low - 10mm - 20MHz BW - 1RB - 0RB offset/Zoom Scan (6x6x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 12.650 V/m; Power Drift = -0.06 dB
Peak SAR (extrapolated) = 0.385 W/kg
SAR(1 g) = 0.243 W/kg; SAR(10 g) = 0.136 W/kg
Maximum value of SAR (measured) = 0.277 W/kg



0 dB = 0.277 W/kg = -5.58 dBW/kg

Additional information:
position or distance of DUT to SAM: 10mm
ambient temperature: 23.7°C; liquid temperature: 22.4°C

Date/Time: 11.06.2014 23:54:02

FCC-body

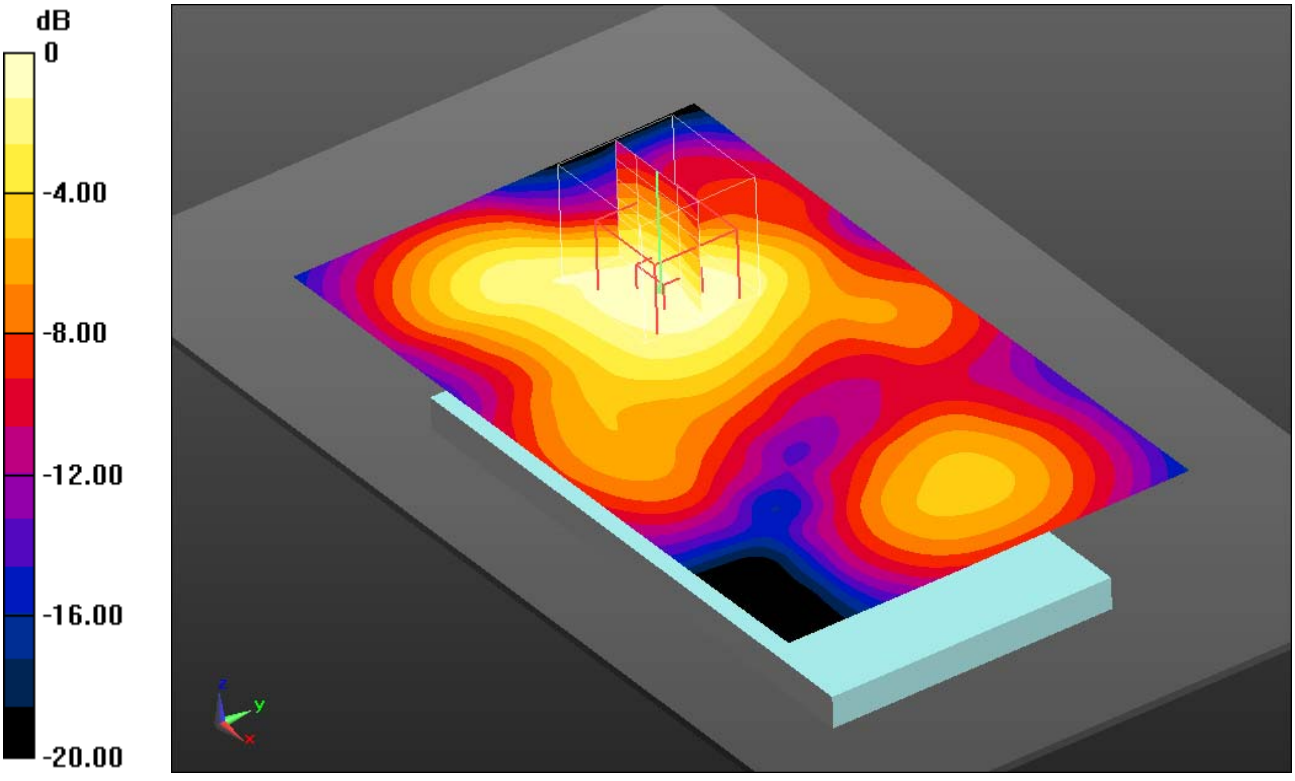
DUT: Sony; Type: PM-0740-BV; Serial: CB5A1W1HSZ
Communication System: UID 0, LTE FDD (0); Communication System Band: LTE 4 (1700MHz); Frequency: 1732.5 MHz; Communication System PAR: 0 dB; PMF: 1
Medium parameters used (interpolated): f = 1732.5 MHz; σ = 1.495 S/m; ε_r = 52.429; ρ = 1000 kg/m^3
Phantom section: Center Section
Measurement Standard: DASY5
DASY5 Configuration:
- Probe: ET3DV6 - SN1558; ConvF(4.41, 4.41, 4.41); Calibrated: 22.08.2013;
- Sensor-Surface: 4mm (Mechanical Surface Detection), z = 2.7, 32.7
- Electronics: DAE3 Sn477; Calibrated: 14.05.2014
- Phantom: Triple Flat Phantom 5.1C; Type: QD 000 P51 CA; Serial: 1154
- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

LTE FDD 4 - body worn - MSL1750/Rear - Middle - 15mm - 20MHz BW - 1RB - 99RB offset/Area Scan (71x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.199 W/kg

LTE FDD 4 - body worn - MSL1750/Rear - Middle - 15mm - 20MHz BW - 1RB - 99RB offset/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 12.077 V/m; Power Drift = -0.00 dB
Peak SAR (extrapolated) = 0.235 W/kg
SAR(1 g) = 0.179 W/kg; SAR(10 g) = 0.118 W/kg
Maximum value of SAR (measured) = 0.193 W/kg



0 dB = 0.193 W/kg = -7.14 dBW/kg

Additional information:
position or distance of DUT to SAM: 15mm
ambient temperature: 23.7°C; liquid temperature: 22.4°C

Annex B.8: LTE FDD 5

Date/Time: 6/13/2014 8:29:54 AM

IEEE1528-head

DUT: Sony; Type: PM-0740-BV; Serial: CB5A1W1HSZ

Communication System: UID 0, LTE FDD (0); Communication System Band: LTE 5 (850MHz); Frequency: 844 MHz; Communication System PAR: 0 dB; PMF: 1

Medium parameters used: f = 844 MHz; σ = 0.946 S/m; ε_r = 41.715; ρ = 1000 kg/m^3

Phantom section: Right Section

Measurement Standard: DASY5

DASY5 Configuration:

- Probe: ES3DV3 - SN3326; ConvF(6.25, 6.25, 6.25); Calibrated: 9/2/2013;
- Sensor-Surface: 4mm (Mechanical Surface Detection), z = 2.0, 32.0
- Electronics: DAE4 Sn1387; Calibrated: 8/28/2013
- Phantom: SAM front; Type: QD000P40CC; Serial: TP:1041
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

LTE FDD 5 - Right-Hand-Side - HSL835/Touch Position - Middle - 10MHz BW - 1RB - 0RB offset/Area Scan (81x121x1):

Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.356 W/kg

LTE FDD 5 - Right-Hand-Side - HSL835/Touch Position - Middle - 10MHz BW - 1RB - 0RB offset/Zoom Scan (5x5x7)/Cube 0:

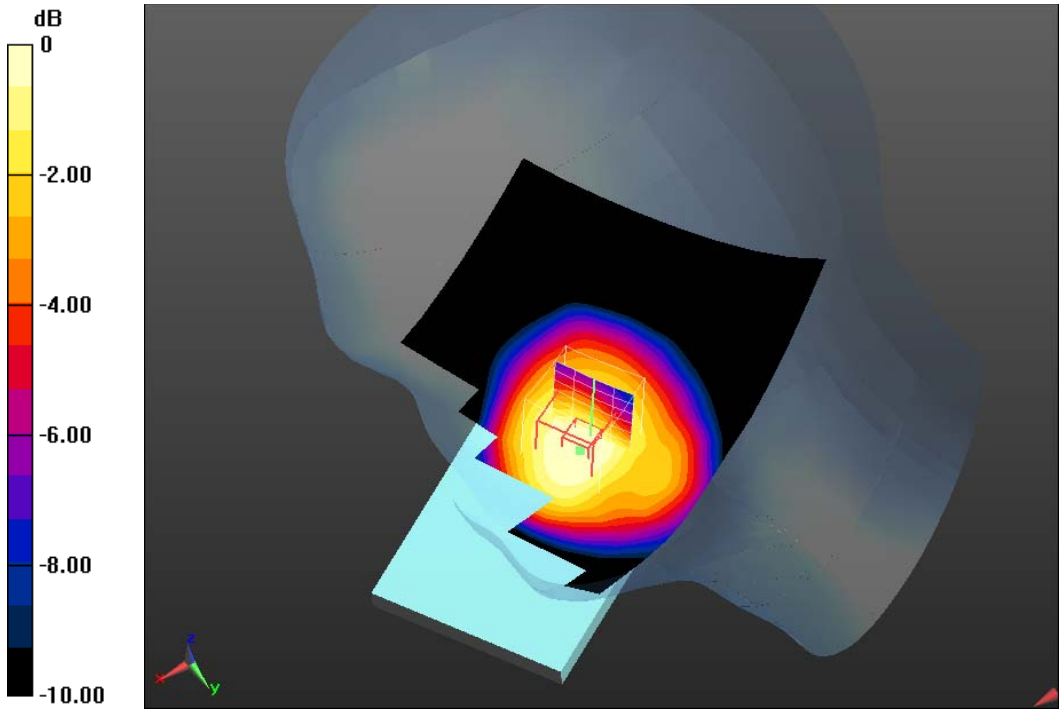
Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 19.37 V/m; Power Drift = -0.10 dB

Peak SAR (extrapolated) = 0.418 W/kg

SAR(1 g) = 0.321 W/kg; SAR(10 g) = 0.236 W/kg

Maximum value of SAR (measured) = 0.339 W/kg



0 dB = 0.339 W/kg = -4.70 dBW/kg

Additional information:

ambient temperature: 23.4°C; liquid temperature: 22.6°C

Date/Time: 11.06.2014 09:27:49

FCC-body

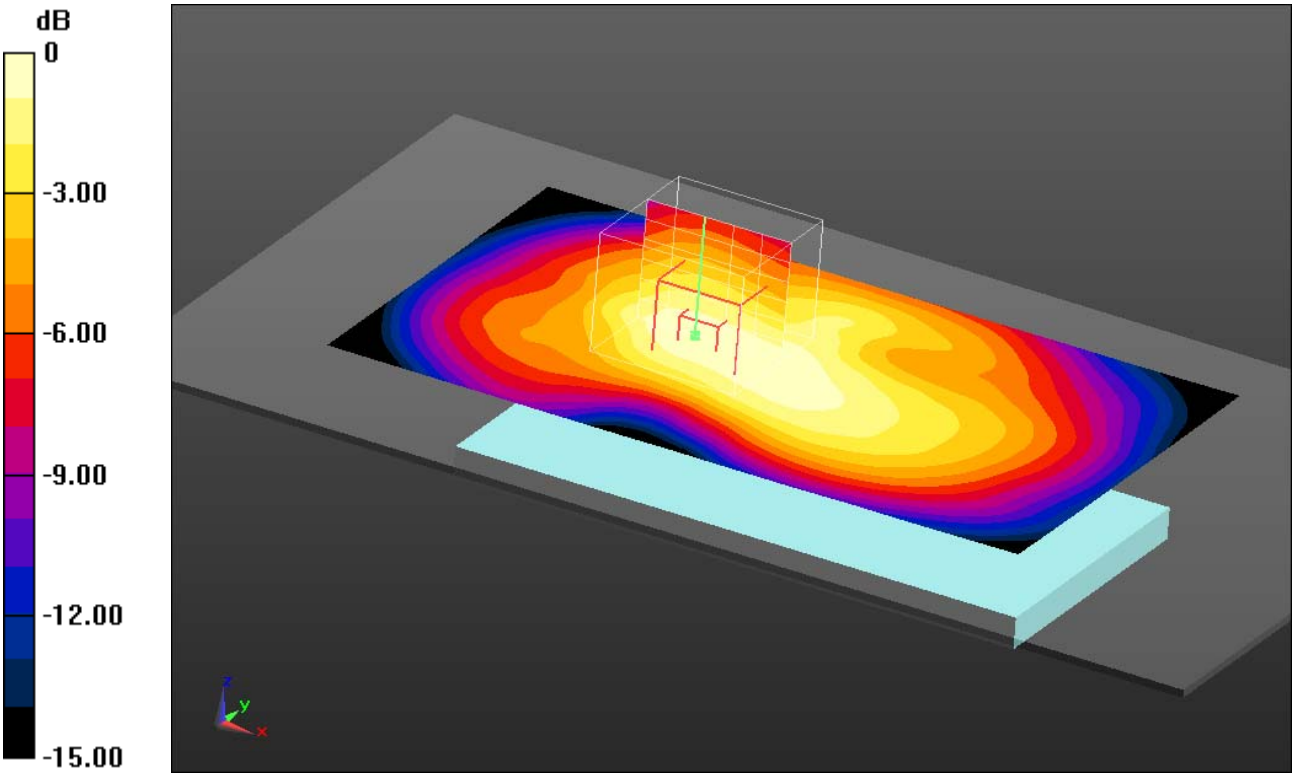
DUT: Sony; Type: PM-0740-BV; Serial: CB5A1W1HSZ
Communication System: UID 0, LTE FDD (0); Communication System Band: LTE 5 (850MHz); Frequency: 844 MHz; Communication System PAR: 0 dB; PMF: 1
Medium parameters used: f = 844 MHz; σ = 1.022 S/m; ε_r = 53.858; ρ = 1000 kg/m^3
Phantom section: Center Section
Measurement Standard: DASY5
DASY5 Configuration:
- Probe: ET3DV6 - SN1558; ConvF(5.64, 5.64, 5.64); Calibrated: 22.08.2013;
- Sensor-Surface: 4mm (Mechanical Surface Detection), z = 2.7, 32.7
- Electronics: DAE3 Sn477; Calibrated: 14.05.2014
- Phantom: Triple Flat Phantom 5.1C; Type: QD 000 P51 CA; Serial: 1154
- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

LTE FDD 5 - hotspot - MSL835/Rear High 10mm - 10MHz BW - 1RB - 0RB offset/Area Scan (71x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.232 W/kg

LTE FDD 5 - hotspot - MSL835/Rear High 10mm - 10MHz BW - 1RB - 0RB offset/Zoom Scan (6x6x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 15.465 V/m; Power Drift = 0.10 dB
Peak SAR (extrapolated) = 0.263 W/kg
SAR(1 g) = 0.215 W/kg; SAR(10 g) = 0.160 W/kg
Maximum value of SAR (measured) = 0.226 W/kg



0 dB = 0.226 W/kg = -6.46 dBW/kg

Additional information:
position or distance of DUT to SAM: 10mm
ambient temperature: 23.6°C; liquid temperature: 22.4°C

Date/Time: 11.06.2014 09:46:11

FCC-body

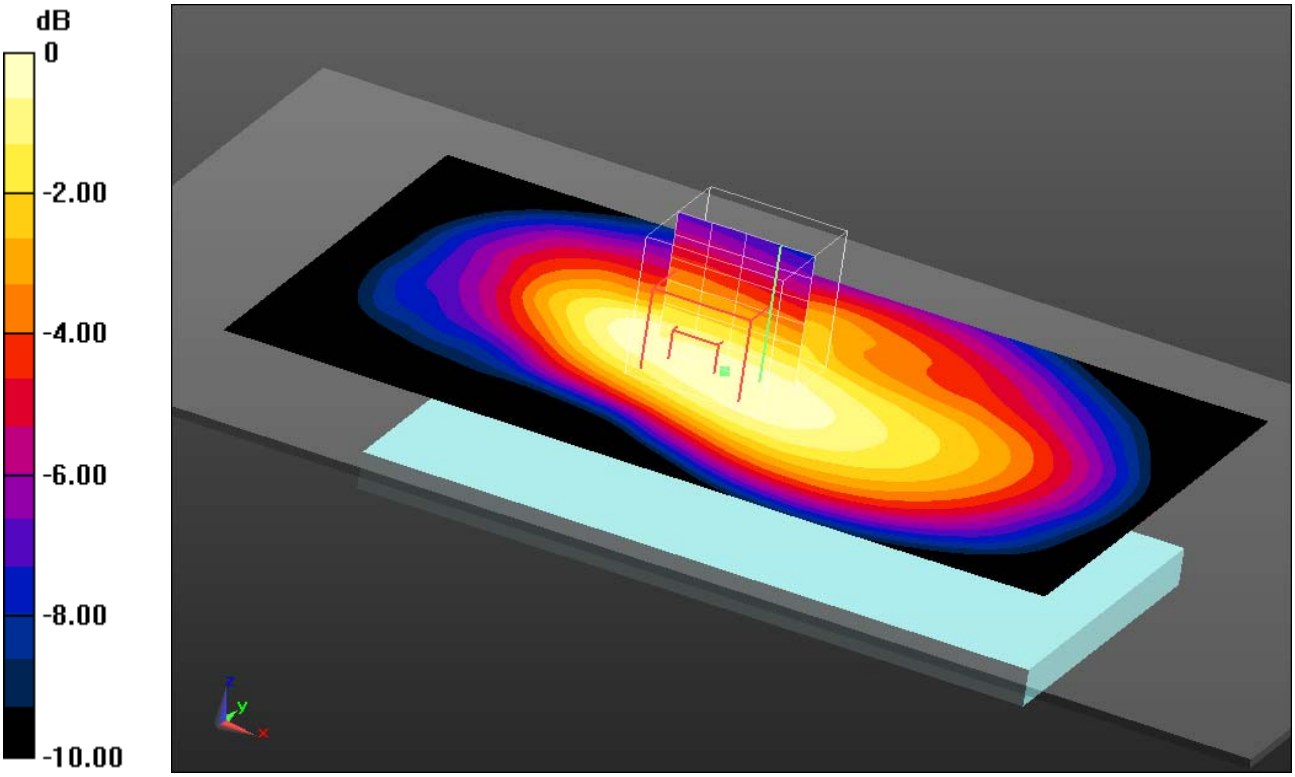
DUT: Sony; Type: PM-0740-BV; Serial: CB5A1W1HSZ
Communication System: UID 0, LTE FDD (0); Communication System Band: LTE 5 (850MHz); Frequency: 844 MHz; Communication System PAR: 0 dB; PMF: 1
Medium parameters used: f = 844 MHz; σ = 1.022 S/m; ε_r = 53.858; ρ = 1000 kg/m^3
Phantom section: Center Section
Measurement Standard: DASY5
DASY5 Configuration:
- Probe: ET3DV6 - SN1558; ConvF(5.64, 5.64, 5.64); Calibrated: 22.08.2013;
- Sensor-Surface: 4mm (Mechanical Surface Detection), z = 2.7, 32.7
- Electronics: DAE3 Sn477; Calibrated: 14.05.2014
- Phantom: Triple Flat Phantom 5.1C; Type: QD 000 P51 CA; Serial: 1154
- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

LTE FDD 5 - body worn - MSL835/Rear High 15mm - 10MHz BW - 1RB - 0RB offset/Area Scan (71x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.185 W/kg

LTE FDD 5 - body worn - MSL835/Rear High 15mm - 10MHz BW - 1RB - 0RB offset/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 13.813 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 0.212 W/kg
SAR(1 g) = 0.173 W/kg; SAR(10 g) = 0.129 W/kg
Maximum value of SAR (measured) = 0.182 W/kg



0 dB = 0.182 W/kg = -7.40 dBW/kg

Additional information:
position or distance of DUT to SAM: 15mm
ambient temperature: 23.6°C; liquid temperature: 22.4°C

Annex B.9: LTE FDD 7

Date/Time: 12.06.2014 12:20:42

IEEE1528-head

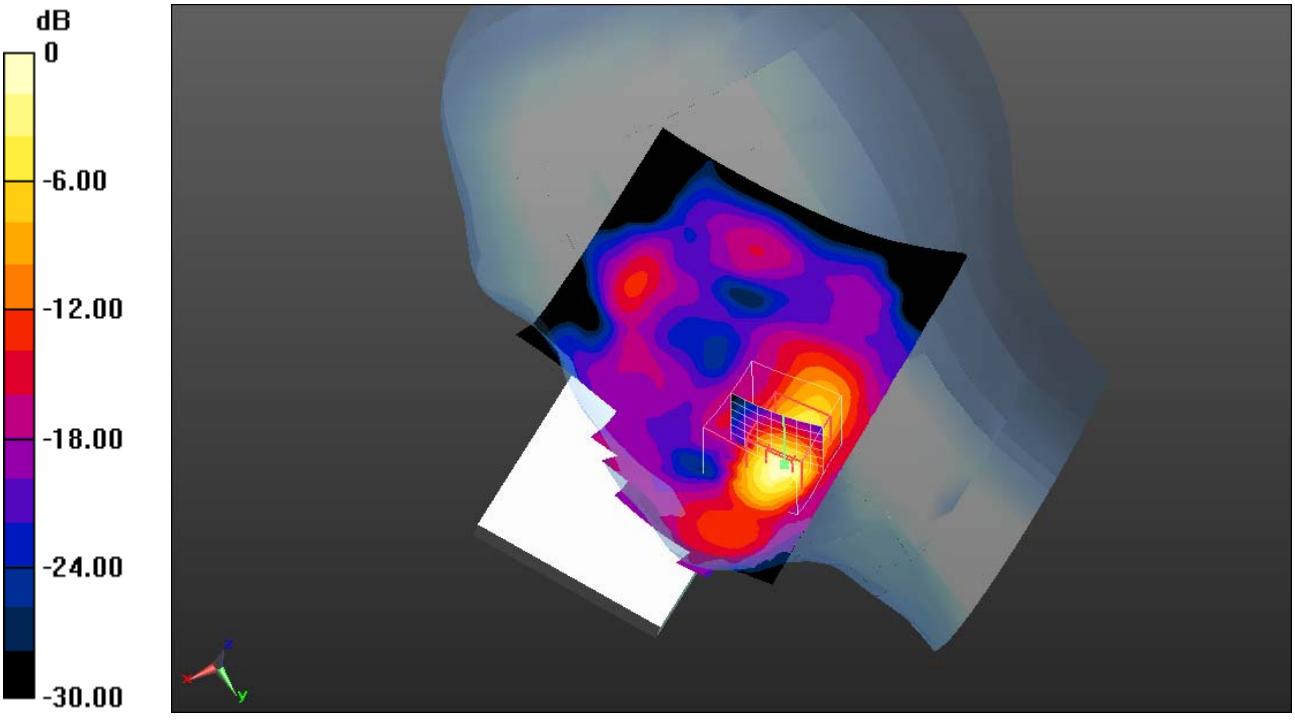
DUT: Sony; Type: PM-0740-BV; Serial: CB5A1W1HSZ
Communication System: UID 0, LTE FDD (0); Communication System Band: LTE 7 (2600MHz); Frequency: 2510 MHz; Communication System PAR: 0 dB; PMF: 1
Medium parameters used: f = 2510 MHz; σ = 1.876 S/m; ε_r = 38.806; ρ = 1000 kg/m^3
Phantom section: Right Section
Measurement Standard: DASY5
DASY5 Configuration:
- Probe: EX3DV4 - SN3944; ConvF(7.43, 7.43, 7.43); Calibrated: 02.08.2013;
- Sensor-Surface: 2mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 2mm (Mechanical Surface Detection), z = 1.0, 31.0
- Electronics: DAE3 Sn413; Calibrated: 22.05.2014
- Phantom: SAM; Type: QD000P40C; Serial: TP1150
- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

Right-Hand-Side HSL2600/Touch Position - Low 1RB/Offset 99 QPSK BW 20MHz/Area Scan (111x171x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 1.30 W/kg

Right-Hand-Side HSL2600/Touch Position - Low 1RB/Offset 99 QPSK BW 20MHz/Zoom Scan (8x8x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 27.109 V/m; Power Drift = -0.14 dB
Peak SAR (extrapolated) = 2.34 W/kg
SAR(1 g) = 0.854 W/kg; SAR(10 g) = 0.302 W/kg
Maximum value of SAR (measured) = 1.34 W/kg



0 dB = 1.34 W/kg = 1.27 dBW/kg

Additional information:
ambient temperature: 22.9°C; liquid temperature: 22.1°C

Date/Time: 6/11/2014 8:14:06 AM

FCC-body

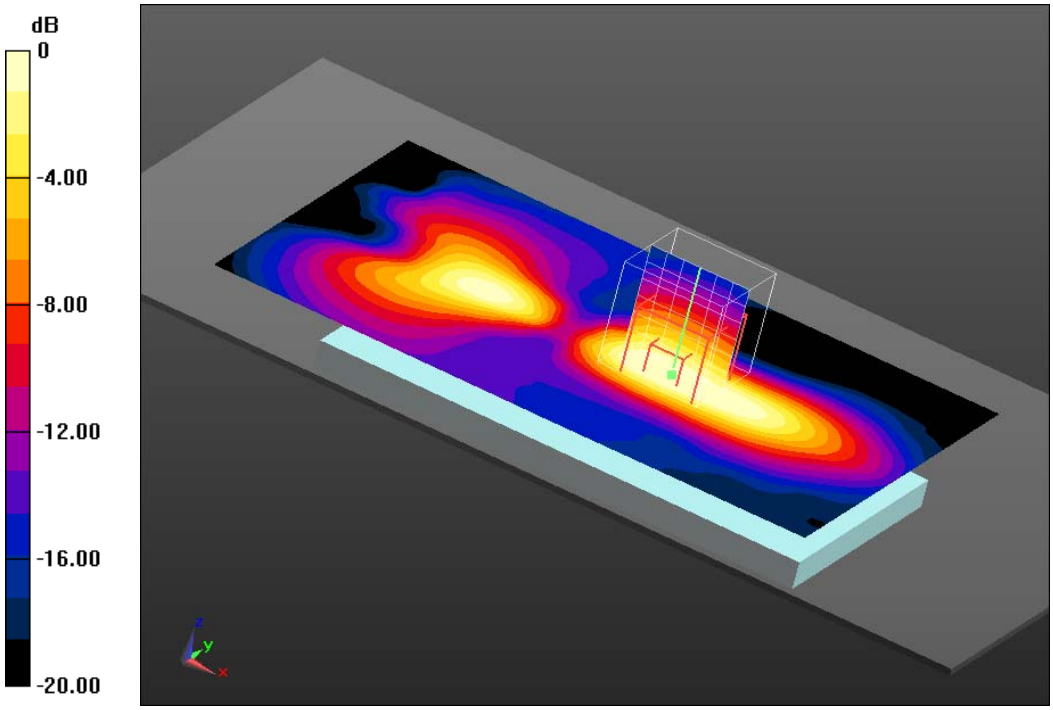
DUT: Sony; Type: PM-0740-BV; Serial: CB5A1W1HSZ
Communication System: UID 0, LTE FDD (0); Communication System Band: LTE 7 (2600MHz); Frequency: 2510 MHz; Communication System PAR: 0 dB; PMF: 1
Medium parameters used: f = 2510 MHz; σ = 2.085 S/m; ε_r = 50.436; ρ = 1000 kg/m^3
Phantom section: Center Section
Measurement Standard: DASY5
DASY5 Configuration:
- Probe: EX3DV4 - SN3944; ConvF(7.27, 7.27, 7.27); Calibrated: 8/2/2013;
- Sensor-Surface: 2mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection), z = 1.0, 31.0
- Electronics: DAE4 Sn1387; Calibrated: 8/28/2013
- Phantom: Triple Flat Phantom 5.1C; Type: QD 000 P51 CA; Serial: 1154
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

LTE FDD 7 - hotspot - MSL2450-2600/Right edge Low 10mm - 20MHz BW - 1RB - 99RB offset/Area Scan (111x181x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.487 W/kg

LTE FDD 7 - hotspot - MSL2450-2600/Right edge Low 10mm - 20MHz BW - 1RB - 99RB offset/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 14.44 V/m; Power Drift = 0.14 dB
Peak SAR (extrapolated) = 0.634 W/kg
SAR(1 g) = 0.320 W/kg; SAR(10 g) = 0.150 W/kg
Maximum value of SAR (measured) = 0.367 W/kg



0 dB = 0.367 W/kg = -4.35 dBW/kg

Additional information:
position or distance of DUT to SAM: 10mm
ambient temperature: 23.8°C; liquid temperature: 22.5°C

Date/Time: 6/11/2014 7:19:31 AM

FCC-body

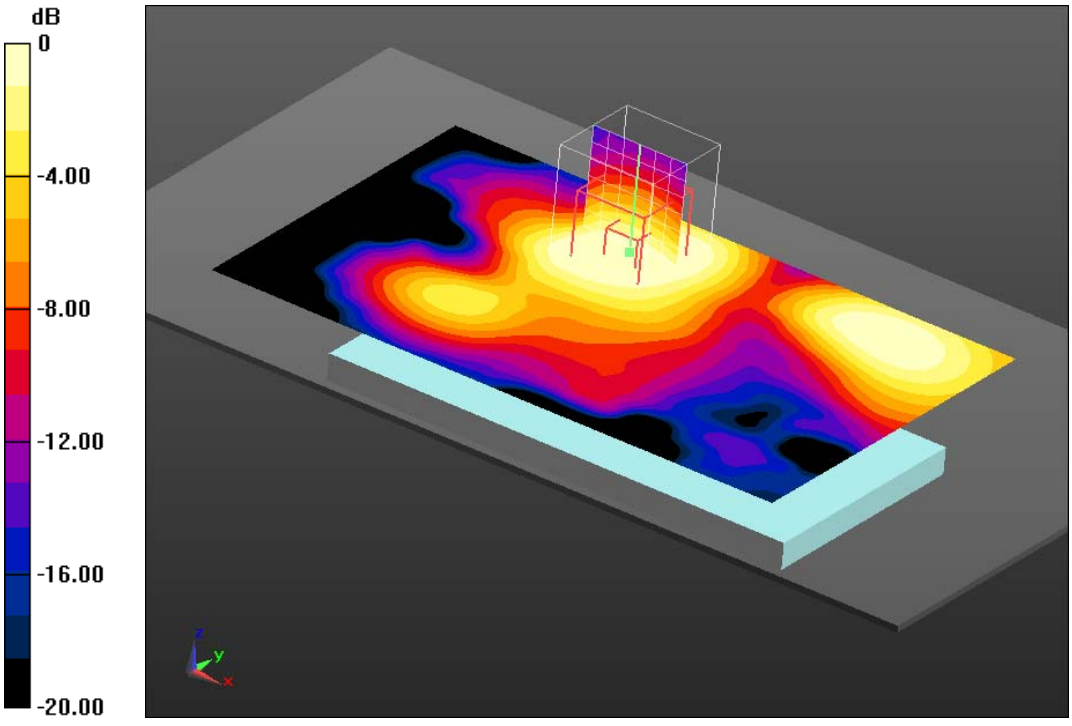
DUT: Sony; Type: PM-0740-BV; Serial: CB5A1W1HSZ
Communication System: UID 0, LTE FDD (0); Communication System Band: LTE 7 (2600MHz); Frequency: 2560 MHz; Communication System PAR: 0 dB; PMF: 1
Medium parameters used: f = 2560 MHz; σ = 2.142 S/m; ε_r = 50.194; ρ = 1000 kg/m^3
Phantom section: Center Section
Measurement Standard: DASY5
DASY5 Configuration:
- Probe: EX3DV4 - SN3944; ConvF(7.27, 7.27, 7.27); Calibrated: 8/2/2013;
- Sensor-Surface: 2mm (Mechanical Surface Detection), Sensor-Surface: 4mm (Mechanical Surface Detection), z = 1.0, 31.0
- Electronics: DAE4 Sn1387; Calibrated: 8/28/2013
- Phantom: Triple Flat Phantom 5.1C; Type: QD 000 P51 CA; Serial: 1154
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

LTE FDD 7 - body worn - MSL2450-2600/Rear High 15mm - 20MHz BW - 1RB - 0RB offset/Area Scan (111x181x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.190 W/kg

LTE FDD 7 - body worn - MSL2450-2600/Rear High 15mm - 20MHz BW - 1RB - 0RB offset/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 9.140 V/m; Power Drift = -0.14 dB
Peak SAR (extrapolated) = 0.223 W/kg
SAR(1 g) = 0.133 W/kg; SAR(10 g) = 0.077 W/kg
Maximum value of SAR (measured) = 0.145 W/kg



0 dB = 0.145 W/kg = -8.39 dBW/kg

Additional information:
position or distance of DUT to SAM: 15mm
ambient temperature: 23.8°C; liquid temperature: 22.5°C

Annex B.10: LTE FDD 13

Date/Time: 12.06.2014 16:06:24

IEEE1528-head

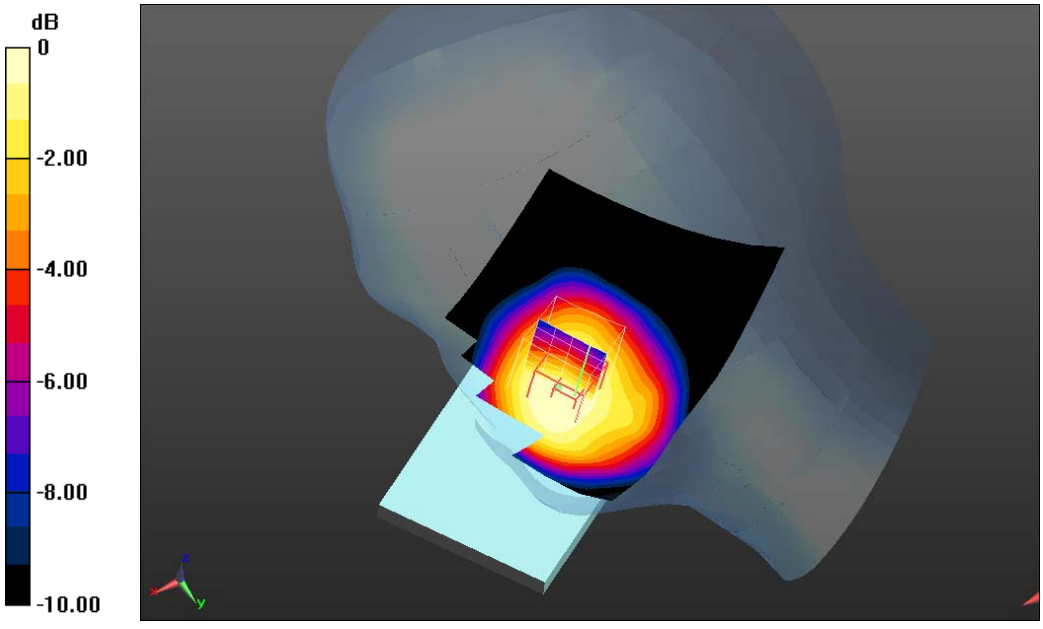
DUT: Sony; Type: PM-0740-BV; Serial: CB5A1W1HSZ
Communication System: UID 0, LTE FDD (0); Communication System Band: LTE 13 (700MHz); Frequency: 782 MHz; Communication System PAR: 0 dB; PMF: 1
Medium parameters used: f = 782 MHz; σ = 0.926 S/m; ε_r = 41.096; ρ = 1000 kg/m^3
Phantom section: Right Section
Measurement Standard: DASY5
DASY5 Configuration:
- Probe: ET3DV6 - SN1558; ConvF(6.15, 6.15, 6.15); Calibrated: 22.08.2013;
- Sensor-Surface: 4mm (Mechanical Surface Detection), z = 2.7, 32.7
- Electronics: DAE3 Sn477; Calibrated: 14.05.2014
- Phantom: SAM front; Type: QD000P40CC; Serial: TP-1042
- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

LTE FDD 13 - Right-Hand-Side - HSL750/Touch Position - Middle - 10MHz BW - 1RB - 0RB offset/Area Scan (71x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.366 W/kg

LTE FDD 13 - Right-Hand-Side - HSL750/Touch Position - Middle - 10MHz BW - 1RB - 0RB offset/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 19.423 V/m; Power Drift = -0.10 dB
Peak SAR (extrapolated) = 0.444 W/kg
SAR(1 g) = 0.320 W/kg; SAR(10 g) = 0.234 W/kg
Maximum value of SAR (measured) = 0.340 W/kg



0 dB = 0.340 W/kg = -4.69 dBW/kg

Additional information:
ambient temperature: 23.0°C; liquid temperature: 22.1°C

Date/Time: 12.06.2014 17:32:31

FCC-hotspot

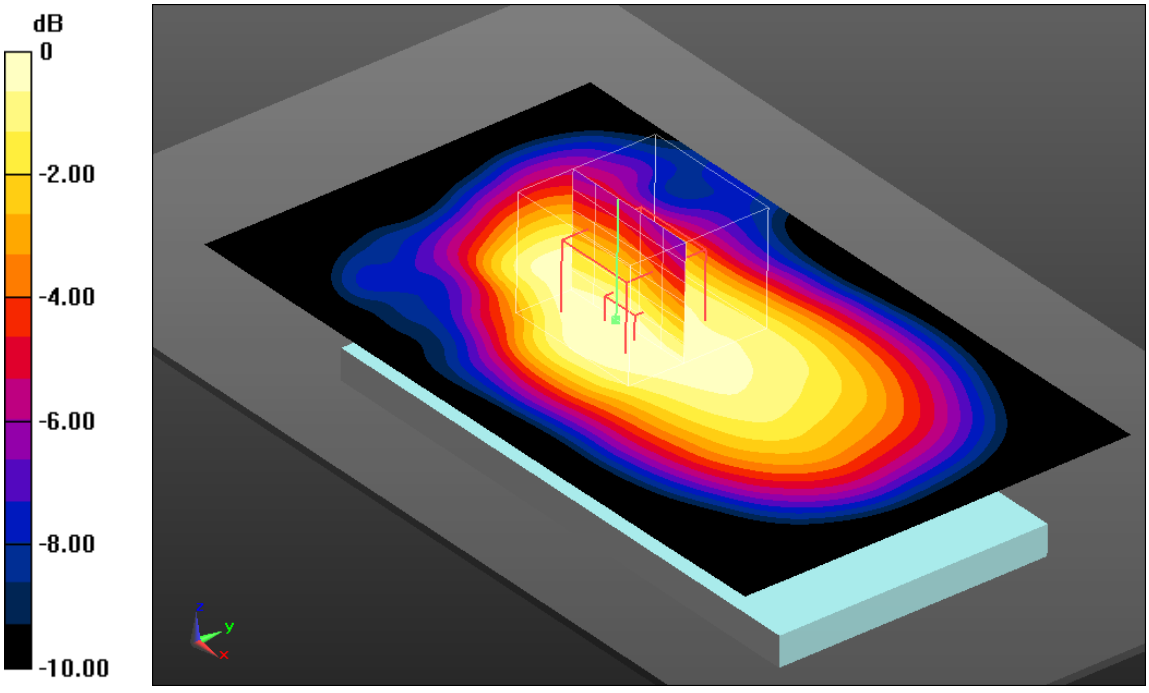
DUT: Sony; Type: PM-0740-BV; Serial: CB5A1W1HSZ
Communication System: UID 0, LTE FDD (0); Communication System Band: LTE 13 (700MHz); Frequency: 782 MHz; Communication System PAR: 0 dB; PMF: 1
Medium parameters used: f = 782 MHz; σ = 0.997 S/m; ε_r = 55.312; ρ = 1000 kg/m^3
Phantom section: Center Section
Measurement Standard: DASY5
DASY5 Configuration:
- Probe: ET3DV6 - SN1558; ConvF(5.73, 5.73, 5.73); Calibrated: 22.08.2013;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection), z = 2.7, 32.7
- Electronics: DAE3 Sn477; Calibrated: 14.05.2014
- Phantom: Triple Flat Phantom 5.1C; Type: QD 000 P51 CA; Serial: 1154
- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

LTE FDD 13 - hotspot - MSL750/Front - Middle - 10mm - 10MHz BW - 1RB - 0RB offset/Area Scan (71x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.328 W/kg

LTE FDD 13 - hotspot - MSL750/Front - Middle - 10mm - 10MHz BW - 1RB - 0RB offset/Zoom Scan (6x6x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 17.435 V/m; Power Drift = 0.10 dB
Peak SAR (extrapolated) = 0.371 W/kg
SAR(1 g) = 0.300 W/kg; SAR(10 g) = 0.233 W/kg
Maximum value of SAR (measured) = 0.312 W/kg



0 dB = 0.312 W/kg = -5.06 dBW/kg

Additional information:
position or distance of DUT to SAM: 10mm
ambient temperature: 22.9°C; liquid temperature: 22.0°C

Date/Time: 12.06.2014 17:18:06

FCC-body

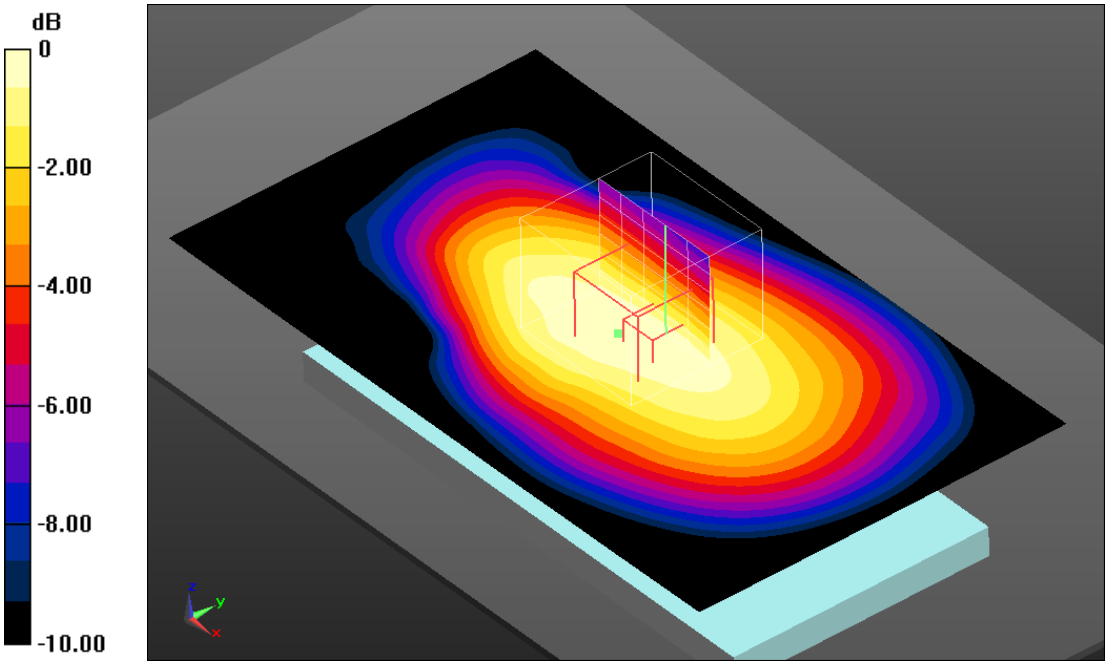
DUT: Sony; Type: PM-0740-BV; Serial: CB5A1W1HSZ
Communication System: UID 0, LTE FDD (0); Communication System Band: LTE 13 (700MHz); Frequency: 784.5 MHz; Communication System PAR: 0 dB; PMF: 1
Medium parameters used (interpolated): f = 784.5 MHz; σ = 1 S/m; ε_r = 55.301; ρ = 1000 kg/m^3
Phantom section: Center Section
Measurement Standard: DASY5
DASY5 Configuration:
- Probe: ET3DV6 - SN1558; ConvF(5.73, 5.73, 5.73); Calibrated: 22.08.2013;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection), z = 2.7, 32.7
- Electronics: DAE3 Sn477; Calibrated: 14.05.2014
- Phantom: Triple Flat Phantom 5.1C; Type: QD 000 P51 CA; Serial: 1154
- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

LTE FDD 13 - body worn - MSL750/Front - High - 15mm - 5MHz BW - 1RB - 24RB offset/Area Scan (71x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.258 W/kg

LTE FDD 13 - body worn - MSL750/Front - High - 15mm - 5MHz BW - 1RB - 24RB offset/Zoom Scan (6x6x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 16.591 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 0.318 W/kg
SAR(1 g) = 0.252 W/kg; SAR(10 g) = 0.188 W/kg
Maximum value of SAR (measured) = 0.264 W/kg



0 dB = 0.264 W/kg = -5.78 dBW/kg

Additional information:
position or distance of DUT to SAM: 15mm
ambient temperature: 22.9°C; liquid temperature: 22.0°C

Annex B.11: LTE FDD 17

Date/Time: 12.06.2014 16:21:43

IEEE1528-head

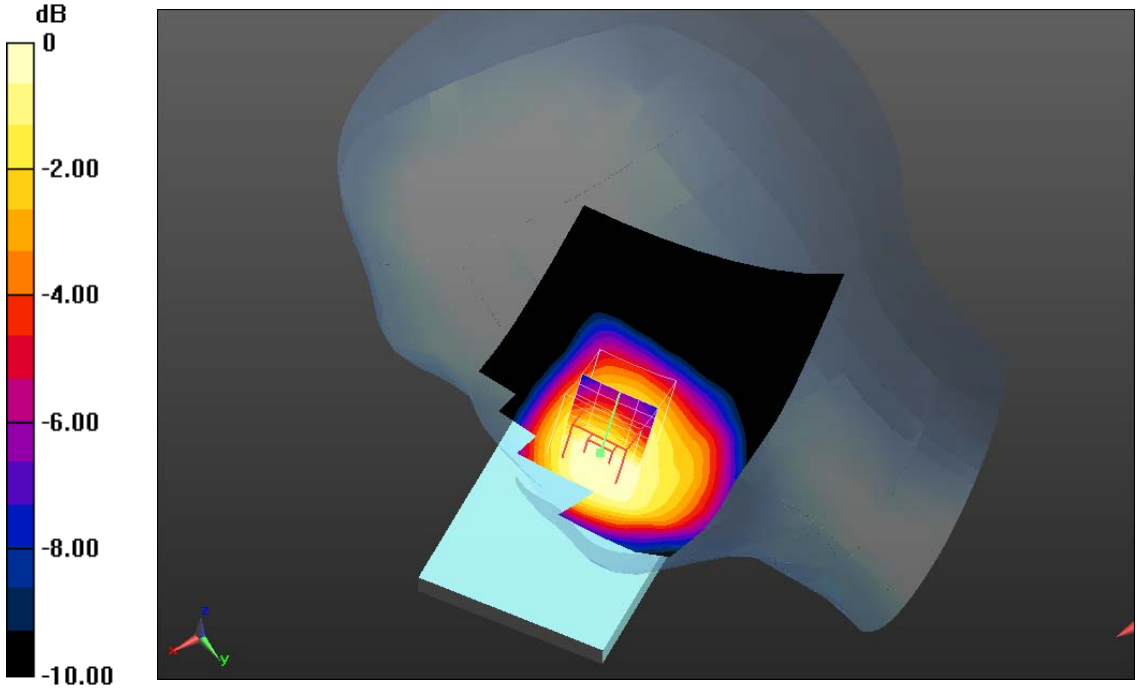
DUT: Sony; Type: PM-0740-BV; Serial: CB5A1W1HSZ
Communication System: UID 0, LTE FDD (0); Communication System Band: LTE 17 (700MHz); Frequency: 709 MHz; Communication System PAR: 0 dB; PMF: 1
Medium parameters used: f = 709 MHz; σ = 0.856 S/m; ε_r = 42.192; ρ = 1000 kg/m^3
Phantom section: Right Section
Measurement Standard: DASY5
DASY5 Configuration:
- Probe: ET3DV6 - SN1558; ConvF(6.15, 6.15, 6.15); Calibrated: 22.08.2013;
- Sensor-Surface: 4mm (Mechanical Surface Detection), z = 2.7, 32.7
- Electronics: DAE3 Sn477; Calibrated: 14.05.2014
- Phantom: SAM front; Type: QD000P40CC; Serial: TP-1042
- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

LTE FDD 17 - Right-Hand-Side - HSL750/Touch Position - Low - 10MHz BW - 1RB - 25RB offset/Area Scan (71x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.0794 W/kg

LTE FDD 17 - Right-Hand-Side - HSL750/Touch Position - Low - 10MHz BW - 1RB - 25RB offset/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 9.812 V/m; Power Drift = -0.05 dB
Peak SAR (extrapolated) = 0.101 W/kg
SAR(1 g) = 0.074 W/kg; SAR(10 g) = 0.056 W/kg
Maximum value of SAR (measured) = 0.0780 W/kg



0 dB = 0.0780 W/kg = -11.08 dBW/kg

Additional information:
ambient temperature: 23.0°C; liquid temperature: 22.1°C

Date/Time: 12.06.2014 16:43:25

FCC-hotspot

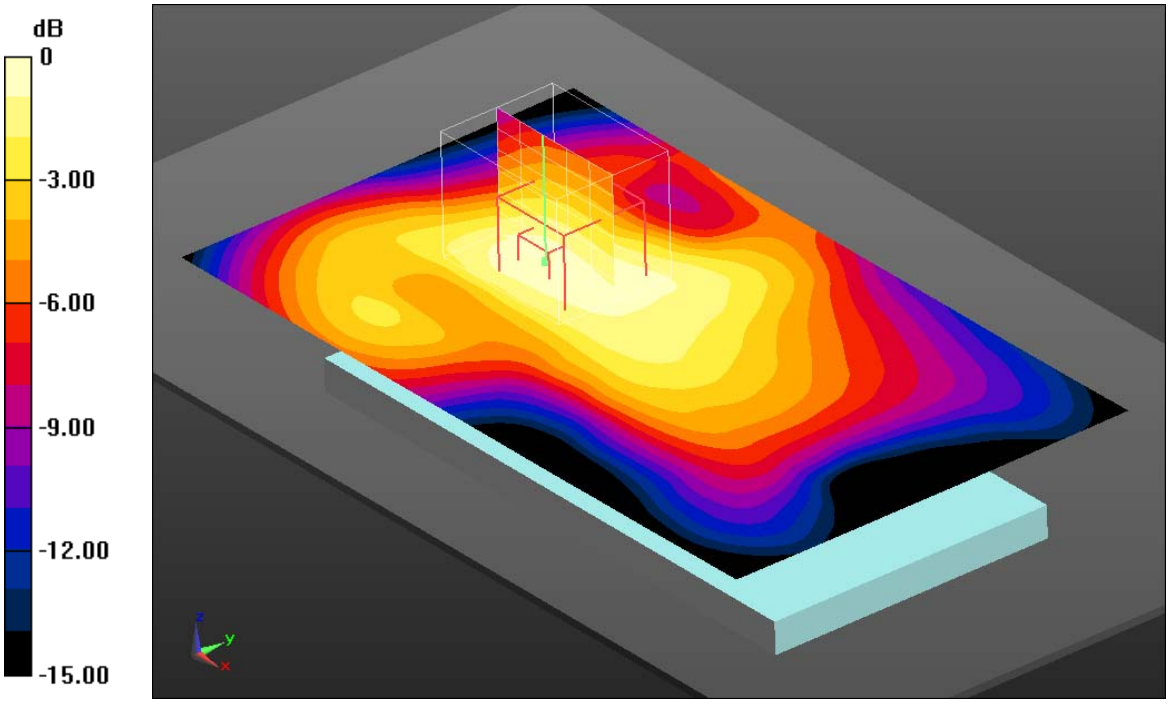
DUT: Sony; Type: PM-0740-BV; Serial: CB5A1W1HSZ
Communication System: UID 0, LTE FDD (0); Communication System Band: LTE 17 (700MHz); Frequency: 711 MHz; Communication System PAR: 0 dB; PMF: 1
Medium parameters used: f = 711 MHz; σ = 0.928 S/m; ε_r = 56.148; ρ = 1000 kg/m^3
Phantom section: Center Section
Measurement Standard: DASY5
DASY5 Configuration:
- Probe: ET3DV6 - SN1558; ConvF(5.73, 5.73, 5.73); Calibrated: 22.08.2013;
- Sensor-Surface: 4mm (Mechanical Surface Detection), z = 2.7, 32.7
- Electronics: DAE3 Sn477; Calibrated: 14.05.2014
- Phantom: Triple Flat Phantom 5.1C; Type: QD 000 P51 CA; Serial: 1154
- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

LTE FDD 17 - hotspot - MSL750/Rear - High - 10mm - 10MHz BW - 1RB - 0RB offset/Area Scan (71x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.0776 W/kg

LTE FDD 17 - hotspot - MSL750/Rear - High - 10mm - 10MHz BW - 1RB - 0RB offset/Zoom Scan (6x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 9.274 V/m; Power Drift = 0.06 dB
Peak SAR (extrapolated) = 0.0890 W/kg
SAR(1 g) = 0.073 W/kg; SAR(10 g) = 0.056 W/kg
Maximum value of SAR (measured) = 0.0779 W/kg



0 dB = 0.0779 W/kg = -11.08 dBW/kg

Additional information:
position or distance of DUT to SAM: 10mm
ambient temperature: 22.9°C; liquid temperature: 22.0°C

Date/Time: 12.06.2014 17:02:55

FCC-body

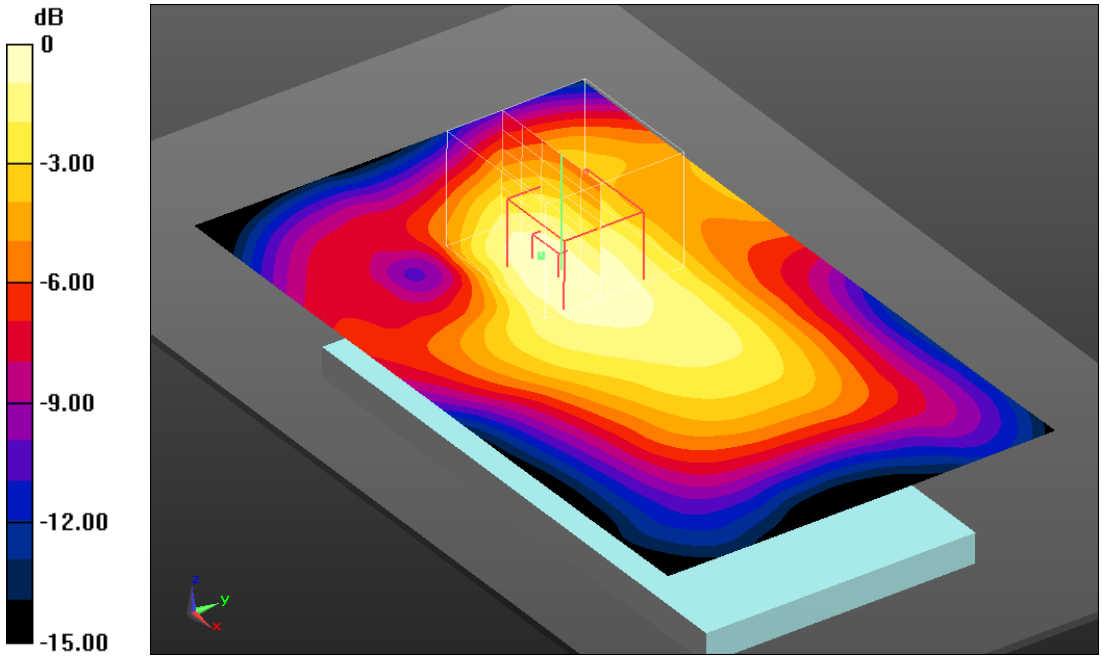
DUT: Sony; Type: PM-0740-BV; Serial: CB5A1W1HSZ
Communication System: UID 0, LTE FDD (0); Communication System Band: LTE 17 (700MHz); Frequency: 709 MHz; Communication System PAR: 0 dB; PMF: 1
Medium parameters used: f = 709 MHz; σ = 0.926 S/m; ε_r = 56.133; ρ = 1000 kg/m^3
Phantom section: Center Section
Measurement Standard: DASY5
DASY5 Configuration:
- Probe: ET3DV6 - SN1558; ConvF(5.73, 5.73, 5.73); Calibrated: 22.08.2013;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection), z = 2.7, 32.7
- Electronics: DAE3 Sn477; Calibrated: 14.05.2014
- Phantom: Triple Flat Phantom 5.1C; Type: QD 000 P51 CA; Serial: 1154
- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

LTE FDD 17 - body worn - MSL750/Front - Low - 15mm - 10MHz BW - 1RB - 25RB offset/Area Scan (71x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.0632 W/kg

LTE FDD 17 - body worn - MSL750/Front - Low - 15mm - 10MHz BW - 1RB - 25RB offset/Zoom Scan (6x6x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 8.505 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 0.0760 W/kg
SAR(1 g) = 0.062 W/kg; SAR(10 g) = 0.048 W/kg
Maximum value of SAR (measured) = 0.0641 W/kg



0 dB = 0.0641 W/kg = -11.93 dBW/kg

Additional information:
position or distance of DUT to SAM: 15mm
ambient temperature: 22.9°C; liquid temperature: 22.0°C

Annex B.12: WLAN 2450MHz

Date/Time: 13.06.2014 09:17:11

IEEE1528-head

DUT: Sony; Type: PM-0740-BV; Serial: CB5A1W1HRP

Communication System: UID 0, WLAN 2450 (0); Communication System Band: 2.4 GHz; Frequency: 2437 MHz; Communication System PAR: 0 dB; PMF: 1

Medium parameters used: f = 2437 MHz; σ = 1.794 S/m; ε_r = 39.043; ρ = 1000 kg/m^3

Phantom section: Left Section

Measurement Standard: DASY5

DASY5 Configuration:

- Probe: ES3DV3 - SN3320; ConvF(4.4, 4.4, 4.4); Calibrated: 09.05.2014;
- Sensor-Surface: 4mm (Mechanical Surface Detection), z = 2.0, 32.0
- Electronics: DAE3 Sn413; Calibrated: 22.05.2014
- Phantom: SAM; Type: QD000P40C; Serial: TP1150
- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

Left-Hand-Side HSL2450/Touch Position - Ch 6/Area Scan (111x171x1):

Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.205 W/kg

Left-Hand-Side HSL2450/Touch Position - Ch 6/Zoom Scan (7x8x7)/Cube 0:

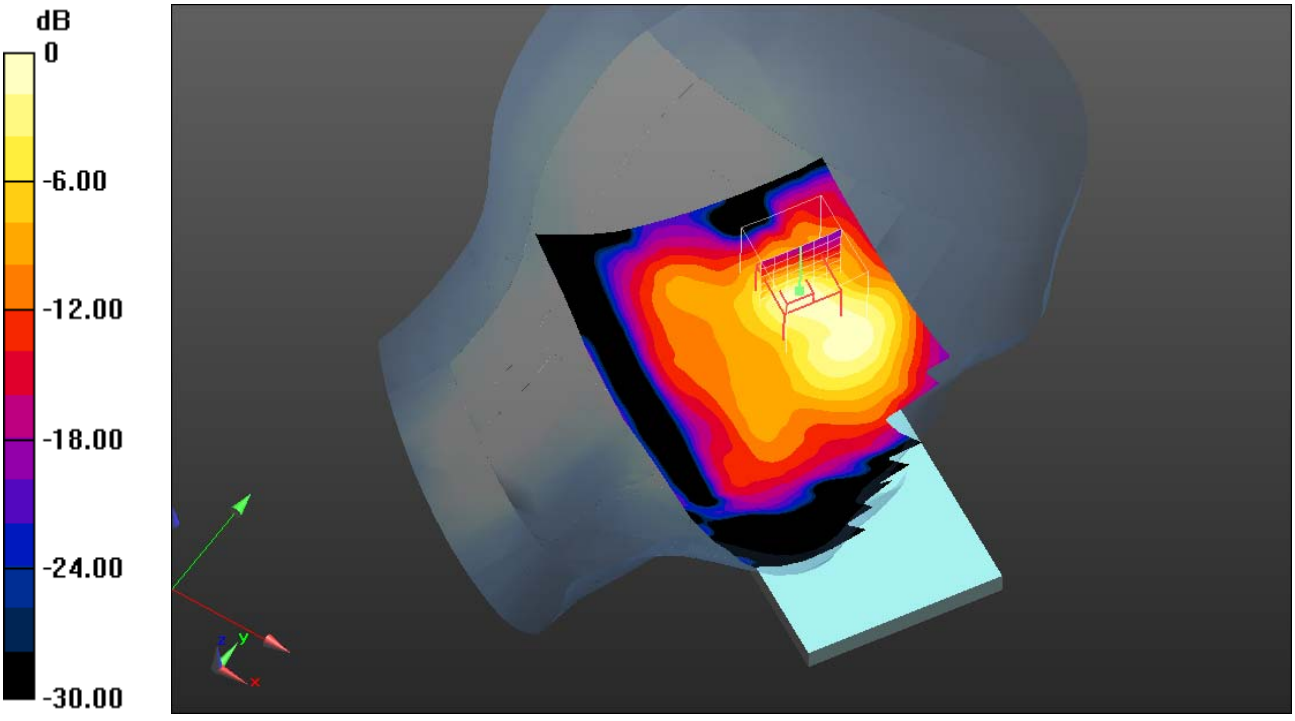
Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 9.239 V/m; Power Drift = 0.24 dB

Peak SAR (extrapolated) = 0.355 W/kg

SAR(1 g) = 0.170 W/kg; SAR(10 g) = 0.074 W/kg

Maximum value of SAR (measured) = 0.197 W/kg



0 dB = 0.197 W/kg = -7.06 dBW/kg

Additional information:

ambient temperature: 23.3°C; liquid temperature: 22.3°C

Date/Time: 13.06.2014 12:10:52

FCC-body

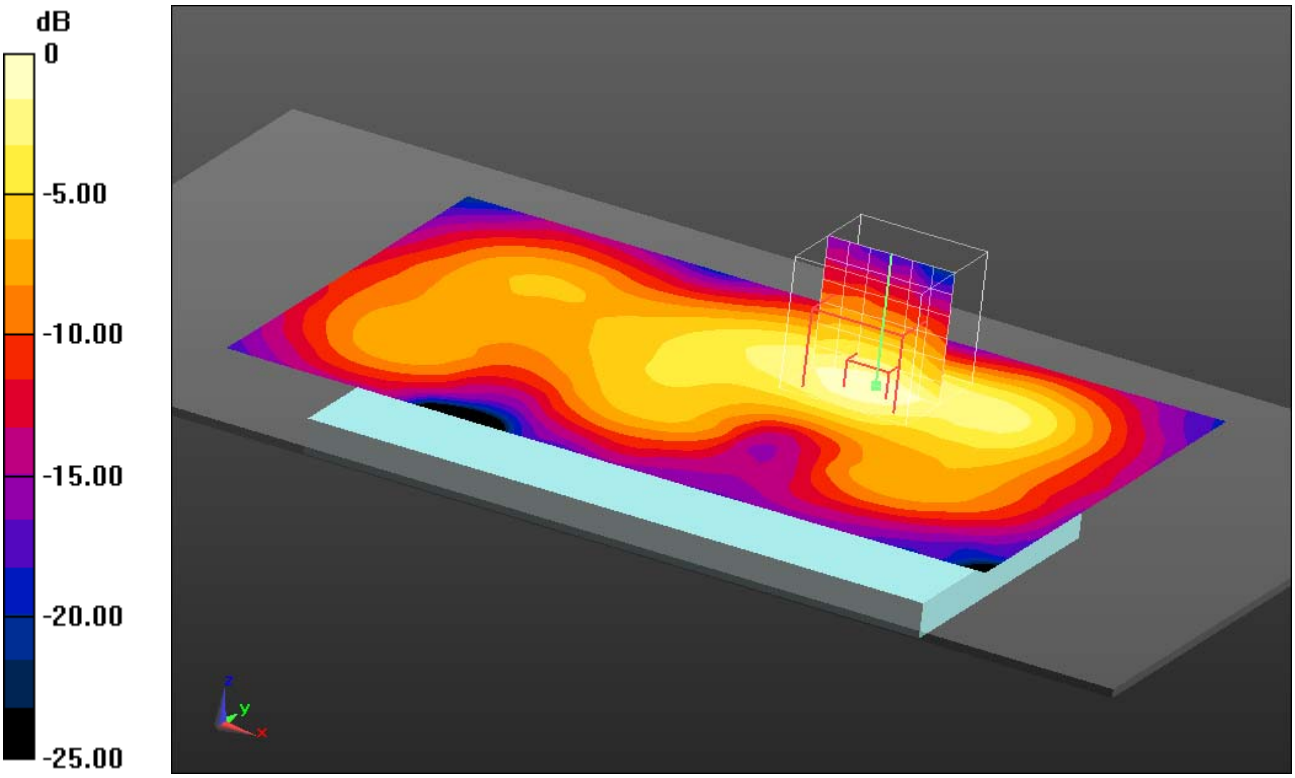
DUT: Sony; Type: PM-0740-BV; Serial: CB5A1W1HRP
Communication System: UID 0, WLAN 2450 (0); Communication System Band: 2.4 GHz; Frequency: 2437 MHz; Communication System PAR: 0 dB; PMF: 1
Medium parameters used: f = 2437 MHz; σ = 2 S/m; ε_r = 50.434; ρ = 1000 kg/m^3
Phantom section: Center Section
Measurement Standard: DASY5
DASY5 Configuration:
- Probe: ET3DV6 - SN1558; ConvF(3.81, 3.81, 3.81); Calibrated: 22.08.2013;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection), z = 2.7, 32.7
- Electronics: DAE3 Sn477; Calibrated: 14.05.2014
- Phantom: Triple Flat Phantom 5.1C; Type: QD 000 P51 CA; Serial: 1154
- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

WLAN2450 - hotspot - MSL2450/Rear High 10mm/Area Scan (111x181x1):

Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.164 W/kg

WLAN2450 - hotspot - MSL2450/Rear High 10mm/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 9.047 V/m; Power Drift = 0.10 dB
Peak SAR (extrapolated) = 0.357 W/kg
SAR(1 g) = 0.159 W/kg; SAR(10 g) = 0.081 W/kg
Maximum value of SAR (measured) = 0.172 W/kg



0 dB = 0.172 W/kg = -7.64 dBW/kg

Additional information:
position or distance of DUT to SAM: 10mm
ambient temperature: 23.4°C; liquid temperature: 22.4°C

Date/Time: 13.06.2014 11:37:45

FCC-body

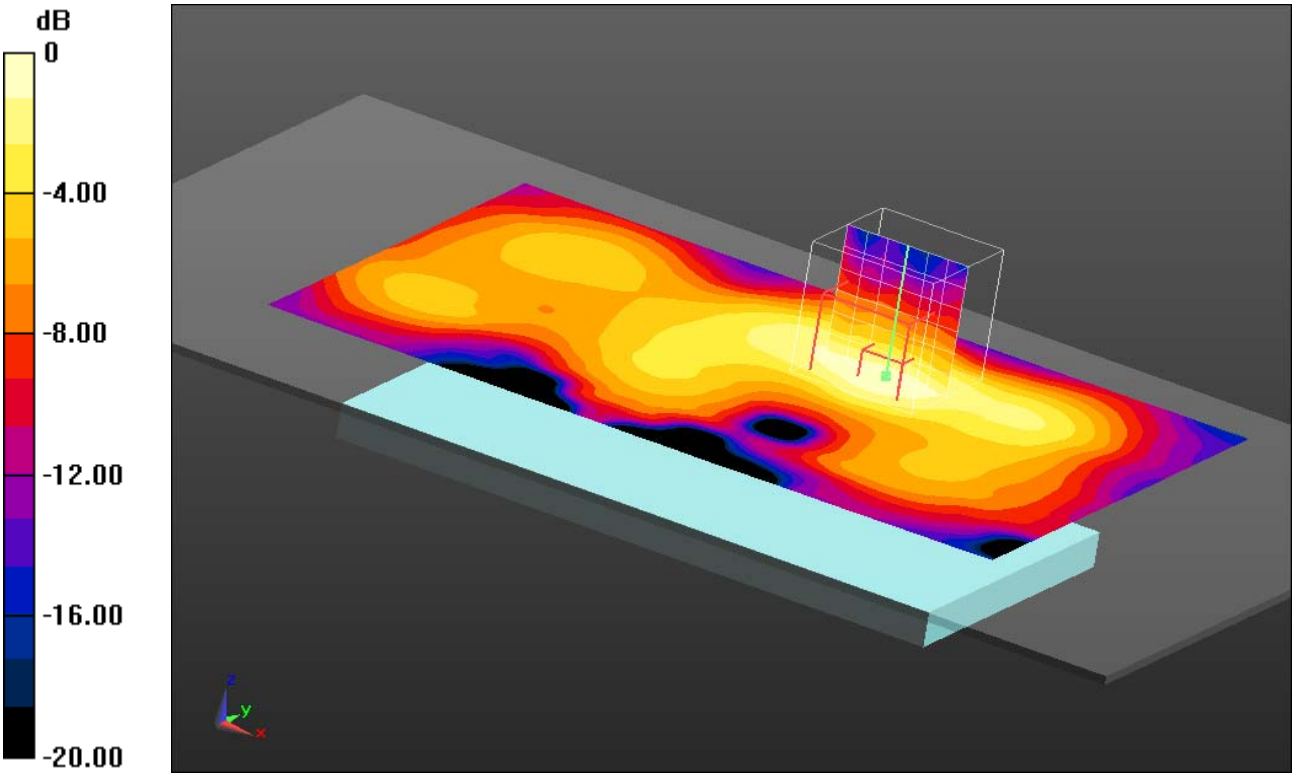
DUT: Sony; Type: PM-0740-BV; Serial: CB5A1W1HRP
Communication System: UID 0, WLAN 2450 (0); Communication System Band: 2.4 GHz; Frequency: 2462 MHz; Communication System PAR: 0 dB; PMF: 1
Medium parameters used: f = 2462 MHz; σ = 2.043 S/m; ε_r = 50.568; ρ = 1000 kg/m^3
Phantom section: Center Section
Measurement Standard: DASY5
DASY5 Configuration:
- Probe: ET3DV6 - SN1558; ConvF(3.81, 3.81, 3.81); Calibrated: 22.08.2013;
- Sensor-Surface: 4mm (Mechanical Surface Detection), z = 2.7, 32.7
- Electronics: DAE3 Sn477; Calibrated: 14.05.2014
- Phantom: Triple Flat Phantom 5.1C; Type: QD 000 P51 CA; Serial: 1154
- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

WLAN2450 - body worn - MSL2450/Rear High 15mm/Area Scan (111x181x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.0403 W/kg

WLAN2450 - body worn - MSL2450/Rear High 15mm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 4.586 V/m; Power Drift = -0.06 dB
Peak SAR (extrapolated) = 0.0840 W/kg
SAR(1 g) = 0.039 W/kg; SAR(10 g) = 0.021 W/kg
Maximum value of SAR (measured) = 0.0410 W/kg



0 dB = 0.0410 W/kg = -13.87 dBW/kg

Additional information:
position or distance of DUT to SAM: 15mm
ambient temperature: 23.4°C; liquid temperature: 22.4°C

Annex B.13: WLAN 5GHz

Date/Time: 13.06.2014 15:02:06

IEEE1528-head WLAN 5GHz

DUT: Sony; Type: PM-0740-BV; Serial: CB5A1W1HRP

Communication System: UID 0, WLAN 5GHz (0); Communication System Band: 5 GHz Band; Frequency: 5825 MHz; Communication System PAR: 0 dB; PMF: 1

Medium parameters used: f = 5825 MHz; σ = 5.068 S/m; ε_r = 35.444; ρ = 1000 kg/m^3

Phantom section: Left Section

Measurement Standard: DASY5

DASY5 Configuration:

- Probe: EX3DV4 - SN3944; ConvF(4.75, 4.75, 4.75); Calibrated: 02.08.2013;
- Sensor-Surface: 2mm (Mechanical Surface Detection), z = 1.0, 23.0
- Electronics: DAE3 Sn413; Calibrated: 22.05.2014
- Phantom: SAM; Type: QD000P40C; Serial: TP1150
- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

Left-Hand-Side HSL5000/Touch Position - High/Area Scan (111x171x1):

Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.518 W/kg

Left-Hand-Side HSL5000/Touch Position - High/Zoom Scan (8x8x12)/Cube 0:

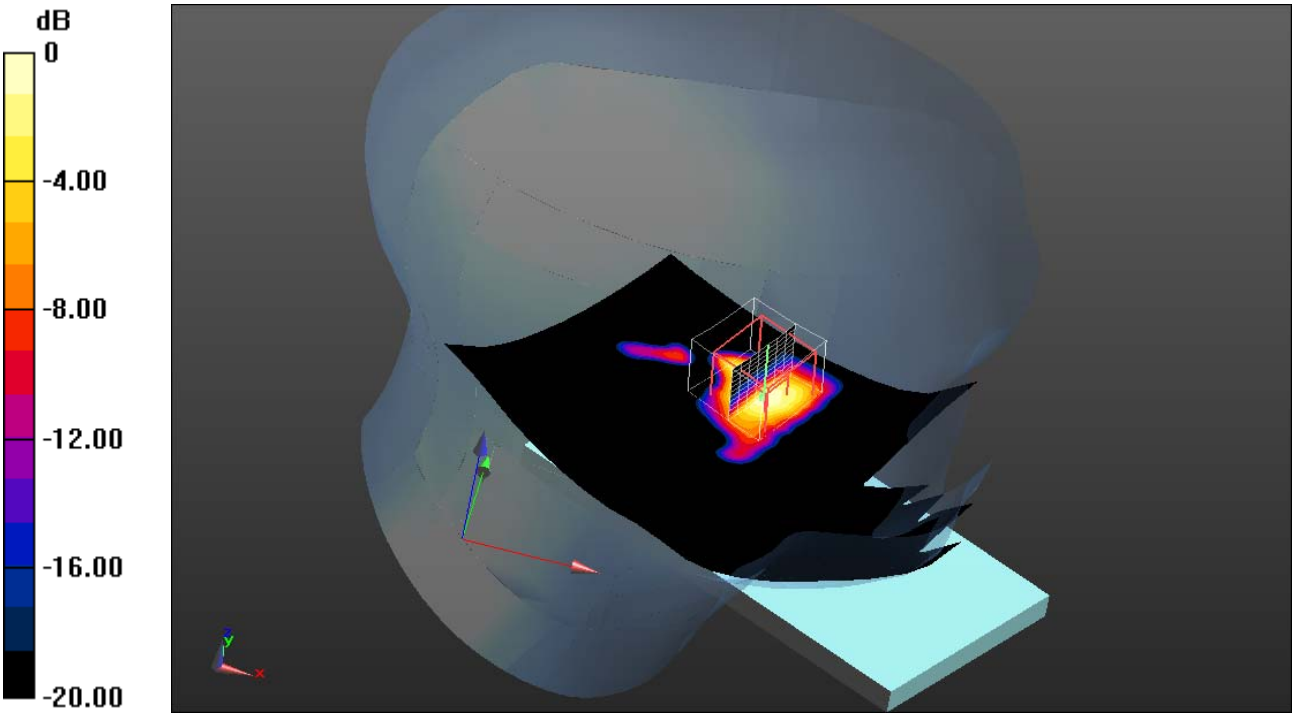
Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 8.990 V/m; Power Drift = 0.05 dB

Peak SAR (extrapolated) = 1.21 W/kg

SAR(1 g) = 0.246 W/kg; SAR(10 g) = 0.071 W/kg

Maximum value of SAR (measured) = 0.522 W/kg



0 dB = 0.522 W/kg = -2.82 dBW/kg

Additional information:

ambient temperature: 22.2°C; liquid temperature: 22.1°C

Date/Time: 13.06.2014 12:52:02

FCC-body

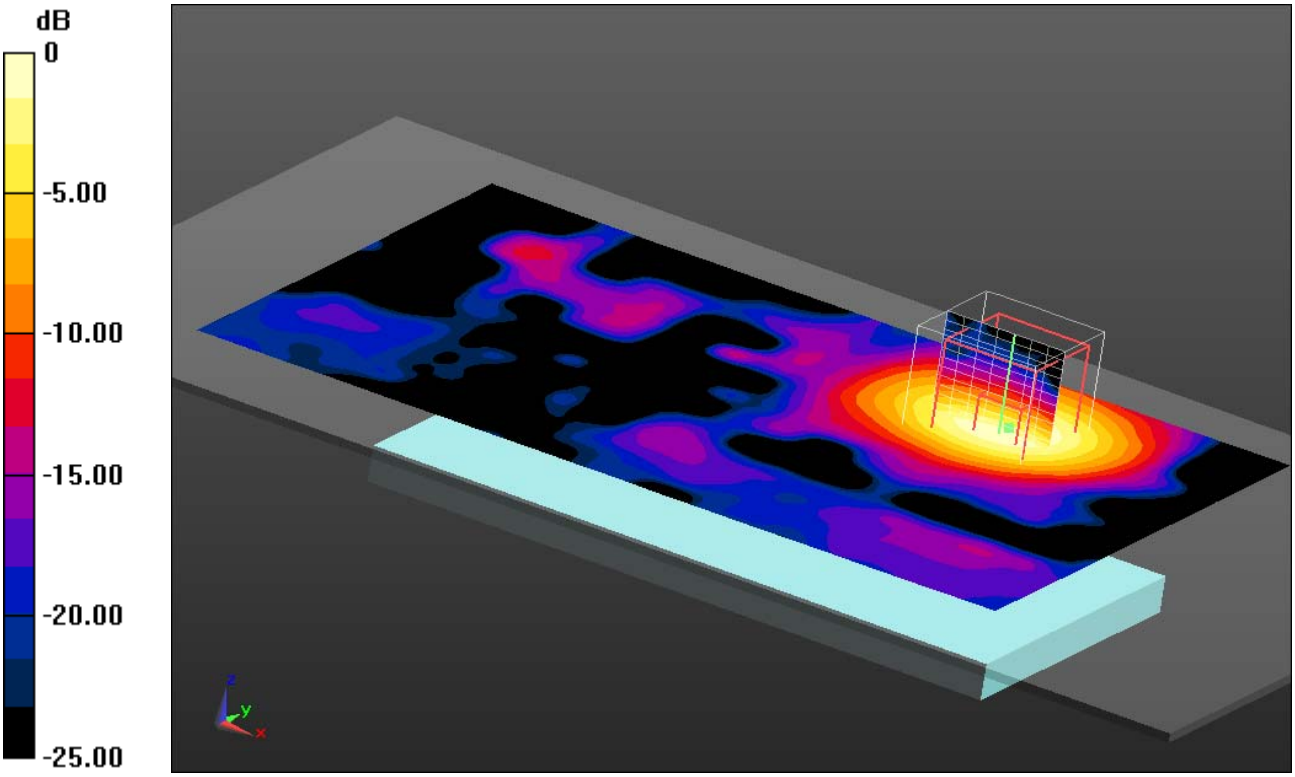
DUT: Sony; Type: PM-0740-BV; Serial: CB5A1W1HRP
Communication System: UID 0, WLAN 5GHz (0); Communication System Band: 5 GHz Band; Frequency: 5300 MHz; Communication System PAR: 0 dB; PMF: 1
Medium parameters used: f = 5300 MHz; σ = 5.375 S/m; ε_r = 48.046; ρ = 1000 kg/m^3
Phantom section: Center Section
Measurement Standard: DASY5
DASY5 Configuration:
- Probe: EX3DV4 - SN3944; ConvF(4.3, 4.3, 4.3); Calibrated: 02.08.2013;
- Sensor-Surface: 2mm (Mechanical Surface Detection), z = 1.0, 23.0
- Electronics: DAE3 Sn477; Calibrated: 14.05.2014
- Phantom: Triple Flat Phantom 5.1C; Type: QD 000 P51 CA; Serial: 1154
- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

WLAN 5GHz - body worn - MSL5000 - 15mm/Rear Middle/Area Scan (121x191x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 1.03 W/kg

WLAN 5GHz - body worn - MSL5000 - 15mm/Rear Middle/Zoom Scan (8x8x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 14.639 V/m; Power Drift = -0.12 dB
Peak SAR (extrapolated) = 1.78 W/kg
SAR(1 g) = 0.541 W/kg; SAR(10 g) = 0.217 W/kg
Maximum value of SAR (measured) = 0.954 W/kg



0 dB = 0.954 W/kg = -0.20 dBW/kg

Additional information:
position or distance of DUT to SAM: 15mm
ambient temperature: 23.7°C; liquid temperature: 22.4°C

Annex B.14: Bluetooth 2.4GHz

Date/Time: 13.06.2014 10:28:42

IEEE1528-head-BT

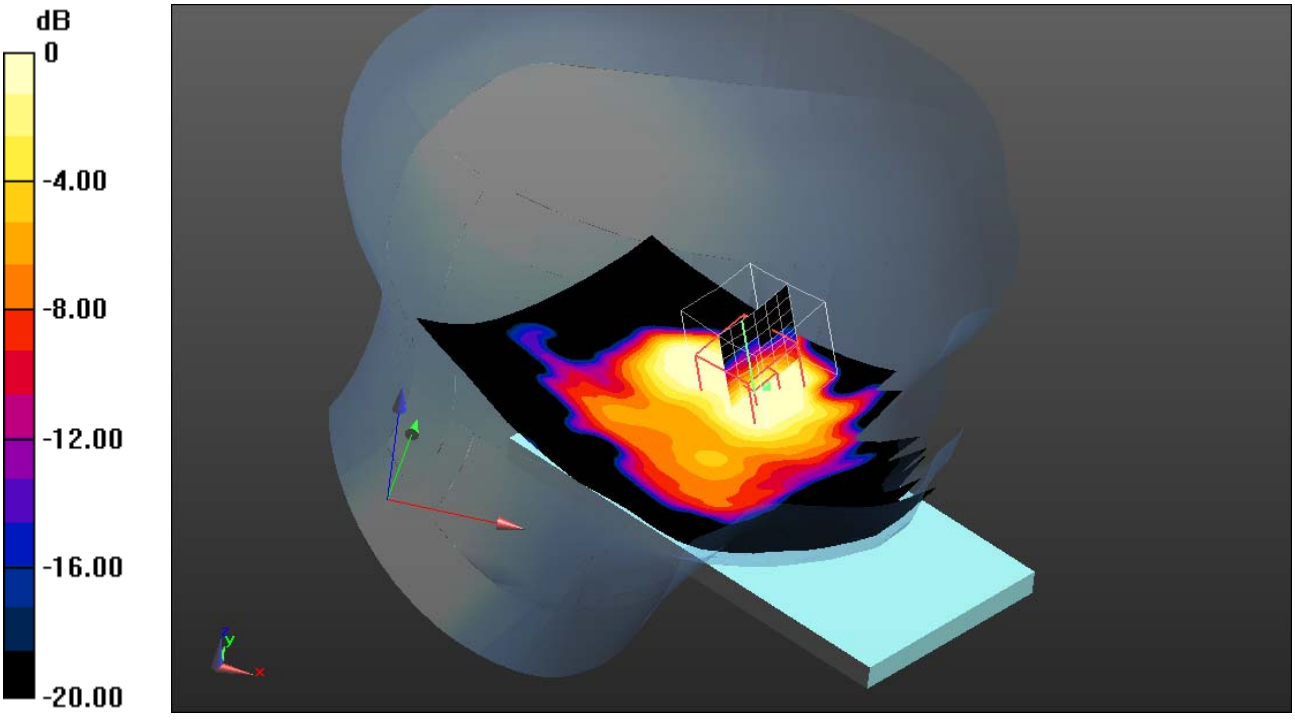
DUT: Sony; Type: PM-0740-BV; Serial: CB5A1W1HRP
Communication System: UID 0, Bluetooth (0); Communication System Band: BT; Frequency: 2441 MHz;
Communication System PAR: 1.16 dB; PMF: 1.14288
Medium parameters used: f = 2441 MHz; σ = 1.798 S/m; ε_r = 39.001; ρ = 1000 kg/m^3
Phantom section: Left Section
Measurement Standard: DASY5
DASY5 Configuration:
- Probe: ES3DV3 - SN3320; ConvF(4.4, 4.4, 4.4); Calibrated: 09.05.2014;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection), z = 2.0, 32.0
- Electronics: DAE3 Sn413; Calibrated: 22.05.2014
- Phantom: SAM; Type: QD000P40C; Serial: TP1150
- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

Left-Hand-Side HSL2450 - BT/Touch Position - Ch 39 - BT/Area Scan (111x171x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.0385 W/kg

Left-Hand-Side HSL2450 - BT/Touch Position - Ch 39 - BT/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 2.934 V/m; Power Drift = 0.06 dB
Peak SAR (extrapolated) = 0.0380 W/kg
SAR(1 g) = 0.018 W/kg; SAR(10 g) = 0.00734 W/kg
Maximum value of SAR (measured) = 0.0214 W/kg



0 dB = 0.0214 W/kg = -16.70 dBW/kg

Additional information:
ambient temperature: 23.3°C; liquid temperature: 22.3°C

Annex B.15: Liquid depth

Photo 1: Liquid depth 750 MHz head simulating liquid

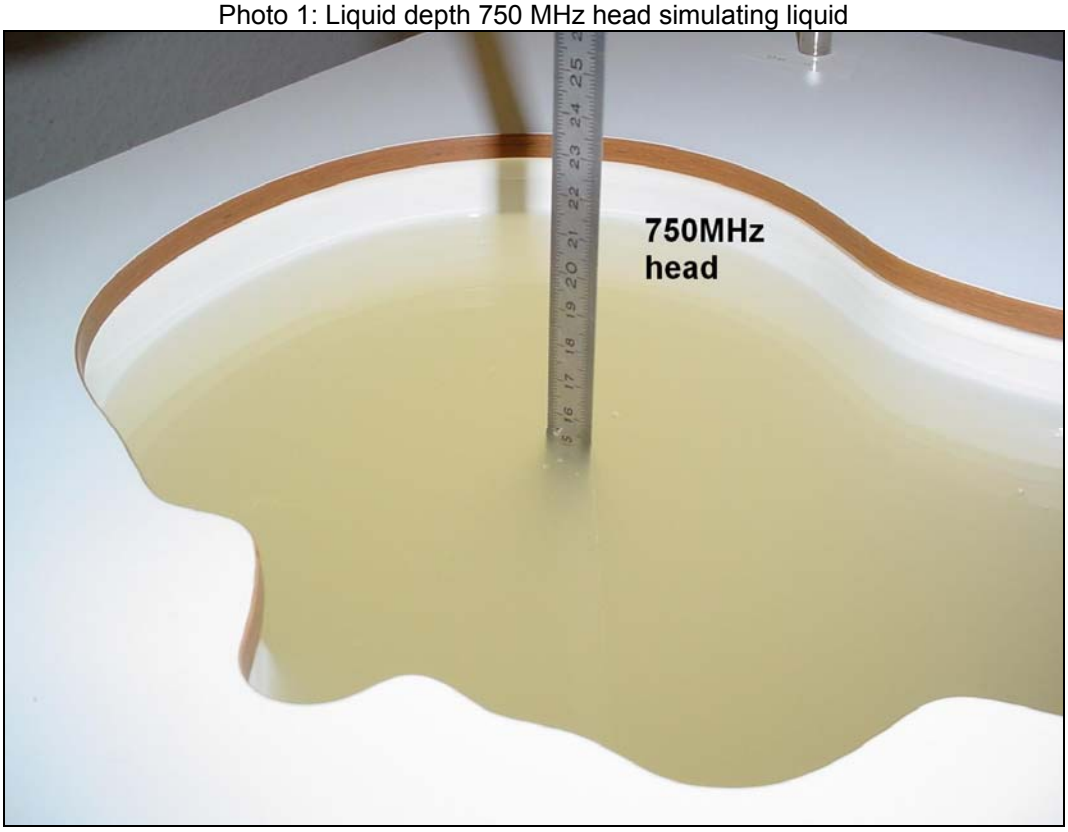


Photo 2: Liquid depth 750 MHz body simulating liquid

Photo 3: Liquid depth 850 MHz head simulating liquid

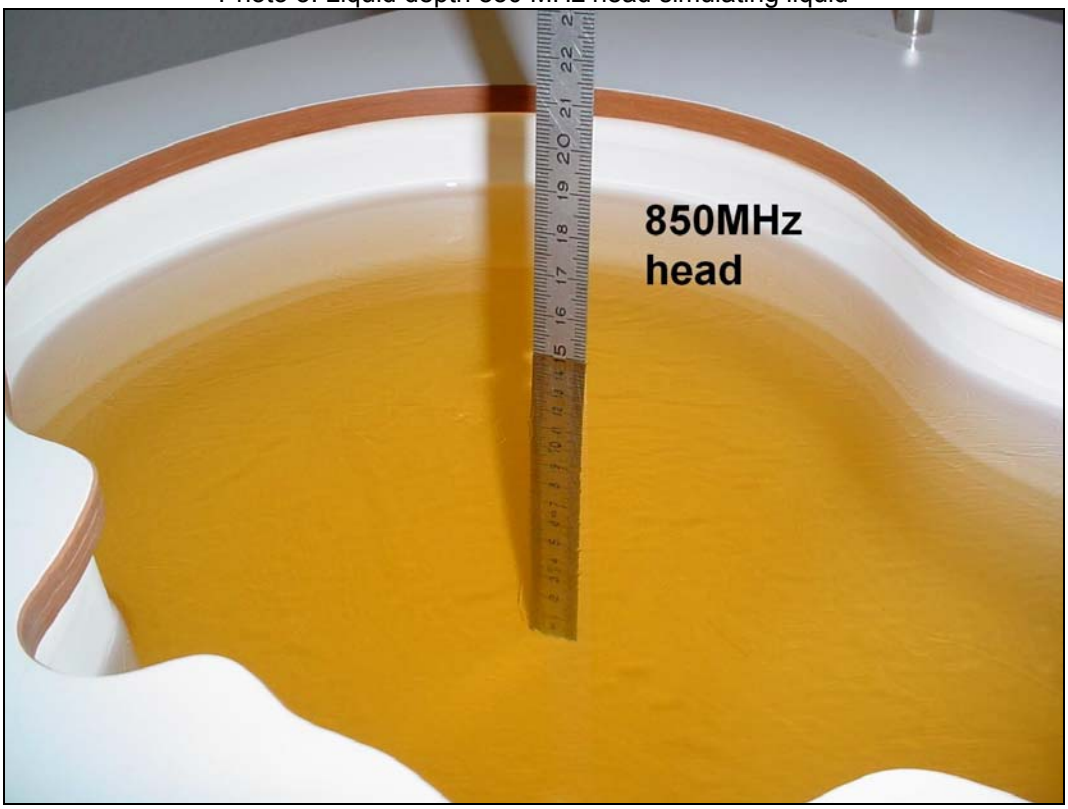


Photo 4: Liquid depth 850 MHz body simulating liquid

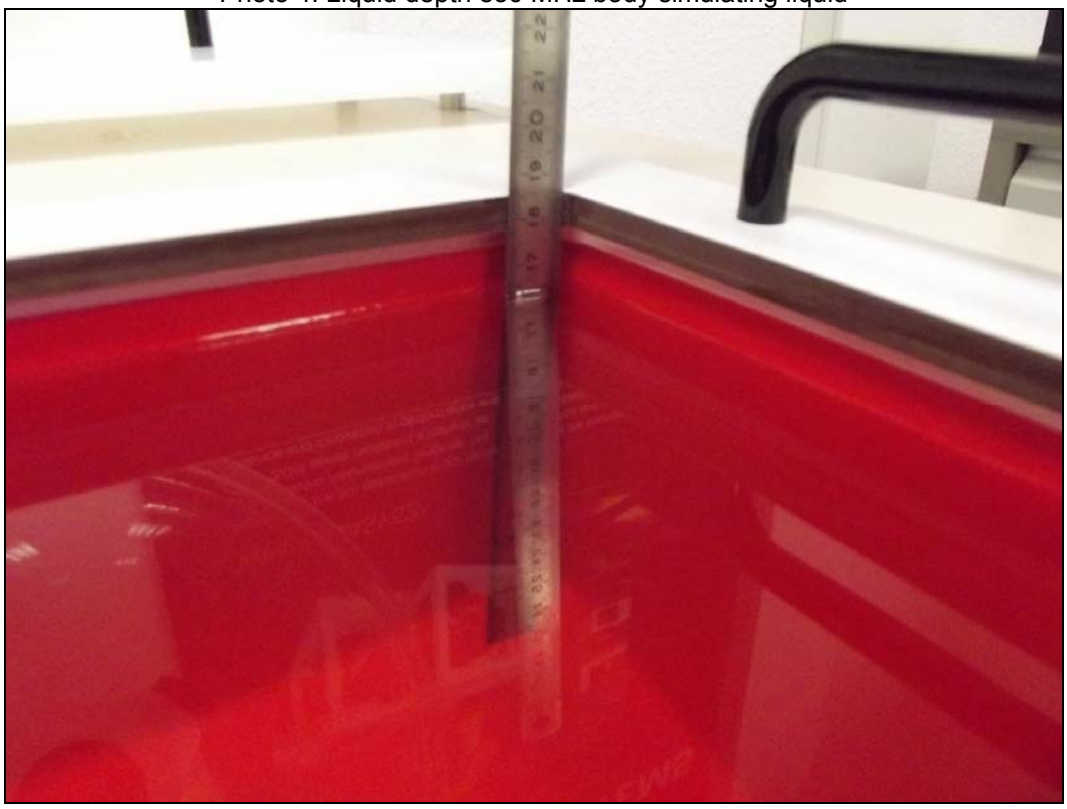


Photo 5: Liquid depth 1750MHz head simulating liquid

Photo 6: Liquid depth 1750 MHz body simulating liquid

Photo 7: Liquid depth 1900MHz head simulating liquid

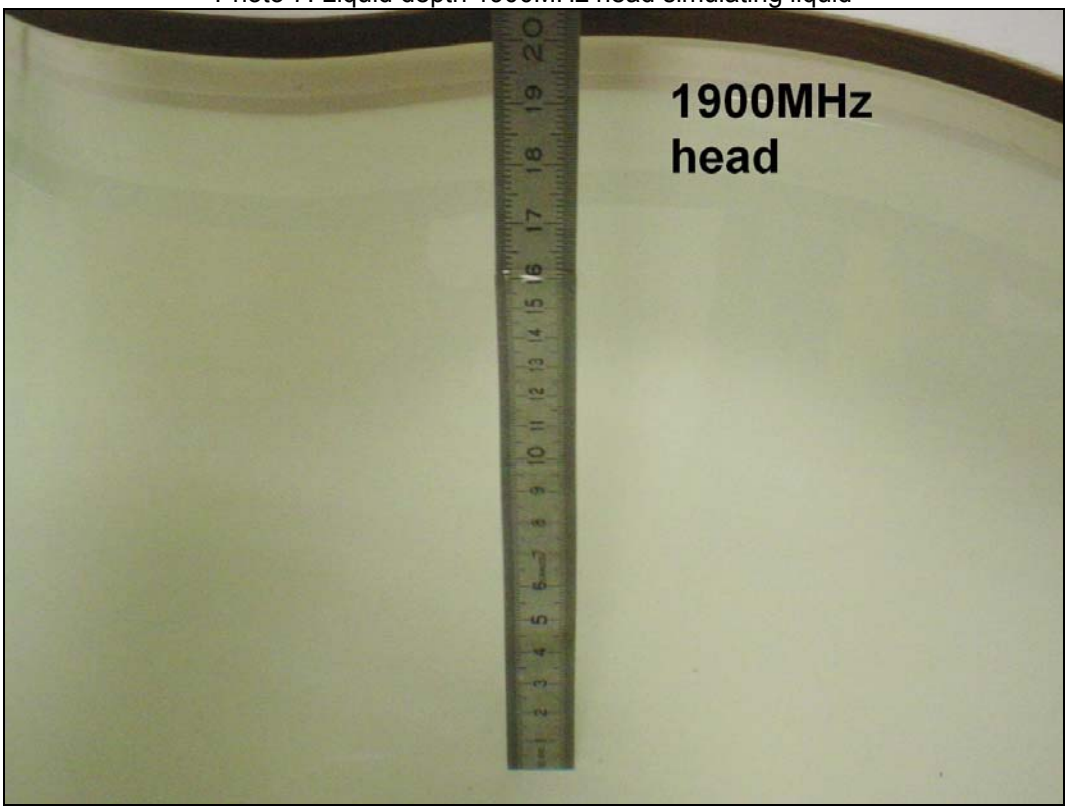


Photo 8: Liquid depth 1900 MHz body simulating liquid

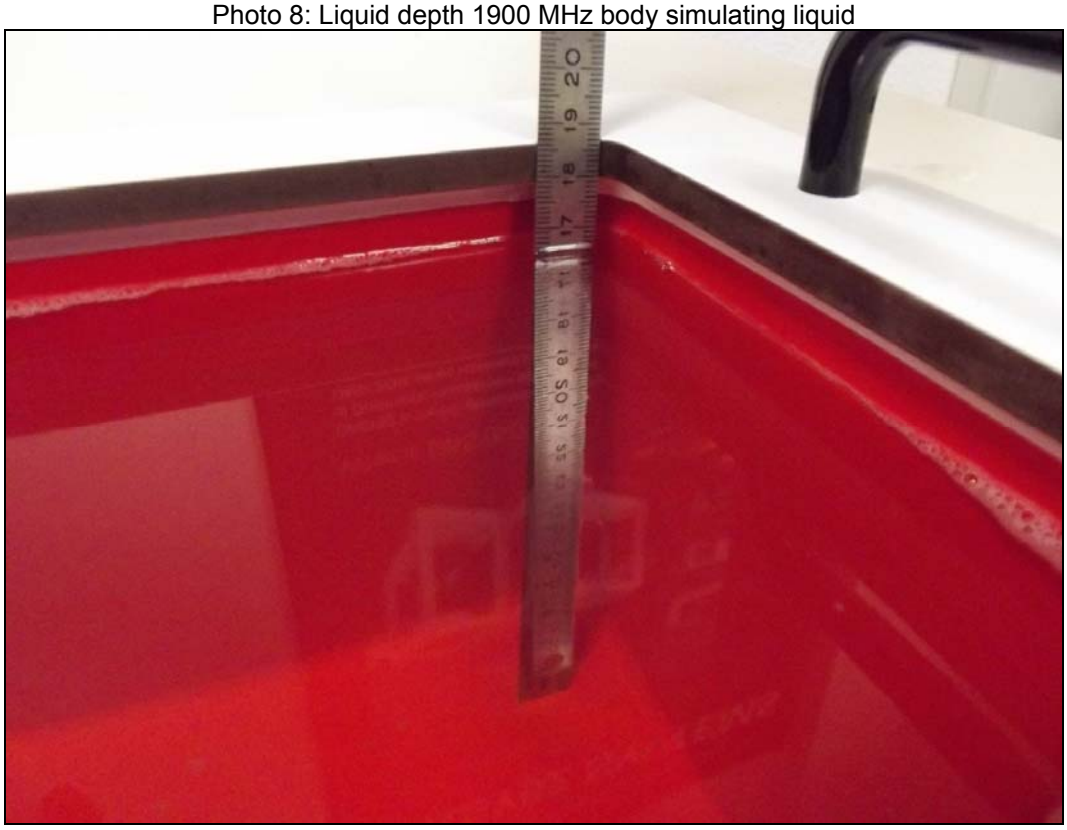


Photo 9: Liquid depth 2450MHz head simulating liquid

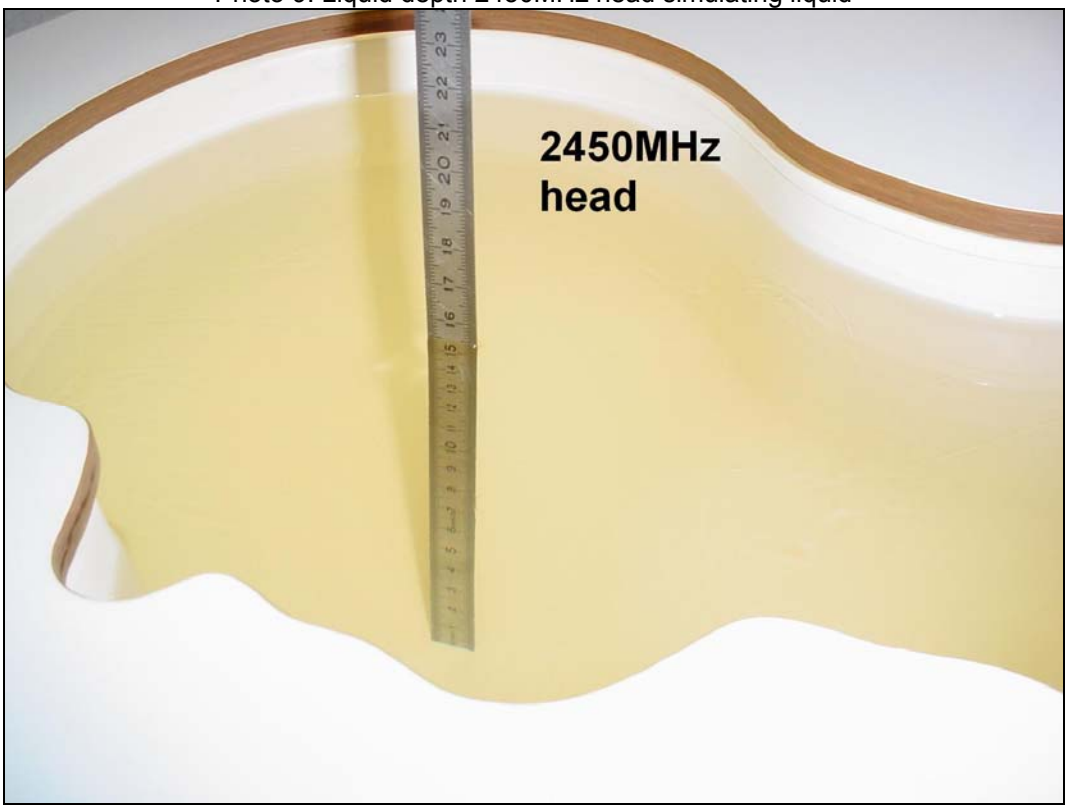


Photo 10: Liquid depth 2450 MHz body simulating liquid

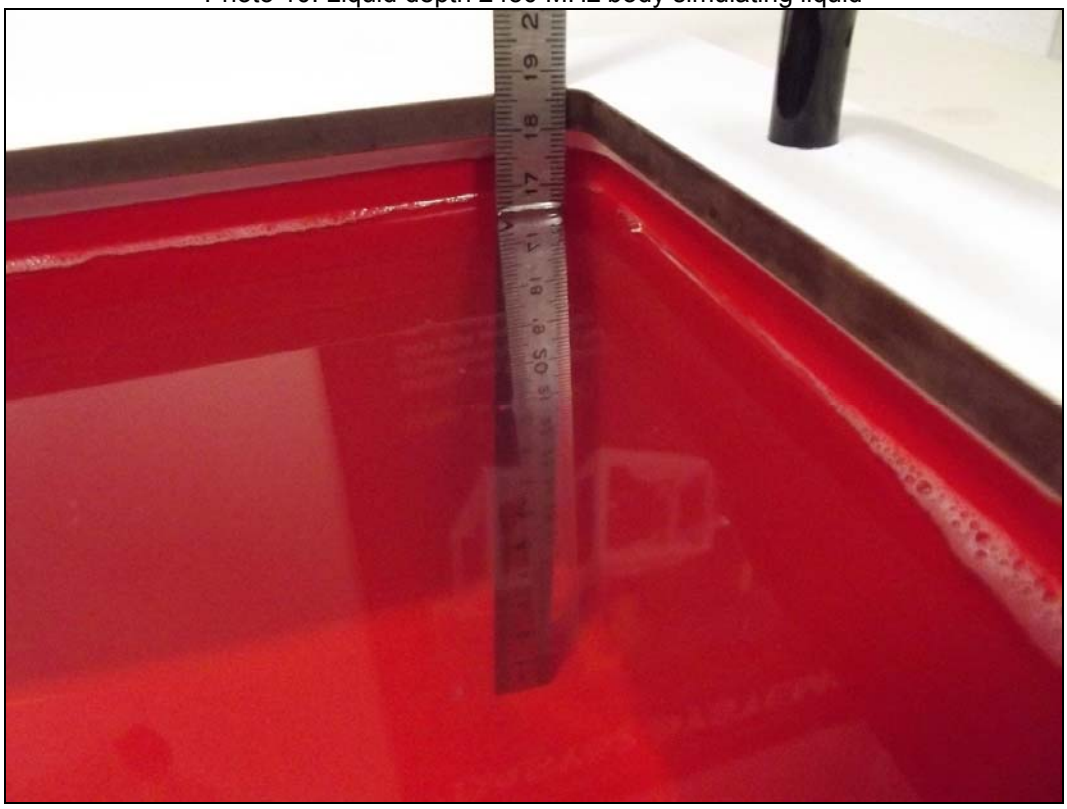
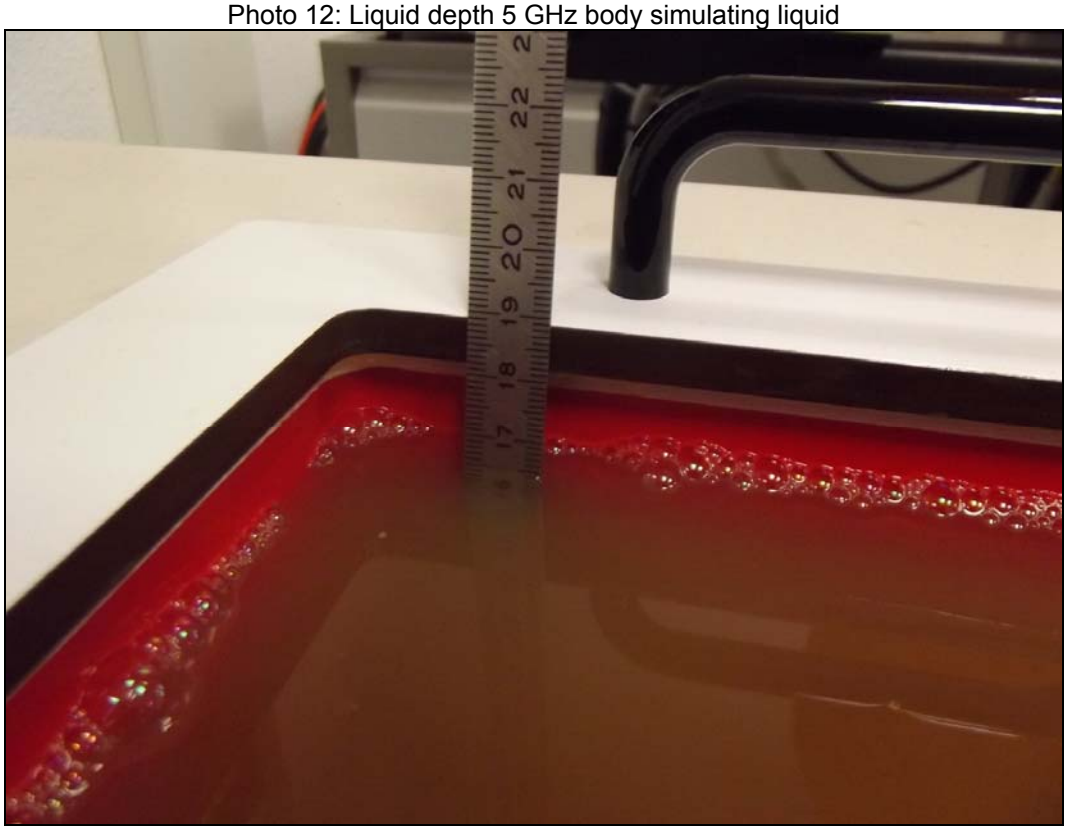


Photo 11: Liquid depth 5 GHz head simulating liquid

Photo 12: Liquid depth 5 GHz body simulating liquid



Annex C: Photo documentation

Photo documentation is described in the additional document:

Appendix to test report no. 1-6965/13-21-02-A Photo documentation

Annex D: Calibration parameters

Calibration parameters are described in the additional document:

**Appendix to test report no. 1-6965/13-21-02-A
Calibration data, Phantom certificate
and detail information of the DASY5 System**

Annex E: Document History

Version	Applied Changes	Date of Release
	Initial Release	2014-06-17
-A	Corrected Note on the page 10	2014-06-20

Annex F: Further Information

Glossary

BW	-	Bandwidth
DTS	-	Distributed Transmission System
DUT	-	Device under Test
EUT	-	Equipment under Test
FCC	-	Federal Communication Commission
FCC ID	-	Company Identifier at FCC
HW	-	Hardware
IC	-	Industry Canada
Inv. No.	-	Inventory number
LTE	-	Long Term Evolution
N/A	-	not applicable
PCE	-	Personal Consumption Expenditure
OET	-	Office of Engineering and Technology
RB	-	resource block(s)
SAR	-	Specific Absorption Rate
S/N	-	Serial Number
$SPLSR_i$	-	SAR-to-(peak-locations spacing) ratio
SW	-	Software
UNII	-	Unlicensed National Information Infrastructure
WPC	-	Wireless Passive Charger