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Libro 82, Folio 133, Hoja MA3729

ENAC ENSAYOS Nº 51/LE342

TEST REPORT (MODIFICATION 1)

REFERENCE STANDARDS:

FCC 47CFR Part 2.1093 (10-1-11 Edition)

NIE ..... :	39687RRF.001A1
Approved by (name / position & signature) ..... :	A. Llamas / RF Lab Manager
Elaboration date ..... :	2014-02-13

Firmado digitalmente por Alejandro Llamas Rodríguez
Fecha: 2014.02.14 11:26:03 +01'00'

Identification of item tested ..... :	BLACK
Trademark ..... :	Boeing
Model and/or type reference ..... :	Model: BLACK / Type: BLK1
Serial number ..... :	IMEI: 035891240080995, IMEI: 035891240081126
Other identification of the product ..... :	HW Version: 4.0.2 SW Version: 1.2.0 FCCID: H8V-BLK1
Features ..... :	Data/Voice GSM (Worldwide) at 850/900/1800/1900 Mhz (2G) Data/Voice UMTS/HSPA at 850/1800/2100MHz (3G) Data at LTE FDD band 1 (2100MHz), Band 4(1700MHz) and Band 17(700MHz) Bluetooth, WLAN, USB, HDMI, PDMI
Description ..... :	Smartphone.
Applicant ..... :	The Boeing Company
Address..... :	7700 Boston Blvd. Sprinfield, VA 22153
CIF/NIF/Passport..... :	N/A
Contact person:	Brian Chapman
Telephone / Fax..... :	703.270.6714
e-mail: ..... :	brian.s.chapman@boeing.com
Test samples supplier ..... :	Same as applicant
Manufacturer ..... :	Same as applicant

Test method requested .....:	See Standard
Standard .....:	1. FCC 47 CFR Part 2.1093. Radiofrequency radiation exposure evaluation: portable devices. 2. FCC OET KDB 450824 – SAR Probe Calibration and System Verification Considerations for measurements at 150 MHz – 3 GHz (January 2007). 3. FCC OET KDB 941225 D03 – Recommended SAR Test Reduction Procedures for GSM/GPRS/EDGE. 4. FCC OET KDB 941225 D01 – SAR Measurement Procedures for 3G Devices (October 2007). 5. FCC OET KDB 941225 D02 – SAR Guidance for HSPA, HSPA^{+}, DC-HSPA and 1x Advanced (May 2013). 6. FCC OET KDB 248227 – SAR Measurements Procedures 802.11a/b/g Transmitters (May 2007 – Revised). 7. FCC OET KDB 941225 D05 – SAR Evaluation Considerations for LTE Devices (May 2013). 8. FCC OET KDB 648474 D01 – SAR Evaluation Considerations for Handsets with Multiple Transmitters and Antennas (Sept 2008).
Test procedure .....:	PERF019.
Non-standardized test method .....:	N/A
Used instrumentation .....:	1. Dosimetric E-field probe SPEAG ES3DV3 2. Data acquisition device SPEAG DAE4 3. Electro-optical converter SPEAG EOC3 4. 750 MHz dipole validation kit SPEAG D750V3 5. 900 MHz dipole validation kit SPEAG D900V2 6. 1800MHz dipole validation kit SPEAG D1800V2 7. 2000MHz dipole validation kit SPEAG D2000V2 8. 2450 MHz dipole validation kit SPEAG D2450V2 9. Robot STÄUBLI RX60BL 10. Robot controller STÄUBLI CM7MB 11. SAR measurement software SPEAG DASY52 V52.8.2.969 12. SAR postprocessing software SPEAG SEMCAD X 13. Measurement server SPEAG DASY5 SE UMS 011 BS 14. SAM head-body simulator SPEAG Twin SAM V4.0 15. Oval flat phantom SPEAG ELI 4 16. Head and Body Tissue Equivalent Liquids for 750 MHz, 900MHz, 1800MHz, and 2450MHz bands 17. Radio Communication Tester R&S CMU 200 18. Wideband Radio Communication Tester R&S CMW 500 19. Vector network analyzer Agilent FieldFox N9923A 20. Dielectric probe kit SPEAG DAK-3.5 21. Power meter R&S NRVD 22. Power sensor R&S NRV-Z51 23. Power sensor R&S NRV-Z1 24. RF Generator R&S SMU200A 25. DC Power supply R&S NGSM 32/10 26. Dual directional coupler NARDA FSCM 99899 27. Dual directional coupler HP 778D. 28. Power amplifier MITEQ AMF-4D-00400600-50-30P 29. Handset positioner SPEAG Device Holder
Report template No. .....:	FDT11_14

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Competences and guarantees

AT4 wireless is a testing laboratory accredited by the National Accreditation Body (ENAC -Entidad Nacional de Acreditación), to perform the tests indicated in the Certificate No. 51/LE 342.

In order to assure the traceability to other national and international laboratories, AT4 wireless has a calibration and maintenance programme for its measurement equipment.

AT4 wireless guarantees the reliability of the data presented in this report, which is the result of the measurements and the tests performed to the item under test on the date and under the conditions stated on the report and, it is based on the knowledge and technical facilities available at AT4 wireless at the time of performance of the test.

AT4 wireless is liable to the client for the maintenance of the confidentiality of all information related to the item under test and the results of the test.

General conditions

1. This report is only referred to the item that has undergone the test.
2. This report does not constitute or imply on its own an approval of the product by the Certification Bodies or competent Authorities.
3. This document is only valid if complete; no partial reproduction can be made without previous written permission of AT4 wireless.
4. This test report cannot be used partially or in full for publicity and/or promotional purposes without previous written permission of AT4 wireless and the Accreditation Bodies.

Uncertainty

Uncertainty (factor k=2) was calculated according to the following documents:

1. FCC OET Bulletin 65, Supplement C (Edition 01-01), “Evaluating Compliance with FCC Guidelines for Human Exposure to Radio Frequency Electromagnetic Fields”.
2. FCC OET KDB 865664 – SAR Measurements Requirements for 3-6 GHz (October 2006).

Usage of samples

Samples undergoing test have been selected by: **the client**.

Sample M/01 is composed of the following elements:

Control Nº	Description	Model	IMEI	Date of reception
39687/76	Handset	PureSecure	035891240080995	2013-07-02
39687/42	Battery	--	--	2013-08-28
39687/47	Battery			2013-08-28
39687/123	Battery			2013-08-28

Sample M/02 is composed of the following elements:

Control Nº	Description	Model	IMEI	Date of reception
39687/27	Handset	PureSecure	035891240081126	2013-07-02
39687/42	Battery	--	--	2013-08-28
39687/47	Battery			2013-08-28
39687/123	Battery			2013-08-28

1. Sample M/01 has undergone the test(s) specified in subclause “Test method requested”: Conducted average output power.
2. Sample M/02 has undergone the test(s) specified in subclause “Test method requested”: SAR evaluation for 2G, 3G, LTE and 802.11 b/g modes.

Testing period

The performed test started on 2013-08-12 and finished on 2014-01-15.

The tests have been performed at AT4 wireless.

Environmental conditions

In the chamber for measurements, the following limits were not exceeded during the test:

Temperature	Min. = 19.25 ºC Max. = 24.41 ºC
Relative humidity	Min. = 48.86 % Max. = 68.12 %

Modifications to the reference test report

It was introduced the following modifications in respect to the test report 39687RRF.001 related with the same samples, in the next clauses and sub-clauses:

CLAUSES / SUB-CLAUSES	MODIFICATION	JUSTIFICATION
Appendix A.2.1. Measurement System	Detailed measurement system information has been included.	Information requested.
Appendix B. 1.3. Test signal, Output Power and Frequencies.	Antenna separation distances have been updated.	Information updated.
Appendix B. 2.Conducted Average Power Measurements.	Detailed conducted average power measurements settings have been included.	Information requested.
Appendix B. 3.Tissue Parameters Measurements.	SAR dielectric parameters for 835 MHz, 1750 MHz and 1900 MHz have been included.	Information requested.
Appendix B. 3.Tissue Parameters Measurements	Composition/Information of Tissue simulation liquids has been included.	Information requested.
Appendix B. 4. System Validation Measurements	Validation results for 1800 Band for Body TSL Variability measurements.	Information updated.
Appendix B. 5. Measurement result for SAR	All SAR results have benn updated and Max SAR results have been scaled to maximum tune-up tolerance.	Information updated.
Appendix B. 5. Measurement result for SAR	Variability measurements have been included.	Information updated.
Appendix C: Measurement Reports.	Correct communication system for some GPRS and LTE Bands have been updated.	Information updated.
Appendix C: Measurement Reports.	Date of measurement in all plots have been included.	Information requested.
Appendix D: System Validation Reports.	System Validation plots have been included.	Information requested.
Appendix E: Variability Reports	Variability plots have been included.	Information requested.
Appendix G: Photographs.	Appendix eliminated. Photographs included in a separated document.	Action requested.

Summary

Considering the results of the performed test according to FCC 47CFR Part 2.1093, the item under test is **IN COMPLIANCE** with the requested specifications specified in the standards.

The maximum 1g volume averaged SAR found during this test has been 1.19 W/kg, for body position and LTE Band 4 (1 RB, 20MHz, QPSK mode)

NOTE: The results presented in this Test Report apply only to the particular item under test established in page 1 of this document, as presented for test on the date(s) shown in section, "USAGE OF SAMPLES, TESTING PERIOD AND ENVIRONMENTAL CONDITIONS".

Remarks and comments

1: Testing of the lowest and highest channels is not necessary according to the FCC OET 941225 D03 "Recommended SAR Test Reduction Procedures for GSM/GPRS/EDGE".

2: GSM, GPRS and EDGE mode tested only for one position due to testing reductions mentioned in FCC OET KDB 941225 D03 – Recommended SAR Test Reduction Procedures for GSM/GPRS/EDGE.

3: Testing of EDGE mode is not required according to FCC OET KDB 941225 D03 – Recommended SAR Test Reduction Procedures for GSM/GPRS/EDGE.

4: Testing of HSDPA mode is not required according to FCC OET KDB 941225 D01 – SAR Measurement Procedures for 3G Devices (October 2007).

4: Testing of other channels in each band is optional when the maximum output channel SAR fulfils the testing reductions mentioned in FCC OET KDB 248227 – SAR Measurements Procedures 802.11a/b/g Transmitters (May 2007 – Revised), paragraph "Frequency Channel Configurations".

5: Testing 802.11g and 802.11n is not required due to the testing reductions mentioned in FCC OET KDB 248227 – SAR Measurements Procedures 802.11a/b/g Transmitters (May 2007 – Revised), paragraph "Frequency Channel Configurations".

6: Testing other channels is not required due to the testing reduction mentioned in FCC OET KDB 941225 D05 – SAR Evaluation Considerations for LTE Devices (May 2013).

7: Testing of Bluetooth mode is not required according to FCC OET KDB 447498 D01 General RF Exposure Guidance v05r01, paragraph "4.3.1. Standalone SAR test exclusion considerations Individual Transmitters".

8: Zoom scan is not required due to Area scan based 1-g estimation mention in FCC 447498 D01 – General Exposure Guidance (May 2013).

Testing verdicts	
Not applicable	: NA
Pass.....	: P
Fail	: F
Not measured.....	: NM

700 MHz band

FCC 47CFR Part 2.1093 Paragraph	VERDICT			
	NA	P	F	NM
(d)(2) LTE Band 17		P		

850 MHz band

FCC 47CFR Part 2.1093 Paragraph	VERDICT			
	NA	P	F	NM
(d)(2) GSM		P		
(d)(2) GPRS		P		
(d)(2) EDGE				NM[3]
(d)(2) WCDMA Band V		P		
(d)(2) HSDPA and HSDPA$^+$ Band V				NM[4]

3 and 4: See Remarks and Comments.

1900 MHz band

FCC 47CFR Part 2.1093 Paragraph	VERDICT			
	NA	P	F	NM
(d)(2) GSM		P		
(d)(2) GPRS		P		
(d)(2) EDGE				NM[3]
(d)(2) WCDMA Band II		P		
(d)(2) HSDPA and HSDPA$^+$ Band II				NM[4]
(d)(2) LTE Band 4		P		

3 and 4: See Remarks and Comments.

2450 MHz band

FCC 47CFR Part 2.1093 Paragraph	VERDICT			
	NA	P	F	NM
(d)(2) 802.11b		P		
(d)(2) 802.11g				NM[5]
(d)(2) 802.11n				NM[5]
(d)(2) Bluetooth				NM[7]

5 and 7: See Remarks and Comments.

FCC 47CFR Part 2.1093 Paragraph	VERDICT			
	NA	P	F	NM
(d)(2) Simultaneous multi-band transmission		P		

APPENDIX A: Test Configuration

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1. GENERAL INTRODUCTION

1.1. Application Standard

The Federal Communications Commission (FCC) sets the limits for General Population / Uncontrolled exposure to radio frequency electromagnetic fields for transmitting devices designed to be used within 20 centimetres of the body of the user under FCC 47 CFR Part 2.1093 - "Radiofrequency radiation exposure evaluation: portable devices", paragraph (d)(2).

1.2. General requirements

The SAR measurement has been performed continuing the following considerations and environment conditions:

- The ambient temperature shall be in the range of 18ºC to 25ºC and the variation shall not exceed +/-2ºC during the test.
- The ambient humidity shall be in the range of and 30% - 70%.
- The device battery shall be fully charged before each measurement.

1.3. Measurement system requirements

The measurement system used for SAR tests fulfils the procedural and technical requirements described at the reference standards used.

1.4. Phantom requirements

The phantom is a simplified representation of the human anatomy and comprised of material with electrical properties similar to the corresponding tissues in human body. The human model has the following proportions:

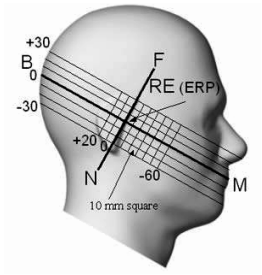


Figure 1: Proportions of Phantom

The shell model is a shaped container and it has the representation shown in the following figure:

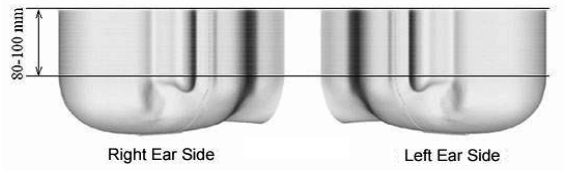


Figure 2: Proportions and shape of Phantom shell

The phantom model for body worn is an elliptical open-top container with a flat bottom, with the following shape and dimension:

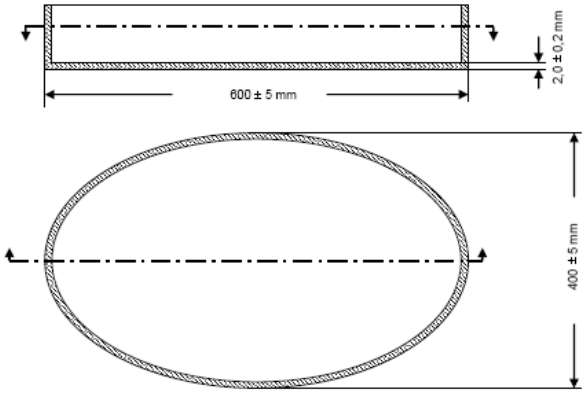


Figure 3: Proportions and shape of Phantom shell

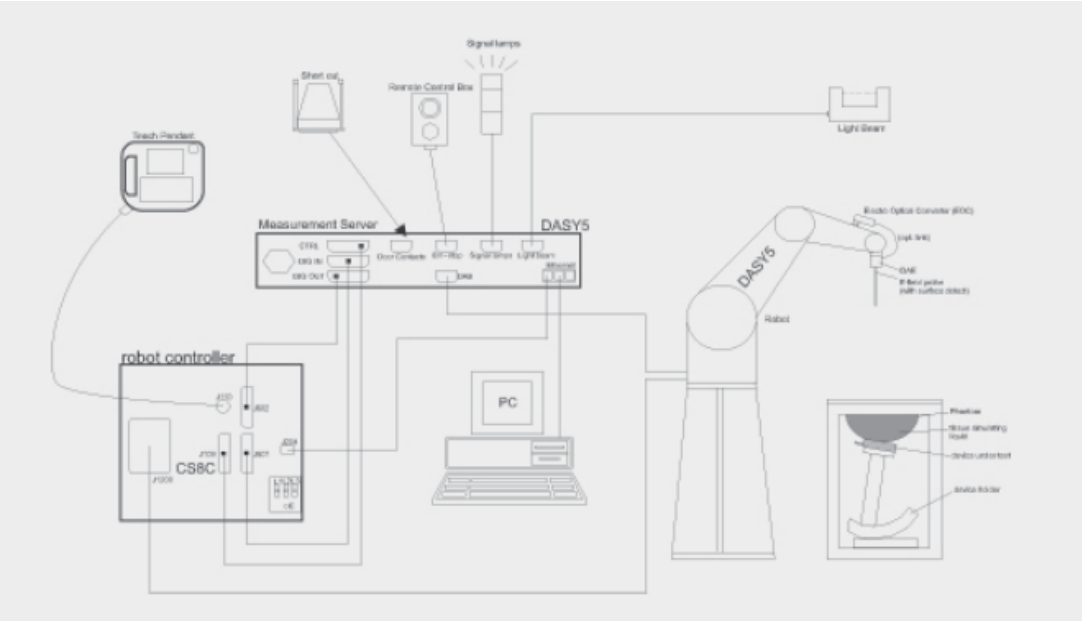
1.5. Measurement Liquids requirements.

The liquids used to simulate the human tissues, must fulfils the requirements of the dielectric properties required. These target dielectric properties per FCC OET KDB 450824 instructions come from the dipole and probe calibration data which are included in Appendix B, Section 3, of this document.

2. MEASUREMENT SYSTEM

2.1. Measurement System

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



- A standard high precision 6-axis robot (Stäubli TX=RX family) with controller, teach pendant and software. An arm extension for accommodating the data acquisition electronics (DAE).
- An isotropic field probe optimized and calibrated for the targeted measurement.
- A data acquisition electronics (DAE) which performs the signal amplification, signal multiplexing, AD-conversion, offset measurements, mechanical surface detection, collision detection, etc. The unit is battery powered with standard or rechargeable batteries. The signal is optically transmitted to the EOC.
- The Electro-optical converter (EOC) performs the conversion from optical to electrical signals for the digital communication to the DAE. To use optical surface detection, a special version of the EOC is required. The EOC signal is transmitted to the measurement server.
- The function of the measurement server is to perform the time critical tasks such as signal filtering, control of the robot operation and fast movement interrupts.
- The Light Beam used is for probe alignment. This improves the (absolute) accuracy of the probe positioning.
- A computer running Win7 profesional operating system and the DASY5 software.
- Remote control and teach pendant as well as additional circuitry for robot safety such as warning lamps, etc.
- The phantom, the device holder and other accessories according to the targeted measurement.

Manufacturer	Device	Type
Schmid & Partner Engineering AG	Dosimetric E-Field Probe	ES3DV3
Schmid & Partner Engineering AG	Data Acquisition Electronics	DAE4
Schmid & Partner Engineering AG	Electro-Optical Converter	EOC3
Stäubli	Robot	RX60BL
Stäubli	Robot controller	CS7MB
Schmid & Partner Engineering AG	Measurement Server	DASY5 SE UMS 011 BS
Schmid & Partner Engineering AG	SAM head-body simulator	TWIN SAM V4.0
Schmid & Partner Engineering AG	Oval flat phantom	SPEAG ELI 4
Schmid & Partner Engineering AG	Handset Positioner	SD000 HD1HA
Schmid & Partner Engineering AG	Measurement Software	DASY52 V52.8.2.969
Schmid & Partner Engineering AG	Postprocessing Software	SEMCAD X
Rohde & Schwarz	RF Generator	SMU 200A
MITEQ	Power amplifier	AMF-4D-00400600-50-30P
Rohde & Schwarz	DC Power supply	NGSM 32/10
NARDA	Directional coupler	FSCM 99899
HP	Dual directional coupler	778D
Weinschel	6dB attenuator	75A-6-11
Rohde & Schwarz	Power Meter	NRVD
Rohde & Schwarz	Power Sensor	NRV-Z51
Rohde & Schwarz	Power Sensor	NRV-Z1
Schmid & Partner Engineering AG	750 MHz System Validation Dipole	D750V3
Schmid & Partner Engineering AG	900 MHz System Validation Dipole	D900V2
Schmid & Partner Engineering AG	1800 MHz System Validation Dipole	D1800V2
Schmid & Partner Engineering AG	2450 MHz System Validation Dipole	D2450V2
Agilent	Vector Network Analyser	FieldFox N9923A
Schmid & Partner Engineering AG	Dielectric Probe Kit	DAK-3.5
Rohde & Schwarz	Radio Communication Tester	CMU 200
Rohde & Schwarz	Wideband Radio Communication Tester	CMW 500

Table 1: Measurement Equipment

DOSIMETRIC E-FIELD PROBE

ES3DV3
Isotropic E-Field Probe for Dosimetric Measurements

	Symmetrical design with triangular core Interleaved sensors Built-in shielding against static charges PEEK enclosure material (resistant to organic solvents, e.g., DGBE)
Calibration	ISO/IEC 17025
Frequency	10 MHz to 4 GHz; Linearity: ± 0.2 dB (30 MHz to 4 GHz)
Directivity	± 0.2 dB in TSL (rotation around probe axis) ± 0.3 dB in TSL (rotation normal to probe axis)
Dynamic Range	5 µW/g to > 100 mW/g; Linearity: ± 0.2 dB
Dimensions	Overall length: 337 mm (Tip: 20 mm) Tip diameter: 3.9 mm (Body: 12 mm) Distance from probe tip to dipole centers: 2.0 mm

DATA ACQUISITION ELECTRONICS

DAE4 - Data Acquisition Electronics

	Signal amplifier, multiplexer, A/D converter, and control logic Serial optical link for communication with DASY4/5 embedded system (fully remote controlled) Two-step probe touch detector for mechanical surface detection and emergency robot stop
Measurement Range	-100 to +300 mV (16 bit resolution and two range settings: 4mV, 400mV)
Input Offset Voltage	< 5 µV (with auto zero)
Input Resistance	200 MOhm
Input Bias Current	< 50 fA

SAM HEAD-BODY SIMULATOR

Twin SAM

	The shell corresponds to the specifications of the Specific Anthropomorphic Mannequin (SAM) phantom defined in IEEE 1528 and IEC 62209-1. It enables the dosimetric evaluation of left and right hand phone usage as well as body mounted usage at the flat phantom region. A cover prevents evaporation of the liquid. Reference markings on the phantom allow the complete setup of all predefined phantom positions and measurement grids by teaching three points with the robot. Twin SAM V5.0 has the same shell geometry and is manufactured from the same material as Twin SAM V4.0, but has reinforced top structure.
Material	Vinylester, glass fiber reinforced (VE-GF)
Liquid Compatibility	Compatible with all SPEAG tissue simulating liquids (incl. DGBE type)
Shell Thickness	2 ± 0.2 mm (6 ± 0.2 mm at ear point)
Dimensions **(incl. Wooden Support)**	Length: 1000 mm Width: 500 mm Height: adjustable feet
Filling Volume	approx. 25 liters
Wooden Support	SPEAG standard phantom table

OVAL FLAT PHANTOM

ELI

Phantom for compliance testing of handheld and body-mounted wireless devices in the frequency range of 30 MHz to 6 GHz. ELI is fully compatible with the IEC 62209-2 standard and all known tissue simulating liquids. ELI has been optimized regarding its performance and can be integrated into our standard phantom tables. A cover prevents evaporation of the liquid. Reference markings on the phantom allow installation of the complete setup, including all predefined phantom positions and measurement grids, by teaching three points. The phantom is compatible with all SPEAG dosimetric probes and dipoles.

ELI V5.0 has the same shell geometry and is manufactured from the same material as ELI4, but has reinforced top structure.

Material	Vinylester, glass fiber reinforced (VE-GF)
Liquid Compatibility	Compatible with all SPEAG tissue simulating liquids (incl. DGBE type)
Shell Thickness	2.0 ± 0.2 mm (bottom plate)
Dimensions	Major axis: 600 mm Minor axis: 400 mm
Filling Volume	approx. 30 liters
Wooden Support	SPEAG standard phantom table

HANDSET POSITIONER

Mounting Device for Hand-Held Transmitters

In combination with the Twin SAM V5.0/V5.0c or ELI Phantoms, the Mounting Device for Hand-Held Transmitters enables rotation of the mounted transmitter device to specified spherical coordinates. At the heads, the rotation axis is at the ear opening. Transmitter devices can be easily and accurately positioned according to IEC 62209-1, IEEE 1528, FCC, or other specifications. The device holder can be locked for positioning at different phantom sections (left head, right head, flat).

Material: Polyoxymethylene (POM)

DIPOLES

System Validation Kits 300 MHz – 6 GHz

Symmetrical dipole with I/4 balun
Enables measurement of feedpoint impedance with NWA
Matched for use near flat phantoms filled with tissue simulating solutions

Calibration	ISO/IEC 17025		
Frequency	300, 400, 450, 600, 733, 750, 835, 850, 900, 1300, 1450, 1500, 1640, 1750, 1800, 1900, 1950, 2000, 2100, 2300, 2450, 2550, 2600, 3000, 3300, 3500, 3700 MHz and D5GHz (5100-5800 MHz)		
Return Loss	> 20 dB at specified validation position		
Power Capability	> 100 W (f < 1GHz); > 40 W (f > 1GHz)		
Dimensions (length and overall height in mm)	**Product**	**Dipole length**	**Overall height**
	D750V3	179.0	330.0
	D900V2	148.5	340.0
	D1800V2	72.5	300.0
	D2000V2	65.0	300.0
	D2450V2	52.0	290.0
	D2600V2	49.2	290.0
	D5GHzV2	20.6	300.0

2.2. Test Positions of device relative to body

The standard FCC OET Bulletin 65, Supplement C (Edition 01-01) requires two test positions for the handset in the head. These positions are the "cheek" position and the “tilted” position. The tests positions used are described below. The handset should be tested in both positions (left and right sides) in the SAM phantom.

The EUT shall be placed in the Phantom in such way that the main point of the mobile terminal (acoustic output) coincides with the reference point located at the Phantom’s ear.

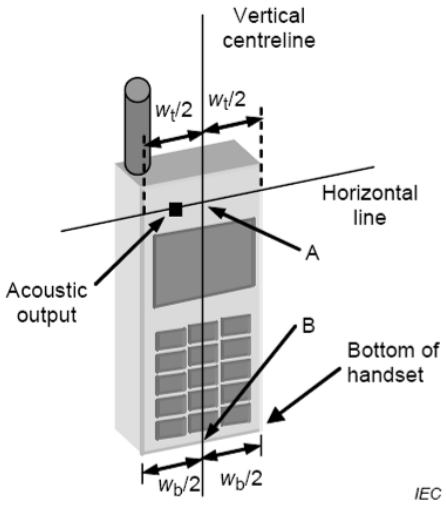


Figure 3: EUT’s basic scheme

SAR measurements will be performed for the following configurations as indicated in the reference standard:

- Right side of Phantom, Cheek position.
- Right side of Phantom, 15º Tilted position.
- Left side of Phantom, Cheek position.
- Left side of Phantom, 15º Tilted position.

Definition of the “cheek” position

The "cheek" position relative to Phantom is described as follows:

1. - Position the device with the vertical centre line of the body of the device and the horizontal line crossing the centre of the ear piece in a plane parallel to the sagital plane of the Phantom. While maintaining the device in this plane, aligning the centre line with the reference plane containing the three ear and mouth reference points (M, RE and LE).

2. - Translate the mobile phone box towards the Phantom until the ear-piece touches the ear reference point (RE or LE). While maintaining the device in the reference plane, move the bottom of the box until any point of the front side is in contact with the cheek of the Phantom.

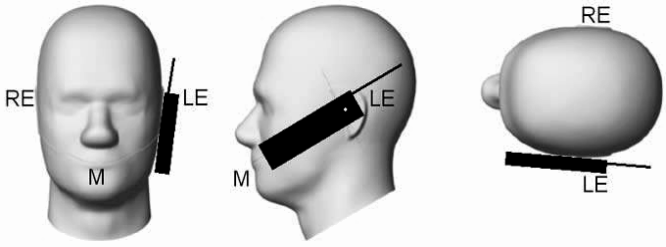


Figure 4: "Cheek" position of EUT

Definition of the tilted position:

The "15º tilted" position relative to Phantom is described as follows:

1. - Position the device in the "cheek" position described above.

2. - While maintaining the device in the reference plane described above and pivoting against the ear, move it outward away from the mouth by an angle of 15 degrees.

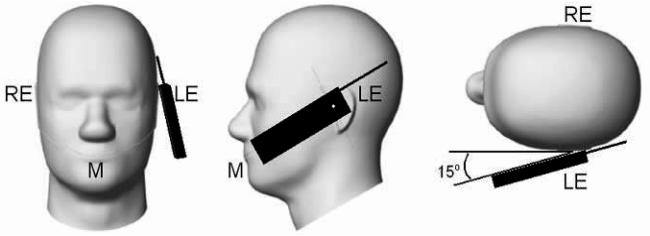


Figure 5: "Tilted" position of EUT

Also, according to the FCC OET Bulletin 65, Supplement C (Edition 01-01), for devices that are designed to operate in body-worn configurations SAR compliance should be evaluated using a flat phantom.

2.3. Test to be performed

Test shall be performed at both phone positions previously described, on each side of the head (left and right side) and using the centre frequency of each operating band.

Additionally, the configuration giving to the maximum mass averaged SAR shall be used to test the low-end and the high-end frequencies of each transmitting band. Thus, the tests to be performed in mobile phones are as follows:

- Measurements at Central Channel of application band:
  1. SAR measurement at the left side of Phantom and the cheek position of the EUT.
  2. SAR measurement at the left side of Phantom and the tilted 15º position of the EUT.
  3. SAR measurement at the right side of Phantom and the cheek position of the EUT.
  4. SAR measurement at the right side of Phantom and the tilted 15º position of the EUT.
- Measurements at Low Channel of application band:

  SAR measurement at the side and position where the maximum SAR level, measured at Central channel, was found.
- Measurements at High Channel of application band:

  SAR measurement at the side and position where the maximum SAR level, measured at Central channel, was found.

As noted above, measurements shall be performed using a flat phantom for body worn configuration. EUT will be placed at the center of flat phantom. The EUT position using during the body SAR tests will be that where maximum peak SAR was found. Low and high channels for each band should be tested at this position.

If the mobile phone is also designed to transmit with other configurations (antenna fully extended/retracted, keypad cover opened/closed…), all tests described above shall be performed for each configuration. When considering multi-mode and multi-band mobile phones, all of the above tests shall be performed at each transmitting mode/band with the corresponding maximum peak power level.

2.4. Description of interpolation/extrapolation scheme

The local SAR inside the Phantom is measured using small dipole sensing elements inside a probe element. The probe tip must not be in contact with the Phantoms surface in order to minimise measurement errors, but the highest local SAR is obtained from measurements at a certain distances from the shell trough extrapolation. The accurate assessment of the maximum SAR averaged over 1gr. requires a very fine resolution in the three dimensional scanned data array. Since the measurements have to be performed over a limited time, the measured data have to be interpolated to provide an array of sufficient resolution.

The interpolation of 2D area scan is used after the initial area scan, at a fixed distance from the Phantom shell wall. The initial scan data are collected with approx. 15 mm spatial resolution and this interpolation is used to find the location of the local maximum for positioning the subsequent 3D scanning to within a 1mm resolution.

For the 3D scan, data are collected on a spatially regular 3D grid having 5 mm steps in both directions. After the data collection by the SAR probe, the data are extrapolated in the depth direction to assign values to points in the 3D array closer to the shell wall. A notional extrapolation value is also assigned to the first point outside the shell wall so that subsequent interpolation schemes will de applicable right up to the shell wall boundary.

2.5. Determination of the largest peak spatial-average SAR

To determine the maximum value of the peak spatial-average SAR of a EUT, all device positions, configurations and operational modes should be tested for each frequency band.

According to FCC OET Bulletin 65, Supplement C (Edition 01-01), the averaging volume shall be chosen as 1gr. of contiguous tissue. The cubic volumes, over which the SAR measurements are averaged after extrapolation and interpolation, are chosen in order to include the highest values of local SAR.

The maximum SAR level for the EUT will be the maximum level obtained of the performed measurements, and indicated in the previous points.

2.6. System Validation

Prior to the SAR measurements, system verification is done daily to verify the system accuracy. FCC OET Bulletin 65 – Supplement C, Appendix D “SAR measurement procedures” Paragraph “System Verification” specifies, a complete SAR evaluation is done using a half-wavelength dipole as source with the frequency of the mid-band channel of the operating band, or within 10% of this channel.

The measured one-gram SAR should be within 10% of the expected target values specified in the calibration certificate of the dipole, for the specific tissue and frequency used.

3. UNCERTAINTY

Uncertainty for 300 MHz – 3 GHz

ERROR SOURCES	Uncertainty value (± %)	Probability distribution	Divisor	(c_i) 1g	(c_i) 10g	Standard uncertainty (1g) (± %)	Standard uncertainty (10g) (± %)
Measurement Equipment							
Probe Calibration	6.550	N	1	1	1	6.550	6.550
Isotropy	7.558	R	√3	1	1	4.364	4.364
Linearity	4.700	R	√3	1	1	2.714	2.714
Probe modulation response	2.300	R	√3	1	1	1.328	1.328
Detection limits	0.250	R	√3	1	1	0.144	0.144
Boundary effect	2.000	R	√3	1	1	1.155	1.155
Readout electronics	0.300	N	1	1	1	0.300	0.300
Response time	0.000	R	√3	1	1	0.000	0.000
Integration time	1.900	R	√3	1	1	1.097	1.097
RF Ambien conditions - noise	3.000	R	√3	1	1	1.732	1.732
RF Ambien conditions – reflections	3.000	R	√3	1	1	1.732	1.732
Probe positioner mech. restrictions	0.400	R	√3	1	1	0.231	0.231
Probe positioning with respect to phantom shell	6.700	R	√3	1	1	3.868	3.868
Post-processing	4.000	R	√3	1	1	2.309	2.309
Test Sample Related							
Device holder uncertainty	2.900	N	1	1	1	2.900	2.900
Test sample positioning	3.600	N	1	1	1	3.600	3.600
Drift of output power	5.000	R	√3	1	1	2.887	2.887
Phantom and Setup							
Phantom uncertainty (shape and thickness tolerances)	7.900	R	√3	1	1	4.561	4.561
Algorithm for correcting SAR for deviations in permittivity and conductivity	1.900	N	1	1	0.84	1.900	1.596
Liquid conductivity (meas.)	3.350	N	1	0.78	0.71	2.613	2.379
Liquid permittivity (meas.)	1.500	N	1	0.23	0.26	0.345	0.390
Liquid conductivity – temperature uncertainty	0.440	R	√3	0.78	0.71	0.198	0.180
Liquid permittivity – temperature uncertainty	3.120	R	√3	0.23	0.26	0.414	0.468
Combined standard uncertainty	$u_c = \sqrt{\sum_{1=1}^{m} c_i^2 \cdot u_i^2}$					**12.70**	**12.62**
Expanded uncertainty (confidence interval of 95%)	*ue =2.00 uc*					**25.40**	**25.23**

Table 2: Uncertainty Assessment for 300 MHz - 3 GHz

4. SAR LIMIT

Having a worst case measurement, the SAR limit is valid for general population/uncontrolled exposure.

The SAR values have to be averaged over a mass of 1 gr. ($SAR_{1\ gr.}$) with the shape of a cube. This level couldn't exceed the values indicated in the application Standard:

Standard	SAR	SAR Limit (W/Kg)
FCC 47 CFR Part 2.1093 Paragraph (d)(2)	$SAR_{1\ gr.}$	1.6

Table 3: SAR limit

APPENDIX B: Test results

INDEX

1. TEST CONDITIONS

1.1. Power supply (V):

V_n = 3.7 Li-polymer rechargeable battery
Type of power supply = DC Voltage from rechargeable Li-Ion 3.7 V battery.

1.2. Temperature (ºC):

T_n = +19.25 to +24.41 ºC
The subscript n indicates normal test conditions.

1.3. Test signal, Output Power and Frequencies

For the GSM/GPRS/EDGE and WCDMA modes, the sample (**IMEI: 035891240081126)** was put into operation by using a R&S CMU 200 as base station simulator.

For the LTE operational mode, the device was put into operation by using a R&S CMW 500 as base station simulator.

The output power of the device was set to Power Control Level (PCL) maximum for all tests.

For the 802.11b/g/n, the device was put into operation by using a manufacturer proprietary test mode, setting the maximum output power for each mode. For 802.11b/g/n mode, the duty factor is set to maximum (aprox. 100%).

A fully charged battery was used for every test sequence.

In all operating bands and test position, the measurements were performed on middle channels. In each band, for those positions with the maximum averaged SAR was found, measurements were performed on lowest and highest channels except those with applicable test reductions [1, 2, 4,5,6].

1, 2, 4, 5 and 6: See remarks and comments

The maximum time-average conducted power of the device for each mode was measured with a Power meter R&S NRVD and a thermocoupled power sensor NRV-Z51.

The actual SAR samples does not have accessible antenna connectors for conducted measurements, so the conducted average output power was measured using another identical sample (**IMEI 035891240080995)** provided by the manufacturer with auxiliary external connectors that makes the measurements representative and applicable for all the tested samples. See ‘usage of samples’ paragraph of this report.

Simultaneous transmission evaluation was performed following the FCC OET KDB 648474 D01 – SAR Evaluation Considerations for Handsets with Multiple Transmitters and Antennas (Sept 2008), the EUT only admits simultaneous operation in 802.11 b/g/n mode with the other ones. The detailed simultaneous transmission combination is:

	GSM / GPRS / EDGE	WCDMA / HSDPA	LTE	802.11b/g/n	Bluetooth
GSM / GPRS / EDGE		Not supported	Not supported	Supported	Supported
WCDMA / HSDPA	Not supported		Not supported	Supported	Supported
LTE	Not supported	Not supported		Supported	Supported
802.11b/g/n	Supported	Supported	Supported		Not Supported

The distances between antennas are (please check the antennas location diagram in the appendix D):

- WIFI/BT and Main antenna → 9.0 cm.
- WIFI/BT and Diversity antenna → 7.0 cm.
- Main and Diversity antenna → 5.0 cm.

1.4. EUT and test-site configurations.

For both modes, voice modes (GSM, WCDMA, LTE) and only-data modes (GPRS, EDGE, HSPA+, 802.11b/g/n), the EUT was tested over head and body worn exposure conditions.

For head tests, the EUT was placed in cheek and tilt position on the right/left side of the SAM phantom.

For body worn tests, the EUT was placed in each edge position against the flat phantom surface.

The separation distance between EUT and flat phantom surface was 10 mm, declared by the manufacturer as the minimum operating distance for body-worn use

2. CONDUCTED AVERAGE POWER MEASUREMENTS

2.1. GSM/GPRS/EGPRS Bands

- GSM 850: For voice mode PCL 5 was set in the CMU-200 to allow DUT's max power transmission.

Conducted Average Power Measurement 2G: GSM850					
Channel Number	Frecuency (MHz)	Frame Average Output Power (dBm)	Average Burst Output Power (dBm)	PCL	Modulation
128	824.2	23.2	32.4	5	GMSK
190	836.6	23.1	32.3	5	GMSK
251	848.8	23.0	32.2	5	GMSK

- GPRS 850: For data mode. PCL 5, CS1 coding scheme and Gamma 3 were set in the CMU-200 to allow DUT's max power transmission for each slot.

GPRS 850 - Frame Average Output Power							
Channel Number	Frecuency (MHz)	Power (dBm) 1 Slot	Power (dBm) 2 Slot	Power (dBm) 3 Slot	Power (dBm) 4 Slot	PCL	Modulation
128	824.2	23.2	23.4	23.4	23.4	5	GMSK-CS1
190	836.6	23.0	23.3	23.3	23.3	5	GMSK-CS1
251	848.8	22.9	23.2	23.1	23.2	5	GMSK-CS1

GPRS 850 - Average Burst Output Power							
Channel Number	Frecuency (MHz)	Power (dBm) 1 Slot	Power (dBm) 2 Slot	Power (dBm) 3 Slot	Power (dBm) 4 Slot	PCL	Modulation
128	824.2	32.4	29.6	27.8	26.5	5	GMSK-CS1
190	836.6	32.2	29.5	27.7	26.4	5	GMSK-CS1
251	848.8	32.1	29.4	27.5	26.4	5	GMSK-CS1

- EGPRS 850: For data mode. PCL 8, MCS5 coding scheme and Gamma 6 were set in the CMU-500 to allow DUT's max power transmission for each slot.

EDGE 850 - Frame Average Output Power							
Channel Number	Frecuency (MHz)	Power (dBm) 1 Slot	Power (dBm) 2 Slot	Power (dBm) 3 Slot	Power (dBm) 4 Slot	PCL	Modulation
128	824.2	16.2	18.1	20.2	20.1	8	8PSK-MCS5
190	836.6	16.1	18.1	20.2	20.0	8	8PSK-MCS5
251	848.8	15.9	18.1	20.2	19.9	8	8PSK-MCS5

EDGE 850 - Average Burst Output Power							
Channel Number	Frecuency (MHz)	Power (dBm) 1 Slot	Power (dBm) 2 Slot	Power (dBm) 3 Slot	Power (dBm) 4 Slot	PCL	Modulation
128	824.2	25.3	24.3	24.7	23.3	8	8PSK-MCS5
190	836.6	25.2	24.3	24.6	23.1	8	8PSK-MCS5
251	848.8	25.1	24.3	24.6	23.1	8	8PSK-MCS5

- GSM 1900: For voice mode PCL 0 was set in the CMU-200 to allow DUT's max power transmission.

Conducted Average Power Measurement 2G: GSM 1900					
Channel Number	Frecuency (MHz)	Frame Average Output Power (dBm)	Average Burst Output Power (dBm)	PCL	Modulation
512	1850.2	19.7	28.9	0	GMSK-CS1
661	1880	19.6	28.8	0	GMSK-CS1
810	1909.8	19.3	28.4	0	GMSK-CS1

- GPRS1900: For data mode. PCL 0, CS1 coding scheme and Gamma 3 were set in the CMU-200 to allow max power transmission for each slot.

GPRS 1900 - Frame Average Output Power							
Channel Number	Frecuency (MHz)	Power (dBm) 1 Slot	Power (dBm) 2 Slot	Power (dBm) 3 Slot	Power (dBm) 4 Slot	PCL	Modulation
512	1850.2	19.7	20.6	20.2	19.8	0	GMSK-CS1
661	1880	19.5	20.5	20.1	19.7	0	GMSK-CS1
810	1909.8	19.3	20.3	20.0	19.6	0	GMSK-CS1

GPRS 1900 - Average Burst Output Power							
Channel Number	Frecuency (MHz)	Power (dBm) 1 Slot	Power (dBm) 2 Slot	Power (dBm) 3 Slot	Power (dBm) 4 Slot	PCL	Modulation
512	1850.2	28.9	26.8	24.6	23.0	0	GMSK-CS1
661	1880	28.7	26.7	24.5	22.9	0	GMSK-CS1
810	1909.8	28.5	26.5	24.4	22.7	0	GMSK-CS1

- EGPRS 1900: For data mode, PCL 2, MCS5 coding scheme and Gamma 5 were set in the CMU-200 to allow max power transmission for each slot.

EDGE 1900 - Frame Average Output Power							
Channel Number	Frecuency (MHz)	Power (dBm) 1 Slot	Power (dBm) 2 Slot	Power (dBm) 3 Slot	Power (dBm) 4 Slot	PCL	Modulation
512	1850.2	14.1	16.3	16.3	17.6	2	8PSK-MCS5
661	1880	14.1	16.3	16.3	17.5	2	8PSK-MCS5
810	1909.8	13.9	16.2	16.2	17.3	2	8PSK-MCS5

EDGE 1900 - Average Burst Output Power							
Channel Number	Frecuency (MHz)	Power (dBm) 1 Slot	Power (dBm) 2 Slot	Power (dBm) 3 Slot	Power (dBm) 4 Slot	PCL	Modulation
512	1850.2	23.3	22.5	20.8	20.8	2	8PSK-MCS5
661	1880	23.3	22.5	20.8	20.7	2	8PSK-MCS5
810	1909.8	23.1	22.4	20.6	20.4	2	8PSK-MCS5

2.2. WCDMA/HSDPA/HSPA/HSPA+ Bands

- **WCDMA:** The DUT supports power Class 3, with a nominal maximum output power of 24 dBm (+1.7/-3.7). The tests were completed according to 3GPP TS31.121-1 test requirements.

Mode	Subtest	Rel99
WCDMA	Loopback Mode	Test Mode 1
	Rel99 RMC	12,2Kbps RMC
	Power Control Algorithm	Algorithm2
	βc/βd	8/15

Band	Mode	CH	Freq	Average Output Power (dBm)
FDD II 1900	WCDMA	9262	1852.4	22.2
FDD II 1900	WCDMA	9400	1880	22.05
FDD II 1900	WCDMA	9538	1907.6	21.87

Band	Mode	CH	Freq	Average Output Power (dBm)
FDD V 850	WCDMA	4132	826.4	22.97
FDD V 850	WCDMA	4182	836.4	22.76
FDD V 850	WCDMA	4233	846.6	22,57

- **HSDPA:**

Mode	Subtest	1	2	3	4
HSDPA	Loopback Mode	Test Mode 1			
	Rel99 RMC	12,2Kbps RMC			
	HSDPA FRC	H-Set1			
	HSUPA Test	HSUPA Loopback			
	Power Control Algorithm	Algorithm 2			
	βc	2/15	12/15	15/15	15/15
	βd	15/15	15/15	8/15	4/15
	Bd (SF)	64	64	64	
	βc/βd	2/15	12/15	15/8	15/4
	βhs	4/15	24/15	30/15	30/15
	CM (dB)	0	1	1,5	1,5
	Dack	8			
	Dnak	8			
	Ack-Nack repetition factor	3			
	DCQI	8			
	CQI Feedback	4ms			
	CQI Repetition Factor	2			
	Ahs =βhs/βc	30/15			

				Average Output Power (dBm)			
Band	Mode	CH	Freq	Subtest 1 HSDPA	Subtest 2 HSDPA	Subtest3 HSDPA	Subtest 4 HSDPA
FDD II 1900	HSDPA	9262	1852.4	21.31	21.14	20.63	20.67
FDD II 1900	HSDPA	9400	1880	20.99	20.77	20.17	20.14
FDD II 1900	HSDPA	9538	1907.6	20.97	20.80	20.12	20.15

				Average Output Power (dBm)			
Band	Mode	CH	Freq	Subtest 1 HSDPA	Subtest 2 HSDPA	Subtest3 HSDPA	Subtest 4 HSDPA
FDD V 850	HSDPA	4132	826.4	21.92	21.77	21.11	21.23
FDD V 850	HSDPA	4182	836.4	21.69	21.54	20.93	20.97
FDD V 850	HSDPA	4233	846.6	21.47	21.19	20.78	20.84

- **HSPA:**

Mode	Subtest	1	2	3	4	5
HSPA	Loopback Mode	Test Mode 1				
	Rel99 RMC	12,2Kbps RMC				
	HSDPA FRC	H-Set1				
	HSUPA Test	HSUPA Loopback				
	Power Control Algorithm	Algorithm 2				
	βc	11/15	6/15	15/15	2/15	15/15
	βd	15/15	15/15	9/15	15/15	15/15
	βec	209/225	12/15	30/15	2/15	24/15
	βc/βd	11/15	6/15	15/9	2/15	15/15
	βhs	22/15	12/15	30/15	4/15	30/15
	βed	1309/225	94/75	47/15	56/75	134/15
	MPR (dB)	1.5	1.5	1.5	1.5	1.5
	Dack	8				
	Dnak	8				
	Ack-Nack repetition factor	3				
	DCQI	8				
	CQI Feedback	4ms				
	CQI Repetition Factor	2				
	Ahs =βhs/βc	30/15				
	AG Index	20	12	15	17	21
	ETFCI	75	67	92	71	81

				Average Output Power (dBm)				
Band	Mode	CH	Freq	Subtest 1 HSUPA	Subtest 2 HSUPA	Subtest3 HSUPA	Subtest 4 HSUPA	Subtest 5 HSUPA
FDD II 1900	HSPA	9262	1852.4	20.61	20.75	20.41	20.93	20.37
FDD II 1900	HSPA	9400	1880	20.52	20.77	20.52	20.84	20.31
FDD II 1900	HSPA	9538	1907.6	20.70	20.63	20.43	20.99	20.42

				Average Output Power (dBm)				
Band	Mode	CH	Freq	Subtest 1 HSUPA	Subtest 2 HSUPA	Subtest3 HSUPA	Subtest 4 HSUPA	Subtest 5 HSUPA
FDD V 850	HSPA	4132	826.4	21.04	21.15	20.71	21.33	20.67
FDD V 850	HSPA	4182	836.4	20.96	21.05	20.78	21.23	20.63
FDD V 850	HSPA	4233	846.6	20.72	20.81	20.44	20.98	20.41

- **HSPA+**

The DUT doesn't support 16QAM for uplink, so the uplink category and release was the same as HSPA, therefore the RF conducted power for HSPA+ was not measured.

2.3. Wi-Fi & Bluetooth (2.4 GHz)

		Average Conducted Power (dBm)		
Band	**Mode**	**CH Low**	**CH Mid**	**CH High**
2450 MHz	802.11b	12.61	12.86	13.18
	802.11g	8.95	9.56	9.80
	802.11n	6.68	7.30	7.56
	Bluetooth GFSK	5.10	5.73	6.30
	Bluetooth π/4 DQPSK	2.33	3.27	3.93
	Bluetooth 8 DPSK	2.32	3.27	3.92

2.4. LTE Bands.

Band	BW	Mode	Average Conducted Power (dBm)					
			CH Low		CH Mid		CH High	
			QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
LTE B4	20 MHz	1RB Low	20.47	19.19	22.33	21.14	22.11	20.91
		1RB Mid	22.19	20.99	21.97	20.8	22.16	20.97
		1RB High	22.24	21.03	22.25	21.06	20.38	19.17
		50% Low	20.44	19.42	21.11	20.11	21.18	20.18
		50% Mid	21.08	20.09	21.02	20.03	21.02	20.03
		50% High	21.32	20.32	21.03	20.02	20.38	19.39
		100%	20.98	19.89	21.18	20.13	20.91	19.87
LTE B4	15 MHz	1RB Low	20.96	20.12	22.18	21.01	22.13	21.32
		1RB Mid	22.13	21.33	21.93	20.8	22.15	21.36
		1RB High	22.35	21.55	22.05	20.89	21.02	20.23
		50% Low	20.58	19.57	21.12	20.11	21.18	20.23
		50% Mid	21.06	20.09	21.05	20.03	21.12	20.16
		50% High	21.3	20.3	21.04	20.03	20.69	19.75
		100%	21	20	21.18	20.18	21.09	20.06
LTE B4	10 MHz	1RB Low	21.43	20.57	22.09	20.91	22.16	21.37
		1RB Mid	22.15	21.34	21.87	20.7	22.13	21.33
		1RB High	22.32	21.49	22.06	20.9	21.34	20.57
		50% Low	20.85	19.83	21.02	20.02	21.19	20.17
		50% Mid	21.11	20.09	20.98	19.95	21.09	20.08
		50% High	21.22	20.19	20.98	19.98	20.81	19.83
		100%	21.07	20.06	21.08	20.07	21.04	20.06
LTE B4	5 MHz	1RB Low	21.93	21.17	22.08	21.03	22.2	21.46
		1RB Mid	22.2	21.45	21.88	20.82	22.17	21.43
		1RB High	22.17	21.43	22.08	21.02	21.86	21.15
		50% Low	21.09	20.09	21.05	20.05	21.22	20.24
		50% Mid	21.17	20.19	20.98	19.97	21.2	20.22
		50% High	21.21	20.23	21	20.01	21.11	20.12
		100%	21.07	20.07	20.98	19.99	21.11	20.1
LTE B4	3 MHz	1RB Low	22.06	21.25	22.07	20.89	21.46	22.18
		1RB Mid	22.17	21.37	21.87	20.7	21.43	22.1
		1RB High	22.19	21.39	22.02	20.83	21.15	21.99
		50% Low	21.15	20.23	21.02	19.97	20.24	21.22
		50% Mid	21.2	20.27	20.95	19.9	20.22	21.17
		50% High	21.23	20.31	20.96	19.91	20.12	21.11
		100%	21.16	20.17	20.98	19.96	20.15	21.16

Band	BW	Mode	Average Conducted Power (dBm)					
			CH Low		CH Mid		CH High	
			QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
LTE B4	1.4 MHz	1RB Low	22.15	21.33	22.03	21.16	22.17	21.37
		1RB Mid	22.18	21.38	22	21.09	22.13	21.34
		1RB High	22.19	21.4	22.01	21.14	22.09	21.29
		50% Low	22.17	21.06	21.92	20.85	22.21	21.08
		50% Mid	22.18	21.1	21.89	20.84	22.13	21.06
		50% High	22.21	21.1	21.89	20.81	22.11	21.05
		100%	21.28	20.29	21	20.04	21.23	20.27
LTE B17	10 MHz	1RB Low	18.81	17.87	22.06	21.12	21.94	21.08
		1RB Mid	21.72	20.85	21.89	20.98	21.09	20.24
		1RB High	21.74	20.87	21.84	20.9	14.26	16.6
		50% Low	19.68	18.48	20.43	19.2	20.34	19.16
		50% Mid	20.33	19.14	20.42	19.22	20.13	18.96
		50% High	20.41	19.21	20.45	19.26	18.57	17.35
		100%	19.86	18.53	20.2	19.26	19.34	18.1
LTE B17	5 MHz	1RB Low	21.45	20.61	21.8	20.6	21.92	21.08
		1RB Mid	21.77	20.92	21.87	20.67	21.05	20.24
		1RB High	21.72	20.91	21.97	20.85	20.62	19.81
		50% Low	20.37	19.27	20.52	19.44	20.39	19.3
		50% Mid	20.51	19.39	20.54	19.47	20.11	18.92
		50% High	20.6	19.49	20.6	19.51	19.72	18.54
		100%	20.31	19.11	20.42	19.24	19.86	18.68

3. TISSUE PARAMETERS MEASUREMENTS

Frequency (MHz)	Target Head Tissue: Parameters used in Probe Calibration		Target Head Tissue: Parameters used in Dipole Calibration		Measured Head Tissue		Measured Date
	Permittivity	Conductivity [S/m]	Permittivity	Conductivity [S/m]	Permittivity	Conductivity [S/m]	
750	41.9 ± 5%	0.89 ± 5%	42.0 ± 6%	0.90 ± 6%	40.96	0.92	2013-08-20
900	41.5 ± 5%	0.97 ± 5%	41.6 ± 6%	0.94 ± 6%	38.31*	1.02*	2013-09-02
1800	40.0 ± 5%	1.40 ± 5%	38.7 ± 6%	1.37 ± 6%	39.43	1.41	2013-09-03
2450	39.2 ± 5%	1.80 ± 5%	37.8 ± 6%	1.81 ± 6%	39.29	1.80	2013-08-19

Frequency (MHz)	Target Body Tissue: Parameters used in Probe Calibration		Target Body Tissue: Parameters used in Dipole Calibration		Measured Body Tissue		Measured Date
	Permittivity	Conductivity [S/m]	Permittivity	Conductivity [S/m]	Permittivity	Conductivity [S/m]	
750	55.5 ± 5%	0.96 ± 5%	55.1 ± 6%	0.98 ± 6%	54.96	1.00	2013-08-22
900	55.0 ± 5%	1.05 ± 5%	54.8 ± 6%	1.03 ± 6%	53.99	1.08	2013-08-29
1800	53.3 ± 5%	1.52 ± 5%	51.4 ± 6%	1.53 ± 6%	50.80	1.58	2013-08-23
2450	52.7 ± 5%	1.95 ± 5%	50.5 ± 6%	2.01 ± 6%	51.92	1.98	2013-08-14

Frequency (MHz)	Target Head Tissue: Parameters used in Probe Calibration		Target Head Tissue: Parameters used in Dipole Calibration		Measured Head Tissue		Measured Date)
	Permittivity	Conductivity [S/m]	Permittivity	Conductivity [S/m]	Permittivity	Conductivity [S/m]	
835	41.5 ± 5%	0.90 ± 5%	-	-	39.1*	0.98*	2013-09-02
1750	40.1± 5%	1.37 ± 5%	-	-	39.68	1.39	2013-09-03
1900	40.0± 5%	1.40 ± 5%	-	-	38.99	1.52*	2013-09-03

Frequency (MHz)	Target Body Tissue: Parameters used in Probe Calibration		Target Body Tissue: Parameters used in Dipole Calibration		Measured Body Tissue		Measured Date
	Permittivity	Conductivity [S/m]	Permittivity	Conductivity [S/m]	Permittivity	Conductivity [S/m]	
835	55.2 ± 5%	0.97 ± 5%	-	-	54.05	1.04*	2013-08-29
1750	53.4 ± 5%	1.49 ± 5%	-	-	50.98	1.56	2013-08-23
1900	53.3 ± 5%	1.52 ± 5%	-	-	50.52*	1.57	2013-08-23

Note: The dielectric properties have been measured by the contact probe method at 23° C.

Frequency (MHz)	Target Head Tissue for Probe Calibration		Measured Head Tissue		Measured Head Tissue Desviation		Measured Date
	Permittivity	Conductivity [S/m]	Permittivity	Conductivity [S/m]	Permittivity	Conductivity [S/m]	
750	41.9 ± 5%	0.89 ± 5%	40.96	0.92	-2.24 %	3.37 %	2013-08-20
900	41.5 ± 5%	0.97 ± 5%	38.31*	1.02*	-7.68 %	-5.15 %	2013-09-02
1800	40.0 ± 5%	1.40 ± 5%	39.43	1.41	- 1.43 %	0.71 %	2013-09-03
2450	39.2 ± 5%	1.80 ± 5%	39.29	1.80	- 3.57 %	0.56 %	2013-08-19

Frequency (MHz)	Target Body Tissue for Probe Calibration		Measured Body Tissue		Measured Body Tissue Desviation		Measured Date
	Permittivity	Conductivity [S/m]	Permittivity	Conductivity [S/m]	Permittivity	Conductivity [S/m]	
750	55.5 ± 5%	0.96 ± 5%	54.96	1.00	-0.97 %	4.17 %	2013-08-22
900	55.0 ± 5%	1.05 ± 5%	53.99	1.08	-1.84 %	-2.86 %	2013-08-29
1800	53.3 ± 5%	1.52 ± 5%	50.80	1.58	- 4.69 %	3.95 %	2013-08-23
2450	52.7 ± 5%	1.95 ± 5%	51.92	1.98	- 1.48 %	1.54 %	2013-08-14

Frequency (MHz)	Target Head Tissue for Probe Calibration		Measured Head Tissue		Measured Head Tissue Desviation		Measured Date)
	Permittivity	Conductivity [S/m]	Permittivity	Conductivity [S/m]	Permittivity	Conductivity [S/m]	
835	41.5 ± 10%	0.90 ± 10%	39.1*	0.98*	-5.78 %	8.16 %	2013-09-02
1750	40.1± 10%	1.37 ± 10%	39.68	1.39	-1.05 %	1.46 %	2013-09-03
1900	40.0± 10%	1.40 ± 10%	38.99	1.52*	- 2.52 %	8.57 %	2013-09-03

Frequency (MHz)	Target Body Tissue for Probe Calibration		Measured Body Tissue		Measured Body Tissue Desviation		Measured Date
	Permittivity	Conductivity [S/m]	Permittivity	Conductivity [S/m]	Permittivity	Conductivity [S/m]	
835	55.2 ± 10%	0.97 ± 10%	54.05	1.04*	-2.08 %	7.21 %	2013-08-29
1750	53.4 ± 10%	1.49 ± 10%	50.98	1.56	-4.53 %	4.70 %	2013-08-23
1900	53.3 ± 10%	1.52 ± 10%	50.52*	1.57	-5.21 %	3.28 %	2013-08-23

* DASY5 measurement system has a SAR error compensation algorithm documented in draft standard IEEE P1528-2011 to automatically compensate the measured SAR results for deviations between the measured and required tissue dielectric parameters, so according to “KDB 865664 D01 SAR measurement 100 MHz to 6 GHz v01”, the tolerance for εr and σ may be relaxed to ± 10%.

Frequency (MHz)	Target Body Tissue: Parameters used in Probe Calibration		Target Body Tissue: Parameters used in Dipole Calibration		Measured Body Tissue		Measured Date
	Permittivity	Conductivity [S/m]	Permittivity	Conductivity [S/m]	Permittivity	Conductivity [S/m]	
1800	53.3 ± 5%	1.52 ± 5%	51.4 ± 6%	1.53 ± 6%	50.78	1.57	2014-01-15

Frequency (MHz)	Target Body Tissue: Parameters used in Probe Calibration		Target Body Tissue: Parameters used in Dipole Calibration		Measured Body Tissue		Measured Date
	Permittivity	Conductivity [S/m]	Permittivity	Conductivity [S/m]	Permittivity	Conductivity [S/m]	
1750	53.4 ± 5%	1.49 ± 5%	-	-	50.97	1.52	2014-01-15
1900	53.3 ± 5%	1.52 ± 5%	-	-	50.85	1.57	2014-01-15

Frequency (MHz)	Target Body Tissue for Probe Calibration		Measured Body Tissue		Measured Body Tissue Desviation		Measured Date
	Permittivity	Conductivity [S/m]	Permittivity	Conductivity [S/m]	Permittivity	Conductivity [S/m]	
1800	53.3 ± 5%	1.52 ± 5%	50.78	1.57	- 4.72 %	3.29 %	2014-01-15

Frequency (MHz)	Target Body Tissue for Probe Calibration		Measured Body Tissue		Measured Body Tissue Desviation		Measured Date
	Permittivity	Conductivity [S/m]	Permittivity	Conductivity [S/m]	Permittivity	Conductivity [S/m]	
1750	53.4 ± 10%	1.49 ± 10%	50.97	1.52	-4.55%	2.01 %	2014-01-15
1900	53.3 ± 10%	1.52 ± 10%	50.58*	1.57	-5.10 %	3.29 %	2014-01-15

* DASY5 measurement system has a SAR error compensation algorithm documented in draft standard IEEE P1528-2011 to automatically compensate the measured SAR results for deviations between the measured and required tissue dielectric parameters, so according to “KDB 865664 D01 SAR measurement 100 MHz to 6 GHz v01”, the tolerance for εr and σ may be relaxed to ± 10%.

- Composition / Information on ingredients

Head and Muscle Tissue Simulation Liquids HSL750V2/MSL750V2

H2O	Water, 35 – 58%
Sucrose	Sugar, white, refined, 40 – 60%
NaCl	Sodium Chloride, 0 – 6%
Hydroxyethyl-cellulose	Medium Viscosity (CAS# 9004-62-0), <0.3%
Preventol-D7	Preservative: aqueous preparation, (CAS# 55965-84-9), containing 5-chloro-2-methyl-3(2H)-isothiazolone and 2-methyyl-3(2H)-isothiazolone, 0.1 – 0.7%

Head and Muscle Tissue Simulation Liquids HSL900/MSL900

H_2O	Water, 35 – 58%
Sucrose	Sugar, white, refined, 40 – 60%
NaCl	Sodium Chloride, 0 – 6%
Hydroxyethyl-cellulose	Medium Viscosity (CAS# 9004-62-0), <0.3%
Preventol-D7	Preservative: aqueous preparation, (CAS# 55965-84-9), containing 5-chloro-2-methyl-3(2H)-isothiazolone and 2-methyyl-3(2H)-isothiazolone, 0.1 – 0.7%

Head and Muscle Tissue Simulation Liquids HSL1800/MSL1800

H2O	Water, 52 – 75%
C8H18O3	Diethylene glycol monobutyl ether (DGBE), 25 – 48% (CAS-No. 112-34-5, EC-No. 203-961-6, EC-index-No. 603-096-00-8)
NaCl	Sodium Chloride, <1.0%

Head and Muscle Tissue Simulation Liquids HBBL1900-3800V3/M HBBL1900-3800V3

Water	50 – 73 %
Non-ionic detergents	27 – 50 % polyoxyethylenesorbitan monolaurate
NaCl	0 – 2 %
Preservative	0.05 – 0.1% Preventol-D7
Safety relevant ingredients:	
CAS-No. 55965-84-9	< 0.1 % aqueous preparation, containing 5-chloro-2-methyl-3(2H)-isothiazolone and 2-methyyl-3(2H)-isothiazolone
CAS-No. 9005-64-5	<50 % polyoxyethylenesorbitan monolaurate

4. SYSTEM VALIDATION MEASUREMENTS

4.1. Validation results in 750 MHz Band for Head TSL

SAR	Target SAR	Measured SAR	Drift (%)	Limit (%)	Sar 1g	Fast SAR 1g	±3%
1 gr.	8.49	8.35	-1.68	√	2.09	2.11	√
10 gr.	5.56	5.43	-2.31	√	1.36	-	-

4.2. Validation results in 750 MHz Band for Body TSL

SAR	Target SAR	Measured SAR	Drift (%)	± 10% Limit	Sar 1g	Fast SAR 1g	±3%
1 gr.	8.85	8.84	-0.08	√	2.22	2.28	√
10 gr.	5.88	5.86	-0.42	√	1.47	-	-

4.3. Validation results in 900 MHz Band for Head TSL

SAR	Target SAR	Measured SAR	Drift (%)	± 10% Limit	Sar 1g	Fast SAR 1g	±3%
1 gr.	10.70	11.50	7.45	√	2.93	2.96	√
10 gr.	6.85	7.18	4.83	√	1.83	-	-

4.4. Validation results in 900 MHz Band for Body TSL

SAR	Target SAR	Measured SAR	Drift (%)	± 10% Limit	Sar 1g	Fast SAR 1g	±3%
1 gr.	10.70	10.77	0.63	√	2.66	2.67	√
10 gr.	6.95	6.96	0.17	√	1.72	-	-

4.5. Validation results in 1800 MHz Band for Head TSL

SAR	Target SAR	Measured SAR	Drift (%)	± 10% Limit	Sar 1g	Fast SAR 1g	±3%
1 gr.	38.90	41.98	7.92	√	10.60	10.89	√
10 gr.	20.40	21.74	6.58	√	5.49	-	-

4.6. Validation results in 1800 MHz Band for Body TSL

SAR	Target SAR	Measured SAR	Drift (%)	± 10% Limit	Sar 1g	Fast SAR 1g	±3%
1 gr.	39.50	42.79	8.32	√	10.80	10.90	√
10 gr.	21.00	22.54	7.34	√	5.69	-	-

4.7. Validation results in 1800 MHz Band for Body TSL Variability

SAR	Target SAR	Measured SAR	Drift (%)	± 10% Limit	Sar 1g	Fast SAR 1g	±3%
1 gr.	39.50	42.73	8.19	√	10.70	10.80	√
10 gr.	21.00	22.60	7.64	√	5.66	-	-

4.8. Validation results in 2450 MHz Band for Head TSL

SAR	Target SAR	Measured SAR	Drift (%)	± 10% Limit	Sar 1g	Fast SAR 1g	± 3%
1 gr.	53.00	57.75	8.96	√	14.70	15.00	√
10 gr.	24.60	26.91	9.39	√	6.85	-	-

4.9. Validation results in 2450 MHz Band for Body TSL

SAR	Target SAR	Measured SAR	Drift (%)	± 10% Limit	Sar 1g	Fast SAR 1g	± 3%
1 gr.	51.10	53.16	4.03	√	13.50	13.15	√
10 gr.	23.90	25.32	5.94	√	6.43	-	-

5. MEASUREMENT RESULTS FOR SAR (SPECIFIC ABSORPTION RATE)

5.1. Summary maximum results for head measurements

Band	Mode	Side / Position	Channel (Frequency)	Measured SAR (1g avg) (W/Kg)	SAR limit (1g avg) (W/Kg)
750 MHz	LTE 17 1 RB 10 MHz QPSK	Right / Tilted	CH 23730 (710 MHz)	0.029	1.6
850 MHz	GSM	Left / Cheek	CH 190 (836.6 MHz)	0.051	1.6
	GPRS 1slot	Left / Cheek	CH 190 (836.6 MHz)	0.045	1.6
	GPRS 2 slots	Left / Cheek	CH 190 (836.6 MHz)	0.054	1.6
	GPRS 3 slots	Left / Cheek	CH 190 (836.6 MHz)	0.049	1.6
	GPRS 4 slots	Left / Cheek	CH 190 (836.6 MHz)	0.054	1.6
	WCDMA Band V	Left / Cheek	CH 4183 (836.6 MHz)	0.043	1.6
1800 MHz	LTE 4 1 RB 20 MHz QPSK	Right / Cheek	CH 20175 (1732.5 MHz)	0.174	1.6
1900 MHz	GSM	Left / Cheek	CH 661 (1880 MHz)	0.104	1.6
	GPRS 1 slot	Left / Cheek	CH 661 (1880 MHz)	0.100	1.6
	GPRS 2 slots	Left / Cheek	CH 661 (1880 MHz)	0.170	1.6
	GPRS 3 slots	Left / Cheek	CH 661 (1880 MHz)	0.131	1.6
	GPRS 4 slots	Left / Cheek	CH 661 (1880 MHz)	0.114	1.6
	WCDMA Band II	Left / Cheek	CH 9400 (1880.4 MHz)	0.171	1.6
2450 MHz	802.11b	Left / Cheek	CH 6 (2437 MHz)	0.014	1.6

5.2. Summary maximum results for body measurements

Band	Mode	Side / Position	Channel (Frequency)	Measured SAR (1g avg) (W/Kg)	SAR limit (1g avg) (W/Kg)
750 MHz	LTE 17 1RB 10 MHz QPSK	Back face 10 mm	CH 23790 (710 MHz)	0.204	1.6
850 MHz	GSM	Back face 10 mm	CH 190 (836.6 MHz)	0.263	1.6
	GPRS 1 slot	Back face 10 mm	CH 190 (836.6 MHz)	0.217	1.6
	GPRS 2 slots	Back face 10mm	CH 190 (836.6 MHz)	0.251	1.6
	GPRS 3 slots	Back face 10 mm	CH 190 (836.6 MHz)	0.310	1.6
	GPRS 4 slots	Back face 10 mm	CH 190 (836.6 MHz)	0.276	1.6
	WCDMA Band V	Bottom edge 10 mm	CH 4183 (836.6 MHz)	0.016	1.6
1800 MHz	LTE 4 1RB 20 MHz QPSK	Back face 10 mm	CH 20175 (1732.5 MHz)	1.19	1.6
1900 MHz	GSM	Back face 10mm	CH 661 (1880 MHz)	0.532	1.6
	GPRS 1 slot	Back face 10 mm	CH 661 (1880 MHz)	0.326	1.6
	GPRS 2 slots	Back face 10 mm	CH 661 (1880 MHz)	0.485	1.6
	GPRS 3 slots	Back face 10 mm	CH 661 (1880 MHz)	0.526	1.6
	GPRS 4 slots	Back face 10 mm	CH 661 (1880 MHz)	0.454	1.6
	WCDMA Band II	Back face 10 mm	CH 9262 (1852.4 Mhz)	1.02	1.6
2450 MHz	802.11b	Back face 10 mm	CH 11 (2462MHz)	0.021	1.6

5.3. Maximum Head SAR results scaled to maximum output power.

Band	Mode	Side / Position	Channel (Frequency)	Power (dBm)		SAR (W/Kg)	
				Tune-up Limit	Measured	Measured	Scaled
750 MHz	LTE 17 1RB 10 MHz QPSK	Right / Tilted	CH 23790 (710 MHz)	23.0	22.1	0.029	0.030
850 MHz	GSM	Left / Cheek	CH 190 (836,6 MHz)	33.0	32.3	0.051	0.061
	GPRS 1 slot	Left / Cheek	CH 190 (836,6 MHz)	33.0	32.2	0.045	0.054
	GPRS 2 slots	Left / Cheek	CH 190 (836,6 MHz)	30.5	29.5	0.054	0.068
	GPRS 3 slots	Left / Cheek	CH 190 (836,6 MHz)	28.8	27.7	0.049	0.063
	GPRS 4 slots	Left / Cheek	CH 190 (836,6 MHz)	27.5	26.4	0.054	0.069
	WCDMA Band V	Left / Cheek	CH 4183 (836,6 MHz)	24.0	22.8	0.043	0.057
1800 MHz	LTE 4 1RB 20 MHz QPSK	Right / Cheek	CH 20175 (1732,5 MHz)	22.5	22.3	0.174	0.181
1900 MHz	GSM	Left / Cheek	CH 661 (1880 MHz)	29.7	28.8	0.104	0.129
	GPRS 1 slot	Left / Cheek	CH 661 (1880 MHz)	29.7	28.7	0.099	0.125
	GPRS 2 slots	Left / Cheek	CH 661 (1880 MHz)	27.5	26.8	0.170	0.202
	GPRS 3 slots	Left / Cheek	CH 661 (1880 MHz)	26.2	24.5	0.132	0.193
	GPRS 4 slots	Left / Cheek	CH 661 (1880 MHz)	24.5	22.9	0.114	0.165
	WCDMA Band II	Left / Cheek	CH 9262 (1852,4 Mhz)	24.0	22.1	0.171	0.268
2450 MHz	802,11b	Left / Cheek	CH 11 (2462MHz)	13.5	12.9	0.014	0.016

5.4. Maximum Body SAR results scaled to maximum output power.

Band	Mode	Side / Position	Channel (Frequency)	Power (dBm)		SAR (W/Kg)	
				Tune-up Limit	Measured	Measured	Scaled
750 MHz	LTE 17 1RB 10 MHz QPSK	Right / Tilted	CH 23790 (710 MHz)	23.0	22.1	0.204	0.213
850 MHz	GSM	Left / Cheek	CH 190 (836,6 MHz)	33.0	32.3	0.263	0.313
	GPRS 1 slot	Left / Cheek	CH 190 (836,6 MHz)	33.0	32.2	0.211	0.254
	GPRS 2 slots	Left / Cheek	CH 190 (836,6 MHz)	30.5	29.5	0.251	0.317
	GPRS 3 slots	Left / Cheek	CH 190 (836,6 MHz)	28.8	27.7	0.315	0.408
	GPRS 4 slots	Left / Cheek	CH 190 (836,6 MHz)	27.5	26.4	0.281	0.360
	WCDMA Band V	Left / Cheek	CH 4183 (836,6 MHz)	24.0	22.8	0.016	0.021
1800 MHz	LTE 4 1RB 20 MHz QPSK	Right / Cheek	CH 20175 (1732,5 MHz)	22.5	22.3	1.190	1.238
1900 MHz	GSM	Left / Cheek	CH 661 (1880 MHz)	29.7	28.8	0.532	0.661
	GPRS 1 slot	Left / Cheek	CH 661 (1880 MHz)	29.7	28.7	0.320	0.403
	GPRS 2 slots	Left / Cheek	CH 661 (1880 MHz)	27.5	26.7	0.485	0.580
	GPRS 3 slots	Left / Cheek	CH 661 (1880 MHz)	26.2	24.5	0.532	0.780
	GPRS 4 slots	Left / Cheek	CH 661 (1880 MHz)	24.5	22.9	0.461	0.668
	WCDMA Band II	Left / Cheek	CH 9262 (1852,4 Mhz)	24.0	22.2	1.020	1.544
2450 MHz	802,11b	Left / Cheek	CH 11 (2462MHz)	13.5	13.2	0.021	0.023

5.5. Result for simultaneous multi-band transmission head

Transmission Mode	Band	Max SAR (1g avg) (W/Kg)	Σ SARi (W/kg)	SAR limit (W/Kg)	Veredict
GSM / GPRS /EDGE	850MHz	0.069	0.085	1.6	Pass
802.11b/g/n	2.4GHz	0.016			
GSM / GPRS /EDGE	1900MHz	0.202	0.218	1.6	Pass
802.11b/g/n	2.4GHz	0.016			
WCDMA/HDSPA	FDD V	0.057	0.073	1.6	Pass
802.11b/g/n	2.4GHz	0.016			
WCDMA/HDSPA	FDD II	0.268	0.284	1.6	Pass
802.11b/g/n	2.4GHz	0.016			
LTE	Band 4	0.181	0.197	1.6	Pass
802.11b/g/n	2.4GHz	0.016			
LTE	Band 17	0.030	0.046	1.6	Pass
802.11b/g/n	2.4GHz	0.016			

5.6. Result for simultaneous multi-band transmission body

Transmission Mode	Band	Max SAR (1g avg) (W/Kg)	Σ SARi (W/kg)	SAR limit (W/Kg)	Veredict
GSM / GPRS /EDGE	850MHz	0.408	0.431	1.6	Pass
802.11b/g/n	2.4GHz	0.023			
GSM / GPRS /EDGE	1900MHz	0.780	0.803	1.6	Pass
802.11b/g/n	2.4GHz	0.023			
WCDMA/HDSPA	FDD V	0.021	0.044	1.6	Pass
802.11b/g/n	2.4GHz	0.023			
WCDMA/HDSPA	FDD II	1.544	1.567	1.6	Pass
802.11b/g/n	2.4GHz	0.023			
LTE	Band 4	1.238	1.261	1.6	Pass
802.11b/g/n	2.4GHz	0.023			
LTE	Band 17	0.213	0.236	1.6	Pass
802.11b/g/n	2.4GHz	0.023			

5.7. Results for GSM 850 MHz band.

- **Head measurements**

Side / Position	Channel (Frequency)	SAR extrapolated 1gr (W/Kg)	SAR Max. over 1gr (W/Kg)	±0.1 (W/Kg)	Power Drift (%)	Limit (%)	Verdict
Right / Cheek	CH 190 (836.6 Mhz)	0.048	NM[8]	-	-	±5	Pass
Right / 15º Tilted	CH 190 (836.6 Mhz)	0.044	NM[8]	-	-	±5	Pass
Left / Cheek	CH 190 (836.6 Mhz)	0.049	0.051	√	2.09	±5	Pass
Left / 15º Tilted	CH 190 (836.6 Mhz)	0.040	NM[8]	-	-	±5	Pass
Right / Cheek	CH 128 (824.2 Mhz)	NM[1]		-	-	±5	Pass
Right / Cheek	CH 251 (848.8 Mhz)	NM[1]		-	-	±5	Pass

1 and 8: See remarks and comments.

- **Body measurements**

Side / Position	Channel (Frequency)	SAR extrapolated 1gr (W/Kg)	SAR Max. gr (W/Kg)	±0.1 (W/Kg)	Power Drift (%)	Limit (%)	Verdict
Back face / 10 mm	CH 190 (836.6 Mhz)	0.262	0.263	√	-0.01	±5	Pass
Front face / 10 mm	CH 190 (836.6 Mhz)	0.055	NM[8]	-	-	±5	Pass
Right edge / 10 mm	CH 190 (836.6 Mhz)	0.095	NM[8]	-	-	±5	Pass
Left edge / 10 mm	CH 190 (836.6 Mhz)	0.101	NM[8]	-	-	±5	Pass
Top edge / 10 mm	CH 190 (836.6 Mhz)	0.0019	NM[8]	-	-	±5	Pass
Bottom edge / 10 mm	CH 190 (836.6 Mhz)	0.081	NM[8]	-	-	±5	Pass

-	CH 128 (824.2 Mhz)	NM[1]		-	-	±5	Pass
-	CH 251 (848.8 Mhz)	NM[1]		-	-	±5	Pass

1 and 8: See remarks and comments.

5.8. Results for GPRS 850 MHz band – 1 slot.

- **Head measurements**

Side / Position	Channel (Frequency)	SAR extrapolated 1gr (W/Kg)	SAR Max. 1gr (W/Kg)	±0.1 (W/Kg)	Power Drift (%)	Limit (%)	Verdict
Left / Cheek	CH 190 (836.6 Mhz)	0.045	0.045	√	0.23	±5	Pass
-	CH 128 (824.2 Mhz)	NM[1]		-	-	±5	Pass
-	CH 251 (848.8 Mhz)	NM[1]		-	-	±5	Pass

1: See remarks and comments.

- **Body measurements**

Side / Position	Channel (Frequency)	SAR extrapolated 1gr (W/Kg)	SAR Max. 1gr (W/Kg)	±0.1 (W/Kg)	Power Drift (%)	Limit (%)	Verdict
Back Face/ 10 mm	CH 190 (836.6 Mhz)	0.219	0.217	√	-0.34	±5	Pass
-	CH 128 (824.2 Mhz)	NM[1]		-	-	±5	Pass
-	CH 251 (848.8 Mhz)	NM[1]		-	-	±5	Pass

1: See remarks and comments

5.9. Results for GPRS 850 MHz band – 2 slots.

- **Head measurements**

Side / Position	Channel (Frequency)	SAR extrapolated 1gr (W/Kg)	SAR Max. 1gr (W/Kg)	±0.1 (W/Kg)	Power Drift (%)	Limit (%)	Verdict
Left / Cheek	CH 190 (836.6 Mhz)	0.052	0.054	√	2.80	±5	Pass
-	CH 128 (824.2 Mhz)	NM[1]		-	-	±5	Pass
-	CH 251 (848.8 Mhz)	NM[1]		-	-	±5	Pass

1: See remarks and comments.

- **Body measurements**

Side / Position	Channel (Frequency)	SAR extrapolated 1gr (W/Kg)	SAR Max. 1gr (W/Kg)	±0.1 (W/Kg)	Power Drift (%)	Limit (%)	Verdict
Back Face/ 10 mm	CH 190 (836.6 Mhz)	0.253	0.251	√	-0.23	±5	Pass
-	CH 128 (824.2 Mhz)	NM[1]		-	-	±5	Pass
-	CH 251 (848.8 Mhz)	NM[1]		-	-	±5	Pass

1: See remarks and comments

5.10. Results for GPRS 850 MHz band – 3 slots.

- **Head measurements**

Side / Position	Channel (Frequency)	SAR extrapolated 1gr (W/Kg)	SAR Max. 1gr (W/Kg)	±0.1 (W/Kg)	Power Drift (%)	Limit (%)	Verdict
Left / Cheek	CH 190 (836.6 Mhz)	0.051	0.049	√	0.23	±5	Pass
-	CH 128 (824.2 Mhz)	NM[1]		-	-	±5	Pass
-	CH 251 (848.8 Mhz)	NM[1]		-	-	±5	Pass

1: See remarks and comments.

- **Body measurements**

Side / Position	Channel (Frequency)	SAR extrapolated 1gr (W/Kg)	SAR Max. 1gr (W/Kg)	±0.1 (W/Kg)	Power Drift (%)	Limit (%)	Verdict
Back Face/ 10 mm	CH 190 (836.6 Mhz)	0.311	0.310	√	-2.16	±5	Pass
-	CH 128 (824.2 Mhz)	NM[1]		-	-	±5	Pass
-	CH 251 (848.8 Mhz)	NM[1]		-	-	±5	Pass

1: See remarks and comments

5.11. Results for GPRS 850 MHz band – 4 slots.

- **Head measurements**

Side / Position	Channel (Frequency)	SAR extrapolated 1gr (W/Kg)	SAR Max. 1gr (W/Kg)	±0.1 (W/Kg)	Power Drift (%)	Limit (%)	Verdict
Left / Cheek	CH 190 (836.6 Mhz)	0.051	0.054	√	1.98	±5	Pass
-	CH 128 (824.2 Mhz)	NM[1]		-	-	±5	Pass
-	CH 251 (848.8 Mhz)	NM[1]		-	-	±5	Pass

1: See remarks and comments.

- **Body measurements**

Side / Position	Channel (Frequency)	SAR extrapolated 1gr (W/Kg)	SAR Max. 1gr (W/Kg)	±0.1 (W/Kg)	Power Drift (%)	Limit (%)	Verdict
Back Face/ 10 mm	CH 190 (836.6 Mhz)	0.276	0.276	√	-1.03	±5	Pass
-	CH 128 (824.2 Mhz)	NM[1]		-	-	±5	Pass
-	CH 251 (848.8 Mhz)	NM[1]		-	-	±5	Pass

1: See remarks and comments

5.12. Results for GSM 1900 MHz Band

- **Head measurements**

Side / Position	Channel (Frequency)	SAR extrapolated 1gr (W/Kg)	SAR Max. 1gr (W/Kg)	±0.1 (W/Kg)	Power Drift (%)	Limit (%)	Verdict
Right / Cheek	CH 661 (1880 Mhz)	0.058	NM[8]	-	-	±5	Pass
Right / 15º Tilted	CH 661 (1880 Mhz)	0.066	NM[8]	-	-	±5	Pass
Left / Cheek	CH 661 (1880 Mhz)	0.103	0.104	√	0.23	±5	Pass
Left / 15º Tilted	CH 661 (1880 Mhz)	0.056	NM[8]	-	-	±5	Pass
-	CH 512 (1850.2 Mhz)	NM[1]		-	-	±5	Pass
-	CH 810 (1909.8 Mhz)	NM[1]		-	-	±5	Pass

1 and 8: See remarks and comments

- **Body measurements**

Side / Position	Channel (Frequency)	SAR extrapolated 1gr (W/Kg)	SAR Max. 1gr (W/Kg)	±0.1 (W/Kg)	Power Drift (%)	Limit (%)	Verdict
Back face / 10 mm	CH 661 (1880 Mhz	0.534	0.532	√	-0.92	±5	Pass
Front face / 10 mm	CH 661 (1880 Mhz)	0.087	NM[8]	-	-	±5	Pass
Right edge / 10 mm	CH 661 (1880 Mhz)	0.045	NM[8]	-	-	±5	Pass
Left edge / 10 mm	CH 661 (1880 Mhz)	0.106	NM[8]	-	-	±5	Pass
Top edge / 10 mm	CH 661 (1880 Mhz)	0.023	NM[8]	-	-	±5	Pass
Bottom edge/ 10 mm	CH 661 (1880 Mhz)	0.178	NM[8]	-	-	±5	Pass
-	CH 512 (1850.2 Mhz)	NM[1]		-	-	±5	Pass
-	CH 810 (1909.8 Mhz)	NM[1]		-	-	±5	Pass

1 and 8: See remarks and comments

5.13. Results for GPRS 1900 MHz Band – 1 slot.

- **Head measurements**

Side / Position	Channel (Frequency)	SAR extrapolated 1gr (W/Kg)	SAR Max. 1gr (W/Kg)	±0.1 (W/Kg)	Power Drift (%)	Limit (%)	Verdict
Left / Cheek	CH 661 (1880 Mhz)	0.099	0.100	√	-0.12	±5	Pass
-	CH 512 (1850.2 Mhz)	NM[1]		-	-	±5	Pass
-	CH 810 (1909.8 Mhz)	NM[1]		-	-	±5	Pass

1: See remarks and comments

- **Body measurements**

Side / Position	Channel (Frequency)	SAR extrapolated 1gr (W/Kg)	SAR Max. over 1gr (W/K1)	±0.1 (W/Kg)	Power Drift (%)	Limit (%)	Verdict
Back face / 10 mm	CH 661 (1880 Mhz)	0.329	0.326	√	-1.26	±5	Pass
-	CH 512 (1850.2 Mhz)	NM[1]		-	-	±5	Pass
-	CH 810 (1909.8 Mhz)	NM[1]		-	-	±5	Pass

1: See remarks and comments

5.14. Results for GPRS 1900 MHz Band – 2 slots.

- **Head measurements**

Side / Position	Channel (Frequency)	SAR extrapolated 1gr (W/Kg)	SAR Max. 1gr (W/Kg)	±0.1 (W/Kg)	Power Drift (%)	Limit (%)	Verdict
Left / Cheek	CH 661 (1880 Mhz)	0.168	0.170	√	-0.23	±5	Pass
-	CH 512 (1850.2 Mhz)	NM[1]		-	-	±5	Pass
-	CH 810 (1909.8 Mhz)	NM[1]		-	-	±5	Pass

1: See remarks and comments

- **Body measurements**

Side / Position	Channel (Frequency)	SAR extrapolated 1gr (W/Kg)	SAR Max. 1gr (W/Kg)	±0.1 (W/Kg)	Power Drift (%)	Limit (%)	Verdict
Back face / 10 mm	CH 661 (1880 Mhz)	0.482	0.485	√	0.23	±5	Pass
-	CH 512 (1850.2 Mhz)	NM[1]		-	-	±5	Pass
-	CH 810 (1909.8 Mhz)	NM[1]		-	-	±5	Pass

1: See remarks and comments

5.15. Results for GPRS 1900 MHz Band – 3 slots.

- **Head measurements**

Side / Position	Channel (Frequency)	SAR extrapolated 1gr (W/Kg)	SAR Max. 1gr (W/Kg)	±0.1 (W/Kg)	Power Drift (%)	Limit (%)	Verdict
Left / Cheek	CH 661 (1880 Mhz)	0.126	0.131	√	0.12	±5	Pass
-	CH 512 (1850.2 Mhz)	NM[1]		-	-	±5	Pass
-	CH 810 (1909.8 Mhz)	NM[1]		-	-	±5	Pass

1: See remarks and comments

- **Body measurements**

Side / Position	Channel (Frequency)	SAR extrapolated 1gr (W/Kg)	SAR Max. 1gr (W/Kg)	±0.1 (W/Kg)	Power Drift (%)	Limit (%)	Verdict
Back face / 10 mm	CH 661 (1880 Mhz)	0.505	0.526	√	-3.28	±5	Pass
-	CH 512 (1850.2 Mhz)	NM[1]		-	-	±5	Pass
-	CH 810 (1909.8 Mhz)	NM[1]		-	-	±5	Pass

1: See remarks and comments

5.16. Results for GPRS 1900 MHz Band – 4 slots.

- **Head measurements**

Side / Position	Channel (Frequency)	SAR extrapolated 1gr (W/Kg)	SAR Max. 1gr (W/Kg)	±0.1 (W/Kg)	Power Drift (%)	Limit (%)	Verdict
Left / Cheek	CH 661 (1880 Mhz)	0.112	0.114	√	0.00	±5	Pass
-	CH 512 (1850.2 Mhz)	NM[1]		-	-	±5	Pass
-	CH 810 (1909.8 Mhz)	NM[1]		-	-	±5	Pass

1: See remarks and comments

- **Body measurements**

Side / Position	Channel (Frequency)	SAR extrapolated 1gr (W/Kg)	SAR Max. 1gr (W/Kg)	±0.1 (W/Kg)	Power Drift (%)	Limit (%)	Verdict
Back face / 10 mm	CH 661 (1880 Mhz)	0.452	0.454	√	1.98	±5	Pass
-	CH 512 (1850.2 Mhz)	NM[1]		-	-	±5	Pass
-	CH 810 (1909.8 Mhz)	NM[1]		-	-	±5	Pass

1: See remarks and comments

5.17. Results for WCDMA Band II

- **Head measurements**

Side / Position	Channel (Frequency)	SAR extrapolated 1gr (W/Kg)	SAR Max. 1gr (W/Kg)	±0.1 (W/Kg)	Power Drift (%)	Limit (%)	Verdict
Right / Cheek	CH 9400 (1880 Mhz)	0.139	NM[8]	-	-	±5	Pass
Right / 15º Tilted	CH 9400 (1880 Mhz)	0.102	NM[8]	-	-	±5	Pass
Left / Cheek	CH 9400 (1880 Mhz)	0.165	0.171	√	1.98	±5	Pass
Left / 15º Tilted	CH 9400 (1880 Mhz)	0.082	NM[8]	-	-	±5	Pass
-	CH 9262 (1852.4 Mhz)	NM[1]		-	-	±5	Pass
-	CH 9538 (1907.6 Mhz)	NM[1]		-	-	±5	Pass

1 and 8: See remarks and comments

- **Body measurements**

Side / Position	Channel (Frequency)	SAR extrapolated 1gr (W/Kg)	SAR Max. 1gr (W/Kg)	±0.1 (W/Kg)	Power Drift (%)	Limit (%)	Verdict
Back face / 10 mm	CH 9400 (1880 Mhz)	0.843	0.831	√	-1.49	±5	Pass
Front face / 10 mm	CH 9400 (1880 Mhz)	0.197	NM[8]	-	-	±5	Pass
Right edge / 10 mm	CH 9400 (1880 Mhz)	0.066	NM[8]	-	-	±5	Pass
Left edge / 10 mm	CH 9400 (1880 Mhz)	0.176	NM[8]	-	-	±5	Pass
Top edge / 10 mm	CH 9400 (1880 Mhz)	0.040	NM[8]	-	-	±5	Pass
Bottom edge / 10 mm	CH 9400 (1880 Mhz)	0.262	0.259	√	-0.34	±5	Pass
Back face / 10 mm	CH 9262 (1852.4 Mhz)	1.03	1.02	√	0.12	±5	Pass
Back face / 10 mm	CH 9538 (1907.6 Mhz)	0.813	0.81	√	-0.30	±5	Pass
Variability Back face/10 mm	CH 9262 (1852.4 Mhz)	0.895	0.894	√	-0.80	±5	Pass

8: See remarks and comments

5.18. Results for WCDMA Band V

- **Head measurements**

Side / Position	Channel (Frequency)	SAR extrapolated 1gr (W/Kg)	SAR Max. 1gr (W/Kg)	±0.1 (W/Kg)	Power Drift (%)	Limit (%)	Verdict
Right / Cheek	CH 4183 (836.6 Mhz)	0.042	NM[8]	-	-	±5	Pass
Right / 15º Tilted	CH 4183 (836.6 Mhz)	0.036	NM[8]	-	-	±5	Pass
Left / Cheek	CH 4183 (836.6 Mhz)	0.043	0.043	√	2.92	±5	Pass
Left / 15º Tilted	CH 4183 (836.6 Mhz)	0.028	NM[8]	-	-	±5	Pass
-	CH 4132 (826.4 Mhz)	NM[1]			-	±5	Pass
-	CH 4233 (846.6 Mhz)	NM[1]			-	±5	Pass

1 and 8: See remarks and comments

- **Body measurements**

Side / Position	Channel (Frequency)	SAR extrapolated 1gr (W/Kg)	SAR Max. 1gr (W/Kg)	±0.1 (W/Kg)	Power Drift (%)	Limit (%)	Verdict
Back face / 10 mm	CH 4183 (836.6 Mhz)	0.00532	NM[8]	-	-	±5	Pass
Front face / 10 mm	CH 4183 (836.6 Mhz)	0.00303	NM[8]	-	-	±5	Pass
Right edge / 10 mm	CH 4183 (836.6 Mhz)	0.00290	NM[8]	-	-	±5	Pass
Left edge / 10 mm	CH 4183 (836.6 Mhz)	0.00273	NM[8]	-	-	±5	Pass
Top edge / 10 mm	CH 4183 (836.6 Mhz)	0.00105	NM[8]	-	-	±5	Pass
Bottom edge / 10 mm	CH 4183 (836.6 Mhz)	0.0520	0.016	√	0.69	±5	Pass
-	CH 4132 (826.4 Mhz)	NM[1]		-	-	±5	Pass
-	CH 4233 (846.6 Mhz)	NM[1]		-	-	±5	Pass

1 and 8: See remarks and comments

5.19. Results for LTE Band 4 (1 Rb, 20 MHz, QPSK)

- **Head measurements**

Side / Position	Channel (Frequency)	SAR extrapolated 1gr (W/Kg)	SAR Max. 1gr (W/Kg)	±0.1 (W/Kg)	Power Drift (%)	Limit (%)	Verdict
Right / Cheek	20175 (1732 MHz)	0.176	0.174	√	0.58	±5	Pass
Right / 15º Tilted	20175 (1732 MHz)	0.152	NM[8]	-	-	±5	Pass
Left / Cheek	20175 (1732 MHz)	0.159	NM[8]	-	-	±5	Pass
Left / 15º Tilted	20175 (1732 MHz)	0.125	NM[8]	-	-	±5	Pass
-	Low (1710 MHz)	NM[6]		-	-	±5	Pass
-	High (1755 MHz)	NM[6]		-	-	±5	Pass

6 and 8: See remarks and comments

- **Body measurements**

Side / Position	Channel (Frequency)	SAR extrapolated 1gr (W/Kg)	SAR Max. 1gr (W/Kg)	±0.1 (W/Kg)	Power Drift (%)	Limit (%)	Verdict
Back face / 10 mm	20175 (1732 MHz)	1.2	1.19	√	-0.80	±5	Pass
Front face / 10 mm	20175 (1732 MHz)	0.114	NM[8]	-	-	±5	Pass
Right edge / 10 mm	20175 (1732 MHz)	0.110	NM[8]	-	-	±5	Pass
Left edge / 10 mm	20175 (1732 MHz)	0.097	NM[8]	-	-	±5	Pass
Top edge / 10 mm	20175 (1732 MHz)	0.050	NM[8]	-	-	±5	Pass
Bottom edge / 10 mm	20175 (1732 MHz)	0.293	0.288	√	-0.23	±5	Pass
Back face / 10 mm	Low (1710 MHz)	0.902	0.90	√	1.27	±5	Pass
Back face / 10 mm	High (1755 MHz)	1.08	1.08	√	0.23	±5	Pass
Variability Back face / 10 mm	Mid (1732 MHz)	1.18	1.16	√	0.12	±5	Pass

8: See remarks and comments

5.20. Results for LTE Band 4 (50% Rb, 20 MHz, QPSK)

- **Head measurements**

Side / Position	Channel (Frequency)	SAR extrapolated 1gr (W/Kg)	SAR Max. 1gr (W/Kg)	±0.1 (W/Kg)	Power Drift (%)	Limit (%)	Verdict
Right / Cheek	19950 (1710 MHz)	0.129	0.127	√	0.46	±5	Pass
-	Mid (1732 MHz)	NM[6]		-	-	±5	Pass
-	High (1755 MHz)	NM[6]		-	-	±5	Pass

6: See remarks and comments

- **Body measurements**

Side / Position	Channel (Frequency)	SAR extrapolated 1gr (W/Kg)	SAR Max. 1gr (W/Kg)	±0.1 (W/Kg)	Power Drift (%)	Limit (%)	Verdict
Back face / 10 mm	19950 (1710 MHz)	0.734	0.729	√	0.35	±5	Pass
-	Mid (1732 MHz)	NM[6]		-	-	±5	Pass
-	High (1755 MHz)	NM[6]		-	-	±5	Pass

6: See remarks and comments

5.21. Results for LTE Band 4 (100% Rb, 20 MHz, QPSK)

- **Head measurements**

Side / Position	Channel (Frequency)	SAR extrapolated 1gr (W/Kg)	SAR Max. 1gr (W/Kg)	±0.1 (W/Kg)	Power Drift (%)	Limit (%)	Verdict
Right / Cheek	20175 (1732 MHz)	NM[6]	NM[6]	-	-	±5	Pass
-	Low (1710 MHz)	NM[6]		-	-	±5	Pass
-	High (1755 MHz)	NM[6]		-	-	±5	Pass

6: See remarks and comments

- **Body measurements**

Side / Position	Channel (Frequency)	SAR extrapolated 1gr (W/Kg)	SAR Max. 1gr (W/Kg)	±0.1 (W/Kg)	Power Drift (%)	Limit (%)	Verdict
Back face / 10 mm	20175 (1732 MHz)	0.706	0.702	√	0	±5	Pass
-	Low (1710 MHz)	NM[6]		-	-	±5	Pass
-	High (1755 MHz)	NM[6]		-	-	±5	Pass

6: See remarks and comments

5.22. Results for LTE Band 17 (1 Rb, 10 MHz, QPSK)

- **Head measurements**

Side / Position	Channel (Frequency)	SAR extrapolated 1gr (W/Kg)	SAR Max. 1gr (W/Kg)	±0.1 (W/Kg)	Power Drift (%)	Limit (%)	Verdict
Right / Cheek	23790 (710 MHz)	0.025	NM[8]	-	-	±5	Pass
Right / 15º Tilted	23790 (710 MHz)	0.029	0.029	√	-0.23	±5	Pass
Left / Cheek	23790 (710 MHz)	0.0237	NM[8]	-	-	±5	Pass
Left / 15º Tilted	23790 (710 MHz)	0.0238	NM[8]	-	-	±5	Pass
-	Low (704 MHz)	NM[6]		-	-	±5	Pass
-	High (716 MHz)	NM[6]		-	-	±5	Pass

6 and 8: See remarks and comments

- **Body measurements**

Side / Position	Channel (Frequency)	SAR extrapolated 1gr (W/Kg)	SAR Max. 1gr (W/Kg)	±0.1 (W/Kg)	Power Drift (%)	Limit (%)	Verdict
Back face / 10 mm	23790 (710 MHz)	0.208	0.204	√	-0.23	±5	Pass
Front face / 10 mm	23790 (710 MHz)	0.0296	NM[8]	-	-	±5	Pass
Right edge / 10 mm	23790 (710 MHz)	0.0519	NM[8]	-	-	±5	Pass
Left edge / 10 mm	23790 (710 MHz)	0.0370	NM[8]	-	-	±5	Pass
Top edge / 10 mm	23790 (710 MHz)	0.00892	NM[8]	-	-	±5	Pass
Bottom edge / 10 mm	23790 (710 MHz)	0.0323	NM[8]	-	-	±5	Pass
-	Low (704 MHz)	NM[6]		-	-	±5	Pass
-	High (716 MHz)	NM[6]		-	-	±5	Pass

6 and 8: See remarks and comments

5.23. Results for LTE Band 17 (50% Rb, 10 MHz, QPSK)

- **Head measurements**

Side / Position	Channel (Frequency)	SAR extrapolated 1gr (W/Kg)	SAR Max. 1gr (W/Kg)	±0.1 (W/Kg)	Power Drift (%)	Limit (%)	Verdict
Right / 15º Tilted	23790 (710 MHz)	0.026	0.026	√	0.58	±5	Pass
-	Low (704 MHz)	NM[6]		-	-	±5	Pass
-	High (716 MHz)	NM[6]		-	-	±5	Pass

6: See remarks and comments

- **Body measurements**

Side / Position	Channel (Frequency)	SAR extrapolated 1gr (W/Kg)	SAR Max. 1gr (W/Kg)	±0.1 (W/Kg)	Power Drift (%)	Limit (%)	Verdict
Back face / 10 mm	23790 (710 MHz)	0.172	0.170	√	-0.57	±5	Pass
-	Low (704 MHz)	NM[6]		-	-	±5	Pass
-	High (716 MHz)	NM[6]		-	-	±5	Pass

6: See remarks and comments

5.24. Results for 802.11b

- **Head measurements**

Side / Position	Channel (Frequency)	SAR extrapolated 1gr (W/Kg)	SAR Max. 1gr (W/Kg)	±0.1 (W/Kg)	Power Drift (%)	Limit	Verdict
Right / Cheek	CH 11 (2462 Mhz)	0.009	NM[8]	-	-	±5	Pass
Right / 15º Tilted	CH 11 (2462 Mhz))	0.011	NM[8]	-	-	±5	Pass
Left / Cheek	CH 11 (2462 Mhz)	0.017	0.014	√	-1.98	±5	Pass
Left / 15º Tilted	CH 11 (2462 Mhz)	0.00752	NM[8]	-	-	±5	Pass
-	CH 1 (2412 Mhz)	NM[4]		-	-	±5	Pass
-	CH 6 (2437 Mhz)	NM[4]		-	-	±5	Pass

4 and 8: See remarks and comments

- **Body measurements**

Side / Position	Channel (Frequency)	SAR Extrapolated 1gr (W/Kg)	SAR Max. 1gr (W/Kg)	±0.1 (W/Kg)	Power Drift (%)	Limit	Verdict
Back face / 10 mm	CH 11 (2462 Mhz)	0.02100	0.021	√	1.04	±5%	Pass
Front face / 10 mm	CH 11 (2462 Mhz)	0.00636	NM[8]	-	-	±5%	Pass
Right edge / 10 mm	CH 11 (2462 Mhz)	0.01800	NM[8]	-	-	±5%	Pass
Left edge / 10 mm	CH 11 (2462 Mhz)	0.01110	NM[8]	-	-	±5%	Pass
Top edge / 10 mm	CH 11 (2462 Mhz)	0.00872	NM[8]	-	-	±5%	Pass
Bottom edge / 10 mm	CH 11 (2462 Mhz)	0.00351	NM[8]	-	-	±5%	Pass

-	CH 1 (2412 Mhz)	NM[4]		-	-	±5	Pass
-	CH 6 (2437 Mhz)	NM[4]		-	-	±5	Pass

4 and 8: See remarks and comments

APPENDIX C: Measurements Reports

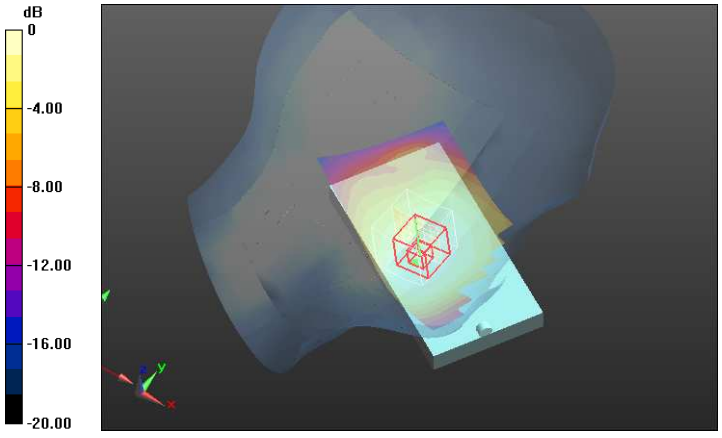
GSM 850 MHz – Left hand side – Cheek position – Middle Channel

Test Laboratory: AT4 Wireless; Date: 02/09/2013

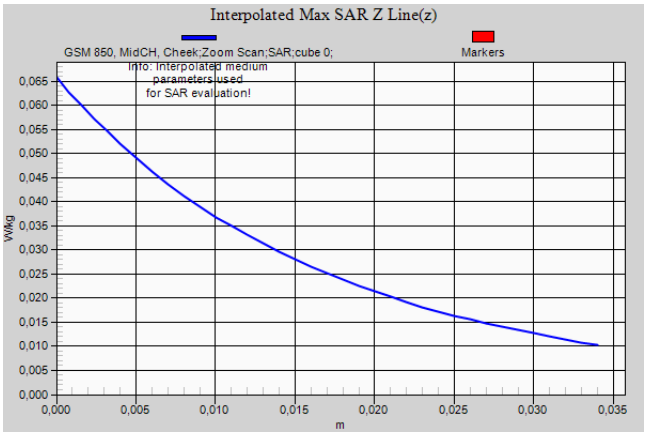
DUT: PureSecure; Type: Smartphone; Serial: IMEI: 035891240081126
Communication System: GSM-FDD (TDMA, GMSK); Frequency: 836.6 MHz; Duty Cycle: 1:8.70964
Medium parameters used (interpolated): f = 836.6 MHz; σ = 0.977 mho/m; ε_r = 39.074; ρ = 1000 kg/m^3
Phantom section: Left Section
DASY5 Configuration:
- Probe: ES3DV3 - SN3052; ConvF(6.31, 6.31, 6.31); Calibrated: 22/07/2013;
- Sensor-Surface: 3mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 17/07/2013
- Phantom: SAM head-body simulator ; Type: Twin SAM V4.0; Serial: ---
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

900MHz - Left Hand Side/GSM 850, MidCH, Cheek/Area Scan (81x151x1):
Interpolated grid: dx=1.000 mm, dy=1.000 mm
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.0557 W/kg

900MHz - Left Hand Side/GSM 850, MidCH, Cheek/Zoom Scan (7x8x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 7.307 V/m; Power Drift = 0.18 dB
Peak SAR (extrapolated) = 0.066 mW/g
SAR(1 g) = 0.051 mW/g; SAR(10 g) = 0.037 mW/g (SAR corrected for target medium)
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.0542 W/kg



0 dB = 0.0542 W/kg = -25.32 dB W/kg



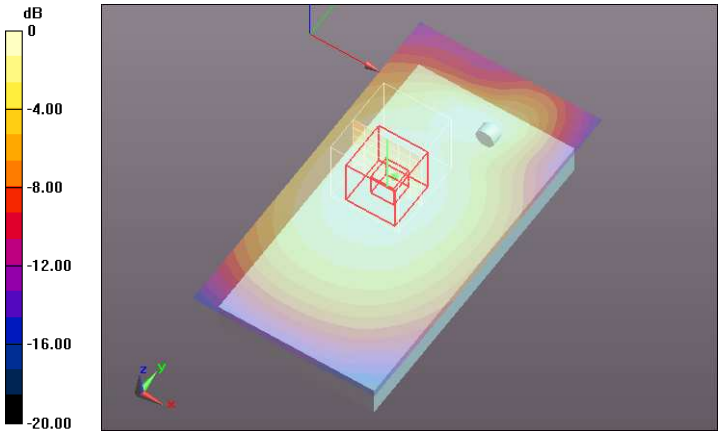
GSM 850 MHz – Body – Back Face 10 mm – Middle Channel

Test Laboratory: AT4 Wireless; Date: 29/08/2013

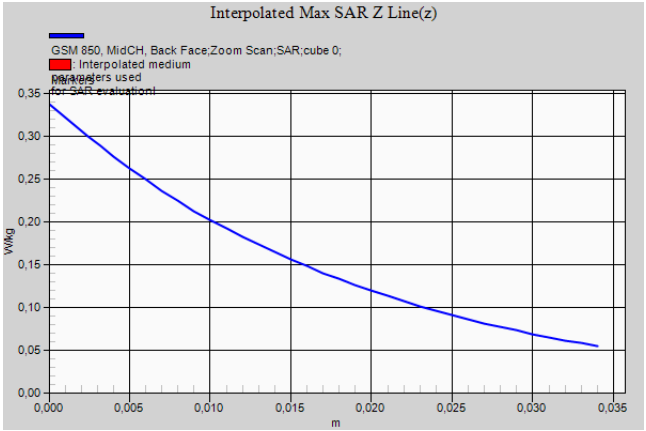
DUT: PureSecure; Type: Smartphone; Serial: IMEI: 035891240081126
Communication System: GSM-FDD (TDMA, GMSK); Frequency: 836.6 MHz; Duty Cycle: 1:8.70964
Medium parameters used (interpolated): f = 836.6 MHz; σ = 1.043 mho/m; ε_r = 54.069; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY5 Configuration:
- Probe: ES3DV3 - SN3052; ConvF(6.29, 6.29, 6.29); Calibrated: 22/07/2013;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 17/07/2013
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1060
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

900MHz - Body/GSM 850, MidCH, Back Face/Area Scan (81x151x1):
Interpolated grid: dx=1.000 mm, dy=1.000 mm
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.278 W/kg

900MHz - Body/GSM 850, MidCH, Back Face/Zoom Scan (7x8x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 15.853 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 0.338 mW/g
SAR(1 g) = 0.263 mW/g; SAR(10 g) = 0.195 mW/g (SAR corrected for target medium)
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.277 W/kg



0 dB = 0.277 W/kg = -11.15 dB W/kg

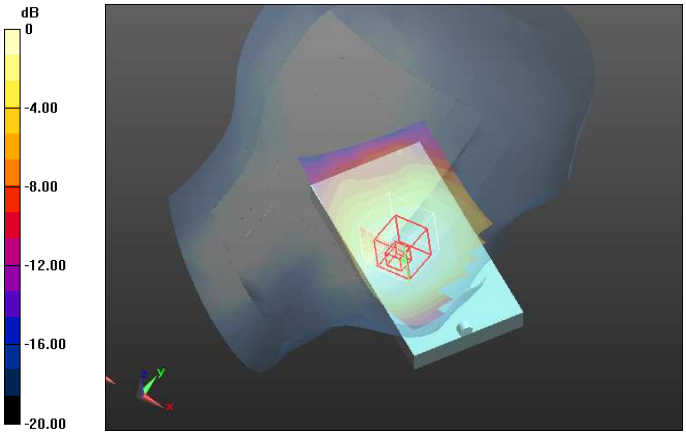


GPRS 850 MHz 1 slot – Left hand side – Cheek position – Middle Channel

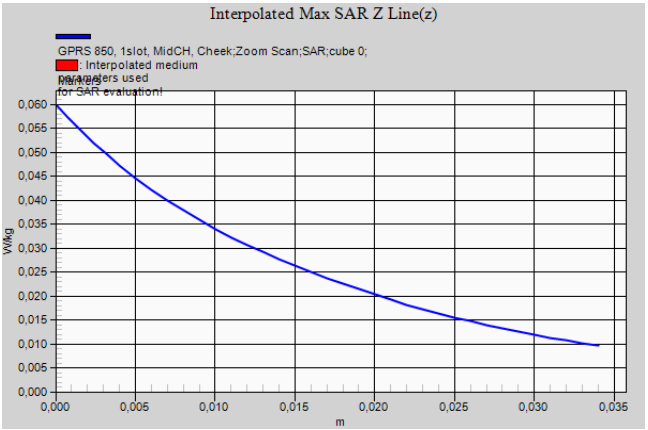
Test Laboratory: AT4 Wireless; Date: 02/09/2013

DUT: PureSecure; Type: Smartphone; Serial: IMEI: 035891240081126
Communication System: GPRS-FDD (TDMA, GMSK, TN 0); Frequency: 836.6 MHz; Duty Cycle: 1:9.05733
Medium parameters used (interpolated): f = 836.6 MHz; σ = 0.977 mho/m; ε_r = 39.074; ρ = 1000 kg/m^3
Phantom section: Left Section
DASY5 Configuration:
- Probe: ES3DV3 - SN3052; ConvF(6.31, 6.31, 6.31); Calibrated: 22/07/2013;
- Sensor-Surface: 3mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 17/07/2013
- Phantom: SAM head-body simulator ; Type: Twin SAM V4.0; Serial: ---
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

900MHz - Left Hand Side/GPRS 850, 1slot, MidCH, Cheek/Area Scan (81x151x1):
Interpolated grid: dx=1.000 mm, dy=1.000 mm
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.0516 W/kg
900MHz - Left Hand Side/GPRS 850, 1slot, MidCH, Cheek/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 7.008 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 0.060 mW/g
SAR(1 g) = 0.045 mW/g; SAR(10 g) = 0.033 mW/g (SAR corrected for target medium)
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.0476 W/kg



0 dB = 0.0476 W/kg = -26.45 dB W/kg



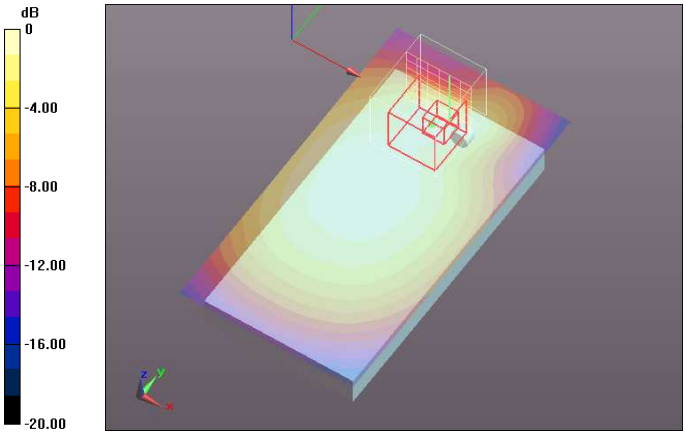
GPRS 850 MHz 1 slot – Body – Back Face 10 mm – Middle Channel

Test Laboratory: AT4 Wireless; Date: 29/08/2013

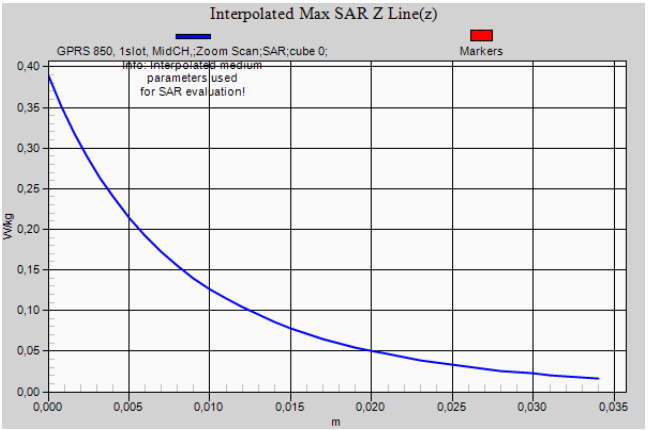
DUT: PureSecure; Type: Smartphone; Serial: IMEI: 035891240081126
Communication System: GPRS-FDD (TDMA, GMSK, TN 0); Frequency: 836.6 MHz; Duty Cycle: 1:9.05733
Medium parameters used (interpolated): f = 836.6 MHz; σ = 1.043 mho/m; ε_r = 54.069; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY5 Configuration:
- Probe: ES3DV3 - SN3052; ConvF(6.29, 6.29, 6.29); Calibrated: 22/07/2013;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 17/07/2013
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1060
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

900MHz - Body/GPRS 850, 1slot, MidCH,/Area Scan (81x151x1):
Interpolated grid: dx=1.000 mm, dy=1.000 mm
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.240 W/kg

900MHz - Body/GPRS 850, 1slot, MidCH,/Zoom Scan (7x8x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 15.215 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 0.388 mW/g
SAR(1 g) = 0.217 mW/g; SAR(10 g) = 0.127 mW/g (SAR corrected for target medium)
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.235 W/kg



0 dB = 0.235 W/kg = -12.58 dB W/kg



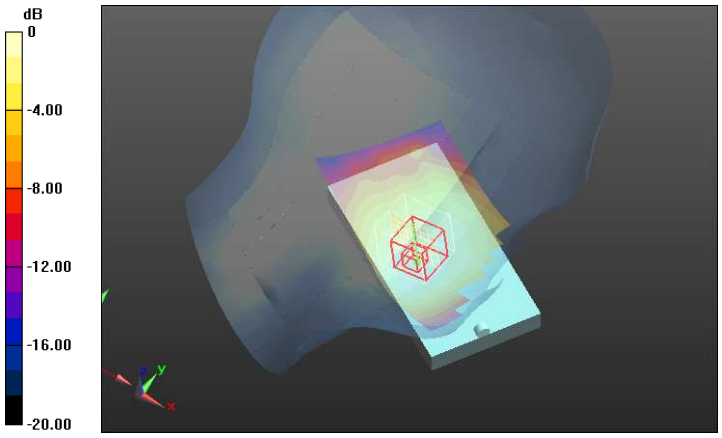
GPRS 850 MHz 2 slots – Left hand side – Cheek position – Middle Channel

Test Laboratory: AT4 Wireless; Date: 02/09/2013

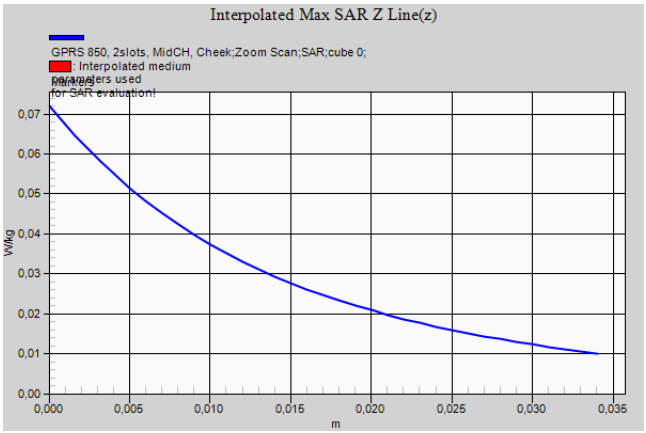
DUT: PureSecure; Type: Smartphone; Serial: IMEI: 035891240081126
Communication System: GPRS-FDD (TDMA, GMSK, TN 0-1); Frequency: 836.6 MHz; Duty Cycle: 1:4.52898
Medium parameters used (interpolated): f = 836.6 MHz; σ = 0.977 mho/m; ε_r = 39.074; ρ = 1000 kg/m^3
Phantom section: Left Section
DASY5 Configuration:
- Probe: ES3DV3 - SN3052; ConvF(6.31, 6.31, 6.31); Calibrated: 22/07/2013;
- Sensor-Surface: 3mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 17/07/2013
- Phantom: SAM head-body simulator ; Type: Twin SAM V4.0; Serial: ---
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

900MHz - Left Hand Side/GPRS 850, 2slots, MidCH, Cheek/Area Scan (81x151x1):
Interpolated grid: dx=1.000 mm, dy=1.000 mm
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.0594 W/kg

900MHz - Left Hand Side/GPRS 850, 2slots, MidCH, Cheek/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 7.581 V/m; Power Drift = 0.24 dB
Peak SAR (extrapolated) = 0.072 mW/g
SAR(1 g) = 0.054 mW/g; SAR(10 g) = 0.040 mW/g (SAR corrected for target medium)
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.0577 W/kg



0 dB = 0.0577 W/kg = -24.78 dB W/kg



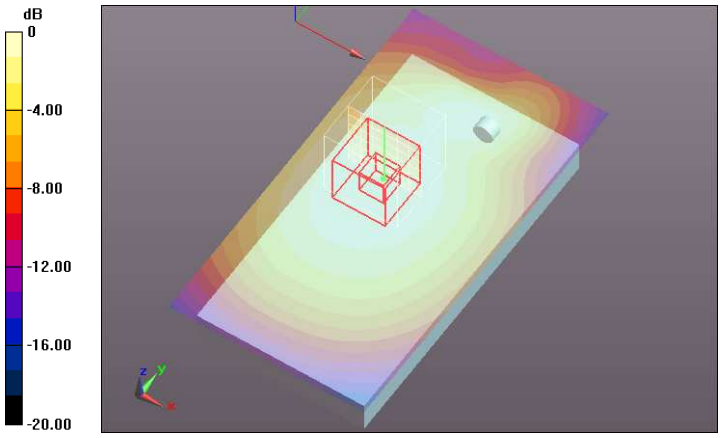
GPRS 850 MHz 2 slots – Body – Back Face 10 mm – Middle Channel

Test Laboratory: AT4 Wireless; Date: 29/08/2013

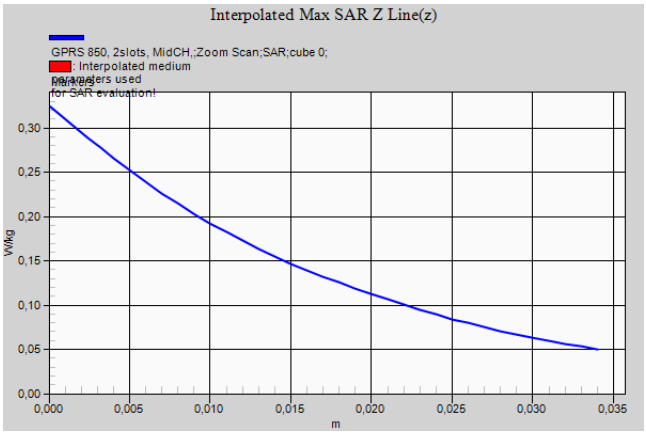
DUT: PureSecure; Type: Smartphone; Serial: IMEI: 035891240081126
Communication System: GPRS-FDD (TDMA, GMSK, TN 0-1); Frequency: 836.6 MHz; Duty Cycle: 1:4.52898
Medium parameters used (interpolated): f = 836.6 MHz; σ = 1.043 mho/m; ε_r = 54.069; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY5 Configuration:
- Probe: ES3DV3 - SN3052; ConvF(6.29, 6.29, 6.29); Calibrated: 22/07/2013;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 17/07/2013
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1060
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

900MHz - Body/GPRS 850, 2slots, MidCH,/Area Scan (81x151x1):
Interpolated grid: dx=1.000 mm, dy=1.000 mm
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.268 W/kg

900MHz - Body/GPRS 850, 2slots, MidCH,/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 15.724 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 0.325 mW/g
SAR(1 g) = 0.251 mW/g; SAR(10 g) = 0.186 mW/g (SAR corrected for target medium)
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.266 W/kg



0 dB = 0.266 W/kg = -11.50 dB W/kg



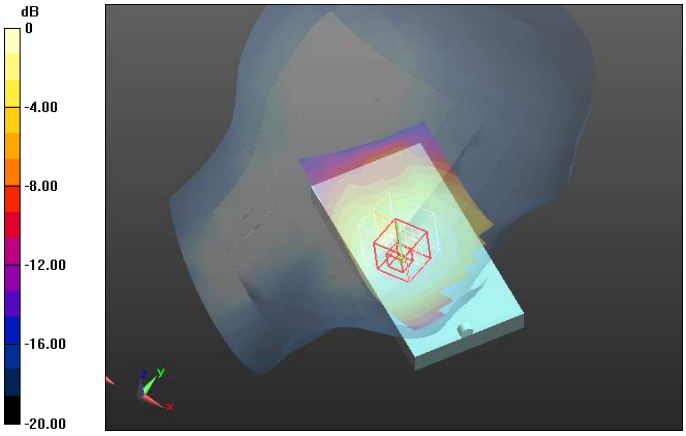
GPRS 850 MHz 3 slots – Left hand side – Cheek position – Middle Channel

Test Laboratory: AT4 Wireless; Date: 02/09/2013

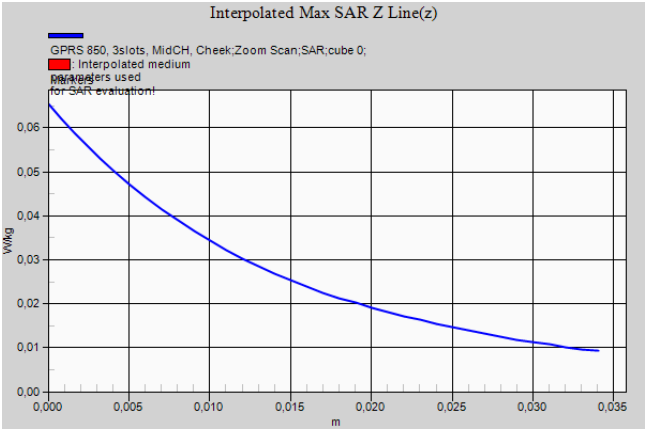
DUT: PureSecure; Type: Smartphone; Serial: IMEI: 035891240081126
Communication System: GPRS-FDD (TDMA, GMSK, TN 0-1-2); Frequency: 836.6 MHz; Duty Cycle: 1:3.01995
Medium parameters used (interpolated): f = 836.6 MHz; σ = 0.977 mho/m; ε_r = 39.074; ρ = 1000 kg/m^3
Phantom section: Left Section
DASY5 Configuration:
- Probe: ES3DV3 - SN3052; ConvF(6.31, 6.31, 6.31); Calibrated: 22/07/2013;
- Sensor-Surface: 3mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 17/07/2013
- Phantom: SAM head-body simulator ; Type: Twin SAM V4.0; Serial: ---
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

900MHz - Left Hand Side/GPRS 850, 3slots, MidCH, Cheek/Area Scan (81x151x1):
Interpolated grid: dx=1.000 mm, dy=1.000 mm
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.0583 W/kg

900MHz - Left Hand Side/GPRS 850, 3slots, MidCH, Cheek/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 7.532 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 0.065 mW/g
SAR(1 g) = 0.049 mW/g; SAR(10 g) = 0.036 mW/g (SAR corrected for target medium)
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.0521 W/kg



0 dB = 0.0521 W/kg = -25.66 dB W/kg



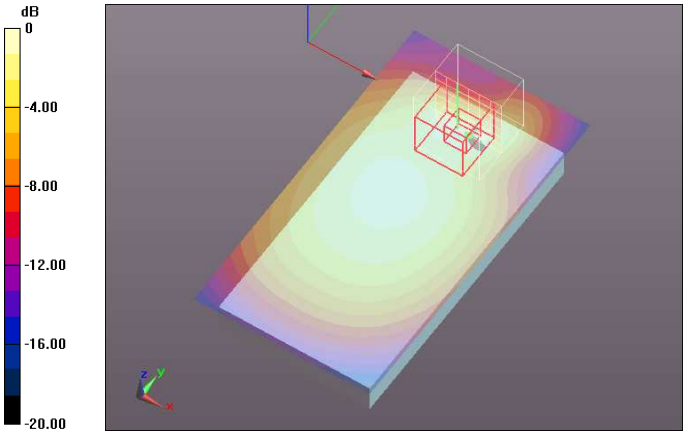
GPRS 850 MHz 3 slots – Body – Back Face 10 mm – Middle Channel

Test Laboratory: AT4 Wireless; Date: 29/08/2013

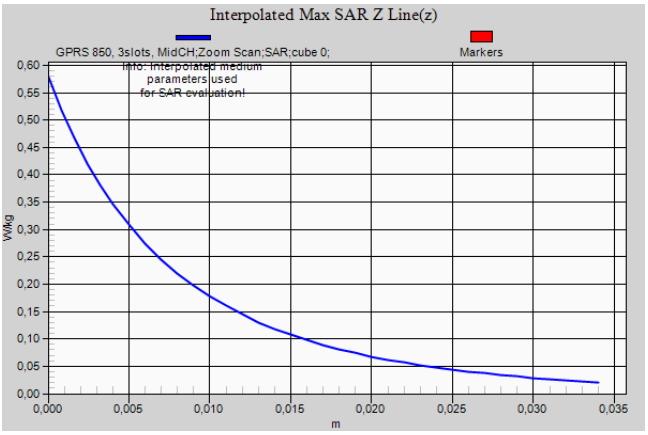
DUT: PureSecure; Type: Smartphone; Serial: IMEI: 035891240081126
Communication System: GPRS-FDD (TDMA, GMSK, TN 0-1-2); Frequency: 836.6 MHz; Duty Cycle: 1:3.01995
Medium parameters used (interpolated): f = 836.6 MHz; σ = 1.043 mho/m; ε_r = 54.069; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY5 Configuration:
- Probe: ES3DV3 - SN3052; ConvF(6.29, 6.29, 6.29); Calibrated: 22/07/2013;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 17/07/2013
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1060
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

900MHz - Body/GPRS 850, 3slots, MidCH/Area Scan (81x151x1):
Interpolated grid: dx=1.000 mm, dy=1.000 mm
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.352 W/kg

900MHz - Body/GPRS 850, 3slots, MidCH/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 18.783 V/m; Power Drift = -0.19 dB
Peak SAR (extrapolated) = 0.578 mW/g
SAR(1 g) = 0.310 mW/g; SAR(10 g) = 0.172 mW/g (SAR corrected for target medium)
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.346 W/kg



0 dB = 0.346 W/kg = -9.22 dB W/kg



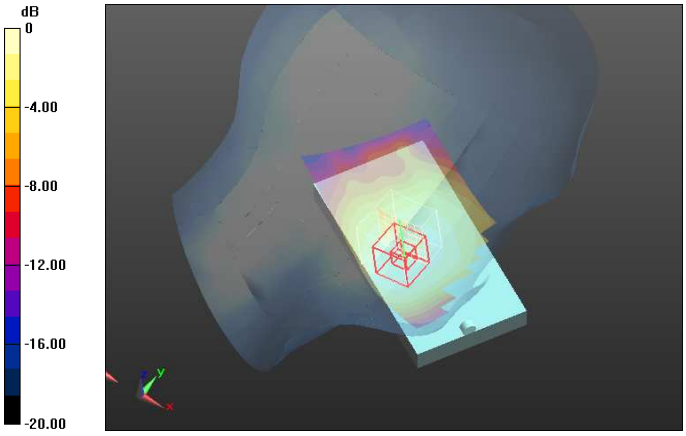
GPRS 850 MHz 4 slots – Left hand side – Cheek position – Middle Channel

Test Laboratory: AT4 Wireless; Date: 02/09/2013

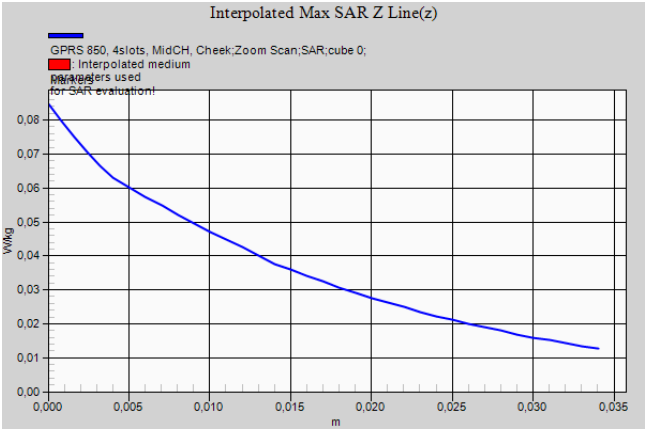
DUT: PureSecure; Type: Smartphone; Serial: IMEI: 035891240081126
Communication System: GPRS-FDD (TDMA, GMSK, TN 0-1-2-3); Frequency: 836.6 MHz; Duty Cycle: 1:2.26464
Medium parameters used (interpolated): f = 836.6 MHz; σ = 0.977 mho/m; ε_r = 39.074; ρ = 1000 kg/m^3
Phantom section: Left Section
DASY5 Configuration:
- Probe: ES3DV3 - SN3052; ConvF(6.31, 6.31, 6.31); Calibrated: 22/07/2013;
- Sensor-Surface: 3mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 17/07/2013
- Phantom: SAM head-body simulator ; Type: Twin SAM V4.0; Serial: ---
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

800MHz - Left Hand Side/GPRS 850, 4slots, MidCH, Cheek/Area Scan (81x151x1):
Interpolated grid: dx=1.000 mm, dy=1.000 mm
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.0582 W/kg

800MHz - Left Hand Side/GPRS 850, 4slots, MidCH, Cheek/Zoom Scan (7x8x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 7.435 V/m; Power Drift = 0.17 dB
Peak SAR (extrapolated) = 0.085 mW/g
SAR(1 g) = 0.054 mW/g; SAR(10 g) = 0.037 mW/g (SAR corrected for target medium)
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.0537 W/kg



0 dB = 0.0537 W/kg = -25.40 dB W/kg

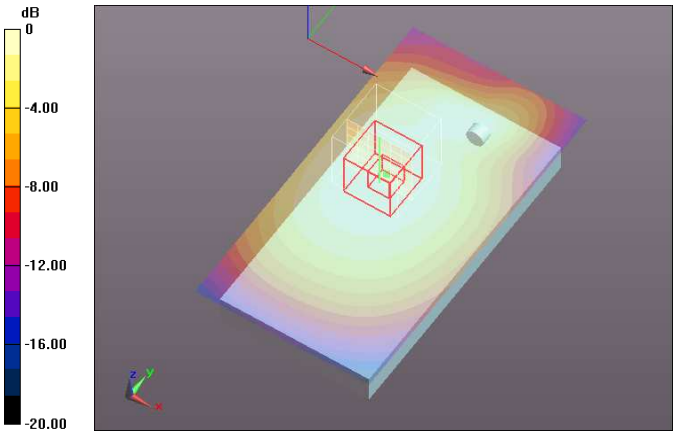


GPRS 850 MHz 4 slots – Body – Back Face 10 mm – Middle Channel

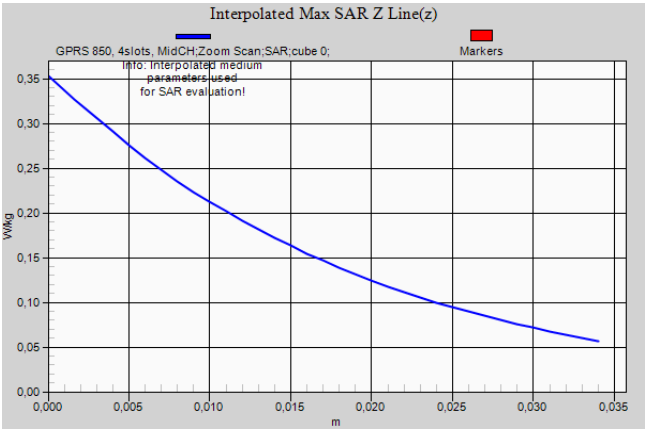
Test Laboratory: AT4 Wireless; Date: 29/08/2013
DUT: PureSecure; Type: Smartphone; Serial: IMEI: 035891240081126
Communication System: GPRS-FDD (TDMA, GMSK, TN 0-1-2-3); Frequency: 836.6 MHz; Duty Cycle: 1:2.26464
Medium parameters used (interpolated): f = 836.6 MHz; σ = 1.043 mho/m; ε_r = 54.069; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY5 Configuration:
- Probe: ES3DV3 - SN3052; ConvF(6.29, 6.29, 6.29); Calibrated: 22/07/2013;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 17/07/2013
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1060
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

900MHz - Body/GPRS 850, 4slots, MidCH/Area Scan (81x151x1):
Interpolated grid: dx=1.000 mm, dy=1.000 mm
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.293 W/kg

900MHz - Body/GPRS 850, 4slots, MidCH/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 17.047 V/m; Power Drift = -0.09 dB
Peak SAR (extrapolated) = 0.353 mW/g
SAR(1 g) = 0.276 mW/g; SAR(10 g) = 0.205 mW/g (SAR corrected for target medium)
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.290 W/kg



0 dB = 0.290 W/kg = -10.75 dB W/kg



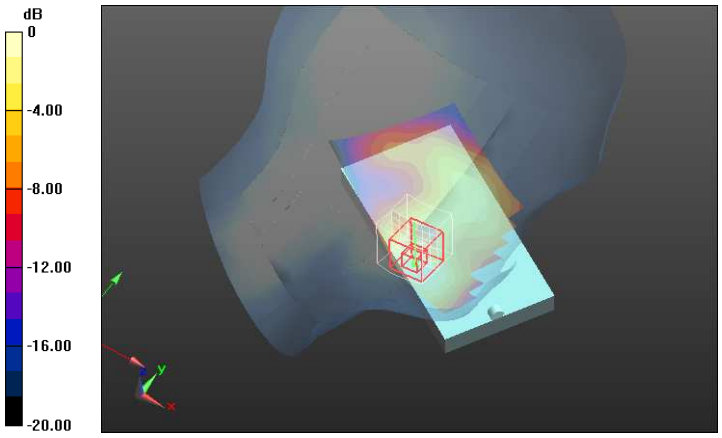
GSM 1900 MHz – Left hand side – Cheek position – Middle Channel

Test Laboratory: AT4 Wireless; Date: 03/09/2013

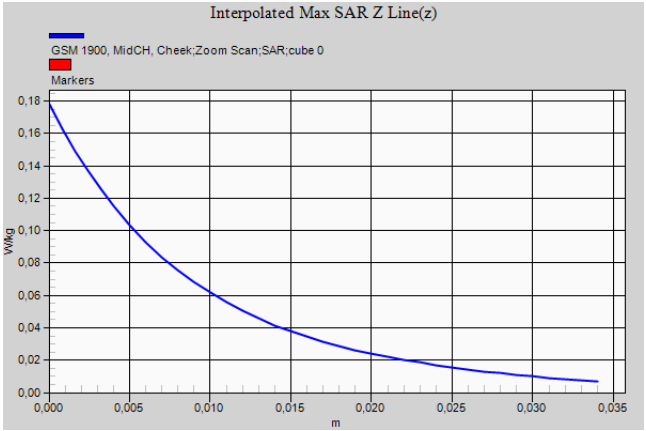
DUT: PureSecure; Type: Smartphone; Serial: IMEI: 035891240081126
Communication System: GSM-FDD (TDMA, GMSK); Frequency: 1880 MHz; Duty Cycle: 1:8.70964
Medium parameters used: f = 1880 MHz; σ = 1.52 mho/m; ε_r = 38.34; ρ = 1000 kg/m^3
Phantom section: Left Section
DASY5 Configuration:
- Probe: ES3DV3 - SN3052; ConvF(5.07, 5.07, 5.07); Calibrated: 22/07/2013;
- Sensor-Surface: 3mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 17/07/2013
- Phantom: SAM head-body simulator ; Type: Twin SAM V4.0; Serial: ---
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

1800MHz - Left Hand Side/GSM 1900, MidCH, Cheek/Area Scan (81x151x1):
Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.128 W/kg

1800MHz - Left Hand Side/GSM 1900, MidCH, Cheek/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 8.796 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 0.178 mW/g
SAR(1 g) = 0.104 mW/g; SAR(10 g) = 0.060 mW/g (SAR corrected for target medium)
Maximum value of SAR (measured) = 0.114 W/kg



0 dB = 0.114 W/kg = -18.86 dB W/kg



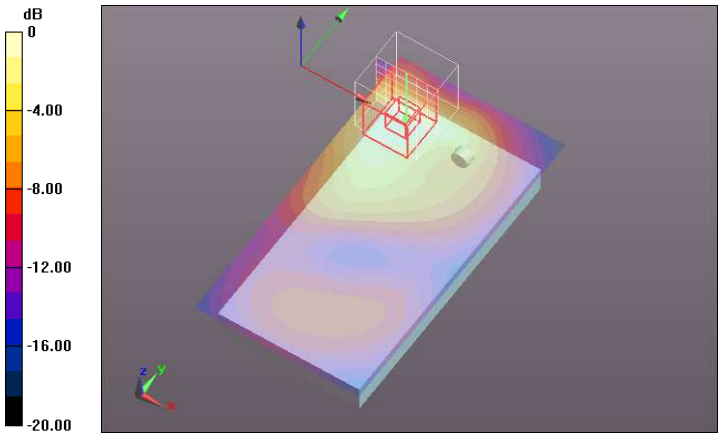
GSM 1900 MHz – Body – Back Face 10 mm – Middle Channel

Test Laboratory: AT4 Wireless; Date: 25/08/2013

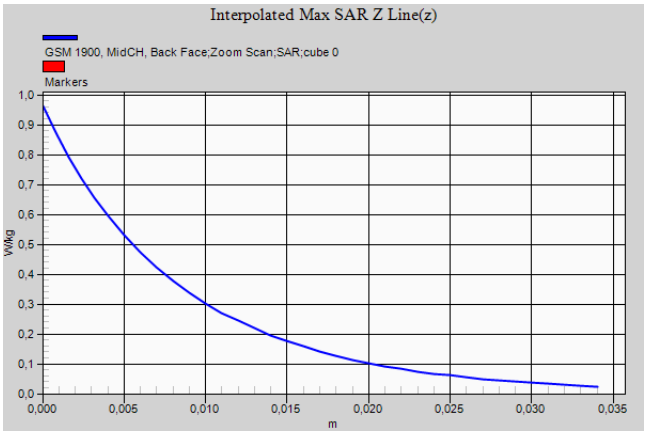
DUT: PureSecure; Type: Smartphone; Serial: IMEI: 035891240081126
Communication System: GSM-FDD (TDMA, GMSK); Frequency: 1880 MHz; Duty Cycle: 1:8.70964
Medium parameters used: f = 1880 MHz; σ = 1.6 mho/m; ε_r = 50.38; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY5 Configuration:
- Probe: ES3DV3 - SN3052; ConvF(4.64, 4.64, 4.64); Calibrated: 22/07/2013;
- Sensor-Surface: 3mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 17/07/2013
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1060
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

1800MHz - Body/GSM 1900, MidCH, Back Face/Area Scan (81x151x1):
nterpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.685 W/kg

1800MHz - Body/GSM 1900, MidCH, Back Face/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 18.884 V/m; Power Drift = -0.08 dB
Peak SAR (extrapolated) = 0.963 mW/g
SAR(1 g) = 0.532 mW/g; SAR(10 g) = 0.284 mW/g (SAR corrected for target medium)
Maximum value of SAR (measured) = 0.588 W/kg



0 dB = 0.588 W/kg = -4.61 dB W/kg



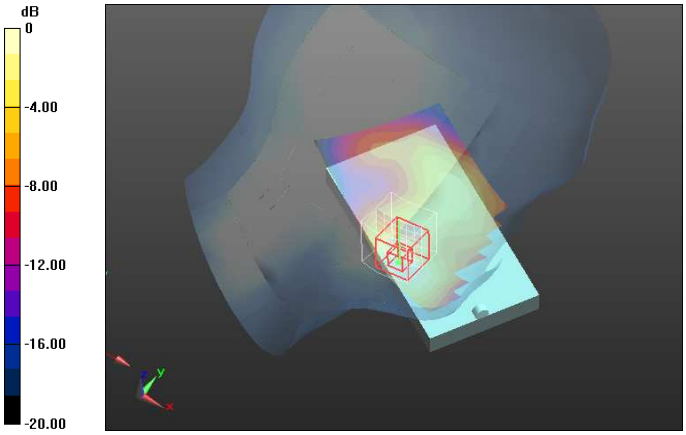
GPRS 1900 MHz 1 slot – Left hand side – Cheek position – Middle Channel

Test Laboratory: AT4 Wireless; Date: 03/09/2013

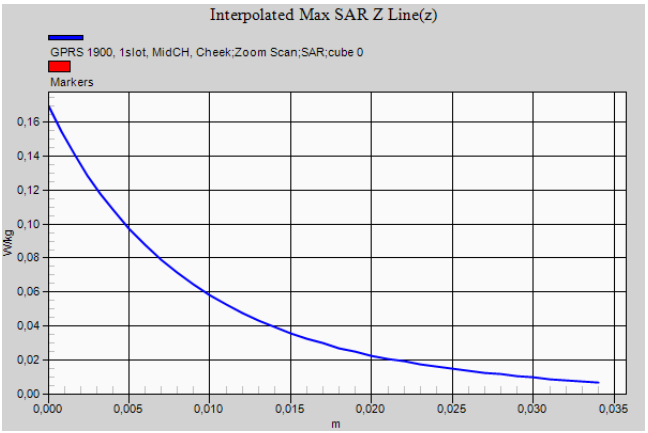
DUT: PureSecure; Type: Smartphone; Serial: IMEI: 035891240081126
Communication System: GPRS-FDD (TDMA, GMSK, TN 0); Frequency: 1880 MHz; Duty Cycle: 1:9.05733
Medium parameters used: f = 1880 MHz; σ = 1.52 mho/m; ε_r = 38.34; ρ = 1000 kg/m^3
Phantom section: Left Section
DASY5 Configuration:
- Probe: ES3DV3 - SN3052; ConvF(5.07, 5.07, 5.07); Calibrated: 22/07/2013;
- Sensor-Surface: 3mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 17/07/2013
- Phantom: SAM head-body simulator ; Type: Twin SAM V4.0; Serial: ---
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

1800MHz - Left Hand Side/GPRS 1900, 1slot, MidCH, Cheek/Area Scan (81x151x1):
Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.122 W/kg

1800MHz - Left Hand Side/GPRS 1900, 1slot, MidCH, Cheek/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 8.687 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 0.170 mW/g
SAR(1 g) = 0.100 mW/g; SAR(10 g) = 0.058 mW/g (SAR corrected for target medium)
Maximum value of SAR (measured) = 0.110 W/kg



0 dB = 0.110 W/kg = -19.17 dB W/kg

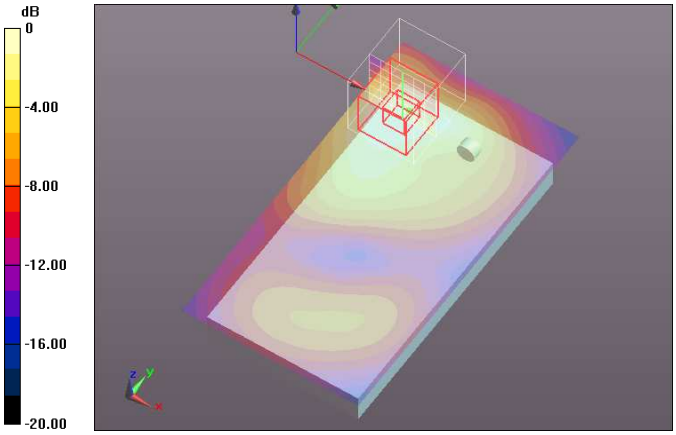


GPRS 1900 MHz 1 slot – Body – Back Face 10 mm – Middle Channel

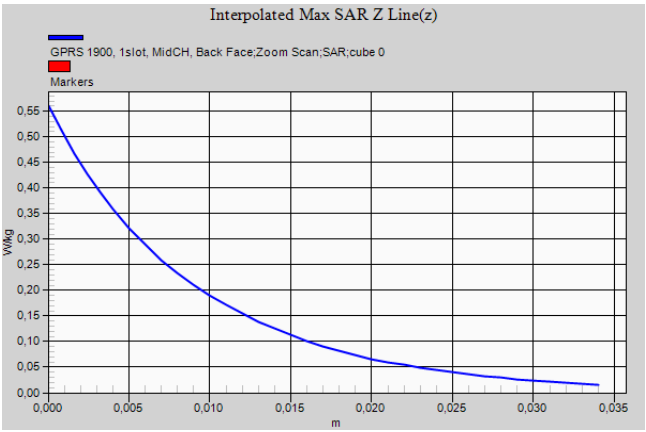
Test Laboratory: AT4 Wireless; Date: 25/08/2013
DUT: PureSecure; Type: Smartphone; Serial: IMEI: 035891240081126
Communication System: GPRS-FDD (TDMA, GMSK, TN 0); Frequency: 1880 MHz; Duty Cycle: 1:9.05733
Medium parameters used: f = 1880 MHz; σ = 1.6 mho/m; ε_r = 50.38; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY5 Configuration:
- Probe: ES3DV3 - SN3052; ConvF(4.64, 4.64, 4.64); Calibrated: 22/07/2013;
- Sensor-Surface: 3mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 17/07/2013
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1060
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

1800MHz - Body/GPRS 1900, 1slot, MidCH, Back Face/Area Scan (81x151x1):
Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.401 W/kg

1800MHz - Body/GPRS 1900, 1slot, MidCH, Back Face/Zoom Scan (7x8x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 15.278 V/m; Power Drift = -0.11 dB
Peak SAR (extrapolated) = 0.561 mW/g
SAR(1 g) = 0.326 mW/g; SAR(10 g) = 0.182 mW/g (SAR corrected for target medium)
Maximum value of SAR (measured) = 0.352 W/kg



0 dB = 0.352 W/kg = -9.07 dB W/kg



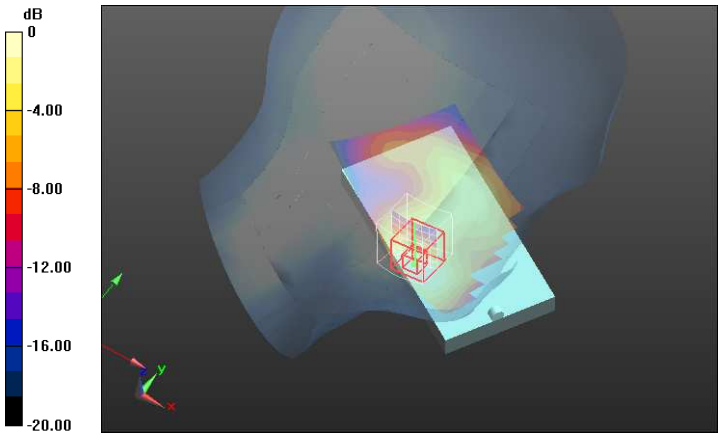
GPRS 1900 MHz 2 slots – Left hand side – Cheek position – Middle Channel

Test Laboratory: AT4 Wireless; Date: 03/09/2013

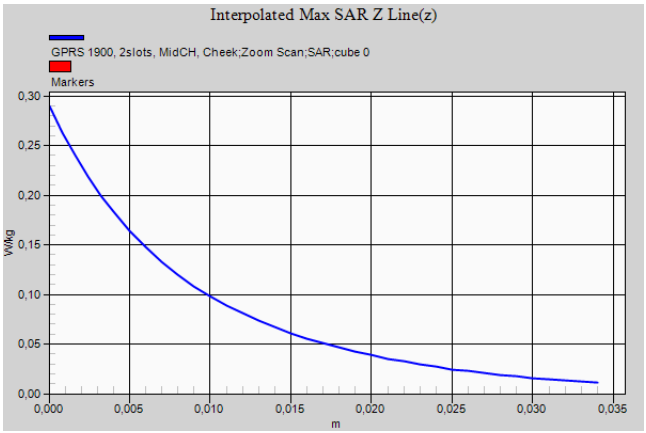
DUT: PureSecure; Type: Smartphone; Serial: IMEI: 035891240081126
Communication System: GPRS-FDD (TDMA, GMSK, TN 0-1); Frequency: 1880 MHz; Duty Cycle: 1:4.52898
Medium parameters used: f = 1880 MHz; σ = 1.52 mho/m; ε_r = 38.34; ρ = 1000 kg/m^3
Phantom section: Left Section
DASY5 Configuration:
- Probe: ES3DV3 - SN3052; ConvF(5.07, 5.07, 5.07); Calibrated: 22/07/2013;
- Sensor-Surface: 3mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 17/07/2013
- Phantom: SAM head-body simulator ; Type: Twin SAM V4.0; Serial: ---
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

1800MHz - Left Hand Side/GPRS 1900, 2slots, MidCH, Cheek/Area Scan (81x151x1):
Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.208 W/kg

1800MHz - Left Hand Side/GPRS 1900, 2slots, MidCH, Cheek/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 11.276 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 0.290 mW/g
SAR(1 g) = 0.170 mW/g; SAR(10 g) = 0.098 mW/g (SAR corrected for target medium)
Maximum value of SAR (measured) = 0.186 W/kg



0 dB = 0.186 W/kg = -14.61 dB W/kg



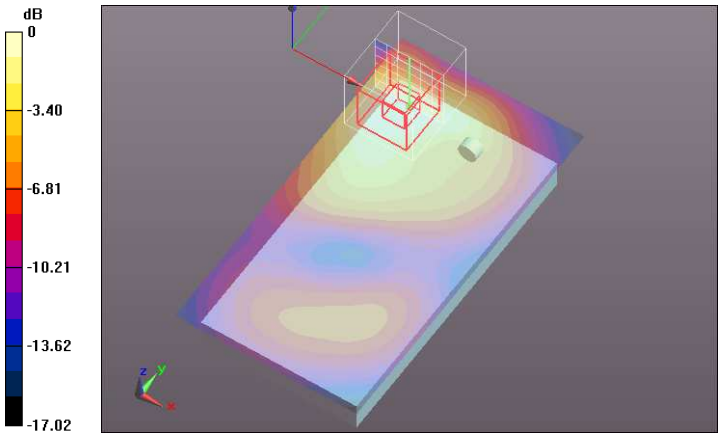
GPRS 1900 MHz 2 slots – Body – Back Face 10 mm – Middle Channel

Test Laboratory: AT4 Wireless; Date: 25/08/2013

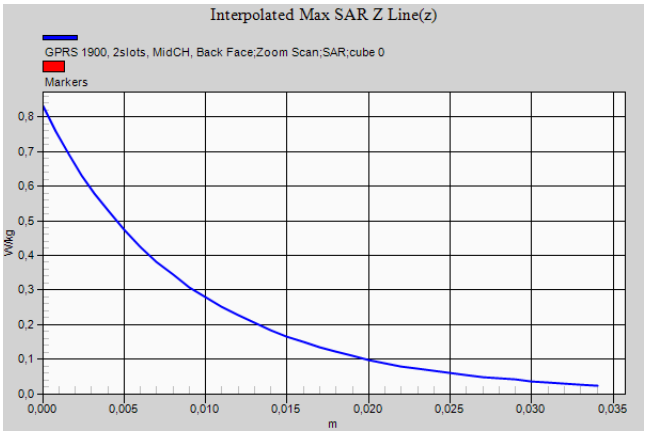
DUT: PureSecure; Type: Smartphone; Serial: IMEI: 035891240081126
Communication System: GPRS-FDD (TDMA, GMSK, TN 0-1); Frequency: 1880 MHz; Duty Cycle: 1:4.52898
Medium parameters used: f = 1880 MHz; σ = 1.6 mho/m; ε_r = 50.38; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY5 Configuration:
- Probe: ES3DV3 - SN3052; ConvF(4.64, 4.64, 4.64); Calibrated: 22/07/2013;
- Sensor-Surface: 3mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 17/07/2013
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1060
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

1800MHz - Body/GPRS 1900, 2slots, MidCH, Back Face/Area Scan (81x151x1):
Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.600 W/kg

1800MHz - Body/GPRS 1900, 2slots, MidCH, Back Face/Zoom Scan (7x8x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 18.074 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 0.832 mW/g
SAR(1 g) = 0.485 mW/g; SAR(10 g) = 0.274 mW/g (SAR corrected for target medium)
Maximum value of SAR (measured) = 0.526 W/kg



0 dB = 0.526 W/kg = -5.58 dB W/kg

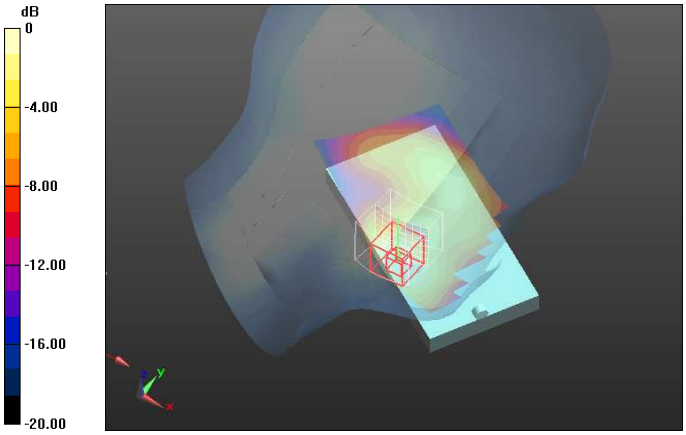


GPRS 1900 MHz 3 slots – Left hand side – Cheek position – Middle Channel

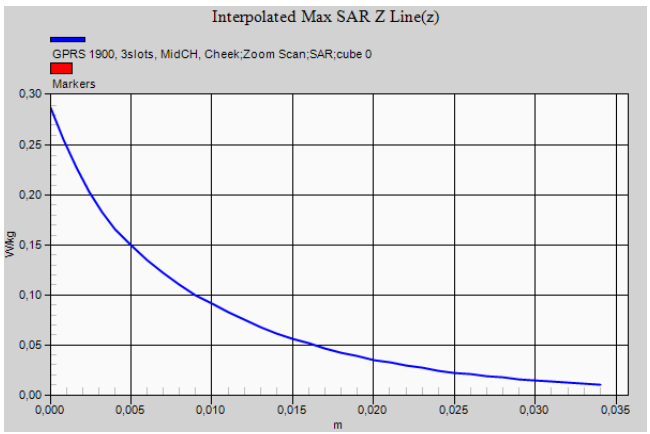
Test Laboratory: AT4 Wireless; Date: 03/09/2013
DUT: PureSecure; Type: Smartphone; Serial: IMEI: 035891240081126
Communication System: GPRS-FDD (TDMA, GMSK, TN 0-1-2); Frequency: 1880 MHz; Duty Cycle: 1:3.01995
Medium parameters used: f = 1880 MHz; σ = 1.52 mho/m; ε_r = 38.34; ρ = 1000 kg/m^3
Phantom section: Left Section
DASY5 Configuration:
- Probe: ES3DV3 - SN3052; ConvF(5.07, 5.07, 5.07); Calibrated: 22/07/2013;
- Sensor-Surface: 3mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 17/07/2013
- Phantom: SAM head-body simulator ; Type: Twin SAM V4.0; Serial: ---
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

1800MHz - Left Hand Side/GPRS 1900, 3slots, MidCH, Cheek/Area Scan (81x151x1):
Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.155 W/kg

1800MHz - Left Hand Side/GPRS 1900, 3slots, MidCH, Cheek/Zoom Scan (8x8x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 9.668 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 0.288 mW/g
SAR(1 g) = 0.131 mW/g; SAR(10 g) = 0.068 mW/g (SAR corrected for target medium)
Maximum value of SAR (measured) = 0.143 W/kg



0 dB = 0.143 W/kg = -16.89 dB W/kg



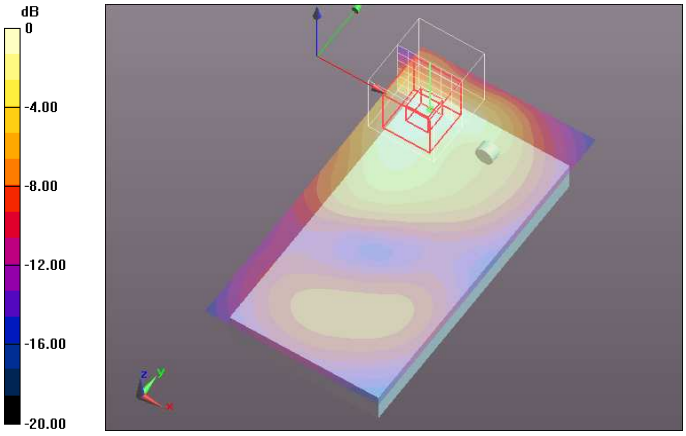
GPRS 1900 MHz 3 slots – Body – Back Face 10 mm – Middle Channel

Test Laboratory: AT4 Wireless; Date: 25/08/2013

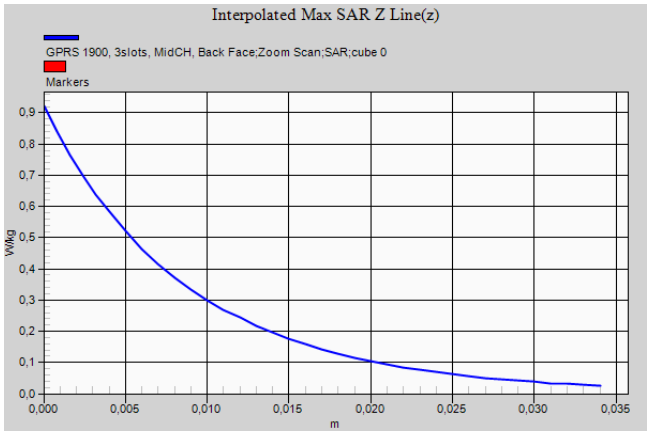
DUT: PureSecure; Type: Smartphone; Serial: IMEI: 035891240081126
Communication System: GPRS-FDD (TDMA, GMSK, TN 0-1-2); Frequency: 1880 MHz; Duty Cycle: 1:3.01995
Medium parameters used: f = 1880 MHz; σ = 1.6 mho/m; ε_r = 50.38; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY5 Configuration:
- Probe: ES3DV3 - SN3052; ConvF(4.64, 4.64, 4.64); Calibrated: 22/07/2013;
- Sensor-Surface: 3mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 17/07/2013
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1060
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

1800MHz - Body/GPRS 1900, 3slots, MidCH, Back Face/Area Scan (81x151x1):
Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.642 W/kg

1800MHz - Body/GPRS 1900, 3slots, MidCH, Back Face/Zoom Scan (7x8x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 17.934 V/m; Power Drift = -0.29 dB
Peak SAR (extrapolated) = 0.922 mW/g
SAR(1 g) = 0.526 mW/g; SAR(10 g) = 0.290 mW/g (SAR corrected for target medium)
Maximum value of SAR (measured) = 0.576 W/kg



0 dB = 0.576 W/kg = -4.79 dB W/kg



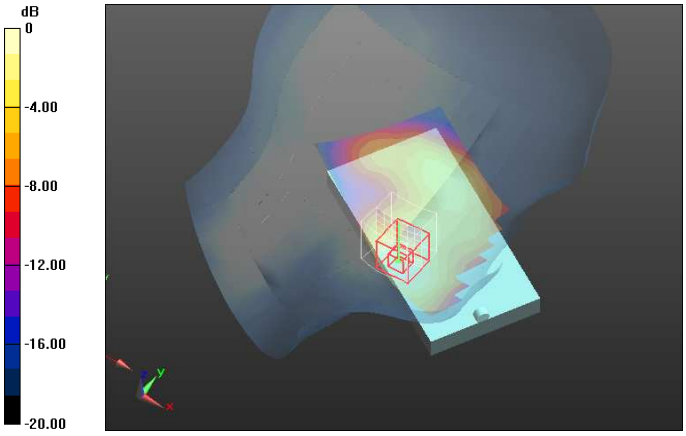
GPRS 1900 MHz 4 slots – Left hand side – Cheek position – Middle Channel

Test Laboratory: AT4 Wireless; Date: 03/09/2013

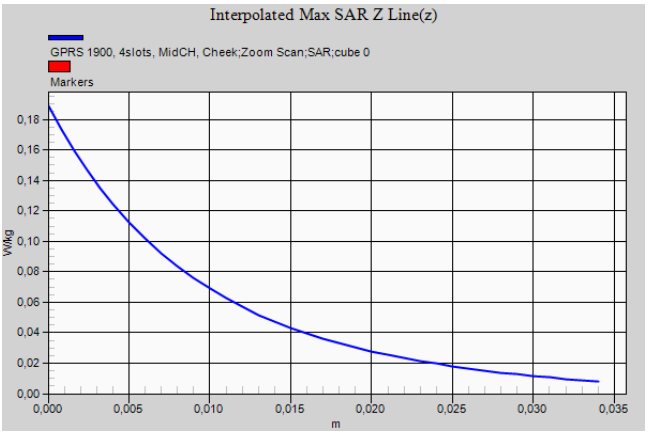
DUT: PureSecure; Type: Smartphone; Serial: IMEI: 035891240081126
Communication System: GPRS-FDD (TDMA, GMSK, TN 0-1-2-3); Frequency: 1880 MHz; Duty Cycle: 1:2.26464
Medium parameters used: f = 1880 MHz; σ = 1.52 mho/m; ε_r = 38.34; ρ = 1000 kg/m^3
Phantom section: Left Section
DASY5 Configuration:
- Probe: ES3DV3 - SN3052; ConvF(5.07, 5.07, 5.07); Calibrated: 22/07/2013;
- Sensor-Surface: 3mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 17/07/2013
- Phantom: SAM head-body simulator ; Type: Twin SAM V4.0; Serial: ---
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

1800MHz - Left Hand Side/GPRS 1900, 4slots, MidCH, Cheek/Area Scan (81x151x1):
Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.137 W/kg

1800MHz - Left Hand Side/GPRS 1900, 4slots, MidCH, Cheek/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 9.134 V/m; Power Drift = -0.00 dB
Peak SAR (extrapolated) = 0.189 mW/g
SAR(1 g) = 0.114 mW/g; SAR(10 g) = 0.067 mW/g (SAR corrected for target medium)
Maximum value of SAR (measured) = 0.126 W/kg



0 dB = 0.126 W/kg = -17.99 dB W/kg



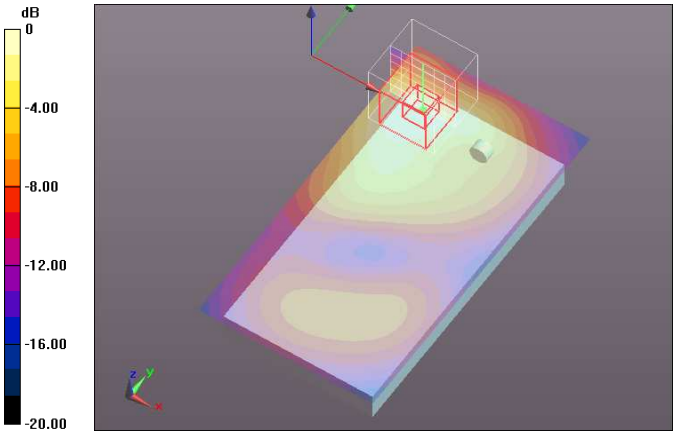
GPRS 1900 MHz 4 slots – Body – Back Face 10 mm – Middle Channel

Test Laboratory: AT4 Wireless; Date: 25/08/2013

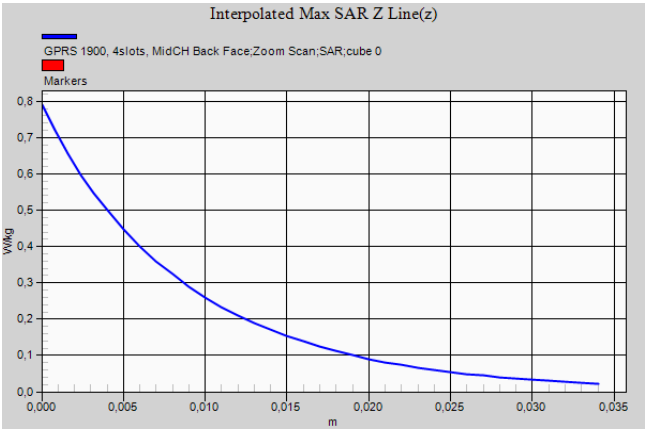
DUT: PureSecure; Type: Smartphone; Serial: IMEI: 035891240081126
Communication System: GPRS-FDD (TDMA, GMSK, TN 0-1-2-3); Frequency: 1880 MHz; Duty Cycle: 1:2.26464
Medium parameters used: f = 1880 MHz; σ = 1.6 mho/m; ε_r = 50.38; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY5 Configuration:
- Probe: ES3DV3 - SN3052; ConvF(4.64, 4.64, 4.64); Calibrated: 22/07/2013;
- Sensor-Surface: 3mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 17/07/2013
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1060
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

1800MHz - Body/GPRS 1900, 4slots, MidCH Back Face/Area Scan (81x151x1):
Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.570 W/kg

1800MHz - Body/GPRS 1900, 4slots, MidCH Back Face/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 17.352 V/m; Power Drift = 0.17 dB
Peak SAR (extrapolated) = 0.791 mW/g
SAR(1 g) = 0.454 mW/g; SAR(10 g) = 0.252 mW/g (SAR corrected for target medium)
Maximum value of SAR (measured) = 0.505 W/kg



0 dB = 0.505 W/kg = -5.93 dB W/kg



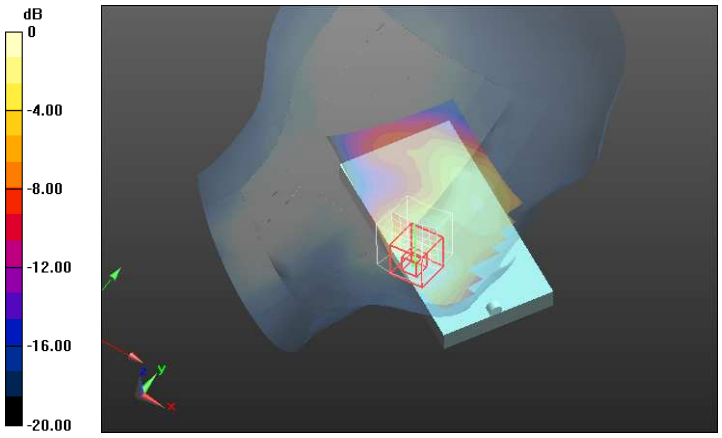
WCDMA Band II – Left hand side – Cheek position – Middle Channel

Test Laboratory: AT4 Wireless; Date: 03/09/2013

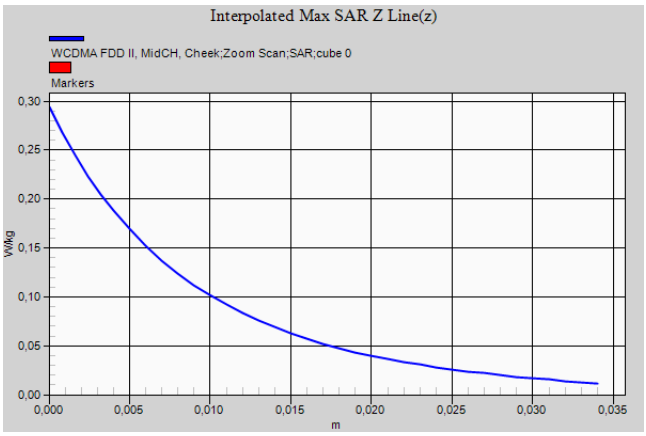
DUT: PureSecure; Type: Smartphone; Serial: IMEI: 035891240081126
Communication System: UMTS-FDD (WCDMA); Frequency: 1880 MHz; Duty Cycle: 1:1.95434
Medium parameters used: f = 1880 MHz; σ = 1.52 mho/m; ε_r = 38.34; ρ = 1000 kg/m^3
Phantom section: Left Section
DASY5 Configuration:
- Probe: ES3DV3 - SN3052; ConvF(5.07, 5.07, 5.07); Calibrated: 22/07/2013;
- Sensor-Surface: 3mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 17/07/2013
- Phantom: SAM head-body simulator ; Type: Twin SAM V4.0; Serial: ---
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

1800MHz - Left Hand Side/WCDMA FDD II, MidCH, Cheek/Area Scan (81x151x1):
Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.202 W/kg

1800MHz - Left Hand Side/WCDMA FDD II, MidCH, Cheek/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 10.944 V/m; Power Drift = 0.17 dB
Peak SAR (extrapolated) = 0.294 mW/g
SAR(1 g) = 0.171 mW/g; SAR(10 g) = 0.100 mW/g (SAR corrected for target medium)
Maximum value of SAR (measured) = 0.189 W/kg



0 dB = 0.189 W/kg = -14.47 dB W/kg



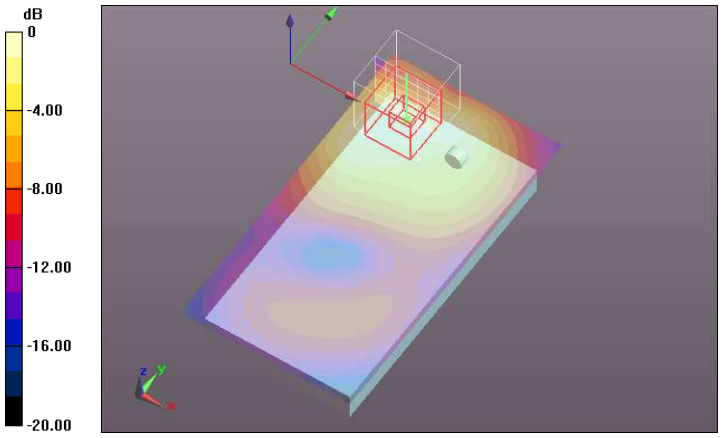
WCDMA Band II – Body – Back Face 10 mm – Middle Channel

Test Laboratory: AT4 Wireless; Date: 24/08/2013

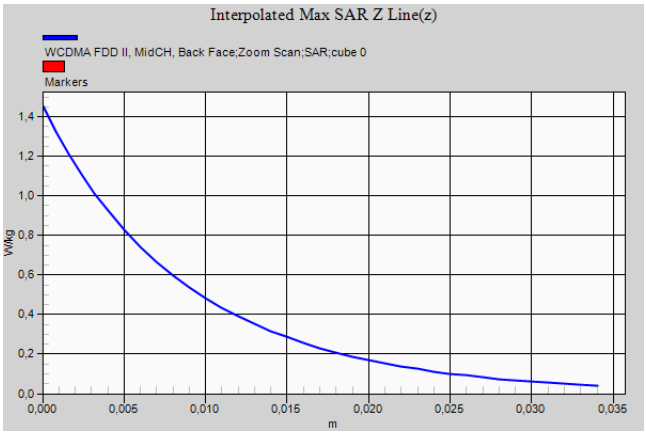
DUT: PureSecure; Type: Smartphone; Serial: IMEI: 035891240081126
Communication System: UMTS-FDD (WCDMA); Frequency: 1880 MHz; Duty Cycle: 1:1.95434
Medium parameters used: f = 1880 MHz; σ = 1.6 mho/m; ε_r = 50.38; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY5 Configuration:
- Probe: ES3DV3 - SN3052; ConvF(4.64, 4.64, 4.64); Calibrated: 22/07/2013;
- Sensor-Surface: 3mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 17/07/2013
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1060
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

1800MHz - Body/WCDMA FDD II, MidCH, Back Face/Area Scan (81x151x1):
Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 1.08 W/kg

1800MHz - Body/WCDMA FDD II, MidCH, Back Face/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 23.349 V/m; Power Drift = -0.13 dB
Peak SAR (extrapolated) = 1.454 mW/g
SAR(1 g) = 0.831 mW/g; SAR(10 g) = 0.468 mW/g (SAR corrected for target medium)
Maximum value of SAR (measured) = 0.931 W/kg



0 dB = 0.931 W/kg = -0.62 dB W/kg



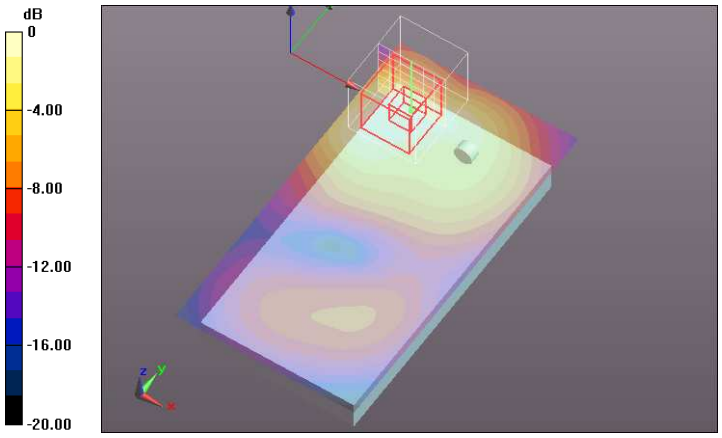
WCDMA Band II – Body – Back Face 10 mm – Lowest Channel

Test Laboratory: AT4 Wireless; Date: 24/08/2013

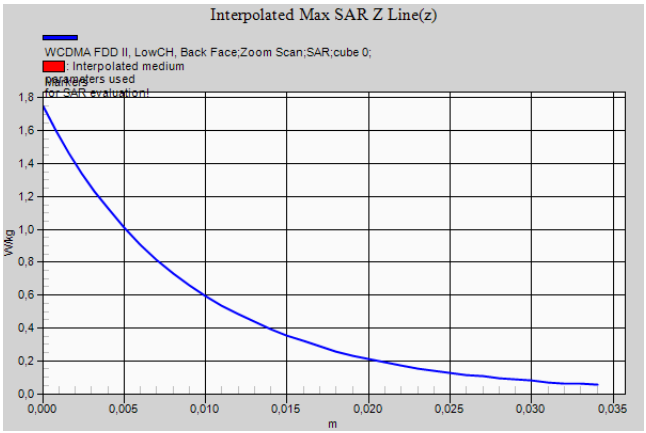
DUT: PureSecure; Type: Smartphone; Serial: IMEI: 035891240081126
Communication System: UMTS-FDD (WCDMA); Frequency: 1852.4 MHz; Duty Cycle: 1:1.95434
Medium parameters used (interpolated): f = 1852.4 MHz; σ = 1.571 mho/m; ε_r = 50.128; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY5 Configuration:
- Probe: ES3DV3 - SN3052; ConvF(4.64, 4.64, 4.64); Calibrated: 22/07/2013;
- Sensor-Surface: 3mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 17/07/2013
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1060
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

1800MHz - Body/WCDMA FDD II, LowCH, Back Face/Area Scan (81x151x1):
Interpolated grid: dx=1.000 mm, dy=1.000 mm
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 1.31 W/kg

1800MHz - Body/WCDMA FDD II, LowCH, Back Face/Zoom Scan (7x8x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 26.699 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 1.751 mW/g
SAR(1 g) = 1.02 mW/g; SAR(10 g) = 0.580 mW/g (SAR corrected for target medium)
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 1.13 W/kg



0 dB = 1.13 W/kg = 1.06 dB W/kg



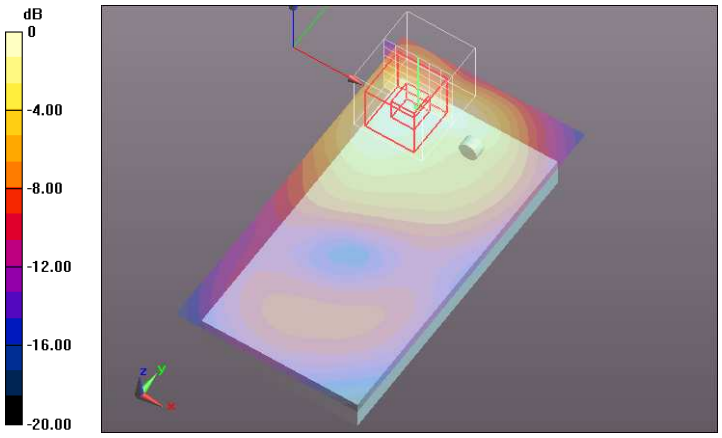
WCDMA Band II – Body – Back Face 10 mm – Highest Channel

Test Laboratory: AT4 Wireless; Date: 24/08/2013

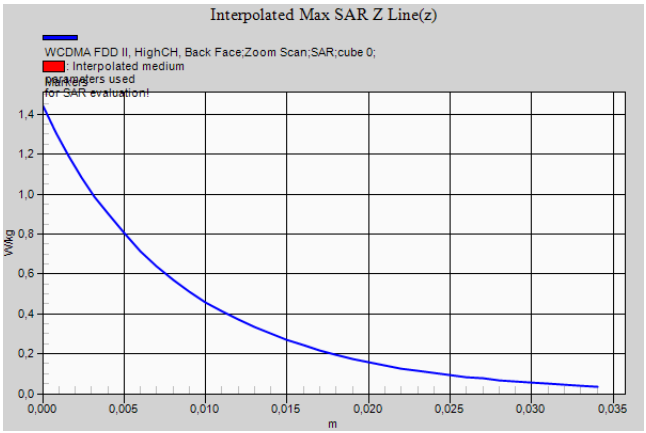
DUT: PureSecure; Type: Smartphone; Serial: IMEI: 035891240081126
Communication System: UMTS-FDD (WCDMA); Frequency: 1907.6 MHz; Duty Cycle: 1:1.95434
Medium parameters used (interpolated): f = 1907.6 MHz; σ = 1.559 mho/m; ε_r = 50.41; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY5 Configuration:
- Probe: ES3DV3 - SN3052; ConvF(4.64, 4.64, 4.64); Calibrated: 22/07/2013;
- Sensor-Surface: 3mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 17/07/2013
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1060
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

1800MHz - Body/WCDMA FDD II, HighCH, Back Face/Area Scan (81x151x1):
Interpolated grid: dx=1.000 mm, dy=1.000 mm
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 1.04 W/kg

1800MHz - Body/WCDMA FDD II, HighCH, Back Face/Zoom Scan (7x8x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 23.828 V/m; Power Drift = -0.26 dB
Peak SAR (extrapolated) = 1.442 mW/g
SAR(1 g) = 0.810 mW/g; SAR(10 g) = 0.448 mW/g (SAR corrected for target medium)
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.886 W/kg



0 dB = 0.886 W/kg = -1.05 dB W/kg



WCDMA Band II – Body – Bottom Edge 10 mm – Middle Channel

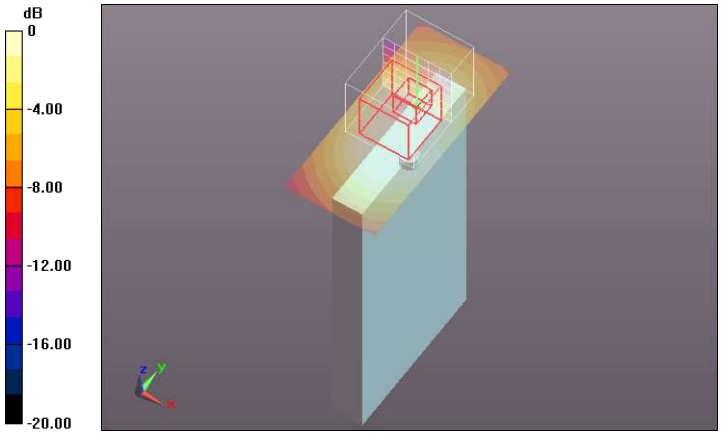
Test Laboratory: AT4 Wireless; Date: 24/08/2013

DUT: PureSecure; Type: Smartphone; Serial: IMEI: 035891240081126
Communication System: UMTS-FDD (WCDMA); Frequency: 1880 MHz; Duty Cycle: 1:1.95434
Medium parameters used: f = 1880 MHz; σ = 1.6 mho/m; ε_r = 50.38; ρ = 1000 kg/m^3
Phantom section: Flat Section

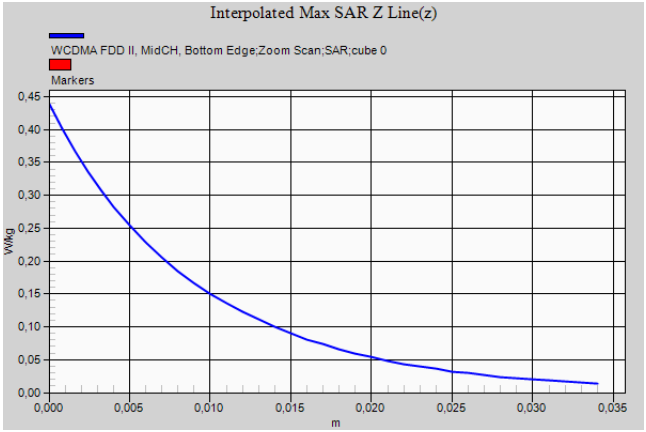
DASY5 Configuration:
- Probe: ES3DV3 - SN3052; ConvF(4.64, 4.64, 4.64); Calibrated: 22/07/2013;
- Sensor-Surface: 3mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 17/07/2013
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1060
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

1800MHz - Body/WCDMA FDD II, MidCH, Bottom Edge/Area Scan (41x91x1):
Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.321 W/kg

1800MHz - Body/WCDMA FDD II, MidCH, Bottom Edge/Zoom Scan (7x9x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 11.435 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 0.439 mW/g
SAR(1 g) = 0.259 mW/g; SAR(10 g) = 0.155 mW/g (SAR corrected for target medium)
Maximum value of SAR (measured) = 0.280 W/kg



0 dB = 0.280 W/kg = -11.06 dB W/kg



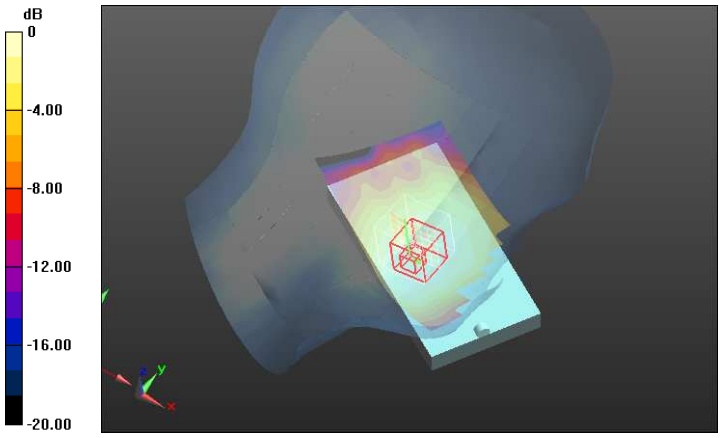
WCDMA Band V – Left hand side – Cheek position – Middle Channel

Test Laboratory: AT4 Wireless; Date: 02/09/2013

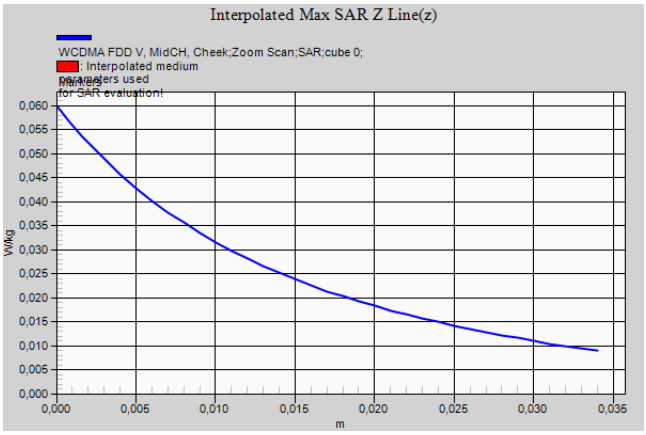
DUT: PureSecure; Type: Smartphone; Serial: IMEI: 035891240081126
Communication System: UMTS-FDD (WCDMA); Frequency: 836.6 MHz; Duty Cycle: 1:1.95434
Medium parameters used (interpolated): f = 836.6 MHz; σ = 0.977 mho/m; ε_r = 39.074; ρ = 1000 kg/m^3
Phantom section: Left Section
DASY5 Configuration:
- Probe: ES3DV3 - SN3052; ConvF(6.31, 6.31, 6.31); Calibrated: 22/07/2013;
- Sensor-Surface: 3mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 17/07/2013
- Phantom: SAM head-body simulator ; Type: Twin SAM V4.0; Serial: ---
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

900MHz - Left Hand Side/WCDMA FDD V, MidCH, Cheek/Area Scan (81x151x1):
Interpolated grid: dx=1.000 mm, dy=1.000 mm
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.0498 W/kg

900MHz - Left Hand Side/WCDMA FDD V, MidCH, Cheek/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 2.347 V/m; Power Drift = 0.25 dB
Peak SAR (extrapolated) = 0.060 mW/g
SAR(1 g) = 0.043 mW/g; SAR(10 g) = 0.031 mW/g (SAR corrected for target medium)
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.0459 W/kg



0 dB = 0.0459 W/kg = -26.76 dB W/kg



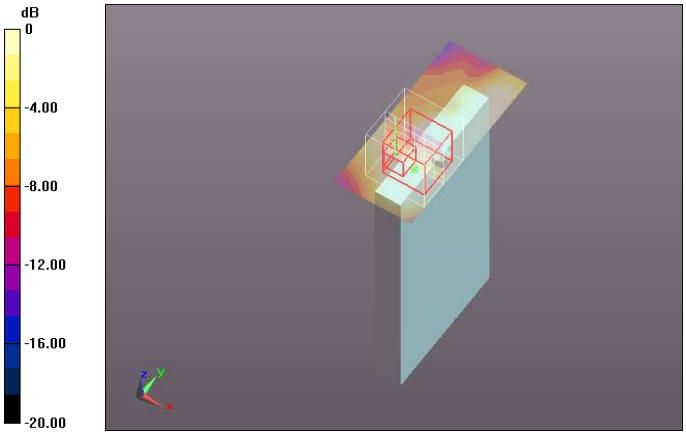
WCDMA Band V – Body – Bottom Edge 10 mm – Middle Channel

Test Laboratory: AT4 Wireless; Date: 30/08/2013

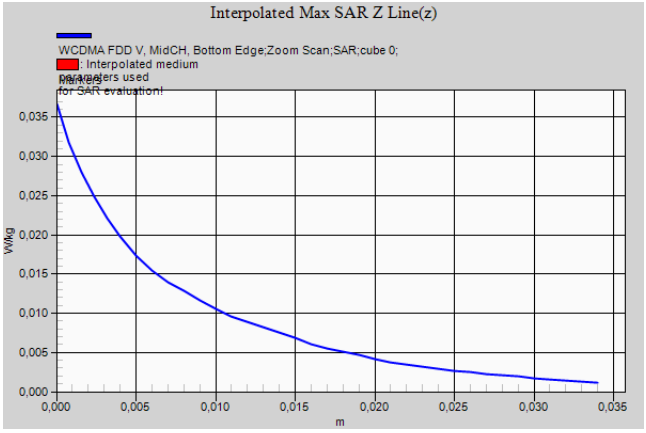
DUT: PureSecure; Type: Smartphone; Serial: IMEI: 035891240081126
Communication System: UMTS-FDD (WCDMA); Frequency: 836.6 MHz; Duty Cycle: 1:1.95434
Medium parameters used (interpolated): f = 836.6 MHz; σ = 1.043 mho/m; ε_r = 54.069; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY5 Configuration:
- Probe: ES3DV3 - SN3052; ConvF(6.29, 6.29, 6.29); Calibrated: 22/07/2013;
- Sensor-Surface: 3mm (Mechanical Surface Detection), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 17/07/2013
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1060
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

900MHz - Body/WCDMA FDD V, MidCH, Bottom Edge/Area Scan (41x91x1):
Interpolated grid: dx=1.000 mm, dy=1.000 mm
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.0636 W/kg

900MHz - Body/WCDMA FDD V, MidCH, Bottom Edge/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 4.241 V/m; Power Drift = 0.06 dB
Peak SAR (extrapolated) = 0.037 mW/g
SAR(1 g) = 0.016 mW/g; SAR(10 g) = 0.00854 mW/g (SAR corrected for target medium)
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.0197 W/kg



0 dB = 0.0197 W/kg = -34.11 dB W/kg

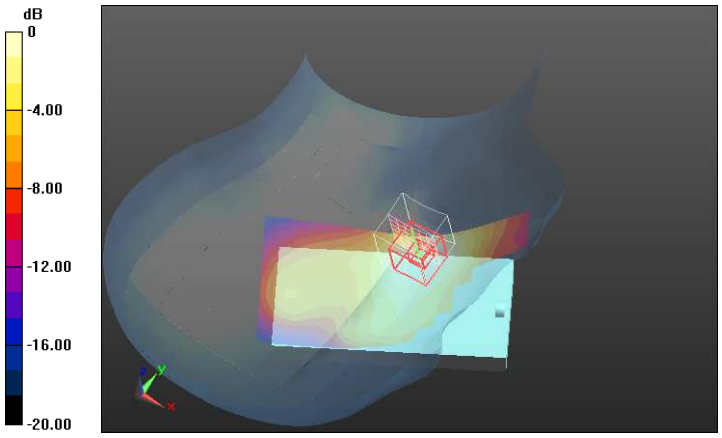


LTE Band 4 1RB – Right hand side – Cheek position – Middle Channel

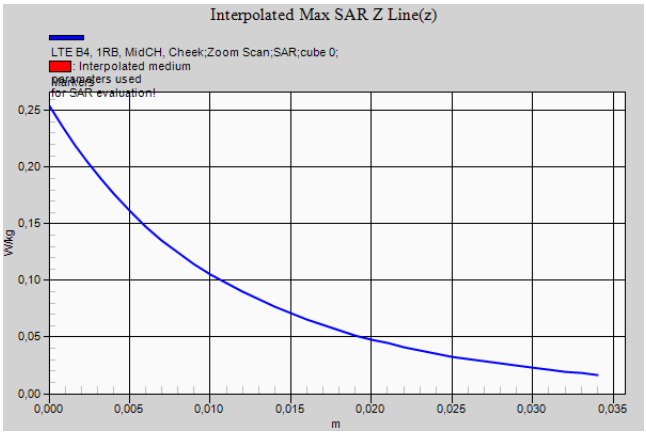
Test Laboratory: AT4 Wireless; Date: 04/09/2013

DUT: PureSecure; Type: Smartphone; Serial: IMEI: 035891240081126
Communication System: LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK); Frequency: 1732.5 MHz; Duty Cycle: 1:3.74111
Medium parameters used (interpolated): f = 1732.5 MHz; σ = 1.236 mho/m; ε_r = 38.6; ρ = 1000 kg/m^3
Phantom section: Right Section
DASY5 Configuration:
- Probe: ES3DV3 - SN3052; ConvF(5.26, 5.26, 5.26); Calibrated: 22/07/2013;
- Sensor-Surface: 3mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 17/07/2013
- Phantom: SAM head-body simulator ; Type: Twin SAM V4.0; Serial: ---
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

1800MHz - Right Hand Side/LTE B4, 1RB, MidCH, Cheek/Area Scan (81x151x1):
Interpolated grid: dx=1.000 mm, dy=1.000 mm
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.202 W/kg
1800MHz - Right Hand Side/LTE B4, 1RB, MidCH, Cheek/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 12.132 V/m; Power Drift = 0.05 dB
Peak SAR (extrapolated) = 0.254 mW/g
SAR(1 g) = 0.174 mW/g; SAR(10 g) = 0.109 mW/g (SAR corrected for target medium)
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.179 W/kg



0 dB = 0.179 W/kg = -14.94 dB W/kg

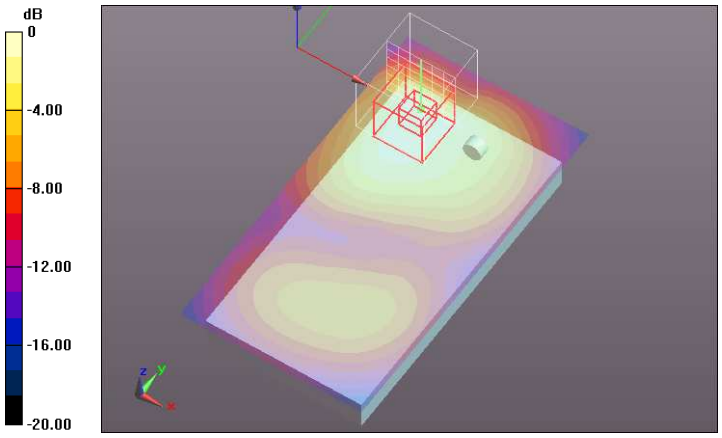


LTE Band 4 1RB – Body – Back Face 10 mm – Middle Channel

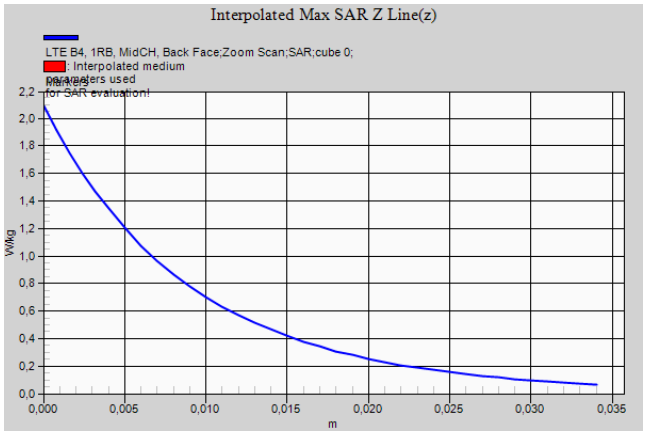
Test Laboratory: AT4 Wireless; Date: 23/08/2013

DUT: PureSecure; Type: Smartphone; Serial: IMEI: 035891240081126
Communication System: LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK); Frequency: 1732.5 MHz; Duty Cycle: 1:3.74111
Medium parameters used (interpolated): f = 1732.5 MHz; σ = 1.479 mho/m; ε_r = 50.545; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY5 Configuration:
- Probe: ES3DV3 - SN3052; ConvF(4.9, 4.9, 4.9); Calibrated: 22/07/2013;
- Sensor-Surface: 3mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 17/07/2013
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1060
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

1800MHz - Body/LTE B4, 1RB, MidCH, Back Face/Area Scan (81x151x1):
Interpolated grid: dx=1.000 mm, dy=1.000 mm
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 1.58 W/kg
1800MHz - Body/LTE B4, 1RB, MidCH, Back Face/Zoom Scan (7x8x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 29.854 V/m; Power Drift = -0.07 dB
Peak SAR (extrapolated) = 2.091 mW/g
SAR(1 g) = 1.19 mW/g; SAR(10 g) = 0.676 mW/g (SAR corrected for target medium)
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 1.32 W/kg



0 dB = 1.32 W/kg = 2.41 dB W/kg

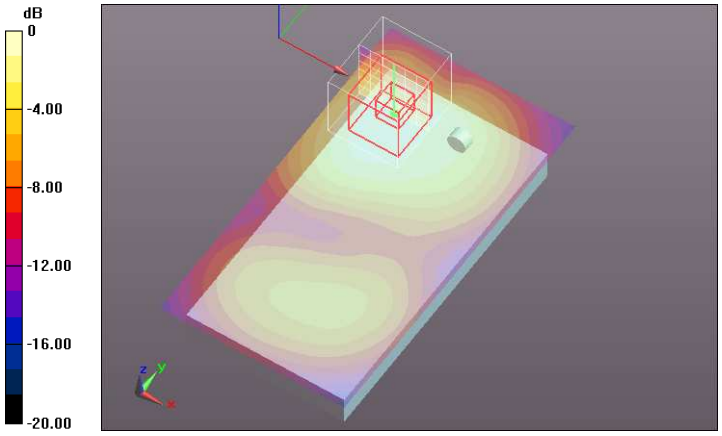


LTE Band 4 1RB – Body – Back Face 10 mm – Lowest Channel

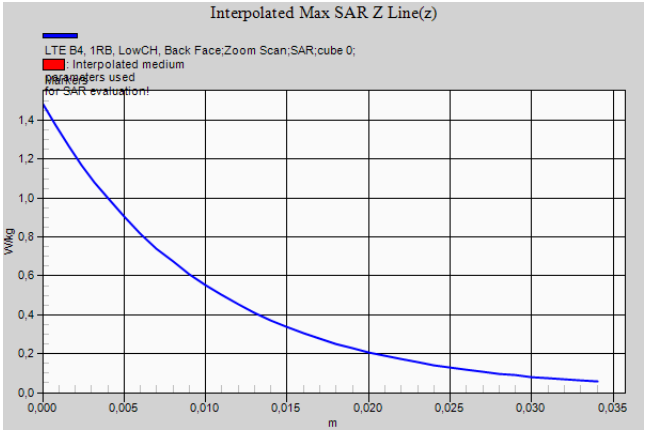
Test Laboratory: AT4 Wireless; Date: 23/08/2013

DUT: PureSecure; Type: Smartphone; Serial: IMEI: 035891240081126
Communication System: LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK); Frequency: 1710 MHz; Duty Cycle: 1:3.74111
Medium parameters used (interpolated): f = 1710 MHz; σ = 1.465 mho/m; ε_r = 50.93; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY5 Configuration:
- Probe: ES3DV3 - SN3052; ConvF(4.9, 4.9, 4.9); Calibrated: 22/07/2013;
- Sensor-Surface: 3mm (Mechanical Surface Detection), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 17/07/2013
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1060
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

1800MHz - Body/LTE B4, 1RB, LowCH, Back Face/Area Scan (81x151x1):
nterpolated grid: dx=1.000 mm, dy=1.000 mm
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 1.11 W/kg
1800MHz - Body/LTE B4, 1RB, LowCH, Back Face/Zoom Scan (7x8x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 26.421 V/m; Power Drift = 0.11 dB
Peak SAR (extrapolated) = 1.483 mW/g
SAR(1 g) = 0.900 mW/g; SAR(10 g) = 0.538 mW/g (SAR corrected for target medium)
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.977 W/kg



0 dB = 0.977 W/kg = -0.20 dB W/kg



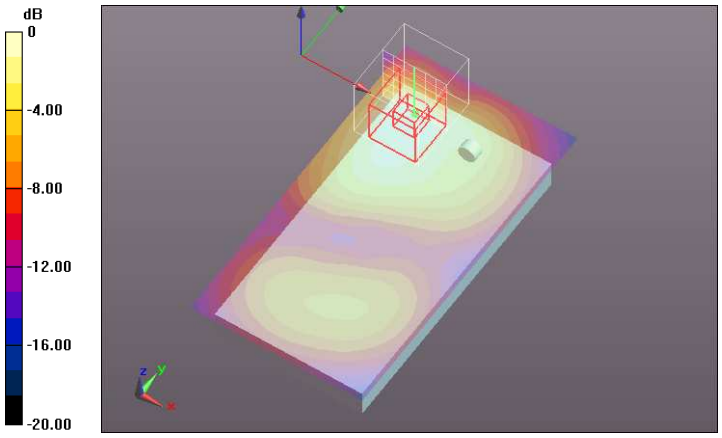
LTE Band 4 1RB – Body – Back Face 10 mm – Highest Channel

Test Laboratory: AT4 Wireless; Date: 23/08/2013

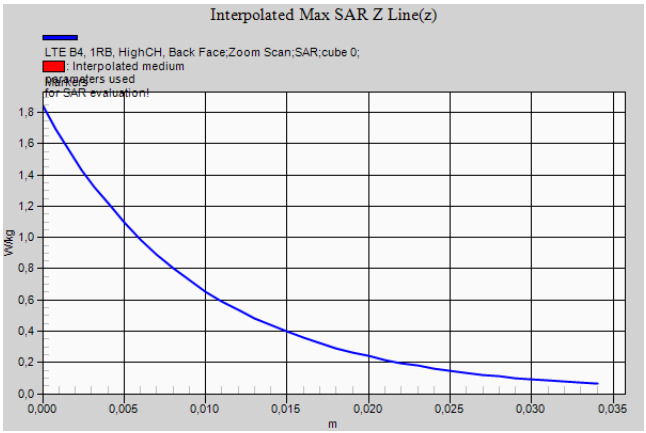
DUT: PureSecure; Type: Smartphone; Serial: IMEI: 035891240081126
Communication System: LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK); Frequency: 1754.9 MHz; Duty Cycle: 1:3.74111
Medium parameters used (interpolated): f = 1754.9 MHz; σ = 1.535 mho/m; ε_r = 50.417; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY5 Configuration:
- Probe: ES3DV3 - SN3052; ConvF(4.9, 4.9, 4.9); Calibrated: 22/07/2013;
- Sensor-Surface: 3mm (Mechanical Surface Detection), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 17/07/2013
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1060
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

1800MHz - Body/LTE B4, 1RB, HighCH, Back Face/Area Scan (81x151x1):
Interpolated grid: dx=1.000 mm, dy=1.000 mm
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 1.36 W/kg

1800MHz - Body/LTE B4, 1RB, HighCH, Back Face/Zoom Scan (7x8x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 28.507 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 1.842 mW/g
SAR(1 g) = 1.08 mW/g; SAR(10 g) = 0.619 mW/g (SAR corrected for target medium)
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 1.20 W/kg



0 dB = 1.20 W/kg = 1.58 dB W/kg

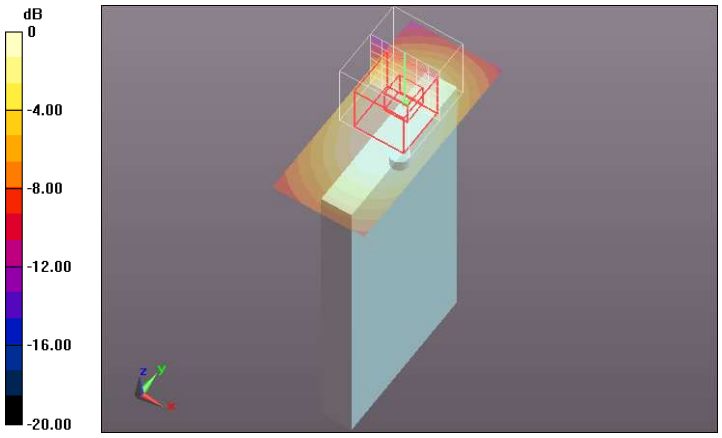


LTE Band 4 1RB – Body – Bottom Edge 10 mm – Middle Channel

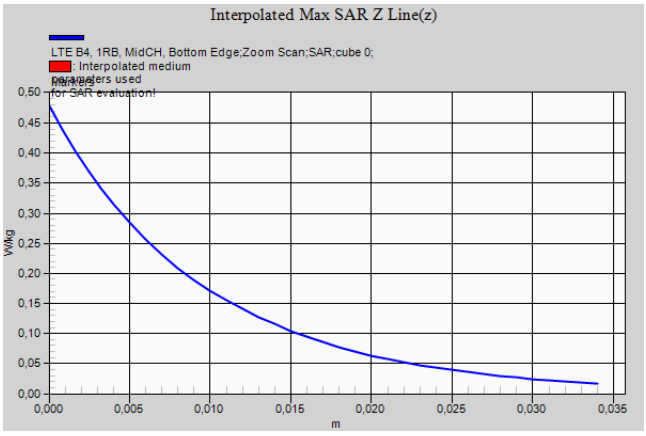
Test Laboratory: AT4 Wireless; Date: 23/08/2013

DUT: PureSecure; Type: Smartphone; Serial: IMEI: 035891240081126
Communication System: LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK); Frequency: 1732.5 MHz; Duty Cycle: 1:3.74111
Medium parameters used (interpolated): f = 1732.5 MHz; σ = 1.479 mho/m; ε_r = 50.545; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY5 Configuration:
- Probe: ES3DV3 - SN3052; ConvF(4.9, 4.9, 4.9); Calibrated: 22/07/2013;
- Sensor-Surface: 3mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 17/07/2013
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1060
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

1800MHz - Body/LTE B4, 1RB, MidCH, Bottom Edge/Area Scan (41x91x1):
Interpolated grid: dx=1.000 mm, dy=1.000 mm
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.358 W/kg
1800MHz - Body/LTE B4, 1RB, MidCH, Bottom Edge/Zoom Scan (7x8x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 12.647 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 0.478 mW/g
SAR(1 g) = 0.288 mW/g; SAR(10 g) = 0.173 mW/g (SAR corrected for target medium)
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.314 W/kg



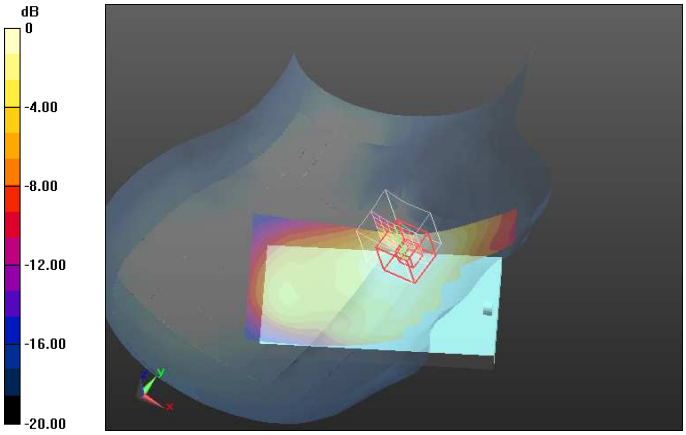
0 dB = 0.314 W/kg = -10.06 dB W/kg



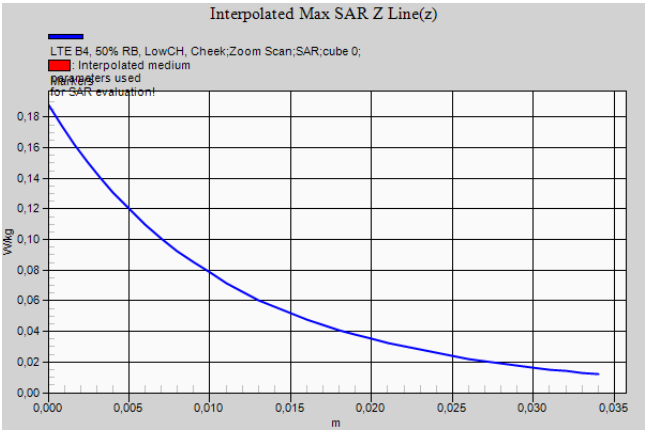
LTE Band 4 50% RB – Right hand side – Cheek position – Lowest Channel

Test Laboratory: AT4 Wireless; Date: 23/08/2013
DUT: PureSecure; Type: Smartphone; Serial: IMEI: 035891240081126
Communication System: LTE-FDD (SC-FDMA, 50% RB, 20 MHz, QPSK); Frequency: 1710 MHz; Duty Cycle: 1:3.68978
Medium parameters used (interpolated): f = 1710 MHz; σ = 1.275 mho/m; ε_r = 39.6; ρ = 1000 kg/m^3
Phantom section: Right Section
DASY5 Configuration:
- Probe: ES3DV3 - SN3052; ConvF(5.26, 5.26, 5.26); Calibrated: 22/07/2013;
- Sensor-Surface: 3mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 17/07/2013
- Phantom: SAM head-body simulator ; Type: Twin SAM V4.0; Serial: ---
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

1800MHz - Right Hand Side /LTE B4, 50% RB, LowCH, Cheek/Area Scan (81x151x1):
Interpolated grid: dx=1.000 mm, dy=1.000 mm
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.150 W/kg
1800MHz - Right Hand Side /LTE B4, 50% RB, LowCH, Cheek/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 6.275 V/m; Power Drift = 0.04 dB
Peak SAR (extrapolated) = 0.188 mW/g
SAR(1 g) = 0.127 mW/g; SAR(10 g) = 0.081 mW/g (SAR corrected for target medium)
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.132 W/kg



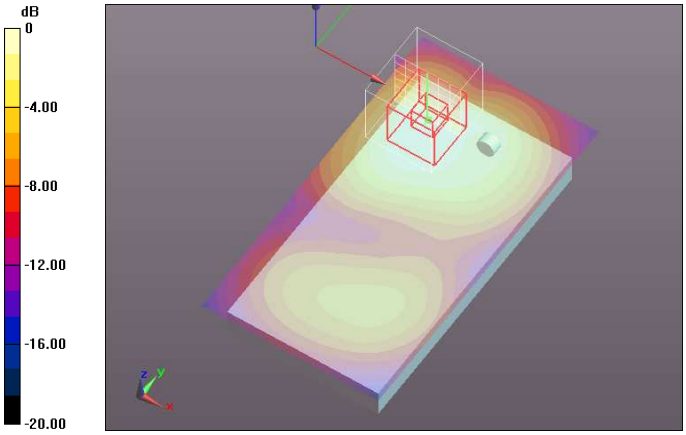
0 dB = 0.132 W/kg = -17.59 dB W/kg



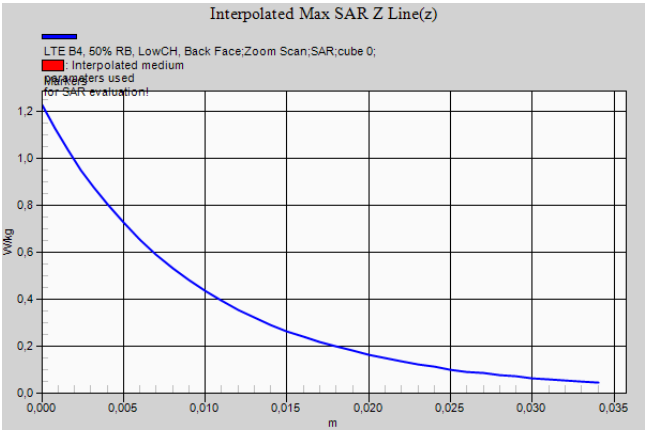
LTE Band 4 50% RB – Body – Back Face 10 mm – Lowest Channel

Test Laboratory: AT4 Wireless; Date: 23/08/2013
DUT: PureSecure; Type: Smartphone; Serial: IMEI: 035891240081126
Communication System: LTE-FDD (SC-FDMA, 50% RB, 20 MHz, QPSK); Frequency: 1710 MHz; Duty Cycle: 1:3.68978
Medium parameters used (interpolated): f = 1710 MHz; σ = 1.465 mho/m; ε_r = 50.93; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY5 Configuration:
- Probe: ES3DV3 - SN3052; ConvF(4.9, 4.9, 4.9); Calibrated: 22/07/2013;
- Sensor-Surface: 3mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 17/07/2013
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1060
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

1800MHz - Body/LTE B4, 50% RB, LowCH, Back Face/Area Scan (81x151x1):
Interpolated grid: dx=1.000 mm, dy=1.000 mm
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.911 W/kg
1800MHz - Body/LTE B4, 50% RB, LowCH, Back Face/Zoom Scan (7x8x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 23.557 V/m; Power Drift = 0.04 dB
Peak SAR (extrapolated) = 1.225 mW/g
SAR(1 g) = 0.729 mW/g; SAR(10 g) = 0.438 mW/g (SAR corrected for target medium)
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.801 W/kg



0 dB = 0.801 W/kg = -1.93 dB W/kg



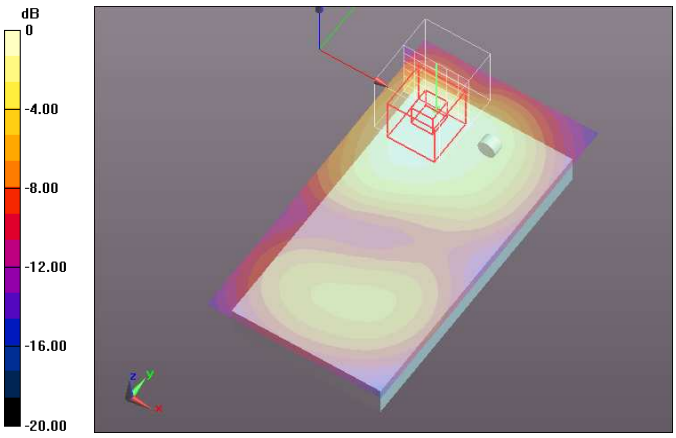
LTE Band 4 100% RB – Body – Back Face 10 mm – Middle Channel

Test Laboratory: AT4 Wireless; Date: 23/08/2013

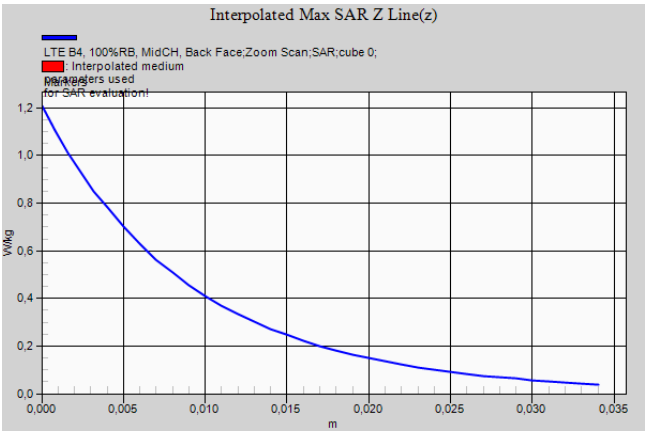
DUT: PureSecure; Type: Smartphone; Serial: IMEI: 035891240081126
Communication System: LTE-FDD (SC-FDMA, 100% RB, 20MHz, QPSK); Frequency: 1732.5 MHz; Duty Cycle: 1:3.68129
Medium parameters used (interpolated): f = 1732.5 MHz; σ = 1.479 mho/m; ε_r = 50.545; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY5 Configuration:
- Probe: ES3DV3 - SN3052; ConvF(4.9, 4.9, 4.9); Calibrated: 22/07/2013;
- Sensor-Surface: 3mm (Mechanical Surface Detection), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 17/07/2013
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1060
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

1800MHz - Body/LTE B4, 100%RB, MidCH, Back Face/Area Scan (81x151x1):
Interpolated grid: dx=1.000 mm, dy=1.000 mm
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.880 W/kg

1800MHz - Body/LTE B4, 100%RB, MidCH, Back Face/Zoom Scan (7x8x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 23.266 V/m; Power Drift = -0.00 dB
Peak SAR (extrapolated) = 1.208 mW/g
SAR(1 g) = 0.702 mW/g; SAR(10 g) = 0.406 mW/g (SAR corrected for target medium)
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.765 W/kg



0 dB = 0.765 W/kg = -2.33 dB W/kg

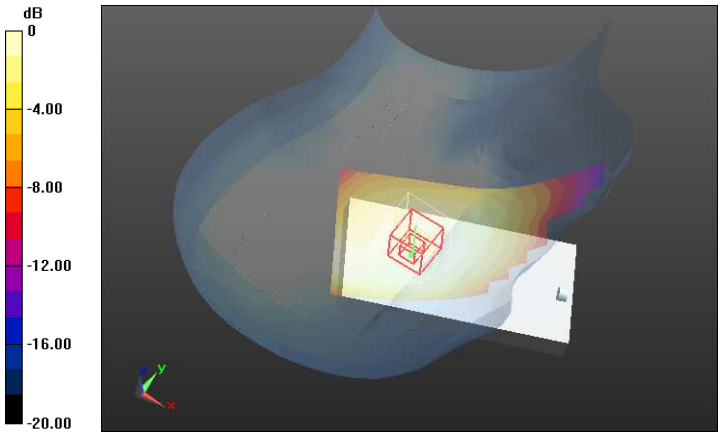


LTE Band 17 1 RB – Right hand side – Tilted position – Middle Channel

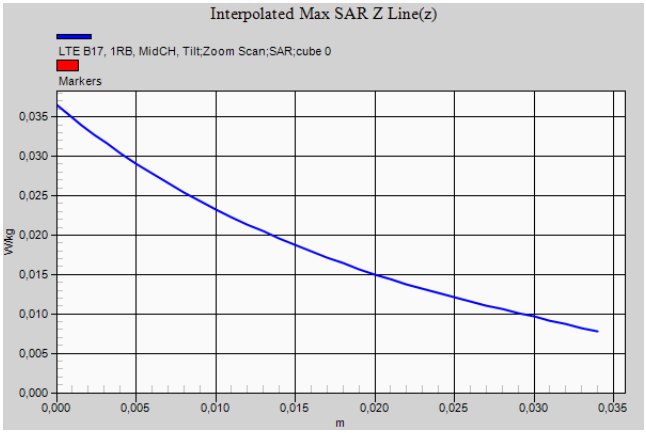
Test Laboratory: AT4 Wireless; Date: 20/08/2013
DUT: PureSecure; Type: Smartphone; Serial: IMEI: 035891240081126
Communication System: LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK); Frequency: 710 MHz; Duty Cycle: 1:3.74111
Medium parameters used: f = 710 MHz; σ = 0.89 mho/m; ε_r = 41.55; ρ = 1000 kg/m^3
Phantom section: Right Section
DASY5 Configuration:
- Probe: ES3DV3 - SN3052; ConvF(6.52, 6.52, 6.52); Calibrated: 22/07/2013;
- Sensor-Surface: 3mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 17/07/2013
- Phantom: SAM head-body simulator ; Type: Twin SAM V4.0; Serial: ---
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

750MHz - Right Hand Side/LTE B17, 1RB, MidCH, Tilt/Area Scan (81x151x1):
Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.0331 W/kg

750MHz - Right Hand Side/LTE B17, 1RB, MidCH, Tilt/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 5.927 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 0.037 mW/g
SAR(1 g) = 0.029 mW/g; SAR(10 g) = 0.022 mW/g (SAR corrected for target medium)
Maximum value of SAR (measured) = 0.0304 W/kg



0 dB = 0.0304 W/kg = -30.34 dB W/kg



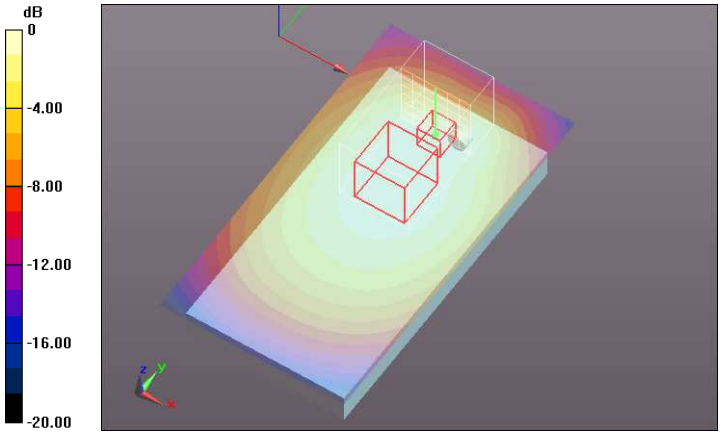
LTE Band 17 1 RB – Back Face 10 mm – Middle Channel

Test Laboratory: AT4 Wireless; Date: 22/08/2013

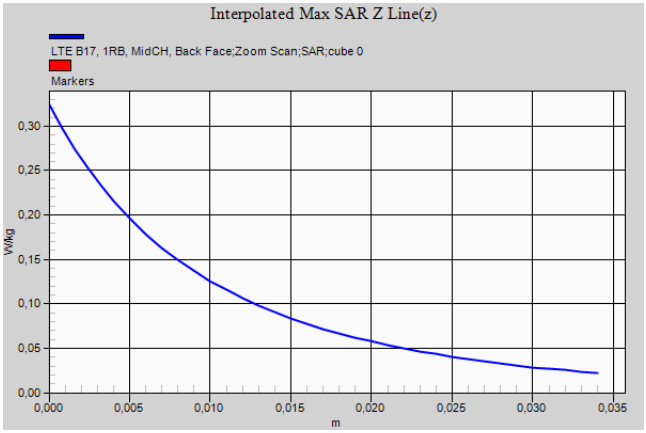
DUT: PureSecure; Type: Smartphone; Serial: IMEI: 035891240081126
Communication System: LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK); Frequency: 710 MHz; Duty Cycle: 1:3.74111
Medium parameters used: f = 710 MHz; σ = 0.96 mho/m; ε_r = 55.38; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY5 Configuration:
- Probe: ES3DV3 - SN3052; ConvF(6.32, 6.32, 6.32); Calibrated: 22/07/2013;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 17/07/2013
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1060
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

750MHz - Body/LTE B17, 1RB, MidCH, Back Face/Area Scan (81x151x1):
Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.230 W/kg

750MHz - Body/LTE B17, 1RB, MidCH, Back Face/Zoom Scan (7x12x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 14.883 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 0.324 mW/g
SAR(1 g) = 0.204 mW/g; SAR(10 g) = 0.148 mW/g (SAR corrected for target medium)
Maximum value of SAR (measured) = 0.220 W/kg



0 dB = 0.220 W/kg = -13.15 dB W/kg



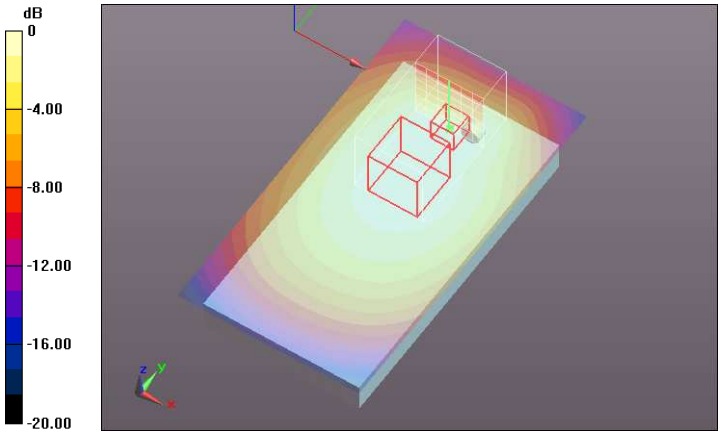
LTE Band 17 50% RB – Right hand side – Tilted position – Middle Channel

Test Laboratory: AT4 Wireless; Date: 22/08/2013

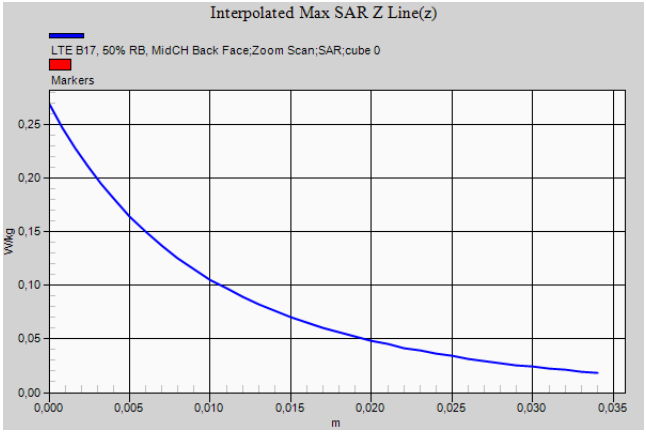
DUT: PureSecure; Type: Smartphone; Serial: IMEI: 035891240081126
Communication System: LTE-FDD (SC-FDMA, 50% RB, 10 MHz, QPSK); Frequency: 710 MHz; Duty Cycle: 1:3.76704
Medium parameters used: f = 710 MHz; σ = 0.96 mho/m; ε_r = 55.38; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY5 Configuration:
- Probe: ES3DV3 - SN3052; ConvF(6.32, 6.32, 6.32); Calibrated: 22/07/2013;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 17/07/2013
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1060
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

750MHz - Body/LTE B17, 50% RB, MidCH Back Face/Area Scan (81x151x1):
Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.191 W/kg

750MHz - Body/LTE B17, 50% RB, MidCH Back Face/Zoom Scan (7x12x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 14.036 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 0.269 mW/g
SAR(1 g) = 0.170 mW/g; SAR(10 g) = 0.124 mW/g (SAR corrected for target medium)
Maximum value of SAR (measured) = 0.184 W/kg



0 dB = 0.184 W/kg = -14.70 dB W/kg

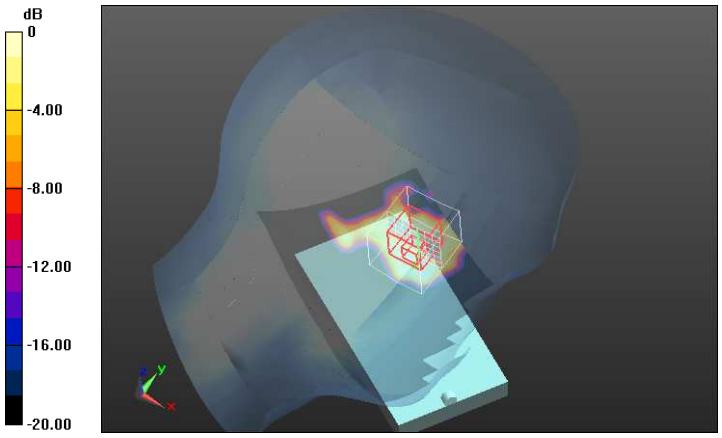


802.11b – Left hand side – Cheek position – Highest Channel

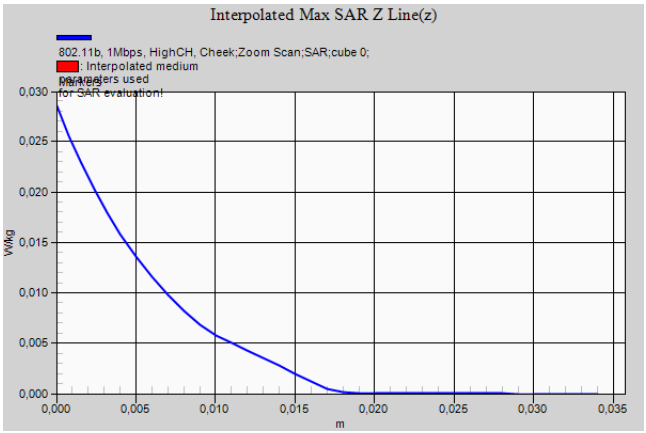
Test Laboratory: AT4 Wireless; Date: 19/08/2013

DUT: PureSecure; Type: Smartphone; Serial: IMEI: 035891240081126
Communication System: IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps); Frequency: 2462 MHz; Duty Cycle: 1:1.53815
Medium parameters used (interpolated): f = 2462 MHz; σ = 1.802 mho/m; ε_r = 39.058; ρ = 1000 kg/m^3
Phantom section: Left Section
DASY5 Configuration:
- Probe: ES3DV3 - SN3052; ConvF(4.46, 4.46, 4.46); Calibrated: 22/07/2013;
- Sensor-Surface: 3mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 17/07/2013
- Phantom: SAM head-body simulator ; Type: Twin SAM V4.0; Serial: ---
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

2450MHz - Left Hand Side/802.11b, 1Mbps, HighCH, Cheek/Area Scan (101x161x1):
Interpolated grid: dx=1.000 mm, dy=1.000 mm
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.0223 W/kg
2450MHz - Left Hand Side/802.11b, 1Mbps, HighCH, Cheek/Zoom Scan (8x9x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 2.919 V/m; Power Drift = 0.17 dB
Peak SAR (extrapolated) = 0.029 mW/g
SAR(1 g) = 0.014 mW/g; SAR(10 g) = 0.00629 mW/g (SAR corrected for target medium)
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.0159 W/kg



0 dB = 0.0159 W/kg = -35.97 dB W/kg



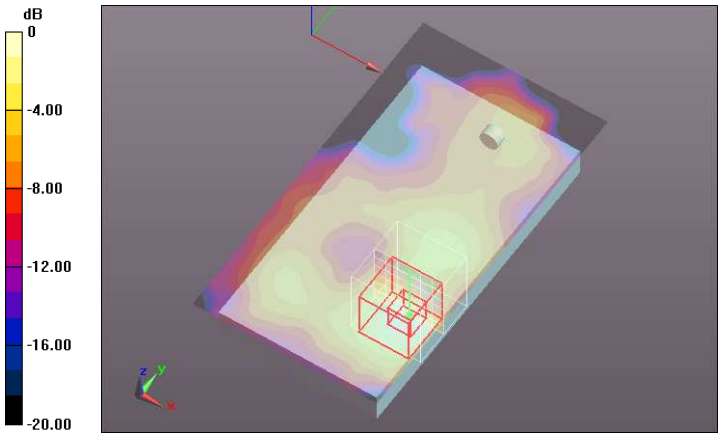
802.11b – Back Face 10 mm – Highest Channel

Test Laboratory: AT4 Wireless; Date: 14/08/2013

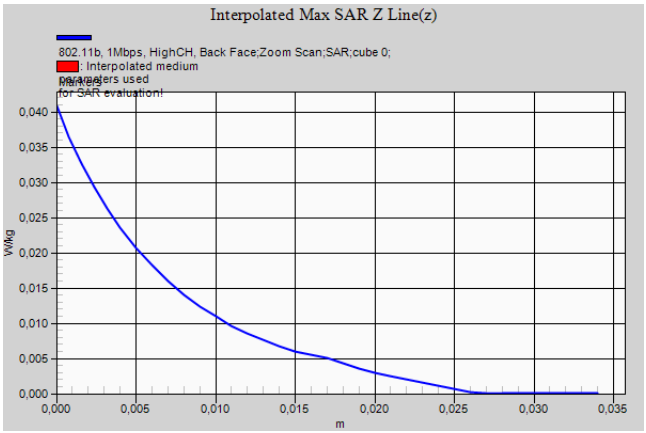
DUT: PureSecure; Type: Smartphone; Serial: IMEI: 035891240081126
Communication System: IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps); Frequency: 2462 MHz; Duty Cycle: 1:1.53815
Medium parameters used (interpolated): f = 2462 MHz; σ = 1.992 mho/m; ε_r = 51.16; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY5 Configuration:
- Probe: ES3DV3 - SN3052; ConvF(4.25, 4.25, 4.25); Calibrated: 22/07/2013;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 17/07/2013
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1060
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

2450MHz - Body/802.11b, 1Mbps, HighCH, Back Face/Area Scan (81x151x1):
Interpolated grid: dx=1.000 mm, dy=1.000 mm
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.0247 W/kg

2450MHz - Body/802.11b, 1Mbps, HighCH, Back Face/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 3.416 V/m; Power Drift = 0.09 dB
Peak SAR (extrapolated) = 0.041 mW/g
SAR(1 g) = 0.021 mW/g; SAR(10 g) = 0.010 mW/g (SAR corrected for target medium)
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.0237 W/kg



0 dB = 0.0237 W/kg = -32.51 dB W/kg



APPENDIX D: System Validation Reports

Validation results in 750 MHz Band for Head TSL

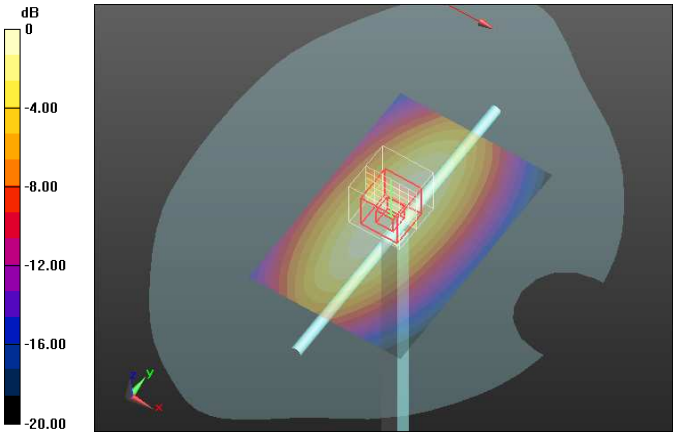
Test Laboratory: AT4 Wireless; Date: 20/08/2013

DUT: Dipole 750 MHz D750V3; Type: D750V3; Serial: D750V3 - SN:xxx
Communication System: CW; Frequency: 750 MHz; Duty Cycle: 1:1
Medium parameters used: f = 750 MHz; σ = 0.92 mho/m; ε_r = 40.96; ρ = 1000 kg/m^3
Phantom section: Flat Section

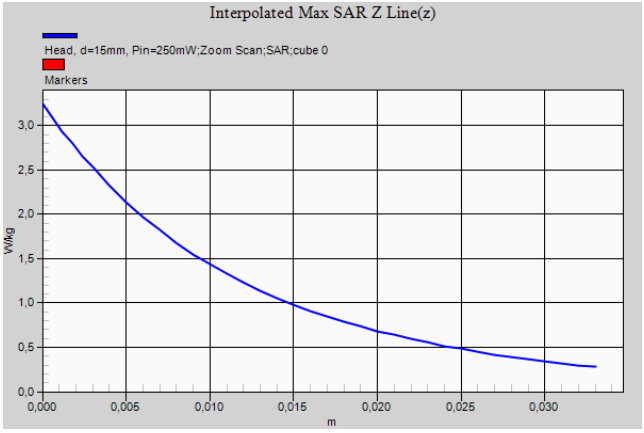
DASY5 Configuration:
- Probe: ES3DV3 - SN3052; ConvF(6.52, 6.52, 6.52); Calibrated: 22/07/2013;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 17/07/2013
- Phantom: SAM head-body simulator ; Type: Twin SAM V4.0; Serial: ---
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

System Performance Check with D750V3 Dipole Head/Head, d=15mm, Pin=250mW/Area Scan (61x91x1):
Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 2.43 W/kg

System Performance Check with D750V3 Dipole Head/Head, d=15mm, Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 53.547 V/m; Power Drift = -0.09 dB
Peak SAR (extrapolated) = 3.247 mW/g
SAR(1 g) = 2.09 mW/g; SAR(10 g) = 1.36 mW/g (SAR corrected for target medium)
Maximum value of SAR (measured) = 2.53 W/kg



0 dB = 2.53 W/kg = 8.06 dB W/kg



Validation results in 750 MHz Band for Body TSL

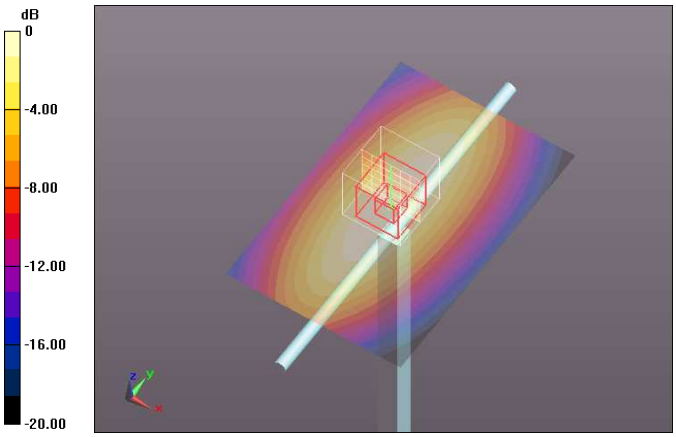
Test Laboratory: AT4 Wireless; Date: 22/08/2013

DUT: Dipole 750 MHz D750V3; Type: D750V3; Serial: D750V3 - SN:xxx
Communication System: CW; Frequency: 750 MHz; Duty Cycle: 1:1
Medium parameters used: f = 750 MHz; σ = 1 mho/m; ε_r = 54.96; ρ = 1000 kg/m^3
Phantom section: Flat Section

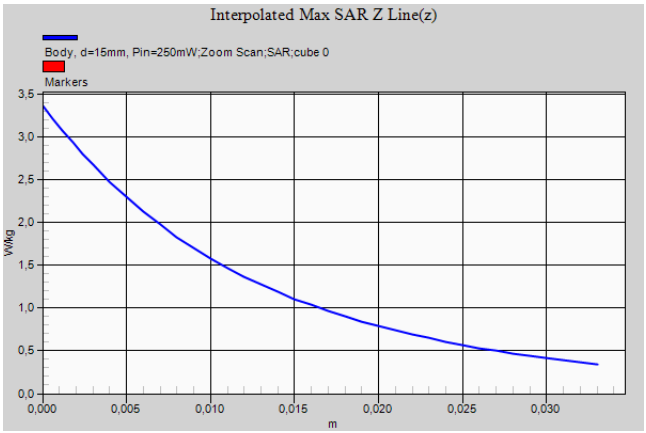
DASY5 Configuration:
- Probe: ES3DV3 - SN3052; ConvF(6.32, 6.32, 6.32); Calibrated: 22/07/2013;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 17/07/2013
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1060
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

System Performance Check with D750V3 Dipole Body/Body, d=15mm, Pin=250mW/Area Scan (61x91x1):
Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 2.66 W/kg

System Performance Check with D750V3 Dipole Body/Body, d=15mm, Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 53.043 V/m; Power Drift = 0.04 dB
Peak SAR (extrapolated) = 3.362 mW/g
SAR(1 g) = 2.22 mW/g; SAR(10 g) = 1.47 mW/g (SAR corrected for target medium)
Maximum value of SAR (measured) = 2.68 W/kg



0 dB = 2.68 W/kg = 8.56 dB W/kg



Validation results in 900 MHz Band for Head TSL

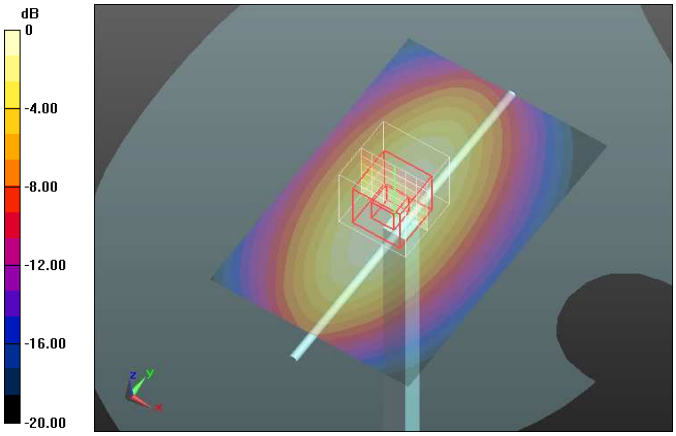
Test Laboratory: AT4 Wireless; Date: 02/09/2013

DUT: Dipole 900 MHz D900V2; Type: D900V2; Serial: D900V2 - SN:xxx
Communication System: CW; Frequency: 900 MHz; Duty Cycle: 1:1
Medium parameters used: f = 900 MHz; σ = 1.02 mho/m; ε_r = 38.31; ρ = 1000 kg/m^3
Phantom section: Flat Section

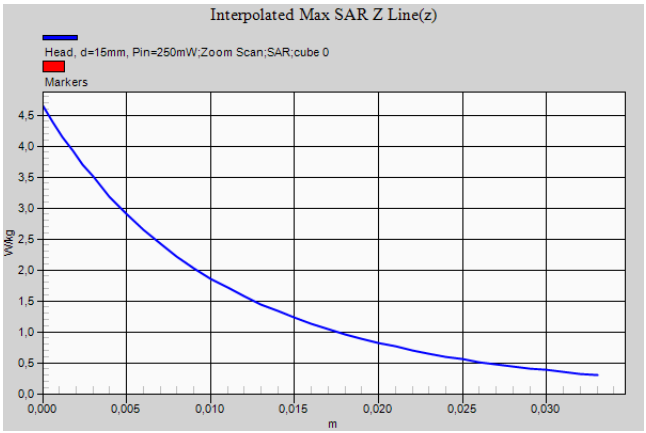
DASY5 Configuration:
- Probe: ES3DV3 - SN3052; ConvF(6.26, 6.26, 6.26); Calibrated: 22/07/2013;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 17/07/2013
- Phantom: SAM head-body simulator ; Type: Twin SAM V4.0; Serial: ---
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

System Performance Check with D900V2 Dipole Head/Head, d=15mm, Pin=250mW/Area Scan (61x91x1):
Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 3.44 W/kg

System Performance Check with D900V2 Dipole Head/Head, d=15mm, Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 59.931 V/m; Power Drift = -0.11 dB
Peak SAR (extrapolated) = 4.647 mW/g
SAR(1 g) = 2.93 mW/g; SAR(10 g) = 1.83 mW/g (SAR corrected for target medium)
Maximum value of SAR (measured) = 3.48 W/kg



0 dB = 3.48 W/kg = 10.83 dB W/kg



Validation results in 900 MHz Band for Body TSL

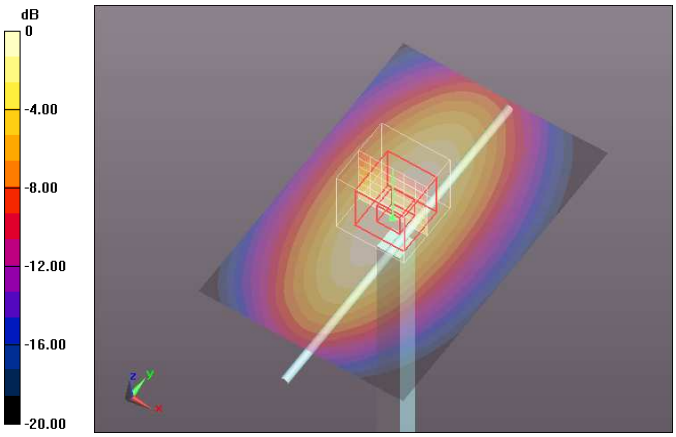
Test Laboratory: AT4 Wireless; Date: 29/08/2013

DUT: Dipole 900 MHz D900V2; Type: D900V2; Serial: D900V2 - SN:xxx
Communication System: CW; Frequency: 900 MHz; Duty Cycle: 1:1
Medium parameters used: f = 900 MHz; σ = 1.08 mho/m; ε_r = 53.99; ρ = 1000 kg/m^3
Phantom section: Flat Section

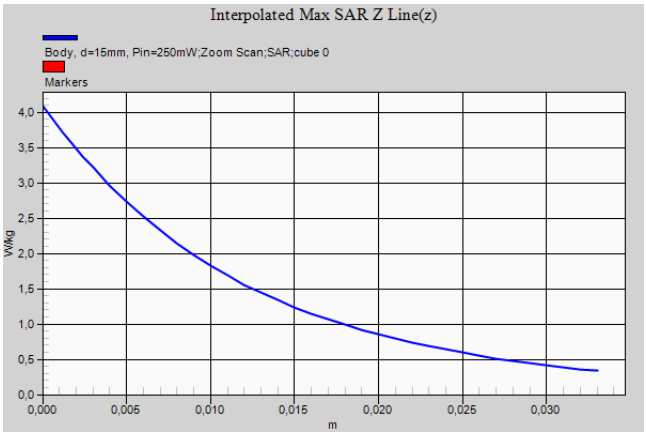
DASY5 Configuration:
- Probe: ES3DV3 - SN3052; ConvF(6.18, 6.18, 6.18); Calibrated: 22/07/2013;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 17/07/2013
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1060
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

System Performance Check with D900V2 Dipole Body/Body, d=15mm, Pin=250mW/Area Scan (61x91x1):
Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 3.12 W/kg

System Performance Check with D900V2 Dipole Body/Body, d=15mm, Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 56.308 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 4.088 mW/g
SAR(1 g) = 2.66mW/g; SAR(10 g) = 1.72 mW/g (SAR corrected for target medium)
Maximum value of SAR (measured) = 3.21 W/kg



0 dB = 3.21 W/kg = 10.13 dB W/kg



Validation results in 1800 MHz Band for Head TSL

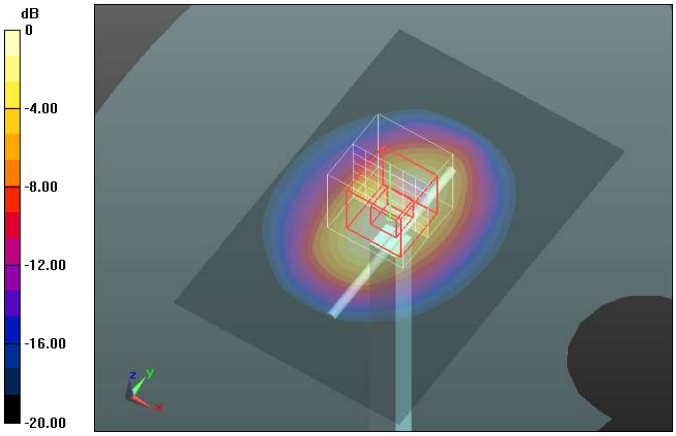
Test Laboratory: AT4 Wireless; Date: 03/09/2013

DUT: Dipole 1800 MHz D1800V2; Type: D1800V2; Serial: D1800V2 - SN:xxx
Communication System: CW; Frequency: 1800 MHz; Duty Cycle: 1:1
Medium parameters used: f = 1800 MHz; σ = 1.41 mho/m; ε_r = 39.43; ρ = 1000 kg/m^3
Phantom section: Flat Section

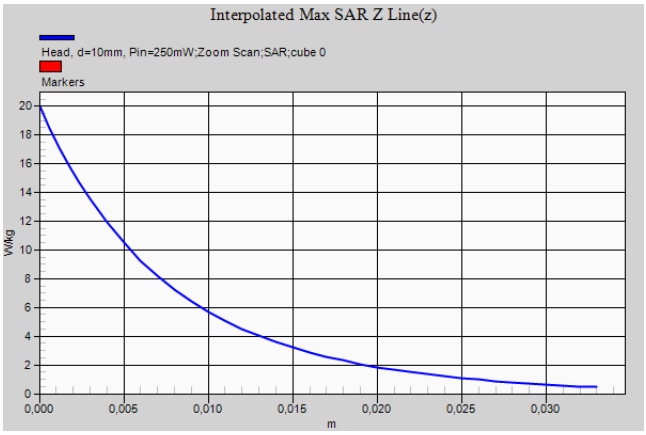
DASY5 Configuration:
- Probe: ES3DV3 - SN3052; ConvF(5.26, 5.26, 5.26); Calibrated: 22/07/2013;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 17/07/2013
- Phantom: SAM head-body simulator ; Type: Twin SAM V4.0; Serial: ---
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

System Performance Check with D1800V2 Dipole Head/Head, d=10mm, Pin=250mW/Area Scan (61x91x1):
Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 14.1 W/kg

System Performance Check with D1800V2 Dipole Head/Head, d=10mm, Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 101.9 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 20.022 mW/g
SAR(1 g) = 10.6 mW/g; SAR(10 g) = 5.49 mW/g (SAR corrected for target medium)
Maximum value of SAR (measured) = 13.6 W/kg



0 dB = 13.6 W/kg = 22.67 dB W/kg



Validation results in 1800 MHz Band for Body TSL

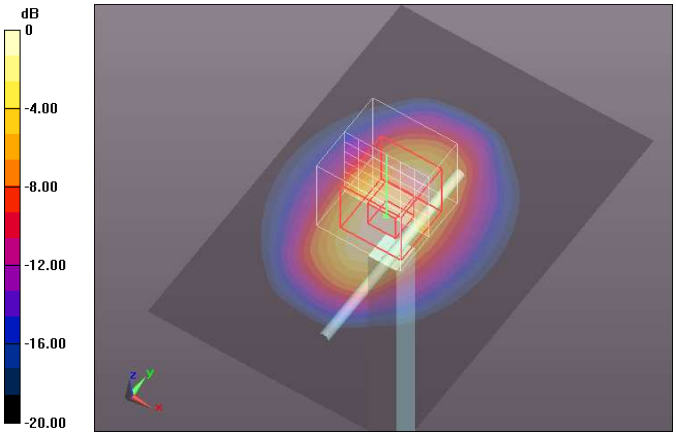
Test Laboratory: AT4 Wireless; Date: 23/08/2013

DUT: Dipole 1800 MHz D1800V2; Type: D1800V2; Serial: D1800V2 - SN:xxx
Communication System: CW; Frequency: 1800 MHz; Duty Cycle: 1:1
Medium parameters used: f = 1800 MHz; σ = 1.58 mho/m; ε_r = 50.8; ρ = 1000 kg/m^3
Phantom section: Flat Section

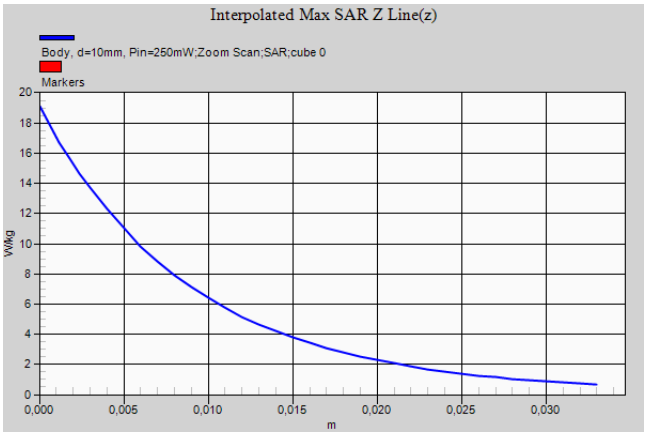
DASY5 Configuration:
- Probe: ES3DV3 - SN3052; ConvF(4.9, 4.9, 4.9); Calibrated: 22/07/2013;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 17/07/2013
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1060
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

System Performance Check with D1800V2 Dipole Body/Body, d=10mm, Pin=250mW/Area Scan (61x91x1):
Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 14.3 W/kg

System Performance Check with D1800V2 Dipole Body/Body, d=10mm, Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 97.518 V/m; Power Drift = 0.04 dB
Peak SAR (extrapolated) = 19.117 mW/g
SAR(1 g) = 10.8 mW/g; SAR(10 g) = 5.69 mW/g (SAR corrected for target medium)
Maximum value of SAR (measured) = 13.7 W/kg



0 dB = 13.7 W/kg = 22.73 dB W/kg



Validation results in 2450 MHz Band for Head TSL

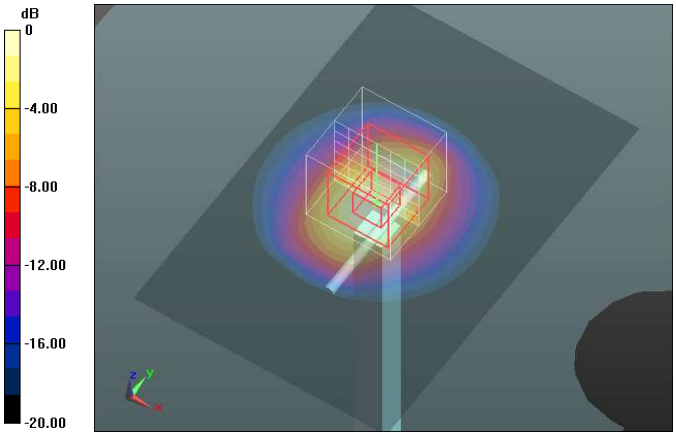
Test Laboratory: AT4 Wireless; Date: 19/08/2013

DUT: Dipole 2450 MHz D2450V2; Type: D2450V2; Serial: D2450V2 - SN:xxx
Communication System: CW; Frequency: 2450 MHz; Duty Cycle: 1:1
Medium parameters used: f = 2450 MHz; σ = 1.8 mho/m; ε_r = 39.29; ρ = 1000 kg/m^3
Phantom section: Flat Section

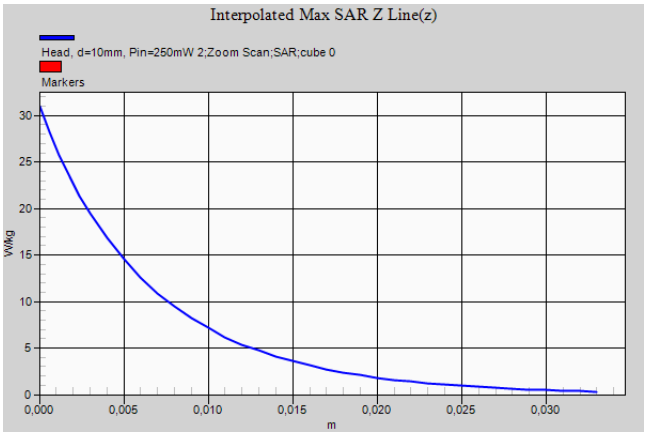
DASY5 Configuration:
- Probe: ES3DV3 - SN3052; ConvF(4.46, 4.46, 4.46); Calibrated: 22/07/2013;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 17/07/2013
- Phantom: SAM head-body simulator ; Type: Twin SAM V4.0; Serial: ---
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

System Performance Check with D2450V2 Dipole Head/Head, d=10mm, Pin=250mW 2/Area Scan (61x91x1):
Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 21.0 W/kg

System Performance Check with D2450V2 Dipole Head/Head, d=10mm, Pin=250mW 2/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 109.6 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 31.009 mW/g
SAR(1 g) = 14.7 mW/g; SAR(10 g) = 6.85 mW/g (SAR corrected for target medium)
Maximum value of SAR (measured) = 19.6 W/kg



0 dB = 19.6 W/kg = 25.85 dB W/kg



Validation results in 2450 MHz Band for Body TSL

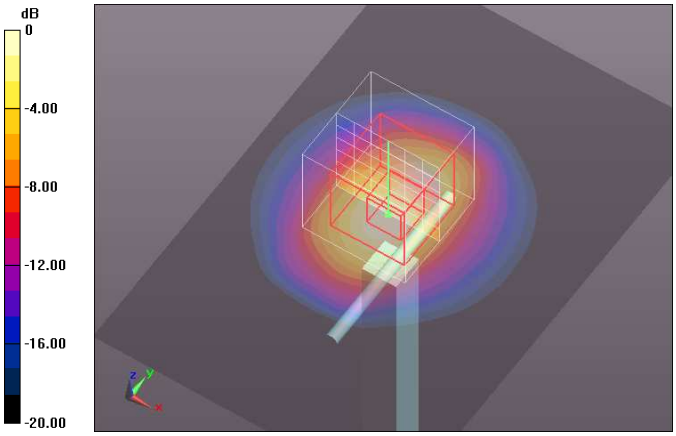
Test Laboratory: AT4 Wireless; Date: 14/08/2013

DUT: Dipole 2450 MHz D2450V2; Type: D2450V2; Serial: D2450V2 - SN:xxx
Communication System: CW; Frequency: 2450 MHz; Duty Cycle: 1:1
Medium parameters used: f = 2450 MHz; σ = 1.98 mho/m; ε_r = 51.22; ρ = 1000 kg/m^3
Phantom section: Flat Section

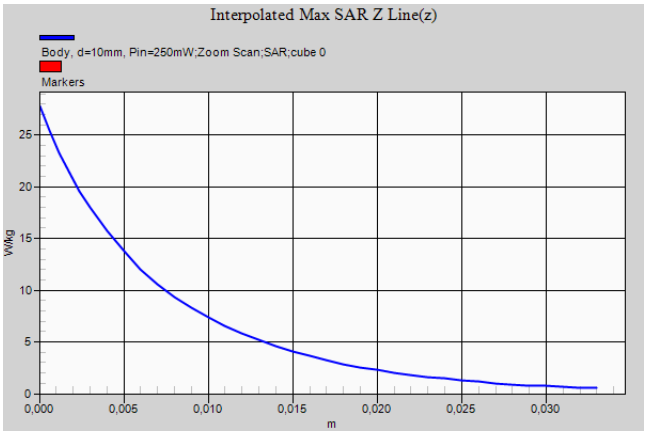
DASY5 Configuration:
- Probe: ES3DV3 - SN3052; ConvF(4.25, 4.25, 4.25); Calibrated: 22/07/2013;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 17/07/2013
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1060
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

System Performance Check with D2400V2 Dipole Body/Body, d=10mm, Pin=250mW/Area Scan (61x91x1):
Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 17.9 W/kg

System Performance Check with D2400V2 Dipole Body/Body, d=10mm, Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 97.518 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 27.816 mW/g
SAR(1 g) = 13.5 mW/g; SAR(10 g) = 6.43 mW/g (SAR corrected for target medium)
Maximum value of SAR (measured) = 17.8 W/kg



0 dB = 17.8 W/kg = 25.01 dB W/kg



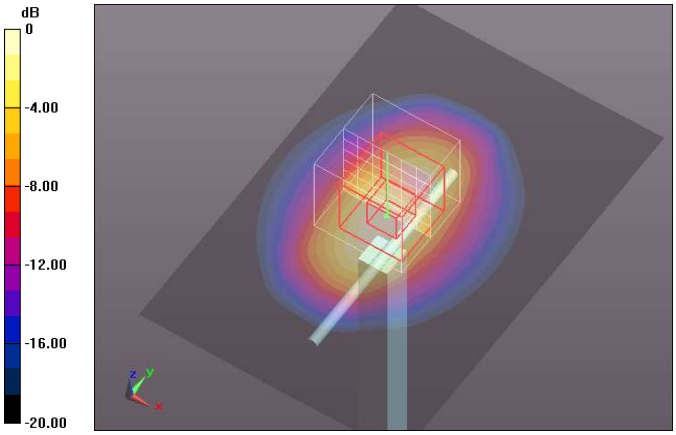
Validation results in 1800 MHz Band Variability for Body TSL

Test Laboratory: AT4 Wireless; Date: 15/01/2014

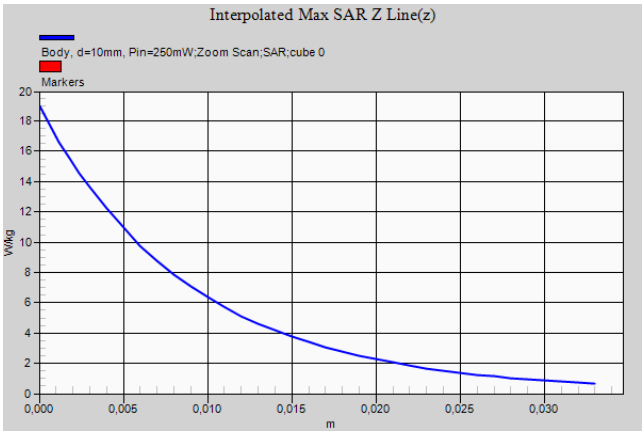
DUT: Dipole 1800 MHz D1800V2; Type: D1800V2; Serial: D1800V2 - SN:xxx
Communication System: CW; Frequency: 1800 MHz; Duty Cycle: 1:1
Medium parameters used: f = 1800 MHz; σ = 1.57 mho/m; ε_r = 50.78; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY5 Configuration:
- Probe: ES3DV3 - SN3052; ConvF(4.9, 4.9, 4.9); Calibrated: 22/07/2013;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 17/07/2013
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1060
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

System Performance Check with D1800V2 Dipole Body/Body, d=10mm, Pin=250mW/Area Scan (61x91x1):
Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 14.2 W/kg

System Performance Check with D1800V2 Dipole Body/Body, d=10mm, Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 96.441 V/m; Power Drift = 0.04 dB
Peak SAR (extrapolated) = 18.996 mW/g
SAR(1 g) = 10.7 mW/g; SAR(10 g) = 5.66 mW/g (SAR corrected for target medium)
Maximum value of SAR (measured) = 13.6 W/kg



0 dB = 13.6 W/kg = 22.67 dB W/kg



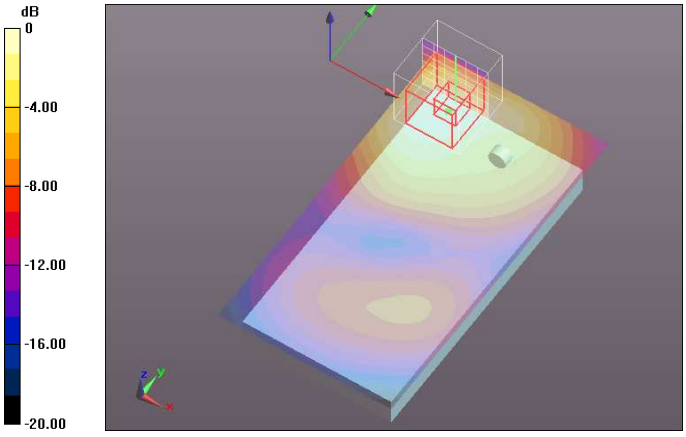
APPENDIX E: Variability Reports

WCDMA Band II – Body – Back Face 10 mm – Lowest Channel - Variability

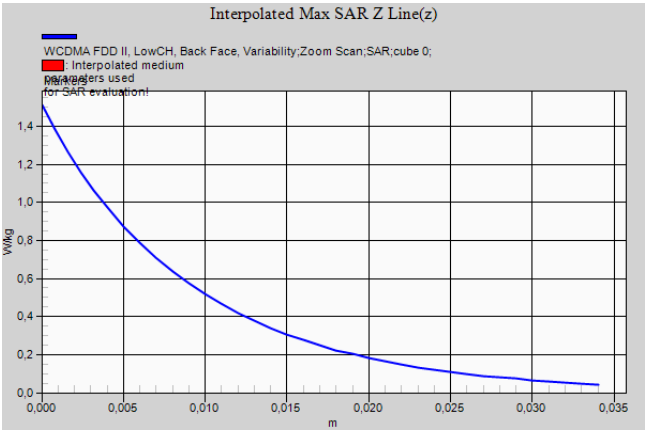
Test Laboratory: AT4 Wireless; Date: 15/01/2014
DUT: PureSecure; Type: Smartphone; Serial: IMEI: 035891240081126
Communication System: UMTS-FDD (WCDMA); Frequency: 1852.4 MHz; Duty Cycle: 1:1.95434
Medium parameters used (interpolated): f = 1852.4 MHz; σ = 1.572 mho/m; ε_r = 50.458; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY5 Configuration:
- Probe: ES3DV3 - SN3052; ConvF(4.64, 4.64, 4.64); Calibrated: 22/07/2013;
- Sensor-Surface: 3mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 17/07/2013
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1060
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

1800MHz - Body - Variability/WCDMA FDD II, LowCH, Back Face, Variability/Area Scan (81x151x1):
Interpolated grid: dx=1.000 mm, dy=1.000 mm
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 1.09 W/kg

1800MHz - Body - Variability/WCDMA FDD II, LowCH, Back Face, Variability/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 16.555 V/m; Power Drift = -0.07 dB
Peak SAR (extrapolated) = 1.512 mW/g
SAR(1 g) = 0.894 mW/g; SAR(10 g) = 0.513 mW/g (SAR corrected for target medium)
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.969 W/kg



0 dB = 0.969 W/kg = -0.27 dB W/kg



LTE Band 4 1RB – Body – Back Face 10 mm – Middle Channel - Variability

Test Laboratory: AT4 Wireless; Date: 15/01/2014

DUT: PureSecure; Type: Smartphone; Serial: IMEI: 035891240081126

Communication System: LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK); Frequency: 1732.5 MHz; Duty Cycle: 1:3.74111

Medium parameters used (interpolated): f = 1732.5 MHz; σ = 1.481 mho/m; ε_r = 51.219; ρ = 1000 kg/m^3

Phantom section: Flat Section

DASY5 Configuration:

- Probe: ES3DV3 - SN3052; ConvF(4.9, 4.9, 4.9); Calibrated: 22/07/2013;
- Sensor-Surface: 3mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 17/07/2013
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1060
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

1800MHz - Body - Variability/LTE B4, 1RB, MidCH, Back Face Variability/Area Scan (81x151x1):

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

Info: Interpolated medium parameters used for SAR evaluation.

Maximum value of SAR (interpolated) = 1.50 W/kg

1800MHz - Body - Variability/LTE B4, 1RB, MidCH, Back Face Variability/Zoom Scan (7x8x7)/Cube 0:

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

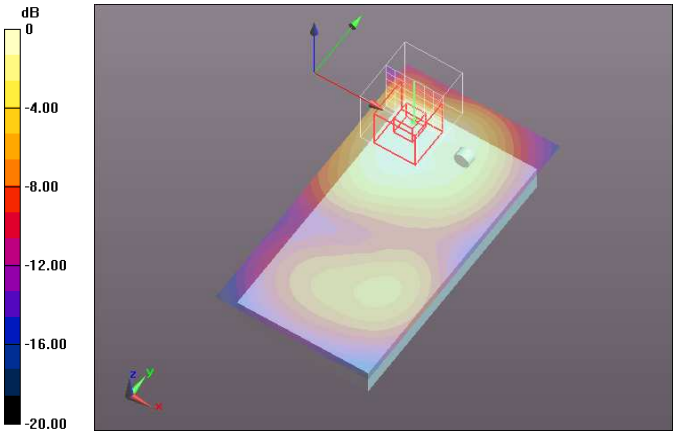
Reference Value = 29.485 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 2.015 mW/g

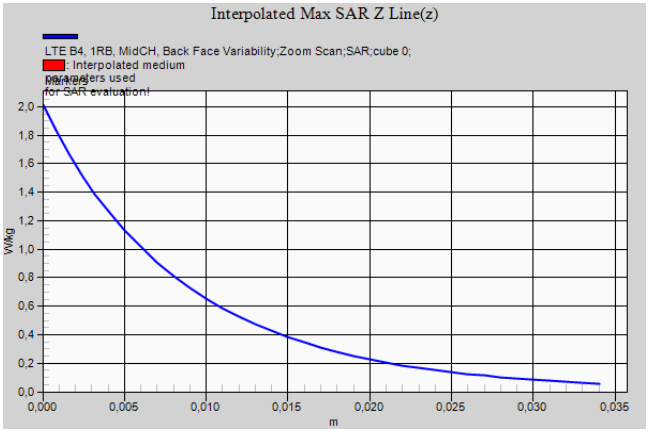
SAR(1 g) = 1.16 mW/g; SAR(10 g) = 0.672 mW/g (SAR corrected for target medium)

Info: Interpolated medium parameters used for SAR evaluation.

Maximum value of SAR (measured) = 1.26 W/kg



0 dB = 1.26 W/kg = 2.01 dB W/kg



APPENDIX F: Calibration Data

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Accreditation No.: SCS 108

Client AT4 wireless

Certificate No: ES3-3052_Jul13

CALIBRATION CERTIFICATE

Object: ES3DV3 - SN:3052

Calibration procedure(s): QA CAL-01.v8, QA CAL-23.v4, QA CAL-25.v4
Calibration procedure for dosimetric E-field probes

Calibration date: July 22, 2013

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

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

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID	Cal Date (Certificate No.)	Scheduled Calibration
Power meter E4419B	GB41293874	04-Apr-13 (No. 217-01733)	Apr-14
Power sensor E4412A	MY41498087	04-Apr-13 (No. 217-01733)	Apr-14
Reference 3 dB Attenuator	SN: S5054 (3c)	04-Apr-13 (No. 217-01737)	Apr-14
Reference 20 dB Attenuator	SN: S5277 (20x)	04-Apr-13 (No. 217-01735)	Apr-14
Reference 30 dB Attenuator	SN: S5129 (30b)	04-Apr-13 (No. 217-01738)	Apr-14
Reference Probe ES3DV2	SN: 3013	28-Dec-12 (No. ES3-3013_Dec12)	Dec-13
DAE4	SN: 660	31-Jan-13 (No. DAE4-660_Jan13)	Jan-14
Secondary Standards	ID	Check Date (in house)	Scheduled Check
RF generator HP 8648C	US3642U01700	4-Aug-99 (in house check Apr-13)	In house check: Apr-15
Network Analyzer HP 8753E	US37390585	18-Oct-01 (in house check Oct-12)	In house check: Oct-13

	Name	Function	Signature
Calibrated by:	Israe El-Naouq	Laboratory Technician	
Approved by:	Katja Pokovic	Technical Manager	

Issued: July 24, 2013

DASY/EASY - Parameters of Probe: ES3DV3 - SN:3052

Calibration Parameter Determined in Head Tissue Simulating Media

f (MHz) [C]	Relative Permittivity [F]	Conductivity (S/m) [F]	ConvF X	ConvF Y	ConvF Z	Alpha	Depth (mm)	Unct. (k=2)
750	41.9	0.89	6.52	6.52	6.52	0.60	1.32	± 12.0 %
835	41.5	0.90	6.31	6.31	6.31	0.75	1.20	± 12.0 %
900	41.5	0.97	6.26	6.26	6.26	0.47	1.42	± 12.0 %
1750	40.1	1.37	5.26	5.26	5.26	0.74	1.17	± 12.0 %
1900	40.0	1.40	5.07	5.07	5.07	0.64	1.35	± 12.0 %
2000	40.0	1.40	5.05	5.05	5.05	0.79	1.17	± 12.0 %
2450	39.2	1.80	4.46	4.46	4.46	0.71	1.28	± 12.0 %
2600	39.0	1.96	4.38	4.38	4.38	0.76	1.30	± 12.0 %

[C] Frequency validity of ± 100 MHz only applies for DASY v4.4 and higher (see Page 2), else it is restricted to ± 50 MHz. The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band.
[F] At frequencies below 3 GHz, the validity of tissue parameters (ε and σ) can be relaxed to ± 10% if liquid compensation formula is applied to measured SAR values. At frequencies above 3 GHz, the validity of tissue parameters (ε and σ) is restricted to ± 5%. The uncertainty is the RSS of the ConvF uncertainty for indicated target tissue parameters.

DASY/EASY - Parameters of Probe: ES3DV3 - SN:3052

Calibration Parameter Determined in Body Tissue Simulating Media

f (MHz) [C]	Relative Permittivity [F]	Conductivity (S/m) [F]	ConvF X	ConvF Y	ConvF Z	Alpha	Depth (mm)	Unct. (k=2)
750	55.5	0.96	6.32	6.32	6.32	0.70	1.24	± 12.0 %
835	55.2	0.97	6.29	6.29	6.29	0.72	1.22	± 12.0 %
900	55.0	1.05	6.18	6.18	6.18	0.79	1.20	± 12.0 %
1750	53.4	1.49	4.90	4.90	4.90	0.36	1.94	± 12.0 %
1900	53.3	1.52	4.64	4.64	4.64	0.57	1.48	± 12.0 %
2000	53.3	1.52	4.72	4.72	4.72	0.80	1.25	± 12.0 %
2450	52.7	1.95	4.25	4.25	4.25	0.69	1.15	± 12.0 %
2600	52.5	2.16	4.07	4.07	4.07	0.80	0.98	± 12.0 %

[C] Frequency validity of ± 100 MHz only applies for DASY v4.4 and higher (see Page 2), else it is restricted to ± 50 MHz. The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band.
[F] At frequencies below 3 GHz, the validity of tissue parameters (ε and σ) can be relaxed to ± 10% if liquid compensation formula is applied to measured SAR values. At frequencies above 3 GHz, the validity of tissue parameters (ε and σ) is restricted to ± 5%. The uncertainty is the RSS of the ConvF uncertainty for indicated target tissue parameters.

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Accreditation No.: SCS 108

Client AT4 Wireless

Certificate No: D750V3-1036_Jul13

CALIBRATION CERTIFICATE

Object	D750V3 - SN: 1036
Calibration procedure(s)	QA CAL-05.v9 Calibration procedure for dipole validation kits above 700 MHz
Calibration date:	July 17, 2013

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

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

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID #	Cal Date (Certificate No.)	Scheduled Calibration
Power meter EPM-442A	GB37480704	01-Nov-12 (No. 217-01640)	Oct-13
Power sensor HP 8481A	US37292783	01-Nov-12 (No. 217-01640)	Oct-13
Reference 20 dB Attenuator	SN: 5058 (20k)	04-Apr-13 (No. 217-01736)	Apr-14
Type-N mismatch combination	SN: 5047.3 / 06327	04-Apr-13 (No. 217-01739)	Apr-14
Reference Probe ES3DV3	SN: 3205	28-Dec-12 (No. ES3-3205_Dec12)	Dec-13
DAE4	SN: 601	25-Apr-13 (No. DAE4-601_Apr13)	Apr-14

Secondary Standards	ID #	Check Date (in house)	Scheduled Check
Power sensor HP 8481A	MY41092317	18-Oct-02 (in house check Oct-11)	In house check: Oct-13
RF generator R&S SMT-06	100005	04-Aug-99 (in house check Oct-11)	In house check: Oct-13
Network Analyzer HP 8753E	US37390585 S4206	18-Oct-01 (in house check Oct-12)	In house check: Oct-13

	Name	Function	Signature
Calibrated by:	Leif Klysner	Laboratory Technician	
Approved by:	Katja Pokovic	Technical Manager	

Issued: July 18, 2013

Measurement Conditions

DASY system configuration, as far as not given on page 1.

DASY Version	DASY5	V52.8.7
Extrapolation	Advanced Extrapolation	
Phantom	Modular Flat Phantom	
Distance Dipole Center - TSL	15 mm	with Spacer
Zoom Scan Resolution	dx, dy, dz = 5 mm	
Frequency	750 MHz ± 1 MHz	

Head TSL parameters

The following parameters and calculations were applied.

	Temperature	**Permittivity**	**Conductivity**
Nominal Head TSL parameters	22.0 °C	41.9	0.89 mho/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	42.0 ± 6 %	0.90 mho/m ± 6 %
Head TSL temperature change during test	< 0.5 °C	----	----

SAR result with Head TSL

SAR averaged over 1 cm^3 (1 g) of Head TSL	Condition	
SAR measured	250 mW input power	2.14 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	**8.49 W/kg ± 17.0 % (k=2)**

SAR averaged over 10 cm^3 (10 g) of Head TSL	condition	
SAR measured	250 mW input power	1.40 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	**5.56 W/kg ± 16.5 % (k=2)**

Body TSL parameters

The following parameters and calculations were applied.

	Temperature	**Permittivity**	**Conductivity**
Nominal Body TSL parameters	22.0 °C	55.5	0.96 mho/m
Measured Body TSL parameters	(22.0 ± 0.2) °C	55.1 ± 6 %	0.98 mho/m ± 6 %
Body TSL temperature change during test	< 0.5 °C	----	----

SAR result with Body TSL

SAR averaged over 1 cm^3 (1 g) of Body TSL	Condition	
SAR measured	250 mW input power	2.25 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	**8.85 W/kg ± 17.0 % (k=2)**

SAR averaged over 10 cm^3 (10 g) of Body TSL	condition	
SAR measured	250 mW input power	1.49 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	**5.88 W/kg ± 16.5 % (k=2)**

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Accreditation No.: SCS 108

Client AT4 Wireless

Certificate No: D900V2-1d007_Jul13

CALIBRATION CERTIFICATE

Object	D900V2 - SN: 1d007
Calibration procedure(s)	QA CAL-05.v9 Calibration procedure for dipole validation kits above 700 MHz
Calibration date:	July 19, 2013

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

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

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID #	Cal Date (Certificate No.)	Scheduled Calibration
Power meter EPM-442A	GB37480704	01-Nov-12 (No. 217-01640)	Oct-13
Power sensor HP 8481A	US37292783	01-Nov-12 (No. 217-01640)	Oct-13
Reference 20 dB Attenuator	SN: 5058 (20k)	04-Apr-13 (No. 217-01736)	Apr-14
Type-N mismatch combination	SN: 5047.3 / 06327	04-Apr-13 (No. 217-01739)	Apr-14
Reference Probe ES3DV3	SN: 3205	28-Dec-12 (No. ES3-3205_Dec12)	Dec-13
DAE4	SN: 601	25-Apr-13 (No. DAE4-601_Apr13)	Apr-14

Secondary Standards	ID #	Check Date (in house)	Scheduled Check
Power sensor HP 8481A	MY41092317	18-Oct-02 (in house check Oct-11)	In house check: Oct-13
RF generator R&S SMT-06	100005	04-Aug-99 (in house check Oct-11)	In house check: Oct-13
Network Analyzer HP 8753E	US37390585 S4206	18-Oct-01 (in house check Oct-12)	In house check: Oct-13

	Name	Function	Signature
Calibrated by:	Israe El-Naouq	Laboratory Technician	
Approved by:	Katja Pokovic	Technical Manager	

Issued: July 19, 2013

Measurement Conditions

DASY system configuration, as far as not given on page 1.

DASY Version	DASY5	V52.8.7
Extrapolation	Advanced Extrapolation	
Phantom	Modular Flat Phantom	
Distance Dipole Center - TSL	15 mm	with Spacer
Zoom Scan Resolution	dx, dy, dz = 5 mm	
Frequency	900 MHz ± 1 MHz	

Head TSL parameters

The following parameters and calculations were applied.

	Temperature	**Permittivity**	**Conductivity**
Nominal Head TSL parameters	22.0 °C	41.5	0.97 mho/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	41.6 ± 6 %	0.94 mho/m ± 6 %
Head TSL temperature change during test	< 0.5 °C	----	----

SAR result with Head TSL

SAR averaged over 1 cm^3 (1 g) of Head TSL	Condition	
SAR measured	250 mW input power	2.60 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	**10.7 W/kg ± 17.0 % (k=2)**

SAR averaged over 10 cm^3 (10 g) of Head TSL	condition	
SAR measured	250 mW input power	1.68 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	**6.85 W/kg ± 16.5 % (k=2)**

Body TSL parameters

The following parameters and calculations were applied.

	Temperature	**Permittivity**	**Conductivity**
Nominal Body TSL parameters	22.0 °C	55.0	1.05 mho/m
Measured Body TSL parameters	(22.0 ± 0.2) °C	54.8 ± 6 %	1.03 mho/m ± 6 %
Body TSL temperature change during test	< 0.5 °C	----	----

SAR result with Body TSL

SAR averaged over 1 cm^3 (1 g) of Body TSL	Condition	
SAR measured	250 mW input power	2.65 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	**10.7 W/kg ± 17.0 % (k=2)**

SAR averaged over 10 cm^3 (10 g) of Body TSL	condition	
SAR measured	250 mW input power	1.72 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	**6.95 W/kg ± 16.5 % (k=2)**

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Accreditation No.: SCS 108

Client AT4 Wireless

Certificate No: D1800V2-2d099_Jul13

CALIBRATION CERTIFICATE

Object	D1800V2 - SN: 2d099
Calibration procedure(s)	QA CAL-05.v9 Calibration procedure for dipole validation kits above 700 MHz
Calibration date:	July 18, 2013

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

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

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID #	Cal Date (Certificate No.)	Scheduled Calibration
Power meter EPM-442A	GB37480704	01-Nov-12 (No. 217-01640)	Oct-13
Power sensor HP 8481A	US37292783	01-Nov-12 (No. 217-01640)	Oct-13
Reference 20 dB Attenuator	SN: 5058 (20k)	04-Apr-13 (No. 217-01736)	Apr-14
Type-N mismatch combination	SN: 5047.3 / 06327	04-Apr-13 (No. 217-01739)	Apr-14
Reference Probe ES3DV3	SN: 3205	28-Dec-12 (No. ES3-3205_Dec12)	Dec-13
DAE4	SN: 601	25-Apr-13 (No. DAE4-601_Apr13)	Apr-14

Secondary Standards	ID #	Check Date (in house)	Scheduled Check
Power sensor HP 8481A	MY41092317	18-Oct-02 (in house check Oct-11)	In house check: Oct-13
RF generator R&S SMT-06	100005	04-Aug-99 (in house check Oct-11)	In house check: Oct-13
Network Analyzer HP 8753E	US37390585 S4206	18-Oct-01 (in house check Oct-12)	In house check: Oct-13

	Name	Function	Signature
Calibrated by:	Jeton Kastrati	Laboratory Technician	
Approved by:	Katja Pokovic	Technical Manager	

Issued: July 19, 2013

Measurement Conditions

DASY system configuration, as far as not given on page 1.

DASY Version	DASY5	V52.8.7
Extrapolation	Advanced Extrapolation	
Phantom	Modular Flat Phantom	
Distance Dipole Center - TSL	10 mm	with Spacer
Zoom Scan Resolution	dx, dy, dz = 5 mm	
Frequency	1800 MHz ± 1 MHz	

Head TSL parameters

The following parameters and calculations were applied.

	Temperature	**Permittivity**	**Conductivity**
Nominal Head TSL parameters	22.0 °C	40.0	1.40 mho/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	38.7 ± 6 %	1.37 mho/m ± 6 %
Head TSL temperature change during test	< 0.5 °C	----	----

SAR result with Head TSL

SAR averaged over 1 cm^3 (1 g) of Head TSL	Condition	
SAR measured	250 mW input power	9.67 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	**38.9 W/kg ± 17.0 % (k=2)**

SAR averaged over 10 cm^3 (10 g) of Head TSL	condition	
SAR measured	250 mW input power	5.08 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	**20.4 W/kg ± 16.5 % (k=2)**

Body TSL parameters

The following parameters and calculations were applied.

	Temperature	**Permittivity**	**Conductivity**
Nominal Body TSL parameters	22.0 °C	53.3	1.52 mho/m
Measured Body TSL parameters	(22.0 ± 0.2) °C	51.4 ± 6 %	1.53 mho/m ± 6 %
Body TSL temperature change during test	< 0.5 °C	----	----

SAR result with Body TSL

SAR averaged over 1 cm^3 (1 g) of Body TSL	Condition	
SAR measured	250 mW input power	10.0 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	**39.5 W/kg ± 17.0 % (k=2)**

SAR averaged over 10 cm^3 (10 g) of Body TSL	condition	
SAR measured	250 mW input power	5.30 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	**21.0 W/kg ± 16.5 % (k=2)**

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Accreditation No.: SCS 108

Client AT4 Wireless

Certificate No: D2450V2-756_Jul13

CALIBRATION CERTIFICATE

Object	D2450V2 - SN: 756
Calibration procedure(s)	QA CAL-05.v9 Calibration procedure for dipole validation kits above 700 MHz
Calibration date:	July 22, 2013

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

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

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID #	Cal Date (Certificate No.)	Scheduled Calibration
Power meter EPM-442A	GB37480704	01-Nov-12 (No. 217-01640)	Oct-13
Power sensor HP 8481A	US37292783	01-Nov-12 (No. 217-01640)	Oct-13
Reference 20 dB Attenuator	SN: 5058 (20k)	04-Apr-13 (No. 217-01736)	Apr-14
Type-N mismatch combination	SN: 5047.3 / 06327	04-Apr-13 (No. 217-01739)	Apr-14
Reference Probe ES3DV3	SN: 3205	28-Dec-12 (No. ES3-3205_Dec12)	Dec-13
DAE4	SN: 601	25-Apr-13 (No. DAE4-601_Apr13)	Apr-14

Secondary Standards	ID #	Check Date (in house)	Scheduled Check
Power sensor HP 8481A	MY41092317	18-Oct-02 (in house check Oct-11)	In house check: Oct-13
RF generator R&S SMT-06	100005	04-Aug-99 (in house check Oct-11)	In house check: Oct-13
Network Analyzer HP 8753E	US37390585 S4206	18-Oct-01 (in house check Oct-12)	In house check: Oct-13

	Name	Function	Signature
Calibrated by:	Jeton Kastrati	Laboratory Technician	
Approved by:	Katja Pokovic	Technical Manager	

Issued: July 22, 2013

Measurement Conditions

DASY system configuration, as far as not given on page 1.

DASY Version	DASY5	V52.8.7
Extrapolation	Advanced Extrapolation	
Phantom	Modular Flat Phantom	
Distance Dipole Center - TSL	10 mm	with Spacer
Zoom Scan Resolution	dx, dy, dz = 5 mm	
Frequency	2450 MHz ± 1 MHz	

Head TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	39.2	1.80 mho/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	37.8 ± 6 %	1.81 mho/m ± 6 %
Head TSL temperature change during test	< 0.5 °C	----	----

SAR result with Head TSL

SAR averaged over 1 cm^3 (1 g) of Head TSL	Condition	
SAR measured	250 mW input power	13.4 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	**53.0 W/kg ± 17.0 % (k=2)**

SAR averaged over 10 cm^3 (10 g) of Head TSL	condition	
SAR measured	250 mW input power	6.20 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	**24.6 W/kg ± 16.5 % (k=2)**

Body TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Body TSL parameters	22.0 °C	52.7	1.95 mho/m
Measured Body TSL parameters	(22.0 ± 0.2) °C	50.5 ± 6 %	2.01 mho/m ± 6 %
Body TSL temperature change during test	< 0.5 °C	----	----

SAR result with Body TSL

SAR averaged over 1 cm^3 (1 g) of Body TSL	Condition	
SAR measured	250 mW input power	13.1 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	**51.1 W/kg ± 17.0 % (k=2)**

SAR averaged over 10 cm^3 (10 g) of Body TSL	condition	
SAR measured	250 mW input power	6.06 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	**23.9 W/kg ± 16.5 % (k=2)**