AT4 wireless, S.A.
Parque Tecnológico de Andalucía,
c/ Severo Ochoa nº 2 · 29590 Campanillas · Málaga · España
www.at4wireless.com · C.I.F. A29 507 456

ENSAYOS Nº 51/LE147

Informe de ensayo nº:
Test report No:

NIE: 45636RRF.004

Test report

REFERENCE STANDARDS:

FCC 47CFR Part 2.1093, Published RF Exposure KDB Procedures, IEEE Std 1528:2013, IEEE Std C95-3:2002, IEEE Std C95-1:2005, IC RSS -102 Issue 5:2015

Identification of item tested.....:	Yotaphone2 Dual screen SmartPhone with EPD back screen
Trade .....:	YotaPhone
Model and /or type reference.....:	YD205
Other identification of the product .....:	FCC ID: 2ADHW205 IC: 12469A-205
Final HW version .....:	P2
Final SW version .....:	4.4.3-S01-003-US1.0.3.63a
Features.....:	CPU: Qualcomm Snapdragon 801, quad-core 2.26 GHz Network: GSM 850, 900, 1800, 1900 MHz, UMTS/HSPA+/DC-HSDPA 850,900,1900,1700/2100,2100 MHz; LTE CAT4 B2 MIMO,B3 MIMO, B4 MIMO, B5 MIMO, B7 MIMO, B12 MIMO and B20 MIMO Connectivity: WiFi 802.11 a/b/g/n/ac, USB 2.0, BT v4.0 LE, GPS w/A-GPS + Glonass, NFC
Manufacturer.....:	YOTA DEVICES LTD Arch. Makariou & Kalograion, 4, Nicolaides Sea View City, 9th Floor, Flat/Offices 903 -904, Block A-B, 6016, Larnaca, Cyprus
Test method requested, standard.....:	1. FCC 47 CFR Part 2.1093. (10-1-14 Edition) – Radiofrequency radiation exposure evaluation: portable devices. 2. FCC OET KDB 447498 D01 General RF Exposure Guidance v05r02 (February 2014). 3. FCC OET KDB 865664 D01 v01r03 – SAR Measurement Requirements for 100 MHz to 6 GHz (February 2014). 4. FCC OET KDB 248227 D01 - v01r02 – SAR Measurements Procedures 802.11a/b/g Transmitters (May 2007 – Revised). 5. FCC OET KDB 941225 D01-v03 – 3G SAR Measurement Procedures (October 2014).

	6. FCC OET KDB 648474 D04 - v01r02 – SAR Evaluation Considerations for Wireless Handsets (Dec 2013). 7. FCC OET KDB 941225 D07 UMPC Mini Tablet v01r01 – SAR Evaluation Procedures for UMPC Mini-Tablet Devices 8. FCC OET KDB 941225 D06 Hot Spot SAR v02 – SAR Evaluation Procedures for Portable Devices with Wireless Router Capabilities. 9. IC RSS-102 Issue 5. Radio Frequency (RF) Exposure Compliance of Radiocommunication Apparatus (All Frequency Bands). 10. Canada`s Safety Code No.6 – Limits of Human Exposure to Radiofrequency Electromagnetic Fields in the Frequency Range from 3 kHz to 300 GHz .
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 for standalone transmission found during this test has been 1.176 W/kg, for body position and WCDMA IV Band. The maximum 1g volume averaged SAR for multiband transmission found during this test has been 1.372 W/kg, for body position. 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".
Approved by (name / position & signature) .....:	A. Llamas RF Lab. Manager  Firmado digitalmente por Alejandro Llamas Rodríguez Fecha: 2015.05.21 16:30:47 +02'00'
Date of issue .....:	2015-05-21
Report template No.....:	FDT08_16

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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 147.

In order to assure the traceability to other national and international laboratories, AT4 wireless has a calibration and maintenance program 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.

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The results presented in this Test Report apply only to the particular item under test established in this document.

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General conditions

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Uncertainty

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

1. FCC OET KDB 865664 – SAR Measurements Requirements for 100 MHz to 6 GHz (February 2014).

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	Serial Nº	Date of reception
45636B/16	Handset	YD205	356431061029903	05/05/2015

Sample M/02 is composed of the following elements:

Control Nº	Description	Model	Serial Nº	Date of reception
45636B/01	USB Cable	--	--	22/04/2015
45636B/05	AC/DC Adapter	YDC101au-b	--	22/04/2015
45636B/12	Handset	YD205	356431061029929	27/04/2015
45636B/10	Handset	YD205	356431061029747	27/04/2015

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 modes.

Test sample description

The test sample consists of Smartphone.

Identification of the client

YOTA DEVICES LTD

Arch. Makariou & Kalograion, 4, Nicolaides Sea View City, 9th Floor, Flat/Offices 903 -904, Block A-B, 6016, Larnaca, Cyprus.

Testing period

The performed test started on 2015-05-05 and finished on 2015-05-18.

The tests have been performed at AT4 wireless.

Environmental conditions

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

Temperature	Min. = 21.17 ºC Max. = 24.84 ºC
Relative humidity	Min. = 40.90 % Max. = 61.13 %

Remarks and comments

1: Testing of other required channels is not required according to FCC OET KDB 447498 D01 General RF Exposure Guidance v05r02, paragraph "4.3.3. SAR test reduction considerations".

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

3: Only the plots of the highest reported SAR for each test position and mode/band are included in appendix C.

4: Testing of EDGE mode is not required according to FCC OET KDB 941225 D01 – 3G SAR Measurement Procedures (October 2014).

5: Testing of HSDPA/HSPA/HSPA+/DC-HSDPA modes are not required according to FCC OET KDB 941225 D01 – 3G SAR Measurement Procedures (October 2014) .

6: Testing of Bluetooth mode is not required according to FCC OET KDB 447498 D01 General RF Exposure Guidance v05r02, paragraph "4.3.1. Standalone SAR test exclusion considerations Individual Transmitters".

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

8: Results from AT4Wireless Test Report Num. 43480RRF.001A1.

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. 2600MHz dipole validation kit SPEAG D2600V2
8. Robot Stäubli RX60BL
9. Robot controller Stäubli CM7MB
10. SAR measurement software SPEAG DASY52 V52.8.8.1222
11. SAR post processing software SPEAG SEMCAD X
12. Measurement server SPEAG DASY5 SE UMS 011 BS
13. SAM head-body simulator SPEAG Twin SAM V4.0
14. Oval flat phantom SPEAG ELI 4
15. Head and Body Tissue Equivalent Liquids for 750 MHz, 900MHz, 1800MHz and 2600 MHz bands
16. Radio Communication Tester R&S CMU 200
17. Wideband Radio Communication Tester R&S CMW 500
18. Vector network analyzer Agilent E5071C
19. Dielectric probe kit SPEAG DAK-3.5
20. Power meter Agilent E4419B
21. Power meter R&S NRVD and Power sensor R&S NRV-Z51
22. RF Generator R&S SMU200A
23. DC Power supply Agilent U8002A
24. Dual directional coupler NARDA FSCM 99899
25. Dual directional coupler HP 778D.
26. Power amplifier MITEQ AMF-4D-00400600-50-30P
27. Handset positioner SPEAG Device Holder

Testing verdicts

Not applicable .....:	N/A
Pass .....:	P
Fail .....:	F
Not measured .....:	N/M

700 MHz band

FCC 47CFR Part 2.1093 Paragraph	VERDICT			
	NA	**P**	**F**	**NM**
(d)(2) LTE 12		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[4]
(d)(2) WCDMA Band V		P		
(d)(2) HSDPA, HSPA, HSPA$^+$ and DC-HSDPA Band V				NM[5]
(d)(2) LTE 5		P		

4 and 5: See Remarks and Comments.

1800 MHz band

FCC 47CFR Part 2.1093 Paragraph	VERDICT			
	NA	**P**	**F**	**NM**
(d)(2) WCDMA Band IV		P		
(d)(2) HSDPA, HSPA, HSPA$^+$ and DC-HSDPA Band IV				NM[5]
(d)(2) LTE 4		P		

4 and 5: 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[4]
(d)(2) WCDMA Band II		P		
(d)(2) HSDPA, HSPA, HSPA$^+$ and DC-HSDPA Band II				NM[5]
(d)(2) LTE 2		P		

4 and 5: See Remarks and Comments.

2450 MHz band

FCC 47CFR Part 2.1093 Paragraph	VERDICT			
	NA	P	F	NM
(d)(2) 802.11b		P[8]		
(d)(2) 802.11g		P[8]		
(d)(2) 802.11n		P[8]		
(d)(2) 802.11ac		P[8]		
(d)(2) Bluetooth				NM[6]

6 and 8: See Remarks and Comments.

2600 MHz band

FCC 47CFR Part 2.1093 Paragraph	VERDICT			
	NA	P	F	NM
(d)(2) LTE 7		P		

5 GHz bands

FCC 47CFR Part 2.1093 Paragraph	VERDICT			
	NA	P	F	NM
(d)(2) 802.11a		P[8]		
(d)(2) 802.11n		P[8]		
(d)(2) 802.11ac		P[8]		

8: 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

INDEX

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 centimeters 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 for head worn 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:

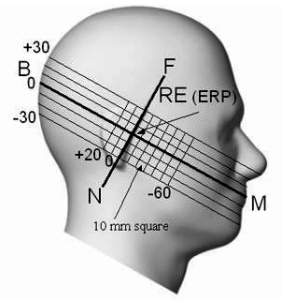


Figure 1: Proportions of Phantom

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

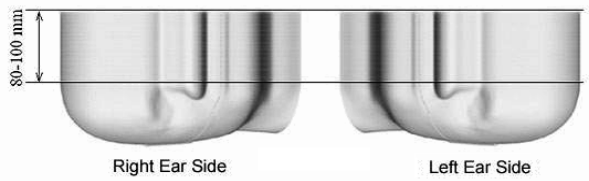


Figure 2: Proportions and shape of Phantom shell

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

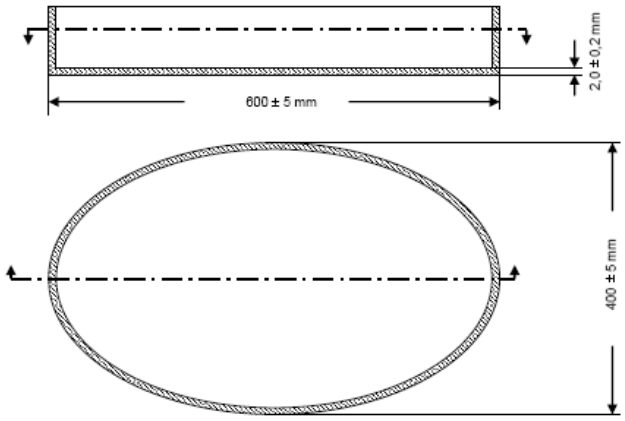


Figure 3: Proportions and shape of Phantom shell

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:

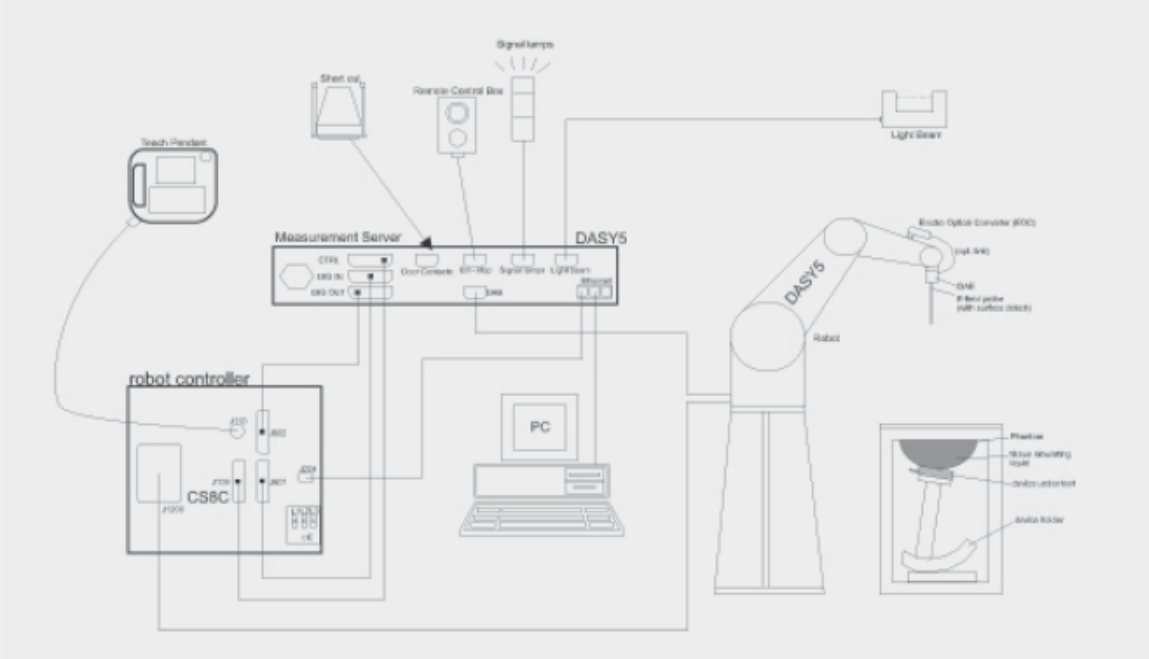


Figure 4: SAR Measurement system

- 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 professional 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
Agilent	DC Power supply	U8002A
NARDA	Directional coupler	FSCM 99899
HP	Dual directional coupler	778D
Weinschel	6dB attenuator	75A-6-11
Weinschel	20 dB attenuator	75A-20-11
Agilent	Power Meter	E4419B
Rohde & Schwarz	Power Meter & Power Sensor	NRVD & NRV-Z51
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	2600 MHz System Validation Dipole	D2600V2
Agilent	Vector Network Analyser	E5071C
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

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

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

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 head and body

Two test positions for the handset in the head are required. 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.

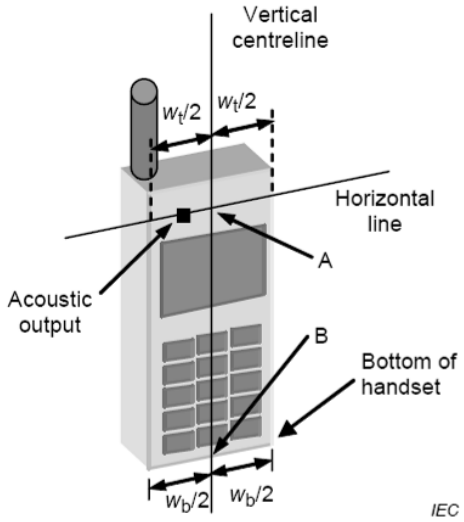


Figure 5: EUT's basic scheme

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, align 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.

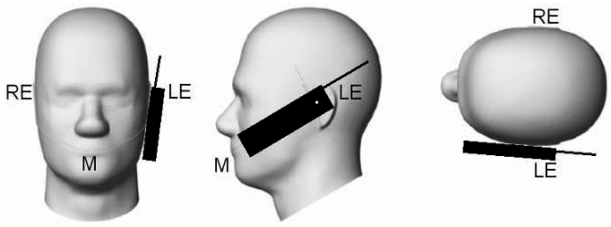


Figure 6: "Cheek" position of EUT

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.

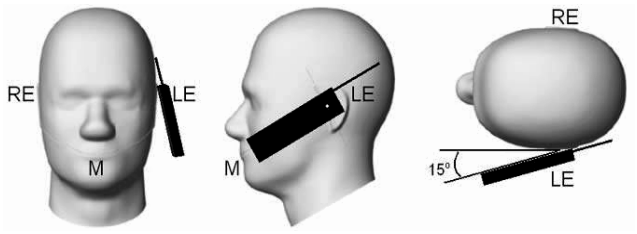


Figure 7: “Tilted” position of EUT

For devices that are designed to operate in body 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 configurations. EUT will be placed at the center of flat phantom. The EUT position using during the body SAR tests will be the one where the 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.

The device under test is a modified version from the original sample tested in AT4Wireless test report number 43480RRF.001A1. There has been no modification into WLAN configuration; therefore no SAR testing has been performed for WLAN modes.

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 1 gr. 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 is 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 within a 1mm resolution.

For the 3D scan, data is 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 be 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.

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. 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 – 6 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 - 6 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

5. DEVICE UNDER TEST

5.1. Dimmensions

Dimensions	Millimetres
Height x Width x Depth	145.0 x 70.0 x 8.0
Overall Diagonal:	148.0
Display Diagonal:	127.0

Table 4: Dimensions

5.2. Wireless Technology

Wireless Technology	Frequency Bands	Modes
GSM	850/1900	- Voice (GMSK) - GPRS (GMSK, Multi-slot class 14) - EGPRS (8PSK, Multi-slot class 14)
W-CDMA	II/IV/V	- UMTS Rel. 99 (Voice & Data) - HSDPA (Rel. 7) - HSUPA (Rel. 6) - DC-HSDPA (Rel. 8) - HSPA+ (Rel. 6)
LTE	2/4/5/7/12	- QPSK and 16-QAM (Rel. 9)
Wi-Fi	2.4 GHz	- 802.11b/g/n(20MHz & 40MHz)/ac(20MHz)
	5 GHz	- 802.11a/n(20MHz & 40MHz)/ac(20MHz)
Bluetooth	2.4 GHz	- Bluetooth

Table 5: Supported modes

5.3. Simultaneous Transmission

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 a/b/g/n/ac mode with the other ones. The detailed simultaneous transmission combination is:

RF Exposure Condition	Capable Transmit Configurations
Head	1. GSM 850/1900 Voice + (WiFi 2.4/5GHz or BT) 2. GSM 850/1900 (GPRS/EDGE) + (WiFi 2.4/5GHz or BT) 3. WCDMA Band II/IV/V + (WiFi 2.4/5GHz or BT) 4. LTE Band 2/4/5/7/12 + (WiFi 2.4/5GHz or BT)
Body-worn Accessory/Hotspot	1. GSM 850/1900 Voice + (WiFi 2.4/5GHz or BT) 2. GSM 850/1900 (GPRS/EDGE) + (WiFi 2.4/5GHz or BT) 3. WCDMA Band II/IV/V + (WiFi 2.4/5GHz or BT) 4. LTE Band 2/4/5/7/12 + (WiFi 2.4/5GHz or BT)
Notes: 1. WiFi cannot transmit simultaneously with Bluetooth Radio.	

Table 6: Simultaneous transmission

5.4. DUT Antenna Location

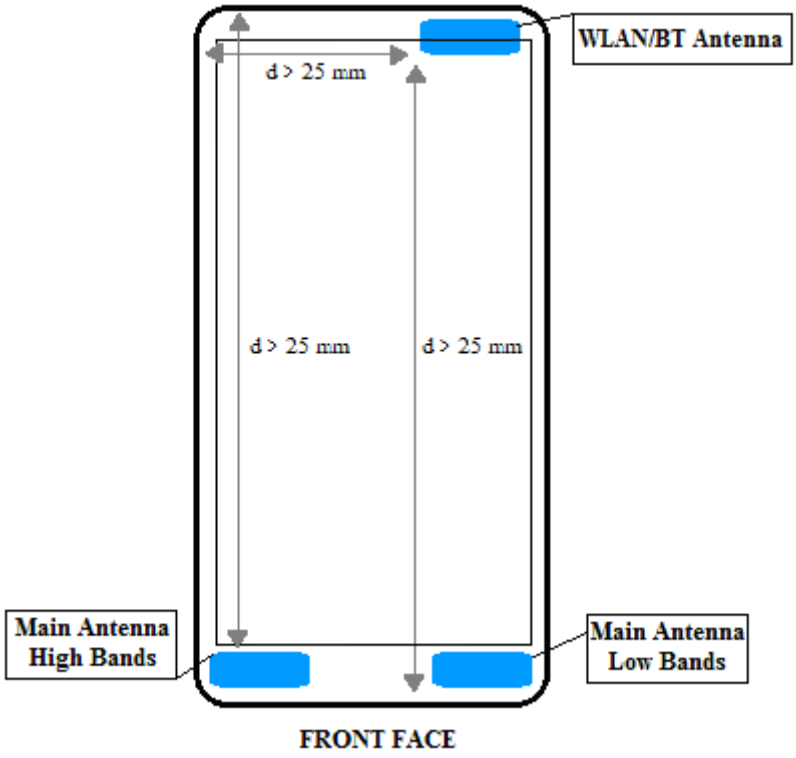


Figure 8: Antenna location.

Appendix B – Test results

INDEX

1. TEST CONDITIONS

1.1. Power supply (V):

V_n = 3.8 Li-polymer rechargeable battery

Type of power supply = DC Voltage from rechargeable Li-Ion 3.8 V battery.

1.2. Temperature (ºC):

T_n = +21.173 to +24.844

The subscript n indicates normal test conditions.

1.3. Test signal, Output Power and Frequencies

For the GSM/GPRS/EDGE, WCDMA and LTE modes, the samples (IMEI:356431061029929, 356431061029747) were put into operation by using a R&S CMU 200 and 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.

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, 3, 4, 5, 6, 7].

1, 3, 4, 5, 6 and 7: 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: 356431061029903) 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.

1.4. EUT and test-site configurations

For both modes, voice modes and only-data modes, the EUT was tested over head and body 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 tests, the EUT was placed in each face/edge position with a transmitting antenna located at ≤ 25 mm distance from that surface or edge against the flat phantom surface.

The separation distance between EUT and the flat phantom surface was 10 mm.

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	23.7	32.7	5	GMSK
190	836.6	23.8	32.8	5	GMSK
251	848.8	23.7	32.7	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	23.6	24.5	23.8	23.2	5	GMSK-CS1
190	836.6	23.7	24.2	23.8	23.1	5	GMSK-CS1
251	848.8	23.4	24.2	23.8	23.1	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	32.6	30.5	28.1	26.2	5	GMSK-CS1
190	836.6	32.7	30.3	28.0	26.1	5	GMSK-CS1
251	848.8	32.5	30.2	28.0	26.1	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	17.2	18.1	17.8	17.0	8	8PSK-MCS5
190	836.6	17.2	18.1	17.9	17.1	8	8PSK-MCS5
251	848.8	17.2	18.1	17.9	17.0	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	26.2	24.1	22.1	20.0	8	8PSK-MCS5
190	836.6	26.2	24.1	22.2	20.1	8	8PSK-MCS5
251	848.8	26.2	24.1	22.1	20.0	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	20.6	29.7	0	GMSK-CS1
661	1880	20.3	29.3	0	GMSK-CS1
810	1909.8	20.0	29.1	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	20.5	21.4	21.0	20.2	0	GMSK-CS1
661	1880	20.1	21.2	20.9	20.1	0	GMSK-CS1
810	1909.8	20.1	21.0	20.9	20.0	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	29.5	27.4	25.3	23.2	0	GMSK-CS1
661	1880	29.1	27.2	25.2	23.1	0	GMSK-CS1
810	1909.8	29.1	27.0	25.2	23.0	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	16.3	17.3	17.1	16.2	2	8PSK-MCS5
661	1880	16.1	17.2	17.0	16.2	2	8PSK-MCS5
810	1909.8	16.1	17.0	16.8	16.0	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	25.3	23.3	21.3	19.2	2	8PSK-MCS5
661	1880	25.1	23.2	21.2	19.2	2	8PSK-MCS5
810	1909.8	25.1	23.0	21.0	19.0	2	8PSK-MCS5

2.2. WCDMA/HSDPA/HSPA/HSPA+/DC-HSDPA 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	23.66
FDD II 1900	WCDMA	9400	1880	23.63
FDD II 1900	WCDMA	9538	1907.6	23.18

Band	Mode	CH	Freq	Average Output Power (dBm)
FDD IV 1700	WCDMA	1312	1712.4	24.06
FDD IV 1700	WCDMA	1412	1732.6	23.95
FDD IV 1700	WCDMA	1512	1752.6	24.05

Band	Mode	CH	Freq	Average Output Power (dBm)
FDD V 850	WCDMA	4132	826.4	24.09
FDD V 850	WCDMA	4182	836.4	24.12
FDD V 850	WCDMA	4233	846.6	24.17

- 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	64
	βc/βd	2/15	12/15	15/8	15/4
	βhs	4/15	24/15	30/15	30/15
	MPR	0	0	0.5	0.5
	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	22.29	22.26	22.24	22.23
FDD II 1900	HSDPA	9400	1880	22.22	22.21	22.19	22.17
FDD II 1900	HSDPA	9538	1907.6	21.92	21.89	21.87	21.86

				Average Output Power (dBm)			
Band	Mode	CH	Freq	Subtest 1 HSDPA	Subtest 2 HSDPA	Subtest3 HSDPA	Subtest 4 HSDPA
FDD IV 1700	HSDPA	1312	1712.4	22.58	22.21	22.21	22.17
FDD IV 1700	HSDPA	1412	1732.6	22.42	22.39	22.37	22.35
FDD IV 1700	HSDPA	1512	1752.6	22.56	22.56	22.61	22.61

				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	22.76	22.77	22.79	22.78
FDD V 850	HSDPA	4182	836.4	22.82	22.82	22.83	22.84
FDD V 850	HSDPA	4233	846.6	22.81	22.77	22.77	22.79

- **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)	0	2	1	2	0
	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	20.82	21.07	22.45	20.98	22.32
FDD II 1900	HSPA	9400	1880	20.71	20.97	22.41	20.93	22.18
FDD II 1900	HSPA	9538	1907.6	20.41	20.72	22.06	20.59	21.84

				Average Output Power (dBm)				
Band	Mode	CH	Freq	Subtest 1 HSUPA	Subtest 2 HSUPA	Subtest3 HSUPA	Subtest 4 HSUPA	Subtest 5 HSUPA
FDD IV 1700	HSPA	1312	1712.4	22.17	22.6	22.19	22.15	22.14
FDD IV 1700	HSPA	1412	1732.6	22.31	22.78	22.29	22.33	22.35
FDD IV 1700	HSPA	1512	1752.6	22.51	23.06	22.57	22.52	22.58

				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	21.24	21.52	22.93	21.49	22.73
FDD V 850	HSPA	4182	836.4	21.29	21.56	23.01	21.5	22.78
FDD V 850	HSPA	4233	846.6	21.33	21.55	22.54	21.46	22.76

- HSPA+

Mode	**Subtest**	**1**
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	1
	βd	0
	βec	30/15
	βhs	30/15
	βed (2xSF2)	βed1: 30/15
		βed2: 30/15
	βed (2xSF4)	βed3: 24/15
		βed4: 24/15
	CM (dB)	3.5
	MPR (dB)	2.5
	D E-DPCCH	7
	AG Index	14
	ETFCI	105

Band	Mode	CH	Freq	Average Output Power (dBm)
FDD II 1900	HSPA+	9262	1852.4	22.74
FDD II 1900	HSPA+	9400	1880	22.65
FDD II 1900	HSPA+	9538	1907.6	22.34

Band	Mode	CH	Freq	Average Output Power (dBm)
FDD IV 1700	HSPA+	1312	1712.4	21.29
FDD IV 1700	HSPA+	1412	1732.6	21.45
FDD IV 1700	HSPA+	1512	1752.6	21.62

Band	Mode	CH	Freq	Average Output Power (dBm)
FDD V 850	HSPA+	4132	826.4	23.14
FDD V 850	HSPA+	4182	836.4	23.17
FDD V 850	HSPA+	4233	846.6	23.28

DC-HSDPA

	Mode	**HSDPA**	**HSDPA**	**HSDPA**	**HSDPA**
	Subtest	**1**	**2**	**3**	**4**
W-CDMA General Settings	Loopback Mode	Test Mode 1			
	Rel99 RMC	12.2 Kbps RMC			
	HSDPA FRC	H-Set 12			
	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			
	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
	MPR	0.0	0.0	0.5	0.5
HSDPA Specific Settings	Dack	8			
	Dnak	8			
	DCQI	8			
	Ack-Nack repetition factor	3			
	CQI Feedback	4ms			
	CQI Repetition Factor	2			
	Ahs =βhs/βc	30/15			

				Average Output Power (dBm)			
Band	Mode	CH	Freq	Subtest 1 DC-HSDPA	Subtest 2 DC-HSDPA	Subtest 3 DC-HSDPA	Subtest 4 DC-HSDPA
FDD II 1900	DC-HSDPA	9262	1852.4	22.31	22.27	22.28	22.25
FDD II 1900	DC-HSDPA	9400	1880	22.23	22.25	22.21	22.23
FDD II 1900	DC-HSDPA	9538	1907.6	21.9	21.91	21.89	21.88

				Average Output Power (dBm)			
Band	Mode	CH	Freq	Subtest 1 DC-HSDPA	Subtest 2 DC-HSDPA	Subtest 3 DC-HSDPA	Subtest 4 DC-HSDPA
FDD IV 1700	DC-HSDPA	1312	1712.4	22.24	22.26	22.27	22.19
FDD IV 1700	DC-HSDPA	1412	1732.6	22.41	22.39	22.37	22.36
FDD IV 1700	DC-HSDPA	1512	1752.6	22.63	22.65	22.54	22.64

				Average Output Power (dBm)			
Band	Mode	CH	Freq	Subtest 1 DC-HSDPA	Subtest 2 DC-HSDPA	Subtest 3 DC-HSDPA	Subtest 4 DC-HSDPA
FDD V 850	DC-HSDPA	4132	826.4	22.79	22.79	22.77	22.81
FDD V 850	DC-HSDPA	4182	836.4	22.82	22.85	22.84	22.84
FDD V 850	DC-HSDPA	4233	846.6	22.78	22.8	22.81	22.76

2.3. LTE Bands

LTE Band	BW (MHz)	Ch	Freq (MHz)	Mode	UL RB Allocation	UL RB Start	MPR	Avg Pwr (dBm)
2	20	18700	1860	QPSK	1	0	0	23.11
					1	49	0	23.28
					1	99	0	23.35
					50	0	1	22.39
					50	24	1	22.31
					50	49	1	22.32
					100	0	1	22.33
				16QAM	1	0	1	22.1
					1	49	1	22.12
					1	99	1	22.45
					50	0	2	21.23
					50	24	2	21.19
					50	49	2	21.23
					100	0	2	21.25
		18900	1880	QPSK	1	0	0	23.15
					1	49	0	23.31
					1	99	0	23.39
					50	0	1	22.43
					50	24	1	22.4
					50	49	1	22.38
					100	0	1	22.41
				16QAM	1	0	1	22.17
					1	49	1	22.39
					1	99	1	22.38
					50	0	2	21.48
					50	24	2	21.46
					50	49	2	21.45
					100	0	2	21.47
		19099	1900	QPSK	1	0	0	23.46
					1	49	0	23.39
					1	99	0	23.57
					50	0	1	22.45
					50	24	1	22.37
					50	49	1	22.38
					100	0	1	22.43
				16QAM	1	0	1	22.48
					1	49	1	22.51
					1	99	1	22.61
					50	0	2	21.51
					50	24	2	21.47
					50	49	2	21.49
					100	0	2	21.52

LTE Band	BW (MHz)	Ch	Freq (MHz)	Mode	UL RB Allocation	UL RB Start	MPR	Avg Pwr (dBm)
2	15	18675	1857.5	QPSK	1	0	0	23.09
					1	37	0	23.23
					1	74	0	23.2
					36	0	1	22.26
					36	18	1	22.36
					36	39	1	22.37
					75	0	1	22.43
				16QAM	1	0	1	22.17
					1	37	1	22.25
					1	74	1	22.23
					36	0	2	21.15
					36	18	2	21.24
					36	39	2	21.21
					75	0	2	21.28
		18900	1880	QPSK	1	0	0	23.33
					1	37	0	22.36
					1	74	0	22.38
					36	0	1	22.37
					36	18	1	22.4
					36	39	1	22.53
					75	0	1	22.52
				16QAM	1	0	1	22.6
					1	37	1	22.65
					1	74	1	22.74
					36	0	2	21.36
					36	18	2	21.43
					36	39	2	21.49
					75	0	2	21.49
		19124	1902.5	QPSK	1	0	0	23.36
					1	37	0	22.35
					1	74	0	23.47
					36	0	1	22.42
					36	18	1	22.41
					36	39	1	22.37
					75	0	1	22.47
				16QAM	1	0	1	22.54
					1	37	1	22.68
					1	74	1	22.59
					36	0	2	21.5
					36	18	2	21.45
					36	39	2	21.46
					75	0	2	21.55

LTE Band	BW (MHz)	Ch	Freq (MHz)	Mode	UL RB Allocation	UL RB Start	MPR	Avg Pwr (dBm)
2	5	18625	1852.5	QPSK	1	0	0	23.15
					1	12	0	23.25
					1	24	0	23.3
					12	0	1	22.24
					12	6	1	22.4
					12	11	1	22.41
					25	0	1	22.26
				16QAM	1	0	1	22.04
					1	12	1	22.03
					1	24	1	22.18
					12	0	2	21.13
					12	6	2	21.09
					12	11	2	21.21
					25	0	2	21.13
		18900	1880	QPSK	1	0	0	23.47
					1	12	0	23.43
					1	24	0	23.36
					12	0	1	22.39
					12	6	1	22.44
					12	11	1	22.47
					25	0	1	22.41
				16QAM	1	0	1	22.81
					1	12	1	22.37
					1	24	1	22.67
					12	0	2	21.44
					12	6	2	21.41
					12	11	2	21.45
					25	0	2	21.43
		19174	1907.5	QPSK	1	0	0	23.31
					1	12	0	23.38
					1	24	0	23.44
					12	0	1	22.32
					12	6	1	22.48
					12	11	1	22.46
					25	0	1	22.47
				16QAM	1	0	1	22.5
					1	12	1	22.51
					1	24	1	22.66
					12	0	2	21.53
					12	6	2	21.63
					12	11	2	21.64
					25	0	2	21.59

LTE Band	BW (MHz)	Ch	Freq (MHz)	Mode	UL RB Allocation	UL RB Start	MPR	Avg Pwr (dBm)
2	3	18615	1851.5	QPSK	1	0	0	23.1
					1	7	0	23.2
					1	14	0	23.31
					8	0	1	22.17
					8	4	1	22.31
					8	7	1	22.33
					15	0	1	22.26
				16QAM	1	0	1	22.08
					1	7	1	22.12
					1	14	1	22.34
					8	0	2	21.11
					8	4	2	21.07
					8	7	2	21.09
					15	0	2	21.19
		18900	1880	QPSK	1	0	0	23.38
					1	7	0	23.43
					1	14	0	23.37
					8	0	1	22.44
					8	4	1	22.44
					8	7	1	22.46
					15	0	1	22.19
				16QAM	1	0	1	22.53
					1	7	1	22.45
					1	14	1	22.54
					8	0	2	21.45
					8	4	2	21.45
					8	7	2	21.47
					15	0	2	21.45
		19184	1908.5	QPSK	1	0	0	23.31
					1	7	0	22.37
					1	14	0	23.43
					8	0	1	22.47
					8	4	1	22.52
					8	7	1	22.51
					15	0	1	22.48
				16QAM	1	0	1	22.51
					1	7	1	22.73
					1	14	1	22.59
					8	0	2	21.55
					8	4	2	21.53
					8	7	2	21.54
					15	0	2	21.61

LTE Band	BW (MHz)	Ch	Freq (MHz)	Mode	UL RB Allocation	UL RB Start	MPR	Avg Pwr (dBm)
2	1.4	18607	1850.7	QPSK	1	0	0	23.05
					1	2	0	23.08
					1	5	0	23.07
					3	0	0	23.01
					3	1	0	23.05
					3	2	0	23.04
					6	0	1	22.15
				16QAM	1	0	1	21.94
					1	2	1	22.2
					1	5	1	22.08
					3	0	1	22.13
					3	1	1	22.17
					3	2	1	22.18
					6	0	2	21.1
		18900	1880	QPSK	1	0	0	23.41
					1	2	0	23.42
					1	5	0	23.48
					3	0	0	22.39
					3	1	0	23.4
					3	2	0	23.42
					6	0	1	22.52
				16QAM	1	0	1	22.68
					1	2	1	22.51
					1	5	1	22.75
					3	0	1	22.58
					3	1	1	22.55
					3	2	1	22.57
					6	0	2	21.52
		19192	1909.3	QPSK	1	0	0	23.46
					1	2	0	23.44
					1	5	0	23.46
					3	0	0	23.47
					3	1	0	23.41
					3	2	0	23.39
					6	0	1	22.5
				16QAM	1	0	1	22.81
					1	2	1	22.74
					1	5	1	22.79
					3	0	1	22.64
					3	1	1	22.59
					3	2	1	22.61
					6	0	2	21.67

LTE Band	BW (MHz)	Ch	Freq (MHz)	Mode	UL RB Allocation	UL RB Start	MPR	Avg Pwr (dBm)
4	20	20050	1720	QPSK	1	0	0	23.24
					1	49	0	23.18
					1	99	0	23.36
					50	0	1	22.24
					50	24	1	22.25
					50	49	1	22.31
					100	0	1	22.32
				16QAM	1	0	1	21.59
					1	49	1	22.26
					1	99	1	22.54
					50	0	2	21.36
					50	24	2	21.37
					50	49	2	21.39
					100	0	2	21.37
		20175	1732.5	QPSK	1	0	0	23.23
					1	49	0	23.39
					1	99	0	22.88
					50	0	1	22.38
					50	24	1	22.35
					50	49	1	22.34
					100	0	1	22.34
				16QAM	1	0	1	22.08
					1	49	1	22.35
					1	99	1	22.15
					50	0	2	21.48
					50	24	2	21.49
					50	49	2	21.54
					100	0	2	21.51
		20299	1745	QPSK	1	0	0	23.17
					1	49	0	23.22
					1	99	0	23.41
					50	0	1	22.15
					50	24	1	22.32
					50	49	1	22.42
					100	0	1	22.3
				16QAM	1	0	1	22.47
					1	49	1	22.48
					1	99	1	22.46
					50	0	2	21.31
					50	24	2	21.46
					50	49	2	21.44
					100	0	2	21.51

LTE Band	BW (MHz)	Ch	Freq (MHz)	Mode	UL RB Allocation	UL RB Start	MPR	Avg Pwr (dBm)
4	15	20025	1717.5	QPSK	1	0	0	23.14
					1	37	0	23.15
					1	74	0	23.06
					36	0	1	22.17
					36	18	1	22.27
					36	39	1	22.28
					75	0	1	22.37
				16QAM	1	0	1	21.68
					1	37	1	22.33
					1	74	1	22.5
					36	0	2	21.34
					36	18	2	21.39
					36	39	2	21.4
					75	0	2	22.15
		20175	1732.5	QPSK	1	0	0	23.21
					1	37	0	23.25
					1	74	0	23.19
					36	0	1	22.34
					36	18	1	22.33
					36	39	1	22.49
					75	0	1	22.45
				16QAM	1	0	1	22.11
					1	37	1	22.57
					1	74	1	22.21
					36	0	2	21.39
					36	18	2	21.41
					36	39	2	21.45
					75	0	2	21.51
		20324	1747.5	QPSK	1	0	0	23.11
					1	37	0	23.27
					1	74	0	23.39
					36	0	1	22.31
					36	18	1	22.51
					36	39	1	22.41
					75	0	1	22.49
				16QAM	1	0	1	22.51
					1	37	1	22.6
					1	74	1	22.48
					36	0	2	21.44
					36	18	2	21.49
					36	39	2	21.44
					75	0	2	21.57

LTE Band	BW (MHz)	Ch	Freq (MHz)	Mode	UL RB Allocation	UL RB Start	MPR	Avg Pwr (dBm)
4	10	20000	1715	QPSK	1	0	0	23.06
					1	24	0	23.18
					1	49	0	23.23
					25	0	1	21.95
					25	12	1	22.19
					25	24	1	22.26
					50	0	1	22.27
				16QAM	1	0	1	21.76
					1	24	1	22.49
					1	49	1	22.59
					25	0	2	21.1
					25	12	2	21.32
					25	24	2	21.34
					50	0	2	21.37
		20175	1732.5	QPSK	1	0	0	23.31
					1	24	0	23.23
					1	49	0	23.31
					25	0	1	22.35
					25	12	1	22.29
					25	24	1	22.31
					50	0	1	22.36
				16QAM	1	0	1	22.51
					1	24	1	22.41
					1	49	1	22.48
					25	0	2	21.44
					25	12	2	21.44
					25	24	2	21.46
					50	0	2	21.49
		20349	1750	QPSK	1	0	0	23.34
					1	24	0	23.43
					1	49	0	23.41
					25	0	1	22.42
					25	12	1	22.5
					25	24	1	22.45
					50	0	1	22.47
				16QAM	1	0	1	22.52
					1	24	1	22.39
					1	49	1	22.57
					25	0	2	21.44
					25	12	2	21.47
					25	24	2	21.51
					50	0	2	21.44

LTE Band	BW (MHz)	Ch	Freq (MHz)	Mode	UL RB Allocation	UL RB Start	MPR	Avg Pwr (dBm)
4	5	19975	1712.5	QPSK	1	0	0	23.14
					1	12	0	23.09
					1	24	0	23.21
					12	0	1	21.66
					12	6	1	21.83
					12	11	1	21.94
					25	0	1	21.88
				16QAM	1	0	1	21.54
					1	12	1	21.97
					1	24	1	22.27
					12	0	2	20.77
					12	6	2	20.92
					12	11	2	21.11
					25	0	2	20.99
		20175	1732.5	QPSK	1	0	0	23.38
					1	12	0	23.27
					1	24	0	23.31
					12	0	1	22.29
					12	6	1	22.34
					12	11	1	22.38
					25	0	1	22.36
				16QAM	1	0	1	22.8
					1	12	1	22.37
					1	24	1	22.75
					12	0	2	21.46
					12	6	2	21.48
					12	11	2	21.45
					25	0	2	21.44
		20374	1752.5	QPSK	1	0	0	23.37
					1	12	0	23.4
					1	24	0	23.44
					12	0	1	22.41
					12	6	1	22.43
					12	11	1	22.46
					25	0	1	22.13
				16QAM	1	0	1	22.45
					1	12	1	22.44
					1	24	1	22.56
					12	0	2	21.56
					12	6	2	21.54
					12	11	2	21.58
					25	0	2	21.54

LTE Band	BW (MHz)	Ch	Freq (MHz)	Mode	UL RB Allocation	UL RB Start	MPR	Avg Pwr (dBm)
4	3	19965	1711.5	QPSK	1	0	0	22.4
					1	7	0	22.53
					1	14	0	22.81
					8	0	1	21.5
					8	4	1	21.65
					8	7	1	21.66
					15	0	1	21.65
				16QAM	1	0	1	21.57
					1	7	1	21.83
					1	14	1	22.03
					8	0	2	20.63
					8	4	2	20.73
					8	7	2	20.91
					15	0	2	20.71
		20175	1732.5	QPSK	1	0	0	23.36
					1	7	0	23.33
					1	14	0	23.18
					8	0	1	22.35
					8	4	1	22.37
					8	7	1	22.31
					15	0	1	22.33
				16QAM	1	0	1	22.51
					1	7	1	22.43
					1	14	1	22.51
					8	0	2	21.49
					8	4	2	21.46
					8	7	2	21.49
					15	0	2	21.44
		20384	1753.5	QPSK	1	0	0	23.32
					1	7	0	23.29
					1	14	0	23.38
					8	0	1	22.42
					8	4	1	22.48
					8	7	1	22.48
					15	0	1	22.44
				16QAM	1	0	1	22.49
					1	7	1	22.62
					1	14	1	22.5
					8	0	2	21.48
					8	4	2	21.46
					8	7	2	21.49
					15	0	2	21.55

LTE Band	BW (MHz)	Ch	Freq (MHz)	Mode	UL RB Allocation	UL RB Start	MPR	Avg Pwr (dBm)
4	1.4	19957	1710.7	QPSK	1	0	0	23.38
					1	2	0	23.34
					1	5	0	23.4
					3	0	1	23.42
					3	1	1	23.39
					3	2	1	23.38
					6	0	1	22.53
				16QAM	1	0	1	21.54
					1	2	1	21.72
					1	5	1	21.66
					3	0	2	21.58
					3	1	2	21.67
					3	2	2	21.7
					6	0	2	20.57
		20175	1732.5	QPSK	1	0	0	23.32
					1	2	0	23.27
					1	5	0	23.35
					3	0	1	23.31
					3	1	1	23.25
					3	2	1	23.32
					6	0	1	22.19
				16QAM	1	0	1	22.67
					1	2	1	22.59
					1	5	1	22.67
					3	0	2	22.47
					3	1	2	22.41
					3	2	2	22.41
					6	0	2	21.55
		20392	1754.3	QPSK	1	0	0	23.39
					1	2	0	23.33
					1	5	0	23.42
					3	0	1	23.4
					3	1	1	23.38
					3	2	1	23.32
					6	0	1	22.51
				16QAM	1	0	1	22.69
					1	2	1	22.58
					1	5	1	22.7
					3	0	2	22.45
					3	1	2	22.47
					3	2	2	22.47
					6	0	2	21.59

LTE Band	BW (MHz)	Ch	Freq (MHz)	Mode	UL RB Allocation	UL RB Start	MPR	Avg Pwr (dBm)
5	10	20450	829	QPSK	1	0	0	22.99
					1	24	0	22.98
					1	49	0	22.99
					25	0	1	22.12
					25	12	1	22.11
					25	24	1	22.16
					50	0	1	22.09
				16QAM	1	0	1	22.36
					1	24	1	22.33
					1	49	1	22.36
					25	0	2	21.14
					25	12	2	21.13
					25	24	2	21.21
					50	0	2	21.14
		20525	836.5	QPSK	1	0	0	23.19
					1	24	0	23.11
					1	49	0	23.13
					25	0	1	22.17
					25	12	1	22.17
					25	24	1	22.14
					50	0	1	22.16
				16QAM	1	0	1	22.23
					1	24	1	22.19
					1	49	1	22.16
					25	0	2	21.21
					25	12	2	21.17
					25	24	2	21.18
					50	0	2	21.2
		20599	844	QPSK	1	0	0	23.04
					1	24	0	22.9
					1	49	0	23.01
					25	0	1	22.11
					25	12	1	22.13
					25	24	1	22.14
					50	0	1	21.82
				16QAM	1	0	1	22.19
					1	24	1	22.07
					1	49	1	22.16
					25	0	2	21.14
					25	12	2	21.15
					25	24	2	21.17
					50	0	2	21.16

LTE Band	BW (MHz)	Ch	Freq (MHz)	Mode	UL RB Allocation	UL RB Start	MPR	Avg Pwr (dBm)
5	5	20425	826.5	QPSK	1	0	0	23.07
					1	12	0	23.03
					1	24	0	23.09
					12	0	1	22.09
					12	6	1	22.06
					12	11	1	22.07
					25	0	1	22.13
				16QAM	1	0	1	22.22
					1	12	1	22.05
					1	24	1	22.4
					12	0	2	21.17
					12	6	2	21.21
					12	11	2	21.15
					25	0	2	21.19
		20525	836.5	QPSK	1	0	0	23.17
					1	12	0	23.13
					1	24	0	23.14
					12	0	1	22.19
					12	6	1	22.13
					12	11	1	22.17
					25	0	1	22.15
				16QAM	1	0	1	22.51
					1	12	1	21.94
					1	24	1	22.49
					12	0	2	21.35
					12	6	2	21.29
					12	11	2	21.32
					25	0	2	21.25
		20624	846.5	QPSK	1	0	0	22.93
					1	12	0	23
					1	24	0	23.04
					12	0	1	22.13
					12	6	1	22.11
					12	11	1	22.16
					25	0	1	22.17
				16QAM	1	0	1	22.01
					1	12	1	22.13
					1	24	1	22.11
					12	0	2	21.18
					12	6	2	21.21
					12	11	2	21.18
					25	0	2	21.19

LTE Band	BW (MHz)	Ch	Freq (MHz)	Mode	UL RB Allocation	UL RB Start	MPR	Avg Pwr (dBm)
5	3	20415	825.5	QPSK	1	0	0	23.23
					1	7	0	23.2
					1	14	0	23.19
					8	0	1	22.24
					8	4	1	22.19
					8	7	1	22.18
					15	0	1	22.25
				16QAM	1	0	1	22.25
					1	7	1	22.16
					1	14	1	22.26
					8	0	2	21.15
					8	4	2	21.14
					8	7	2	21.16
					15	0	2	21.21
		20525	836.5	QPSK	1	0	0	23.18
					1	7	0	23.16
					1	14	0	23.05
					8	0	1	22.27
					8	4	1	22.28
					8	7	1	22.28
					15	0	1	22.23
				16QAM	1	0	1	22.27
					1	7	1	21.99
					1	14	1	22.14
					8	0	2	21.29
					8	4	2	21.27
					8	7	2	21.29
					15	0	2	21.28
		20634	847.4	QPSK	1	0	0	23.19
					1	7	0	23.14
					1	14	0	23.21
					8	0	1	22.19
					8	4	1	22.21
					8	7	1	22.18
					15	0	1	22.17
				16QAM	1	0	1	22.39
					1	7	1	22.3
					1	14	1	22.38
					8	0	2	21.18
					8	4	2	21.15
					8	7	2	21.17
					15	0	2	21.21

LTE Band	BW (MHz)	Ch	Freq (MHz)	Mode	UL RB Allocation	UL RB Start	MPR	Avg Pwr (dBm)
5	1.4	20407	824.7	QPSK	1	0	0	23.18
					1	2	0	23.15
					1	5	0	23.19
					3	0	1	23.17
					3	1	1	23.11
					3	2	1	23.13
					6	0	1	22.12
				16QAM	1	0	1	22.4
					1	2	1	22.32
					1	5	1	22.39
					3	0	2	22.16
					3	1	2	22.14
					3	2	2	22.16
					6	0	2	21.27
		20525	836.5	QPSK	1	0	0	23.24
					1	2	0	23.25
					1	5	0	23.23
					3	0	1	23.22
					3	1	1	23.17
					3	2	1	23.16
					6	0	1	22.32
				16QAM	1	0	1	22.26
					1	2	1	22.25
					1	5	1	22.27
					3	0	2	22.24
					3	1	2	22.21
					3	2	2	22.2
					6	0	2	21.31
		20642	848.2	QPSK	1	0	0	23.16
					1	2	0	23.11
					1	5	0	23.19
					3	0	1	23.13
					3	1	1	23.09
					3	2	1	23.09
					6	0	1	22.22
				16QAM	1	0	1	22.35
					1	2	1	22.21
					1	5	1	22.34
					3	0	2	22.25
					3	1	2	22.21
					3	2	2	22.22
					6	0	2	21.28

LTE Band	BW (MHz)	Ch	Freq (MHz)	Mode	UL RB Allocation	UL RB Start	MPR	Avg Pwr (dBm)
7	20	20850	2510	QPSK	1	0	0	23.55
					1	49	0	23.69
					1	99	0	23.87
					50	0	1	22.78
					50	24	1	22.82
					50	49	1	22.87
					100	0	1	22.83
				16QAM	1	0	1	22.62
					1	49	1	22.84
					1	99	1	22.76
					50	0	2	21.79
					50	24	2	21.84
					50	49	2	21.88
					100	0	2	21.86
		21100	2535	QPSK	1	0	0	23.61
					1	49	0	23.55
					1	99	0	23.49
					50	0	1	22.71
					50	24	1	22.65
					50	49	1	22.55
					100	0	1	22.63
				16QAM	1	0	1	22.69
					1	49	1	22.47
					1	99	1	22.52
					50	0	2	21.68
					50	24	2	21.6
					50	49	2	21.58
					100	0	2	21.61
		21349	2560	QPSK	1	0	0	23.58
					1	49	0	23.34
					1	99	0	22.94
					50	0	1	22.5
					50	24	1	22.47
					50	49	1	22.37
					100	0	1	22.46
				16QAM	1	0	1	22.41
					1	49	1	22.37
					1	99	1	22.12
					50	0	2	21.55
					50	24	2	21.56
					50	49	2	21.45
					100	0	2	21.55

LTE Band	BW (MHz)	Ch	Freq (MHz)	Mode	UL RB Allocation	UL RB Start	MPR	Avg Pwr (dBm)
7	15	20825	2507.5	QPSK	1	0	0	23.67
					1	37	0	23.76
					1	74	0	23.84
					36	0	1	22.76
					36	18	1	22.77
					36	39	1	22.84
					75	0	1	22.85
				16QAM	1	0	1	22.42
					1	37	1	22.9
					1	74	1	22.58
					36	0	2	21.77
					36	18	2	21.75
					36	39	2	21.86
					75	0	2	21.79
		21100	2535	QPSK	1	0	0	23.55
					1	37	0	23.64
					1	74	0	23.54
					36	0	1	22.68
					36	18	1	22.64
					36	39	1	22.57
					75	0	1	22.62
				16QAM	1	0	1	22.63
					1	37	1	22.77
					1	74	1	22.54
					36	0	2	21.64
					36	18	2	21.6
					36	39	2	21.55
					75	0	2	21.62
		21374	2562.5	QPSK	1	0	0	23.43
					1	37	0	22.39
					1	74	0	23.36
					36	0	1	22.51
					36	18	1	22.46
					36	39	1	22.41
					75	0	1	22.48
				16QAM	1	0	1	22.63
					1	37	1	22.4
					1	74	1	22.43
					36	0	2	21.56
					36	18	2	21.48
					36	39	2	21.45
					75	0	2	22.45

LTE Band	BW (MHz)	Ch	Freq (MHz)	Mode	UL RB Allocation	UL RB Start	MPR	Avg Pwr (dBm)
7	10	20800	2505	QPSK	1	0	0	23.69
					1	24	0	23.7
					1	49	0	23.85
					25	0	1	22.73
					25	12	1	22.78
					25	24	1	22.8
					50	0	1	22.77
				16QAM	1	0	1	22.87
					1	24	1	22.73
					1	49	1	23
					25	0	2	21.72
					25	12	2	21.74
					25	24	2	21.8
					50	0	2	21.81
		21100	2535	QPSK	1	0	0	23.56
					1	24	0	23.57
					1	49	0	23.55
					25	0	1	22.63
					25	12	1	22.64
					25	24	1	22.63
					50	0	1	22.61
				16QAM	1	0	1	22.68
					1	24	1	22.56
					1	49	1	22.66
					25	0	2	21.69
					25	12	2	21.66
					25	24	2	21.64
					50	0	2	21.63
		21399	2565	QPSK	1	0	0	23.41
					1	24	0	23.39
					1	49	0	23.34
					25	0	1	22.48
					25	12	1	22.43
					25	24	1	22.39
					50	0	1	22.4
				16QAM	1	0	1	22.43
					1	24	1	22.56
					1	49	1	22.37
					25	0	2	21.49
					25	12	2	21.44
					25	24	2	21.46
					50	0	2	21.44

LTE Band	BW (MHz)	Ch	Freq (MHz)	Mode	UL RB Allocation	UL RB Start	MPR	Avg Pwr (dBm)
7	5	20775	2502.5	QPSK	1	0	0	23.71
					1	12	0	23.66
					1	24	0	23.77
					12	0	1	22.7
					12	6	1	22.71
					12	11	1	22.72
					25	0	1	22.75
				16QAM	1	0	1	22.96
					1	12	1	22.54
					1	24	1	23
					12	0	2	21.71
					12	6	2	21.69
					12	11	2	21.74
					25	0	2	21.71
		21100	2535	QPSK	1	0	0	23.67
					1	12	0	23.51
					1	24	0	23.58
					12	0	1	22.67
					12	6	1	22.66
					12	11	1	22.67
					25	0	1	22.62
				16QAM	1	0	1	22.53
					1	12	1	22.5
					1	24	1	22.48
					12	0	2	21.67
					12	6	2	21.61
					12	11	2	21.63
					25	0	2	21.63
		21424	2567.5	QPSK	1	0	0	23.35
					1	12	0	23.26
					1	24	0	23.17
					12	0	1	22.4
					12	6	1	22.4
					12	11	1	22.37
					25	0	1	22.41
				16QAM	1	0	1	22.42
					1	12	1	22.3
					1	24	1	22.36
					12	0	2	21.52
					12	6	2	21.52
					12	11	2	21.44
					25	0	2	21.45

LTE Band	BW (MHz)	Ch	Freq (MHz)	Mode	UL RB Allocation	UL RB Start	MPR	Avg Pwr (dBm)
12	10	23060	704	QPSK	1	0	0	23.31
					1	24	0	23.21
					1	49	0	23.25
					25	0	1	22.28
					25	12	1	22.33
					25	24	1	22.36
					50	0	1	22.37
				16QAM	1	0	1	22.34
					1	24	1	22.21
					1	49	1	22.33
					25	0	2	21.33
					25	12	2	21.36
					25	24	2	21.31
					50	0	2	21.34
		23090	707	QPSK	1	0	0	23.33
					1	24	0	23.21
					1	49	0	23.3
					25	0	1	22.38
					25	12	1	22.35
					25	24	1	22.32
					50	0	1	22.34
				16QAM	1	0	1	22.58
					1	24	1	22.46
					1	49	1	22.47
					25	0	2	21.33
					25	12	2	21.31
					25	24	2	21.29
					50	0	2	21.32
		23129	711	QPSK	1	0	0	23.22
					1	24	0	23.21
					1	49	0	23.31
					25	0	1	22.32
					25	12	1	22.3
					25	24	1	22.29
					50	0	1	22.34
				16QAM	1	0	1	22.31
					1	24	1	22.29
					1	49	1	22.34
					25	0	2	21.3
					25	12	2	21.28
					25	24	2	21.29
					50	0	2	21.31

LTE Band	BW (MHz)	Ch	Freq (MHz)	Mode	UL RB Allocation	UL RB Start	MPR	Avg Pwr (dBm)
12	5	23035	701.5	QPSK	1	0	0	23.33
					1	12	0	23.08
					1	24	0	23.18
					12	0	1	22.34
					12	6	1	22.33
					12	11	1	22.33
					25	0	1	22.26
				16QAM	1	0	1	23.31
					1	12	1	22.11
					1	24	1	23.3
					12	0	2	21.32
					12	6	2	21.28
					12	11	2	21.3
					25	0	2	22.28
		23090	707	QPSK	1	0	0	23.35
					1	12	0	23.28
					1	24	0	23.27
					12	0	1	22.36
					12	6	1	22.31
					12	11	1	22.16
					25	0	1	22.28
				16QAM	1	0	1	23.32
					1	12	1	22.23
					1	24	1	23.24
					12	0	2	21.37
					12	6	2	21.34
					12	11	2	21.34
					25	0	2	22.3
		23154	713.5	QPSK	1	0	0	23.18
					1	12	0	23.26
					1	24	0	23.31
					12	0	1	22.3
					12	6	1	22.27
					12	11	1	22.26
					25	0	1	22.14
				16QAM	1	0	1	22.31
					1	12	1	22.12
					1	24	1	22.39
					12	0	2	22.3
					12	6	2	21.23
					12	11	2	21.21
					25	0	2	22.27

LTE Band	BW (MHz)	Ch	Freq (MHz)	Mode	UL RB Allocation	UL RB Start	MPR	Avg Pwr (dBm)
12	3	23025	700.5	QPSK	1	0	0	23.35
					1	7	0	23.32
					1	14	0	23.15
					8	0	1	22.37
					8	4	1	22.31
					8	7	1	22.29
					15	0	1	22.32
				16QAM	1	0	1	22.42
					1	7	1	22.3
					1	14	1	22.22
					8	0	2	21.36
					8	4	2	21.27
					8	7	2	21.3
					15	0	2	21.28
		23090	707	QPSK	1	0	0	23.26
					1	7	0	23.13
					1	14	0	23.23
					8	0	1	22.31
					8	4	1	22.32
					8	7	1	22.3
					15	0	1	22.35
				16QAM	1	0	1	22.49
					1	7	1	22.42
					1	14	1	22.51
					8	0	2	21.32
					8	4	2	21.29
					8	7	2	21.34
					15	0	2	21.3
		23164	714.5	QPSK	1	0	0	23.25
					1	7	0	23.29
					1	14	0	23.32
					8	0	1	22.15
					8	4	1	22.26
					8	7	1	22.35
					15	0	1	22.26
				16QAM	1	0	1	22.29
					1	7	1	22.22
					1	14	1	22.34
					8	0	2	21.23
					8	4	2	21.21
					8	7	2	21.31
					15	0	2	21.29

LTE Band	BW (MHz)	Ch	Freq (MHz)	Mode	UL RB Allocation	UL RB Start	MPR	Avg Pwr (dBm)
12	1.4	23017	699.7	QPSK	1	0	0	23.36
					1	2	0	23.34
					1	5	0	23.32
					3	0	0	23.34
					3	1	0	23.36
					3	2	0	23.38
					6	0	1	22.43
				16QAM	1	0	1	22.39
					1	2	1	22.32
					1	5	1	22.33
					3	0	1	22.43
					3	1	1	22.53
					3	2	1	22.42
					6	0	2	21.4
		23090	707	QPSK	1	0	0	23.29
					1	2	0	23.23
					1	5	0	23.26
					3	0	0	23.29
					3	1	0	23.32
					3	2	0	23.32
					6	0	1	22.35
				16QAM	1	0	1	22.52
					1	2	1	22.4
					1	5	1	22.51
					3	0	1	22.25
					3	1	1	22.24
					3	2	1	22.24
					6	0	2	21.37
		23172	715.3	QPSK	1	0	0	23.36
					1	2	0	23.41
					1	5	0	23.34
					3	0	0	23.37
					3	1	0	23.39
					3	2	0	23.34
					6	0	1	22.25
				16QAM	1	0	1	22.53
					1	2	1	22.38
					1	5	1	22.54
					3	0	1	22.45
					3	1	1	22.42
					3	2	1	22.4
					6	0	2	21.4

* For LTE Bands, MPR is permanently implemented according to 3GPP TS36.101. The specific manufacturer MPR is indicated alongside the LTE conducted output power measurements.

2.4. Wi-Fi & Bluetooth 2.4 GHz [8]

Band	Mode	Channel / Freq (MHz)	Averaged Power (dBm)
2.4 GHz	802.11b	1/2412	15.3
		2/2417	15.65
		3/2422	15.2
		4/2427	15.14
		5/2432	15.56
		6/2437	15.2
		7/2442	15.24
		8/2447	15.31
		9/2452	15.46
		10/2457	15.46
		11/2462	15.3
	802.11g	1/2412	15.8
		2/2417	15.94
		3/2422	15.85
		4/2427	15.85
		5/2432	15.97
		6/2437	15.8
		7/2442	15.59
		8/2447	15.68
		9/2452	15.83
		10/2457	15.81
		11/2462	15.7
	802.11n20	1/2412	15.0
		2/2417	14.94
		3/2422	14.85
		4/2427	14.73
		5/2432	14.8
		6/2437	14.9
		7/2442	14.77
		8/2447	14.84
		9/2452	14.96
		10/2457	14.93
		11/2462	14.9

		Average Conducted Power (dBm)		
Band	**Mode**	**CH Low**	**CH Mid**	**CH High**
2450	Bluetooth GFSK	7.265	7.715	5.965
	Bluetooth π/4 DQPSK	8.095	8.695	6.085
	Bluetooth 8 DPSK	8.385	8.815	7.095

Based on the paragraph "4.3.1. Standalone SAR test exclusion considerations" of the KDB 447498 D01 - General RF Exposure Guidance v05r02:

[(*max. power of channel, including tune-up tolerance, mW*)/(*min. test separation distance, mm*)] · [√f(GHz)]

≤ 3.0 for 1-g SAR and ≤ 7.5 for 10-g extremity SAR

Communication System	Time Average Max Conducted Power		Min. Test separation distance (mm)	Frequency (Ghz)	Result
	(dBm)	(mW)			
Bluetooth 8 DPSK	8.815	7.612	5	2441	2.38

The computed value is < 3.0, Bluetooth qualifies for Standalone SAR test exclusion for 1-g SAR.

2.5. Wi-Fi 5 GHz[8]

5.2 GHz Band:

Band	Mode	Channel / Freq (MHz)	Averaged Power (dBm)
5.2 GHz	802.11a	36/5180	14.30
		40/5200	14.28
		44/5200	14.32
		48/5240	14.36
	802.11n20	36/5180	14.24
		40/5200	14.29
		44/5200	14.31
		48/5240	14.41
	802.11ac20	36/5180	13.07
		40/5200	13.07
		44/5200	13.26
		48/5240	13.68
	802.11n40	38/5190	13.60
		46/5230	13.42

- 5.3 GHz Band:

Band	Mode	Channel / Freq (MHz)	Averaged Power (dBm)
5.3 GHz	802.11a	52/5260	14.52
		56/5280	14.51
		60/5300	14.14
		64/5320	14.19
	802.11n20	52/5260	14.53
		56/5280	14.52
		60/5300	14.19
		64/5320	14.18
	802.11ac20	52/5260	13.43
		56/5280	13.28
		60/5300	13.12
		64/5320	12.97
	802.11n40	54/5270	13.80
		62/5310	13.40

- 5.6 GHz Band:

Band	Mode	Channel / Freq (MHz)	Averaged Power (dBm)
5.6 GHz	802.11a	100/5500	14.67
		104/5520	14.53
		108/5540	14.75
		116/5580	14.72
		132/5660	14.74
		136/5680	14.59
		140/5700	14.50
	802.11n20	100/5500	13.69
		104/5520	13.97
		108/5540	14.22
		116/5580	14.12
		132/5660	14.03
		136/5680	13.81
		140/5700	13.86
	802.11ac20	100/5500	13.62
		104/5520	13.89
		108/5540	14.17
		116/5580	13.95
		132/5660	13.88
		136/5680	13.77
		140/5700	13.78
	802.11n40	102/5510	13.74
		110/5550	14.19
		134/ 5670	14.01

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	41.94 ± 5%	0.89 ± 5%	42.0 ± 6%	0.90 ± 6%	40.32	0.93	15-05-2015
900	41.5 ± 5%	0.97 ± 5%	41.6 ± 6%	0.94 ± 6%	41.23	0.98	13-05-2015
1800	40.0 ± 5%	1.40 ± 5%	38.7 ± 6%	1.37 ± 6%	39.27	1.35	07-05-2015
1800	40.0 ± 5%	1.40 ± 5%	38.7 ± 6%	1.37 ± 6%	39.64	1.36	11-05-2015
2600	39.0 ± 5%	1.96 ± 5%	37.2 ± 6%	1.97 ± 6%	37.81	2.02	11-05-2015

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	55.53 ± 5%	0.96 ± 5%	55.1 ± 6%	0.98 ± 6%	52.90	0.98	15-05-2015
900	55.0 ± 5%	1.05 ± 5%	54.8 ± 6%	1.03 ± 6%	52.95	1.00	14-05-2015
1800	53.3 ± 5%	1.52 ± 5%	51.4 ± 6%	1.53 ± 6%	55.93	1.54	07-05-2015
1800	53.3 ± 5%	1.52 ± 5%	51.4 ± 6%	1.53 ± 6%	54.16	1.46	12-05-2015
1800	53.3 ± 5%	1.52 ± 5%	51.4 ± 6%	1.53 ± 6%	54.05	1.48	18-05-2015
2600	52.51 ± 5%	2.16 ± 5%	50.1 ± 6%	2.20 ± 6%	51.30	2.09	12-05-2015

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

- 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

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 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 CHECK MEASUREMENTS

4.1. Validation results in 750 MHz Band for Head TSL

DATE	SAR	Target SAR	Measured SAR	Drift (%)	± 10% Limit	SAR 1g	Fast SAR 1g	±3%
15/05/2015	1 gr.	8.49	8.94	5.28	√	2.25	2.27	√
	10 gr.	5.56	5.84	5.03	√	1.47	-	-

4.2. Validation results in 750 MHz Band for Body TSL

DATE	SAR	Target SAR	Measured SAR	Drift (%)	± 10% Limit	SAR 1g	Fast SAR 1g	±3%
15/05/2015	1 gr.	8.85	9.25	4.55	√	2.34	2.35	√
	10 gr.	5.88	6.17	4.91	√	1.56	-	-

4.3. Validation results in 900 MHz Band for Head TSL

DATE	SAR	Target SAR	Measured SAR	Drift (%)	± 10% Limit	SAR 1g	Fast SAR 1g	±3%
13/05/2015	1 gr.	10.70	10.05	-6.11	√	2.48	2.53	√
	10 gr.	6.85	6.44	-5.97	√	1.59	-	-

4.4. Validation results in 900 MHz Band for Body TSL

DATE	SAR	Target SAR	Measured SAR	Drift (%)	± 10% Limit	SAR 1g	Fast SAR 1g	±3%
14/05/2015	1 gr.	10.70	11.08	3.57	√	2.78	2.82	√
	10 gr.	6.95	7.22	3.81	√	1.81	-	-

4.5. Validation results in 1800 MHz Band for Head TSL

DATE	SAR	Target SAR	Measured SAR	Drift (%)	± 10% Limit	SAR 1g	Fast SAR 1g	±3%
07/05/2015	1 gr.	38.90	38.09	-2.08	√	9.49	9.76	√
	10 gr.	20.40	19.79	-3.00	√	4.93	-	-

DATE	SAR	Target SAR	Measured SAR	Drift (%)	± 10% Limit	SAR 1g	Fast SAR 1g	±3%
11/05/2015	1 gr.	38.90	40.29	3.56	√	10.20	10.30	√
	10 gr.	20.40	21.68	6.29	√	5.49	-	-

4.6. Validation results in 1800 MHz Band for Body TSL

DATE	SAR	Target SAR	Measured SAR	Drift (%)	± 10% Limit	SAR 1g	Fast SAR 1g	±3%
07/05/2015	1 gr.	39.50	40.40	2.28	√	10.10	10.20	√
	10 gr.	21.00	21.48	2.29	√	5.37	-	-

DATE	SAR	Target SAR	Measured SAR	Drift (%)	± 10% Limit	SAR 1g	Fast SAR 1g	±3%
12/05/2015	1 gr.	39.50	40.96	3.71	√	10.30	10.30	√
	10 gr.	21.00	22.35	6.43	√	5.62	-	-

DATE	SAR	Target SAR	Measured SAR	Drift (%)	± 10% Limit	SAR 1g	Fast SAR 1g	±3%
18/05/2015	1 gr.	39.50	41.81	5.84	√	10.50	10.50	√
	10 gr.	21.00	22.77	8.45	√	5.72	-	-

4.7. Validation results in 2600 MHz Band for Head TSL

DATE	SAR	Target SAR	Measured SAR	Drift (%)	± 10% Limit	SAR 1g	Fast SAR 1g	±3%
11/05/2015	1 gr.	58.40	62.76	7.47	√	16.00	16.30	√
	10 gr.	26.20	27.38	4.50	√	6.98	-	-

4.8. Validation results in 2600 MHz Band for Body TSL

DATE	SAR	Target SAR	Measured SAR	Drift (%)	± 10% Limit	SAR 1g	Fast SAR 1g	±3%
12/05/2015	1 gr.	56.50	56.80	0.53	√	14.20	14.60	√
	10 gr.	25.20	25.20	0.00	√	6.30	-	-

5. MEASUREMENT RESULTS FOR SAR (SPECIFIC ABSORPTION RATE)

5.1. Summary maximum results for head measurements.

Band	Mode	Side / Position	Channel (Frequency)	Reported SAR (1g avg) (W/Kg)	SAR limit (1g avg) (W/Kg)
700 MHz	LTE 12, 10 MHz 1 RB QPSK	Right / Cheek	CH 23095 (707.5 MHz)	0.204	1.6
850 MHz	GSM	Right / Cheek	CH 189 (836.6 Mhz)	0.311	1.6
	GPRS 2 slots	Right / Cheek	CH 189 (836.6 Mhz)	0.345	1.6
	WCDMA Band V	Right / Cheek	CH 4183 (836.6 Mhz)	0.272	1.6
	LTE 5, 10 MHz 1 RB QPSK	Right / Cheek	20525 (836.5 MHz)	0.231	1.6
1800 MHz	WCDMA Band IV	Right / Cheek	CH 1412 (1732.6 Mhz)	0.610	1.6
	LTE 4, 20 MHz 1 RB QPSK	Right / Cheek	20299 (1745 MHz)	0.448	1.6
1900 MHz	GSM	Right / Cheek	CH 661 (1880 MHz)	0.272	1.6
	GPRS 2 slots	Right / Cheek	CH 661 (1880 MHz)	0.286	1.6
	WCDMA Band II	Right / Cheek	CH 9400 (1880 MHz)	0.508	1.6
	LTE 2, 20 MHz 1 RB QPSK	Right / Cheek	19099 (1899.9 MHz)	0.490	1.6
2600 MHz	LTE 7, 20 MHz 1 RB QPSK	Left / Cheek	20850 (2510 MHz)	0.528	1.6

5.2. Summary maximum results for body measurements

Band	Mode	Side / Position	Channel (Frequency)	Reported SAR (1g avg) (W/Kg)	SAR limit (1g avg) (W/Kg)
700 MHz	LTE 12, 10 MHz 1 RB QPSK	Right Edge	CH 23095 (707.5 MHz)	0.371	1.6
850 MHz	GSM	Back Face	CH 189 (836.6 Mhz)	0.484	1.6
	GPRS 2 slots	Back Face	CH 189 (836.6 Mhz)	0.497	1.6
	WCDMA Band V	Back Face	CH 4183 (836.6 Mhz)	0.374	1.6
	LTE 5, 10 MHz 1 RB QPSK	Back Face	20525 (836.5 MHz)	0.351	1.6
1800 MHz	WCDMA Band IV	Back Face	CH 1512 (1752.6 Mhz)	1.176	1.6
	LTE 4, 20 MHz 1 RB QPSK	Back Face	20299 (1745 MHz)	1.005	1.6
1900 MHz	GSM	Front Face	CH 661 (1880 MHz)	0.490	1.6
	GPRS 2 slots	Front Face	CH 661 (1880 MHz)	0.483	1.6
	WCDMA Band II	Back Face	CH 9262 (1852.4 Mhz)	1.067	1.6
	LTE 2, 20 MHz 1 RB QPSK	Back Face	19099 (1899.9 MHz)	0.816	1.6
2600 MHz	LTE 7, 20 MHz 1 RB QPSK	Back Face	20850 (2510 MHz)	0.774	1.6

5.3. Result for head simultaneous multi-band transmission

WWAN + Wi-Fi 2.4 GHz

Transmission Mode	Band	Max SAR (1g avg) (W/Kg)	Σ SARi (W/kg)	SAR limit (W/Kg)	Veredict
GSM / GPRS /EDGE	850MHz	0.345	0.742	1.6	Pass
802.11g	2.4 GHz	0.397			
GSM / GPRS /EDGE	1900MHz	0.286	0.683	1.6	Pass
802.11g	2.4 GHz	0.397			
WCDMA	FDD V	0.272	0.669	1.6	Pass
802.11g	2.4 GHz	0.397			
WCDMA	FDD IV	0.610	1.007	1.6	Pass
802.11g	2.4 GHz	0.397			
WCDMA	FDD II	0.508	0.905	1.6	Pass
802.11g	2.4 GHz	0.397			
LTE	12	0.204	0.601	1.6	Pass
802.11g	2.4 GHz	0.397			
LTE	5	0.231	0.628	1.6	Pass
802.11g	2.4 GHz	0.397			
LTE	4	0.448	0.845	1.6	Pass
802.11g	2.4 GHz	0.397			
LTE	20	0.490	0.887	1.6	Pass
802.11g	2.4 GHz	0.397			
LTE	7	0.528	0.925	1.6	Pass
802.11g	2.4 GHz	0.397			

WWAN + Wi-Fi 5 GHz

Transmission Mode	Band	Max SAR (1g avg) (W/Kg)	Σ SARi (W/kg)	SAR limit (W/Kg)	Veredict
GSM / GPRS /EDGE	850MHz	0.345	0.783	1.6	Pass
802.11n40	5.2/5.3GHz	0.438			
GSM / GPRS /EDGE	1900MHz	0.286	0.724	1.6	Pass
802.11n40	5.2/5.3GHz	0.438			
WCDMA	FDD V	0.272	0.710	1.6	Pass
802.11n40	5.2/5.3GHz	0.438			
WCDMA	FDD IV	0.610	1.048	1.6	Pass
802.11n40	5.2/5.3GHz	0.438			
WCDMA	FDD II	0.508	0.946	1.6	Pass
802.11n40	5.2/5.3GHz	0.438			
LTE	12	0.204	0.642	1.6	Pass
802.11n40	5.2/5.3GHz	0.438			
LTE	5	0.231	0.669	1.6	Pass
802.11n40	5.2/5.3GHz	0.438			
LTE	4	0.448	0.886	1.6	Pass
802.11n40	5.2/5.3GHz	0.438			
LTE	20	0.490	0.928	1.6	Pass
802.11n40	5.2/5.3GHz	0.438			
LTE	7	0.528	0.966	1.6	Pass
802.11n40	5.2/5.3GHz	0.438			

5.4. Result for body simultaneous multi-band transmission

WWAN + Wi-Fi 2.4 GHz

Transmission Mode	Band	Max SAR (1g avg) (W/Kg)	Σ SARi (W/kg)	SAR limit (W/Kg)	Veredict
GSM / GPRS /EDGE	850MHz	0.497	0.684	1.6	Pass
802.11b	2.4 GHz	0.187			
GSM / GPRS /EDGE	1900MHz	0.490	0.677	1.6	Pass
802.11b	2.4 GHz	0.187			
WCDMA	FDD V	0.374	0.561	1.6	Pass
802.11b	2.4 GHz	0.187			
WCDMA	FDD IV	1.176	1.363	1.6	Pass
802.11b	2.4 GHz	0.187			
WCDMA	FDD II	1.067	1.254	1.6	Pass
802.11b	2.4 GHz	0.187			
LTE	12	0.371	0.558	1.6	Pass
802.11b	2.4 GHz	0.187			
LTE	5	0.351	0.538	1.6	Pass
802.11b	2.4 GHz	0.187			
LTE	4	1.005	1.192	1.6	Pass
802.11b	2.4 GHz	0.187			
LTE	20	0.816	1.003	1.6	Pass
802.11b	2.4 GHz	0.187			
LTE	7	0.774	0.961	1.6	Pass
802.11b	2.4 GHz	0.187			

WWAN + Wi-Fi 5 GHz

Transmission Mode	Band	Max SAR (1g avg) (W/Kg)	Σ SARi (W/kg)	SAR limit (W/Kg)	Veredict
GSM / GPRS /EDGE	850MHz	0.497	0.693	1.6	Pass
802.11n40	5.6 GHz	0.196			
GSM / GPRS /EDGE	1900MHz	0.490	0.686	1.6	Pass
802.11n40	5.6 GHz	0.196			
WCDMA	FDD V	0.374	0.570	1.6	Pass
802.11n40	5.6 GHz	0.196			
WCDMA	FDD IV	1.176	1.372	1.6	Pass
802.11n40	5.6 GHz	0.196			
WCDMA	FDD II	1.067	1.263	1.6	Pass
802.11n40	5.6 GHz	0.196			
LTE	12	0.371	0.567	1.6	Pass
802.11n40	5.6 GHz	0.196			
LTE	5	0.351	0.547	1.6	Pass
802.11n40	5.6 GHz	0.196			
LTE	4	1.005	1.201	1.6	Pass
802.11n40	5.6 GHz	0.196			
LTE	20	0.816	1.012	1.6	Pass
802.11n40	5.6 GHz	0.196			
LTE	7	0.774	0.97	1.6	Pass
802.11n40	5.6 GHz	0.196			

5.5. Results for GSM 850 MHz band.

- **Head measurements**

Side / Position	Dist (mm)	Channel (Frequency)	Extrapolated 1-g SAR (W/Kg)	1-g SAR (W/Kg)	±0.1 (W/Kg)	Power Drift (%)	Max Output Power (dBm)	Max. Reported 1-g SAR	Plot No.
Left / Cheek	0	CH 189 (836.6 Mhz)	0.200	NM[2]	-	-0.80	34	0.264	
Left / 15º Tilted	0	CH 189 (836.6 Mhz)	0.121	NM[2]	-	1.62	34	0.160	
Right / Cheek	0	CH 189 (836.6 Mhz)	0.223	0.236	√	0	34	0.311	1
Right / 15º Tilted	0	CH 189 (836.6 Mhz)	0.144	NM[2]	-	1.04	34	0.190	
Right / Cheek	0	CH 128 (824.2 Mhz)	NM[1]				34	-	
Right / Cheek	0	CH 251 (848.8 Mhz)	NM[1]				34	-	

1 and 2: See remarks and comments.

- **Body measurements**

Side / Position	Dist (mm)	Channel (Frequency)	Extrapolated 1-g SAR (W/Kg)	1-g SAR (W/Kg)	±0.1 (W/Kg)	Power Drift (%)	Max Output Power (dBm)	Max. Reported 1-g SAR	Plot No.
Front face	10	CH 189 (836.6 Mhz)	0.294	NM[2]	-	-0.12	34	0.388	
Back face	10	CH 189 (836.6 Mhz)	0.36	0.367	√	-1.83	34	0.484	2
Left edge	10	CH 189 (836.6 Mhz)	0.017	NM[2]	-	1.98	34	0.022	
Right edge	10	CH 189 (836.6 Mhz)	0.324	NM[2]	-	-0.12	34	0.427	
Bottom edge	10	CH 189 (836.6 Mhz)	0.199	NM[2]	-	0	34	0.262	
Back face	10	CH 128 (824.2 Mhz)	NM[1]				34	-	
Back face	10	CH 251 (848.8 Mhz)	NM[1]				34	-	

1 and 2: See remarks and comments.

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

- **Head measurements**

Side / Position	Dist (mm)	Channel (Frequency)	Extrapolated 1-g SAR (W/Kg)	1-g SAR (W/Kg)	±0.1 (W/Kg)	Power Drift (%)	Max Output Power (dBm)	Max. Reported 1-g SAR	Plot No.
Left / Cheek	0	CH 189 (836.6 Mhz)	0.191	NM[2]	-	3.63	32	0.283	
Left / 15º Tilted	0	CH 189 (836.6 Mhz)	0.123	NM[2]	-	-0.92	32	0.182	
Right / Cheek	0	CH 189 (836.6 Mhz)	0.222	0.233	√	3.51	32	0.345	3
Right / 15º Tilted	0	CH 189 (836.6 Mhz)	0.148	NM[2]	-	-1.03	32	0.219	
Right / Cheek	0	CH 128 (824.2 Mhz)	NM[1]				32	-	
Right / Cheek	0	CH 251 (848.8 Mhz)	NM[1]				32	-	

1 and 2: See remarks and comments.

- **Body measurements**

Side / Position	Dist (mm)	Channel (Frequency)	Extrapolated 1-g SAR (W/Kg)	1-g SAR (W/Kg)	±0.1 (W/Kg)	Power Drift (%)	Max Output Power (dBm)	Max. Reported 1-g SAR	Plot No.
Front face	10	CH 189 (836.6 Mhz)	0.293	NM[2]	-	-0.69	32	0.433	
Back face	10	CH 189 (836.6 Mhz)	0.324	0.336	√	0.58	32	0.497	4
Left edge	10	CH 189 (836.6 Mhz)	0.246	NM[2]	-	-0.14	32	0.364	
Right edge	10	CH 189 (836.6 Mhz)	0.323	NM[2]	-	0.02	32	0.478	
Bottom edge	10	CH 189 (836.6 Mhz)	0.191	NM[2]	-	0	32	0.283	
Back face	10	CH 128 (824.2 Mhz)	NM[1]				32	-	
Back face	10	CH 251 (848.8 Mhz)	NM[1]				32	-	

1 and 2: See remarks and comments.

5.7. Results for GSM 1900 MHz Band

- **Head measurements**

Side / Position	Dist (mm)	Channel (Frequency)	Extrapolated 1-g SAR (W/Kg)	1-g SAR (W/Kg)	±0.1 (W/Kg)	Power Drift (%)	Max Output Power (dBm)	Max. Reported 1-g SAR	Plot No.
Left / Cheek	0	CH 661 (1880 Mhz)	0.161	NM[2]	-	1.04	31	0.238	
Left / 15º Tilted	0	CH 661 (1880 Mhz)	0.089	NM[2]	-	2.21	31	0.132	
Right / Cheek	0	CH 661 (1880 Mhz)	0.179	0.184	√	0.69	31	0.272	5
Right / 15º Tilted	0	CH 661 (1880 Mhz)	0.097	NM[2]	-	2.57	31	0.143	
Right / Cheek	0	CH 512 (1850.2 Mhz)	NM[1]				31	-	
Right / Cheek	0	CH 810 (1909.8 Mhz)	NM[1]				31	-	

1 and 2: See remarks and comments.

- **Body measurements**

Side / Position	Dist (mm)	Channel (Frequency)	Extrapolated 1-g SAR (W/Kg)	1-g SAR (W/Kg)	±0.1 (W/Kg)	Power Drift (%)	Max Output Power (dBm)	Max. Reported 1-g SAR	Plot No.
Front face	10	CH 661 (1880 Mhz)	0.335	0.331	√	0.46	31	0.490	6
Back face	10	CH 661 (1880 Mhz)	0.322	NM[2]	-	0.46	31	0.481	
Left edge	10	CH 661 (1880 Mhz)	0.259	NM[2]	-	0	31	0.383	
Right edge	10	CH 661 (1880 Mhz)	0.114	NM[2]	-	1.51	31	0.169	
Bottom edge	10	CH 661 (1880 Mhz)	0.217	NM[2]	-	-0.34	31	0.321	
Back face	10	CH 512 (1850.2 Mhz)	NM[1]				31	-	
Back face	10	CH 810 (1909.8 Mhz)	NM[1]				31	-	

1 and 2: See remarks and comments.

5.8. Results for GPRS 1900 MHz Band - 2 slots

- **Head measurements**

Side / Position	Dist (mm)	Channel (Frequency)	Extrapolated 1-g SAR (W/Kg)	1-g SAR (W/Kg)	±0.1 (W/Kg)	Power Drift (%)	Max Output Power (dBm)	Max. Reported 1-g SAR	Plot No.
Left / Cheek	0	CH 661 (1880 Mhz)	0.158	NM[2]	-	0.23	29	0.239	
Left / 15º Tilted	0	CH 661 (1880 Mhz)	0.091	NM[2]	-	0.81	29	0.138	
Right / Cheek	0	CH 661 (1880 Mhz)	0.182	0.189	√	3.04	29	0.286	7
Right / 15º Tilted	0	CH 661 (1880 Mhz)	0.105	NM[2]	-	3.04	29	0.159	
Right / Cheek	0	CH 512 (1850.2 Mhz)	NM[1]				29	-	
Right / Cheek	0	CH 810 (1909.8 Mhz)	NM[1]				29	-	

1 and 2: See remarks and comments.

- **Body measurements**

Side / Position	Dist (mm)	Channel (Frequency)	Extrapolated 1-g SAR (W/Kg)	1-g SAR (W/Kg)	±0.1 (W/Kg)	Power Drift (%)	Max Output Power (dBm)	Max. Reported 1-g SAR	Plot No.
Front face	10	CH 661 (1880 Mhz)	0.323	0.319	√	0.58	29	0.483	8
Back face	10	CH 661 (1880 Mhz)	0.285	NM[2]	-	1.39	29	0.431	
Left edge	10	CH 661 (1880 Mhz)	0.258	NM[2]	-	2.57	29	0.390	
Right edge	10	CH 661 (1880 Mhz)	0.109	NM[2]	-	0.81	29	0.165	
Bottom edge	10	CH 661 (1880 Mhz)	0.208	NM[2]	-	0	29	0.315	
Back face	10	CH 512 (1850.2 Mhz)	NM[1]				29	-	
Back face	10	CH 810 (1909.8 Mhz)	NM[1]				29	-	

1 and 2: See remarks and comments.

5.9. Results for WCDMA Band II

- **Head measurements**

Side / Position	Dist (mm)	Channel (Frequency)	Extrapolated 1-g SAR (W/Kg)	1-g SAR (W/Kg)	±0.1 (W/Kg)	Power Drift (%)	Max Output Power (dBm)	Max. Reported 1-g SAR	Plot No.
Left / Cheek	0	CH 9400 (1880 Mhz)	0.353	NM[2]	-	-4.17	24.5	0.431	
Left / 15º Tilted	0	CH 9400 (1880 Mhz)	0.204	NM[2]	-	3.51	24.5	0.249	
Right / Cheek	0	CH 9400 (1880 Mhz)	0.403	0.416	√	4.23	24.5	0.508	9
Right / 15º Tilted	0	CH 9400 (1880 Mhz)	0.229	NM[2]	-	-0.46	24.5	0.28	
Right / Cheek	0	CH 9262 (1852.4 Mhz)	NM[1]				24.5	-	
Right / Cheek	0	CH 9538 (1907.6 Mhz)	NM[1]				24.5	-	

1 and 2: See remarks and comments.

- **Body measurements**

Side / Position	Dist (mm)	Channel (Frequency)	Extrapolated 1-g SAR (W/Kg)	1-g SAR (W/Kg)	±0.1 (W/Kg)	Power Drift (%)	Max Output Power (dBm)	Max. Reported 1-g SAR	Plot No.
Front face	10	CH 9400 (1880 Mhz)	0.794	0.791	√	0.46	24.5	0.966	
Back face	10	CH 9400 (1880 Mhz)	0.789	0.805	√	-1.14	24.5	0.984	
Left edge	10	CH 9400 (1880 Mhz)	0.522	NM[2]	-	0.46	24.5	0.638	
Right edge	10	CH 9400 (1880 Mhz)	0.224	NM[2]	-	0.58	24.5	0.274	
Bottom edge	10	CH 9400 (1880 Mhz)	0.602	NM[2]	-	0.58	24.5	0.736	
Back face	10	CH 9262 (1852.4 Mhz)	0.862	0.878	√	-0.12	24.5	1.065	10
Back face	10	CH 9538 (1907.6 Mhz)	0.617	0.646	√	1.04	24.5	0.875	
Variability Back Face	10	CH 9262 (1852.4 Mhz)	0.851	0.879	√	0	24.5	1.067	11

1 and 2: See remarks and comments.

5.10. Results for WCDMA Band IV

- **Head measurements**

Side / Position	Dist (mm)	Channel (Frequency)	Extrapolated 1-g SAR (W/Kg)	1-g SAR (W/Kg)	±0.1 (W/Kg)	Power Drift (%)	Max Output Power (dBm)	Max. Reported 1-g SAR	Plot
Left / Cheek	0	CH 1412 (1732.6 Mhz)	0.394	NM[2]	-	1.51	24.5	0.447	
Left / 15º Tilted	0	CH 1412 (1732.6 Mhz)	0.222	NM[2]	-	0.81	24.5	0.252	
Right / Cheek	0	CH 1412 (1732.6 Mhz)	0.525	0.537	√	0.12	24.5	0.610	12
Right / 15º Tilted	0	CH 1412 (1732.6 Mhz)	0.232	NM[2]	-	0.23	24.5	0.263	
Right / Cheek	0	CH 1312 (1712.4 Mhz)	NM[1]				24.5	-	
Right / Cheek	0	CH 1512 (1752.6 Mhz)	NM[1]				24.5	-	

1 and 2: See remarks and comments

- **Body measurements**

Side / Position	Dist (mm)	Channel (Frequency)	Extrapolated 1-g SAR (W/Kg)	1-g SAR (W/Kg)	±0.1 (W/Kg)	Power Drift (%)	Max Output Power (dBm)	Max. Reported 1-g SAR	Plot
Front face	10	CH 1412 (1732.6 Mhz)	0.765	0.788	-	0.23	24.5	0.894	
Back face	10	CH 1412 (1732.6 Mhz)	0.996	0.993	√	-0.80	24.5	1.127	
Left edge	10	CH 1412 (1732.6 Mhz)	0.614	NM[2]	-	-0.80	24.5	0.697	
Right edge	10	CH 1412 (1732.6 Mhz)	0.230	NM[2]	-	0.23	24.5	0.261	
Bottom edge	10	CH 1412 (1732.6 Mhz)	0.719	NM[2]	-	0.69	24.5	0.816	
Back face	10	CH 1312 (1712.4 Mhz)	1.010	1.019	√	0.23	24.5	1.129	
Back face	10	CH 1512 (1752.6 Mhz)	1.010	1.020	√	0.35	24.5	1.131	13
Variability Back Face	10	CH 1512 (1752.6 Mhz)	1.040	1.060	√	0.12	24.5	1.176	14

1 and 2: See remarks and comments

5.11. Results for WCDMA Band V

- **Head measurements**

Side / Position	Dist (mm)	Channel (Frequency)	Extrapolated 1-g SAR (W/Kg)	1-g SAR (W/Kg)	±0.1 (W/Kg)	Power Drift (%)	Max Output Power (dBm)	Max. Reported 1-g SAR	Plot
Left / Cheek	0	CH 4183 (836.6 Mhz)	0.191	NM[2]	-	4.47	24.5	0.208	
Left / 15º Tilted	0	CH 4183 (836.6 Mhz)	0.121	NM[2]	-	1.74	24.5	0.132	
Right / Cheek	0	CH 4183 (836.6 Mhz)	0.247	0.249	√	3.28	24.5	0.272	15
Right / 15º Tilted	0	CH 4183 (836.6 Mhz)	0.139	NM[2]	-	2.21	24.5	0.152	
Right / Cheek	0	CH 4132 (826.4 Mhz)	NM[1]				24.5	-	
Right / Cheek	0	CH 4233 (846.6 Mhz)	NM[1]				24.5	-	

1 and 2: See remarks and comments

- **Body measurements**

Side / Position	Dist (mm)	Channel (Frequency)	Extrapolated 1-g SAR (W/Kg)	1-g SAR (W/Kg)	±0.1 (W/Kg)	Power Drift (%)	Max Output Power (dBm)	Max. Reported 1-g SAR	Plot
Front face	10	CH 4183 (836.6 Mhz)	0.291	NM[2]	-	0.23	24.5	0.318	
Back face	10	CH 4183 (836.6 Mhz)	0.334	0.343	√	0	24.5	0.374	16
Left edge	10	CH 4183 (836.6 Mhz)	0.241	NM[2]	-	0.58	24.5	0.263	
Right edge	10	CH 4183 (836.6 Mhz)	0.315	NM[2]	-	-0.34	24.5	0.344	
Bottom edge	10	CH 4183 (836.6 Mhz)	0.181	NM[2]	-	0.93	24.5	0.198	
Back face	10	CH 4132 (826.4 Mhz)	NM[1]				24.5	-	
Back face	10	CH 4233 (846.6 Mhz)	NM[1]				24.5	-	

1 and 2: See remarks and comments

5.12. Results for LTE Band 2

- 1 Rb, 20 MHz, QPSK

- **Head measurements**

Side / Position	Dist (mm)	Channel (Frequency)	Extrapolated 1-g SAR (W/Kg)	1-g SAR (W/Kg)	±0.1 (W/Kg)	Power Drift (%)	Max Output Power (dBm)	Max. Reported 1-g SAR	Plot No.
Left / Cheek	0	19099 (1899.9 MHz)	0.374	NM[2]	-	1.51	24	0.413	
Left / 15º Tilted	0	19099 (1899.9 MHz)	0.186	NM[2]	-	-0.23	24	0.205	
Right / Cheek	0	19099 (1899.9 MHz)	0.419	0.444	√	3.04	24	0.490	17
Right / 15º Tilted	0	19099 (1899.9 MHz)	0.238	NM[2]	-	1.98	24	0.263	
Right / Cheek	0	18700 (1860 MHz)	NM[1]				24	-	
Right / Cheek	0	18900 (1880 MHz)	NM[1]				24	-	

1 and 2: See remarks and comments.

- **Body measurements**

Side / Position	Dist (mm)	Channel (Frequency)	Extrapolated 1-g SAR (W/Kg)	1-g SAR (W/Kg)	±0.1 (W/Kg)	Power Drift (%)	Max Output Power (dBm)	Max. Reported 1-g SAR	Plot No.
Front face	10	19099 (1899.9 MHz)	0.690	NM[2]	-	1.39	24	0.762	
Back face	10	19099 (1899.9 MHz)	0.716	0.739	√	-1.03	24	0.816	18
Left edge	10	19099 (1899.9 MHz)	0.530	NM[2]	-	0.23	24	0.585	
Right edge	10	19099 (1899.9 MHz)	0.223	NM[2]	-	0.23	24	0.246	
Bottom edge	10	19099 (1899.9 MHz)	0.545	NM[2]	-	1.16	24	0.602	
Back face	10	18700 (1860 MHz)	0.598	0.620	√	0.23	24	0.720	
Back face	10	18900 (1880 MHz)	0.560	0.579	√	0	24	0.666	
Variability Back face	10	19099 (1899.9 MHz)	0.604	0.630	√	0.81	24	0.696	19

2: See remarks and comments.

- 50% Rb, 20 MHz, QPSK

- **Head measurements**

Side / Position	Dist (mm)	Channel (Frequency)	Extrapolated 1-g SAR (W/Kg)	1-g SAR (W/Kg)	±0.1 (W/Kg)	Power Drift (%)	Max Output Power (dBm)	Max. Reported 1-g SAR	Plot No.
Right / Cheek	0	19099 (1899.9 MHz)	0.358	0.368	√	2.57	23	0.418	
Right / Cheek	0	18900 (1880 MHz)	NM[7]				23	-	
Right / Cheek	0	18700 (1860 MHz)	NM[7]				23	-	

7: See remarks and comments.

- **Body measurements**

Side / Position	Dist (mm)	Channel (Frequency)	Extrapolated 1-g SAR (W/Kg)	1-g SAR (W/Kg)	±0.1 (W/Kg)	Power Drift (%)	Max Output Power (dBm)	Max. Reported 1-g SAR	Plot No.
Back face	10	19099 (1899.9 MHz)	0.582	0.595	√	0.23	23	0.675	
Back face	10	18900 (1880 MHz)	NM[7]				23	-	
Back face	10	18700 (1860 MHz)	NM[7]				23	-	

7: See remarks and comments

- 100% Rb, 20 MHz, QPSK)

- **Head measurements**

Side / Position	Dist (mm)	Channel (Frequency)	Extrapolated 1-g SAR (W/Kg)	1-g SAR (W/Kg)	±0.1 (W/Kg)	Power Drift (%)	Max Output Power (dBm)	Max. Reported 1-g SAR	Plot No.
Right / Cheek	0	19099 (1899.9 MHz)	NM[7]				23	-	
Right / Cheek	0	18900 (1880 MHz)	NM[7]				23	-	
Right / Cheek	0	18700 (1860 MHz)	NM[7]				23	-	

7: See remarks and comments.

- **Body measurements**

Side / Position	Dist (mm)	Channel (Frequency)	Extrapolated 1-g SAR (W/Kg)	1-g SAR (W/Kg)	±0.1 (W/Kg)	Power Drift (%)	Max Output Power (dBm)	Max. Reported 1-g SAR	Plot No.
Back face	10	19099 (1899.9 MHz)	0.519	0.536	√	0.81	23	0.611	
Back face	10	18900 (1880 MHz)	NM[7]				23	-	
Back face	10	18700 (1860 MHz)	NM[7]				23	-	

7: See remarks and comments

5.13. Results for LTE Band 4

- 1 Rb, 20 MHz, QPSK

- **Head measurements**

Side / Position	Dist (mm)	Channel (Frequency)	Extrapolated 1-g SAR (W/Kg)	1-g SAR (W/Kg)	±0.1 (W/Kg)	Power Drift (%)	Max Output Power (dBm)	Max. Reported 1-g SAR	Plot No.
Left / Cheek	0	20299 (1745 MHz)	0.301	NM[2]	-	-0.92	24	0.345	
Left / 15º Tilted	0	20299 (1745 MHz)	0.190	NM[2]	-	0.46	24	0.218	
Right / Cheek	0	20299 (1745 MHz)	0.379	0.391	√	2.80	24	0.448	20
Right / 15º Tilted	0	20299 (1745 MHz)	0.211	NM[2]	-	0.23	24	0.242	
Right / Cheek	0	20050 (1720 MHz)	NM[7]				24	-	
Right / Cheek	0	20175 (1732.5 MHz)	NM[7]				24	-	

2 and 7: See remarks and comments

- **Body measurements**

Side / Position	Dist (mm)	Channel (Frequency)	Extrapolated 1-g SAR (W/Kg)	1-g SAR (W/Kg)	±0.1 (W/Kg)	Power Drift (%)	Max Output Power (dBm)	Max. Reported 1-g SAR	Plot No.
Front face	10	20299 (1745 MHz)	0.750	NM[2]	-	1.62	24	0.876	
Back face	10	20299 (1745 MHz)	0.858	0.877	√	0.12	24	1.005	21
Left edge	10	20299 (1745 MHz)	0.582	NM[2]	-	1.39	24	0.667	
Right edge	10	20299 (1745 MHz)	0.133	NM[2]	-	0.23	24	0.152	
Bottom edge	10	20299 (1745 MHz)	0.629	NM[2]	-	0.35	24	0.721	
Back face	10	20050 (1720 MHz)	0.740	0.753	√	0.23	24	0.873	
Back face	10	20175 (1732.5 MHz)	0.709	0.721	√	0.23	24	0.830	
Variability Back face	10	20299 (1745 MHz)	0.797	0.808	√	0.12	24	0.926	22

2 and 7: See remarks and comments

- 50% Rb, 20 MHz, QPSK

- **Head measurements**

Side / Position	Dist (mm)	Channel (Frequency)	Extrapolated 1-g SAR (W/Kg)	1-g SAR (W/Kg)	±0.1 (W/Kg)	Power Drift (%)	Max Output Power (dBm)	Max. Reported 1-g SAR	Plot No.
Right / Cheek	0	20299 (1745 MHz)	0.381	0.390	√	0.35	23	0.446	
Right / Cheek	0	20050 (1720 MHz)	NM[7]				23	-	
Right / Cheek	0	20175 (1732.5 MHz)	NM[7]				23	-	

7: See remarks and comments.

- **Body measurements**

Side / Position	Dist (mm)	Channel (Frequency)	Extrapolated 1-g SAR (W/Kg)	1-g SAR (W/Kg)	±0.1 (W/Kg)	Power Drift (%)	Max Output Power (dBm)	Max. Reported 1-g SAR	Plot No.
Back face	10	20299 (1745 MHz)	0.656	0.673	√	0.46	23	0.769	
Back face	10	20050 (1720 MHz)	NM[7]				23	-	
Back face	10	20175 (1732.5 MHz)	NM[7]				23	-	

7: See remarks and comments

- 100% Rb, 20 MHz, QPSK

- **Head measurements**

Side / Position	Dist (mm)	Channel (Frequency)	Extrapolated 1-g SAR (W/Kg)	1-g SAR (W/Kg)	±0.1 (W/Kg)	Power Drift (%)	Max Output Power (dBm)	Max. Reported 1-g SAR	Plot No.
Right / Cheek	0	20175 (1732.5 MHz)	NM[7]				23	-	
Right / Cheek	0	20050 (1720 MHz)	NM[7]				23	-	
Right / Cheek	0	20299 (1745 MHz)	NM[7]				23	-	

7: See remarks and comments.

- **Body measurements**

Side / Position	Dist (mm)	Channel (Frequency)	Extrapolated 1-g SAR (W/Kg)	1-g SAR (W/Kg)	±0.1 (W/Kg)	Power Drift (%)	Max Output Power (dBm)	Max. Reported 1-g SAR	Plot No.
Back face	10	20175 (1732.5 MHz)	0.714	0.732	√	0.81	23	0.852	
Back face	10	20050 (1720 MHz)	NM[7]				23	-	
Back face	10	20299 (1745 MHz)	NM[7]				23	-	

7: See remarks and comments

5.14. Results for LTE Band 5

- 1 Rb, 10 MHz, QPSK

- **Head measurements**

Side / Position	Dist (mm)	Channel (Frequency)	Extrapolated 1-g SAR (W/Kg)	1-g SAR (W/Kg)	±0.1 (W/Kg)	Power Drift (%)	Max Output Power (dBm)	Max. Reported 1-g SAR	Plot No.
Left / Cheek	0	20525 (836.5 MHz)	0.158	NM[2]	-	1.51	24	0.190	
Left / 15º Tilted	0	20525 (836.5 MHz)	0.0935	NM[2]	-	2.45	24	0.113	
Right / Cheek	0	20525 (836.5 MHz)	0.185	0.192	√	1.04	24	0.231	23
Right / 15º Tilted	0	20525 (836.5 MHz)	0.109	NM[2]	-	3.28	24	0.131	
Right / Cheek	0	20450 (829 MHz)	NM[7]				24	-	
Right / Cheek	0	20599 (844 MHz)	NM[7]				24	-	

2 and 7: See remarks and comments

- **Body measurements**

Side / Position	Dist (mm)	Channel (Frequency)	Extrapolated 1-g SAR (W/Kg)	1-g SAR (W/Kg)	±0.1 (W/Kg)	Power Drift (%)	Max Output Power (dBm)	Max. Reported 1-g SAR	Plot No.
Front face	10	20525 (836.5 MHz)	0.243	NM[2]	-	0.23	24	0.293	
Back face	10	20525 (836.5 MHz)	0.284	0.291	√	0.12	24	0.351	24
Left edge	10	20525 (836.5 MHz)	0.203	NM[2]	-	-0.34	24	0.245	
Right edge	10	20525 (836.5 MHz)	0.284	NM[2]	-	0.46	24	0.342	
Bottom edge	10	20525 (836.5 MHz)	0.153	NM[2]	-	-0.23	24	0.184	
Back face	10	20450 (829 MHz)	NM[7]		-	-	24	-	
Back face	10	20599 (844 MHz)	NM[7]		-	-	24	-	

2 and 7: See remarks and comments

- 50% Rb, 10 MHz, QPSK

- **Head measurements**

Side / Position	Dist (mm)	Channel (Frequency)	Extrapolated 1-g SAR (W/Kg)	1-g SAR (W/Kg)	±0.1 (W/Kg)	Power Drift (%)	Max Output Power (dBm)	Max. Reported 1-g SAR	Plot No.
Right / Cheek	0	20525 (836.5 MHz)	0.155	0.161	√	1.62	23	0.195	
Right / Cheek	0	20450 (829 MHz)	NM[7]				23	-	
Right / Cheek	0	20599 (844 MHz)	NM[7]				23	-	

7: See remarks and comments.

- **Body measurements**

Side / Position	Dist (mm)	Channel (Frequency)	Extrapolated 1-g SAR (W/Kg)	1-g SAR (W/Kg)	±0.1 (W/Kg)	Power Drift (%)	Max Output Power (dBm)	Max. Reported 1-g SAR	Plot No.
Back face	10	20525 (836.5 MHz)	0.232	0.240	√	-0.12	33.5	0.291	
Back face	10	20450 (829 MHz)	NM[7]				33.5	-	
Back face	10	20599 (844 MHz)	NM[7]				33.5	-	

7: See remarks and comments

- 100% Rb, 10 MHz, QPSK

- **Head measurements**

Side / Position	Dist (mm)	Channel (Frequency)	Extrapolated 1-g SAR (W/Kg)	1-g SAR (W/Kg)	±0.1 (W/Kg)	Power Drift (%)	Max Output Power (dBm)	Max. Reported 1-g SAR	Plot No.
Right / Cheek	0	20525 (836.5 MHz)	NM[7]				33.5	-	
Right / Cheek	0	20450 (829 MHz)	NM[7]				33.5	-	
Right / Cheek	0	20599 (844 MHz)	NM[7]				33.5	-	

7: See remarks and comments.

- **Body measurements**

Side / Position	Dist (mm)	Channel (Frequency)	Extrapolated 1-g SAR (W/Kg)	1-g SAR (W/Kg)	±0.1 (W/Kg)	Power Drift (%)	Max Output Power (dBm)	Max. Reported 1-g SAR	Plot No.
Back face	10	20525 (836.5 MHz)	NM[7]				33.5	-	
Back face	10	20450 (829 MHz)	NM[7]				33.5	-	
Back face	10	20599 (844 MHz)	NM[7]				33.5	-	

7: See remarks and comments

5.15. Results for LTE Band 7

- 1 Rb, 20 MHz, QPSK

- **Head measurements**

Side / Position	Dist (mm)	Channel (Frequency)	Extrapolated 1-g SAR (W/Kg)	1-g SAR (W/Kg)	±0.1 (W/Kg)	Power Drift (%)	Max Output Power (dBm)	Max. Reported 1-g SAR	Plot No.
Left / Cheek	0	20850 (2510 MHz)	0.508	0.512	√	0.69	24	0.528	25
Left / 15º Tilted	0	20850 (2510 MHz)	0.151	NM[2]	-	3.75	24	0.156	
Right / Cheek	0	20850 (2510 MHz)	0.341	NM[2]	-	3.87	24	0.351	
Right / 15º Tilted	0	20850 (2510 MHz)	0.274	NM[2]	-	1.39	24	0.282	
Right / Cheek	0	21100 (2535 MHz)	NM[7]				24	-	
Right / Cheek	0	21349 (2560 MHz)	NM[7]				24	-	

2 and 7: See remarks and comments

- **Body measurements**

Side / Position	Dist (mm)	Channel (Frequency)	Extrapolated 1-g SAR (W/Kg)	1-g SAR (W/Kg)	±0.1 (W/Kg)	Power Drift (%)	Max Output Power (dBm)	Max. Reported 1-g SAR	Plot No.
Front face	10	20850 (2510 MHz)	0.394	NM[2]	-	1.16	24	0.406	
Back face	10	20850 (2510 MHz)	0.748	0.751	√	1.98	24	0.774	26
Left edge	10	20850 (2510 MHz)	0.409	NM[2]	-	-0.12	24	0.421	
Right edge	10	20850 (2510 MHz)	0.249	NM[2]	-	1.98	24	0.257	
Bottom edge	10	20850 (2510 MHz)	0.290	NM[2]	-	-1.14	24	0.299	
Back face	10	21100 (2535 MHz)	NM[7]		-	-	24	-	
Back face	10	21349 (2560 MHz)	NM[7]		-	-	24	-	

2 and 7: See remarks and comments

- 50% Rb, 20 MHz, QPSK

- **Head measurements**

Side / Position	Dist (mm)	Channel (Frequency)	Extrapolated 1-g SAR (W/Kg)	1-g SAR (W/Kg)	±0.1 (W/Kg)	Power Drift (%)	Max Output Power (dBm)	Max. Reported 1-g SAR	Plot No.
Left / Cheek	0	20850 (2510 MHz)	0.395	0.395	√	0	23	0.407	
Left / Cheek	0	21100 (2535 MHz)	NM[7]				23	-	
Left / Cheek	0	21349 (2560 MHz)	NM[7]				23	-	

7: See remarks and comments.

- **Body measurements**

Side / Position	Dist (mm)	Channel (Frequency)	Extrapolated 1-g SAR (W/Kg)	1-g SAR (W/Kg)	±0.1 (W/Kg)	Power Drift (%)	Max Output Power (dBm)	Max. Reported 1-g SAR	Plot No.
Back face	10	20850 (2510 MHz)	0.543	0.548	√	0.23	23	0.565	
Back face	10	21100 (2535 MHz)	NM[7]				23	-	
Back face	10	21349 (2560 MHz)	NM[7]				23	-	

7: See remarks and comments

- 100% Rb, 20 MHz, QPSK

- **Head measurements**

Side / Position	Dist (mm)	Channel (Frequency)	Extrapolated 1-g SAR (W/Kg)	1-g SAR (W/Kg)	±0.1 (W/Kg)	Power Drift (%)	Max Output Power (dBm)	Max. Reported 1-g SAR	Plot No.
Left / Cheek	0	20850 (2510 MHz)	NM[7]				23	-	
Left / Cheek	0	21100 (2535 MHz)	NM[7]				23	-	
Left / Cheek	0	21349 (2560 MHz)	NM[7]				23	-	

7: See remarks and comments.

- **Body measurements**

Side / Position	Dist (mm)	Channel (Frequency)	Extrapolated 1-g SAR (W/Kg)	1-g SAR (W/Kg)	±0.1 (W/Kg)	Power Drift (%)	Max Output Power (dBm)	Max. Reported 1-g SAR	Plot No.
Back face	10	20850 (2510 MHz)	NM[7]				23	-	
Back face	10	21100 (2535 MHz)	NM[7]				23	-	
Back face	10	21349 (2560 MHz)	NM[7]				23	-	

7: See remarks and comments

5.16. Results for LTE Band 12

- 1 Rb, 10 MHz, QPSK

- **Head measurements**

Side / Position	Dist (mm)	Channel (Frequency)	Extrapolated 1-g SAR (W/Kg)	1-g SAR (W/Kg)	±0.1 (W/Kg)	Power Drift (%)	Max Output Power (dBm)	Max. Reported 1-g SAR	Plot No.
Left / Cheek	0	23095 (707.5 MHz)	0.130	NM[2]	-	0.69	24	0.152	
Left / 15º Tilted	0	23095 (707.5 MHz)	0.088	NM[2]	-	-0.34	24	0.103	
Right / Cheek	0	23095 (707.5 MHz)	0.169	0.175	√	0.58	24	0.204	27
Right / 15º Tilted	0	23095 (707.5 MHz)	0.103	NM[2]	-	2.33	24	0.120	
Right / Cheek	0	23060 (704 MHz)	NM[7]				24	-	
Right / Cheek	0	23129 (711 MHz)	NM[7]				24	-	

2 and 7: See remarks and comments

- **Body measurements**

Side / Position	Dist (mm)	Channel (Frequency)	Extrapolated 1-g SAR (W/Kg)	1-g SAR (W/Kg)	±0.1 (W/Kg)	Power Drift (%)	Max Output Power (dBm)	Max. Reported 1-g SAR	Plot No.
Front face	10	23095 (707.5 MHz)	0.234	NM[2]	-	0	24	0.273	
Back face	10	23095 (707.5 MHz)	0.301	NM[2]	-	0.69	24	0.351	
Left edge	10	23095 (707.5 MHz)	0.118	NM[2]	-	1.27	24	0.138	
Right edge	10	23095 (707.5 MHz)	0.319	0.318	√	0.35	24	0.371	28
Bottom edge	10	23095 (707.5 MHz)	0.098	NM[2]	-	-0.57	24	0.114	
Back face	10	23060 (704 MHz)	NM[7]		-	-	24	-	
Back face	10	23129 (711 MHz)	NM[7]		-	-	24	-	

2 and 7: See remarks and comments

- 50% Rb, 10 MHz, QPSK

- **Head measurements**

Side / Position	Dist (mm)	Channel (Frequency)	Extrapolated 1-g SAR (W/Kg)	1-g SAR (W/Kg)	±0.1 (W/Kg)	Power Drift (%)	Max Output Power (dBm)	Max. Reported 1-g SAR	Plot No.
Right / Cheek	0	23095 (707.5 MHz)	0.141	0.147	√	-0.12	23	0.170	
Right / Cheek	0	23060 (704 MHz)	NM[7]				23	-	
Right / Cheek	0	23129 (711 MHz)	NM[7]				23	-	

7: See remarks and comments.

- **Body measurements**

Side / Position	Dist (mm)	Channel (Frequency)	Extrapolated 1-g SAR (W/Kg)	1-g SAR (W/Kg)	±0.1 (W/Kg)	Power Drift (%)	Max Output Power (dBm)	Max. Reported 1-g SAR	Plot No.
Right edge	10	23095 (707.5 MHz)	0.268	0.268	√	1.04	23	0.311	
Right edge	10	23060 (704 MHz)	NM[7]				23	-	
Right edge	10	23129 (711 MHz)	NM[7]				23	-	

7: See remarks and comments

- 100% Rb, 10 MHz, QPSK

- **Head measurements**

Side / Position	Dist (mm)	Channel (Frequency)	Extrapolated 1-g SAR (W/Kg)	1-g SAR (W/Kg)	±0.1 (W/Kg)	Power Drift (%)	Max Output Power (dBm)	Max. Reported 1-g SAR	Plot No.
Right / Cheek	0	23060 (704 MHz)	NM[7]				23	-	
Right / Cheek	0	23095 (707.5 MHz)	NM[7]				23	-	
Right / Cheek	0	23129 (711 MHz)	NM[7]				23	-	

7: See remarks and comments.

- **Body measurements**

Side / Position	Dist (mm)	Channel (Frequency)	Extrapolated 1-g SAR (W/Kg)	1-g SAR (W/Kg)	±0.1 (W/Kg)	Power Drift (%)	Max Output Power (dBm)	Max. Reported 1-g SAR	Plot No.
Right edge	10	23060 (704 MHz)	NM[7]				23	-	
Right edge	10	23095 (707.5 MHz)	NM[7]				23	-	
Right edge	10	23129 (711 MHz)	NM[7]				23	-	

7: See remarks and comments

5.17. Results for Wifi 2.4 GHz Band[8]

- **Head measurements**

Side / Position	Dist (mm)	Mode	Ch #. (Freq)	Extrapolated 1-g SAR (W/Kg)	1-g SAR (W/Kg)	Power Drift (%)	Max Output Power (dBm)	Max. Reported 1-g SAR	Test Report No.
Left / Cheek	0	802.11b	CH 6 (2437 Mhz)	0.333	0.337	-0.12	15	0.337	43480RRF.001A1
Left / 15º Tilted	0	802.11b	CH 6 (2437 Mhz)	0.274	NM[2]	0.69	15	0.274	
Right / Cheek	0	802.11b	CH 6 (2437 Mhz)	0.195	NM[2]	4.47	15	0.195	
Right / 15º Tilted	0	802.11b	CH 6 (2437 Mhz)	0.221	NM[2]	0.93	15	0.221	
Left / Cheek	0	802.11b	CH 1 (2412 Mhz)	NM[1]			15	-	
Left / Cheek	0	802.11b	CH 11 (2462 Mhz)	NM[1]			15	-	
Left / Cheek	0	802.11g	CH 6 (2437 Mhz)	0.384	0.379	-2.21	16	0.397	
Left / Cheek	0	802.11n20	CH 6 (2437 Mhz)	0.300	0.296	0.69	15	0.303	

1 and 2: See remarks and comments

- **Body measurements**

Side / Position	Dist (mm)	Mode	Ch #. (Freq)	Extrapolated 1-g SAR (W/Kg)	1-g SAR (W/Kg)	Power Drift (%)	Max Output Power (dBm)	Max. Reported 1-g SAR	Test Report No.
Front face	10	802.11b	CH 6 (2437 Mhz)	0.097	NM[2]	0	15	0.097	43480RRF.001A1
Back face	10	802.11b	CH 6 (2437 Mhz)	0.19	0.187	-1.49	15	0.187	
Right edge	10	802.11b	CH 6 (2437 Mhz)	0.06	NM[2]	-0.69	15	0.060	
Top edge	10	802.11b	CH 6 (2437 Mhz)	0.053	NM[2]	-3.39	15	0.053	
Back face	10	802.11b	CH 1 (2412 Mhz)	NM[1]			15	-	
Back face	10	802.11b	CH 11 (2462 Mhz)	NM[1]			15	-	
Back face	10	802.11g	CH 6 (2437 Mhz)	0.171	0.166	2.21	16	0.174	
Back face	10	802.11n20	CH 6 (2437 Mhz)	0.137	0.132	0.69	15	0.135	

1 and 2: See remarks and comments

5.18. Results for Wi-Fi 5200 MHz Band[8]

- **Head measurements**

Side / Position	Dist (mm)	Mode	Ch #. (Freq)	1-g SAR (W/Kg)	Power Drift (%)	Max Output Power (dBm)	Max. Reported 1-g SAR	Test Report No.
Left / Cheek	0	802.11a	48 (5240 Mhz)	0.310	2.09	15	0.359	43480RRF.001A1
Left / 15º Tilted	0	802.11a	48 (5240 Mhz)	0.284	4.59	15	0.329	
Right / Cheek	0	802.11a	48 (5240 Mhz)	0.204	-1.03	15	0.236	
Right / 15º Tilted	0	802.11a	48 (5240 Mhz)	0.218	-0.80	15	0.253	
Left / Cheek	0	802.11a	36 (5180 Mhz)	NM[1]		15	-	
Left / Cheek	0	802.11a	40 (5200 Mhz)	NM[1]		15	-	
Left / Cheek	0	802.11n20	48 (5240 Mhz)	0.283	2.33	15	0.324	
Left / Cheek	0	802.11ac20	48 (5240 Mhz)	0.220	1.62	14	0.237	
Left / Cheek	0	802.11n40	38 (5190 Mhz)	0.252	-2.95	16	0.438	

1: See remarks and comments

- **Body measurements**

Side / Position	Dist (mm)	Mode	Ch #. (Freq)	1-g SAR (W/Kg)	Power Drift (%)	Max Output Power (dBm)	Max. Reported 1-g SAR	Test Report No.
Front face	10	802.11a	48 (5240 Mhz)	0.082	1.27	15	0.095	43480RRF.001A1
Back face	10	802.11a	48 (5240 Mhz)	0.086	-0.92	15	0.100	
Right edge	10	802.11a	48 (5240 Mhz)	0.095	-0.69	15	0.110	
Top edge	10	802.11a	48 (5240 Mhz)	0.07	2.09	15	0.081	
Right edge	10	802.11a	36 (5180 Mhz)	NM[1]		15	-	
Right edge	10	802.11a	40 (5200 Mhz)	NM[1]		15	-	
Right edge	10	802.11n20	48 (5240 Mhz)	0.093	-1.71	15	0.107	
Right edge	10	802.11ac20	48 (5240 Mhz)	0.068	0	14	0.073	
Right edge	10	802.11n40	38 (5190 Mhz)	0.075	1.04	16	0.130	

1: See remarks and comments

5.19. Results for Wi-Fi 5300 MHz Band[8].

- **Head measurements**

Side / Position	Dist (mm)	Mode	Ch #. (Freq)	1-g SAR (W/Kg)	Power Drift (%)	Max Output Power (dBm)	Max. Reported 1-g SAR	Test Report No.
Left / Cheek	0	802.11a	52 (5260 Mhz)	0.286	1.16	15	0.319	43480RRF.001A1
Left / 15º Tilted	0	802.11a	52 (5260 Mhz)	0.325	1.04	15	0.363	
Right / Cheek	0	802.11a	52 (5260 Mhz)	0.225	1.74	15	0.251	
Right / 15º Tilted	0	802.11a	52 (5260 Mhz)	0.228	3.16	15	0.255	
Left / Cheek	0	802.11a	60 (5300 Mhz)	NM[1]		15	-	
Left / Cheek	0	802.11a	64 (5320 Mhz)	NM[1]		15	-	
Left / Cheek	0	802.11n20	52 (5260 Mhz)	0.299	-3.17	15	0.333	
Left / Cheek	0	802.11ac20	52 (5260 Mhz)	0.218	1.16	14	0.249	
Left / Cheek	0	802.11n40	54 (5270 Mhz)	0.264	2.33	16	0.438	

1: See remarks and comments

- **Body measurements**

Side / Position	Dist (mm)	Mode	Ch #. (Freq)	1-g SAR (W/Kg)	Power Drift (%)	Max Output Power (dBm)	Max. Reported 1-g SAR	Test Report No.
Front face	10	802.11a	52 (5260 Mhz)	0.072	3.40	15	0.08	43480RRF.001A1
Back face	10	802.11a	52 (5260 Mhz)	0.103	4.23	15	0.115	
Right edge	10	802.11a	52 (5260 Mhz)	0.095	3.87	15	0.106	
Top edge	10	802.11a	52 (5260 Mhz)	0.078	0.12	15	0.087	
Back face	10	802.11a	60 (5300 Mhz)	NM[1]		15	-	
Back face	10	802.11a	64 (5320 Mhz)	NM[1]		15	-	
Back face	10	802.11n20	52 (5260 Mhz)	0.084	1.74	15	0.094	
Back face	10	802.11ac20	52 (5260 Mhz)	0.049	2.80	14	0.056	
Back face	10	802.11n40	54 (5270 Mhz)	0.066	1.04	16	0.11	

1: See remarks and comments

5.20. Results for Wi-Fi 5600 MHz Band[8].

- **Head measurements**

Side / Position	Dist (mm)	Mode	Ch #. (Freq)	1-g SAR (W/Kg)	Power Drift (%)	Max Output Power (dBm)	Max. Reported 1-g SAR	Test Report No.
Left / Cheek	0	802.11a	108 (5260 Mhz)	0.24	1.51	15	0.254	43480RRF.001A1
Left / 15º Tilted	0	802.11a	108 (5260 Mhz)	0.236	-0.34	15	0.25	
Right / Cheek	0	802.11a	108 (5260 Mhz)	0.181	1.98	15	0.192	
Right / 15º Tilted	0	802.11a	108 (5260 Mhz)	0.167	2.68	15	0.177	
Left / Cheek	0	802.11a	104 (5520 Mhz)	NM[1]		15	-	
Left / Cheek	0	802.11a	136 (5680 Mhz)	NM[1]		15	-	
Left / Cheek	0	802.11n20	108 (5540 Mhz)	0.265	2.21	14	0.265	
Left / Cheek	0	802.11ac20	108 (5540 Mhz)	0.263	3.75	14	0.263	
Left / Cheek	0	802.11n40	110 (5550 Mhz)	0.281	3.16	16	0.426	

1: See remarks and comments

- **Body measurements**

Side / Position	Dist (mm)	Mode	Ch #. (Freq)	1-g SAR (W/Kg)	Power Drift (%)	Max Output Power (dBm)	Max. Reported 1-g SAR	Test Report No.
Front face	10	802.11a	108 (5260 Mhz)	0.046	0.58	15	0.049	43480RRF.001A1
Back face	10	802.11a	108 (5260 Mhz)	0.065	0.35	15	0.069	
Right edge	10	802.11a	108 (5260 Mhz)	0.064	3.40	15	0.068	
Top edge	10	802.11a	108 (5260 Mhz)	0.077	1.16	15	0.082	
Top edge	10	802.11a	104 (5520 Mhz)	NM[1]		15	-	
Top edge	10	802.11a	136 (5680 Mhz)	NM[1]		15	-	
Top edge	10	802.11n20	108 (5540 Mhz)	0.063	4.23	14	0.063	
Top edge	10	802.11ac20	108 (5540 Mhz)	0.074	0.93	14	0.074	
Top edge	10	802.11n40	110 (5550 Mhz)	0.129	-0.23	16	0.196	

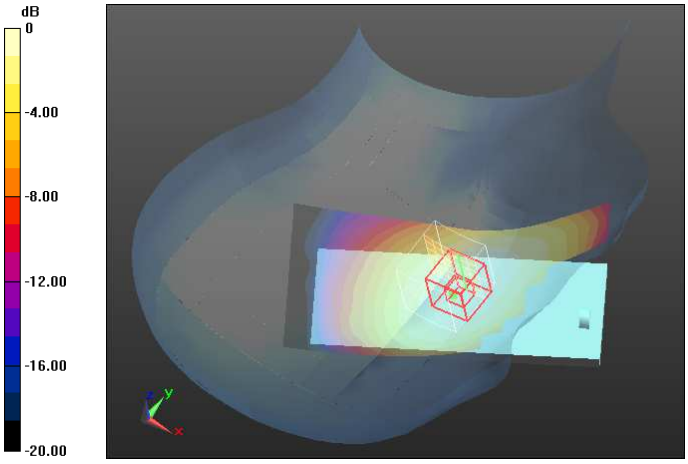
1: See remarks and comments

Appendix C – Measurement report

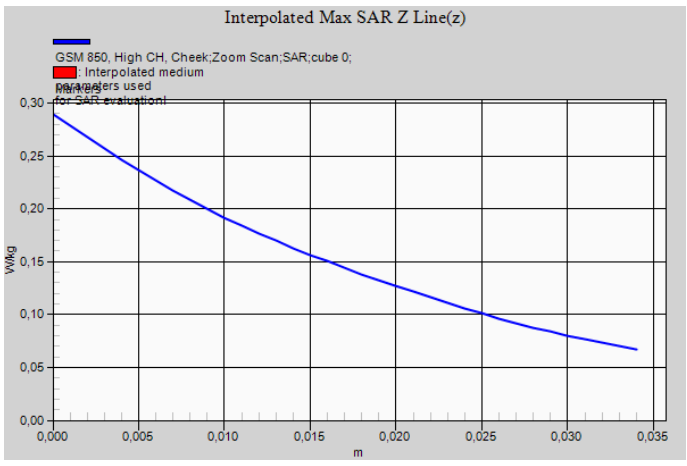
GSM 850 MHz – Right hand side – Cheek position – Middle Channel – Plot Nº 1
Test Laboratory: AT4 Wireless; Date: 14/05/2015
DUT: YotaPhone2; Type: Handset; Serial: IMEI:356431061029929
Communication System: UID 10021 - DAB, GSM-FDD (TDMA, GMSK); Frequency: 836.6 MHz; Duty Cycle: 1:8.6896
Medium parameters used (interpolated): f = 836.6 MHz; σ = 0.923 S/m; ε_r = 41.748; ρ = 1000 kg/m^3
Phantom section: Right Section
DASY5 Configuration:
- Probe: ES3DV3 - SN3052; ConvF(6.5, 6.5, 6.5); Calibrated: 24/09/2014;
- Sensor-Surface: 3mm (Mechanical Surface Detection), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 08/07/2014
- Phantom: SAM head-body simulator ; Type: Twin SAM V4.0; Serial: ---
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Right Hand Side - 850 MHz/GSM 850, High CH, Cheek/Area Scan (81x171x1):
Interpolated grid: dx=1.000 mm, dy=1.000 mm
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.257 W/kg

Right Hand Side - 850 MHz/GSM 850, High CH, Cheek/Zoom Scan (7x8x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 5.558 V/m; Power Drift = -0.00 dB
Peak SAR (extrapolated) = 0.289 W/kg
SAR(1 g) = 0.236 W/kg; SAR(10 g) = 0.183 W/kg (SAR corrected for target medium)
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.246 W/kg



0 dB = 0.246 W/kg = -6.09 dBW/kg

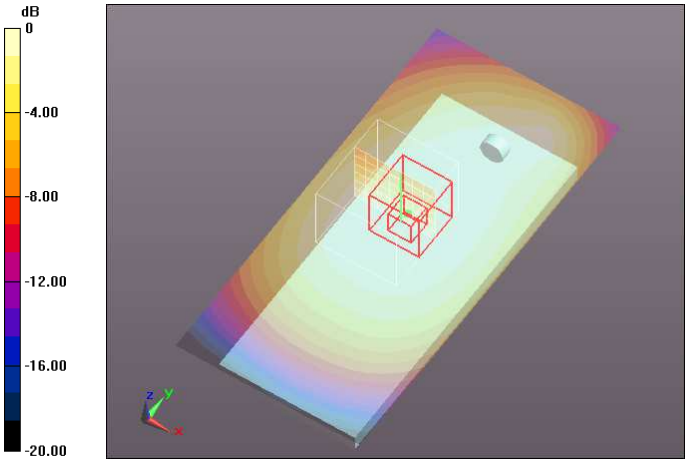


GSM 850 MHz – Body – Back Face 10 mm – Middle Channel – Plot Nº 2

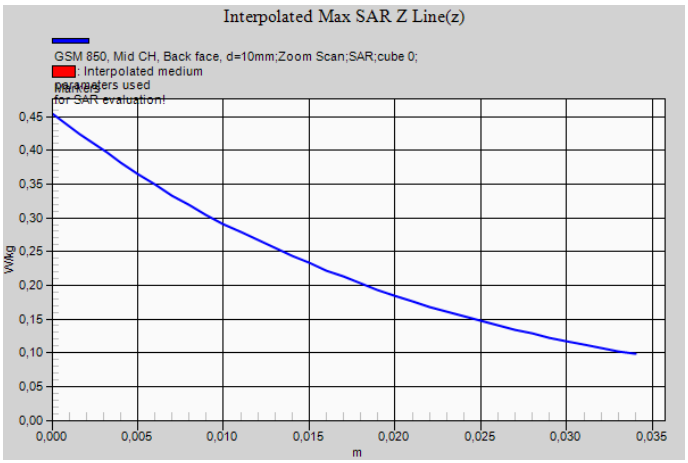
Test Laboratory: AT4 Wireless; Date: 14/05/2015
DUT: YotaPhone2; Type: Handset; Serial: IMEI:356431061029929
Communication System: UID 10021 - DAB, GSM-FDD (TDMA, GMSK); Frequency: 836.6 MHz; Duty Cycle: 1:8.6896
Medium parameters used (interpolated): f = 836.6 MHz; σ = 0.956 S/m; ε_r = 53.007; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY5 Configuration:
- Probe: ES3DV3 - SN3052; ConvF(6.26, 6.26, 6.26); Calibrated: 24/09/2014;
- Sensor-Surface: 3mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 08/07/2014
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1060
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat Phantom Side - 850 MHz/GSM 850, Mid CH, Back face, d=10mm/Area Scan (81x171x1):
Interpolated grid: dx=1.000 mm, dy=1.000 mm
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.405 W/kg

Flat Phantom Side - 850 MHz/GSM 850, Mid CH, Back face, d=10mm/Zoom Scan (8x9x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 20.34 V/m; Power Drift = -0.17 dB
Peak SAR (extrapolated) = 0.454 W/kg
SAR(1 g) = 0.367 W/kg; SAR(10 g) = 0.285 W/kg (SAR corrected for target medium)
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.382 W/kg



0 dB = 0.382 W/kg = -4.18 dBW/kg

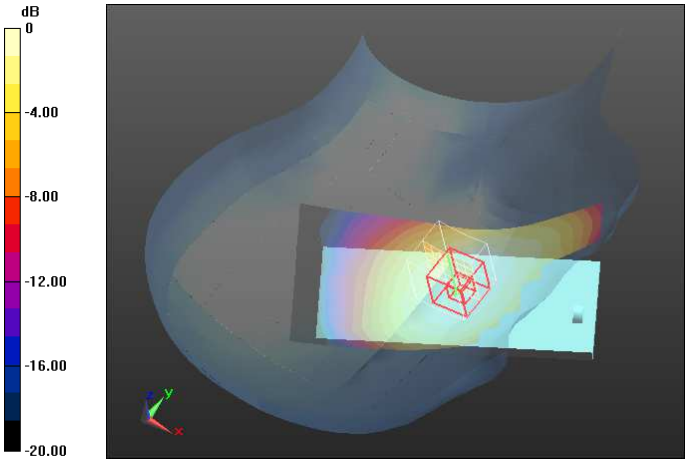


GPRS 850 MHz 2 slots – Right hand side – Cheek position – Middle Channel – Plot Nº 3

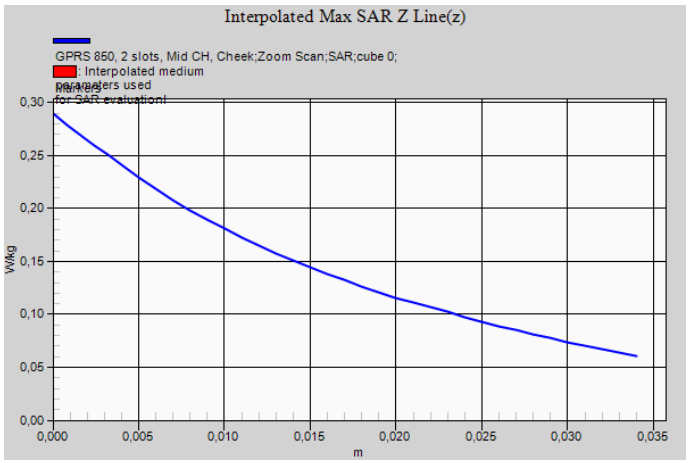
Test Laboratory: AT4 Wireless; Date: 13/05/2015
DUT: YotaPhone2; Type: Handset; Serial: IMEI:356431061029929
Communication System: UID 10024 - DAB, GPRS-FDD (TDMA, GMSK, TN 0-1); Frequency: 836.6 MHz; Duty Cycle: 1:4.52898
Medium parameters used (interpolated): f = 836.6 MHz; σ = 0.923 S/m; ε_r = 41.748; ρ = 1000 kg/m^3
Phantom section: Right Section
DASY5 Configuration:
- Probe: ES3DV3 - SN3052; ConvF(6.5, 6.5, 6.5); Calibrated: 24/09/2014;
- Sensor-Surface: 3mm (Mechanical Surface Detection), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 08/07/2014
- Phantom: SAM head-body simulator ; Type: Twin SAM V4.0; Serial: ---
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Right Hand Side - 850 MHz/GPRS 850, 2 slots, Mid CH, Cheek/Area Scan (81x171x1):
Interpolated grid: dx=1.000 mm, dy=1.000 mm
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.254 W/kg

Right Hand Side - 850 MHz/GPRS 850, 2 slots, Mid CH, Cheek/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 4.905 V/m; Power Drift = 0.30 dB
Peak SAR (extrapolated) = 0.290 W/kg
SAR(1 g) = 0.233 W/kg; SAR(10 g) = 0.181 W/kg (SAR corrected for target medium)
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.243 W/kg



0 dB = 0.243 W/kg = -6.14 dBW/kg

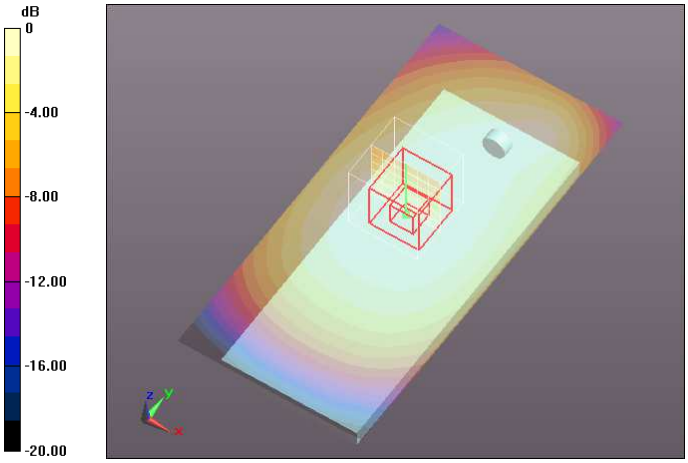


GPRS 850 MHz 2 slots – Body – Back Face 10 mm – Middle Channel – Plot Nº 4

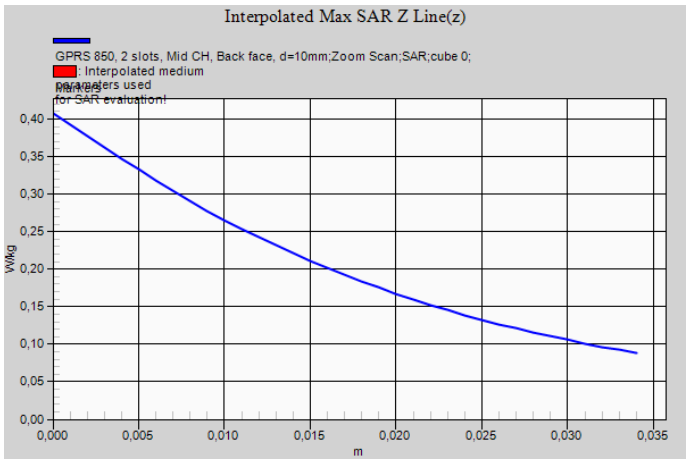
Test Laboratory: AT4 Wireless; Date: 14/05/2015
DUT: YotaPhone2; Type: Handset; Serial: IMEI:356431061029929
Communication System: UID 10024 - DAB, GPRS-FDD (TDMA, GMSK, TN 0-1); Frequency: 836.6 MHz; Duty Cycle: 1:4.52898
Medium parameters used (interpolated): f = 836.6 MHz; σ = 0.956 S/m; ε_r = 53.007; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY5 Configuration:
- Probe: ES3DV3 - SN3052; ConvF(6.26, 6.26, 6.26); Calibrated: 24/09/2014;
- Sensor-Surface: 3mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 08/07/2014
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1060
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat Phantom Side - 850 MHz/GPRS 850, 2 slots, Mid CH, Back face, d=10mm/Area Scan (81x171x1):
Interpolated grid: dx=1.000 mm, dy=1.000 mm
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.365 W/kg

Flat Phantom Side - 850 MHz/GPRS 850, 2 slots, Mid CH, Back face, d=10mm/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 19.02 V/m; Power Drift = 0.05 dB
Peak SAR (extrapolated) = 0.408 W/kg
SAR(1 g) = 0.336 W/kg; SAR(10 g) = 0.261 W/kg (SAR corrected for target medium)
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.349 W/kg



0 dB = 0.349 W/kg = -4.57 dBW/kg

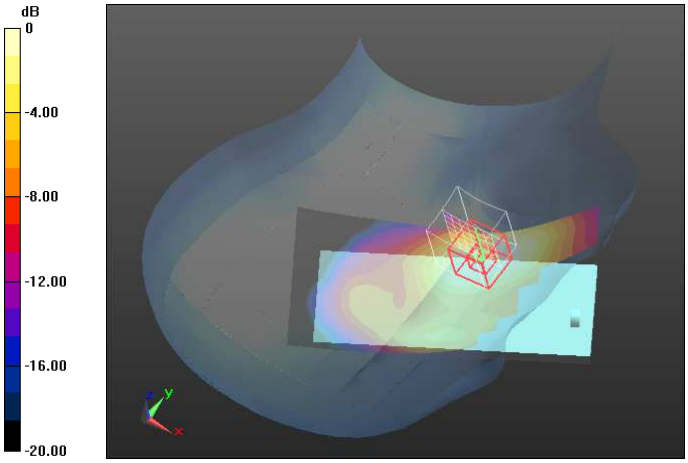


GSM 1900 MHz – Right hand side – Cheek position – Middle Channel – Plot Nº 5

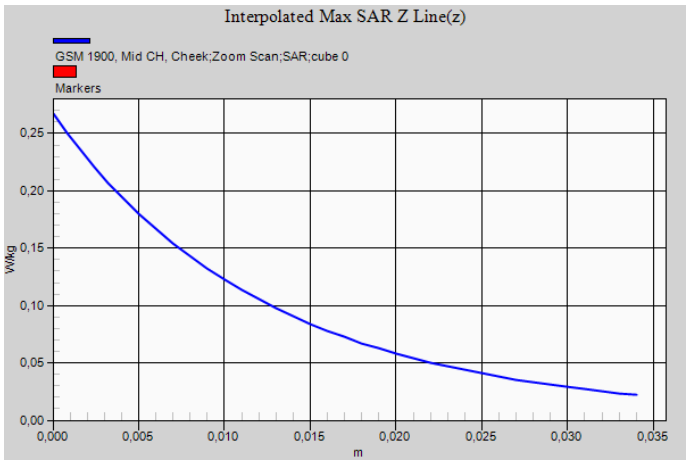
Test Laboratory: AT4 Wireless; Date: 11/05/2015
DUT: YotaPhone2; Type: Handset; Serial: IMEI:356431061029747
Communication System: UID 10021 - DAB, GSM-FDD (TDMA, GMSK); Frequency: 1880 MHz; Duty Cycle: 1:8.6896
Medium parameters used: f = 1880 MHz; σ = 1.34 S/m; ε_r = 39.1; ρ = 1000 kg/m^3
Phantom section: Right Section
DASY5 Configuration:
- Probe: ES3DV3 - SN3052; ConvF(5.12, 5.12, 5.12); Calibrated: 24/09/2014;
- Sensor-Surface: 3mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 08/07/2014
- Phantom: SAM head-body simulator ; Type: Twin SAM V4.0; Serial: ---
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Right Hand Side - 1800 MHz/GSM 1900, Mid CH, Cheek/Area Scan (81x171x1):
Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.216 W/kg

Right Hand Side - 1800 MHz/GSM 1900, Mid CH, Cheek/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 12.07 V/m; Power Drift = 0.06 dB
Peak SAR (extrapolated) = 0.267 W/kg
SAR(1 g) = 0.184 W/kg; SAR(10 g) = 0.116 W/kg (SAR corrected for target medium)
Maximum value of SAR (measured) = 0.197 W/kg



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

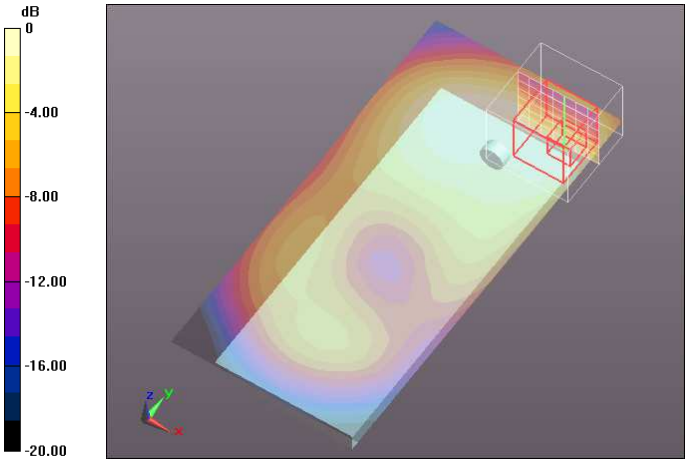


GSM 1900 MHz – Body – Front Face 10 mm – Middle Channel – Plot Nº 6

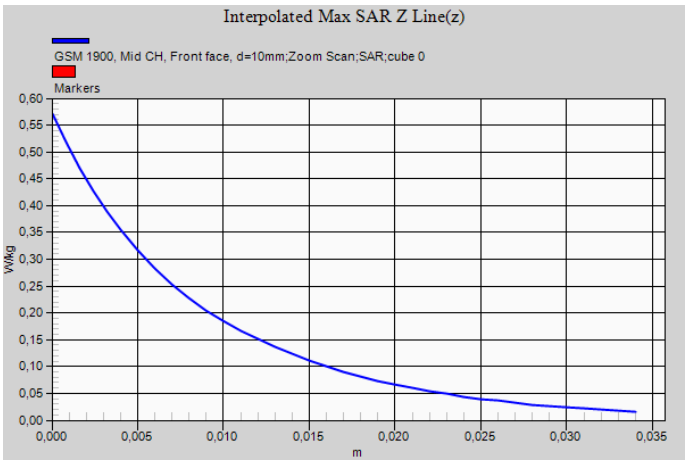
Test Laboratory: AT4 Wireless; Date: 13/05/2015
DUT: YotaPhone2; Type: Handset; Serial: IMEI:356431061029929
Communication System: UID 10021 - DAB, GSM-FDD (TDMA, GMSK); Frequency: 1880 MHz; Duty Cycle: 1:8.6896
Medium parameters used: f = 1880 MHz; σ = 1.45 S/m; ε_r = 54.06; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY5 Configuration:
- Probe: ES3DV3 - SN3052; ConvF(4.71, 4.71, 4.71); Calibrated: 24/09/2014;
- Sensor-Surface: 3mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 08/07/2014
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1060
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat Phantom Side - 1800 MHz/GSM 1900, Mid CH, Front face, d=10mm/Area Scan (81x171x1):
Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.410 W/kg

Flat Phantom Side - 1800 MHz/GSM 1900, Mid CH, Front face, d=10mm/Zoom Scan (8x8x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 15.70 V/m; Power Drift = 0.04 dB
Peak SAR (extrapolated) = 0.572 W/kg
SAR(1 g) = 0.331 W/kg; SAR(10 g) = 0.188 W/kg (SAR corrected for target medium)
Maximum value of SAR (measured) = 0.355 W/kg



0 dB = 0.355 W/kg = -4.50 dBW/kg

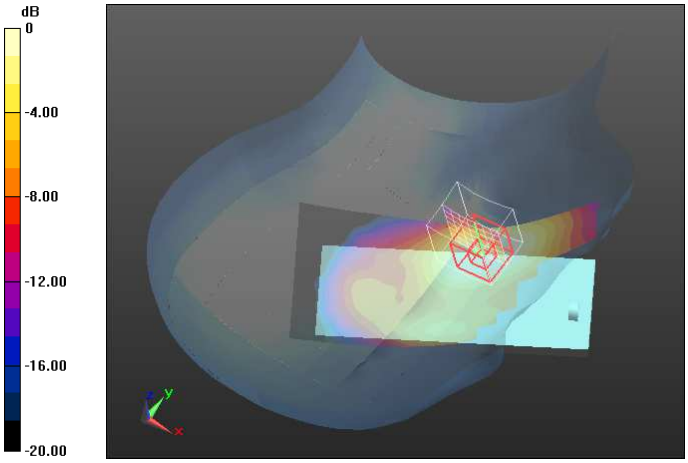


GPRS 1900 MHz 2 slots – Right hand side – Cheek position – Middle Channel – Plot Nº 7

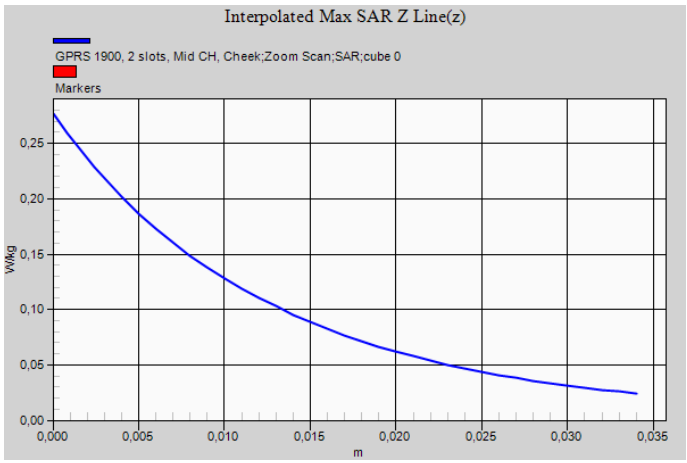
Test Laboratory: AT4 Wireless; Date: 11/05/2015
DUT: YotaPhone2; Type: Handset; Serial: IMEI:356431061029747
Communication System: UID 10024 - DAB, GPRS-FDD (TDMA, GMSK, TN 0-1); Frequency: 1880 MHz; Duty Cycle: 1:4.52898
Medium parameters used: f = 1880 MHz; σ = 1.34 S/m; ε_r = 39.1; ρ = 1000 kg/m^3
Phantom section: Right Section
DASY5 Configuration:
- Probe: ES3DV3 - SN3052; ConvF(5.12, 5.12, 5.12); Calibrated: 24/09/2014;
- Sensor-Surface: 3mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 08/07/2014
- Phantom: SAM head-body simulator ; Type: Twin SAM V4.0; Serial: ---
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Right Hand Side - 1800 MHz/GPRS 1900, 2 slots, Mid CH, Cheek/Area Scan (81x171x1):
Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.219 W/kg

Right Hand Side - 1800 MHz/GPRS 1900, 2 slots, Mid CH, Cheek/Zoom Scan (8x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 4.190 V/m; Power Drift = 0.26 dB
Peak SAR (extrapolated) = 0.277 W/kg
SAR(1 g) = 0.189 W/kg; SAR(10 g) = 0.118 W/kg (SAR corrected for target medium)
Maximum value of SAR (measured) = 0.203 W/kg



0 dB = 0.203 W/kg = -6.93 dBW/kg

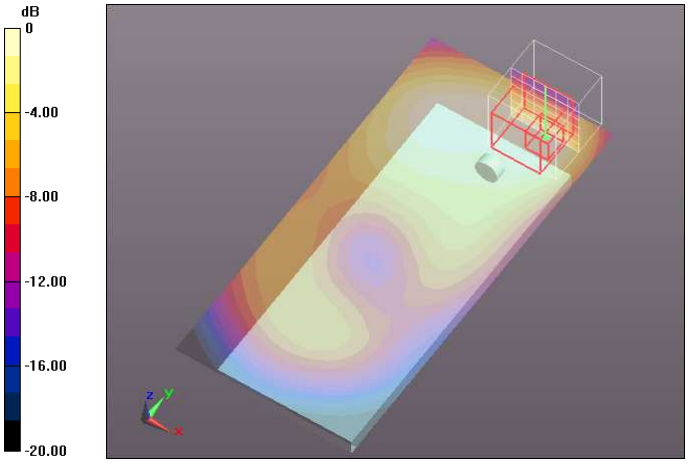


GPRS 1900 MHz 2 slots – Body – Front Face 10 mm – Middle Channel – Plot Nº 8

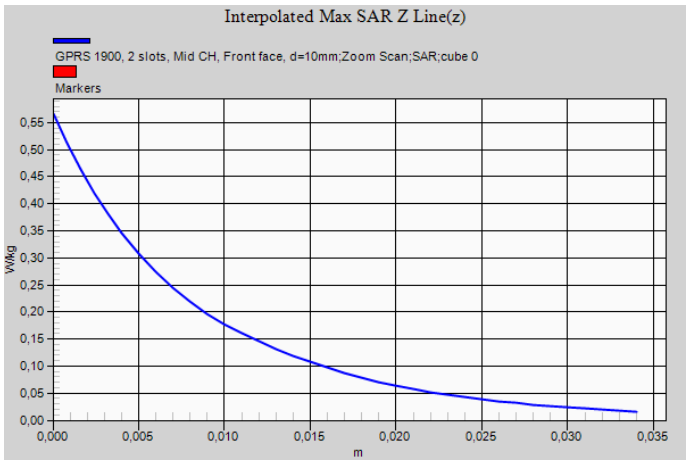
Test Laboratory: AT4 Wireless; Date: 13/05/2015
DUT: YotaPhone2; Type: Handset; Serial: IMEI:356431061029929
Communication System: UID 10026 - DAB, EDGE-FDD (TDMA, 8PSK, TN 0-1); Frequency: 1880 MHz; Duty Cycle: 1:9.01571
Medium parameters used: f = 1880 MHz; σ = 1.45 S/m; ε_r = 54.06; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY5 Configuration:
- Probe: ES3DV3 - SN3052; ConvF(4.71, 4.71, 4.71); Calibrated: 24/09/2014;
- Sensor-Surface: 3mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 08/07/2014
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1060
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat Phantom Side - 1800 MHz/GPRS 1900, 2 slots, Mid CH, Front face, d=10mm/Area Scan (81x171x1):
Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.399 W/kg

Flat Phantom Side - 1800 MHz/GPRS 1900, 2 slots, Mid CH, Front face, d=10mm/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 13.75 V/m; Power Drift = 0.06 dB
Peak SAR (extrapolated) = 0.567 W/kg
SAR(1 g) = 0.319 W/kg; SAR(10 g) = 0.179 W/kg (SAR corrected for target medium)
Maximum value of SAR (measured) = 0.346 W/kg



0 dB = 0.346 W/kg = -4.61 dBW/kg

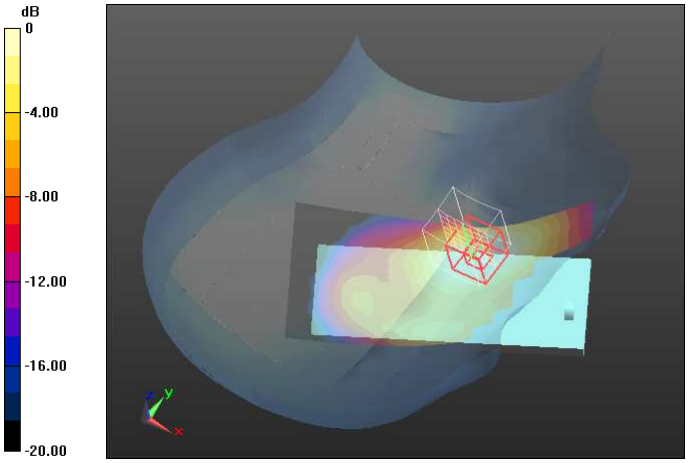


WCDMA Band II – Right hand side – Cheek position – Middle Channel – Plot Nº 9

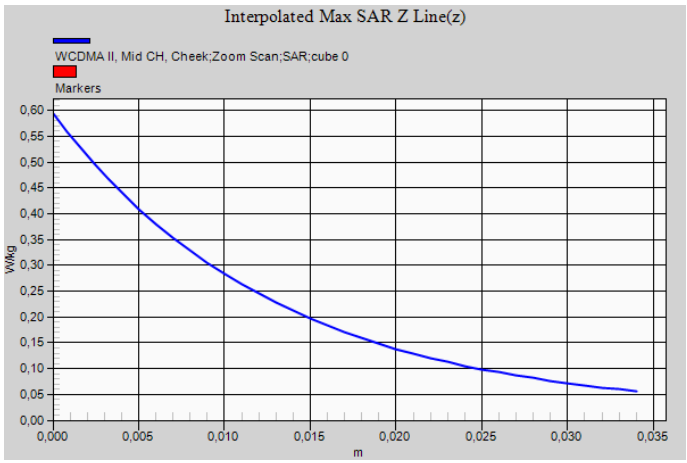
Test Laboratory: AT4 Wireless; Date: 11/05/2015
DUT: YotaPhone2; Type: Handset; Serial: IMEI:356431061029747
Communication System: UID 10011 - CAB, UMTS-FDD (WCDMA); Frequency: 1880 MHz; Duty Cycle: 1:1.95434
Medium parameters used: f = 1880 MHz; σ = 1.34 S/m; ε_r = 39.1; ρ = 1000 kg/m^3
Phantom section: Right Section
DASY5 Configuration:
- Probe: ES3DV3 - SN3052; ConvF(5.12, 5.12, 5.12); Calibrated: 24/09/2014;
- Sensor-Surface: 3mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 08/07/2014
- Phantom: SAM head-body simulator ; Type: Twin SAM V4.0; Serial: ---
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Right Hand Side - 1800 MHz/WCDMA II, Mid CH, Cheek/Area Scan (81x171x1):
Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.481 W/kg

Right Hand Side - 1800 MHz/WCDMA II, Mid CH, Cheek/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 6.495 V/m; Power Drift = 0.36 dB
Peak SAR (extrapolated) = 0.594 W/kg
SAR(1 g) = 0.416 W/kg; SAR(10 g) = 0.265 W/kg (SAR corrected for target medium)
Maximum value of SAR (measured) = 0.438 W/kg



0 dB = 0.438 W/kg = -3.59 dBW/kg

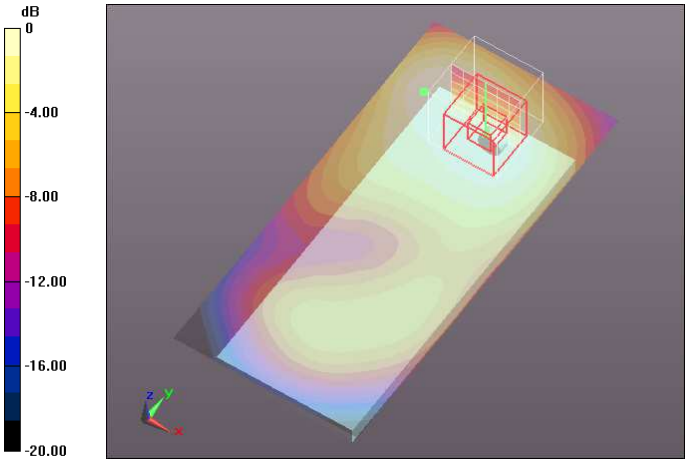


WCDMA Band II – Body – Back Face 10 mm – Lowest Channel – Plot Nº 10

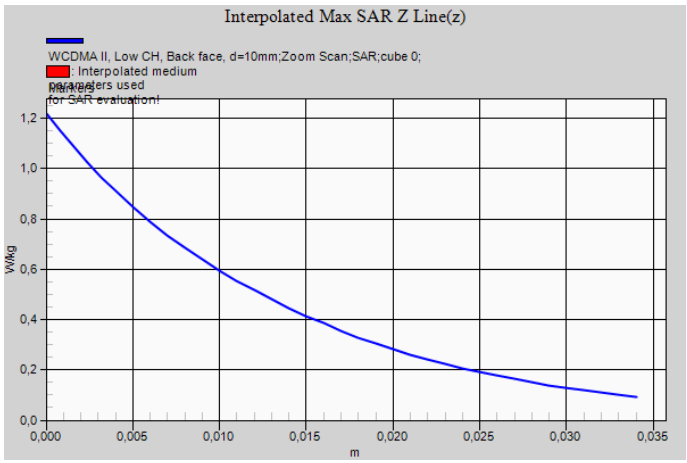
Test Laboratory: AT4 Wireless; Date: 13/05/2015
DUT: YotaPhone2; Type: Handset; Serial: IMEI:356431061029929
Communication System: UID 10011 - CAB, UMTS-FDD (WCDMA); Frequency: 1852.4 MHz; Duty Cycle: 1:1.95434
Medium parameters used (interpolated): f = 1852.4 MHz; σ = 1.454 S/m; ε_r = 53.844; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY5 Configuration:
- Probe: ES3DV3 - SN3052; ConvF(4.71, 4.71, 4.71); Calibrated: 24/09/2014;
- Sensor-Surface: 3mm (Mechanical Surface Detection), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 08/07/2014
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1060
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat Phantom Side - 1800 MHz/WCDMA II, Low CH, Back face, d=10mm/Area Scan (81x171x1):
Interpolated grid: dx=1.000 mm, dy=1.000 mm
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.997 W/kg

Flat Phantom Side - 1800 MHz/WCDMA II, Low CH, Back face, d=10mm/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 25.50 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 1.22 W/kg
SAR(1 g) = 0.878 W/kg; SAR(10 g) = 0.584 W/kg (SAR corrected for target medium)
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.911 W/kg



0 dB = 0.911 W/kg = -0.40 dBW/kg



WCDMA Band II – Body – Back Face 10 mm – Lowest Channel Variability– Plot Nº 11

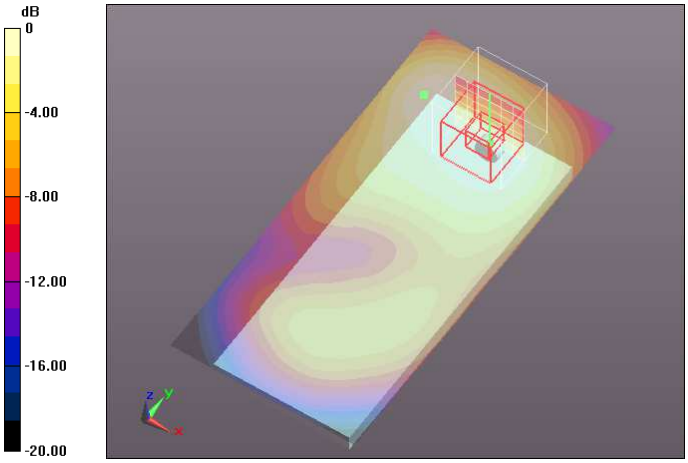
Test Laboratory: AT4 Wireless; Date: 13/05/2015

DUT: YotaPhone2; Type: Handset; Serial: IMEI:356431061029929

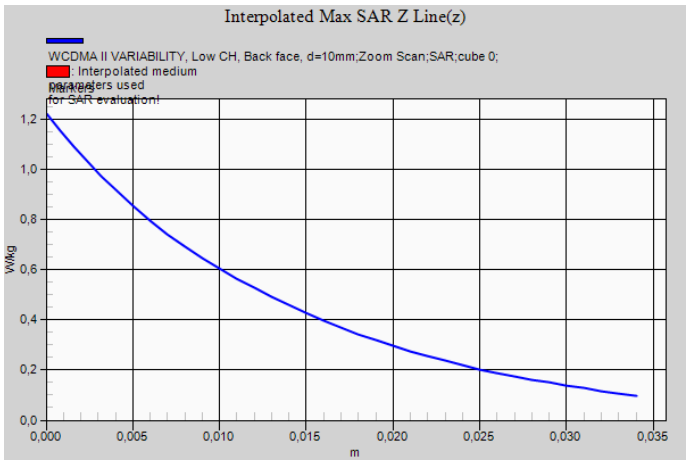
Communication System: UID 10011 - CAB, UMTS-FDD (WCDMA); Frequency: 1852.4 MHz; Duty Cycle: 1:1.95434
Medium parameters used (interpolated): f = 1852.4 MHz; σ = 1.454 S/m; ε_r = 53.844; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY5 Configuration:
- Probe: ES3DV3 - SN3052; ConvF(4.71, 4.71, 4.71); Calibrated: 24/09/2014;
- Sensor-Surface: 3mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 08/07/2014
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1060
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat Phantom Side - 1800 MHz/WCDMA II VARIABILITY, Low CH, Back face, d=10mm/Area Scan (81x171x1):
Interpolated grid: dx=1.000 mm, dy=1.000 mm
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.987 W/kg

Flat Phantom Side - 1800 MHz/WCDMA II VARIABILITY, Low CH, Back face, d=10mm/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 25.49 V/m; Power Drift = -0.00 dB
Peak SAR (extrapolated) = 1.22 W/kg
SAR(1 g) = 0.879 W/kg; SAR(10 g) = 0.583 W/kg (SAR corrected for target medium)
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.920 W/kg



0 dB = 0.920 W/kg = -0.36 dBW/kg

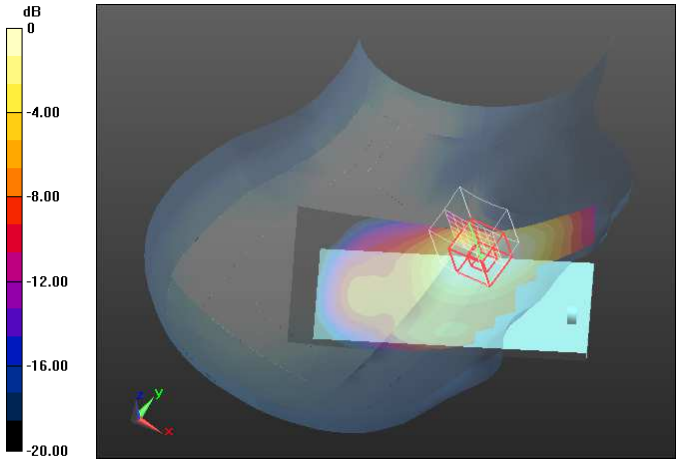


WCDMA Band IV – Right hand side – Cheek position – Middle Channel – Plot Nº 12

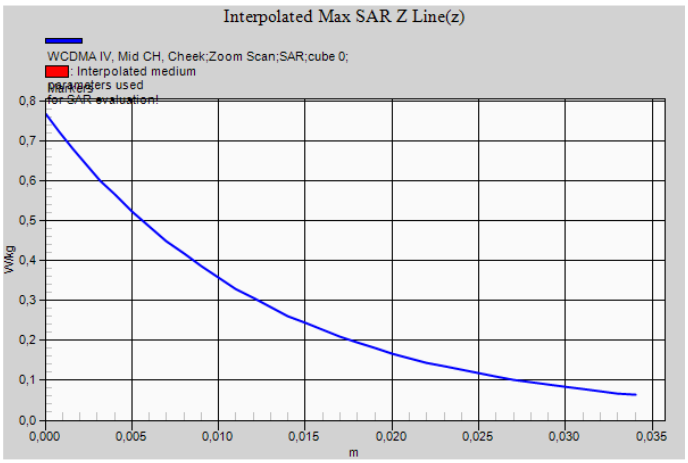
Test Laboratory: AT4 Wireless; Date: 07/05/2015
DUT: YotaPhone2; Type: Handset; Serial: IMEI:356431061029747
Communication System: UID 10011 - CAB, UMTS-FDD (WCDMA); Frequency: 1732.6 MHz; Duty Cycle: 1:1.95434
Medium parameters used (interpolated): f = 1732.6 MHz; σ = 1.306 S/m; ε_r = 39.443; ρ = 1000 kg/m^3
Phantom section: Right Section
DASY5 Configuration:
- Probe: ES3DV3 - SN3052; ConvF(5.28, 5.28, 5.28); Calibrated: 24/09/2014;
- Sensor-Surface: 3mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 08/07/2014
- Phantom: SAM head-body simulator ; Type: Twin SAM V4.0; Serial: ---
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Right Hand Side - 1800 MHz/WCDMA IV, Mid CH, Cheek/Area Scan (81x171x1):
Interpolated grid: dx=1.000 mm, dy=1.000 mm
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.623 W/kg

Right Hand Side - 1800 MHz/WCDMA IV, Mid CH, Cheek/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 20.97 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 0.770 W/kg
SAR(1 g) = 0.537 W/kg; SAR(10 g) = 0.338 W/kg (SAR corrected for target medium)
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.564 W/kg



0 dB = 0.564 W/kg = -2.49 dBW/kg



WCDMA Band IV – Body – Back Face 10 mm – Highest Channel – Plot Nº 13

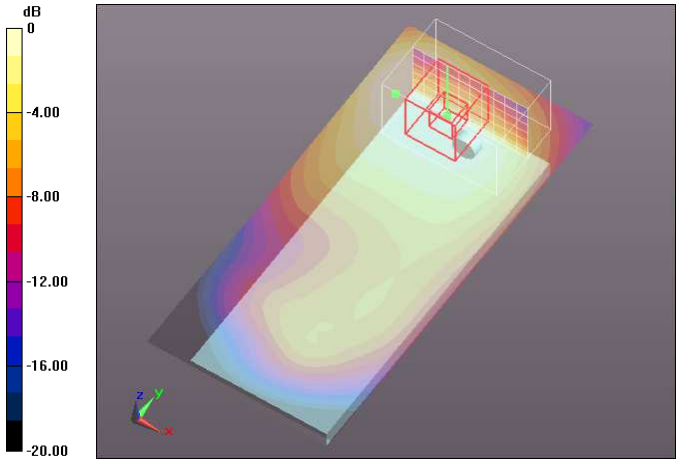
Test Laboratory: AT4 Wireless; Date: 08/05/2015

DUT: YotaPhone2; Type: Handset; Serial: IMEI:356431061029747

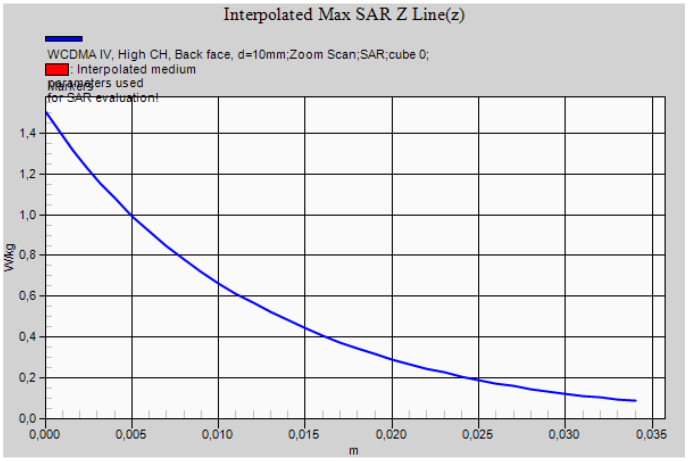
Communication System: UID 10011 - CAB, UMTS-FDD (WCDMA); Frequency: 1752.6 MHz; Duty Cycle: 1:1.95434
Medium parameters used (interpolated): f = 1752.6 MHz; σ = 1.485 S/m; ε_r = 55.855; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY5 Configuration:
- Probe: ES3DV3 - SN3052; ConvF(4.94, 4.94, 4.94); Calibrated: 24/09/2014;
- Sensor-Surface: 3mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 08/07/2014
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1060
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat Phantom Side - 1800 MHz/WCDMA IV, High CH, Back face, d=10mm/Area Scan (81x171x1):
Interpolated grid: dx=1.000 mm, dy=1.000 mm
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 1.17 W/kg

Flat Phantom Side - 1800 MHz/WCDMA IV, High CH, Back face, d=10mm/Zoom Scan (11x8x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 27.05 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 1.51 W/kg
SAR(1 g) = 1.02 W/kg; SAR(10 g) = 0.663 W/kg (SAR corrected for target medium)
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 1.09 W/kg



0 dB = 1.09 W/kg = 0.37 dBW/kg



WCDMA Band IV – Body – Back Face 10 mm – Highest Channel Variability– Plot Nº 14

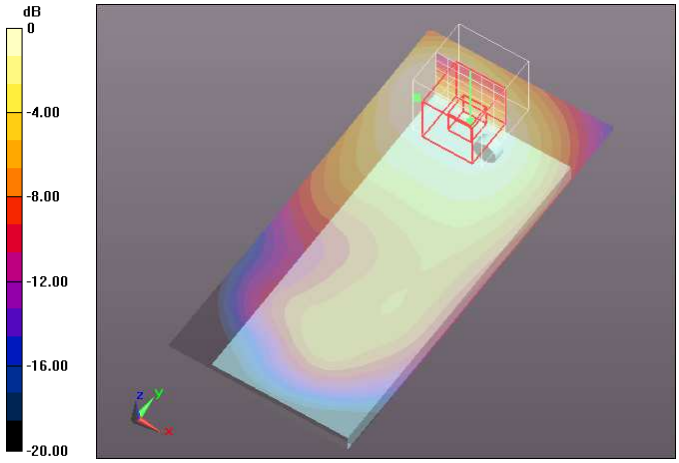
Test Laboratory: AT4 Wireless; Date: 08/05/2015

DUT: YotaPhone2; Type: Handset; Serial: IMEI:356431061029747

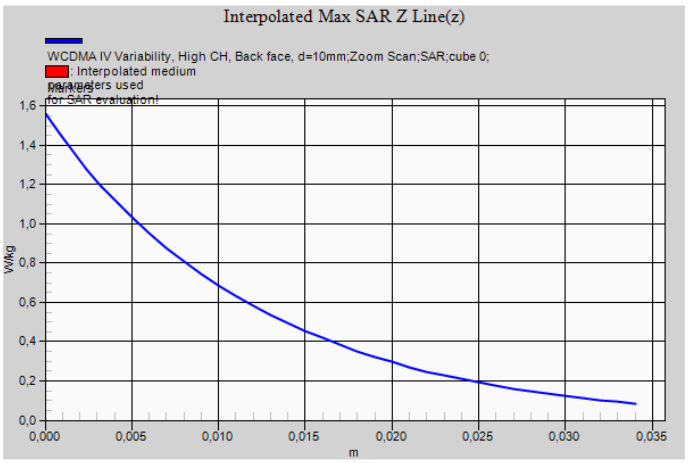
Communication System: UID 10011 - CAB, UMTS-FDD (WCDMA); Frequency: 1752.6 MHz; Duty Cycle: 1:1.95434
Medium parameters used (interpolated): f = 1752.6 MHz; σ = 1.485 S/m; ε_r = 55.855; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY5 Configuration:
- Probe: ES3DV3 - SN3052; ConvF(4.94, 4.94, 4.94); Calibrated: 24/09/2014;
- Sensor-Surface: 3mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 08/07/2014
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1060
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat Phantom Side - 1800 MHz/WCDMA IV Variability, High CH, Back face, d=10mm/Area Scan (81x171x1):
Interpolated grid: dx=1.000 mm, dy=1.000 mm
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 1.22 W/kg

Flat Phantom Side - 1800 MHz/WCDMA IV Variability, High CH, Back face, d=10mm/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 27.72 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 1.56 W/kg
SAR(1 g) = 1.06 W/kg; SAR(10 g) = 0.690 W/kg (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 = 0.53 dBW/kg

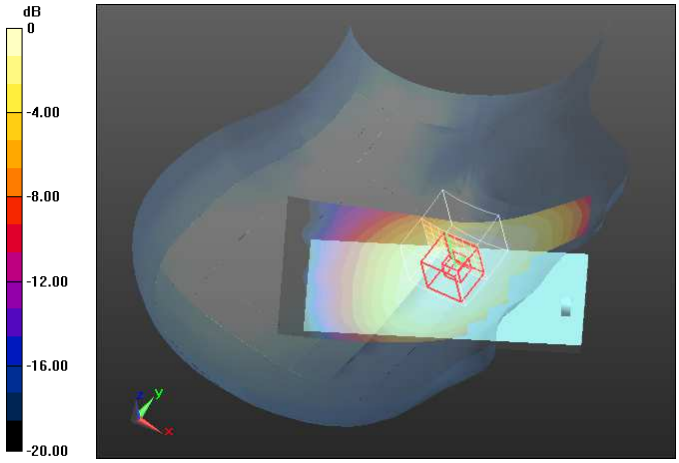


WCDMA Band V – Right hand side – Cheek position – Middle Channel – Plot Nº 15

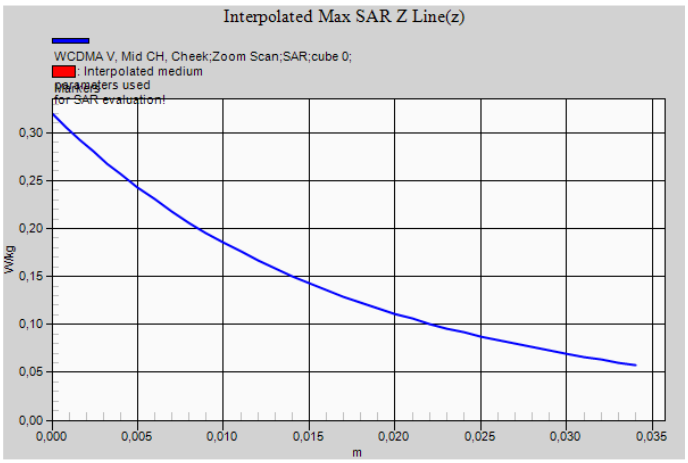
Test Laboratory: AT4 Wireless; Date: 14/05/2015
DUT: YotaPhone2; Type: Handset; Serial: IMEI:356431061029929
Communication System: UID 10011 - CAB, UMTS-FDD (WCDMA); Frequency: 836.6 MHz; Duty Cycle: 1:1.95434
Medium parameters used (interpolated): f = 836.6 MHz; σ = 0.923 S/m; ε_r = 41.748; ρ = 1000 kg/m^3
Phantom section: Right Section
DASY5 Configuration:
- Probe: ES3DV3 - SN3052; ConvF(6.5, 6.5, 6.5); Calibrated: 24/09/2014;
- Sensor-Surface: 3mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 08/07/2014
- Phantom: SAM head-body simulator ; Type: Twin SAM V4.0; Serial: ---
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Right Hand Side - 850 MHz/WCDMA V, Mid CH, Cheek/Area Scan (81x171x1):
Interpolated grid: dx=1.000 mm, dy=1.000 mm
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.283 W/kg

Right Hand Side - 850 MHz/WCDMA V, Mid CH, Cheek/Zoom Scan (8x9x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 4.905 V/m; Power Drift = 0.28 dB
Peak SAR (extrapolated) = 0.320 W/kg
SAR(1 g) = 0.249 W/kg; SAR(10 g) = 0.189 W/kg (SAR corrected for target medium)
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.261 W/kg



0 dB = 0.261 W/kg = -5.83 dBW/kg



WCDMA Band V – Body – Back Face 10 mm – Middle Channel – Plot Nº 16

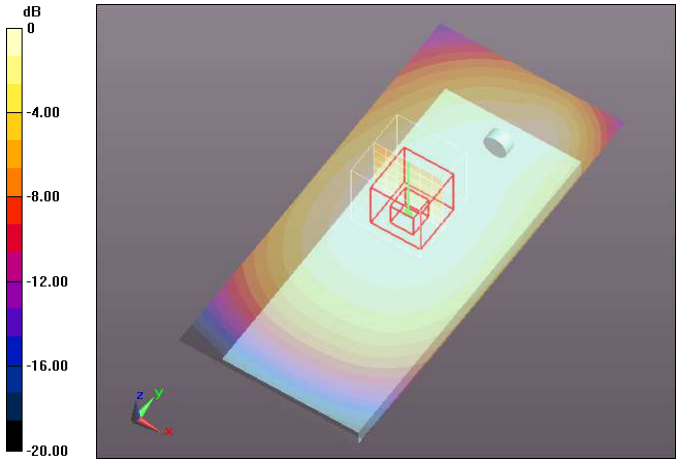
Test Laboratory: AT4 Wireless; Date: 14/05/2015

DUT: YotaPhone2; Type: Handset; Serial: IMEI:356431061029929

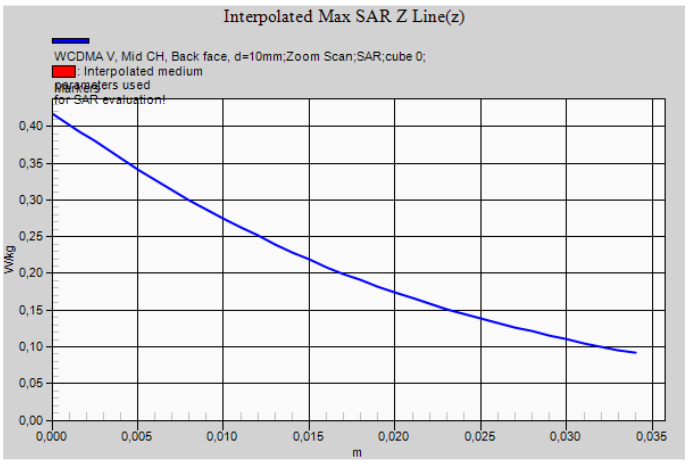
Communication System: UID 10011 - CAB, UMTS-FDD (WCDMA); Frequency: 836.6 MHz; Duty Cycle: 1:1.95434
Medium parameters used (interpolated): f = 836.6 MHz; σ = 0.956 S/m; ε_r = 53.007; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY5 Configuration:
- Probe: ES3DV3 - SN3052; ConvF(6.26, 6.26, 6.26); Calibrated: 24/09/2014;
- Sensor-Surface: 3mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 08/07/2014
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1060
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat Phantom Side - 850 MHz/WCDMA V, Mid CH, Back face, d=10mm/Area Scan (81x171x1):
Interpolated grid: dx=1.000 mm, dy=1.000 mm
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.376 W/kg

Flat Phantom Side - 850 MHz/WCDMA V, Mid CH, Back face, d=10mm/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 19.39 V/m; Power Drift = -0.00 dB
Peak SAR (extrapolated) = 0.418 W/kg
SAR(1 g) = 0.343 W/kg; SAR(10 g) = 0.267 W/kg (SAR corrected for target medium)
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.357 W/kg



0 dB = 0.357 W/kg = -4.47 dBW/kg



LTE Band 2 1RB, 20MHz, QPSK – Right hand side – Cheek position – Highest Channel – Plot Nº17

Test Laboratory: AT4 Wireless; Date: 11/05/2015

DUT: YotaPhone2; Type: Handset; Serial: IMEI:356431061029747

Communication System: UID 10169 - CAB, LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK); Frequency: 1899.9 MHz; Duty Cycle: 1:3.74111

Medium parameters used: f = 1900 MHz; σ = 1.36 S/m; ε_r = 39.24; ρ = 1000 kg/m^3

Phantom section: Right Section

DASY5 Configuration:

- Probe: ES3DV3 - SN3052; ConvF(5.12, 5.12, 5.12); Calibrated: 24/09/2014;
- Sensor-Surface: 3mm (Mechanical Surface Detection), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 08/07/2014
- Phantom: SAM head-body simulator ; Type: Twin SAM V4.0; Serial: ---
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Right Hand Side - 1800 MHz/LTE B2, 1 RB High, High CH, Cheek/Area Scan (81x171x1):

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

Maximum value of SAR (interpolated) = 0.505 W/kg

Right Hand Side - 1800 MHz/LTE B2, 1 RB High, High CH, Cheek/Zoom Scan (8x7x7)/Cube 0:

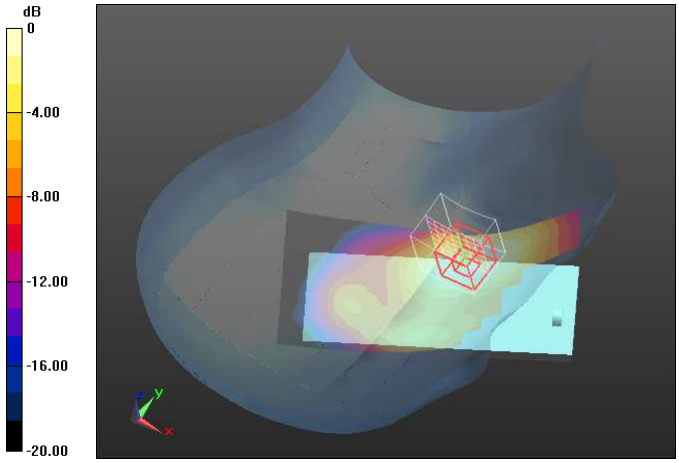
Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 6.711 V/m; Power Drift = 0.26 dB

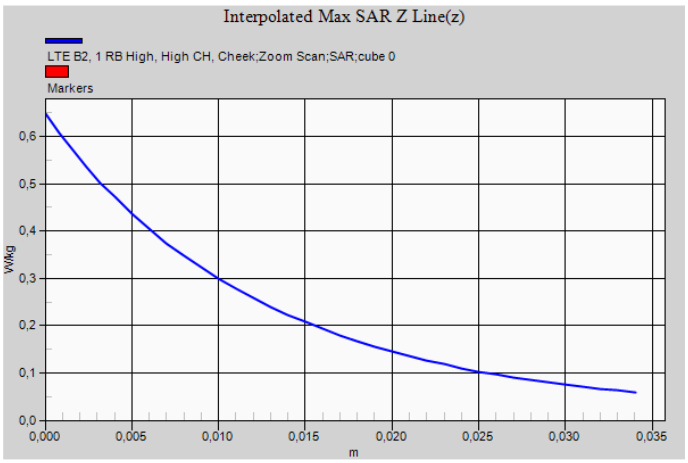
Peak SAR (extrapolated) = 0.648 W/kg

SAR(1 g) = 0.444 W/kg; SAR(10 g) = 0.282 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 0.473 W/kg



0 dB = 0.473 W/kg = -3.25 dBW/kg



LTE Band 2 1RB, 20MHz, QPSK – Body – Back Face 10 mm – Highest Channel – Plot Nº18

Test Laboratory: AT4 Wireless; Date: 12/05/2015

DUT: YotaPhone2; Type: Handset; Serial: IMEI:356431061029929

Communication System: UID 10169 - CAB, LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK); Frequency: 1899.9 MHz; Duty Cycle: 1:3.74111

Medium parameters used: f = 1900 MHz; σ = 1.45 S/m; ε_r = 54.21; ρ = 1000 kg/m^3

Phantom section: Flat Section

DASY5 Configuration:

- Probe: ES3DV3 - SN3052; ConvF(4.71, 4.71, 4.71); Calibrated: 24/09/2014;
- Sensor-Surface: 3mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 08/07/2014
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1060
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat Phantom Side - 1800 MHz/LTE B2, 1 RB High, High CH, Back face, d=10mm/Area Scan (81x171x1):

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

Maximum value of SAR (interpolated) = 0.823 W/kg

Flat Phantom Side - 1800 MHz/LTE B2, 1 RB High, High CH, Back face, d=10mm/Zoom Scan (7x7x7)/Cube 0:

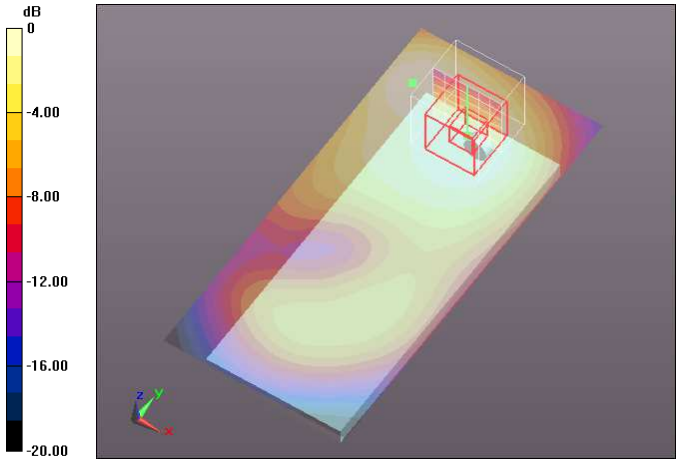
Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 21.94 V/m; Power Drift = -0.09 dB

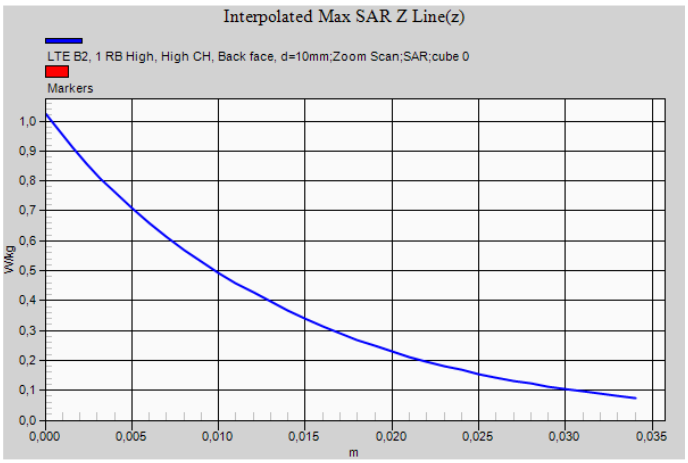
Peak SAR (extrapolated) = 1.02 W/kg

SAR(1 g) = 0.739 W/kg; SAR(10 g) = 0.486 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 0.763 W/kg



0 dB = 0.763 W/kg = -1.17 dBW/kg

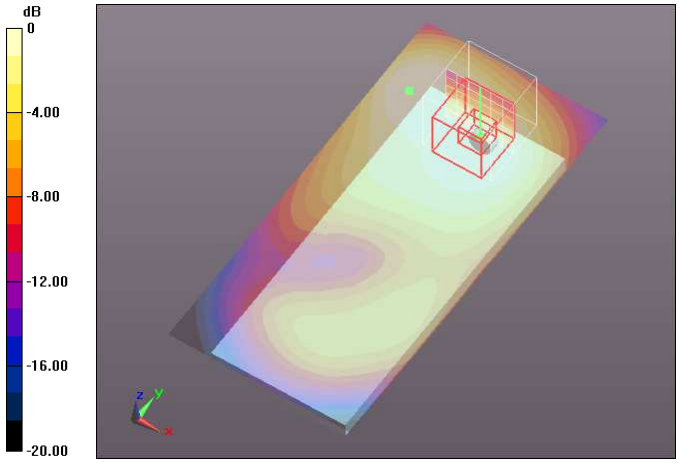


LTE Band 2 1RB, 20MHz, QPSK – Body – Back Face 10 mm – Highest Channel Variability – Plot Nº19

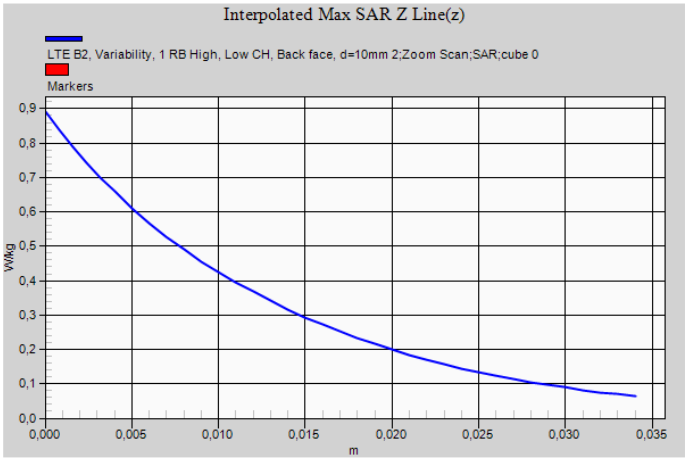
Test Laboratory: AT4 Wireless; Date: 18/05/2015
DUT: YotaPhone2; Type: Handset; Serial: IMEI:356431061029929
Communication System: UID 10169 - CAB, LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK); Frequency: 1899.9 MHz; Duty Cycle: 1:3.74111
Medium parameters used: f = 1900 MHz; σ = 1.47 S/m; ε_r = 54.07; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY5 Configuration:
- Probe: ES3DV3 - SN3052; ConvF(4.71, 4.71, 4.71); Calibrated: 24/09/2014;
- Sensor-Surface: 3mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 08/07/2014
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1060
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat Phantom Side - 1800 MHz/LTE B2, Variability, 1 RB High, Low CH, Back face, d=10mm 2/Area Scan (81x171x1):
Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.706 W/kg

Flat Phantom Side - 1800 MHz/LTE B2, Variability, 1 RB High, Low CH, Back face, d=10mm 2/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 10.85 V/m; Power Drift = 0.07 dB
Peak SAR (extrapolated) = 0.892 W/kg
SAR(1 g) = 0.630 W/kg; SAR(10 g) = 0.416 W/kg (SAR corrected for target medium)
Maximum value of SAR (measured) = 0.659 W/kg



0 dB = 0.659 W/kg = -1.81 dBW/kg



LTE Band 4 1RB, 20MHz, QPSK – Right hand side – Cheek position – Highest Channel – Plot Nº20

Test Laboratory: AT4 Wireless; Date: 07/05/2015

DUT: YotaPhone2; Type: Handset; Serial: IMEI:356431061029747

Communication System: UID 10169 - CAB, LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK); Frequency: 1745 MHz; Duty Cycle: 1:3.74111

Medium parameters used (interpolated): f = 1745 MHz; σ = 1.32 S/m; ε_r = 39.353; ρ = 1000 kg/m^3

Phantom section: Right Section

DASY5 Configuration:

- Probe: ES3DV3 - SN3052; ConvF(5.28, 5.28, 5.28); Calibrated: 24/09/2014;
- Sensor-Surface: 3mm (Mechanical Surface Detection), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 08/07/2014
- Phantom: SAM head-body simulator ; Type: Twin SAM V4.0; Serial: ---
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Right Hand Side - 1800 MHz/LTE B4, 1 RB High, High CH, Cheek/Area Scan (81x171x1):

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

Info: Interpolated medium parameters used for SAR evaluation.

Maximum value of SAR (interpolated) = 0.450 W/kg

Right Hand Side - 1800 MHz/LTE B4, 1 RB High, High CH, Cheek/Zoom Scan (7x7x7)/Cube 0:

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

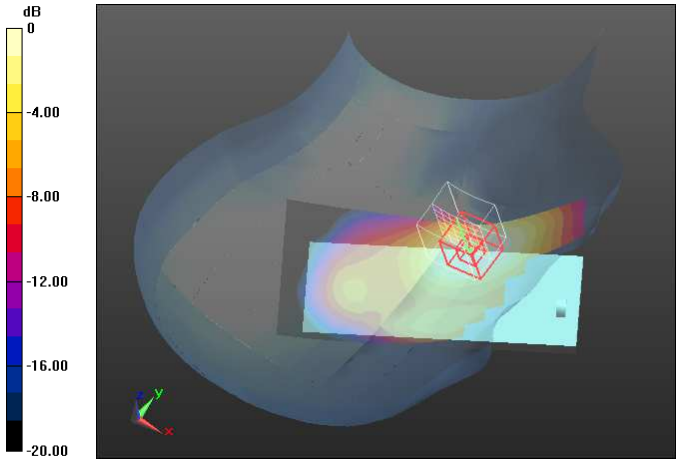
Reference Value = 6.776 V/m; Power Drift = 0.23 dB

Peak SAR (extrapolated) = 0.569 W/kg

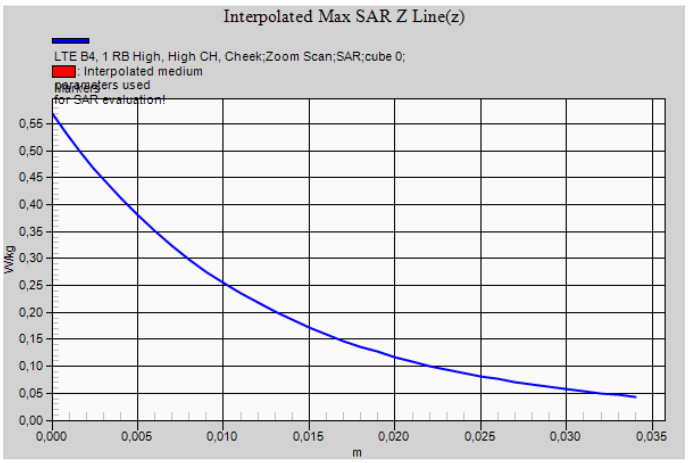
SAR(1 g) = 0.391 W/kg; SAR(10 g) = 0.245 W/kg (SAR corrected for target medium)

Info: Interpolated medium parameters used for SAR evaluation.

Maximum value of SAR (measured) = 0.414 W/kg



0 dB = 0.414 W/kg = -3.83 dBW/kg



LTE Band 4 1RB, 20MHz, QPSK – Body – Back Face 10 mm – Highest Channel – Plot Nº21

Test Laboratory: AT4 Wireless; Date: 08/05/2015

DUT: YotaPhone2; Type: Handset; Serial: IMEI:356431061029747

Communication System: UID 10169 - CAB, LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK); Frequency: 1745 MHz; Duty Cycle: 1:3.74111

Medium parameters used (interpolated): f = 1745 MHz; σ = 1.47 S/m; ε_r = 55.87; ρ = 1000 kg/m^3

Phantom section: Flat Section

DASY5 Configuration:

- Probe: ES3DV3 - SN3052; ConvF(4.94, 4.94, 4.94); Calibrated: 24/09/2014;
- Sensor-Surface: 3mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 08/07/2014
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1060
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat Phantom Side - 1800 MHz/LTE B4, 1 RB High, High CH, Back face, d=10mm/Area Scan (81x171x1):

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

Info: Interpolated medium parameters used for SAR evaluation.

Maximum value of SAR (interpolated) = 1.01 W/kg

Flat Phantom Side - 1800 MHz/LTE B4, 1 RB High, High CH, Back face, d=10mm/Zoom Scan (7x7x7)/Cube 0:

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

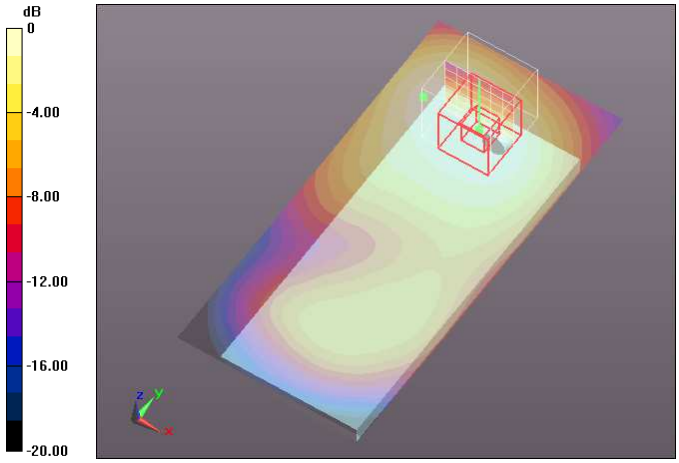
Reference Value = 25.52 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 1.26 W/kg

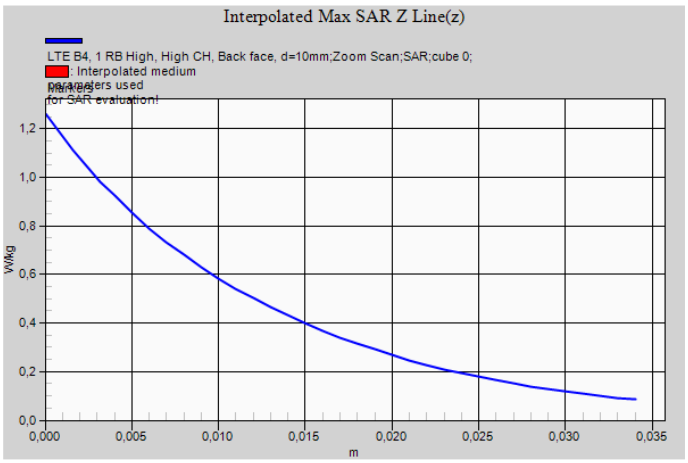
SAR(1 g) = 0.877 W/kg; SAR(10 g) = 0.575 W/kg (SAR corrected for target medium)

Info: Interpolated medium parameters used for SAR evaluation.

Maximum value of SAR (measured) = 0.926 W/kg



0 dB = 0.926 W/kg = -0.33 dBW/kg



LTE Band 4 1RB, 20MHz, QPSK – Body – Back Face 10 mm – Highest Channel Variability– Plot Nº22

Test Laboratory: AT4 Wireless; Date: 08/05/2015

DUT: YotaPhone2; Type: Handset; Serial: IMEI:356431061029747

Communication System: UID 10169 - CAB, LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK); Frequency: 1745 MHz; Duty Cycle: 1:3.74111

Medium parameters used (interpolated): f = 1745 MHz; σ = 1.47 S/m; ε_r = 55.87; ρ = 1000 kg/m^3

Phantom section: Flat Section

DASY5 Configuration:

- Probe: ES3DV3 - SN3052; ConvF(4.94, 4.94, 4.94); Calibrated: 24/09/2014;
- Sensor-Surface: 3mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 08/07/2014
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1060
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat Phantom Side - 1800 MHz/LTE B4 Variability, 1 RB High, High CH, Back face, d=10mm/Area Scan (81x171x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Info: Interpolated medium parameters used for SAR evaluation.

Maximum value of SAR (interpolated) = 0.936 W/kg

Flat Phantom Side - 1800 MHz/LTE B4 Variability, 1 RB High, High CH, Back face, d=10mm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

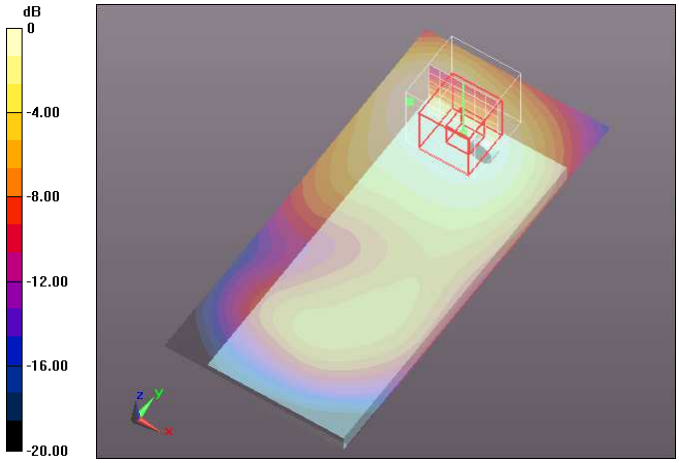
Reference Value = 24.56 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 1.17 W/kg

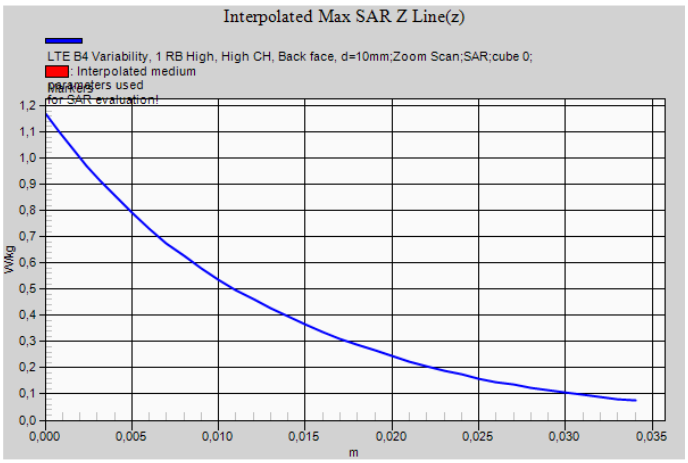
SAR(1 g) = 0.808 W/kg; SAR(10 g) = 0.528 W/kg (SAR corrected for target medium)

Info: Interpolated medium parameters used for SAR evaluation.

Maximum value of SAR (measured) = 0.857 W/kg



0 dB = 0.857 W/kg = -0.67 dBW/kg



LTE Band 5 1RB, 20MHz, QPSK – Right hand side – Cheek position – Middle Channel – Plot Nº23

Test Laboratory: AT4 Wireless; Date: 14/05/2015

DUT: YotaPhone2; Type: Handset; Serial: IMEI:356431061029929

Communication System: UID 10175 - CAB, LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK); Frequency: 836.5 MHz; Duty Cycle: 1:3.7325

Medium parameters used (interpolated): f = 836.5 MHz; σ = 0.923 S/m; ε_r = 41.749; ρ = 1000 kg/m^3

Phantom section: Right Section

DASY5 Configuration:

- Probe: ES3DV3 - SN3052; ConvF(6.5, 6.5, 6.5); Calibrated: 24/09/2014;
- Sensor-Surface: 3mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 08/07/2014
- Phantom: SAM head-body simulator ; Type: Twin SAM V4.0; Serial: ---
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Right Hand Side - 850 MHz/LTE B5, 1 RB Low, Mid CH, Cheek/Area Scan (81x171x1):

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

Info: Interpolated medium parameters used for SAR evaluation.

Maximum value of SAR (interpolated) = 0.211 W/kg

Right Hand Side - 850 MHz/LTE B5, 1 RB Low, Mid CH, Cheek/Zoom Scan (7x8x7)/Cube 0:

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

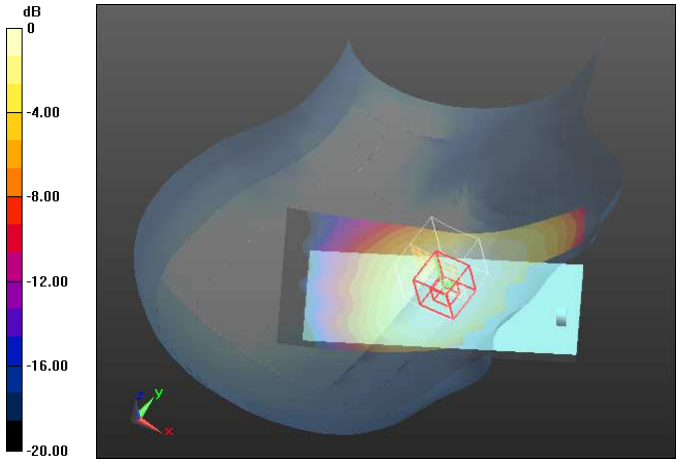
Reference Value = 14.26 V/m; Power Drift = 0.09 dB

Peak SAR (extrapolated) = 0.237 W/kg

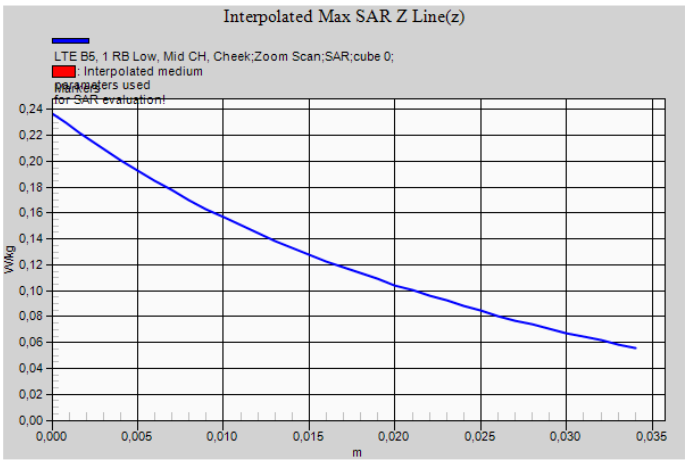
SAR(1 g) = 0.192 W/kg; SAR(10 g) = 0.149 W/kg (SAR corrected for target medium)

Info: Interpolated medium parameters used for SAR evaluation.

Maximum value of SAR (measured) = 0.201 W/kg



0 dB = 0.201 W/kg = -6.97 dBW/kg



LTE Band 5 1RB, 20MHz, QPSK – Body – Back Face 10 mm – Middle Channel – Plot Nº24

Test Laboratory: AT4 Wireless; Date: 14/05/2015

DUT: YotaPhone2; Type: Handset; Serial: IMEI:356431061029929

Communication System: UID 10175 - CAB, LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK); Frequency: 836.5 MHz; Duty Cycle: 1:3.7325

Medium parameters used (interpolated): f = 836.5 MHz; σ = 0.956 S/m; ε_r = 53.008; ρ = 1000 kg/m^3

Phantom section: Flat Section

DASY5 Configuration:

- Probe: ES3DV3 - SN3052; ConvF(6.26, 6.26, 6.26); Calibrated: 24/09/2014;
- Sensor-Surface: 3mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 08/07/2014
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1060
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat Phantom Side - 850 MHz/LTE B5, 1 RB Low, Mid CH, Back face, d=10mm/Area Scan (81x171x1):

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

Info: Interpolated medium parameters used for SAR evaluation.

Maximum value of SAR (interpolated) = 0.320 W/kg

Flat Phantom Side - 850 MHz/LTE B5, 1 RB Low, Mid CH, Back face, d=10mm/Zoom Scan (7x7x7)/Cube 0:

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

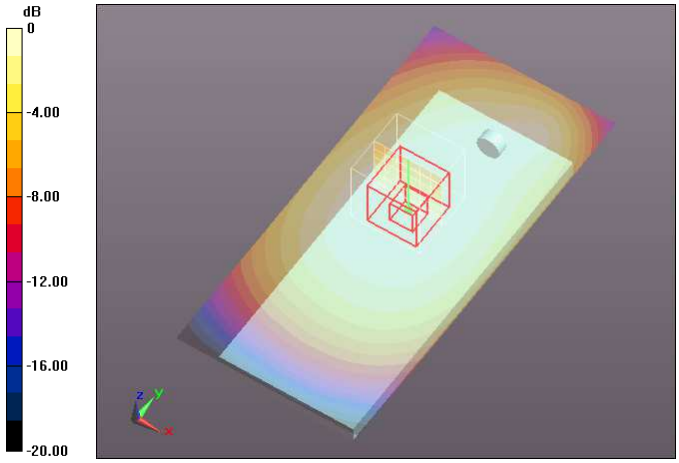
Reference Value = 17.76 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 0.353 W/kg

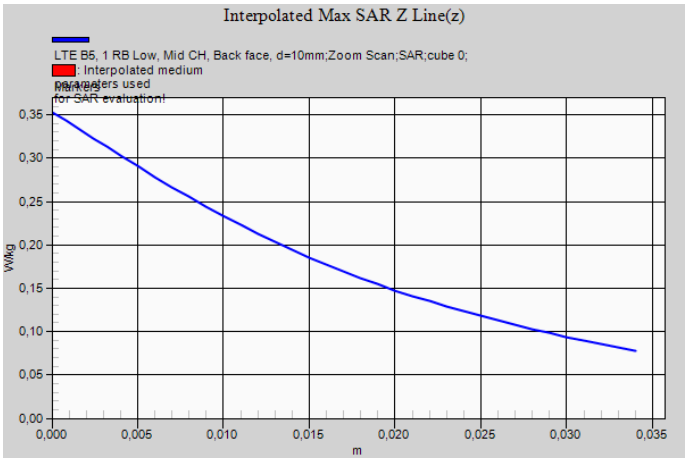
SAR(1 g) = 0.291 W/kg; SAR(10 g) = 0.227 W/kg (SAR corrected for target medium)

Info: Interpolated medium parameters used for SAR evaluation.

Maximum value of SAR (measured) = 0.303 W/kg



0 dB = 0.303 W/kg = -5.19 dBW/kg



LTE Band 7 1RB, 20MHz, QPSK – Left hand side – Cheek position – Lowtest Channel – Plot Nº25

Test Laboratory: AT4 Wireless; Date: 12/05/2015

DUT: YotaPhone2; Type: Handset; Serial: IMEI:356431061029747

Communication System: UID 10169 - CAB, LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK); Frequency: 2510 MHz; Duty Cycle: 1:3.74111

Medium parameters used: f = 2510 MHz; σ = 1.93 S/m; ε_r = 38.11; ρ = 1000 kg/m^3

Phantom section: Left Section

DASY5 Configuration:

- Probe: ES3DV3 - SN3052; ConvF(4.37, 4.37, 4.37); Calibrated: 24/09/2014;
- Sensor-Surface: 3mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 08/07/2014
- Phantom: SAM head-body simulator ; Type: Twin SAM V4.0; Serial: ---
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Left Hand Side - 1800 MHz/LTE B7, 1 RB High, Low CH, Cheek/Area Scan (81x171x1):

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

Maximum value of SAR (interpolated) = 0.660 W/kg

Left Hand Side - 1800 MHz/LTE B7, 1 RB High, Low CH, Cheek/Zoom Scan (7x7x7)/Cube 0:

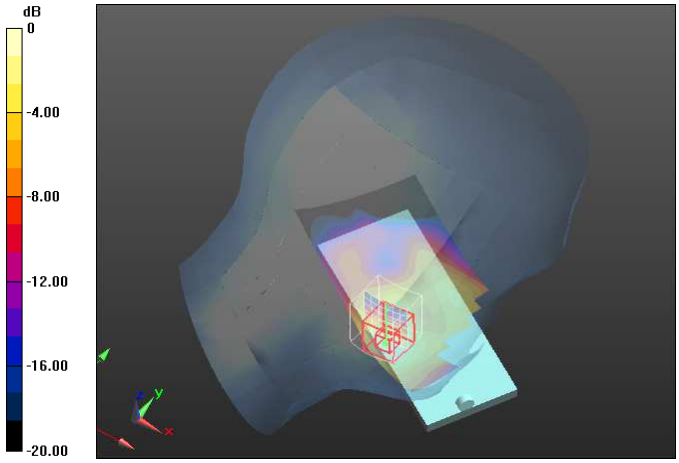
Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 17.26 V/m; Power Drift = 0.06 dB

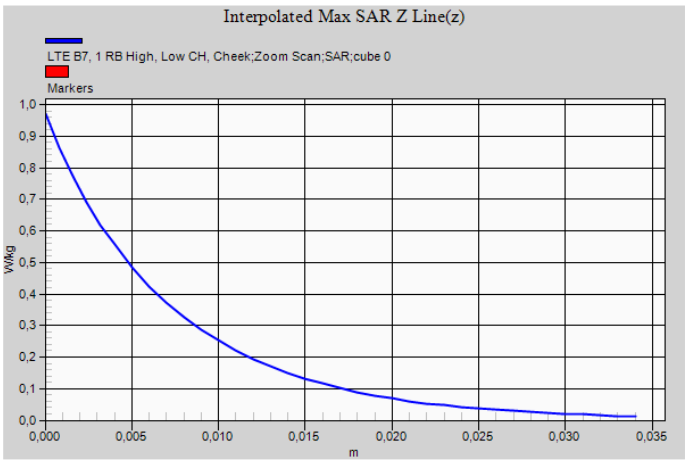
Peak SAR (extrapolated) = 0.972 W/kg

SAR(1 g) = 0.512 W/kg; SAR(10 g) = 0.264 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 0.570 W/kg



0 dB = 0.570 W/kg = -2.44 dBW/kg



LTE Band 7 1RB, 20MHz, QPSK – Body – Back Face 10 mm – Lowest Channel – Plot Nº26

Test Laboratory: AT4 Wireless; Date: 12/05/2015

DUT: YotaPhone2; Type: Handset; Serial: IMEI:356431061029929

Communication System: UID 10169 - CAB, LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK); Frequency: 2510 MHz; Duty Cycle: 1:3.74111

Medium parameters used: f = 2510 MHz; σ = 1.95 S/m; ε_r = 51.26; ρ = 1000 kg/m^3

Phantom section: Flat Section

DASY5 Configuration:

- Probe: ES3DV3 - SN3052; ConvF(4.16, 4.16, 4.16); Calibrated: 24/09/2014;
- Sensor-Surface: 3mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 08/07/2014
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1060
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat Phantom Side - 1800 MHz/LTE B7, 1 RB High, Low CH, Back face, d=10mm/Area Scan (81x171x1):

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

Maximum value of SAR (interpolated) = 1.05 W/kg

Flat Phantom Side - 1800 MHz/LTE B7, 1 RB High, Low CH, Back face, d=10mm/Zoom Scan (7x7x7)/Cube 0:

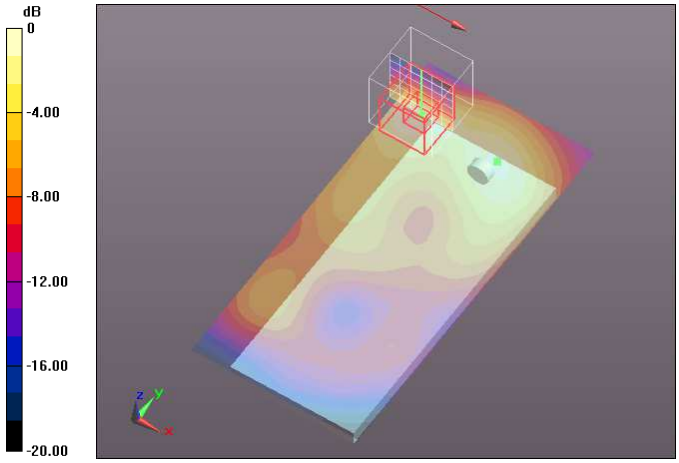
Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 8.315 V/m; Power Drift = 0.17 dB

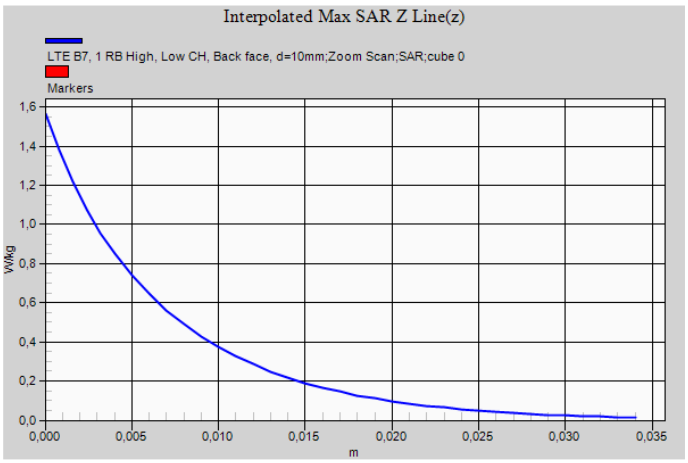
Peak SAR (extrapolated) = 1.57 W/kg

SAR(1 g) = 0.751 W/kg; SAR(10 g) = 0.344 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 0.857 W/kg



0 dB = 0.857 W/kg = -0.67 dBW/kg



LTE Band 12 1RB, 20MHz, QPSK – Right hand side – Cheek position – Middle Channel – Plot Nº27

Test Laboratory: AT4 Wireless; Date: 15/05/2015

DUT: YotaPhone2; Type: Handset; Serial: IMEI:356431061029929

Communication System: UID 10175 - CAB, LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK); Frequency: 707.5 MHz; Duty Cycle: 1:3.7325

Medium parameters used (interpolated): f = 707.5 MHz; σ = 0.87 S/m; ε_r = 41.305; ρ = 1000 kg/m^3

Phantom section: Right Section

DASY5 Configuration:

- Probe: ES3DV3 - SN3052; ConvF(6.73, 6.73, 6.73); Calibrated: 24/09/2014;
- Sensor-Surface: 3mm (Mechanical Surface Detection), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 08/07/2014
- Phantom: SAM head-body simulator ; Type: Twin SAM V4.0; Serial: ---
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Right Hand Side - 750 MHz/LTE B12, 1 RB Low, Mid CH, Cheek/Area Scan (81x171x1):

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

Info: Interpolated medium parameters used for SAR evaluation.

Maximum value of SAR (interpolated) = 0.189 W/kg

Right Hand Side - 750 MHz/LTE B12, 1 RB Low, Mid CH, Cheek/Zoom Scan (7x7x7)/Cube 0:

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

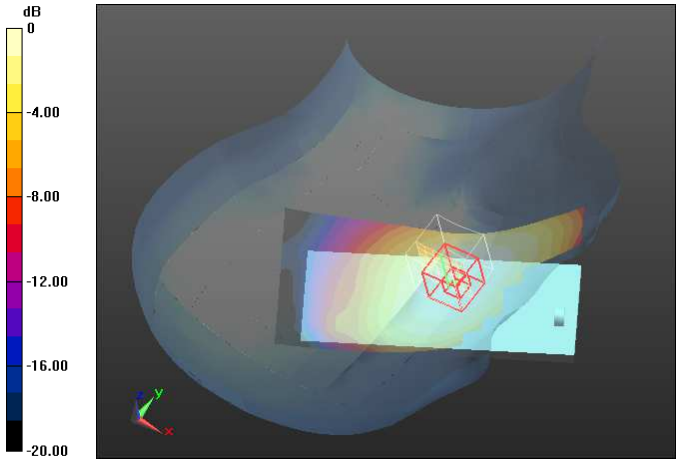
Reference Value = 14.47 V/m; Power Drift = 0.05 dB

Peak SAR (extrapolated) = 0.217 W/kg

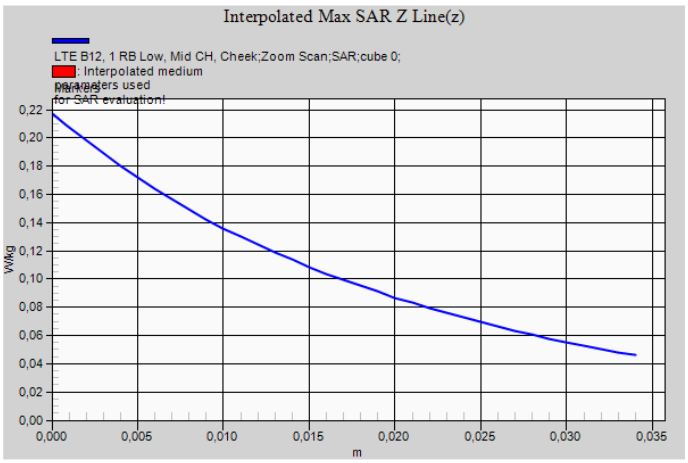
SAR(1 g) = 0.175 W/kg; SAR(10 g) = 0.135 W/kg (SAR corrected for target medium)

Info: Interpolated medium parameters used for SAR evaluation.

Maximum value of SAR (measured) = 0.182 W/kg



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



LTE Band 12 1RB, 20MHz, QPSK – Body – Right Edge 10 mm – Middle Channel – Plot Nº28

Test Laboratory: AT4 Wireless; Date: 15/05/2015

DUT: YotaPhone2; Type: Handset; Serial: IMEI:356431061029929

Communication System: UID 10175 - CAB, LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK); Frequency: 707.5 MHz; Duty Cycle: 1:3.7325

Medium parameters used (interpolated): f = 707.5 MHz; σ = 0.935 S/m; ε_r = 53.44; ρ = 1000 kg/m^3

Phantom section: Flat Section

DASY5 Configuration:

- Probe: ES3DV3 - SN3052; ConvF(6.34, 6.34, 6.34); Calibrated: 24/09/2014;
- Sensor-Surface: 3mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 08/07/2014
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1060
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat Phantom Side - 750 MHz Edges/LTE B12, 1 RB Low, Mid CH, Right Edge, d=10mm/Area Scan (51x171x1):

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

Info: Interpolated medium parameters used for SAR evaluation.

Maximum value of SAR (interpolated) = 0.361 W/kg

Flat Phantom Side - 750 MHz Edges/LTE B12, 1 RB Low, Mid CH, Right Edge, d=10mm/Zoom Scan (7x7x7)/Cube 0:

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

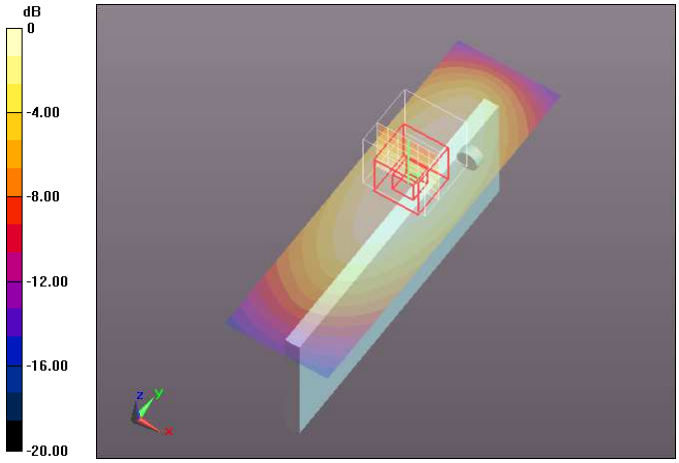
Reference Value = 18.02 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 0.438 W/kg

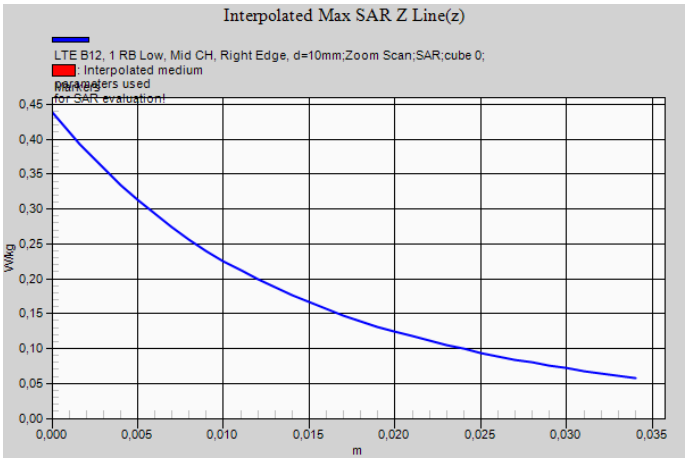
SAR(1 g) = 0.318 W/kg; SAR(10 g) = 0.223 W/kg (SAR corrected for target medium)

Info: Interpolated medium parameters used for SAR evaluation.

Maximum value of SAR (measured) = 0.335 W/kg



0 dB = 0.335 W/kg = -4.75 dBW/kg



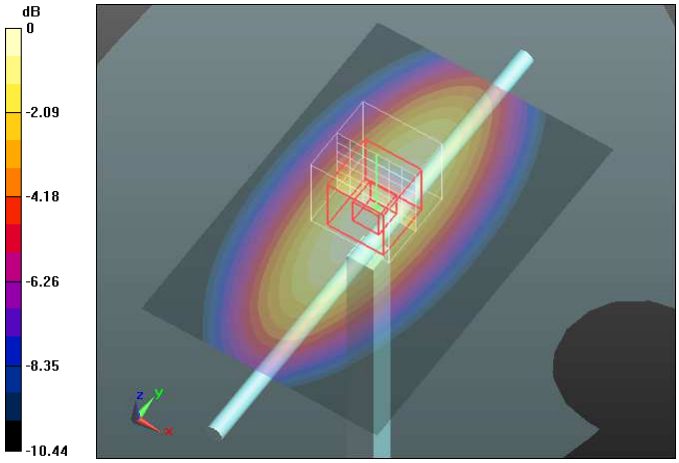
Appendix D – System Validation Reports

Validation results in 750 MHz Band for Head TSL

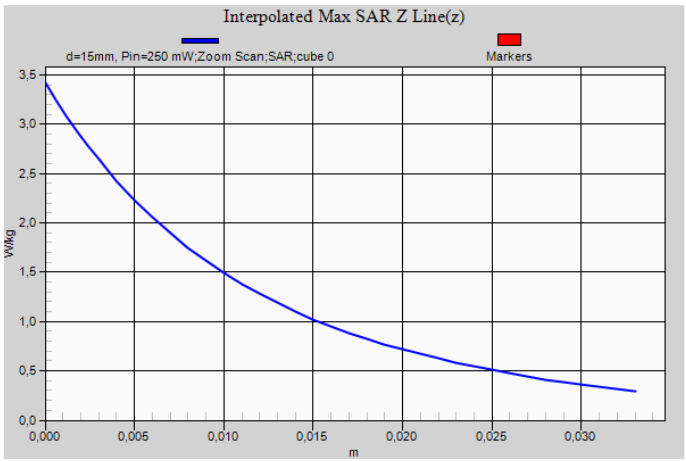
Test Laboratory: AT4 Wireless; Date: 15/05/2015
DUT: Dipole 750 MHz D750V3; Type: D750V3; Serial: D750V3 - SN:1036
Communication System: UID 0, CW (0); Frequency: 750 MHz; Duty Cycle: 1:1
Medium parameters used: f = 750 MHz; σ = 0.93 S/m; ε_r = 40.32; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY5 Configuration:
- Probe: ES3DV3 - SN3052; ConvF(6.73, 6.73, 6.73); Calibrated: 24/09/2014;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 08/07/2014
- Phantom: SAM head-body simulator ; Type: Twin SAM V4.0; Serial: ---
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

System Performance Check with D750V2 Dipole/d=15mm, Pin=250 mW/Area Scan (61x91x1):
Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 2.60 W/kg

System Performance Check with D750V2 Dipole/d=15mm, Pin=250 mW/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 55.00 V/m; Power Drift = -0.05 dB
Peak SAR (extrapolated) = 3.41 W/kg
SAR(1 g) = 2.25 W/kg; SAR(10 g) = 1.47 W/kg (SAR corrected for target medium)
Maximum value of SAR (measured) = 2.64 W/kg



0 dB = 2.64 W/kg = 4.22 dBW/kg

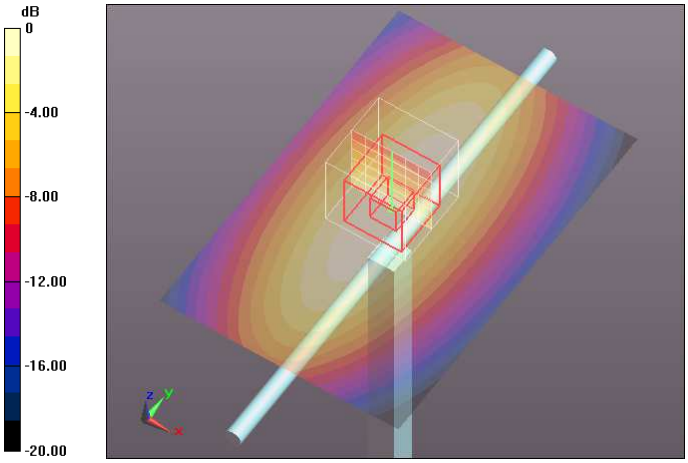


Validation results in 750 MHz Band for Body TSL

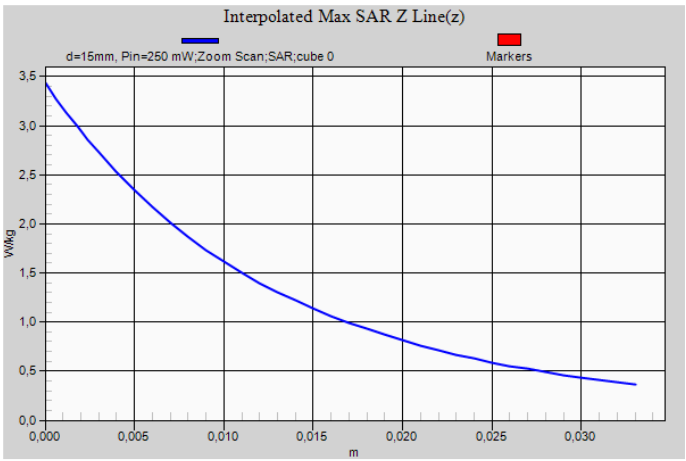
Test Laboratory: AT4 Wireless; Date: 15/05/2015
DUT: Dipole 750 MHz D750V3; Type: D750V3; Serial: D750V3 - SN:1036
Communication System: UID 0, CW (0); Frequency: 750 MHz; Duty Cycle: 1:1
Medium parameters used: f = 750 MHz; σ = 0.98 S/m; εr = 52.9; ρ = 1000 kg/m3
Phantom section: Flat Section
DASY5 Configuration:
- Probe: ES3DV3 - SN3052; ConvF(6.34, 6.34, 6.34); Calibrated: 24/09/2014;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 08/07/2014
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1060
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

System Performance Check with D750V2 Dipole Body/d=15mm, Pin=250 mW/Area Scan (61x91x1):
Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 2.69 W/kg

System Performance Check with D750V2 Dipole Body/d=15mm, Pin=250 mW/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 54.14 V/m; Power Drift = 0.06 dB
Peak SAR (extrapolated) = 3.43 W/kg
SAR(1 g) = 2.34 W/kg; SAR(10 g) = 1.56 W/kg (SAR corrected for target medium)
Maximum value of SAR (measured) = 2.73 W/kg



0 dB = 2.73 W/kg = 4.36 dBW/kg

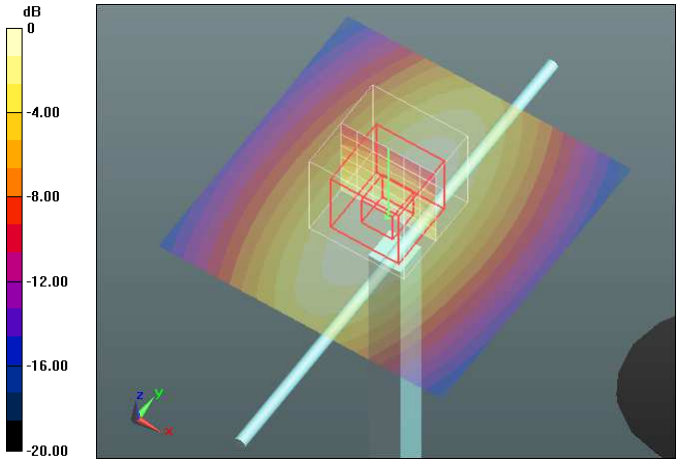


Validation results in 900 MHz Band for Head TSL

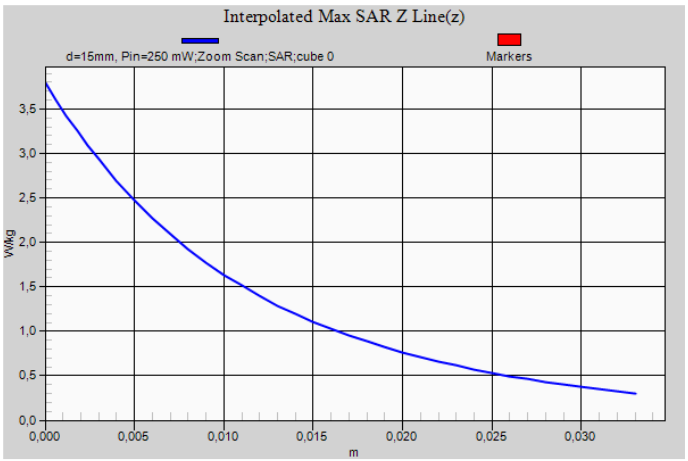
Test Laboratory: AT4 Wireless; Date: 13/05/2015
DUT: Dipole 900 MHz D900V2; Type: D900V2; Serial: D900V2 - SN:1d007
Communication System: UID 0, CW; Frequency: 900 MHz; Duty Cycle: 1:1
Medium parameters used: f = 900 MHz; σ = 0.98 S/m; ε_r = 41.23; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY5 Configuration:
- Probe: ES3DV3 - SN3052; ConvF(6.4, 6.4, 6.4); Calibrated: 24/09/2014;
- Sensor-Surface: 3mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 08/07/2014
- Phantom: SAM head-body simulator ; Type: Twin SAM V4.0; Serial: ---
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

System Performance Check with D900V2 Dipole/d=15mm, Pin=250 mW/Area Scan (61x61x1):
Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 2.92 W/kg

System Performance Check with D900V2 Dipole/d=15mm, Pin=250 mW/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 55.96 V/m; Power Drift = 0.04 dB
Peak SAR (extrapolated) = 3.79 W/kg
SAR(1 g) = 2.48 W/kg; SAR(10 g) = 1.59 W/kg (SAR corrected for target medium)
Maximum value of SAR (measured) = 2.93 W/kg



0 dB = 2.93 W/kg = 4.67 dBW/kg

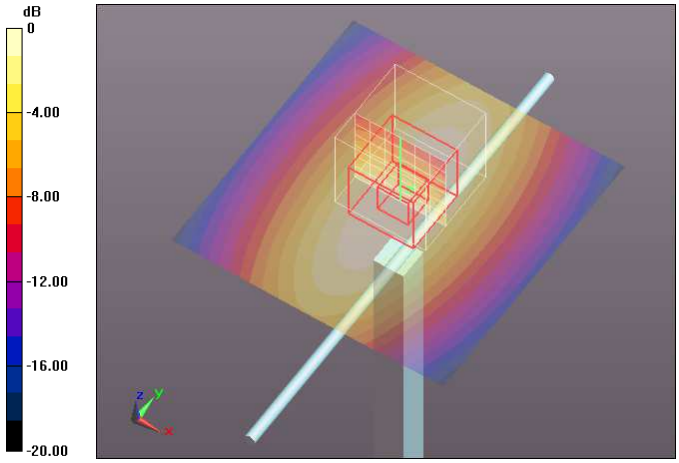


Validation results in 900 MHz Band for Head TSL

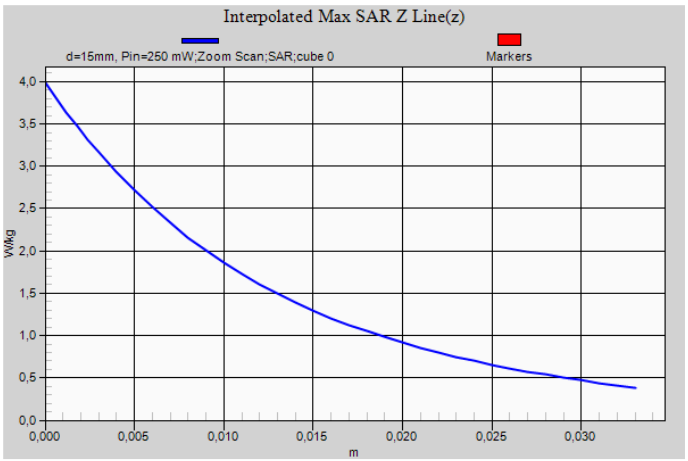
Test Laboratory: AT4 Wireless; Date: 14/05/2015
DUT: Dipole 900 MHz D900V2; Type: D900V2; Serial: D900V2 - SN:1d007
Communication System: UID 0, CW; Frequency: 900 MHz; Duty Cycle: 1:1
Medium parameters used: f = 900 MHz; σ = 1 S/m; ε_r = 52.95; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY5 Configuration:
- Probe: ES3DV3 - SN3052; ConvF(6.14, 6.14, 6.14); Calibrated: 24/09/2014;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 08/07/2014
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1060
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

System Performance Check with D900V2 Dipole Body/d=15mm, Pin=250 mW/Area Scan (61x61x1):
Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 3.17 W/kg

System Performance Check with D900V2 Dipole Body/d=15mm, Pin=250 mW/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 57.86 V/m; Power Drift = 0.04 dB
Peak SAR (extrapolated) = 3.98 W/kg
SAR(1 g) = 2.78 W/kg; SAR(10 g) = 1.81 W/kg (SAR corrected for target medium)
Maximum value of SAR (measured) = 3.16 W/kg



0 dB = 3.16 W/kg = 5.00 dBW/kg

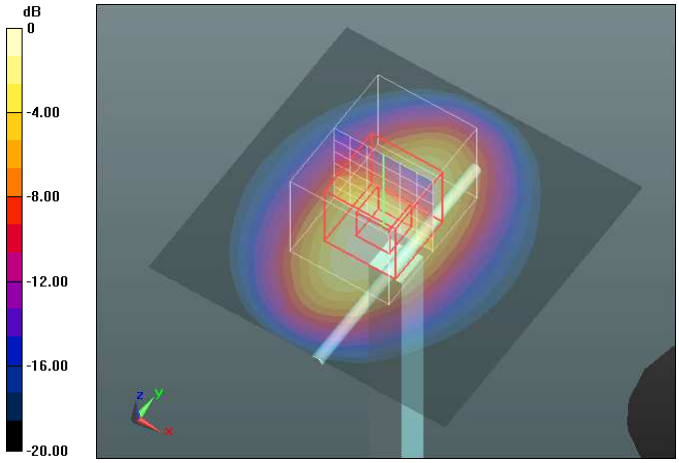


Validation results in 1800 MHz Band for Head TSL

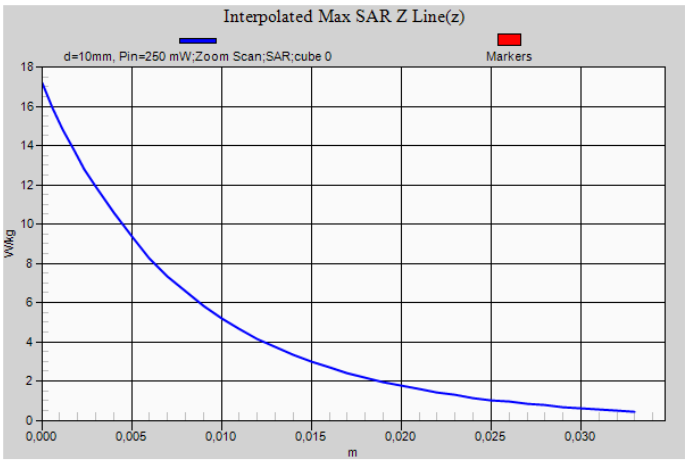
Test Laboratory: AT4 Wireless; Date: 07/05/2015
DUT: Dipole 1800 MHz D1800V2; Type: D1800V2; Serial: D1800V2 - SN:2d099
Communication System: UID 0, CW; Frequency: 1800 MHz; Duty Cycle: 1:1
Medium parameters used: f = 1800 MHz; σ = 1.35 S/m; ε_r = 39.27; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY5 Configuration:
- Probe: ES3DV3 - SN3052; ConvF(5.28, 5.28, 5.28); Calibrated: 24/09/2014;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 08/07/2014
- Phantom: SAM head-body simulator ; Type: Twin SAM V4.0; Serial: ---
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

System Performance Check with D1800V2 Dipole- 07_05_2015/d=10mm, Pin=250 mW/Area Scan (91x91x1):
Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 11.9 W/kg

System Performance Check with D1800V2 Dipole- 07_05_2015/d=10mm, Pin=250 mW/Zoom Scan (7x9x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 94.86 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 17.2 W/kg
SAR(1 g) = 9.49 W/kg; SAR(10 g) = 4.93 W/kg (SAR corrected for target medium)
Maximum value of SAR (measured) = 11.9 W/kg



0 dB = 11.9 W/kg = 10.76 dBW/kg

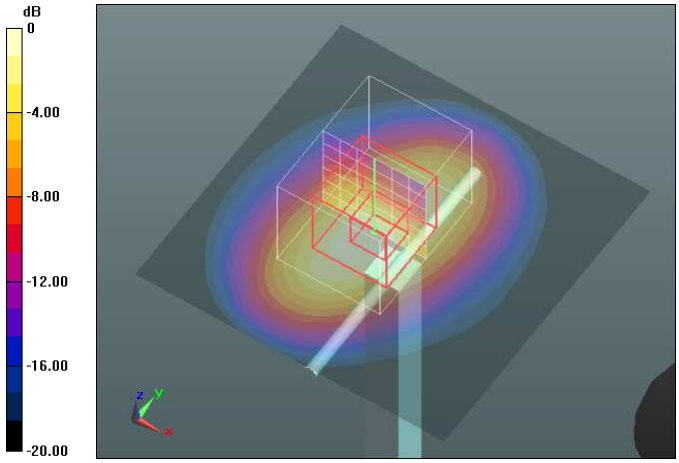


Validation results in 1800 MHz Band for Head TSL

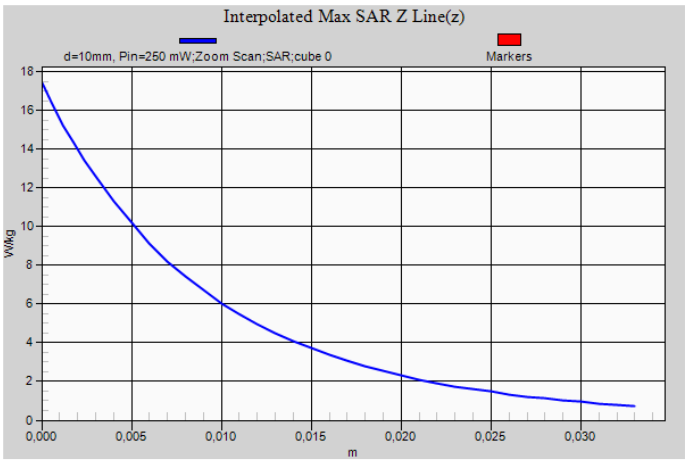
Test Laboratory: AT4 Wireless; Date: 11/05/2015
DUT: Dipole 1800 MHz D1800V2; Type: D1800V2; Serial: D1800V2 - SN:2d099
Communication System: UID 0, CW; Frequency: 1800 MHz; Duty Cycle: 1:1
Medium parameters used: f = 1800 MHz; σ = 1.36 S/m; ε_r = 39.64; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY5 Configuration:
- Probe: ES3DV3 - SN3052; ConvF(5.28, 5.28, 5.28); Calibrated: 24/09/2014;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 08/07/2014
- Phantom: SAM head-body simulator ; Type: Twin SAM V4.0; Serial: ---
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

System Performance Check with D1800V2 Dipole - 11_05_2015/d=10mm, Pin=250 mW/Area Scan (91x91x1):
Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 12.6 W/kg

System Performance Check with D1800V2 Dipole - 11_05_2015/d=10mm, Pin=250 mW/Zoom Scan (7x9x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 95.59 V/m; Power Drift = 0.12 dB
Peak SAR (extrapolated) = 17.4 W/kg
SAR(1 g) = 10.2 W/kg; SAR(10 g) = 5.49 W/kg (SAR corrected for target medium)
Maximum value of SAR (measured) = 12.6 W/kg



0 dB = 12.6 W/kg = 11.00 dBW/kg

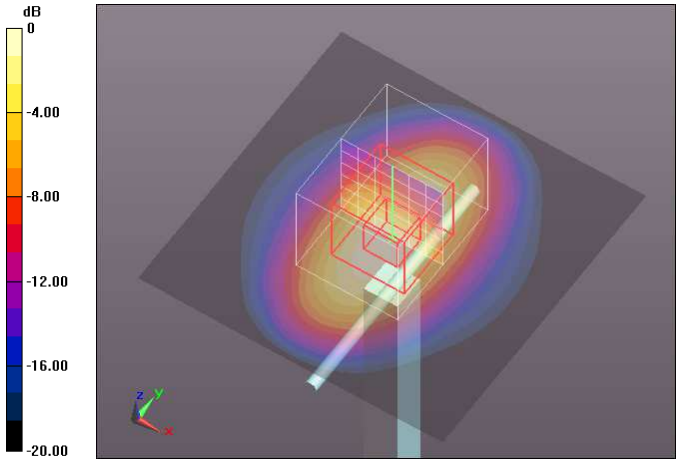


Validation results in 1800 MHz Band for Body TSL

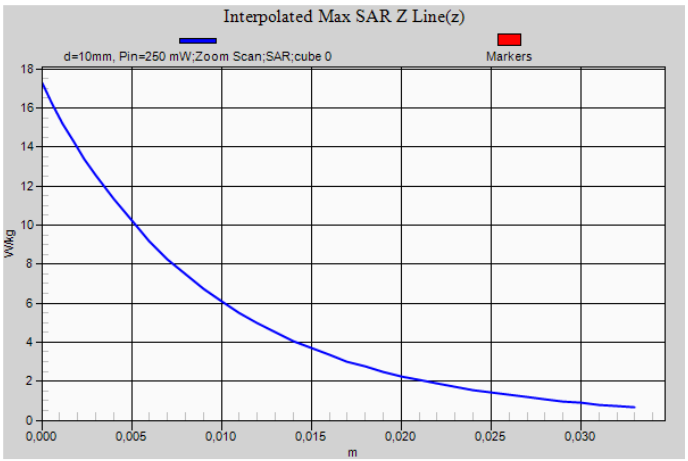
Test Laboratory: AT4 Wireless; Date: 07/05/2015
DUT: Dipole 1800 MHz D1800V2; Type: D1800V2; Serial: D1800V2 - SN:2d099
Communication System: UID 0, CW; Frequency: 1800 MHz; Duty Cycle: 1:1
Medium parameters used: f = 1800 MHz; σ = 1.54 S/m; ε_r = 55.93; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY5 Configuration:
- Probe: ES3DV3 - SN3052; ConvF(4.94, 4.94, 4.94); Calibrated: 24/09/2014;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 08/07/2014
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1060
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

System Performance Check with D1800V2 Dipole Body 07_05_2015 2/d=10mm, Pin=250 mW/Area Scan (91x91x1):
Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 12.8 W/kg

System Performance Check with D1800V2 Dipole Body 07_05_2015 2/d=10mm, Pin=250 mW/Zoom Scan (7x9x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 94.99 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 17.3 W/kg
SAR(1 g) = 10.1 W/kg; SAR(10 g) = 5.37 W/kg (SAR corrected for target medium)
Maximum value of SAR (measured) = 12.6 W/kg



0 dB = 12.6 W/kg = 11.00 dBW/kg

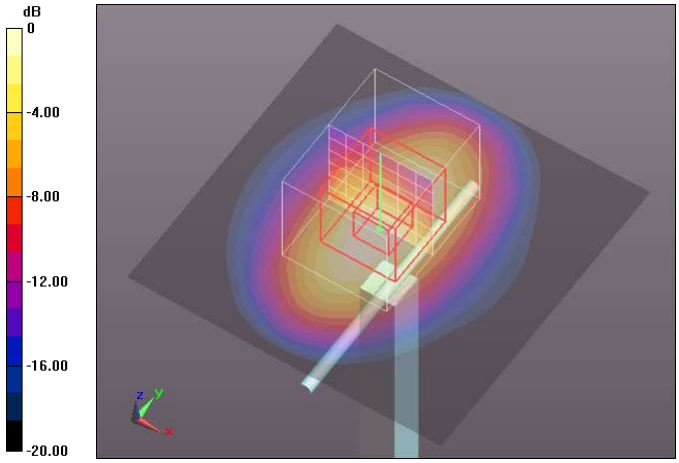


Validation results in 1800 MHz Band for Body TSL

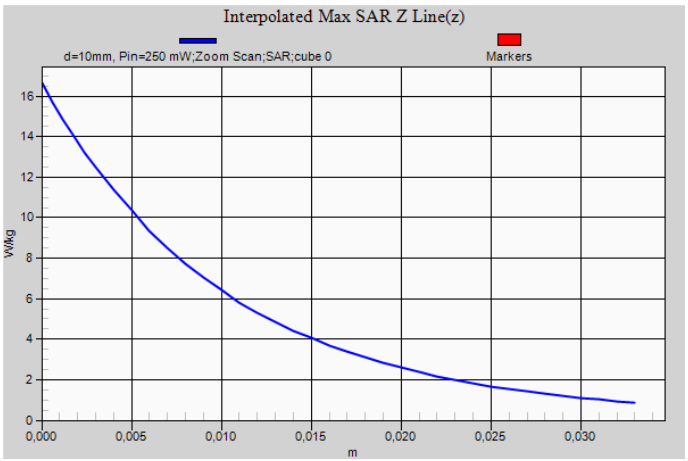
Test Laboratory: AT4 Wireless; Date: 12/05/2015
DUT: Dipole 1800 MHz D1800V2; Type: D1800V2; Serial: D1800V2 - SN:2d099
Communication System: UID 0, CW; Frequency: 1800 MHz; Duty Cycle: 1:1
Medium parameters used: f = 1800 MHz; σ = 1.46 S/m; ε_r = 54.16; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY5 Configuration:
- Probe: ES3DV3 - SN3052; ConvF(4.94, 4.94, 4.94); Calibrated: 24/09/2014;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 08/07/2014
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1060
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

System Performance Check with D1800V2 Dipole Body 12_05_2015 2/d=10mm, Pin=250 mW/Area Scan (91x91x1):
Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 12.6 W/kg

System Performance Check with D1800V2 Dipole Body 12_05_2015 2/d=10mm, Pin=250 mW/Zoom Scan (7x9x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 93.42 V/m; Power Drift = 0.08 dB
Peak SAR (extrapolated) = 16.6 W/kg
SAR(1 g) = 10.3 W/kg; SAR(10 g) = 5.62 W/kg (SAR corrected for target medium)
Maximum value of SAR (measured) = 12.5 W/kg



0 dB = 12.5 W/kg = 10.97 dBW/kg

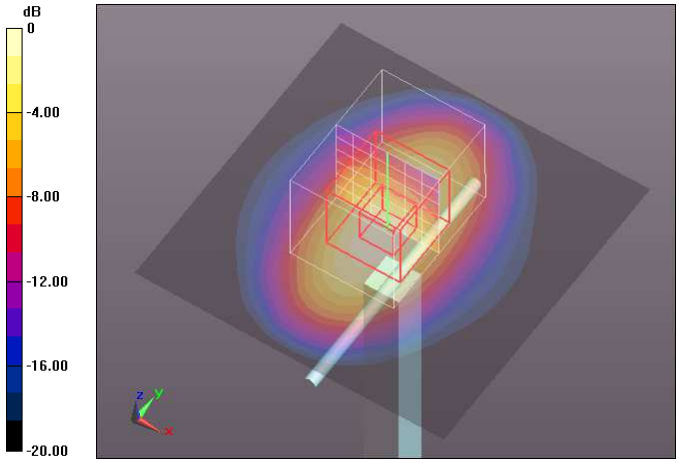


Validation results in 1800 MHz Band for Body TSL

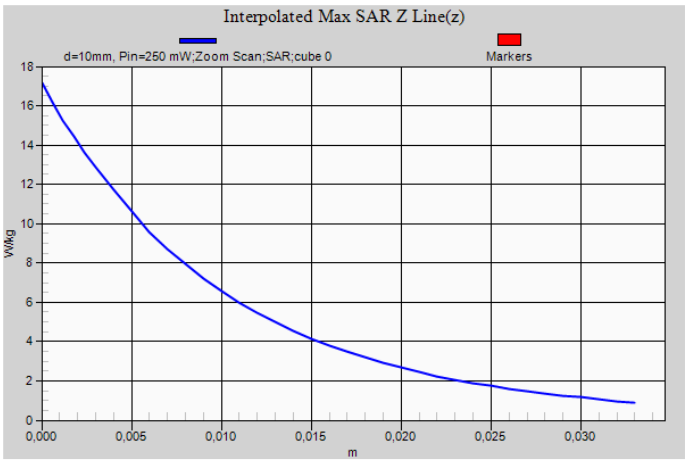
Test Laboratory: AT4 Wireless; Date: 18/05/2015
DUT: Dipole 1800 MHz D1800V2; Type: D1800V2; Serial: D1800V2 - SN:2d099
Communication System: UID 0, CW; Frequency: 1800 MHz; Duty Cycle: 1:1
Medium parameters used: f = 1800 MHz; σ = 1.48 S/m; ε_r = 54.05; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY5 Configuration:
- Probe: ES3DV3 - SN3052; ConvF(4.94, 4.94, 4.94); Calibrated: 24/09/2014;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 08/07/2014
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1060
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

System Performance Check with D1800V2 Dipole Body 18_05_2015/d=10mm, Pin=250 mW/Area Scan (91x91x1):
Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 12.9 W/kg

System Performance Check with D1800V2 Dipole Body 18_05_2015/d=10mm, Pin=250 mW/Zoom Scan (7x9x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 95.05 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 17.1 W/kg
SAR(1 g) = 10.5 W/kg; SAR(10 g) = 5.72 W/kg (SAR corrected for target medium)
Maximum value of SAR (measured) = 12.9 W/kg



0 dB = 12.9 W/kg = 11.11 dBW/kg

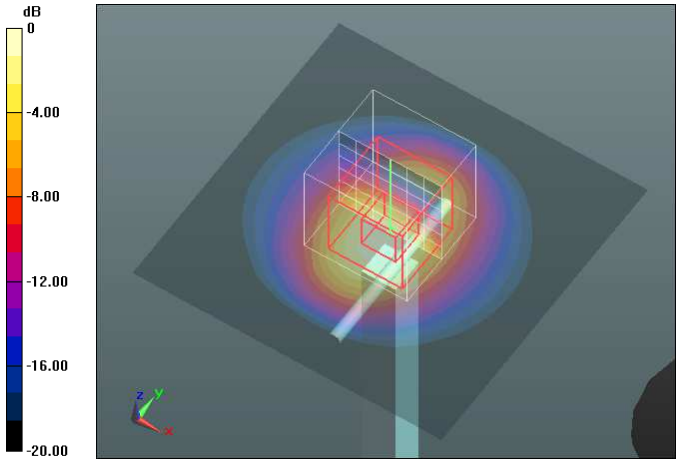


Validation results in 2600 MHz Band for Head TSL

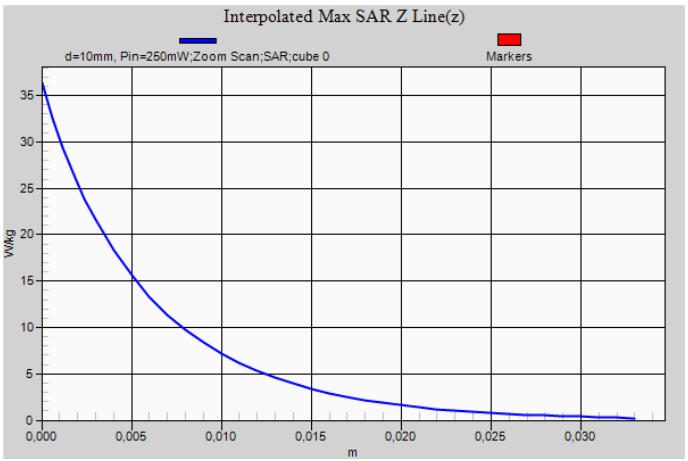
Test Laboratory: AT4 Wireless; Date: 11/05/2015
DUT: Dipole 2600 MHz D2600V2; Type: D2600V2; Serial: D2600V2 - SN:1023
Communication System: UID 0, CW (0); Frequency: 2600 MHz; Duty Cycle: 1:1
Medium parameters used: f = 2600 MHz; σ = 2.02 S/m; ε_r = 37.81; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY5 Configuration:
- Probe: ES3DV3 - SN3052; ConvF(4.37, 4.37, 4.37); Calibrated: 24/09/2014;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 08/07/2014
- Phantom: SAM head-body simulator ; Type: Twin SAM V4.0; Serial: ---
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

System Performance Check with D2600V2 Dipole/d=10mm, Pin=250mW/Area Scan (91x91x1):
Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 21.5 W/kg

System Performance Check with D2600V2 Dipole/d=10mm, Pin=250mW/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 106.9 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 36.3 W/kg
SAR(1 g) = 16 W/kg; SAR(10 g) = 6.98 W/kg (SAR corrected for target medium)
Maximum value of SAR (measured) = 21.6 W/kg



0 dB = 21.6 W/kg = 13.34 dBW/kg

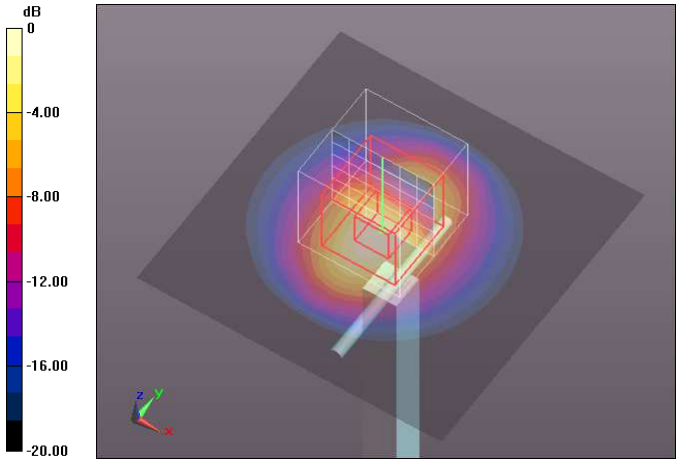


Validation results in 2600 MHz Band for Body TSL

Test Laboratory: AT4 Wireless; Date: 12/05/2015
DUT: Dipole 2600 MHz D2600V2; Type: D2600V2; Serial: D2600V2 - SN:1023
Communication System: UID 0, CW (0); Frequency: 2600 MHz; Duty Cycle: 1:1
Medium parameters used: f = 2600 MHz; σ = 2.09 S/m; ε_r = 51.3; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY5 Configuration:
- Probe: ES3DV3 - SN3052; ConvF(4.16, 4.16, 4.16); Calibrated: 24/09/2014;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 08/07/2014
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1060
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

System Performance Check with D2600V2 Dipole Body/d=10mm, Pin=250mW/Area Scan (91x91x1):
Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 19.6 W/kg

System Performance Check with D2600V2 Dipole Body/d=10mm, Pin=250mW/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 94.40 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 30.8 W/kg
SAR(1 g) = 14.2 W/kg; SAR(10 g) = 6.3 W/kg (SAR corrected for target medium)
Maximum value of SAR (measured) = 18.9 W/kg



0 dB = 18.9 W/kg = 12.76 dBW/kg