Appendix 2. Measurement Methods

A.2.1. Evaluation Procedure

The Specific Absorption Rate (SAR) evaluation was performed in the following manner:

a) (i) The evaluation was performed in an applicable area of the phantom depending on the type of device being tested. For devices worn about the ear during normal operation, both the left and right ear positions were evaluated at the centre frequency of the band at maximum power. The side, which produced the greatest SAR, determined which side of the phantom would be used for the entire evaluation. The positioning of the head worn device relative to the phantom was dictated by the test specification identified in section 3.1 of this report.

(ii) For body worn devices or devices which can be operated within 20 cm of the body, the flat section of the phantom was used. The type of device being evaluated dictated the distance of the EUT to the outer surface of the phantom flat section.

b) The SAR was determined by a pre-defined procedure within the DASY4 software. The exposed region of the phantom was scanned near the inner surface with a grid spacing of 20mm x 20mm or appropriate resolution.

c) A 7x7x7 matrix was performed around the greatest spatial SAR distribution found during the area scan of the applicable exposed region. SAR values were then calculated using a 3-D spline interpolation algorithm and averaged over spatial volumes of 1 and 10 grams.

d) If the EUT had any appreciable drift over the course of the evaluation, then the EUT was re-evaluated. Any unusual anomalies over the course of the test also warranted a re-evaluation.

A.2.2. Specific Absorption Rate (SAR) Measurements to OET Bulletin 65 Supplement C: (2001-01)

Evaluating Compliance with FCC Guidelines for Human Exposure to Radio Frequency Electromagnetic Fields

SAR measurements were performed in accordance with Appendix D of the standard FCC OET Bulletin 65 Supplement C: 2001, against appropriate limits for each measurement position in accordance with the standard.

The test was performed in a shielded enclosure with the temperature controlled to remain between +18.0ºC and +25.0ºC. The tissue equivalent material fluid temperature was controlled to give a maximum variation of ± 2.0ºC

Prior to any SAR measurements on the EUT, system validation and material dielectric property measurements were conducted. In the absence of a detailed procedure within the specification, system validation and material dielectric property measurements were performed in accordance with Appendix C and Appendix D of FCC OET Bulletin 65 Supplement C: 2001.

Following the successful system validation and material dielectric property measurements, a SAR versus time sweep shall be performed within 10 mm of the phantom inner surface. If the EUT power output is stable after three minutes then the measurement probe will perform a coarse surface level scan at each test position in order to ascertain the location of the maximum local SAR level. Once this area had been established, a 7x7x7 cube of 343 points (5 mm spacing in each axis ≈ 27g) will be centred at the area of concern. Extrapolation and interpolation will then be carried out on the 27g of tissue and the highest averaged SAR over a 10g cube determined.

Once the maximum interpolated SAR measurement is complete; the coarse scan is visually assessed to check for secondary peaks within 50% of the maximum SAR level. If there are any further SAR measurements required, extra 7x7x7 cubes shall be centred on each of these extra local SAR maxima.

At the end of each position test case a second time sweep shall be performed to check whether the EUT has remained stable throughout the test.

Appendix 3. SAR Distribution Scans

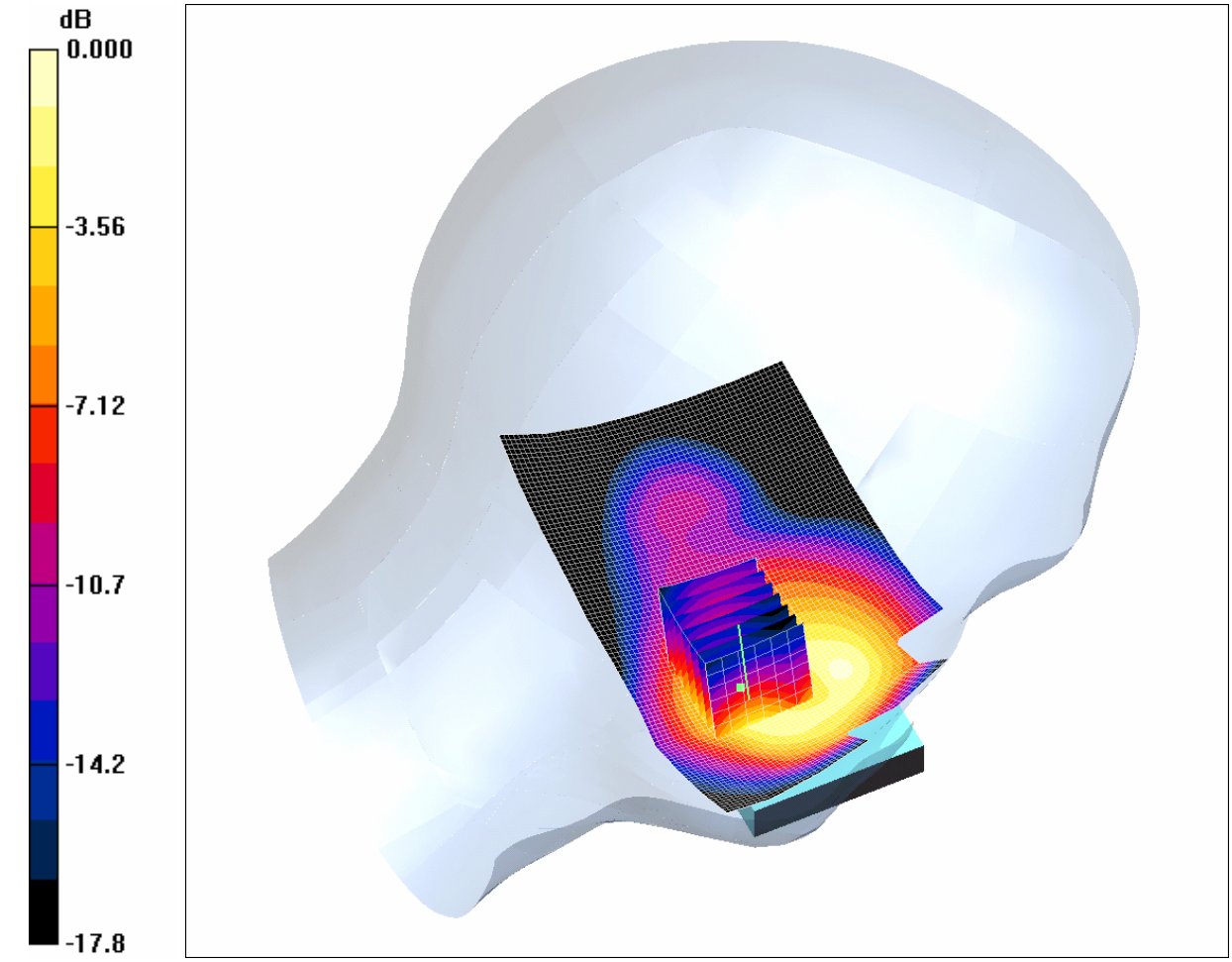
This appendix contains SAR distribution scans which are not included in the total number of pages for this report.

Scan Reference Number	Title
SCN/49249JD01/001	Touch Left CH660
SCN/49249JD01/002	Tilt Left CH660
SCN/49249JD01/003	Touch Right CH660
SCN/49249JD01/004	Tilt Right CH660
SCN/49249JD01/005	Touch Right CH512
SCN/49249JD01/006	Touch Right CH810
SCN/49249JD01/007	Front Of EUT Facing Phantom Flat Section With 15mm Separation PCS1900 CH660
SCN/49249JD01/008	Front Of EUT Facing Phantom Flat Section With 15mm Separation GPRS CH660
SCN/49249JD01/009	Rear Of EUT Facing Phantom Flat Section With 15mm Separation GPRS CH660
SCN/49249JD01/010	System Performance Check 08 06 07

Test of: Wiz4com Technologies SAS
CT9A9W

To: OET Bulletin 65 Supplement C:2001-01 / IEEE Std 1528 - 2003

Date: 08/06/2007
001 Touch Left CH660
DUT: PHILIPS; Type: xenium CT9A9W; Serial: 358233000053673



0 dB = 0.529mW/g

Communication System: PCS 1900; Frequency: 1879.8 MHz; Duty Cycle: 1:8.3
Medium: 1900 MHz HSL Medium parameters used (interpolated): f = 1879.8 MHz; σ = 1.43 mho/m; ε_r = 40.8; ρ = 1000 kg/m^3
Phantom section: Left Section
DASY4 Configuration:
- Probe: ET3DV6 - SN1529; ConvF(4.87, 4.87, 4.87); Calibrated: 30/08/2006
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn394; Calibrated: 19/05/2006
- Phantom: SAM 12a; Type: SAM 4.0; Serial: TP:1193
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

Touch Left - High/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

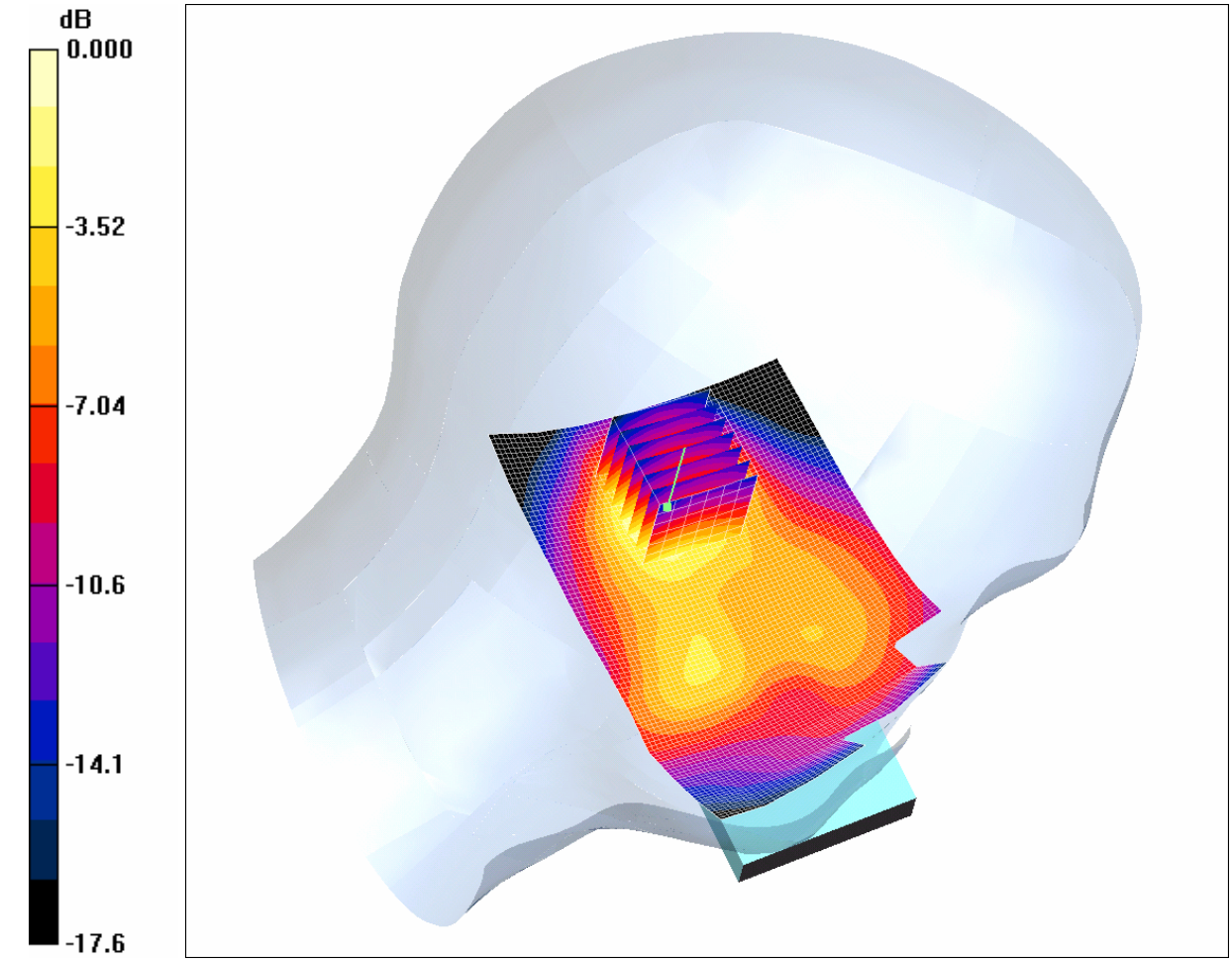
Maximum value of SAR (interpolated) = 0.517 mW/g

Touch Left - High/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 6.26 V/m; Power Drift = -0.020 dB
Peak SAR (extrapolated) = 0.784 W/kg
SAR(1 g) = 0.464 mW/g; SAR(10 g) = 0.254 mW/g
Maximum value of SAR (measured) = 0.529 mW/g

Test of: Wiz4com Technologies SAS
CT9A9W

To: OET Bulletin 65 Supplement C:2001-01 / IEEE Std 1528 - 2003

Date: 08/06/2007
002 Tilt Left CH660
DUT: PHILIPS; Type: xenium CT9A9W; Serial: 358233000053673



0 dB = 0.108mW/g

Communication System: PCS 1900; Frequency: 1879.8 MHz; Duty Cycle: 1:8.3
Medium: 1900 MHz HSL Medium parameters used (interpolated): f = 1879.8 MHz; σ = 1.43 mho/m; ε_r = 40.8; ρ = 1000 kg/m^3
Phantom section: Left Section
DASY4 Configuration:
- Probe: ET3DV6 - SN1529; ConvF(4.87, 4.87, 4.87); Calibrated: 30/08/2006
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn394; Calibrated: 19/05/2006
- Phantom: SAM 12a; Type: SAM 4.0; Serial: TP:1193
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

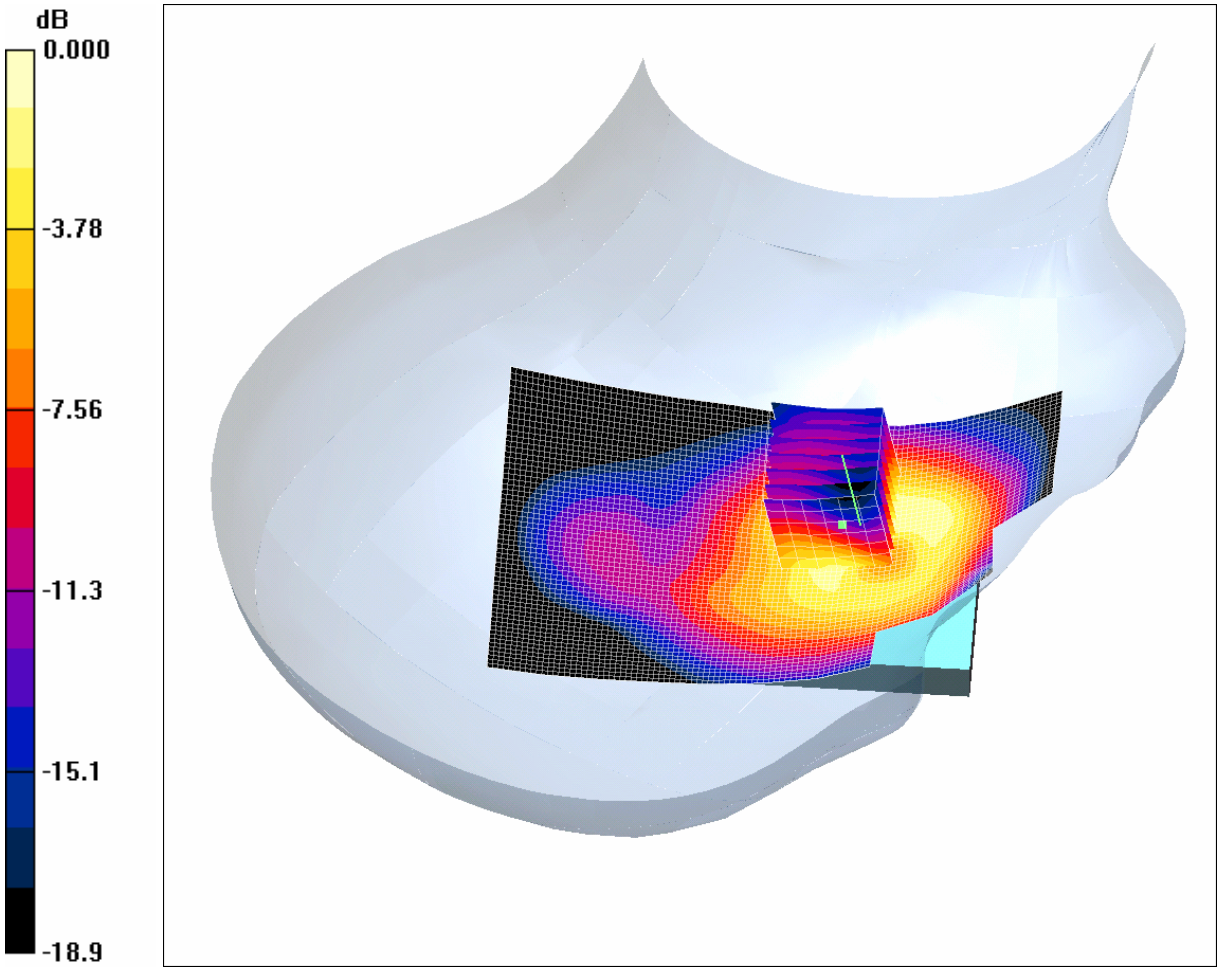
Tilt Left - Middle/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.115 mW/g

Tilt Left - Middle/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 9.29 V/m; Power Drift = 0.007 dB
Peak SAR (extrapolated) = 0.145 W/kg
SAR(1 g) = 0.098 mW/g; SAR(10 g) = 0.058 mW/g
Maximum value of SAR (measured) = 0.108 mW/g

Test of: Wiz4com Technologies SAS
CT9A9W

To: OET Bulletin 65 Supplement C:2001-01 / IEEE Std 1528 - 2003

Date: 08/06/2007
003 Touch Right CH660
DUT: PHILIPS; Type: xenium CT9A9W; Serial: 358233000053673



0 dB = 0.617mW/g

Communication System: PCS 1900; Frequency: 1879.8 MHz; Duty Cycle: 1:8.3
Medium: 1900 MHz HSL Medium parameters used (interpolated): f = 1879.8 MHz; σ = 1.43 mho/m; ε_r = 40.8; ρ = 1000 kg/m^3
Phantom section: Right Section
DASY4 Configuration:
- Probe: ET3DV6 - SN1529; ConvF(4.87, 4.87, 4.87); Calibrated: 30/08/2006
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn394; Calibrated: 19/05/2006
- Phantom: SAM 12a; Type: SAM 4.0; Serial: TP:1193
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

Touch Right - Middle/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

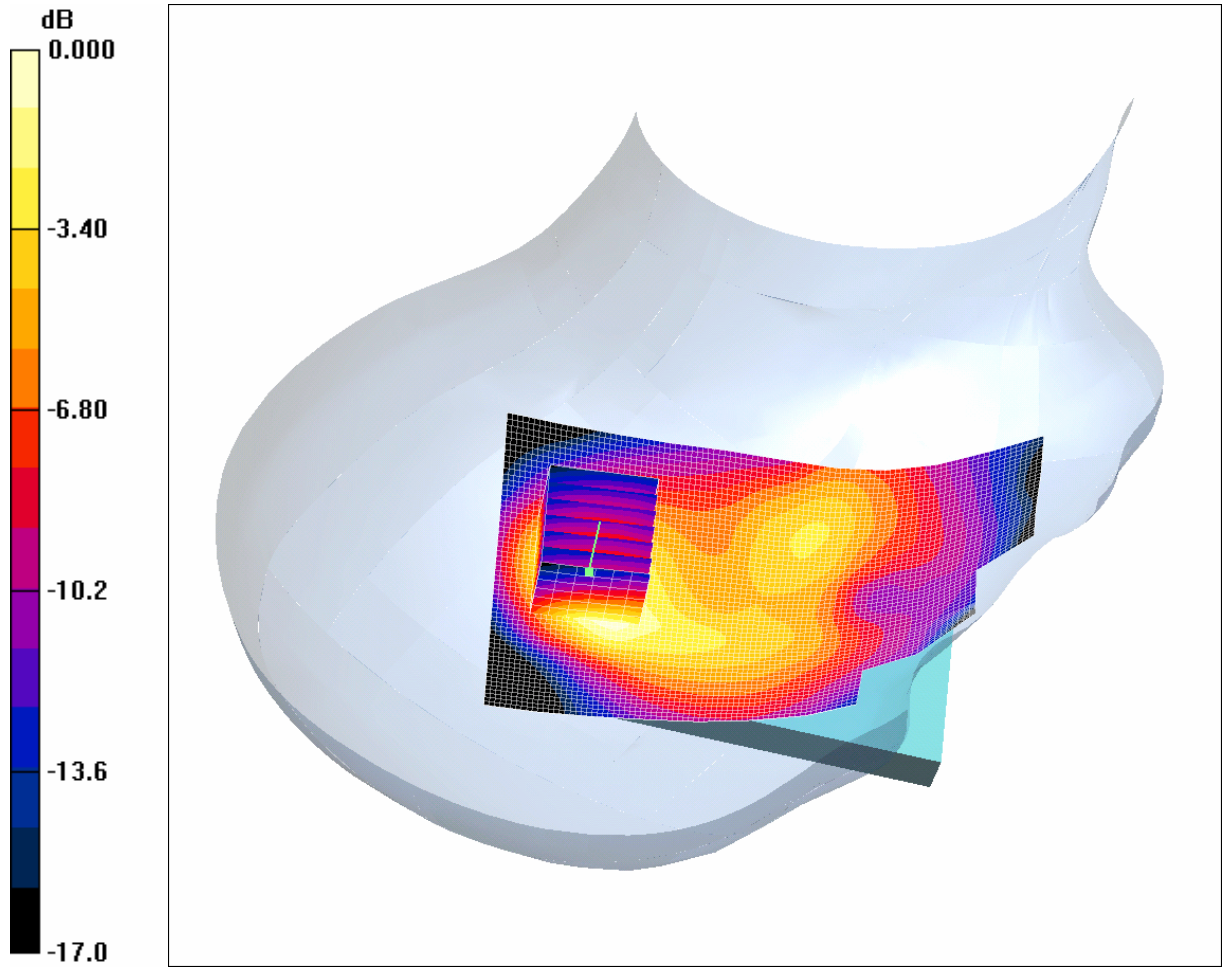
Maximum value of SAR (interpolated) = 0.628 mW/g

Touch Right - Middle/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 6.44 V/m; Power Drift = -0.009 dB
Peak SAR (extrapolated) = 0.882 W/kg
SAR(1 g) = 0.552 mW/g; SAR(10 g) = 0.301 mW/g
Maximum value of SAR (measured) = 0.617 mW/g

Test of: Wiz4com Technologies SAS
CT9A9W

To: OET Bulletin 65 Supplement C:2001-01 / IEEE Std 1528 - 2003

Date: 08/06/2007
004 Tilt Right CH660
DUT: PHILIPS; Type: xenium CT9A9W; Serial: 358233000053673



0 dB = 0.112mW/g

Communication System: PCS 1900; Frequency: 1879.8 MHz; Duty Cycle: 1:8.3
Medium: 1900 MHz HSL Medium parameters used (interpolated): f = 1879.8 MHz; σ = 1.43 mho/m; ε_r = 40.8; ρ = 1000 kg/m^3
Phantom section: Right Section
DASY4 Configuration:
- Probe: ET3DV6 - SN1529; ConvF(4.87, 4.87, 4.87); Calibrated: 30/08/2006
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn394; Calibrated: 19/05/2006
- Phantom: SAM 12a; Type: SAM 4.0; Serial: TP:1193
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

Tilt Right - Middle/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

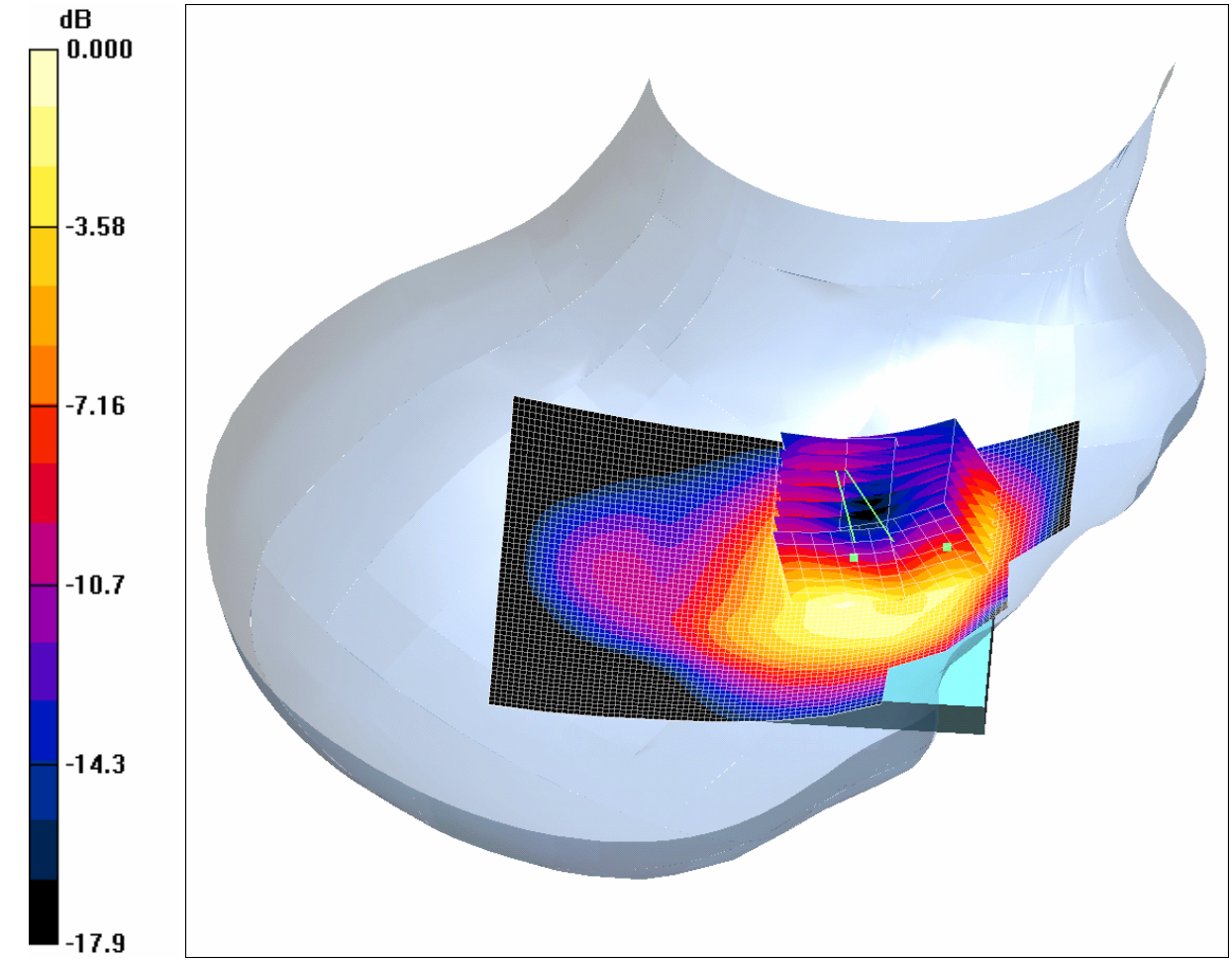
Maximum value of SAR (interpolated) = 0.117 mW/g

Tilt Right - Middle/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 9.39 V/m; Power Drift = -0.061 dB
Peak SAR (extrapolated) = 0.149 W/kg
SAR(1 g) = 0.101 mW/g; SAR(10 g) = 0.060 mW/g
Maximum value of SAR (measured) = 0.112 mW/g

Test of: Wiz4com Technologies SAS
CT9A9W

To: OET Bulletin 65 Supplement C:2001-01 / IEEE Std 1528 - 2003

Date: 08/06/2007
005 Touch Right CH512
DUT: PHILIPS; Type: xenium CT9A9W; Serial: 358233000053673



0 dB = 0.557mW/g

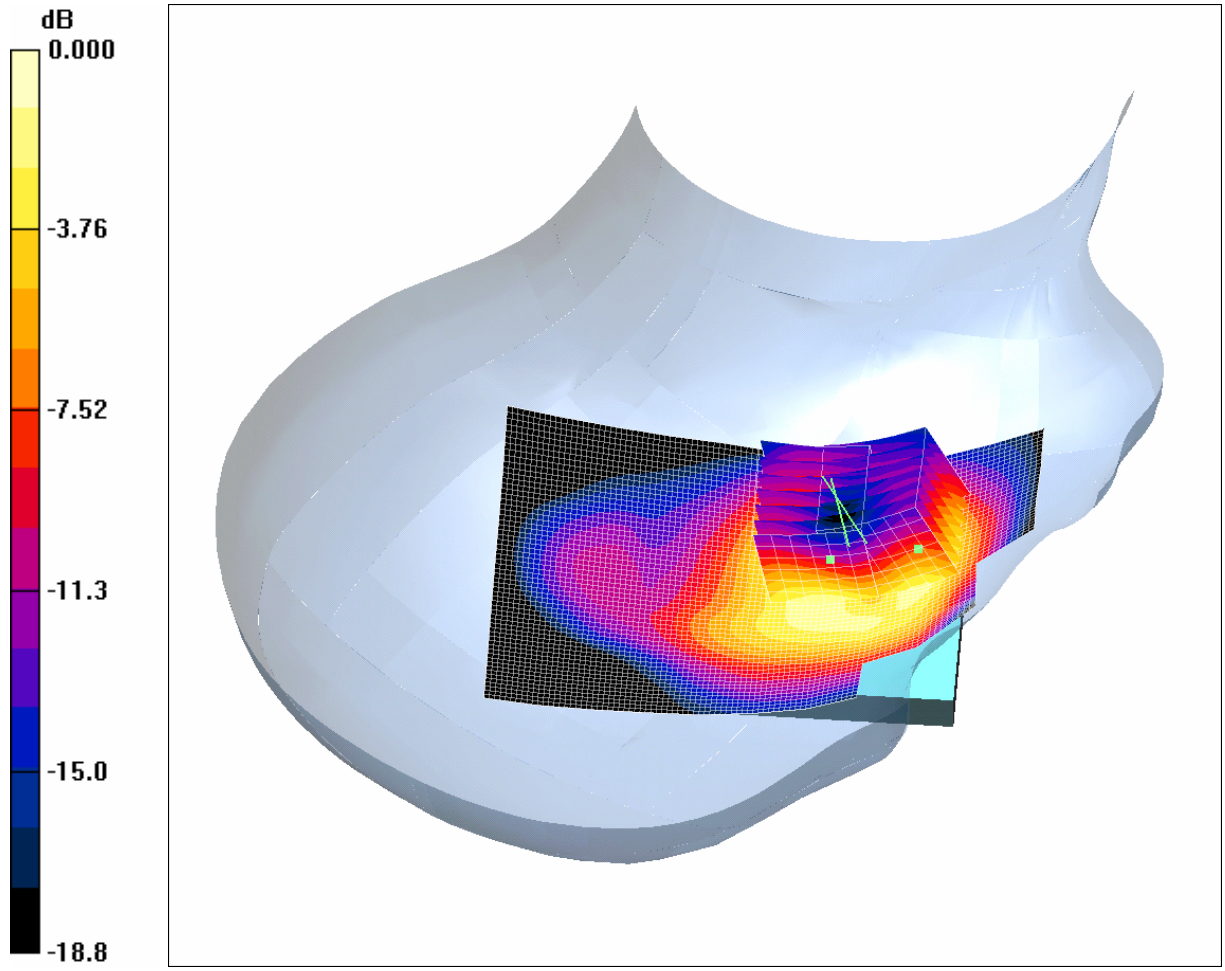
Communication System: PCS 1900; Frequency: 1850.2 MHz; Duty Cycle: 1:8.3
Medium: 1900 MHz HSL Medium parameters used (interpolated): f = 1850.2 MHz; σ = 1.4 mho/m; ε_r = 40.9; ρ = 1000 kg/m^3
Phantom section: Right Section
DASY4 Configuration:
- Probe: ET3DV6 - SN1529; ConvF(4.87, 4.87, 4.87); Calibrated: 30/08/2006
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn394; Calibrated: 19/05/2006
- Phantom: SAM 12a; Type: SAM 4.0; Serial: TP:1193
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172
Touch Right - Low/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.679 mW/g
Touch Right - Low/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 6.61 V/m; Power Drift = 0.034 dB
Peak SAR (extrapolated) = 0.976 W/kg
SAR(1 g) = 0.614 mW/g; SAR(10 g) = 0.334 mW/g
Maximum value of SAR (measured) = 0.679 mW/g
Touch Right - Low/Zoom Scan (7x7x7) (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 6.61 V/m; Power Drift = 0.034 dB
Peak SAR (extrapolated) = 0.817 W/kg
SAR(1 g) = 0.434 mW/g; SAR(10 g) = 0.231 mW/g

Maximum value of SAR (measured) = 0.557 mW/g

Test of: Wiz4com Technologies SAS
CT9A9W

To: OET Bulletin 65 Supplement C:2001-01 / IEEE Std 1528 - 2003

Date: 08/06/2007
006 Touch Right CH810
DUT: PHILIPS; Type: xenium CT9A9W; Serial: 358233000053673



0 dB = 0.555mW/g

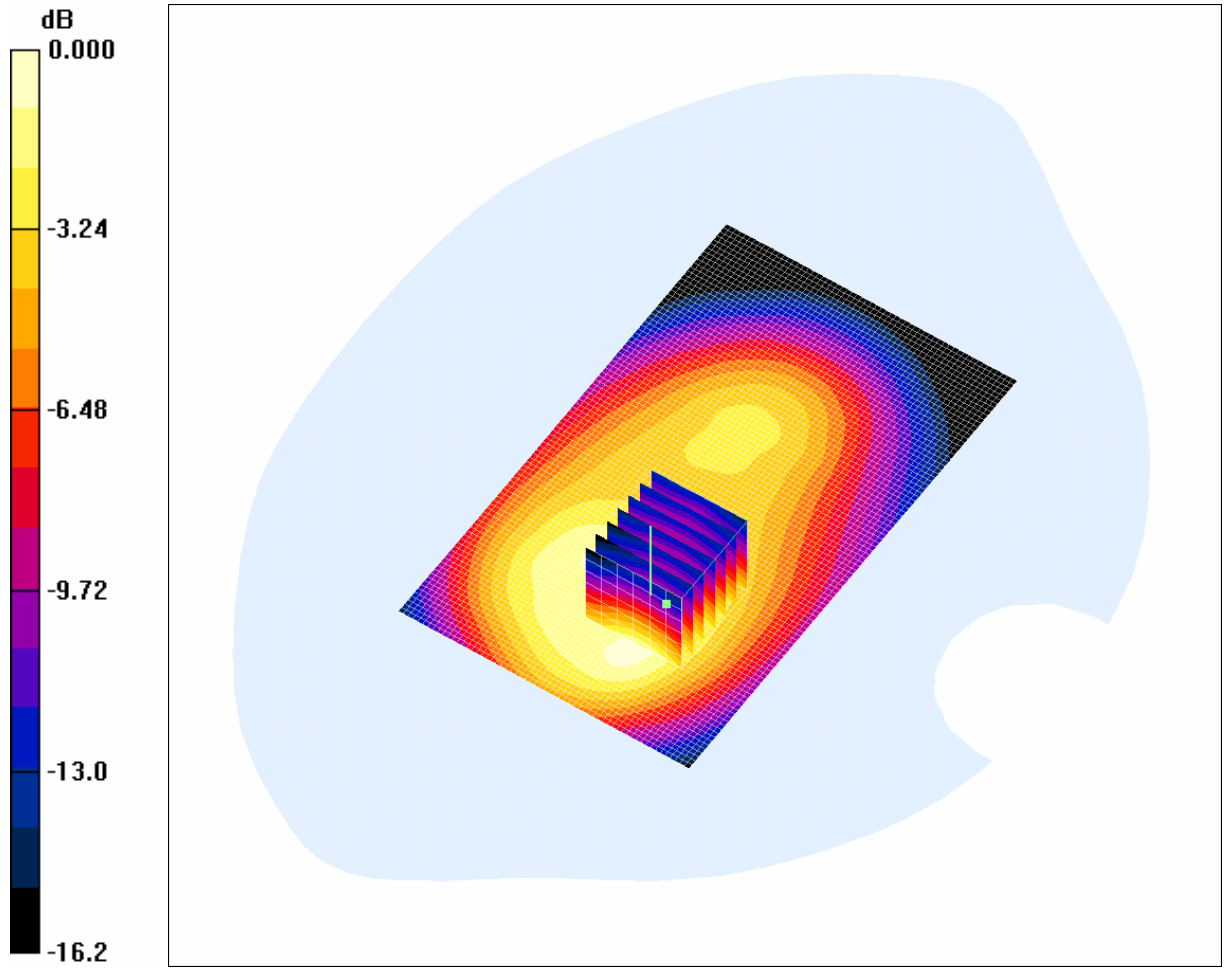
Communication System: PCS 1900; Frequency: 1909.8 MHz; Duty Cycle: 1:8.3
Medium: 1900 MHz HSL Medium parameters used (interpolated): f = 1909.8 MHz; σ = 1.46 mho/m; ε_r = 40.6; ρ = 1000 kg/m^3
Phantom section: Right Section
DASY4 Configuration:
- Probe: ET3DV6 - SN1529; ConvF(4.87, 4.87, 4.87); Calibrated: 30/08/2006
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn394; Calibrated: 19/05/2006
- Phantom: SAM 12a; Type: SAM 4.0; Serial: TP:1193
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

Touch Right - High/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.660 mW/g
Touch Right - High/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 6.31 V/m; Power Drift = -0.102 dB
Peak SAR (extrapolated) = 0.991 W/kg
SAR(1 g) = 0.598 mW/g; SAR(10 g) = 0.319 mW/g
Maximum value of SAR (measured) = 0.668 mW/g
Touch Right - High/Zoom Scan (7x7x7) (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 6.31 V/m; Power Drift = -0.102 dB
Peak SAR (extrapolated) = 0.824 W/kg**SAR(1 g) = 0.447 mW/g; SAR(10 g) = 0.243 mW/g**
Maximum value of SAR (measured) = 0.555 mW/g

Test of: Wiz4com Technologies SAS
CT9A9W

To: OET Bulletin 65 Supplement C:2001-01 / IEEE Std 1528 - 2003

Date: 08/06/2007
007 Front Of EUT Facing Phantom Flat Section With 15mm Separation PCS1900 CH660
DUT: PHILIPS; Type: xenium CT9A9W; Serial: 358233000053673



0 dB = 0.131mW/g

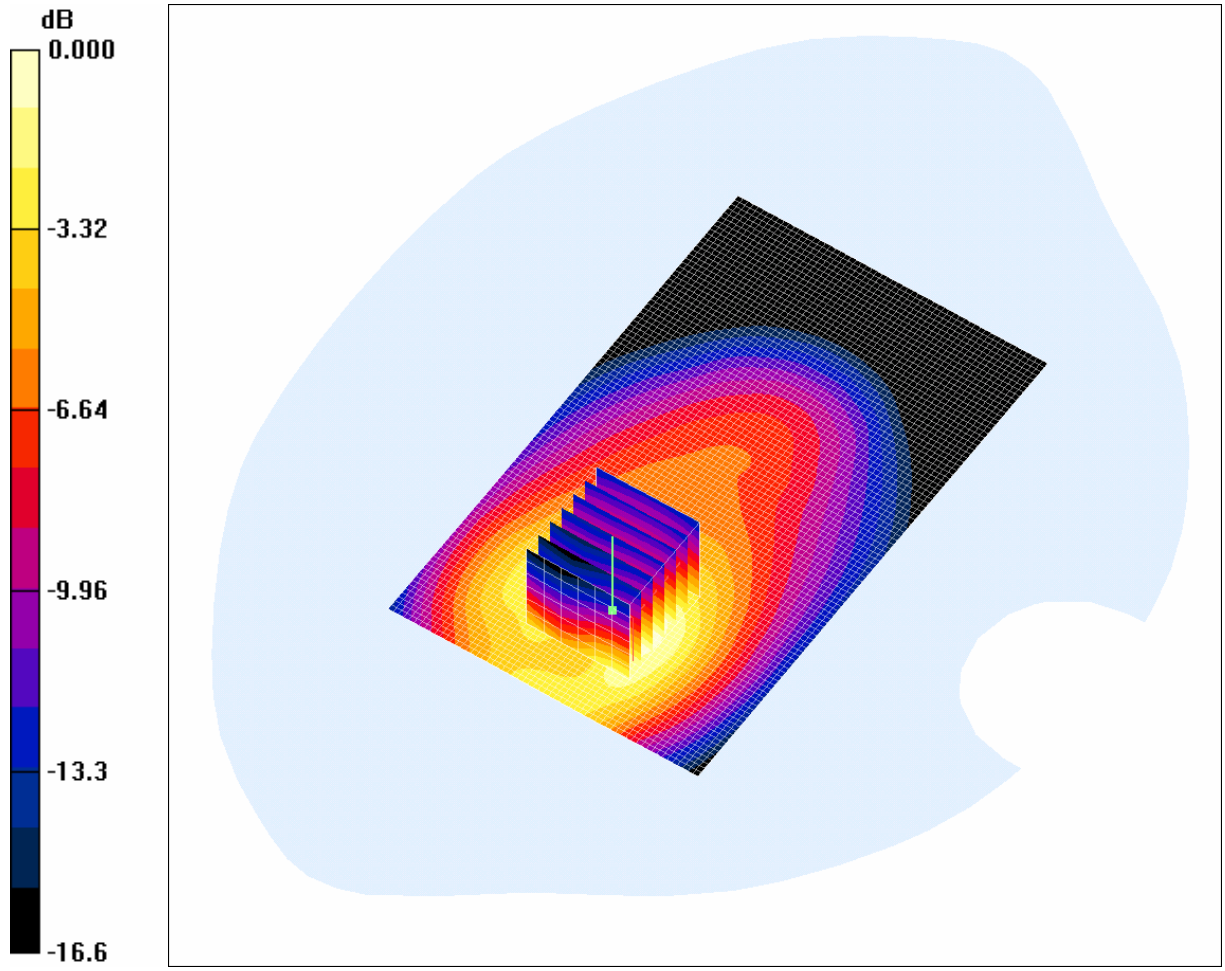
Communication System: PCS 1900; Frequency: 1879.8 MHz; Duty Cycle: 1:8.3
Medium: 1900 MHz HSL Medium parameters used (interpolated): f = 1879.8 MHz; σ = 1.43 mho/m; ε_r = 40.8; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY4 Configuration:
- Probe: ET3DV6 - SN1529; ConvF(4.87, 4.87, 4.87); Calibrated: 30/08/2006
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn394; Calibrated: 19/05/2006
- Phantom: SAM 12b; Type: SAM 4.0; Serial: TP:1207
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

Front Of EUT Facing Phantom With 15mm Separation - Middle/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.121 mW/g
Front Of EUT Facing Phantom With 15mm Separation - Middle/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 6.89 V/m; Power Drift = -0.045 dB
Peak SAR (extrapolated) = 0.196 W/kg
SAR(1 g) = 0.119 mW/g; SAR(10 g) = 0.070 mW/g
Maximum value of SAR (measured) = 0.131 mW/g

Test of: Wiz4com Technologies SAS
CT9A9W

To: OET Bulletin 65 Supplement C:2001-01 / IEEE Std 1528 - 2003

Date: 08/06/2007
008 Front Of EUT Facing Phantom Flat Section With 15mm Separation GPRS CH660
DUT: PHILIPS; Type: xenium CT9A9W; Serial: 358233000053673



0 dB = 0.420mW/g

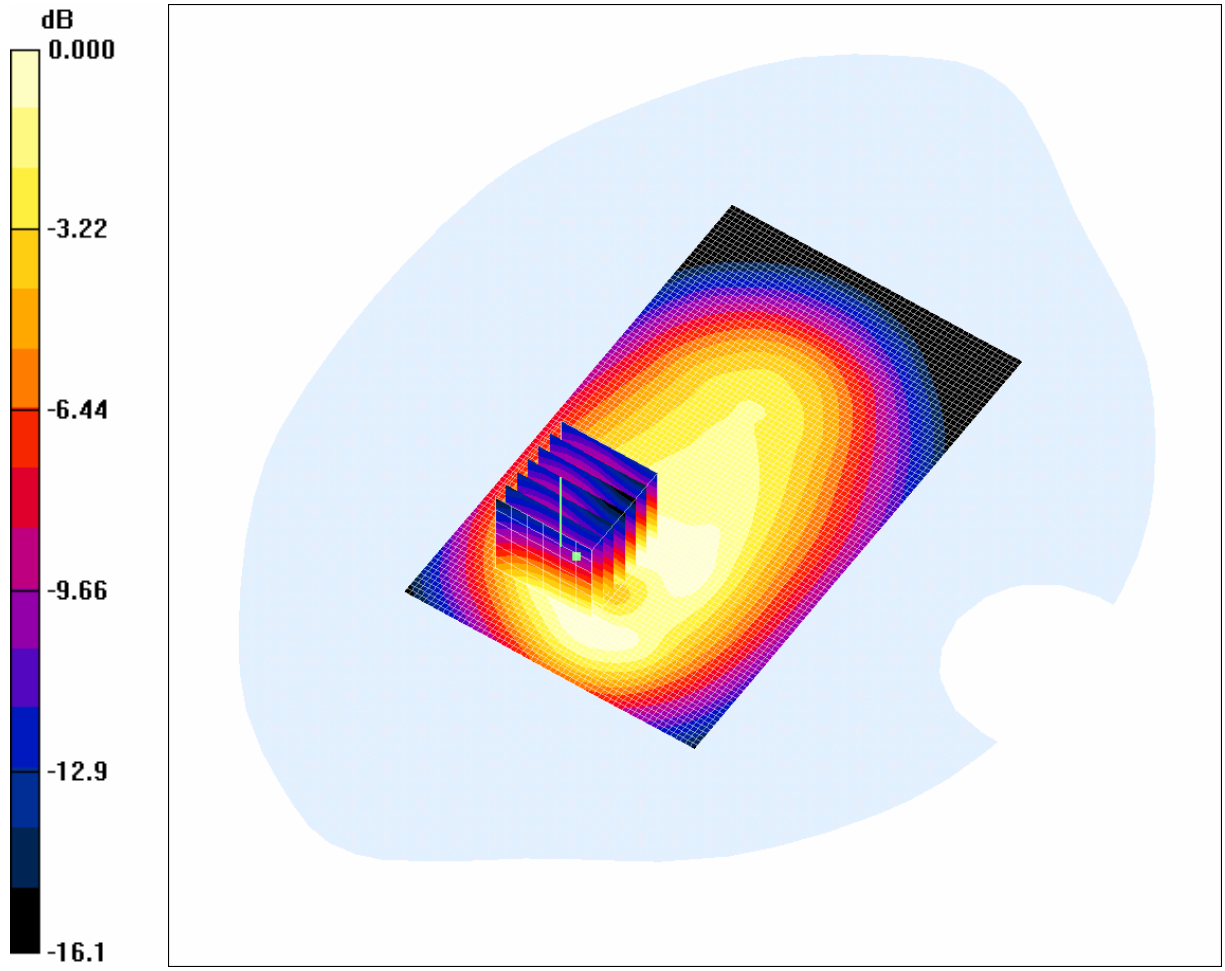
Communication System: GPRS 1900; Frequency: 1879.8 MHz; Duty Cycle: 1:4
Medium: 1900 MHz HSL Medium parameters used (interpolated): f = 1879.8 MHz; σ = 1.43 mho/m; ε_r = 40.8; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY4 Configuration:
- Probe: ET3DV6 - SN1529; ConvF(4.87, 4.87, 4.87); Calibrated: 30/08/2006
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn394; Calibrated: 19/05/2006
- Phantom: SAM 12b; Type: SAM 4.0; Serial: TP:1207
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

Front Of EUT Facing Phantom With 15mm Separation - Middle/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.421 mW/g
Front Of EUT Facing Phantom With 15mm Separation - Middle/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 8.83 V/m; Power Drift = -0.042 dB
Peak SAR (extrapolated) = 0.639 W/kg
SAR(1 g) = 0.382 mW/g; SAR(10 g) = 0.222 mW/g
Maximum value of SAR (measured) = 0.420 mW/g

Test of: Wiz4com Technologies SAS
CT9A9W

To: OET Bulletin 65 Supplement C:2001-01 / IEEE Std 1528 - 2003

Date: 08/06/2007
009 Rear Of EUT Facing Phantom Flat Section With 15mm Separation GPRS CH660
DUT: PHILIPS; Type: xenium CT9A9W; Serial: 358233000053673



0 dB = 0.298mW/g

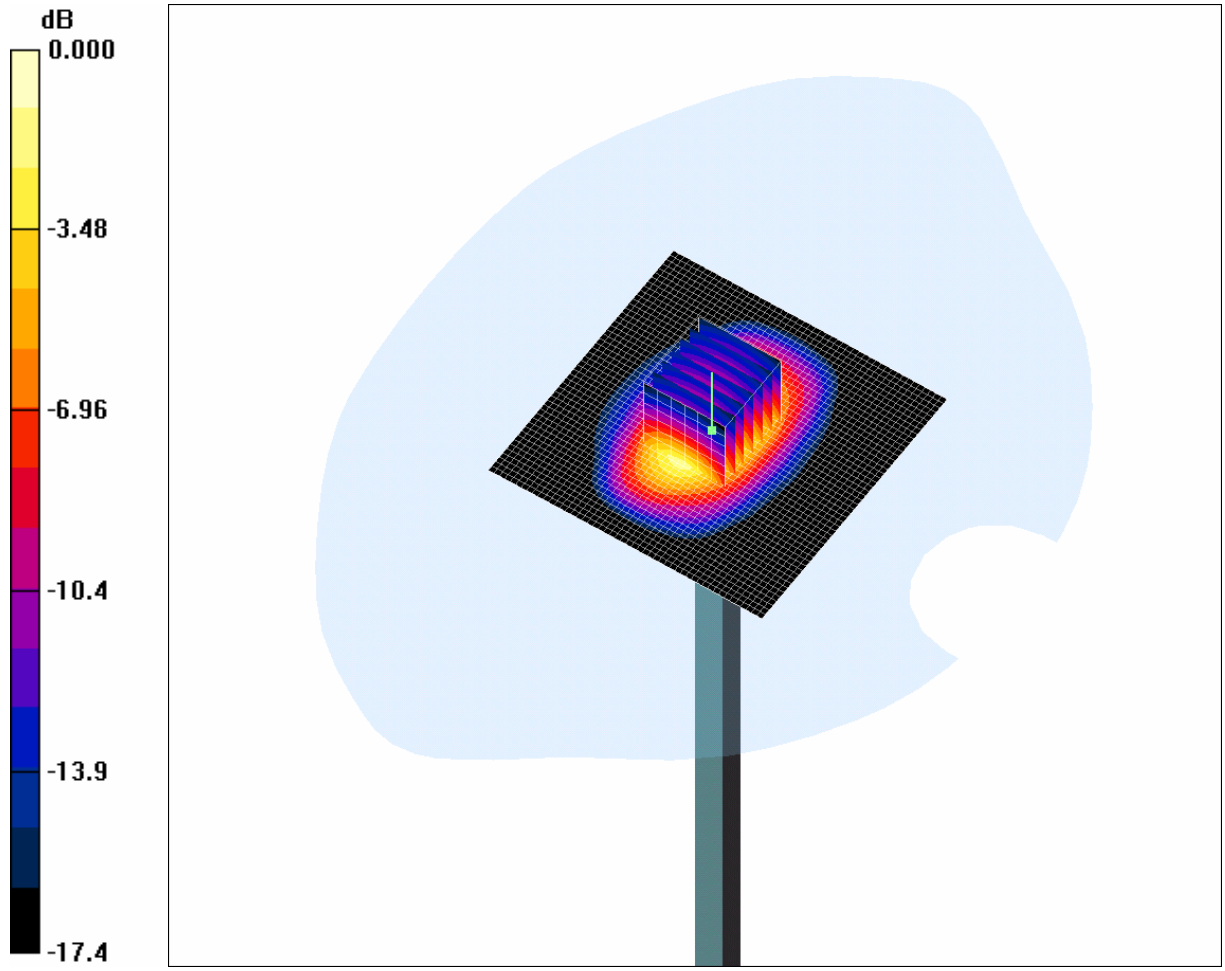
Communication System: GPRS 1900; Frequency: 1879.8 MHz; Duty Cycle: 1:4
Medium: 1900 MHz HSL Medium parameters used (interpolated): f = 1879.8 MHz; σ = 1.43 mho/m; ε_r = 40.8; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY4 Configuration:
- Probe: ET3DV6 - SN1529; ConvF(4.87, 4.87, 4.87); Calibrated: 30/08/2006
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn394; Calibrated: 19/05/2006
- Phantom: SAM 12b; Type: SAM 4.0; Serial: TP:1207
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

Front Of EUT Facing Phantom With 15mm Separation - Middle/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.296 mW/g
Front Of EUT Facing Phantom With 15mm Separation - Middle/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 12.7 V/m; Power Drift = 0.017 dB
Peak SAR (extrapolated) = 0.486 W/kg
SAR(1 g) = 0.278 mW/g; SAR(10 g) = 0.160 mW/g
Maximum value of SAR (measured) = 0.298 mW/g

Test of: Wiz4com Technologies SAS
CT9A9W

To: OET Bulletin 65 Supplement C:2001-01 / IEEE Std 1528 - 2003

Date: 08/06/2007
010 System Performance Check-D1800 08 06 07
DUT: Dipole 1800 MHz; Type: D1800V2; Serial: 264



0 dB = 10.5mW/g

Communication System: CW; Frequency: 1800 MHz; Duty Cycle: 1:1
Medium: 1900 MHz HSL Medium parameters used: f = 1800 MHz; σ = 1.35 mho/m; ε_r = 41.1; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY4 Configuration:
- Probe: ET3DV6 - SN1529; ConvF(5.01, 5.01, 5.01); Calibrated: 30/08/2006
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn394; Calibrated: 19/05/2006
- Phantom: SAM 12a; Type: SAM 4.0; Serial: TP:1193
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

d=15mm, Pin=250mW/Area Scan (51x51x1): Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 13.5 mW/g

d=15mm, Pin=250mW/Zoom Scan 7x7x7 (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 91.3 V/m; Power Drift = 0.008 dB
Peak SAR (extrapolated) = 16.4 W/kg
SAR(1 g) = 9.36 mW/g; SAR(10 g) = 4.95 mW/g
Maximum value of SAR (measured) = 10.5 mW/g

Appendix 4. Photographs

This appendix contains the following photographs:

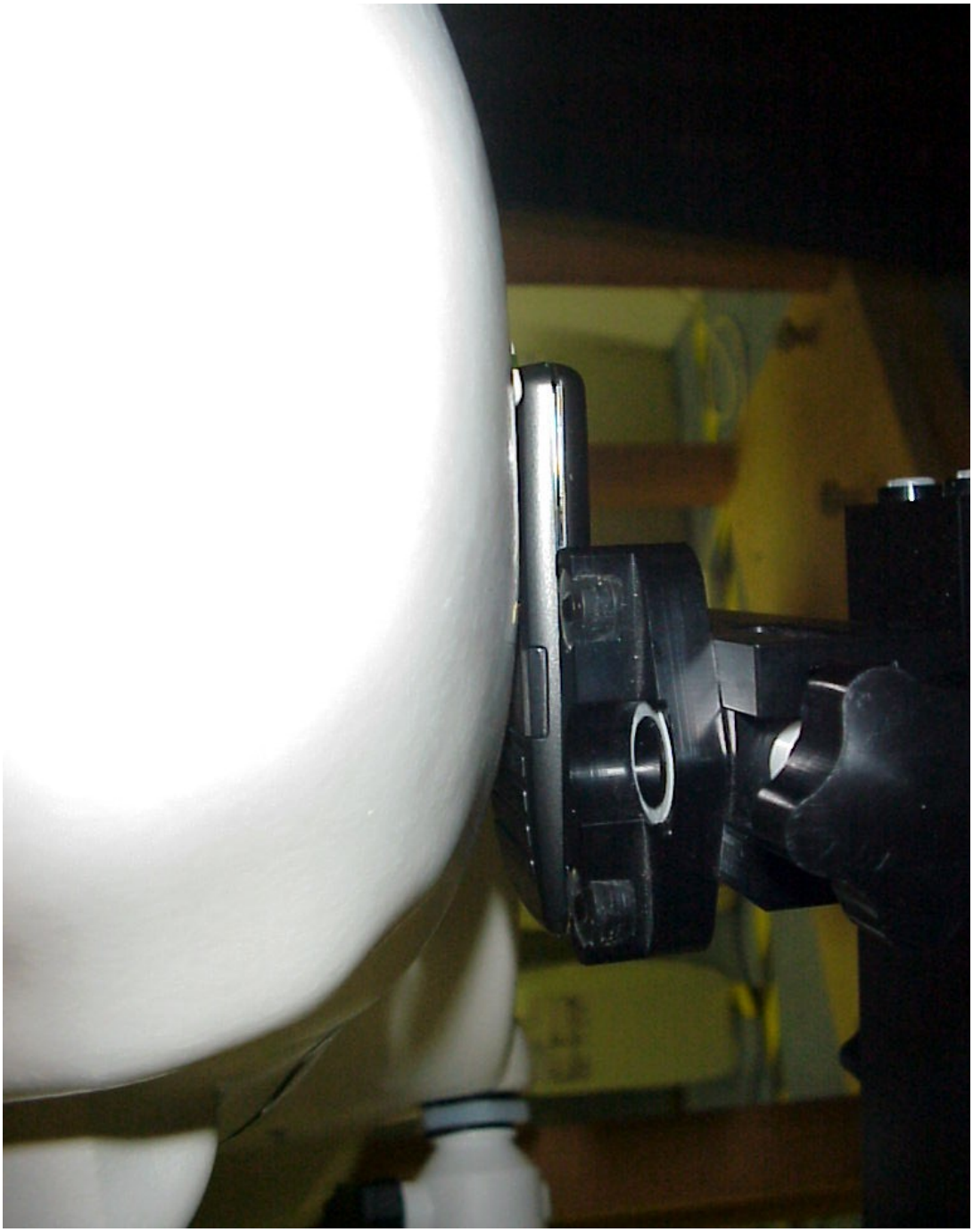
Photo Reference Number	Title
PHT/49249JD01/001	Test configuration for the measurement of Specific Absorption Rate (SAR)
PHT/49249JD01/002	Touch Left
PHT/49249JD01/003	Tilt Left
PHT/49249JD01/004	Touch Right
PHT/49249JD01/005	Tilt Right
PHT/49249JD01/006	Front Of EUT Facing Phantom
PHT/49249JD01/007	Rear Of EUT Facing Phantom
PHT/49249JD01/008	Front View Of EUT
PHT/49249JD01/009	Rear View Of EUT
PHT/49249JD01/010	Internal View Of EUT
PHT/49249JD01/011	Battery View Of EUT
PHT/49249JD01/012	Fluid Level 1900 MHz Body
PHT/49249JD01/013	Fluid Level 1900 MHz Head

Test of: Wiz4com Technologies SAS
CT9A9W

To: OET Bulletin 65 Supplement C:2001-01 / IEEE Std 1528 - 2003

PHT/49249JD01/001: SAR Configuration

PHT/49249JD01/002: Touch Left

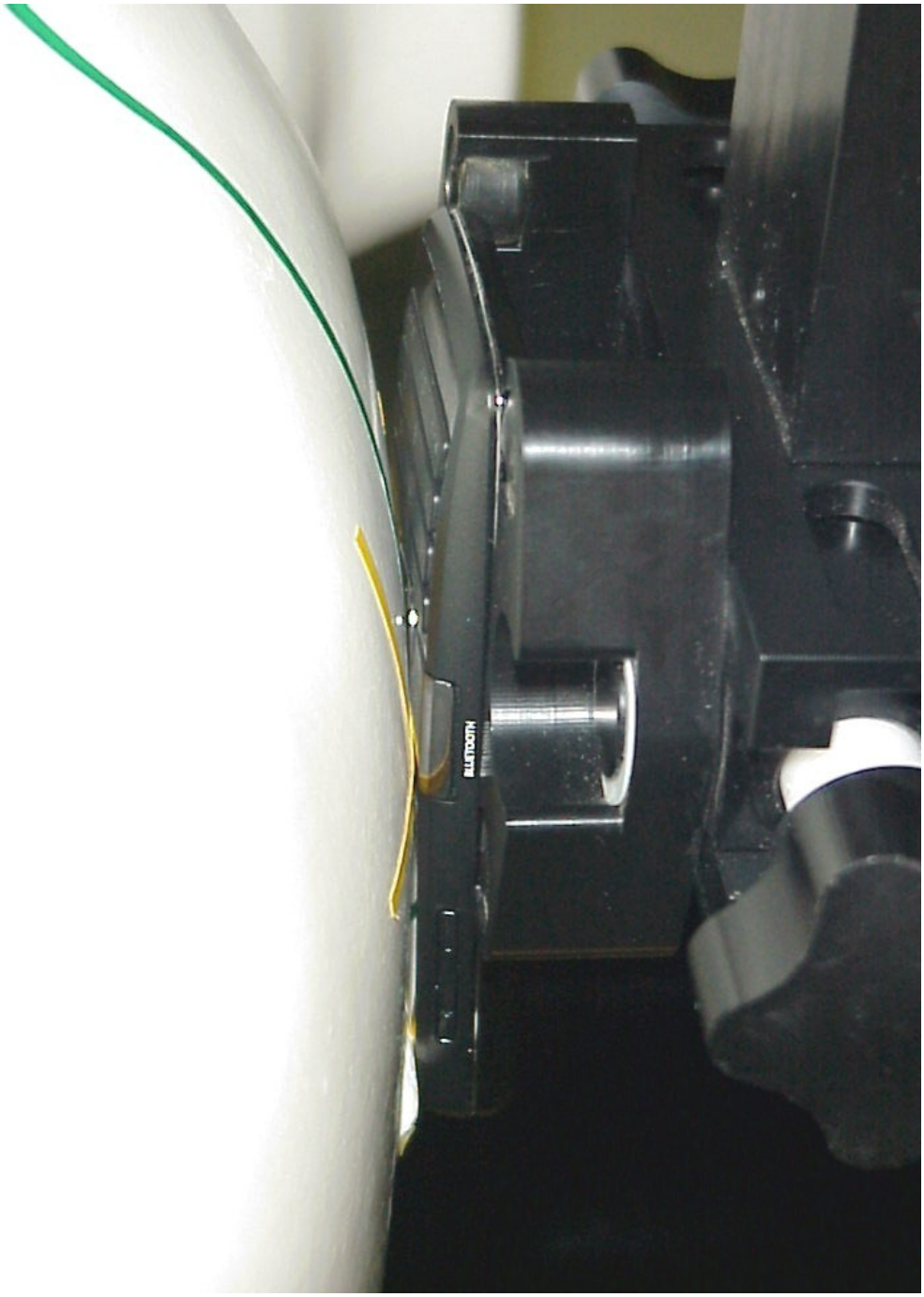


PHT/49249JD01/003: Tilt Left

Test of: Wiz4com Technologies SAS
CT9A9W

To: OET Bulletin 65 Supplement C:2001-01 / IEEE Std 1528 - 2003

PHT/49249JD01/004: Touch Right



Test of: Wiz4com Technologies SAS
CT9A9W

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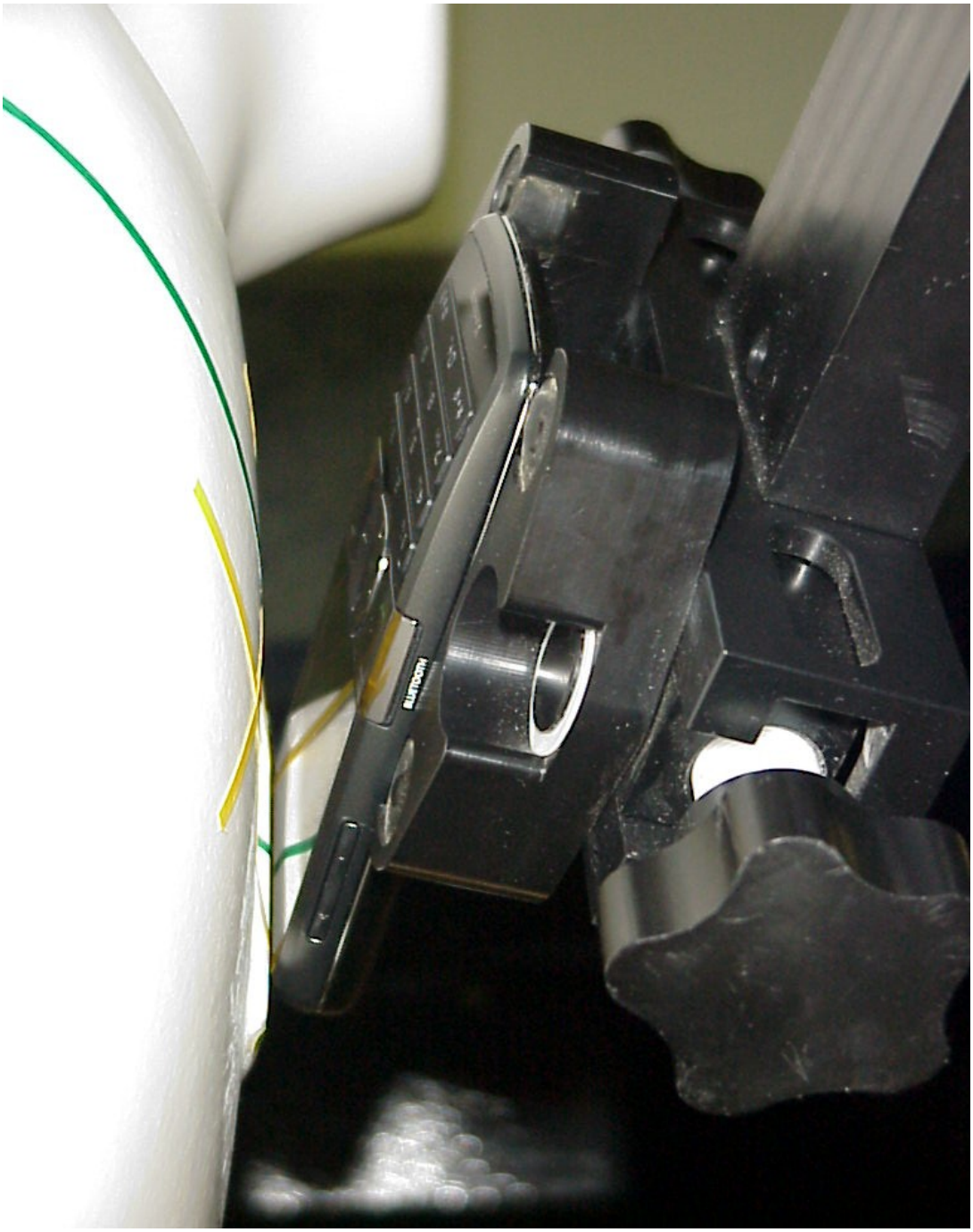
PHT/49249JD01/005: Tilt Right



Test of: Wiz4com Technologies SAS
CT9A9W

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PHT/49249JD01/006: Front Of EUT Facing Phantom

PHT/49249JD01/007: Rear Of EUT Facing Phantom

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PHT/49249JD01/008: Front View Of EUT

Test of: Wiz4com Technologies SAS
CT9A9W

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PHT/49249JD01/009: Rear View Of EUT

Test of: Wiz4com Technologies SAS
CT9A9W

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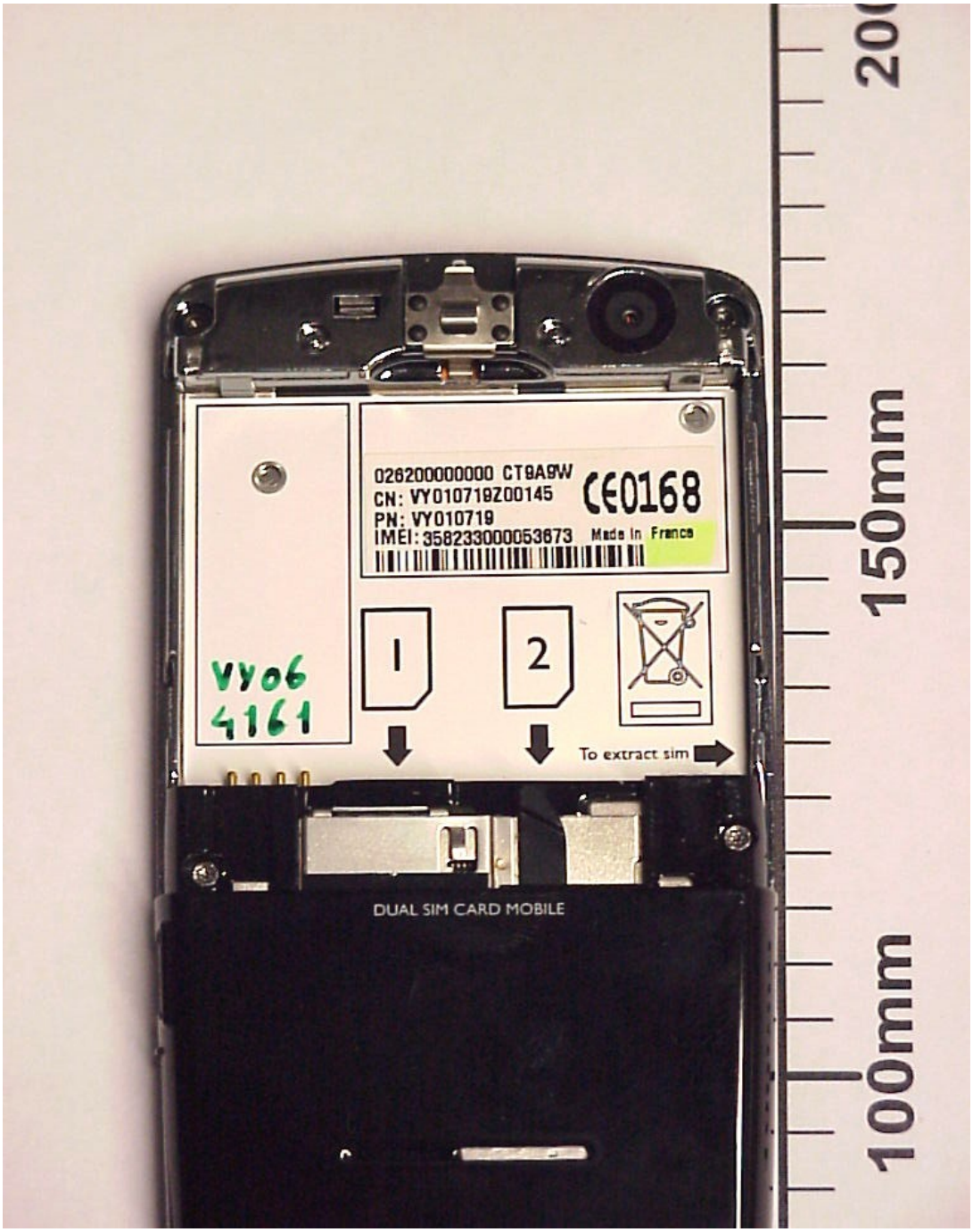
PHT/49249JD01/010: Internal View Of EUT



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PHT/49249JD01/011: Battery View Of EUT

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CT9A9W

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PHT/49249JD01/012: Fluid Level 1900 MHz Body

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PHT/49249JD01/013: Fluid Level 1900 MHz Head

Appendix 5. Validation of System

Prior to the assessment, the system was verified in the flat region of the phantom.
An 1800 MHz dipole was used. A forward power of 250 mW was applied to the dipole and the system was verified to a tolerance of ±5% for the 1800 MHz dipole. The applicable verification (normalised to 1 Watt).

Date: 08 June 2007

Validation Dipole and Serial Number: D1800V2 SN: 264

Stimulant	Frequency (MHz)	Room Temperature	Liquid Temperature	Parameters	Target Value	Measured Value	Deviation (%)	Limit (%)
Head	1800	24ºC	23ºC	ε_r	40.00	40.68	1.69	±5
				σ	1.40	1.45	3.64	±5
				1g SAR	38.50	37.44	-2.75	±5

Note(s):

1. *1900MHz head simulating liquid was used for validation using an 1800MHz Dipole. This was possible as the two frequencies are only 100 MHz apart.*

Appendix 6. Simulated Tissues

The body mixture consists of water and glycol. Visual inspection is made to ensure air bubbles are not trapped during the mixing process. The mixture is calibrated to obtain proper dielectric constant (permittivity) and conductivity of the tissue.

Ingredient	Frequency
	1800/1900 MHz Head
De-Ionised Water	55.41%
Diglycol Butyl Ether (DGBE)	44.51%
Salt	0.08%

Ingredient	Frequency
	1800/1900 MHz Body
De-Ionised Water	69.79%
Diglycol Butyl Ether (DGBE)	30.00%
Salt	0.20%

Appendix 7. DASY4 System Details

A.7.1. DASY4 SAR Measurement System

RFI Global Services Ltd, SAR measurement facility utilises the Dosimetric Assessment System (DASY™) manufactured by Schmid & Partner Engineering AG (SPEAG™) of Zurich, Switzerland. The DASY4 system is comprised of the robot controller, computer, near-field probe, probe alignment sensor, and the SAM phantom containing brain or muscle equivalent material. The robot is a six-axis industrial robot performing precise movements to position the probe to the location (points) of maximum electromagnetic field (EMF). A cell controller system contains the power supply, robot controller; teach pendant (Joystick), and remote control. This is used to drive the robot motors. The Staubli robot is connected to the cell controller to allow software manipulation of the robot. The data acquisition electronics (DAE) performs signal amplification, signal multiplexing, AD-conversion, offset measurements, mechanical surface detection, collision detection etc. The DAE is connected to the Electro-optical coupler (EOC). The EOC performs the conversion from the optical into digital electric signal of the DAE and transfers data to the PC plug-in card. The DAE3 utilises a highly sensitive electrometer-grade preamplifier with auto-zeroing, a channel and gain-switching mulitplexer, a fast 16-bit AD-converter and a command decoder and control logic unit. Transmission to the PC-card is accomplished through an optical downlink for data and status information and an optical uplink for commands and clock lines. The mechanical probe-mounting device includes two different sensor systems for frontal and sidewise probe contacts. They are also used for mechanical surface detection and probe collision detection. The robot uses its own controller with a built in VME-bus computer.

A.7.2. DASY4 SAR System Specifications

Robot System

Positioner:	Stäubli Unimation Corp. Robot Model: RX90L
Repeatability:	0.025 mm
No. of Axis:	6
Serial Number:	F00/SD89A1/A/01
Reach:	1185 mm
Payload:	3.5 kg
Control Unit:	CS7
Programming Language:	V+

Data Acquisition Electronic (DAE) System

Serial Number:	394

Cell Controller

PC:	Dell Precision 340
Operating System:	Windows 2000
Data Card:	DASY4 Measurement Server
Serial Number:	1080

Data Converter

Features:	Signal Amplifier, multiplexer, A/D converted and control logic.
Software:	DASY4 Software
Connecting Lines:	Optical downlink for data and status info. Optical uplink for commands and clock.

PC Interface Card

Function:	24 bit (64 MHz) DSP for real time processing Link to DAE3 16 nit A/D converter for surface detection system serial link to robot direct emergency stop output for robot.

DASY4 SAR System Specifications (Continued)

E-Field Probe

Model:	ET3DV6
Serial No:	1529
Construction:	Triangular core fibre optic detection system
Frequency:	10 MHz to 3 GHz
Linearity:	±0.2 dB (30 MHz to 3 GHz)
Probe Length (mm):	337
Probe Diameter (mm):	12
Tip Length (mm):	10
Tip Diameter (mm):	6.8
Sensor X Offset (mm):	2.7
Sensor Y Offset (mm):	2.7
Sensor Z Offset (mm):	2.7

Phantom

Phantom:	SAM Phantom
Shell Material:	Fibreglass
Thickness:	2.0 ±0.1 mm