HAC RF Emissions Test Report

Test report no.:	Salo_HAC_0529_02	**Date of report:**	2005-08-05
Template version:	1.0	**Number of pages:**	56
Testing laboratory:	TCC Salo P.O. Box 86 Joensuunkatu 7H / Kiila 1B FIN-24101 SALO, FINLAND Tel. +358 (0) 7180 08000 Fax. +358 (0) 7180 45220	**Client:**	Nokia Germany/Ulm Lise Meitner Strasse 10 89081 ULM GERMANY Tel. +49-731-1754-0 Fax. +49-731-1754-6800
Responsible test engineer:	Virpi Tuominen	**Product contact person:**	Thomas Reitmayer
Measurements made by:	Janne Hirsimäki, Virpi Tuominen		
Tested devices:	RM-77		
FCC ID:	PPIRM-77H	**IC:**	661U-RM77
Supplement reports:	-		
Testing has been carried out in accordance with:	**ANSI C63.19-2005** American National Standard for Methods of Measurement of Compatibility between Wireless Communications Devices and Hearing Aids		
Documentation:	The documentation of the testing performed on the tested devices is archived for 15 years at TCC Nokia.		
Test results:	**The tested device complies with the requirements in respect of all parameters subject to the test.** The test results and statements relate only to the items tested. The test report shall not be reproduced except in full, without written approval of the laboratory.		

Date and signatures:

For the contents:

Digitally signed by Virpi Tuominen
DN: CN = Virpi Tuominen, C = FI, O = Nokia, OU = CertT
Date: 2005.08.05 15:31:47 +03'00'

Virpi Tuominen
Senior Design Engineer

TCC
Nokia

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1. SUMMARY OF HAC RF EMISSION TEST REPORT

1.1 Test Details

Period of test	2005-07-22 to 2005-08-04
SN, HW, SW and DUT numbers of tested device	SN: 356642/00/000041/3, HW: 5010, SW: 3.37, DUT: 10674
Batteries used in testing	BL-4C, DUT: 1062, 10663, 10669
State of sample	Prototype unit
Notes	-

1.2 Maximum Results

The maximum measured HAC RF emissions values and categories for electric and magnetic fields are given in section 1.2.1 and 1.2.2 respectively.

1.2.1 Electric field measurements

Mode	Limit of E-field max. value in category M3 [V/m]	Maximum E-field value after exclusion [V/m]	Category
GSM850, Hearing aid mode	47.3 – 84.1	72.8	M3 (-5dB)
GSM1900	47.3 – 84.1	82.5	M3 (-5dB)

1.2.2 Magnetic field measurements

Mode	Limit of H-field max. value in category M3 [A/m]	Maximum H-field value after exclusion [A/m]	Category
EGPRS	0.15 – 0.25	0.12	M4 (-5dB)
GSM1900	0.15 – 0.25	0.15	M3 (-5dB)

1.2.3 Overall RF emissions category of the tested device

Frequency Band	Combined category (E- and H-fields)	Pass / Fail
850MHz	M3 (-5dB)	**PASSED**
1900MHz	M3 (-5dB)	**PASSED**

1.2.4 Maximum Drift

Maximum drift during measurements	-0.25 dB

1.2.5 Measurement Uncertainty

Extended Uncertainty (k=2) 95%, E-field	14.7 %
Extended Uncertainty (k=2) 95%, H-field	10.9 %

2. DESCRIPTION OF THE DEVICE UNDER TEST (DUT)

Modes and Bands of Operation	GSM 850 / 1900	GPRS 850 / 1900	EGPRS 850 / 1900
Modulation Mode	GMSK	GMSK	8PSK
Duty Cycle	1/8	1/8 or 2/8	1/8 or 2/8
Transmitter Frequency Range (MHz)	824 – 849 1850 - 1910	824 – 849 1850 - 1910	824 – 849 1850 - 1910

Outside of USA, tested device is also capable of operating in GSM1800 band, which is not part of this test.

This device has Push to Talk capability for use at the ear. Therefore, HAC for 2-slot GPRS and 2-slot EGPRS mode was evaluated.

2.1 Picture of Device

3. TEST CONDITIONS

3.1 Temperature and Humidity

Ambient temperature (°C):	21 to 23
Ambient humidity (RH %):	45 to 55

3.2 Test Signal, Frequencies, and Output Power

The transmitter of the device was put into operation by using a call tester. Communications between the device and the call tester were established by air link.

For all tests Hearing aid mode was switched on and the device output power was set to maximum power level; a fully charged battery was used for every test sequency.

In all operating bands the measurements were performed on low, middle and high channels.

4. DESCRIPTION OF THE TEST EQUIPMENT

4.1 Measurement system and components

The measurements were performed using an automated near-field scanning system, DASY 4 software version 4.5, manufactured by Schmid & Partner Engineering AG (SPEAG) in Switzerland. The following table lists calibration dates of SPEAG components:

Test Equipment	Serial Number	Calibration interval	Calibration expiry
DAE V1	388	12 months	2006-01
E-field Probe ER3DV6	2333	12 months	2006-01
H-field Probe H3DV6	6053	12 months	2006-01
Dipole Validation Kit, CD835V3	1004	24 months	2007-02
Dipole Validation Kit, CD1880V3	1003	24 months	2007-02

Additional test equipment used in testing and validation:

Test Equipment	Model	Serial Number	Calibration interval	Calibration expiry
Signal Generator	SML03	101265	12 months	2005-09
Amplifier	ZHL-42 (SMA)	N072095-5	12 months	2005-07
Power Meter	NRVS	849305/028	12 months	2005-07
Power Sensor	NRV-Z32	839176/020	12 months	2005-07
Radio Communication Tester	CMU 200	101111	-	-

4.1.1 Isotropic E-field probe ER3DV6

Construction	One dipole parallel, two dipoles normal to probe axis Built-in shielding against static charges PEEK enclosure material
Calibration	Calibration certificate in Appendix D
Frequency	In air 100 MHz to >6 GHz; Linearity: ± 0.2 dB (100 MHz to 3 GHz)
Directivity	± 0.2 dB in air (rotation around probe axis) ± 0.4 dB in air (rotation normal to probe axis)
Dynamic Range	2 V/m to > 1000 V/m; Linearity: ± 0.2 dB
Dimensions	Overall length: 330 mm Tip length: 16 mm Body diameter: 12 mm Tip diameter: 8 mm Distance from probe tip to nearest point of dipole: 1.25 mm
Application	Generel near-field measurements up to 6 GHz Field component measurements Fast automatic scanning in phantoms

4.1.2 Isotropic H-field probe H3DV6

Construction	Three concentric loop sensors with 3.8 mm loop diameters Resistively loaded detector diodes for linear response Built-in shielding against static charges PEEK enclosure material
Calibration	Calibration certificate in Appendix D
Frequency	200 MHz to 3 GHz; Output linearized (absolute accuracy ±6.0%, k=2)
Directivity	± 0.25 dB (spherical isotropy error)
Dynamic Range	10 mA/m to 2 A/m at 1 GHz
Dimensions	Overall length: 330 mm Tip length: 40 mm Body diameter: 12 mm Tip diameter: 6 mm Distance from probe tip to nearest point of dipole: 1.1 mm
Application	Generel magnetic near-field measurements up to 3 GHz Field component measurements, surface current measurements Measurements in air or liquids, low interaction

4.2 WD positioner

The WD positioner and Test Arch is manufactured by Speag (http://www.dasy4.com/hac). Test arch is used for all tests i.e. for both validation testing and device testing. The positioner and test arch conforms to the requirements of ANSI C63.19.

The SPEAG device holder (see Section 5.1) was used to position the test device in all tests whilst a tripod was used to position the validation dipoles in the test arch.

4.2.1 Verification of the System

The manufacturer calibrates the probes annually. Validation measurements are made regularly using the dipole validation kit. The power level used by manufacturer in dipole calibration is supplied to the dipole antenna. The antenna is scanned at 1.0cm distance between top surface of the dipole and calibration point of the probe.

Validation measurements

f (MHz)	Description	E-field (V/m)	H-field (V/m)
835	Reference result	162.1	0.439
	±10% window	145.9 – 179.2	0.395 – 0.483
	2005-07-22	178.8	0.458
1880	Reference result	133.9	0.444
	±10% window	120.5 – 147.3	0.400 – 0.488
	2005-07-22	139.4	0.477
	2005-08-04	145.2	-

Plots of the Validation measurements are given in Appendix A.

Description of the Test Procedure

4.3 Test Arch and Device Holder

The test device was placed in the Device Holder (illustrated below) that is supplied by SPEAG. Using this positioner the tested device is positioned under Test Arch.

Device holder and Test Arch supplied by SPEAG

4.4 Test Positions

4.4.1 Scan area centered at the speaker output

The device was positioned such that Device Reference level was touching the bottom of the Test Arch. The scan is centered at the speaker output by aligning the speaker output with the intersection of the Test Arch's middle bar and dielectric wire.

Photo of the device positioned under Test Arch

4.4.2 Scan area centered at the maximum magnetic T-coil coupling

Scanning centered at the maximum magnetic T-coil coupling was not applicable for the tested device.

4.5 Scan Procedures

Near field scans of 5cm x 5cm were used for determination of the field distribution. Measurement plane distance from WD reference plane is 1cm. Scans were performed for both E- and H-field using appropriate probe. DASY software divides detected values into 3 x 3 subgrids as described in the C63.19 standard.

4.6 Slot Averaged Calculation Method

The slot-averaged values were calculated using modulation response conversion factor of sqrt(8.3) (in linear units) for GSM and sqrt(4.2) (in linear units) for 2-slots GPRS and EGPRS.

4.7 Sub-grid Exclusion

The measurement grid defined in C63.19 consists of 9 evenly sized blocks, which are used to define permissible exclusion areas. For both E- and H-field measurements three

contiguous blocks may be excluded from the measurements except center block may never be excluded. There must be 4 blocks left that are common for both E- and H-field measurements, so maximum of 5 different blocks can be excluded (e.g. 3 blocks excluded from E-field and 2 blocks from H-field).

4.8 Category Limits

From remaining maximum values after exclusion process, Hearing Aid M-category is defined according to the category limits of C63.19.

Category	AWF (dB)	Limits for E-Field Emissions (V/m)	Limits for H-Field Emissions (A/m)
M1	0	199.5 - 354.8	0.6 - 1.07
	-5	149.6 - 266.1	0.45 - 0.8
M2	0	112.2 - 199.5	0.34 - 0.6
	-5	84.1 - 149.6	0.25 - 0.45
M3	**0**	**63.1 - 112.2**	**0.19 - 0.34**
	-5	**47.3 - 84.1**	**0.15 - 0.25**
M4	0	<63.1	<0.19
	-5	<47.3	<0.15

5. RESULTS

The calculated maximum field values for the test device are tabulated below:

GSM850, E and H RF emissions results

Mode	Flip option	Test configuration	Ch 128 824.2MHz	Ch 190 836.6MHz	Ch 251 848.8MHz
GSM850, Hearing aid mode	Flip open	E-field (V/M)	63.5	64.0	72.8
		H-field (A/m)	0.109	0.115	0.117
		Category	M3 (-5dB)	M3 (-5dB)	M3 (-5dB)

GPRS850, E and H RF emissions results

Mode	Flip option	Test configuration	Ch 128 824.2MHz	Ch 190 836.6MHz	Ch 251 848.8MHz
2-slot GPRS850, Hearing aid mode	Flip open	E-field (V/M)	64.1	63.5	71.7
		H-field (A/m)	0.109	0.114	0.117
		Category	M3 (-5dB)	M3 (-5dB)	M3 (-5dB)

EGPRS850, E and H RF emissions results

Mode	Flip option	Test configuration	Ch 128 824.2MHz	Ch 190 836.6MHz	Ch 251 848.8MHz
2-slot EGPRS850	Flip open	E-field (V/M)	58.7	61.2	64.2
		H-field (A/m)	0.122	0.105	0.110
		Category	M3 (-5dB)	M3 (-5dB)	M3 (-5dB)

GSM1900, E and H RF emissions results

Mode	Flip option	Test configuration	Ch 512 1850.2MHz	Ch 661 1880.0MHz	Ch 810 1909.8MHz
GSM1900	Flip open	E-field (V/M)	82.5	77.6	74.5
		H-field (A/m)	0.147	0.154	0.150
		Category	M3 (-5dB)	M3 (-5dB)	M3 (-5dB)

GPRS1900, E and H RF emissions results

Mode	Flip option	Test configuration	Ch 512 1850.2MHz	Ch 661 1880.0MHz	Ch 810 1909.8MHz
2-slot GPRS1900	Flip open	E-field (V/M)	78.3	76.9	76.1
		H-field (A/m)	0.142	0.151	0.151
		Category	M3 (-5dB)	M3 (-5dB)	M3 (-5dB)

EGPRS1900, E and H RF emissions results

Mode	Flip option	Test configuration	Ch 512 1850.2MHz	Ch 661 1880.0MHz	Ch 810 1909.8MHz
2-slot EGPRS1900	Flip open	E-field (V/M)	55.4	52.6	52.0
		H-field (A/m)	0.108	0.114	0.110
		Category	M3 (-5dB)	M3 (-5dB)	M3 (-5dB)

Plots of the Measurement scans are given in Appendix B.

APPENDIX A: VALIDATION SCANS

Date/Time: 22.07.2005 13:30:58
Test Laboratory: TCC Nokia
Type: D835V3, Program Name: HAC H Dipole

Communication System: CW; Frequency: 835 MHz; Duty Cycle: 1:1
Medium parameters used: σ = 0 mho/m, ε_r = 1; ρ = 1 kg/m^3
Phantom section: H Dipole Section

DASY4 Configuration:
- Probe: H3DV6 - SN6053; ; Calibrated: 20.01.2005
- Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn388; Calibrated: 07.01.2005
- Phantom: HAC Phantom; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

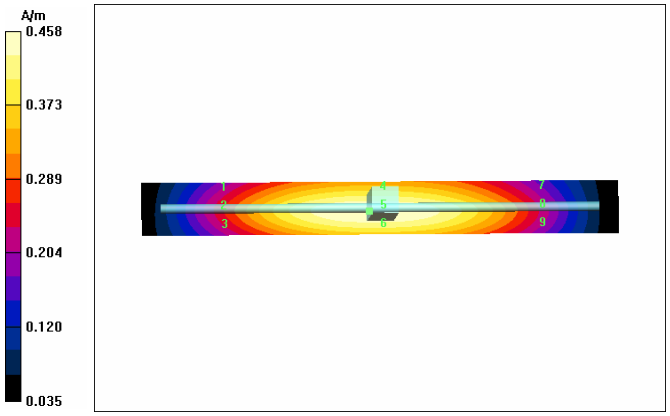
H Scan 10mm above CD 835 MHz/Hearing Aid Compatibility Test (41x361x1): Measurement grid: dx=5mm, dy=5mm
Maximum value of Total field (slot averaged) = 0.458 A/m
Hearing Aid Near-Field Category: M2 (AWF 0 dB)

H in A/m (Time averaged)

Grid 1 **0.376**	Grid 2 **0.415**	Grid 3 **0.404**
Grid 4 **0.410**	Grid 5 **0.458**	Grid 6 **0.448**
Grid 7 **0.359**	Grid 8 **0.405**	Grid 9 **0.397**

H in A/m (Slot averaged)

Grid 1 **0.376**	Grid 2 **0.415**	Grid 3 **0.404**
Grid 4 **0.410**	Grid 5 **0.458**	Grid 6 **0.448**
Grid 7 **0.359**	Grid 8 **0.405**	Grid 9 **0.397**



Date/Time: 22.07.2005 12:42:01
Test Laboratory: TCC Nokia
Type: D835V3, Program Name: HAC E Dipole

Communication System: CW; Frequency: 835 MHz; Duty Cycle: 1:1
Medium parameters used: σ = 0 mho/m, ε_r = 1; ρ = 1000 kg/m^3
Phantom section: E Dipole Section

DASY4 Configuration:
- Probe: ER3DV6 - SN2333; ConvF(1, 1, 1); Calibrated: 31.01.2005
- Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn388; Calibrated: 07.01.2005
- Phantom: HAC Phantom; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

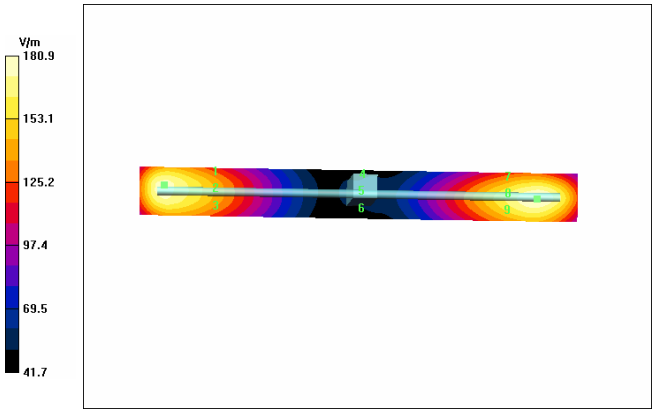
E Scan 10mm above CD 835 MHz/Hearing Aid Compatibility Test (41x361x1): Measurement grid: dx=5mm, dy=5mm
Maximum value of Total field (slot averaged) = 180.9 V/m
Hearing Aid Near-Field Category: M2 (AWF 0 dB)

E in V/m (Time averaged)

Grid 1 **174.3**	Grid 2 **176.6**	Grid 3 **171.0**
Grid 4 **85.8**	Grid 5 **92.2**	Grid 6 **90.2**
Grid 7 **167.7**	Grid 8 **180.9**	Grid 9 **174.6**

E in V/m (Slot averaged)

Grid 1 **174.3**	Grid 2 **176.6**	Grid 3 **171.0**
Grid 4 **85.8**	Grid 5 **92.2**	Grid 6 **90.2**
Grid 7 **167.7**	Grid 8 **180.9**	Grid 9 **174.6**



Date/Time: 22.07.2005 13:51:22
Test Laboratory: TCC Nokia
Type: CD1880V3, Program Name: HAC H Dipole

Communication System: CW; Frequency: 1880 MHz; Duty Cycle: 1:1
Medium parameters used: $\sigma = 0$ mho/m, $\varepsilon_r = 1$; $\rho = 1$ kg/m^3
Phantom section: H Dipole Section

DASY4 Configuration:
- Probe: H3DV6 - SN6053; ; Calibrated: 20.01.2005
- Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn388; Calibrated: 07.01.2005
- Phantom: HAC Phantom; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

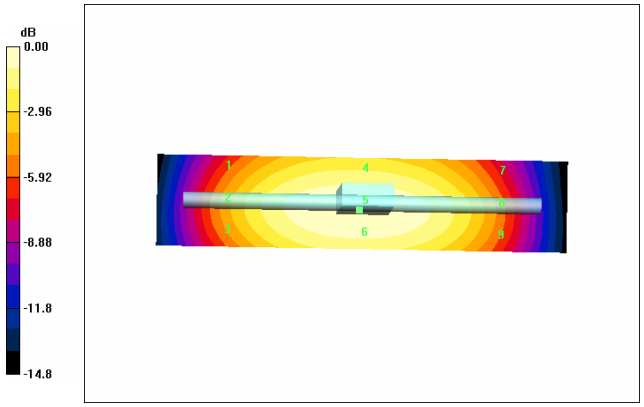
H Scan 10mm above CD 1880 MHz/Hearing Aid Compatibility Test (41x181x1): Measurement grid: dx=5mm, dy=5mm
Maximum value of Total field (slot averaged) = 0.477 A/m
Hearing Aid Near-Field Category: M2 (AWF 0 dB)

H in A/m (Time averaged)

Grid 1 **0.393**	Grid 2 **0.437**	Grid 3 **0.429**
Grid 4 **0.428**	Grid 5 **0.477**	Grid 6 **0.469**
Grid 7 **0.381**	Grid 8 **0.427**	Grid 9 **0.420**

H in A/m (Slot averaged)

Grid 1 **0.393**	Grid 2 **0.437**	Grid 3 **0.429**
Grid 4 **0.428**	Grid 5 **0.477**	Grid 6 **0.469**
Grid 7 **0.381**	Grid 8 **0.427**	Grid 9 **0.420**



Date/Time: 22.07.2005 09:06:53
Test Laboratory: TCC Nokia
Type: CD1880V3, Program Name: HAC E Dipole

Communication System: CW; Frequency: 1880 MHz; Duty Cycle: 1:1
Medium parameters used: σ = 0 mho/m, ε_r = 1; ρ = 1000 kg/m^3
Phantom section: E Dipole Section

DASY4 Configuration:
- Probe: ER3DV6 - SN2333; ConvF(1, 1, 1); Calibrated: 31.01.2005
- Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn388; Calibrated: 07.01.2005
- Phantom: HAC Phantom; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

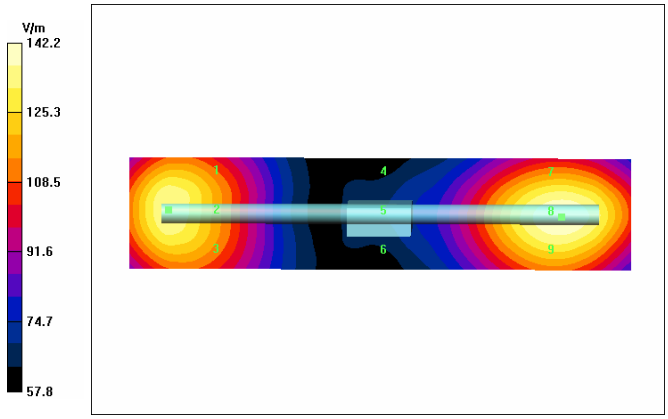
E Scan 10mm above CD 1880 MHz/Hearing Aid Compatibility Test (41x181x1): Measurement grid: dx=5mm, dy=5mm
Maximum value of Total field (slot averaged) = 142.2 V/m
Hearing Aid Near-Field Category: M2 (AWF 0 dB)

E in V/m (Time averaged)

Grid 1 **133.8**	Grid 2 **136.5**	Grid 3 **132.1**
Grid 4 **88.4**	Grid 5 **93.7**	Grid 6 **91.3**
Grid 7 **131.6**	Grid 8 **142.2**	Grid 9 **137.3**

E in V/m (Slot averaged)

Grid 1 **133.8**	Grid 2 **136.5**	Grid 3 **132.1**
Grid 4 **88.4**	Grid 5 **93.7**	Grid 6 **91.3**
Grid 7 **131.6**	Grid 8 **142.2**	Grid 9 **137.3**



Date/Time: 04.08.2005 13:51:32
Test Laboratory: TCC Nokia
Type: CD1880V3; Serial: 1003, Program Name: HAC E Dipole

Communication System: CW; Frequency: 1880 MHz;Duty Cycle: 1:1
Medium parameters used: σ = 0 mho/m, ε_r = 1; ρ = 1000 kg/m^3
Phantom section: E Dipole Section

DASY4 Configuration:
- Probe: ER3DV6 - SN2333; ConvF(1, 1, 1); Calibrated: 31.01.2005
- Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn388; Calibrated: 07.01.2005
- Phantom: HAC Phantom; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

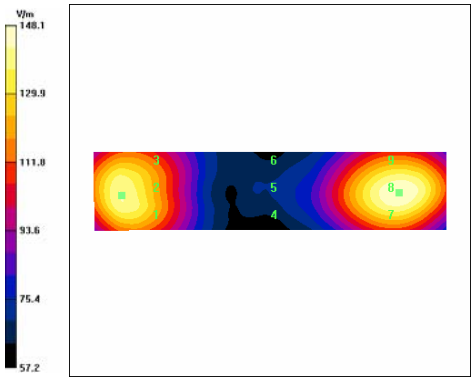
E Scan 10mm above CD 1880 MHz/Hearing Aid Compatibility Test (41x181x1): Measurement grid: dx=5mm, dy=5mm
Maximum value of Total field (slot averaged) = 148.1 V/m
Hearing Aid Near-Field Category: M2 (AWF 0 dB)

E in V/m (Time averaged)

Grid 1 **140.6**	Grid 2 **142.3**	Grid 3 **137.7**
Grid 4 **92.2**	Grid 5 **95.1**	Grid 6 **90.1**
Grid 7 **141.4**	Grid 8 **148.1**	Grid 9 **140.0**

E in V/m (Slot averaged)

Grid 1 **140.6**	Grid 2 **142.3**	Grid 3 **137.7**
Grid 4 **92.2**	Grid 5 **95.1**	Grid 6 **90.1**
Grid 7 **141.4**	Grid 8 **148.1**	Grid 9 **140.0**



APPENDIX B: MEASUREMENT SCANS

Date/Time: 22.07.2005 11:38:33
Test Laboratory: TCC Nokia
Type: RM-77; Serial: 356642/00/000041/3, Program Name: HAC E Device

Communication System: GSM850; Frequency: 824.2 MHz; Duty Cycle: 1:8.3
Medium parameters used: σ = 0 mho/m, ε_r = 1; ρ = 1000 kg/m^3
Phantom section: E Device Section

DASY4 Configuration:
- Probe: ER3DV6 - SN2333; ConvF(1, 1, 1); Calibrated: 31.01.2005
- Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn388; Calibrated: 07.01.2005
- Phantom: HAC Phantom; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

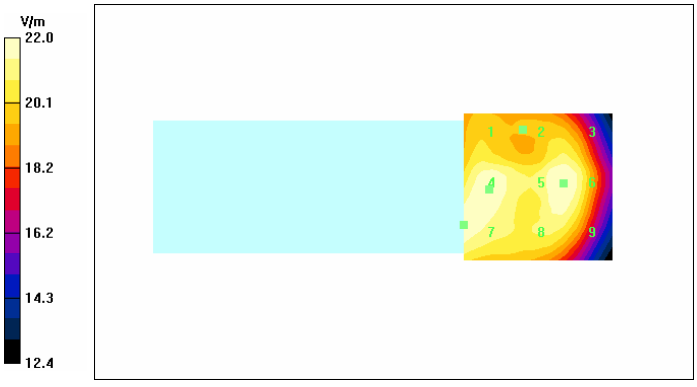
E Scan 10mm above Device Reference/Hearing Aid Compatibility Test (101x101x1): Measurement grid: dx=5mm, dy=5mm
Maximum value of Total field (slot averaged) = 63.5 V/m
Hearing Aid Near-Field Category: M3 (AWF -5 dB)

E in V/m (Time averaged)

Grid 1 **20.7**	Grid 2 **21.1**	Grid 3 **21.2**
Grid 4 **21.9**	Grid 5 **22.0**	Grid 6 **22.0**
Grid 7 **21.8**	Grid 8 **21.5**	Grid 9 **21.5**

E in V/m (Slot averaged)

Grid 1 **59.7**	Grid 2 **60.9**	Grid 3 **61.0**
Grid 4 **63.2**	Grid 5 **63.5**	Grid 6 **63.5**
Grid 7 **62.7**	Grid 8 **61.9**	Grid 9 **61.9**



Date/Time: 22.07.2005 14:48:06
Test Laboratory: TCC Nokia
Type: RM-77; Serial: 356642/00/000041/3, Program Name: HAC H Device

Communication System: GSM850; Frequency: 824.2 MHz; Duty Cycle: 1:8.3
Medium parameters used: $\sigma = 0$ mho/m, $\varepsilon_r = 1$; $\rho = 1$ kg/m^3
Phantom section: H Device Section

DASY4 Configuration:
- Probe: H3DV6 - SN6053; ; Calibrated: 20.01.2005
- Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn388; Calibrated: 07.01.2005
- Phantom: HAC Phantom; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

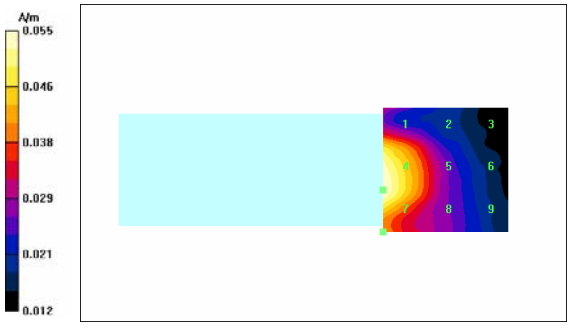
H Scan 10mm above Device Reference/Hearing Aid Compatibility Test (101x101x1): Measurement grid: dx=5mm, dy=5mm
Maximum value of Total field (slot averaged) = 0.159 A/m
Hearing Aid Near-Field Category: M3 (AWF -5 dB)

H in A/m (Time averaged)

Grid 1 **0.048**	Grid 2 **0.032**	Grid 3 **0.019**
Grid 4 **0.055**	Grid 5 **0.038**	Grid 6 **0.022**
Grid 7 **0.055**	Grid 8 **0.037**	Grid 9 **0.023**

H in A/m (Slot averaged)

Grid 1 **0.137**	Grid 2 **0.094**	Grid 3 **0.055**
Grid 4 **0.159**	Grid 5 **0.109**	Grid 6 **0.065**
Grid 7 **0.159**	Grid 8 **0.107**	Grid 9 **0.067**



Date/Time: 22.07.2005 11:30:12
Test Laboratory: TCC Nokia
Type: RM-77; Serial: 356642/00/000041/3, Program Name: HAC E Device

Communication System: GSM850; Frequency: 836.6 MHz; Duty Cycle: 1:8.3
Medium parameters used: σ = 0 mho/m, ε_r = 1; ρ = 1000 kg/m^3
Phantom section: E Device Section

DASY4 Configuration:
- Probe: ER3DV6 - SN2333; ConvF(1, 1, 1); Calibrated: 31.01.2005
- Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn388; Calibrated: 07.01.2005
- Phantom: HAC Phantom; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

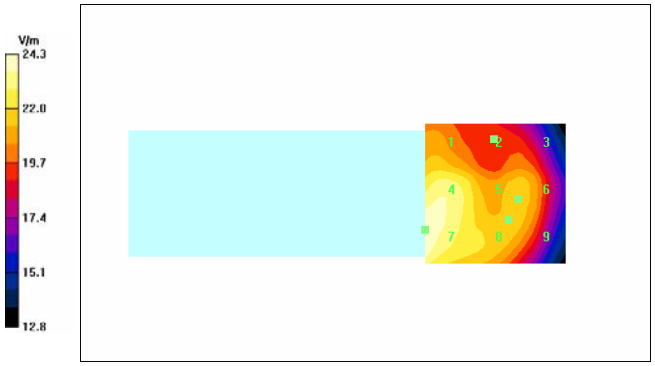
E Scan 10mm above Device Reference /Hearing Aid Compatibility Test (101x101x1): Measurement grid: dx=5mm, dy=5mm
Maximum value of Total field (slot averaged) = 70.0 V/m
Hearing Aid Near-Field Category: M3 (AWF -5 dB)

E in V/m (Time averaged)

Grid 1 **21.8**	Grid 2 **20.5**	Grid 3 **20.4**
Grid 4 **23.9**	Grid 5 **22.2**	Grid 6 **21.7**
Grid 7 **24.3**	Grid 8 **22.3**	Grid 9 **21.6**

E in V/m (Slot averaged)

Grid 1 **62.9**	Grid 2 **59.0**	Grid 3 **58.9**
Grid 4 **69.0**	Grid 5 **64.0**	Grid 6 **62.5**
Grid 7 **70.0**	Grid 8 **64.3**	Grid 9 **62.2**



Date/Time: 22.07.2005 14:39:37
Test Laboratory: TCC Nokia
Type: RM-77; Serial: 356642/00/000041/3, Program Name: HAC H Device

Communication System: GSM850; Frequency: 836.6 MHz; Duty Cycle: 1:8.3
Medium parameters used: $\sigma = 0$ mho/m, $\varepsilon_r = 1$; $\rho = 1$ kg/m^3
Phantom section: H Device Section

DASY4 Configuration:
- Probe: H3DV6 - SN6053; ; Calibrated: 20.01.2005
- Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn388; Calibrated: 07.01.2005
- Phantom: HAC Phantom; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

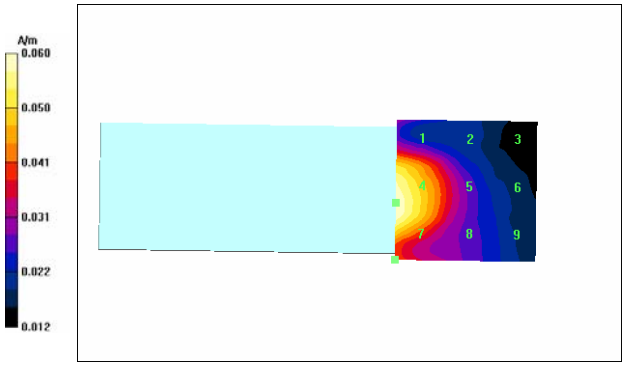
H Scan 10mm above Device Reference /Hearing Aid Compatibility Test (101x101x1): Measurement grid: dx=5mm, dy=5mm
Maximum value of Total field (slot averaged) = 0.172 A/m
Hearing Aid Near-Field Category: M3 (AWF -5 dB)

H in A/m (Time averaged)

Grid 1 **0.050**	Grid 2 **0.034**	Grid 3 **0.019**
Grid 4 **0.060**	Grid 5 **0.040**	Grid 6 **0.023**
Grid 7 **0.059**	Grid 8 **0.038**	Grid 9 **0.024**

H in A/m (Slot averaged)

Grid 1 **0.143**	Grid 2 **0.097**	Grid 3 **0.055**
Grid 4 **0.172**	Grid 5 **0.115**	Grid 6 **0.066**
Grid 7 **0.171**	Grid 8 **0.110**	Grid 9 **0.069**



Date/Time: 22.07.2005 11:43:40
Test Laboratory: TCC Nokia
Type: RM-77; Serial: 356642/00/000041/3, Program Name: HAC E Device

Communication System: GSM850; Frequency: 848.8 MHz; Duty Cycle: 1:8.3
Medium parameters used: $\sigma = 0$ mho/m, $\varepsilon_r = 1$; $\rho = 1000$ kg/m^3
Phantom section: E Device Section

DASY4 Configuration:
- Probe: ER3DV6 - SN2333; ConvF(1, 1, 1); Calibrated: 31.01.2005
- Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn388; Calibrated: 07.01.2005
- Phantom: HAC Phantom; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

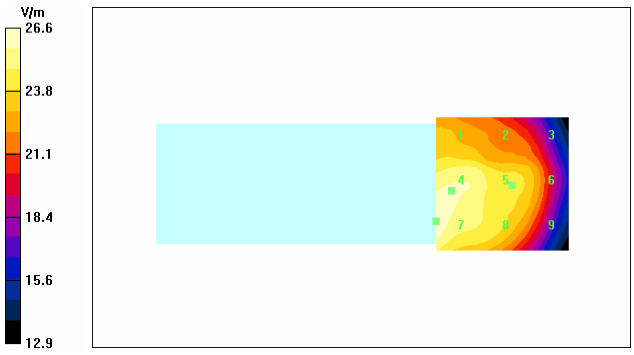
E Scan 10mm above Device Reference /Hearing Aid Compatibility Test (101x101x1): Measurement grid: dx=5mm, dy=5mm
Maximum value of Total field (slot averaged) = 76.5 V/m
Hearing Aid Near-Field Category: M3 (AWF -5 dB)

E in V/m (Time averaged)

Grid 1 **24.0**	Grid 2 **23.5**	Grid 3 **22.3**
Grid 4 **26.2**	Grid 5 **25.3**	Grid 6 **23.8**
Grid 7 **26.6**	Grid 8 **25.0**	Grid 9 **23.3**

E in V/m (Slot averaged)

Grid 1 **69.2**	Grid 2 **67.6**	Grid 3 **64.2**
Grid 4 **75.5**	Grid 5 **72.8**	Grid 6 **68.6**
Grid 7 **76.5**	Grid 8 **71.9**	Grid 9 **67.0**



Date/Time: 22.07.2005 14:43:59
Test Laboratory: TCC Nokia
DUT: Idefix US Standard; Type: RM-77; Serial: 356642/00/000041/3, Program Name: HAC H Device

Communication System: GSM850; Frequency: 848.8 MHz; Duty Cycle: 1:8.3
Medium parameters used: $\sigma = 0$ mho/m, $\varepsilon_r = 1$; $\rho = 1$ kg/m^3
Phantom section: H Device Section

DASY4 Configuration:
- Probe: H3DV6 - SN6053; ; Calibrated: 20.01.2005
- Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn388; Calibrated: 07.01.2005
- Phantom: HAC Phantom; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

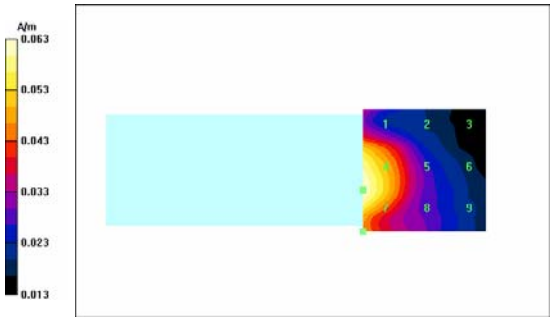
H Scan 10mm above Device Reference /Hearing Aid Compatibility Test (101x101x1): Measurement grid: dx=5mm, dy=5mm
Maximum value of Total field (slot averaged) = 0.181 A/m
Hearing Aid Near-Field Category: M3 (AWF -5 dB)

H in A/m (Time averaged)

Grid 1 **0.051**	Grid 2 **0.034**	Grid 3 **0.019**
Grid 4 **0.063**	Grid 5 **0.041**	Grid 6 **0.024**
Grid 7 **0.063**	Grid 8 **0.040**	Grid 9 **0.026**

H in A/m (Slot averaged)

Grid 1 **0.147**	Grid 2 **0.097**	Grid 3 **0.056**
Grid 4 **0.181**	Grid 5 **0.117**	Grid 6 **0.070**
Grid 7 **0.181**	Grid 8 **0.115**	Grid 9 **0.074**



Date/Time: 22.07.2005 12:11:26
Test Laboratory: TCC Nokia
Type: RM-77; Serial: 356642/00/000041/3, Program Name: HAC E Device

Communication System: GPRS850; Frequency: 824.2 MHz; Duty Cycle: 1:4.2
Medium parameters used: $\sigma = 0$ mho/m, $\varepsilon_r = 1$; $\rho = 1000$ kg/m^3
Phantom section: E Device Section

DASY4 Configuration:
- Probe: ER3DV6 - SN2333; ConvF(1, 1, 1); Calibrated: 31.01.2005
- Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn388; Calibrated: 07.01.2005
- Phantom: HAC Phantom; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

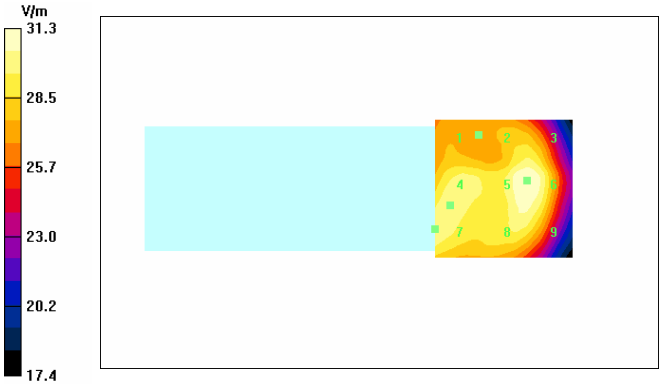
E Scan 10mm above Device Reference/Hearing Aid Compatibility Test (101x101x1): Measurement grid: dx=5mm, dy=5mm
Maximum value of Total field (slot averaged) = 64.1 V/m
Hearing Aid Near-Field Category: M3 (AWF -5 dB)

E in V/m (Time averaged)

Grid 1 **28.3**	Grid 2 **30.0**	Grid 3 **30.0**
Grid 4 **30.0**	Grid 5 **31.3**	Grid 6 **31.3**
Grid 7 **30.0**	Grid 8 **30.4**	Grid 9 **30.3**

E in V/m (Slot averaged)

Grid 1 **57.9**	Grid 2 **61.4**	Grid 3 **61.5**
Grid 4 **61.5**	Grid 5 **64.1**	Grid 6 **64.1**
Grid 7 **61.5**	Grid 8 **62.3**	Grid 9 **62.1**



Date/Time: 25.07.2005 15:01:50
Test Laboratory: TCC Nokia
Type: RM-77; Serial: 356642/00/000041/3, Program Name: HAC H Device

Communication System: GPRS850; Frequency: 824.2 MHz; Duty Cycle: 1:4.2
Medium parameters used: $\sigma = 0$ mho/m, $\varepsilon_r = 1$; $\rho = 1$ kg/m^3
Phantom section: H Device Section

DASY4 Configuration:
- Probe: H3DV6 - SN6053; ; Calibrated: 20.01.2005
- Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn388; Calibrated: 07.01.2005
- Phantom: HAC Phantom; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

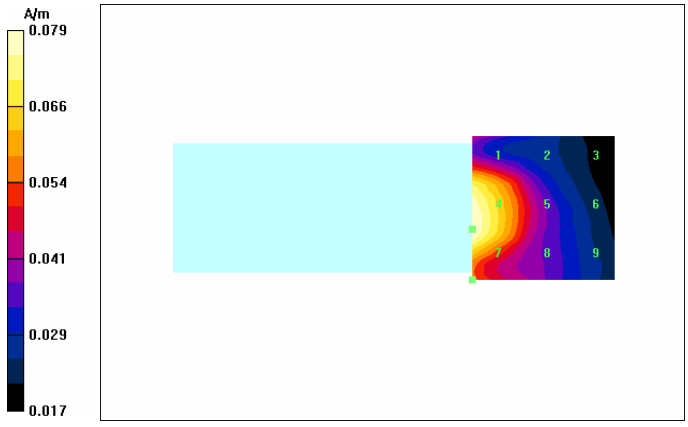
H Scan 10mm above Device Reference /Hearing Aid Compatibility Test (101x101x1): Measurement grid: dx=5mm, dy=5mm
Maximum value of Total field (slot averaged) = 0.161 A/m
Hearing Aid Near-Field Category: M3 (AWF -5 dB)

H in A/m (Time averaged)

Grid 1 **0.068**	Grid 2 **0.047**	Grid 3 **0.026**
Grid 4 **0.079**	Grid 5 **0.053**	Grid 6 **0.031**
Grid 7 **0.078**	Grid 8 **0.051**	Grid 9 **0.032**

H in A/m (Slot averaged)

Grid 1 **0.140**	Grid 2 **0.096**	Grid 3 **0.054**
Grid 4 **0.161**	Grid 5 **0.109**	Grid 6 **0.064**
Grid 7 **0.160**	Grid 8 **0.105**	Grid 9 **0.066**



Date/Time: 22.07.2005 11:56:40
Test Laboratory: TCC Nokia
Type: RM-77; Serial: 356642/00/000041/3, Program Name: HAC E Device

Communication System: GPRS850; Frequency: 836.6 MHz; Duty Cycle: 1:4.2
Medium parameters used: $\sigma = 0$ mho/m, $\varepsilon_r = 1$; $\rho = 1000$ kg/m^3
Phantom section: E Device Section

DASY4 Configuration:
- Probe: ER3DV6 - SN2333; ConvF(1, 1, 1); Calibrated: 31.01.2005
- Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn388; Calibrated: 07.01.2005
- Phantom: HAC Phantom; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

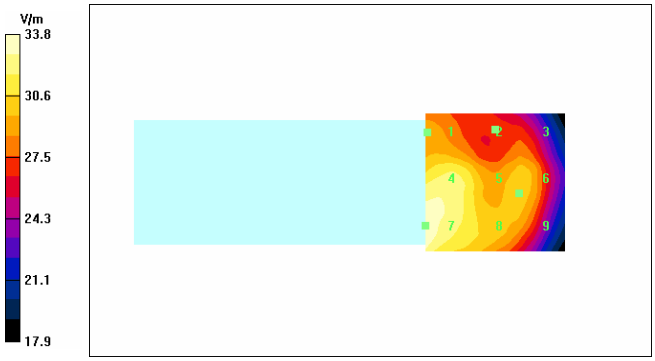
E Scan 10mm above Device Reference /Hearing Aid Compatibility Test (101x101x1): Measurement grid: dx=5mm, dy=5mm
Maximum value of Total field (slot averaged) = 69.3 V/m
Hearing Aid Near-Field Category: M3 (AWF -5 dB)

E in V/m (Time averaged)

Grid 1 **29.9**	Grid 2 **28.6**	Grid 3 **28.7**
Grid 4 **33.0**	Grid 5 **31.0**	Grid 6 **30.2**
Grid 7 **33.8**	Grid 8 **31.1**	Grid 9 **30.0**

E in V/m (Slot averaged)

Grid 1 **61.3**	Grid 2 **58.6**	Grid 3 **58.7**
Grid 4 **67.7**	Grid 5 **63.5**	Grid 6 **61.9**
Grid 7 **69.3**	Grid 8 **63.7**	Grid 9 **61.5**



Date/Time: 22.07.2005 14:16:40
Test Laboratory: TCC Nokia
Type: RM-77; Serial: 356642/00/000041/3, Program Name: HAC H Device

Communication System: GPRS850; Frequency: 836.6 MHz; Duty Cycle: 1:4.2
Medium parameters used: $\sigma = 0$ mho/m, $\varepsilon_r = 1$; $\rho = 1$ kg/m^3
Phantom section: H Device Section

DASY4 Configuration:
- Probe: H3DV6 - SN6053; ; Calibrated: 20.01.2005
- Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn388; Calibrated: 07.01.2005
- Phantom: HAC Phantom; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

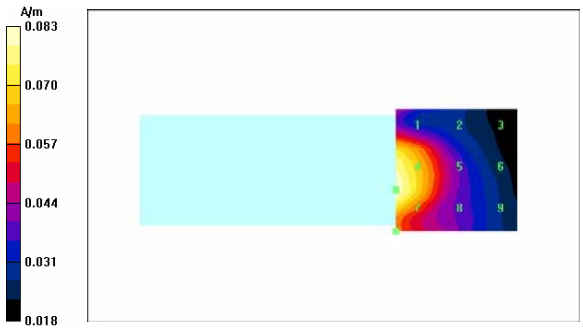
H Scan 10mm above Device Reference /Hearing Aid Compatibility Test (101x101x1): Measurement grid: dx=5mm, dy=5mm
Maximum value of Total field (slot averaged) = 0.170 A/m
Hearing Aid Near-Field Category: M3 (AWF -5 dB)

H in A/m (Time averaged)

Grid 1 **0.069**	Grid 2 **0.047**	Grid 3 **0.028**
Grid 4 **0.083**	Grid 5 **0.056**	Grid 6 **0.033**
Grid 7 **0.083**	Grid 8 **0.054**	Grid 9 **0.034**

H in A/m (Slot averaged)

Grid 1 **0.141**	Grid 2 **0.097**	Grid 3 **0.056**
Grid 4 **0.170**	Grid 5 **0.114**	Grid 6 **0.068**
Grid 7 **0.170**	Grid 8 **0.110**	Grid 9 **0.070**



Date/Time: 22.07.2005 11:51:55
Test Laboratory: TCC Nokia
Type: RM-77; Serial: 356642/00/000041/3, Program Name: HAC E Device

Communication System: GPRS850; Frequency: 848.8 MHz; Duty Cycle: 1:4.2
Medium parameters used: $\sigma = 0$ mho/m, $\varepsilon_r = 1$; $\rho = 1000$ kg/m^3
Phantom section: E Device Section

DASY4 Configuration:
- Probe: ER3DV6 - SN2333; ConvF(1, 1, 1); Calibrated: 31.01.2005
- Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn388; Calibrated: 07.01.2005
- Phantom: HAC Phantom; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

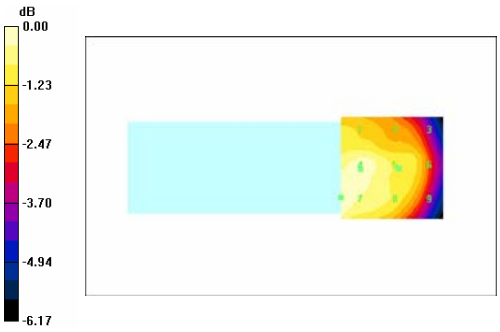
E Scan 10mm above Device Reference /Hearing Aid Compatibility Test (101x101x1): Measurement grid: dx=5mm, dy=5mm
Maximum value of Total field (slot averaged) = 74.8 V/m
Hearing Aid Near-Field Category: M3 (AWF -5 dB)

E in V/m (Time averaged)

Grid 1 **33.1**	Grid 2 **32.4**	Grid 3 **31.0**
Grid 4 **35.8**	Grid 5 **35.0**	Grid 6 **32.8**
Grid 7 **36.5**	Grid 8 **34.5**	Grid 9 **32.1**

E in V/m (Slot averaged)

Grid 1 **67.7**	Grid 2 **66.4**	Grid 3 **63.5**
Grid 4 **73.4**	Grid 5 **71.7**	Grid 6 **67.3**
Grid 7 **74.8**	Grid 8 **70.6**	Grid 9 **65.8**



Date/Time: 22.07.2005 14:23:32
Test Laboratory: TCC Nokia
Type: RM-77; Serial: 356642/00/000041/3, Program Name: HAC H Device

Communication System: GPRS850; Frequency: 848.8 MHz; Duty Cycle: 1:4.2
Medium parameters used: $\sigma = 0$ mho/m, $\varepsilon_r = 1$; $\rho = 1$ kg/m^3
Phantom section: H Device Section

DASY4 Configuration:
- Probe: H3DV6 - SN6053; ; Calibrated: 20.01.2005
- Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn388; Calibrated: 07.01.2005
- Phantom: HAC Phantom; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

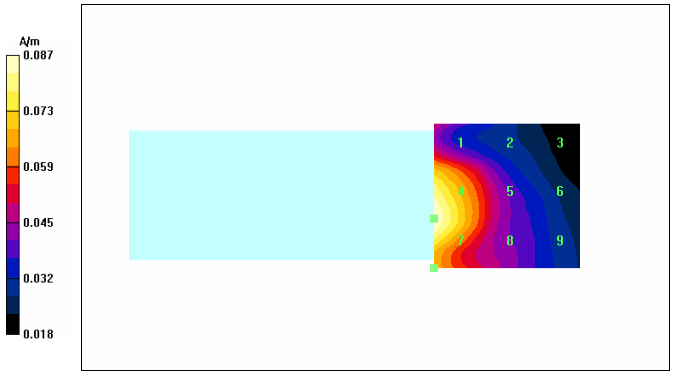
H Scan 10mm above Device Reference /Hearing Aid Compatibility Test (101x101x1): Measurement grid: dx=5mm, dy=5mm
Maximum value of Total field (slot averaged) = 0.177 A/m
Hearing Aid Near-Field Category: M3 (AWF -5 dB)

H in A/m (Time averaged)

Grid 1 **0.069**	Grid 2 **0.048**	Grid 3 **0.029**
Grid 4 **0.087**	Grid 5 **0.057**	Grid 6 **0.036**
Grid 7 **0.087**	Grid 8 **0.056**	Grid 9 **0.037**

H in A/m (Slot averaged)

Grid 1 **0.142**	Grid 2 **0.098**	Grid 3 **0.060**
Grid 4 **0.177**	Grid 5 **0.117**	Grid 6 **0.074**
Grid 7 **0.177**	Grid 8 **0.115**	Grid 9 **0.077**



Date/Time: 26.07.2005 14:42:02
Test Laboratory: TCC Nokia
Type: RM-77; Serial: 356642/00/000041/3, Program Name: HAC E Device

Communication System: E-GPRS 850; Frequency: 824 MHz; Duty Cycle: 1:4.2
Medium parameters used: $\sigma = 0$ mho/m, $\varepsilon_r = 1$; $\rho = 1000$ kg/m^3
Phantom section: E Device Section

DASY4 Configuration:
- Probe: ER3DV6 - SN2333; ConvF(1, 1, 1); Calibrated: 31.01.2005
- Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn388; Calibrated: 07.01.2005
- Phantom: HAC Phantom; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

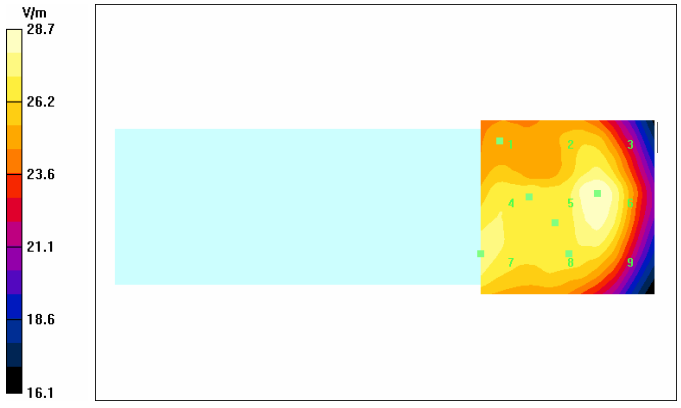
E Scan 10mm above Device Reference/Hearing Aid Compatibility Test (101x101x1): Measurement grid: dx=5mm, dy=5mm
Maximum value of Total field (slot averaged) = 58.8 V/m
Hearing Aid Near-Field Category: M3 (AWF -5 dB)

E in V/m (Time averaged)

Grid 1 **25.8**	Grid 2 **27.5**	Grid 3 **27.5**
Grid 4 **27.2**	Grid 5 **28.6**	Grid 6 **28.7**
Grid 7 **27.5**	Grid 8 **27.6**	Grid 9 **27.6**

E in V/m (Slot averaged)

Grid 1 **52.9**	Grid 2 **56.4**	Grid 3 **56.4**
Grid 4 **55.8**	Grid 5 **58.7**	Grid 6 **58.8**
Grid 7 **56.3**	Grid 8 **56.5**	Grid 9 **56.5**



Date/Time: 26.07.2005 13:53:42
Test Laboratory: TCC Nokia
Type: RM-77; Serial: 356642/00/000041/3, Program Name: HAC H Device

Communication System: E-GPRS 850; Frequency: 824 MHz; Duty Cycle: 1:4.2
Medium parameters used: $\sigma = 0$ mho/m, $\varepsilon_r = 1$; $\rho = 1$ kg/m^3
Phantom section: H Device Section

DASY4 Configuration:
- Probe: H3DV6 - SN6053; ; Calibrated: 20.01.2005
- Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn388; Calibrated: 07.01.2005
- Phantom: HAC Phantom; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

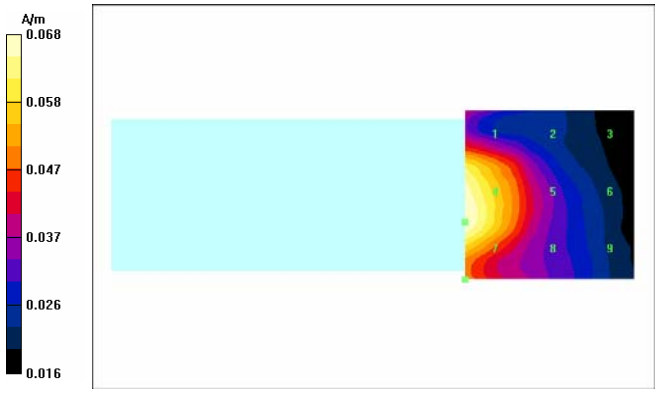
H Scan 10mm above Device Reference 3/Hearing Aid Compatibility Test (101x101x1): Measurement grid: dx=5mm, dy=5mm
Maximum value of Total field (slot averaged) = 0.140 A/m
Hearing Aid Near-Field Category: M4 (AWF -5 dB)

H in A/m (Time averaged)

Grid 1 **0.060**	Grid 2 **0.041**	Grid 3 **0.023**
Grid 4 **0.068**	Grid 5 **0.047**	Grid 6 **0.027**
Grid 7 **0.068**	Grid 8 **0.045**	Grid 9 **0.029**

H in A/m (Slot averaged)

Grid 1 **0.122**	Grid 2 **0.083**	Grid 3 **0.047**
Grid 4 **0.140**	Grid 5 **0.095**	Grid 6 **0.056**
Grid 7 **0.140**	Grid 8 **0.092**	Grid 9 **0.060**



Date/Time: 26.07.2005 14:36:32
Test Laboratory: TCC Nokia
Type: RM-77; Serial: 356642/00/000041/3, Program Name: HAC E Device

Communication System: E-GPRS 850; Frequency: 836 MHz; Duty Cycle: 1:4.2
Medium parameters used: $\sigma = 0$ mho/m, $\varepsilon_r = 1$; $\rho = 1000$ kg/m^3
Phantom section: E Device Section

DASY4 Configuration:
- Probe: ER3DV6 - SN2333; ConvF(1, 1, 1); Calibrated: 31.01.2005
- Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn388; Calibrated: 07.01.2005
- Phantom: HAC Phantom; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

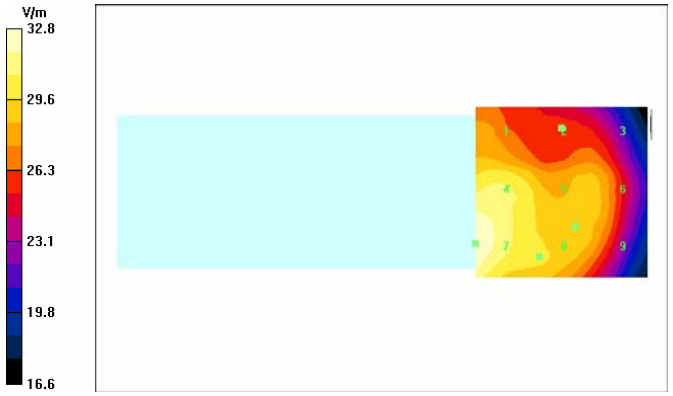
E Scan 10mm above Device Reference 2/Hearing Aid Compatibility Test (101x101x1): Measurement grid: dx=5mm, dy=5mm
Maximum value of Total field (slot averaged) = 67.2 V/m
Hearing Aid Near-Field Category: M3 (AWF -5 dB)

E in V/m (Time averaged)

Grid 1 **28.8**	Grid 2 **27.4**	Grid 3 **27.3**
Grid 4 **32.1**	Grid 5 **29.9**	Grid 6 **29.3**
Grid 7 **32.8**	Grid 8 **29.9**	Grid 9 **29.0**

E in V/m (Slot averaged)

Grid 1 **59.0**	Grid 2 **56.1**	Grid 3 **56.0**
Grid 4 **65.7**	Grid 5 **61.2**	Grid 6 **60.1**
Grid 7 **67.2**	Grid 8 **61.2**	Grid 9 **59.4**



Date/Time: 26.07.2005 13:44:41
Test Laboratory: TCC Nokia
Type: RM-77; Serial: 356642/00/000041/3, Program Name: HAC H Device

Communication System: E-GPRS 850; Frequency: 836 MHz; Duty Cycle: 1:4.2
Medium parameters used: $\sigma = 0$ mho/m, $\varepsilon_r = 1$; $\rho = 1$ kg/m^3
Phantom section: H Device Section

DASY4 Configuration:
- Probe: H3DV6 - SN6053; ; Calibrated: 20.01.2005
- Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn388; Calibrated: 07.01.2005
- Phantom: HAC Phantom; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

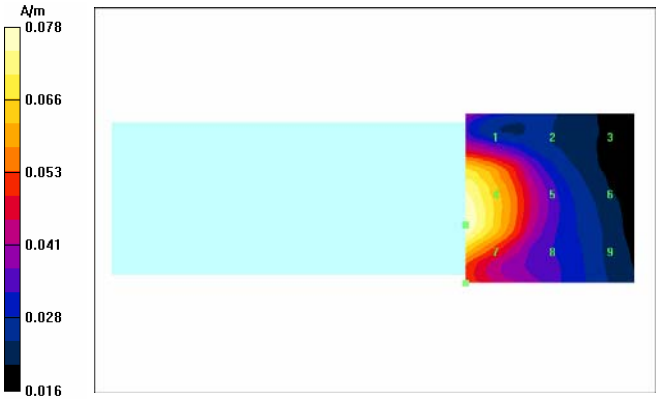
H Scan 10mm above Device Reference 2/Hearing Aid Compatibility Test (101x101x1): Measurement grid: dx=5mm, dy=5mm
Maximum value of Total field (slot averaged) = 0.160 A/m
Hearing Aid Near-Field Category: M3 (AWF -5 dB)

H in A/m (Time averaged)

Grid 1 **0.065**	Grid 2 **0.044**	Grid 3 **0.024**
Grid 4 **0.078**	Grid 5 **0.051**	Grid 6 **0.028**
Grid 7 **0.078**	Grid 8 **0.049**	Grid 9 **0.030**

H in A/m (Slot averaged)

Grid 1 **0.134**	Grid 2 **0.091**	Grid 3 **0.049**
Grid 4 **0.160**	Grid 5 **0.105**	Grid 6 **0.058**
Grid 7 **0.160**	Grid 8 **0.101**	Grid 9 **0.061**



Date/Time: 26.07.2005 14:29:37
Test Laboratory: TCC Nokia
Type: RM-77; Serial: 356642/00/000041/3, Program Name: HAC E Device

Communication System: E-GPRS 850; Frequency: 849 MHz; Duty Cycle: 1:4.2
Medium parameters used: $\sigma = 0$ mho/m, $\varepsilon_r = 1$; $\rho = 1000$ kg/m^3
Phantom section: E Device Section

DASY4 Configuration:
- Probe: ER3DV6 - SN2333; ConvF(1, 1, 1); Calibrated: 31.01.2005
- Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn388; Calibrated: 07.01.2005
- Phantom: HAC Phantom; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

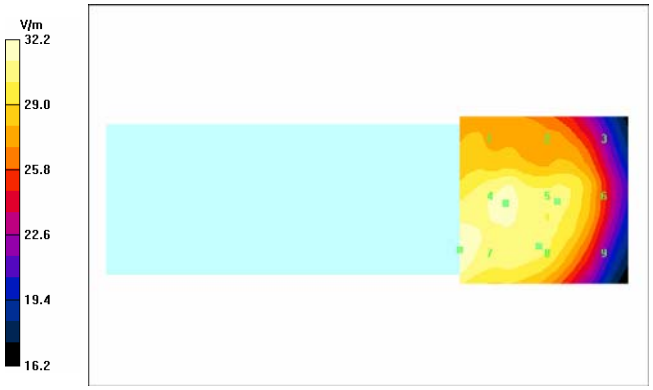
E Scan 10mm above Device Reference 2 2/Hearing Aid Compatibility Test (101x101x1): Measurement grid: dx=5mm, dy=5mm
Maximum value of Total field (slot averaged) = 66.1 V/m
Hearing Aid Near-Field Category: M3 (AWF -5 dB)

E in V/m (Time averaged)

Grid 1 **29.2**	Grid 2 **29.0**	Grid 3 **28.5**
Grid 4 **31.5**	Grid 5 **31.3**	Grid 6 **30.0**
Grid 7 **32.2**	Grid 8 **31.1**	Grid 9 **29.3**

E in V/m (Slot averaged)

Grid 1 **59.8**	Grid 2 **59.5**	Grid 3 **58.4**
Grid 4 **64.6**	Grid 5 **64.2**	Grid 6 **61.6**
Grid 7 **66.1**	Grid 8 **63.6**	Grid 9 **60.0**



Date/Time: 26.07.2005 14:00:08
Test Laboratory: TCC Nokia
Type: RM-77; Serial: 356642/00/000041/3, Program Name: HAC H Device

Communication System: E-GPRS 850; Frequency: 849 MHz; Duty Cycle: 1:4.2
Medium parameters used: $\sigma = 0$ mho/m, $\varepsilon_r = 1$; $\rho = 1$ kg/m^3
Phantom section: H Device Section

DASY4 Configuration:
- Probe: H3DV6 - SN6053; ; Calibrated: 20.01.2005
- Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn388; Calibrated: 07.01.2005
- Phantom: HAC Phantom; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

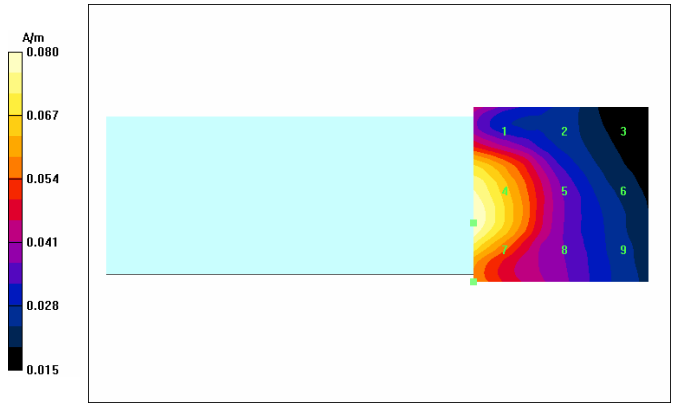
H Scan 10mm above Device Reference 2 2/Hearing Aid Compatibility Test (101x101x1): Measurement grid: dx=5mm, dy=5mm
Maximum value of Total field (slot averaged) = 0.165 A/m
Hearing Aid Near-Field Category: M3 (AWF -5 dB)

H in A/m (Time averaged)

Grid 1 **0.066**	Grid 2 **0.046**	Grid 3 **0.025**
Grid 4 **0.080**	Grid 5 **0.054**	Grid 6 **0.031**
Grid 7 **0.080**	Grid 8 **0.052**	Grid 9 **0.033**

H in A/m (Slot averaged)

Grid 1 **0.136**	Grid 2 **0.093**	Grid 3 **0.052**
Grid 4 **0.165**	Grid 5 **0.110**	Grid 6 **0.064**
Grid 7 **0.165**	Grid 8 **0.107**	Grid 9 **0.067**



Date/Time: 22.07.2005 09:52:12
Test Laboratory: TCC Nokia
Type: RM-77; Serial: 356642/00/000041/3, Program Name: HAC E Device

Communication System: GSM1900; Frequency: 1850.2 MHz; Duty Cycle: 1:8.3
Medium parameters used: $\sigma = 0$ mho/m, $\varepsilon_r = 1$; $\rho = 1000$ kg/m^3
Phantom section: E Device Section

DASY4 Configuration:
- Probe: ER3DV6 - SN2333; ConvF(1, 1, 1); Calibrated: 31.01.2005
- Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn388; Calibrated: 07.01.2005
- Phantom: HAC Phantom; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

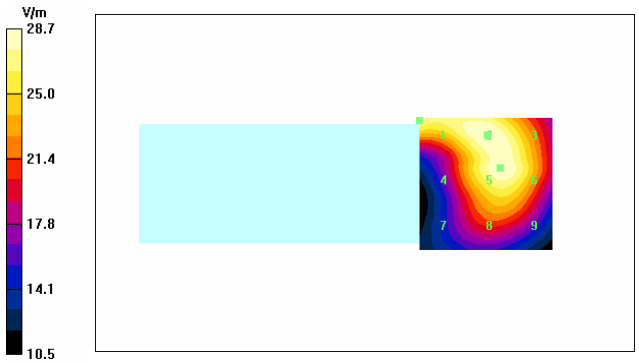
E Scan 10mm above Device Reference/Hearing Aid Compatibility Test (101x101x1): Measurement grid: dx=5mm, dy=5mm
Maximum value of Total field (slot averaged) = 82.6 V/m
Hearing Aid Near-Field Category: M3 (AWF -5 dB)

E in V/m (Time averaged)

Grid 1 **27.4**	Grid 2 **28.7**	Grid 3 **28.1**
Grid 4 **22.3**	Grid 5 **28.6**	Grid 6 **28.4**
Grid 7 **18.9**	Grid 8 **23.8**	Grid 9 **23.4**

E in V/m (Slot averaged)

Grid 1 **79.0**	Grid 2 **82.6**	Grid 3 **80.8**
Grid 4 **64.4**	Grid 5 **82.5**	Grid 6 **81.8**
Grid 7 **54.4**	Grid 8 **68.7**	Grid 9 **67.5**



Date/Time: 25.07.2005 16:52:11
Test Laboratory: TCC Nokia
Type: RM-77; Serial: 356642/00/000041/3, Program Name: HAC H Device

Communication System: GSM1900; Frequency: 1850.2 MHz; Duty Cycle: 1:8.3
Medium parameters used: $\sigma = 0$ mho/m, $\varepsilon_r = 1$; $\rho = 1$ kg/m^3
Phantom section: H Device Section

DASY4 Configuration:
- Probe: H3DV6 - SN6053; ; Calibrated: 20.01.2005
- Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn388; Calibrated: 07.01.2005
- Phantom: HAC Phantom; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

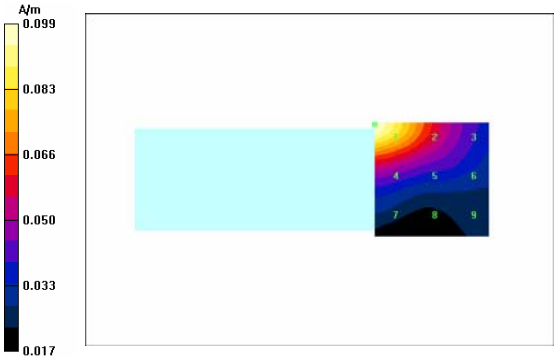
H Scan 10mm above Device Reference /Hearing Aid Compatibility Test (101x101x1): Measurement grid: dx=5mm, dy=5mm
Maximum value of Total field (slot averaged) = 0.286 A/m
Hearing Aid Near-Field Category: M2 (AWF -5 dB)

H in A/m (Time averaged)

Grid 1 **0.099**	Grid 2 **0.075**	Grid 3 **0.050**
Grid 4 **0.061**	Grid 5 **0.051**	Grid 6 **0.042**
Grid 7 **0.033**	Grid 8 **0.027**	Grid 9 **0.027**

H in A/m (Slot averaged)

Grid 1 **0.286**	Grid 2 **0.216**	Grid 3 **0.143**
Grid 4 **0.177**	Grid 5 **0.147**	Grid 6 **0.120**
Grid 7 **0.095**	Grid 8 **0.079**	Grid 9 **0.077**



Date/Time: 22.07.2005 09:57:05
Test Laboratory: TCC Nokia
Type: RM-77; Serial: 356642/00/000041/3, Program Name: HAC E Device

Communication System: GSM1900; Frequency: 1880 MHz; Duty Cycle: 1:8.3
Medium parameters used: σ = 0 mho/m, ε_r = 1; ρ = 1000 kg/m^3
Phantom section: E Device Section

DASY4 Configuration:
- Probe: ER3DV6 - SN2333; ConvF(1, 1, 1); Calibrated: 31.01.2005
- Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn388; Calibrated: 07.01.2005
- Phantom: HAC Phantom; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

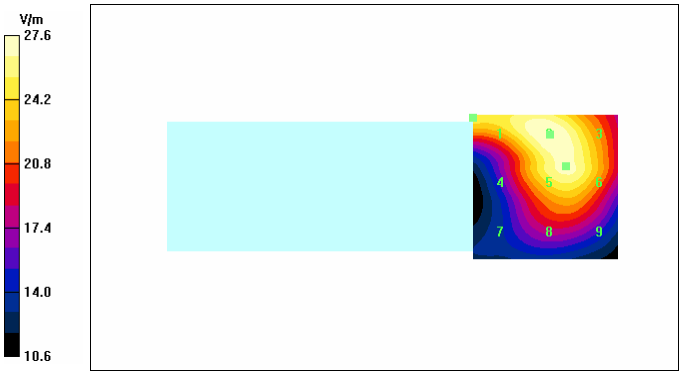
E Scan 10mm above Device Reference /Hearing Aid Compatibility Test (101x101x1): Measurement grid: dx=5mm, dy=5mm
Maximum value of Total field (slot averaged) = 79.6 V/m
Hearing Aid Near-Field Category: M3 (AWF -5 dB)

E in V/m (Time averaged)

Grid 1 **26.1**	Grid 2 **27.6**	Grid 3 **26.8**
Grid 4 **20.8**	Grid 5 **26.9**	Grid 6 **26.9**
Grid 7 **16.9**	Grid 8 **21.3**	Grid 9 **21.2**

E in V/m (Slot averaged)

Grid 1 **75.3**	Grid 2 **79.6**	Grid 3 **77.3**
Grid 4 **60.1**	Grid 5 **77.6**	Grid 6 **77.4**
Grid 7 **48.7**	Grid 8 **61.2**	Grid 9 **60.9**



Date/Time: 25.07.2005 16:39:35
Test Laboratory: TCC Nokia
Type: RM-77; Serial: 356642/00/000041/3, Program Name: HAC H Device

Communication System: GSM1900; Frequency: 1880 MHz; Duty Cycle: 1:8.3
Medium parameters used: $\sigma = 0$ mho/m, $\varepsilon_r = 1$; $\rho = 1$ kg/m^3
Phantom section: H Device Section

DASY4 Configuration:
- Probe: H3DV6 - SN6053; ; Calibrated: 20.01.2005
- Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn388; Calibrated: 07.01.2005
- Phantom: HAC Phantom; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

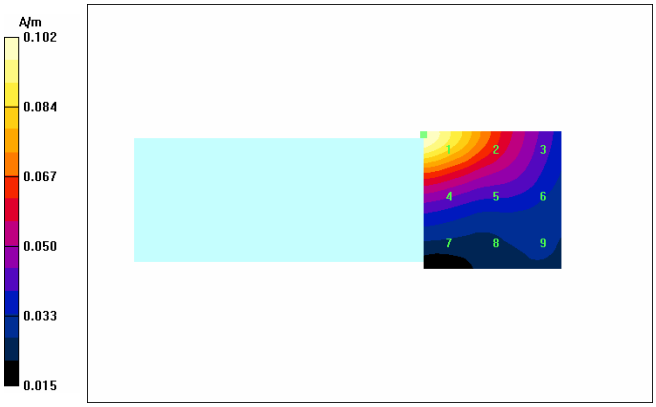
H Scan 10mm above Device Reference /Hearing Aid Compatibility Test (101x101x1): Measurement grid: dx=5mm, dy=5mm
Maximum value of Total field (slot averaged) = 0.293 A/m
Hearing Aid Near-Field Category: M2 (AWF -5 dB)

H in A/m (Time averaged)

Grid 1 **0.102**	Grid 2 **0.080**	Grid 3 **0.054**
Grid 4 **0.064**	Grid 5 **0.053**	Grid 6 **0.045**
Grid 7 **0.034**	Grid 8 **0.030**	Grid 9 **0.030**

H in A/m (Slot averaged)

Grid 1 **0.293**	Grid 2 **0.231**	Grid 3 **0.156**
Grid 4 **0.184**	Grid 5 **0.154**	Grid 6 **0.129**
Grid 7 **0.099**	Grid 8 **0.087**	Grid 9 **0.087**



Date/Time: 22.07.2005 10:01:21
Test Laboratory: TCC Nokia
Type: RM-77; Serial: 356642/00/000041/3, Program Name: HAC E Device

Communication System: GSM1900; Frequency: 1909.8 MHz; Duty Cycle: 1:8.3
Medium parameters used: $\sigma = 0$ mho/m, $\varepsilon_r = 1$; $\rho = 1000$ kg/m^3
Phantom section: E Device Section

DASY4 Configuration:
- Probe: ER3DV6 - SN2333; ConvF(1, 1, 1); Calibrated: 31.01.2005
- Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn388; Calibrated: 07.01.2005
- Phantom: HAC Phantom; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

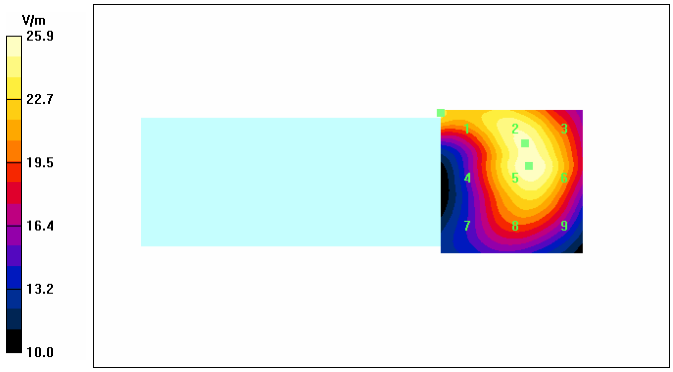
E Scan 10mm above Device Reference /Hearing Aid Compatibility Test (101x101x1): Measurement grid: dx=5mm, dy=5mm
Maximum value of Total field (slot averaged) = 74.5 V/m
Hearing Aid Near-Field Category: M3 (AWF -5 dB)

E in V/m (Time averaged)

Grid 1 **23.1**	Grid 2 **25.4**	Grid 3 **25.2**
Grid 4 **19.7**	Grid 5 **25.9**	Grid 6 **25.7**
Grid 7 **17.7**	Grid 8 **22.1**	Grid 9 **21.8**

E in V/m (Slot averaged)

Grid 1 **66.5**	Grid 2 **73.1**	Grid 3 **72.5**
Grid 4 **56.8**	Grid 5 **74.5**	Grid 6 **74.0**
Grid 7 **50.9**	Grid 8 **63.8**	Grid 9 **62.9**



Date/Time: 25.07.2005 16:57:20
Test Laboratory: TCC Nokia
Type: RM-77; Serial: 356642/00/000041/3, Program Name: HAC H Device

Communication System: GSM1900; Frequency: 1909.8 MHz; Duty Cycle: 1:8.3
Medium parameters used: $\sigma = 0$ mho/m, $\varepsilon_r = 1$; $\rho = 1$ kg/m^3
Phantom section: H Device Section

DASY4 Configuration:
- Probe: H3DV6 - SN6053; ; Calibrated: 20.01.2005
- Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn388; Calibrated: 07.01.2005
- Phantom: HAC Phantom; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

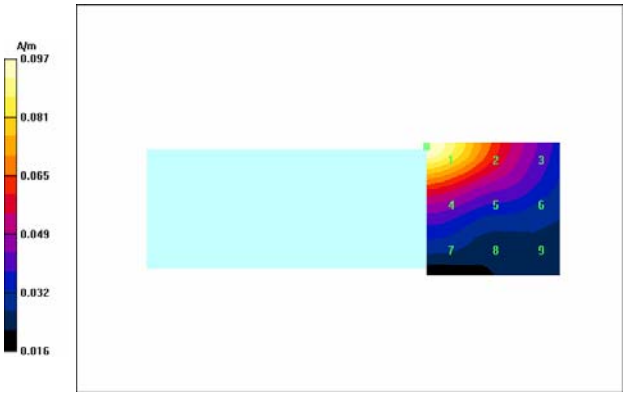
H Scan 10mm above Device Reference /Hearing Aid Compatibility Test (101x101x1): Measurement grid: dx=5mm, dy=5mm
Maximum value of Total field (slot averaged) = 0.280 A/m
Hearing Aid Near-Field Category: M2 (AWF -5 dB)

H in A/m (Time averaged)

Grid 1 **0.097**	Grid 2 **0.078**	Grid 3 **0.052**
Grid 4 **0.063**	Grid 5 **0.052**	Grid 6 **0.043**
Grid 7 **0.036**	Grid 8 **0.030**	Grid 9 **0.027**

H in A/m (Slot averaged)

Grid 1 **0.280**	Grid 2 **0.224**	Grid 3 **0.151**
Grid 4 **0.183**	Grid 5 **0.150**	Grid 6 **0.123**
Grid 7 **0.103**	Grid 8 **0.087**	Grid 9 **0.079**



Date/Time: 22.07.2005 10:19:41
Test Laboratory: TCC Nokia
Type: RM-77; Serial: 356642/00/000041/3, Program Name: HAC E Device

Communication System: GPRS1900; Frequency: 1850.2 MHz; Duty Cycle: 1:4.2
Medium parameters used: $\sigma = 0$ mho/m, $\varepsilon_r = 1$; $\rho = 1000$ kg/m^3
Phantom section: E Device Section

DASY4 Configuration:
- Probe: ER3DV6 - SN2333; ConvF(1, 1, 1); Calibrated: 31.01.2005
- Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn388; Calibrated: 07.01.2005
- Phantom: HAC Phantom; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

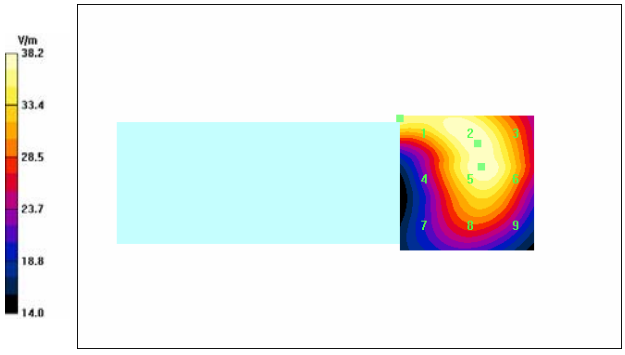
E Scan 10mm above Device Reference/Hearing Aid Compatibility Test (101x101x1): Measurement grid: dx=5mm, dy=5mm
Maximum value of Total field (slot averaged) = 78.3 V/m
Hearing Aid Near-Field Category: M3 (AWF -5 dB)

E in V/m (Time averaged)

Grid 1 **36.6**	Grid 2 **38.1**	Grid 3 **37.4**
Grid 4 **29.9**	Grid 5 **38.2**	Grid 6 **38.0**
Grid 7 **25.8**	Grid 8 **32.4**	Grid 9 **31.8**

E in V/m (Slot averaged)

Grid 1 **75.0**	Grid 2 **78.1**	Grid 3 **76.6**
Grid 4 **61.2**	Grid 5 **78.3**	Grid 6 **77.9**
Grid 7 **52.8**	Grid 8 **66.4**	Grid 9 **65.3**



Date/Time: 25.07.2005 17:27:03
Test Laboratory: TCC Nokia
Type: RM-77; Serial: 356642/00/000041/3, Program Name: HAC H Device

Communication System: GPRS1900; Frequency: 1850.2 MHz; Duty Cycle: 1:4.2
Medium parameters used: σ = 0 mho/m, ε_r = 1; ρ = 1 kg/m^3
Phantom section: H Device Section

DASY4 Configuration:
- Probe: H3DV6 - SN6053; ; Calibrated: 20.01.2005
- Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn388; Calibrated: 07.01.2005
- Phantom: HAC Phantom; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

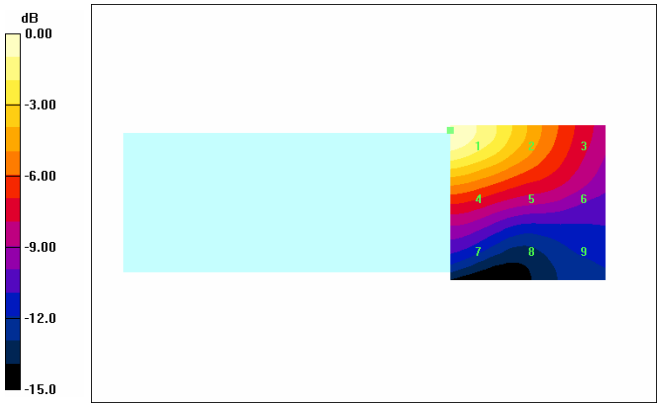
H Scan 10mm above Device Reference /Hearing Aid Compatibility Test (101x101x1): Measurement grid: dx=5mm, dy=5mm
Maximum value of Total field (slot averaged) = 0.267 A/m
Hearing Aid Near-Field Category: M2 (AWF -5 dB)

H in A/m (Time averaged)

Grid 1 **0.130**	Grid 2 **0.100**	Grid 3 **0.067**
Grid 4 **0.083**	Grid 5 **0.070**	Grid 6 **0.057**
Grid 7 **0.045**	Grid 8 **0.038**	Grid 9 **0.037**

H in A/m (Slot averaged)

Grid 1 **0.267**	Grid 2 **0.205**	Grid 3 **0.138**
Grid 4 **0.171**	Grid 5 **0.142**	Grid 6 **0.116**
Grid 7 **0.092**	Grid 8 **0.077**	Grid 9 **0.075**



Date/Time: 22.07.2005 10:15:01
Test Laboratory: TCC Nokia
Type: RM-77; Serial: 356642/00/000041/3, Program Name: HAC E Device

Communication System: GPRS1900; Frequency: 1880 MHz; Duty Cycle: 1:4.2
Medium parameters used: $\sigma = 0$ mho/m, $\varepsilon_r = 1$; $\rho = 1000$ kg/m^3
Phantom section: E Device Section

DASY4 Configuration:
- Probe: ER3DV6 - SN2333; ConvF(1, 1, 1); Calibrated: 31.01.2005
- Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn388; Calibrated: 07.01.2005
- Phantom: HAC Phantom; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

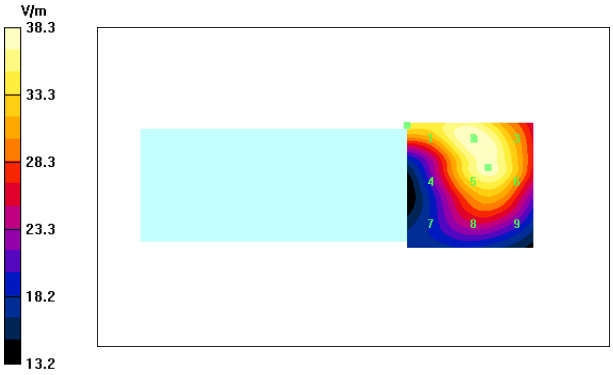
E Scan 10mm above Device Reference /Hearing Aid Compatibility Test (101x101x1): Measurement grid: dx=5mm, dy=5mm
Maximum value of Total field (slot averaged) = 78.5 V/m
Hearing Aid Near-Field Category: M3 (AWF -5 dB)

E in V/m (Time averaged)

Grid 1 **35.6**	Grid 2 **38.3**	Grid 3 **37.5**
Grid 4 **28.5**	Grid 5 **37.5**	Grid 6 **37.4**
Grid 7 **22.9**	Grid 8 **29.5**	Grid 9 **29.3**

E in V/m (Slot averaged)

Grid 1 **73.0**	Grid 2 **78.5**	Grid 3 **76.8**
Grid 4 **58.4**	Grid 5 **76.9**	Grid 6 **76.7**
Grid 7 **46.9**	Grid 8 **60.4**	Grid 9 **60.0**



Date/Time: 25.07.2005 17:22:09
Test Laboratory: TCC Nokia
Type: RM-77; Serial: 356642/00/000041/3, Program Name: HAC H Device

Communication System: GPRS1900; Frequency: 1880 MHz; Duty Cycle: 1:4.2
Medium parameters used: $\sigma = 0$ mho/m, $\varepsilon_r = 1$; $\rho = 1$ kg/m^3
Phantom section: H Device Section

DASY4 Configuration:
- Probe: H3DV6 - SN6053; ; Calibrated: 20.01.2005
- Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn388; Calibrated: 07.01.2005
- Phantom: HAC Phantom; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

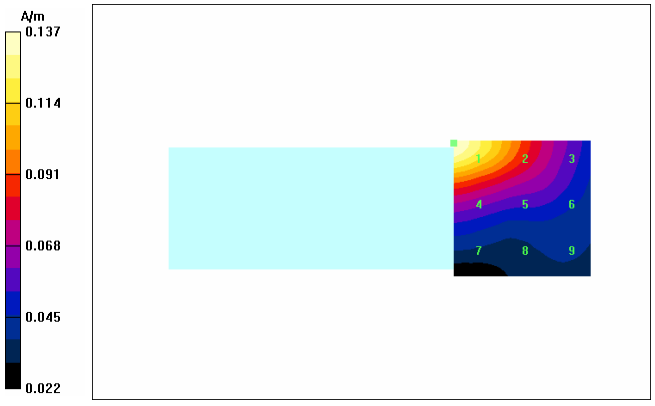
H Scan 10mm above Device Reference /Hearing Aid Compatibility Test (101x101x1): Measurement grid: dx=5mm, dy=5mm
Maximum value of Total field (slot averaged) = 0.280 A/m
Hearing Aid Near-Field Category: M2 (AWF -5 dB)

H in A/m (Time averaged)

Grid 1 **0.137**	Grid 2 **0.108**	Grid 3 **0.073**
Grid 4 **0.088**	Grid 5 **0.074**	Grid 6 **0.061**
Grid 7 **0.047**	Grid 8 **0.041**	Grid 9 **0.041**

H in A/m (Slot averaged)

Grid 1 **0.280**	Grid 2 **0.222**	Grid 3 **0.150**
Grid 4 **0.180**	Grid 5 **0.151**	Grid 6 **0.126**
Grid 7 **0.097**	Grid 8 **0.085**	Grid 9 **0.085**



Date/Time: 22.07.2005 10:10:39
Test Laboratory: TCC Nokia
Type: RM-77; Serial: 356642/00/000041/3, Program Name: HAC E Device

Communication System: GPRS1900; Frequency: 1909.8 MHz; Duty Cycle: 1:4.2
Medium parameters used: σ = 0 mho/m, ε_r = 1; ρ = 1000 kg/m^3
Phantom section: E Device Section

DASY4 Configuration:
- Probe: ER3DV6 - SN2333; ConvF(1, 1, 1); Calibrated: 31.01.2005
- Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn388; Calibrated: 07.01.2005
- Phantom: HAC Phantom; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

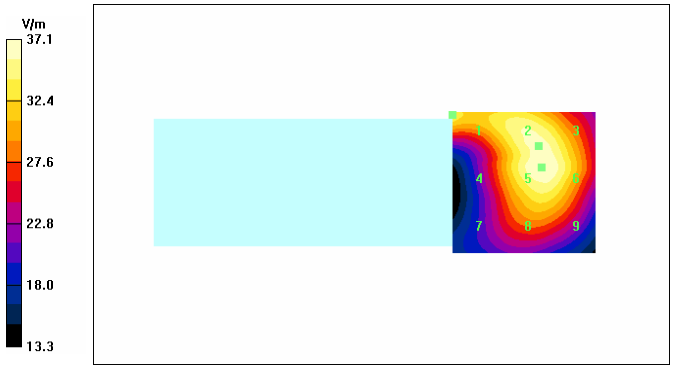
E Scan 10mm above Device Reference /Hearing Aid Compatibility Test (101x101x1): Measurement grid: dx=5mm, dy=5mm
Maximum value of Total field (slot averaged) = 76.1 V/m
Hearing Aid Near-Field Category: M3 (AWF -5 dB)

E in V/m (Time averaged)

Grid 1 **33.3**	Grid 2 **36.5**	Grid 3 **36.4**
Grid 4 **28.3**	Grid 5 **37.1**	Grid 6 **36.9**
Grid 7 **25.0**	Grid 8 **31.8**	Grid 9 **31.4**

E in V/m (Slot averaged)

Grid 1 **68.3**	Grid 2 **74.9**	Grid 3 **74.5**
Grid 4 **58.0**	Grid 5 **76.1**	Grid 6 **75.7**
Grid 7 **51.3**	Grid 8 **65.2**	Grid 9 **64.3**



Date/Time: 25.07.2005 17:32:05
Test Laboratory: TCC Nokia
Type: RM-77; Serial: 356642/00/000041/3, Program Name: HAC H Device

Communication System: GPRS1900; Frequency: 1909.8 MHz; Duty Cycle: 1:4.2
Medium parameters used: $\sigma = 0$ mho/m, $\varepsilon_r = 1$; $\rho = 1$ kg/m^3
Phantom section: H Device Section

DASY4 Configuration:
- Probe: H3DV6 - SN6053; ; Calibrated: 20.01.2005
- Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn388; Calibrated: 07.01.2005
- Phantom: HAC Phantom; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

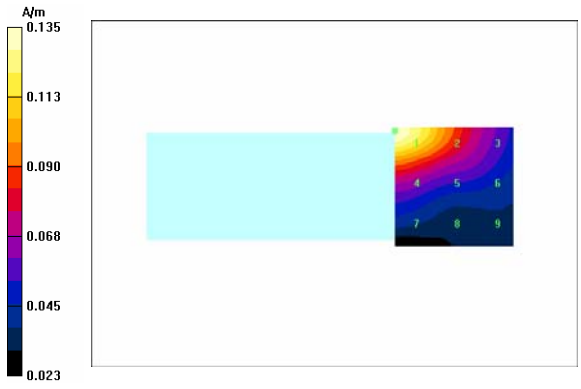
H Scan 10mm above Device Reference /Hearing Aid Compatibility Test (101x101x1): Measurement grid: dx=5mm, dy=5mm
Maximum value of Total field (slot averaged) = 0.276 A/m
Hearing Aid Near-Field Category: M2 (AWF -5 dB)

H in A/m (Time averaged)

Grid 1 **0.135**	Grid 2 **0.108**	Grid 3 **0.074**
Grid 4 **0.089**	Grid 5 **0.073**	Grid 6 **0.060**
Grid 7 **0.051**	Grid 8 **0.042**	Grid 9 **0.039**

H in A/m (Slot averaged)

Grid 1 **0.276**	Grid 2 **0.222**	Grid 3 **0.152**
Grid 4 **0.182**	Grid 5 **0.151**	Grid 6 **0.124**
Grid 7 **0.104**	Grid 8 **0.087**	Grid 9 **0.080**



Date/Time: 04.08.2005 14:19:14
Test Laboratory: TCC Nokia
Type: RM-77; Serial: 356642/00/000041/3, Program Name: HAC E Device

Communication System: EGPRS1900; Frequency: 1850.2 MHz; Duty Cycle: 1:4.2
Medium parameters used: $\sigma = 0$ mho/m, $\varepsilon_r = 1$; $\rho = 1000$ kg/m^3
Phantom section: E Device Section

DASY4 Configuration:
- Probe: ER3DV6 - SN2333; ConvF(1, 1, 1); Calibrated: 31.01.2005
- Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn388; Calibrated: 07.01.2005
- Phantom: HAC Phantom; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

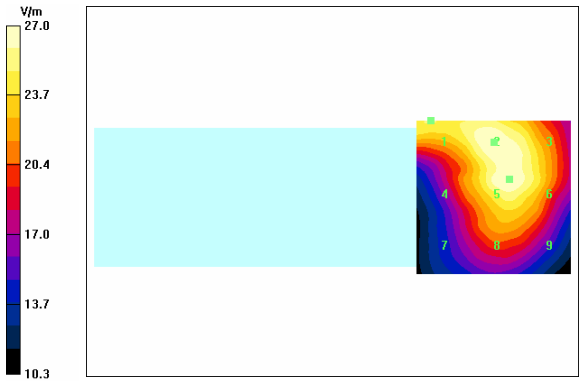
E Scan 10mm above Device Reference/Hearing Aid Compatibility Test (101x101x1): Measurement grid: dx=5mm, dy=5mm
Maximum value of Total field (slot averaged) = 55.4 V/m
Hearing Aid Near-Field Category: M3 (AWF -5 dB)

E in V/m (Time averaged)

Grid 1 **25.2**	Grid 2 **27.0**	Grid 3 **26.2**
Grid 4 **21.9**	Grid 5 **27.0**	Grid 6 **26.4**
Grid 7 **18.3**	Grid 8 **22.5**	Grid 9 **21.9**

E in V/m (Slot averaged)

Grid 1 **51.5**	Grid 2 **55.3**	Grid 3 **53.6**
Grid 4 **45.0**	Grid 5 **55.4**	Grid 6 **54.1**
Grid 7 **37.5**	Grid 8 **46.2**	Grid 9 **44.9**



Date/Time: 26.07.2005 12:58:59
Test Laboratory: TCC Nokia
Type: RM-77; Serial: 356642/00/000041/3, Program Name: HAC H Device

Communication System: EGPRS1900; Frequency: 1850.2 MHz; Duty Cycle: 1:4.2
Medium parameters used: $\sigma = 0$ mho/m, $\varepsilon_r = 1$; $\rho = 1$ kg/m^3
Phantom section: H Device Section

DASY4 Configuration:
- Probe: H3DV6 - SN6053; ; Calibrated: 20.01.2005
- Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn388; Calibrated: 07.01.2005
- Phantom: HAC Phantom; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

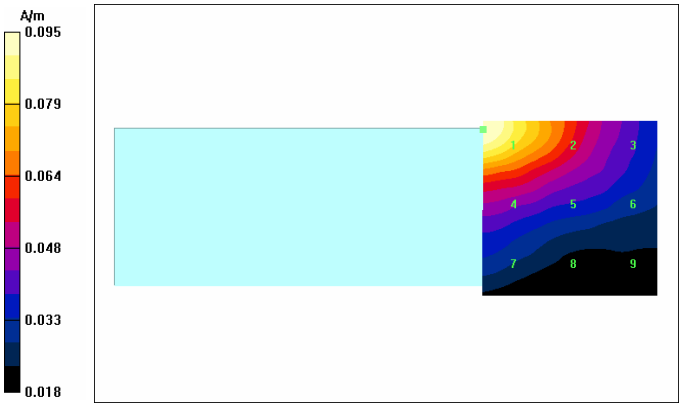
H Scan 10mm above Device Reference 3/Hearing Aid Compatibility Test (101x101x1): Measurement grid: dx=5mm, dy=5mm
Maximum value of Total field (slot averaged) = 0.194 A/m
Hearing Aid Near-Field Category: M3 (AWF -5 dB)

H in A/m (Time averaged)

Grid 1 **0.095**	Grid 2 **0.074**	Grid 3 **0.049**
Grid 4 **0.062**	Grid 5 **0.053**	Grid 6 **0.042**
Grid 7 **0.037**	Grid 8 **0.030**	Grid 9 **0.025**

H in A/m (Slot averaged)

Grid 1 **0.194**	Grid 2 **0.151**	Grid 3 **0.101**
Grid 4 **0.127**	Grid 5 **0.108**	Grid 6 **0.086**
Grid 7 **0.076**	Grid 8 **0.062**	Grid 9 **0.051**



Date/Time: 04.08.2005 14:26:22
Test Laboratory: TCC Nokia
Type: RM-77; Serial: 356642/00/000041/3, Program Name: HAC E Device

Communication System: EGPRS1900; Frequency: 1880 MHz;Duty Cycle: 1:4.2
Medium parameters used: $\sigma = 0$ mho/m, $\varepsilon_r = 1$; $\rho = 1000$ kg/m^3
Phantom section: E Device Section

DASY4 Configuration:
- Probe: ER3DV6 - SN2333; ConvF(1, 1, 1); Calibrated: 31.01.2005
- Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn388; Calibrated: 07.01.2005
- Phantom: HAC Phantom; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

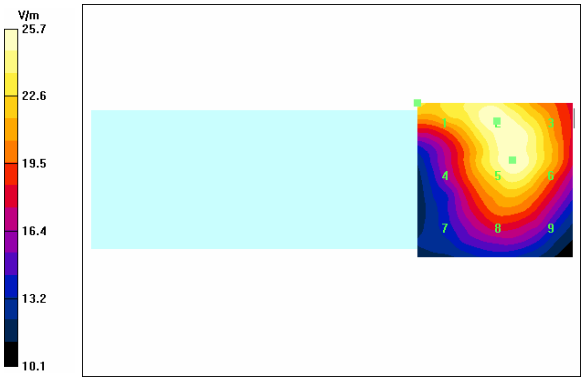
E Scan 10mm above Device Reference 2/Hearing Aid Compatibility Test (101x101x1): Measurement grid: dx=5mm, dy=5mm
Maximum value of Total field (slot averaged) = 52.7 V/m
Hearing Aid Near-Field Category: M3 (AWF -5 dB)

E in V/m (Time averaged)

Grid 1 **23.8**	Grid 2 **25.7**	Grid 3 **25.3**
Grid 4 **20.1**	Grid 5 **25.7**	Grid 6 **25.4**
Grid 7 **17.2**	Grid 8 **20.7**	Grid 9 **20.3**

E in V/m (Slot averaged)

Grid 1 **48.9**	Grid 2 **52.7**	Grid 3 **51.8**
Grid 4 **41.2**	Grid 5 **52.6**	Grid 6 **52.0**
Grid 7 **35.2**	Grid 8 **42.4**	Grid 9 **41.5**



Date/Time: 26.07.2005 12:53:23
Test Laboratory: TCC Nokia
Type: RM-77; Serial: 356642/00/000041/3, Program Name: HAC H Device

Communication System: EGPRS1900; Frequency: 1880 MHz; Duty Cycle: 1:4.2
Medium parameters used: $\sigma = 0$ mho/m, $\varepsilon_r = 1$; $\rho = 1$ kg/m^3
Phantom section: H Device Section

DASY4 Configuration:
- Probe: H3DV6 - SN6053; ; Calibrated: 20.01.2005
- Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn388; Calibrated: 07.01.2005
- Phantom: HAC Phantom; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

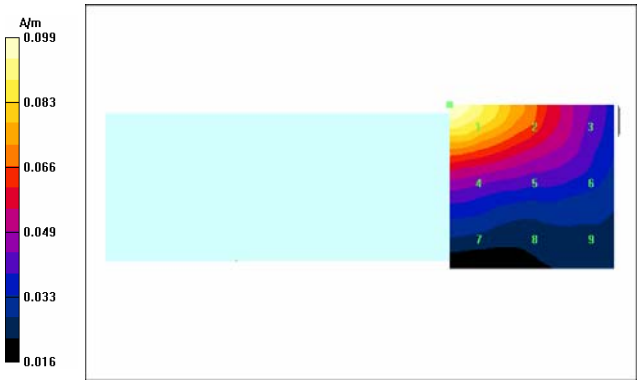
H Scan 10mm above Device Reference 2/Hearing Aid Compatibility Test (101x101x1): Measurement grid: dx=5mm, dy=5mm
Maximum value of Total field (slot averaged) = 0.203 A/m
Hearing Aid Near-Field Category: M3 (AWF -5 dB)

H in A/m (Time averaged)

Grid 1 **0.099**	Grid 2 **0.080**	Grid 3 **0.055**
Grid 4 **0.064**	Grid 5 **0.056**	Grid 6 **0.046**
Grid 7 **0.034**	Grid 8 **0.030**	Grid 9 **0.029**

H in A/m (Slot averaged)

Grid 1 **0.203**	Grid 2 **0.165**	Grid 3 **0.113**
Grid 4 **0.131**	Grid 5 **0.114**	Grid 6 **0.095**
Grid 7 **0.070**	Grid 8 **0.061**	Grid 9 **0.060**



Date/Time: 04.08.2005 14:35:47
Test Laboratory: TCC Nokia
Type: RM-77; Serial: 356642/00/000041/3, Program Name: HAC E Device

Communication System: EGPRS1900; Frequency: 1909.8 MHz;Duty Cycle: 1:4.2
Medium parameters used: $\sigma = 0$ mho/m, $\varepsilon_r = 1$; $\rho = 1000$ kg/m^3
Phantom section: E Device Section

DASY4 Configuration:
- Probe: ER3DV6 - SN2333; ConvF(1, 1, 1); Calibrated: 31.01.2005
- Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn388; Calibrated: 07.01.2005
- Phantom: HAC Phantom; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

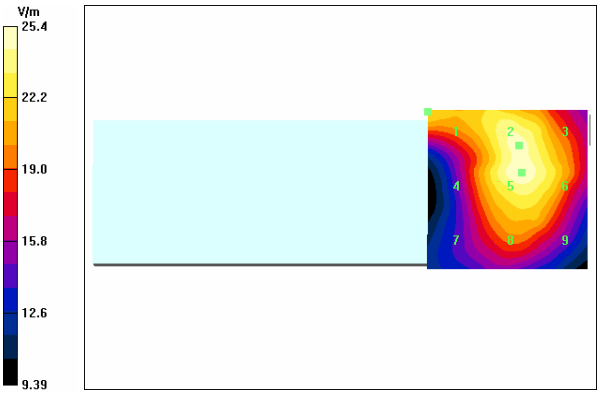
E Scan 10mm above Device Reference 2 2/Hearing Aid Compatibility Test (101x101x1): Measurement grid: dx=5mm, dy=5mm
Maximum value of Total field (slot averaged) = 52.0 V/m
Hearing Aid Near-Field Category: M3 (AWF -5 dB)

E in V/m (Time averaged)

Grid 1 **22.1**	Grid 2 **24.7**	Grid 3 **24.0**
Grid 4 **20.1**	Grid 5 **25.4**	Grid 6 **24.4**
Grid 7 **17.6**	Grid 8 **21.5**	Grid 9 **21.4**

E in V/m (Slot averaged)

Grid 1 **45.3**	Grid 2 **50.7**	Grid 3 **49.3**
Grid 4 **41.1**	Grid 5 **52.0**	Grid 6 **50.0**
Grid 7 **36.1**	Grid 8 **44.0**	Grid 9 **43.8**



Date/Time: 26.07.2005 13:35:18
Test Laboratory: TCC Nokia
Type: RM-77; Serial: 356642/00/000041/3, Program Name: HAC H Device

Communication System: EGPRS1900; Frequency: 1909.8 MHz; Duty Cycle: 1:4.2
Medium parameters used: $\sigma = 0$ mho/m, $\varepsilon_r = 1$; $\rho = 1$ kg/m^3
Phantom section: H Device Section

DASY4 Configuration:
- Probe: H3DV6 - SN6053; ; Calibrated: 20.01.2005
- Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn388; Calibrated: 07.01.2005
- Phantom: HAC Phantom; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

H Scan 10mm above Device Reference 2 2/Hearing Aid Compatibility Test (101x101x1): Measurement grid: dx=5mm, dy=5mm
Maximum value of Total field (slot averaged) = 0.190 A/m
Hearing Aid Near-Field Category: M3 (AWF -5 dB)

H in A/m (Time averaged)

Grid 1 **0.093**	Grid 2 **0.076**	Grid 3 **0.051**
Grid 4 **0.062**	Grid 5 **0.054**	Grid 6 **0.043**
Grid 7 **0.038**	Grid 8 **0.032**	Grid 9 **0.026**

H in A/m (Slot averaged)

Grid 1 **0.190**	Grid 2 **0.155**	Grid 3 **0.105**
Grid 4 **0.128**	Grid 5 **0.110**	Grid 6 **0.088**
Grid 7 **0.078**	Grid 8 **0.066**	Grid 9 **0.054**