



HAC TEST REPORT

Test Item: Summary Result HAC Category = M4

REPORT NO.: HA970502L07

MODEL NO.: DIAM400

RECEIVED: May 02, 2008

TESTED: Dec. 09, 2008

ISSUED: Dec. 16, 2008

APPLICANT: HTC Corporation

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ISSUED BY: Bureau Veritas Consumer Products Services
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1. CERTIFICATION

PRODUCT : Pocket PC Phone

MODEL NO. : DIAM400

APPLICANT : HTC Corporation

TESTED : Dec. 09, 2008

TEST SAMPLE : ENGINEERING SAMPLE

STANDARDS : **FCC Part 20.19**

ANSI C63.19-2007

TEST ITEM: Radio frequency interference / RF emissions

The above equipment (model: DIAM400) have been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's EMC characteristics under the conditions specified in this report.

PREPARED BY : Andrea Hsia , **DATE**: Dec. 16, 2008
Andrea Hsia / Specialist

TECHNICAL ACCEPTANCE : Long Chen , **DATE**: Dec. 16, 2008
Responsible for RF Long Chen / Senior Engineer

APPROVED BY : Gary Chang , **DATE**: Dec. 16, 2008
Gary Chang / Assistant Manager



2. GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF EUT

Wireless 802.11b/g and Bluetooth channel frequencies are only documented to demonstrate compliance testing for composite functions in the CDMA 850 and 1900 bands.

PRODUCT	Pocket PC Phone
MODEL NO.	DIAM400
FCC ID	NM8DIAM400
POWER SUPPLY	3.7Vdc from rechargeable lithium battery 5.0Vdc from power adapter 5.0Vdc from host equipment
CLASSIFICATION	Portable device, production unit
MODULATION TYPE	OQPSK, HPSK
FREQUENCY RANGE	824MHz ~ 849MHz (CDMA850) 1850MHz ~ 1910MHz (CDMA1900)
CHANNEL FREQUENCIES UNDER TEST AND ITS CONDUCTED OUTPUT POWER	CDMA850: 0.260W (24.15dBm) / 824.7MHz for channel 1013 0.248W (23.94dBm) / 836.5MHz for channel 384 0.243W (23.85dBm) / 848.3MHz for channel 777 CDMA1900: 0.275W (24.40dBm) / 1851.25MHz for channel 25 0.261W (24.16dBm) / 1880.00MHz for channel 600 0.259W (24.13dBm) / 1908.75MHz for channel 1175
HAC RATE CATEGORY	M4
ANTENNA TYPE	PIFA antenna with 0dBi gain for CDMA850 PIFA antenna with 1dBi gain for CDMA1900
DATA CABLE	1.25m shielded USB cable without core 1.30m shielded USB cable without core
I/O PORTS	Refer to user's manual
ACCESSORY DEVICES	Adapter, Battery, Multifunction Audio Cable

NOTE:

- The communicated functions of EUT listed as below:

		850MHz	1900MHz	With WLAN 802.11b/g + Bluetooth 2.0 w EDR + AGPS
3G	CDMA	V	V	
	1*EVDO	V	V	



2. The EUT has lithium batteries listed as below:

BATTERY A:	
BRAND:	HTC
MODEL:	DIAM171
P/N:	35H00101-01M
RATING:	3.7Vdc, 1340mAh

BATTERY B:	
BRAND:	HTC
MODEL:	DIAM171
P/N:	35H00111-00M
RATING:	3.7Vdc, 1340mAh

NOTE: After pre-tested both batteries, found battery B is worse, therefore all the test results came out from this.

3. The EUT was operated with following power adapter:

BRAND:	htc
MODEL:	TC P300
INPUT:	100-240Vac, 0.2A, 50-60Hz
OUTPUT:	5Vdc, 1A
POWER LINE:	1.25m non-shielded cable without core

4. Refer to following table for MEID no.:

MEID NO.
A1000005 xxxxxx

5. The above EUT information was declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications or User's Manual.



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2.2 DESCRIPTION OF SUPPORT UNITS

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

NO.	PRODUCT	BRAND	MODEL NO.	SERIAL NO.	CALIBRATED UNTIL
1	Universal Radio Communication Tester	R&S	CMU200	104484	Jan. 20, 2009

NO.	SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS
1	NA

NOTE: All power cords of the above support units are non shielded (1.8m).

2.3 GENERAL DESCRIPTION OF APPLIED STANDARDS

According to the specifications of the manufacturer, this product must comply with the requirements of the following standards:

FCC Part 20.19

ANSI C63.19-2007

All test items have been performed and recorded as per the above standards.

3. GENERAL INFORMATION OF THE DASY4 SYSTEM

3.1. GENERAL INFORMATION OF TEST EQUIPMENT

DASY4 (Software 4.7 Build 53) consists of high precision robot, probe alignment sensor, phantom, robot controller, controlled measurement server and near-field probe. The robot includes six axes that can move to the precision position of the DASY4 software defined. The DASY4 software can define the area that is detected by the probe. The robot is connected to controlled box. Controlled measurement server is connected to the controlled robot box. The DAE includes amplifier, signal multiplexing, AD converter, offset measurement and surface detection. It is connected to the Electro-optical coupler (ECO). The ECO performs the conversion from the optical into digital electric signal of the DAE and transfers data to the PC.

ER3DV6 E-FIELD PROBE

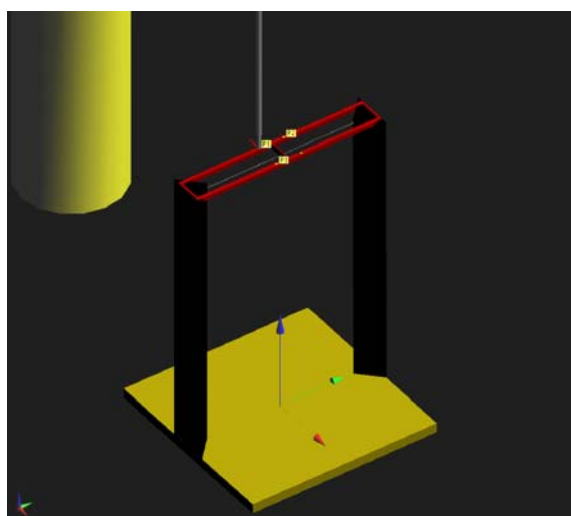
CONSTRUCTION	One dipole parallel, two dipoles normal to probe axis Built-in shielding against static charges
CALIBRATION	In air from 100MHz to 3.0GHz (absolute accuracy $\pm 6.0\%$, $k = 2$)
FREQUENCY	100MHz to > 6GHz; Linearity: $\pm 0.2\text{dB}$ (100MHz to 3GHz)
DIRECTIVITY	$\pm 0.2\text{dB}$ in air (rotation around probe axis) $\pm 0.4\text{dB}$ in air (rotation normal to probe axis)
DYNAMIC RANGE	2V/m to > 1000V/m (M3 or better device readings fall well below diode compression point) Linearity: $\pm 0.2\text{dB}$
DIMENSIONS	Overall length: 330mm (Tip: 16mm) Tip diameter: 8mm (Body: 12mm) Distance from probe tip to dipole centers: 2.5mm

H3DV6 H-FIELD PROBE

CONSTRUCTION	Three concentric loop sensors with 3.8mm loop diameters Resistively loaded detector diodes for linear response Built-in shielding against static charges
FREQUENCY	200MHz to 3GHz (absolute accuracy $\pm 6.0\%$, $k = 2$); Output linearized
DIRECTIVITY	$\pm 0.25\text{dB}$ (spherical isotropy error)
DYNAMIC RANGE	10mA/m to 2A/m at 1GHz (M3 or better device readings fall well below diode compression point)
DIMENSIONS	Overall length: 330mm (Tip: 40mm) Tip diameter: 6mm (Body: 12mm) Distance from probe tip to dipole centers: 3mm
E-FIELD INTERFERENCE	< 10% at 3GHz (for plane wave)

NOTE: The Probe parameters have been calibrated by the SPEAG. Please reference "APPENDIX D" for the Calibration Certification Report.

HAC ARCH



DIMENSIONS 370 x 370 x 370mm

SYSTEM VALIDATION KITS:

- Frequency Band:** 800 ~ 960MHz (free space)
Return Loss: > 15dB
CD835V3 **Calibrated at:** 835MHz
Power Capability: 50W continuous
Length & Height: 166 x 330mm
- Frequency Band:** 1710 ~ 2000MHz (free space)
Return Loss: > 18dB
CD1880V3 **Calibrated at:** 1880MHz
Power Capability: 50W continuous
Length & Height: 80.8 x 330mm

**DEVICE HOLDER**

CONSTRUCTION Supports accurate and reliable positioning of any phone effect on near field $\pm 0.5\text{dB}$

DATA ACQUISITION ELECTRONICS (DAE)



CONSTRUCTION

The data acquisition electronics (DAE3) consists of a highly sensitive electrometer grade preamplifier with auto-zeroing, a channel and gain-switching multiplex, a fast 16 bit AD converter and a command decoder and control logic unit. Transmission to the measurement server is accomplished through an optical downlink for data and status information as well as an optical uplink for commands and the clock. The mechanical probe is mounting device includes two different sensor systems for frontal and sideways probe contacts. They are used for mechanical surface detection and probe collision detection. The input impedance of the DAE3 box is 200M Ω ; the inputs are symmetrical and floating. Common mode rejection is above 80dB.

3.2. TEST EQUIPMENT LIST

ITEM	NAME	BAND	TYPE	SERIES NO.	DATE OF CALIBRATION	CALIBRATED UNTIL
1	SAM Phantom	S & P	SD HAC P01 BA	1034	NA	NA
2	Robot Positioner	Staubli Unimation	NA	NA	NA	NA
3	Signal Generator	Agilent	68247C	MY43320668	May 27, 2008	May 26, 2009
4	E-Field Probe	Speag	ER3DV6	2293	Jan. 23, 2007	Jan. 22, 2009
5	H-Field Probe	Speag	H3DV6	6124	Jan. 23, 2007	Jan. 22, 2009
6	DAE	Speag	DAE3 V1	579	Mar. 13, 2008	Mar. 12, 2009
7	Validation Dipole	Speag	CD835V3	1041	May 14, 2008	May 13, 2010
			CD1880V3	1032	Jul. 17, 2008	Jul. 16, 2010

NOTE: Before starting the measurement, all test equipment shall be warmed up for 30min.



3.3. MEASUREMENT UNCERTAINTY

HAC UNCERTAINTY BUDGET ACCORDING TO ANSI C63.19[1]							
ERROR DESCRIPTION	UNCERTAINTY VALUE	PROBABILITY DISTRIBUTION	DIVISOR	(Ci) E	(Ci) H	STD. UNC. E	STD. UNC. H
MEASUREMENT SYSTEM							
Probe calibration	±5.1%	Normal	1	1	1	±5.1%	±5.1%
Axial isotropy	±4.7%	Rectangular	√3	1	1	±2.7%	±2.7%
Sensor Displacement	±16.5%	Rectangular	√3	1	0.145	±9.5%	±1.4%
Boundary Effects	±2.4%	Rectangular	√3	1	1	±1.4%	±1.4%
Linearity	±4.7%	Rectangular	√3	1	1	±2.7%	±2.7%
Scaling to Peak Envelope Power	±2.0%	Rectangular	√3	1	1	±1.2%	±1.2%
System Detection Limit	±1.0%	Rectangular	√3	1	1	±0.6%	±0.6%
Readout Electronics	±0.3%	Rectangular	√3	1	1	±0.3%	±0.3%
Response Time	±0.8%	Rectangular	√3	1	1	±0.5%	±0.5%
Integration Time	±2.6%	Rectangular	√3	1	1	±1.5%	±1.5%
RF Ambient Condition	±3.0%	Rectangular	√3	1	1	±1.7%	±1.7%
RF Reflections	±12.0%	Rectangular	√3	1	1	±6.9%	±6.9%
Probe Positioner	±1.2%	Rectangular	√3	1	0.67	±0.7%	±0.5%
Probe Positioning	±4.7%	Rectangular	√3	1	0.67	±2.7%	±1.8%
Extrap. And Interpolation	±1.0%	Rectangular	√3	1	1	±0.6%	±0.6%
TEST SAMPLE RELATED							
Device Positioning Vertical	±4.7%	Rectangular	√3	1	0.67	±2.7%	±1.8%
Device Positioning Lateral	±1.0%	Rectangular	√3	1	1	±0.6%	±0.6%
Device Holder and Phantom	±2.4%	Rectangular	√3	1	1	±1.4%	±1.4%
Power Drift	±5.0%	Rectangular	√3	1	1	±2.9%	±2.9%
PHANTOM AND SETUP RELATED							
Phantom Thickness	±2.4%	Rectangular	√3	1	0.67	±1.4%	±0.9%
COMBINED STD. UNCERTAINTY						±14.7%	±10.9%
EXPANDED STD. UNCERTAINTY ON POWER						±29.4%	±21.8%
EXPANDED STD. UNCERTAINTY ON FIELD						±14.7%	±10.9%

NOTE: Worst-case uncertainty budget for HAC free field assessment according to ANSI C63.19 [1]. The budget is valid for the frequency range 800MHz ~ 3GHz and represents a worst-case analysis. For specific tests and configurations, the uncertainty could be considerably smaller.

3.4. GENERAL DESCRIPTION OF THE HAC EVALUATION

The DASY4 post-processing software (SEMCAD) automatically executes the following procedures to calculate the field units from the micro-volt readings at the probe connector. The parameters used in the evaluation are stored in the configuration modules of the software:

Probe parameters: - Sensitivity	Norm _i , a _{i0} , a _{i1} , a _{i2}
- Conversion factor	ConvF _i
- Diode compression point	dcp _i
Device parameters: - Frequency	F
- Crest factor	Cf

The first step of the evaluation is a linearization of the filtered input signal to account for the compression characteristics of the detector diode. The compensation depends on the input signal, the diode type and the DC-transmission factor from the diode to the evaluation electronics. If the exciting field is pulsed, the crest factor of the signal must be known to correctly compensate for peak power. The formula for each channel can be given as:

$$V_i = U_i + U_i^2 \cdot \frac{cf}{dcp_i}$$

V _i = compensated signal of channel i	(i = x, y, z)
U _i = input signal of channel i	(i = x, y, z)
Cf = crest factor of exciting field	(DASY parameter)
dcp _i = diode compression point	(DASY parameter)

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

$$\textit{E-field probes: } E_i = \sqrt{\frac{V_i}{\text{Norm}_i \cdot \text{Conv}F}}$$

$$\textit{H-field probes: } H_i = \sqrt{V_i} \cdot \frac{a_{i0} + a_{i1}f + a_{i2}f^2}{f}$$

V_i = compensated signal of channel i ($i = x, y, z$)

Norm_i = sensor sensitivity of channel i $\mu\text{V}/(\text{V/m})^2$ for E-field Probes ($i = x, y, z$)

$\text{Conv}F$ = sensitivity enhancement in solution

a_{ij} = sensor sensitivity factors for H-field probes

F = carrier frequency [GHz]

E_i = electric field strength of channel i in V/m

H_i = magnetic field strength of channel i in A/m

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

$$E_{tot} = \sqrt{E_x^2 + E_y^2 + E_z^2}$$

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

E = field strength in V/m

E_{tot} = total field strength in V/m

NOTE: The signal response time is evaluated as the time required by the system to reach 90% of the expected final value after an on/off switch of the power source with an integration time of 500ms and a probe response time of < 5ms. In the current implementation, DASY4 waits longer than 100ms after having reached the grid point before starting a measurement, i.e., the response time uncertainty is negligible.



4. PERFORMANCE CATEGORIES

The ANSI Standard presents performance requirements for acceptable interoperability of hearing aids with wireless communications devices. When these parameters are met, a hearing aid operates acceptably in close proximity to a wireless communications device.

CATEGORY NEAR FIELD	TELEPHONE RF PARAMETERS < 960MHz				
	AWF	E-FIELD EMISSION CW (dBV/m)	E-FIELD EMISSION CW (V/m)	H-FIELD EMISSION CW (dBA/m)	H-FIELD EMISSION CW (A/m)
M1	0	56.0 to 61.0	631.0 to 1122.0	5.6 to 10.6	1.91 to 3.39
	-5	53.5 to 58.5	473.2 to 841.4	3.1 to 8.1	1.43 to 2.54
M2	0	51.0 to 56.0	354.8 to 631.0	0.6 to 5.6	1.07 to 1.91
	-5	48.5 to 53.5	266.1 to 473.2	-1.9 to 3.1	0.80 to 1.43
M3	0	46.0 to 51.0	199.5 to 354.8	-4.4 to 0.6	0.60 to 1.07
	-5	43.5 to 48.5	149.6 to 266.1	-6.9 to -1.9	0.45 to 0.80
M4	0	< 46.0	< 199.5	< -4.4	< 0.60
	-5	< 43.5	< 149.6	< -6.9	< 0.45

CATEGORY NEAR FIELD	TELEPHONE RF PARAMETERS > 960MHz				
	AWF	E-FIELD EMISSION CW (dBV/m)	E-FIELD EMISSION CW (V/m)	H-FIELD EMISSION CW (dBA/m)	H-FIELD EMISSION CW (A/m)
M1	0	46.0 to 51.0	199.5 to 354.8	-4.4 to 0.6	0.60 to 1.07
	-5	43.5 to 48.5	149.6 to 266.1	-6.9 to -1.9	0.45 to 0.80
M2	0	41.0 to 46.0	112.2 to 199.5	-9.4 to -4.4	0.34 to 0.60
	-5	48.5 to 53.5	84.1 to 149.6	-11.9 to -6.9	0.25 to 0.45
M3	0	36.0 to 41.0	63.1 to 112.2	-14.4 to -9.4	0.19 to 0.34
	-5	33.5 to 38.5	47.3 to 84.1	-16.9 to -11.9	0.14 to 0.25
M4	0	< 36.0	< 63.1	< -14.4	< 0.19
	-5	< 33.5	< 47.3	< -16.9	< 0.14



ARTICULATION WEIGHING FACTOR (AWF)

The following AWF factors shall be used for the standard transmission protocols:

STANDARD	TECHNOLOGY	AWF (dB)
TIA/EIA/IS-2000	CDMA	0
TIA/EIA-136	TDMA (50Hz)	0
iDENTM	TDMA (22 and 11Hz)	0
J-STD-007	GSM (217)	-5
T1/T1P1/3GPP	UMTS (WCDMA)	0

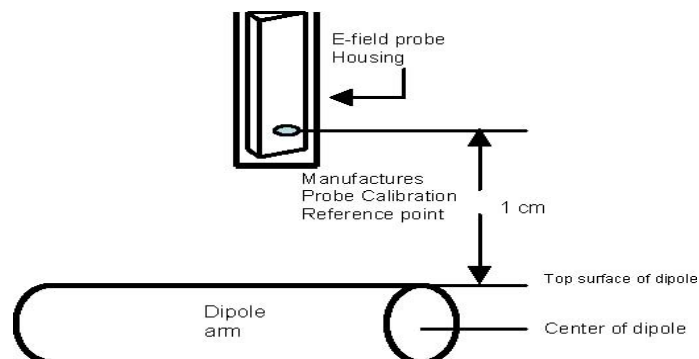
5. SYSTEM CHECK

The measured values (E-field and H-field) were compared with the values provided by the probe manufacturer and must within the allowed tolerance of **25%**.

5.1. VALIDATION STRUCTURE

The input signal was an un-modulated continuous wave. The following points were taken into consideration in performing this check:

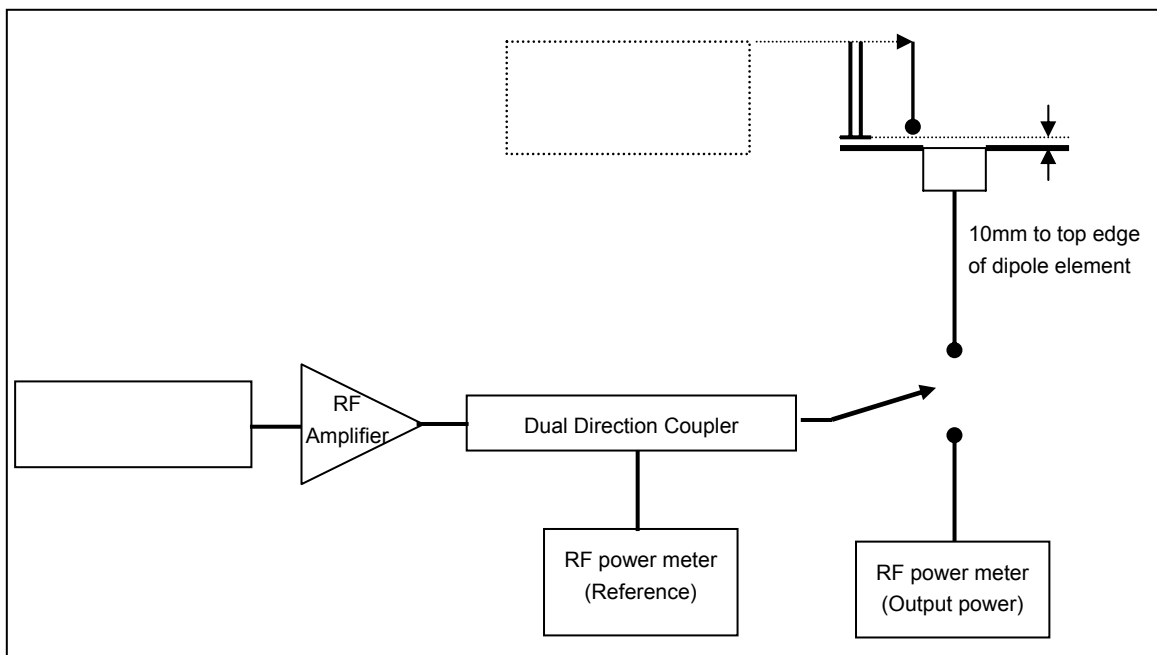
- Average Input Power $P = 100\text{mW RMS}$ (20dBm RMS) after adjustment for return loss
- The test fixture must meet the 2 wavelength separation criterion
- The proper measurement of the 1cm probe to dipole separation, which is measured from top surface of the dipole to the calibration reference point of the sensor, defined by the probe manufacturer is shown in the following diagram:



5.2. SYSTEM CHECK PROCEDURE

1. Before you start the system performance check, need only to tell the system with which components (probe type, validation dipole and HAC arch) are performing the system performance check; the system will take care of all parameters.

The system check configuration is shown in the following figure:



2. The dipole was energized with a 20dBm unmodulated continuous-wave signal.
3. The length of the dipole was scanned with both E-field and H-field probes and the maximum values for each were recorded.



5.3. VALIDATION RESULTS

SYSTEM CHECK						
TEST FREQUENCY (MHz)	BEGIN TEST SG POWER (mW)	REQUIRED E-FILED (V/m)	MEASURED E-FILED (V/m)	DEVIATION (%)	SEPARATION DISTANCE (mm)	TESTED DATE
835	100.0	164.3	167.2	1.77	10	Dec. 09, 2008
1880	100.0	141.8	153.6	8.32	10	Dec. 09, 2008
TEST FREQUENCY (MHz)	BEGIN TEST SG POWER (mW)	REQUIRED H-FILED (V/m)	MEASURED H-FILED (V/m)	DEVIATION (%)	SEPARATION DISTANCE (mm)	TESTED DATE
835	100.0	0.456	0.465	1.97	10	Dec. 09, 2008
1880	100.0	0.467	0.476	1.93	10	Dec. 09, 2008
TESTED BY	Sam Onn					

NOTE: Please see Appendix for the system validation test data.

6. MODULATION FACTOR

A calibration was made of the modulation response of the probe and its instrumentation chain. This calibration was performed with the field probe, attached to its instrumentation. The response of the probe system to a CW field at the frequency of interest is compared to its response to a modulated signal with equal peak amplitude to that of a CW signal. The field level of the test signals are ensured to be more than 10dB above the ambient level and the noise floor of the instrumentation being used. The ratio of the CW reading to that taken with a modulated reading was applied to the DUT measurements.

This was done using the following procedure:

1. Fixing the probe in a set location relative to a field generating device, such as a reference dipole antenna, as illustrated in the system check procedure.
2. Illuminate the probe using the wireless device connected to the reference dipole with a test signal at the intended measurement frequency, Ensure there is sufficient field coupling between the probe and the antenna so the resulting reading is greater than 10dB above the probe system noise floor but within the systems operating range.
3. Record the amplitude applied to the antenna during transmission and the field strength measured by the E-field probe located near the tip of the dipole antenna.
4. Replace the wireless device with an RF signal generator producing an unmodulated CW signal and set to the wireless device operating frequency.
5. Set the amplitude of the unmodulated signal to equal that recorded from the wireless device.
6. Record the reading of the probe measurement system of the unmodulated signal.
7. The RF signal generator producing an 80%AM signal and set to the wireless device operating frequency. Set the amplitude of the signal to equal that recorded from the wireless device.



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8. Record the reading of the probe measurement system of the 80%AM signal.
9. The ratio, in linear units, of the probe reading in Step 3) or 8) to the reading in Step 6) is the E-field modulation factor.
10. Steps 1-9 were repeated at all frequency bands and for both E and H field probes.

NOTE: The ratio of the CW to modulated signal reading is the modulation factor. The modulation factors obtained were applied to readings taken of the actual wireless device, in order to obtain an accurate peak field reading using the formula:

$$\text{Peak} = 20 \cdot \log(\text{Raw} \cdot \text{ProbeModulationFactor})$$

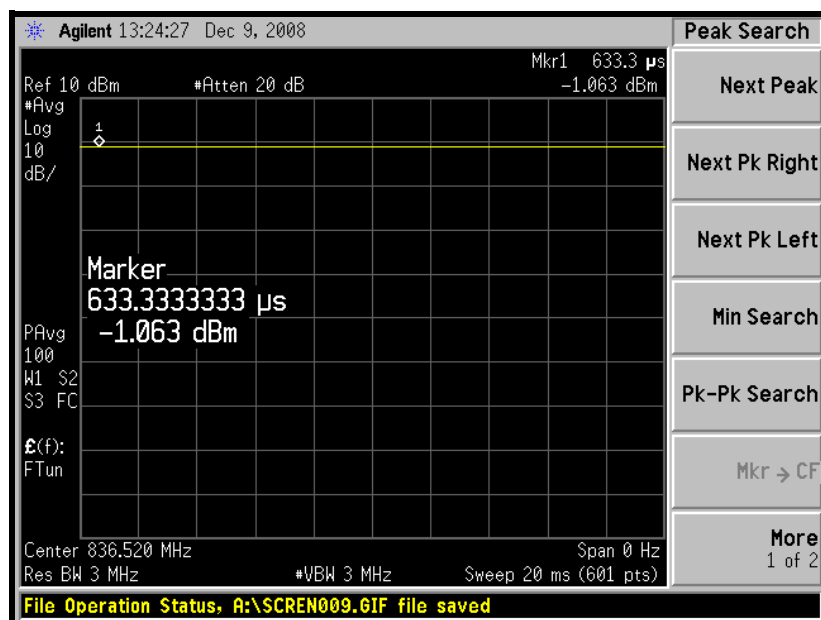


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6.1 MODULATION FACTOR TEST RESULTS

TEST FREQUENCY (MHz)	PROTOCOL	REFERENCE LEVEL	MEASURED E-FILED (V/m)	E-FILED MODULATION FACTOR	TESTED DATE
836.5	CW	Refer to the next three plots	138.7	NA	Dec. 09, 2008
	80% AM		128.2	1.08	
	CDMA		147.2	0.94	
TEST FREQUENCY (MHz)	PROTOCOL	REFERENCE LEVEL	MEASURED H-FILED (A/m)	H-FILED MODULATION FACTOR	TESTED DATE
836.5	CW	Refer to the next three plots	0.415	NA	Dec. 09, 2008
	80% AM		0.406	1.02	
	CDMA		0.411	1.01	
TESTED BY	Sam Onn				

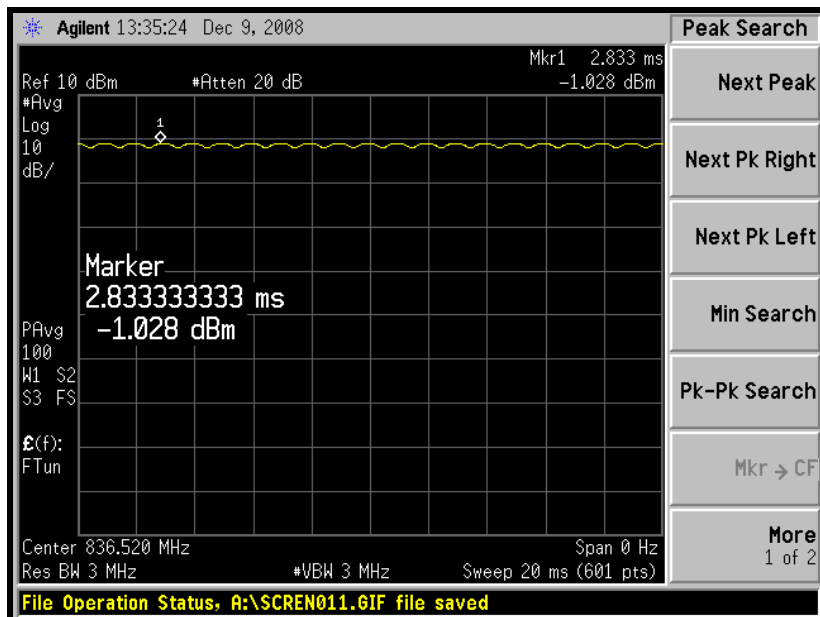
CW SIGNAL:



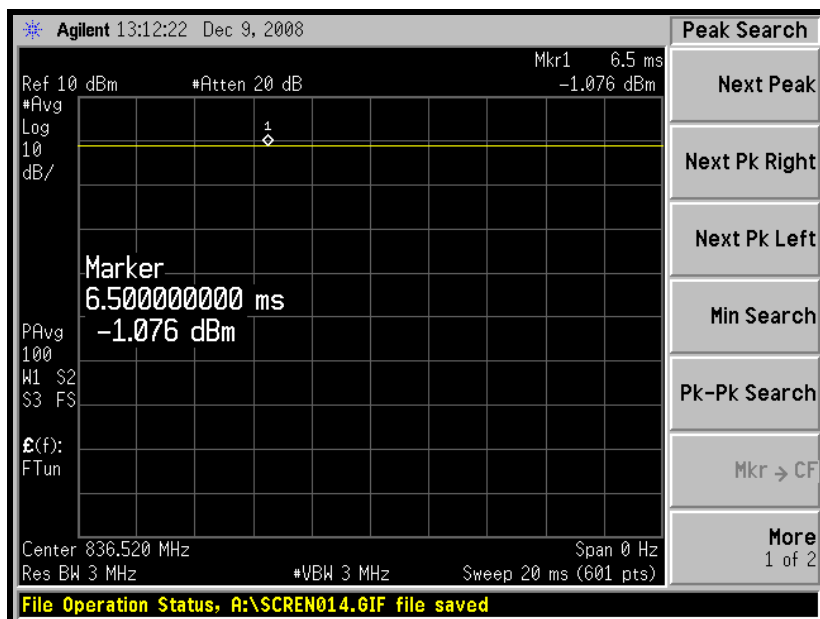


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80% AM SIGNAL:



CDMA SIGNAL:

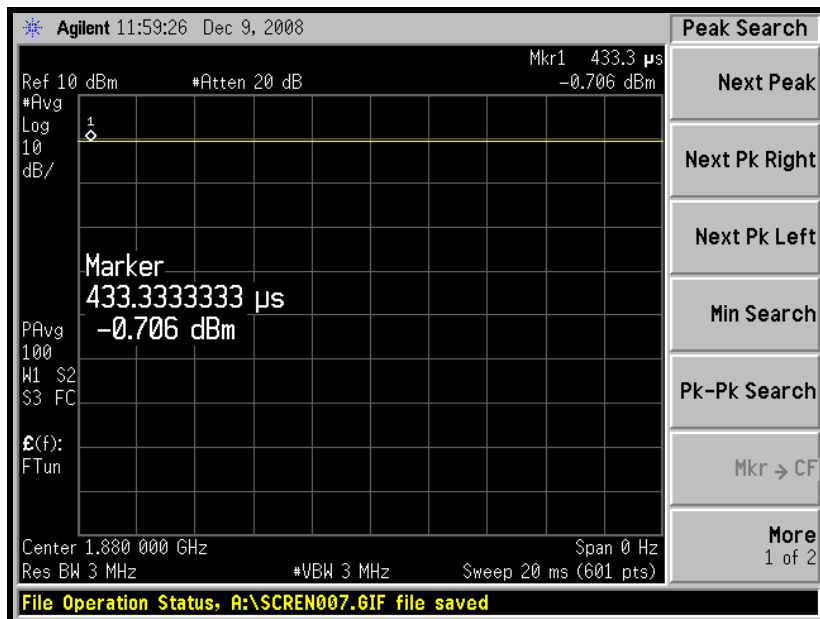




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TEST FREQUENCY (MHz)	PROTOCOL	REFERENCE LEVEL	MEASURED E-FILED (V/m)	E-FILED MODULATION FACTOR	TESTED DATE
1880.0	CW	Refer to the next three plots	124.2	NA	Dec. 09, 2008
	80% AM		115.3	1.08	
	CDMA		128.6	0.97	
TEST FREQUENCY (MHz)	PROTOCOL	REFERENCE LEVEL	MEASURED H-FILED (A/m)	H-FILED MODULATION FACTOR	TESTED DATE
1880.0	CW	Refer to the next three plots	0.463	NA	Dec. 09, 2008
	80% AM		0.462	1.00	
	CDMA		0.468	0.99	
TESTED BY	Sam Onn				

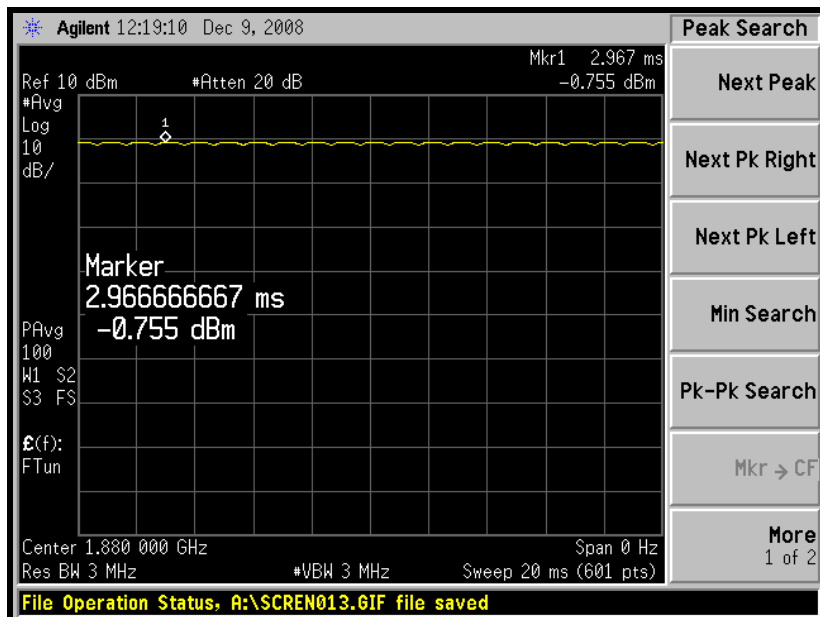
CW SIGNAL:



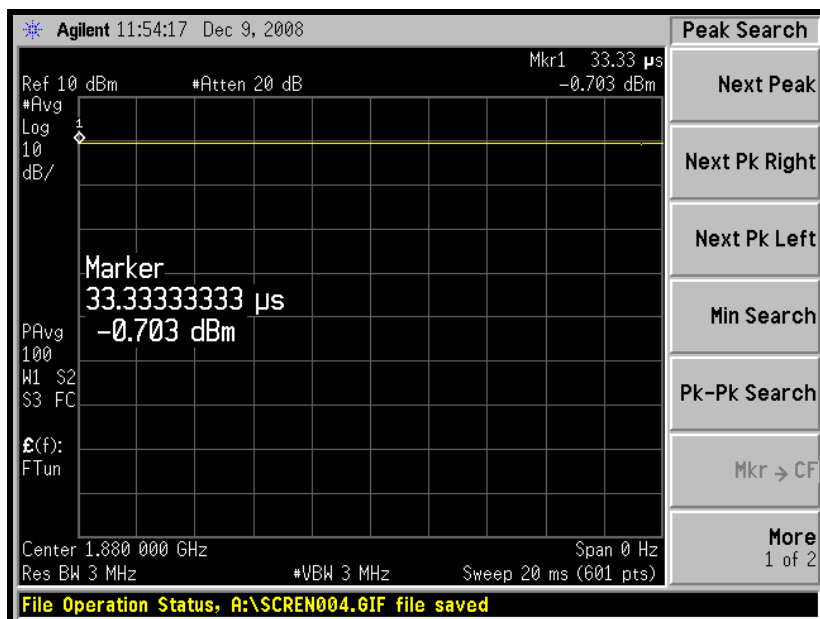


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80% AM SIGNAL:

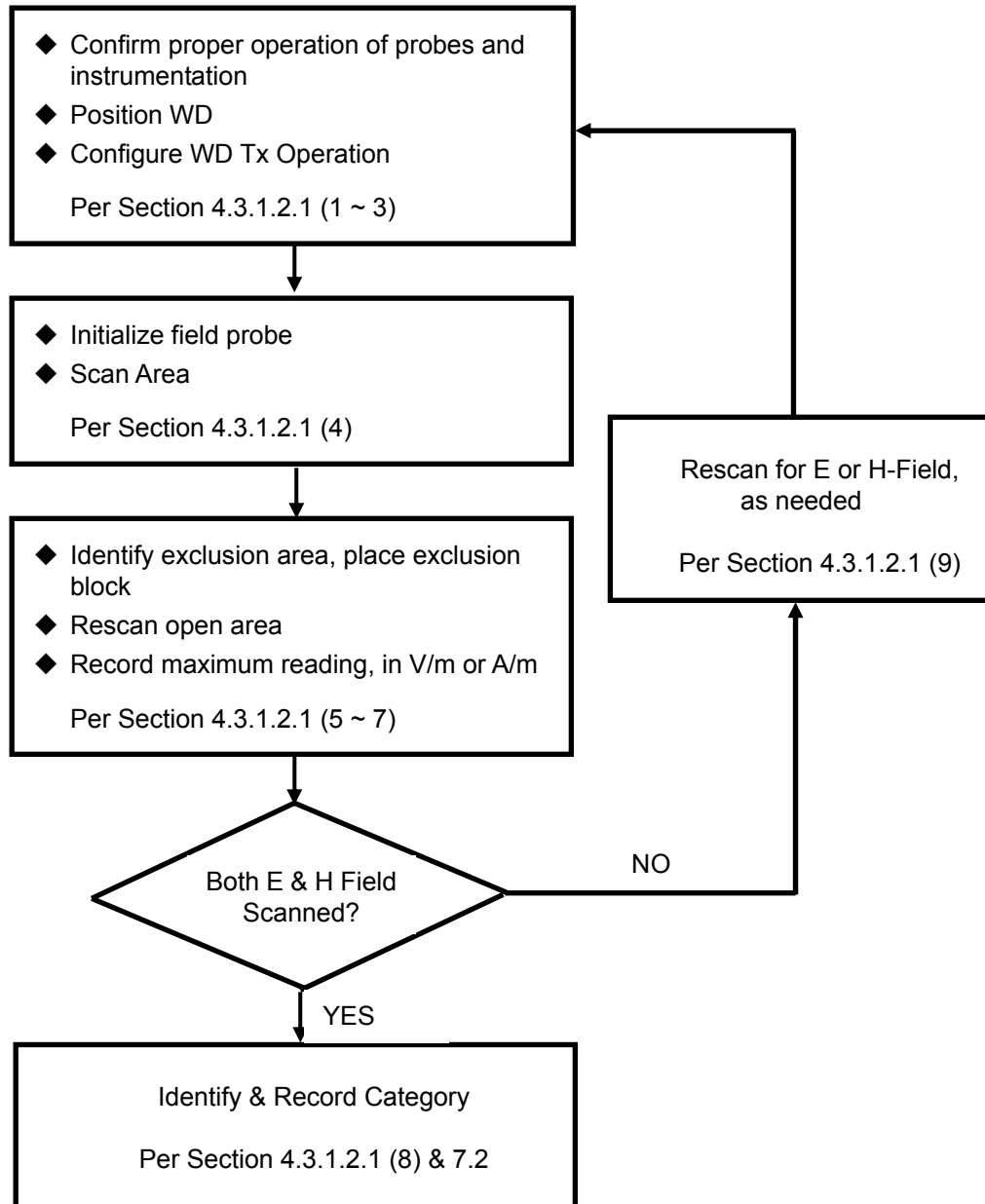


CDMA SIGNAL:



7. RF EMISSION TEST PROCEDURES

7.1. TEST INSTRUCTION



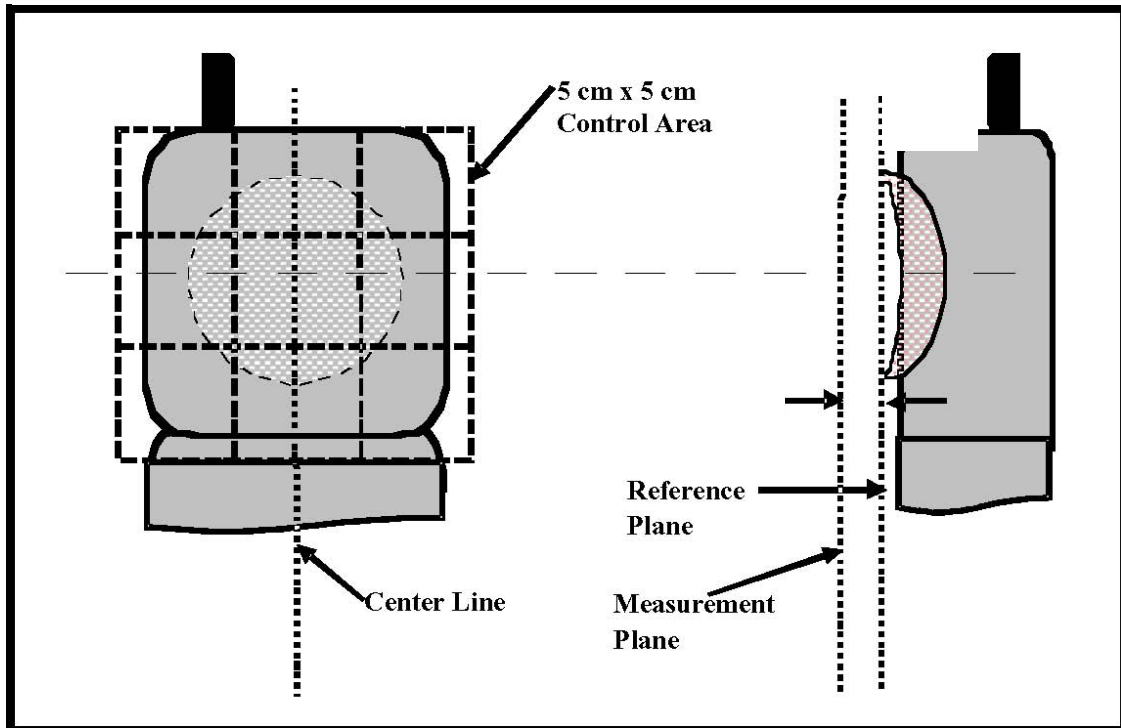
7.2. TEST PROCEDURES

The EUT (Pocket PC Phone) makes a phone call to the GSM base station. Establish the simulation communication configuration rather the actual communication. Then the EUT could continuous the transmission mode. Adjust the PCL of the base station could controlled the EUT to transmitted the maximum output power. The base station also could control the transmission channel.

The recommended procedure for assessing the RF emission value consists of the following steps:

1. Proper operation of the field probe, probe measurement system, other instrumentation, and the positioning system was confirmed.
2. WD is positioned in its intended test position, acoustic output point of the device perpendicular to the field probe.
3. The center sub-grid was centered over the center of the acoustic output (also audio band magnetic output, if applicable). The WD audio output was positioned tangent (as physically possible) to the measurement plane.
4. A surface calibration was performed before each setup change to ensure repeatable spacing and proper maintenance of the measurement plane using the HAC arch.
5. The measurement system measured the field strength at the reference location.
6. Measurements at 2mm increments in the 5 x 5cm region were performed and recorded. A 360° rotation about the azimuth axis at the maximum interpolated position was measured. For the worst-case condition, the peak reading from this rotation was used in re-evaluating the HAC category.
7. Steps 1-6 were done for both the E and H-Field measurements.

7.3. DESCRIPTION OF TEST POSITION AND CONFIGURATIONS





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7.4. SUMMARY OF MEASURED HAC RESULTS

H-FIELD EMISSION

ENVIRONMENTAL CONDITION			Air Temperature : 23.5°C, Humidity : 60%RH					
TESTED BY			Sam Onn		DATE		Dec. 09, 2008	
FREQ. (MHz)	CHAN.	MODE	CONDUCTED POWER (dBm)	DRIFT (dB)	MEASURED PMF	EXCLUDED CELLS	PEAK FIELD (A/m)	RATING
824.70 (Low)	1013	CDMA850 (Light off)	24.15	-0.202	1.01	6.8.9	0.248	M4
836.50 (Mid.)	384	CDMA850 (Light off)	23.94	0.178		6.8.9	0.216	M4
848.30 (High)	777	CDMA850 (Light off)	23.85	-0.453		6.8.9	0.229	M4
824.70 (Low)	1013	CDMA850 (Light on)	24.15	0.025		6.8.9	0.249	M4
824.70 (Low)	1013	CDMA850 + 11b	24.15	0.066		6.8.9	0.241	M4
824.70 (Low)	1013	CDMA850 + 11g	24.15	0.018		6.8.9	0.234	M4
824.70 (Low)	1013	CDMA850 + Bluetooth	24.15	-0.040		6.8.9	0.231	M4

NOTE:

1. The LCD back-light "Off" & battery A are the worst case for measurement.
2. Please see the Appendix A for the measured data and test plots.
3. The variation of the EUT conducted power measured before and after HAC testing should not over 5%.



ENVIRONMENTAL CONDITION			Air Temperature : 23.5°C, Humidity : 60%RH					
TESTED BY			Sam Onn		DATE		Dec. 09, 2008	
FREQ. (MHz)	CHAN.	MODE	CONDUCTED POWER (dBm)	DRIFT (dB)	MEASURED PMF	EXCLUDED CELLS	PEAK FIELD (A/m)	RATING
1851.25 (Low)	25	CDMA1900 (Light off)	24.40	0.117	0.99	7.8.9	0.055	M4
1880.00 (Mid.)	600	CDMA1900 (Light off)	24.16	-0.209		3.6.9	0.052	M4
1908.75 (High)	1175	CDMA1900 (Light off)	24.13	-0.373		3.6.9	0.050	M4
1851.25 (Low)	25	CDMA1900 (Light on)	24.40	0.100		3.6.9	0.053	M4
1851.25 (Low)	25	CDMA1900 + 11b	24.40	0.077		6.8.9	0.052	M4
1851.25 (Low)	25	CDMA1900 + 11g	24.40	0.208		6.8.9	0.053	M4
1851.25 (Low)	25	CDMA1900 + Bluetooth	24.40	0.275		3.6.9	0.050	M4

NOTE:

1. The LCD back-light "Off" & battery A are the worst case for measurement.
2. Please see the Appendix A for the measured data and test plots.
3. The variation of the EUT conducted power measured before and after HAC testing should not over 5%.



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E-FIELD EMISSION

ENVIRONMENTAL CONDITION			Air Temperature : 23.5°C, Humidity : 60%RH					
TESTED BY			Sam Onn		DATE		Dec. 09, 2008	
FREQ. (MHz)	CHAN.	MODE	CONDUCTED POWER (dBm)	DRIFT (dB)	MEASURED PMF	EXCLUDED CELLS	PEAK FIELD (V/m)	RATING
824.70 (Low)	1013	CDMA850 (Light off)	24.15	-0.089	0.94	2.3.6	75.6	M4
836.50 (Mid.)	384	CDMA850 (Light off)	23.94	0.200		2.3.6	68.0	M4
848.30 (High)	777	CDMA850 (Light off)	23.85	-0.319		2.3.6	68.6	M4
824.70 (Low)	1013	CDMA850 (Light on)	24.15	0.018		2.3.6	74.3	M4
824.70 (Low)	1013	CDMA850 + 11b	24.15	-0.313		2.3.6	71.5	M4
824.70 (Low)	1013	CDMA850 + 11b	24.15	0.003		2.3.6	72.2	M4
824.70 (Low)	1013	CDMA850 + Bluetooth	24.15	0.202		2.3.6	71.6	M4

NOTE:

1. The LCD back-light "Off" & battery A are the worst case for measurement.
2. Please see the Appendix A for the measured data and test plots.
3. The variation of the EUT conducted power measured before and after HAC testing should not over 5%.



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ENVIRONMENTAL CONDITION			Air Temperature : 23.5°C, Humidity : 60%RH					
TESTED BY			Sam Onn		DATE		Dec. 09, 2008	
FREQ. (MHz)	CHAN.	MODE	CONDUCTED POWER (dBm)	DRIFT (dB)	MEASURED PMF	EXCLUDED CELLS	PEAK FIELD (V/m)	RATING
1851.25 (Low)	25	CDMA1900 (Light off)	24.40	0.152	0.97	7.8.9	26.9	M4
1880.00 (Mid.)	600	CDMA1900 (Light off)	24.16	-0.451		7.8.9	33.4	M4
1908.75 (High)	1175	CDMA1900 (Light off)	24.13	-0.113		7.8.9	30.6	M4
1880.00 (Mid.)	600	CDMA1900 (Light on)	24.16	0.000		7.8.9	33.3	M4
1880.00 (Mid.)	600	CDMA1900 + 11b	24.16	-0.053		7.8.9	32.8	M4
1880.00 (Mid.)	600	CDMA1900 + 11g	24.16	0.100		7.8.9	32.3	M4
1880.00 (Mid.)	600	CDMA1900 + Bluetooth	24.16	-0.315		7.8.9	32.6	M4

NOTE:

1. The LCD back-light "Off" & battery A are the worst case for measurement.
2. Please see the Appendix A for the measured data and test plots.
3. The variation of the EUT conducted power measured before and after HAC testing should not over 5%.



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8. INFORMATION ON THE TESTING LABORATORIES

We, Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch, were founded in 1988 to provide our best service in EMC, Radio, Telecom and Safety consultation. Our laboratories are accredited and approved by the following approval agencies according to ISO/IEC 17025.

USA	FCC, NVLAP
Germany	TUV Rheinland
Japan	VCCI
Norway	NEMKO
Canada	INDUSTRY CANADA, CSA
R.O.C.	TAF, BSMI, NCC
Netherlands	Telefication
Singapore	GOST-ASIA(MOU)
Russia	CERTIS(MOU)

Copies of accreditation certificates of our laboratories obtained from approval agencies can be downloaded from our web site:

www.adt.com.tw/index.5/phtml. If you have any comments, please feel free to contact us at the following:

Linko EMC/RF Lab:

Tel: 886-2-26052180

Fax: 886-2-26051924

Hsin Chu EMC/RF Lab:

Tel: 886-3-5935343

Fax: 886-3-5935342

Hwa Ya EMC/RF/Safety/Telecom Lab:

Tel: 886-3-3183232

Fax: 886-3-3185050

Web Site: www.adt.com.tw

The address and road map of all our labs can be found in our web site also.

--- END ---

Test Laboratory: Advance Data Technology

E-CDMA850-Ch1013

DUT: Pocket PC Phone ; Type: DIAM400 ; Test Frequency: 824.7 MHz

Communication System: CDMA ; Frequency: 824.7 MHz ; Duty Cycle: 1:1 Modulation type: OQPSK

Medium: Air Medium parameters used: $\sigma = 0$ mho/m, $\epsilon_r = 1$; $\rho = 1000$ kg/m³ ;

Phantom section: E Device Section ;

Measurement Standard: DASY4 (High Precision Assessment);

DASY4 Configuration:

- Probe: ER3DV6 - SN2293 ; ConvF(1, 1, 1) ; Calibrated: 2007/1/23
- Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn579; Calibrated: 2008/3/13
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

E Scan - ER probe center 10mm above Device Reference Low Channel 1013/Hearing Aid Compatibility Test (101x101x1): Measurement grid: dx=5mm, dy=5mm

Maximum value of peak Total field = **75.6** V/m

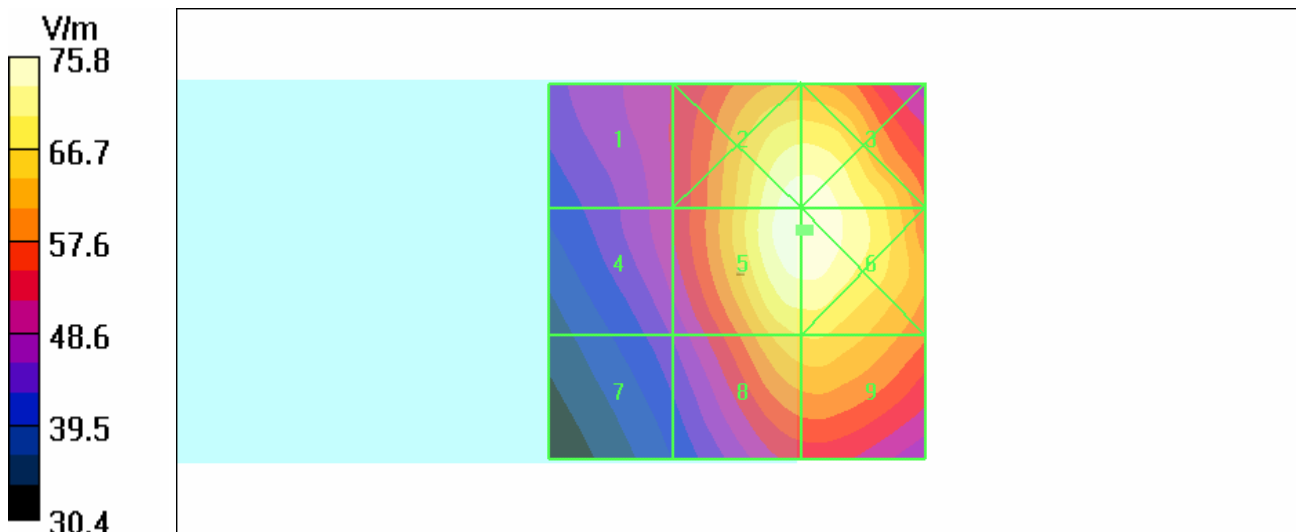
Probe Modulation Factor = 0.940

Reference Value = 94.3 V/m; Power Drift = -0.089 dB

Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak E-field in V/m

Grid 1	Grid 2	Grid 3
52.1	74.9	74.9
Grid 4	Grid 5	Grid 6
51.8	75.6	75.8
Grid 7	Grid 8	Grid 9
46.0	66.8	67.1



Test Laboratory: Advance Data Technology

E-CDMA850-Ch384

DUT: Pocket PC Phone ; Type: DIAM400 ; Test Frequency: 836.5 MHz

Communication System: CDMA ; Frequency: 836.5 MHz ; Duty Cycle: 1:1 Modulation type: OQPSK

Medium: Air Medium parameters used: $\sigma = 0$ mho/m, $\epsilon_r = 1$; $\rho = 1000$ kg/m³ ;

Phantom section: E Device Section ;

Measurement Standard: DASYS4 (High Precision Assessment);

DASY4 Configuration:

- Probe: ER3DV6 - SN2293 ; ConvF(1, 1, 1) ; Calibrated: 2007/1/23
- Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn579; Calibrated: 2008/3/13
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASYS4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

E Scan - ER probe center 10mm above Device Reference Mid Channel 384/Hearing Aid

Compatibility Test (101x101x1): Measurement grid: dx=5mm, dy=5mm

Maximum value of peak Total field = **68.0** V/m

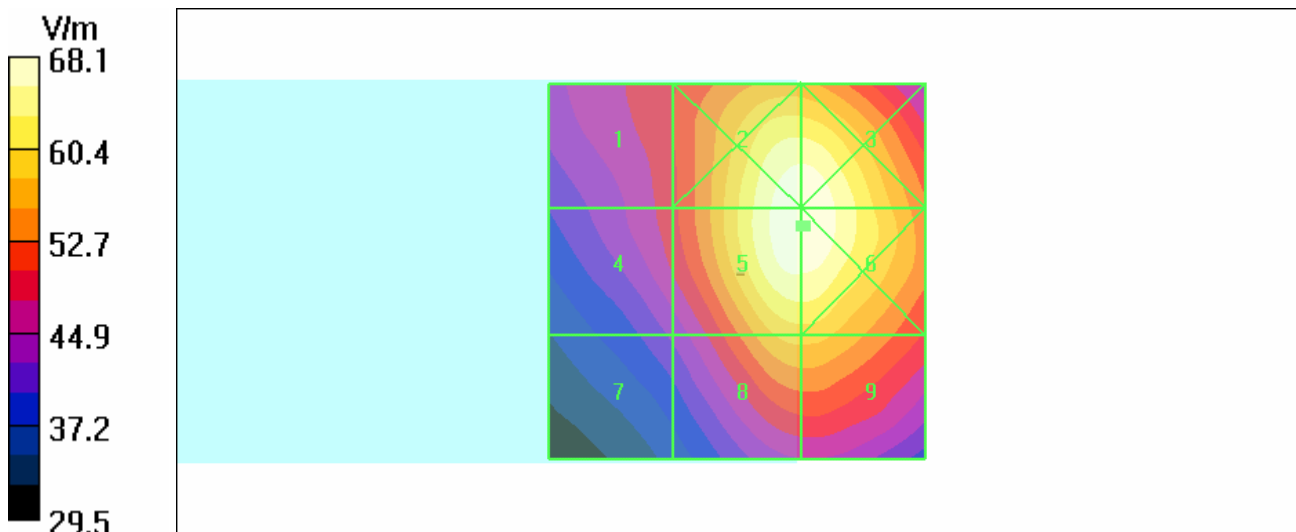
Probe Modulation Factor = 0.940

Reference Value = 86.5 V/m; Power Drift = 0.200 dB

Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak E-field in V/m

Grid 1 50.3	Grid 2 67.7	Grid 3 67.7
Grid 4 49.5	Grid 5 68.0	Grid 6 68.1
Grid 7 43.1	Grid 8 58.9	Grid 9 58.9



Test Laboratory: Advance Data Technology

E-CDMA850-Ch777

DUT: Pocket PC Phone ; Type: DIAM400 ; Test Frequency: 848.3 MHz

Communication System: CDMA ; Frequency: 848.3 MHz ; Duty Cycle: 1:1 Modulation type: OQPSK

Medium: Air Medium parameters used: $\sigma = 0$ mho/m, $\epsilon_r = 1$; $\rho = 1000$ kg/m³ ;

Phantom section: E Device Section ;

Measurement Standard: DASY4 (High Precision Assessment);

DASY4 Configuration:

- Probe: ER3DV6 - SN2293 ; ConvF(1, 1, 1) ; Calibrated: 2007/1/23
- Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn579; Calibrated: 2008/3/13
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

E Scan - ER probe center 10mm above Device Reference High Channel 777/Hearing Aid

Compatibility Test (101x101x1): Measurement grid: dx=5mm, dy=5mm

Maximum value of peak Total field = **68.6** V/m

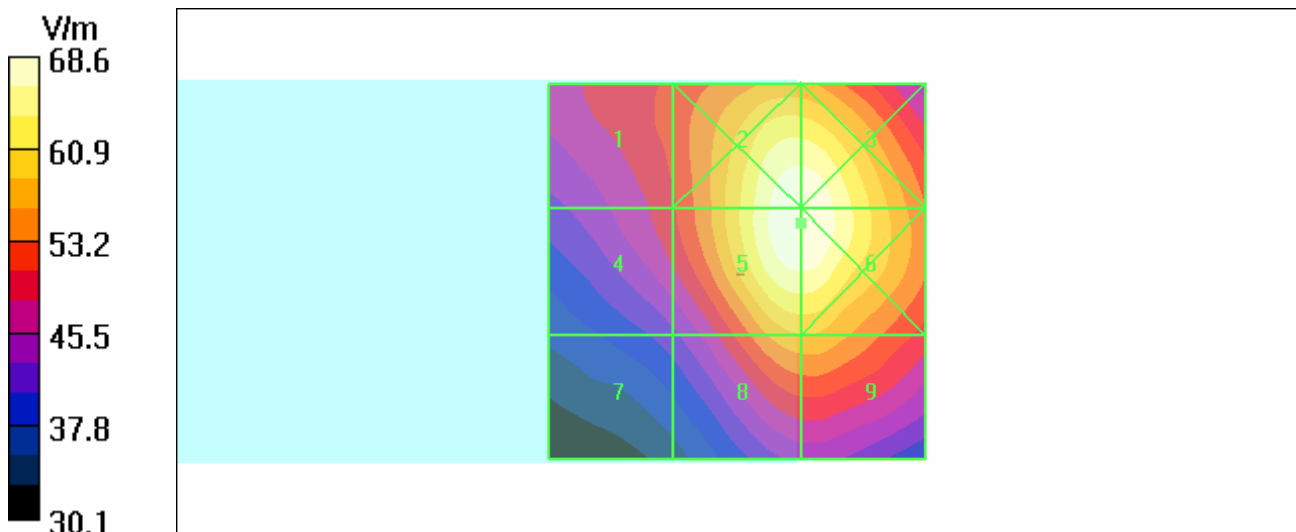
Probe Modulation Factor = 0.940

Reference Value = 88.7 V/m; Power Drift = -0.319 dB

Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak E-field in V/m

Grid 1 51.9	Grid 2 68.3	Grid 3 68.3
Grid 4 50.3	Grid 5 68.6	Grid 6 68.6
Grid 7 42.3	Grid 8 58.2	Grid 9 58.2



Test Laboratory: Advance Data Technology

E-CDMA850-Ch1013 Light On

DUT: Pocket PC Phone ; Type: DIAM400 ; Test Frequency: 824.7 MHz

Communication System: CDMA ; Frequency: 824.7 MHz ; Duty Cycle: 1:1 Modulation type: OQPSK

Medium: Air Medium parameters used: $\sigma = 0$ mho/m, $\epsilon_r = 1$; $\rho = 1000$ kg/m³ ;

Phantom section: E Device Section ;

Measurement Standard: DASY4 (High Precision Assessment);

DASY4 Configuration:

- Probe: ER3DV6 - SN2293 ; ConvF(1, 1, 1) ; Calibrated: 2007/1/23
- Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn579; Calibrated: 2008/3/13
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

E Scan - ER probe center 10mm above Device Reference Low Channel 1013/Hearing Aid Compatibility Test (101x101x1): Measurement grid: dx=5mm, dy=5mm

Maximum value of peak Total field = **74.3** V/m

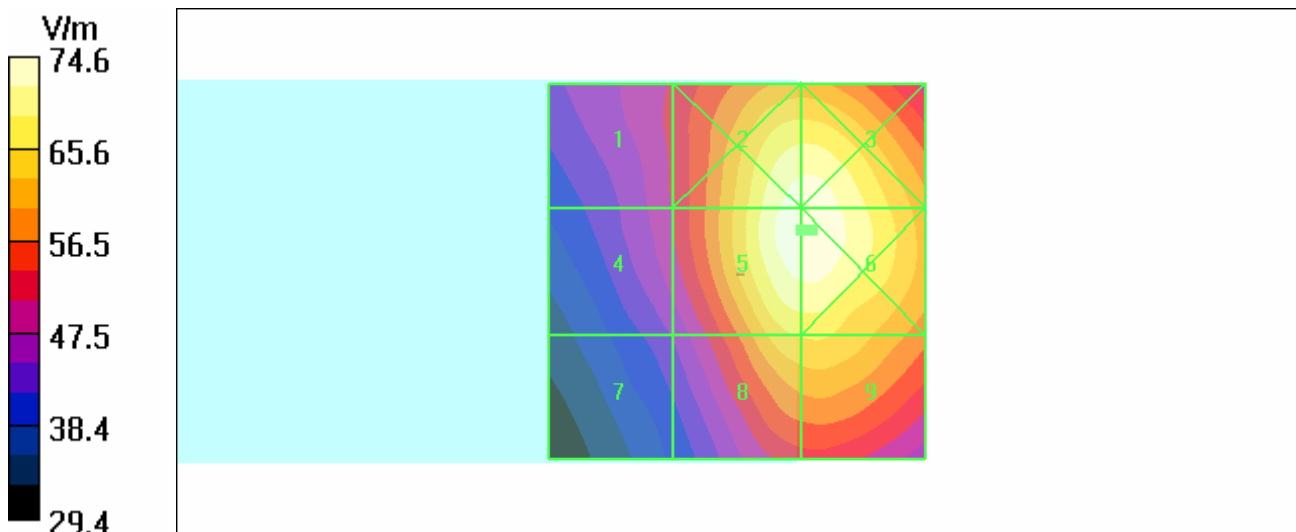
Probe Modulation Factor = 0.940

Reference Value = 92.8 V/m; Power Drift = 0.018 dB

Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak E-field in V/m

Grid 1	Grid 2	Grid 3
51.6	73.5	73.7
Grid 4	Grid 5	Grid 6
50.9	74.3	74.6
Grid 7	Grid 8	Grid 9
44.9	65.8	66.1



Test Laboratory: Advance Data Technology

E-CDMA850-Ch1013+11B-Ch6

DUT: Pocket PC Phone ; Type: DIAM400 ; Test Frequency: 824.7 MHz

Communication System: CDMA ; Frequency: 824.7 MHz ; Duty Cycle: 1:1 Modulation type: OQPSK

Medium: Air Medium parameters used: $\sigma = 0$ mho/m, $\epsilon_r = 1$; $\rho = 1000$ kg/m³ ;

Phantom section: E Device Section ;

Measurement Standard: DASY4 (High Precision Assessment);

DASY4 Configuration:

- Probe: ER3DV6 - SN2293 ; ConvF(1, 1, 1) ; Calibrated: 2007/1/23
- Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn579; Calibrated: 2008/3/13
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

E Scan - ER probe center 10mm above Device Reference Low Channel 1013/Hearing Aid Compatibility Test (101x101x1): Measurement grid: dx=5mm, dy=5mm

Maximum value of peak Total field = **71.5** V/m

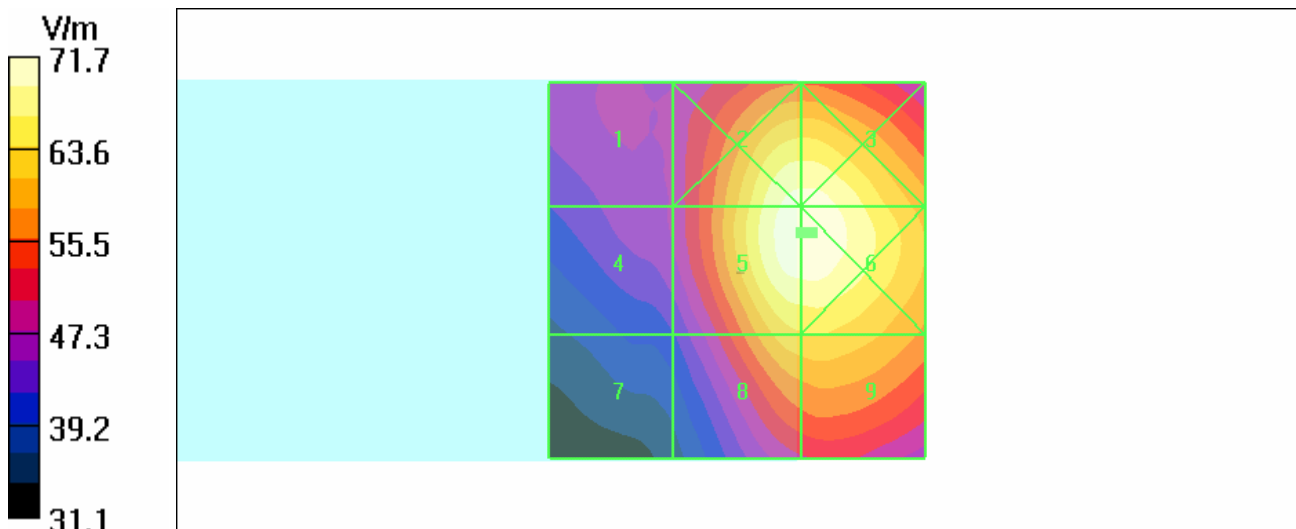
Probe Modulation Factor = 0.940

Reference Value = 92.5 V/m; Power Drift = -0.313 dB

Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak E-field in V/m

Grid 1 48.4	Grid 2 70.4	Grid 3 70.5
Grid 4 48.2	Grid 5 71.5	Grid 6 71.7
Grid 7 41.9	Grid 8 63.3	Grid 9 63.7



Test Laboratory: Advance Data Technology

E-CDMA850-Ch1013+11G-Ch6

DUT: Pocket PC Phone ; Type: DIAM400 ; Test Frequency: 824.7 MHz

Communication System: CDMA ; Frequency: 824.7 MHz ; Duty Cycle: 1:1 Modulation type: OQPSK

Medium: Air Medium parameters used: $\sigma = 0$ mho/m, $\epsilon_r = 1$; $\rho = 1000$ kg/m³ ;

Phantom section: E Device Section ;

Measurement Standard: DASYS4 (High Precision Assessment);

DASY4 Configuration:

- Probe: ER3DV6 - SN2293 ; ConvF(1, 1, 1) ; Calibrated: 2007/1/23
- Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn579; Calibrated: 2008/3/13
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASYS4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

E Scan - ER probe center 10mm above Device Reference Low Channel 1013/Hearing Aid Compatibility Test (101x101x1): Measurement grid: dx=5mm, dy=5mm

Maximum value of peak Total field = **72.2** V/m

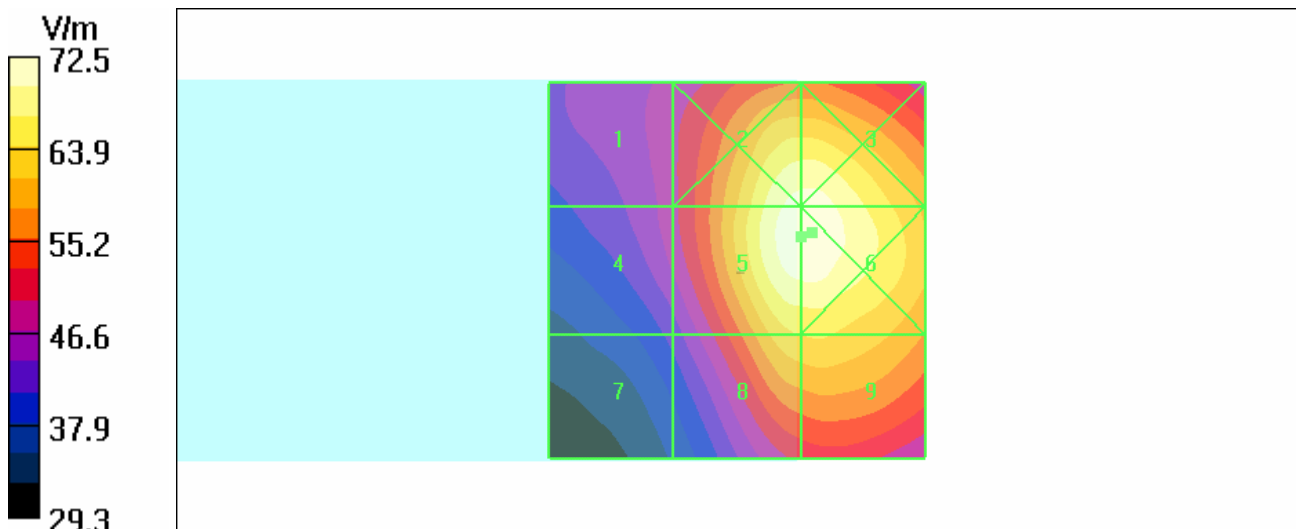
Probe Modulation Factor = 0.940

Reference Value = 89.4 V/m; Power Drift = 0.003 dB

Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak E-field in V/m

Grid 1 49.0	Grid 2 71.0	Grid 3 71.1
Grid 4 48.7	Grid 5 72.2	Grid 6 72.5
Grid 7 42.3	Grid 8 64.0	Grid 9 64.3



Test Laboratory: Advance Data Technology

E-CDMA850-Ch1013+BT-Ch39

DUT: Pocket PC Phone ; Type: DIAM400 ; Test Frequency: 824.7 MHz

Communication System: CDMA ; Frequency: 824.7 MHz ; Duty Cycle: 1:1 Modulation type: OQPSK

Medium: Air Medium parameters used: $\sigma = 0$ mho/m, $\epsilon_r = 1$; $\rho = 1000$ kg/m³ ;

Phantom section: E Device Section ;

Measurement Standard: DASY4 (High Precision Assessment);

DASY4 Configuration:

- Probe: ER3DV6 - SN2293 ; ConvF(1, 1, 1) ; Calibrated: 2007/1/23
- Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn579; Calibrated: 2008/3/13
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

E Scan - ER probe center 10mm above Device Reference Low Channel 1013/Hearing Aid Compatibility Test (101x101x1): Measurement grid: dx=5mm, dy=5mm

Maximum value of peak Total field = **71.6** V/m

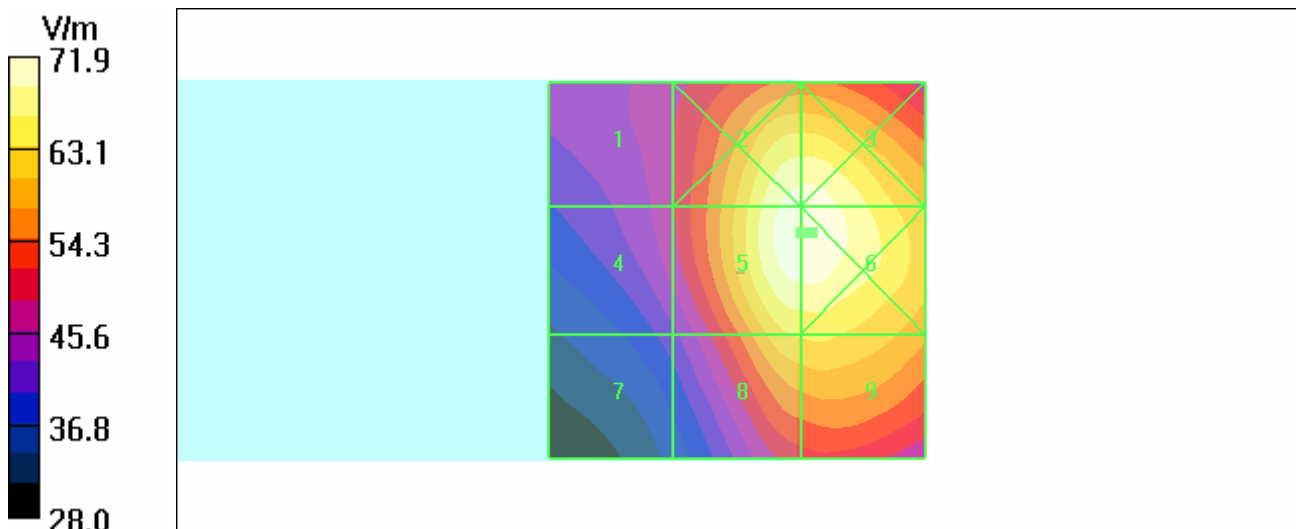
Probe Modulation Factor = 0.940

Reference Value = 87.3 V/m; Power Drift = 0.202 dB

Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak E-field in V/m

Grid 1 48.6	Grid 2 70.6	Grid 3 70.7
Grid 4 48.3	Grid 5 71.6	Grid 6 71.9
Grid 7 42.0	Grid 8 63.6	Grid 9 63.9



Test Laboratory: Advance Data Technology

E-CDMA1900-Ch25

DUT: Pocket PC Phone ; Type: DIAM400 ; Test Frequency: 1851.25 MHz

Communication System: CDMA ; Frequency: 1851.25 MHz ; Duty Cycle: 1:1 Modulation type: OQPSK

Medium: Air Medium parameters used: $\sigma = 0$ mho/m, $\epsilon_r = 1$; $\rho = 1000$ kg/m³ ;

Phantom section: E Device Section ;

Measurement Standard: DASY4 (High Precision Assessment);

DASY4 Configuration:

- Probe: ER3DV6 - SN2293 ; ConvF(1, 1, 1) ; Calibrated: 2007/1/23
- Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn579; Calibrated: 2008/3/13
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

E Scan - ER probe center 10mm above Device Reference Low Channel 25/Hearing Aid

Compatibility Test (101x101x1): Measurement grid: dx=5mm, dy=5mm

Maximum value of peak Total field = **26.9** V/m

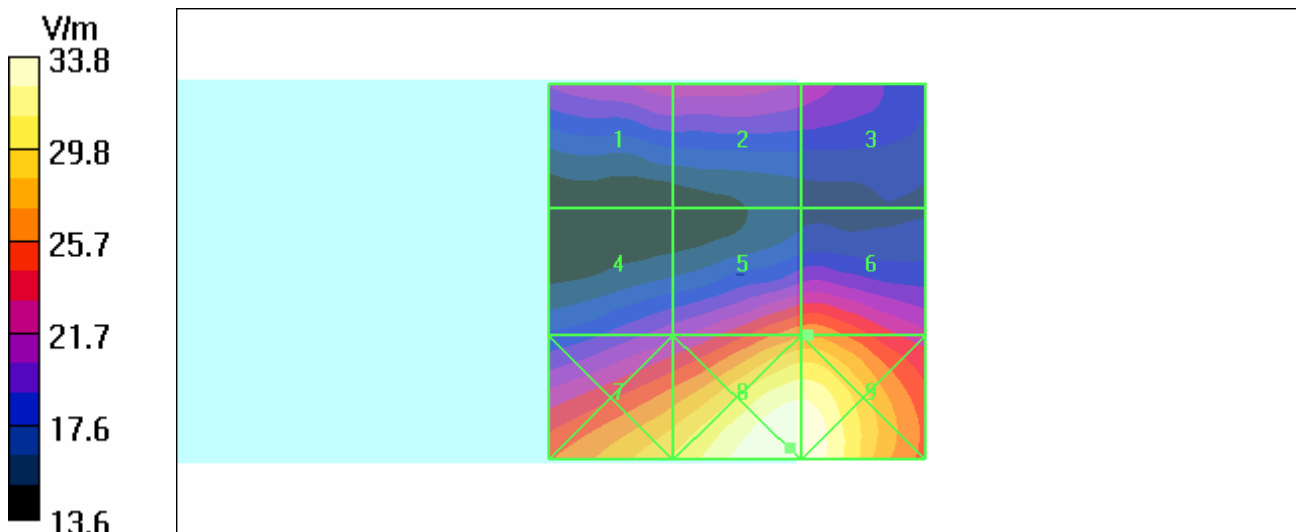
Probe Modulation Factor = 0.970

Reference Value = 19.7 V/m; Power Drift = 0.152 dB

Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak E-field in V/m

Grid 1	Grid 2	Grid 3
22.6	22.6	21.3
Grid 4	Grid 5	Grid 6
21.3	26.9	26.9
Grid 7	Grid 8	Grid 9
30.0	33.8	33.7



Test Laboratory: Advance Data Technology

E-CDMA1900-Ch600

DUT: Pocket PC Phone ; Type: DIAM400 ; Test Frequency: 1880 MHz

Communication System: CDMA ; Frequency: 1880 MHz ; Duty Cycle: 1:1 Modulation type: OQPSK

Medium: Air Medium parameters used: $\sigma = 0$ mho/m, $\epsilon_r = 1$; $\rho = 1000$ kg/m³ ;

Phantom section: E Device Section ;

Measurement Standard: DASY4 (High Precision Assessment);

DASY4 Configuration:

- Probe: ER3DV6 - SN2293 ; ConvF(1, 1, 1) ; Calibrated: 2007/1/23

- Sensor-Surface: (Fix Surface)

- Electronics: DAE3 Sn579; Calibrated: 2008/3/13

- Phantom: HAC Test Arch; Type: SD HAC P01 BA;

- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

E Scan - ER probe center 10mm above Device Reference Mid Channel 600/Hearing Aid

Compatibility Test (101x101x1): Measurement grid: dx=5mm, dy=5mm

Maximum value of peak Total field = **33.4** V/m

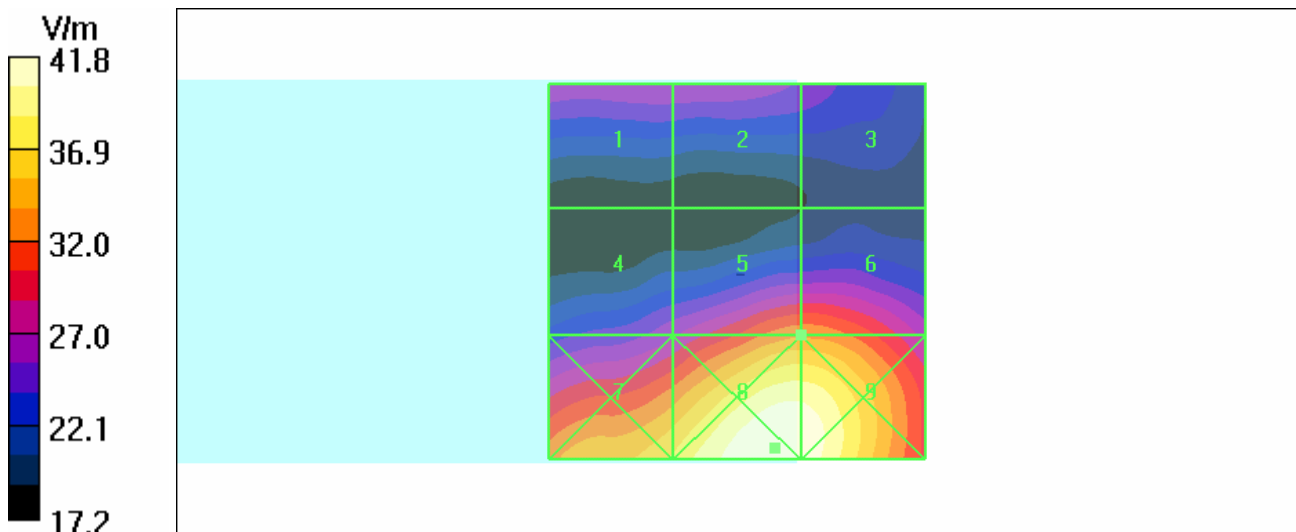
Probe Modulation Factor = 0.970

Reference Value = 26.4 V/m; Power Drift = -0.451 dB

Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak E-field in V/m

Grid 1	Grid 2	Grid 3
27.2	27.2	25.3
Grid 4	Grid 5	Grid 6
26.9	33.4	33.4
Grid 7	Grid 8	Grid 9
37.2	41.8	41.4



Test Laboratory: Advance Data Technology

E-CDMA1900-Ch1175

DUT: Pocket PC Phone ; Type: DIAM400 ; Test Frequency: 1908.75 MHz

Communication System: CDMA ; Frequency: 1908.75 MHz ; Duty Cycle: 1:1 Modulation type: OQPSK

Medium: Air Medium parameters used: $\sigma = 0$ mho/m, $\epsilon_r = 1$; $\rho = 1000$ kg/m³ ;

Phantom section: E Device Section ;

Measurement Standard: DASYS4 (High Precision Assessment);

DASY4 Configuration:

- Probe: ER3DV6 - SN2293 ; ConvF(1, 1, 1) ; Calibrated: 2007/1/23
- Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn579; Calibrated: 2008/3/13
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASYS4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

E Scan - ER probe center 10mm above Device Reference High Channel 1175/Hearing Aid Compatibility Test (101x101x1): Measurement grid: dx=5mm, dy=5mm

Maximum value of peak Total field = **30.6** V/m

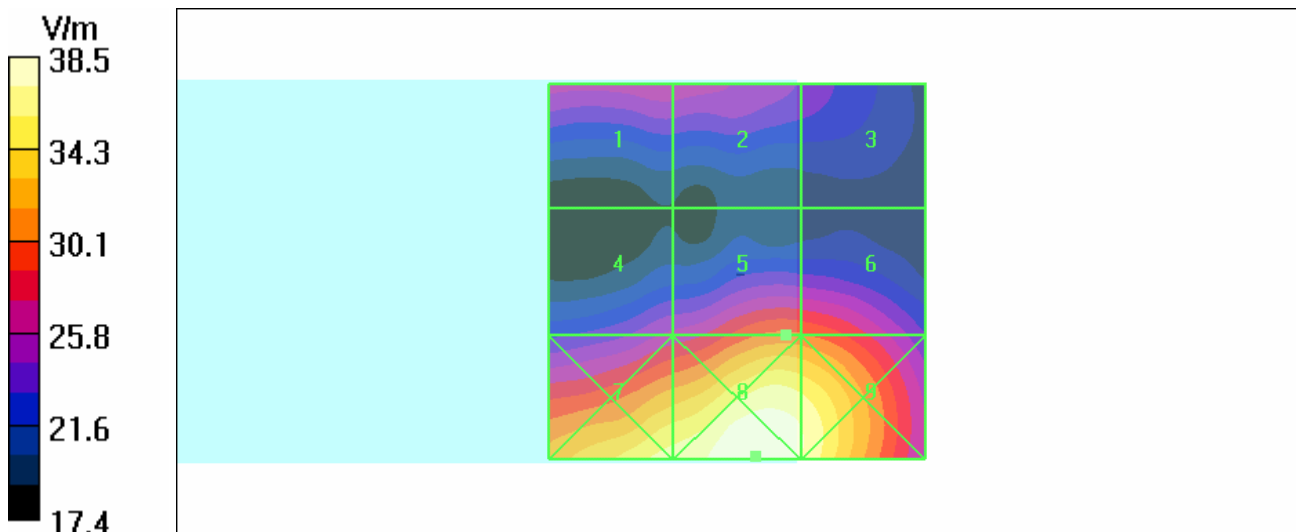
Probe Modulation Factor = 0.970

Reference Value = 26.8 V/m; Power Drift = -0.113 dB

Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak E-field in V/m

Grid 1	Grid 2	Grid 3
27.1	27.0	24.3
Grid 4	Grid 5	Grid 6
26.4	30.6	30.3
Grid 7	Grid 8	Grid 9
36.5	38.5	37.2



Test Laboratory: Advance Data Technology

E-CDMA1900-Ch600 Light on

DUT: Pocket PC Phone ; Type: DIAM400 ; Test Frequency: 1880 MHz

Communication System: CDMA ; Frequency: 1880 MHz ; Duty Cycle: 1:1 Modulation type: OQPSK

Medium: Air Medium parameters used: $\sigma = 0$ mho/m, $\epsilon_r = 1$; $\rho = 1000$ kg/m³ ;

Phantom section: E Device Section ;

Measurement Standard: DASYS4 (High Precision Assessment);

DASY4 Configuration:

- Probe: ER3DV6 - SN2293 ; ConvF(1, 1, 1) ; Calibrated: 2007/1/23
- Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn579; Calibrated: 2008/3/13
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASYS4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

E Scan - ER probe center 10mm above Device Reference Mid Channel 600/Hearing Aid

Compatibility Test (101x101x1): Measurement grid: dx=5mm, dy=5mm

Maximum value of peak Total field = **33.3** V/m

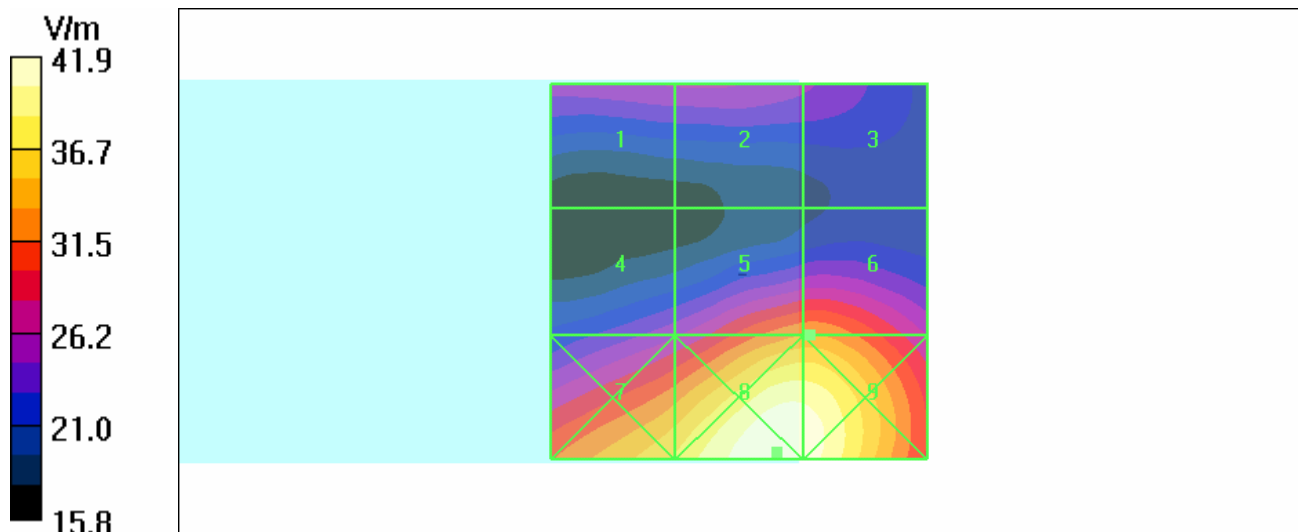
Probe Modulation Factor = 0.970

Reference Value = 25.1 V/m; Power Drift = 0.000 dB

Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak E-field in V/m

Grid 1	Grid 2	Grid 3
26.6	26.6	25.0
Grid 4	Grid 5	Grid 6
26.1	33.3	33.3
Grid 7	Grid 8	Grid 9
37.0	41.9	41.4



Test Laboratory: Advance Data Technology

E-CDMA1900-Ch600+11B-Ch6

DUT: Pocket PC Phone ; Type: DIAM400 ; Test Frequency: 1880 MHz

Communication System: CDMA ; Frequency: 1880 MHz ; Duty Cycle: 1:1 Modulation type: OQPSK

Medium: Air Medium parameters used: $\sigma = 0$ mho/m, $\epsilon_r = 1$; $\rho = 1000$ kg/m³ ;

Phantom section: E Device Section ;

Measurement Standard: DASY4 (High Precision Assessment);

DASY4 Configuration:

- Probe: ER3DV6 - SN2293 ; ConvF(1, 1, 1) ; Calibrated: 2007/1/23
- Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn579; Calibrated: 2008/3/13
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

E Scan - ER probe center 10mm above Device Reference Mid Channel 600/Hearing Aid

Compatibility Test (101x101x1): Measurement grid: dx=5mm, dy=5mm

Maximum value of peak Total field = **32.8** V/m

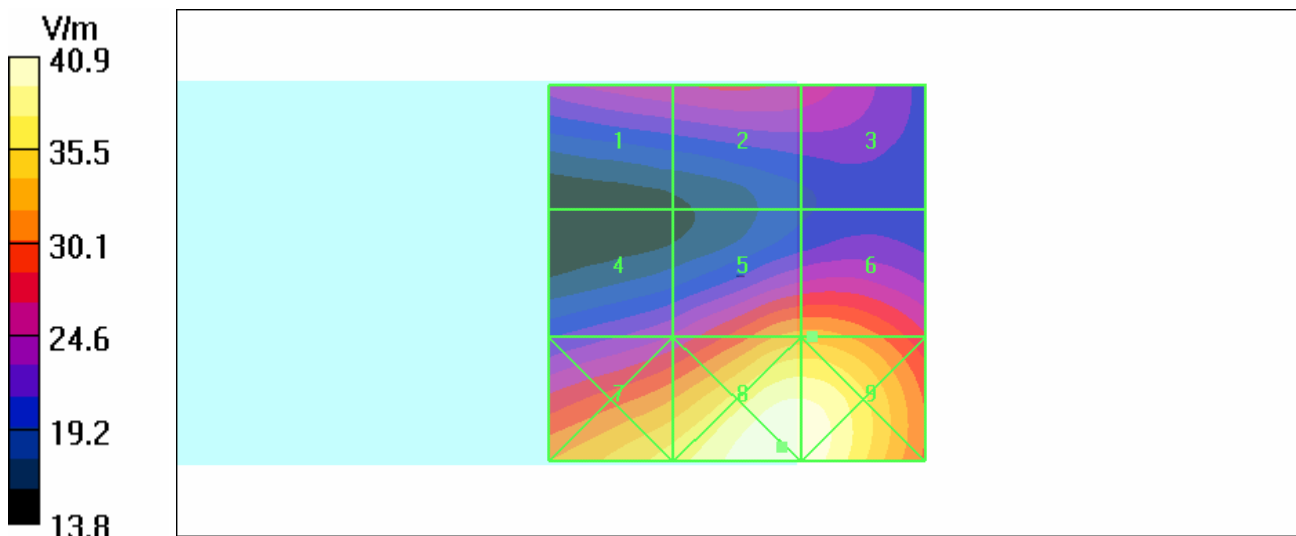
Probe Modulation Factor = 0.970

Reference Value = 24.9 V/m; Power Drift = -0.053 dB

Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak E-field in V/m

Grid 1	Grid 2	Grid 3
26.4	26.9	26.0
Grid 4	Grid 5	Grid 6
25.1	32.8	32.8
Grid 7	Grid 8	Grid 9
36.6	40.9	40.7



Test Laboratory: Advance Data Technology

E-CDMA1900-Ch600+11G-Ch6

DUT: Pocket PC Phone ; Type: DIAM400 ; Test Frequency: 1880 MHz

Communication System: CDMA ; Frequency: 1880 MHz ; Duty Cycle: 1:1 Modulation type: OQPSK

Medium: Air Medium parameters used: $\sigma = 0$ mho/m, $\epsilon_r = 1$; $\rho = 1000$ kg/m³ ;

Phantom section: E Device Section ;

Measurement Standard: DASY4 (High Precision Assessment);

DASY4 Configuration:

- Probe: ER3DV6 - SN2293 ; ConvF(1, 1, 1) ; Calibrated: 2007/1/23
- Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn579; Calibrated: 2008/3/13
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

E Scan - ER probe center 10mm above Device Reference Mid Channel 600/Hearing Aid

Compatibility Test (101x101x1): Measurement grid: dx=5mm, dy=5mm

Maximum value of peak Total field = **32.3** V/m

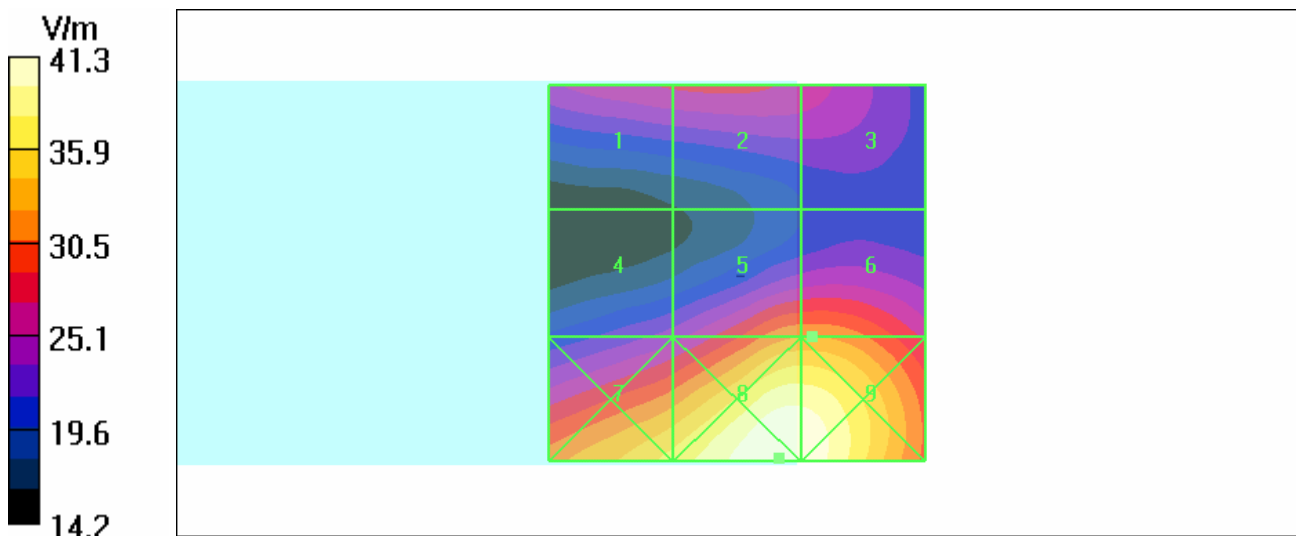
Probe Modulation Factor = 0.970

Reference Value = 24.0 V/m; Power Drift = 0.100 dB

Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak E-field in V/m

Grid 1	Grid 2	Grid 3
27.2	27.5	26.3
Grid 4	Grid 5	Grid 6
24.4	32.3	32.3
Grid 7	Grid 8	Grid 9
36.7	41.3	41.0



Test Laboratory: Advance Data Technology

E-CDMA1900-Ch600+BT-Ch39

DUT: Pocket PC Phone ; Type: DIAM400 ; Test Frequency: 1880 MHz

Communication System: CDMA ; Frequency: 1880 MHz ; Duty Cycle: 1:1 Modulation type: OQPSK

Medium: Air Medium parameters used: $\sigma = 0$ mho/m, $\epsilon_r = 1$; $\rho = 1000$ kg/m³ ;

Phantom section: E Device Section ;

Measurement Standard: DASY4 (High Precision Assessment);

DASY4 Configuration:

- Probe: ER3DV6 - SN2293 ; ConvF(1, 1, 1) ; Calibrated: 2007/1/23
- Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn579; Calibrated: 2008/3/13
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

E Scan - ER probe center 10mm above Device Reference Mid Channel 600/Hearing Aid

Compatibility Test (101x101x1): Measurement grid: dx=5mm, dy=5mm

Maximum value of peak Total field = **32.6** V/m

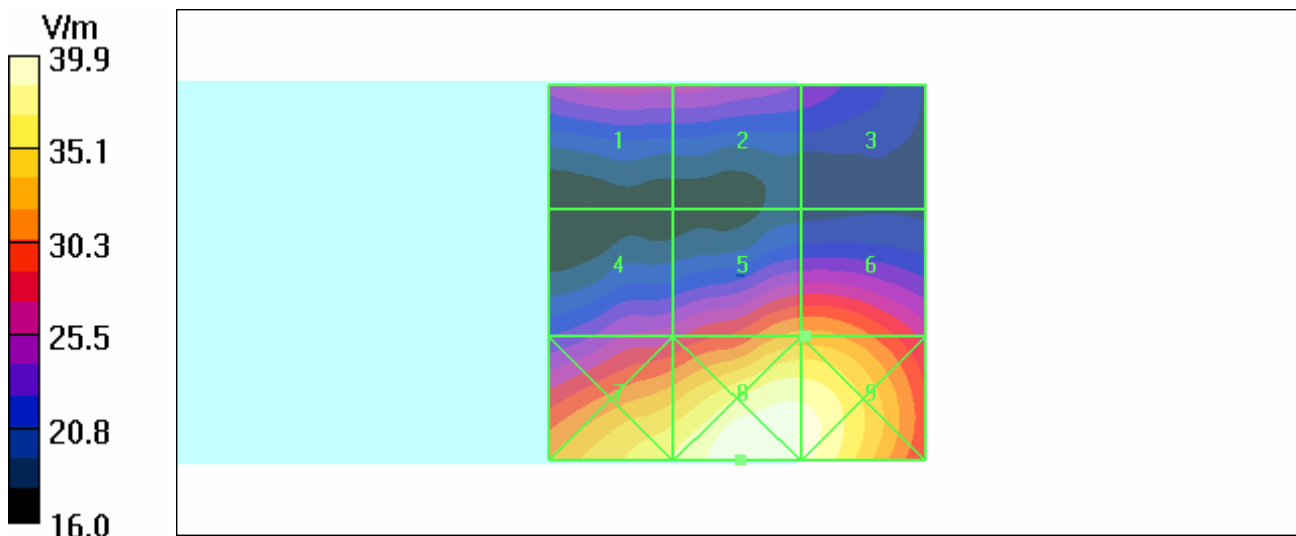
Probe Modulation Factor = 0.970

Reference Value = 28.8 V/m; Power Drift = -0.315 dB

Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak E-field in V/m

Grid 1	Grid 2	Grid 3
26.5	26.4	23.9
Grid 4	Grid 5	Grid 6
26.8	32.6	32.6
Grid 7	Grid 8	Grid 9
37.0	39.9	39.1



Test Laboratory: Advance Data Technology

H-CDMA850-Ch1013

DUT: Pocket PC Phone ; Type: DIAM400 ; Test Frequency: 824.7 MHz

Communication System: CDMA ; Frequency: 824.7 MHz ; Duty Cycle: 1:1 Modulation type: OQPSK

Medium: Air Medium parameters used: $\sigma = 0$ mho/m, $\epsilon_r = 1$; $\rho = 1$ kg/m³ ;

Phantom section: H Device Section ;

Measurement Standard: DASY4 (High Precision Assessment);

DASY4 Configuration:

- Probe: H3DV6 - SN6124 ; ; Calibrated: 2007/1/23
- Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn579; Calibrated: 2008/3/13
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

H Scan - ER probe center 10mm above Device Reference Low Channel 1013/Hearing

Aid Compatibility Test (101x101x1): Measurement grid: dx=5mm, dy=5mm

Maximum value of peak Total field = **0.248** A/m

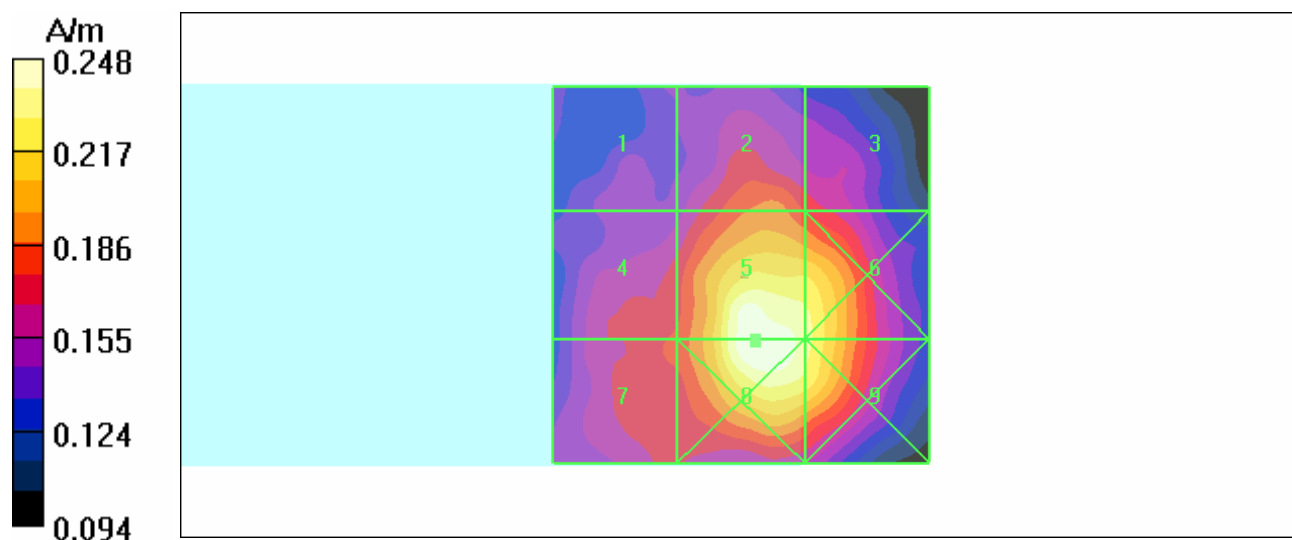
Probe Modulation Factor = 1.01

Reference Value = 0.271 A/m; Power Drift = -0.202 dB

Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak H-field in A/m

Grid 1	Grid 2	Grid 3
0.153	0.190	0.176
Grid 4	Grid 5	Grid 6
0.180	0.248	0.232
Grid 7	Grid 8	Grid 9
0.181	0.248	0.232



Test Laboratory: Advance Data Technology

H-CDMA850-Ch384

DUT: Pocket PC Phone ; Type: DIAM400 ; Test Frequency: 836.5 MHz

Communication System: CDMA ; Frequency: 836.5 MHz ; Duty Cycle: 1:1 Modulation type: OQPSK

Medium: Air Medium parameters used: $\sigma = 0$ mho/m, $\epsilon_r = 1$; $\rho = 1$ kg/m³ ;

Phantom section: H Device Section ;

Measurement Standard: DASY4 (High Precision Assessment);

DASY4 Configuration:

- Probe: H3DV6 - SN6124 ; ; Calibrated: 2007/1/23
- Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn579; Calibrated: 2008/3/13
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

H Scan - ER probe center 10mm above Device Reference Mid Channel 384/Hearing Aid

Compatibility Test (101x101x1): Measurement grid: dx=5mm, dy=5mm

Maximum value of peak Total field = **0.216** A/m

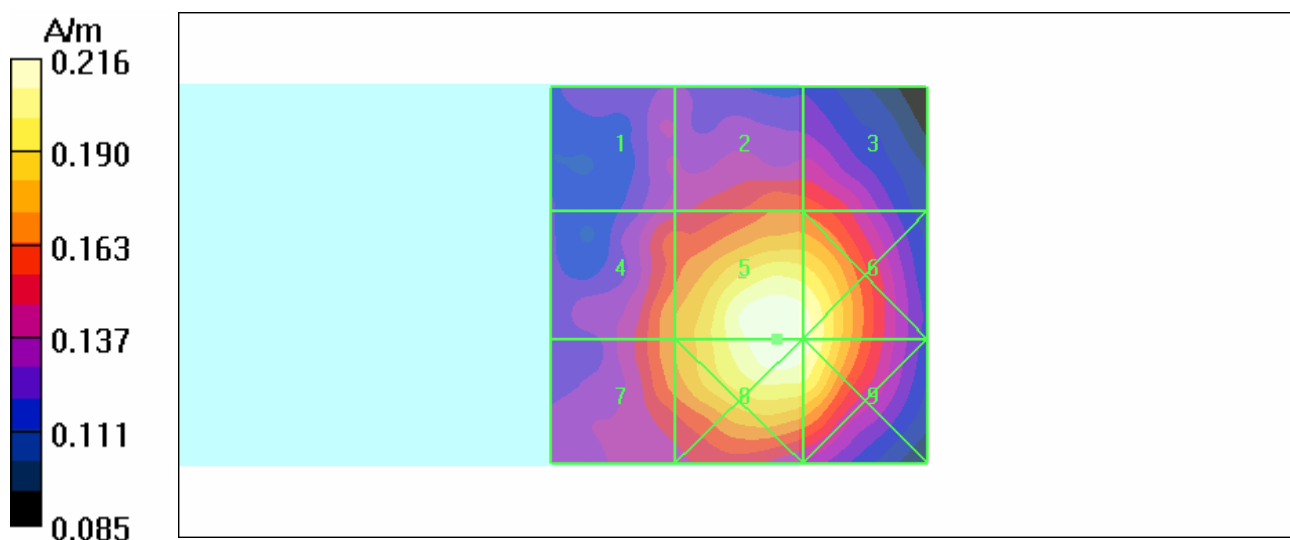
Probe Modulation Factor = 1.01

Reference Value = 0.255 A/m; Power Drift = 0.178 dB

Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak H-field in A/m

Grid 1	Grid 2	Grid 3
0.144	0.165	0.162
Grid 4	Grid 5	Grid 6
0.173	0.216	0.211
Grid 7	Grid 8	Grid 9
0.173	0.216	0.211



Test Laboratory: Advance Data Technology

H-CDMA850-Ch777

DUT: Pocket PC Phone ; Type: DIAM400 ; Test Frequency: 848.3 MHz

Communication System: CDMA ; Frequency: 848.3 MHz ; Duty Cycle: 1:1 Modulation type: OQPSK

Medium: Air Medium parameters used: $\sigma = 0$ mho/m, $\epsilon_r = 1$; $\rho = 1$ kg/m³ ;

Phantom section: H Device Section ;

Measurement Standard: DASY4 (High Precision Assessment);

DASY4 Configuration:

- Probe: H3DV6 - SN6124 ; ; Calibrated: 2007/1/23
- Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn579; Calibrated: 2008/3/13
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

H Scan - ER probe center 10mm above Device Reference High Channel 777/Hearing

Aid Compatibility Test (101x101x1): Measurement grid: dx=5mm, dy=5mm

Maximum value of peak Total field = **0.229** A/m

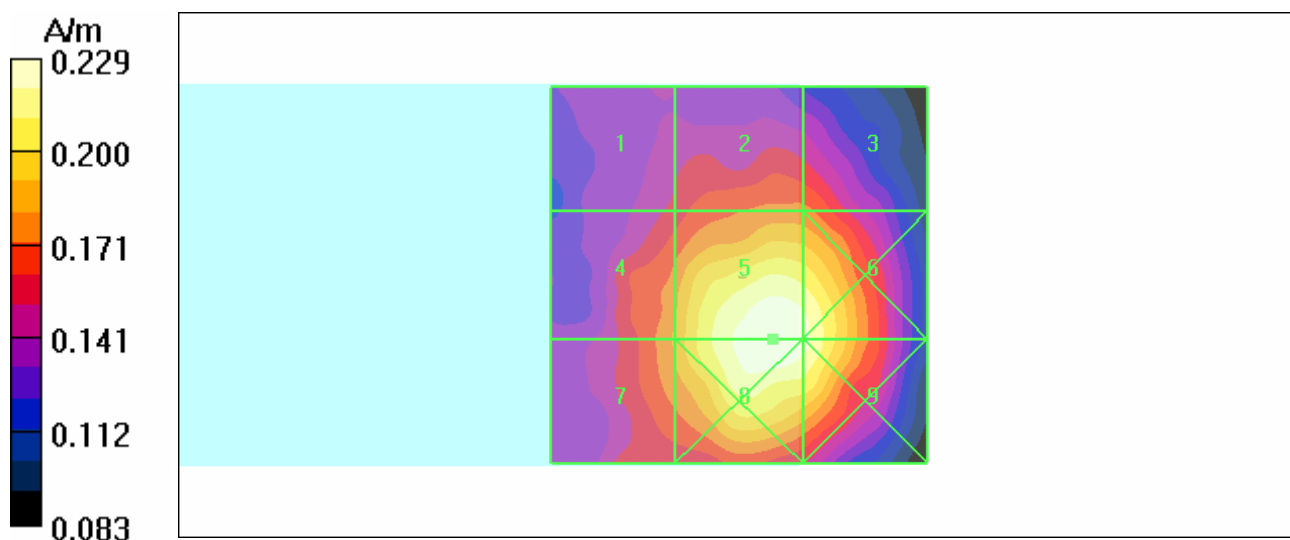
Probe Modulation Factor = 1.01

Reference Value = 0.276 A/m; Power Drift = -0.453 dB

Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak H-field in A/m

Grid 1	Grid 2	Grid 3
0.156	0.175	0.174
Grid 4	Grid 5	Grid 6
0.182	0.229	0.223
Grid 7	Grid 8	Grid 9
0.182	0.229	0.223



Test Laboratory: Advance Data Technology

H-CDMA850-Ch1013 Light On

DUT: Pocket PC Phone ; Type: DIAM400 ; Test Frequency: 824.7 MHz

Communication System: CDMA ; Frequency: 824.7 MHz ; Duty Cycle: 1:1 Modulation type: OQPSK

Medium: Air Medium parameters used: $\sigma = 0$ mho/m, $\epsilon_r = 1$; $\rho = 1$ kg/m³ ;

Phantom section: H Device Section ;

Measurement Standard: DASYS4 (High Precision Assessment);

DASY4 Configuration:

- Probe: H3DV6 - SN6124 ; ; Calibrated: 2007/1/23
- Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn579; Calibrated: 2008/3/13
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASYS4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

H Scan - ER probe center 10mm above Device Reference Low Channel 1013/Hearing

Aid Compatibility Test (101x101x1): Measurement grid: dx=5mm, dy=5mm

Maximum value of peak Total field = **0.249** A/m

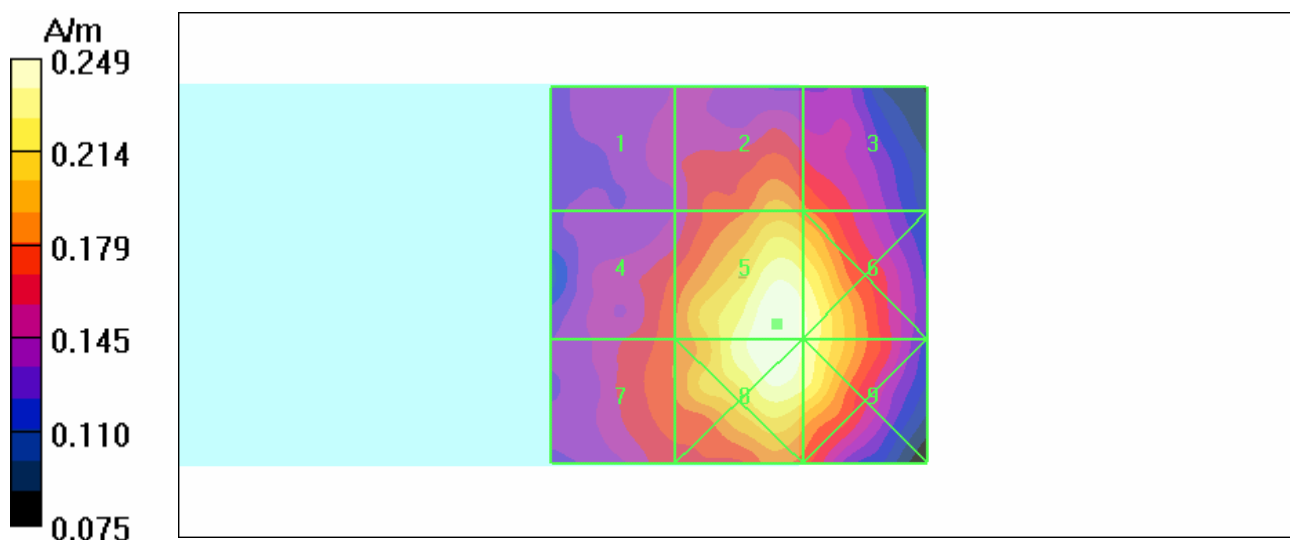
Probe Modulation Factor = 1.01

Reference Value = 0.276 A/m; Power Drift = 0.025 dB

Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak H-field in A/m

Grid 1	Grid 2	Grid 3
0.156	0.197	0.185
Grid 4	Grid 5	Grid 6
0.179	0.249	0.240
Grid 7	Grid 8	Grid 9
0.181	0.247	0.239



Test Laboratory: Advance Data Technology

H-CDMA850-Ch1013+11B-Ch6

DUT: Pocket PC Phone ; Type: DIAM400 ; Test Frequency: 824.7 MHz

Communication System: CDMA ; Frequency: 824.7 MHz ; Duty Cycle: 1:1 Modulation type: OQPSK

Medium: Air Medium parameters used: $\sigma = 0$ mho/m, $\epsilon_r = 1$; $\rho = 1$ kg/m³ ;

Phantom section: H Device Section ;

Measurement Standard: DASY4 (High Precision Assessment);

DASY4 Configuration:

- Probe: H3DV6 - SN6124 ; ; Calibrated: 2007/1/23
- Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn579; Calibrated: 2008/3/13
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

H Scan - ER probe center 10mm above Device Reference Low Channel 1013/Hearing

Aid Compatibility Test (101x101x1): Measurement grid: dx=5mm, dy=5mm

Maximum value of peak Total field = **0.241** A/m

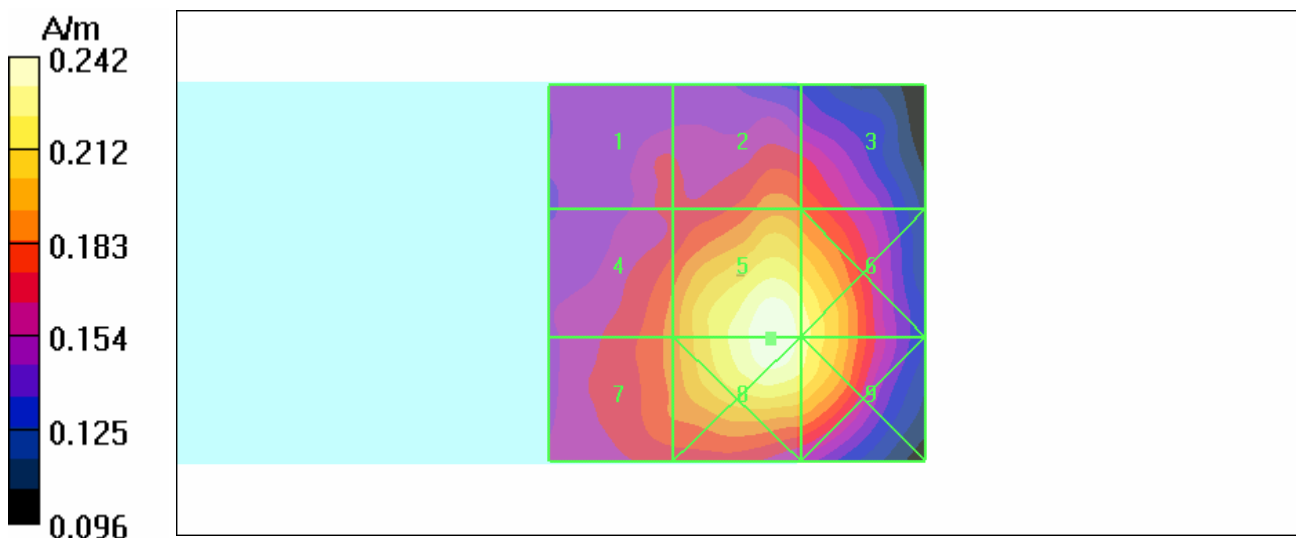
Probe Modulation Factor = 1.01

Reference Value = 0.280 A/m; Power Drift = 0.066 dB

Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak H-field in A/m

Grid 1	Grid 2	Grid 3
0.167	0.190	0.184
Grid 4	Grid 5	Grid 6
0.189	0.241	0.229
Grid 7	Grid 8	Grid 9
0.189	0.242	0.229



Test Laboratory: Advance Data Technology

H-CDMA850-Ch1013+11G-Ch6

DUT: Pocket PC Phone ; Type: DIAM400 ; Test Frequency: 824.7 MHz

Communication System: CDMA ; Frequency: 824.7 MHz ; Duty Cycle: 1:1 Modulation type: OQPSK

Medium: Air Medium parameters used: $\sigma = 0$ mho/m, $\epsilon_r = 1$; $\rho = 1$ kg/m³ ;

Phantom section: H Device Section ;

Measurement Standard: DASYS4 (High Precision Assessment);

DASY4 Configuration:

- Probe: H3DV6 - SN6124 ; ; Calibrated: 2007/1/23
- Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn579; Calibrated: 2008/3/13
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASYS4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

H Scan - ER probe center 10mm above Device Reference Low Channel 1013/Hearing

Aid Compatibility Test (101x101x1): Measurement grid: dx=5mm, dy=5mm

Maximum value of peak Total field = **0.234** A/m

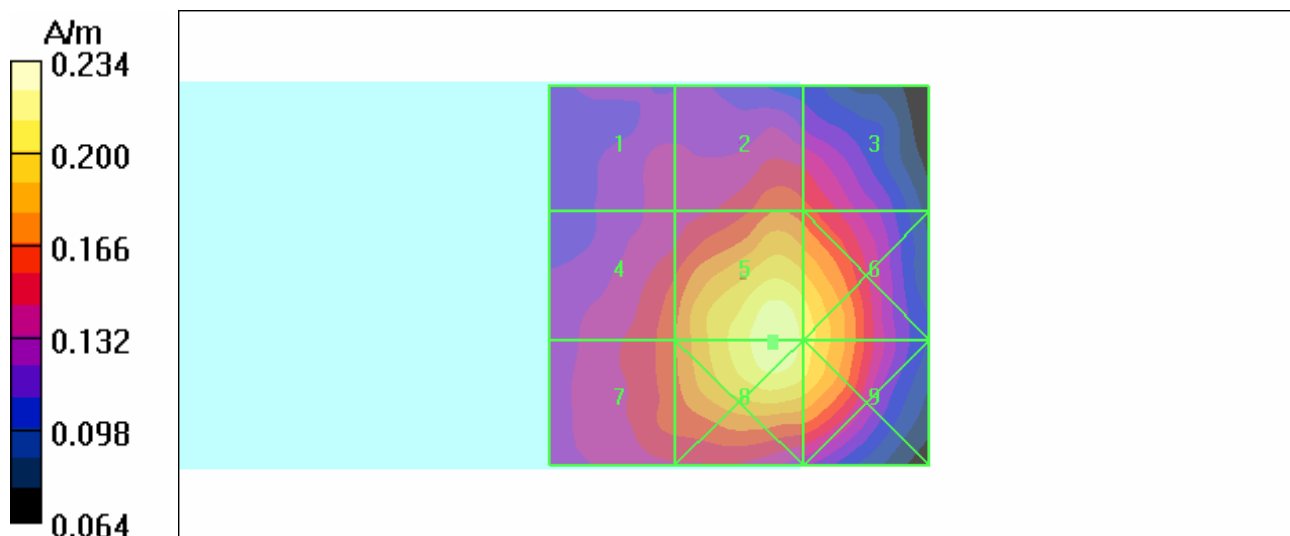
Probe Modulation Factor = 1.01

Reference Value = 0.282 A/m; Power Drift = 0.018 dB

Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak H-field in A/m

Grid 1	Grid 2	Grid 3
0.112	0.152	0.148
Grid 4	Grid 5	Grid 6
0.148	0.234	0.229
Grid 7	Grid 8	Grid 9
0.151	0.234	0.229



Test Laboratory: Advance Data Technology

H-CDMA850-Ch1013+BT-Ch39

DUT: Pocket PC Phone ; Type: DIAM400 ; Test Frequency: 824.7 MHz

Communication System: CDMA ; Frequency: 824.7 MHz ; Duty Cycle: 1:1 Modulation type: OQPSK

Medium: Air Medium parameters used: $\sigma = 0$ mho/m, $\epsilon_r = 1$; $\rho = 1$ kg/m³ ;

Phantom section: H Device Section ;

Measurement Standard: DASY4 (High Precision Assessment);

DASY4 Configuration:

- Probe: H3DV6 - SN6124 ; ; Calibrated: 2007/1/23
- Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn579; Calibrated: 2008/3/13
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

H Scan - ER probe center 10mm above Device Reference Low Channel 1013/Hearing

Aid Compatibility Test (101x101x1): Measurement grid: dx=5mm, dy=5mm

Maximum value of peak Total field = **0.231** A/m

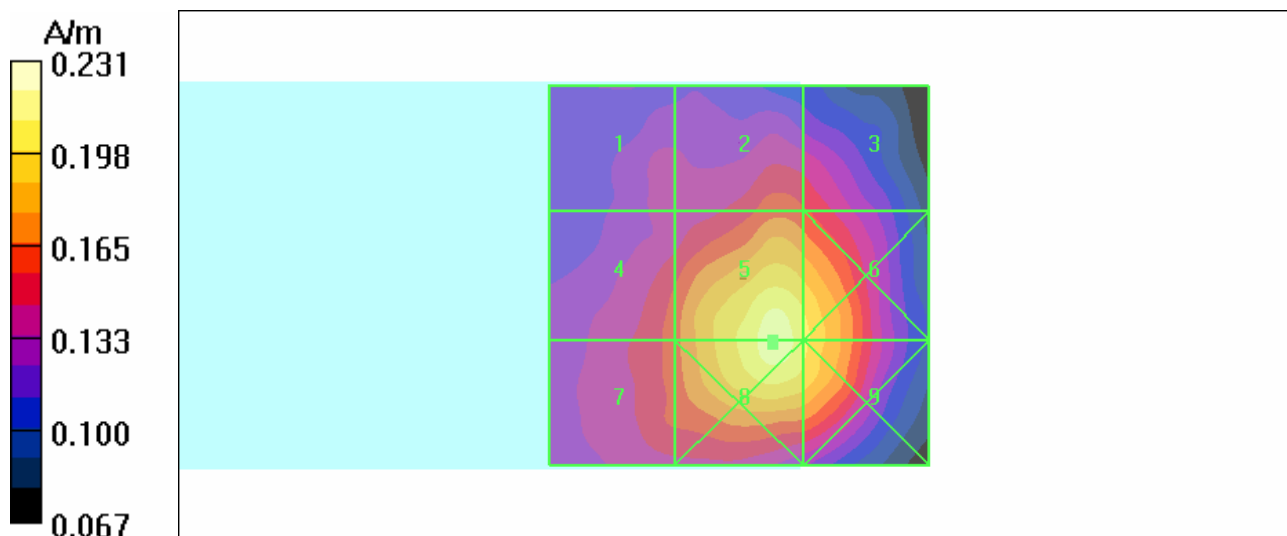
Probe Modulation Factor = 1.01

Reference Value = 0.284 A/m; Power Drift = -0.040 dB

Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak H-field in A/m

Grid 1	Grid 2	Grid 3
0.119	0.147	0.146
Grid 4	Grid 5	Grid 6
0.147	0.231	0.224
Grid 7	Grid 8	Grid 9
0.149	0.231	0.224



Test Laboratory: Advance Data Technology

H-CDMA1900-Ch25

DUT: Pocket PC Phone ; Type: DIAM400 ; Test Frequency: 1851.25 MHz

Communication System: CDMA ; Frequency: 1851.25 MHz ; Duty Cycle: 1:1 Modulation type: OQPSK

Medium: Air Medium parameters used: $\sigma = 0$ mho/m, $\epsilon_r = 1$; $\rho = 1$ kg/m³ ;

Phantom section: H Device Section ;

Measurement Standard: DASY4 (High Precision Assessment);

DASY4 Configuration:

- Probe: H3DV6 - SN6124 ; ; Calibrated: 2007/1/23
- Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn579; Calibrated: 2008/3/13
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

H Scan - ER probe center 10mm above Device Reference Low Channel 25/Hearing Aid

Compatibility Test (101x101x1): Measurement grid: dx=5mm, dy=5mm

Maximum value of peak Total field = **0.055** A/m

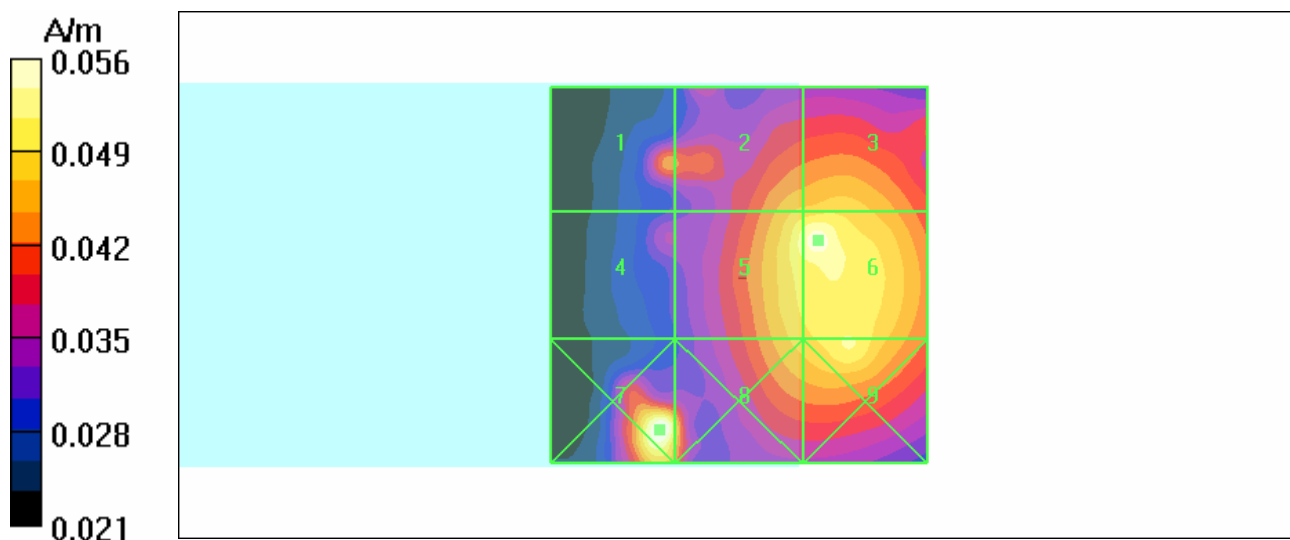
Probe Modulation Factor = 0.990

Reference Value = 0.040 A/m; Power Drift = 0.117 dB

Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak H-field in A/m

Grid 1	Grid 2	Grid 3
0.044	0.047	0.049
Grid 4	Grid 5	Grid 6
0.036	0.053	0.055
Grid 7	Grid 8	Grid 9
0.056	0.049	0.052



Test Laboratory: Advance Data Technology

H-CDMA1900-Ch600

DUT: Pocket PC Phone ; Type: DIAM400 ; Test Frequency: 1880 MHz

Communication System: CDMA ; Frequency: 1880 MHz ; Duty Cycle: 1:1 Modulation type: OQPSK

Medium: Air Medium parameters used: $\sigma = 0$ mho/m, $\epsilon_r = 1$; $\rho = 1$ kg/m³ ;

Phantom section: H Device Section ;

Measurement Standard: DASY4 (High Precision Assessment);

DASY4 Configuration:

- Probe: H3DV6 - SN6124 ; ; Calibrated: 2007/1/23
- Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn579; Calibrated: 2008/3/13
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

H Scan - ER probe center 10mm above Device Reference Mid Channel 600/Hearing Aid

Compatibility Test (101x101x1): Measurement grid: dx=5mm, dy=5mm

Maximum value of peak Total field = **0.052** A/m

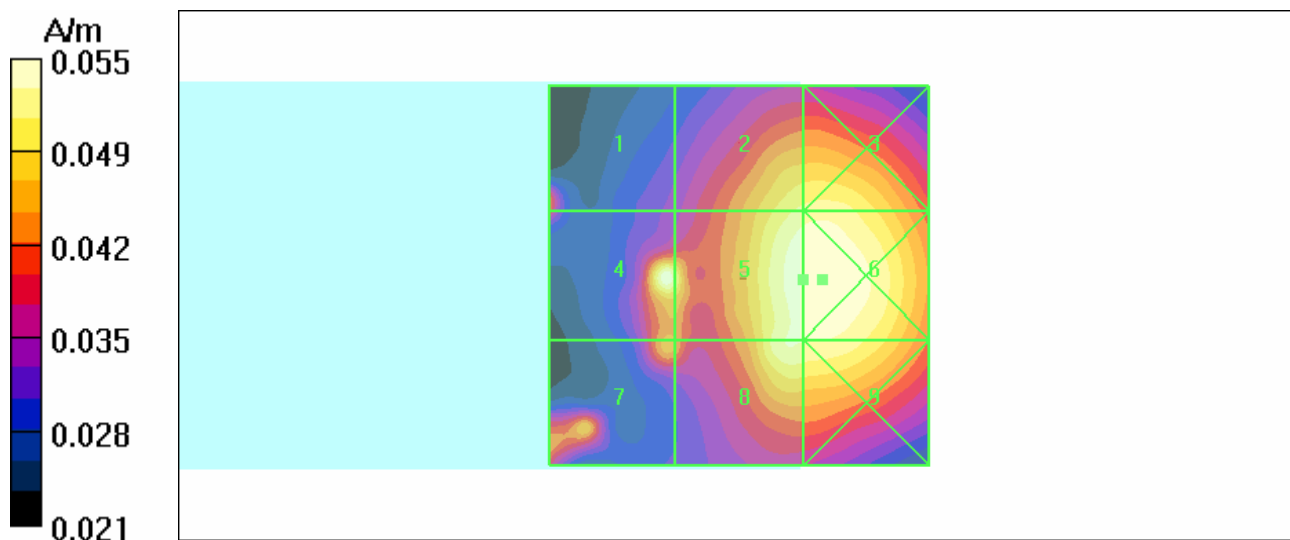
Probe Modulation Factor = 0.990

Reference Value = 0.038 A/m; Power Drift = -0.209 dB

Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak H-field in A/m

Grid 1	Grid 2	Grid 3
0.043	0.049	0.051
Grid 4	Grid 5	Grid 6
0.052	0.052	0.052
Grid 7	Grid 8	Grid 9
0.045	0.050	0.050



Test Laboratory: Advance Data Technology

H-CDMA1900-Ch1175

DUT: Pocket PC Phone ; Type: DIAM400 ; Test Frequency: 1908.75 MHz

Communication System: CDMA ; Frequency: 1908.75 MHz ; Duty Cycle: 1:1 Modulation type: OQPSK

Medium: Air Medium parameters used: $\sigma = 0$ mho/m, $\epsilon_r = 1$; $\rho = 1$ kg/m³ ;

Phantom section: H Device Section ;

Measurement Standard: DASY4 (High Precision Assessment);

DASY4 Configuration:

- Probe: H3DV6 - SN6124 ; ; Calibrated: 2007/1/23
- Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn579; Calibrated: 2008/3/13
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

H Scan - ER probe center 10mm above Device Reference High Channel 1175/Hearing

Aid Compatibility Test (101x101x1): Measurement grid: dx=5mm, dy=5mm

Maximum value of peak Total field = **0.050** A/m

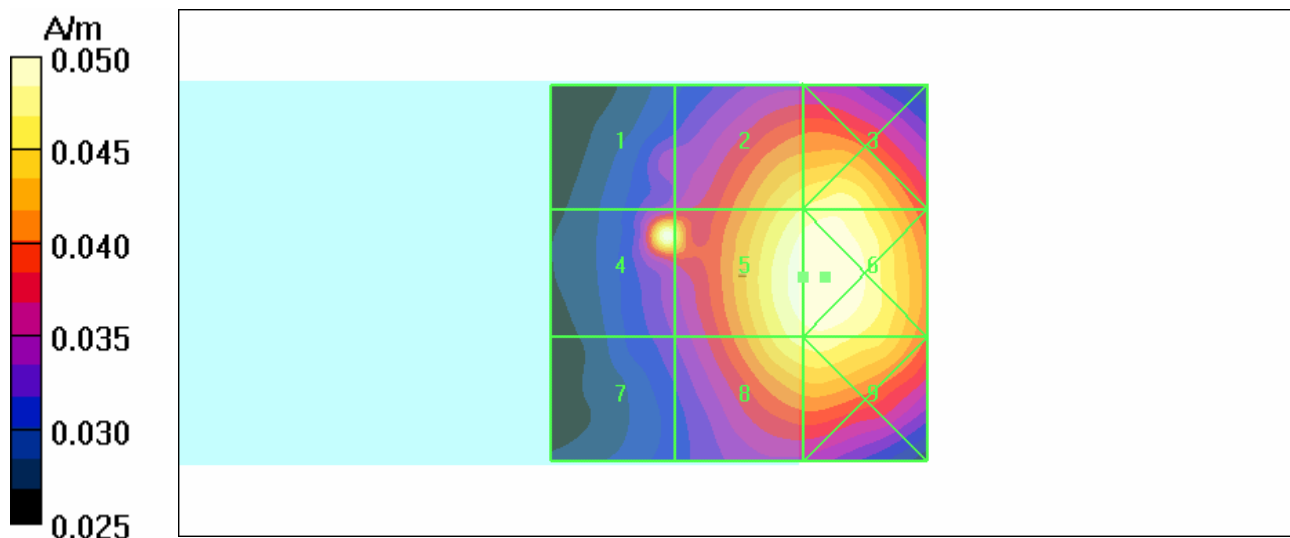
Probe Modulation Factor = 0.990

Reference Value = 0.050 A/m; Power Drift = -0.373 dB

Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak H-field in A/m

Grid 1	Grid 2	Grid 3
0.036	0.047	0.048
Grid 4	Grid 5	Grid 6
0.050	0.050	0.050
Grid 7	Grid 8	Grid 9
0.034	0.048	0.048



Test Laboratory: Advance Data Technology

H-CDMA1900-Ch25 Light On

DUT: Pocket PC Phone ; Type: DIAM400 ; Test Frequency: 1851.25 MHz

Communication System: CDMA ; Frequency: 1851.25 MHz ; Duty Cycle: 1:1 Modulation type: OQPSK

Medium: Air Medium parameters used: $\sigma = 0$ mho/m, $\epsilon_r = 1$; $\rho = 1$ kg/m³ ;

Phantom section: H Device Section ;

Measurement Standard: DAS4 (High Precision Assessment);

DASY4 Configuration:

- Probe: H3DV6 - SN6124 ; ; Calibrated: 2007/1/23
- Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn579; Calibrated: 2008/3/13
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DAS4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

H Scan - ER probe center 10mm above Device Reference Low Channel 25/Hearing Aid

Compatibility Test (101x101x1): Measurement grid: dx=5mm, dy=5mm

Maximum value of peak Total field = **0.053** A/m

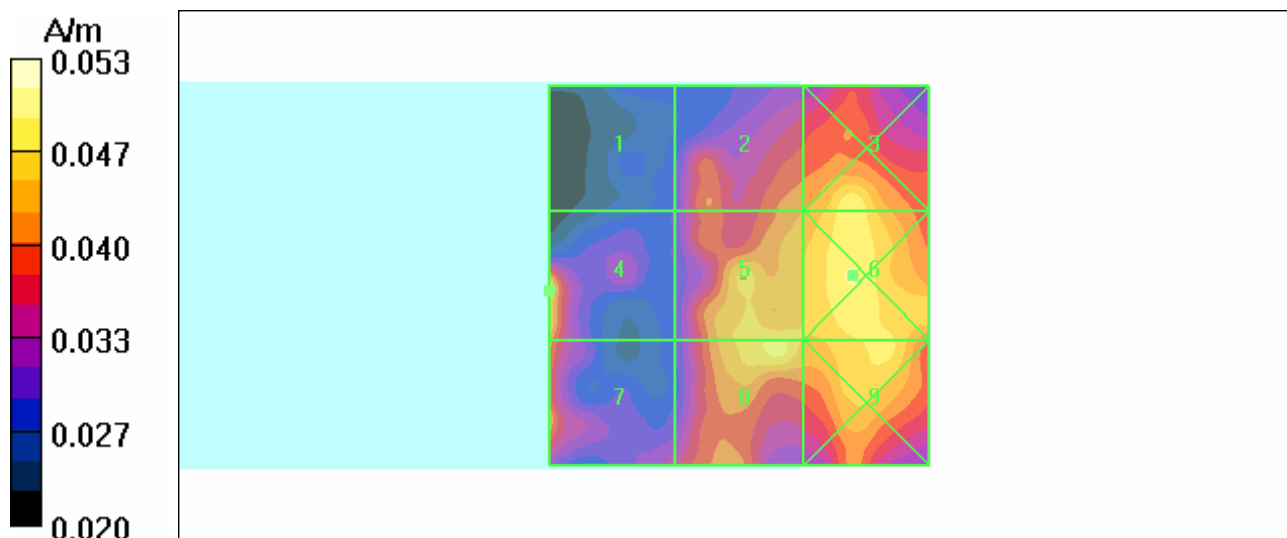
Probe Modulation Factor = 0.990

Reference Value = 0.039 A/m; Power Drift = 0.100 dB

Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak H-field in A/m

Grid 1	Grid 2	Grid 3
0.031	0.045	0.052
Grid 4	Grid 5	Grid 6
0.053	0.051	0.053
Grid 7	Grid 8	Grid 9
0.046	0.052	0.052



Test Laboratory: Advance Data Technology

H-CDMA1900-Ch25+11B-Ch6

DUT: Pocket PC Phone ; Type: DIAM400 ; Test Frequency: 1851.25 MHz

Communication System: CDMA ; Frequency: 1851.25 MHz ; Duty Cycle: 1:1 Modulation type: OQPSK

Medium: Air Medium parameters used: $\sigma = 0$ mho/m, $\epsilon_r = 1$; $\rho = 1$ kg/m³ ;

Phantom section: H Device Section ;

Measurement Standard: DASY4 (High Precision Assessment);

DASY4 Configuration:

- Probe: H3DV6 - SN6124 ; ; Calibrated: 2007/1/23
- Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn579; Calibrated: 2008/3/13
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

H Scan - ER probe center 10mm above Device Reference Low Channel 25/Hearing Aid

Compatibility Test (101x101x1): Measurement grid: dx=5mm, dy=5mm

Maximum value of peak Total field = **0.052** A/m

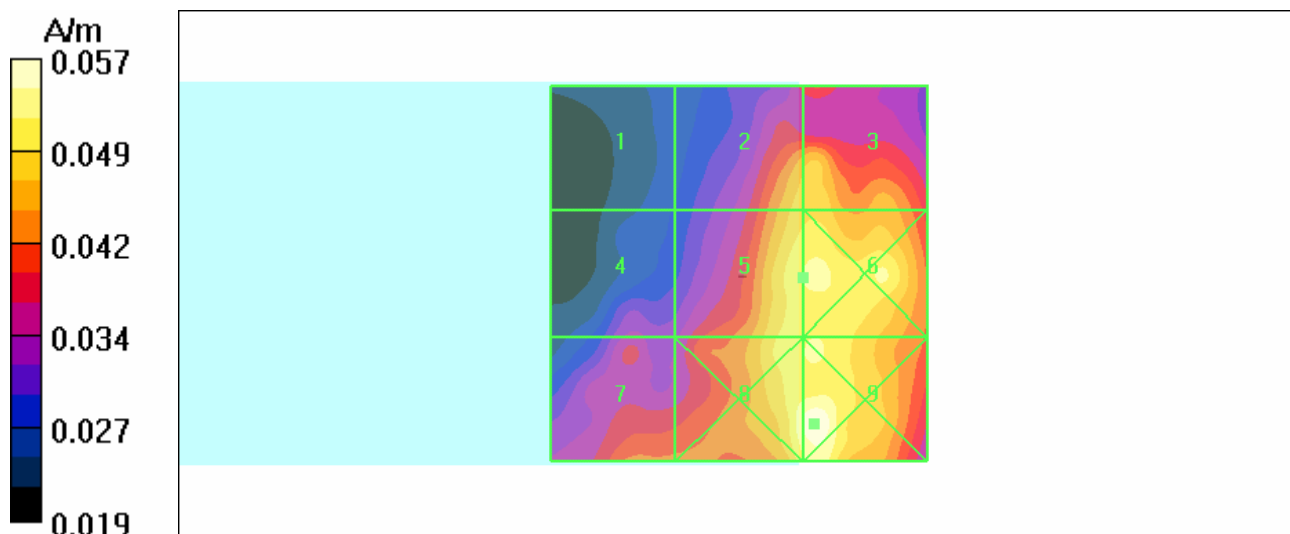
Probe Modulation Factor = 0.990

Reference Value = 0.043 A/m; Power Drift = 0.077 dB

Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak H-field in A/m

Grid 1	Grid 2	Grid 3
0.027	0.049	0.049
Grid 4	Grid 5	Grid 6
0.035	0.052	0.053
Grid 7	Grid 8	Grid 9
0.043	0.055	0.057



Test Laboratory: Advance Data Technology

H-CDMA1900-Ch25+11G-Ch6

DUT: Pocket PC Phone ; Type: DIAM400 ; Test Frequency: 1851.25 MHz

Communication System: CDMA ; Frequency: 1851.25 MHz ; Duty Cycle: 1:1 Modulation type: OQPSK

Medium: Air Medium parameters used: $\sigma = 0$ mho/m, $\epsilon_r = 1$; $\rho = 1$ kg/m³ ;

Phantom section: H Device Section ;

Measurement Standard: DAS4 (High Precision Assessment);

DASY4 Configuration:

- Probe: H3DV6 - SN6124 ; ; Calibrated: 2007/1/23
- Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn579; Calibrated: 2008/3/13
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DAS4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

H Scan - ER probe center 10mm above Device Reference Low Channel 25/Hearing Aid

Compatibility Test (101x101x1): Measurement grid: dx=5mm, dy=5mm

Maximum value of peak Total field = **0.053** A/m

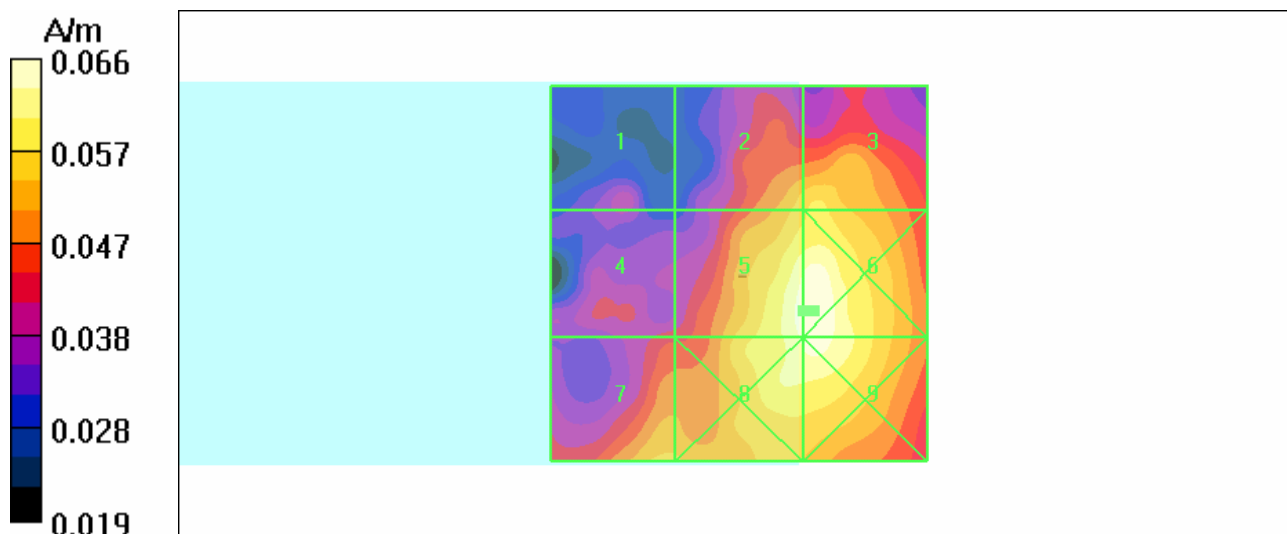
Probe Modulation Factor = 0.990

Reference Value = 0.057 A/m; Power Drift = 0.208 dB

Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak H-field in A/m

Grid 1	Grid 2	Grid 3
0.033	0.046	0.047
Grid 4	Grid 5	Grid 6
0.035	0.053	0.054
Grid 7	Grid 8	Grid 9
0.045	0.052	0.053



Test Laboratory: Advance Data Technology

H-CDMA1900-Ch25+BT-Ch39

DUT: Pocket PC Phone ; Type: DIAM400 ; Test Frequency: 1851.25 MHz

Communication System: CDMA ; Frequency: 1851.25 MHz ; Duty Cycle: 1:1 Modulation type: OQPSK

Medium: Air Medium parameters used: $\sigma = 0$ mho/m, $\epsilon_r = 1$; $\rho = 1$ kg/m³ ;

Phantom section: H Device Section ;

Measurement Standard: DASY4 (High Precision Assessment);

DASY4 Configuration:

- Probe: H3DV6 - SN6124 ; ; Calibrated: 2007/1/23
- Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn579; Calibrated: 2008/3/13
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

H Scan - ER probe center 10mm above Device Reference Low Channel 25/Hearing Aid

Compatibility Test (101x101x1): Measurement grid: dx=5mm, dy=5mm

Maximum value of peak Total field = **0.050** A/m

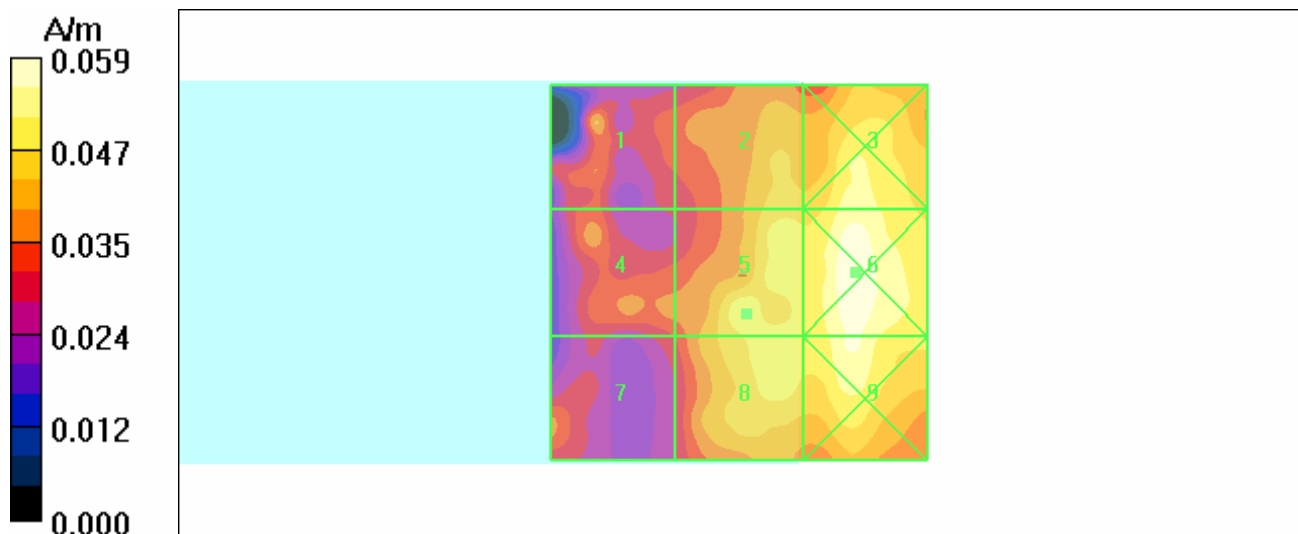
Probe Modulation Factor = 0.990

Reference Value = 0.052 A/m; Power Drift = 0.275 dB

Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak H-field in A/m

Grid 1	Grid 2	Grid 3
0.040	0.046	0.053
Grid 4	Grid 5	Grid 6
0.038	0.050	0.059
Grid 7	Grid 8	Grid 9
0.037	0.050	0.056



Test Laboratory: Advance Data Technology

H-836.5 MHz (WD)

DUT: HAC-Dipole 835 MHz ; Type: D835V3 ; Serial: 1041 ; Test Frequency: 836.5 MHz

Communication System: CDMA ; Frequency: 836.5 MHz; Duty Cycle: 1:1; Modulation type: OQPSK
 Medium: Air;Medium parameters used: $\sigma = 0$ mho/m, $\epsilon_r = 1$; $\rho = 1$ kg/m³
 Phantom section: H Dipole Section Measurement Standard: DASY4 (High Precision Assessment);

DASY4 Configuration:

- Probe: H3DV6 - SN6124 ; ; Calibrated: 2007/1/23
- Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn579; Calibrated: 2008/3/13
- Phantom: HAC Test Arch; Type: SD HAC P01 BA; Serial: Not Specified
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

H Scan - ER probe center 10mm above CD835 Dipole/Hearing Aid Compatibility Test

(41x361x1): Measurement grid: dx=5mm, dy=5mm

Maximum value of peak Total field = **0.411** A/m

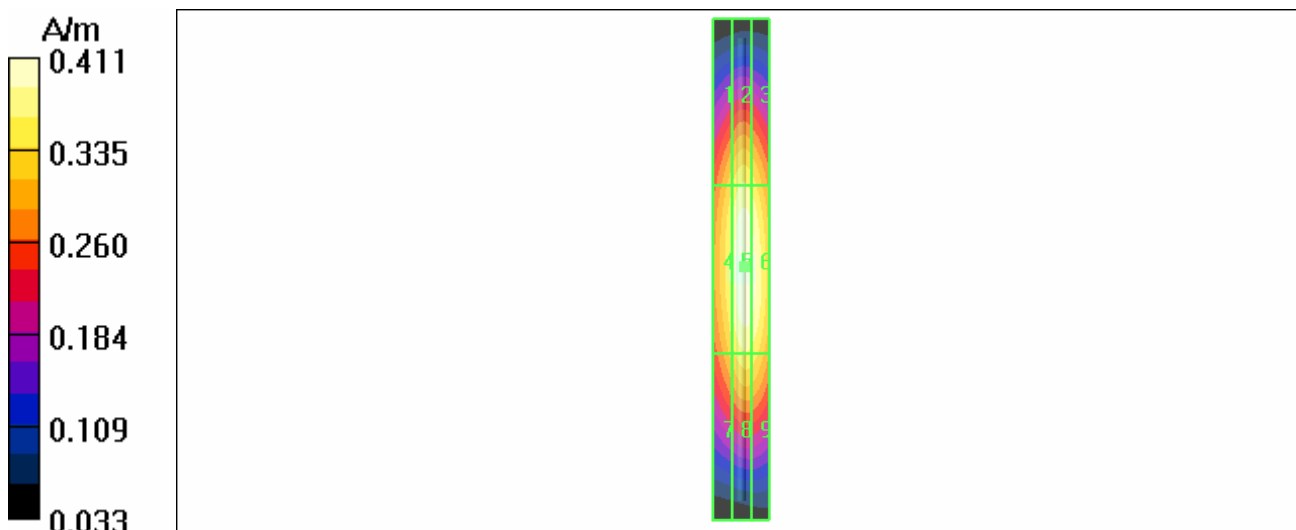
Probe Modulation Factor = 1.00

Reference Value = 0.433 A/m; Power Drift = 0.049 dB

Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak H-field in A/m

Grid 1	Grid 2	Grid 3
0.331	0.366	0.352
Grid 4	Grid 5	Grid 6
0.369	0.411	0.401
Grid 7	Grid 8	Grid 9
0.321	0.359	0.354



Test Laboratory: Advance Data Technology

H-836.5MHz (CW)

DUT: HAC-Dipole 835 MHz ; Type: D835V3 ; Serial: 1041 ; Test Frequency: 836.5 MHz

Communication System: CW ; Frequency: 836.5 MHz; Duty Cycle: 1:1; Modulation type: CW

Medium: Air;Medium parameters used: $\sigma = 0$ mho/m, $\epsilon_r = 1$; $\rho = 1$ kg/m³

Phantom section: H Dipole Section Measurement Standard: DAS4 (High Precision Assessment);

DASY4 Configuration:

- Probe: H3DV6 - SN6124 ; ; Calibrated: 2007/1/23
- Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn579; Calibrated: 2008/3/13
- Phantom: HAC Test Arch; Type: SD HAC P01 BA; Serial: Not Specified
- Measurement SW: DAS4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

H Scan - ER probe center 10mm above CD835 Dipole/Hearing Aid Compatibility Test

(41x361x1): Measurement grid: dx=5mm, dy=5mm

Maximum value of peak Total field = **0.415** A/m

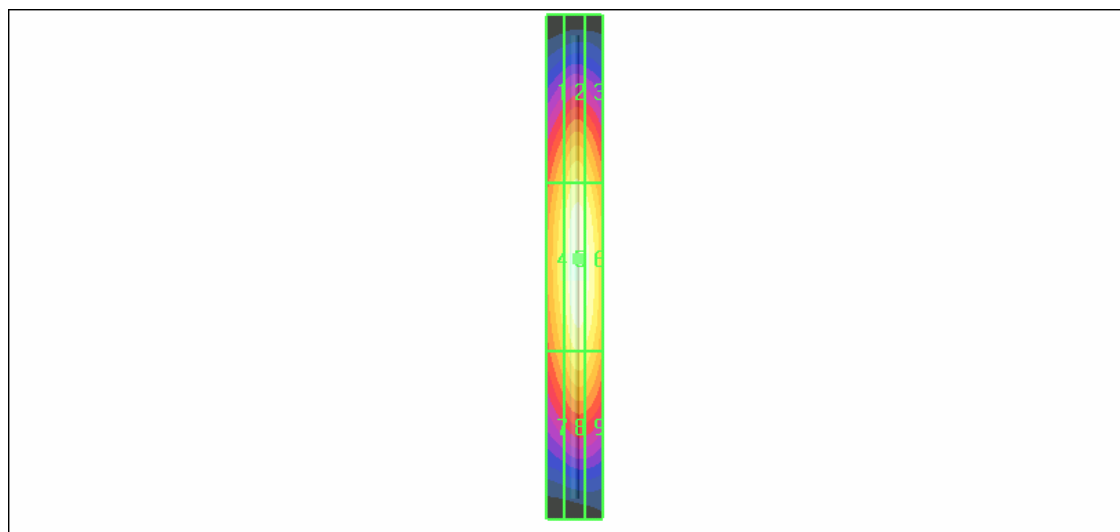
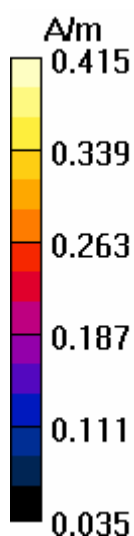
Probe Modulation Factor = 1.00

Reference Value = 0.440 A/m; Power Drift = 0.005 dB

Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak H-field in A/m

Grid 1	Grid 2	Grid 3
0.335	0.369	0.358
Grid 4	Grid 5	Grid 6
0.375	0.415	0.405
Grid 7	Grid 8	Grid 9
0.327	0.366	0.360



Test Laboratory: Advance Data Technology

H-836.5MHz (AM 80%)

DUT: HAC-Dipole 835 MHz ; Type: D835V3 ; Serial: 1041 ; Test Frequency: 836.5 MHz

Communication System: AM ; Frequency: 836.5 MHz; Duty Cycle: 1:1; Modulation type: AM

Medium: Air; Medium parameters used: $\sigma = 0$ mho/m, $\epsilon_r = 1$; $\rho = 1$ kg/m³

Phantom section: H Dipole Section Measurement Standard: DASY4 (High Precision Assessment);

DASY4 Configuration:

- Probe: H3DV6 - SN6124 ; ; Calibrated: 2007/1/23
- Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn579; Calibrated: 2008/3/13
- Phantom: HAC Test Arch; Type: SD HAC P01 BA; Serial: Not Specified
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

H Scan - ER probe center 10mm above CD835 Dipole/Hearing Aid Compatibility Test

(41x361x1): Measurement grid: dx=5mm, dy=5mm

Maximum value of peak Total field = **0.406** A/m

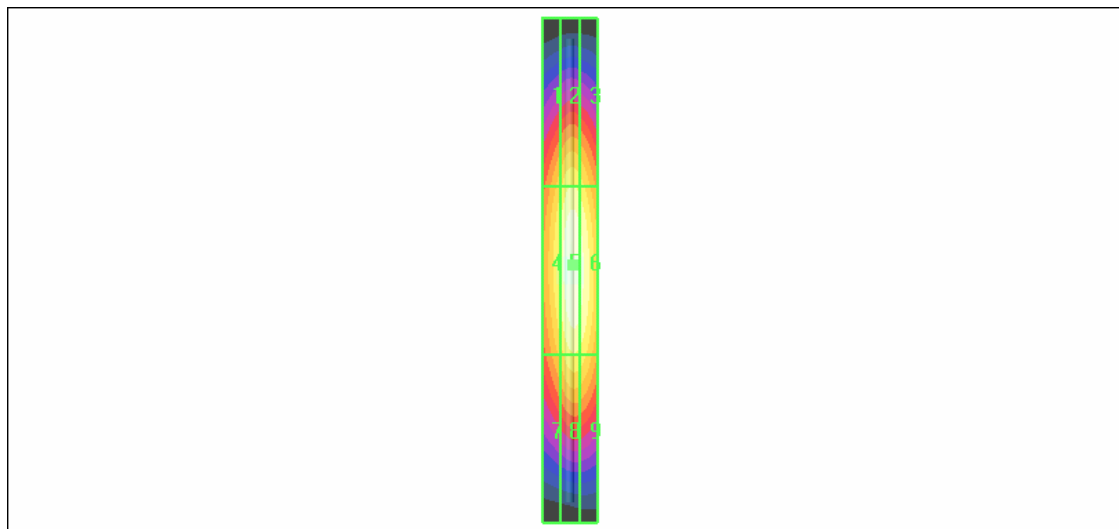
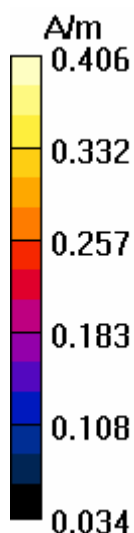
Probe Modulation Factor = 1.00

Reference Value = 0.429 A/m; Power Drift = -0.004 dB

Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak H-field in A/m

Grid 1	Grid 2	Grid 3
0.324	0.358	0.347
Grid 4	Grid 5	Grid 6
0.364	0.406	0.395
Grid 7	Grid 8	Grid 9
0.316	0.355	0.349



Test Laboratory: Advance Data Technology

E-836.5MHz (WD)

DUT: HAC-Dipole 835 MHz ; Type: D835V3 ; Serial: 1041 ; Test Frequency: 836.5 MHz

Communication System: CDMA ; Frequency: 836.5 MHz; Duty Cycle: 1:1; Modulation type: OQPSK
 Medium: Air; Medium parameters used: $\sigma = 0$ mho/m, $\epsilon_r = 1$; $\rho = 1000$ kg/m³
 Phantom section: E Dipole Section Measurement Standard: DASY4 (High Precision Assessment);

DASY4 Configuration:

- Probe: ER3DV6 - SN2293 ; ConvF(1, 1, 1) ; Calibrated: 2007/1/23
- Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn579; Calibrated: 2008/3/13
- Phantom: HAC Test Arch; Type: SD HAC P01 BA; Serial: Not Specified
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

E Scan - ER probe center 10mm above CD835 Dipole/Hearing Aid Compatibility Test

(41x361x1): Measurement grid: dx=5mm, dy=5mm

Maximum value of peak Total field = **147.2** V/m

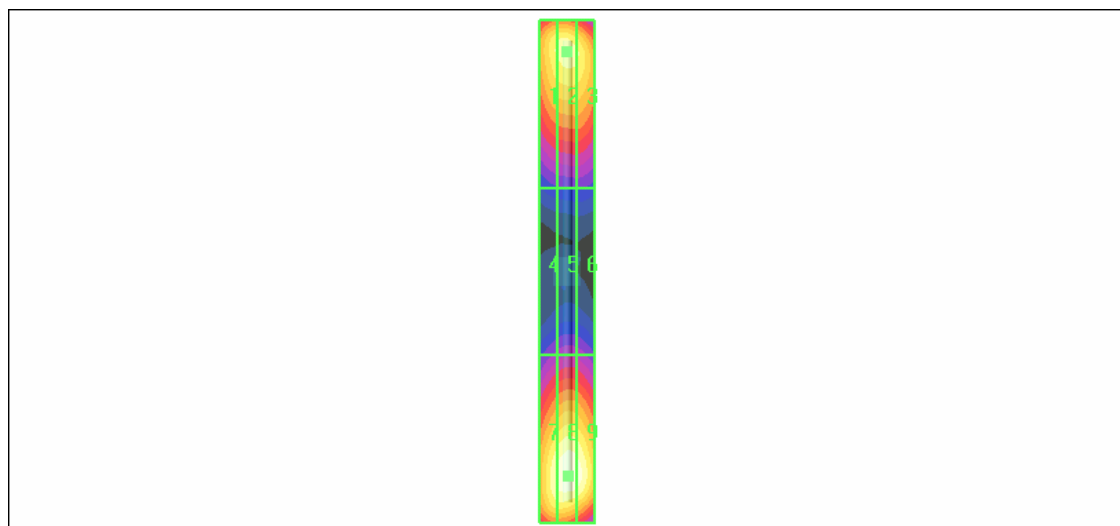
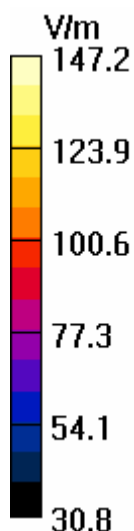
Probe Modulation Factor = 1.00

Reference Value = 106.8 V/m; Power Drift = 0.044 dB

Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak E-field in V/m

Grid 1	Grid 2	Grid 3
133.6	136.5	133.3
Grid 4	Grid 5	Grid 6
73.6	76.9	75.7
Grid 7	Grid 8	Grid 9
141.4	147.2	144.5



Test Laboratory: Advance Data Technology

E-836.5MHz (CW)

DUT: HAC-Dipole 835 MHz ; Type: D835V3 ; Serial: 1041 ; Test Frequency: 836.5 MHz

Communication System: CW ; Frequency: 836.5 MHz; Duty Cycle: 1:1; Modulation type: CW

Medium: Air; Medium parameters used: $\sigma = 0$ mho/m, $\epsilon_r = 1$; $\rho = 1000$ kg/m³

Phantom section: E Dipole Section Measurement Standard: DASY4 (High Precision Assessment);

DASY4 Configuration:

- Probe: ER3DV6 - SN2293 ; ConvF(1, 1, 1) ; Calibrated: 2007/1/23
- Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn579; Calibrated: 2008/3/13
- Phantom: HAC Test Arch; Type: SD HAC P01 BA; Serial: Not Specified
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

E Scan - ER probe center 10mm above CD835 Dipole/Hearing Aid Compatibility Test

(41x361x1): Measurement grid: dx=5mm, dy=5mm

Maximum value of peak Total field = **138.7** V/m

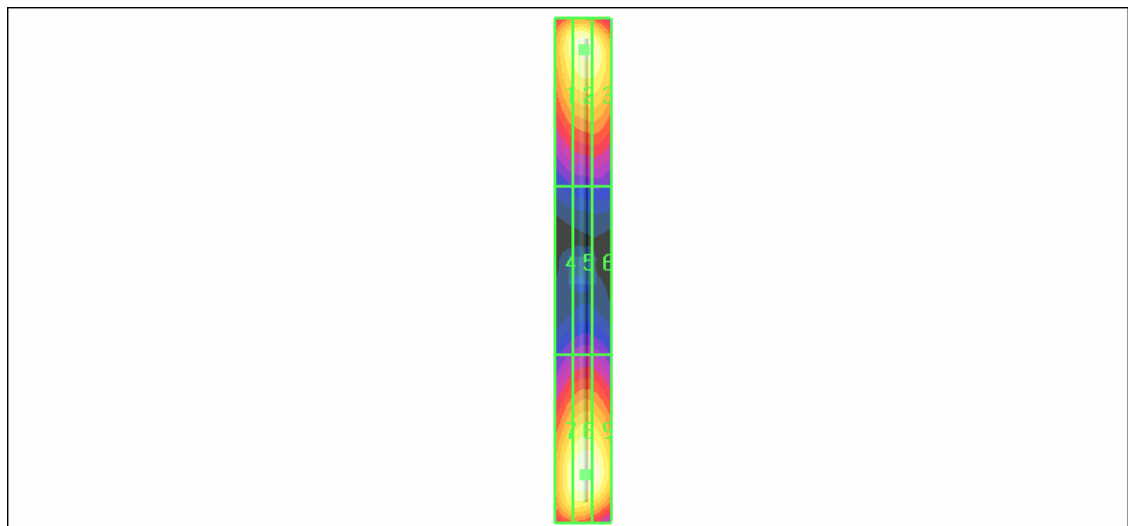
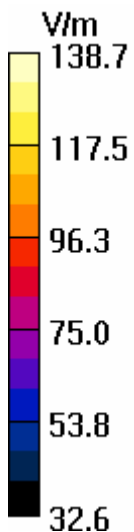
Probe Modulation Factor = 1.00

Reference Value = 102.3 V/m; Power Drift = 0.036 dB

Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak E-field in V/m

Grid 1	Grid 2	Grid 3
129.9	134.7	133.3
Grid 4	Grid 5	Grid 6
70.6	74.1	73.2
Grid 7	Grid 8	Grid 9
132.2	138.7	136.8



Test Laboratory: Advance Data Technology

E-836.5MHz (AM 80%)

DUT: HAC-Dipole 835 MHz ; Type: D835V3 ; Serial: 1041 ; Test Frequency: 836.5 MHz

Communication System: AM ; Frequency: 836.5 MHz; Duty Cycle: 1:1; Modulation type: AM

Medium: Air; Medium parameters used: $\sigma = 0$ mho/m, $\epsilon_r = 1$; $\rho = 1000$ kg/m³

Phantom section: E Dipole Section Measurement Standard: DASY4 (High Precision Assessment);

DASY4 Configuration:

- Probe: ER3DV6 - SN2293 ; ConvF(1, 1, 1) ; Calibrated: 2007/1/23
- Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn579; Calibrated: 2008/3/13
- Phantom: HAC Test Arch; Type: SD HAC P01 BA; Serial: Not Specified
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

E Scan - ER probe center 10mm above CD835 Dipole/Hearing Aid Compatibility Test

(41x361x1): Measurement grid: dx=5mm, dy=5mm

Maximum value of peak Total field = **128.2** V/m

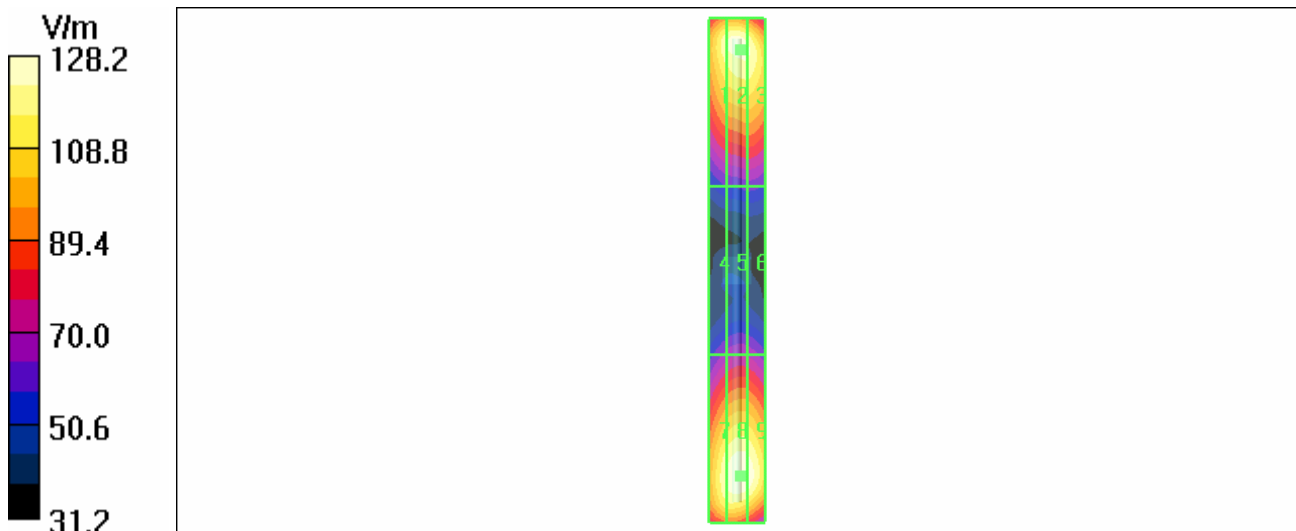
Probe Modulation Factor = 1.00

Reference Value = 95.1 V/m; Power Drift = 0.034 dB

Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak E-field in V/m

Grid 1	Grid 2	Grid 3
121.6	124.5	123.8
Grid 4	Grid 5	Grid 6
66.9	70.0	69.3
Grid 7	Grid 8	Grid 9
123.1	128.2	127.1



Test Laboratory: Advance Data Technology

H-1880MHz (WD)

DUT: HAC Dipole 1880 MHz ; Type: CD1880V3 ; Serial: 1032 ; Test Frequency: 1880 MHz

Communication System: CDMA ; Frequency: 1880 MHz; Duty Cycle: 1:1; Modulation type: OQPSK
 Medium: Air; Medium parameters used: $\sigma = 0$ mho/m, $\epsilon_r = 1$; $\rho = 1$ kg/m³
 Phantom section: H Dipole Section Measurement Standard: DAS4 (High Precision Assessment);

DASY4 Configuration:

- Probe: H3DV6 - SN6124 ; ; Calibrated: 2007/1/23
- Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn579; Calibrated: 2008/3/13
- Phantom: HAC Test Arch; Type: SD HAC P01 BA; Serial: Not Specified
- Measurement SW: DAS4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

H Scan - ER probe center 10mm above CD1880 Dipole/Hearing Aid Compatibility Test

(41x181x1): Measurement grid: dx=5mm, dy=5mm

Maximum value of peak Total field = **0.468** A/m

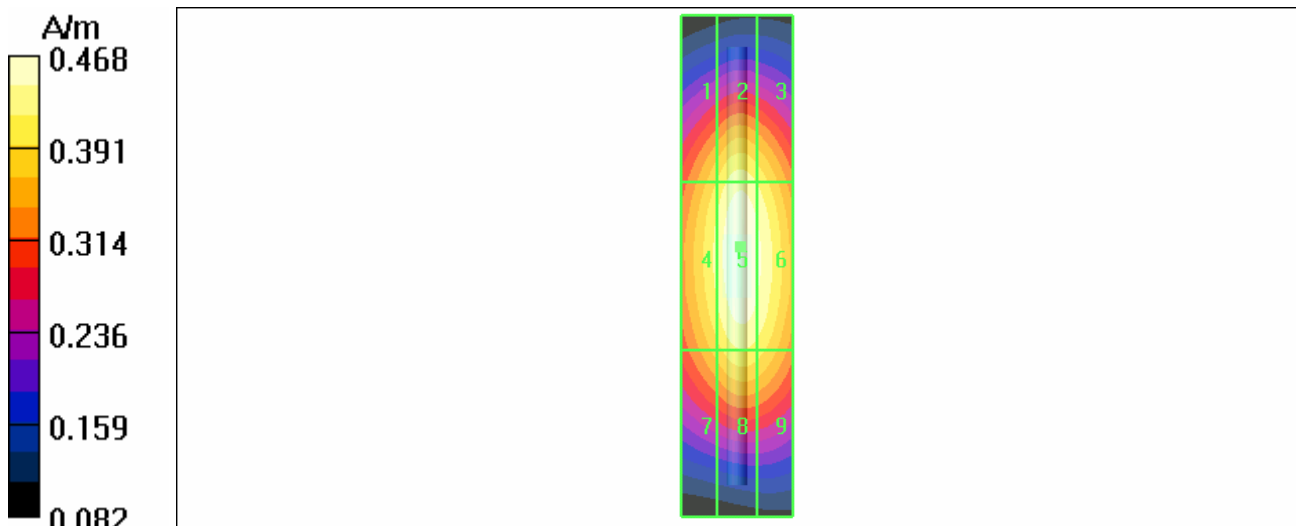
Probe Modulation Factor = 1.00

Reference Value = 0.493 A/m; Power Drift = 0.034 dB

Hearing Aid Near-Field Category: M2 (AWF 0 dB)

Peak H-field in A/m

Grid 1	Grid 2	Grid 3
0.394	0.434	0.416
Grid 4	Grid 5	Grid 6
0.428	0.468	0.452
Grid 7	Grid 8	Grid 9
0.380	0.416	0.405



Test Laboratory: Advance Data Technology

H-1880MHz (CW)

DUT: HAC Dipole 1880 MHz ; Type: CD1880V3 ; Serial: 1032 ; Test Frequency: 1880 MHz

Communication System: CW ; Frequency: 1880 MHz; Duty Cycle: 1:1; Modulation type: CW

Medium: Air;Medium parameters used: $\sigma = 0$ mho/m, $\epsilon_r = 1$; $\rho = 1$ kg/m³

Phantom section: H Dipole Section Measurement Standard: DASY4 (High Precision Assessment);

DASY4 Configuration:

- Probe: H3DV6 - SN6124 ; ; Calibrated: 2007/1/23
- Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn579; Calibrated: 2008/3/13
- Phantom: HAC Test Arch; Type: SD HAC P01 BA; Serial: Not Specified
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

H Scan - ER probe center 10mm above CD1880 Dipole/Hearing Aid Compatibility Test

(41x181x1): Measurement grid: dx=5mm, dy=5mm

Maximum value of peak Total field = **0.463** A/m

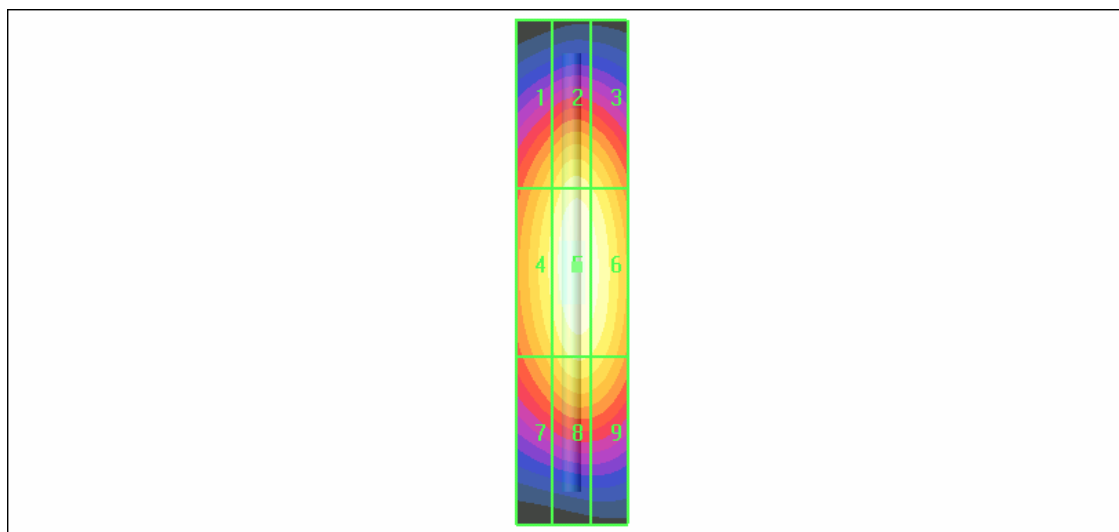
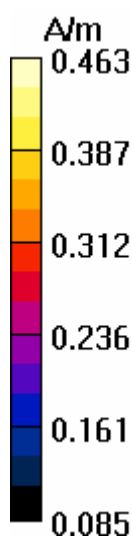
Probe Modulation Factor = 1.00

Reference Value = 0.491 A/m; Power Drift = -0.061 dB

Hearing Aid Near-Field Category: M2 (AWF 0 dB)

Peak H-field in A/m

Grid 1	Grid 2	Grid 3
0.388	0.428	0.414
Grid 4	0.463	0.451
Grid 5		
Grid 6		
Grid 7	Grid 8	Grid 9
0.379	0.418	0.410



Test Laboratory: Advance Data Technology

H-1880MHz (AM 80%)

DUT: HAC Dipole 1880 MHz ; Type: CD1880V3 ; Serial: 1032 ; Test Frequency: 1880 MHz

Communication System: AM ; Frequency: 1880 MHz; Duty Cycle: 1:1; Modulation type: AM
 Medium: Air; Medium parameters used: $\sigma = 0$ mho/m, $\epsilon_r = 1$; $\rho = 1$ kg/m³
 Phantom section: H Dipole Section Measurement Standard: DASY4 (High Precision Assessment);

DASY4 Configuration:

- Probe: H3DV6 - SN6124 ; ; Calibrated: 2007/1/23
- Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn579; Calibrated: 2008/3/13
- Phantom: HAC Test Arch; Type: SD HAC P01 BA; Serial: Not Specified
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

H Scan - ER probe center 10mm above CD1880 Dipole/Hearing Aid Compatibility Test

(41x181x1): Measurement grid: dx=5mm, dy=5mm

Maximum value of peak Total field = **0.462** A/m

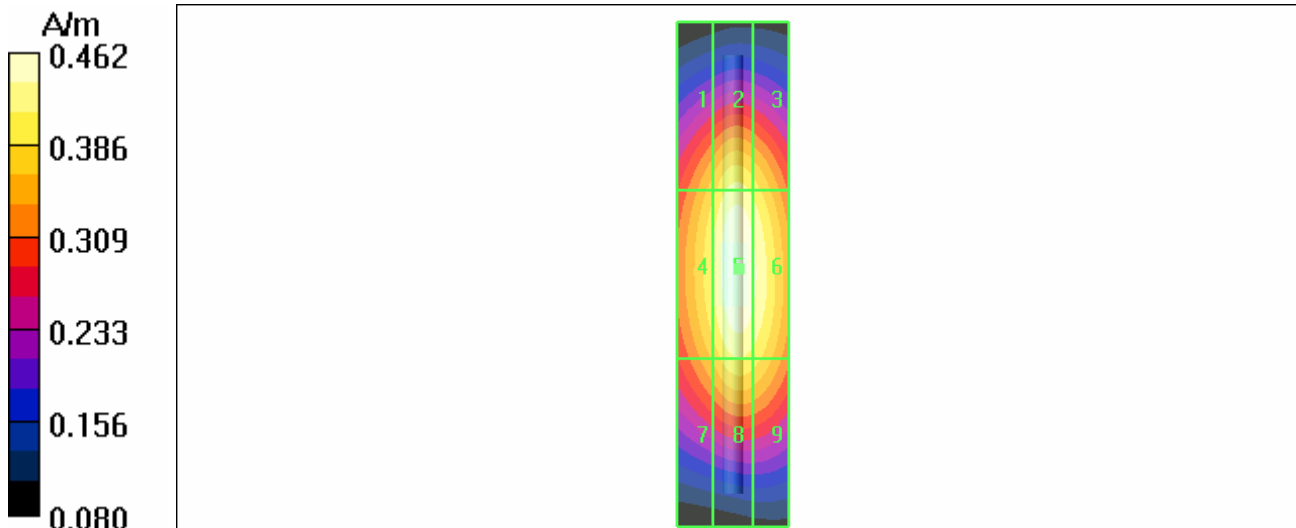
Probe Modulation Factor = 1.00

Reference Value = 0.493 A/m; Power Drift = -0.050 dB

Hearing Aid Near-Field Category: M2 (AWF 0 dB)

Peak H-field in A/m

Grid 1	Grid 2	Grid 3
0.378	0.422	0.404
Grid 4	Grid 5	Grid 6
0.414	0.462	0.445
Grid 7	Grid 8	Grid 9
0.367	0.411	0.400



Test Laboratory: Advance Data Technology

E-1880MHz (WD)

DUT: HAC Dipole 1880 MHz ; Type: CD1880V3 ; Serial: 1032 ; Test Frequency: 1880 MHz

Communication System: CDMA ; Frequency: 1880 MHz; Duty Cycle: 1:1; Modulation type: OQPSK
 Medium: Air; Medium parameters used: $\sigma = 0$ mho/m, $\epsilon_r = 1$; $\rho = 1000$ kg/m³
 Phantom section: E Dipole Section Measurement Standard: DASY4 (High Precision Assessment);

DASY4 Configuration:

- Probe: ER3DV6 - SN2293 ; ConvF(1, 1, 1) ; Calibrated: 2007/1/23
- Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn579; Calibrated: 2008/3/13
- Phantom: HAC Test Arch; Type: SD HAC P01 BA; Serial: Not Specified
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

E Scan - ER probe center 10mm above CD1880 Dipole/Hearing Aid Compatibility Test

(41x181x1): Measurement grid: dx=5mm, dy=5mm

Maximum value of peak Total field = **128.6** V/m

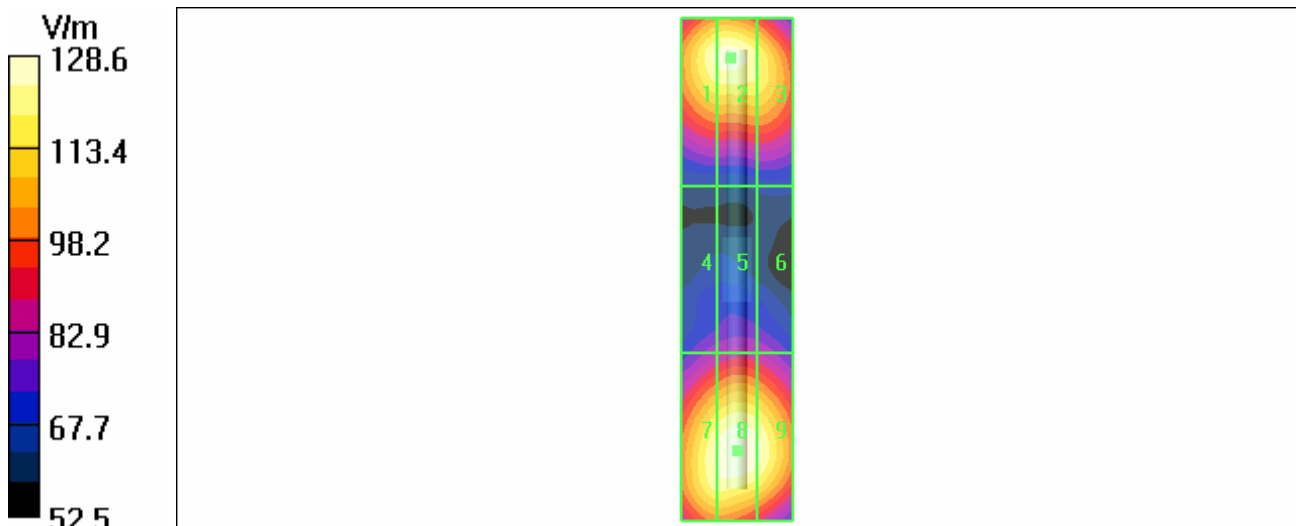
Probe Modulation Factor = 1.00

Reference Value = 130.4 V/m; Power Drift = 0.041 dB

Hearing Aid Near-Field Category: M2 (AWF 0 dB)

Peak E-field in V/m

Grid 1	Grid 2	Grid 3
125.1	126.5	120.3
Grid 4	Grid 5	Grid 6
82.3	86.1	83.9
Grid 7	Grid 8	Grid 9
125.1	128.6	125.8



Test Laboratory: Advance Data Technology

E-1880MHz (CW)

DUT: HAC Dipole 1880 MHz ; Type: CD1880V3 ; Serial: 1032 ; Test Frequency: 1880 MHz

Communication System: CW ; Frequency: 1880 MHz; Duty Cycle: 1:1; Modulation type: CW
 Medium: Air; Medium parameters used: $\sigma = 0$ mho/m, $\epsilon_r = 1$; $\rho = 1000$ kg/m³
 Phantom section: E Dipole Section Measurement Standard: DASY4 (High Precision Assessment);

DASY4 Configuration:

- Probe: ER3DV6 - SN2293 ; ConvF(1, 1, 1) ; Calibrated: 2007/1/23
- Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn579; Calibrated: 2008/3/13
- Phantom: HAC Test Arch; Type: SD HAC P01 BA; Serial: Not Specified
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

E Scan - ER probe center 10mm above CD1880 Dipole/Hearing Aid Compatibility Test

(41x181x1): Measurement grid: dx=5mm, dy=5mm

Maximum value of peak Total field = **124.2** V/m

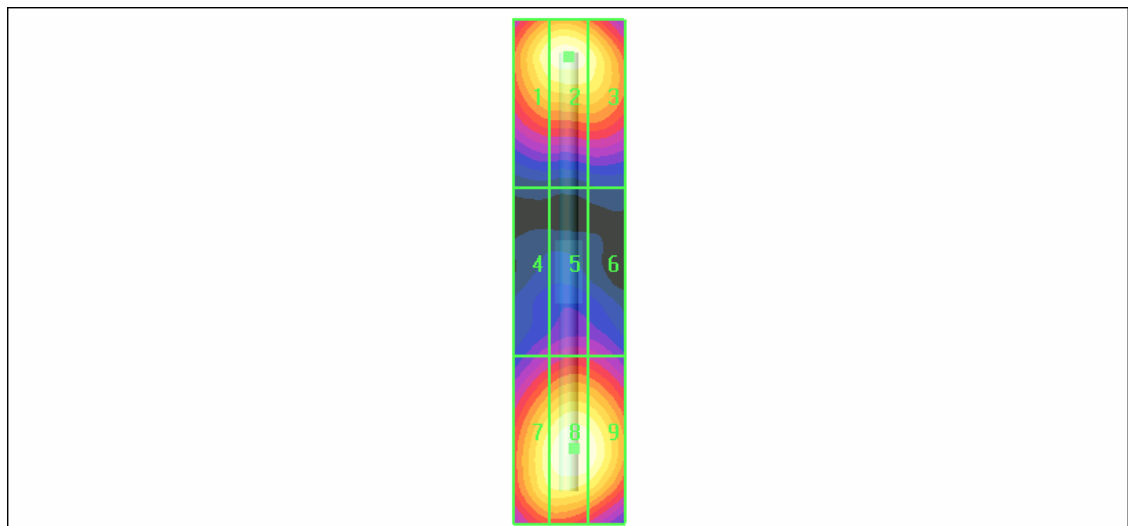
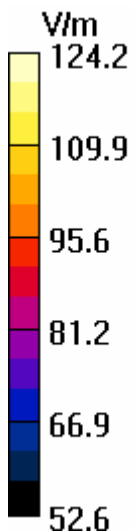
Probe Modulation Factor = 1.00

Reference Value = 125.2 V/m; Power Drift = 0.019 dB

Hearing Aid Near-Field Category: M2 (AWF 0 dB)

Peak E-field in V/m

Grid 1	Grid 2	Grid 3
119.5	122.8	118.4
Grid 4	Grid 5	Grid 6
80.9	86.0	84.7
Grid 7	Grid 8	Grid 9
118.7	124.2	122.4



Test Laboratory: Advance Data Technology

E-1880MHz (AM 80%)

DUT: HAC Dipole 1880 MHz ; Type: CD1880V3 ; Serial: 1032 ; Test Frequency: 1880 MHz

Communication System: AM ; Frequency: 1880 MHz; Duty Cycle: 1:1; Modulation type: AM

Medium: Air;Medium parameters used: $\sigma = 0$ mho/m, $\epsilon_r = 1$; $\rho = 1000$ kg/m³

Phantom section: E Dipole Section Measurement Standard: DASY4 (High Precision Assessment);

DASY4 Configuration:

- Probe: ER3DV6 - SN2293 ; ConvF(1, 1, 1) ; Calibrated: 2007/1/23
- Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn579; Calibrated: 2008/3/13
- Phantom: HAC Test Arch; Type: SD HAC P01 BA; Serial: Not Specified
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

E Scan - ER probe center 10mm above CD1880 Dipole/Hearing Aid Compatibility Test

(41x181x1): Measurement grid: dx=5mm, dy=5mm

Maximum value of peak Total field = **115.3** V/m

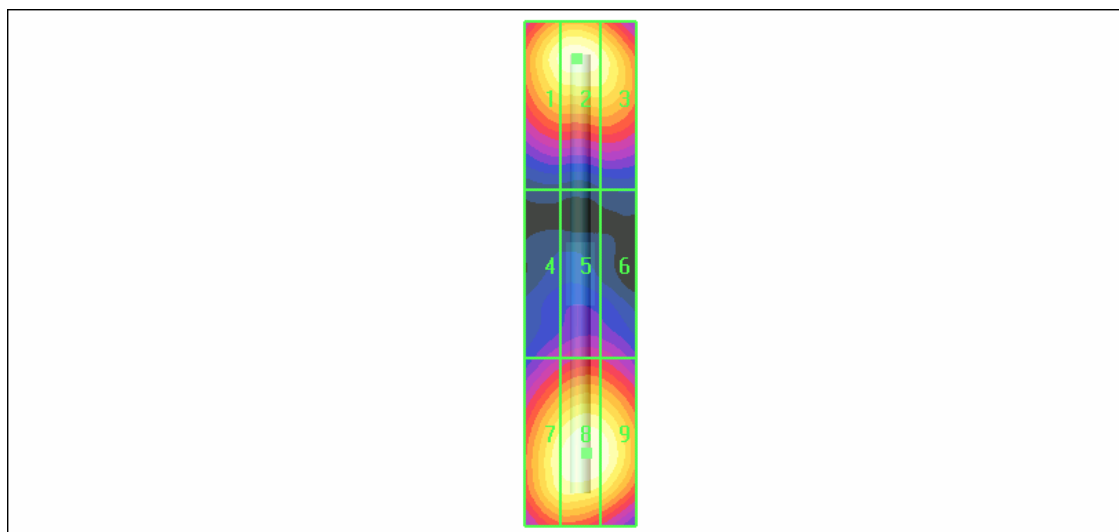
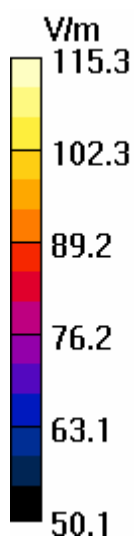
Probe Modulation Factor = 1.00

Reference Value = 117.3 V/m; Power Drift = 0.013 dB

Hearing Aid Near-Field Category: M2 (AWF 0 dB)

Peak E-field in V/m

Grid 1	Grid 2	Grid 3
112.3	114.5	110.7
Grid 4	Grid 5	Grid 6
76.8	81.2	80.1
Grid 7	Grid 8	Grid 9
111.3	115.3	114.2



Test Laboratory: Advance Data Technology

H-835MHz (System Validation)

DUT: HAC-Dipole 835 MHz ; Type: D835V3 ; Serial: 1041 ; Test Frequency: 835 MHz

Communication System: CW ; Frequency: 835 MHz; Duty Cycle: 1:1; Modulation type: CW

Medium: Air; Medium parameters used: $\sigma = 0$ mho/m, $\epsilon_r = 1$; $\rho = 1$ kg/m³

Phantom section: H Dipole Section Measurement Standard: DASY4 (High Precision Assessment);

DASY4 Configuration:

- Probe: H3DV6 - SN6124 ; ; Calibrated: 2007/1/23
- Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn579; Calibrated: 2008/3/13
- Phantom: HAC Test Arch; Type: SD HAC P01 BA; Serial: Not Specified
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

H Scan - ER probe center 10mm above CD835 Dipole/Hearing Aid Compatibility Test

(41x361x1): Measurement grid: dx=5mm, dy=5mm

Maximum value of peak Total field = **0.465** A/m

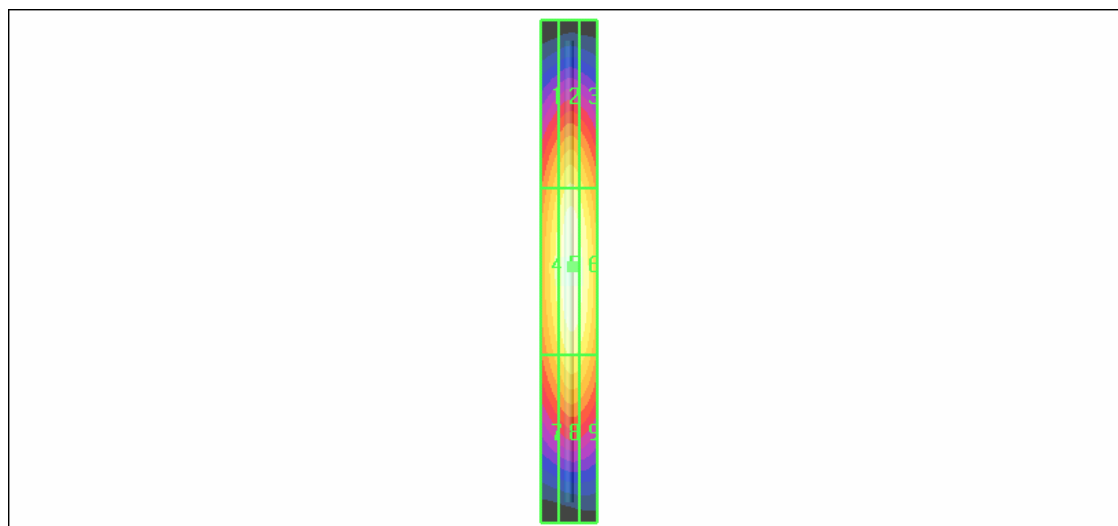
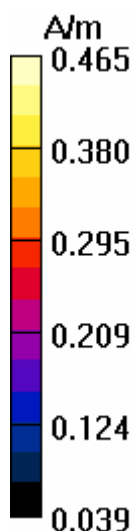
Probe Modulation Factor = 1.00

Reference Value = 0.493 A/m; Power Drift = 0.043 dB

Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak H-field in A/m

Grid 1	Grid 2	Grid 3
0.383	0.415	0.399
Grid 4	Grid 5	Grid 6
0.429	0.465	0.451
Grid 7	Grid 8	Grid 9
0.376	0.410	0.400



Test Laboratory: Advance Data Technology

E-835MHz (System Validation)

DUT: HAC-Dipole 835 MHz ; Type: D835V3 ; Serial: 1041 ; Test Frequency: 835 MHz

Communication System: CW ; Frequency: 835 MHz; Duty Cycle: 1:1; Modulation type: CW

Medium: Air;Medium parameters used: $\sigma = 0$ mho/m, $\epsilon_r = 1$; $\rho = 1000$ kg/m³

Phantom section: E Dipole Section Measurement Standard: DASY4 (High Precision Assessment);

DASY4 Configuration:

- Probe: ER3DV6 - SN2293 ; ConvF(1, 1, 1) ; Calibrated: 2007/1/23
- Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn579; Calibrated: 2008/3/13
- Phantom: HAC Test Arch; Type: SD HAC P01 BA; Serial: Not Specified
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

E Scan - ER probe center 10mm above CD835 Dipole/Hearing Aid Compatibility Test

(41x361x1): Measurement grid: dx=5mm, dy=5mm

Maximum value of peak Total field = **167.2** V/m

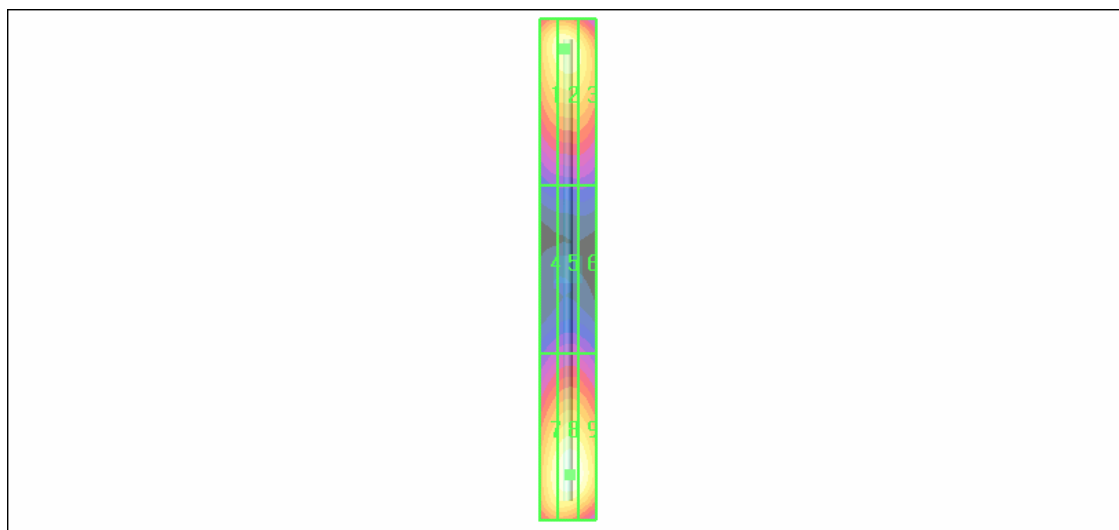
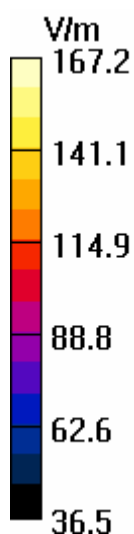
Probe Modulation Factor = 1.00

Reference Value = 122.6 V/m; Power Drift = -0.003 dB

Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak E-field in V/m

Grid 1	Grid 2	Grid 3
156.7	158.8	153.7
Grid 4	Grid 5	Grid 6
84.6	88.2	86.6
Grid 7	Grid 8	Grid 9
160.4	167.2	164.6



Test Laboratory: Advance Data Technology

H-1880MHz (System Validation)

DUT: HAC Dipole 1880 MHz ; Type: CD1880V3 ; Serial: 1032 ; Test Frequency: 1880 MHz

Communication System: CW ; Frequency: 1880 MHz; Duty Cycle: 1:1; Modulation type: CW
 Medium: Air; Medium parameters used: $\sigma = 0$ mho/m, $\epsilon_r = 1$; $\rho = 1$ kg/m³
 Phantom section: H Dipole Section Measurement Standard: DASY4 (High Precision Assessment);

DASY4 Configuration:

- Probe: H3DV6 - SN6124 ; ; Calibrated: 2007/1/23
- Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn579; Calibrated: 2008/3/13
- Phantom: HAC Test Arch; Type: SD HAC P01 BA; Serial: Not Specified
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

H Scan - ER probe center 10mm above CD1880 Dipole/Hearing Aid Compatibility Test

(41x181x1): Measurement grid: dx=5mm, dy=5mm

Maximum value of peak Total field = **0.476** A/m

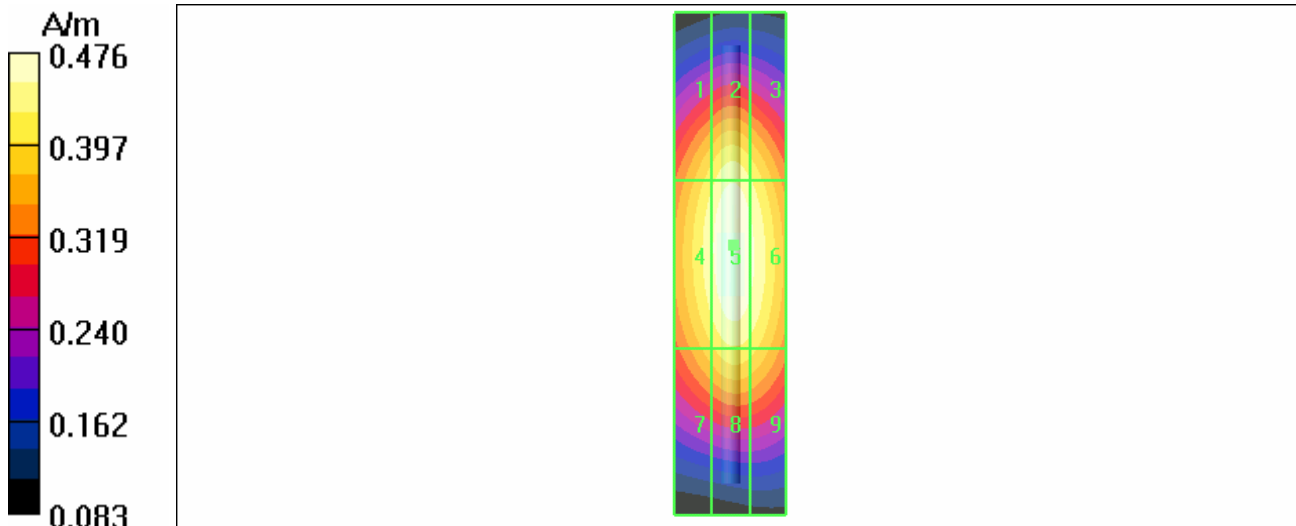
Probe Modulation Factor = 1.00

Reference Value = 0.504 A/m; Power Drift = -0.001 dB

Hearing Aid Near-Field Category: M2 (AWF 0 dB)

Peak H-field in A/m

Grid 1	Grid 2	Grid 3
0.414	0.447	0.426
Grid 4	Grid 5	Grid 6
0.444	0.476	0.459
Grid 7	Grid 8	Grid 9
0.392	0.422	0.410



Test Laboratory: Advance Data Technology

E-1880MHz (System Validation)

DUT: HAC Dipole 1880 MHz ; Type: CD1880V3 ; Serial: 1032 ; Test Frequency: 1880 MHz

Communication System: CW ; Frequency: 1880 MHz; Duty Cycle: 1:1; Modulation type: CW

Medium: Air;Medium parameters used: $\sigma = 0$ mho/m, $\epsilon_r = 1$; $\rho = 1000$ kg/m³

Phantom section: E Dipole Section Measurement Standard: DASY4 (High Precision Assessment);

DASY4 Configuration:

- Probe: ER3DV6 - SN2293 ; ConvF(1, 1, 1) ; Calibrated: 2007/1/23
- Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn579; Calibrated: 2008/3/13
- Phantom: HAC Test Arch; Type: SD HAC P01 BA; Serial: Not Specified
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

E Scan - ER probe center 10mm above CD1880 Dipole 2/Hearing Aid Compatibility Test

(41x181x1): Measurement grid: dx=5mm, dy=5mm

Maximum value of peak Total field = **153.6** V/m

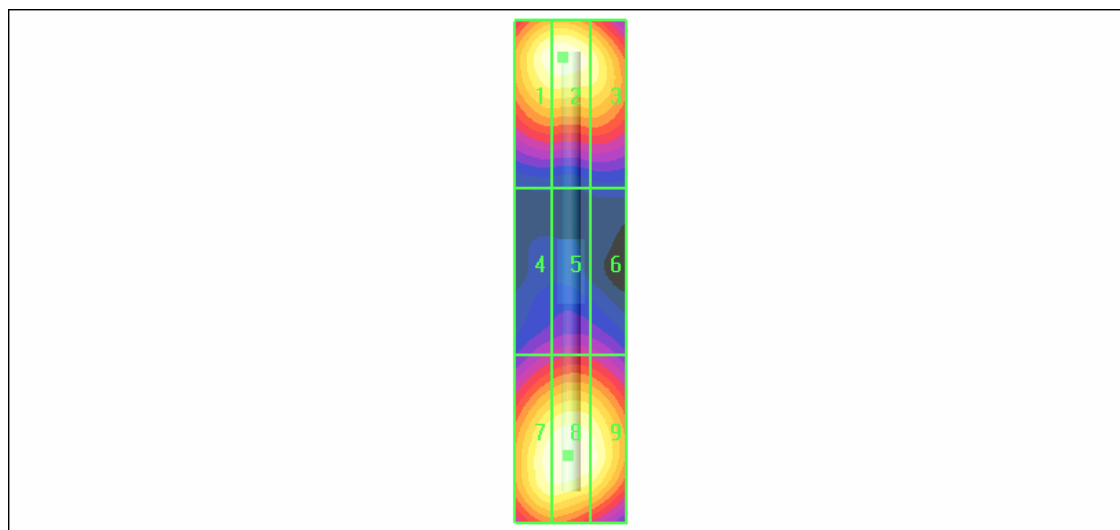
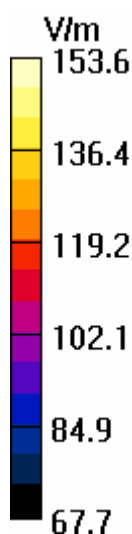
Probe Modulation Factor = 1.00

Reference Value = 156.6 V/m; Power Drift = 0.027 dB

Hearing Aid Near-Field Category: M2 (AWF 0 dB)

Peak E-field in V/m

Grid 1	Grid 2	Grid 3
152.2	152.9	146.8
Grid 4	Grid 5	Grid 6
104.4	108.1	106.2
Grid 7	Grid 8	Grid 9
151.9	153.6	150.9





A D T

APPENDIX B: SYSTEM CERTIFICATE & CALIBRATION
B1: E-FIELD PROBE



Accredited by the Swiss Federal Office of Metrology and Accreditation
The Swiss Accreditation Service is one of the signatories to the EA
Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: **SCS 108**

Client **ADT (Auden)**

Certificate No: **ER3-2293_Jan07**

CALIBRATION CERTIFICATE

Object **ER3DV6 - SN:2293**

Calibration procedure(s) **QA CAL-02.v4
Calibration procedure for E-field probes optimized for close near field
evaluations in air**

Calibration date: **January 23, 2007**

Condition of the calibrated item **In Tolerance**

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

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

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID #	Cal Date (Calibrated by, Certificate No.)	Scheduled Calibration
Power meter E4419B	GB41293874	5-Apr-06 (METAS, No. 251-00557)	Apr-07
Power sensor E4412A	MY41495277	5-Apr-06 (METAS, No. 251-00557)	Apr-07
Power sensor E4412A	MY41498087	5-Apr-06 (METAS, No. 251-00557)	Apr-07
Reference 3 dB Attenuator	SN: S5054 (3c)	10-Aug-06 (METAS, No. 217-00592)	Aug-07
Reference 20 dB Attenuator	SN: S5086 (20b)	4-Apr-06 (METAS, No. 251-00558)	Apr-07
Reference 30 dB Attenuator	SN: S5129 (30b)	10-Aug-06 (METAS, No. 217-00593)	Aug-07
Reference Probe ER3DV6	SN: 2328	2-Oct-06 (SPEAG, No. ER3-2328_Oct06)	Oct-07
DAE4	SN: 654	21-Jun-06 (SPEAG, No. DAE4-654_Jun06)	Jun-07
Secondary Standards	ID #	Check Date (in house)	Scheduled Check
RF generator HP 8648C	US3642U01700	4-Aug-99 (SPEAG, in house check Nov-05)	In house check: Nov-07
Network Analyzer HP 8753E	US37390585	18-Oct-01 (SPEAG, in house check Oct-06)	In house check: Oct-07

Calibrated by: **Katja Pokovic** (Name) **Technical Manager** (Function)  (Signature)

Approved by: **Niels Kuster** (Name) **Quality Manager** (Function)  (Signature)

Issued: January 23, 2007

This calibration certificate shall not be reproduced except in full without written approval of the laboratory.

**Calibration Laboratory of
Schmid & Partner
Engineering AG**
Zeughausstrasse 43, 8004 Zurich, Switzerland



S Schweizerischer Kalibrierdienst
C Service suisse d'étalonnage
S Servizio svizzero di taratura
S Swiss Calibration Service

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The Swiss Accreditation Service is one of the signatories to the EA
Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: **SCS 108**

Glossary:

NORM _{x,y,z}	sensitivity in free space
DCP	diode compression point
Polarization φ	φ rotation around probe axis
Polarization ϑ	ϑ rotation around an axis that is in the plane normal to probe axis (at measurement center), i.e., $\vartheta = 0$ is normal to probe axis
Connector Angle	information used in DASY system to align probe sensor X to the robot coordinate system

Calibration is Performed According to the Following Standards:

- IEEE Std 1309-1996, "IEEE Standard for calibration of electromagnetic field sensors and probes, excluding antennas, from 9 kHz to 40 GHz", 1996.

Methods Applied and Interpretation of Parameters:

- NORM_{x,y,z}**: Assessed for E-field polarization $\vartheta = 0$ for XY sensors and $\vartheta = 90$ for Z sensor ($f \leq 900$ MHz in TEM-cell; $f > 1800$ MHz: R22 waveguide).
- NORM(f)_{x,y,z}** = NORM_{x,y,z} * frequency_response (see Frequency Response Chart).
- DCP_{x,y,z}**: DCP are numerical linearization parameters assessed based on the data of power sweep (no uncertainty required). DCP does not depend on frequency.
- Spherical isotropy (3D deviation from isotropy)**: in a locally homogeneous field realized using an open waveguide setup.
- Sensor Offset**: The sensor offset corresponds to the offset of virtual measurement center from the probe tip (on probe axis). No tolerance required.
- Connector Angle**: The angle is assessed using the information gained by determining the NORM_x (no uncertainty required).

Probe ER3DV6

SN:2293

Manufactured:	October 1, 2002
Last calibrated:	September 22, 2005
Recalibrated:	January 23, 2007

Calibrated for DASY Systems

(Note: non-compatible with DASY2 system!)

DASY - Parameters of Probe: ER3DV6 SN:2293

Sensitivity in Free Space [$\mu\text{V}/(\text{V}/\text{m})^2$]		Diode Compression ^A	
NormX	1.27 ± 10.1 % (k=2)	DCP X	95 mV
NormY	1.06 ± 10.1 % (k=2)	DCP Y	95 mV
NormZ	1.42 ± 10.1 % (k=2)	DCP Z	96 mV

Frequency Correction

X	0.0
Y	0.0
Z	0.0

Sensor Offset (Probe Tip to Sensor Center)

X	2.5 mm
Y	2.5 mm
Z	2.5 mm

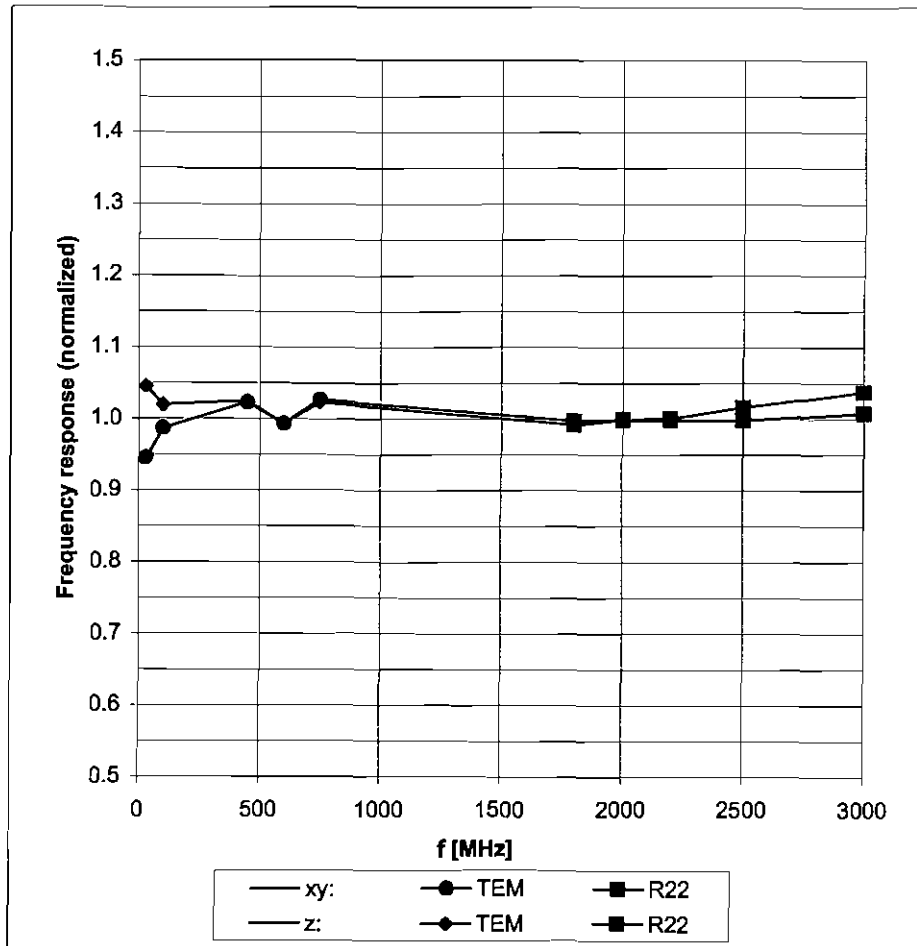
Connector Angle -12 °

The reported uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k=2, which for a normal distribution corresponds to a coverage probability of approximately 95%.

^A numerical linearization parameter: uncertainty not required

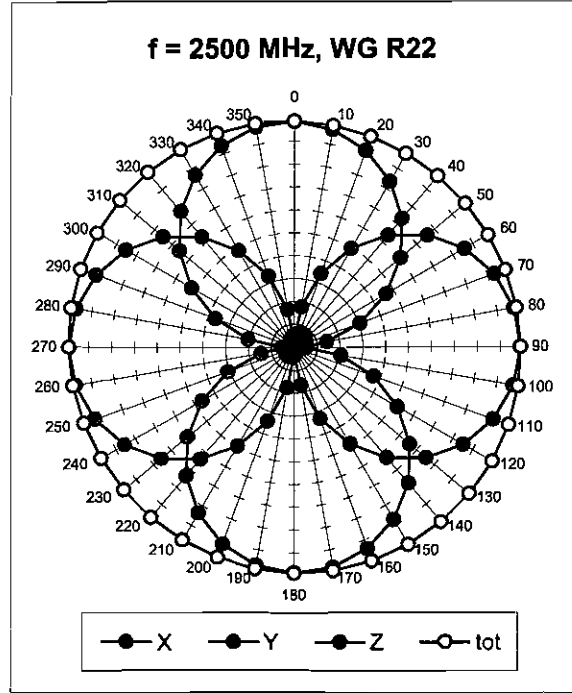
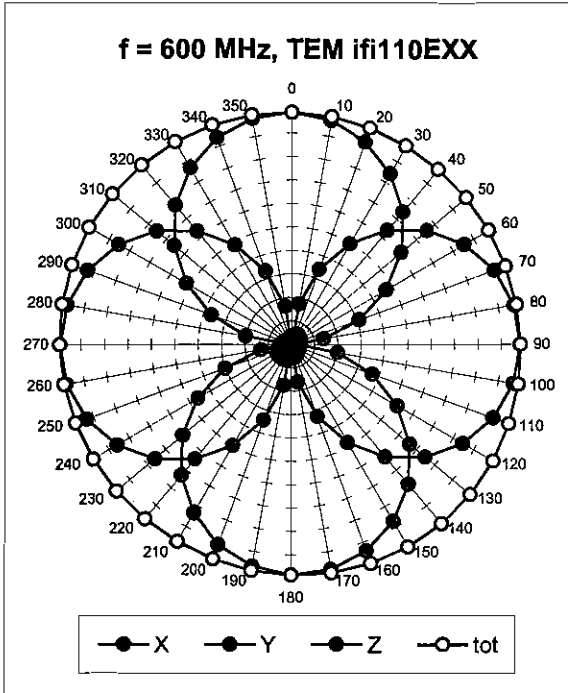
Frequency Response of E-Field

(TEM-Cell:ifi110 EXX, Waveguide R22)

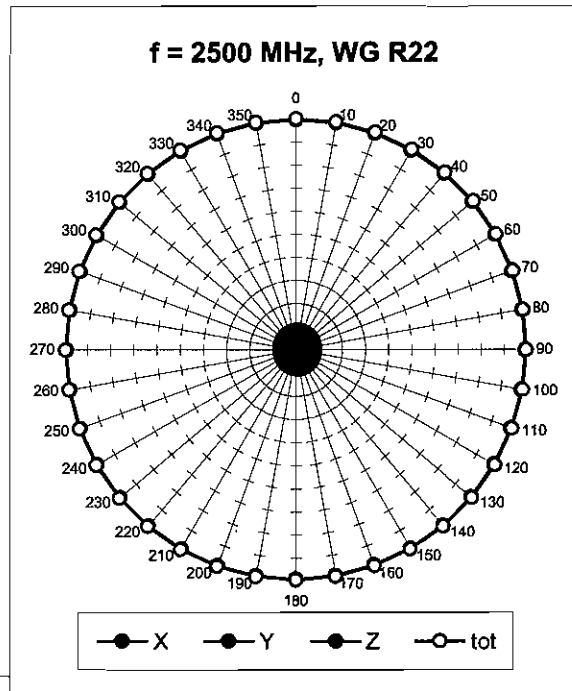
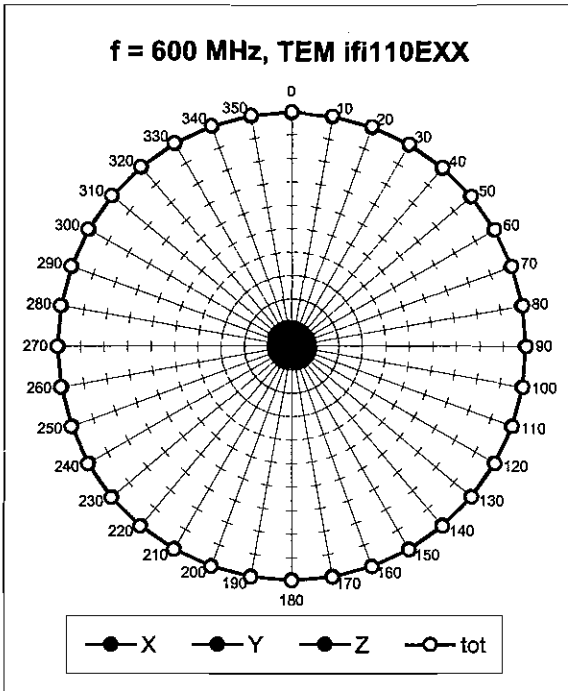


Uncertainty of Frequency Response of E-field: $\pm 6.3\%$ ($k=2$)

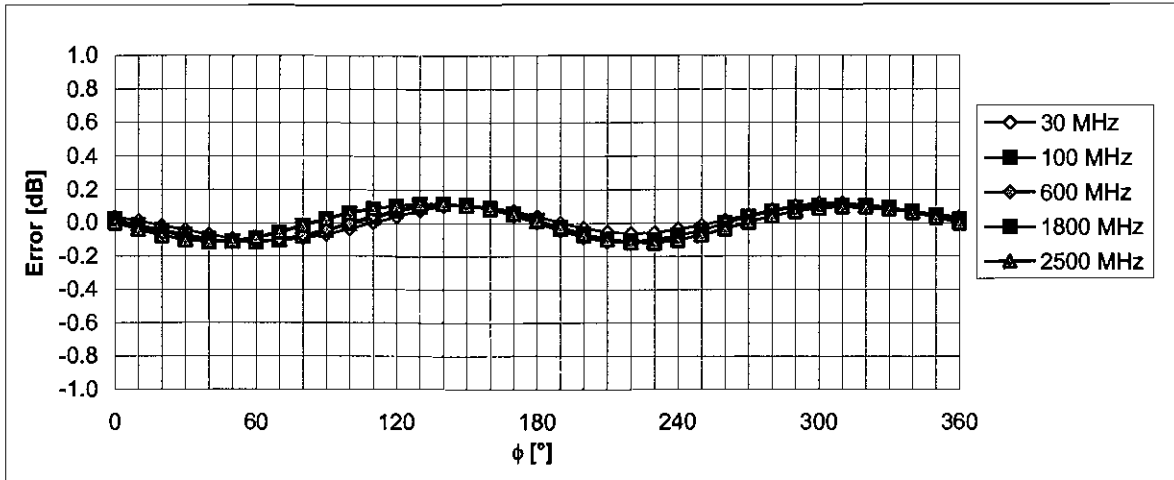
Receiving Pattern (ϕ), $\vartheta = 0^\circ$



Receiving Pattern (ϕ), $\vartheta = 90^\circ$

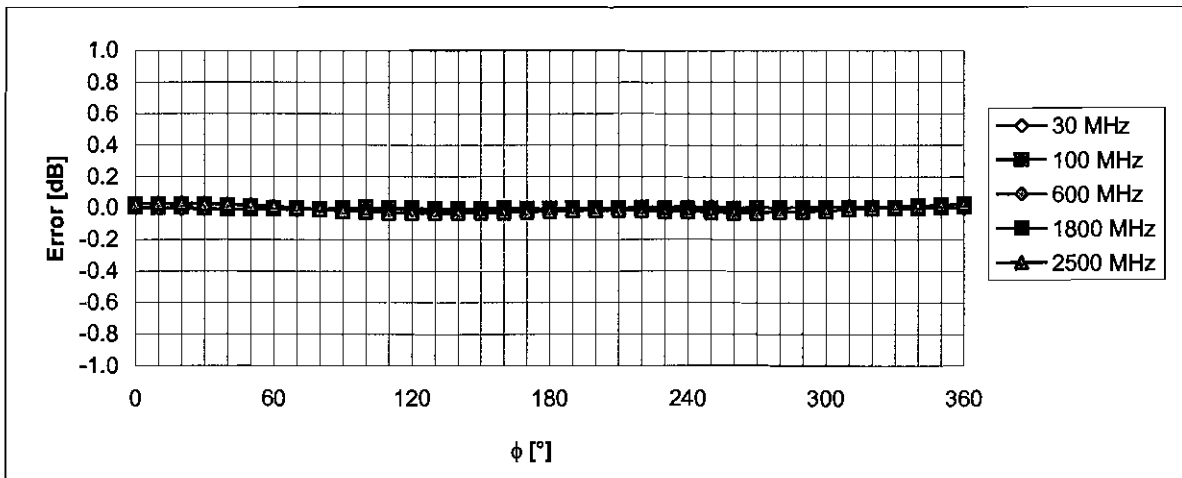


Receiving Pattern (ϕ), $\vartheta = 0^\circ$



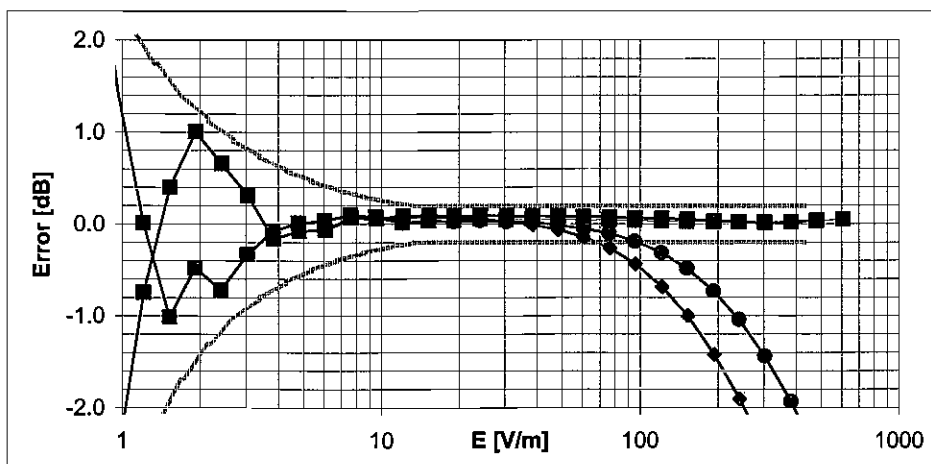
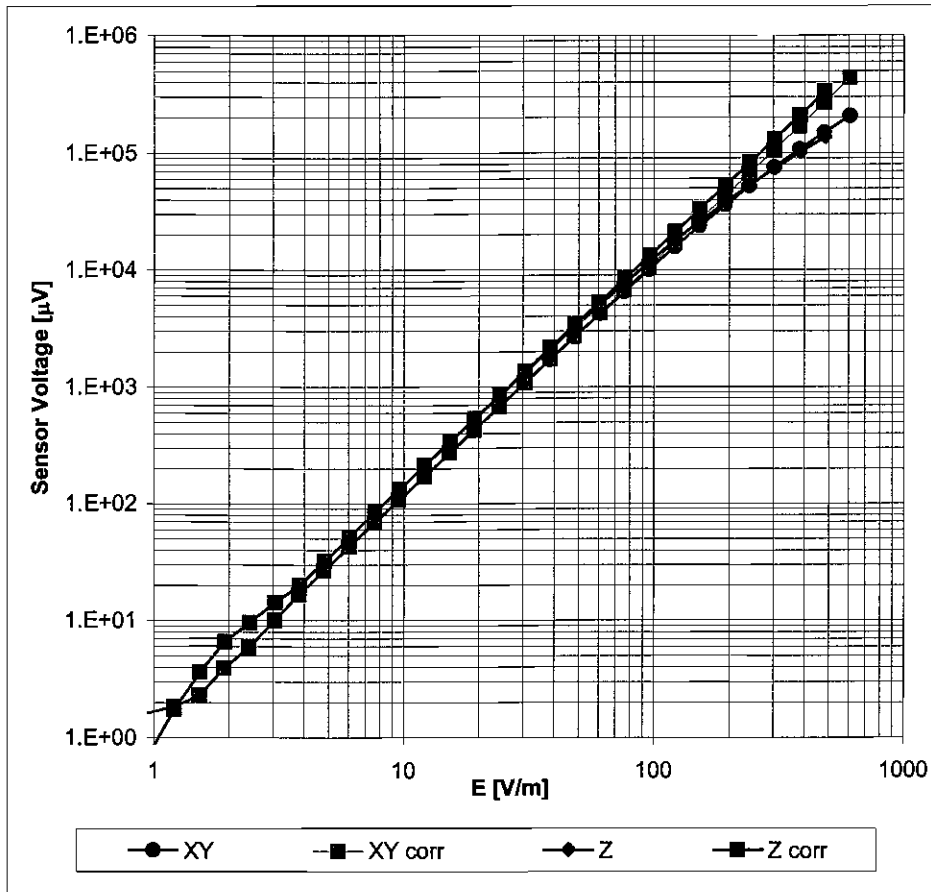
Uncertainty of Axial Isotropy Assessment: $\pm 0.5\%$ ($k=2$)

Receiving Pattern (ϕ), $\vartheta = 90^\circ$



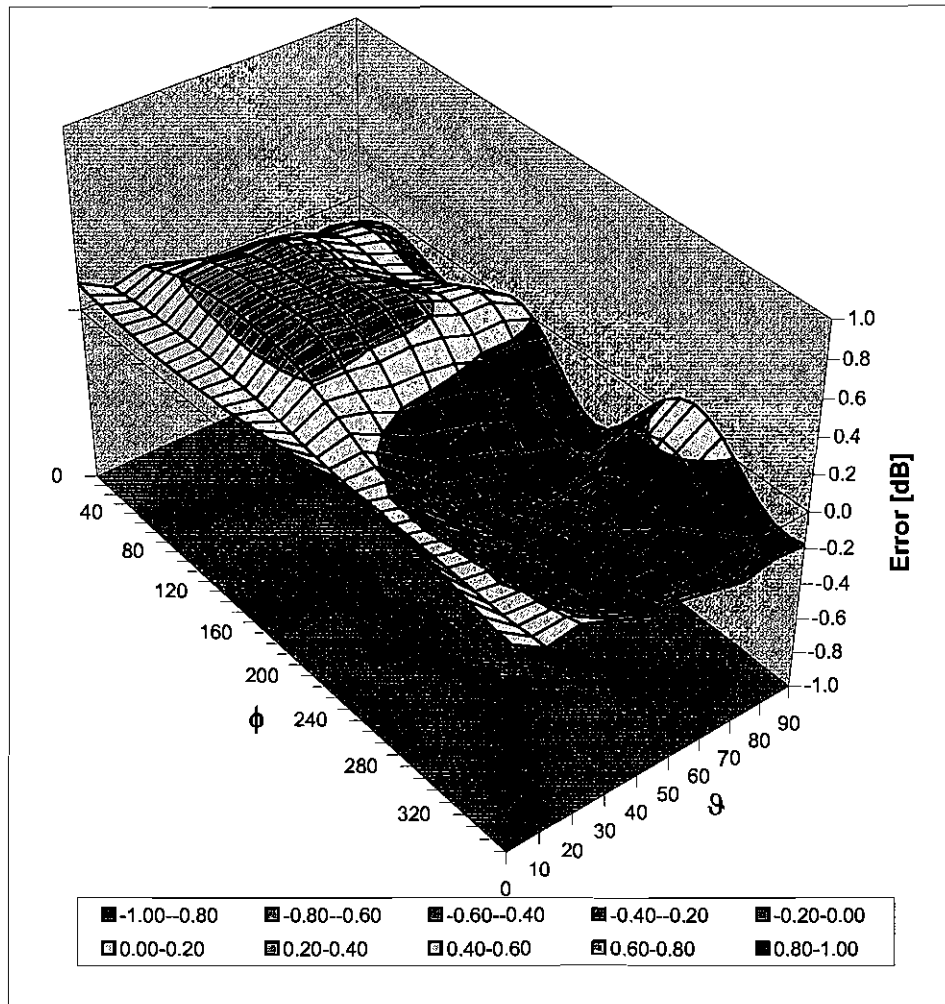
Uncertainty of Axial Isotropy Assessment: $\pm 0.5\%$ ($k=2$)

Dynamic Range f(E-field) (Waveguide R22, f = 1800 MHz)



Uncertainty of Linearity Assessment: $\pm 0.6\%$ ($k=2$)

Deviation from Isotropy in Air Error (ϕ, ϑ), $f = 900$ MHz



Uncertainty of Spherical Isotropy Assessment: $\pm 2.6\%$ ($k=2$)



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Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: **SCS 108**

Client **ADT (Auden)**

Certificate No: **H3-6124_Jan07**

CALIBRATION CERTIFICATE

Object **H3DV6 - SN:6124**

Calibration procedure(s) **QA CAL-03-v4
Calibration procedure for H-field probes optimized for close near field
evaluations in air**

Calibration date: **January 23, 2007**

Condition of the calibrated item **In Tolerance**

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

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

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID #	Cal Date (Calibrated by, Certificate No.)	Scheduled Calibration
Power meter E4419B	GB41293874	5-Apr-06 (METAS, No. 251-00557)	Apr-07
Power sensor E4412A	MY41495277	5-Apr-06 (METAS, No. 251-00557)	Apr-07
Power sensor E4412A	MY41498087	5-Apr-06 (METAS, No. 251-00557)	Apr-07
Reference 3 dB Attenuator	SN: S5054 (3c)	10-Aug-06 (METAS, No. 217-00592)	Aug-07
Reference 20 dB Attenuator	SN: S5086 (20b)	4-Apr-06 (METAS, No. 251-00558)	Apr-07
Reference 30 dB Attenuator	SN: S5129 (30b)	10-Aug-06 (METAS, No. 217-00593)	Aug-07
Reference Probe H3DV6	SN: 6182	2-Oct-06 (SPEAG, No. H3-6182_Oct06)	Oct-07
DAE4	SN: 654	21-Jun-06 (SPEAG, No. DAE4-654_Jun06)	Jun-07
Secondary Standards	ID #	Check Date (in house)	Scheduled Check
RF generator HP 8648C	US3642U01700	4-Aug-99 (SPEAG, in house check Nov-05)	In house check: Nov-07
Network Analyzer HP 8753E	US37390585	18-Oct-01 (SPEAG, in house check Oct-06)	In house check: Oct-07

	Name	Function	Signature
Calibrated by:	Katja Pokovic	Technical Manager	
Approved by:	Niels Kuster	Quality Manager	

issued: January 23, 2007

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**Calibration Laboratory of
Schmid & Partner
Engineering AG**
Zeughausstrasse 43, 8004 Zurich, Switzerland



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S Servizio svizzero di taratura
S Swiss Calibration Service

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The Swiss Accreditation Service is one of the signatories to the EA
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Accreditation No.: **SCS 108**

Glossary:

NORM _{x,y,z}	sensitivity in free space
DCP	diode compression point
Polarization φ	φ rotation around probe axis
Polarization ϑ	ϑ rotation around an axis that is in the plane normal to probe axis (at measurement center), i.e., $\vartheta = 0$ is normal to probe axis
Connector Angle	information used in DASY system to align probe sensor X to the robot coordinate system

Calibration is Performed According to the Following Standards:

- IEEE Std 1309-1996, " IEEE Standard for calibration of electromagnetic field sensors and probes, excluding antennas, from 9 kHz to 40 GHz", 1996.

Methods Applied and Interpretation of Parameters:

- X, Y, Z_{a0a1a2} : Assessed for E-field polarization $\vartheta = 90$ for XY sensors and $\vartheta = 0$ for Z sensor ($f \leq 900$ MHz in TEM-cell; $f > 1800$ MHz: R22 waveguide).
- $X, Y, Z(f)_{a0a1a2} = X, Y, Z_{a0a1a2} * \text{frequency_response}$ (see Frequency Response Chart).
- $DCP_{x,y,z}$: DCP are numerical linearization parameters assessed based on the data of power sweep (no uncertainty required). DCP does not depend on frequency.
- Spherical isotropy (3D deviation from isotropy)*: in a locally homogeneous field realized using an open waveguide setup.
- Sensor Offset*: The sensor offset corresponds to the offset of virtual measurement center from the probe tip (on probe axis). No tolerance required.
- Connector Angle*: The angle is assessed using the information gained by determining the X_{a0a1a2} (no uncertainty required).

Probe H3DV6

SN:6124

Manufactured:	June 8, 2002
Last calibrated:	September 22, 2005
Recalibrated:	January 23, 2007

Calibrated for DASY Systems

(Note: non-compatible with DASY2 system!)

DASY - Parameters of Probe: H3DV6 SN:6124Sensitivity in Free Space [A/m / $\sqrt{(\mu\text{V})}$]

	a0	a1	a2
X	2.679E-03	-9.856E-5	5.307E-5 \pm 5.1 % (k=2)
Y	2.790E-03	-2.467E-4	3.051E-5 \pm 5.1 % (k=2)
Z	3.037E-03	-1.907E-4	1.047E-5 \pm 5.1 % (k=2)

Diode Compression¹

DCP X	86 mV
DCP Y	86 mV
DCP Z	88 mV

Sensor Offset

(Probe Tip to Sensor Center)

X	3.0 mm
Y	3.0 mm
Z	3.0 mm

Connector Angle

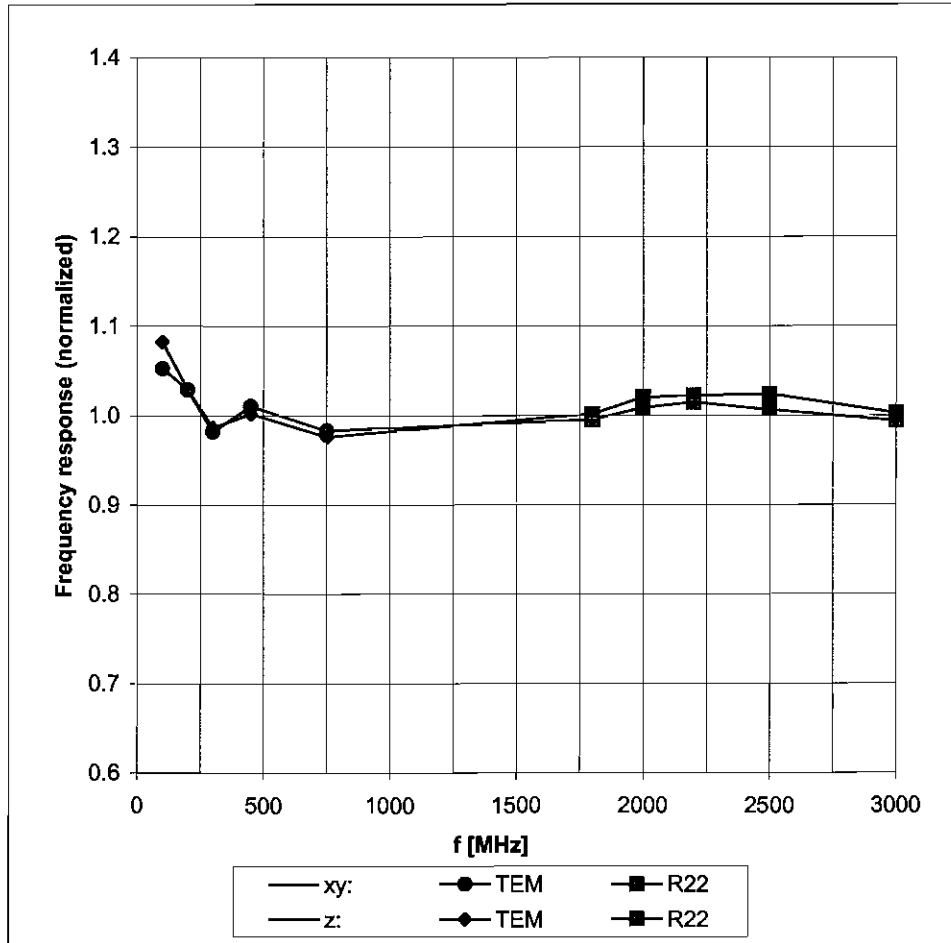
-25 °

The reported uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k=2, which for a normal distribution corresponds to a coverage probability of approximately 95%.

¹ numerical linearization parameter: uncertainty not required

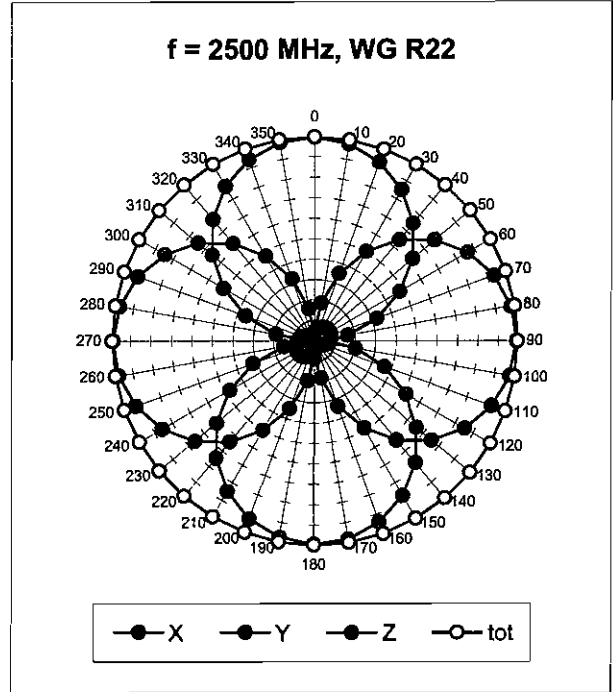
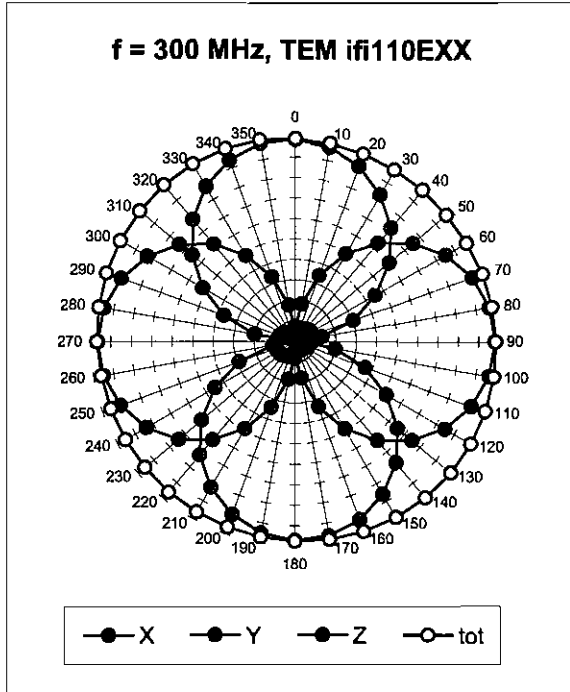
Frequency Response of H-Field

(TEM-Cell:ifi110, Waveguide R22)

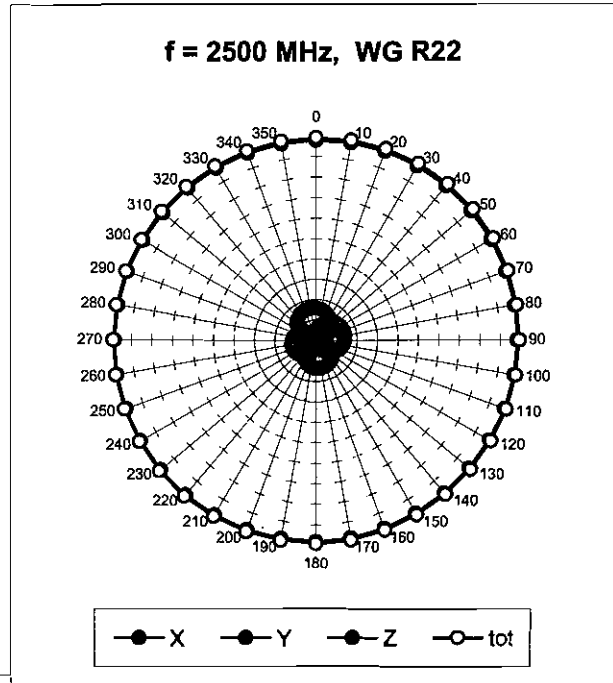
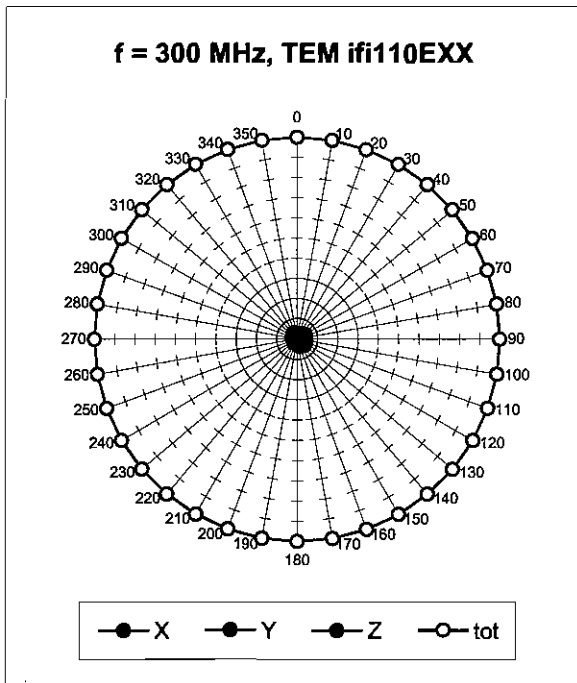


Uncertainty of Frequency Response of E-field: $\pm 6.3\%$ (k=2)

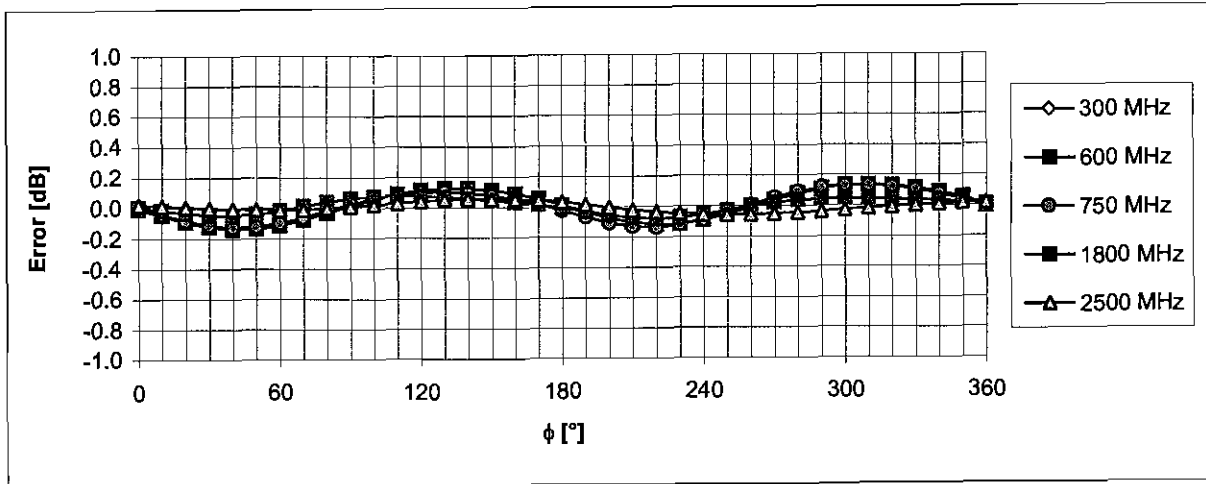
Receiving Pattern (ϕ), $\vartheta = 90^\circ$



Receiving Pattern (ϕ), $\vartheta = 0^\circ$

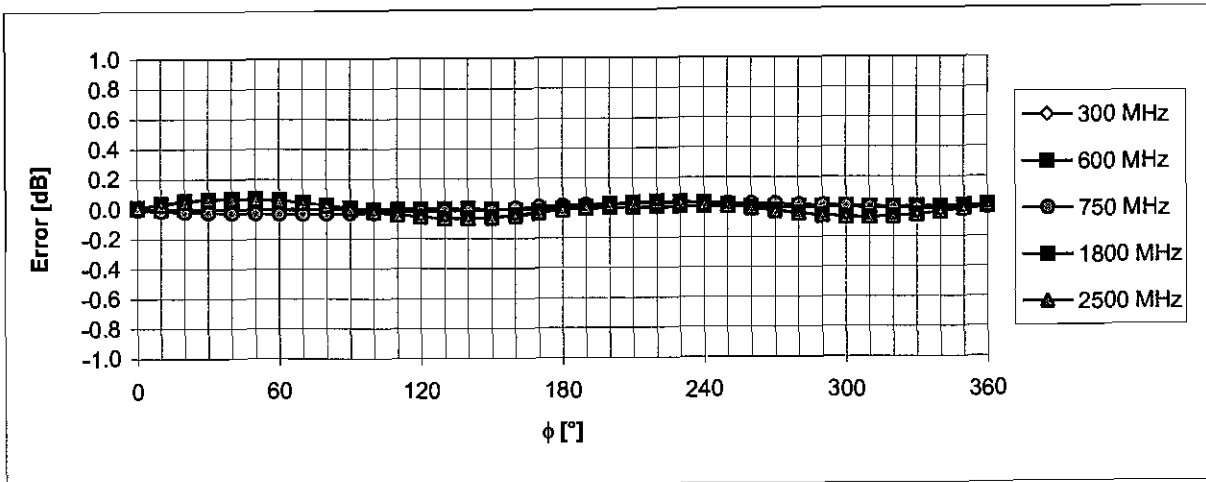


Receiving Pattern (ϕ), $\vartheta = 90^\circ$



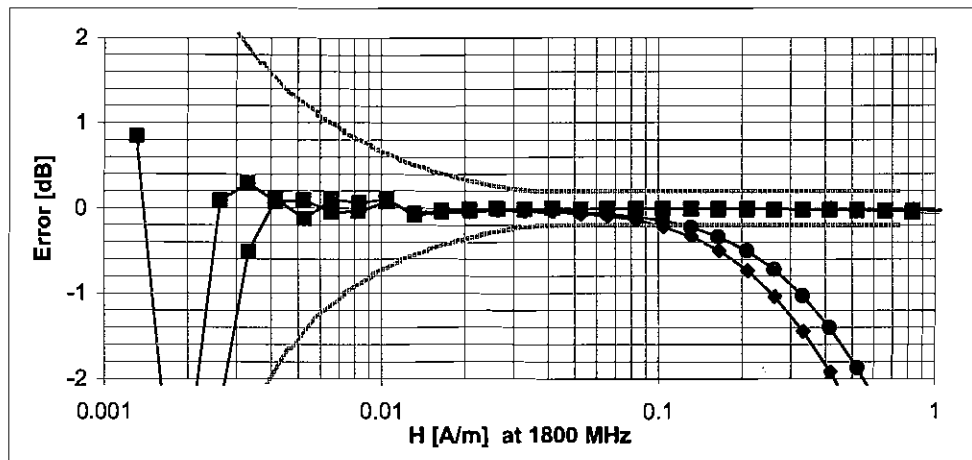
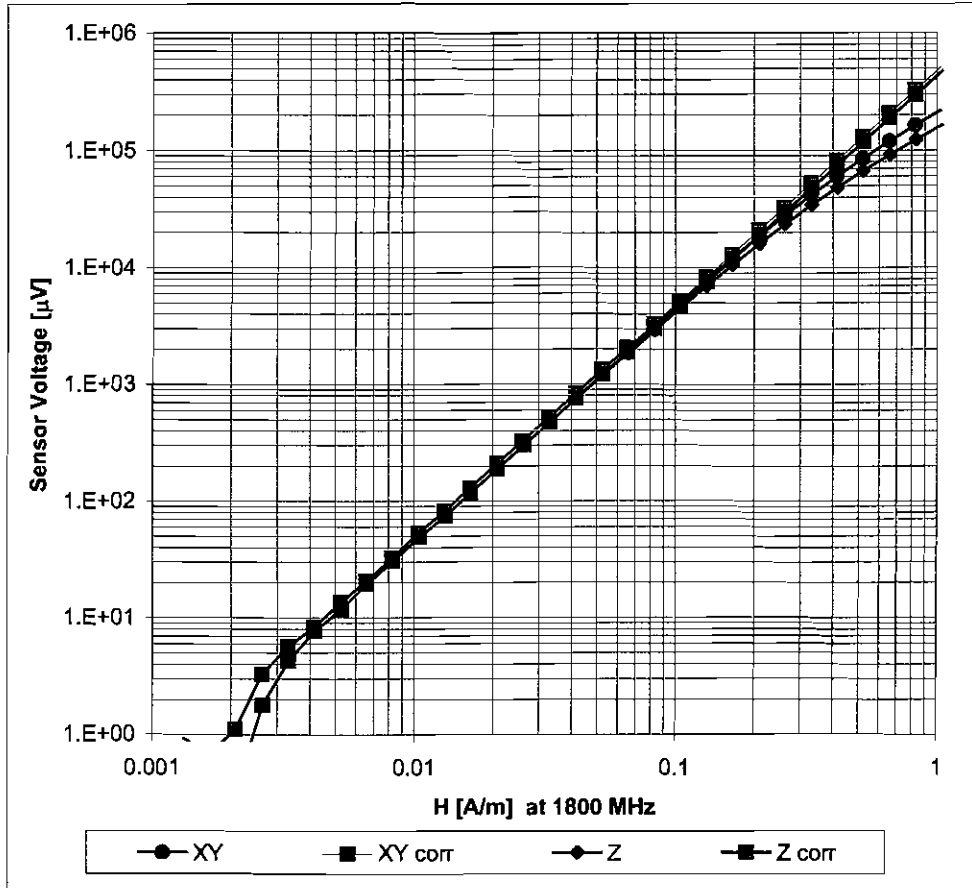
Uncertainty of Axial Isotropy Assessment: $\pm 0.5\%$ ($k=2$)

Receiving Pattern (ϕ), $\vartheta = 0^\circ$



Uncertainty of Axial Isotropy Assessment: $\pm 0.5\%$ ($k=2$)

Dynamic Range f(H-field) (Waveguide R22, f = 1800 MHz)



Uncertainty of Linearity Assessment: $\pm 0.6\%$ (k=2)

IMPORTANT NOTICE

USAGE OF THE DAE 3

The DAE unit is a delicate, high precision instrument and requires careful treatment by the user. There are no serviceable parts inside the DAE. Special attention shall be given to the following points:

Battery Exchange: The battery cover of the DAE3 unit is connected to a fragile 3-pin battery connector. Customer is responsible to apply utmost caution not to bend or damage the connector when changing batteries.

Shipping of the DAE: Before shipping the DAE to SPEAG for calibration Customer shall remove the batteries and pack the DAE in an antistatic bag. The packaging shall protect the DAE from impacts during transportation. The package shall be marked to indicate that a fragile instrument is inside.

E-Stop Failures: Touch detection may be malfunctioning due to broken magnets in the E-stop. Rough handling of the E-stop may lead to damage of these magnets. Touch and collision errors are often caused by dust and dirt accumulated in the E-stop. To prevent E-stop failure, Customer shall always mount the probe to the DAE carefully and keep the DAE unit in a non-dusty environment if not used for measurements.

Repair: Minor repairs are performed at no extra cost during the annual calibration. However, SPEAG reserves the right to charge for any repair especially if rough unprofessional handling caused the defect.

Important Note:

Warranty and calibration is void if the DAE unit is disassembled partly or fully by the Customer.

Important Note:

Never attempt to grease or oil the E-stop assembly. Cleaning and readjusting of the E-stop assembly is allowed by certified SPEAG personnel only and is part of the annual calibration procedure.



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Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: **SCS 108**

Client **ADT (Auden)**

Certificate No: **DAE3-579_Mar08**

CALIBRATION CERTIFICATE

Object **DAE3 - SD 000 D03 AA - SN: 579**

Calibration procedure(s) **QA CAL-06.v12
Calibration procedure for the data acquisition electronics (DAE)**

Calibration date: **March 13, 2008**

Condition of the calibrated item **In Tolerance**

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

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

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID #	Cal Date (Calibrated by, Certificate No.)	Scheduled Calibration
Fluke Process Calibrator Type 702	SN: 6295803	04-Oct-07 (Elcal AG, No: 6467)	Oct-08
Keithley Multimeter Type 2001	SN: 0810278	03-Oct-07 (Elcal AG, No: 6465)	Oct-08
Secondary Standards	ID #	Check Date (in house)	Scheduled Check
Calibrator Box V1.1	SE UMS 006 AB 1004	25-Jun-07 (SPEAG, in house check)	In house check Jun-08

Calibrated by: **Name** Dominique Steffen **Function** Technician **Signature**

Approved by: **Name** Fin Bornholt **Function** R&D Director **Signature**

Issued: March 13, 2008

This calibration certificate shall not be reproduced except in full without written approval of the laboratory.



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Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: **SCS 108**

Glossary

DAE data acquisition electronics
Connector angle information used in DASY system to align probe sensor X to the robot coordinate system.

Methods Applied and Interpretation of Parameters

- *DC Voltage Measurement:* Calibration Factor assessed for use in DASY system by comparison with a calibrated instrument traceable to national standards. The figure given corresponds to the full scale range of the voltmeter in the respective range.
- *Connector angle:* The angle of the connector is assessed measuring the angle mechanically by a tool inserted. Uncertainty is not required.
- The following parameters as documented in the Appendix contain technical information as a result from the performance test and require no uncertainty.
 - *DC Voltage Measurement Linearity:* Verification of the Linearity at +10% and -10% of the nominal calibration voltage. Influence of offset voltage is included in this measurement.
 - *Common mode sensitivity:* Influence of a positive or negative common mode voltage on the differential measurement.
 - *Channel separation:* Influence of a voltage on the neighbor channels not subject to an input voltage.
 - *AD Converter Values with inputs shorted:* Values on the internal AD converter corresponding to zero input voltage
 - *Input Offset Measurement:* Output voltage and statistical results over a large number of zero voltage measurements.
 - *Input Offset Current:* Typical value for information; Maximum channel input offset current, not considering the input resistance.
 - *Input resistance:* DAE input resistance at the connector, during internal auto-zeroing and during measurement.
 - *Low Battery Alarm Voltage:* Typical value for information. Below this voltage, a battery alarm signal is generated.
 - *Power consumption:* Typical value for information. Supply currents in various operating modes.

DC Voltage Measurement

A/D - Converter Resolution nominal

High Range: 1LSB = 6.1 μ V, full range = -100...+300 mV

Low Range: 1LSB = 61nV, full range = -1.....+3mV

DASY measurement parameters: Auto Zero Time: 3 sec; Measuring time: 3 sec

Calibration Factors	X	Y	Z
High Range	404.417 \pm 0.1% (k=2)	404.496 \pm 0.1% (k=2)	404.250 \pm 0.1% (k=2)
Low Range	3.96392 \pm 0.7% (k=2)	3.98485 \pm 0.7% (k=2)	3.94736 \pm 0.7% (k=2)

Connector Angle

Connector Angle to be used in DASY system	0 $^{\circ}$ \pm 1 $^{\circ}$
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Appendix

1. DC Voltage Linearity

High Range		Input (μV)	Reading (μV)	Error (%)
Channel X	+ Input	200000	199999.9	0.00
Channel X	+ Input	20000	20006.39	0.03
Channel X	- Input	20000	-19997.12	-0.01
Channel Y	+ Input	200000	199999.6	0.00
Channel Y	+ Input	20000	20003.48	0.02
Channel Y	- Input	20000	-19999.40	0.00
Channel Z	+ Input	200000	200000.5	0.00
Channel Z	+ Input	20000	20005.11	0.03
Channel Z	- Input	20000	-20000.56	0.00

Low Range		Input (μV)	Reading (μV)	Error (%)
Channel X	+ Input	2000	1999.9	0.00
Channel X	+ Input	200	200.77	0.38
Channel X	- Input	200	-199.61	-0.19
Channel Y	+ Input	2000	1999.9	0.00
Channel Y	+ Input	200	199.52	-0.24
Channel Y	- Input	200	-200.01	0.00
Channel Z	+ Input	2000	2000	0.00
Channel Z	+ Input	200	200.04	0.02
Channel Z	- Input	200	-200.10	0.05

2. Common mode sensitivity

DASY measurement parameters: Auto Zero Time: 3 sec; Measuring time: 3 sec

	Common mode Input Voltage (mV)	High Range Average Reading (μV)	Low Range Average Reading (μV)
Channel X	200	7.31	7.04
	- 200	-5.43	-5.14
Channel Y	200	-4.64	3.79
	- 200	9.97	2.98
Channel Z	200	9.71	9.67
	- 200	-10.05	-10.25

3. Channel separation

DASY measurement parameters: Auto Zero Time: 3 sec; Measuring time: 3 sec

	Input Voltage (mV)	Channel X (μV)	Channel Y (μV)	Channel Z (μV)
Channel X	200	-	0.91	1.12
Channel Y	200	1.44	-	4.27
Channel Z	200	-2.15	0.74	-

4. AD-Converter Values with inputs shorted

DASY measurement parameters: Auto Zero Time: 3 sec; Measuring time: 3 sec

	High Range (LSB)	Low Range (LSB)
Channel X	16337	17475
Channel Y	16186	16655
Channel Z	15807	16761

5. Input Offset Measurement

DASY measurement parameters: Auto Zero Time: 3 sec; Measuring time: 3 sec

Input 10M Ω

	Average (μ V)	min. Offset (μ V)	max. Offset (μ V)	Std. Deviation (μ V)
Channel X	-0.02	-1.05	2.46	0.44
Channel Y	-1.99	-3.37	-0.92	0.33
Channel Z	2.37	0.38	3.81	0.43

6. Input Offset Current

Nominal Input circuitry offset current on all channels: <25fA

7. Input Resistance

	Zeroing (MOhm)	Measuring (MOhm)
Channel X	0.2001	199.5
Channel Y	0.2000	202.9
Channel Z	0.1999	204.2

8. Low Battery Alarm Voltage (verified during pre test)

Typical values	Alarm Level (VDC)
Supply (+ Vcc)	+7.9
Supply (- Vcc)	-7.6

9. Power Consumption (verified during pre test)

Typical values	Switched off (mA)	Stand by (mA)	Transmitting (mA)
Supply (+ Vcc)	+0.0	+6	+14
Supply (- Vcc)	-0.01	-8	-9