



HAC RF TEST REPORT

No. 2011HAC00036-1

For

ZTE CORPORATION

CDMA 1x-EVDO Digital Mobile Phone

Sean

With

Hardware Version: c5kC

Software Version: N850V1.0.0B04

FCCID: Q78-ZTEN850

Results Summary: M Category = M4

Issued Date: 2011-11-18



No. DGA-PL-114/01-02

Note:

The test results in this test report relate only to the devices specified in this report. This report shall not be reproduced except in full without the written approval of TMC Beijing.

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1 Test Laboratory

1.1 Testing Location

Company Name: TMC Beijing, Telecommunication Metrology Center of MIIT
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1.2 Testing Environment

Temperature: 18°C~25 °C,
Relative humidity: 30%~ 70%
Ground system resistance: < 0.5 Ω

Ambient noise is checked and found very low and in compliance with requirement of standards.
Reflection of surrounding objects is minimized and in compliance with requirement of standards.

1.3 Project Data

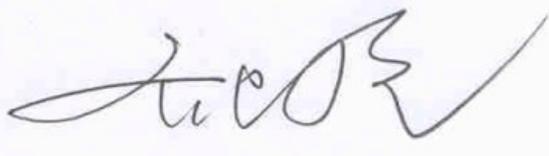
Project Leader: Qi Dianyuan
Test Engineer: Lin Hao
Testing Start Date: November 7, 2011
Testing End Date: November 7, 2011

1.4 Signature



Lin Hao

(Prepared this test report)



Qi Dianyuan

(Reviewed this test report)



Xiao Li

Deputy Director of the laboratory
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2 Client Information

2.1 Applicant Information

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2.2 Manufacturer Information

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Country: P. R. China
Telephone: +8613813893560
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3 Equipment Under Test (EUT) and Ancillary Equipment (AE)

3.1 About EUT

EUT Description: CDMA 1x-EVDO Digital Mobile Phone
Model Name: Sean
Tested Frequency Band: CDMA 835 / CDMA 1900 / BC10

3.2 Internal Identification of EUT used during the test

EUT ID*	SN or IMEI	HW Version	SW Version
EUT1	A10000207D9464 / A10000207D9471	c5kC	N850V1.0.0B04

*EUT ID: is used to identify the test sample in the lab internally.

3.3 Internal Identification of AE used during the test

AE ID*	Description	Model	SN	Manufacturer
AE1	Battery	Li3715T42P3h415266	/	ZTE

*AE ID: is used to identify the test sample in the lab internally

4 CONDUCTED OUTPUT POWER MEASUREMENT

4.1 Summary

During the process of testing, the EUT was controlled via Rhode & Schwarz Digital Radio Communication tester (CMU-200) to ensure the maximum power transmission and proper modulation. This result contains conducted output power for the EUT. In all cases, the measured output power should be greater and within 5% than EMI measurement.

4.2 Conducted Power

CDMA BC0	Conducted Power (dBm)		
	Channel 777(848.31MHz)	Channel 384(836.52MHz)	Channel 1013(824.7MHz)
	25.11	25.55	25.37
CDMA BC1	Conducted Power (dBm)		
	Channel 1175(1908.75MHz)	Channel 600(1880MHz)	Channel 25(1851.25MHz)
	23.73	23.69	23.98
CDMA BC10	Conducted Power (dBm)		
	Channel 684(823.1MHz)	Channel 580(820.5MHz)	Channel 476(817.9MHz)
	25.52	25.20	25.30

5. Reference Documents

5.1 Reference Documents for testing

The following document listed in this section is referred for testing.

Reference	Title	Version
ANSI C63.19-2007	American National Standard for Methods of Measurement of Compatibility between Wireless Communication Devices and Hearing Aids	2007 Edition
CTIA	CTIA_HAC_Test_Plan_Rev_2.0	2.0

6 OPERATIONAL CONDITIONS DURING TEST

6.1 HAC MEASUREMENT SET-UP

These measurements are performed using the DASY5 NEO automated dosimetric assessment system. It is made by Schmid & Partner Engineering AG (SPEAG) in Zurich, Switzerland. It consists of high precision robotics system (Stäubli), robot controller, Intel Core2 computer, near-field probe, probe alignment sensor. The robot is a six-axis industrial robot performing precise movements. A cell controller system contains the power supply, robot controller, teach pendant (Joystick), and remote control, is used to drive the robot motors. The PC consists of the HP Intel Core2 1.86 GHz computer with Windows XP system and HAC Measurement Software DASY5 NEO, A/D interface card, monitor, mouse, and keyboard. The Stäubli Robot is connected to the cell controller to allow software manipulation of the robot. A data acquisition electronic (DAE)

circuit performs the signal amplification, signal multiplexing, AD-conversion, offset measurements, mechanical surface detection, collision detection, etc. is connected to the Electro-optical coupler (EOC). The EOC performs the conversion from the optical into digital electric signal of the DAE and transfers data to the PC plug-in card.

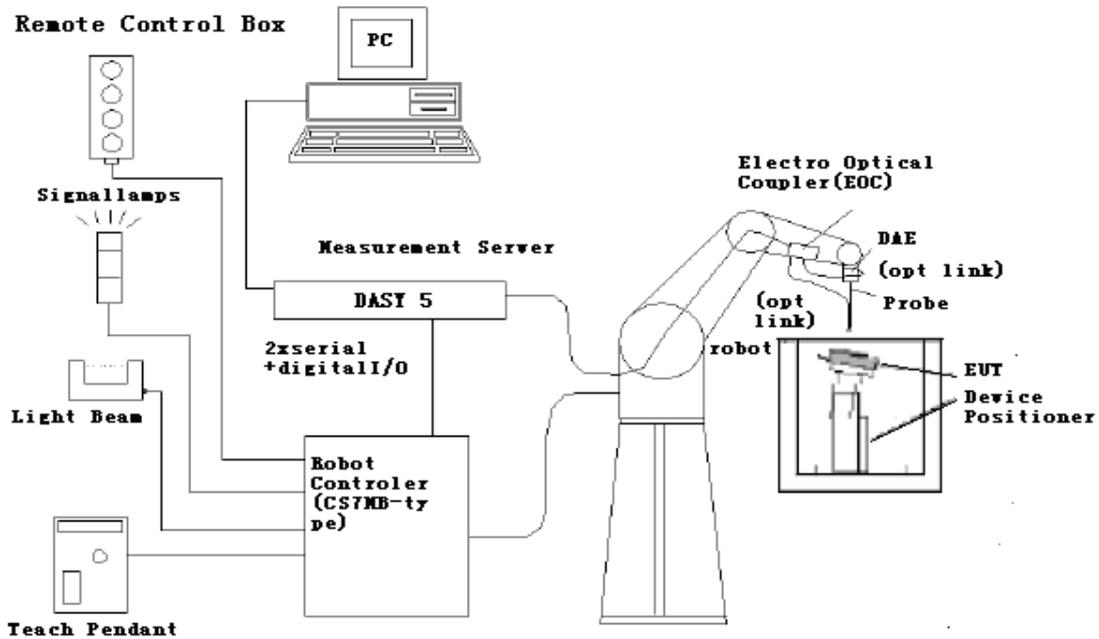


Fig. 1 HAC Test Measurement Set-up

The DAE4 consists of a highly sensitive electrometer-grade preamplifier with auto-zeroing, a channel and gain-switching multiplexer, a fast 16 bit AD-converter and a command decoder and control logic unit. Transmission to the PC-card is accomplished through an optical downlink for data and status information and an optical uplink for commands and clock lines. The mechanical probe mounting device includes two different sensor systems for frontal and sidewise probe contacts. They are also used for mechanical surface detection and probe collision detection. The robot uses its own controller with a built in VME-bus computer.

6.2 Probe Specification

6.2.1 E-Field Probe Description

Construction	One dipole parallel, two dipoles normal to probe axis Built-in shielding against static charges PEEK enclosure material
Calibration	In air from 100 MHz to 3.0 GHz (absolute accuracy $\pm 6.0\%$, $k=2$)
Frequency	40 MHz to > 6 GHz (can be extended to < 20 MHz) Linearity: ± 0.2 dB (100 MHz to 3 GHz)
Directivity	± 0.2 dB in air (rotation around probe axis) ± 0.4 dB in air (rotation normal to probe axis)
Dynamic Range	2 V/m to > 1000 V/m; Linearity: ± 0.2 dB



[ER3DV6]

Dimensions	Overall length: 330 mm (Tip: 16 mm) Tip diameter: 8 mm (Body: 12 mm) Distance from probe tip to dipole centers: 2.5 mm
Application	General near-field measurements up to 6 GHz Field component measurements Fast automatic scanning in phantoms

6.2.2 H-Field Probe Description

Construction	Three concentric loop sensors with 3.8 mm loop diameters Resistively loaded detector diodes for linear response Built-in shielding against static charges PEEK enclosure material (resistant to organic solvents, e.g., glycolether)
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[H3DV6]

Frequency	200 MHz to 3 GHz (absolute accuracy $\pm 6.0\%$, $k=2$); Output linearized
Directivity	± 0.2 dB (spherical isotropy error)
Dynamic Range	10 mA/m to 2 A/m at 1 GHz
E-Field Interference	< 10% at 3 GHz (for plane wave)
Dimensions	Overall length: 330 mm (Tip: 40 mm) Tip diameter: 6 mm (Body: 12 mm) Distance from probe tip to dipole centers: 3 mm
Application	General magnetic near-field measurements up to 3 GHz (in air or liquids) Field component measurements Surface current measurements Low interaction with the measured field

6.3 Test Arch Phantom & Phone Positioner

The Test Arch phantom should be positioned horizontally on a stable surface. Reference markings on the Phantom allow the complete setup of all predefined phantom positions and measurement grids by manually teaching three points in the robot. It enables easy and well defined positioning of the phone and validation dipoles as well as simple teaching of the robot (Dimensions: 370 x 370 x 370 mm).

The Phone Positioner supports accurate and reliable positioning of any phone with effect on near field $< \pm 0.5$ dB.

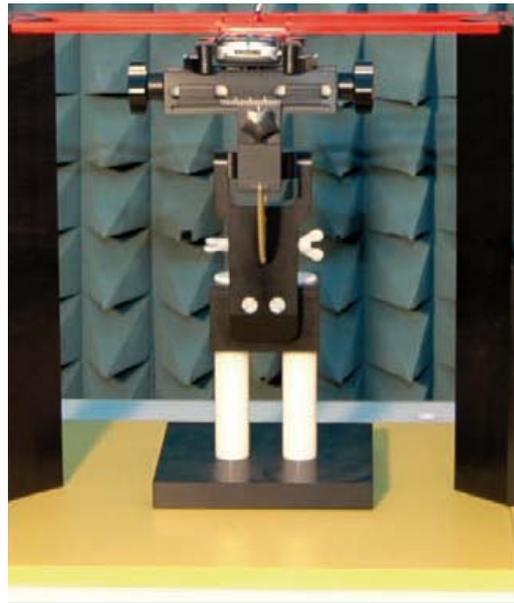


Fig. 2 HAC Phantom & Device Holder

6.4 Robotic System Specifications

Specifications

Positioner: Stäubli Unimation Corp. Robot Model: RX160L

Repeatability: ± 0.02 mm

No. of Axis: 6

Data Acquisition Electronic (DAE) System

Cell Controller

Processor: Intel Core2

Clock Speed: 1.86 GHz

Operating System: Windows XP

Data Converter

Features: Signal Amplifier, multiplexer, A/D converter, and control logic

Software: DASY5 software

Connecting Lines: Optical downlink for data and status info.

Optical uplink for commands and clock

7 EUT ARRANGEMENT

7.1 WD RF Emission Measurements Reference and Plane

Figure 4 illustrates the references and reference plane that shall be used in the WD emissions measurement.

- The grid is 5 cm by 5 cm area that is divided into 9 evenly sized blocks or sub-grids.
- The grid is centered on the audio frequency output transducer of the WD (speaker or T-coil).
- The grid is located by reference to a reference plane. This reference plane is the planar area that contains the highest point in the area of the WD that normally rests against the user's ear
- The measurement plane is located parallel to the reference plane and 10 mm from it, out from

the phone. The grid is located in the measurement plane.

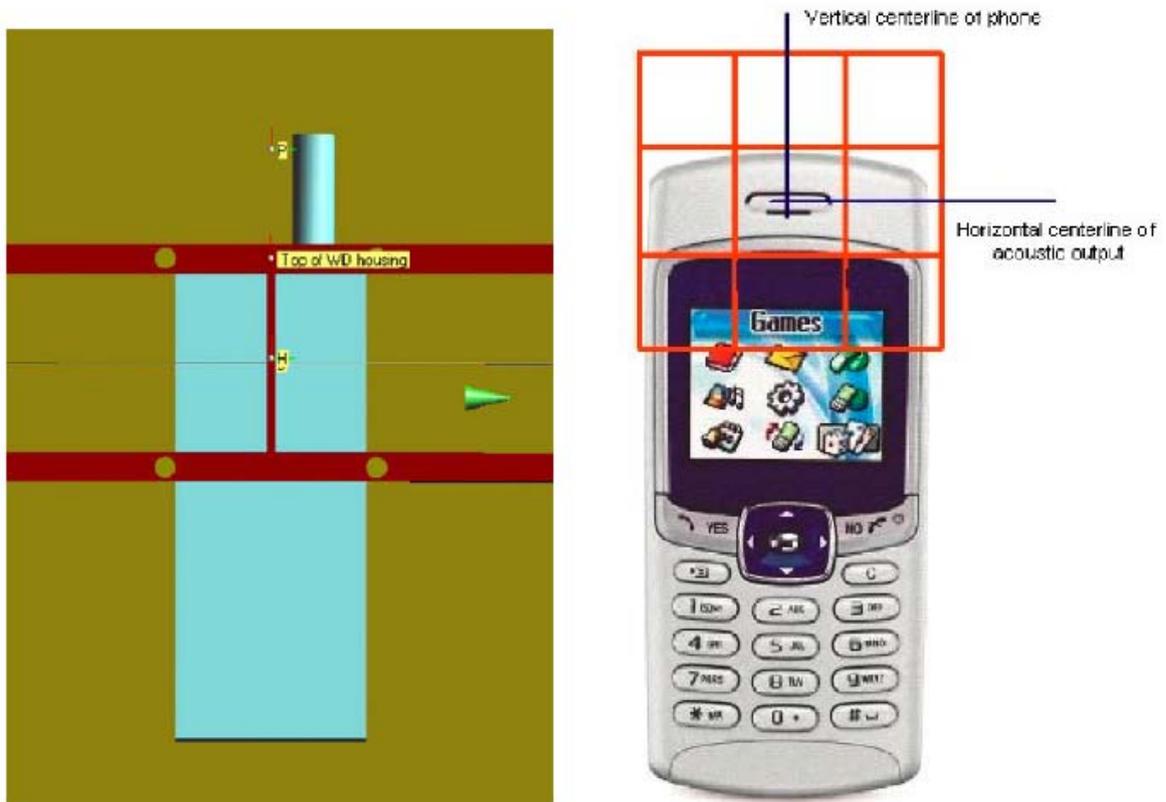


Fig. 3 WD reference and plane for RF emission measurements

8 SYSTEM VALIDATION

8.1 Validation Procedure

Place a dipole antenna meeting the requirements given in ANSI C63.19 D.5 in the position normally occupied by the WD. The dipole antenna serves as a known source for an electrical and magnetic output. Position the E-field and H-field probes so that:

- The probes and their cables are parallel to the coaxial feed of the dipole antenna
- The probe cables and the coaxial feed of the dipole antenna approach the measurement area from opposite directions
- The center point of the probe element(s) are 10 mm from the closest surface of the dipole elements.

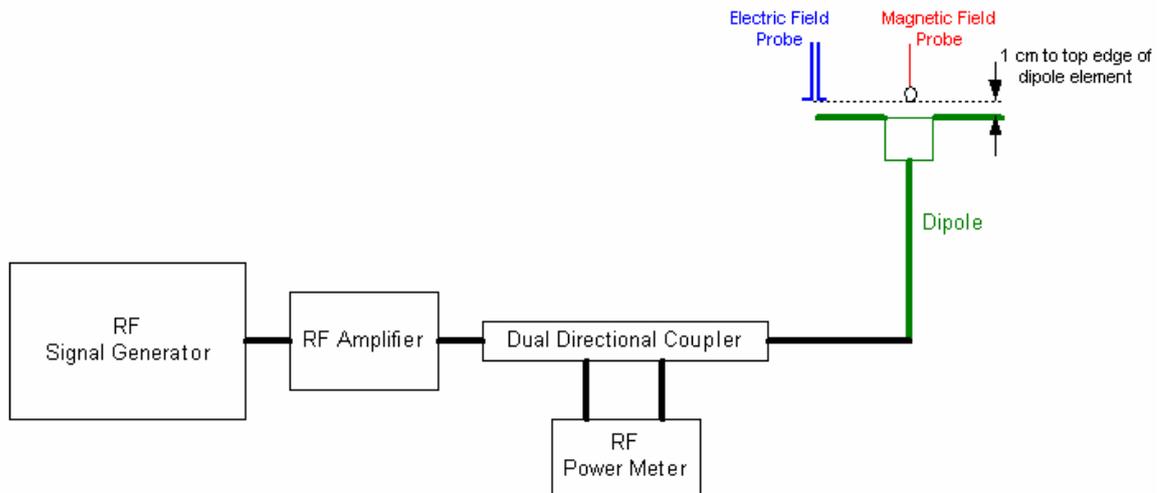


Fig. 4 Dipole Validation Setup

8.2 Validation Result

E-Field Scan							
Mode	Frequency (MHz)	Input Power (mW)	Power	Measured ¹ Value(V/m)	Target ² Value(V/m)	Deviation ³ (%)	Limit ⁴ (%)
CW	835	100		168.7	163.9	+2.93%	± 25
CW	1880	100		133.6	137.7	-2.98%	± 25
H-Field Scan							
Mode	Frequency (MHz)	Input Power (mW)	Power	Measured Value(A/m)	Target Value(A/m)	Deviation (%)	Limit (%)
CW	835	100		0.445	0.458	-2.84%	± 25
CW	1880	100		0.453	0.463	-2.16%	± 25

Notes:

1. Please refer to the attachment for detailed measurement data and plot.
2. Target value is provided by SPEAD in the calibration certificate of specific dipoles.
3. Deviation (%) = 100 * (Measured value minus Target value) divided by Target value.
4. ANSI C63.19 requires values within ± 25% are acceptable, of which 12% is deviation and 13% is measurement uncertainty. Values independently validated for the dipole actually used in the measurements should be used, when available.

9 Probe Modulation Factor

The Probe Modulation Factor (PMF) is defined as the ratio of the field readings for a CW and a modulated signal with the equivalent Field Envelope Peak as defined in ANSI C63.19 (Chapter C.3.1). Calibration shall be made of the modulation response of the probe and its instrumentation chain. This Calibration shall be performed with the field probe, attached to the instrumentation that is to be used with it during the measurement. The response of the probe system to a CW field at the frequency(s) of interest is compared to its response to a modulated signal with equal peak amplitude. The field level of the test signals shall 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 field shall be applied to the readings taken of modulated fields of the specified type.

Note:

For the PMF of CDMA835/1880, we need to calculate it at CDMA SO55 and SO3 respectively according to CTIA request.

9.1 Modulation Factor Test Procedure

This may be done using the following procedure:

1. Fix the field probe in a set location relative to a field generating device, such as the reference dipole antenna, as illustrated in the following figure.
2. Illuminate the probe using the wireless device (EUT) 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 10 dB above the probe system noise floor but within the systems operating range.

Note:

- The EUT shall be placed on a Service Option 3 call using Radio Configuration 1. The EUT audio shall be muted such that the RF gating is guaranteed to be 1/8th rate.

- The EUT shall be placed on a Service Option 2 or Service Option 55 call using Radio Configuration 1. The data rate shall be set to "Full".

- The test shall be run in Cell Band and PCS Band at low, mid, and high channels. Cell Band test channels shall be 1013, 384, and 777. PCS Band test channels shall be 25, 600, and 1175.

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 ratio, in linear units, of the probe reading in Step 6) to the reading in Step 3) is the E-field modulation factor. $PMF_E = E_{CW} / E_{mod}$ ($PMF_H = H_{CW} / H_{mod}$)
8. Repeat the previous steps using the H-field probe, except locate the probe at the center of the dipole.

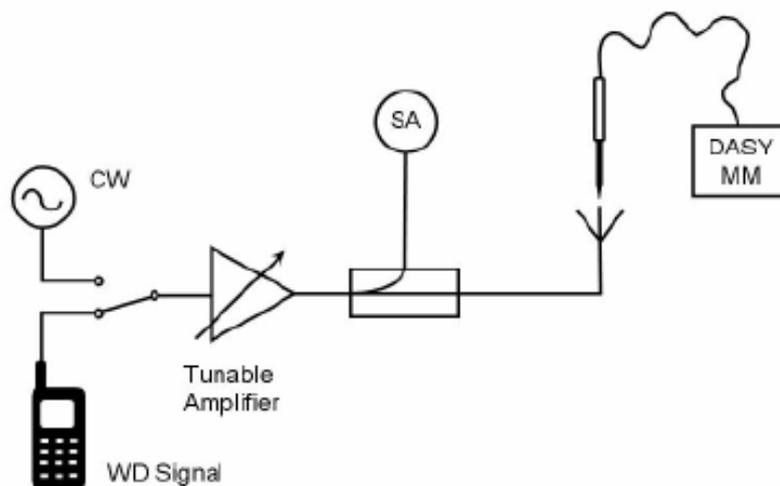


Fig. 6 Probe Modulation Factor Test Setup

9.2 Modulation Factor

9.2.1 E-Field

Mode	Frequency (MHz)	E-Field Measured Value (V/m)	Probe Modulation Factor
CW	848.31	256	0.945
CDMA(SO55)		271	
CW	836.52	247	0.939
CDMA(SO55)		263	
CW	824.7	231	0.928
CDMA(SO55)		249	
CW	848.31	32.08	2.82
CDMA(SO3)		11.36	
CW	836.52	32.35	2.77
CDMA(SO3)		11.66	
CW	824.7	32.87	2.84
CDMA(SO3)		11.58	
CW	1908.75	166	0.933
CDMA(SO55)		178	
CW	1880	169	0.932
CDMA(SO55)		181	
CW	1851.25	163	0.931
CDMA(SO55)		175	
CW	1908.75	40.98	2.88
CDMA(SO3)		14.23	
CW	1880	38.64	2.70
CDMA(SO3)		14.31	
CW	1851.25	39.23	2.78
CDMA(SO3)		14.11	

9.2.2 H-Field

Mode	Frequency (MHz)	H-Field Measured Value (A/m)	Probe Modulation Factor
CW	848.31	0.561	0.903
CDMA(SO55)		0.621	
CW	836.52	0.558	0.894
CDMA(SO55)		0.624	
CW	824.7	0.558	0.904
CDMA(SO55)		0.617	
CW	848.31	0.276	2.89
CDMA(SO3)		0.095	
CW	836.52	0.278	2.87
CDMA(SO3)		0.097	

CW	824.7	0.280	2.88
CDMA(SO3)		0.097	
CW	1908.75	0.458	0.941
CDMA(SO55)		0.487	
CW	1880	0.456	0.927
CDMA(SO55)		0.492	
CW	1851.25	0.471	0.932
CDMA(SO55)		0.505	
CW	1908.75	0.225	2.92
CDMA(SO3)		0.077	
CW	1880	0.225	2.89
CDMA(SO3)		0.078	
CW	1851.25	0.221	2.91
CDMA(SO3)		0.076	

10 RF TEST PROCEDURES

The evaluation was performed with the following procedure:

- 1) Confirm proper operation of the field probe, probe measurement system and other instrumentation and the positioning system.
- 2) Position the WD in its intended test position. The gauge block can simplify this positioning. Note that a separate E-field and H-field gauge block will be needed if the center of the probe sensor elements are at different distances from the tip of the probe.
- 3) Configure the WD normal operation for maximum rated RF output power, at the desired channel and other operating parameters (e.g., test mode), as intended for the test.
- 4) The center sub-grid shall centered on the center of the T-Coil mode axial measurement point or the acoustic output, as appropriate. Locate the field probe at the initial test position in the 50 mm by 50 mm grid, which is contained in the measurement plane. If the field alignment method is used, align the probe for maximum field reception.
- 5) Record the reading.
- 6) Scan the entire 50 mm by 50 mm region in equally spaced increments and record the reading at each measurement point. The distance between measurement points shall be sufficient to assure the identification of the maximum reading.
- 7) Identify the five contiguous sub-grids around the center sub-grid with the lowest maximum field strength readings. Thus the six areas to be used to determine the WD's highest emissions are identified and outlined for the final manual scan. Please note that a maximum of five blocks can be excluded for both E-field and H-field measurements for the WD output being measured. Stated another way, the center sub-grid and three others must be common to both the E-field and H-field measurements.
- 8) Identify the maximum field reading within the non-excluded sub-grids identified in Step 7)
- 9) Convert the maximum field strength reading identified in Step 8) to V/m or A/m, as appropriate. For probes which require a probe modulation factor, this conversion shall be done using the appropriate probe modulation factor and the calibration.
- 10) Repeat Step 1) through Step 10) for both the E-field and H-field measurements.

11) Compare this reading to the categories in ANSI C63.19 Clause 7 and record the resulting category. The lowest category number listed in 7.2, Table 7.4, or Table 7.5 obtained in Step 10) for either E- or H-field determines the M category for the audio coupling mode assessment. Record the WD category rating.

11 HAC RF TEST DATA SUMMARY

11.1 Measurement Results (E-Field)

Frequency		AWF	Measured Value (V/m)	Power Drift (dB)	Category
MHz	Channel				
CDMA BC10					
823.1	684	0	12.7	0.015	M4 (see Fig B.1)
820.5	580	0	14.1	0.140	M4 (see Fig B.2)
817.9	476	0	14.5	-0.078	M4 (see Fig B.3)

CDMA Mode: SO55

Frequency		AWF	Measured Value (V/m)	Power Drift (dB)	Category
MHz	Channel				
CDMA 835					
848.31	777	0	33.8	0.041	M4 (see Fig B.4)
836.52	384	0	35.8	-0.054	M4 (see Fig B.5)
824.7	1013	0	32.9	0.085	M4 (see Fig B.6)
CDMA 1880					
1908.75	1175	0	31.6	0.103	M4 (see Fig B.7)
1880	600	0	27.4	0.00149	M4 (see Fig B.8)
1851.25	25	0	17.8	-0.114	M4 (see Fig B.9)

CDMA Mode: SO3

Frequency		AWF	Measured Value (V/m)	Power Drift (dB)	Category
MHz	Channel				
CDMA 835					
848.31	777	0	35.2	-0.072	M4 (see Fig B.10)
836.52	384	0	36.7	0.063	M4 (see Fig B.11)
824.7	1013	0	34.7	0.181	M4 (see Fig B.12)
CDMA 1880					
1908.75	1175	0	41.5	-0.144	M4 (see Fig B.13)
1880	600	0	32.4	-0.044	M4 (see Fig B.14)
1851.25	25	0	22.8	0.046	M4 (see Fig B.15)

11.2 Measurement Results (H-Field)

Frequency		AWF	Measured Value (A/m)	Power Drift (dB)	Category
MHz	Channel				
CDMA BC10					
823.1	684	0	0.020	0.178	M4 (see Fig B.16)
820.5	580	0	0.022	-0.134	M4 (see Fig B.17)
817.9	476	0	0.022	-0.180	M4 (see Fig B.18)

CDMA Mode: SO55

Frequency		AWF	Measured Value (A/m)	Power Drift (dB)	Category
MHz	Channel				
CDMA 835					
848.31	777	0	0.054	0.123	M4 (see Fig B.19)
836.52	384	0	0.056	0.118	M4 (see Fig B.20)
824.7	1013	0	0.054	0.105	M4 (see Fig B.21)
CDMA 1880					
1908.75	1175	0	0.086	0.074	M4 (see Fig B.22)
1880	600	0	0.074	0.146	M4 (see Fig B.23)
1851.25	25	0	0.049	0.133	M4 (see Fig B.24)

CDMA Mode: SO3

Frequency		AWF	Measured Value (A/m)	Power Drift (dB)	Category
MHz	Channel				
CDMA 835					
848.31	777	0	0.066	0.140	M4 (see Fig B.25)
836.52	384	0	0.070	0.162	M4 (see Fig B.26)
824.7	1013	0	0.060	0.168	M4 (see Fig B.27)
CDMA 1880					
1908.75	1175	0	0.112	-0.021	M4 (see Fig B.28)
1880	600	0	0.093	-0.000743	M4 (see Fig B.29)
1851.25	25	0	0.060	0.047	M4 (see Fig B.30)

11.3 Total M-rating

Mode	Maximum value of peak Total E-Field (V/m)	Maximum value of peak Total H-Field (A/m)	E-Field M Rating	H-Field M Rating	Total M Rating
CDMA BC10	14.5	0.022	M4 (AWF 0 dB)	M4 (AWF 0 dB)	M4(see Fig B.31)

CDMA Mode: SO55

Mode	Maximum value of peak Total E-Field (V/m)	Maximum value of peak Total H-Field (A/m)	E-Field M Rating	H-Field M Rating	Total M Rating
CDMA 835	35.8	0.056	M4 (AWF 0 dB)	M4 (AWF 0 dB)	M4(see Fig B.32)
CDMA 1880	31.6	0.086	M4 (AWF 0 dB)	M4 (AWF 0 dB)	M4(see Fig B.33)

CDMA Mode: SO3

Mode	Maximum value of peak Total E-Field (V/m)	Maximum value of peak Total H-Field (A/m)	E-Field M Rating	H-Field M Rating	Total M Rating
CDMA 835	36.7	0.070	M4 (AWF 0 dB)	M4 (AWF 0 dB)	M4(see Fig B.34)
CDMA 1880	41.5	0.112	M4 (AWF 0 dB)	M4 (AWF 0 dB)	M4(see Fig B.35)

12 ANSI C 63.19-2006 LIMITS

Table 1: Telephone near-field categories in linear units

Category		Telephone RF parameters < 960 MHz			
Near field	AWF	E-field emissions		H-field emissions	
Category M1/T1	0	631.0 to 1122.0	V/m	1.91 to 3.39	A/m
	-5	473.2 to 841.4	V/m	1.43 to 2.54	A/m
Category M2/T2	0	354.8 to 631.0	V/m	1.07 to 1.91	A/m
	-5	266.1 to 473.2	V/m	0.80 to 1.43	A/m
Category M3/T3	0	199.5 to 354.8	V/m	0.60 to 1.07	A/m
	-5	149.6 to 266.1	V/m	0.45 to 0.80	A/m
Category M4/T4	0	< 199.5	V/m	< 0.60	A/m
	-5	< 149.6	V/m	< 0.45	A/m
Category		Telephone RF parameters > 960 MHz			
Near field	AWF	E-field emissions		H-field emissions	
Category M1/T1	0	199.5 to 354.8	V/m	0.60 to 1.07	A/m
	-5	149.6 to 266.1	V/m	0.45 to 0.80	A/m
Category M2/T2	0	112.2 to 199.5	V/m	0.34 to 0.60	A/m
	-5	84.1 to 149.6	V/m	0.25 to 0.45	A/m
Category M3/T3	0	63.1 to 112.2	V/m	0.19 to 0.34	A/m
	-5	47.3 to 84.1	V/m	0.14 to 0.25	A/m
Category M4/T4	0	< 63.1	V/m	< 0.19	A/m
	-5	< 47.3	V/m	< 0.14	A/m

13 MEASUREMENT UNCERTAINTY

No.	Error source	Type	Uncertainty Value (%)	Prob. Dist.	k	c_i E	c_i H	Standard Uncertainty (%) u_i' (%) E	Standard Uncertainty (%) u_i' (%) H	Degree of freedom V_{eff} or ν_i
1	System repeatability	A	0.24	N	1	1	1	0.24	0.24	9
Measurement System										
2	– Probe Calibration	B	3	N	1	1	1	5.1	5.1	∞
3	– Axial Isotropy	B	3.5	R	$\sqrt{3}$	1	1	2.7	2.7	∞
4	– Sensor Displacement	B	16.5	R	$\sqrt{3}$	1	0.145	9.5	1.4	∞
5	– Boundary Effects	B	2.4	R	$\sqrt{3}$	1	1	1.4	1.4	∞
6	– Linearity	B	4.7	R	$\sqrt{3}$	1	1	2.7	2.7	∞
7	– Scaling to Peak Envelope Power	B	2.0	R	$\sqrt{3}$	1	1	1.2	1.2	∞
8	– System Detection Limit	B	1.0	R	$\sqrt{3}$	1	1	0.6	0.6	∞
9	– Readout Electronics	B	0.3	N	1	1	1	0.3	0.3	∞
10	- Response Time	B	0.8	R	$\sqrt{3}$	1	1	0.5	0.5	∞
11	– Integration Time	B	2.6	R	$\sqrt{3}$	1	1	1.5	1.5	∞
12	– RF Ambient Conditions	B	3.0	R	$\sqrt{3}$	1	1	1.7	1.7	∞
13	– RF Reflections	B	12.0	R	$\sqrt{3}$	1	1	6.9	6.9	∞
14	– Probe Positioner	A	1.2	R	$\sqrt{3}$	1	0.67	0.7	0.5	∞
15	– Probe Positioning	A	4.7	R	$\sqrt{3}$	1	0.67	2.7	1.8	∞
16	– Extra. And Interpolation	B	1.0	R	$\sqrt{3}$	1	1	0.6	0.6	∞
Test Sample Related										
17	– Device Positioning Vertical	B	4.7	R	$\sqrt{3}$	1	0.67	2.7	1.8	∞
18	– Device Positioning Lateral	B	1.0	R	$\sqrt{3}$	1	1	0.6	0.6	∞

19	– Device Holder and Phantom	B	2.4	R	$\sqrt{3}$	1	1	1.4	1.4	∞
20	– Power Drift	B	5.0	R	$\sqrt{3}$	1	1	2.9	2.9	∞
Phantom and Setup related										
21	– Phantom Thickness	B	2.4	R	$\sqrt{3}$	1	0.67	1.4	0.9	∞
PMF										
22	– monitoring amplitude ratio	B	2.8	R	$\sqrt{3}$	1	1	1.6	1.6	∞
23	– setup repeatability	A	2.7	N	1	1	1	2.7	2.7	9
24	– sensor amplitude	B	11.6	R	$\sqrt{3}$	1	0.569	6.7	3.8	∞
Combined standard uncertainty (%)		$u_c = \sqrt{\sum_{i=1}^{24} c_i^2 u_i^2}$						16.4	11.5	
Expanded uncertainty (confidence interval of 95 %)		$u_e = 2u_c$		N		k=2		32.8	23.0	

14 MAIN TEST INSTRUMENTS

Table 2: List of Main Instruments

No.	Name	Type	Serial Number	Calibration Date	Valid Period
01	E-Field Probe	ER3DV6	2428	October 19, 2011	One year
02	H-Field Probe	H3DV6	6260	October 19, 2011	One year
03	HAC Dipole	CD835V3	1023	October 20, 2011	Two years
04	HAC Dipole	CD1880V3	1018	October 20, 2011	Two years
05	BTS	8960	MY48365192	November 18, 2010	One year
06	DAE	SPEAG DAE4	777	July 8, 2011	One year

15 CONCLUSION

The HAC measurement indicates that the EUT complies with the HAC limits of the ANSI C63.19-2007 and CTIA Standard. The total M-rating is **M4** for CDMA BC0 / 1/ 10 band.

END OF REPORT BODY

ANNEX A TEST LAYOUT



Picture A1: HAC RF System Layout

ANNEX B TEST PLOTS

HAC RF E-Field CDMA BC10 High

Date/Time: 11/7/2011 11:54:28 AM

Electronics: DAE4 Sn777

Medium: Air

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

Ambient Temperature: 23.3°C Liquid Temperature: 22.5°C

Communication System: CDMA BC10; Frequency: 823.1 MHz; Duty Cycle: 1:1

Probe: ER3DV6 - SN2428; ConvF(1, 1, 1)

E Scan - ER3DV6 - 2007: 15 mm from Probe Center to the Device 3/Hearing Aid

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

Maximum value of peak Total field = 12.7 V/m

Probe Modulation Factor = 1

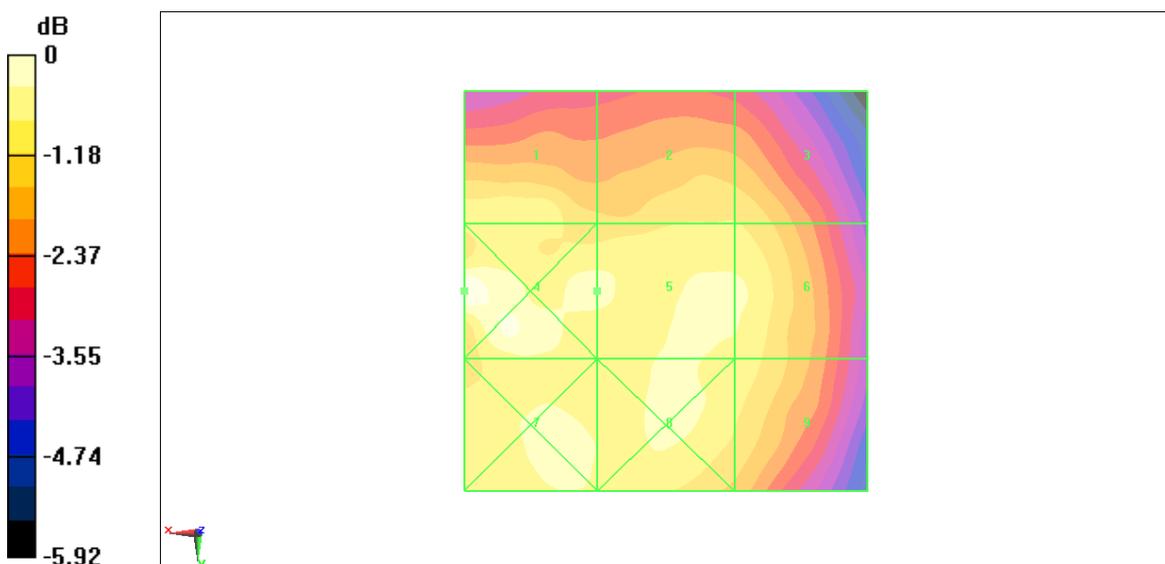
Device Reference Point: 0, 0, -6.3 mm

Reference Value = 16 V/m; Power Drift = 0.015 dB

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

Peak E-field in V/m

Grid 1 12.2 M4	Grid 2 11.8 M4	Grid 3 11.8 M4
Grid 4 13.5 M4	Grid 5 12.7 M4	Grid 6 12.5 M4
Grid 7 12.4 M4	Grid 8 12.6 M4	Grid 9 12.2 M4



0 dB = 13.5V/m

Fig B.1 HAC RF E-Field CDMA BC10 High

HAC RF E-Field CDMA BC10 Middle

Date/Time: 11/7/2011 11:44:42 AM

Electronics: DAE4 Sn777

Medium: Air

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

Ambient Temperature: 23.3°C Liquid Temperature: 22.5°C

Communication System: CDMA BC10; Frequency: 820.5 MHz; Duty Cycle: 1:1

Probe: ER3DV6 - SN2428; ConvF(1, 1, 1)

E Scan - ER3DV6 - 2007: 15 mm from Probe Center to the Device 2/Hearing Aid Compatibility Test (101x101x1): Measurement grid: dx=5mm, dy=5mm

Maximum value of peak Total field = 14.1 V/m

Probe Modulation Factor = 1

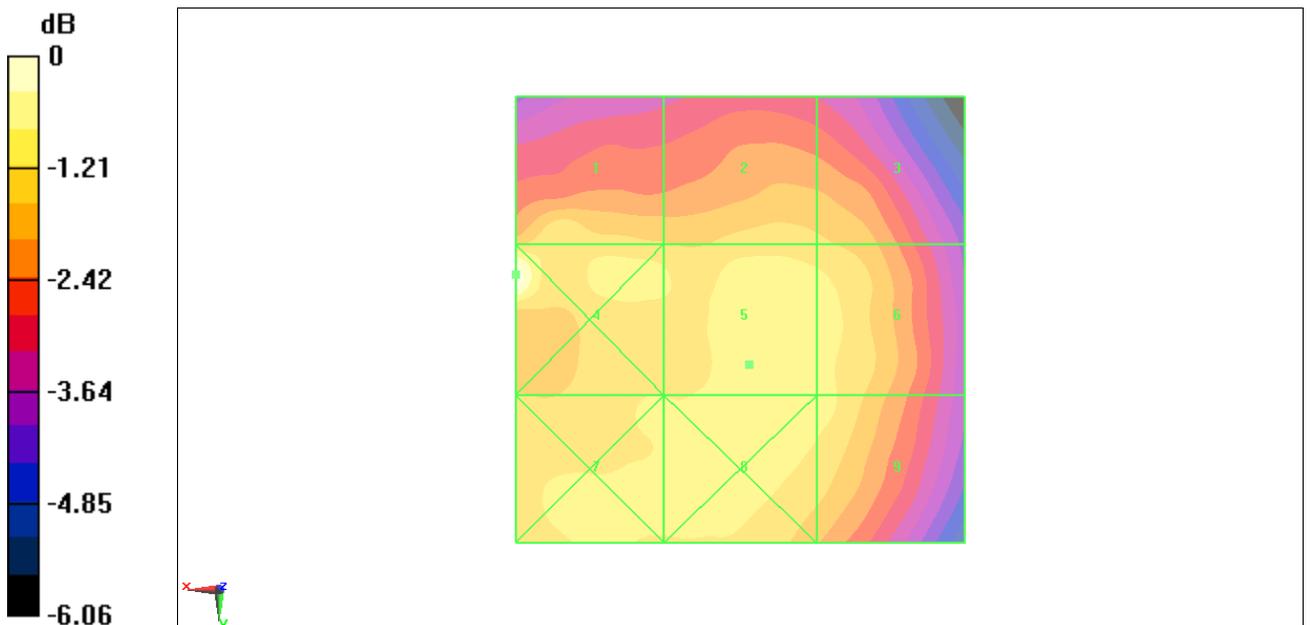
Device Reference Point: 0, 0, -6.3 mm

Reference Value = 17.5 V/m; Power Drift = 0.140 dB

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

Peak E-field in V/m

Grid 1 13.6 M4	Grid 2 13.3 M4	Grid 3 13.2 M4
Grid 4 15.6 M4	Grid 5 14.1 M4	Grid 6 13.9 M4
Grid 7 13.8 M4	Grid 8 14 M4	Grid 9 13.8 M4



0 dB = 15.6V/m

Fig B.2 HAC RF E-Field CDMA BC10 Middle

HAC RF E-Field CDMA BC10 Low

Date/Time: 11/7/2011 11:39:01 AM

Electronics: DAE4 Sn777

Medium: Air

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

Ambient Temperature: 23.3°C Liquid Temperature: 22.5°C

Communication System: CDMA BC10; Frequency: 817.9 MHz; Duty Cycle: 1:1

Probe: ER3DV6 - SN2428; ConvF(1, 1, 1)

E Scan - ER3DV6 - 2007: 15 mm from Probe Center to the Device/Hearing Aid

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

Maximum value of peak Total field = 14.5 V/m

Probe Modulation Factor = 1

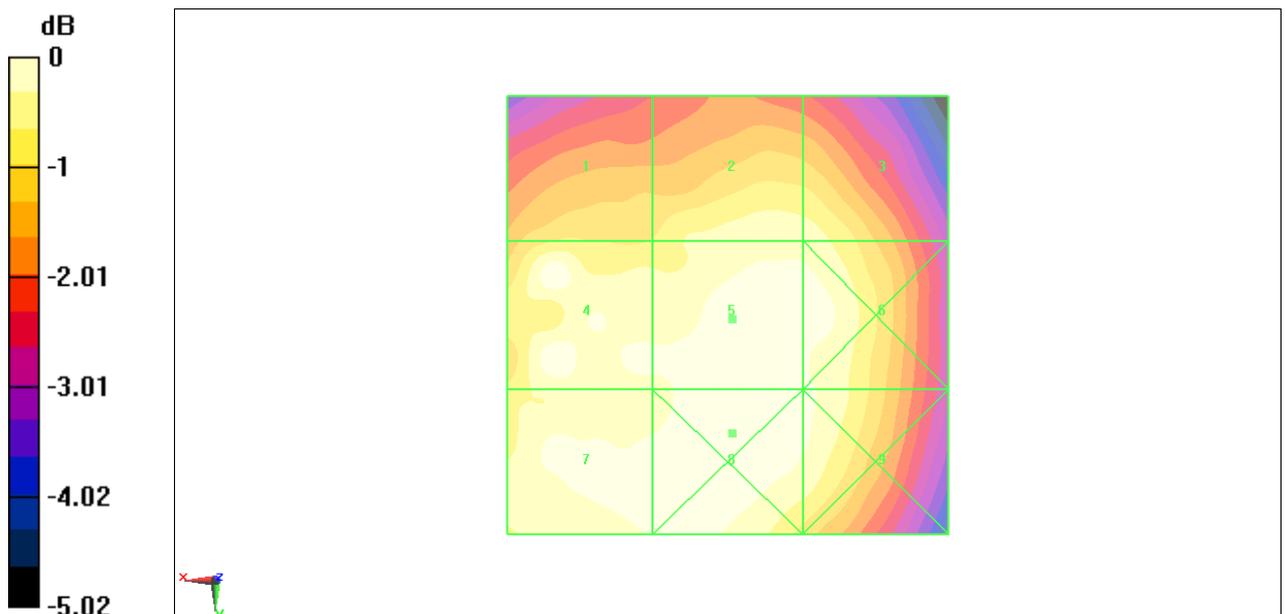
Device Reference Point: 0, 0, -6.3 mm

Reference Value = 18.5 V/m; Power Drift = -0.078 dB

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

Peak E-field in V/m

Grid 1 13.1 M4	Grid 2 13.9 M4	Grid 3 13.9 M4
Grid 4 14.4 M4	Grid 5 14.5 M4	Grid 6 14.5 M4
Grid 7 14.2 M4	Grid 8 14.6 M4	Grid 9 14.2 M4



0 dB = 14.6V/m

Fig B.3 HAC RF E-Field CDMA BC10 Low

HAC RF E-Field CDMA 835 High – SO55

Date/Time: 11/7/2011 2:21:36 PM

Electronics: DAE4 Sn777

Medium: Air

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

Ambient Temperature: 23.3°C Liquid Temperature: 22.5°C

Communication System: CDMA 835; Frequency: 848.31 MHz; Duty Cycle: 1:1

Probe: ER3DV6 - SN2428; ConvF(1, 1, 1)

E Scan - ER3DV6 - 2007: 15 mm from Probe Center to the Device/Hearing Aid

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

Maximum value of peak Total field = 33.8 V/m

Probe Modulation Factor = 0.945

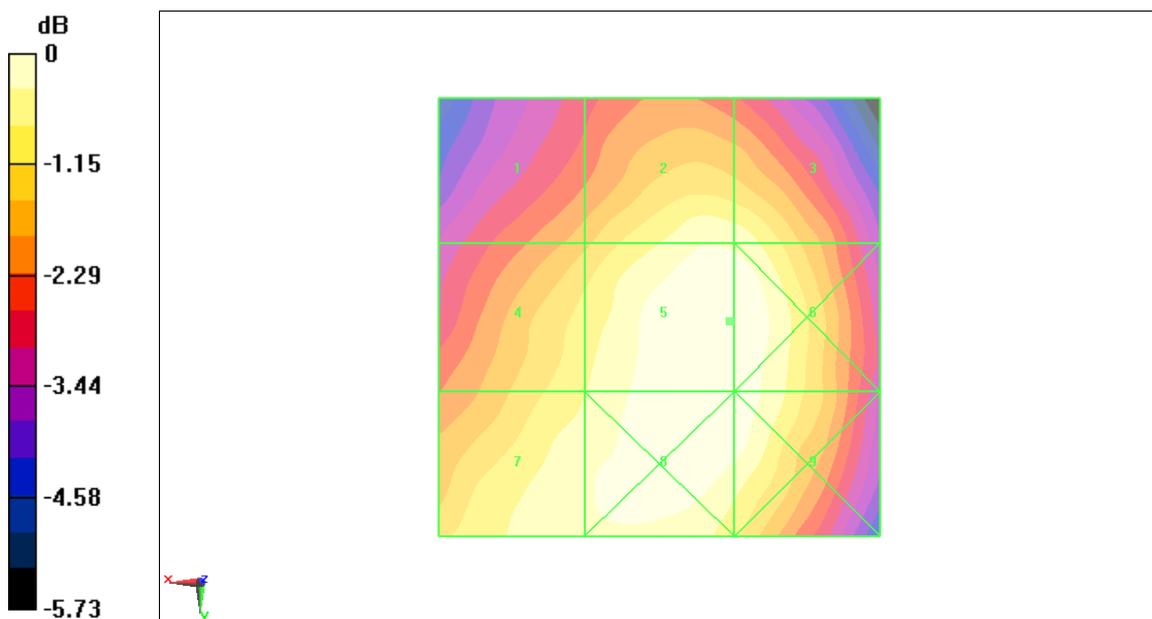
Device Reference Point: 0, 0, -6.3 mm

Reference Value = 46.1 V/m; Power Drift = 0.041 dB

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

Peak E-field in V/m

Grid 1 28 M4	Grid 2 32.3 M4	Grid 3 32 M4
Grid 4 30.9 M4	Grid 5 33.8 M4	Grid 6 33.7 M4
Grid 7 32.1 M4	Grid 8 33.6 M4	Grid 9 33.3 M4



0 dB = 33.8V/m

Fig B.4 HAC RF E-Field CDMA 835 High

HAC RF E-Field CDMA 835 Middle – SO55

Date/Time: 11/7/2011 2:16:16 PM

Electronics: DAE4 Sn777

Medium: Air

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

Ambient Temperature: 23.3°C Liquid Temperature: 22.5°C

Communication System: CDMA 835; Frequency: 836.52 MHz; Duty Cycle: 1:1

Probe: ER3DV6 - SN2428; ConvF(1, 1, 1)

E Scan - ER3DV6 - 2007: 15 mm from Probe Center to the Device/Hearing Aid

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

Maximum value of peak Total field = 35.8 V/m

Probe Modulation Factor = 0.939

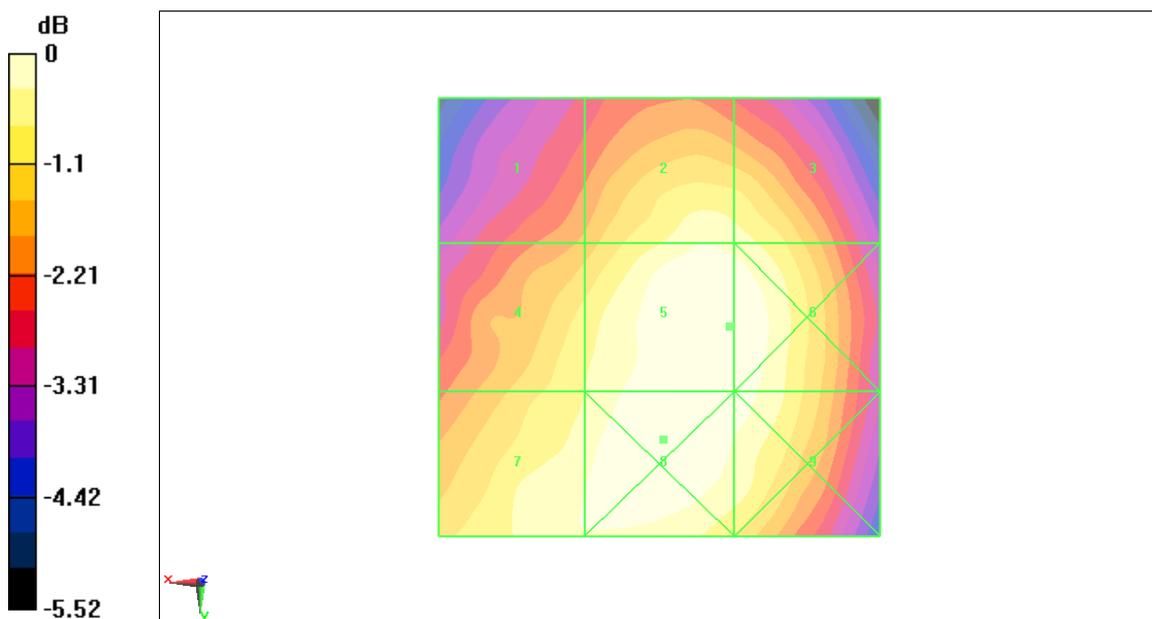
Device Reference Point: 0, 0, -6.3 mm

Reference Value = 50.1 V/m; Power Drift = -0.054 dB

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

Peak E-field in V/m

Grid 1 29.5 M4	Grid 2 34.4 M4	Grid 3 33.9 M4
Grid 4 33 M4	Grid 5 35.8 M4	Grid 6 35.8 M4
Grid 7 34.5 M4	Grid 8 35.9 M4	Grid 9 35.2 M4



0 dB = 35.9V/m

Fig B.5 HAC RF E-Field CDMA 835 Middle

HAC RF E-Field CDMA 835 Low – SO55

Date/Time: 11/7/2011 2:09:40 PM

Electronics: DAE4 Sn777

Medium: Air

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

Ambient Temperature: 23.3°C Liquid Temperature: 22.5°C

Communication System: CDMA 835; Frequency: 824.7 MHz; Duty Cycle: 1:1

Probe: ER3DV6 - SN2428; ConvF(1, 1, 1)

E Scan - ER3DV6 - 2007: 15 mm from Probe Center to the Device/Hearing Aid

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

Maximum value of peak Total field = 32.9 V/m

Probe Modulation Factor = 0.928

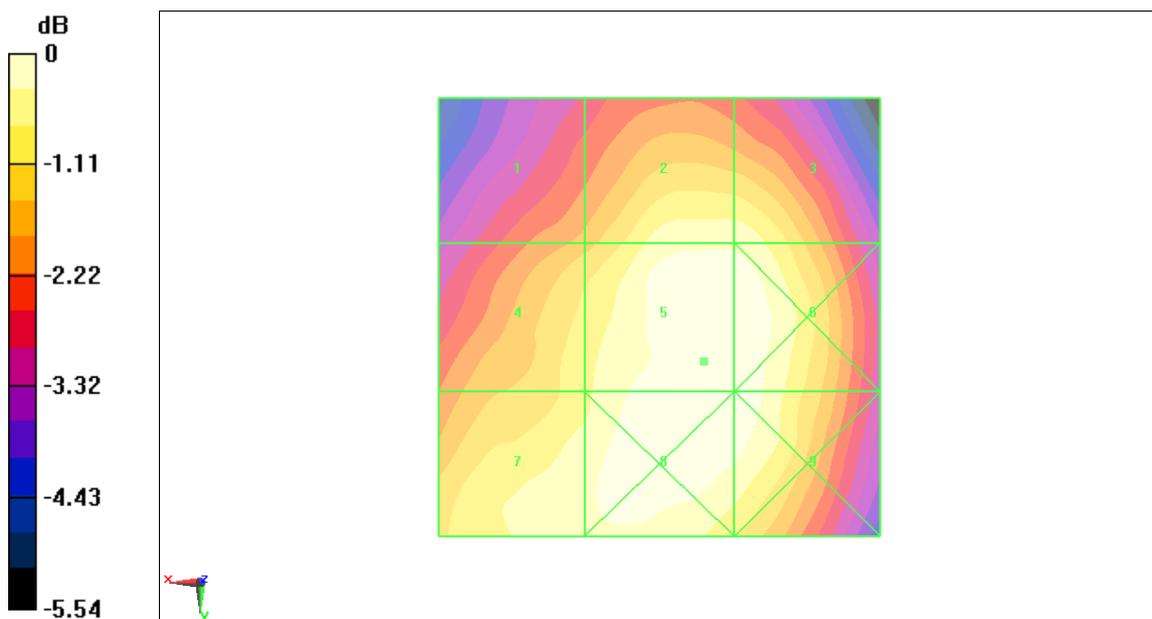
Device Reference Point: 0, 0, -6.3 mm

Reference Value = 45.6 V/m; Power Drift = 0.085 dB

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

Peak E-field in V/m

Grid 1 27.2 M4	Grid 2 31.3 M4	Grid 3 31.2 M4
Grid 4 29.9 M4	Grid 5 32.9 M4	Grid 6 32.6 M4
Grid 7 31.3 M4	Grid 8 32.6 M4	Grid 9 32.6 M4



0 dB = 32.9V/m

Fig B.6 HAC RF E-Field CDMA 835 Low

HAC RF E-Field CDMA 1900 High – SO55

Date/Time: 11/7/2011 2:42:04 PM

Electronics: DAE4 Sn777

Medium: Air

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

Ambient Temperature: 23.3°C Liquid Temperature: 22.5°C

Communication System: CDMA 1900; Frequency: 1908.75 MHz; Duty Cycle: 1:1

Probe: ER3DV6 - SN2428; ConvF(1, 1, 1)

E Scan - ER3DV6 - 2007: 15 mm from Probe Center to the Device/Hearing Aid

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

Maximum value of peak Total field = 31.6 V/m

Probe Modulation Factor = 0.933

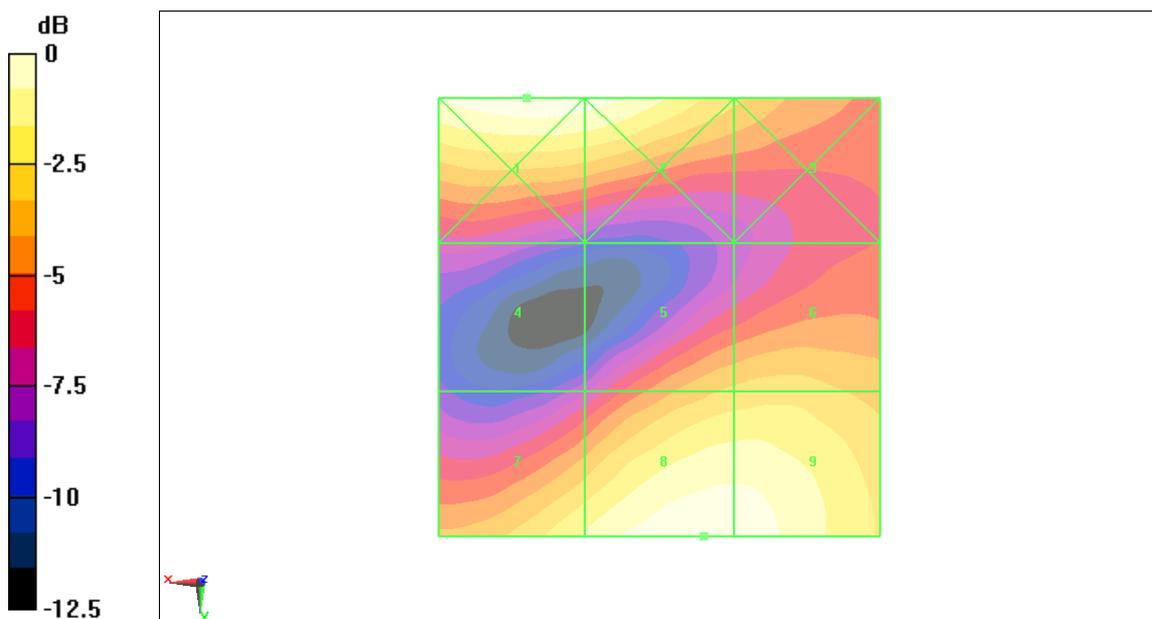
Device Reference Point: 0, 0, -6.3 mm

Reference Value = 15.2 V/m; Power Drift = 0.103 dB

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

Peak E-field in V/m

Grid 1 32.9 M4	Grid 2 31.6 M4	Grid 3 23 M4
Grid 4 14.8 M4	Grid 5 23 M4	Grid 6 23.7 M4
Grid 7 27.6 M4	Grid 8 31.6 M4	Grid 9 31.3 M4



0 dB = 32.9V/m

Fig B.7 HAC RF E-Field CDMA 1900 High

HAC RF E-Field CDMA 1900 Middle – SO55

Date/Time: 11/7/2011 2:30:52 PM

Electronics: DAE4 Sn777

Medium: Air

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

Ambient Temperature: 23.3°C Liquid Temperature: 22.5°C

Communication System: CDMA 1900; Frequency: 1880 MHz; Duty Cycle: 1:1

Probe: ER3DV6 - SN2428; ConvF(1, 1, 1)

E Scan - ER3DV6 - 2007: 15 mm from Probe Center to the Device/Hearing Aid

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

Maximum value of peak Total field = 27.4 V/m

Probe Modulation Factor = 0.932

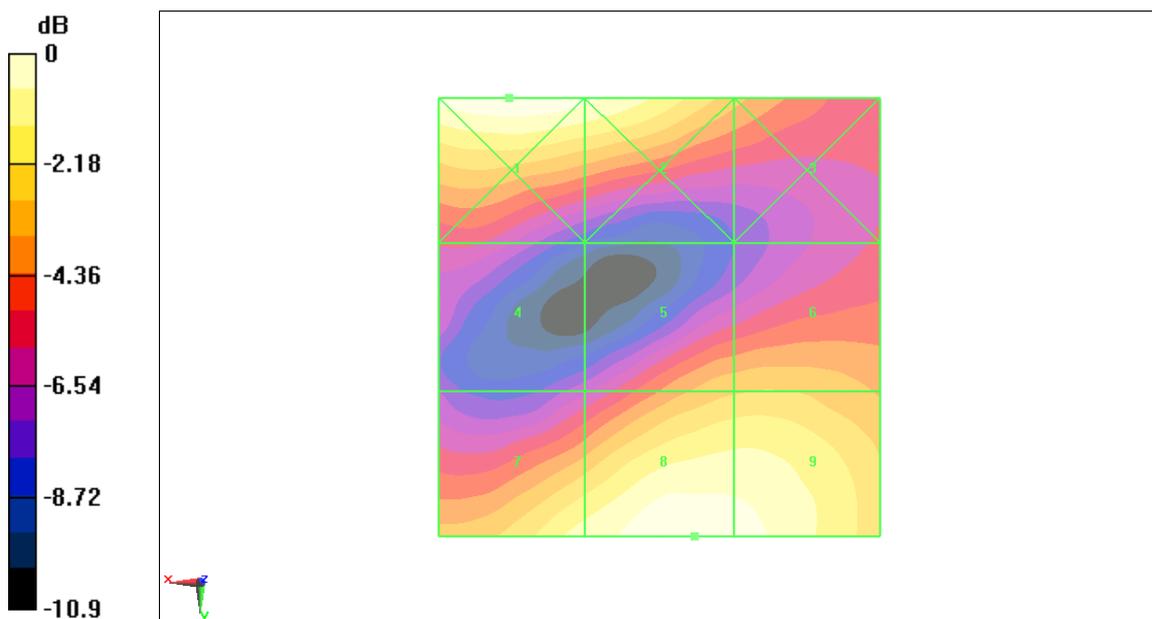
Device Reference Point: 0, 0, -6.3 mm

Reference Value = 14 V/m; Power Drift = 0.00149 dB

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

Peak E-field in V/m

Grid 1 27.6 M4	Grid 2 26.2 M4	Grid 3 18.8 M4
Grid 4 14.5 M4	Grid 5 19.6 M4	Grid 6 19.9 M4
Grid 7 24.3 M4	Grid 8 27.4 M4	Grid 9 26.5 M4



0 dB = 27.6V/m

Fig B.8 HAC RF E-Field CDMA 1900 Middle

HAC RF E-Field CDMA 1900 Low – SO55

Date/Time: 11/7/2011 2:36:34 PM

Electronics: DAE4 Sn777

Medium: Air

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

Ambient Temperature: 23.3°C Liquid Temperature: 22.5°C

Communication System: CDMA 1900; Frequency: 1851.25 MHz; Duty Cycle: 1:1

Probe: ER3DV6 - SN2428; ConvF(1, 1, 1)

E Scan - ER3DV6 - 2007: 15 mm from Probe Center to the Device/Hearing Aid

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

Maximum value of peak Total field = 17.8 V/m

Probe Modulation Factor = 0.931

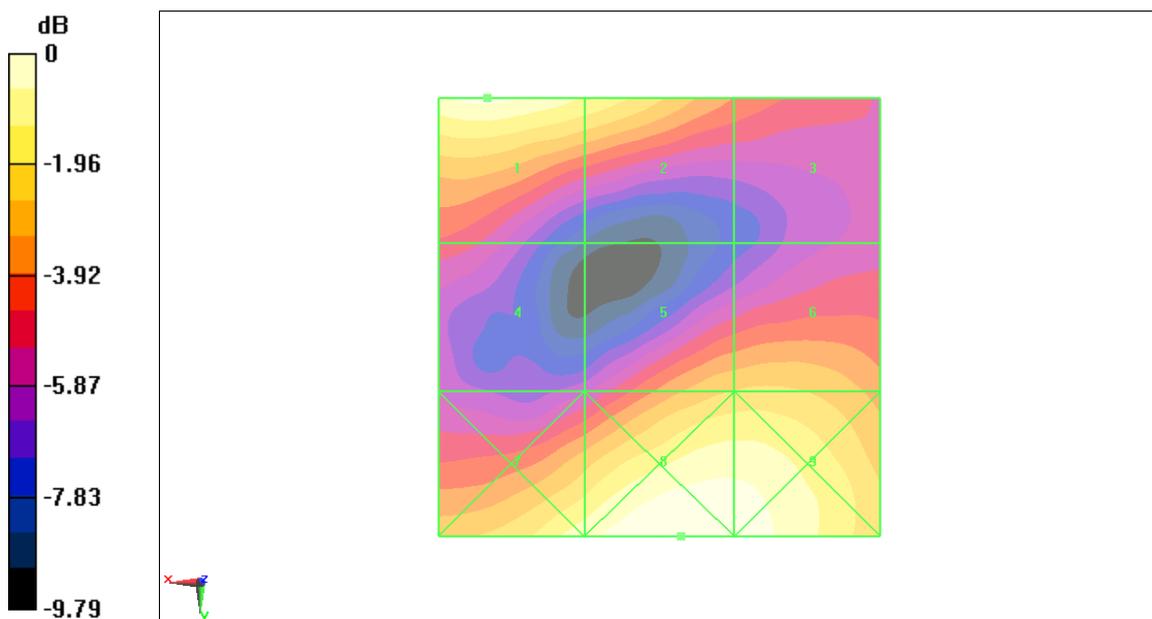
Device Reference Point: 0, 0, -6.3 mm

Reference Value = 11.1 V/m; Power Drift = -0.114 dB

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

Peak E-field in V/m

Grid 1 17.8 M4	Grid 2 16 M4	Grid 3 11.9 M4
Grid 4 10.9 M4	Grid 5 13.9 M4	Grid 6 14.1 M4
Grid 7 16.9 M4	Grid 8 18.7 M4	Grid 9 18.2 M4



0 dB = 18.7V/m

Fig B.9 HAC RF E-Field CDMA 1900 Low

HAC RF E-Field CDMA 835 High – SO3

Date/Time: 11/7/2011 9:53:53 AM

Electronics: DAE4 Sn777

Medium: Air

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

Ambient Temperature: 23.3°C Liquid Temperature: 22.5°C

Communication System: CDMA 835; Frequency: 848.31 MHz; Duty Cycle: 1:1

Probe: ER3DV6 - SN2428; ConvF(1, 1, 1)

E Scan - ER3DV6 - 2007: 15 mm from Probe Center to the Device/Hearing Aid

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

Maximum value of peak Total field = 35.2 V/m

Probe Modulation Factor = 2.82

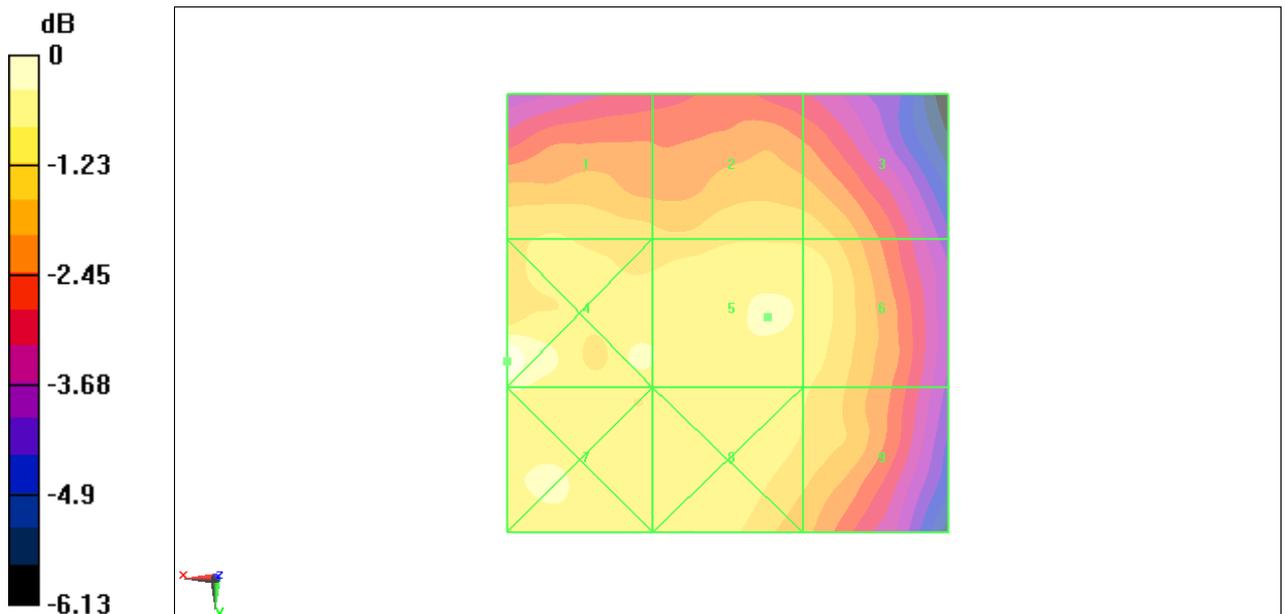
Device Reference Point: 0, 0, -6.3 mm

Reference Value = 15.8 V/m; Power Drift = -0.072 dB

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

Peak E-field in V/m

Grid 1 33.4 M4	Grid 2 33.2 M4	Grid 3 33 M4
Grid 4 38.3 M4	Grid 5 35.2 M4	Grid 6 34.7 M4
Grid 7 35.3 M4	Grid 8 34.7 M4	Grid 9 33.5 M4



0 dB = 38.3V/m

Fig B.10 HAC RF E-Field CDMA 835 High

HAC RF E-Field CDMA 835 Middle – SO3

Date/Time: 11/7/2011 9:47:55 AM

Electronics: DAE4 Sn777

Medium: Air

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

Ambient Temperature: 23.3°C Liquid Temperature: 22.5°C

Communication System: CDMA 835; Frequency: 836.52 MHz; Duty Cycle: 1:1

Probe: ER3DV6 - SN2428; ConvF(1, 1, 1)

E Scan - ER3DV6 - 2007: 15 mm from Probe Center to the Device/Hearing Aid

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

Maximum value of peak Total field = 36.7 V/m

Probe Modulation Factor = 2.77

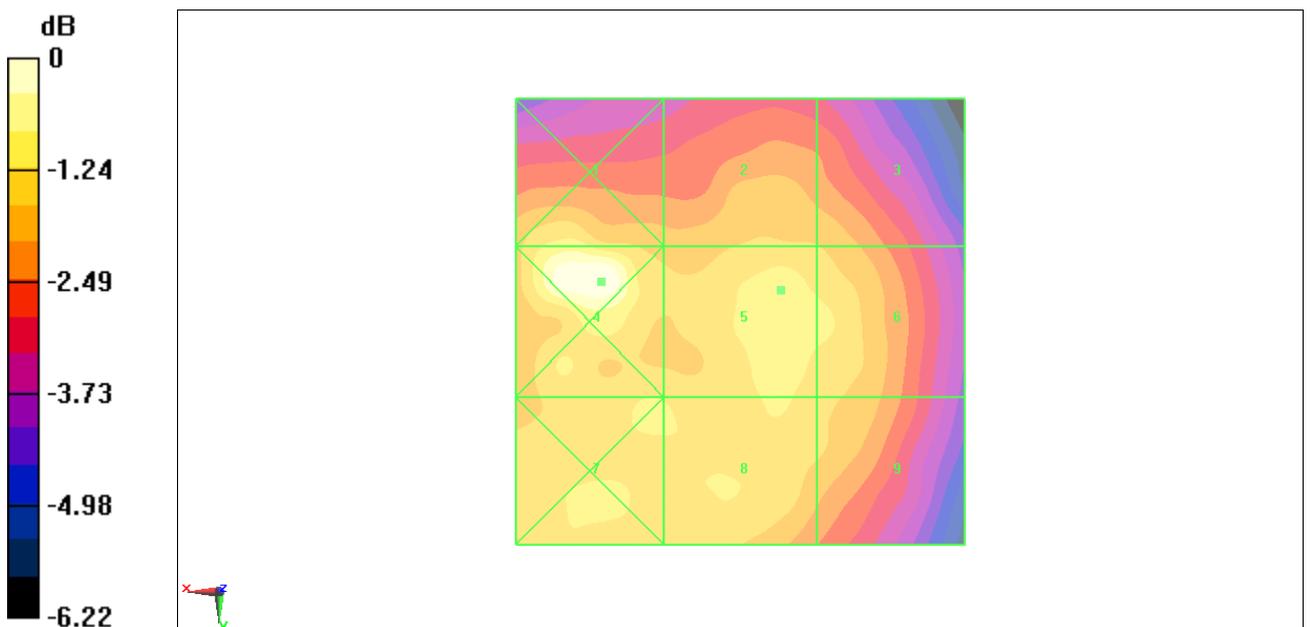
Device Reference Point: 0, 0, -6.3 mm

Reference Value = 16.7 V/m; Power Drift = 0.063 dB

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

Peak E-field in V/m

Grid 1 37 M4	Grid 2 34.8 M4	Grid 3 34.4 M4
Grid 4 41.6 M4	Grid 5 36.7 M4	Grid 6 36.6 M4
Grid 7 36.7 M4	Grid 8 36.5 M4	Grid 9 35.2 M4



0 dB = 41.6V/m

Fig B.11 HAC RF E-Field CDMA 835 Middle

HAC RF E-Field CDMA 835 Low – SO3

Date/Time: 11/7/2011 10:06:58 AM

Electronics: DAE4 Sn777

Medium: Air

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

Ambient Temperature: 23.3°C Liquid Temperature: 22.5°C

Communication System: CDMA 835; Frequency: 824.7 MHz; Duty Cycle: 1:1

Probe: ER3DV6 - SN2428; ConvF(1, 1, 1)

E Scan - ER3DV6 - 2007: 15 mm from Probe Center to the Device/Hearing Aid

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

Maximum value of peak Total field = 34.7 V/m

Probe Modulation Factor = 2.84

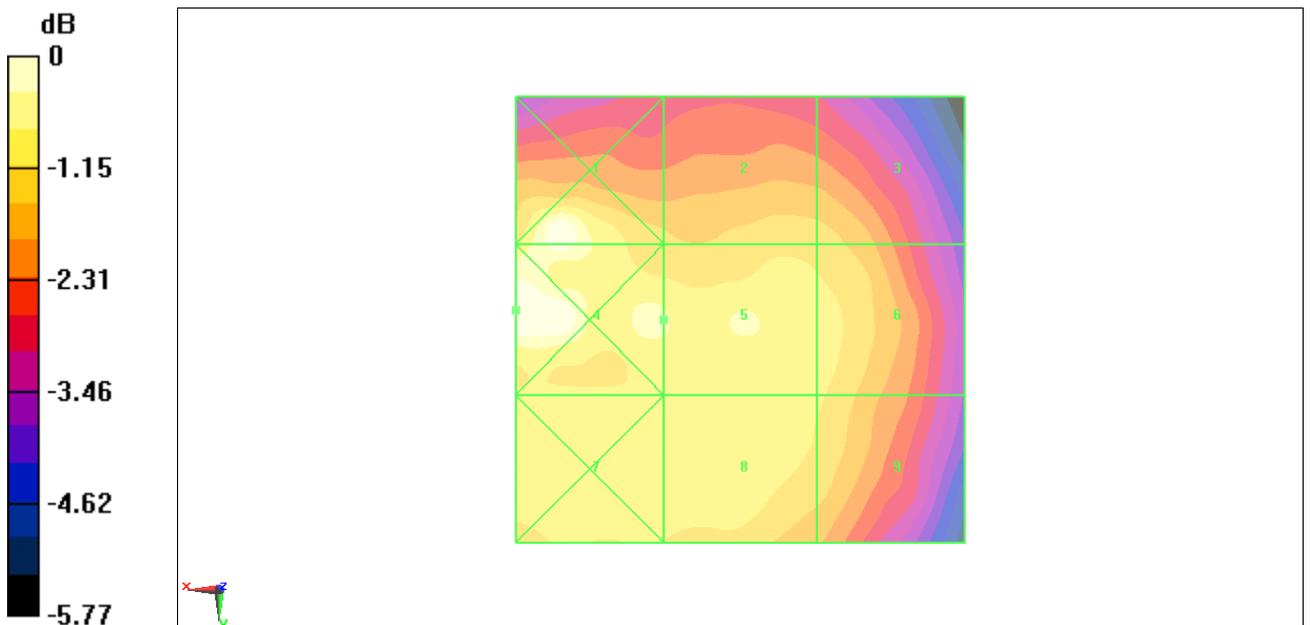
Device Reference Point: 0, 0, -6.3 mm

Reference Value = 15.1 V/m; Power Drift = 0.181 dB

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

Peak E-field in V/m

Grid 1 37.4 M4	Grid 2 32.5 M4	Grid 3 32.3 M4
Grid 4 37.5 M4	Grid 5 34.7 M4	Grid 6 33.7 M4
Grid 7 34.2 M4	Grid 8 34.3 M4	Grid 9 33.1 M4



0 dB = 37.5V/m

Fig B.12 HAC RF E-Field CDMA 835 Low

HAC RF E-Field CDMA 1900 High – SO3

Date/Time: 11/7/2011 11:28:05 AM

Electronics: DAE4 Sn777

Medium: Air

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

Ambient Temperature: 23.3°C Liquid Temperature: 22.5°C

Communication System: CDMA 1900; Frequency: 1908.75 MHz; Duty Cycle: 1:1

Probe: ER3DV6 - SN2428; ConvF(1, 1, 1)

E Scan - ER3DV6 - 2007: 15 mm from Probe Center to the Device/Hearing Aid

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

Maximum value of peak Total field = 41.5 V/m

Probe Modulation Factor = 2.88

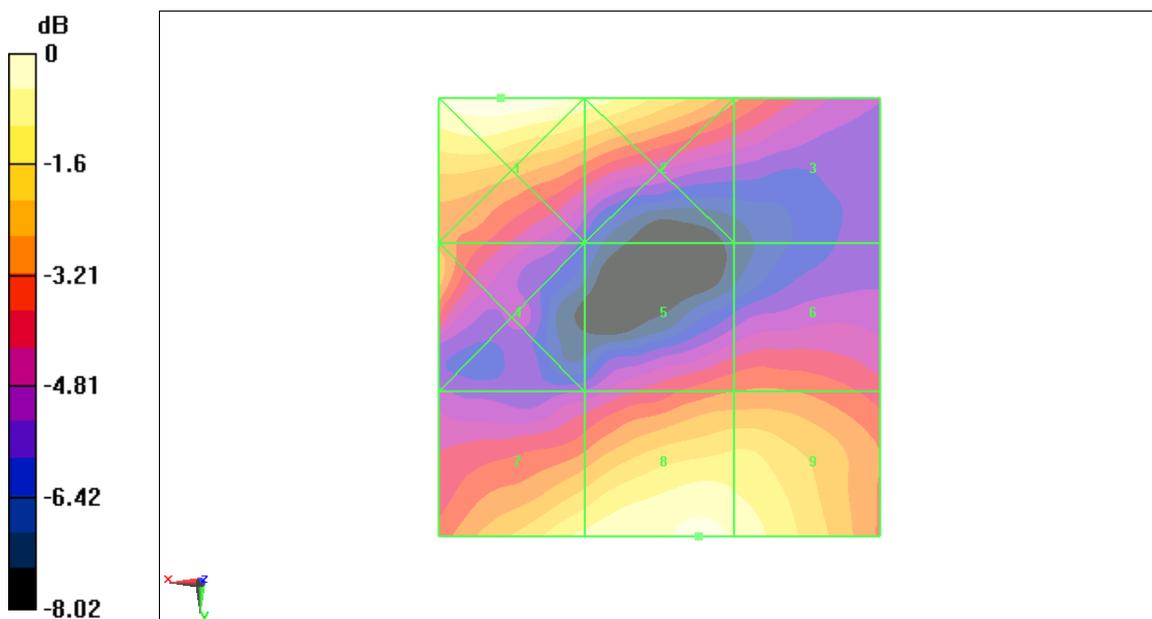
Device Reference Point: 0, 0, -6.3 mm

Reference Value = 7.85 V/m; Power Drift = -0.144 dB

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

Peak E-field in V/m

Grid 1 43 M4	Grid 2 40 M4	Grid 3 30.3 M4
Grid 4 33.2 M4	Grid 5 29.8 M4	Grid 6 30.1 M4
Grid 7 38.8 M4	Grid 8 41.5 M4	Grid 9 40 M4



0 dB = 43V/m

Fig B.13 HAC RF E-Field CDMA 1900 High

HAC RF E-Field CDMA 1900 Middle – SO3

Date/Time: 11/7/2011 10:58:46 AM

Electronics: DAE4 Sn777

Medium: Air

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

Ambient Temperature: 23.3°C Liquid Temperature: 22.5°C

Communication System: CDMA 1900; Frequency: 1880 MHz; Duty Cycle: 1:1

Probe: ER3DV6 - SN2428; ConvF(1, 1, 1)

E Scan - ER3DV6 - 2007: 15 mm from Probe Center to the Device/Hearing Aid

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

Maximum value of peak Total field = 32.4 V/m

Probe Modulation Factor = 2.7

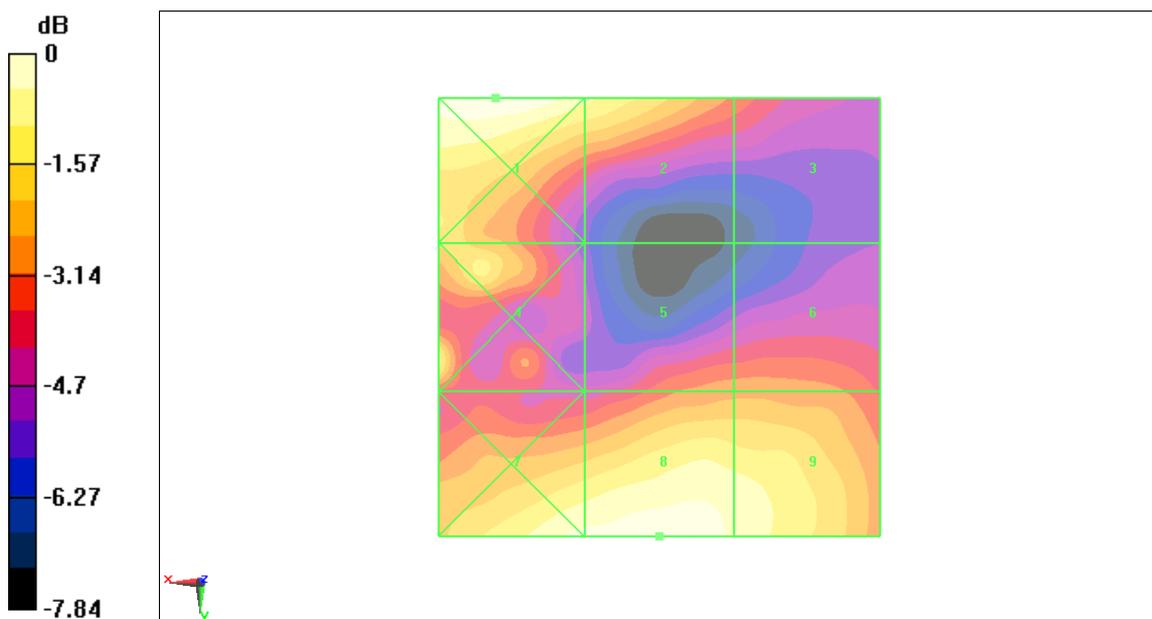
Device Reference Point: 0, 0, -6.3 mm

Reference Value = 7.1 V/m; Power Drift = -0.044 dB

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

Peak E-field in V/m

Grid 1 32.9 M4	Grid 2 29.8 M4	Grid 3 22.6 M4
Grid 4 28.5 M4	Grid 5 23.9 M4	Grid 6 23.9 M4
Grid 7 31.5 M4	Grid 8 32.4 M4	Grid 9 30.7 M4



0 dB = 32.9V/m

Fig B.14 HAC RF E-Field CDMA 1900 Middle

HAC RF E-Field CDMA 1900 Low – SO3

Date/Time: 11/7/2011 10:12:55 AM

Electronics: DAE4 Sn777

Medium: Air

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

Ambient Temperature: 23.3°C Liquid Temperature: 22.5°C

Communication System: CDMA 1900; Frequency: 1851.25 MHz; Duty Cycle: 1:1

Probe: ER3DV6 - SN2428; ConvF(1, 1, 1)

E Scan - ER3DV6 - 2007: 15 mm from Probe Center to the Device/Hearing Aid

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

Maximum value of peak Total field = 22.8 V/m

Probe Modulation Factor = 2.78

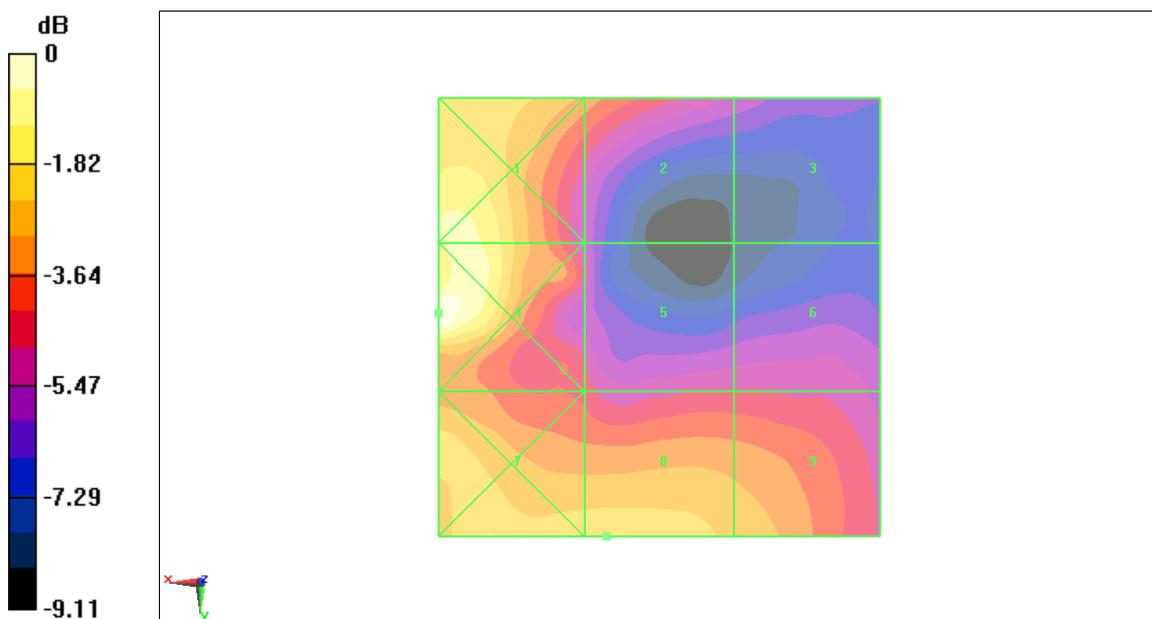
Device Reference Point: 0, 0, -6.3 mm

Reference Value = 5.45 V/m; Power Drift = 0.046 dB

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

Peak E-field in V/m

Grid 1 25.6 M4	Grid 2 19.9 M4	Grid 3 15.1 M4
Grid 4 28.6 M4	Grid 5 17 M4	Grid 6 16.5 M4
Grid 7 23.3 M4	Grid 8 22.8 M4	Grid 9 21.3 M4



0 dB = 28.6V/m

Fig B.15 HAC RF E-Field CDMA 1900 Low

HAC RF H-Field CDMA BC10 High

Date/Time: 11/7/2011 1:42:13 PM

Electronics: DAE4 Sn777

Medium: Air

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

Ambient Temperature: 23.3°C Liquid Temperature: 22.5°C

Communication System: CDMA BC10; Frequency: 823.1MHz; Duty Cycle: 1:1

Probe: H3DV6 - SN6260;

H Scan - H3DV6 - 2007: 15 mm from Probe Center to the Device 3/Hearing Aid

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

Maximum value of peak Total field = 0.020 A/m

Probe Modulation Factor = 1

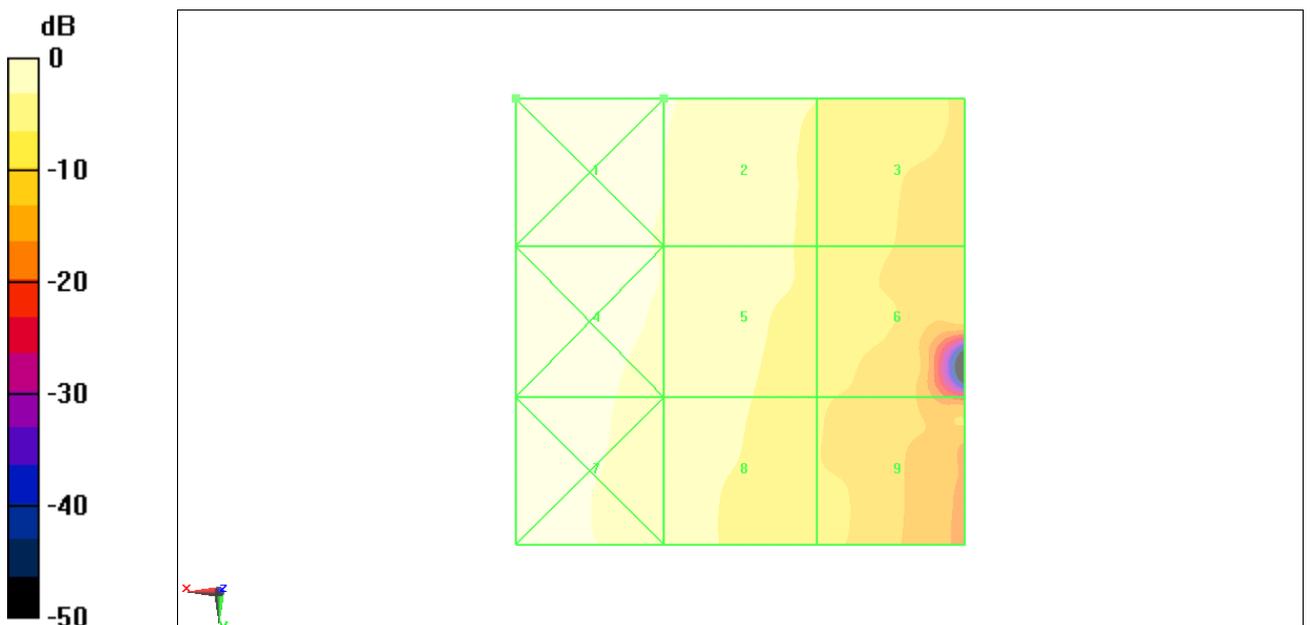
Device Reference Point: 0, 0, -6.3 mm

Reference Value = 0.016 A/m; Power Drift = 0.178 dB

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

Peak H-field in A/m

Grid 1 0.028 M4	Grid 2 0.020 M4	Grid 3 0.013 M4
Grid 4 0.025 M4	Grid 5 0.019 M4	Grid 6 0.012 M4
Grid 7 0.024 M4	Grid 8 0.017 M4	Grid 9 0.010 M4



0 dB = 0.028A/m

Fig B.16 HAC RF H-Field CDMA BC10 High

HAC RF H-Field CDMA BC10 Middle

Date/Time: 11/7/2011 1:36:25 PM

Electronics: DAE4 Sn777

Medium: Air

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

Ambient Temperature: 23.3°C Liquid Temperature: 22.5°C

Communication System: CDMA BC10; Frequency: 820.5 MHz; Duty Cycle: 1:1

Probe: H3DV6 - SN6260;

H Scan - H3DV6 - 2007: 15 mm from Probe Center to the Device 2/Hearing Aid

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

Maximum value of peak Total field = 0.022 A/m

Probe Modulation Factor = 1

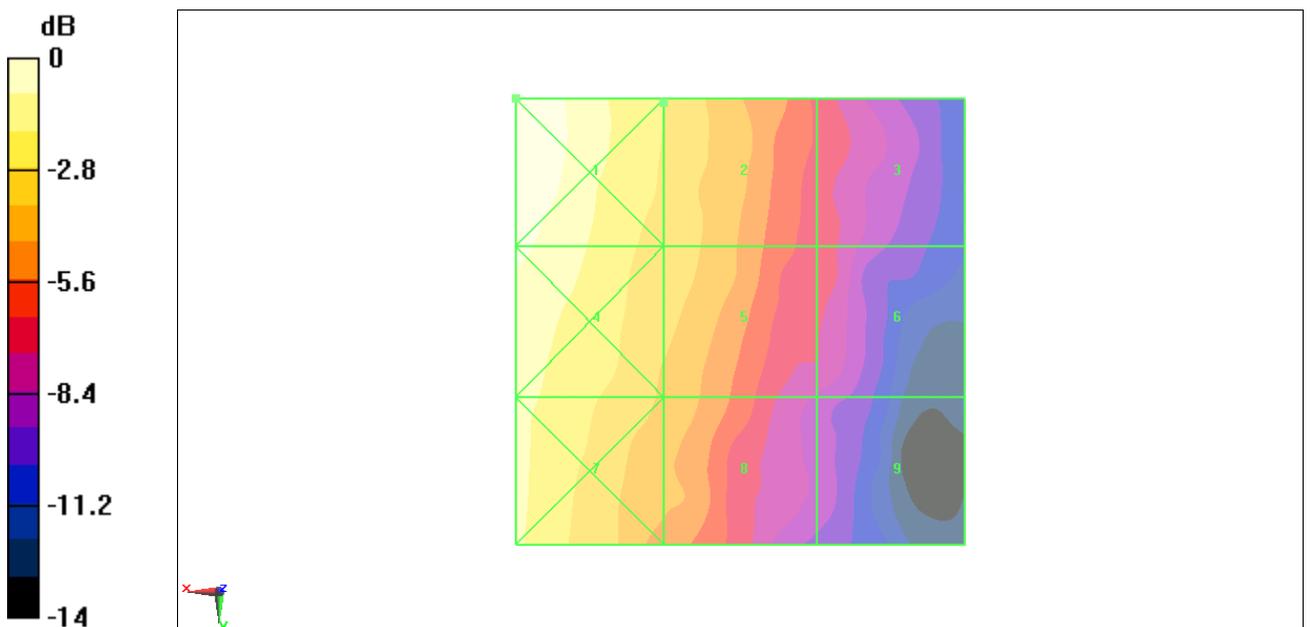
Device Reference Point: 0, 0, -6.3 mm

Reference Value = 0.018 A/m; Power Drift = -0.134 dB

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

Peak H-field in A/m

Grid 1 0.031 M4	Grid 2 0.022 M4	Grid 3 0.015 M4
Grid 4 0.029 M4	Grid 5 0.021 M4	Grid 6 0.014 M4
Grid 7 0.026 M4	Grid 8 0.020 M4	Grid 9 0.012 M4



0 dB = 0.031A/m

Fig B.17 HAC RF H-Field CDMA BC10 Middle

HAC RF H-Field CDMA BC10 Low

Date/Time: 11/7/2011 1:52:52 PM

Electronics: DAE4 Sn777

Medium: Air

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

Ambient Temperature: 23.3°C Liquid Temperature: 22.5°C

Communication System: CDMA BC10; Frequency: 817.9 MHz; Duty Cycle: 1:1

Probe: H3DV6 - SN6260;

H Scan - H3DV6 - 2007: 15 mm from Probe Center to the Device 4/Hearing Aid

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

Maximum value of peak Total field = 0.022 A/m

Probe Modulation Factor = 1

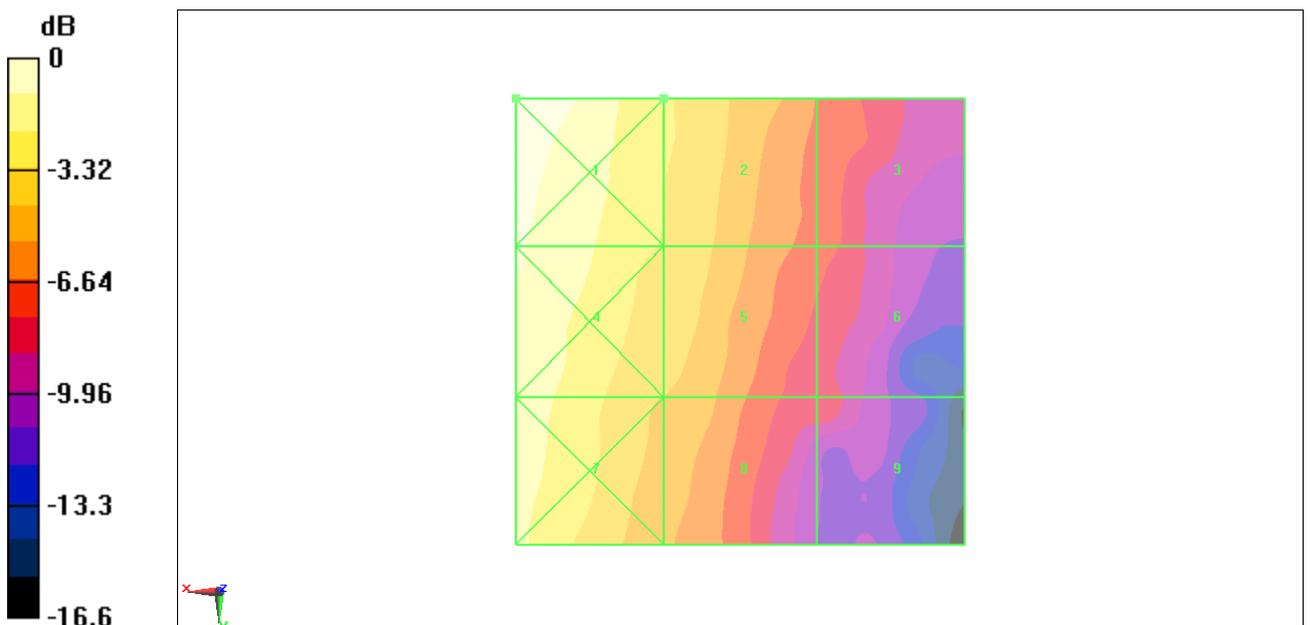
Device Reference Point: 0, 0, -6.3 mm

Reference Value = 0.018 A/m; Power Drift = -0.180 dB

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

Peak H-field in A/m

Grid 1 0.032 M4	Grid 2 0.022 M4	Grid 3 0.015 M4
Grid 4 0.029 M4	Grid 5 0.022 M4	Grid 6 0.014 M4
Grid 7 0.026 M4	Grid 8 0.019 M4	Grid 9 0.013 M4



0 dB = 0.032A/m

Fig B.18 HAC RF H-Field CDMA BC10 Low

HAC RF H-Field CDMA 835 High – SO55

Date/Time: 11/7/2011 3:15:35 PM

Electronics: DAE4 Sn777

Medium: Air

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

Ambient Temperature: 23.3°C Liquid Temperature: 22.5°C

Communication System: CDMA 835; Frequency: 848.31 MHz; Duty Cycle: 1:1

Probe: H3DV6 - SN6260;

H Scan - H3DV6 - 2007: 15 mm from Probe Center to the Device/Hearing Aid

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

Maximum value of peak Total field = 0.054 A/m

Probe Modulation Factor = 0.903

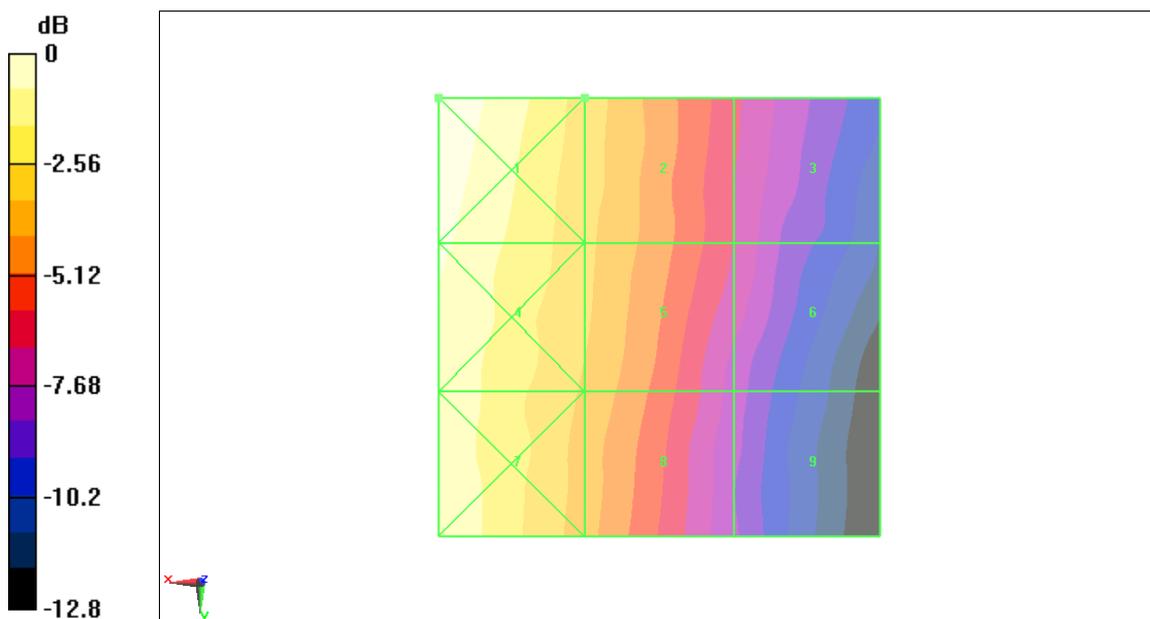
Device Reference Point: 0, 0, -6.3 mm

Reference Value = 0.050 A/m; Power Drift = 0.123 dB

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

Peak H-field in A/m

Grid 1 0.076 M4	Grid 2 0.054 M4	Grid 3 0.035 M4
Grid 4 0.071 M4	Grid 5 0.053 M4	Grid 6 0.034 M4
Grid 7 0.069 M4	Grid 8 0.051 M4	Grid 9 0.030 M4



0 dB = 0.076A/m

Fig B.19 HAC RF H-Field CDMA 835 High

HAC RF H-Field CDMA 835 Middle – SO55

Date/Time: 11/7/2011 3:21:09 PM

Electronics: DAE4 Sn777

Medium: Air

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

Ambient Temperature: 23.3°C Liquid Temperature: 22.5°C

Communication System: CDMA 835; Frequency: 836.52 MHz; Duty Cycle: 1:1

Probe: H3DV6 - SN6260;

H Scan - H3DV6 - 2007: 15 mm from Probe Center to the Device/Hearing Aid

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

Maximum value of peak Total field = 0.056 A/m

Probe Modulation Factor = 0.894

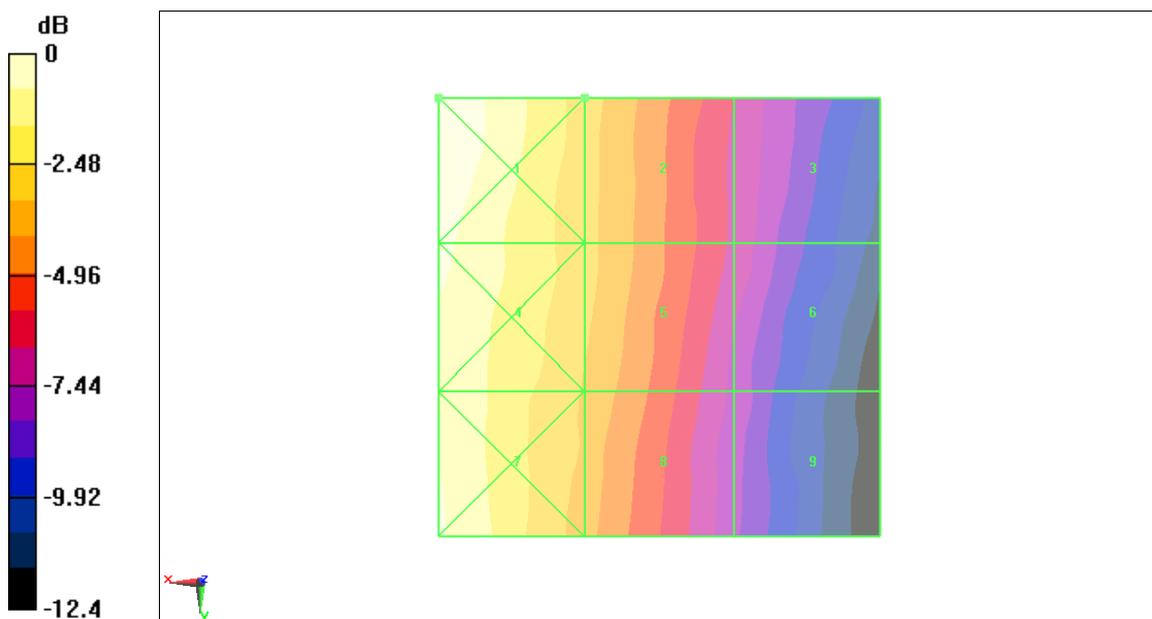
Device Reference Point: 0, 0, -6.3 mm

Reference Value = 0.053 A/m; Power Drift = 0.118 dB

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

Peak H-field in A/m

Grid 1 0.078 M4	Grid 2 0.056 M4	Grid 3 0.036 M4
Grid 4 0.073 M4	Grid 5 0.055 M4	Grid 6 0.036 M4
Grid 7 0.072 M4	Grid 8 0.053 M4	Grid 9 0.032 M4



0 dB = 0.078A/m

Fig B.20 HAC RF H-Field CDMA 835 Middle

HAC RF H-Field CDMA 835 Low – SO55

Date/Time: 11/7/2011 3:26:39 PM

Electronics: DAE4 Sn777

Medium: Air

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

Ambient Temperature: 23.3°C Liquid Temperature: 22.5°C

Communication System: CDMA 835; Frequency: 824.7 MHz; Duty Cycle: 1:1

Probe: H3DV6 - SN6260;

H Scan - H3DV6 - 2007: 15 mm from Probe Center to the Device/Hearing Aid

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

Maximum value of peak Total field = 0.054 A/m

Probe Modulation Factor = 0.904

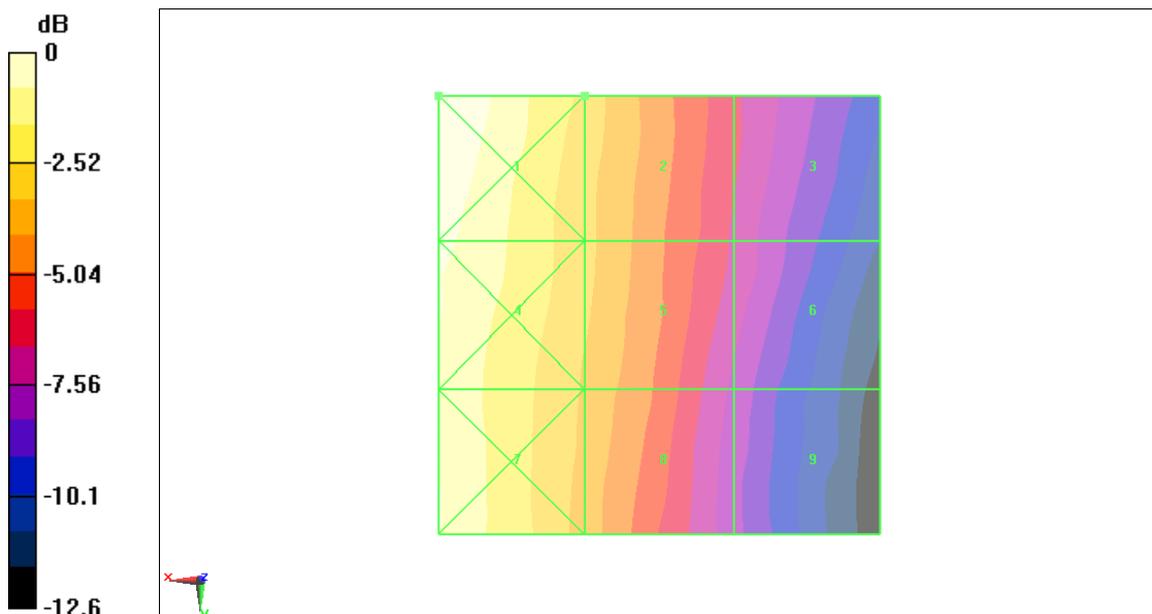
Device Reference Point: 0, 0, -6.3 mm

Reference Value = 0.049 A/m; Power Drift = 0.105 dB

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

Peak H-field in A/m

Grid 1 0.074 M4	Grid 2 0.054 M4	Grid 3 0.035 M4
Grid 4 0.069 M4	Grid 5 0.052 M4	Grid 6 0.034 M4
Grid 7 0.068 M4	Grid 8 0.050 M4	Grid 9 0.030 M4



0 dB = 0.074A/m

Fig B.21 HAC RF H-Field CDMA 835 Low

HAC RF H-Field CDMA 1900 High – SO55

Date/Time: 11/7/2011 2:56:04 PM

Electronics: DAE4 Sn777

Medium: Air

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

Ambient Temperature: 23.3°C Liquid Temperature: 22.5°C

Communication System: CDMA 1900; Frequency: 1908.75 MHz; Duty Cycle: 1:1

Probe: H3DV6 - SN6260;

H Scan - H3DV6 - 2007: 15 mm from Probe Center to the Device/Hearing Aid

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

Maximum value of peak Total field = 0.086 A/m

Probe Modulation Factor = 0.941

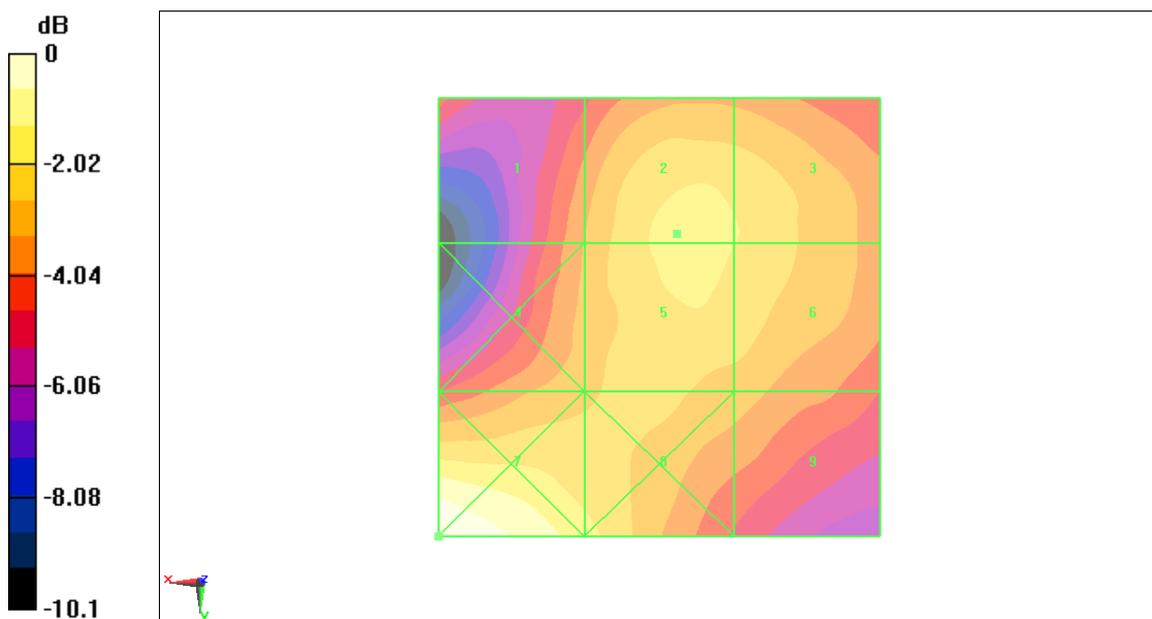
Device Reference Point: 0, 0, -6.3 mm

Reference Value = 0.102 A/m; Power Drift = 0.074 dB

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

Peak H-field in A/m

Grid 1 0.072 M4	Grid 2 0.086 M4	Grid 3 0.084 M4
Grid 4 0.077 M4	Grid 5 0.086 M4	Grid 6 0.084 M4
Grid 7 0.106 M4	Grid 8 0.087 M4	Grid 9 0.075 M4



0 dB = 0.106A/m

Fig B.22 HAC RF H-Field CDMA 1900 High

HAC RF H-Field CDMA 1900 Middle – SO55

Date/Time: 11/7/2011 3:01:27 PM

Electronics: DAE4 Sn777

Medium: Air

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

Ambient Temperature: 23.3°C Liquid Temperature: 22.5°C

Communication System: CDMA 1900; Frequency: 1880 MHz; Duty Cycle: 1:1

Probe: H3DV6 - SN6260;

H Scan - H3DV6 - 2007: 15 mm from Probe Center to the Device/Hearing Aid

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

Maximum value of peak Total field = 0.074 A/m

Probe Modulation Factor = 0.927

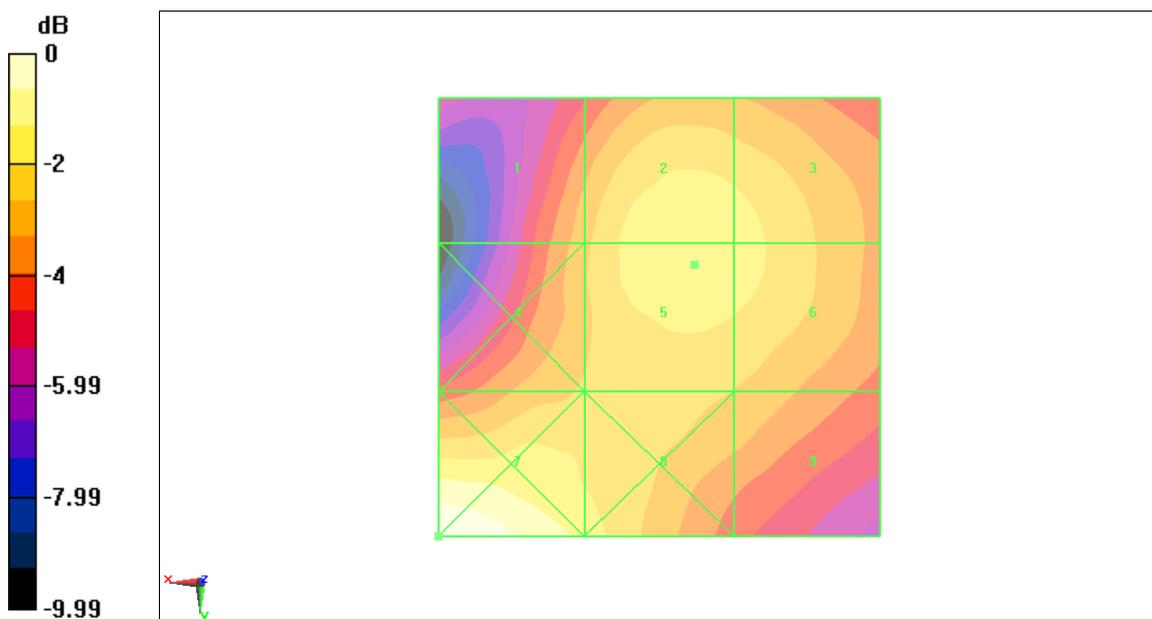
Device Reference Point: 0, 0, -6.3 mm

Reference Value = 0.090 A/m; Power Drift = 0.146 dB

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

Peak H-field in A/m

Grid 1 0.063 M4	Grid 2 0.074 M4	Grid 3 0.072 M4
Grid 4 0.065 M4	Grid 5 0.074 M4	Grid 6 0.072 M4
Grid 7 0.088 M4	Grid 8 0.074 M4	Grid 9 0.065 M4



0 dB = 0.088A/m

Fig B.23 HAC RF H-Field CDMA 1900 Middle

HAC RF H-Field CDMA 1900 Low – SO55

Date/Time: 11/7/2011 3:06:57 PM

Electronics: DAE4 Sn777

Medium: Air

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

Ambient Temperature: 23.3°C Liquid Temperature: 22.5°C

Communication System: CDMA 1900; Frequency: 1851.25 MHz; Duty Cycle: 1:1

Probe: H3DV6 - SN6260;

H Scan - H3DV6 - 2007: 15 mm from Probe Center to the Device/Hearing Aid

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

Maximum value of peak Total field = 0.049 A/m

Probe Modulation Factor = 0.932

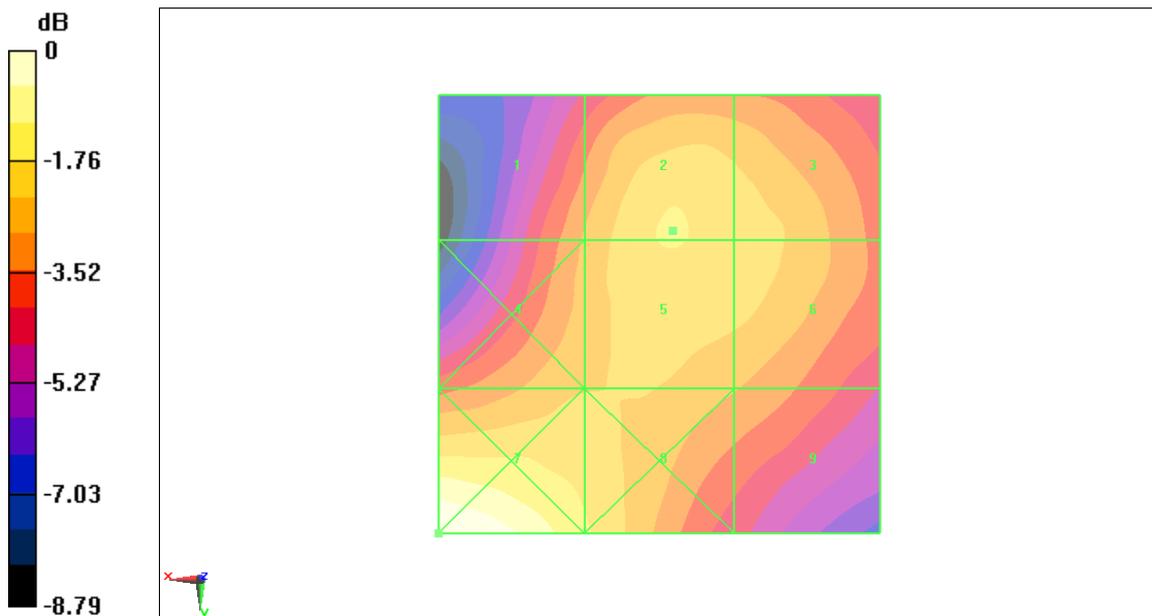
Device Reference Point: 0, 0, -6.3 mm

Reference Value = 0.058 A/m; Power Drift = 0.133 dB

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

Peak H-field in A/m

Grid 1 0.043 M4	Grid 2 0.049 M4	Grid 3 0.047 M4
Grid 4 0.045 M4	Grid 5 0.048 M4	Grid 6 0.047 M4
Grid 7 0.059 M4	Grid 8 0.049 M4	Grid 9 0.042 M4



0 dB = 0.059A/m

Fig B.24 HAC RF H-Field CDMA 1900 Low

HAC RF H-Field CDMA 835 High – SO3

Date/Time: 11/7/2011 4:48:40 PM

Electronics: DAE4 Sn777

Medium: Air

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

Ambient Temperature: 23.3°C Liquid Temperature: 22.5°C

Communication System: CDMA 835; Frequency: 848.31 MHz; Duty Cycle: 1:1

Probe: H3DV6 - SN6260;

H Scan - H3DV6 - 2007: 15 mm from Probe Center to the Device/Hearing Aid

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

Maximum value of peak Total field = 0.066 A/m

Probe Modulation Factor = 2.89

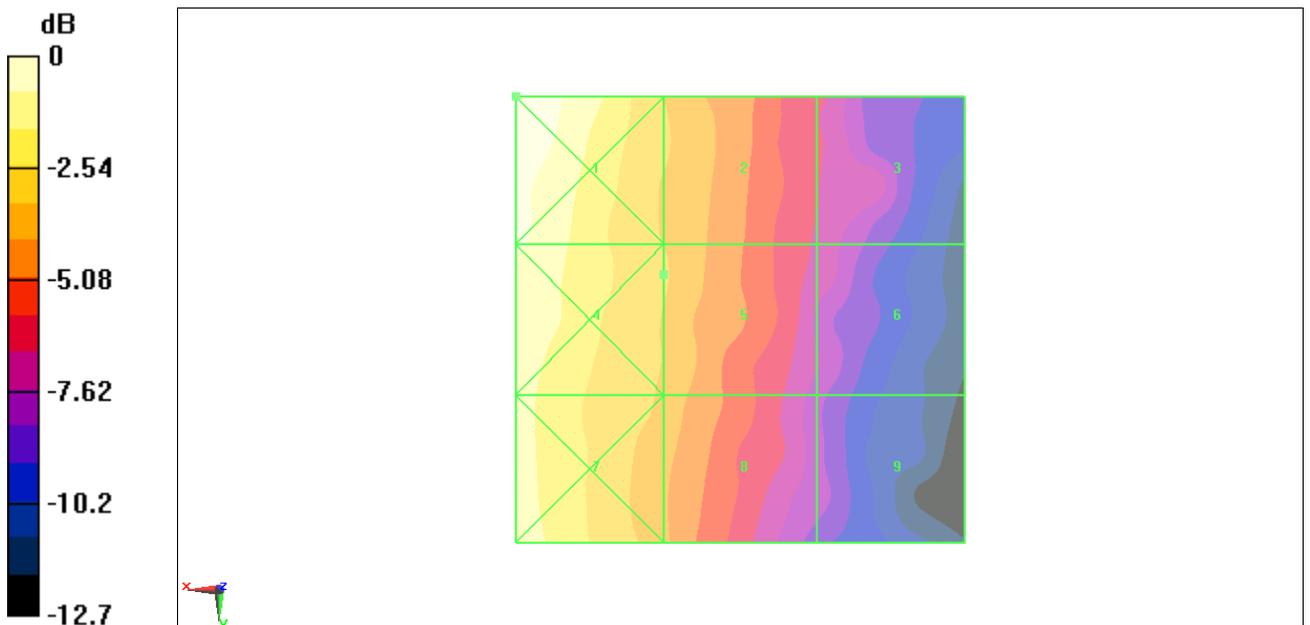
Device Reference Point: 0, 0, -6.3 mm

Reference Value = 0.020 A/m; Power Drift = 0.140 dB

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

Peak H-field in A/m

Grid 1 0.096 M4	Grid 2 0.066 M4	Grid 3 0.045 M4
Grid 4 0.089 M4	Grid 5 0.066 M4	Grid 6 0.043 M4
Grid 7 0.084 M4	Grid 8 0.064 M4	Grid 9 0.038 M4



0 dB = 0.096A/m

Fig B.25 HAC RF H-Field CDMA 835 High

HAC RF H-Field CDMA 835 Middle – SO3

Date/Time: 11/7/2011 4:39:05 PM

Electronics: DAE4 Sn777

Medium: Air

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

Ambient Temperature: 23.3°C Liquid Temperature: 22.5°C

Communication System: CDMA 835; Frequency: 836.52 MHz; Duty Cycle: 1:1

Probe: H3DV6 - SN6260;

H Scan - H3DV6 - 2007: 15 mm from Probe Center to the Device/Hearing Aid

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

Maximum value of peak Total field = 0.070 A/m

Probe Modulation Factor = 2.87

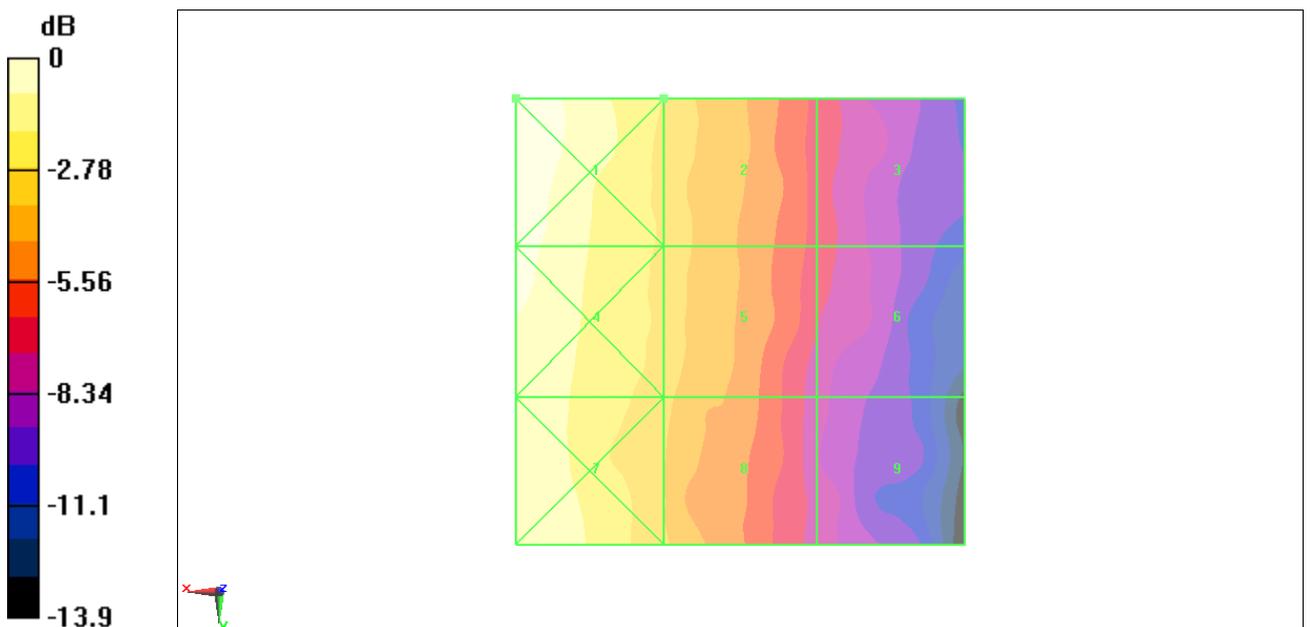
Device Reference Point: 0, 0, -6.3 mm

Reference Value = 0.020 A/m; Power Drift = 0.162 dB

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

Peak H-field in A/m

Grid 1 0.097 M4	Grid 2 0.070 M4	Grid 3 0.045 M4
Grid 4 0.090 M4	Grid 5 0.069 M4	Grid 6 0.044 M4
Grid 7 0.088 M4	Grid 8 0.066 M4	Grid 9 0.041 M4



0 dB = 0.097A/m

Fig B.26 HAC RF H-Field CDMA 835 Middle

HAC RF H-Field CDMA 835 Low – SO3

Date/Time: 11/7/2011 4:57:26 PM

Electronics: DAE4 Sn777

Medium: Air

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

Ambient Temperature: 23.3°C Liquid Temperature: 22.5°C

Communication System: CDMA 835; Frequency: 824.7 MHz; Duty Cycle: 1:1

Probe: H3DV6 - SN6260;

H Scan - H3DV6 - 2007: 15 mm from Probe Center to the Device/Hearing Aid

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

Maximum value of peak Total field = 0.060 A/m

Probe Modulation Factor = 2.88

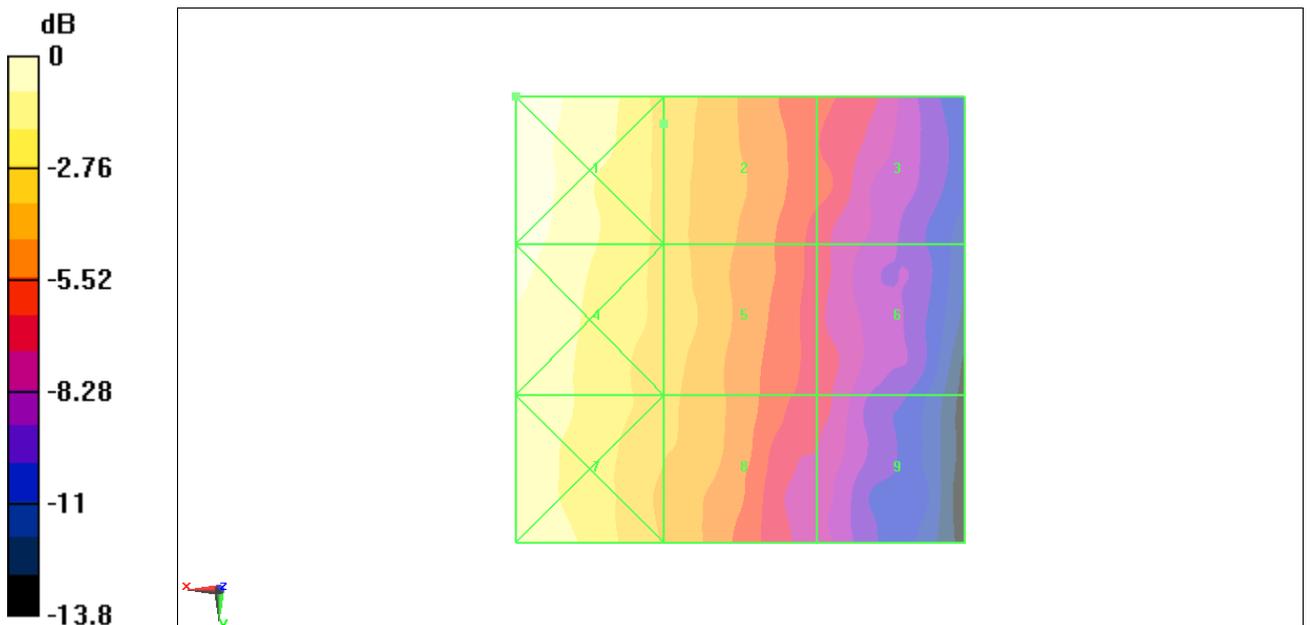
Device Reference Point: 0, 0, -6.3 mm

Reference Value = 0.018 A/m; Power Drift = 0.168 dB

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

Peak H-field in A/m

Grid 1 0.085 M4	Grid 2 0.060 M4	Grid 3 0.043 M4
Grid 4 0.081 M4	Grid 5 0.060 M4	Grid 6 0.039 M4
Grid 7 0.077 M4	Grid 8 0.058 M4	Grid 9 0.039 M4



0 dB = 0.085A/m

Fig B.27 HAC RF H-Field CDMA 835 Low

HAC RF H-Field CDMA 1900 High – SO3

Date/Time: 11/7/2011 12:14:22 PM

Electronics: DAE4 Sn777

Medium: Air

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

Ambient Temperature: 23.3°C Liquid Temperature: 22.5°C

Communication System: CDMA 1900; Frequency: 1908.75 MHz; Duty Cycle: 1:1

Probe: H3DV6 - SN6260;

H Scan - H3DV6 - 2007: 15 mm from Probe Center to the Device/Hearing Aid

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

Maximum value of peak Total field = 0.112 A/m

Probe Modulation Factor = 2.92

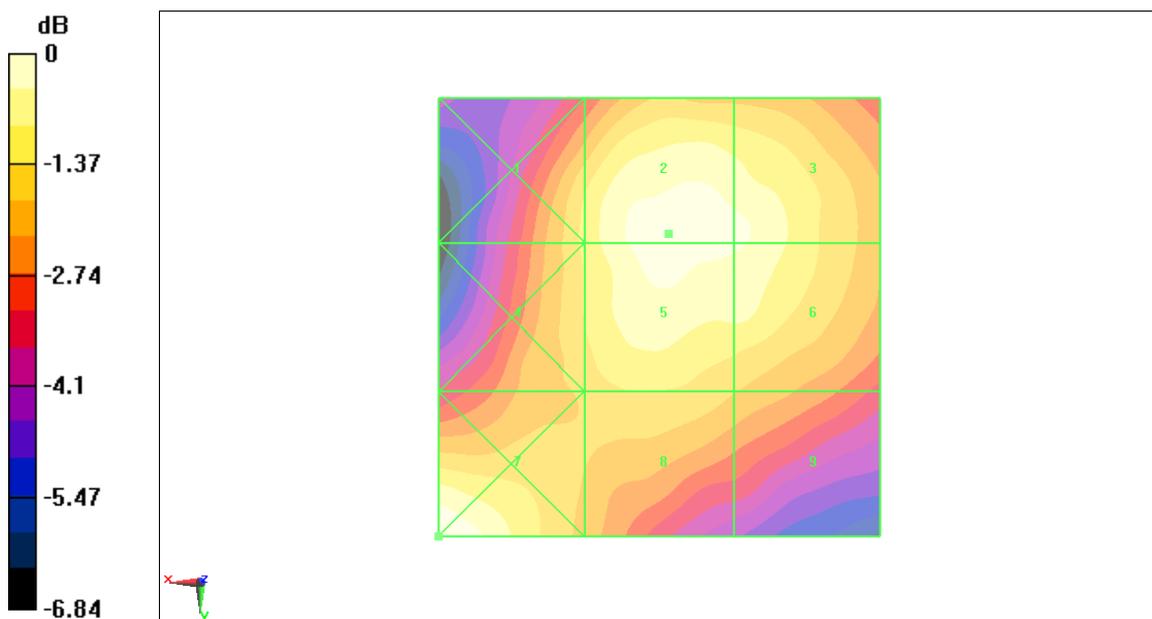
Device Reference Point: 0, 0, -6.3 mm

Reference Value = 0.042 A/m; Power Drift = -0.021 dB

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

Peak H-field in A/m

Grid 1 0.099 M4	Grid 2 0.112 M4	Grid 3 0.110 M4
Grid 4 0.099 M4	Grid 5 0.112 M4	Grid 6 0.109 M4
Grid 7 0.114 M4	Grid 8 0.098 M4	Grid 9 0.093 M4



0 dB = 0.114A/m

Fig B.28 HAC RF H-Field CDMA 1900 High

HAC RF H-Field CDMA 1900 Middle – SO3

Date/Time: 11/7/2011 12:24:22 PM

Electronics: DAE4 Sn777

Medium: Air

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

Ambient Temperature: 23.3°C Liquid Temperature: 22.5°C

Communication System: CDMA 1900; Frequency: 1880 MHz; Duty Cycle: 1:1

Probe: H3DV6 - SN6260;

H Scan - H3DV6 - 2007: 15 mm from Probe Center to the Device/Hearing Aid

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

Maximum value of peak Total field = 0.093 A/m

Probe Modulation Factor = 2.89

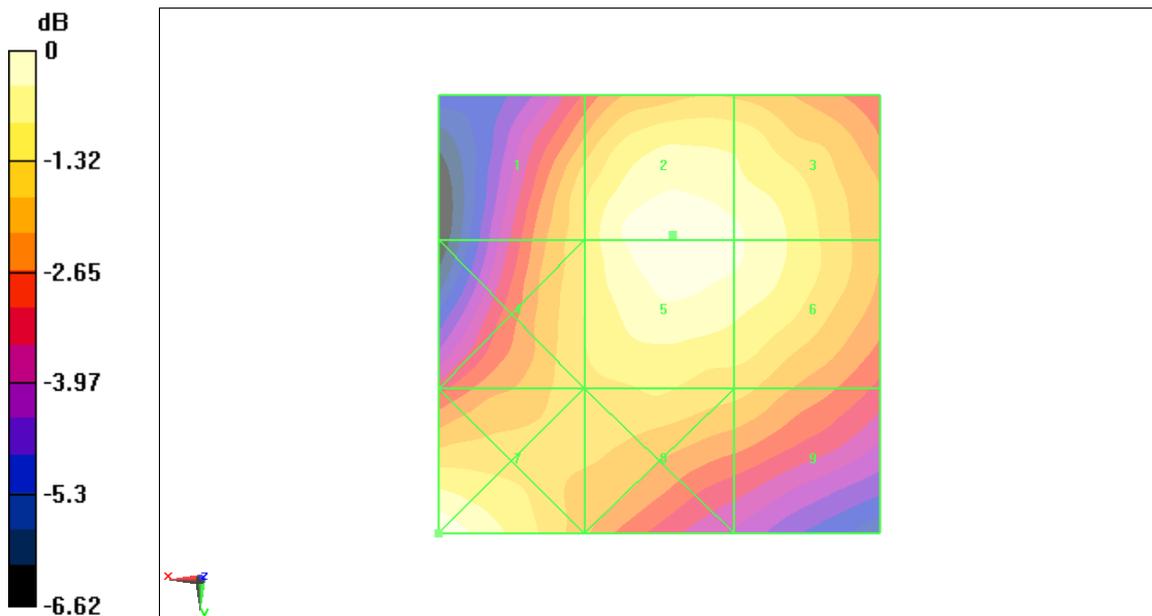
Device Reference Point: 0, 0, -6.3 mm

Reference Value = 0.036 A/m; Power Drift = -0.000743 dB

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

Peak H-field in A/m

Grid 1 0.082 M4	Grid 2 0.093 M4	Grid 3 0.091 M4
Grid 4 0.082 M4	Grid 5 0.093 M4	Grid 6 0.091 M4
Grid 7 0.095 M4	Grid 8 0.082 M4	Grid 9 0.079 M4



0 dB = 0.095A/m

Fig B.29 HAC RF H-Field CDMA 1900 Middle

HAC RF H-Field CDMA 1900 Low – SO3

Date/Time: 11/7/2011 12:47:16 PM

Electronics: DAE4 Sn777

Medium: Air

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

Ambient Temperature: 23.3°C Liquid Temperature: 22.5°C

Communication System: CDMA 1900; Frequency: 1851.25 MHz; Duty Cycle: 1:1

Probe: H3DV6 - SN6260;

H Scan - H3DV6 - 2007: 15 mm from Probe Center to the Device/Hearing Aid

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

Maximum value of peak Total field = 0.060 A/m

Probe Modulation Factor = 2.91

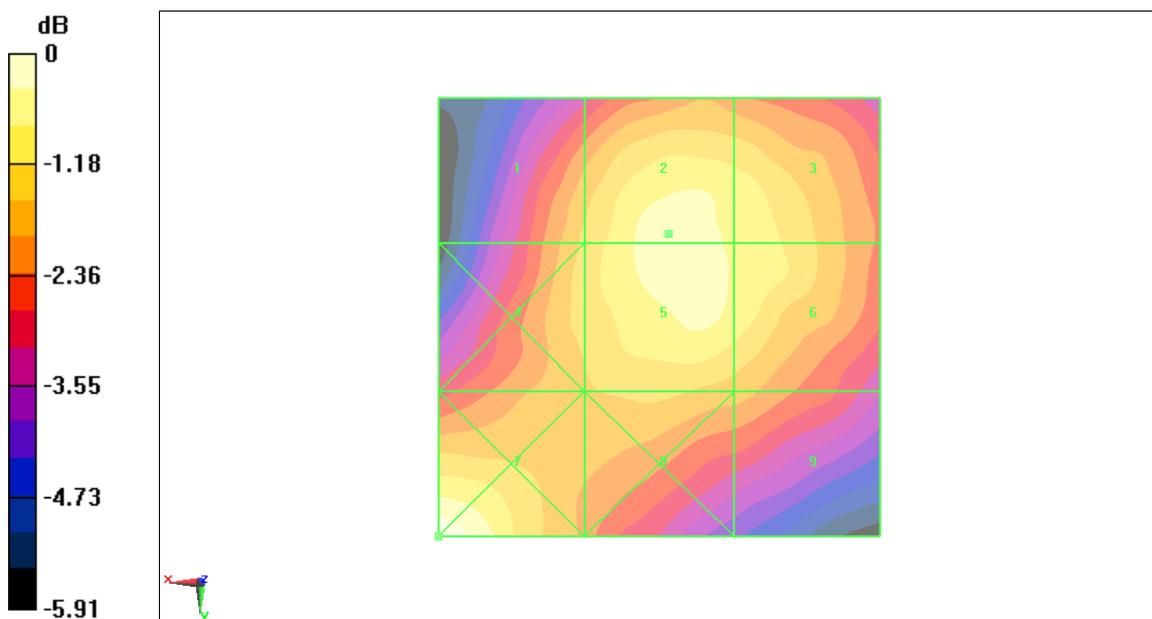
Device Reference Point: 0, 0, -6.3 mm

Reference Value = 0.022 A/m; Power Drift = 0.047 dB

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

Peak H-field in A/m

Grid 1 0.053 M4	Grid 2 0.060 M4	Grid 3 0.057 M4
Grid 4 0.054 M4	Grid 5 0.059 M4	Grid 6 0.057 M4
Grid 7 0.063 M4	Grid 8 0.053 M4	Grid 9 0.051 M4



0 dB = 0.063A/m

Fig B.30 HAC RF H-Field CDMA 1900 Low

Total M-rating of CDMA BC10 MHz Band

Date/Time: 11/7/2011 11:39:01 AM, Date/Time: 11/7/2011 1:52:52 PM

Electronics: DAE4 Sn777

Medium: Air

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

Ambient Temperature:23.3°C Liquid Temperature: 22.5°C

Communication System: CDMA BC10; Frequency: 817.9 MHz; Duty Cycle: 1:1

Probe: ER3DV6 - SN2428Probe: H3DV6 - SN6260;ConvF(1, 1, 1)

E Scan - ER3DV6 - 2007: 15 mm from Probe Center to the Device/Hearing Aid

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

Maximum value of peak Total field = 14.5 V/m

Probe Modulation Factor = 1

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 18.5 V/m; Power Drift = -0.078 dB

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

Peak E-field in V/m

Grid 1 13.1 M4	Grid 2 13.9 M4	Grid 3 13.9 M4
Grid 4 14.4 M4	Grid 5 14.5 M4	Grid 6 14.5 M4
Grid 7 14.2 M4	Grid 8 14.6 M4	Grid 9 14.2 M4

H Scan - H3DV6 - 2007: 15 mm from Probe Center to the Device/Hearing Aid

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

Maximum value of peak Total field = 0.022 A/m

Probe Modulation Factor = 1

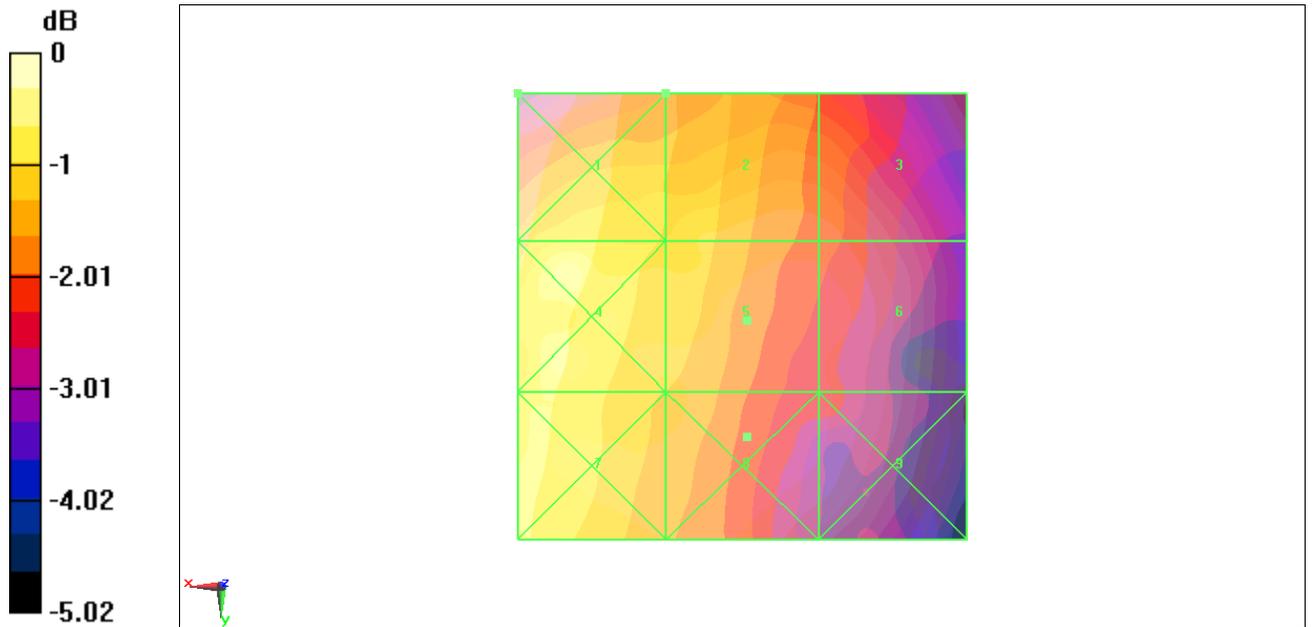
Device Reference Point: 0, 0, -6.3 mm

Reference Value = 0.018 A/m; Power Drift = -0.180 dB

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

Peak H-field in A/m

Grid 1 0.032 M4	Grid 2 0.022 M4	Grid 3 0.015 M4
Grid 4 0.029 M4	Grid 5 0.022 M4	Grid 6 0.014 M4
Grid 7 0.026 M4	Grid 8 0.019 M4	Grid 9 0.013 M4



0 dB = 14.6V/m

RF RESULTS AND M-RATING	E-Field M Rating	M4 (AWF 0 dB)
	H-Field M Rating	M4 (AWF 0 dB)
	Total M Rating	M4

Fig B.31 Total M-rating of CDMA BC10

Total M-rating of CDMA 835 MHz Band – SO55

Date/Time: 11/7/2011 2:16:16 PM, Date/Time: 11/7/2011 3:21:09 PM

Electronics: DAE4 Sn777

Medium: Air

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

Ambient Temperature:23.3°C Liquid Temperature: 22.5°C

Communication System: CDMA 835; Frequency: 836.52 MHz; Duty Cycle: 1:1

Probe: ER3DV6 - SN2428Probe: H3DV6 - SN6260;ConvF(1, 1, 1)

E Scan - ER3DV6 - 2007: 15 mm from Probe Center to the Device/Hearing Aid

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

Maximum value of peak Total field = 35.8 V/m

Probe Modulation Factor = 0.939

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 50.1 V/m; Power Drift = -0.054 dB

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

Peak E-field in V/m

Grid 1 29.5 M4	Grid 2 34.4 M4	Grid 3 33.9 M4
Grid 4 33 M4	Grid 5 35.8 M4	Grid 6 35.8 M4
Grid 7 34.5 M4	Grid 8 35.9 M4	Grid 9 35.2 M4

H Scan - H3DV6 - 2007: 15 mm from Probe Center to the Device/Hearing Aid

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

Maximum value of peak Total field = 0.056 A/m

Probe Modulation Factor = 0.894

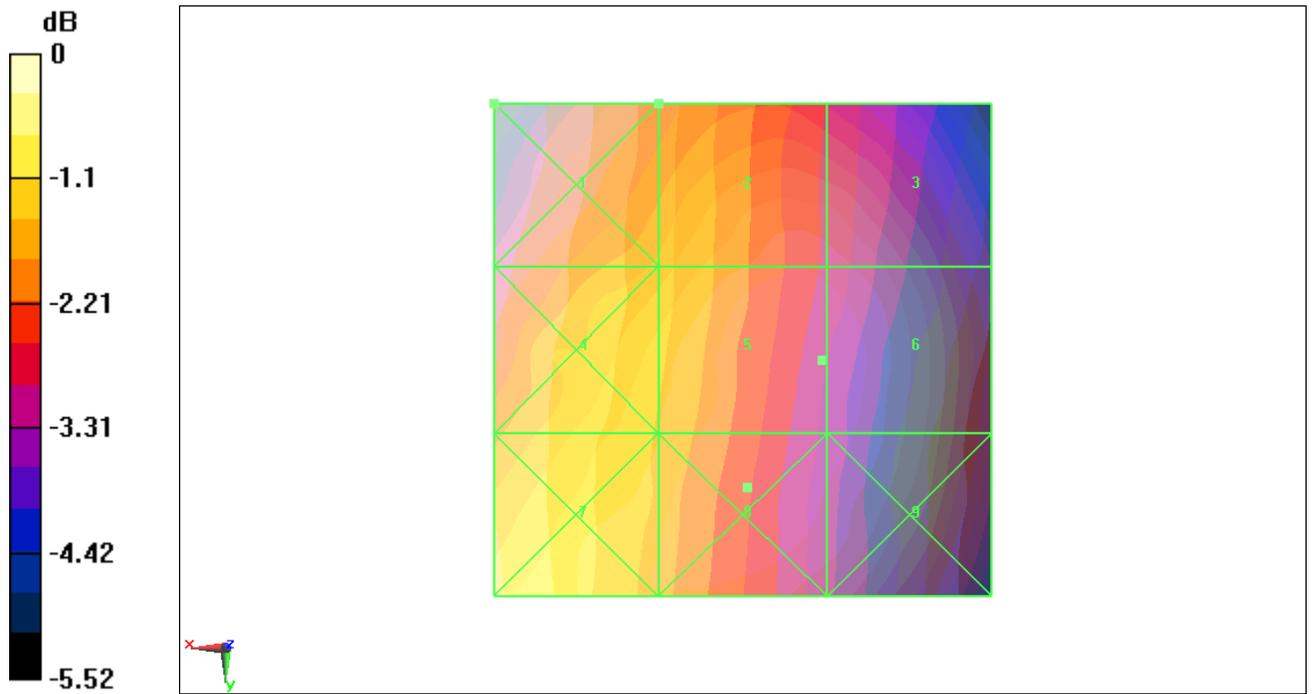
Device Reference Point: 0, 0, -6.3 mm

Reference Value = 0.053 A/m; Power Drift = 0.118 dB

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

Peak H-field in A/m

Grid 1 0.078 M4	Grid 2 0.056 M4	Grid 3 0.036 M4
Grid 4 0.073 M4	Grid 5 0.055 M4	Grid 6 0.036 M4
Grid 7 0.072 M4	Grid 8 0.053 M4	Grid 9 0.032 M4



0 dB = 35.9V/m

RF RESULTS AND M-RATING	E-Field M Rating	M4 (AWF 0 dB)
	H-Field M Rating	M4 (AWF 0 dB)
	Total M Rating	M4

Fig B.32 Total M-rating of CDMA 835

Total M-rating of CDMA 1900 MHz Band – SO55

Date/Time: 11/7/2011 2:42:04 PM, Date/Time: 11/7/2011 2:56:04 PM

Electronics: DAE4 Sn777

Medium: Air

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

Ambient Temperature:23.3°C Liquid Temperature: 22.5°C

Communication System: CDMA 1900; Frequency: 1908.75 MHz; Duty Cycle: 1:1

Probe: ER3DV6 - SN2428Probe: H3DV6 - SN6260;ConvF(1, 1, 1)

E Scan - ER3DV6 - 2007: 15 mm from Probe Center to the Device/Hearing Aid

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

Maximum value of peak Total field = 31.6 V/m

Probe Modulation Factor = 0.933

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 15.2 V/m; Power Drift = 0.103 dB

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

Peak E-field in V/m

Grid 1 32.9 M4	Grid 2 31.6 M4	Grid 3 23 M4
Grid 4 14.8 M4	Grid 5 23 M4	Grid 6 23.7 M4
Grid 7 27.6 M4	Grid 8 31.6 M4	Grid 9 31.3 M4

H Scan - H3DV6 - 2007: 15 mm from Probe Center to the Device/Hearing Aid

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

Maximum value of peak Total field = 0.086 A/m

Probe Modulation Factor = 0.941

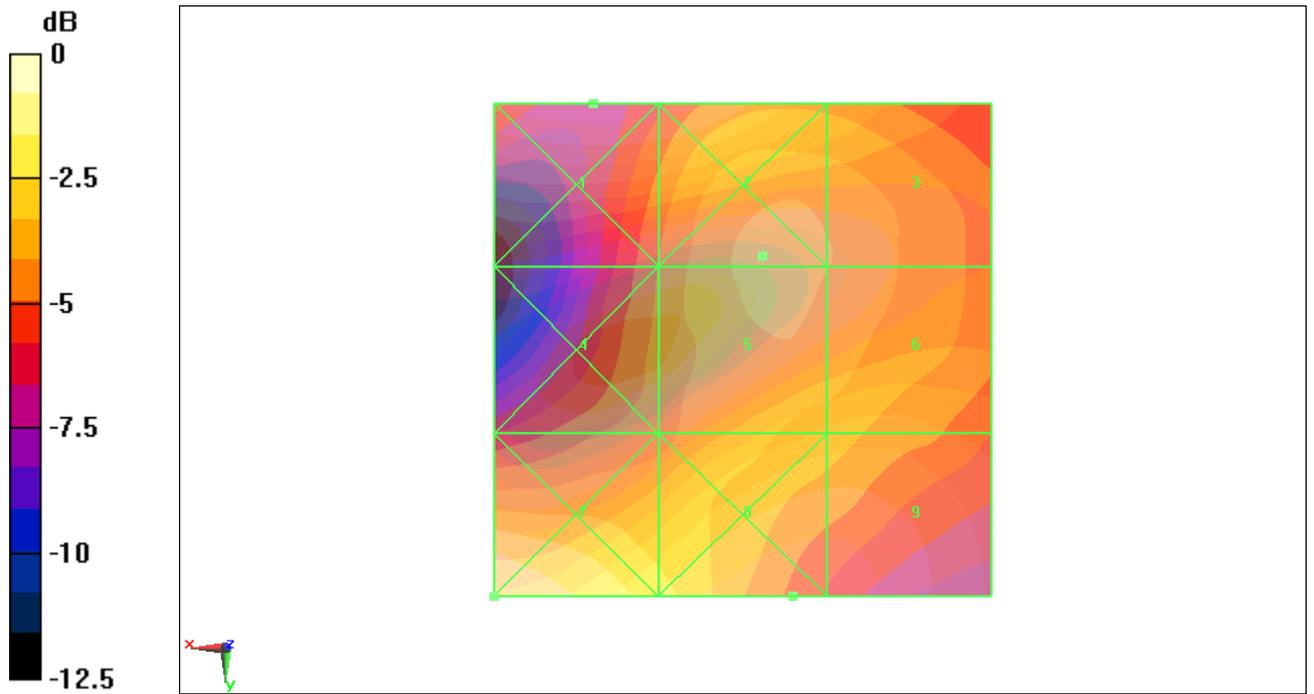
Device Reference Point: 0, 0, -6.3 mm

Reference Value = 0.102 A/m; Power Drift = 0.074 dB

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

Peak H-field in A/m

Grid 1 0.072 M4	Grid 2 0.086 M4	Grid 3 0.084 M4
Grid 4 0.077 M4	Grid 5 0.086 M4	Grid 6 0.084 M4
Grid 7 0.106 M4	Grid 8 0.087 M4	Grid 9 0.075 M4



0 dB = 32.9V/m

RF RESULTS AND M-RATING	E-Field M Rating	M4 (AWF 0 dB)
	H-Field M Rating	M4 (AWF 0 dB)
	Total M Rating	M4

Fig B.33 Total M-rating of CDMA 1900

Total M-rating of CDMA 835 MHz Band – SO3

Date/Time: 11/7/2011 9:47:55 AM, Date/Time: 11/7/2011 4:39:05 PM

Electronics: DAE4 Sn777

Medium: Air

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

Ambient Temperature:23.3°C Liquid Temperature: 22.5°C

Communication System: CDMA 835; Frequency: 836.52 MHz; Duty Cycle: 1:1

Probe: ER3DV6 - SN2428Probe: H3DV6 - SN6260;ConvF(1, 1, 1)

E Scan - ER3DV6 - 2007: 15 mm from Probe Center to the Device/Hearing Aid

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

Maximum value of peak Total field = 36.7 V/m

Probe Modulation Factor = 2.77

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 16.7 V/m; Power Drift = 0.063 dB

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

Peak E-field in V/m

Grid 1 37 M4	Grid 2 34.8 M4	Grid 3 34.4 M4
Grid 4 41.6 M4	Grid 5 36.7 M4	Grid 6 36.6 M4
Grid 7 36.7 M4	Grid 8 36.5 M4	Grid 9 35.2 M4

H Scan - H3DV6 - 2007: 15 mm from Probe Center to the Device/Hearing Aid

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

Maximum value of peak Total field = 0.070 A/m

Probe Modulation Factor = 2.87

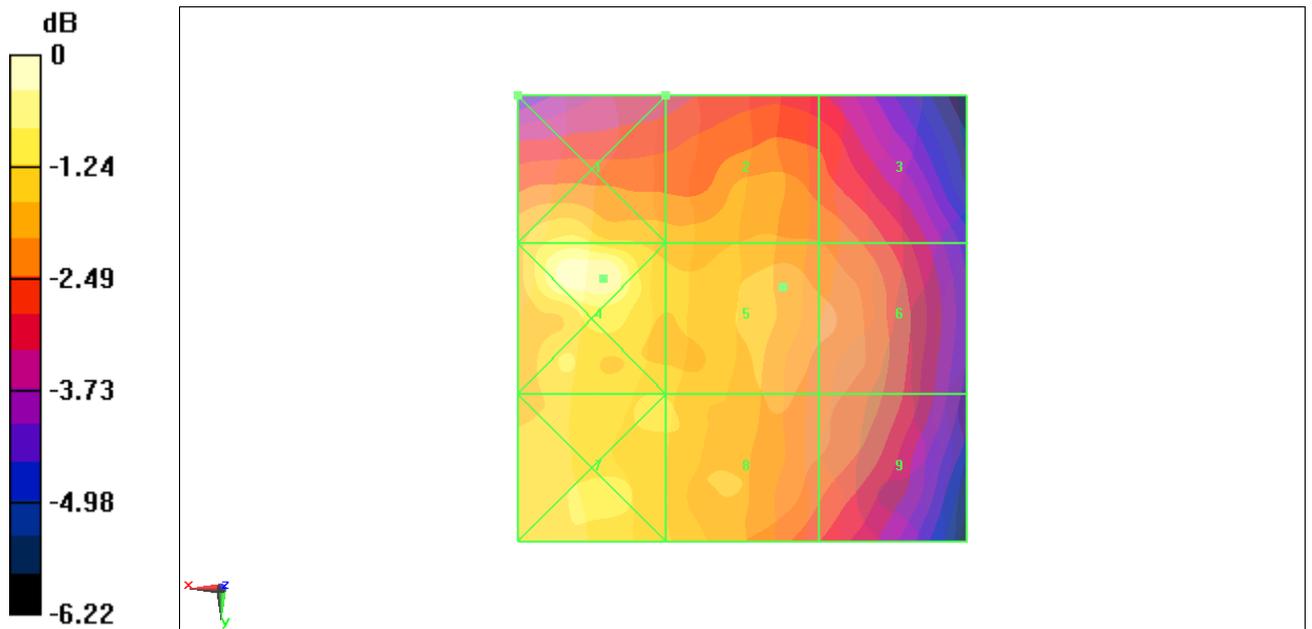
Device Reference Point: 0, 0, -6.3 mm

Reference Value = 0.020 A/m; Power Drift = 0.162 dB

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

Peak H-field in A/m

Grid 1 0.097 M4	Grid 2 0.070 M4	Grid 3 0.045 M4
Grid 4 0.090 M4	Grid 5 0.069 M4	Grid 6 0.044 M4
Grid 7 0.088 M4	Grid 8 0.066 M4	Grid 9 0.041 M4



0 dB = 41.6V/m

RF RESULTS AND M-RATING	E-Field M Rating	M4 (AWF 0 dB)
	H-Field M Rating	M4 (AWF 0 dB)
	Total M Rating	M4

Fig B.34 Total M-rating of CDMA 835

Total M-rating of CDMA 1900 MHz Band – SO3

Date/Time: 11/7/2011 11:28:05 AM, Date/Time: 11/7/2011 12:14:22 PM

Electronics: DAE4 Sn777

Medium: Air

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

Ambient Temperature:23.3°C Liquid Temperature: 22.5°C

Communication System: CDMA 1900; Frequency: 1908.75 MHz; Duty Cycle: 1:1

Probe: ER3DV6 - SN2428Probe: H3DV6 - SN6260;ConvF(1, 1, 1)

E Scan - ER3DV6 - 2007: 15 mm from Probe Center to the Device/Hearing Aid

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

Maximum value of peak Total field = 41.5 V/m

Probe Modulation Factor = 2.88

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 7.85 V/m; Power Drift = -0.144 dB

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

Peak E-field in V/m

Grid 1 43 M4	Grid 2 40 M4	Grid 3 30.3 M4
Grid 4 33.2 M4	Grid 5 29.8 M4	Grid 6 30.1 M4
Grid 7 38.8 M4	Grid 8 41.5 M4	Grid 9 40 M4

Configuration/H Scan - H3DV6 - 2007: 15 mm from Probe Center to the Device

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

Maximum value of peak Total field = 0.112 A/m

Probe Modulation Factor = 2.92

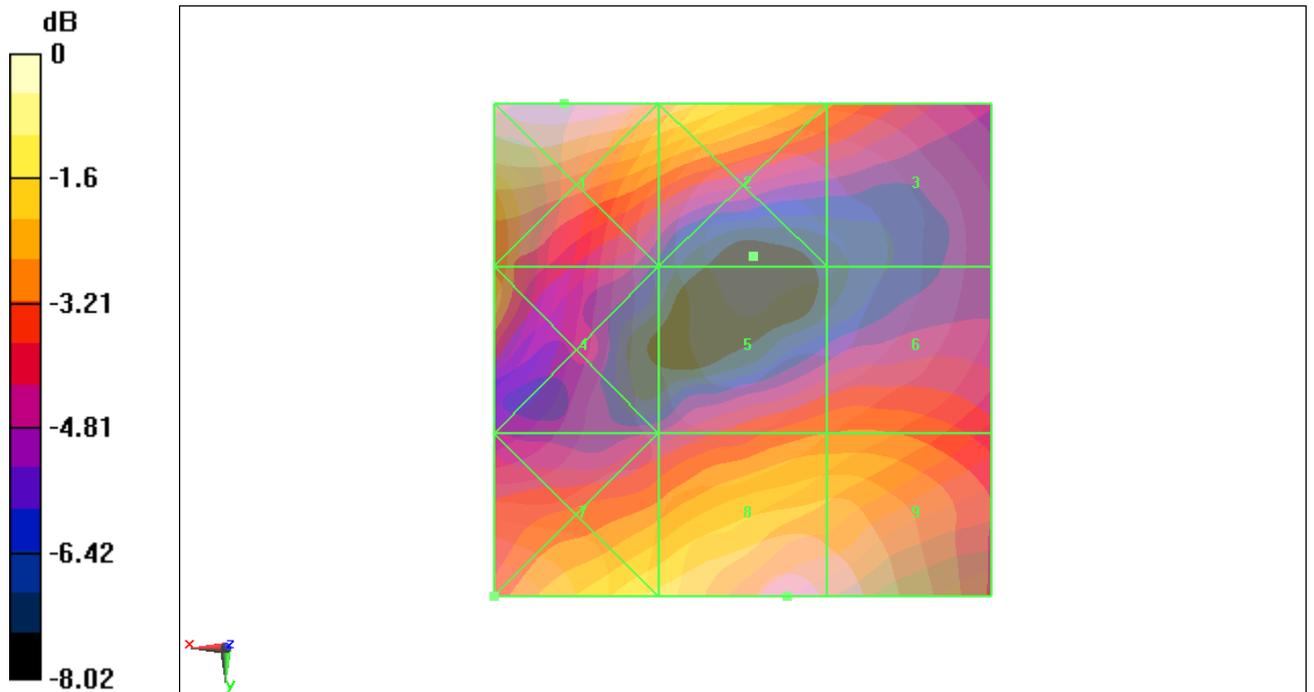
Device Reference Point: 0, 0, -6.3 mm

Reference Value = 0.042 A/m; Power Drift = -0.021 dB

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

Peak H-field in A/m

Grid 1 0.099 M4	Grid 2 0.112 M4	Grid 3 0.110 M4
Grid 4 0.099 M4	Grid 5 0.112 M4	Grid 6 0.109 M4
Grid 7 0.114 M4	Grid 8 0.098 M4	Grid 9 0.093 M4



0 dB = 43V/m

RF RESULTS AND M-RATING	E-Field M Rating	M4 (AWF 0 dB)
	H-Field M Rating	M4 (AWF 0 dB)
	Total M Rating	M4

Fig B.35 Total M-rating of CDMA 1900

ANNEX C SYSTEM VALIDATION RESULT

E SCAN of Dipole 835 MHz

Date/Time: 11/7/2011 7:33:46 AM

Electronics: DAE4 Sn777

Medium: Air

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

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

Probe: ER3DV6 - SN2428;ConvF(1, 1, 1)

E Scan - measurement distance from the probe sensor center to CD835 Dipole = 10mm/Hearing Aid Compatibility Test (41x361x1): Measurement grid: dx=5mm, dy=5mm

Maximum value of peak Total field = 168.7 V/m

Probe Modulation Factor = 1

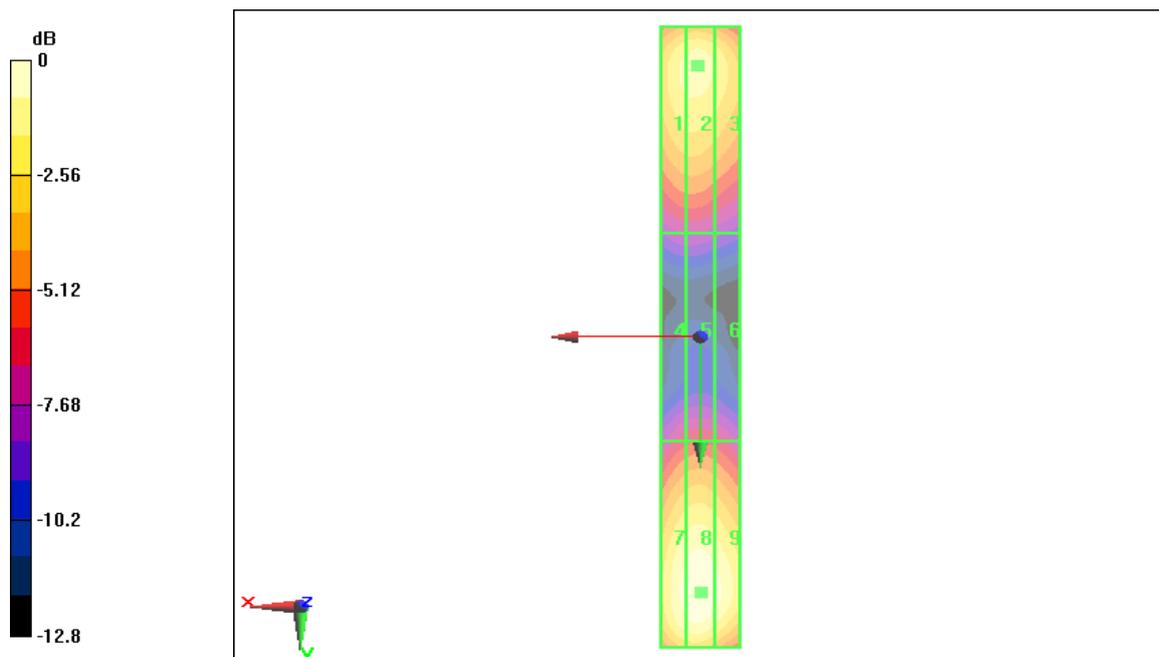
Device Reference Point: 0, 0, -6.3 mm

Reference Value = 119.0 V/m; Power Drift = 0.074 dB

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

Peak E-field in V/m

Grid 1	Grid 2	Grid 3
143.6 M4	146.1 M4	138.3 M4
Grid 4	Grid 5	Grid 6
80.3 M4	82.7 M4	79.5 M4
Grid 7	Grid 8	Grid 9
160.5 M4	168.7 M4	160.6 M4



0 dB = 168.7V/m

H SCAN of Dipole 835 MHz

Date/Time: 11/7/2011 7:52:44 AM

Electronics: DAE4 Sn777

Medium: Air

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

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

Probe: H3DV6 - SN6260;

H Scan - measurement distance from the probe sensor center to CD835 Dipole = 10mm/Hearing Aid Compatibility Test (41x361x1): Measurement grid: dx=5mm, dy=5mm

Maximum value of peak Total field = 0.445 A/m

Probe Modulation Factor = 1

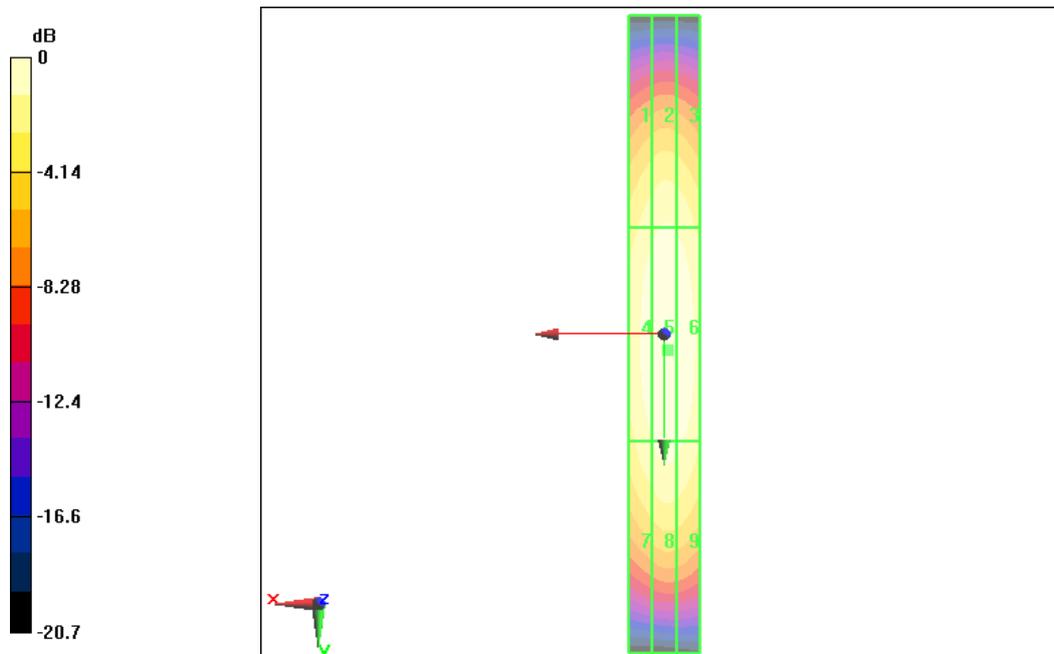
Device Reference Point: 0, 0, -6.3 mm

Reference Value = 0.464 A/m; Power Drift = 0.088 dB

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

Peak H-field in A/m

Grid 1	Grid 2	Grid 3
0.360 M4	0.384 M4	0.371 M4
Grid 4	Grid 5	Grid 6
0.419 M4	0.445 M4	0.432 M4
Grid 7	Grid 8	Grid 9
0.371 M4	0.399 M4	0.390 M4



0 dB = 0.445A/m

E SCAN of Dipole 1880 MHz

Date/Time: 11/7/2011 8:15:52 AM

Electronics: DAE4 Sn777

Medium: Air

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

Communication System: CW; Frequency: 1900 MHz; Duty Cycle: 1:1

Probe: ER3DV6 - SN2428;ConvF(1, 1, 1)

E Scan - measurement distance from the probe sensor center to CD1880 Dipole = 10mm/Hearing Aid Compatibility Test (41x181x1): Measurement grid: dx=5mm, dy=5mm

Maximum value of peak Total field = 133.6 V/m

Probe Modulation Factor = 1

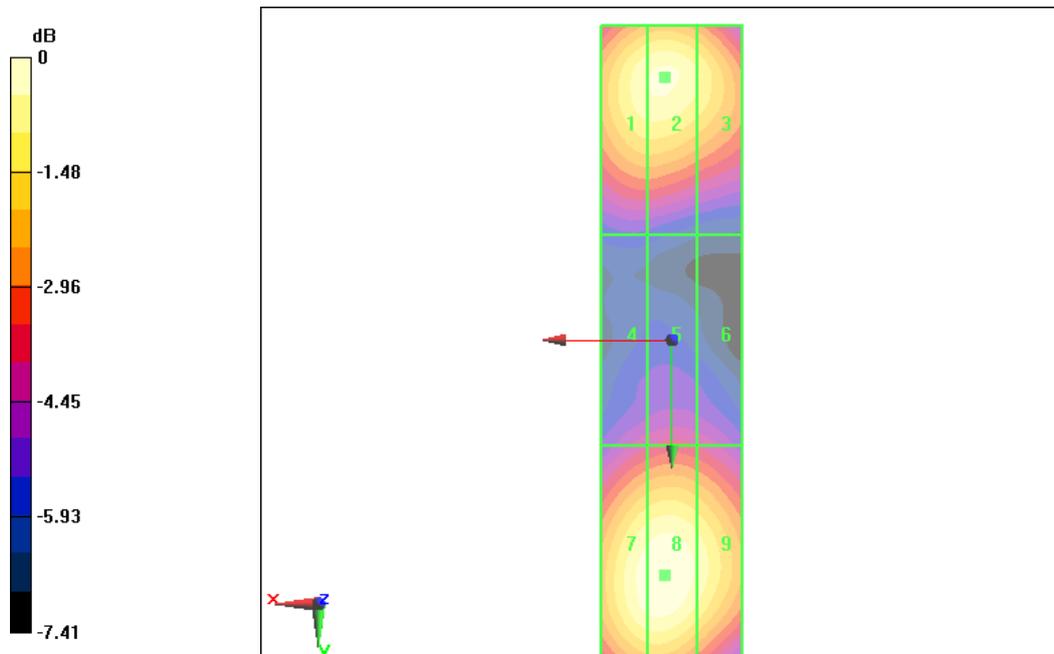
Device Reference Point: 0, 0, -6.3 mm

Reference Value = 139.4 V/m; Power Drift = -0.090 dB

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

Peak E-field in V/m

Grid 1	Grid 2	Grid 3
125.8 M2	128.0 M2	120.3 M2
Grid 4	Grid 5	Grid 6
84.1 M3	86.9 M3	82.5 M3
Grid 7	Grid 8	Grid 9
131.0 M2	133.6 M2	125.1 M2



0 dB = 133.6V/m

H SCAN of Dipole 1880 MHz

Date/Time: 11/7/2011 8:39:37 AM

Electronics: DAE4 Sn777

Medium: Air

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

Communication System: CW; Frequency: 1900 MHz; Duty Cycle: 1:1

Probe: H3DV6 - SN6260;

H Scan - measurement distance from the probe sensor center to CD1880 Dipole = 10mm/Hearing Aid Compatibility Test (41x181x1): Measurement grid: dx=5mm, dy=5mm

Maximum value of peak Total field = 0.453 A/m

Probe Modulation Factor = 1

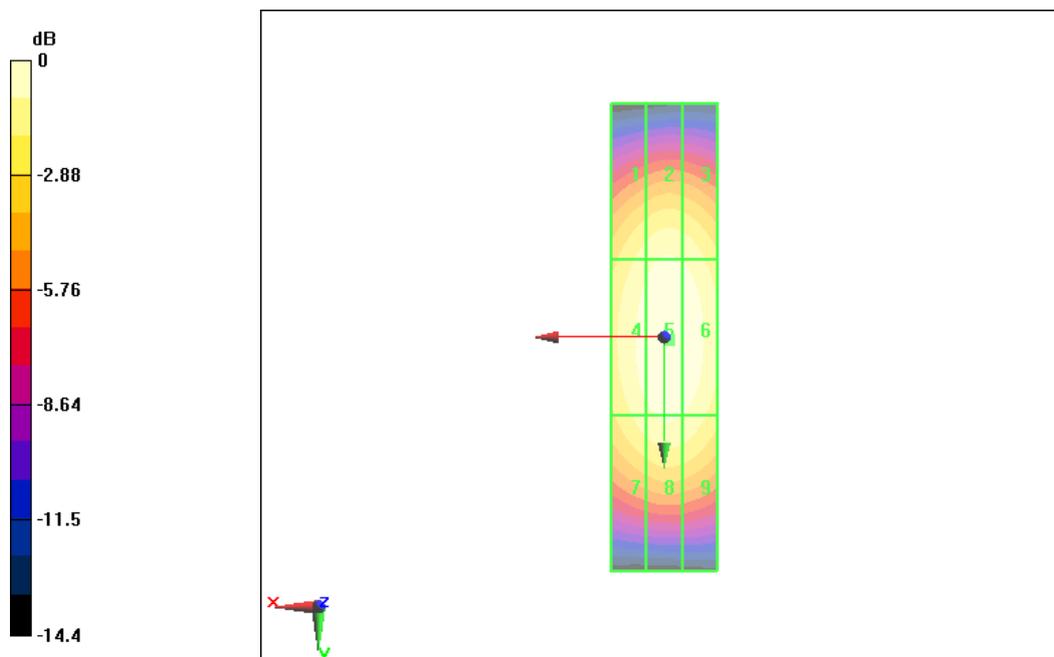
Device Reference Point: 0, 0, -6.3 mm

Reference Value = 0.455 A/m; Power Drift = 0.107 dB

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

Peak H-field in A/m

Grid 1	Grid 2	Grid 3
0.383 M2	0.404 M2	0.399 M2
Grid 4	Grid 5	Grid 6
0.420 M2	0.453 M2	0.433 M2
Grid 7	Grid 8	Grid 9
0.384 M2	0.409 M2	0.402 M2



0 dB = 0.453A/m