

APPENDIX A. HAC TEST PLOTS

Test Laboratory: HYUNDAI CALIBRATION & CERTIFICATION TECHNOLOGIES CO., LTD.
 Ambient Temperature / Channel 22.7 °C / 1013
 Test Date July 3, 2007

DUT: L1; Type: Folder; Serial: #1
Program Name: HAC E Device

Communication System: CDMA 835MHz FCC; Frequency: 824.7 MHz; Duty Cycle: 1:1
 Medium parameters used: $\sigma = 0$ mho/m, $\epsilon_r = 1$; $\rho = 1000$ kg/m³
 Phantom section: E Device Section ; Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

DASY4 Configuration:

- Probe: ER3DV6 - SN2343; ConvF(1, 1, 1); Calibrated: 2007-06-25
- Sensor-Surface: (Fix Surface)
- Electronics: DAE4 Sn447; Calibrated: 2007-03-06
- Phantom: HAC Test Arch; Type: SD HAC P01 BA

E Scan 10mm above Device Reference/Hearing Aid Compatibility Test (101x101x1): Measurement grid:
 dx=5mm, dy=5mm

Maximum value of peak Total field = 64.2 V/m

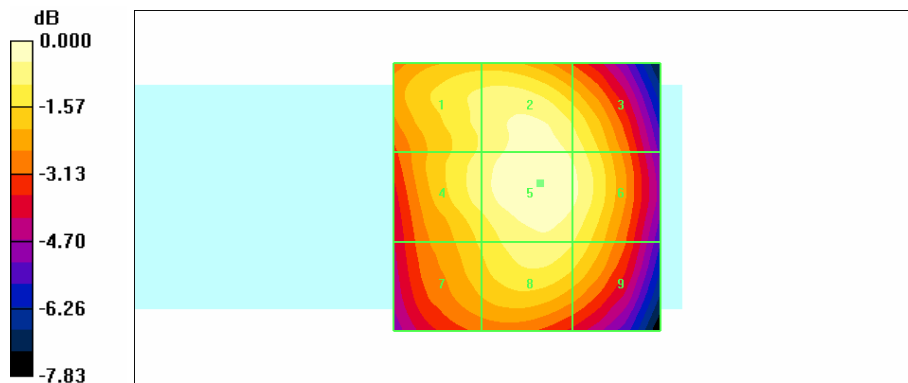
Probe Modulation Factor = 1.04

Reference Value = 65.5 V/m; Power Drift = -0.030 dB

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

Peak E-field in V/m

Grid 1	Grid 2	Grid 3
58.1	62.6	59.6
Grid 4	Grid 5	Grid 6
59.2	64.2	61.5
Grid 7	Grid 8	Grid 9
54.3	59.7	57.2



0 dB = 64.2V/m

Test Laboratory: HYUNDAI CALIBRATION & CERTIFICATION TECHNOLOGIES CO., LTD.
 Ambient Temperature / Channel 22.7 °C / 384
 Test Date July 3, 2007

DUT: L1; Type: Folder; Serial: #1
Program Name: HAC E Device

Communication System: CDMA 835MHz FCC; Frequency: 836.52 MHz; Duty Cycle: 1:1
 Medium parameters used: $\sigma = 0$ mho/m, $\epsilon_r = 1$; $\rho = 1000$ kg/m³
 Phantom section: E Device Section ; Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

DASY4 Configuration:

- Probe: ER3DV6 - SN2343; ConvF(1, 1, 1); Calibrated: 2007-06-25
- Sensor-Surface: (Fix Surface)
- Electronics: DAE4 Sn447; Calibrated: 2007-03-06
- Phantom: HAC Test Arch; Type: SD HAC P01 BA

E Scan 10mm above Device Reference/Hearing Aid Compatibility Test (101x101x1): Measurement grid:

dx=5mm, dy=5mm

Maximum value of peak Total field = 82.1 V/m

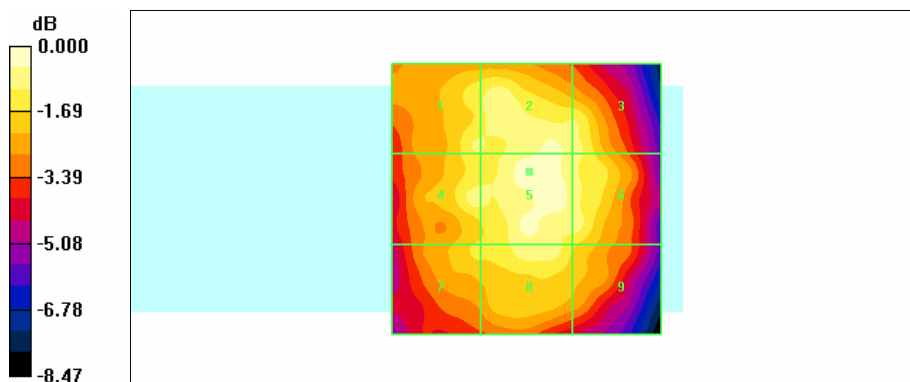
Probe Modulation Factor = 1.04

Reference Value = 82.1 V/m; Power Drift = 0.093 dB

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

Peak E-field in V/m

Grid 1	Grid 2	Grid 3
72.8	78.5	75.1
Grid 4	Grid 5	Grid 6
74.4	82.1	75.0
Grid 7	Grid 8	Grid 9
68.7	75.6	68.8



0 dB = 82.1V/m

Test Laboratory: HYUNDAI CALIBRATION & CERTIFICATION TECHNOLOGIES CO., LTD.
Ambient Temperature / Channel 22.7 °C / 777
Test Date July 3, 2007

DUT: L1; Type: Folder; Serial: #1
Program Name: HAC E Device

Communication System: CDMA 835MHz FCC; Frequency: 848.31 MHz; Duty Cycle: 1:1
Medium parameters used: $\sigma = 0$ mho/m, $\epsilon_r = 1$; $\rho = 1000$ kg/m³
Phantom section: E Device Section ; Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

DASY4 Configuration:

- Probe: ER3DV6 - SN2343; ConvF(1, 1, 1); Calibrated: 2007-06-25
- Sensor-Surface: (Fix Surface)
- Electronics: DAE4 Sn447; Calibrated: 2007-03-06
- Phantom: HAC Test Arch; Type: SD HAC P01 BA

E Scan 10mm above Device Reference/Hearing Aid Compatibility Test (101x101x1): Measurement grid:

dx=5mm, dy=5mm

Maximum value of peak Total field = 77.1 V/m

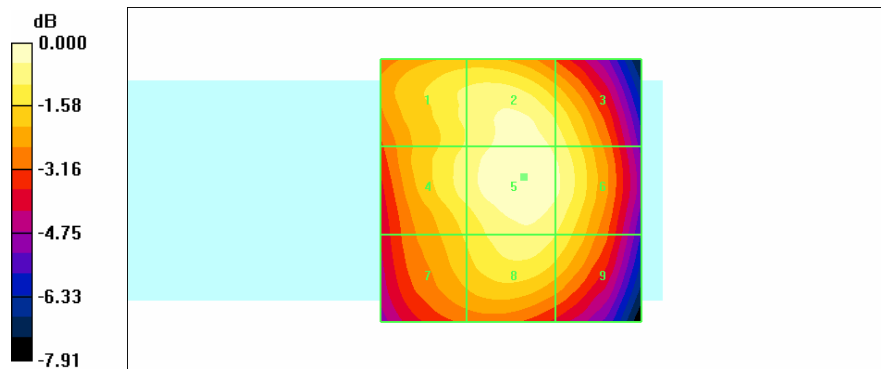
Probe Modulation Factor = 1.04

Reference Value = 78.1 V/m; Power Drift = 0.004 dB

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

Peak E-field in V/m

Grid 1	Grid 2	Grid 3
69.4	75.1	71.4
Grid 4	Grid 5	Grid 6
70.8	77.1	73.7
Grid 7	Grid 8	Grid 9
65.0	71.6	68.3



0 dB = 77.1V/m

Test Laboratory: HYUNDAI CALIBRATION & CERTIFICATION TECHNOLOGIES CO., LTD.
 Ambient Temperature / Channel 22.7 °C / 25
 Test Date July 3, 2007

DUT: L1; Type: Folder; Serial: #1
Program Name: HAC E Device

Communication System: PCS 1900MHz FCC; Frequency: 1851.25 MHz; Duty Cycle: 1:1
 Medium parameters used: $\sigma = 0$ mho/m, $\epsilon_r = 1$; $\rho = 1000$ kg/m³
 Phantom section: E Device Section ; Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

DASY4 Configuration:

- Probe: ER3DV6 - SN2343; ConvF(1, 1, 1); Calibrated: 2007-06-25
- Sensor-Surface: (Fix Surface)
- Electronics: DAE4 Sn447; Calibrated: 2007-03-06
- Phantom: HAC Test Arch; Type: SD HAC P01 BA

E Scan 10mm above Device Reference/Hearing Aid Compatibility Test (101x101x1): Measurement grid:

dx=5mm, dy=5mm

Maximum value of peak Total field = 17.5 V/m

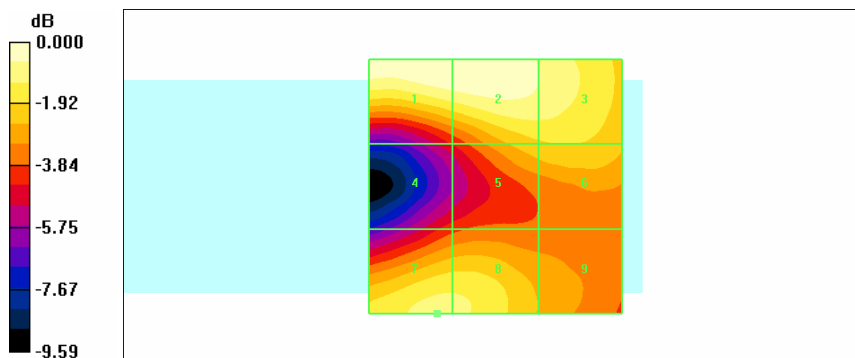
Probe Modulation Factor = 1.00

Reference Value = 10.8 V/m; Power Drift = 0.066 dB

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

Peak E-field in V/m

Grid 1	Grid 2	Grid 3
17.5	17.5	16.3
Grid 4	Grid 5	Grid 6
11.0	13.9	14.1
Grid 7	Grid 8	Grid 9
15.5	15.4	13.0



0 dB = 17.5V/m

Test Laboratory: HYUNDAI CALIBRATION & CERTIFICATION TECHNOLOGIES CO., LTD.

Ambient Temperature / Channel 22.7 °C / 600

Test Date July 3, 2007

DUT: L1; Type: Folder; Serial: #1

Program Name: HAC E Device

Communication System: PCS 1900MHz FCC; Frequency: 1880 MHz; Duty Cycle: 1:1

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

Phantom section: E Device Section ; Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

DASY4 Configuration:

- Probe: ER3DV6 - SN2343; ConvF(1, 1, 1); Calibrated: 2007-06-25

- Sensor-Surface: (Fix Surface)

- Electronics: DAE4 Sn447; Calibrated: 2007-03-06

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

E Scan 10mm above Device Reference/Hearing Aid Compatibility Test (101x101x1): Measurement grid:

dx=5mm, dy=5mm

Maximum value of peak Total field = 20.3 V/m

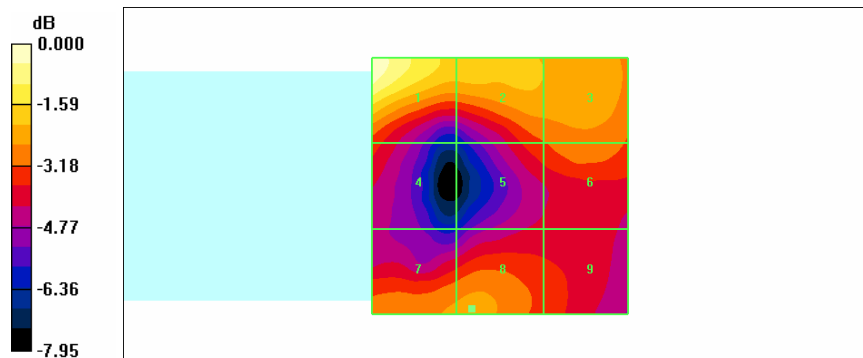
Probe Modulation Factor = 1.00

Reference Value = 11.1 V/m; Power Drift = -0.090 dB

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

Peak E-field in V/m

Grid 1	Grid 2	Grid 3
20.3	16.6	15.9
Grid 4	Grid 5	Grid 6
13.8	14.1	14.7
Grid 7	Grid 8	Grid 9
15.1	15.2	13.9



0 dB = 20.3V/m

Test Laboratory: HYUNDAI CALIBRATION & CERTIFICATION TECHNOLOGIES CO., LTD.
 Ambient Temperature / Channel 22.7 °C / 1175
 Test Date July 3, 2007

DUT: L1; Type: Folder; Serial: #1
Program Name: HAC E Device

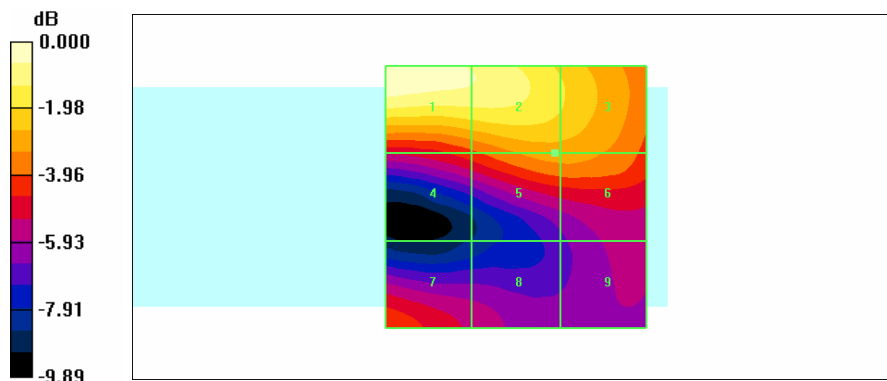
Communication System: PCS 1900MHz FCC; Frequency: 1908.75 MHz; Duty Cycle: 1:1
 Medium parameters used: $\sigma = 0$ mho/m, $\epsilon_r = 1$; $\rho = 1000$ kg/m³
 Phantom section: E Device Section ; Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

DASY4 Configuration:
 - Probe: ER3DV6 - SN2343; ConvF(1, 1, 1); Calibrated: 2007-06-25
 - Sensor-Surface: (Fix Surface)
 - Electronics: DAE4 Sn447; Calibrated: 2007-03-06
 - Phantom: HAC Test Arch; Type: SD HAC P01 BA

E Scan 10mm above Device Reference/Hearing Aid Compatibility Test (101x101x1): Measurement grid:
 dx=5mm, dy=5mm
 Maximum value of peak Total field = 29.0 V/m
 Probe Modulation Factor = 1.00
 Reference Value = 15.0 V/m; Power Drift = 0.022 dB
Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak E-field in V/m

Grid 1	Grid 2	Grid 3
29.0	27.0	23.4
Grid 4	Grid 5	Grid 6
18.1	20.6	20.6
Grid 7	Grid 8	Grid 9
18.1	15.6	15.1



0 dB = 29.0V/m

Test Laboratory: HYUNDAI CALIBRATION & CERTIFICATION TECHNOLOGIES CO., LTD.
 Ambient Temperature / Channel 22.7 °C / 1013
 Test Date July 3, 2007

DUT: L1; Type: Folder; Serial: #1
Program Name: HAC H Device

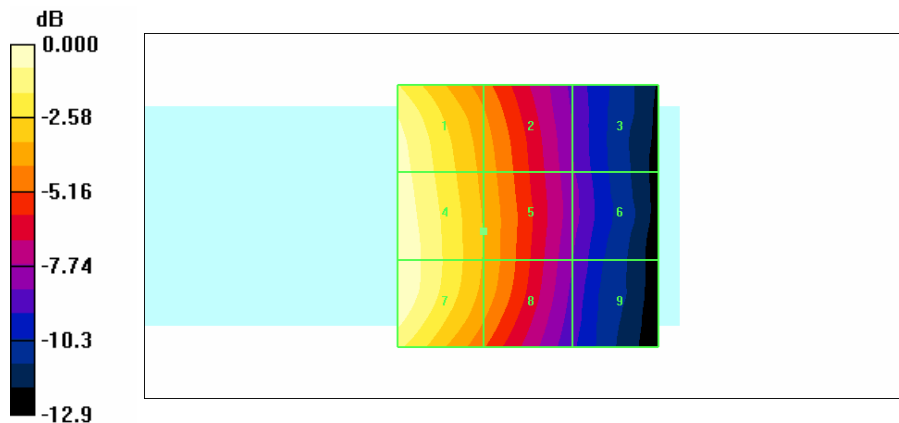
Communication System: CDMA 835MHz FCC; Frequency: 824.7 MHz; Duty Cycle: 1:1
 Medium parameters used: $\sigma = 0$ mho/m, $\epsilon_r = 1$; $\rho = 1$ kg/m³
 Phantom section: H Device Section ; Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

DASY4 Configuration:
 - Probe: H3DV6 - SN6101; ; Calibrated: 2006-07-12
 - Sensor-Surface: (Fix Surface)
 - Electronics: DAE4 Sn447; Calibrated: 2007-03-06
 - Phantom: HAC Test Arch; Type: SD HAC P01 BA

H Scan 10mm above Device Reference/Hearing Aid Compatibility Test (101x101x1): Measurement grid:
 dx=5mm, dy=5mm
 Maximum value of peak Total field = 0.107 A/m
 Probe Modulation Factor = 0.920
 Reference Value = 0.062 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
0.102	0.070	0.041
Grid 4	Grid 5	Grid 6
0.107	0.072	0.042
Grid 7	Grid 8	Grid 9
0.107	0.072	0.040



0 dB = 0.107A/m

Test Laboratory: HYUNDAI CALIBRATION & CERTIFICATION TECHNOLOGIES CO., LTD.
 Ambient Temperature / Channel 22.7 °C / 384
 Test Date July 3, 2007

DUT: L1; Type: Folder; Serial: #1
Program Name: HAC H Device

Communication System: CDMA 835MHz FCC; Frequency: 836.52 MHz; Duty Cycle: 1:1
 Medium parameters used: $\sigma = 0$ mho/m, $\epsilon_r = 1$; $\rho = 1$ kg/m³
 Phantom section: H Device Section ; Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

DASY4 Configuration:

- Probe: H3DV6 - SN6101; ; Calibrated: 2006-07-12
- Sensor-Surface: (Fix Surface)
- Electronics: DAE4 Sn447; Calibrated: 2007-03-06
- Phantom: HAC Test Arch; Type: SD HAC P01 BA

H Scan 10mm above Device Reference/Hearing Aid Compatibility Test (101x101x1): Measurement grid:
 dx=5mm, dy=5mm

Maximum value of peak Total field = 0.140 A/m

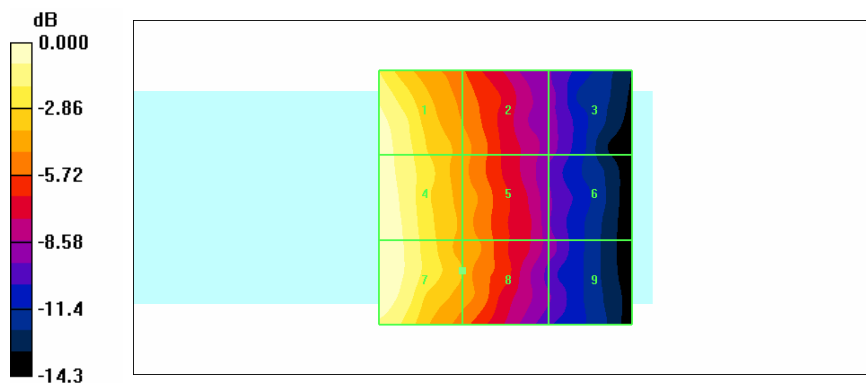
Probe Modulation Factor = 0.920

Reference Value = 0.079 A/m; Power Drift = -0.172 dB

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

Peak H-field in A/m

Grid 1	Grid 2	Grid 3
0.132	0.085	0.050
Grid 4	Grid 5	Grid 6
0.139	0.087	0.050
Grid 7	Grid 8	Grid 9
0.140	0.090	0.050



Test Laboratory: HYUNDAI CALIBRATION & CERTIFICATION TECHNOLOGIES CO., LTD.
 Ambient Temperature / Channel 22.7 °C / 777
 Test Date July 3, 2007

DUT: L1; Type: Folder; Serial: #1
Program Name: HAC H Device

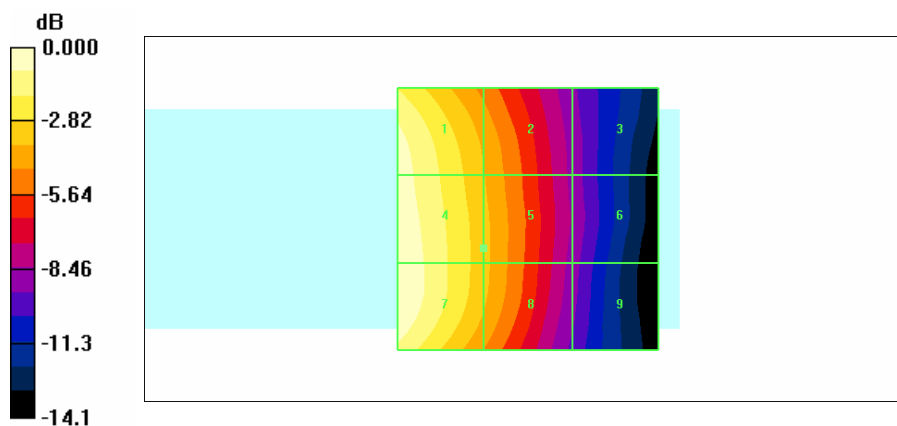
Communication System: CDMA 835MHz FCC; Frequency: 848.31 MHz; Duty Cycle: 1:1
 Medium parameters used: $\sigma = 0$ mho/m, $\epsilon_r = 1$; $\rho = 1$ kg/m³
 Phantom section: H Device Section ; Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

DASY4 Configuration:
 - Probe: H3DV6 - SN6101; ; Calibrated: 2006-07-12
 - Sensor-Surface: (Fix Surface)
 - Electronics: DAE4 Sn447; Calibrated: 2007-03-06
 - Phantom: HAC Test Arch; Type: SD HAC P01 BA

H Scan 10mm above Device Reference/Hearing Aid Compatibility Test (101x101x1): Measurement grid:
 dx=5mm, dy=5mm
 Maximum value of peak Total field = 0.131 A/m
 Probe Modulation Factor = 0.920
 Reference Value = 0.076 A/m; Power Drift = 0.017 dB
Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak H-field in A/m

Grid 1	Grid 2	Grid 3
0.125	0.086	0.048
Grid 4	Grid 5	Grid 6
0.131	0.088	0.049
Grid 7	Grid 8	Grid 9
0.131	0.088	0.047



0 dB = 0.131A/m

Test Laboratory: HYUNDAI CALIBRATION & CERTIFICATION TECHNOLOGIES CO., LTD.
 Ambient Temperature / Channel 22.7 °C / 25
 Test Date July 3, 2007

DUT: L1; Type: Folder; Serial: #1
Program Name: HAC H Device

Communication System: PCS 1900MHz FCC; Frequency: 1851.25 MHz; Duty Cycle: 1:1
 Medium parameters used: $\sigma = 0$ mho/m, $\epsilon_r = 1$; $\rho = 1$ kg/m³
 Phantom section: H Device Section ; Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

DASY4 Configuration:

- Probe: H3DV6 - SN6101; ; Calibrated: 2006-07-12
- Sensor-Surface: (Fix Surface)
- Electronics: DAE4 Sn447; Calibrated: 2007-03-06
- Phantom: HAC Test Arch; Type: SD HAC P01 BA

H Scan 10mm above Device Reference/Hearing Aid Compatibility Test (101x101x1): Measurement grid:

dx=5mm, dy=5mm

Maximum value of peak Total field = 0.055 A/m

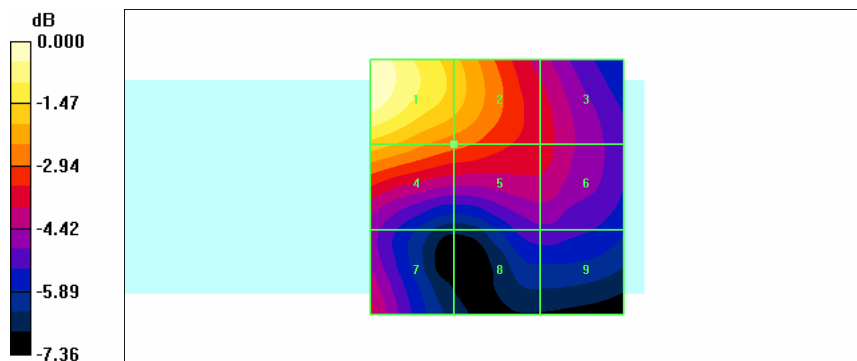
Probe Modulation Factor = 0.915

Reference Value = 0.038 A/m; Power Drift = 0.046 dB

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

Peak H-field in A/m

Grid 1	Grid 2	Grid 3
0.055	0.046	0.036
Grid 4	Grid 5	Grid 6
0.046	0.040	0.036
Grid 7	Grid 8	Grid 9
0.036	0.031	0.031



0 dB = 0.055A/m

Test Laboratory: HYUNDAI CALIBRATION & CERTIFICATION TECHNOLOGIES CO., LTD.
 Ambient Temperature / Channel 22.7 °C / 600
 Test Date July 3, 2007

DUT: L1; Type: Folder; Serial: #1
Program Name: HAC H Device

Communication System: PCS 1900MHz FCC; Frequency: 1880 MHz; Duty Cycle: 1:1
 Medium parameters used: $\sigma = 0$ mho/m, $\epsilon_r = 1$; $\rho = 1$ kg/m³
 Phantom section: H Device Section ; Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

DASY4 Configuration:

- Probe: H3DV6 - SN6101; ; Calibrated: 2006-07-12
- Sensor-Surface: (Fix Surface)
- Electronics: DAE4 Sn447; Calibrated: 2007-03-06
- Phantom: HAC Test Arch; Type: SD HAC P01 BA

H Scan 10mm above Device Reference/Hearing Aid Compatibility Test (101x101x1): Measurement grid:
 dx=5mm, dy=5mm

Maximum value of peak Total field = 0.061 A/m

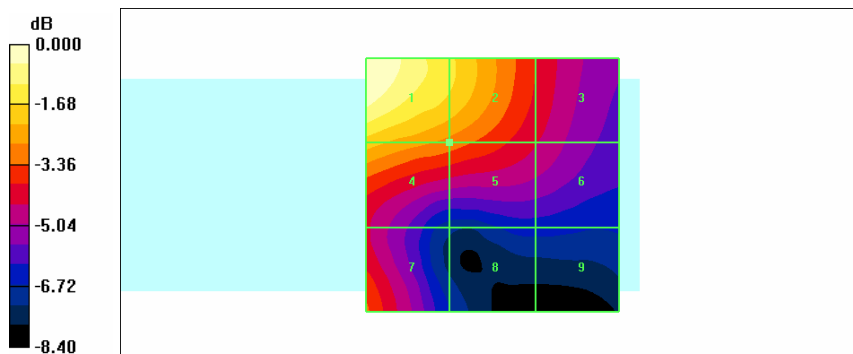
Probe Modulation Factor = 0.915

Reference Value = 0.039 A/m; Power Drift = 0.017 dB

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

Peak H-field in A/m

Grid 1	Grid 2	Grid 3
0.061	0.051	0.039
Grid 4	Grid 5	Grid 6
0.049	0.043	0.037
Grid 7	Grid 8	Grid 9
0.042	0.029	0.029



0 dB = 0.061A/m

Test Laboratory: HYUNDAI CALIBRATION & CERTIFICATION TECHNOLOGIES CO., LTD.
 Ambient Temperature / Channel 22.7 °C / 1175
 Test Date July 3, 2007

DUT: L1; Type: Folder; Serial: #1
Program Name: HAC H Device

Communication System: PCS 1900MHz FCC; Frequency: 1908.75 MHz; Duty Cycle: 1:1
 Medium parameters used: $\sigma = 0$ mho/m, $\epsilon_r = 1$; $\rho = 1$ kg/m³
 Phantom section: H Device Section ; Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

DASY4 Configuration:

- Probe: H3DV6 - SN6101; ; Calibrated: 2006-07-12
- Sensor-Surface: (Fix Surface)
- Electronics: DAE4 Sn447; Calibrated: 2007-03-06
- Phantom: HAC Test Arch; Type: SD HAC P01 BA

H Scan 10mm above Device Reference/Hearing Aid Compatibility Test (101x101x1): Measurement grid:
 dx=5mm, dy=5mm

Maximum value of peak Total field = 0.081 A/m

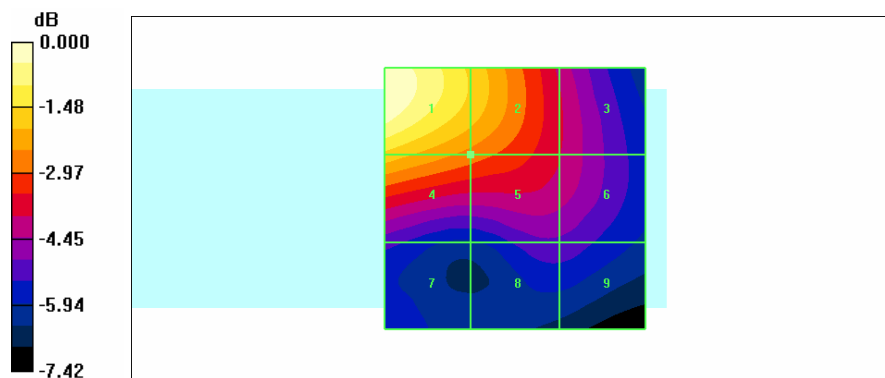
Probe Modulation Factor = 0.915

Reference Value = 0.057 A/m; Power Drift = -0.006 dB

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

Peak H-field in A/m

Grid 1	Grid 2	Grid 3
0.081	0.068	0.052
Grid 4	Grid 5	Grid 6
0.067	0.060	0.052
Grid 7	Grid 8	Grid 9
0.044	0.045	0.045



0 dB = 0.081A/m