

ATTACHMENT A – HAC TEST PLOTS

Test Laboratory: HCT

Company : Hyundai Curitel Inc.
Antenna : In / Channel : 1013
Date Tested : October 07, 2005

DUT: TX-230; 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: $\sigma = 0 \text{ mho/m}$, $\epsilon_r = 1$; $\rho = 1000 \text{ kg/m}^3$
Phantom section: E Device Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2343; ConvF(1, 1, 1); Calibrated: 2005-04-27
- Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn447; Calibrated: 2005-05-27
- Phantom: HAC Test Arch; Type: SD HAC P01 BA

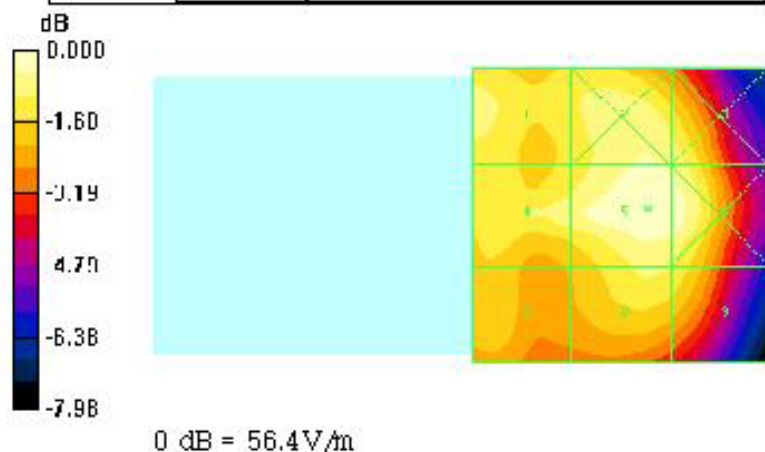
E Scan 10mm above Device Reference/Hearing Aid Compatibility Test (101x101x1):

Measurement grid: $d_x=5\text{mm}$, $d_y=5\text{mm}$
Maximum value of peak Total field = 56.4 V/m
Probe Modulation Factor = 0.980
Reference Value = 55.7 V/m; Power Drift = 0.080 dB
Hearing Aid Near-Field Category: **M4 (AWF 0 dB)**

Peak E-field in V/m

Grid 1	Grid 2	Grid 3
50.9	53.7	52.5
Grid 4	Grid 5	Grid 6
51.7	56.4	55.5
Grid 7	Grid 8	Grid 9
46.9	51.0	50.0

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



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Company : Hyundai Curitel Inc.
Antenna : Out / Channel : 1013
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DUT: TX-230; 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

DASY4 Configuration:

- Probe: ER3DV6 - SN2343; ConvF(1, 1, 1); Calibrated: 2005-04-27
- Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn447; Calibrated: 2005-05-27
- Phantom: HAC Test Arch; Type: SD HAC P01 BA

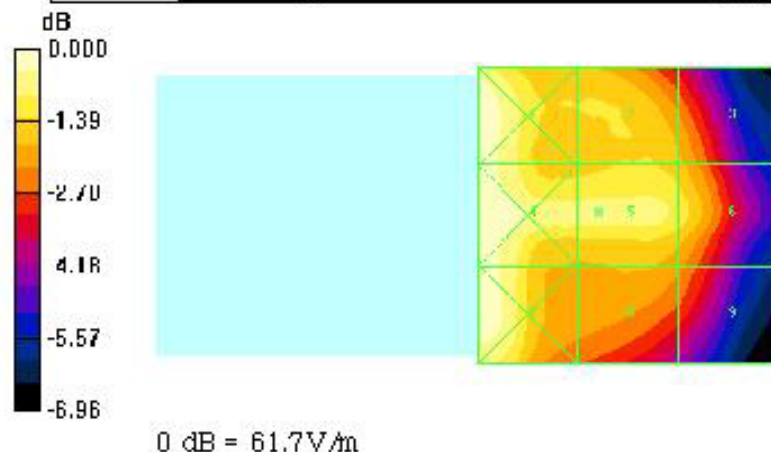
E Scan 10mm above Device Reference/Hearing Aid Compatibility Test (101x101x1):

Measurement grid: dx=5mm, dy=5mm
Maximum value of peak Total field = 57.2 V/m
Probe Modulation Factor = 0.880
Reference Value = 57.1 V/m; Power Drift = -0.050 dB
Hearing Aid Hear-Field Category: M4 (AWF 0 dB)

Peak E-field in V/m

Grid 1	Grid 2	Grid 3
61.7	53.0	50.9
Grid 4	Grid 5	Grid 6
60.8	57.2	54.5
Grid 7	Grid 8	Grid 9
60.1	50.2	48.0

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



Test Laboratory: HCT

Company : Hyundai Curitel Inc.
Antenna : In / Channel : 384
Date Tested : October 07, 2005

DUT: TX-230; 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

DASY4 Configuration:

- Probe: ER3DV6 - SN2343; CorvF(1, 1, 1); Calibrated: 2005-04-27
- Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn447; Calibrated: 2005-05-27
- Phantom: HAC Test Arch; Type: SD HAC P01 BA

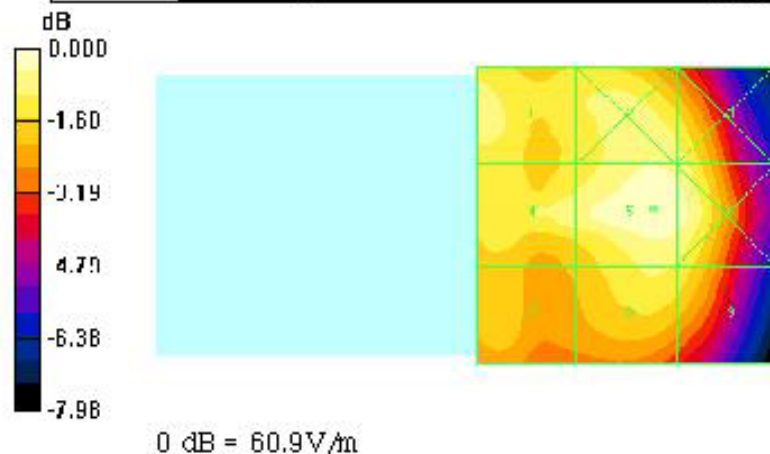
E Scan 10mm above Device Reference/Hearing Aid Compatibility Test (101x101x1):

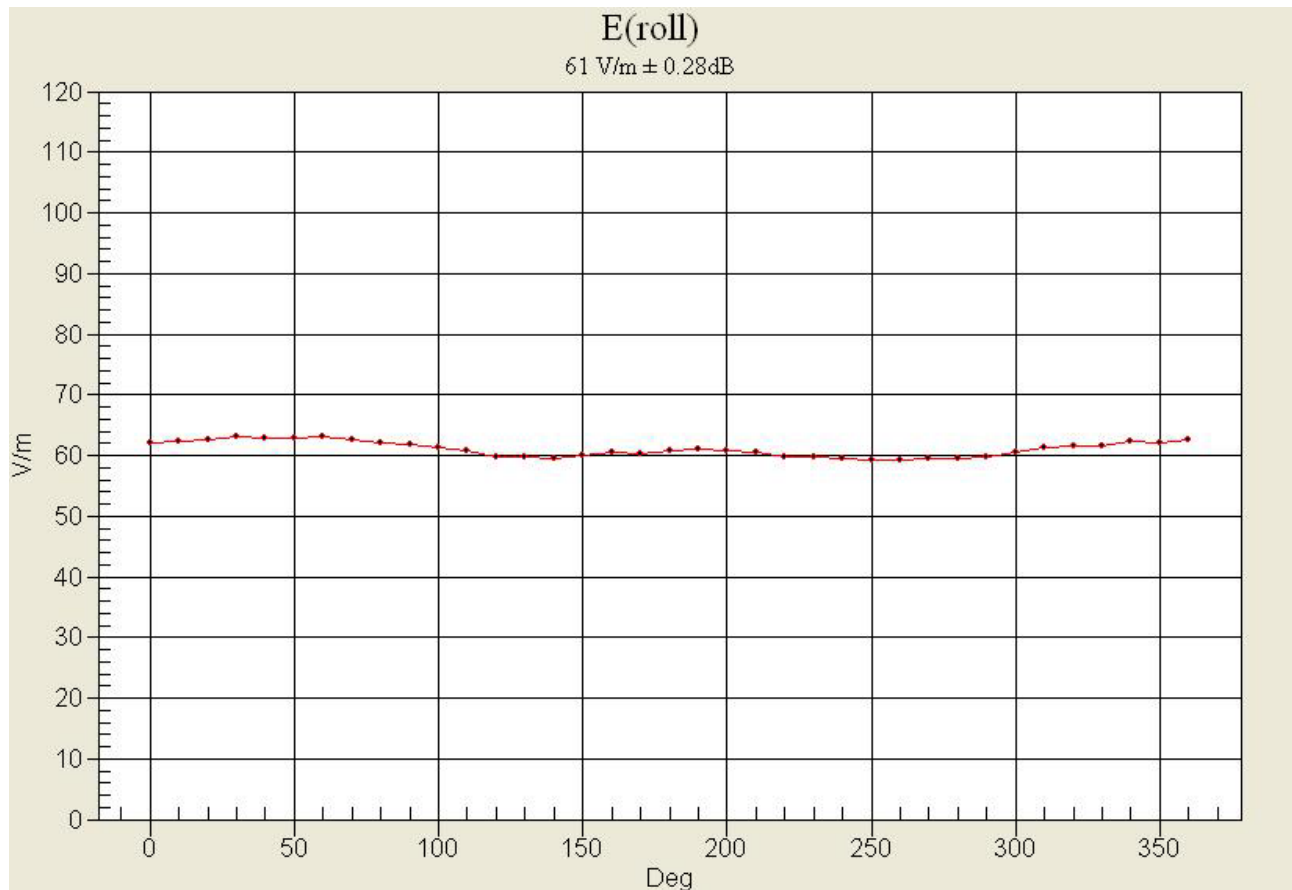
Measurement grid: dx=5mm dy=5mm
Maximum value of peak Total field = 60.9 V/m
Probe Modulation Factor = 0.980
Reference Value = 60.5 V/m; Power Drift = -0.038 dB
Hearing Aid Hear-Field Category: M4 (AWF 0 dB)

Peak E-field in V/m

Grid 1	Grid 2	Grid 3
55.5	57.3	55.9
Grid 4	Grid 5	Grid 6
56.2	60.9	59.3
Grid 7	Grid 8	Grid 9
50.3	54.8	53.6

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





Test Laboratory: HCT

Company : Hyundai Curitel Inc.
Antenna : Out / Channel : 384
Date Tested : October 07, 2005

DUT: TX-230; 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

DASY4 Configuration:

- Probe: ER3DV6 - SN2343; ConvF(1, 1, 1); Calibrated: 2005-04-27
- Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn447; Calibrated: 2005-05-27
- Phantom: HAC Test Arch; Type: SD HAC P01 BA

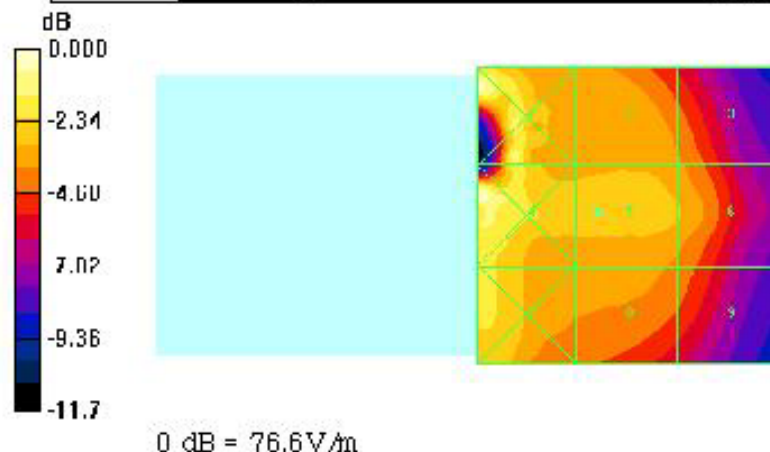
E Scan 10mm above Device Reference/Hearing Aid Compatibility Test (101x101x1):

Measurement grid: dx=5mm, dy=5mm
Maximum value of peak Total field = 58.2 V/m
Probe Modulation Factor = 0.880
Reference Value = 56.9 V/m; Power Drift = -0.081 dB
Hearing Aid Hear-Field Category: M4 (AWF 0 dB)

Peak E-field in V/m

Grid 1	Grid 2	Grid 3
71.2	53.3	50.0
Grid 4	Grid 5	Grid 6
76.6	58.2	54.1
Grid 7	Grid 8	Grid 9
59.9	50.7	48.0

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



Test Laboratory: HCT

Company : Hyundai Curitel Inc.
Antenna : In / Channel : 777
Date Tested : October 07, 2005

DUT: TX-230; 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

DASY4 Configuration:

- Probe: ER3DV6 - SN2343; ConvF(1, 1, 1); Calibrated: 2005-04-27
- Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn447; Calibrated: 2005-05-27
- Phantom: HAC Test Arch; Type: SD HAC P01 BA

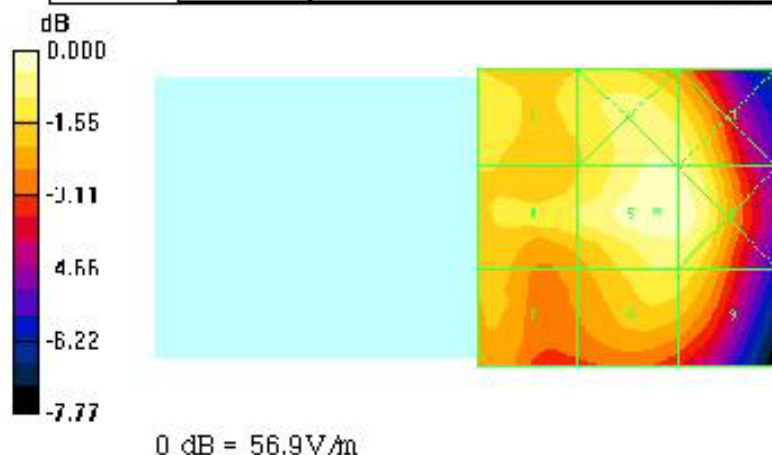
E Scan 10mm above Device Reference/Hearing Aid Compatibility Test (101x101x1):

Measurement grid: dx=5mm, dy=5mm
Maximum value of peak Total field = 56.9 V/m
Probe Modulation Factor = 0.980
Reference Value = 55.8 V/m; Power Drift = -0.023 dB
Hearing Aid Hear-Field Category: M4 (AWF 0 dB)

Peak E-field in V/m

Grid 1	Grid 2	Grid 3
49.9	54.3	53.4
Grid 4	Grid 5	Grid 6
50.7	56.9	56.3
Grid 7	Grid 8	Grid 9
45.6	50.8	50.2

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



Test Laboratory: HCT

Company : Hyundai Curitel Inc.
Antenna : Out / Channel : 777
Date Tested : October 07, 2005

DUT: TX-230; 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

DASY4 Configuration:

- Probe: ER3DV6 - SN2343; ConvF(1, 1, 1); Calibrated: 2005-04-27
- Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn447; Calibrated: 2005-05-27
- Phantom: HAC Test Arch; Type: SD HAC P01 BA

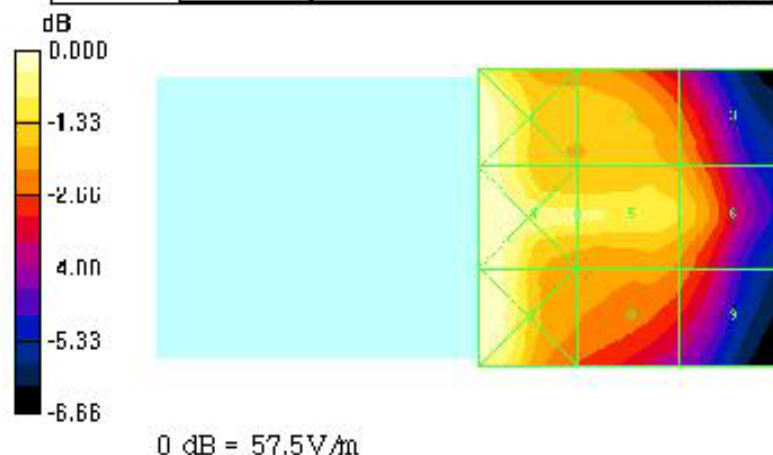
E Scan 10mm above Device Reference/Hearing Aid Compatibility Test (101x101x1):

Measurement grid: dx=5mm, dy=5mm
Maximum value of peak Total field = 52.4 V/m
Probe Modulation Factor = 0.980
Reference Value = 51.8 V/m; Power Drift = -0.017 dB
Hearing Aid Hear-Field Category: M4 (AWF 0 dB)

Peak E-field in V/m

Grid 1	Grid 2	Grid 3
57.0	47.9	46.3
Grid 4	Grid 5	Grid 6
57.4	52.4	49.6
Grid 7	Grid 8	Grid 9
57.5	45.6	44.1

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



Test Laboratory: HCT

Company : Hyundai Curitel Inc.
Antenna : In / Channel : 25
Date Tested : October 07, 2005

DUT: TX-230; Type: Folder; Serial: #1
Program Name: HAC E Device

Communication System: PCS1900; 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

DASY4 Configuration:

- Probe: ER3DV6 - SN2343; ConvF(1, 1, 1); Calibrated: 2005-04-27
- Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn447; Calibrated: 2005-05-27
- Phantom: HAC Test Arch; Type: SD HAC P01 BA

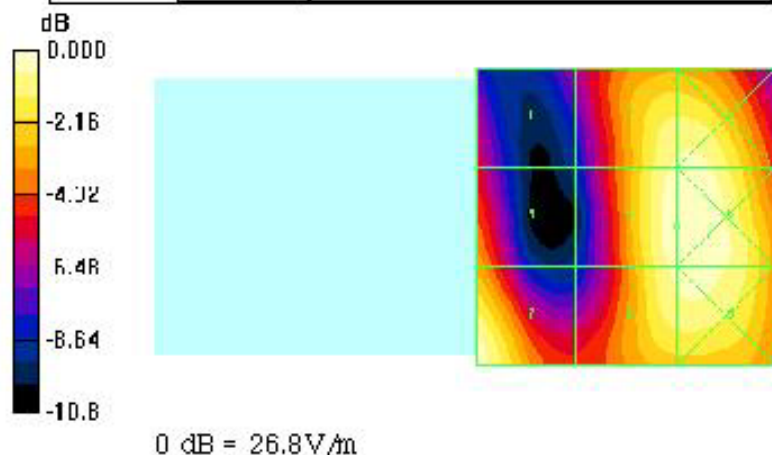
E Scan 10mm above Device Reference/Hearing Aid Compatibility Test (101x101x1):

Measurement grid: dx=5mm, dy=5mm
Maximum value of peak Total field = 26.1 V/m
Probe Modulation Factor = 0.980
Reference Value = 20.5 V/m; Power Drift = -0.068 dB
Hearing Aid Hear-Field Category: M4 (AWF 0 dB)

Peak E-field in V/m

Grid 1	Grid 2	Grid 3
14.7	25.1	25.5
Grid 4	Grid 5	Grid 6
19.0	26.1	26.8
Grid 7	Grid 8	Grid 9
26.1	25.3	26.0

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



Test Laboratory: HCT

Company : Hyundai Curitel Inc.
Antenna : Out / Channel : 25
Date Tested : October 07, 2005

DUT: TX-230; Type: Folder; Serial: #1
Program Name: HAC E Device

Communication System: PCS1900; 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

DASY4 Configuration:

- Probe: ER3DV6 - SN2343; ConvF(1, 1, 1); Calibrated: 2005-04-27
- Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn447; Calibrated: 2005-05-27
- Phantom: HAC Test Arch; Type: SD HAC P01 BA

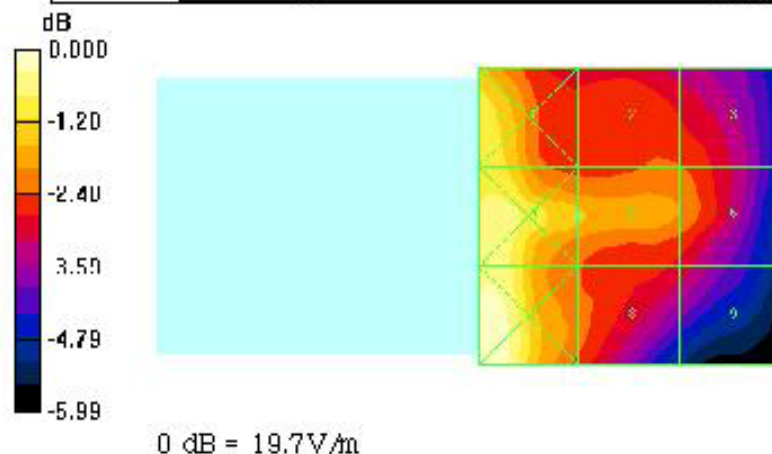
E Scan 10mm above Device Reference/Hearing Aid Compatibility Test (101x101x1):

Measurement grid: dx=5mm dy=5mm
Maximum value of peak Total field = 18.6 V/m
Probe Modulation Factor = 0.980
Reference Value = 15.1 V/m; Power Drift = 0.017 dB
Hearing Aid Hear-Field Category: M4 (AWF 0 dB)

Peak E-field in V/m

Grid 1	Grid 2	Grid 3
17.7	15.1	15.0
Grid 4	Grid 5	Grid 6
18.6	16.6	15.7
Grid 7	Grid 8	Grid 9
19.7	15.3	14.0

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



Test Laboratory: HCT

Company : Hyundai Curitel Inc.

Antenna : In / Channel : 600

Date Tested : October 07, 2005

DUT: TX-230; Type: Folder; Serial: #1

Program Name: HAC E Device

Communication System: PCS1900; Frequency: 1880 MHz; Duty Cycle: 1:1

Medium parameters used: $\sigma = 0 \text{ mho/m}$, $\epsilon_r = 1$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: E Device Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2343; ConvF(1, 1, 1); Calibrated: 2005-04-27

- Sensor-Surface: (Fix Surface)

- Electronics: DAE3 Sn447; Calibrated: 2005-05-27

- 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 = 27.1 V/m

Probe Modulation Factor = 0.980

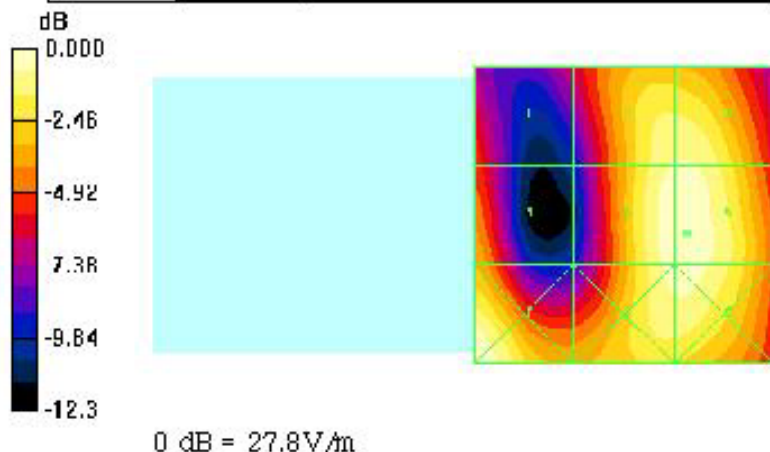
Reference Value = 22.0 V/m; Power Drift = -0.028 dB

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

Peak E-field in V/m

Grid 1	Grid 2	Grid 3
15.4	25.4	25.6
Grid 4	Grid 5	Grid 6
19.3	26.9	27.1
Grid 7	Grid 8	Grid 9
27.8	26.2	26.4

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



Test Laboratory: HCT

Company : Hyundai Curitel Inc.
Antenna : Out / Channel : 600
Date Tested : October 07, 2005

DUT: TX-230; Type: Folder; Serial: #1
Program Name: HAC E Device

Communication System: PCS1900; 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

DASY4 Configuration:

- Probe: ER3DV6 - SN2343; ConvF(1, 1, 1); Calibrated: 2005-04-27
- Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn447; Calibrated: 2005-05-27
- Phantom: HAC Test Arch; Type: SD HAC P01 BA

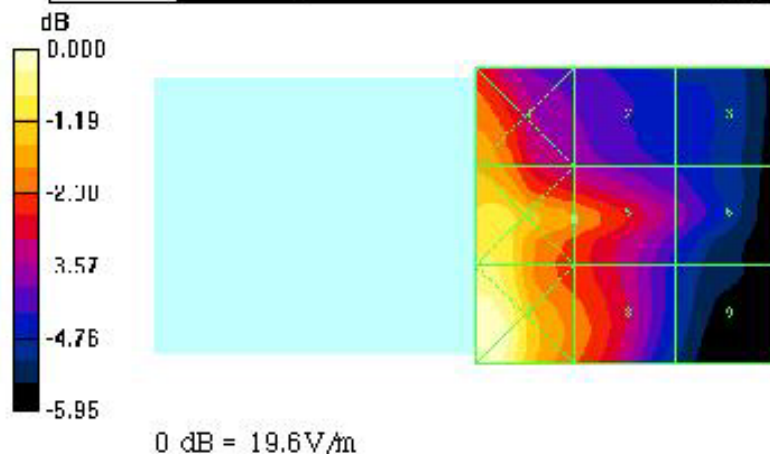
E Scan 10mm above Device Reference/Hearing Aid Compatibility Test (101x101x1):

Measurement grid: dx=5mm, dy=5mm
Maximum value of peak Total field = 15.5 V/m
Probe Modulation Factor = 0.880
Reference Value = 18.0 V/m; Power Drift = -0.061 dB
Hearing Aid Hear-Field Category: M4 (AWF 0 dB)

Peak E-field in V/m

Grid 1	Grid 2	Grid 3
16.3	13.0	11.8
Grid 4	Grid 5	Grid 6
18.1	15.5	12.7
Grid 7	Grid 8	Grid 9
19.6	15.3	11.6

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



Test Laboratory: HCT

Company : Hyundai Curitel Inc.
Antenna : In / Channel : 1175
Date Tested : October 07, 2005

DUT: TX-230; Type: Folder; Serial: #1
Program Name: HAC E Device

Communication System: PCS1900; 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

DASY4 Configuration:

- Probe: ER3DV6 - SN2343; ConvF(1, 1, 1); Calibrated: 2005-04-27
- Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn447; Calibrated: 2005-05-27
- Phantom: HAC Test Arch; Type: SD HAC P01 BA

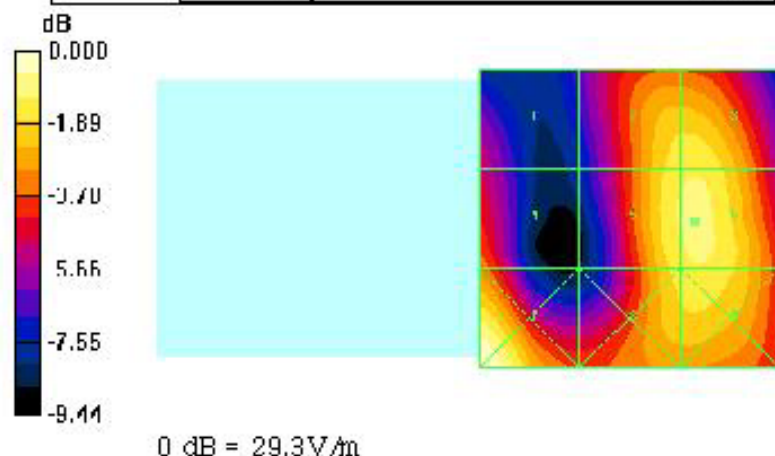
E Scan 10mm above Device Reference/Hearing Aid Compatibility Test (101x101x1):

Measurement grid: dx=5mm, dy=5mm
Maximum value of peak Total field = 26.0 V/m
Probe Modulation Factor = 0.980
Reference Value = 20.7 V/m; Power Drift = -0.047 dB
Hearing Aid Hear-Field Category: M4 (AWF 0 dB)

Peak E-field in V/m

Grid 1	Grid 2	Grid 3
16.5	24.7	25.0
Grid 4	Grid 5	Grid 6
20.2	25.5	26.0
Grid 7	Grid 8	Grid 9
29.3	24.5	25.2

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



Test Laboratory: HCT

Company : Hyundai Curitel Inc.
Antenna : Out / Channel : 1175
Date Tested : October 07, 2005

DUT: TX-230; Type: Folder; Serial: #1
Program Name: HAC E Device

Communication System: PCS1900; Frequency: 1908.75 MHz; Duty Cycle: 1:1
Medium parameters used: $\sigma = 0 \text{ mho/m}$, $\epsilon_r = 1$; $\rho = 1000 \text{ kg/m}^3$
Phantom section: E Device Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2343; ConvF(1, 1, 1); Calibrated: 2005-04-27
- Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn447; Calibrated: 2005-05-27
- Phantom: HAC Test Arch; Type: SD HAC P01 BA

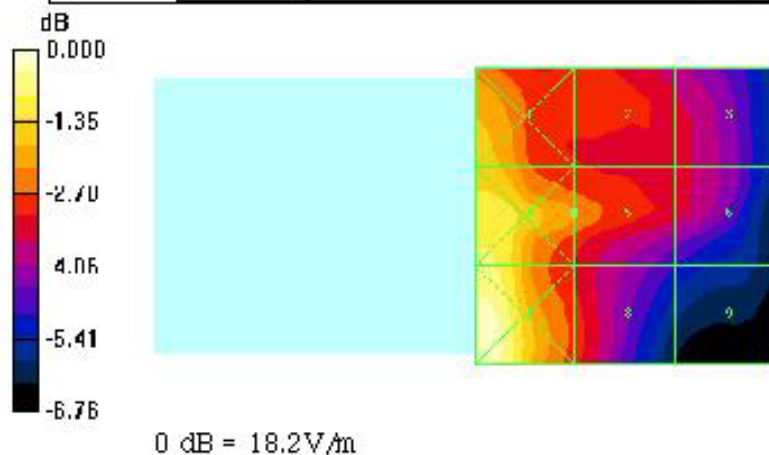
E Scan 10mm above Device Reference/Hearing Aid Compatibility Test (101x101x1):

Measurement grid: $d_x=5\text{mm}$ $d_y=5\text{mm}$
Maximum value of peak Total field = 14.1 V/m
Probe Modulation Factor = 0.980
Reference Value = 12.0 V/m; Power Drift = 0.060 dB
Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak E-field in V/m

Grid 1	Grid 2	Grid 3
15.3	13.0	12.4
Grid 4	Grid 5	Grid 6
16.7	14.1	12.3
Grid 7	Grid 8	Grid 9
18.2	13.1	10.3

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



Test Laboratory: HCT

Company : Hyundai Curitel Inc.

Antenna : In / Channel : 1013

Date Tested : October 07, 2005

DUT: TX-230; 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: $\sigma = 0 \text{ rho/m}$, $\epsilon_r = 1$; $\rho = 1 \text{ kg/m}^3$

Phantom section: H Device Section

DASY4 Configuration:

- Probe: H3DV6 - SN6101; ; Calibrated: 2005-07-20

- Sensor-Surface: (Fix Surface)

- Electronics: DAE3 Sn447; Calibrated: 2005-05-27

- 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 = 0.079 A/m

Probe Modulation Factor = 0.980

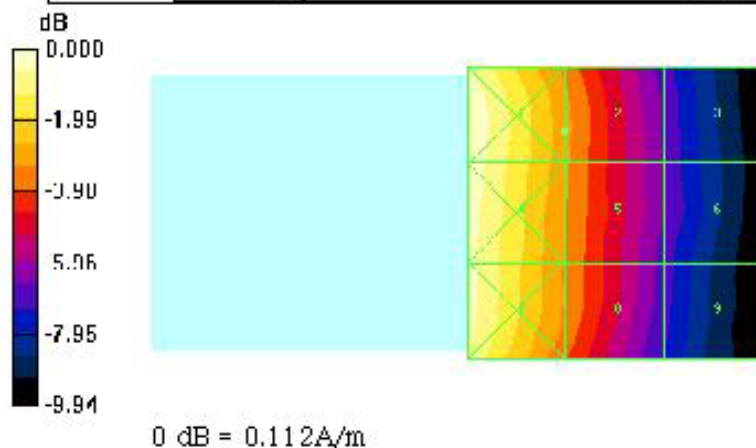
Reference Value = 0.068 A/m; Power Drift = -0.188 dB

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

Peak H-field in A/m

Grid 1	Grid 2	Grid 3
0.112	0.079	0.052
Grid 4	Grid 5	Grid 6
0.110	0.078	0.053
Grid 7	Grid 8	Grid 9
0.108	0.076	0.051

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



Test Laboratory: HCT

Company : Hyundai Curitel Inc.
Antenna : Out / Channel : 1013
Date Tested : October 07, 2005

DUT: TX-230; 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

DASY4 Configuration:

- Probe: H3DV6 - SN6101; ; Calibrated: 2005-07-20
- Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn447; Calibrated: 2005-05-27
- Phantom: HAC Test Arch; Type: SD HAC P01 BA

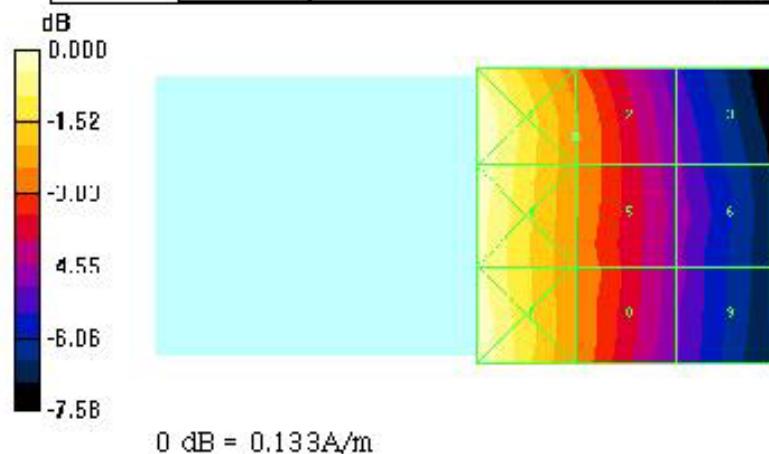
H Scan 10mm above Device Reference/Hearing Aid Compatibility Test (101x101x1):

Measurement grid: dx=5mm, dy=5mm
Maximum value of peak Total field = 0.101 A/m
Probe Modulation Factor = 0.980
Reference Value = 0.092 A/m; Power Drift = -0.018 dB
Hearing Aid Hear-Field Category: M4 (AWF 0 dB)

Peak H-field in A/m

Grid 1	Grid 2	Grid 3
0.133	0.101	0.076
Grid 4	Grid 5	Grid 6
0.132	0.101	0.077
Grid 7	Grid 8	Grid 9
0.133	0.100	0.076

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



Test Laboratory: HCT

Company : Hyundai Curitel Inc.
Antenna : In / Channel : 384
Date Tested : October 07, 2005

DUT: TX-230; 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

DASY4 Configuration:

- Probe: H3DV6 - SN6101;; Calibrated: 2005-07-20
- Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn447; Calibrated: 2005-05-27
- Phantom: HAC Test Arch; Type: SD HAC P01 BA

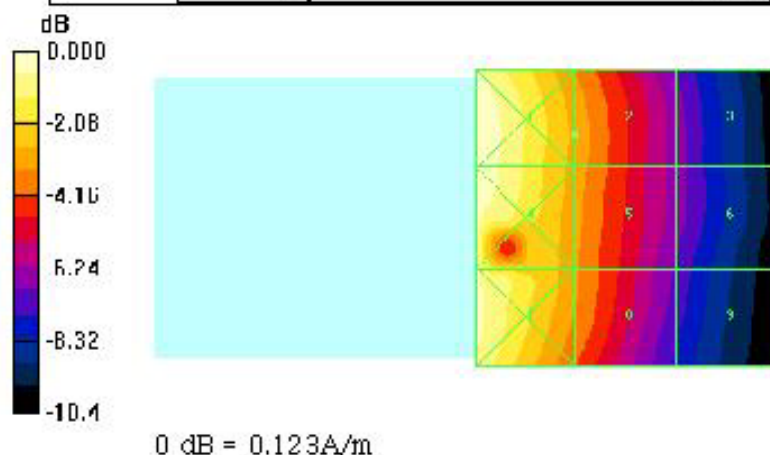
H Scan 10mm above Device Reference/Hearing Aid Compatibility Test (101x101x1):

Measurement grid: dx=5mm, dy=5mm
Maximum value of peak Total field = 0.087 A/m
Probe Modulation Factor = 0.980
Reference Value = 0.068 A/m; Power Drift = 0.027 dB
Hearing Aid Hear-Field Category: M4 (AWF 0 dB)

Peak H-field in A/m

Grid 1	Grid 2	Grid 3
0.123	0.087	0.058
Grid 4	Grid 5	Grid 6
0.122	0.087	0.058
Grid 7	Grid 8	Grid 9
0.118	0.084	0.055

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



Test Laboratory: HCT

Company : Hyundai Curitel Inc.
Antenna : Out / Channel : 384
Date Tested : October 07, 2005

DUT: TX-230; 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

DASY4 Configuration:

- Probe: H3DV6 - SN6101; ; Calibrated: 2005-07-20
- Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn447; Calibrated: 2005-05-27
- Phantom: HAC Test Arch; Type: SD HAC P01 BA

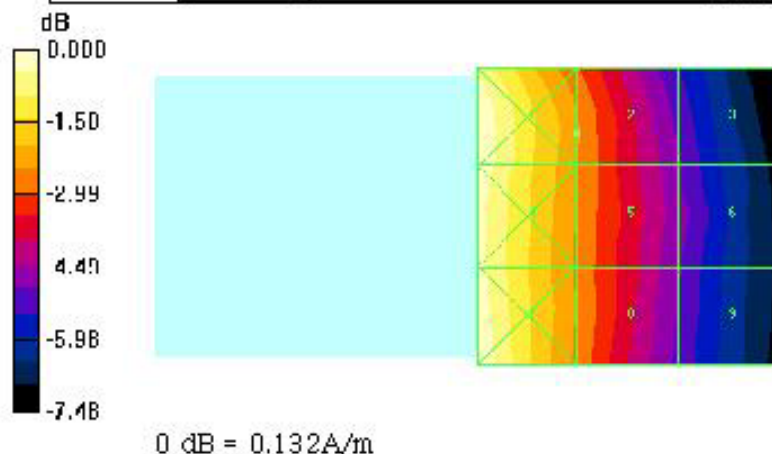
H Scan 10mm above Device Reference/Hearing Aid Compatibility Test (101x101x1):

Measurement grid: dx=5mm, dy=5mm
Maximum value of peak Total field = 0.100 A/m
Probe Modulation Factor = 0.980
Reference Value = 0.090 A/m; Power Drift= 0.010 dB
Hearing Aid Hear-Field Category: M4 (AWF 0 dB)

Peak H-field in A/m

Grid 1	Grid 2	Grid 3
0.132	0.100	0.075
Grid 4	Grid 5	Grid 6
0.130	0.100	0.076
Grid 7	Grid 8	Grid 9
0.131	0.099	0.075

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



Test Laboratory: HCT

Company : Hyundai Curitel Inc.

Antenna : In / Channel : 777

Date Tested : October 07, 2005

DUT: TX-230; 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

DASY4 Configuration:

- Probe: H3DV6 - SN6101; ; Calibrated: 2005-07-20

- Sensor-Surface: (Fix Surface)

- Electronics: DAE3 Sn447; Calibrated: 2005-05-27

- 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 = 0.088 A/m

Probe Modulation Factor = 0.980

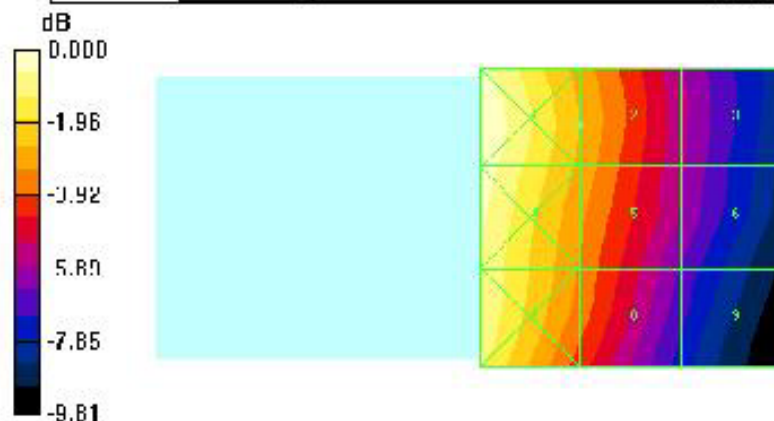
Reference Value = 0.076 A/m; Power Drift = -0.071 dB

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

Peak H-field in A/m

Grid 1	Grid 2	Grid 3
0.119	0.088	0.062
Grid 4	Grid 5	Grid 6
0.116	0.086	0.061
Grid 7	Grid 8	Grid 9
0.111	0.081	0.056

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



0 dB = 0.119 A/m

Test Laboratory: HCT

Company : Hyundai Curitel Inc.
Antenna : Out / Channel : 777
Date Tested : October 07, 2005

DUT: TX-230; 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: $\sigma = 0 \text{ mho/m}$, $\epsilon_r = 1$; $\rho = 1 \text{ kg/m}^3$
Phantom section: H Device Section

DASY4 Configuration:

- Probe: H3DV6 - SN6101; ; Calibrated: 2005-07-20
- Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn447; Calibrated: 2005-05-27
- Phantom: HAC Test Arch; Type: SD HAC P01 BA

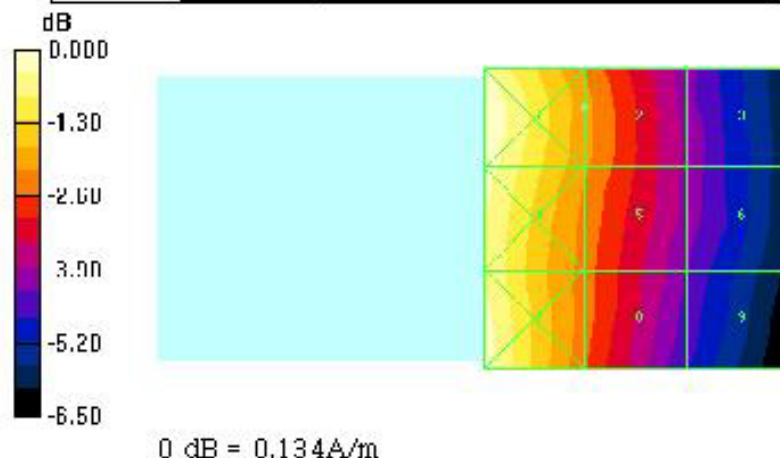
H Scan 10mm above Device Reference/Hearing Aid Compatibility Test (101x101x1):

Measurement grid: dx=5mm dy=5mm
Maximum value of peak Total field = 0.107 A/m
Probe Modulation Factor = 0.880
Reference Value = 0.088 A/m; Power Drift = -0.064 dB
Hearing Aid Hear-Field Category: M4 (AWF 0 dB)

Peak H-field in A/m

Grid 1	Grid 2	Grid 3
0.134	0.107	0.085
Grid 4	Grid 5	Grid 6
0.131	0.106	0.084
Grid 7	Grid 8	Grid 9
0.132	0.102	0.082

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



Test Laboratory: HCT

Company : Hyundai Curitel Inc.
Antenna : In / Channel : 25
Date Tested : October 07, 2005

DUT: TX-230; Type: Folder; Serial: #1
Program Name: HAC H Device

Communication System: PCS1900; 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

DASY4 Configuration:

- Probe: H3DV6 - SN6101; ; Calibrated: 2005-07-20
- Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn447; Calibrated: 2005-05-27
- Phantom: HAC Test Arch; Type: SD HAC P01 BA

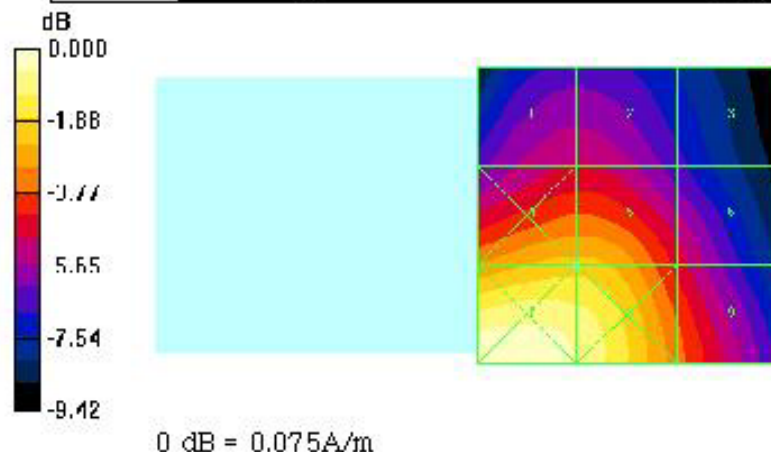
H Scan 10mm above Device Reference/Hearing Aid Compatibility Test (101x101x1):

Measurement grid: dx=5mm, dy=5mm
Maximum value of peak Total field = 0.058 A/m
Probe Modulation Factor = 0.940
Reference Value = 0.048 A/m; Power Drift = 0.000 dB
Hearing Aid Hear-Field Category: M4 (AWF 0 dB)

Peak H-field in A/m

Grid 1	Grid 2	Grid 3
0.042	0.042	0.035
Grid 4	Grid 5	Grid 6
0.058	0.058	0.044
Grid 7	Grid 8	Grid 9
0.075	0.069	0.050

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



Test Laboratory: HCT

Company : Hyundai Curitel Inc.
Antenna : Out / Channel : 25
Date Tested : October 07, 2005

DUT: TX-230; Type: Folder; Serial: #1
Program Name: HAC H Device

Communication System: PCS1900; 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

DASY4 Configuration:

- Probe: H3DV6 - SN6101; ; Calibrated: 2005-07-20
- Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn447; Calibrated: 2005-05-27
- Phantom: HAC Test Arch; Type: SDHAC P01 BA

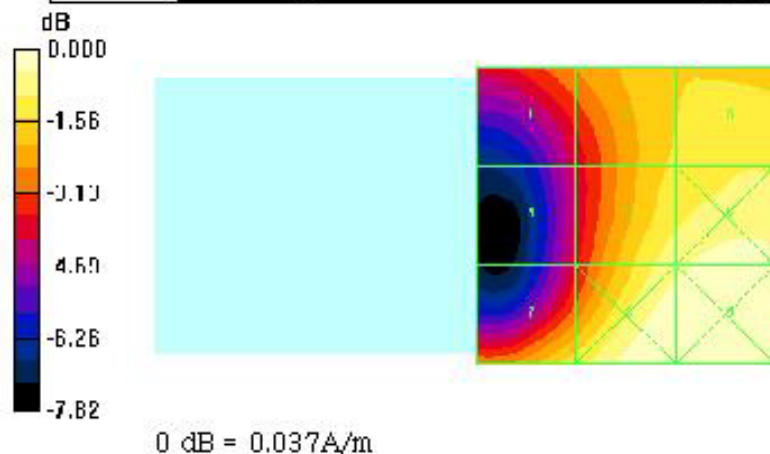
H Scan 10mm above Device Reference/Hearing Aid Compatibility Test (101x101x1):

Measurement grid: dx=5mm, dy=5mm
Maximum value of peak Total field = 0.034 A/m
Probe Modulation Factor = 0.940
Reference Value = 0.028 A/m; Power Drift = -0.031 dB
Hearing Aid Hear-Field Category: M4 (AWF 0 dB)

Peak H-field in A/m

Grid 1	Grid 2	Grid 3
0.027	0.031	0.033
Grid 4	Grid 5	Grid 6
0.024	0.034	0.036
Grid 7	Grid 8	Grid 9
0.032	0.037	0.037

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



Test Laboratory: HCT

Company : Hyundai Curitel Inc.
Antenna : In / Channel : 600
Date Tested : October 07, 2005

DUT: TX-230; Type: Folder; Serial: #1
Program Name: HAC H Device

Communication System: PCS1900; 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

DASY4 Configuration:

- Probe: H3DV6 - SN6101; ; Calibrated: 2005-07-20
- Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn447; Calibrated: 2005-05-27
- Phantom: HAC Test Arch; Type: SD HAC P01 BA

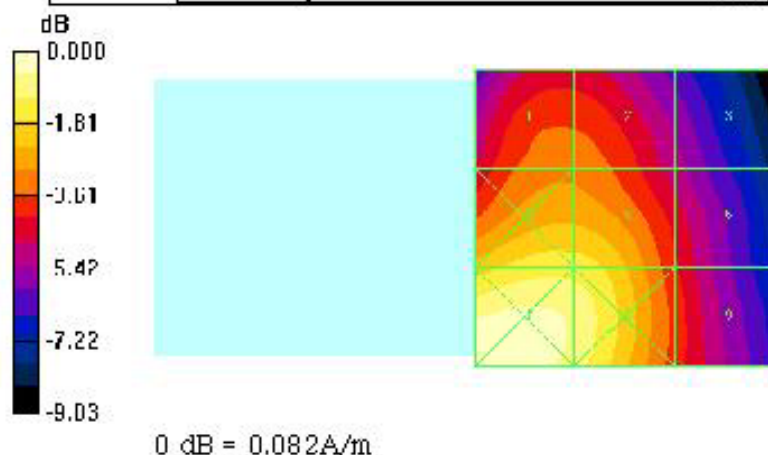
H Scan 10mm above Device Reference/Hearing Aid Compatibility Test (101x101x1):

Measurement grid: dx=5mm, dy=5mm
Maximum value of peak Total field = 0.068 A/m
Probe Modulation Factor = 0.940
Reference Value = 0.061 A/m; Power Drift = 0.046 dB
Hearing Aid Hear-Field Category: M4 (AWF 0 dB)

Peak H-field in A/m

Grid 1	Grid 2	Grid 3
0.057	0.057	0.046
Grid 4	Grid 5	Grid 6
0.070	0.069	0.051
Grid 7	Grid 8	Grid 9
0.082	0.076	0.053

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



Test Laboratory: HCT

Company : Hyundai Curitel Inc.
Antenna : Out / Channel : 600
Date Tested : October 07, 2005

DUT: TX-230; Type: Folder; Serial: #1
Program Name: HAC H Device

Communication System: PCS1900; 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

DASY4 Configuration:

- Probe: H3DW6 - SN6101;; Calibrated: 2005-07-20
- Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn447; Calibrated: 2005-05-27
- Phantom: HAC Test Arch; Type: SD HAC P01 BA

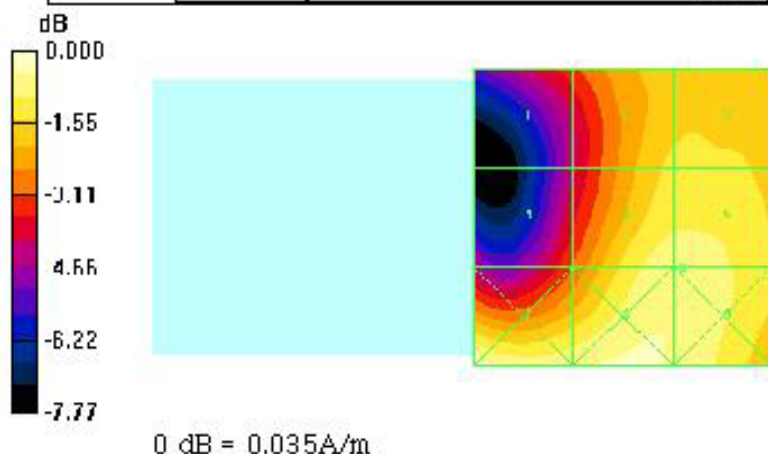
H Scan 10mm above Device Reference/Hearing Aid Compatibility Test (101x101x1):

Measurement grid: dx=5mm, dy=5mm
Maximum value of peak Total field = 0.032 A/m
Probe Modulation Factor = 0.940
Reference Value = 0.027 A/m; Power Drift = -0.168 dB
Hearing Aid Hear-Field Category: M4 (AWF 0 dB)

Peak H-field in A/m

Grid 1	Grid 2	Grid 3
0.024	0.030	0.030
Grid 4	Grid 5	Grid 6
0.025	0.032	0.032
Grid 7	Grid 8	Grid 9
0.035	0.033	0.033

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



Test Laboratory: HCT

Company : Hyundai Curitel Inc.
Antenna : In / Channel : 1175
Date Tested : October 07, 2005

DUT: TX-230; Type: Folder; Serial: #1
Program Name: HAC H Device

Communication System: PCS1900; Frequency: 1908.75 MHz; Duty Cycle: 1:1
Medium parameters used: $\sigma = 0 \text{ mho/m}$, $\epsilon_r = 1$; $\rho = 1 \text{ kg/m}^3$
Phantom section: H Device Section

DASY4 Configuration:

- Probe: H3DV6 - SN6101; ; Calibrated: 2005-07-20
- Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn447; Calibrated: 2005-05-27
- Phantom: HAC Test Arch; Type: SD HAC P01 BA

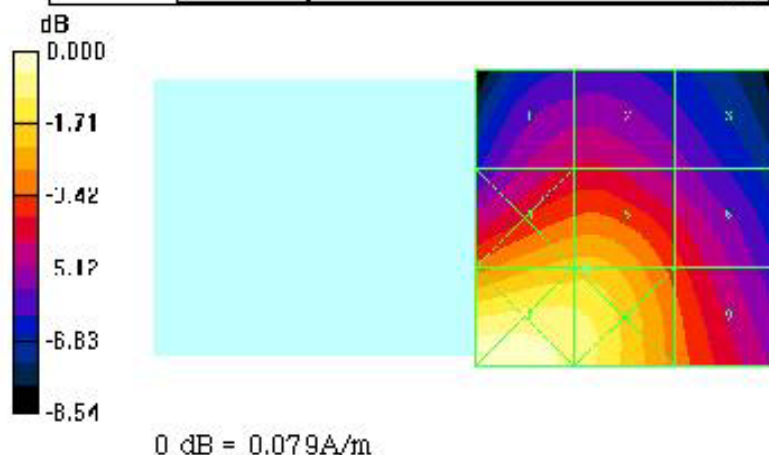
H Scan 10mm above Device Reference/Hearing Aid Compatibility Test (101x101x1):

Measurement grid: $d_x=5\text{mm}$, $d_y=5\text{mm}$
Maximum value of peak Total field = 0.068 A/m
Probe Modulation Factor = 0.840
Reference Value = 0.055 A/m; Power Drift = 0.001 dB
Hearing Aid Hear-Field Category: M4 (AWF 0 dB)

Peak H-field in A/m

Grid 1	Grid 2	Grid 3
0.047	0.048	0.043
Grid 4	Grid 5	Grid 6
0.063	0.063	0.052
Grid 7	Grid 8	Grid 9
0.079	0.072	0.056

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



Test Laboratory: HCT

Company : Hyundai Curitel Inc.
Antenna : Out / Channel : 1175
Date Tested : October 07, 2005

DUT: TX-230; Type: Folder; Serial: #1
Program Name: HAC H Device

Communication System: PCS1900; 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

DASY4 Configuration:

- Probe: H3DV6 - SN6101; ; Calibrated: 2005-07-20
- Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn447; Calibrated: 2005-05-27
- Phantom: HAC Test Arch; Type: SD HAC P01 BA

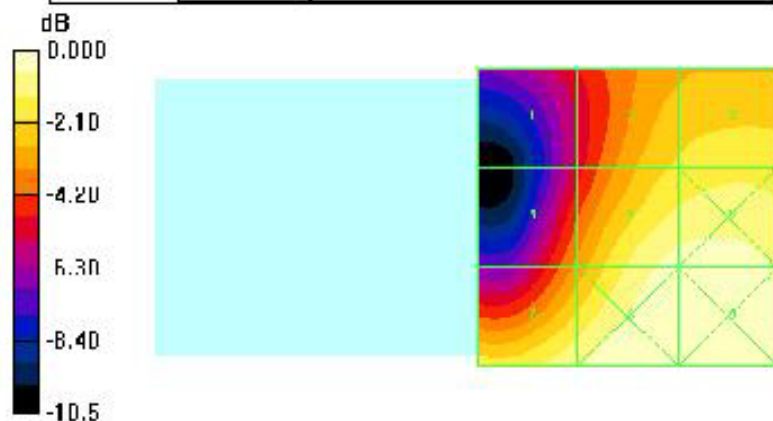
H Scan 10mm above Device Reference/Hearing Aid Compatibility Test (101x101x1):

Measurement grid: dx=5mm, dy=5mm
Maximum value of peak Total field = 0.033 A/m
Probe Modulation Factor = 0.940
Reference Value = 0.026 A/m; Power Drift = 0.006 dB
Hearing Aid Hear-Field Category: M4 (AWF 0 dB)

Peak H-field in A/m

Grid 1	Grid 2	Grid 3
0.020	0.028	0.029
Grid 4	Grid 5	Grid 6
0.024	0.033	0.034
Grid 7	Grid 8	Grid 9
0.032	0.035	0.035

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



0 dB = 0.035A/m