

RTS RIM Testing Services	Document Annex A to Hearing Aid Compatibility RF Emissions Test Report for BlackBerry Wireless Handheld Model RBF20CW		Page 1(111)
	Author Data Daoud Attayi	Dates July 13-19, 31, 2006	Report No RTS-0373-0607-14

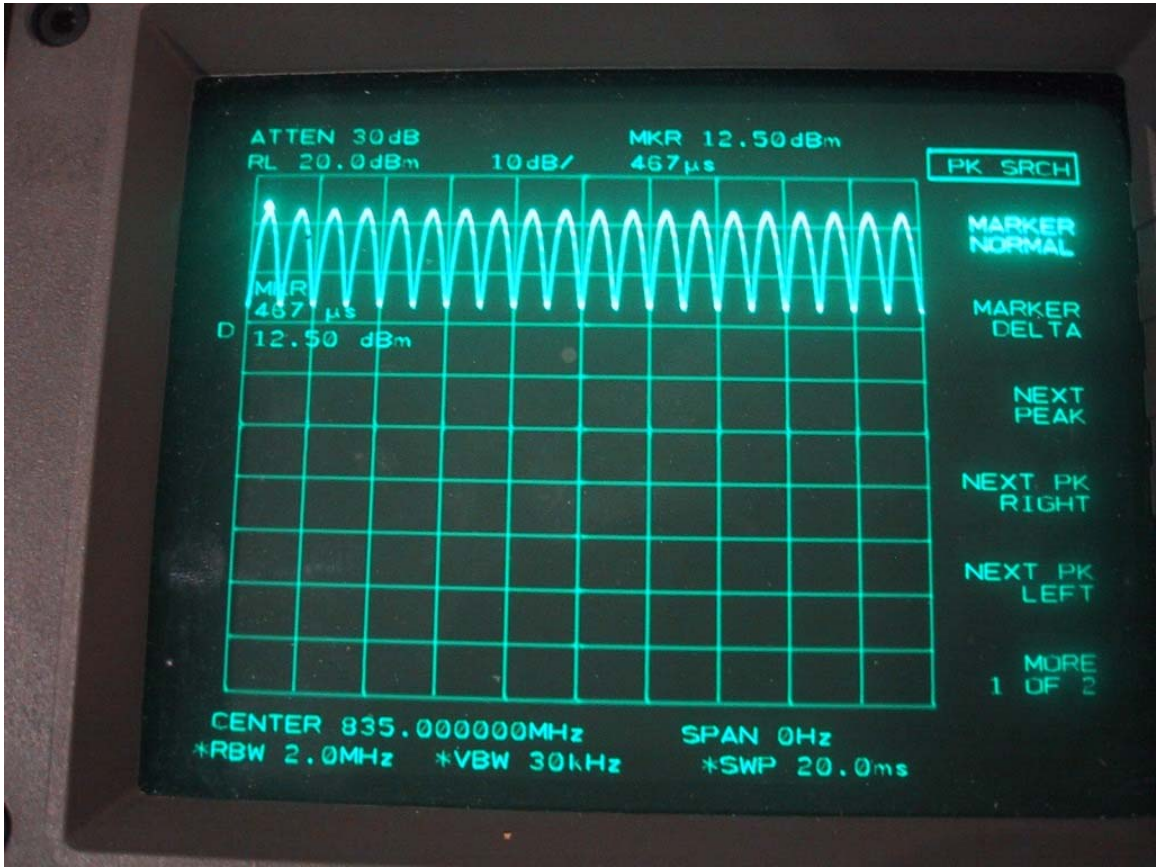
Annex A: Measurement plots and data

A.1 Spectrum analyser plots: CW, 80% AM and CDMA signals



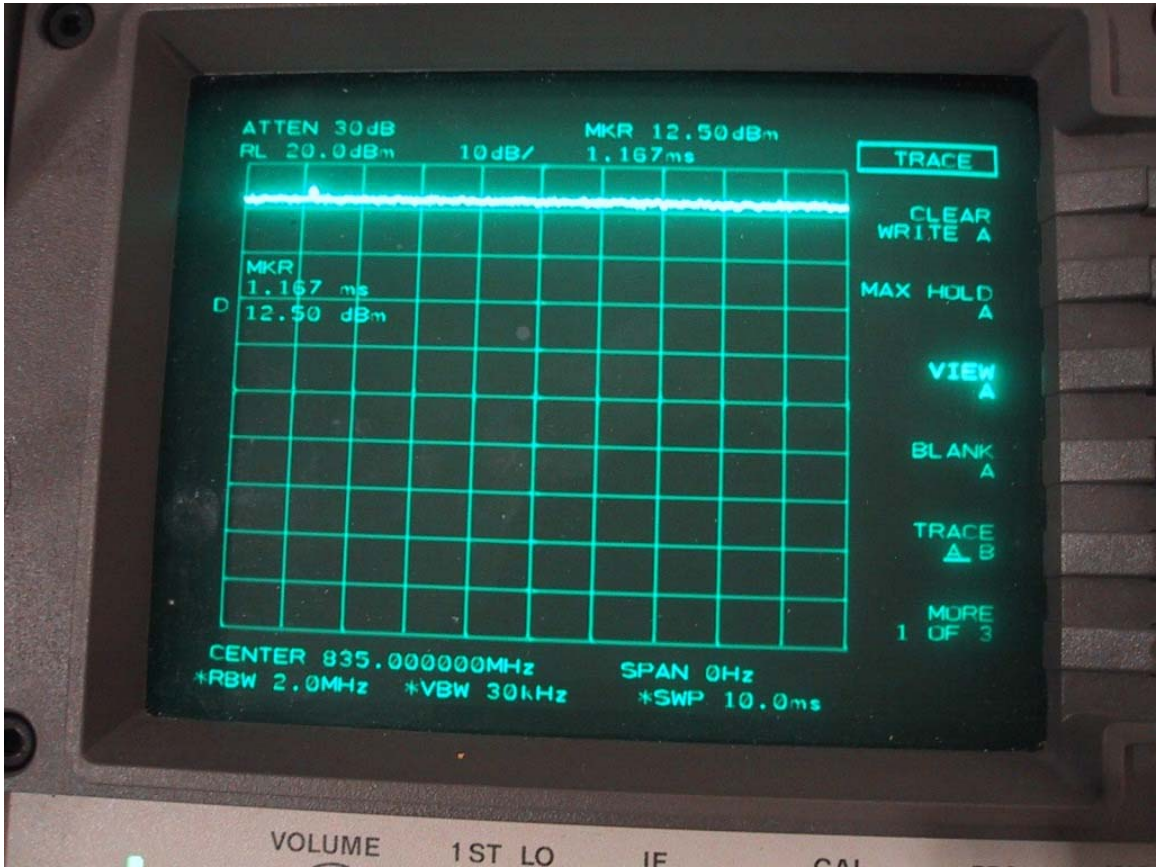
0 Hz Span CW Plot (835MHz)

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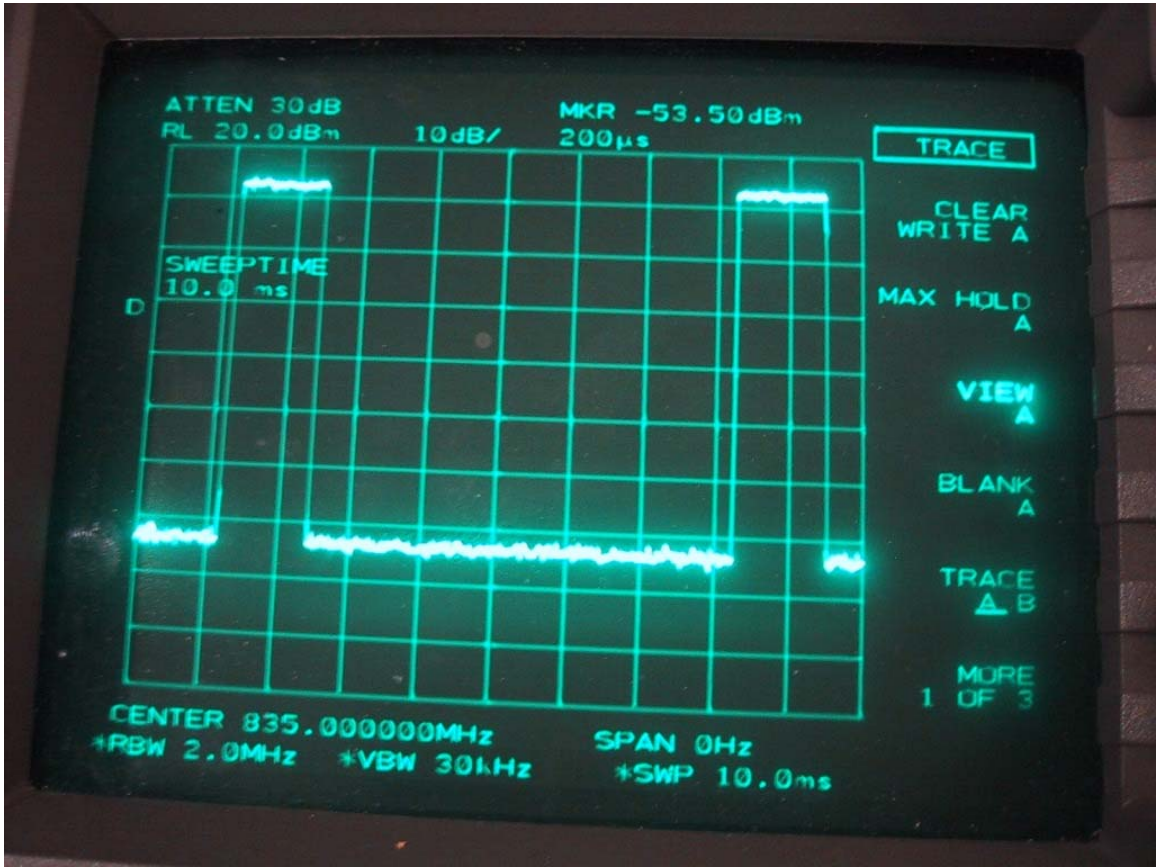
0 Hz Span 80% AM Plot (835MHz)

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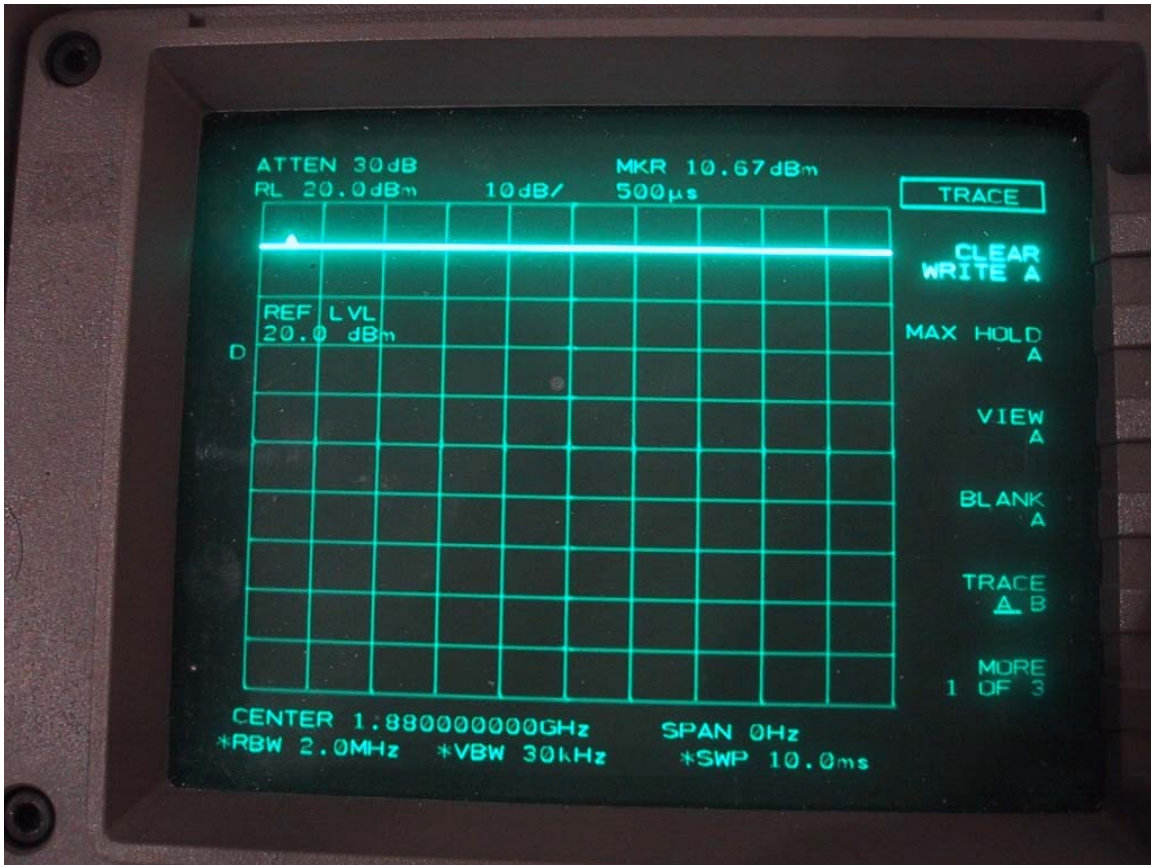
0 Hz Span CDMA Full Rate (835MHz)

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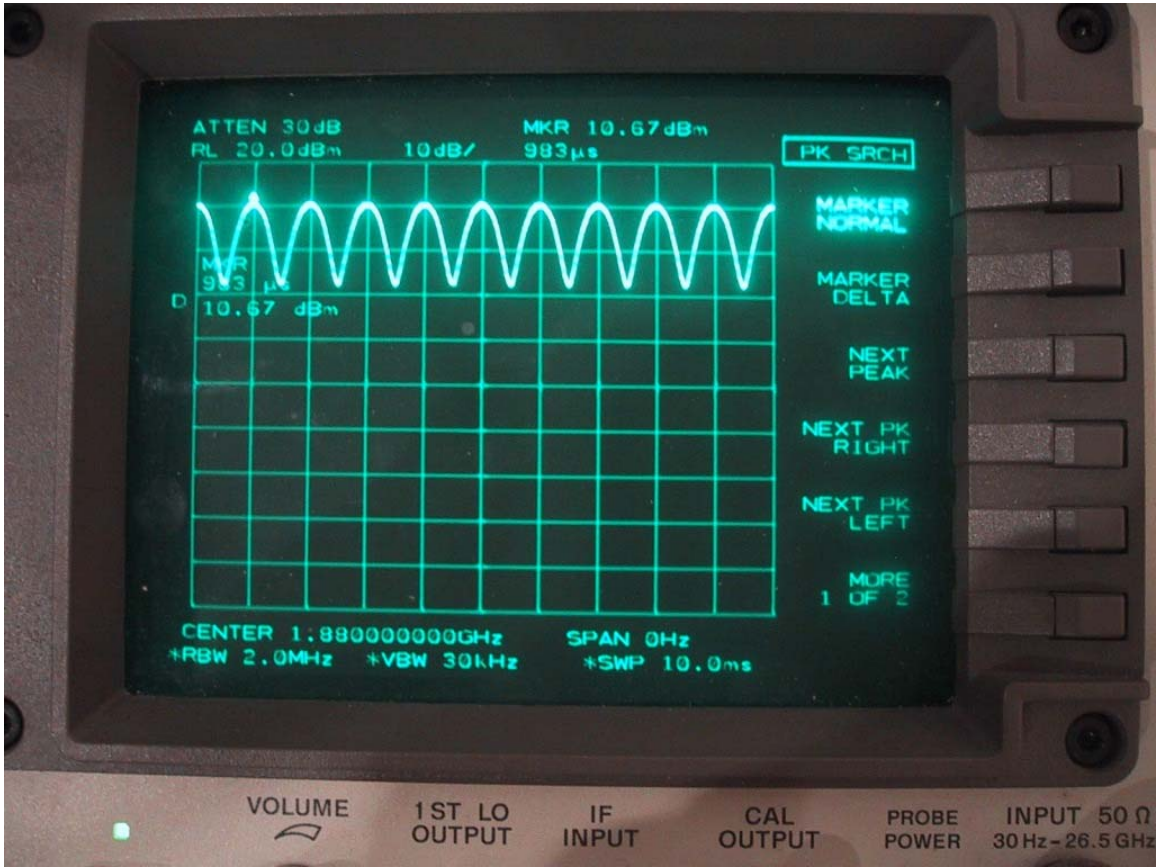
0 Hz Span CDMA 1/8 Rate (835MHz)

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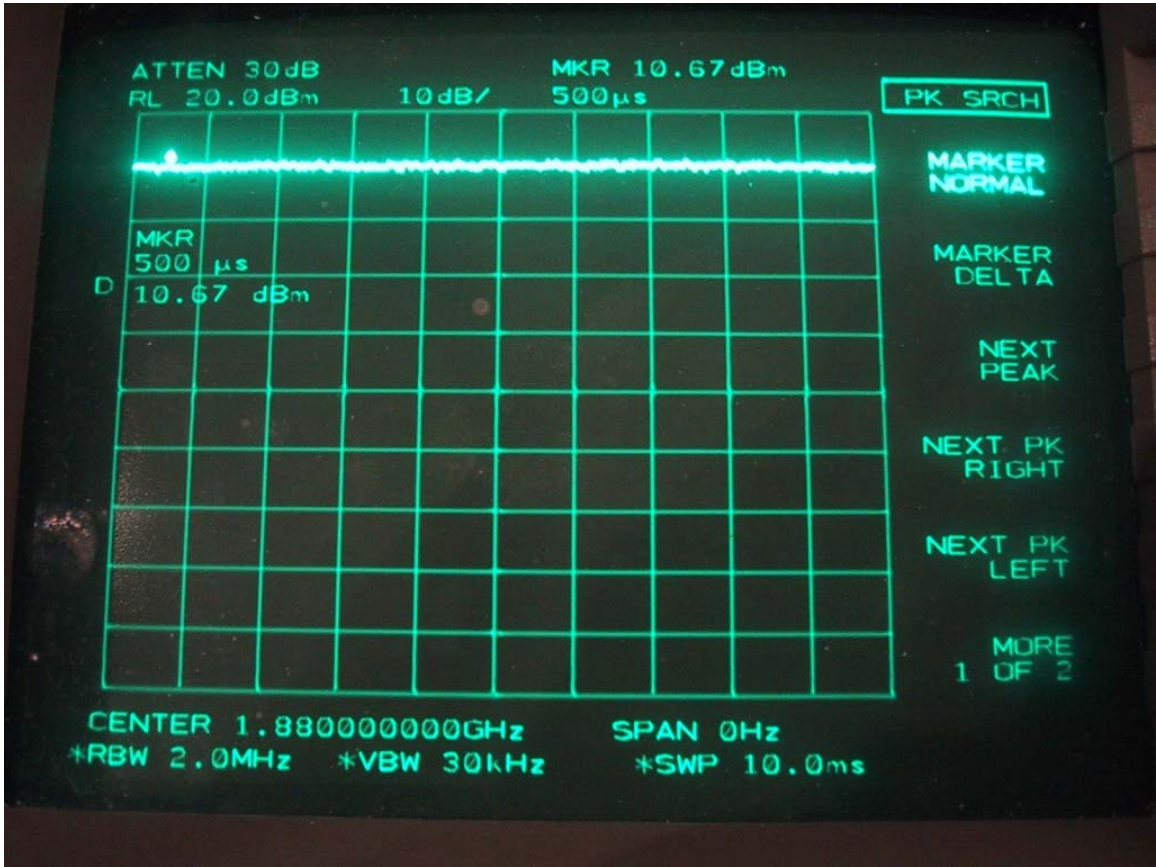
0 Hz Span CW Plot (1880MHz)

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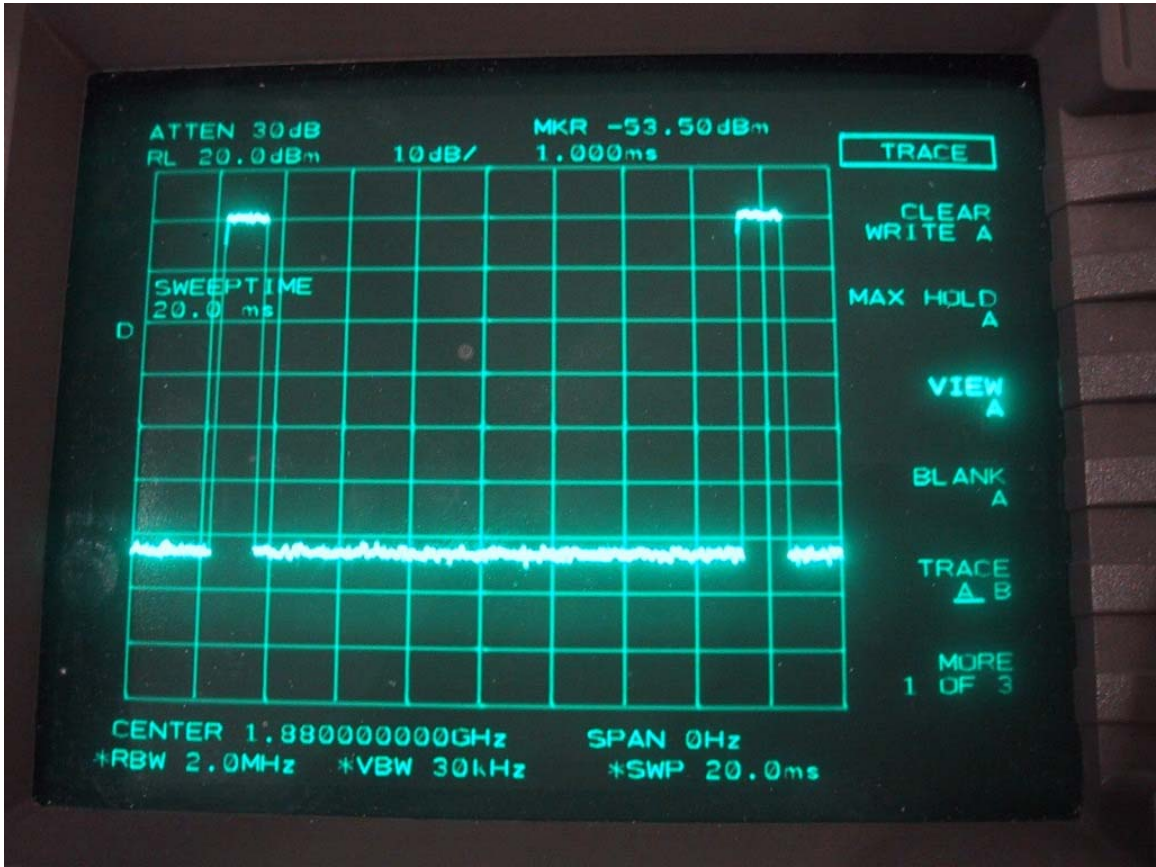
0 Hz Span 80% AM Plot (1880MHz)

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0 Hz Span CDMA Full Rate (1880MHz)

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0 Hz Span CDMA 1/8 Rate (1880MHz)

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A.2 Dipole validation and probe modulation factor plots

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Date/Time: 17/07/2006 10:34:32 AM

Test Laboratory: RTS

HAC_E_Dipole_835 MHz_CW_20dBm

DUT: HAC-Dipole 835 MHz; Type: D835V3; Serial: Not Specified

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

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

Phantom section: H Device Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2285; ConvF(1, 1, 1); Calibrated: 27/04/2006
- Sensor-Surface: 0mm (Fix Surface) Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 25/04/2006
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

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

(5x37x1): Measurement grid: dx=5mm, dy=5mm

Probe Modulation Factor = 1.00

Reference Value = 53.7 V/m; Power Drift = 0.038 dB

Maximum value of Total (measured) = 171.7 V/m

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

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

Maximum value of peak Total field = 174.2 V/m

Probe Modulation Factor = 1.00

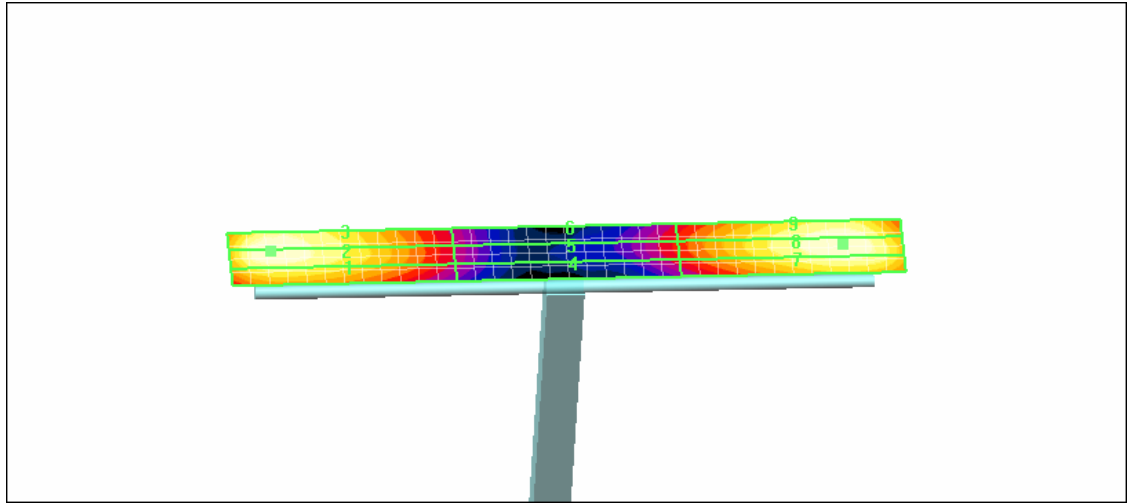
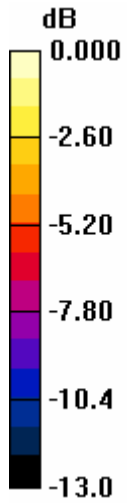
Reference Value = 53.7 V/m; Power Drift = 0.038 dB

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

Peak E-field in V/m

Grid	Grid	Grid
152.7	174.2	174.1
Grid	Grid	Grid
85.6	91.0	90.2
Grid	Grid	Grid

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0 dB = 174.2V/m

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Date/Time: 17/07/2006 12:47:20 PM

Test Laboratory: RTS

HAC_E_Dipole_835 MHz_CW_12.5dBm

DUT: HAC-Dipole 835 MHz; Type: D835V3; Serial: Not Specified

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

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

Phantom section: H Device Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2285; ConvF(1, 1, 1); Calibrated: 27/04/2006
- Sensor-Surface: 0mm (Fix Surface) Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 25/04/2006
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

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

(5x37x1): Measurement grid: dx=5mm, dy=5mm

Probe Modulation Factor = 1.00

Reference Value = 22.5 V/m; Power Drift = 0.006 dB

Maximum value of Total (measured) = 74.7 V/m

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

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

Maximum value of peak Total field = 75.8 V/m

Probe Modulation Factor = 1.00

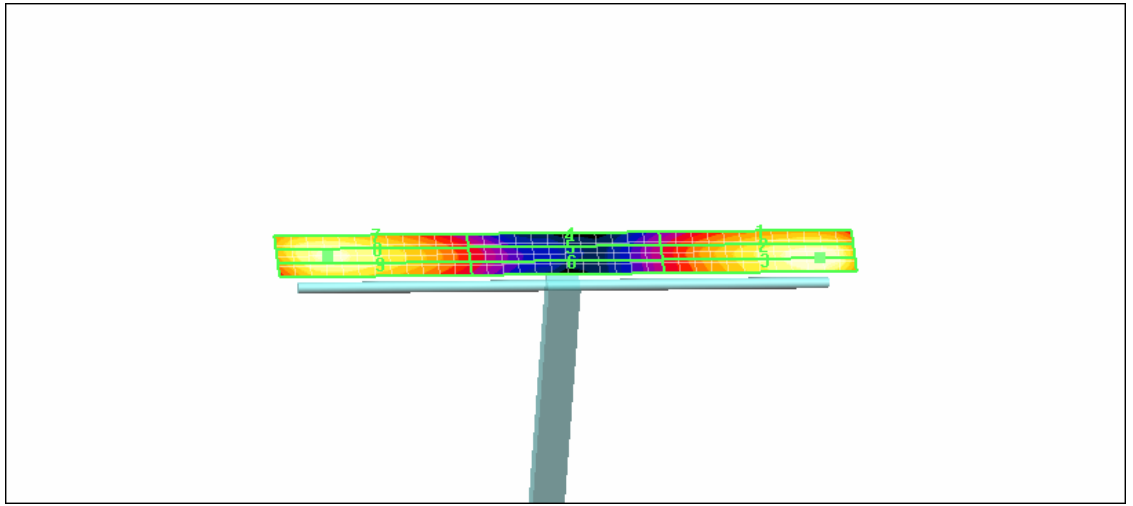
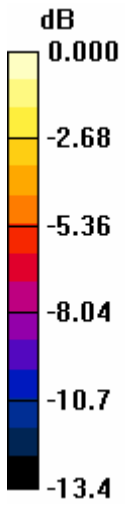
Reference Value = 22.5 V/m; Power Drift = 0.006 dB

Hearing Aid Near-Field Category: M3 (AWF 0 dB)

Peak E-field in V/m

Grid	Grid	Grid
64.6	75.8	75.8
Grid	Grid	Grid
36.2	37.8	37.2
Grid	Grid	Grid

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0 dB = 75.8V/m

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Date/Time: 17/07/2006 12:55:40 PM

Test Laboratory: RTS

HAC_E_Dipole_835 MHz_AM80%_12.5dBm

DUT: HAC-Dipole 835 MHz; Type: D835V3; Serial: Not Specified

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

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

Phantom section: H Device Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2285; ConvF(1, 1, 1); Calibrated: 27/04/2006
- Sensor-Surface: 0mm (Fix Surface) Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 25/04/2006
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

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

(5x37x1): Measurement grid: dx=5mm, dy=5mm

Probe Modulation Factor = 1.00

Reference Value = 13.8 V/m; Power Drift = 0.081 dB

Maximum value of Total (measured) = 45.6 V/m

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

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

Maximum value of peak Total field = 46.2 V/m

Probe Modulation Factor = 1.00

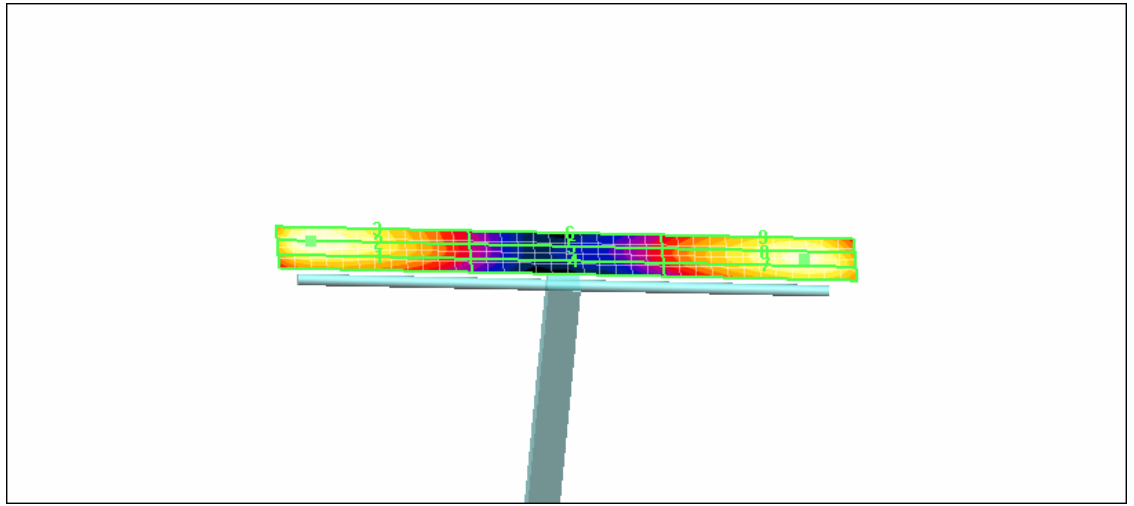
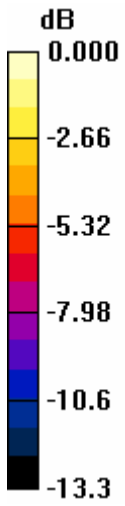
Reference Value = 13.8 V/m; Power Drift = 0.081 dB

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

Peak E-field in V/m

Grid	Grid	Grid
39.6	46.2	46.2
Grid	Grid	Grid
22.2	23.4	23.1
Grid	Grid	Grid

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0 dB = 46.2V/m

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Date/Time: 17/07/2006 11:26:09 AM

Test Laboratory: RTS

HAC_E_Dipole_835 MHz_CDMA_Full_12.5dBm

DUT: HAC-Dipole 835 MHz; Type: D835V3; Serial: Not Specified

Communication System: CDMA 800; Frequency: 835 MHz; Duty Cycle: 1:1

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

Phantom section: H Device Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2285; ConvF(1, 1, 1); Calibrated: 27/04/2006
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 25/04/2006
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

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

(5x37x1): Measurement grid: dx=5mm, dy=5mm

Probe Modulation Factor = 1.00

Reference Value = 23.1 V/m; Power Drift = 0.010 dB

Maximum value of Total (measured) = 73.4 V/m

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

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

Maximum value of peak Total field = 73.8 V/m

Probe Modulation Factor = 1.00

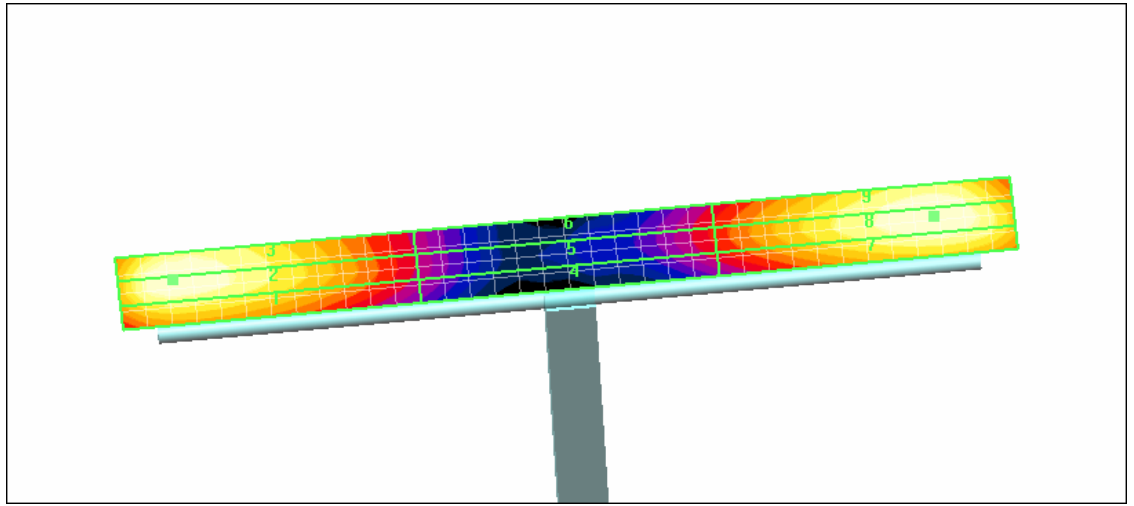
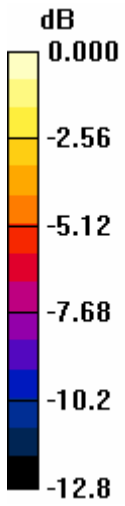
Reference Value = 23.1 V/m; Power Drift = 0.010 dB

Hearing Aid Near-Field Category: M3 (AWF 0 dB)

Peak E-field in V/m

Grid	Grid	Grid
64.6	73.8	73.6
Grid	Grid	Grid
36.4	38.6	38.3
Grid	Grid	Grid

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0 dB = 73.8V/m

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Date/Time: 17/07/2006 11:35:24 AM

Test Laboratory: RTS

HAC_E_Dipole_835 MHz_CDMA_1/8th_R_12.5dBm

DUT: HAC-Dipole 835 MHz; Type: D835V3; Serial: Not Specified

Communication System: CDMA 800; Frequency: 835 MHz; Duty Cycle: 1:8

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

Phantom section: H Device Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2285; ConvF(1, 1, 1); Calibrated: 27/04/2006
- Sensor-Surface: 0mm (Fix Surface) Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 25/04/2006
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

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

(5x37x1): Measurement grid: dx=5mm, dy=5mm

Probe Modulation Factor = 1.00

Reference Value = 8.45 V/m; Power Drift = 0.066 dB

Maximum value of Total (measured) = 36.8 V/m

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

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

Maximum value of peak Total field = 37.1 V/m

Probe Modulation Factor = 1.00

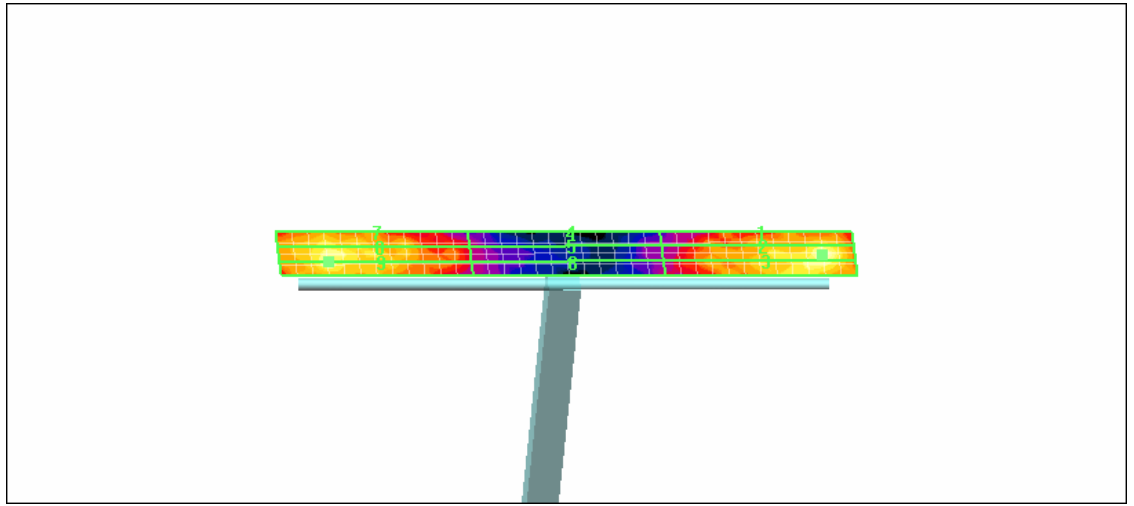
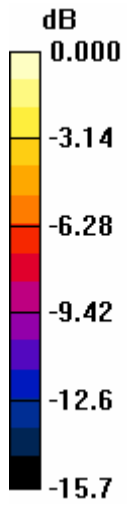
Reference Value = 8.45 V/m; Power Drift = 0.066 dB

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

Peak E-field in V/m

Grid	Grid	Grid
28.3	37.1	33.0
Grid	Grid	Grid
14.7	14.7	14.8
Grid	Grid	Grid

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0 dB = 37.1V/m

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Date/Time: 17/07/2006 2:29:02 PM

Test Laboratory: RTS

HAC_H_Dipole_835 MHz_CW_20dBm

DUT: HAC-Dipole 835 MHz; Type: D835V3; Serial: Not Specified

Communication System: CW; Frequency: 835 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 - SN6105; ; Calibrated: 11/11/2005
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 25/04/2006
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

H Scan - H3DV6 probe tip 10mm above CD835 Dipole/Hearing Aid Compatibility Test

(5x37x1): Measurement grid: dx=5mm, dy=5mm

Probe Modulation Factor = 1.00

Reference Value = 0.532 A/m; Power Drift = -0.067 dB

Maximum value of Total (measured) = 0.458 A/m

H Scan - H3DV6 probe tip 10mm above CD835 Dipole/Hearing Aid Compatibility Test

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

Maximum value of peak Total field = 0.460 A/m

Probe Modulation Factor = 1.00

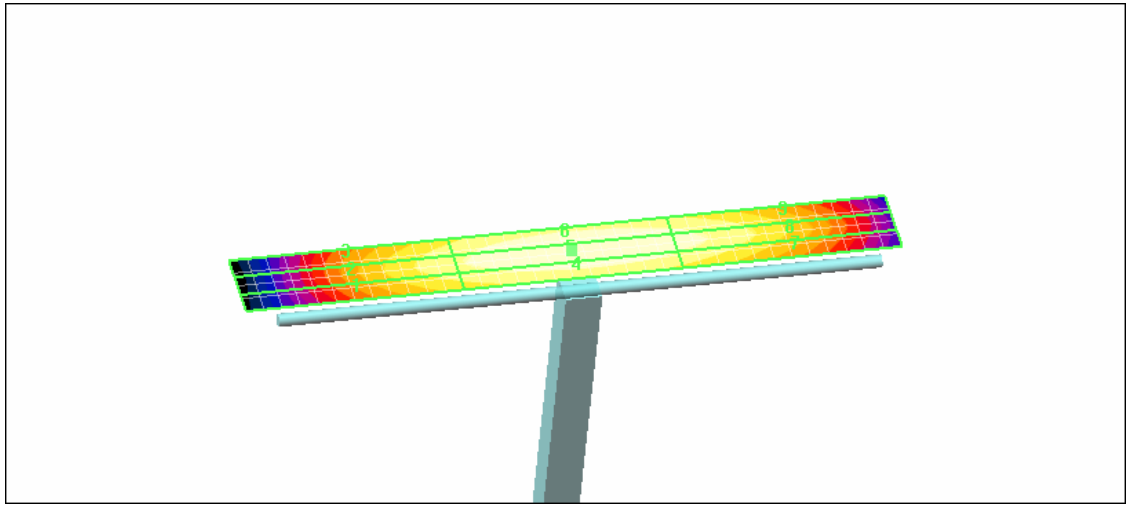
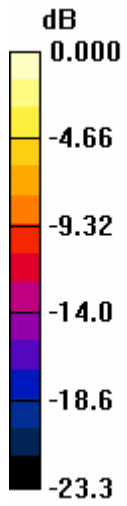
Reference Value = 0.532 A/m; Power Drift = -0.067 dB

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

Peak H-field in A/m

Grid	Grid	Grid
0.354	0.376	0.366
Grid	Grid	Grid
0.427	0.460	0.451
Grid	Grid	Grid

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0 dB = 0.460A/m

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Date/Time: 17/07/2006 1:54:14 PM

Test Laboratory: RTS

HAC_H_Dipole_835 MHz_CW_12.5dBm

DUT: HAC-Dipole 835 MHz; Type: D835V3; Serial: Not Specified

Communication System: CW; Frequency: 835 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 - SN6105; ; Calibrated: 11/11/2005
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 25/04/2006
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

H Scan - H3DV6 probe tip 10mm above CD1880 Dipole/Hearing Aid Compatibility Test

(5x37x1): Measurement grid: dx=5mm, dy=5mm

Probe Modulation Factor = 1.00

Reference Value = 0.219 A/m; Power Drift = -0.012 dB

Maximum value of Total (measured) = 0.226 A/m

H Scan - H3DV6 probe tip 10mm above CD1880 Dipole/Hearing Aid Compatibility Test

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

Maximum value of peak Total field = 0.226 A/m

Probe Modulation Factor = 1.00

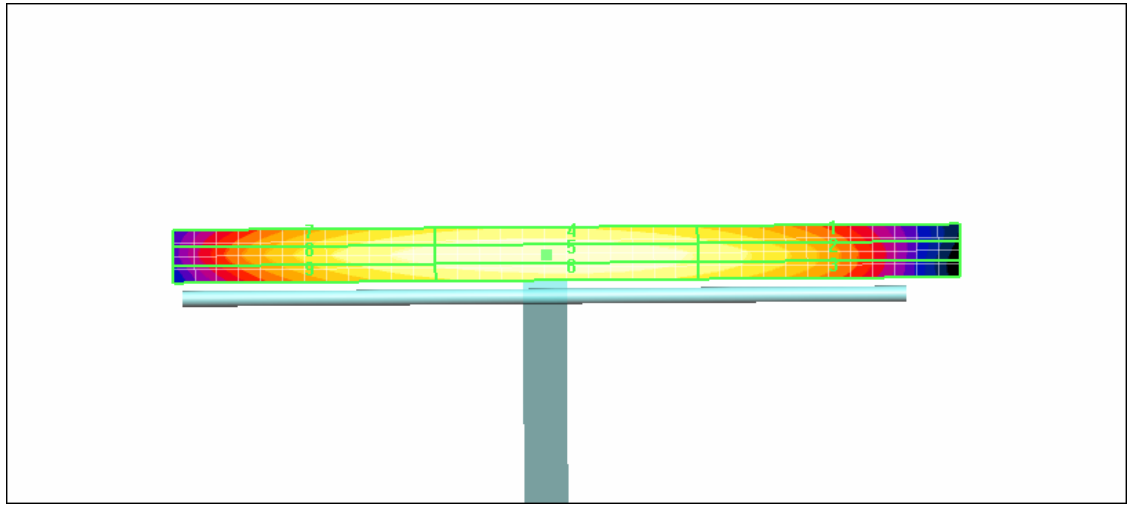
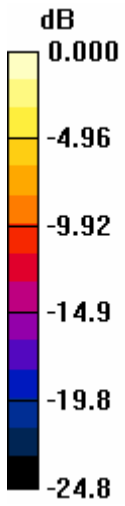
Reference Value = 0.219 A/m; Power Drift = -0.012 dB

Hearing Aid Near-Field Category: M3 (AWF 0 dB)

Peak H-field in A/m

Grid	Grid	Grid
0.165	0.185	0.182
Grid	Grid	Grid
0.205	0.226	0.216
Grid	Grid	Grid

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0 dB = 0.226A/m

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Date/Time: 17/07/2006 1:44:36 PM

Test Laboratory: RTS

HAC_H_Dipole_835 MHz_AM80%_12.5dBm

DUT: HAC-Dipole 835 MHz; Type: D835V3; Serial: Not Specified

Communication System: CW; Frequency: 835 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 - SN6105; ; Calibrated: 11/11/2005
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 25/04/2006
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

H Scan - H3DV6 probe tip 10mm above CD1880 Dipole/Hearing Aid Compatibility Test

(5x37x1): Measurement grid: dx=5mm, dy=5mm

Probe Modulation Factor = 1.00

Reference Value = 0.134 A/m; Power Drift = 0.040 dB

Maximum value of Total (measured) = 0.139 A/m

H Scan - H3DV6 probe tip 10mm above CD1880 Dipole/Hearing Aid Compatibility Test

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

Maximum value of peak Total field = 0.140 A/m

Probe Modulation Factor = 1.00

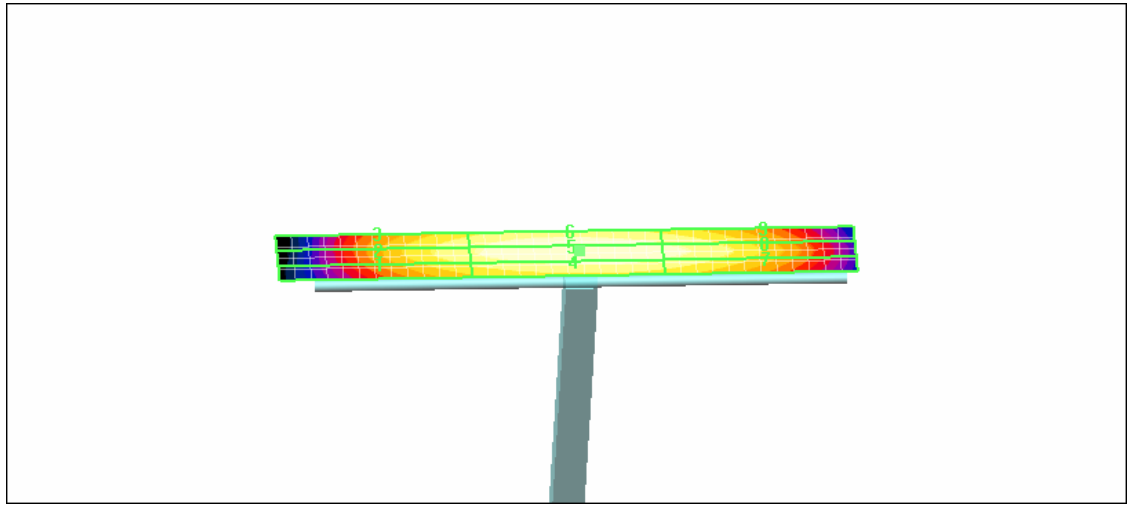
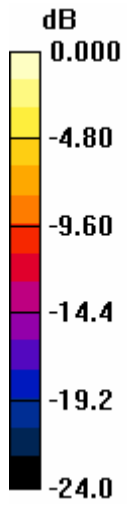
Reference Value = 0.134 A/m; Power Drift = 0.040 dB

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

Peak H-field in A/m

Grid	Grid	Grid
0.102	0.115	0.113
Grid	Grid	Grid
0.126	0.140	0.134
Grid	Grid	Grid

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0 dB = 0.140A/m

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Date/Time: 17/07/2006 2:42:01 PM

Test Laboratory: RTS

HAC_H_Dipole_835 MHz_CDMA_12.5dBm

DUT: HAC-Dipole 835 MHz; Type: D835V3; Serial: Not Specified

Communication System: CDMA 800; Frequency: 835 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 - SN6105; ; Calibrated: 11/11/2005
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 25/04/2006
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

H Scan - H3DV6 probe tip 10mm above CD835 Dipole/Hearing Aid Compatibility Test

(5x37x1): Measurement grid: dx=5mm, dy=5mm

Probe Modulation Factor = 1.00

Reference Value = 0.219 A/m; Power Drift = 0.037 dB

Maximum value of Total (measured) = 0.226 A/m

H Scan - H3DV6 probe tip 10mm above CD835 Dipole/Hearing Aid Compatibility Test

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

Maximum value of peak Total field = 0.227 A/m

Probe Modulation Factor = 1.00

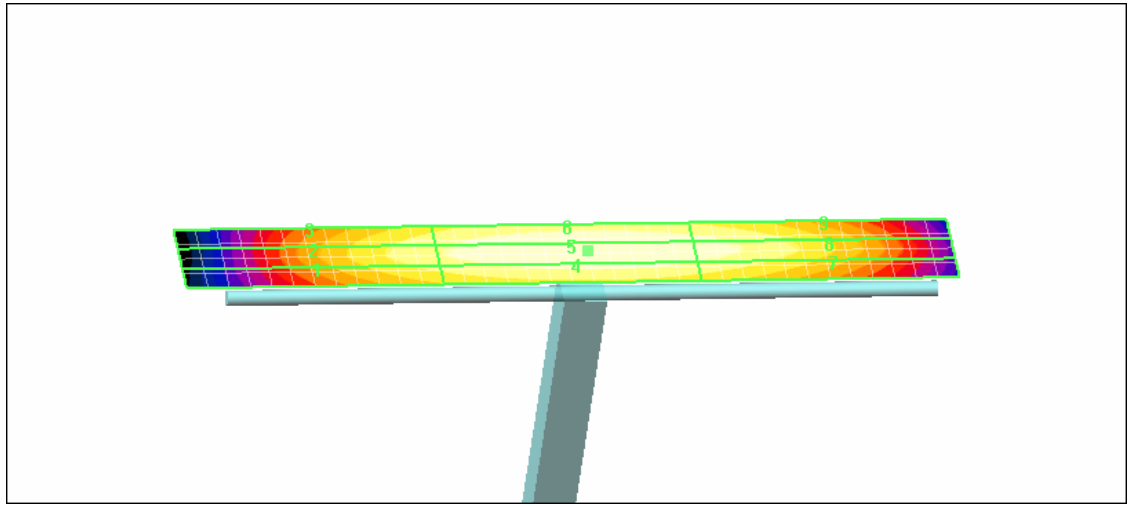
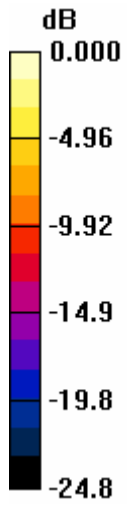
Reference Value = 0.219 A/m; Power Drift = 0.037 dB

Hearing Aid Near-Field Category: M3 (AWF 0 dB)

Peak H-field in A/m

Grid	Grid	Grid
0.169	0.185	0.179
Grid	Grid	Grid
0.205	0.227	0.219
Grid	Grid	Grid

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0 dB = 0.227A/m

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Date/Time: 31/07/2006 9:38:48 AM

Test Laboratory: RTS

HAC_H_Dipole_835 MHz_CDMA_1/8th_12.5dBm

DUT: HAC-Dipole 835 MHz; Type: D835V3; Serial: Not Specified

Communication System: CDMA 800; Frequency: 835 MHz; Duty Cycle: 1:8

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

Phantom section: H Device Section

DASY4 Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 11/11/2005
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 25/04/2006
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

H Scan - H3DV6 probe tip 10mm above CD835 Dipole/Hearing Aid Compatibility Test

(5x37x1): Measurement grid: dx=5mm, dy=5mm

Probe Modulation Factor = 1.00

Reference Value = 0.083 A/m; Power Drift = -0.011 dB

Maximum value of Total (measured) = 0.096 A/m

H Scan - H3DV6 probe tip 10mm above CD835 Dipole/Hearing Aid Compatibility Test

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

Maximum value of peak Total field = 0.096 A/m

Probe Modulation Factor = 1.00

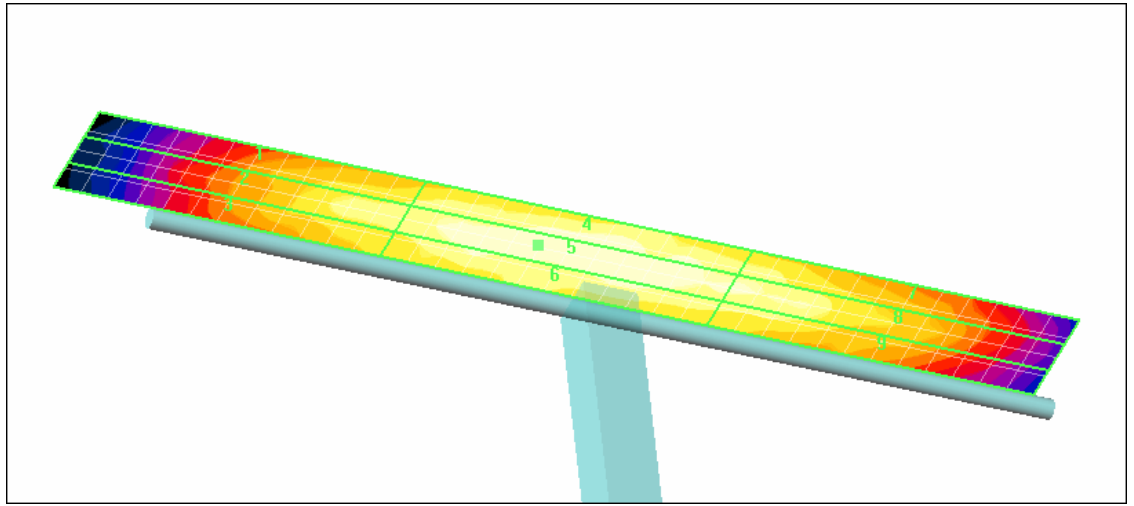
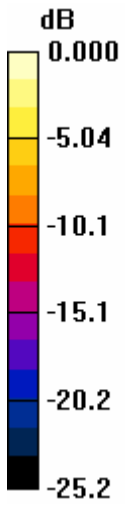
Reference Value = 0.083 A/m; Power Drift = -0.011 dB

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

Peak H-field in A/m

Grid	Grid	Grid
0.069	0.075	0.065
Grid	Grid	Grid
0.091	0.096	0.085
Grid	Grid	Grid

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0 dB = 0.096A/m

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Date/Time: 13/07/2006 2:40:05 PM

Test Laboratory: RTS

HAC_E_Dipole_1880 MHz_CW_20dBm

DUT: HAC Dipole 1880 MHz; Type: CD1880V3; Serial: Not Specified

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

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

Phantom section: H Device Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2285; ConvF(1, 1, 1); Calibrated: 27/04/2006
- Sensor-Surface: 0mm (Fix Surface) Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 25/04/2006
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

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

(5x19x1): Measurement grid: dx=5mm, dy=5mm

Probe Modulation Factor = 1.00

Reference Value = 72.9 V/m; Power Drift = 0.031 dB

Maximum value of Total (measured) = 130.3 V/m

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

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

Maximum value of peak Total field = 132.4 V/m

Probe Modulation Factor = 1.00

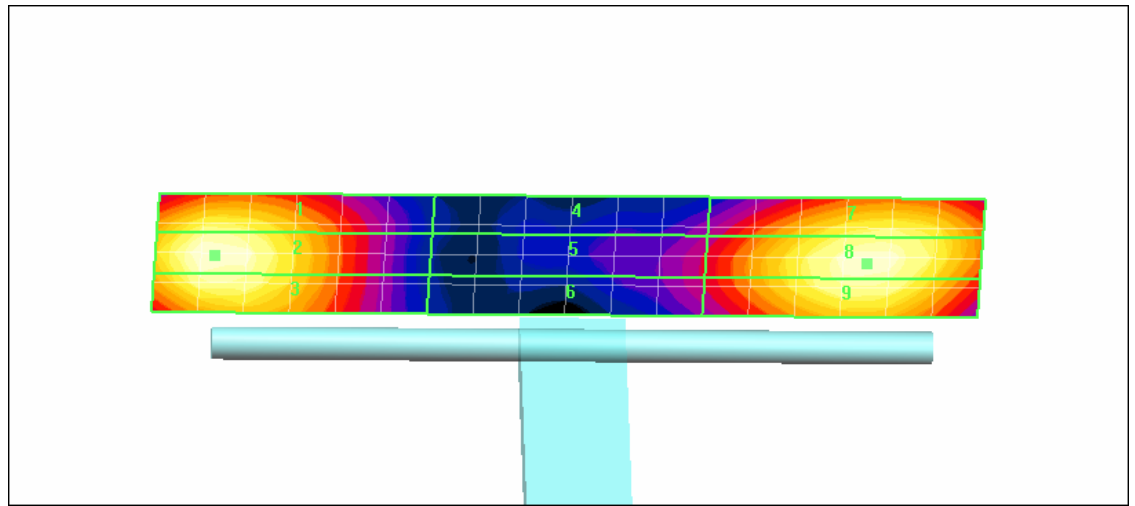
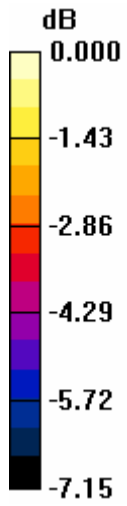
Reference Value = 72.9 V/m; Power Drift = 0.031 dB

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

Peak E-field in V/m

Grid	Grid	Grid
125.2	132.4	129.3
Grid	Grid	Grid
81.9	87.3	87.0
Grid	Grid	Grid

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0 dB = 132.4V/m

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Date/Time: 13/07/2006 2:46:28 PM

Test Laboratory: RTS

HAC_E_Dipole_1880 MHz_CW_10.67dBm

DUT: HAC Dipole 1880 MHz; Type: CD1880V3; Serial: Not Specified

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

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

Phantom section: H Device Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2285; ConvF(1, 1, 1); Calibrated: 27/04/2006
- Sensor-Surface: 0mm (Fix Surface) Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 25/04/2006
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

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

(5x19x1): Measurement grid: dx=5mm, dy=5mm

Probe Modulation Factor = 1.00

Reference Value = 24.8 V/m; Power Drift = -0.017 dB

Maximum value of Total (measured) = 44.4 V/m

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

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

Maximum value of peak Total field = 45.1 V/m

Probe Modulation Factor = 1.00

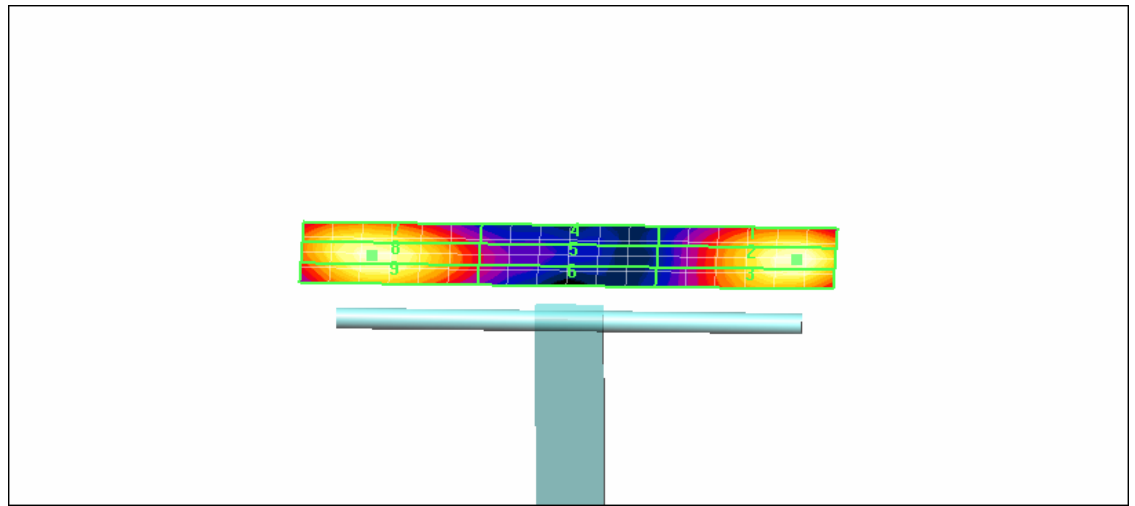
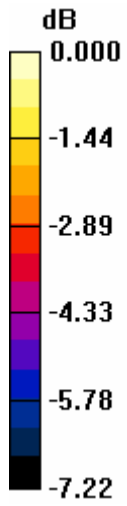
Reference Value = 24.8 V/m; Power Drift = -0.017 dB

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

Peak E-field in V/m

Grid	Grid	Grid
42.6	45.1	43.9
Grid	Grid	Grid
27.9	29.7	29.5
Grid	Grid	Grid

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0 dB = 45.1V/m

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Date/Time: 13/07/2006 2:53:15 PM

Test Laboratory: RTS

HAC_E_Dipole_1880 MHz_80%AM_10.67dBm

DUT: HAC Dipole 1880 MHz; Type: CD1880V3; Serial: Not Specified

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

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

Phantom section: H Device Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2285; ConvF(1, 1, 1); Calibrated: 27/04/2006
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 25/04/2006
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

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

(5x19x1): Measurement grid: dx=5mm, dy=5mm

Probe Modulation Factor = 1.00

Reference Value = 15.4 V/m; Power Drift = -0.009 dB

Maximum value of Total (measured) = 27.7 V/m

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

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

Maximum value of peak Total field = 28.1 V/m

Probe Modulation Factor = 1.00

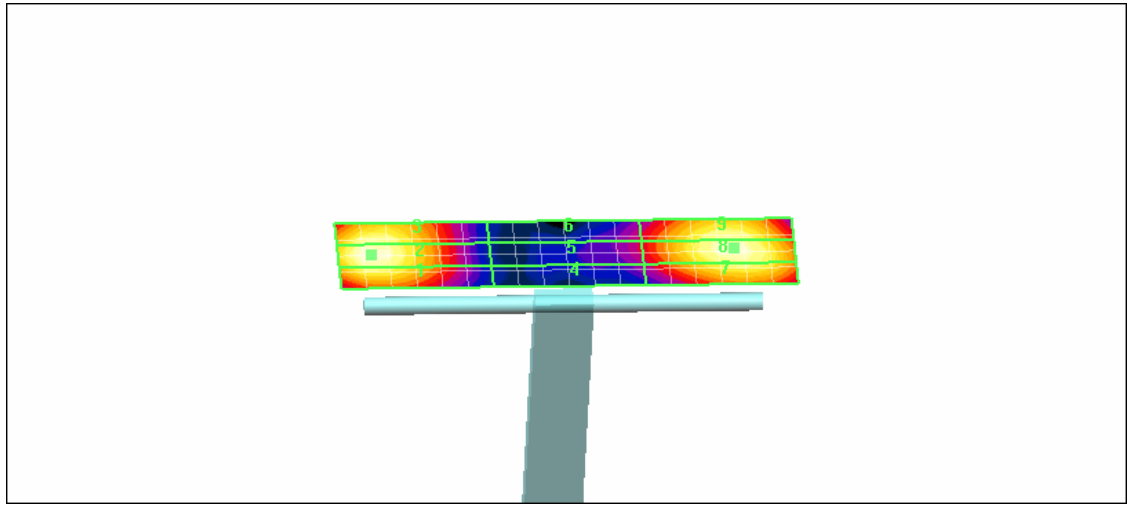
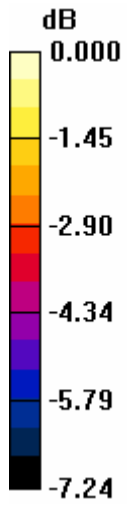
Reference Value = 15.4 V/m; Power Drift = -0.009 dB

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

Peak E-field in V/m

Grid	Grid	Grid
26.7	28.1	27.4
Grid	Grid	Grid
17.4	18.5	18.4
Grid	Grid	Grid

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0 dB = 28.1V/m

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Date/Time: 13/07/2006 3:03:30 PM

Test Laboratory: RTS

HAC_E_Dipole_1880 MHz_CDMA_FR_10.67dBm

DUT: HAC Dipole 1880 MHz; Type: CD1880V3; Serial: Not Specified

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

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

Phantom section: H Device Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2285; ConvF(1, 1, 1); Calibrated: 27/04/2006
- Sensor-Surface: 0mm (Fix Surface) Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 25/04/2006
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

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

(5x19x1): Measurement grid: dx=5mm, dy=5mm

Probe Modulation Factor = 1.00

Reference Value = 25.5 V/m; Power Drift = -0.088 dB

Maximum value of Total (measured) = 45.1 V/m

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

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

Maximum value of peak Total field = 45.8 V/m

Probe Modulation Factor = 1.00

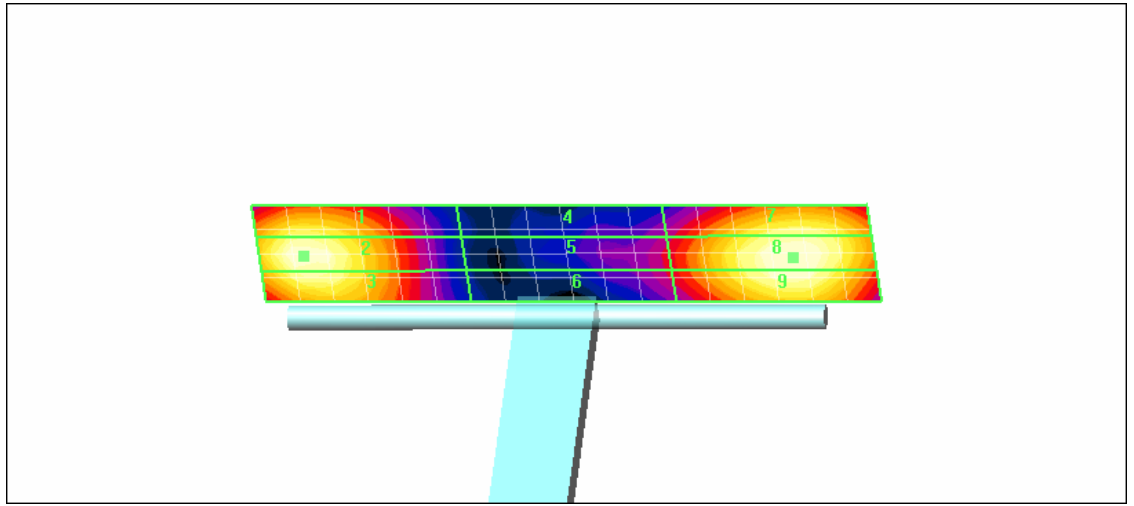
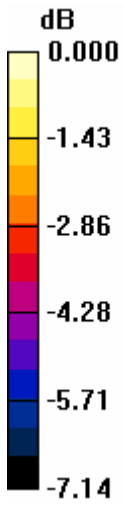
Reference Value = 25.5 V/m; Power Drift = -0.088 dB

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

Peak E-field in V/m

Grid	Grid	Grid
43.1	45.8	44.5
Grid	Grid	Grid
28.7	30.7	30.5
Grid	Grid	Grid

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0 dB = 45.8V/m

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Date/Time: 31/07/2006 10:26:14 AM

Test Laboratory: RTS

HAC_E_Dipole_1880 MHz_CDMA_eigth_10.67dBm_07_31_06

DUT: HAC Dipole 1880 MHz; Type: CD1880V3; Serial: Not Specified

Communication System: CDMA 1900; Frequency: 1880 MHz; Duty Cycle: 1:8

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

Phantom section: H Device Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2285; ConvF(1, 1, 1); Calibrated: 27/04/2006
- Sensor-Surface: 0mm (Fix Surface) Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 25/04/2006
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

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

(5x19x1): Measurement grid: dx=5mm, dy=5mm

Probe Modulation Factor = 1.00

Reference Value = 9.47 V/m; Power Drift = -0.005 dB

Maximum value of Total (measured) = 19.0 V/m

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

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

Maximum value of peak Total field = 19.2 V/m

Probe Modulation Factor = 1.00

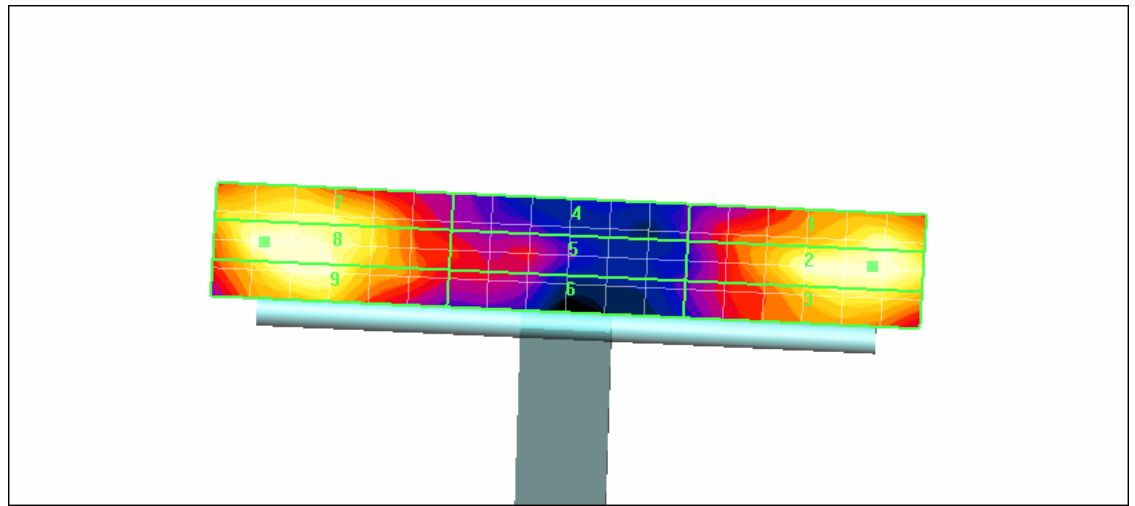
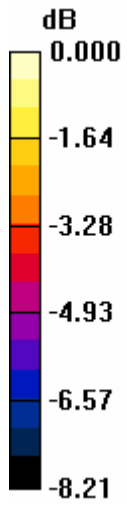
Reference Value = 9.47 V/m; Power Drift = -0.005 dB

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

Peak E-field in V/m

Grid	Grid	Grid
18.6	19.1	17.7
Grid	Grid	Grid
11.4	12.7	12.1
Grid	Grid	Grid

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0 dB = 19.2V/m

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Date/Time: 14/07/2006 4:00:34 PM

Test Laboratory: RTS

HAC_H_Dipole_1880 MHz_CW_20dBm

DUT: HAC Dipole 1880 MHz; Type: CD1880V3; Serial: Not Specified

Communication System: CW; 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 - SN6105; ; Calibrated: 11/11/2005
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 25/04/2006
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

H Scan - H3DV6 probe tip 10mm above CD1880 Dipole/Hearing Aid Compatibility Test

(5x19x1): Measurement grid: dx=5mm, dy=5mm

Probe Modulation Factor = 1.00

Reference Value = 0.478 A/m; Power Drift = -0.003 dB

Maximum value of Total (measured) = 0.491 A/m

H Scan - H3DV6 probe tip 10mm above CD1880 Dipole/Hearing Aid Compatibility Test

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

Maximum value of peak Total field = 0.492 A/m

Probe Modulation Factor = 1.00

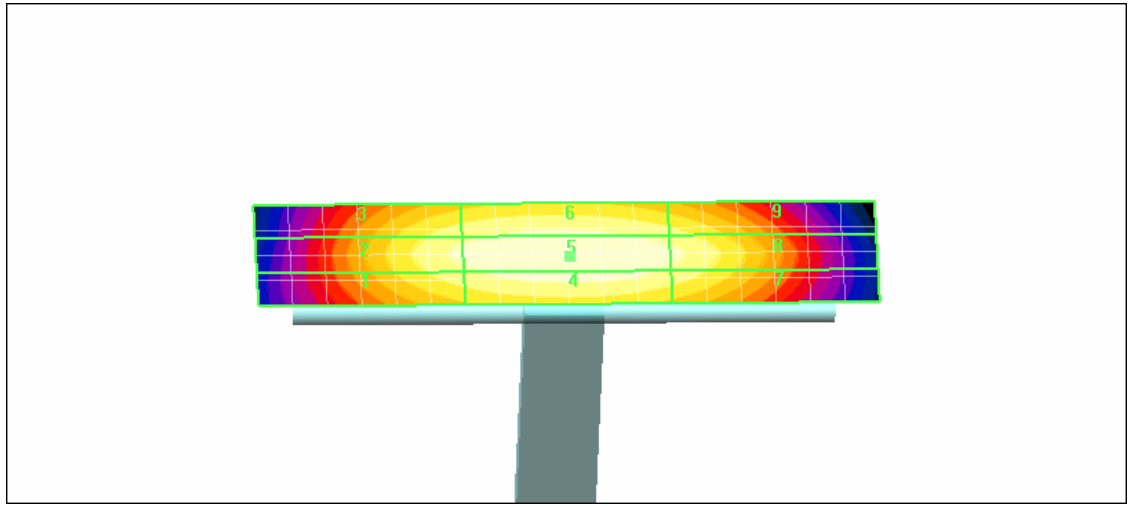
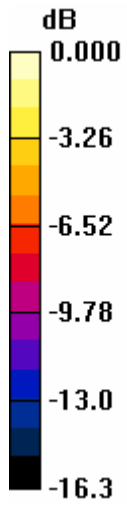
Reference Value = 0.478 A/m; Power Drift = -0.003 dB

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

Peak H-field in A/m

Grid	Grid	Grid
0.425	0.451	0.422
Grid	Grid	Grid
0.468	0.492	0.454
Grid	Grid	Grid

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0 dB = 0.492A/m

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Date/Time: 14/07/2006 4:09:14 PM

Test Laboratory: RTS

HAC_H_Dipole_1880 MHz_CW_10.67dBm

DUT: HAC Dipole 1880 MHz; Type: CD1880V3; Serial: Not Specified

Communication System: CW; 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 - SN6105; ; Calibrated: 11/11/2005
- Sensor-Surface: 0mm (Fix Surface) Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 25/04/2006
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

H Scan - H3DV6 probe tip 10mm above CD1880 Dipole/Hearing Aid Compatibility Test

(5x19x1): Measurement grid: dx=5mm, dy=5mm

Probe Modulation Factor = 1.00

Reference Value = 0.161 A/m; Power Drift = -0.020 dB

Maximum value of Total (measured) = 0.165 A/m

H Scan - H3DV6 probe tip 10mm above CD1880 Dipole/Hearing Aid Compatibility Test

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

Maximum value of peak Total field = 0.165 A/m

Probe Modulation Factor = 1.00

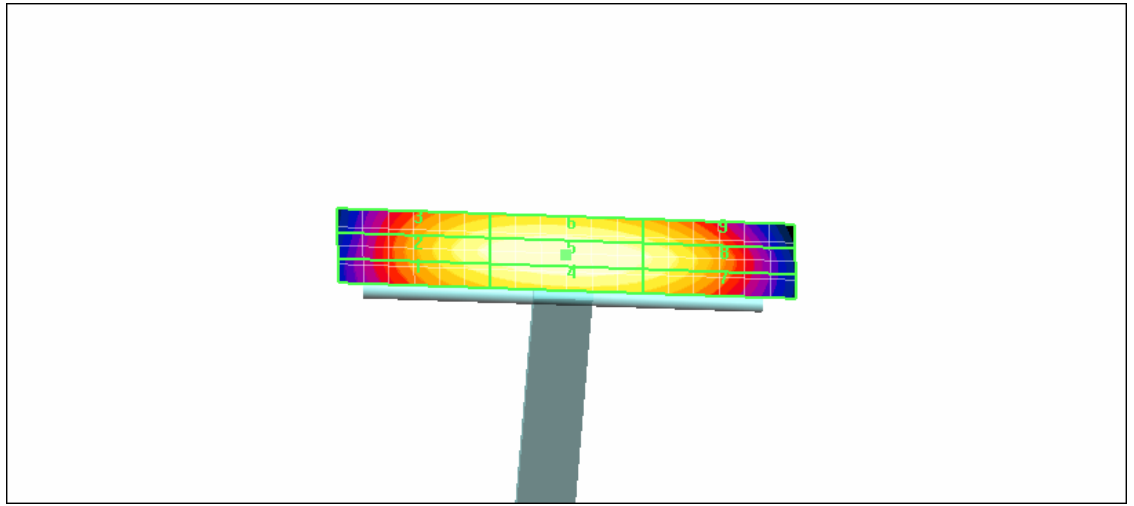
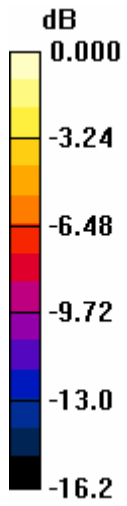
Reference Value = 0.161 A/m; Power Drift = -0.020 dB

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

Peak H-field in A/m

Grid	Grid	Grid
0.144	0.152	0.142
Grid	Grid	Grid
0.158	0.165	0.152
Grid	Grid	Grid

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0 dB = 0.165A/m

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Date/Time: 14/07/2006 4:16:07 PM

Test Laboratory: RTS

HAC_H_Dipole_1880 MHz_80%AM_10.67dBm

DUT: HAC Dipole 1880 MHz; Type: CD1880V3; Serial: Not Specified

Communication System: CW; 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 - SN6105; ; Calibrated: 11/11/2005
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 25/04/2006
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

H Scan - H3DV6 probe tip 10mm above CD1880 Dipole/Hearing Aid Compatibility Test

(5x19x1): Measurement grid: dx=5mm, dy=5mm

Probe Modulation Factor = 1.00

Reference Value = 0.101 A/m; Power Drift = -0.049 dB

Maximum value of Total (measured) = 0.103 A/m

H Scan - H3DV6 probe tip 10mm above CD1880 Dipole/Hearing Aid Compatibility Test

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

Maximum value of peak Total field = 0.103 A/m

Probe Modulation Factor = 1.00

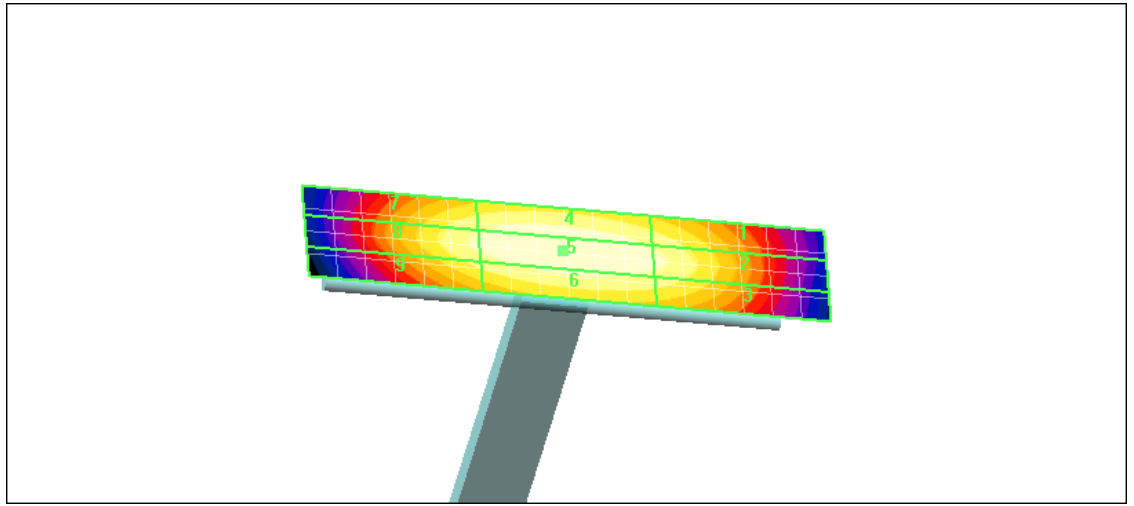
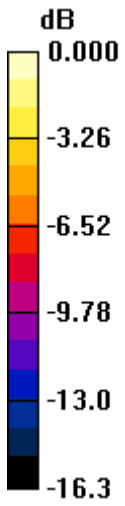
Reference Value = 0.101 A/m; Power Drift = -0.049 dB

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

Peak H-field in A/m

Grid	Grid	Grid
0.090	0.095	0.088
Grid	Grid	Grid
0.099	0.103	0.095
Grid	Grid	Grid

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0 dB = 0.103A/m

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Date/Time: 14/07/2006 4:30:14 PM

Test Laboratory: RTS

HAC_H_Dipole_1880 MHz_CDMA_Full_10.67dBm

DUT: HAC Dipole 1880 MHz; Type: CD1880V3; Serial: Not Specified

Communication System: CDMA 1900; 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 - SN6105; ; Calibrated: 11/11/2005
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 25/04/2006
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

H Scan - H3DV6 probe tip 10mm above CD1880 Dipole/Hearing Aid Compatibility Test

(5x19x1): Measurement grid: dx=5mm, dy=5mm

Probe Modulation Factor = 1.00

Reference Value = 0.167 A/m; Power Drift = -0.071 dB

Maximum value of Total (measured) = 0.171 A/m

H Scan - H3DV6 probe tip 10mm above CD1880 Dipole/Hearing Aid Compatibility Test

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

Maximum value of peak Total field = 0.171 A/m

Probe Modulation Factor = 1.00

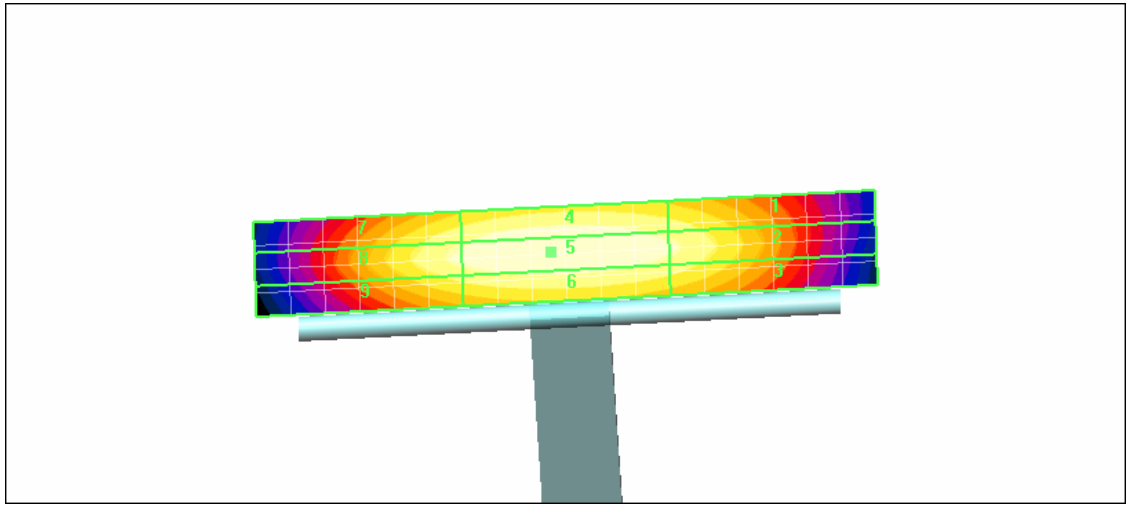
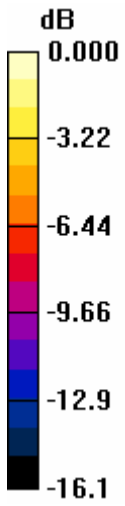
Reference Value = 0.167 A/m; Power Drift = -0.071 dB

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

Peak H-field in A/m

Grid	Grid	Grid
0.147	0.156	0.145
Grid	Grid	Grid
0.164	0.171	0.157
Grid	Grid	Grid

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0 dB = 0.171A/m

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Test Laboratory: RTS

HAC_H_Dipole_1880 MHz_CDMA_Eigth_10.67dBm

DUT: HAC Dipole 1880 MHz; Type: CD1880V3; Serial: Not Specified

Communication System: CDMA 1900; Frequency: 1880 MHz; Duty Cycle: 1:8

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

Phantom section: H Device Section

DASY4 Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 11/11/2005
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 25/04/2006
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

H Scan - H3DV6 probe tip 10mm above CD1880 Dipole/Hearing Aid Compatibility Test

(5x19x1): Measurement grid: dx=5mm, dy=5mm

Probe Modulation Factor = 1.00

Reference Value = 0.069 A/m; Power Drift = 0.150 dB

Maximum value of Total (measured) = 0.079 A/m

H Scan - H3DV6 probe tip 10mm above CD1880 Dipole/Hearing Aid Compatibility Test

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

Maximum value of peak Total field = 0.079 A/m

Probe Modulation Factor = 1.00

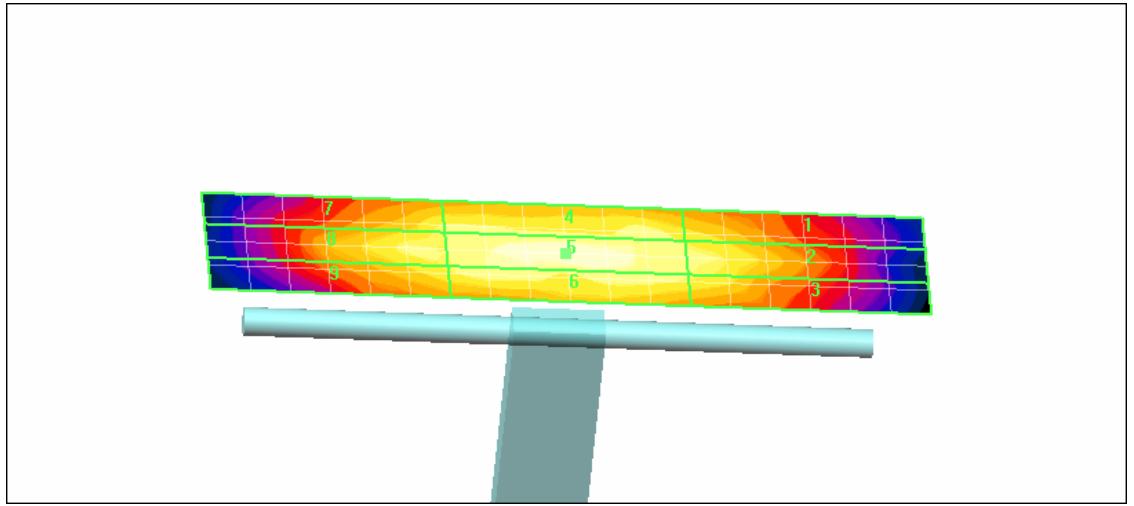
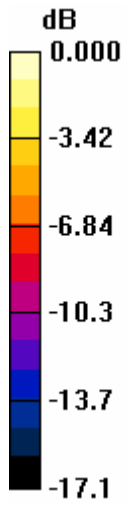
Reference Value = 0.069 A/m; Power Drift = 0.150 dB

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

Peak H-field in A/m

Grid	Grid	Grid
0.060	0.064	0.063
Grid	Grid	Grid
0.069	0.079	0.070
Grid	Grid	Grid

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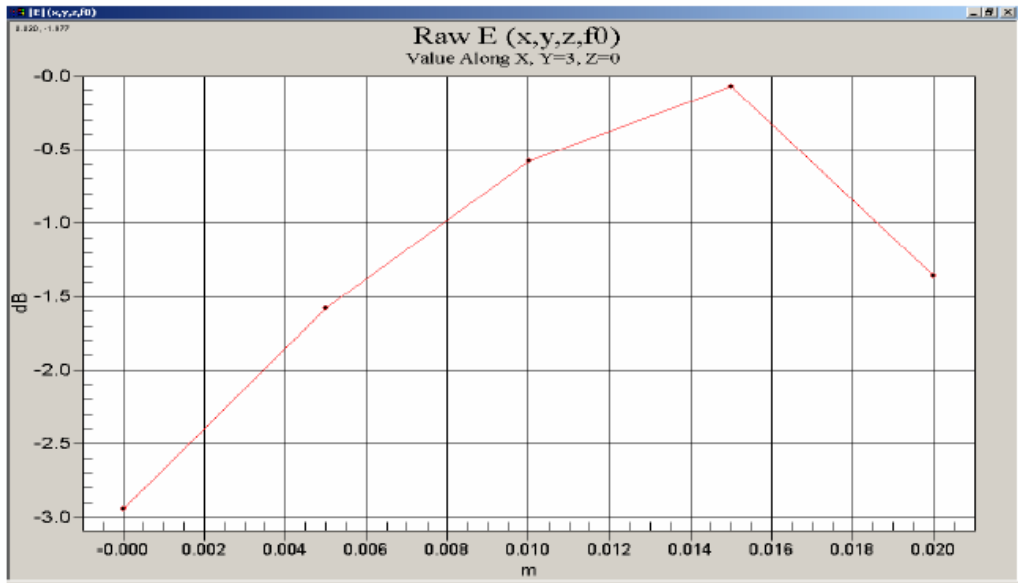


0 dB = 0.079A/m

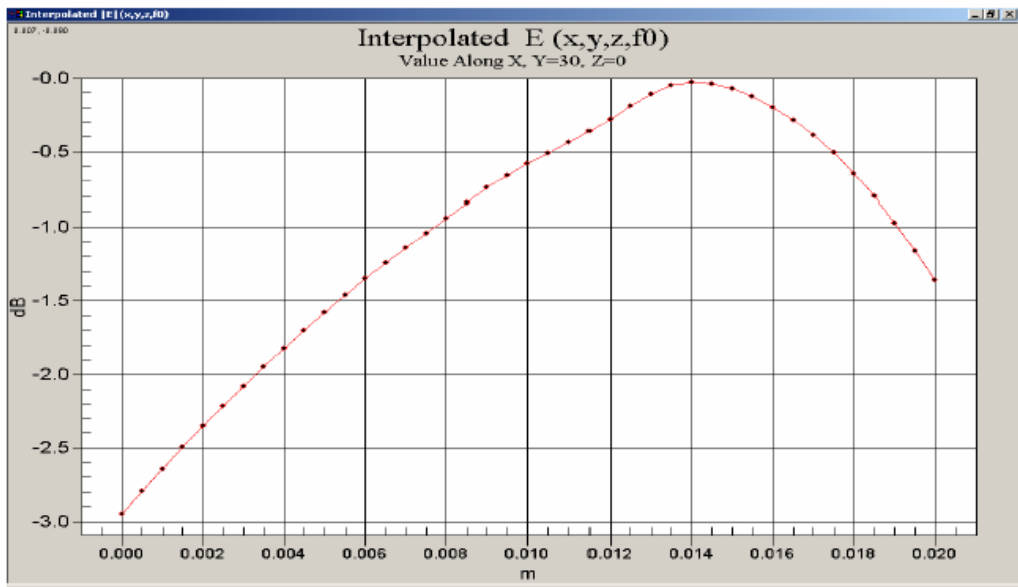
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Justification of Step Size and Interpolation

This section demonstrates that a 5mm step size with interpolation provides sufficient resolution for RF emissions measurements. The DASY 4 uses interpolation algorithms to derive 9 interpolated points between every measured point.

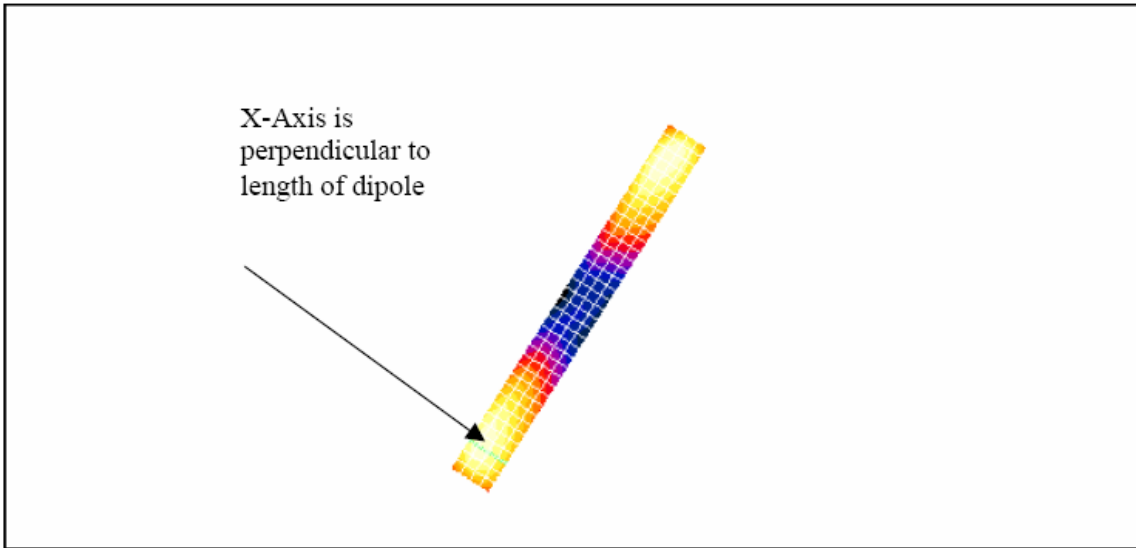


The figure above shows the raw measured field strength perpendicular to the length of the validation dipole. The TCB guidance slides require the 3dB width to be much larger than the step size. The width between -3dB points is > 21mm, at least 4 times the step size.



This figure shows the interpolated field strength perpendicular to the dipole. The interpolated points follow the raw points with no inconsistencies.

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The green line in this figure shows the axis along which the points lie.

Comparison of 5mm and 2mm step sizes

An additional set of measurements was taken: dipole validations were performed using 5mm and 2mm step sizes. The delta between the two readings is insignificant for both field types (< 0.4% for E and 0% for H), demonstrating that 5mm is sufficient. The plots follow.

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Date/Time: 14/07/2005 11:35:24 AM

Lab: RIM Testing Services (RTS)

Dipole Validation 1880 MHz_E-Field 07_14_05

DUT: HAC Dipole 1880 MHz; Type: CD1880V3

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

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

Phantom section: H Device Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2285; ConvF(1, 1, 1); Calibrated: 10/12/2004
- Sensor-Surface: 0mm (Fix Surface) Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 03/01/2005
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

E Scan 10mm above CD 1880 MHz/Hearing Aid Compatibility Test (5x19x1):

Measurement grid: dx=5mm, dy=5mm

Maximum value of Total (measured) = 134.8 V/m

E Scan 10mm above CD 1880 MHz/Hearing Aid Compatibility Test (41x181x1):

Measurement grid: dx=5mm, dy=5mm

Maximum value of Total field (slot averaged) = 131.0 V/m

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

E in V/m (Time averaged) E in V/m (Slot averaged)

Grid 1	Grid 2	Grid 3	Grid 1	Grid 2	Grid 3
123.2	138.1	138.4	123.2	138.1	138.4
Grid 4	Grid 5	Grid 6	Grid 4	Grid 5	Grid 6
80.9	92.3	92.2	80.9	92.3	92.2
Grid 7	Grid 8	Grid 9	Grid 7	Grid 8	Grid 9
119.8	131.0	130.7	119.8	131.0	130.7

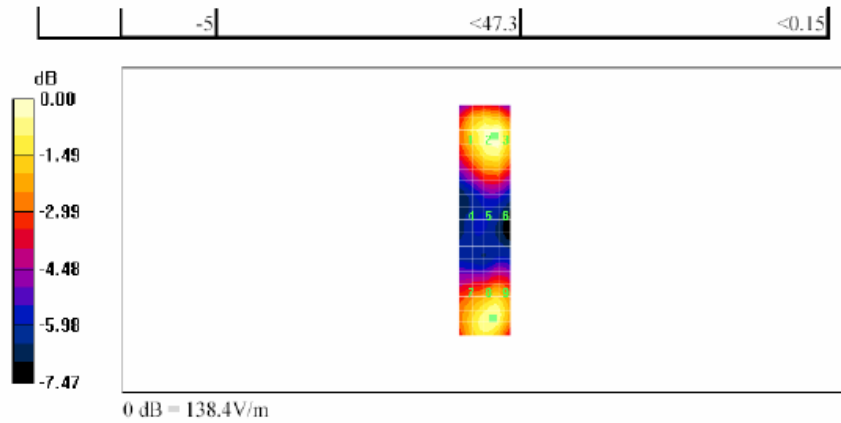
Category	AWF (dB)	Limits for E-Field Emissions (V/m)	Limits for H-Field Emissions (A/m)
M1	0	199.5 - 354.8	0.6 - 1.07
	-5	149.6 - 266.1	0.45 - 0.8
M2	0	112.2 - 199.5	0.34 - 0.6
	-5	84.1 - 149.6	0.25 - 0.45
M3	0	63.1 - 112.2	0.19 - 0.34
	-5	47.3 - 84.1	0.15 - 0.25
M4	0	<63.1	<0.19

file://C:\Program%20Files\DASY4\Print_Templates\Dipole%20Validation%201880%20... 14/07/2005

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Date/Time: 14/07/2005 11:44:51 AM

Lab: RIM Testing Services (RTS)

Dipole Validation 1880 MHz_2mm step_E-Field 07_14_05

DUT: HAC Dipole 1880 MHz; Type: CD1880V3

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

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

Phantom section: H Device Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2285; ConvF(1, 1, 1); Calibrated: 10/12/2004

- Sensor-Surface: 0mm (Fix Surface) Sensor-Surface: (Fix Surface)

- Electronics: DAE3 Sn472; Calibrated: 03/01/2005

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

- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

E Scan 10mm above CD 1880 MHz/Hearing Aid Compatibility Test (11x46x1):

Measurement grid: dx=2mm, dy=2mm

Maximum value of Total (measured) = 138.0 V/m

E Scan 10mm above CD 1880 MHz/Hearing Aid Compatibility Test (101x451x1):

Measurement grid: dx=2mm, dy=2mm

Maximum value of Total field (slot averaged) = 131.2 V/m

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

E in V/m (Time averaged) E in V/m (Slot averaged)

Grid 1	Grid 2	Grid 3	Grid 1	Grid 2	Grid 3
123.1	138.6	138.6	123.1	138.6	138.6
Grid 4	Grid 5	Grid 6	Grid 4	Grid 5	Grid 6
81.4	92.1	91.6	81.4	92.1	91.6
Grid 7	Grid 8	Grid 9	Grid 7	Grid 8	Grid 9
121.3	131.2	131.0	121.3	131.2	131.0

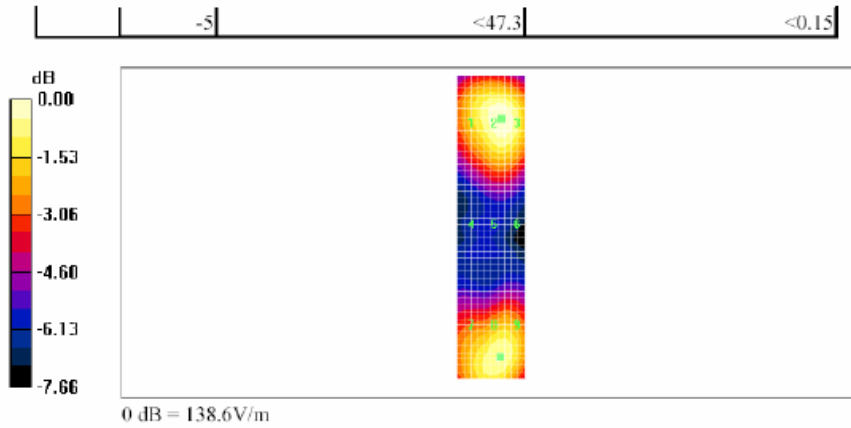
Category	AWF (dB)	Limits for E-Field Emissions (V/m)	Limits for H-Field Emissions (A/m)
M1	0	199.5 - 354.8	0.6 - 1.07
	-5	149.6 - 266.1	0.45 - 0.8
M2	0	112.2 - 199.5	0.34 - 0.6
	-5	84.1 - 149.6	0.25 - 0.45
M3	0	63.1 - 112.2	0.19 - 0.34
	-5	47.3 - 84.1	0.15 - 0.25
M4	0	<63.1	<0.19

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Lab: RIM Testing Services (RTS)

HAC_H_Dipole_CW 1880_5 mm step_07_14_05

DUT: HAC Dipole 1880 MHz; Type: CD1880V3

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

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

Phantom section: H Dipole Section

DASY4 Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 10/12/2004
- Sensor-Surface: 0mm (Fix Surface) Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 03/01/2005
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

H Scan 10mm above CD 1880 MHz/Hearing Aid Compatibility Test (5x19x1):

Measurement grid: dx=5mm, dy=5mm

Maximum value of Total (measured) = 0.406 A/m

H Scan 10mm above CD 1880 MHz/Hearing Aid Compatibility Test (41x181x1):

Measurement grid: dx=5mm, dy=5mm

Maximum value of Total field (slot averaged) = 0.406 A/m

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

H in A/m (Time averaged) H in A/m (Slot averaged)

Grid 1	Grid 2	Grid 3	Grid 1	Grid 2	Grid 3
0.342	0.359	0.344	0.342	0.359	0.344
Grid 4	Grid 5	Grid 6	Grid 4	Grid 5	Grid 6
0.389	0.406	0.389	0.389	0.406	0.389
Grid 7	Grid 8	Grid 9	Grid 7	Grid 8	Grid 9
0.363	0.378	0.363	0.363	0.378	0.363

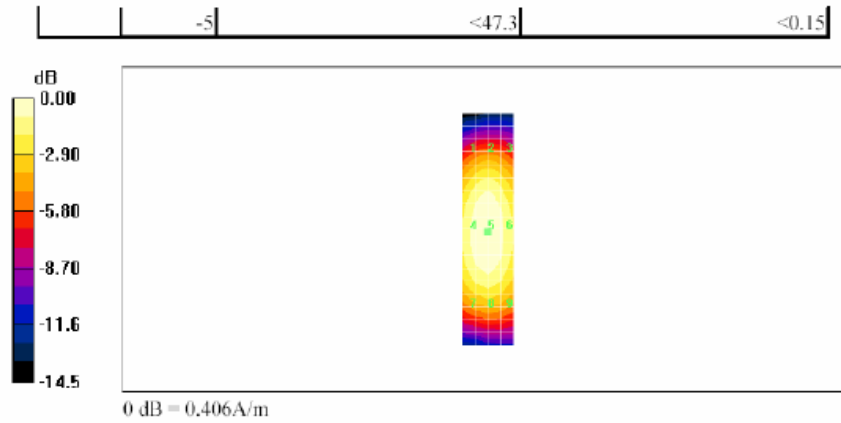
Category	AWF (dB)	Limits for E-Field Emissions (V/m)	Limits for H-Field Emissions (A/m)
M1	0	199.5 - 354.8	0.6 - 1.07
	-5	149.6 - 266.1	0.45 - 0.8
M2	0	112.2 - 199.5	0.34 - 0.6
	-5	84.1 - 149.6	0.25 - 0.45
M3	0	63.1 - 112.2	0.19 - 0.34
	-5	47.3 - 84.1	0.15 - 0.25
M4	0	<63.1	<0.19

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Lab: RIM Testing Services (RTS)

HAC_H_Dipole_CW 1880_2 mm step_07_14_05

DUT: HAC Dipole 1880 MHz; Type: CD1880V3

Communication System: CW; Frequency: 1880 MHz; Duty Cycle: 1:1
Medium: Air Medium parameters used: $\sigma = 0$ mho/m, $\epsilon_r = 1$; $\rho = 1$ kg/m³
Phantom section: H Dipole Section

DASY4 Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 10/12/2004
- Sensor-Surface: 0mm (Fix Surface) Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 03/01/2005
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

H Scan 10mm above CD 1880 MHz/Hearing Aid Compatibility Test (11x46x1):

Measurement grid: dx=2mm, dy=2mm
Maximum value of Total (measured) = 0.406 A/m

H Scan 10mm above CD 1880 MHz/Hearing Aid Compatibility Test (101x451x1):

Measurement grid: dx=2mm, dy=2mm
Maximum value of Total field (slot averaged) = 0.406 A/m
Hearing Aid Near-Field Category: M2 (AWF 0 dB)

H in A/m (Time averaged) H in A/m (Slot averaged)

Grid 1	Grid 2	Grid 3	Grid 1	Grid 2	Grid 3
0.347	0.361	0.348	0.347	0.361	0.348
Grid 4	Grid 5	Grid 6	Grid 4	Grid 5	Grid 6
0.394	0.406	0.391	0.394	0.406	0.391
Grid 7	Grid 8	Grid 9	Grid 7	Grid 8	Grid 9
0.367	0.380	0.365	0.367	0.380	0.365

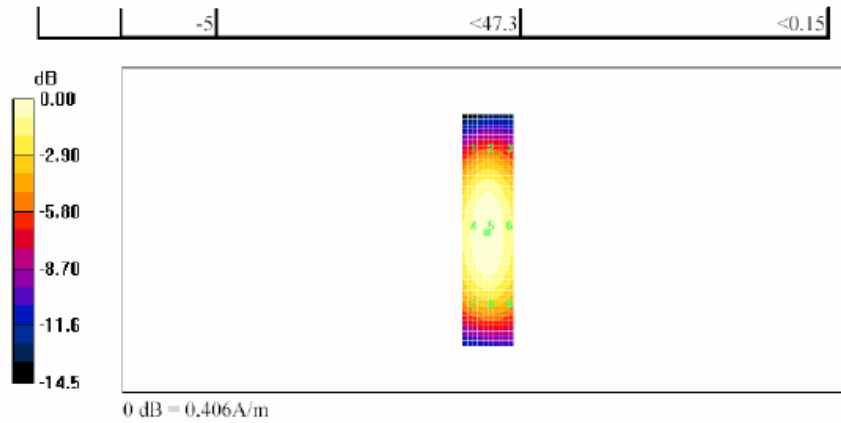
Category	AWF (dB)	Limits for E-Field Emissions (V/m)	Limits for H-Field Emissions (A/m)
M1	0	199.5 - 354.8	0.6 - 1.07
	-5	149.6 - 266.1	0.45 - 0.8
M2	0	112.2 - 199.5	0.34 - 0.6
	-5	84.1 - 149.6	0.25 - 0.45
M3	0	63.1 - 112.2	0.19 - 0.34
	-5	47.3 - 84.1	0.15 - 0.25
M4	0	<63.1	<0.19

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A.3 RF emission field plots

For plots where the probe was rotated, an arrow is drawn to showing location of the probe rotation after the exclusion block.

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Date/Time: 18/07/2006 10:16:26 AM

Test Laboratory: RTS

HAC_E_Field_CDMA800_Spk center_low_chan

DUT: BlackBerry Wireless Handheld; Type: Sample ; Serial: Not Specified

Communication System: CDMA 800; 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 - SN2285; ConvF(1, 1, 1); Calibrated: 27/04/2006
- Sensor-Surface: 0mm (Fix Surface) Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 25/04/2006
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

E Scan - ER probe tip 10mm above Device Reference/Z Scan (1x1x21): Measurement grid: dx=20mm, dy=20mm, dz=5mm
Maximum value of Total (measured) = 94.4 V/m

E Scan - ER probe tip 10mm above Device Reference/Hearing Aid Compatibility Test (11x11x1): Measurement grid: dx=5mm, dy=5mm
Probe Modulation Factor = 1.00
Reference Value = 91.9 V/m; Power Drift = -0.099 dB
Maximum value of Total (measured) = 94.8 V/m

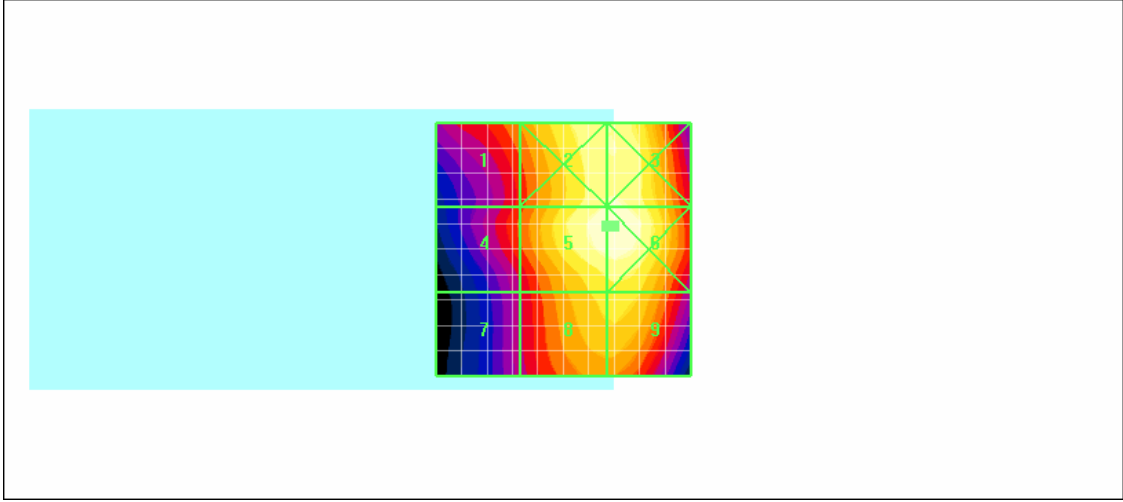
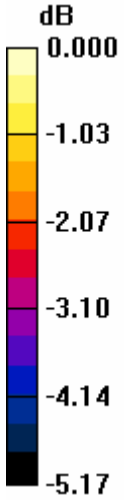
E Scan - ER probe tip 10mm above Device Reference/Hearing Aid Compatibility Test (101x101x1): Measurement grid: dx=5mm, dy=5mm
Maximum value of peak Total field = 94.4 V/m
Probe Modulation Factor = 1.00
Reference Value = 91.9 V/m; Power Drift = -0.099 dB
Hearing Aid Near-Field Category: M3 (AWF 0 dB)

Peak E-field in V/m

Grid	Grid	Grid
78.4	91.9	92.1
Grid	Grid	Grid
75.8	94.4	94.9
Grid	Grid	Grid

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68.9	86.3	86.7
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0 dB = 94.9V/m

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	Author Data Daoud Attayi	Dates July 13-19, 31, 2006	Report No RTS-0373-0607-14

Date/Time: 18/07/2006 10:26:30 AM

Test Laboratory: RTS

HAC_E_Field_CDMA800_Spk center_mid_chan

DUT: BlackBerry Wireless Handheld; Type: Sample ; Serial: Not Specified

Communication System: CDMA 800; 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 - SN2285; ConvF(1, 1, 1); Calibrated: 27/04/2006
- Sensor-Surface: 0mm (Fix Surface) Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 25/04/2006
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

E Scan - ER probe tip 10mm above Device Reference/Z Scan (1x1x21): Measurement grid: dx=20mm, dy=20mm, dz=5mm
Maximum value of Total (measured) = 91.6 V/m

E Scan - ER probe tip 10mm above Device Reference/Hearing Aid Compatibility Test (11x11x1): Measurement grid: dx=5mm, dy=5mm
Probe Modulation Factor = 1.00
Reference Value = 90.1 V/m; Power Drift = -0.103 dB
Maximum value of Total (measured) = 91.1 V/m

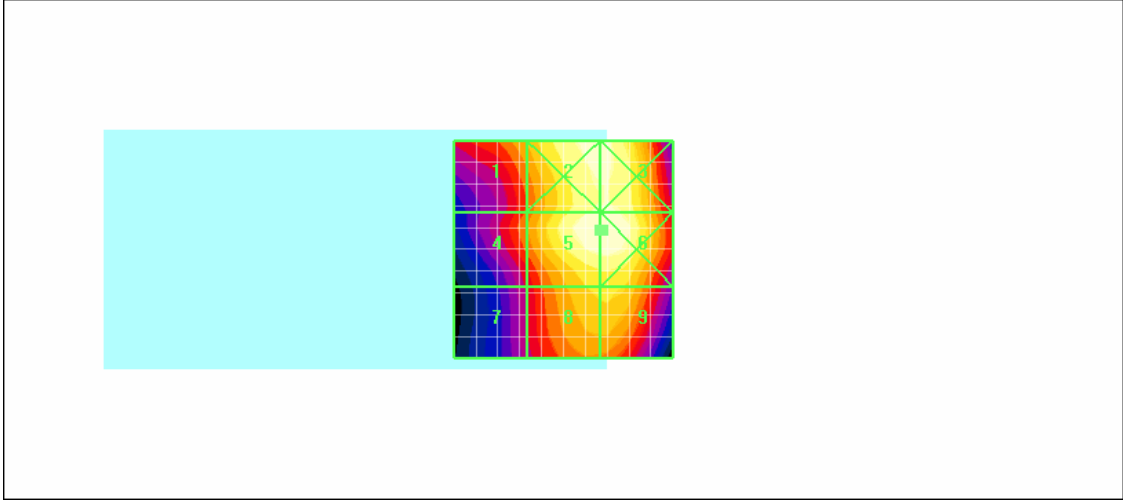
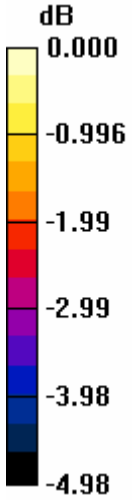
E Scan - ER probe tip 10mm above Device Reference/Hearing Aid Compatibility Test (101x101x1): Measurement grid: dx=5mm, dy=5mm
Maximum value of peak Total field = 91.1 V/m
Probe Modulation Factor = 1.00
Reference Value = 90.1 V/m; Power Drift = -0.103 dB
Hearing Aid Near-Field Category: M3 (AWF 0 dB)

Peak E-field in V/m

Grid	Grid	Grid
78.9	89.2	89.2
Grid	Grid	Grid
75.3	91.1	91.2
Grid	Grid	Grid

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67.7	82.7	82.8
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0 dB = 91.2V/m

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	Author Data Daoud Attayi	Dates July 13-19, 31, 2006	Report No RTS-0373-0607-14

Date/Time: 18/07/2006 10:48:30 AM

Test Laboratory: RTS

HAC_E_Field_CDMA800_Spk center_high_chan

DUT: BlackBerry Wireless Handheld; Type: Sample ; Serial: Not Specified

Communication System: CDMA 800; Frequency: 848.52 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 - SN2285; ConvF(1, 1, 1); Calibrated: 27/04/2006
- Sensor-Surface: 0mm (Fix Surface) Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 25/04/2006
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

E Scan - ER probe tip 10mm above Device Reference/Z Scan (1x1x21): Measurement grid: dx=20mm, dy=20mm, dz=5mm
Maximum value of Total (measured) = 105.4 V/m

E Scan - ER probe tip 10mm above Device Reference/Hearing Aid Compatibility Test (11x11x1): Measurement grid: dx=5mm, dy=5mm
Probe Modulation Factor = 1.00
Reference Value = 100.9 V/m; Power Drift = 0.007 dB
Maximum value of Total (measured) = 105.2 V/m

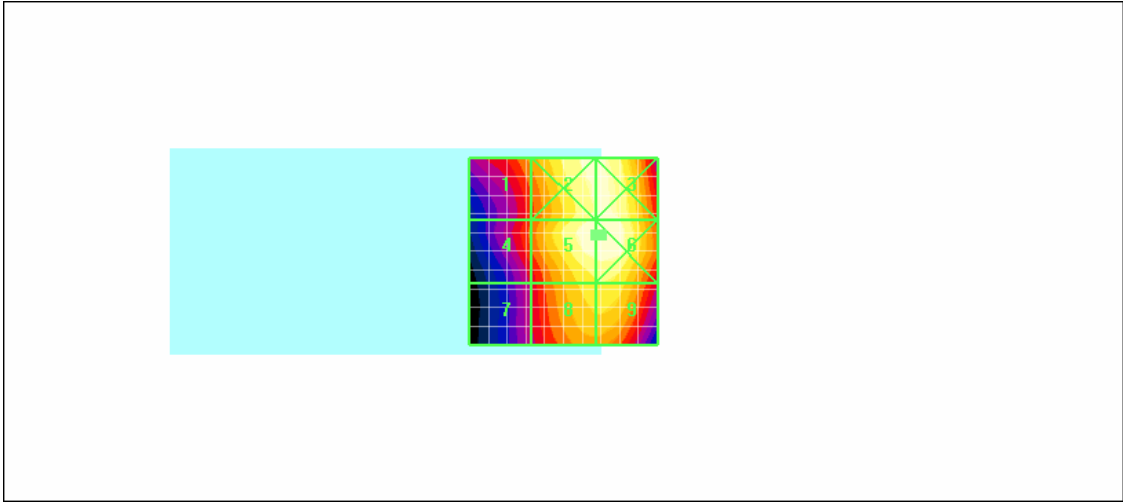
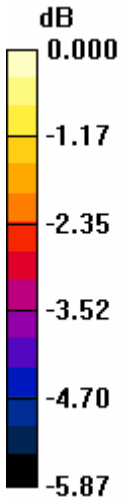
E Scan - ER probe tip 10mm above Device Reference/Hearing Aid Compatibility Test (101x101x1): Measurement grid: dx=5mm, dy=5mm
Maximum value of peak Total field = 104.8 V/m
Probe Modulation Factor = 1.00
Reference Value = 100.9 V/m; Power Drift = 0.007 dB
Hearing Aid Near-Field Category: M3 (AWF 0 dB)

Peak E-field in V/m

Grid	Grid	Grid
85.9	102.1	102.6
Grid	Grid	Grid
82.1	104.8	105.2
Grid	Grid	Grid

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74.5	95.8	96.3
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0 dB = 105.2V/m

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Date/Time: 18/07/2006 11:08:31 AM

Test Laboratory: RTS

HAC_E_Field_CDMA800_T_Coil center_low_chan

DUT: BlackBerry Wireless Handheld; Type: Sample ; Serial: Not Specified

Communication System: CDMA 800; 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 - SN2285; ConvF(1, 1, 1); Calibrated: 27/04/2006
- Sensor-Surface: 0mm (Fix Surface) Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 25/04/2006
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

E Scan - ER probe tip 10mm above Device Reference/Z Scan (1x1x21): Measurement grid: dx=20mm, dy=20mm, dz=5mm
Maximum value of Total (measured) = 94.3 V/m

E Scan - ER probe tip 10mm above Device Reference/Hearing Aid Compatibility Test (11x11x1): Measurement grid: dx=5mm, dy=5mm
Probe Modulation Factor = 1.00
Reference Value = 90.7 V/m; Power Drift = -0.048 dB
Maximum value of Total (measured) = 92.9 V/m

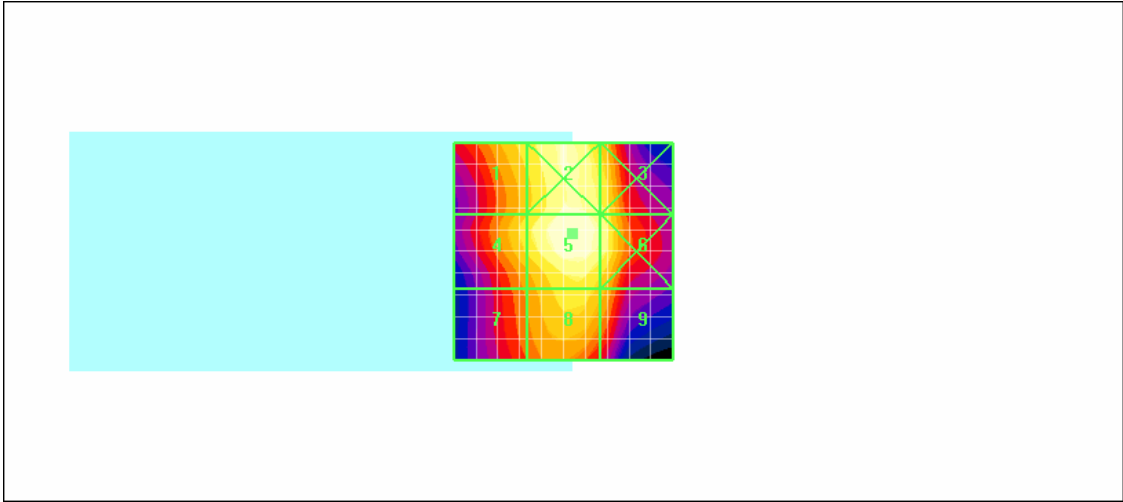
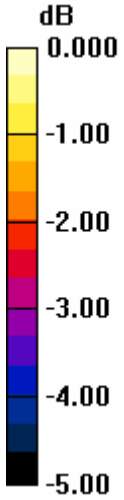
E Scan - ER probe tip 10mm above Device Reference/Hearing Aid Compatibility Test (101x101x1): Measurement grid: dx=5mm, dy=5mm
Maximum value of peak Total field = 93.2 V/m
Probe Modulation Factor = 1.00
Reference Value = 90.7 V/m; Power Drift = -0.048 dB
Hearing Aid Near-Field Category: M3 (AWF 0 dB)

Peak E-field in V/m

Grid	Grid	Grid
85.2	91.1	87.6
Grid	Grid	Grid
85.3	93.2	89.3
Grid	Grid	Grid

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77.8	85.6	82.0
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0 dB = 93.2V/m

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Date/Time: 18/07/2006 11:18:05 AM

Test Laboratory: RTS

HAC_E_Field_CDMA800_T_coil_center_mid_chan

DUT: BlackBerry Wireless Handheld; Type: Sample ; Serial: Not Specified

Communication System: CDMA 800; 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 - SN2285; ConvF(1, 1, 1); Calibrated: 27/04/2006
- Sensor-Surface: 0mm (Fix Surface) Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 25/04/2006
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

E Scan - ER probe tip 10mm above Device Reference/Z Scan (1x1x21): Measurement grid:

dx=20mm, dy=20mm, dz=5mm

Maximum value of Total (measured) = 92.4 V/m

E Scan - ER probe tip 10mm above Device Reference/Hearing Aid Compatibility Test

(11x11x1): Measurement grid: dx=5mm, dy=5mm

Probe Modulation Factor = 1.00

Reference Value = 89.2 V/m; Power Drift = -0.042 dB

Maximum value of Total (measured) = 91.9 V/m

E Scan - ER probe tip 10mm above Device Reference/Hearing Aid Compatibility Test

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

Maximum value of peak Total field = 92.5 V/m

Probe Modulation Factor = 1.00

Reference Value = 89.2 V/m; Power Drift = -0.042 dB

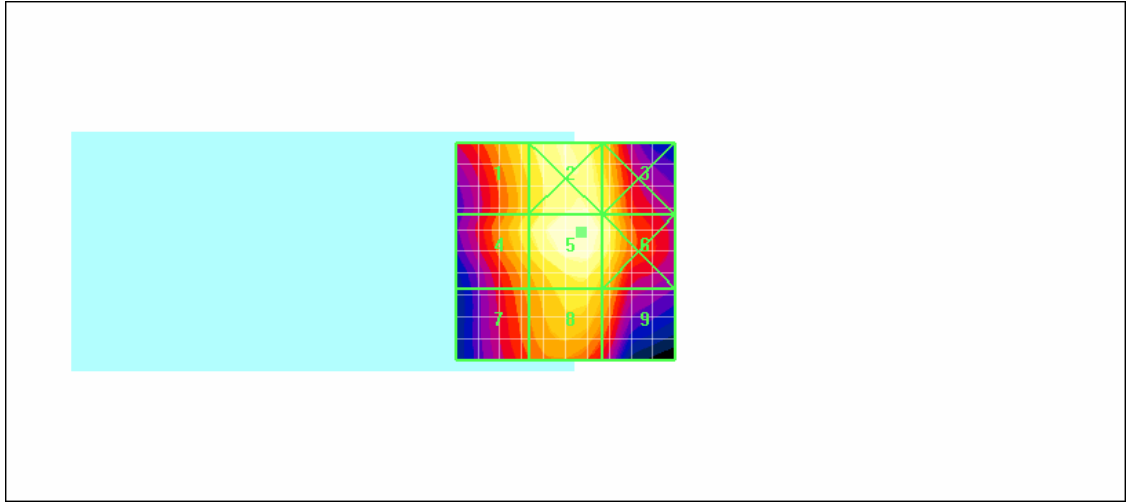
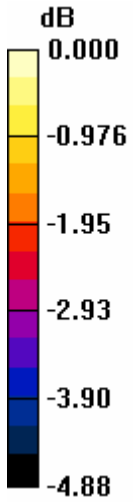
Hearing Aid Near-Field Category: M3 (AWF 0 dB)

Peak E-field in V/m

Grid	Grid	Grid
85.5	90.4	86.9
Grid	Grid	Grid
85.5	92.5	89.0
Grid	Grid	Grid

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78.0	85.2	81.4
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0 dB = 92.5V/m

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	Author Data Daoud Attayi	Dates July 13-19, 31, 2006	Report No RTS-0373-0607-14

Date/Time: 18/07/2006 11:28:28 AM

Test Laboratory: RTS

HAC_E_Field_CDMA800_T_coil center_high_chan

DUT: BlackBerry Wireless Handheld; Type: Sample ; Serial: Not Specified

Communication System: CDMA 800; Frequency: 848.52 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 - SN2285; ConvF(1, 1, 1); Calibrated: 27/04/2006
- Sensor-Surface: 0mm (Fix Surface) Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 25/04/2006
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

E Scan - ER probe tip 10mm above Device Reference/Z Scan (1x1x21): Measurement grid: dx=20mm, dy=20mm, dz=5mm
Maximum value of Total (measured) = 106.4 V/m

E Scan - ER probe tip 10mm above Device Reference/Hearing Aid Compatibility Test (11x11x1): Measurement grid: dx=5mm, dy=5mm
Probe Modulation Factor = 1.00
Reference Value = 100.5 V/m; Power Drift = 0.000 dB
Maximum value of Total (measured) = 104.2 V/m

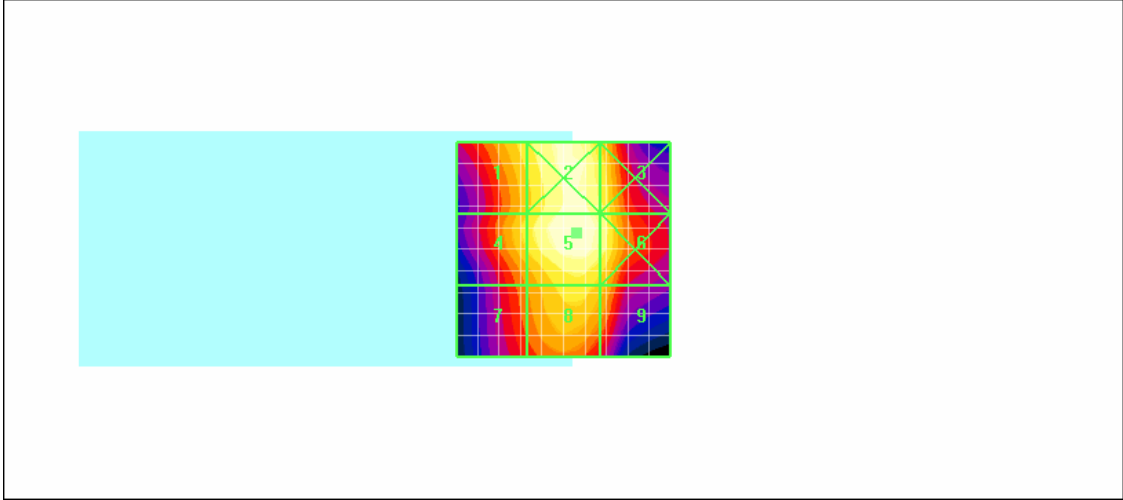
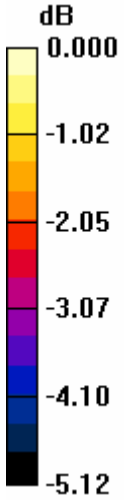
E Scan - ER probe tip 10mm above Device Reference/Hearing Aid Compatibility Test (101x101x1): Measurement grid: dx=5mm, dy=5mm
Maximum value of peak Total field = 105.0 V/m
Probe Modulation Factor = 1.00
Reference Value = 100.5 V/m; Power Drift = 0.000 dB
Hearing Aid Near-Field Category: M3 (AWF 0 dB)

Peak E-field in V/m

Grid	Grid	Grid
96.4	102.9	98.9
Grid	Grid	Grid
95.6	105.0	100.9
Grid	Grid	Grid

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86.8	95.9	92.3
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0 dB = 105.0V/m

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Date/Time: 18/07/2006 11:46:29 AM

Test Laboratory: RTS

HAC_E_Field_CDMA800_T_coil center_high_chan_batt2

DUT: BlackBerry Wireless Handheld; Type: Sample ; Serial: Not Specified

Communication System: CDMA 800; Frequency: 848.52 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 - SN2285; ConvF(1, 1, 1); Calibrated: 27/04/2006
- Sensor-Surface: 0mm (Fix Surface) Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 25/04/2006
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

E Scan - ER probe tip 10mm above Device Reference/Z Scan (1x1x21): Measurement grid:

dx=20mm, dy=20mm, dz=5mm

Maximum value of Total (measured) = 107.7 V/m

E Scan - ER probe tip 10mm above Device Reference/Hearing Aid Compatibility Test

(11x11x1): Measurement grid: dx=5mm, dy=5mm

Probe Modulation Factor = 1.00

Reference Value = 100.8 V/m; Power Drift = 0.171 dB

Maximum value of Total (measured) = 106.3 V/m

E Scan - ER probe tip 10mm above Device Reference/Hearing Aid Compatibility Test

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

Maximum value of peak Total field = 106.5 V/m

Probe Modulation Factor = 1.00

Reference Value = 100.8 V/m; Power Drift = 0.171 dB

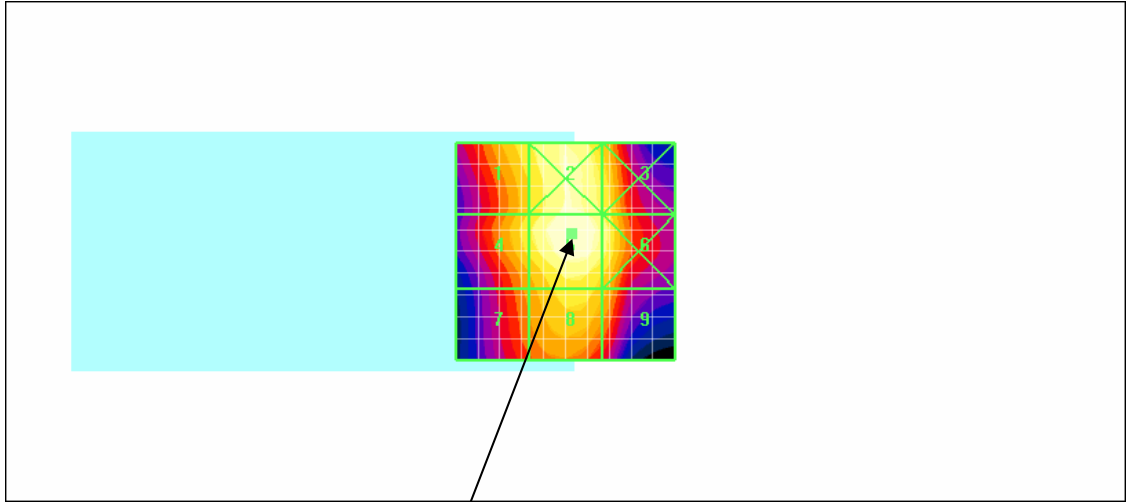
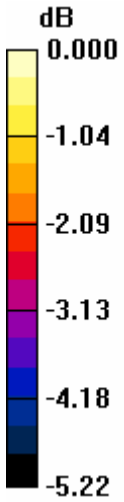
Hearing Aid Near-Field Category: M3 (AWF 0 dB)

Peak E-field in V/m

Grid	Grid	Grid
98.1	103.9	99.1
Grid	Grid	Grid
97.5	106.5	101.3
Grid	Grid	Grid

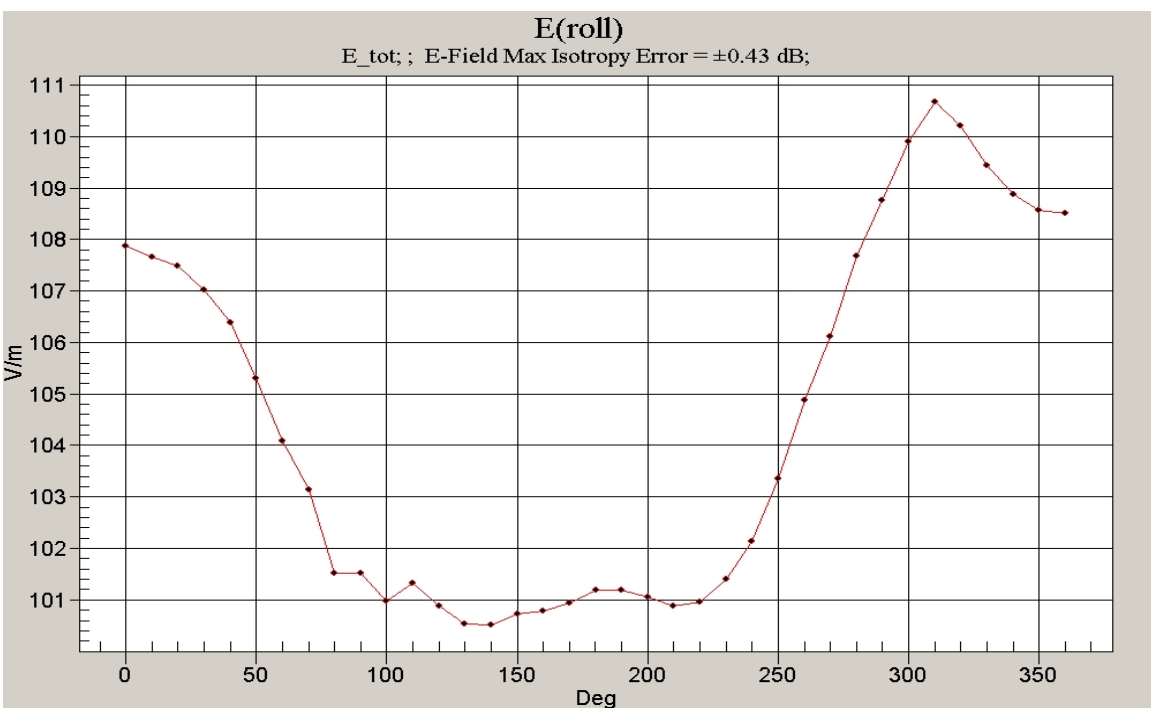
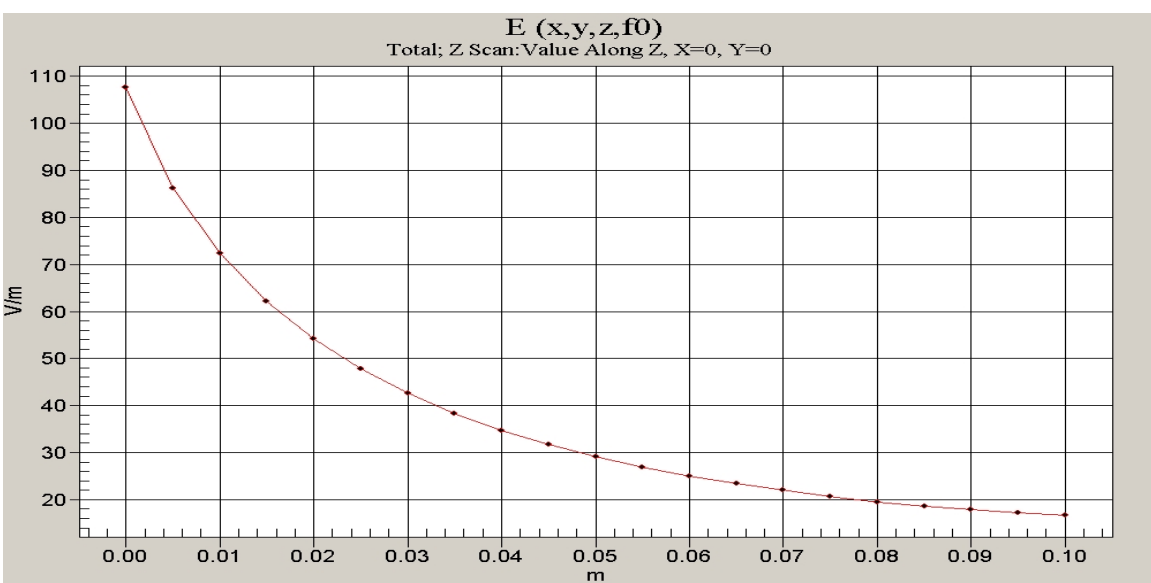
RTS RIM Testing Services	Document Annex A to Hearing Aid Compatibility RF Emissions Test Report for BlackBerry Wireless Handheld Model RBF20CW		Page 75(111)
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88.9	97.2	93.1
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0 dB = 106.5V/m

Location of probe rotation after applying exclusion blocks



E (delta) = (E max - E at zero degree) * PMF
= (110.7 – 107.9) * 1.03
= 2.8 * 1.03
= 2.88 V/m

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Date/Time: 18/07/2006 11:58:18 AM

Test Laboratory: RTS

HAC_E_Field_CDMA800_T_coil center_high_chan_batt3

DUT: BlackBerry Wireless Handheld; Type: Sample ; Serial: Not Specified

Communication System: CDMA 800; Frequency: 848.52 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 - SN2285; ConvF(1, 1, 1); Calibrated: 27/04/2006
- Sensor-Surface: 0mm (Fix Surface) Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 25/04/2006
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

E Scan - ER probe tip 10mm above Device Reference/Z Scan (1x1x21): Measurement grid:

dx=20mm, dy=20mm, dz=5mm

Maximum value of Total (measured) = 100.7 V/m

E Scan - ER probe tip 10mm above Device Reference/Hearing Aid Compatibility Test

(11x11x1): Measurement grid: dx=5mm, dy=5mm

Probe Modulation Factor = 1.00

Reference Value = 98.0 V/m; Power Drift = 0.112 dB

Maximum value of Total (measured) = 101.0 V/m

E Scan - ER probe tip 10mm above Device Reference/Hearing Aid Compatibility Test

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

Maximum value of peak Total field = 101.5 V/m

Probe Modulation Factor = 1.00

Reference Value = 98.0 V/m; Power Drift = 0.112 dB

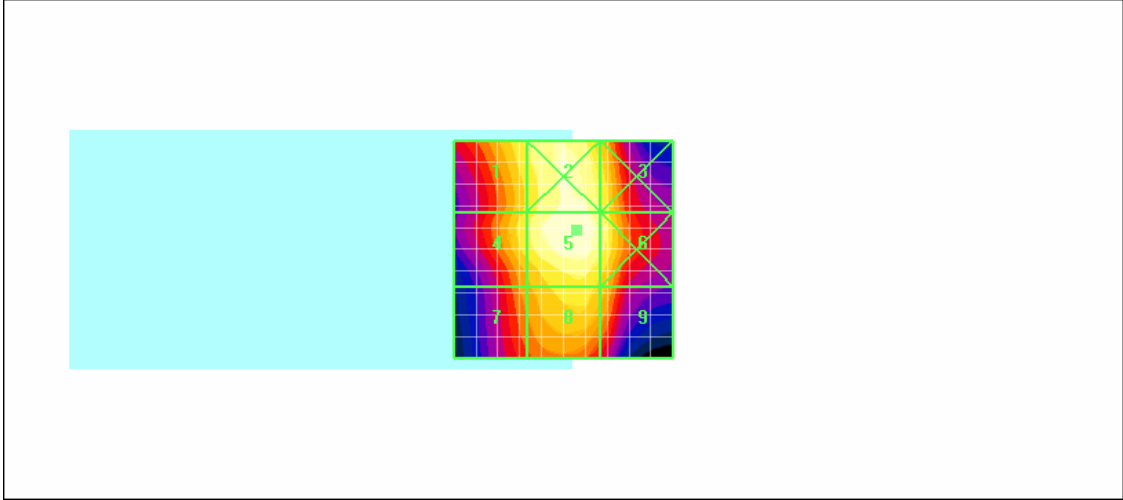
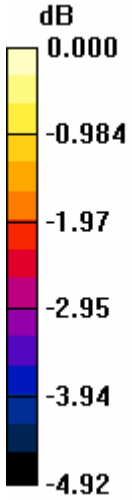
Hearing Aid Near-Field Category: M3 (AWF 0 dB)

Peak E-field in V/m

Grid	Grid	Grid
94.9	99.6	95.1
Grid	Grid	Grid
94.1	101.5	97.0
Grid	Grid	Grid

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86.4	93.5	90.0
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0 dB = 101.5V/m

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	Author Data Daoud Attayi	Dates July 13-19, 31, 2006	Report No RTS-0373-0607-14

Date/Time: 18/07/2006 12:16:14 PM

Test Laboratory: RTS

HAC_E_Field_CDMA800_T_coil center_high_chan_batt2_one_eighth_gating.da4

DUT: BlackBerry Wireless Handheld; Type: Sample ; Serial: Not Specified

Communication System: CDMA 800; Frequency: 848.52 MHz; Duty Cycle: 1:8

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

Phantom section: E Device Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2285; ConvF(1, 1, 1); Calibrated: 27/04/2006
- Sensor-Surface: 0mm (Fix Surface) Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 25/04/2006
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

E Scan - ER probe tip 10mm above Device Reference/Z Scan (1x1x21): Measurement grid: dx=20mm, dy=20mm, dz=5mm
Maximum value of Total (measured) = 43.5 V/m

E Scan - ER probe tip 10mm above Device Reference/Hearing Aid Compatibility Test (11x11x1): Measurement grid: dx=5mm, dy=5mm
Probe Modulation Factor = 1.00
Reference Value = 45.2 V/m; Power Drift = -0.193 dB
Maximum value of Total (measured) = 52.1 V/m

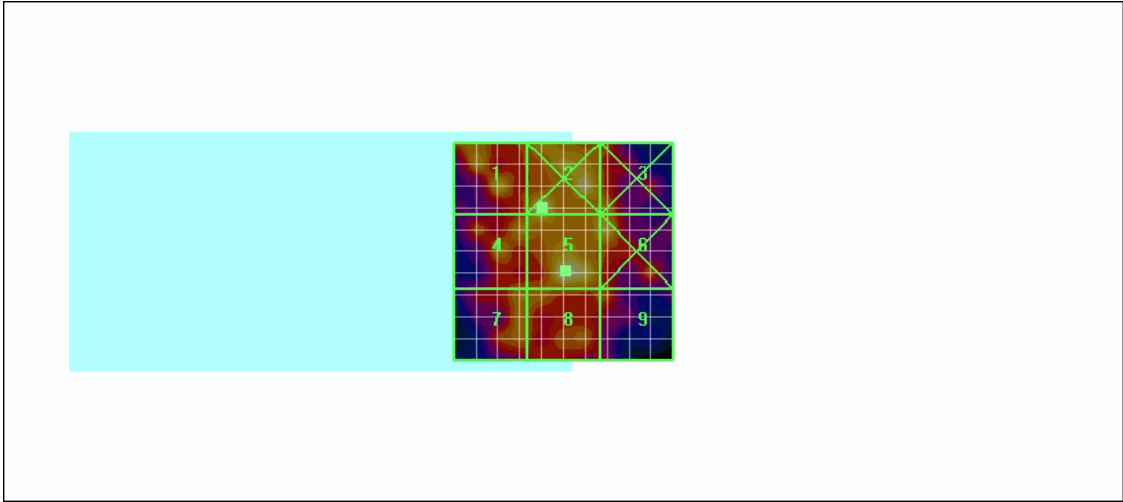
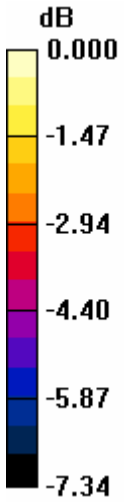
E Scan - ER probe tip 10mm above Device Reference/Hearing Aid Compatibility Test (101x101x1): Measurement grid: dx=5mm, dy=5mm
Maximum value of peak Total field = 105.6 V/m
Probe Modulation Factor = 2.04
Reference Value = 45.2 V/m; Power Drift = -0.193 dB
Hearing Aid Near-Field Category: M3 (AWF 0 dB)

Peak E-field in V/m

Grid	Grid	Grid
93.7	106.3	87.7
Grid	Grid	Grid
87.2	105.6	96.1
Grid	Grid	Grid

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85.7	85.1	79.9
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0 dB = 106.3V/m

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	Author Data Daoud Attayi	Dates July 13-19, 31, 2006	Report No RTS-0373-0607-14

Date/Time: 31/07/2006 11:00:06 AM

Test Laboratory: RTS

HAC_E_Field_CDMA800_T_coil center_high_chan_batt2_one_eighth_gating_RC1_SO3

DUT: BlackBerry Wireless Handheld; Type: Sample ; Serial: Not Specified

Communication System: CDMA 800; Frequency: 848.52 MHz; Duty Cycle: 1:8

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

Phantom section: E Device Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2285; ConvF(1, 1, 1); Calibrated: 27/04/2006
- Sensor-Surface: 0mm (Fix Surface) Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 25/04/2006
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

E Scan - ER probe tip 10mm above Device Reference/Z Scan (1x1x21): Measurement grid:

dx=20mm, dy=20mm, dz=5mm

Maximum value of Total (measured) = 69.1 V/m

E Scan - ER probe tip 10mm above Device Reference/Hearing Aid Compatibility Test

(11x11x1): Measurement grid: dx=5mm, dy=5mm

Probe Modulation Factor = 1.00

Reference Value = 39.2 V/m; Power Drift = -0.046 dB

Maximum value of Total (measured) = 61.7 V/m

E Scan - ER probe tip 10mm above Device Reference/Hearing Aid Compatibility Test

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

Maximum value of peak Total field = 99.5 V/m

Probe Modulation Factor = 2.04

Reference Value = 39.2 V/m; Power Drift = -0.046 dB

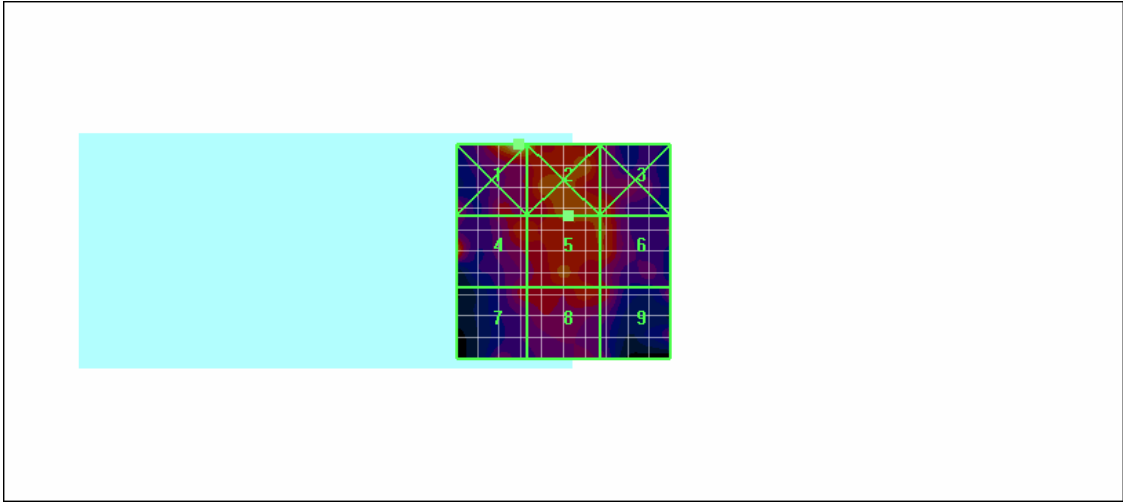
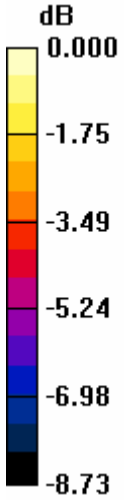
Hearing Aid Near-Field Category: M3 (AWF 0 dB)

Peak E-field in V/m

Grid	Grid	Grid
126.2	113.2	85.3
Grid	Grid	Grid
99.5	87.9	86.3
Grid	Grid	Grid

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76.9	82.5	79.1
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0 dB = 126.2V/m

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	Author Data Daoud Attayi	Dates July 13-19, 31, 2006	Report No RTS-0373-0607-14

Date/Time: 19/07/2006 9:37:11 AM

Test Laboratory: RTS

HAC_H_Field_CDMA800_Spk center_low_chan

DUT: BlackBerry Wireless Handheld Model; Type: Sample ; Serial: Not Specified

Communication System: CDMA 800; 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 Dipole Section

DASY4 Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 11/11/2005
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 25/04/2006
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

H Scan - H3DV6 probe tip 10mm above Device Reference/Z Scan (1x1x21): Measurement grid: dx=20mm, dy=20mm, dz=5mm
Maximum value of Total (measured) = 0.175 A/m

H Scan - H3DV6 probe tip 10mm above Device Reference/Hearing Aid Compatibility Test (11x11x1): Measurement grid: dx=5mm, dy=5mm
Probe Modulation Factor = 1.00
Reference Value = 0.099 A/m; Power Drift = -0.107 dB
Maximum value of Total (measured) = 0.174 A/m

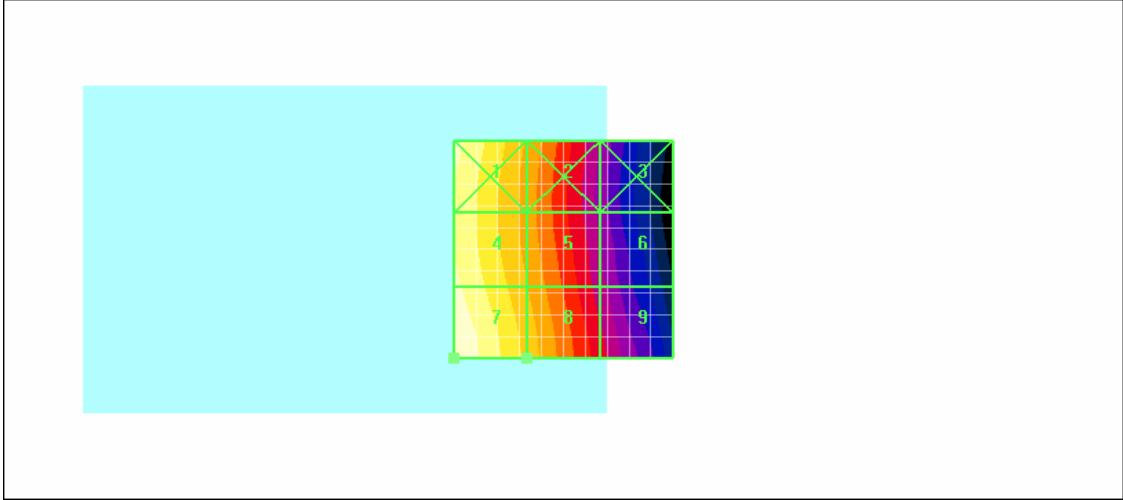
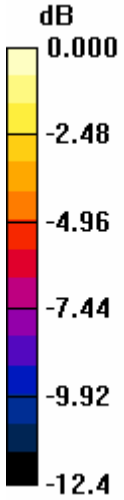
H Scan - H3DV6 probe tip 10mm above Device Reference/Hearing Aid Compatibility Test (101x101x1): Measurement grid: dx=5mm, dy=5mm
Maximum value of peak Total field = 0.174 A/m
Probe Modulation Factor = 1.00
Reference Value = 0.099 A/m; Power Drift = -0.107 dB
Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak H-field in A/m

Grid	Grid	Grid
0.164	0.118	0.073
Grid	Grid	Grid
0.162	0.120	0.077
Grid	Grid	Grid

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0.174	0.128	0.085
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0 dB = 0.174A/m

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	Author Data Daoud Attayi	Dates July 13-19, 31, 2006	Report No RTS-0373-0607-14

Date/Time: 19/07/2006 9:56:10 AM

Test Laboratory: RTS

HAC_H_Field_CDMA800_Spk center_mid_chan

DUT: BlackBerry Wireless Handheld Model; Type: Sample ; Serial: Not Specified

Communication System: CDMA 800; 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 Dipole Section

DASY4 Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 11/11/2005
- Sensor-Surface: 0mm (Fix Surface) Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 25/04/2006
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

H Scan - H3DV6 probe tip 10mm above Device Reference/Z Scan (1x1x21): Measurement grid: dx=20mm, dy=20mm, dz=5mm
Maximum value of Total (measured) = 0.190 A/m

H Scan - H3DV6 probe tip 10mm above Device Reference/Hearing Aid Compatibility Test (11x11x1): Measurement grid: dx=5mm, dy=5mm
Probe Modulation Factor = 1.00
Reference Value = 0.104 A/m; Power Drift = 0.147 dB
Maximum value of Total (measured) = 0.187 A/m

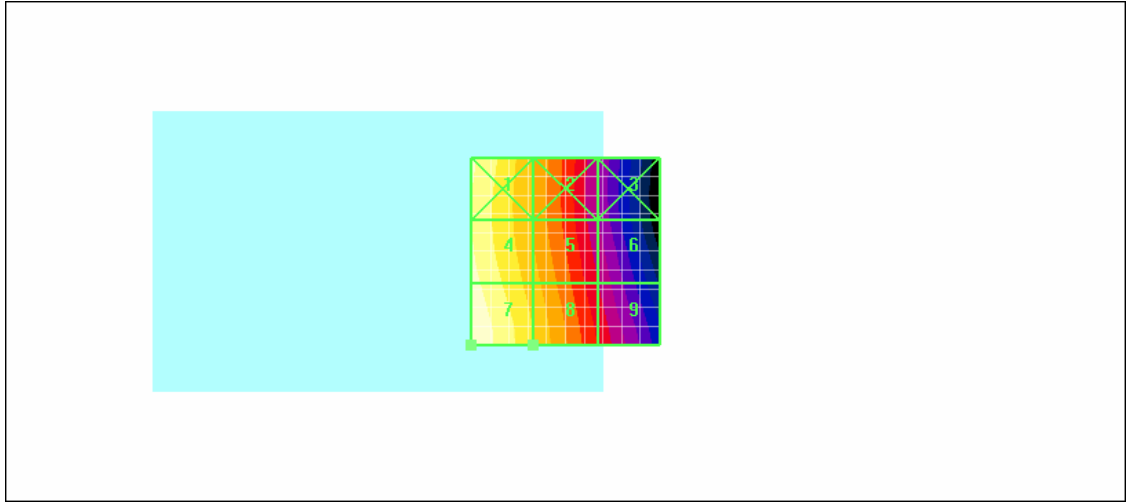
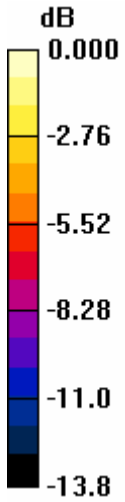
H Scan - H3DV6 probe tip 10mm above Device Reference/Hearing Aid Compatibility Test (101x101x1): Measurement grid: dx=5mm, dy=5mm
Maximum value of peak Total field = 0.187 A/m
Probe Modulation Factor = 1.00
Reference Value = 0.104 A/m; Power Drift = 0.147 dB
Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak H-field in A/m

Grid	Grid	Grid
0.172	0.123	0.073
Grid	Grid	Grid
0.176	0.128	0.081
Grid	Grid	Grid

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0.187	0.136	0.089
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0 dB = 0.187A/m

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	Author Data Daoud Attayi	Dates July 13-19, 31, 2006	Report No RTS-0373-0607-14

Date/Time: 19/07/2006 10:05:20 AM

Test Laboratory: RTS

HAC_H_Field_CDMA800_Spk center_high_chan

DUT: BlackBerry Wireless Handheld Model; Type: Sample ; Serial: Not Specified

Communication System: CDMA 800; Frequency: 848.52 MHz; Duty Cycle: 1:1

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

Phantom section: H Dipole Section

DASY4 Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 11/11/2005
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 25/04/2006
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

H Scan - H3DV6 probe tip 10mm above Device Reference/Z Scan (1x1x21): Measurement grid: dx=20mm, dy=20mm, dz=5mm
Maximum value of Total (measured) = 0.211 A/m

H Scan - H3DV6 probe tip 10mm above Device Reference/Hearing Aid Compatibility Test (11x11x1): Measurement grid: dx=5mm, dy=5mm
Probe Modulation Factor = 1.00
Reference Value = 0.118 A/m; Power Drift = 0.059 dB
Maximum value of Total (measured) = 0.209 A/m

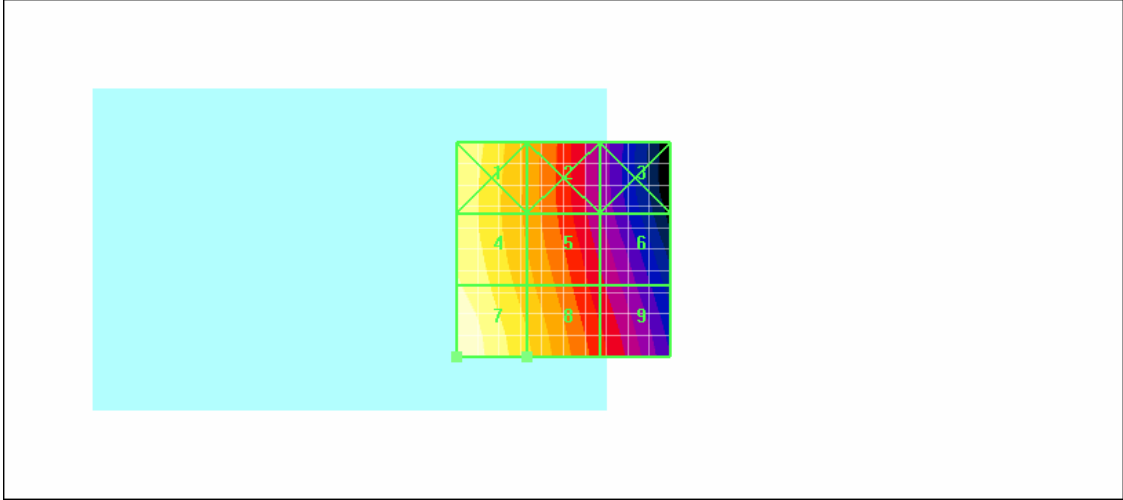
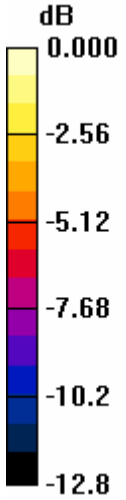
H Scan - H3DV6 probe tip 10mm above Device Reference/Hearing Aid Compatibility Test (101x101x1): Measurement grid: dx=5mm, dy=5mm
Maximum value of peak Total field = 0.209 A/m
Probe Modulation Factor = 1.00
Reference Value = 0.118 A/m; Power Drift = 0.059 dB
Hearing Aid Near-Field Category: M3 (AWF 0 dB)

Peak H-field in A/m

Grid	Grid	Grid
0.188	0.139	0.087
Grid	Grid	Grid
0.192	0.147	0.099
Grid	Grid	Grid

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0.209	0.159	0.110
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0 dB = 0.209A/m

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	Author Data Daoud Attayi	Dates July 13-19, 31, 2006	Report No RTS-0373-0607-14

Date/Time: 19/07/2006 10:28:00 AM

Test Laboratory: RTS

HAC_H_Field_CDMA800_Spk center_high_chan batt2

DUT: BlackBerry Wireless Handheld Model; Type: Sample ; Serial: Not Specified

Communication System: CDMA 800; Frequency: 848.52 MHz; Duty Cycle: 1:1

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

Phantom section: H Dipole Section

DASY4 Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 11/11/2005
- Sensor-Surface: 0mm (Fix Surface) Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 25/04/2006
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

H Scan - H3DV6 probe tip 10mm above Device Reference/Z Scan (1x1x21):

Measurement grid: dx=20mm, dy=20mm, dz=5mm

Maximum value of Total (measured) = 0.211 A/m

H Scan - H3DV6 probe tip 10mm above Device Reference/Hearing Aid Compatibility Test (11x11x1): Measurement grid: dx=5mm, dy=5mm

Probe Modulation Factor = 1.00

Reference Value = 0.119 A/m; Power Drift = -0.001 dB

H Scan - H3DV6 probe tip 10mm above Device Reference/Hearing Aid Compatibility Test (101x101x1): Measurement grid: dx=5mm, dy=5mm

Maximum value of peak Total field = 0.211 A/m

Probe Modulation Factor = 1.00

Reference Value = 0.119 A/m; Power Drift = -0.001 dB

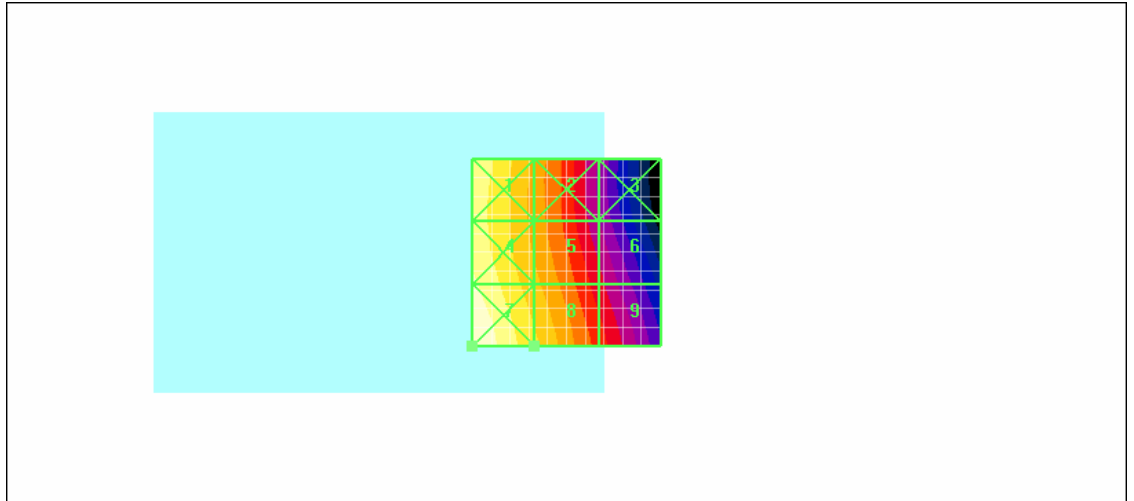
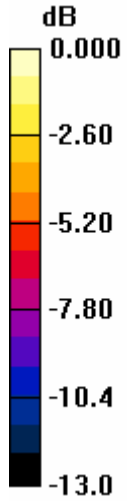
Hearing Aid Near-Field Category: M3 (AWF 0 dB)

Peak H-field in A/m

Grid	Grid	Grid
0.189	0.139	0.087
Grid	Grid	Grid
0.195	0.146	0.099

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Grid	Grid	Grid
0.211	0.160	0.112



0 dB = 0.211A/m

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Date/Time: 19/07/2006 10:39:26 AM

Test Laboratory: RTS

HAC_H_Field_CDMA800_Spk center_high_chan batt3

DUT: BlackBerry Wireless Handheld Model; Type: Sample ; Serial: Not Specified

Communication System: CDMA 800; Frequency: 848.52 MHz; Duty Cycle: 1:1

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

Phantom section: H Dipole Section

DASY4 Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 11/11/2005
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 25/04/2006
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

H Scan - H3DV6 probe tip 10mm above Device Reference/Z Scan (1x1x21): Measurement grid: dx=20mm, dy=20mm, dz=5mm
Maximum value of Total (measured) = 0.203 A/m

H Scan - H3DV6 probe tip 10mm above Device Reference/Hearing Aid Compatibility Test (11x11x1): Measurement grid: dx=5mm, dy=5mm
Probe Modulation Factor = 1.00
Reference Value = 0.116 A/m; Power Drift = 0.035 dB
Maximum value of Total (measured) = 0.204 A/m

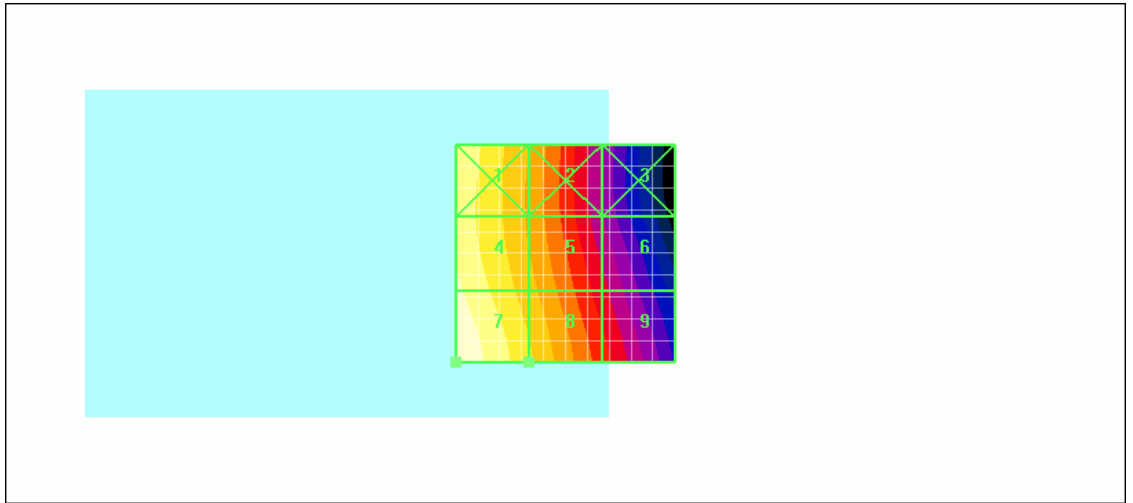
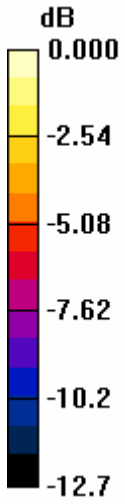
H Scan - H3DV6 probe tip 10mm above Device Reference/Hearing Aid Compatibility Test (101x101x1): Measurement grid: dx=5mm, dy=5mm
Maximum value of peak Total field = 0.204 A/m
Probe Modulation Factor = 1.00
Reference Value = 0.116 A/m; Power Drift = 0.035 dB
Hearing Aid Near-Field Category: M3 (AWF 0 dB)

Peak H-field in A/m

Grid	Grid	Grid
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Grid	Grid	Grid
0.190	0.144	0.097
Grid	Grid	Grid



0 dB = 0.204A/m

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Date/Time: 19/07/2006 10:52:30 AM

Test Laboratory: RTS

HAC_H_Field_CDMA800_Spk center_high_chan batt2_1_8th_rate

DUT: BlackBerry Wireless Handheld Model; Type: Sample ; Serial: Not Specified

Communication System: CDMA 800; Frequency: 848.52 MHz; Duty Cycle: 1:8

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

Phantom section: H Dipole Section

DASY4 Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 11/11/2005
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 25/04/2006
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

H Scan - H3DV6 probe tip 10mm above Device Reference/Z Scan (1x1x21): Measurement grid: dx=20mm, dy=20mm, dz=5mm
Maximum value of Total (measured) = 0.075 A/m

H Scan - H3DV6 probe tip 10mm above Device Reference/Hearing Aid Compatibility Test (11x11x1): Measurement grid: dx=5mm, dy=5mm
Probe Modulation Factor = 1.00
Reference Value = 0.046 A/m; Power Drift = -0.008 dB
Maximum value of Total (measured) = 0.099 A/m

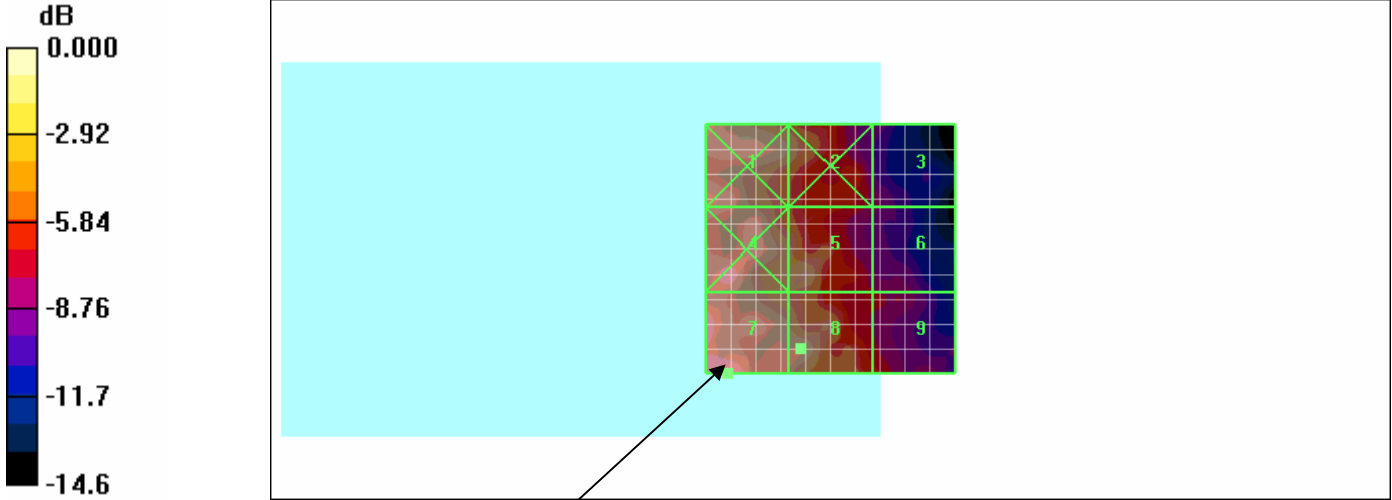
H Scan - H3DV6 probe tip 10mm above Device Reference/Hearing Aid Compatibility Test (101x101x1): Measurement grid: dx=5mm, dy=5mm
Maximum value of peak Total field = 0.234 A/m
Probe Modulation Factor = 2.35
Reference Value = 0.046 A/m; Power Drift = -0.008 dB
Hearing Aid Near-Field Category: M3 (AWF 0 dB)

Peak H-field in A/m

Grid	Grid	Grid
0.196	0.148	0.092
Grid	Grid	Grid
0.198	0.150	0.097
Grid	Grid	Grid

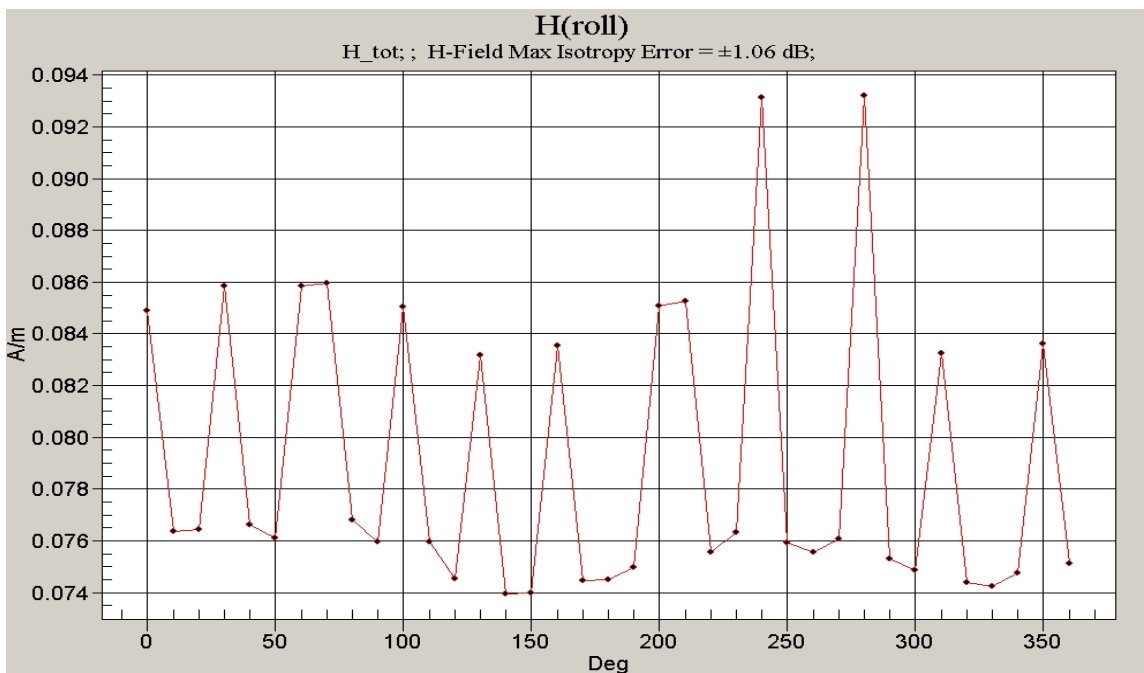
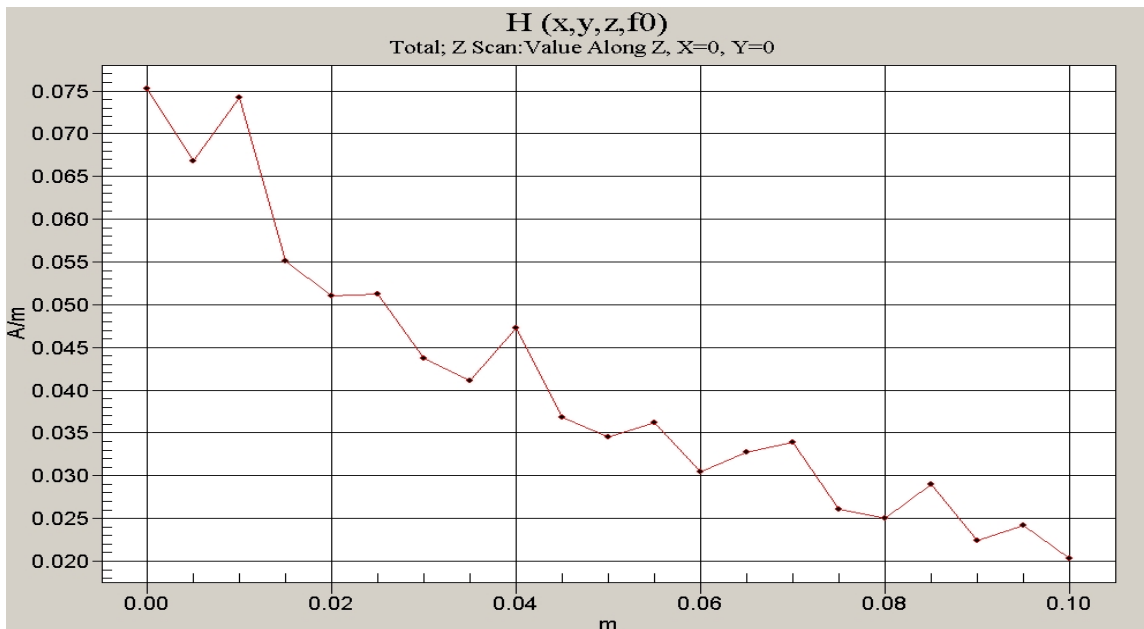
RTS RIM Testing Services	Document Annex A to Hearing Aid Compatibility RF Emissions Test Report for BlackBerry Wireless Handheld Model RBF20CW		Page 94(111)
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0.234	0.165	0.113
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0 dB = 0.234A/m

Location of the probe rotation after applying exclusion blocks



$$\begin{aligned}
 H(\delta) &= (H_{\max} - H_{\text{at zero degrees}}) * PMF \\
 &= (0.093 - 0.085) * 2.35 \\
 &= 0.008 * 2.35 \\
 &= 0.02
 \end{aligned}$$

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Date/Time: 19/07/2006 11:30:58 AM

Test Laboratory: RTS

HAC_H_Field_CDMA800_Spk center_high_chan batt2_RC1_SO3

DUT: BlackBerry Wireless Handheld Model; Type: Sample ; Serial: Not Specified

Communication System: CDMA 800; Frequency: 848.52 MHz; Duty Cycle: 1:8

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

Phantom section: H Dipole Section

DASY4 Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 11/11/2005
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 25/04/2006
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

H Scan - H3DV6 probe tip 10mm above Device Reference/Z Scan (1x1x21): Measurement grid: dx=20mm, dy=20mm, dz=5mm
Maximum value of Total (measured) = 0.079 A/m

H Scan - H3DV6 probe tip 10mm above Device Reference/Hearing Aid Compatibility Test (11x11x1): Measurement grid: dx=5mm, dy=5mm
Probe Modulation Factor = 1.00
Reference Value = 0.046 A/m; Power Drift = 0.112 dB
Maximum value of Total (measured) = 0.088 A/m

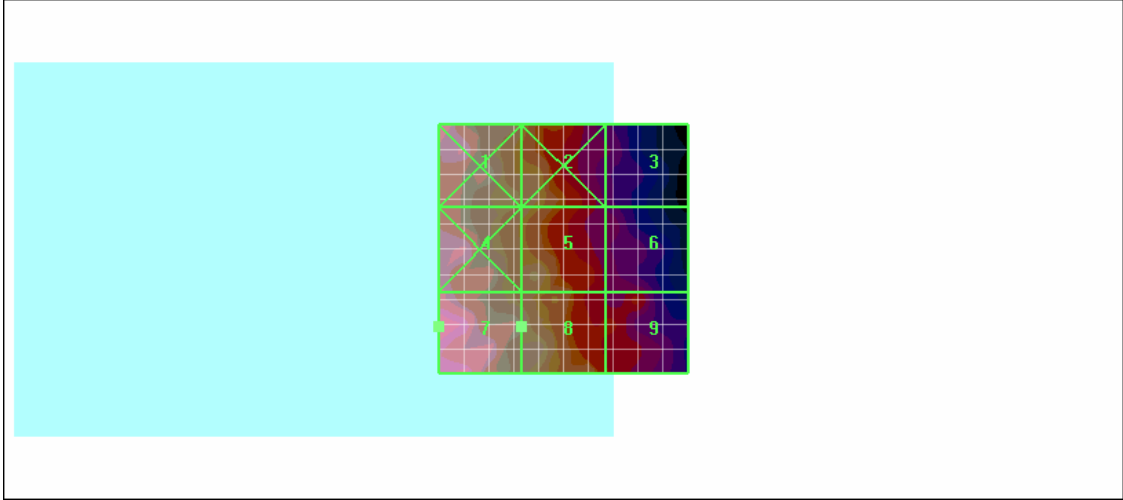
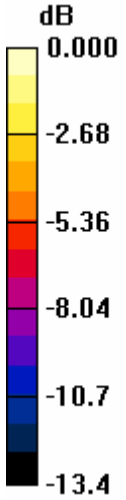
H Scan - H3DV6 probe tip 10mm above Device Reference/Hearing Aid Compatibility Test (101x101x1): Measurement grid: dx=5mm, dy=5mm
Maximum value of peak Total field = 0.208 A/m
Probe Modulation Factor = 2.35
Reference Value = 0.046 A/m; Power Drift = 0.112 dB
Hearing Aid Near-Field Category: M3 (AWF 0 dB)

Peak H-field in A/m

Grid	Grid	Grid
0.197	0.137	0.084
Grid	Grid	Grid
0.179	0.140	0.095
Grid	Grid	Grid

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0.208	0.153	0.104
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0 dB = 0.208A/m

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	Author Data Daoud Attayi	Dates July 13-19, 31, 2006	Report No RTS-0373-0607-14

Date/Time: 19/07/2006 8:35:23 AM

Test Laboratory: RTS

HAC_E_Field_CDMA1900_Spk center_low_chan

DUT: BlackBerry Wireless Handheld; Type: Sample ; Serial: Not Specified

Communication System: CDMA 1900; 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 - SN2285; ConvF(1, 1, 1); Calibrated: 27/04/2006
- Sensor-Surface: 0mm (Fix Surface) Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 25/04/2006
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

E Scan - ER probe tip 10mm above Device Reference/Z Scan (1x1x21): Measurement grid: dx=20mm, dy=20mm, dz=5mm
Maximum value of Total (measured) = 49.5 V/m

E Scan - ER probe tip 10mm above Device Reference/Hearing Aid Compatibility Test (11x11x1): Measurement grid: dx=5mm, dy=5mm
Probe Modulation Factor = 1.00
Reference Value = 25.3 V/m; Power Drift = -0.033 dB

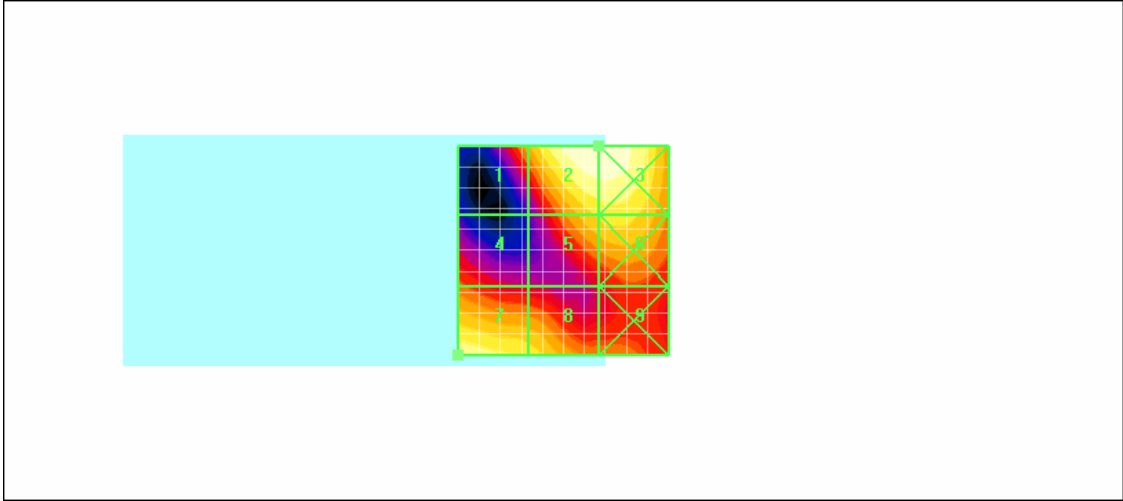
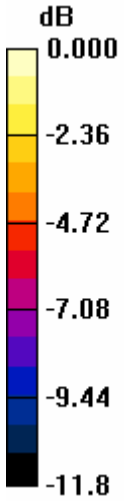
E Scan - ER probe tip 10mm above Device Reference/Hearing Aid Compatibility Test (101x101x1): Measurement grid: dx=5mm, dy=5mm
Maximum value of peak Total field = 48.7 V/m
Probe Modulation Factor = 0.980
Reference Value = 25.3 V/m; Power Drift = -0.033 dB
Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak E-field in V/m

Grid	Grid	Grid
33.5	48.7	48.7
Grid	Grid	Grid

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Grid	Grid	Grid
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0 dB = 48.7V/m

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Date/Time: 19/07/2006 8:43:58 AM

Test Laboratory: RTS

HAC_E_Field_CDMA1900_Spk_center_mid_chan

DUT: BlackBerry Wireless Handheld; Type: Sample ; Serial: Not Specified

Communication System: CDMA 1900; 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 - SN2285; ConvF(1, 1, 1); Calibrated: 27/04/2006
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 25/04/2006
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

E Scan - ER probe tip 10mm above Device Reference/Z Scan (1x1x21): Measurement grid:

dx=20mm, dy=20mm, dz=5mm

Maximum value of Total (measured) = 49.6 V/m

E Scan - ER probe tip 10mm above Device Reference/Hearing Aid Compatibility Test

(11x11x1): Measurement grid: dx=5mm, dy=5mm

Probe Modulation Factor = 1.00

Reference Value = 24.8 V/m; Power Drift = -0.070 dB

Maximum value of Total (measured) = 49.4 V/m

E Scan - ER probe tip 10mm above Device Reference/Hearing Aid Compatibility Test

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

Maximum value of peak Total field = 48.5 V/m

Probe Modulation Factor = 0.980

Reference Value = 24.8 V/m; Power Drift = -0.070 dB

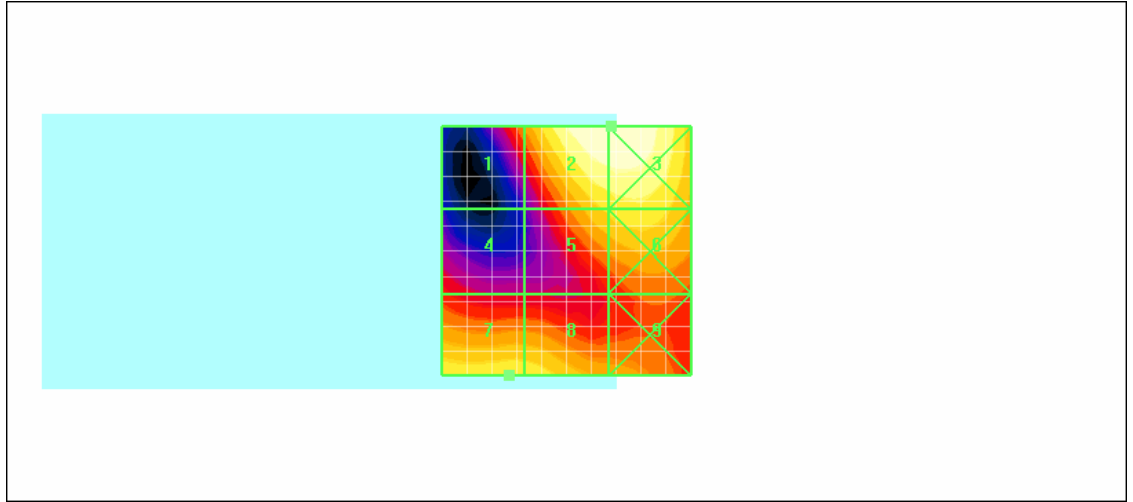
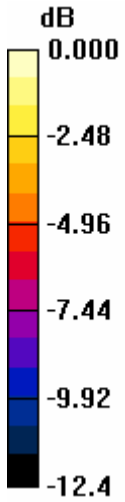
Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak E-field in V/m

Grid	Grid	Grid
30.9	48.5	48.5
Grid	Grid	Grid
25.7	37.2	38.8
Grid	Grid	Grid

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39.5	39.1	32.1
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0 dB = 48.5V/m

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Date/Time: 19/07/2006 8:52:51 AM

Test Laboratory: RTS

HAC_E_Field_CDMA1900_Spk center_high_chan

DUT: BlackBerry Wireless Handheld; Type: Sample ; Serial: Not Specified

Communication System: CDMA 1900; Frequency: 1908.5 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 - SN2285; ConvF(1, 1, 1); Calibrated: 27/04/2006
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 25/04/2006
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

E Scan - ER probe tip 10mm above Device Reference/Z Scan (1x1x21): Measurement grid:

dx=20mm, dy=20mm, dz=5mm

Maximum value of Total (measured) = 38.0 V/m

E Scan - ER probe tip 10mm above Device Reference/Hearing Aid Compatibility Test

(11x11x1): Measurement grid: dx=5mm, dy=5mm

Probe Modulation Factor = 1.00

Reference Value = 21.6 V/m; Power Drift = -0.127 dB

Maximum value of Total (measured) = 37.9 V/m

E Scan - ER probe tip 10mm above Device Reference/Hearing Aid Compatibility Test

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

Maximum value of peak Total field = 37.1 V/m

Probe Modulation Factor = 0.980

Reference Value = 21.6 V/m; Power Drift = -0.127 dB

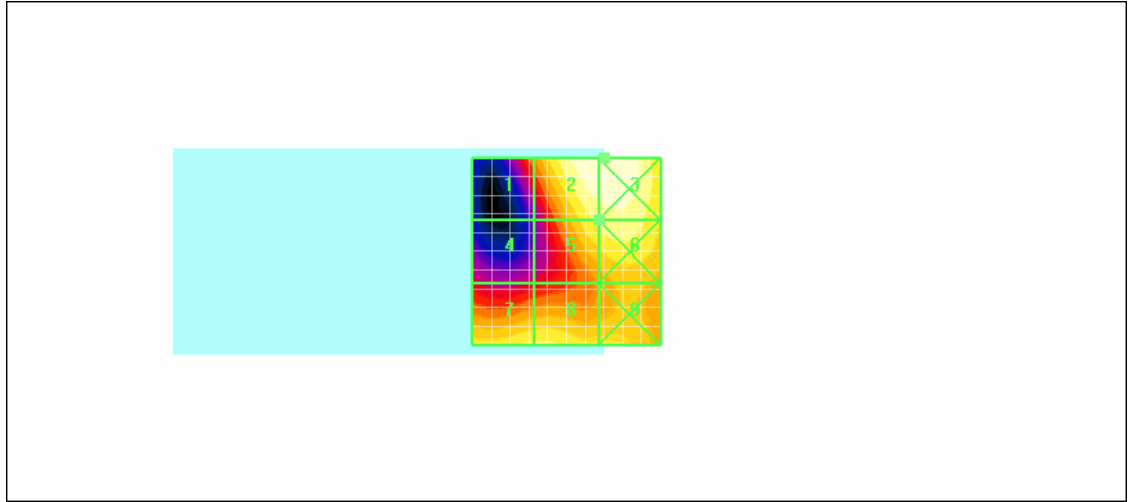
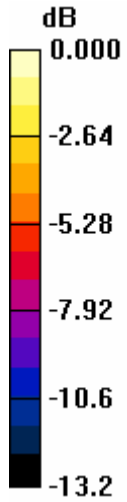
Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak E-field in V/m

Grid	Grid	Grid
22.9	37.1	37.2
Grid	Grid	Grid
17.3	31.1	32.6
Grid	Grid	Grid

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30.9	30.9	28.2
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0 dB = 37.2V/m

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Date/Time: 19/07/2006 9:06:01 AM

Test Laboratory: RTS

HAC_E_Field_CDMA1900_T_coil center_low_chan

DUT: BlackBerry Wireless Handheld; Type: Sample ; Serial: Not Specified

Communication System: CDMA 1900; 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 - SN2285; ConvF(1, 1, 1); Calibrated: 27/04/2006
- Sensor-Surface: 0mm (Fix Surface) Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 25/04/2006
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

E Scan - ER probe tip 10mm above Device Reference/Z Scan (1x1x21): Measurement grid:
dx=20mm, dy=20mm, dz=5mm
Maximum value of Total (measured) = 47.5 V/m

E Scan - ER probe tip 10mm above Device Reference/Hearing Aid Compatibility Test (11x11x1): Measurement grid: dx=5mm, dy=5mm
Probe Modulation Factor = 1.00
Reference Value = 23.8 V/m; Power Drift = -0.089 dB
Maximum value of Total (measured) = 47.3 V/m

E Scan - ER probe tip 10mm above Device Reference/Hearing Aid Compatibility Test (101x101x1): Measurement grid: dx=5mm, dy=5mm
Maximum value of peak Total field = 41.9 V/m
Probe Modulation Factor = 1.00
Reference Value = 23.8 V/m; Power Drift = -0.089 dB
Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak E-field in V/m

Grid	Grid	Grid
42.5	47.3	43.5
Grid	Grid	Grid
27.0	36.8	36.2
Grid	Grid	Grid

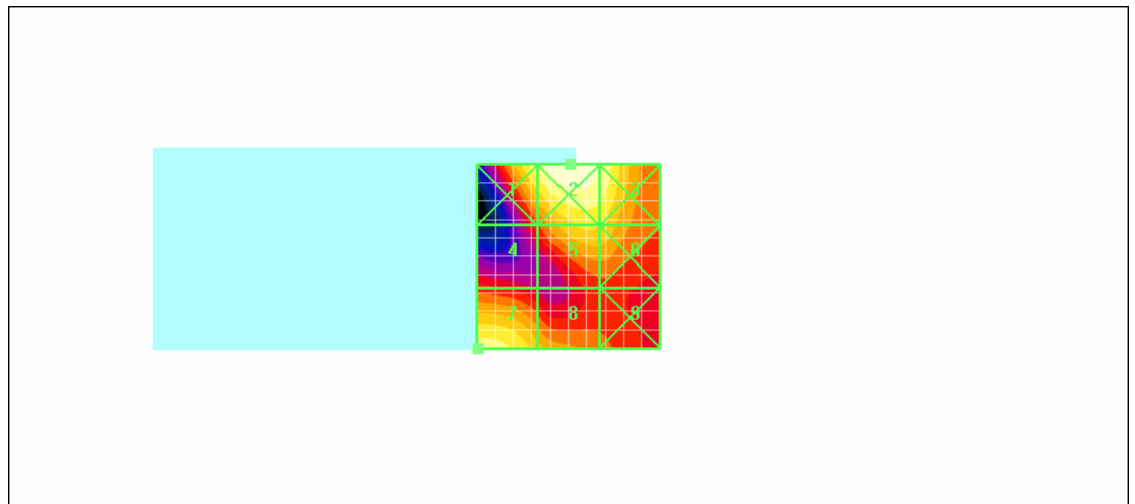
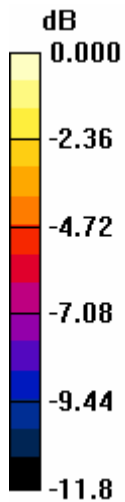
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41.9	34.6	28.7
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E Scan - ER probe tip 10mm above Device Reference/Hearing Aid Compatibility Test (101x101x1): Measurement grid: dx=5mm, dy=5mm
Maximum value of peak Total field = 46.3 V/m
Probe Modulation Factor = 0.980
Reference Value = 23.8 V/m; Power Drift = -0.089 dB
Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak E-field in V/m

Grid	Grid	Grid
41.7	46.3	42.6
Grid	Grid	Grid
26.5	36.1	35.5
Grid	Grid	Grid



0 dB = 47.3V/m

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Date/Time: 31/07/2006 11:25:49 AM

Test Laboratory: RTS

HAC_H_Field_CDMA1900_Spk_center_low_chan

DUT: BlackBerry Wireless Handheld Model; Type: Sample ; Serial: Not Specified

Communication System: CDMA 1900; 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 Dipole Section

DASY4 Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 11/11/2005
- Sensor-Surface: 0mm (Fix Surface) Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 25/04/2006
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

H Scan - H3DV6 probe tip 10mm above Device Reference/Z Scan (1x1x21): Measurement grid: dx=20mm, dy=20mm, dz=5mm
Maximum value of Total (measured) = 0.134 A/m

H Scan - H3DV6 probe tip 10mm above Device Reference/Hearing Aid Compatibility Test (11x11x1): Measurement grid: dx=5mm, dy=5mm
Probe Modulation Factor = 1.00
Reference Value = 0.123 A/m; Power Drift = -0.008 dB
Maximum value of Total (measured) = 0.136 A/m

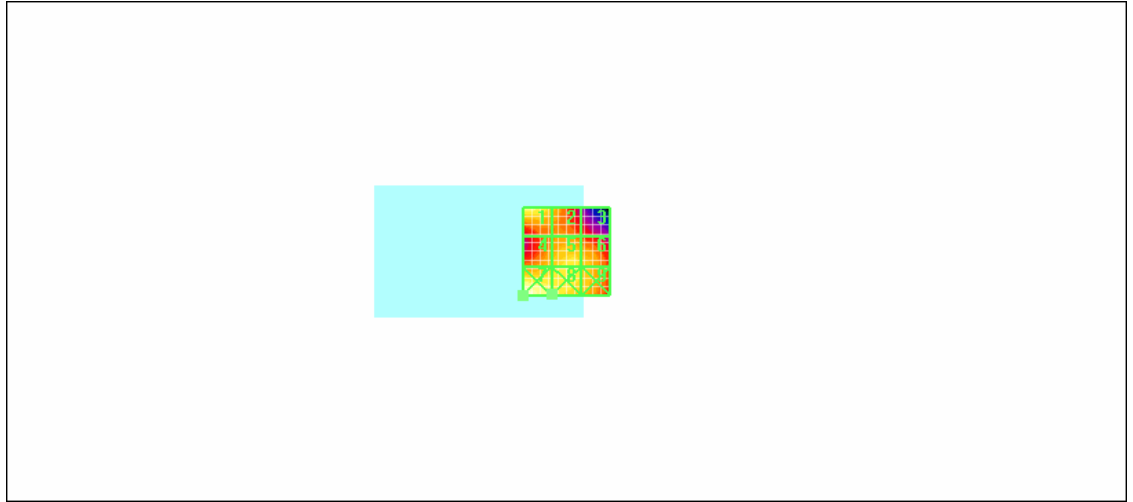
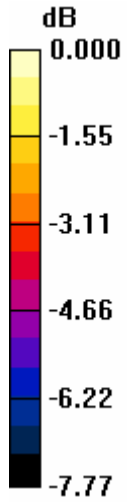
H Scan - H3DV6 probe tip 10mm above Device Reference/Hearing Aid Compatibility Test (101x101x1): Measurement grid: dx=5mm, dy=5mm
Maximum value of peak Total field = 0.122 A/m
Probe Modulation Factor = 0.980
Reference Value = 0.123 A/m; Power Drift = -0.008 dB
Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak H-field in A/m

Grid	Grid	Grid
0.122	0.109	0.093
Grid	Grid	Grid
0.108	0.114	0.110
Grid	Grid	Grid

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0.133	0.117	0.110
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0 dB = 0.133A/m

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Date/Time: 19/07/2006 3:32:58 PM

Test Laboratory: RTS

HAC_H_Field_CDMA1900_Spk center_low_chan_1_8th_RC1_SO2

DUT: BlackBerry Wireless Handheld Model; Type: Sample ; Serial: Not Specified

Communication System: CDMA 1900; Frequency: 1851.25 MHz;Duty Cycle: 1:8

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

Phantom section: H Dipole Section

DASY4 Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 11/11/2005
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 25/04/2006
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

H Scan - H3DV6 probe tip 10mm above Device Reference/Z Scan (1x1x21): Measurement grid: dx=20mm, dy=20mm, dz=5mm
Maximum value of Total (measured) = 0.049 A/m

H Scan - H3DV6 probe tip 10mm above Device Reference/Hearing Aid Compatibility Test (11x11x1): Measurement grid: dx=5mm, dy=5mm
Probe Modulation Factor = 1.00
Reference Value = 0.046 A/m; Power Drift = -0.029 dB
Maximum value of Total (measured) = 0.055 A/m

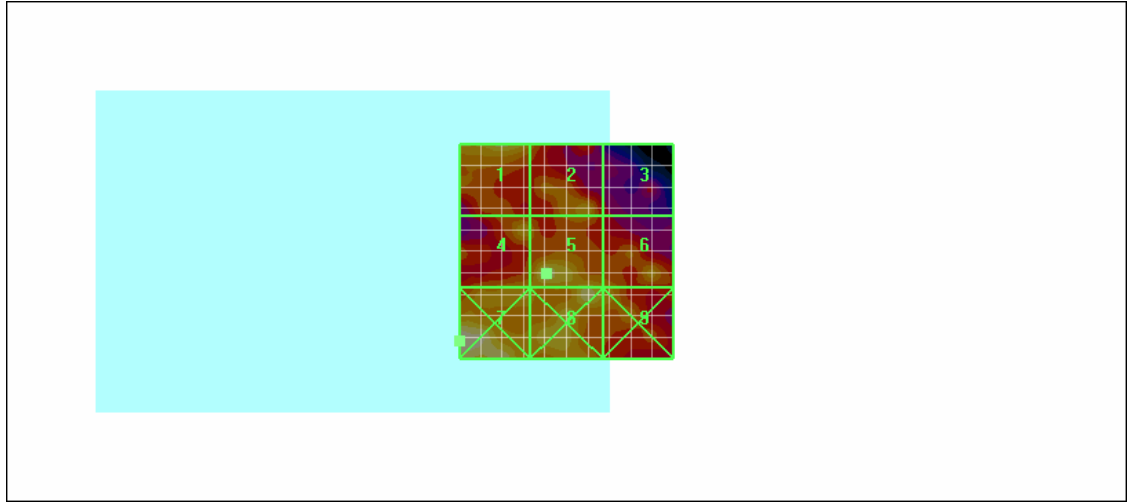
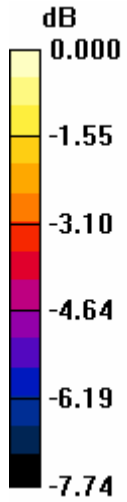
H Scan - H3DV6 probe tip 10mm above Device Reference/Hearing Aid Compatibility Test (101x101x1): Measurement grid: dx=5mm, dy=5mm
Maximum value of peak Total field = 0.117 A/m
Probe Modulation Factor = 2.26
Reference Value = 0.046 A/m; Power Drift = -0.029 dB
Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak H-field in A/m

Grid	Grid	Grid
0.115	0.104	0.083
Grid	Grid	Grid
0.104	0.117	0.102
Grid	Grid	Grid

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0.125	0.117	0.104
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0 dB = 0.125A/m

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Date/Time: 19/07/2006 1:38:06 PM

Test Laboratory: RTS

HAC_H_Field_CDMA1900_Spk center_mid_chan

DUT: BlackBerry Wireless Handheld Model; Type: Sample ; Serial: Not Specified

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

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

Phantom section: H Dipole Section

DASY4 Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 11/11/2005
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 25/04/2006
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

H Scan - H3DV6 probe tip 10mm above Device Reference/Z Scan (1x1x21): Measurement grid: dx=20mm, dy=20mm, dz=5mm
Maximum value of Total (measured) = 0.142 A/m

H Scan - H3DV6 probe tip 10mm above Device Reference/Hearing Aid Compatibility Test (11x11x1): Measurement grid: dx=5mm, dy=5mm
Probe Modulation Factor = 1.00
Reference Value = 0.118 A/m; Power Drift = -0.006 dB
Maximum value of Total (measured) = 0.143 A/m

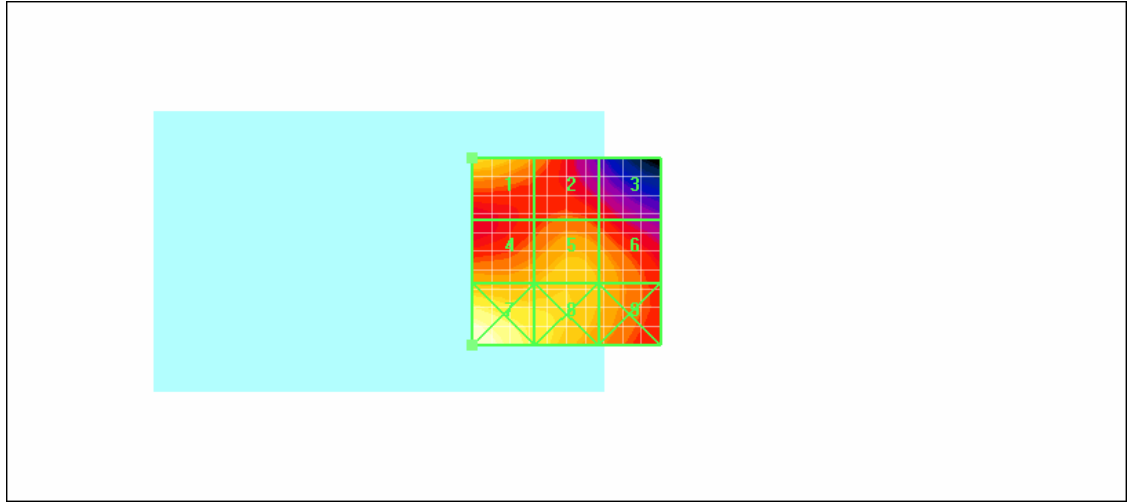
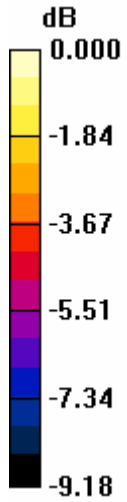
H Scan - H3DV6 probe tip 10mm above Device Reference/Hearing Aid Compatibility Test (101x101x1): Measurement grid: dx=5mm, dy=5mm
Maximum value of peak Total field = 0.116 A/m
Probe Modulation Factor = 0.980
Reference Value = 0.118 A/m; Power Drift = -0.006 dB
Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak H-field in A/m

Grid	Grid	Grid
0.116	0.098	0.088
Grid	Grid	Grid
0.106	0.111	0.105
Grid	Grid	Grid

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0.140	0.118	0.106
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0 dB = 0.140A/m