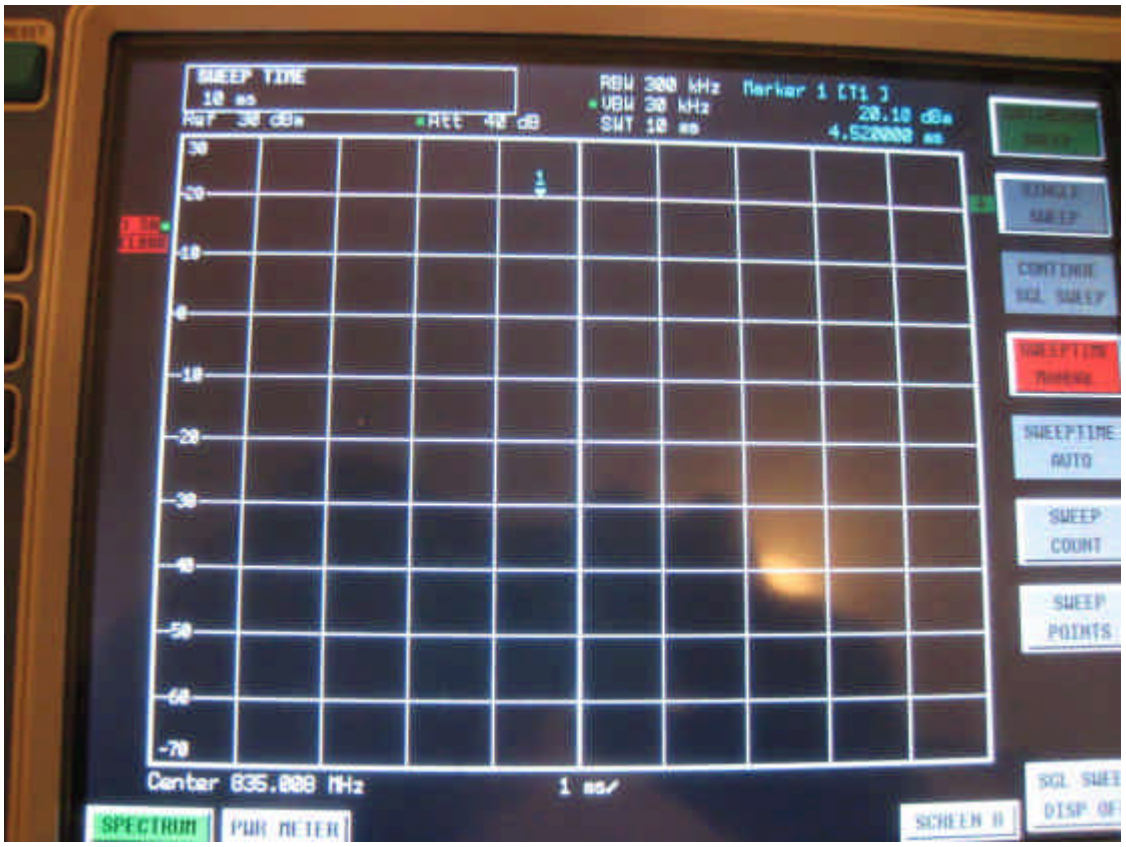
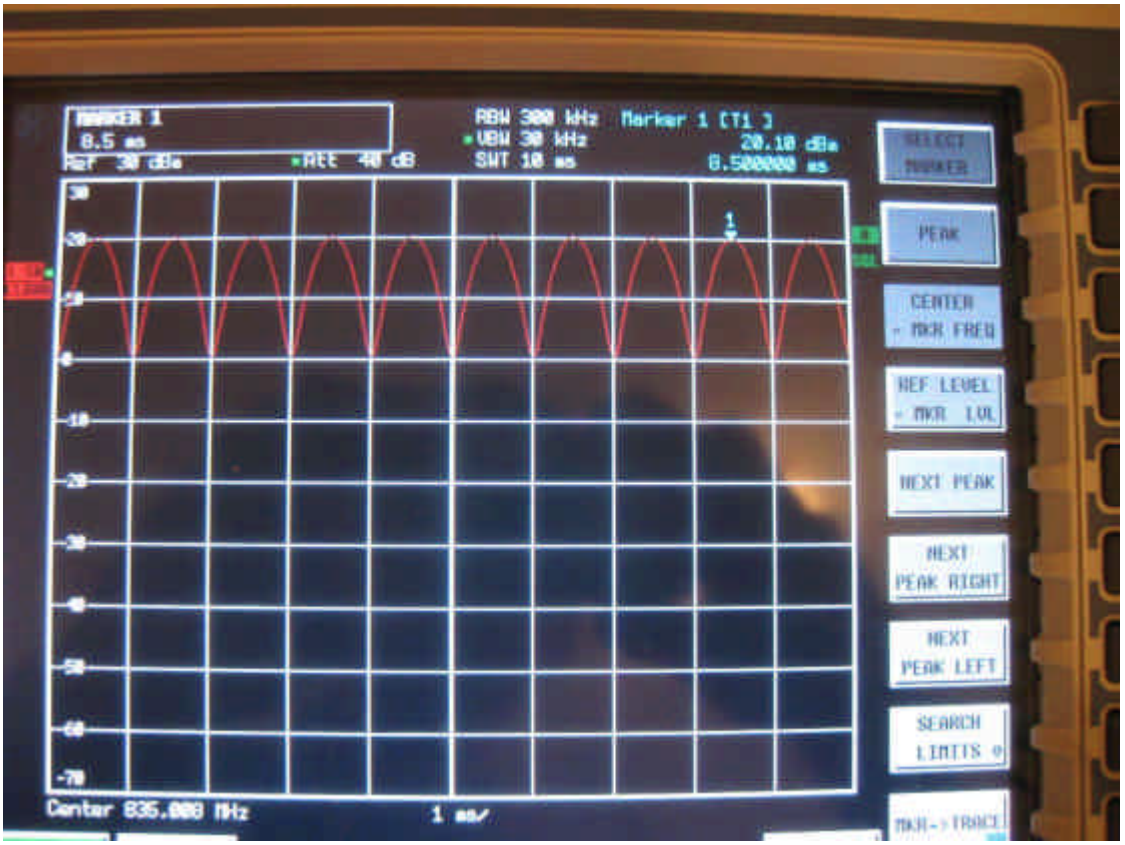
Annex A: Measurement data and plots

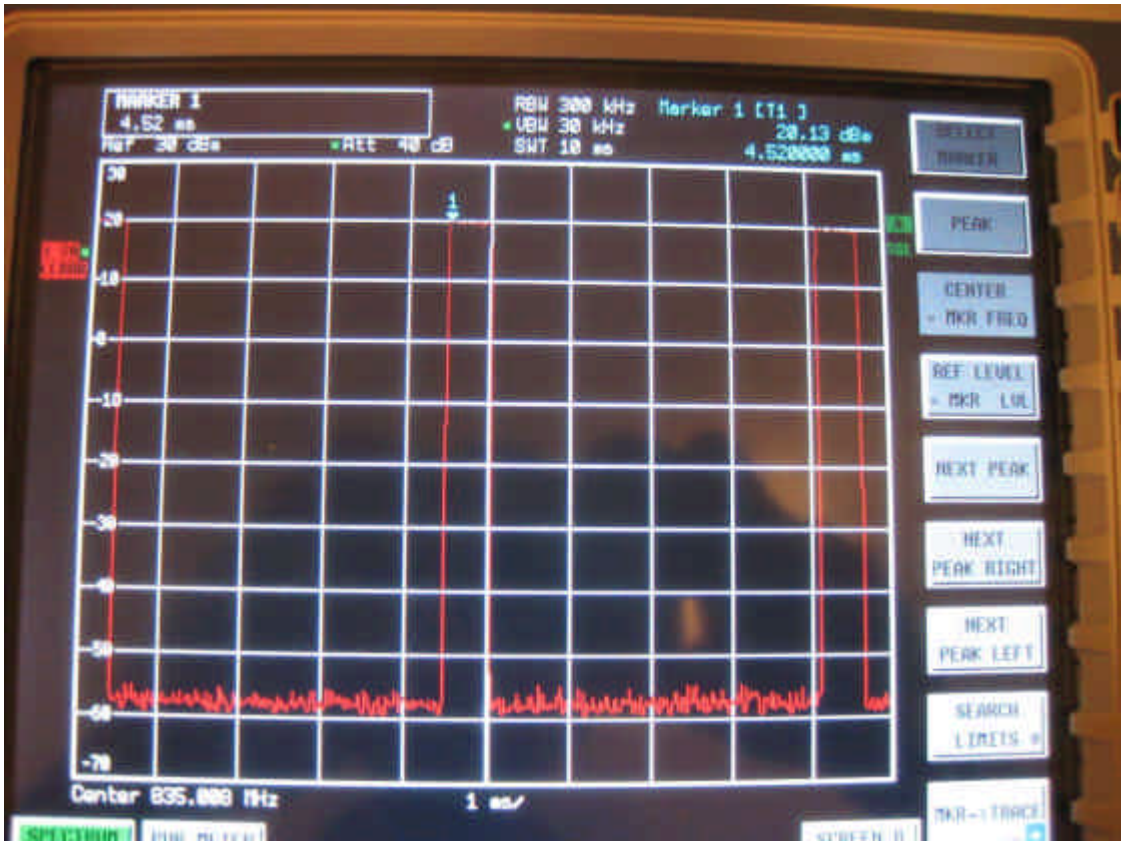
A.1 Spectrum analyser plots: CW, 80%AM, GSM and CDMA signals



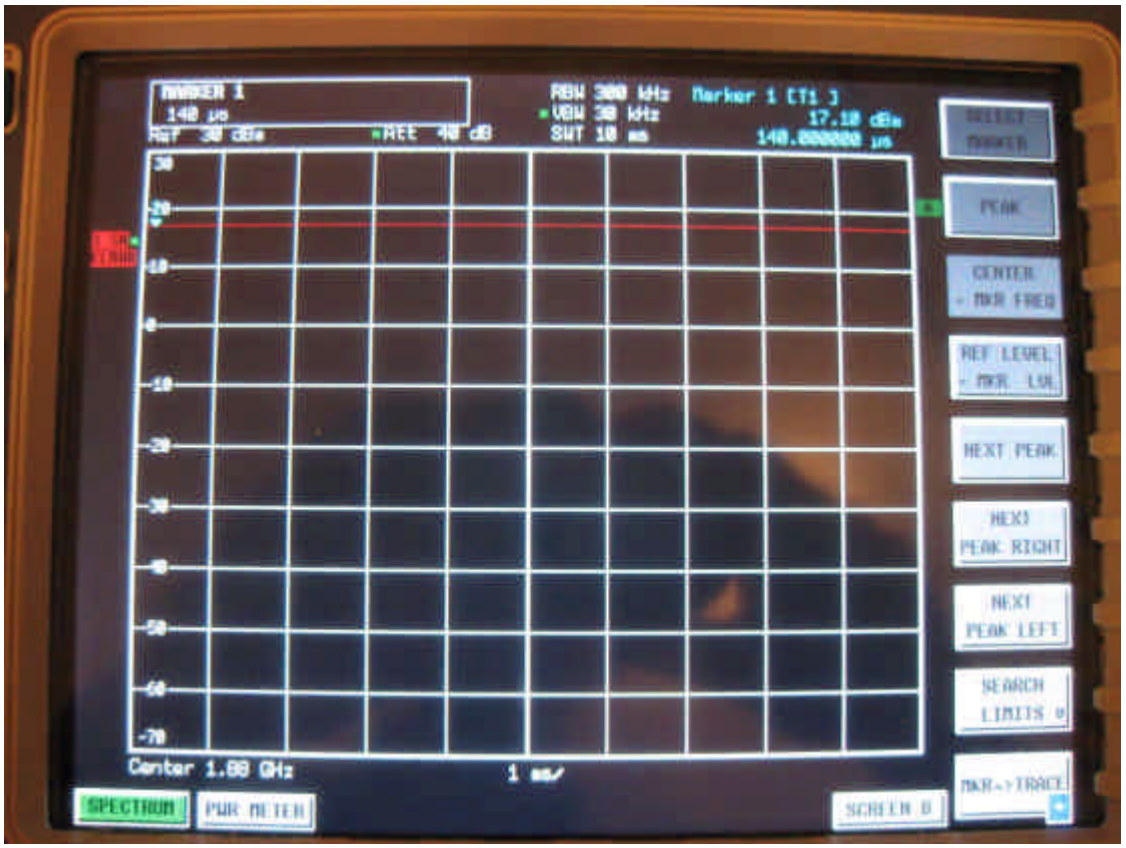
0 Hz Span CW Plot (835MHz)



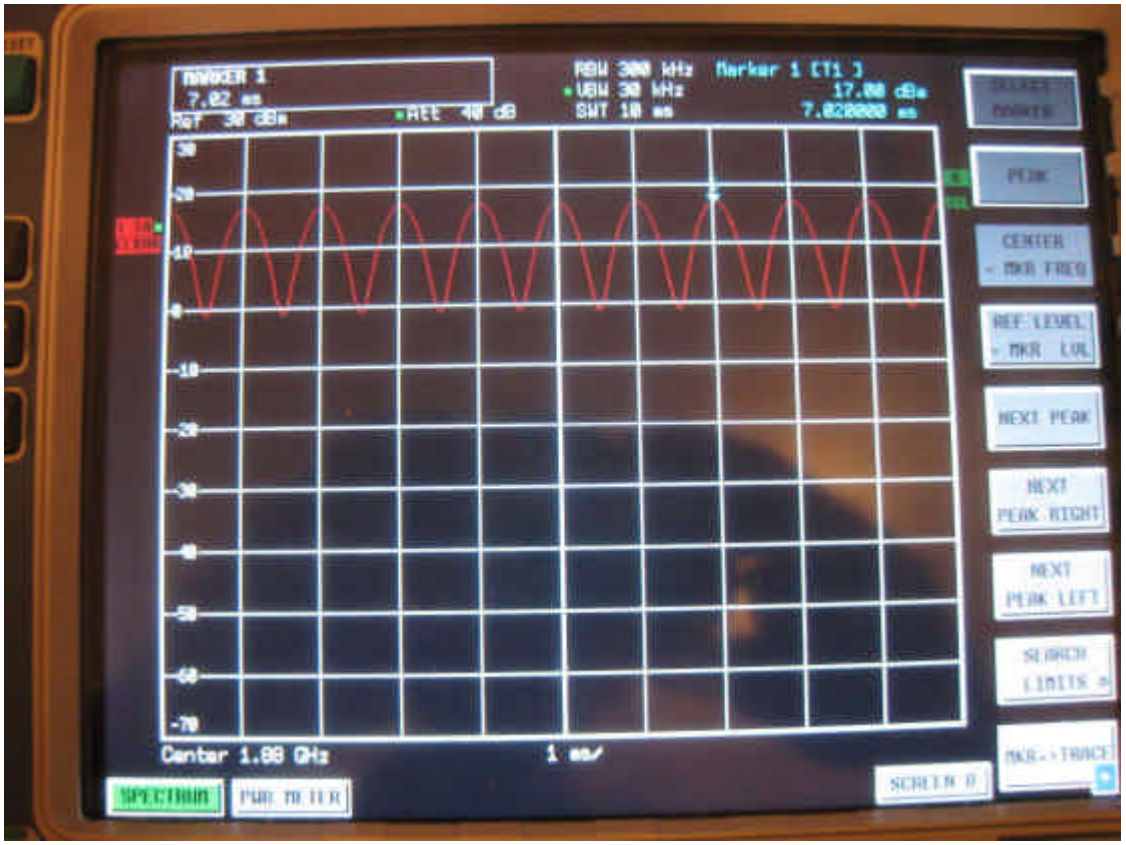
0 Hz Span 80% AM Plot (835MHz)



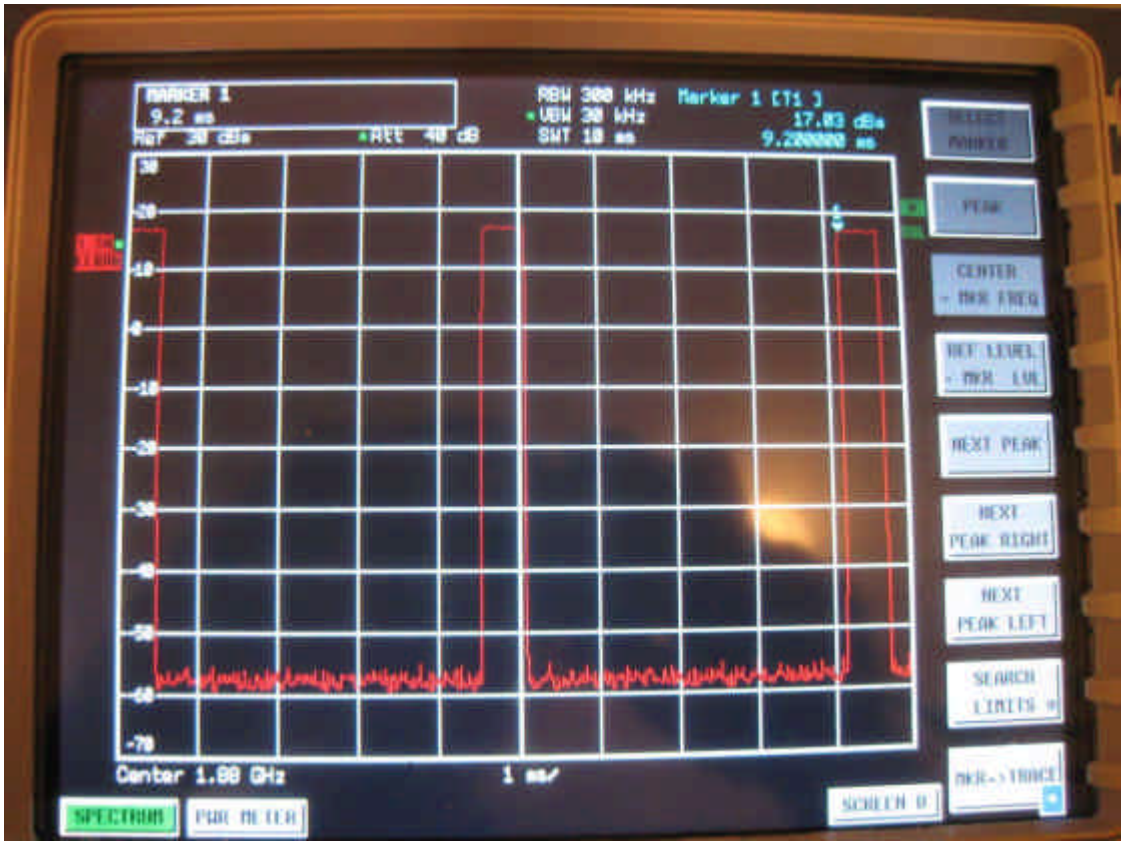
0 Hz Span GSM (835MHz)



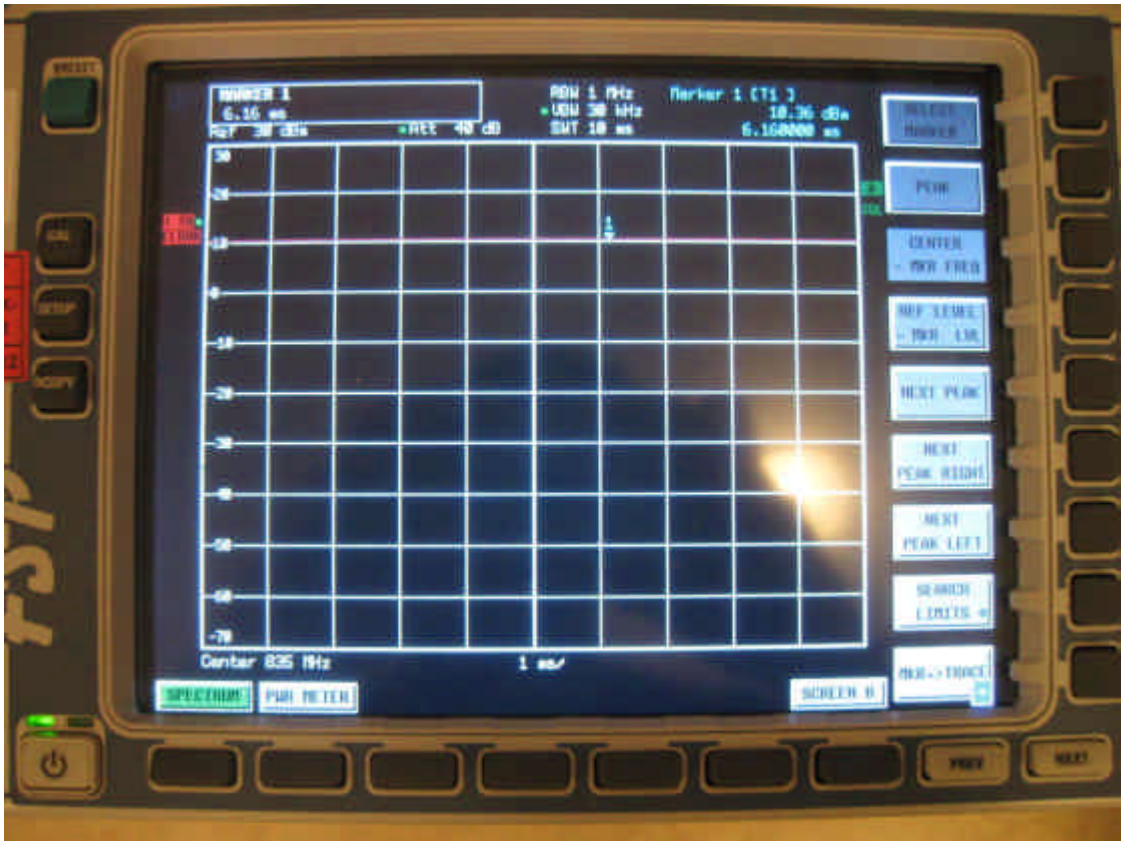
0 Hz Span CW Plot (1880MHz)



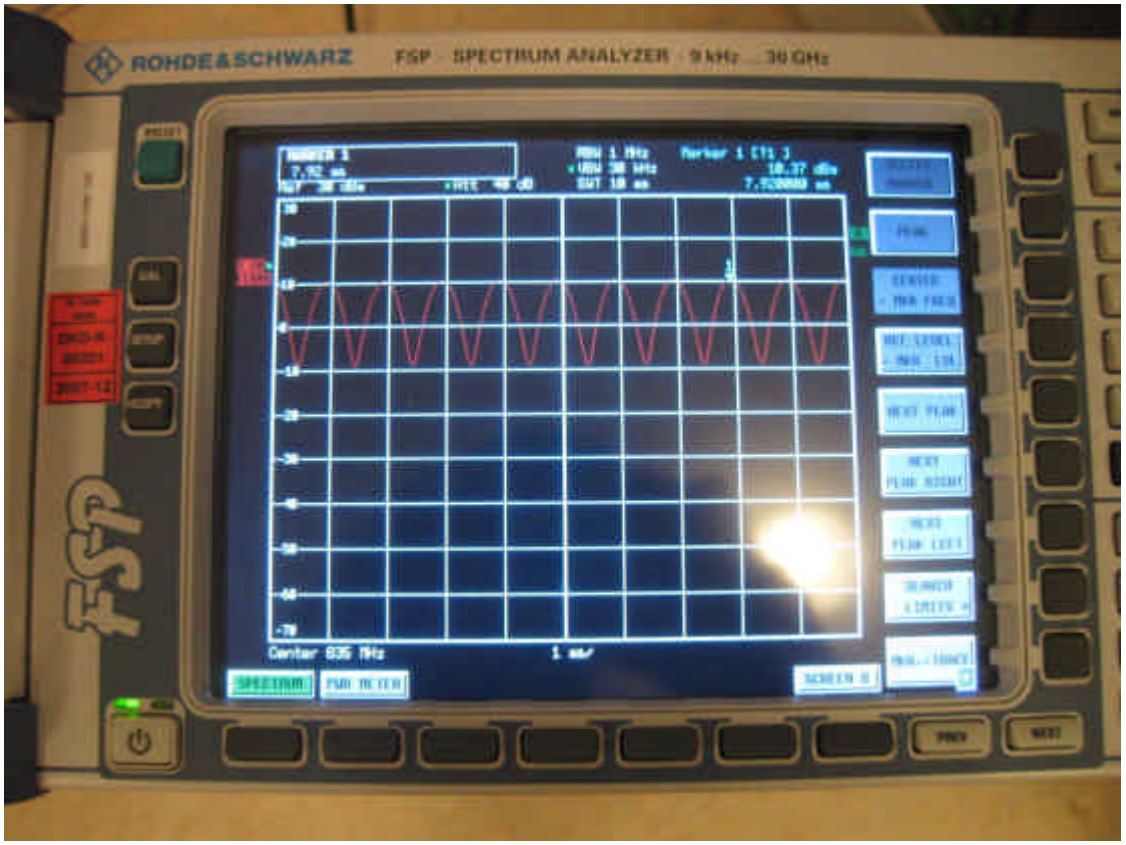
0 Hz Span 80% AM Plot (1880MHz)



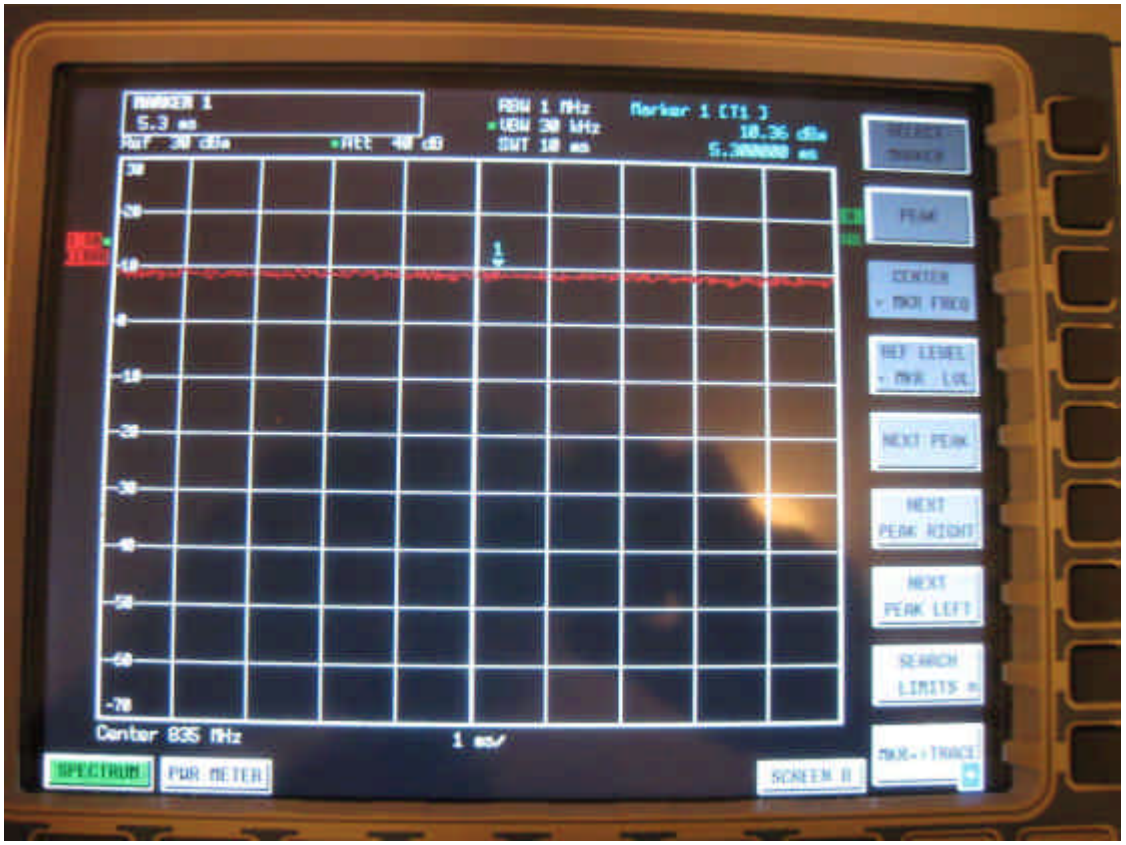
0 Hz Span GSM (1880MHz)



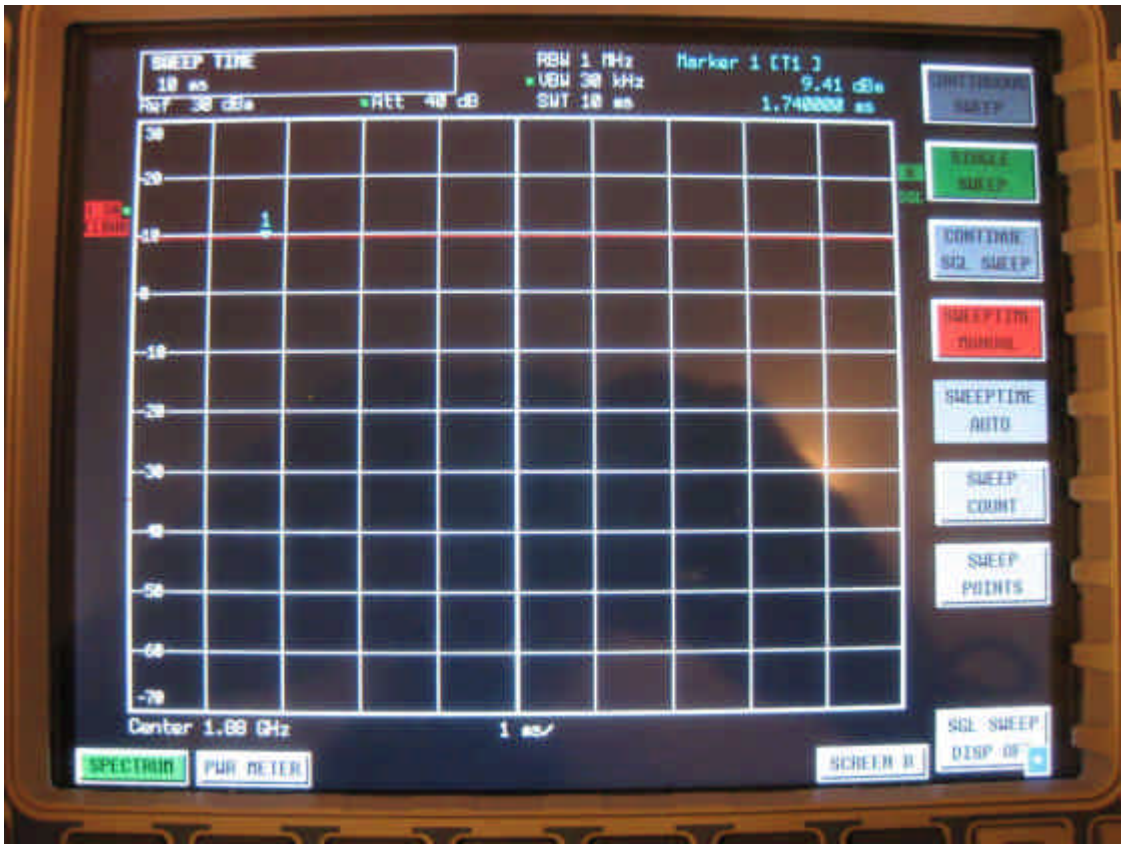
0 Hz Span CW Plot (835MHz)



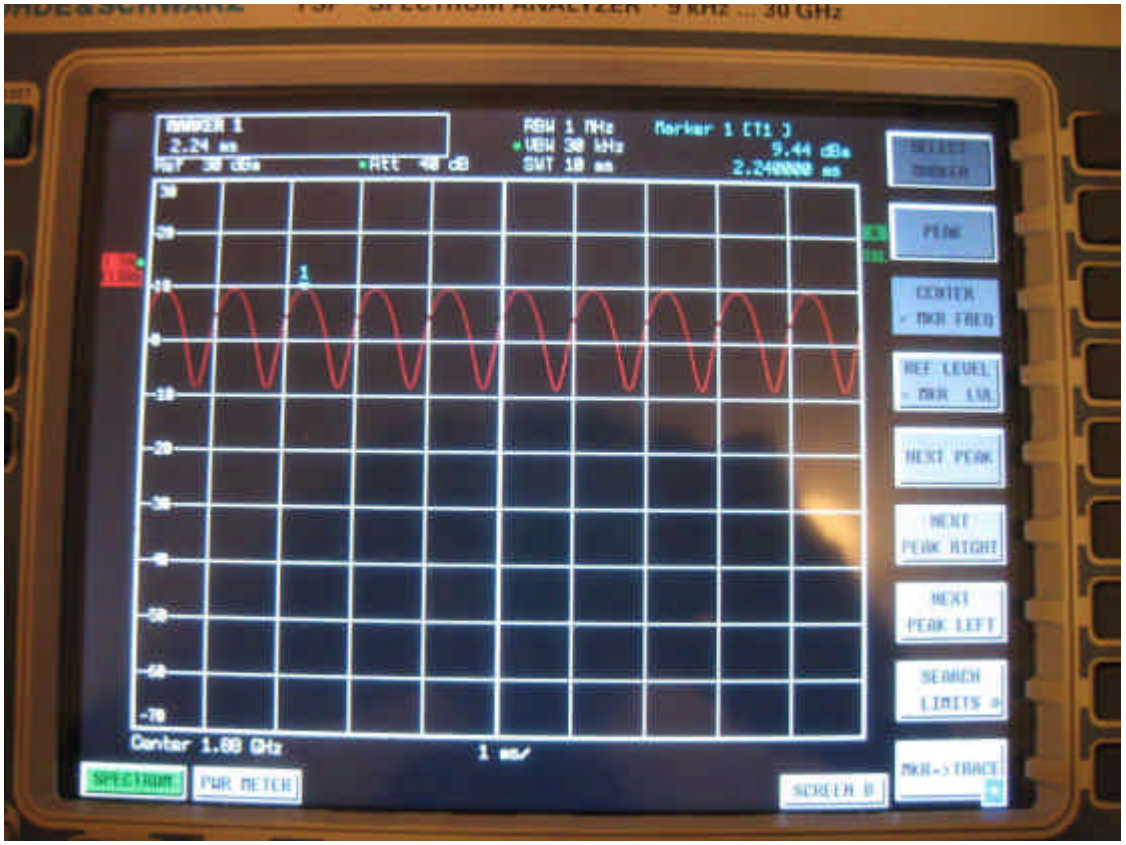
0 Hz Span 80% AM Plot (835MHz)



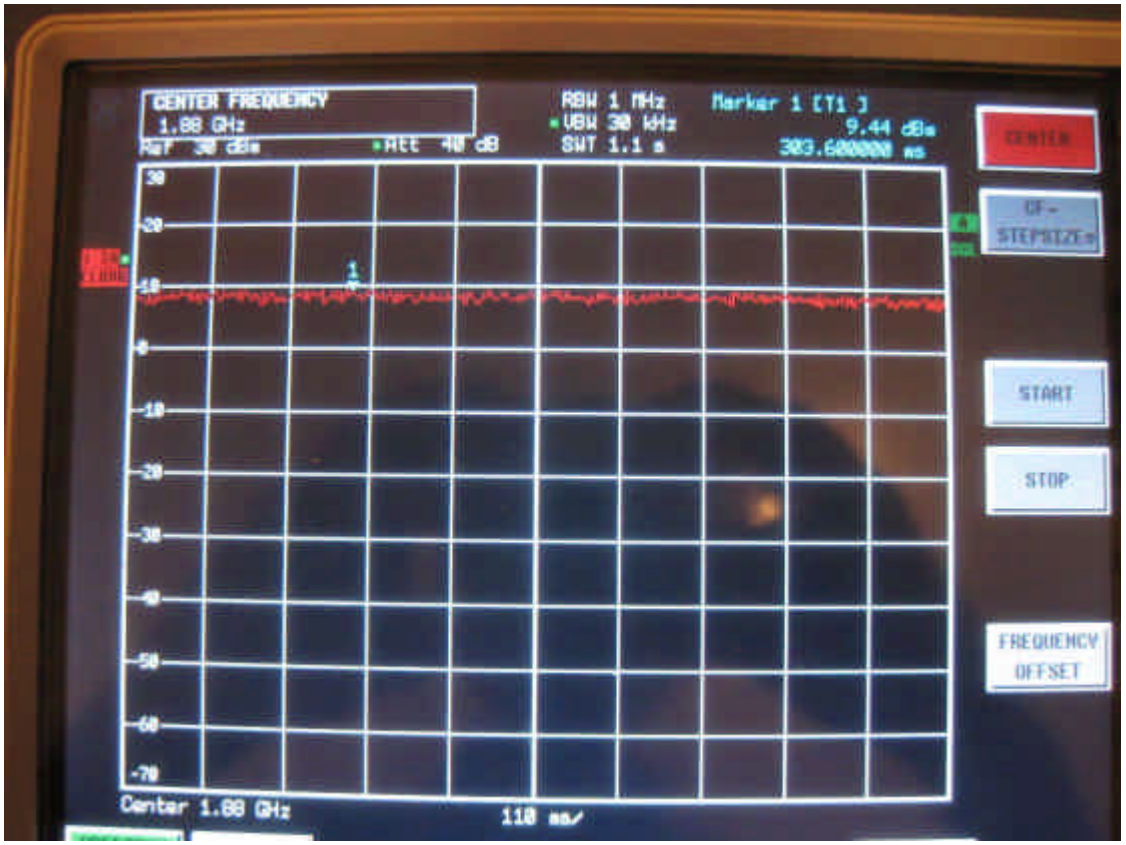
0 Hz Span CDMA (835MHz)



0 Hz Span CW Plot (1880MHz)



0 Hz Span 80% AM Plot (1880MHz)



0 Hz Span CDMA (1880MHz)

A.2 Dipole validation and probe modulation factor plots

Date/Time: 26/08/2008 10:30:21 AM

Test Laboratory: RTS

File Name: HAC_E_Dipole_CW835_20.00dBm.da4

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

Program Name: HAC RF E Dipole

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

Medium parameters used: s = 0 mho/m, e_r = 1; density = 1000 kg/m^3

Phantom section: E Device Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2285; ConvF(1, 1, 1); Calibrated: 07/03/2008
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 05/03/2008
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

E Scan - measurement distance from the probe sensor center to CD835 Dipole = 10mm/Hearing Aid Compatibility Test (5x37x1):

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

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, 353.7 mm

Reference Value = 110.4 V/m; Power Drift = -0.029 dB

Maximum value of Total (measured) = 146.7 V/m

E Scan - measurement distance from the probe sensor center to

CD835 Dipole = 10mm/Hearing Aid Compatibility Test

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

Maximum value of peak Total field = 147.2 V/m

Probe Modulation Factor = 1.00

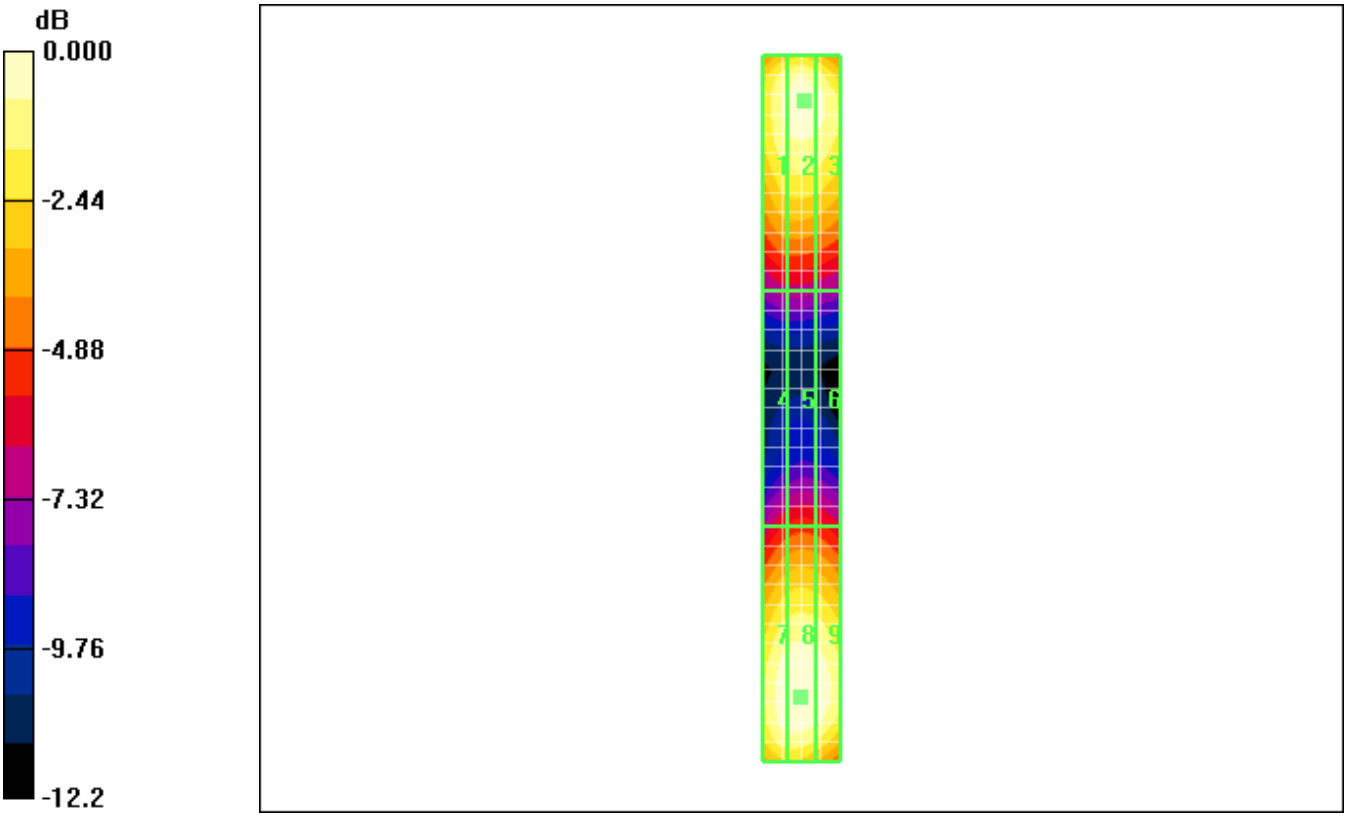
Device Reference Point: 0.000, 0.000, 353.7 mm

Reference Value = 110.4 V/m; Power Drift = -0.029 dB

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

Peak E-field in V/m

Grid 1 **139.0** **M4**	Grid 2 **143.6** **M4**	Grid 3 **140.7** **M4**
Grid 4 **78.9** **M4**	Grid 5 **81.2** **M4**	Grid 6 **79.8** **M4**
Grid 7 **144.9** **M4**	Grid 8 **147.2** **M4**	Grid 9 **145.2** **M4**



0 dB = 147.2V/m

Date/Time: 26/09/2008 3:00:16 PM

Test Laboratory: RTS

File Name: HAC_E_Dipole_CW835_09_26_08.da4

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

Program Name: HAC RF E Dipole

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

Medium parameters used: s = 0 mho/m, e_r = 1; density = 1000 kg/m^3

Phantom section: E Device Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2285; ConvF(1, 1, 1); Calibrated: 07/03/2008
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 05/03/2008
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

E Scan - measurement distance from the probe sensor center to CD835 Dipole = 10mm/Hearing Aid Compatibility Test (5x37x1):

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

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, 353.7 mm

Reference Value = 111.5 V/m; Power Drift = -0.138 dB

Maximum value of Total (measured) = 148.9 V/m

E Scan - measurement distance from the probe sensor center to

CD835 Dipole = 10mm/Hearing Aid Compatibility Test

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

Maximum value of peak Total field = 149.5 V/m

Probe Modulation Factor = 1.00

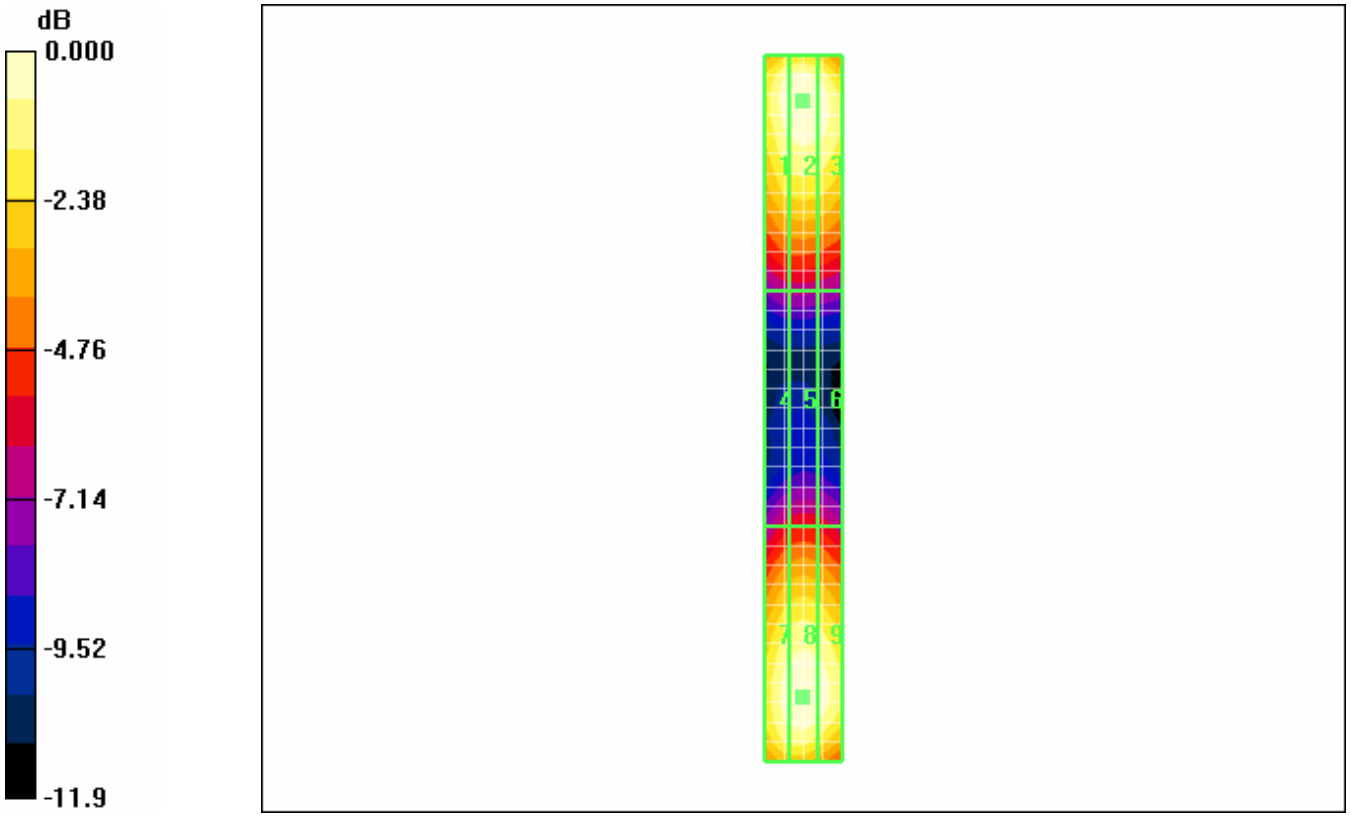
Device Reference Point: 0.000, 0.000, 353.7 mm

Reference Value = 111.5 V/m; Power Drift = -0.138 dB

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

Peak E-field in V/m

Grid 1 **146.0** **M4**	Grid 2 **149.5** **M4**	Grid 3 **146.7** **M4**
Grid 4 **77.3** **M4**	Grid 5 **79.2** **M4**	Grid 6 **77.5** **M4**
Grid 7 **144.6** **M4**	Grid 8 **148.2** **M4**	Grid 9 **145.0** **M4**



0 dB = 149.5V/m

Date/Time: 26/09/2008 2:26:11 PM

Test Laboratory: RTS

File Name: HAC_E_Dipole_CW835_PMF_GSM.da4

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

Program Name: HAC RF E Dipole

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

Medium parameters used: s = 0 mho/m, e_r = 1; density = 1000 kg/m^3

Phantom section: E Device Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2285; ConvF(1, 1, 1); Calibrated: 07/03/2008
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 05/03/2008
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

E Scan - measurement distance from the probe sensor center to CD835 Dipole = 10mm/Hearing Aid Compatibility Test (5x37x1):

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

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, 353.7 mm

Reference Value = 115.1 V/m; Power Drift = -0.023 dB

Maximum value of Total (measured) = 157.1 V/m

E Scan - measurement distance from the probe sensor center to

CD835 Dipole = 10mm/Hearing Aid Compatibility Test

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

Maximum value of peak Total field = 157.7 V/m

Probe Modulation Factor = 1.00

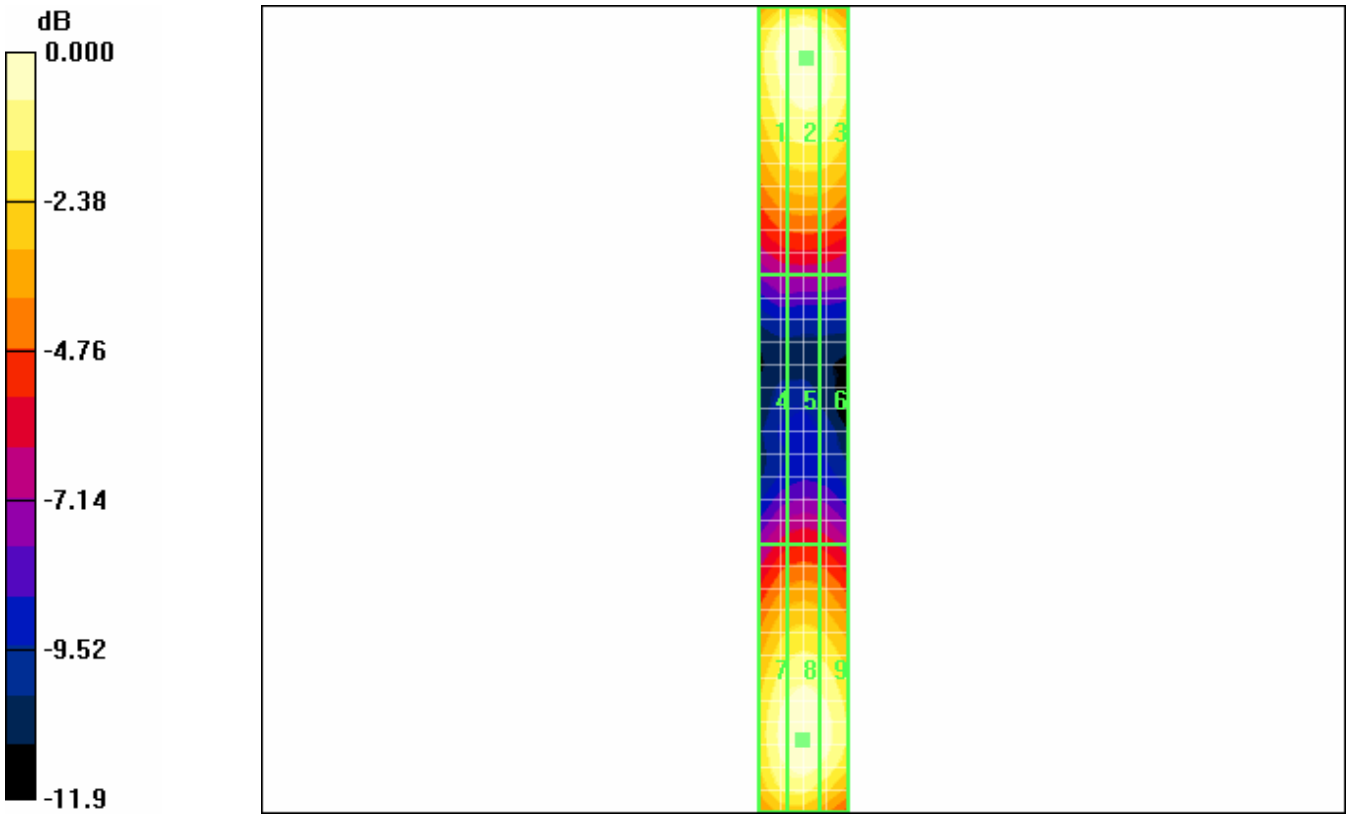
Device Reference Point: 0.000, 0.000, 353.7 mm

Reference Value = 115.1 V/m; Power Drift = -0.023 dB

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

Peak E-field in V/m

Grid 1 **154.0** **M4**	Grid 2 **157.7** **M4**	Grid 3 **155.7** **M4**
Grid 4 **81.4** **M4**	Grid 5 **83.3** **M4**	Grid 6 **81.8** **M4**
Grid 7 **152.3** **M4**	Grid 8 **156.3** **M4**	Grid 9 **152.8** **M4**



0 dB = 157.7V/m

Date/Time: 26/09/2008 2:34:29 PM

Test Laboratory: RTS

File Name: HAC_E_Dipole_AM835_PMF_GSM.da4

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

Program Name: HAC RF E Dipole

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

Medium parameters used: s = 0 mho/m, e_r = 1; density = 1000 kg/m^3

Phantom section: E Device Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2285; ConvF(1, 1, 1); Calibrated: 07/03/2008
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 05/03/2008
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

E Scan - measurement distance from the probe sensor center to CD835 Dipole = 10mm/Hearing Aid Compatibility Test (5x37x1):

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

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, 353.7 mm

Reference Value = 71.6 V/m; Power Drift = 0.109 dB

Maximum value of Total (measured) = 98.3 V/m

E Scan - measurement distance from the probe sensor center to

CD835 Dipole = 10mm/Hearing Aid Compatibility Test

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

Maximum value of peak Total field = 98.6 V/m

Probe Modulation Factor = 1.00

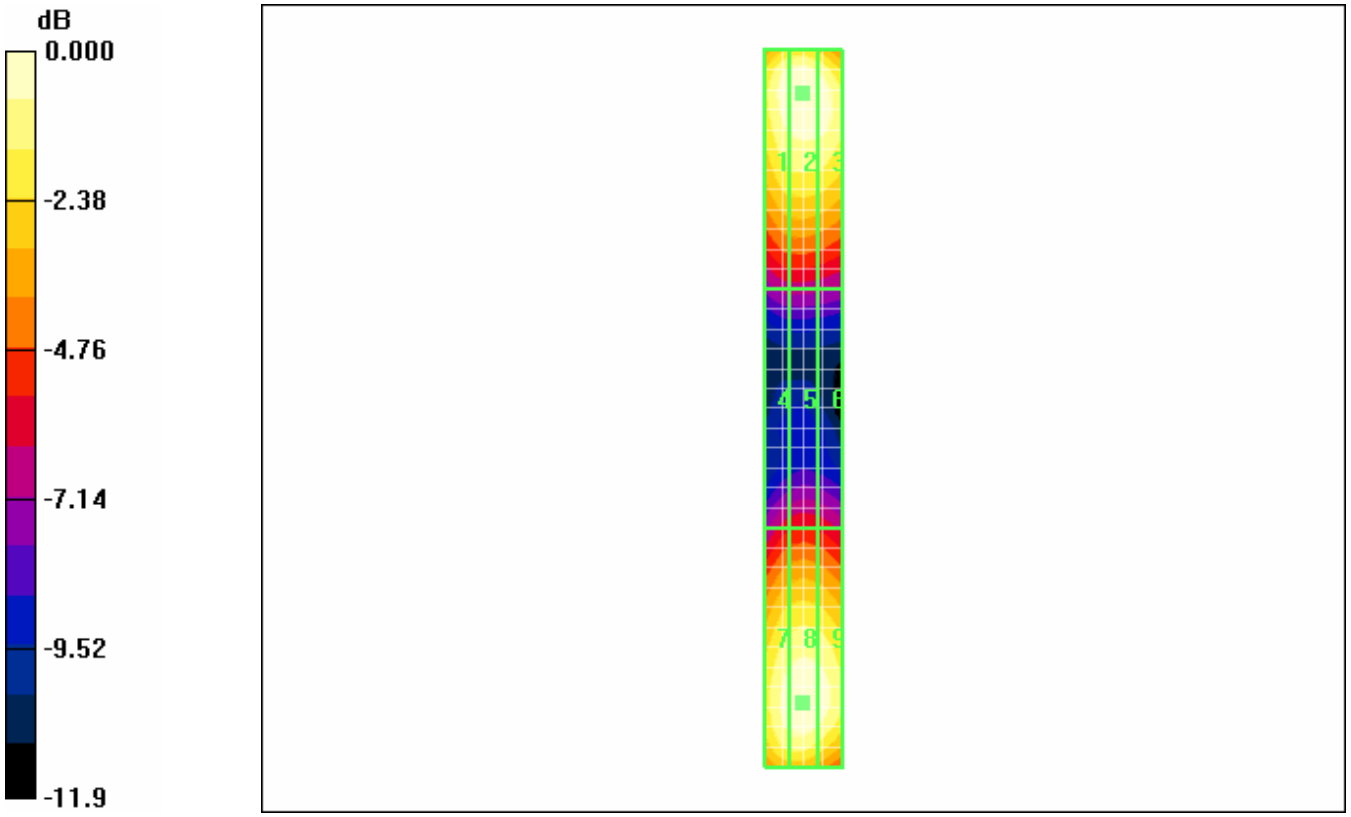
Device Reference Point: 0.000, 0.000, 353.7 mm

Reference Value = 71.6 V/m; Power Drift = 0.109 dB

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

Peak E-field in V/m

Grid 1 **97.3** **M4**	Grid 2 **98.6** **M4**	Grid 3 **97.1** **M4**
Grid 4 **51.5** **M4**	Grid 5 **52.6** **M4**	Grid 6 **51.6** **M4**
Grid 7 **94.9** **M4**	Grid 8 **97.1** **M4**	Grid 9 **95.2** **M4**



0 dB = 98.6V/m

Date/Time: 26/09/2008 2:16:10 PM

Test Laboratory: RTS

File Name: HAC_E_Dipole_GSM835.da4

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

Program Name: HAC RF E Dipole

Communication System: GSM 850; Frequency: 835 MHz;Duty Cycle: 1:8.3

Medium parameters used: s = 0 mho/m, e_r = 1; density = 1000 kg/m^3

Phantom section: E Device Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2285; ConvF(1, 1, 1); Calibrated: 07/03/2008
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 05/03/2008
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

E Scan - measurement distance from the probe sensor center to CD835 Dipole = 10mm/Hearing Aid Compatibility Test (5x37x1):

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

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, 353.7 mm

Reference Value = 37.8 V/m; Power Drift = 0.079 dB

Maximum value of Total (measured) = 51.2 V/m

E Scan - measurement distance from the probe sensor center to

CD835 Dipole = 10mm/Hearing Aid Compatibility Test

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

Maximum value of peak Total field = 51.4 V/m

Probe Modulation Factor = 1.00

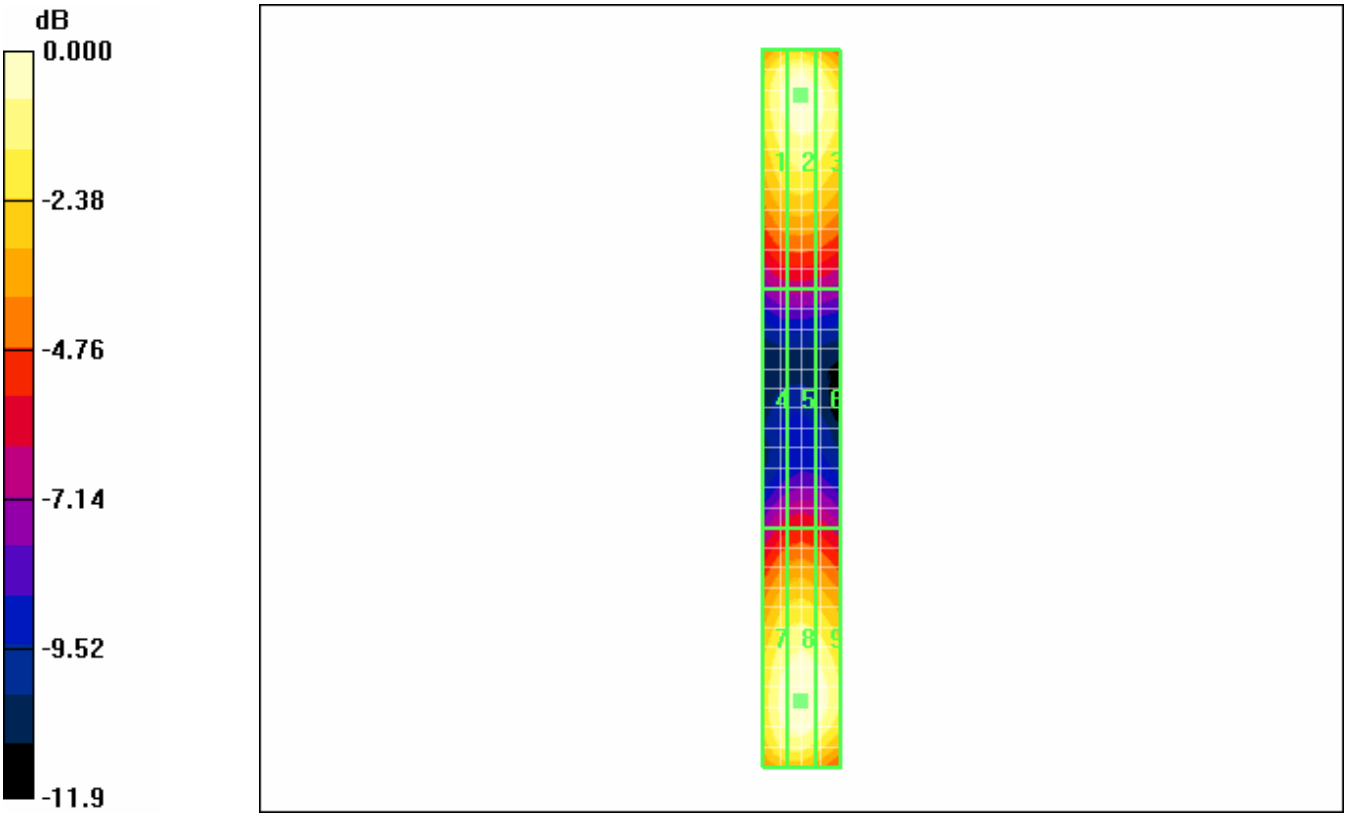
Device Reference Point: 0.000, 0.000, 353.7 mm

Reference Value = 37.8 V/m; Power Drift = 0.079 dB

Hearing Aid Near-Field Category: M4 (AWF -5 dB)

Peak E-field in V/m

Grid 1 **48.8** **M4**	Grid 2 **50.1** **M4**	Grid 3 **49.0** **M4**
Grid 4 **26.6** **M4**	Grid 5 **27.3** **M4**	Grid 6 **26.6** **M4**
Grid 7 **49.8** **M4**	Grid 8 **51.4** **M4**	Grid 9 **50.2** **M4**



0 dB = 51.4V/m

Date/Time: 26/09/2008 2:49:40 PM

Test Laboratory: RTS

File Name: HAC_E_Dipole_CW835_PMF_CDMA.da4

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

Program Name: HAC RF E Dipole

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

Medium parameters used: s = 0 mho/m, e_r = 1; density = 1000 kg/m^3

Phantom section: E Device Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2285; ConvF(1, 1, 1); Calibrated: 07/03/2008
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 05/03/2008
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

E Scan - measurement distance from the probe sensor center to CD835 Dipole = 10mm/Hearing Aid Compatibility Test (5x37x1):

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

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, 353.7 mm

Reference Value = 38.4 V/m; Power Drift = 0.108 dB

Maximum value of Total (measured) = 52.3 V/m

E Scan - measurement distance from the probe sensor center to

CD835 Dipole = 10mm/Hearing Aid Compatibility Test

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

Maximum value of peak Total field = 52.4 V/m

Probe Modulation Factor = 1.00

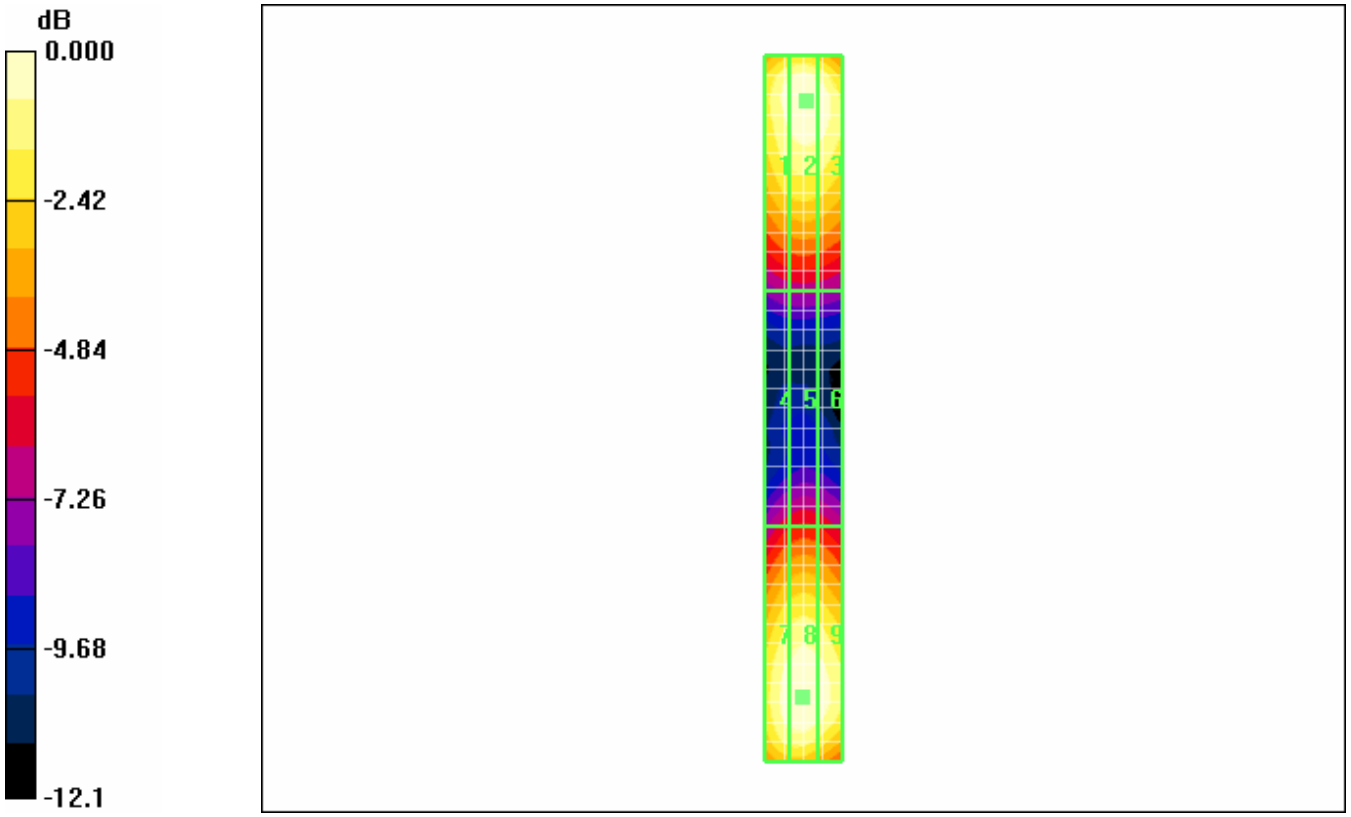
Device Reference Point: 0.000, 0.000, 353.7 mm

Reference Value = 38.4 V/m; Power Drift = 0.108 dB

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

Peak E-field in V/m

Grid 1 **50.6** **M4**	Grid 2 **52.3** **M4**	Grid 3 **51.6** **M4**
Grid 4 **27.2** **M4**	Grid 5 **28.0** **M4**	Grid 6 **27.4** **M4**
Grid 7 **51.0** **M4**	Grid 8 **52.4** **M4**	Grid 9 **51.2** **M4**



0 dB = 52.4V/m

Date/Time: 26/09/2008 2:41:20 PM

Test Laboratory: RTS

File Name: HAC_E_Dipole_AM835_PMF_CDMA.da4

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

Program Name: HAC RF E Dipole

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

Medium parameters used: s = 0 mho/m, e_r = 1; density = 1000 kg/m^3

Phantom section: E Device Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2285; ConvF(1, 1, 1); Calibrated: 07/03/2008
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 05/03/2008
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

E Scan - measurement distance from the probe sensor center to CD835 Dipole = 10mm/Hearing Aid Compatibility Test (5x37x1):

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

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, 353.7 mm

Reference Value = 24.4 V/m; Power Drift = 0.011 dB

Maximum value of Total (measured) = 32.8 V/m

E Scan - measurement distance from the probe sensor center to

CD835 Dipole = 10mm/Hearing Aid Compatibility Test

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

Maximum value of peak Total field = 32.9 V/m

Probe Modulation Factor = 1.00

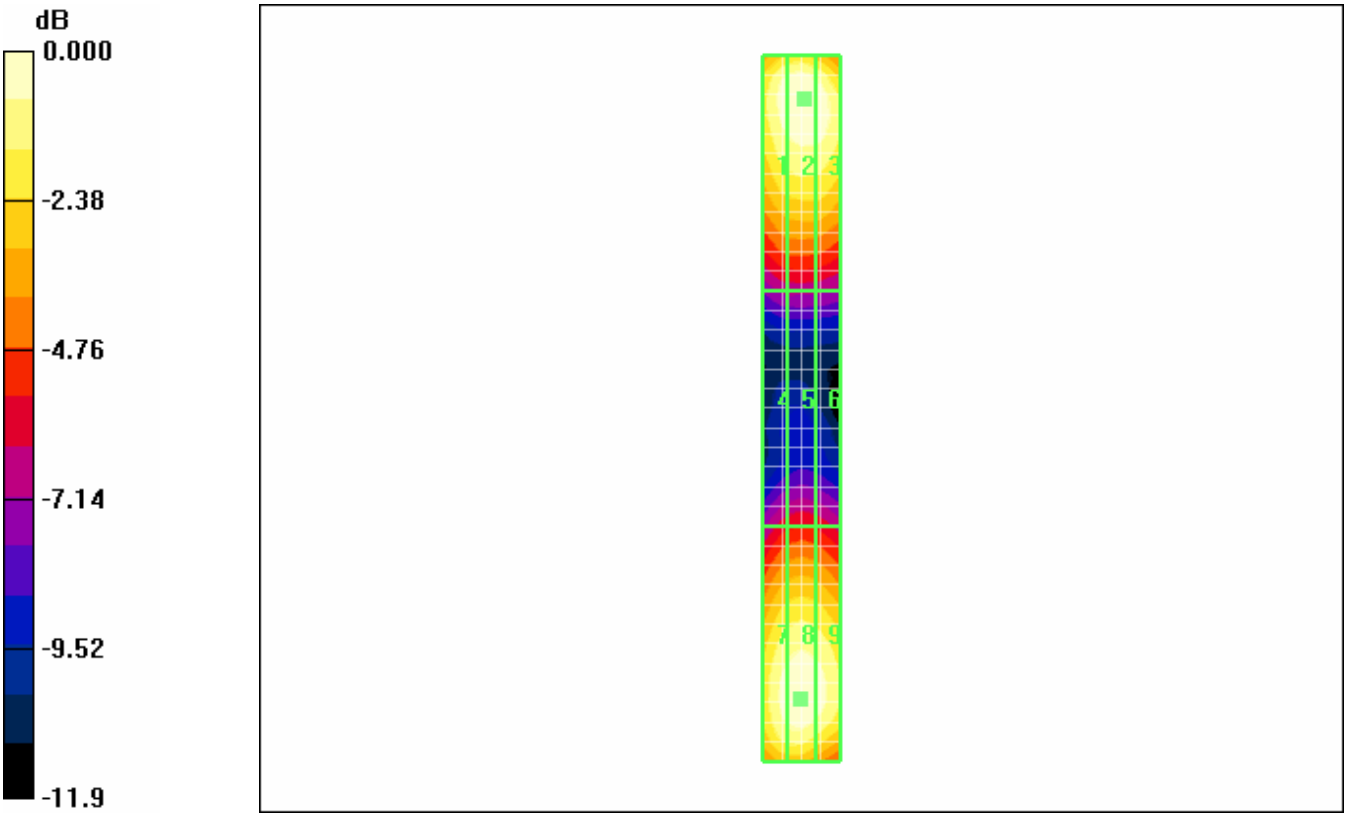
Device Reference Point: 0.000, 0.000, 353.7 mm

Reference Value = 24.4 V/m; Power Drift = 0.011 dB

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

Peak E-field in V/m

Grid 1 **32.1** **M4**	Grid 2 **32.9** **M4**	Grid 3 **32.5** **M4**
Grid 4 **17.1** **M4**	Grid 5 **17.5** **M4**	Grid 6 **17.2** **M4**
Grid 7 **31.7** **M4**	Grid 8 **32.5** **M4**	Grid 9 **31.7** **M4**



0 dB = 32.9V/m

Date/Time: 26/09/2008 3:16:30 PM

Test Laboratory: RTS

File Name: HAC_E_Dipole_CDMA835_R2.da4

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

Program Name: HAC RF E Dipole

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

Medium parameters used: s = 0 mho/m, e_r = 1; density = 1000 kg/m^3

Phantom section: E Device Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2285; ConvF(1, 1, 1); Calibrated: 07/03/2008
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 05/03/2008
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

E Scan - measurement distance from the probe sensor center to CD835 Dipole = 10mm/Hearing Aid Compatibility Test (5x37x1):

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

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, 353.7 mm

Reference Value = 41.3 V/m; Power Drift = -0.106 dB

Maximum value of Total (measured) = 55.2 V/m

E Scan - measurement distance from the probe sensor center to

CD835 Dipole = 10mm/Hearing Aid Compatibility Test

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

Maximum value of peak Total field = 55.4 V/m

Probe Modulation Factor = 1.00

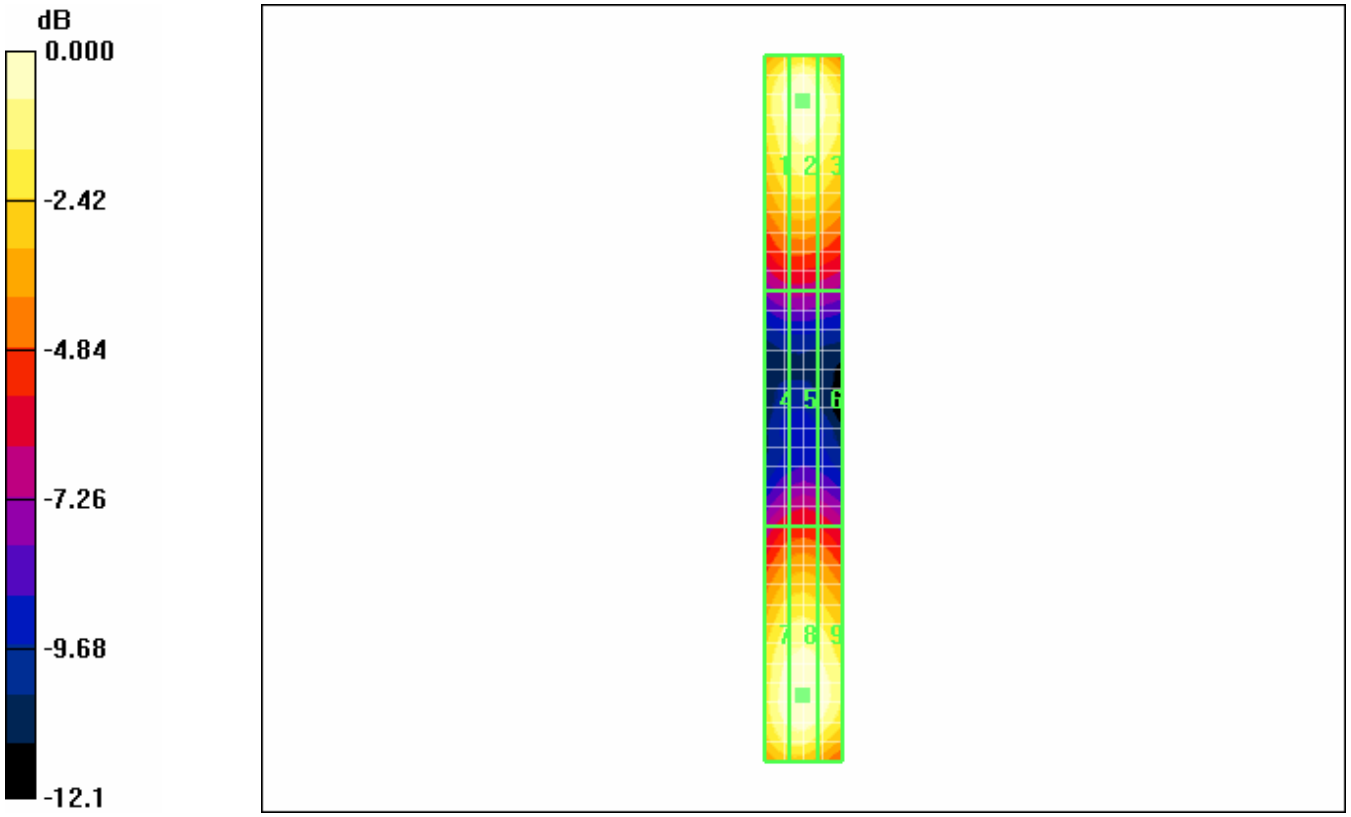
Device Reference Point: 0.000, 0.000, 353.7 mm

Reference Value = 41.3 V/m; Power Drift = -0.106 dB

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

Peak E-field in V/m

Grid 1 **53.0** **M4**	Grid 2 **54.4** **M4**	Grid 3 **53.0** **M4**
Grid 4 **29.2** **M4**	Grid 5 **29.4** **M4**	Grid 6 **28.9** **M4**
Grid 7 **54.7** **M4**	Grid 8 **55.4** **M4**	Grid 9 **54.3** **M4**



0 dB = 55.4V/m

Date/Time: 26/08/2008 10:11:51 AM

Test Laboratory: RTS

File Name: HAC_E_Dipole_CW1880_20.00dBm.da4

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

Program Name: HAC RF E Dipole

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

Medium parameters used: s = 0 mho/m, e_r = 1; density = 1000 kg/m^3

Phantom section: E Device Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2285; ConvF(1, 1, 1); Calibrated: 07/03/2008
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 05/03/2008
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

E Scan - measurement distance from the probe sensor center to CD1880 Dipole = 10mm/Hearing Aid Compatibility Test (5x19x1): Measurement grid: dx=5mm, dy=5mm

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, 353.7 mm

Reference Value = 118.5 V/m; Power Drift = 0.009 dB

Maximum value of Total (measured) = 117.7 V/m

E Scan - measurement distance from the probe sensor center to

CD1880 Dipole = 10mm/Hearing Aid Compatibility Test

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

Maximum value of peak Total field = 120.1 V/m

Probe Modulation Factor = 1.00

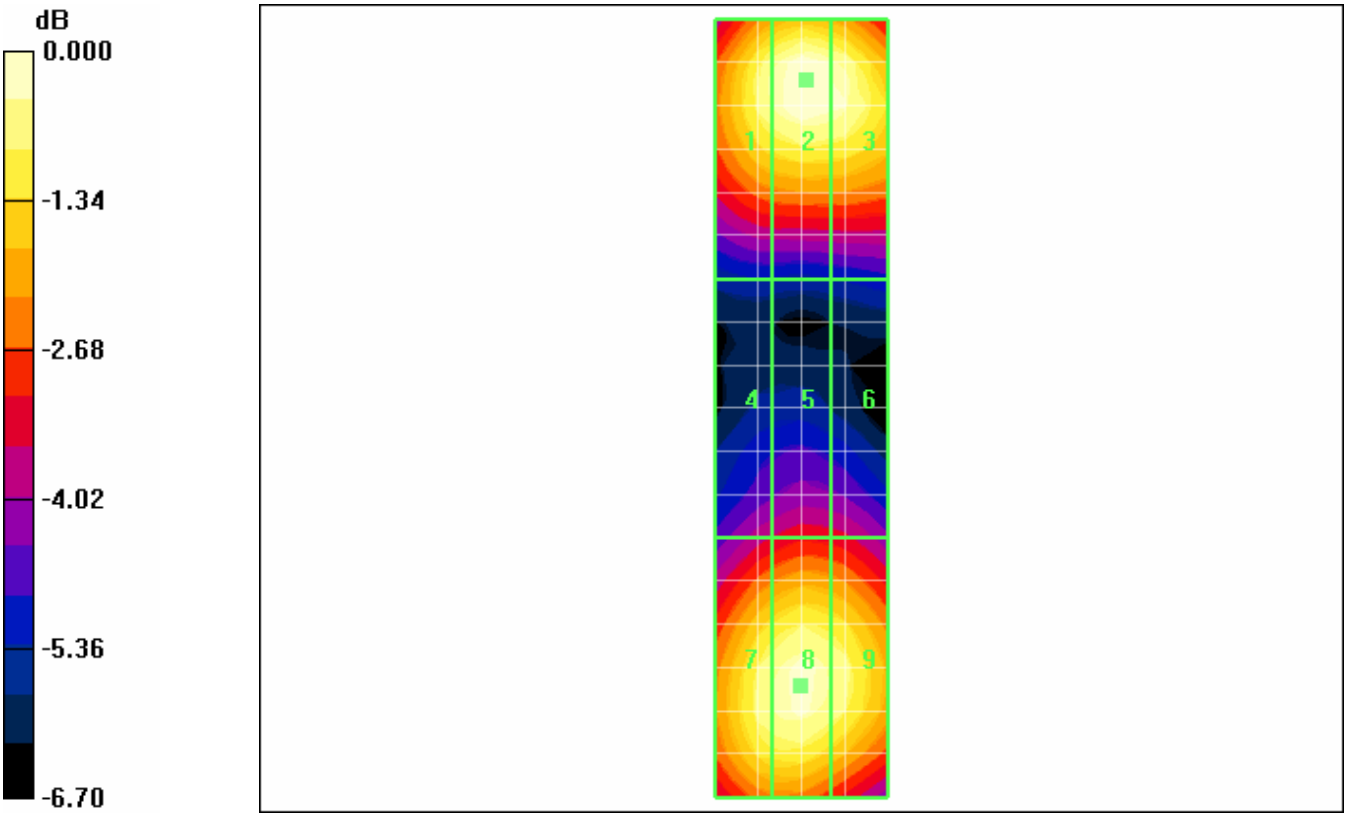
Device Reference Point: 0.000, 0.000, 353.7 mm

Reference Value = 118.5 V/m; Power Drift = 0.009 dB

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

Peak E-field in V/m

Grid 1 **115.1** **M2**	Grid 2 **120.1** **M2**	Grid 3 **118.2** **M2**
Grid 4 **80.1** **M3**	Grid 5 **83.4** **M3**	Grid 6 **82.5** **M3**
Grid 7 **114.0** **M2**	Grid 8 **116.6** **M2**	Grid 9 **113.6** **M2**



0 dB = 120.1V/m

Date/Time: 26/09/2008 12:51:51 PM

Test Laboratory: RTS

File Name: HAC_E_Dipole_CW1880_20.00dBm_26_09_08.da4

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

Program Name: HAC RF E Dipole

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

Medium parameters used: s = 0 mho/m, e_r = 1; density = 1000 kg/m^3

Phantom section: E Device Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2285; ConvF(1, 1, 1); Calibrated: 07/03/2008
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 05/03/2008
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

E Scan - measurement distance from the probe sensor center to CD1880 Dipole = 10mm/Hearing Aid Compatibility Test (5x19x1): Measurement grid: dx=5mm, dy=5mm

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, 353.7 mm

Reference Value = 123.4 V/m; Power Drift = 0.006 dB

Maximum value of Total (measured) = 123.6 V/m

E Scan - measurement distance from the probe sensor center to

CD1880 Dipole = 10mm/Hearing Aid Compatibility Test

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

Maximum value of peak Total field = 125.9 V/m

Probe Modulation Factor = 1.00

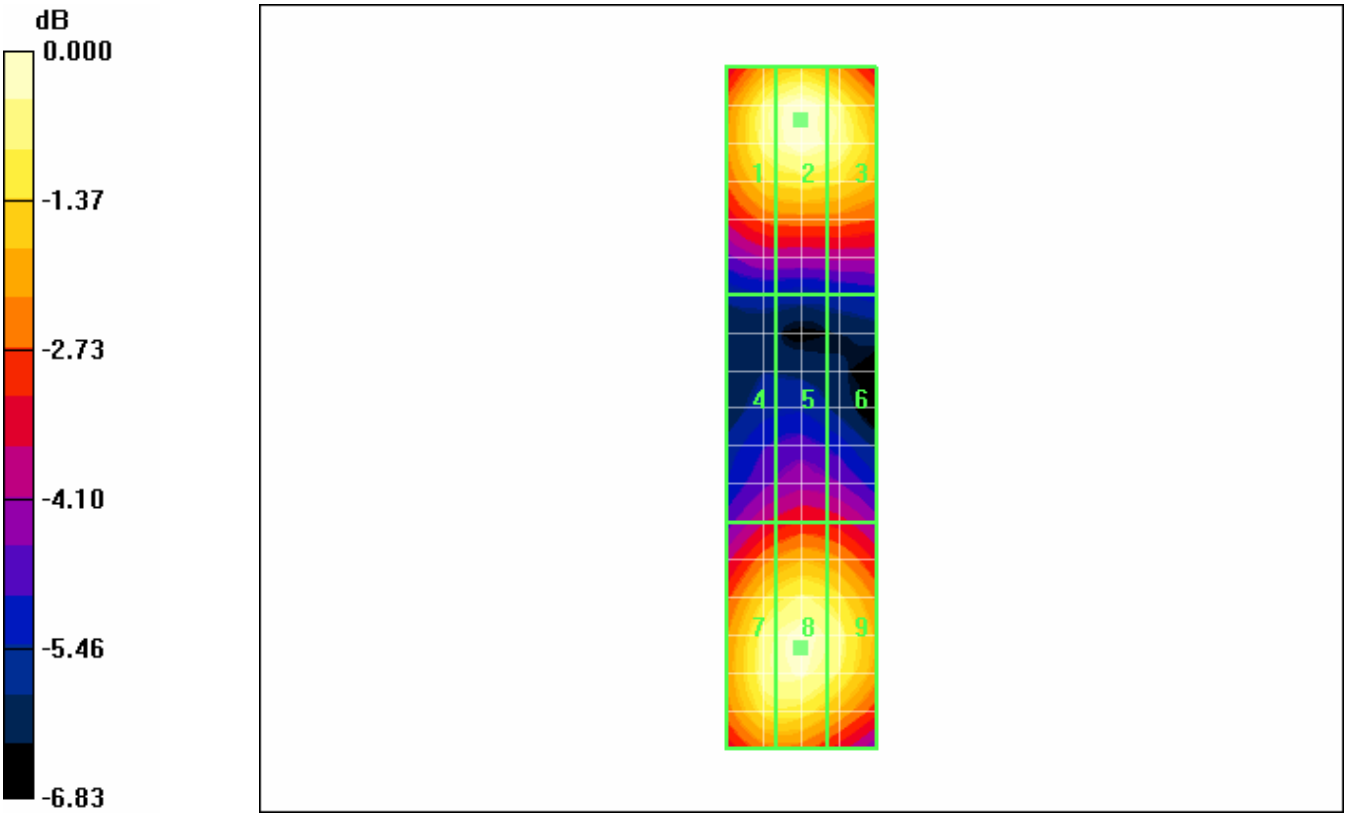
Device Reference Point: 0.000, 0.000, 353.7 mm

Reference Value = 123.4 V/m; Power Drift = 0.006 dB

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

Peak E-field in V/m

Grid 1 **122.2** **M2**	Grid 2 **125.9** **M2**	Grid 3 **122.0** **M2**
Grid 4 **84.7** **M3**	Grid 5 **88.0** **M3**	Grid 6 **86.7** **M3**
Grid 7 **120.5** **M2**	Grid 8 **122.4** **M2**	Grid 9 **119.0** **M2**



0 dB = 125.9V/m

Date/Time: 26/09/2008 12:58:06 PM

Test Laboratory: RTS

File Name: HAC_E_Dipole_CW1880_PMF_GSM.da4

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

Program Name: HAC RF E Dipole

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

Medium parameters used: s = 0 mho/m, e_r = 1; density = 1000 kg/m^3

Phantom section: E Device Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2285; ConvF(1, 1, 1); Calibrated: 07/03/2008
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 05/03/2008
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

E Scan - measurement distance from the probe sensor center to CD1880 Dipole = 10mm/Hearing Aid Compatibility Test (5x19x1): Measurement grid: dx=5mm, dy=5mm

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, 353.7 mm

Reference Value = 89.5 V/m; Power Drift = 0.001 dB

Maximum value of Total (measured) = 89.7 V/m

E Scan - measurement distance from the probe sensor center to

CD1880 Dipole = 10mm/Hearing Aid Compatibility Test

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

Maximum value of peak Total field = 91.3 V/m

Probe Modulation Factor = 1.00

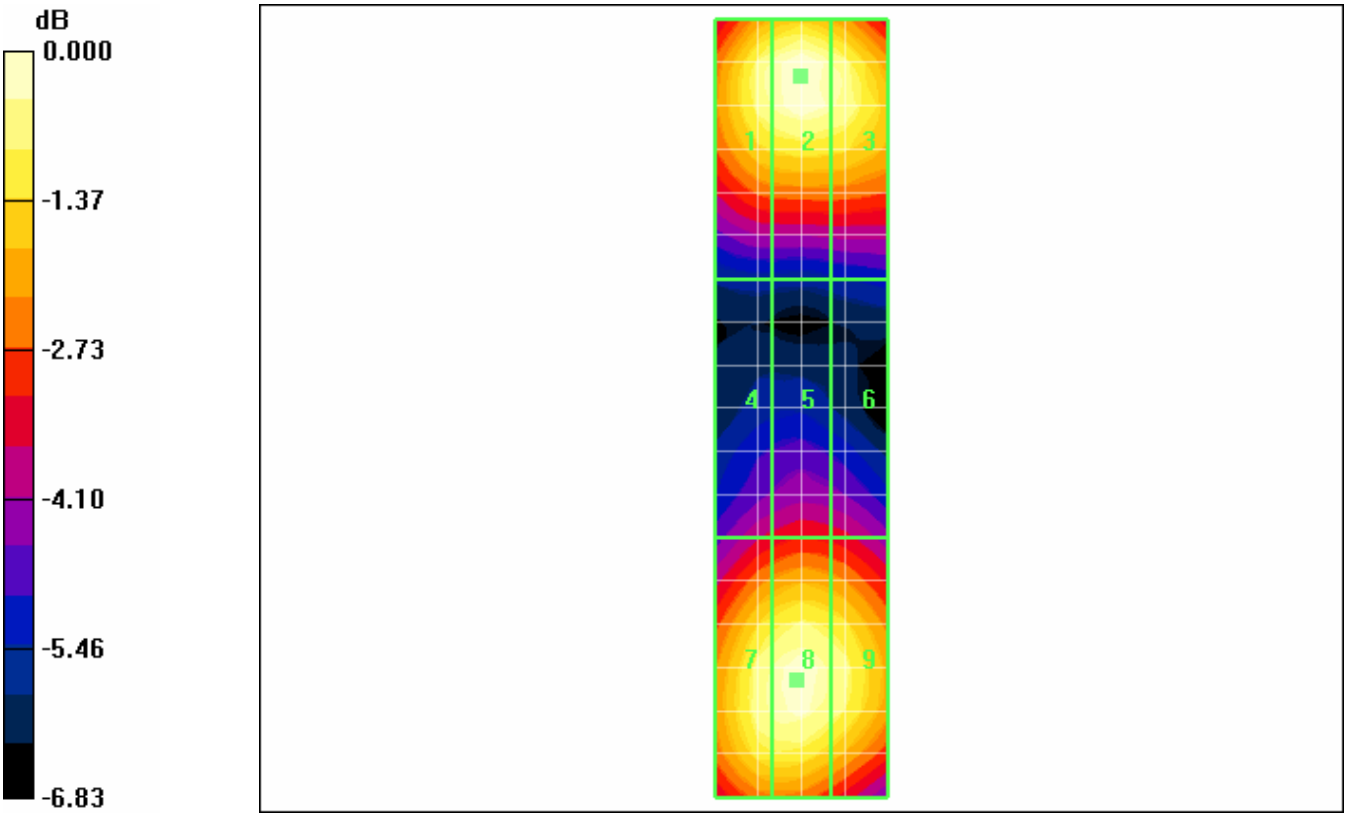
Device Reference Point: 0.000, 0.000, 353.7 mm

Reference Value = 89.5 V/m; Power Drift = 0.001 dB

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

Peak E-field in V/m

Grid 1 **88.4** **M3**	Grid 2 **91.3** **M3**	Grid 3 **88.5** **M3**
Grid 4 **61.5** **M4**	Grid 5 **63.7** **M3**	Grid 6 **62.7** **M4**
Grid 7 **87.4** **M3**	Grid 8 **88.9** **M3**	Grid 9 **86.1** **M3**



0 dB = 91.3V/m

Date/Time: 26/09/2008 1:12:00 PM

Test Laboratory: RTS

File Name: HAC_E_Dipole_AM_1880_PMF_GSM.da4

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

Program Name: HAC RF E Dipole

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

Medium parameters used: s = 0 mho/m, e_r = 1; density = 1000 kg/m^3

Phantom section: E Device Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2285; ConvF(1, 1, 1); Calibrated: 07/03/2008
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 05/03/2008
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

E Scan - measurement distance from the probe sensor center to CD1880 Dipole = 10mm/Hearing Aid Compatibility Test (5x19x1): Measurement grid: dx=5mm, dy=5mm

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, 353.7 mm

Reference Value = 56.2 V/m; Power Drift = 0.021 dB

Maximum value of Total (measured) = 56.5 V/m

E Scan - measurement distance from the probe sensor center to

CD1880 Dipole = 10mm/Hearing Aid Compatibility Test

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

Maximum value of peak Total field = 57.5 V/m

Probe Modulation Factor = 1.00

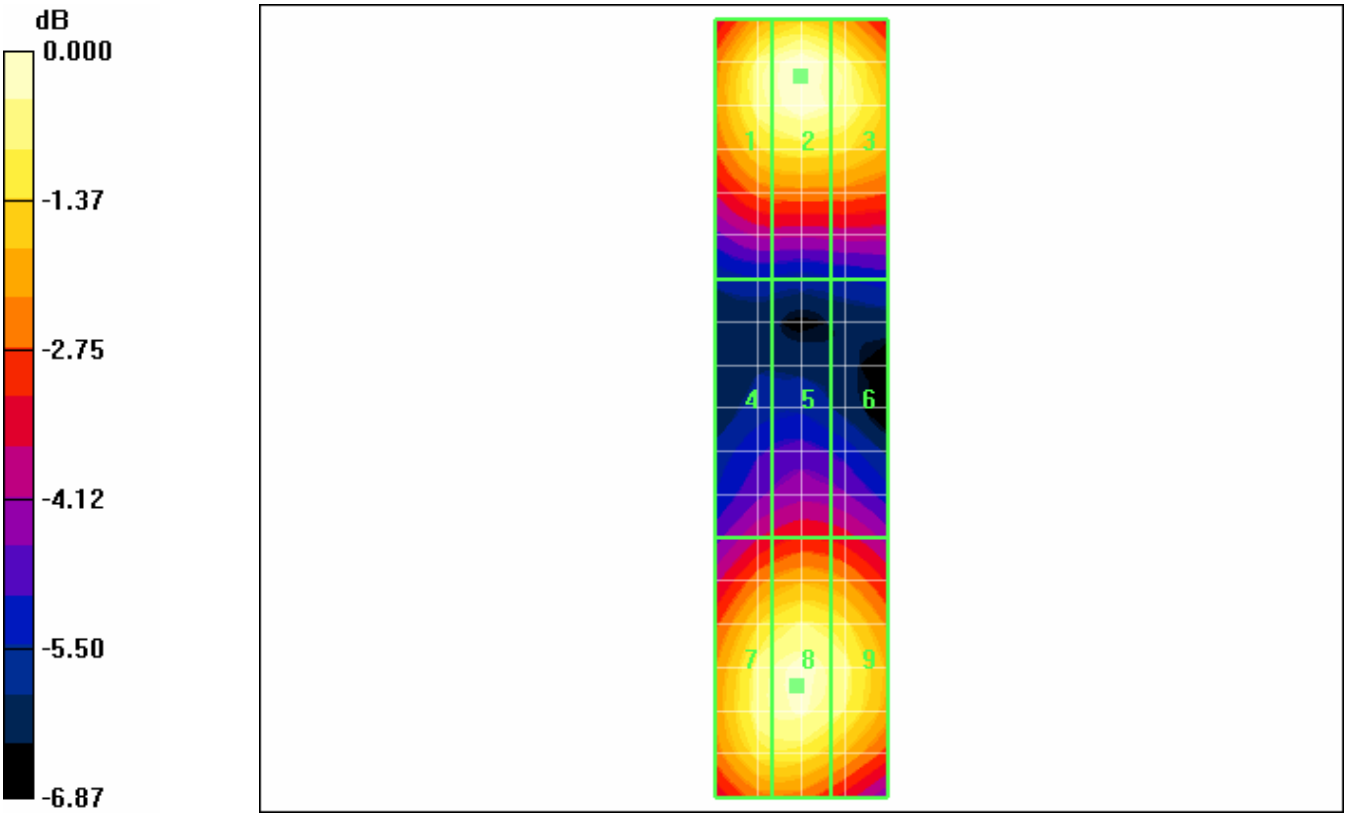
Device Reference Point: 0.000, 0.000, 353.7 mm

Reference Value = 56.2 V/m; Power Drift = 0.021 dB

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

Peak E-field in V/m

Grid 1 **55.9** **M4**	Grid 2 **57.5** **M4**	Grid 3 **55.8** **M4**
Grid 4 **38.8** **M4**	Grid 5 **40.2** **M4**	Grid 6 **39.6** **M4**
Grid 7 **54.9** **M4**	Grid 8 **55.8** **M4**	Grid 9 **54.2** **M4**



0 dB = 57.5V/m

Date/Time: 26/09/2008 1:48:32 PM

Test Laboratory: RTS

File Name: HAC_E_Dipole_GSM1880.da4

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

Program Name: HAC RF E Dipole

Communication System: GSM 1900; Frequency: 1880 MHz;Duty Cycle: 1:8.3

Medium parameters used: s = 0 mho/m, e_r = 1; density = 1000 kg/m^3

Phantom section: E Device Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2285; ConvF(1, 1, 1); Calibrated: 07/03/2008
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 05/03/2008
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

E Scan - measurement distance from the probe sensor center to CD1880 Dipole = 10mm/Hearing Aid Compatibility Test (5x19x1): Measurement grid: dx=5mm, dy=5mm

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, 353.7 mm

Reference Value = 32.4 V/m; Power Drift = -0.087 dB

Maximum value of Total (measured) = 31.5 V/m

E Scan - measurement distance from the probe sensor center to

CD1880 Dipole = 10mm/Hearing Aid Compatibility Test

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

Maximum value of peak Total field = 31.7 V/m

Probe Modulation Factor = 1.00

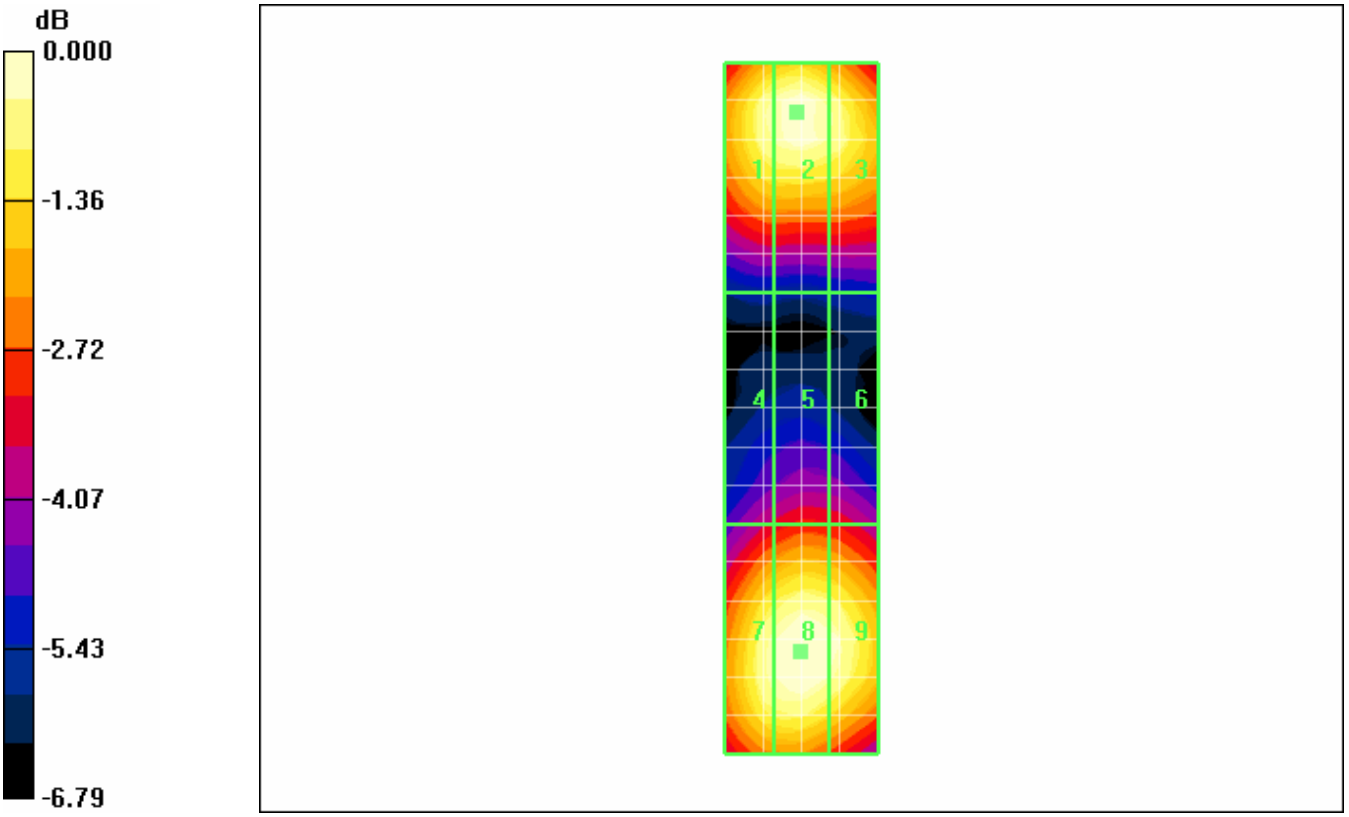
Device Reference Point: 0.000, 0.000, 353.7 mm

Reference Value = 32.4 V/m; Power Drift = -0.087 dB

Hearing Aid Near-Field Category: M4 (AWF -5 dB)

Peak E-field in V/m

Grid 1 **30.8** **M4**	Grid 2 **31.6** **M4**	Grid 3 **30.4** **M4**
Grid 4 **21.4** **M4**	Grid 5 **22.5** **M4**	Grid 6 **22.2** **M4**
Grid 7 **30.8** **M4**	Grid 8 **31.7** **M4**	Grid 9 **31.0** **M4**



0 dB = 31.7V/m

Date/Time: 26/09/2008 1:03:21 PM

Test Laboratory: RTS

File Name: HAC_E_Dipole_CW1880_PMF_CDMA.da4

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

Program Name: HAC RF E Dipole

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

Medium parameters used: s = 0 mho/m, e_r = 1; density = 1000 kg/m^3

Phantom section: E Device Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2285; ConvF(1, 1, 1); Calibrated: 07/03/2008
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 05/03/2008
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

E Scan - measurement distance from the probe sensor center to CD1880 Dipole = 10mm/Hearing Aid Compatibility Test (5x19x1): Measurement grid: dx=5mm, dy=5mm

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, 353.7 mm

Reference Value = 36.7 V/m; Power Drift = 0.040 dB

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

E Scan - measurement distance from the probe sensor center to

CD1880 Dipole = 10mm/Hearing Aid Compatibility Test

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

Maximum value of peak Total field = 37.4 V/m

Probe Modulation Factor = 1.00

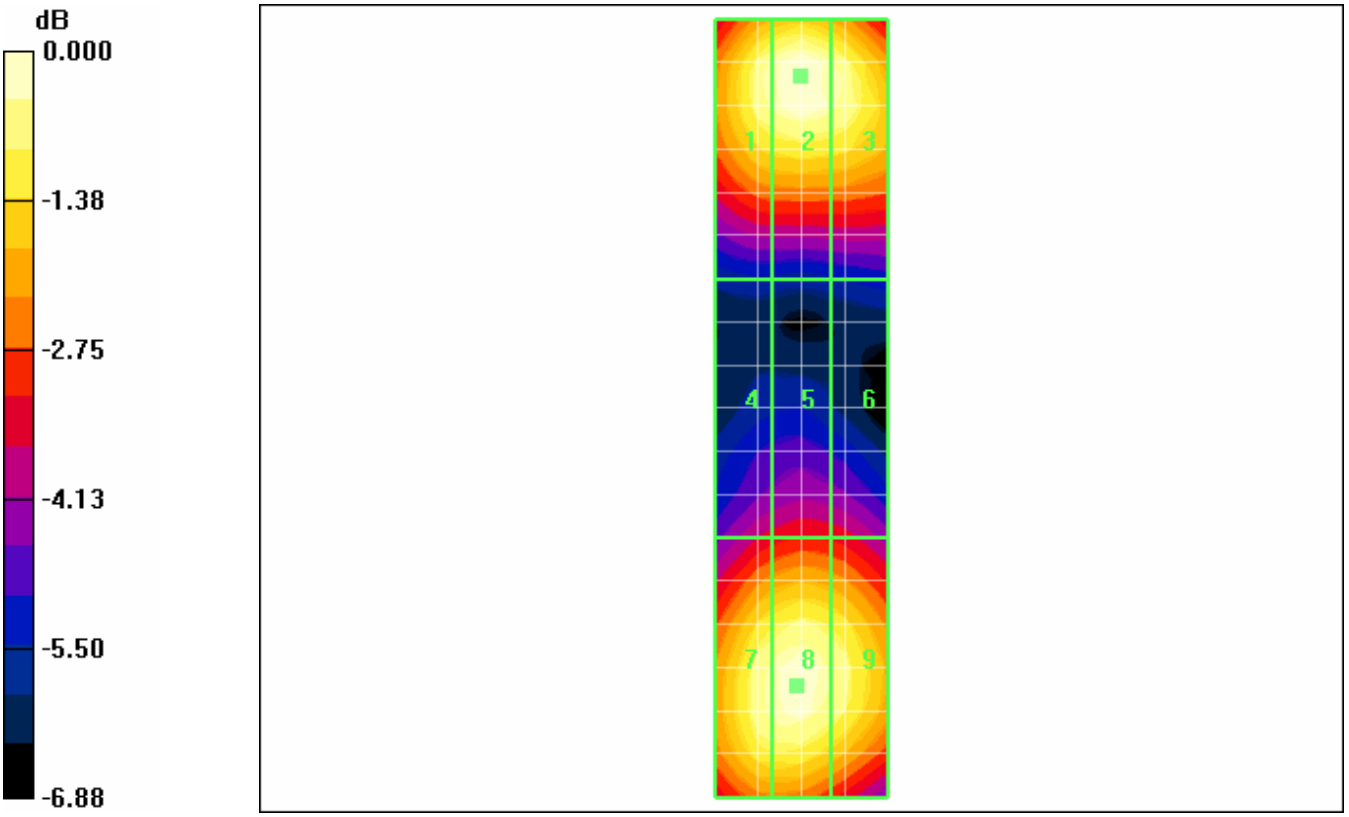
Device Reference Point: 0.000, 0.000, 353.7 mm

Reference Value = 36.7 V/m; Power Drift = 0.040 dB

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

Peak E-field in V/m

Grid 1 **36.3** **M4**	Grid 2 **37.4** **M4**	Grid 3 **36.3** **M4**
Grid 4 **25.3** **M4**	Grid 5 **26.2** **M4**	Grid 6 **25.8** **M4**
Grid 7 **36.0** **M4**	Grid 8 **36.5** **M4**	Grid 9 **35.3** **M4**



0 dB = 37.4V/m

Date/Time: 26/09/2008 1:07:53 PM

Test Laboratory: RTS

File Name: HAC_E_Dipole_AM_1880_PMF_CDMA.da4

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

Program Name: HAC RF E Dipole

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

Medium parameters used: s = 0 mho/m, e_r = 1; density = 1000 kg/m^3

Phantom section: E Device Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2285; ConvF(1, 1, 1); Calibrated: 07/03/2008
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 05/03/2008
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

E Scan - measurement distance from the probe sensor center to CD1880 Dipole = 10mm/Hearing Aid Compatibility Test (5x19x1): Measurement grid: dx=5mm, dy=5mm

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, 353.7 mm

Reference Value = 23.5 V/m; Power Drift = -0.003 dB

Maximum value of Total (measured) = 23.6 V/m

E Scan - measurement distance from the probe sensor center to

CD1880 Dipole = 10mm/Hearing Aid Compatibility Test

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

Maximum value of peak Total field = 24.0 V/m

Probe Modulation Factor = 1.00

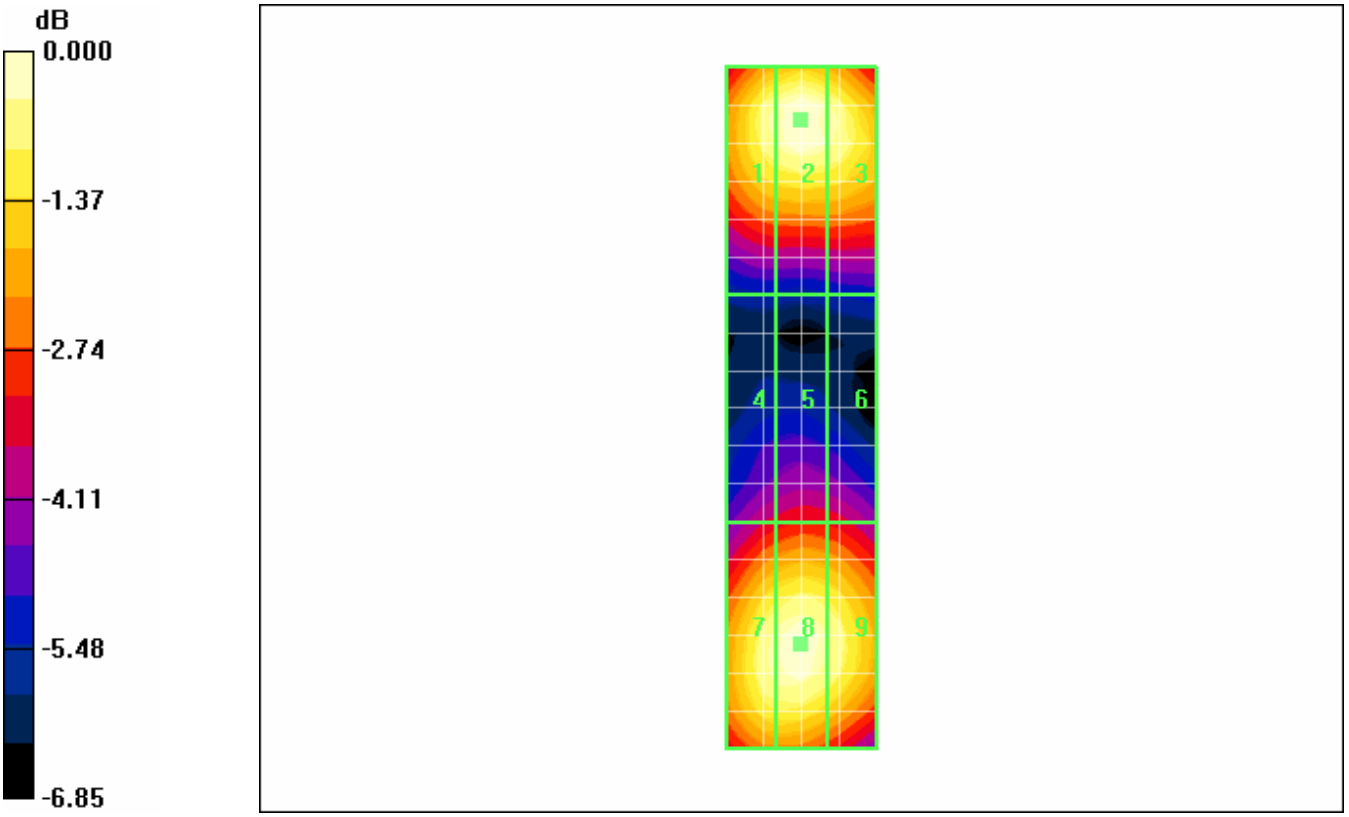
Device Reference Point: 0.000, 0.000, 353.7 mm

Reference Value = 23.5 V/m; Power Drift = -0.003 dB

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

Peak E-field in V/m

Grid 1 **23.2** **M4**	Grid 2 **24.0** **M4**	Grid 3 **23.3** **M4**
Grid 4 **16.2** **M4**	Grid 5 **16.8** **M4**	Grid 6 **16.5** **M4**
Grid 7 **23.1** **M4**	Grid 8 **23.5** **M4**	Grid 9 **22.8** **M4**



0 dB = 24.0V/m

Date/Time: 26/09/2008 1:56:46 PM

Test Laboratory: RTS

File Name: HAC_E_Dipole_CDMA1880.da4

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

Program Name: HAC RF E Dipole

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

Medium parameters used: s = 0 mho/m, e_r = 1; density = 1000 kg/m^3

Phantom section: E Device Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2285; ConvF(1, 1, 1); Calibrated: 07/03/2008
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 05/03/2008
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

E Scan - measurement distance from the probe sensor center to CD1880 Dipole = 10mm/Hearing Aid Compatibility Test (5x19x1): Measurement grid: dx=5mm, dy=5mm

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, 353.7 mm

Reference Value = 43.7 V/m; Power Drift = -0.133 dB

Maximum value of Total (measured) = 42.5 V/m

E Scan - measurement distance from the probe sensor center to

CD1880 Dipole = 10mm/Hearing Aid Compatibility Test

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

Maximum value of peak Total field = 43.0 V/m

Probe Modulation Factor = 1.00

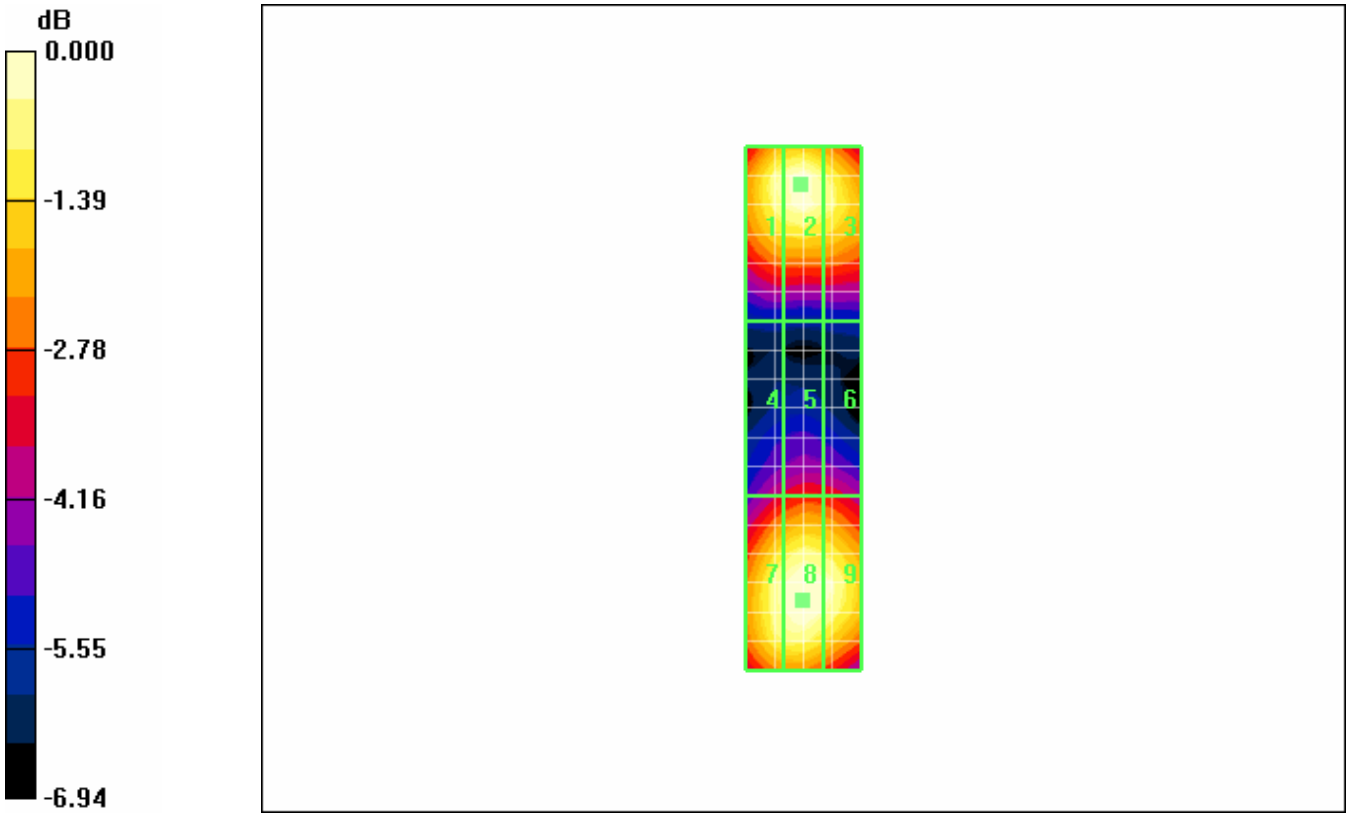
Device Reference Point: 0.000, 0.000, 353.7 mm

Reference Value = 43.7 V/m; Power Drift = -0.133 dB

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

Peak E-field in V/m

Grid 1 **41.9** **M4**	Grid 2 **43.0** **M4**	Grid 3 **40.8** **M4**
Grid 4 **28.8** **M4**	Grid 5 **30.3** **M4**	Grid 6 **29.9** **M4**
Grid 7 **41.6** **M4**	Grid 8 **42.8** **M4**	Grid 9 **42.0** **M4**



0 dB = 43.0V/m

Date/Time: 26/08/2008 10:46:01 AM

Test Laboratory: RTS

File Name: HAC_H_Dipole_CW835_20.00dBm.da4

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

Program Name: HAC RF H3DV6 Dipole

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

Medium parameters used: s = 0 mho/m, e_r = 1; density = 1 kg/m^3

Phantom section: E Device Section

DASY4 Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 09/11/2007
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 05/03/2008
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

H Scan - measurement distance from the probe sensor center to CD835 Dipole = 10mm/Hearing Aid Compatibility Test (5x37x1):

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

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, 353.7 mm

Reference Value = 0.444 A/m; Power Drift = 0.063 dB

Maximum value of Total (measured) = 0.428 A/m

H Scan - measurement distance from the probe sensor center to

CD835 Dipole = 10mm/Hearing Aid Compatibility Test

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

Maximum value of peak Total field = 0.428 A/m

Probe Modulation Factor = 1.00

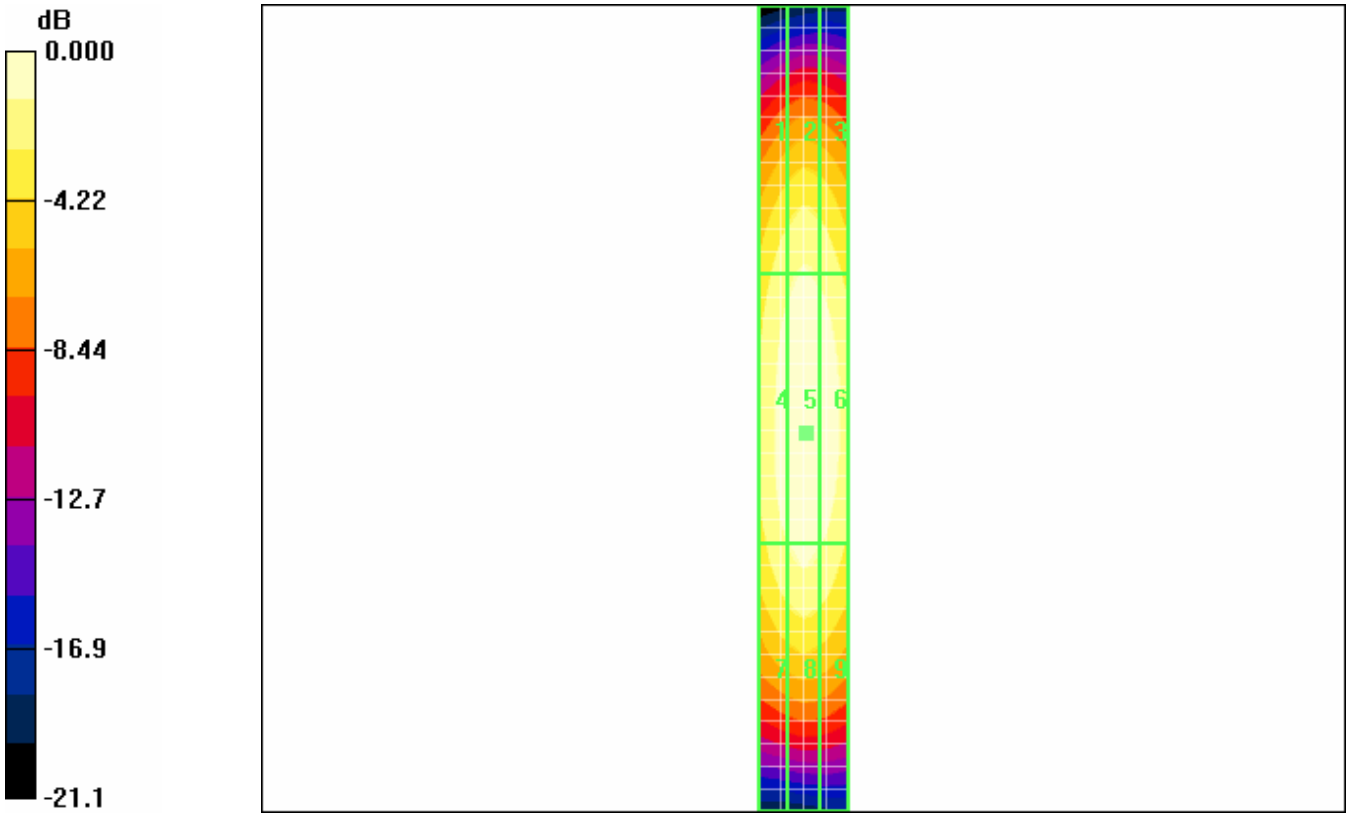
Device Reference Point: 0.000, 0.000, 353.7 mm

Reference Value = 0.444 A/m; Power Drift = 0.063 dB

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

Peak H-field in A/m

Grid 1 **0.352** **M4**	Grid 2 **0.372** **M4**	Grid 3 **0.360** **M4**
Grid 4 **0.401** **M4**	Grid 5 **0.428** **M4**	Grid 6 **0.417** **M4**
Grid 7 **0.367** **M4**	Grid 8 **0.387** **M4**	Grid 9 **0.372** **M4**



0 dB = 0.428A/m

Date/Time: 26/09/2008 4:28:20 PM

Test Laboratory: RTS

File Name: HAC_H_Dipole_CW835_20dBm_09_26_08.da4

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

Program Name: HAC RF H3DV6 Dipole

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

Medium parameters used: s = 0 mho/m, e_r = 1; density = 1 kg/m^3

Phantom section: E Device Section

DASY4 Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 09/11/2007
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 05/03/2008
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

H Scan - measurement distance from the probe sensor center to CD835 Dipole = 10mm/Hearing Aid Compatibility Test (5x37x1):

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

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, 353.7 mm

Reference Value = 0.446 A/m; Power Drift = 0.070 dB

Maximum value of Total (measured) = 0.425 A/m

H Scan - measurement distance from the probe sensor center to

CD835 Dipole = 10mm/Hearing Aid Compatibility Test

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

Maximum value of peak Total field = 0.427 A/m

Probe Modulation Factor = 1.00

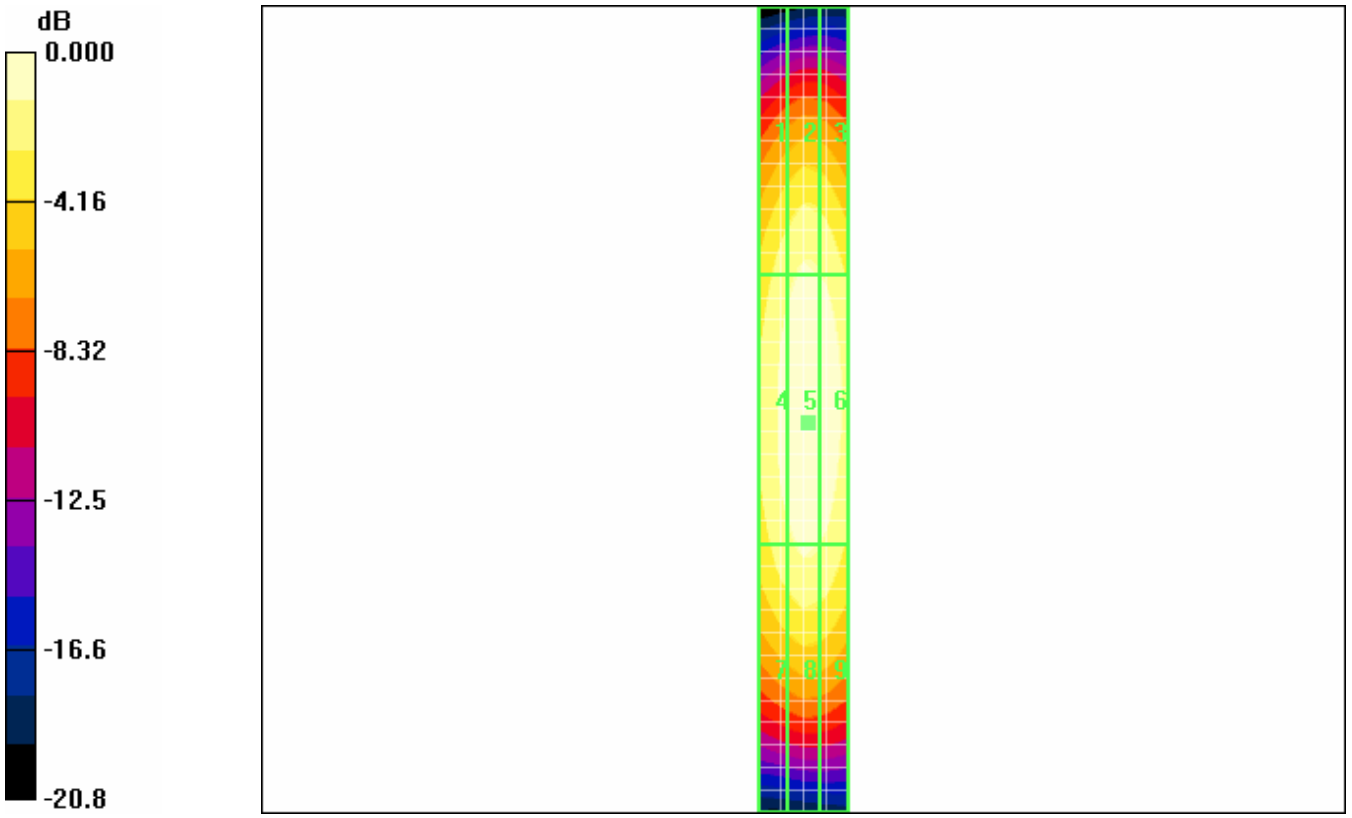
Device Reference Point: 0.000, 0.000, 353.7 mm

Reference Value = 0.446 A/m; Power Drift = 0.070 dB

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

Peak H-field in A/m

Grid 1 **0.351** **M4**	Grid 2 **0.376** **M4**	Grid 3 **0.369** **M4**
Grid 4 **0.393** **M4**	Grid 5 **0.427** **M4**	Grid 6 **0.418** **M4**
Grid 7 **0.351** **M4**	Grid 8 **0.377** **M4**	Grid 9 **0.367** **M4**



0 dB = 0.427A/m

Date/Time: 26/09/2008 3:58:11 PM

Test Laboratory: RTS

File Name: HAC_H_Dipole_CW835_PMF_GSM.da4

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

Program Name: HAC RF H3DV6 Dipole

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

Medium parameters used: s = 0 mho/m, e_r = 1; density = 1 kg/m^3

Phantom section: E Device Section

DASY4 Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 09/11/2007
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 05/03/2008
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

H Scan - measurement distance from the probe sensor center to CD835 Dipole = 10mm/Hearing Aid Compatibility Test (5x37x1):

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

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, 353.7 mm

Reference Value = 0.472 A/m; Power Drift = 0.082 dB

Maximum value of Total (measured) = 0.445 A/m

H Scan - measurement distance from the probe sensor center to

CD835 Dipole = 10mm/Hearing Aid Compatibility Test

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

Maximum value of peak Total field = 0.447 A/m

Probe Modulation Factor = 1.00

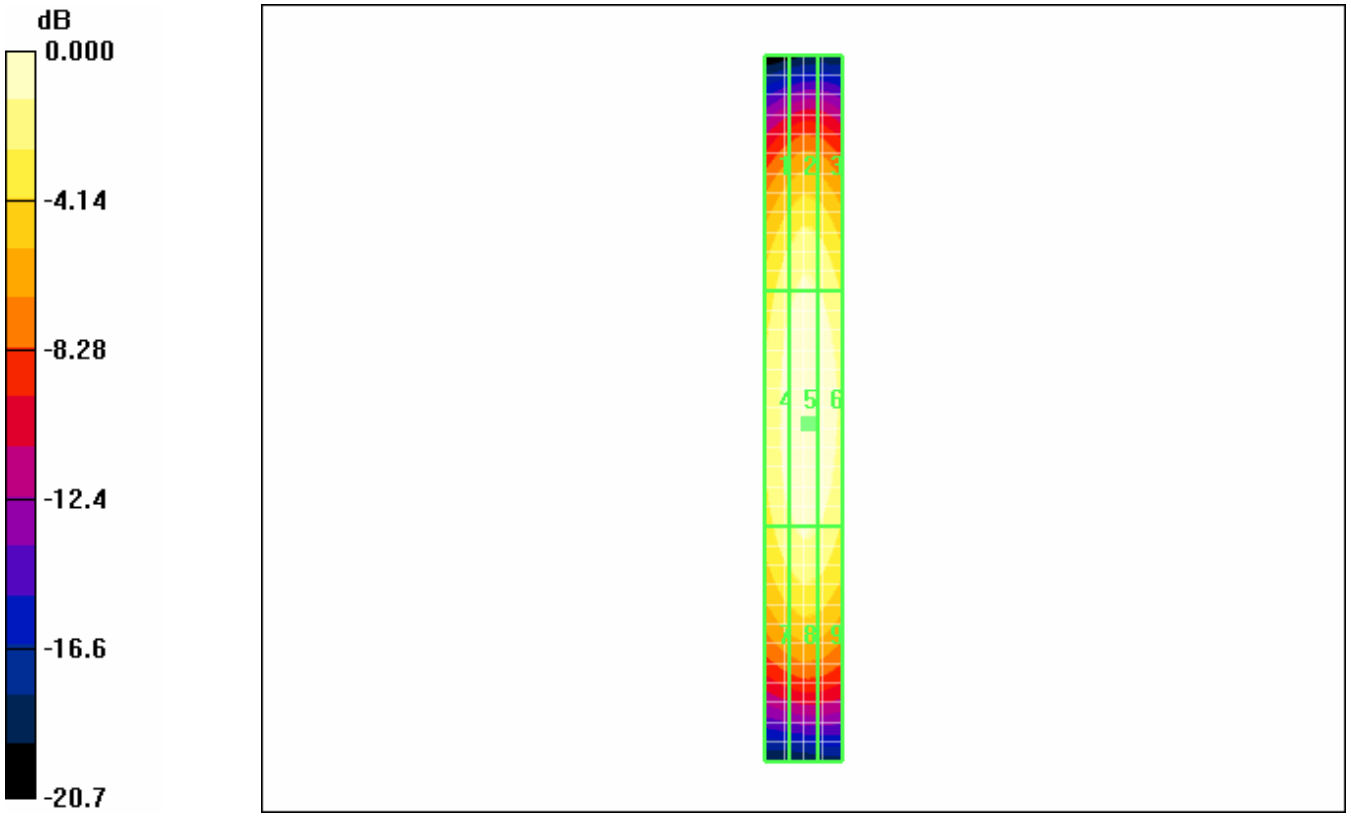
Device Reference Point: 0.000, 0.000, 353.7 mm

Reference Value = 0.472 A/m; Power Drift = 0.082 dB

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

Peak H-field in A/m

Grid 1 **0.370** **M4**	Grid 2 **0.396** **M4**	Grid 3 **0.386** **M4**
Grid 4 **0.413** **M4**	Grid 5 **0.447** **M4**	Grid 6 **0.438** **M4**
Grid 7 **0.373** **M4**	Grid 8 **0.395** **M4**	Grid 9 **0.384** **M4**



0 dB = 0.447A/m

Date/Time: 26/09/2008 4:06:30 PM

Test Laboratory: RTS

File Name: HAC_H_Dipole_AM835_PMF_GSM.da4

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

Program Name: HAC RF H3DV6 Dipole

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

Medium parameters used: s = 0 mho/m, e_r = 1; density = 1 kg/m^3

Phantom section: E Device Section

DASY4 Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 09/11/2007
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 05/03/2008
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

H Scan - measurement distance from the probe sensor center to CD835 Dipole = 10mm/Hearing Aid Compatibility Test (5x37x1):

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

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, 353.7 mm

Reference Value = 0.299 A/m; Power Drift = -0.023 dB

Maximum value of Total (measured) = 0.282 A/m

H Scan - measurement distance from the probe sensor center to

CD835 Dipole = 10mm/Hearing Aid Compatibility Test

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

Maximum value of peak Total field = 0.283 A/m

Probe Modulation Factor = 1.00

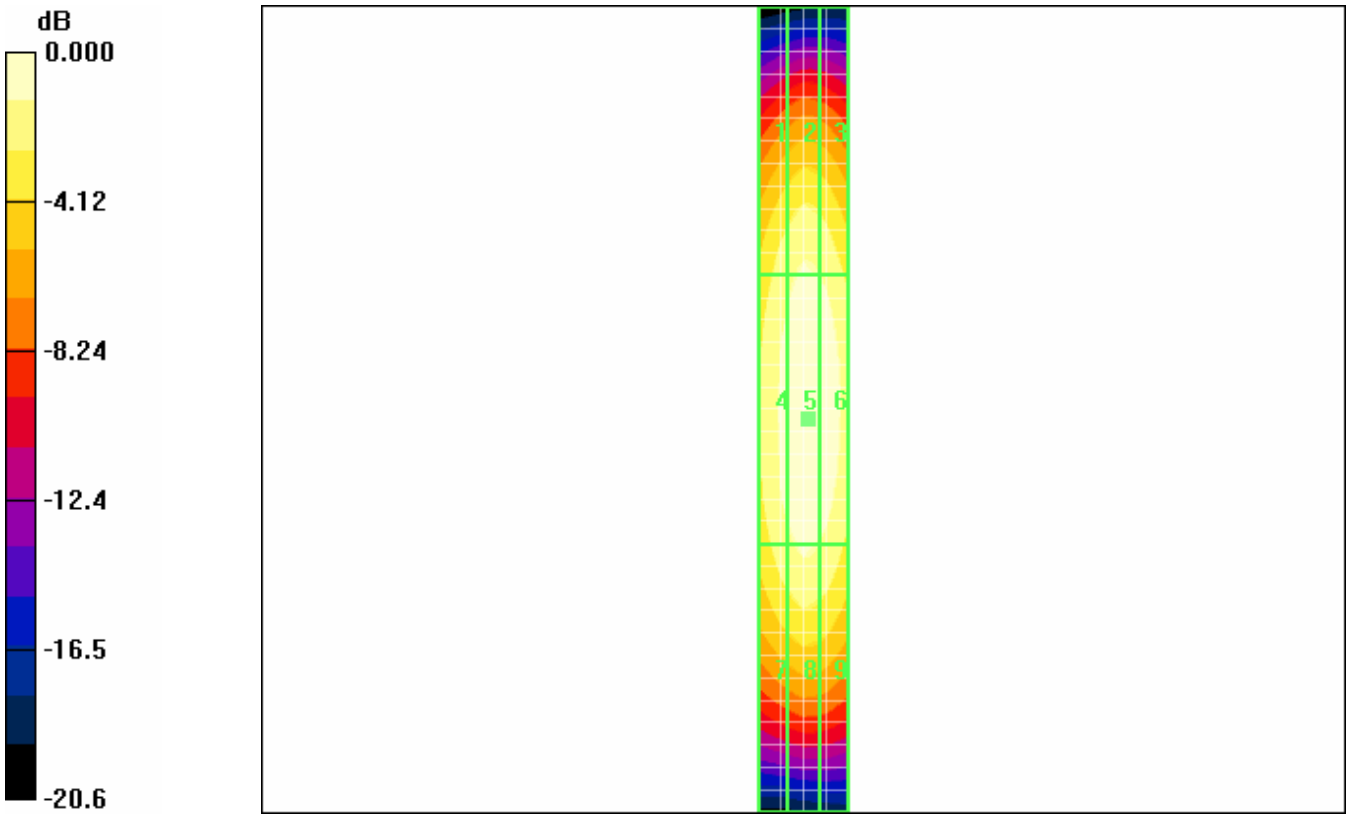
Device Reference Point: 0.000, 0.000, 353.7 mm

Reference Value = 0.299 A/m; Power Drift = -0.023 dB

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

Peak H-field in A/m

Grid 1 **0.232** **M4**	Grid 2 **0.249** **M4**	Grid 3 **0.243** **M4**
Grid 4 **0.259** **M4**	Grid 5 **0.283** **M4**	Grid 6 **0.277** **M4**
Grid 7 **0.234** **M4**	Grid 8 **0.250** **M4**	Grid 9 **0.242** **M4**



0 dB = 0.283A/m

Date/Time: 26/09/2008 3:48:50 PM

Test Laboratory: RTS

File Name: HAC_H_Dipole_GSM835.da4

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

Program Name: HAC RF H3DV6 Dipole

Communication System: GSM 850; Frequency: 835 MHz;Duty Cycle: 1:8.3

Medium parameters used: s = 0 mho/m, e_r = 1; density = 1 kg/m^3

Phantom section: E Device Section

DASY4 Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 09/11/2007
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 05/03/2008
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

H Scan - measurement distance from the probe sensor center to CD835 Dipole = 10mm/Hearing Aid Compatibility Test (5x37x1):

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

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, 353.7 mm

Reference Value = 0.177 A/m; Power Drift = 0.084 dB

Maximum value of Total (measured) = 0.168 A/m

H Scan - measurement distance from the probe sensor center to

CD835 Dipole = 10mm/Hearing Aid Compatibility Test

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

Maximum value of peak Total field = 0.169 A/m

Probe Modulation Factor = 1.00

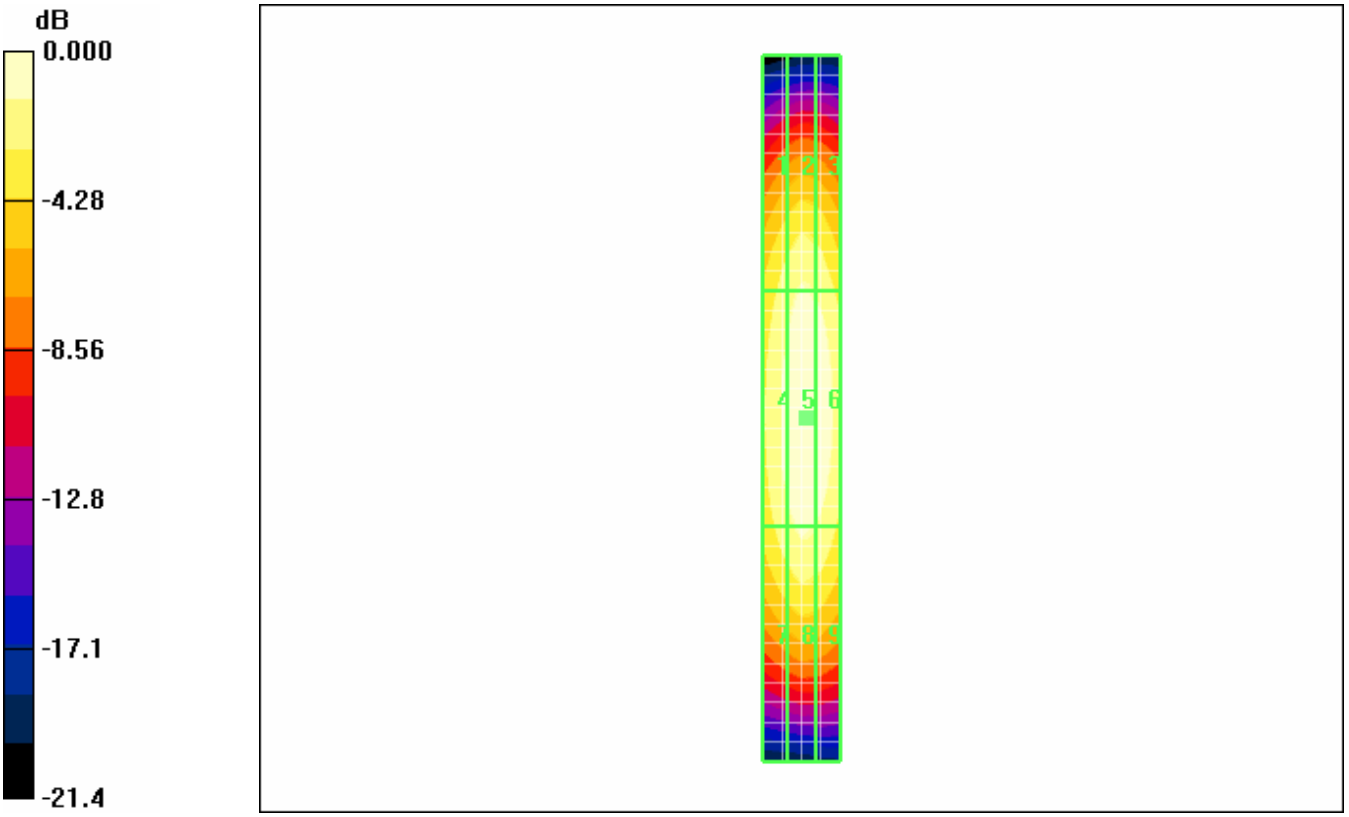
Device Reference Point: 0.000, 0.000, 353.7 mm

Reference Value = 0.177 A/m; Power Drift = 0.084 dB

Hearing Aid Near-Field Category: M4 (AWF -5 dB)

Peak H-field in A/m

Grid 1 **0.135** **M4**	Grid 2 **0.147** **M4**	Grid 3 **0.142** **M4**
Grid 4 **0.153** **M4**	Grid 5 **0.169** **M4**	Grid 6 **0.165** **M4**
Grid 7 **0.137** **M4**	Grid 8 **0.149** **M4**	Grid 9 **0.144** **M4**



0 dB = 0.169A/m

Date/Time: 26/09/2008 4:20:54 PM

Test Laboratory: RTS

File Name: HAC_H_Dipole_CW835_PMF_CDMA.da4

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

Program Name: HAC RF H3DV6 Dipole

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

Medium parameters used: s = 0 mho/m, e_r = 1; density = 1 kg/m^3

Phantom section: E Device Section

DASY4 Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 09/11/2007
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 05/03/2008
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

H Scan - measurement distance from the probe sensor center to CD835 Dipole = 10mm/Hearing Aid Compatibility Test (5x37x1):

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

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, 353.7 mm

Reference Value = 0.156 A/m; Power Drift = -0.007 dB

Maximum value of Total (measured) = 0.147 A/m

H Scan - measurement distance from the probe sensor center to

CD835 Dipole = 10mm/Hearing Aid Compatibility Test

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

Maximum value of peak Total field = 0.148 A/m

Probe Modulation Factor = 1.00

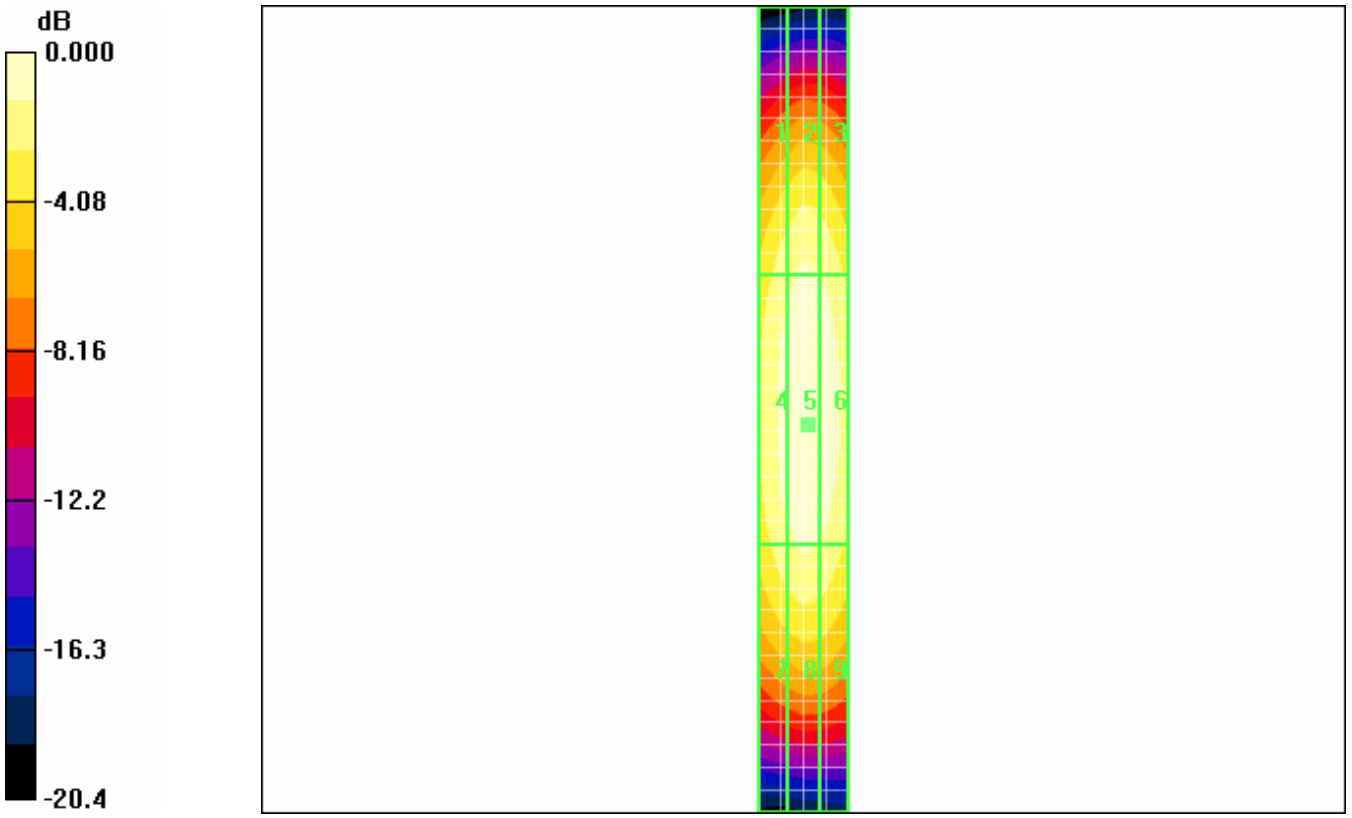
Device Reference Point: 0.000, 0.000, 353.7 mm

Reference Value = 0.156 A/m; Power Drift = -0.007 dB

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

Peak H-field in A/m

Grid 1 **0.122** **M4**	Grid 2 **0.130** **M4**	Grid 3 **0.127** **M4**
Grid 4 **0.136** **M4**	Grid 5 **0.148** **M4**	Grid 6 **0.144** **M4**
Grid 7 **0.122** **M4**	Grid 8 **0.130** **M4**	Grid 9 **0.126** **M4**



0 dB = 0.148A/m

Date/Time: 26/09/2008 4:13:23 PM

Test Laboratory: RTS

File Name: HAC_H_Dipole_AM835_PMF_CDMA.da4

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

Program Name: HAC RF H3DV6 Dipole

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

Medium parameters used: s = 0 mho/m, e_r = 1; density = 1 kg/m^3

Phantom section: E Device Section

DASY4 Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 09/11/2007
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 05/03/2008
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

H Scan - measurement distance from the probe sensor center to CD835 Dipole = 10mm/Hearing Aid Compatibility Test (5x37x1):

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

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, 353.7 mm

Reference Value = 0.099 A/m; Power Drift = -0.045 dB

Maximum value of Total (measured) = 0.093 A/m

H Scan - measurement distance from the probe sensor center to

CD835 Dipole = 10mm/Hearing Aid Compatibility Test

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

Maximum value of peak Total field = 0.094 A/m

Probe Modulation Factor = 1.00

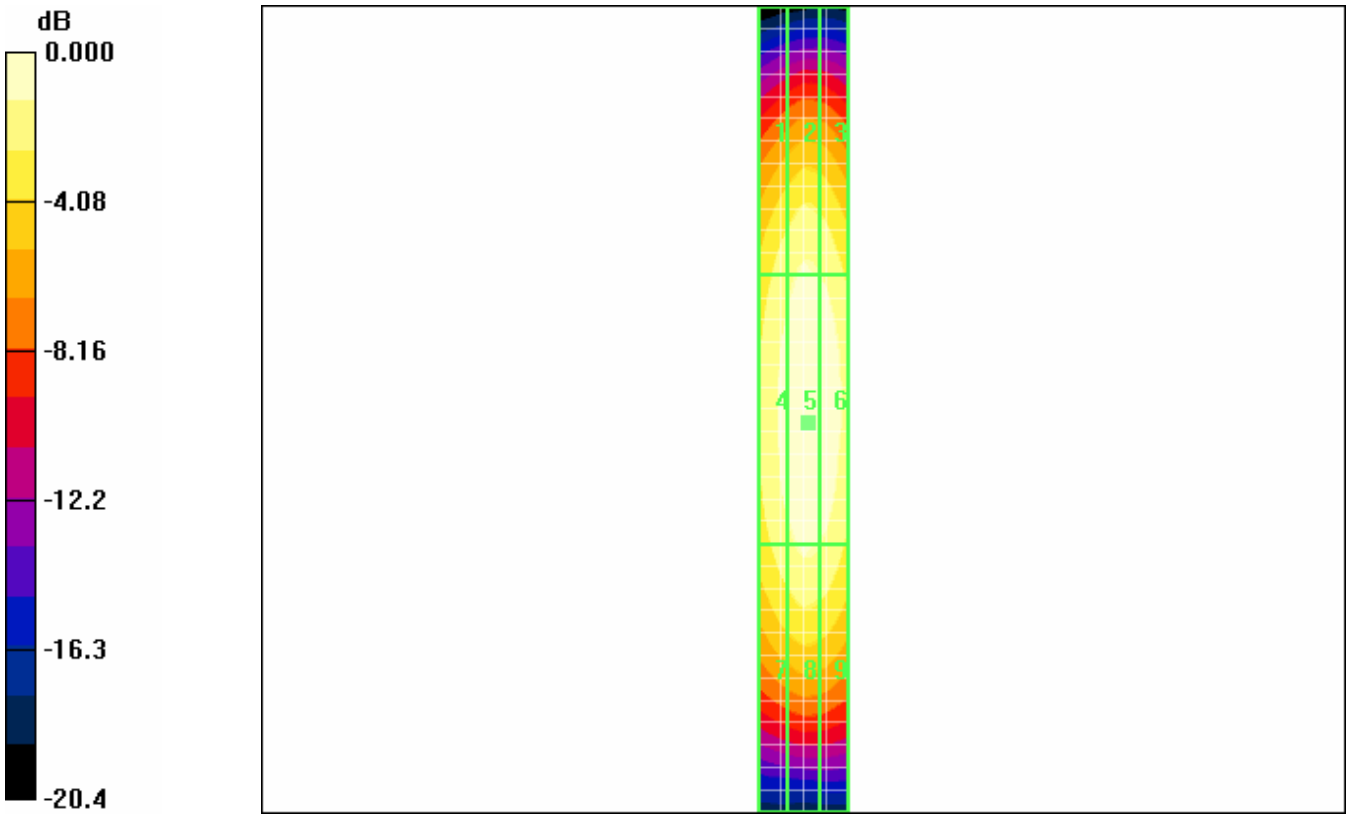
Device Reference Point: 0.000, 0.000, 353.7 mm

Reference Value = 0.099 A/m; Power Drift = -0.045 dB

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

Peak H-field in A/m

Grid 1 **0.078** **M4**	Grid 2 **0.083** **M4**	Grid 3 **0.081** **M4**
Grid 4 **0.086** **M4**	Grid 5 **0.094** **M4**	Grid 6 **0.092** **M4**
Grid 7 **0.078** **M4**	Grid 8 **0.083** **M4**	Grid 9 **0.081** **M4**



0 dB = 0.094A/m

Date/Time: 26/09/2008 3:36:36 PM

Test Laboratory: RTS

File Name: HAC_H_Dipole_CDMA835.da4

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

Program Name: HAC RF H3DV6 Dipole

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

Medium parameters used: s = 0 mho/m, e_r = 1; density = 1 kg/m^3

Phantom section: E Device Section

DASY4 Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 09/11/2007
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 05/03/2008
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

H Scan - measurement distance from the probe sensor center to CD835 Dipole = 10mm/Hearing Aid Compatibility Test (5x37x1):

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

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, 353.7 mm

Reference Value = 0.158 A/m; Power Drift = 0.081 dB

Maximum value of Total (measured) = 0.152 A/m

H Scan - measurement distance from the probe sensor center to

CD835 Dipole = 10mm/Hearing Aid Compatibility Test

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

Maximum value of peak Total field = 0.153 A/m

Probe Modulation Factor = 1.00

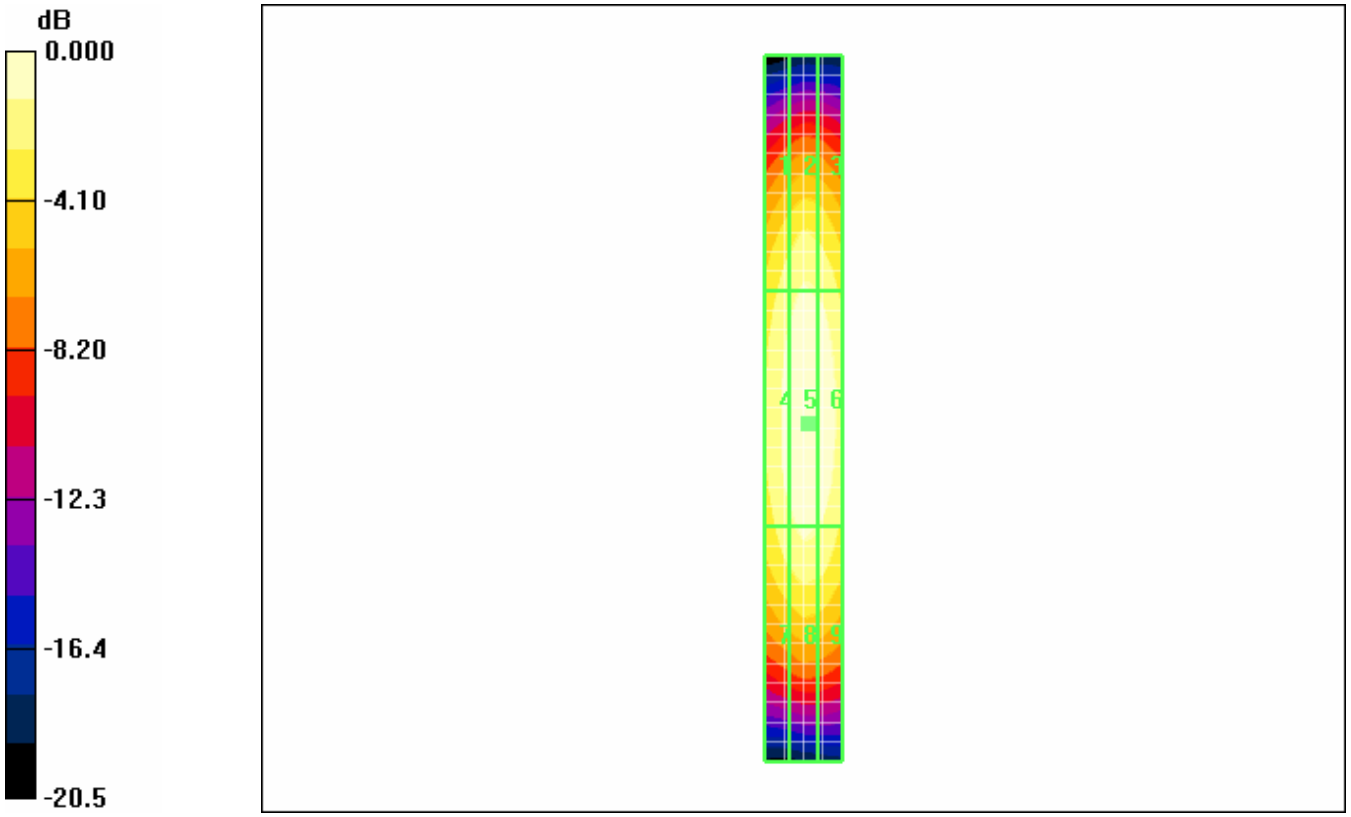
Device Reference Point: 0.000, 0.000, 353.7 mm

Reference Value = 0.158 A/m; Power Drift = 0.081 dB

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

Peak H-field in A/m

Grid 1 **0.124** **M4**	Grid 2 **0.134** **M4**	Grid 3 **0.130** **M4**
Grid 4 **0.140** **M4**	Grid 5 **0.153** **M4**	Grid 6 **0.150** **M4**
Grid 7 **0.127** **M4**	Grid 8 **0.136** **M4**	Grid 9 **0.132** **M4**



0 dB = 0.153A/m

Date/Time: 26/08/2008 11:00:12 AM

Test Laboratory: RTS

File Name: HAC_H_Dipole_CW1880_20.00dBm.da4

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

Program Name: HAC RF H3DV6 Dipole

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

Medium parameters used: s = 0 mho/m, e_r = 1; density = 1 kg/m^3

Phantom section: E Device Section

DASY4 Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 09/11/2007
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 05/03/2008
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

H Scan - measurement distance from the probe sensor center to CD1880 Dipole = 10mm/Hearing Aid Compatibility Test (5x19x1): Measurement grid: dx=5mm, dy=5mm

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, 353.7 mm

Reference Value = 0.447 A/m; Power Drift = -0.012 dB

Maximum value of Total (measured) = 0.423 A/m

H Scan - measurement distance from the probe sensor center to

CD1880 Dipole = 10mm/Hearing Aid Compatibility Test

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

Maximum value of peak Total field = 0.424 A/m

Probe Modulation Factor = 1.00

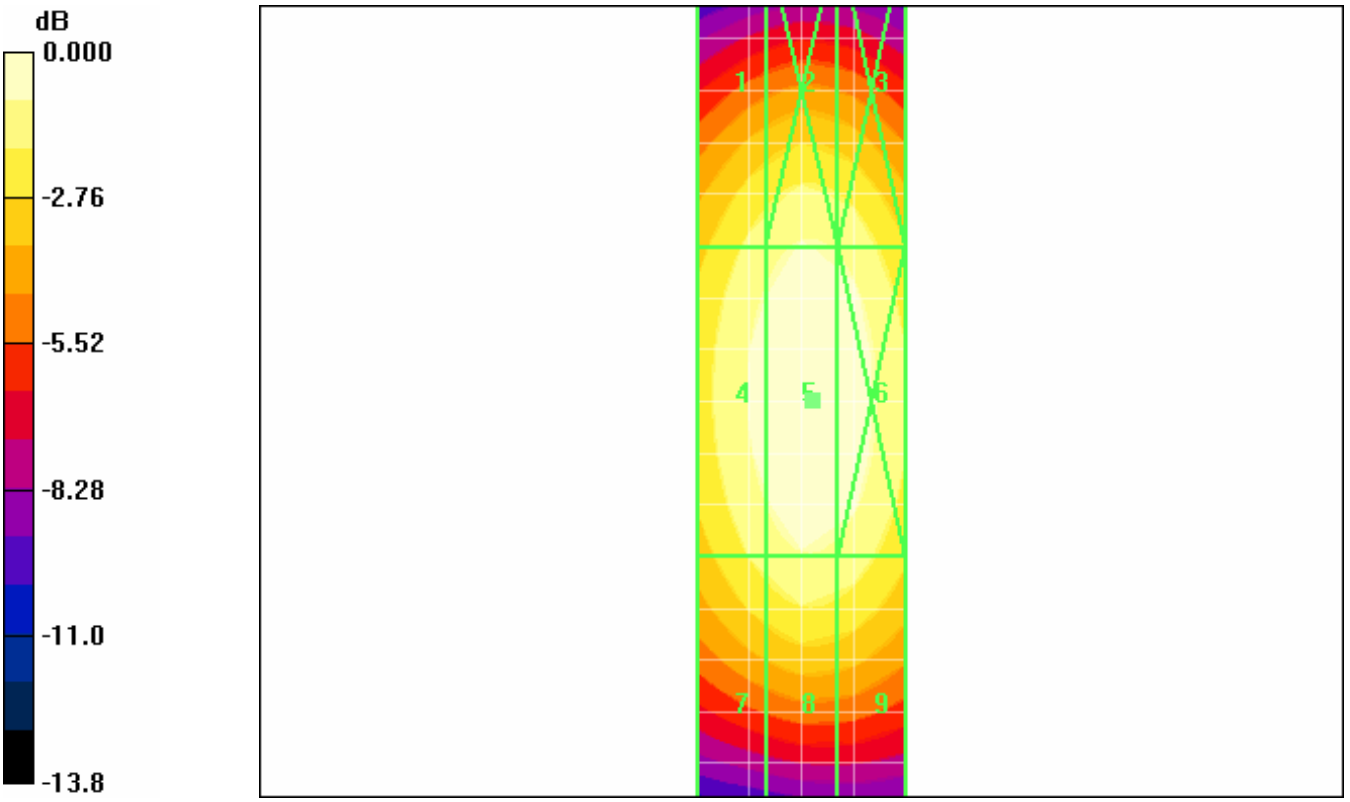
Device Reference Point: 0.000, 0.000, 353.7 mm

Reference Value = 0.447 A/m; Power Drift = -0.012 dB

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

Peak H-field in A/m

Grid 1 **0.365** **M2**	Grid 2 **0.386** **M2**	Grid 3 **0.378** **M2**
Grid 4 **0.399** **M2**	Grid 5 **0.424** **M2**	Grid 6 **0.415** **M2**
Grid 7 **0.358** **M2**	Grid 8 **0.379** **M2**	Grid 9 **0.371** **M2**



0 dB = 0.424A/m

Date/Time: 26/09/2008 5:27:46 PM

Test Laboratory: RTS

File Name: HAC_H_Dipole_CW1880_20dBm_09_26_08.da4

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

Program Name: HAC RF H3DV6 Dipole

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

Medium parameters used: s = 0 mho/m, e_r = 1; density = 1 kg/m^3

Phantom section: E Device Section

DASY4 Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 09/11/2007
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 05/03/2008
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

H Scan - measurement distance from the probe sensor center to CD1880 Dipole = 10mm/Hearing Aid Compatibility Test (5x19x1): Measurement grid: dx=5mm, dy=5mm

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, 353.7 mm

Reference Value = 0.463 A/m; Power Drift = 0.004 dB

Maximum value of Total (measured) = 0.439 A/m

H Scan - measurement distance from the probe sensor center to

CD1880 Dipole = 10mm/Hearing Aid Compatibility Test

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

Maximum value of peak Total field = 0.442 A/m

Probe Modulation Factor = 1.00

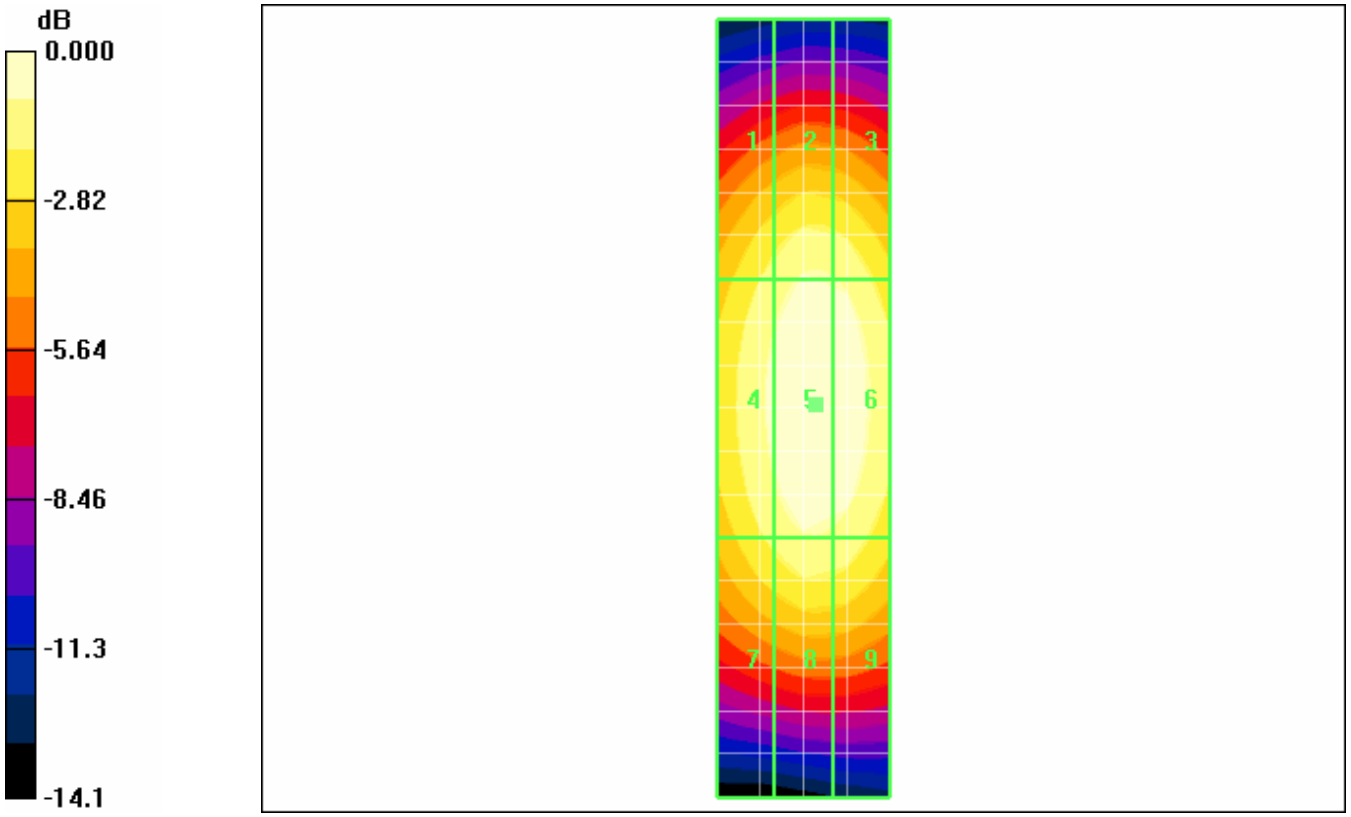
Device Reference Point: 0.000, 0.000, 353.7 mm

Reference Value = 0.463 A/m; Power Drift = 0.004 dB

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

Peak H-field in A/m

Grid 1 **0.373 M2**	Grid 2 **0.404 M2**	Grid 3 **0.399 M2**
Grid 4 **0.408 M2**	Grid 5 **0.442 M2**	Grid 6 **0.436 M2**
Grid 7 **0.367 M2**	Grid 8 **0.394 M2**	Grid 9 **0.388 M2**



0 dB = 0.442A/m

Date/Time: 26/09/2008 5:05:10 PM

Test Laboratory: RTS

File Name: HAC_H_Dipole_CW1880_PMF_GSM.da4

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

Program Name: HAC RF H3DV6 Dipole

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

Medium parameters used: s = 0 mho/m, e_r = 1; density = 1 kg/m^3

Phantom section: E Device Section

DASY4 Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 09/11/2007
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 05/03/2008
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

H Scan - measurement distance from the probe sensor center to CD1880 Dipole = 10mm/Hearing Aid Compatibility Test (5x19x1): Measurement grid: dx=5mm, dy=5mm

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, 353.7 mm

Reference Value = 0.336 A/m; Power Drift = -0.004 dB

Maximum value of Total (measured) = 0.319 A/m

H Scan - measurement distance from the probe sensor center to

CD1880 Dipole = 10mm/Hearing Aid Compatibility Test

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

Maximum value of peak Total field = 0.321 A/m

Probe Modulation Factor = 1.00

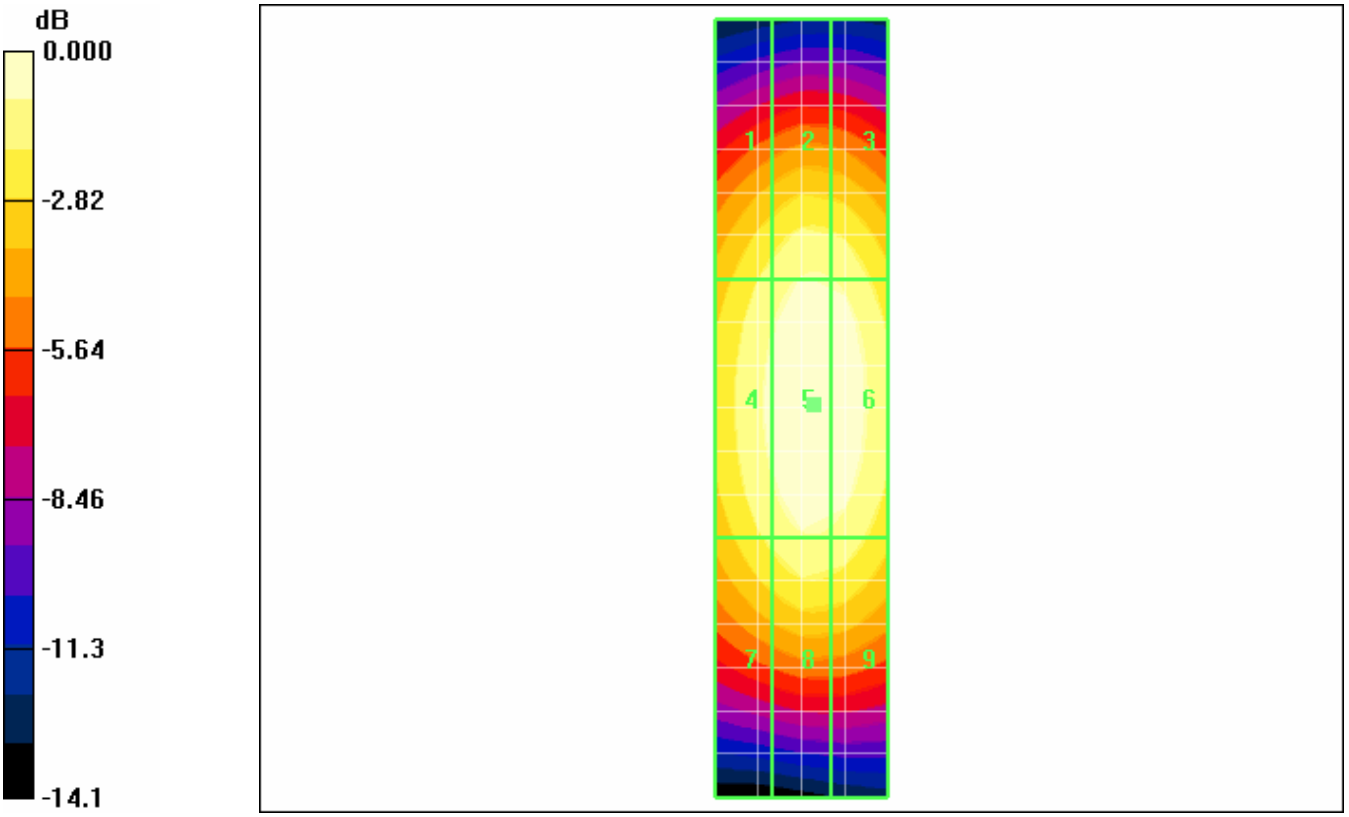
Device Reference Point: 0.000, 0.000, 353.7 mm

Reference Value = 0.336 A/m; Power Drift = -0.004 dB

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

Peak H-field in A/m

Grid 1 **0.270** **M3**	Grid 2 **0.292** **M3**	Grid 3 **0.289** **M3**
Grid 4 **0.296** **M3**	Grid 5 **0.321** **M3**	Grid 6 **0.316** **M3**
Grid 7 **0.266** **M3**	Grid 8 **0.286** **M3**	Grid 9 **0.282** **M3**



0 dB = 0.321A/m

Date/Time: 26/09/2008 5:09:43 PM

Test Laboratory: RTS

File Name: HAC_H_Dipole_AM1880_PMF_GSM.da4

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

Program Name: HAC RF H3DV6 Dipole

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

Medium parameters used: s = 0 mho/m, e_r = 1; density = 1 kg/m^3

Phantom section: E Device Section

DASY4 Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 09/11/2007
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 05/03/2008
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

H Scan - measurement distance from the probe sensor center to CD1880 Dipole = 10mm/Hearing Aid Compatibility Test (5x19x1): Measurement grid: dx=5mm, dy=5mm

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, 353.7 mm

Reference Value = 0.216 A/m; Power Drift = 0.018 dB

Maximum value of Total (measured) = 0.204 A/m

H Scan - measurement distance from the probe sensor center to

CD1880 Dipole = 10mm/Hearing Aid Compatibility Test

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

Maximum value of peak Total field = 0.205 A/m

Probe Modulation Factor = 1.00

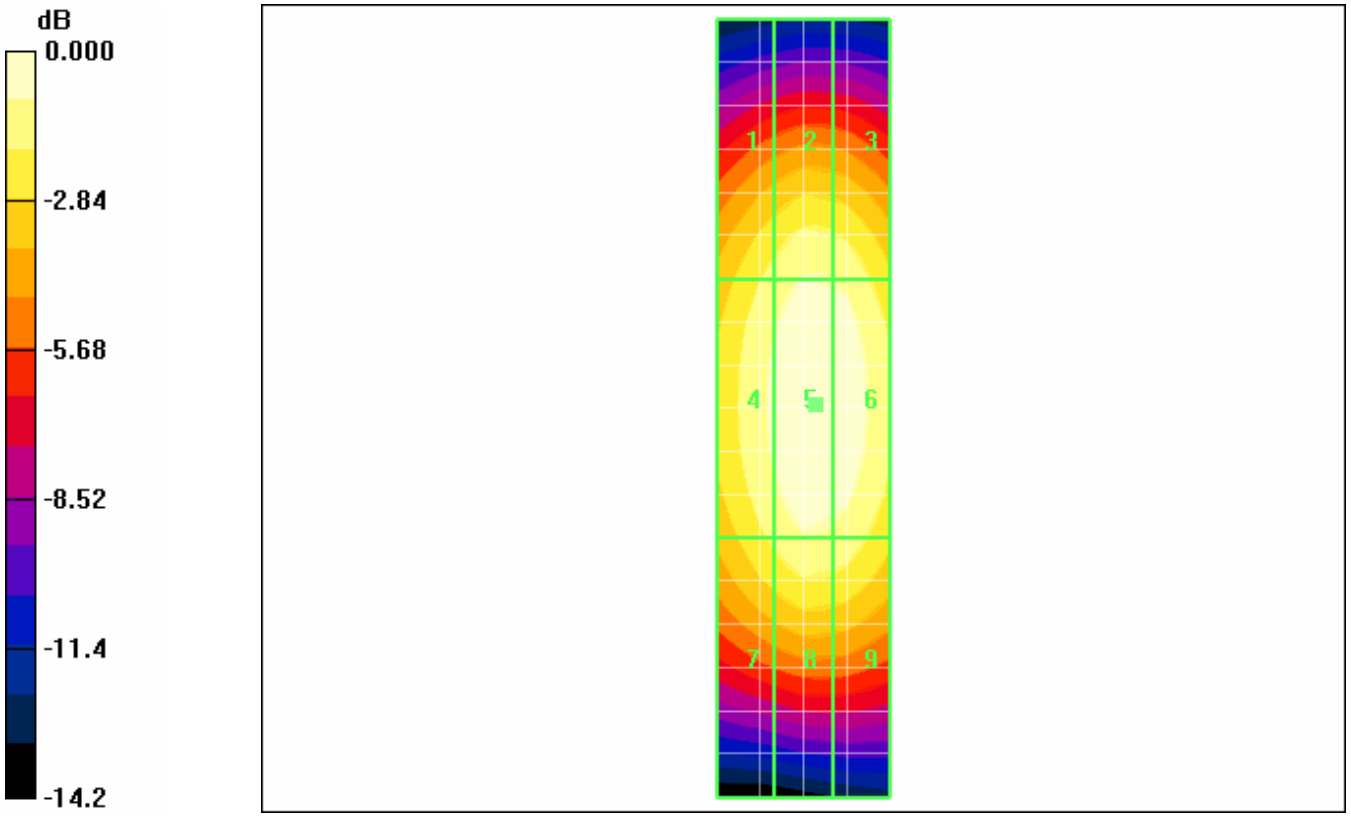
Device Reference Point: 0.000, 0.000, 353.7 mm

Reference Value = 0.216 A/m; Power Drift = 0.018 dB

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

Peak H-field in A/m

Grid 1 **0.172** **M4**	Grid 2 **0.186** **M4**	Grid 3 **0.184** **M4**
Grid 4 **0.188** **M4**	Grid 5 **0.205** **M3**	Grid 6 **0.202** **M3**
Grid 7 **0.169** **M4**	Grid 8 **0.183** **M4**	Grid 9 **0.180** **M4**



0 dB = 0.205A/m

Date/Time: 26/09/2008 4:39:54 PM

Test Laboratory: RTS

File Name: HAC_H_Dipole_GSM1880.da4

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

Program Name: HAC RF H3DV6 Dipole

Communication System: GSM 1900; Frequency: 1880 MHz;Duty Cycle: 1:8.3

Medium parameters used: s = 0 mho/m, e_r = 1; density = 1 kg/m^3

Phantom section: E Device Section

DASY4 Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 09/11/2007
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 05/03/2008
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

H Scan - measurement distance from the probe sensor center to CD835 Dipole = 10mm/Hearing Aid Compatibility Test (5x37x1):

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

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, 353.7 mm

Reference Value = 0.135 A/m; Power Drift = -0.063 dB

Maximum value of Total (measured) = 0.127 A/m

H Scan - measurement distance from the probe sensor center to

CD835 Dipole = 10mm/Hearing Aid Compatibility Test

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

Maximum value of peak Total field = 0.127 A/m

Probe Modulation Factor = 1.00

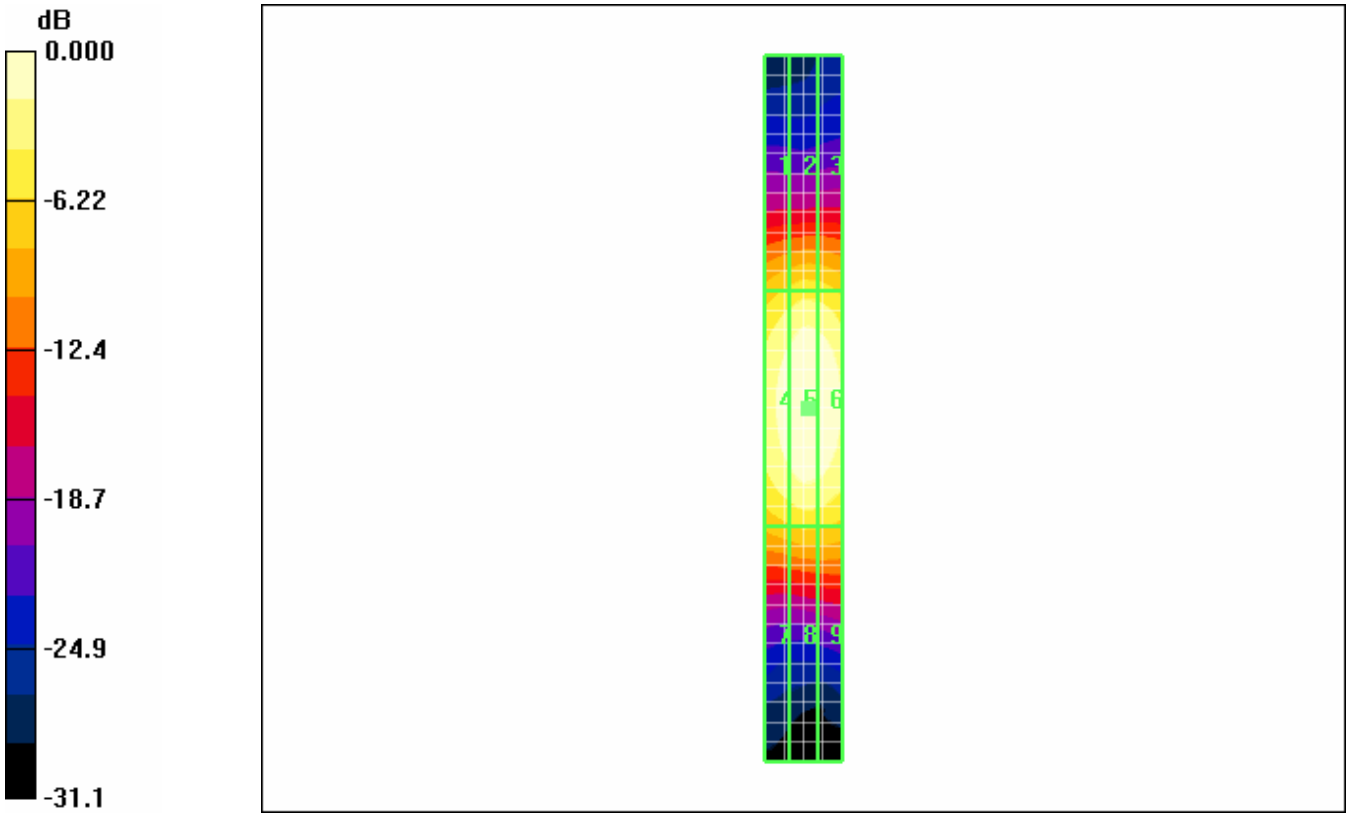
Device Reference Point: 0.000, 0.000, 353.7 mm

Reference Value = 0.135 A/m; Power Drift = -0.063 dB

Hearing Aid Near-Field Category: M4 (AWF -5 dB)

Peak H-field in A/m

Grid 1 **0.067** **M4**	Grid 2 **0.073** **M4**	Grid 3 **0.071** **M4**
Grid 4 **0.115** **M4**	Grid 5 **0.127** **M4**	Grid 6 **0.124** **M4**
Grid 7 **0.061** **M4**	Grid 8 **0.066** **M4**	Grid 9 **0.065** **M4**



0 dB = 0.127A/m

Date/Time: 26/09/2008 5:18:21 PM

Test Laboratory: RTS

File Name: HAC_H_Dipole_CW1880_PMF_CDMA.da4

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

Program Name: HAC RF H3DV6 Dipole

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

Medium parameters used: s = 0 mho/m, e_r = 1; density = 1 kg/m^3

Phantom section: E Device Section

DASY4 Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 09/11/2007
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 05/03/2008
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

H Scan - measurement distance from the probe sensor center to CD1880 Dipole = 10mm/Hearing Aid Compatibility Test (5x19x1): Measurement grid: dx=5mm, dy=5mm

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, 353.7 mm

Reference Value = 0.160 A/m; Power Drift = -0.001 dB

Maximum value of Total (measured) = 0.151 A/m

H Scan - measurement distance from the probe sensor center to

CD1880 Dipole = 10mm/Hearing Aid Compatibility Test

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

Maximum value of peak Total field = 0.152 A/m

Probe Modulation Factor = 1.00

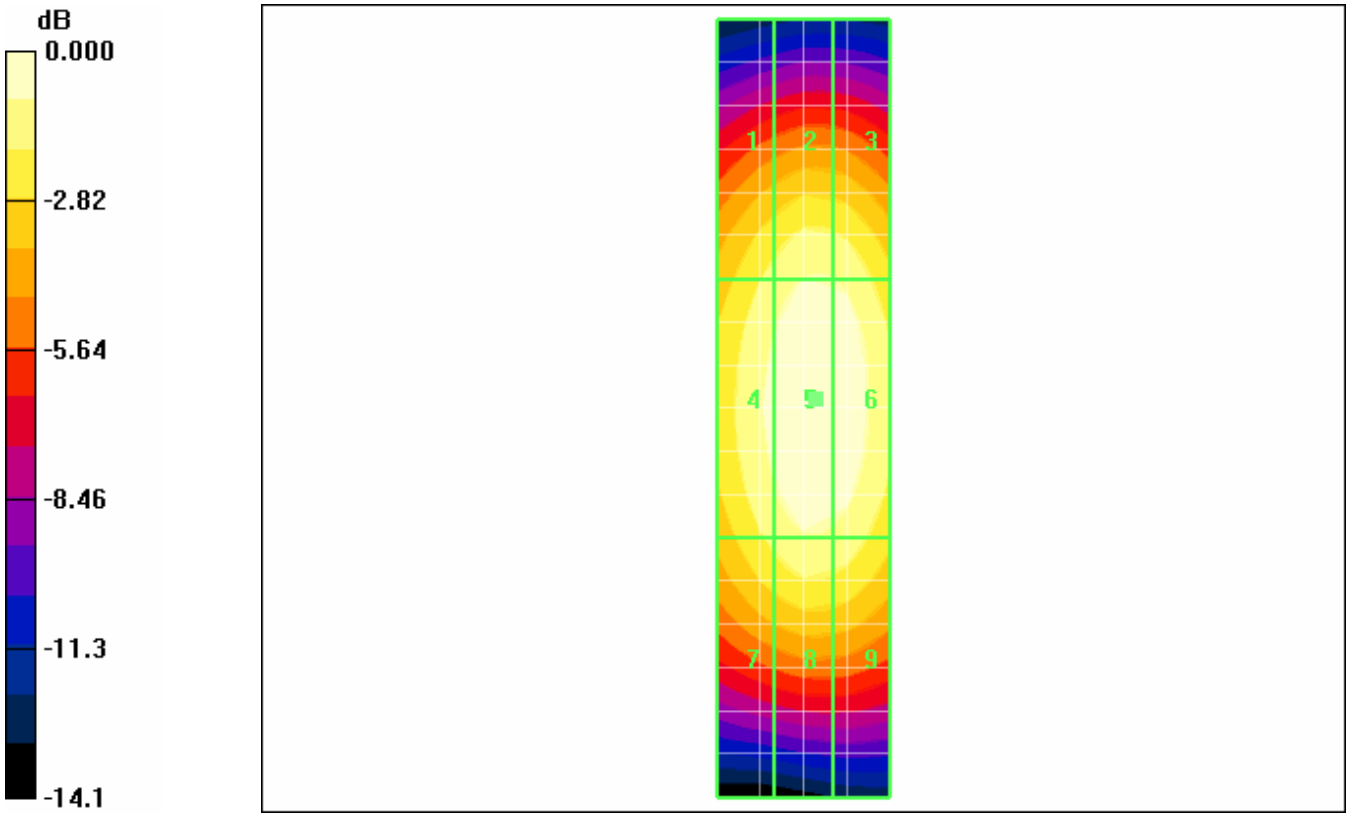
Device Reference Point: 0.000, 0.000, 353.7 mm

Reference Value = 0.160 A/m; Power Drift = -0.001 dB

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

Peak H-field in A/m

Grid 1 **0.128** **M4**	Grid 2 **0.138** **M4**	Grid 3 **0.137** **M4**
Grid 4 **0.141** **M4**	Grid 5 **0.152** **M4**	Grid 6 **0.150** **M4**
Grid 7 **0.126** **M4**	Grid 8 **0.136** **M4**	Grid 9 **0.133** **M4**



0 dB = 0.152A/m

Date/Time: 26/09/2008 5:13:58 PM

Test Laboratory: RTS

File Name: HAC_H_Dipole_AM1880_PMF_CDMA.da4

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

Program Name: HAC RF H3DV6 Dipole

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

Medium parameters used: s = 0 mho/m, e_r = 1; density = 1 kg/m^3

Phantom section: E Device Section

DASY4 Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 09/11/2007
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 05/03/2008
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

H Scan - measurement distance from the probe sensor center to CD1880 Dipole = 10mm/Hearing Aid Compatibility Test (5x19x1): Measurement grid: dx=5mm, dy=5mm

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, 353.7 mm

Reference Value = 0.088 A/m; Power Drift = 0.056 dB

Maximum value of Total (measured) = 0.084 A/m

H Scan - measurement distance from the probe sensor center to

CD1880 Dipole = 10mm/Hearing Aid Compatibility Test

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

Maximum value of peak Total field = 0.085 A/m

Probe Modulation Factor = 1.00

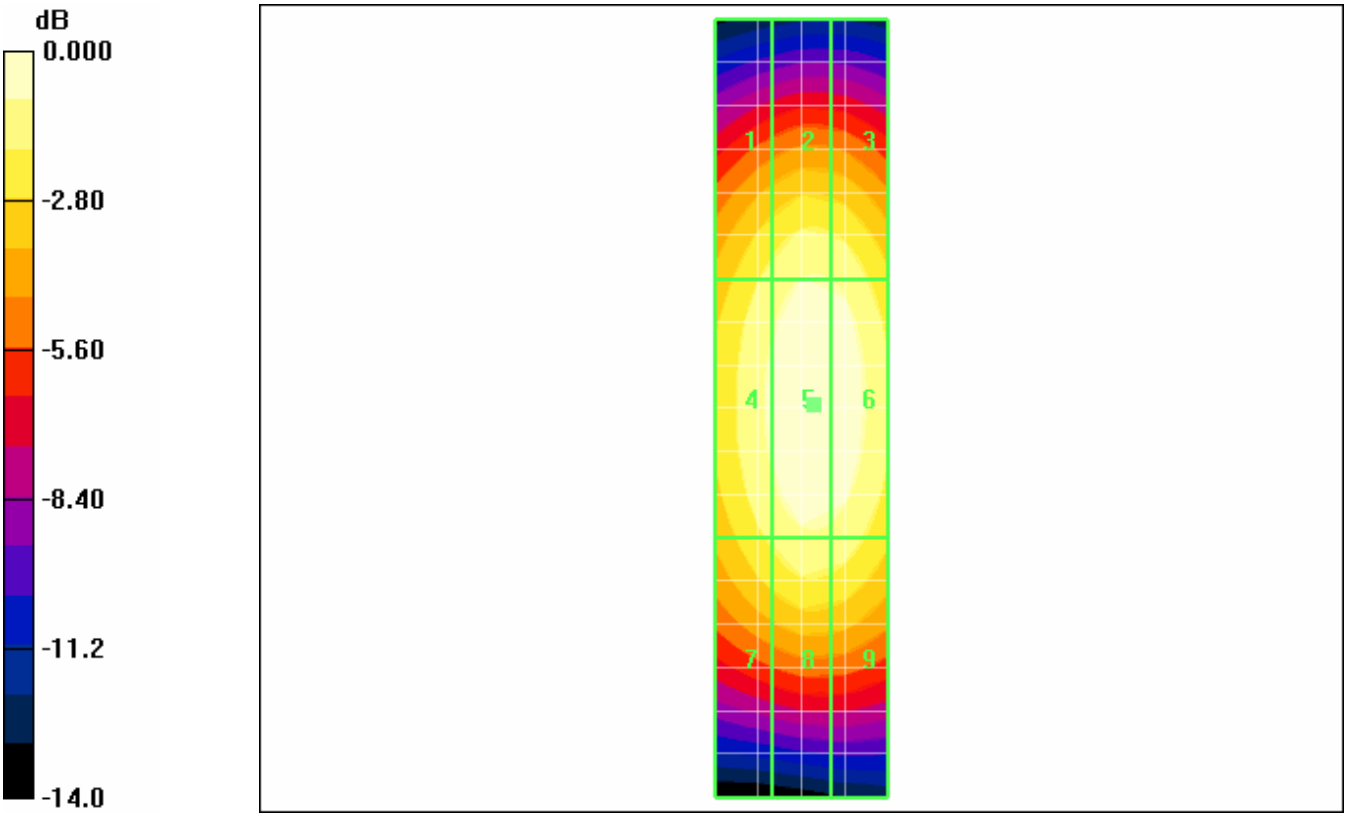
Device Reference Point: 0.000, 0.000, 353.7 mm

Reference Value = 0.088 A/m; Power Drift = 0.056 dB

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

Peak H-field in A/m

Grid 1 **0.071** **M4**	Grid 2 **0.077** **M4**	Grid 3 **0.076** **M4**
Grid 4 **0.078** **M4**	Grid 5 **0.085** **M4**	Grid 6 **0.083** **M4**
Grid 7 **0.070** **M4**	Grid 8 **0.075** **M4**	Grid 9 **0.074** **M4**



0 dB = 0.085A/m

Date/Time: 26/09/2008 4:49:44 PM

Test Laboratory: RTS

File Name: HAC_H_Dipole_CDMA1880.da4

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

Program Name: HAC RF H3DV6 Dipole

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

Medium parameters used: s = 0 mho/m, e_r = 1; density = 1 kg/m^3

Phantom section: E Device Section

DASY4 Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 09/11/2007
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 05/03/2008
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

H Scan - measurement distance from the probe sensor center to CD835 Dipole = 10mm/Hearing Aid Compatibility Test (5x37x1):

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

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, 353.7 mm

Reference Value = 0.161 A/m; Power Drift = -0.141 dB

Maximum value of Total (measured) = 0.151 A/m

H Scan - measurement distance from the probe sensor center to

CD835 Dipole = 10mm/Hearing Aid Compatibility Test

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

Maximum value of peak Total field = 0.152 A/m

Probe Modulation Factor = 1.00

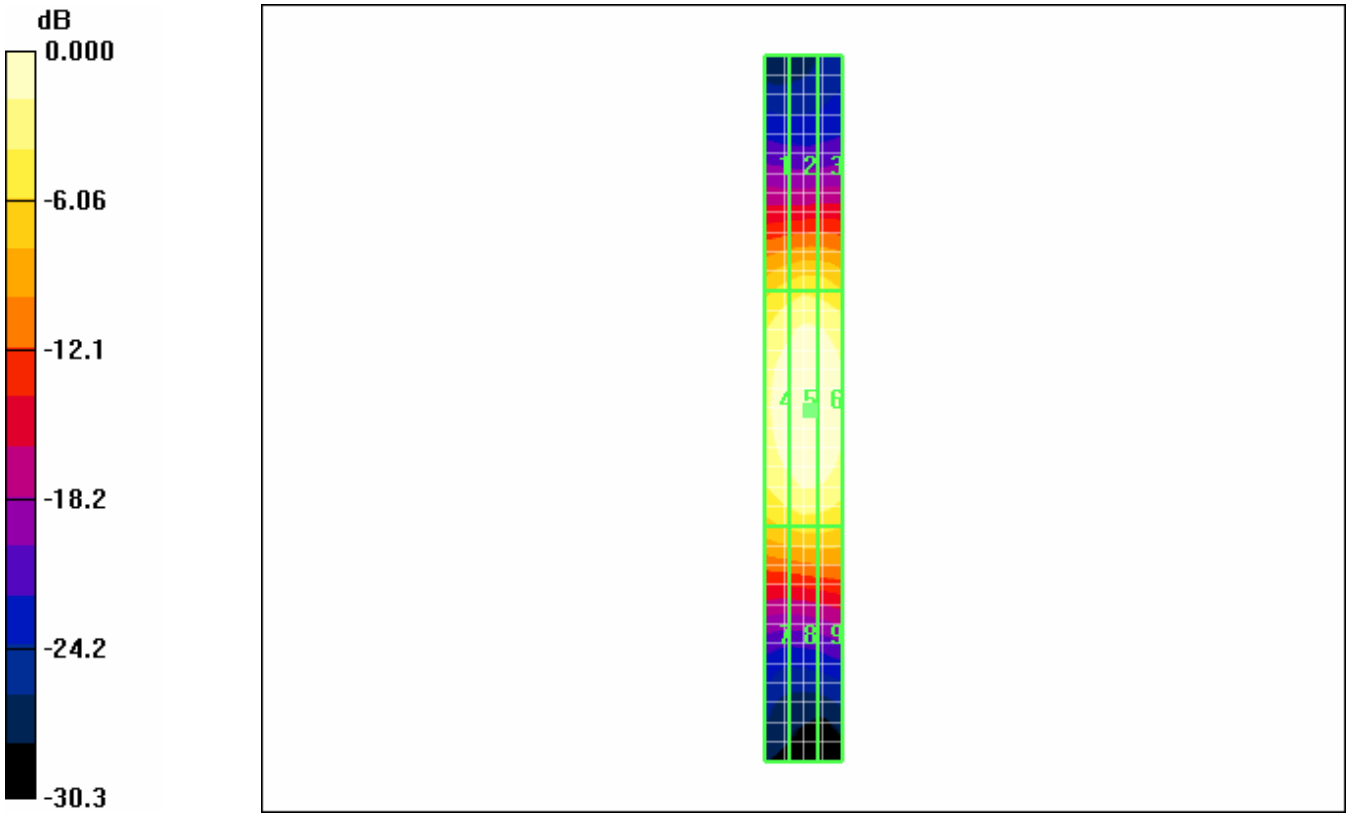
Device Reference Point: 0.000, 0.000, 353.7 mm

Reference Value = 0.161 A/m; Power Drift = -0.141 dB

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

Peak H-field in A/m

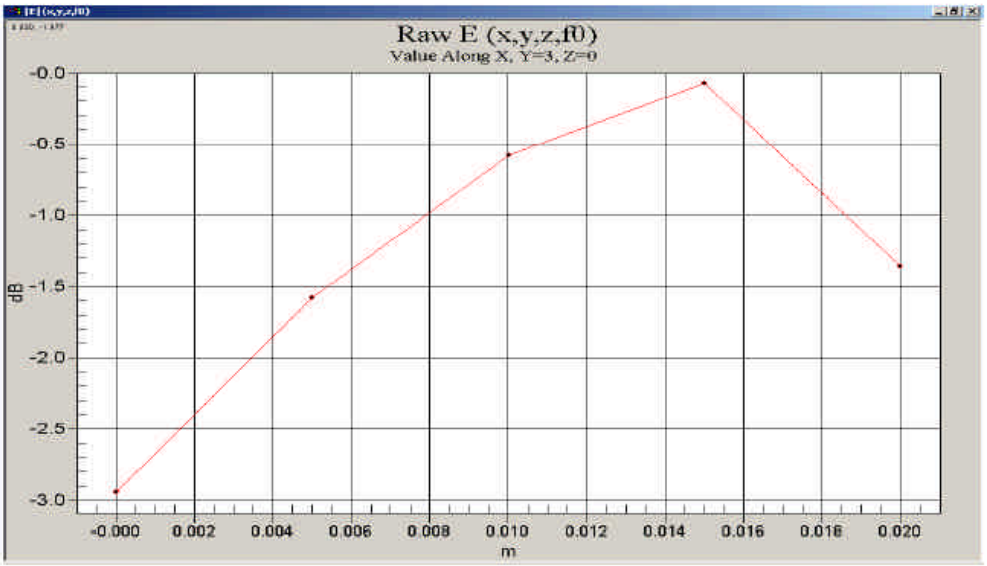
Grid 1 **0.087** **M4**	Grid 2 **0.092** **M4**	Grid 3 **0.090** **M4**
Grid 4 **0.140** **M4**	Grid 5 **0.152** **M4**	Grid 6 **0.150** **M4**
Grid 7 **0.079** **M4**	Grid 8 **0.084** **M4**	Grid 9 **0.084** **M4**



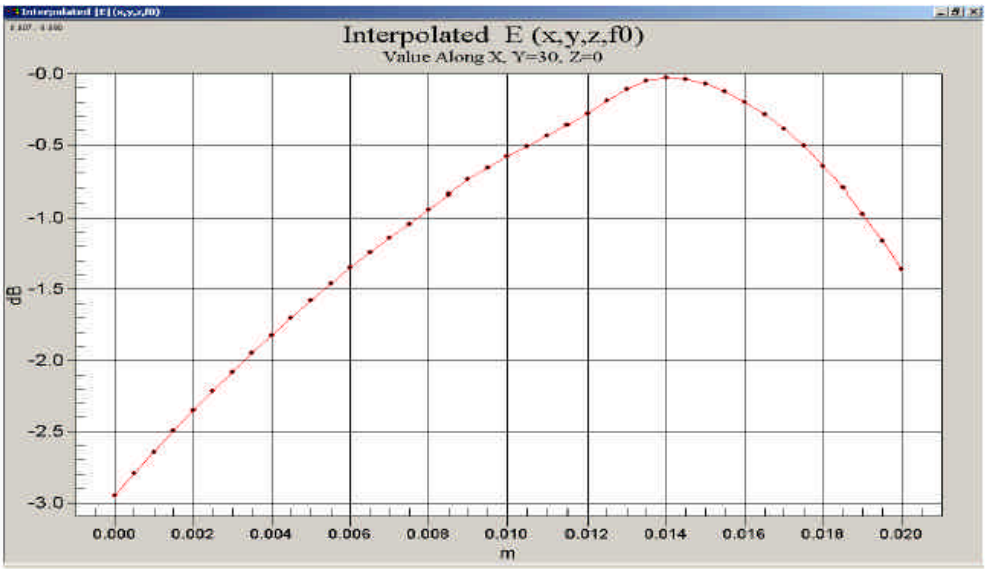
0 dB = 0.152A/m

Justification of Step Size and Interpolation

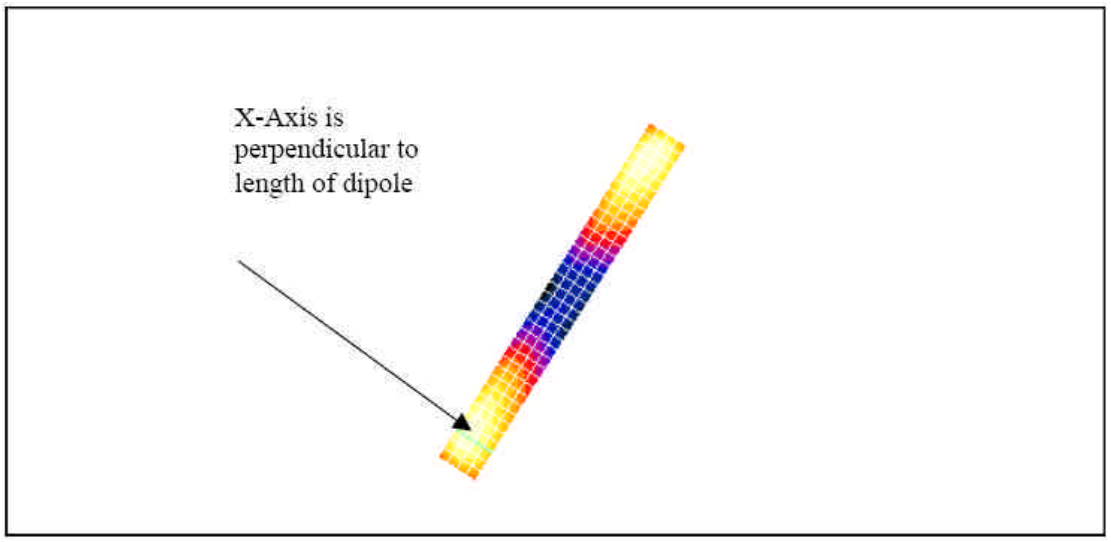
This section demonstrates that a 5mm step size with interpolation provides sufficient resolution for RF emissions measurements. The DASY 4 uses interpolation algorithms to derive 9 interpolated points between every measured point.



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.



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.

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, $\varepsilon_r = 1$; $\rho = 1000$ kg/m^3
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)

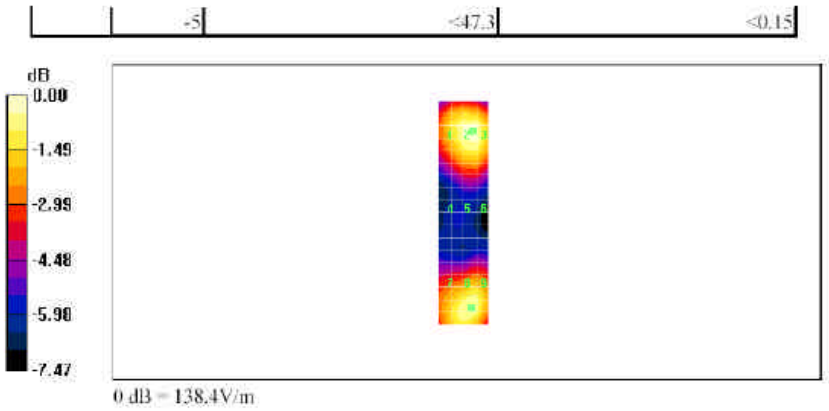
E in V/m (Time averaged)

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

E in V/m (Slot averaged)

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



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, $\varepsilon_r = 1$; $\rho = 1000$ kg/m^3
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)

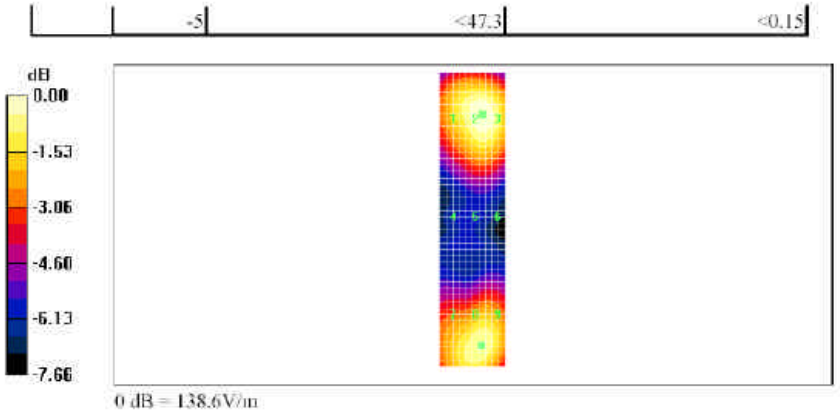
E in V/m (Time averaged)

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

E in V/m (Slot averaged)

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



Date/Time: 14/07/2005 12:43:02 PM

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, $\varepsilon_r = 1$; $\rho = 1$ kg/m^3
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)

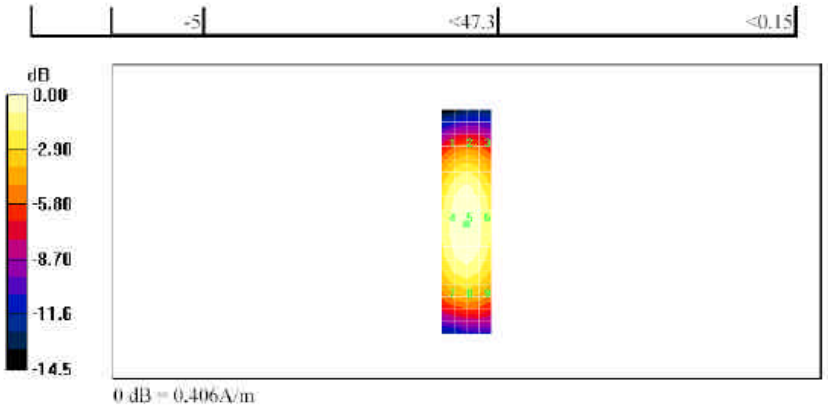
H in A/m (Time averaged)

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

H in A/m (Slot averaged)

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



Date/Time: 14/07/2005 12:53:40 PM

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, $\varepsilon_r = 1$; $\rho = 1$ kg/m^3
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)

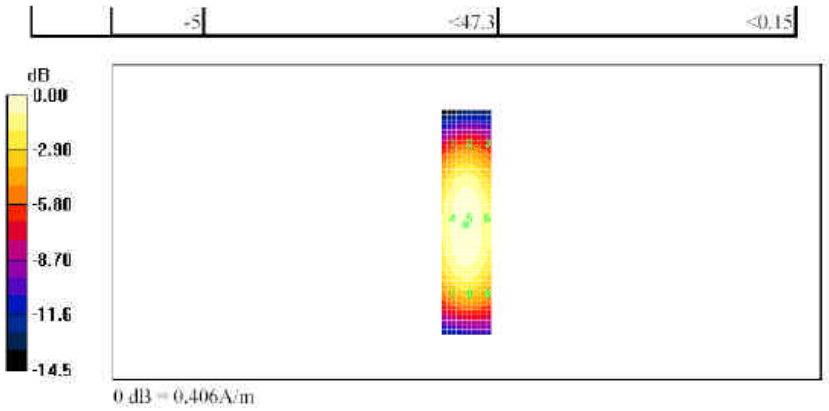
Grid 1	Grid 2	Grid 3
0.347	**0.361**	**0.348**
Grid 4	Grid 5	Grid 6
0.394	**0.406**	**0.391**
Grid 7	Grid 8	Grid 9
0.367	**0.380**	**0.365**

H in A/m (Slot averaged)

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

Date/Time: 14/07/2005 12:53:40 PM Page 2 of 2



file://C:\Program%20Files\DASY4\Print_Templates\HAC_H_Dipole_CW%201880_2%... 14/07/2005

A.3 RF emissions and ambient noise plots

Date/Time: 26/08/2008 11:15:42 AM

Test Laboratory: RTS

File Name: HAC_E_GSM850_Low_Chan.da4

DUT: BlackBerry Smartphone; Type: Sample ; Serial: Not Specified

Program Name: HAC RF ER3D Device

Communication System: GSM 850; Frequency: 824.2 MHz;Duty Cycle: 1:8.3

Medium parameters used: s = 0 mho/m, e_r = 1; density = 1000 kg/m^3

Phantom section: E Device Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2285; ConvF(1, 1, 1); Calibrated: 07/03/2008
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 05/03/2008
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

E Scan - ER3D - 2007: 15 mm from Probe Center to the Device/Hearing Aid Compatibility Test (11x11x1): Measurement grid: dx=5mm, dy=5mm

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, 353.7 mm

Reference Value = 73.2 V/m; Power Drift = -0.114 dB

Maximum value of Total (measured) = 60.0 V/m

E Scan - ER3D - 2007: 15 mm from Probe Center to the Device/Hearing Aid Compatibility Test (101x101x1): Measurement grid: dx=5mm, dy=5mm

Maximum value of peak Total field = 184.9 V/m

Probe Modulation Factor = 3.07

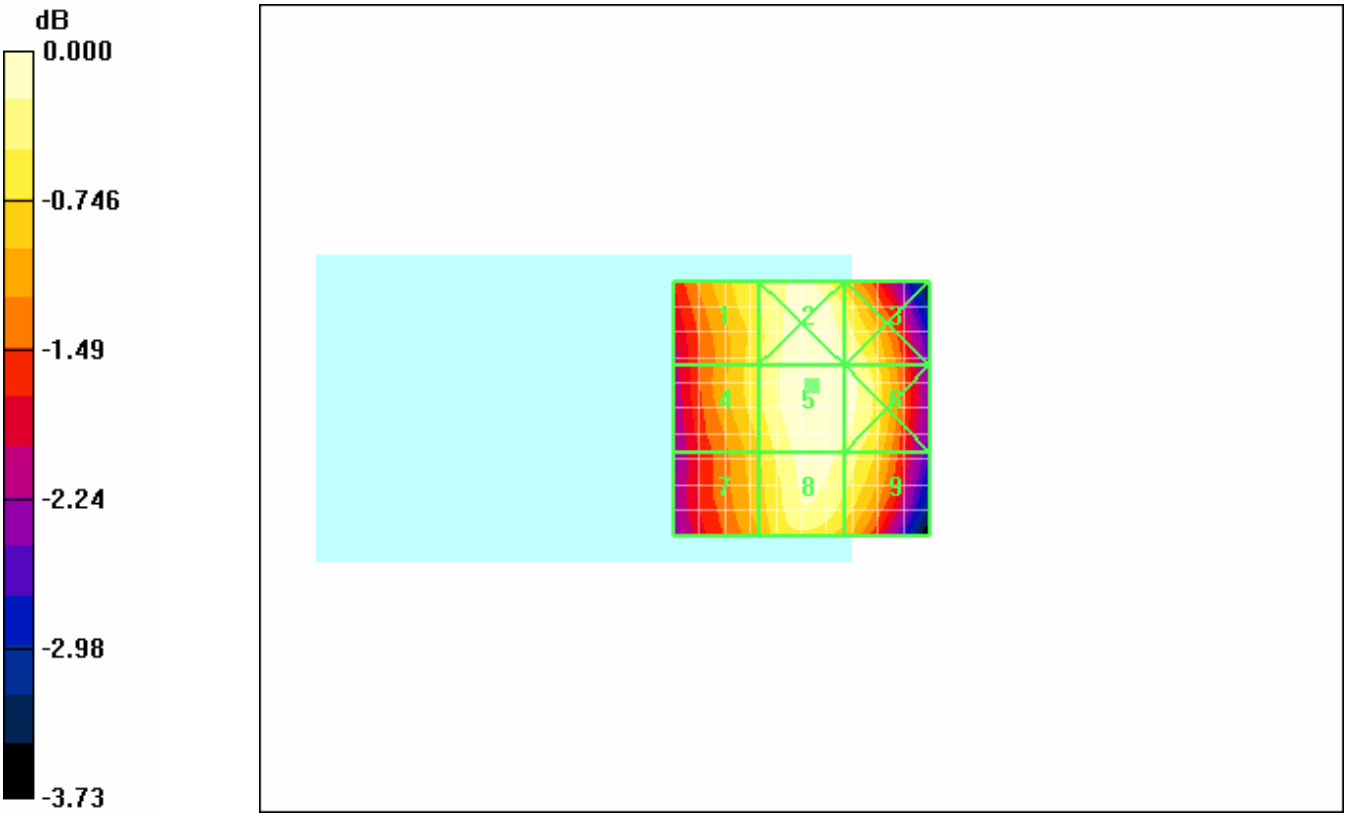
Device Reference Point: 0.000, 0.000, 353.7 mm

Reference Value = 73.2 V/m; Power Drift = -0.114 dB

Hearing Aid Near-Field Category: M3 (AWF -5 dB)

Peak E-field in V/m

Grid 1 **174.7 M3**	Grid 2 **184.3 M3**	Grid 3 **181.7 M3**
Grid 4 **174.0 M3**	Grid 5 **184.9 M3**	Grid 6 **182.9 M3**
Grid 7 **169.4 M3**	Grid 8 **182.0 M3**	Grid 9 **178.6 M3**



0 dB = 184.9V/m

Date/Time: 26/08/2008 11:41:40 AM

Test Laboratory: RTS

File Name: HAC_E_GSM850_Mid_Chan.da4

DUT: BlackBerry Smartphone; Type: Sample ; Serial: Not Specified

Program Name: HAC RF ER3D Device

Communication System: GSM 850; Frequency: 836.8 MHz;Duty Cycle: 1:8.3

Medium parameters used: s = 0 mho/m, e_r = 1; density = 1000 kg/m^3

Phantom section: E Device Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2285; ConvF(1, 1, 1); Calibrated: 07/03/2008
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 05/03/2008
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

E Scan - ER3D - 2007: 15 mm from Probe Center to the Device/Hearing Aid Compatibility Test (11x11x1): Measurement grid: dx=5mm, dy=5mm

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, 353.7 mm

Reference Value = 73.8 V/m; Power Drift = -0.081 dB

Maximum value of Total (measured) = 62.7 V/m

E Scan - ER3D - 2007: 15 mm from Probe Center to the

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

Maximum value of peak Total field = 192.9 V/m

Probe Modulation Factor = 3.07

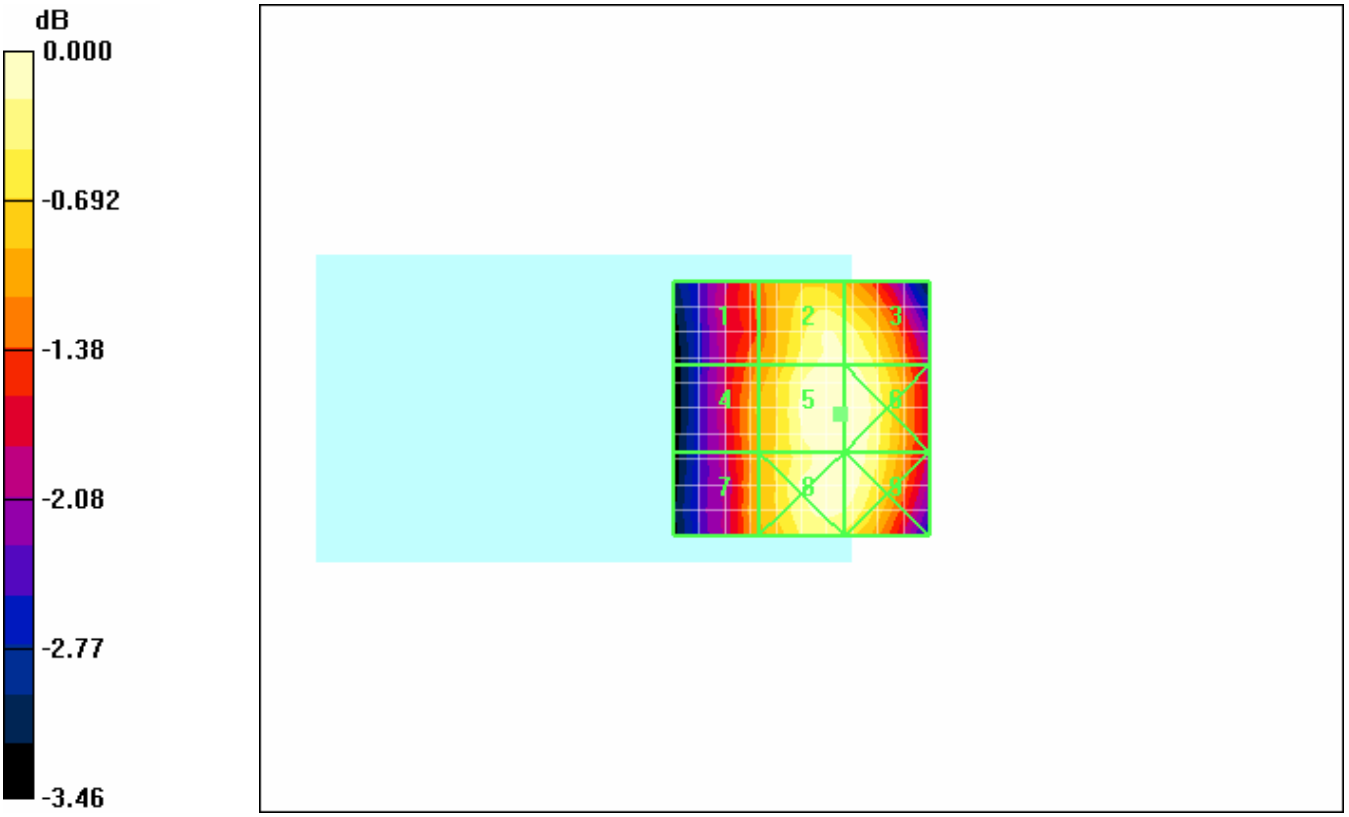
Device Reference Point: 0.000, 0.000, 353.7 mm

Reference Value = 73.8 V/m; Power Drift = -0.081 dB

Hearing Aid Near-Field Category: M3 (AWF -5 dB)

Peak E-field in V/m

Grid 1 **169.6** **M3**	Grid 2 **189.5** **M3**	Grid 3 **189.3** **M3**
Grid 4 **174.3** **M3**	Grid 5 **192.9** **M3**	Grid 6 **192.8** **M3**
Grid 7 **174.1** **M3**	Grid 8 **192.3** **M3**	Grid 9 **192.3** **M3**



0 dB = 192.9V/m

Date/Time: 26/08/2008 11:48:33 AM

Test Laboratory: RTS

File Name: HAC_E_GSM850_High_Chan.da4

DUT: BlackBerry Smartphone; Type: Sample ; Serial: Not Specified

Program Name: HAC RF ER3D Device

Communication System: GSM 850; Frequency: 848.8 MHz;Duty Cycle: 1:8.3

Medium parameters used: s = 0 mho/m, e_r = 1; density = 1000 kg/m^3

Phantom section: E Device Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2285; ConvF(1, 1, 1); Calibrated: 07/03/2008
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 05/03/2008
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

E Scan - ER3D - 2007: 15 mm from Probe Center to the Device/Hearing Aid Compatibility Test (11x11x1): Measurement grid: dx=5mm, dy=5mm

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, 353.7 mm

Reference Value = 71.0 V/m; Power Drift = 0.061 dB

Maximum value of Total (measured) = 61.4 V/m

E Scan - ER3D - 2007: 15 mm from Probe Center to the

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

Maximum value of peak Total field = 188.8 V/m

Probe Modulation Factor = 3.07

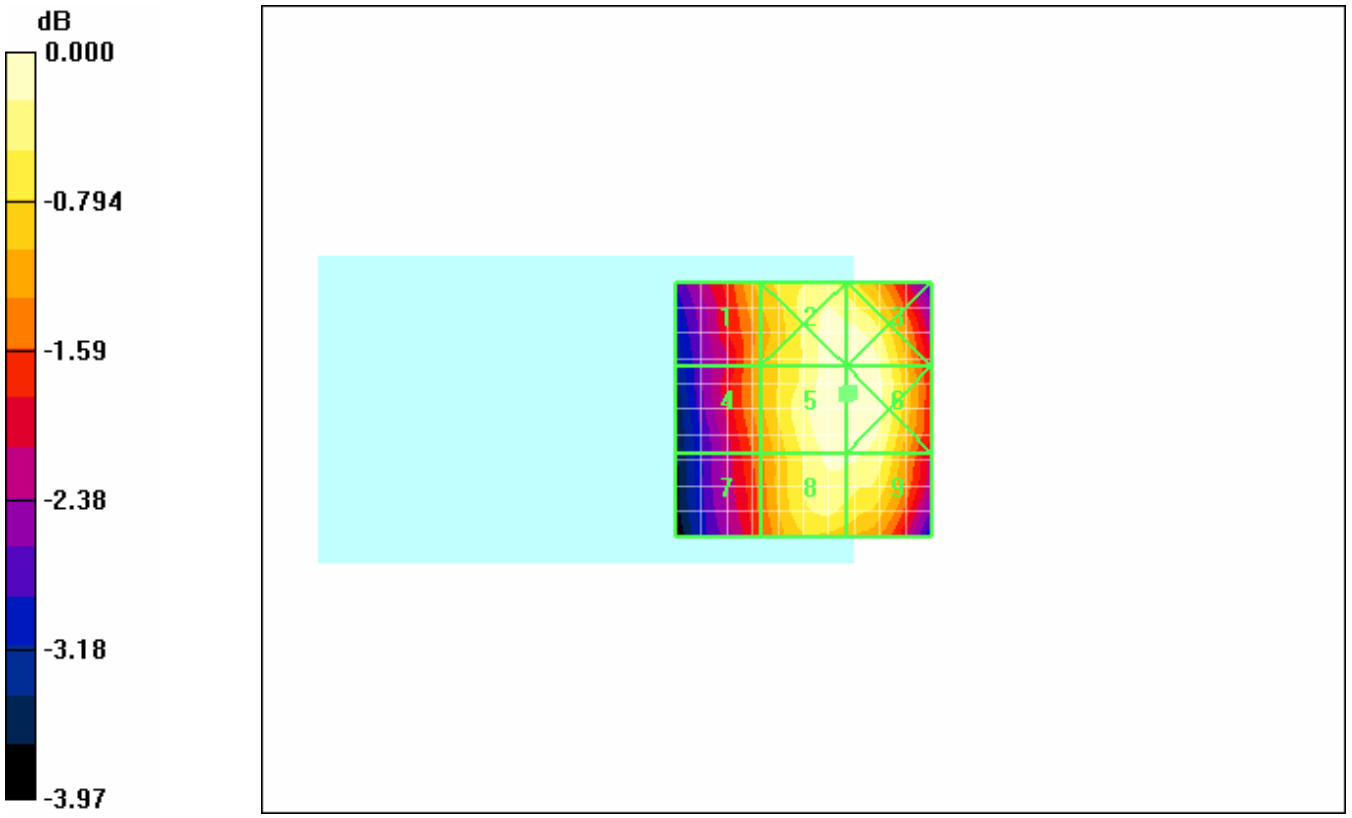
Device Reference Point: 0.000, 0.000, 353.7 mm

Reference Value = 71.0 V/m; Power Drift = 0.061 dB

Hearing Aid Near-Field Category: M3 (AWF -5 dB)

Peak E-field in V/m

Grid 1 **169.7 M3**	Grid 2 **188.0 M3**	Grid 3 **188.0 M3**
Grid 4 **166.2 M3**	Grid 5 **188.8 M3**	Grid 6 **188.8 M3**
Grid 7 **161.2 M3**	Grid 8 **185.0 M3**	Grid 9 **184.6 M3**



0 dB = 188.8V/m

Date/Time: 27/09/2008 9:59:10 AM

Test Laboratory: RTS

File Name: HAC_E_GSM850_Mid_Chan_Rev4.da4

DUT: BlackBerry Smartphone; Type: Sample ; Serial: Not Specified

Program Name: HAC RF ER3D Device

Communication System: GSM 850; Frequency: 836.8 MHz;Duty Cycle: 1:8.3

Medium parameters used: s = 0 mho/m, e_r = 1; density = 1000 kg/m^3

Phantom section: E Device Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2285; ConvF(1, 1, 1); Calibrated: 07/03/2008
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 05/03/2008
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

E Scan - ER3D - 2007: 15 mm from Probe Center to the Device/Hearing Aid Compatibility Test (11x11x1): Measurement grid: dx=5mm, dy=5mm

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, 353.7 mm

Reference Value = 70.0 V/m; Power Drift = -0.015 dB

Maximum value of Total (measured) = 59.2 V/m

E Scan - ER3D - 2007: 15 mm from Probe Center to the

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

Maximum value of peak Total field = 182.2 V/m

Probe Modulation Factor = 3.07

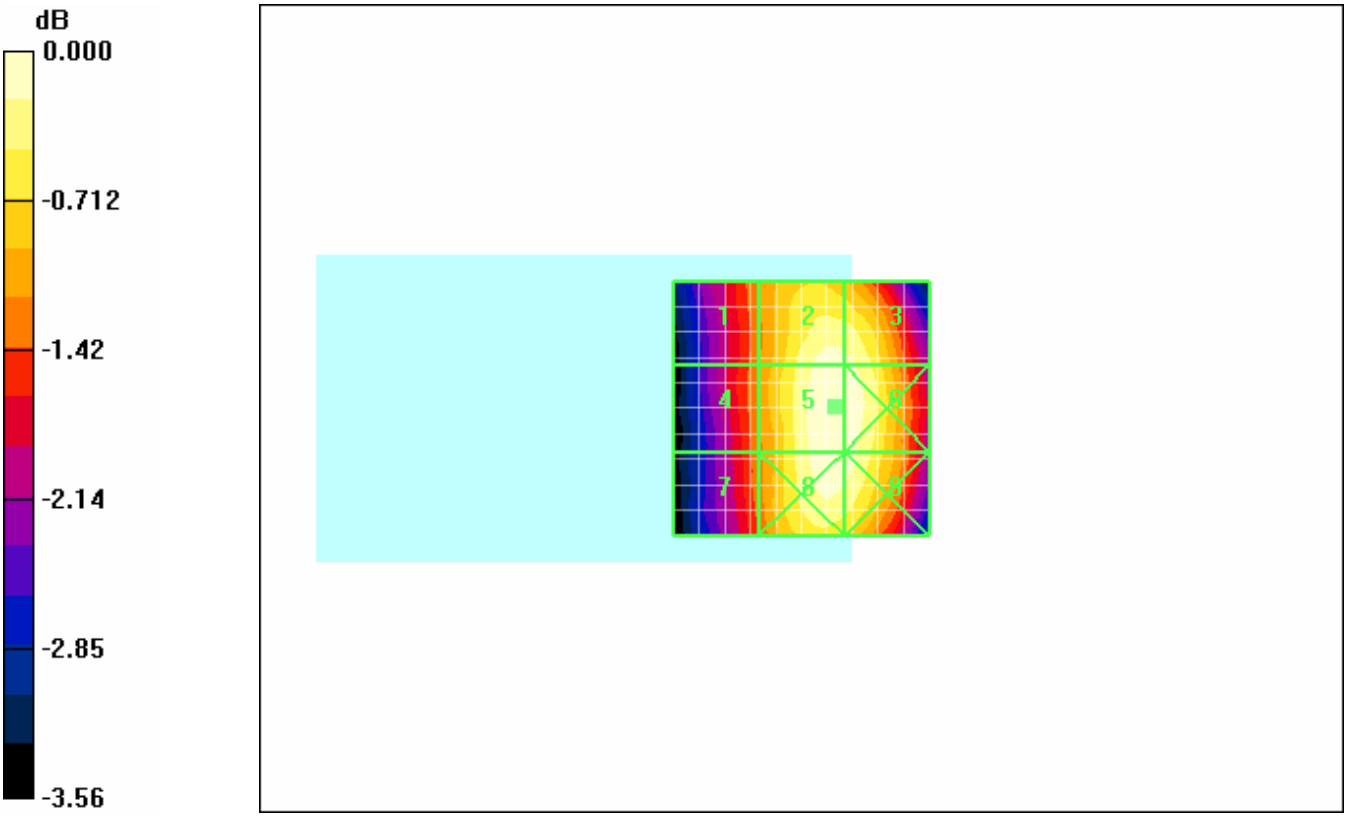
Device Reference Point: 0.000, 0.000, 353.7 mm

Reference Value = 70.0 V/m; Power Drift = -0.015 dB

Hearing Aid Near-Field Category: M3 (AWF -5 dB)

Peak E-field in V/m

Grid 1 **159.0** **M3**	Grid 2 **179.8** **M3**	Grid 3 **178.9** **M3**
Grid 4 **159.4** **M3**	Grid 5 **182.2** **M3**	Grid 6 **181.5** **M3**
Grid 7 **157.6** **M3**	Grid 8 **180.5** **M3**	Grid 9 **179.7** **M3**



0 dB = 182.2V/m

Date/Time: 26/08/2008 4:52:22 PM

Test Laboratory: RTS

File Name: HAC_E_CDMA800_Low_Chan.da4

DUT: BlackBerry Smartphone; Type: Sample ; Serial: Not Specified

Program Name: HAC RF ER3D Device

Communication System: CDMA 800; Frequency: 824.7 MHz;Duty Cycle: 1:1

Medium parameters used: s = 0 mho/m, e_r = 1; density = 1000 kg/m^3

Phantom section: E Device Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2285; ConvF(1, 1, 1); Calibrated: 07/03/2008
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 05/03/2008
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

E Scan - ER3D - 2007: 15 mm from Probe Center to the Device/Hearing Aid Compatibility Test (11x11x1): Measurement grid: dx=5mm, dy=5mm

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, 353.7 mm

Reference Value = 60.3 V/m; Power Drift = 0.088 dB

Maximum value of Total (measured) = 51.0 V/m

E Scan - ER3D - 2007: 15 mm from Probe Center to the Device/Hearing Aid Compatibility Test (101x101x1): Measurement grid: dx=5mm, dy=5mm

Maximum value of peak Total field = 48.0 V/m

Probe Modulation Factor = 0.940

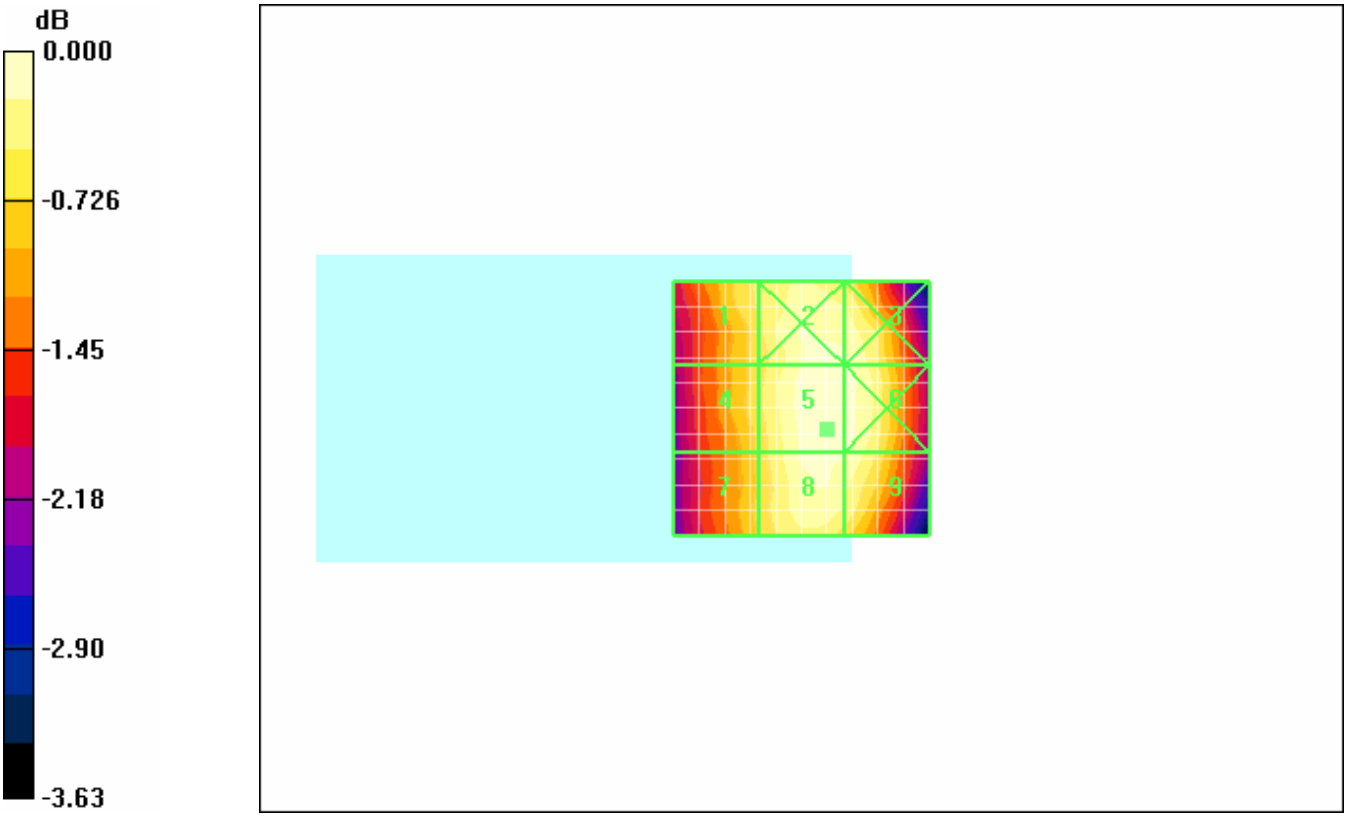
Device Reference Point: 0.000, 0.000, 353.7 mm

Reference Value = 60.3 V/m; Power Drift = 0.088 dB

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

Peak E-field in V/m

Grid 1 **44.4** **M4**	Grid 2 **47.4** **M4**	Grid 3 **47.0** **M4**
Grid 4 **43.8** **M4**	Grid 5 **48.0** **M4**	Grid 6 **47.4** **M4**
Grid 7 **43.2** **M4**	Grid 8 **47.2** **M4**	Grid 9 **46.8** **M4**



0 dB = 48.0V/m

Date/Time: 26/08/2008 4:59:17 PM

Test Laboratory: RTS

File Name: HAC_E_CDMA800_Mid_Chan.da4

DUT: BlackBerry Smartphone; Type: Sample ; Serial: Not Specified

Program Name: HAC RF ER3D Device

Communication System: CDMA 800; Frequency: 836.52 MHz;Duty Cycle: 1:1

Medium parameters used: s = 0 mho/m, e_r = 1; density = 1000 kg/m^3

Phantom section: E Device Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2285; ConvF(1, 1, 1); Calibrated: 07/03/2008
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 05/03/2008
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

E Scan - ER3D - 2007: 15 mm from Probe Center to the Device/Hearing Aid Compatibility Test (11x11x1): Measurement grid:

dx=5mm, dy=5mm

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, 353.7 mm

Reference Value = 68.1 V/m; Power Drift = -0.033 dB

Maximum value of Total (measured) = 58.0 V/m

E Scan - ER3D - 2007: 15 mm from Probe Center to the

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

Maximum value of peak Total field = 54.7 V/m

Probe Modulation Factor = 0.940

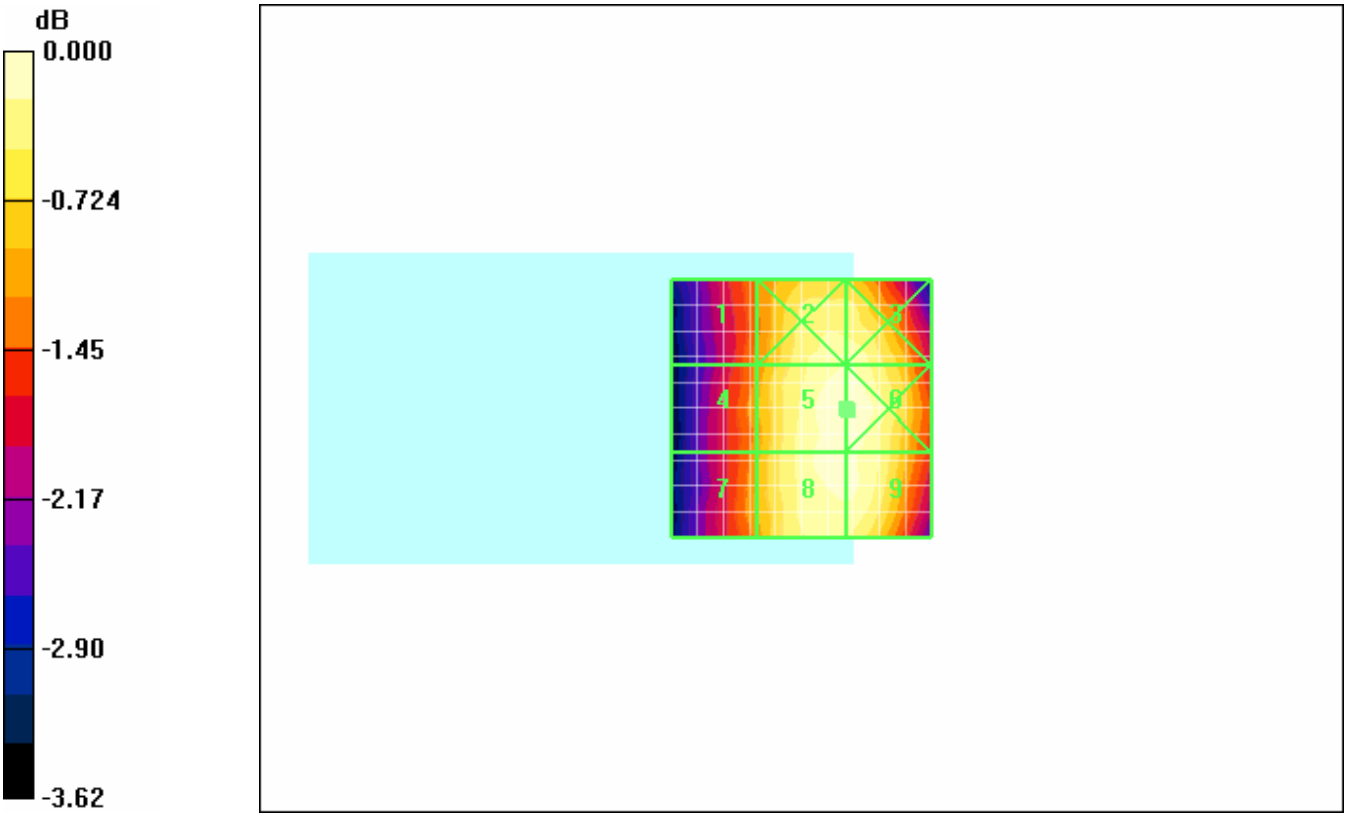
Device Reference Point: 0.000, 0.000, 353.7 mm

Reference Value = 68.1 V/m; Power Drift = -0.033 dB

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

Peak E-field in V/m

Grid 1 **46.8** **M4**	Grid 2 **53.3** **M4**	Grid 3 **53.3** **M4**
Grid 4 **47.6** **M4**	Grid 5 **54.7** **M4**	Grid 6 **54.7** **M4**
Grid 7 **47.8** **M4**	Grid 8 **54.0** **M4**	Grid 9 **53.8** **M4**



0 dB = 54.7V/m

Date/Time: 26/08/2008 5:06:00 PM

Test Laboratory: RTS

File Name: HAC_E_CDMA800_High_Chan.da4

DUT: BlackBerry Smartphone; Type: Sample ; Serial: Not Specified

Program Name: HAC RF ER3D Device

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

Medium parameters used: s = 0 mho/m, e_r = 1; density = 1000 kg/m^3

Phantom section: E Device Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2285; ConvF(1, 1, 1); Calibrated: 07/03/2008
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 05/03/2008
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

E Scan - ER3D - 2007: 15 mm from Probe Center to the Device/Hearing Aid Compatibility Test (11x11x1): Measurement grid: dx=5mm, dy=5mm

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, 353.7 mm

Reference Value = 65.6 V/m; Power Drift = 0.056 dB

Maximum value of Total (measured) = 55.7 V/m

E Scan - ER3D - 2007: 15 mm from Probe Center to the

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

Maximum value of peak Total field = 52.5 V/m

Probe Modulation Factor = 0.940

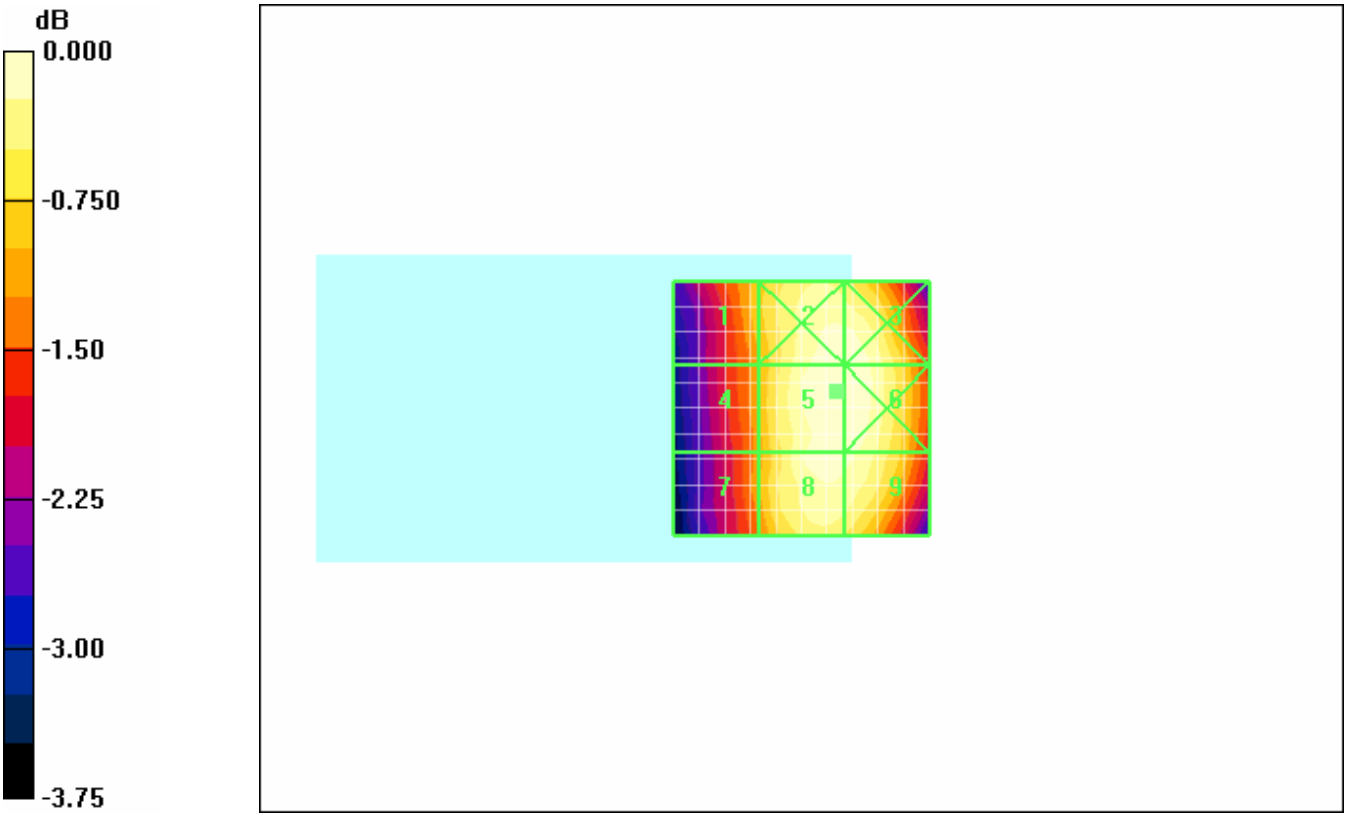
Device Reference Point: 0.000, 0.000, 353.7 mm

Reference Value = 65.6 V/m; Power Drift = 0.056 dB

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

Peak E-field in V/m

Grid 1 **46.5** **M4**	Grid 2 **52.2** **M4**	Grid 3 **52.2** **M4**
Grid 4 **45.4** **M4**	Grid 5 **52.5** **M4**	Grid 6 **52.5** **M4**
Grid 7 **45.2** **M4**	Grid 8 **51.9** **M4**	Grid 9 **51.6** **M4**



0 dB = 52.5V/m

Date/Time: 26/08/2008 11:59:17 AM

Test Laboratory: RTS

File Name: HAC_E_GSM1900_Low_Chan.da4

DUT: BlackBerry Smartphone; Type: Sample ; Serial: Not Specified

Program Name: HAC RF ER3D Device

Communication System: GSM 1900; Frequency: 1850.2 MHz;Duty Cycle: 1:8.3

Medium parameters used: s = 0 mho/m, e_r = 1; density = 1000 kg/m^3

Phantom section: E Device Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2285; ConvF(1, 1, 1); Calibrated: 07/03/2008
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 05/03/2008
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

E Scan - ER3D - 2007: 15 mm from Probe Center to the Device/Hearing Aid Compatibility Test (11x11x1): Measurement grid: dx=5mm, dy=5mm

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, 353.7 mm

Reference Value = 16.9 V/m; Power Drift = 0.129 dB

Maximum value of Total (measured) = 31.0 V/m

E Scan - ER3D - 2007: 15 mm from Probe Center to the

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

Maximum value of peak Total field = 70.3 V/m

Probe Modulation Factor = 2.88

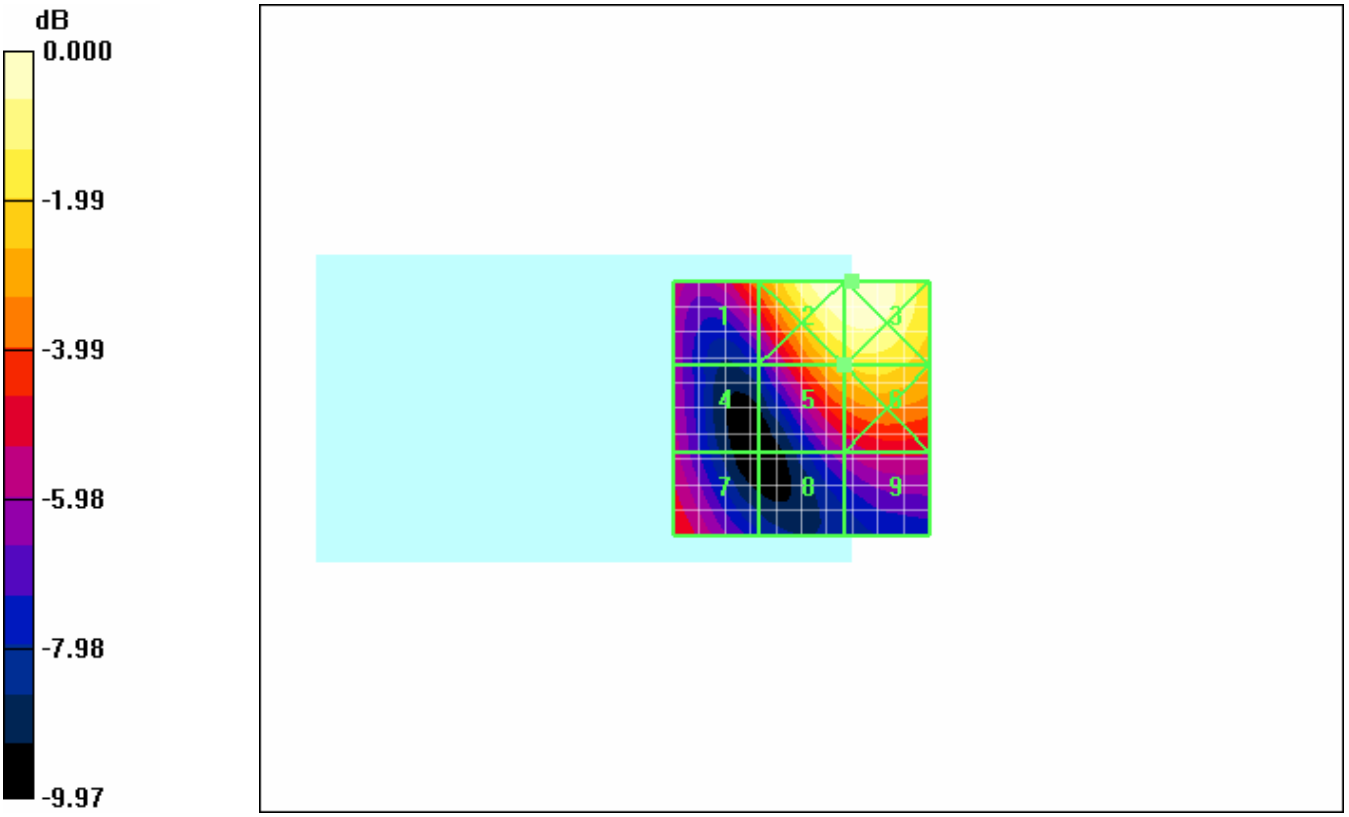
Device Reference Point: 0.000, 0.000, 353.7 mm

Reference Value = 16.9 V/m; Power Drift = 0.129 dB

Hearing Aid Near-Field Category: M3 (AWF -5 dB)

Peak E-field in V/m

Grid 1 **60.2** **M3**	Grid 2 **88.9** **M2**	Grid 3 **89.2** **M2**
Grid 4 **46.5** **M4**	Grid 5 **70.3** **M3**	Grid 6 **73.4** **M3**
Grid 7 **52.9** **M3**	Grid 8 **44.8** **M4**	Grid 9 **49.6** **M3**



0 dB = 89.2V/m

Date/Time: 26/08/2008 12:06:19 PM

Test Laboratory: RTS

File Name: HAC_E_GSM1900_Mid_Chan.da4

DUT: BlackBerry Smartphone; Type: Sample ; Serial: Not Specified

Program Name: HAC RF ER3D Device

Communication System: GSM 1900; Frequency: 1880 MHz;Duty Cycle: 1:8.3

Medium parameters used: s = 0 mho/m, e_r = 1; density = 1000 kg/m^3

Phantom section: E Device Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2285; ConvF(1, 1, 1); Calibrated: 07/03/2008
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 05/03/2008
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

E Scan - ER3D - 2007: 15 mm from Probe Center to the Device/Hearing Aid Compatibility Test (11x11x1): Measurement grid: dx=5mm, dy=5mm

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, 353.7 mm

Reference Value = 15.9 V/m; Power Drift = 0.151 dB

Maximum value of Total (measured) = 33.6 V/m

E Scan - ER3D - 2007: 15 mm from Probe Center to the

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

Maximum value of peak Total field = 74.4 V/m

Probe Modulation Factor = 2.88

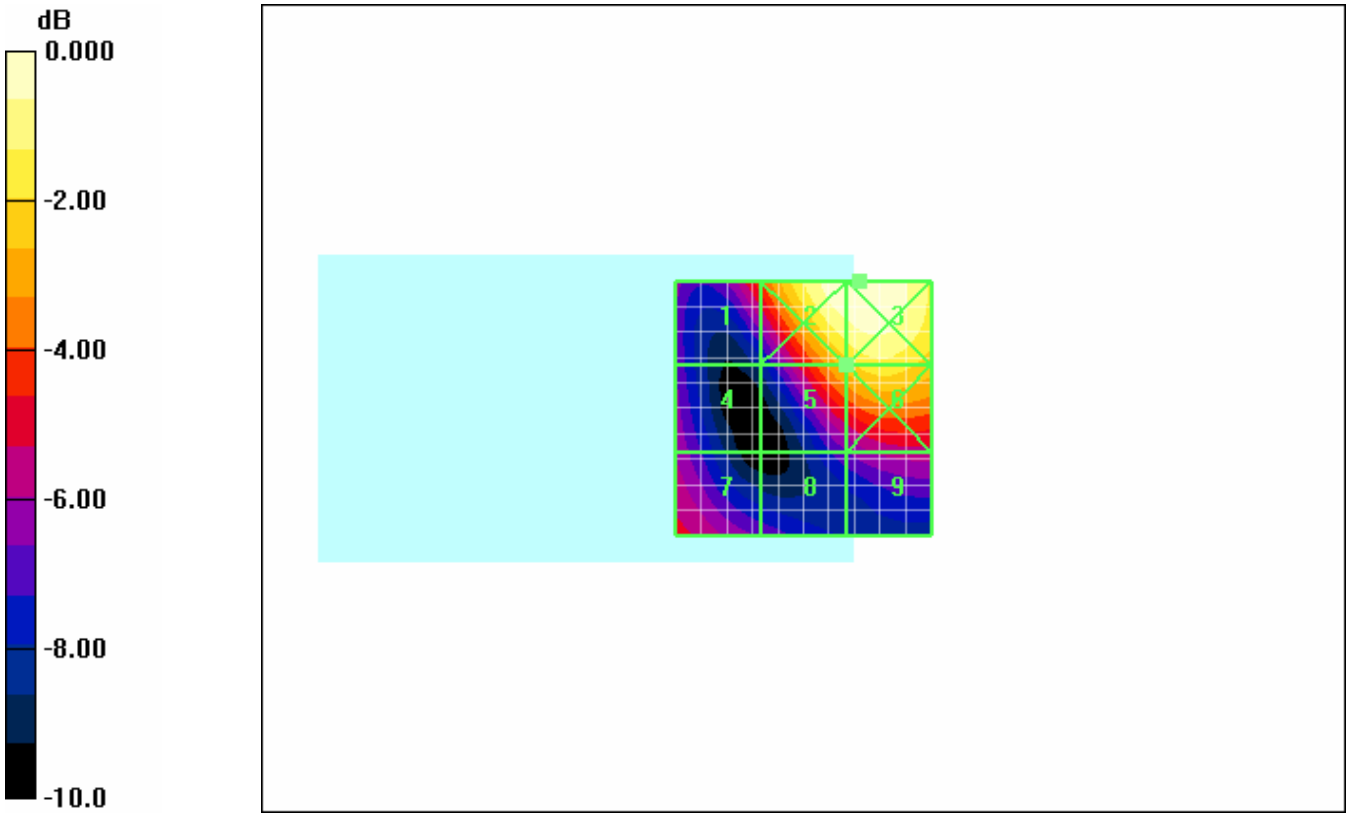
Device Reference Point: 0.000, 0.000, 353.7 mm

Reference Value = 15.9 V/m; Power Drift = 0.151 dB

Hearing Aid Near-Field Category: M3 (AWF -5 dB)

Peak E-field in V/m

Grid 1 **60.0** **M3**	Grid 2 **95.9** **M2**	Grid 3 **96.7** **M2**
Grid 4 **48.2** **M3**	Grid 5 **74.4** **M3**	Grid 6 **80.8** **M3**
Grid 7 **54.1** **M3**	Grid 8 **44.9** **M4**	Grid 9 **51.0** **M3**



0 dB = 96.7V/m

Date/Time: 27/09/2008 10:05:23 AM

Test Laboratory: RTS

File Name: HAC_E_GSM1900_Mid_Chan_Rev4.da4

DUT: BlackBerry Smartphone; Type: Sample ; Serial: Not Specified

Program Name: HAC RF ER3D Device

Communication System: GSM 1900; Frequency: 1880 MHz;Duty Cycle: 1:8.3

Medium parameters used: s = 0 mho/m, e_r = 1; density = 1000 kg/m^3

Phantom section: E Device Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2285; ConvF(1, 1, 1); Calibrated: 07/03/2008
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 05/03/2008
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

E Scan - ER3D - 2007: 15 mm from Probe Center to the Device/Hearing Aid Compatibility Test (11x11x1): Measurement grid: dx=5mm, dy=5mm

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, 353.7 mm

Reference Value = 18.5 V/m; Power Drift = -0.142 dB

Maximum value of Total (measured) = 32.8 V/m

E Scan - ER3D - 2007: 15 mm from Probe Center to the

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

Maximum value of peak Total field = 76.2 V/m

Probe Modulation Factor = 2.88

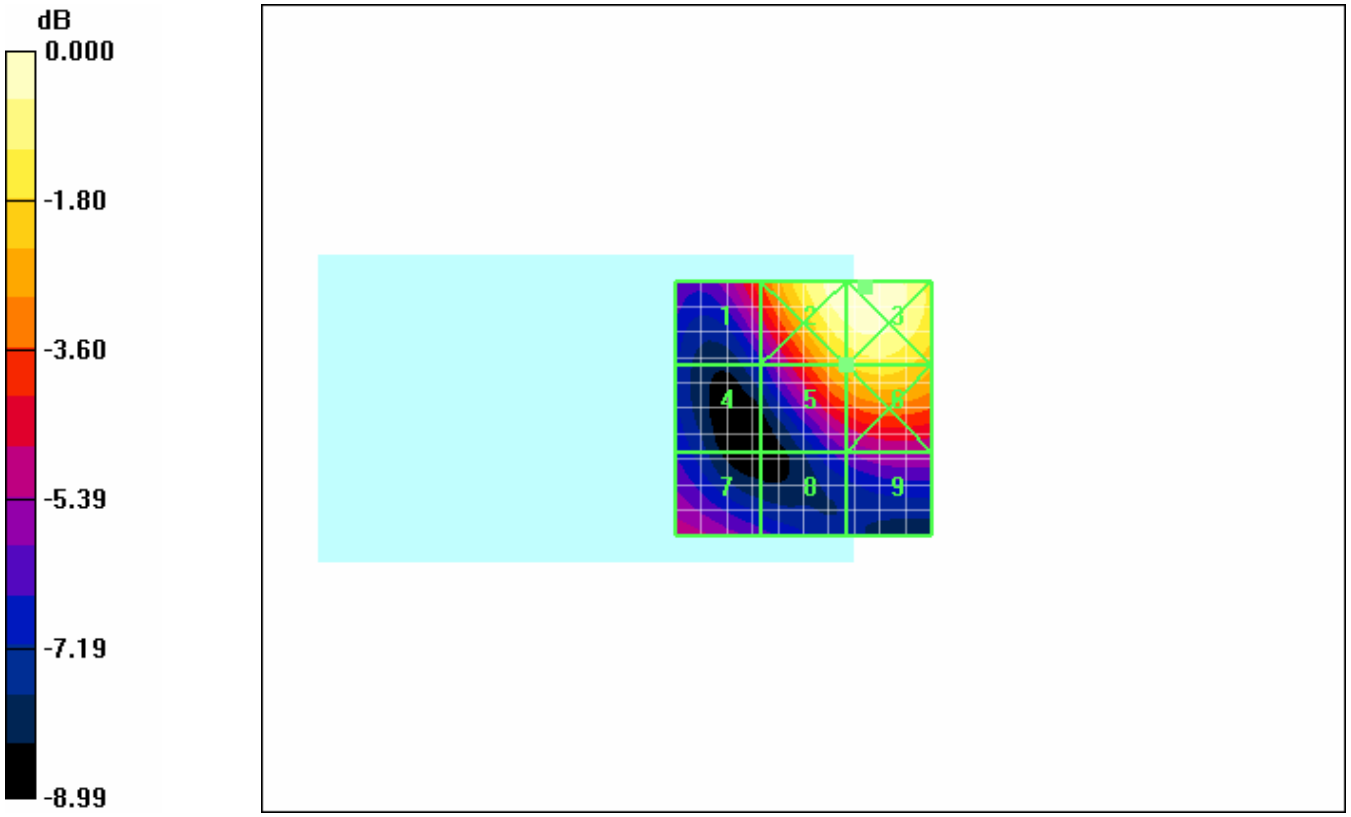
Device Reference Point: 0.000, 0.000, 353.7 mm

Reference Value = 18.5 V/m; Power Drift = -0.142 dB

Hearing Aid Near-Field Category: M3 (AWF -5 dB)

Peak E-field in V/m

Grid 1 **62.4** **M3**	Grid 2 **93.6** **M2**	Grid 3 **94.8** **M2**
Grid 4 **44.3** **M4**	Grid 5 **76.2** **M3**	Grid 6 **80.2** **M3**
Grid 7 **53.4** **M3**	Grid 8 **47.4** **M3**	Grid 9 **51.7** **M3**



0 dB = 94.8V/m

Date/Time: 26/08/2008 12:13:27 PM

Test Laboratory: RTS

File Name: HAC_E_GSM1900_High_Chan.da4

DUT: BlackBerry Smartphone; Type: Sample ; Serial: Not Specified

Program Name: HAC RF ER3D Device

Communication System: GSM 1900; Frequency: 1909.8 MHz;Duty Cycle: 1:8.3

Medium parameters used: s = 0 mho/m, e_r = 1; density = 1000 kg/m^3

Phantom section: E Device Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2285; ConvF(1, 1, 1); Calibrated: 07/03/2008
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 05/03/2008
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

E Scan - ER3D - 2007: 15 mm from Probe Center to the Device/Hearing Aid Compatibility Test (11x11x1): Measurement grid: dx=5mm, dy=5mm

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, 353.7 mm

Reference Value = 15.6 V/m; Power Drift = -0.010 dB

Maximum value of Total (measured) = 31.4 V/m

E Scan - ER3D - 2007: 15 mm from Probe Center to the

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

Maximum value of peak Total field = 69.1 V/m

Probe Modulation Factor = 2.88

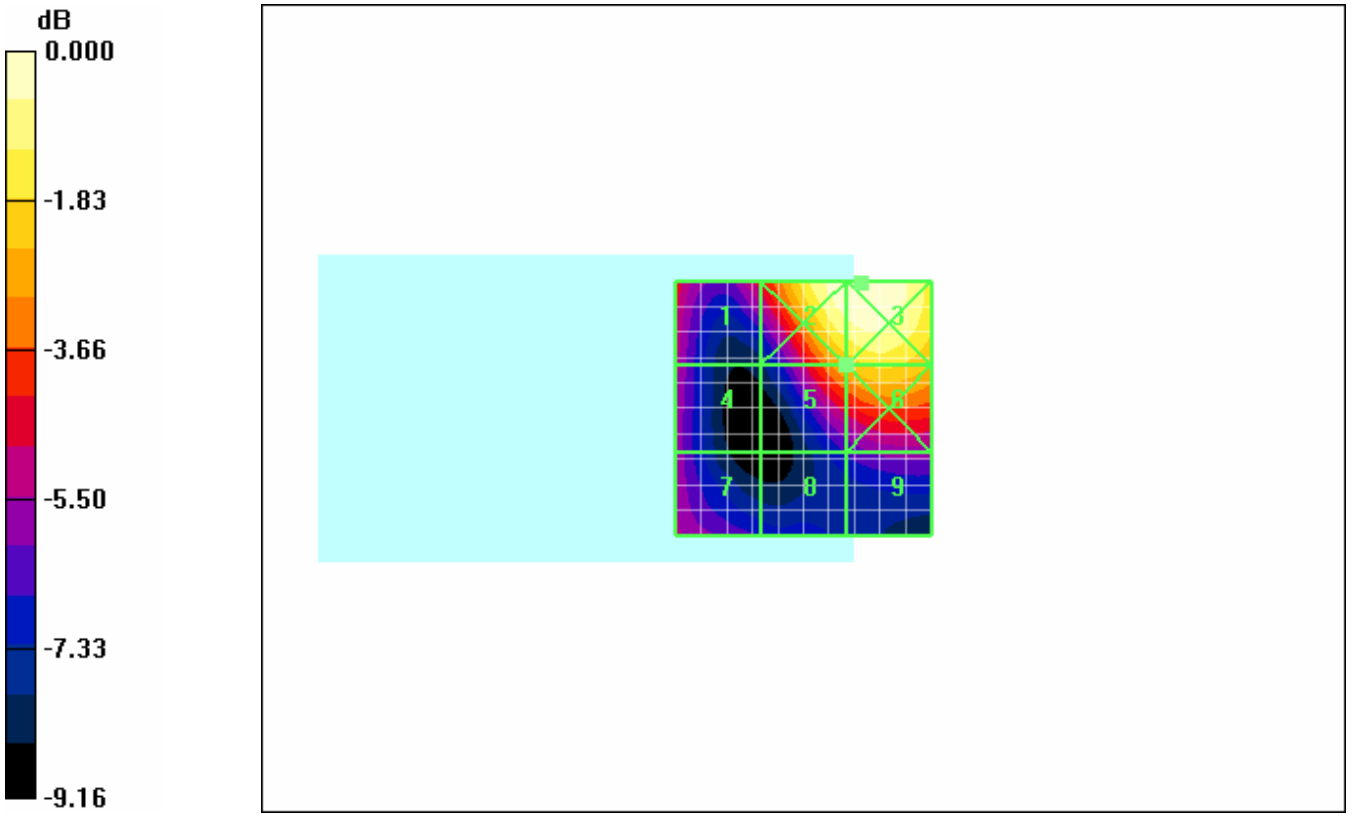
Device Reference Point: 0.000, 0.000, 353.7 mm

Reference Value = 15.6 V/m; Power Drift = -0.010 dB

Hearing Aid Near-Field Category: M3 (AWF -5 dB)

Peak E-field in V/m

Grid 1 **55.2** **M3**	Grid 2 **89.6** **M2**	Grid 3 **90.7** **M2**
Grid 4 **49.7** **M3**	Grid 5 **69.1** **M3**	Grid 6 **74.8** **M3**
Grid 7 **49.1** **M3**	Grid 8 **42.5** **M4**	Grid 9 **46.9** **M4**



0 dB = 90.7V/m

Date/Time: 26/08/2008 4:27:23 PM

Test Laboratory: RTS

File Name: HAC_E_CDMA1900_Low_Chan.da4

DUT: BlackBerry Smartphone; Type: Sample ; Serial: Not Specified

Program Name: HAC RF ER3D Device

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

Medium parameters used: s = 0 mho/m, e_r = 1; density = 1000 kg/m^3

Phantom section: E Device Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2285; ConvF(1, 1, 1); Calibrated: 07/03/2008
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 05/03/2008
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

E Scan - ER3D - 2007: 15 mm from Probe Center to the Device/Hearing Aid Compatibility Test (11x11x1): Measurement grid: dx=5mm, dy=5mm

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, 353.7 mm

Reference Value = 23.6 V/m; Power Drift = 0.057 dB

Maximum value of Total (measured) = 42.0 V/m

E Scan - ER3D - 2007: 15 mm from Probe Center to the

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

Maximum value of peak Total field = 28.9 V/m

Probe Modulation Factor = 0.870

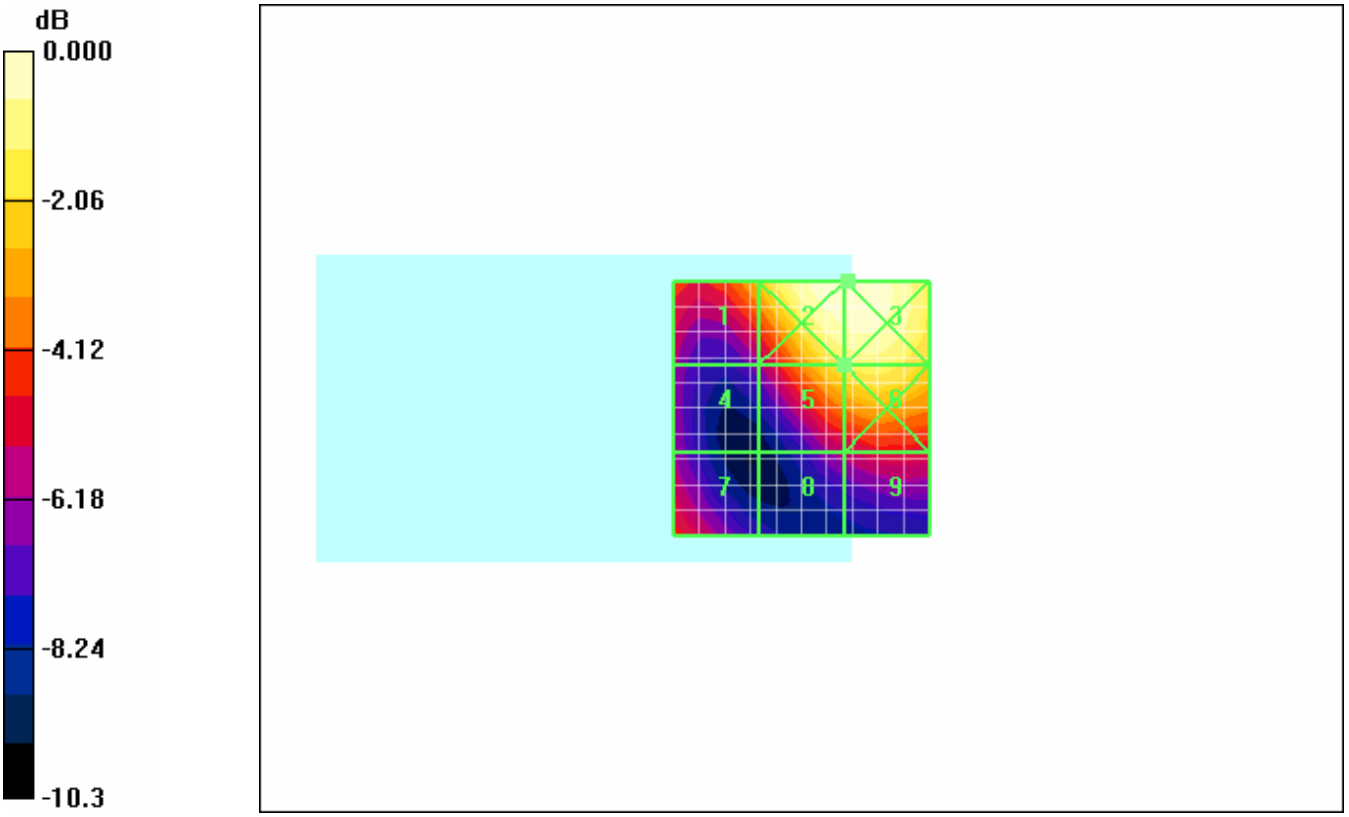
Device Reference Point: 0.000, 0.000, 353.7 mm

Reference Value = 23.6 V/m; Power Drift = 0.057 dB

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

Peak E-field in V/m

Grid 1 **25.8** **M4**	Grid 2 **36.6** **M4**	Grid 3 **36.6** **M4**
Grid 4 **17.1** **M4**	Grid 5 **28.9** **M4**	Grid 6 **30.1** **M4**
Grid 7 **20.3** **M4**	Grid 8 **17.7** **M4**	Grid 9 **19.4** **M4**



0 dB = 36.6V/m

Date/Time: 26/08/2008 4:34:44 PM

Test Laboratory: RTS

File Name: HAC_E_CDMA1900_Mid_Chan.da4

DUT: BlackBerry Smartphone; Type: Sample ; Serial: Not Specified

Program Name: HAC RF ER3D Device

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

Medium parameters used: s = 0 mho/m, e_r = 1; density = 1000 kg/m^3

Phantom section: E Device Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2285; ConvF(1, 1, 1); Calibrated: 07/03/2008
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 05/03/2008
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

E Scan - ER3D - 2007: 15 mm from Probe Center to the Device/Hearing Aid Compatibility Test (11x11x1): Measurement grid: dx=5mm, dy=5mm

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, 353.7 mm

Reference Value = 22.9 V/m; Power Drift = 0.180 dB

Maximum value of Total (measured) = 48.0 V/m

E Scan - ER3D - 2007: 15 mm from Probe Center to the

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

Maximum value of peak Total field = 31.9 V/m

Probe Modulation Factor = 0.870

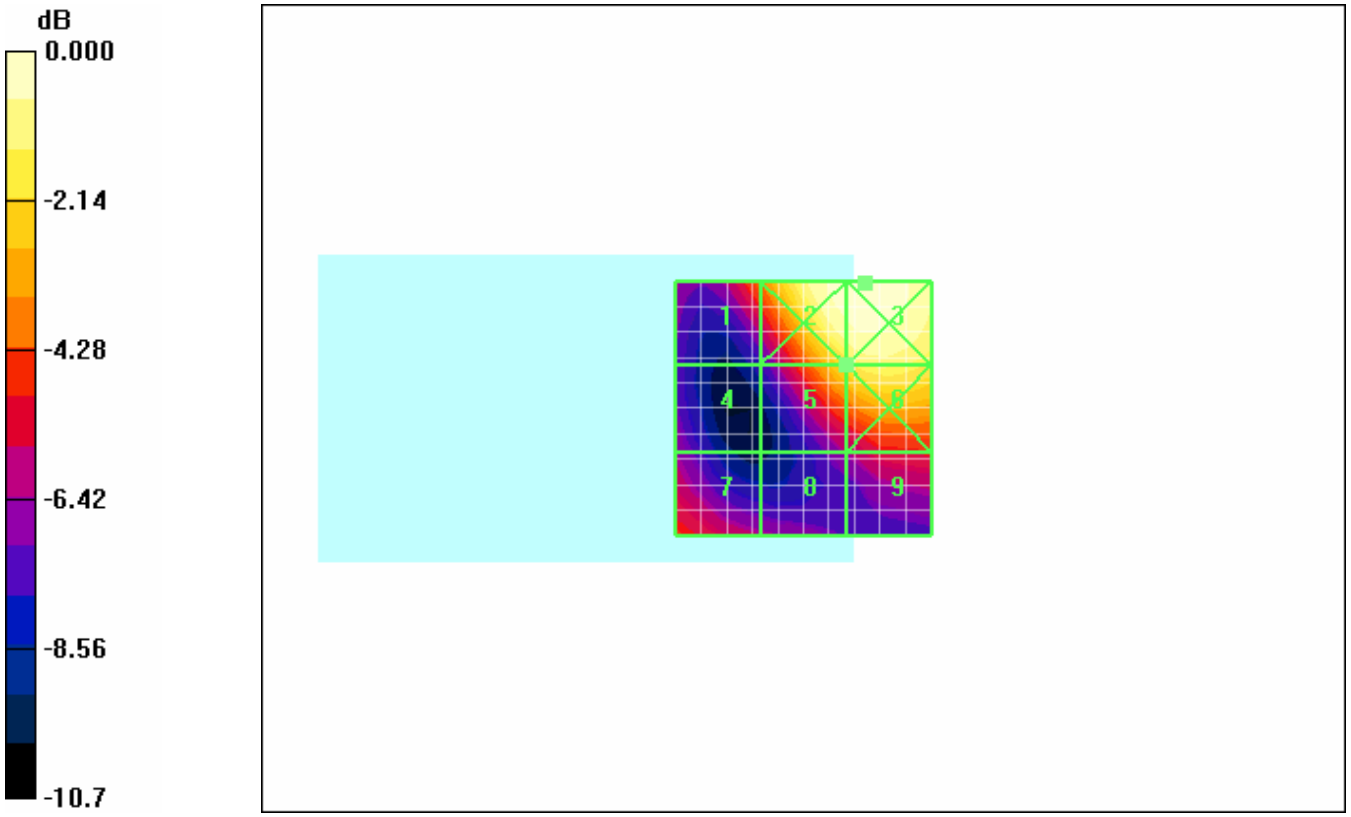
Device Reference Point: 0.000, 0.000, 353.7 mm

Reference Value = 22.9 V/m; Power Drift = 0.180 dB

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

Peak E-field in V/m

Grid 1 **25.7** **M4**	Grid 2 **41.2** **M4**	Grid 3 **42.1** **M4**
Grid 4 **18.7** **M4**	Grid 5 **31.9** **M4**	Grid 6 **34.5** **M4**
Grid 7 **22.9** **M4**	Grid 8 **19.2** **M4**	Grid 9 **22.3** **M4**



0 dB = 42.1V/m

Date/Time: 26/08/2008 4:42:38 PM

Test Laboratory: RTS

File Name: HAC_E_CDMA1900_High_Chan.da4

DUT: BlackBerry Smartphone; Type: Sample ; Serial: Not Specified

Program Name: HAC RF ER3D Device

Communication System: CDMA 1900; Frequency: 1908.5 MHz;Duty Cycle: 1:1

Medium parameters used: s = 0 mho/m, e_r = 1; density = 1000 kg/m^3

Phantom section: E Device Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2285; ConvF(1, 1, 1); Calibrated: 07/03/2008
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 05/03/2008
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

E Scan - ER3D - 2007: 15 mm from Probe Center to the Device/Hearing Aid Compatibility Test (11x11x1): Measurement grid: dx=5mm, dy=5mm

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, 353.7 mm

Reference Value = 23.2 V/m; Power Drift = 0.320 dB

Maximum value of Total (measured) = 44.5 V/m

E Scan - ER3D - 2007: 15 mm from Probe Center to the

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

Maximum value of peak Total field = 30.3 V/m

Probe Modulation Factor = 0.870

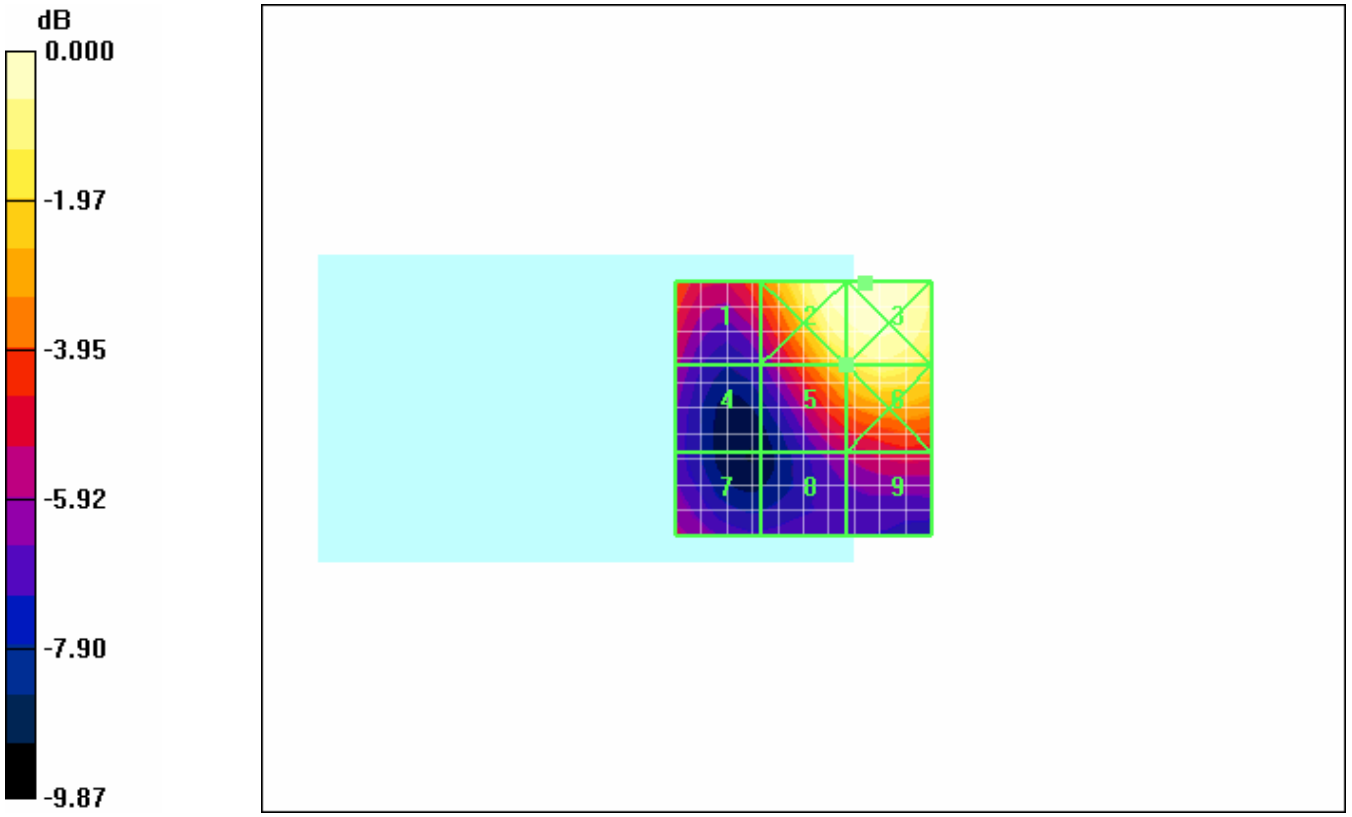
Device Reference Point: 0.000, 0.000, 353.7 mm

Reference Value = 23.2 V/m; Power Drift = 0.320 dB

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

Peak E-field in V/m

Grid 1 **23.8** **M4**	Grid 2 **38.4** **M4**	Grid 3 **38.9** **M4**
Grid 4 **18.8** **M4**	Grid 5 **30.3** **M4**	Grid 6 **32.6** **M4**
Grid 7 **18.9** **M4**	Grid 8 **18.9** **M4**	Grid 9 **21.0** **M4**



0 dB = 38.9V/m

Date/Time: 29/07/2008 6:31:43 PM

Test Laboratory: RTS

File Name: HAC_H_GSM850_Low_Chan.da4

DUT: BlackBerry Smartphone; Type: Sample ; Serial: Not Specified

Program Name: HAC RF H3DV6 Device

Communication System: GSM 850; Frequency: 824.2 MHz;Duty Cycle: 1:8.3

Medium parameters used: s = 0 mho/m, e_r = 1; density = 1 kg/m^3

Phantom section: E Device Section

DASY4 Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 09/11/2007
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 05/03/2008
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

H Scan - H3DV6 - 2007: 15 mm from Probe Center to the Device/Hearing Aid Compatibility Test (11x11x1): Measurement grid: dx=5mm, dy=5mm

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, 353.7 mm

Reference Value = 0.072 A/m; Power Drift = 0.136 dB

Maximum value of Total (measured) = 0.140 A/m

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

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

Maximum value of peak Total field = 0.353 A/m

Probe Modulation Factor = 2.64

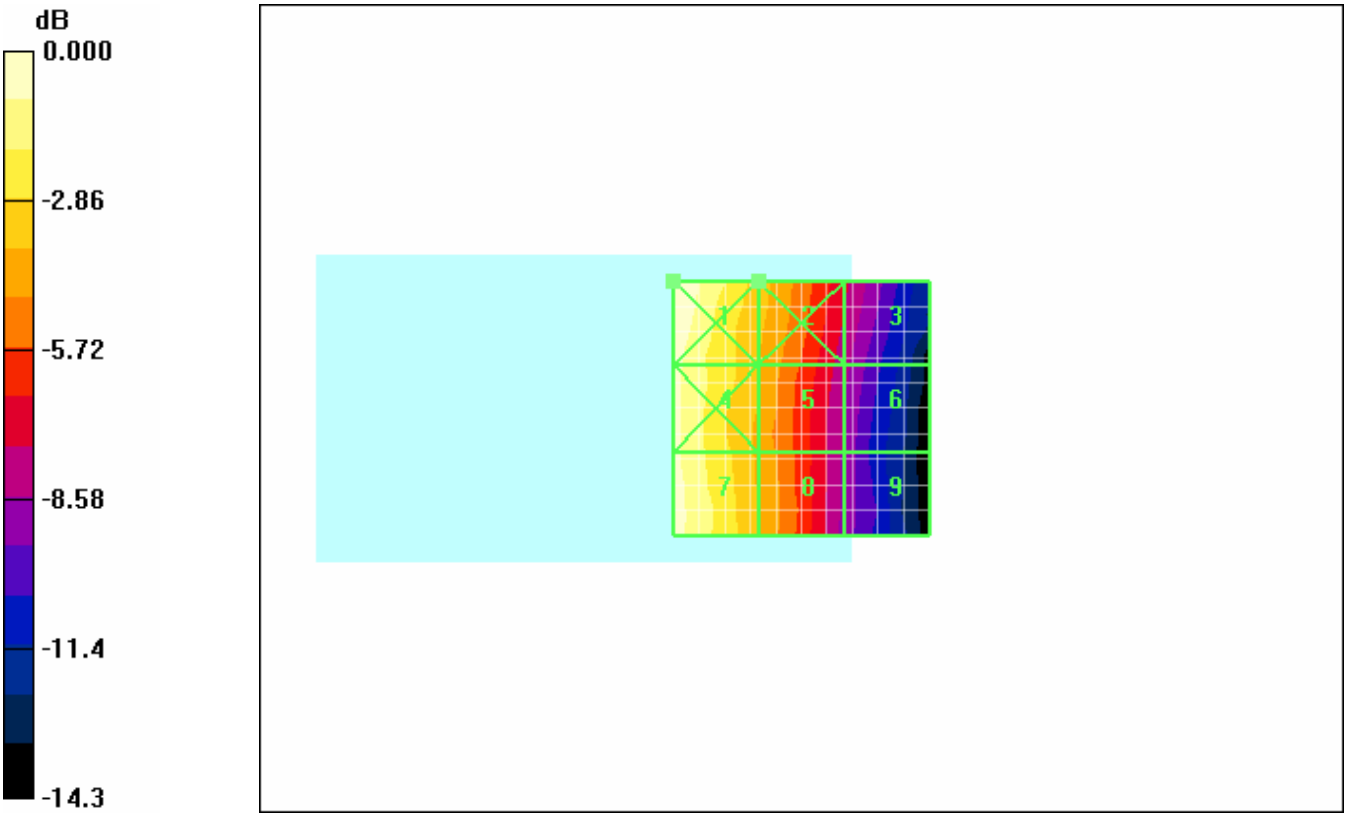
Device Reference Point: 0.000, 0.000, 353.7 mm

Reference Value = 0.072 A/m; Power Drift = 0.136 dB

Hearing Aid Near-Field Category: M4 (AWF -5 dB)

Peak H-field in A/m

Grid 1 **0.370** **M4**	Grid 2 **0.254** **M4**	Grid 3 **0.158** **M4**
Grid 4 **0.347** **M4**	Grid 5 **0.240** **M4**	Grid 6 **0.143** **M4**
Grid 7 **0.353** **M4**	Grid 8 **0.240** **M4**	Grid 9 **0.134** **M4**



0 dB = 0.370A/m

Date/Time: 26/08/2008 1:59:35 PM

Test Laboratory: RTS

File Name: HAC_H_GSM850_Mid_Chan.da4

DUT: BlackBerry Smartphone; Type: Sample ; Serial: Not Specified

Program Name: HAC RF H3DV6 Device

Communication System: GSM 850; Frequency: 836.8 MHz;Duty Cycle: 1:8.3

Medium parameters used: s = 0 mho/m, e_r = 1; density = 1 kg/m^3

Phantom section: E Device Section

DASY4 Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 09/11/2007
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 05/03/2008
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

H Scan - H3DV6 - 2007: 15 mm from Probe Center to the Device/Hearing Aid Compatibility Test (11x11x1): Measurement grid: dx=5mm, dy=5mm

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, 353.7 mm

Reference Value = 0.088 A/m; Power Drift = 0.037 dB

Maximum value of Total (measured) = 0.147 A/m

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

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

Maximum value of peak Total field = 0.350 A/m

Probe Modulation Factor = 2.64

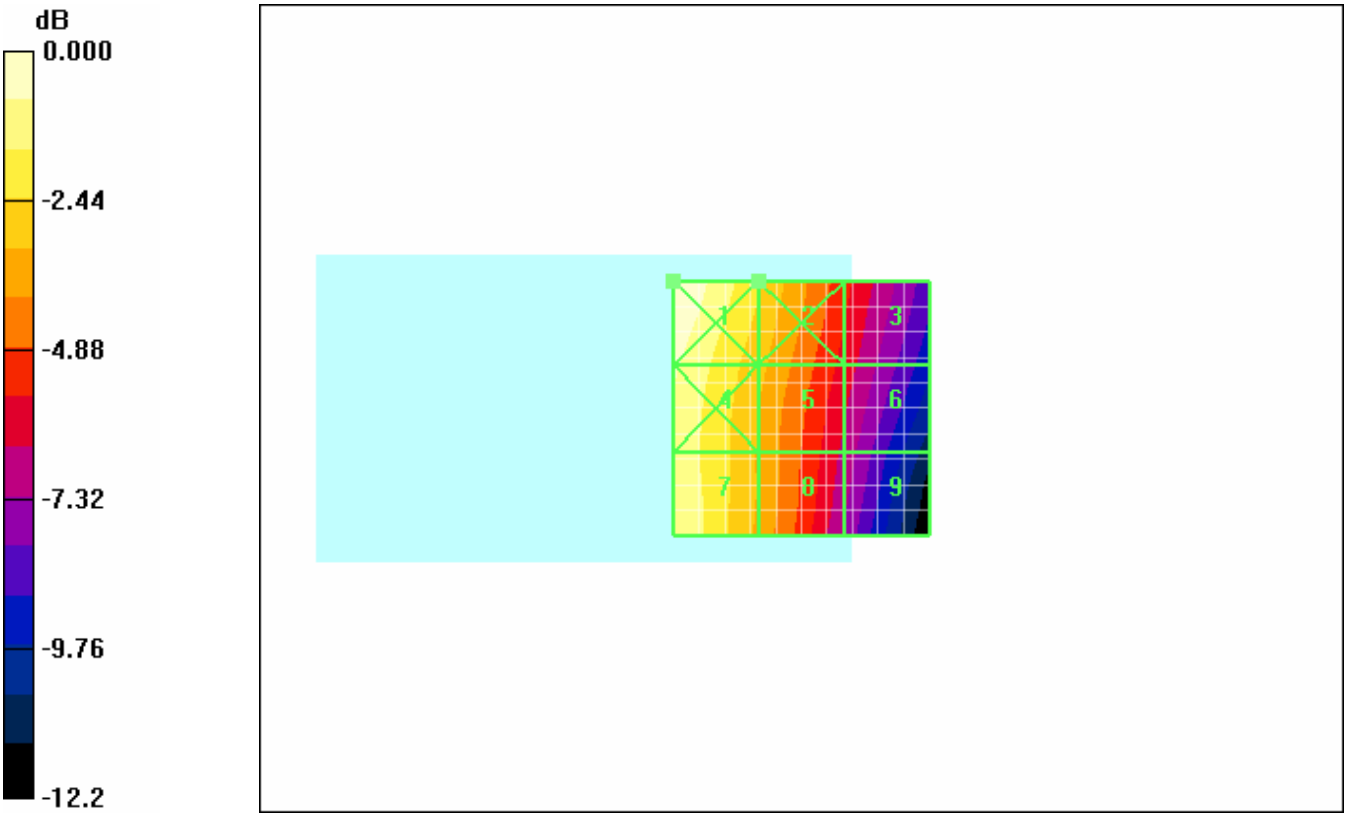
Device Reference Point: 0.000, 0.000, 353.7 mm

Reference Value = 0.088 A/m; Power Drift = 0.037 dB

Hearing Aid Near-Field Category: M4 (AWF -5 dB)

Peak H-field in A/m

Grid 1 **0.387** **M4**	Grid 2 **0.296** **M4**	Grid 3 **0.208** **M4**
Grid 4 **0.358** **M4**	Grid 5 **0.275** **M4**	Grid 6 **0.194** **M4**
Grid 7 **0.350** **M4**	Grid 8 **0.264** **M4**	Grid 9 **0.178** **M4**



0 dB = 0.387A/m

Date/Time: 26/08/2008 2:08:13 PM

Test Laboratory: RTS

File Name: HAC_H_GSM850_High_Chan.da4

DUT: BlackBerry Smartphone; Type: Sample ; Serial: Not Specified

Program Name: HAC RF H3DV6 Device

Communication System: GSM 850; Frequency: 848.8 MHz;Duty Cycle: 1:8.3

Medium parameters used: s = 0 mho/m, e_r = 1; density = 1 kg/m^3

Phantom section: E Device Section

DASY4 Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 09/11/2007
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 05/03/2008
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

H Scan - H3DV6 - 2007: 15 mm from Probe Center to the Device/Hearing Aid Compatibility Test (11x11x1): Measurement grid: dx=5mm, dy=5mm

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, 353.7 mm

Reference Value = 0.094 A/m; Power Drift = 0.015 dB

Maximum value of Total (measured) = 0.149 A/m

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

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

Maximum value of peak Total field = 0.377 A/m

Probe Modulation Factor = 2.64

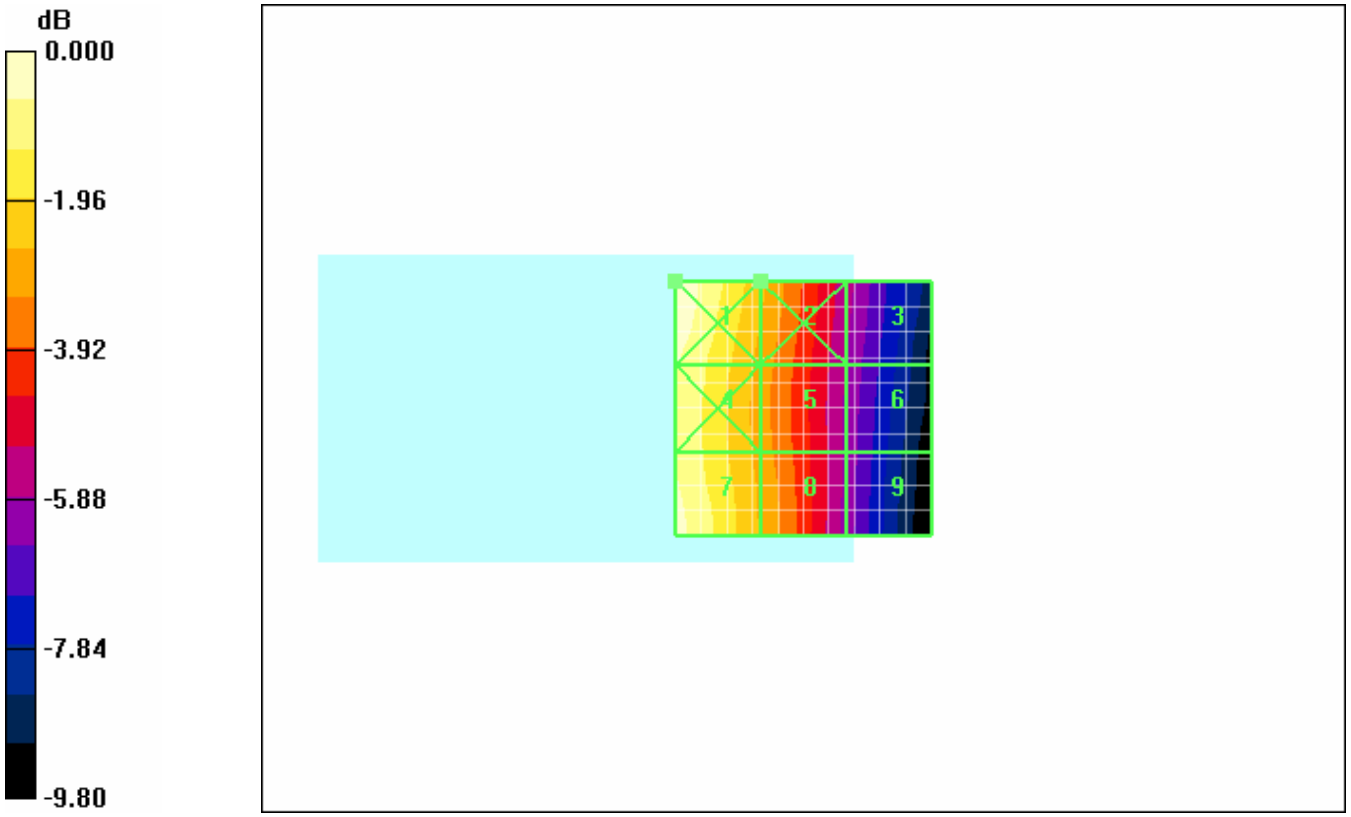
Device Reference Point: 0.000, 0.000, 353.7 mm

Reference Value = 0.094 A/m; Power Drift = 0.015 dB

Hearing Aid Near-Field Category: M4 (AWF -5 dB)

Peak H-field in A/m

Grid 1 **0.395** **M4**	Grid 2 **0.298** **M4**	Grid 3 **0.208** **M4**
Grid 4 **0.369** **M4**	Grid 5 **0.286** **M4**	Grid 6 **0.200** **M4**
Grid 7 **0.377** **M4**	Grid 8 **0.291** **M4**	Grid 9 **0.197** **M4**



0 dB = 0.395A/m

Date/Time: 27/09/2008 10:51:14 AM

Test Laboratory: RTS

File Name: HAC_H_GSM850_High_Chan_Rev4.da4

DUT: BlackBerry Smartphone; Type: Sample ; Serial: Not Specified

Program Name: HAC RF H3DV6 Device

Communication System: GSM 850; Frequency: 848.8 MHz;Duty Cycle: 1:8.3

Medium parameters used: s = 0 mho/m, e_r = 1; density = 1 kg/m^3

Phantom section: E Device Section

DASY4 Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 09/11/2007
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 05/03/2008
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

H Scan - H3DV6 - 2007: 15 mm from Probe Center to the Device/Hearing Aid Compatibility Test (11x11x1): Measurement grid: dx=5mm, dy=5mm

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, 353.7 mm

Reference Value = 0.088 A/m; Power Drift = 0.076 dB

Maximum value of Total (measured) = 0.141 A/m

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

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

Maximum value of peak Total field = 0.371 A/m

Probe Modulation Factor = 2.64

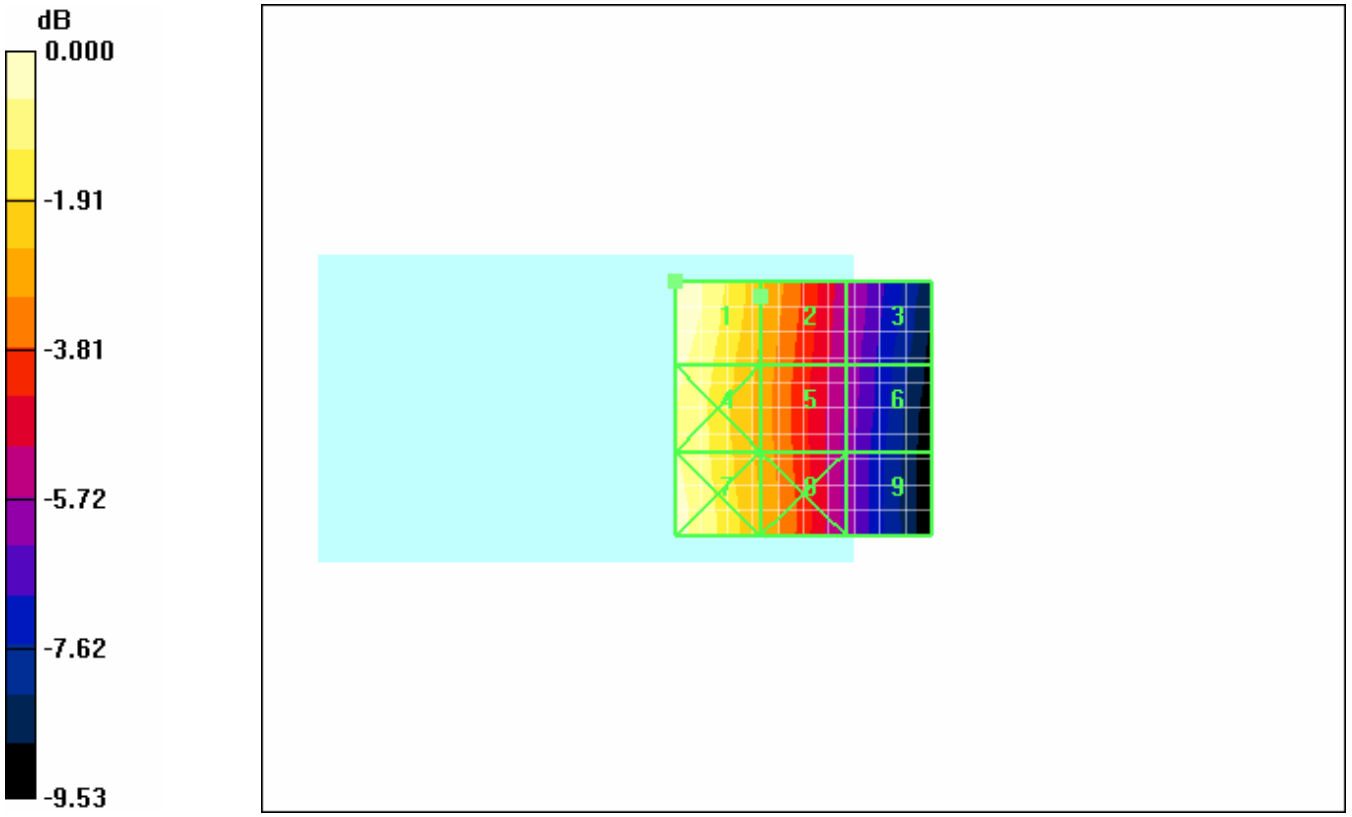
Device Reference Point: 0.000, 0.000, 353.7 mm

Reference Value = 0.088 A/m; Power Drift = 0.076 dB

Hearing Aid Near-Field Category: M4 (AWF -5 dB)

Peak H-field in A/m

Grid 1 **0.371** **M4**	Grid 2 **0.282** **M4**	Grid 3 **0.196** **M4**
Grid 4 **0.352** **M4**	Grid 5 **0.273** **M4**	Grid 6 **0.191** **M4**
Grid 7 **0.353** **M4**	Grid 8 **0.278** **M4**	Grid 9 **0.187** **M4**



0 dB = 0.371A/m

Date/Time: 26/08/2008 3:33:07 PM

Test Laboratory: RTS

File Name: HAC_H_CDMA800_Low_Chan.da4

DUT: BlackBerry Smartphone; Type: Sample ; Serial: Not Specified

Program Name: HAC RF H3DV6 Device

Communication System: CDMA 800; Frequency: 824.7 MHz;Duty Cycle: 1:1

Medium parameters used: s = 0 mho/m, e_r = 1; density = 1 kg/m^3

Phantom section: E Device Section

DASY4 Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 09/11/2007
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 05/03/2008
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

H Scan - H3DV6 - 2007: 15 mm from Probe Center to the Device/Hearing Aid Compatibility Test (11x11x1): Measurement grid: dx=5mm, dy=5mm

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, 353.7 mm

Reference Value = 0.070 A/m; Power Drift = 0.030 dB

Maximum value of Total (measured) = 0.124 A/m

H Scan - H3DV6 - 2007: 15 mm from Probe Center to the Device/Hearing Aid Compatibility Test (101x101x1): Measurement grid: dx=5mm, dy=5mm

Maximum value of peak Total field = 0.108 A/m

Probe Modulation Factor = 0.970

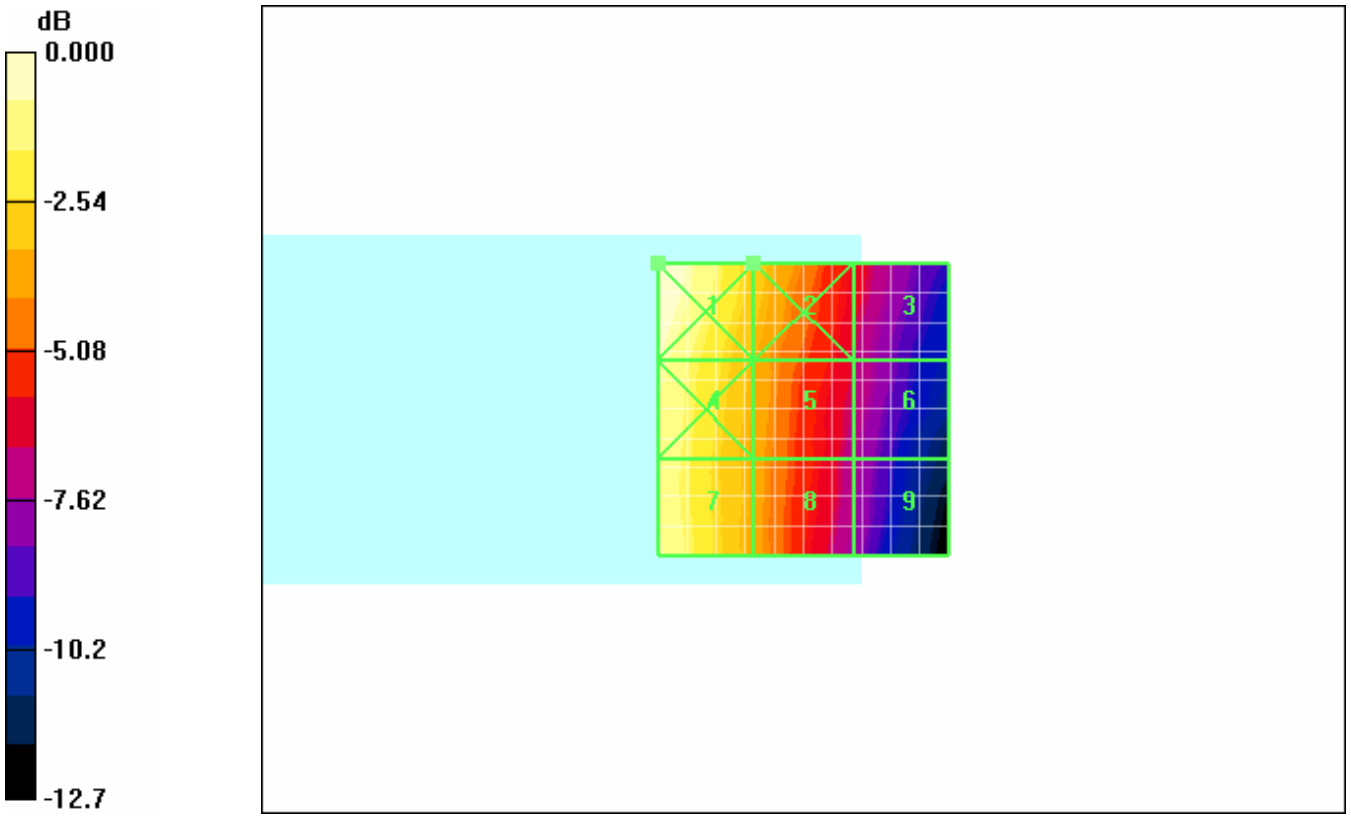
Device Reference Point: 0.000, 0.000, 353.7 mm

Reference Value = 0.070 A/m; Power Drift = 0.030 dB

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

Peak H-field in A/m

Grid 1 **0.120** **M4**	Grid 2 **0.085** **M4**	Grid 3 **0.059** **M4**
Grid 4 **0.110** **M4**	Grid 5 **0.080** **M4**	Grid 6 **0.055** **M4**
Grid 7 **0.108** **M4**	Grid 8 **0.078** **M4**	Grid 9 **0.051** **M4**



0 dB = 0.120A/m

Date/Time: 26/08/2008 3:40:49 PM

Test Laboratory: RTS

File Name: HAC_H_CDMA800_Mid_Chan.da4

DUT: BlackBerry Smartphone; Type: Sample ; Serial: Not Specified

Program Name: HAC RF H3DV6 Device

Communication System: CDMA 800; Frequency: 824.7 MHz;Duty Cycle: 1:1

Medium parameters used: s = 0 mho/m, e_r = 1; density = 1 kg/m^3

Phantom section: E Device Section

DASY4 Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 09/11/2007
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 05/03/2008
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

H Scan - H3DV6 - 2007: 15 mm from Probe Center to the Device/Hearing Aid Compatibility Test (11x11x1): Measurement grid: dx=5mm, dy=5mm

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, 353.7 mm

Reference Value = 0.085 A/m; Power Drift = -0.044 dB

Maximum value of Total (measured) = 0.138 A/m

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

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

Maximum value of peak Total field = 0.122 A/m

Probe Modulation Factor = 0.970

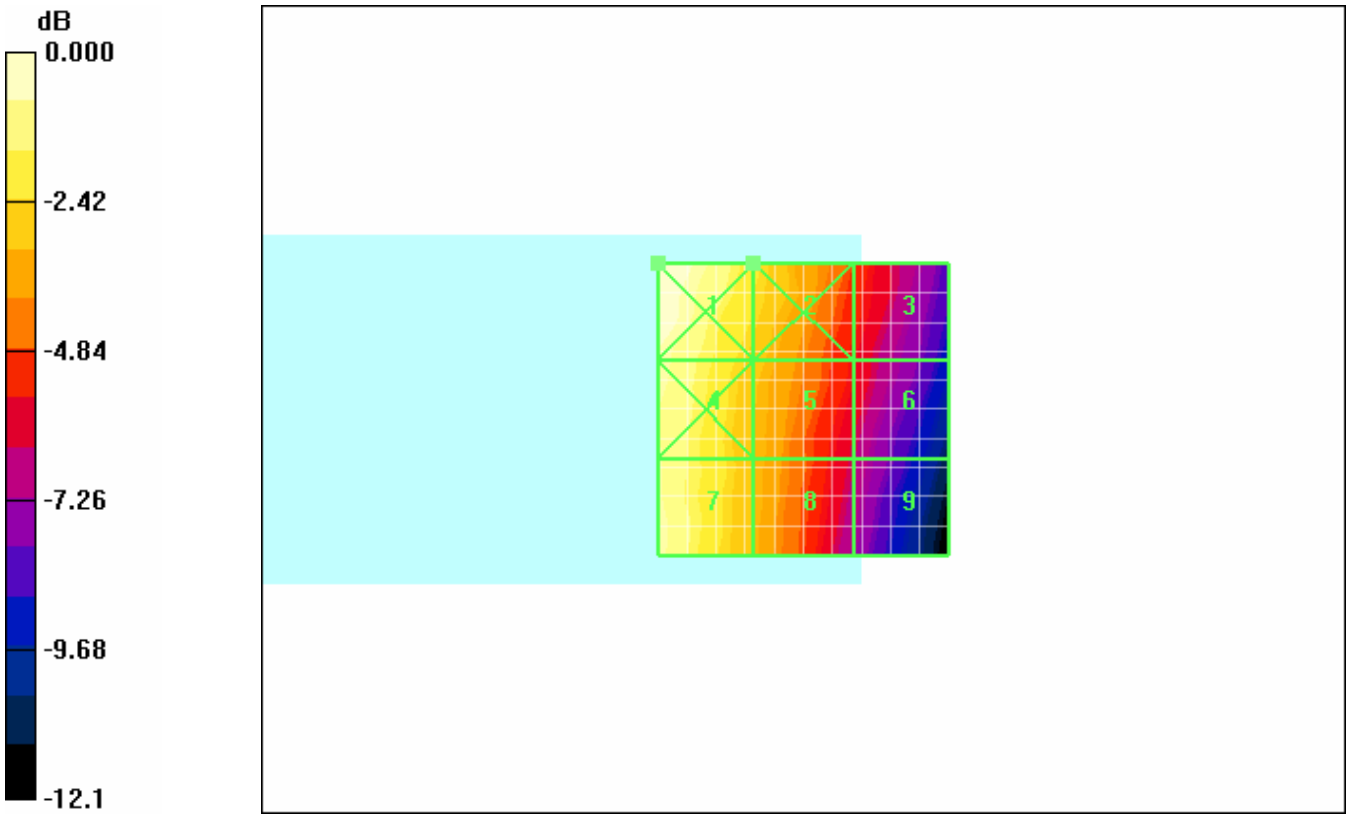
Device Reference Point: 0.000, 0.000, 353.7 mm

Reference Value = 0.085 A/m; Power Drift = -0.044 dB

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

Peak H-field in A/m

Grid 1 **0.134** **M4**	Grid 2 **0.104** **M4**	Grid 3 **0.075** **M4**
Grid 4 **0.122** **M4**	Grid 5 **0.096** **M4**	Grid 6 **0.069** **M4**
Grid 7 **0.122** **M4**	Grid 8 **0.093** **M4**	Grid 9 **0.063** **M4**



0 dB = 0.134A/m

Date/Time: 26/08/2008 3:48:23 PM

Test Laboratory: RTS

File Name: HAC_H_CDMA800_High_Chan.da4

DUT: BlackBerry Smartphone; Type: Sample ; Serial: Not Specified

Program Name: HAC RF H3DV6 Device

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

Medium parameters used: s = 0 mho/m, e_r = 1; density = 1 kg/m^3

Phantom section: E Device Section

DASY4 Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 09/11/2007
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 05/03/2008
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

H Scan - H3DV6 - 2007: 15 mm from Probe Center to the Device/Hearing Aid Compatibility Test (11x11x1): Measurement grid: dx=5mm, dy=5mm

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, 353.7 mm

Reference Value = 0.083 A/m; Power Drift = -0.157 dB

Maximum value of Total (measured) = 0.135 A/m

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

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

Maximum value of peak Total field = 0.127 A/m

Probe Modulation Factor = 0.970

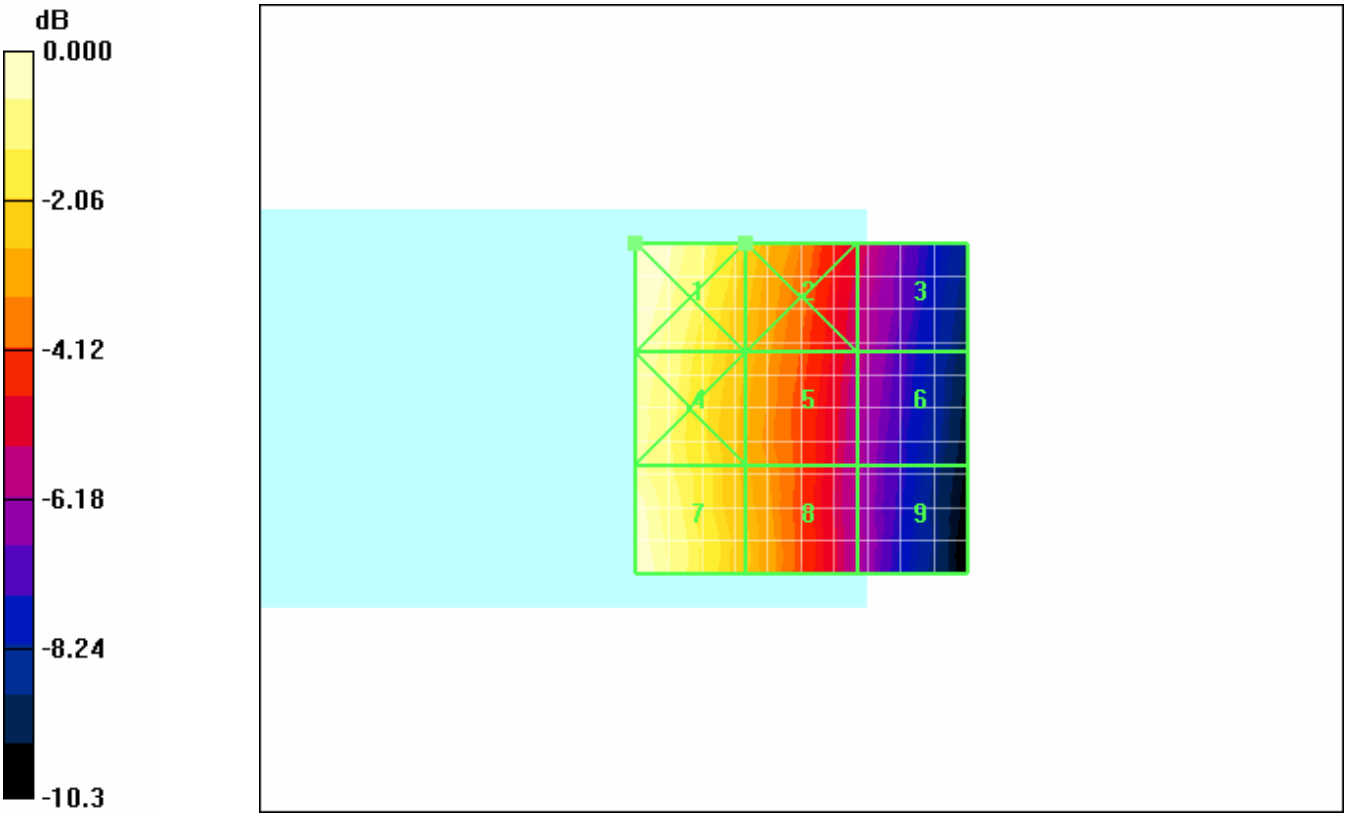
Device Reference Point: 0.000, 0.000, 353.7 mm

Reference Value = 0.083 A/m; Power Drift = -0.157 dB

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

Peak H-field in A/m

Grid 1 **0.131** **M 4**	Grid 2 **0.101** **M 4**	Grid 3 **0.070** **M 4**
Grid 4 **0.122** **M 4**	Grid 5 **0.096** **M 4**	Grid 6 **0.067** **M 4**
Grid 7 **0.127** **M 4**	Grid 8 **0.097** **M 4**	Grid 9 **0.064** **M 4**



0 dB = 0.131A/m

Date/Time: 26/08/2008 2:17:29 PM

Test Laboratory: RTS

File Name: HAC_H_GSM1900_Low_Chan.da4

DUT: BlackBerry Smartphone; Type: Sample ; Serial: Not Specified

Program Name: HAC RF H3DV6 Device

Communication System: GSM 1900; Frequency: 1850.2 MHz;Duty Cycle: 1:8.3

Medium parameters used: s = 0 mho/m, e_r = 1; density = 1 kg/m^3

Phantom section: E Device Section

DASY4 Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 09/11/2007
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 05/03/2008
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

H Scan - H3DV6 - 2007: 15 mm from Probe Center to the Device/Hearing Aid Compatibility Test (11x11x1): Measurement grid: dx=5mm, dy=5mm

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, 353.7 mm

Reference Value = 0.070 A/m; Power Drift = 0.029 dB

Maximum value of Total (measured) = 0.110 A/m

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

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

Maximum value of peak Total field = 0.198 A/m

Probe Modulation Factor = 2.53

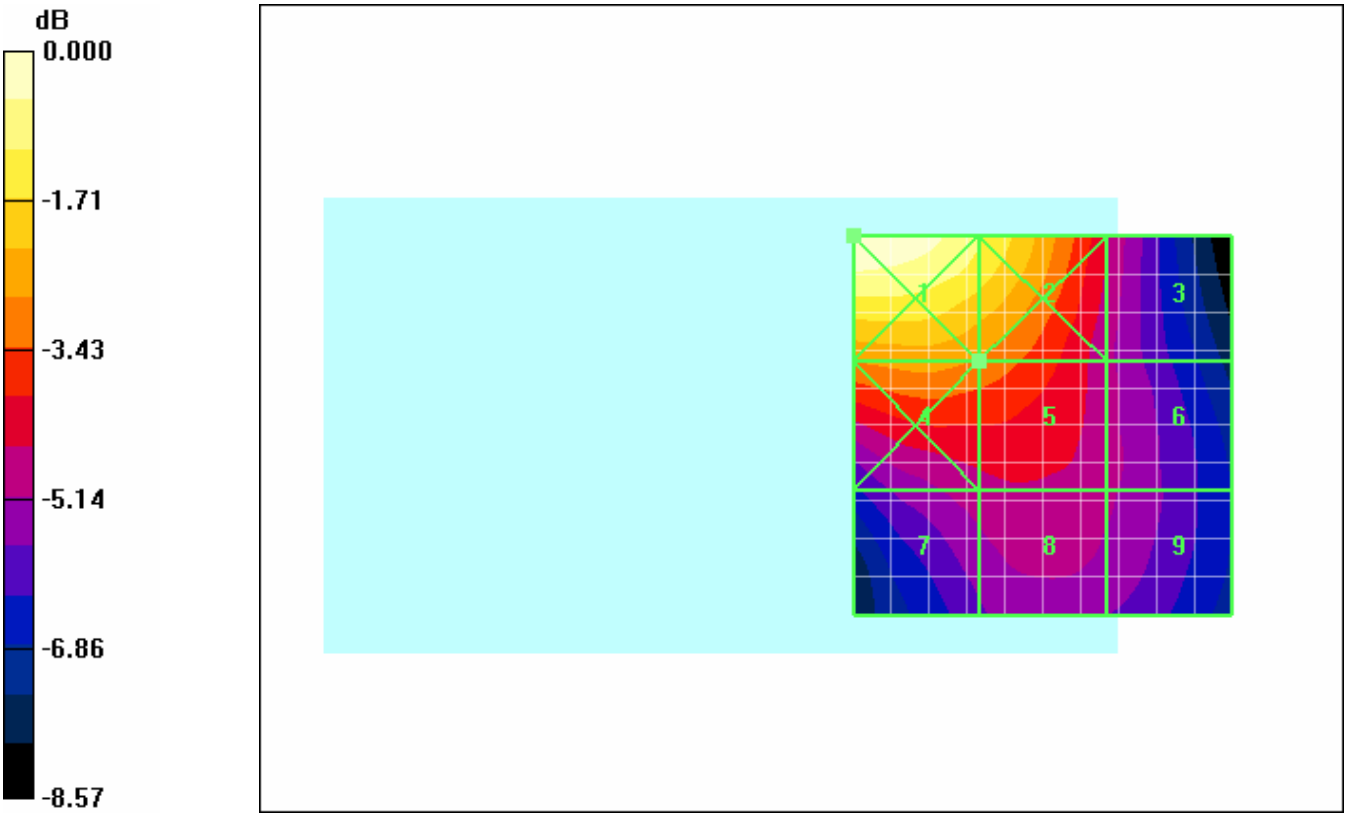
Device Reference Point: 0.000, 0.000, 353.7 mm

Reference Value = 0.070 A/m; Power Drift = 0.029 dB

Hearing Aid Near-Field Category: M3 (AWF -5 dB)

Peak H-field in A/m

Grid 1 **0.277** **M2**	Grid 2 **0.245** **M3**	Grid 3 **0.165** **M3**
Grid 4 **0.205** **M3**	Grid 5 **0.198** **M3**	Grid 6 **0.158** **M3**
Grid 7 **0.160** **M3**	Grid 8 **0.163** **M3**	Grid 9 **0.156** **M3**



0 dB = 0.277A/m

Date/Time: 26/08/2008 2:25:07 PM

Test Laboratory: RTS

File Name: HAC_H_GSM1900_Mid_Chan.da4

DUT: BlackBerry Smartphone; Type: Sample ; Serial: Not Specified

Program Name: HAC RF H3DV6 Device

Communication System: GSM 1900; Frequency: 1880 MHz;Duty Cycle: 1:8.3

Medium parameters used: s = 0 mho/m, e_r = 1; density = 1 kg/m^3

Phantom section: E Device Section

DASY4 Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 09/11/2007
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 05/03/2008
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

H Scan - H3DV6 - 2007: 15 mm from Probe Center to the Device/Hearing Aid Compatibility Test (11x11x1): Measurement grid: dx=5mm, dy=5mm

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, 353.7 mm

Reference Value = 0.070 A/m; Power Drift = -0.017 dB

Maximum value of Total (measured) = 0.108 A/m

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

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

Maximum value of peak Total field = 0.195 A/m

Probe Modulation Factor = 2.53

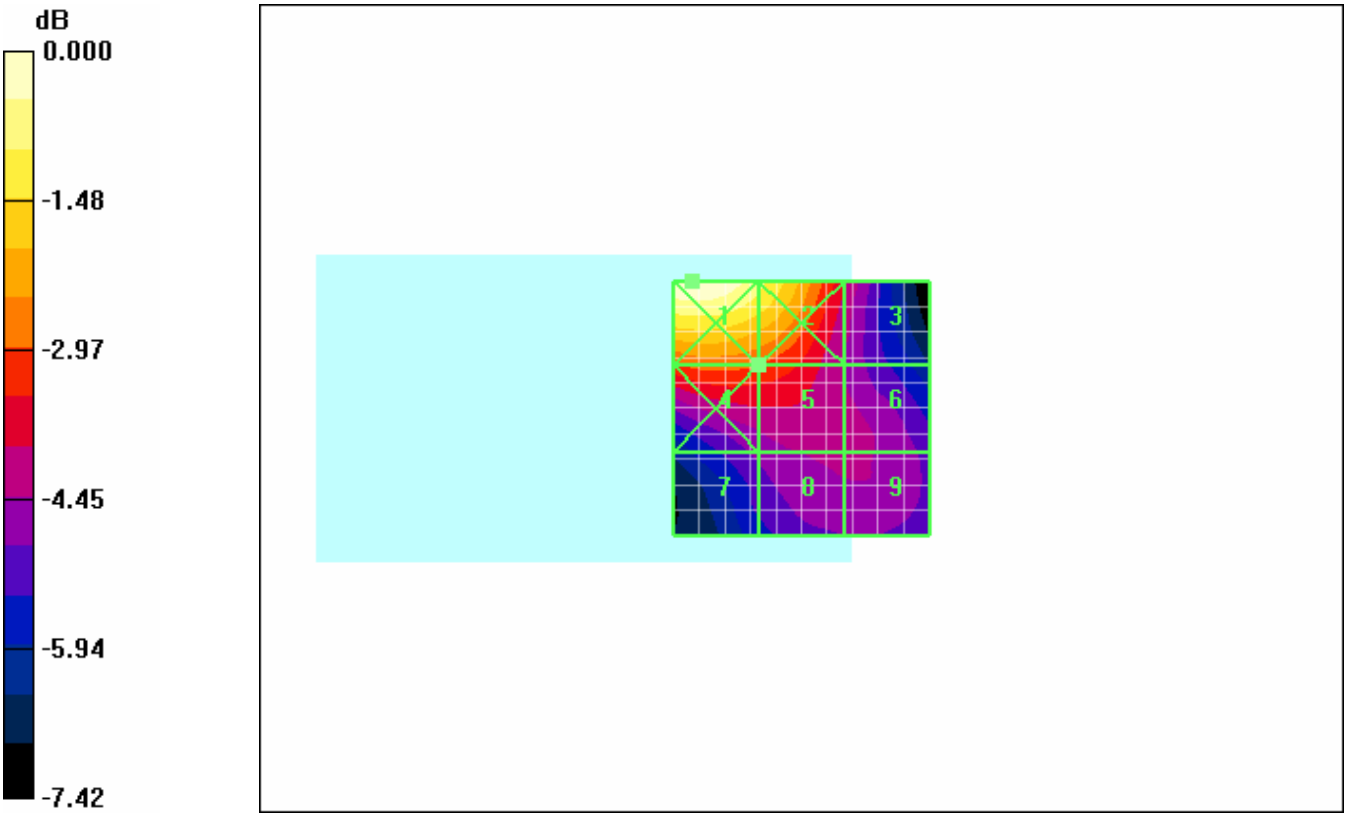
Device Reference Point: 0.000, 0.000, 353.7 mm

Reference Value = 0.070 A/m; Power Drift = -0.017 dB

Hearing Aid Near-Field Category: M3 (AWF -5 dB)

Peak H-field in A/m

Grid 1 **0.273** **M2**	Grid 2 **0.249** **M3**	Grid 3 **0.176** **M3**
Grid 4 **0.199** **M3**	Grid 5 **0.195** **M3**	Grid 6 **0.167** **M3**
Grid 7 **0.158** **M3**	Grid 8 **0.166** **M3**	Grid 9 **0.166** **M3**



0 dB = 0.273A/m

Date/Time: 27/09/2008 10:59:01 AM

Test Laboratory: RTS

File Name: HAC_H_GSM1900_Mid_Chan_Rev4.da4

DUT: BlackBerry Smartphone; Type: Sample ; Serial: Not Specified

Program Name: HAC RF H3DV6 Device

Communication System: GSM 1900; Frequency: 1880 MHz;Duty Cycle: 1:8.3

Medium parameters used: s = 0 mho/m, e_r = 1; density = 1 kg/m^3

Phantom section: E Device Section

DASY4 Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 09/11/2007
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 05/03/2008
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

H Scan - H3DV6 - 2007: 15 mm from Probe Center to the Device/Hearing Aid Compatibility Test (11x11x1): Measurement grid: dx=5mm, dy=5mm

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, 353.7 mm

Reference Value = 0.068 A/m; Power Drift = 0.114 dB

Maximum value of Total (measured) = 0.101 A/m

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

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

Maximum value of peak Total field = 0.191 A/m

Probe Modulation Factor = 2.53

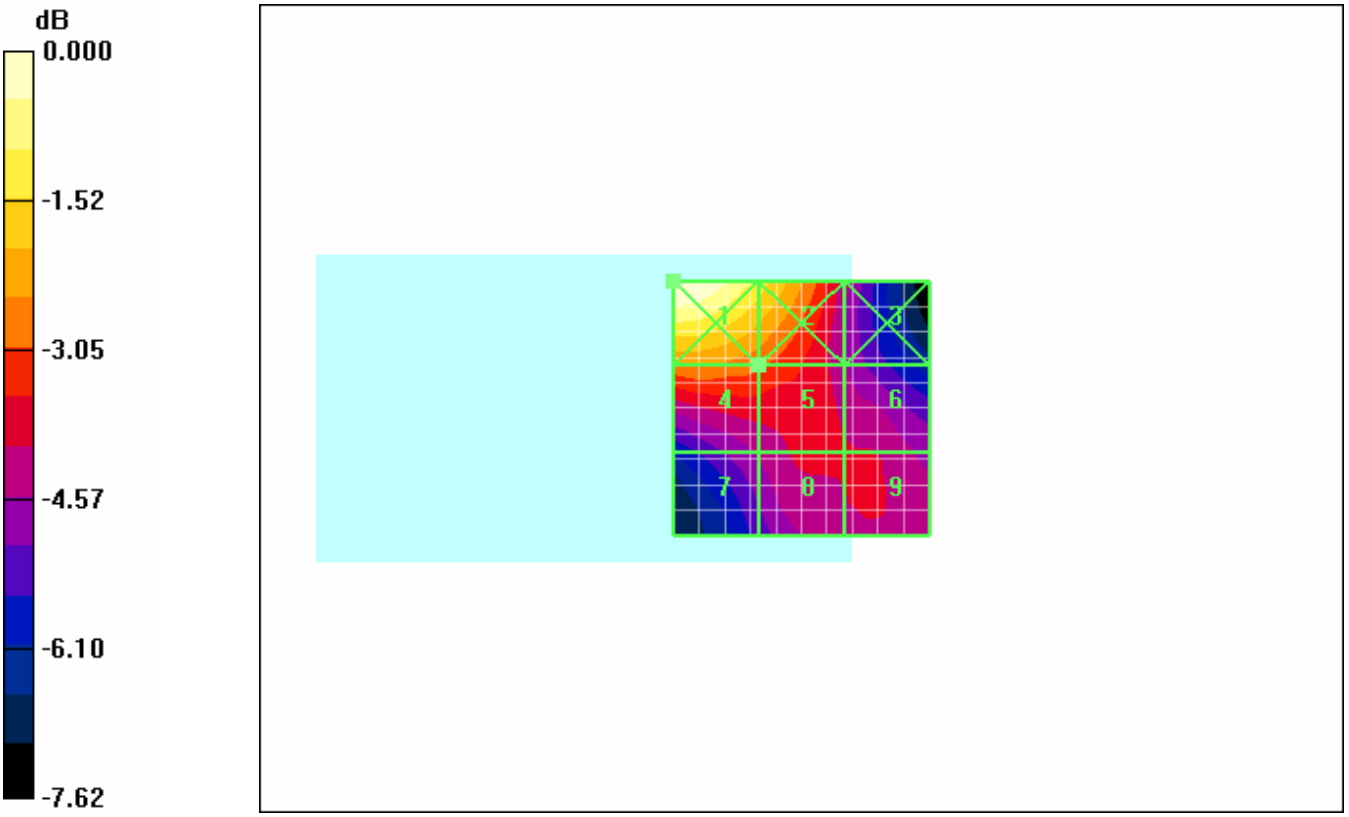
Device Reference Point: 0.000, 0.000, 353.7 mm

Reference Value = 0.068 A/m; Power Drift = 0.114 dB

Hearing Aid Near-Field Category: M3 (AWF -5 dB)

Peak H-field in A/m

Grid 1 **0.255 M2**	Grid 2 **0.222 M3**	Grid 3 **0.156 M3**
Grid 4 **0.191 M3**	Grid 5 **0.182 M3**	Grid 6 **0.161 M3**
Grid 7 **0.152 M3**	Grid 8 **0.164 M3**	Grid 9 **0.162 M3**



0 dB = 0.255A/m

Date/Time: 26/08/2008 2:37:10 PM

Test Laboratory: RTS

File Name: HAC_H_GSM1900_High_Chan.da4

DUT: BlackBerry Smartphone; Type: Sample ; Serial: Not Specified

Program Name: HAC RF H3DV6 Device

Communication System: GSM 1900; Frequency: 1909.8 MHz;Duty Cycle: 1:8.3

Medium parameters used: s = 0 mho/m, e_r = 1; density = 1 kg/m^3

Phantom section: E Device Section

DASY4 Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 09/11/2007
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 05/03/2008
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

H Scan - H3DV6 - 2007: 15 mm from Probe Center to the Device/Hearing Aid Compatibility Test (11x11x1): Measurement grid: dx=5mm, dy=5mm

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, 353.7 mm

Reference Value = 0.066 A/m; Power Drift = -0.146 dB

Maximum value of Total (measured) = 0.106 A/m

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

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

Maximum value of peak Total field = 0.192 A/m

Probe Modulation Factor = 2.53

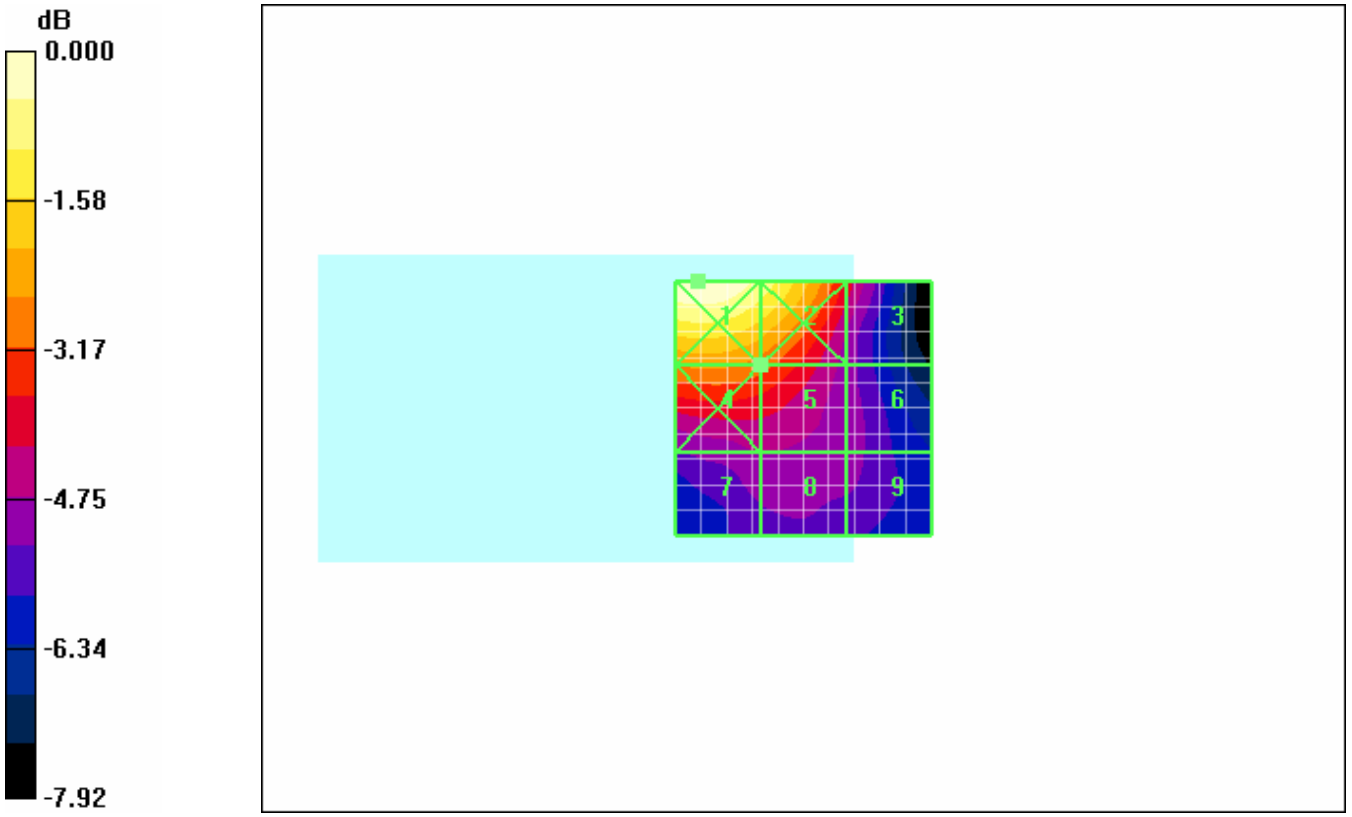
Device Reference Point: 0.000, 0.000, 353.7 mm

Reference Value = 0.066 A/m; Power Drift = -0.146 dB

Hearing Aid Near-Field Category: M3 (AWF -5 dB)

Peak H-field in A/m

Grid 1 **0.269** **M2**	Grid 2 **0.249** **M3**	Grid 3 **0.173** **M3**
Grid 4 **0.202** **M3**	Grid 5 **0.192** **M3**	Grid 6 **0.152** **M3**
Grid 7 **0.156** **M3**	Grid 8 **0.156** **M3**	Grid 9 **0.151** **M3**



0 dB = 0.269A/m

Date/Time: 26/08/2008 3:55:49 PM

Test Laboratory: RTS

File Name: HAC_H_CDMA1900_Low_Chan.da4

DUT: BlackBerry Smartphone; Type: Sample ; Serial: Not Specified

Program Name: HAC RF H3DV6 Device

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

Medium parameters used: s = 0 mho/m, e_r = 1; density = 1 kg/m^3

Phantom section: E Device Section

DASY4 Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 09/11/2007
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 05/03/2008
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

H Scan - H3DV6 - 2007: 15 mm from Probe Center to the Device/Hearing Aid Compatibility Test (11x11x1): Measurement grid: dx=5mm, dy=5mm

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, 353.7 mm

Reference Value = 0.093 A/m; Power Drift = -0.016 dB

Maximum value of Total (measured) = 0.137 A/m

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

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

Maximum value of peak Total field = 0.102 A/m

Probe Modulation Factor = 1.00

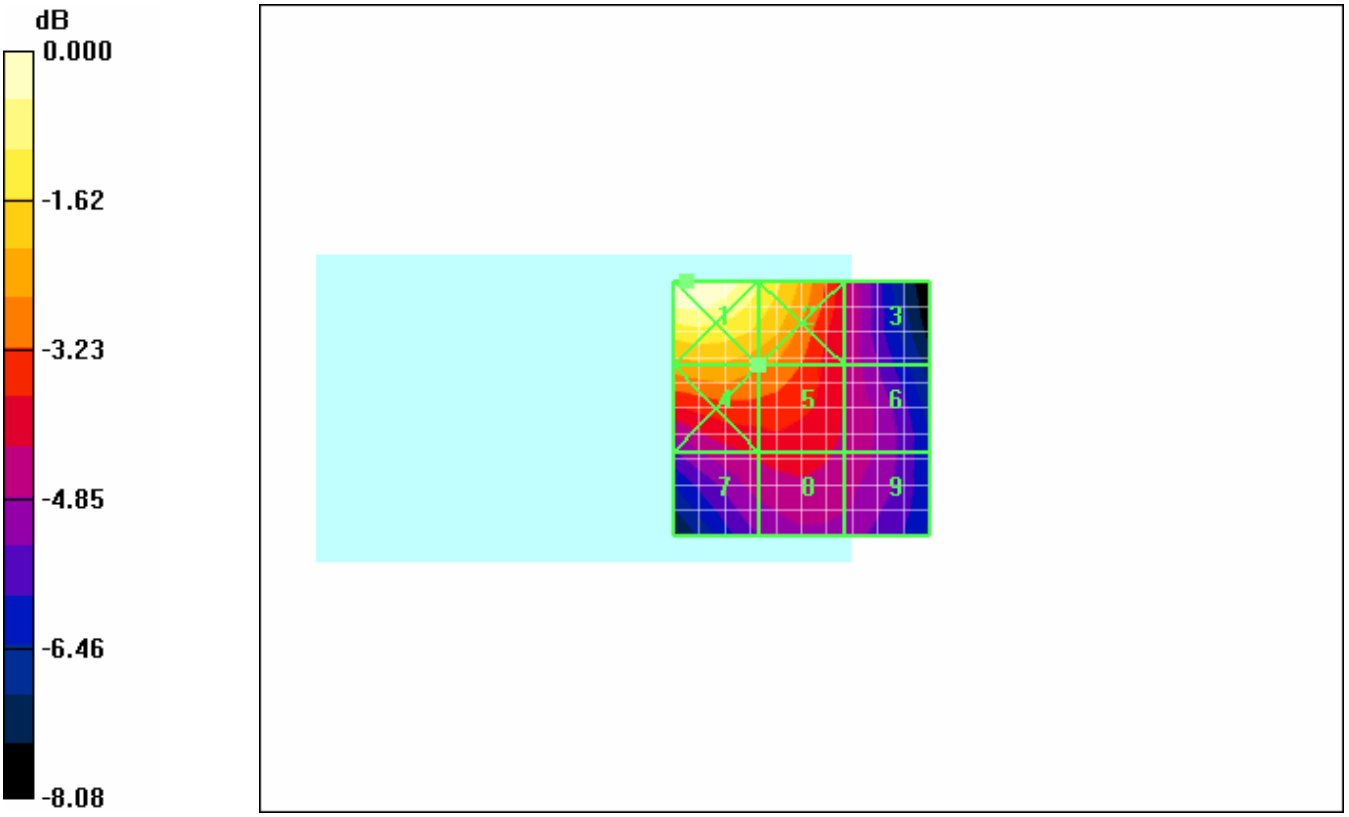
Device Reference Point: 0.000, 0.000, 353.7 mm

Reference Value = 0.093 A/m; Power Drift = -0.016 dB

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

Peak H-field in A/m

Grid 1 **0.137** **M4**	Grid 2 **0.124** **M4**	Grid 3 **0.085** **M4**
Grid 4 **0.106** **M4**	Grid 5 **0.102** **M4**	Grid 6 **0.084** **M4**
Grid 7 **0.085** **M4**	Grid 8 **0.086** **M4**	Grid 9 **0.082** **M4**



0 dB = 0.137A/m

Date/Time: 26/08/2008 4:07:09 PM

Test Laboratory: RTS

File Name: HAC_H_CDMA1900_Mid_Chan.da4

DUT: BlackBerry Smartphone; Type: Sample ; Serial: Not Specified

Program Name: HAC RF H3DV6 Device

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

Medium parameters used: s = 0 mho/m, e_r = 1; density = 1 kg/m^3

Phantom section: E Device Section

DASY4 Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 09/11/2007
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 05/03/2008
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

H Scan - H3DV6 - 2007: 15 mm from Probe Center to the Device/Hearing Aid Compatibility Test (11x11x1): Measurement grid: dx=5mm, dy=5mm

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, 353.7 mm

Reference Value = 0.095 A/m; Power Drift = 0.067 dB

Maximum value of Total (measured) = 0.142 A/m

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

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

Maximum value of peak Total field = 0.104 A/m

Probe Modulation Factor = 1.00

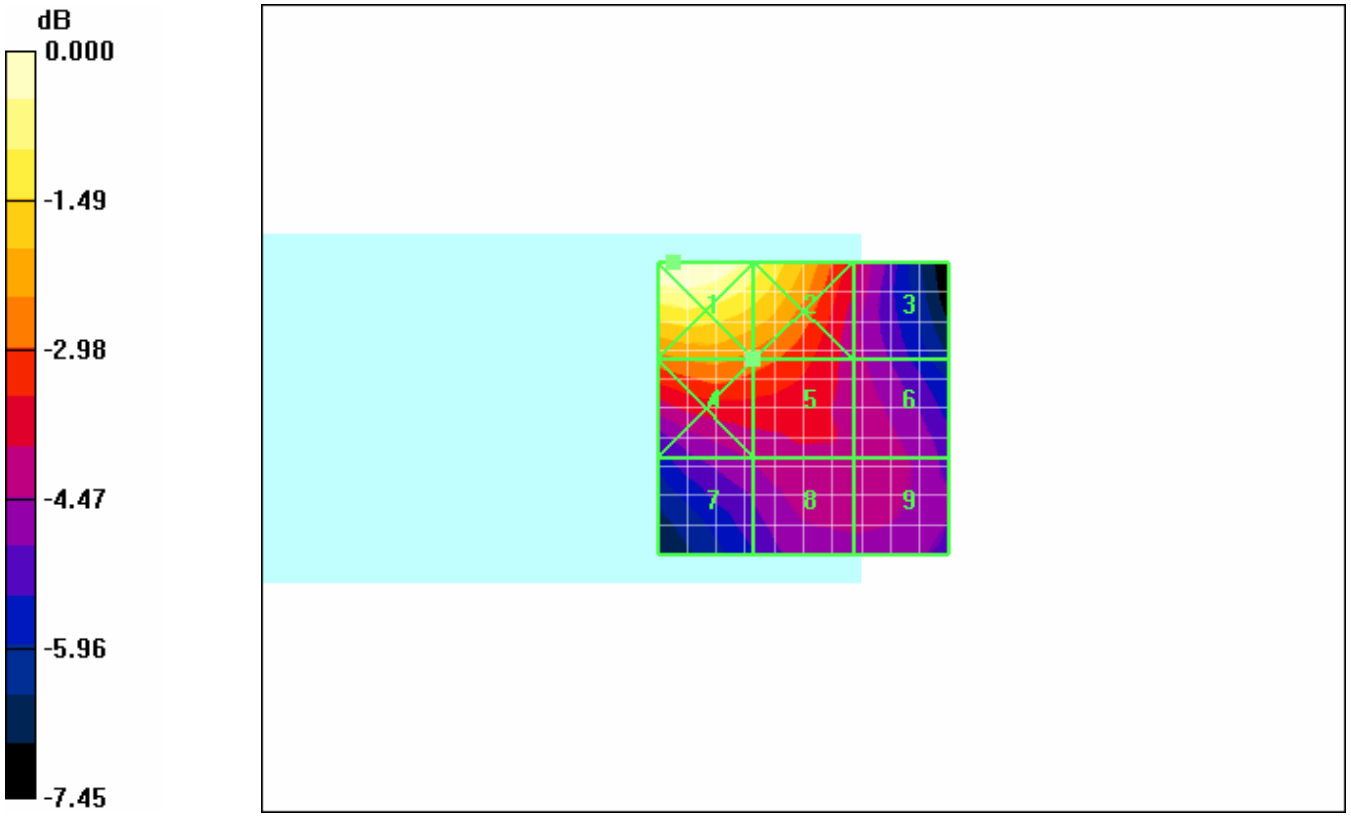
Device Reference Point: 0.000, 0.000, 353.7 mm

Reference Value = 0.095 A/m; Power Drift = 0.067 dB

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

Peak H-field in A/m

Grid 1 **0.142** **M4**	Grid 2 **0.131** **M4**	Grid 3 **0.092** **M4**
Grid 4 **0.108** **M4**	Grid 5 **0.104** **M4**	Grid 6 **0.090** **M4**
Grid 7 **0.086** **M4**	Grid 8 **0.090** **M4**	Grid 9 **0.089** **M4**



0 dB = 0.142A/m

Date/Time: 26/08/2008 4:13:30 PM

Test Laboratory: RTS

File Name: HAC_H_CDMA1900_High_Chan.da4

DUT: BlackBerry Smartphone; Type: Sample ; Serial: Not Specified

Program Name: HAC RF H3DV6 Device

Communication System: CDMA 1900; Frequency: 1908.5 MHz;Duty Cycle: 1:1

Medium parameters used: s = 0 mho/m, e_r = 1; density = 1 kg/m^3

Phantom section: E Device Section

DASY4 Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 09/11/2007
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 05/03/2008
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

H Scan - H3DV6 - 2007: 15 mm from Probe Center to the Device/Hearing Aid Compatibility Test (11x11x1): Measurement grid: dx=5mm, dy=5mm

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, 353.7 mm

Reference Value = 0.091 A/m; Power Drift = 0.113 dB

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

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

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

Maximum value of peak Total field = 0.101 A/m

Probe Modulation Factor = 1.00

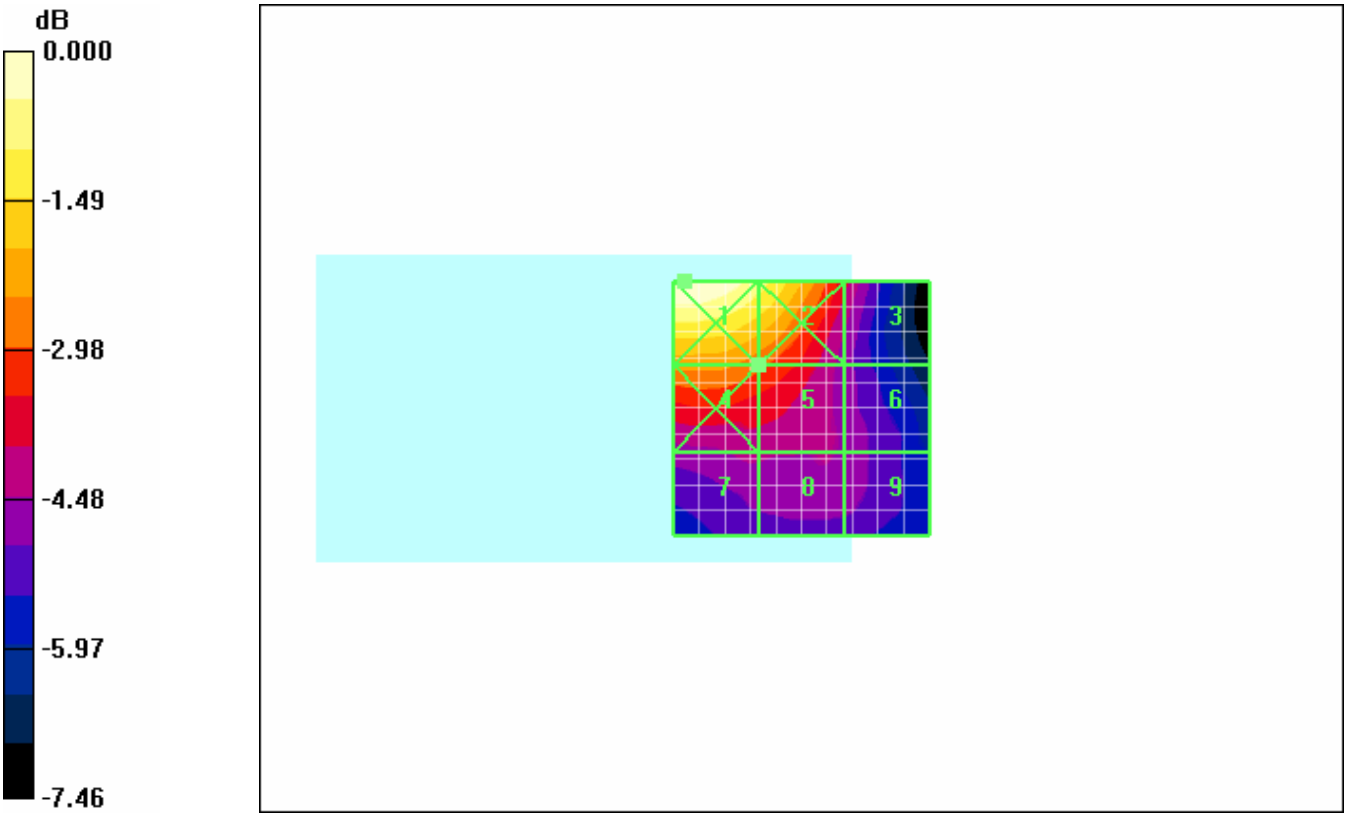
Device Reference Point: 0.000, 0.000, 353.7 mm

Reference Value = 0.091 A/m; Power Drift = 0.113 dB

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

Peak H-field in A/m

Grid 1 **0.140** **M4**	Grid 2 **0.129** **M4**	Grid 3 **0.091** **M4**
Grid 4 **0.107** **M4**	Grid 5 **0.101** **M4**	Grid 6 **0.083** **M4**
Grid 7 **0.085** **M4**	Grid 8 **0.085** **M4**	Grid 9 **0.083** **M4**



0 dB = 0.140A/m

Date/Time: 25/06/2008 10:44:08 AM

Test Laboratory: RTS

File Name: HAC_E_Ambient Noise_835MHz.da4

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

Program Name: HAC RF E Dipole

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

Medium parameters used: s = 0 mho/m, e_r = 1; density = 1000 kg/m^3

Phantom section: E Device Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 21/01/2008
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 05/03/2008
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

E Scan - measurement distance from the probe sensor center to CD835 Dipole = 10mm/Hearing Aid Compatibility Test (5x37x1):

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

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, 353.7 mm

Reference Value = 0.000 V/m; Power Drift = 999.0 dB

Maximum value of Total (measured) = 1.68 V/m

E Scan - measurement distance from the probe sensor center to

CD835 Dipole = 10mm/Hearing Aid Compatibility Test

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

Maximum value of peak Total field = 1.68 V/m

Probe Modulation Factor = 1.00

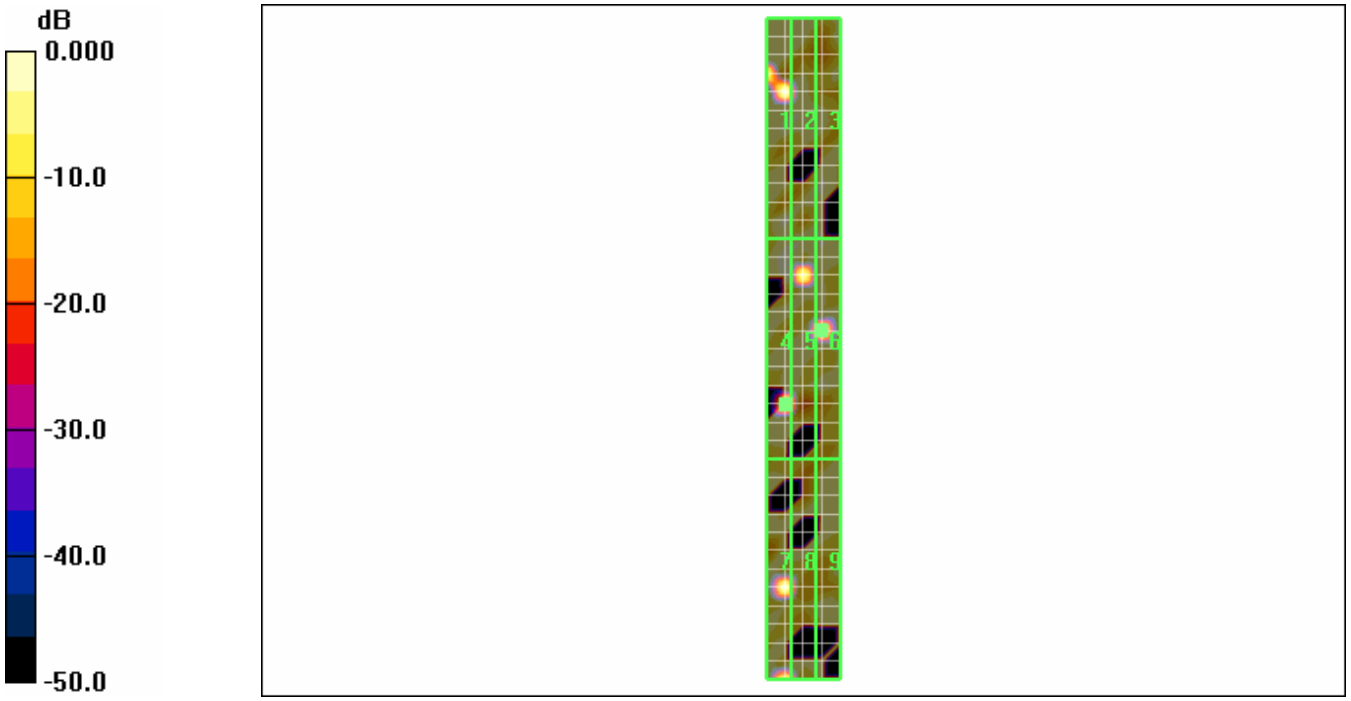
Device Reference Point: 0.000, 0.000, 353.7 mm

Reference Value = 0.000 V/m; Power Drift = 999.0 dB

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

Peak E-field in V/m

Grid 1 **1.57** **M4**	Grid 2 **0.408** **M4**	Grid 3 **0.000** **M4**
Grid 4 **1.59** **M4**	Grid 5 **1.18** **M4**	Grid 6 **1.68** **M4**
Grid 7 **1.50** **M4**	Grid 8 **0.596** **M4**	Grid 9 **0.000** **M4**



0 dB = 1.68V/m

Date/Time: 25/06/2008 11:01:47 AM

Test Laboratory: RTS

File Name: HAC_E_Ambient Noise_1880MHz.da4

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

Program Name: HAC RF E Dipole

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

Medium parameters used: s = 0 mho/m, e_r = 1; density = 1000 kg/m^3

Phantom section: E Device Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 21/01/2008
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 05/03/2008
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

E Scan - measurement distance from the probe sensor center to CD835 Dipole = 10mm/Hearing Aid Compatibility Test (5x37x1):

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

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, 353.7 mm

Reference Value = 0.658 V/m; Power Drift = -0.581 dB

Maximum value of Total (measured) = 1.69 V/m

E Scan - measurement distance from the probe sensor center to

CD835 Dipole = 10mm/Hearing Aid Compatibility Test

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

Maximum value of peak Total field = 1.69 V/m

Probe Modulation Factor = 1.00

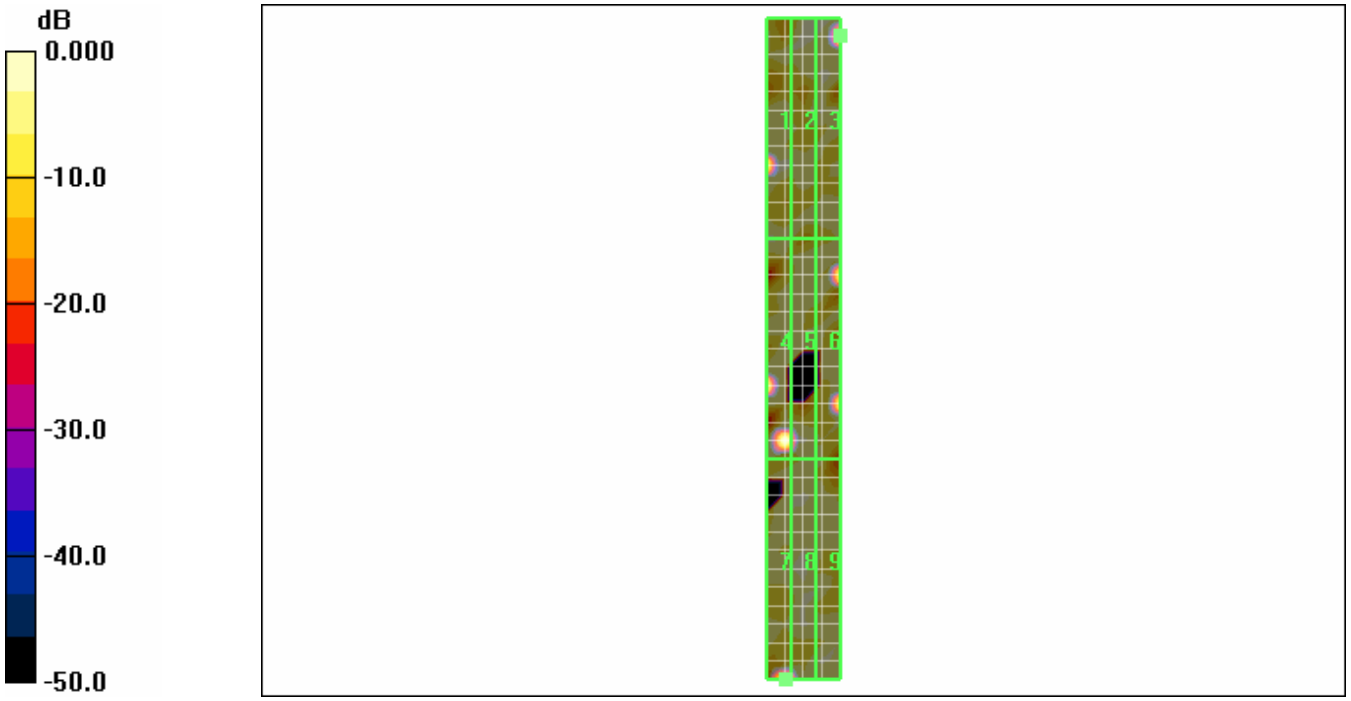
Device Reference Point: 0.000, 0.000, 353.7 mm

Reference Value = 0.658 V/m; Power Drift = -0.581 dB

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

Peak E-field in V/m

Grid 1 **1.09** **M4**	Grid 2 **0.000** **M4**	Grid 3 **1.60** **M4**
Grid 4 **1.55** **M4**	Grid 5 **0.470** **M4**	Grid 6 **1.14** **M4**
Grid 7 **1.69** **M4**	Grid 8 **0.696** **M4**	Grid 9 **0.000** **M4**



0 dB = 1.69V/m

Date/Time: 25/06/2008 2:32:22 PM

Test Laboratory: RTS

File Name: HAC_H_Ambient Noise_835MHz.da4

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

Program Name: HAC RF H3DV6 Dipole

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

Medium parameters used: s = 0 mho/m, e_r = 1; density = 1 kg/m^3

Phantom section: E Device Section

DASY4 Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 09/11/2007
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 05/03/2008
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

H Scan - measurement distance from the probe sensor center to CD835 Dipole = 10mm/Hearing Aid Compatibility Test (5x37x1):

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

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, 353.7 mm

Reference Value = 0.003 A/m; Power Drift = 1.02 dB

Maximum value of Total (measured) = 0.007 A/m

H Scan - measurement distance from the probe sensor center to

CD835 Dipole = 10mm/Hearing Aid Compatibility Test

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

Maximum value of peak Total field = 0.007 A/m

Probe Modulation Factor = 1.00

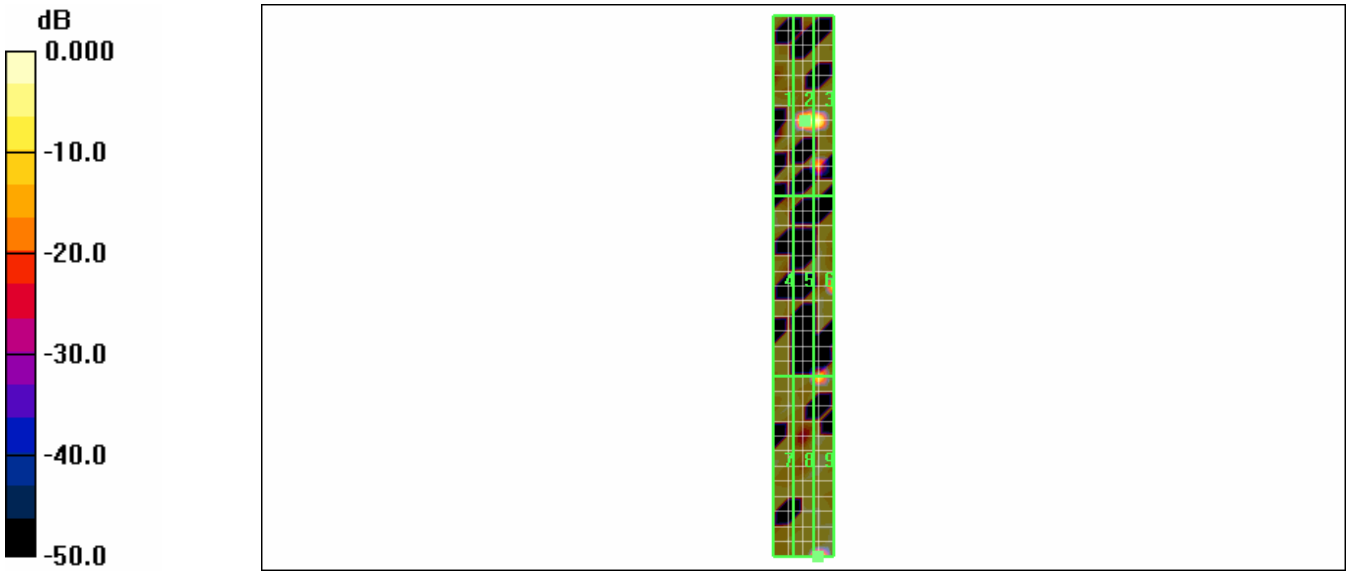
Device Reference Point: 0.000, 0.000, 353.7 mm

Reference Value = 0.003 A/m; Power Drift = 1.02 dB

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

Peak H-field in A/m

Grid 1 **0.000** **M4**	Grid 2 **0.006** **M4**	Grid 3 **0.005** **M4**
Grid 4 **0.000** **M4**	Grid 5 **0.001** **M4**	Grid 6 **0.002** **M4**
Grid 7 **0.000** **M4**	Grid 8 **0.003** **M4**	Grid 9 **0.007** **M4**



0 dB = 0.007A/m

Date/Time: 25/06/2008 2:41:50 PM

Test Laboratory: RTS

File Name: HAC_H_Ambient Noise_1880MHz.da4

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

Program Name: HAC RF H3DV6 Dipole

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

Medium parameters used: s = 0 mho/m, e_r = 1; density = 1 kg/m^3

Phantom section: E Device Section

DASY4 Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 09/11/2007
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 05/03/2008
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

H Scan - measurement distance from the probe sensor center to CD835 Dipole = 10mm/Hearing Aid Compatibility Test (5x37x1):

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

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, 353.7 mm

Reference Value = 0.001 A/m; Power Drift = 2.15 dB

Maximum value of Total (measured) = 0.003 A/m

H Scan - measurement distance from the probe sensor center to

CD835 Dipole = 10mm/Hearing Aid Compatibility Test

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

Maximum value of peak Total field = 0.004 A/m

Probe Modulation Factor = 1.00

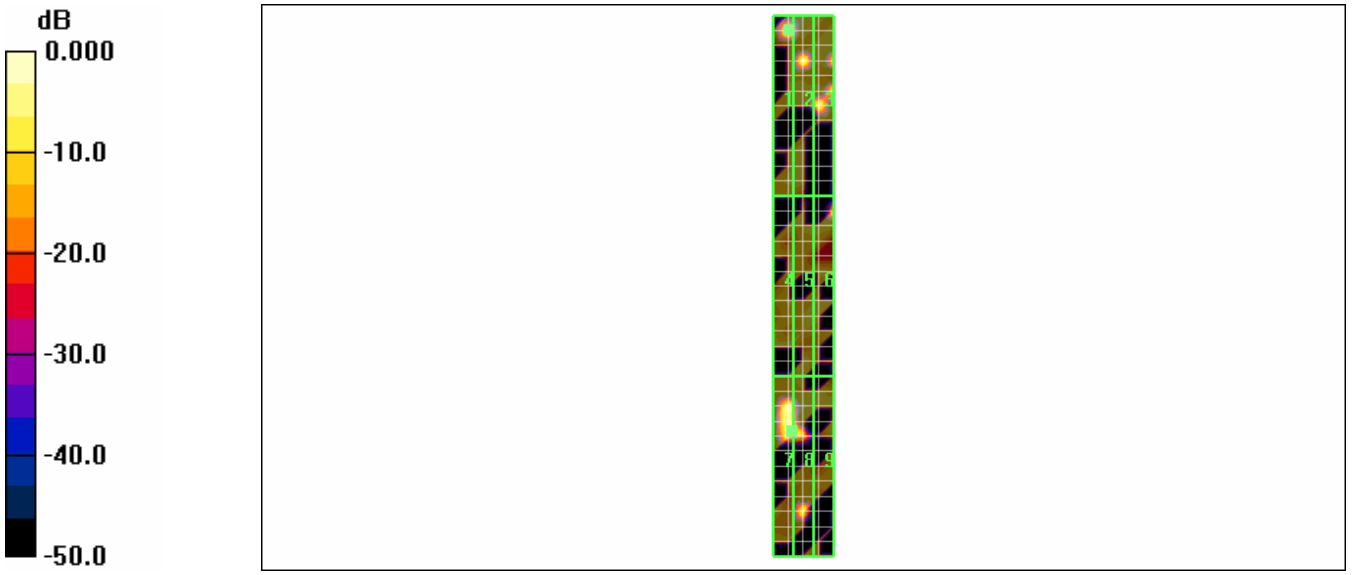
Device Reference Point: 0.000, 0.000, 353.7 mm

Reference Value = 0.001 A/m; Power Drift = 2.15 dB

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

Peak H-field in A/m

Grid 1 **0.003** **M4**	Grid 2 **0.002** **M4**	Grid 3 **0.002** **M4**
Grid 4 **0.000** **M4**	Grid 5 **0.000** **M4**	Grid 6 **0.002** **M4**
Grid 7 **0.004** **M4**	Grid 8 **0.003** **M4**	Grid 9 **0.000** **M4**



0 dB = 0.004A/m