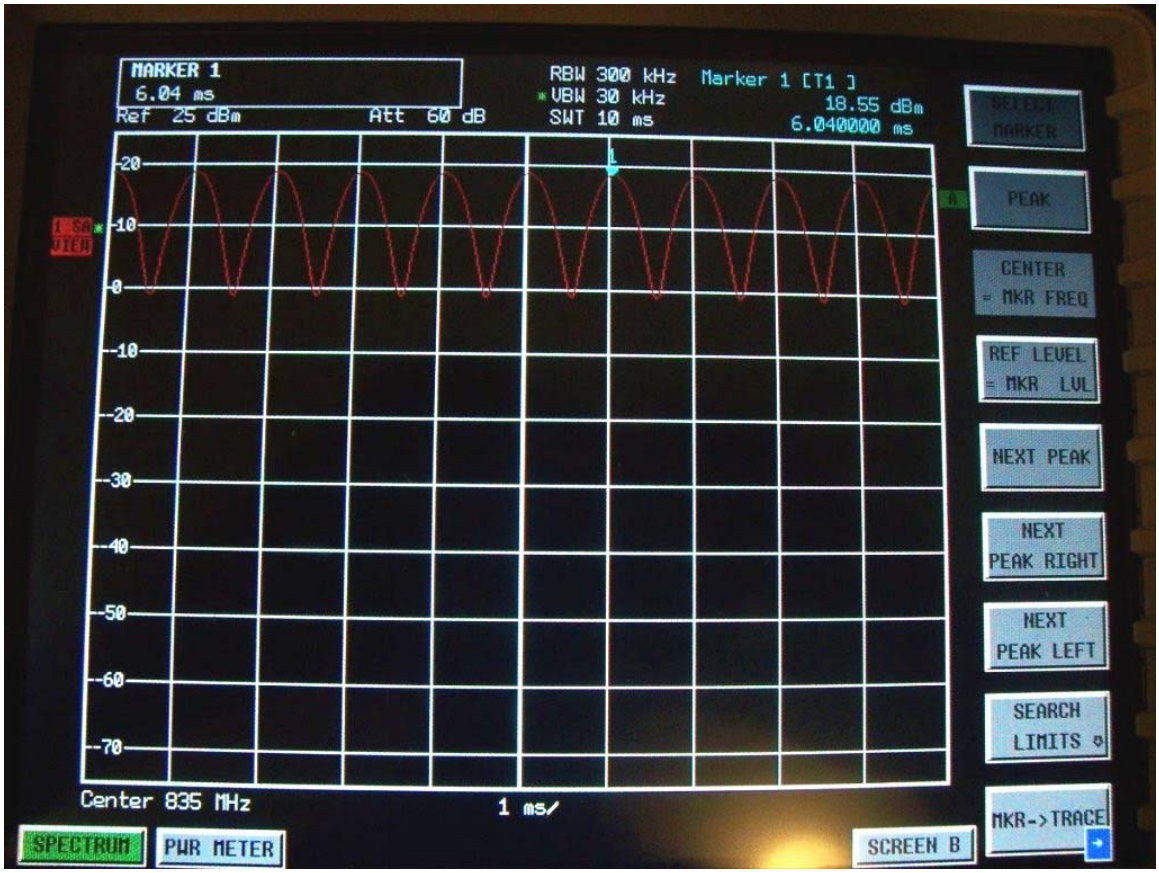
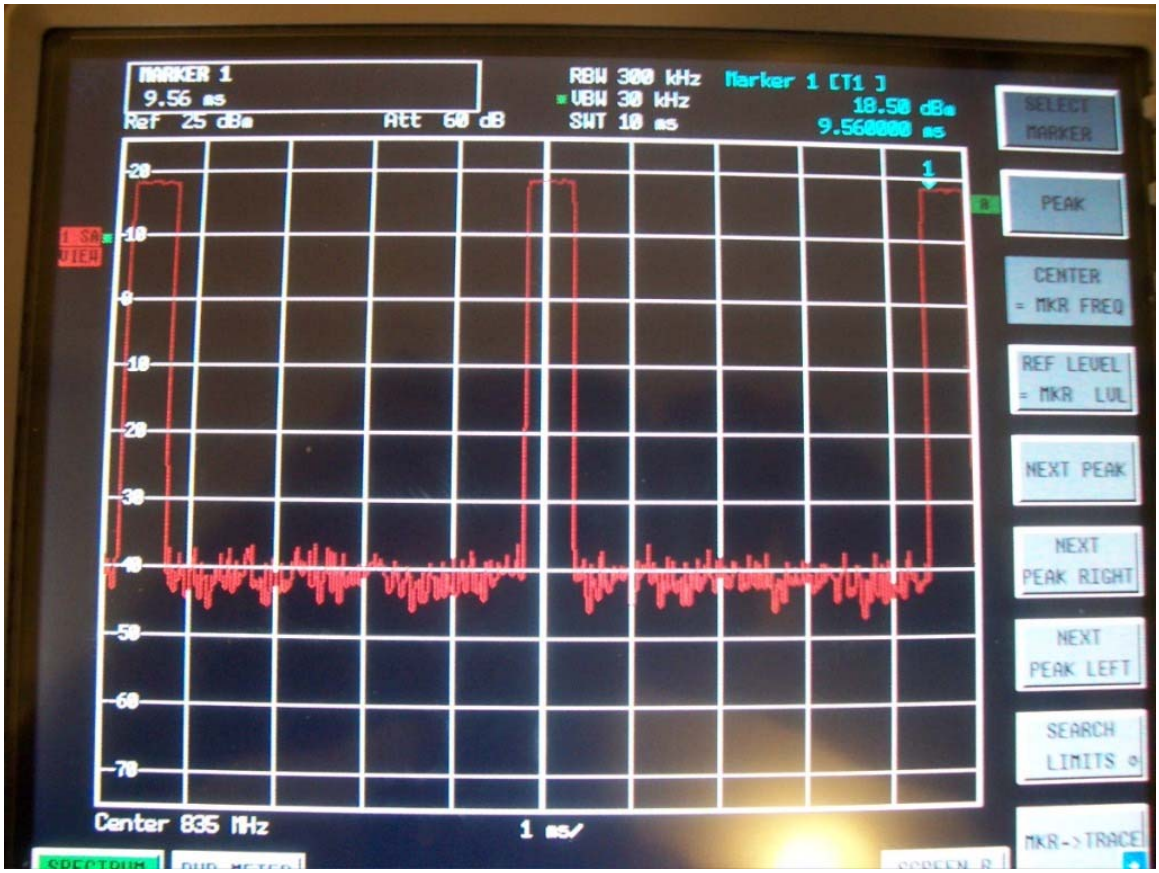
Annex A: Measurement data and plots

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

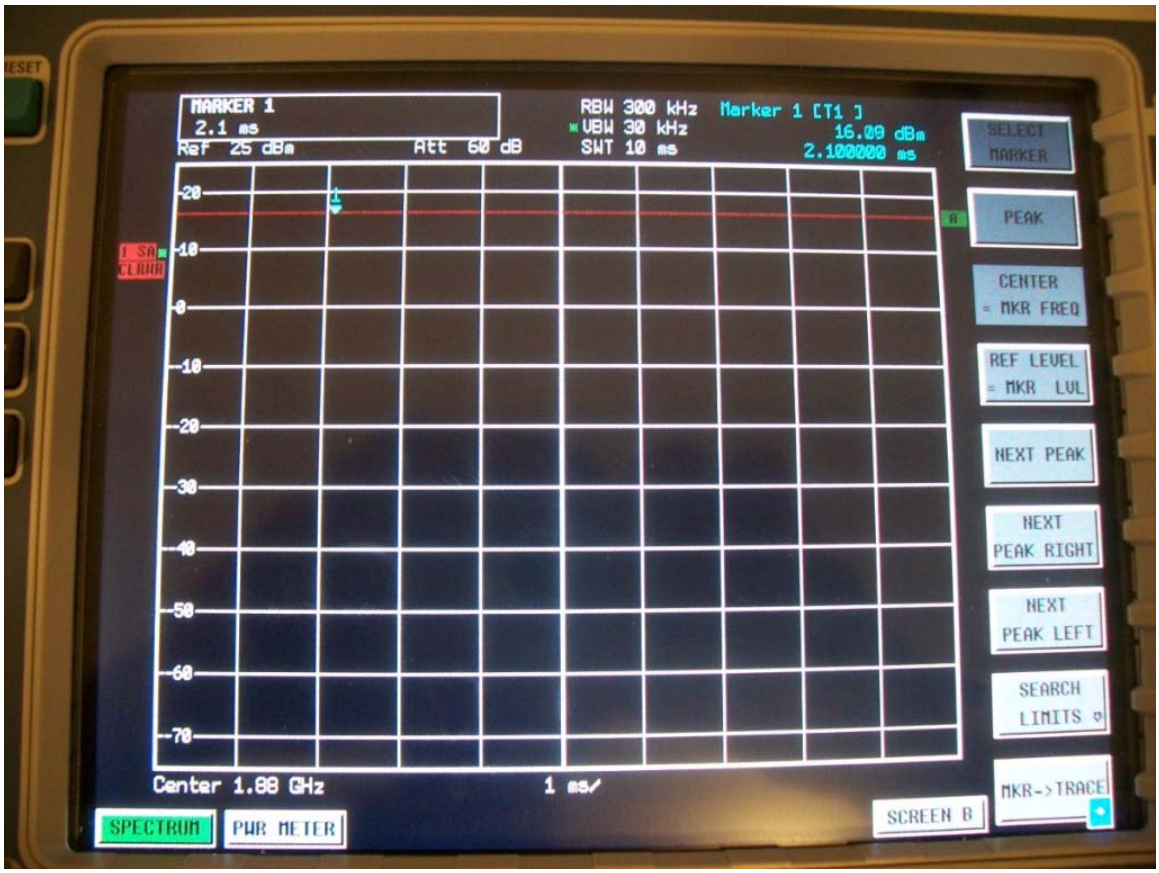
0 Hz Span CW Plot (835MHz)



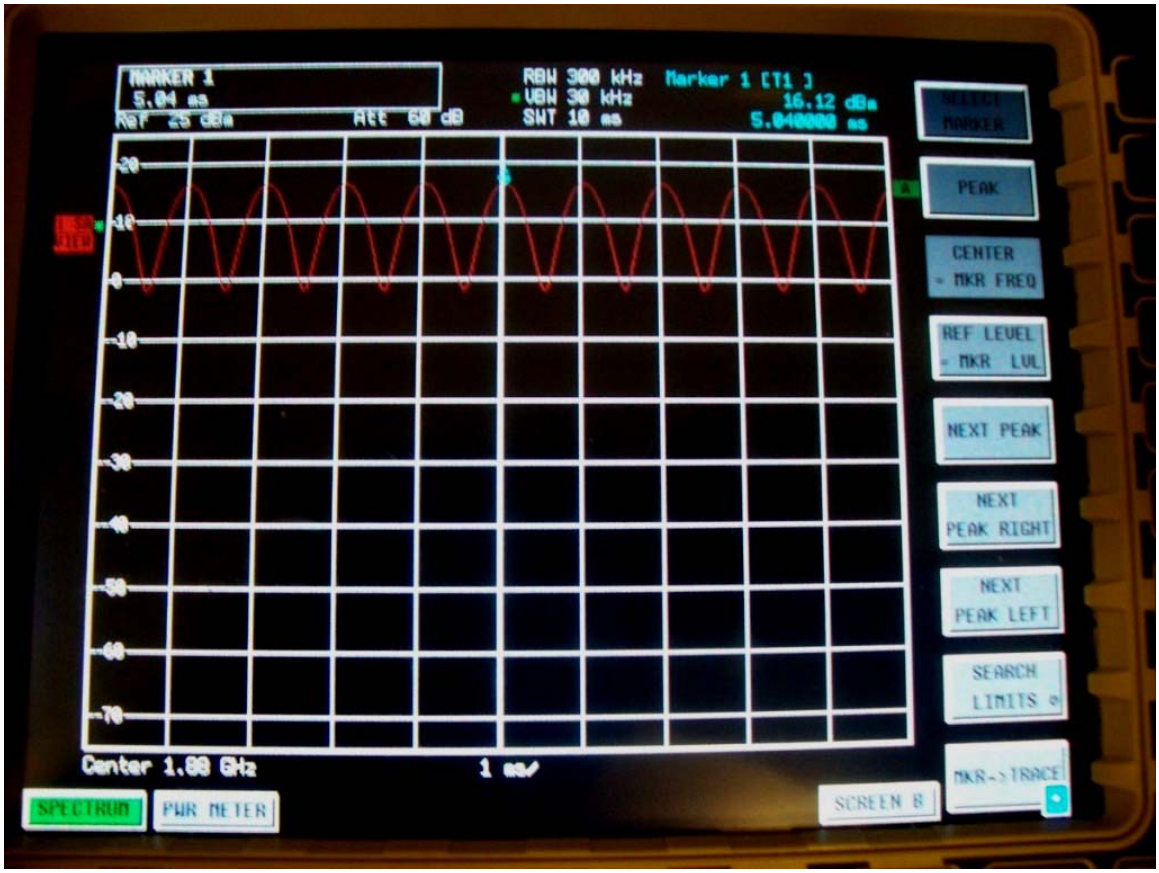
0 Hz Span 80% AM Plot (835MHz)



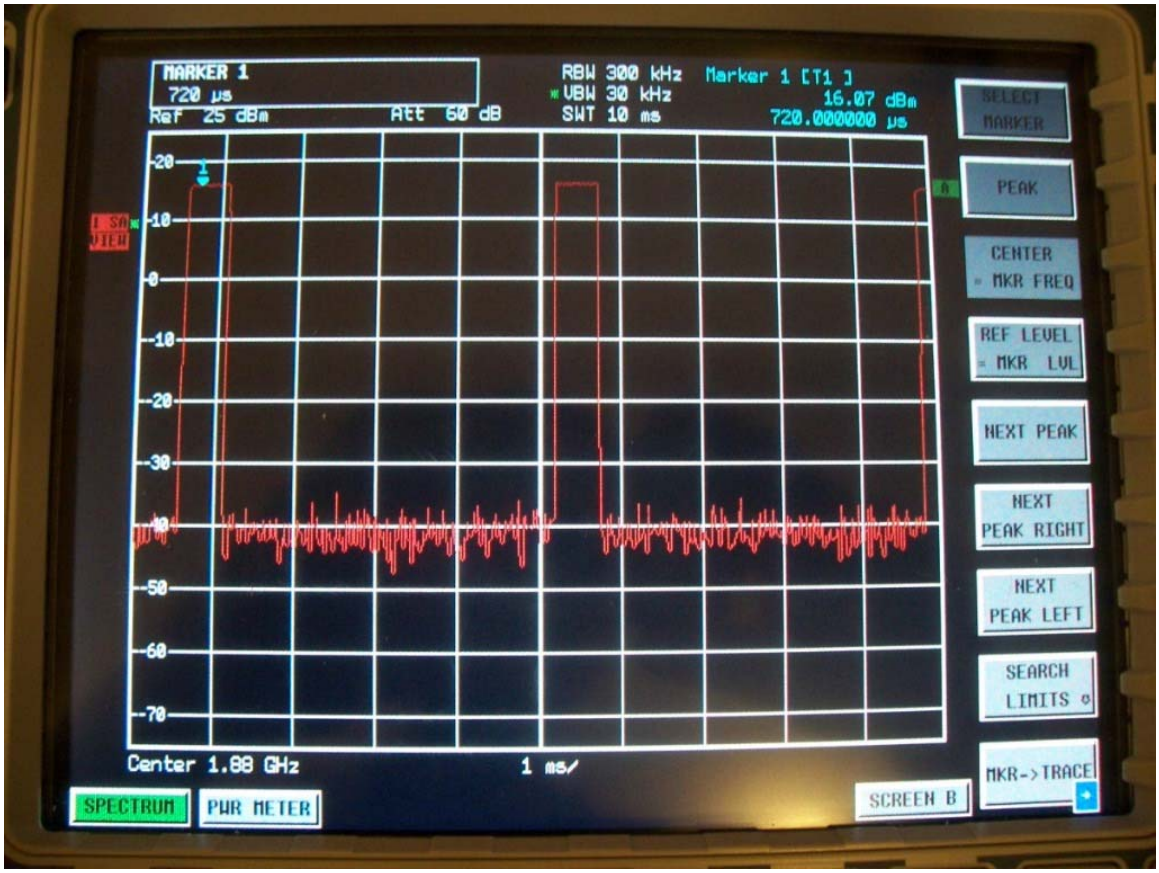
0 Hz Span GSM (835MHz)



0 Hz Span CW Plot (1880MHz)



0 Hz Span 80% AM Plot (1880MHz)



0 Hz Span GSM (1880MHz)

A.2 Dipole validation and probe modulation factor plots

Date/Time: 23/06/2008 2:38:35 PM

Test Laboratory: RTS
File Name: HAC_E_Dipole_CW835_20.00dBm.da4

DUT: HAC-Dipole 835 MHz; Type: D835V3; Serial: 1011
Program Name: HAC RF E Dipole

Communication System: CW; Frequency: 835 MHz;Duty Cycle: 1:1
Medium parameters used: σ = 0 mho/m, ε_r = 1; ρ = 1000 kg/m^3
Phantom section: E Device Section

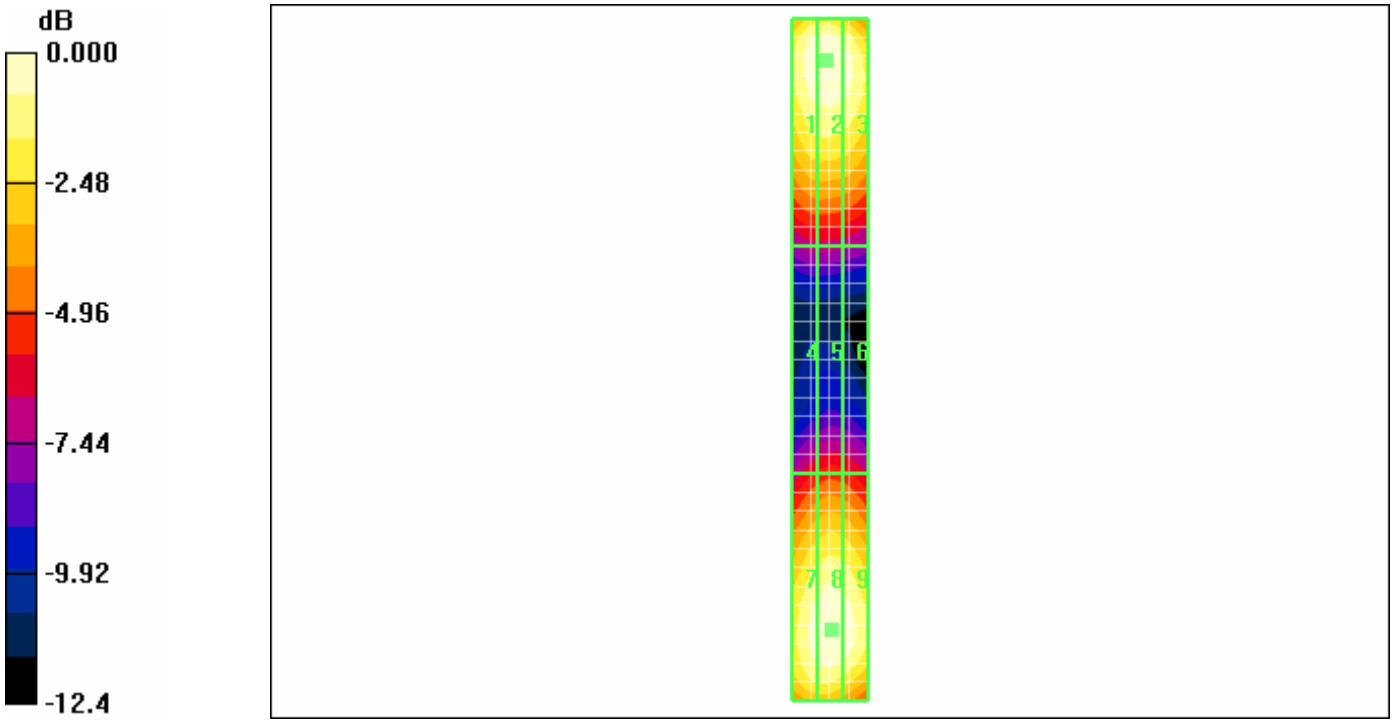
DASY4 Configuration:
- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 21/01/2008
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 05/03/2008
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing 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 = 109.4 V/m; Power Drift = 0.074 dB
Maximum value of Total (measured) = 146.9 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 = 147.5 V/m
Probe Modulation Factor = 1.00
Device Reference Point: 0.000, 0.000, 353.7 mm
Reference Value = 109.4 V/m; Power Drift = 0.074 dB
Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak E-field in V/m

Grid 1 **145.8 M4**	Grid 2 **147.5 M4**	Grid 3 **142.9 M4**
Grid 4 **77.5 M4**	Grid 5 **80.9 M4**	Grid 6 **79.1 M4**
Grid 7	Grid 8	Grid 9



0 dB = 147.5V/m

Date/Time: 23/06/2008 2:19:20 PM

Test Laboratory: RTS
File Name: HAC_E_Dipole_CW835_18.50dBm.da4

DUT: HAC-Dipole 835 MHz; Type: D835V3; Serial: 1011
Program Name: HAC RF E Dipole

Communication System: CW; Frequency: 835 MHz;Duty Cycle: 1:1
Medium parameters used: σ = 0 mho/m, ε_r = 1; ρ = 1000 kg/m^3
Phantom section: E Device Section

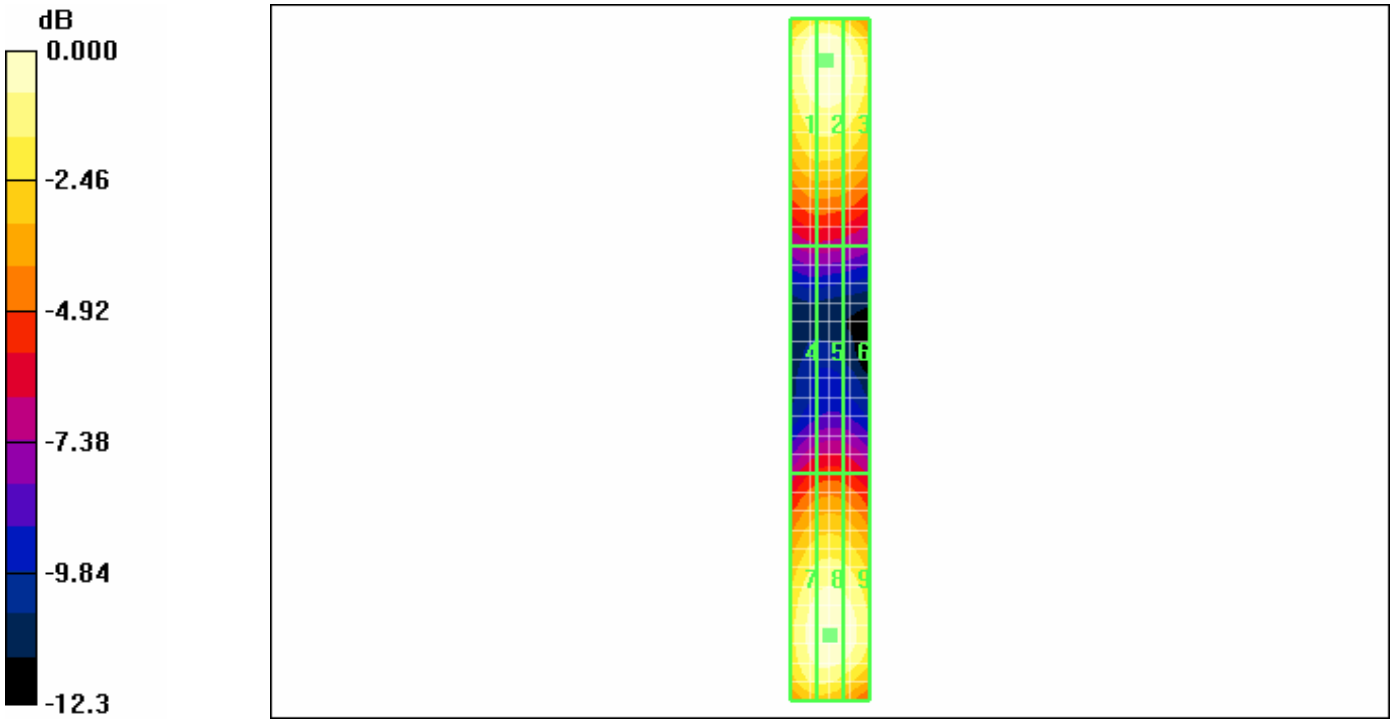
DASY4 Configuration:
- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 21/01/2008
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 05/03/2008
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing 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 = 97.8 V/m; Power Drift = 0.015 dB
Maximum value of Total (measured) = 130.5 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 = 131.1 V/m
Probe Modulation Factor = 1.00
Device Reference Point: 0.000, 0.000, 353.7 mm
Reference Value = 97.8 V/m; Power Drift = 0.015 dB
Hearing Aid Near-Field Category: M2 (AWF 0 dB)

Peak E-field in V/m

Grid 1 **129.6 M2**	Grid 2 **131.1 M2**	Grid 3 **126.7 M2**
Grid 4 **69.5 M3**	Grid 5 **71.3 M3**	Grid 6 **70.1 M3**
Grid 7	Grid 8	Grid 9



0 dB = 131.1V/m

Date/Time: 23/06/2008 2:29:31 PM

Test Laboratory: RTS
File Name: HAC_E_Dipole_AM80%_835_18.50dBm.da4

DUT: HAC-Dipole 835 MHz; Type: D835V3; Serial: 1011
Program Name: HAC RF E Dipole

Communication System: AM; Frequency: 835 MHz;Duty Cycle: 1:1
Medium parameters used: σ = 0 mho/m, ε_r = 1; ρ = 1000 kg/m^3
Phantom section: E Device Section

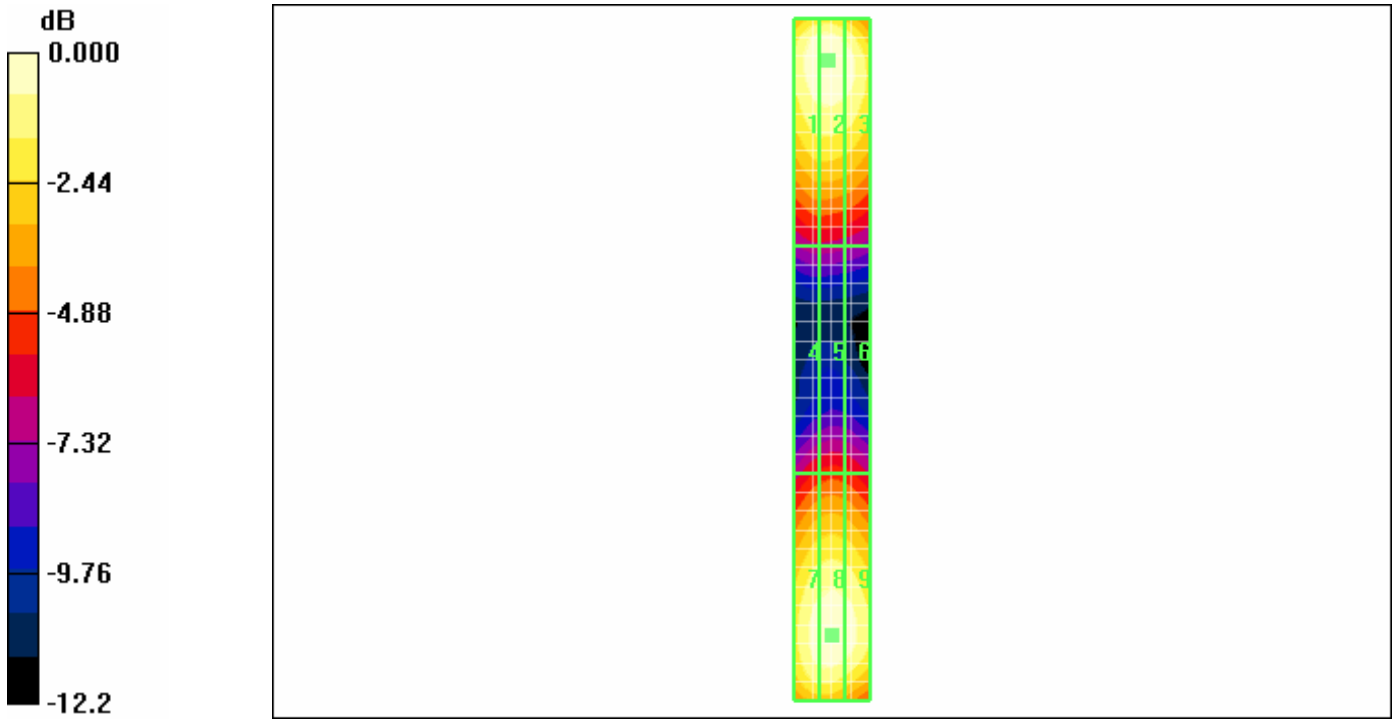
DASY4 Configuration:
- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 21/01/2008
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 05/03/2008
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing 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 = 62.9 V/m; Power Drift = -0.054 dB
Maximum value of Total (measured) = 83.0 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 = 83.4 V/m
Probe Modulation Factor = 1.00
Device Reference Point: 0.000, 0.000, 353.7 mm
Reference Value = 62.9 V/m; Power Drift = -0.054 dB
Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak E-field in V/m

Grid 1 **82.7 M4**	Grid 2 **83.4 M4**	Grid 3 **80.7 M4**
Grid 4 **44.9 M4**	Grid 5 **46.0 M4**	Grid 6 **45.1 M4**
Grid 7	Grid 8	Grid 9



0 dB = 83.4V/m

Date/Time: 23/06/2008 1:59:08 PM

Test Laboratory: RTS
File Name: HAC_E_Dipole_GSM835_18.50dBm.da4

DUT: HAC-Dipole 835 MHz; Type: D835V3; Serial: 1011
Program Name: HAC RF E Dipole

Communication System: GSM 850; Frequency: 835 MHz;Duty Cycle: 1:8.3
Medium parameters used: σ = 0 mho/m, ε_r = 1; ρ = 1000 kg/m^3
Phantom section: E Device Section

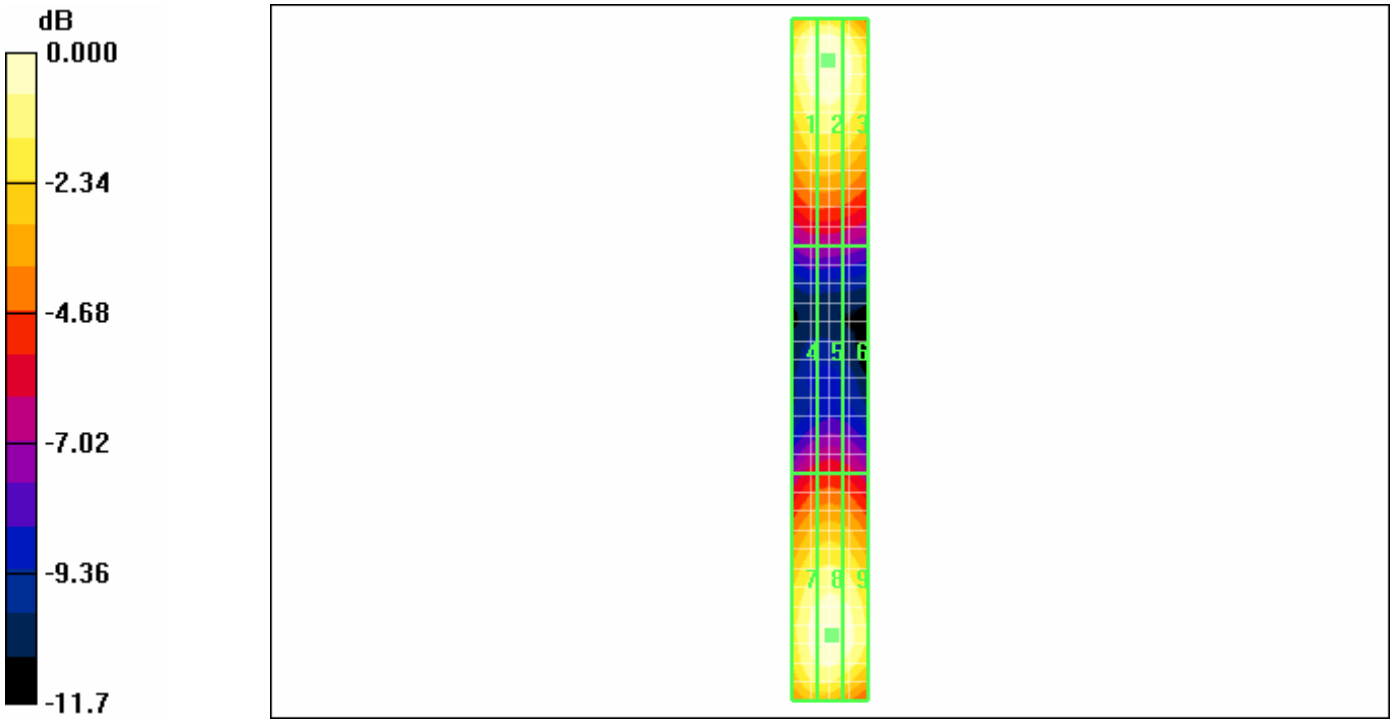
DASY4 Configuration:
- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 21/01/2008
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 05/03/2008
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing 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 = 32.5 V/m; Power Drift = 0.014 dB
Maximum value of Total (measured) = 43.9 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 = 44.1 V/m
Probe Modulation Factor = 1.00
Device Reference Point: 0.000, 0.000, 353.7 mm
Reference Value = 32.5 V/m; Power Drift = 0.014 dB
Hearing Aid Near-Field Category: M4 (AWF -5 dB)

Peak E-field in V/m

Grid 1 **43.6 M4**	Grid 2 **44.1 M4**	Grid 3 **42.7 M4**
Grid 4 **23.3 M4**	Grid 5 **23.7 M4**	Grid 6 **23.3 M4**
Grid 7	Grid 8	Grid 9



0 dB = 44.1V/m

Date/Time: 23/06/2008 1:44:06 PM

Test Laboratory: RTS
File Name: HAC_E_Dipole_CW1880_20.00dBm.da4

DUT: HAC Dipole 1880 MHz; Type: CD1880V3; Serial: 1008
Program Name: HAC RF E Dipole

Communication System: CW; Frequency: 1880 MHz;Duty Cycle: 1:1
Medium parameters used: σ = 0 mho/m, ε_r = 1; ρ = 1000 kg/m^3
Phantom section: E Device Section

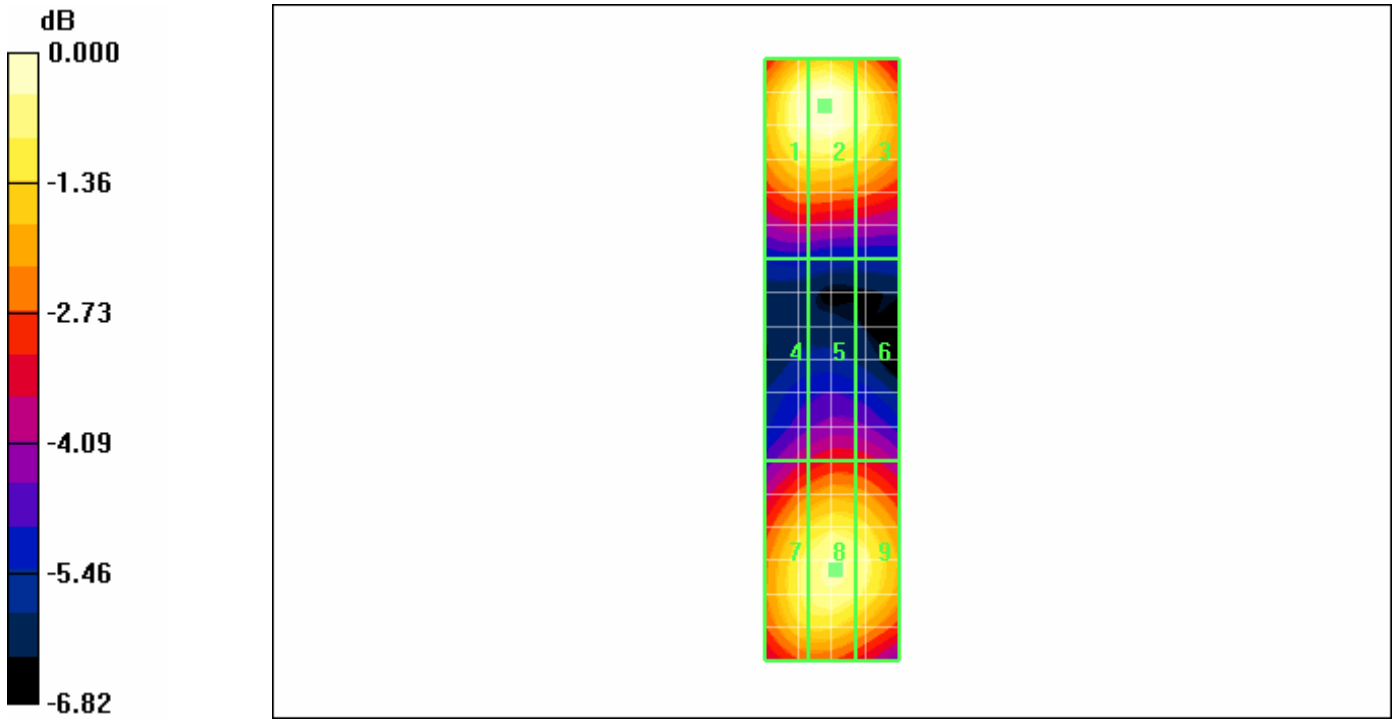
DASY4 Configuration:
- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 21/01/2008
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 05/03/2008
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing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

E Scan - measurement distance from the probe sensor center to 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 = 116.3 V/m; Power Drift = 0.023 dB
Maximum value of Total (measured) = 118.7 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 = 121.4 V/m
Probe Modulation Factor = 1.00
Device Reference Point: 0.000, 0.000, 353.7 mm
Reference Value = 116.3 V/m; Power Drift = 0.023 dB
Hearing Aid Near-Field Category: M2 (AWF 0 dB)

Peak E-field in V/m

Grid 1 **120.2 M2**	Grid 2 **121.4 M2**	Grid 3 **115.5 M2**
Grid 4 **80.5 M3**	Grid 5 **84.3 M3**	Grid 6 **83.6 M3**
Grid 7	Grid 8	Grid 9



0 dB = 121.4V/m

Date/Time: 23/06/2008 12:11:14 PM

Test Laboratory: RTS
File Name: HAC_E_Dipole_CW1880_16.10dBm.da4

DUT: HAC Dipole 1880 MHz; Type: CD1880V3; Serial: 1008
Program Name: HAC RF E Dipole

Communication System: CW; Frequency: 1880 MHz;Duty Cycle: 1:1
Medium parameters used: $\sigma = 0$ mho/m, $\varepsilon_r = 1$; $\rho = 1000$ kg/m^3
Phantom section: E Device Section

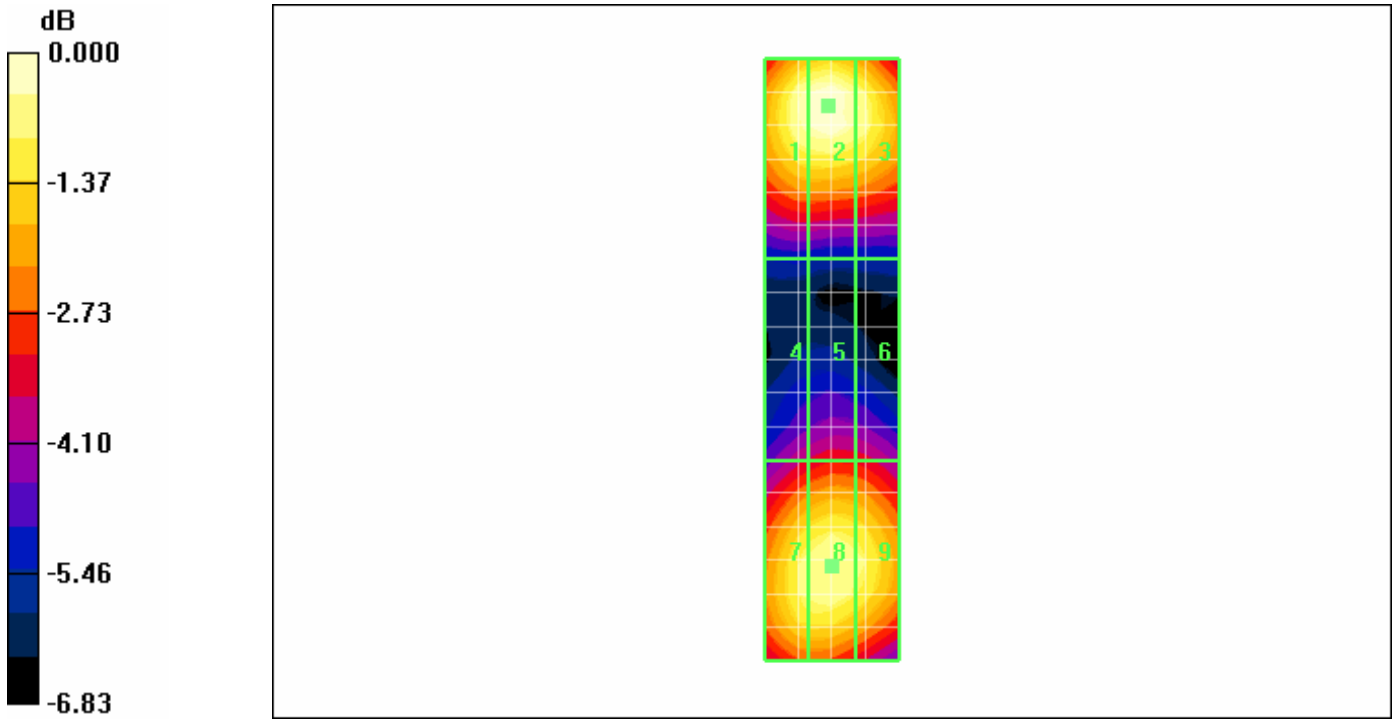
DASY4 Configuration:
- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 21/01/2008
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 05/03/2008
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing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

E Scan - measurement distance from the probe sensor center to 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 = 76.0 V/m; Power Drift = -0.029 dB
Maximum value of Total (measured) = 78.7 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 = 80.3 V/m
Probe Modulation Factor = 1.00
Device Reference Point: 0.000, 0.000, 353.7 mm
Reference Value = 76.0 V/m; Power Drift = -0.029 dB
Hearing Aid Near-Field Category: M3 (AWF 0 dB)

Peak E-field in V/m

Grid 1 **78.9 M3**	Grid 2 **80.3 M3**	Grid 3 **76.9 M3**
Grid 4 **53.3 M4**	Grid 5 **55.4 M4**	Grid 6 **54.9 M4**
Grid 7	Grid 8	Grid 9



0 dB = 80.3V/m

Date/Time: 23/06/2008 12:19:16 PM

Test Laboratory: RTS
File Name: HAC_E_Dipole_AM80%_1880_16.10dBm.da4

DUT: HAC Dipole 1880 MHz; Type: CD1880V3; Serial: 1008
Program Name: HAC RF E Dipole

Communication System: AM 80%; Frequency: 1880 MHz;Duty Cycle: 1:1
Medium parameters used: $\sigma = 0$ mho/m, $\varepsilon_r = 1$; $\rho = 1000$ kg/m^3
Phantom section: E Device Section

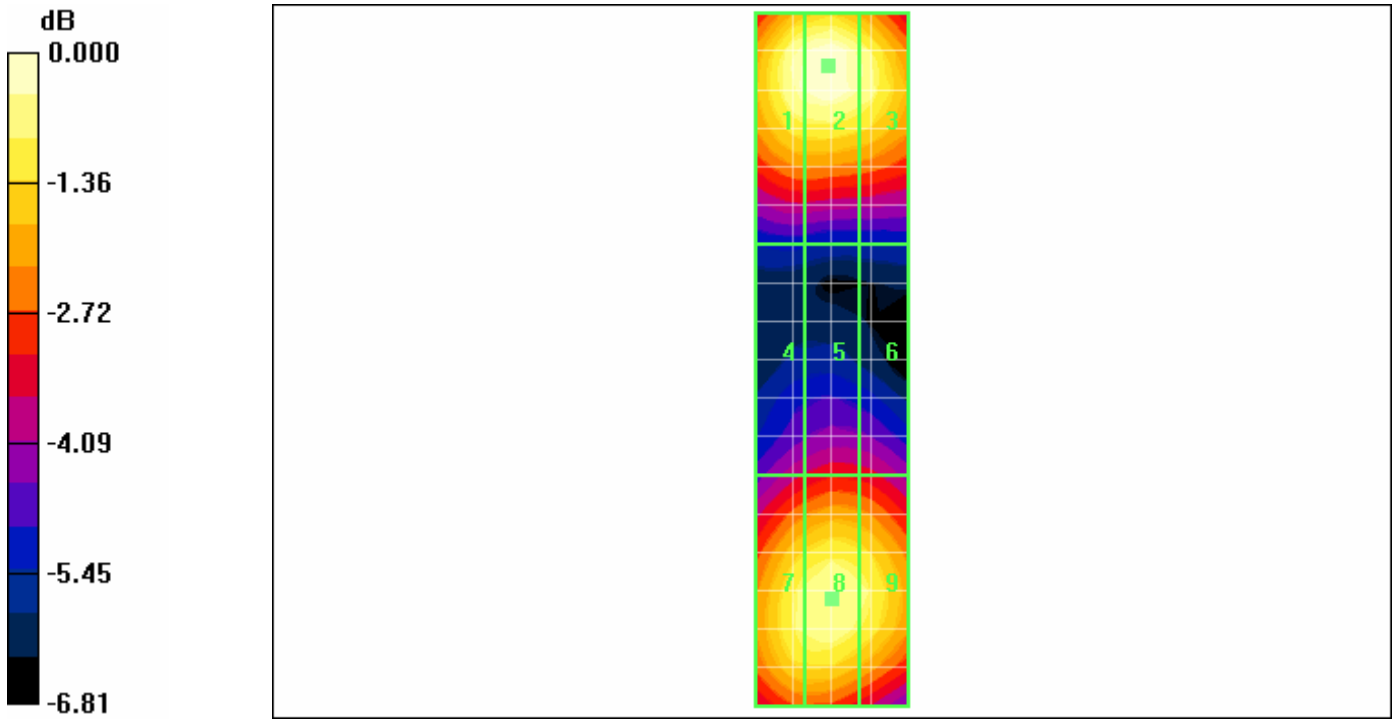
DASY4 Configuration:
- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 21/01/2008
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 05/03/2008
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing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

E Scan - measurement distance from the probe sensor center to 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 = 48.1 V/m; Power Drift = 0.008 dB
Maximum value of Total (measured) = 50.3 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 = 51.2 V/m
Probe Modulation Factor = 1.00
Device Reference Point: 0.000, 0.000, 353.7 mm
Reference Value = 48.1 V/m; Power Drift = 0.008 dB
Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak E-field in V/m

Grid 1 **50.5 M4**	Grid 2 **51.2 M4**	Grid 3 **49.1 M4**
Grid 4 **34.1 M4**	Grid 5 **35.4 M4**	Grid 6 **35.1 M4**
Grid 7	Grid 8	Grid 9



0 dB = 51.2V/m

Date/Time: 23/06/2008 11:49:35 AM

Test Laboratory: RTS
File Name: HAC_E_Dipole_GSM1880_16.10dBm.da4

DUT: HAC Dipole 1880 MHz; Type: CD1880V3; Serial: 1008
Program Name: HAC RF E Dipole

Communication System: GSM 1900; Frequency: 1880 MHz;Duty Cycle: 1:8.3
Medium parameters used: σ = 0 mho/m, ε_r = 1; ρ = 1000 kg/m^3
Phantom section: E Device Section

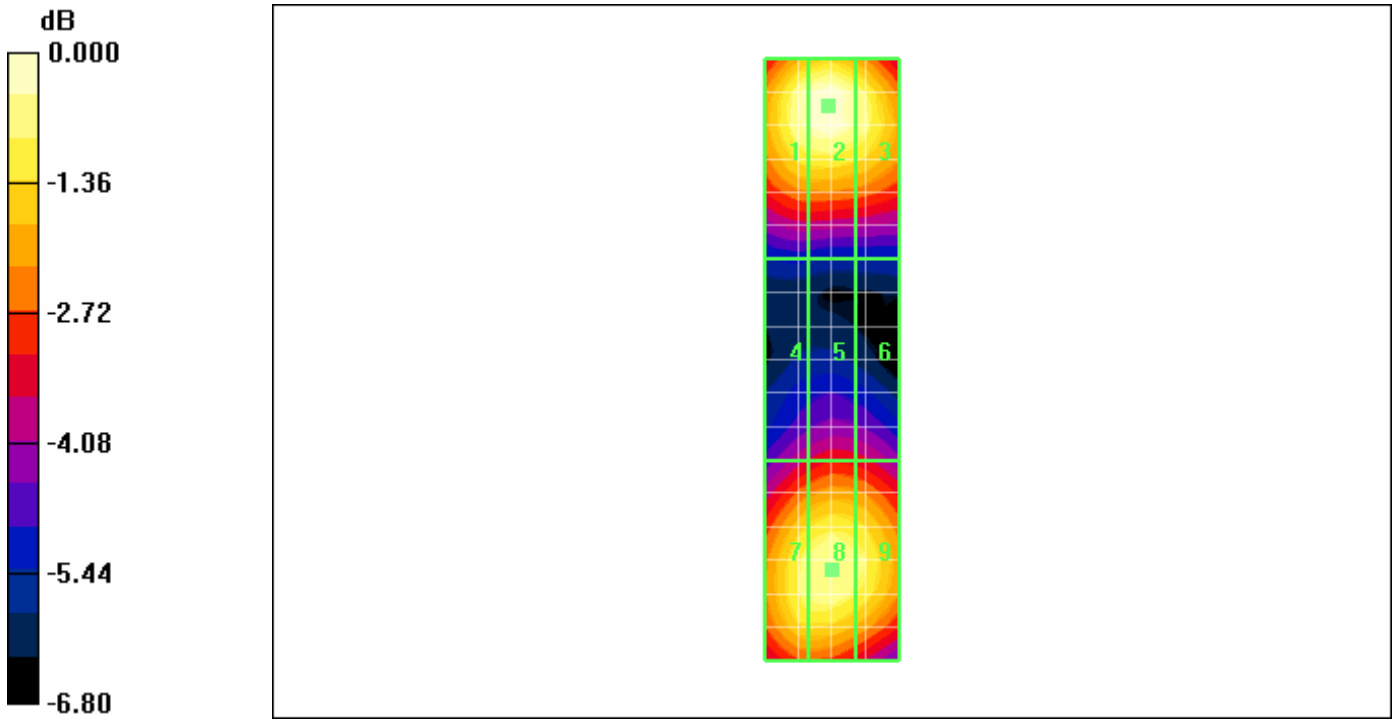
DASY4 Configuration:
- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 21/01/2008
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 05/03/2008
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing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

E Scan - measurement distance from the probe sensor center to 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 = 25.7 V/m; Power Drift = -0.009 dB
Maximum value of Total (measured) = 26.8 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 = 27.4 V/m
Probe Modulation Factor = 1.00
Device Reference Point: 0.000, 0.000, 353.7 mm
Reference Value = 25.7 V/m; Power Drift = -0.009 dB
Hearing Aid Near-Field Category: M4 (AWF -5 dB)

Peak E-field in V/m

Grid 1 **26.9 M4**	Grid 2 **27.4 M4**	Grid 3 **26.2 M4**
Grid 4 **18.2 M4**	Grid 5 **19.0 M4**	Grid 6 **18.7 M4**
Grid 7	Grid 8	Grid 9



0 dB = 27.4V/m

Date/Time: 23/06/2008 2:55:45 PM

Test Laboratory: RTS
File Name: HAC_H_Dipole_CW835_20.00dBm.da4

DUT: HAC-Dipole 835 MHz; Type: D835V3; Serial: 1011
Program Name: HAC RF H3DV6 Dipole

Communication System: CW; Frequency: 835 MHz;Duty Cycle: 1:1
Medium parameters used: σ = 0 mho/m, ε_r = 1; ρ = 1 kg/m^3
Phantom section: E Device Section

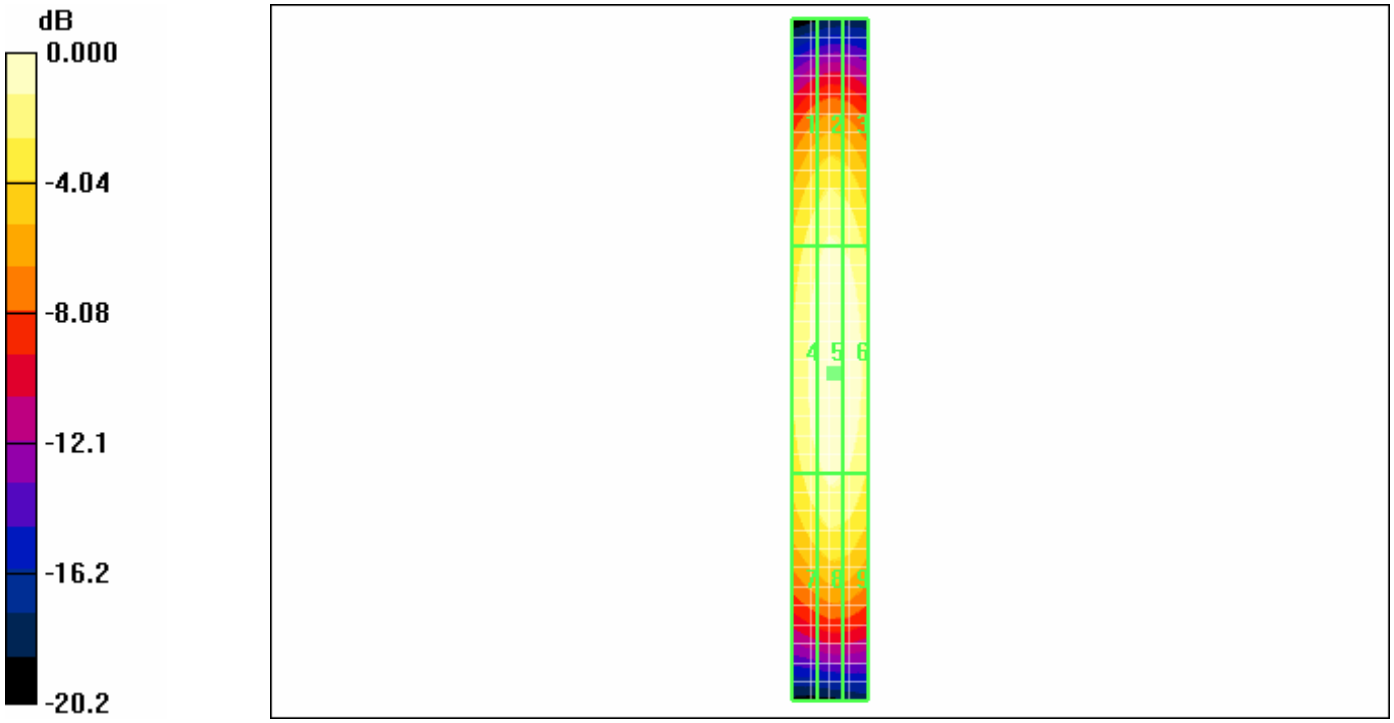
DASY4 Configuration:
- Probe: H3DV6 - SN6105; ; Calibrated: 09/11/2007
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 05/03/2008
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 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 = 0.453 A/m; Power Drift = -0.028 dB
Maximum value of Total (measured) = 0.430 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 = 0.432 A/m
Probe Modulation Factor = 1.00
Device Reference Point: 0.000, 0.000, 353.7 mm
Reference Value = 0.453 A/m; Power Drift = -0.028 dB
Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak H-field in A/m

Grid 1 **0.357 M4**	Grid 2 **0.381 M4**	Grid 3 **0.371 M4**
Grid 4 **0.398 M4**	Grid 5 **0.432 M4**	Grid 6 **0.424 M4**
Grid 7	Grid 8	Grid 9



0 dB = 0.432A/m

Date/Time: 23/06/2008 3:05:40 PM

Test Laboratory: RTS
File Name: HAC_H_Dipole_CW835_18.50dBm.da4

DUT: HAC-Dipole 835 MHz; Type: D835V3; Serial: 1011
Program Name: HAC RF H3DV6 Dipole

Communication System: CW; Frequency: 835 MHz;Duty Cycle: 1:1
Medium parameters used: σ = 0 mho/m, ε_r = 1; ρ = 1 kg/m^3
Phantom section: E Device Section

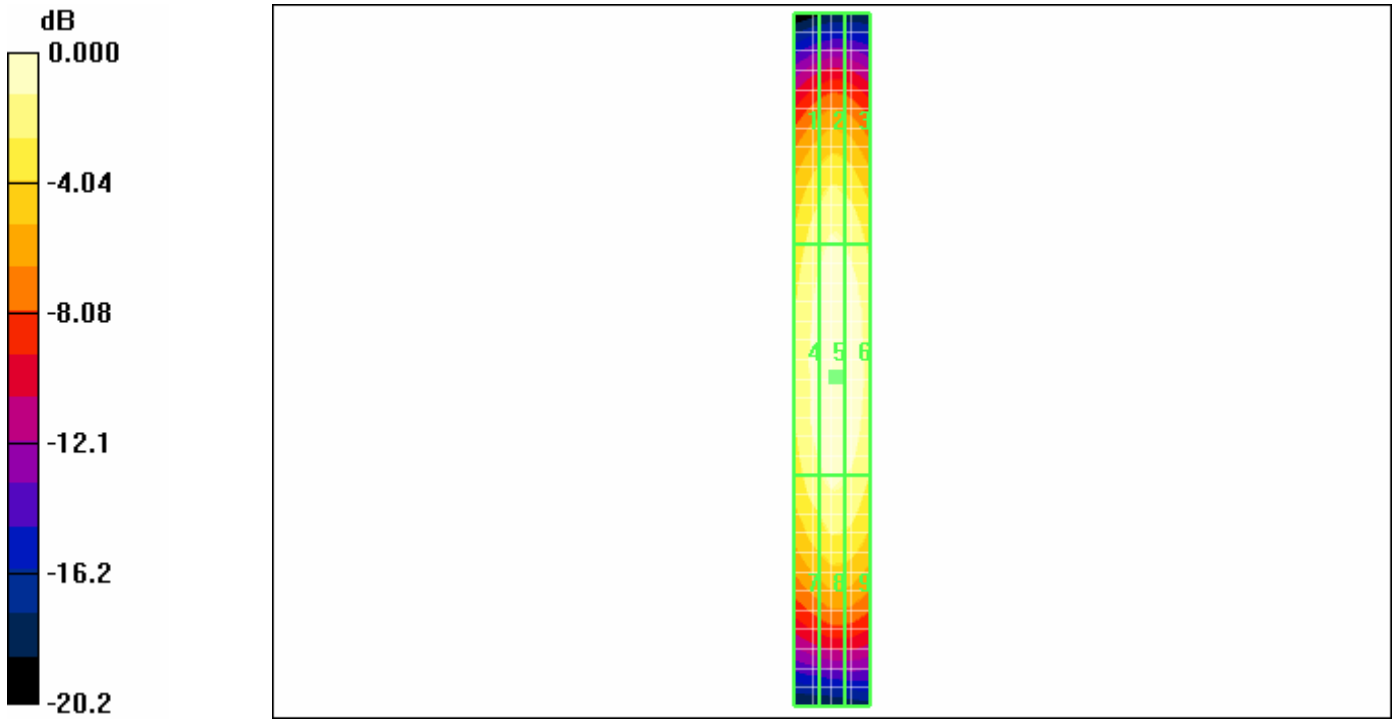
DASY4 Configuration:
- Probe: H3DV6 - SN6105; ; Calibrated: 09/11/2007
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 05/03/2008
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 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 = 0.399 A/m; Power Drift = 0.022 dB
Maximum value of Total (measured) = 0.381 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 = 0.383 A/m
Probe Modulation Factor = 1.00
Device Reference Point: 0.000, 0.000, 353.7 mm
Reference Value = 0.399 A/m; Power Drift = 0.022 dB
Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak H-field in A/m

Grid 1 **0.315 M4**	Grid 2 **0.337 M4**	Grid 3 **0.329 M4**
Grid 4 **0.356 M4**	Grid 5 **0.383 M4**	Grid 6 **0.371 M4**
Grid 7	Grid 8	Grid 9



0 dB = 0.383A/m

Date/Time: 23/06/2008 3:14:09 PM

Test Laboratory: RTS
File Name: HAC_H_Dipole_AM80%_835_18.50dBm.da4

DUT: HAC-Dipole 835 MHz; Type: D835V3; Serial: 1011
Program Name: HAC RF H3DV6 Dipole

Communication System: AM; Frequency: 835 MHz;Duty Cycle: 1:1
Medium parameters used: σ = 0 mho/m, ε_r = 1; ρ = 1 kg/m^3
Phantom section: E Device Section

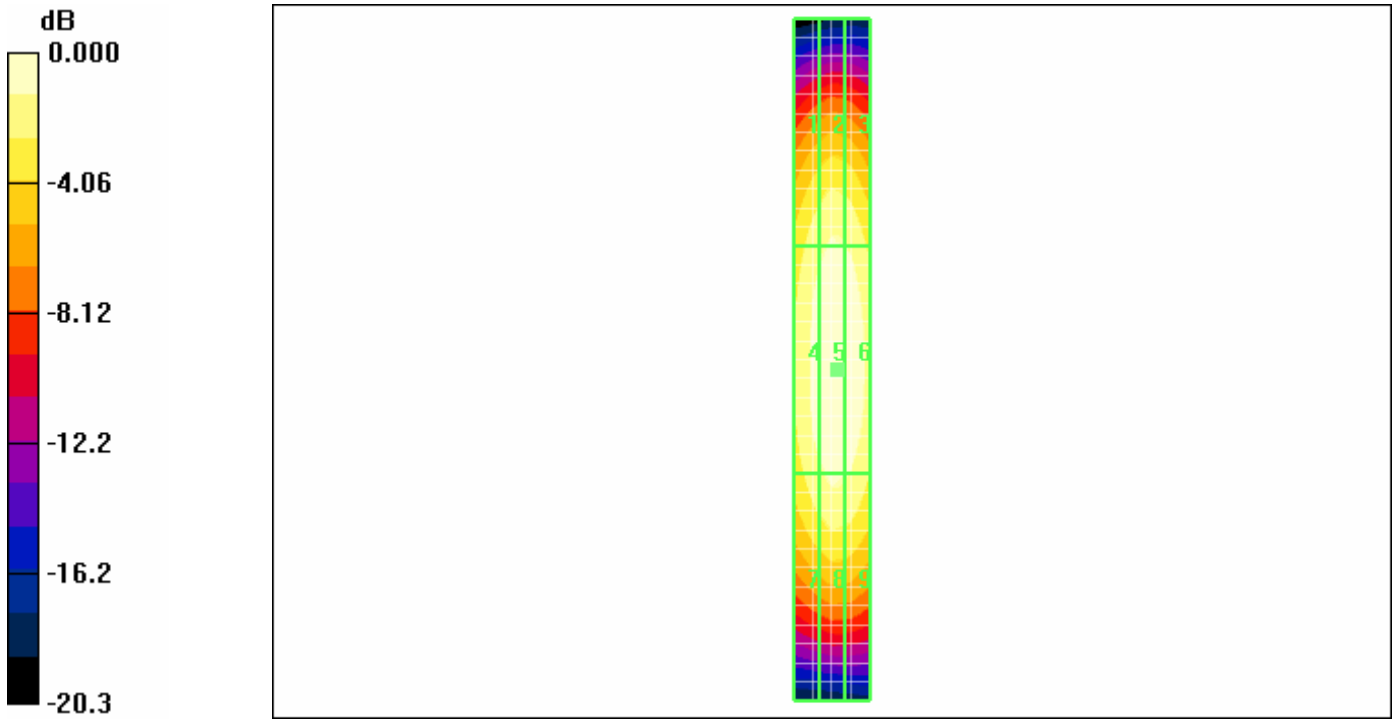
DASY4 Configuration:
- Probe: H3DV6 - SN6105; ; Calibrated: 09/11/2007
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 05/03/2008
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 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 = 0.261 A/m; Power Drift = -0.005 dB
Maximum value of Total (measured) = 0.246 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 = 0.247 A/m
Probe Modulation Factor = 1.00
Device Reference Point: 0.000, 0.000, 353.7 mm
Reference Value = 0.261 A/m; Power Drift = -0.005 dB
Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak H-field in A/m

Grid 1 **0.204 M4**	Grid 2 **0.217 M4**	Grid 3 **0.213 M4**
Grid 4 **0.228 M4**	Grid 5 **0.247 M4**	Grid 6 **0.243 M4**
Grid 7	Grid 8	Grid 9



0 dB = 0.247A/m

Date/Time: 23/06/2008 3:25:08 PM

Test Laboratory: RTS
File Name: HAC_H_Dipole_GSM835_18.50dBm.da4

DUT: HAC-Dipole 835 MHz; Type: D835V3; Serial: 1011
Program Name: HAC RF H3DV6 Dipole

Communication System: GSM 850; Frequency: 835 MHz;Duty Cycle: 1:8.3
Medium parameters used: σ = 0 mho/m, ε_r = 1; ρ = 1 kg/m^3
Phantom section: E Device Section

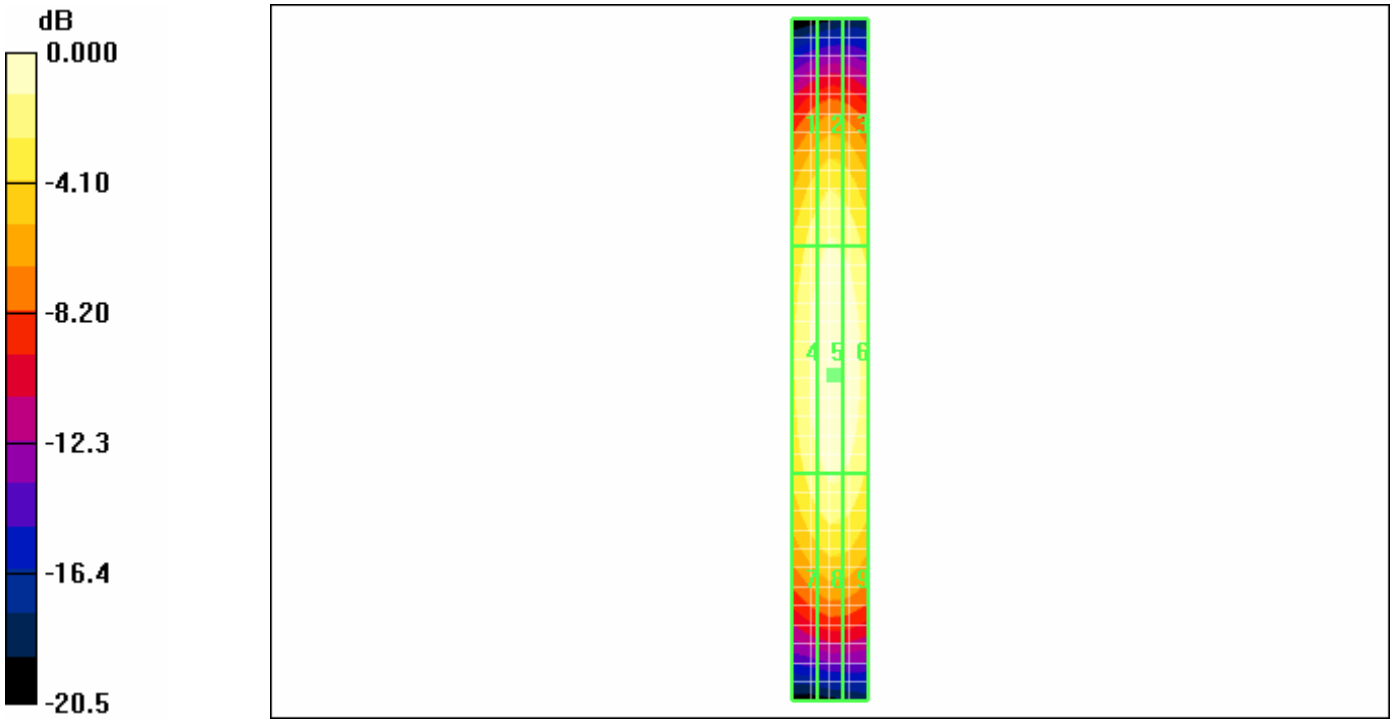
DASY4 Configuration:
- Probe: H3DV6 - SN6105; ; Calibrated: 09/11/2007
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 05/03/2008
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 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 = 0.146 A/m; Power Drift = 0.051 dB
Maximum value of Total (measured) = 0.139 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 = 0.140 A/m
Probe Modulation Factor = 1.00
Device Reference Point: 0.000, 0.000, 353.7 mm
Reference Value = 0.146 A/m; Power Drift = 0.051 dB
Hearing Aid Near-Field Category: M4 (AWF -5 dB)

Peak H-field in A/m

Grid 1 **0.114 M4**	Grid 2 **0.122 M4**	Grid 3 **0.118 M4**
Grid 4 **0.128 M4**	Grid 5 **0.140 M4**	Grid 6 **0.136 M4**
Grid 7	Grid 8	Grid 9



0 dB = 0.140A/m

Date/Time: 23/06/2008 3:54:36 PM

Test Laboratory: RTS
File Name: HAC_H_Dipole_CW1880_20.00dBm.da4

DUT: HAC Dipole 1880 MHz; Type: CD1880V3; Serial: 1008
Program Name: HAC RF H3DV6 Dipole

Communication System: CW; Frequency: 1880 MHz;Duty Cycle: 1:1
Medium parameters used: σ = 0 mho/m, ε_r = 1; ρ = 1 kg/m^3
Phantom section: E Device Section

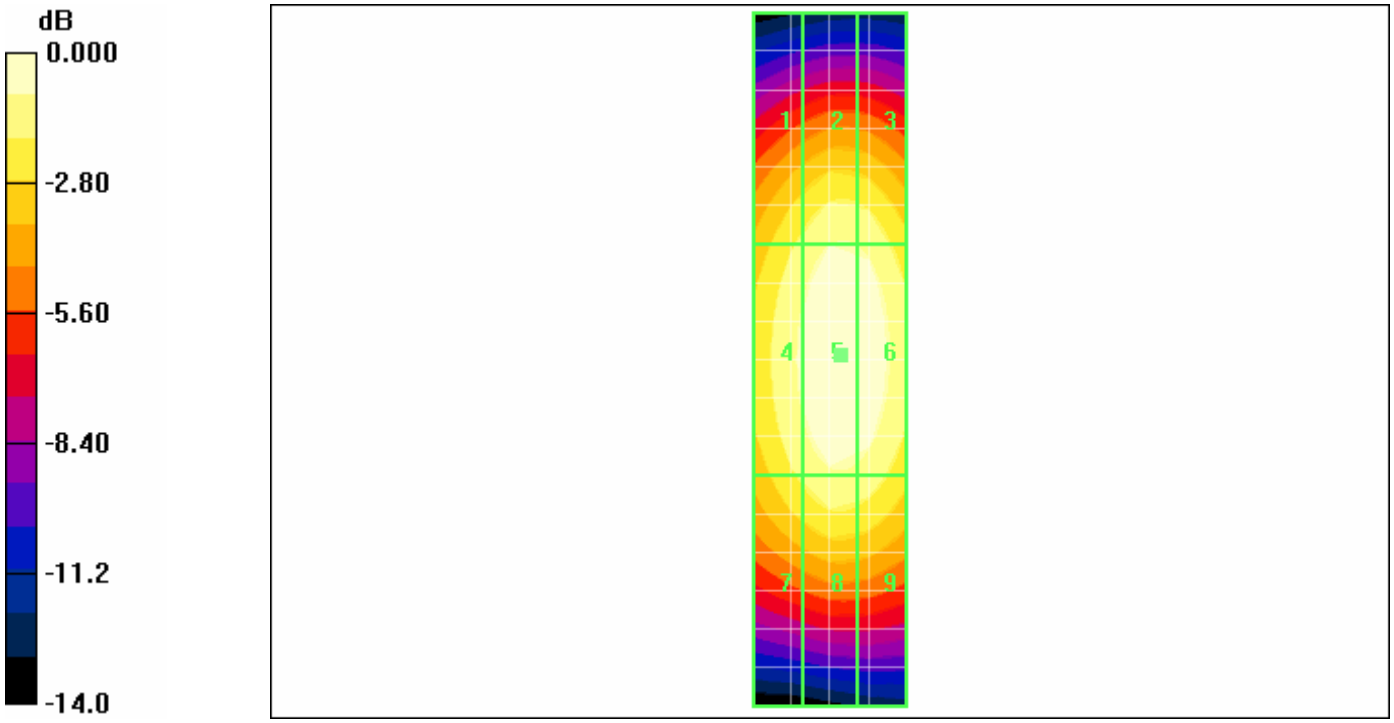
DASY4 Configuration:
- Probe: H3DV6 - SN6105; ; Calibrated: 09/11/2007
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 05/03/2008
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 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 = 0.462 A/m; Power Drift = -0.008 dB
Maximum value of Total (measured) = 0.436 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 = 0.440 A/m
Probe Modulation Factor = 1.00
Device Reference Point: 0.000, 0.000, 353.7 mm
Reference Value = 0.462 A/m; Power Drift = -0.008 dB
Hearing Aid Near-Field Category: M2 (AWF 0 dB)

Peak H-field in A/m

Grid 1 **0.367 M2**	Grid 2 **0.398 M2**	Grid 3 **0.395 M2**
Grid 4 **0.405 M2**	Grid 5 **0.440 M2**	Grid 6 **0.434 M2**
Grid 7	Grid 8	Grid 9



0 dB = 0.440A/m

Date/Time: 23/06/2008 3:42:58 PM

Test Laboratory: RTS
File Name: HAC_H_Dipole_CW1880_16.10dBm.da4

DUT: HAC Dipole 1880 MHz; Type: CD1880V3; Serial: 1008
Program Name: HAC RF H3DV6 Dipole

Communication System: CW; Frequency: 1880 MHz;Duty Cycle: 1:1
Medium parameters used: $\sigma = 0$ mho/m, $\varepsilon_r = 1$; $\rho = 1$ kg/m^3
Phantom section: E Device Section

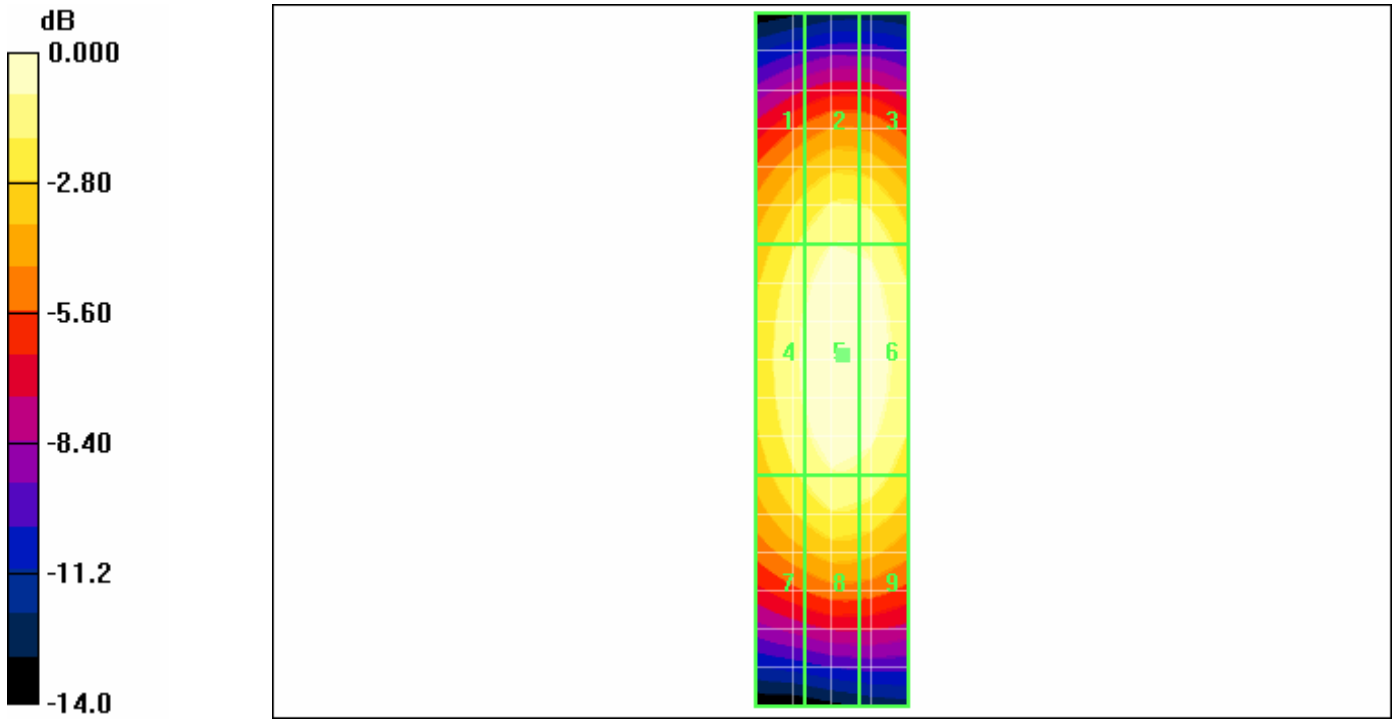
DASY4 Configuration:
- Probe: H3DV6 - SN6105; ; Calibrated: 09/11/2007
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 05/03/2008
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 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 = 0.320 A/m; Power Drift = 0.004 dB
Maximum value of Total (measured) = 0.302 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 = 0.304 A/m
Probe Modulation Factor = 1.00
Device Reference Point: 0.000, 0.000, 353.7 mm
Reference Value = 0.320 A/m; Power Drift = 0.004 dB
Hearing Aid Near-Field Category: M3 (AWF 0 dB)

Peak H-field in A/m

Grid 1 **0.253 M3**	Grid 2 **0.275 M3**	Grid 3 **0.272 M3**
Grid 4 **0.280 M3**	Grid 5 **0.304 M3**	Grid 6 **0.299 M3**
Grid 7	Grid 8	Grid 9



0 dB = 0.304A/m

Date/Time: 23/06/2008 3:49:08 PM

Test Laboratory: RTS
File Name: HAC_H_Dipole_AM80%_1880_16.10dBm.da4

DUT: HAC Dipole 1880 MHz; Type: CD1880V3; Serial: 1008
Program Name: HAC RF H3DV6 Dipole

Communication System: AM; Frequency: 1880 MHz;Duty Cycle: 1:1
Medium parameters used: $\sigma = 0$ mho/m, $\varepsilon_r = 1$; $\rho = 1$ kg/m^3
Phantom section: E Device Section

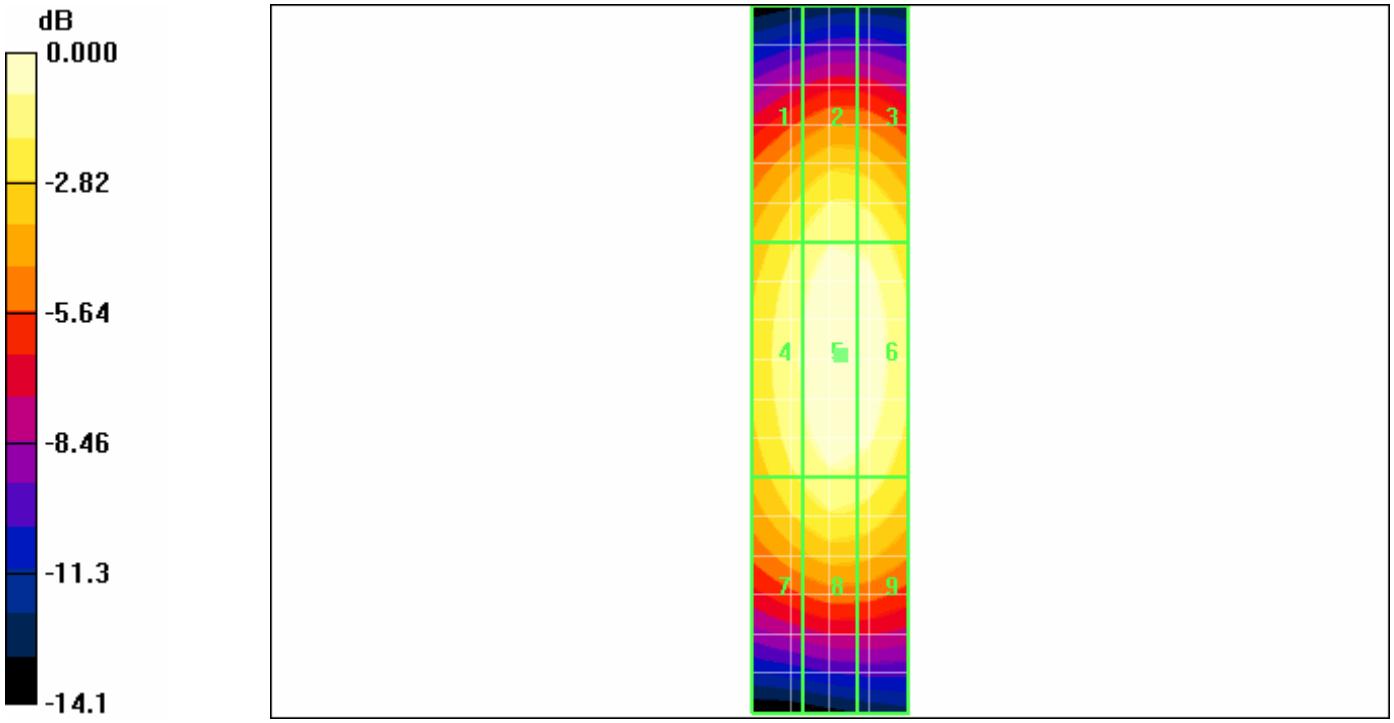
DASY4 Configuration:
- Probe: H3DV6 - SN6105; ; Calibrated: 09/11/2007
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 05/03/2008
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 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 = 0.206 A/m; Power Drift = 0.047 dB
Maximum value of Total (measured) = 0.195 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 = 0.197 A/m
Probe Modulation Factor = 1.00
Device Reference Point: 0.000, 0.000, 353.7 mm
Reference Value = 0.206 A/m; Power Drift = 0.047 dB
Hearing Aid Near-Field Category: M3 (AWF 0 dB)

Peak H-field in A/m

Grid 1 **0.162 M4**	Grid 2 **0.177 M4**	Grid 3 **0.176 M4**
Grid 4 **0.180 M4**	Grid 5 **0.197 M3**	Grid 6 **0.194 M3**
Grid 7	Grid 8	Grid 9



0 dB = 0.197A/m

Date/Time: 23/06/2008 3:35:55 PM

Test Laboratory: RTS
File Name: HAC_H_Dipole_GSM1880_16.10dBm.da4

DUT: HAC Dipole 1880 MHz; Type: CD1880V3; Serial: 1008
Program Name: HAC RF H3DV6 Dipole

Communication System: GSM 1900; Frequency: 1880 MHz;Duty Cycle: 1:8.3
Medium parameters used: σ = 0 mho/m, ε_r = 1; ρ = 1 kg/m^3
Phantom section: E Device Section

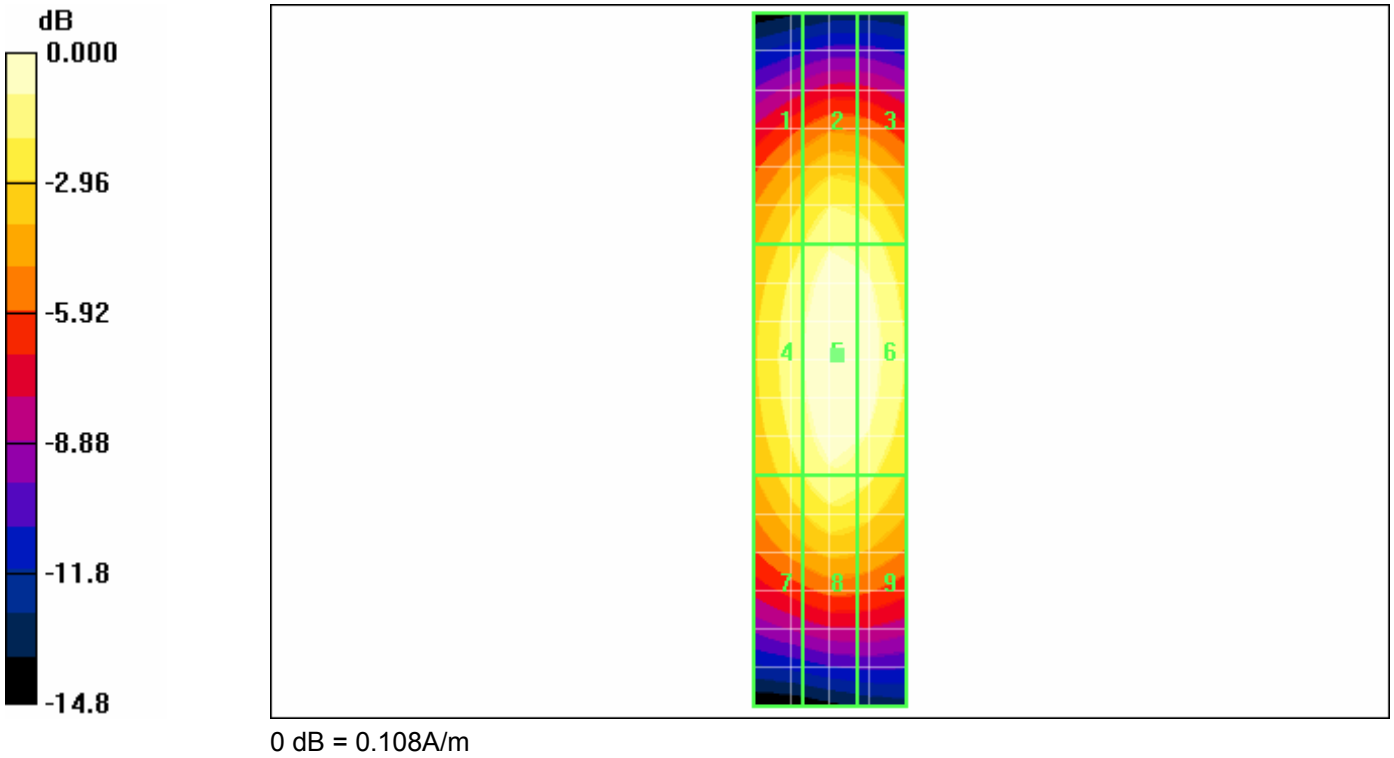
DASY4 Configuration:
- Probe: H3DV6 - SN6105; ; Calibrated: 09/11/2007
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 05/03/2008
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 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 = 0.113 A/m; Power Drift = 0.070 dB
Maximum value of Total (measured) = 0.107 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 = 0.108 A/m
Probe Modulation Factor = 1.00
Device Reference Point: 0.000, 0.000, 353.7 mm
Reference Value = 0.113 A/m; Power Drift = 0.070 dB
Hearing Aid Near-Field Category: M4 (AWF -5 dB)

Peak H-field in A/m

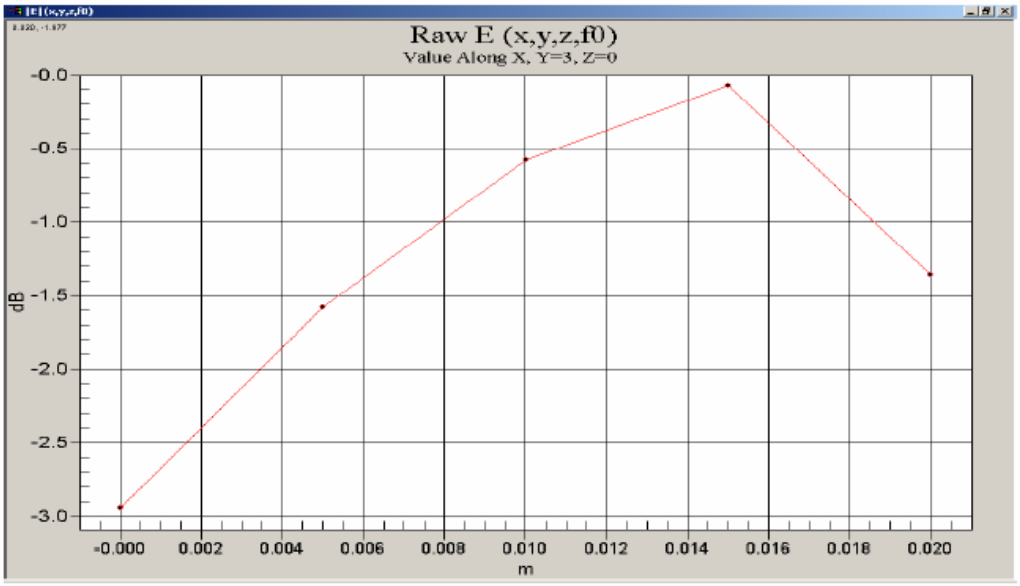
Grid 1 **0.086** **M4**	Grid 2 **0.096** **M4**	Grid 3 **0.094** **M4**
Grid 4 **0.097** **M4**	Grid 5 **0.108** **M4**	Grid 6 **0.105** **M4**
Grid 7	Grid 8	Grid 9



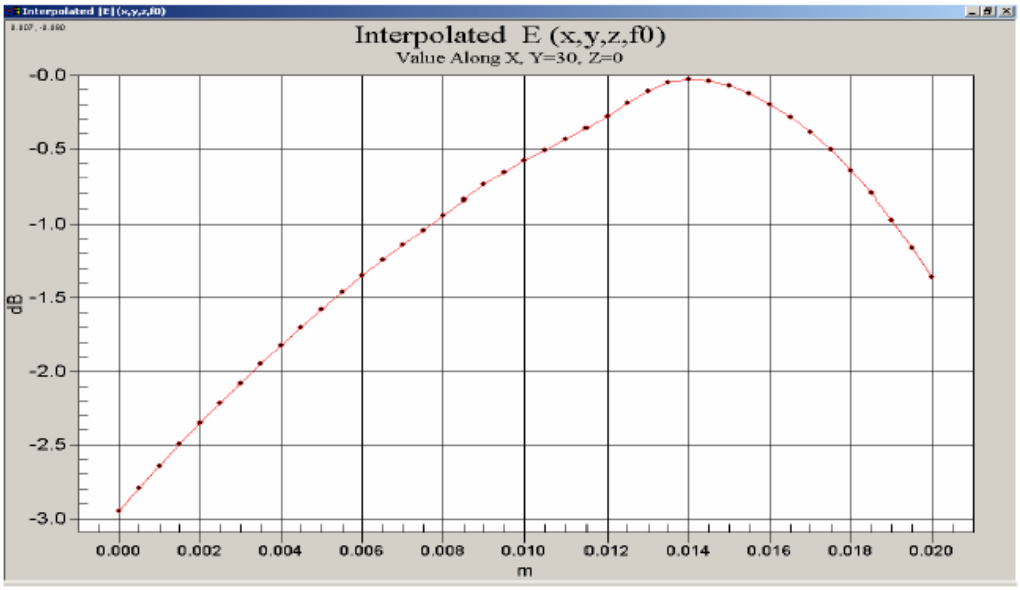
0 dB = 0.108A/m

Justification of Step Size and Interpolation

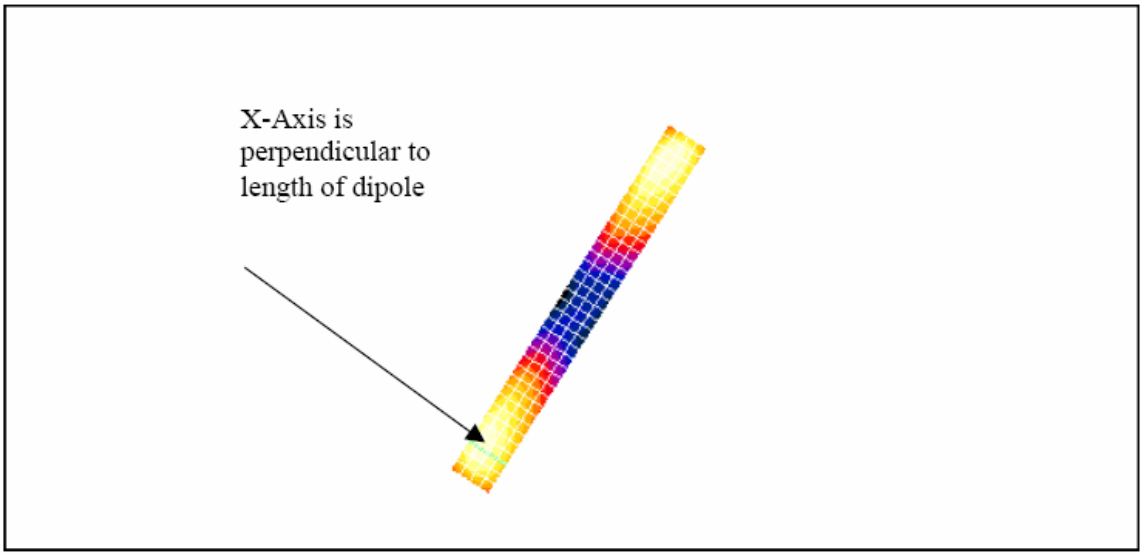
This section demonstrates that a 5mm step size with interpolation provides sufficient resolution for RF emissions measurements. The DASY 4 uses interpolation algorithms to derive 9 interpolated points between every measured point.



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: σ = 0 mho/m, ε_r = 1; ρ = 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 11:35:24 AM

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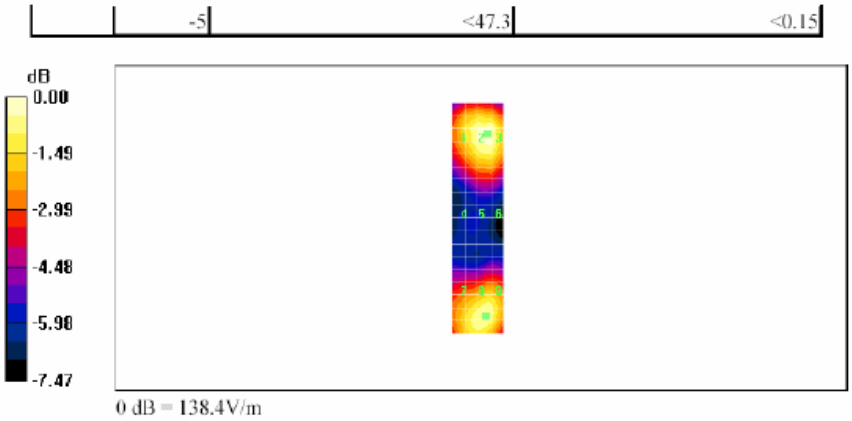

file://C:\Program%20Files\DASY4\Print_Templates\Dipole%20Validation%201880%20... 14/07/2005

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: σ = 0 mho/m, ε_r = 1; ρ = 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 11:44:51 AM

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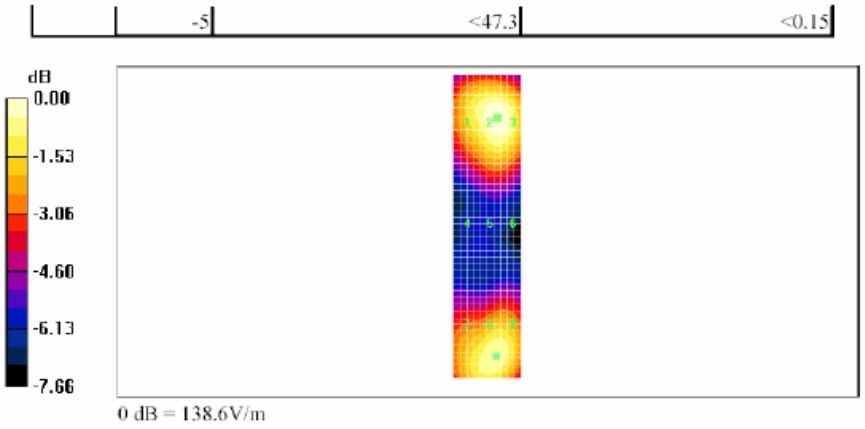

0 dB = 138.6V/m

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

H in A/m (Slot averaged)

Grid 1 **0.342**	Grid 2 **0.359**	Grid 3 **0.344**
Grid 4 **0.389**	Grid 5 **0.406**	Grid 6 **0.389**
Grid 7 **0.363**	Grid 8 **0.378**	Grid 9 **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 12:43:02 PM

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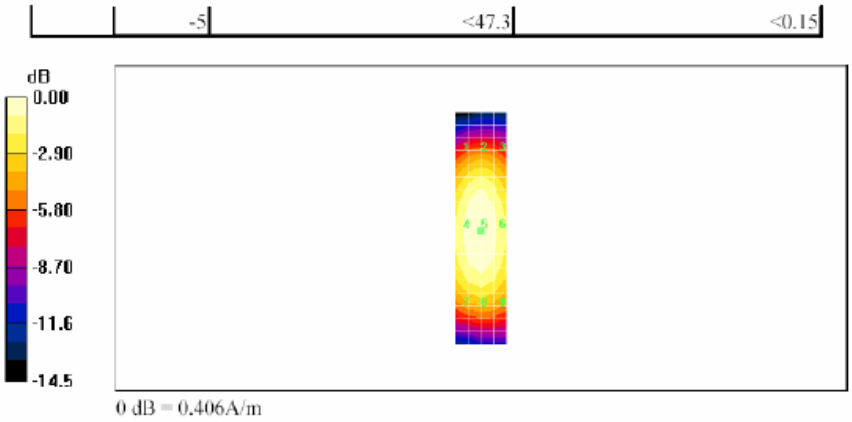


0 dB = 0.406A/m

file://C:\Program%20Files\DASY4\Print_Templates\HAC_H_Dipole_CW%201880_5%... 14/07/2005

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: σ = 0 mho/m, ε_r = 1; ρ = 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)

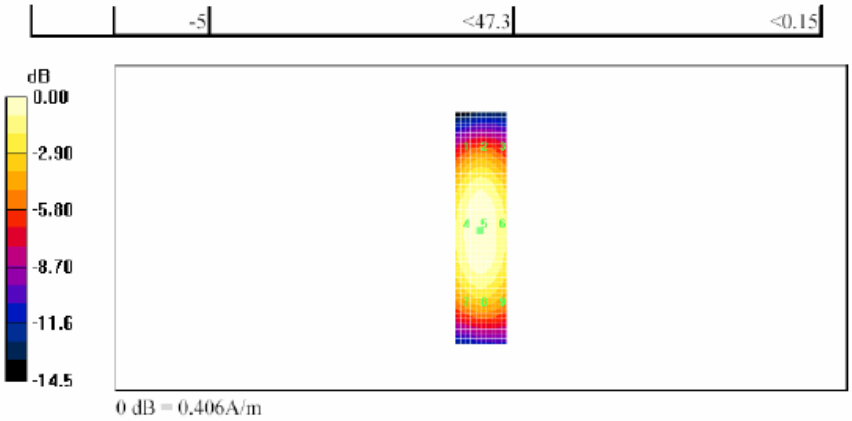
Grid 1 **0.347**	Grid 2 **0.361**	Grid 3 **0.348**
Grid 4 **0.394**	Grid 5 **0.406**	Grid 6 **0.391**
Grid 7 **0.367**	Grid 8 **0.380**	Grid 9 **0.365**

H in A/m (Slot averaged)

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



0 dB = 0.406A/m

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

A.3 RF emissions and ambient noise plots

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

Date/Time: 25/06/2008 11:31:12 AM

Test Laboratory: RTS
File Name: HAC_E_GSM850_Low_Chan.da4

DUT: BlackBerry Smartphone; Type: Clamshell; PIN: 20746462
Program Name: HAC RF ER3D Device

Communication System: GSM 850; Frequency: 824.2 MHz;Duty Cycle: 1:8.3
Medium parameters used: $\sigma = 0$ mho/m, $\varepsilon_r = 1$; $\rho = 1000$ 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 - 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 = 60.7 V/m; Power Drift = -0.136 dB
Maximum value of Total (measured) = 46.4 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 = 138.4 V/m
Probe Modulation Factor = 2.97
Device Reference Point: 0.000, 0.000, 353.7 mm
Reference Value = 60.7 V/m; Power Drift = -0.136 dB
Hearing Aid Near-Field Category: M4 (AWF -5 dB)

Peak E-field in V/m

Grid 1 **121.9 M4**	Grid 2 **134.3 M4**	Grid 3 **129.9 M4**
Grid 4 **126.6 M4**	Grid 5 **138.4 M4**	Grid 6 **134.7 M4**
Grid 7	Grid 8	Grid 9

0 dB = 138.4V/m

Date/Time: 25/06/2008 11:51:35 AM

Test Laboratory: RTS
File Name: HAC_E_GSM850_Mid_Chan.da4

DUT: BlackBerry Smartphone; Type: Clamshell; PIN: 20746462
Program Name: HAC RF ER3D Device

Communication System: GSM 850; Frequency: 836.8 MHz;Duty Cycle: 1:8.3
Medium parameters used: $\sigma = 0$ mho/m, $\varepsilon_r = 1$; $\rho = 1000$ 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 - 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 = -0.204 dB
Maximum value of Total (measured) = 54.7 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 = 162.4 V/m
Probe Modulation Factor = 2.97
Device Reference Point: 0.000, 0.000, 353.7 mm
Reference Value = 71.0 V/m; Power Drift = -0.204 dB
Hearing Aid Near-Field Category: M3 (AWF -5 dB)

Peak E-field in V/m

Grid 1 **136.9 M4**	Grid 2 **155.6 M3**	Grid 3 **154.8 M3**
Grid 4 **143.1 M4**	Grid 5 **162.4 M3**	Grid 6 **161.3 M3**
Grid 7	Grid 8	Grid 9

0 dB = 162.4V/m

Date/Time: 25/06/2008 11:58:41 AM

Test Laboratory: RTS
File Name: HAC_E_GSM850_High_Chan.da4

DUT: BlackBerry Smartphone; Type: Clamshell; PIN: 20746462
Program Name: HAC RF ER3D Device

Communication System: GSM 850; Frequency: 848.8 MHz;Duty Cycle: 1:8.3
Medium parameters used: σ = 0 mho/m, ε_r = 1; ρ = 1000 kg/m^3
Phantom section: E Device Section

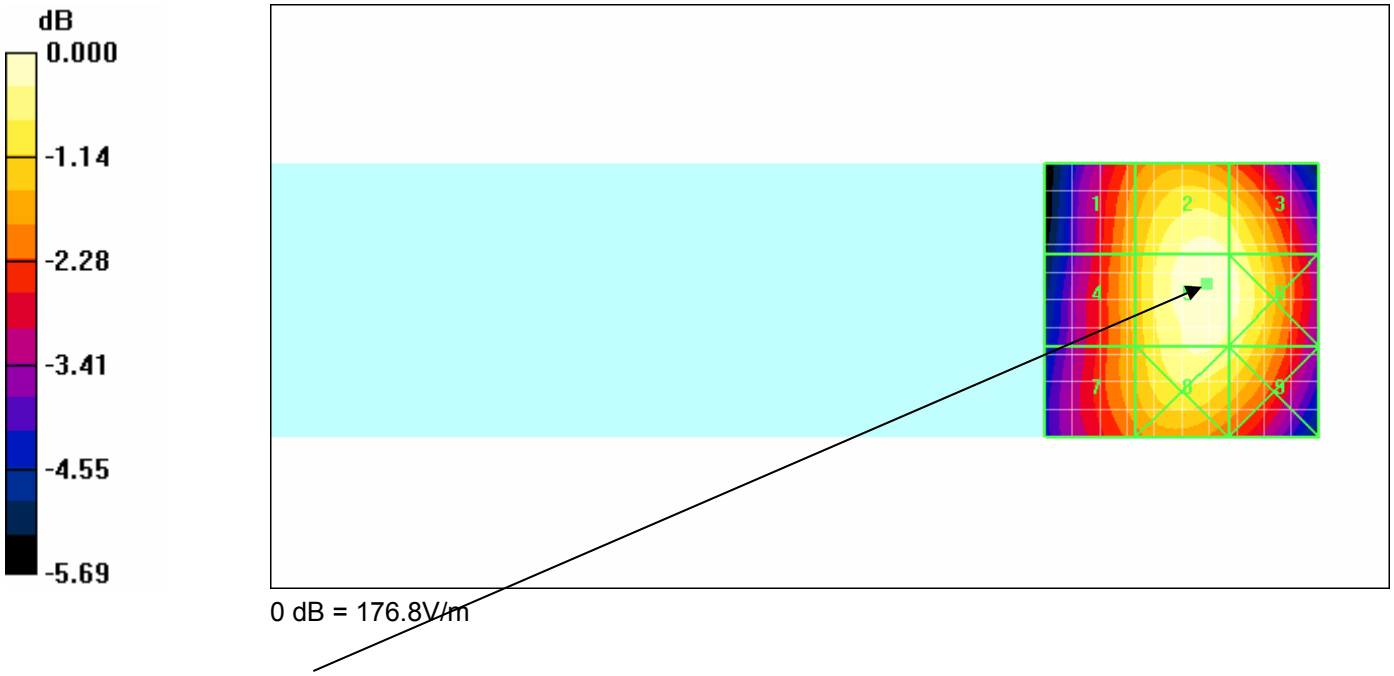
DASY4 Configuration:
- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 21/01/2008
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 05/03/2008
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing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

E Scan - 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 = 76.7 V/m; Power Drift = 0.001 dB
Maximum value of Total (measured) = 59.4 V/m

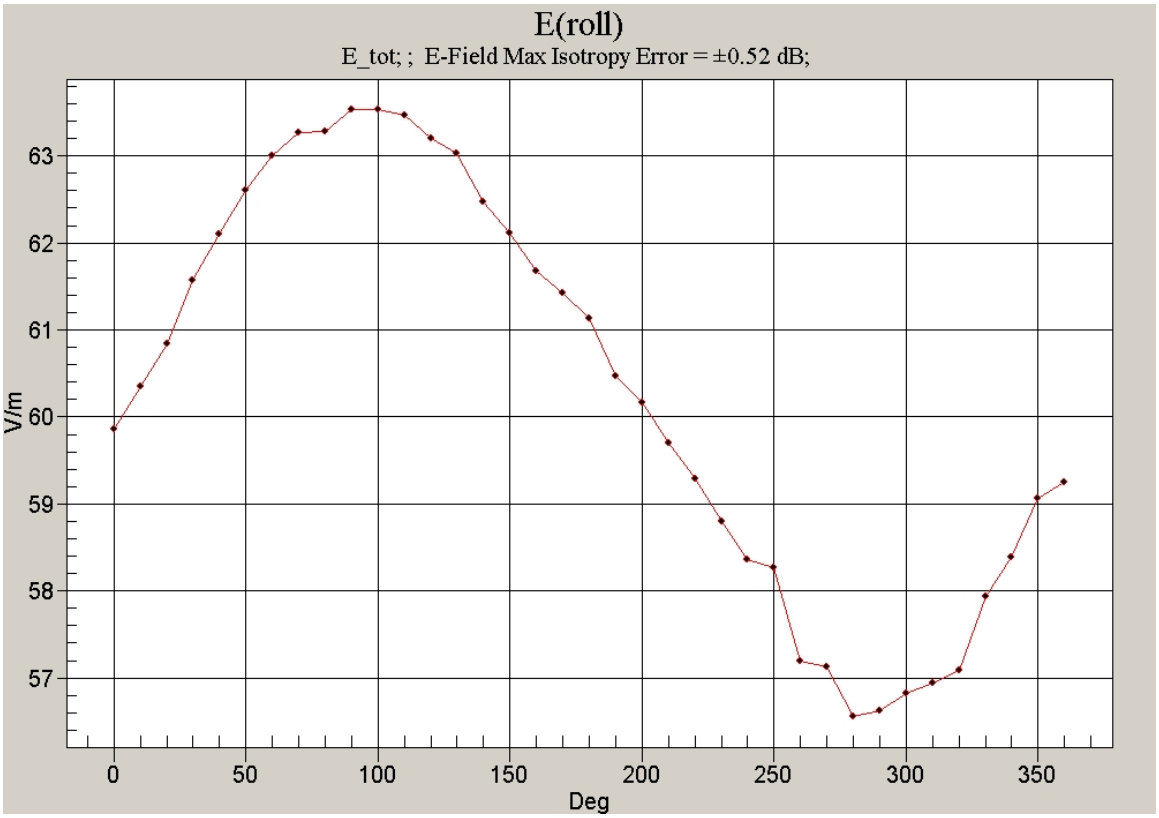
E Scan - ER3D - 2007: 15 mm from Probe Center to the Device/Hearing Aid Compatibility Test (101x101x1): Measurement grid: dx=5mm, dy=5mm
Maximum value of peak Total field = 176.8 V/m
Probe Modulation Factor = 2.97
Device Reference Point: 0.000, 0.000, 353.7 mm
Reference Value = 76.7 V/m; Power Drift = 0.001 dB
Hearing Aid Near-Field Category: M3 (AWF -5 dB)

Peak E-field in V/m

Grid 1 **150.8 M3**	Grid 2 **173.1 M3**	Grid 3 **169.5 M3**
Grid 4 **152.1 M3**	Grid 5 **176.8 M3**	Grid 6 **173.4 M3**
Grid 7	Grid 8	Grid 9



Location of the probe rotation



Plot for probe rotation at max location after exclusion block

E (delta) = (E max - E at zero degress) * PMF
= (63.6 – 59.8) * 2.97
= 3.8 * 2.97
= 11.29 V/m

Date/Time: 25/06/2008 12:23:43 PM

Test Laboratory: RTS
File Name: HAC_E_GSM1900_Low_Chan.da4

DUT: BlackBerry Smartphone; Type: Clamshell; PIN: 20746462
Program Name: HAC RF ER3D Device

Communication System: GSM 1900; Frequency: 1850.2 MHz;Duty Cycle: 1:8.3
Medium parameters used: σ = 0 mho/m, ε_r = 1; ρ = 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 - 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 = 23.9 V/m; Power Drift = -0.151 dB
Maximum value of Total (measured) = 23.0 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 = 65.9 V/m
Probe Modulation Factor = 2.93
Device Reference Point: 0.000, 0.000, 353.7 mm
Reference Value = 23.9 V/m; Power Drift = -0.151 dB
Hearing Aid Near-Field Category: M3 (AWF -5 dB)

Peak E-field in V/m

Grid 1 **40.5 M4**	Grid 2 **49.2 M3**	Grid 3 **50.9 M3**
Grid 4 **43.8 M4**	Grid 5 **65.9 M3**	Grid 6 **65.9 M3**
Grid 7	Grid 8	Grid 9

0 dB = 67.6V/m

Date/Time: 25/06/2008 12:30:49 PM

Test Laboratory: RTS
File Name: HAC_E_GSM1900_Mid_Chan.da4

DUT: BlackBerry Smartphone; Type: Clamshell; PIN: 20746462
Program Name: HAC RF ER3D Device

Communication System: GSM 1900; Frequency: 1880 MHz;Duty Cycle: 1:8.3
Medium parameters used: σ = 0 mho/m, ε_r = 1; ρ = 1000 kg/m^3
Phantom section: E Device Section

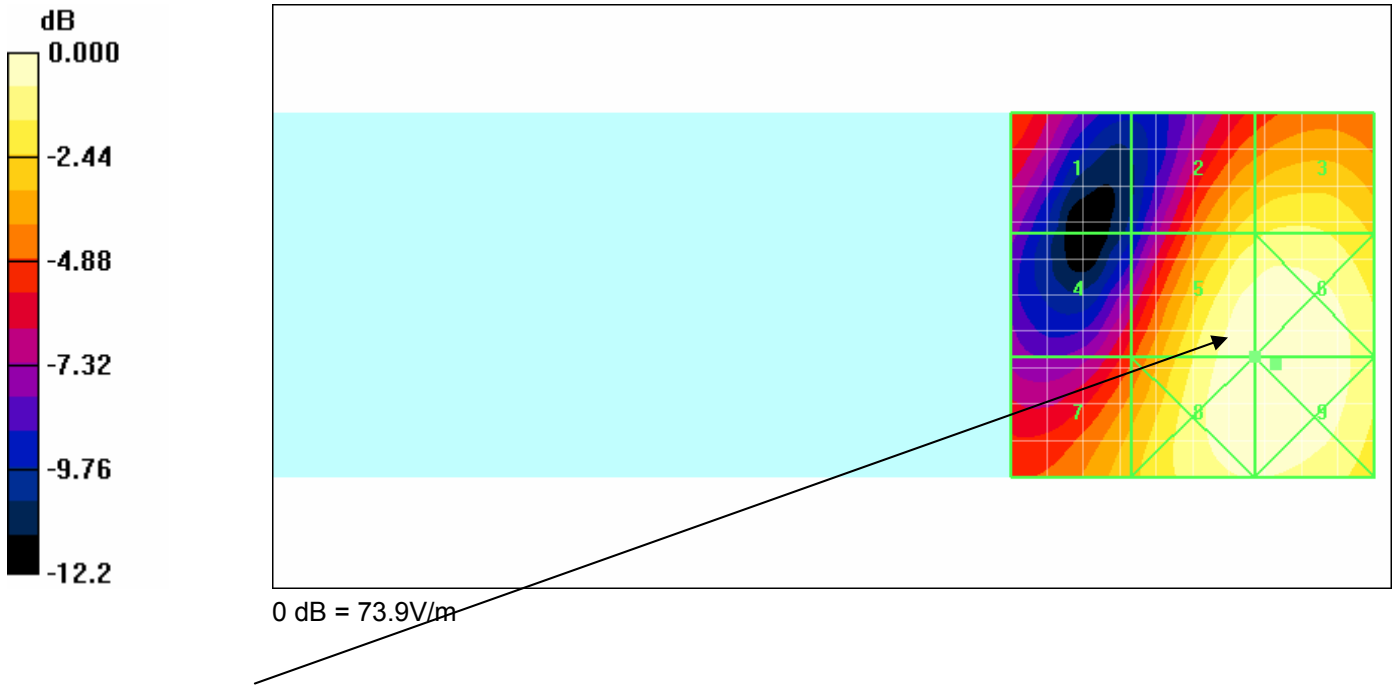
DASY4 Configuration:
- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 21/01/2008
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 05/03/2008
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing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

E Scan - 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 = 24.3 V/m; Power Drift = 0.028 dB
Maximum value of Total (measured) = 25.1 V/m

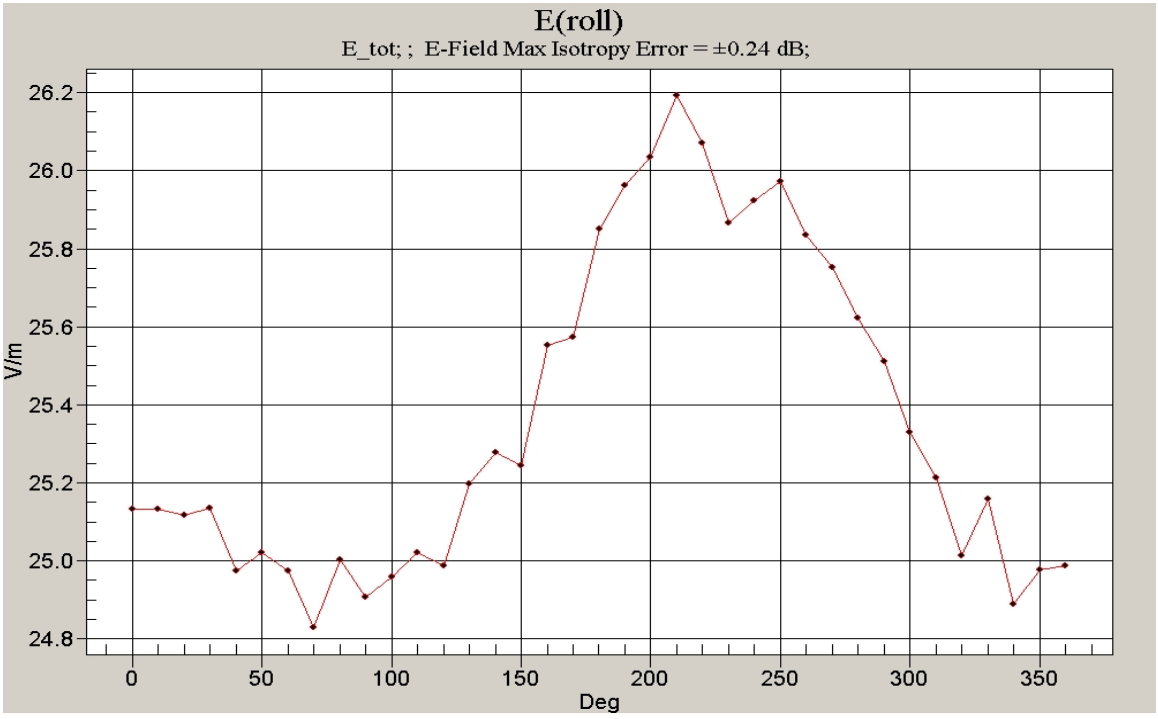
E Scan - ER3D - 2007: 15 mm from Probe Center to the Device/Hearing Aid Compatibility Test (101x101x1): Measurement grid: dx=5mm, dy=5mm
Maximum value of peak Total field = 72.9 V/m
Probe Modulation Factor = 2.93
Device Reference Point: 0.000, 0.000, 353.7 mm
Reference Value = 24.3 V/m; Power Drift = 0.028 dB
Hearing Aid Near-Field Category: M3 (AWF -5 dB)

Peak E-field in V/m

Grid 1 **42.6 M4**	Grid 2 **59.7 M3**	Grid 3 **62.5 M3**
Grid 4 **41.1 M4**	Grid 5 **72.9 M3**	Grid 6 **73.9 M3**
Grid 7	Grid 8	Grid 9



Location of the probe rotation



Probe rotation at max location after exclusion block

E (delta) = (E max - E at zero degress) * PMF
= (26.2 – 25.15) * 2.93
= 1.05 * 2.93
= 3.08 V/m

Date/Time: 25/06/2008 12:38:28 PM

Test Laboratory: RTS
File Name: HAC_E_GSM1900_High_Chan.da4

DUT: BlackBerry Smartphone; Type: Clamshell; PIN: 20746462
Program Name: HAC RF ER3D Device

Communication System: GSM 1900; Frequency: 1909.8 MHz;Duty Cycle: 1:8.3
Medium parameters used: σ = 0 mho/m, ε_r = 1; ρ = 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 - 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 = 22.8 V/m; Power Drift = -0.136 dB
Maximum value of Total (measured) = 24.1 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 = 69.9 V/m
Probe Modulation Factor = 2.97
Device Reference Point: 0.000, 0.000, 353.7 mm
Reference Value = 22.8 V/m; Power Drift = -0.136 dB
Hearing Aid Near-Field Category: M3 (AWF -5 dB)

Peak E-field in V/m

Grid 1 **40.7 M4**	Grid 2 **53.8 M3**	Grid 3 **56.0 M3**
Grid 4 **44.2 M4**	Grid 5 **69.9 M3**	Grid 6 **70.4 M3**
Grid 7	Grid 8	Grid 9

0 dB = 71.6V/m

Date/Time: 25/06/2008 5:02:39 PM

Test Laboratory: RTS
File Name: HAC_H_GSM850_Low_Chan.da4

DUT: BlackBerry Smartphone; Type: Clamshell; PIN: 20746462
Program Name: HAC RF H3DV6 Device

Communication System: GSM 850; Frequency: 824.2 MHz;Duty Cycle: 1:8.3
Medium parameters used: $\sigma = 0$ mho/m, $\varepsilon_r = 1$; $\rho = 1$ kg/m^3
Phantom section: E Device Section

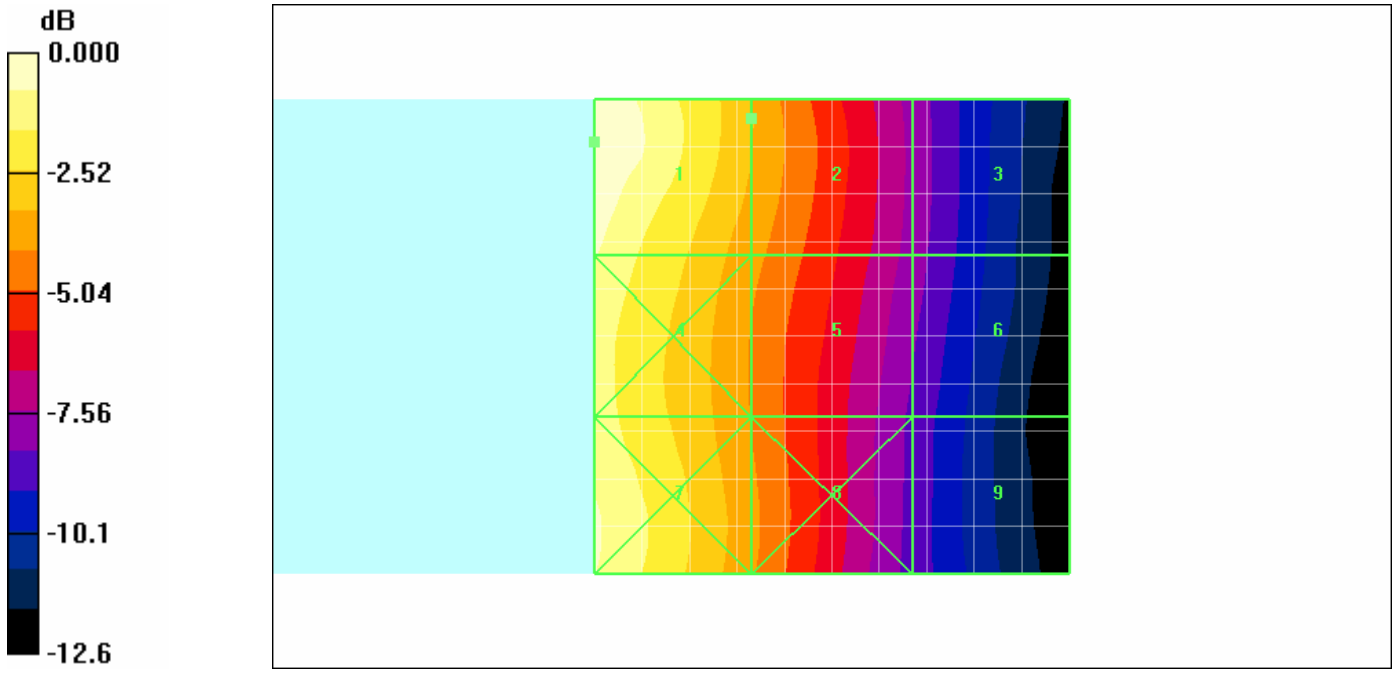
DASY4 Configuration:
- Probe: H3DV6 - SN6105; ; Calibrated: 09/11/2007
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 05/03/2008
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 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 = 0.056 A/m; Power Drift = 0.026 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 = 0.296 A/m
Probe Modulation Factor = 2.74
Device Reference Point: 0.000, 0.000, 353.7 mm
Reference Value = 0.056 A/m; Power Drift = 0.026 dB
Hearing Aid Near-Field Category: M4 (AWF -5 dB)

Peak H-field in A/m

Grid 1 **0.296 M4**	Grid 2 **0.203 M4**	Grid 3 **0.121 M4**
Grid 4 **0.271 M4**	Grid 5 **0.189 M4**	Grid 6 **0.119 M4**
Grid 7	Grid 8	Grid 9



0 dB = 0.296A/m

Date/Time: 25/06/2008 5:10:27 PM

Test Laboratory: RTS
File Name: HAC_H_GSM850_Mid_Chan.da4

DUT: BlackBerry Smartphone; Type: Clamshell; PIN: 20746462
Program Name: HAC RF H3DV6 Device

Communication System: GSM 850; Frequency: 836.8 MHz;Duty Cycle: 1:8.3
Medium parameters used: $\sigma = 0$ mho/m, $\varepsilon_r = 1$; $\rho = 1$ kg/m^3
Phantom section: E Device Section

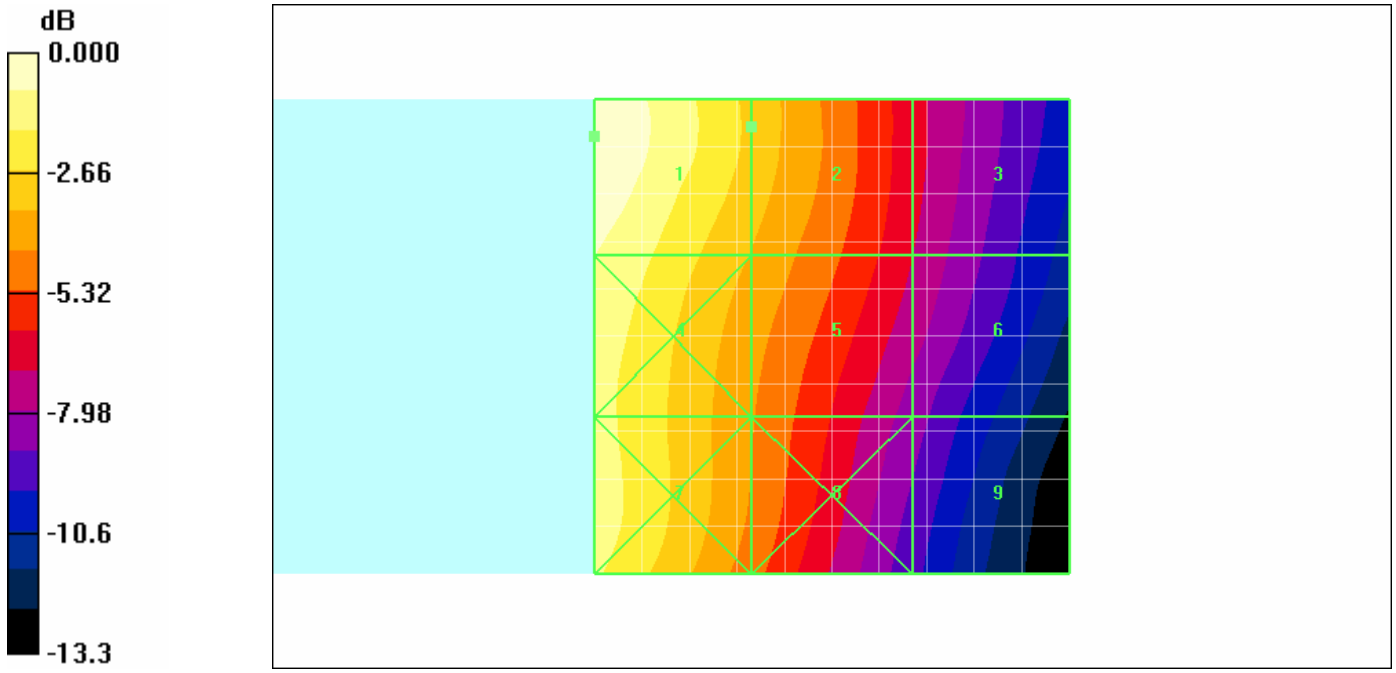
DASY4 Configuration:
- Probe: H3DV6 - SN6105; ; Calibrated: 09/11/2007
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 05/03/2008
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 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 = 0.071 A/m; Power Drift = 0.105 dB
Maximum value of Total (measured) = 0.133 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 = 0.364 A/m
Probe Modulation Factor = 2.74
Device Reference Point: 0.000, 0.000, 353.7 mm
Reference Value = 0.071 A/m; Power Drift = 0.105 dB
Hearing Aid Near-Field Category: M4 (AWF -5 dB)

Peak H-field in A/m

Grid 1 **0.364 M4**	Grid 2 **0.262 M4**	Grid 3 **0.169 M4**
Grid 4 **0.329 M4**	Grid 5 **0.241 M4**	Grid 6 **0.161 M4**
Grid 7	Grid 8	Grid 9



0 dB = 0.364A/m

Date/Time: 25/06/2008 5:16:43 PM

Test Laboratory: RTS
File Name: HAC_H_GSM850_High_Chan.da4

DUT: BlackBerry Smartphone; Type: Clamshell; PIN: 20746462
Program Name: HAC RF H3DV6 Device

Communication System: GSM 850; Frequency: 848.8 MHz;Duty Cycle: 1:8.3
Medium parameters used: σ = 0 mho/m, ε_r = 1; ρ = 1 kg/m^3
Phantom section: E Device Section

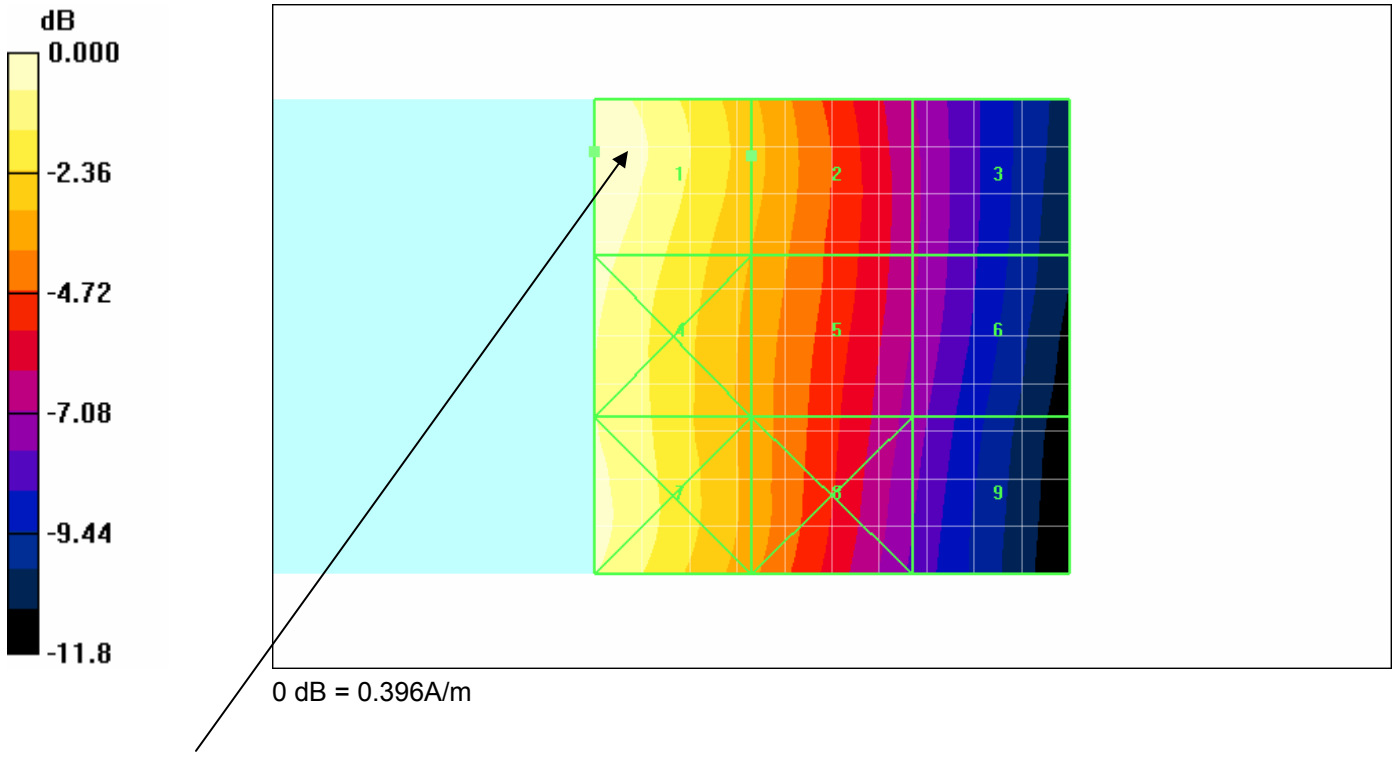
DASY4 Configuration:
- Probe: H3DV6 - SN6105; ; Calibrated: 09/11/2007
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 05/03/2008
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 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 = 0.029 dB
Maximum value of Total (measured) = 0.145 A/m

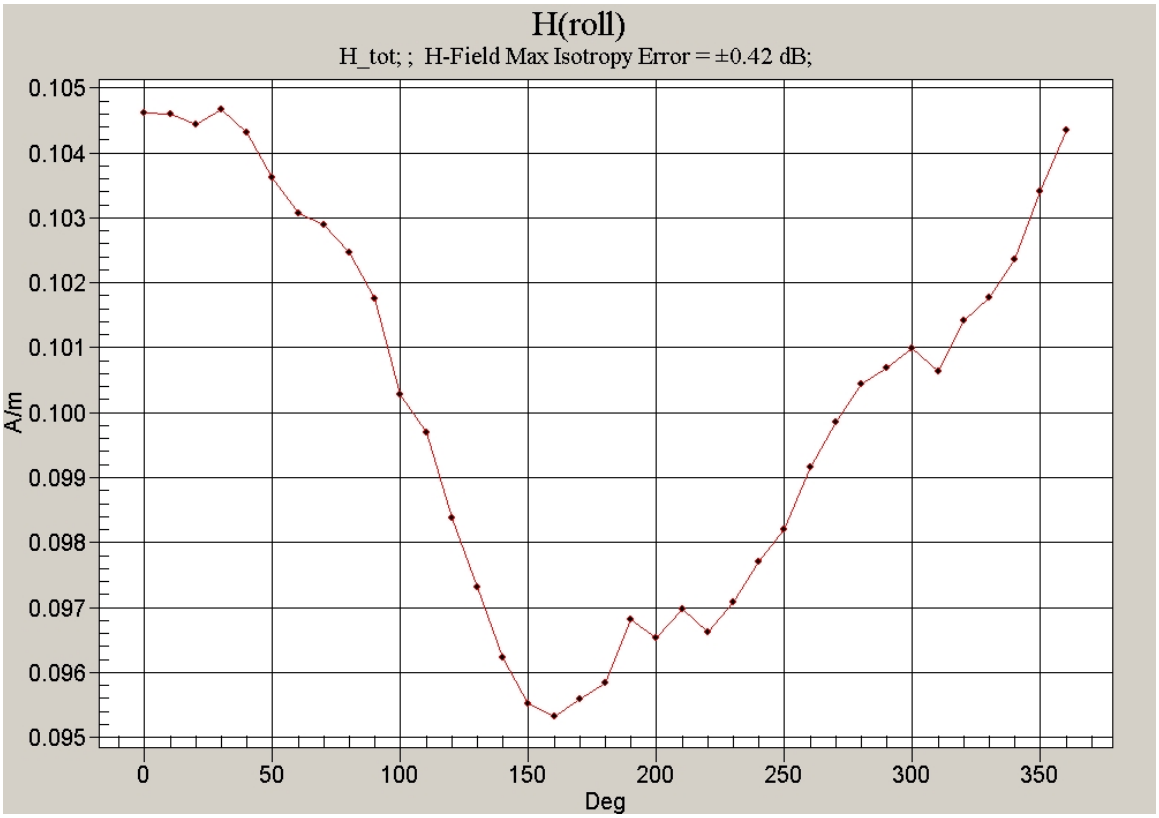
H Scan - H3DV6 - 2007: 15 mm from Probe Center to the Device/Hearing Aid Compatibility Test (101x101x1): Measurement grid: dx=5mm, dy=5mm
Maximum value of peak Total field = 0.396 A/m
Probe Modulation Factor = 2.74
Device Reference Point: 0.000, 0.000, 353.7 mm
Reference Value = 0.083 A/m; Power Drift = 0.029 dB
Hearing Aid Near-Field Category: M4 (AWF -5 dB)

Peak H-field in A/m

Grid 1 **0.396 M4**	Grid 2 **0.287 M4**	Grid 3 **0.181 M4**
Grid 4 **0.375 M4**	Grid 5 **0.275 M4**	Grid 6 **0.179 M4**
Grid 7	Grid 8	Grid 9



Location of the probe rotation



Probe rotation at max location after exclusion block

E (delta) = (H max - H at zero degress) * PMF
= (0.1048 – 0.1047) * 2.74
= 0.0001 * 2.74
= 0.0003 A/m

Date/Time: 25/06/2008 4:30:07 PM

Test Laboratory: RTS
File Name: HAC_H_GSM1900_Low_Chan.da4

DUT: BlackBerry Smartphone; Type: Clamshell; PIN: 20746462
Program Name: HAC RF H3DV6 Device

Communication System: GSM 1900; Frequency: 1850.2 MHz;Duty Cycle: 1:8.3
Medium parameters used: $\sigma = 0$ mho/m, $\varepsilon_r = 1$; $\rho = 1$ kg/m^3
Phantom section: E Device Section

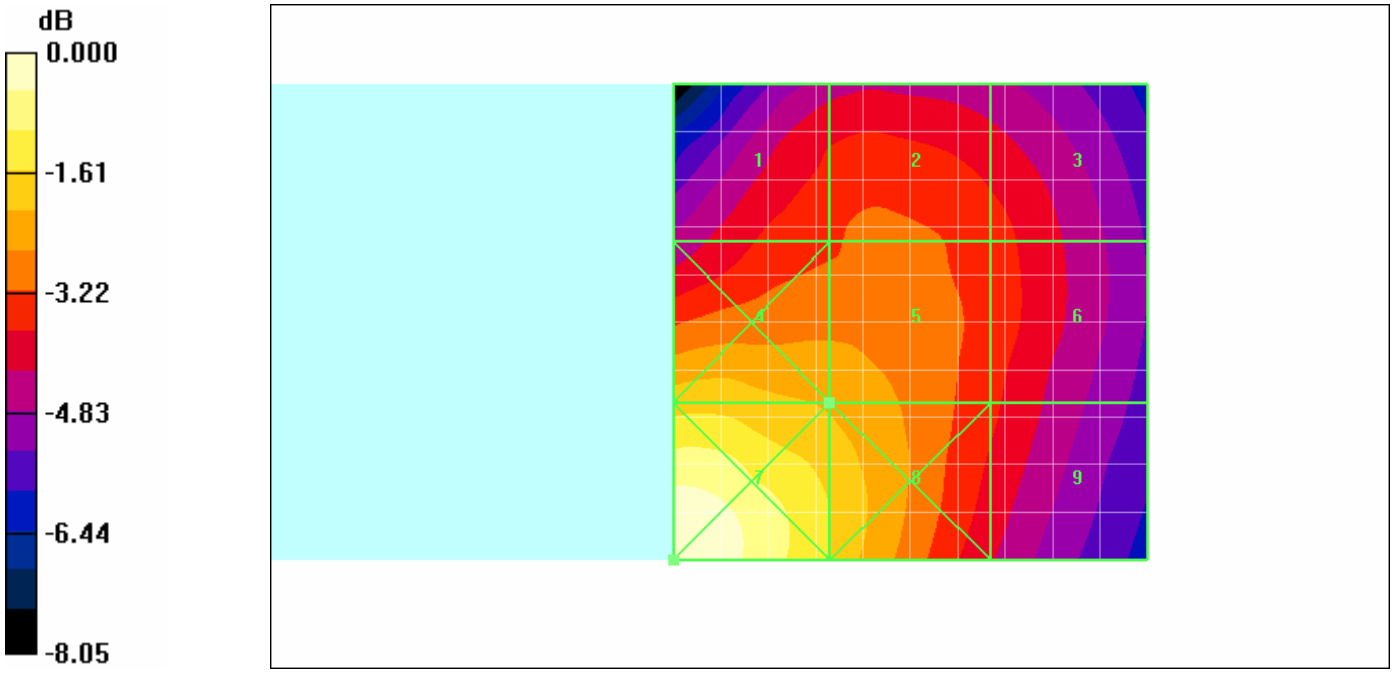
DASY4 Configuration:
- Probe: H3DV6 - SN6105; ; Calibrated: 09/11/2007
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 05/03/2008
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 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 = -0.009 dB
Maximum value of Total (measured) = 0.085 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 = 0.186 A/m
Probe Modulation Factor = 2.81
Device Reference Point: 0.000, 0.000, 353.7 mm
Reference Value = 0.068 A/m; Power Drift = -0.009 dB
Hearing Aid Near-Field Category: M3 (AWF -5 dB)

Peak H-field in A/m

Grid 1 **0.164 M3**	Grid 2 **0.168 M3**	Grid 3 **0.160 M3**
Grid 4 **0.196 M3**	Grid 5 **0.186 M3**	Grid 6 **0.162 M3**
Grid 7	Grid 8	Grid 9



0 dB = 0.240A/m

Date/Time: 25/06/2008 4:40:20 PM

Test Laboratory: RTS
File Name: HAC_H_GSM1900_Mid_Chan.da4

DUT: BlackBerry Smartphone; Type: Clamshell; PIN: 20746462
Program Name: HAC RF H3DV6 Device

Communication System: GSM 1900; Frequency: 1880 MHz;Duty Cycle: 1:8.3
Medium parameters used: σ = 0 mho/m, ε_r = 1; ρ = 1 kg/m^3
Phantom section: E Device Section

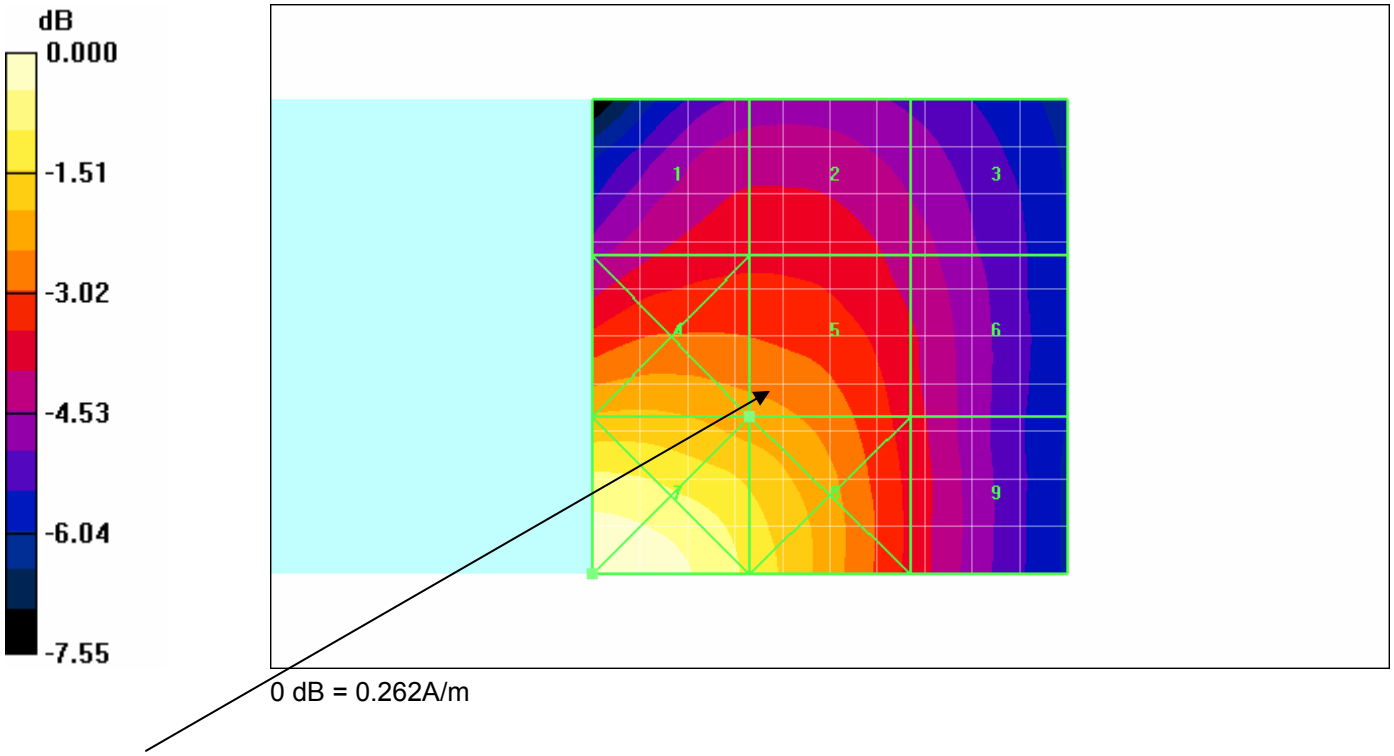
DASY4 Configuration:
- Probe: H3DV6 - SN6105; ; Calibrated: 09/11/2007
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 05/03/2008
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 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 = 0.071 A/m; Power Drift = -0.002 dB
Maximum value of Total (measured) = 0.093 A/m

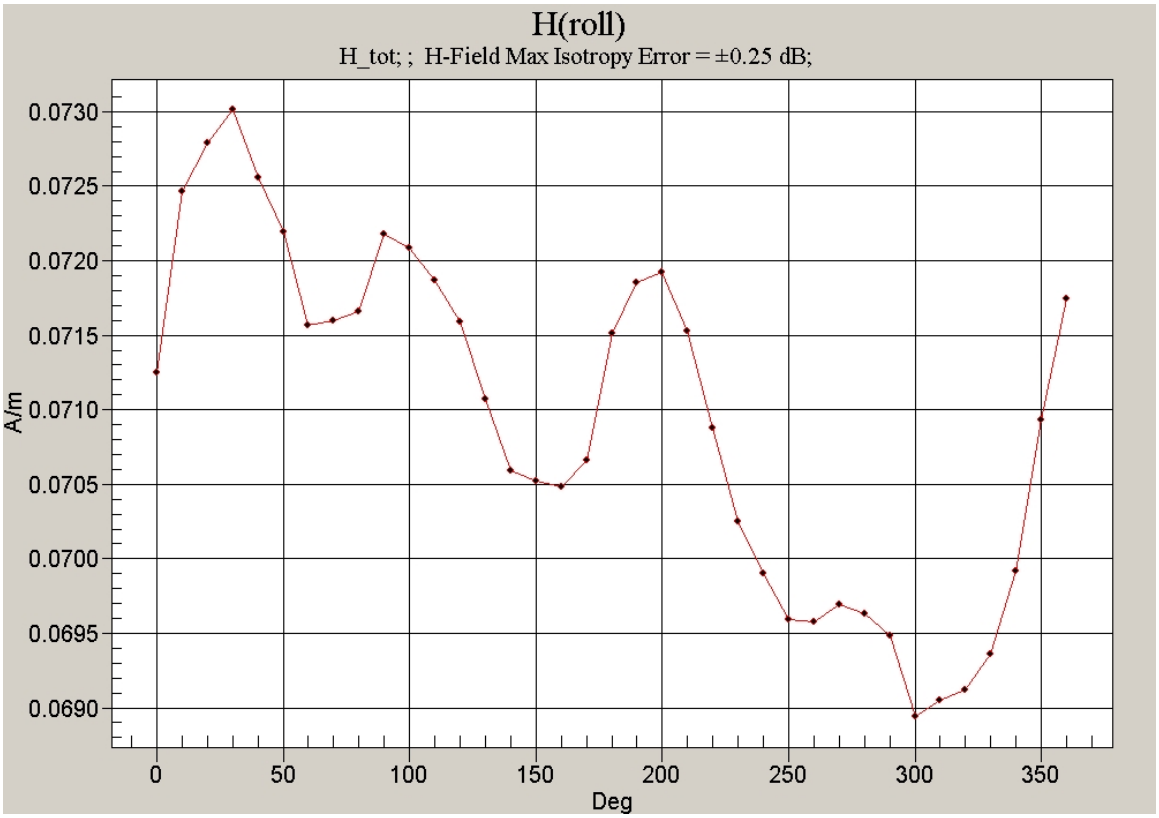
H Scan - H3DV6 - 2007: 15 mm from Probe Center to the Device/Hearing Aid Compatibility Test (101x101x1): Measurement grid: dx=5mm, dy=5mm
Maximum value of peak Total field = 0.202 A/m
Probe Modulation Factor = 2.81
Device Reference Point: 0.000, 0.000, 353.7 mm
Reference Value = 0.071 A/m; Power Drift = -0.002 dB
Hearing Aid Near-Field Category: M3 (AWF -5 dB)

Peak H-field in A/m

Grid 1 **0.173 M3**	Grid 2 **0.173 M3**	Grid 3 **0.161 M3**
Grid 4 **0.211 M3**	Grid 5 **0.202 M3**	Grid 6 **0.170 M3**
Grid 7	Grid 8	Grid 9



Location of the probe rotation



Probe rotation at max location after exclusion block

E (delta) = (H max - H at zero degress) * PMF
= (0.0730-0.0712) * 2.81
= 0.0018 * 2.81
= 0.0051 A/m

Date/Time: 25/06/2008 4:48:03 PM

Test Laboratory: RTS
File Name: HAC_H_GSM1900_High_Chan.da4

DUT: BlackBerry Smartphone; Type: Clamshell; PIN: 20746462
Program Name: HAC RF H3DV6 Device

Communication System: GSM 1900; Frequency: 1909.8 MHz;Duty Cycle: 1:8.3
Medium parameters used: $\sigma = 0$ mho/m, $\varepsilon_r = 1$; $\rho = 1$ kg/m^3
Phantom section: E Device Section

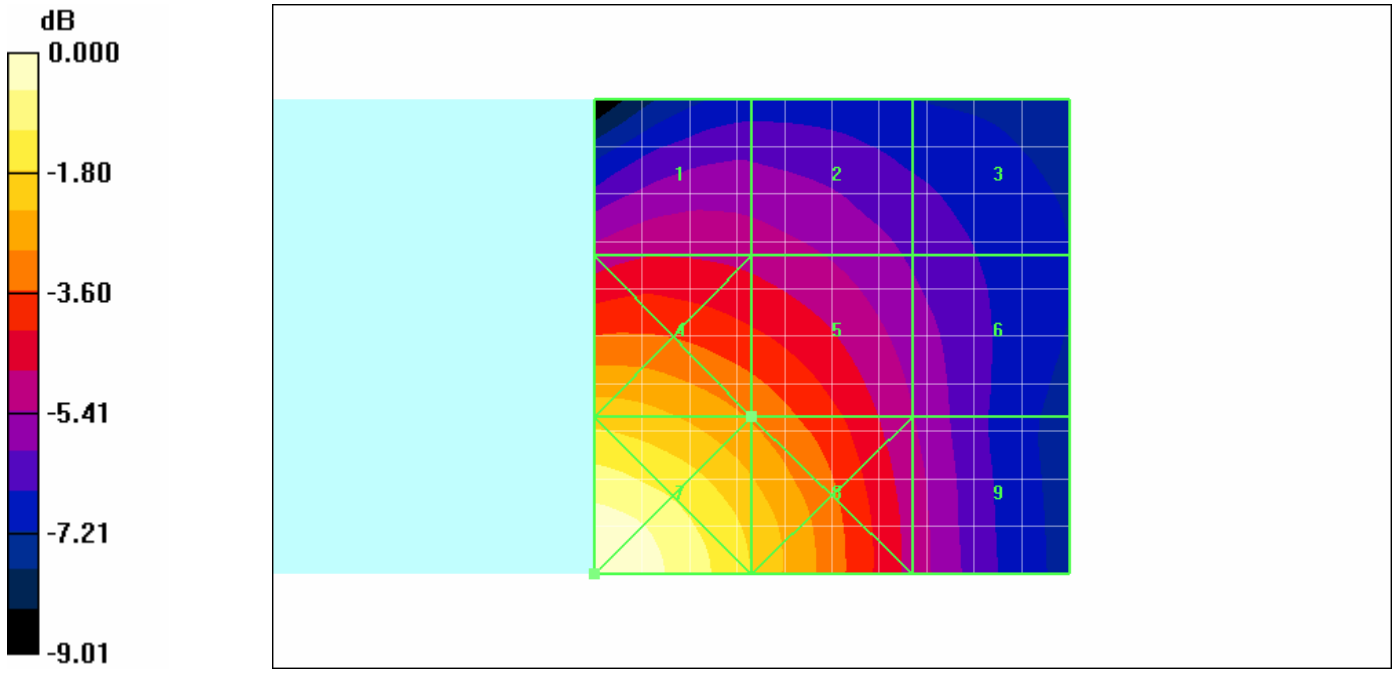
DASY4 Configuration:
- Probe: H3DV6 - SN6105; ; Calibrated: 09/11/2007
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 05/03/2008
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 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 = 0.062 A/m; Power Drift = 0.031 dB
Maximum value of Total (measured) = 0.096 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 = 2.81
Device Reference Point: 0.000, 0.000, 353.7 mm
Reference Value = 0.062 A/m; Power Drift = 0.031 dB
Hearing Aid Near-Field Category: M3 (AWF -5 dB)

Peak H-field in A/m

Grid 1 **0.156 M3**	Grid 2 **0.153 M3**	Grid 3 **0.135 M4**
Grid 4 **0.215 M3**	Grid 5 **0.191 M3**	Grid 6 **0.146 M3**
Grid 7	Grid 8	Grid 9



0 dB = 0.271A/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; PIN: 20746462
Program Name: HAC RF E Dipole

Communication System: CW; Frequency: 835 MHz;Duty Cycle: 1:1
Medium parameters used: σ = 0 mho/m, ε_r = 1; ρ = 1000 kg/m^3
Phantom section: E Device Section

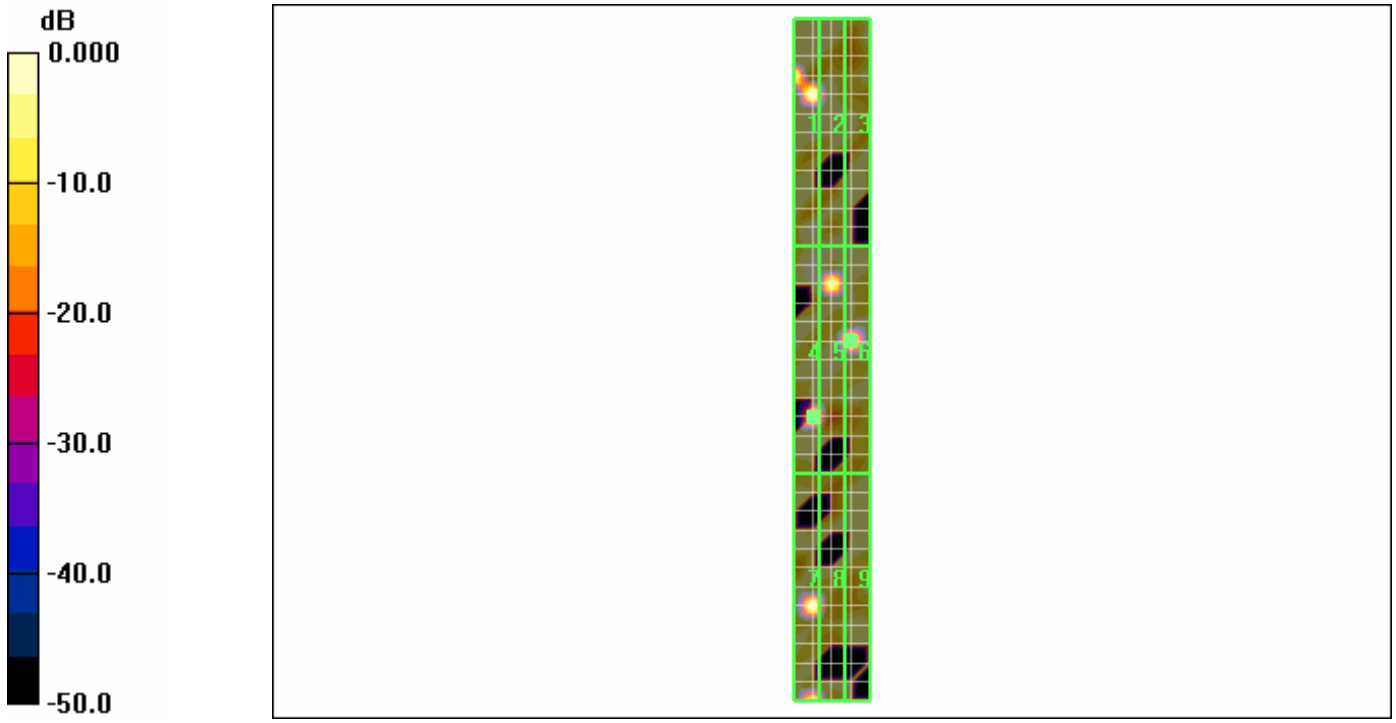
DASY4 Configuration:
- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 21/01/2008
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 05/03/2008
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing 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	Grid 9



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; PIN: 20746462
Program Name: HAC RF E Dipole

Communication System: CW; Frequency: 835 MHz;Duty Cycle: 1:1
Medium parameters used: σ = 0 mho/m, ε_r = 1; ρ = 1000 kg/m^3
Phantom section: E Device Section

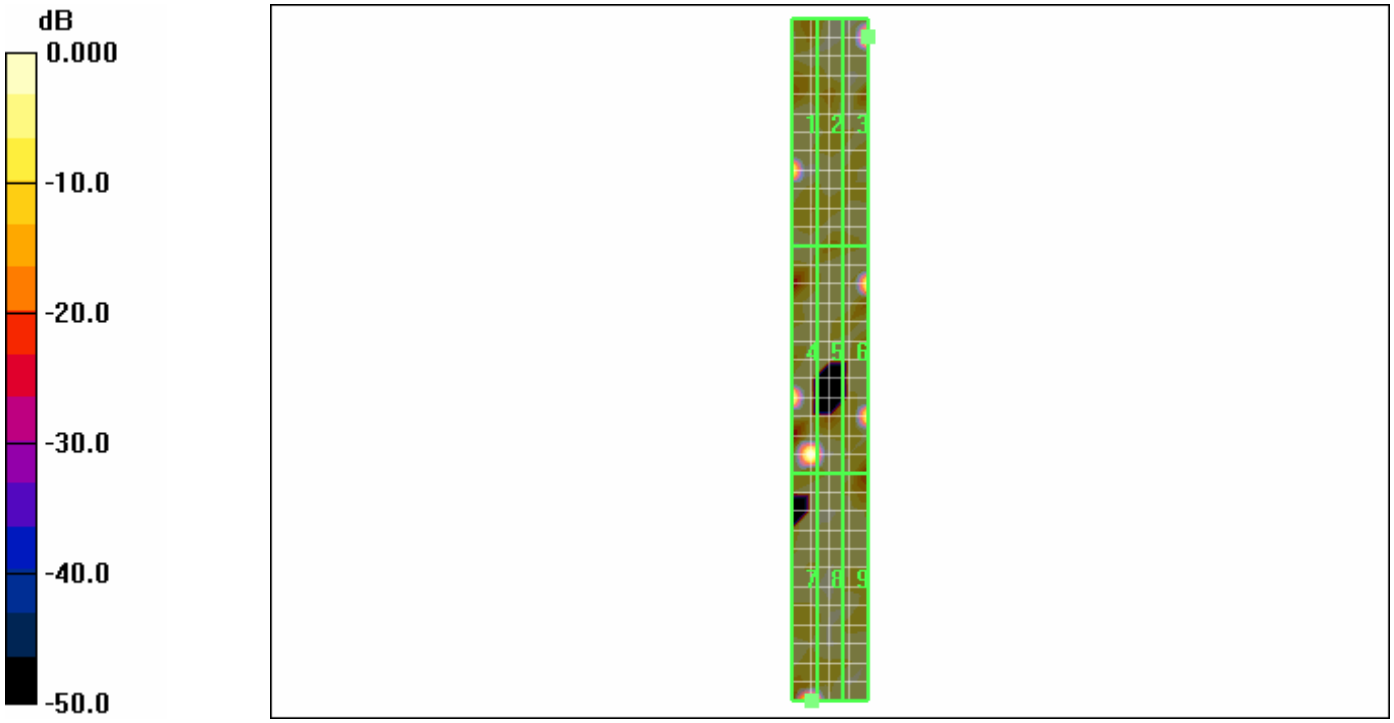
DASY4 Configuration:
- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 21/01/2008
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 05/03/2008
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing 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	Grid 9



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; PIN: 20746462
Program Name: HAC RF H3DV6 Dipole

Communication System: CW; Frequency: 835 MHz;Duty Cycle: 1:1
Medium parameters used: σ = 0 mho/m, ε_r = 1; ρ = 1 kg/m^3
Phantom section: E Device Section

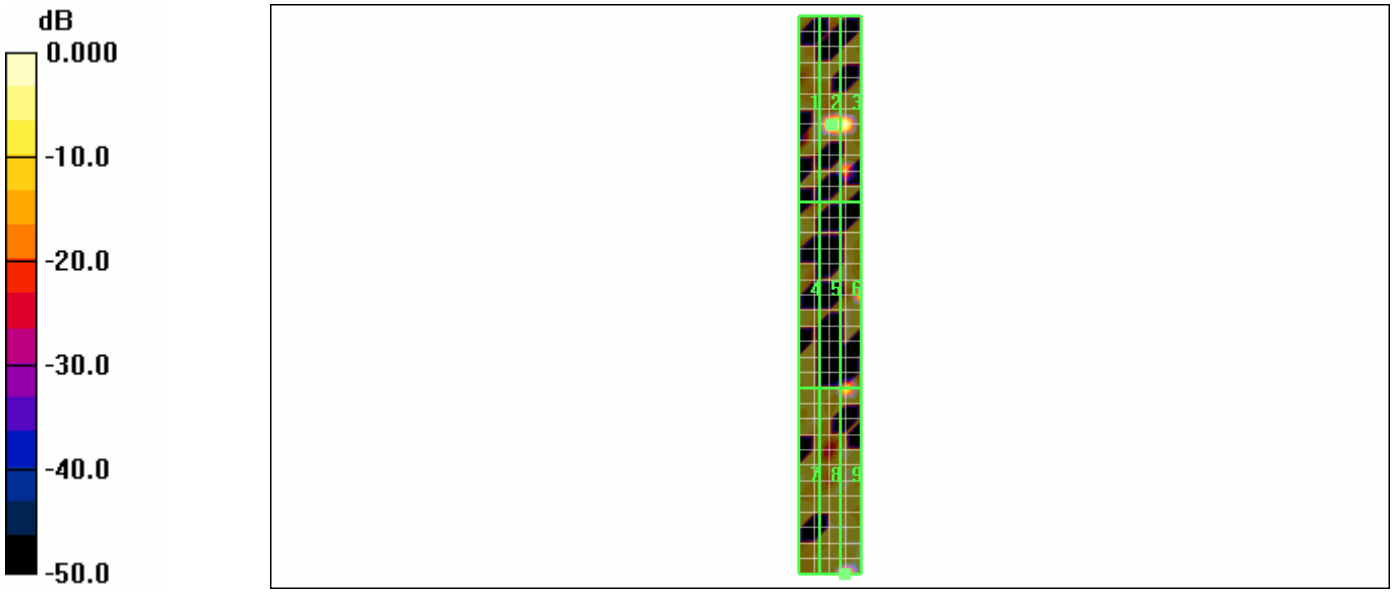
DASY4 Configuration:
- Probe: H3DV6 - SN6105; ; Calibrated: 09/11/2007
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 05/03/2008
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 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	Grid 8	Grid 9



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; PIN: 20746462
Program Name: HAC RF H3DV6 Dipole

Communication System: CW; Frequency: 1880 MHz;Duty Cycle: 1:1
Medium parameters used: σ = 0 mho/m, ε_r = 1; ρ = 1 kg/m^3
Phantom section: E Device Section

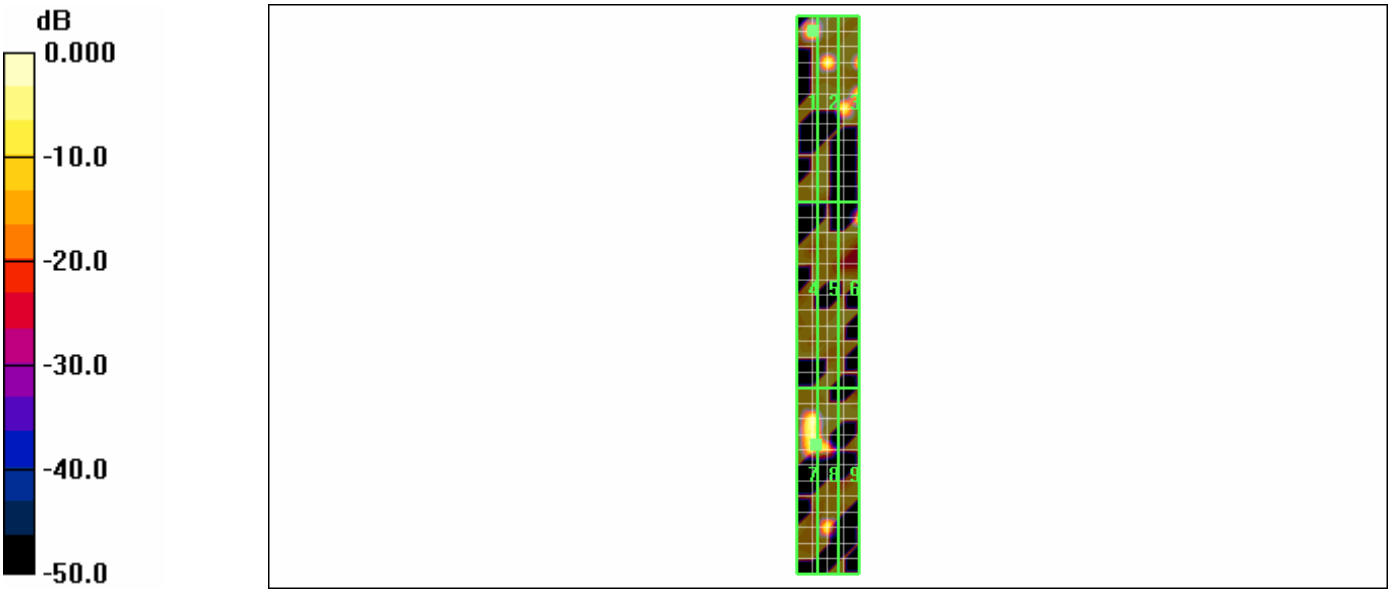
DASY4 Configuration:
- Probe: H3DV6 - SN6105; ; Calibrated: 09/11/2007
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 05/03/2008
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 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	Grid 8	Grid 9



0 dB = 0.004A/m