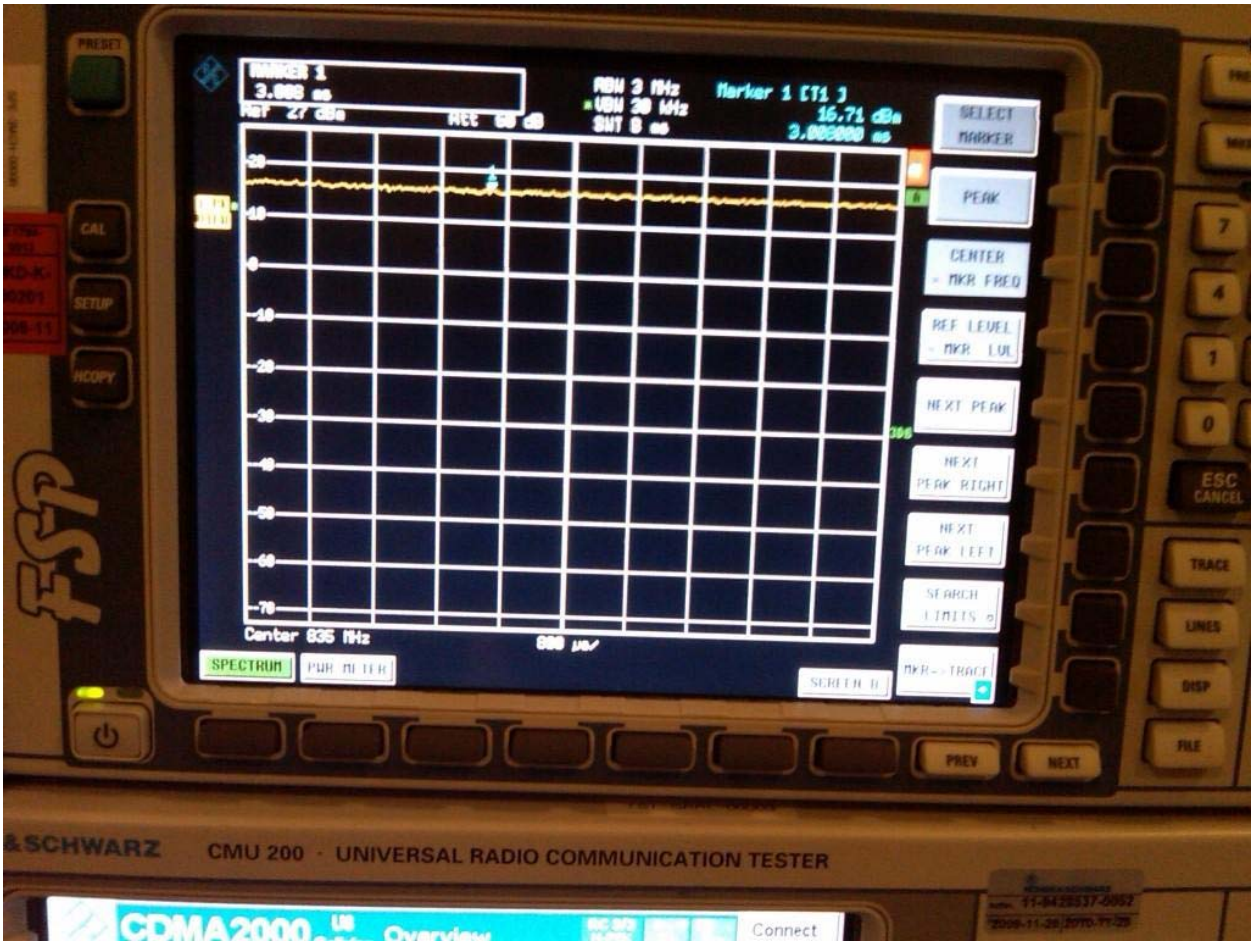
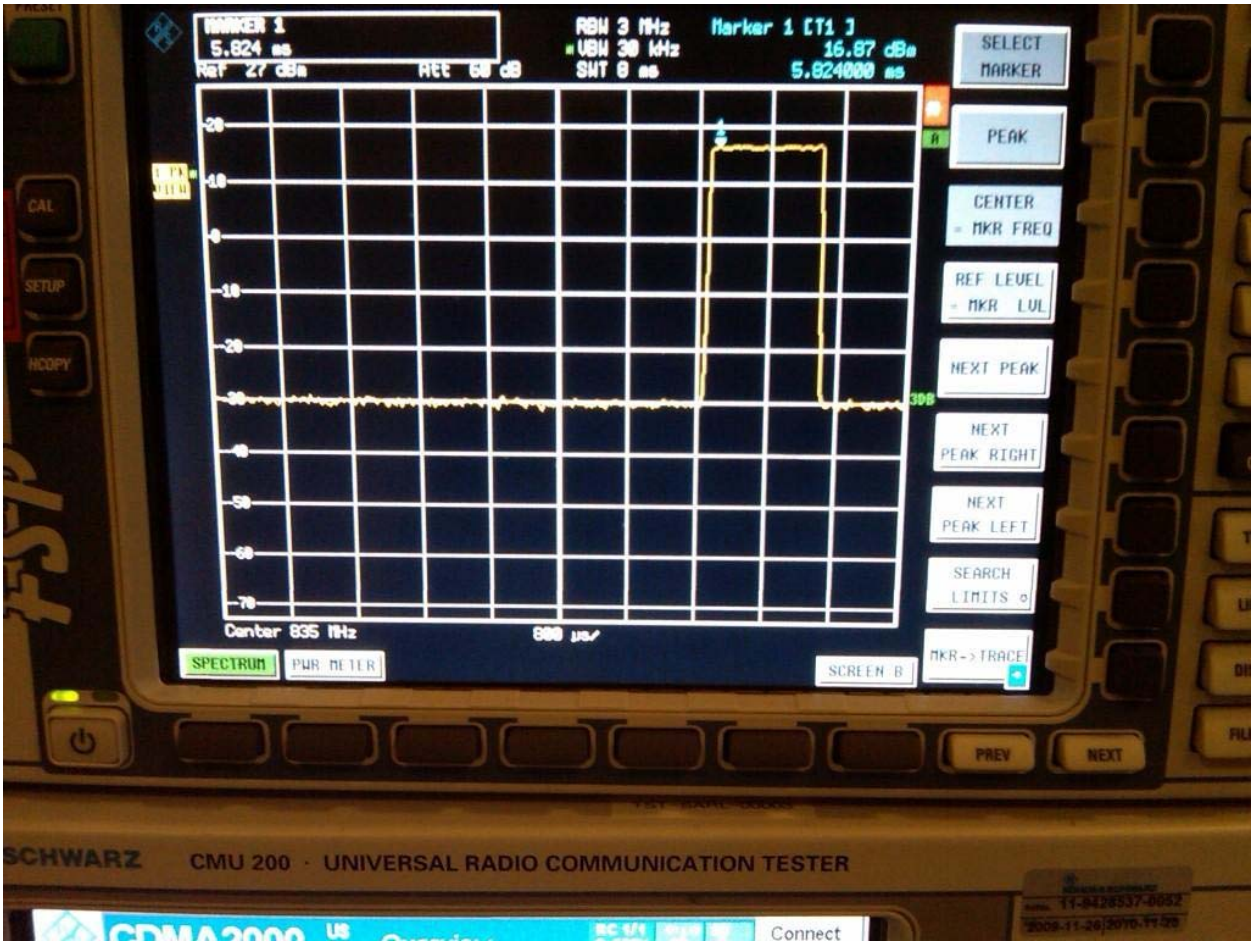
Annex A: Measurement data and plots

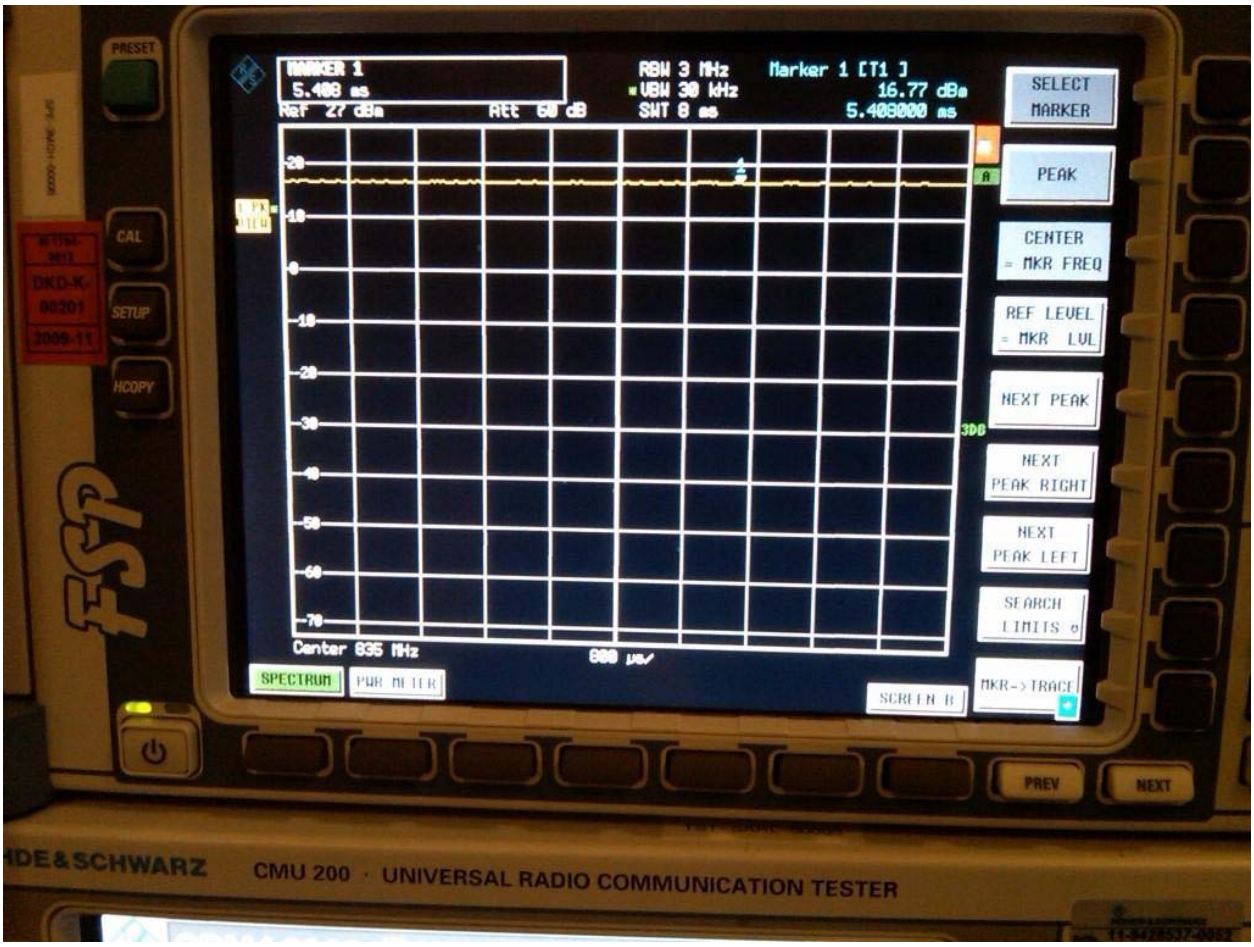
A.1 Spectrum analyser plots: CDMA, CW and 80%AM ignals



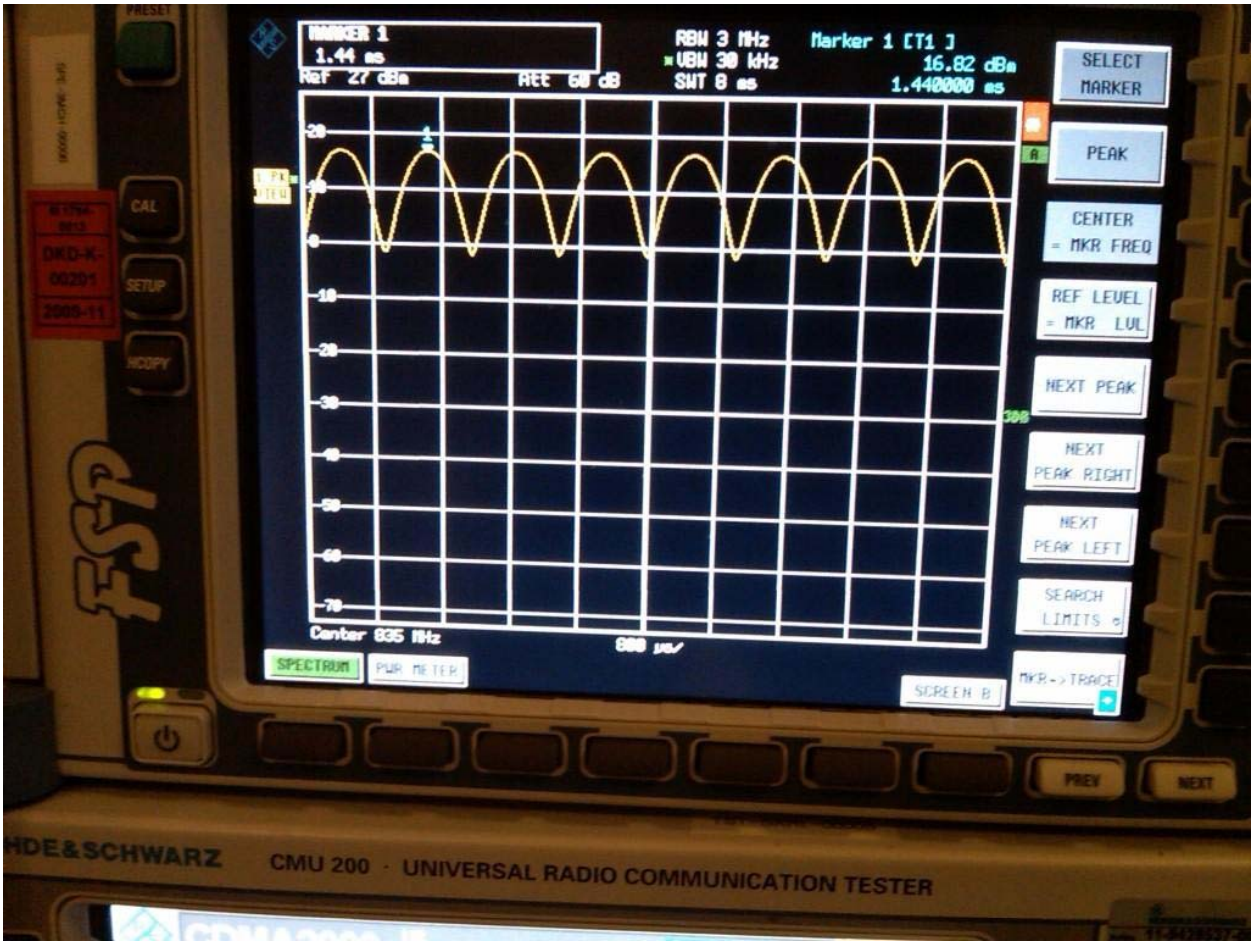
0 Hz Span CDMA Full Rate (835MHz)



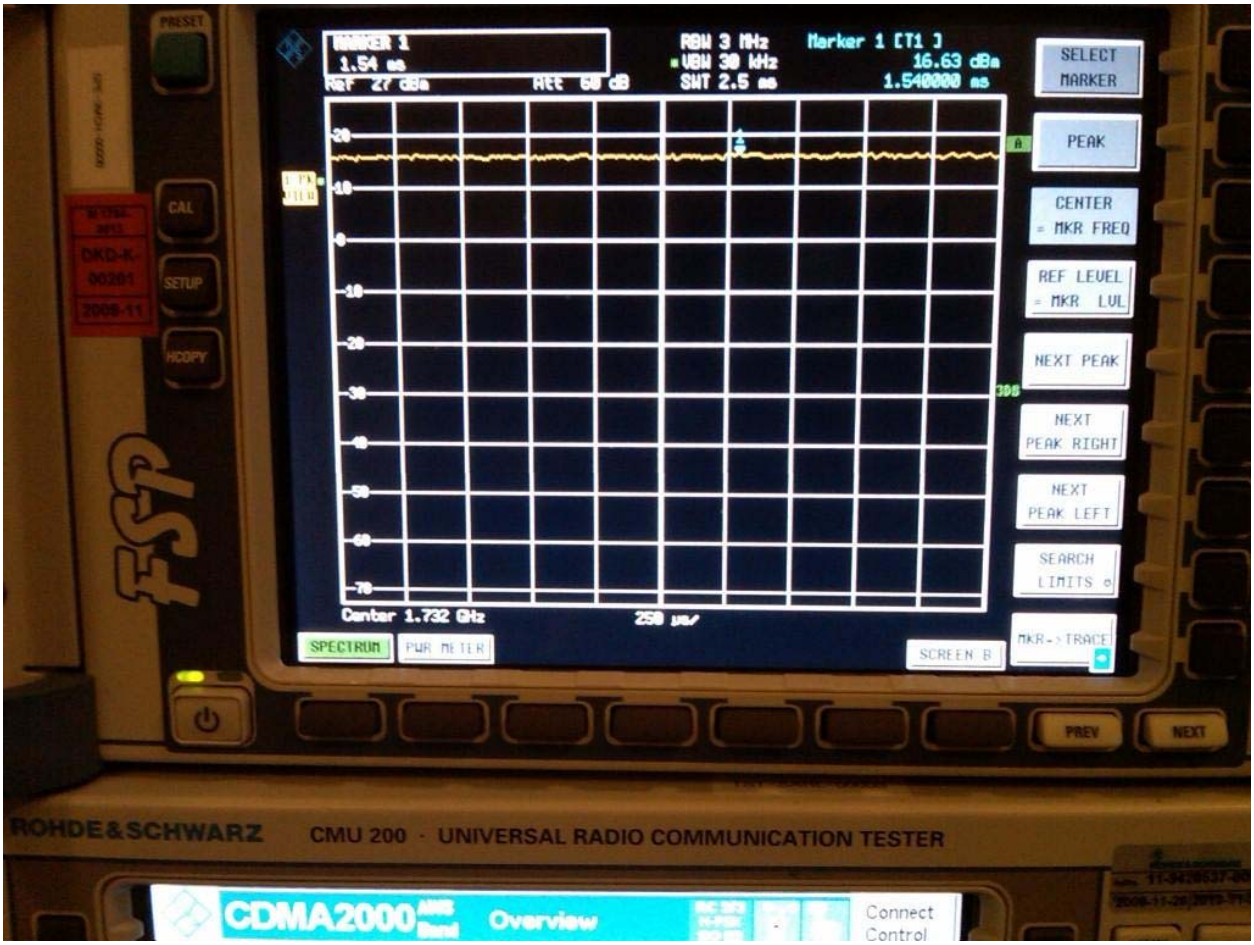
0 Hz Span CDMA 1/8 th (835MHz)



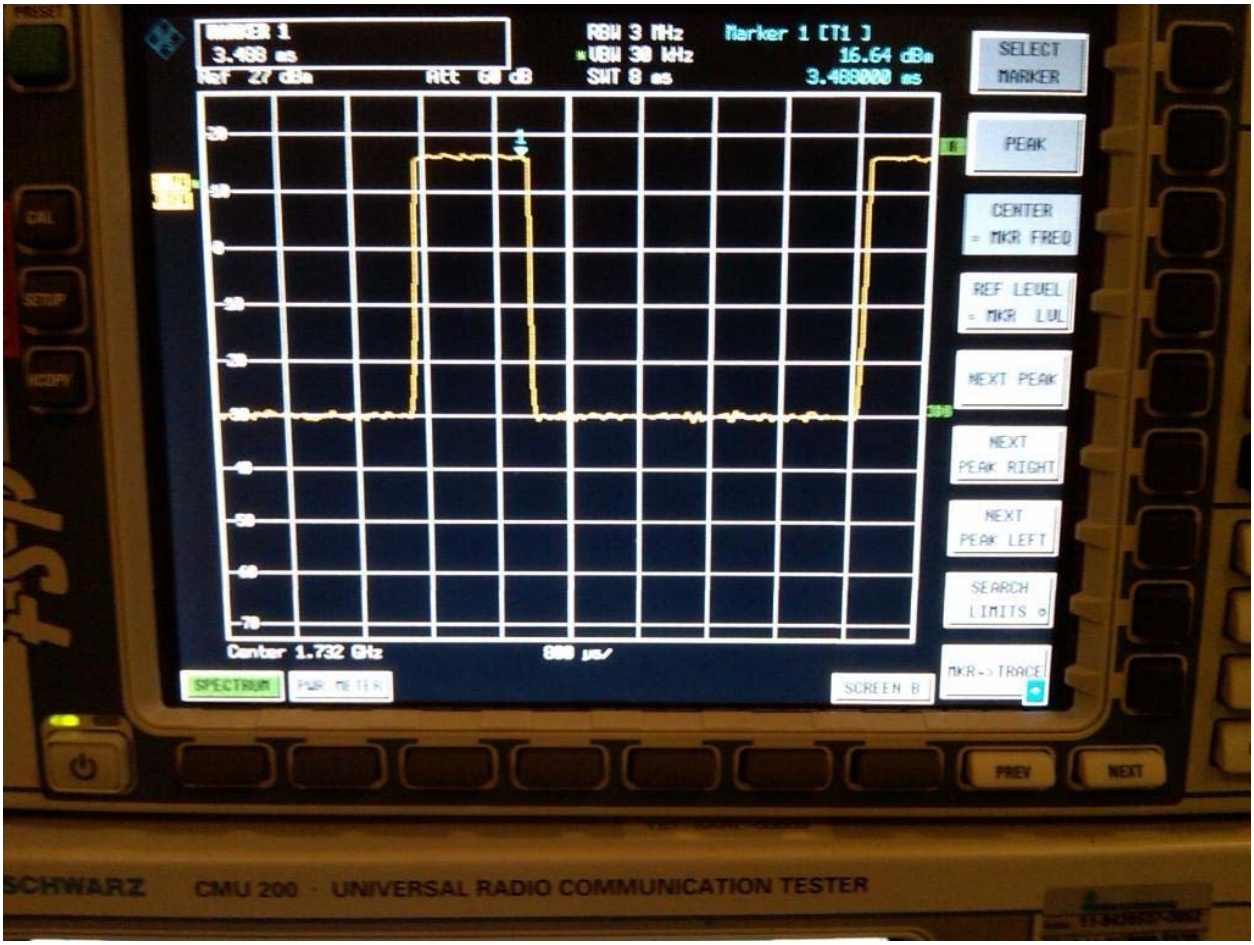
0 Hz Span CW Plot (835MHz)



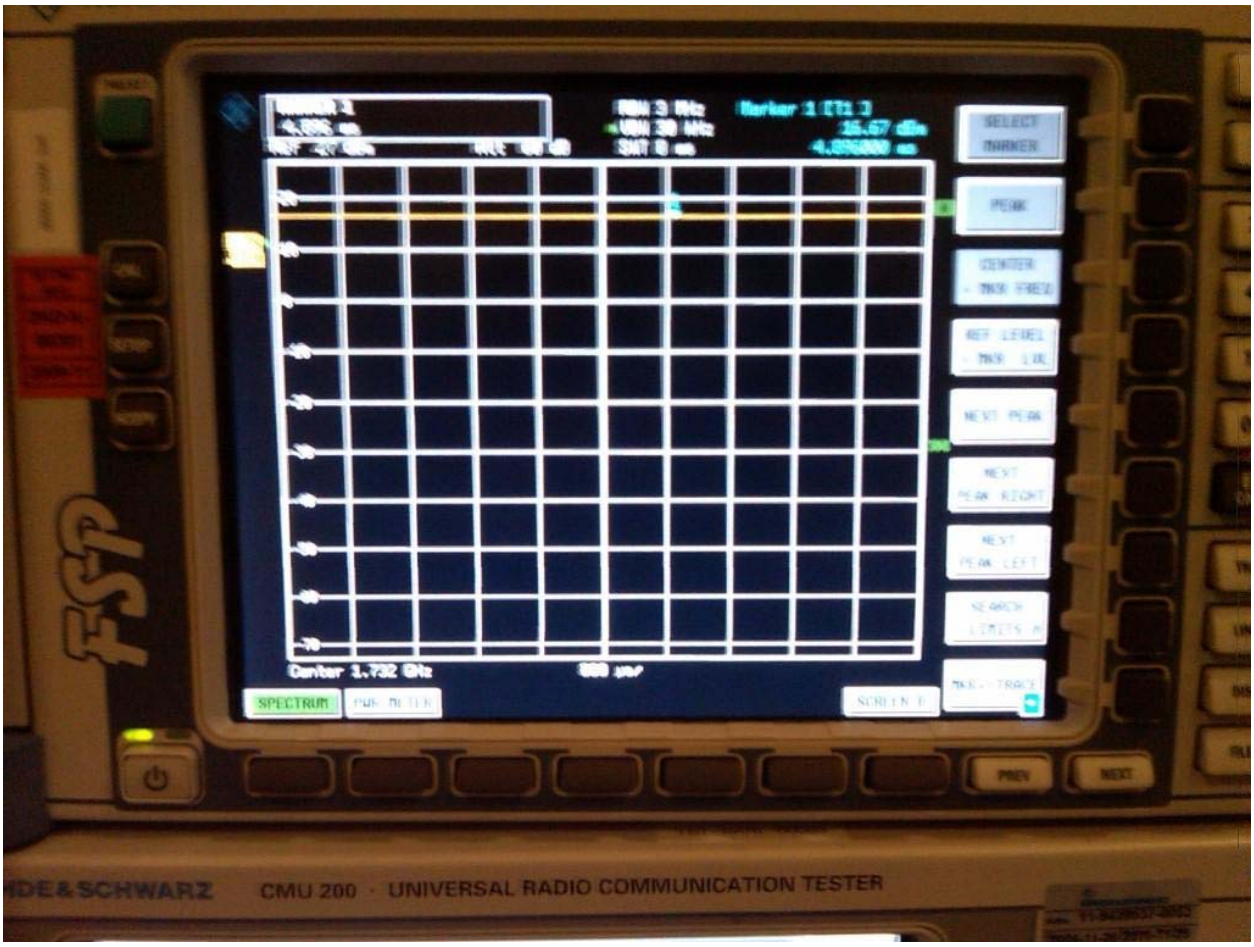
0 Hz Span 80% AM Plot (835MHz)



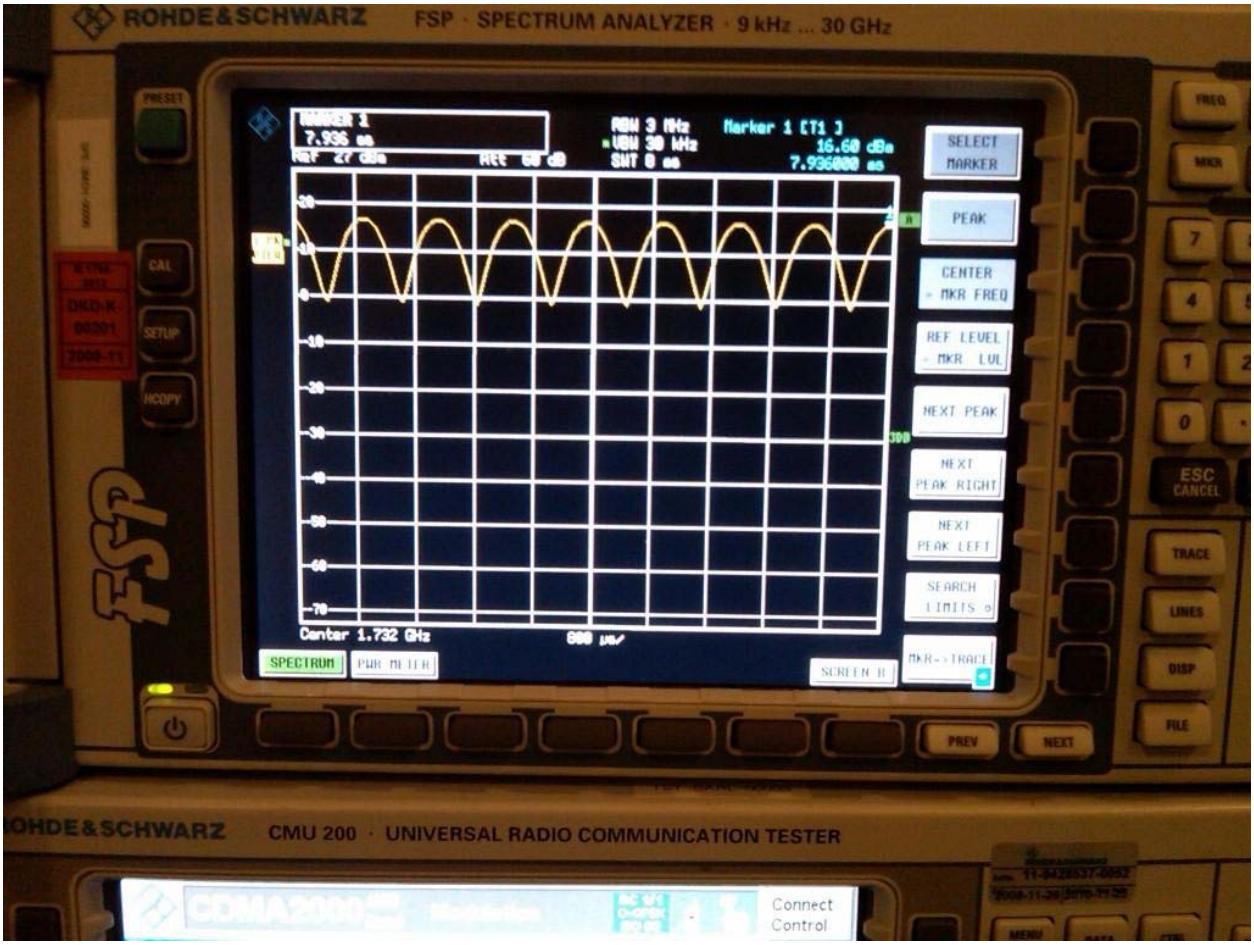
0 Hz Span CDMA Full Rate (1732 MHz)



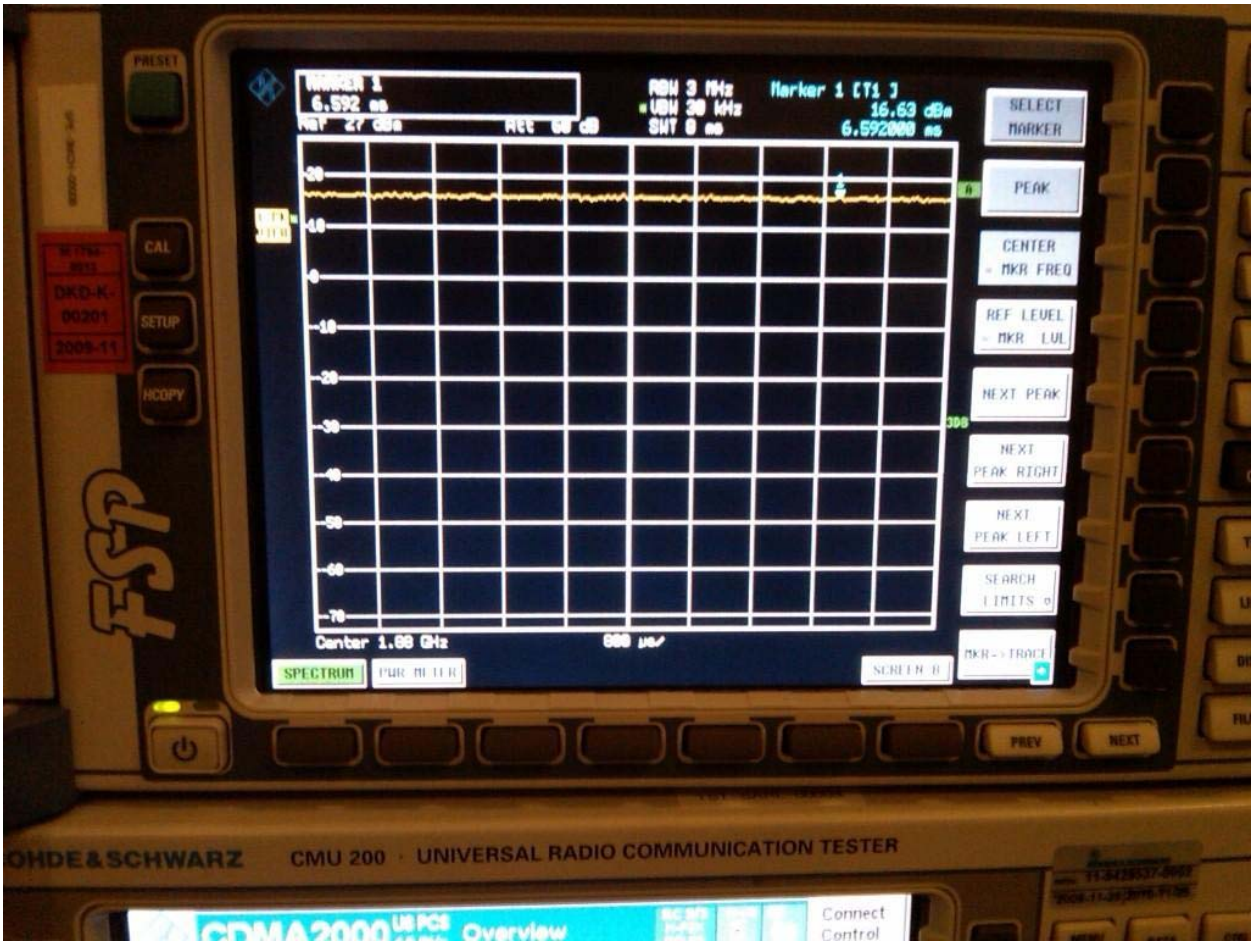
0 Hz Span CDMA 1/8 th (1732 MHz)



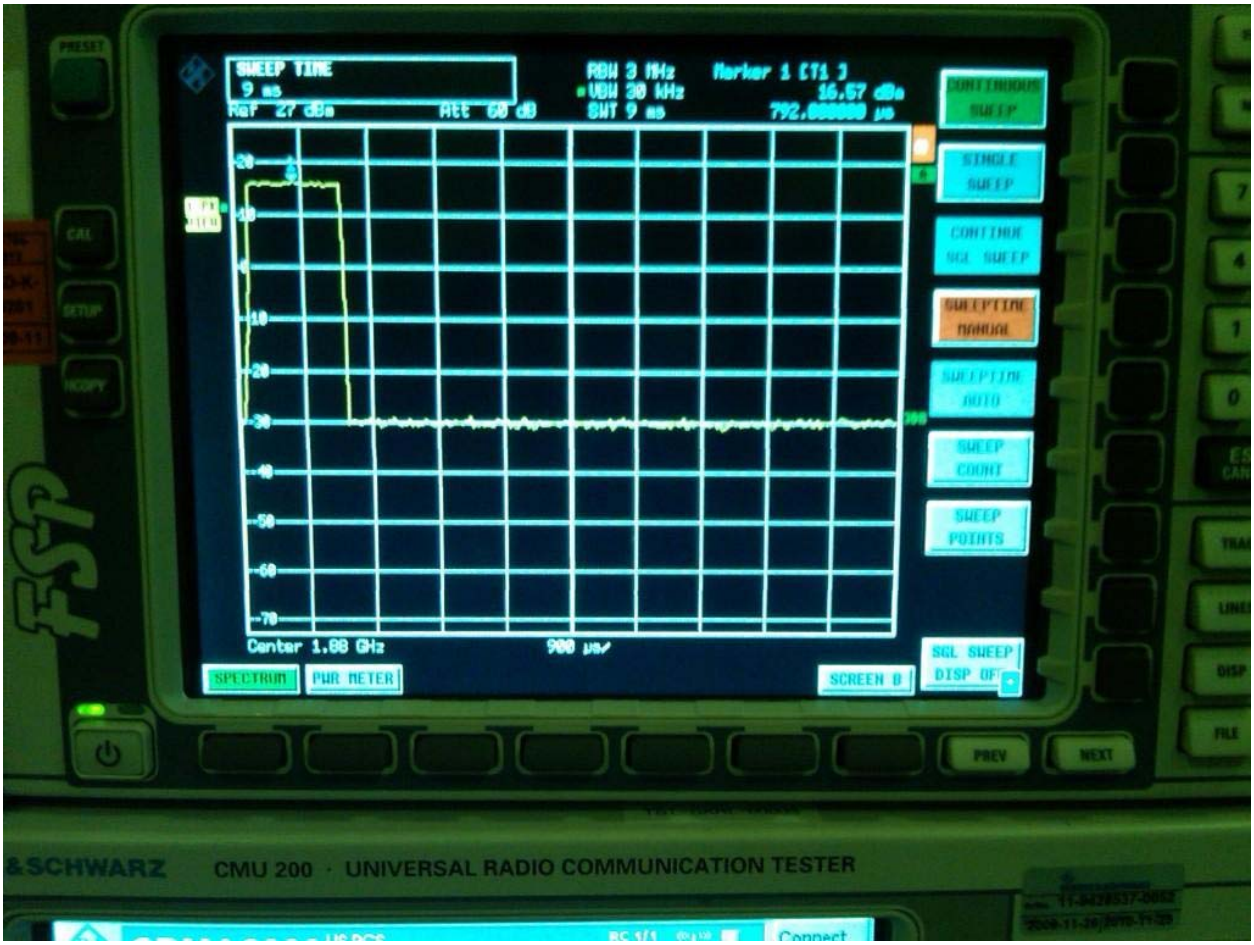
0 Hz Span CW Plot (1732 MHz)



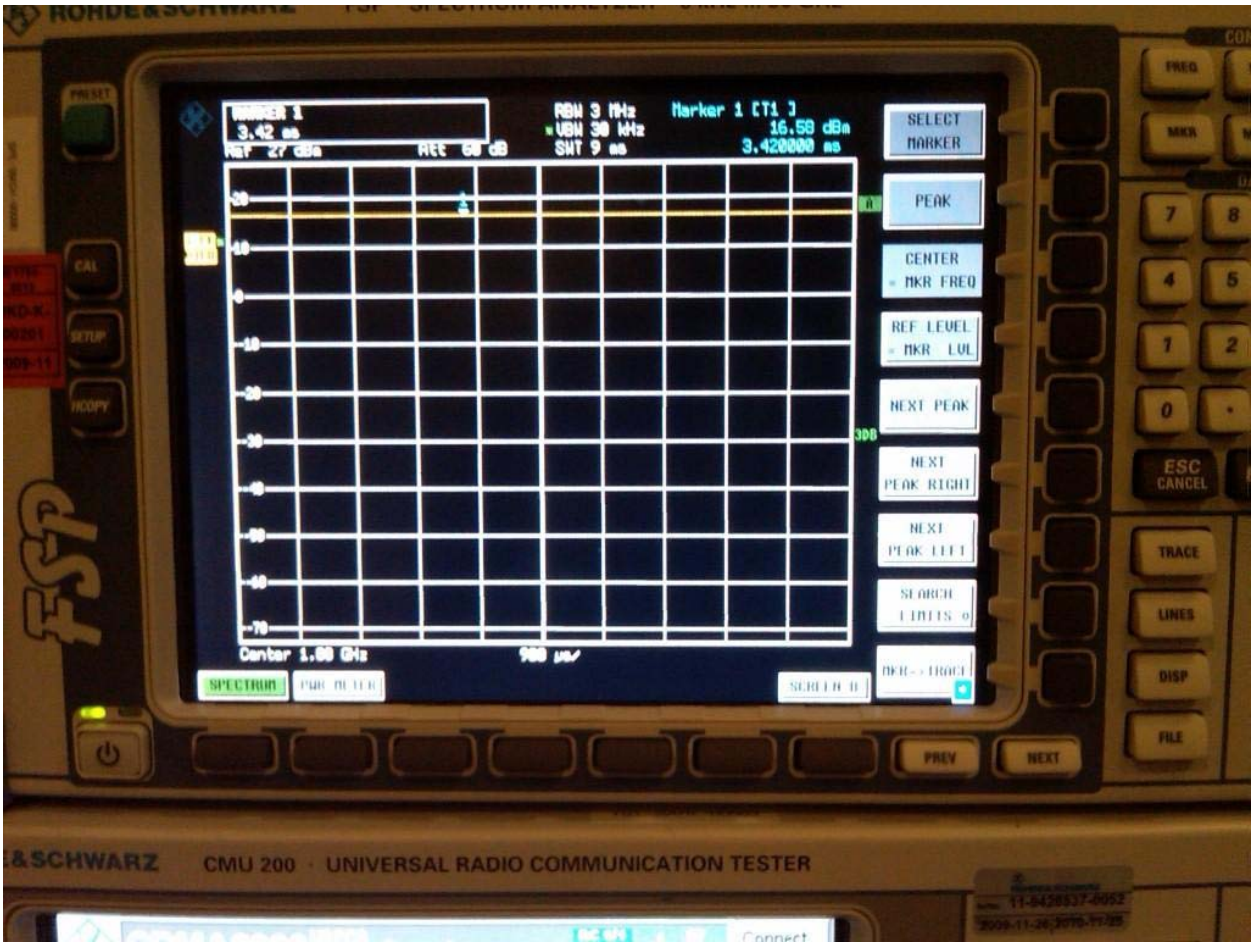
0 Hz Span 80% AM Plot (1732 MHz)



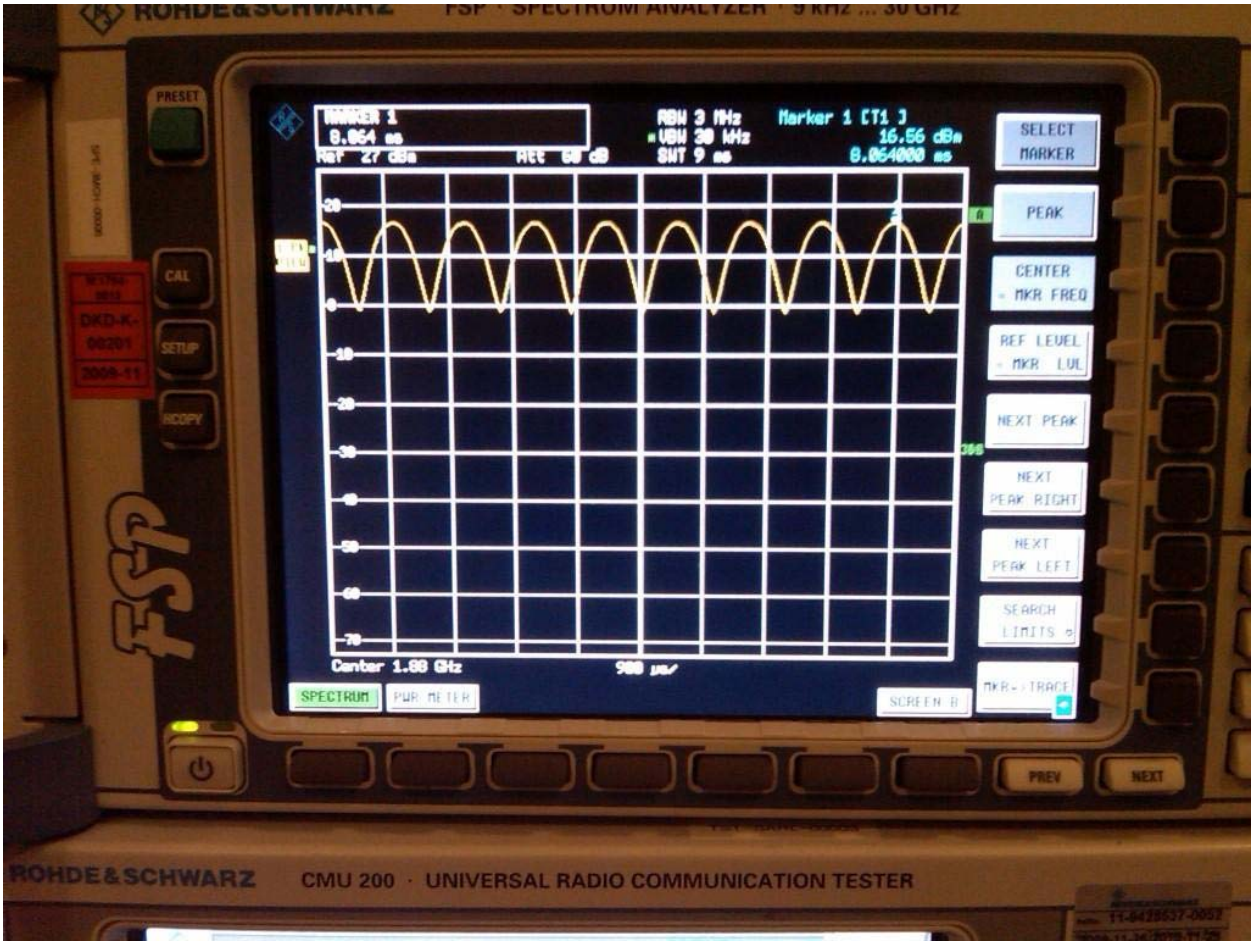
0 Hz Span CDMA Full Rate (1880 MHz)



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



0 Hz Span CW Plot (1880 MHz)



0 Hz Span 80% AM Plot (1880 MHz)

A.2 Dipole validation and probe modulation factor plots

Date/Time: 4/7/2010 12:00:12 PM

File Name: HAC_E_Dipole_CW835_20.00dBm.da4

DUT: HAC-Dipole 835 MHz; Type: D835V3;

Program Name: HAC RF E Dipole

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

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

Phantom section: RF Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 1/8/2010
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn473; Calibrated: 1/4/2010
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

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, -6.30 mm

Reference Value = 103.5 V/m; Power Drift = 0.021 dB

Maximum value of Total (measured) = 162.9 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 = 163.6 V/m

Probe Modulation Factor = 1.00

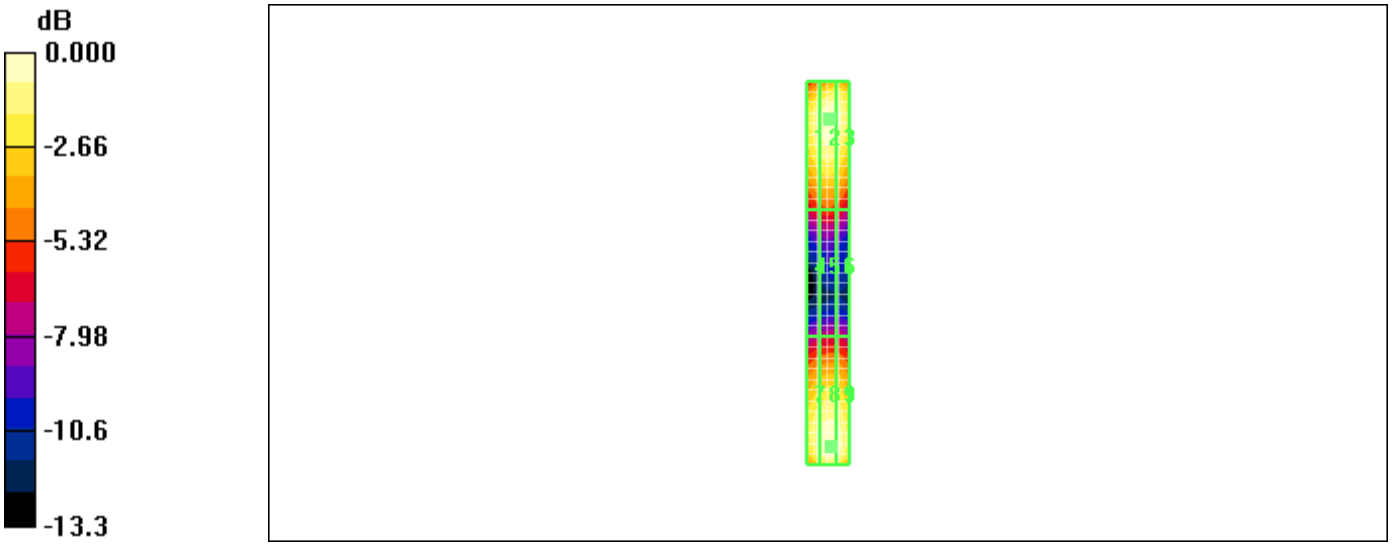
Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 103.5 V/m; Power Drift = 0.021 dB

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

Peak E-field in V/m

Grid 1 **153.8 M4**	Grid 2 **160.3 M4**	Grid 3 **158.2 M4**
Grid 4 **85.8 M4**	Grid 5 **87.8 M4**	Grid 6 **85.2 M4**
Grid 7 **156.0 M4**	Grid 8 **163.6 M4**	Grid 9 **161.6 M4**



0 dB = 163.6V/m

Date/Time: 4/7/2010 10:49:55 AM

File Name: HAC_E_Dipole_CDMA835.da4

DUT: HAC-Dipole 835 MHz; Type: D835V3;

Program Name: HAC RF E Dipole

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

Medium parameters used: σ = 0 mho/m, ε_r = 1; ρ = 1000 kg/m^3

Phantom section: RF Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 1/8/2010
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn473; Calibrated: 1/4/2010
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

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, -6.30 mm

Reference Value = 73.2 V/m; Power Drift = -0.056 dB

Maximum value of Total (measured) = 115.0 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 = 115.5 V/m

Probe Modulation Factor = 1.00

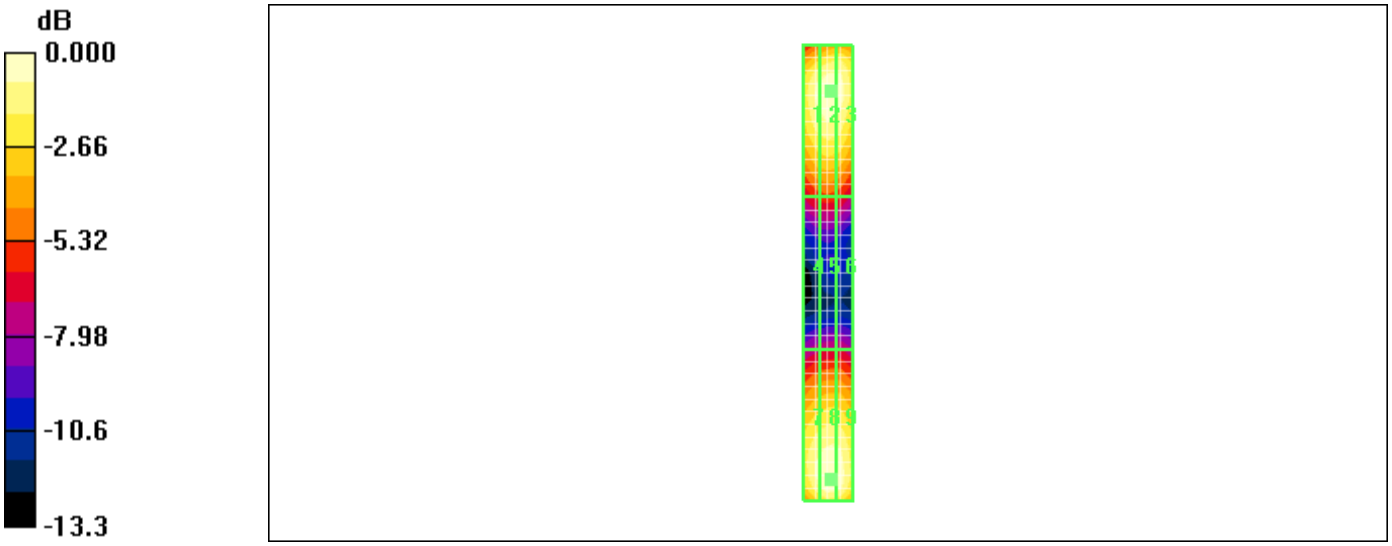
Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 73.2 V/m; Power Drift = -0.056 dB

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

Peak E-field in V/m

Grid 1 **108.4 M4**	Grid 2 **112.8 M4**	Grid 3 **112.1 M4**
Grid 4 **59.7 M4**	Grid 5 **60.7 M4**	Grid 6 **59.2 M4**
Grid 7 **109.4 M4**	Grid 8 **115.5 M4**	Grid 9 **113.5 M4**



0 dB = 115.5V/m

Date/Time: 4/7/2010 11:10:34 AM

File Name: HAC_E_Dipole_CDMA835_one_eigth.da4

DUT: HAC-Dipole 835 MHz; Type: D835V3;

Program Name: HAC RF E Dipole

Communication System: CDMA 800 1/8 th; Frequency: 835 MHz;Duty Cycle: 1:8.3

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

Phantom section: RF Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 1/8/2010
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn473; Calibrated: 1/4/2010
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

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, -6.30 mm

Reference Value = 26.4 V/m; Power Drift = -0.182 dB

Maximum value of Total (measured) = 52.8 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 = 53.1 V/m

Probe Modulation Factor = 1.00

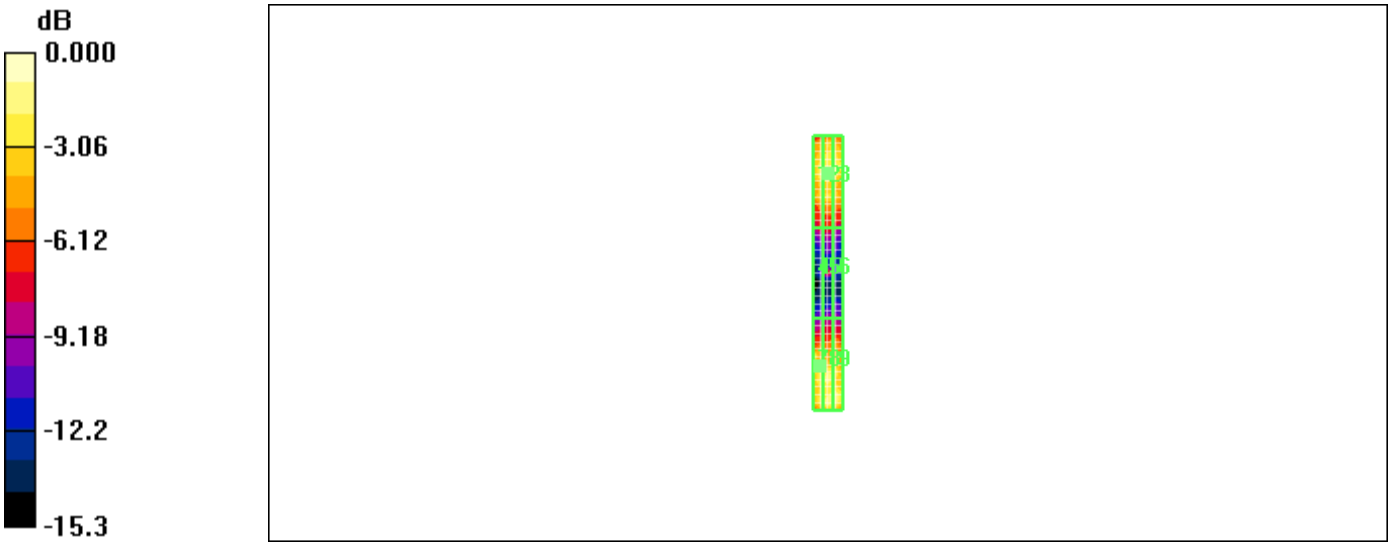
Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 26.4 V/m; Power Drift = -0.182 dB

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

Peak E-field in V/m

Grid 1 **43.8 M4**	Grid 2 **45.4 M4**	Grid 3 **45.2 M4**
Grid 4 **25.2 M4**	Grid 5 **25.2 M4**	Grid 6 **21.8 M4**
Grid 7 **53.1 M4**	Grid 8 **48.6 M4**	Grid 9 **46.9 M4**



0 dB = 53.1V/m

Date/Time: 4/7/2010 11:22:39 AM

File Name: HAC_E_Dipole_CW835_PMF_CDMA.da4

DUT: HAC-Dipole 835 MHz; Type: D835V3;

Program Name: HAC RF E Dipole

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

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

Phantom section: RF Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 1/8/2010
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn473; Calibrated: 1/4/2010
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

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, -6.30 mm

Reference Value = 72.8 V/m; Power Drift = 0.000 dB

Maximum value of Total (measured) = 115.0 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 = 115.2 V/m

Probe Modulation Factor = 1.00

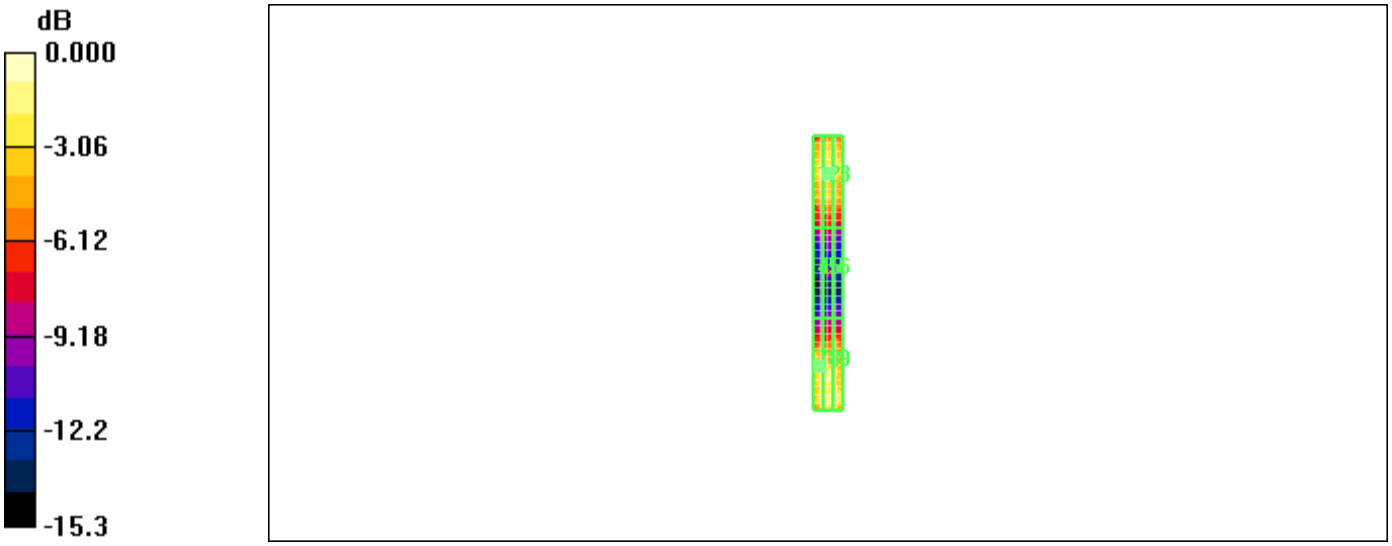
Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 72.8 V/m; Power Drift = 0.000 dB

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

Peak E-field in V/m

Grid 1 **106.3 M4**	Grid 2 **111.4 M4**	Grid 3 **110.4 M4**
Grid 4 **58.8 M4**	Grid 5 **60.2 M4**	Grid 6 **58.5 M4**
Grid 7 **110.1 M4**	Grid 8 **115.2 M4**	Grid 9 **113.2 M4**



0 dB = 115.2V/m

Date/Time: 4/7/2010 11:39:18 AM

File Name: HAC_E_Dipole_AM835_PMF_CDMA.da4

DUT: HAC-Dipole 835 MHz; Type: D835V3;

Program Name: HAC RF E Dipole

Communication System: AM 80%; Frequency: 835 MHz;Duty Cycle: 1:1

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

Phantom section: RF Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 1/8/2010
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn473; Calibrated: 1/4/2010
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

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, -6.30 mm

Reference Value = 45.6 V/m; Power Drift = 0.081 dB

Maximum value of Total (measured) = 72.1 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 = 72.4 V/m

Probe Modulation Factor = 1.00

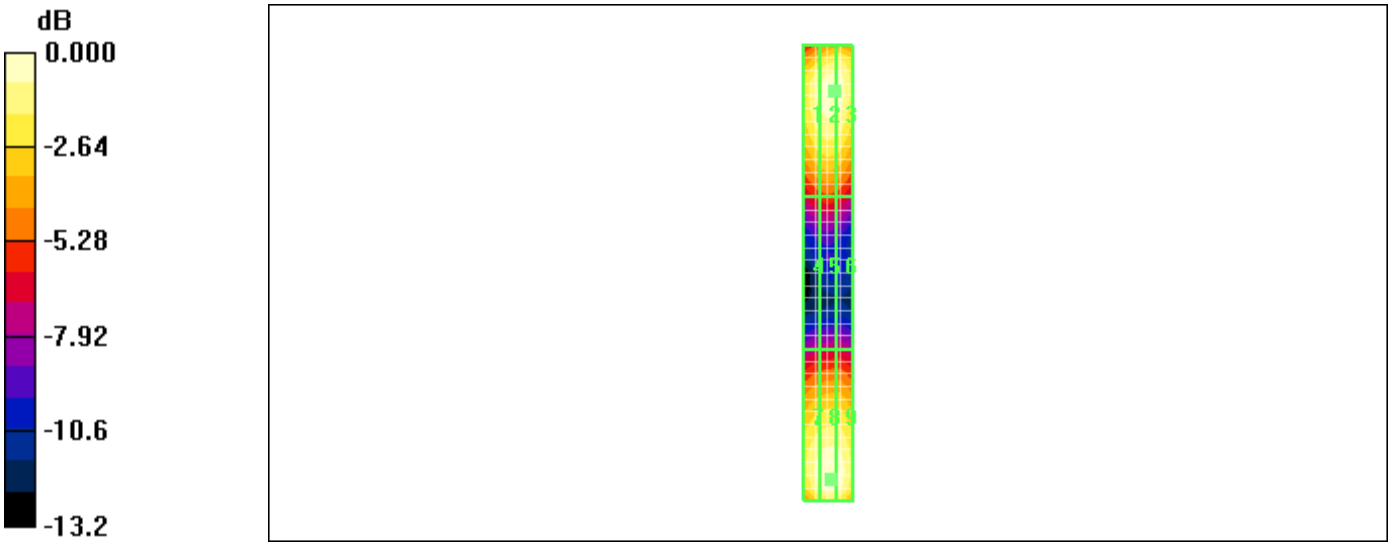
Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 45.6 V/m; Power Drift = 0.081 dB

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

Peak E-field in V/m

Grid 1 **67.0 M4**	Grid 2 **70.2 M4**	Grid 3 **69.9 M4**
Grid 4 **37.4 M4**	Grid 5 **38.4 M4**	Grid 6 **37.4 M4**
Grid 7 **68.8 M4**	Grid 8 **72.4 M4**	Grid 9 **71.4 M4**



0 dB = 72.4V/m

Date/Time: 4/7/2010 12:34:36 PM

File Name: HAC_E_Dipole_CDMA1732.da4

DUT: HAC Dipole 1880 MHz; Type: CD1880V3;

Program Name: HAC RF E Dipole

Communication System: CDMA AWS 1700; Frequency: 1732.5 MHz;Duty Cycle: 1:1

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

Phantom section: RF Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 1/8/2010
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn473; Calibrated: 1/4/2010
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

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, -6.30 mm

Reference Value = 107.4 V/m; Power Drift = -0.042 dB

Maximum value of Total (measured) = 94.2 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 = 97.0 V/m

Probe Modulation Factor = 1.00

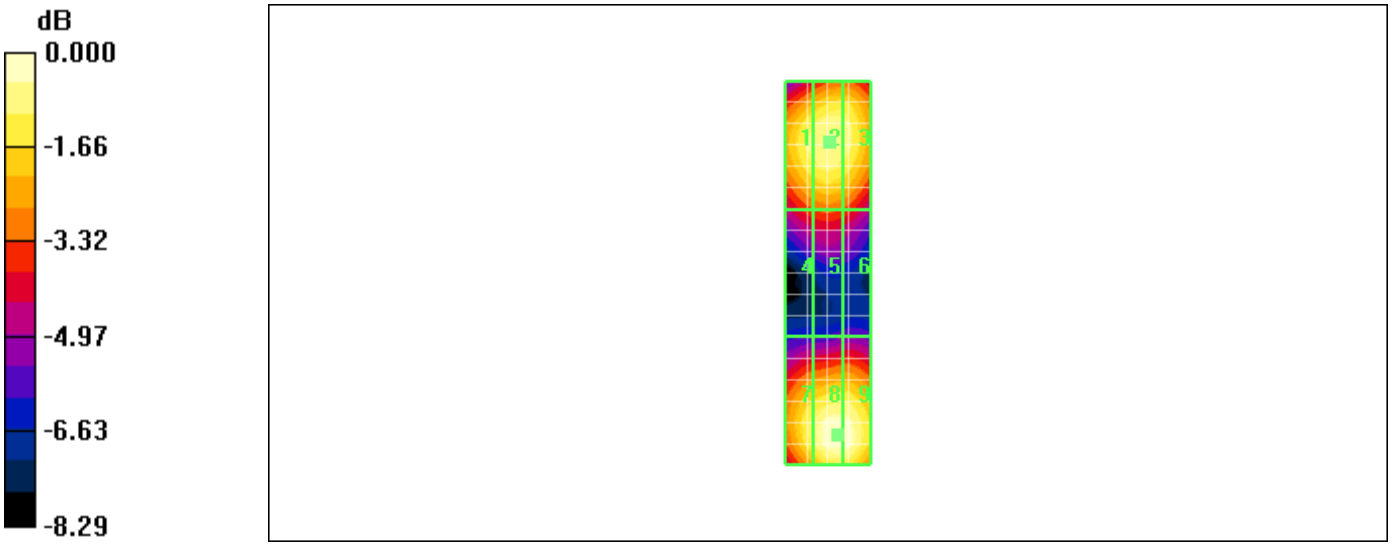
Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 107.4 V/m; Power Drift = -0.042 dB

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

Peak E-field in V/m

Grid 1 **88.8 M3**	Grid 2 **91.7 M3**	Grid 3 **90.0 M3**
Grid 4 **66.5 M3**	Grid 5 **68.5 M3**	Grid 6 **66.4 M3**
Grid 7 **88.8 M3**	Grid 8 **97.0 M3**	Grid 9 **96.7 M3**



0 dB = 97.0V/m

Date/Time: 4/7/2010 1:01:20 PM

File Name: HAC_E_Dipole_CDMA1732_one_eigth_.da4

DUT: HAC Dipole 1880 MHz; Type: CD1880V3;

Program Name: HAC RF E Dipole

Communication System: CDMA AWS 1700_1/8th; Frequency: 1732.5 MHz;Duty Cycle: 1:8.3

Medium parameters used: σ = 0 mho/m, ε_r = 1; ρ = 1000 kg/m^3

Phantom section: RF Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 1/8/2010
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn473; Calibrated: 1/4/2010
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

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, -6.30 mm

Reference Value = 38.6 V/m; Power Drift = 0.005 dB

Maximum value of Total (measured) = 36.3 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 = 36.6 V/m

Probe Modulation Factor = 1.00

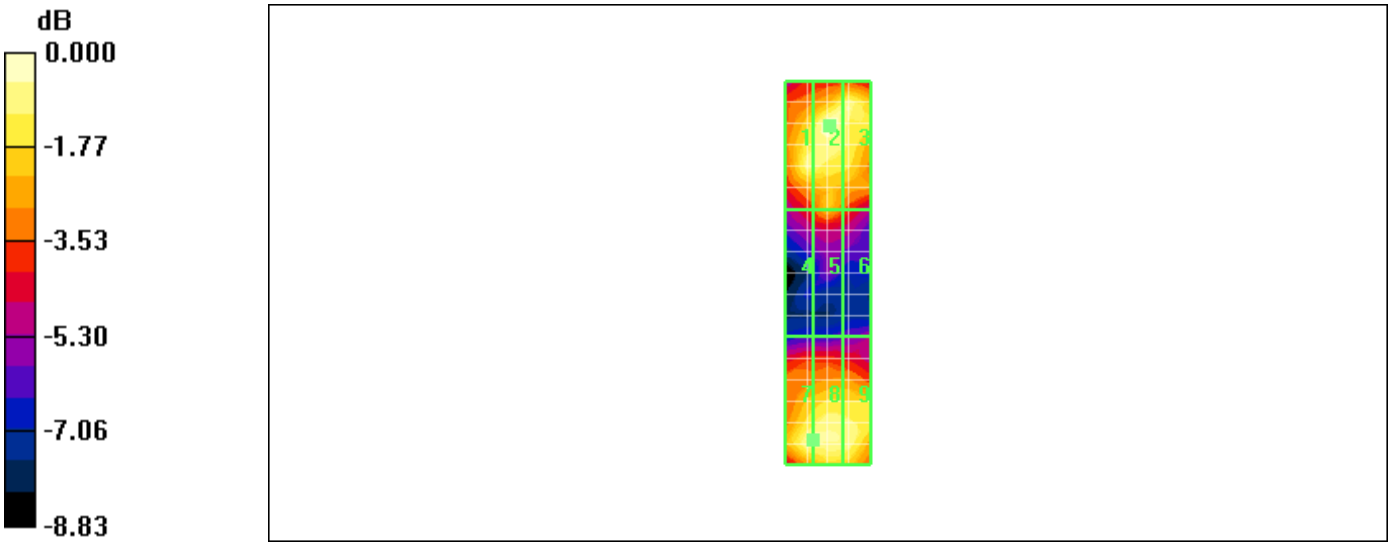
Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 38.6 V/m; Power Drift = 0.005 dB

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

Peak E-field in V/m

Grid 1 **33.9 M4**	Grid 2 **36.6 M4**	Grid 3 **34.4 M4**
Grid 4 **24.1 M4**	Grid 5 **28.2 M4**	Grid 6 **24.7 M4**
Grid 7 **35.3 M4**	Grid 8 **35.3 M4**	Grid 9 **34.1 M4**



0 dB = 36.6V/m

Date/Time: 4/7/2010 12:48:46 PM

File Name: HAC_E_Dipole_CW1732_CDMA.da4

DUT: HAC Dipole 1880 MHz; Type: CD1880V3;

Program Name: HAC RF E Dipole

Communication System: CW; Frequency: 1732 MHz;Duty Cycle: 1:1

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

Phantom section: RF Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 1/8/2010
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn473; Calibrated: 1/4/2010
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

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, -6.30 mm

Reference Value = 103.6 V/m; Power Drift = 0.138 dB

Maximum value of Total (measured) = 91.8 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 = 94.3 V/m

Probe Modulation Factor = 1.00

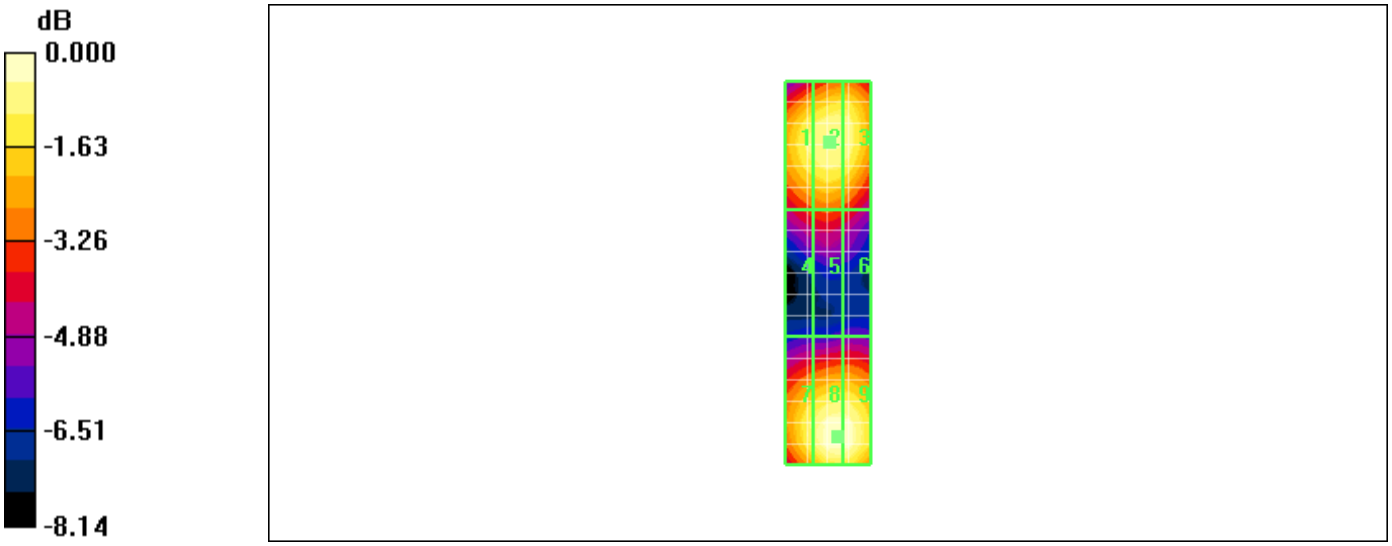
Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 103.6 V/m; Power Drift = 0.138 dB

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

Peak E-field in V/m

Grid 1 **86.7 M3**	Grid 2 **89.3 M3**	Grid 3 **88.7 M3**
Grid 4 **64.7 M3**	Grid 5 **66.8 M3**	Grid 6 **63.9 M3**
Grid 7 **86.8 M3**	Grid 8 **94.3 M3**	Grid 9 **94.0 M3**



0 dB = 94.3V/m

Date/Time: 4/7/2010 12:54:49 PM

File Name: HAC_E_Dipole_AM1732_CDMA.da4

DUT: HAC Dipole 1880 MHz; Type: CD1880V3;

Program Name: HAC RF E Dipole

Communication System: AM 80%_1732; Frequency: 1732 MHz;Duty Cycle: 1:1

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

Phantom section: RF Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 1/8/2010
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn473; Calibrated: 1/4/2010
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

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, -6.30 mm

Reference Value = 65.8 V/m; Power Drift = 0.193 dB

Maximum value of Total (measured) = 59.1 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 = 60.8 V/m

Probe Modulation Factor = 1.00

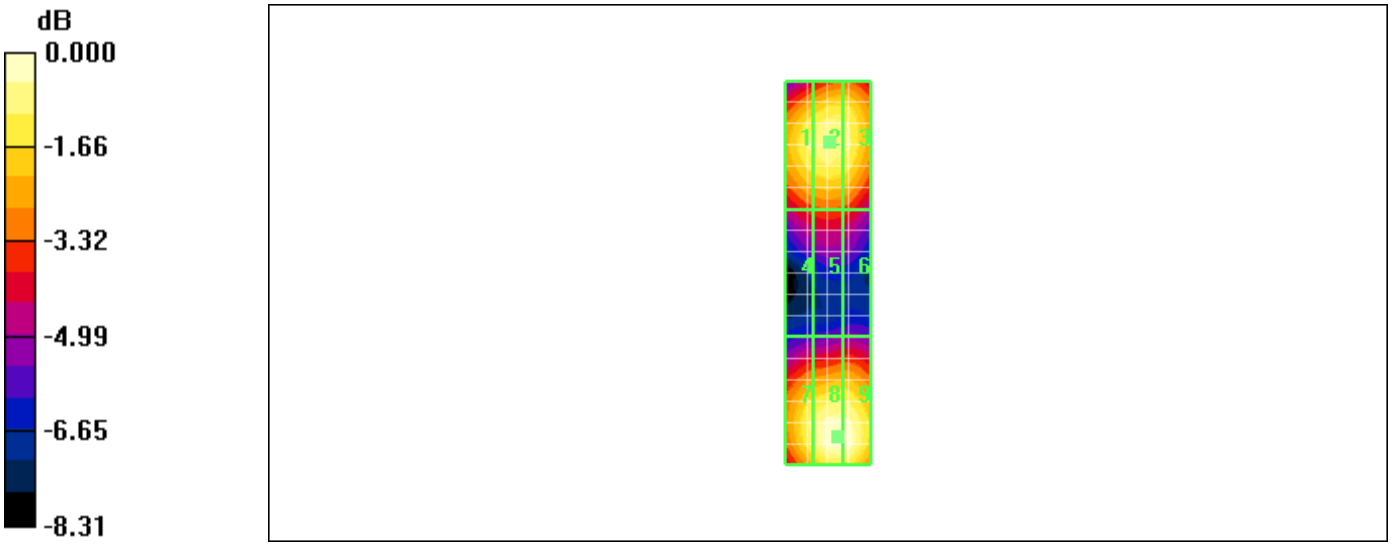
Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 65.8 V/m; Power Drift = 0.193 dB

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

Peak E-field in V/m

Grid 1 **55.2 M4**	Grid 2 **56.6 M4**	Grid 3 **55.8 M4**
Grid 4 **40.9 M4**	Grid 5 **41.8 M4**	Grid 6 **41.3 M4**
Grid 7 **56.0 M4**	Grid 8 **60.8 M4**	Grid 9 **60.7 M4**



0 dB = 60.8V/m

Date/Time: 4/7/2010 2:29:31 PM

File Name: HAC_E_Dipole_CW1880_20.00dBm.da4

DUT: HAC Dipole 1880 MHz; Type: CD1880V3;

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: RF Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 1/8/2010
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn473; Calibrated: 1/4/2010
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

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, -6.30 mm

Reference Value = 145.3 V/m; Power Drift = -0.198 dB

Maximum value of Total (measured) = 125.7 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 = 127.6 V/m

Probe Modulation Factor = 1.00

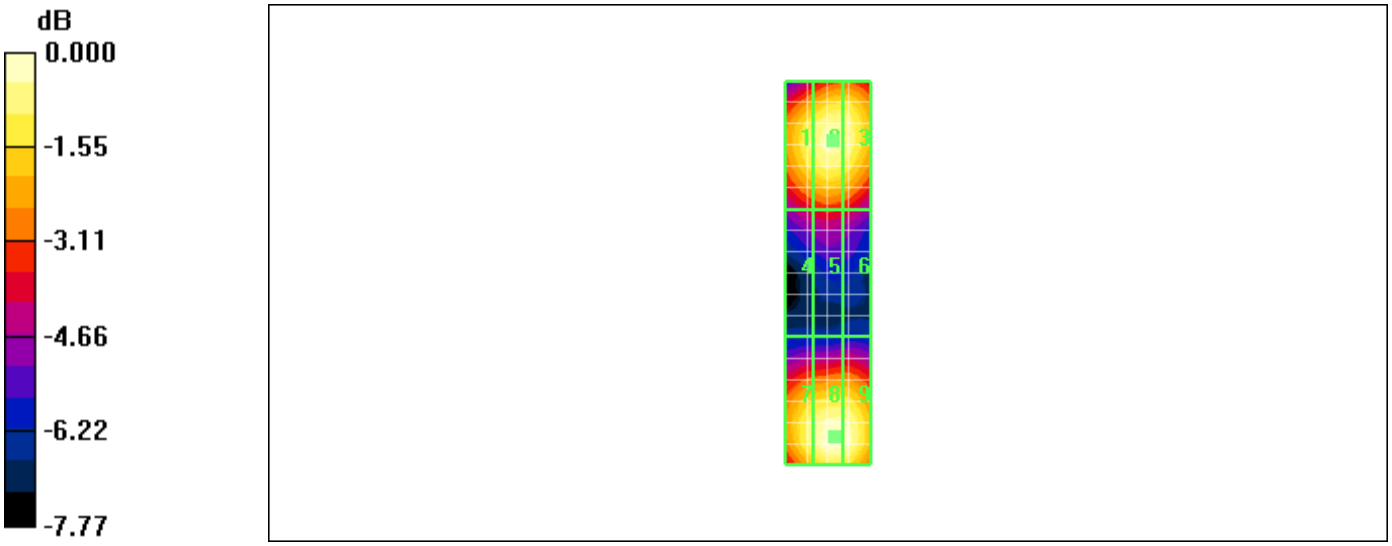
Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 145.3 V/m; Power Drift = -0.198 dB

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

Peak E-field in V/m

Grid 1 **116.8 M2**	Grid 2 **123.1 M2**	Grid 3 **121.2 M2**
Grid 4 **83.5 M3**	Grid 5 **86.8 M3**	Grid 6 **84.5 M3**
Grid 7 **120.2 M2**	Grid 8 **127.6 M2**	Grid 9 **126.5 M2**



0 dB = 127.6V/m

Date/Time: 4/7/2010 2:06:47 PM

File Name: HAC_E_Dipole_CDMA1880.da4

DUT: HAC Dipole 1880 MHz; Type: CD1880V3;

Program Name: HAC RF E Dipole

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

Medium parameters used: σ = 0 mho/m, ε_r = 1; ρ = 1000 kg/m^3

Phantom section: RF Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 1/8/2010
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn473; Calibrated: 1/4/2010
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

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, -6.30 mm

Reference Value = 97.3 V/m; Power Drift = 0.045 dB

Maximum value of Total (measured) = 86.1 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 = 87.5 V/m

Probe Modulation Factor = 1.00

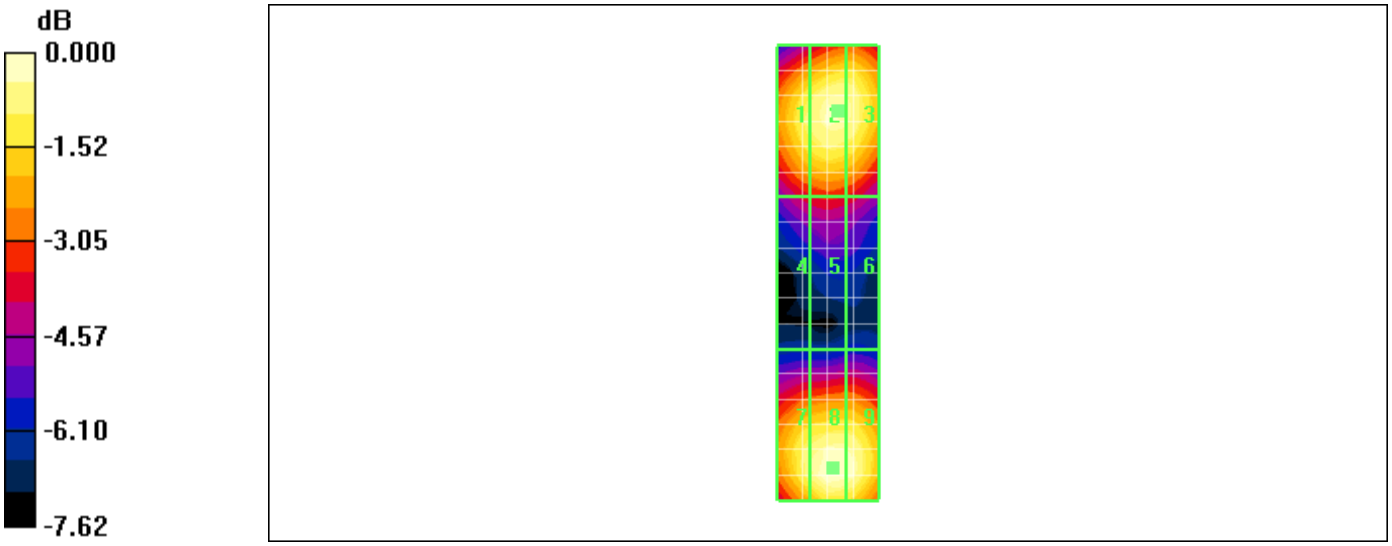
Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 97.3 V/m; Power Drift = 0.045 dB

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

Peak E-field in V/m

Grid 1 **80.4 M3**	Grid 2 **84.2 M3**	Grid 3 **83.8 M3**
Grid 4 **57.5 M4**	Grid 5 **59.4 M4**	Grid 6 **57.8 M4**
Grid 7 **82.4 M3**	Grid 8 **87.5 M3**	Grid 9 **86.7 M3**



0 dB = 87.5V/m

Date/Time: 4/7/2010 2:12:58 PM

File Name: HAC_E_Dipole_CDMA1880_one_eigth.da4

DUT: HAC Dipole 1880 MHz; Type: CD1880V3;

Program Name: HAC RF E Dipole

Communication System: CDMA 1900 1/8th; Frequency: 1880 MHz;Duty Cycle: 1:8.3

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

Phantom section: RF Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 1/8/2010
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn473; Calibrated: 1/4/2010
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

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, -6.30 mm

Reference Value = 34.9 V/m; Power Drift = 1.08 dB

Maximum value of Total (measured) = 34.1 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 = 34.4 V/m

Probe Modulation Factor = 1.00

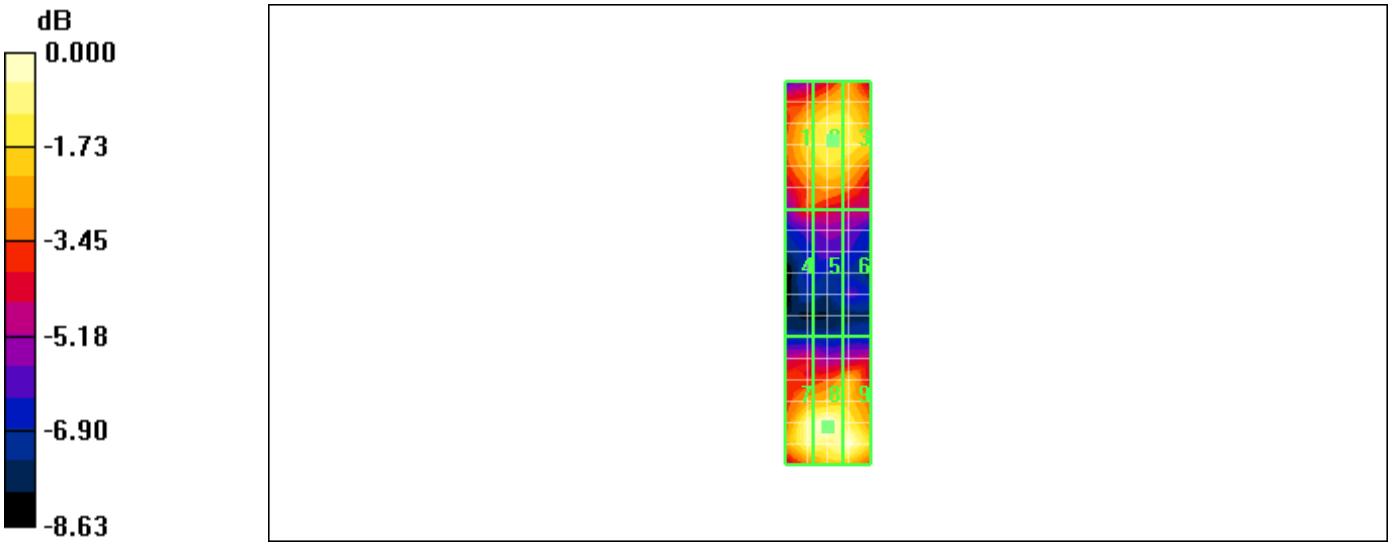
Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 34.9 V/m; Power Drift = 1.08 dB

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

Peak E-field in V/m

Grid 1 **29.0 M4**	Grid 2 **30.4 M4**	Grid 3 **30.0 M4**
Grid 4 **23.0 M4**	Grid 5 **22.9 M4**	Grid 6 **20.5 M4**
Grid 7 **33.6 M4**	Grid 8 **34.4 M4**	Grid 9 **34.2 M4**



0 dB = 34.4V/m

Date/Time: 4/7/2010 2:18:40 PM

File Name: HAC_E_Dipole_CW1880_PMF_CDMA.da4

DUT: HAC Dipole 1880 MHz; Type: CD1880V3;

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: RF Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 1/8/2010
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn473; Calibrated: 1/4/2010
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

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, -6.30 mm

Reference Value = 103.6 V/m; Power Drift = -0.376 dB

Maximum value of Total (measured) = 89.8 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 = 91.0 V/m

Probe Modulation Factor = 1.00

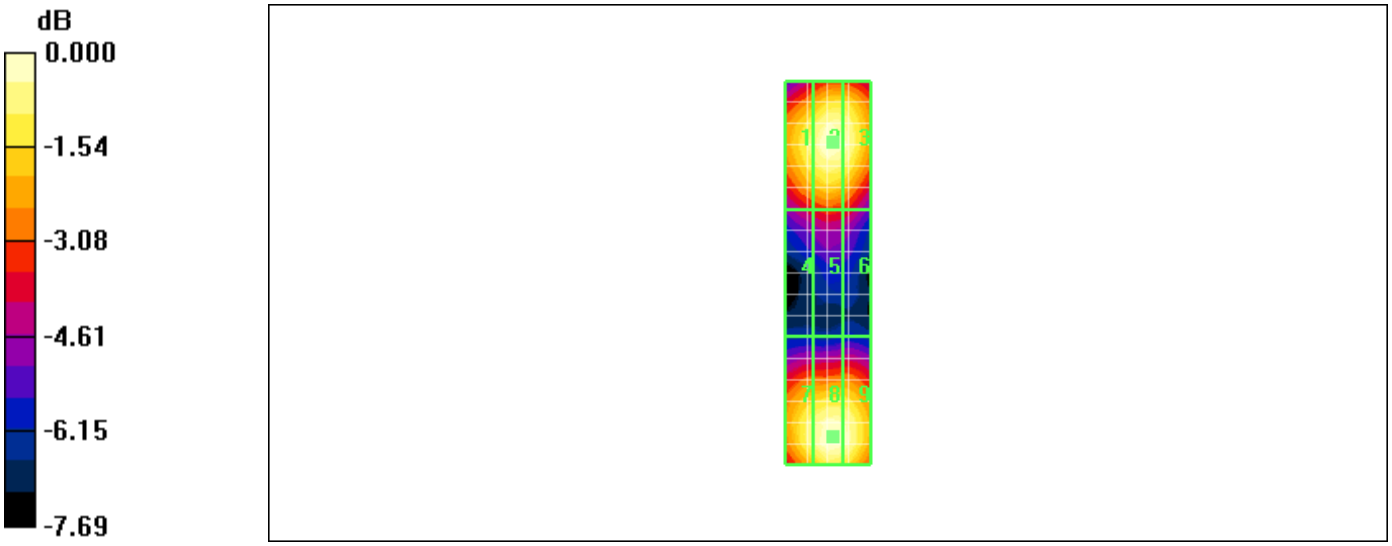
Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 103.6 V/m; Power Drift = -0.376 dB

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

Peak E-field in V/m

Grid 1 **84.2 M3**	Grid 2 **90.1 M3**	Grid 3 **88.8 M3**
Grid 4 **60.0 M4**	Grid 5 **63.1 M3**	Grid 6 **61.8 M4**
Grid 7 **86.1 M3**	Grid 8 **91.0 M3**	Grid 9 **89.7 M3**



0 dB = 91.0V/m

Date/Time: 4/7/2010 2:23:44 PM

File Name: HAC_E_Dipole_AM_1880_PMF_CDMA.da4

DUT: HAC Dipole 1880 MHz; Type: CD1880V3;

Program Name: HAC RF E Dipole

Communication System: 80% AM; Frequency: 1880 MHz;Duty Cycle: 1:1

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

Phantom section: RF Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 1/8/2010
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn473; Calibrated: 1/4/2010
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

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, -6.30 mm

Reference Value = 61.8 V/m; Power Drift = -0.117 dB

Maximum value of Total (measured) = 53.7 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 = 54.6 V/m

Probe Modulation Factor = 1.00

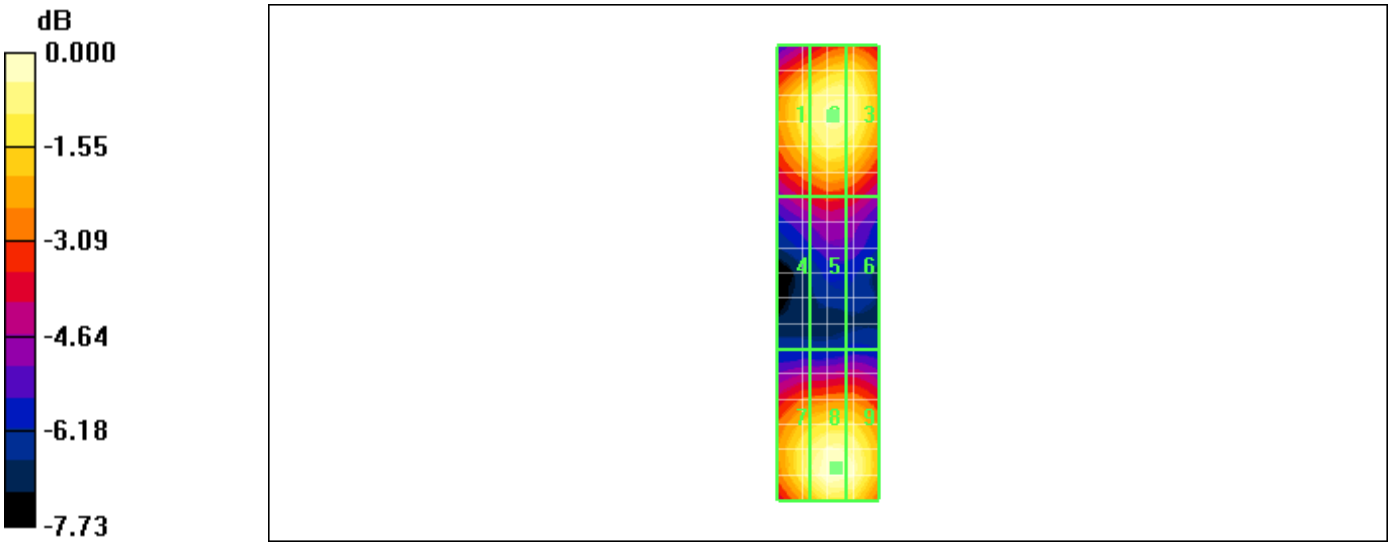
Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 61.8 V/m; Power Drift = -0.117 dB

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

Peak E-field in V/m

Grid 1 **49.6 M4**	Grid 2 **52.2 M4**	Grid 3 **51.7 M4**
Grid 4 **35.2 M4**	Grid 5 **37.2 M4**	Grid 6 **36.4 M4**
Grid 7 **51.0 M4**	Grid 8 **54.6 M4**	Grid 9 **54.0 M4**



0 dB = 54.6V/m

Date/Time: 4/7/2010 4:14:31 PM

File Name: HAC_H_Dipole_CW835_20.00dBm.da4

DUT: HAC-Dipole 835 MHz; Type: D835V3;

Program Name: HAC RF H3DV6 Dipole

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

Medium parameters used: $\sigma = 0$ mho/m, $\varepsilon_r = 1$; $\rho = 1$ kg/m^3

Phantom section: RF Section

DASY4 Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 11/13/2009
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn473; Calibrated: 1/4/2010
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

H Scan - measurement distance from the probe sensor center to CD835 Dipole = 10mm/Hearing Aid Compatibility Test (5x11x1): Measurement grid:

dx=5mm, dy=5mm

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.496 A/m; Power Drift = -0.123 dB

Maximum value of Total (measured) = 0.469 A/m

H Scan - measurement distance from the probe sensor center to CD835

Dipole = 10mm/Hearing Aid Compatibility Test (41x101x1): Measurement grid: dx=5mm, dy=5mm

Maximum value of peak Total field = 0.471 A/m

Probe Modulation Factor = 1.00

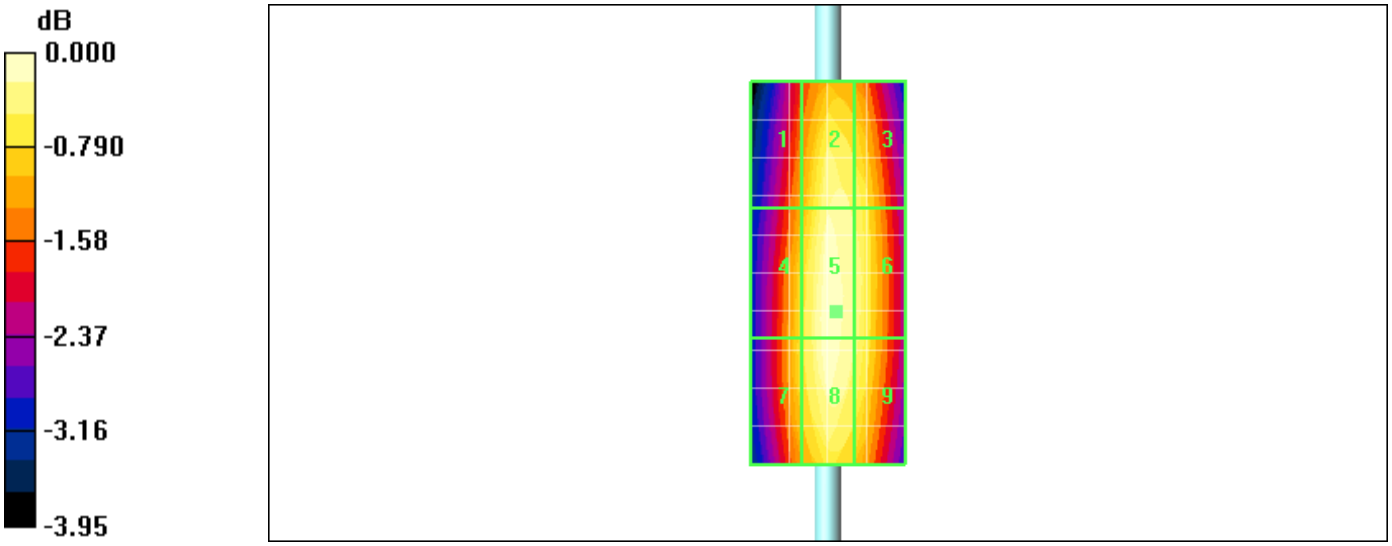
Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.496 A/m; Power Drift = -0.123 dB

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

Peak H-field in A/m

Grid 1 **0.418 M4**	Grid 2 **0.461 M4**	Grid 3 **0.453 M4**
Grid 4 **0.437 M4**	Grid 5 **0.471 M4**	Grid 6 **0.459 M4**
Grid 7 **0.438 M4**	Grid 8 **0.469 M4**	Grid 9 **0.457 M4**



0 dB = 0.471A/m

Date/Time: 4/7/2010 4:02:09 PM

File Name: HAC_H_Dipole_CDMA835_.da4

DUT: HAC-Dipole 835 MHz; Type: D835V3;

Program Name: HAC RF H3DV6 Dipole

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

Medium parameters used: $\sigma = 0$ mho/m, $\varepsilon_r = 1$; $\rho = 1$ kg/m^3

Phantom section: RF Section

DASY4 Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 11/13/2009
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn473; Calibrated: 1/4/2010
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

H Scan - measurement distance from the probe sensor center to CD835 Dipole = 10mm/Hearing Aid Compatibility Test (5x11x1): Measurement grid: dx=5mm, dy=5mm

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.359 A/m; Power Drift = -0.062 dB

Maximum value of Total (measured) = 0.337 A/m

H Scan - measurement distance from the probe sensor center to CD835

Dipole = 10mm/Hearing Aid Compatibility Test (41x101x1): Measurement grid: dx=5mm, dy=5mm

Maximum value of peak Total field = 0.339 A/m

Probe Modulation Factor = 1.00

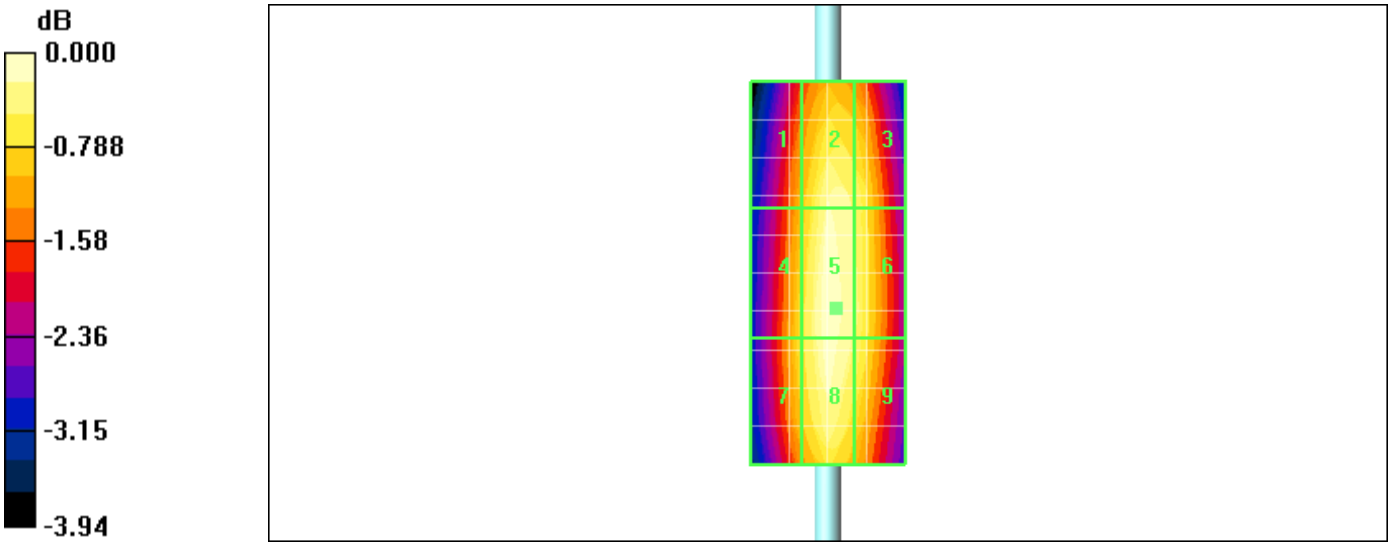
Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.359 A/m; Power Drift = -0.062 dB

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

Peak H-field in A/m

Grid 1 **0.304 M4**	Grid 2 **0.333 M4**	Grid 3 **0.327 M4**
Grid 4 **0.315 M4**	Grid 5 **0.339 M4**	Grid 6 **0.329 M4**
Grid 7 **0.315 M4**	Grid 8 **0.336 M4**	Grid 9 **0.326 M4**



0 dB = 0.339A/m

Date/Time: 4/7/2010 3:57:29 PM

File Name: HAC_H_Dipole_CDMA835_one_eigth.da4

DUT: HAC-Dipole 835 MHz; Type: D835V3;

Program Name: HAC RF H3DV6 Dipole

Communication System: CDMA 800; Frequency: 835 MHz;Duty Cycle: 1:8.3

Medium parameters used: $\sigma = 0$ mho/m, $\varepsilon_r = 1$; $\rho = 1$ kg/m^3

Phantom section: RF Section

DASY4 Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 11/13/2009
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn473; Calibrated: 1/4/2010
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

H Scan - measurement distance from the probe sensor center to CD835 Dipole = 10mm/Hearing Aid Compatibility Test (5x13x1): Measurement grid:

dx=5mm, dy=5mm

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.129 A/m; Power Drift = 1.13 dB

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

H Scan - measurement distance from the probe sensor center to CD835

Dipole = 10mm/Hearing Aid Compatibility Test (41x121x1): Measurement grid: dx=5mm, dy=5mm

Maximum value of peak Total field = 0.140 A/m

Probe Modulation Factor = 1.00

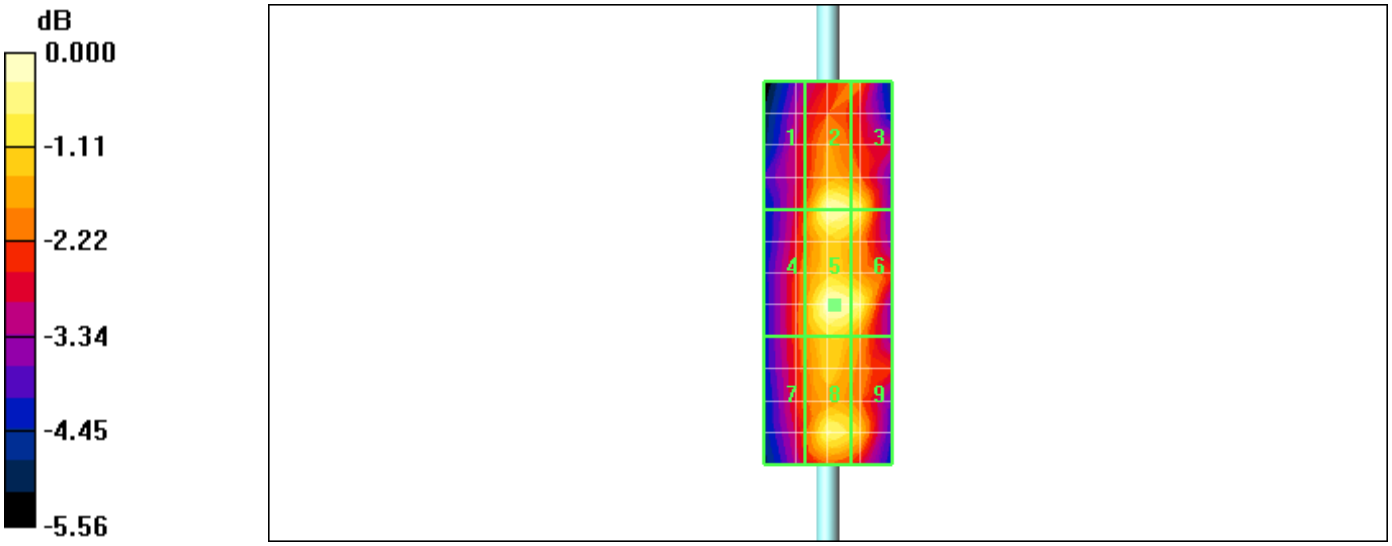
Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.129 A/m; Power Drift = 1.13 dB

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

Peak H-field in A/m

Grid 1 **0.109 M4**	Grid 2 **0.138 M4**	Grid 3 **0.134 M4**
Grid 4 **0.116 M4**	Grid 5 **0.140 M4**	Grid 6 **0.136 M4**
Grid 7 **0.114 M4**	Grid 8 **0.132 M4**	Grid 9 **0.127 M4**



0 dB = 0.140A/m

Date/Time: 4/7/2010 4:06:06 PM

File Name: HAC_H_Dipole_CW835_PMF_CDMA.da4

DUT: HAC-Dipole 835 MHz; Type: D835V3;

Program Name: HAC RF H3DV6 Dipole

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

Medium parameters used: $\sigma = 0$ mho/m, $\varepsilon_r = 1$; $\rho = 1$ kg/m^3

Phantom section: RF Section

DASY4 Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 11/13/2009
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn473; Calibrated: 1/4/2010
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

H Scan - measurement distance from the probe sensor center to CD835 Dipole = 10mm/Hearing Aid Compatibility Test (5x11x1): Measurement grid: dx=5mm, dy=5mm

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.354 A/m; Power Drift = -0.126 dB

Maximum value of Total (measured) = 0.331 A/m

H Scan - measurement distance from the probe sensor center to CD835

Dipole = 10mm/Hearing Aid Compatibility Test (41x101x1): Measurement grid: dx=5mm, dy=5mm

Maximum value of peak Total field = 0.333 A/m

Probe Modulation Factor = 1.00

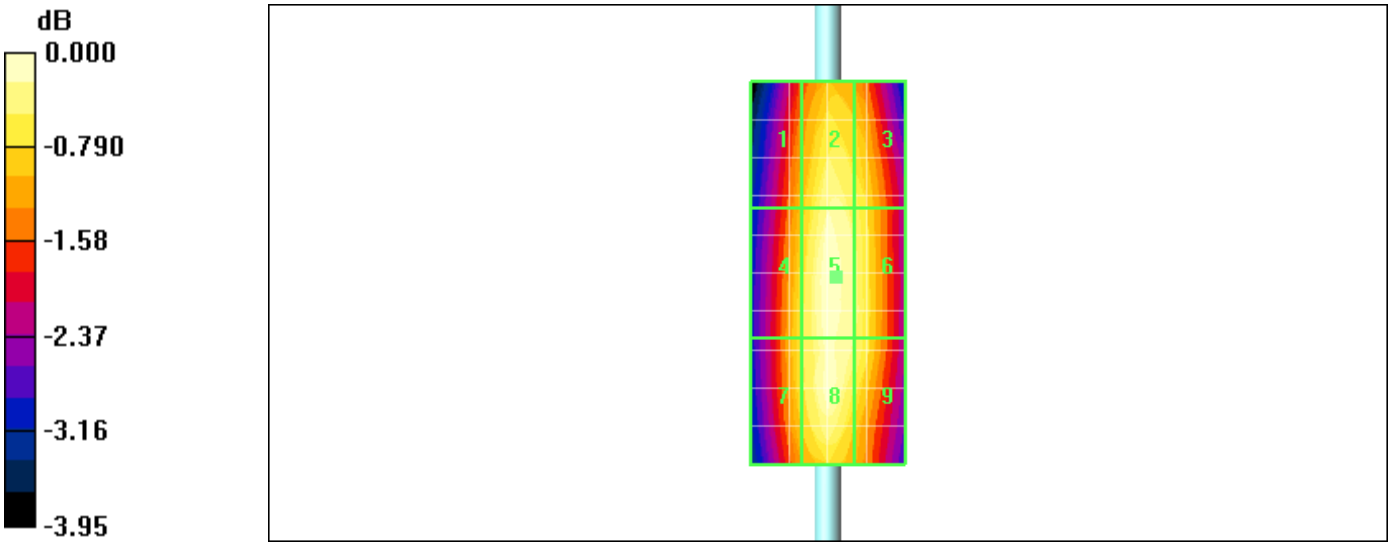
Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.354 A/m; Power Drift = -0.126 dB

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

Peak H-field in A/m

Grid 1 **0.300 M4**	Grid 2 **0.325 M4**	Grid 3 **0.317 M4**
Grid 4 **0.311 M4**	Grid 5 **0.333 M4**	Grid 6 **0.323 M4**
Grid 7 **0.311 M4**	Grid 8 **0.329 M4**	Grid 9 **0.322 M4**



0 dB = 0.333A/m

Date/Time: 4/7/2010 4:10:40 PM

File Name: HAC_H_Dipole_AM835_PMF_CDMA.da4

DUT: HAC-Dipole 835 MHz; Type: D835V3;

Program Name: HAC RF H3DV6 Dipole

Communication System: 80% AM; Frequency: 835 MHz;Duty Cycle: 1:1

Medium parameters used: $\sigma = 0$ mho/m, $\varepsilon_r = 1$; $\rho = 1$ kg/m^3

Phantom section: RF Section

DASY4 Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 11/13/2009
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn473; Calibrated: 1/4/2010
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

H Scan - measurement distance from the probe sensor center to CD835 Dipole = 10mm/Hearing Aid Compatibility Test (5x13x1): Measurement grid: dx=5mm, dy=5mm

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.224 A/m; Power Drift = 0.067 dB

Maximum value of Total (measured) = 0.212 A/m

H Scan - measurement distance from the probe sensor center to CD835

Dipole = 10mm/Hearing Aid Compatibility Test (41x121x1): Measurement grid: dx=5mm, dy=5mm

Maximum value of peak Total field = 0.213 A/m

Probe Modulation Factor = 1.00

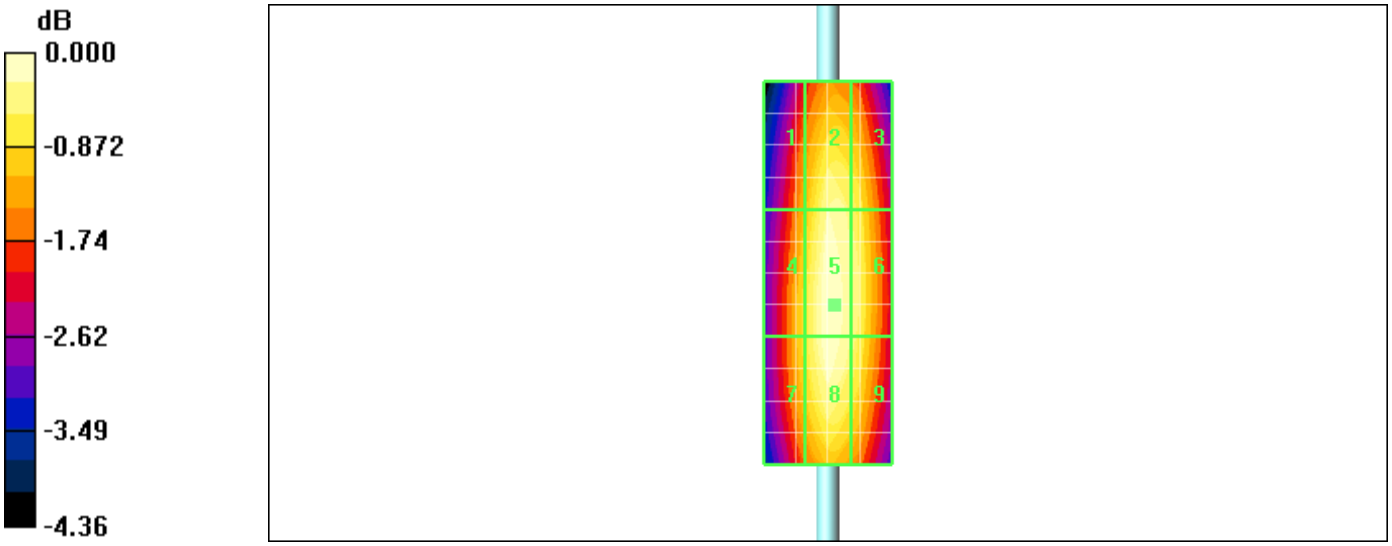
Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.224 A/m; Power Drift = 0.067 dB

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

Peak H-field in A/m

Grid 1 **0.189 M4**	Grid 2 **0.208 M4**	Grid 3 **0.204 M4**
Grid 4 **0.197 M4**	Grid 5 **0.213 M4**	Grid 6 **0.207 M4**
Grid 7 **0.197 M4**	Grid 8 **0.212 M4**	Grid 9 **0.206 M4**



0 dB = 0.213A/m

Date/Time: 4/7/2010 3:33:43 PM

File Name: HAC_H_Dipole_CDMA1732.da4

DUT: HAC Dipole 1880 MHz; Type: CD1880V3;

Program Name: HAC RF H3DV6 Dipole

Communication System: CDMA AWS 1700; Frequency: 1732.5 MHz;Duty Cycle: 1:1

Medium parameters used: $\sigma = 0$ mho/m, $\varepsilon_r = 1$; $\rho = 1$ kg/m^3

Phantom section: RF Section

DASY4 Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 11/13/2009
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn473; Calibrated: 1/4/2010
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

H Scan - measurement distance from the probe sensor center to CD1880 Dipole = 10mm/Hearing Aid Compatibility Test (5x11x1): Measurement grid: dx=5mm, dy=5mm

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.361 A/m; Power Drift = 0.120 dB

Maximum value of Total (measured) = 0.343 A/m

H Scan - measurement distance from the probe sensor center to CD1880

Dipole = 10mm/Hearing Aid Compatibility Test (41x101x1): Measurement grid: dx=5mm, dy=5mm

Maximum value of peak Total field = 0.345 A/m

Probe Modulation Factor = 1.00

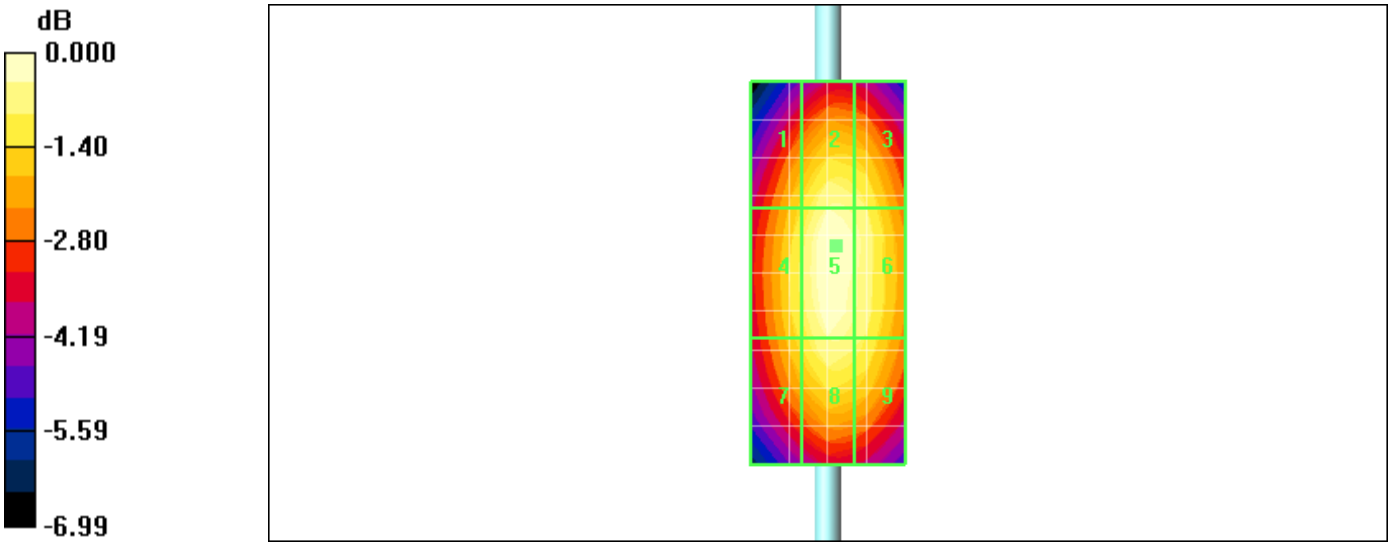
Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.361 A/m; Power Drift = 0.120 dB

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

Peak H-field in A/m

Grid 1 **0.299 M3**	Grid 2 **0.330 M3**	Grid 3 **0.322 M3**
Grid 4 **0.314 M3**	Grid 5 **0.345 M2**	Grid 6 **0.333 M3**
Grid 7 **0.302 M3**	Grid 8 **0.328 M3**	Grid 9 **0.319 M3**



0 dB = 0.345A/m

Date/Time: 4/7/2010 3:43:10 PM

File Name: HAC_H_Dipole_CDMA1732_one_eigth.da4

DUT: HAC Dipole 1880 MHz; Type: CD1880V3;

Program Name: HAC RF H3DV6 Dipole

Communication System: CDMA AWS 1700_1/8th; Frequency: 1732.5 MHz;Duty Cycle: 1:8.3

Medium parameters used: $\sigma = 0$ mho/m, $\varepsilon_r = 1$; $\rho = 1$ kg/m^3

Phantom section: RF Section

DASY4 Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 11/13/2009
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn473; Calibrated: 1/4/2010
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

H Scan - measurement distance from the probe sensor center to CD1880 Dipole = 10mm/Hearing Aid Compatibility Test (5x11x1): Measurement grid: dx=5mm, dy=5mm

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.142 A/m; Power Drift = 0.103 dB

Maximum value of Total (measured) = 0.132 A/m

H Scan - measurement distance from the probe sensor center to CD1880 Dipole = 10mm/Hearing Aid Compatibility Test (41x101x1): Measurement grid: dx=5mm, dy=5mm

Maximum value of peak Total field = 0.133 A/m

Probe Modulation Factor = 1.00

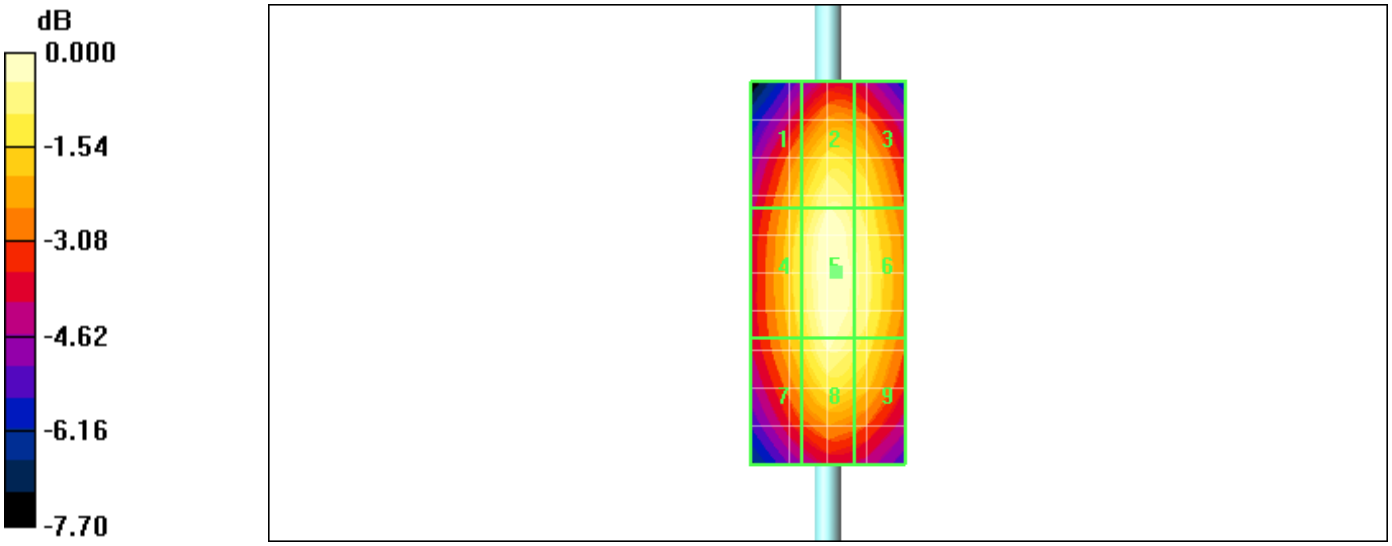
Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.142 A/m; Power Drift = 0.103 dB

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

Peak H-field in A/m

Grid 1 **0.113 M4**	Grid 2 **0.127 M4**	Grid 3 **0.121 M4**
Grid 4 **0.118 M4**	Grid 5 **0.133 M4**	Grid 6 **0.127 M4**
Grid 7 **0.113 M4**	Grid 8 **0.128 M4**	Grid 9 **0.122 M4**



0 dB = 0.133A/m

Date/Time: 4/7/2010 2:55:37 PM

File Name: HAC_H_Dipole_CW1732_PMF_CDMA.da4

DUT: HAC Dipole 1880 MHz; Type: CD1880V3;

Program Name: HAC RF H3DV6 Dipole

Communication System: CW; Frequency: 1732 MHz;Duty Cycle: 1:1

Medium parameters used: $\sigma = 0$ mho/m, $\varepsilon_r = 1$; $\rho = 1$ kg/m^3

Phantom section: RF Section

DASY4 Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 11/13/2009
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn473; Calibrated: 1/4/2010
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

H Scan - measurement distance from the probe sensor center to CD835 Dipole = 10mm/Hearing Aid Compatibility Test (5x11x1): Measurement grid: dx=5mm, dy=5mm

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.352 A/m; Power Drift = -0.062 dB

Maximum value of Total (measured) = 0.339 A/m

H Scan - measurement distance from the probe sensor center to CD835

Dipole = 10mm/Hearing Aid Compatibility Test (41x101x1): Measurement grid: dx=5mm, dy=5mm

Maximum value of peak Total field = 0.341 A/m

Probe Modulation Factor = 1.00

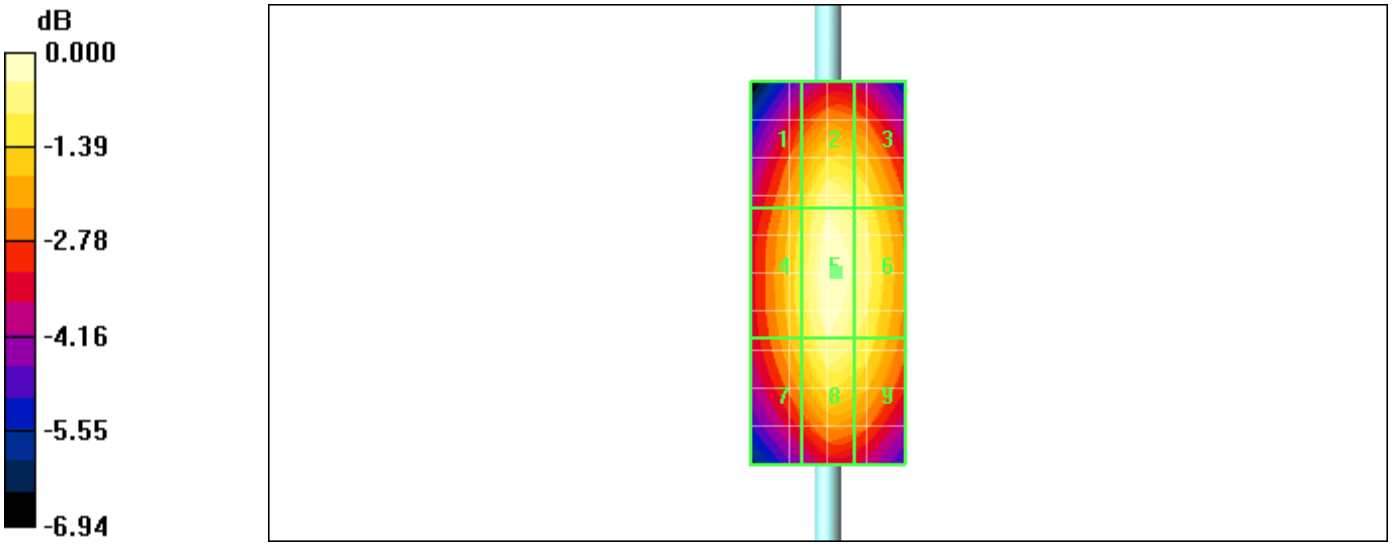
Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.352 A/m; Power Drift = -0.062 dB

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

Peak H-field in A/m

Grid 1 **0.288 M3**	Grid 2 **0.326 M3**	Grid 3 **0.314 M3**
Grid 4 **0.303 M3**	Grid 5 **0.341 M2**	Grid 6 **0.327 M3**
Grid 7 **0.293 M3**	Grid 8 **0.325 M3**	Grid 9 **0.313 M3**



0 dB = 0.341A/m

Date/Time: 4/7/2010 3:05:43 PM

File Name: HAC_H_Dipole_AM1732_PMF_CDMA.da4

DUT: HAC Dipole 1880 MHz; Type: CD1880V3;

Program Name: HAC RF H3DV6 Dipole

Communication System: AM 80%; Frequency: 1732 MHz;Duty Cycle: 1:1

Medium parameters used: $\sigma = 0$ mho/m, $\varepsilon_r = 1$; $\rho = 1$ kg/m^3

Phantom section: RF Section

DASY4 Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 11/13/2009
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn473; Calibrated: 1/4/2010
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

H Scan - measurement distance from the probe sensor center to CD1880 Dipole = 10mm/Hearing Aid Compatibility Test (5x11x1): Measurement grid: dx=5mm, dy=5mm

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.221 A/m; Power Drift = 0.127 dB

Maximum value of Total (measured) = 0.209 A/m

H Scan - measurement distance from the probe sensor center to CD1880

Dipole = 10mm/Hearing Aid Compatibility Test (41x101x1): Measurement grid: dx=5mm, dy=5mm

Maximum value of peak Total field = 0.211 A/m

Probe Modulation Factor = 1.00

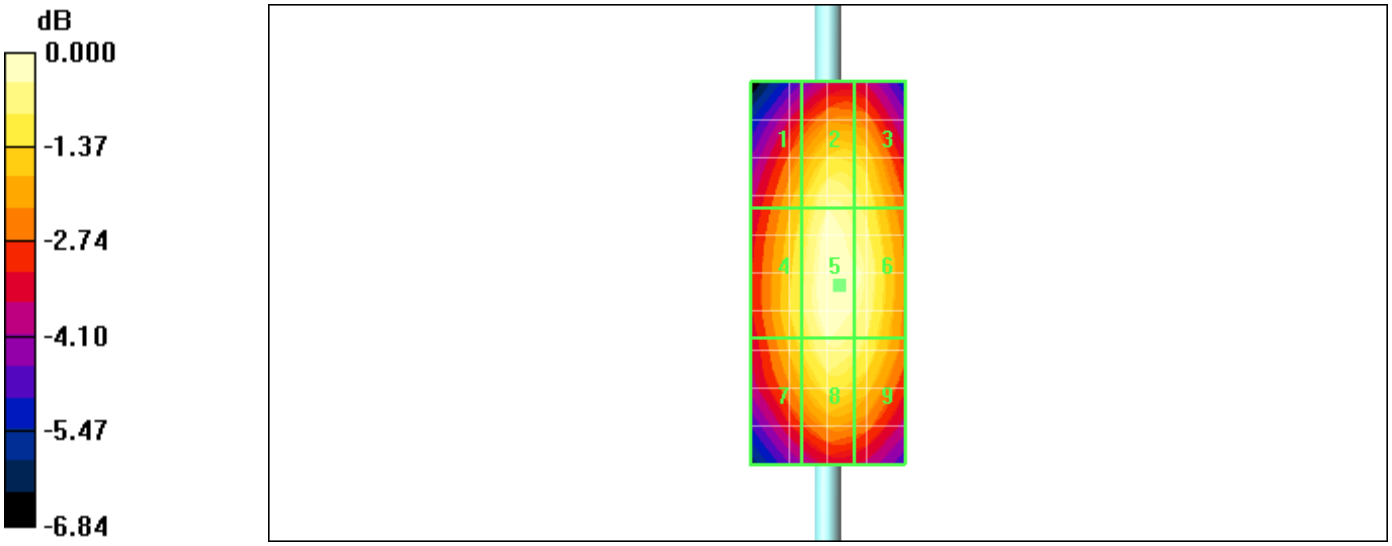
Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.221 A/m; Power Drift = 0.127 dB

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

Peak H-field in A/m

Grid 1 **0.181 M4**	Grid 2 **0.202 M3**	Grid 3 **0.196 M3**
Grid 4 **0.191 M3**	Grid 5 **0.211 M3**	Grid 6 **0.206 M3**
Grid 7 **0.185 M4**	Grid 8 **0.203 M3**	Grid 9 **0.197 M3**



0 dB = 0.211A/m

Date/Time: 4/7/2010 2:42:18 PM

File Name: HAC_H_Dipole_CW1880_20.00dBm.da4

DUT: HAC Dipole 1880 MHz; Type: CD1880V3;

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: RF Section

DASY4 Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 11/13/2009
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn473; Calibrated: 1/4/2010
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

H Scan - measurement distance from the probe sensor center to CD1880 Dipole = 10mm/Hearing Aid Compatibility Test (5x11x1): Measurement grid: dx=5mm, dy=5mm

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.476 A/m; Power Drift = -0.041 dB

Maximum value of Total (measured) = 0.448 A/m

H Scan - measurement distance from the probe sensor center to CD1880

Dipole = 10mm/Hearing Aid Compatibility Test (41x101x1): Measurement grid: dx=5mm, dy=5mm

Maximum value of peak Total field = 0.449 A/m

Probe Modulation Factor = 1.00

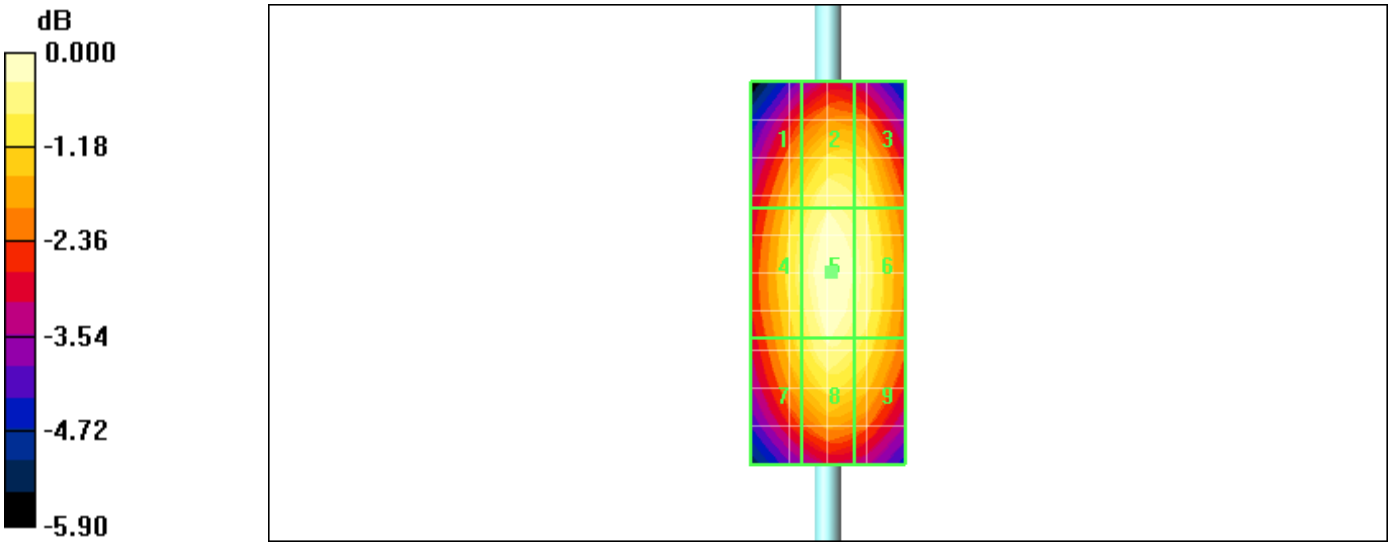
Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.476 A/m; Power Drift = -0.041 dB

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

Peak H-field in A/m

Grid 1 **0.402 M2**	Grid 2 **0.430 M2**	Grid 3 **0.422 M2**
Grid 4 **0.421 M2**	Grid 5 **0.449 M2**	Grid 6 **0.435 M2**
Grid 7 **0.405 M2**	Grid 8 **0.433 M2**	Grid 9 **0.420 M2**



0 dB = 0.449A/m

Date/Time: 4/7/2010 3:12:02 PM

File Name: HAC_H_Dipole_CDMA1880.da4

DUT: HAC Dipole 1880 MHz; Type: CD1880V3;

Program Name: HAC RF H3DV6 Dipole

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

Medium parameters used: $\sigma = 0$ mho/m, $\varepsilon_r = 1$; $\rho = 1$ kg/m^3

Phantom section: RF Section

DASY4 Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 11/13/2009
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn473; Calibrated: 1/4/2010
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

H Scan - measurement distance from the probe sensor center to CD1880 Dipole = 10mm/Hearing Aid Compatibility Test (5x11x1): Measurement grid: dx=5mm, dy=5mm

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.337 A/m; Power Drift = 0.067 dB

Maximum value of Total (measured) = 0.314 A/m

H Scan - measurement distance from the probe sensor center to CD1880

Dipole = 10mm/Hearing Aid Compatibility Test (41x101x1): Measurement grid: dx=5mm, dy=5mm

Maximum value of peak Total field = 0.316 A/m

Probe Modulation Factor = 1.00

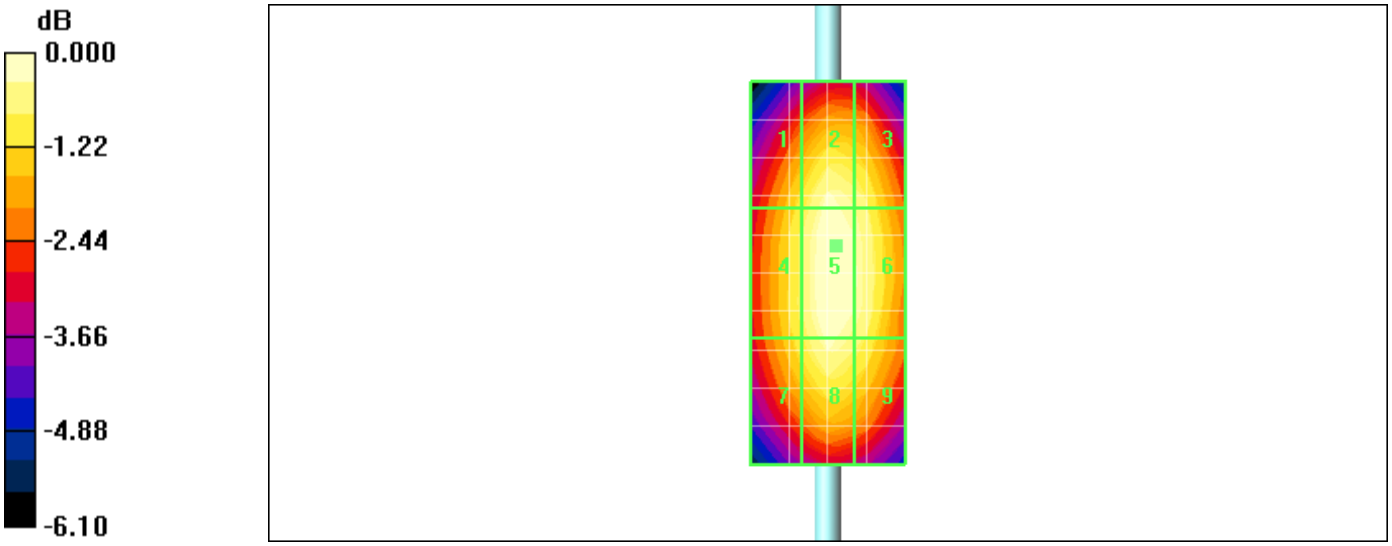
Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.337 A/m; Power Drift = 0.067 dB

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

Peak H-field in A/m

Grid 1 **0.283 M3**	Grid 2 **0.309 M3**	Grid 3 **0.301 M3**
Grid 4 **0.292 M3**	Grid 5 **0.316 M3**	Grid 6 **0.309 M3**
Grid 7 **0.286 M3**	Grid 8 **0.307 M3**	Grid 9 **0.297 M3**



0 dB = 0.316A/m

Date/Time: 4/7/2010 3:27:39 PM

File Name: HAC_H_Dipole_CDMA1880_one_eigth.da4

DUT: HAC Dipole 1880 MHz; Type: CD1880V3;

Program Name: HAC RF H3DV6 Dipole

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

Medium parameters used: $\sigma = 0$ mho/m, $\varepsilon_r = 1$; $\rho = 1$ kg/m^3

Phantom section: RF Section

DASY4 Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 11/13/2009
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn473; Calibrated: 1/4/2010
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

H Scan - measurement distance from the probe sensor center to CD1880 Dipole = 10mm/Hearing Aid Compatibility Test (5x11x1): Measurement grid: dx=5mm, dy=5mm

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.133 A/m; Power Drift = -0.078 dB

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

H Scan - measurement distance from the probe sensor center to CD1880

Dipole = 10mm/Hearing Aid Compatibility Test (41x101x1): Measurement grid: dx=5mm, dy=5mm

Maximum value of peak Total field = 0.125 A/m

Probe Modulation Factor = 1.00

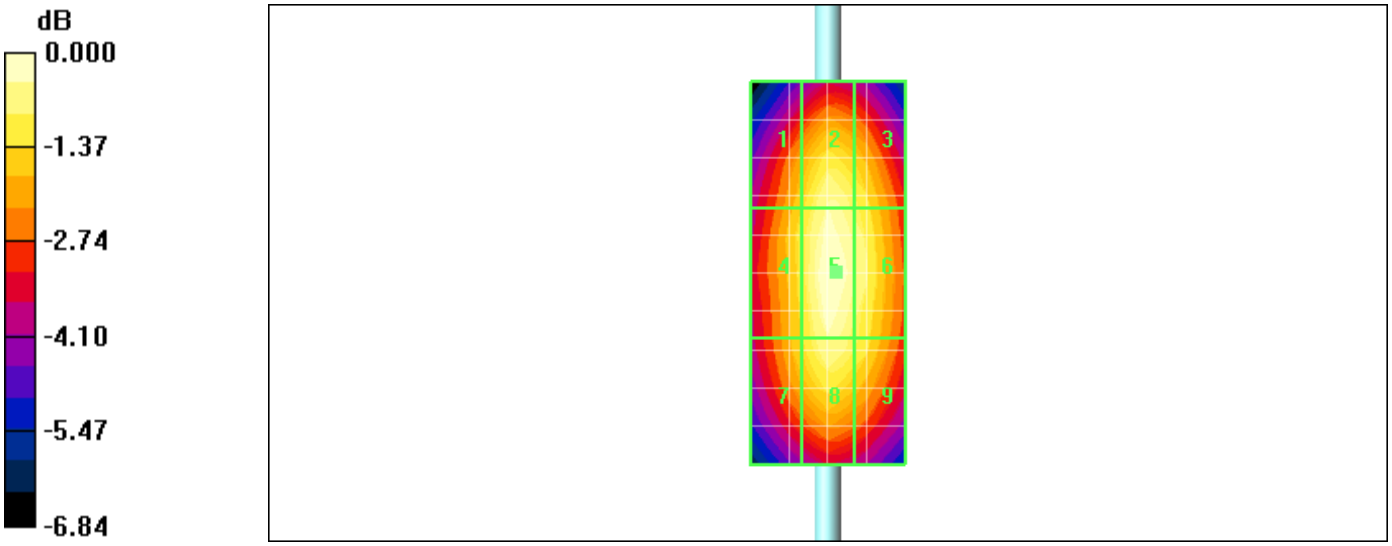
Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.133 A/m; Power Drift = -0.078 dB

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

Peak H-field in A/m

Grid 1 **0.107 M4**	Grid 2 **0.120 M4**	Grid 3 **0.114 M4**
Grid 4 **0.111 M4**	Grid 5 **0.125 M4**	Grid 6 **0.119 M4**
Grid 7 **0.107 M4**	Grid 8 **0.119 M4**	Grid 9 **0.114 M4**



0 dB = 0.125A/m

Date/Time: 4/7/2010 2:46:26 PM

File Name: HAC_H_Dipole_CW1880_PMF_CDMA.da4

DUT: HAC Dipole 1880 MHz; Type: CD1880V3;

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: RF Section

DASY4 Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 11/13/2009
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn473; Calibrated: 1/4/2010
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

H Scan - measurement distance from the probe sensor center to CD835 Dipole = 10mm/Hearing Aid Compatibility Test (5x11x1): Measurement grid: dx=5mm, dy=5mm

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.331 A/m; Power Drift = 0.085 dB

Maximum value of Total (measured) = 0.310 A/m

H Scan - measurement distance from the probe sensor center to CD835

Dipole = 10mm/Hearing Aid Compatibility Test (41x101x1): Measurement grid: dx=5mm, dy=5mm

Maximum value of peak Total field = 0.312 A/m

Probe Modulation Factor = 1.00

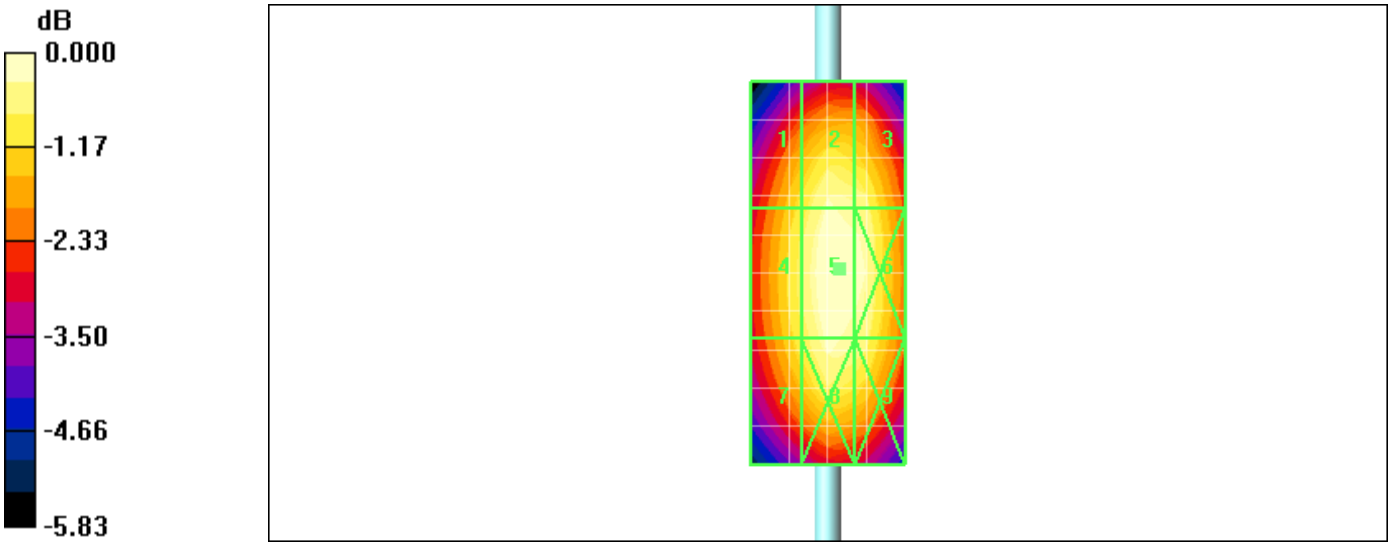
Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.331 A/m; Power Drift = 0.085 dB

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

Peak H-field in A/m

Grid 1 **0.280 M3**	Grid 2 **0.303 M3**	Grid 3 **0.300 M3**
Grid 4 **0.290 M3**	Grid 5 **0.312 M3**	Grid 6 **0.308 M3**
Grid 7 **0.283 M3**	Grid 8 **0.304 M3**	Grid 9 **0.299 M3**



0 dB = 0.312A/m

Date/Time: 4/7/2010 2:51:09 PM

File Name: HAC_H_Dipole_AM1880_PMF_CDMA.da4

DUT: HAC Dipole 1880 MHz; Type: CD1880V3;

Program Name: HAC RF H3DV6 Dipole

Communication System: AM 80%; Frequency: 1880 MHz;Duty Cycle: 1:1

Medium parameters used: $\sigma = 0$ mho/m, $\varepsilon_r = 1$; $\rho = 1$ kg/m^3

Phantom section: TCoil Section

DASY4 Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 11/13/2009
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn473; Calibrated: 1/4/2010
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

H Scan - measurement distance from the probe sensor center to CD1880 Dipole = 10mm/Hearing Aid Compatibility Test (5x11x1): Measurement grid: dx=5mm, dy=5mm

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.205 A/m; Power Drift = 0.094 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 (41x101x1): Measurement grid: dx=5mm, dy=5mm

Maximum value of peak Total field = 0.196 A/m

Probe Modulation Factor = 1.00

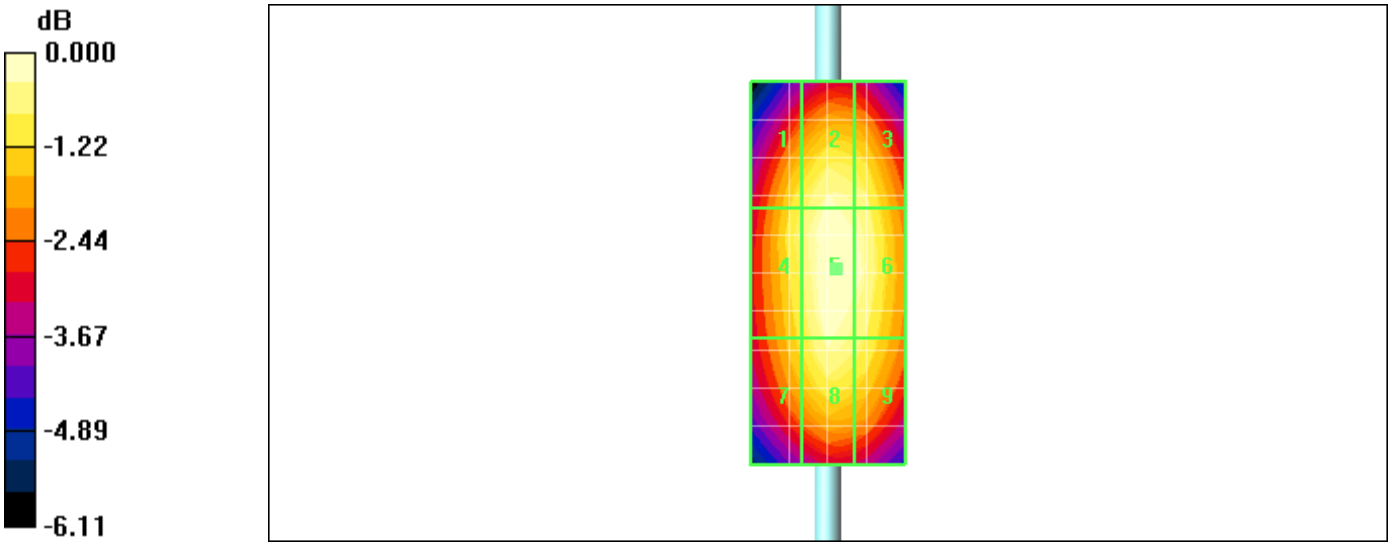
Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.205 A/m; Power Drift = 0.094 dB

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

Peak H-field in A/m

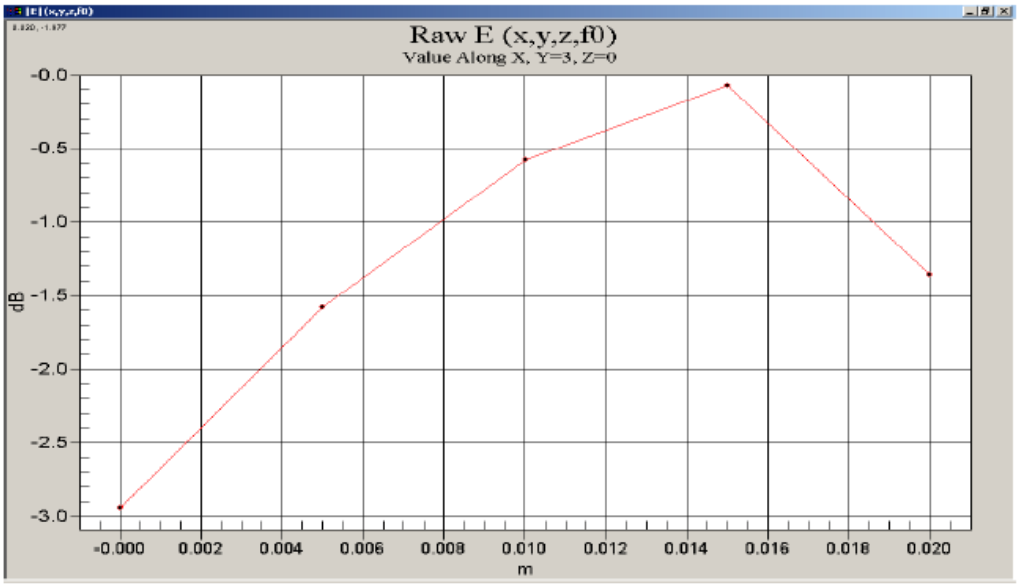
Grid 1 **0.179 M4**	Grid 2 **0.190 M3**	Grid 3 **0.187 M4**
Grid 4 **0.184 M4**	Grid 5 **0.196 M3**	Grid 6 **0.192 M3**
Grid 7 **0.174 M4**	Grid 8 **0.190 M4**	Grid 9 **0.184 M4**



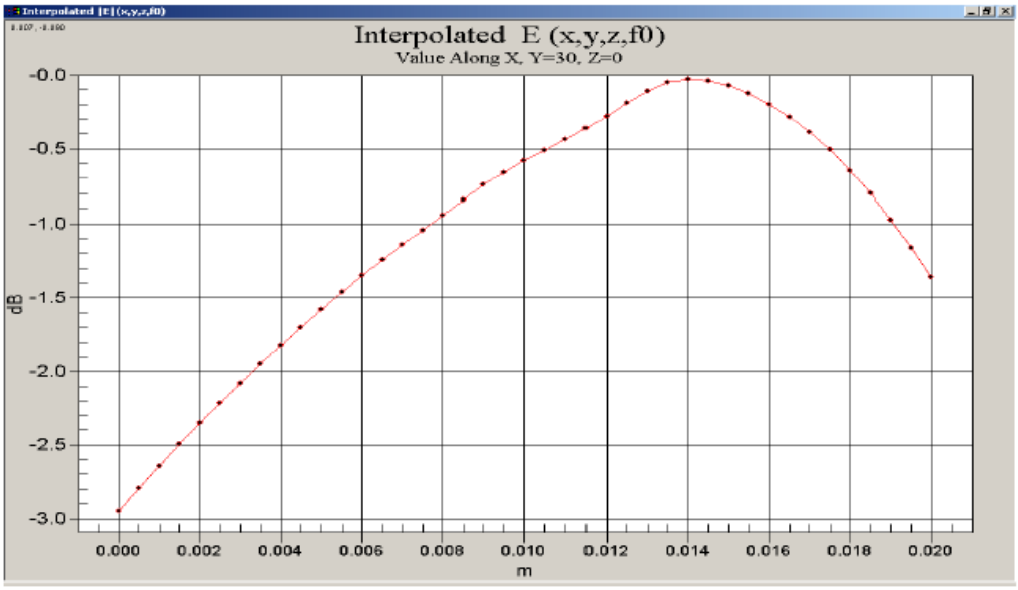
0 dB = 0.196A/m

Justification of Step Size and Interpolation

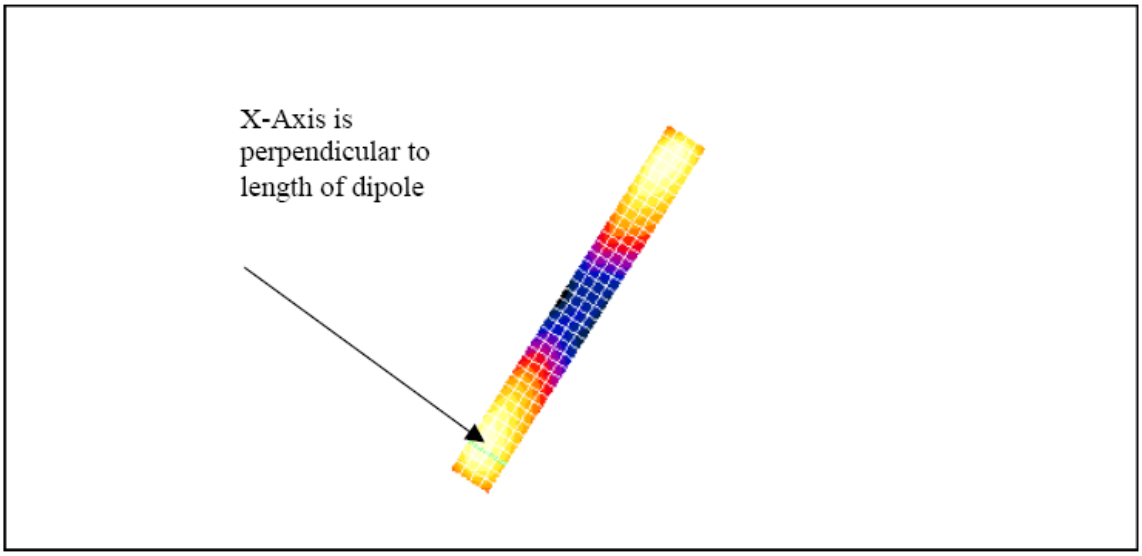
This section demonstrates that a 5mm step size with interpolation provides sufficient resolution for RF emissions measurements. The DASY 4 uses interpolation algorithms to derive 9 interpolated points between every measured point.



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)

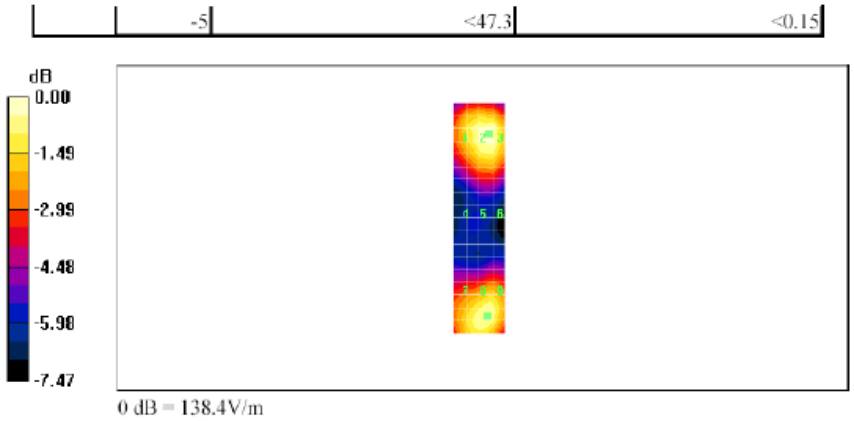
Grid 1	Grid 2	Grid 3
123.2	**138.1**	**138.4**
Grid 4	Grid 5	Grid 6
80.9	**92.3**	**92.2**
Grid 7	Grid 8	Grid 9
119.8	**131.0**	**130.7**

E in V/m (Slot averaged)

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

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

Date/Time: 14/07/2005 11:35:24 AM Page 2 of 2



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: $\sigma = 0$ 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)

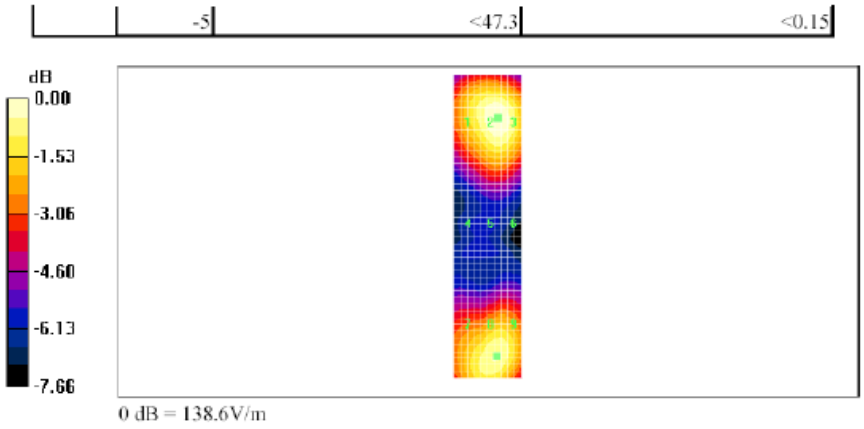
E in V/m (Time averaged)

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

E in V/m (Slot averaged)

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

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



0 dB = 138.6V/m

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)

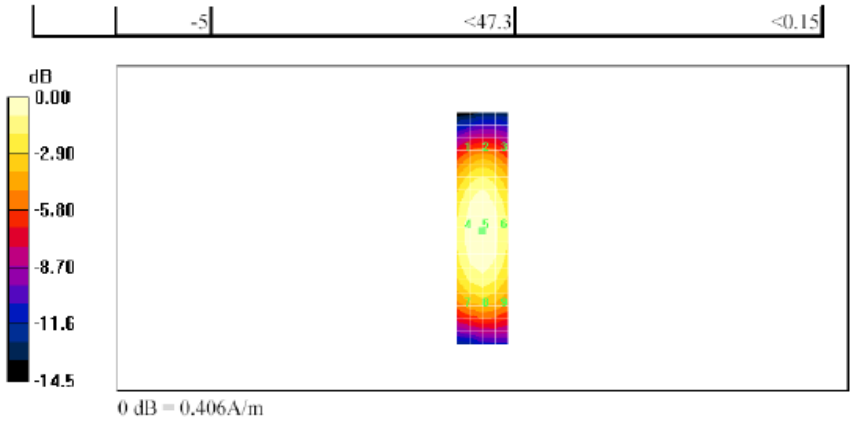
Grid 1 **0.342**	Grid 2 **0.359**	Grid 3 **0.344**
Grid 4 **0.389**	Grid 5 **0.406**	Grid 6 **0.389**
Grid 7 **0.363**	Grid 8 **0.378**	Grid 9 **0.363**

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



0 dB = 0.406A/m

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)

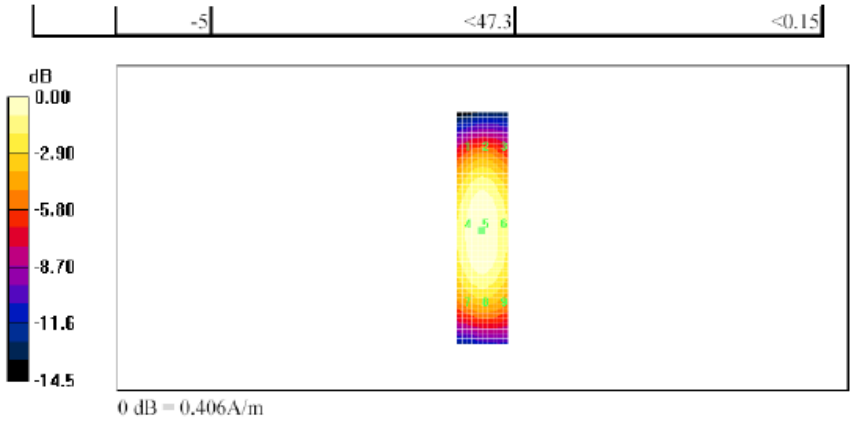
H in A/m (Time averaged)

Grid 1 **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: 4/7/2010 6:03:07 PM

Test Laboratory: RIM TESTING SERVICES

File Name: HAC_E_CDMA_800_low chan.da4

DUT: BlackBerry Smartphone

Program Name: HAC RF ER3D Device

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

Medium parameters used: σ = 0 mho/m, ε_r = 1; ρ = 1000 kg/m^3

Phantom section: RF Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 1/8/2010
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn473; Calibrated: 1/4/2010
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

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, -6.30 mm

Reference Value = 101.6 V/m; Power Drift = -0.027 dB

Maximum value of Total (measured) = 77.6 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 = 77.9 V/m

Probe Modulation Factor = 1.00

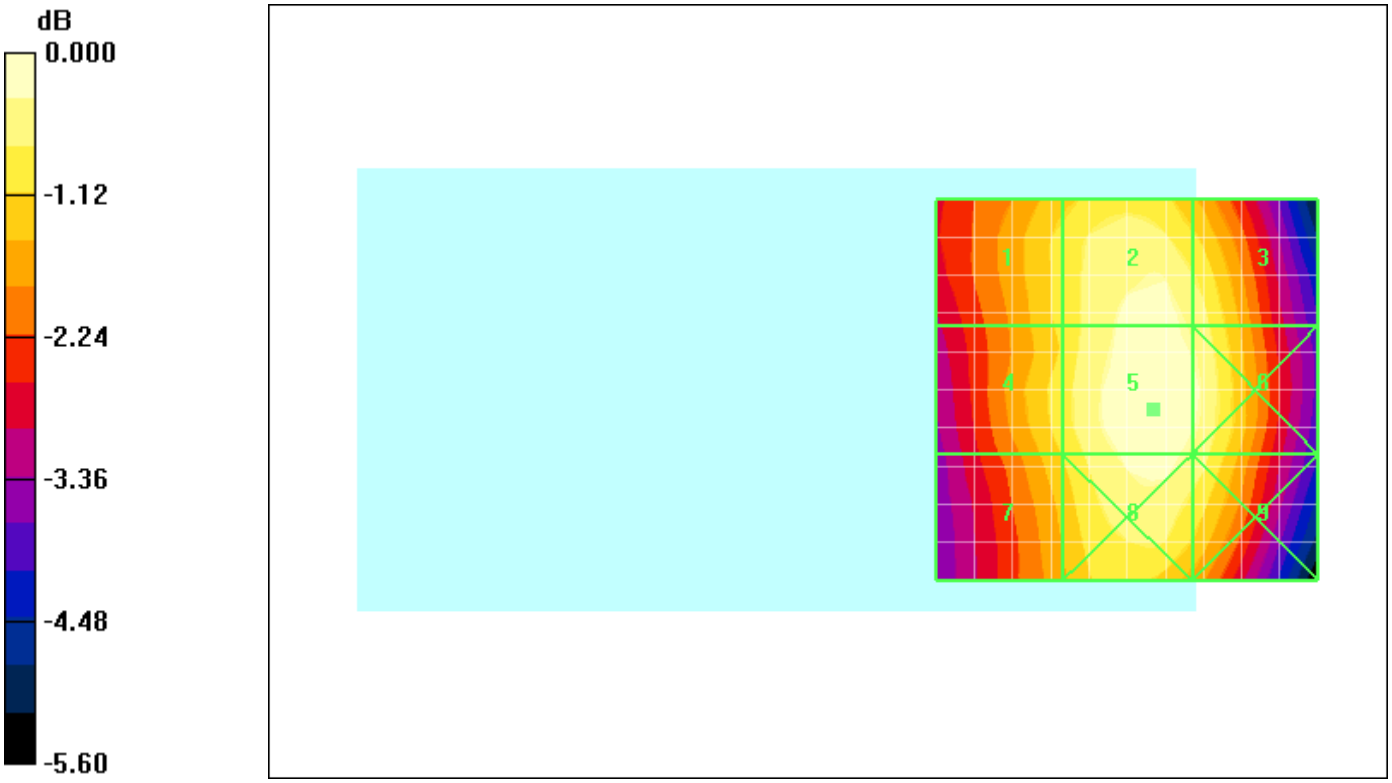
Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 101.6 V/m; Power Drift = -0.027 dB

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

Peak E-field in V/m

Grid 1 **69.8 M4**	Grid 2 **76.2 M4**	Grid 3 **74.1 M4**
Grid 4 **70.5 M4**	Grid 5 **77.9 M4**	Grid 6 **75.9 M4**
Grid 7 **68.7 M4**	Grid 8 **76.3 M4**	Grid 9 **74.1 M4**



0 dB = 77.9V/m

Date/Time: 4/7/2010 6:13:54 PM

Test Laboratory: RIM TESTING SERVICES

File Name: HAC_E_CDMA_800_mid chan.da4

DUT: BlackBerry Smartphone

Program Name: HAC RF ER3D Device

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

Medium parameters used: σ = 0 mho/m, ε_r = 1; ρ = 1000 kg/m^3

Phantom section: RF Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 1/8/2010
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn473; Calibrated: 1/4/2010
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

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, -6.30 mm

Reference Value = 109.6 V/m; Power Drift = 0.133 dB

Maximum value of Total (measured) = 86.1 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 = 86.3 V/m

Probe Modulation Factor = 1.00

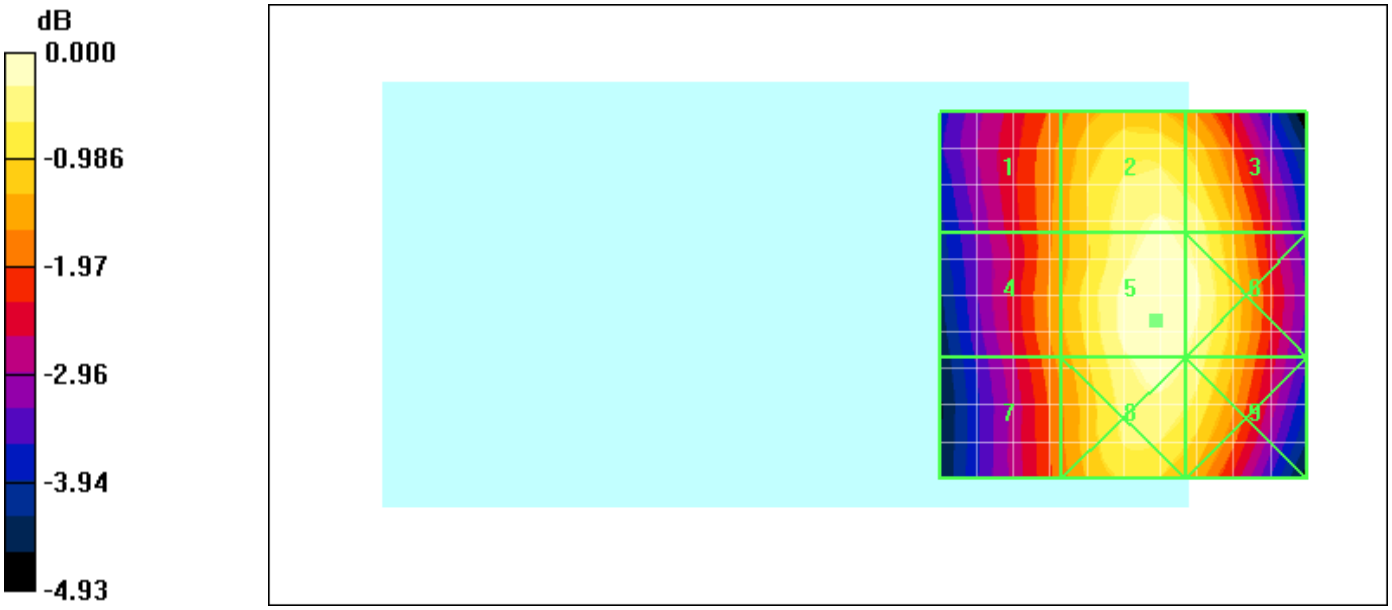
Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 109.6 V/m; Power Drift = 0.133 dB

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

Peak E-field in V/m

Grid 1 **72.9 M4**	Grid 2 **84.0 M4**	Grid 3 **83.2 M4**
Grid 4 **74.2 M4**	Grid 5 **86.3 M4**	Grid 6 **85.2 M4**
Grid 7 **72.7 M4**	Grid 8 **85.0 M4**	Grid 9 **83.2 M4**



0 dB = 86.3V/m

Date/Time: 4/7/2010 6:22:49 PM

Test Laboratory: RIM TESTING SERVICES

File Name: HAC_E_CDMA_800_high chan.da4

DUT: BlackBerry Smartphone

Program Name: HAC RF ER3D Device

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

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

Phantom section: RF Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 1/8/2010
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn473; Calibrated: 1/4/2010
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

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, -6.30 mm

Reference Value = 114.3 V/m; Power Drift = -0.035 dB

Maximum value of Total (measured) = 88.8 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 = 89.1 V/m

Probe Modulation Factor = 1.00

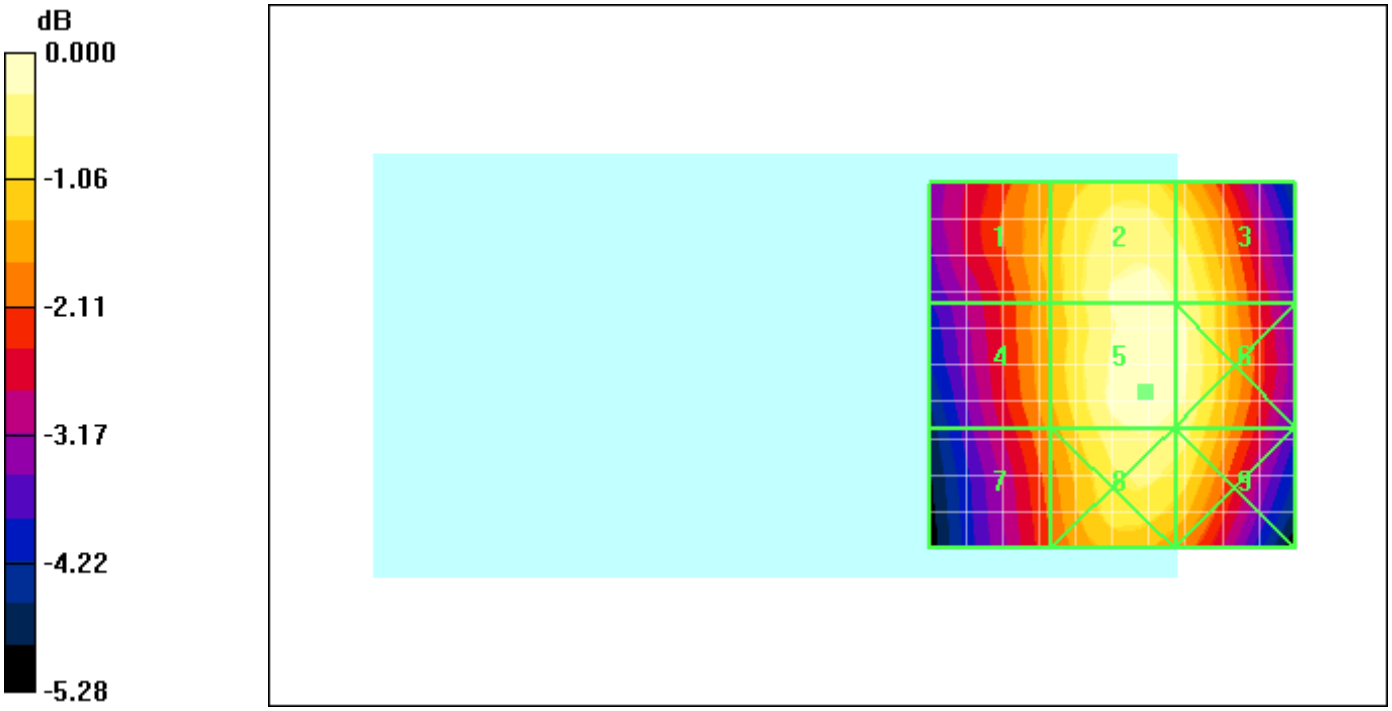
Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 114.3 V/m; Power Drift = -0.035 dB

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

Peak E-field in V/m

Grid 1 **77.5 M4**	Grid 2 **87.4 M4**	Grid 3 **86.2 M4**
Grid 4 **76.5 M4**	Grid 5 **89.1 M4**	Grid 6 **87.4 M4**
Grid 7 **74.0 M4**	Grid 8 **86.1 M4**	Grid 9 **85.1 M4**



0 dB = 89.1V/m

Date/Time: 4/7/2010 6:36:43 PM

Test Laboratory: RIM TESTING SERVICES

HAC_E_CDMA_800_high chan_one_eigth

DUT: BlackBerry Smartphone

Communication System: CDMA 800 1/8 th; Frequency: 848.52 MHz;Duty Cycle: 1:8.3

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

Phantom section: RF Section

Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 1/8/2010
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn473; Calibrated: 1/4/2010
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

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, -6.30 mm

Reference Value = 42.0 V/m; Power Drift = -0.011 dB

Maximum value of Total (measured) = 36.5 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 = 79.2 V/m

Probe Modulation Factor = 2.17

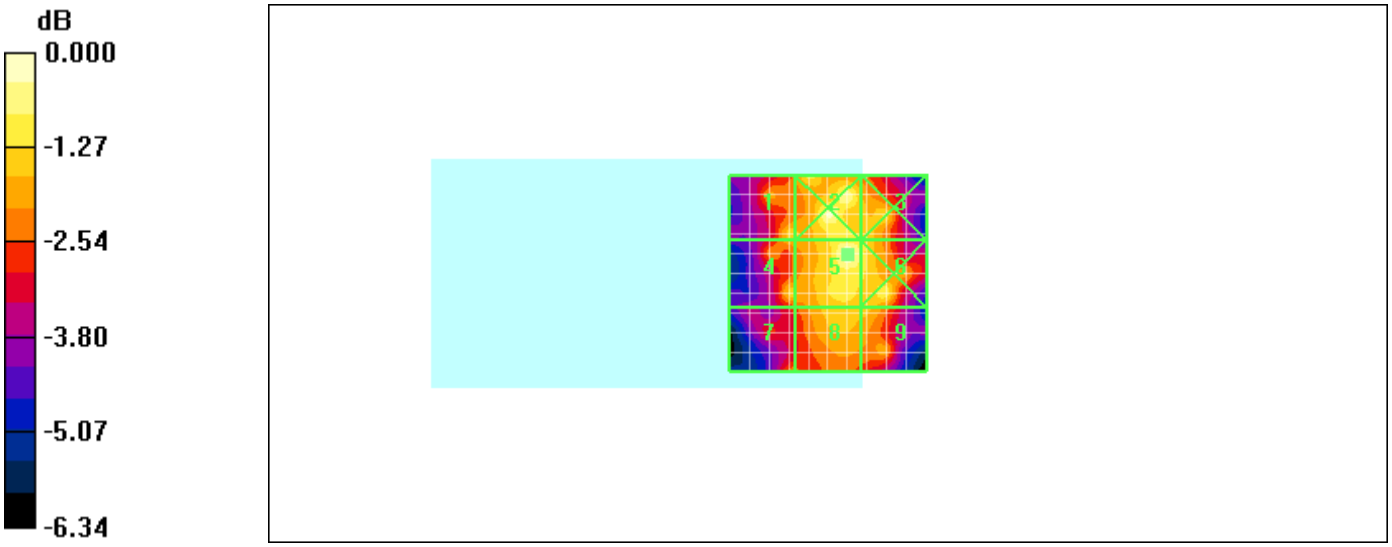
Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 42.0 V/m; Power Drift = -0.011 dB

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

Peak E-field in V/m

Grid 1 **67.1 M4**	Grid 2 **76.1 M4**	Grid 3 **69.0 M4**
Grid 4 **66.8 M4**	Grid 5 **79.2 M4**	Grid 6 **71.1 M4**
Grid 7 **61.8 M4**	Grid 8 **67.7 M4**	Grid 9 **66.8 M4**



0 dB = 79.2V/m

Date/Time: 4/7/2010 7:04:25 PM

Test Laboratory: RIM TESTING SERVICES

File Name: HAC_E_CDMA_800_high chan_telecoil.da4

DUT: BlackBerry Smartphone

Program Name: HAC RF ER3D Device

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

Medium parameters used: σ = 0 mho/m, ε_r = 1; ρ = 1000 kg/m^3

Phantom section: RF Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 1/8/2010
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn473; Calibrated: 1/4/2010
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

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, -6.30 mm

Reference Value = 112.5 V/m; Power Drift = 0.135 dB

Maximum value of Total (measured) = 87.8 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 = 87.8 V/m

Probe Modulation Factor = 1.00

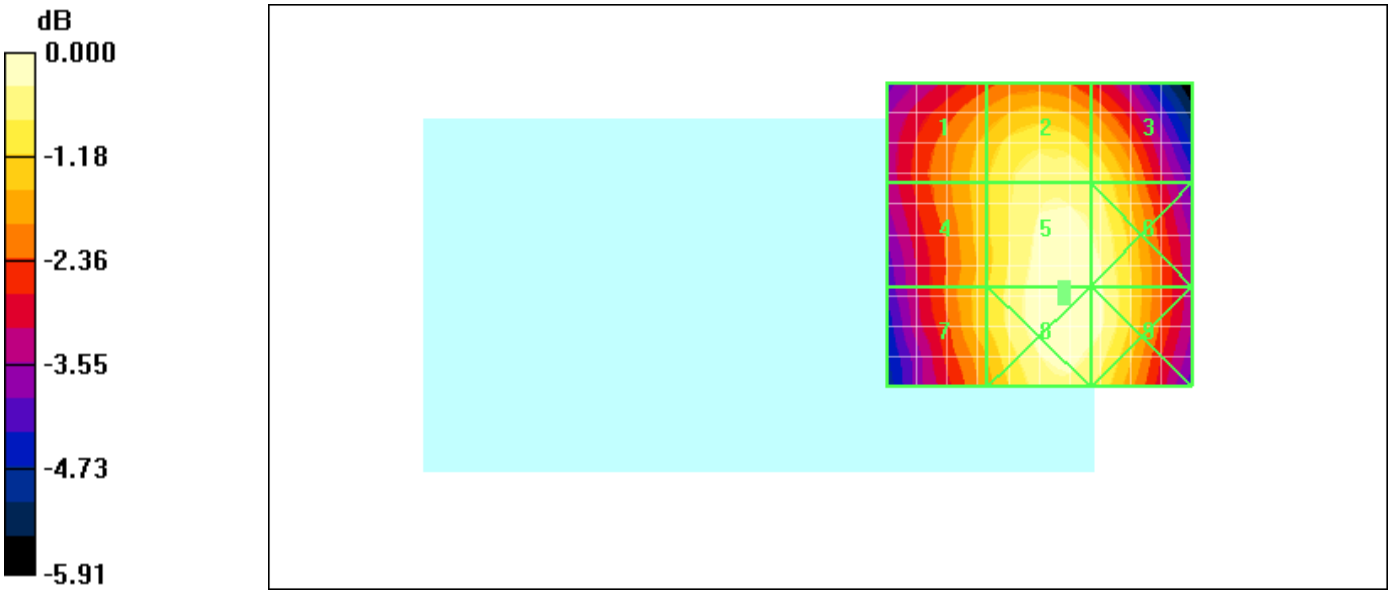
Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 112.5 V/m; Power Drift = 0.135 dB

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

Peak E-field in V/m

Grid 1 **76.5 M4**	Grid 2 **83.7 M4**	Grid 3 **81.6 M4**
Grid 4 **76.7 M4**	Grid 5 **87.8 M4**	Grid 6 **86.2 M4**
Grid 7 **77.1 M4**	Grid 8 **87.9 M4**	Grid 9 **86.4 M4**



0 dB = 87.9V/m

Date/Time: 4/7/2010 7:33:33 PM

Test Laboratory: RIM TESTING SERVICES

File Name: HAC_E_CDMA_1700_low chan.da4

DUT: BlackBerry Smartphone

Program Name: HAC RF ER3D Device

Communication System: CDMA AWS 1700; Frequency: 1711.25 MHz;Duty Cycle: 1:1

Medium parameters used: σ = 0 mho/m, ε_r = 1; ρ = 1000 kg/m^3

Phantom section: RF Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 1/8/2010
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn473; Calibrated: 1/4/2010
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

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, -6.30 mm

Reference Value = 48.2 V/m; Power Drift = 0.053 dB

Maximum value of Total (measured) = 43.1 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 = 41.3 V/m

Probe Modulation Factor = 0.970

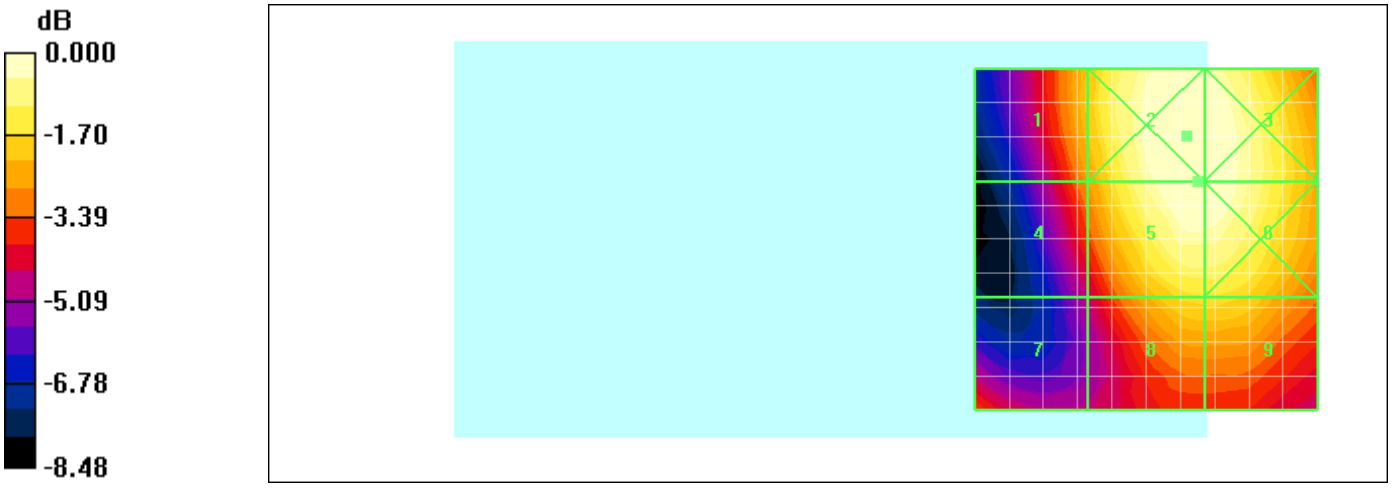
Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 48.2 V/m; Power Drift = 0.053 dB

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

Peak E-field in V/m

Grid 1 **32.8 M4**	Grid 2 **41.9 M4**	Grid 3 **41.5 M4**
Grid 4 **30.4 M4**	Grid 5 **41.3 M4**	Grid 6 **41.2 M4**
Grid 7 **28.1 M4**	Grid 8 **34.3 M4**	Grid 9 **34.3 M4**



0 dB = 41.9V/m

Date/Time: 4/7/2010 7:42:41 PM

Test Laboratory: RIM TESTING SERVICES

File Name: HAC_E_CDMA_1700_mid chan.da4

DUT: BlackBerry Smartphone

Program Name: HAC RF ER3D Device

Communication System: CDMA AWS 1700; Frequency: 1732.5 MHz;Duty Cycle: 1:1

Medium parameters used: σ = 0 mho/m, ε_r = 1; ρ = 1000 kg/m^3

Phantom section: RF Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 1/8/2010
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn473; Calibrated: 1/4/2010
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

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, -6.30 mm

Reference Value = 56.8 V/m; Power Drift = -0.154 dB

Maximum value of Total (measured) = 51.1 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 = 49.2 V/m

Probe Modulation Factor = 0.970

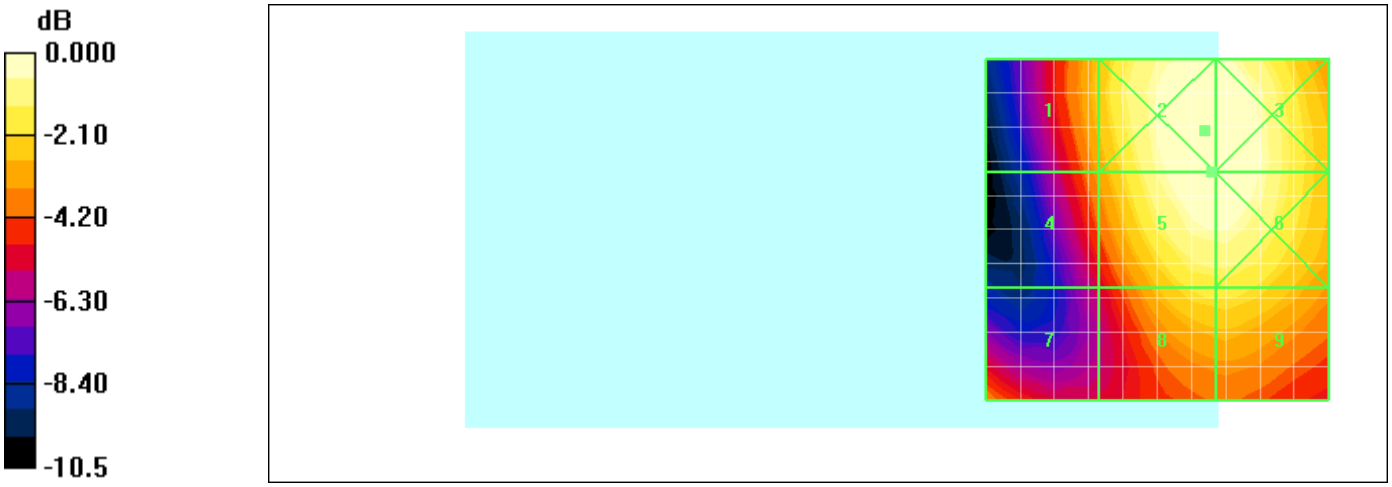
Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 56.8 V/m; Power Drift = -0.154 dB

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

Peak E-field in V/m

Grid 1 **37.0 M4**	Grid 2 **49.8 M4**	Grid 3 **49.7 M4**
Grid 4 **34.0 M4**	Grid 5 **49.2 M4**	Grid 6 **49.1 M4**
Grid 7 **32.6 M4**	Grid 8 **40.3 M4**	Grid 9 **40.3 M4**



0 dB = 49.8V/m

Date/Time: 4/7/2010 7:53:12 PM

Test Laboratory: RIM TESTING SERVICES

File Name: HAC_E_CDMA_1700_high chan.da4

DUT: BlackBerry Smartphone

Program Name: HAC RF ER3D Device

Communication System: CDMA AWS 1700; Frequency: 1732.5 MHz;Duty Cycle: 1:1

Medium parameters used: σ = 0 mho/m, ε_r = 1; ρ = 1000 kg/m^3

Phantom section: RF Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 1/8/2010
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn473; Calibrated: 1/4/2010
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

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, -6.30 mm

Reference Value = 46.8 V/m; Power Drift = -0.062 dB

Maximum value of Total (measured) = 43.6 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 = 41.4 V/m

Probe Modulation Factor = 0.970

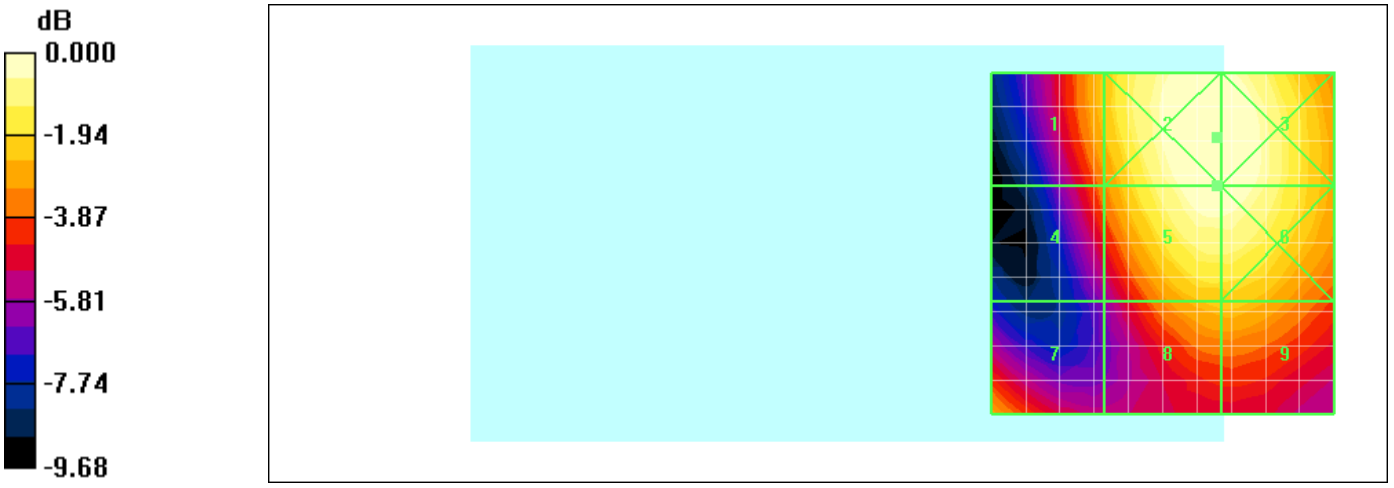
Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 46.8 V/m; Power Drift = -0.062 dB

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

Peak E-field in V/m

Grid 1 **32.5 M4**	Grid 2 **42.7 M4**	Grid 3 **42.7 M4**
Grid 4 **28.8 M4**	Grid 5 **41.4 M4**	Grid 6 **41.4 M4**
Grid 7 **30.3 M4**	Grid 8 **32.4 M4**	Grid 9 **32.5 M4**



0 dB = 42.7V/m

Date/Time: 4/7/2010 8:36:12 PM

Test Laboratory: RIM TESTING SERVICES

File Name: HAC_E_CDMA_1700_mid chan_one_eigth.da4

DUT: BlackBerry Smartphone

Program Name: HAC RF ER3D Device

Communication System: CDMA AWS 1700_1/8th; Frequency: 1732.5 MHz;Duty Cycle: 1:8.3

Medium parameters used: σ = 0 mho/m, ε_r = 1; ρ = 1000 kg/m^3

Phantom section: RF Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 1/8/2010
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn473; Calibrated: 1/4/2010
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

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, -6.30 mm

Reference Value = 21.7 V/m; Power Drift = -1.04 dB

Maximum value of Total (measured) = 20.0 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 = 50.3 V/m

Probe Modulation Factor = 2.58

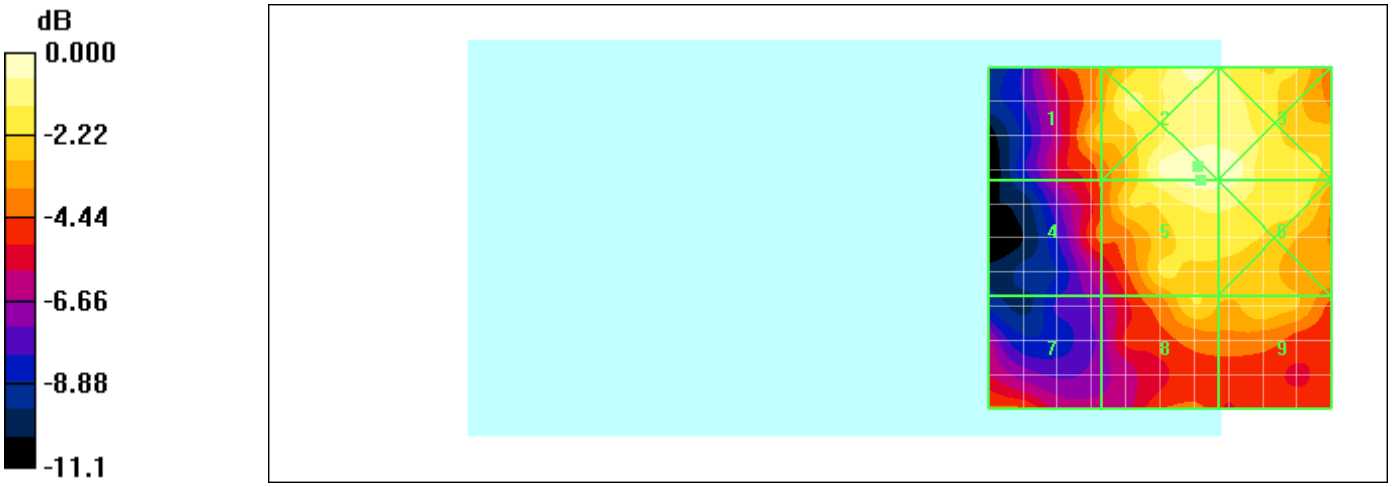
Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 21.7 V/m; Power Drift = -1.04 dB

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

Peak E-field in V/m

Grid 1 **37.9 M4**	Grid 2 **51.6 M4**	Grid 3 **51.6 M4**
Grid 4 **32.0 M4**	Grid 5 **50.3 M4**	Grid 6 **50.1 M4**
Grid 7 **32.0 M4**	Grid 8 **40.3 M4**	Grid 9 **39.8 M4**



0 dB = 51.6V/m

Date/Time: 4/7/2010 8:59:41 PM

Test Laboratory: RIM TESTING SERVICES

File Name: HAC_E_CDMA_1700_mid chan_one_eigth_telecoil.da4

DUT: BlackBerry Smartphone

Program Name: HAC RF ER3D Device

Communication System: CDMA AWS 1700_1/8th; Frequency: 1732.5 MHz;Duty Cycle: 1:8.3

Medium parameters used: σ = 0 mho/m, ε_r = 1; ρ = 1000 kg/m^3

Phantom section: RF Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 1/8/2010
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn473; Calibrated: 1/4/2010
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

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, -6.30 mm

Reference Value = 19.4 V/m; Power Drift = 1.08 dB

Maximum value of Total (measured) = 20.0 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 = 50.5 V/m

Probe Modulation Factor = 2.58

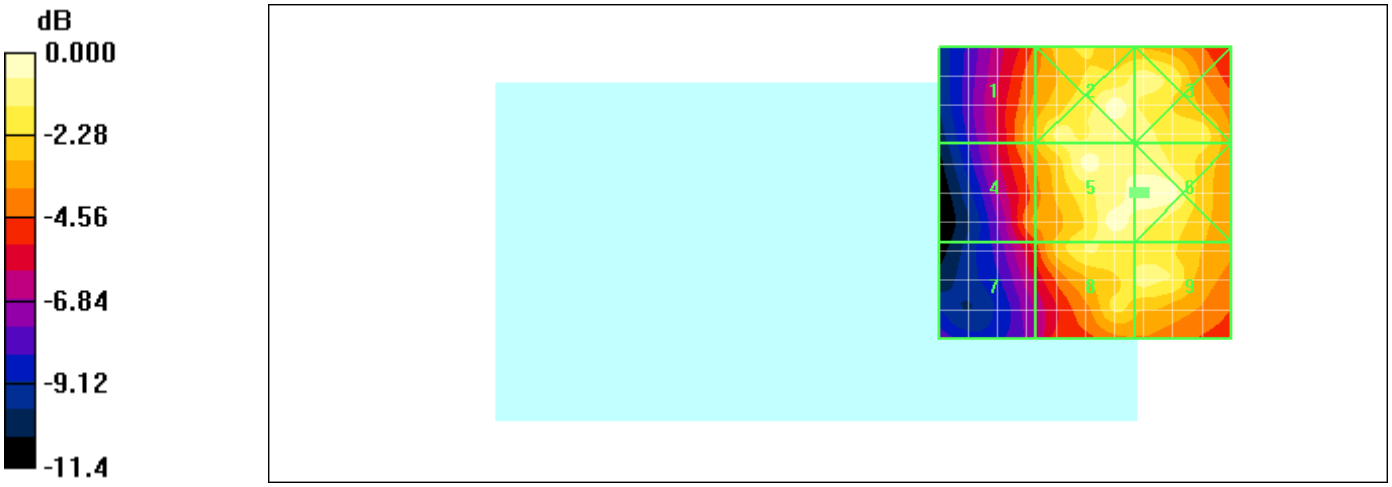
Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 19.4 V/m; Power Drift = 1.08 dB

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

Peak E-field in V/m

Grid 1 **37.4 M4**	Grid 2 **49.3 M4**	Grid 3 **45.6 M4**
Grid 4 **36.8 M4**	Grid 5 **50.5 M4**	Grid 6 **51.6 M4**
Grid 7 **30.4 M4**	Grid 8 **44.0 M4**	Grid 9 **44.9 M4**



0 dB = 51.6V/m

Date/Time: 4/7/2010 9:13:04 PM

Test Laboratory: RIM TESTING SERVICES

File Name: HAC_E_CDMA_1900_low chan.da4

DUT: BlackBerry Smartphone

Program Name: HAC RF ER3D Device

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

Medium parameters used: σ = 0 mho/m, ε_r = 1; ρ = 1000 kg/m^3

Phantom section: RF Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 1/8/2010
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn473; Calibrated: 1/4/2010
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

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, -6.30 mm

Reference Value = 49.0 V/m; Power Drift = -0.013 dB

Maximum value of Total (measured) = 49.0 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 = 49.1 V/m

Probe Modulation Factor = 1.04

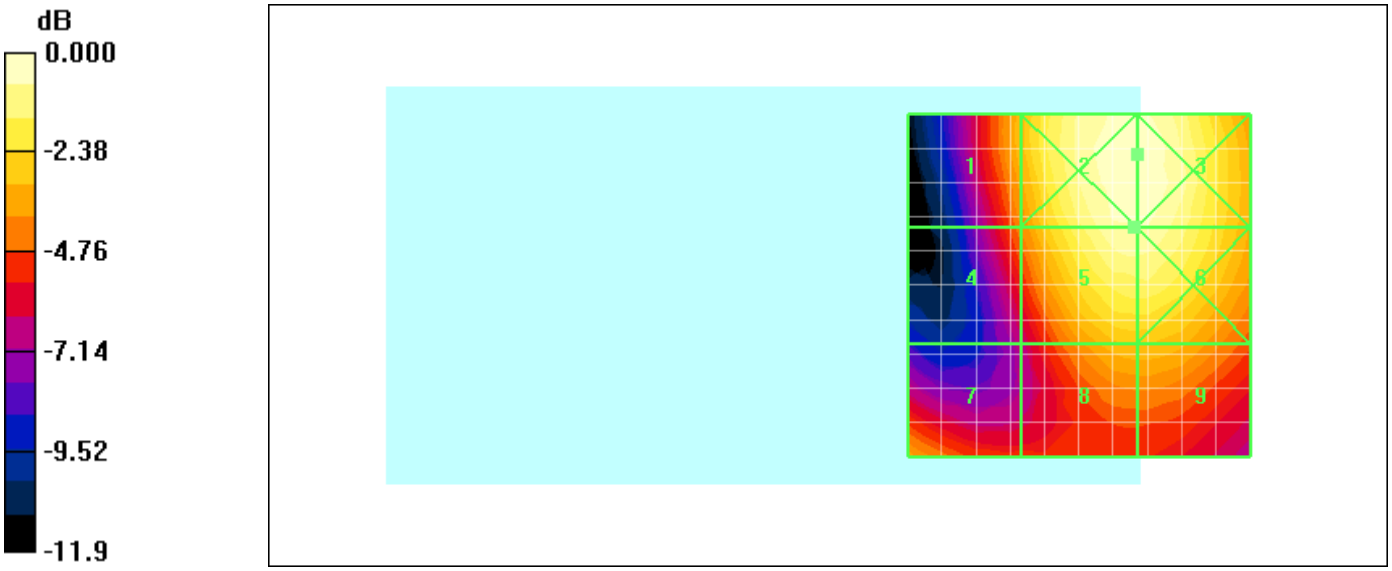
Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 49.0 V/m; Power Drift = -0.013 dB

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

Peak E-field in V/m

Grid 1 **37.1 M4**	Grid 2 **51.3 M4**	Grid 3 **51.3 M4**
Grid 4 **32.6 M4**	Grid 5 **49.1 M4**	Grid 6 **49.0 M4**
Grid 7 **34.9 M4**	Grid 8 **37.4 M4**	Grid 9 **37.4 M4**



0 dB = 51.3V/m

Date/Time: 4/7/2010 9:24:15 PM

Test Laboratory: RIM TESTING SERVICES

File Name: HAC_E_CDMA_1900_mid chan.da4

DUT: BlackBerry Smartphone

Program Name: HAC RF ER3D Device

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

Medium parameters used: σ = 0 mho/m, ε_r = 1; ρ = 1000 kg/m^3

Phantom section: RF Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 1/8/2010
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn473; Calibrated: 1/4/2010
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

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, -6.30 mm

Reference Value = 44.4 V/m; Power Drift = 0.084 dB

Maximum value of Total (measured) = 47.0 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 = 46.4 V/m

Probe Modulation Factor = 1.04

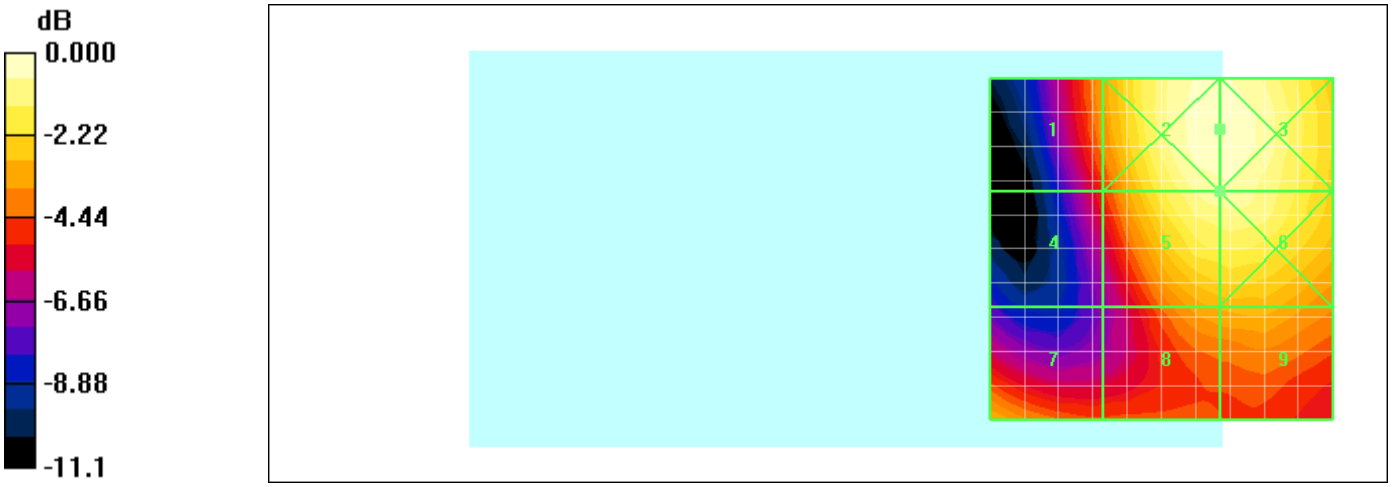
Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 44.4 V/m; Power Drift = 0.084 dB

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

Peak E-field in V/m

Grid 1 **34.1 M4**	Grid 2 **49.2 M4**	Grid 3 **49.2 M4**
Grid 4 **29.2 M4**	Grid 5 **46.4 M4**	Grid 6 **46.5 M4**
Grid 7 **35.2 M4**	Grid 8 **35.3 M4**	Grid 9 **35.9 M4**



0 dB = 49.2V/m

Date/Time: 4/7/2010 10:06:51 PM

Test Laboratory: RIM TESTING SERVICES

File Name: HAC_E_CDMA_1900_high chan.da4

DUT: BlackBerry Smartphone

Program Name: HAC RF ER3D Device

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

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

Phantom section: RF Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 1/8/2010
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn473; Calibrated: 1/4/2010
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

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, -6.30 mm

Reference Value = 50.4 V/m; Power Drift = -0.076 dB

Maximum value of Total (measured) = 51.8 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 = 51.6 V/m

Probe Modulation Factor = 1.04

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 50.4 V/m; Power Drift = -0.076 dB

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

Peak E-field in V/m

Grid 1 **39.5 M4**	Grid 2 **54.5 M4**	Grid 3 **54.4 M4**
Grid 4 **34.1 M4**	Grid 5 **51.6 M4**	Grid 6 **51.6 M4**
Grid 7 **37.8 M4**	Grid 8 **38.8 M4**	Grid 9 **38.9 M4**

0 dB = 54.5V/m

Date/Time: 4/7/2010 9:45:23 PM

Test Laboratory: RIM TESTING SERVICES

File Name: HAC_E_CDMA_1900_high chan_one_eigth.da4

DUT: BlackBerry Smartphone

Program Name: HAC RF ER3D Device

Communication System: CDMA 1900 1/8th; Frequency: 1908.5 MHz;Duty Cycle: 1:8.3

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

Phantom section: RF Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 1/8/2010
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn473; Calibrated: 1/4/2010
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

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, -6.30 mm

Reference Value = 17.3 V/m; Power Drift = 0.078 dB

Maximum value of Total (measured) = 20.4 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 = 45.6 V/m

Probe Modulation Factor = 2.65

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 17.3 V/m; Power Drift = 0.078 dB

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

Peak E-field in V/m

Grid 1 **37.5 M4**	Grid 2 **54.1 M4**	Grid 3 **48.8 M4**
Grid 4 **29.7 M4**	Grid 5 **45.6 M4**	Grid 6 **45.4 M4**
Grid 7 **37.9 M4**	Grid 8 **34.9 M4**	Grid 9 **35.0 M4**

0 dB = 54.1V/m

Date/Time: 4/7/2010 9:56:35 PM

Test Laboratory: RIM TESTING SERVICES

File Name: HAC_E_CDMA_1900_high chan_telecoil.da4

DUT: BlackBerry Smartphone

Program Name: HAC RF ER3D Device

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

Medium parameters used: σ = 0 mho/m, ε_r = 1; ρ = 1000 kg/m^3

Phantom section: RF Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 1/8/2010
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn473; Calibrated: 1/4/2010
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

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, -6.30 mm

Reference Value = 49.4 V/m; Power Drift = -0.017 dB

Maximum value of Total (measured) = 51.9 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 = 53.8 V/m

Probe Modulation Factor = 1.04

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 49.4 V/m; Power Drift = -0.017 dB

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

Peak E-field in V/m

Grid 1 **41.4 M4**	Grid 2 **54.0 M4**	Grid 3 **53.3 M4**
Grid 4 **40.3 M4**	Grid 5 **53.8 M4**	Grid 6 **53.0 M4**
Grid 7 **31.2 M4**	Grid 8 **45.2 M4**	Grid 9 **44.9 M4**

0 dB = 54.0V/m

Date/Time: 4/7/2010 10:39:33 PM

Test Laboratory: RIM TESTING SERVICES

File Name: HAC_H_CDMA800_low_chan.da4

DUT: BlackBerry Smartphone

Program Name: HAC RF H3DV6 Device

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

Medium parameters used: σ = 0 mho/m, ε_r = 1; ρ = 1 kg/m^3

Phantom section: RF Section

DASY4 Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 11/13/2009
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn473; Calibrated: 1/4/2010
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

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, -6.30 mm

Reference Value = 0.081 A/m; Power Drift = 0.058 dB

Maximum value of Total (measured) = 0.151 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 = 0.980

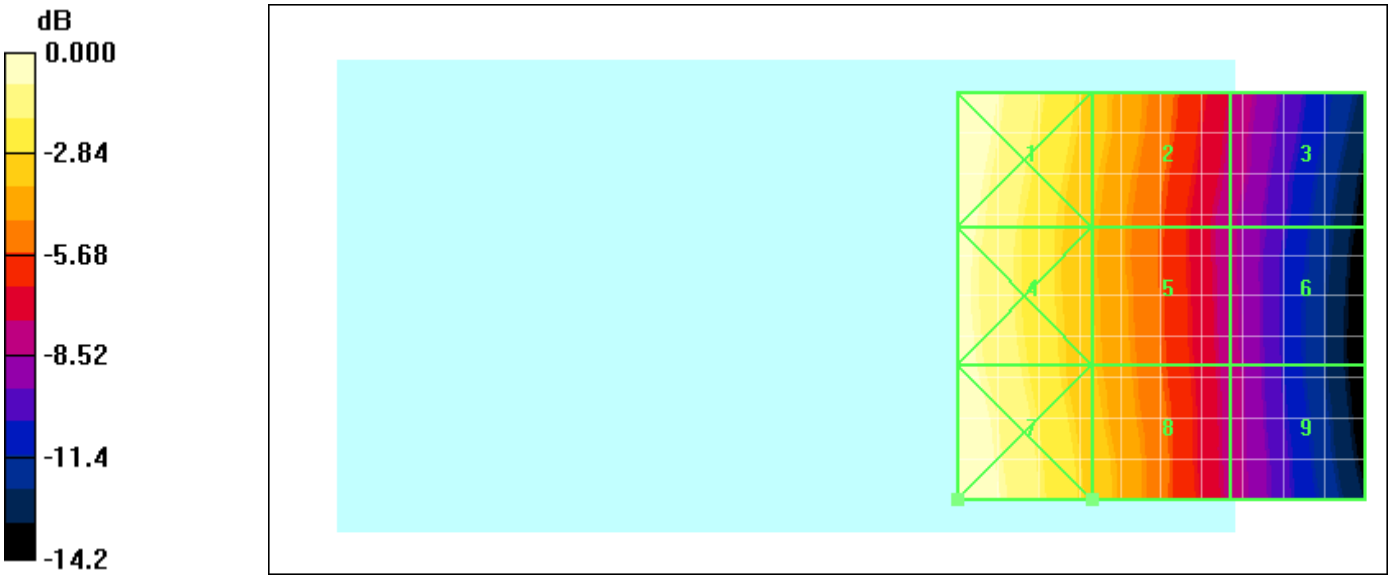
Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.081 A/m; Power Drift = 0.058 dB

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

Peak H-field in A/m

Grid 1 **0.147 M4**	Grid 2 **0.101 M4**	Grid 3 **0.061 M4**
Grid 4 **0.139 M4**	Grid 5 **0.097 M4**	Grid 6 **0.058 M4**
Grid 7 **0.148 M4**	Grid 8 **0.102 M4**	Grid 9 **0.059 M4**



0 dB = 0.148A/m

Date/Time: 4/7/2010 10:55:38 PM

Test Laboratory: RIM TESTING SERVICES

File Name: HAC_H_CDMA800_mid_chan.da4

DUT: BlackBerry Smartphone

Program Name: HAC RF H3DV6 Device

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

Medium parameters used: σ = 0 mho/m, ε_r = 1; ρ = 1 kg/m^3

Phantom section: RF Section

DASY4 Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 11/13/2009
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn473; Calibrated: 1/4/2010
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

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, -6.30 mm

Reference Value = 0.089 A/m; Power Drift = 0.042 dB

Maximum value of Total (measured) = 0.164 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 = 0.114 A/m

Probe Modulation Factor = 0.980

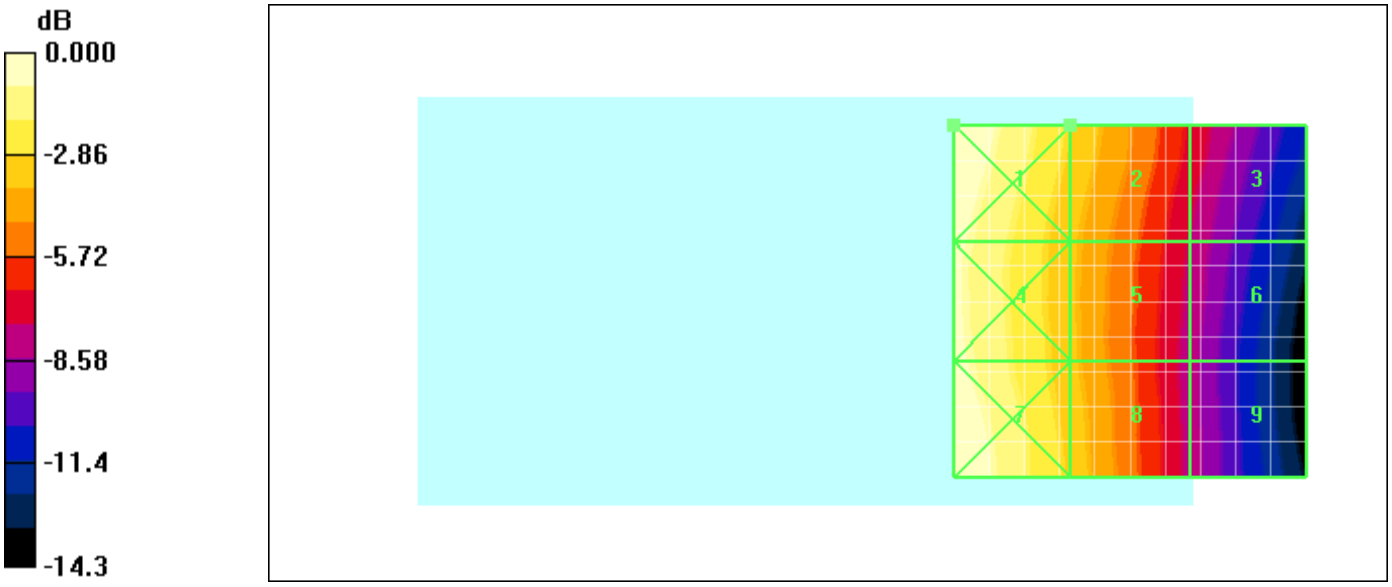
Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.089 A/m; Power Drift = 0.042 dB

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

Peak H-field in A/m

Grid 1 **0.161 M4**	Grid 2 **0.114 M4**	Grid 3 **0.073 M4**
Grid 4 **0.149 M4**	Grid 5 **0.107 M4**	Grid 6 **0.066 M4**
Grid 7 **0.161 M4**	Grid 8 **0.112 M4**	Grid 9 **0.063 M4**



0 dB = 0.161A/m

Date/Time: 4/7/2010 11:05:40 PM

Test Laboratory: RIM TESTING SERVICES

File Name: HAC_H_CDMA800_high_chan.da4

DUT: BlackBerry Smartphone

Program Name: HAC RF H3DV6 Device

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

Medium parameters used: $\sigma = 0$ mho/m, $\varepsilon_r = 1$; $\rho = 1$ kg/m^3

Phantom section: RF Section

DASY4 Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 11/13/2009
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn473; Calibrated: 1/4/2010
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

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, -6.30 mm

Reference Value = 0.107 A/m; Power Drift = 0.125 dB

Maximum value of Total (measured) = 0.185 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 = 0.134 A/m

Probe Modulation Factor = 0.980

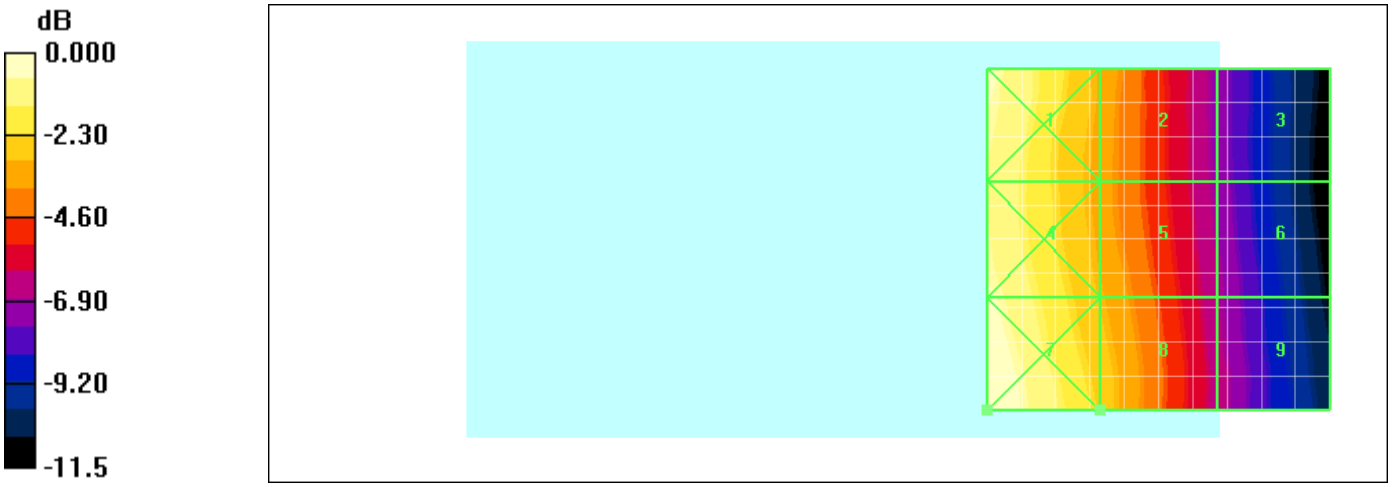
Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.107 A/m; Power Drift = 0.125 dB

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

Peak H-field in A/m

Grid 1 **0.170 M4**	Grid 2 **0.123 M4**	Grid 3 **0.079 M4**
Grid 4 **0.169 M4**	Grid 5 **0.126 M4**	Grid 6 **0.083 M4**
Grid 7 **0.181 M4**	Grid 8 **0.134 M4**	Grid 9 **0.086 M4**



0 dB = 0.181A/m

Date/Time: 4/7/2010 11:12:38 PM

Test Laboratory: RIM TESTING SERVICES

File Name: HAC_H_CDMA800_high_chan_one_eigth.da4

DUT: BlackBerry Smartphone

Program Name: HAC RF H3DV6 Device

Communication System: CDMA 800 1/8 th; Frequency: 848.52 MHz;Duty Cycle: 1:8.3

Medium parameters used: $\sigma = 0$ mho/m, $\varepsilon_r = 1$; $\rho = 1$ kg/m^3

Phantom section: RF Section

DASY4 Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 11/13/2009
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn473; Calibrated: 1/4/2010
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

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, -6.30 mm

Reference Value = 0.039 A/m; Power Drift = 0.022 dB

Maximum value of Total (measured) = 0.074 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 = 0.123 A/m

Probe Modulation Factor = 2.38

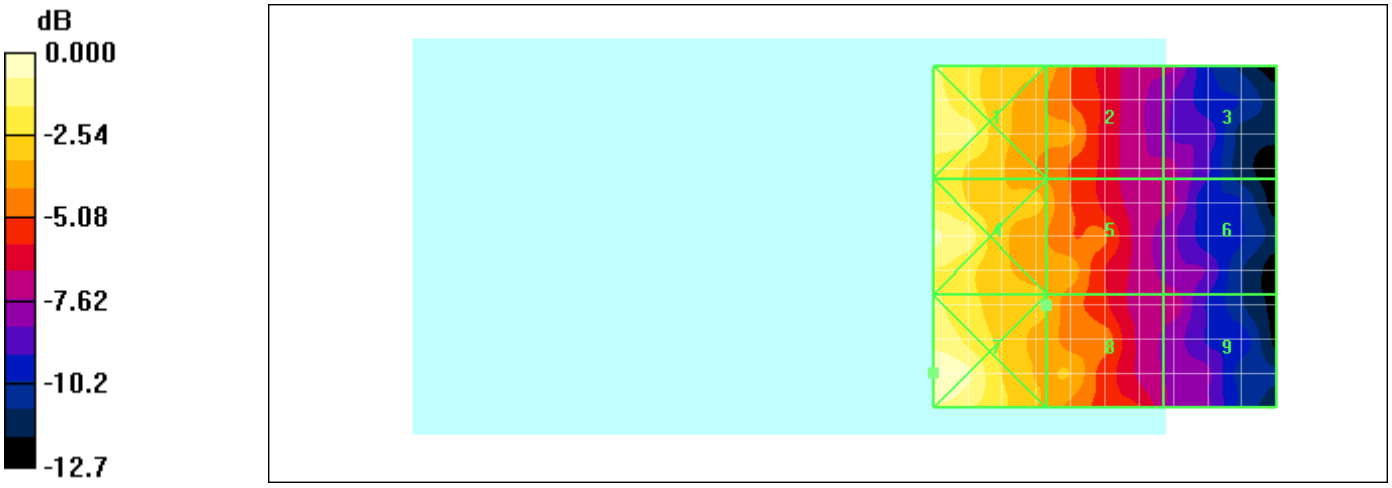
Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.039 A/m; Power Drift = 0.022 dB

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

Peak H-field in A/m

Grid 1 **0.154 M4**	Grid 2 **0.120 M4**	Grid 3 **0.078 M4**
Grid 4 **0.163 M4**	Grid 5 **0.121 M4**	Grid 6 **0.078 M4**
Grid 7 **0.177 M4**	Grid 8 **0.123 M4**	Grid 9 **0.080 M4**



0 dB = 0.177A/m

Date/Time: 4/7/2010 11:24:28 PM

Test Laboratory: RIM TESTING SERVICES

File Name: HAC_H_CDMA800_high_chan_telecoil.da4

DUT: BlackBerry Smartphone

Program Name: HAC RF H3DV6 Device

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

Medium parameters used: $\sigma = 0$ mho/m, $\varepsilon_r = 1$; $\rho = 1$ kg/m^3

Phantom section: RF Section

DASY4 Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 11/13/2009
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn473; Calibrated: 1/4/2010
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

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, -6.30 mm

Reference Value = 0.109 A/m; Power Drift = -0.053 dB

Maximum value of Total (measured) = 0.180 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 = 0.131 A/m

Probe Modulation Factor = 0.980

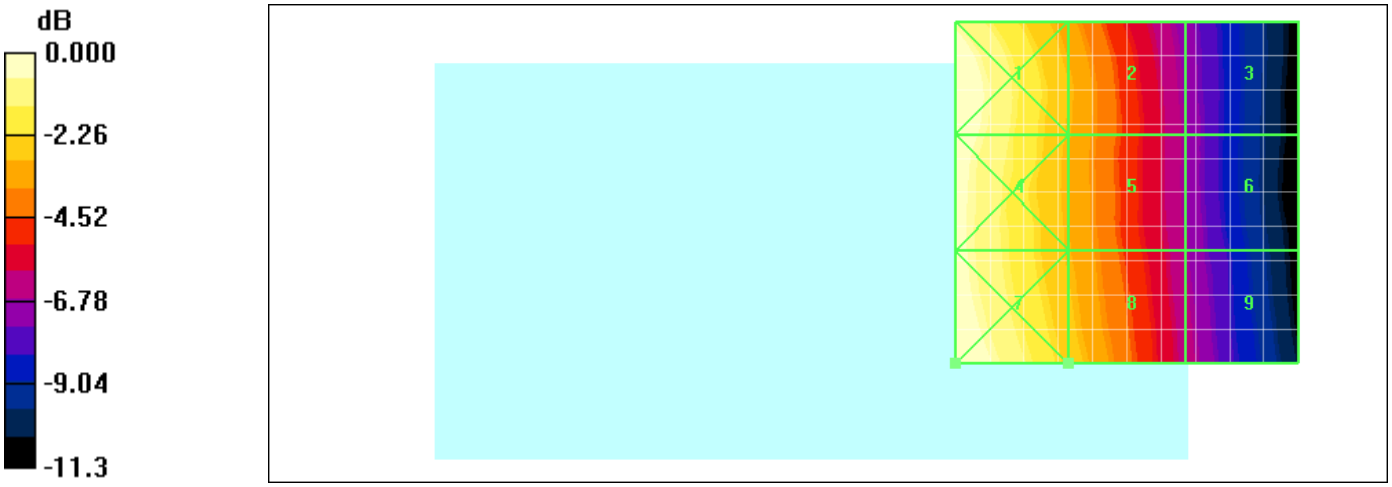
Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.109 A/m; Power Drift = -0.053 dB

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

Peak H-field in A/m

Grid 1 **0.173 M4**	Grid 2 **0.125 M4**	Grid 3 **0.080 M4**
Grid 4 **0.171 M4**	Grid 5 **0.124 M4**	Grid 6 **0.081 M4**
Grid 7 **0.177 M4**	Grid 8 **0.131 M4**	Grid 9 **0.085 M4**



0 dB = 0.177A/m

Date/Time: 4/7/2010 11:44:18 PM

Test Laboratory: RIM TESTING SERVICES

HAC_H_CDMA1700_low_chan

DUT: BlackBerry Smartphone

Communication System: CDMA AWS 1700; Frequency: 1711.25 MHz;Duty Cycle: 1:1

Medium parameters used: σ = 0 mho/m, ε_r = 1; ρ = 1 kg/m^3

Phantom section: RF Section

Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 11/13/2009
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn473; Calibrated: 1/4/2010
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

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, -6.30 mm

Reference Value = 0.108 A/m; Power Drift = 0.038 dB

Maximum value of Total (measured) = 0.126 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 = 0.117 A/m

Probe Modulation Factor = 0.990

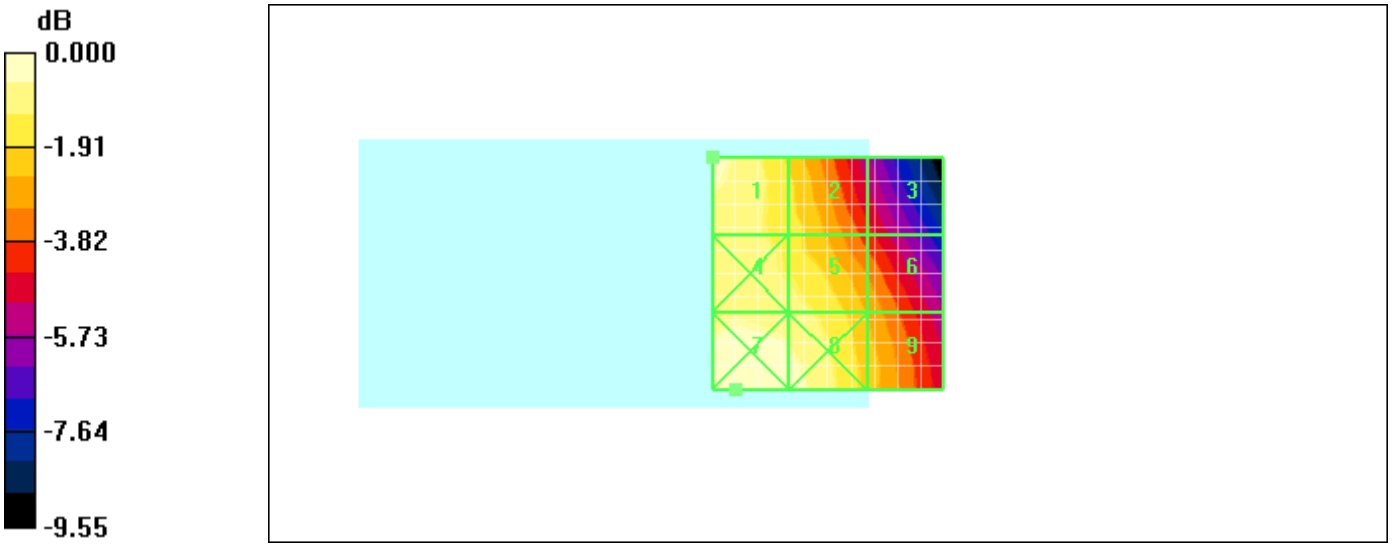
Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.108 A/m; Power Drift = 0.038 dB

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

Peak H-field in A/m

Grid 1 **0.117 M4**	Grid 2 **0.103 M4**	Grid 3 **0.077 M4**
Grid 4 **0.113 M4**	Grid 5 **0.111 M4**	Grid 6 **0.092 M4**
Grid 7 **0.124 M4**	Grid 8 **0.119 M4**	Grid 9 **0.097 M4**



0 dB = 0.124A/m

Date/Time: 4/7/2010 11:49:43 PM

Test Laboratory: RIM TESTING SERVICES

HAC_H_CDMA1700_mid_chan

DUT: BlackBerry Smartphone

Communication System: CDMA AWS 1700; Frequency: 1732.5 MHz;Duty Cycle: 1:1

Medium parameters used: σ = 0 mho/m, ε_r = 1; ρ = 1 kg/m^3

Phantom section: RF Section

Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 11/13/2009
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn473; Calibrated: 1/4/2010
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

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, -6.30 mm

Reference Value = 0.125 A/m; Power Drift = 0.011 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 = 0.134 A/m

Probe Modulation Factor = 0.990

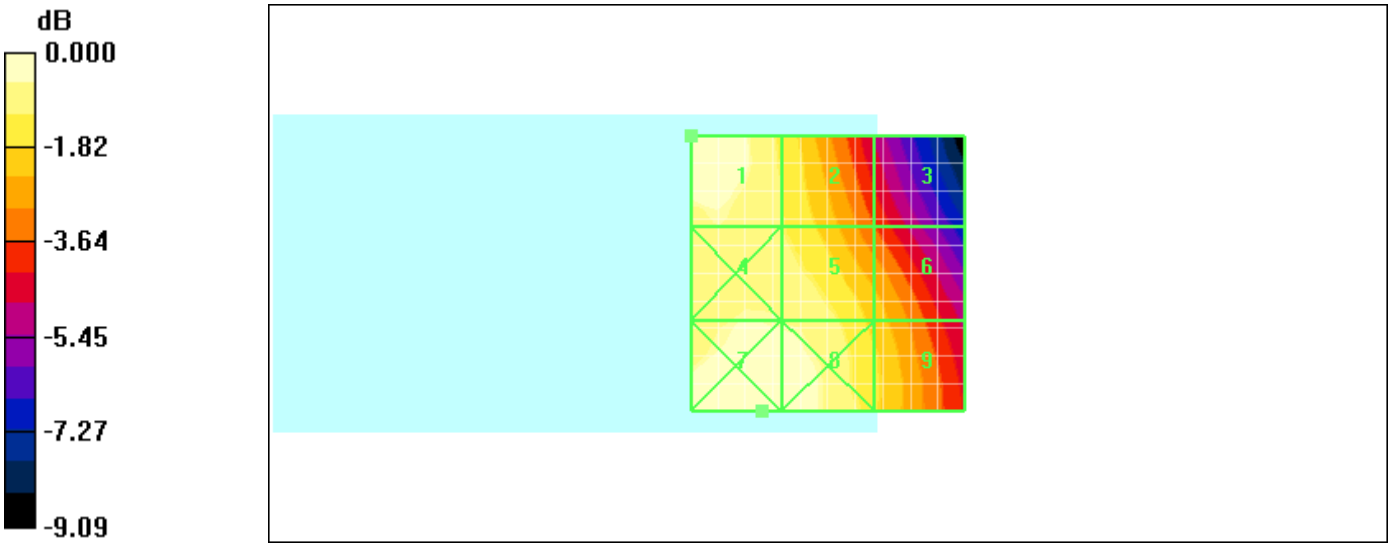
Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.125 A/m; Power Drift = 0.011 dB

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

Peak H-field in A/m

Grid 1 **0.134 M4**	Grid 2 **0.118 M4**	Grid 3 **0.089 M4**
Grid 4 **0.126 M4**	Grid 5 **0.125 M4**	Grid 6 **0.106 M4**
Grid 7 **0.135 M4**	Grid 8 **0.134 M4**	Grid 9 **0.111 M4**



0 dB = 0.135A/m

Date/Time: 4/7/2010 11:56:35 PM

Test Laboratory: RIM TESTING SERVICES

HAC_H_CDMA1700_high_chan

DUT: BlackBerry Smartphone

Communication System: CDMA AWS 1700; Frequency: 1753.75 MHz;Duty Cycle: 1:1

Medium parameters used: σ = 0 mho/m, ε_r = 1; ρ = 1 kg/m^3

Phantom section: RF Section

Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 11/13/2009
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn473; Calibrated: 1/4/2010
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

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, -6.30 mm

Reference Value = 0.111 A/m; Power Drift = 0.143 dB

Maximum value of Total (measured) = 0.120 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 = 0.111 A/m

Probe Modulation Factor = 0.990

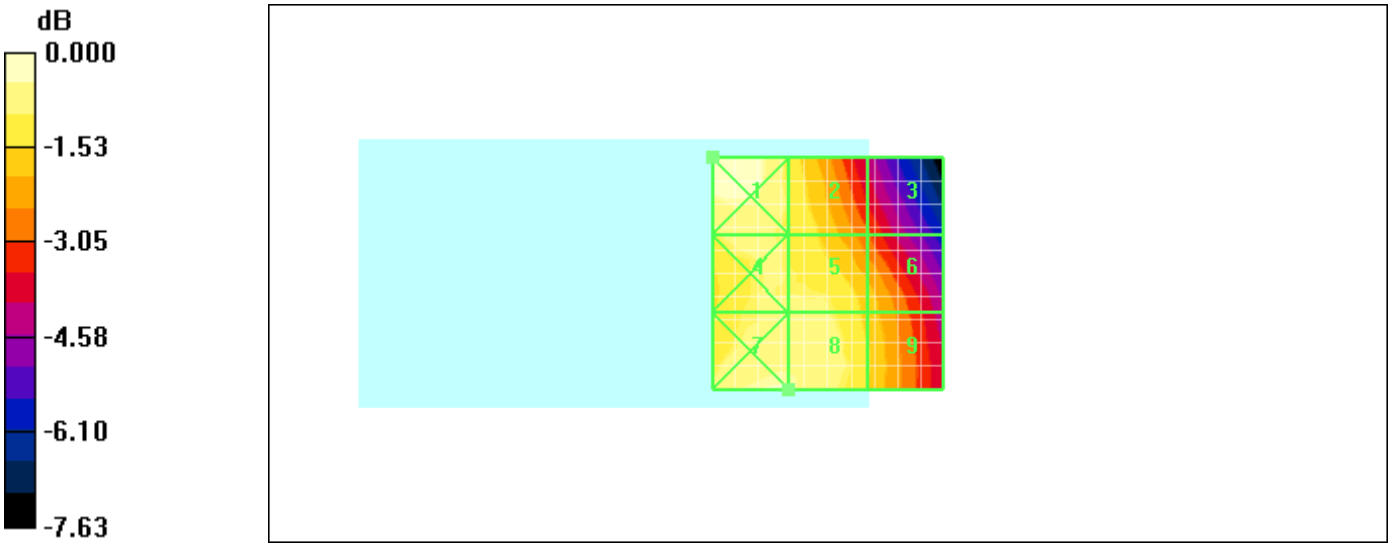
Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.111 A/m; Power Drift = 0.143 dB

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

Peak H-field in A/m

Grid 1 **0.118 M4**	Grid 2 **0.104 M4**	Grid 3 **0.084 M4**
Grid 4 **0.107 M4**	Grid 5 **0.107 M4**	Grid 6 **0.097 M4**
Grid 7 **0.112 M4**	Grid 8 **0.111 M4**	Grid 9 **0.099 M4**



0 dB = 0.118A/m

Date/Time: 4/8/2010 12:26:02 AM

Test Laboratory: RIM TESTING SERVICES

HAC_H_CDMA1700_mid_chan_one_eigth

DUT: BlackBerry Smartphone

Communication System: CDMA AWS 1700_1/8th; Frequency: 1732.5 MHz;Duty Cycle: 1:8.3

Medium parameters used: σ = 0 mho/m, ε_r = 1; ρ = 1 kg/m^3

Phantom section: RF Section

Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 11/13/2009
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn473; Calibrated: 1/4/2010
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

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, -6.30 mm

Reference Value = 0.045 A/m; Power Drift = -0.040 dB

Maximum value of Total (measured) = 0.055 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 = 0.123 A/m

Probe Modulation Factor = 2.56

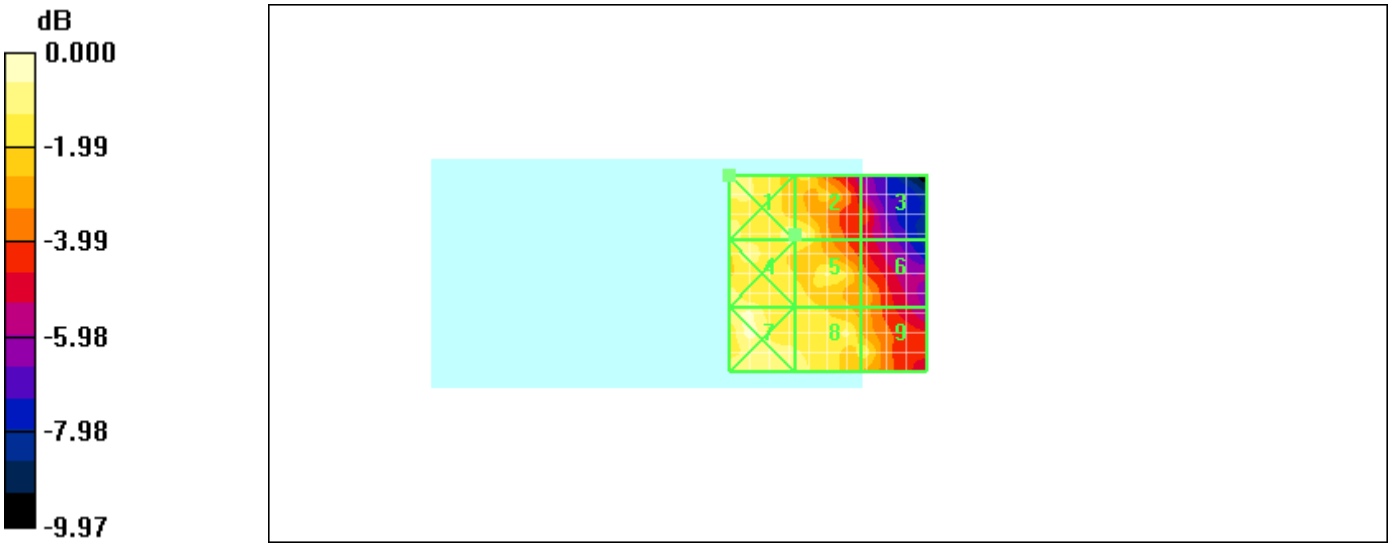
Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.045 A/m; Power Drift = -0.040 dB

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

Peak H-field in A/m

Grid 1 **0.140 M4**	Grid 2 **0.123 M4**	Grid 3 **0.086 M4**
Grid 4 **0.130 M4**	Grid 5 **0.122 M4**	Grid 6 **0.101 M4**
Grid 7 **0.136 M4**	Grid 8 **0.122 M4**	Grid 9 **0.114 M4**



0 dB = 0.140A/m

Date/Time: 4/8/2010 12:40:34 AM

Test Laboratory: RIM TESTING SERVICES

HAC_H_CDMA1700_mid_chan_telecoil

DUT: BlackBerry Smartphone

Communication System: CDMA AWS 1700; Frequency: 1732.5 MHz;Duty Cycle: 1:1

Medium parameters used: σ = 0 mho/m, ε_r = 1; ρ = 1 kg/m^3

Phantom section: RF Section

Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 11/13/2009
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn473; Calibrated: 1/4/2010
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

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, -6.30 mm

Reference Value = 0.124 A/m; Power Drift = 0.019 dB

Maximum value of Total (measured) = 0.136 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 = 0.128 A/m

Probe Modulation Factor = 0.990

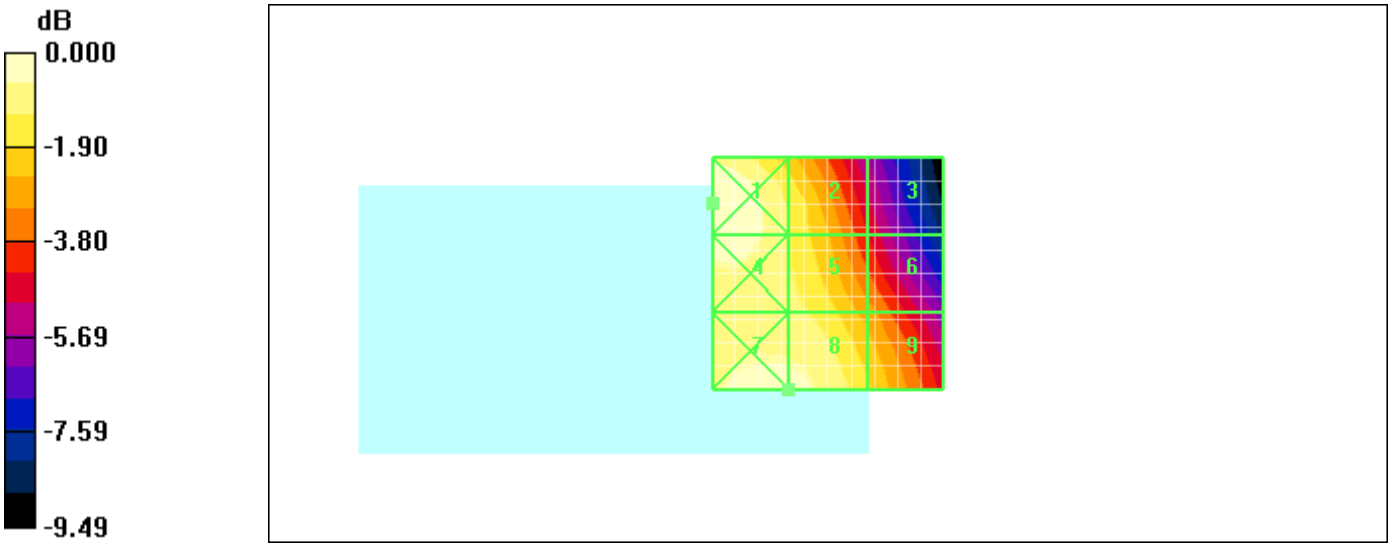
Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.124 A/m; Power Drift = 0.019 dB

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

Peak H-field in A/m

Grid 1 **0.135 M4**	Grid 2 **0.117 M4**	Grid 3 **0.081 M4**
Grid 4 **0.130 M4**	Grid 5 **0.120 M4**	Grid 6 **0.098 M4**
Grid 7 **0.129 M4**	Grid 8 **0.128 M4**	Grid 9 **0.109 M4**



0 dB = 0.135A/m

Date/Time: 4/8/2010 12:57:28 AM

Test Laboratory: RIM TESTING SERVICES

HAC_H_CDMA1900_low_chan

DUT: BlackBerry Smartphone

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

Medium parameters used: σ = 0 mho/m, ε_r = 1; ρ = 1 kg/m^3

Phantom section: RF Section

Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 11/13/2009
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn473; Calibrated: 1/4/2010
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

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, -6.30 mm

Reference Value = 0.112 A/m; Power Drift = 0.140 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 = 0.109 A/m

Probe Modulation Factor = 0.990

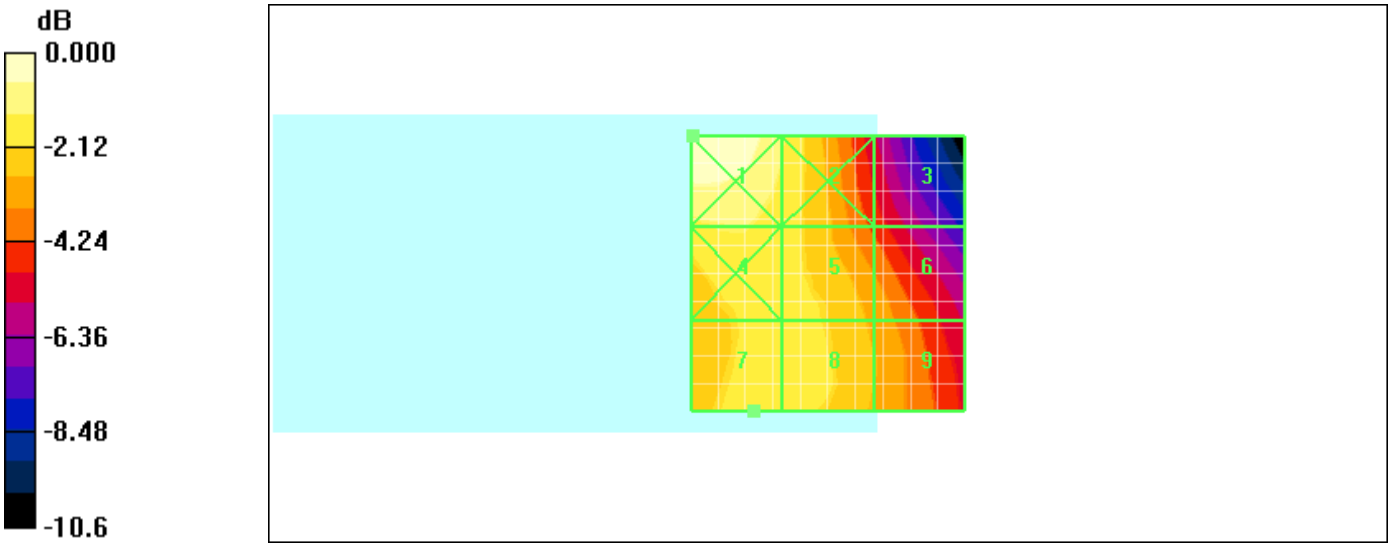
Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.112 A/m; Power Drift = 0.140 dB

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

Peak H-field in A/m

Grid 1 **0.135 M4**	Grid 2 **0.116 M4**	Grid 3 **0.081 M4**
Grid 4 **0.115 M4**	Grid 5 **0.109 M4**	Grid 6 **0.095 M4**
Grid 7 **0.109 M4**	Grid 8 **0.109 M4**	Grid 9 **0.097 M4**



0 dB = 0.135A/m

Date/Time: 4/8/2010 1:21:20 AM

Test Laboratory: RIM TESTING SERVICES

HAC_H_CDMA1900_mid_chan

DUT: BlackBerry Smartphone

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

Medium parameters used: σ = 0 mho/m, ε_r = 1; ρ = 1 kg/m^3

Phantom section: RF Section

Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 11/13/2009
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn473; Calibrated: 1/4/2010
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

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, -6.30 mm

Reference Value = 0.118 A/m; Power Drift = 0.042 dB

Maximum value of Total (measured) = 0.130 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 = 0.113 A/m

Probe Modulation Factor = 0.990

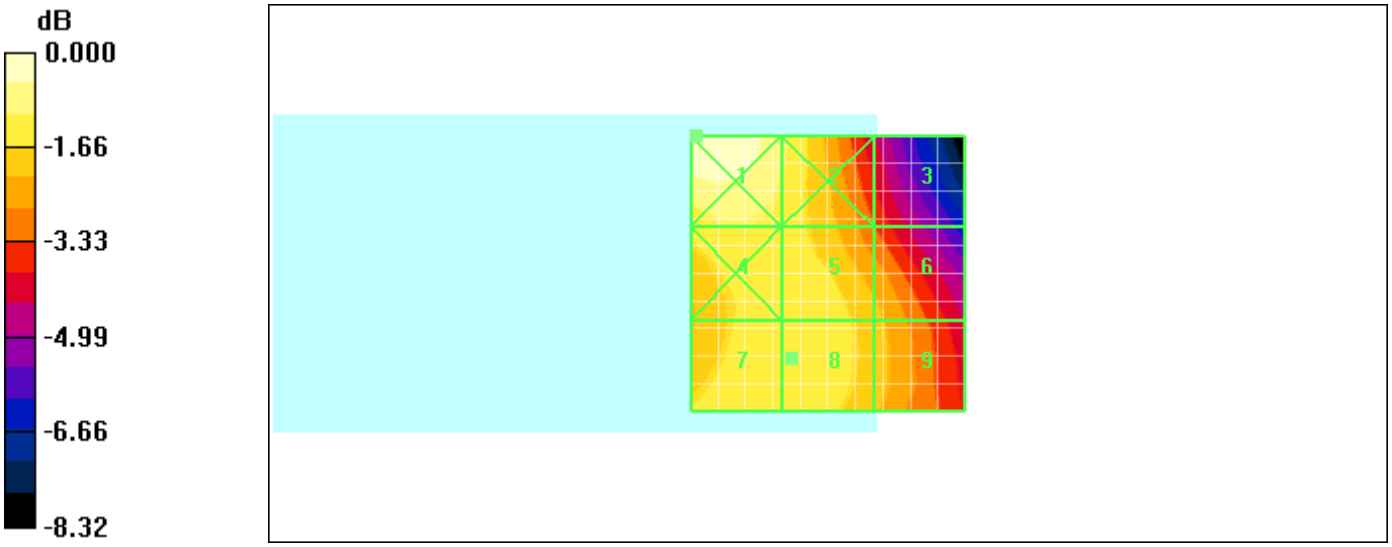
Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.118 A/m; Power Drift = 0.042 dB

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

Peak H-field in A/m

Grid 1 **0.129 M4**	Grid 2 **0.116 M4**	Grid 3 **0.088 M4**
Grid 4 **0.113 M4**	Grid 5 **0.111 M4**	Grid 6 **0.102 M4**
Grid 7 **0.112 M4**	Grid 8 **0.113 M4**	Grid 9 **0.103 M4**



0 dB = 0.129A/m

Date/Time: 4/8/2010 1:27:37 AM

Test Laboratory: RIM TESTING SERVICES

HAC_H_CDMA1900_high_chan

DUT: BlackBerry Smartphone

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

Medium parameters used: σ = 0 mho/m, ε_r = 1; ρ = 1 kg/m^3

Phantom section: RF Section

Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 11/13/2009
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn473; Calibrated: 1/4/2010
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

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, -6.30 mm

Reference Value = 0.133 A/m; Power Drift = -0.038 dB

Maximum value of Total (measured) = 0.151 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 = 0.128 A/m

Probe Modulation Factor = 0.990

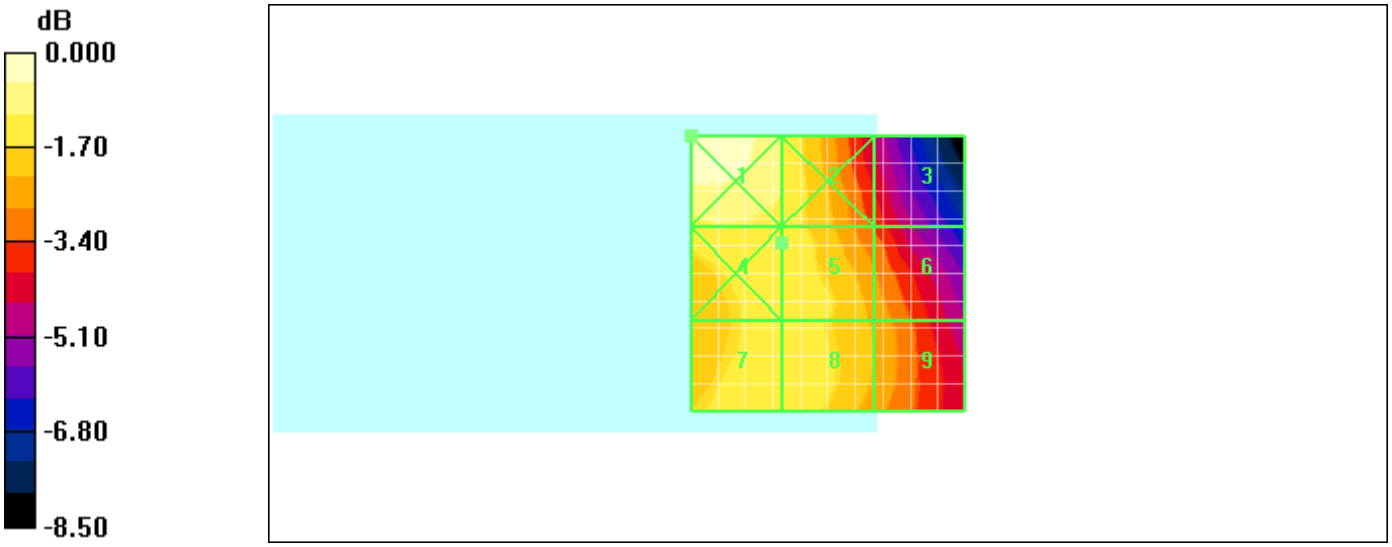
Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.133 A/m; Power Drift = -0.038 dB

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

Peak H-field in A/m

Grid 1 **0.149 M4**	Grid 2 **0.131 M4**	Grid 3 **0.099 M4**
Grid 4 **0.130 M4**	Grid 5 **0.128 M4**	Grid 6 **0.113 M4**
Grid 7 **0.127 M4**	Grid 8 **0.128 M4**	Grid 9 **0.114 M4**



0 dB = 0.149A/m

Date/Time: 4/8/2010 1:36:03 AM

Test Laboratory: RIM TESTING SERVICES

HAC_H_CDMA1900_high_chan_one_eigth

DUT: BlackBerry Smartphone

Communication System: CDMA 1900 1/8th; Frequency: 1908.5 MHz;Duty Cycle: 1:8.3

Medium parameters used: σ = 0 mho/m, ε_r = 1; ρ = 1 kg/m^3

Phantom section: RF Section

Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 11/13/2009
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn473; Calibrated: 1/4/2010
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

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, -6.30 mm

Reference Value = 0.047 A/m; Power Drift = 0.018 dB

Maximum value of Total (measured) = 0.058 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 = 0.125 A/m

Probe Modulation Factor = 2.50

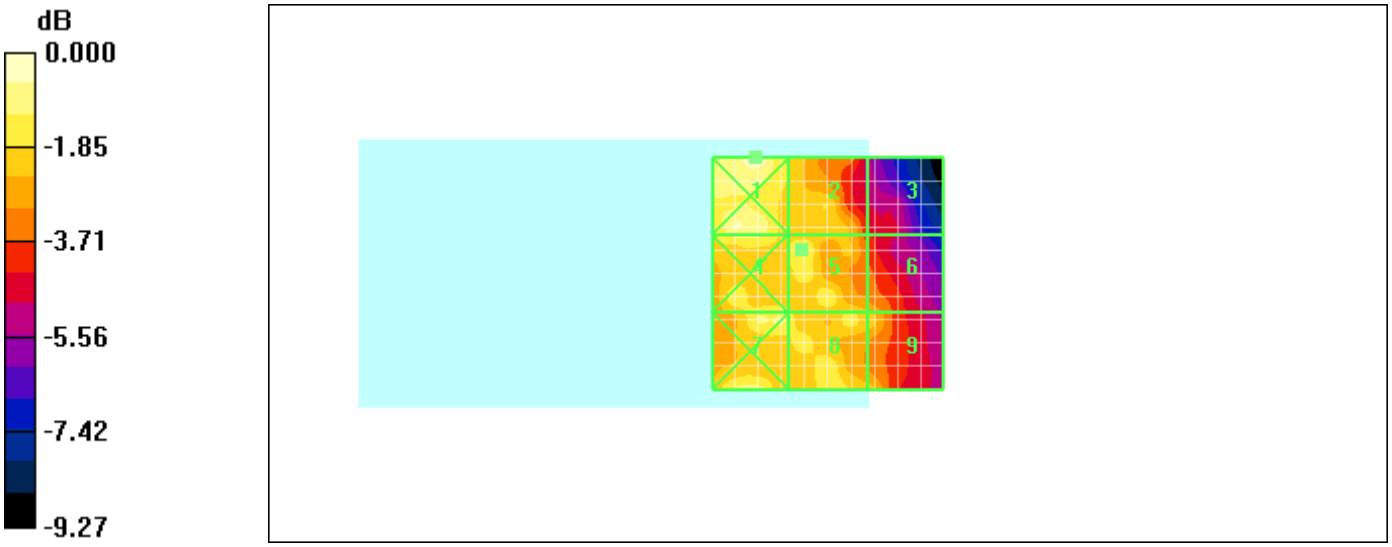
Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.047 A/m; Power Drift = 0.018 dB

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

Peak H-field in A/m

Grid 1 **0.144 M4**	Grid 2 **0.117 M4**	Grid 3 **0.090 M4**
Grid 4 **0.130 M4**	Grid 5 **0.125 M4**	Grid 6 **0.110 M4**
Grid 7 **0.131 M4**	Grid 8 **0.123 M4**	Grid 9 **0.114 M4**



0 dB = 0.144A/m

Date/Time: 4/8/2010 1:48:36 AM

Test Laboratory: RIM TESTING SERVICES

HAC_H_CDMA1900_high_chan_one_eigth_telecoil

DUT: BlackBerry Smartphone

Communication System: CDMA 1900 1/8th; Frequency: 1908.5 MHz;Duty Cycle: 1:8.3

Medium parameters used: $\sigma = 0$ mho/m, $\varepsilon_r = 1$; $\rho = 1$ kg/m^3

Phantom section: RF Section

Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 11/13/2009
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn473; Calibrated: 1/4/2010
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

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, -6.30 mm

Reference Value = 0.047 A/m; Power Drift = 1.16 dB

Maximum value of Total (measured) = 0.060 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 = 2.50

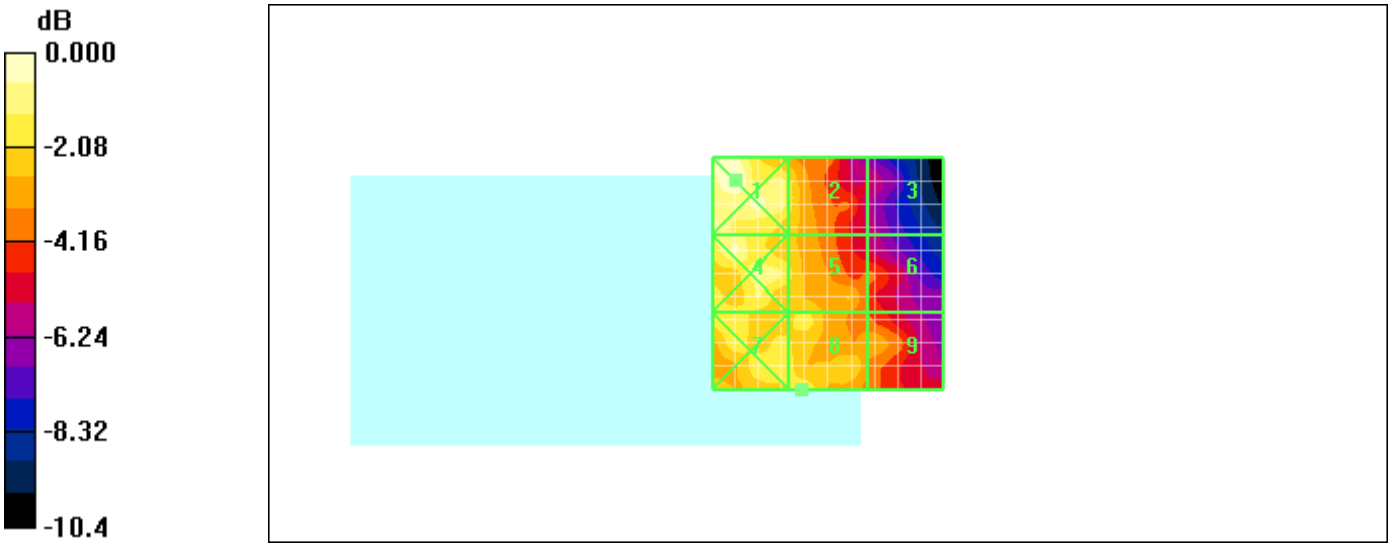
Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.047 A/m; Power Drift = 1.16 dB

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

Peak H-field in A/m

Grid 1 **0.150 M4**	Grid 2 **0.124 M4**	Grid 3 **0.080 M4**
Grid 4 **0.140 M4**	Grid 5 **0.123 M4**	Grid 6 **0.095 M4**
Grid 7 **0.128 M4**	Grid 8 **0.127 M4**	Grid 9 **0.108 M4**



0 dB = 0.150A/m