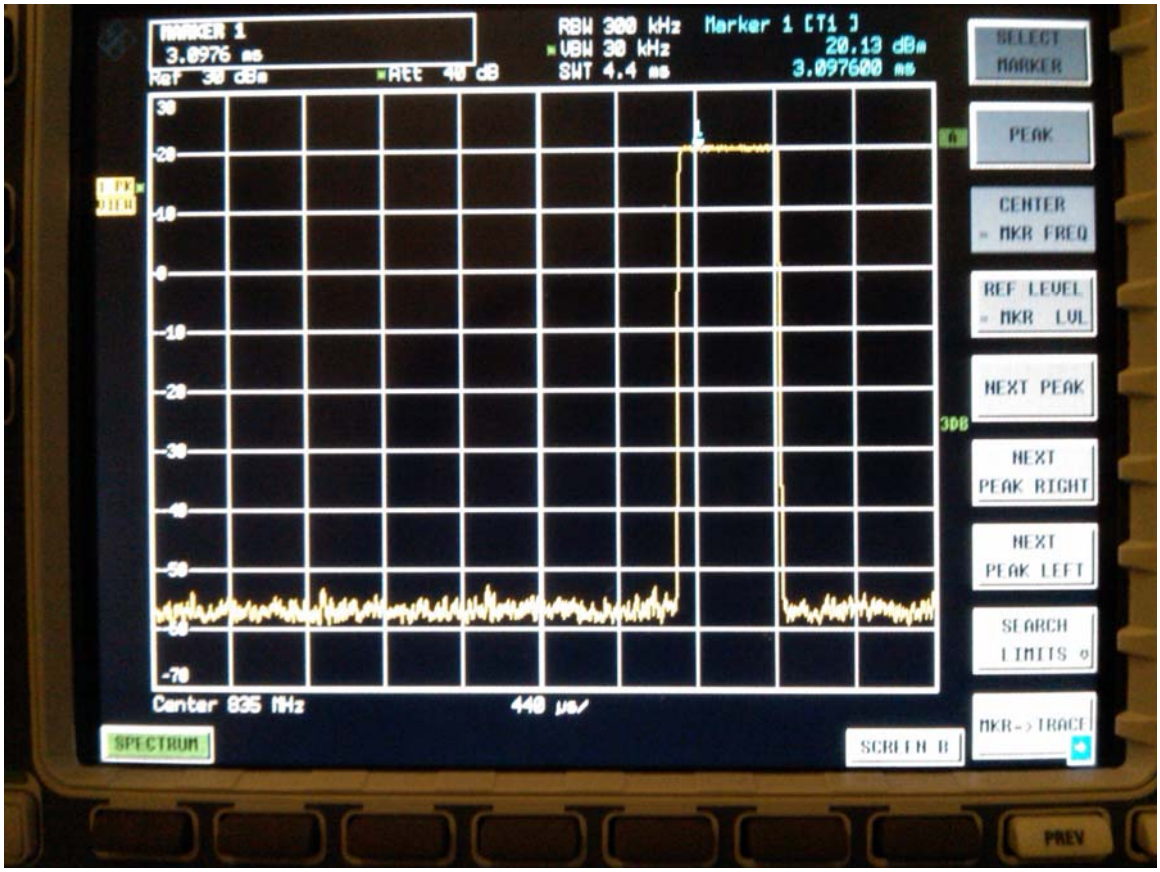
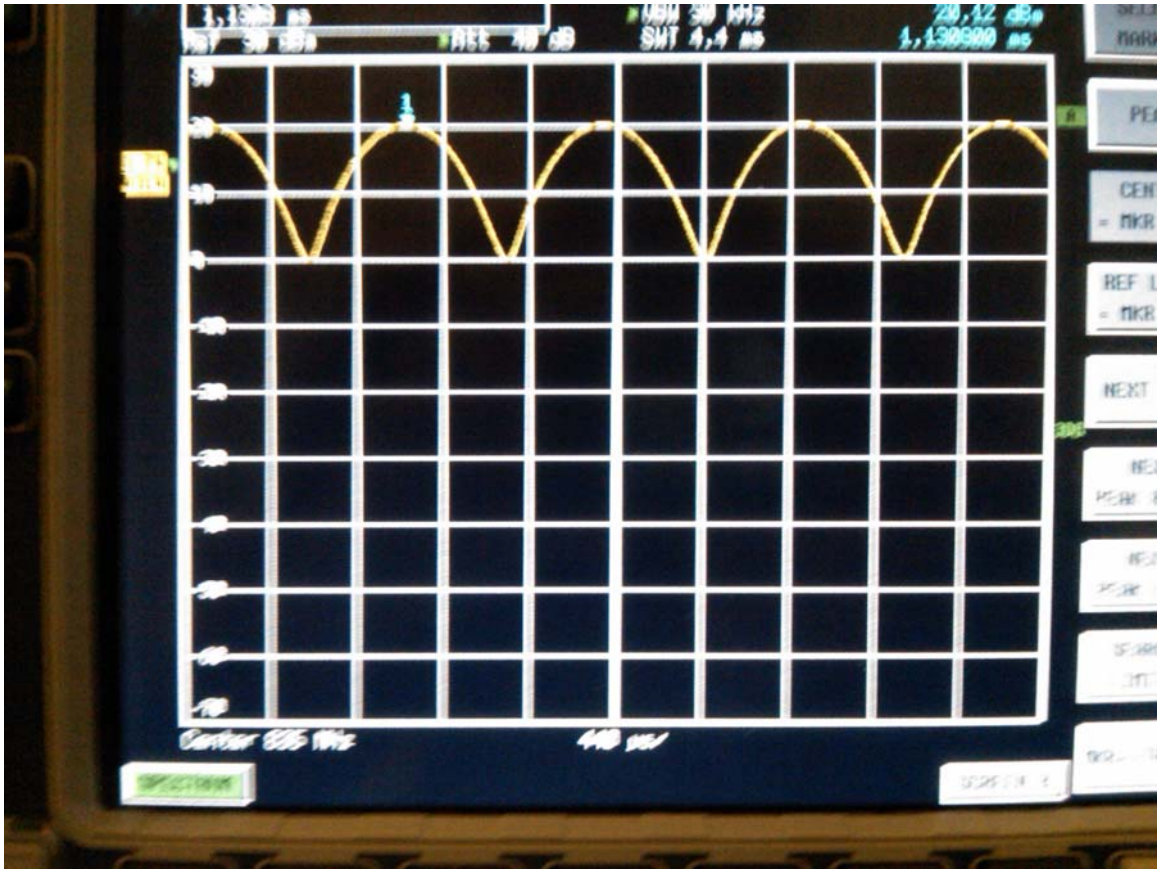
Annex A: Measurement data and plots

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



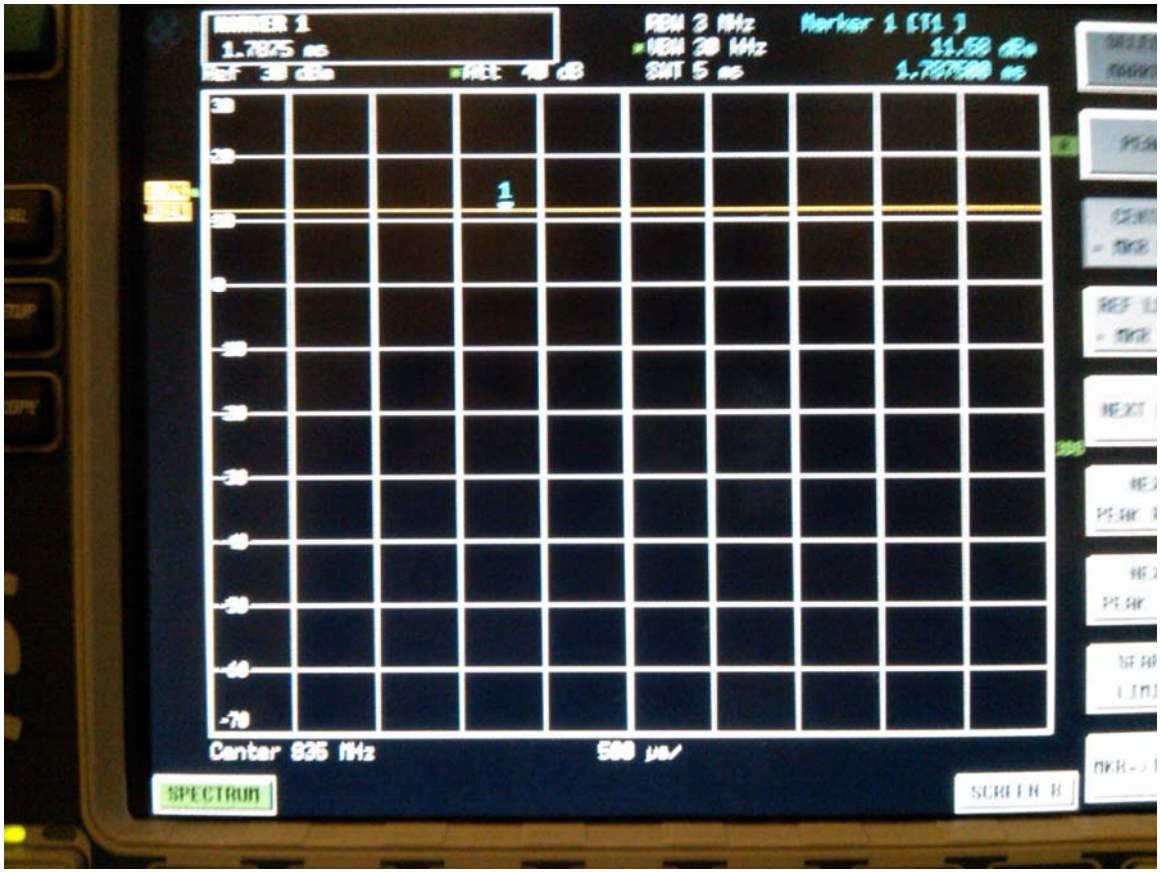
GSM 835 MHz

CW 835 MHz

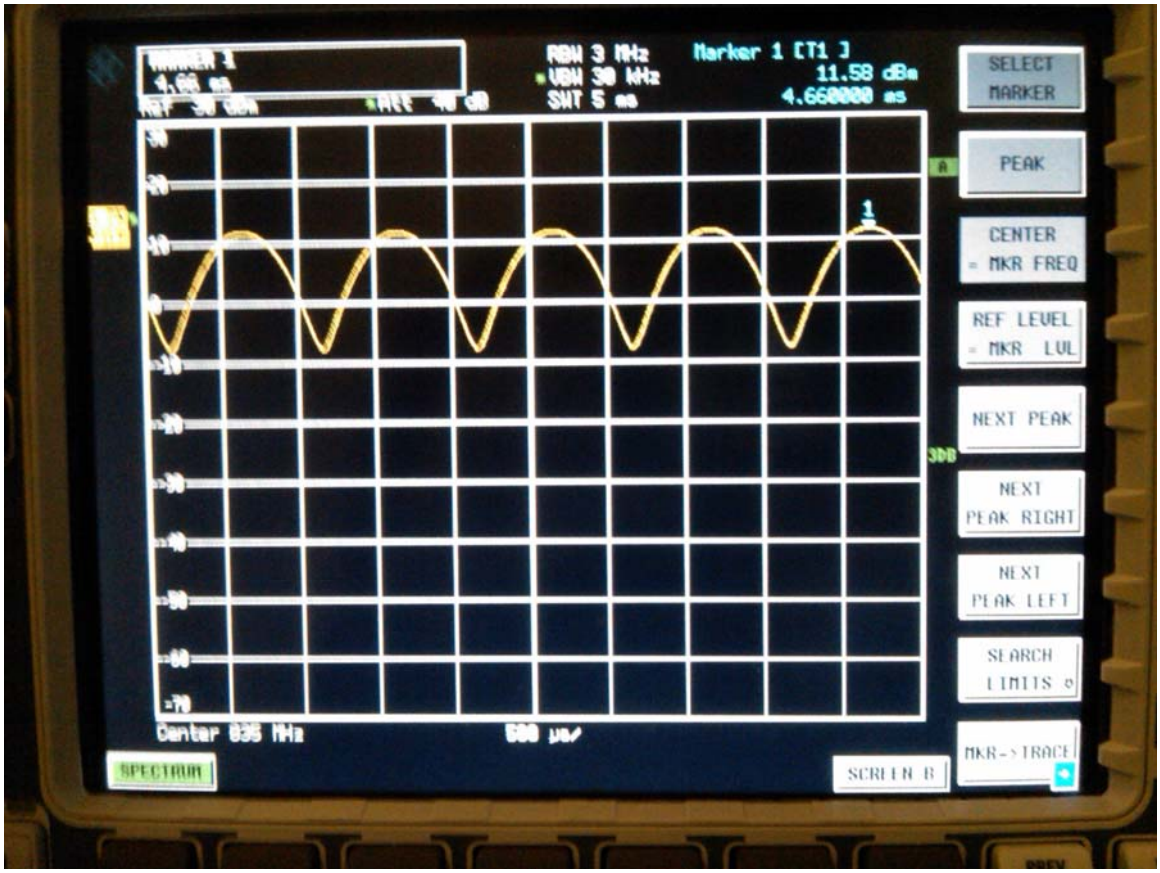


AM 80% 835 MHz

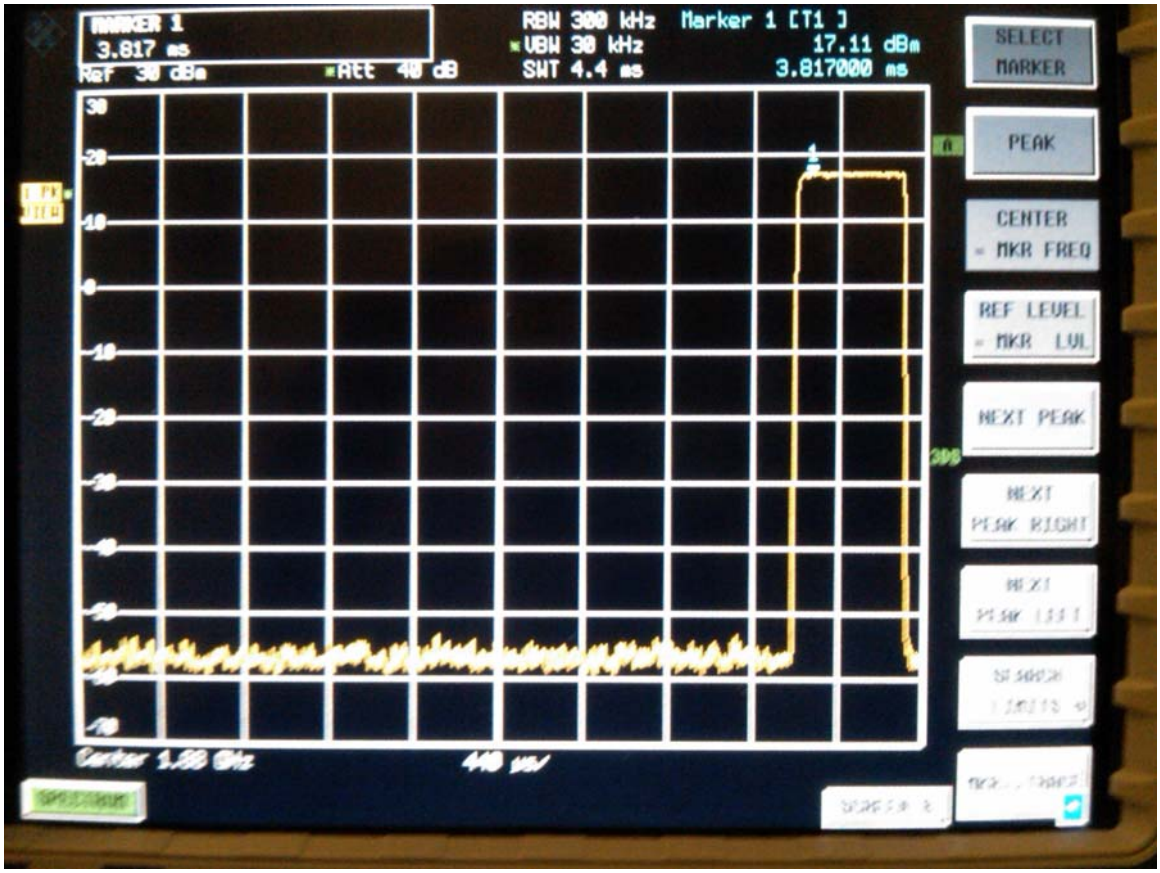
CDMA 835 MHz



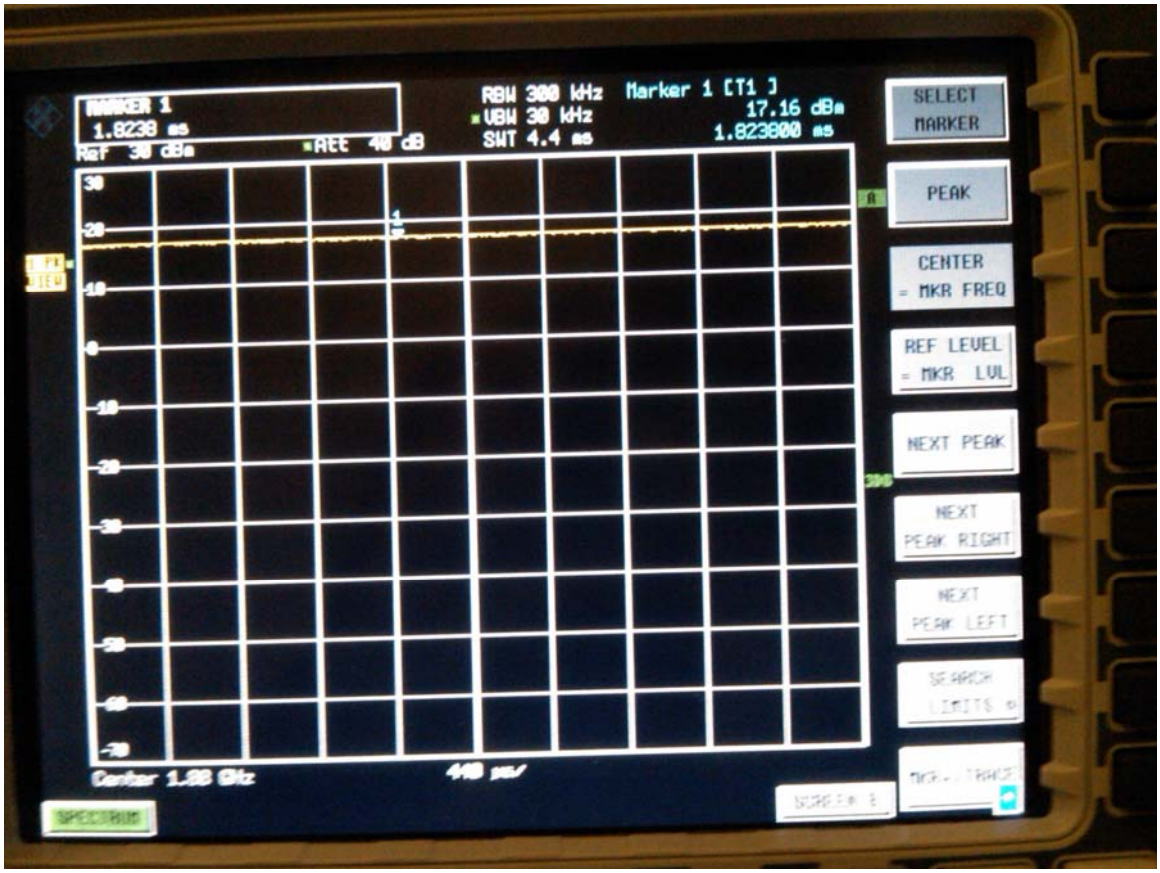
CW 835 MHz



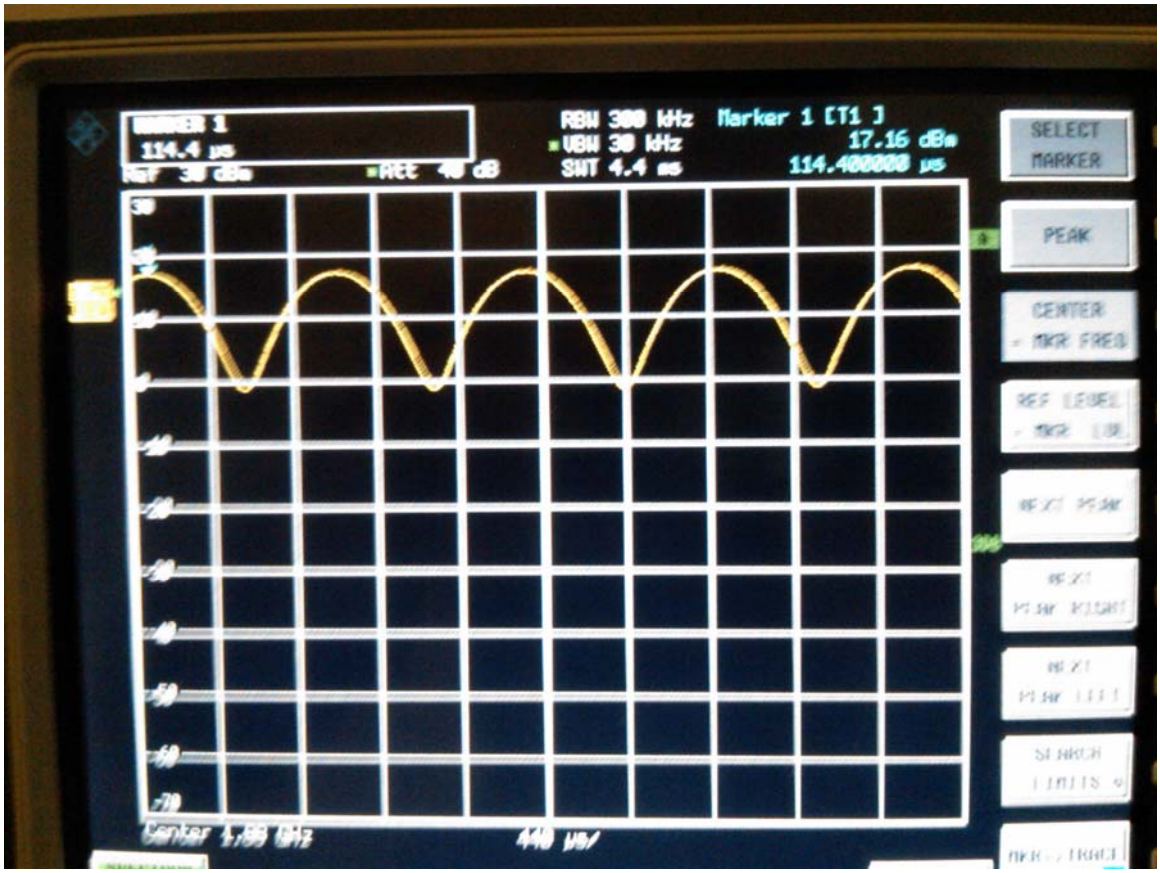
AM 80% 835 MHz



GSM 1880 MHz



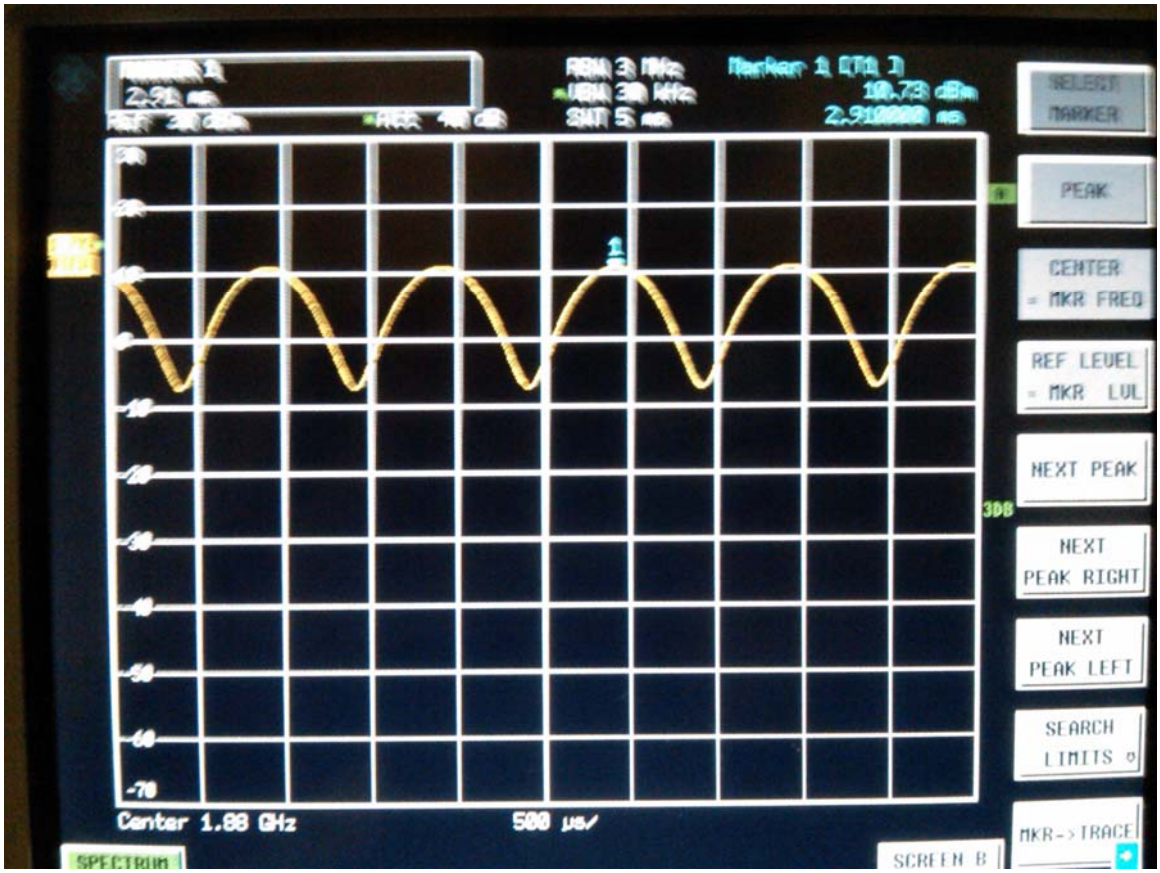
CW 1880 MHz



AM 80 % 1880 MHz

CDMA 1880 MHz

CW 1880 MHz



AM 80 % 1880 MHz

A.2 Dipole validation and probe modulation factor plots

Date/Time: 1/12/2011 12:39:57 PM

Test Laboratory: RIM Testing Services

HAC_E_Dipole_835MHz

DUT: HAC-Dipole 835 MHz; Type: D835V3

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

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

Phantom section: RF Section

Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ER3DV6 - SN2285; ConvF(1, 1, 1); Calibrated: 3/8/2010
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 5/17/2010
- 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 = 110.5 V/m; Power Drift = -0.014 dB

Maximum value of Total (measured) = 168.0 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 = 169.7 V/m

Probe Modulation Factor = 1.00

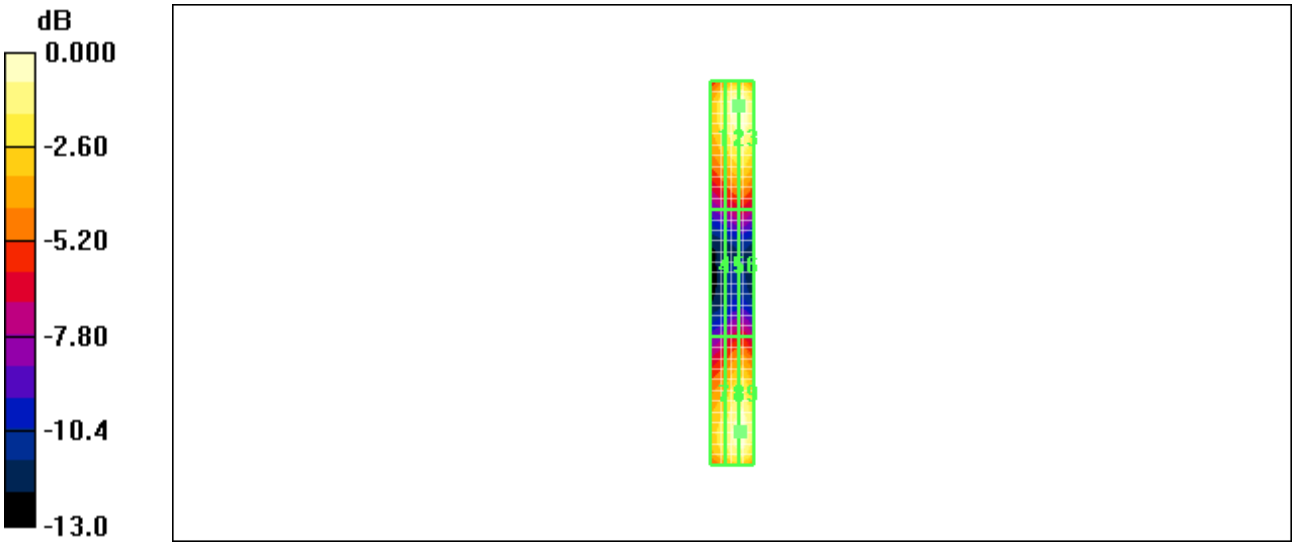
Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 110.5 V/m; Power Drift = -0.014 dB

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

Peak E-field in V/m

Grid 1 **143.5 M4**	Grid 2 **169.7 M4**	Grid 3 **169.7 M4**
Grid 4 **70.5 M4**	Grid 5 **84.9 M4**	Grid 6 **85.0 M4**
Grid 7 **137.9 M4**	Grid 8 **166.2 M4**	Grid 9 **166.5 M4**



0 dB = 169.7V/m

Date/Time: 1/19/2011 11:06:12 AM

Test Laboratory: RIM Testing Services

HAC_E_Dipole_835MHz_GSM_mod

DUT: HAC-Dipole 835 MHz; Type: D835V3

Communication System: GSM 850; 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

Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ER3DV6 - SN2285; ConvF(1, 1, 1); Calibrated: 3/8/2010
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 5/17/2010
- 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 = 39.7 V/m; Power Drift = -0.029 dB

Maximum value of Total (measured) = 54.5 V/m

E Scan - measurement distance from the probe sensor center to CD835 Dipole = 10mm/Hearing Aid Compatibility Test (41x361x1):

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

Maximum value of peak Total field = 55.1 V/m

Probe Modulation Factor = 1.00

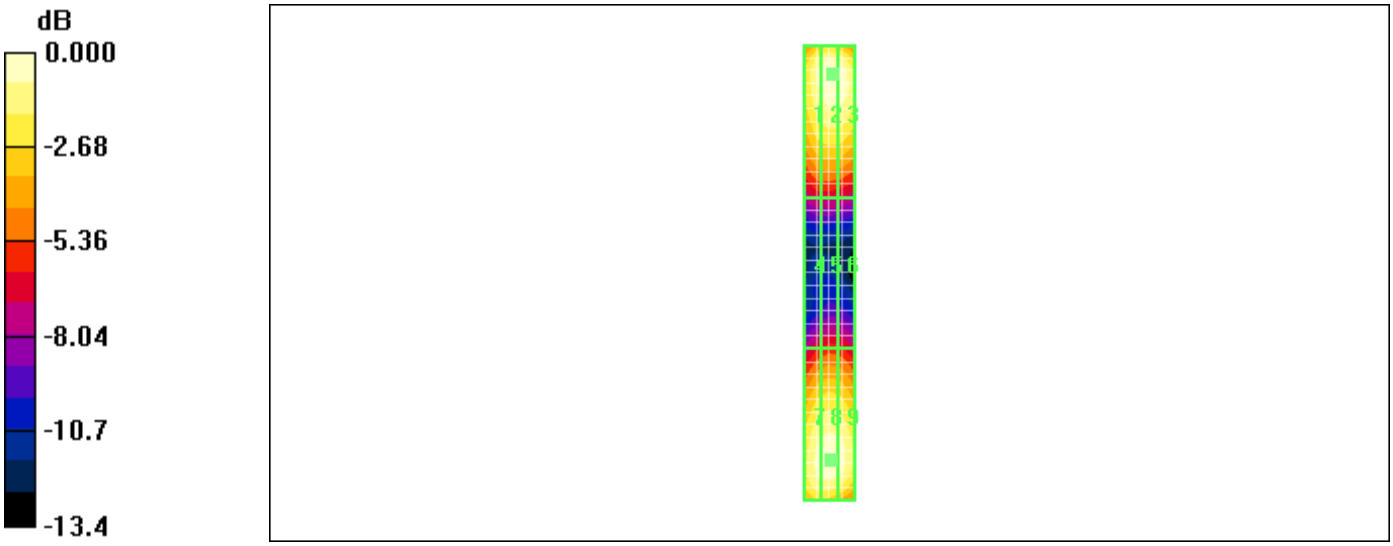
Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 39.7 V/m; Power Drift = -0.029 dB

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

Peak E-field in V/m

Grid 1 **52.0 M4**	Grid 2 **55.1 M4**	Grid 3 **54.5 M4**
Grid 4 **27.5 M4**	Grid 5 **28.6 M4**	Grid 6 **28.1 M4**
Grid 7 **52.3 M4**	Grid 8 **53.6 M4**	Grid 9 **53.2 M4**



0 dB = 55.1V/m

Date/Time: 1/19/2011 11:22:25 AM

Test Laboratory: RIM Testing Services

HAC_E_Dipole_835MHz_CW_GSM_mod

DUT: HAC-Dipole 835 MHz; Type: D835V3

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

Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ER3DV6 - SN2285; ConvF(1, 1, 1); Calibrated: 3/8/2010
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 5/17/2010
- 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 = 115.7 V/m; Power Drift = 0.021 dB

Maximum value of Total (measured) = 158.6 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 = 159.9 V/m

Probe Modulation Factor = 1.00

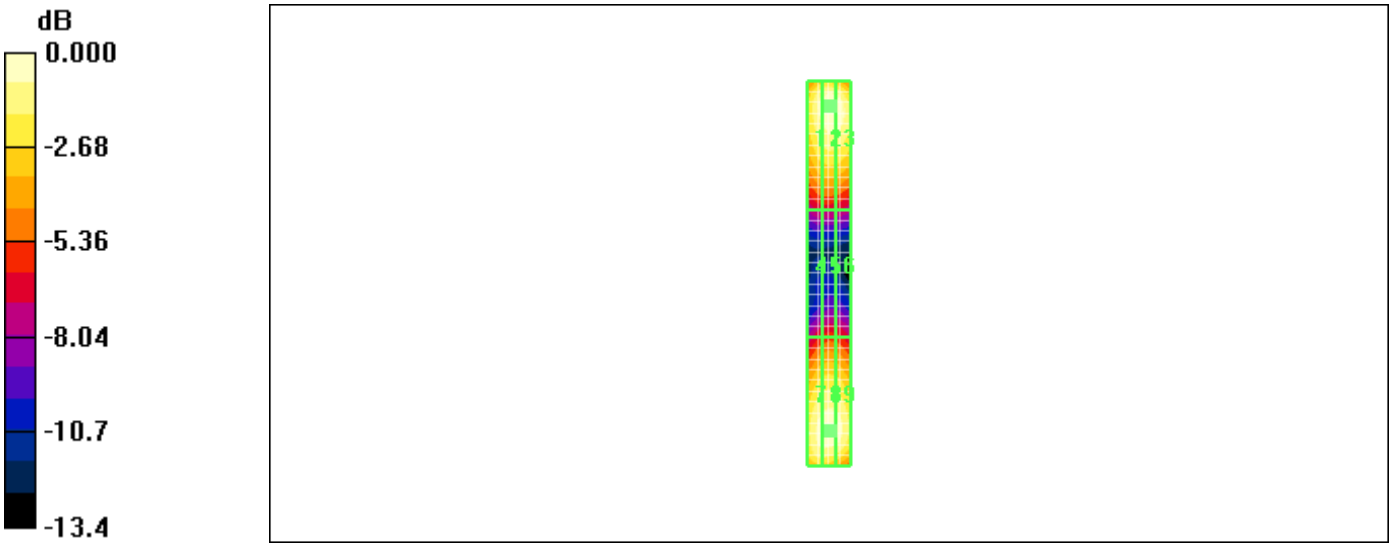
Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 115.7 V/m; Power Drift = 0.021 dB

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

Peak E-field in V/m

Grid 1 **151.8 M4**	Grid 2 **159.9 M4**	Grid 3 **157.4 M4**
Grid 4 **80.7 M4**	Grid 5 **83.6 M4**	Grid 6 **82.6 M4**
Grid 7 **151.7 M4**	Grid 8 **154.5 M4**	Grid 9 **153.0 M4**



0 dB = 159.9V/m

Date/Time: 1/19/2011 11:32:23 AM

Test Laboratory: RIM Testing Services

HAC_E_Dipole_835MHz_AM80%_GSM_mod

DUT: HAC-Dipole 835 MHz; Type: D835V3

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

Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ER3DV6 - SN2285; ConvF(1, 1, 1); Calibrated: 3/8/2010
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 5/17/2010
- 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 2/Hearing Aid Compatibility Test (5x5x1):

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

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 72.4 V/m; Power Drift = 0.041 dB

Maximum value of Total (measured) = 80.7 V/m

E Scan - measurement distance from the probe sensor center to CD835 Dipole = 10mm 2/Hearing Aid Compatibility Test (41x41x1):

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

Maximum value of peak Total field = 81.1 V/m

Probe Modulation Factor = 1.00

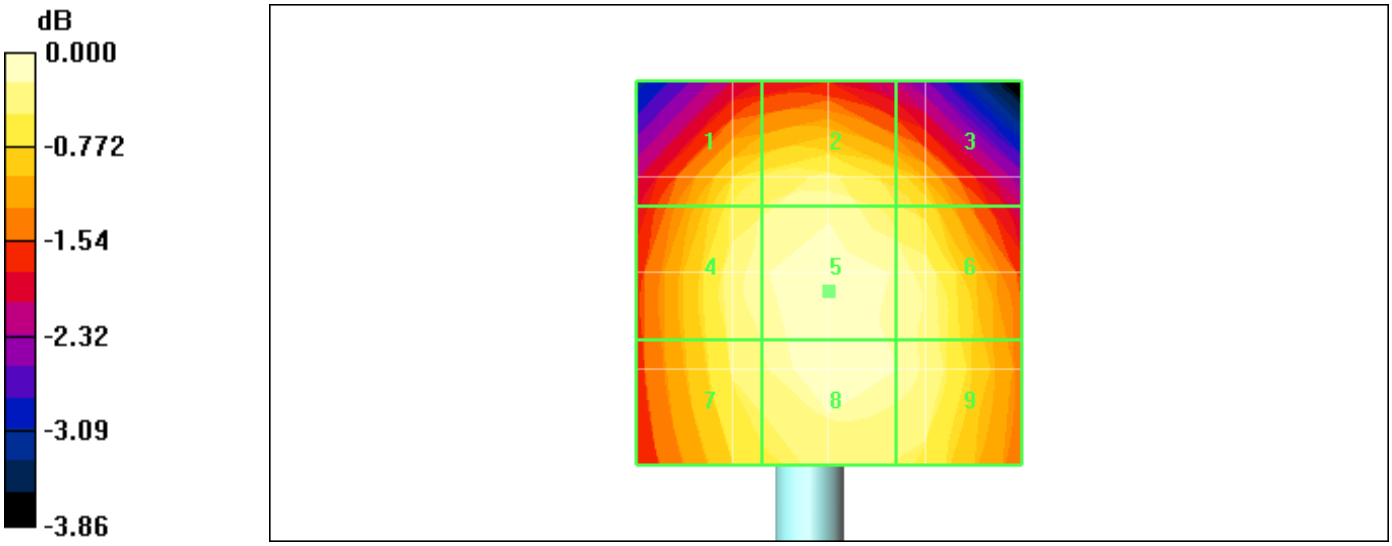
Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 72.4 V/m; Power Drift = 0.041 dB

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

Peak E-field in V/m

Grid 1 **78.7 M4**	Grid 2 **80.0 M4**	Grid 3 **77.9 M4**
Grid 4 **79.8 M4**	Grid 5 **81.1 M4**	Grid 6 **80.3 M4**
Grid 7 **78.8 M4**	Grid 8 **80.3 M4**	Grid 9 **79.7 M4**



0 dB = 81.1V/m

Date/Time: 1/19/2011 11:14:50 AM

Test Laboratory: RIM Testing Services

HAC_E_Dipole_835MHz_CDMA_mod

DUT: HAC-Dipole 835 MHz; Type: D835V3

Communication System: CDMA 800; 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

Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ER3DV6 - SN2285; ConvF(1, 1, 1); Calibrated: 3/8/2010
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 5/17/2010
- 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 2/Hearing Aid Compatibility Test (5x5x1):

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

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 43.0 V/m; Power Drift = -0.052 dB

Maximum value of Total (measured) = 48.4 V/m

E Scan - measurement distance from the probe sensor center to CD835 Dipole = 10mm 2/Hearing Aid Compatibility Test (41x41x1):

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

Maximum value of peak Total field = 48.7 V/m

Probe Modulation Factor = 1.00

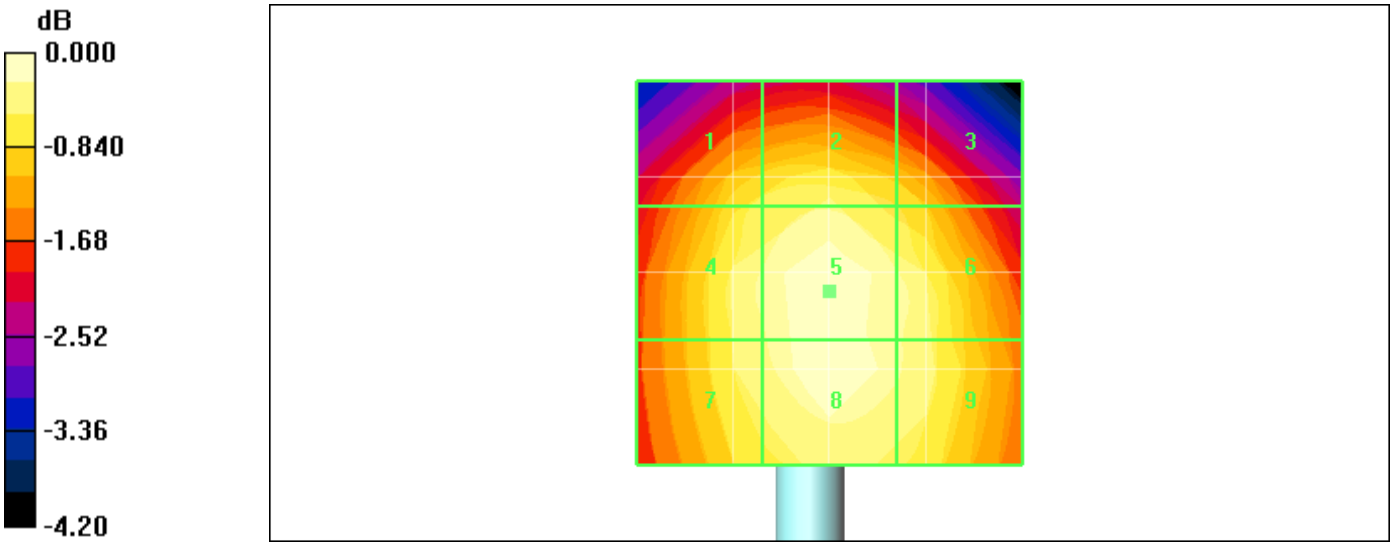
Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 43.0 V/m; Power Drift = -0.052 dB

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

Peak E-field in V/m

Grid 1 **46.0 M4**	Grid 2 **47.0 M4**	Grid 3 **45.7 M4**
Grid 4 **47.4 M4**	Grid 5 **48.7 M4**	Grid 6 **47.6 M4**
Grid 7 **47.0 M4**	Grid 8 **48.2 M4**	Grid 9 **47.3 M4**



0 dB = 48.7V/m

Date/Time: 1/19/2011 11:36:21 AM

Test Laboratory: RIM Testing Services

HAC_E_Dipole_835MHz_CW_CDMA_mod

DUT: HAC-Dipole 835 MHz; Type: D835V3

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

Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ER3DV6 - SN2285; ConvF(1, 1, 1); Calibrated: 3/8/2010
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 5/17/2010
- 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 2/Hearing Aid Compatibility Test (5x5x1):

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

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 44.6 V/m; Power Drift = -0.104 dB

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

E Scan - measurement distance from the probe sensor center to CD835 Dipole = 10mm 2/Hearing Aid Compatibility Test (41x41x1):

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

Maximum value of peak Total field = 49.2 V/m

Probe Modulation Factor = 1.00

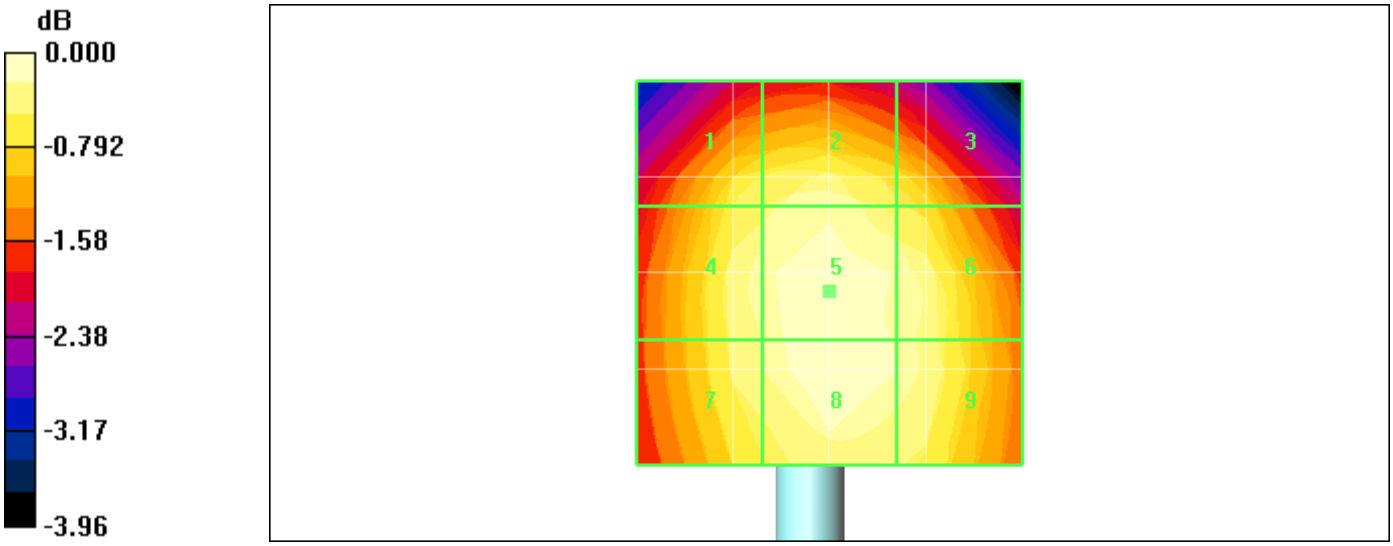
Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 44.6 V/m; Power Drift = -0.104 dB

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

Peak E-field in V/m

Grid 1 **47.6 M4**	Grid 2 **48.5 M4**	Grid 3 **47.3 M4**
Grid 4 **48.3 M4**	Grid 5 **49.2 M4**	Grid 6 **48.7 M4**
Grid 7 **47.8 M4**	Grid 8 **48.8 M4**	Grid 9 **48.4 M4**



0 dB = 49.2V/m

Date/Time: 1/19/2011 11:41:20 AM

Test Laboratory: RIM Testing Services

HAC_E_Dipole_835MHz_AM80%_CDMA

DUT: HAC-Dipole 835 MHz; Type: D835V3

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

Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ER3DV6 - SN2285; ConvF(1, 1, 1); Calibrated: 3/8/2010
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 5/17/2010
- 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 2/Hearing Aid Compatibility Test (5x5x1):

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

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 28.3 V/m; Power Drift = -0.092 dB

Maximum value of Total (measured) = 31.1 V/m

E Scan - measurement distance from the probe sensor center to CD835 Dipole = 10mm 2/Hearing Aid Compatibility Test (41x41x1):

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

Maximum value of peak Total field = 31.3 V/m

Probe Modulation Factor = 1.00

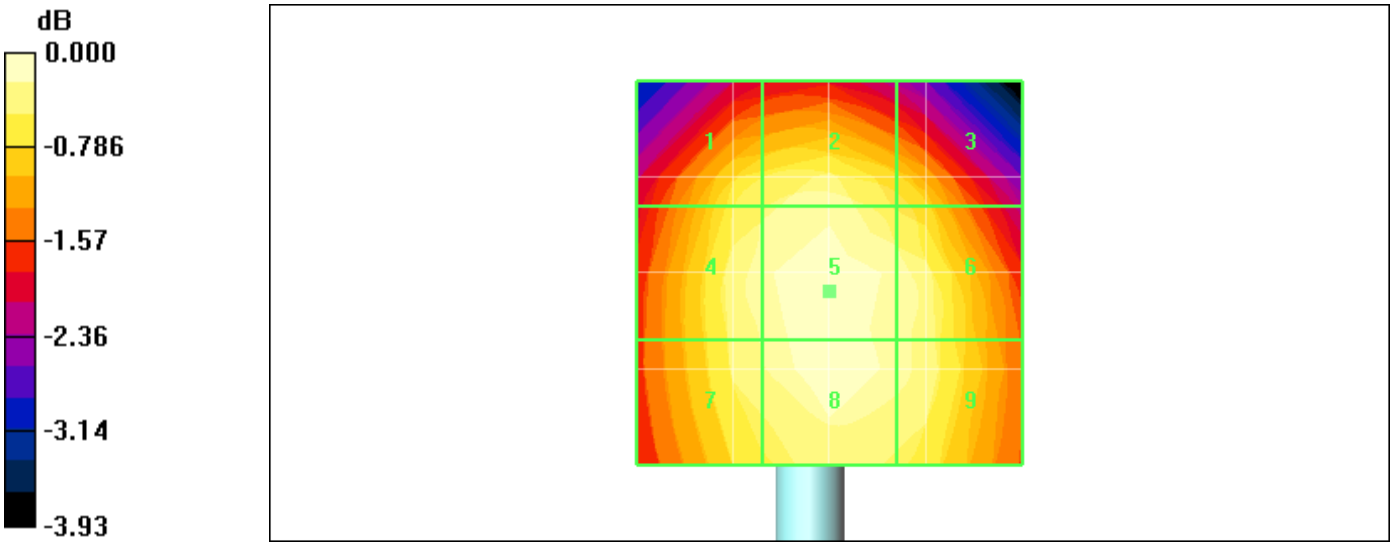
Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 28.3 V/m; Power Drift = -0.092 dB

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

Peak E-field in V/m

Grid 1 **30.3 M4**	Grid 2 **30.9 M4**	Grid 3 **29.9 M4**
Grid 4 **30.8 M4**	Grid 5 **31.3 M4**	Grid 6 **30.9 M4**
Grid 7 **30.4 M4**	Grid 8 **30.9 M4**	Grid 9 **30.7 M4**



0 dB = 31.3V/m

Date/Time: 1/12/2011 2:35:41 PM

Test Laboratory: RIM Testing Services

HAC_E_Dipole_1880MHz

DUT: HAC Dipole 1880 MHz; Type: CD1880V3

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

Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ER3DV6 - SN2285; ConvF(1, 1, 1); Calibrated: 3/8/2010
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 5/17/2010
- 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 = 128.4 V/m; Power Drift = -0.030 dB

Maximum value of Total (measured) = 126.3 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 = 127.8 V/m

Probe Modulation Factor = 1.00

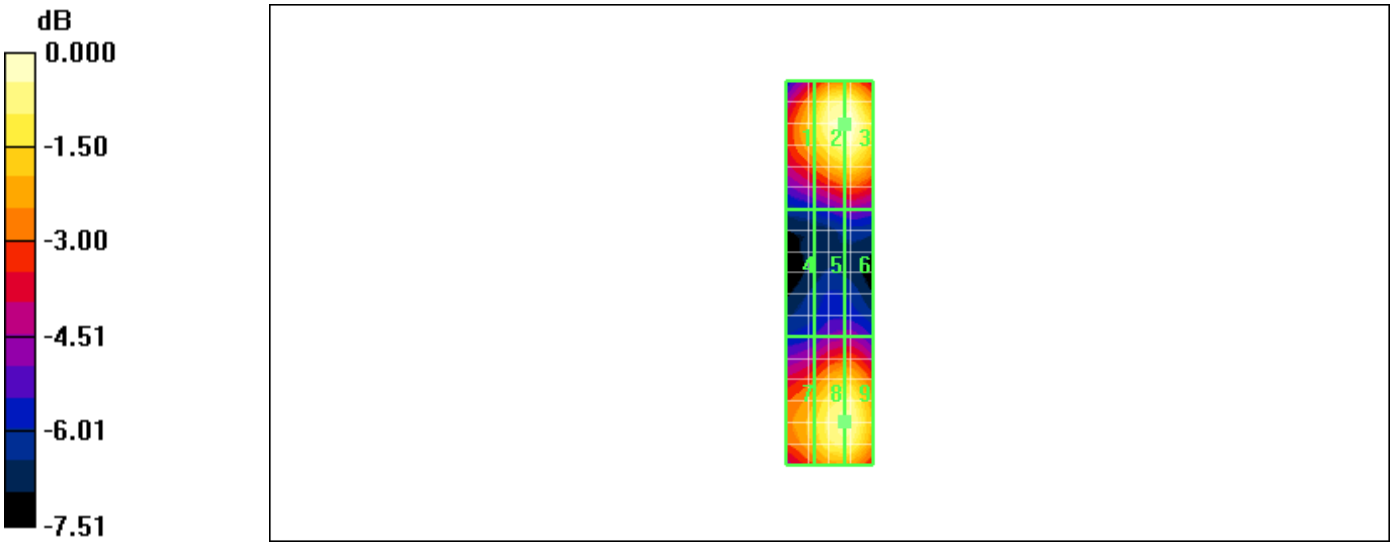
Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 128.4 V/m; Power Drift = -0.030 dB

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

Peak E-field in V/m

Grid 1 **109.1 M3**	Grid 2 **127.8 M2**	Grid 3 **127.8 M2**
Grid 4 **68.3 M3**	Grid 5 **75.8 M3**	Grid 6 **75.8 M3**
Grid 7 **106.5 M3**	Grid 8 **123.0 M2**	Grid 9 **123.0 M2**



0 dB = 127.8V/m

Date/Time: 1/19/2011 11:49:05 AM

Test Laboratory: RIM Testing Services

HAC_E_Dipole_1880MHz_GSM_mod

DUT: HAC Dipole 1880 MHz; Type: CD1880V3

Communication System: GSM 1900; 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

Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ER3DV6 - SN2285; ConvF(1, 1, 1); Calibrated: 3/8/2010
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 5/17/2010
- 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 = 30.3 V/m; Power Drift = -0.038 dB

Maximum value of Total (measured) = 29.7 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 = 30.2 V/m

Probe Modulation Factor = 1.00

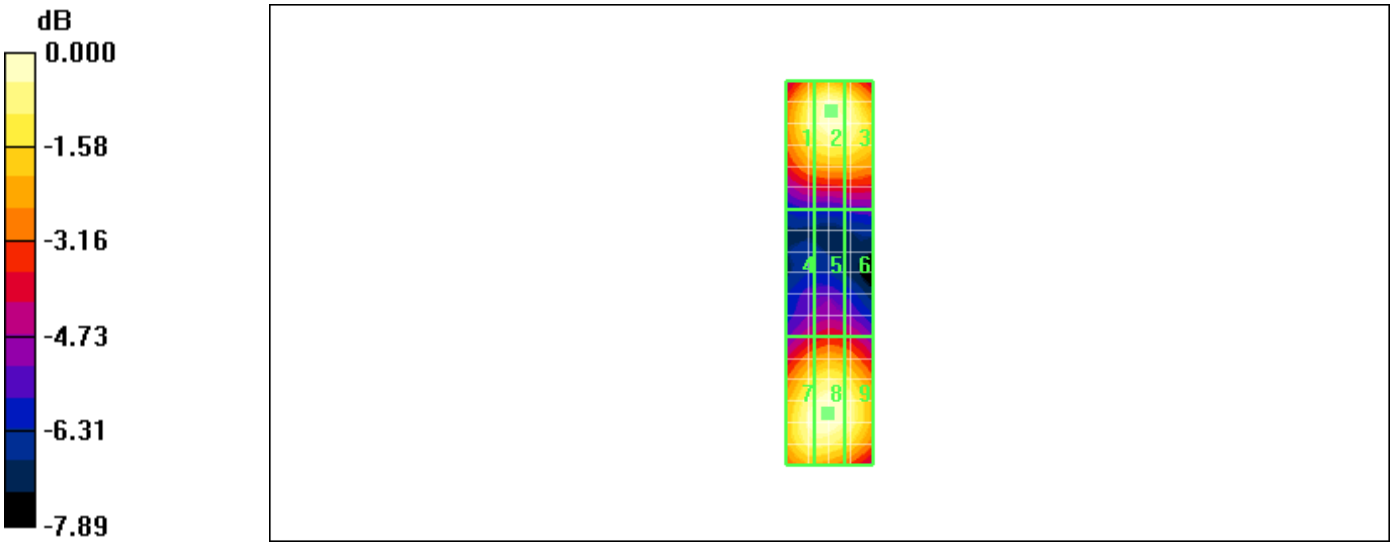
Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 30.3 V/m; Power Drift = -0.038 dB

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

Peak E-field in V/m

Grid 1 **28.7 M4**	Grid 2 **30.2 M4**	Grid 3 **29.5 M4**
Grid 4 **19.0 M4**	Grid 5 **19.9 M4**	Grid 6 **19.4 M4**
Grid 7 **29.6 M4**	Grid 8 **30.0 M4**	Grid 9 **29.0 M4**



0 dB = 30.2V/m

Date/Time: 1/19/2011 12:06:18 PM

Test Laboratory: RIM Testing Services

HAC_E_Dipole_1880MHz_CW_GSM_mod

DUT: HAC Dipole 1880 MHz; Type: CD1880V3

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

Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ER3DV6 - SN2285; ConvF(1, 1, 1); Calibrated: 3/8/2010
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 5/17/2010
- 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 = 86.9 V/m; Power Drift = 0.001 dB

Maximum value of Total (measured) = 86.8 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 = 87.6 V/m

Probe Modulation Factor = 1.00

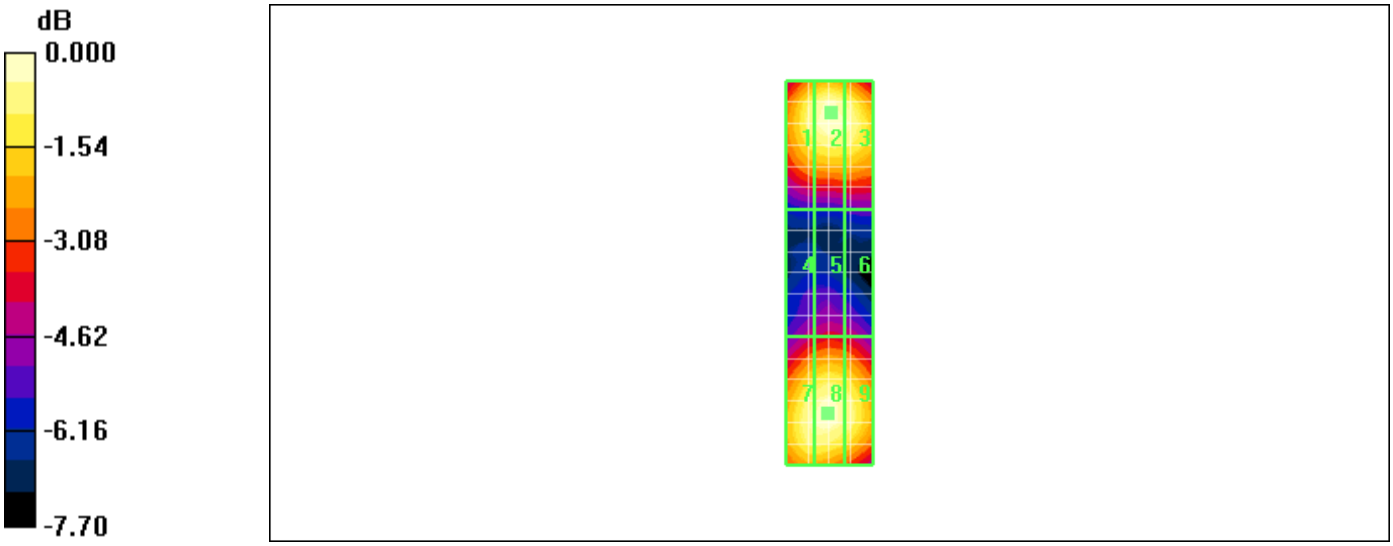
Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 86.9 V/m; Power Drift = 0.001 dB

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

Peak E-field in V/m

Grid 1 **83.8 M3**	Grid 2 **87.6 M3**	Grid 3 **85.3 M3**
Grid 4 **54.9 M4**	Grid 5 **56.9 M4**	Grid 6 **55.8 M4**
Grid 7 **84.5 M3**	Grid 8 **85.4 M3**	Grid 9 **83.1 M3**



0 dB = 87.6V/m

Date/Time: 1/19/2011 12:14:44 PM

Test Laboratory: RIM Testing Services

HAC_E_Dipole_1880MHz_AM80%_GSM

DUT: HAC Dipole 1880 MHz; Type: CD1880V3

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

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

Phantom section: RF Section

Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ER3DV6 - SN2285; ConvF(1, 1, 1); Calibrated: 3/8/2010
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 5/17/2010
- 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 2/Hearing Aid Compatibility Test (5x5x1):

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

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 55.5 V/m; Power Drift = 0.016 dB

Maximum value of Total (measured) = 44.8 V/m

E Scan - measurement distance from the probe sensor center to CD1880 Dipole = 10mm 2/Hearing Aid Compatibility Test (41x41x1):

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

Maximum value of peak Total field = 45.2 V/m

Probe Modulation Factor = 1.00

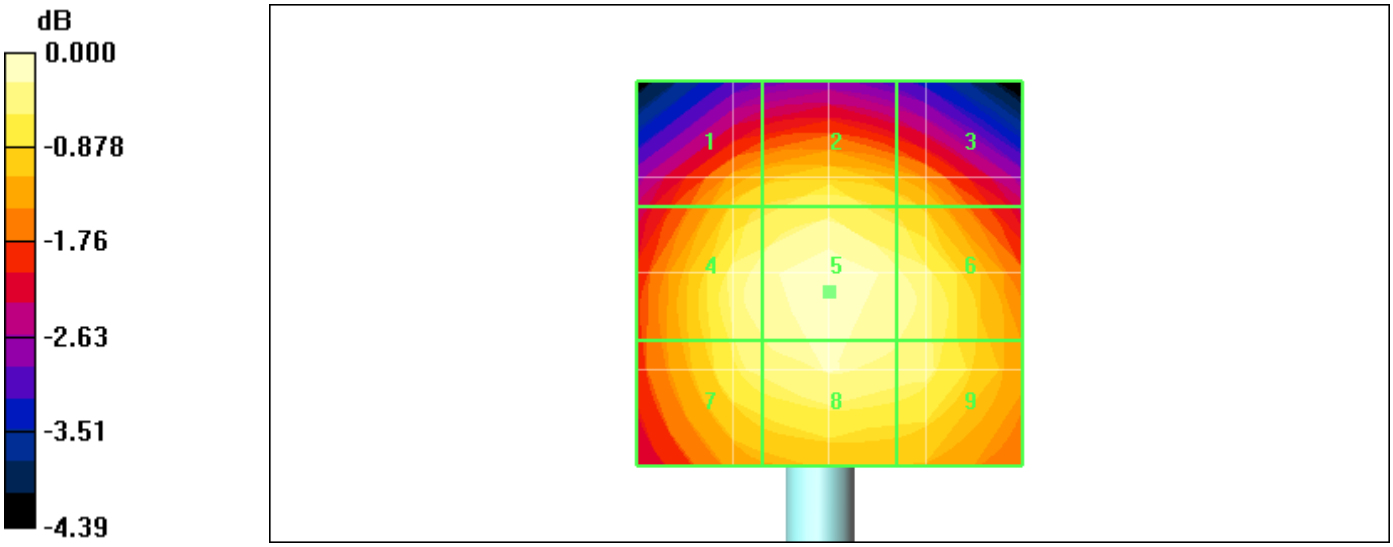
Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 55.5 V/m; Power Drift = 0.016 dB

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

Peak E-field in V/m

Grid 1 **42.3 M4**	Grid 2 **43.1 M4**	Grid 3 **41.8 M4**
Grid 4 **44.4 M4**	Grid 5 **45.2 M4**	Grid 6 **44.3 M4**
Grid 7 **43.6 M4**	Grid 8 **44.4 M4**	Grid 9 **43.8 M4**



0 dB = 45.2V/m

Date/Time: 1/19/2011 12:29:07 PM

Test Laboratory: RIM Testing Services

HAC_E_Dipole_1880MHz_CDMA_mod

DUT: HAC Dipole 1880 MHz; Type: CD1880V3

Communication System: CDMA 1900; 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

Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ER3DV6 - SN2285; ConvF(1, 1, 1); Calibrated: 3/8/2010
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 5/17/2010
- 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 = 43.0 V/m; Power Drift = -0.010 dB

Maximum value of Total (measured) = 41.9 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 = 42.2 V/m

Probe Modulation Factor = 1.00

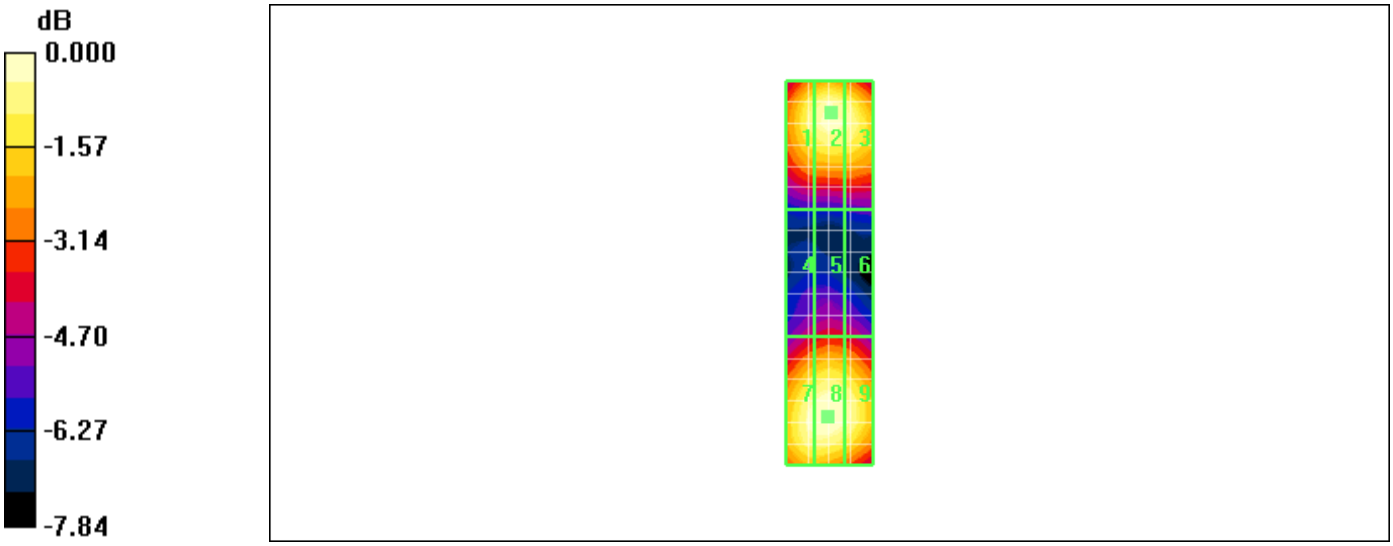
Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 43.0 V/m; Power Drift = -0.010 dB

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

Peak E-field in V/m

Grid 1 **39.9 M4**	Grid 2 **41.6 M4**	Grid 3 **40.7 M4**
Grid 4 **26.7 M4**	Grid 5 **27.8 M4**	Grid 6 **27.2 M4**
Grid 7 **41.5 M4**	Grid 8 **42.2 M4**	Grid 9 **41.0 M4**



0 dB = 42.2V/m

Date/Time: 1/19/2011 1:40:16 PM

Test Laboratory: RIM Testing Services

HAC_E_Dipole_1880MHz_CW_CDMA_mod

DUT: HAC Dipole 1880 MHz; Type: CD1880V3

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

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

Phantom section: RF Section

Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ER3DV6 - SN2285; ConvF(1, 1, 1); Calibrated: 3/8/2010
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 5/17/2010
- 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 = 42.2 V/m; Power Drift = -0.002 dB

Maximum value of Total (measured) = 41.8 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 = 42.1 V/m

Probe Modulation Factor = 1.00

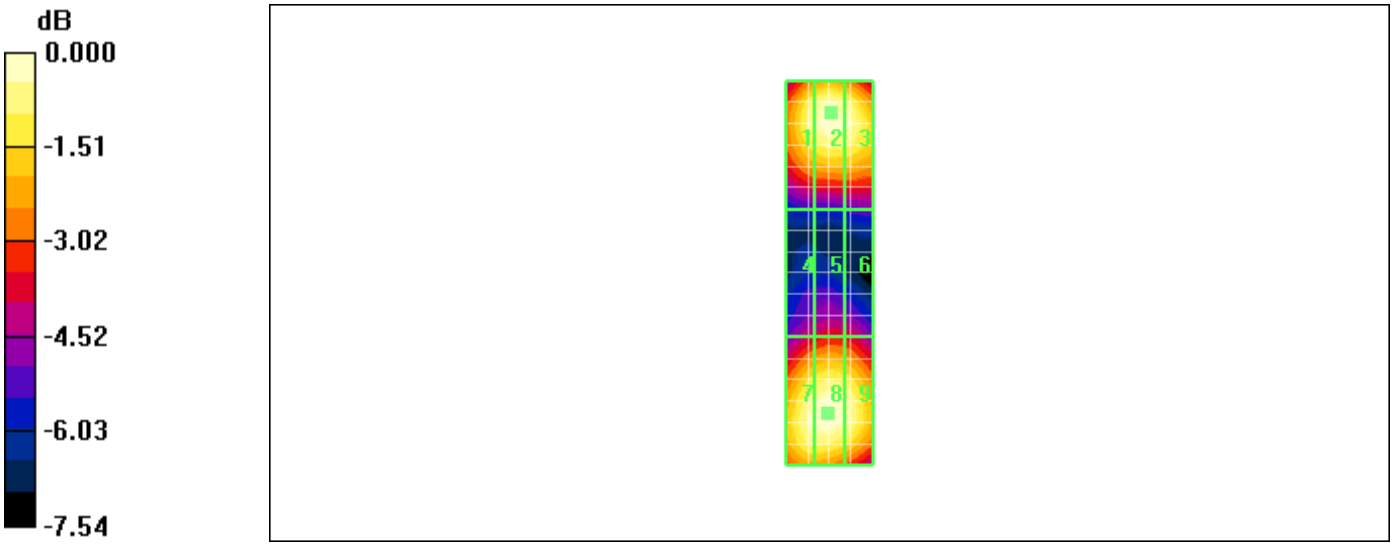
Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 42.2 V/m; Power Drift = -0.002 dB

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

Peak E-field in V/m

Grid 1 **40.1 M4**	Grid 2 **42.1 M4**	Grid 3 **41.2 M4**
Grid 4 **27.2 M4**	Grid 5 **28.2 M4**	Grid 6 **27.9 M4**
Grid 7 **41.1 M4**	Grid 8 **41.6 M4**	Grid 9 **40.8 M4**



0 dB = 42.1V/m

Date/Time: 1/19/2011 1:45:51 PM

Test Laboratory: RIM Testing Services

HAC_E_Dipole_1880MHz_AM80%_CDMA

DUT: HAC Dipole 1880 MHz; Type: CD1880V3

Communication System: AM 80%; 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

Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ER3DV6 - SN2285; ConvF(1, 1, 1); Calibrated: 3/8/2010
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 5/17/2010
- 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 2/Hearing Aid Compatibility Test (5x5x1):

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

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 27.0 V/m; Power Drift = 0.044 dB

Maximum value of Total (measured) = 21.7 V/m

E Scan - measurement distance from the probe sensor center to CD1880 Dipole = 10mm 2/Hearing Aid Compatibility Test (41x41x1):

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

Maximum value of peak Total field = 22.0 V/m

Probe Modulation Factor = 1.00

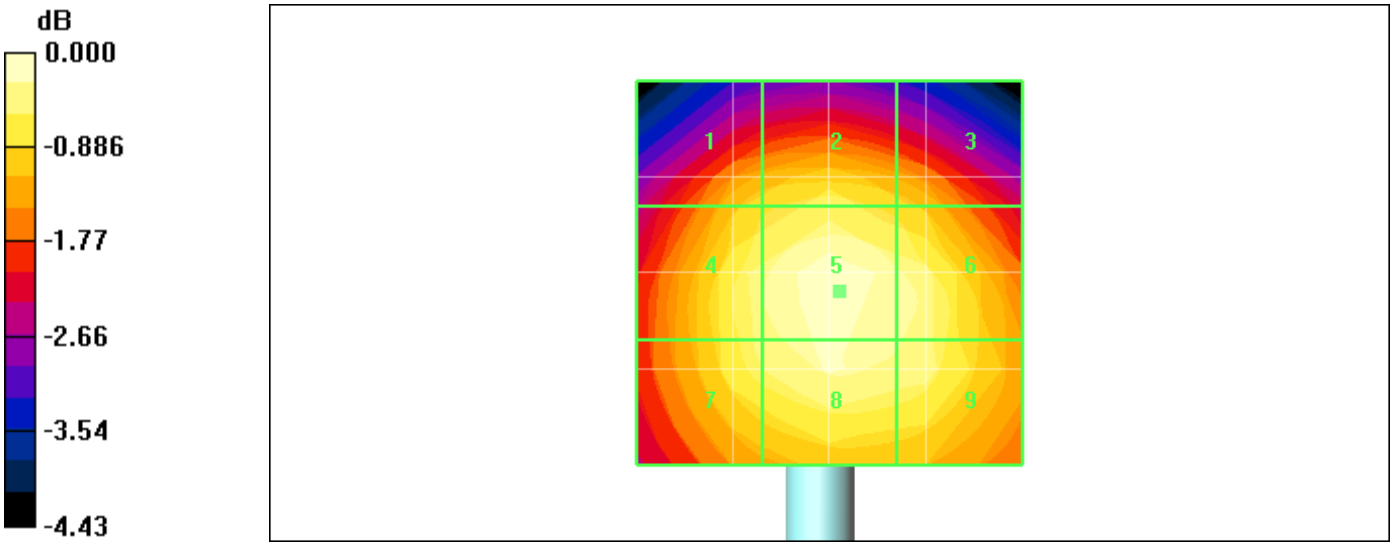
Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 27.0 V/m; Power Drift = 0.044 dB

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

Peak E-field in V/m

Grid 1 **20.4 M4**	Grid 2 **20.9 M4**	Grid 3 **20.3 M4**
Grid 4 **21.3 M4**	Grid 5 **22.0 M4**	Grid 6 **21.5 M4**
Grid 7 **21.0 M4**	Grid 8 **21.6 M4**	Grid 9 **21.3 M4**



0 dB = 22.0V/m

Date/Time: 1/12/2011 3:55:25 PM

Test Laboratory: RIM Testing Services

HAC_H_Dipole_835MHz

DUT: HAC-Dipole 835 MHz; Type: D835V3

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

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

Phantom section: RF Section

Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: H3DV6 - SN6168; ; Calibrated: 3/12/2010
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 5/17/2010
- 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 = 0.497 A/m; Power Drift = -0.014 dB

Maximum value of Total (measured) = 0.466 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 = 0.467 A/m

Probe Modulation Factor = 1.00

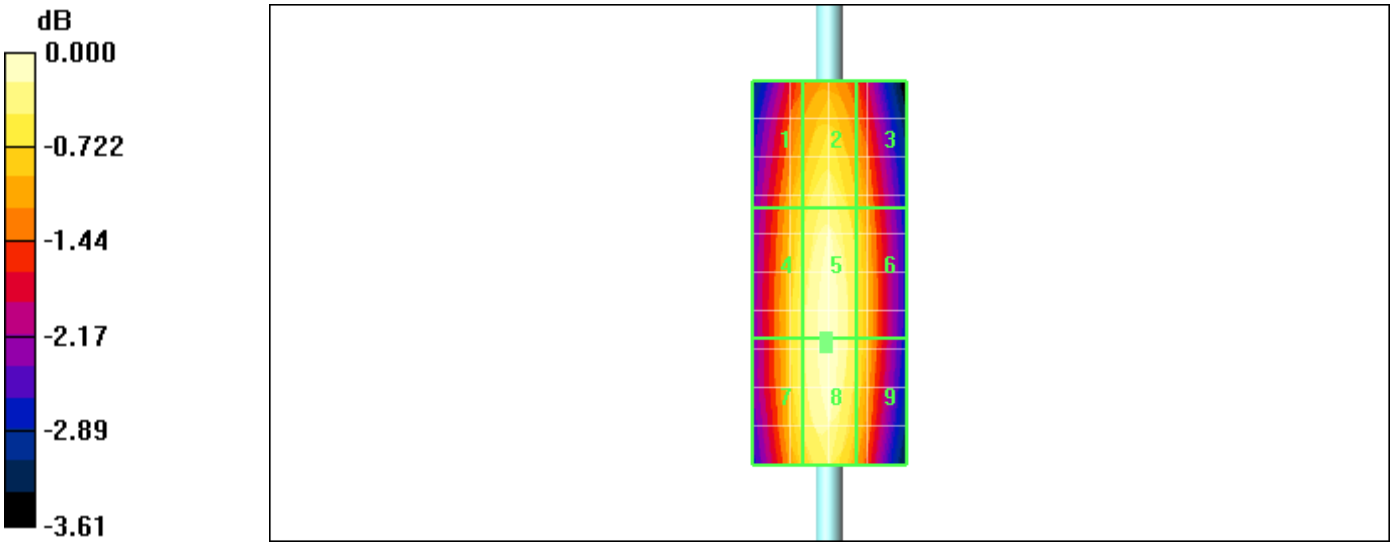
Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.497 A/m; Power Drift = -0.014 dB

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

Peak H-field in A/m

Grid 1 **0.437 M4**	Grid 2 **0.450 M4**	Grid 3 **0.432 M4**
Grid 4 **0.450 M4**	Grid 5 **0.467 M4**	Grid 6 **0.444 M4**
Grid 7 **0.450 M4**	Grid 8 **0.467 M4**	Grid 9 **0.443 M4**



0 dB = 0.467A/m

Date/Time: 1/19/2011 3:04:45 PM

Test Laboratory: RIM Testing Services

HAC_H_Dipole_835MHz_GSM_mod

DUT: HAC-Dipole 835 MHz; Type: D835V3

Communication System: GSM 850; 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

Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: H3DV6 - SN6168; ; Calibrated: 3/12/2010
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 5/17/2010
- 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 = 0.174 A/m; Power Drift = -0.012 dB

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

Probe Modulation Factor = 1.00

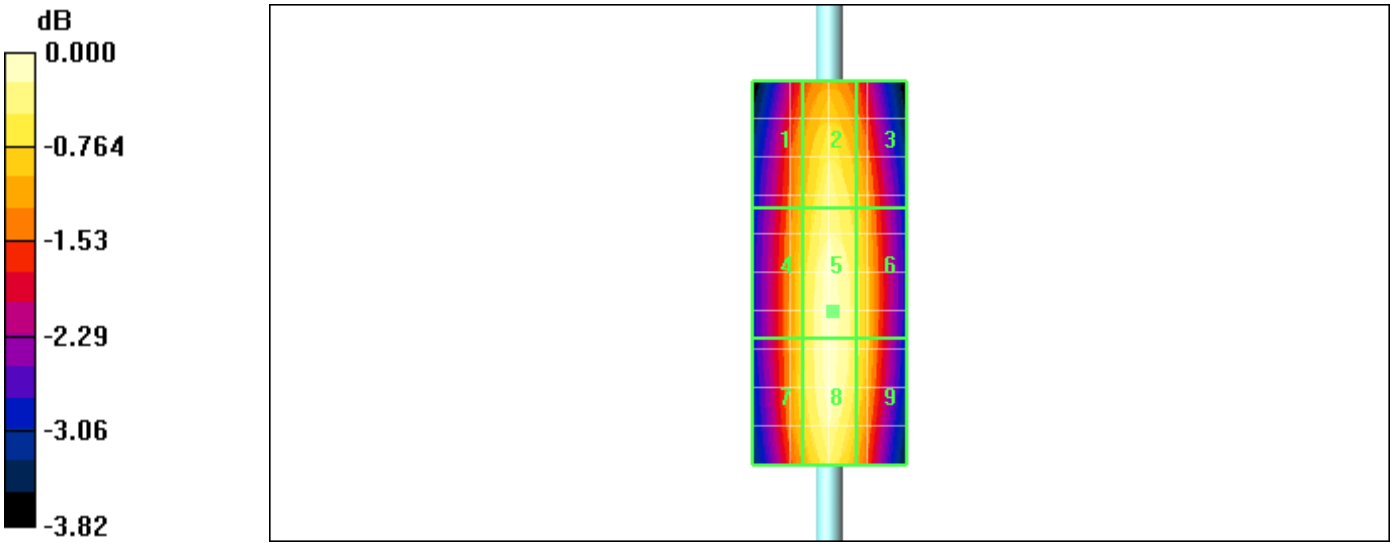
Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.174 A/m; Power Drift = -0.012 dB

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

Peak H-field in A/m

Grid 1 **0.148 M4**	Grid 2 **0.158 M4**	Grid 3 **0.152 M4**
Grid 4 **0.153 M4**	Grid 5 **0.164 M4**	Grid 6 **0.157 M4**
Grid 7 **0.153 M4**	Grid 8 **0.163 M4**	Grid 9 **0.157 M4**



0 dB = 0.164A/m

Date/Time: 1/19/2011 3:29:53 PM

Test Laboratory: RIM Testing Services

HAC_H_Dipole_835MHz_CW_GSM_mod

DUT: HAC-Dipole 835 MHz; Type: D835V3

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

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

Phantom section: RF Section

Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: H3DV6 - SN6168; ; Calibrated: 3/12/2010
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 5/17/2010
- 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 = 0.483 A/m; Power Drift = -0.026 dB

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

Probe Modulation Factor = 1.00

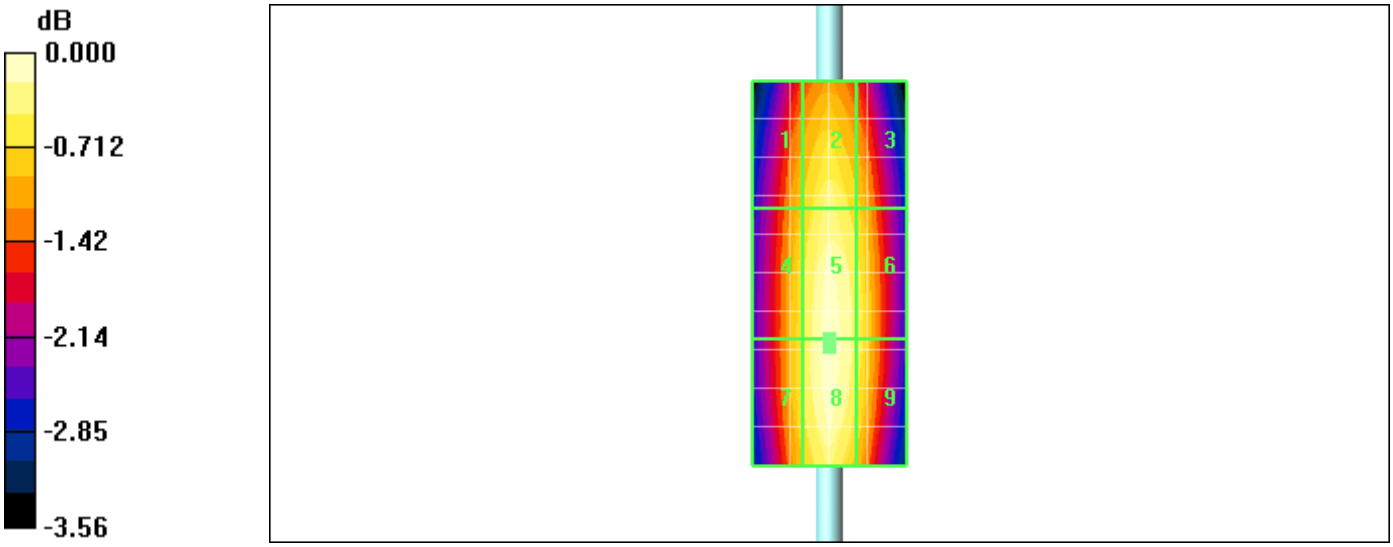
Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.483 A/m; Power Drift = -0.026 dB

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

Peak H-field in A/m

Grid 1 **0.422 M4**	Grid 2 **0.441 M4**	Grid 3 **0.426 M4**
Grid 4 **0.433 M4**	Grid 5 **0.458 M4**	Grid 6 **0.441 M4**
Grid 7 **0.435 M4**	Grid 8 **0.458 M4**	Grid 9 **0.441 M4**



0 dB = 0.458A/m

Date/Time: 1/19/2011 3:50:53 PM

Test Laboratory: RIM Testing Services

HAC_H_Dipole_835MHz_AM80%_GSM_mod

DUT: HAC-Dipole 835 MHz; Type: D835V3

Communication System: AM 80%; Frequency: 835 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 - SN6168; ; Calibrated: 3/12/2010
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 5/17/2010
- 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 = 0.306 A/m; Power Drift = -0.043 dB

Maximum value of Total (measured) = 0.289 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 = 0.289 A/m

Probe Modulation Factor = 1.00

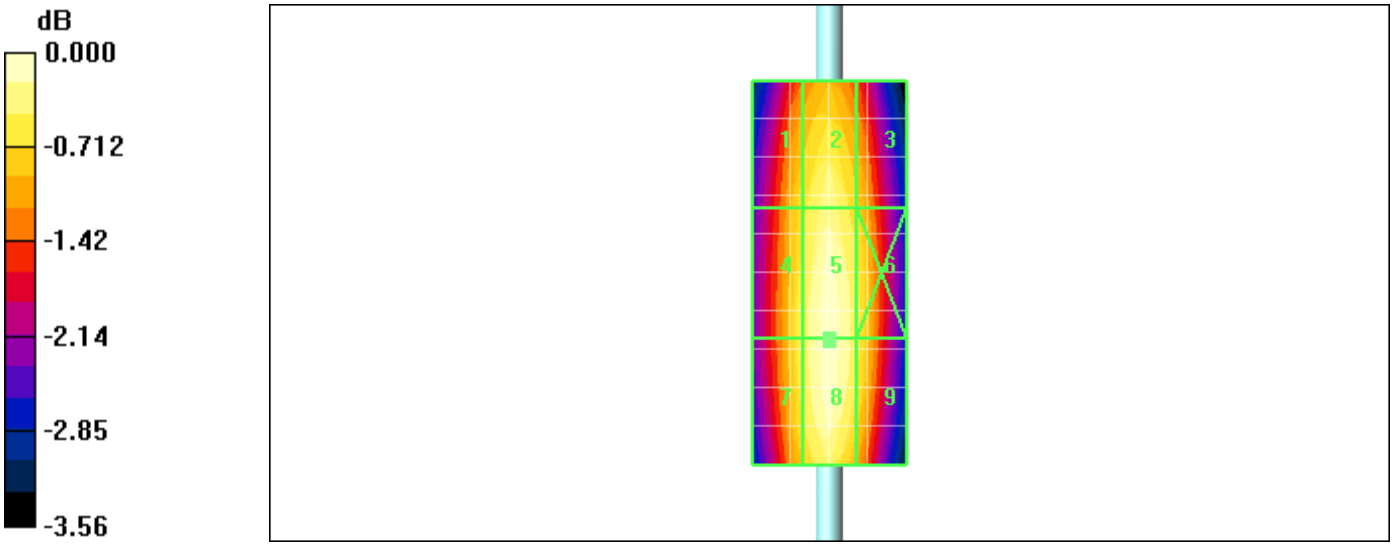
Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.306 A/m; Power Drift = -0.043 dB

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

Peak H-field in A/m

Grid 1 **0.270 M4**	Grid 2 **0.280 M4**	Grid 3 **0.268 M4**
Grid 4 **0.276 M4**	Grid 5 **0.289 M4**	Grid 6 **0.277 M4**
Grid 7 **0.276 M4**	Grid 8 **0.289 M4**	Grid 9 **0.277 M4**



0 dB = 0.289A/m

Date/Time: 1/19/2011 3:13:22 PM

Test Laboratory: RIM Testing Services

HAC_H_Dipole_835MHz_CDMA_mod

DUT: HAC-Dipole 835 MHz; Type: D835V3

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

Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: H3DV6 - SN6168; ; Calibrated: 3/12/2010
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 5/17/2010
- 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 = 0.179 A/m; Power Drift = -0.011 dB

Maximum value of Total (measured) = 0.169 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 = 0.170 A/m

Probe Modulation Factor = 1.00

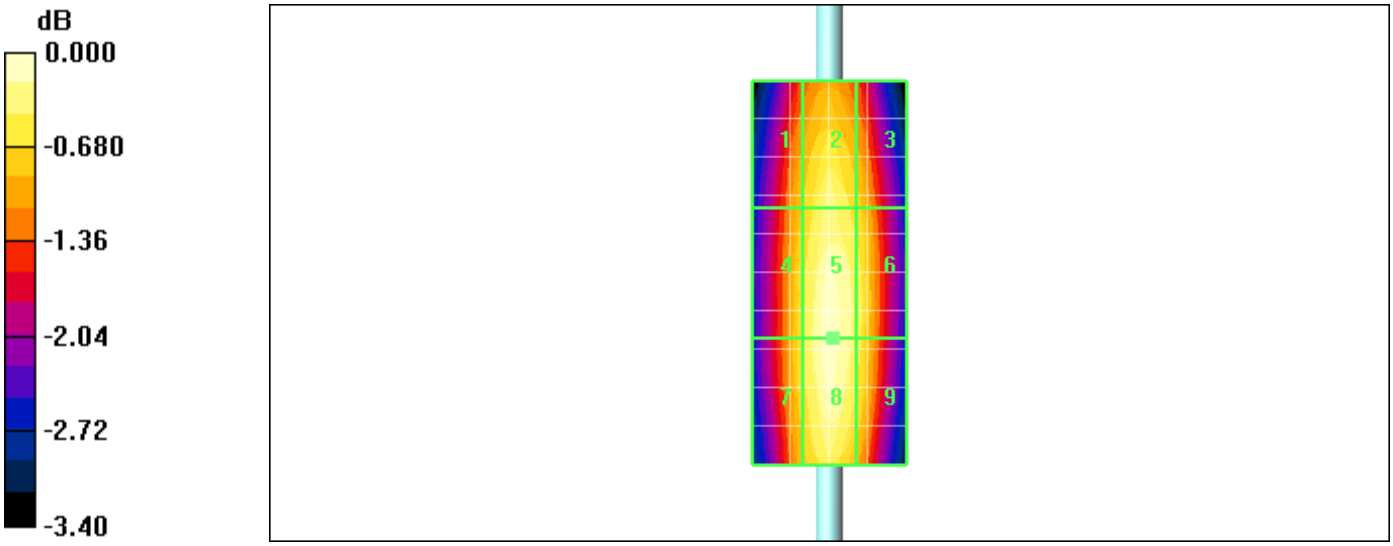
Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.179 A/m; Power Drift = -0.011 dB

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

Peak H-field in A/m

Grid 1 **0.157 M4**	Grid 2 **0.164 M4**	Grid 3 **0.159 M4**
Grid 4 **0.161 M4**	Grid 5 **0.170 M4**	Grid 6 **0.164 M4**
Grid 7 **0.161 M4**	Grid 8 **0.170 M4**	Grid 9 **0.164 M4**



0 dB = 0.170A/m

Date/Time: 1/19/2011 3:58:56 PM

Test Laboratory: RIM Testing Services

HAC_H_Dipole_835MHz_CW_CDMA_mod

DUT: HAC-Dipole 835 MHz; Type: D835V3

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

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

Phantom section: RF Section

Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: H3DV6 - SN6168; ; Calibrated: 3/12/2010
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 5/17/2010
- 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 = 0.181 A/m; Power Drift = -0.057 dB

Maximum value of Total (measured) = 0.172 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 = 0.172 A/m

Probe Modulation Factor = 1.00

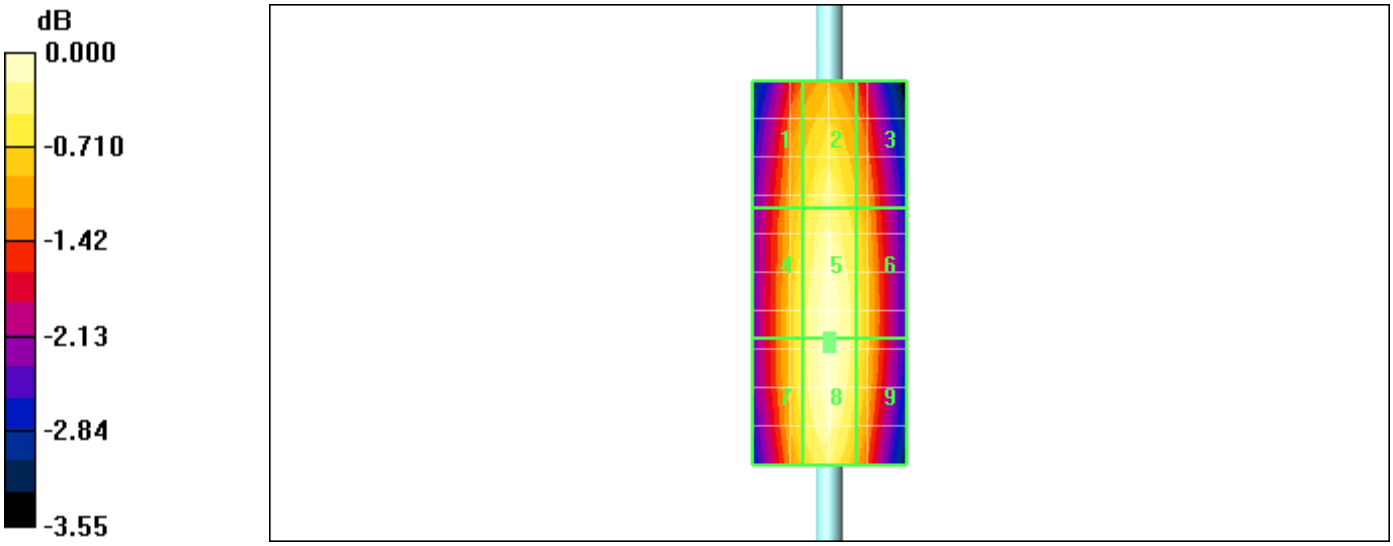
Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.181 A/m; Power Drift = -0.057 dB

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

Peak H-field in A/m

Grid 1 **0.161 M4**	Grid 2 **0.166 M4**	Grid 3 **0.160 M4**
Grid 4 **0.165 M4**	Grid 5 **0.172 M4**	Grid 6 **0.165 M4**
Grid 7 **0.165 M4**	Grid 8 **0.172 M4**	Grid 9 **0.165 M4**



0 dB = 0.172A/m

Date/Time: 1/19/2011 3:54:05 PM

Test Laboratory: RIM Testing Services

HAC_H_Dipole_835MHz_AM80%_CDMA_mod

DUT: HAC-Dipole 835 MHz; Type: D835V3

Communication System: AM 80%; 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

Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: H3DV6 - SN6168; ; Calibrated: 3/12/2010
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 5/17/2010
- 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 = 0.116 A/m; Power Drift = -0.014 dB

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

Probe Modulation Factor = 1.00

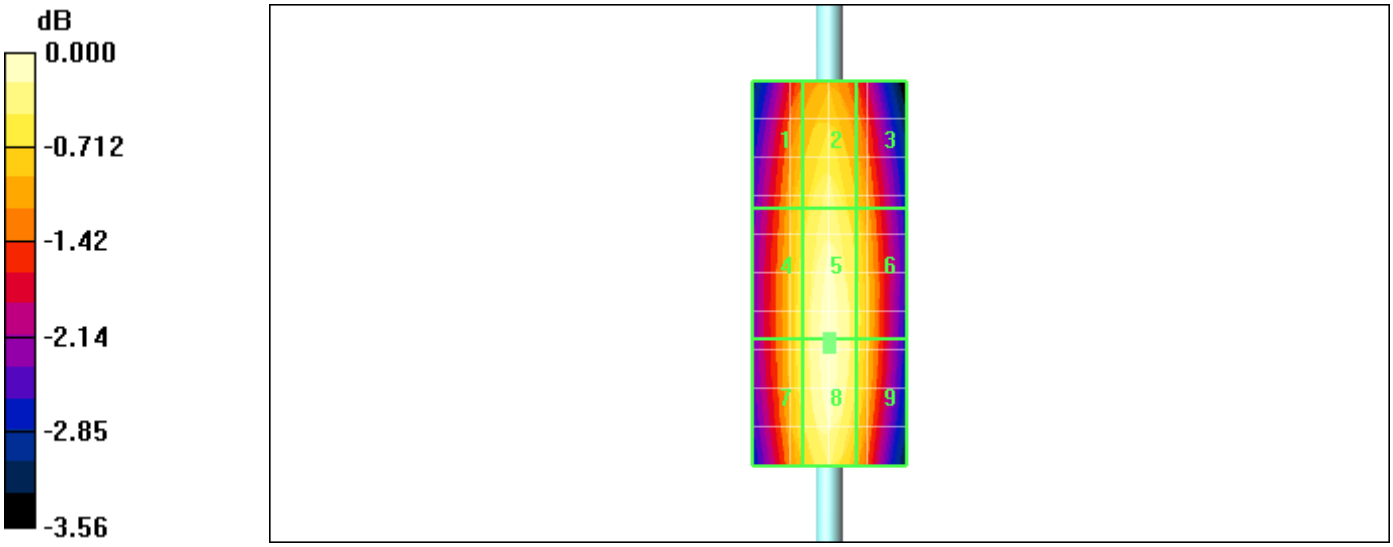
Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.116 A/m; Power Drift = -0.014 dB

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

Peak H-field in A/m

Grid 1 **0.103 M4**	Grid 2 **0.106 M4**	Grid 3 **0.102 M4**
Grid 4 **0.105 M4**	Grid 5 **0.110 M4**	Grid 6 **0.105 M4**
Grid 7 **0.105 M4**	Grid 8 **0.110 M4**	Grid 9 **0.105 M4**



0 dB = 0.110A/m

Date/Time: 1/13/2011 2:49:30 PM

Test Laboratory: RIM Testing Services

HAC_H_Dipole_1880MHz_

DUT: HAC Dipole 1880 MHz; Type: CD1880V3

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

Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: H3DV6 - SN6168; ; Calibrated: 3/12/2010
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 5/17/2010
- 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 = 0.478 A/m; Power Drift = 0.007 dB

Maximum value of Total (measured) = 0.449 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 = 0.450 A/m

Probe Modulation Factor = 1.00

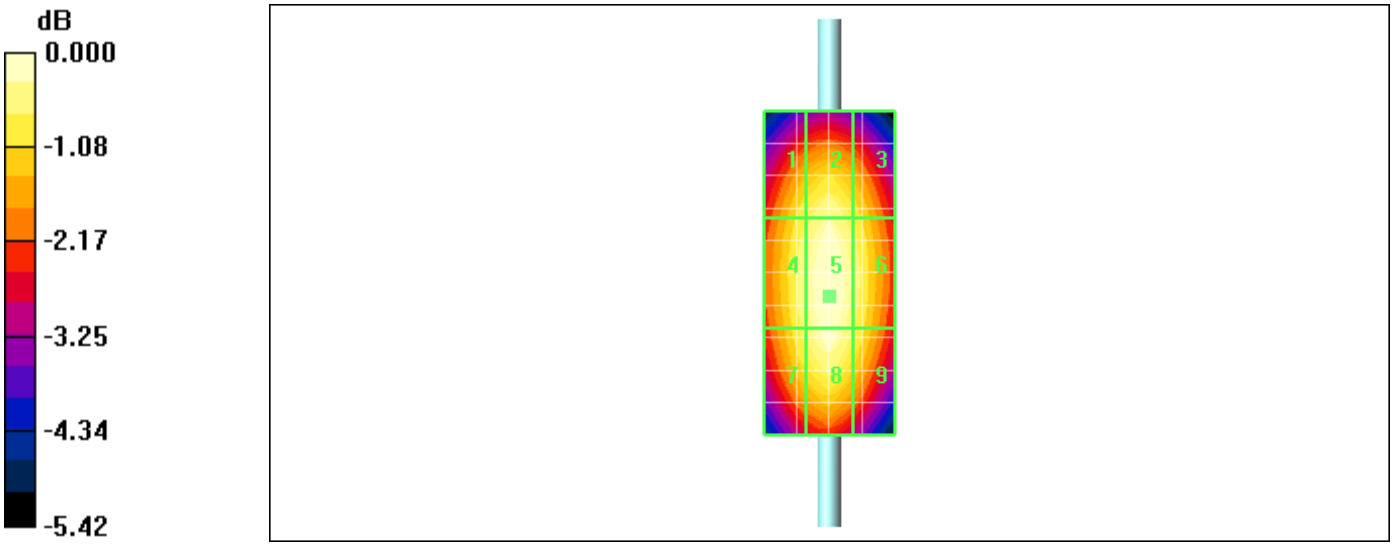
Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.478 A/m; Power Drift = 0.007 dB

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

Peak H-field in A/m

Grid 1 **0.416 M2**	Grid 2 **0.432 M2**	Grid 3 **0.413 M2**
Grid 4 **0.433 M2**	Grid 5 **0.450 M2**	Grid 6 **0.430 M2**
Grid 7 **0.425 M2**	Grid 8 **0.444 M2**	Grid 9 **0.422 M2**



0 dB = 0.450A/m

Date/Time: 1/19/2011 2:23:57 PM

Test Laboratory: RIM Testing Services

HAC_H_Dipole_1880MHz_GSM_mod

DUT: HAC Dipole 1880 MHz; Type: CD1880V3

Communication System: GSM 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

Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: H3DV6 - SN6168; ; Calibrated: 3/12/2010
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 5/17/2010
- 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 (5x9x1):

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

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.131 A/m; Power Drift = -0.040 dB

Maximum value of Total (measured) = 0.122 A/m

H Scan - measurement distance from the probe sensor center to CD1880 Dipole = 10mm/Hearing Aid Compatibility Test (41x81x1):

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

Maximum value of peak Total field = 0.122 A/m

Probe Modulation Factor = 1.00

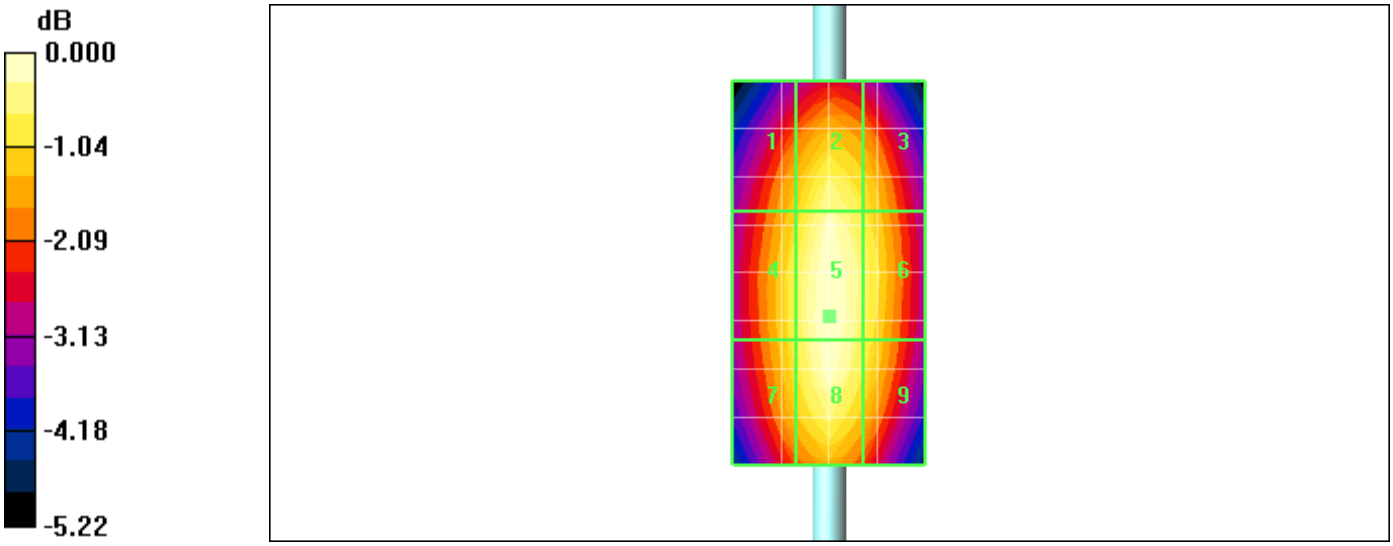
Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.131 A/m; Power Drift = -0.040 dB

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

Peak H-field in A/m

Grid 1 **0.108 M4**	Grid 2 **0.117 M4**	Grid 3 **0.111 M4**
Grid 4 **0.113 M4**	Grid 5 **0.122 M4**	Grid 6 **0.116 M4**
Grid 7 **0.112 M4**	Grid 8 **0.121 M4**	Grid 9 **0.114 M4**



0 dB = 0.122A/m

Date/Time: 1/19/2011 2:01:09 PM

Test Laboratory: RIM Testing Services

HAC_H_Dipole_1880MHz_CW_GSM_mod

DUT: HAC Dipole 1880 MHz; Type: CD1880V3

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

Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: H3DV6 - SN6168; ; Calibrated: 3/12/2010
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 5/17/2010
- 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 (5x5x1):

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

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.325 A/m; Power Drift = -0.041 dB

Maximum value of Total (measured) = 0.306 A/m

H Scan - measurement distance from the probe sensor center to CD1880 Dipole = 10mm/Hearing Aid Compatibility Test (41x41x1):

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

Maximum value of peak Total field = 0.308 A/m

Probe Modulation Factor = 1.00

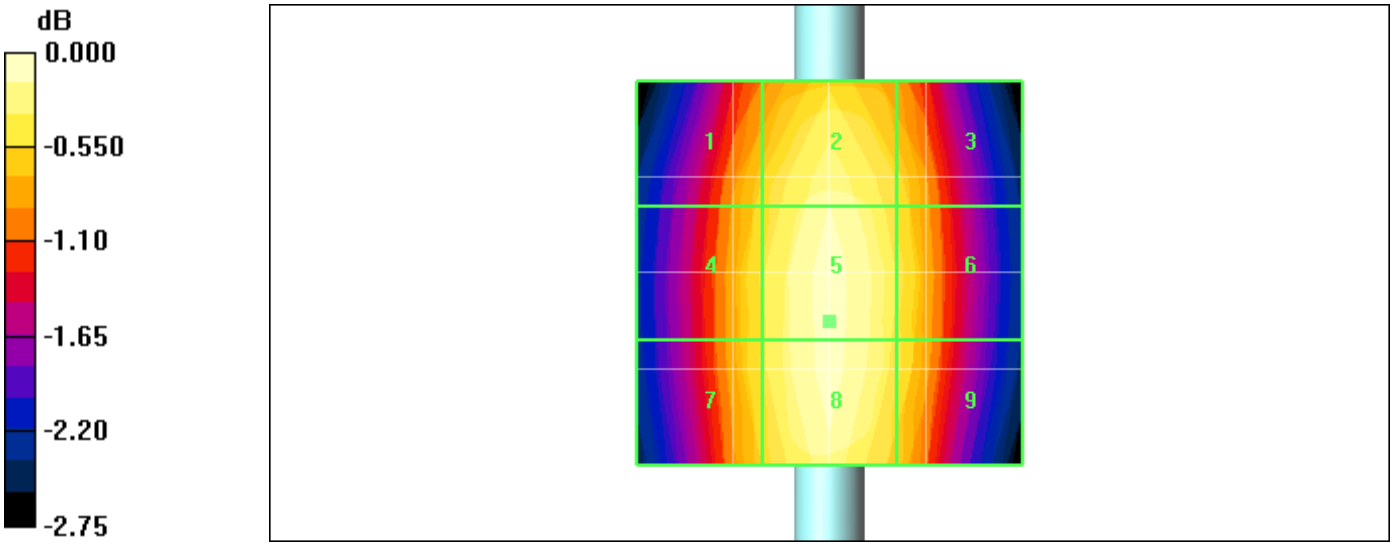
Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.325 A/m; Power Drift = -0.041 dB

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

Peak H-field in A/m

Grid 1 **0.293 M3**	Grid 2 **0.304 M3**	Grid 3 **0.296 M3**
Grid 4 **0.296 M3**	Grid 5 **0.308 M3**	Grid 6 **0.299 M3**
Grid 7 **0.296 M3**	Grid 8 **0.307 M3**	Grid 9 **0.298 M3**



0 dB = 0.308A/m

Date/Time: 1/19/2011 2:05:06 PM

Test Laboratory: RIM Testing Services

HAC_H_Dipole_1880MHz_AM80%_GSM_mod

DUT: HAC Dipole 1880 MHz; Type: CD1880V3

Communication System: AM 80%; 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 - SN6168; ; Calibrated: 3/12/2010
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 5/17/2010
- 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 (5x9x1):

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

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.211 A/m; Power Drift = -0.008 dB

Maximum value of Total (measured) = 0.198 A/m

H Scan - measurement distance from the probe sensor center to CD1880 Dipole = 10mm/Hearing Aid Compatibility Test (41x81x1):

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

Maximum value of peak Total field = 0.199 A/m

Probe Modulation Factor = 1.00

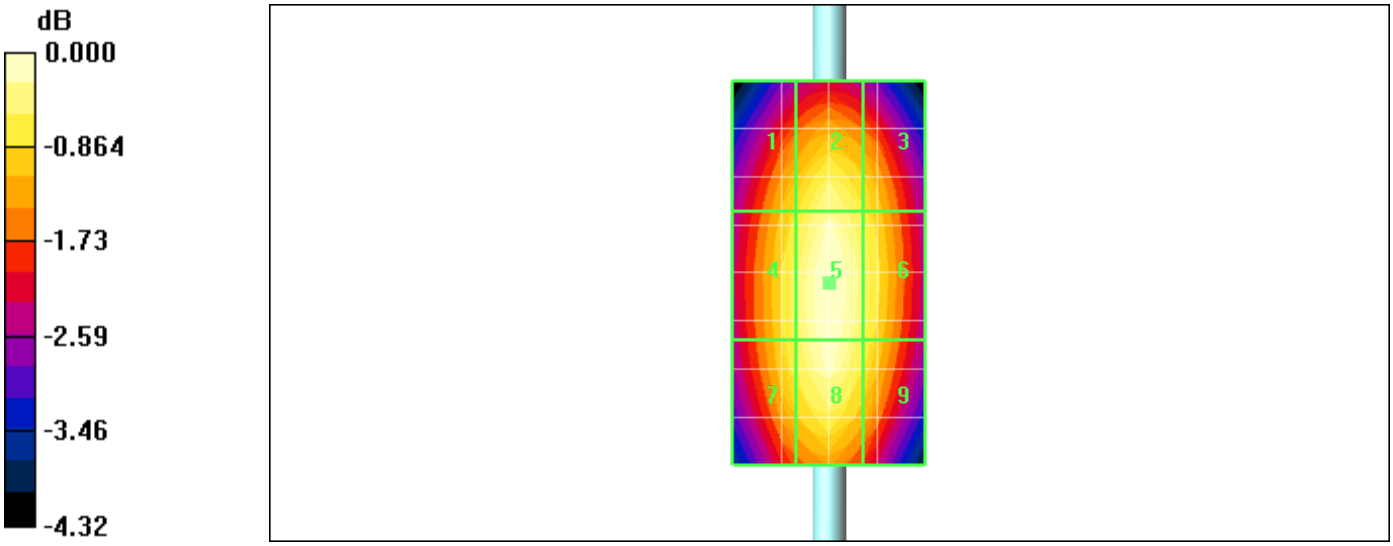
Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.211 A/m; Power Drift = -0.008 dB

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

Peak H-field in A/m

Grid 1 **0.182 M4**	Grid 2 **0.191 M3**	Grid 3 **0.185 M4**
Grid 4 **0.189 M4**	Grid 5 **0.199 M3**	Grid 6 **0.190 M3**
Grid 7 **0.187 M4**	Grid 8 **0.196 M3**	Grid 9 **0.187 M4**



0 dB = 0.199A/m

Date/Time: 1/19/2011 2:40:36 PM

Test Laboratory: RIM Testing Services

HAC_H_Dipole_1880MHz_CDMA_mod

DUT: HAC Dipole 1880 MHz; Type: CD1880V3

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 - SN6168; ; Calibrated: 3/12/2010
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 5/17/2010
- 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 (5x9x1):

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 = 0.002 dB

Maximum value of Total (measured) = 0.102 A/m

H Scan - measurement distance from the probe sensor center to CD1880 Dipole = 10mm/Hearing Aid Compatibility Test (41x81x1):

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

Maximum value of peak Total field = 0.103 A/m

Probe Modulation Factor = 1.00

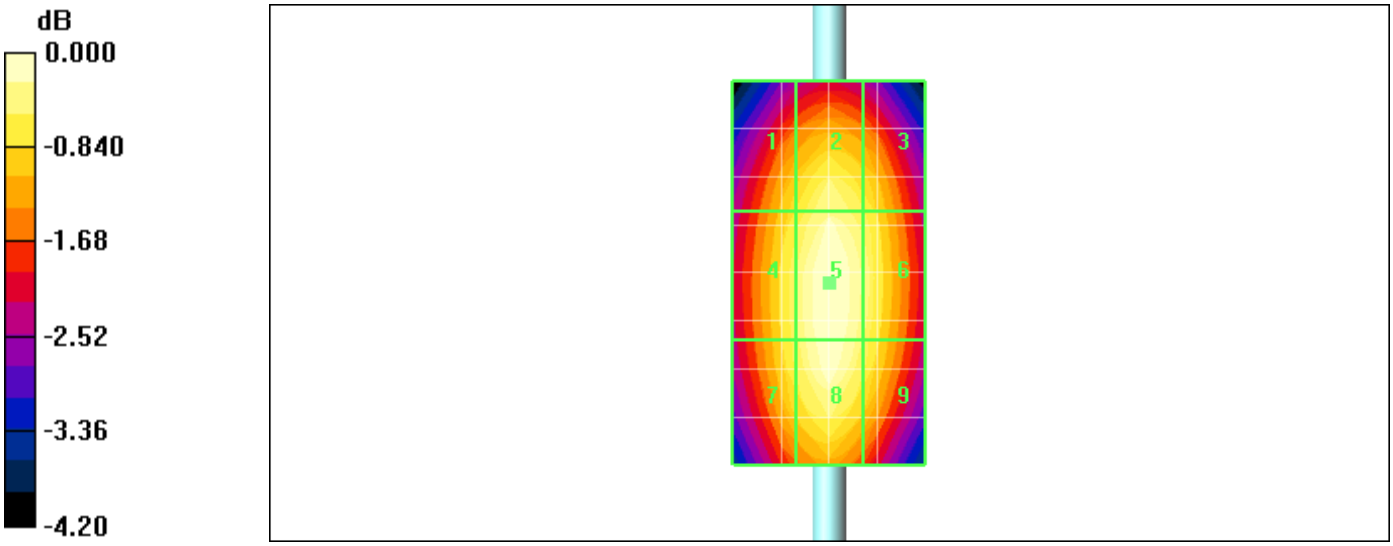
Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.109 A/m; Power Drift = 0.002 dB

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

Peak H-field in A/m

Grid 1 **0.093 M4**	Grid 2 **0.101 M4**	Grid 3 **0.097 M4**
Grid 4 **0.100 M4**	Grid 5 **0.103 M4**	Grid 6 **0.102 M4**
Grid 7 **0.098 M4**	Grid 8 **0.102 M4**	Grid 9 **0.097 M4**



0 dB = 0.111A/m

Date/Time: 1/19/2011 2:51:37 PM

Test Laboratory: RIM Testing Services

HAC_H_Dipole_1880MHz_CW_CDMA_mod

DUT: HAC Dipole 1880 MHz; Type: CD1880V3

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

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

Phantom section: RF Section

Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: H3DV6 - SN6168; ; Calibrated: 3/12/2010
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 5/17/2010
- 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 (5x9x1):

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

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.117 A/m; Power Drift = 0.014 dB

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

H Scan - measurement distance from the probe sensor center to CD1880 Dipole = 10mm/Hearing Aid Compatibility Test (41x81x1):

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

Maximum value of peak Total field = 0.111 A/m

Probe Modulation Factor = 1.00

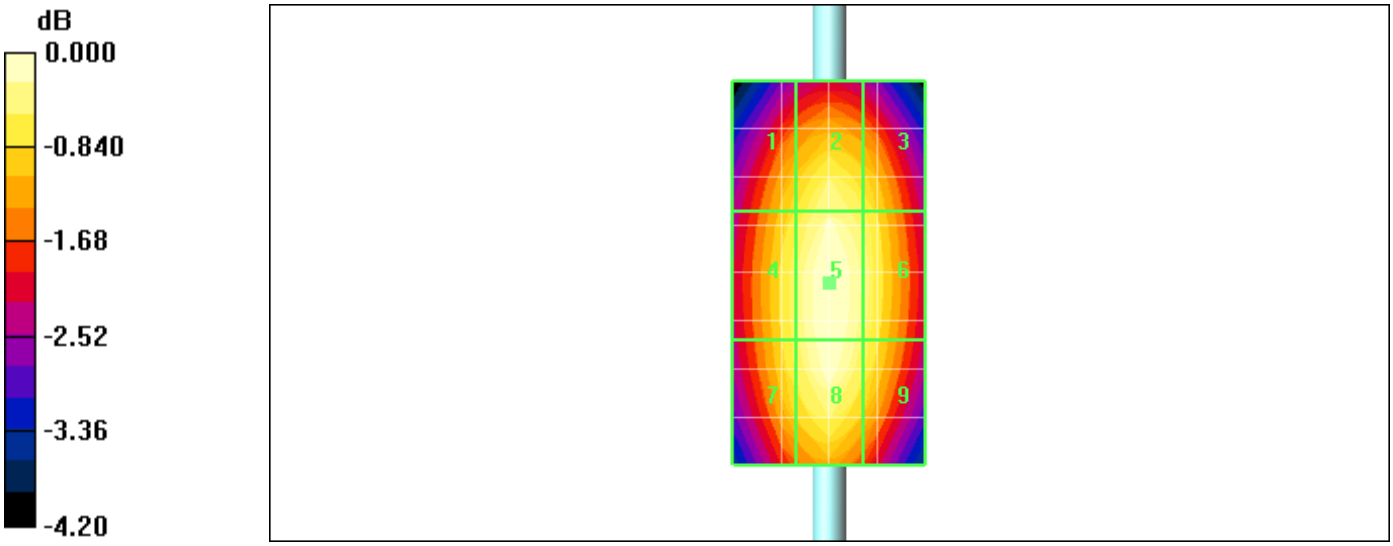
Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.117 A/m; Power Drift = 0.014 dB

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

Peak H-field in A/m

Grid 1 **0.102 M4**	Grid 2 **0.107 M4**	Grid 3 **0.104 M4**
Grid 4 **0.106 M4**	Grid 5 **0.111 M4**	Grid 6 **0.107 M4**
Grid 7 **0.105 M4**	Grid 8 **0.110 M4**	Grid 9 **0.106 M4**



0 dB = 0.111A/m

Date/Time: 1/19/2011 2:54:42 PM

Test Laboratory: RIM Testing Services

HAC_H_Dipole_1880MHz_AM80%_CDMA_mod

DUT: HAC Dipole 1880 MHz; Type: CD1880V3

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: RF Section

Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: H3DV6 - SN6168; ; Calibrated: 3/12/2010
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 5/17/2010
- 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 (5x9x1):

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

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.084 A/m; Power Drift = 0.004 dB

Maximum value of Total (measured) = 0.080 A/m

H Scan - measurement distance from the probe sensor center to CD1880 Dipole = 10mm/Hearing Aid Compatibility Test (41x81x1):

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

Maximum value of peak Total field = 0.080 A/m

Probe Modulation Factor = 1.00

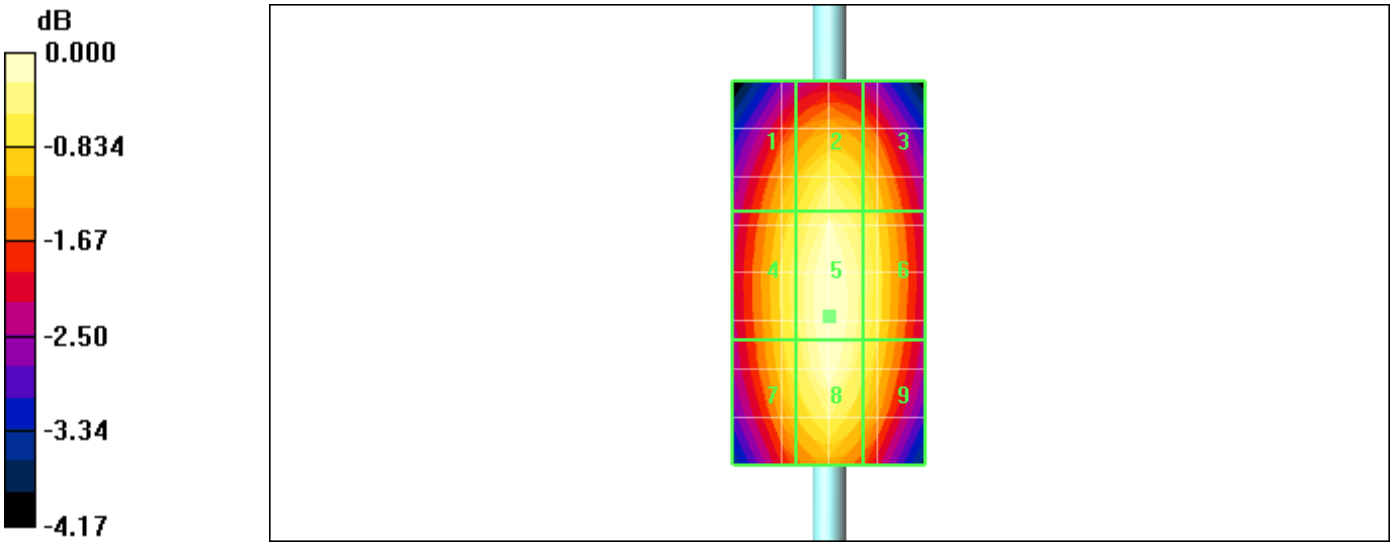
Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.084 A/m; Power Drift = 0.004 dB

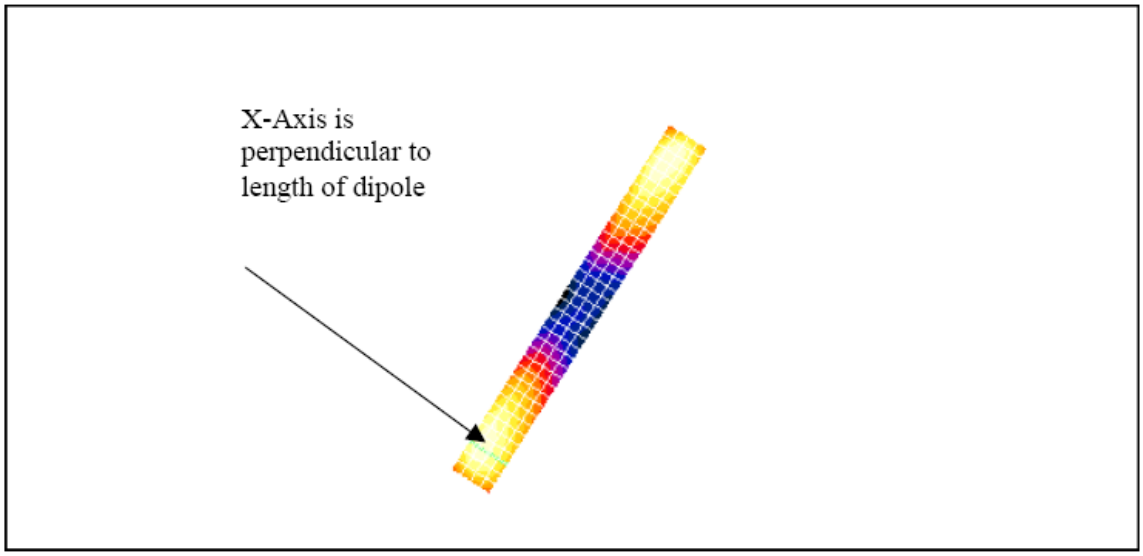
Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak H-field in A/m

Grid 1 **0.074 M4**	Grid 2 **0.077 M4**	Grid 3 **0.075 M4**
Grid 4 **0.076 M4**	Grid 5 **0.080 M4**	Grid 6 **0.077 M4**
Grid 7 **0.076 M4**	Grid 8 **0.079 M4**	Grid 9 **0.076 M4**



0 dB = 0.080A/m



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

Comparison of 5mm and 2mm step sizes

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

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

Lab: RIM Testing Services (RTS)

Dipole Validation 1880 MHz_E-Field 07_14_05

DUT: HAC Dipole 1880 MHz; Type: CD1880V3

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

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

E Scan 10mm above CD 1880 MHz/Hearing Aid Compatibility Test (5x19x1):
Measurement grid: dx=5mm, dy=5mm
Maximum value of Total (measured) = 134.8 V/m

E Scan 10mm above CD 1880 MHz/Hearing Aid Compatibility Test (41x181x1):
Measurement grid: dx=5mm, dy=5mm
Maximum value of Total field (slot averaged) = 131.0 V/m
Hearing Aid Near-Field Category: M2 (AWF 0 dB)

E in V/m (Time averaged)

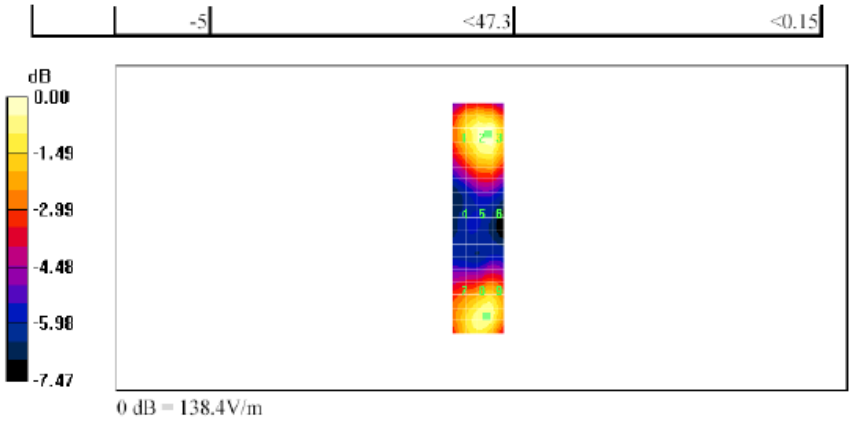
Grid 1 **123.2**	Grid 2 **138.1**	Grid 3 **138.4**
Grid 4 **80.9**	Grid 5 **92.3**	Grid 6 **92.2**
Grid 7 **119.8**	Grid 8 **131.0**	Grid 9 **130.7**

E in V/m (Slot averaged)

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

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

Date/Time: 14/07/2005 11:35:24 AM 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: σ = 0 mho/m, ε_r = 1; ρ = 1000 kg/m^3
Phantom section: H Device Section

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

E Scan 10mm above CD 1880 MHz/Hearing Aid Compatibility Test (11x46x1):
Measurement grid: dx=2mm, dy=2mm
Maximum value of Total (measured) = 138.0 V/m

E Scan 10mm above CD 1880 MHz/Hearing Aid Compatibility Test (101x451x1):
Measurement grid: dx=2mm, dy=2mm
Maximum value of Total field (slot averaged) = 131.2 V/m
Hearing Aid Near-Field Category: M2 (AWF 0 dB)

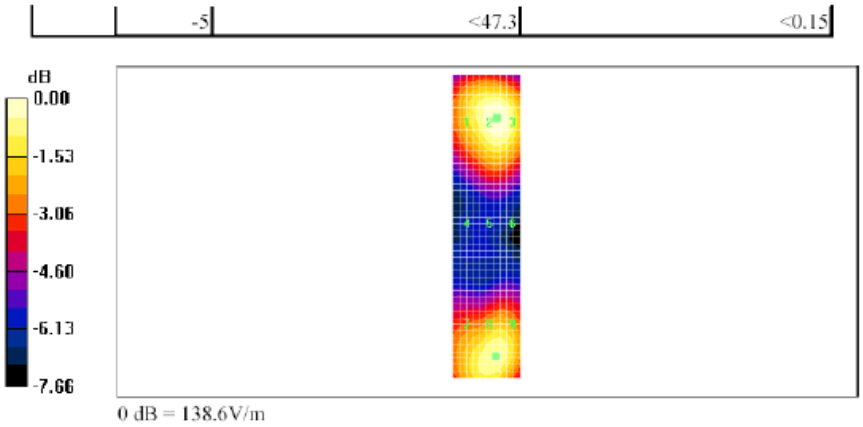
E in V/m (Time averaged)

Grid 1	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

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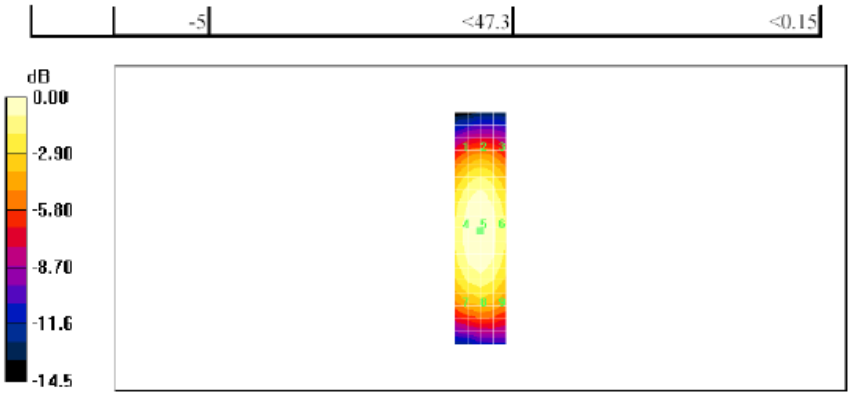


0 dB = 0.406A/m

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

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

Lab: RIM Testing Services (RTS)

HAC_H_Dipole_CW 1880_2 mm step_07_14_05

DUT: HAC Dipole 1880 MHz; Type: CD1880V3

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

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

H Scan 10mm above CD 1880 MHz/Hearing Aid Compatibility Test (11x46x1):
Measurement grid: dx=2mm, dy=2mm
Maximum value of Total (measured) = 0.406 A/m

H Scan 10mm above CD 1880 MHz/Hearing Aid Compatibility Test (101x451x1):
Measurement grid: dx=2mm, dy=2mm
Maximum value of Total field (slot averaged) = 0.406 A/m
Hearing Aid Near-Field Category: M2 (AWF 0 dB)

H in A/m (Time averaged)

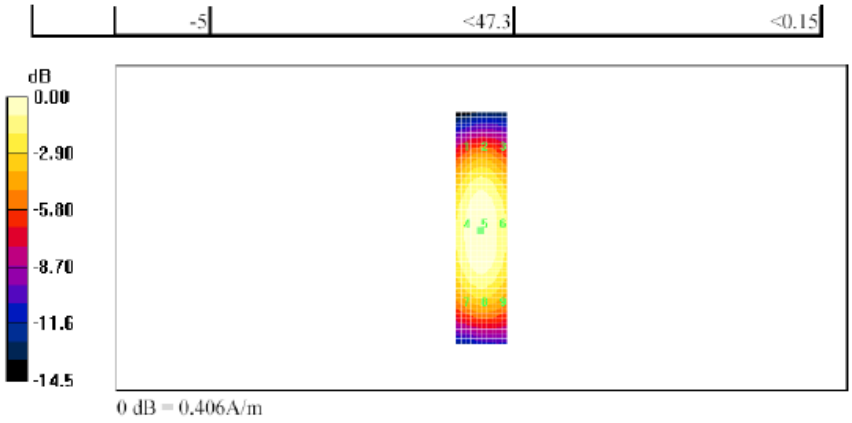
Grid 1 **0.347**	Grid 2 **0.361**	Grid 3 **0.348**
Grid 4 **0.394**	Grid 5 **0.406**	Grid 6 **0.391**
Grid 7 **0.367**	Grid 8 **0.380**	Grid 9 **0.365**

H in A/m (Slot averaged)

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

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

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



0 dB = 0.406A/m

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

A.3 RF emissions plots

Date/Time: 1/19/2011 5:04:29 PM

Test Laboratory: RIM Testing Services

HAC_E_GSM850_low_chan

DUT: BlackBerry Smartphone

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

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

Phantom section: RF Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2285; ConvF(1, 1, 1); Calibrated: 3/8/2010
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 5/17/2010
- 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 = 87.7 V/m; Power Drift = -0.180 dB

Maximum value of Total (measured) = 67.2 V/m

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

Maximum value of peak Total field = 195.4 V/m

Probe Modulation Factor = 2.90

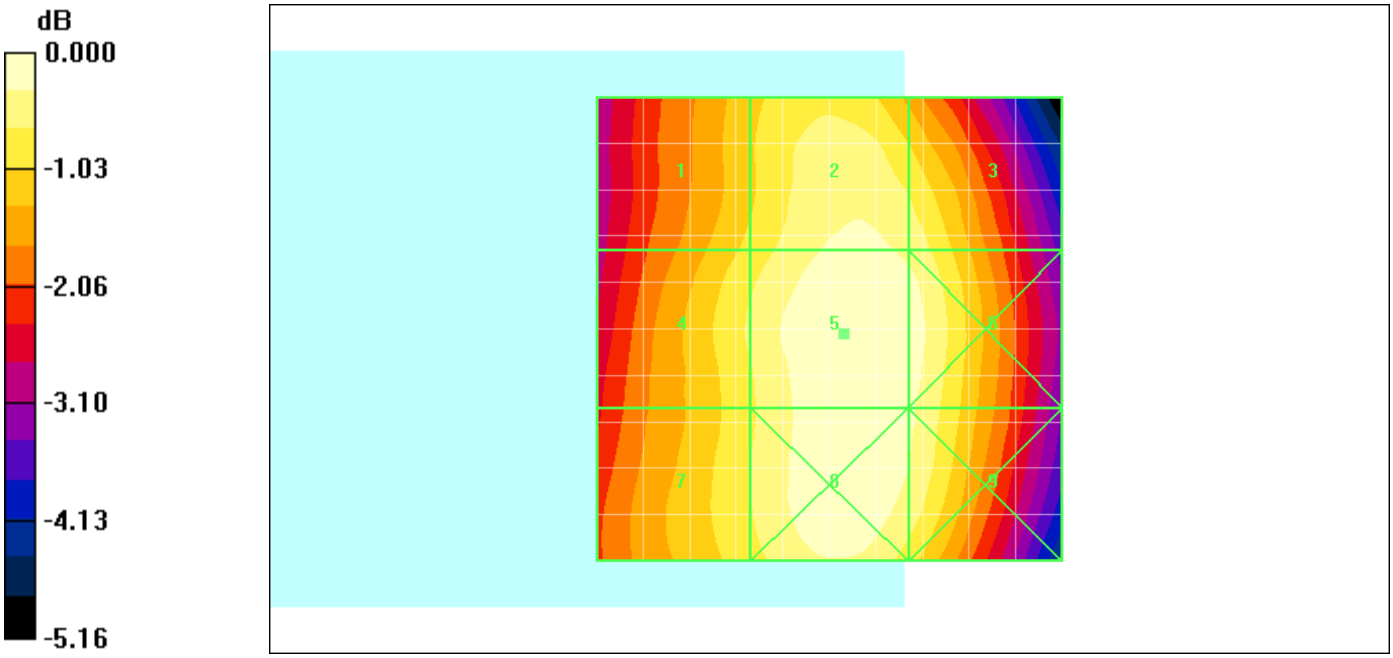
Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 87.7 V/m; Power Drift = -0.180 dB

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

Peak E-field in V/m

Grid 1 **176.0 M3**	Grid 2 **190.1 M3**	Grid 3 **186.0 M3**
Grid 4 **181.7 M3**	Grid 5 **195.4 M3**	Grid 6 **191.6 M3**
Grid 7 **180.8 M3**	Grid 8 **194.4 M3**	Grid 9 **189.5 M3**



0 dB = 195.4V/m

Date/Time: 1/19/2011 5:11:37 PM

Test Laboratory: RIM Testing Services

HAC_E_GSM850_mid_chan

DUT: BlackBerry Smartphone

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

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

Phantom section: RF Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2285; ConvF(1, 1, 1); Calibrated: 3/8/2010
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 5/17/2010
- 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 = 91.2 V/m; Power Drift = 0.212 dB

Maximum value of Total (measured) = 72.8 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 = 211.5 V/m

Probe Modulation Factor = 2.90

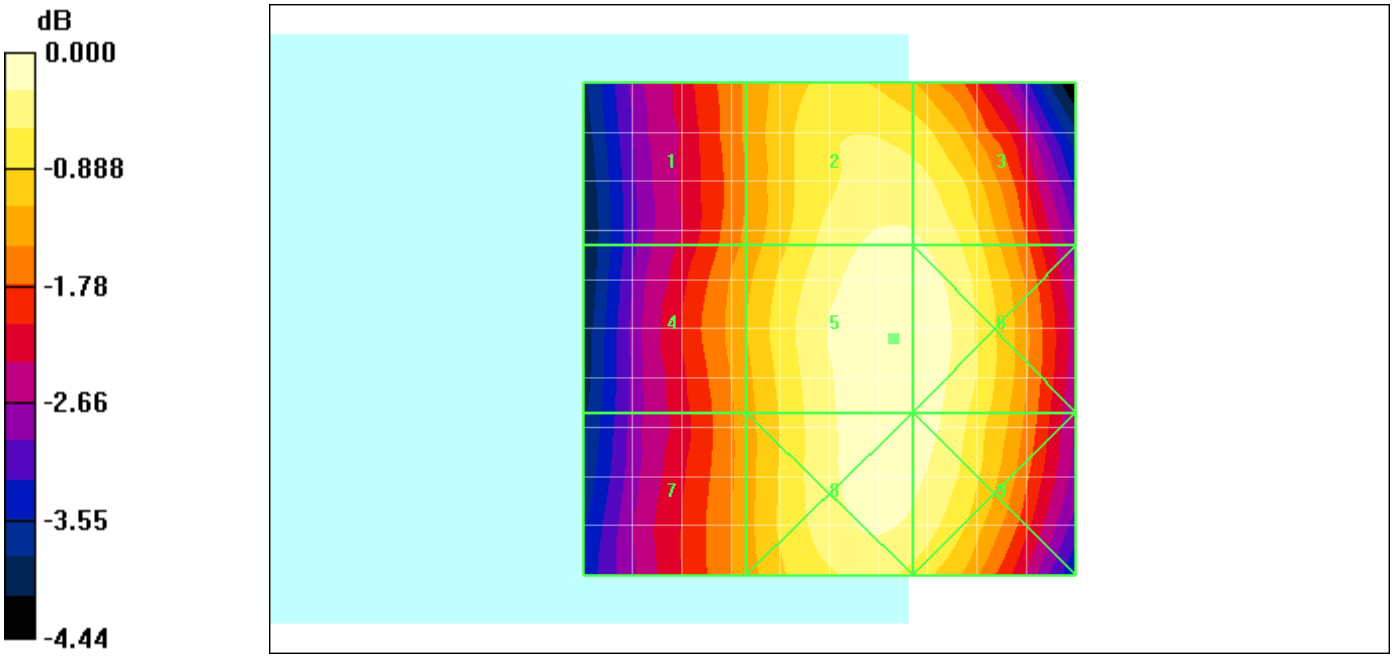
Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 91.2 V/m; Power Drift = 0.212 dB

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

Peak E-field in V/m

Grid 1 **180.3 M3**	Grid 2 **206.1 M3**	Grid 3 **205.7 M3**
Grid 4 **184.4 M3**	Grid 5 **211.5 M3**	Grid 6 **211.2 M3**
Grid 7 **182.1 M3**	Grid 8 **209.9 M3**	Grid 9 **209.0 M3**



0 dB = 211.5V/m

Date/Time: 1/19/2011 5:18:04 PM

Test Laboratory: RIM Testing Services

HAC_E_GSM850_high_chan

DUT: BlackBerry Smartphone

Communication System: GSM 850; Frequency: 848.8 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 - SN2285; ConvF(1, 1, 1); Calibrated: 3/8/2010
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 5/17/2010
- 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 = 96.9 V/m; Power Drift = -0.021 dB

Maximum value of Total (measured) = 76.7 V/m

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

Maximum value of peak Total field = 223.9 V/m

Probe Modulation Factor = 2.90

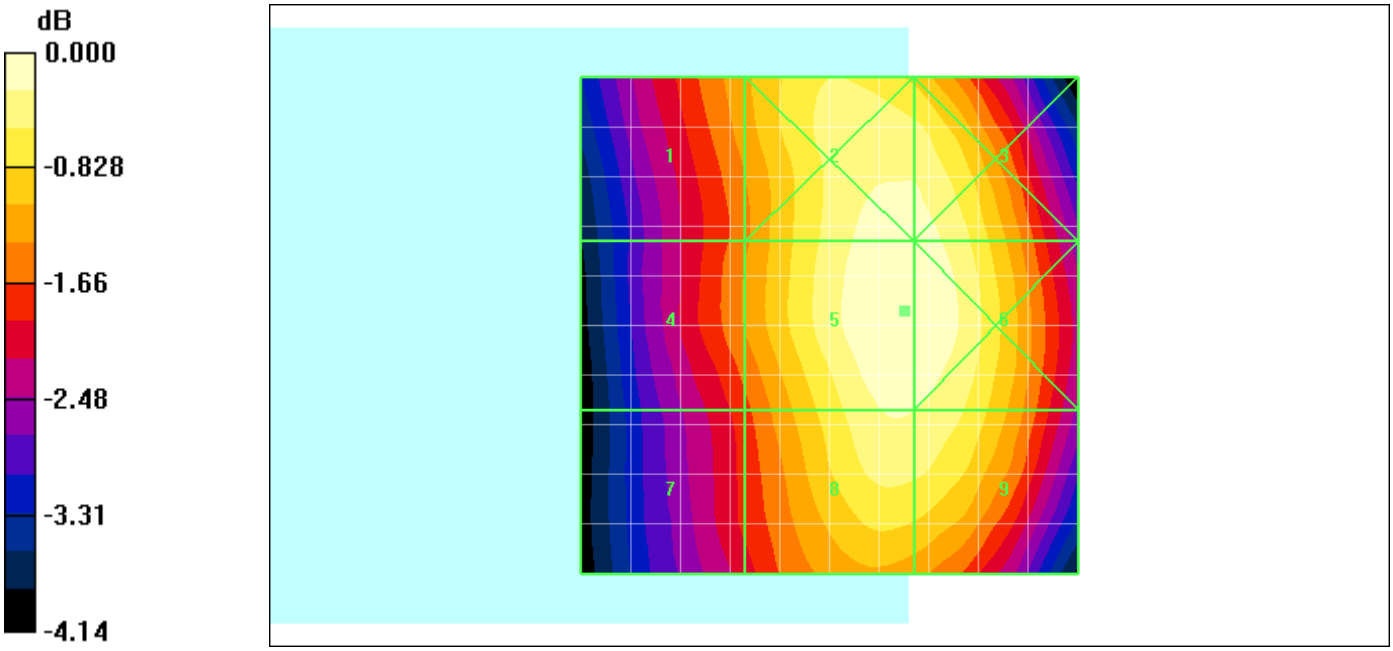
Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 96.9 V/m; Power Drift = -0.021 dB

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

Peak E-field in V/m

Grid 1 **196.0 M3**	Grid 2 **221.1 M3**	Grid 3 **220.8 M3**
Grid 4 **192.0 M3**	Grid 5 **223.9 M3**	Grid 6 **223.7 M3**
Grid 7 **183.4 M3**	Grid 8 **217.6 M3**	Grid 9 **217.0 M3**



0 dB = 223.9V/m

Date/Time: 1/19/2011 5:23:08 PM

Test Laboratory: RIM Testing Services

HAC_E_GSM850_high_chan_Telecoil_Center

DUT: BlackBerry Smartphone

Communication System: GSM 850; Frequency: 848.8 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 - SN2285; ConvF(1, 1, 1); Calibrated: 3/8/2010
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 5/17/2010
- 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 = 96.4 V/m; Power Drift = -0.071 dB

Maximum value of Total (measured) = 77.1 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 = 222.4 V/m

Probe Modulation Factor = 2.90

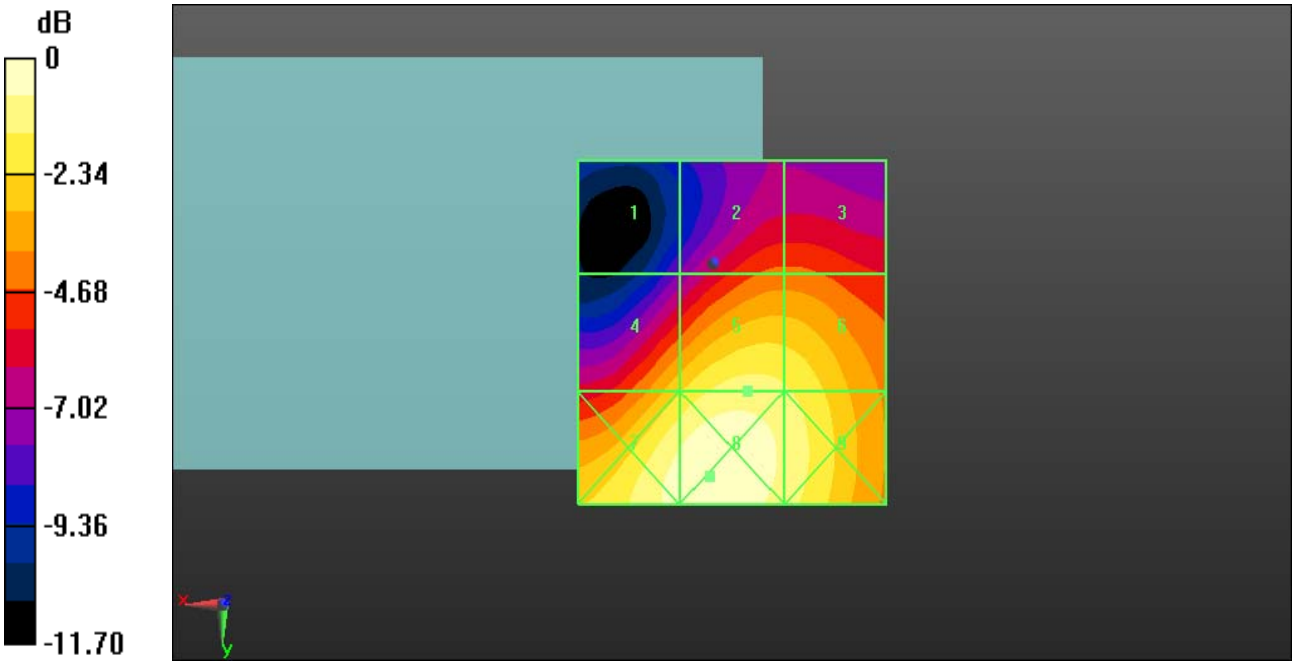
Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 96.4 V/m; Power Drift = -0.071 dB

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

Peak E-field in V/m

Grid 1 **183.5 M3**	Grid 2 **217.8 M3**	Grid 3 **218.5 M3**
Grid 4 **181.0 M3**	Grid 5 **222.4 M3**	Grid 6 **223.7 M3**
Grid 7 **174.8 M3**	Grid 8 **218.2 M3**	Grid 9 **219.9 M3**



0 dB = 223.7V/m

Date/Time: 1/19/2011 5:28:49 PM

Test Laboratory: RIM Testing Services

HAC_E_GSM1900_low_chan

DUT: BlackBerry Smartphone

Communication System: GSM 1900; Frequency: 1850.2 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 - SN2285; ConvF(1, 1, 1); Calibrated: 3/8/2010
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 5/17/2010
- 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 = 13.6 V/m; Power Drift = 0.040 dB

Maximum value of Total (measured) = 24.6 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 = 53.8 V/m

Probe Modulation Factor = 2.90

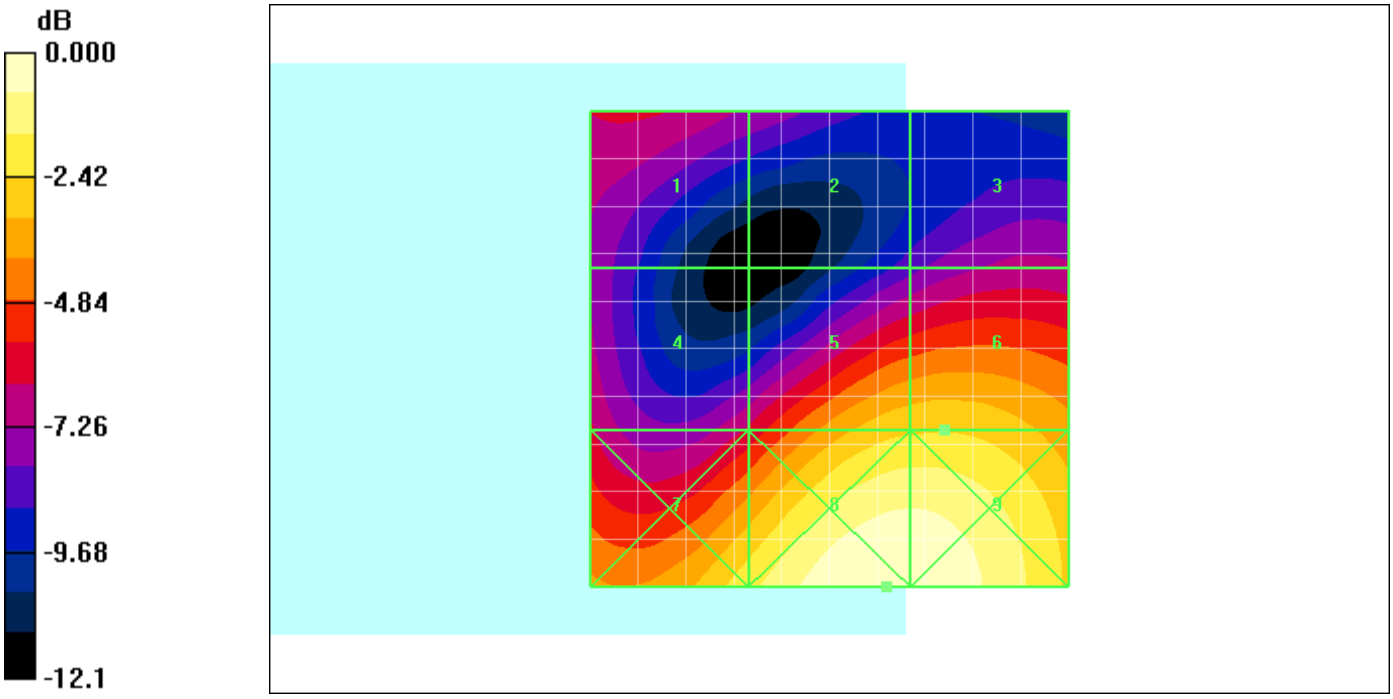
Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 13.6 V/m; Power Drift = 0.040 dB

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

Peak E-field in V/m

Grid 1 **34.7 M4**	Grid 2 **30.8 M4**	Grid 3 **32.2 M4**
Grid 4 **34.7 M4**	Grid 5 **53.3 M3**	Grid 6 **53.8 M3**
Grid 7 **57.6 M3**	Grid 8 **71.4 M3**	Grid 9 **70.9 M3**



0 dB = 71.4V/m

Date/Time: 1/19/2011 5:34:53 PM

Test Laboratory: RIM Testing Services

HAC_E_GSM1900_mid_chan

DUT: BlackBerry Smartphone

Communication System: GSM 1900; 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 - SN2285; ConvF(1, 1, 1); Calibrated: 3/8/2010
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 5/17/2010
- 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 = 15.2 V/m; Power Drift = -0.099 dB

Maximum value of Total (measured) = 23.7 V/m

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

Maximum value of peak Total field = 53.3 V/m

Probe Modulation Factor = 2.90

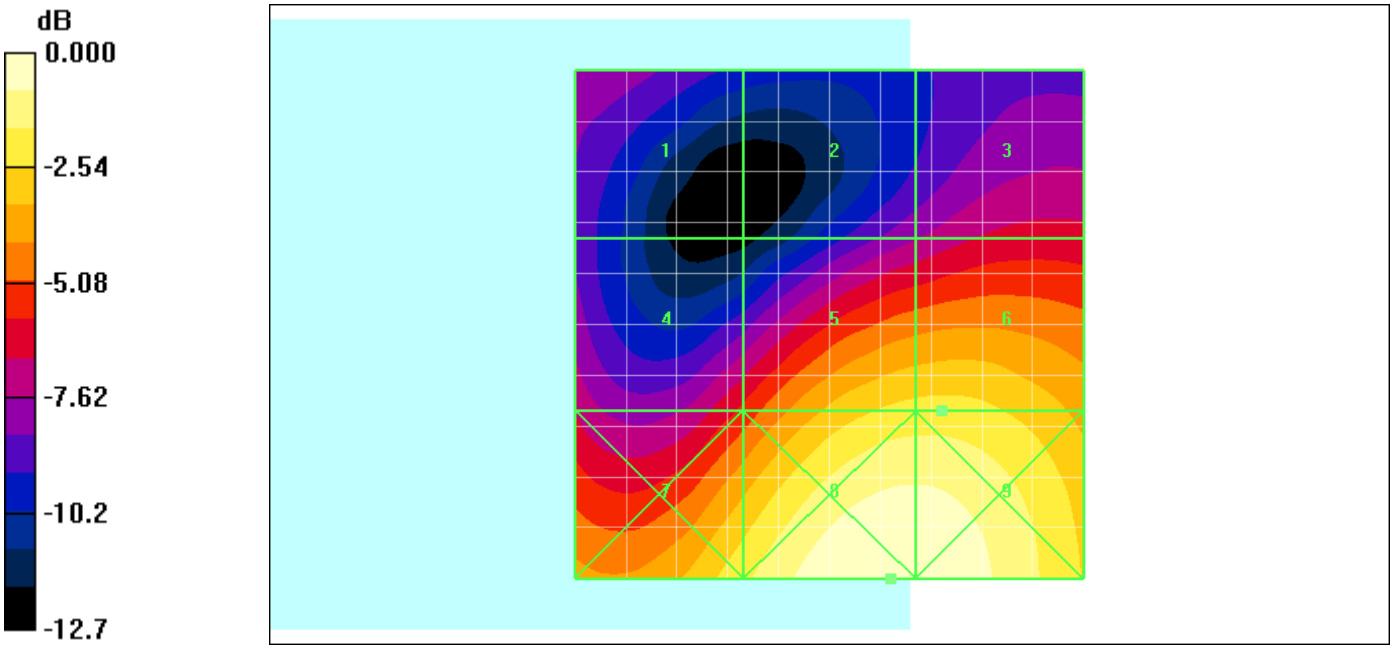
Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 15.2 V/m; Power Drift = -0.099 dB

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

Peak E-field in V/m

Grid 1 **28.3 M4**	Grid 2 **28.5 M4**	Grid 3 **32.9 M4**
Grid 4 **35.7 M4**	Grid 5 **53.1 M3**	Grid 6 **53.3 M3**
Grid 7 **55.1 M3**	Grid 8 **68.6 M3**	Grid 9 **68.0 M3**



0 dB = 68.6V/m

Date/Time: 1/19/2011 5:44:46 PM

Test Laboratory: RIM Testing Services

HAC_E_GSM1900_high_chan

DUT: BlackBerry Smartphone

Communication System: GSM 1900; Frequency: 1909.8 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 - SN2285; ConvF(1, 1, 1); Calibrated: 3/8/2010
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 5/17/2010
- 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 = 15.6 V/m; Power Drift = -0.316 dB

Maximum value of Total (measured) = 22.7 V/m

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

Maximum value of peak Total field = 52.5 V/m

Probe Modulation Factor = 2.90

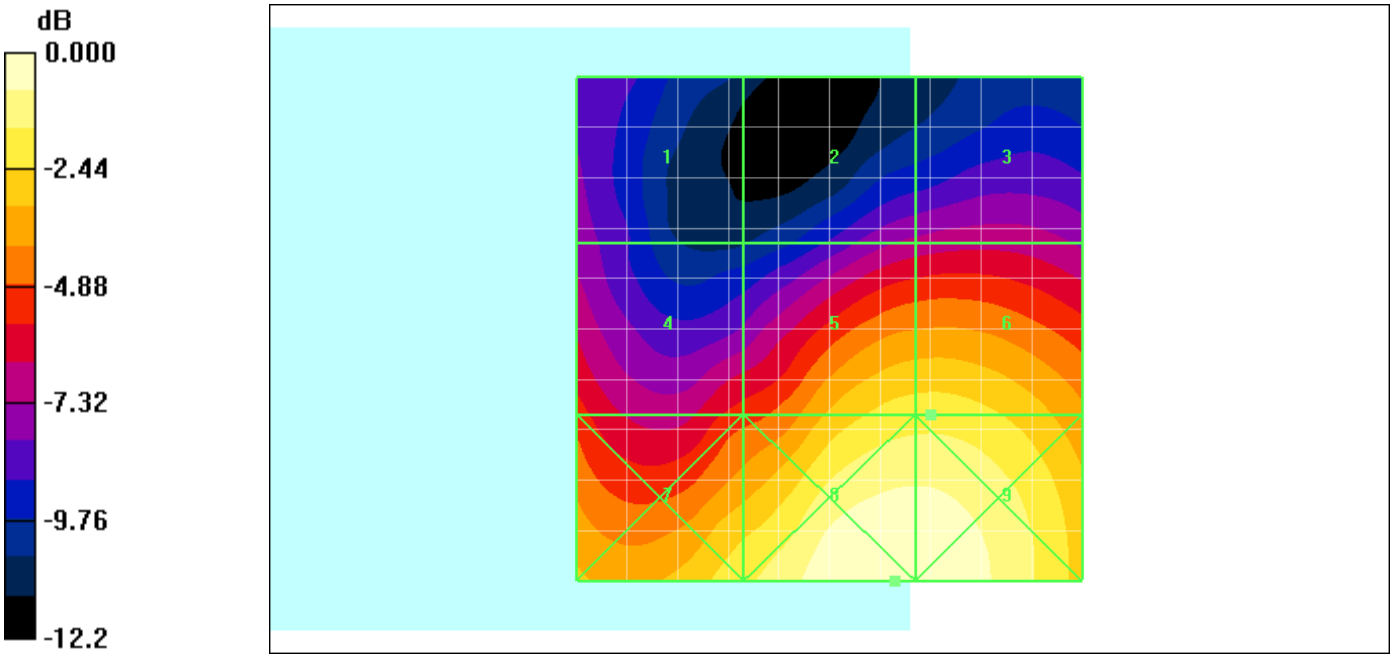
Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 15.6 V/m; Power Drift = -0.316 dB

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

Peak E-field in V/m

Grid 1 **27.4 M4**	Grid 2 **29.4 M4**	Grid 3 **30.5 M4**
Grid 4 **36.2 M4**	Grid 5 **52.4 M3**	Grid 6 **52.5 M3**
Grid 7 **53.5 M3**	Grid 8 **66.0 M3**	Grid 9 **65.7 M3**



0 dB = 66.0V/m

Date/Time: 1/19/2011 5:52:09 PM

Test Laboratory: RIM Testing Services

HAC_E_GSM1900_low_chan_Telecoil_Center

DUT: BlackBerry Smartphone

Communication System: GSM 1900; Frequency: 1850.2 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 - SN2285; ConvF(1, 1, 1); Calibrated: 3/8/2010
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 5/17/2010
- 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 = 13.5 V/m; Power Drift = -0.186 dB

Maximum value of Total (measured) = 23.7 V/m

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

Maximum value of peak Total field = 47.8 V/m

Probe Modulation Factor = 2.90

Device Reference Point: 0.000, 0.000, -6.30 mm

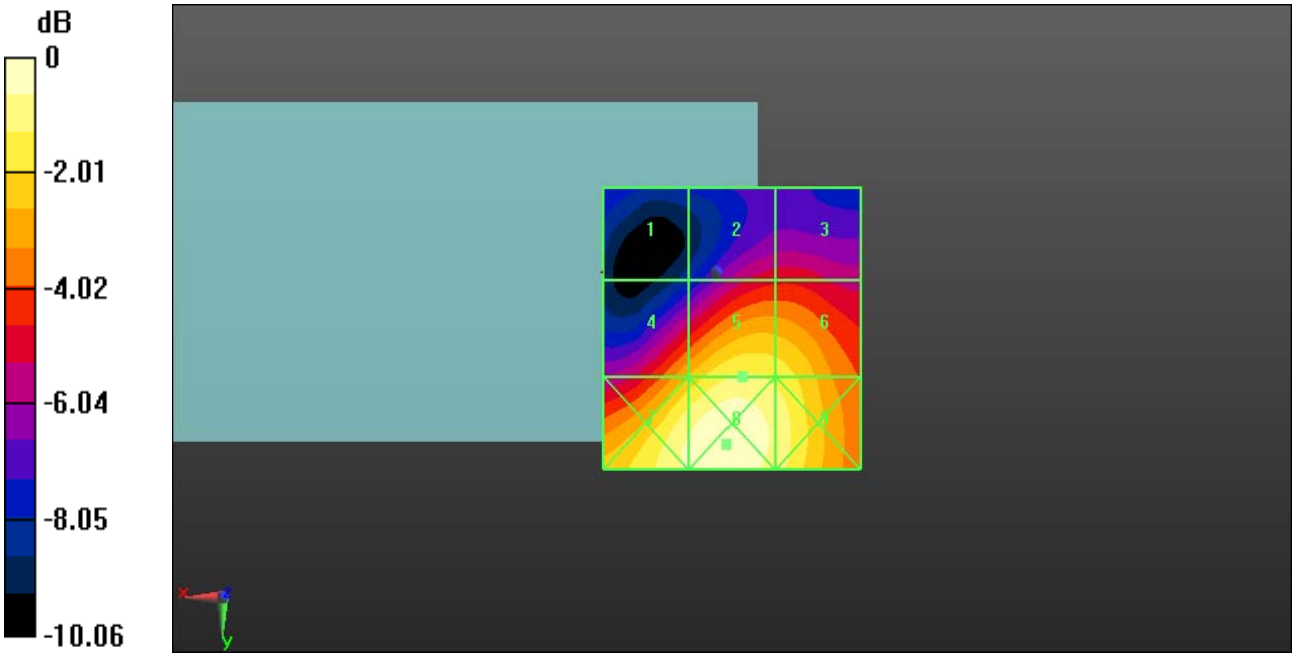
Reference Value = 13.5 V/m; Power Drift = -0.186 dB

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

Peak E-field in V/m

Grid 1 **34.2 M4**	Grid 2 **32.8 M4**	Grid 3 **29.7 M4**
Grid 4 **36.9 M4**	Grid 5 **45.5 M4**	Grid 6 **48.4 M3**
Grid 7 **47.8 M3**	Grid 8 **68.5 M3**	Grid 9 **68.9 M3**

0 dB = 68.9V/m



Date/Time: 1/19/2011 6:55:12 PM

Test Laboratory: RIM Testing Services

HAC_E_CDMA800_low_chan

DUT: BlackBerry Smartphone

Communication System: CDMA 800; Frequency: 824.7 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 - SN2285; ConvF(1, 1, 1); Calibrated: 3/8/2010
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 5/17/2010
- 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 = 30.4 V/m; Power Drift = 0.179 dB

Maximum value of Total (measured) = 27.0 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 = 27.3 V/m

Probe Modulation Factor = 1.01

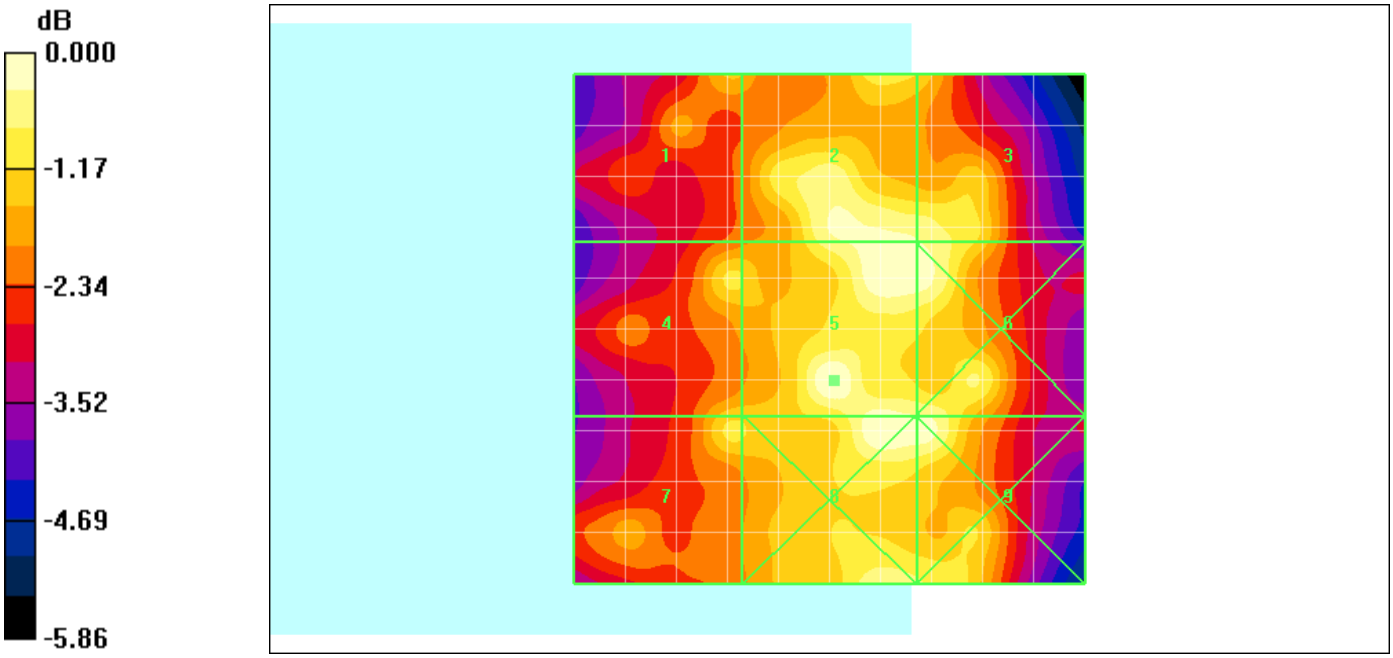
Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 30.4 V/m; Power Drift = 0.179 dB

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

Peak E-field in V/m

Grid 1 **23.1 M4**	Grid 2 **26.5 M4**	Grid 3 **26.3 M4**
Grid 4 **24.2 M4**	Grid 5 **27.3 M4**	Grid 6 **26.8 M4**
Grid 7 **24.2 M4**	Grid 8 **27.2 M4**	Grid 9 **26.7 M4**



0 dB = 27.3V/m

Date/Time: 1/19/2011 6:59:51 PM

Test Laboratory: RIM Testing Services

HAC_E_CDMA800_mid_chan

DUT: BlackBerry Smartphone

Communication System: CDMA 800; Frequency: 836.52 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 - SN2285; ConvF(1, 1, 1); Calibrated: 3/8/2010
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 5/17/2010
- 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 = 34.5 V/m; Power Drift = -0.044 dB

Maximum value of Total (measured) = 27.1 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 = 27.3 V/m

Probe Modulation Factor = 1.01

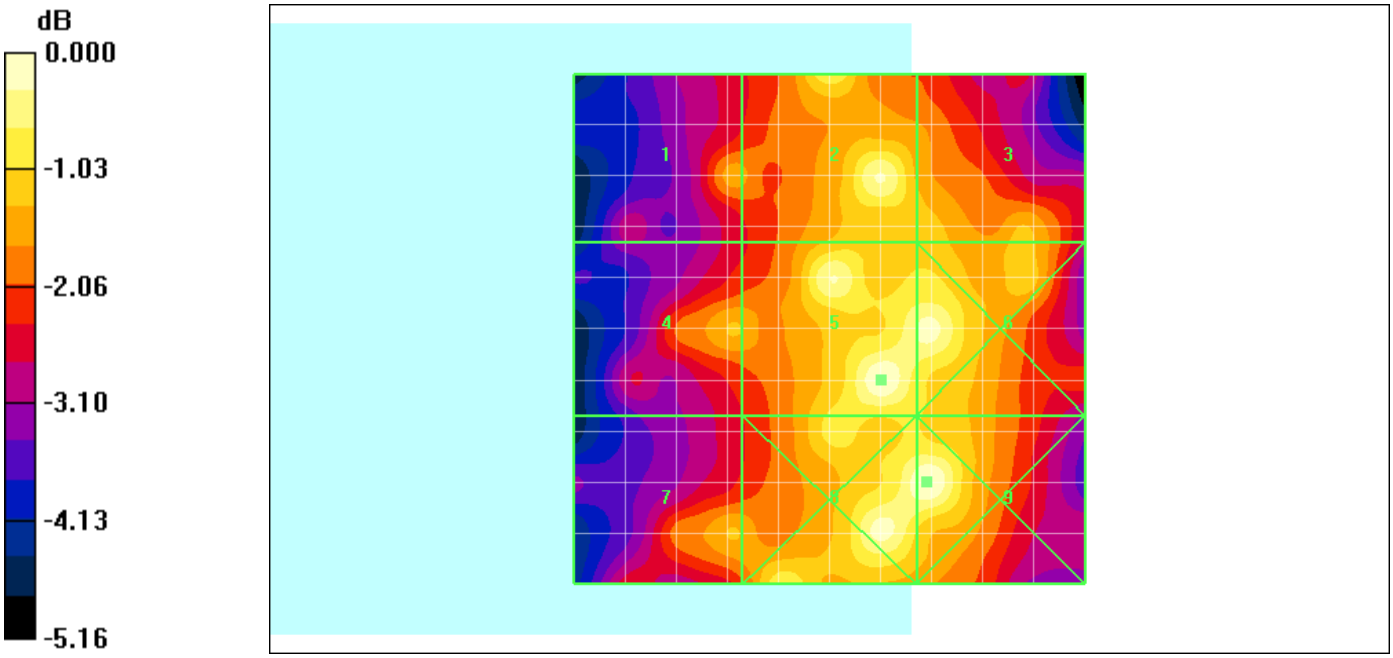
Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 34.5 V/m; Power Drift = -0.044 dB

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

Peak E-field in V/m

Grid 1 **23.0 M4**	Grid 2 **26.5 M4**	Grid 3 **23.9 M4**
Grid 4 **23.5 M4**	Grid 5 **27.3 M4**	Grid 6 **26.8 M4**
Grid 7 **23.5 M4**	Grid 8 **26.9 M4**	Grid 9 **27.4 M4**



0 dB = 27.4V/m

Date/Time: 1/19/2011 7:04:41 PM

Test Laboratory: RIM Testing Services

HAC_E_CDMA800_high_chan

DUT: BlackBerry Smartphone

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 - SN2285; ConvF(1, 1, 1); Calibrated: 3/8/2010
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 5/17/2010
- 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 = 29.1 V/m; Power Drift = -0.074 dB

Maximum value of Total (measured) = 26.1 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 = 26.4 V/m

Probe Modulation Factor = 1.01

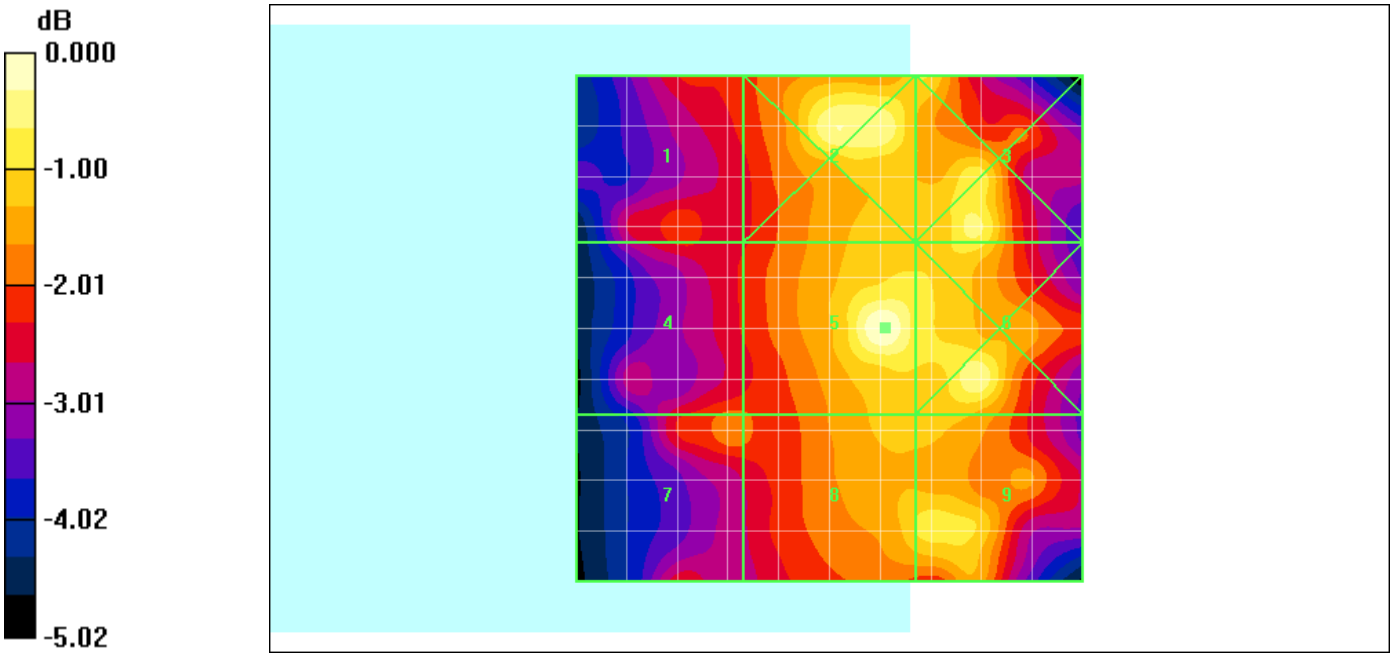
Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 29.1 V/m; Power Drift = -0.074 dB

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

Peak E-field in V/m

Grid 1 **20.9 M4**	Grid 2 **25.4 M4**	Grid 3 **24.8 M4**
Grid 4 **21.3 M4**	Grid 5 **26.4 M4**	Grid 6 **25.3 M4**
Grid 7 **21.7 M4**	Grid 8 **23.6 M4**	Grid 9 **24.1 M4**



0 dB = 26.4V/m

Date/Time: 1/19/2011 7:10:17 PM

Test Laboratory: RIM Testing Services

HAC_E_CDMA800_mid_chan_Telecoil_Center

DUT: BlackBerry Smartphone

Communication System: CDMA 800; Frequency: 836.52 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 - SN2285; ConvF(1, 1, 1); Calibrated: 3/8/2010
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 5/17/2010
- 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 = 30.6 V/m; Power Drift = 0.063 dB

Maximum value of Total (measured) = 27.1 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 = 27.1 V/m

Probe Modulation Factor = 1.01

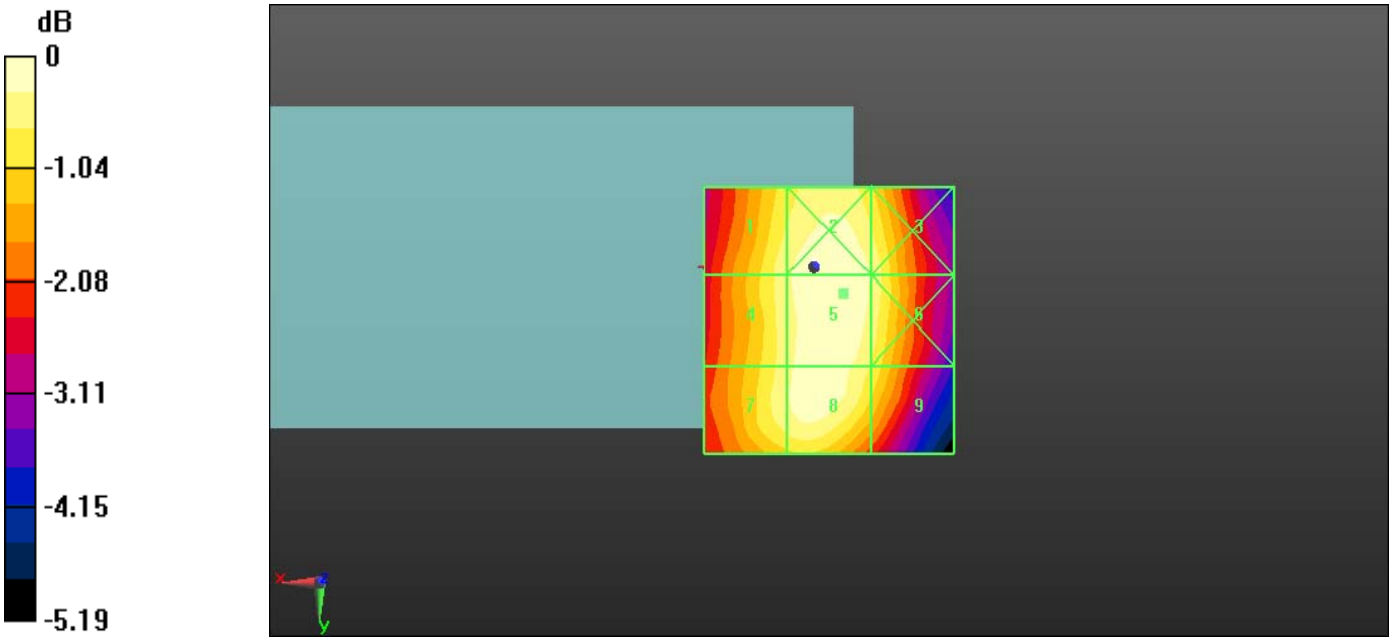
Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 30.6 V/m; Power Drift = 0.063 dB

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

Peak E-field in V/m

Grid 1 **22.7 M4**	Grid 2 **26.9 M4**	Grid 3 **26.7 M4**
Grid 4 **23.0 M4**	Grid 5 **27.1 M4**	Grid 6 **27.1 M4**
Grid 7 **23.5 M4**	Grid 8 **27.5 M4**	Grid 9 **27.4 M4**



0 dB = 27.5V/m

Date/Time: 1/19/2011 7:17:37 PM

Test Laboratory: RIM Testing Services

HAC_E_CDMA1900_low_chan

DUT: BlackBerry Smartphone

Communication System: CDMA 1900; Frequency: 1851.25 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 - SN2285; ConvF(1, 1, 1); Calibrated: 3/8/2010
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 5/17/2010
- 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 = 20.5 V/m; Power Drift = -0.338 dB

Maximum value of Total (measured) = 34.2 V/m

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

Maximum value of peak Total field = 26.1 V/m

Probe Modulation Factor = 1.00

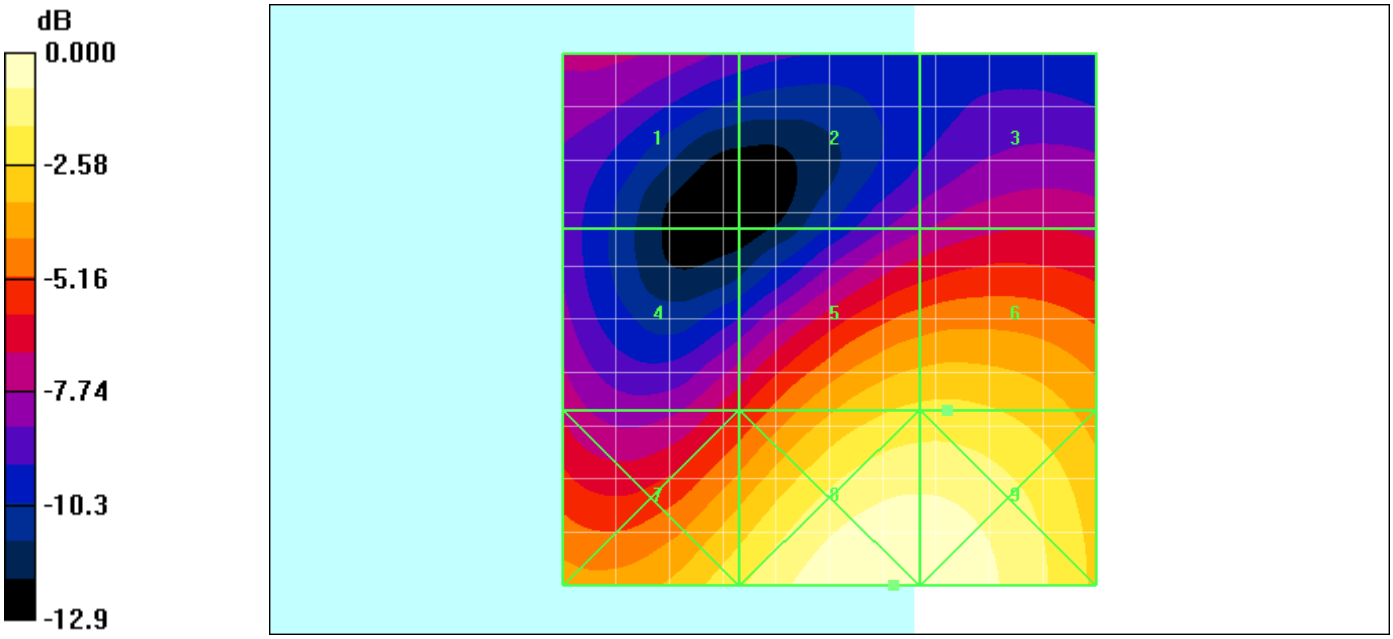
Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 20.5 V/m; Power Drift = -0.338 dB

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

Peak E-field in V/m

Grid 1 **14.5 M4**	Grid 2 **13.9 M4**	Grid 3 **15.6 M4**
Grid 4 **17.0 M4**	Grid 5 **26.0 M4**	Grid 6 **26.1 M4**
Grid 7 **27.6 M4**	Grid 8 **34.2 M4**	Grid 9 **34.0 M4**



0 dB = 34.2V/m

Date/Time: 1/19/2011 7:22:46 PM

Test Laboratory: RIM Testing Services

HAC_E_CDMA1900_mid_chan

DUT: BlackBerry Smartphone

Communication System: CDMA 1900; 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 - SN2285; ConvF(1, 1, 1); Calibrated: 3/8/2010
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 5/17/2010
- 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 = 20.3 V/m; Power Drift = 0.032 dB

Maximum value of Total (measured) = 32.4 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 = 25.0 V/m

Probe Modulation Factor = 1.00

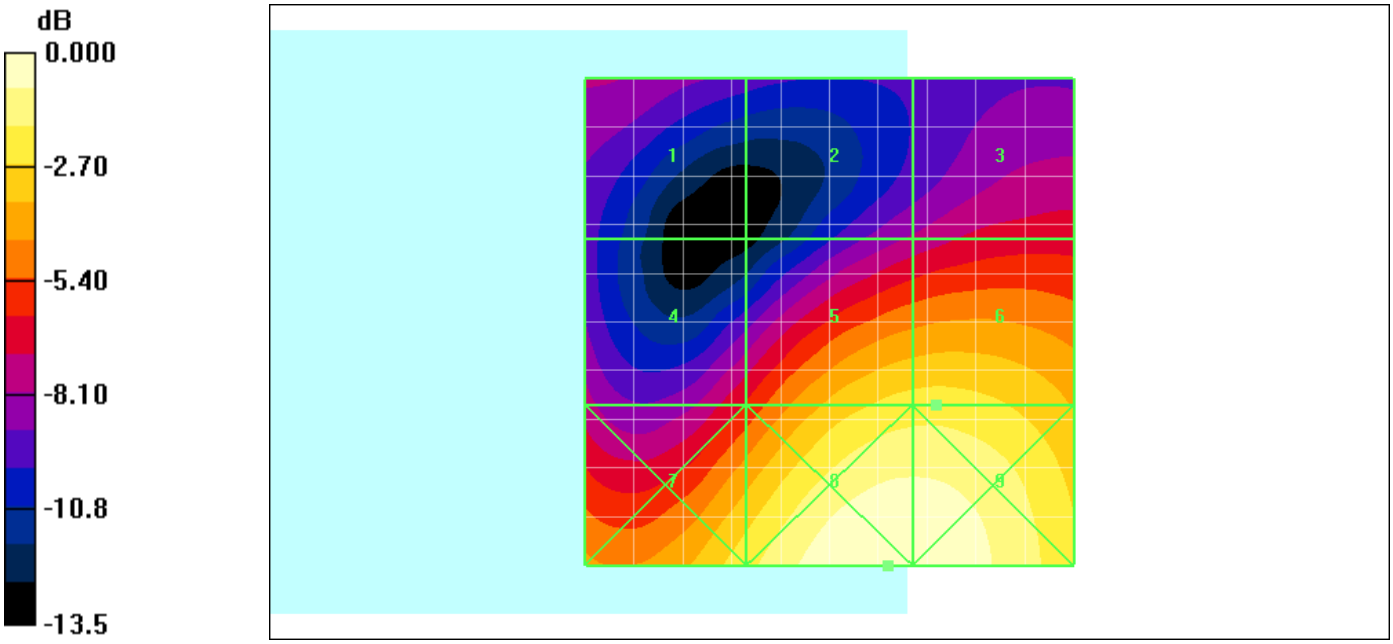
Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 20.3 V/m; Power Drift = 0.032 dB

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

Peak E-field in V/m

Grid 1 **13.0 M4**	Grid 2 **13.1 M4**	Grid 3 **15.1 M4**
Grid 4 **16.0 M4**	Grid 5 **24.8 M4**	Grid 6 **25.0 M4**
Grid 7 **25.5 M4**	Grid 8 **32.4 M4**	Grid 9 **32.1 M4**



0 dB = 32.4V/m

Date/Time: 1/19/2011 7:27:06 PM

Test Laboratory: RIM Testing Services

HAC_E_CDMA1900_high_chan

DUT: BlackBerry Smartphone

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 - SN2285; ConvF(1, 1, 1); Calibrated: 3/8/2010
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 5/17/2010
- 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 = 20.4 V/m; Power Drift = -0.143 dB

Maximum value of Total (measured) = 31.1 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 = 24.8 V/m

Probe Modulation Factor = 1.00

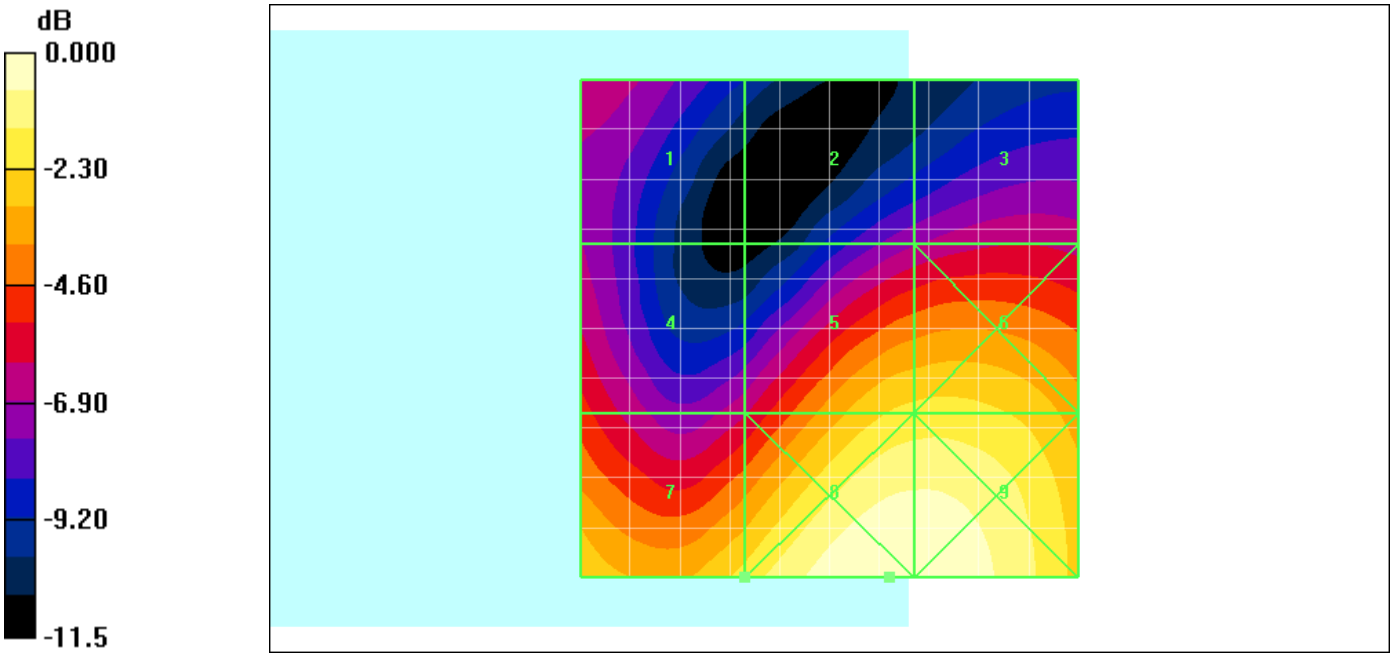
Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 20.4 V/m; Power Drift = -0.143 dB

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

Peak E-field in V/m

Grid 1 **14.8 M4**	Grid 2 **14.0 M4**	Grid 3 **15.4 M4**
Grid 4 **17.6 M4**	Grid 5 **24.6 M4**	Grid 6 **24.9 M4**
Grid 7 **24.8 M4**	Grid 8 **31.2 M4**	Grid 9 **31.0 M4**



0 dB = 31.2V/m

Date/Time: 1/19/2011 7:33:46 PM

Test Laboratory: RIM Testing Services

HAC_E_CDMA1900_low_chan_Telecoil_Center

DUT: BlackBerry Smartphone

Communication System: CDMA 1900; Frequency: 1851.25 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 - SN2285; ConvF(1, 1, 1); Calibrated: 3/8/2010
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 5/17/2010
- 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 = 18.9 V/m; Power Drift = -0.163 dB

Maximum value of Total (measured) = 30.4 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 = 21.2 V/m

Probe Modulation Factor = 1.00

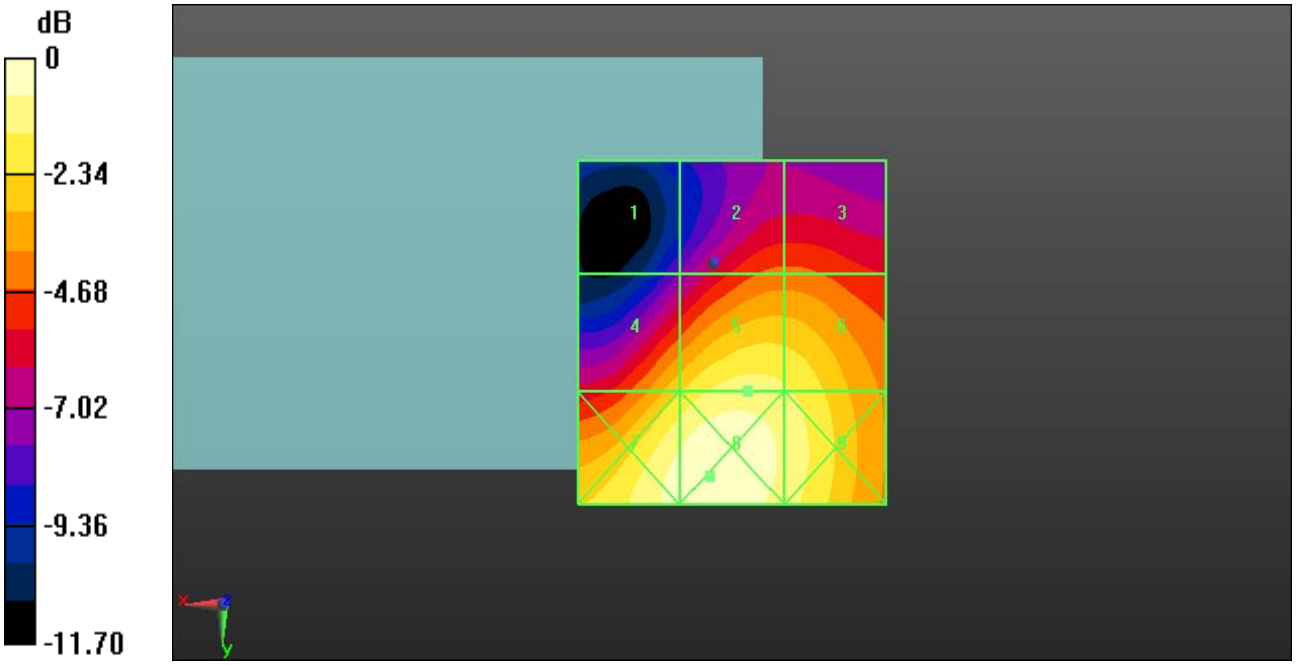
Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 18.9 V/m; Power Drift = -0.163 dB

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

Peak E-field in V/m

Grid 1 **15.1 M4**	Grid 2 **12.7 M4**	Grid 3 **12.8 M4**
Grid 4 **13.7 M4**	Grid 5 **21.1 M4**	Grid 6 **21.2 M4**
Grid 7 **24.0 M4**	Grid 8 **30.4 M4**	Grid 9 **30.1 M4**



0 dB = 30.4V/m

Date/Time: 1/19/2011 8:20:04 PM

Test Laboratory: RIM Testing Services

HAC_H_GSM850_low_chan

DUT: BlackBerry Smartphone

Communication System: GSM 850; Frequency: 824.2 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

DASY4 Configuration:

- Probe: H3DV6 - SN6168; ; Calibrated: 3/12/2010
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 5/17/2010
- 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 = 0.080 A/m; Power Drift = 0.097 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 = 0.372 A/m

Probe Modulation Factor = 2.79

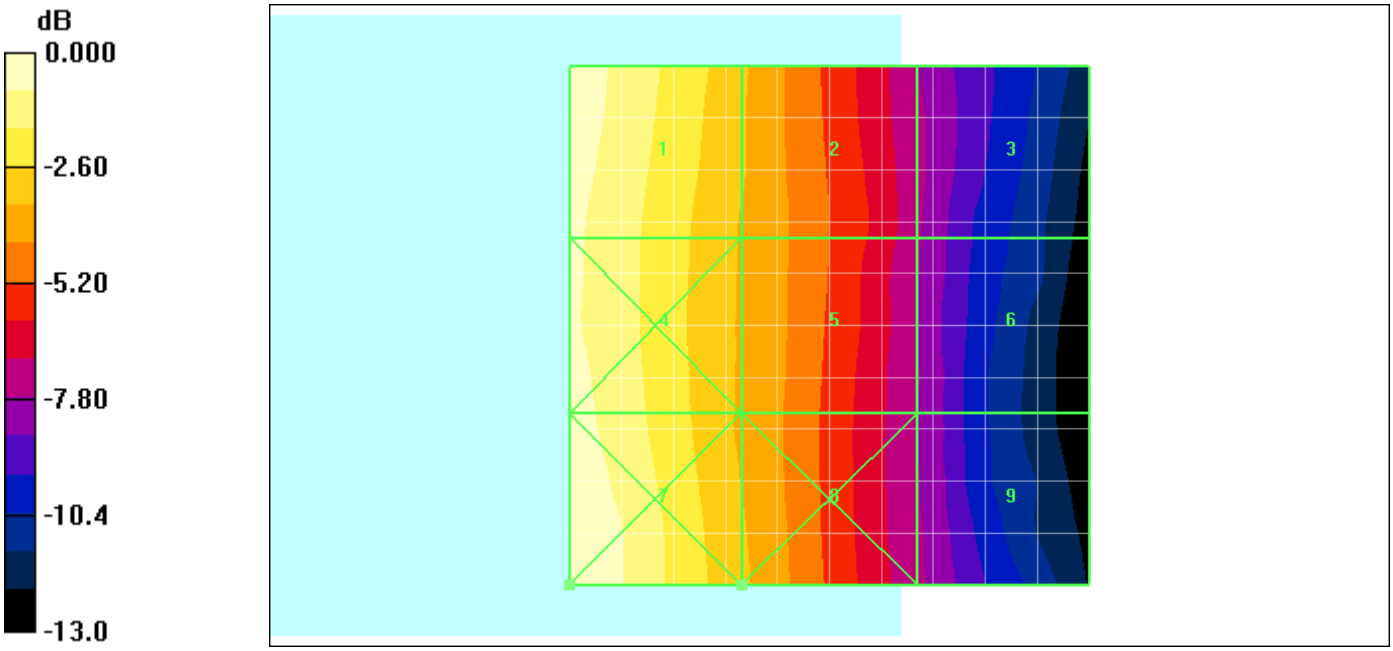
Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.080 A/m; Power Drift = 0.097 dB

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

Peak H-field in A/m

Grid 1 **0.372 M4**	Grid 2 **0.263 M4**	Grid 3 **0.161 M4**
Grid 4 **0.362 M4**	Grid 5 **0.256 M4**	Grid 6 **0.159 M4**
Grid 7 **0.383 M4**	Grid 8 **0.263 M4**	Grid 9 **0.160 M4**



0 dB = 0.383A/m

Date/Time: 1/19/2011 8:25:45 PM

Test Laboratory: RIM Testing Services

HAC_H_GSM850_mid_chan

DUT: BlackBerry Smartphone

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

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

Phantom section: RF Section

DASY4 Configuration:

- Probe: H3DV6 - SN6168; ; Calibrated: 3/12/2010
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 5/17/2010
- 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 = 0.093 A/m; Power Drift = -0.224 dB

Maximum value of Total (measured) = 0.160 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 = 0.417 A/m

Probe Modulation Factor = 2.79

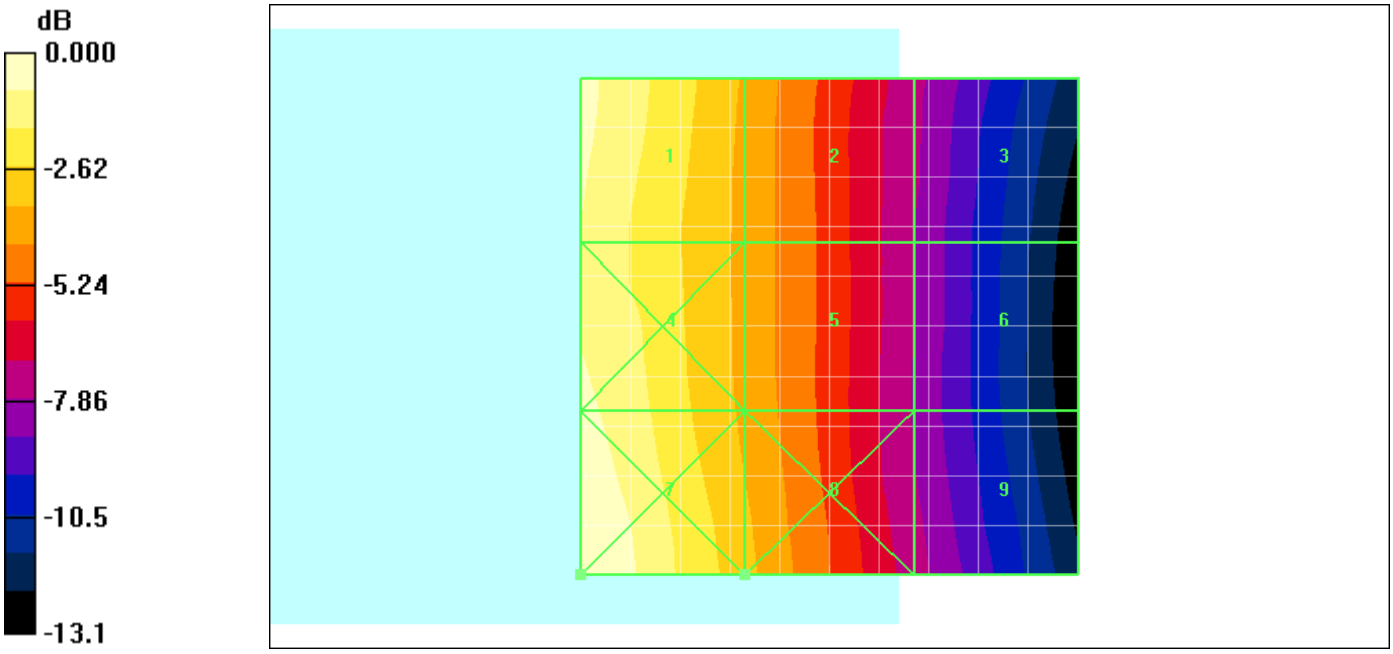
Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.093 A/m; Power Drift = -0.224 dB

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

Peak H-field in A/m

Grid 1 **0.417 M4**	Grid 2 **0.294 M4**	Grid 3 **0.187 M4**
Grid 4 **0.412 M4**	Grid 5 **0.292 M4**	Grid 6 **0.182 M4**
Grid 7 **0.445 M4**	Grid 8 **0.309 M4**	Grid 9 **0.190 M4**



0 dB = 0.445A/m

Date/Time: 1/19/2011 8:31:02 PM

Test Laboratory: RIM Testing Services

HAC_H_GSM850_high_chan

DUT: BlackBerry Smartphone

Communication System: GSM 850; Frequency: 848.8 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 - SN6168; ; Calibrated: 3/12/2010
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 5/17/2010
- 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 = 0.115 A/m; Power Drift = 0.070 dB

Maximum value of Total (measured) = 0.191 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 = 0.533 A/m

Probe Modulation Factor = 2.79

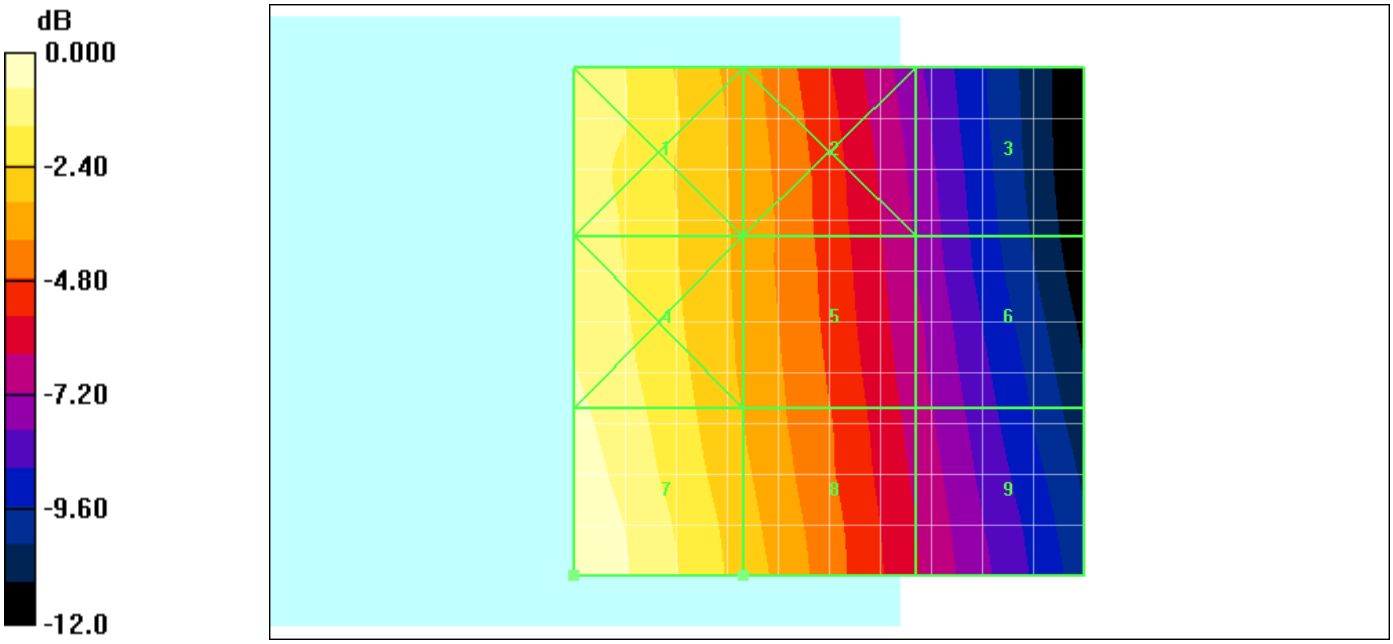
Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.115 A/m; Power Drift = 0.070 dB

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

Peak H-field in A/m

Grid 1 **0.487 M3**	Grid 2 **0.360 M4**	Grid 3 **0.231 M4**
Grid 4 **0.498 M3**	Grid 5 **0.368 M4**	Grid 6 **0.245 M4**
Grid 7 **0.533 M3**	Grid 8 **0.390 M4**	Grid 9 **0.259 M4**



0 dB = 0.533A/m

Date/Time: 1/19/2011 8:35:34 PM

Test Laboratory: RIM Testing Services

HAC_H_GSM850_high_chan_Telecoil_Center

DUT: BlackBerry Smartphone

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

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

Phantom section: RF Section

DASY4 Configuration:

- Probe: H3DV6 - SN6168; ; Calibrated: 3/12/2010
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 5/17/2010
- 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 = 0.116 A/m; Power Drift = -0.077 dB

Maximum value of Total (measured) = 0.202 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 = 0.562 A/m

Probe Modulation Factor = 2.79

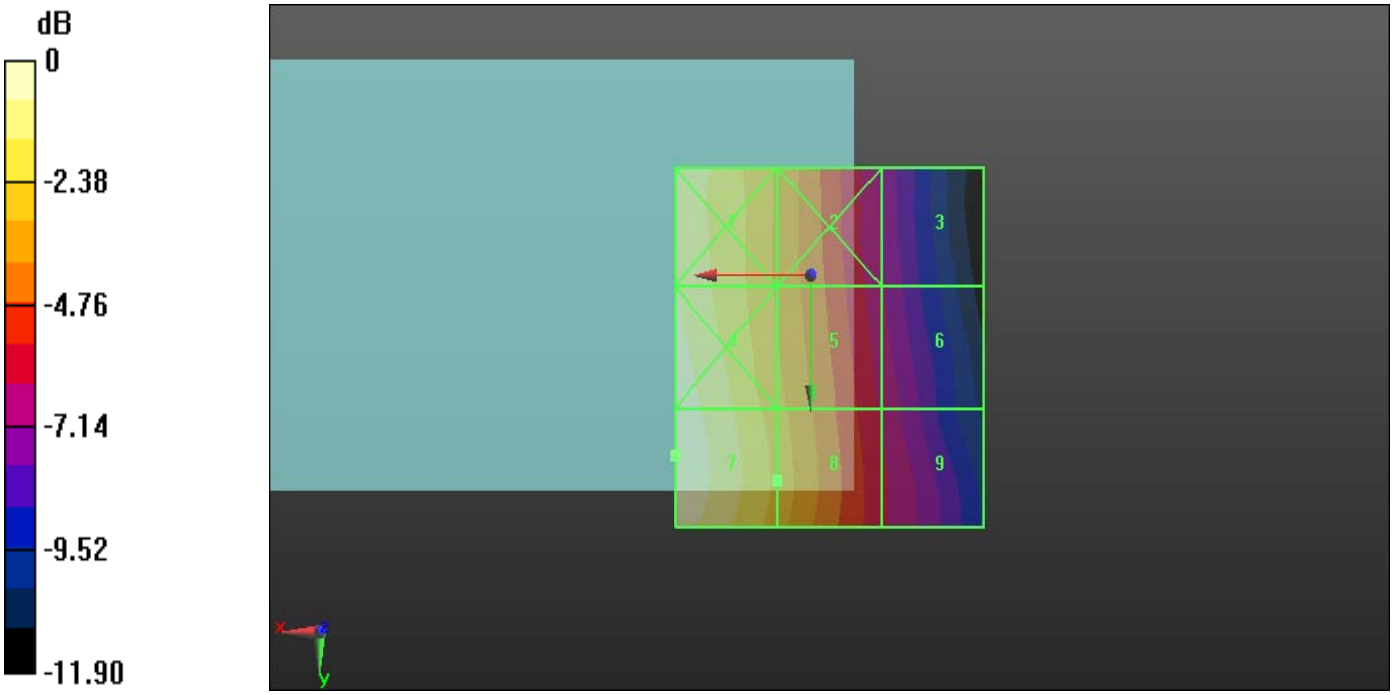
Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.116 A/m; Power Drift = -0.077 dB

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

Peak H-field in A/m

Grid 1 **0.509 M3**	Grid 2 **0.385 M4**	Grid 3 **0.258 M4**
Grid 4 **0.515 M3**	Grid 5 **0.395 M4**	Grid 6 **0.270 M4**
Grid 7 **0.562 M3**	Grid 8 **0.421 M4**	Grid 9 **0.282 M4**



0 dB = 0.562A/m

Date/Time: 1/19/2011 8:41:39 PM

Test Laboratory: RIM Testing Services

HAC_H_GSM1900_low_chan

DUT: BlackBerry Smartphone

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

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

Phantom section: RF Section

DASY4 Configuration:

- Probe: H3DV6 - SN6168; ; Calibrated: 3/12/2010
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 5/17/2010
- 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 = 0.065 A/m; Power Drift = 0.234 dB

Maximum value of Total (measured) = 0.080 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 = 0.152 A/m

Probe Modulation Factor = 2.52

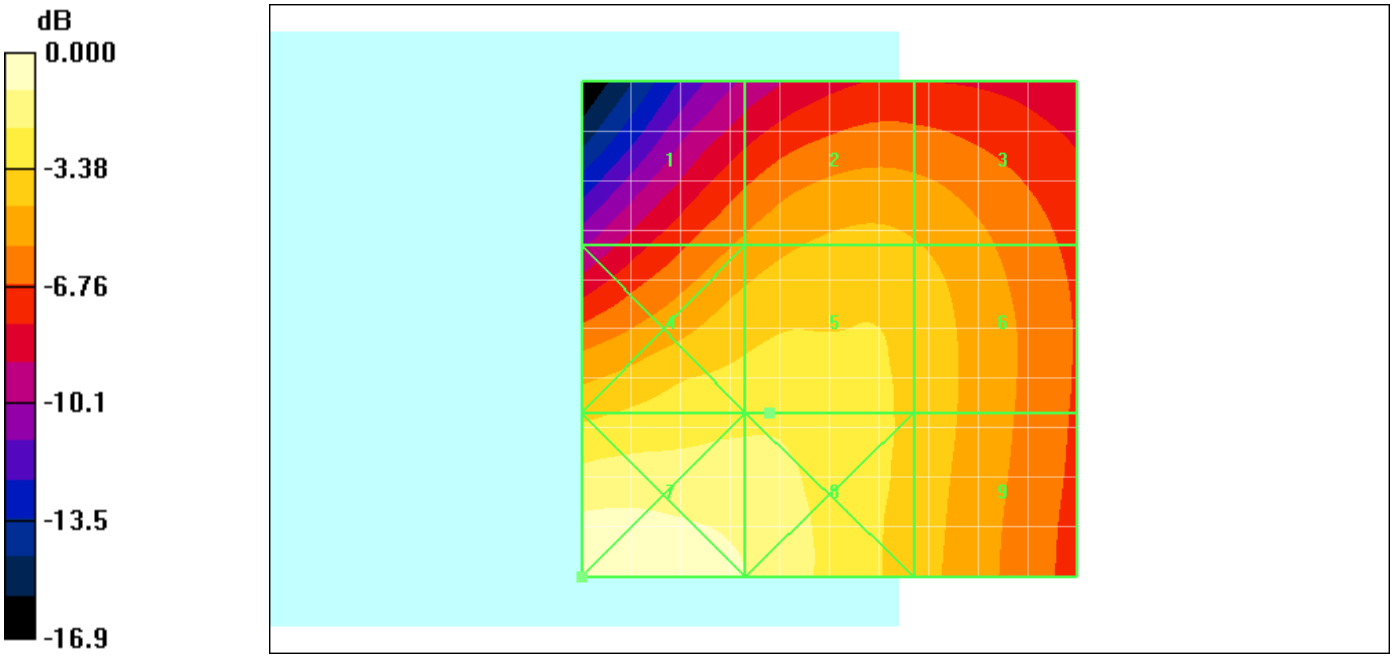
Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.065 A/m; Power Drift = 0.234 dB

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

Peak H-field in A/m

Grid 1 **0.109 M4**	Grid 2 **0.125 M4**	Grid 3 **0.122 M4**
Grid 4 **0.151 M3**	Grid 5 **0.152 M3**	Grid 6 **0.132 M4**
Grid 7 **0.202 M3**	Grid 8 **0.178 M3**	Grid 9 **0.132 M4**



0 dB = 0.202A/m

Date/Time: 1/19/2011 8:46:19 PM

Test Laboratory: RIM Testing Services

HAC_H_GSM1900_mid_chan

DUT: BlackBerry Smartphone

Communication System: GSM 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 - SN6168; ; Calibrated: 3/12/2010
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 5/17/2010
- 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 = 0.066 A/m; Power Drift = 0.052 dB

Maximum value of Total (measured) = 0.082 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 = 0.155 A/m

Probe Modulation Factor = 2.52

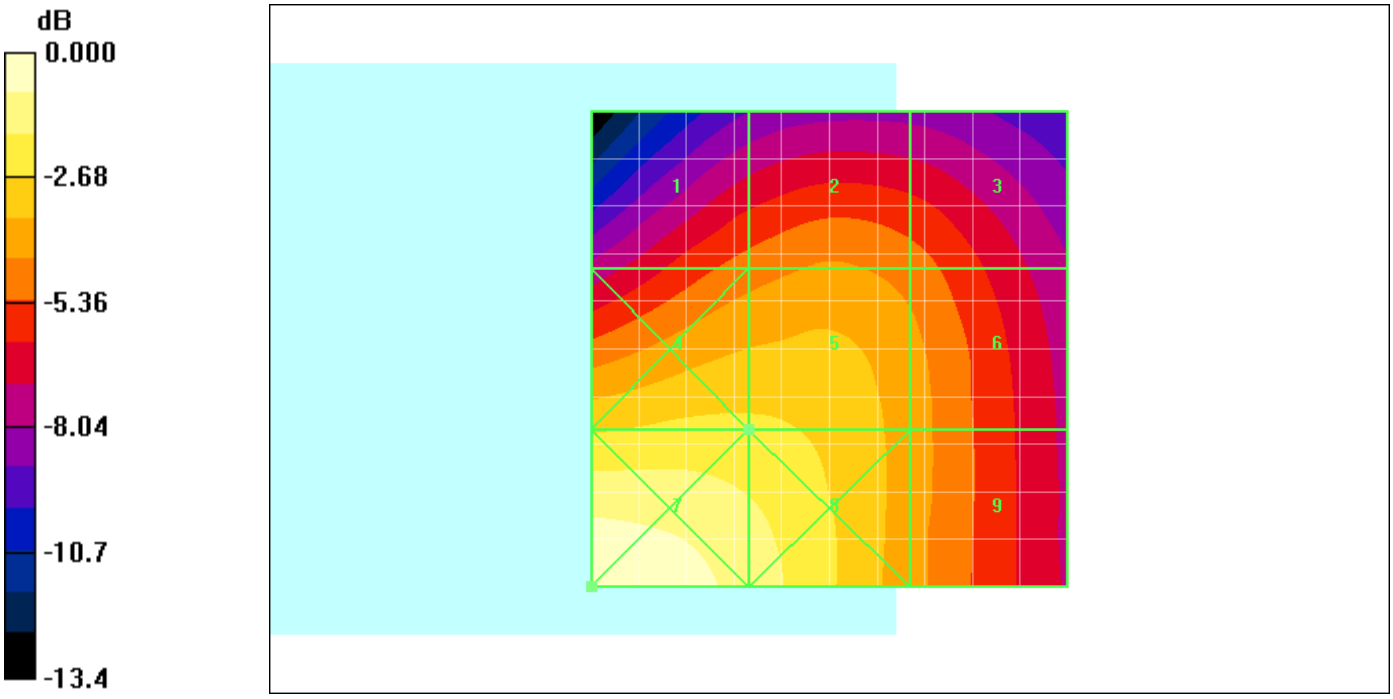
Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.066 A/m; Power Drift = 0.052 dB

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

Peak H-field in A/m

Grid 1 **0.117 M4**	Grid 2 **0.125 M4**	Grid 3 **0.117 M4**
Grid 4 **0.156 M3**	Grid 5 **0.155 M3**	Grid 6 **0.130 M4**
Grid 7 **0.206 M3**	Grid 8 **0.178 M3**	Grid 9 **0.130 M4**



0 dB = 0.206A/m

Date/Time: 1/19/2011 8:50:41 PM

Test Laboratory: RIM Testing Services

HAC_H_GSM1900_high_chan

DUT: BlackBerry Smartphone

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

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

Phantom section: RF Section

DASY4 Configuration:

- Probe: H3DV6 - SN6168; ; Calibrated: 3/12/2010
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 5/17/2010
- 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 = 0.061 A/m; Power Drift = -0.032 dB

Maximum value of Total (measured) = 0.091 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 = 0.159 A/m

Probe Modulation Factor = 2.52

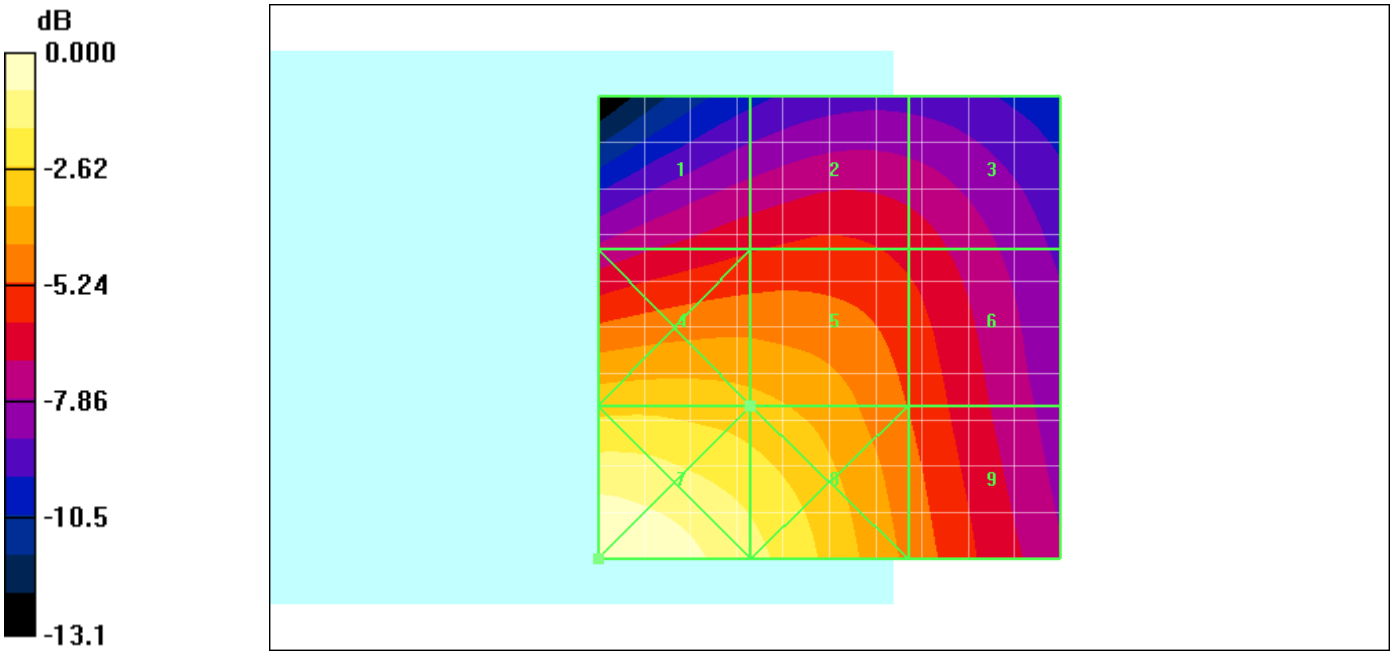
Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.061 A/m; Power Drift = -0.032 dB

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

Peak H-field in A/m

Grid 1 **0.113 M4**	Grid 2 **0.117 M4**	Grid 3 **0.110 M4**
Grid 4 **0.165 M3**	Grid 5 **0.159 M3**	Grid 6 **0.125 M4**
Grid 7 **0.229 M3**	Grid 8 **0.194 M3**	Grid 9 **0.136 M4**



0 dB = 0.229A/m

Date/Time: 1/19/2011 8:56:42 PM

Test Laboratory: RIM Testing Services

HAC_H_GSM1900_high_chan_Telecoil_Center

DUT: BlackBerry Smartphone

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

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

Phantom section: RF Section

DASY4 Configuration:

- Probe: H3DV6 - SN6168; ; Calibrated: 3/12/2010
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 5/17/2010
- 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 = 0.061 A/m; Power Drift = -0.076 dB

Maximum value of Total (measured) = 0.087 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 = 0.153 A/m

Probe Modulation Factor = 2.52

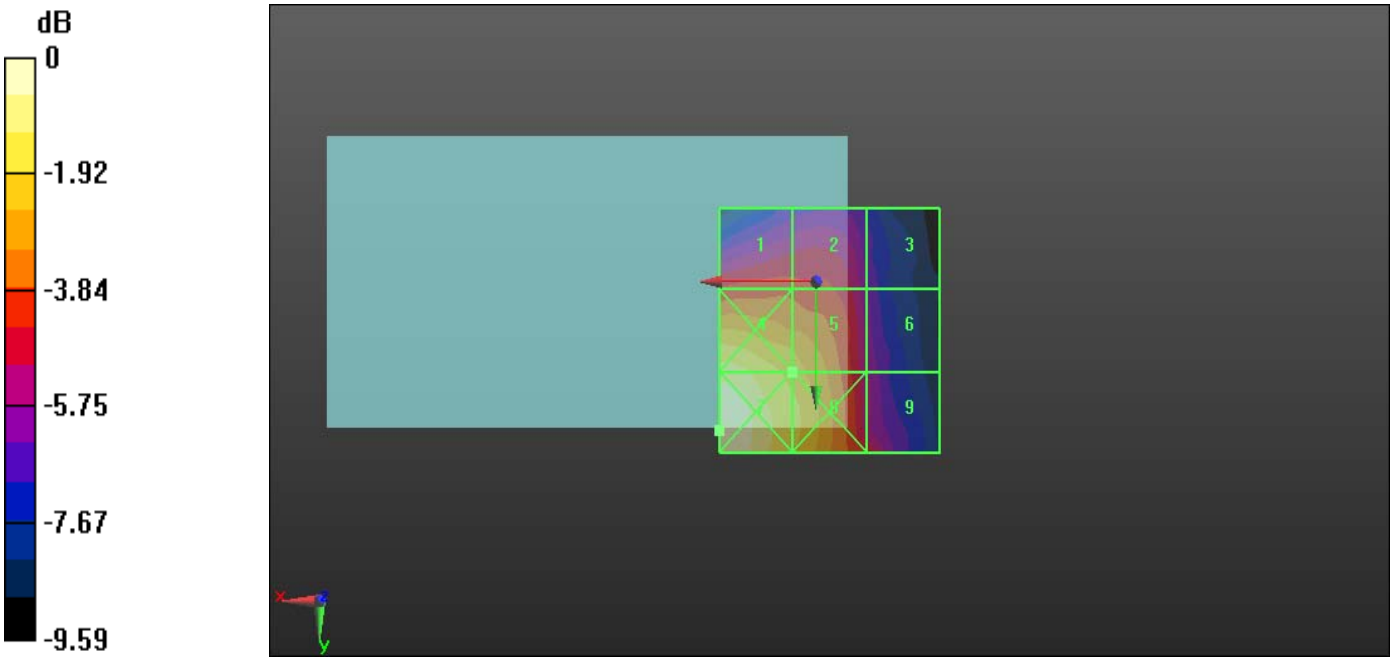
Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.061 A/m; Power Drift = -0.076 dB

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

Peak H-field in A/m

Grid 1 **0.103 M4**	Grid 2 **0.111 M4**	Grid 3 **0.111 M4**
Grid 4 **0.153 M3**	Grid 5 **0.153 M3**	Grid 6 **0.133 M4**
Grid 7 **0.220 M3**	Grid 8 **0.199 M3**	Grid 9 **0.146 M3**



0 dB = 0.220A/m

Date/Time: 1/19/2011 9:04:35 PM

Test Laboratory: RIM Testing Services

HAC_H_CDMA800_low_chan

DUT: BlackBerry Smartphone

Communication System: CDMA 800; Frequency: 824.7 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 - SN6168; ; Calibrated: 3/12/2010
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 5/17/2010
- 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 = 0.035 A/m; Power Drift = -0.804 dB

Maximum value of Total (measured) = 0.059 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 = 0.057 A/m

Probe Modulation Factor = 1.01

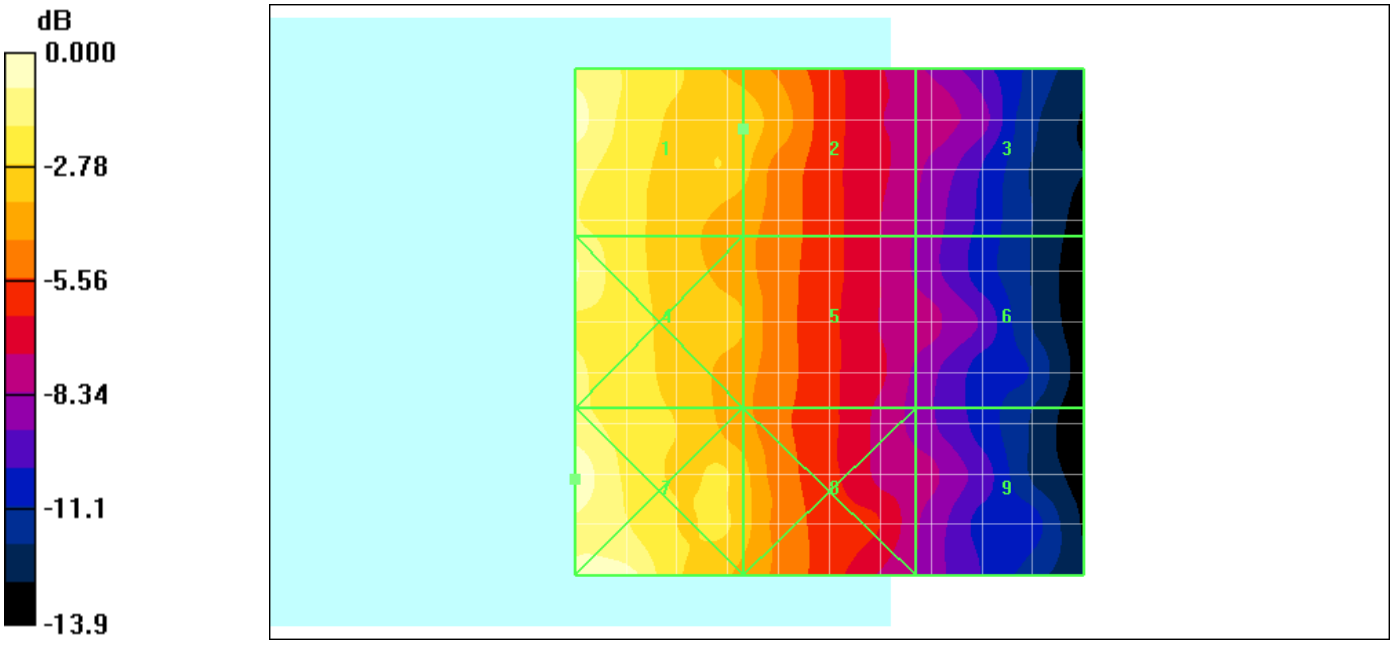
Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.035 A/m; Power Drift = -0.804 dB

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

Peak H-field in A/m

Grid 1 **0.057 M4**	Grid 2 **0.041 M4**	Grid 3 **0.025 M4**
Grid 4 **0.055 M4**	Grid 5 **0.040 M4**	Grid 6 **0.025 M4**
Grid 7 **0.060 M4**	Grid 8 **0.041 M4**	Grid 9 **0.025 M4**



0 dB = 0.060A/m

Date/Time: 1/19/2011 9:08:52 PM

Test Laboratory: RIM Testing Services

HAC_H_CDMA800_mid_chan

DUT: BlackBerry Smartphone

Communication System: CDMA 800; Frequency: 836.52 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 - SN6168; ; Calibrated: 3/12/2010
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 5/17/2010
- 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 = 0.035 A/m; Power Drift = -0.904 dB

Maximum value of Total (measured) = 0.053 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 = 0.051 A/m

Probe Modulation Factor = 1.01

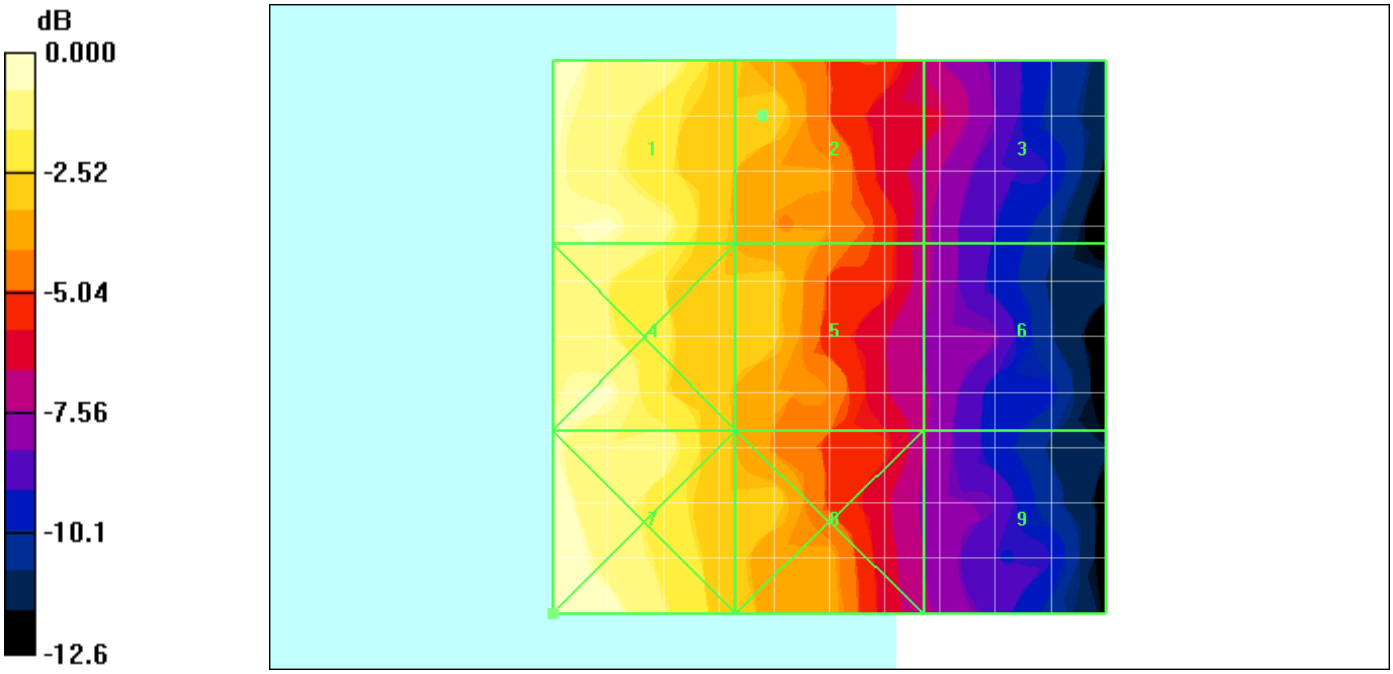
Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.035 A/m; Power Drift = -0.904 dB

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

Peak H-field in A/m

Grid 1 **0.051 M4**	Grid 2 **0.039 M4**	Grid 3 **0.026 M4**
Grid 4 **0.050 M4**	Grid 5 **0.038 M4**	Grid 6 **0.023 M4**
Grid 7 **0.053 M4**	Grid 8 **0.039 M4**	Grid 9 **0.023 M4**



0 dB = 0.053A/m

Date/Time: 1/19/2011 9:14:16 PM

Test Laboratory: RIM Testing Services

HAC_H_CDMA800_high_chan

DUT: BlackBerry Smartphone

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 - SN6168; ; Calibrated: 3/12/2010
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 5/17/2010
- 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 = 0.034 A/m; Power Drift = 1.04 dB

Maximum value of Total (measured) = 0.062 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 = 0.053 A/m

Probe Modulation Factor = 1.01

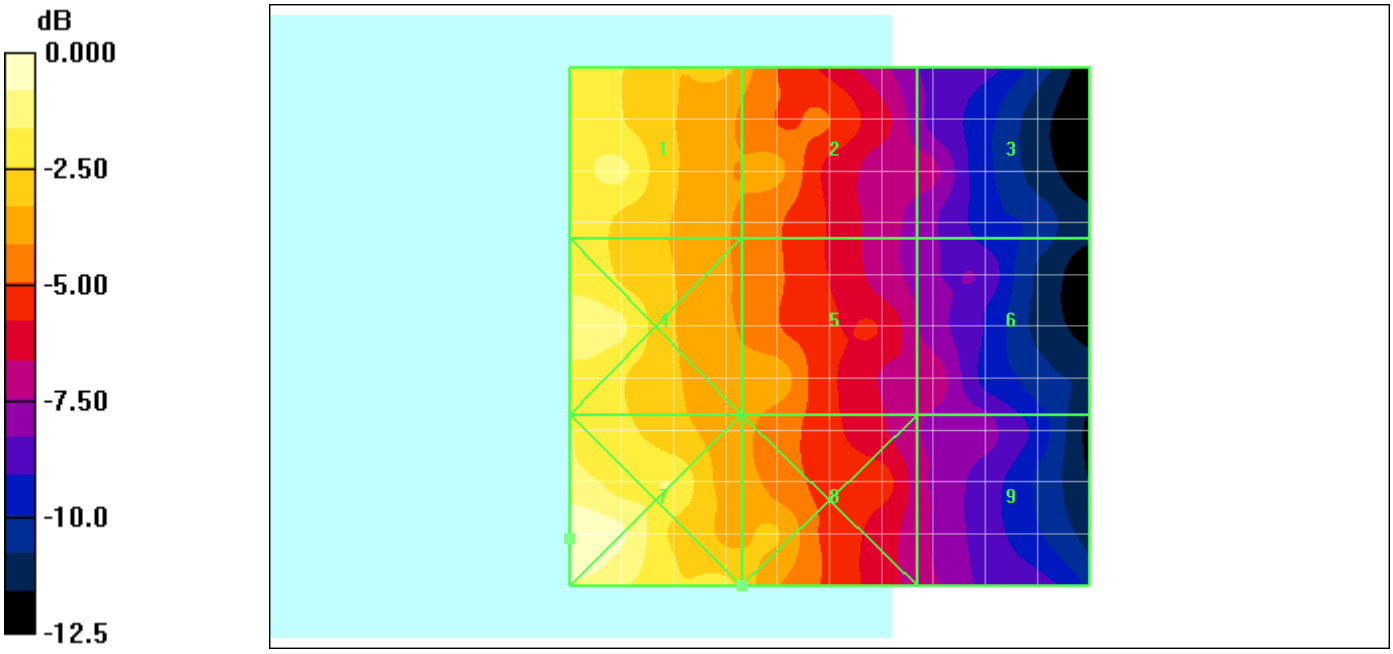
Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.034 A/m; Power Drift = 1.04 dB

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

Peak H-field in A/m

Grid 1 **0.053 M4**	Grid 2 **0.042 M4**	Grid 3 **0.028 M4**
Grid 4 **0.056 M4**	Grid 5 **0.042 M4**	Grid 6 **0.029 M4**
Grid 7 **0.063 M4**	Grid 8 **0.046 M4**	Grid 9 **0.028 M4**



0 dB = 0.063A/m

Date/Time: 1/19/2011 9:20:14 PM

Test Laboratory: RIM Testing Services

HAC_H_CDMA800_low_chan_Telecoil_Center

DUT: BlackBerry Smartphone

Communication System: CDMA 800; Frequency: 824.7 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 - SN6168; ; Calibrated: 3/12/2010
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 5/17/2010
- 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 = 0.035 A/m; Power Drift = -0.835 dB

Maximum value of Total (measured) = 0.057 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 = 0.053 A/m

Probe Modulation Factor = 1.01

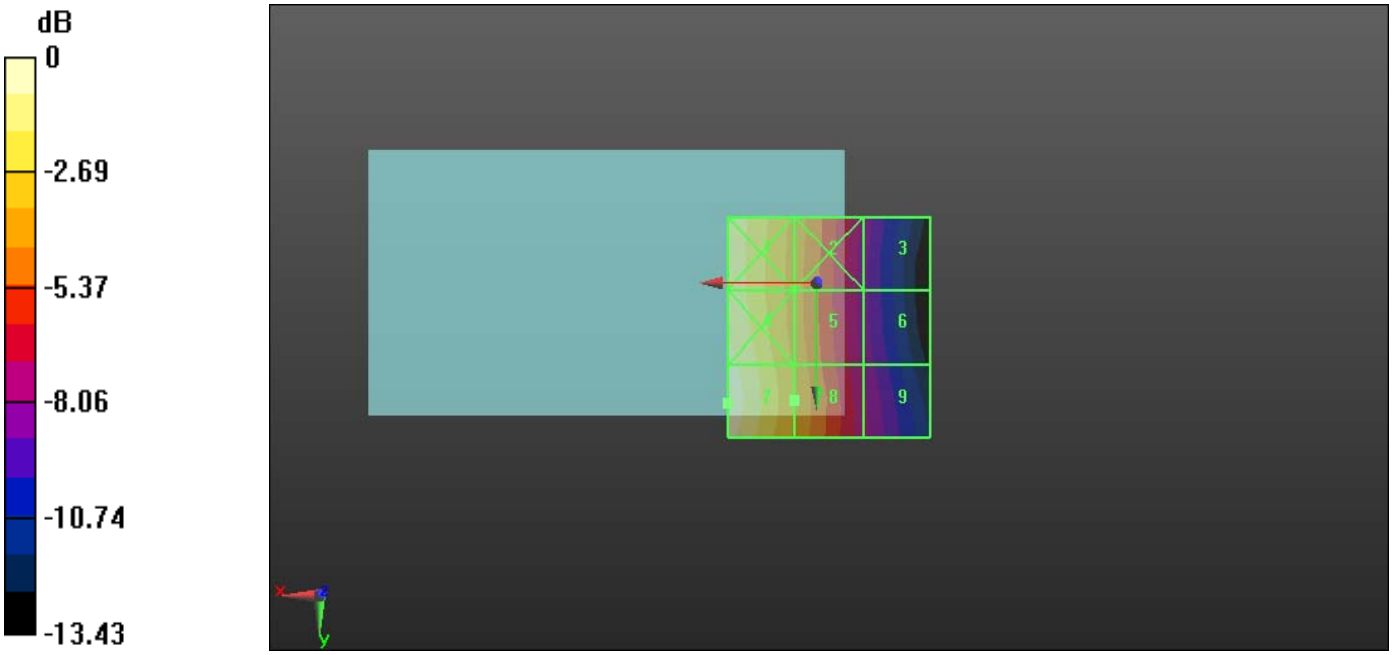
Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.035 A/m; Power Drift = -0.835 dB

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

Peak H-field in A/m

Grid 1 **0.053 M4**	Grid 2 **0.039 M4**	Grid 3 **0.027 M4**
Grid 4 **0.056 M4**	Grid 5 **0.039 M4**	Grid 6 **0.027 M4**
Grid 7 **0.058 M4**	Grid 8 **0.040 M4**	Grid 9 **0.026 M4**



0 dB = 0.058A/m

Date/Time: 1/19/2011 9:26:27 PM

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

DASY4 Configuration:

- Probe: H3DV6 - SN6168; ; Calibrated: 3/12/2010
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 5/17/2010
- 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 = 0.032 A/m; Power Drift = 0.232 dB

Maximum value of Total (measured) = 0.038 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 = 0.031 A/m

Probe Modulation Factor = 1.08

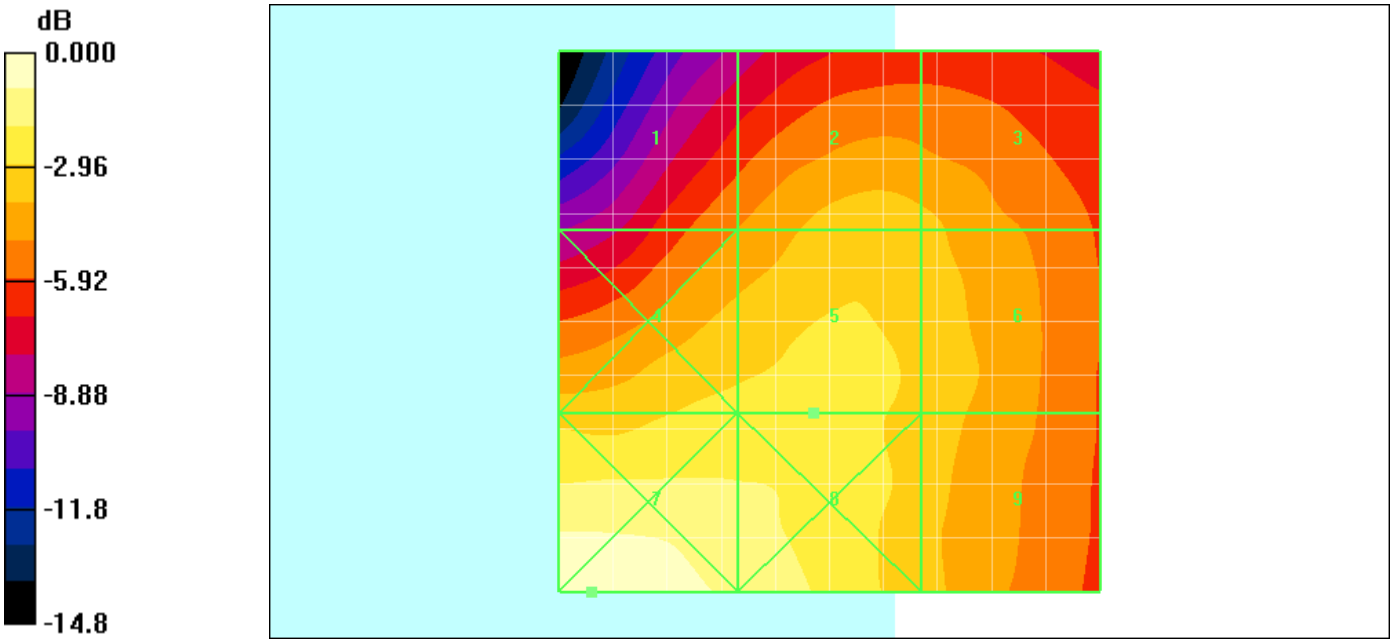
Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.032 A/m; Power Drift = 0.232 dB

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

Peak H-field in A/m

Grid 1 **0.023 M4**	Grid 2 **0.028 M4**	Grid 3 **0.027 M4**
Grid 4 **0.030 M4**	Grid 5 **0.031 M4**	Grid 6 **0.028 M4**
Grid 7 **0.041 M4**	Grid 8 **0.036 M4**	Grid 9 **0.028 M4**



0 dB = 0.041A/m

Date/Time: 1/19/2011 9:32:46 PM

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

DASY4 Configuration:

- Probe: H3DV6 - SN6168; ; Calibrated: 3/12/2010
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 5/17/2010
- 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 = 0.032 A/m; Power Drift = -0.069 dB

Maximum value of Total (measured) = 0.040 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 = 0.032 A/m

Probe Modulation Factor = 1.08

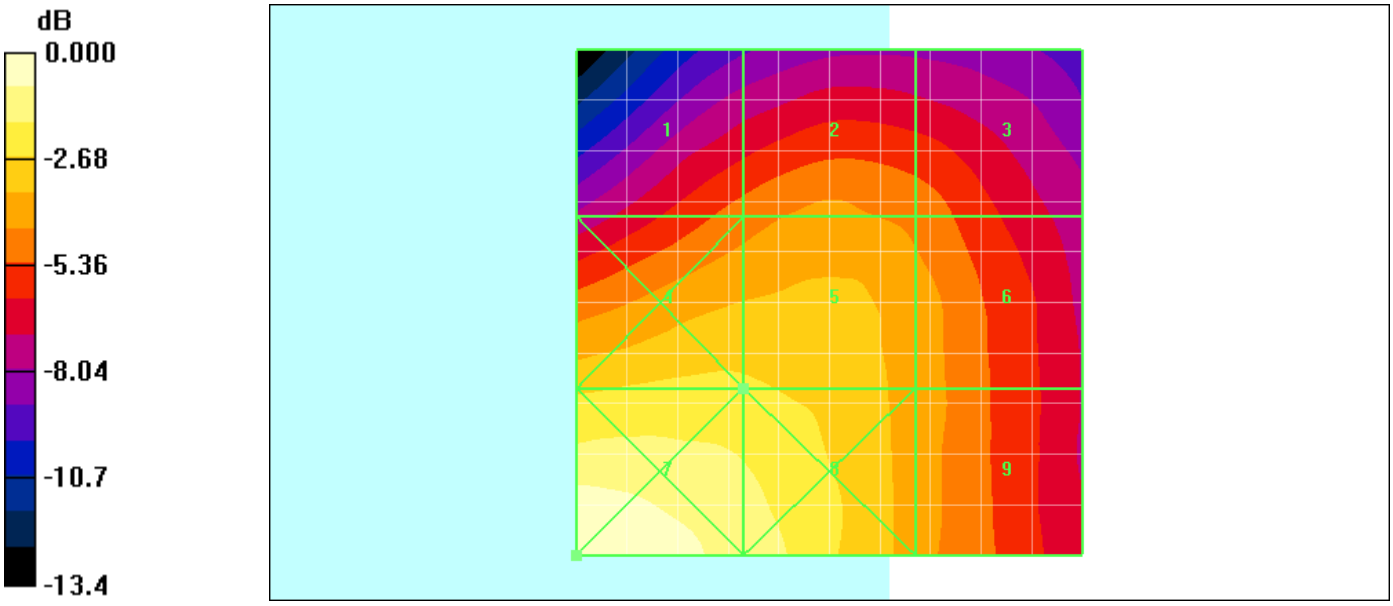
Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.032 A/m; Power Drift = -0.069 dB

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

Peak H-field in A/m

Grid 1 **0.024 M4**	Grid 2 **0.027 M4**	Grid 3 **0.025 M4**
Grid 4 **0.033 M4**	Grid 5 **0.032 M4**	Grid 6 **0.027 M4**
Grid 7 **0.043 M4**	Grid 8 **0.037 M4**	Grid 9 **0.027 M4**



0 dB = 0.043A/m

Date/Time: 1/19/2011 9:37:14 PM

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

DASY4 Configuration:

- Probe: H3DV6 - SN6168; ; Calibrated: 3/12/2010
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 5/17/2010
- 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 = 0.030 A/m; Power Drift = -0.006 dB

Maximum value of Total (measured) = 0.044 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 = 0.034 A/m

Probe Modulation Factor = 1.08

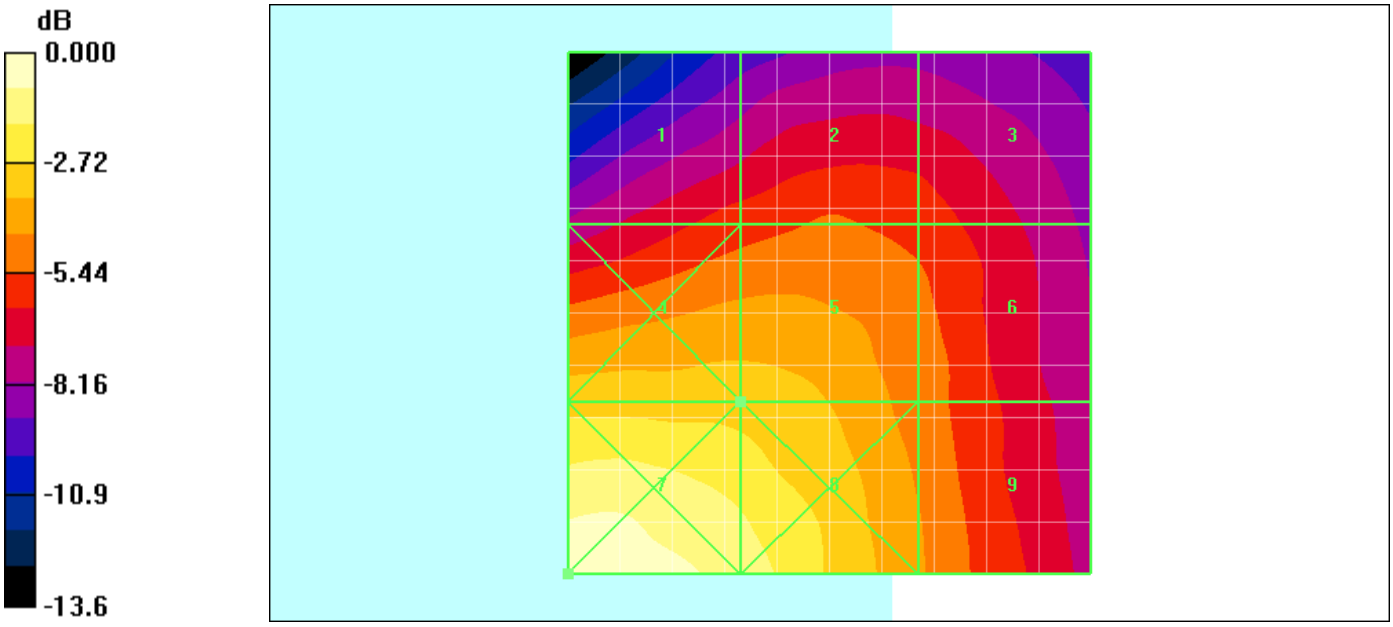
Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.030 A/m; Power Drift = -0.006 dB

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

Peak H-field in A/m

Grid 1 **0.024 M4**	Grid 2 **0.026 M4**	Grid 3 **0.025 M4**
Grid 4 **0.034 M4**	Grid 5 **0.034 M4**	Grid 6 **0.027 M4**
Grid 7 **0.048 M4**	Grid 8 **0.041 M4**	Grid 9 **0.029 M4**



0 dB = 0.048A/m

Date/Time: 1/19/2011 9:42:28 PM

Test Laboratory: RIM Testing Services

HAC_H_CDMA1900_high_chan_Telecoil_Center

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

DASY4 Configuration:

- Probe: H3DV6 - SN6168; ; Calibrated: 3/12/2010
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 5/17/2010
- 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 = 0.031 A/m; Power Drift = -0.179 dB

Maximum value of Total (measured) = 0.042 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 = 0.032 A/m

Probe Modulation Factor = 1.08

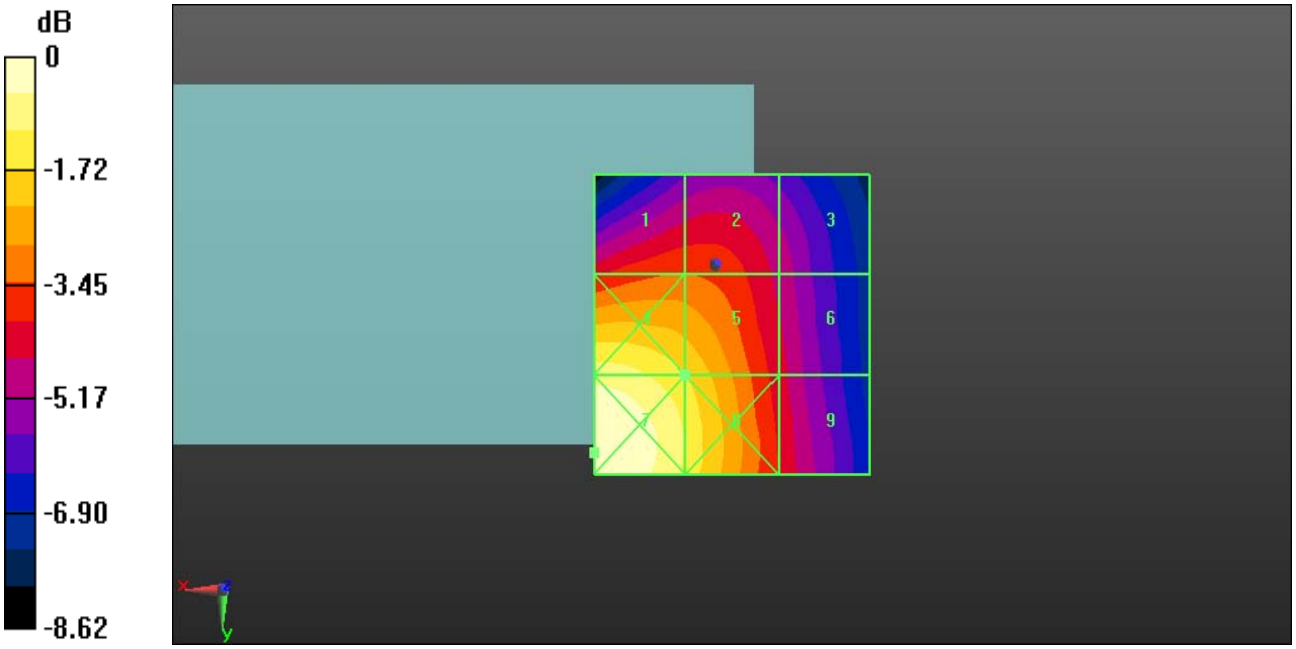
Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.031 A/m; Power Drift = -0.179 dB

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

Peak H-field in A/m

Grid 1 **0.023 M4**	Grid 2 **0.024 M4**	Grid 3 **0.023 M4**
Grid 4 **0.032 M4**	Grid 5 **0.032 M4**	Grid 6 **0.026 M4**
Grid 7 **0.046 M4**	Grid 8 **0.039 M4**	Grid 9 **0.027 M4**



0 dB = 0.046A/m