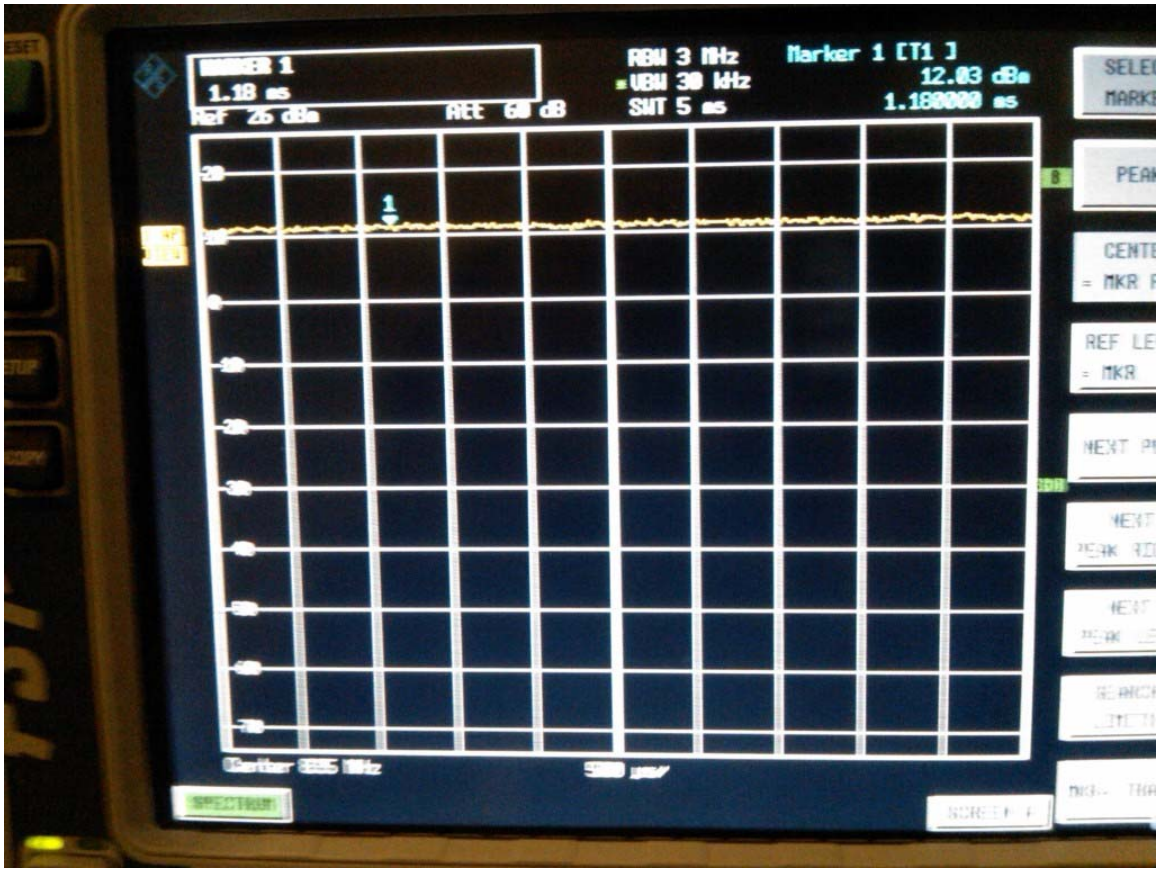
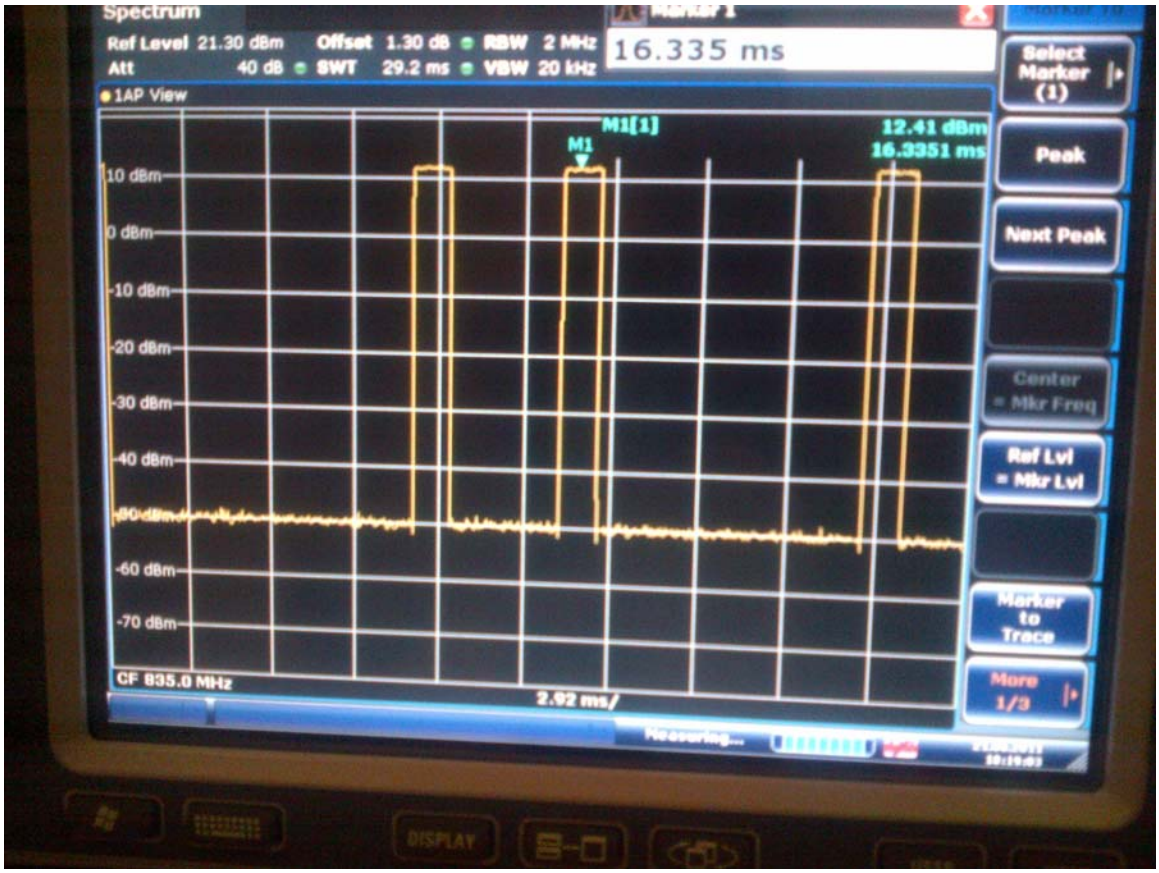
Annex A: Measurement data and plots

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

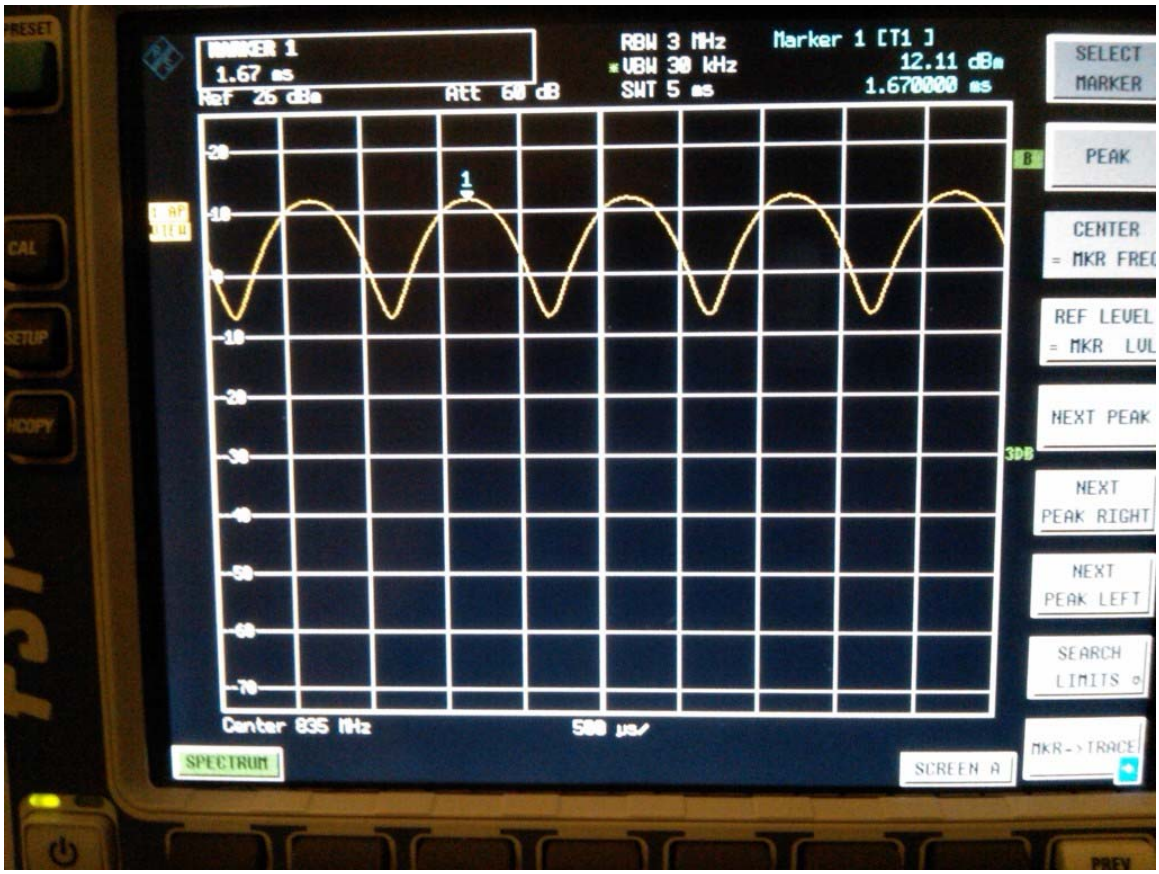


CDMA Cell 835 MHz

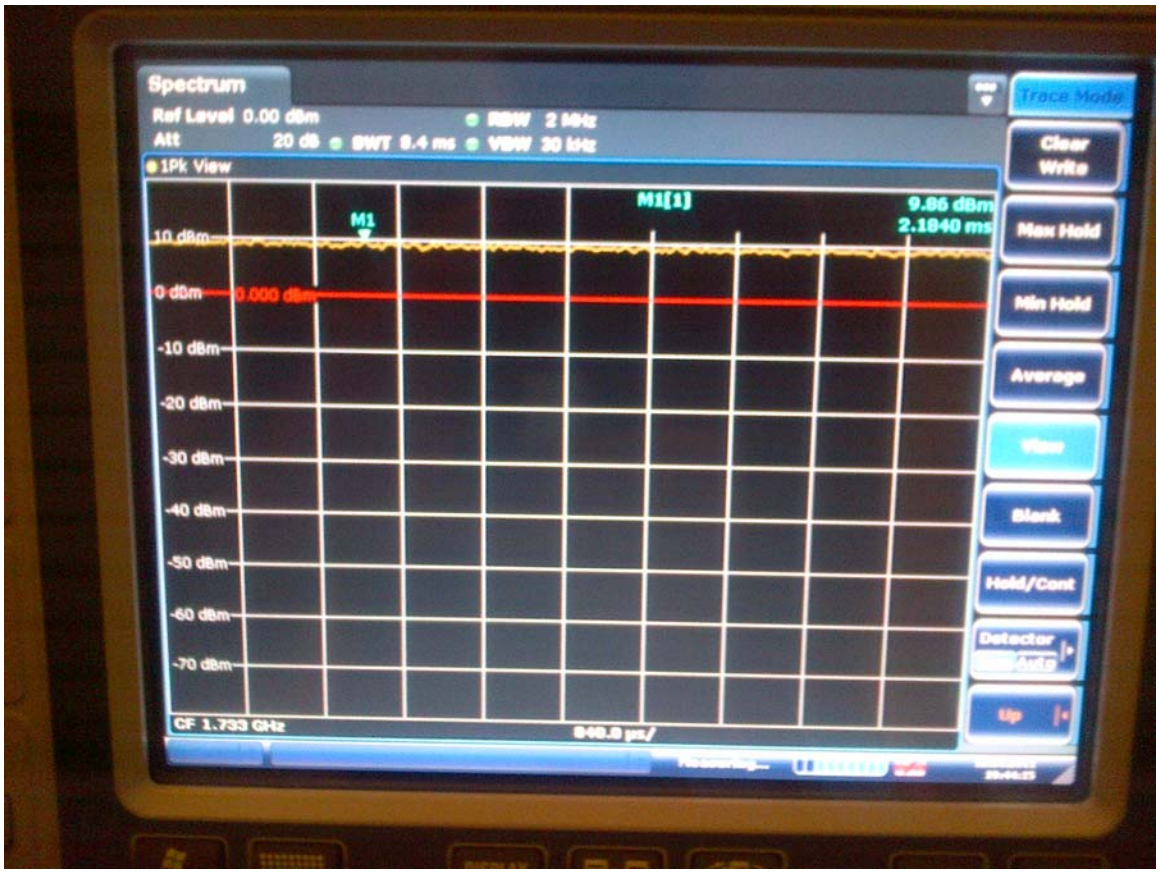


CDMA Cell 835 MHz 1/8th

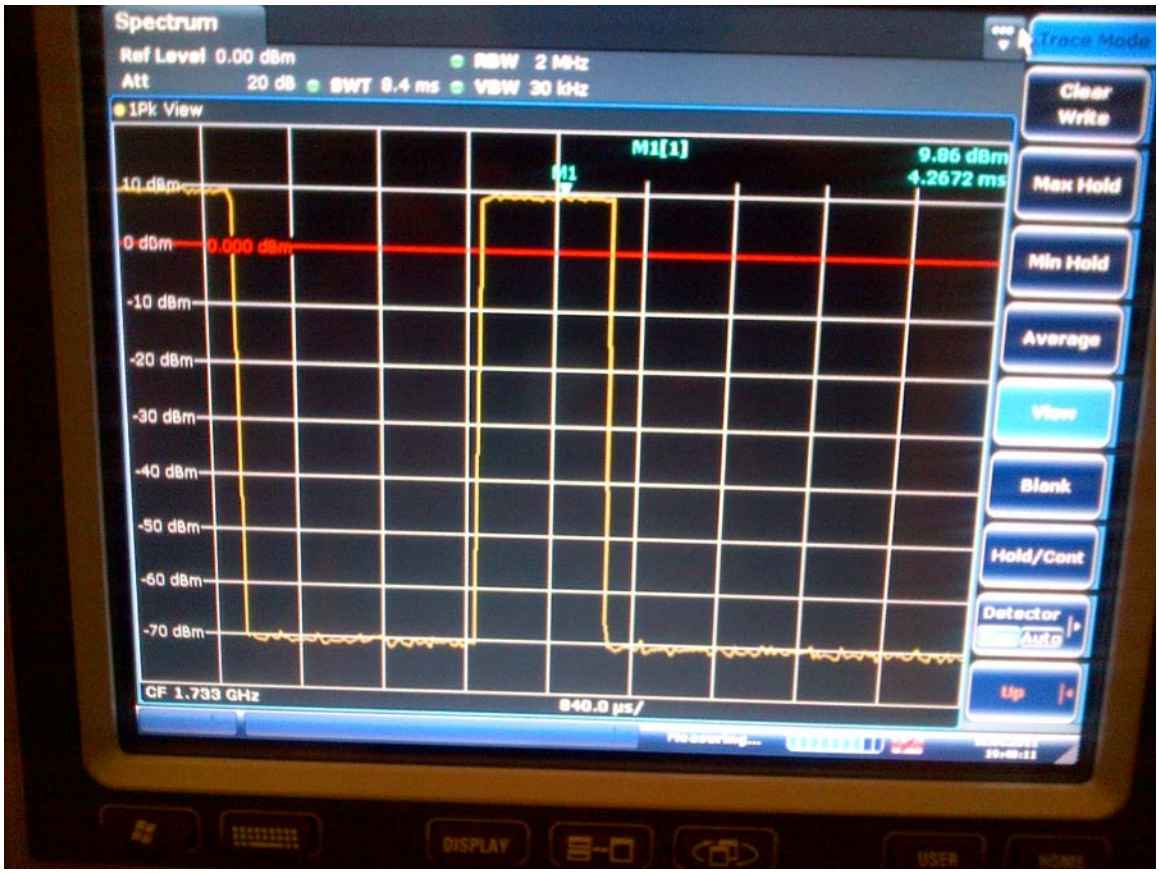
CW 835 MHz



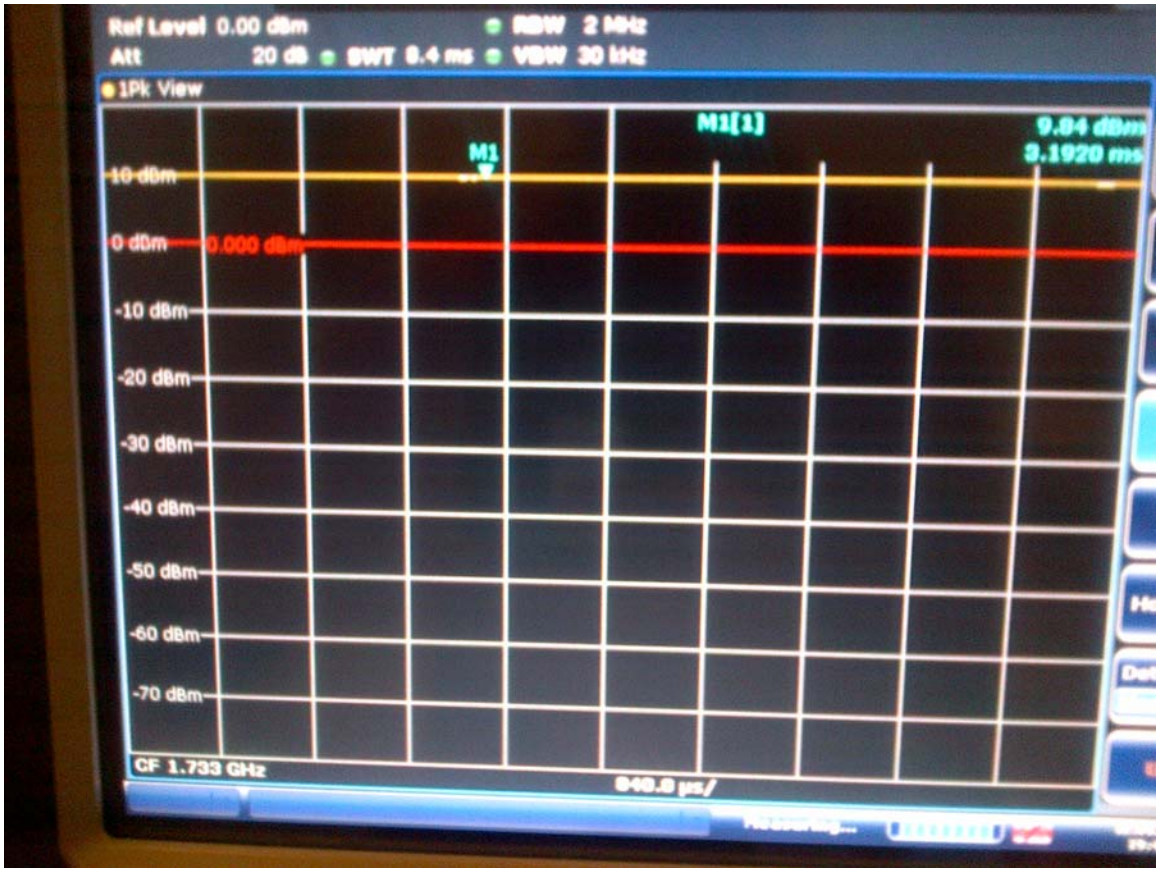
AM 80% 835 MHz



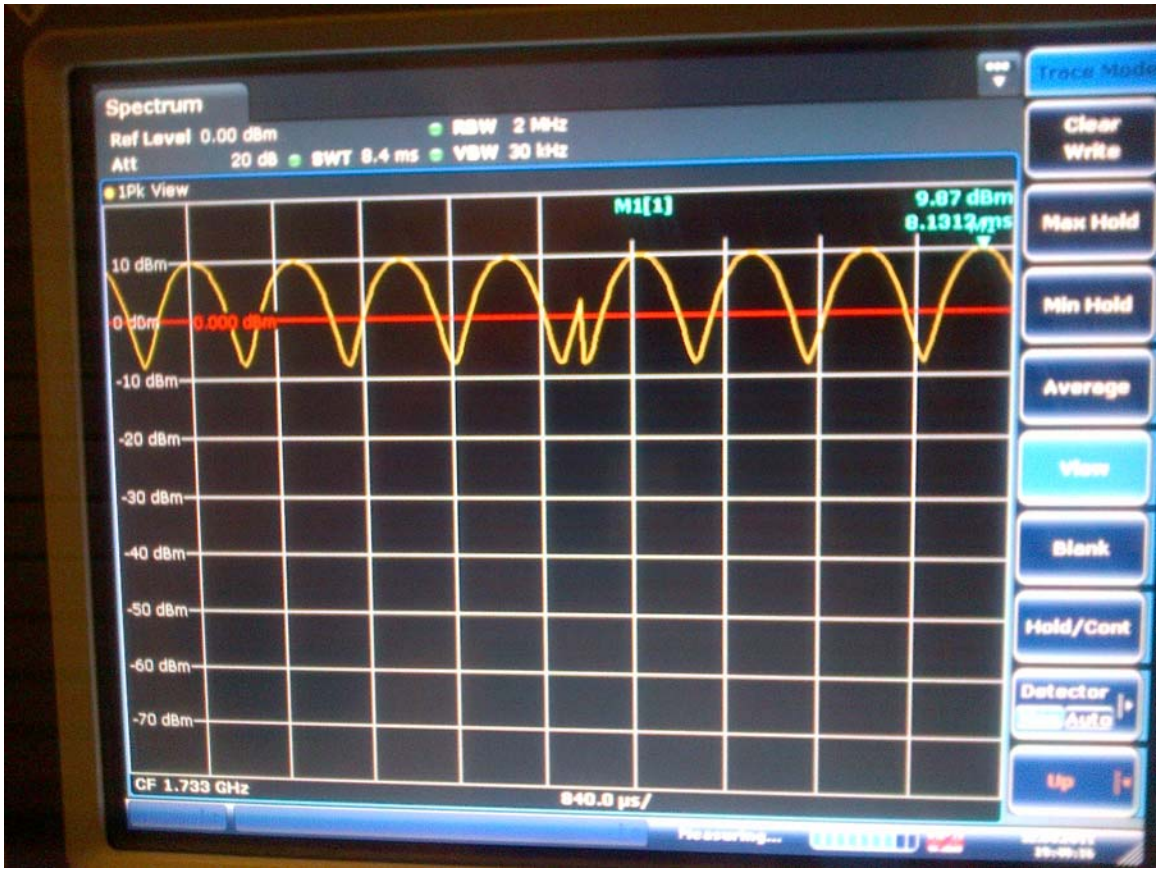
CDMA 1733 MHz



CDMA 1733 MHz 1/8 th

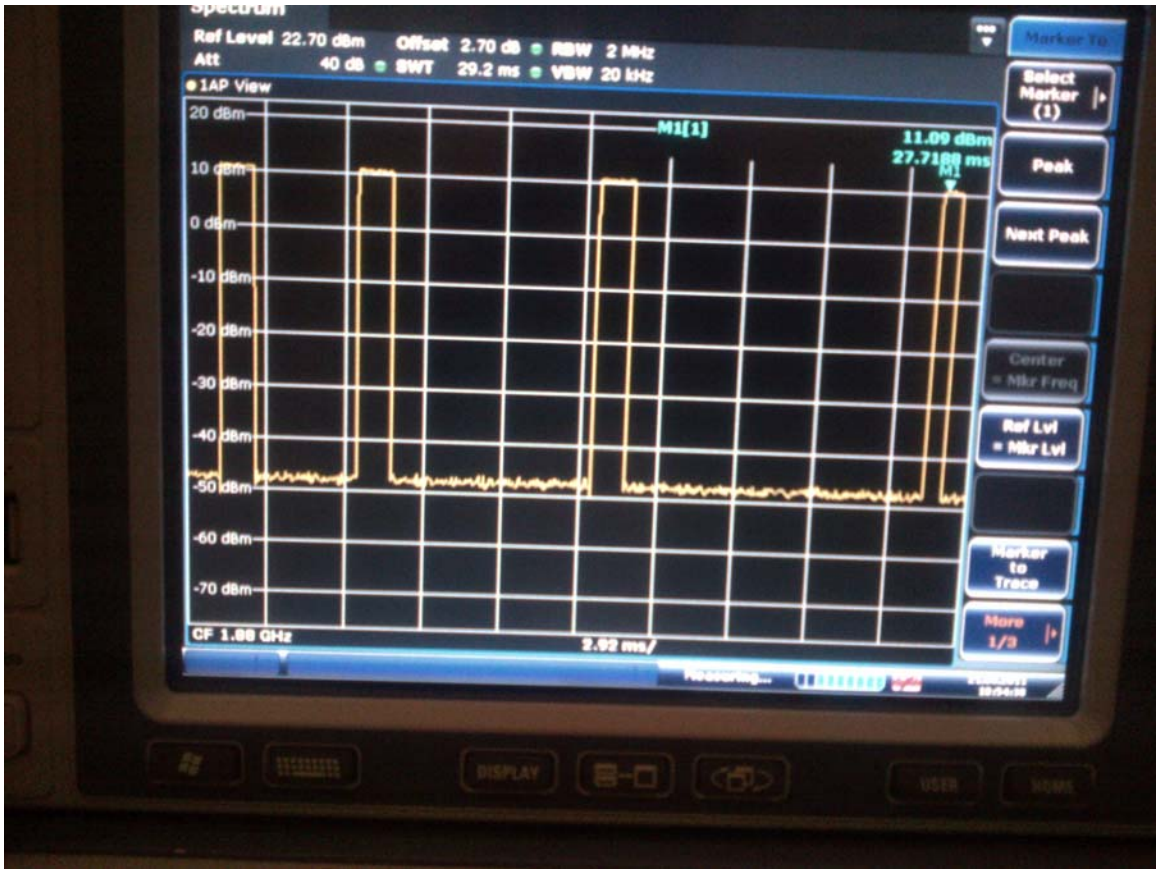


CW 1733 MHz

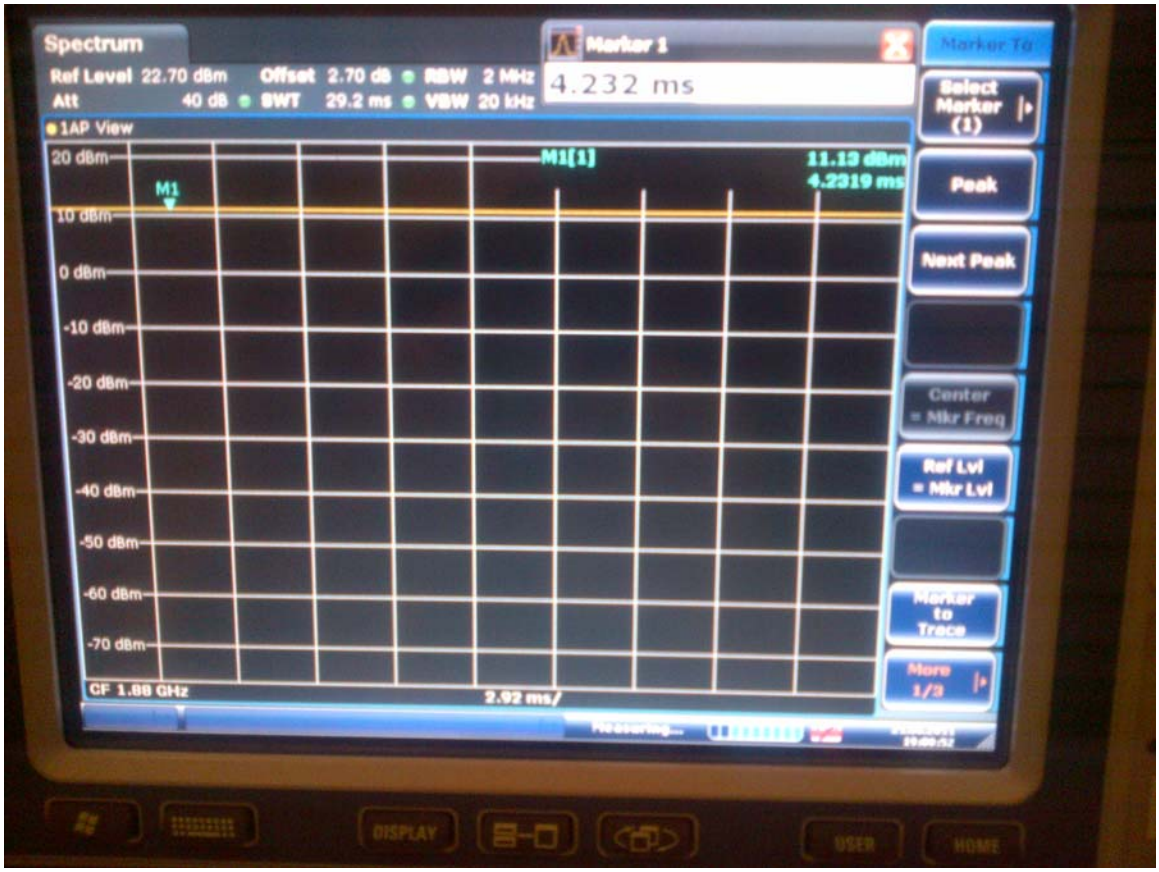


AM 80 % 1733 MHz

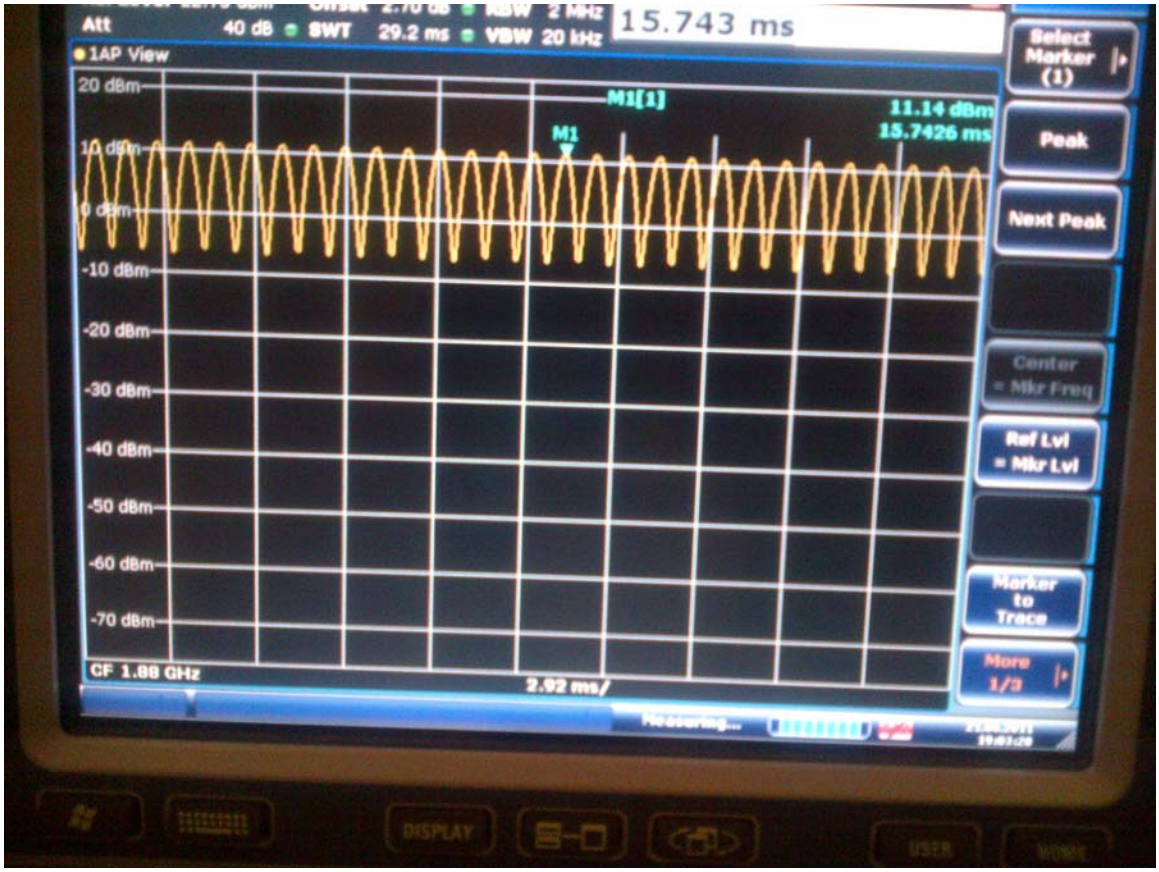
CDMA 1880 MHz



CDMA 1880 MHz 1/8 th



CW 1880 MHz



AM 80 % 1880 MHz

A.2 Dipole validation and probe modulation factor plots

Date/Time: 9/6/2011 12:21:44 PM

Test Laboratory: RIM Testing Services

HAC RF_E-Field_validation_835 MHz_09_06_11

DUT: HAC-Dipole 835 MHz; Type: D835V3

Communication System: CW; Frequency: 835 MHz

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

Phantom section: RF Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 1/14/2011
- Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 3/7/2011
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.4 (2829)

Dipole E-Field measurement/E Scan - measurement distance from the probe sensor center to CD835 Dipole = 10mm/Hearing Aid Compatibility Test (41x361x1): Measurement grid: dx=5mm, dy=5mm

Maximum value of peak Total field = 157.2 V/m

Probe Modulation Factor = 1.000

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 118.2 V/m; Power Drift = 0.003 dB

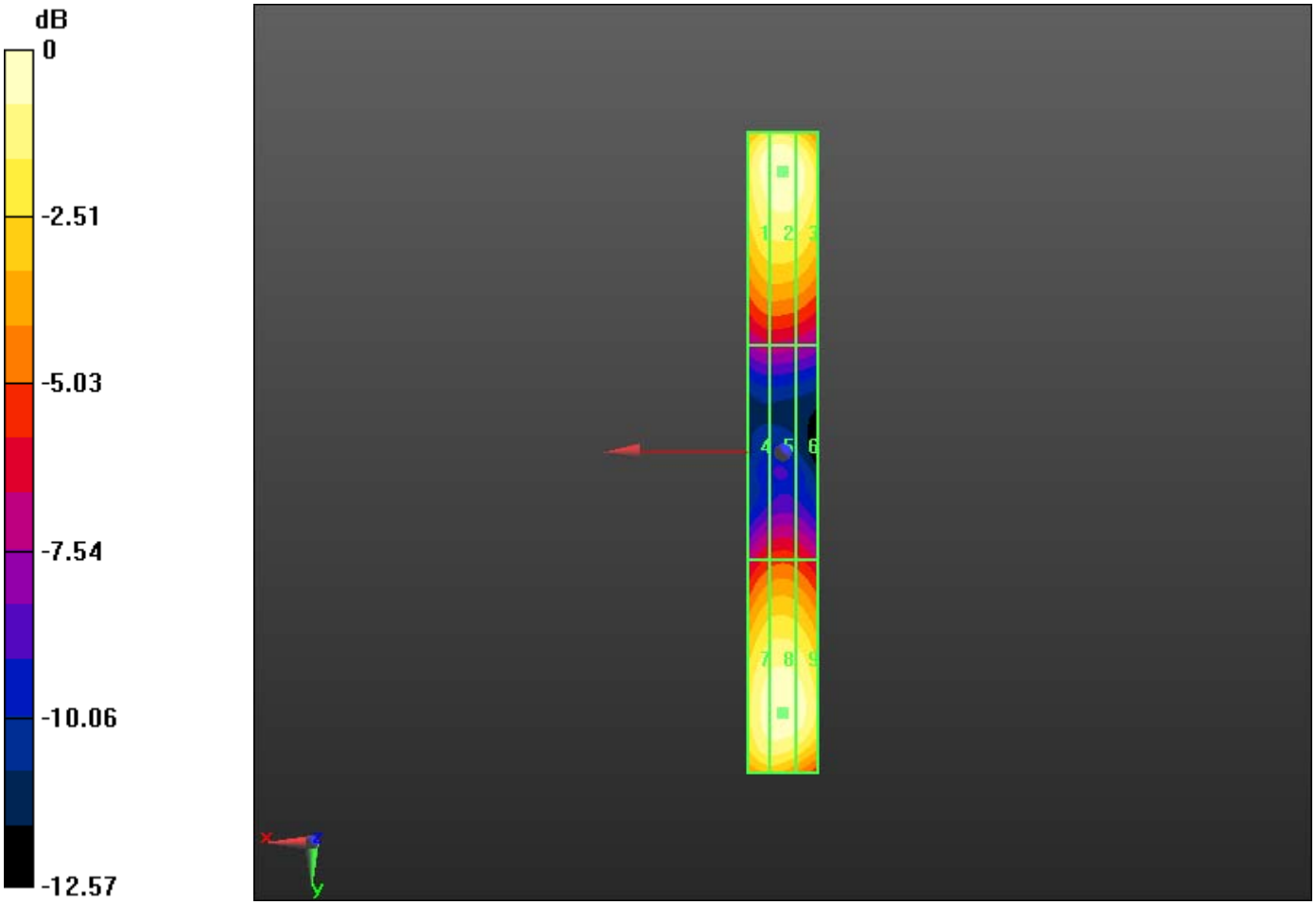
Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak E-field in V/m

Grid 1 **154.0 M4**	Grid 2 **157.2 M4**	Grid 3 **152.8 M4**
Grid 4 **83.638 M4**	Grid 5 **85.844 M4**	Grid 6 **83.612 M4**
Grid 7 **151.7 M4**	Grid 8 **155.2 M4**	Grid 9 **152.2 M4**

Cursor:

Total = 157.2 V/m
E Category: M4
Location: 0, -79, 4.7 mm



0 dB = 157.2V/m

Date/Time: 10/20/2011 1:45:30 PM

Test Laboratory: RIM Testing Services

HAC RF_E-Field_validation_835 MHz_10_20_11

DUT: HAC-Dipole 835 MHz; Type: D835V3

Communication System: CW; Frequency: 835 MHz

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

Phantom section: RF Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 1/14/2011
- Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 3/7/2011
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.4 (2829)

Dipole E-Field measurement/E Scan - measurement distance from the probe sensor center to CD835 Dipole = 10mm/Hearing Aid Compatibility Test (41x361x1): Measurement grid: dx=5mm, dy=5mm

Maximum value of peak Total field = 163.0 V/m

Probe Modulation Factor = 1.000

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 120.4 V/m; Power Drift = 0.07 dB

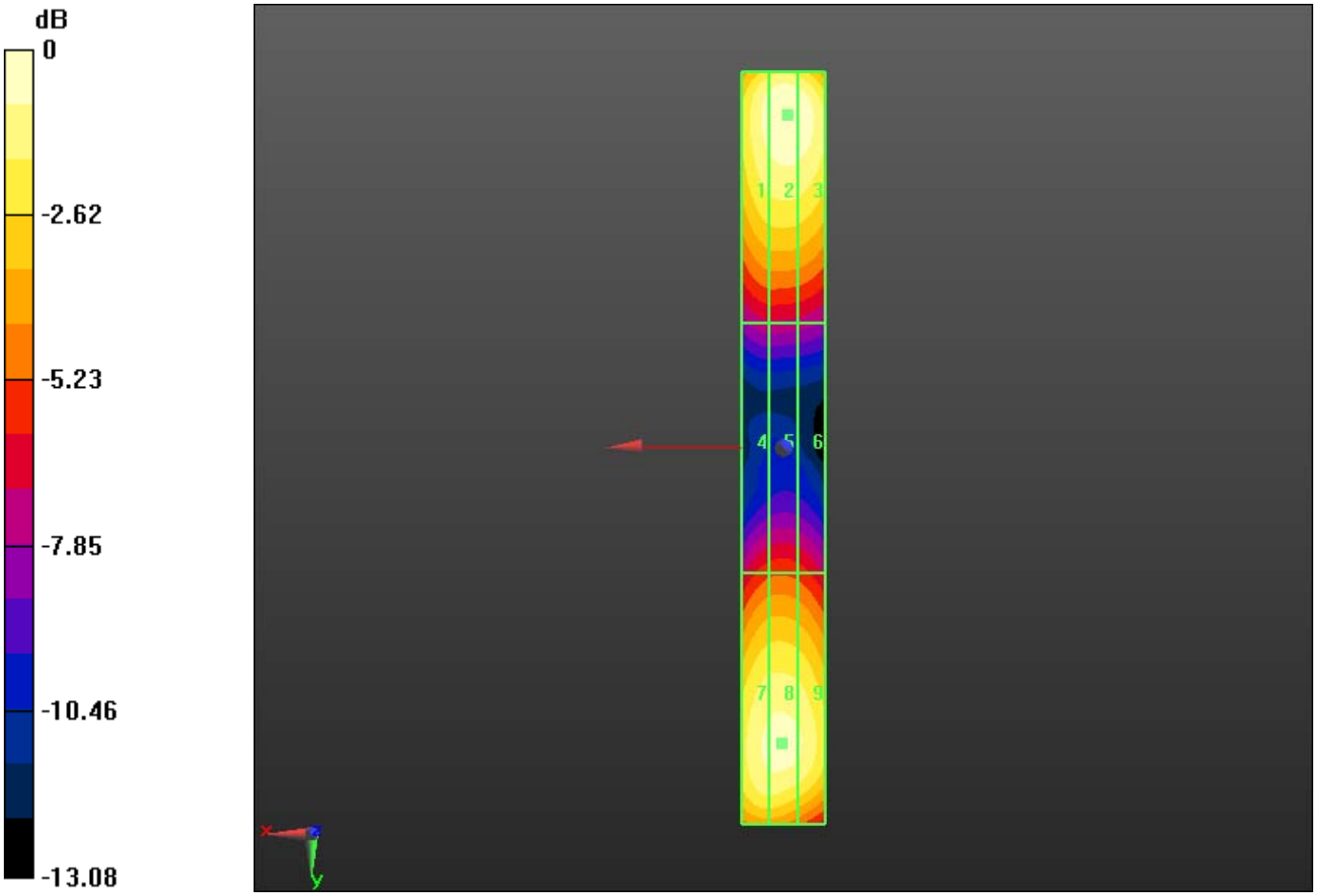
Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak E-field in V/m

Grid 1 **155.1 M4**	Grid 2 **163.0 M4**	Grid 3 **161.0 M4**
Grid 4 **87.180 M4**	Grid 5 **88.480 M4**	Grid 6 **86.061 M4**
Grid 7 **151.3 M4**	Grid 8 **153.4 M4**	Grid 9 **149.6 M4**

Cursor:

Total = 163.0 V/m
E Category: M4
Location: -1, -79.5, 4.7 mm



0 dB = 163.0V/m

Date/Time: 6/21/2011 3:33:41 PM, Date/Time: 6/21/2011 4:08:39 PM,

Test Laboratory: RIM Testing Services

HAC RF_E-Field_PMF_835 MHz

DUT: HAC-Dipole 835 MHz; Type: D835V3

Communication System: CW, Communication System: CDMA 850, Communication System Band: D835 (835.0 MHz), Communication System Band: CDMA 2000 Cellular; Frequency: 835 MHz, Frequency: 820.5 MHz;Communication System PAR: 0, Communication System PAR: 9.19 dB

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

Phantom section: RF Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 1/14/2011
- Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 3/7/2011
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.4 (2829)

Dipole E-Field measurement/E Scan _CW_CDMA835_PMF - measurement distance from the probe sensor center to CD835 Dipole = 10mm 2/Hearing Aid Compatibility Test (41x361x1):

Measurement grid: dx=5mm, dy=5mm
Maximum value of peak Total field = 60.020 V/m
Probe Modulation Factor = 1.000
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 45.311 V/m; Power Drift = -0.13 dB
Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak E-field in V/m

Grid 1 **58.156** **M4**	Grid 2 **60.020** **M4**	Grid 3 **58.370** **M4**
Grid 4 **31.911** **M4**	Grid 5 **32.721** **M4**	Grid 6 **32.052** **M4**
Grid 7 **57.400** **M4**	Grid 8 **58.565** **M4**	Grid 9 **57.669** **M4**

Cursor:

Total = 60.020 V/m
E Category: M4
Location: 0, -79, 4.7 mm

Dipole E-Field measurement/E Scan _AM80%_CDMA835 _PMF - measurement distance from the probe sensor center to CD835 Dipole = 10mm 2 2/Hearing Aid Compatibility Test (41x361x1): Measurement grid: dx=5mm, dy=5mm
Maximum value of peak Total field = 37.844 V/m
Probe Modulation Factor = 1.000
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 28.705 V/m; Power Drift = -0.04 dB
Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak E-field in V/m

Grid 1 **36.315** **M4**	Grid 2 **37.844** **M4**	Grid 3 **37.101** **M4**
Grid 4 **20.380** **M4**	Grid 5 **21.197** **M4**	Grid 6 **20.358** **M4**
Grid 7 **36.696** **M4**	Grid 8 **37.645** **M4**	Grid 9 **36.579** **M4**

Cursor:
Total = 37.844 V/m
E Category: M4
Location: -0.5, -79, 4.7 mm

Dipole E-Field measurement/E Scan - CDMA835_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 = 63.653 V/m
Probe Modulation Factor = 1.000
Device Reference Point: 0, 0, -6.3 mm

Reference Value = 45.492 V/m; Power Drift = 0.04 dB

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

Peak E-field in V/m

Grid 1 **60.457** **M4**	Grid 2 **63.653** **M4**	Grid 3 **62.702** **M4**
Grid 4 **32.119** **M4**	Grid 5 **32.806** **M4**	Grid 6 **32.009** **M4**
Grid 7 **57.694** **M4**	Grid 8 **58.081** **M4**	Grid 9 **56.094** **M4**

Cursor:

Total = 63.653 V/m
E Category: M4
Location: -1, -79, 4.7 mm

Dipole E-Field measurement/E Scan _CDMA835_1_8th_PMF - measurement distance from the probe sensor center to CD835 Dipole = 10mm 2 2 2/Hearing Aid Compatibility Test (41x361x1):

Measurement grid: dx=5mm, dy=5mm
Maximum value of peak Total field = 23.083 V/m
Probe Modulation Factor = 1.000
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 16.053 V/m; Power Drift = 0.10 dB

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

Peak E-field in V/m

Grid 1 **21.961 M4**	Grid 2 **22.888 M4**	Grid 3 **21.653 M4**
Grid 4 **11.102 M4**	Grid 5 **11.571 M4**	Grid 6 **11.296 M4**
Grid 7 **22.471 M4**	Grid 8 **23.083 M4**	Grid 9 **21.920 M4**

Cursor:

Total = 23.083 V/m
E Category: M4
Location: 0, 74.5, 4.7 mm

Date/Time: 9/12/2011 2:41:12 PM

Test Laboratory: RIM Testing Services

HAC RF_E-Field_PMF_CDMA_AWS_1733 MHz

DUT: HAC Dipole 1880 MHz; Type: CD1880V3

Communication System: CW, Communication System: AM80%, Communication System: CDMA AWS 1700, Communication System: CDMA AWS 1700_1/8th; Frequency: 1733 MHz, Frequency: 1732.5 MHz

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

Phantom section: RF Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 1/14/2011
- Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 3/7/2011
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.4 (2829)

Dipole E-Field measurement/E Scan _CW_CDMA1733_PMF - measurement distance from the probe sensor center to CD835 Dipole = 10mm 2/Hearing Aid Compatibility Test (41x181x1): Measurement grid: dx=5mm, dy=5mm

Maximum value of peak Total field = 43.583 V/m

Probe Modulation Factor = 1.000

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 41.282 V/m; Power Drift = 0.02 dB

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

Peak E-field in V/m

Grid 1 **41.904** **M4**	Grid 2 **43.583** **M4**	Grid 3 **42.138** **M4**
Grid 4 **30.700** **M4**	Grid 5 **31.896** **M4**	Grid 6 **31.260** **M4**
Grid 7 **41.898** **M4**	Grid 8 **42.543** **M4**	Grid 9 **41.296** **M4**

Cursor:
Total = 43.583 V/m
E Category: M4
Location: 0, -38.5, 4.7 mm

Dipole E-Field measurement/E Scan _AM80%_CDMA1733_PMF - measurement distance from the probe sensor center to CD835 Dipole = 10mm 2 2/Hearing Aid Compatibility Test (41x181x1): Measurement grid: dx=5mm, dy=5mm
Maximum value of peak Total field = 28.006 V/m
Probe Modulation Factor = 1.000
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 26.571 V/m; Power Drift = 0.03 dB
Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak E-field in V/m

Grid 1 **26.892** **M4**	Grid 2 **28.006** **M4**	Grid 3 **27.093** **M4**
Grid 4 **19.729** **M4**	Grid 5 **20.536** **M4**	Grid 6 **20.163** **M4**
Grid 7 **26.995** **M4**	Grid 8 **27.319** **M4**	Grid 9 **26.510** **M4**

Cursor:

Total = 28.006 V/m
E Category: M4
Location: 0, -38.5, 4.7 mm

Dipole E-Field measurement/E Scan _CDMA1733_FR_PMF - measurement distance from the probe sensor center to CD835 Dipole = 10mm 2 2 2/Hearing Aid Compatibility Test (41x181x1):

Measurement grid: dx=5mm, dy=5mm
Maximum value of peak Total field = 41.512 V/m
Probe Modulation Factor = 1.000
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 39.199 V/m; Power Drift = -0.07 dB

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

Peak E-field in V/m

Grid 1 **39.641** **M4**	Grid 2 **41.512** **M4**	Grid 3 **40.107** **M4**
Grid 4 **28.998** **M4**	Grid 5 **30.164** **M4**	Grid 6 **29.634** **M4**
Grid 7 **39.709** **M4**	Grid 8 **40.259** **M4**	Grid 9 **39.203** **M4**

Cursor:

Total = 41.512 V/m
E Category: M4
Location: 0, -38.5, 4.7 mm

Dipole E-Field measurement/E Scan _CDMA1733_1_8th_PMF - measurement distance from the probe sensor center to CD835 Dipole = 10mm 2 2 2 2 2/Hearing Aid Compatibility Test (41x181x1):

Measurement grid: dx=5mm, dy=5mm
Maximum value of peak Total field = 15.406 V/m
Probe Modulation Factor = 1.000
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 13.814 V/m; Power Drift = 0.14 dB

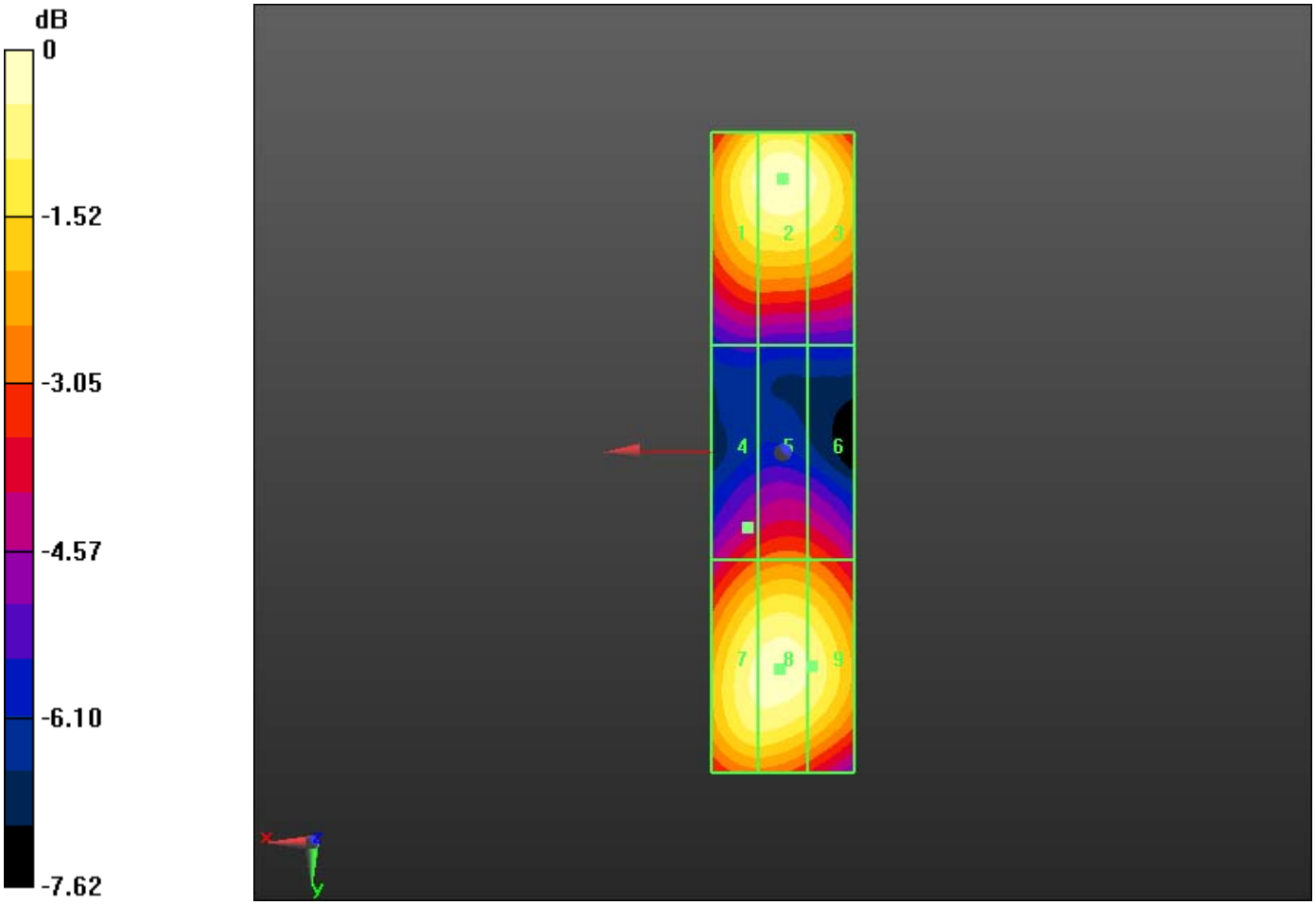
Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak E-field in V/m

Grid 1 **15.292 M4**	Grid 2 **15.255 M4**	Grid 3 **14.062 M4**
Grid 4 **15.406 M4**	Grid 5 **13.792 M4**	Grid 6 **10.756 M4**
Grid 7 **14.498 M4**	Grid 8 **15.101 M4**	Grid 9 **15.124 M4**

Cursor:

Total = 15.406 V/m
E Category: M4
Location: 5, 10.5, 4.7 mm



0 dB = 43.580V/m

Date/Time: 9/6/2011 12:38:29 PM

Test Laboratory: RIM Testing Services

HAC RF_E-Field_validation_1880 MHz_09_06_11

DUT: HAC Dipole 1880 MHz; Type: CD1880V3

Communication System: CW; Frequency: 1880 MHz

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

Phantom section: RF Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 1/14/2011
- Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 3/7/2011
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.4 (2829)

Dipole E-Field measurement/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 = 132.7 V/m

Probe Modulation Factor = 1.000

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 121.7 V/m; Power Drift = 0.01 dB

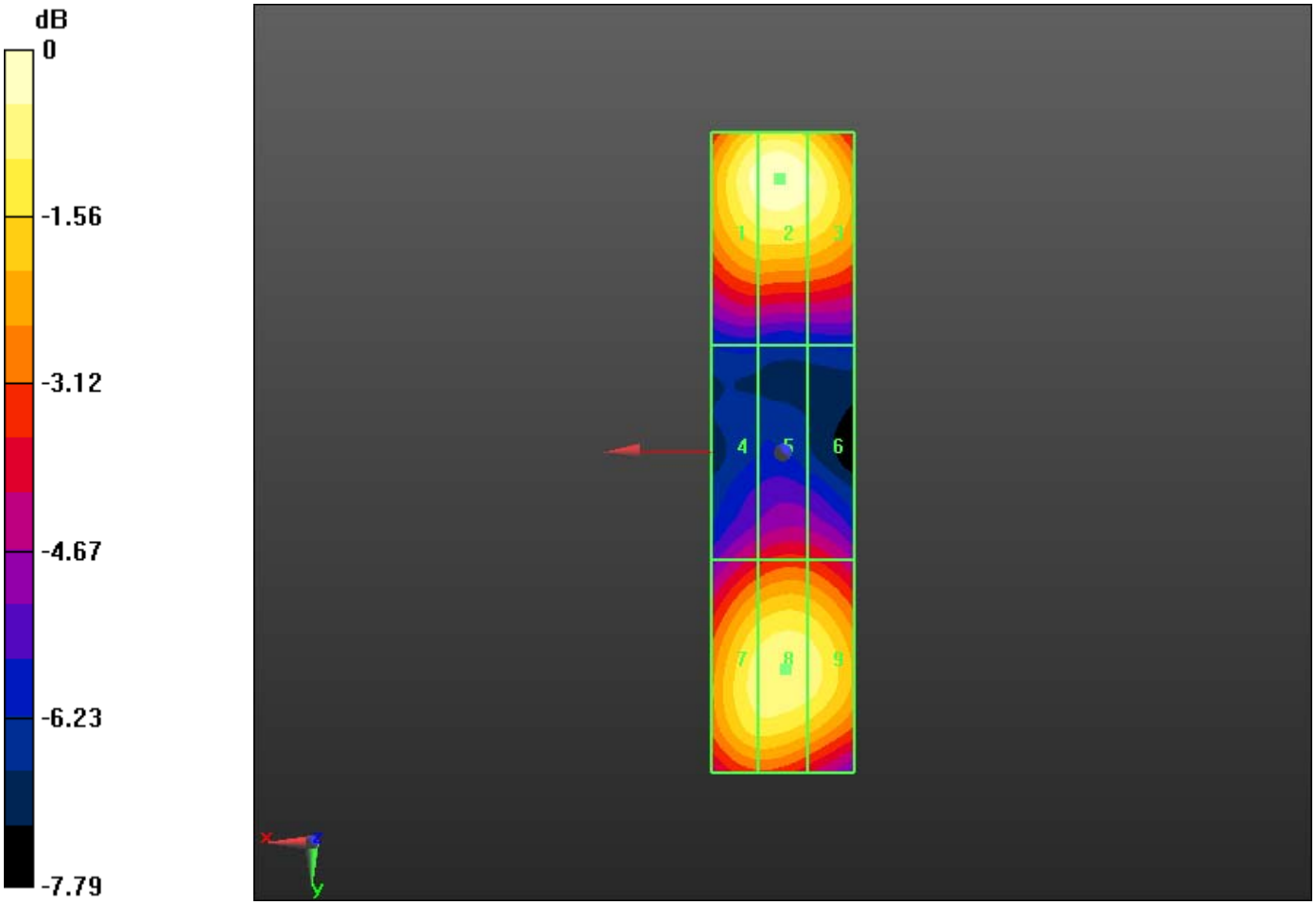
Hearing Aid Near-Field Category: M2 (AWF 0 dB)

Peak E-field in V/m

Grid 1 **129.0 M2**	Grid 2 **132.7 M2**	Grid 3 **126.6 M2**
Grid 4 **84.974 M3**	Grid 5 **89.583 M3**	Grid 6 **88.503 M3**
Grid 7 **121.7 M2**	Grid 8 **124.6 M2**	Grid 9 **122.3 M2**

Cursor:

Total = 132.7 V/m
E Category: M2
Location: 0.5, -38.5, 4.7 mm



0 dB = 132.7V/m

Date/Time: 10/20/2011 2:00:57 PM

Test Laboratory: RIM Testing Services

HAC RF_E-Field_validation_1880 MHz_10_20_11

DUT: HAC Dipole 1880 MHz; Type: CD1880V3

Communication System: CW; Frequency: 1880 MHz

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

Phantom section: RF Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 1/14/2011
- Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 3/7/2011
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.4 (2829)

Dipole E-Field measurement/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 = 132.0 V/m

Probe Modulation Factor = 1.000

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 117.0 V/m; Power Drift = 0.04 dB

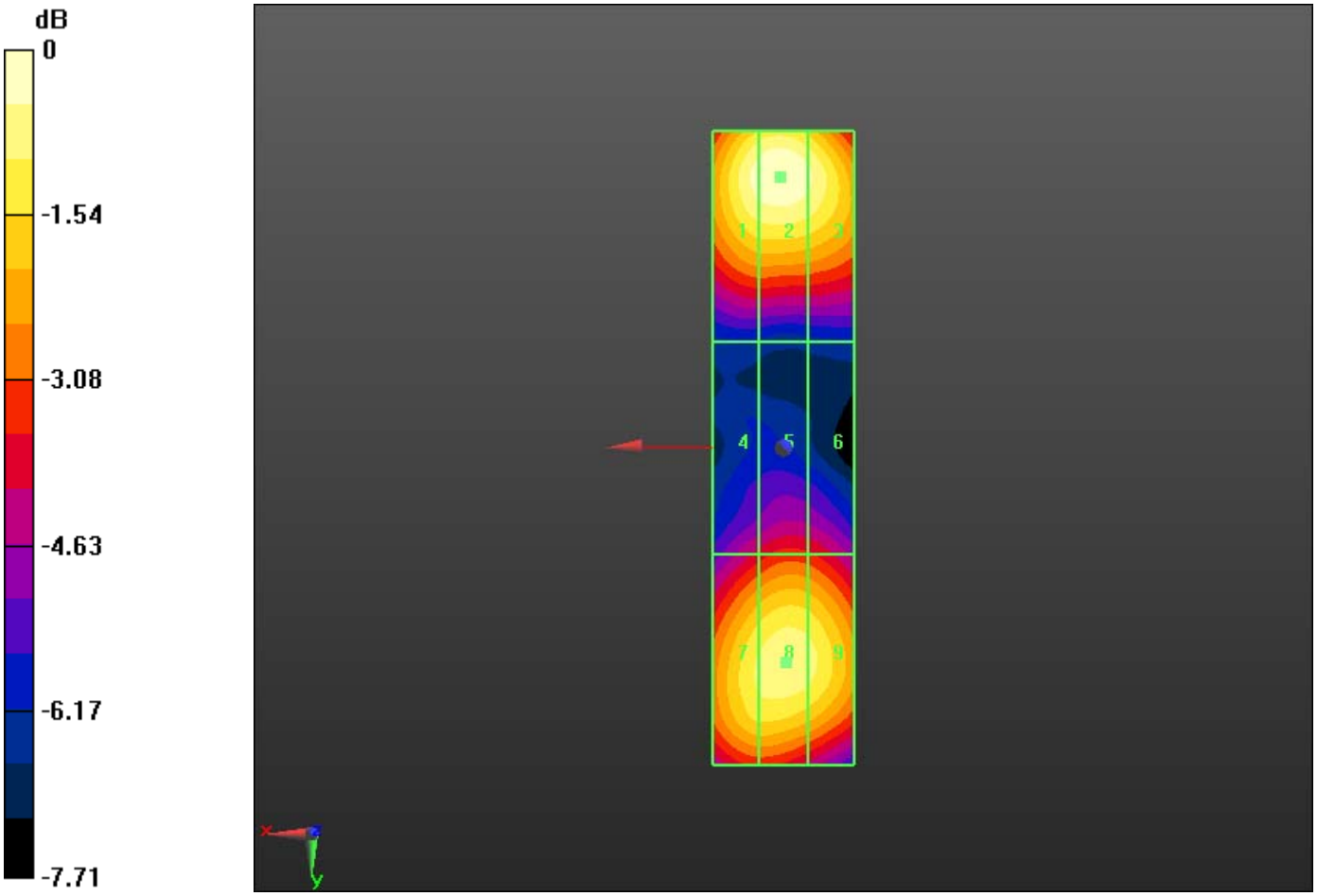
Hearing Aid Near-Field Category: M2 (AWF 0 dB)

Peak E-field in V/m

Grid 1 **128.5 M2**	Grid 2 **132.0 M2**	Grid 3 **126.3 M2**
Grid 4 **84.173 M3**	Grid 5 **89.671 M3**	Grid 6 **88.265 M3**
Grid 7 **118.6 M2**	Grid 8 **122.5 M2**	Grid 9 **120.0 M2**

Cursor:

Total = 132.0 V/m
E Category: M2
Location: 0.5, -38.5, 4.7 mm



0 dB = 132.0V/m

Date/Time: 6/21/2011 5:50:59 PM, Date/Time: 6/21/2011 6:15:20 PM,

Test Laboratory: RIM Testing Services

HAC RF_E-Field_PMF_1880 MHz

DUT: HAC Dipole 1880 MHz; Type: CD1880V3

Communication System: CW, Communication System: CDMA 1900;
Communication System Band: D1900 (1900.0 MHz), Communication System Band: CDMA 2000 PCS; Frequency: 1880 MHz;Communication System PAR: 0, Communication System PAR: 9.19 dB

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

Phantom section: RF Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 1/14/2011
- Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 3/7/2011
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.4 (2829)

Dipole E-Field measurement/E Scan - CW_CDMA1900_measurement distance from the probe sensor center to CD1880 Dipole = 10mm 2/Hearing Aid Compatibility Test (41x181x1): Measurement grid: dx=5mm, dy=5mm

Maximum value of peak Total field = 36.285 V/m

Probe Modulation Factor = 1.000

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 33.617 V/m; Power Drift = 0.04 dB

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

Peak E-field in V/m

Grid 1 **34.758** **M4**	Grid 2 **36.285** **M4**	Grid 3 **34.848** **M4**
Grid 4 **22.360** **M4**	Grid 5 **23.679** **M4**	Grid 6 **23.521** **M4**
Grid 7 **32.897** **M4**	Grid 8 **33.681** **M4**	Grid 9 **33.221** **M4**

Cursor:

Total = 36.285 V/m
E Category: M4
Location: 0, -38.5, 4.7 mm

Dipole E-Field measurement/E Scan - AM80%_CDMA1900_measurement distance from the probe sensor center to CD1880 Dipole = 10mm 2 2/Hearing Aid Compatibility Test (41x181x1): Measurement grid: dx=5mm, dy=5mm
Maximum value of peak Total field = 23.269 V/m
Probe Modulation Factor = 1.000
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 21.624 V/m; Power Drift = -0.02 dB
Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak E-field in V/m

Grid 1 **22.379 M4**	Grid 2 **23.269 M4**	Grid 3 **22.386 M4**
Grid 4 **14.427 M4**	Grid 5 **15.311 M4**	Grid 6 **15.198 M4**
Grid 7 **21.091 M4**	Grid 8 **21.728 M4**	Grid 9 **21.374 M4**

Cursor:
Total = 23.269 V/m
E Category: M4
Location: 0, -38.5, 4.7 mm

Dipole E-Field measurement/E Scan – CDMA1900_ measurement distance from the probe sensor center to CD1880 Dipole = 10mm/Hearing Aid Compatibility Test (41x181x1): Measurement grid: dx=5mm, dy=5mm
Maximum value of peak Total field = 43.150 V/m
Probe Modulation Factor = 1.000
Device Reference Point: 0, 0, -6.3 mm

Reference Value = 40.108 V/m; Power Drift = -0.01 dB

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

Peak E-field in V/m

Grid 1 **41.912** **M4**	Grid 2 **43.150** **M4**	Grid 3 **40.971** **M4**
Grid 4 **26.905** **M4**	Grid 5 **28.223** **M4**	Grid 6 **27.711** **M4**
Grid 7 **39.111** **M4**	Grid 8 **40.205** **M4**	Grid 9 **39.292** **M4**

Cursor:

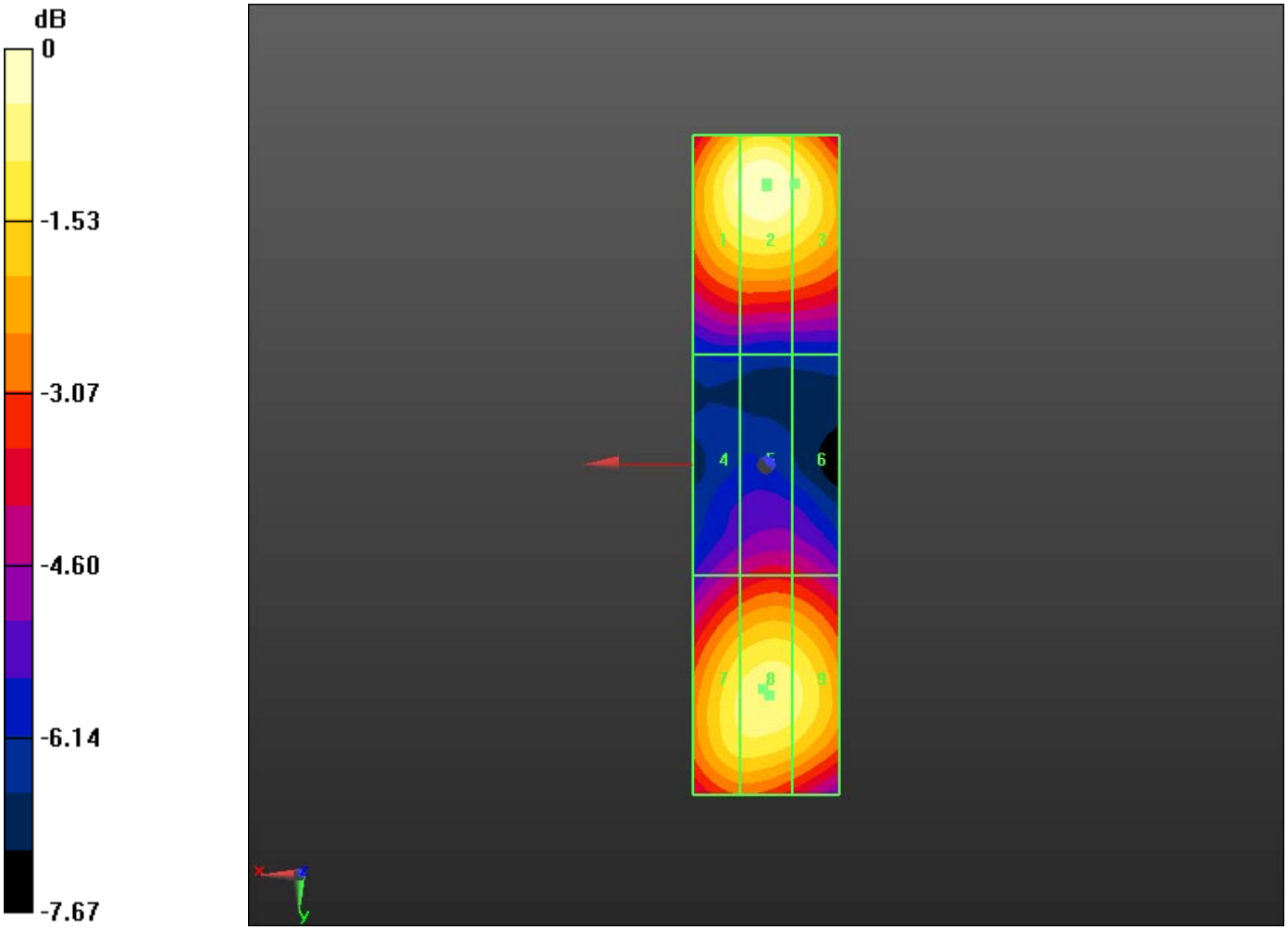
Total = 43.150 V/m
E Category: M4
Location: 0.5, -38.5, 4.7 mm

Dipole E-Field measurement/E Scan - CDMA1900_1_8th_measurement distance from the probe sensor center to CD1880 Dipole = 10mm 2 2 2/Hearing Aid Compatibility Test (41x181x1): Measurement grid: dx=5mm, dy=5mm
Maximum value of peak Total field = 14.129 V/m
Probe Modulation Factor = 1.000
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 13.323 V/m; Power Drift = -0.93 dB
Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak E-field in V/m

Grid 1 **12.459 M4**	Grid 2 **14.120 M4**	Grid 3 **14.129 M4**
Grid 4 **8.084 M4**	Grid 5 **8.555 M4**	Grid 6 **8.489 M4**
Grid 7 **13.250 M4**	Grid 8 **13.548 M4**	Grid 9 **12.104 M4**

Cursor:
Total = 14.129 V/m
E Category: M4
Location: -4, -38.5, 4.7 mm



0 dB = 133.7V/m

Date/Time: 9/6/2011 1:07:00 PM

Test Laboratory: RIM Testing Services

HAC RF_H-Field_validation_835 MHz_09_06_11

DUT: HAC-Dipole 835 MHz; Type: D835V3

Communication System: CW; Frequency: 835 MHz

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

Phantom section: RF Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 11/18/2010
- Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 3/7/2011
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.4 (2829)

Dipole H-Field meausrement with H3DV6 probe/H Scan - measurement distance from the probe sensor center to CD835 Dipole = 10mm/Hearing Aid Compatibility Test (41x181x1): Measurement grid: dx=5mm, dy=5mm

Maximum value of peak Total field = 0.474 A/m

Probe Modulation Factor = 1.000

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 0.499 A/m; Power Drift = 0.0095 dB

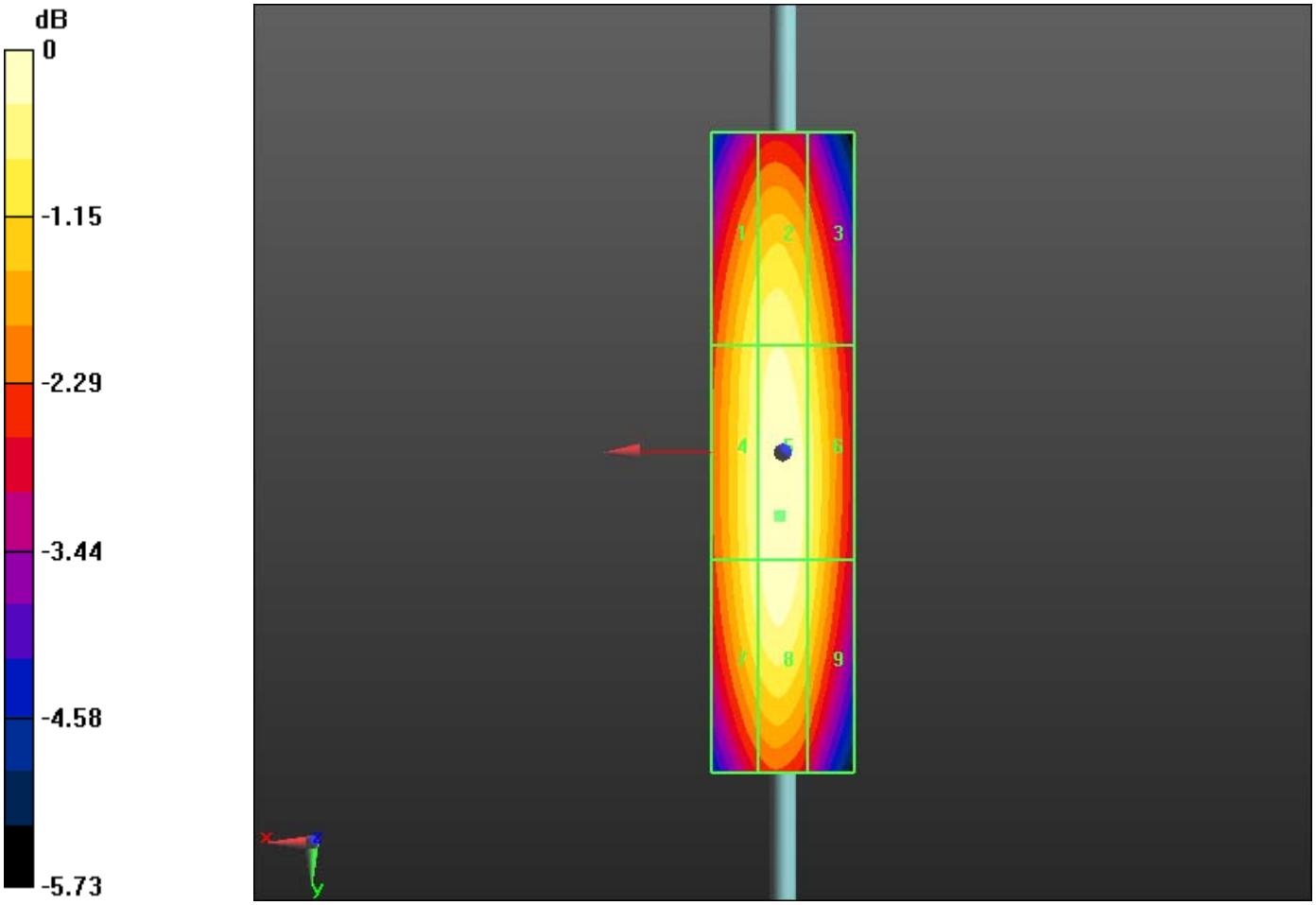
Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak H-field in A/m

Grid 1 **0.437 M4**	Grid 2 **0.450 M4**	Grid 3 **0.422 M4**
Grid 4 **0.451 M4**	Grid 5 **0.474 M4**	Grid 6 **0.444 M4**
Grid 7 **0.448 M4**	Grid 8 **0.469 M4**	Grid 9 **0.437 M4**

Cursor:

Total = 0.474 A/m
H Category: M4
Location: 0.5, 9, 4.7 mm



0 dB = 0.470A/m

Date/Time: 10/20/2011 3:23:56 PM

Test Laboratory: RIM Testing Services

HAC RF_H-Field_validation_835 MHz_10_20_11

DUT: HAC-Dipole 835 MHz; Type: D835V3

Communication System: CW; Frequency: 835 MHz

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

Phantom section: RF Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 11/18/2010
- Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 3/7/2011
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.4 (2829)

Dipole H-Field meausrement with H3DV6 probe/H Scan - measurement distance from the probe sensor center to CD835 Dipole = 10mm/Hearing Aid Compatibility Test (41x181x1): Measurement grid: dx=5mm, dy=5mm

Maximum value of peak Total field = 0.475 A/m

Probe Modulation Factor = 1.000

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 0.506 A/m; Power Drift = -0.06 dB

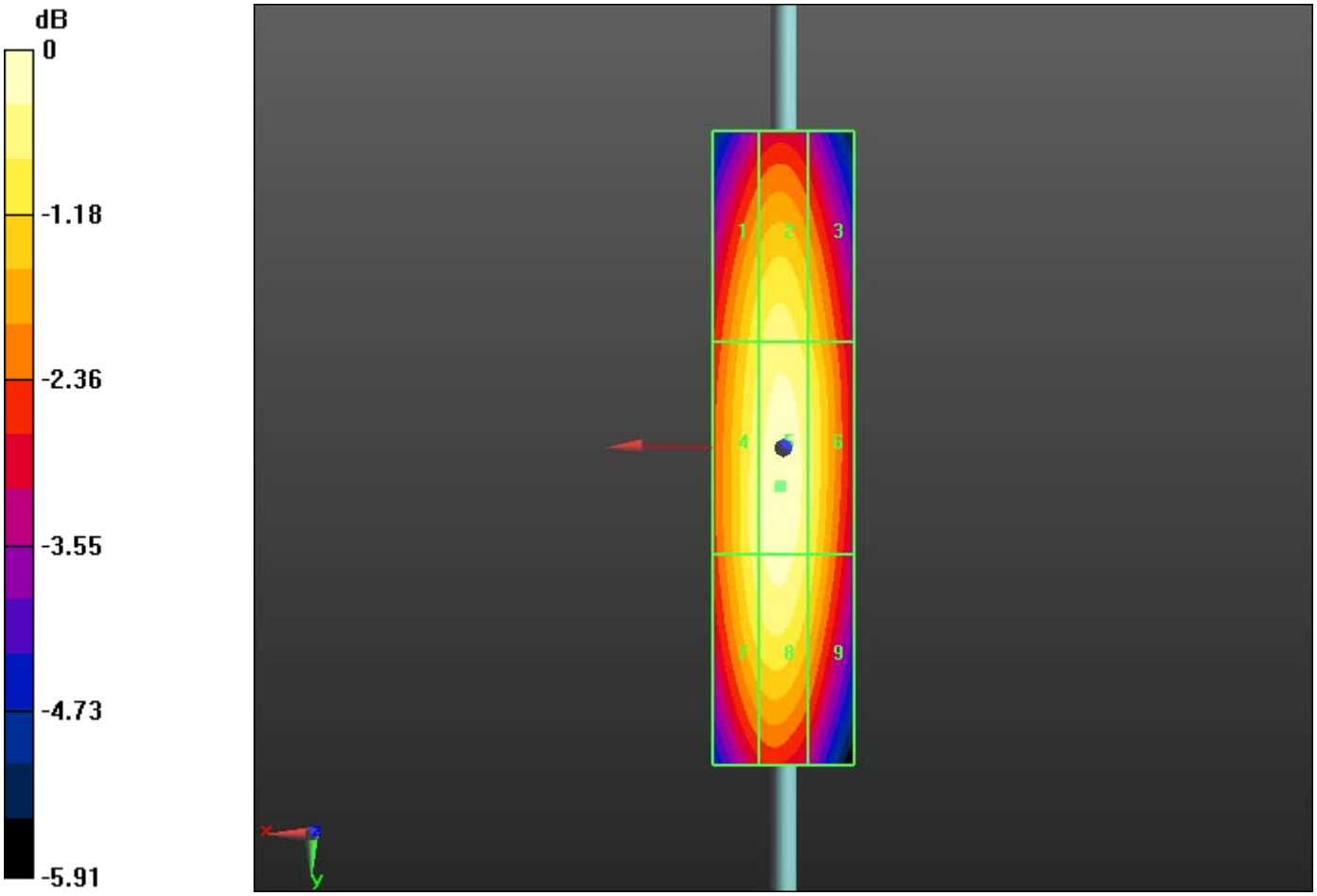
Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak H-field in A/m

Grid 1 **0.435 M4**	Grid 2 **0.451 M4**	Grid 3 **0.426 M4**
Grid 4 **0.456 M4**	Grid 5 **0.475 M4**	Grid 6 **0.448 M4**
Grid 7 **0.453 M4**	Grid 8 **0.469 M4**	Grid 9 **0.437 M4**

Cursor:

Total = 0.475 A/m
H Category: M4
Location: 0.5, 5.5, 4.7 mm



0 dB = 0.480A/m

Date/Time: 6/21/2011 9:00:35 PM

Test Laboratory: RIM Testing Services

HAC RF_H-Field _PMF_835 MHz

DUT: HAC-Dipole 835 MHz; Type: D835V3

Communication System: CW, CDMA 850; Communication System Band: D835 (835.0 MHz), Communication System Band: CDMA 2000 Cellular; Frequency: 835 MHz, Frequency: 836.52 MHz;Communication System PAR: 0, Communication System PAR: 9.19 dB

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

Phantom section: RF Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 11/18/2010
- Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 3/7/2011
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.4 (2829)

Dipole H-Field meausrement with H3DV6 probe/H Scan - CW_CDMA835_measurement distance from the probe sensor center to CD835 Dipole = 10mm/Hearing Aid Compatibility Test (41x361x1):

Measurement grid: dx=5mm, dy=5mm
Maximum value of peak Total field = 0.177 A/m
Probe Modulation Factor = 1.000
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 0.191 A/m; Power Drift = 0.0078 dB
Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak H-field in A/m

Grid 1 **0.145** **M4**	Grid 2 **0.151** **M4**	Grid 3 **0.144** **M4**
Grid 4 **0.169** **M4**	Grid 5 **0.177** **M4**	Grid 6 **0.167** **M4**
Grid 7 **0.154** **M4**	Grid 8 **0.159** **M4**	Grid 9 **0.146** **M4**

Cursor:
Total = 0.177 A/m
H Category: M4
Location: 0, 6, 4.7 mm

Dipole H-Field meausrement with H3DV6 probe/H Scan - AM80%_CDMA835_measurement distance from the probe sensor center to CD835 Dipole = 10mm/Hearing Aid Compatibility Test (41x361x1): Measurement grid: dx=5mm, dy=5mm
Maximum value of peak Total field = 0.114 A/m
Probe Modulation Factor = 1.000
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 0.120 A/m; Power Drift = 0.10 dB
Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak H-field in A/m

Grid 1 **0.093** **M4**	Grid 2 **0.097** **M4**	Grid 3 **0.092** **M4**
Grid 4 **0.109** **M4**	Grid 5 **0.114** **M4**	Grid 6 **0.108** **M4**
Grid 7 **0.100** **M4**	Grid 8 **0.103** **M4**	Grid 9 **0.095** **M4**

Cursor:
Total = 0.114 A/m
H Category: M4
Location: 0, 7, 4.7 mm

Dipole H-Field meausrement with H3DV6 probe/H Scan – CDMA835_measurement distance from the probe sensor center to CD835 Dipole = 10mm/Hearing Aid Compatibility Test (41x181x1): Measurement grid: dx=5mm, dy=5mm
Maximum value of peak Total field = 0.183 A/m
Probe Modulation Factor = 1.000
Device Reference Point: 0, 0, -6.3 mm

Reference Value = 0.196 A/m; Power Drift = 0.01 dB

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

Peak H-field in A/m

Grid 1 **0.168** **M4**	Grid 2 **0.176** **M4**	Grid 3 **0.169** **M4**
Grid 4 **0.173** **M4**	Grid 5 **0.183** **M4**	Grid 6 **0.175** **M4**
Grid 7 **0.171** **M4**	Grid 8 **0.180** **M4**	Grid 9 **0.169** **M4**

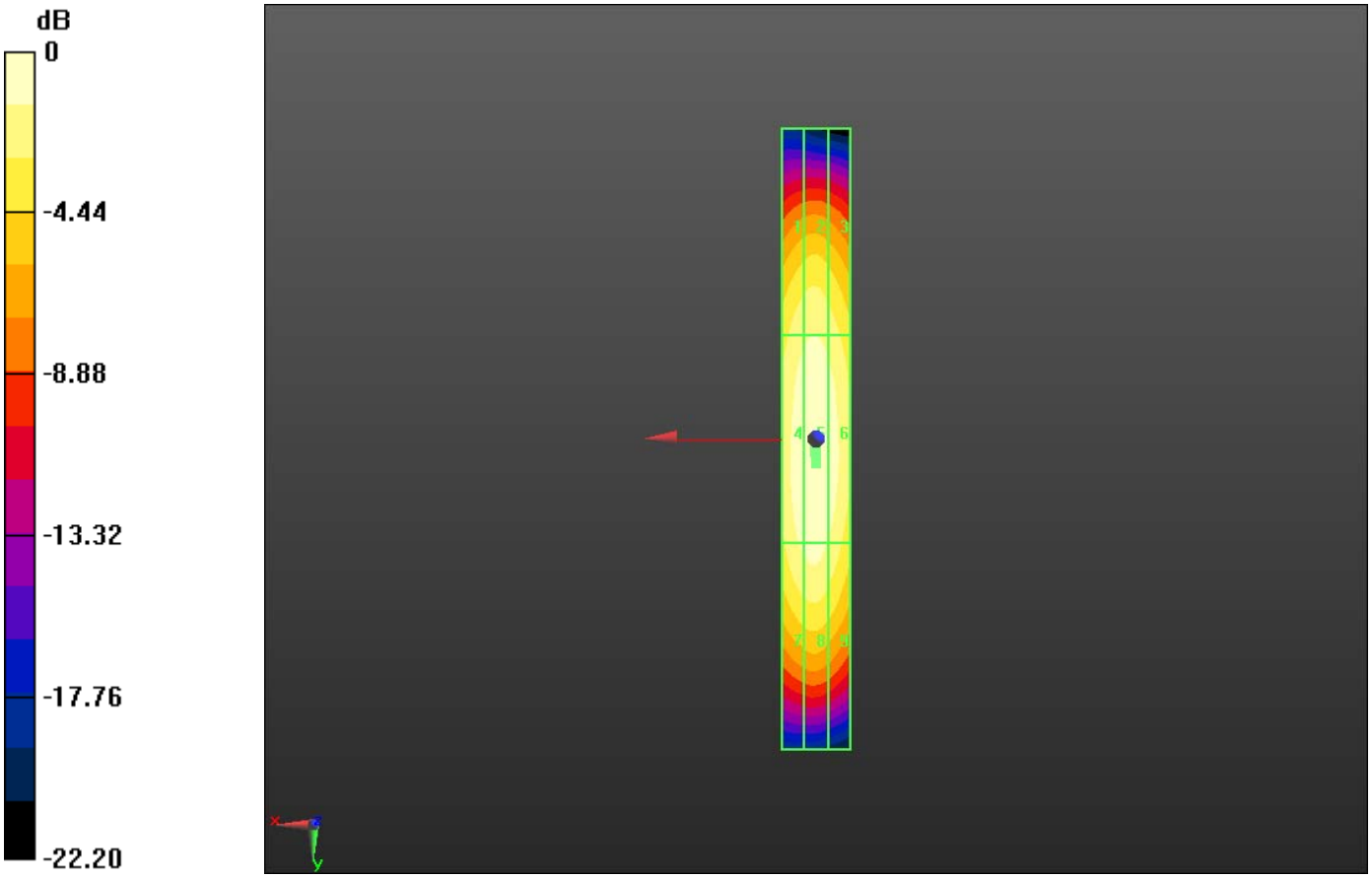
- **Cursor:**
  Total = 0.183 A/m
  H Category: M4
  Location: 0, 5, 4.7 mm

Dipole H-Field meausrement with H3DV6 probe/H Scan - CDMA835_1_8th_measurement distance from the probe sensor center to CD835 Dipole = 10mm/Hearing Aid Compatibility Test (41x361x1): Measurement grid: dx=5mm, dy=5mm
Maximum value of peak Total field = 0.064 A/m
Probe Modulation Factor = 1.000
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 0.067 A/m; Power Drift = -0.08 dB
Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak H-field in A/m

Grid 1 **0.052** **M4**	Grid 2 **0.055** **M4**	Grid 3 **0.052** **M4**
Grid 4 **0.060** **M4**	Grid 5 **0.064** **M4**	Grid 6 **0.060** **M4**
Grid 7 **0.055** **M4**	Grid 8 **0.056** **M4**	Grid 9 **0.052** **M4**

Cursor:
Total = 0.064 A/m
H Category: M4
Location: 0, 1, 4.7 mm



0 dB = 0.480A/m

Date/Time: 9/12/2011 3:32:53 PM

Test Laboratory: RIM Testing Services

HAC RF_H-Field_validation_PMF_CDMA_AWS_1733MHz

DUT: HAC Dipole 1880 MHz; Type: CD1880V3

Communication System: CW, Communication System: AM 80%, Communication System: CDMA AWS 1700, Communication System: CDMA AWS 1700_1/8th; Frequency: 1733 MHz, Frequency: 1732.5 MHz

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

Phantom section: RF Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 11/18/2010
- Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn473; Calibrated: 1/21/2011
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.4 (2829)

Dipole H-Field meausrement with H3DV6 probe/H Scan - CW_CDMA_AWS _1733_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 = 0.155 A/m

Probe Modulation Factor = 1.000

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 0.166 A/m; Power Drift = -0.06 dB

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

Peak H-field in A/m

Grid 1 **0.142 M4**	Grid 2 **0.149 M4**	Grid 3 **0.143 M4**
Grid 4 **0.148 M4**	Grid 5 **0.155 M4**	Grid 6 **0.149 M4**
Grid 7 **0.143 M4**	Grid 8 **0.149 M4**	Grid 9 **0.142 M4**

Cursor:

Total = 0.155 A/m
H Category: M4
Location: 0, 0, 4.7 mm

Dipole H-Field meausrement with H3DV6 probe/H Scan - AM_80%_CDMA_AWS _1733_measurement distance from the probe sensor center to CD1880 Dipole = 10mm 2/Hearing Aid Compatibility Test (41x101x1): Measurement grid: dx=5mm, dy=5mm
Maximum value of peak Total field = 0.100 A/m
Probe Modulation Factor = 1.000
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 0.106 A/m; Power Drift = -0.0044 dB

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

Peak H-field in A/m

Grid 1 **0.092 M4**	Grid 2 **0.095 M4**	Grid 3 **0.092 M4**
Grid 4 **0.096 M4**	Grid 5 **0.100 M4**	Grid 6 **0.096 M4**
Grid 7 **0.092 M4**	Grid 8 **0.097 M4**	Grid 9 **0.091 M4**

Cursor:

Total = 0.100 A/m
H Category: M4
Location: 0, 0.5, 4.7 mm

Dipole H-Field meausrement with H3DV6 probe/H Scan - CDMA_FR_AWS _1733_measurement distance from the probe sensor center to CD1880 Dipole = 10mm 2/Hearing Aid Compatibility Test (41x101x1): Measurement grid: dx=5mm, dy=5mm
Maximum value of peak Total field = 0.149 A/m
Probe Modulation Factor = 1.000
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 0.159 A/m; Power Drift = 0.02 dB
Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak H-field in A/m

Grid 1 **0.137 M4**	Grid 2 **0.144 M4**	Grid 3 **0.138 M4**
Grid 4 **0.143 M4**	Grid 5 **0.149 M4**	Grid 6 **0.143 M4**
Grid 7 **0.138 M4**	Grid 8 **0.145 M4**	Grid 9 **0.138 M4**

Cursor:
Total = 0.149 A/m
H Category: M4
Location: 0, 0, 4.7 mm

Dipole H-Field meausrement with H3DV6 probe/H Scan - CDMA_1_8th_AWS _1733_measurement distance from the probe sensor center to CD1880 Dipole = 10mm 3/Hearing Aid Compatibility Test (41x101x1): Measurement grid: dx=5mm, dy=5mm
Maximum value of peak Total field = 0.061 A/m
Probe Modulation Factor = 1.000
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 0.065 A/m; Power Drift = 7.93 dB
Hearing Aid Near-Field Category: M4 (AWF 0 dB)

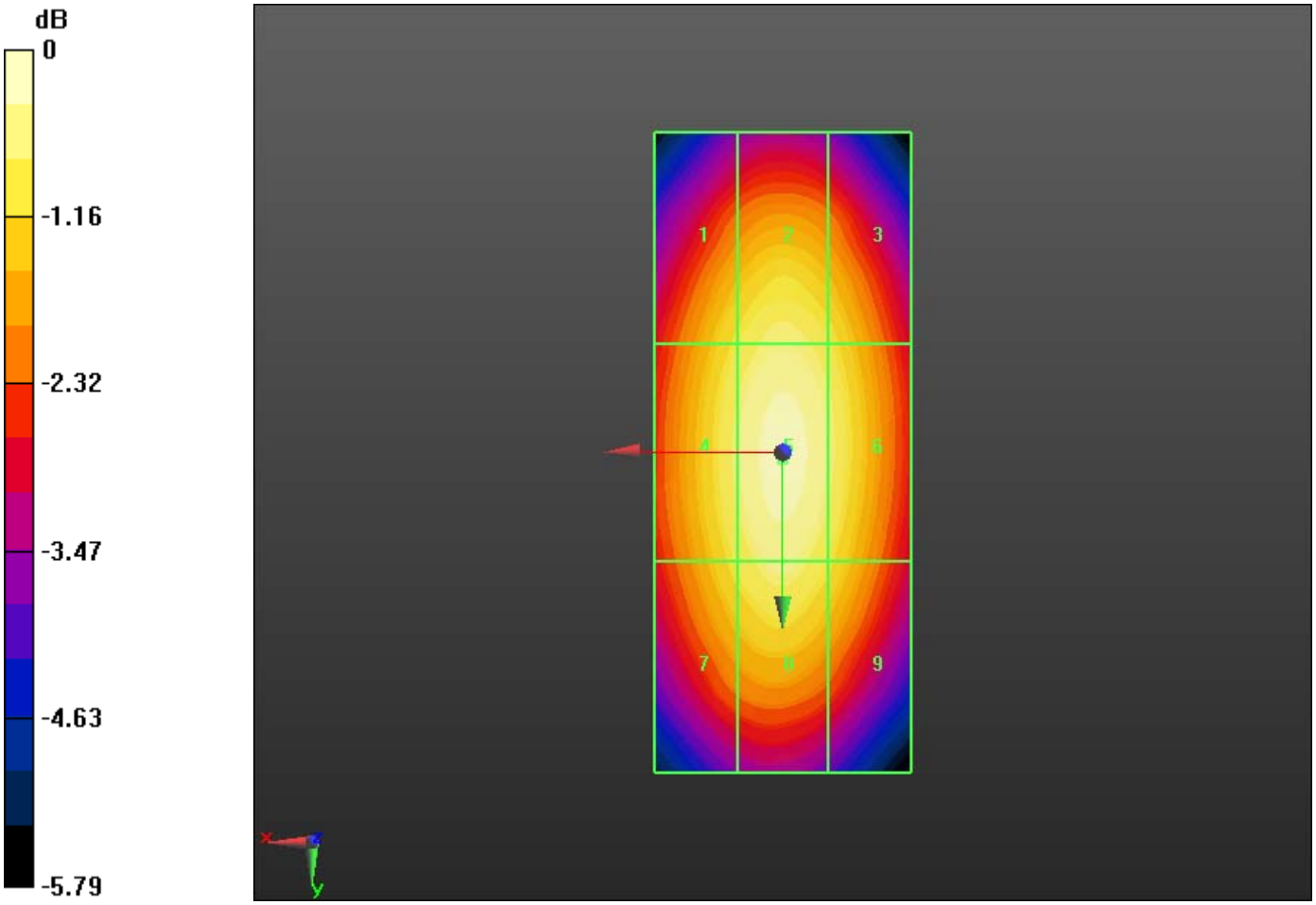
Peak H-field in A/m

Grid 1 **0.053 M4**	Grid 2 **0.054 M4**	Grid 3 **0.048 M4**
Grid 4 **0.053 M4**	Grid 5 **0.061 M4**	Grid 6 **0.053 M4**

Grid 7	Grid 8	Grid 9
0.049 M4	**0.053 M4**	**0.053 M4**

Cursor:

Total = 0.061 A/m
H Category: M4
Location: 0, 0, 4.7 mm



0 dB = 0.160A/m

Date/Time: 9/6/2011 12:58:12 PM

Test Laboratory: RIM Testing Services

HAC RF_H-Field_validation_1880 MHz_09_06_11

DUT: HAC Dipole 1880 MHz; Type: CD1880V3

Communication System: CW; Frequency: 1880 MHz

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

Phantom section: RF Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 11/18/2010
- Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 3/7/2011
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.4 (2829)

Dipole H-Field meausrement with H3DV6 probe/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 = 0.471 A/m

Probe Modulation Factor = 1.000

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 0.501 A/m; Power Drift = -0.01 dB

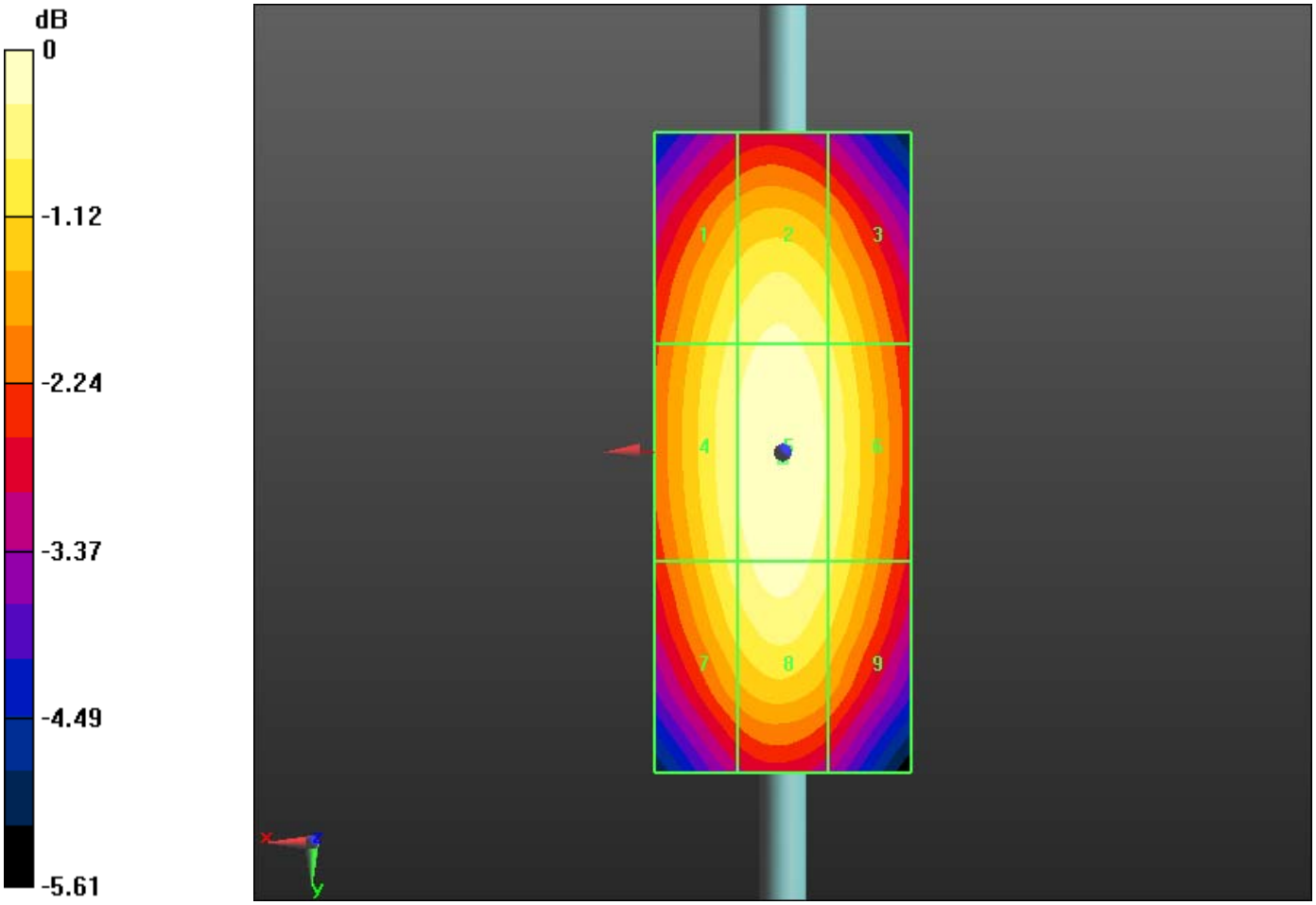
Hearing Aid Near-Field Category: M2 (AWF 0 dB)

Peak H-field in A/m

Grid 1 **0.440 M2**	Grid 2 **0.456 M2**	Grid 3 **0.435 M2**
Grid 4 **0.452 M2**	Grid 5 **0.471 M2**	Grid 6 **0.449 M2**
Grid 7 **0.441 M2**	Grid 8 **0.462 M2**	Grid 9 **0.437 M2**

Cursor:

Total = 0.471 A/m
H Category: M2
Location: 0, 0.5, 4.7 mm



0 dB = 0.470A/m

Date/Time: 10/20/2011 3:07:35 PM

Test Laboratory: RIM Testing Services

HAC RF_H-Field_validation_1880 MHz_10_20_11

DUT: HAC Dipole 1880 MHz; Type: CD1880V3

Communication System: CW; Frequency: 1880 MHz

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

Phantom section: RF Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 11/18/2010
- Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 3/7/2011
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.4 (2829)

Dipole H-Field meausrement with H3DV6 probe/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 = 0.464 A/m

Probe Modulation Factor = 1.000

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 0.494 A/m; Power Drift = -0.04 dB

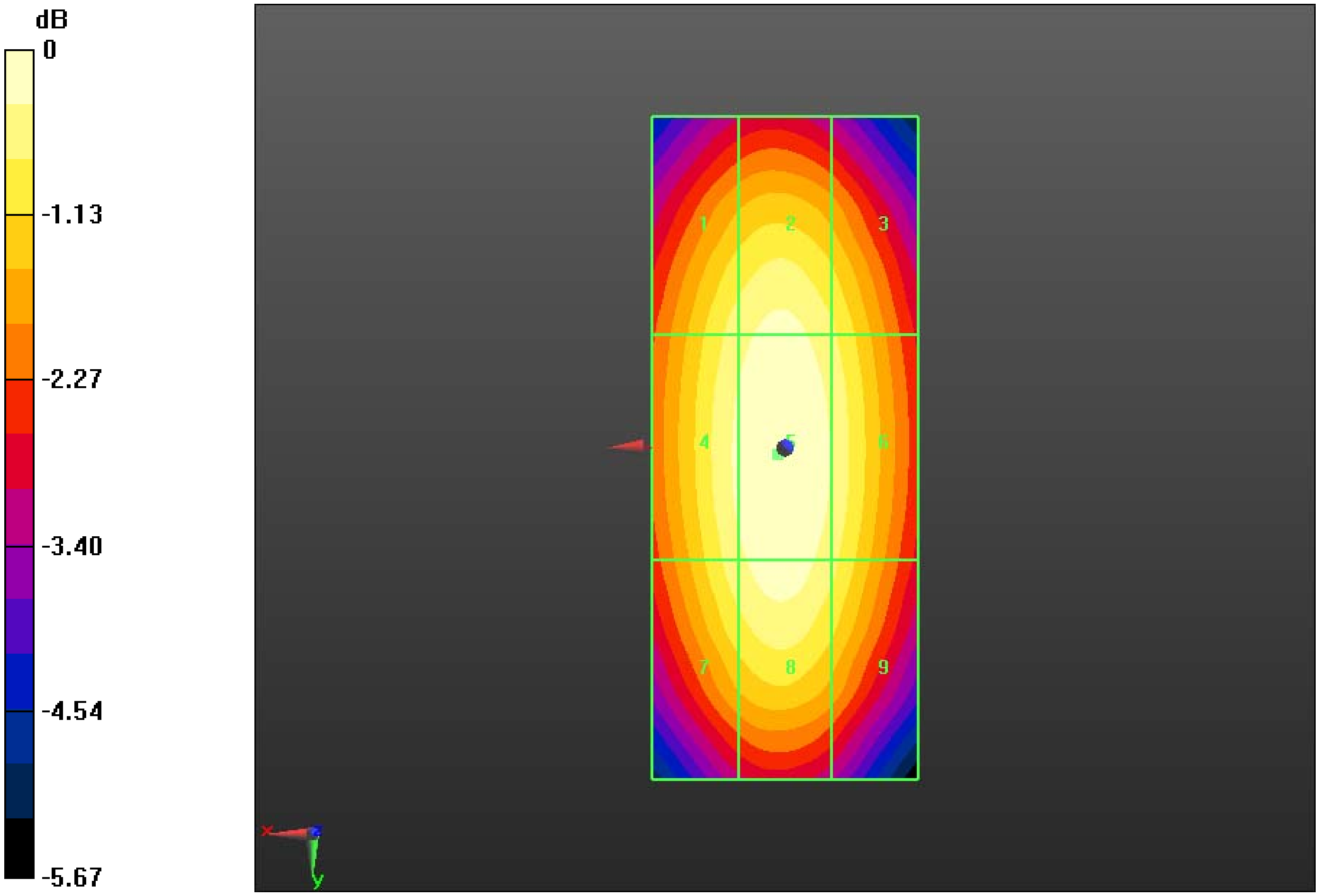
Hearing Aid Near-Field Category: M2 (AWF 0 dB)

Peak H-field in A/m

Grid 1 **0.433 M2**	Grid 2 **0.448 M2**	Grid 3 **0.426 M2**
Grid 4 **0.446 M2**	Grid 5 **0.464 M2**	Grid 6 **0.439 M2**
Grid 7 **0.435 M2**	Grid 8 **0.453 M2**	Grid 9 **0.428 M2**

Cursor:

Total = 0.464 A/m
H Category: M2
Location: 0.5, 0.5, 4.7 mm



0 dB = 0.460A/m

Date/Time: 6/21/2011 7:14:02 PM

Test Laboratory: RIM Testing Services

HAC RF_H-Field_PMF_1880 MHz

DUT: HAC Dipole 1880 MHz; Type: CD1880V3

Communication System: CW; Communication System Band: D1900 (1900.0 MHz); Frequency: 1880 MHz;Communication System PAR: 0, Communication System PAR: 9.19 dB

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

Phantom section: RF Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 11/18/2010
- Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 3/7/2011
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.4 (2829)

Dipole H-Field meausrement with H3DV6 probe/H Scan - CW_CDMA1900_measurement distance from the probe sensor center to CD1880 Dipole = 10mm/Hearing Aid Compatibility Test (41x181x1):

Measurement grid: dx=5mm, dy=5mm
Maximum value of peak Total field = 0.126 A/m
Probe Modulation Factor = 1.000
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 0.135 A/m; Power Drift = -0.02 dB

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

Peak H-field in A/m

Grid 1 **0.109** **M4**	Grid 2 **0.113** **M4**	Grid 3 **0.108** **M4**
Grid 4 **0.121** **M4**	Grid 5 **0.126** **M4**	Grid 6 **0.120** **M4**
Grid 7 **0.110** **M4**	Grid 8 **0.116** **M4**	Grid 9 **0.109** **M4**

Cursor:

Total = 0.126 A/m
H Category: M4
Location: 0, 2.5, 4.7 mm

Dipole H-Field meausrement with H3DV6 probe/H Scan - AM80%_CDMA1900_measurement distance from the probe sensor center to CD1880 Dipole = 10mm/Hearing Aid Compatibility Test (41x181x1): Measurement grid: dx=5mm, dy=5mm
Maximum value of peak Total field = 0.081 A/m
Probe Modulation Factor = 1.000
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 0.086 A/m; Power Drift = -0.0042 dB
Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak H-field in A/m

Grid 1 **0.070** **M4**	Grid 2 **0.073** **M4**	Grid 3 **0.070** **M4**
Grid 4 **0.077** **M4**	Grid 5 **0.081** **M4**	Grid 6 **0.077** **M4**
Grid 7 **0.070** **M4**	Grid 8 **0.074** **M4**	Grid 9 **0.069** **M4**

Cursor:

Total = 0.081 A/m

H Category: M4

Location: 0, 3, 4.7 mm

Dipole H-Field meausrement with H3DV6 probe/H Scan – CDMA 1900_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 = 0.154 A/m

Probe Modulation Factor = 1.000

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 0.165 A/m; Power Drift = -0.02 dB

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

Peak H-field in A/m

Grid 1 **0.143** **M4**	Grid 2 **0.150** **M4**	Grid 3 **0.145** **M4**
Grid 4 **0.147** **M4**	Grid 5 **0.154** **M4**	Grid 6 **0.149** **M4**
Grid 7 **0.144** **M4**	Grid 8 **0.152** **M4**	Grid 9 **0.145** **M4**

Cursor:

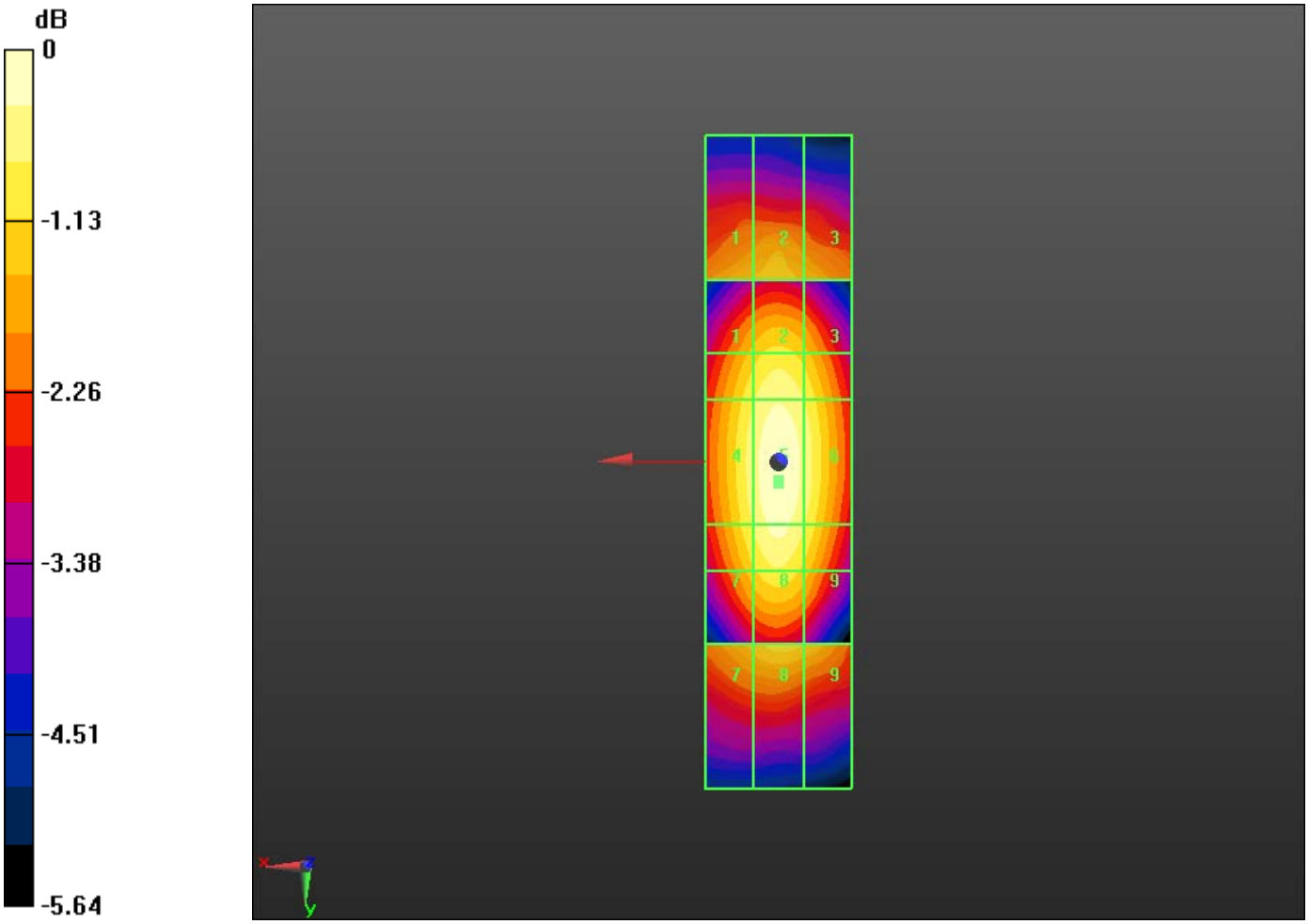
Total = 0.154 A/m
H Category: M4
Location: 0, 0.5, 4.7 mm

Dipole H-Field meausrement with H3DV6 probe/H Scan - CDMA1900_1_8th_measurement distance from the probe sensor center to CD1880 Dipole = 10mm/Hearing Aid Compatibility Test (41x181x1): Measurement grid: dx=5mm, dy=5mm
Maximum value of peak Total field = 0.051 A/m
Probe Modulation Factor = 1.000
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 0.050 A/m; Power Drift = -0.17 dB
Hearing Aid Near-Field Category: M4 (AWF 0 dB)

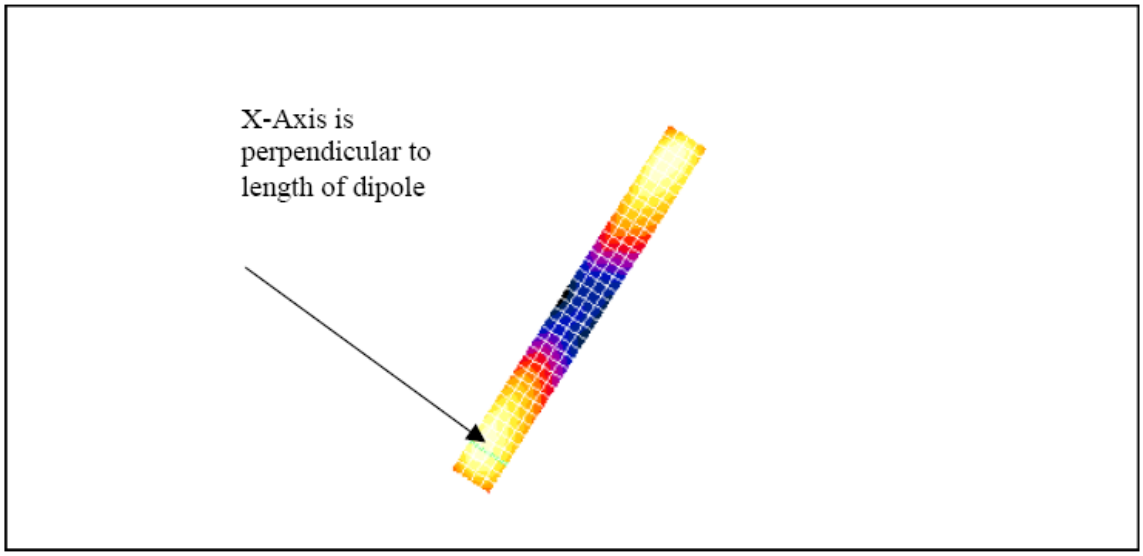
Peak H-field in A/m

Grid 1 **0.040** **M4**	Grid 2 **0.041** **M4**	Grid 3 **0.038** **M4**
Grid 4 **0.047** **M4**	Grid 5 **0.051** **M4**	Grid 6 **0.048** **M4**
Grid 7 **0.040** **M4**	Grid 8 **0.042** **M4**	Grid 9 **0.040** **M4**

Cursor:
Total = 0.051 A/m
H Category: M4
Location: 0, 0, 4.7 mm



0 dB = 0.470A/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: $\sigma = 0$ mho/m, $\varepsilon_r = 1$; $\rho = 1000$ kg/m^3
Phantom section: H Device Section

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

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

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

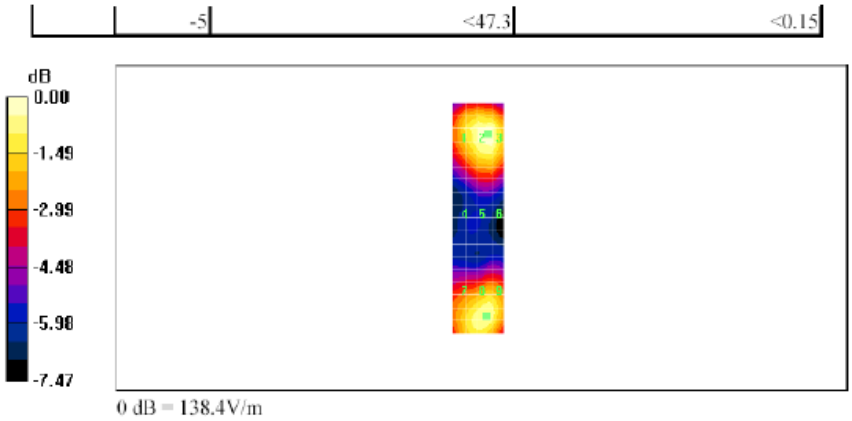
E in V/m (Time averaged)

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

E in V/m (Slot averaged)

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

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



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

Lab: RIM Testing Services (RTS)

Dipole Validation 1880 MHz_2mm step_E-Field 07_14_05

DUT: HAC Dipole 1880 MHz; Type: CD1880V3

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

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

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

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

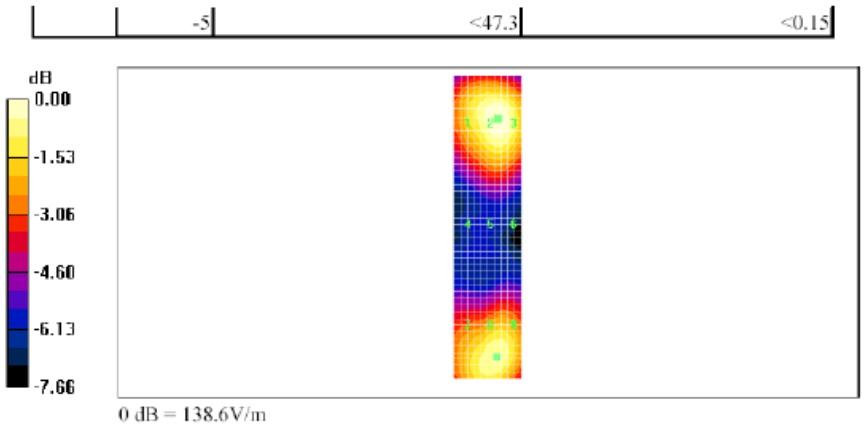
E in V/m (Time averaged)

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

E in V/m (Slot averaged)

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

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



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)

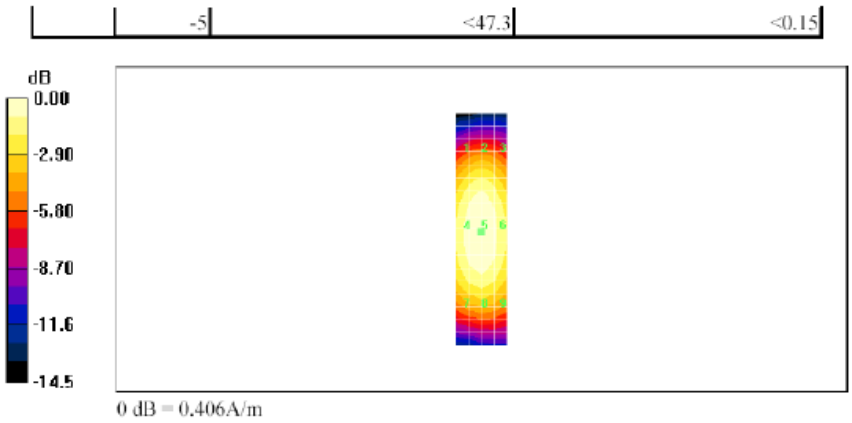
H in A/m (Time averaged)

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

H in A/m (Slot averaged)

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

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



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

Lab: RIM Testing Services (RTS)

HAC_H_Dipole_CW 1880_2 mm step_07_14_05

DUT: HAC Dipole 1880 MHz; Type: CD1880V3

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

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

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

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

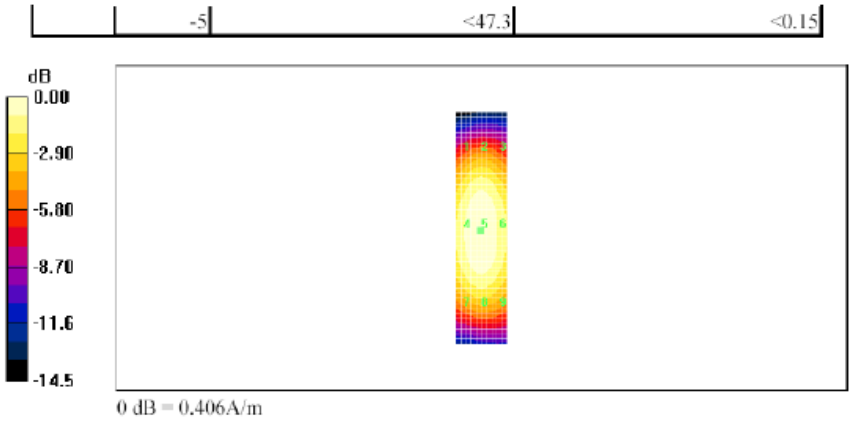
H in A/m (Time averaged)

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

H in A/m (Slot averaged)

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

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



A.3 RF emissions plots

Date/Time: 10/7/2011 10:23:06 AM, Date/Time: 10/7/2011 10:27:11 AM, Date/Time: 10/7/2011 10:30:33 AM

Test Laboratory: RIM Testing Services

HAC RF_E-Field_CDMA850_speaker

DUT: BlackBerry Smartphone; Type: Sample

Communication System: CDMA 850; Frequency: 824.7 MHz, Frequency: 836.52 MHz, Frequency: 848.52 MHz

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

Phantom section: RF Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 1/14/2011
- Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 3/7/2011
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.4 (2829)

Device E-Field measurement with ER probe/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 = 73.325 V/m

Probe Modulation Factor = 0.940

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 97.973 V/m; Power Drift = -0.10 dB

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

Peak E-field in V/m

Grid 1 **66.006** **M4**	Grid 2 **71.458** **M4**	Grid 3 **70.966** **M4**
Grid 4 **67.422** **M4**	Grid 5 **73.325** **M4**	Grid 6 **72.401** **M4**
Grid 7 **67.665** **M4**	Grid 8 **72.449** **M4**	Grid 9 **71.268** **M4**

Cursor:
Total = 73.325 V/m
E Category: M4
Location: -4, 0, 8.7 mm

Device E-Field measurement with ER probe/E Scan - ER3D - 2007: 15 mm from Probe Center to the Device 2/Hearing Aid Compatibility Test (101x101x1): Measurement grid: dx=5mm, dy=5mm
Maximum value of peak Total field = 70.675 V/m
Probe Modulation Factor = 0.940
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 93.584 V/m; Power Drift = -0.07 dB
Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak E-field in V/m

Grid 1 **60.942** **M4**	Grid 2 **68.095** **M4**	Grid 3 **68.039** **M4**
Grid 4 **63.576** **M4**	Grid 5 **70.675** **M4**	Grid 6 **69.865** **M4**
Grid 7 **64.937**	Grid 8 **70.734**	Grid 9 **69.254**

M4	M4	M4

Cursor:

Total = 70.734 V/m
E Category: M4
Location: -4.5, 9.5, 8.7 mm

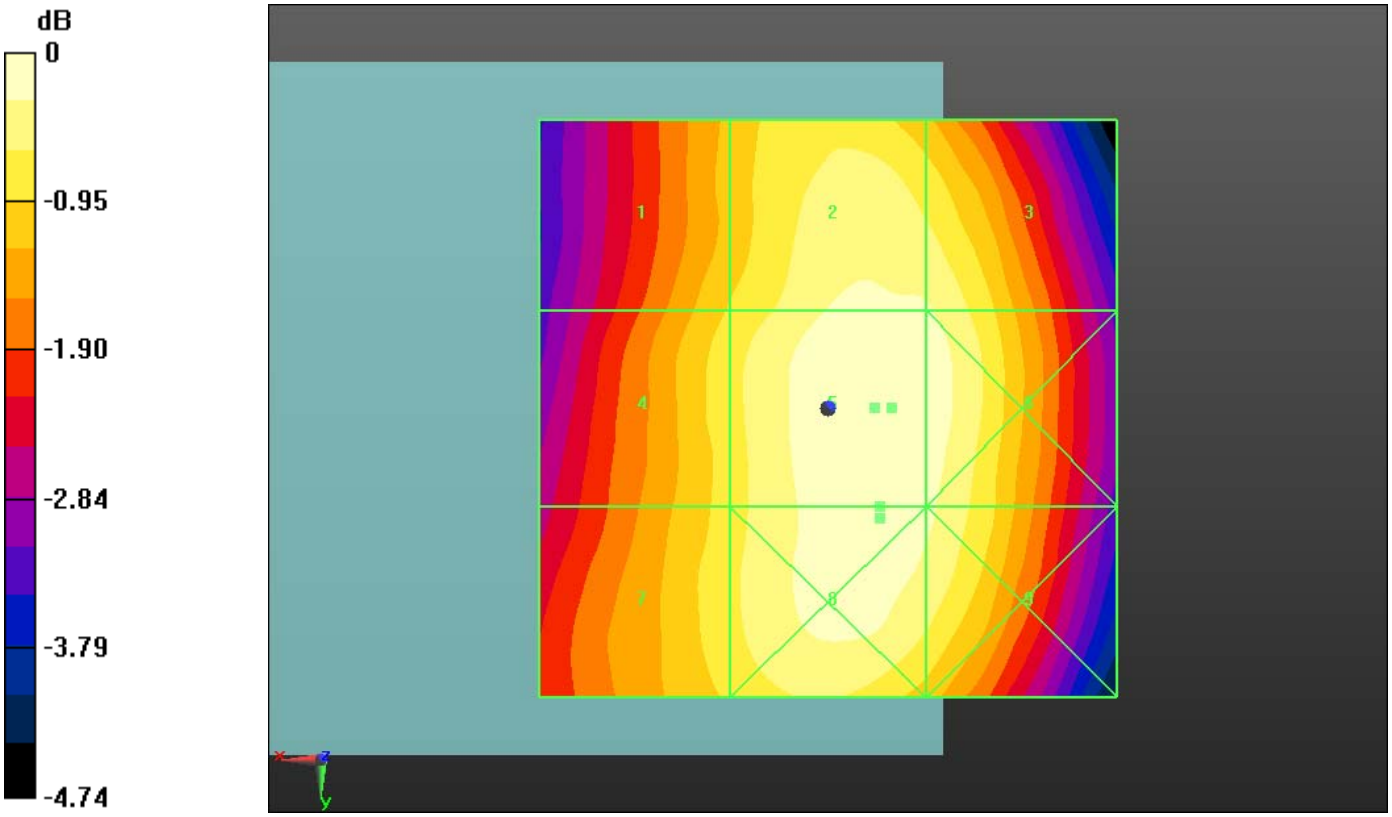
Device E-Field measurement with ER probe/E Scan - ER3D - 2007: 15 mm from Probe Center to the Device 2 2/Hearing Aid Compatibility Test (101x101x1): Measurement grid: dx=5mm, dy=5mm
Maximum value of peak Total field = 74.510 V/m
Probe Modulation Factor = 0.940
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 97.808 V/m; Power Drift = -0.04 dB
Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak E-field in V/m

Grid 1 **63.852** **M4**	Grid 2 **72.913** **M4**	Grid 3 **72.762** **M4**
Grid 4 **64.735** **M4**	Grid 5 **74.510** **M4**	Grid 6 **73.878** **M4**
Grid 7 **64.971** **M4**	Grid 8 **73.262** **M4**	Grid 9 **72.543** **M4**

Cursor:

Total = 74.510 V/m
E Category: M4
Location: -5.5, 0, 8.7 mm



0 dB = 73.330V/m

Date/Time: 10/7/2011 10:52:18 AM

Test Laboratory: RIM Testing Services

HAC RF_E-Field_CDMA850_telecoil

DUT: BlackBerry Smartphone; Type: Sample

Communication System: CDMA 850; Frequency: 848.52 MHz

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

Phantom section: RF Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 1/14/2011
- Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 3/7/2011
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.4 (2829)

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

Maximum value of peak Total field = 73.832 V/m

Probe Modulation Factor = 0.940

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 98.285 V/m; Power Drift = -0.03 dB

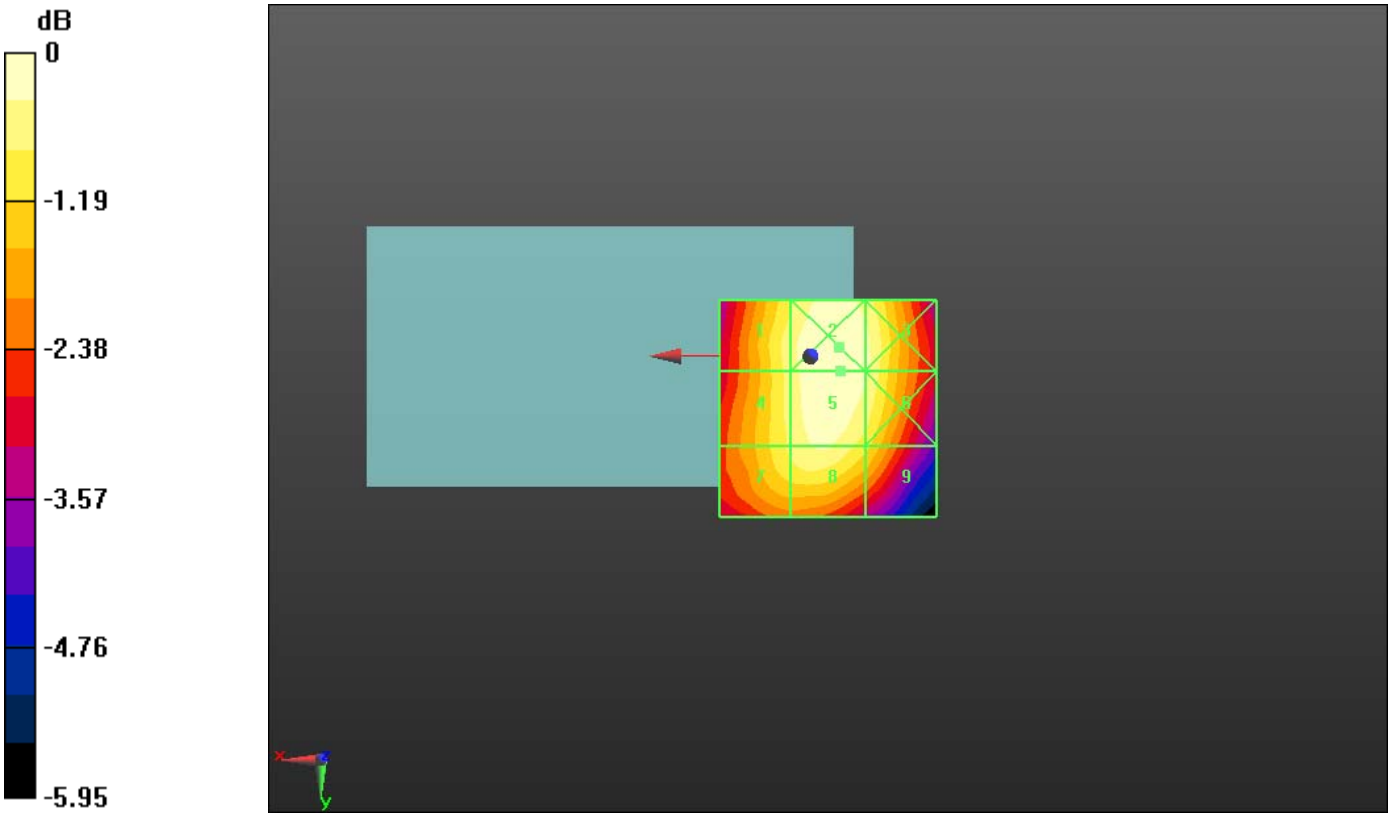
Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak E-field in V/m

Grid 1 **69.791 M4**	Grid 2 **74.076 M4**	Grid 3 **71.933 M4**
Grid 4 **69.350 M4**	Grid 5 **73.832 M4**	Grid 6 **71.576 M4**
Grid 7 **68.398 M4**	Grid 8 **71.242 M4**	Grid 9 **65.867 M4**

Cursor:

Total = 74.076 V/m
E Category: M4
Location: -6.5, -2, 8.7 mm



0 dB = 74.080V/m

Date/Time: 10/7/2011 10:35:04 AM

Test Laboratory: RIM Testing Services

HAC RF_E-Field_CDMA850_1_8th

DUT: BlackBerry Smartphone; Type: Sample

Communication System: CDMA 850_1/8th; Frequency: 848.52 MHz

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

Phantom section: RF Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 1/14/2011
- Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 3/7/2011
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.4 (2829)

Device E-Field measurement with ER probe/E Scan - ER3D - 2007: 15 mm from Probe Center to the Device_1/8/Hearing Aid Compatibility Test (101x101x1): Measurement grid: dx=5mm, dy=5mm

Maximum value of peak Total field = 82.945 V/m

Probe Modulation Factor = 2.600

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 34.691 V/m; Power Drift = 0.24 dB

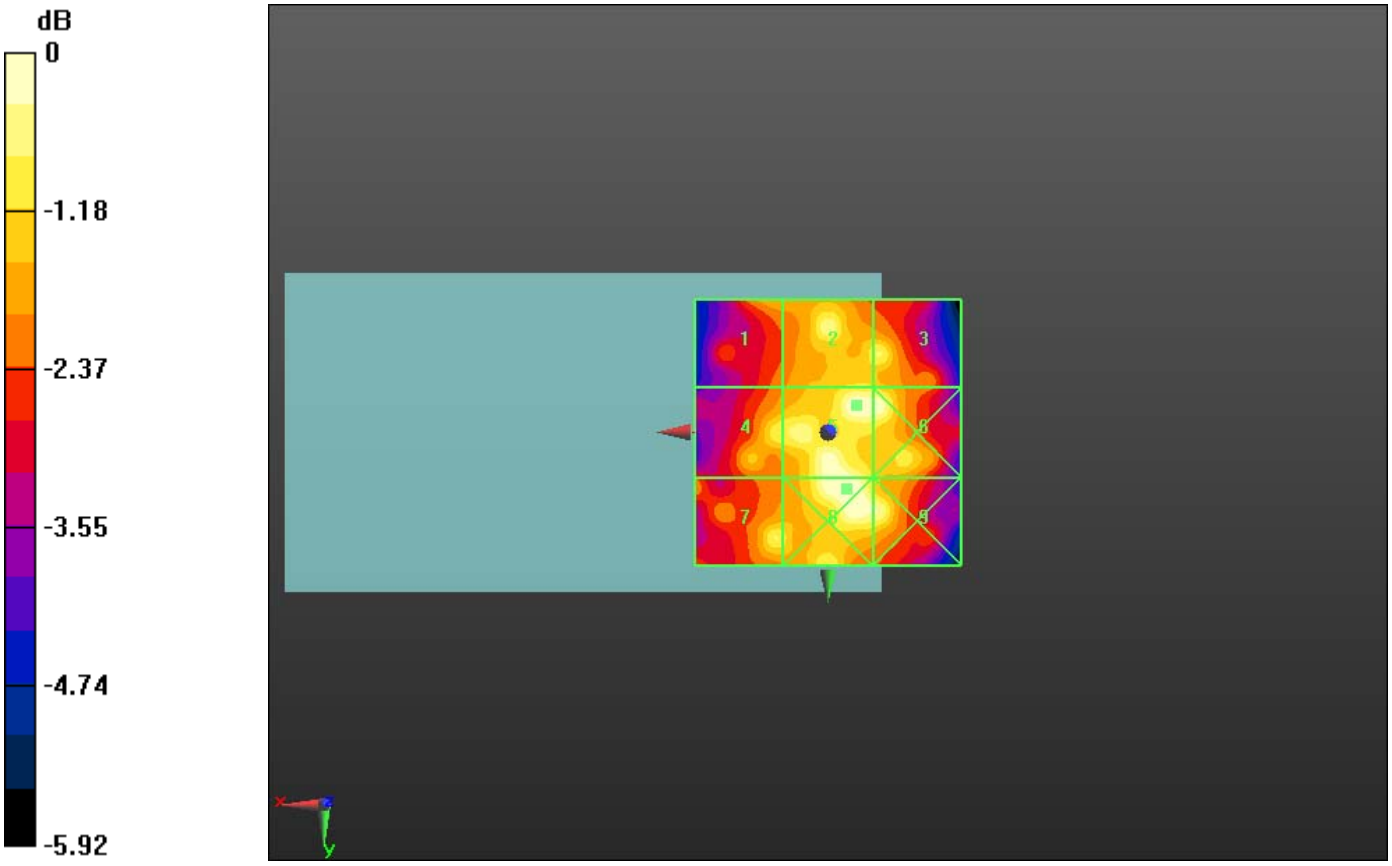
Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak E-field in V/m

Grid 1 **70.058** **M4**	Grid 2 **78.589** **M4**	Grid 3 **76.393** **M4**
Grid 4 **75.581** **M4**	Grid 5 **82.945** **M4**	Grid 6 **81.802** **M4**
Grid 7 **76.240** **M4**	Grid 8 **83.133** **M4**	Grid 9 **80.065** **M4**

Cursor:

Total = 83.133 V/m
E Category: M4
Location: -3.5, 10.5, 8.7 mm



0 dB = 83.130V/m

Date/Time: 10/7/2011 10:58:25 AM, Date/Time: 10/7/2011 11:25:00 AM, Date/Time: 10/7/2011 11:30:15 AM

Test Laboratory: RIM Testing Services

HAC RF_E-Field_CDMA1900_speaker

DUT: BlackBerry Smartphone; Type: Sample

Communication System: CDMA 1900; Frequency: 1851.25 MHz, Frequency: 1880 MHz, Frequency: 1908.5 MHz

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

Phantom section: RF Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 1/14/2011
- Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 3/7/2011
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.4 (2829)

Device E-Field measurement with ER probe/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 = 23.247 V/m

Probe Modulation Factor = 0.840

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 11.758 V/m; Power Drift = 0.16 dB

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

Peak E-field in V/m

Grid 1 **28.180** **M4**	Grid 2 **29.325** **M4**	Grid 3 **27.099** **M4**
Grid 4 **12.368** **M4**	Grid 5 **15.917** **M4**	Grid 6 **16.110** **M4**
Grid 7 **21.734** **M4**	Grid 8 **23.247** **M4**	Grid 9 **22.243** **M4**

Cursor:

Total = 29.325 V/m
E Category: M4
Location: 2.5, -25, 8.7 mm

Device E-Field measurement with ER probe/E Scan - ER3D - 2007: 15 mm from Probe Center to the Device 2/Hearing Aid Compatibility Test (101x101x1): Measurement grid: dx=5mm, dy=5mm
Maximum value of peak Total field = 24.032 V/m
Probe Modulation Factor = 0.840
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 14.749 V/m; Power Drift = -0.11 dB
Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak E-field in V/m

Grid 1 **29.246** **M4**	Grid 2 **30.620** **M4**	Grid 3 **29.049** **M4**
Grid 4 **12.986** **M4**	Grid 5 **18.872** **M4**	Grid 6 **19.823** **M4**
Grid 7 **22.259**	Grid 8 **24.032**	Grid 9 **22.976**

M4	M4	M4

Cursor:

Total = 30.620 V/m
E Category: M4
Location: 0.5, -25, 8.7 mm

Device E-Field measurement with ER probe/E Scan - ER3D - 2007: 15 mm from Probe Center to the Device 2 2/Hearing Aid Compatibility Test (101x101x1):

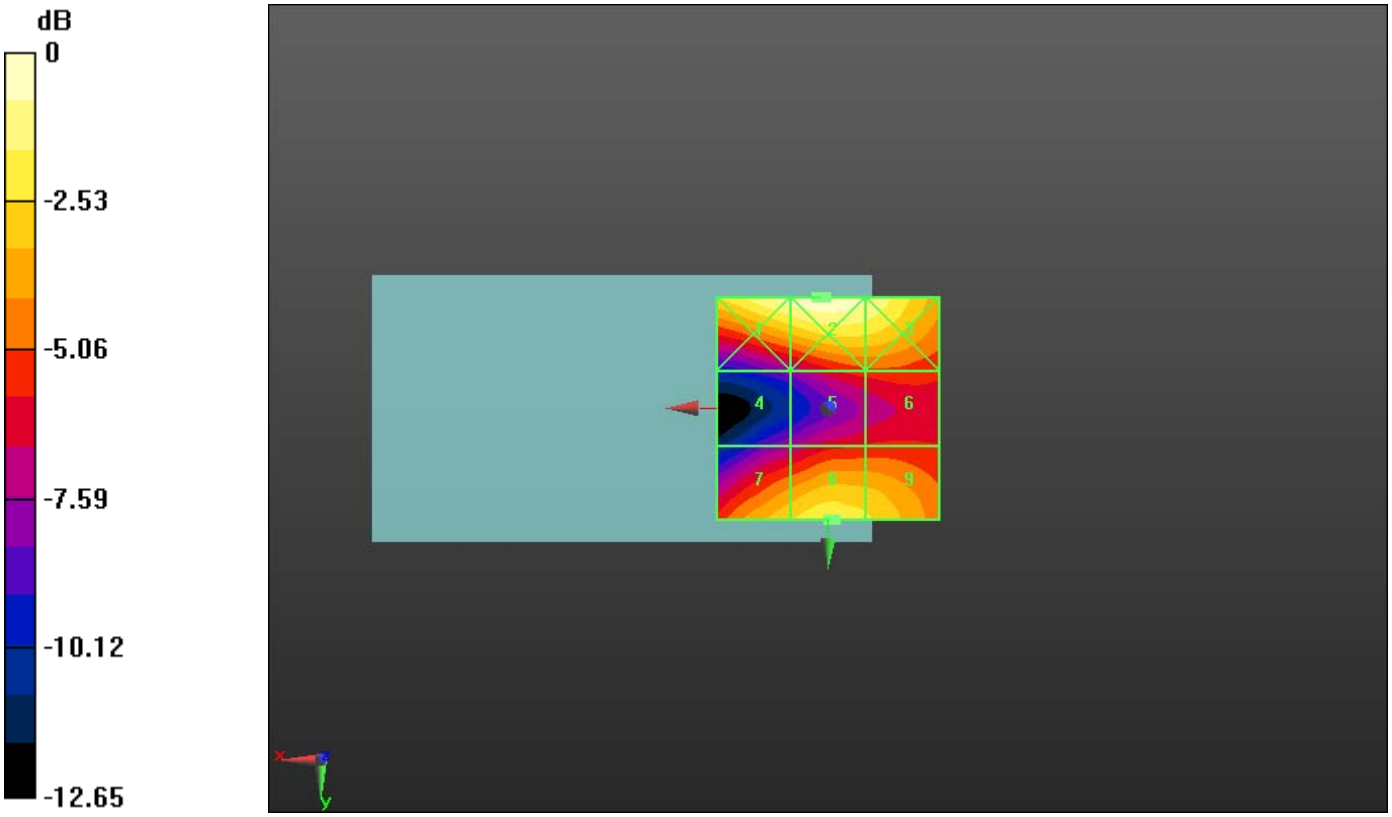
Measurement grid: dx=5mm, dy=5mm
Maximum value of peak Total field = 21.329 V/m
Probe Modulation Factor = 0.840
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 12.754 V/m; Power Drift = 0.0047 dB
Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak E-field in V/m

Grid 1 **28.348** **M4**	Grid 2 **30.127** **M4**	Grid 3 **28.524** **M4**
Grid 4 **12.765** **M4**	Grid 5 **17.755** **M4**	Grid 6 **18.393** **M4**
Grid 7 **20.159** **M4**	Grid 8 **21.329** **M4**	Grid 9 **20.632** **M4**

Cursor:

Total = 30.127 V/m
E Category: M4
Location: 0.5, -25, 8.7 mm



0 dB = 29.320V/m

Date/Time: 10/7/2011 11:51:02 AM

Test Laboratory: RIM Testing Services

HAC RF_E-Field_CDMA1900_telecoil

DUT: BlackBerry Smartphone; Type: Sample

Communication System: CDMA 1900; Frequency: 1880 MHz

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

Phantom section: RF Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 1/14/2011
- Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 3/7/2011
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.4 (2829)

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

Maximum value of peak Total field = 22.643 V/m

Probe Modulation Factor = 0.840

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 13.917 V/m; Power Drift = 0.53 dB

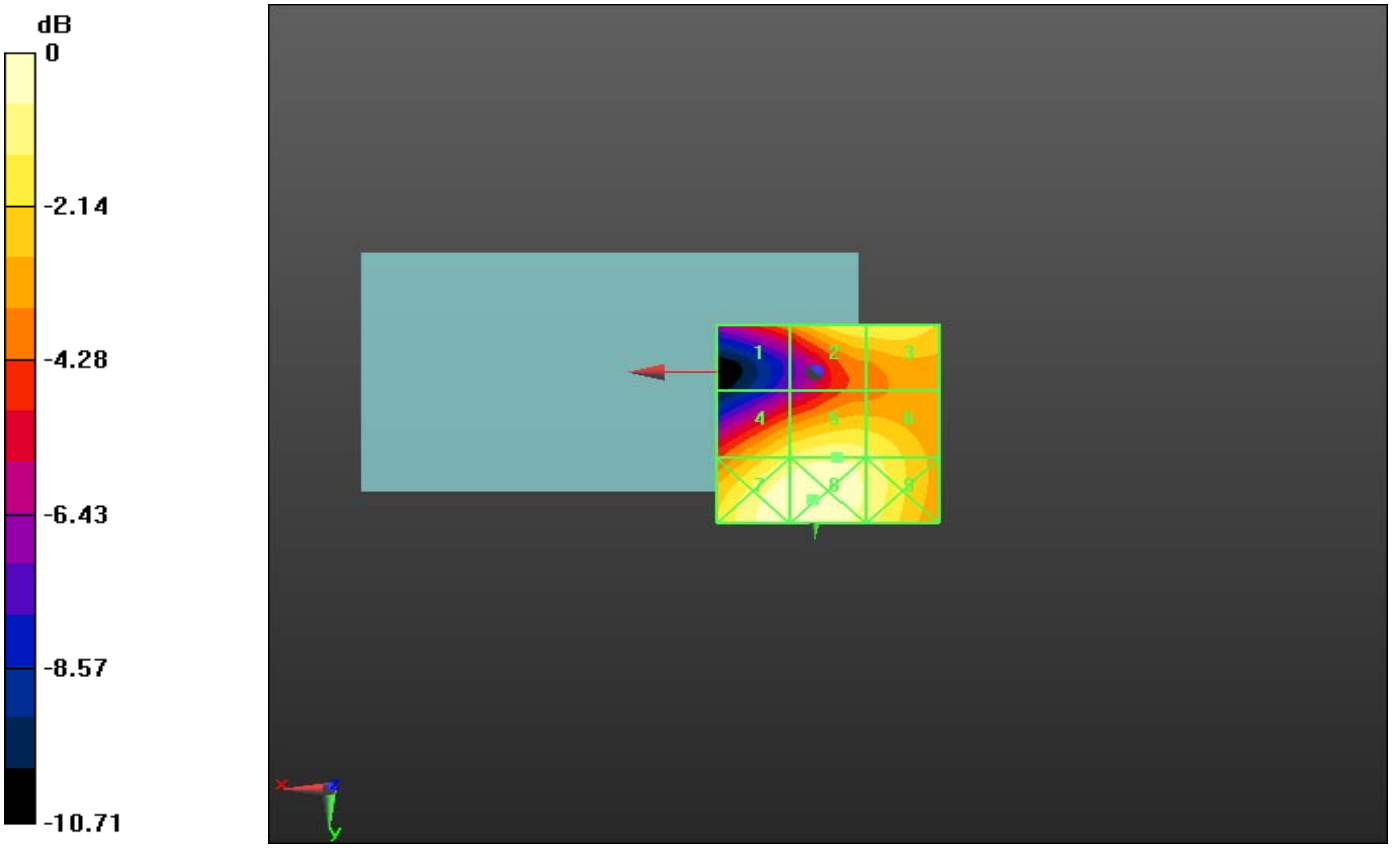
Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak E-field in V/m

Grid 1 **16.836 M4**	Grid 2 **21.581 M4**	Grid 3 **21.506 M4**
Grid 4 **21.327 M4**	Grid 5 **22.643 M4**	Grid 6 **21.811 M4**
Grid 7 **24.674 M4**	Grid 8 **24.871 M4**	Grid 9 **22.721 M4**

Cursor:

Total = 24.871 V/m
E Category: M4
Location: 0.5, 32, 8.7 mm



0 dB = 24.870V/m

Date/Time: 10/20/2011 2:20:16 PM

Test Laboratory: RIM Testing Services

HAC RF_E-Field_CDMA1900_1_8th

DUT: BlackBerry Smartphone; Type: Sample

Communication System: CDMA 1900_1_8th; Frequency: 1880 MHz

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

Phantom section: RF Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 1/14/2011
- Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 3/7/2011
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.4 (2829)

Device E-Field measurement with ER probe/E Scan - ER3D - 2007: 15 mm from Probe Center to the Device_1/8/Hearing Aid Compatibility Test (101x101x1): Measurement grid: dx=5mm, dy=5mm

Maximum value of peak Total field = 31.936 V/m

Probe Modulation Factor = 2.570

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 5.511 V/m; Power Drift = -0.11 dB

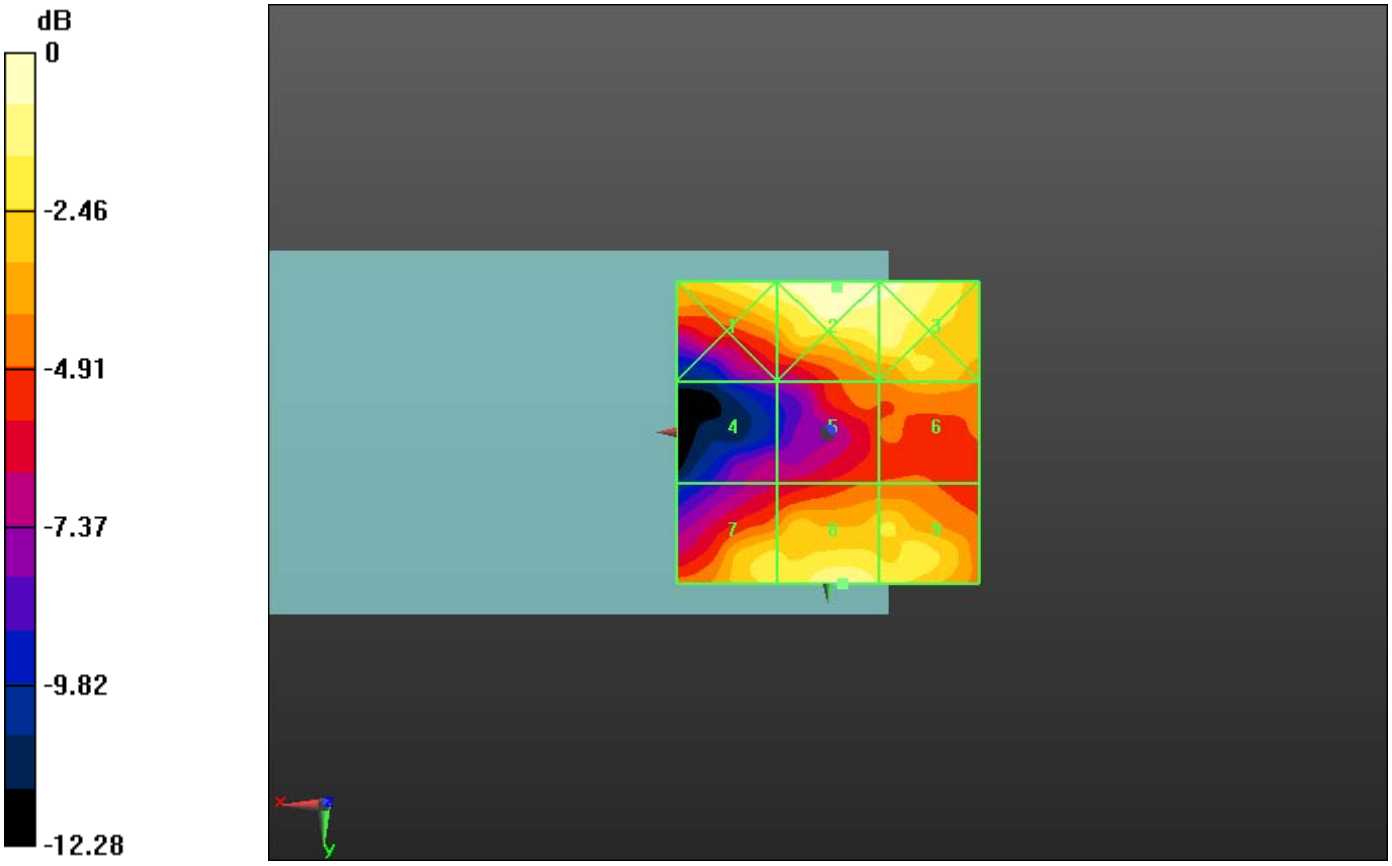
Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak E-field in V/m

Grid 1 **31.012** **M4**	Grid 2 **33.809** **M4**	Grid 3 **32.616** **M4**
Grid 4 **16.066** **M4**	Grid 5 **20.884** **M4**	Grid 6 **23.878** **M4**
Grid 7 **26.684** **M4**	Grid 8 **31.936** **M4**	Grid 9 **27.282** **M4**

Cursor:

Total = 33.808 V/m
E Category: M4
Location: -1.5, -24, 8.7 mm



0 dB = 33.810V/m

Date/Time: 10/7/2011 12:25:41 PM, Date/Time: 10/7/2011 12:33:15 PM, Date/Time: 10/7/2011 12:36:43 PM

Test Laboratory: RIM Testing Services

HAC RF_E-Field_CDMA 1700_speaker

DUT: BlackBerry Smartphone; Type: Sample

Communication System: CDMA AWS 1700; Frequency: 1711.25 MHz, Frequency: 1732.5 MHz, Frequency: 1753.75 MHz

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

Phantom section: RF Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 1/14/2011
- Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 3/7/2011
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.4 (2829)

Device E-Field measurement with ER probe/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 = 33.948 V/m

Probe Modulation Factor = 1.050

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 22.293 V/m; Power Drift = 0.04 dB

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

Peak E-field in V/m

Grid 1 **33.948** **M4**	Grid 2 **28.989** **M4**	Grid 3 **22.829** **M4**
Grid 4 **24.598** **M4**	Grid 5 **30.677** **M4**	Grid 6 **30.593** **M4**
Grid 7 **37.150** **M4**	Grid 8 **39.702** **M4**	Grid 9 **38.070** **M4**

Cursor:

Total = 39.702 V/m
E Category: M4
Location: -2.5, 25, 8.7 mm

Device E-Field measurement with ER probe/E Scan - ER3D - 2007: 15 mm from Probe Center to the Device 2/Hearing Aid Compatibility Test (101x101x1): Measurement grid: dx=5mm, dy=5mm
Maximum value of peak Total field = 37.407 V/m
Probe Modulation Factor = 1.050
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 22.121 V/m; Power Drift = -0.14 dB
Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak E-field in V/m

Grid 1 **37.407** **M4**	Grid 2 **32.907** **M4**	Grid 3 **24.463** **M4**
Grid 4 **26.083** **M4**	Grid 5 **31.135** **M4**	Grid 6 **30.971** **M4**
Grid 7 **40.650**	Grid 8 **42.454**	Grid 9 **39.796**

M4	M4	M4

Cursor:

Total = 42.454 V/m
E Category: M4
Location: 0.5, 25, 8.7 mm

Device E-Field measurement with ER probe/E Scan - ER3D - 2007: 15 mm from Probe Center to the Device 2 2/Hearing Aid Compatibility Test (101x101x1):

Measurement grid: dx=5mm, dy=5mm
Maximum value of peak Total field = 40.097 V/m
Probe Modulation Factor = 1.050
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 18.988 V/m; Power Drift = -0.03 dB

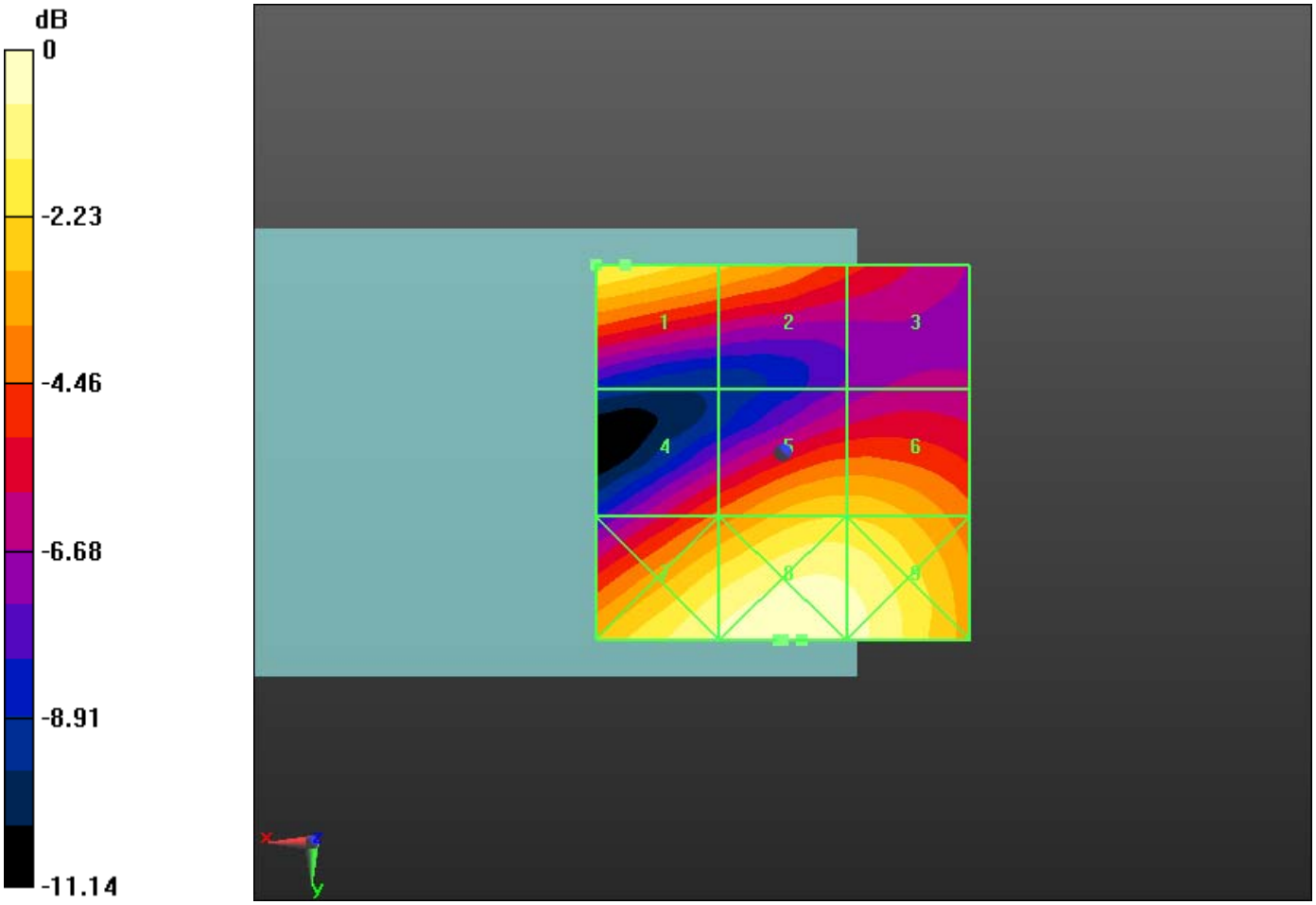
Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak E-field in V/m

Grid 1 **40.097** **M4**	Grid 2 **37.871** **M4**	Grid 3 **30.411** **M4**
Grid 4 **24.376** **M4**	Grid 5 **30.150** **M4**	Grid 6 **30.076** **M4**
Grid 7 **41.029** **M4**	Grid 8 **43.516** **M4**	Grid 9 **41.129** **M4**

Cursor:

Total = 43.516 V/m
E Category: M4
Location: 0, 25, 8.7 mm



0 dB = 39.700V/m

Date/Time: 10/7/2011 12:44:30 PM

Test Laboratory: RIM Testing Services

HAC RF_E-Field_CDMA 1700_telecoil

DUT: BlackBerry Smartphone; Type: Sample

Communication System: CDMA AWS 1700; Frequency: 1753.75 MHz

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

Phantom section: RF Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 1/14/2011
- Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 3/7/2011
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.4 (2829)

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

Maximum value of peak Total field = 41.959 V/m

Probe Modulation Factor = 1.050

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 19.034 V/m; Power Drift = -0.0054 dB

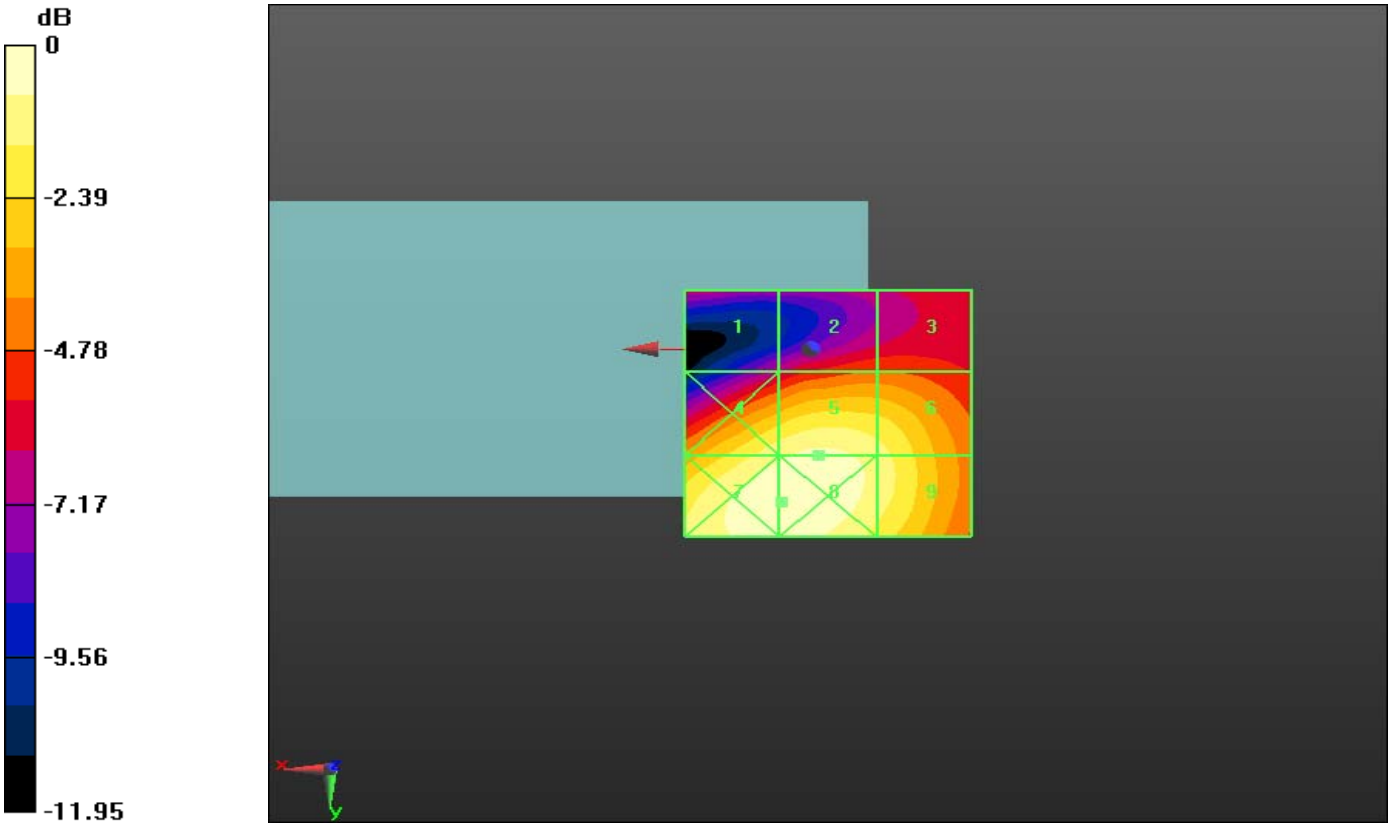
Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak E-field in V/m

Grid 1 **21.457** **M4**	Grid 2 **26.007** **M4**	Grid 3 **26.019** **M4**
Grid 4 **40.026** **M4**	Grid 5 **41.959** **M4**	Grid 6 **38.977** **M4**
Grid 7 **44.845** **M4**	Grid 8 **44.855** **M4**	Grid 9 **39.756** **M4**

Cursor:

Total = 44.855 V/m
E Category: M4
Location: 5, 31, 8.7 mm



0 dB = 44.850V/m

Date/Time: 10/20/2011 2:48:16 PM

Test Laboratory: RIM Testing Services

HAC RF_E-Field_CDMA 1700_1_8th

DUT: BlackBerry Smartphone; Type: Sample

Communication System: CDMA AWS 1700_1/8th; Frequency: 1753.75 MHz

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

Phantom section: RF Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 1/14/2011
- Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 3/7/2011
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.4 (2829)

Device E-Field measurement with ER probe/E Scan - ER3D - 2007: 15 mm from Probe Center to the Device_1/8/Hearing Aid Compatibility Test (101x101x1): Measurement grid: dx=5mm, dy=5mm

Maximum value of peak Total field = 38.423 V/m

Probe Modulation Factor = 2.830

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 6.654 V/m; Power Drift = 0.04 dB

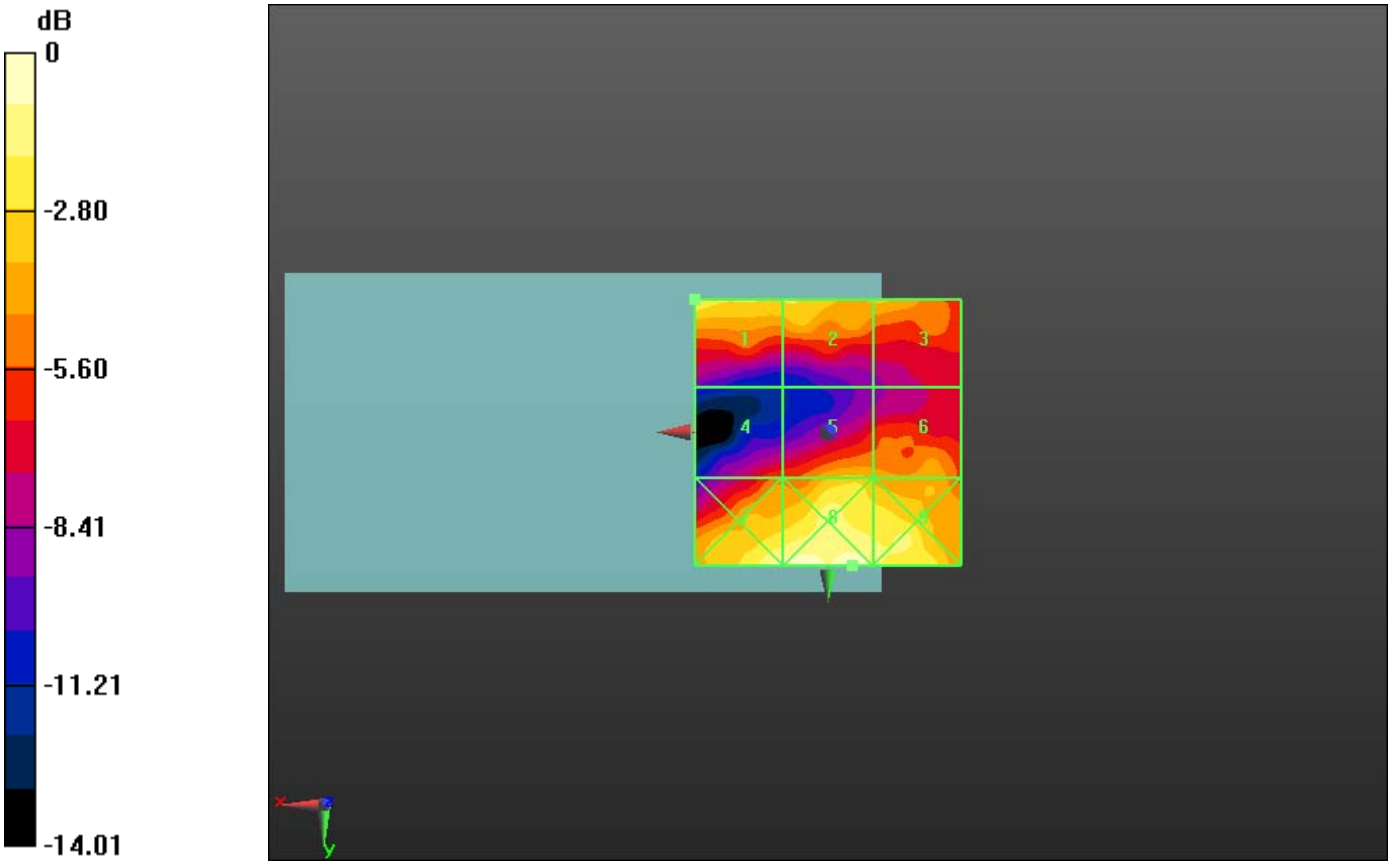
Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak E-field in V/m

Grid 1 **38.423** **M4**	Grid 2 **33.263** **M4**	Grid 3 **30.491** **M4**
Grid 4 **24.292** **M4**	Grid 5 **31.068** **M4**	Grid 6 **28.584** **M4**
Grid 7 **43.672** **M4**	Grid 8 **45.352** **M4**	Grid 9 **38.405** **M4**

Cursor:

Total = 45.352 V/m
E Category: M4
Location: -4.5, 25, 8.7 mm



0 dB = 45.350V/m

Date/Time: 10/7/2011 3:08:05 PM

Test Laboratory: RIM Testing Services

HAC RF_H-Field_CDMA850_speaker

DUT: BlackBerry Smartphone; Type: Sample

Communication System: CDMA 850, Communication System: CDMA 850_1_8th;

Frequency: 824.7 MHz, Frequency: 836.52 MHz, Frequency: 848.52 MHz

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

Phantom section: RF Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 11/18/2010
- Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 3/7/2011
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.4 (2829)

Device H-Field meausrement with H3DV6 probe/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 = 0.174 A/m

Probe Modulation Factor = 0.970

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 0.086 A/m; Power Drift = 0.12 dB

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

Peak H-field in A/m

Grid 1 **0.174 M4**	Grid 2 **0.120 M4**	Grid 3 **0.074 M4**
Grid 4 **0.152 M4**	Grid 5 **0.106 M4**	Grid 6 **0.064 M4**
Grid 7 **0.155 M4**	Grid 8 **0.104 M4**	Grid 9 **0.060 M4**

Cursor:
Total = 0.174 A/m
H Category: M4
Location: 25, -25, 8.7 mm

Device H-Field meausrement with H3DV6 probe/H Scan - H3DV6 - 2007: 15 mm from Probe Center to the Device 2/Hearing Aid Compatibility Test (101x101x1): Measurement grid: dx=5mm, dy=5mm
Maximum value of peak Total field = 0.175 A/m
Probe Modulation Factor = 0.970
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 0.094 A/m; Power Drift = -0.04 dB
Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak H-field in A/m

Grid 1 **0.175 M4**	Grid 2 **0.124 M4**	Grid 3 **0.077 M4**
Grid 4 **0.156 M4**	Grid 5 **0.112 M4**	Grid 6 **0.070 M4**

Grid 7 **0.160 M4**	Grid 8 **0.111 M4**	Grid 9 **0.067 M4**

Cursor:

Total = 0.175 A/m
H Category: M4
Location: 25, -25, 8.7 mm

Device H-Field meausrement with H3DV6 probe/H Scan - H3DV6 - 2007: 15 mm from Probe Center to the Device 2 2/Hearing Aid Compatibility Test (101x101x1): Measurement grid: dx=5mm, dy=5mm
Maximum value of peak Total field = 0.183 A/m
Probe Modulation Factor = 0.970
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 0.104 A/m; Power Drift = -0.09 dB
Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak H-field in A/m

Grid 1 **0.183 M4**	Grid 2 **0.133 M4**	Grid 3 **0.083 M4**
Grid 4 **0.165 M4**	Grid 5 **0.121 M4**	Grid 6 **0.078 M4**
Grid 7 **0.174 M4**	Grid 8 **0.126 M4**	Grid 9 **0.082 M4**

Cursor:

Total = 0.183 A/m
H Category: M4
Location: 25, -25, 8.7 mm

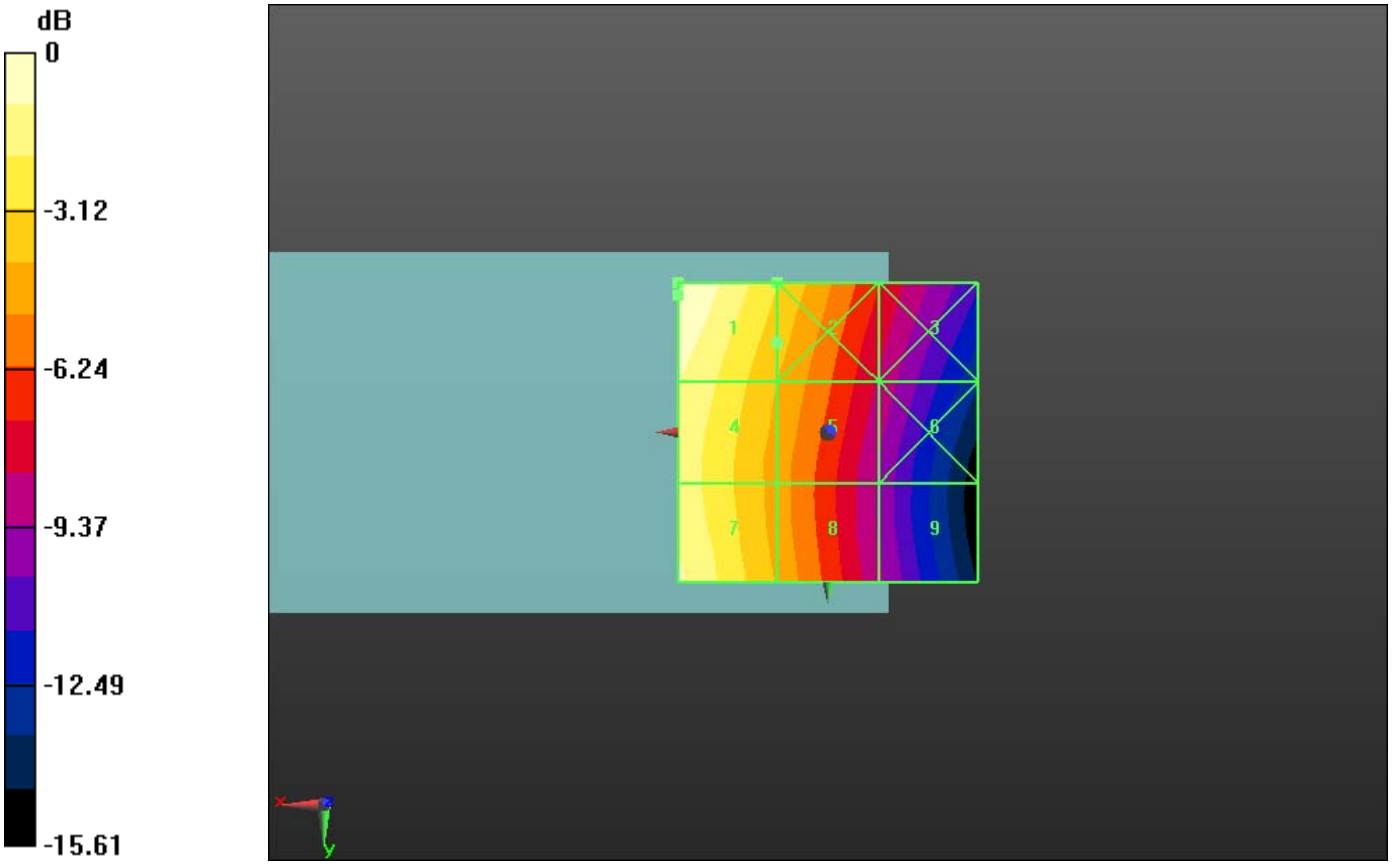
Device H-Field meausrement with H3DV6 probe/H Scan - H3DV6 - 2007: 15 mm from Probe Center to the Device 1/8/Hearing Aid Compatibility Test (101x101x1): Measurement grid: dx=5mm, dy=5mm
Maximum value of peak Total field = 0.176 A/m
Probe Modulation Factor = 2.760
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 0.033 A/m; Power Drift = 0.21 dB
Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak H-field in A/m

Grid 1 **0.176 M4**	Grid 2 **0.127 M4**	Grid 3 **0.081 M4**
Grid 4 **0.174 M4**	Grid 5 **0.120 M4**	Grid 6 **0.075 M4**
Grid 7 **0.168 M4**	Grid 8 **0.122 M4**	Grid 9 **0.078 M4**

Cursor:

Total = 0.176 A/m
H Category: M4
Location: 25, -23, 8.7 mm



0 dB = 0.170A/m

Date/Time: 10/7/2011 3:28:24 PM

Test Laboratory: RIM Testing Services

HAC RF_H-Field_CDMA850_telecoil

DUT: BlackBerry Smartphone; Type: Sample

Communication System: CDMA 850; Frequency: 848.52 MHz

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

Phantom section: RF Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 11/18/2010
- Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 3/7/2011
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.4 (2829)

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

Maximum value of peak Total field = 0.164 A/m

Probe Modulation Factor = 0.970

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 0.103 A/m; Power Drift = 0.04 dB

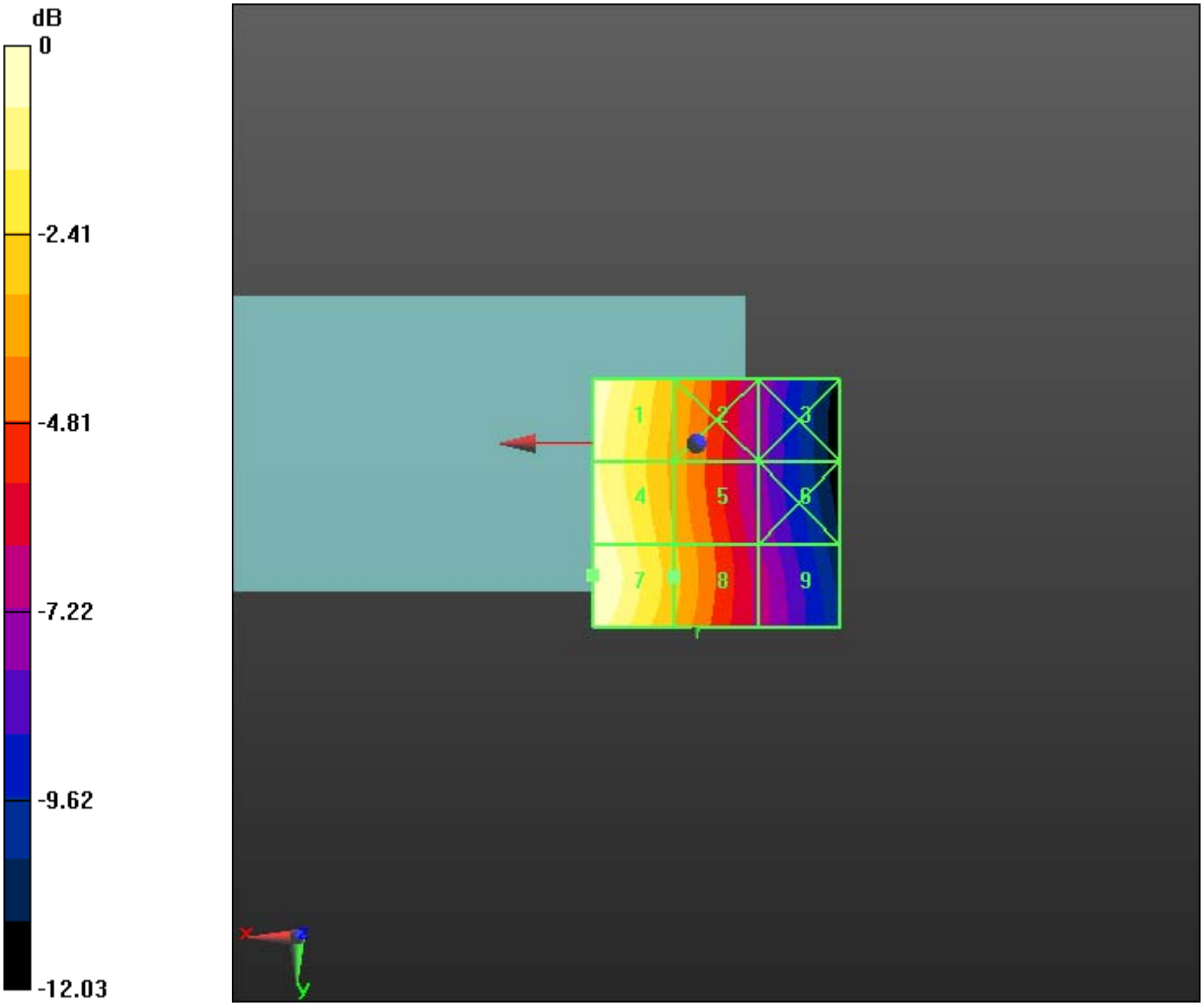
Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak H-field in A/m

Grid 1 **0.158 M4**	Grid 2 **0.112 M4**	Grid 3 **0.070 M4**
Grid 4 **0.160 M4**	Grid 5 **0.112 M4**	Grid 6 **0.071 M4**
Grid 7 **0.164 M4**	Grid 8 **0.115 M4**	Grid 9 **0.074 M4**

Cursor:

Total = 0.164 A/m
H Category: M4
Location: 21, 26.5, 8.7 mm



0 dB = 0.160A/m

Date/Time: 10/7/2011 3:41:21 PM

Test Laboratory: RIM Testing Services

HAC RF_H-Field_CDMA1900_speaker

DUT: BlackBerry Smartphone; Type: Sample

Communication System: CDMA 1900; Frequency: 1851.25 MHz, Frequency: 1880 MHz, Frequency: 1908.5 MHz

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

Phantom section: RF Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 11/18/2010
- Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 3/7/2011
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.4 (2829)

Device H-Field meausrement with H3DV6 probe/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 = 0.074 A/m

Probe Modulation Factor = 0.820

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 0.100 A/m; Power Drift = -0.00066 dB

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

Peak H-field in A/m

Grid 1 **0.089 M4**	Grid 2 **0.074 M4**	Grid 3 **0.072 M4**
Grid 4 **0.068 M4**	Grid 5 **0.074 M4**	Grid 6 **0.072 M4**
Grid 7 **0.055 M4**	Grid 8 **0.064 M4**	Grid 9 **0.064 M4**

Cursor:

Total = 0.089 A/m
H Category: M4
Location: 25, -25, 8.7 mm

Device H-Field meausrement with H3DV6 probe/H Scan - H3DV6 - 2007: 15 mm from Probe Center to the Device 2/Hearing Aid Compatibility Test (101x101x1): Measurement grid: dx=5mm, dy=5mm
Maximum value of peak Total field = 0.080 A/m
Probe Modulation Factor = 0.820
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 0.106 A/m; Power Drift = 0.0072 dB

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

Peak H-field in A/m

Grid 1 **0.092 M4**	Grid 2 **0.080 M4**	Grid 3 **0.079 M4**
Grid 4 **0.072 M4**	Grid 5 **0.080 M4**	Grid 6 **0.079 M4**
Grid 7 **0.056 M4**	Grid 8 **0.069 M4**	Grid 9 **0.069 M4**

Cursor:

Total = 0.092 A/m
H Category: M4
Location: 25, -25, 8.7 mm

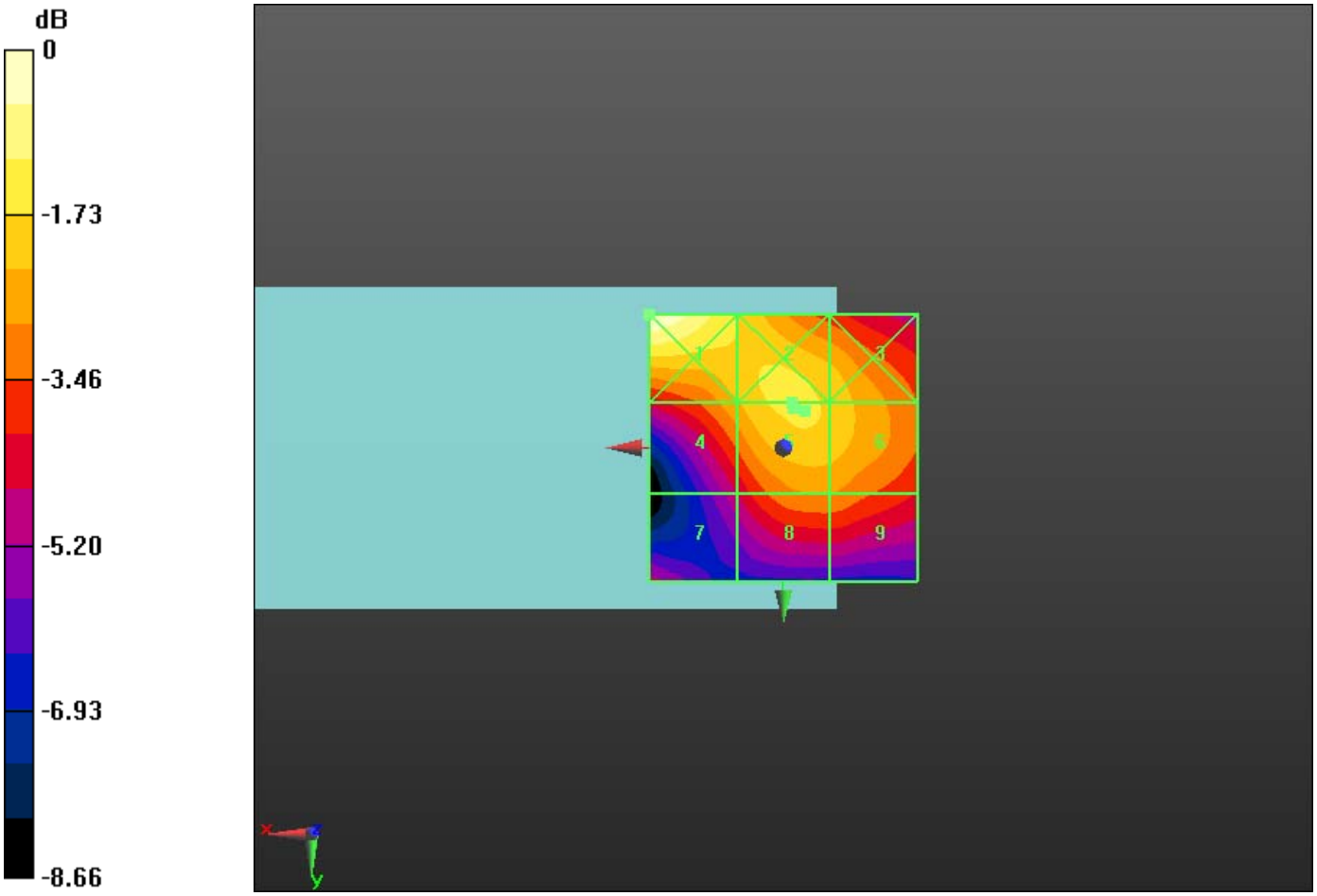
Device H-Field meausrement with H3DV6 probe/H Scan - H3DV6 - 2007: 15 mm from Probe Center to the Device 2 2/Hearing Aid Compatibility Test (101x101x1): Measurement grid: dx=5mm, dy=5mm
Maximum value of peak Total field = 0.076 A/m
Probe Modulation Factor = 0.820
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 0.104 A/m; Power Drift = -0.15 dB
Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak H-field in A/m

Grid 1 **0.091 M4**	Grid 2 **0.076 M4**	Grid 3 **0.073 M4**
Grid 4 **0.070 M4**	Grid 5 **0.076 M4**	Grid 6 **0.074 M4**
Grid 7 **0.054 M4**	Grid 8 **0.066 M4**	Grid 9 **0.066 M4**

Cursor:

Total = 0.091 A/m
H Category: M4
Location: 25, -25, 8.7 mm



0 dB = 0.090A/m

Date/Time: 10/7/2011 4:00:38 PM

Test Laboratory: RIM Testing Services

HAC RF_H-Field_CDMA1900_telecoil

DUT: BlackBerry Smartphone; Type: Sample

Communication System: CDMA 1900; Frequency: 1851.25 MHz

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

Phantom section: RF Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 11/18/2010
- Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 3/7/2011
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.4 (2829)

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

Maximum value of peak Total field = 0.079 A/m

Probe Modulation Factor = 0.820

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 0.107 A/m; Power Drift = 0.03 dB

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

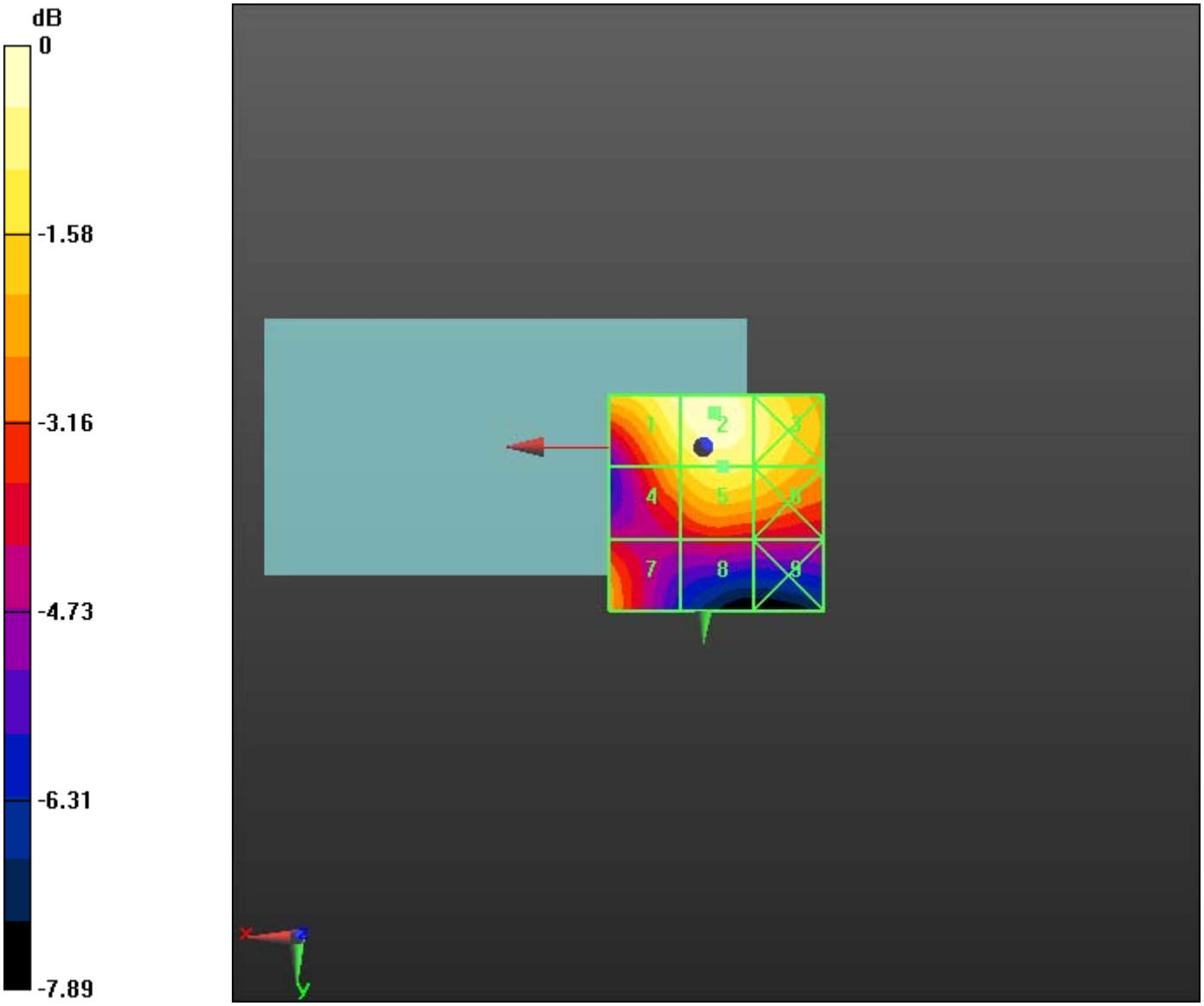
Peak H-field in A/m

Grid 1	Grid 2	Grid 3

0.077 M4	**0.079 M4**	**0.074 M4**
Grid 4 **0.065 M4**	Grid 5 **0.072 M4**	Grid 6 **0.070 M4**
Grid 7 **0.061 M4**	Grid 8 **0.051 M4**	Grid 9 **0.050 M4**

Cursor:

Total = 0.079 A/m
H Category: M4
Location: -2.5, -8, 8.7 mm



0 dB = 0.080A/m

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Test Laboratory: RIM Testing Services

HAC RF_H-Field_CDMA1900_1_8th

DUT: BlackBerry Smartphone; Type: Sample

Communication System: CDMA 1900_1/8th rate; Frequency: 1880 MHz

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

Phantom section: RF Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 11/18/2010
- Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 3/7/2011
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.4 (2829)

Device H-Field meausrement with H3DV6 probe/H Scan - H3DV6 - 2007: 15 mm from Probe Center to the Device 1/8/Hearing Aid Compatibility Test (101x101x1): Measurement grid: dx=5mm, dy=5mm

Maximum value of peak Total field = 0.089 A/m

Probe Modulation Factor = 2.470

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 0.039 A/m; Power Drift = -0.13 dB

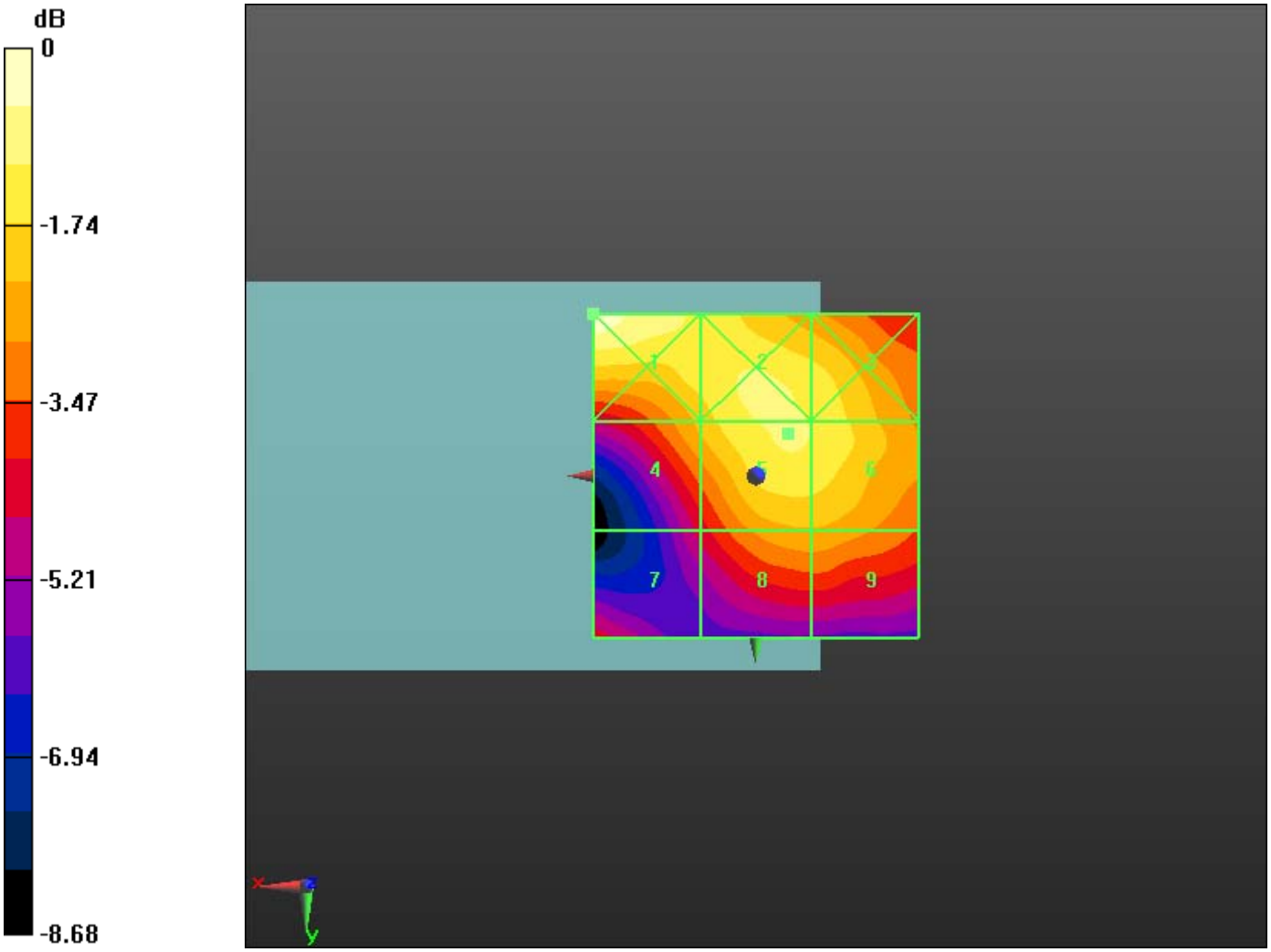
Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak H-field in A/m

Grid 1 **0.102 M4**	Grid 2 **0.089 M4**	Grid 3 **0.087 M4**
Grid 4 **0.078 M4**	Grid 5 **0.089 M4**	Grid 6 **0.087 M4**
Grid 7 **0.062 M4**	Grid 8 **0.076 M4**	Grid 9 **0.076 M4**

Cursor:

Total = 0.102 A/m
H Category: M4
Location: 25, -25, 8.7 mm



0 dB = 0.100A/m

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Date/Time: 10/7/2011 2:30:23 PM

Test Laboratory: RIM Testing Services

HAC RF_H-Field_CDMA1700_speaker

DUT: BlackBerry Smartphone; Type: Sample

Communication System: CDMA AWS 1700; Frequency: 1711.25 MHz,
Frequency: 1732.5 MHz, Frequency: 1753.75 MHz
Medium parameters used: $\sigma = 0$ mho/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m^3
Phantom section: RF Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 11/18/2010
- Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 3/7/2011
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.4 (2829)

Device H-Field meausrement with H3DV6 probe/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 = 0.103 A/m
Probe Modulation Factor = 1.040
Device Reference Point: 0, 0, -6.3 mm

Reference Value = 0.112 A/m; Power Drift = -0.06 dB

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

Peak H-field in A/m

Grid 1 **0.099 M4**	Grid 2 **0.103 M4**	Grid 3 **0.097 M4**
Grid 4 **0.099 M4**	Grid 5 **0.103 M4**	Grid 6 **0.096 M4**
Grid 7 **0.109 M4**	Grid 8 **0.092 M4**	Grid 9 **0.082 M4**

Cursor:
Total = 0.109 A/m
H Category: M4
Location: 25, 25, 8.7 mm

Device H-Field meausrement with H3DV6 probe/H Scan - H3DV6 - 2007: 15 mm from Probe Center to the Device 2/Hearing Aid Compatibility Test (101x101x1): Measurement grid: dx=5mm, dy=5mm
Maximum value of peak Total field = 0.119 A/m
Probe Modulation Factor = 1.040
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 0.131 A/m; Power Drift = 6.3e-005 dB
Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak H-field in A/m

Grid 1 **0.112 M4**	Grid 2 **0.119 M4**	Grid 3 **0.114 M4**
Grid 4 **0.112 M4**	Grid 5 **0.119 M4**	Grid 6 **0.114 M4**
Grid 7 **0.115 M4**	Grid 8 **0.107 M4**	Grid 9 **0.099 M4**

Cursor:

Total = 0.119 A/m
H Category: M4
Location: 0, -7.5, 8.7 mm

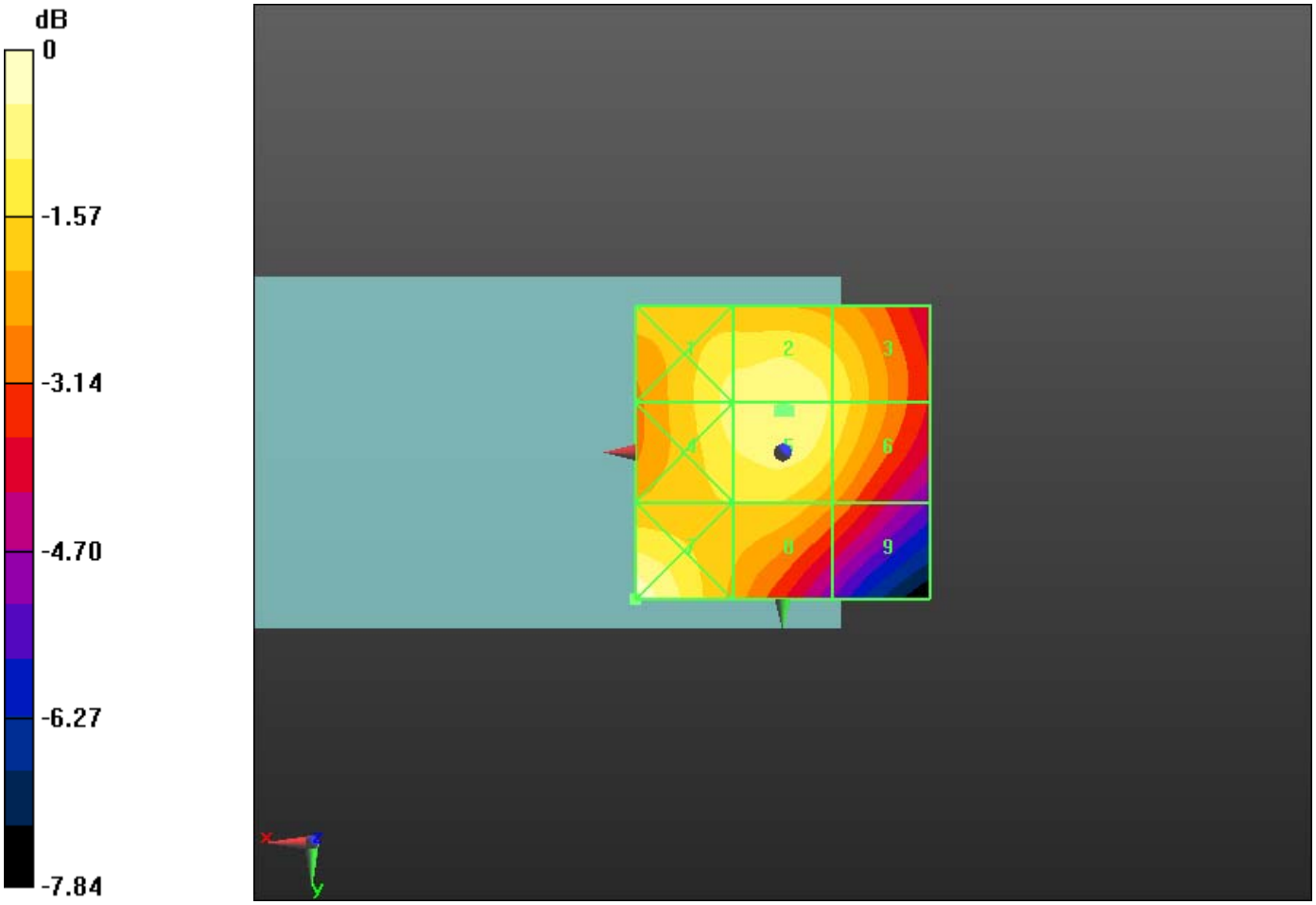
Device H-Field meausrement with H3DV6 probe/H Scan - H3DV6 - 2007: 15 mm from Probe Center to the Device 2 2/Hearing Aid Compatibility Test (101x101x1): Measurement grid: dx=5mm, dy=5mm
Maximum value of peak Total field = 0.127 A/m
Probe Modulation Factor = 1.040
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 0.138 A/m; Power Drift = 0.19 dB
Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak H-field in A/m

Grid 1 **0.118 M4**	Grid 2 **0.126 M4**	Grid 3 **0.122 M4**
Grid 4 **0.118 M4**	Grid 5 **0.127 M4**	Grid 6 **0.122 M4**
Grid 7 **0.111 M4**	Grid 8 **0.110 M4**	Grid 9 **0.106 M4**

Cursor:

Total = 0.127 A/m
H Category: M4
Location: -1, -7, 8.7 mm



0 dB = 0.110A/m

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Test Laboratory: RIM Testing Services

HAC RF_H-Field_CDMA1700_telecoil

DUT: BlackBerry Smartphone; Type: Sample

Communication System: CDMA AWS 1700; Frequency: 1753.75 MHz

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

Phantom section: RF Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 11/18/2010
- Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 3/7/2011
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.4 (2829)

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

Maximum value of peak Total field = 0.128 A/m

Probe Modulation Factor = 1.040

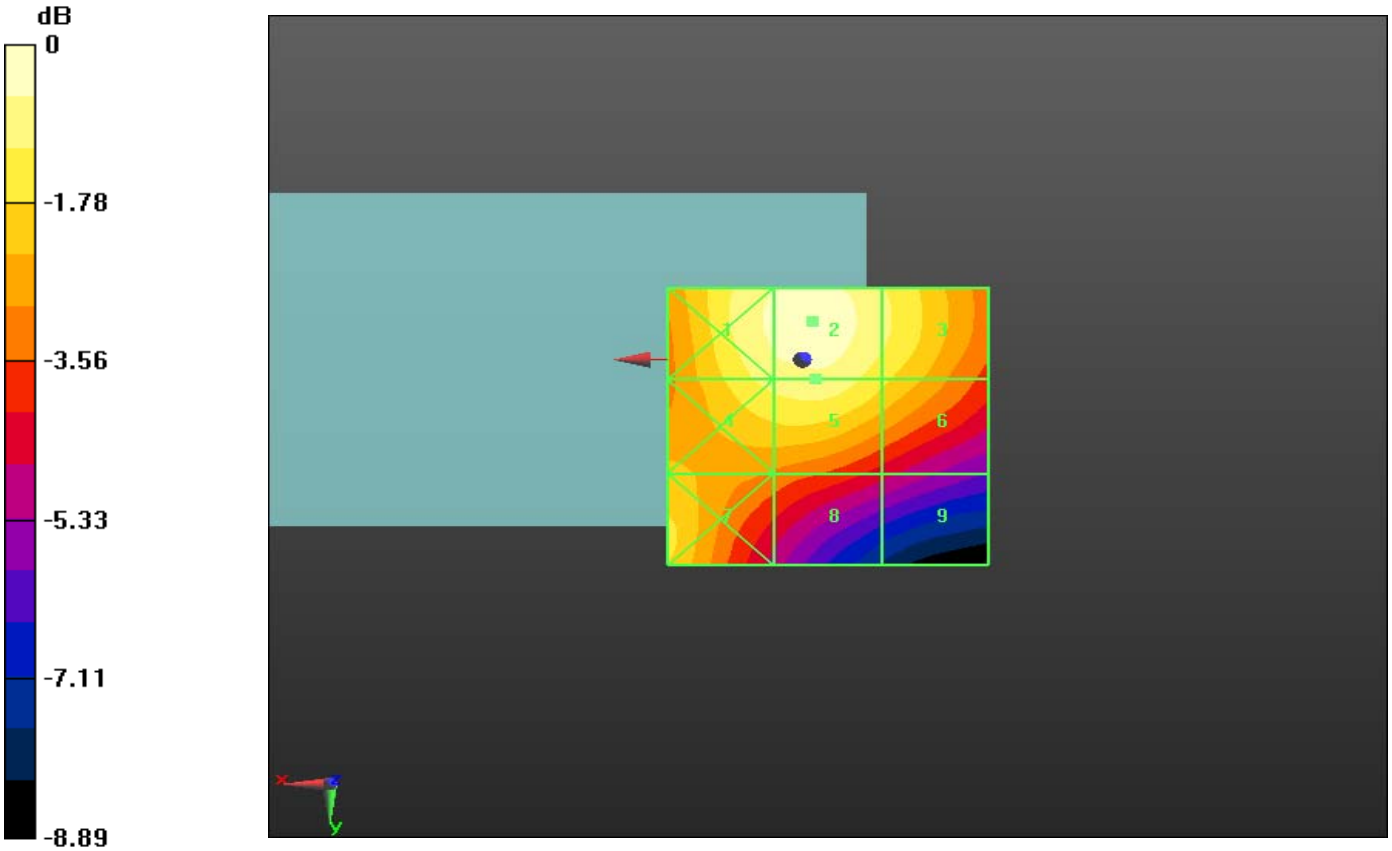
Device Reference Point: 0, 0, -6.3 mm

Reference Value = 0.139 A/m; Power Drift = 0.04 dB

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

Peak H-field in A/m

Grid 1 **0.124 M4**	Grid 2 **0.128 M4**	Grid 3 **0.116 M4**
Grid 4 **0.117 M4**	Grid 5 **0.119 M4**	Grid 6 **0.108 M4**
Grid 7 **0.109 M4**	Grid 8 **0.092 M4**	Grid 9 **0.078 M4**



0 dB = 0.130A/m

Date/Time: 10/20/2011 3:38:01 PM

Test Laboratory: RIM Testing Services

HAC RF_H-Field_CDMA1700_1_8th

DUT: BlackBerry Smartphone; Type: Sample

Communication System: CDMA AWS 1700_1/8th; Frequency: 1753.75 MHz

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

Phantom section: RF Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 11/18/2010
- Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 3/7/2011
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.4 (2829)

Device H-Field meausrement with H3DV6 probe/H Scan - H3DV6 - 2007: 15 mm from Probe Center to the Device 1/8/Hearing Aid Compatibility Test (101x101x1): Measurement grid: dx=5mm, dy=5mm

Maximum value of peak Total field = 0.108 A/m

Probe Modulation Factor = 2.540

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 0.049 A/m; Power Drift = 0.19 dB

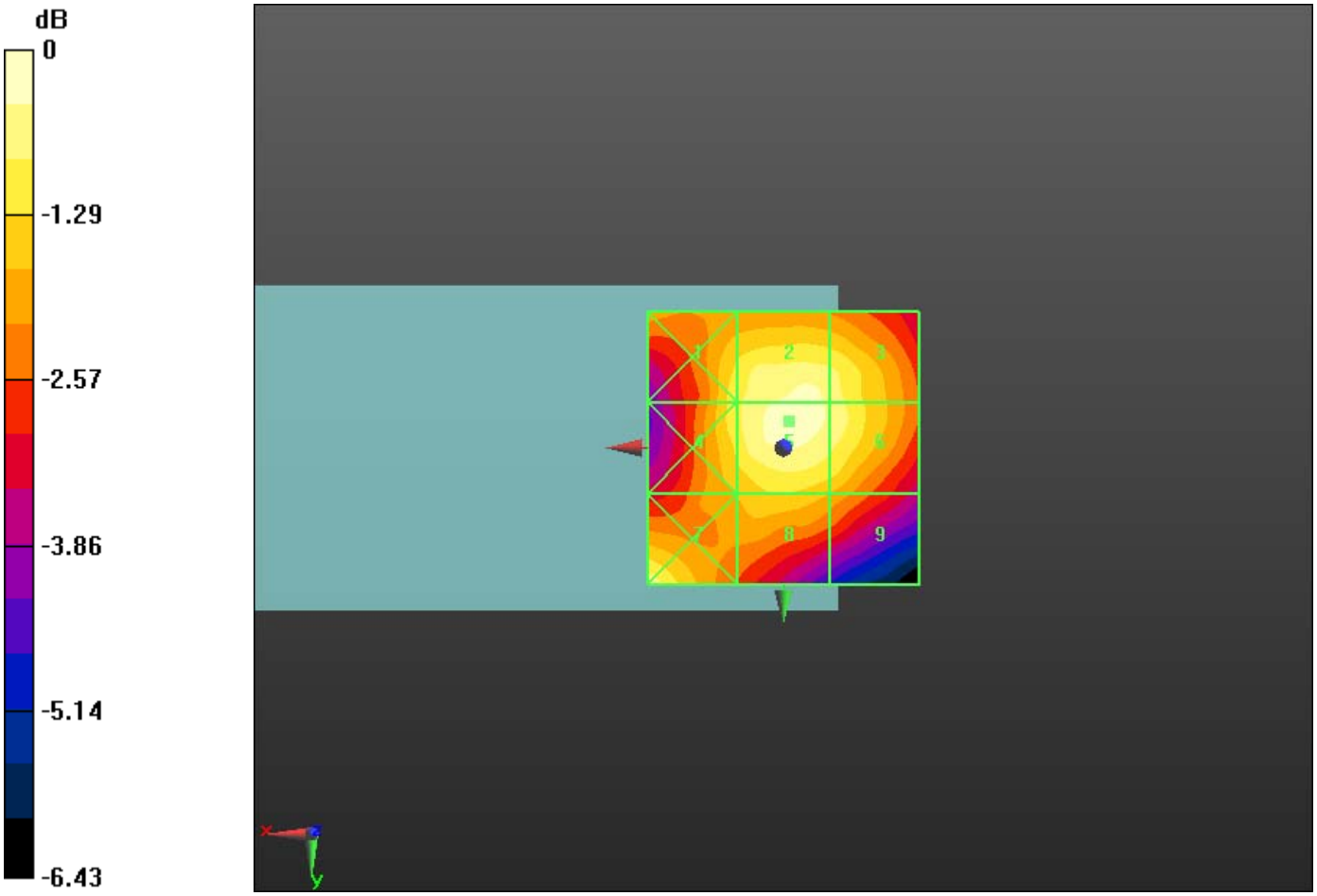
Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak H-field in A/m

Grid 1 **0.098 M4**	Grid 2 **0.107 M4**	Grid 3 **0.103 M4**
Grid 4 **0.099 M4**	Grid 5 **0.108 M4**	Grid 6 **0.104 M4**
Grid 7 **0.105 M4**	Grid 8 **0.095 M4**	Grid 9 **0.090 M4**

Cursor:

Total = 0.108 A/m
H Category: M4
Location: -1, -5, 8.7 mm



0 dB = 0.110A/m