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<b>Andrew Becker</b>	<b>Feb. 29 &amp; March 1-2, 2012</b>	<b>RTS-5994-1203-49</b>	<b>L6AREY20CW</b>

## **Annex A: Measurement data and plots**

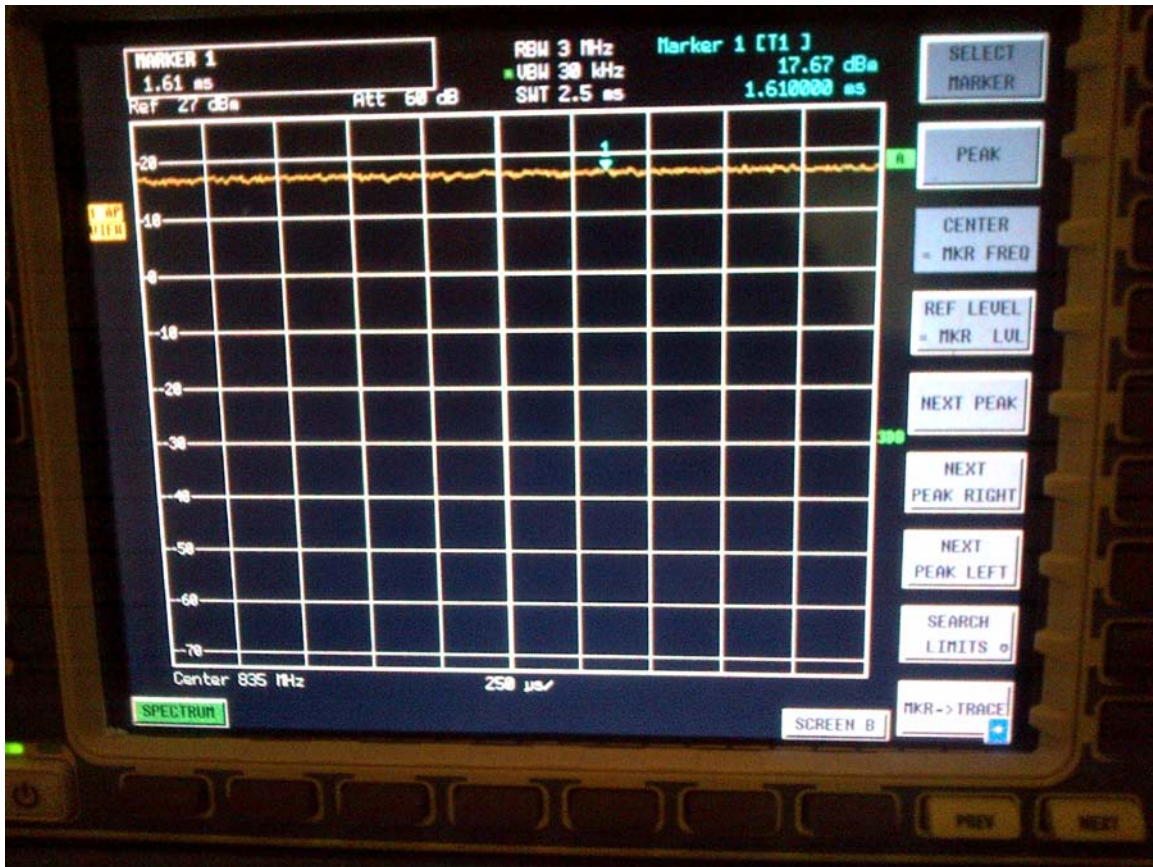
### **A.1 Spectrum analyser plots: CDMA, CW, 80%AM, signals**

Author Data  
**Andrew Becker**

Dates of Test  
**Feb. 29 & March 1-2, 2012**

Report No  
**RTS-5994-1203-49**

FCC ID  
**L6AREY20CW**



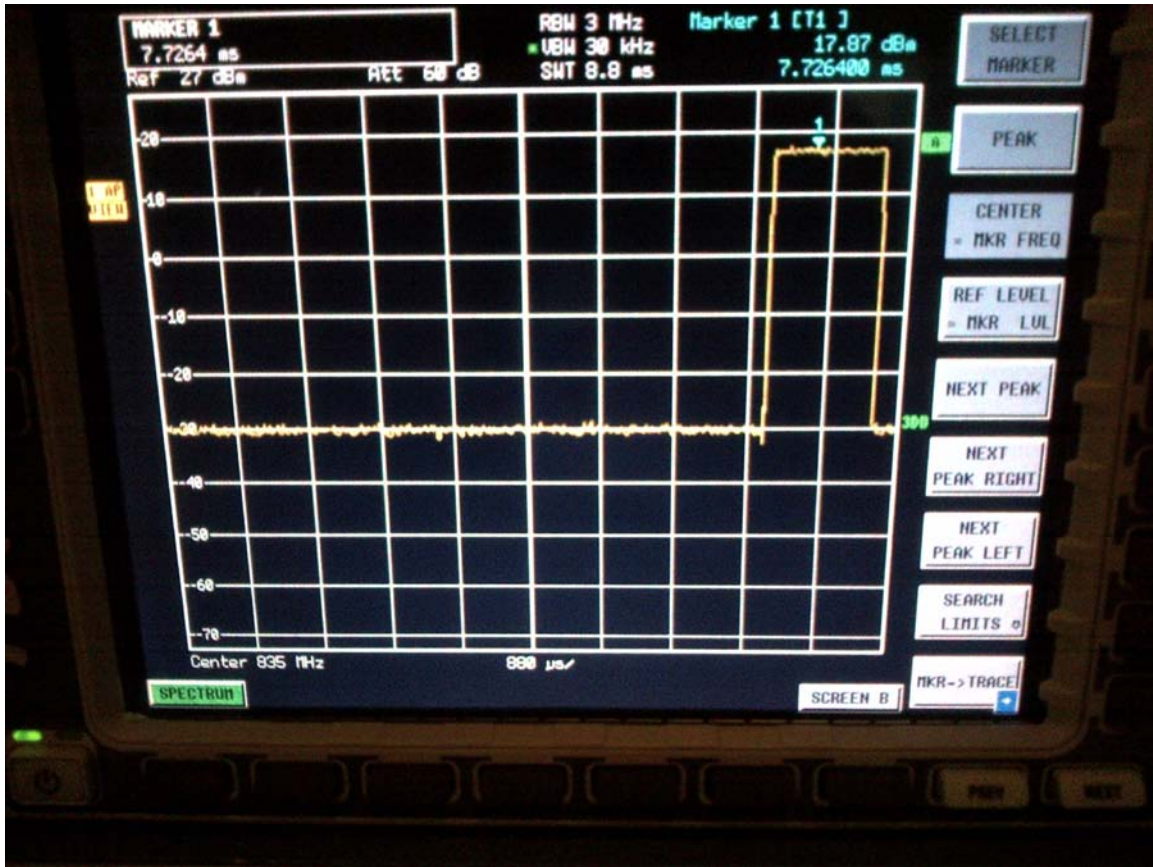
**CDMA 835 MHz (BC0)**

Author Data  
**Andrew Becker**


Dates of Test  
**Feb. 29 & March 1-2, 2012**

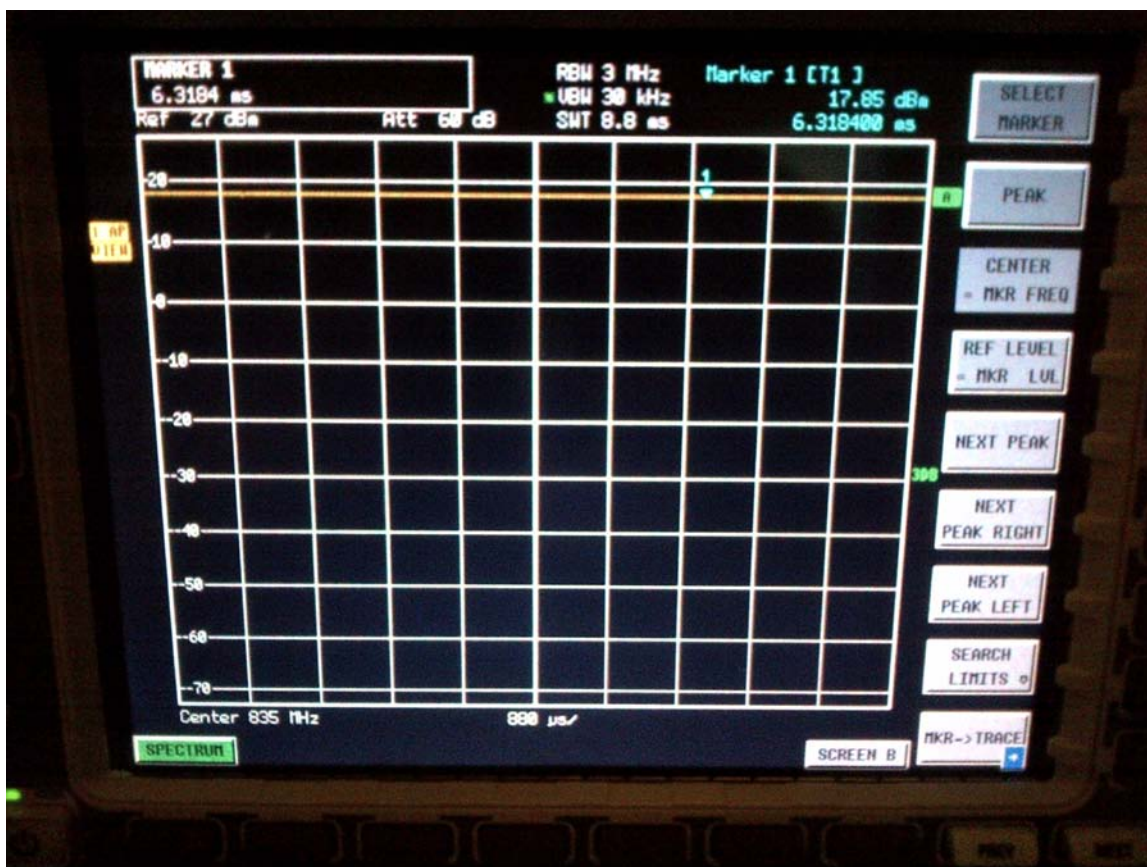
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**RTS-5994-1203-49**

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CDMA 835 MHz (BC0) 1/8<sup>th</sup>

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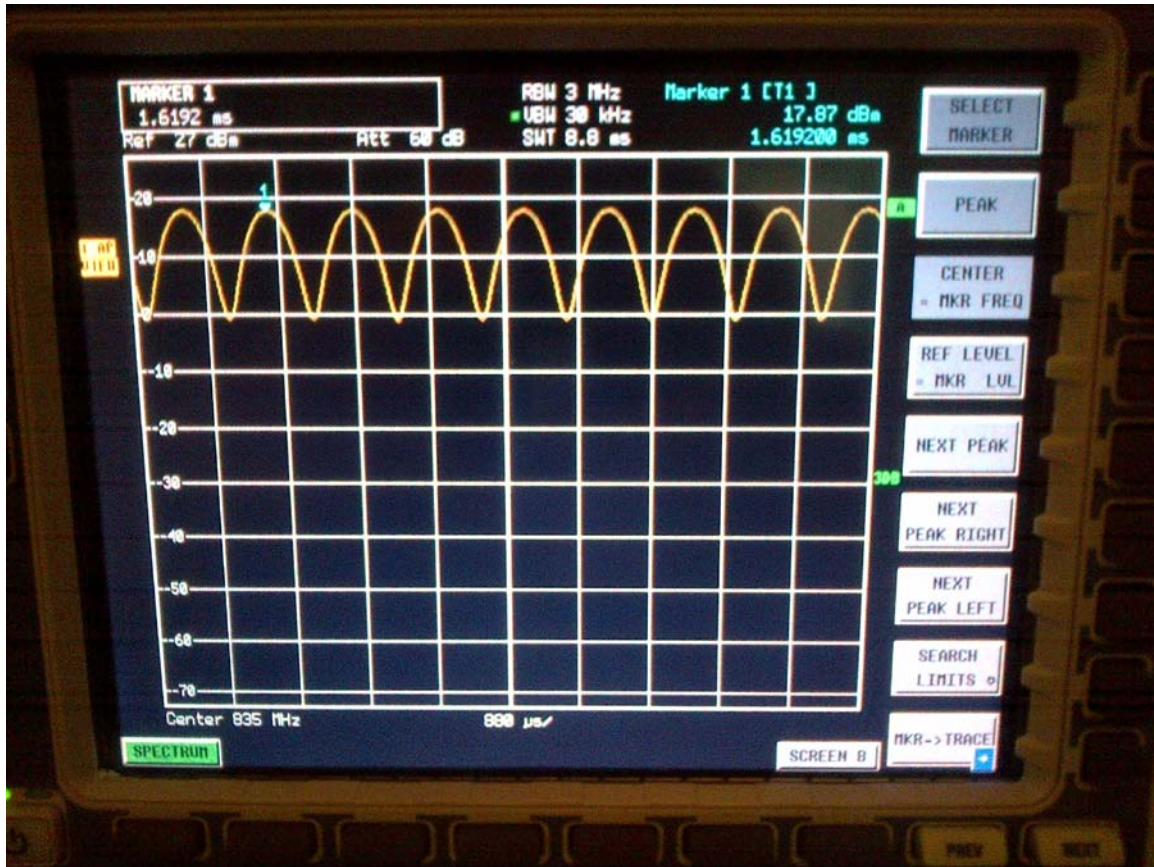
CW 835 MHz

Author Data  
**Andrew Becker**

Dates of Test  
**Feb. 29 & March 1-2, 2012**

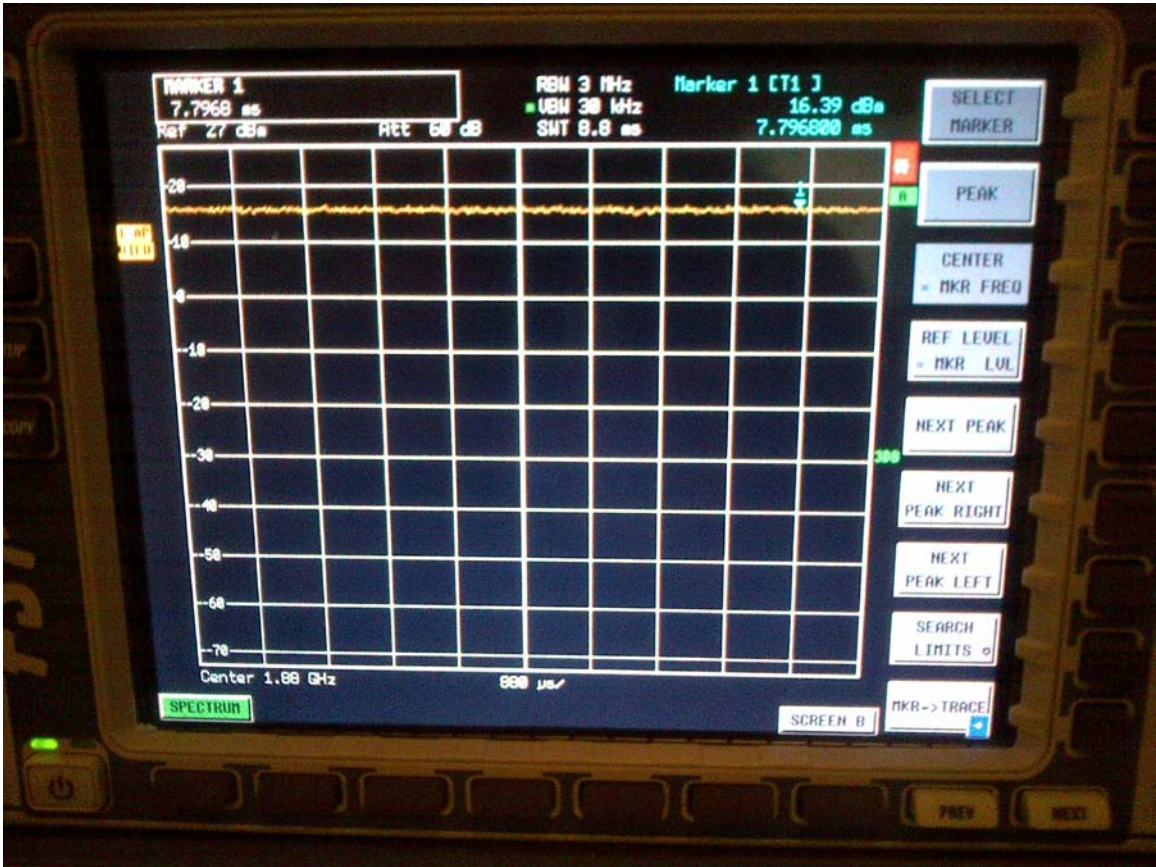
Report No  
**RTS-5994-1203-49**

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**AM 80% 835 MHz**

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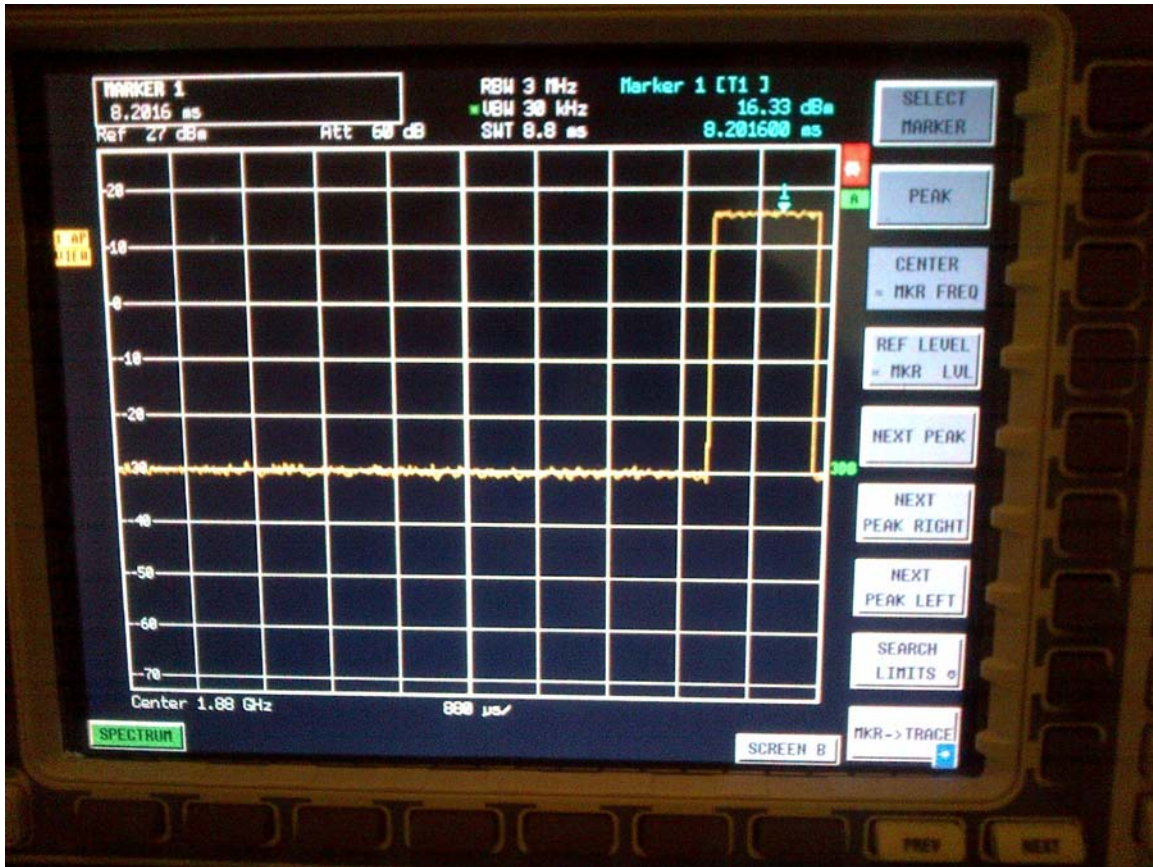
CDMA 1880 MHz (BC1)

Author Data  
**Andrew Becker**

Dates of Test  
**Feb. 29 & March 1-2, 2012**

Report No  
**RTS-5994-1203-49**

FCC ID  
**L6AREY20CW**



**CDMA 1880 MHz (BC1) 1/8 th**

Author Data  
**Andrew Becker**

Dates of Test  
**Feb. 29 & March 1-2, 2012**

Report No  
**RTS-5994-1203-49**

FCC ID  
**L6AREY20CW**



**CW 1880 MHz**

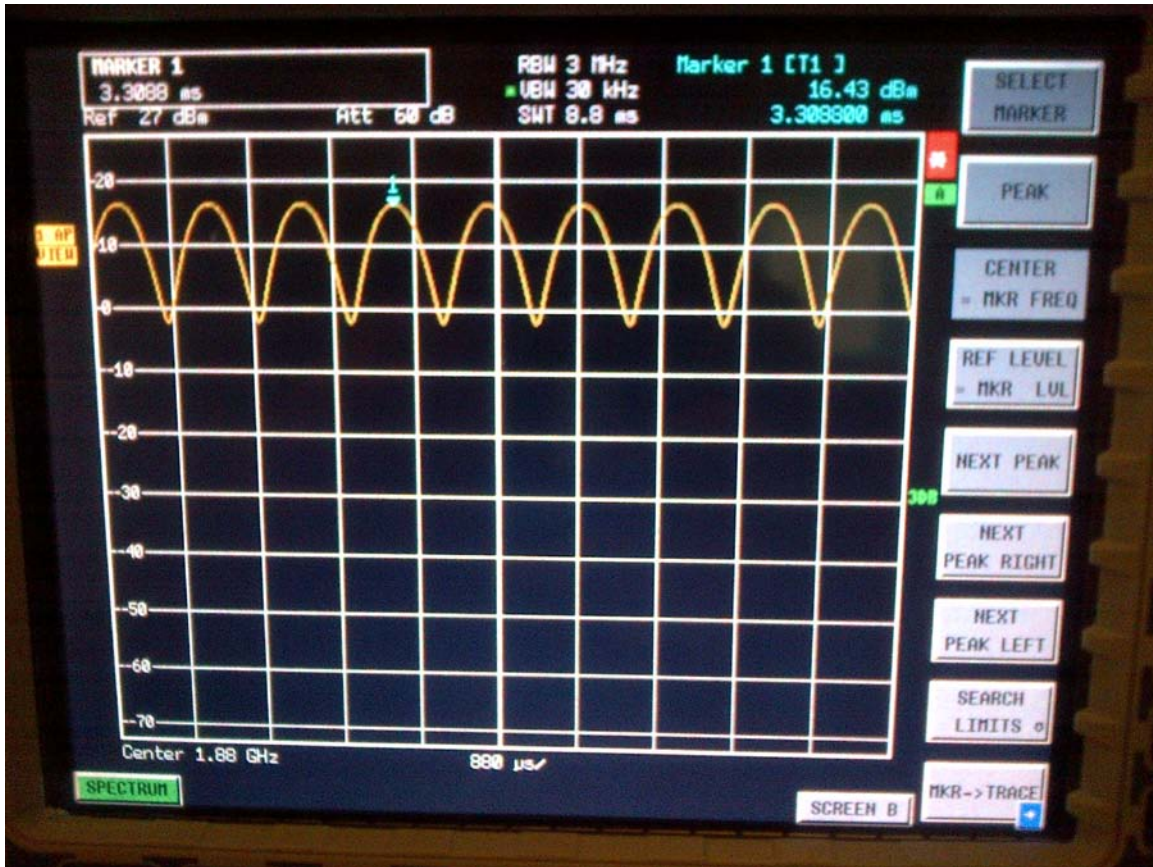


Author Data  
**Andrew Becker**


Dates of Test  
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FCC ID  
**L6AREY20CW**



**AM 80% 1880 MHz**

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## A.2 Dipole validation and probe modulation factor plots

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Test Laboratory: RIM Testing Services

HAC RF\_E-Field\_PMF\_CDMA835 MHz\_02\_29\_12

**DUT: HAC-Dipole 835 MHz; Type: D835V3; Serial: 1011**

Communication System: CDMA 850, Communication System: CDMA 850 1/8th,  
Communication System: CW, Communication System: AM 80%; Frequency: 835 MHz

Medium parameters used:  $\sigma = 0$  mho/m,  $\epsilon_r = 1$ ;  $\rho = 0$  kg/m<sup>3</sup>

Phantom section: RF Section

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

DASY Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 1/9/2012
- Sensor-Surface: (Fix Surface),  $z = 4.7$
- Electronics: DAE3 Sn473; Calibrated: 1/13/2012
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA; Serial: **Not Specified**
- DASY52 52.8.0(692); SEMCAD X 14.6.4(4989)

**Dipole E-Field measurement/E Scan - CDMA FR 835\_PMF/Hearing Aid Compatibility Test (41x361x1):** Measurement grid: dx=5mm, dy=5mm


Device Reference Point: 0, 0, -6.3 mm

Reference Value = 79.95 V/m; Power Drift = -0.18 dB

PMR not calibrated. PMF = 1.000 is applied.

E-field emissions = 118.9 V/m

**Near-field category: M4 (AWF 0 dB)**

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PMF scaled E-field

Grid 1 M4 <b>104.7</b> V/m	Grid 2 M4 <b>108.7</b> V/m	Grid 3 M4 <b>107.6</b> V/m
Grid 4 M4 <b>56.56</b> V/m	Grid 5 M4 <b>57.99</b> V/m	Grid 6 M4 <b>56.06</b> V/m
Grid 7 M4 <b>112.0</b> V/m	Grid 8 M4 <b>118.9</b> V/m	Grid 9 M4 <b>116.1</b> V/m

**Cursor:**

Total = 118.9 V/m

E Category: M4

Location: -0.5, 79, 4.7 mm

**Dipole E-Field measurement/E Scan - CDMA 1/8th 835\_PMF 2/Hearing Aid Compatibility Test (41x361x1):** Measurement grid: dx=5mm, dy=5mm

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 30.10 V/m; Power Drift = 0.23 dB


PMR not calibrated. PMF = 1.000 is applied.

E-field emissions = 43.21 V/m

Near-field category: **M4 (AWF 0 dB)**

PMF scaled E-field

Grid 1 M4 <b>39.00</b> V/m	Grid 2 M4 <b>41.81</b> V/m	Grid 3 M4 <b>39.31</b> V/m
Grid 4 M4 <b>20.47</b> V/m	Grid 5 M4 <b>22.99</b> V/m	Grid 6 M4 <b>20.34</b> V/m
Grid 7 M4 <b>41.05</b> V/m	Grid 8 M4 <b>43.21</b> V/m	Grid 9 M4 <b>42.62</b> V/m

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**Cursor:**

Total = 43.214 V/m

E Category: M4

Location: -0.5, 84, 4.7 mm

**Dipole E-Field measurement/E Scan - CW 835\_PMF/Hearing Aid**

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

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 82.56 V/m; Power Drift = -0.07 dB

PMR not calibrated. PMF = 1.000 is applied.

E-field emissions = 125.5 V/m

**Near-field category: M4 (AWF 0 dB)**

PMF scaled E-field

Grid 1 <b>M4</b> <b>110.7</b> <b>V/m</b>	Grid 2 <b>M4</b> <b>114.9</b> <b>V/m</b>	Grid 3 <b>M4</b> <b>113.7</b> <b>V/m</b>
Grid 4 <b>M4</b> <b>60.24</b> <b>V/m</b>	Grid 5 <b>M4</b> <b>61.44</b> <b>V/m</b>	Grid 6 <b>M4</b> <b>59.31</b> <b>V/m</b>
Grid 7 <b>M4</b> <b>119.5</b> <b>V/m</b>	Grid 8 <b>M4</b> <b>125.5</b> <b>V/m</b>	Grid 9 <b>M4</b> <b>122.3</b> <b>V/m</b>

**Cursor:**

Total = 125.5 V/m

E Category: M4

Location: -0.5, 79, 4.7 mm

**Dipole E-Field measurement/E Scan - AM80%\_ 835\_PMF/Hearing Aid**

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


Device Reference Point: 0, 0, -6.3 mm

Reference Value = 51.22 V/m; Power Drift = 0.06 dB

PMR not calibrated. PMF = 1.000 is applied.

E-field emissions = 78.06 V/m

**Near-field category: M4 (AWF 0 dB)**

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PMF scaled E-field

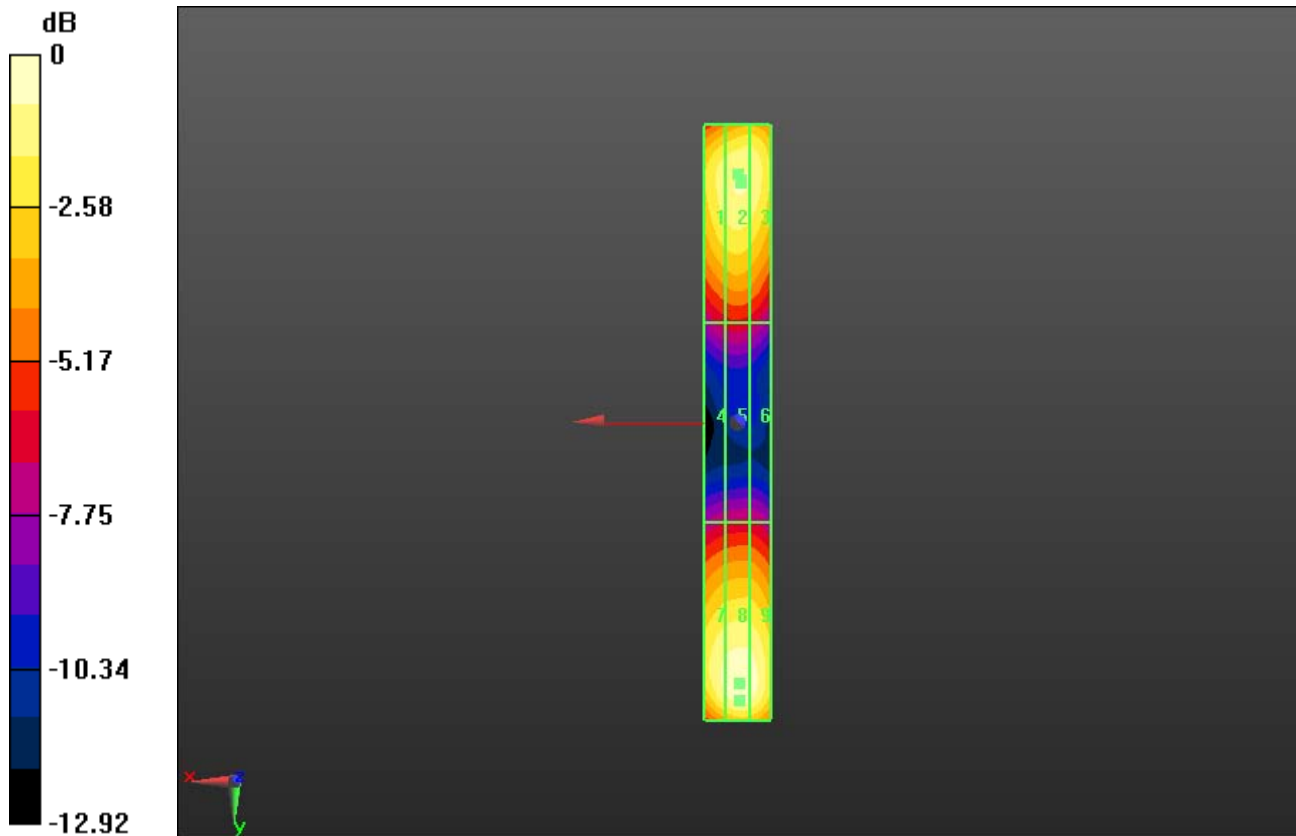
Grid 1 M4 <b>69.60</b> V/m	Grid 2 M4 <b>71.98</b> V/m	Grid 3 M4 <b>71.35</b> V/m
Grid 4 M4 <b>38.16</b> V/m	Grid 5 M4 <b>38.79</b> V/m	Grid 6 M4 <b>37.51</b> V/m
Grid 7 M4 <b>74.44</b> V/m	Grid 8 M4 <b>78.06</b> V/m	Grid 9 M4 <b>76.37</b> V/m

**Cursor:**


Total = 78.060 V/m

E Category: M4

Location: -0.5, 79, 4.7 mm



0 dB = 118.9V/m = 41.50 dB V/m

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Test Laboratory: RIM Testing Services

HAC RF\_E-Field\_validation\_835 MHz\_02\_29\_12

**DUT: HAC-Dipole 835 MHz; Type: D835V3; Serial: 1011**

Communication System: CW; Frequency: 835 MHz

Medium parameters used:  $\sigma = 0$  mho/m,  $\epsilon_r = 1$ ;  $\rho = 0$  kg/m<sup>3</sup>

Phantom section: RF Section

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

DASY Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 1/9/2012
- Sensor-Surface: (Fix Surface),  $z = 4.7$
- Electronics: DAE3 Sn473; Calibrated: 1/13/2012
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA; Serial: **Not Specified**
- DASYS 52.8.0(692); SEMCAD X 14.6.4(4989)

**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

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 116.9 V/m; Power Drift = -0.40 dB

PMR not calibrated. PMF = 1.000 is applied.

E-field emissions = 170.2 V/m

**Near-field category: M4 (AWF 0 dB)**

PMF scaled E-field

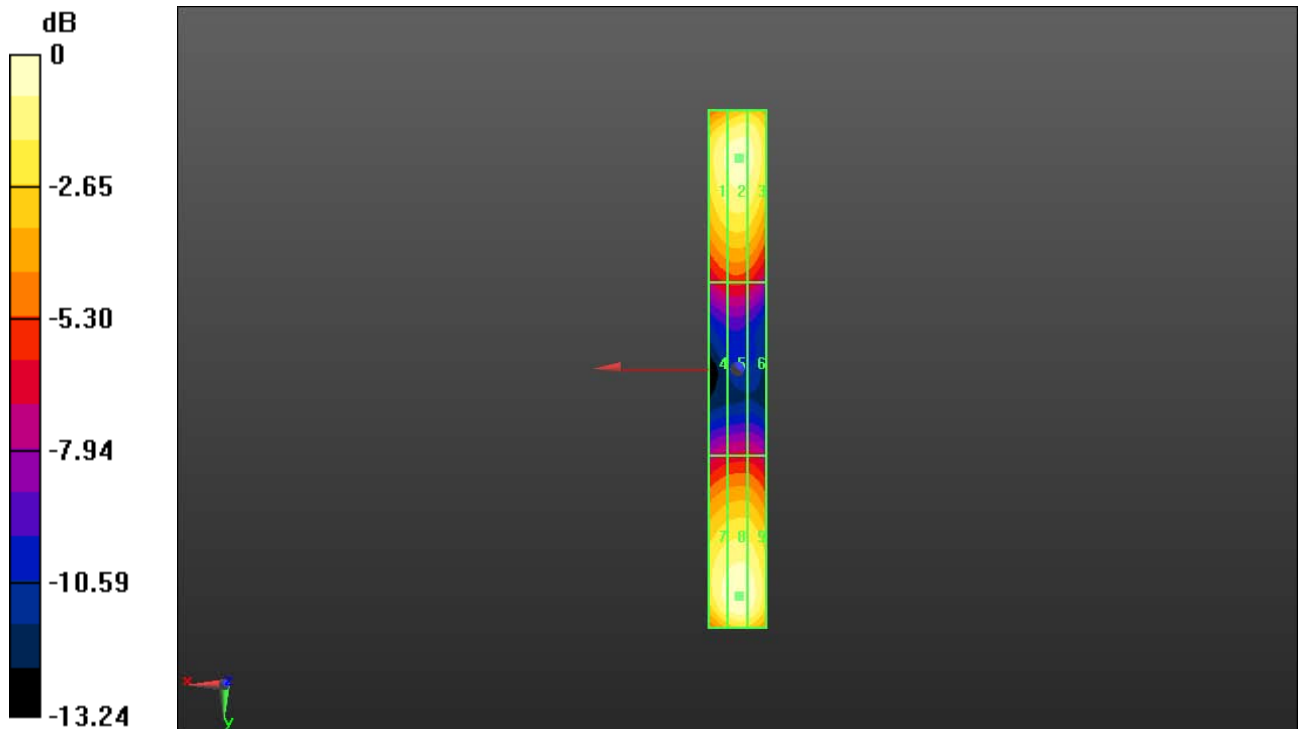
Grid 1 M4 <b>157.8</b> V/m	Grid 2 M4 <b>162.9</b> V/m	Grid 3 M4 <b>160.4</b> V/m
Grid 4 M4 <b>85.01</b> V/m	Grid 5 M4 <b>86.87</b> V/m	Grid 6 M4 <b>83.55</b> V/m
Grid 7 M4 <b>162.0</b> V/m	Grid 8 M4 <b>170.2</b> V/m	Grid 9 M4 <b>166.3</b> V/m

**Cursor:**

Total = 170.2 V/m


E Category: M4

Location: -0.5, 79, 4.7 mm



0 dB = 170.2V/m = 44.62 dB V/m



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Test Laboratory: RIM Testing Services

HAC RF\_E-Field\_PMF\_CDMA1880 MHz\_02\_29\_12

**DUT: HAC Dipole 1880 MHz; Type: CD1880V3; Serial: 1008**

Communication System: CDMA 1900, Communication System: CDMA 1900

1/8th, Communication System: CW, Communication System: AM 80%;

Frequency: 1880 MHz

Medium parameters used:  $\sigma = 0$  mho/m,  $\epsilon_r = 1$ ;  $\rho = 0$  kg/m<sup>3</sup>

Phantom section: RF Section

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

DASY Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 1/9/2012
- Sensor-Surface: (Fix Surface),  $z = 4.7$
- Electronics: DAE3 Sn473; Calibrated: 1/13/2012
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA; Serial: **Not Specified**
- DASY52 52.8.0(692); SEMCAD X 14.6.4(4989)

**Dipole E-Field measurement/E Scan - CDMA FR 1880\_PMF/Hearing Aid Compatibility Test (41x181x1):** Measurement grid: dx=5mm, dy=5mm


Device Reference Point: 0, 0, -6.3 mm

Reference Value = 87.80 V/m; Power Drift = 0.04 dB

PMR not calibrated. PMF = 1.000 is applied.

E-field emissions = 80.60 V/m

**Near-field category: M3 (AWF 0 dB)**

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PMF scaled E-field

Grid 1 <b>M3</b> <b>73.45</b> V/m	Grid 2 <b>M3</b> <b>76.11</b> V/m	Grid 3 <b>M3</b> <b>74.97</b> V/m
Grid 4 <b>M4</b> <b>50.62</b> V/m	Grid 5 <b>M4</b> <b>51.75</b> V/m	Grid 6 <b>M4</b> <b>50.16</b> V/m
Grid 7 <b>M3</b> <b>76.91</b> V/m	Grid 8 <b>M3</b> <b>80.60</b> V/m	Grid 9 <b>M3</b> <b>78.58</b> V/m

**Cursor:**

Total = 80.601 V/m

E Category: M3

Location: -0.5, 37.5, 4.7 mm

**Dipole E-Field measurement/E Scan - CDMA 1/8th 1880\_PMF 2/Hearing Aid Compatibility Test (41x181x1):** Measurement grid: dx=5mm, dy=5mm

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 30.81 V/m; Power Drift = 0.09 dB


PMR not calibrated. PMF = 1.000 is applied.

E-field emissions = 30.61 V/m

Near-field category: **M4 (AWF 0 dB)**

PMF scaled E-field

Grid 1 <b>M4</b> <b>28.31</b> V/m	Grid 2 <b>M4</b> <b>30.22</b> V/m	Grid 3 <b>M4</b> <b>28.54</b> V/m
Grid 4 <b>M4</b> <b>18.23</b> V/m	Grid 5 <b>M4</b> <b>20.72</b> V/m	Grid 6 <b>M4</b> <b>18.32</b> V/m
Grid 7 <b>M4</b> <b>26.79</b> V/m	Grid 8 <b>M4</b> <b>30.61</b> V/m	Grid 9 <b>M4</b> <b>30.61</b> V/m

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**Cursor:**

Total = 30.614 V/m

E Category: M4

Location: -3.5, 36, 4.7 mm

**Dipole E-Field measurement/E Scan- CW 1880\_PMF/Hearing Aid**

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

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 90.26 V/m; Power Drift = -0.02 dB

PMR not calibrated. PMF = 1.000 is applied.

E-field emissions = 81.58 V/m

**Near-field category: M3 (AWF 0 dB)**

PMF scaled E-field

Grid 1 <b>M3</b> <b>75.79</b> V/m	Grid 2 <b>M3</b> <b>78.08</b> V/m	Grid 3 <b>M3</b> <b>77.27</b> V/m
Grid 4 <b>M4</b> <b>52.44</b> V/m	Grid 5 <b>M4</b> <b>53.31</b> V/m	Grid 6 <b>M4</b> <b>51.71</b> V/m
Grid 7 <b>M3</b> <b>78.00</b> V/m	Grid 8 <b>M3</b> <b>81.58</b> V/m	Grid 9 <b>M3</b> <b>79.79</b> V/m

**Cursor:**

Total = 81.580 V/m

E Category: M3

Location: -0.5, 37.5, 4.7 mm

**Dipole E-Field measurement/E Scan - AM80%\_ 1880\_PMF/Hearing Aid**

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


Device Reference Point: 0, 0, -6.3 mm

Reference Value = 56.79 V/m; Power Drift = 0.05 dB

PMR not calibrated. PMF = 1.000 is applied.

E-field emissions = 52.04 V/m

**Near-field category: M4 (AWF 0 dB)**

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PMF scaled E-field

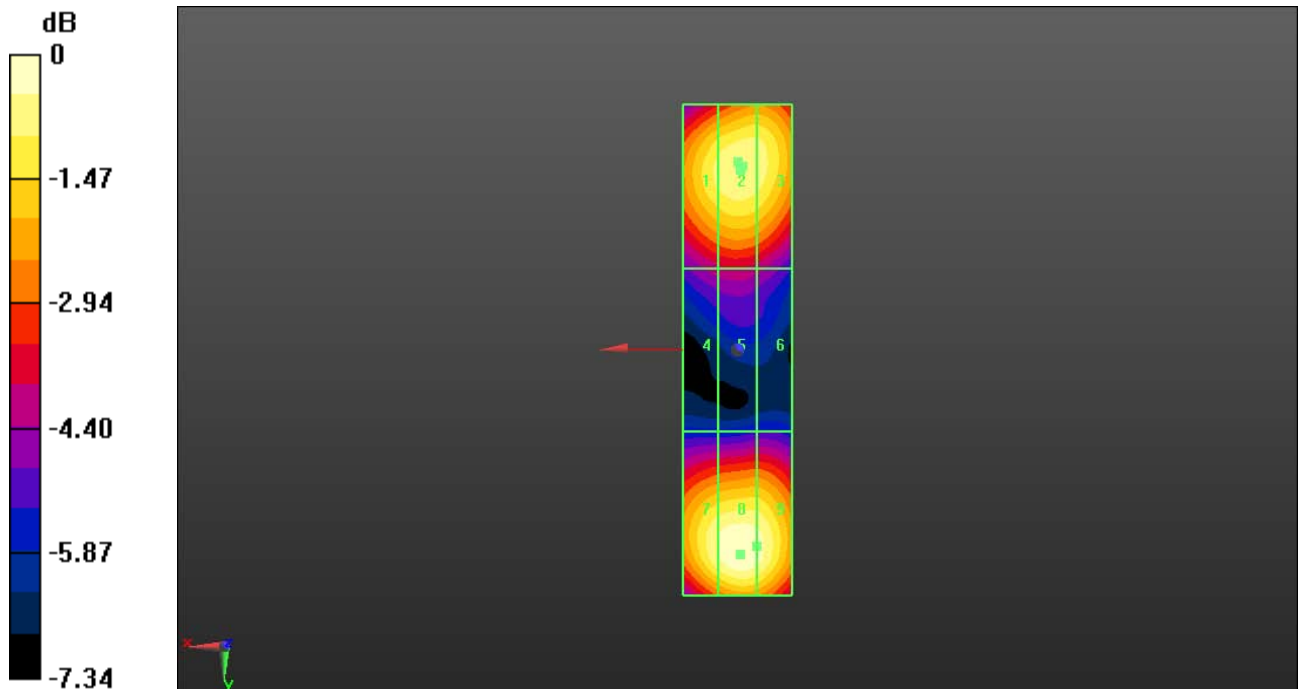
Grid 1 M4 <b>47.54</b> V/m	Grid 2 M4 <b>49.44</b> V/m	Grid 3 M4 <b>48.95</b> V/m
Grid 4 M4 <b>33.05</b> V/m	Grid 5 M4 <b>33.87</b> V/m	Grid 6 M4 <b>32.89</b> V/m
Grid 7 M4 <b>49.67</b> V/m	Grid 8 M4 <b>52.04</b> V/m	Grid 9 M4 <b>50.92</b> V/m

**Cursor:**


Total = 52.041 V/m

E Category: M4

Location: -0.5, 37.5, 4.7 mm



0 dB = 80.600V/m = 38.13 dB V/m

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Test Laboratory: RIM Testing Services

HAC RF\_E-Field\_validation\_1880 MHz\_02\_29\_12

**DUT: HAC Dipole 1880 MHz; Type: CD1880V3; Serial: 1008**

Communication System: CW; Frequency: 1880 MHz

Medium parameters used:  $\sigma = 0$  mho/m,  $\epsilon_r = 1$ ;  $\rho = 0$  kg/m<sup>3</sup>

Phantom section: RF Section

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

DASY Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 1/9/2012
- Sensor-Surface: (Fix Surface),  $z = 4.7$
- Electronics: DAE3 Sn473; Calibrated: 1/13/2012
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA; Serial: **Not Specified**
- DASYS 52.8.0(692); SEMCAD X 14.6.4(4989)

**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

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 142.2 V/m; Power Drift = 0.02 dB

PMR not calibrated. PMF = 1.000 is applied.

E-field emissions = 130.3 V/m

**Near-field category: M2 (AWF 0 dB)**

PMF scaled E-field

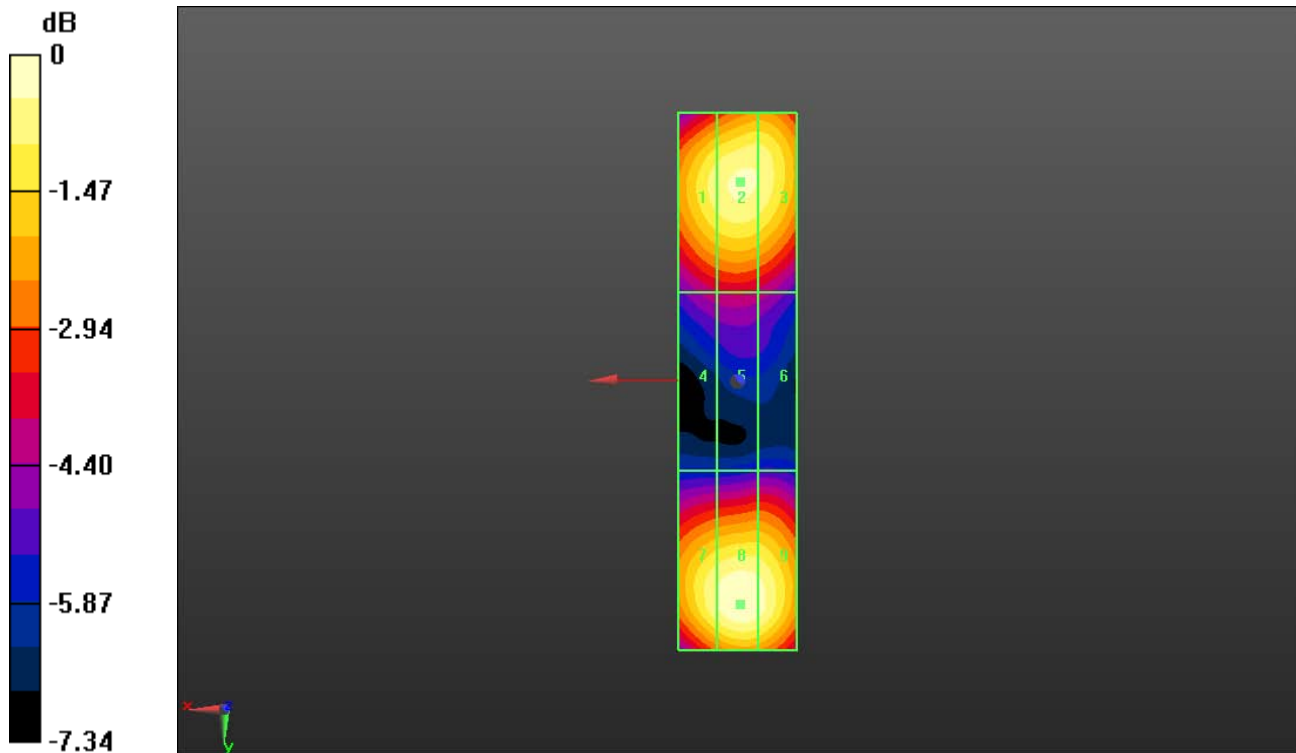
Grid 1 <b>M2</b> <b>120.3</b> V/m	Grid 2 <b>M2</b> <b>124.7</b> V/m	Grid 3 <b>M2</b> <b>123.0</b> V/m
Grid 4 <b>M3</b> <b>82.70</b> V/m	Grid 5 <b>M3</b> <b>84.36</b> V/m	Grid 6 <b>M3</b> <b>81.81</b> V/m
Grid 7 <b>M2</b> <b>123.8</b> V/m	Grid 8 <b>M2</b> <b>130.3</b> V/m	Grid 9 <b>M2</b> <b>126.9</b> V/m

**Cursor:**


Total = 130.3 V/m

E Category: M2

Location: -0.5, 37.5, 4.7 mm



0 dB = 130.3V/m = 42.30 dB V/m

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Test Laboratory: RIM Testing Services

HAC RF\_H-Field\_PMF\_CDMA835 MHz\_02\_29\_12

**DUT: HAC-Dipole 835 MHz; Type: D835V3; Serial: 1011**

Communication System: CDMA 850, Communication System: CDMA 850 1/8th,  
Communication System: CW, Communication System: AM 80%; Frequency: 835  
MHz

Medium parameters used:  $\sigma = 0$  mho/m,  $\epsilon_r = 1$ ;  $\rho = 0$  kg/m<sup>3</sup>

Phantom section: RF Section

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

DASY Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 11/8/2011
- Sensor-Surface: (Fix Surface),  $z = 4.7$
- Electronics: DAE3 Sn473; Calibrated: 1/13/2012
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA; Serial: **Not Specified**
- DASY52 52.8.0(692); SEMCAD X 14.6.4(4989)

**Dipole H-Field measurement with H3DV6 probe/H Scan - CDMA FR  
835\_PMF/Hearing Aid Compatibility Test (41x181x1): Measurement grid:**

$dx=5mm$ ,  $dy=5mm$


Device Reference Point: 0, 0, -6.3 mm

Reference Value = 0.37 V/m; Power Drift = 0.11 dB

PMR not calibrated. PMF = 1.000 is applied.

H-field emissions = 0.34 A/m

**Near-field category: M4 (AWF 0 dB)**

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PMF scaled H-field

Grid 1 <b>M4</b> <b>0.32 A/m</b>	Grid 2 <b>M4</b> <b>0.33 A/m</b>	Grid 3 <b>M4</b> <b>0.32 A/m</b>
Grid 4 <b>M4</b> <b>0.33 A/m</b>	Grid 5 <b>M4</b> <b>0.34 A/m</b>	Grid 6 <b>M4</b> <b>0.33 A/m</b>
Grid 7 <b>M4</b> <b>0.32 A/m</b>	Grid 8 <b>M4</b> <b>0.34 A/m</b>	Grid 9 <b>M4</b> <b>0.32 A/m</b>

**Cursor:**

Total = 0.344 A/m

H Category: M4

Location: 0, 1.5, 4.7 mm

**Dipole H-Field measurement with H3DV6 probe/H Scan - CDMA 1/8th 835\_PMF 2/Hearing Aid Compatibility Test (41x181x1):** Measurement grid:

dx=5mm, dy=5mm

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 0.13 V/m; Power Drift = 0.09 dB

PMR not calibrated. PMF = 1.000 is applied.


H-field emissions = 0.13 A/m

Near-field category: **M4 (AWF 0 dB)**

PMF scaled H-field

Grid 1 <b>M4</b> <b>0.12 A/m</b>	Grid 2 <b>M4</b> <b>0.12 A/m</b>	Grid 3 <b>M4</b> <b>0.12 A/m</b>
Grid 4 <b>M4</b> <b>0.13 A/m</b>	Grid 5 <b>M4</b> <b>0.13 A/m</b>	Grid 6 <b>M4</b> <b>0.12 A/m</b>
Grid 7 <b>M4</b> <b>0.12 A/m</b>	Grid 8 <b>M4</b> <b>0.13 A/m</b>	Grid 9 <b>M4</b> <b>0.12 A/m</b>



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**Cursor:**

Total = 0.134 A/m  
H Category: M4  
Location: 0, 0, 4.7 mm

**Dipole H-Field measurement with H3DV6 probe/H Scan - CW**

**835\_PMF/Hearing Aid Compatibility Test (41x181x1):** Measurement grid:

dx=5mm, dy=5mm  
Device Reference Point: 0, 0, -6.3 mm  
Reference Value = 0.39 V/m; Power Drift = 0.08 dB  
PMR not calibrated. PMF = 1.000 is applied.  
H-field emissions = 0.35 A/m

**Near-field category: M4 (AWF 0 dB)**

PMF scaled H-field

Grid 1 <b>M4</b> <b>0.32 A/m</b>	Grid 2 <b>M4</b> <b>0.34 A/m</b>	Grid 3 <b>M4</b> <b>0.32 A/m</b>
Grid 4 <b>M4</b> <b>0.34 A/m</b>	Grid 5 <b>M4</b> <b>0.35 A/m</b>	Grid 6 <b>M4</b> <b>0.33 A/m</b>
Grid 7 <b>M4</b> <b>0.33 A/m</b>	Grid 8 <b>M4</b> <b>0.35 A/m</b>	Grid 9 <b>M4</b> <b>0.33 A/m</b>

**Cursor:**

Total = 0.355 A/m  
H Category: M4  
Location: 0, 5, 4.7 mm

**Dipole H-Field measurement with H3DV6 probe/H Scan -**

**AM80%\_PMF/Hearing Aid Compatibility Test (41x181x1):** Measurement grid:

dx=5mm, dy=5mm  
Device Reference Point: 0, 0, -6.3 mm  
Reference Value = 0.24 V/m; Power Drift = -0.02 dB  
PMR not calibrated. PMF = 1.000 is applied.  
H-field emissions = 0.23 A/m

**Near-field category: M4 (AWF 0 dB)**

PMF scaled H-field

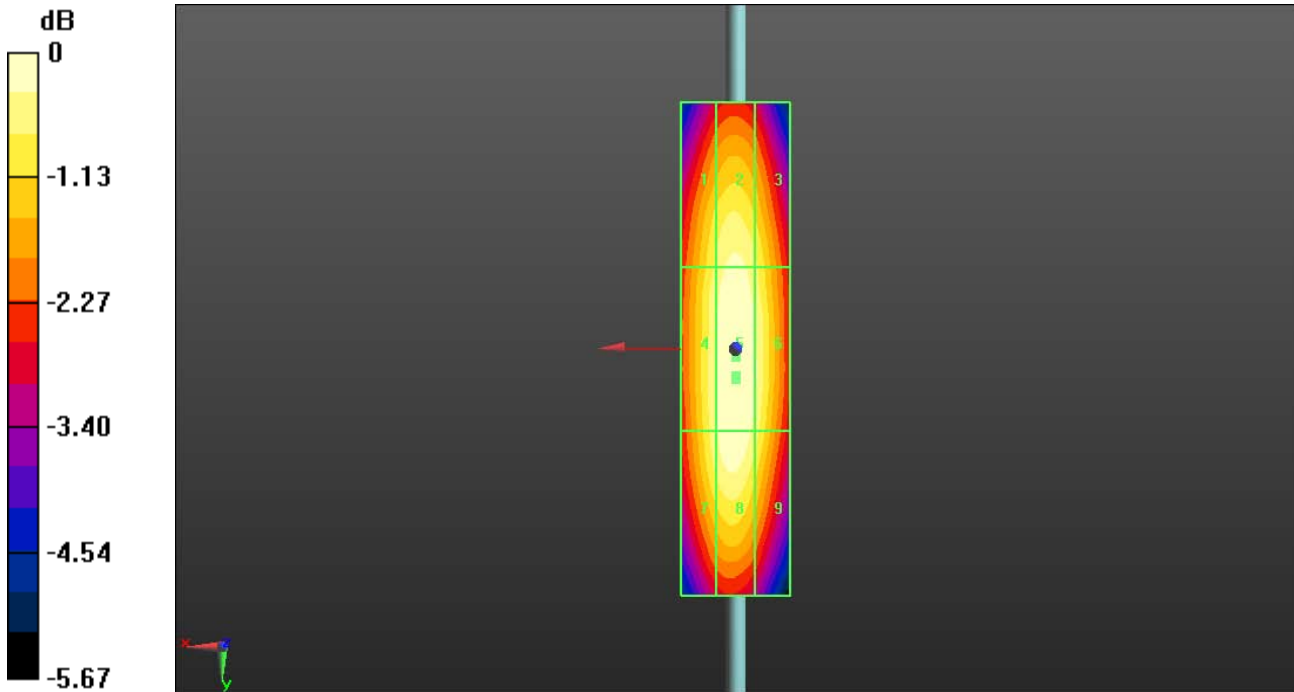
Grid 1 <b>M4</b> <b>0.20 A/m</b>	Grid 2 <b>M4</b> <b>0.21 A/m</b>	Grid 3 <b>M4</b> <b>0.20 A/m</b>
Grid 4 <b>M4</b> <b>0.21 A/m</b>	Grid 5 <b>M4</b> <b>0.23 A/m</b>	Grid 6 <b>M4</b> <b>0.22 A/m</b>
Grid 7 <b>M4</b> <b>0.21 A/m</b>	Grid 8 <b>M4</b> <b>0.22 A/m</b>	Grid 9 <b>M4</b> <b>0.21 A/m</b>

**Cursor:**


Total = 0.227 A/m

H Category: M4

Location: 0, 5.5, 4.7 mm



0 dB = 0.340A/m = -9.37 dB A/m

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Test Laboratory: RIM Testing Services

HAC RF\_H-Field\_validation\_835 MHz\_02\_29\_12

**DUT: HAC-Dipole 835 MHz; Type: D835V3; Serial: 1011**

Communication System: CW; Frequency: 835 MHz

Medium parameters used:  $\sigma = 0$  mho/m,  $\epsilon_r = 1$ ;  $\rho = 0$  kg/m<sup>3</sup>

Phantom section: RF Section

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

DASY Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 11/8/2011
- Sensor-Surface: (Fix Surface),  $z = 4.7$
- Electronics: DAE3 Sn473; Calibrated: 1/13/2012
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA; Serial: **Not Specified**
- DASYS 52.8.0(692); SEMCAD X 14.6.4(4989)

**Dipole H-Field measurement with H3DV6 probe/H Scan -**

**measurement distance from the probe sensor center to CD835 Dipole**

**= 10mm/Hearing Aid Compatibility Test (41x181x1): Measurement grid:**

$dx=5mm, dy=5mm$

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 0.50 V/m; Power Drift = 0.20 dB

PMR not calibrated. PMF = 1.000 is applied.

H-field emissions = 0.47 A/m

**Near-field category: M4 (AWF 0 dB)**

PMF scaled H-field

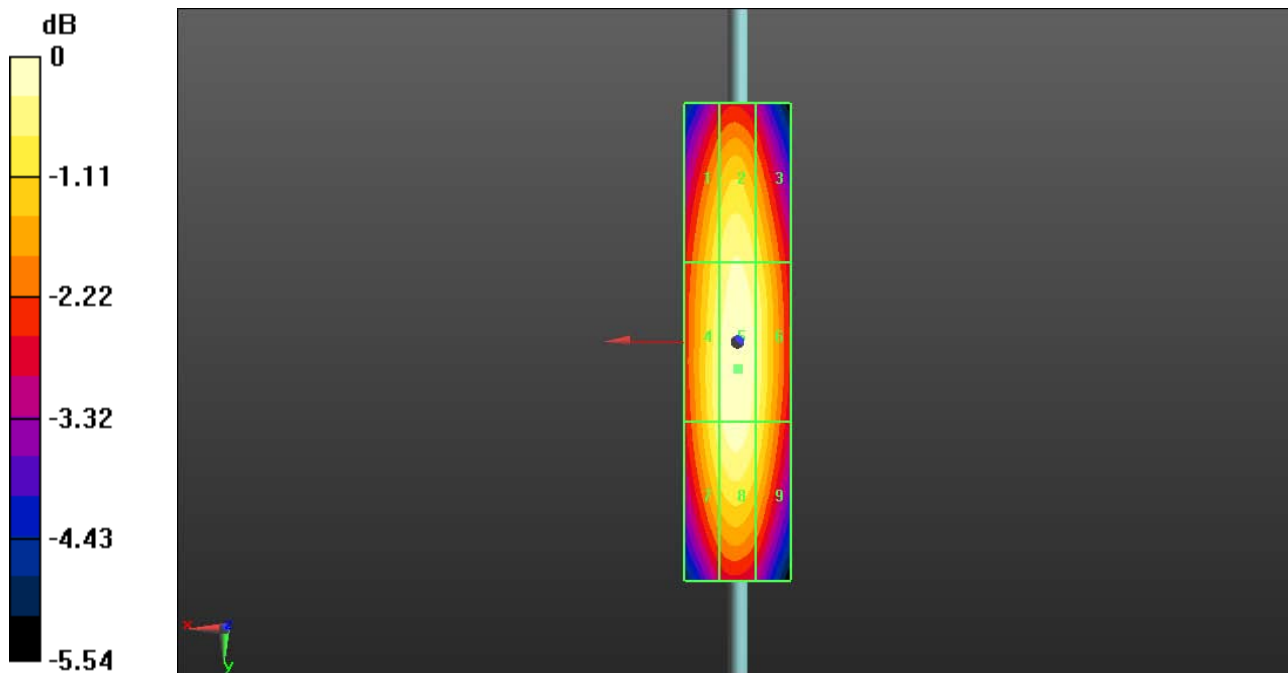
Grid 1 <b>M4</b> <b>0.43 A/m</b>	Grid 2 <b>M4</b> <b>0.45 A/m</b>	Grid 3 <b>M4</b> <b>0.43 A/m</b>
Grid 4 <b>M4</b> <b>0.45 A/m</b>	Grid 5 <b>M4</b> <b>0.47 A/m</b>	Grid 6 <b>M4</b> <b>0.45 A/m</b>
Grid 7 <b>M4</b> <b>0.44 A/m</b>	Grid 8 <b>M4</b> <b>0.46 A/m</b>	Grid 9 <b>M4</b> <b>0.44 A/m</b>

**Cursor:**


Total = 0.471 A/m

H Category: M4

Location: 0, 5, 4.7 mm



0 dB = 0.470A/m = -6.56 dB A/m

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Test Laboratory: RIM Testing Services

HAC RF\_H-Field\_PMF\_CDMA1880 MHz\_02\_29\_12

**DUT: HAC Dipole 1880 MHz; Type: CD1880V3; Serial: 1008**

Communication System: CDMA 1900, Communication System: CDMA 1900

1/8th, Communication System: CW, Communication System: AM 80%;

Frequency: 1880 MHz

Medium parameters used:  $\sigma = 0$  mho/m,  $\epsilon_r = 1$ ;  $\rho = 0$  kg/m<sup>3</sup>

Phantom section: RF Section

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

DASY Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 11/8/2011
- Sensor-Surface: (Fix Surface),  $z = 4.7$
- Electronics: DAE3 Sn473; Calibrated: 1/13/2012
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA; Serial: **Not Specified**
- DASY52 52.8.0(692); SEMCAD X 14.6.4(4989)

**Dipole H-Field measurement with H3DV6 probe/H Scan -CDMA FR 1880\_PMF/Hearing Aid Compatibility Test (41x101x1):** Measurement

grid: dx=5mm, dy=5mm


Device Reference Point: 0, 0, -6.3 mm

Reference Value = 0.31 V/m; Power Drift = -0.05 dB

PMR not calibrated. PMF = 1.000 is applied.

H-field emissions = 0.29 A/m

**Near-field category: M3 (AWF 0 dB)**

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PMF scaled H-field

Grid 1 <b>M3</b> <b>0.27 A/m</b>	Grid 2 <b>M3</b> <b>0.28 A/m</b>	Grid 3 <b>M3</b> <b>0.27 A/m</b>
Grid 4 <b>M3</b> <b>0.28 A/m</b>	Grid 5 <b>M3</b> <b>0.29 A/m</b>	Grid 6 <b>M3</b> <b>0.28 A/m</b>
Grid 7 <b>M3</b> <b>0.27 A/m</b>	Grid 8 <b>M3</b> <b>0.28 A/m</b>	Grid 9 <b>M3</b> <b>0.27 A/m</b>

**Cursor:**

Total = 0.293 A/m

H Category: M3

Location: 0, -0.5, 4.7 mm

**Dipole H-Field measurement with H3DV6 probe/H Scan -CDMA 1/8th 1880\_PMF 2/Hearing Aid Compatibility Test (41x101x1):** Measurement grid:

dx=5mm, dy=5mm

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 0.12 V/m; Power Drift = -0.90 dB


PMR not calibrated. PMF = 1.000 is applied.

H-field emissions = 0.11 A/m

Near-field category: **M4 (AWF 0 dB)**

PMF scaled H-field

Grid 1 <b>M4</b> <b>0.10 A/m</b>	Grid 2 <b>M4</b> <b>0.10 A/m</b>	Grid 3 <b>M4</b> <b>0.09 A/m</b>
Grid 4 <b>M4</b> <b>0.10 A/m</b>	Grid 5 <b>M4</b> <b>0.11 A/m</b>	Grid 6 <b>M4</b> <b>0.10 A/m</b>
Grid 7 <b>M4</b> <b>0.09 A/m</b>	Grid 8 <b>M4</b> <b>0.11 A/m</b>	Grid 9 <b>M4</b> <b>0.09 A/m</b>

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**Cursor:**

Total = 0.111 A/m  
H Category: M4  
Location: 0, 0, 4.7 mm

**Dipole H-Field measurement with H3DV6 probe/H Scan - CW**

**1880\_PMF/Hearing Aid Compatibility Test (41x101x1):** Measurement grid:

dx=5mm, dy=5mm  
Device Reference Point: 0, 0, -6.3 mm  
Reference Value = 0.31 V/m; Power Drift = -0.01 dB  
PMR not calibrated. PMF = 1.000 is applied.  
H-field emissions = 0.29 A/m

**Near-field category: M3 (AWF 0 dB)**

PMF scaled H-field

Grid 1 <b>M3</b> <b>0.27 A/m</b>	Grid 2 <b>M3</b> <b>0.28 A/m</b>	Grid 3 <b>M3</b> <b>0.27 A/m</b>
Grid 4 <b>M3</b> <b>0.28 A/m</b>	Grid 5 <b>M3</b> <b>0.29 A/m</b>	Grid 6 <b>M3</b> <b>0.28 A/m</b>
Grid 7 <b>M3</b> <b>0.27 A/m</b>	Grid 8 <b>M3</b> <b>0.28 A/m</b>	Grid 9 <b>M3</b> <b>0.26 A/m</b>

**Cursor:**

Total = 0.289 A/m  
H Category: M3  
Location: 0, 0, 4.7 mm

**Dipole H-Field measurement with H3DV6 probe/H Scan -**

**AM80%\_1880\_PMF/Hearing Aid Compatibility Test (41x101x1):**

Measurement grid: dx=5mm, dy=5mm  
Device Reference Point: 0, 0, -6.3 mm  
Reference Value = 0.20 V/m; Power Drift = 0.04 dB  
PMR not calibrated. PMF = 1.000 is applied.  
H-field emissions = 0.19 A/m

**Near-field category: M4 (AWF 0 dB)**

PMF scaled H-field

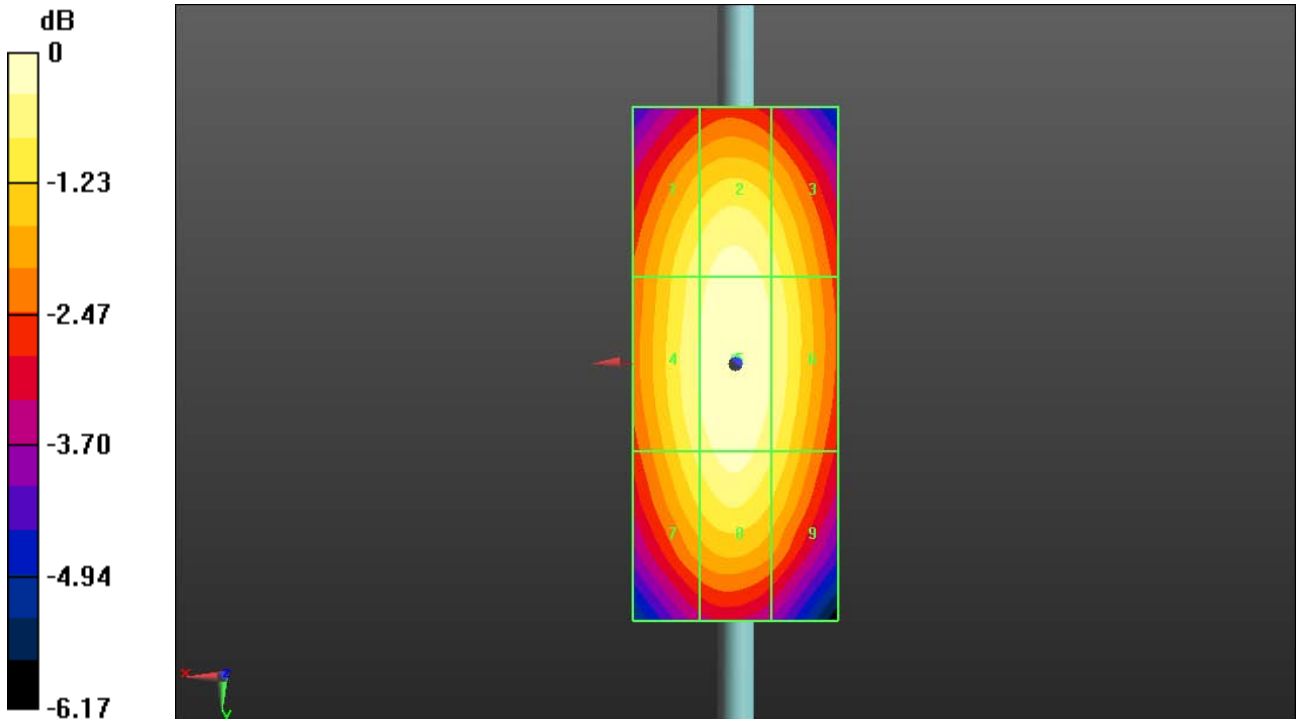
Grid 1 <b>M4</b> <b>0.17 A/m</b>	Grid 2 <b>M4</b> <b>0.18 A/m</b>	Grid 3 <b>M4</b> <b>0.17 A/m</b>
Grid 4 <b>M4</b> <b>0.18 A/m</b>	Grid 5 <b>M4</b> <b>0.19 A/m</b>	Grid 6 <b>M4</b> <b>0.18 A/m</b>
Grid 7 <b>M4</b> <b>0.17 A/m</b>	Grid 8 <b>M4</b> <b>0.18 A/m</b>	Grid 9 <b>M4</b> <b>0.17 A/m</b>

**Cursor:**

Total = 0.187 A/m


H Category: M4

Location: 0, 0, 4.7 mm



0 dB = 0.290A/m = -10.75 dB A/m



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Test Laboratory: RIM Testing Services

HAC RF\_H-Field\_validation\_1880 MHz\_02\_29\_12

**DUT: HAC Dipole 1880 MHz; Type: CD1880V3; Serial: 1008**

Communication System: CW; Frequency: 1880 MHz

Medium parameters used:  $\sigma = 0$  mho/m,  $\epsilon_r = 1$ ;  $\rho = 0$  kg/m<sup>3</sup>

Phantom section: RF Section

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

DASY Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 11/8/2011
- Sensor-Surface: (Fix Surface),  $z = 4.7$
- Electronics: DAE3 Sn473; Calibrated: 1/13/2012
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA; Serial: **Not Specified**
- DASYS 52.8.0(692); SEMCAD X 14.6.4(4989)

**Dipole H-Field measurement with H3DV6 probe/H Scan - measurement distance from the probe sensor center to CD1880**

**Dipole = 10mm/Hearing Aid Compatibility Test (41x101x1):**

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

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 0.48 V/m; Power Drift = -0.04 dB

PMR not calibrated. PMF = 1.000 is applied.

H-field emissions = 0.45 A/m

**Near-field category: M2 (AWF 0 dB)**

PMF scaled H-field

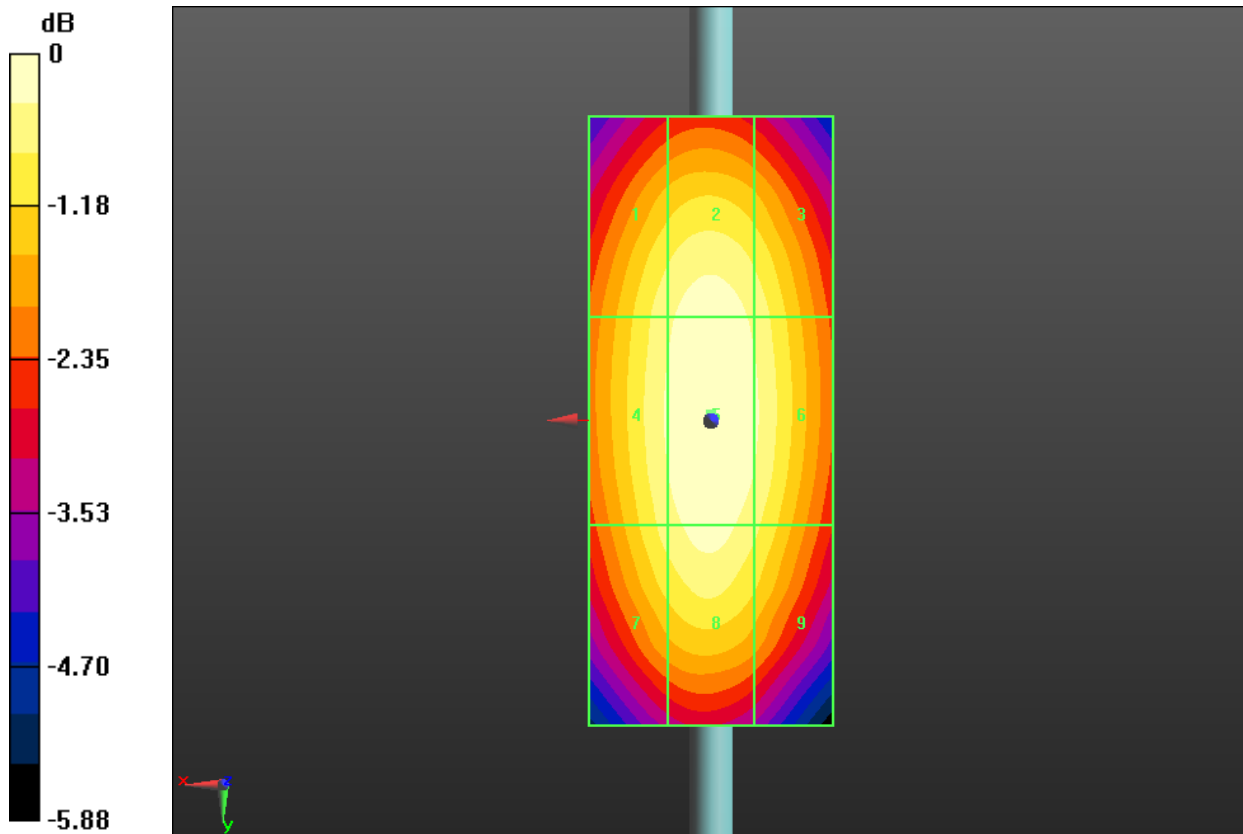
Grid 1 M2 0.43 A/m	Grid 2 M2 0.44 A/m	Grid 3 M2 0.43 A/m
Grid 4 M2 0.43 A/m	Grid 5 M2 0.45 A/m	Grid 6 M2 0.43 A/m
Grid 7 M2 0.42 A/m	Grid 8 M2 0.44 A/m	Grid 9 M2 0.42 A/m

**Cursor:**

Total = 0.455 A/m

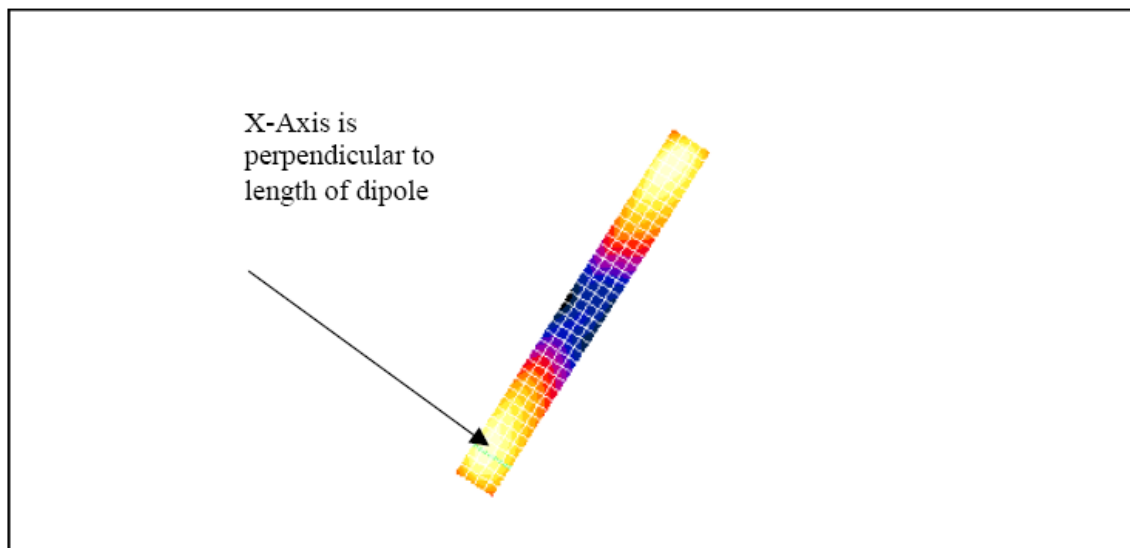
H Category: M2

Location: 0, -0.5, 4.7 mm



0 dB = 0.450A/m = -6.94 dB A/m


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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.

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**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,  $\epsilon_r = 1$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
 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)    E in V/m (Slot averaged)

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

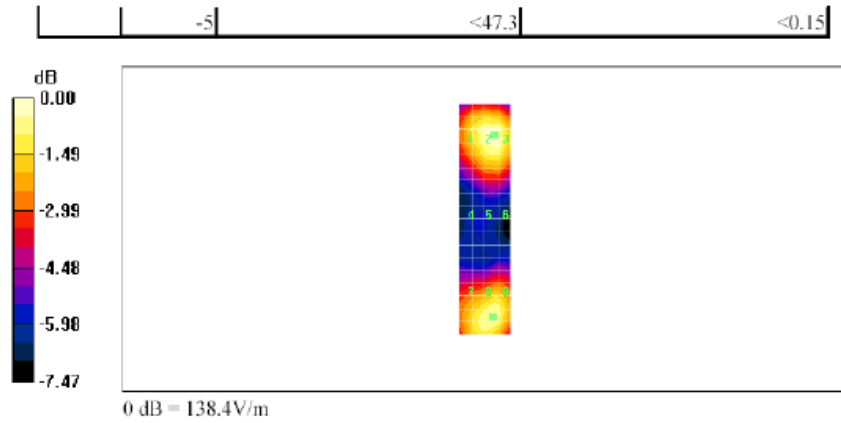
Category	AWF (dB)	Limits for E-Field Emissions (V/m)	Limits for H-Field Emissions (A/m)
M1	0	199.5 - 354.8	0.6 - 1.07
	-5	149.6 - 266.1	0.45 - 0.8
M2	0	112.2 - 199.5	0.34 - 0.6
	-5	84.1 - 149.6	0.25 - 0.45
M3	0	63.1 - 112.2	0.19 - 0.34
	-5	47.3 - 84.1	0.15 - 0.25
M4	0	<63.1	<0.19

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


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

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**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,  $\epsilon_r = 1$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
 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)    E in V/m (Slot averaged)

Grid 1	Grid 2	Grid 3	Grid 1	Grid 2	Grid 3
<b>123.1</b>	<b>138.6</b>	<b>138.6</b>	<b>123.1</b>	<b>138.6</b>	<b>138.6</b>
Grid 4	Grid 5	Grid 6	Grid 4	Grid 5	Grid 6
<b>81.4</b>	<b>92.1</b>	<b>91.6</b>	<b>81.4</b>	<b>92.1</b>	<b>91.6</b>
Grid 7	Grid 8	Grid 9	Grid 7	Grid 8	Grid 9
<b>121.3</b>	<b>131.2</b>	<b>131.0</b>	<b>121.3</b>	<b>131.2</b>	<b>131.0</b>

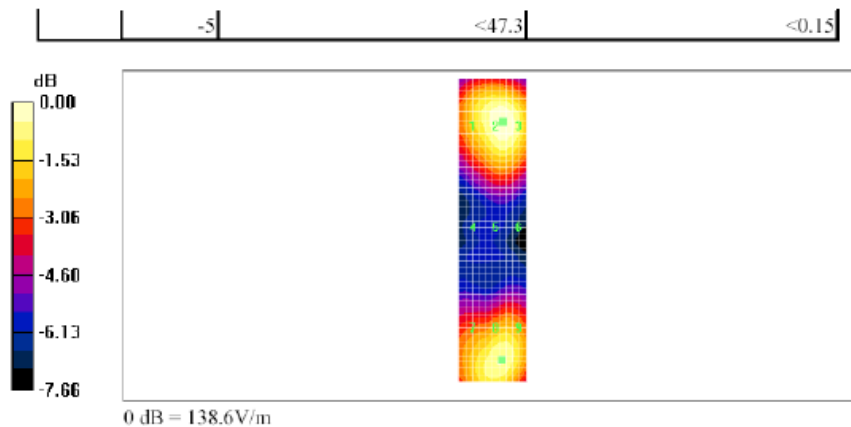
Category	AWF (dB)	Limits for E-Field Emissions (V/m)	Limits for H-Field Emissions (A/m)
M1	0	199.5 - 354.8	0.6 - 1.07
	-5	149.6 - 266.1	0.45 - 0.8
M2	0	112.2 - 199.5	0.34 - 0.6
	-5	84.1 - 149.6	0.25 - 0.45
M3	0	63.1 - 112.2	0.19 - 0.34
	-5	47.3 - 84.1	0.15 - 0.25
M4	0	<63.1	<0.19

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**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,  $\epsilon_r = 1$ ;  $\rho = 1$  kg/m<sup>3</sup>

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)    H in A/m (Slot averaged)

Grid 1	Grid 2	Grid 3	Grid 1	Grid 2	Grid 3
<b>0.342</b>	<b>0.359</b>	<b>0.344</b>	<b>0.342</b>	<b>0.359</b>	<b>0.344</b>
Grid 4	Grid 5	Grid 6	Grid 4	Grid 5	Grid 6
<b>0.389</b>	<b>0.406</b>	<b>0.389</b>	<b>0.389</b>	<b>0.406</b>	<b>0.389</b>
Grid 7	Grid 8	Grid 9	Grid 7	Grid 8	Grid 9
<b>0.363</b>	<b>0.378</b>	<b>0.363</b>	<b>0.363</b>	<b>0.378</b>	<b>0.363</b>

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

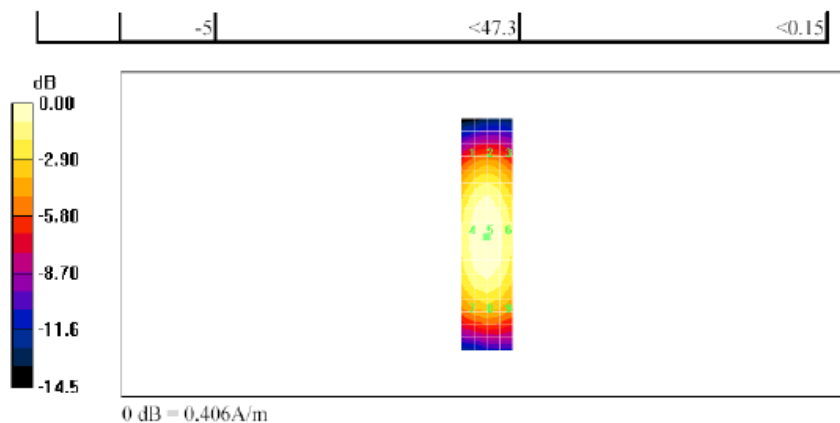
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**Lab: RIM Testing Services (RTS)**

**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,  $\epsilon_r = 1$ ;  $\rho = 1$  kg/m<sup>3</sup>  
 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)    H in A/m (Slot averaged)

Grid 1	Grid 2	Grid 3	Grid 1	Grid 2	Grid 3
<b>0.347</b>	<b>0.361</b>	<b>0.348</b>	<b>0.347</b>	<b>0.361</b>	<b>0.348</b>
Grid 4	Grid 5	Grid 6	Grid 4	Grid 5	Grid 6
<b>0.394</b>	<b>0.406</b>	<b>0.391</b>	<b>0.394</b>	<b>0.406</b>	<b>0.391</b>
Grid 7	Grid 8	Grid 9	Grid 7	Grid 8	Grid 9
<b>0.367</b>	<b>0.380</b>	<b>0.365</b>	<b>0.367</b>	<b>0.380</b>	<b>0.365</b>

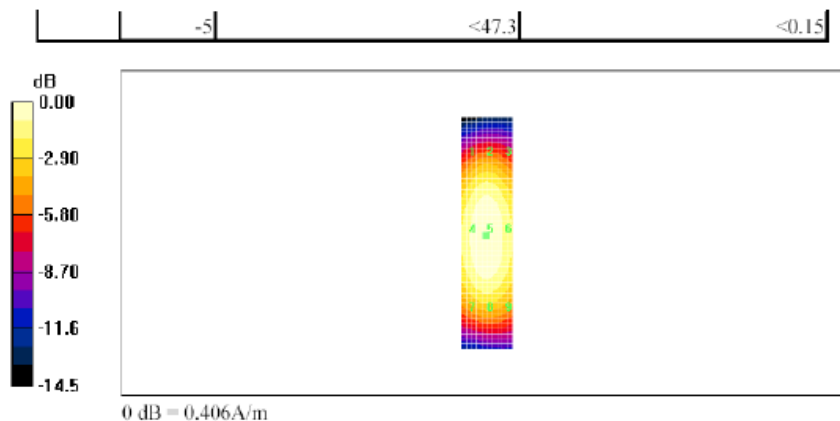
Category	AWF (dB)	Limits for E-Field Emissions (V/m)	Limits for H-Field Emissions (A/m)
M1	0	199.5 - 354.8	0.6 - 1.07
	-5	149.6 - 266.1	0.45 - 0.8
M2	0	112.2 - 199.5	0.34 - 0.6
	-5	84.1 - 149.6	0.25 - 0.45
M3	0	63.1 - 112.2	0.19 - 0.34
	-5	47.3 - 84.1	0.15 - 0.25
M4	0	<63.1	<0.19

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### A.3 RF emissions plots

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Date/Time: 3/1/2012 12:09:24 PM

Test Laboratory: RIM Testing Services

HAC RF\_E-Field\_CDMA850

**DUT: BlackBerry Smartphone; Type: Sample ; Serial: 297DF9E4**

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

Medium parameters used:  $\sigma = 0$  mho/m,  $\epsilon_r = 1$ ;  $\rho = 0$  kg/m<sup>3</sup>

Phantom section: RF Section

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

DASY Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 1/9/2012
- Sensor-Surface: (Fix Surface), z = 8.7
- Electronics: DAE3 Sn473; Calibrated: 1/13/2012
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA; Serial: **Not Specified**
- DASYS 52.8.0(692); SEMCAD X 14.6.4(4989)

**Device E-Field measurement with ER probe/E Scan - ER3D - 2007:**

**15 mm from Probe Center to Device\_Low\_Chan/Hearing Aid**

**Compatibility Test (101x101x1):** Measurement grid: dx=5mm, dy=5mm


Device Reference Point: 0, 0, -6.3 mm

Reference Value = 91.46 V/m; Power Drift = 0.14 dB

PMR not calibrated. PMF = 1.060 is applied.

E-field emissions = 76.87 V/m

**Near-field category: M4 (AWF 0 dB)**

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PMF scaled E-field

Grid 1 <b>M4</b> <b>64.95</b> <b>V/m</b>	Grid 2 <b>M4</b> <b>73.86</b> <b>V/m</b>	Grid 3 <b>M4</b> <b>73.00</b> <b>V/m</b>
Grid 4 <b>M4</b> <b>67.96</b> <b>V/m</b>	Grid 5 <b>M4</b> <b>76.87</b> <b>V/m</b>	Grid 6 <b>M4</b> <b>75.73</b> <b>V/m</b>
Grid 7 <b>M4</b> <b>69.35</b> <b>V/m</b>	Grid 8 <b>M4</b> <b>76.42</b> <b>V/m</b>	Grid 9 <b>M4</b> <b>75.74</b> <b>V/m</b>

**Cursor:**

Total = 76.870 V/m

E Category: M4

Location: -4.5, 5.5, 8.7 mm

**Device E-Field measurement with ER probe/E Scan - ER3D - 2007:**

**15 mm from Probe Center to the Device\_Mid\_Chan/Hearing Aid**

**Compatibility Test (101x101x1):** Measurement grid: dx=5mm, dy=5mm


Device Reference Point: 0, 0, -6.3 mm

Reference Value = 104.2 V/m; Power Drift = 0.08 dB

PMR not calibrated. PMF = 1.060 is applied.

E-field emissions = 88.96 V/m

**Near-field category: M4 (AWF 0 dB)**

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PMF scaled E-field

Grid 1 <b>M4</b> <b>72.51</b> <b>V/m</b>	Grid 2 <b>M4</b> <b>85.41</b> <b>V/m</b>	Grid 3 <b>M4</b> <b>85.38</b> <b>V/m</b>
Grid 4 <b>M4</b> <b>75.20</b> <b>V/m</b>	Grid 5 <b>M4</b> <b>88.96</b> <b>V/m</b>	Grid 6 <b>M4</b> <b>88.75</b> <b>V/m</b>
Grid 7 <b>M4</b> <b>76.42</b> <b>V/m</b>	Grid 8 <b>M4</b> <b>88.48</b> <b>V/m</b>	Grid 9 <b>M4</b> <b>88.30</b> <b>V/m</b>

**Cursor:**

Total = 88.961 V/m

E Category: M4

Location: -7, 4, 8.7 mm

**Device E-Field measurement with ER probe/E Scan - ER3D - 2007:**

**15 mm from Probe Center to the Device\_High\_Chan/Hearing Aid**

**Compatibility Test (101x101x1):** Measurement grid: dx=5mm, dy=5mm

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 104.5 V/m; Power Drift = 0.08 dB

PMR not calibrated. PMF = 1.060 is applied.

E-field emissions = 88.89 V/m

**Near-field category: M4 (AWF 0 dB)**

PMF scaled E-field

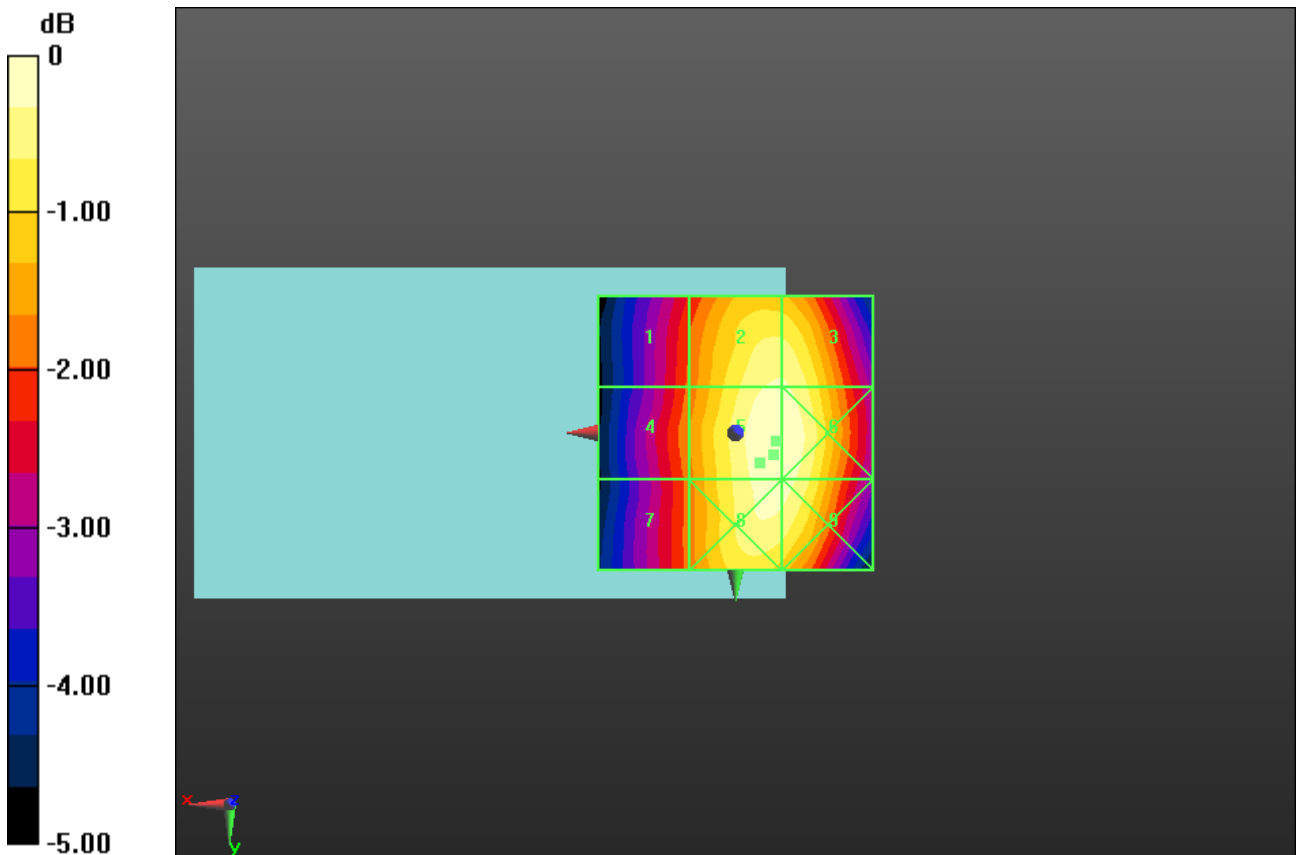
Grid 1 M4 <b>72.32</b> V/m	Grid 2 M4 <b>86.30</b> V/m	Grid 3 M4 <b>86.25</b> V/m
Grid 4 M4 <b>74.18</b> V/m	Grid 5 M4 <b>88.89</b> V/m	Grid 6 M4 <b>88.77</b> V/m
Grid 7 M4 <b>72.88</b> V/m	Grid 8 M4 <b>87.52</b> V/m	Grid 9 M4 <b>87.39</b> V/m

**Cursor:**

Total = 88.892 V/m


E Category: M4

Location: -7.5, 1.5, 8.7 mm



0 dB = 76.870V/m = 37.72 dB V/m



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Date/Time: 3/1/2012 4:56:04 PM

Test Laboratory: RIM Testing Services

HAC RF\_E-Field\_CDMA850\_1/8<sup>th</sup>\_Rate

**DUT: BlackBerry Smartphone; Type: Sample ; Serial: 297DF9E4**

Communication System: CDMA 850 1/8<sup>th</sup>; Frequency: 836.52 MHz

Medium parameters used:  $\sigma = 0$  mho/m,  $\epsilon_r = 1$ ;  $\rho = 0$  kg/m<sup>3</sup>

Phantom section: RF Section

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

DASY Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 1/9/2012
- Sensor-Surface: (Fix Surface),  $z = 8.7$
- Electronics: DAE3 Sn473; Calibrated: 1/13/2012
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA; Serial: **Not Specified**
- DASYS 52.8.0(692); SEMCAD X 14.6.4(4989)

**Device E-Field measurement with ER probe/E Scan - ER3D - 2007:**

**15 mm from Probe Center to the Device\_Mid\_Chan/Hearing Aid**

**Compatibility Test (101x101x1):** Measurement grid: dx=5mm, dy=5mm

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 38.38 V/m; Power Drift = 0.14 dB

PMR not calibrated. PMF = 2.900 is applied.

E-field emissions = 96.45 V/m

**Near-field category: M4 (AWF 0 dB)**

PMF scaled E-field

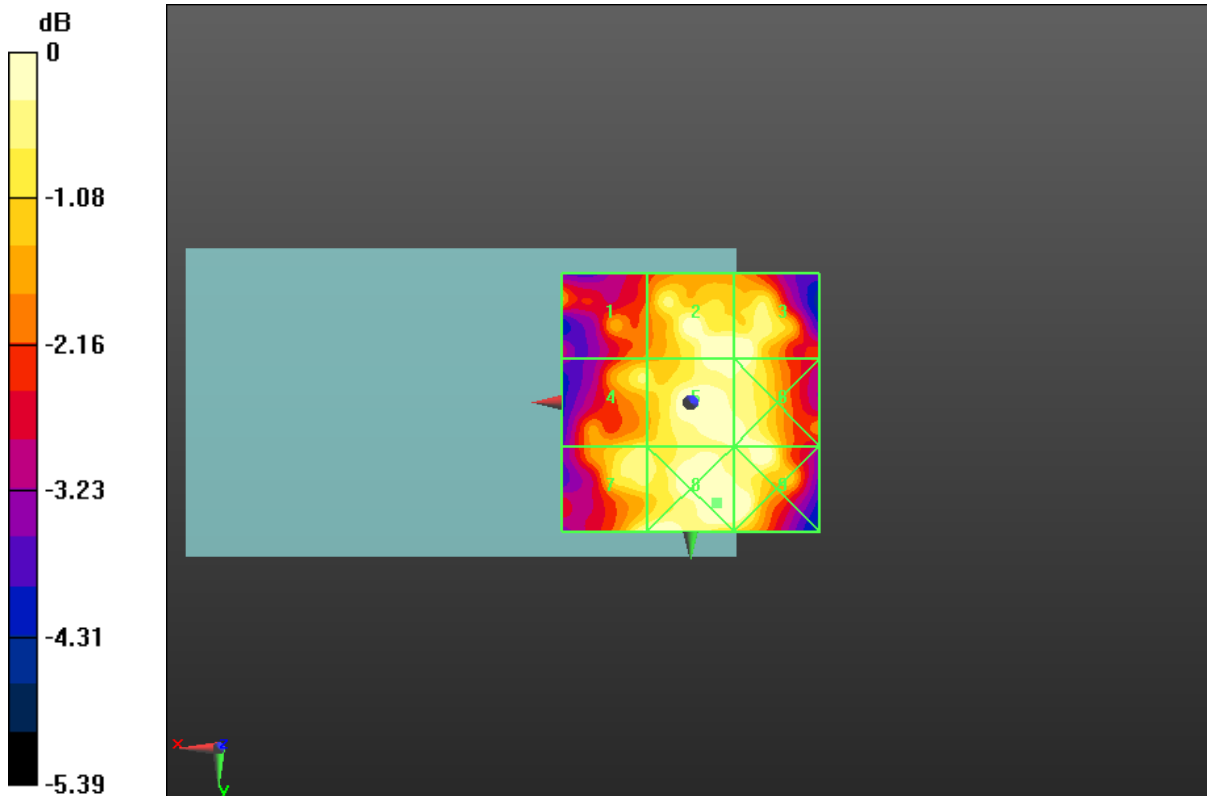
Grid 1 M4 <b>74.87</b> V/m	Grid 2 M4 <b>95.40</b> V/m	Grid 3 M4 <b>94.54</b> V/m
Grid 4 M4 <b>83.43</b> V/m	Grid 5 M4 <b>96.45</b> V/m	Grid 6 M4 <b>93.23</b> V/m
Grid 7 M4 <b>88.93</b> V/m	Grid 8 M4 <b>98.09</b> V/m	Grid 9 M4 <b>96.18</b> V/m

**Cursor:**


Total = 98.092 V/m

E Category: M4

Location: -5, 19.5, 8.7 mm



0 dB = 89.640V/m = 39.05 dB V/m

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Test Laboratory: RIM Testing Services

HAC RF\_E-Field\_CDMA850\_1/8<sup>th</sup>\_Rate\_Telecoil

**DUT: BlackBerry Smartphone; Type: Sample ; Serial: 297DF9E4**

Communication System: CDMA 850 1/8 th; Frequency: 836.52 MHz

Medium parameters used:  $\sigma = 0$  mho/m,  $\epsilon_r = 1$ ;  $\rho = 0$  kg/m<sup>3</sup>

Phantom section: RF Section

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

DASY Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 1/9/2012
- Sensor-Surface: (Fix Surface), z = 8.7
- Electronics: DAE3 Sn473; Calibrated: 1/13/2012
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA; Serial: **Not Specified**
- DASYS 52.8.0(692); SEMCAD X 14.6.4(4989)

**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

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 42.11 V/m; Power Drift = -0.79 dB

PMR not calibrated. PMF = 2.900 is applied.

E-field emissions = 94.76 V/m

**Near-field category: M4 (AWF 0 dB)**

PMF scaled E-field

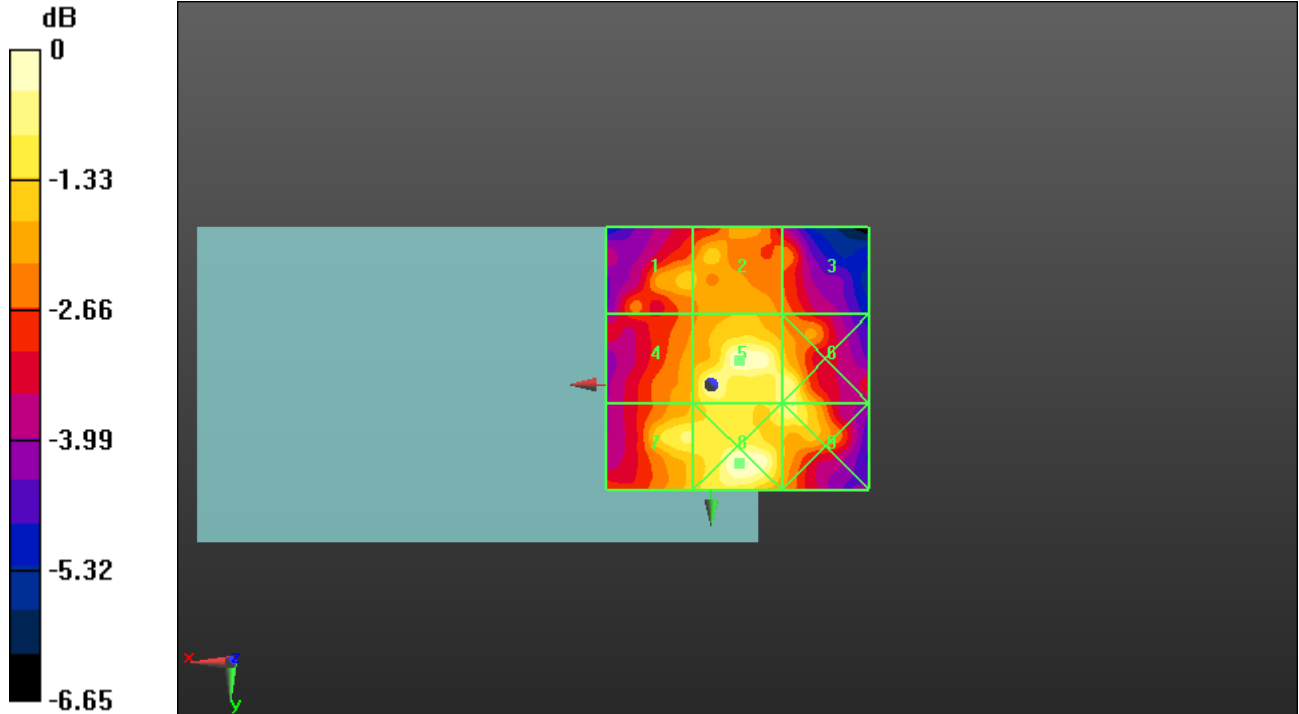
Grid 1 M4 <b>80.58</b> V/m	Grid 2 M4 <b>80.53</b> V/m	Grid 3 M4 <b>73.99</b> V/m
Grid 4 M4 <b>79.20</b> V/m	Grid 5 M4 <b>94.76</b> V/m	Grid 6 M4 <b>90.84</b> V/m
Grid 7 M4 <b>87.67</b> V/m	Grid 8 M4 <b>96.18</b> V/m	Grid 9 M4 <b>89.07</b> V/m

**Cursor:**


Total = 96.177 V/m

E Category: M4

Location: -5.5, 15, 8.7 mm



0 dB = 95.550V/m = 39.60 dB V/m

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Test Laboratory: RIM Testing Services

HAC RF\_E-Field\_CDMA1900

**DUT: BlackBerry Smartphone; Type: Sample ; Serial: 297DF9E4**

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

1880 MHz, Frequency: 1908.5 MHz

Medium parameters used:  $\sigma = 0$  mho/m,  $\epsilon_r = 1$ ;  $\rho = 0$  kg/m<sup>3</sup>

Phantom section: RF Section

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

DASY Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 1/9/2012
- Sensor-Surface: (Fix Surface), z = 8.7
- Electronics: DAE3 Sn473; Calibrated: 1/13/2012
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA; Serial: **Not Specified**
- DASYS2 52.8.0(692); SEMCAD X 14.6.4(4989)

**Device E-Field measurement with ER probe/E Scan - ER3D - 2007:**

**15 mm from Probe Center to Device\_Low\_Chan/Hearing Aid**

**Compatibility Test (101x101x1):** Measurement grid: dx=5mm, dy=5mm


Device Reference Point: 0, 0, -6.3 mm

Reference Value = 42.85 V/m; Power Drift = 0.22 dB

PMR not calibrated. PMF = 1.010 is applied.

E-field emissions = 48.71 V/m

**Near-field category: M4 (AWF 0 dB)**

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<b>Andrew Becker</b>	<b>Feb. 29 &amp; March 1-2, 2012</b>	<b>RTS-5994-1203-49</b>	<b>L6AREY20CW</b>

PMF scaled E-field

Grid 1 <b>M4</b> <b>25.40</b> V/m	Grid 2 <b>M4</b> <b>36.30</b> V/m	Grid 3 <b>M4</b> <b>37.34</b> V/m
Grid 4 <b>M4</b> <b>28.76</b> V/m	Grid 5 <b>M4</b> <b>48.71</b> V/m	Grid 6 <b>M4</b> <b>49.13</b> V/m
Grid 7 <b>M4</b> <b>36.81</b> V/m	Grid 8 <b>M4</b> <b>50.73</b> V/m	Grid 9 <b>M4</b> <b>50.73</b> V/m

**Cursor:**

Total = 50.730 V/m

E Category: M4

Location: -8.5, 18, 8.7 mm

**Device E-Field measurement with ER probe/E Scan - ER3D - 2007:**

**15 mm from Probe Center to the Device\_Mid\_Chan/Hearing Aid**

**Compatibility Test (101x101x1):** Measurement grid: dx=5mm, dy=5mm


Device Reference Point: 0, 0, -6.3 mm

Reference Value = 39.73 V/m; Power Drift = -0.06 dB

PMR not calibrated. PMF = 1.010 is applied.

E-field emissions = 45.83 V/m

**Near-field category: M4 (AWF 0 dB)**

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PMF scaled E-field

Grid 1 <b>M4</b> <b>25.89</b> <b>V/m</b>	Grid 2 <b>M4</b> <b>32.89</b> <b>V/m</b>	Grid 3 <b>M4</b> <b>34.37</b> <b>V/m</b>
Grid 4 <b>M4</b> <b>26.93</b> <b>V/m</b>	Grid 5 <b>M4</b> <b>45.83</b> <b>V/m</b>	Grid 6 <b>M4</b> <b>46.24</b> <b>V/m</b>
Grid 7 <b>M4</b> <b>36.75</b> <b>V/m</b>	Grid 8 <b>M4</b> <b>49.70</b> <b>V/m</b>	Grid 9 <b>M4</b> <b>49.48</b> <b>V/m</b>

**Cursor:**

Total = 49.698 V/m

E Category: M4

Location: -7, 21.5, 8.7 mm

**Device E-Field measurement with ER probe/E Scan - ER3D - 2007:**

**15 mm from Probe Center to the Device\_High\_Chan/Hearing Aid**

**Compatibility Test (101x101x1):** Measurement grid: dx=5mm, dy=5mm

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 40.71 V/m; Power Drift = 0.01 dB

PMR not calibrated. PMF = 1.010 is applied.

E-field emissions = 45.61 V/m

**Near-field category: M4 (AWF 0 dB)**

PMF scaled E-field

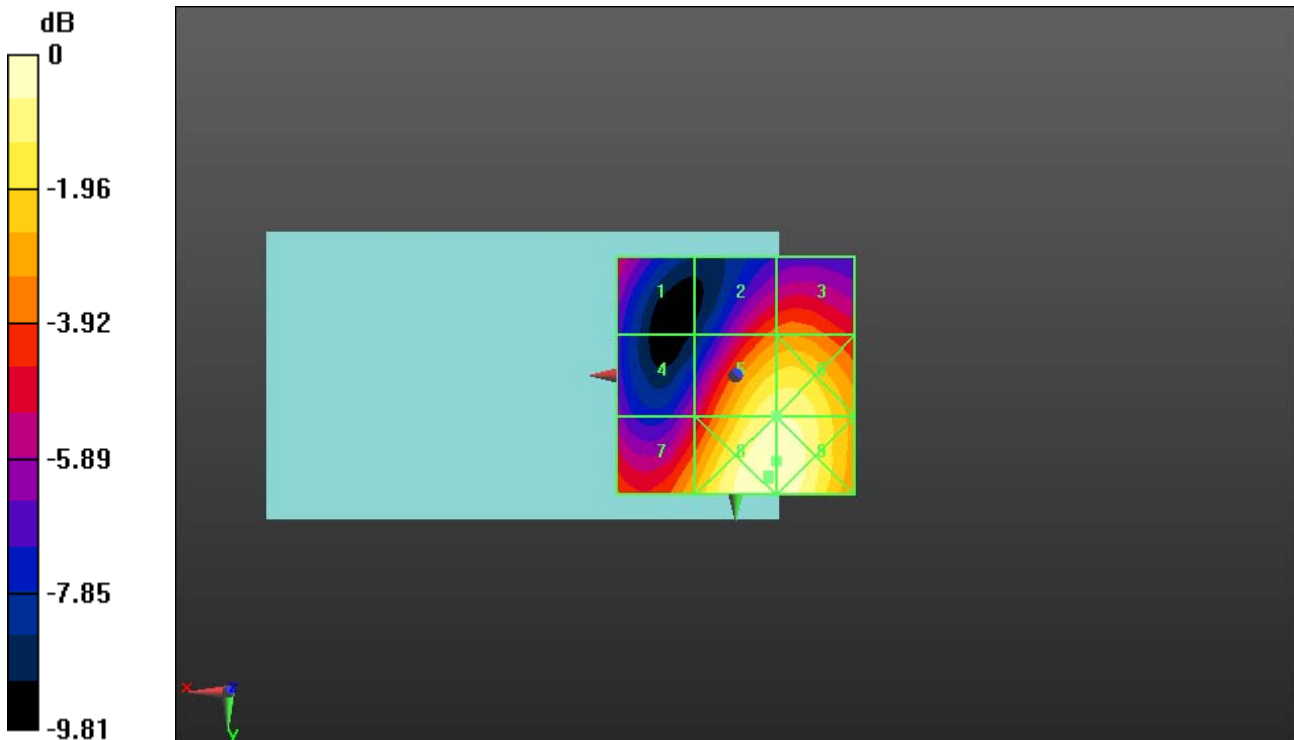
Grid 1 M4 <b>28.81</b> V/m	Grid 2 M4 <b>33.69</b> V/m	Grid 3 M4 <b>34.63</b> V/m
Grid 4 M4 <b>27.60</b> V/m	Grid 5 M4 <b>45.61</b> V/m	Grid 6 M4 <b>45.76</b> V/m
Grid 7 M4 <b>37.41</b> V/m	Grid 8 M4 <b>49.15</b> V/m	Grid 9 M4 <b>48.95</b> V/m

**Cursor:**

Total = 49.145 V/m


E Category: M4

Location: -7, 21, 8.7 mm



0 dB = 50.730V/m = 34.11 dB V/m



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<b>Andrew Becker</b>	<b>Feb. 29 &amp; March 1-2, 2012</b>	<b>RTS-5994-1203-49</b>	<b>L6AREY20CW</b>

Date/Time: 3/1/2012 5:08:39 PM

Test Laboratory: RIM Testing Services

HAC RF\_E-Field\_CDMA1900\_1/8<sup>th</sup>\_Rate

**DUT: BlackBerry Smartphone; Type: Sample ; Serial: 297DF9E4**

Communication System: CDMA 1900 1/8 th; Frequency: 1851.25 MHz

Medium parameters used:  $\sigma = 0$  mho/m,  $\epsilon_r = 1$ ;  $\rho = 0$  kg/m<sup>3</sup>

Phantom section: RF Section

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

DASY Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 1/9/2012
- Sensor-Surface: (Fix Surface), z = 8.7
- Electronics: DAE3 Sn473; Calibrated: 1/13/2012
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA; Serial: **Not Specified**
- DASYS 52.8.0(692); SEMCAD X 14.6.4(4989)

**Device E-Field measurement with ER probe/E Scan - ER3D - 2007:**

**15 mm from Probe Center to Device\_Low\_Chan/Hearing Aid**

**Compatibility Test (101x101x1):** Measurement grid: dx=5mm, dy=5mm

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 17.91 V/m; Power Drift = -1.22 dB

PMR not calibrated. PMF = 2.670 is applied.

E-field emissions = 45.02 V/m

**Near-field category: M4 (AWF 0 dB)**

PMF scaled E-field

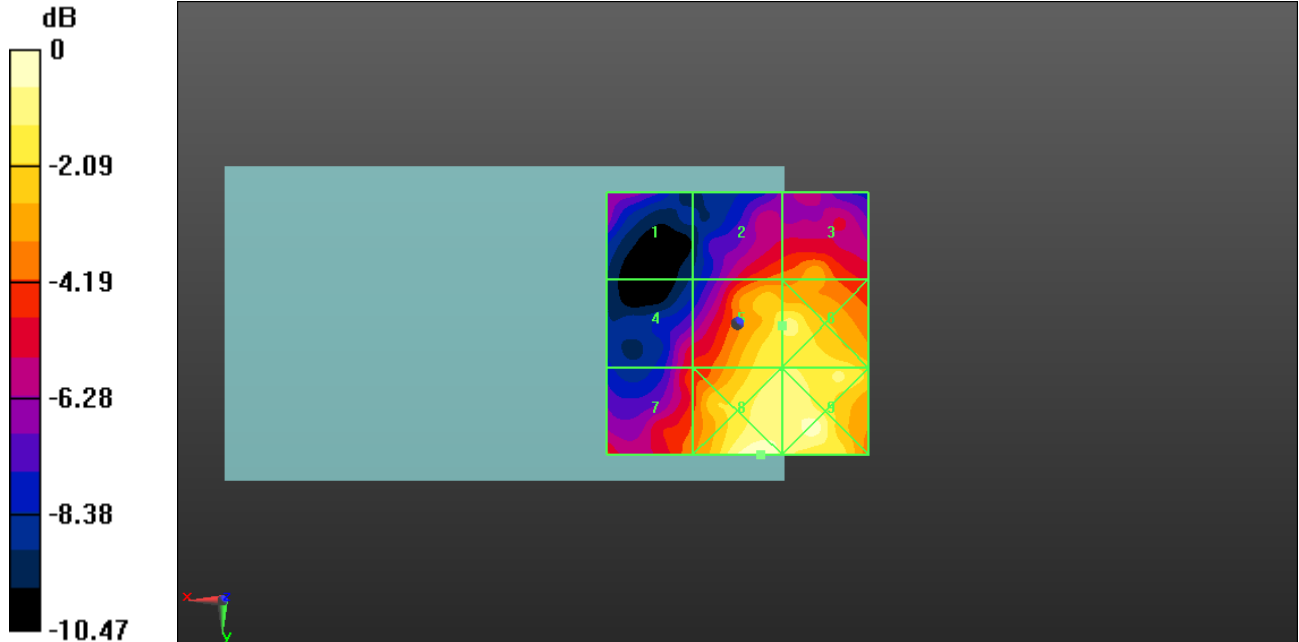
Grid 1 M4 <b>25.26</b> V/m	Grid 2 M4 <b>33.86</b> V/m	Grid 3 M4 <b>37.35</b> V/m
Grid 4 M4 <b>30.75</b> V/m	Grid 5 M4 <b>45.02</b> V/m	Grid 6 M4 <b>46.51</b> V/m
Grid 7 M4 <b>34.75</b> V/m	Grid 8 M4 <b>52.60</b> V/m	Grid 9 M4 <b>50.44</b> V/m

**Cursor:**


Total = 52.596 V/m

E Category: M4

Location: -4.5, 25, 8.7 mm



0 dB = 52.590V/m = 34.42 dB V/m

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Test Laboratory: RIM Testing Services

HAC RF\_E-Field\_CDMA1900\_Telecoil

**DUT: BlackBerry Smartphone; Type: Sample ; Serial: 297DF9E4**

Communication System: CDMA 1900; Frequency: 1851.25 MHz

Medium parameters used:  $\sigma = 0$  mho/m,  $\epsilon_r = 1$ ;  $\rho = 0$  kg/m<sup>3</sup>

Phantom section: RF Section

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

DASY Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 1/9/2012
- Sensor-Surface: (Fix Surface),  $z = 8.7$
- Electronics: DAE3 Sn473; Calibrated: 1/13/2012
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA; Serial: **Not Specified**
- DASYS 52.8.0(692); SEMCAD X 14.6.4(4989)

**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

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 44.20 V/m; Power Drift = 0.10 dB

PMR not calibrated. PMF = 1.010 is applied.

E-field emissions = 45.90 V/m

**Near-field category: M4 (AWF 0 dB)**

PMF scaled E-field

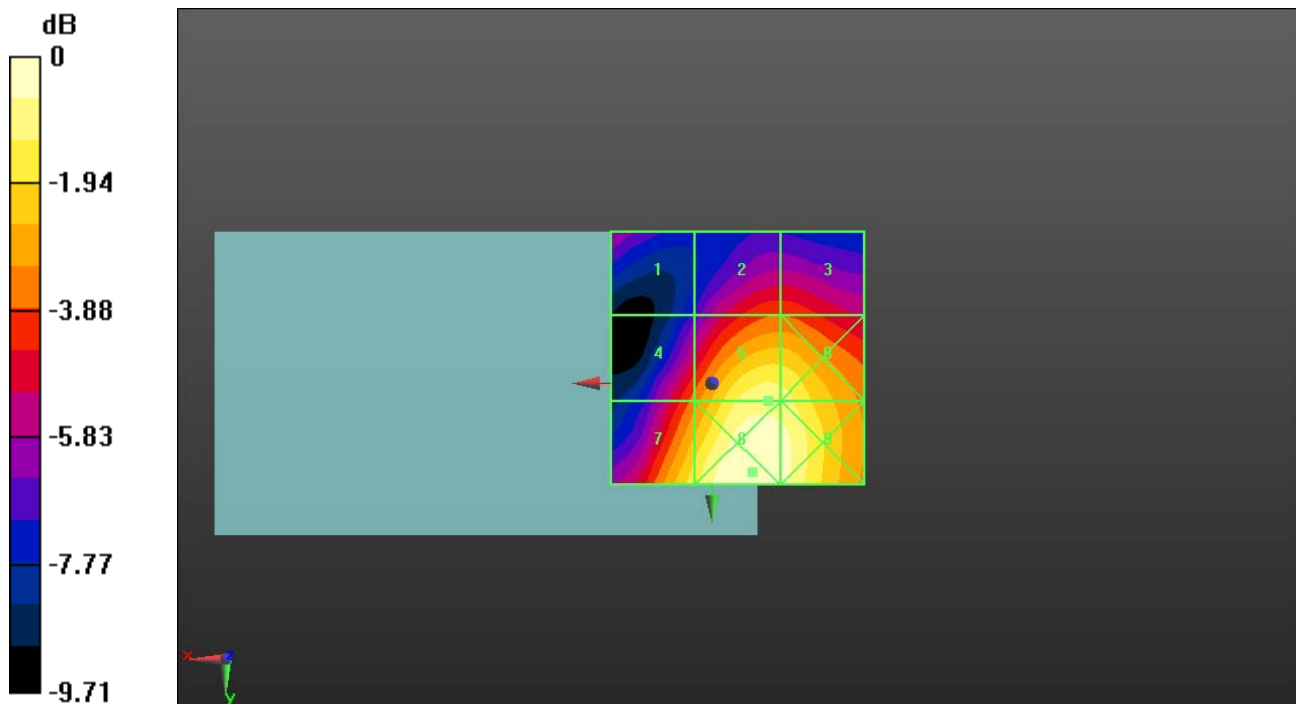
Grid 1 <b>M4</b> <b>26.65</b> <b>V/m</b>	Grid 2 <b>M4</b> <b>32.50</b> <b>V/m</b>	Grid 3 <b>M4</b> <b>32.49</b> <b>V/m</b>
Grid 4 <b>M4</b> <b>33.89</b> <b>V/m</b>	Grid 5 <b>M4</b> <b>45.90</b> <b>V/m</b>	Grid 6 <b>M4</b> <b>45.30</b> <b>V/m</b>
Grid 7 <b>M4</b> <b>42.83</b> <b>V/m</b>	Grid 8 <b>M4</b> <b>50.89</b> <b>V/m</b>	Grid 9 <b>M4</b> <b>48.95</b> <b>V/m</b>

**Cursor:**


Total = 50.890 V/m

E Category: M4

Location: -8, 17.5, 8.7 mm



0 dB = 50.890V/m = 34.13 dB V/m

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Date/Time: 3/1/2012 2:36:24 PM

Test Laboratory: RIM Testing Services

HAC RF\_H-Field\_CDMA850

**DUT: BlackBerry Smartphone; Type: Sample ; Serial: 297DF9E4**

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

Medium parameters used:  $\sigma = 0$  mho/m,  $\epsilon_r = 1$ ;  $\rho = 0$  kg/m<sup>3</sup>

Phantom section: RF Section

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

DASY Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 11/8/2011
- Sensor-Surface: (Fix Surface),  $z = 8.7$
- Electronics: DAE3 Sn473; Calibrated: 1/13/2012
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA; Serial: **Not Specified**
- DASYS 52.8.0(692); SEMCAD X 14.6.4(4989)

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


Device Reference Point: 0, 0, -6.3 mm

Reference Value = 0.08 V/m; Power Drift = 0.10 dB

PMR not calibrated. PMF = 1.030 is applied.

H-field emissions = 0.15 A/m

**Near-field category: M4 (AWF 0 dB)**

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PMF scaled H-field

Grid 1 <b>M4</b> <b>0.15 A/m</b>	Grid 2 <b>M4</b> <b>0.11 A/m</b>	Grid 3 <b>M4</b> <b>0.07 A/m</b>
Grid 4 <b>M4</b> <b>0.15 A/m</b>	Grid 5 <b>M4</b> <b>0.11 A/m</b>	Grid 6 <b>M4</b> <b>0.06 A/m</b>
Grid 7 <b>M4</b> <b>0.16 A/m</b>	Grid 8 <b>M4</b> <b>0.11 A/m</b>	Grid 9 <b>M4</b> <b>0.07 A/m</b>

**Cursor:**

Total = 0.160 A/m

H Category: M4

Location: 25, 24.5, 8.7 mm

**Device H-Field measurement with H3DV6 probe/H Scan - H3DV6 - 2007: 15 mm from Probe Center to the Device\_mid\_chan/Hearing Aid**

**Compatibility Test (101x101x1):** Measurement grid: dx=5mm, dy=5mm


Device Reference Point: 0, 0, -6.3 mm

Reference Value = 0.10 V/m; Power Drift = 0.04 dB

PMR not calibrated. PMF = 1.030 is applied.

H-field emissions = 0.17 A/m

**Near-field category: M4 (AWF 0 dB)**

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PMF scaled H-field

Grid 1 <b>M4</b> <b>0.17 A/m</b>	Grid 2 <b>M4</b> <b>0.13 A/m</b>	Grid 3 <b>M4</b> <b>0.08 A/m</b>
Grid 4 <b>M4</b> <b>0.17 A/m</b>	Grid 5 <b>M4</b> <b>0.12 A/m</b>	Grid 6 <b>M4</b> <b>0.07 A/m</b>
Grid 7 <b>M4</b> <b>0.18 A/m</b>	Grid 8 <b>M4</b> <b>0.13 A/m</b>	Grid 9 <b>M4</b> <b>0.08 A/m</b>

**Cursor:**

Total = 0.184 A/m

H Category: M4

Location: 25, 22, 8.7 mm

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

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 0.10 V/m; Power Drift = 0.36 dB

PMR not calibrated. PMF = 1.030 is applied.

H-field emissions = 0.17 A/m

**Near-field category: M4 (AWF 0 dB)**

PMF scaled H-field

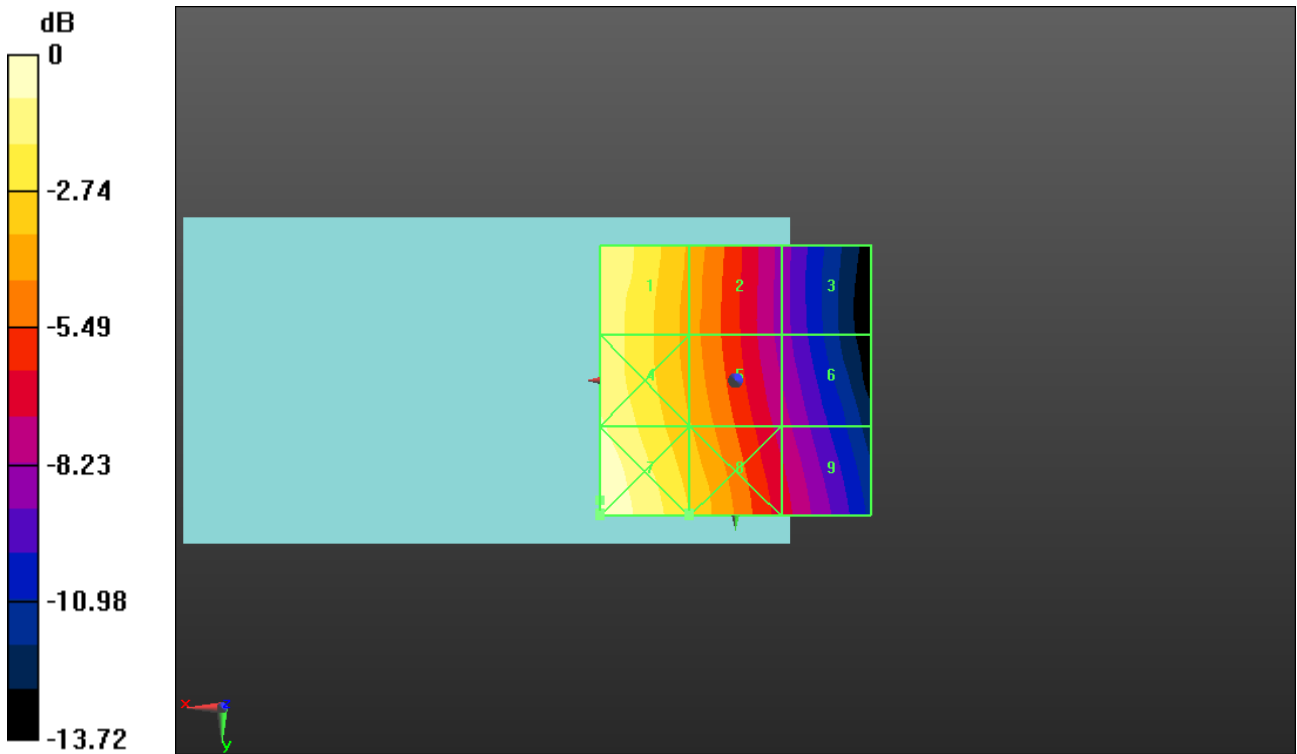
Grid 1 <b>M4</b> <b>0.17 A/m</b>	Grid 2 <b>M4</b> <b>0.13 A/m</b>	Grid 3 <b>M4</b> <b>0.08 A/m</b>
Grid 4 <b>M4</b> <b>0.18 A/m</b>	Grid 5 <b>M4</b> <b>0.13 A/m</b>	Grid 6 <b>M4</b> <b>0.09 A/m</b>
Grid 7 <b>M4</b> <b>0.19 A/m</b>	Grid 8 <b>M4</b> <b>0.14 A/m</b>	Grid 9 <b>M4</b> <b>0.10 A/m</b>

**Cursor:**


Total = 0.190 A/m

H Category: M4

Location: 25, 25, 8.7 mm





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Date/Time: 3/1/2012 4:38:58 PM

Test Laboratory: RIM Testing Services

HAC RF\_H-Field\_CDMA850\_1/8th\_Rate

**DUT: BlackBerry Smartphone; Type: Sample ; Serial: 297DF9E4**

Communication System: CDMA 850 1/8 th; Frequency: 848.52 MHz

Medium parameters used:  $\sigma = 0$  mho/m,  $\epsilon_r = 1$ ;  $\rho = 0$  kg/m<sup>3</sup>

Phantom section: RF Section

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

DASY Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 11/8/2011
- Sensor-Surface: (Fix Surface), z = 8.7
- Electronics: DAE3 Sn473; Calibrated: 1/13/2012
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA; Serial: **Not Specified**
- DASYS 52.8.0(692); SEMCAD X 14.6.4(4989)

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

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 0.04 V/m; Power Drift = 0.30 dB

PMR not calibrated. PMF = 2.650 is applied.

H-field emissions = 0.17 A/m

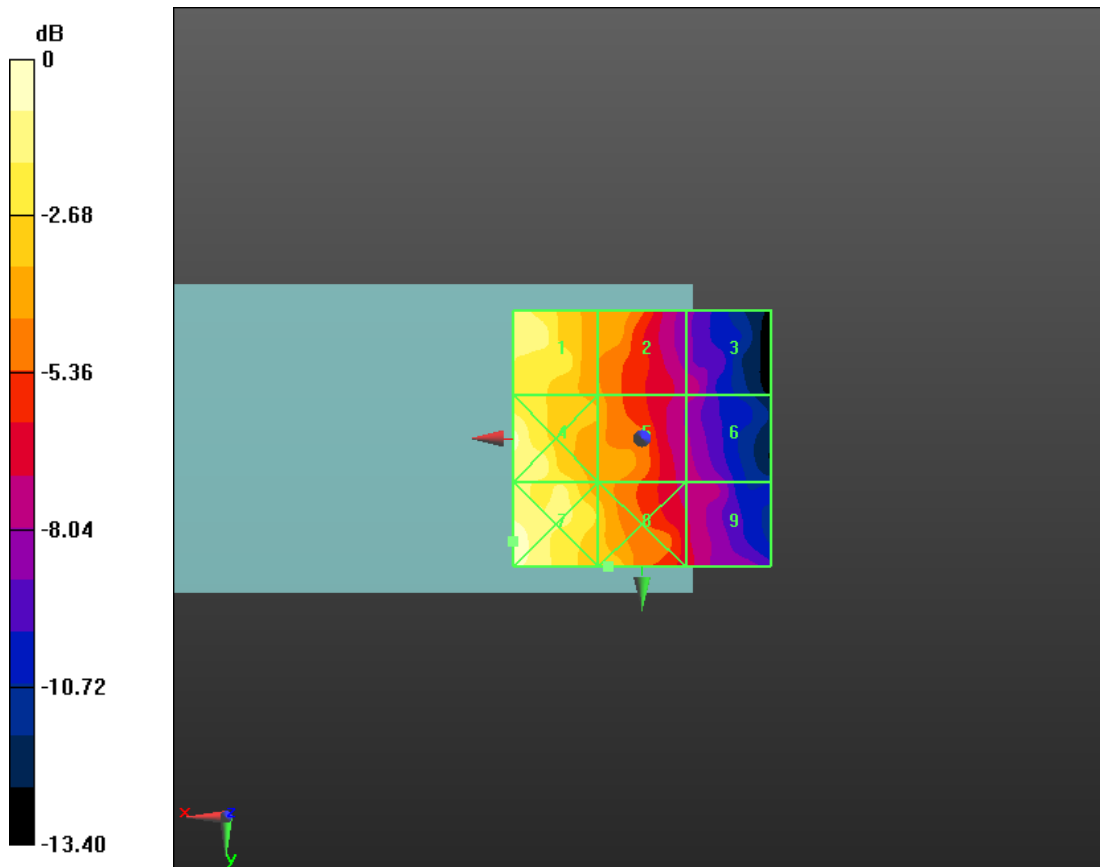
**Near-field category: M4 (AWF 0 dB)**

PMF scaled H-field


Grid 1 <b>M4</b> <b>0.17 A/m</b>	Grid 2 <b>M4</b> <b>0.12 A/m</b>	Grid 3 <b>M4</b> <b>0.08 A/m</b>
Grid 4 <b>M4</b> <b>0.18 A/m</b>	Grid 5 <b>M4</b> <b>0.13 A/m</b>	Grid 6 <b>M4</b> <b>0.08 A/m</b>
Grid 7 <b>M4</b> <b>0.20 A/m</b>	Grid 8 <b>M4</b> <b>0.14 A/m</b>	Grid 9 <b>M4</b> <b>0.09 A/m</b>

**Cursor:**

Total = 0.197 A/m  
H Category: M4  
Location: 25, 20, 8.7 mm



0 dB = 0.190A/m = -14.42 dB A/m

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Date/Time: 3/2/2012 10:52:06 AM

Test Laboratory: RIM Testing Services

HAC RF\_H-Field\_CDMA850\_Telecoil

**DUT: BlackBerry Smartphone; Type: Sample ; Serial: 297DF9E4**

Communication System: CDMA 850; Frequency: 848.52 MHz

Medium parameters used:  $\sigma = 0$  mho/m,  $\epsilon_r = 1$ ;  $\rho = 0$  kg/m<sup>3</sup>

Phantom section: RF Section

Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 11/8/2011
- Sensor-Surface: (Fix Surface), z = 8.7
- Electronics: DAE3 Sn473; Calibrated: 1/13/2012
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA; Serial: **Not Specified**
- DASYS5 52.8.0(692); SEMCAD X 14.6.4(4989)

**Device H-Field measurement with H3DV6 probe/H Scan - H3DV6 -**

**2007: 15 mm from Probe Center to the**

**Device\_Centre\_Telecoil/Hearing Aid Compatibility Test (101x101x1):**

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

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 0.10 V/m; Power Drift = 0.18 dB

PMR not calibrated. PMF = 1.030 is applied.

H-field emissions = 0.16 A/m

**Near-field category: M4 (AWF 0 dB)**

PMF scaled H-field

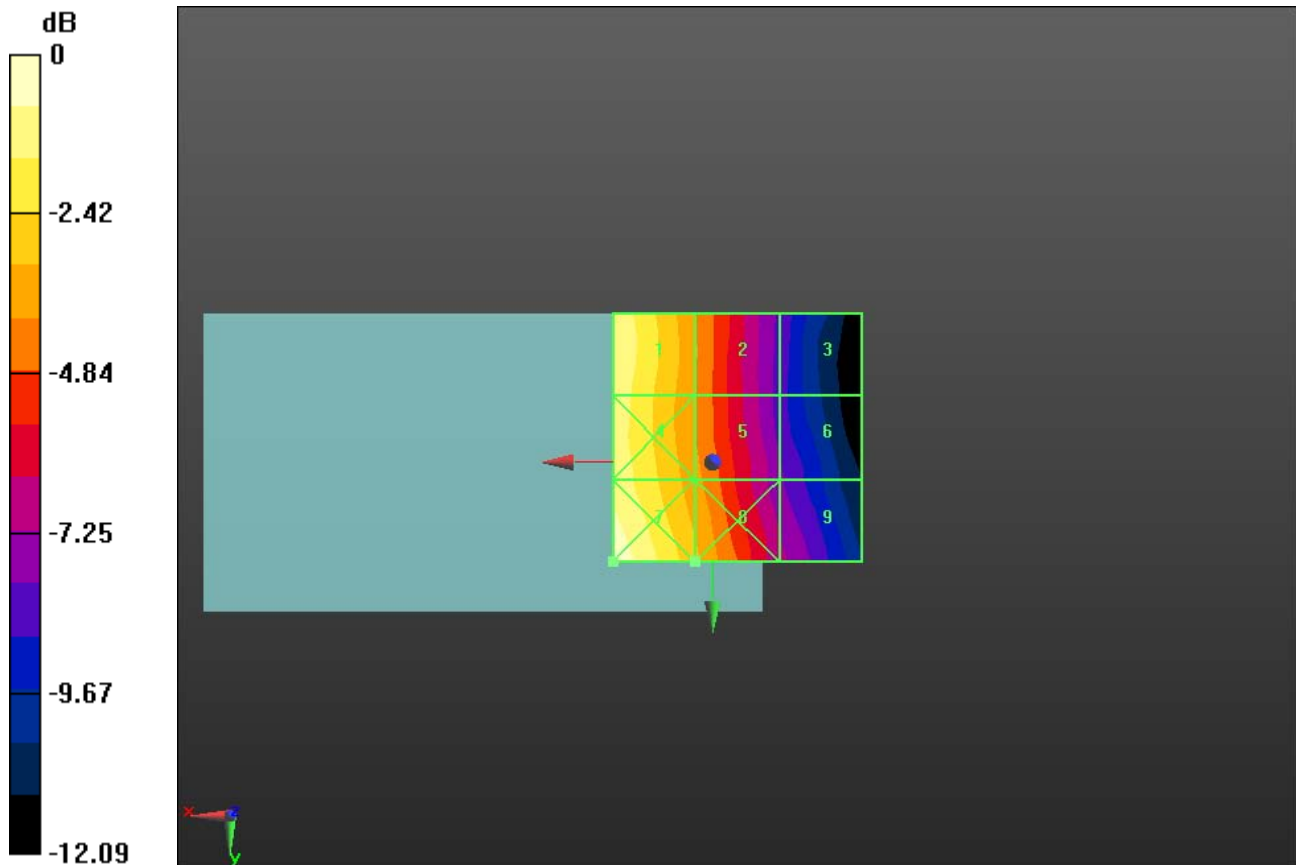
Grid 1 <b>M4</b> <b>0.16 A/m</b>	Grid 2 <b>M4</b> <b>0.11 A/m</b>	Grid 3 <b>M4</b> <b>0.07 A/m</b>
Grid 4 <b>M4</b> <b>0.16 A/m</b>	Grid 5 <b>M4</b> <b>0.12 A/m</b>	Grid 6 <b>M4</b> <b>0.07 A/m</b>
Grid 7 <b>M4</b> <b>0.18 A/m</b>	Grid 8 <b>M4</b> <b>0.13 A/m</b>	Grid 9 <b>M4</b> <b>0.08 A/m</b>

**Cursor:**


Total = 0.175 A/m

H Category: M4

Location: 20, 20, 8.7 mm



0 dB = 0.180A/m = -14.89 dB A/m

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Date/Time: 3/1/2012 3:22:33 PM

Test Laboratory: RIM Testing Services

HAC RF\_H-Field\_CDMA1900

**DUT: BlackBerry Smartphone; Type: Sample ; Serial: 297DF9E4**

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

Medium parameters used:  $\sigma = 0$  mho/m,  $\epsilon_r = 1$ ;  $\rho = 0$  kg/m<sup>3</sup>

Phantom section: RF Section

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

DASY Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 11/8/2011
- Sensor-Surface: (Fix Surface), z = 8.7
- Electronics: DAE3 Sn473; Calibrated: 1/13/2012
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA; Serial: **Not Specified**
- DASYS 52.8.0(692); SEMCAD X 14.6.4(4989)

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


Device Reference Point: 0, 0, -6.3 mm

Reference Value = 0.10 V/m; Power Drift = -0.16 dB

PMR not calibrated. PMF = 0.990 is applied.

H-field emissions = 0.11 A/m

**Near-field category: M4 (AWF 0 dB)**

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PMF scaled H-field

Grid 1 <b>M4</b> <b>0.10 A/m</b>	Grid 2 <b>M4</b> <b>0.10 A/m</b>	Grid 3 <b>M4</b> <b>0.09 A/m</b>
Grid 4 <b>M4</b> <b>0.13 A/m</b>	Grid 5 <b>M4</b> <b>0.11 A/m</b>	Grid 6 <b>M4</b> <b>0.09 A/m</b>
Grid 7 <b>M4</b> <b>0.15 A/m</b>	Grid 8 <b>M4</b> <b>0.12 A/m</b>	Grid 9 <b>M4</b> <b>0.08 A/m</b>

**Cursor:**

Total = 0.145 A/m

H Category: M4

Location: 25, 25, 8.7 mm

**Device H-Field measurement with H3DV6 probe/H Scan - H3DV6 - 2007: 15 mm from Probe Center to the Device\_mid\_chan/Hearing Aid**

**Compatibility Test (101x101x1):** Measurement grid: dx=5mm, dy=5mm


Device Reference Point: 0, 0, -6.3 mm

Reference Value = 0.11 V/m; Power Drift = 0.14 dB

PMR not calibrated. PMF = 0.990 is applied.

H-field emissions = 0.11 A/m

**Near-field category: M4 (AWF 0 dB)**

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	<b>Annex A to Hearing Aid Compatibility RF Emissions Test Report for the BlackBerry® Smartphone model REY21CW</b>		71 (76)
Author Data	Dates of Test	Report No	FCC ID
<b>Andrew Becker</b>	<b>Feb. 29 &amp; March 1-2, 2012</b>	<b>RTS-5994-1203-49</b>	<b>L6AREY20CW</b>

PMF scaled H-field

Grid 1 <b>M4</b> <b>0.10 A/m</b>	Grid 2 <b>M4</b> <b>0.10 A/m</b>	Grid 3 <b>M4</b> <b>0.09 A/m</b>
Grid 4 <b>M4</b> <b>0.12 A/m</b>	Grid 5 <b>M4</b> <b>0.11 A/m</b>	Grid 6 <b>M4</b> <b>0.09 A/m</b>
Grid 7 <b>M4</b> <b>0.14 A/m</b>	Grid 8 <b>M4</b> <b>0.13 A/m</b>	Grid 9 <b>M4</b> <b>0.09 A/m</b>

**Cursor:**

Total = 0.144 A/m

H Category: M4

Location: 25, 25, 8.7 mm

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

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 0.12 V/m; Power Drift = 0.20 dB

PMR not calibrated. PMF = 0.990 is applied.

H-field emissions = 0.12 A/m

**Near-field category: M4 (AWF 0 dB)**

PMF scaled H-field

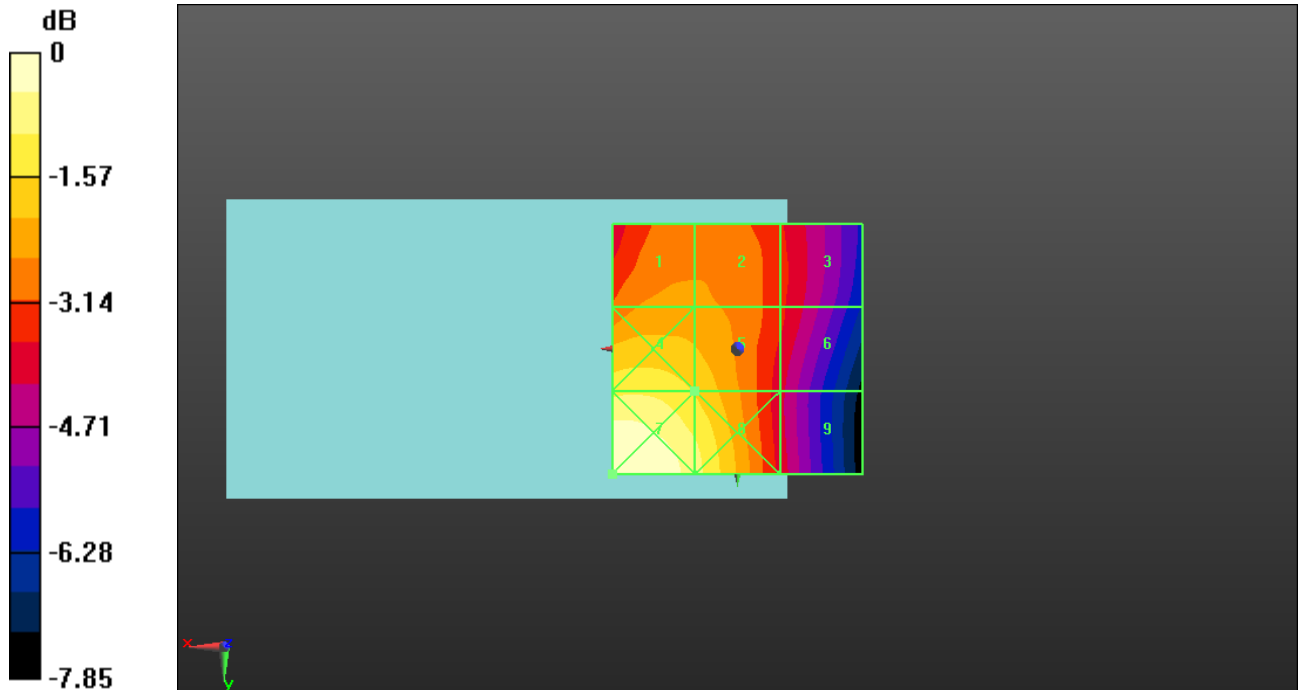
Grid 1 <b>M4</b> <b>0.11 A/m</b>	Grid 2 <b>M4</b> <b>0.11 A/m</b>	Grid 3 <b>M4</b> <b>0.10 A/m</b>
Grid 4 <b>M4</b> <b>0.13 A/m</b>	Grid 5 <b>M4</b> <b>0.12 A/m</b>	Grid 6 <b>M4</b> <b>0.10 A/m</b>
Grid 7 <b>M4</b> <b>0.15 A/m</b>	Grid 8 <b>M4</b> <b>0.14 A/m</b>	Grid 9 <b>M4</b> <b>0.10 A/m</b>

**Cursor:**

Total = 0.153 A/m


H Category: M4

Location: 25, 25, 8.7 mm



0 dB = 0.150A/m = -16.48 dB A/m



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<b>Andrew Becker</b>	<b>Feb. 29 &amp; March 1-2, 2012</b>	<b>RTS-5994-1203-49</b>	<b>L6AREY20CW</b>

Date/Time: 3/1/2012 4:27:03 PM

Test Laboratory: RIM Testing Services

HAC RF\_H-Field\_CDMA1900\_1/8th\_Rate

**DUT: BlackBerry Smartphone; Type: Sample ; Serial: 297DF9E4**

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

Medium parameters used:  $\sigma = 0$  mho/m,  $\epsilon_r = 1$ ;  $\rho = 0$  kg/m<sup>3</sup>

Phantom section: RF Section

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

DASY Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 11/8/2011
- Sensor-Surface: (Fix Surface), z = 8.7
- Electronics: DAE3 Sn473; Calibrated: 1/13/2012
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA; Serial: **Not Specified**
- DASYS 52.8.0(692); SEMCAD X 14.6.4(4989)

**Device H-Field measurement with H3DV6 probe/H Scan - H3DV6 - 2007: 15 mm from Probe Center to the Device\_high\_chan/Hearing Aid**

**Compatibility Test (101x101x1):** Measurement grid: dx=5mm, dy=5mm


Device Reference Point: 0, 0, -6.3 mm

Reference Value = 0.04 V/m; Power Drift = 0.19 dB

PMR not calibrated. PMF = 2.600 is applied.

H-field emissions = 0.11 A/m

**Near-field category: M4 (AWF 0 dB)**

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PMF scaled H-field

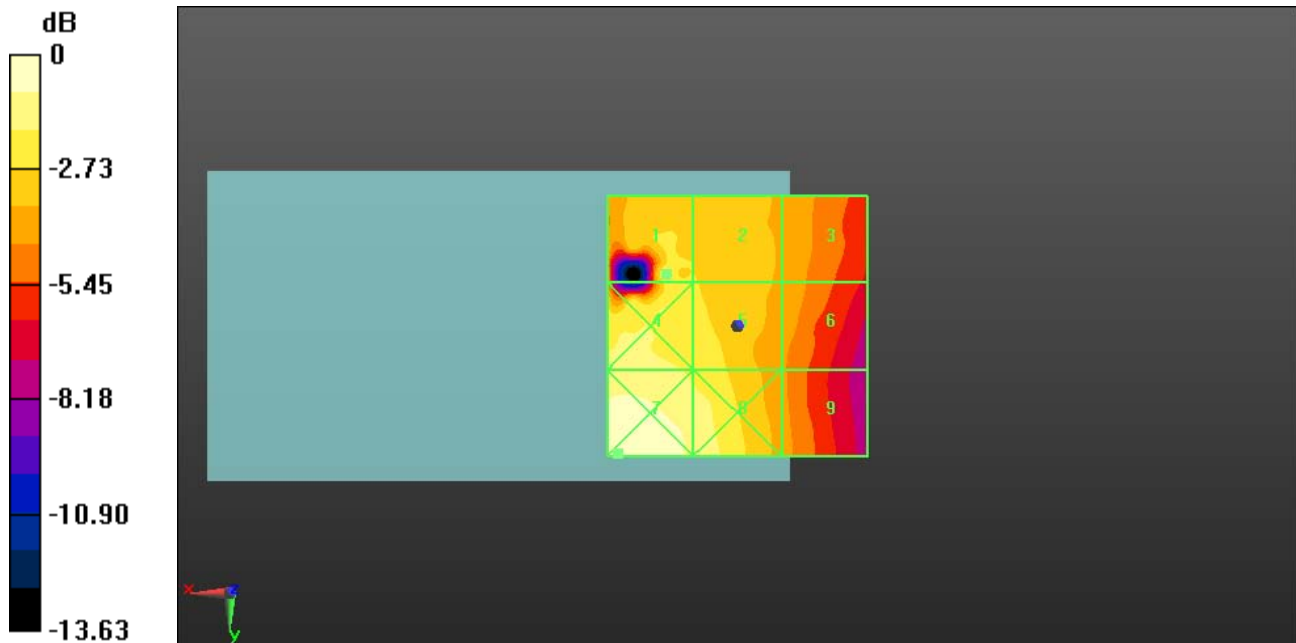
Grid 1 <b>M4</b> <b>0.11 A/m</b>	Grid 2 <b>M4</b> <b>0.10 A/m</b>	Grid 3 <b>M4</b> <b>0.09 A/m</b>
Grid 4 <b>M4</b> <b>0.12 A/m</b>	Grid 5 <b>M4</b> <b>0.11 A/m</b>	Grid 6 <b>M4</b> <b>0.09 A/m</b>
Grid 7 <b>M4</b> <b>0.14 A/m</b>	Grid 8 <b>M4</b> <b>0.12 A/m</b>	Grid 9 <b>M4</b> <b>0.09 A/m</b>

**Cursor:**


Total = 0.139 A/m

H Category: M4

Location: 23, 24.5, 8.7 mm



0 dB = 0.140A/m = -17.08 dB A/m

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Author Data	Dates of Test	Report No	FCC ID
<b>Andrew Becker</b>	<b>Feb. 29 &amp; March 1-2, 2012</b>	<b>RTS-5994-1203-49</b>	<b>L6AREY20CW</b>

Date/Time: 3/2/2012 11:22:13 AM

Test Laboratory: RIM Testing Services

HAC RF\_H-Field\_CDMA1900\_Telecoil

**DUT: BlackBerry Smartphone; Type: Sample ; Serial: 297DF9E4**

Communication System: CDMA 1900; Frequency: 1908.5 MHz

Medium parameters used:  $\sigma = 0$  mho/m,  $\epsilon_r = 1$ ;  $\rho = 0$  kg/m<sup>3</sup>

Phantom section: RF Section

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

DASY Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 11/8/2011
- Sensor-Surface: (Fix Surface), z = 8.7
- Electronics: DAE3 Sn473; Calibrated: 1/13/2012
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA; Serial: **Not Specified**
- DASYS 52.8.0(692); SEMCAD X 14.6.4(4989)

**Device H-Field measurement with H3DV6 probe/H Scan - H3DV6 -**

**2007: 15 mm from Probe Center to the**

**Device\_Centre\_Telecoil/Hearing Aid Compatibility Test (101x101x1):**

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


Device Reference Point: 0, 0, -6.3 mm

Reference Value = 0.11 V/m; Power Drift = 0.10 dB

PMR not calibrated. PMF = 0.990 is applied.

H-field emissions = 0.11 A/m

**Near-field category: M4 (AWF 0 dB)**

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PMF scaled H-field

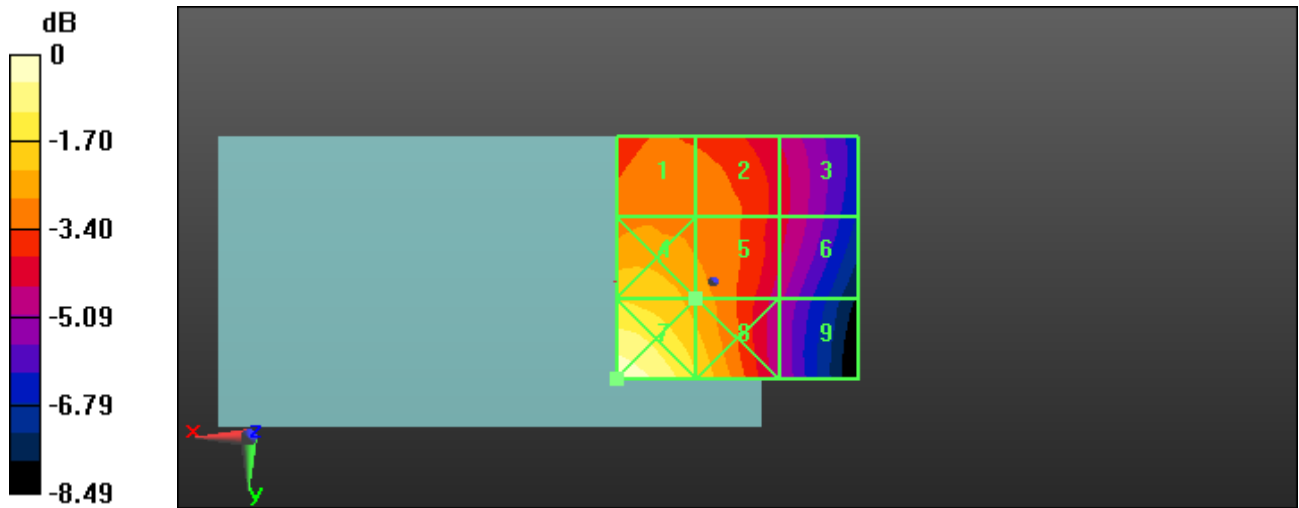
Grid 1 <b>M4</b> <b>0.11 A/m</b>	Grid 2 <b>M4</b> <b>0.11 A/m</b>	Grid 3 <b>M4</b> <b>0.09 A/m</b>
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Grid 7 <b>M4</b> <b>0.15 A/m</b>	Grid 8 <b>M4</b> <b>0.12 A/m</b>	Grid 9 <b>M4</b> <b>0.09 A/m</b>

**Cursor:**

Total = 0.147 A/m

H Category: M4

Location: 20, 20, 8.7 mm



0 dB = 0.150A/m = -16.48 dB A/m