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	Author Data <b>Daoud Attayi</b>	Dates of Test <b>April 05-08, 2010</b>	Report No <b>RTS-2068-1004-46</b>

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

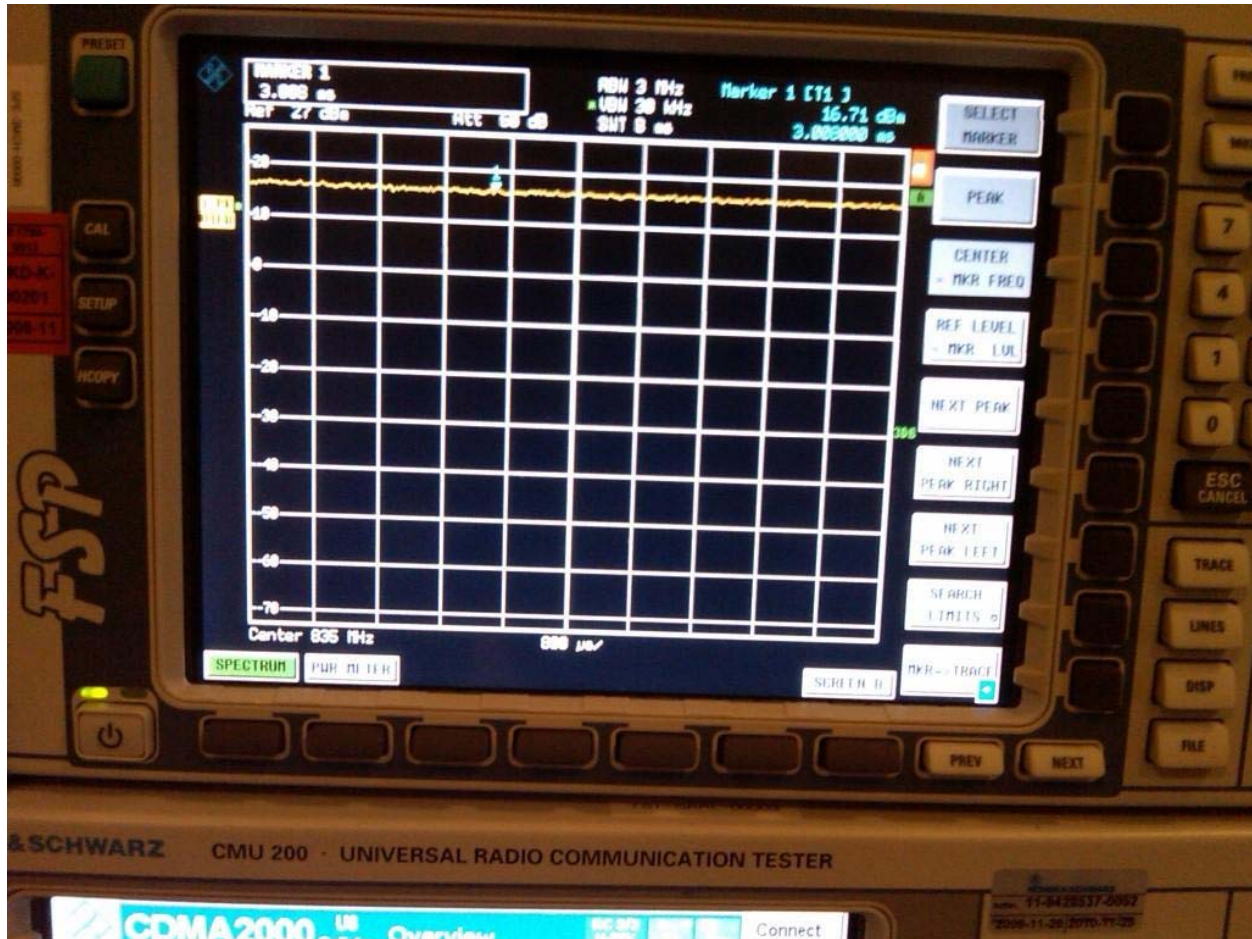
### **A.1 Spectrum analyser plots: CDMA, CW and 80%AM ignals**

Author Data  
**Daoud Attayi**

Dates of Test  
**April 05-08, 2010**

Report No  
**RTS-2068-1004-46**

FCC ID  
**L6ARCZ30CW**



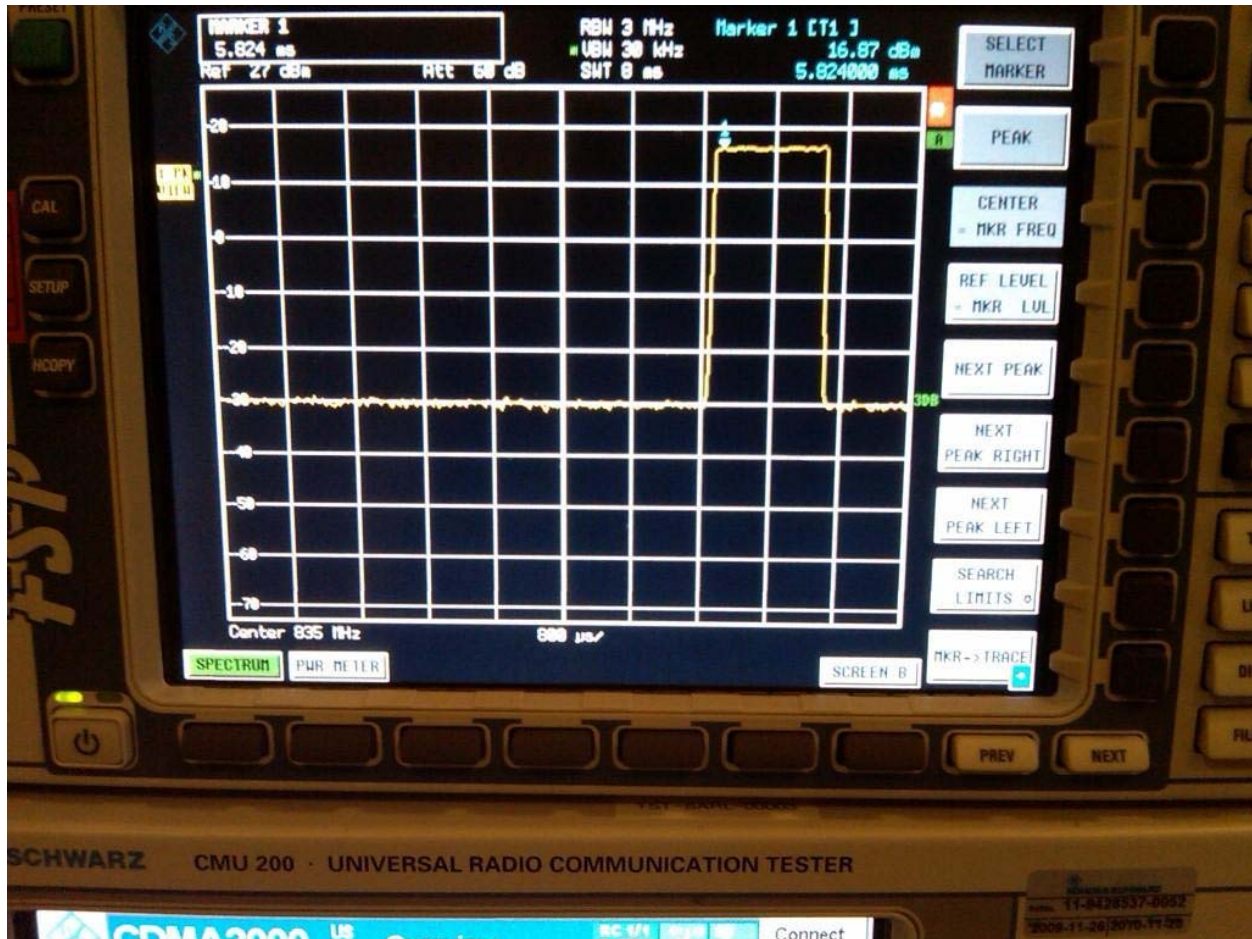
**0 Hz Span CDMA Full Rate (835MHz)**

Author Data  
**Daoud Attayi**

Dates of Test  
**April 05-08, 2010**

Report No  
**RTS-2068-1004-46**

FCC ID  
**L6ARCZ30CW**



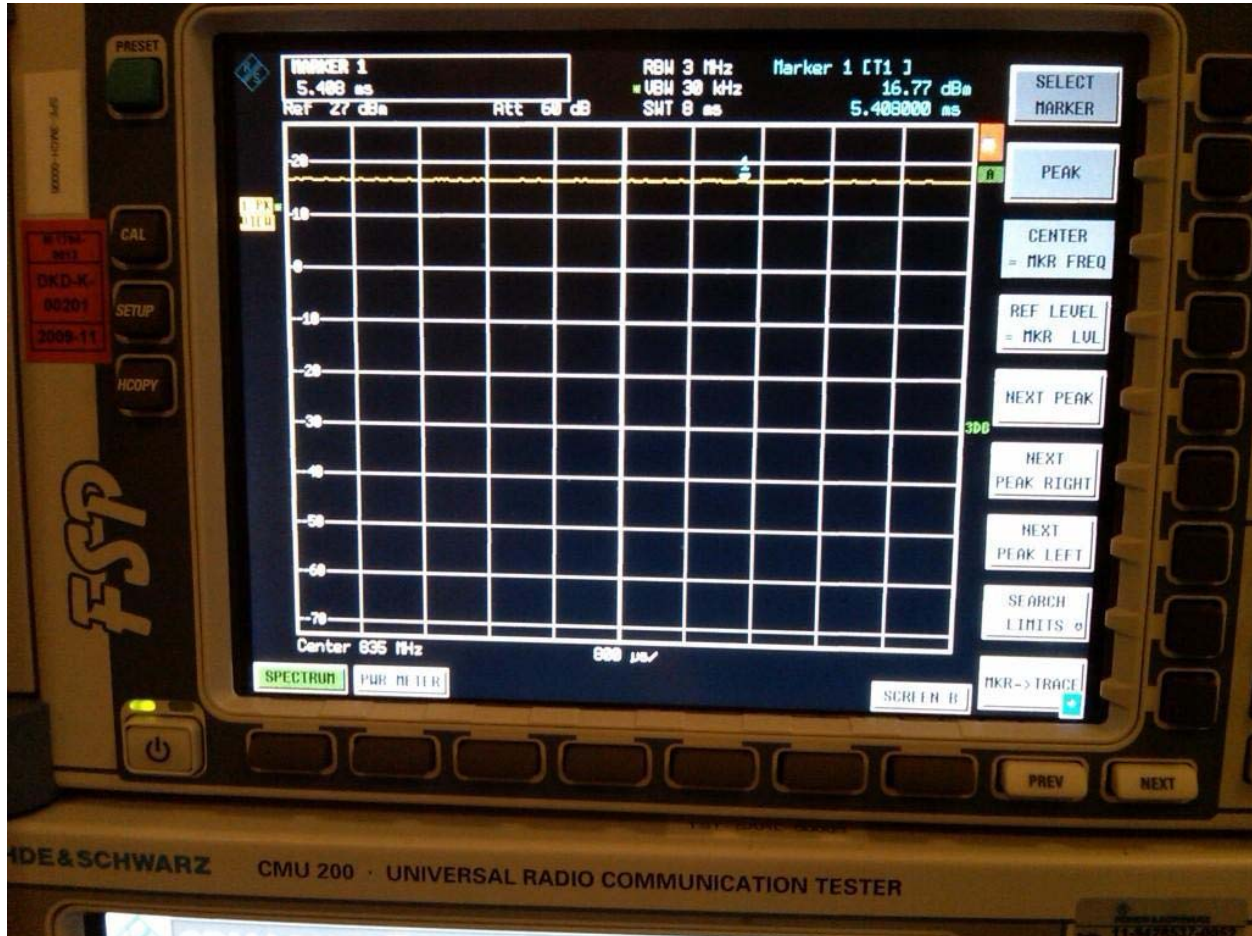
**0 Hz Span CDMA 1/8 th (835MHz)**

Author Data  
**Daoud Attayi**

Dates of Test  
**April 05-08, 2010**

Report No  
**RTS-2068-1004-46**

FCC ID  
**L6ARCZ30CW**



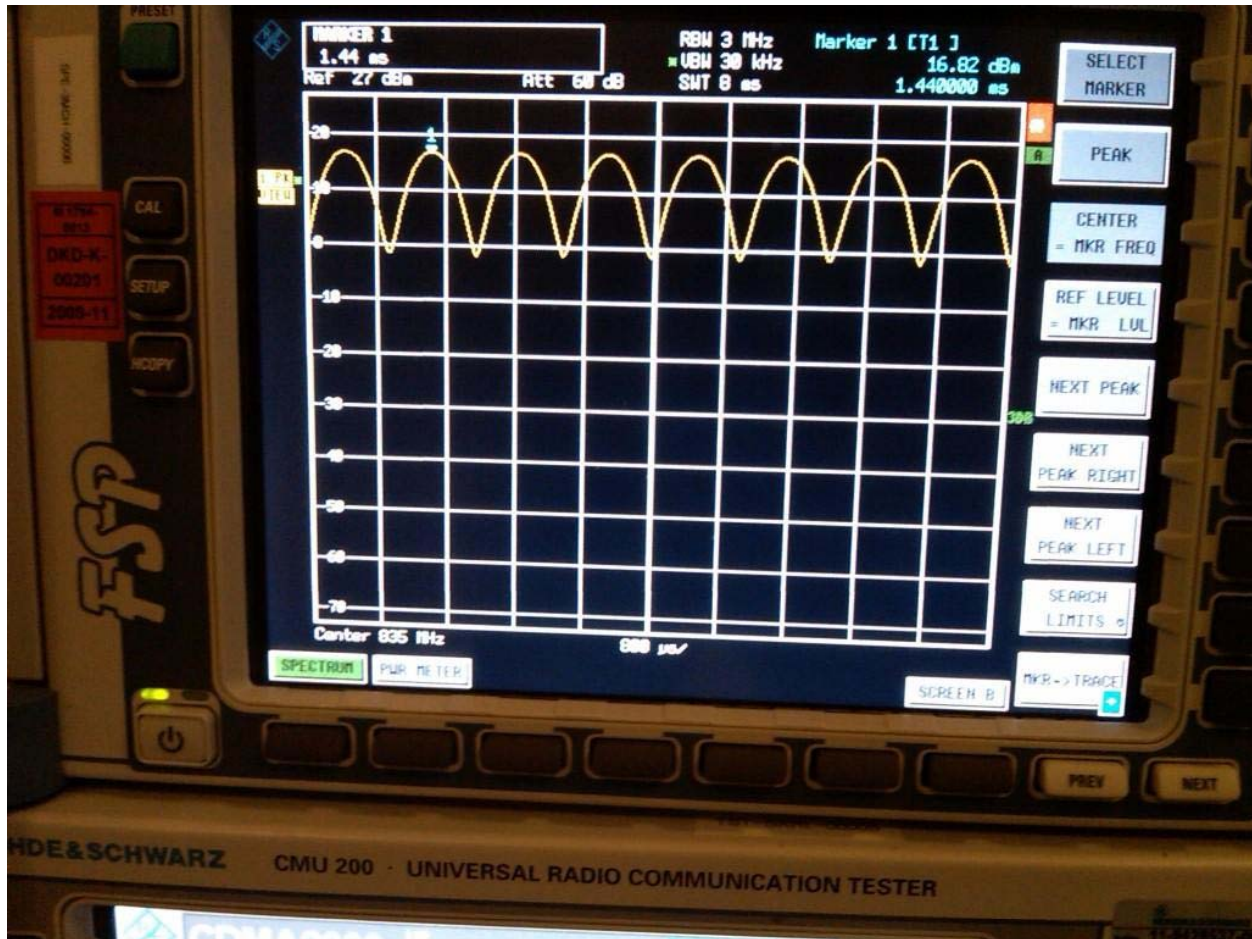
**0 Hz Span CW Plot (835MHz)**

Author Data  
**Daoud Attayi**

Dates of Test  
**April 05-08, 2010**

Report No  
**RTS-2068-1004-46**

FCC ID  
**L6ARCZ30CW**



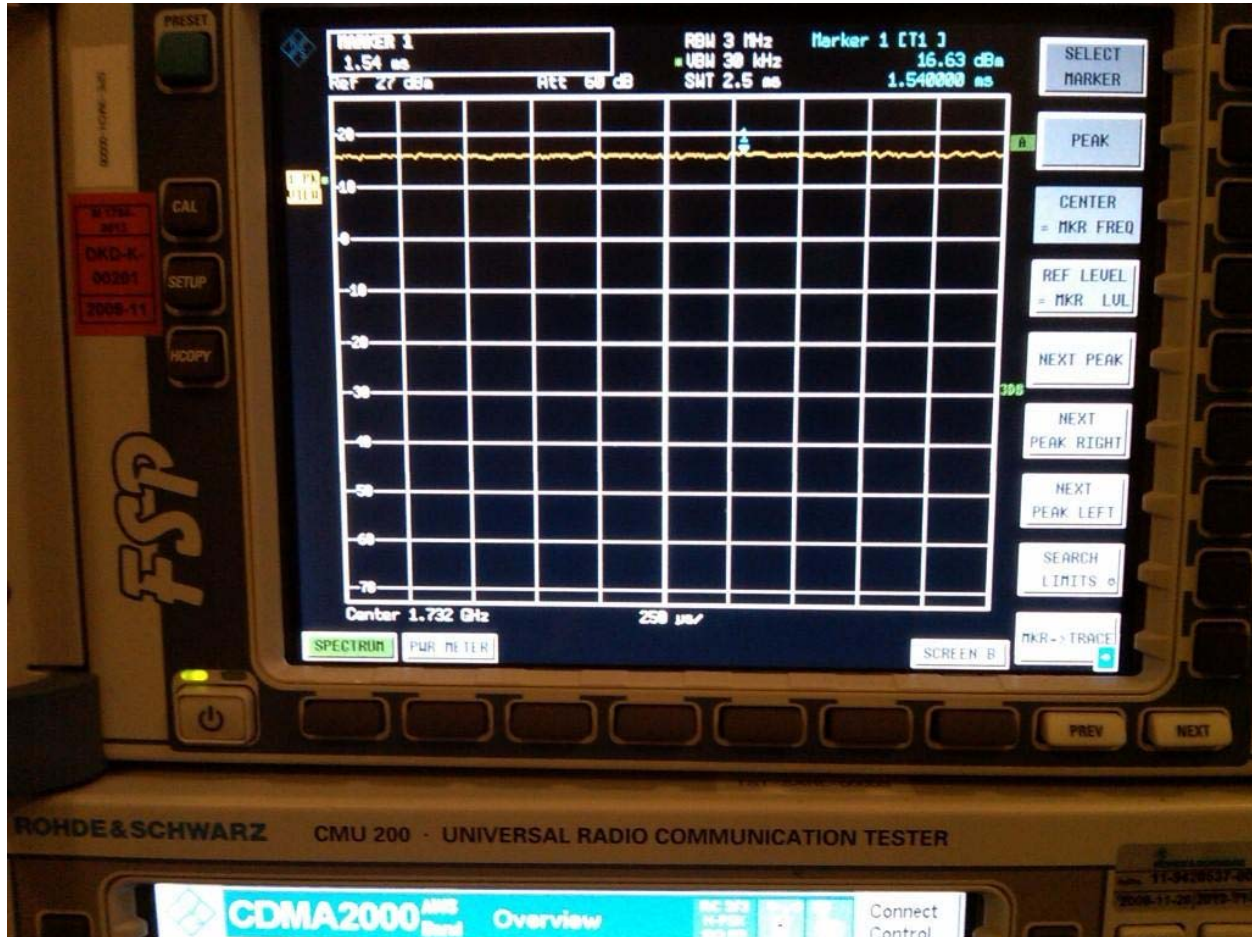
**0 Hz Span 80% AM Plot (835MHz)**

Author Data  
**Daoud Attayi**

Dates of Test  
**April 05-08, 2010**

Report No  
**RTS-2068-1004-46**

FCC ID  
**L6ARCZ30CW**



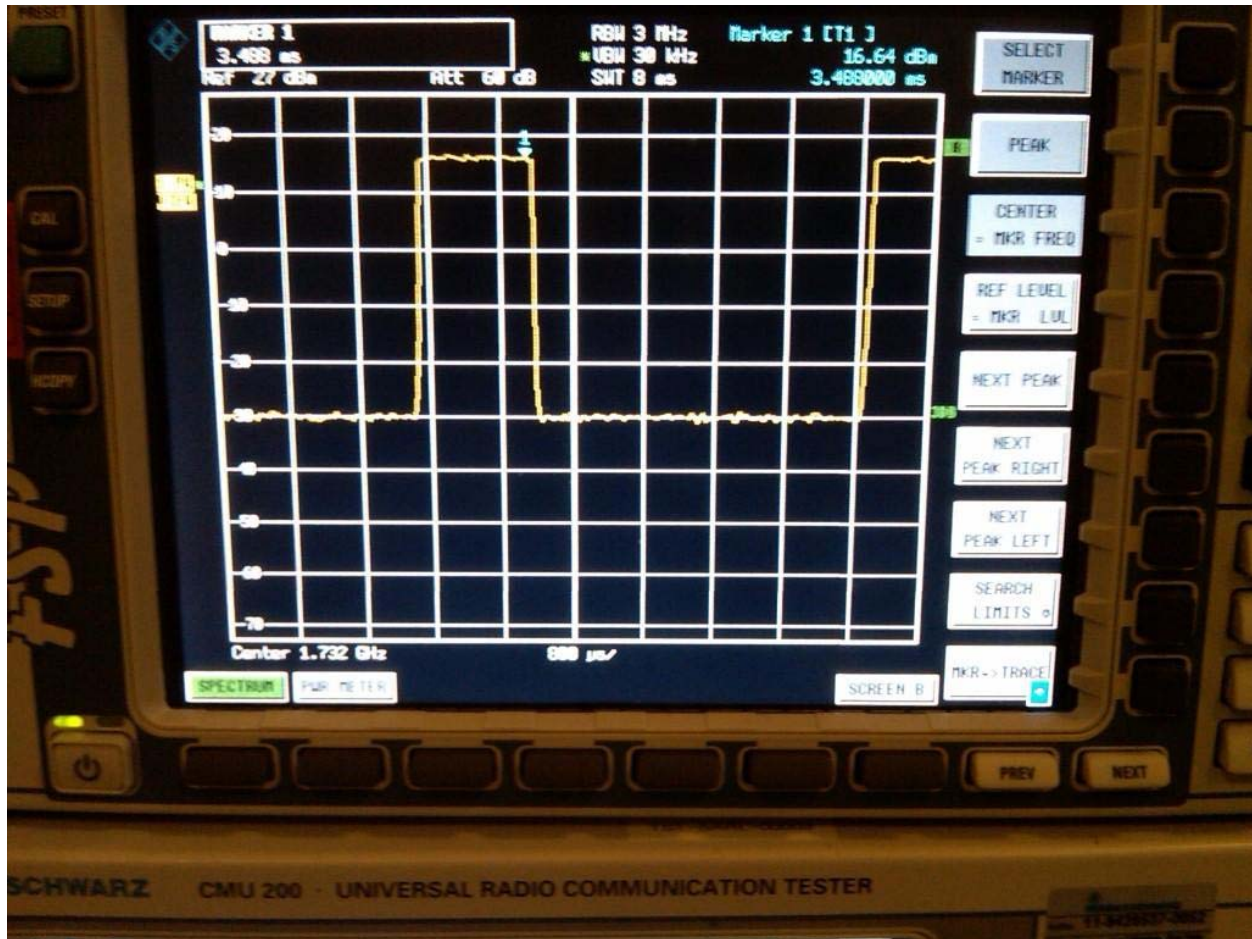
**0 Hz Span CDMA Full Rate (1732 MHz)**

Author Data  
**Daoud Attayi**


Dates of Test  
**April 05-08, 2010**

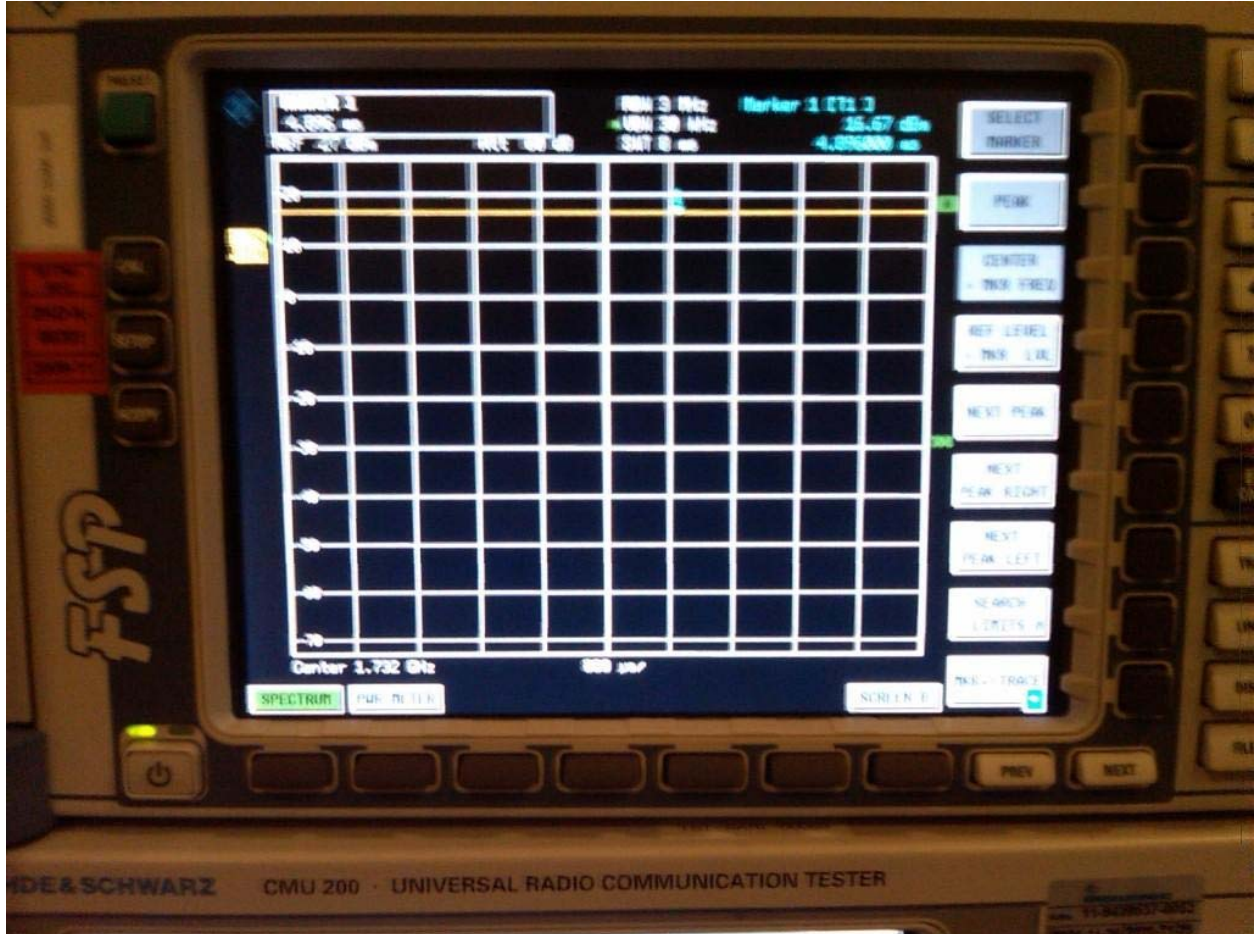
Report No  
**RTS-2068-1004-46**

FCC ID  
**L6ARCZ30CW**



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

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**0 Hz Span CW Plot (1732 MHz)**

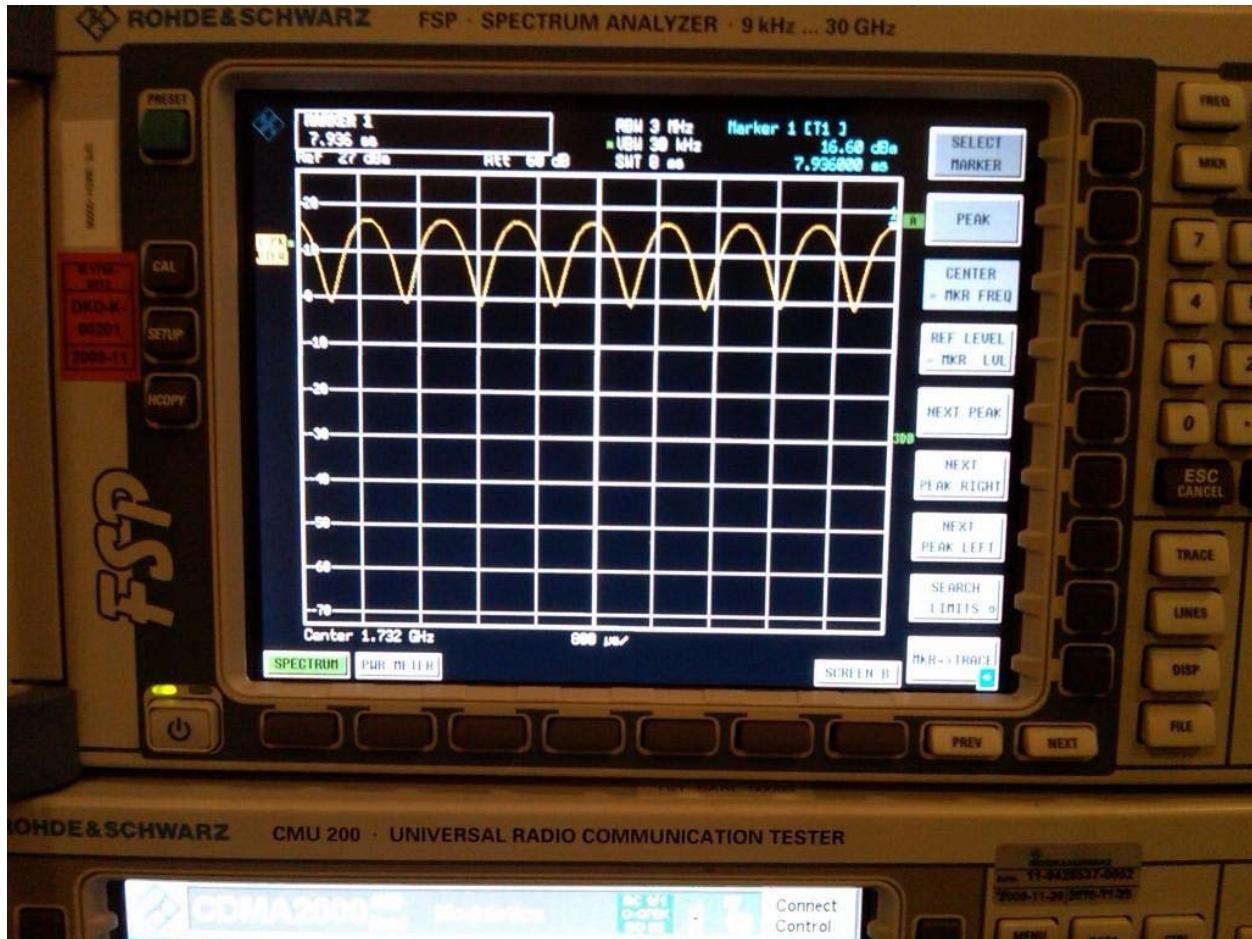


Author Data  
**Daoud Attayi**

Dates of Test  
**April 05-08, 2010**

Report No  
**RTS-2068-1004-46**

FCC ID  
**L6ARCZ30CW**



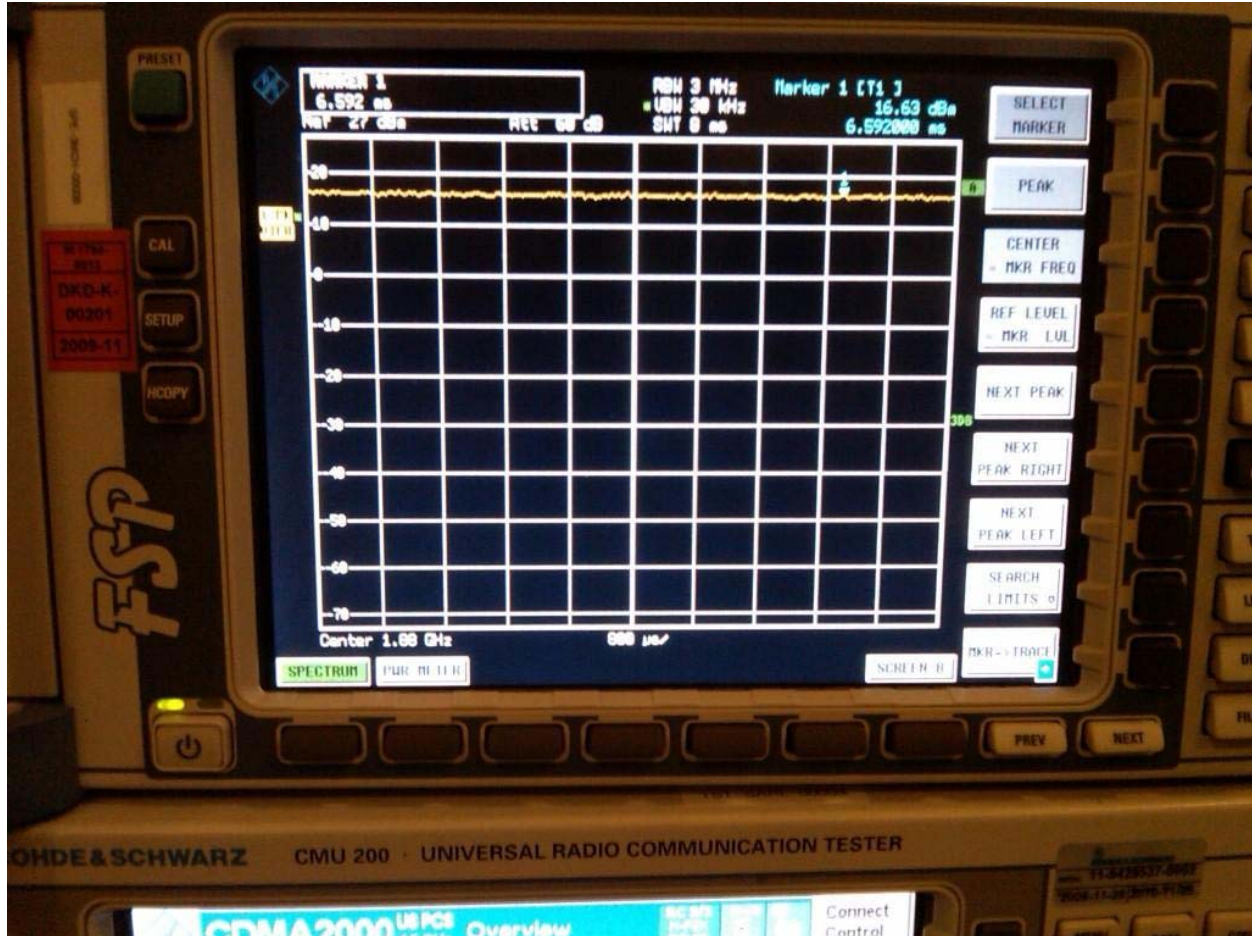
**0 Hz Span 80% AM Plot (1732 MHz)**

Author Data  
**Daoud Attayi**

Dates of Test  
**April 05-08, 2010**

Report No  
**RTS-2068-1004-46**

FCC ID  
**L6ARCZ30CW**



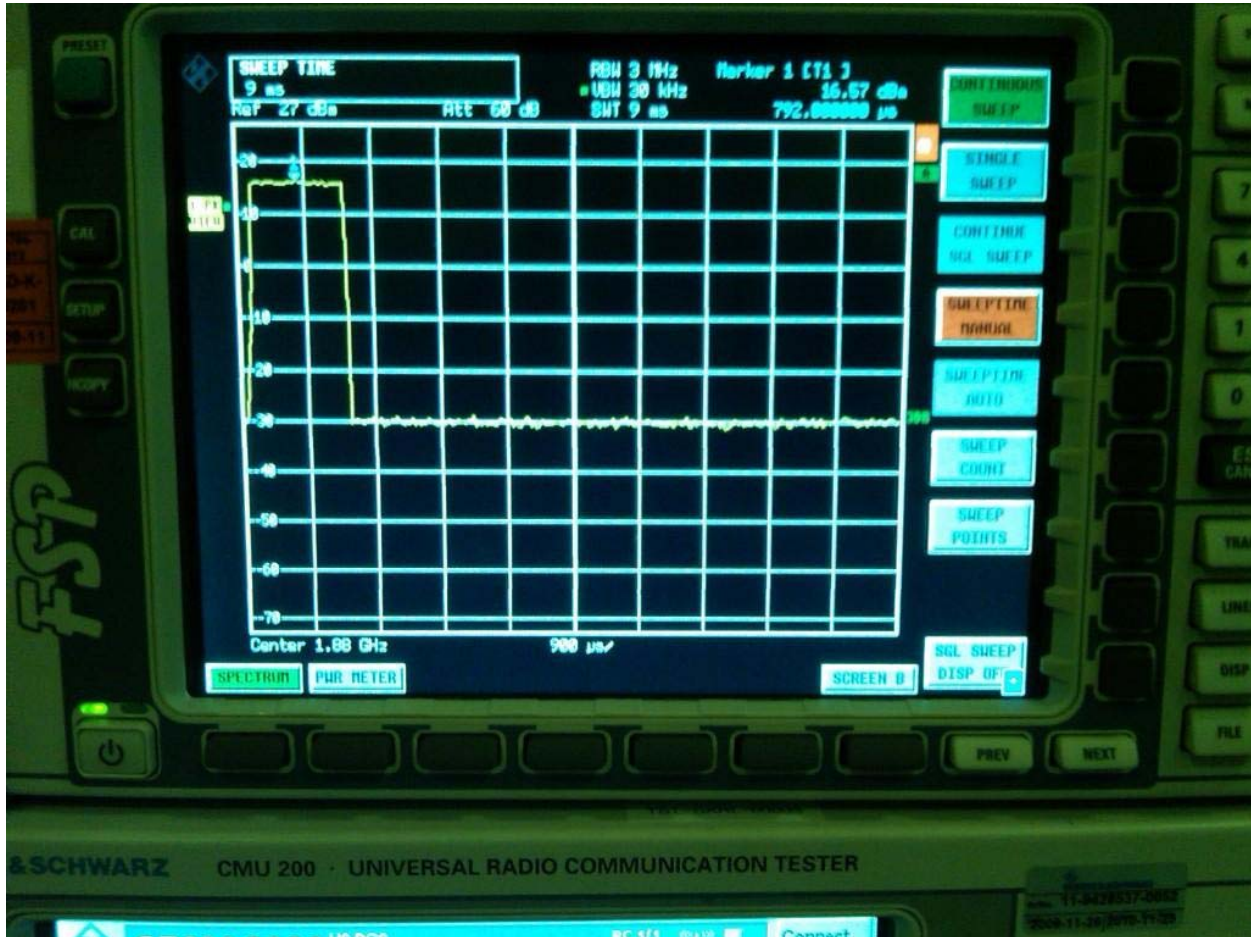
**0 Hz Span CDMA Full Rate (1880 MHz)**

Author Data  
**Daoud Attayi**

Dates of Test  
**April 05-08, 2010**

Report No  
**RTS-2068-1004-46**

FCC ID  
**L6ARCZ30CW**



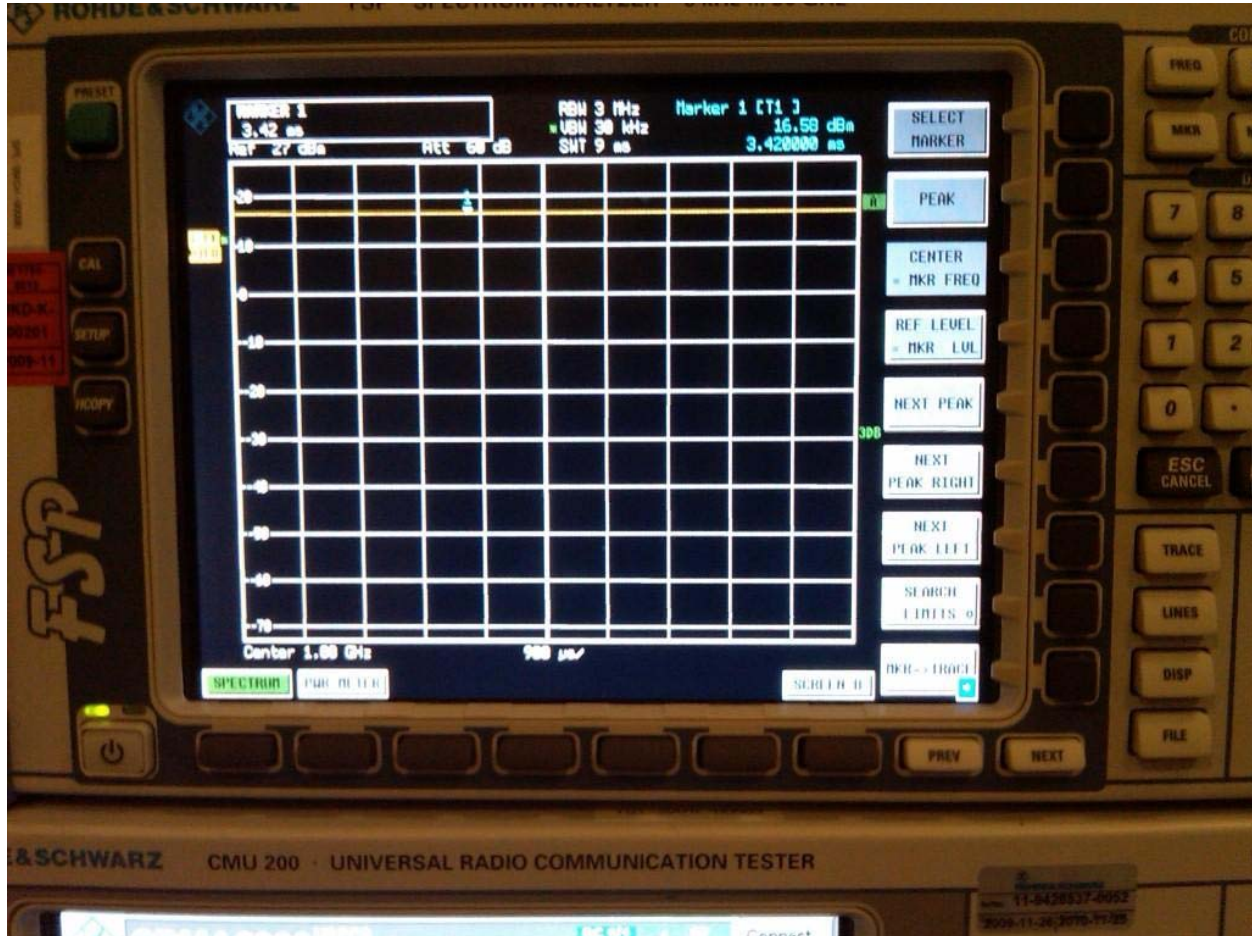
**0 Hz Span CDMA 1/8 th (1880 MHz)**

Author Data  
**Daoud Attayi**

Dates of Test  
**April 05-08, 2010**

Report No  
**RTS-2068-1004-46**

FCC ID  
**L6ARCZ30CW**



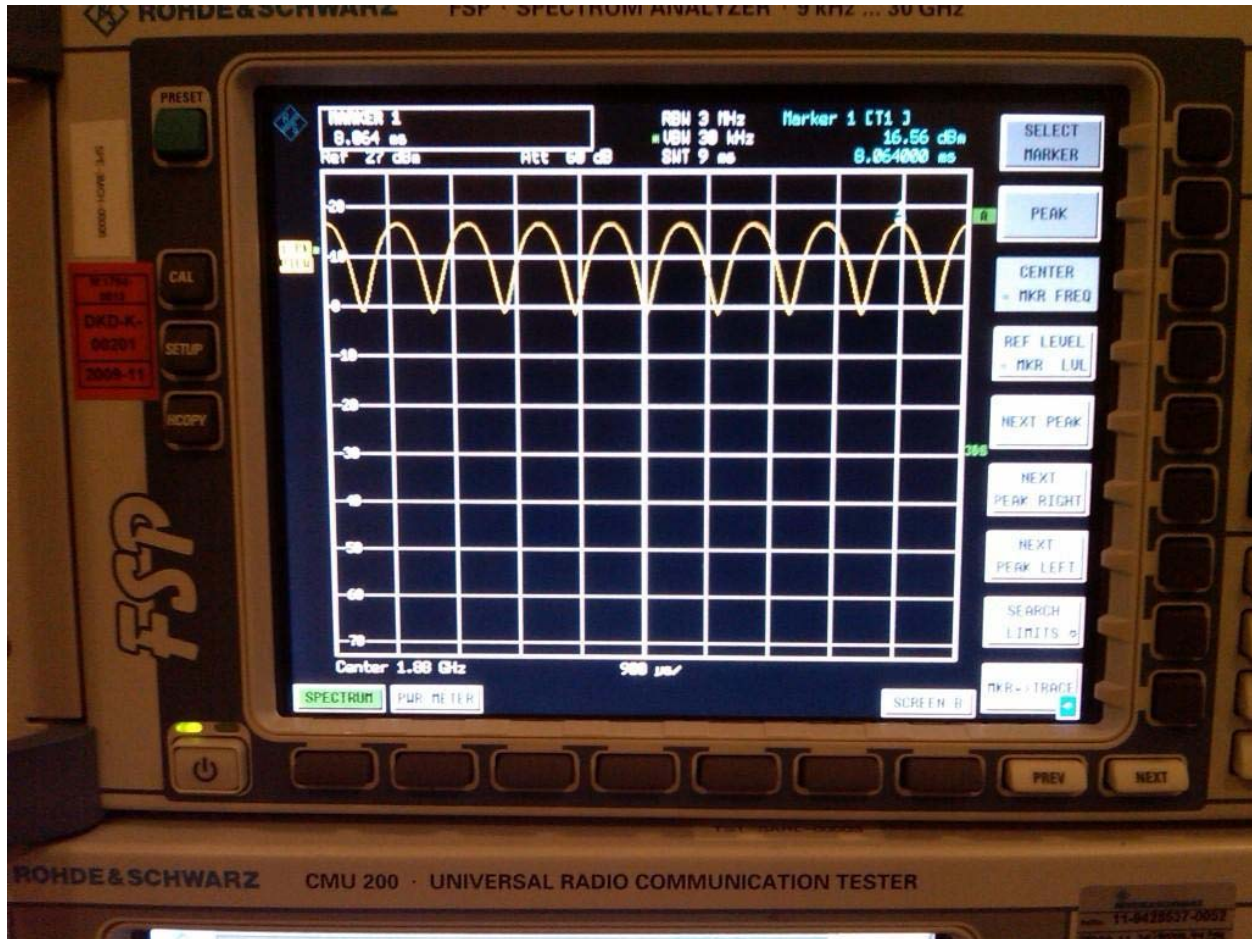
**0 Hz Span CW Plot (1880 MHz)**

Author Data  
**Daoud Attayi**


Dates of Test  
**April 05-08, 2010**

Report No  
**RTS-2068-1004-46**


FCC ID  
**L6ARCZ30CW**



**0 Hz Span 80% AM Plot (1880 MHz)**

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Author Data	Dates of Test	Report No	FCC ID
<b>Daoud Attayi</b>	<b>April 05-08, 2010</b>	<b>RTS-2068-1004-46</b>	<b>L6ARCZ30CW</b>

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

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

File Name: [HAC\\_E\\_Dipole\\_CW835\\_20.00dBm.da4](#)

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

**Program Name: HAC RF E Dipole**

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

Medium parameters used:  $\sigma = 0$  mho/m,  $\epsilon_r = 1$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: RF Section

DASY4 Configuration:

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

**E Scan - measurement distance from the probe sensor center to CD835**

**Dipole = 10mm/Hearing Aid Compatibility Test (5x37x1): Measurement grid:**


dx=5mm, dy=5mm

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

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

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

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**E Scan - measurement distance from the probe sensor center to CD835**  
**Dipole = 10mm/Hearing Aid Compatibility Test (41x361x1): Measurement grid:**  
dx=5mm, dy=5mm  
Maximum value of peak Total field = 163.6 V/m  
Probe Modulation Factor = 1.00  
Device Reference Point: 0.000, 0.000, -6.30 mm  
Reference Value = 103.5 V/m; Power Drift = 0.021 dB  
**Hearing Aid Near-Field Category: M4 (AWF 0 dB)**

Peak E-field in V/m

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

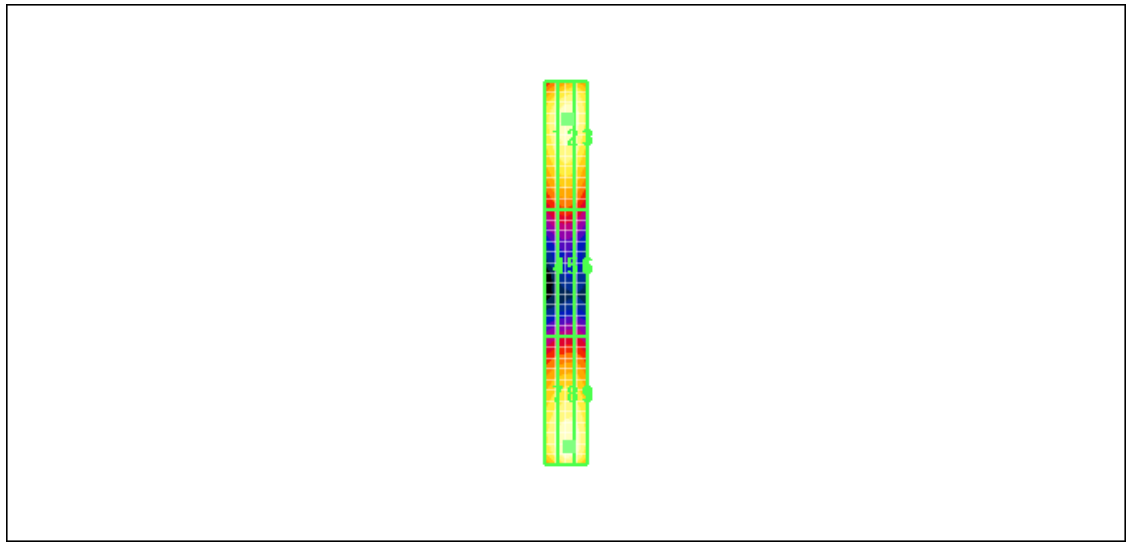
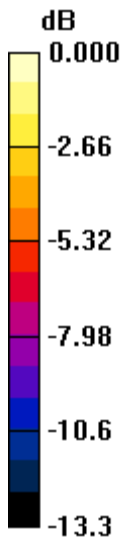


Author Data  
**Daoud Attayi**


Dates of Test  
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0 dB = 163.6V/m

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Author Data	Dates of Test	Report No	FCC ID
<b>Daoud Attayi</b>	<b>April 05-08, 2010</b>	<b>RTS-2068-1004-46</b>	<b>L6ARCZ30CW</b>

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

File Name: [HAC\\_E\\_Dipole\\_CDMA835.da4](#)

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

**Program Name: HAC RF E Dipole**

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

Medium parameters used:  $\sigma = 0$  mho/m,  $\epsilon_r = 1$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: RF Section

DASY4 Configuration:

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

**E Scan - measurement distance from the probe sensor center to CD835**

**Dipole = 10mm/Hearing Aid Compatibility Test (5x37x1): Measurement grid:**

dx=5mm, dy=5mm


Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

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

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

**E Scan - measurement distance from the probe sensor center to CD835**

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	<b>Annex A Hearing Aid Compatibility RF Emissions Test Report for the BlackBerry® Smartphone model RCZ31CW</b>		<b>19 (198)</b>
Author Data <b>Daoud Attayi</b>	Dates of Test <b>April 05-08, 2010</b>	Report No <b>RTS-2068-1004-46</b>	FCC ID <b>L6ARCZ30CW</b>

**Dipole = 10mm/Hearing Aid Compatibility Test (41x361x1):** Measurement grid:

dx=5mm, dy=5mm

Maximum value of peak Total field = 115.5 V/m

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

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

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

Peak E-field in V/m

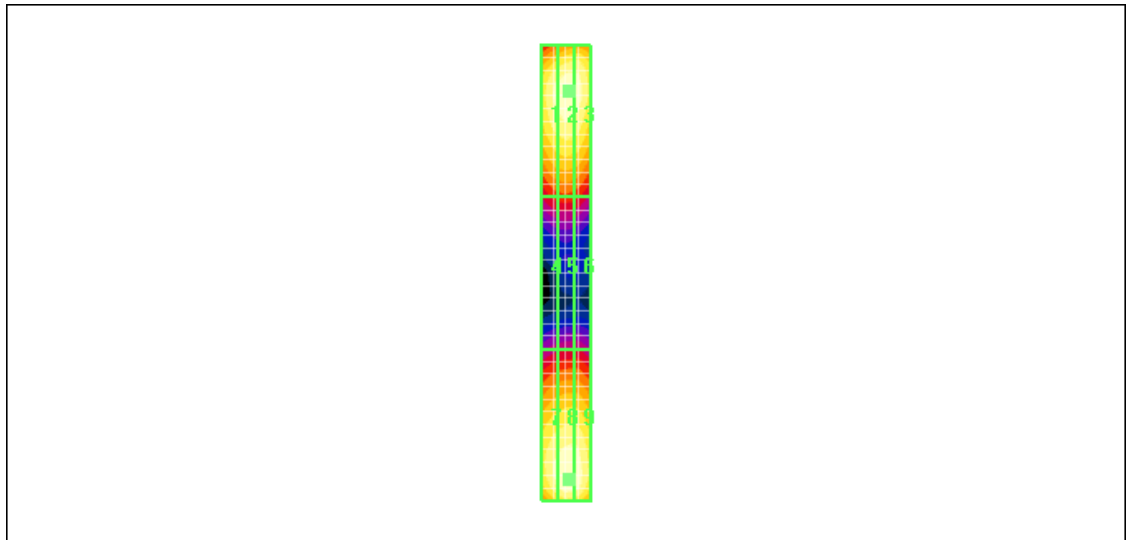
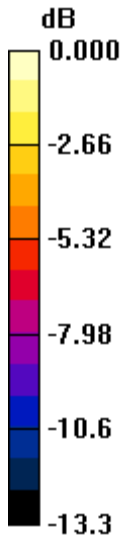
Grid 1 <b>108.4 M4</b>	Grid 2 <b>112.8 M4</b>	Grid 3 <b>112.1 M4</b>
Grid 4 <b>59.7 M4</b>	Grid 5 <b>60.7 M4</b>	Grid 6 <b>59.2 M4</b>
Grid 7 <b>109.4 M4</b>	Grid 8 <b>115.5 M4</b>	Grid 9 <b>113.5 M4</b>

Author Data  
**Daoud Attayi**


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0 dB = 115.5V/m

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Author Data <b>Daoud Attayi</b>	Dates of Test <b>April 05-08, 2010</b>	Report No <b>RTS-2068-1004-46</b>	FCC ID <b>L6ARCZ30CW</b>

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

File Name: [HAC\\_E\\_Dipole\\_CDMA835\\_one\\_eighth.da4](#)

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

**Program Name: HAC RF E Dipole**

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

Medium parameters used:  $\sigma = 0$  mho/m,  $\epsilon_r = 1$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: RF Section

DASY4 Configuration:

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

**E Scan - measurement distance from the probe sensor center to CD835**

**Dipole = 10mm/Hearing Aid Compatibility Test (5x37x1): Measurement grid:**

dx=5mm, dy=5mm

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

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

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

**E Scan - measurement distance from the probe sensor center to CD835**

**Dipole = 10mm/Hearing Aid Compatibility Test (41x361x1): Measurement grid:**

dx=5mm, dy=5mm



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Maximum value of peak Total field = 53.1 V/m

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

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

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

Peak E-field in V/m

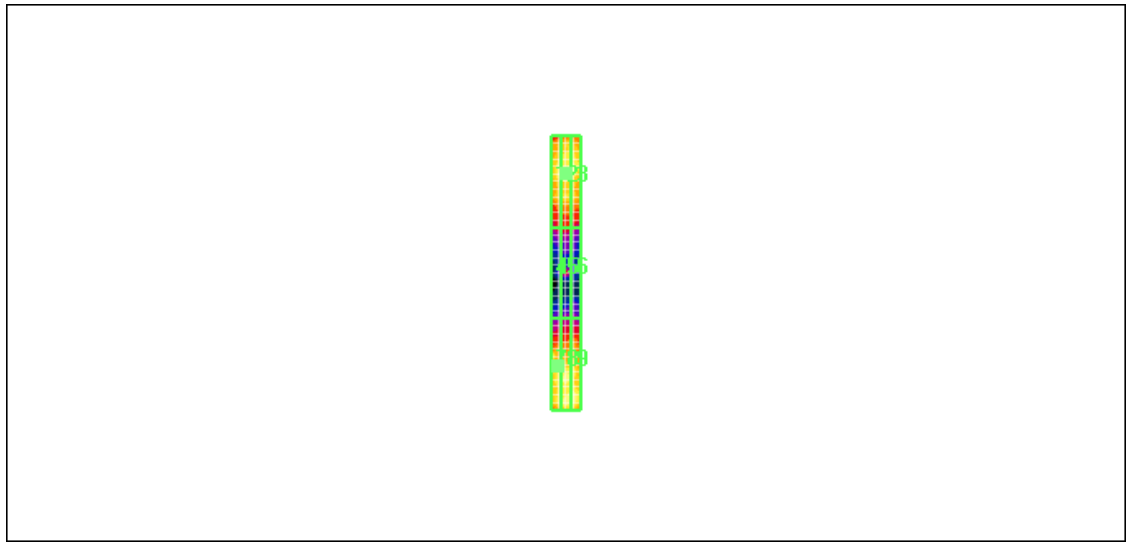
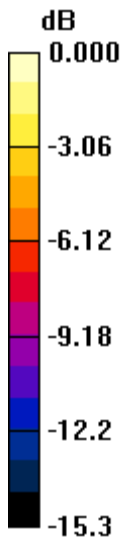
Grid 1 <b>43.8 M4</b>	Grid 2 <b>45.4 M4</b>	Grid 3 <b>45.2 M4</b>
Grid 4 <b>25.2 M4</b>	Grid 5 <b>25.2 M4</b>	Grid 6 <b>21.8 M4</b>
Grid 7 <b>53.1 M4</b>	Grid 8 <b>48.6 M4</b>	Grid 9 <b>46.9 M4</b>

Author Data  
**Daoud Attayi**


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0 dB = 53.1V/m

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<b>Daoud Attayi</b>	<b>April 05-08, 2010</b>	<b>RTS-2068-1004-46</b>	<b>L6ARCZ30CW</b>

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

File Name: [HAC\\_E\\_Dipole\\_CW835\\_PMF\\_CDMA.da4](#)

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

**Program Name: HAC RF E Dipole**

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

Medium parameters used:  $\sigma = 0$  mho/m,  $\epsilon_r = 1$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: RF Section

DASY4 Configuration:

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

**E Scan - measurement distance from the probe sensor center to CD835**

**Dipole = 10mm/Hearing Aid Compatibility Test (5x37x1): Measurement grid:**

dx=5mm, dy=5mm

Probe Modulation Factor = 1.00


Device Reference Point: 0.000, 0.000, -6.30 mm

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

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

**E Scan - measurement distance from the probe sensor center to CD835**



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**Dipole = 10mm/Hearing Aid Compatibility Test (41x361x1): Measurement grid:**

dx=5mm, dy=5mm

Maximum value of peak Total field = 115.2 V/m

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

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

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

Peak E-field in V/m

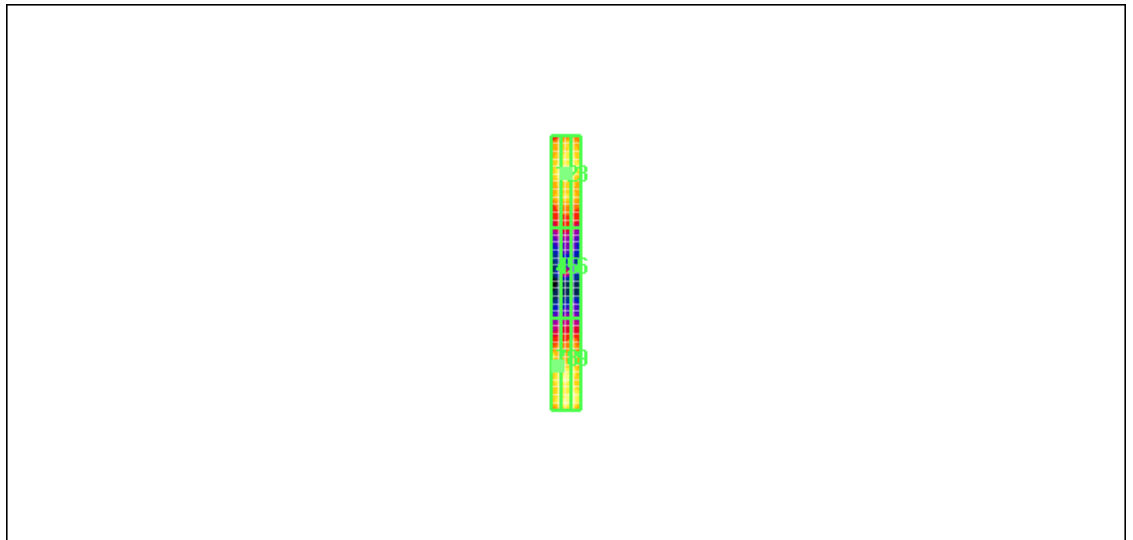
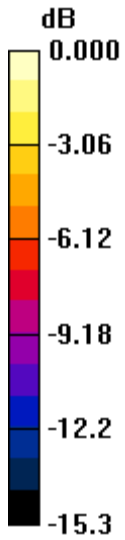
Grid 1	Grid 2	Grid 3
<b>106.3 M4</b>	<b>111.4 M4</b>	<b>110.4 M4</b>
Grid 4	Grid 5	Grid 6
<b>58.8 M4</b>	<b>60.2 M4</b>	<b>58.5 M4</b>
Grid 7	Grid 8	Grid 9
<b>110.1 M4</b>	<b>115.2 M4</b>	<b>113.2 M4</b>

Author Data  
**Daoud Attayi**


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0 dB = 115.2V/m

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

File Name: [HAC\\_E\\_Dipole\\_AM835\\_PMF\\_CDMA.da4](#)

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

**Program Name: HAC RF E Dipole**

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

Medium parameters used:  $\sigma = 0$  mho/m,  $\epsilon_r = 1$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: RF Section

DASY4 Configuration:

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

**E Scan - measurement distance from the probe sensor center to CD835**

**Dipole = 10mm/Hearing Aid Compatibility Test (5x37x1): Measurement grid:**


dx=5mm, dy=5mm

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

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

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

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<b>Daoud Attayi</b>	<b>April 05-08, 2010</b>	<b>RTS-2068-1004-46</b>	<b>L6ARCZ30CW</b>

**E Scan - measurement distance from the probe sensor center to CD835**  
**Dipole = 10mm/Hearing Aid Compatibility Test (41x361x1): Measurement grid:**  
dx=5mm, dy=5mm  
Maximum value of peak Total field = 72.4 V/m  
Probe Modulation Factor = 1.00  
Device Reference Point: 0.000, 0.000, -6.30 mm  
Reference Value = 45.6 V/m; Power Drift = 0.081 dB  
**Hearing Aid Near-Field Category: M4 (AWF 0 dB)**

Peak E-field in V/m

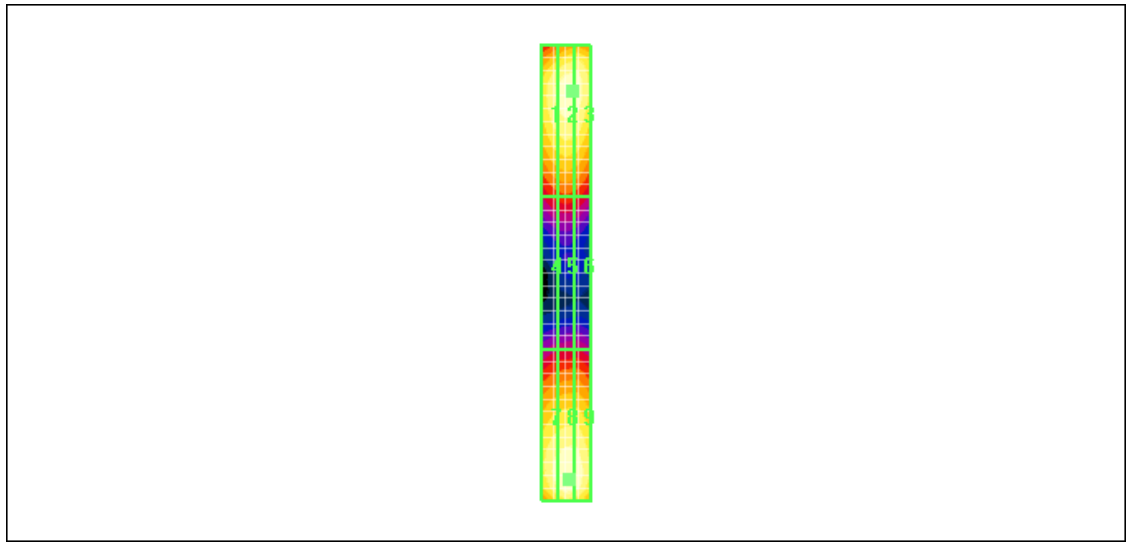
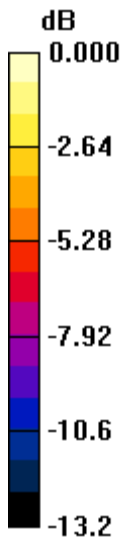
Grid 1	Grid 2	Grid 3
<b>67.0 M4</b>	<b>70.2 M4</b>	<b>69.9 M4</b>
Grid 4	Grid 5	Grid 6
<b>37.4 M4</b>	<b>38.4 M4</b>	<b>37.4 M4</b>
Grid 7	Grid 8	Grid 9
<b>68.8 M4</b>	<b>72.4 M4</b>	<b>71.4 M4</b>

Author Data  
**Daoud Attayi**


Dates of Test  
**April 05-08, 2010**

Report No  
**RTS-2068-1004-46**

FCC ID  
**L6ARCZ30CW**



0 dB = 72.4V/m

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

File Name: [HAC\\_E\\_Dipole\\_CDMA1732.da4](#)

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

**Program Name: HAC RF E Dipole**

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

Medium parameters used:  $\sigma = 0$  mho/m,  $\epsilon_r = 1$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: RF Section

DASY4 Configuration:

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

**E Scan - measurement distance from the probe sensor center to CD1880**

**Dipole = 10mm/Hearing Aid Compatibility Test (5x19x1): Measurement grid:**

dx=5mm, dy=5mm


Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

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

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

**E Scan - measurement distance from the probe sensor center to CD1880**

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

dx=5mm, dy=5mm

Maximum value of peak Total field = 97.0 V/m

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

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

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

Peak E-field in V/m

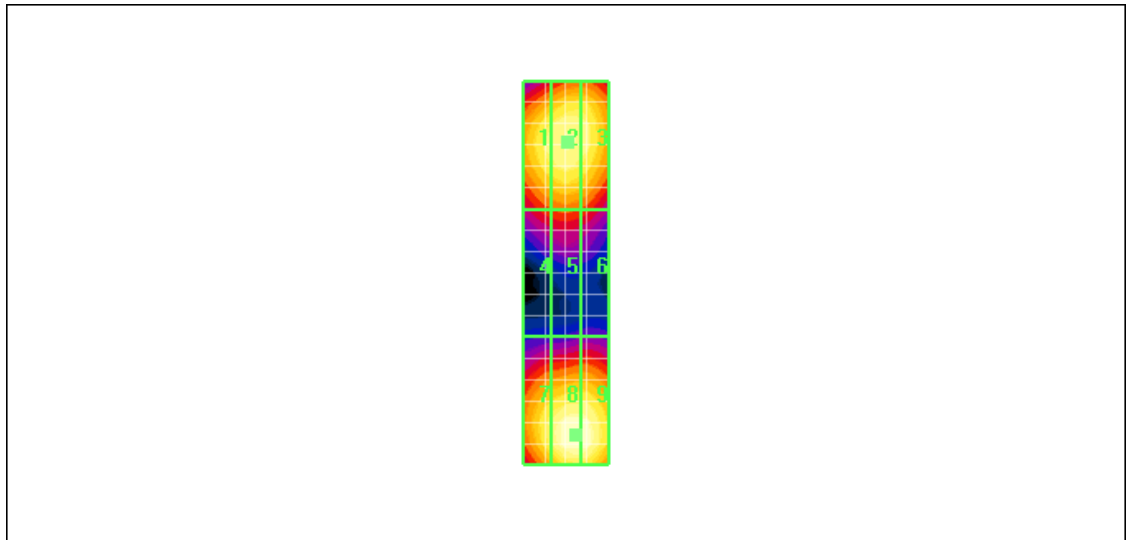
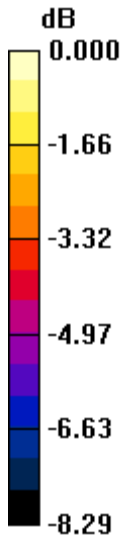
Grid 1	Grid 2	Grid 3
<b>88.8 M3</b>	<b>91.7 M3</b>	<b>90.0 M3</b>
Grid 4	Grid 5	Grid 6
<b>66.5 M3</b>	<b>68.5 M3</b>	<b>66.4 M3</b>
Grid 7	Grid 8	Grid 9
<b>88.8 M3</b>	<b>97.0 M3</b>	<b>96.7 M3</b>

Author Data  
**Daoud Attayi**

Dates of Test  
**April 05-08, 2010**


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0 dB = 97.0V/m



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

File Name: [HAC\\_E\\_Dipole\\_CDMA1732\\_one\\_eigth\\_.da4](#)

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

**Program Name: HAC RF E Dipole**

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

Medium parameters used:  $\sigma = 0$  mho/m,  $\epsilon_r = 1$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: RF Section

DASY4 Configuration:

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

**E Scan - measurement distance from the probe sensor center to CD1880**

**Dipole = 10mm/Hearing Aid Compatibility Test (5x19x1): Measurement grid:**


dx=5mm, dy=5mm

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

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

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

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**E Scan - measurement distance from the probe sensor center to CD1880  
Dipole = 10mm/Hearing Aid Compatibility Test (41x181x1): Measurement grid:  
dx=5mm, dy=5mm  
Maximum value of peak Total field = 36.6 V/m  
Probe Modulation Factor = 1.00  
Device Reference Point: 0.000, 0.000, -6.30 mm  
Reference Value = 38.6 V/m; Power Drift = 0.005 dB  
Hearing Aid Near-Field Category: M4 (AWF 0 dB)**

Peak E-field in V/m

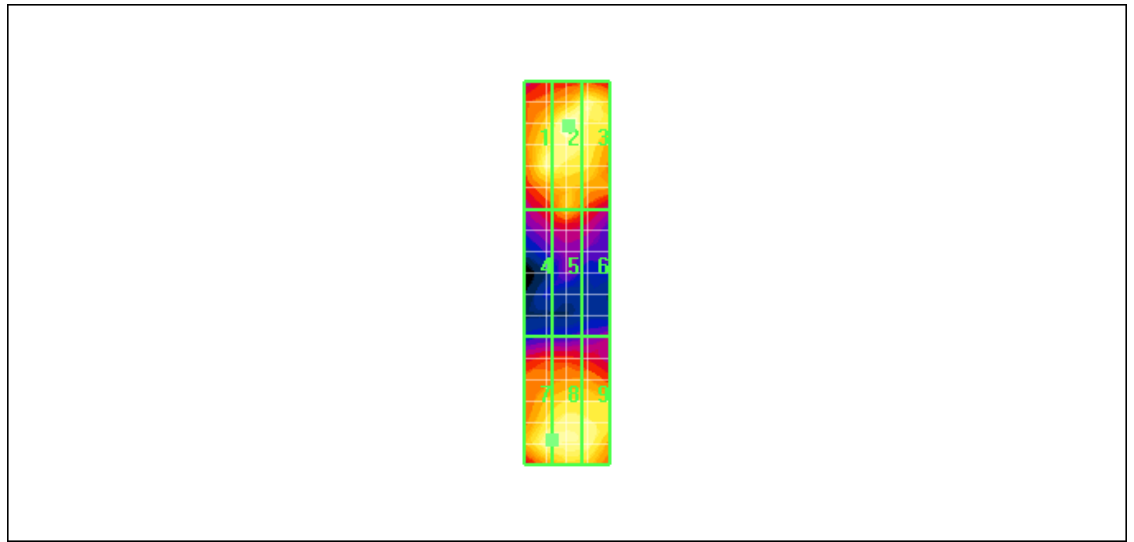
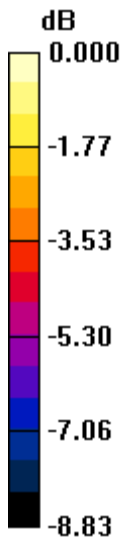
Grid 1 <b>33.9 M4</b>	Grid 2 <b>36.6 M4</b>	Grid 3 <b>34.4 M4</b>
Grid 4 <b>24.1 M4</b>	Grid 5 <b>28.2 M4</b>	Grid 6 <b>24.7 M4</b>
Grid 7 <b>35.3 M4</b>	Grid 8 <b>35.3 M4</b>	Grid 9 <b>34.1 M4</b>

Author Data  
**Daoud Attayi**


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0 dB = 36.6V/m

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

File Name: [HAC\\_E\\_Dipole\\_CW1732\\_CDMA.da4](#)

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

**Program Name: HAC RF E Dipole**

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

Medium parameters used:  $\sigma = 0$  mho/m,  $\epsilon_r = 1$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: RF Section

DASY4 Configuration:

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

**E Scan - measurement distance from the probe sensor center to CD1880**

**Dipole = 10mm/Hearing Aid Compatibility Test (5x19x1): Measurement grid:**

dx=5mm, dy=5mm

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

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

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

**E Scan - measurement distance from the probe sensor center to CD1880**



Author Data  
**Daoud Attayi**

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

dx=5mm, dy=5mm

Maximum value of peak Total field = 94.3 V/m

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

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

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

Peak E-field in V/m

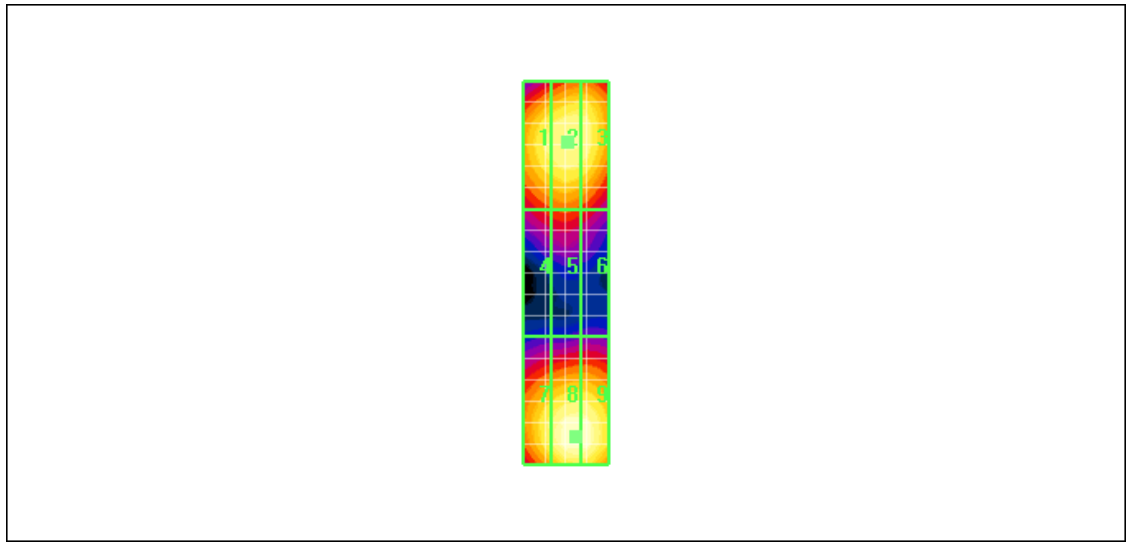
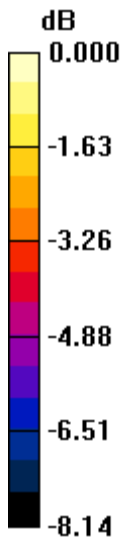
Grid 1 <b>86.7 M3</b>	Grid 2 <b>89.3 M3</b>	Grid 3 <b>88.7 M3</b>
Grid 4 <b>64.7 M3</b>	Grid 5 <b>66.8 M3</b>	Grid 6 <b>63.9 M3</b>
Grid 7 <b>86.8 M3</b>	Grid 8 <b>94.3 M3</b>	Grid 9 <b>94.0 M3</b>

Author Data  
**Daoud Attayi**


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0 dB = 94.3V/m

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

File Name: [HAC\\_E\\_Dipole\\_AM1732\\_CDMA.da4](#)

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

**Program Name: HAC RF E Dipole**

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

Medium parameters used:  $\sigma = 0$  mho/m,  $\epsilon_r = 1$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: RF Section

DASY4 Configuration:

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

**E Scan - measurement distance from the probe sensor center to CD1880**

**Dipole = 10mm/Hearing Aid Compatibility Test (5x19x1): Measurement grid:**


dx=5mm, dy=5mm

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

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

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

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**E Scan - measurement distance from the probe sensor center to CD1880  
Dipole = 10mm/Hearing Aid Compatibility Test (41x181x1): Measurement grid:  
dx=5mm, dy=5mm  
Maximum value of peak Total field = 60.8 V/m  
Probe Modulation Factor = 1.00  
Device Reference Point: 0.000, 0.000, -6.30 mm  
Reference Value = 65.8 V/m; Power Drift = 0.193 dB  
Hearing Aid Near-Field Category: M4 (AWF 0 dB)**

Peak E-field in V/m

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

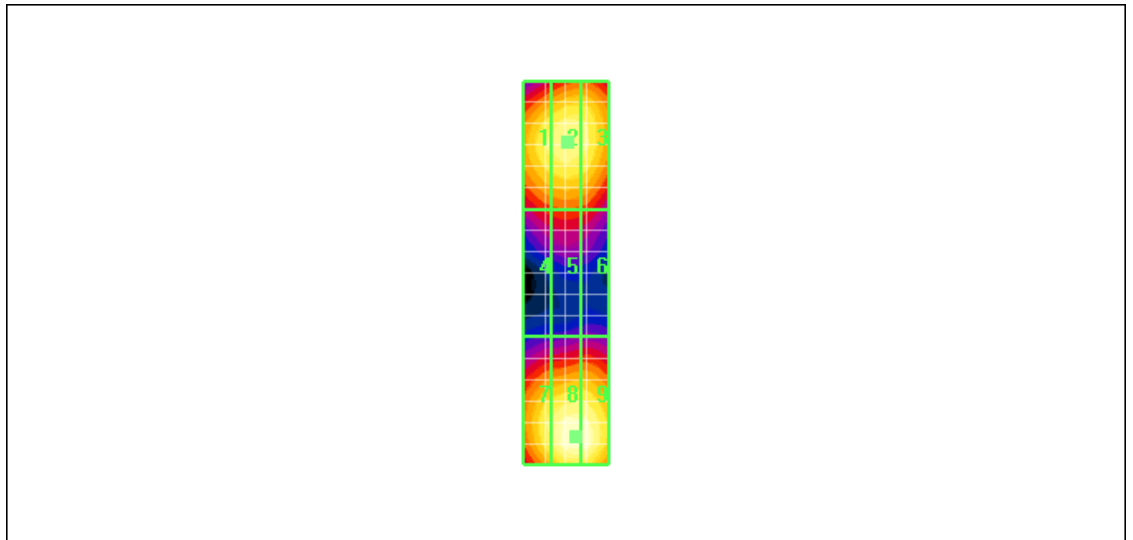
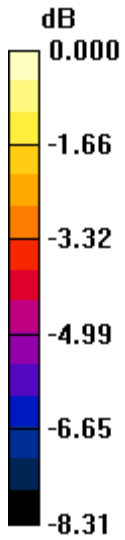


Author Data  
**Daoud Attayi**


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0 dB = 60.8V/m

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

File Name: [HAC\\_E\\_Dipole\\_CW1880\\_20.00dBm.da4](#)

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

**Program Name: HAC RF E Dipole**

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

Medium parameters used:  $\sigma = 0$  mho/m,  $\epsilon_r = 1$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: RF Section

DASY4 Configuration:

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

**E Scan - measurement distance from the probe sensor center to CD1880**

**Dipole = 10mm/Hearing Aid Compatibility Test (5x19x1): Measurement grid:**

dx=5mm, dy=5mm


Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

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

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

**E Scan - measurement distance from the probe sensor center to CD1880**

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

dx=5mm, dy=5mm

Maximum value of peak Total field = 127.6 V/m

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

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

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

Peak E-field in V/m

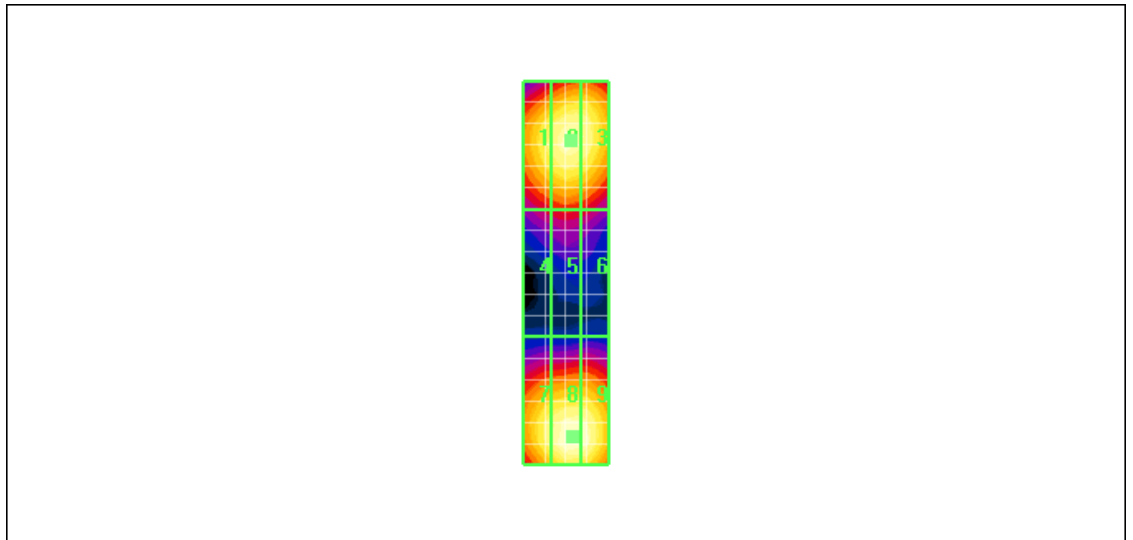
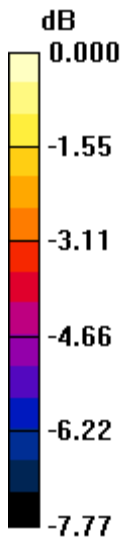
Grid 1 <b>116.8 M2</b>	Grid 2 <b>123.1 M2</b>	Grid 3 <b>121.2 M2</b>
Grid 4 <b>83.5 M3</b>	Grid 5 <b>86.8 M3</b>	Grid 6 <b>84.5 M3</b>
Grid 7 <b>120.2 M2</b>	Grid 8 <b>127.6 M2</b>	Grid 9 <b>126.5 M2</b>

Author Data  
**Daoud Attayi**


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0 dB = 127.6V/m

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

File Name: [HAC\\_E\\_Dipole\\_CDMA1880.da4](#)

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

**Program Name: HAC RF E Dipole**

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

Medium parameters used:  $\sigma = 0$  mho/m,  $\epsilon_r = 1$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: RF Section

DASY4 Configuration:

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

**E Scan - measurement distance from the probe sensor center to CD1880**

**Dipole = 10mm/Hearing Aid Compatibility Test (5x19x1): Measurement grid:**

dx=5mm, dy=5mm

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

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

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

**E Scan - measurement distance from the probe sensor center to CD1880**



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

dx=5mm, dy=5mm

Maximum value of peak Total field = 87.5 V/m

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

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

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

Peak E-field in V/m

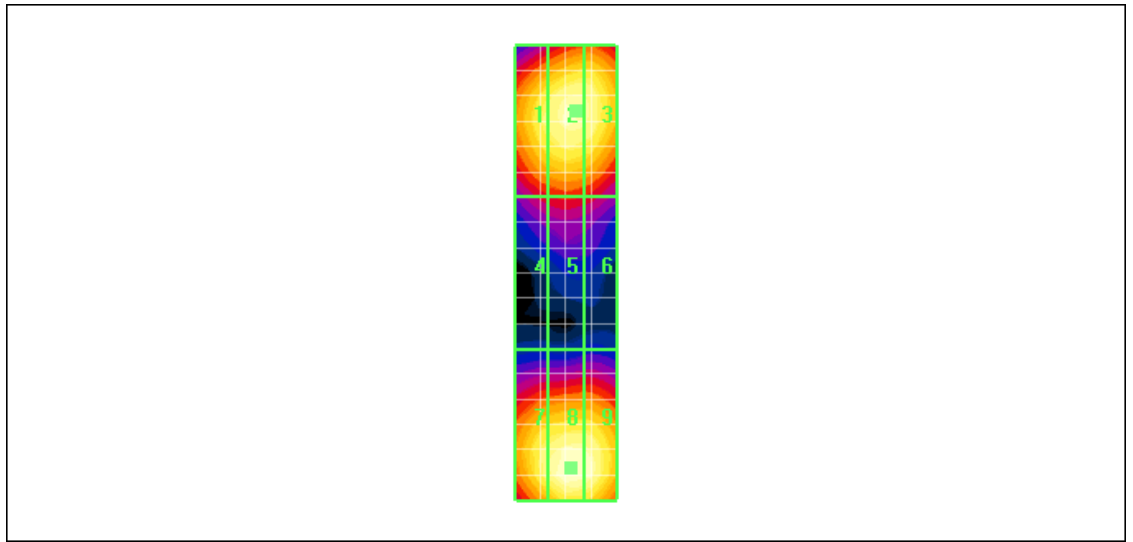
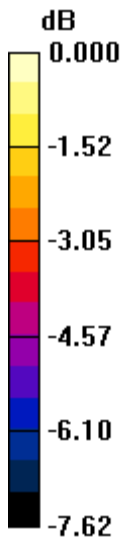
Grid 1 <b>80.4 M3</b>	Grid 2 <b>84.2 M3</b>	Grid 3 <b>83.8 M3</b>
Grid 4 <b>57.5 M4</b>	Grid 5 <b>59.4 M4</b>	Grid 6 <b>57.8 M4</b>
Grid 7 <b>82.4 M3</b>	Grid 8 <b>87.5 M3</b>	Grid 9 <b>86.7 M3</b>

Author Data  
**Daoud Attayi**


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0 dB = 87.5V/m

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

File Name: [HAC\\_E\\_Dipole\\_CDMA1880\\_one\\_eigth.da4](#)

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

**Program Name: HAC RF E Dipole**

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

Medium parameters used:  $\sigma = 0$  mho/m,  $\epsilon_r = 1$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: RF Section

DASY4 Configuration:

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

**E Scan - measurement distance from the probe sensor center to CD1880**

**Dipole = 10mm/Hearing Aid Compatibility Test (5x19x1): Measurement grid:**

dx=5mm, dy=5mm

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

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

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

**E Scan - measurement distance from the probe sensor center to CD1880**





Author Data  
**Daoud Attayi**

Dates of Test  
**April 05-08, 2010**

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**L6ARCZ30CW**

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

dx=5mm, dy=5mm

Maximum value of peak Total field = 34.4 V/m

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

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

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

Peak E-field in V/m

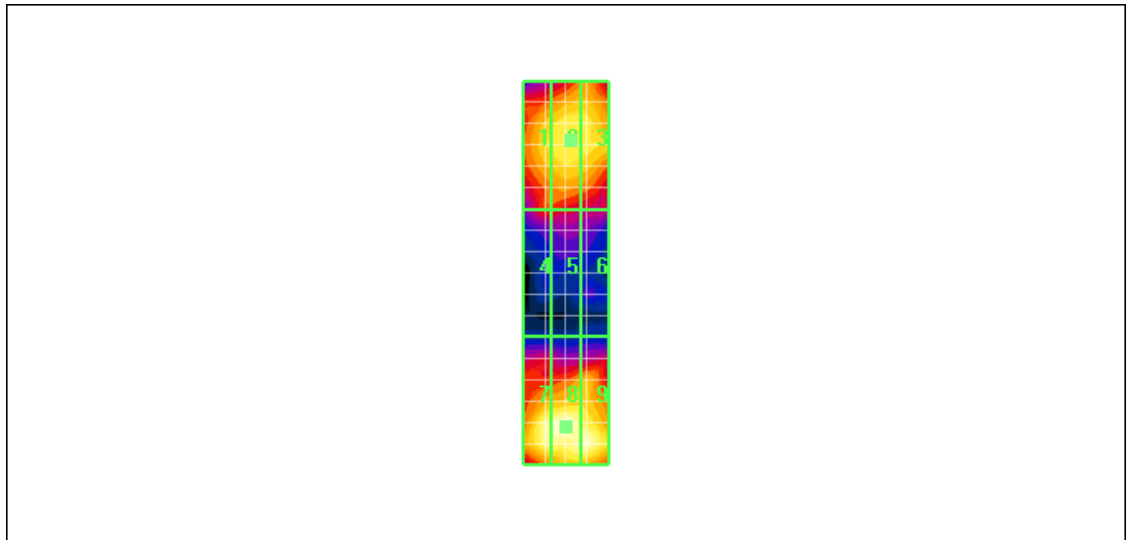
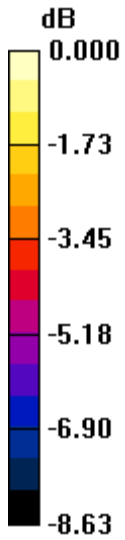
Grid 1 <b>29.0 M4</b>	Grid 2 <b>30.4 M4</b>	Grid 3 <b>30.0 M4</b>
Grid 4 <b>23.0 M4</b>	Grid 5 <b>22.9 M4</b>	Grid 6 <b>20.5 M4</b>
Grid 7 <b>33.6 M4</b>	Grid 8 <b>34.4 M4</b>	Grid 9 <b>34.2 M4</b>

Author Data  
**Daoud Attayi**


Dates of Test  
**April 05-08, 2010**

Report No  
**RTS-2068-1004-46**

FCC ID  
**L6ARCZ30CW**



0 dB = 34.4V/m

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

File Name: [HAC\\_E\\_Dipole\\_CW1880\\_PMF\\_CDMA.da4](#)

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

**Program Name: HAC RF E Dipole**

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

Medium parameters used:  $\sigma = 0$  mho/m,  $\epsilon_r = 1$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: RF Section

DASY4 Configuration:

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

**E Scan - measurement distance from the probe sensor center to CD1880**

**Dipole = 10mm/Hearing Aid Compatibility Test (5x19x1): Measurement grid:**

dx=5mm, dy=5mm

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

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

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

**E Scan - measurement distance from the probe sensor center to CD1880**



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

dx=5mm, dy=5mm

Maximum value of peak Total field = 91.0 V/m

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

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

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

Peak E-field in V/m

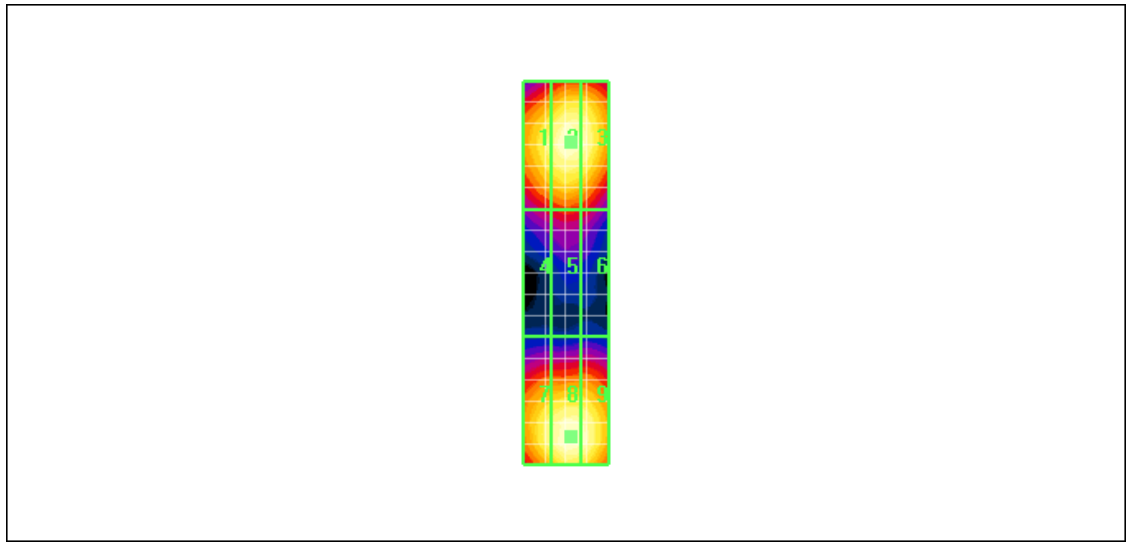
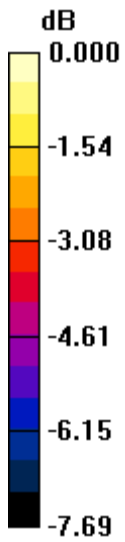
Grid 1 <b>84.2 M3</b>	Grid 2 <b>90.1 M3</b>	Grid 3 <b>88.8 M3</b>
Grid 4 <b>60.0 M4</b>	<b>63.1 M3</b>	Grid 6 <b>61.8 M4</b>
Grid 7 <b>86.1 M3</b>	Grid 8 <b>91.0 M3</b>	Grid 9 <b>89.7 M3</b>

Author Data  
**Daoud Attayi**


Dates of Test  
**April 05-08, 2010**

Report No  
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0 dB = 91.0V/m

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

File Name: [HAC\\_E\\_Dipole\\_AM\\_1880\\_PMF\\_CDMA.da4](#)

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

**Program Name: HAC RF E Dipole**

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

Medium parameters used:  $\sigma = 0$  mho/m,  $\epsilon_r = 1$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: RF Section

DASY4 Configuration:

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

**E Scan - measurement distance from the probe sensor center to CD1880**

**Dipole = 10mm/Hearing Aid Compatibility Test (5x19x1): Measurement grid:**


dx=5mm, dy=5mm

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

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

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

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**E Scan - measurement distance from the probe sensor center to CD1880  
Dipole = 10mm/Hearing Aid Compatibility Test (41x181x1): Measurement grid:  
dx=5mm, dy=5mm  
Maximum value of peak Total field = 54.6 V/m  
Probe Modulation Factor = 1.00  
Device Reference Point: 0.000, 0.000, -6.30 mm  
Reference Value = 61.8 V/m; Power Drift = -0.117 dB  
Hearing Aid Near-Field Category: M4 (AWF 0 dB)**

Peak E-field in V/m

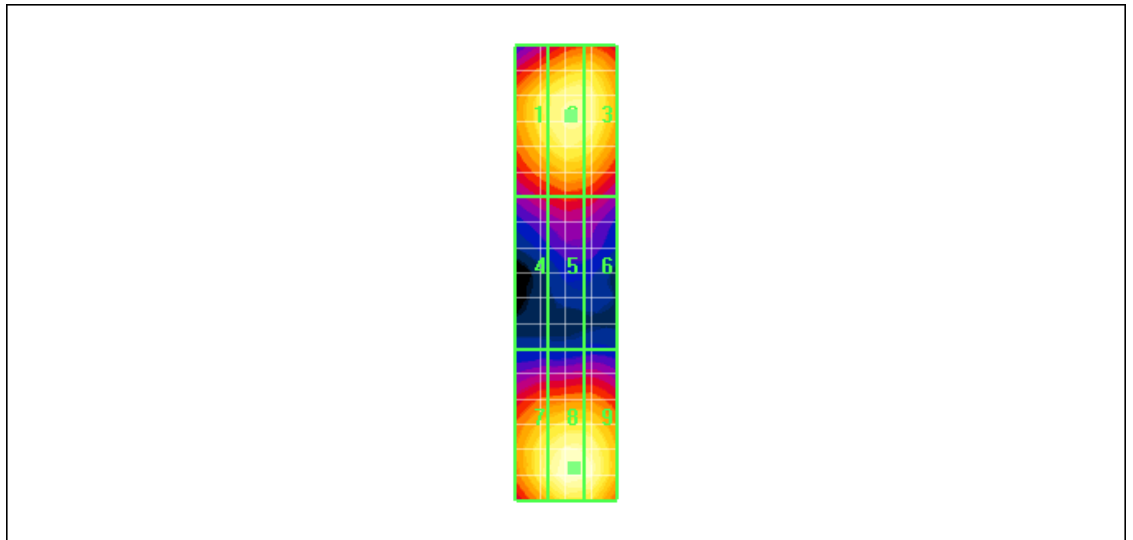
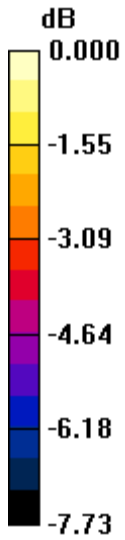
Grid 1	Grid 2	Grid 3
<b>49.6 M4</b>	<b>52.2 M4</b>	<b>51.7 M4</b>
Grid 4	Grid 5	Grid 6
<b>35.2 M4</b>	<b>37.2 M4</b>	<b>36.4 M4</b>
Grid 7	Grid 8	Grid 9
<b>51.0 M4</b>	<b>54.6 M4</b>	<b>54.0 M4</b>

Author Data  
**Daoud Attayi**

Dates of Test  
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0 dB = 54.6V/m



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

File Name: [HAC\\_H\\_Dipole\\_CW835\\_20.00dBm.da4](#)

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

**Program Name: HAC RF H3DV6 Dipole**

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

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

Phantom section: RF Section

DASY4 Configuration:

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

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

**Dipole = 10mm/Hearing Aid Compatibility Test (5x11x1): Measurement grid:**

dx=5mm, dy=5mm

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

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

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

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



Author Data  
**Daoud Attayi**

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

dx=5mm, dy=5mm

Maximum value of peak Total field = 0.471 A/m

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

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

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

Peak H-field in A/m

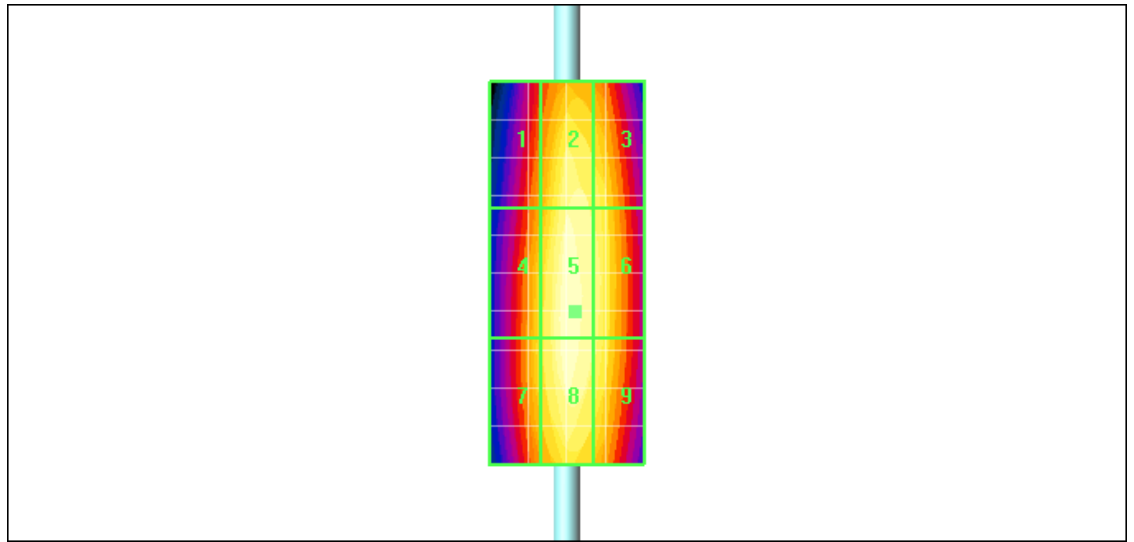
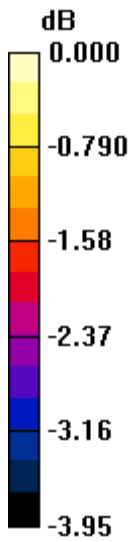
Grid 1 <b>0.418 M4</b>	Grid 2 <b>0.461 M4</b>	Grid 3 <b>0.453 M4</b>
Grid 4 <b>0.437 M4</b>	<b>Grid 5 0.471 M4</b>	Grid 6 <b>0.459 M4</b>
Grid 7 <b>0.438 M4</b>	Grid 8 <b>0.469 M4</b>	Grid 9 <b>0.457 M4</b>

Author Data  
**Daoud Attayi**


Dates of Test  
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**L6ARCZ30CW**



0 dB = 0.471A/m

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

File Name: [HAC\\_H\\_Dipole\\_CDMA835\\_da4](#)

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

**Program Name: HAC RF H3DV6 Dipole**

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

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

Phantom section: RF Section

DASY4 Configuration:

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

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

**Dipole = 10mm/Hearing Aid Compatibility Test (5x11x1): Measurement grid:**

dx=5mm, dy=5mm


Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

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

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

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

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

dx=5mm, dy=5mm

Maximum value of peak Total field = 0.339 A/m

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

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

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

Peak H-field in A/m

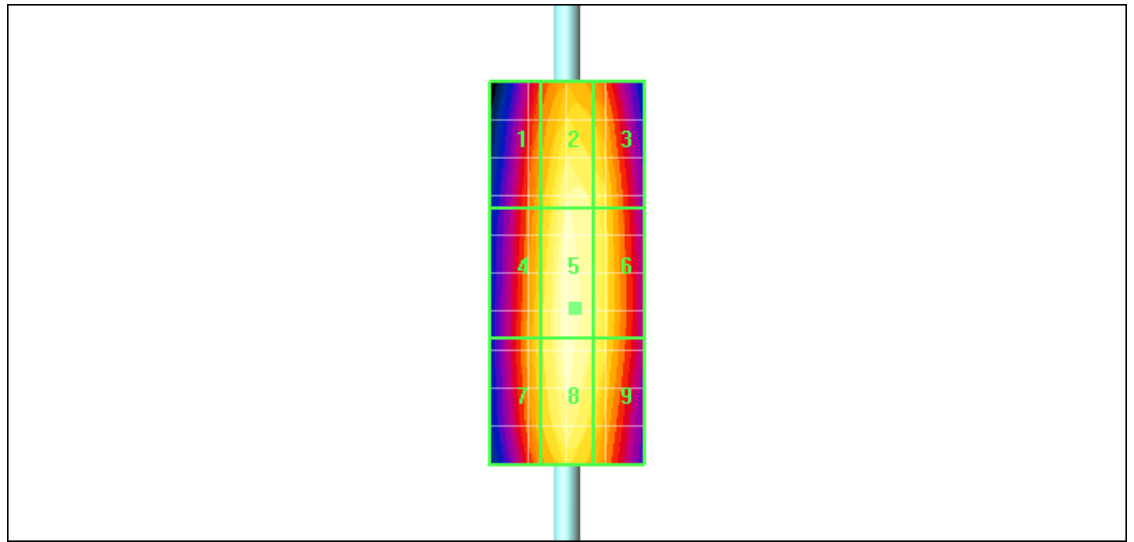
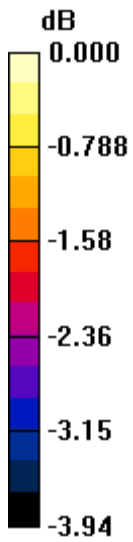
Grid 1 <b>0.304 M4</b>	Grid 2 <b>0.333 M4</b>	Grid 3 <b>0.327 M4</b>
Grid 4 <b>0.315 M4</b>	Grid 5 <b>0.339 M4</b>	Grid 6 <b>0.329 M4</b>
Grid 7 <b>0.315 M4</b>	Grid 8 <b>0.336 M4</b>	Grid 9 <b>0.326 M4</b>

Author Data  
**Daoud Attayi**


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0 dB = 0.339A/m

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

File Name: [HAC\\_H\\_Dipole\\_CDMA835\\_one\\_eighth.da4](#)

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

**Program Name: HAC RF H3DV6 Dipole**

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

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

Phantom section: RF Section

DASY4 Configuration:

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

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

**Dipole = 10mm/Hearing Aid Compatibility Test (5x13x1): Measurement grid:**

dx=5mm, dy=5mm


Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

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

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

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

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**Dipole = 10mm/Hearing Aid Compatibility Test (41x121x1): Measurement grid:**

dx=5mm, dy=5mm

Maximum value of peak Total field = 0.140 A/m

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

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

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

Peak H-field in A/m

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

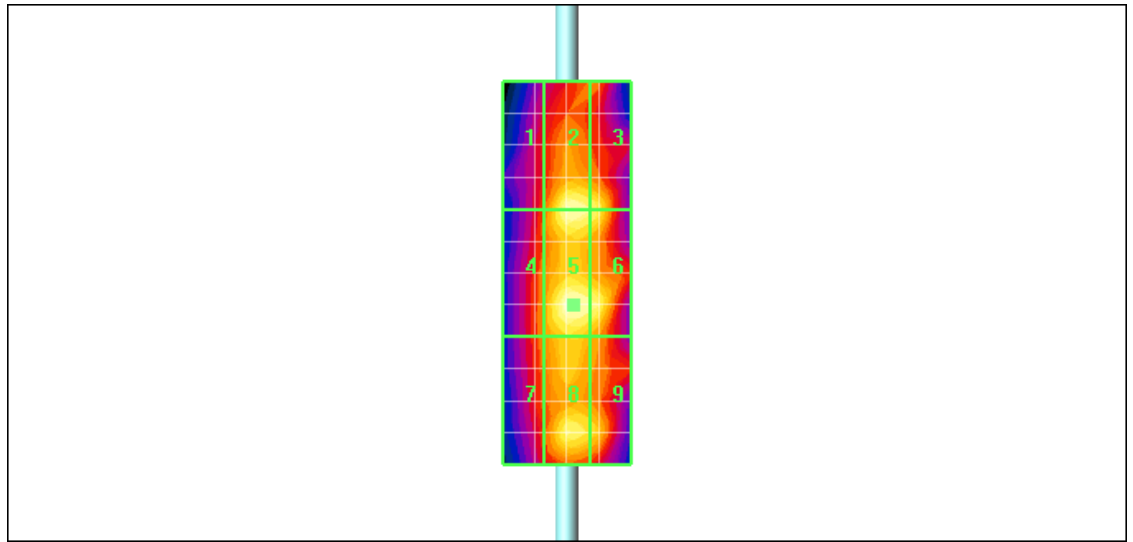
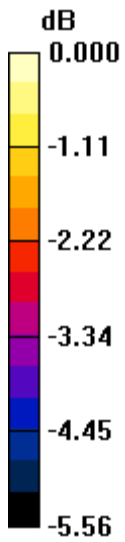


Author Data  
**Daoud Attayi**


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0 dB = 0.140A/m

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

File Name: [HAC\\_H\\_Dipole\\_CW835\\_PMF\\_CDMA.da4](#)

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

**Program Name: HAC RF H3DV6 Dipole**

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

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

Phantom section: RF Section

DASY4 Configuration:

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

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

**Dipole = 10mm/Hearing Aid Compatibility Test (5x11x1): Measurement grid:**

dx=5mm, dy=5mm

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

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

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

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



Author Data  
**Daoud Attayi**

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

dx=5mm, dy=5mm

Maximum value of peak Total field = 0.333 A/m

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

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

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

Peak H-field in A/m

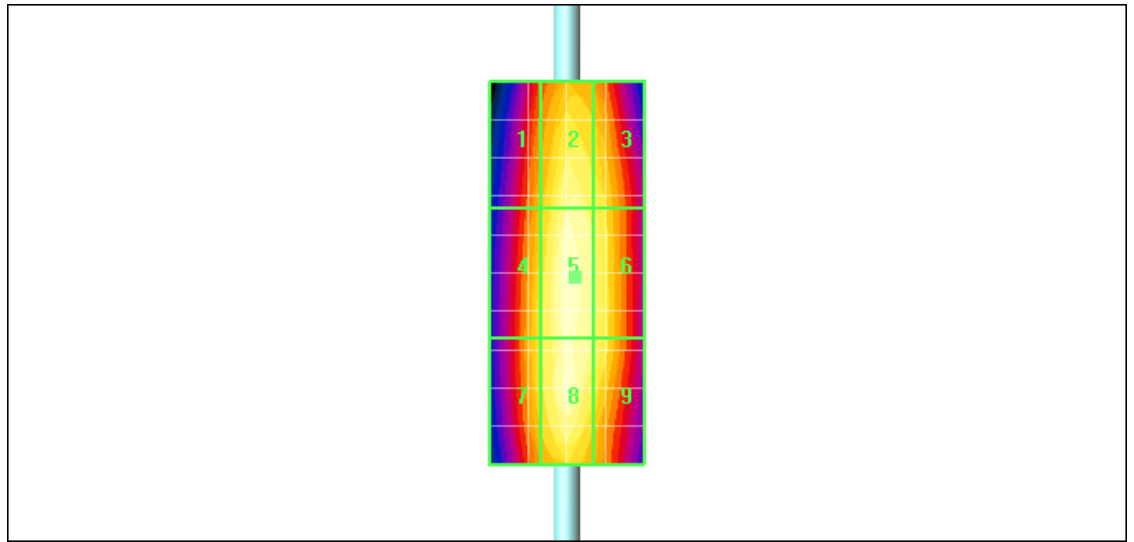
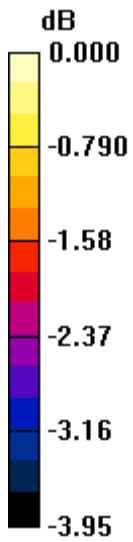
Grid 1 <b>0.300 M4</b>	Grid 2 <b>0.325 M4</b>	Grid 3 <b>0.317 M4</b>
Grid 4 <b>0.311 M4</b>	Grid 5 <b>0.333 M4</b>	Grid 6 <b>0.323 M4</b>
Grid 7 <b>0.311 M4</b>	Grid 8 <b>0.329 M4</b>	Grid 9 <b>0.322 M4</b>

Author Data  
**Daoud Attayi**


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0 dB = 0.333A/m

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

File Name: [HAC\\_H\\_Dipole\\_AM835\\_PMF\\_CDMA.da4](#)

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

**Program Name: HAC RF H3DV6 Dipole**

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

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

Phantom section: RF Section

DASY4 Configuration:

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

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

**Dipole = 10mm/Hearing Aid Compatibility Test (5x13x1): Measurement grid:**

dx=5mm, dy=5mm


Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

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

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

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

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**Dipole = 10mm/Hearing Aid Compatibility Test (41x121x1):** Measurement grid:

dx=5mm, dy=5mm

Maximum value of peak Total field = 0.213 A/m

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

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

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

Peak H-field in A/m

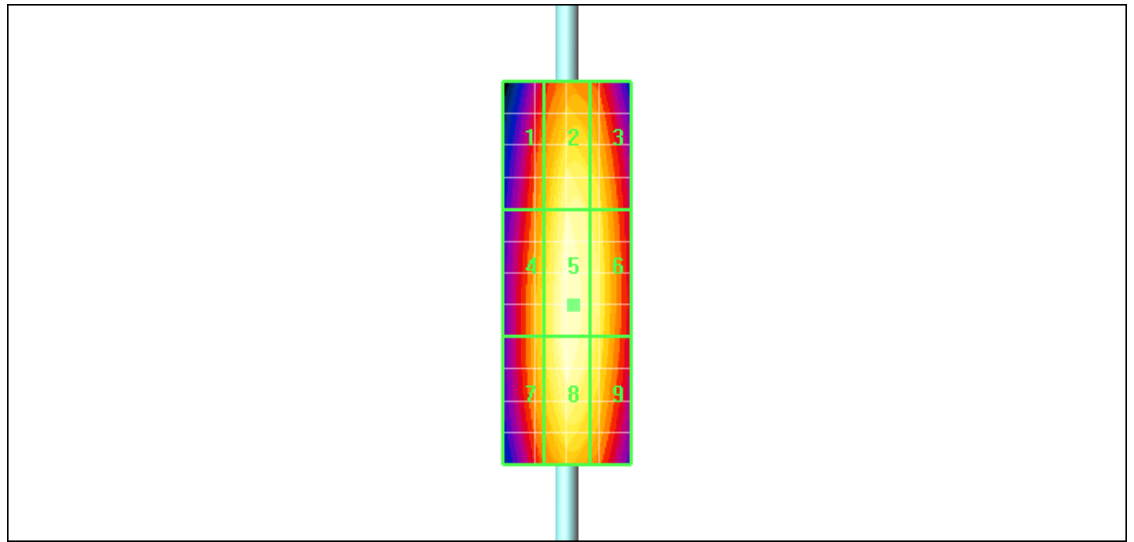
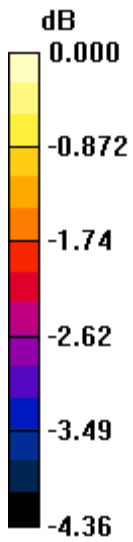
Grid 1 <b>0.189 M4</b>	Grid 2 <b>0.208 M4</b>	Grid 3 <b>0.204 M4</b>
Grid 4 <b>0.197 M4</b>	Grid 5 <b>0.213 M4</b>	Grid 6 <b>0.207 M4</b>
Grid 7 <b>0.197 M4</b>	Grid 8 <b>0.212 M4</b>	Grid 9 <b>0.206 M4</b>

Author Data  
**Daoud Attayi**


Dates of Test  
**April 05-08, 2010**

Report No  
**RTS-2068-1004-46**

FCC ID  
**L6ARCZ30CW**



0 dB = 0.213A/m

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

File Name: [HAC\\_H\\_Dipole\\_CDMA1732.da4](#)

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

**Program Name: HAC RF H3DV6 Dipole**

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

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

Phantom section: RF Section

DASY4 Configuration:

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

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

**Dipole = 10mm/Hearing Aid Compatibility Test (5x11x1): Measurement grid:**

dx=5mm, dy=5mm

Probe Modulation Factor = 1.00


Device Reference Point: 0.000, 0.000, -6.30 mm

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

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

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



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

dx=5mm, dy=5mm

Maximum value of peak Total field = 0.345 A/m

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

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

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

Peak H-field in A/m

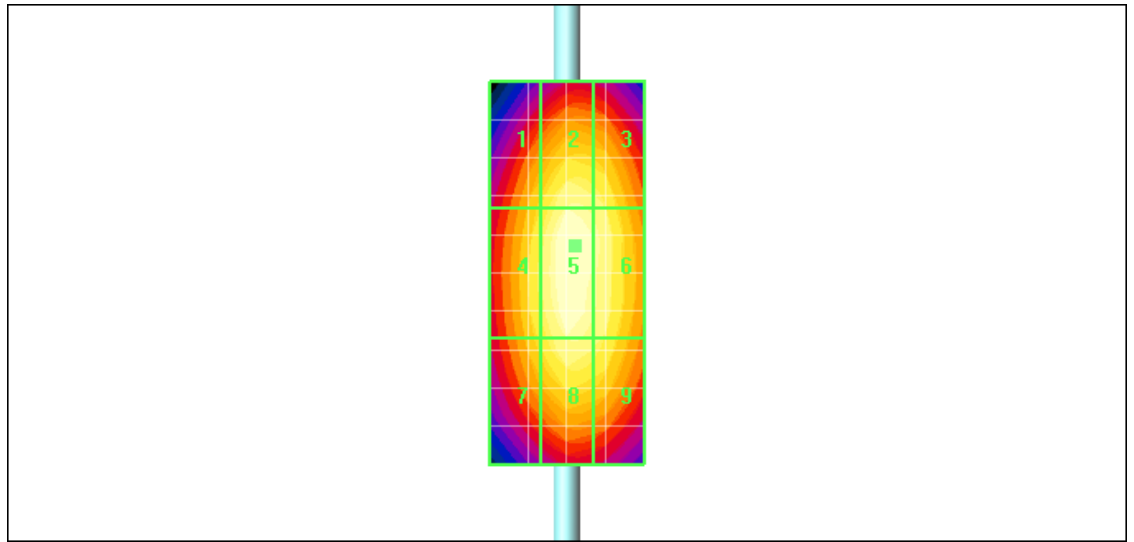
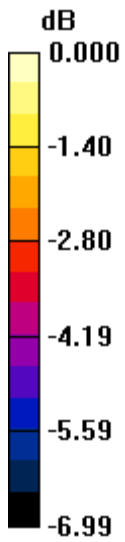
Grid 1 <b>0.299 M3</b>	Grid 2 <b>0.330 M3</b>	Grid 3 <b>0.322 M3</b>
Grid 4 <b>0.314 M3</b>	Grid 5 <b>0.345 M2</b>	Grid 6 <b>0.333 M3</b>
Grid 7 <b>0.302 M3</b>	Grid 8 <b>0.328 M3</b>	Grid 9 <b>0.319 M3</b>

Author Data  
**Daoud Attayi**


Dates of Test  
**April 05-08, 2010**

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**RTS-2068-1004-46**

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**L6ARCZ30CW**



0 dB = 0.345A/m

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

File Name: [HAC\\_H\\_Dipole\\_CDMA1732\\_one\\_eigth.da4](#)

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

**Program Name: HAC RF H3DV6 Dipole**

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

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

Phantom section: RF Section

DASY4 Configuration:

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

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

**Dipole = 10mm/Hearing Aid Compatibility Test (5x11x1): Measurement grid:**


dx=5mm, dy=5mm

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

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

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

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**H Scan - measurement distance from the probe sensor center to CD1880  
Dipole = 10mm/Hearing Aid Compatibility Test (41x101x1): Measurement grid:  
dx=5mm, dy=5mm  
Maximum value of peak Total field = 0.133 A/m  
Probe Modulation Factor = 1.00  
Device Reference Point: 0.000, 0.000, -6.30 mm  
Reference Value = 0.142 A/m; Power Drift = 0.103 dB  
Hearing Aid Near-Field Category: M4 (AWF 0 dB)**

Peak H-field in A/m

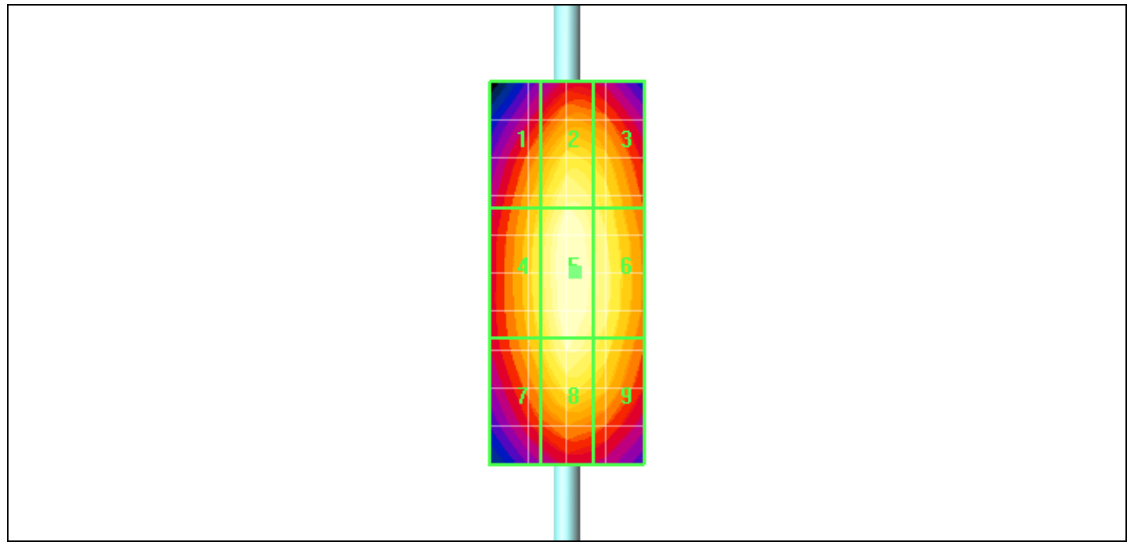
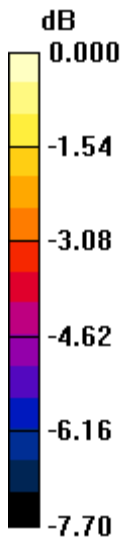
Grid 1 <b>0.113 M4</b>	Grid 2 <b>0.127 M4</b>	Grid 3 <b>0.121 M4</b>
Grid 4 <b>0.118 M4</b>	Grid 5 <b>0.133 M4</b>	Grid 6 <b>0.127 M4</b>
Grid 7 <b>0.113 M4</b>	Grid 8 <b>0.128 M4</b>	Grid 9 <b>0.122 M4</b>

Author Data  
**Daoud Attayi**


Dates of Test  
**April 05-08, 2010**

Report No  
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FCC ID  
**L6ARCZ30CW**



0 dB = 0.133A/m

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

File Name: [HAC\\_H\\_Dipole\\_CW1732\\_PMF\\_CDMA.da4](#)

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

**Program Name: HAC RF H3DV6 Dipole**

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

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

Phantom section: RF Section

DASY4 Configuration:

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

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

**Dipole = 10mm/Hearing Aid Compatibility Test (5x11x1): Measurement grid:**

dx=5mm, dy=5mm


Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

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

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

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

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

dx=5mm, dy=5mm

Maximum value of peak Total field = 0.341 A/m

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

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

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

Peak H-field in A/m

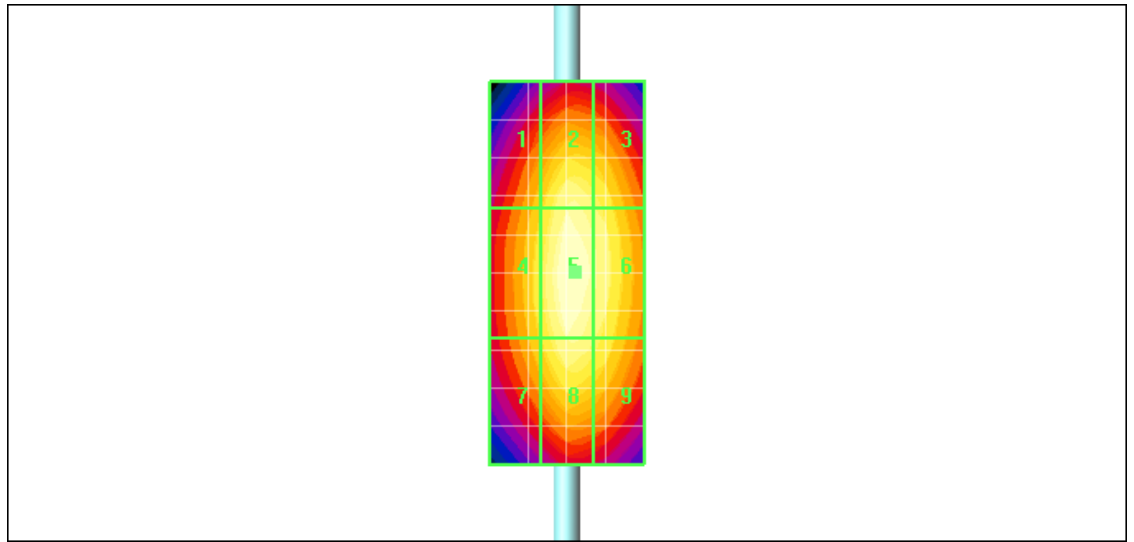
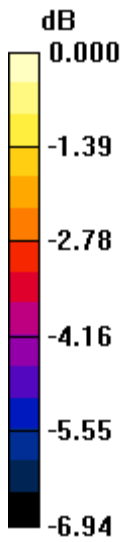
Grid 1 <b>0.288 M3</b>	Grid 2 <b>0.326 M3</b>	Grid 3 <b>0.314 M3</b>
Grid 4 <b>0.303 M3</b>	Grid 5 <b>0.341 M2</b>	Grid 6 <b>0.327 M3</b>
Grid 7 <b>0.293 M3</b>	Grid 8 <b>0.325 M3</b>	Grid 9 <b>0.313 M3</b>

Author Data  
**Daoud Attayi**

Dates of Test  
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FCC ID  
**L6ARCZ30CW**



0 dB = 0.341A/m



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

File Name: [HAC\\_H\\_Dipole\\_AM1732\\_PMF\\_CDMA.da4](#)

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

**Program Name: HAC RF H3DV6 Dipole**

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

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

Phantom section: RF Section

DASY4 Configuration:

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

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

**Dipole = 10mm/Hearing Aid Compatibility Test (5x11x1): Measurement grid:**

dx=5mm, dy=5mm


Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

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

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

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

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

dx=5mm, dy=5mm

Maximum value of peak Total field = 0.211 A/m

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

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

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

Peak H-field in A/m

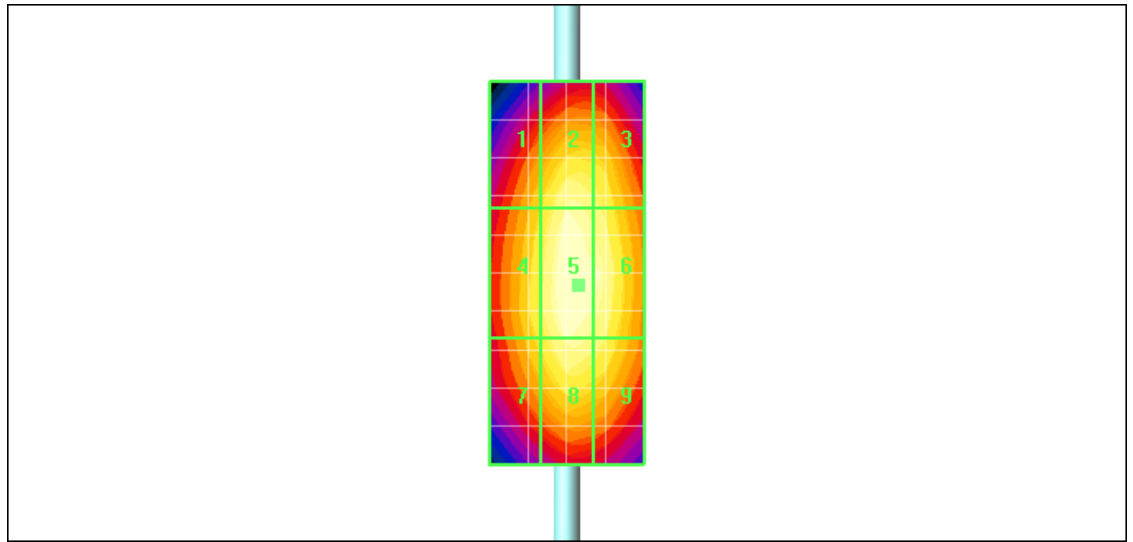
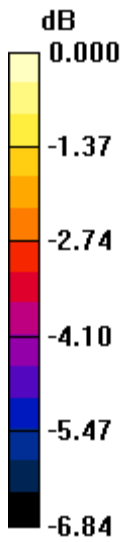
Grid 1 <b>0.181 M4</b>	Grid 2 <b>0.202 M3</b>	Grid 3 <b>0.196 M3</b>
Grid 4 <b>0.191 M3</b>	Grid 5 <b>0.211 M3</b>	Grid 6 <b>0.206 M3</b>
Grid 7 <b>0.185 M4</b>	Grid 8 <b>0.203 M3</b>	Grid 9 <b>0.197 M3</b>

Author Data  
**Daoud Attayi**


Dates of Test  
**April 05-08, 2010**

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**RTS-2068-1004-46**

FCC ID  
**L6ARCZ30CW**



0 dB = 0.211A/m

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

File Name: [HAC\\_H\\_Dipole\\_CW1880\\_20.00dBm.da4](#)

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

**Program Name: HAC RF H3DV6 Dipole**

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

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

Phantom section: RF Section

DASY4 Configuration:

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

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

**Dipole = 10mm/Hearing Aid Compatibility Test (5x11x1): Measurement grid:**

dx=5mm, dy=5mm


Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

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

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

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

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

dx=5mm, dy=5mm

Maximum value of peak Total field = 0.449 A/m

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

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

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

Peak H-field in A/m

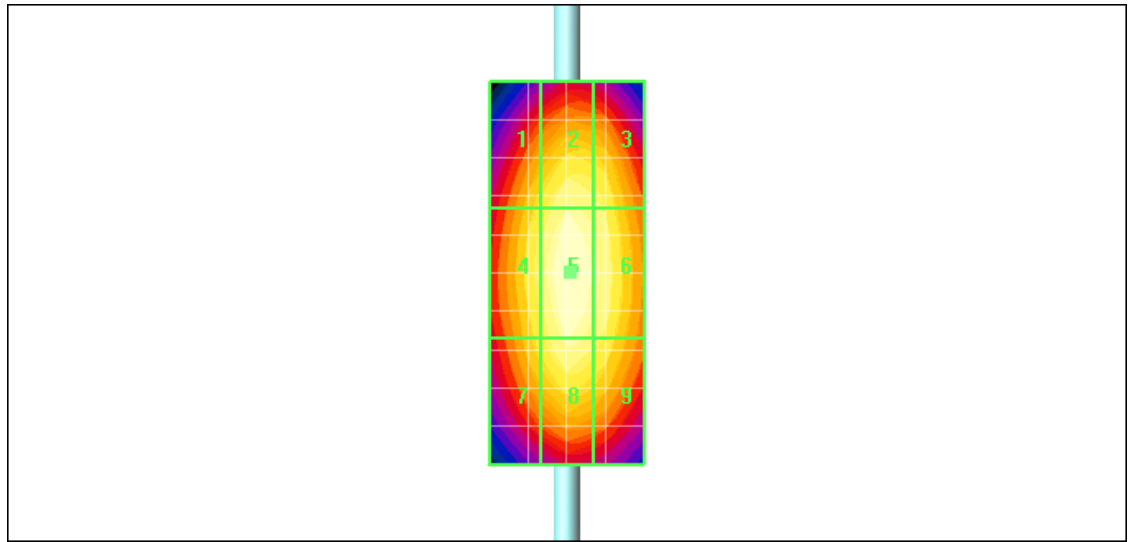
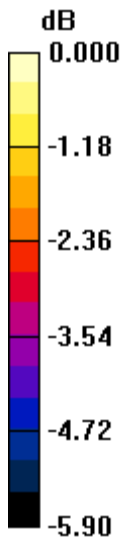
Grid 1 <b>0.402 M2</b>	Grid 2 <b>0.430 M2</b>	Grid 3 <b>0.422 M2</b>
Grid 4 <b>0.421 M2</b>	Grid 5 <b>0.449 M2</b>	Grid 6 <b>0.435 M2</b>
Grid 7 <b>0.405 M2</b>	Grid 8 <b>0.433 M2</b>	Grid 9 <b>0.420 M2</b>

Author Data  
**Daoud Attayi**


Dates of Test  
**April 05-08, 2010**

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0 dB = 0.449A/m

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

File Name: [HAC\\_H\\_Dipole\\_CDMA1880.da4](#)

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

**Program Name: HAC RF H3DV6 Dipole**

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

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

Phantom section: RF Section

DASY4 Configuration:

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

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

**Dipole = 10mm/Hearing Aid Compatibility Test (5x11x1): Measurement grid:**

dx=5mm, dy=5mm


Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

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

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

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

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

dx=5mm, dy=5mm

Maximum value of peak Total field = 0.316 A/m

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

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

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

Peak H-field in A/m

Grid 1 <b>0.283 M3</b>	Grid 2 <b>0.309 M3</b>	Grid 3 <b>0.301 M3</b>
Grid 4 <b>0.292 M3</b>	Grid 5 <b>0.316 M3</b>	Grid 6 <b>0.309 M3</b>
Grid 7 <b>0.286 M3</b>	Grid 8 <b>0.307 M3</b>	Grid 9 <b>0.297 M3</b>

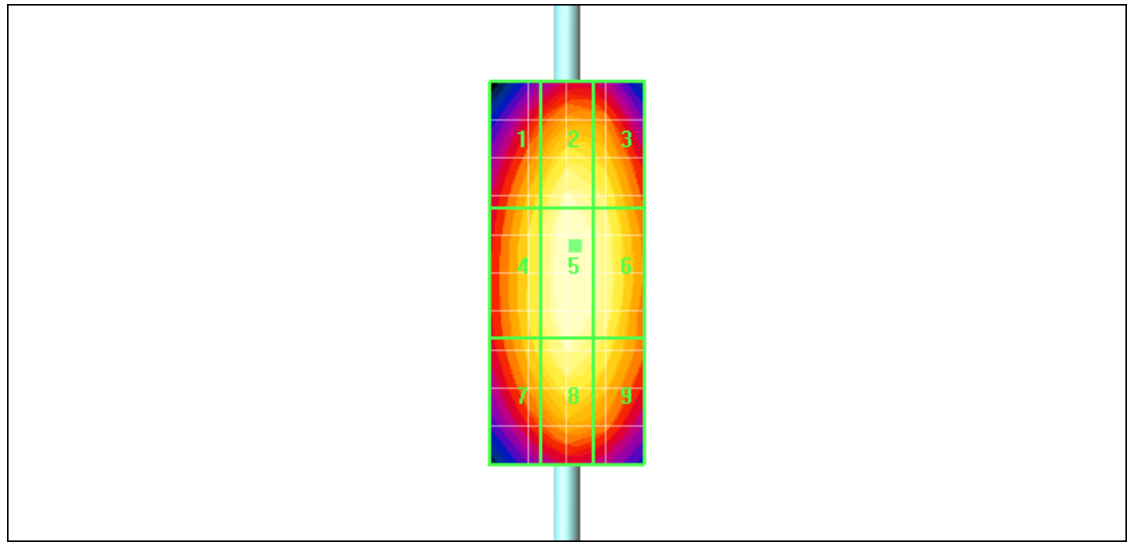
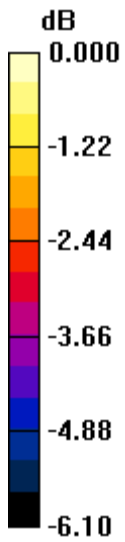


Author Data  
**Daoud Attayi**


Dates of Test  
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**RTS-2068-1004-46**

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0 dB = 0.316A/m

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

File Name: [HAC\\_H\\_Dipole\\_CDMA1880\\_one\\_eigth.da4](#)

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

**Program Name: HAC RF H3DV6 Dipole**

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

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

Phantom section: RF Section

DASY4 Configuration:

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

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

**Dipole = 10mm/Hearing Aid Compatibility Test (5x11x1): Measurement grid:**

dx=5mm, dy=5mm


Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

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

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

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

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

dx=5mm, dy=5mm

Maximum value of peak Total field = 0.125 A/m

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

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

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

Peak H-field in A/m

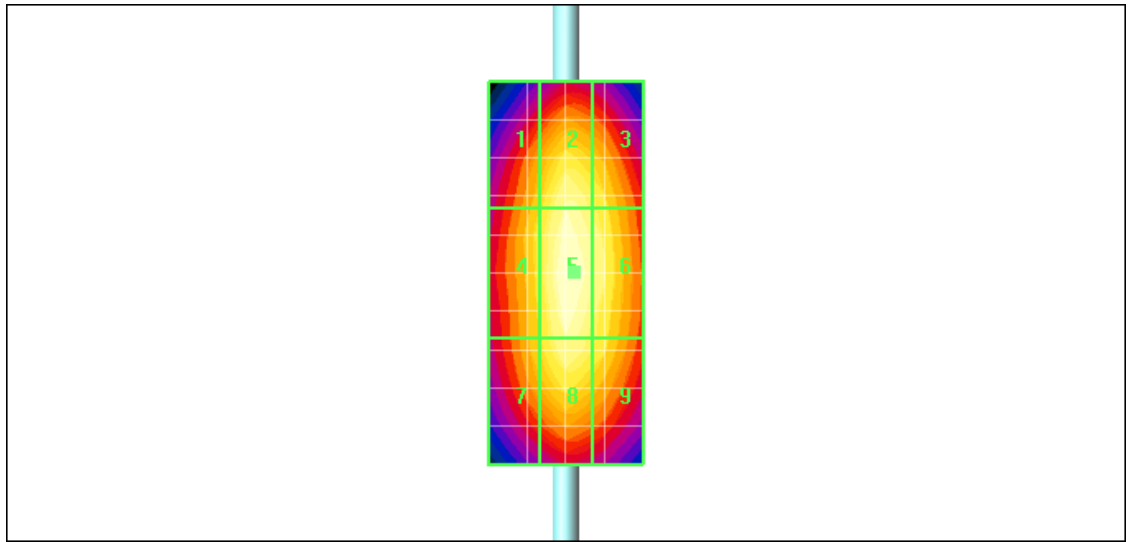
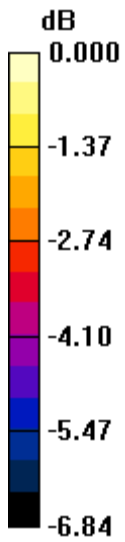
Grid 1 <b>0.107 M4</b>	Grid 2 <b>0.120 M4</b>	Grid 3 <b>0.114 M4</b>
Grid 4 <b>0.111 M4</b>	Grid 5 <b>0.125 M4</b>	Grid 6 <b>0.119 M4</b>
Grid 7 <b>0.107 M4</b>	Grid 8 <b>0.119 M4</b>	Grid 9 <b>0.114 M4</b>

Author Data  
**Daoud Attayi**


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0 dB = 0.125A/m

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

File Name: [HAC\\_H\\_Dipole\\_CW1880\\_PMF\\_CDMA.da4](#)

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

**Program Name: HAC RF H3DV6 Dipole**

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

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

Phantom section: RF Section

DASY4 Configuration:

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

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

**Dipole = 10mm/Hearing Aid Compatibility Test (5x11x1): Measurement grid:**

dx=5mm, dy=5mm


Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

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

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

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

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

dx=5mm, dy=5mm

Maximum value of peak Total field = 0.312 A/m

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

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

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

Peak H-field in A/m

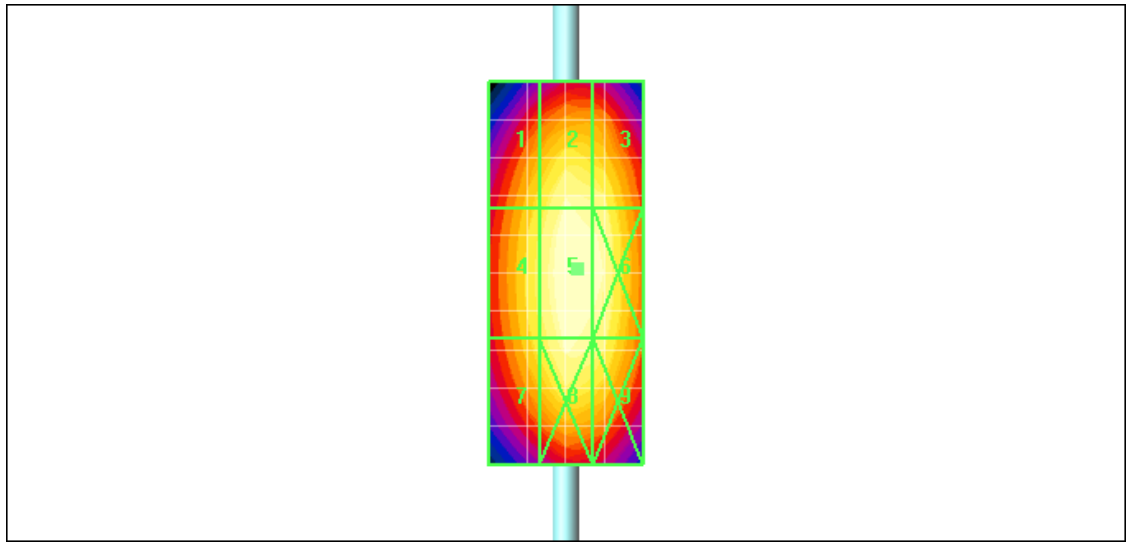
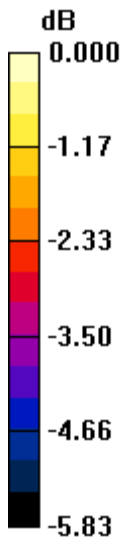
Grid 1 <b>0.280 M3</b>	Grid 2 <b>0.303 M3</b>	Grid 3 <b>0.300 M3</b>
Grid 4 <b>0.290 M3</b>	Grid 5 <b>0.312 M3</b>	Grid 6 <b>0.308 M3</b>
Grid 7 <b>0.283 M3</b>	Grid 8 <b>0.304 M3</b>	Grid 9 <b>0.299 M3</b>

Author Data  
**Daoud Attayi**


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0 dB = 0.312A/m

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File Name: [HAC\\_H\\_Dipole\\_AM1880\\_PMF\\_CDMA.da4](#)

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

**Program Name: HAC RF H3DV6 Dipole**

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

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

Phantom section: TCoil Section

DASY4 Configuration:

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

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

**Dipole = 10mm/Hearing Aid Compatibility Test (5x11x1): Measurement grid:**

dx=5mm, dy=5mm

Probe Modulation Factor = 1.00


Device Reference Point: 0.000, 0.000, -6.30 mm

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

Maximum value of Total (measured) = 0.195 A/m

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



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

dx=5mm, dy=5mm

Maximum value of peak Total field = 0.196 A/m

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

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

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

Peak H-field in A/m

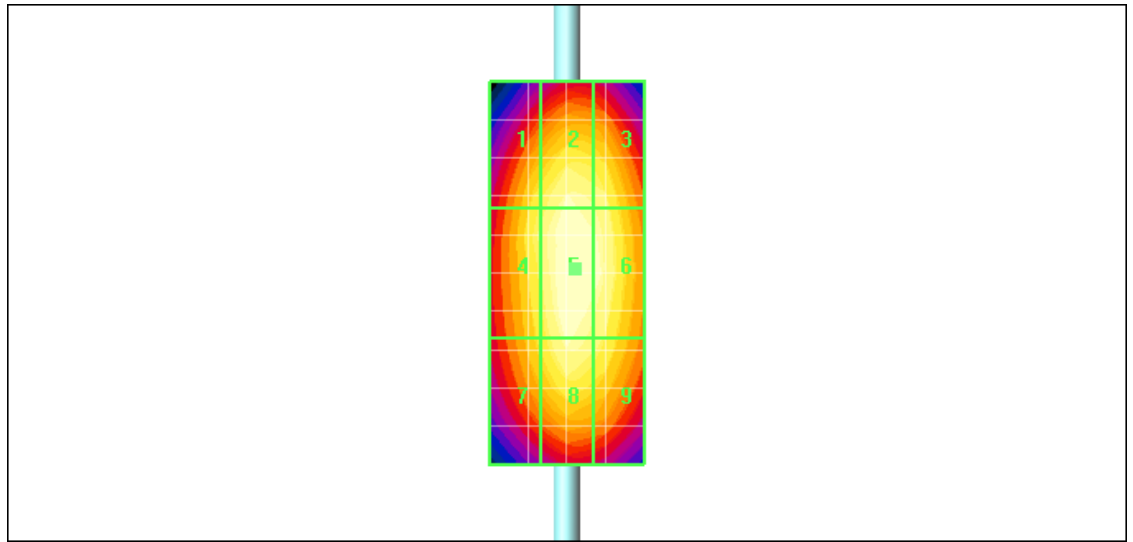
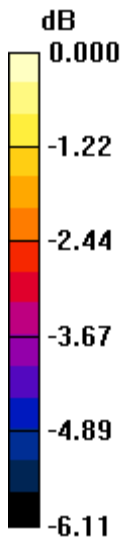
Grid 1 <b>0.179 M4</b>	Grid 2 <b>0.190 M3</b>	Grid 3 <b>0.187 M4</b>
Grid 4 <b>0.184 M4</b>	Grid 5 <b>0.196 M3</b>	Grid 6 <b>0.192 M3</b>
Grid 7 <b>0.174 M4</b>	Grid 8 <b>0.190 M4</b>	Grid 9 <b>0.184 M4</b>

Author Data  
**Daoud Attayi**

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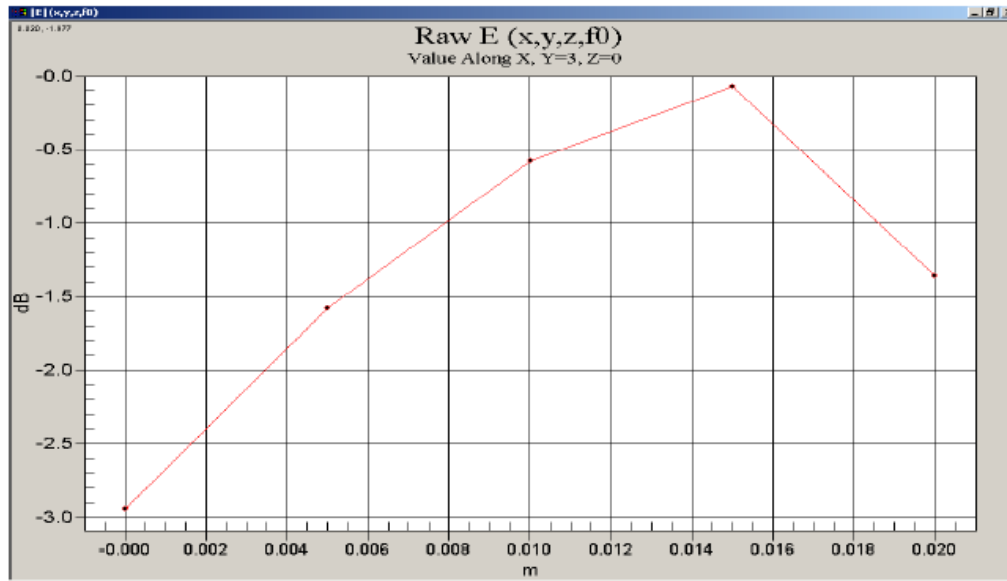
FCC ID  
**L6ARCZ30CW**



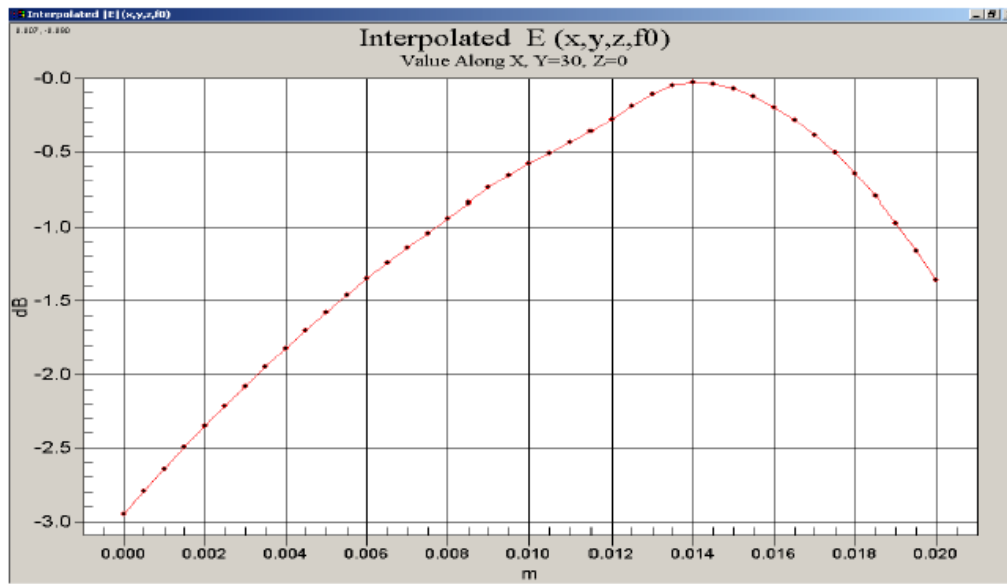
0 dB = 0.196A/m

### Justification of Step Size and Interpolation


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

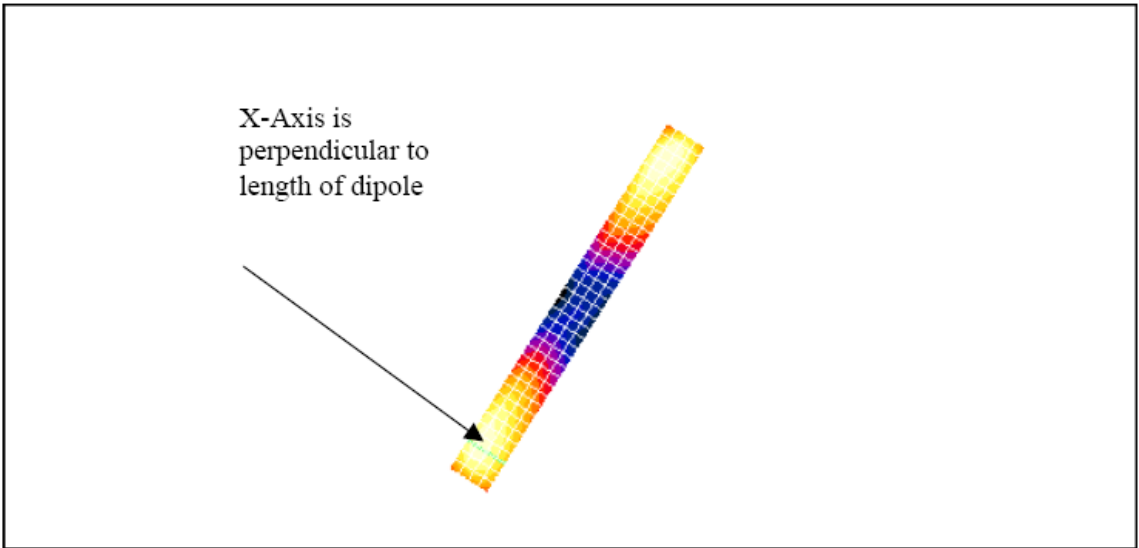


The figure above shows the raw measured field strength perpendicular to the length of the validation dipole. The TCB guidance slides require the 3dB width to be much larger than the step size. The width between -3dB points is > 21mm, at least 4 times the step size.



This figure shows the interpolated field strength perpendicular to the dipole. The interpolated points follow the raw points with no inconsistencies.


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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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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,  $\epsilon_r = 1$ ;  $\rho = 1000$  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

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Author Data  
**Daoud Attayi**

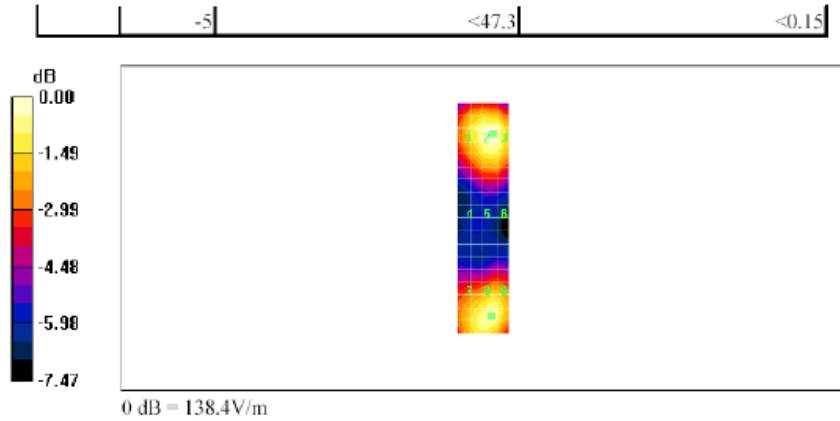
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**Lab: RIM Testing Services (RTS)**

**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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Author Data  
**Daoud Attayi**

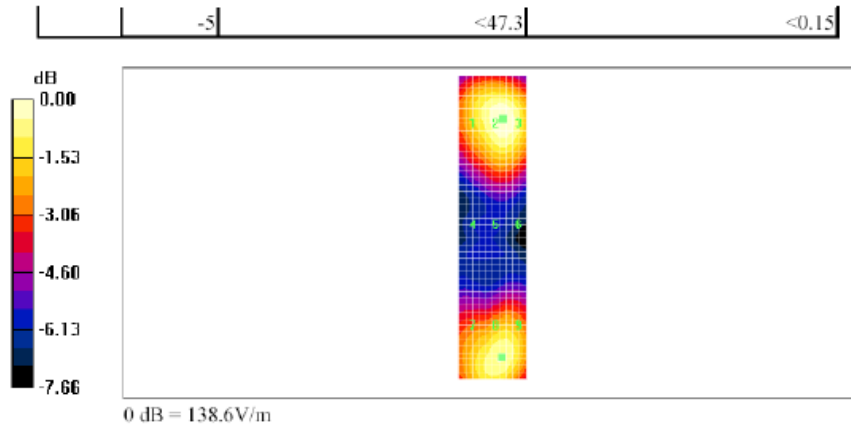
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**Lab: RIM Testing Services (RTS)**

**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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Author Data  
**Daoud Attayi**

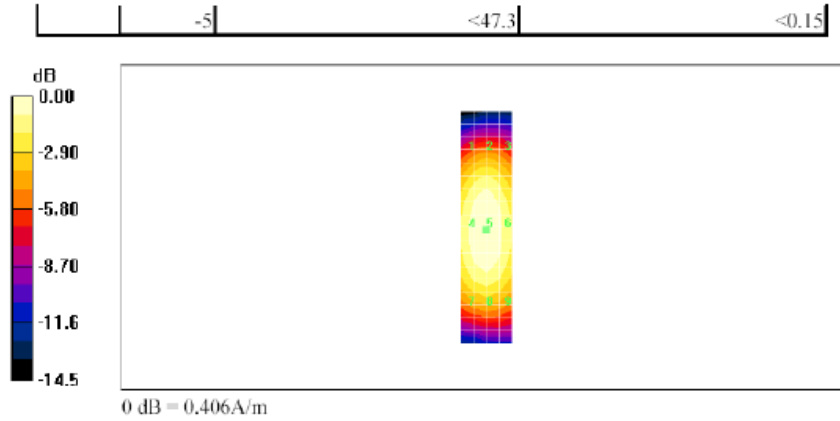
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**Lab: RIM Testing Services (RTS)**

**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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Author Data  
**Daoud Attayi**

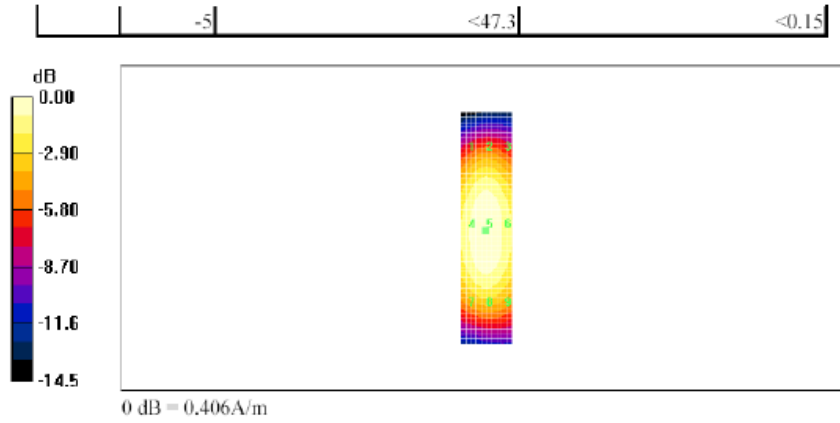
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file://C:\Program%20Files\DASY4\Print\_Templates\HAC\_H\_Dipole\_CW%201880\_2%... 14/07/2005

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Author Data	Dates of Test	Report No	FCC ID
<b>Daoud Attayi</b>	<b>April 05-08, 2010</b>	<b>RTS-2068-1004-46</b>	<b>L6ARCZ30CW</b>

Date/Time: 4/7/2010 6:03:07 PM

Test Laboratory: RIM TESTING SERVICES

File Name: [HAC\\_E\\_CDMA\\_800\\_low\\_chan.da4](#)

**DUT: BlackBerry Smartphone**

**Program Name: HAC RF ER3D Device**

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

Medium parameters used:  $\sigma = 0$  mho/m,  $\epsilon_r = 1$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: RF Section

DASY4 Configuration:

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

**E Scan - ER3D - 2007: 15 mm from Probe Center to the Device/Hearing Aid**

**Compatibility Test (11x11x1):** Measurement grid: dx=5mm, dy=5mm

Probe Modulation Factor = 1.00


Device Reference Point: 0.000, 0.000, -6.30 mm

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

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

**E Scan - ER3D - 2007: 15 mm from Probe Center to the Device/Hearing Aid**

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

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Maximum value of peak Total field = 77.9 V/m

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

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

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

Peak E-field in V/m

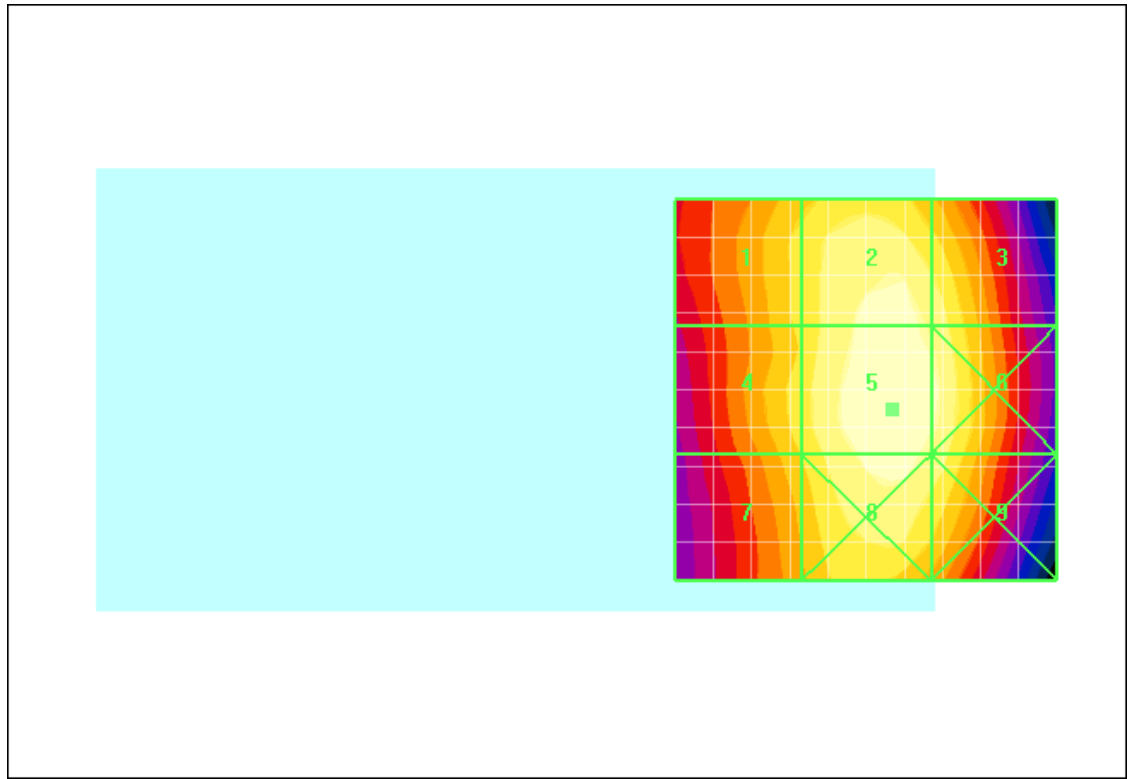
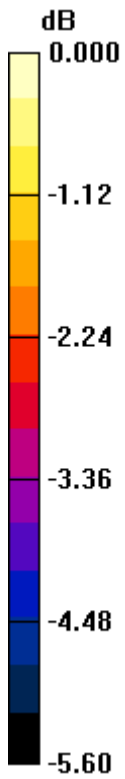
Grid 1 <b>69.8 M4</b>	Grid 2 <b>76.2 M4</b>	Grid 3 <b>74.1 M4</b>
Grid 4 <b>70.5 M4</b>	Grid 5 <b>77.9 M4</b>	Grid 6 <b>75.9 M4</b>
Grid 7 <b>68.7 M4</b>	Grid 8 <b>76.3 M4</b>	Grid 9 <b>74.1 M4</b>

Author Data  
**Daoud Attayi**


Dates of Test  
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0 dB = 77.9V/m

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Test Laboratory: RIM TESTING SERVICES

File Name: [HAC\\_E\\_CDMA\\_800\\_mid\\_chan.da4](#)

**DUT: BlackBerry Smartphone**

**Program Name: HAC RF ER3D Device**

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

Medium parameters used:  $\sigma = 0$  mho/m,  $\epsilon_r = 1$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: RF Section

DASY4 Configuration:

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

**E Scan - ER3D - 2007: 15 mm from Probe Center to the Device/Hearing Aid**

**Compatibility Test (11x11x1):** Measurement grid: dx=5mm, dy=5mm

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

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


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

**E Scan - ER3D - 2007: 15 mm from Probe Center to the Device/Hearing Aid**

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

Maximum value of peak Total field = 86.3 V/m



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Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

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

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

Peak E-field in V/m

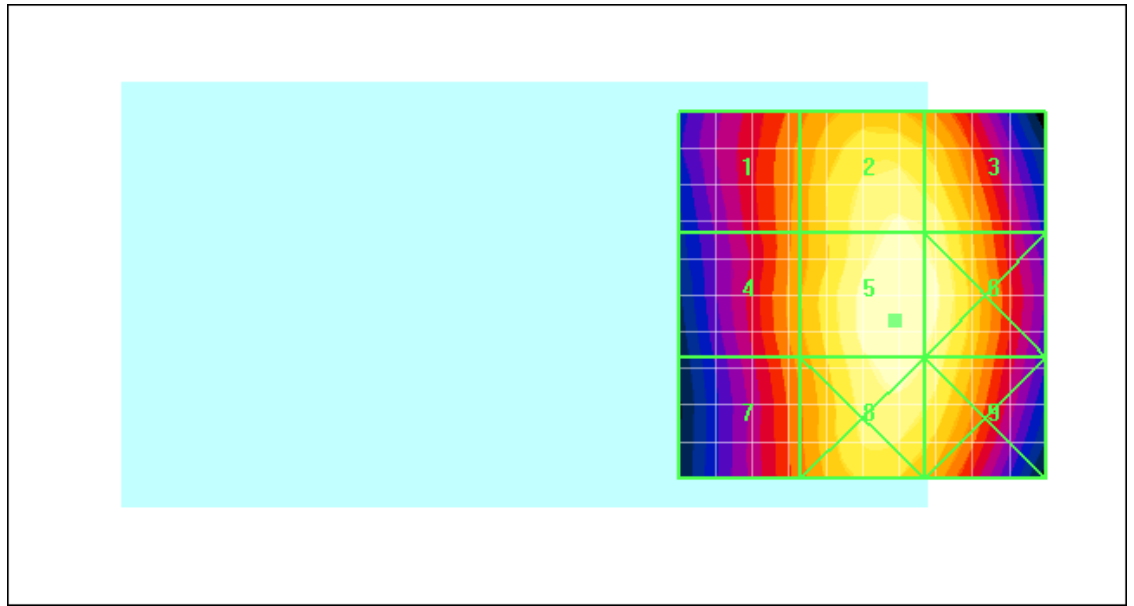
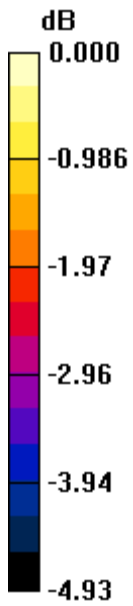
Grid 1 <b>72.9 M4</b>	Grid 2 <b>84.0 M4</b>	Grid 3 <b>83.2 M4</b>
Grid 4 <b>74.2 M4</b>	Grid 5 <b>86.3 M4</b>	Grid 6 <b>85.2 M4</b>
Grid 7 <b>72.7 M4</b>	Grid 8 <b>85.0 M4</b>	Grid 9 <b>83.2 M4</b>

Author Data  
**Daoud Attayi**


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0 dB = 86.3V/m

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

Test Laboratory: RIM TESTING SERVICES

File Name: [HAC\\_E\\_CDMA\\_800\\_high\\_chan.da4](#)

**DUT: BlackBerry Smartphone**

**Program Name: HAC RF ER3D Device**

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

Medium parameters used:  $\sigma = 0$  mho/m,  $\epsilon_r = 1$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: RF Section

DASY4 Configuration:

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

**E Scan - ER3D - 2007: 15 mm from Probe Center to the Device/Hearing Aid**

**Compatibility Test (11x11x1):** Measurement grid: dx=5mm, dy=5mm

Probe Modulation Factor = 1.00


Device Reference Point: 0.000, 0.000, -6.30 mm

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

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

**E Scan - ER3D - 2007: 15 mm from Probe Center to the Device/Hearing Aid**

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

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Maximum value of peak Total field = 89.1 V/m

Probe Modulation Factor = 1.00

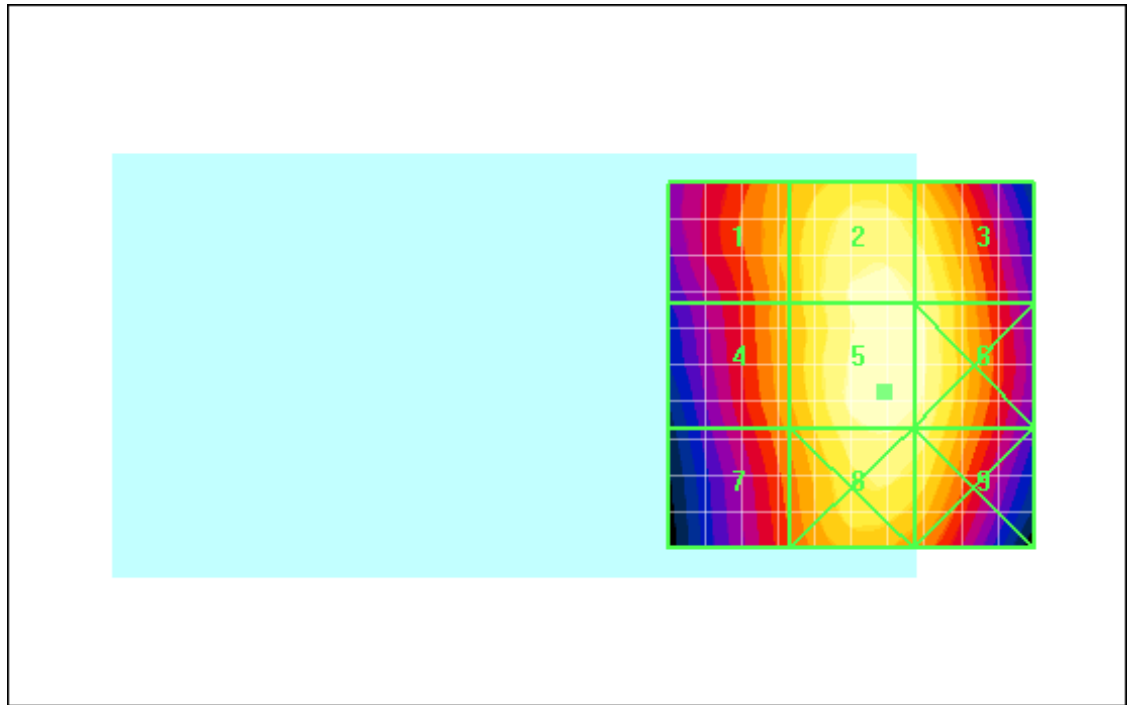
Device Reference Point: 0.000, 0.000, -6.30 mm

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


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

Peak E-field in V/m

Grid 1 <b>77.5 M4</b>	Grid 2 <b>87.4 M4</b>	Grid 3 <b>86.2 M4</b>
Grid 4 <b>76.5 M4</b>	Grid 5 <b>89.1 M4</b>	Grid 6 <b>87.4 M4</b>
Grid 7 <b>74.0 M4</b>	Grid 8 <b>86.1 M4</b>	Grid 9 <b>85.1 M4</b>



0 dB = 89.1V/m

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Test Laboratory: RIM TESTING SERVICES

HAC\_E\_CDMA\_800\_high chan\_one\_eighth

**DUT: BlackBerry Smartphone**

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

Medium parameters used:  $\sigma = 0$  mho/m,  $\epsilon_r = 1$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: RF Section

Measurement Standard: DAS4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 1/8/2010
- Sensor-Surface: 0mm (Fix Surface) Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn473; Calibrated: 1/4/2010
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DAS4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**E Scan - ER3D - 2007: 15 mm from Probe Center to the Device/Hearing Aid**

**Compatibility Test (11x11x1):** Measurement grid: dx=5mm, dy=5mm

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm


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

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

**E Scan - ER3D - 2007: 15 mm from Probe Center to the Device/Hearing Aid**

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

Maximum value of peak Total field = 79.2 V/m

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Probe Modulation Factor = 2.17

Device Reference Point: 0.000, 0.000, -6.30 mm

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

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

Peak E-field in V/m

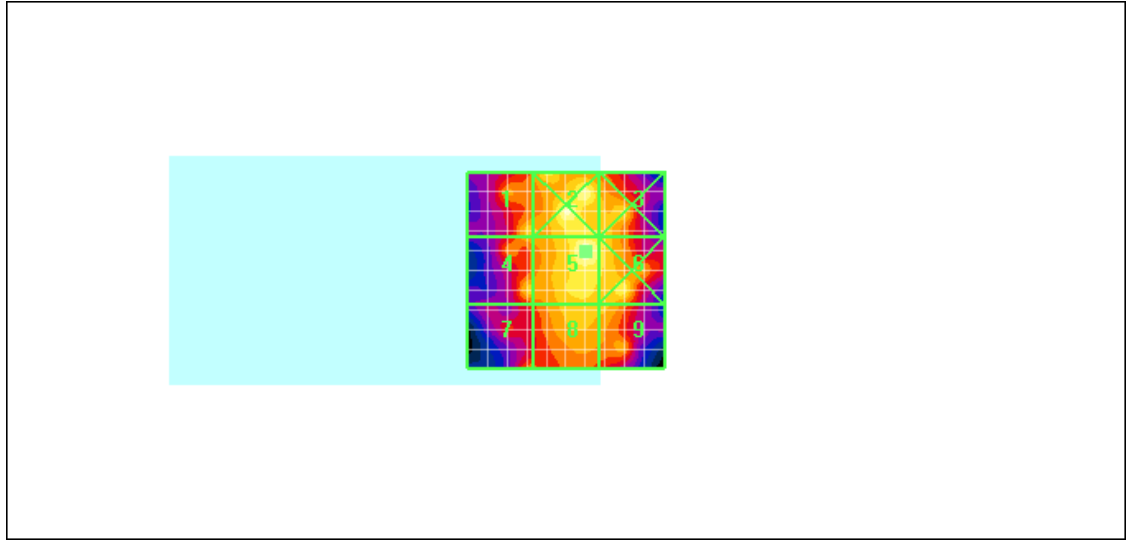
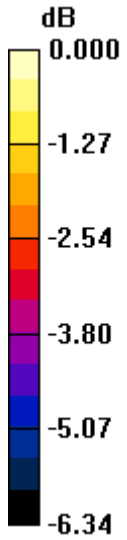
Grid 1	Grid 2	Grid 3
<b>67.1 M4</b>	<b>76.1 M4</b>	<b>69.0 M4</b>
Grid 4	Grid 5	Grid 6
<b>66.8 M4</b>	<b>79.2 M4</b>	<b>71.1 M4</b>
Grid 7	Grid 8	Grid 9
<b>61.8 M4</b>	<b>67.7 M4</b>	<b>66.8 M4</b>

Author Data  
**Daoud Attayi**

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0 dB = 79.2V/m



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

Test Laboratory: RIM TESTING SERVICES

File Name: [HAC\\_E\\_CDMA\\_800\\_high\\_chan\\_telecoil.da4](#)

**DUT: BlackBerry Smartphone**

**Program Name: HAC RF ER3D Device**

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

Medium parameters used:  $\sigma = 0$  mho/m,  $\epsilon_r = 1$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: RF Section

DASY4 Configuration:

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

**E Scan - ER3D - 2007: 15 mm from Probe Center to the Device/Hearing Aid**

**Compatibility Test (11x11x1):** Measurement grid: dx=5mm, dy=5mm

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm


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

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

**E Scan - ER3D - 2007: 15 mm from Probe Center to the Device/Hearing Aid**

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

Maximum value of peak Total field = 87.8 V/m

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Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

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

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

Peak E-field in V/m

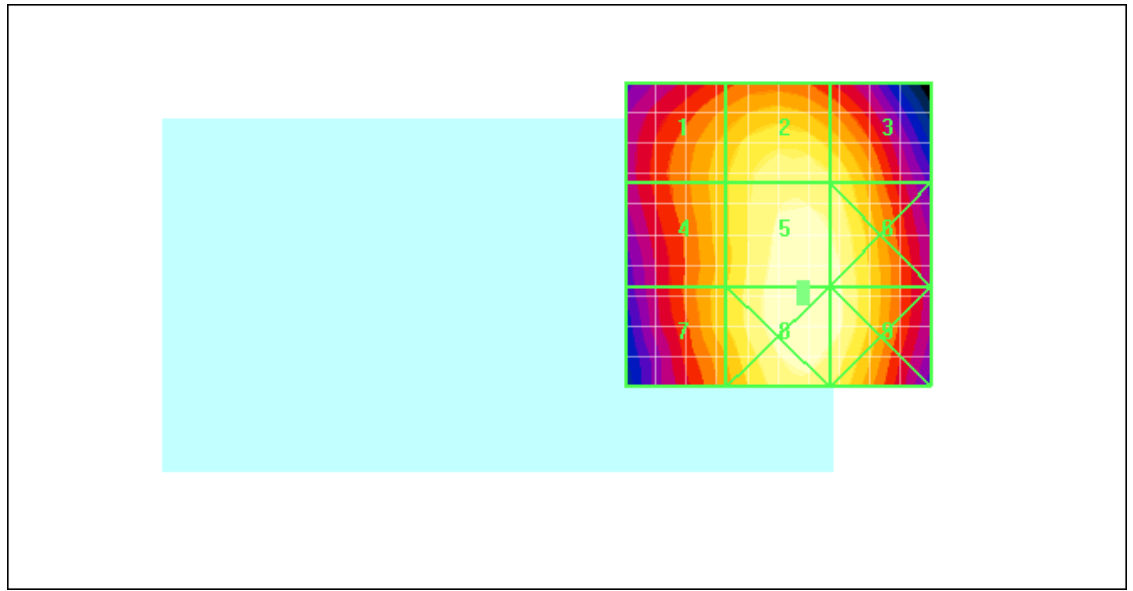
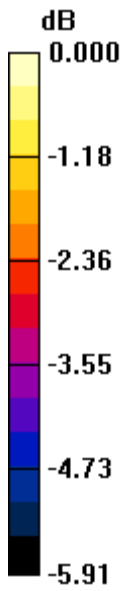
Grid 1 <b>76.5 M4</b>	Grid 2 <b>83.7 M4</b>	Grid 3 <b>81.6 M4</b>
Grid 4 <b>76.7 M4</b>	Grid 5 <b>87.8 M4</b>	Grid 6 <b>86.2 M4</b>
Grid 7 <b>77.1 M4</b>	Grid 8 <b>87.9 M4</b>	Grid 9 <b>86.4 M4</b>

Author Data  
**Daoud Attayi**


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0 dB = 87.9V/m

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Test Laboratory: RIM TESTING SERVICES

File Name: [HAC\\_E\\_CDMA\\_1700\\_low chan.da4](#)

**DUT: BlackBerry Smartphone**

**Program Name: HAC RF ER3D Device**

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

Medium parameters used:  $\sigma = 0$  mho/m,  $\epsilon_r = 1$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: RF Section

DASY4 Configuration:

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

**E Scan - ER3D - 2007: 15 mm from Probe Center to the Device/Hearing Aid**

**Compatibility Test (11x11x1):** Measurement grid: dx=5mm, dy=5mm

Probe Modulation Factor = 1.00


Device Reference Point: 0.000, 0.000, -6.30 mm

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

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

**E Scan - ER3D - 2007: 15 mm from Probe Center to the Device/Hearing Aid**

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

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Maximum value of peak Total field = 41.3 V/m

Probe Modulation Factor = 0.970

Device Reference Point: 0.000, 0.000, -6.30 mm

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

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

Peak E-field in V/m

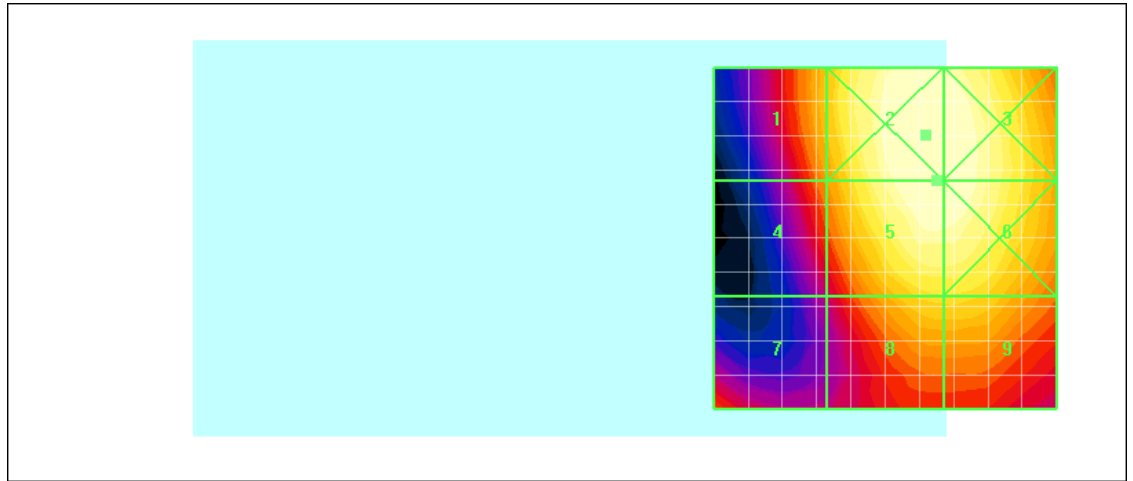
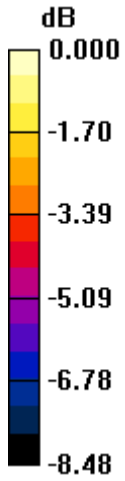
Grid 1  <b>32.8 M4</b>	Grid 2  <b>41.9 M4</b>	Grid 3  <b>41.5 M4</b>
Grid 4  <b>30.4 M4</b>	Grid 5  <b>41.3 M4</b>	Grid 6  <b>41.2 M4</b>
Grid 7  <b>28.1 M4</b>	Grid 8  <b>34.3 M4</b>	Grid 9  <b>34.3 M4</b>

Author Data  
**Daoud Attayi**


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0 dB = 41.9V/m

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Test Laboratory: RIM TESTING SERVICES

File Name: [HAC\\_E\\_CDMA\\_1700\\_mid\\_chan.da4](#)

**DUT: BlackBerry Smartphone**

**Program Name: HAC RF ER3D Device**

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

Medium parameters used:  $\sigma = 0$  mho/m,  $\epsilon_r = 1$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: RF Section

DASY4 Configuration:

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

**E Scan - ER3D - 2007: 15 mm from Probe Center to the Device/Hearing Aid**

**Compatibility Test (11x11x1):** Measurement grid: dx=5mm, dy=5mm

Probe Modulation Factor = 1.00


Device Reference Point: 0.000, 0.000, -6.30 mm

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

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

**E Scan - ER3D - 2007: 15 mm from Probe Center to the Device/Hearing Aid**

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

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Maximum value of peak Total field = 49.2 V/m

Probe Modulation Factor = 0.970

Device Reference Point: 0.000, 0.000, -6.30 mm

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

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

Peak E-field in V/m

Grid 1 <b>37.0 M4</b>	Grid 2 <b>49.8 M4</b>	Grid 3 <b>49.7 M4</b>
Grid 4 <b>34.0 M4</b>	Grid 5 <b>49.2 M4</b>	Grid 6 <b>49.1 M4</b>
Grid 7 <b>32.6 M4</b>	Grid 8 <b>40.3 M4</b>	Grid 9 <b>40.3 M4</b>

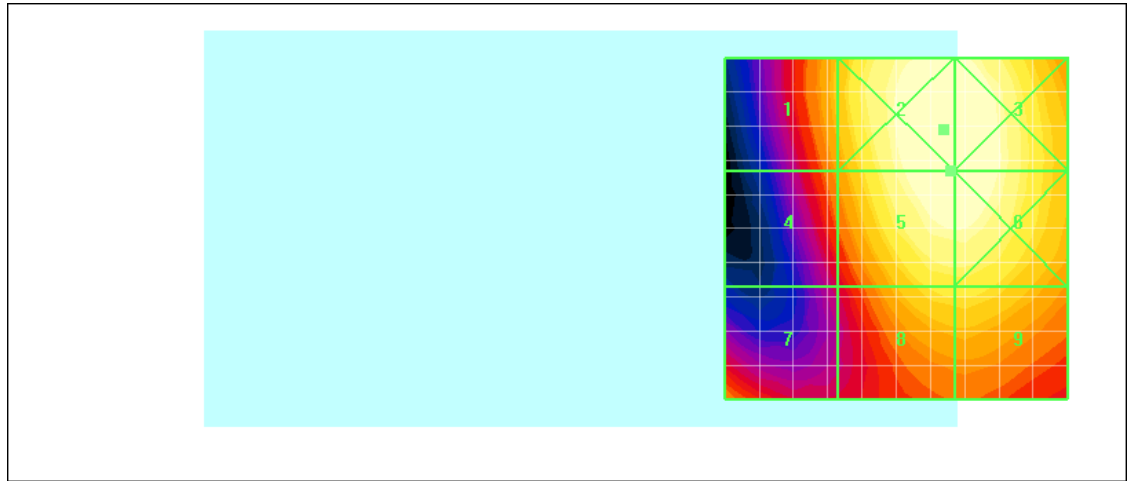
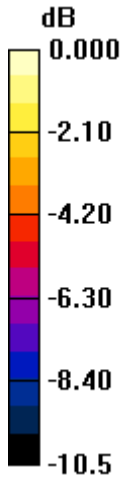


Author Data  
**Daoud Attayi**


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0 dB = 49.8V/m

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

Test Laboratory: RIM TESTING SERVICES

File Name: [HAC\\_E\\_CDMA\\_1700\\_high\\_chan.da4](#)

**DUT: BlackBerry Smartphone**

**Program Name: HAC RF ER3D Device**

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

Medium parameters used:  $\sigma = 0$  mho/m,  $\epsilon_r = 1$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: RF Section

DASY4 Configuration:

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

**E Scan - ER3D - 2007: 15 mm from Probe Center to the Device/Hearing Aid**

**Compatibility Test (11x11x1):** Measurement grid: dx=5mm, dy=5mm

Probe Modulation Factor = 1.00


Device Reference Point: 0.000, 0.000, -6.30 mm

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

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

**E Scan - ER3D - 2007: 15 mm from Probe Center to the Device/Hearing Aid**

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

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	Author Data <b>Daoud Attayi</b>	Dates of Test <b>April 05-08, 2010</b>	Report No <b>RTS-2068-1004-46</b>

Maximum value of peak Total field = 41.4 V/m

Probe Modulation Factor = 0.970

Device Reference Point: 0.000, 0.000, -6.30 mm

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

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

Peak E-field in V/m

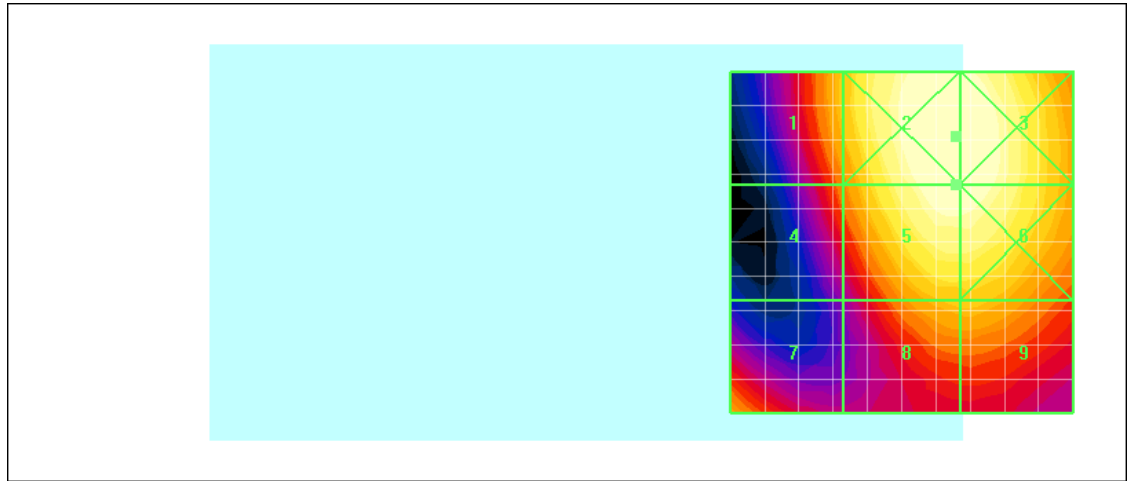
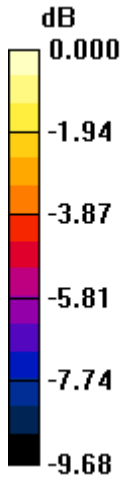
Grid 1 <b>32.5 M4</b>	Grid 2 <b>42.7 M4</b>	Grid 3 <b>42.7 M4</b>
Grid 4 <b>28.8 M4</b>	Grid 5 <b>41.4 M4</b>	Grid 6 <b>41.4 M4</b>
Grid 7 <b>30.3 M4</b>	Grid 8 <b>32.4 M4</b>	Grid 9 <b>32.5 M4</b>

Author Data  
**Daoud Attayi**


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0 dB = 42.7V/m

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

Test Laboratory: RIM TESTING SERVICES

File Name: [HAC\\_E\\_CDMA\\_1700\\_mid\\_chan\\_one\\_eighth.da4](#)

**DUT: BlackBerry Smartphone**

**Program Name: HAC RF ER3D Device**

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

Medium parameters used:  $\sigma = 0$  mho/m,  $\epsilon_r = 1$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: RF Section

DASY4 Configuration:

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

**E Scan - ER3D - 2007: 15 mm from Probe Center to the Device/Hearing Aid**

**Compatibility Test (11x11x1):** Measurement grid: dx=5mm, dy=5mm

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

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

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

**E Scan - ER3D - 2007: 15 mm from Probe Center to the Device/Hearing Aid**



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

Maximum value of peak Total field = 50.3 V/m

Probe Modulation Factor = 2.58

Device Reference Point: 0.000, 0.000, -6.30 mm

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

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

Peak E-field in V/m

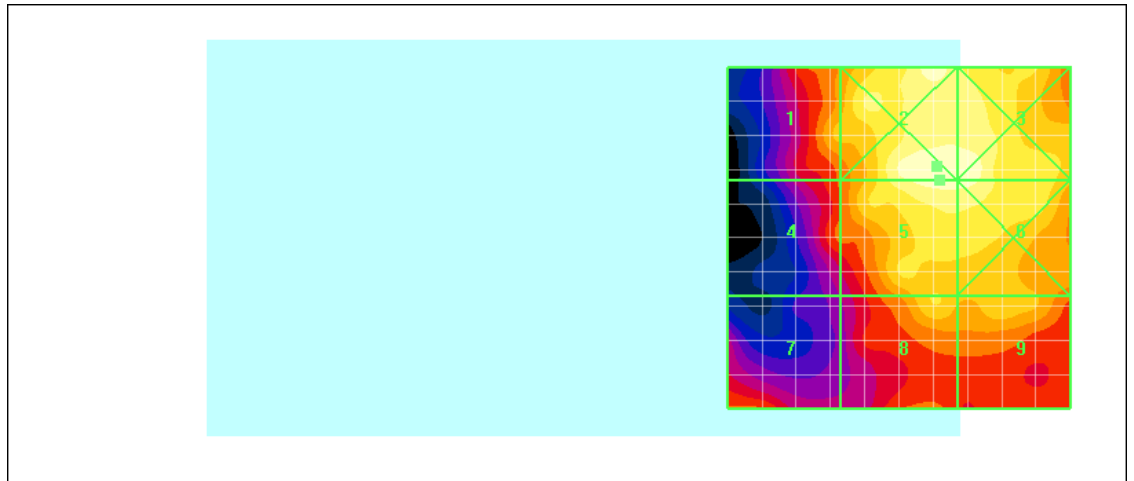
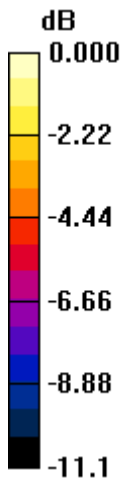
Grid 1 <b>37.9 M4</b>	Grid 2 <b>51.6 M4</b>	Grid 3 <b>51.6 M4</b>
Grid 4 <b>32.0 M4</b>	Grid 5 <b>50.3 M4</b>	Grid 6 <b>50.1 M4</b>
Grid 7 <b>32.0 M4</b>	Grid 8 <b>40.3 M4</b>	Grid 9 <b>39.8 M4</b>

Author Data  
**Daoud Attayi**


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0 dB = 51.6V/m

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

Test Laboratory: RIM TESTING SERVICES

File Name: [HAC\\_E\\_CDMA\\_1700\\_mid\\_chan\\_one\\_eighth\\_telecoil.da4](#)

**DUT: BlackBerry Smartphone**

**Program Name: HAC RF ER3D Device**

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

Medium parameters used:  $\sigma = 0$  mho/m,  $\epsilon_r = 1$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: RF Section

DASY4 Configuration:

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

**E Scan - ER3D - 2007: 15 mm from Probe Center to the Device/Hearing Aid Compatibility Test (11x11x1):** Measurement grid: dx=5mm, dy=5mm

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

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

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

**E Scan - ER3D - 2007: 15 mm from Probe Center to the Device/Hearing Aid**





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

Maximum value of peak Total field = 50.5 V/m

Probe Modulation Factor = 2.58

Device Reference Point: 0.000, 0.000, -6.30 mm

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

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

Peak E-field in V/m

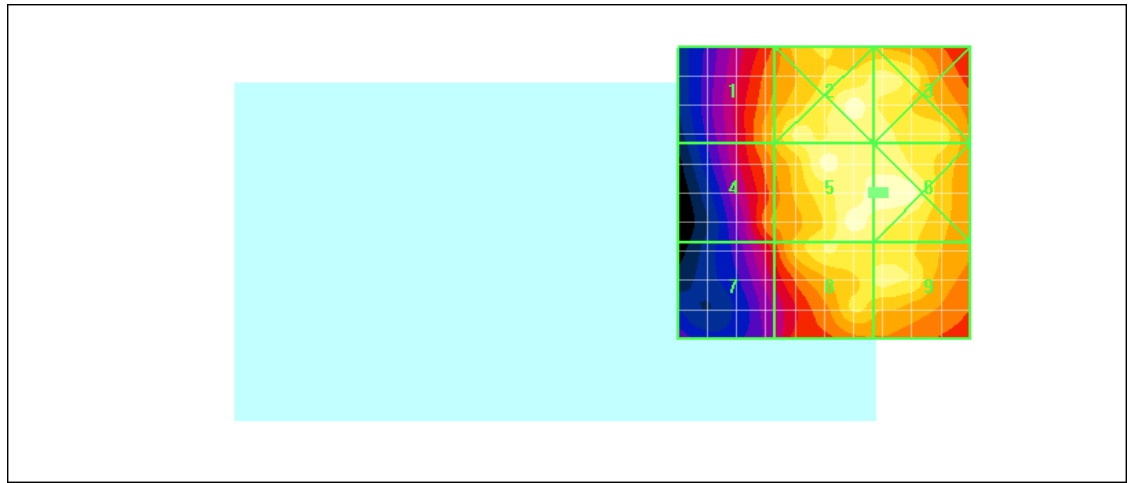
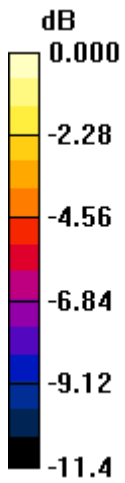
Grid 1 <b>37.4 M4</b>	Grid 2 <b>49.3 M4</b>	Grid 3 <b>45.6 M4</b>
Grid 4 <b>36.8 M4</b>	Grid 5 <b>50.5 M4</b>	Grid 6 <b>51.6 M4</b>
Grid 7 <b>30.4 M4</b>	Grid 8 <b>44.0 M4</b>	Grid 9 <b>44.9 M4</b>

Author Data  
**Daoud Attayi**


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0 dB = 51.6V/m

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Test Laboratory: RIM TESTING SERVICES

File Name: [HAC\\_E\\_CDMA\\_1900\\_low chan.da4](#)

**DUT: BlackBerry Smartphone**

**Program Name: HAC RF ER3D Device**

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

Medium parameters used:  $\sigma = 0$  mho/m,  $\epsilon_r = 1$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: RF Section

DASY4 Configuration:

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

**E Scan - ER3D - 2007: 15 mm from Probe Center to the Device/Hearing Aid**

**Compatibility Test (11x11x1):** Measurement grid: dx=5mm, dy=5mm

Probe Modulation Factor = 1.00


Device Reference Point: 0.000, 0.000, -6.30 mm

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

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

**E Scan - ER3D - 2007: 15 mm from Probe Center to the Device/Hearing Aid**

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

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Maximum value of peak Total field = 49.1 V/m

Probe Modulation Factor = 1.04

Device Reference Point: 0.000, 0.000, -6.30 mm

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

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

Peak E-field in V/m

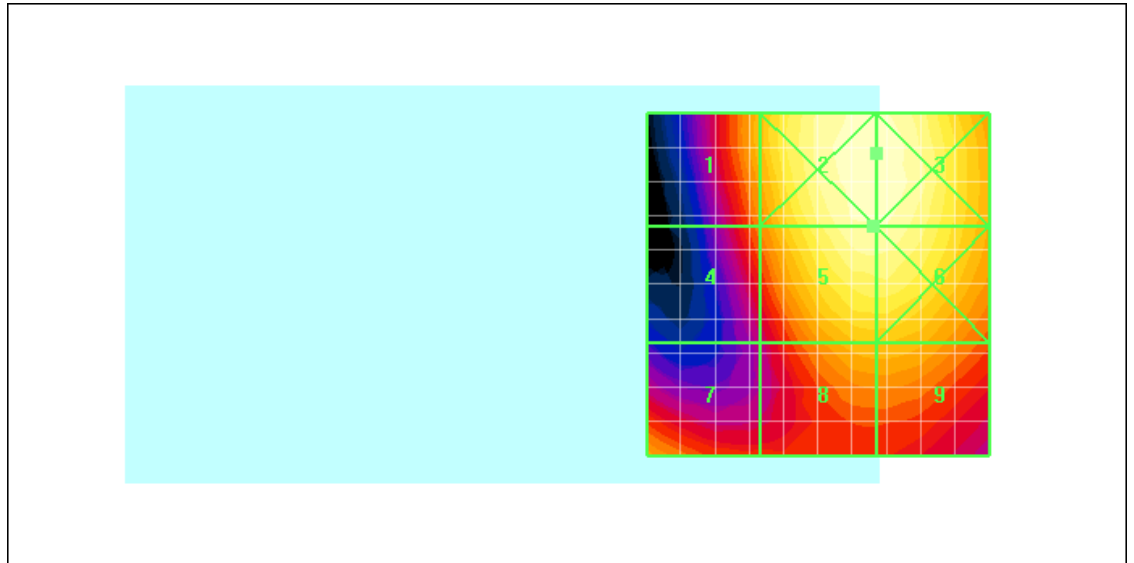
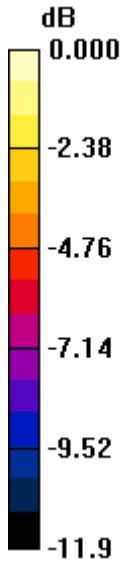
Grid 1 <b>37.1 M4</b>	Grid 2 <b>51.3 M4</b>	Grid 3 <b>51.3 M4</b>
Grid 4 <b>32.6 M4</b>	Grid 5 <b>49.1 M4</b>	Grid 6 <b>49.0 M4</b>
Grid 7 <b>34.9 M4</b>	Grid 8 <b>37.4 M4</b>	Grid 9 <b>37.4 M4</b>

Author Data  
**Daoud Attayi**


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0 dB = 51.3V/m

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

Test Laboratory: RIM TESTING SERVICES

File Name: [HAC\\_E\\_CDMA\\_1900\\_mid\\_chan.da4](#)

**DUT: BlackBerry Smartphone**

**Program Name: HAC RF ER3D Device**

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

Medium parameters used:  $\sigma = 0$  mho/m,  $\epsilon_r = 1$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: RF Section

DASY4 Configuration:

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

**E Scan - ER3D - 2007: 15 mm from Probe Center to the Device/Hearing Aid**

**Compatibility Test (11x11x1):** Measurement grid: dx=5mm, dy=5mm

Probe Modulation Factor = 1.00


Device Reference Point: 0.000, 0.000, -6.30 mm

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

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

**E Scan - ER3D - 2007: 15 mm from Probe Center to the Device/Hearing Aid**

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

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Maximum value of peak Total field = 46.4 V/m

Probe Modulation Factor = 1.04

Device Reference Point: 0.000, 0.000, -6.30 mm

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

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

Peak E-field in V/m

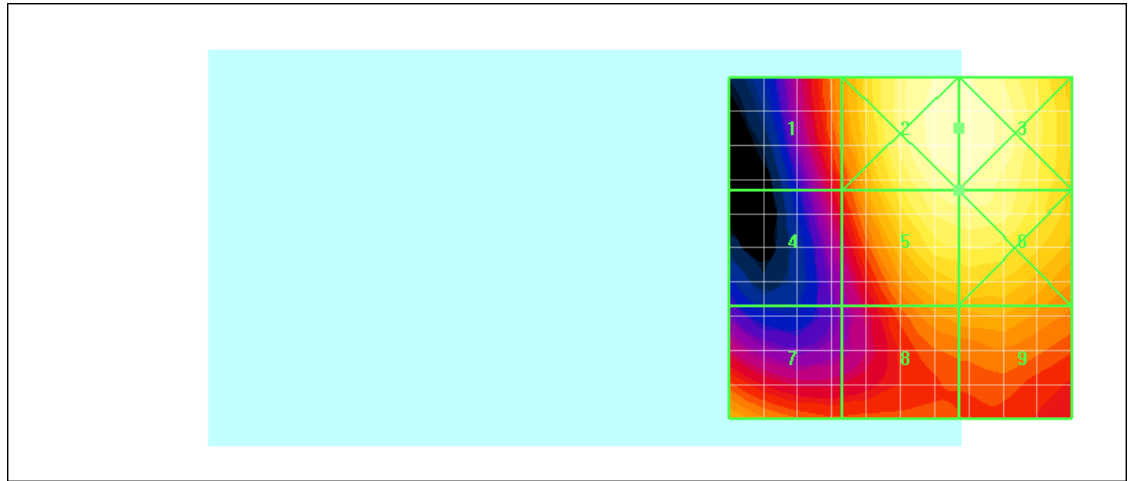
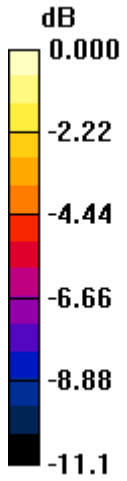
Grid 1 <b>34.1 M4</b>	Grid 2 <b>49.2 M4</b>	Grid 3 <b>49.2 M4</b>
Grid 4 <b>29.2 M4</b>	Grid 5 <b>46.4 M4</b>	Grid 6 <b>46.5 M4</b>
Grid 7 <b>35.2 M4</b>	Grid 8 <b>35.3 M4</b>	Grid 9 <b>35.9 M4</b>

Author Data  
**Daoud Attayi**

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0 dB = 49.2V/m



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

Test Laboratory: RIM TESTING SERVICES

File Name: [HAC\\_E\\_CDMA\\_1900\\_high\\_chan.da4](#)

**DUT: BlackBerry Smartphone**

**Program Name: HAC RF ER3D Device**

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

Medium parameters used:  $\sigma = 0$  mho/m,  $\epsilon_r = 1$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: RF Section

DASY4 Configuration:

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

**E Scan - ER3D - 2007: 15 mm from Probe Center to the Device/Hearing Aid**

**Compatibility Test (11x11x1):** Measurement grid: dx=5mm, dy=5mm

Probe Modulation Factor = 1.00


Device Reference Point: 0.000, 0.000, -6.30 mm

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

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

**E Scan - ER3D - 2007: 15 mm from Probe Center to the Device/Hearing Aid**

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

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Maximum value of peak Total field = 51.6 V/m

Probe Modulation Factor = 1.04

Device Reference Point: 0.000, 0.000, -6.30 mm

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

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

Peak E-field in V/m

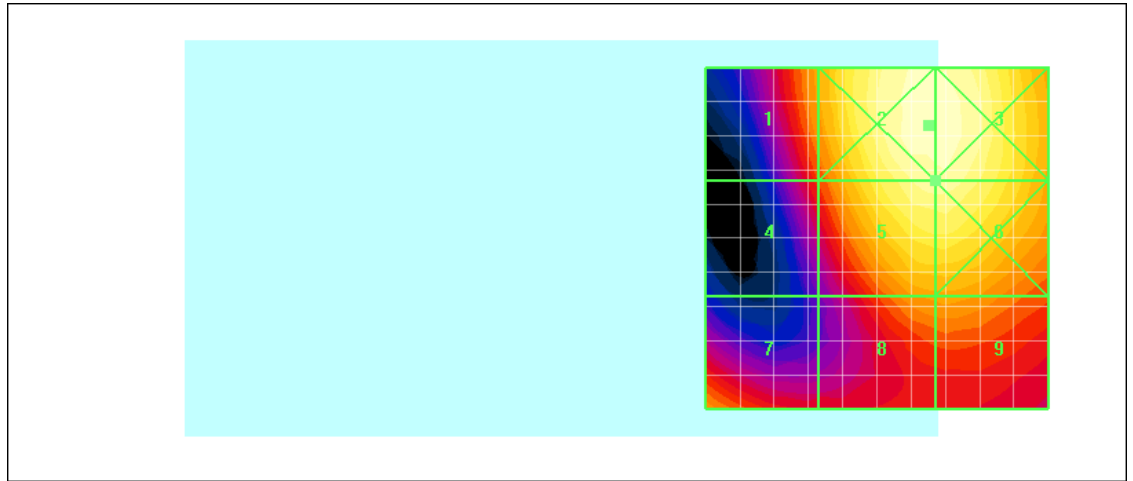
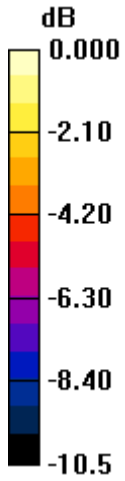
Grid 1 <b>39.5 M4</b>	Grid 2 <b>54.5 M4</b>	Grid 3 <b>54.4 M4</b>
Grid 4 <b>34.1 M4</b>	Grid 5 <b>51.6 M4</b>	Grid 6 <b>51.6 M4</b>
Grid 7 <b>37.8 M4</b>	Grid 8 <b>38.8 M4</b>	Grid 9 <b>38.9 M4</b>

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**Daoud Attayi**


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0 dB = 54.5V/m

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

Test Laboratory: RIM TESTING SERVICES

File Name: [HAC\\_E\\_CDMA\\_1900\\_high\\_chan\\_one\\_eigth.da4](#)

**DUT: BlackBerry Smartphone**

**Program Name: HAC RF ER3D Device**

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

Medium parameters used:  $\sigma = 0$  mho/m,  $\epsilon_r = 1$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: RF Section

DASY4 Configuration:

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

**E Scan - ER3D - 2007: 15 mm from Probe Center to the Device/Hearing Aid**

**Compatibility Test (11x11x1):** Measurement grid: dx=5mm, dy=5mm

Probe Modulation Factor = 1.00


Device Reference Point: 0.000, 0.000, -6.30 mm

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

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

**E Scan - ER3D - 2007: 15 mm from Probe Center to the Device/Hearing Aid**

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

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Maximum value of peak Total field = 45.6 V/m

Probe Modulation Factor = 2.65

Device Reference Point: 0.000, 0.000, -6.30 mm

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

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

Peak E-field in V/m

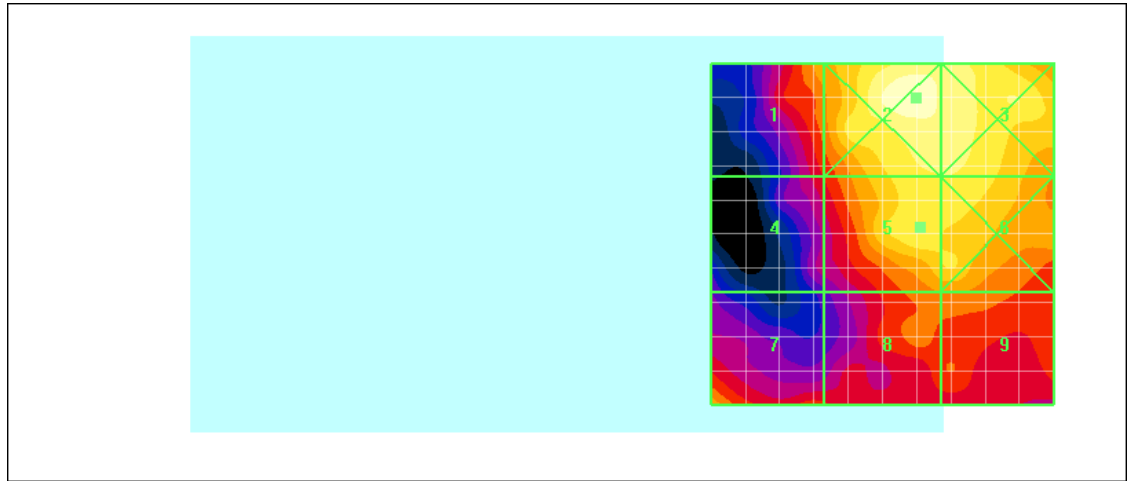
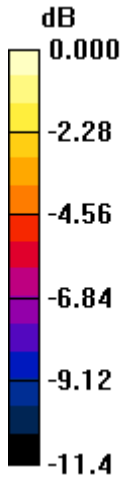
Grid 1 <b>37.5 M4</b>	Grid 2 <b>54.1 M4</b>	Grid 3 <b>48.8 M4</b>
Grid 4 <b>29.7 M4</b>	Grid 5 <b>45.6 M4</b>	Grid 6 <b>45.4 M4</b>
Grid 7 <b>37.9 M4</b>	Grid 8 <b>34.9 M4</b>	Grid 9 <b>35.0 M4</b>

Author Data  
**Daoud Attayi**


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0 dB = 54.1V/m

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Author Data <b>Daoud Attayi</b>	Dates of Test <b>April 05-08, 2010</b>	Report No <b>RTS-2068-1004-46</b>	FCC ID <b>L6ARCZ30CW</b>

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

Test Laboratory: RIM TESTING SERVICES

File Name: [HAC\\_E\\_CDMA\\_1900\\_high\\_chan\\_telecoil.da4](#)

**DUT: BlackBerry Smartphone**

**Program Name: HAC RF ER3D Device**

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

Medium parameters used:  $\sigma = 0$  mho/m,  $\epsilon_r = 1$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: RF Section

DASY4 Configuration:

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

**E Scan - ER3D - 2007: 15 mm from Probe Center to the Device/Hearing Aid**

**Compatibility Test (11x11x1):** Measurement grid: dx=5mm, dy=5mm

Probe Modulation Factor = 1.00


Device Reference Point: 0.000, 0.000, -6.30 mm

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

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

**E Scan - ER3D - 2007: 15 mm from Probe Center to the Device/Hearing Aid**

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

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Maximum value of peak Total field = 53.8 V/m

Probe Modulation Factor = 1.04

Device Reference Point: 0.000, 0.000, -6.30 mm

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

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

Peak E-field in V/m

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

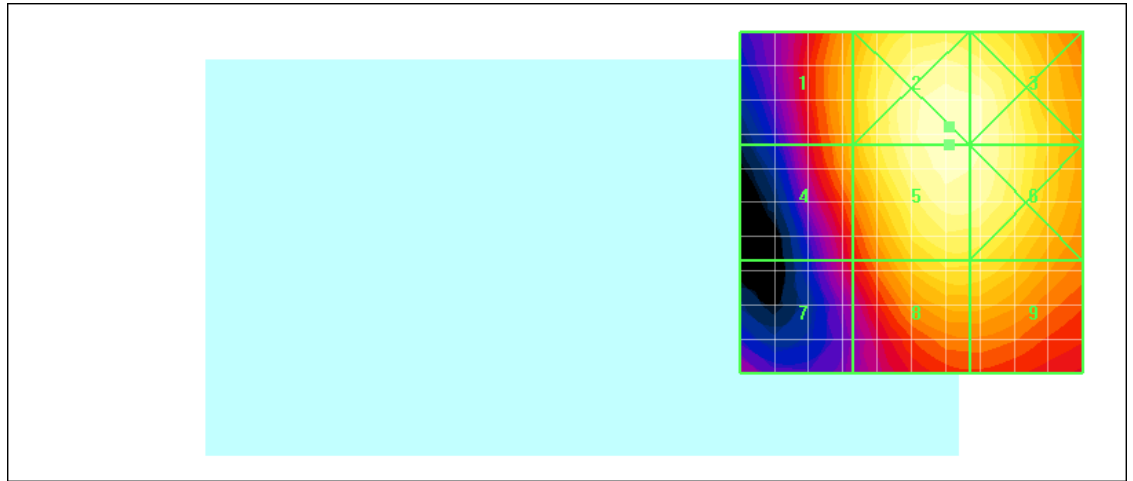
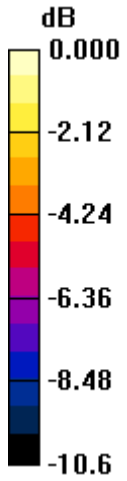


Author Data  
**Daoud Attayi**


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0 dB = 54.0V/m

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

Test Laboratory: RIM TESTING SERVICES

File Name: [HAC\\_H\\_CDMA800\\_low\\_chan.da4](#)

**DUT: BlackBerry Smartphone**

**Program Name: HAC RF H3DV6 Device**

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

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

Phantom section: RF Section

DASY4 Configuration:

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

**H Scan - H3DV6 - 2007: 15 mm from Probe Center to the Device/Hearing Aid**

**Compatibility Test (11x11x1):** Measurement grid: dx=5mm, dy=5mm

Probe Modulation Factor = 1.00


Device Reference Point: 0.000, 0.000, -6.30 mm

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

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

**H Scan - H3DV6 - 2007: 15 mm from Probe Center to the Device/Hearing Aid**

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

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Maximum value of peak Total field = 0.102 A/m

Probe Modulation Factor = 0.980

Device Reference Point: 0.000, 0.000, -6.30 mm

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

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

Peak H-field in A/m

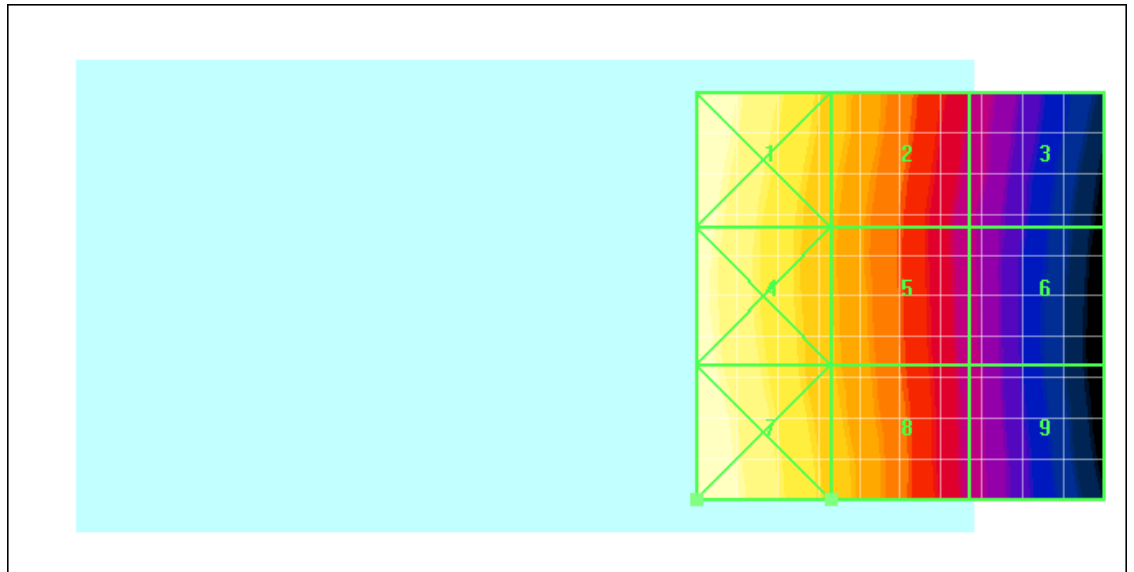
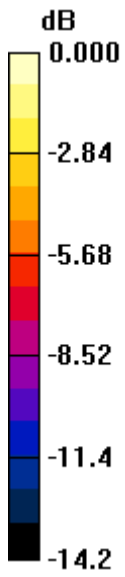
Grid 1 <b>0.147 M4</b>	Grid 2 <b>0.101 M4</b>	Grid 3 <b>0.061 M4</b>
Grid 4 <b>0.139 M4</b>	Grid 5 <b>0.097 M4</b>	Grid 6 <b>0.058 M4</b>
Grid 7 <b>0.148 M4</b>	Grid 8 <b>0.102 M4</b>	Grid 9 <b>0.059 M4</b>

Author Data  
**Daoud Attayi**


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0 dB = 0.148A/m

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

Test Laboratory: RIM TESTING SERVICES

File Name: [HAC\\_H\\_CDMA800\\_mid\\_chan.da4](#)

**DUT: BlackBerry Smartphone**

**Program Name: HAC RF H3DV6 Device**

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

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

Phantom section: RF Section

DASY4 Configuration:

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

**H Scan - H3DV6 - 2007: 15 mm from Probe Center to the Device/Hearing Aid**

**Compatibility Test (11x11x1):** Measurement grid: dx=5mm, dy=5mm

Probe Modulation Factor = 1.00


Device Reference Point: 0.000, 0.000, -6.30 mm

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

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

**H Scan - H3DV6 - 2007: 15 mm from Probe Center to the Device/Hearing Aid**

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

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Maximum value of peak Total field = 0.114 A/m

Probe Modulation Factor = 0.980

Device Reference Point: 0.000, 0.000, -6.30 mm

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

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

Peak H-field in A/m

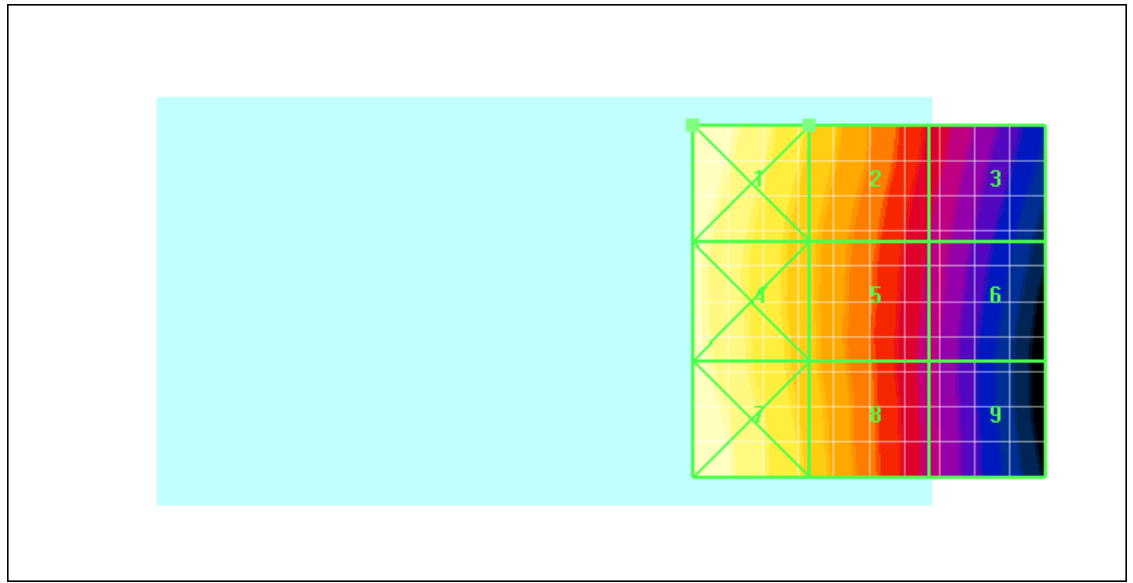
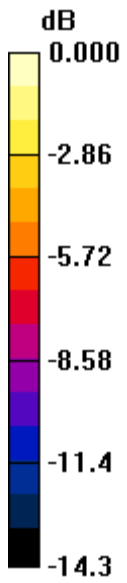
Grid 1 <b>0.161 M4</b>	Grid 2 <b>0.114 M4</b>	Grid 3 <b>0.073 M4</b>
Grid 4 <b>0.149 M4</b>	Grid 5 <b>0.107 M4</b>	Grid 6 <b>0.066 M4</b>
Grid 7 <b>0.161 M4</b>	Grid 8 <b>0.112 M4</b>	Grid 9 <b>0.063 M4</b>

Author Data  
**Daoud Attayi**


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0 dB = 0.161A/m

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Test Laboratory: RIM TESTING SERVICES

File Name: [HAC\\_H\\_CDMA800\\_high\\_chan.da4](#)

**DUT: BlackBerry Smartphone**

**Program Name: HAC RF H3DV6 Device**

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

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

Phantom section: RF Section

DASY4 Configuration:

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

**H Scan - H3DV6 - 2007: 15 mm from Probe Center to the Device/Hearing Aid**

**Compatibility Test (11x11x1):** Measurement grid: dx=5mm, dy=5mm

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm


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

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

**H Scan - H3DV6 - 2007: 15 mm from Probe Center to the Device/Hearing Aid**

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



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Maximum value of peak Total field = 0.134 A/m

Probe Modulation Factor = 0.980

Device Reference Point: 0.000, 0.000, -6.30 mm

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

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

Peak H-field in A/m

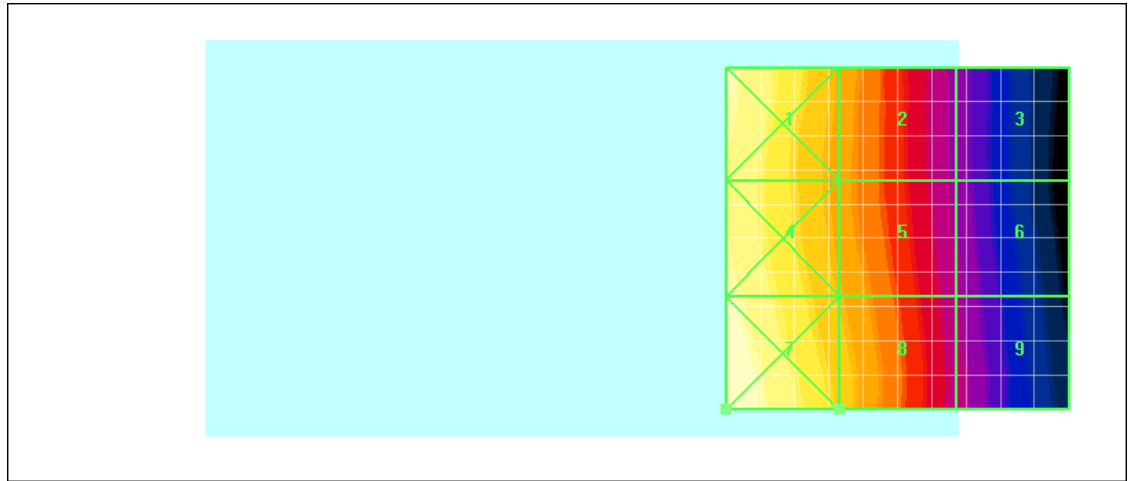
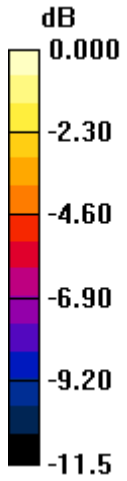
Grid 1 <b>0.170 M4</b>	Grid 2 <b>0.123 M4</b>	Grid 3 <b>0.079 M4</b>
Grid 4 <b>0.169 M4</b>	Grid 5 <b>0.126 M4</b>	Grid 6 <b>0.083 M4</b>
Grid 7 <b>0.181 M4</b>	Grid 8 <b>0.134 M4</b>	Grid 9 <b>0.086 M4</b>

Author Data  
**Daoud Attayi**


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0 dB = 0.181A/m

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

Test Laboratory: RIM TESTING SERVICES

File Name: [HAC\\_H\\_CDMA800\\_high\\_chan\\_one\\_eighth.da4](#)

**DUT: BlackBerry Smartphone**

**Program Name: HAC RF H3DV6 Device**

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

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

Phantom section: RF Section

DASY4 Configuration:

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

**H Scan - H3DV6 - 2007: 15 mm from Probe Center to the Device/Hearing Aid**

**Compatibility Test (11x11x1):** Measurement grid: dx=5mm, dy=5mm

Probe Modulation Factor = 1.00


Device Reference Point: 0.000, 0.000, -6.30 mm

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

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

**H Scan - H3DV6 - 2007: 15 mm from Probe Center to the Device/Hearing Aid**

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

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Maximum value of peak Total field = 0.123 A/m

Probe Modulation Factor = 2.38

Device Reference Point: 0.000, 0.000, -6.30 mm

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

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

Peak H-field in A/m

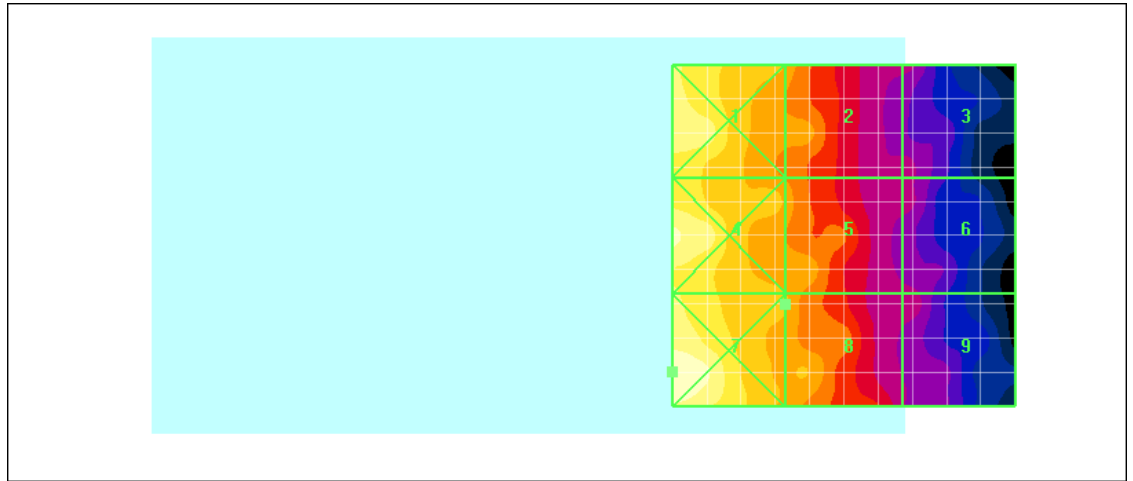
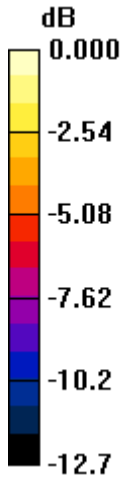
Grid 1 <b>0.154 M4</b>	Grid 2 <b>0.120 M4</b>	Grid 3 <b>0.078 M4</b>
Grid 4 <b>0.163 M4</b>	Grid 5 <b>0.121 M4</b>	Grid 6 <b>0.078 M4</b>
Grid 7 <b>0.177 M4</b>	Grid 8 <b>0.123 M4</b>	Grid 9 <b>0.080 M4</b>

Author Data  
**Daoud Attayi**


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0 dB = 0.177A/m

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

Test Laboratory: RIM TESTING SERVICES

File Name: [HAC\\_H\\_CDMA800\\_high\\_chan\\_telecoil.da4](#)

**DUT: BlackBerry Smartphone**

**Program Name: HAC RF H3DV6 Device**

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

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

Phantom section: RF Section

DASY4 Configuration:

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

**H Scan - H3DV6 - 2007: 15 mm from Probe Center to the Device/Hearing Aid**

**Compatibility Test (11x11x1):** Measurement grid: dx=5mm, dy=5mm

Probe Modulation Factor = 1.00


Device Reference Point: 0.000, 0.000, -6.30 mm

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

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

**H Scan - H3DV6 - 2007: 15 mm from Probe Center to the Device/Hearing Aid**

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

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Maximum value of peak Total field = 0.131 A/m

Probe Modulation Factor = 0.980

Device Reference Point: 0.000, 0.000, -6.30 mm

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

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

Peak H-field in A/m

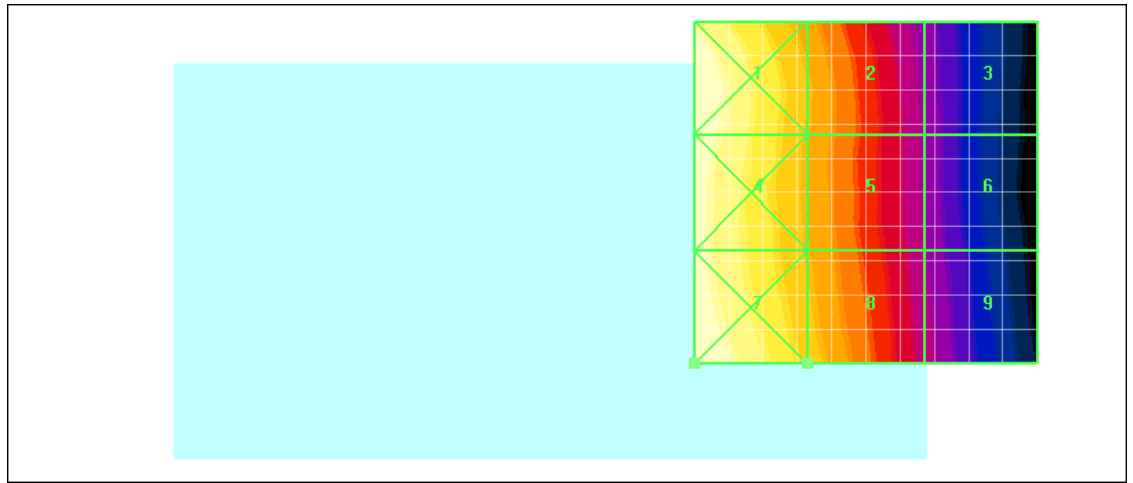
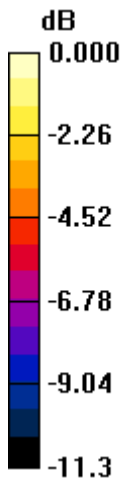
Grid 1 <b>0.173 M4</b>	Grid 2 <b>0.125 M4</b>	Grid 3 <b>0.080 M4</b>
Grid 4 <b>0.171 M4</b>	Grid 5 <b>0.124 M4</b>	Grid 6 <b>0.081 M4</b>
Grid 7 <b>0.177 M4</b>	Grid 8 <b>0.131 M4</b>	Grid 9 <b>0.085 M4</b>

Author Data  
**Daoud Attayi**

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0 dB = 0.177A/m



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

Test Laboratory: RIM TESTING SERVICES

HAC\_H\_CDMA1700\_low\_chan

**DUT: BlackBerry Smartphone**

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

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

Phantom section: RF Section

Measurement Standard: DAS4 (High Precision Assessment)

DASY4 Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 11/13/2009
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn473; Calibrated: 1/4/2010
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DAS4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**H Scan - H3DV6 - 2007: 15 mm from Probe Center to the Device/Hearing Aid  
Compatibility Test (11x11x1):** Measurement grid: dx=5mm, dy=5mm

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

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

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

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

Maximum value of peak Total field = 0.117 A/m



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**Daoud Attayi**

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Probe Modulation Factor = 0.990

Device Reference Point: 0.000, 0.000, -6.30 mm

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

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

Peak H-field in A/m

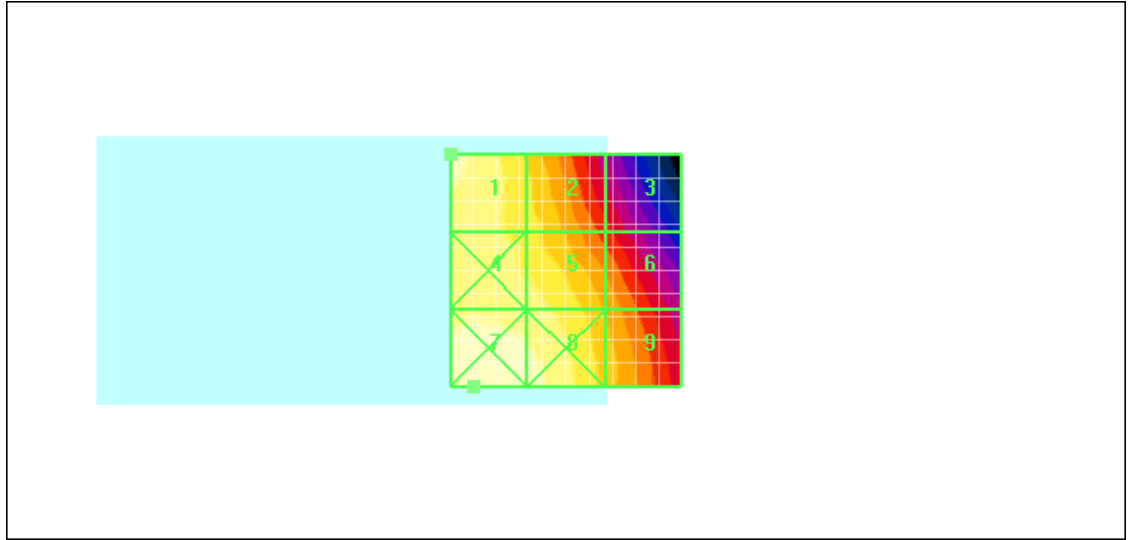
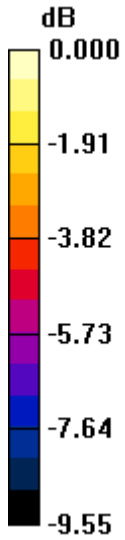
Grid 1 <b>0.117 M4</b>	Grid 2 <b>0.103 M4</b>	Grid 3 <b>0.077 M4</b>
Grid 4 <b>0.113 M4</b>	Grid 5 <b>0.111 M4</b>	Grid 6 <b>0.092 M4</b>
Grid 7 <b>0.124 M4</b>	Grid 8 <b>0.119 M4</b>	Grid 9 <b>0.097 M4</b>

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**Daoud Attayi**


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0 dB = 0.124A/m

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Author Data <b>Daoud Attayi</b>	Dates of Test <b>April 05-08, 2010</b>	Report No <b>RTS-2068-1004-46</b>	FCC ID <b>L6ARCZ30CW</b>

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

Test Laboratory: RIM TESTING SERVICES

HAC\_H\_CDMA1700\_mid\_chan

**DUT: BlackBerry Smartphone**

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

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

Phantom section: RF Section

Measurement Standard: DAS4 (High Precision Assessment)

DASY4 Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 11/13/2009
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn473; Calibrated: 1/4/2010
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DAS4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**H Scan - H3DV6 - 2007: 15 mm from Probe Center to the Device/Hearing Aid  
Compatibility Test (11x11x1):** Measurement grid: dx=5mm, dy=5mm

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

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

Maximum value of Total (measured) = 0.137 A/m

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

Maximum value of peak Total field = 0.134 A/m



Author Data  
**Daoud Attayi**

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Probe Modulation Factor = 0.990

Device Reference Point: 0.000, 0.000, -6.30 mm

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

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

Peak H-field in A/m

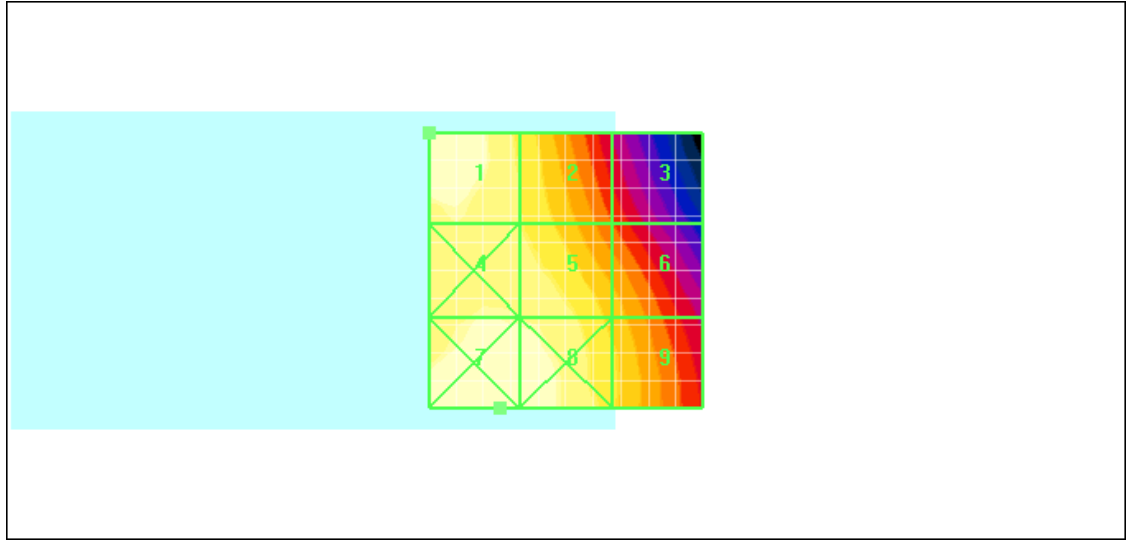
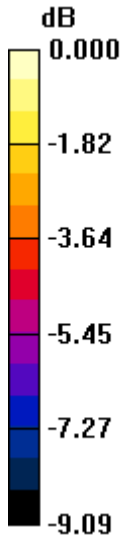
Grid 1 <b>0.134 M4</b>	Grid 2 <b>0.118 M4</b>	Grid 3 <b>0.089 M4</b>
Grid 4 <b>0.126 M4</b>	Grid 5 <b>0.125 M4</b>	Grid 6 <b>0.106 M4</b>
Grid 7 <b>0.135 M4</b>	Grid 8 <b>0.134 M4</b>	Grid 9 <b>0.111 M4</b>

Author Data  
**Daoud Attayi**


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0 dB = 0.135A/m

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<b>Daoud Attayi</b>	<b>April 05-08, 2010</b>	<b>RTS-2068-1004-46</b>	<b>L6ARCZ30CW</b>

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

Test Laboratory: RIM TESTING SERVICES

HAC\_H\_CDMA1700\_high\_chan

**DUT: BlackBerry Smartphone**

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

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

Phantom section: RF Section

Measurement Standard: DAS4 (High Precision Assessment)

DASY4 Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 11/13/2009
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn473; Calibrated: 1/4/2010
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DAS4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**H Scan - H3DV6 - 2007: 15 mm from Probe Center to the Device/Hearing Aid  
Compatibility Test (11x11x1):** Measurement grid: dx=5mm, dy=5mm

Probe Modulation Factor = 1.00


Device Reference Point: 0.000, 0.000, -6.30 mm

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

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

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

Maximum value of peak Total field = 0.111 A/m

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Author Data <b>Daoud Attayi</b>	Dates of Test <b>April 05-08, 2010</b>	Report No <b>RTS-2068-1004-46</b>	FCC ID <b>L6ARCZ30CW</b>

Probe Modulation Factor = 0.990

Device Reference Point: 0.000, 0.000, -6.30 mm

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

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

Peak H-field in A/m

Grid 1 <b>0.118 M4</b>	Grid 2 <b>0.104 M4</b>	Grid 3 <b>0.084 M4</b>
Grid 4 <b>0.107 M4</b>	Grid 5 <b>0.107 M4</b>	Grid 6 <b>0.097 M4</b>
Grid 7 <b>0.112 M4</b>	Grid 8 <b>0.111 M4</b>	Grid 9 <b>0.099 M4</b>

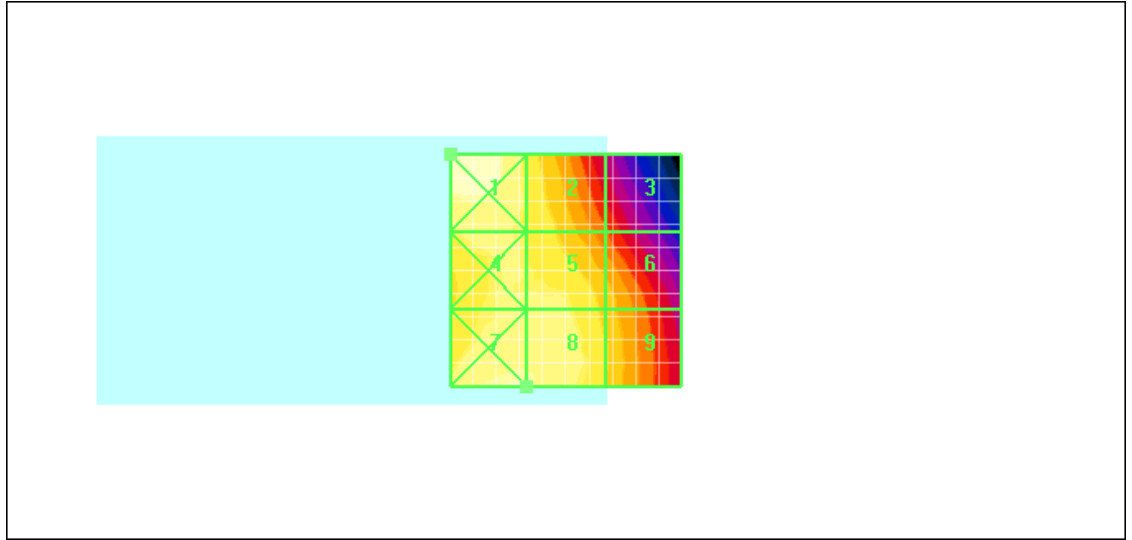
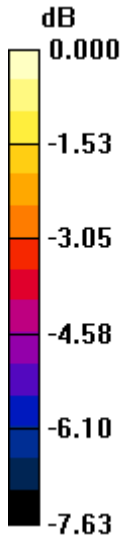


Author Data  
**Daoud Attayi**


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0 dB = 0.118A/m

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<b>Daoud Attayi</b>	<b>April 05-08, 2010</b>	<b>RTS-2068-1004-46</b>	<b>L6ARCZ30CW</b>

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

Test Laboratory: RIM TESTING SERVICES

HAC\_H\_CDMA1700\_mid\_chan\_one\_eighth

**DUT: BlackBerry Smartphone**

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

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

Phantom section: RF Section

Measurement Standard: DAS4 (High Precision Assessment)

DASY4 Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 11/13/2009
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn473; Calibrated: 1/4/2010
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DAS4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**H Scan - H3DV6 - 2007: 15 mm from Probe Center to the Device/Hearing Aid**

**Compatibility Test (11x11x1):** Measurement grid: dx=5mm, dy=5mm

Probe Modulation Factor = 1.00


Device Reference Point: 0.000, 0.000, -6.30 mm

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

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

**H Scan - H3DV6 - 2007: 15 mm from Probe Center to the Device/Hearing Aid**

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

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Maximum value of peak Total field = 0.123 A/m

Probe Modulation Factor = 2.56

Device Reference Point: 0.000, 0.000, -6.30 mm

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

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

Peak H-field in A/m

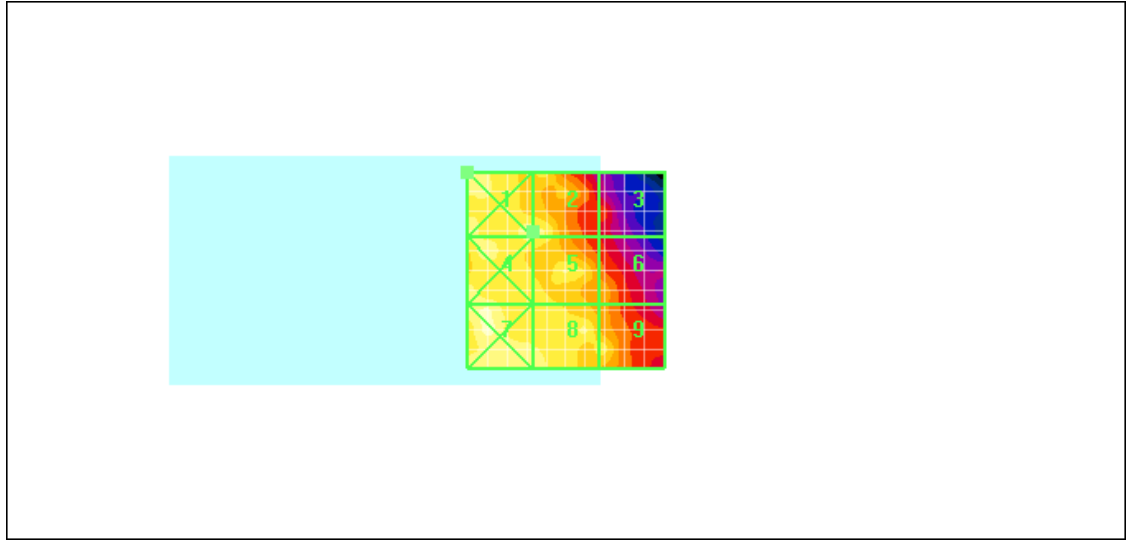
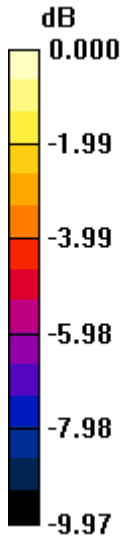
Grid 1 <b>0.140 M4</b>	Grid 2 <b>0.123 M4</b>	Grid 3 <b>0.086 M4</b>
Grid 4 <b>0.130 M4</b>	Grid 5 <b>0.122 M4</b>	Grid 6 <b>0.101 M4</b>
Grid 7 <b>0.136 M4</b>	Grid 8 <b>0.122 M4</b>	Grid 9 <b>0.114 M4</b>

Author Data  
**Daoud Attayi**


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0 dB = 0.140A/m

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<b>Daoud Attayi</b>	<b>April 05-08, 2010</b>	<b>RTS-2068-1004-46</b>	<b>L6ARCZ30CW</b>

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

Test Laboratory: RIM TESTING SERVICES

HAC\_H\_CDMA1700\_mid\_chan\_telecoil

**DUT: BlackBerry Smartphone**

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

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

Phantom section: RF Section

Measurement Standard: DAS4 (High Precision Assessment)

DASY4 Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 11/13/2009
- Sensor-Surface: 0mm (Fix Surface) Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn473; Calibrated: 1/4/2010
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DAS4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**H Scan - H3DV6 - 2007: 15 mm from Probe Center to the Device/Hearing Aid Compatibility Test (11x11x1):** Measurement grid: dx=5mm, dy=5mm

Probe Modulation Factor = 1.00


Device Reference Point: 0.000, 0.000, -6.30 mm

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

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

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

Maximum value of peak Total field = 0.128 A/m

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	<b>Annex A_Hearing Aid Compatibility RF Emissions Test Report for the BlackBerry® Smartphone model RCZ31CW</b>		<b>182 (198)</b>
Author Data <b>Daoud Attayi</b>	Dates of Test <b>April 05-08, 2010</b>	Report No <b>RTS-2068-1004-46</b>	FCC ID <b>L6ARCZ30CW</b>

Probe Modulation Factor = 0.990

Device Reference Point: 0.000, 0.000, -6.30 mm

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

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

Peak H-field in A/m

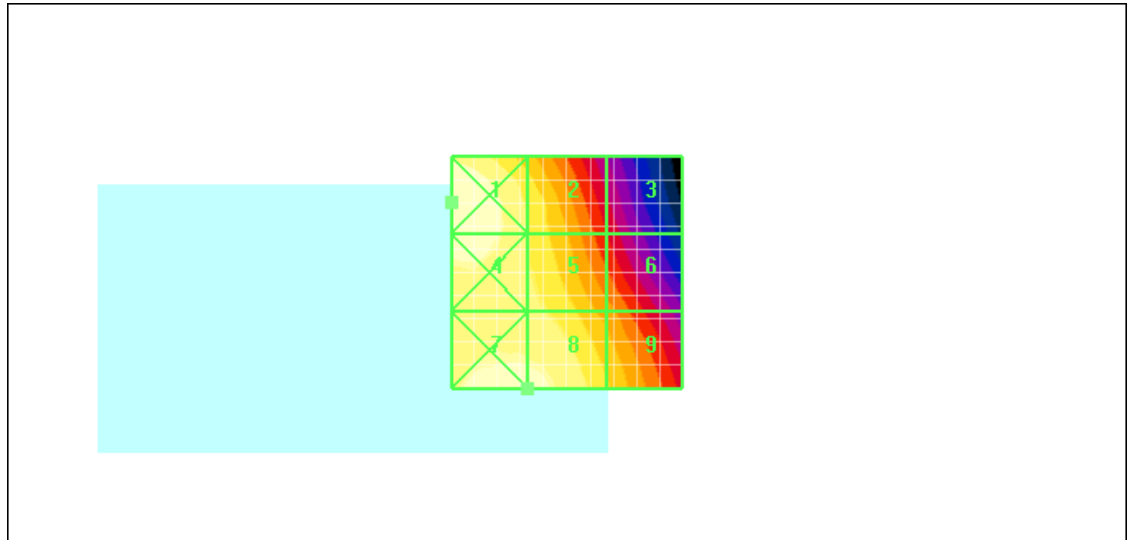
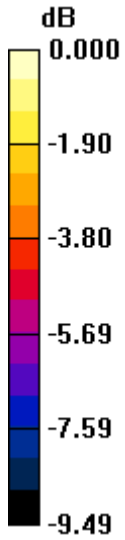
Grid 1 <b>0.135 M4</b>	Grid 2 <b>0.117 M4</b>	Grid 3 <b>0.081 M4</b>
Grid 4 <b>0.130 M4</b>	Grid 5 <b>0.120 M4</b>	Grid 6 <b>0.098 M4</b>
Grid 7 <b>0.129 M4</b>	Grid 8 <b>0.128 M4</b>	Grid 9 <b>0.109 M4</b>

Author Data  
**Daoud Attayi**


Dates of Test  
**April 05-08, 2010**

Report No  
**RTS-2068-1004-46**

FCC ID  
**L6ARCZ30CW**



0 dB = 0.135A/m

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	<b>Annex A Hearing Aid Compatibility RF Emissions Test Report for the BlackBerry® Smartphone model RCZ31CW</b>		<b>184 (198)</b>
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<b>Daoud Attayi</b>	<b>April 05-08, 2010</b>	<b>RTS-2068-1004-46</b>	<b>L6ARCZ30CW</b>

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

Test Laboratory: RIM TESTING SERVICES

HAC\_H\_CDMA1900\_low\_chan

**DUT: BlackBerry Smartphone**

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

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

Phantom section: RF Section

Measurement Standard: DAS4 (High Precision Assessment)

DASY4 Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 11/13/2009
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn473; Calibrated: 1/4/2010
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DAS4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**H Scan - H3DV6 - 2007: 15 mm from Probe Center to the Device/Hearing Aid Compatibility Test (11x11x1):** Measurement grid: dx=5mm, dy=5mm

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

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

Maximum value of Total (measured) = 0.137 A/m

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

Maximum value of peak Total field = 0.109 A/m





Author Data  
**Daoud Attayi**

Dates of Test  
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Probe Modulation Factor = 0.990

Device Reference Point: 0.000, 0.000, -6.30 mm

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

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

Peak H-field in A/m

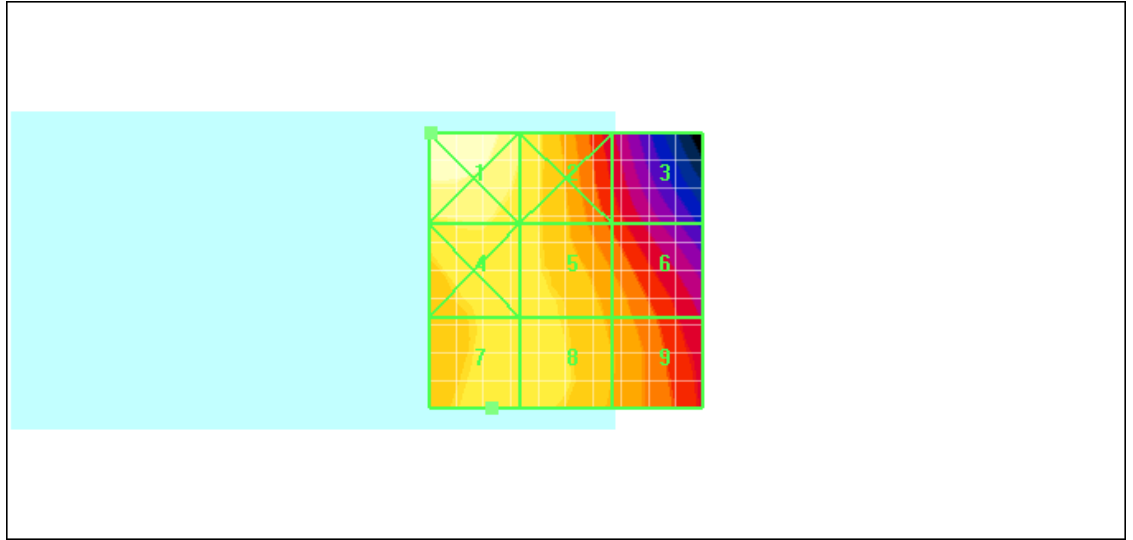
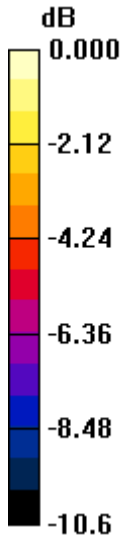
Grid 1 <b>0.135 M4</b>	Grid 2 <b>0.116 M4</b>	Grid 3 <b>0.081 M4</b>
Grid 4 <b>0.115 M4</b>	Grid 5 <b>0.109 M4</b>	Grid 6 <b>0.095 M4</b>
Grid 7 <b>0.109 M4</b>	Grid 8 <b>0.109 M4</b>	Grid 9 <b>0.097 M4</b>

Author Data  
**Daoud Attayi**


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0 dB = 0.135A/m

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

Test Laboratory: RIM TESTING SERVICES

HAC\_H\_CDMA1900\_mid\_chan

**DUT: BlackBerry Smartphone**

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

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

Phantom section: RF Section

Measurement Standard: DAS4 (High Precision Assessment)

DASY4 Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 11/13/2009
- Sensor-Surface: 0mm (Fix Surface) Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn473; Calibrated: 1/4/2010
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DAS4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**H Scan - H3DV6 - 2007: 15 mm from Probe Center to the Device/Hearing Aid  
Compatibility Test (11x11x1):** Measurement grid: dx=5mm, dy=5mm

Probe Modulation Factor = 1.00


Device Reference Point: 0.000, 0.000, -6.30 mm

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

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

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

Maximum value of peak Total field = 0.113 A/m

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Probe Modulation Factor = 0.990

Device Reference Point: 0.000, 0.000, -6.30 mm

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

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

Peak H-field in A/m

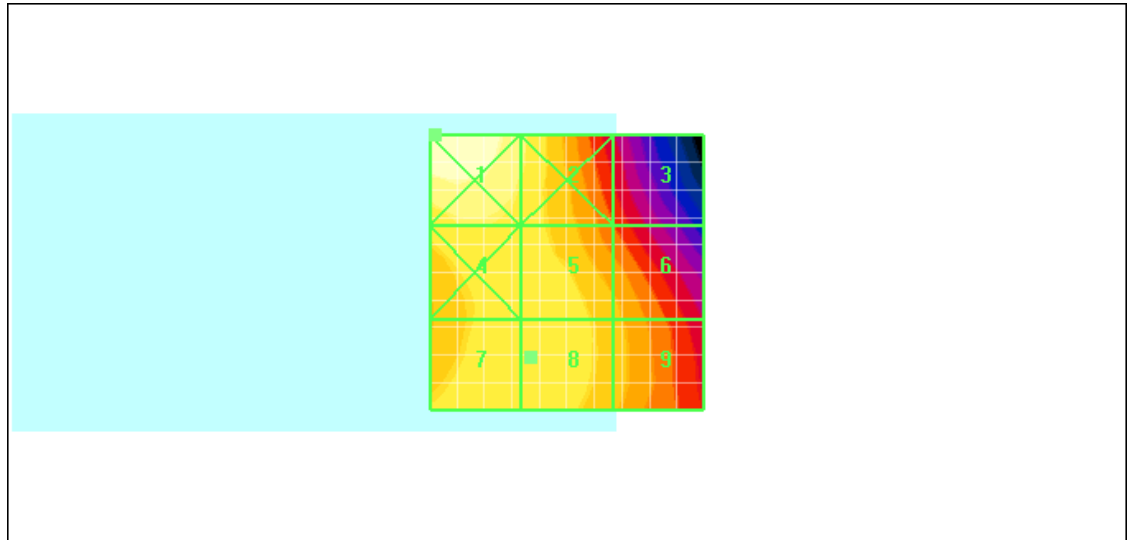
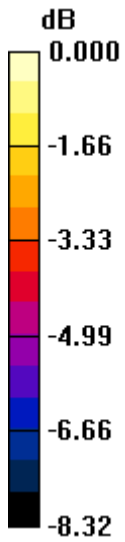
Grid 1 <b>0.129 M4</b>	Grid 2 <b>0.116 M4</b>	Grid 3 <b>0.088 M4</b>
Grid 4 <b>0.113 M4</b>	Grid 5 <b>0.111 M4</b>	Grid 6 <b>0.102 M4</b>
Grid 7 <b>0.112 M4</b>	Grid 8 <b>0.113 M4</b>	Grid 9 <b>0.103 M4</b>

Author Data  
**Daoud Attayi**


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0 dB = 0.129A/m

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

Test Laboratory: RIM TESTING SERVICES

HAC\_H\_CDMA1900\_high\_chan

**DUT: BlackBerry Smartphone**

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

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

Phantom section: RF Section

Measurement Standard: DAS4 (High Precision Assessment)

DASY4 Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 11/13/2009
- Sensor-Surface: 0mm (Fix Surface) Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn473; Calibrated: 1/4/2010
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DAS4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**H Scan - H3DV6 - 2007: 15 mm from Probe Center to the Device/Hearing Aid  
Compatibility Test (11x11x1):** Measurement grid: dx=5mm, dy=5mm

Probe Modulation Factor = 1.00


Device Reference Point: 0.000, 0.000, -6.30 mm

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

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

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

Maximum value of peak Total field = 0.128 A/m

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Probe Modulation Factor = 0.990

Device Reference Point: 0.000, 0.000, -6.30 mm

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

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

Peak H-field in A/m

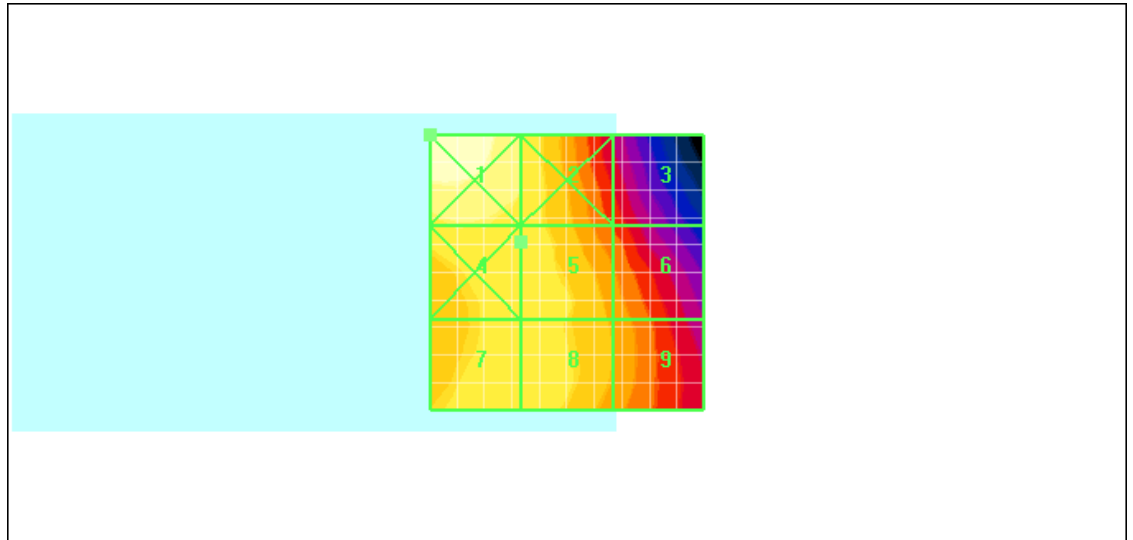
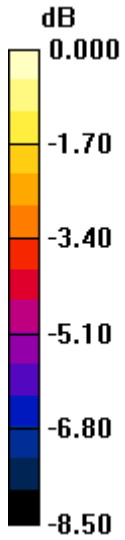
Grid 1 <b>0.149 M4</b>	Grid 2 <b>0.131 M4</b>	Grid 3 <b>0.099 M4</b>
Grid 4 <b>0.130 M4</b>	Grid 5 <b>0.128 M4</b>	Grid 6 <b>0.113 M4</b>
Grid 7 <b>0.127 M4</b>	Grid 8 <b>0.128 M4</b>	Grid 9 <b>0.114 M4</b>

Author Data  
**Daoud Attayi**

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0 dB = 0.149A/m



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

Test Laboratory: RIM TESTING SERVICES

HAC\_H\_CDMA1900\_high\_chan\_one\_eighth

**DUT: BlackBerry Smartphone**

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

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

Phantom section: RF Section

Measurement Standard: DAS4 (High Precision Assessment)

DASY4 Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 11/13/2009
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn473; Calibrated: 1/4/2010
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DAS4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**H Scan - H3DV6 - 2007: 15 mm from Probe Center to the Device/Hearing Aid  
Compatibility Test (11x11x1):** Measurement grid: dx=5mm, dy=5mm

Probe Modulation Factor = 1.00


Device Reference Point: 0.000, 0.000, -6.30 mm

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

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

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

Maximum value of peak Total field = 0.125 A/m

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	<b>Annex A_Hearing Aid Compatibility RF Emissions Test Report for the BlackBerry® Smartphone model RCZ31CW</b>		<b>194 (198)</b>
Author Data <b>Daoud Attayi</b>	Dates of Test <b>April 05-08, 2010</b>	Report No <b>RTS-2068-1004-46</b>	FCC ID <b>L6ARCZ30CW</b>

Probe Modulation Factor = 2.50

Device Reference Point: 0.000, 0.000, -6.30 mm

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

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

Peak H-field in A/m

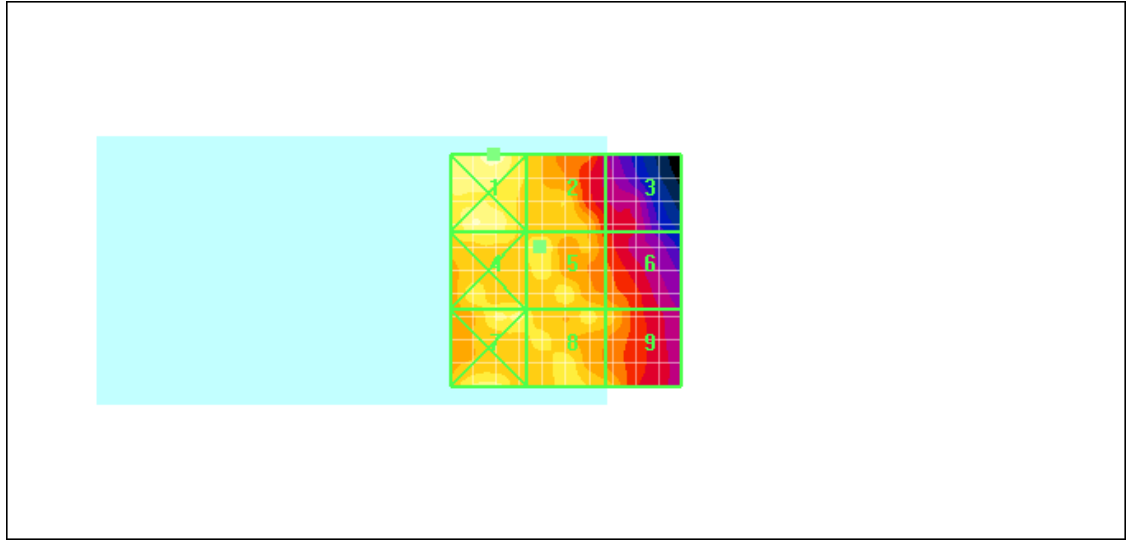
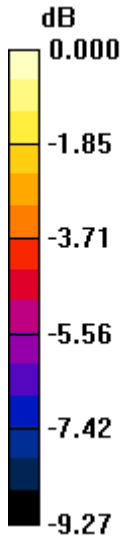
Grid 1 <b>0.144 M4</b>	Grid 2 <b>0.117 M4</b>	Grid 3 <b>0.090 M4</b>
Grid 4 <b>0.130 M4</b>	Grid 5 <b>0.125 M4</b>	Grid 6 <b>0.110 M4</b>
Grid 7 <b>0.131 M4</b>	Grid 8 <b>0.123 M4</b>	Grid 9 <b>0.114 M4</b>

Author Data  
**Daoud Attayi**


Dates of Test  
**April 05-08, 2010**

Report No  
**RTS-2068-1004-46**

FCC ID  
**L6ARCZ30CW**



0 dB = 0.144A/m

	Document		Page
	<b>Annex A Hearing Aid Compatibility RF Emissions Test Report for the BlackBerry® Smartphone model RCZ31CW</b>		<b>196 (198)</b>
Author Data	Dates of Test	Report No	FCC ID
<b>Daoud Attayi</b>	<b>April 05-08, 2010</b>	<b>RTS-2068-1004-46</b>	<b>L6ARCZ30CW</b>

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

Test Laboratory: RIM TESTING SERVICES

HAC\_H\_CDMA1900\_high\_chan\_one\_eighth\_telecoil

**DUT: BlackBerry Smartphone**

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

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

Phantom section: RF Section

Measurement Standard: DAS4 (High Precision Assessment)

DASY4 Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 11/13/2009
- Sensor-Surface: 0mm (Fix Surface) Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn473; Calibrated: 1/4/2010
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DAS4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**H Scan - H3DV6 - 2007: 15 mm from Probe Center to the Device/Hearing Aid Compatibility Test (11x11x1):** Measurement grid: dx=5mm, dy=5mm

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

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

Maximum value of Total (measured) = 0.060 A/m

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

Maximum value of peak Total field = 0.127 A/m



Author Data  
**Daoud Attayi**

Dates of Test  
**April 05-08, 2010**

Report No  
**RTS-2068-1004-46**

FCC ID  
**L6ARCZ30CW**

Probe Modulation Factor = 2.50

Device Reference Point: 0.000, 0.000, -6.30 mm

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

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

Peak H-field in A/m

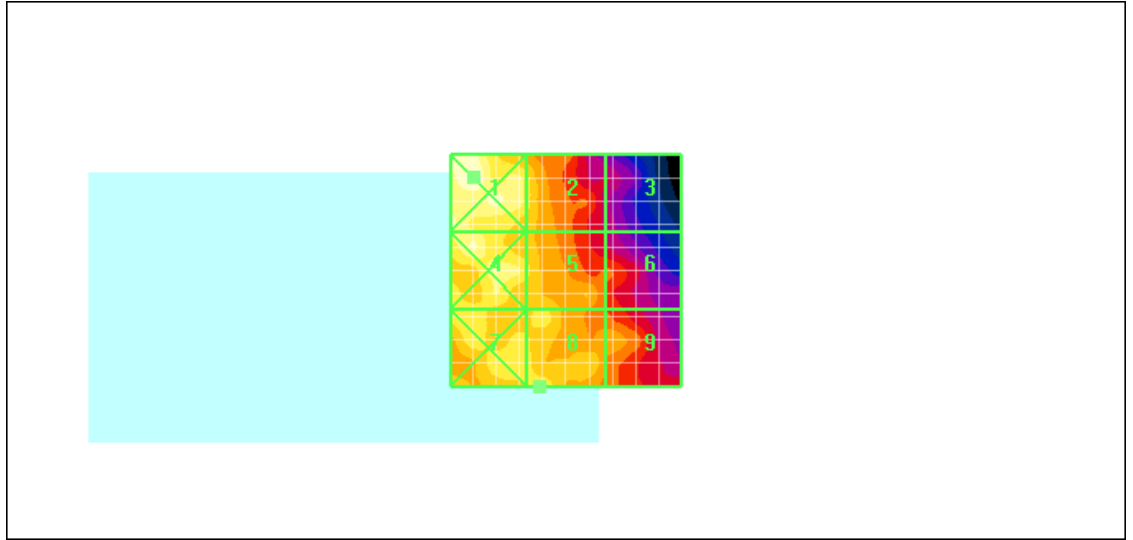
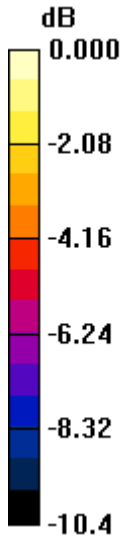
Grid 1 <b>0.150 M4</b>	Grid 2 <b>0.124 M4</b>	Grid 3 <b>0.080 M4</b>
Grid 4 <b>0.140 M4</b>	Grid 5 <b>0.123 M4</b>	Grid 6 <b>0.095 M4</b>
Grid 7 <b>0.128 M4</b>	Grid 8 <b>0.127 M4</b>	Grid 9 <b>0.108 M4</b>

Author Data  
**Daoud Attayi**

Dates of Test  
**April 05-08, 2010**

Report No  
**RTS-2068-1004-46**

FCC ID  
**L6ARCZ30CW**



0 dB = 0.150A/m