

	Document <b>Annex A to Hearing Aid Compatibility RF Emissions Test Report for the BlackBerry® Smartphone model RFF91LW, RFK121LW</b>		Page <b>1 (156)</b>
	Author Data <b>Daoud Attayi</b>	Dates of Test <b>Jan. 31, Feb. 17, June 18-Sep. 28, 2012</b>	Report No <b>RTS-6012-1207-39B</b>

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

### **A.1 Spectrum analyser plots: GSM/UMTS, CW, 80%AM, signals**

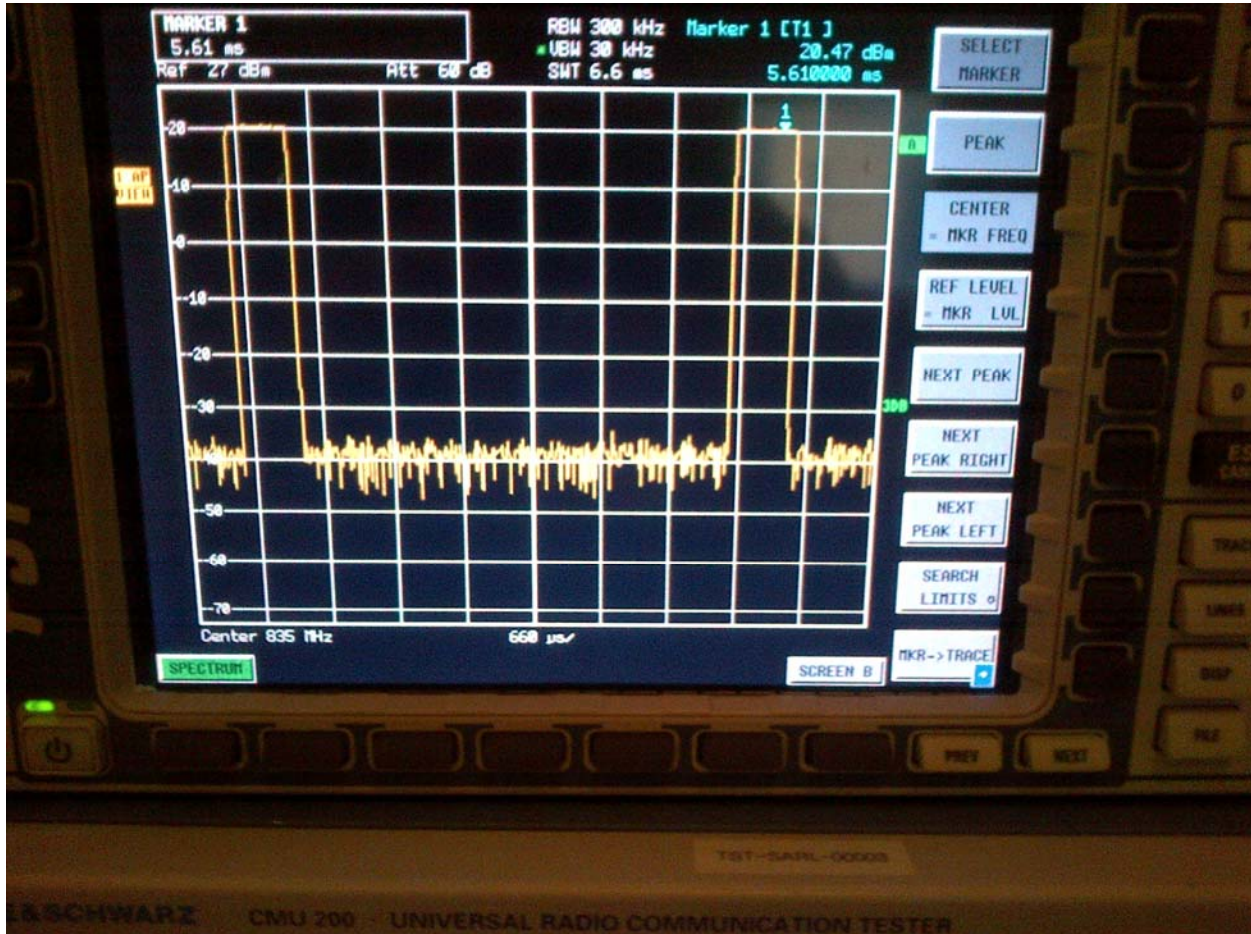


Author Data  
**Daoud Attayi**

Dates of Test  
**Jan. 31, Feb. 17, June 18-Sep. 28, 2012**

Report No  
**RTS-6012-1207-39B**

FCC ID  
**L6ARFF90LW  
L6ARFK120LW**



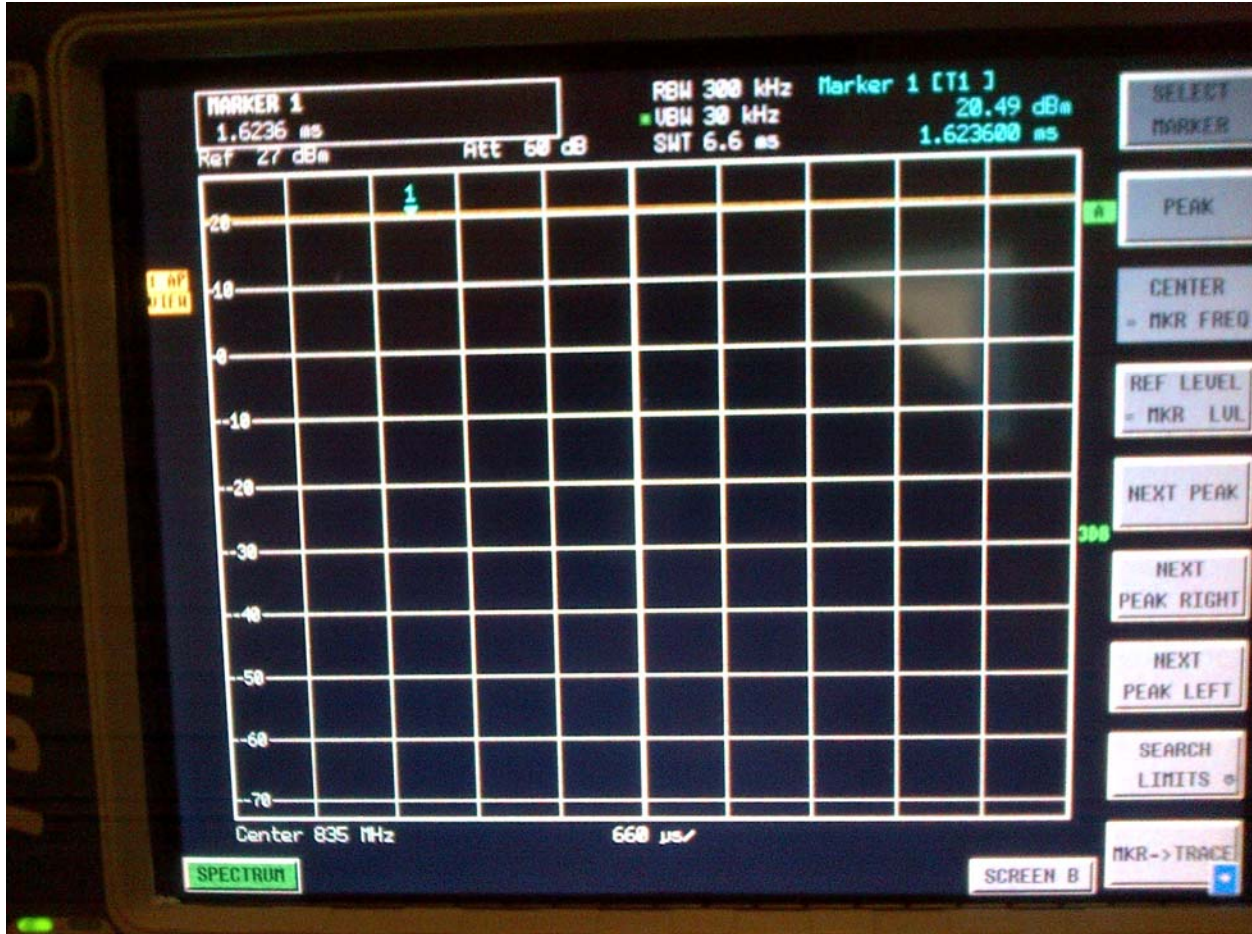
**GSM 835 MHz**

Author Data  
**Daoud Attayi**

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FCC ID  
**L6ARFF90LW  
 L6ARFK120LW**



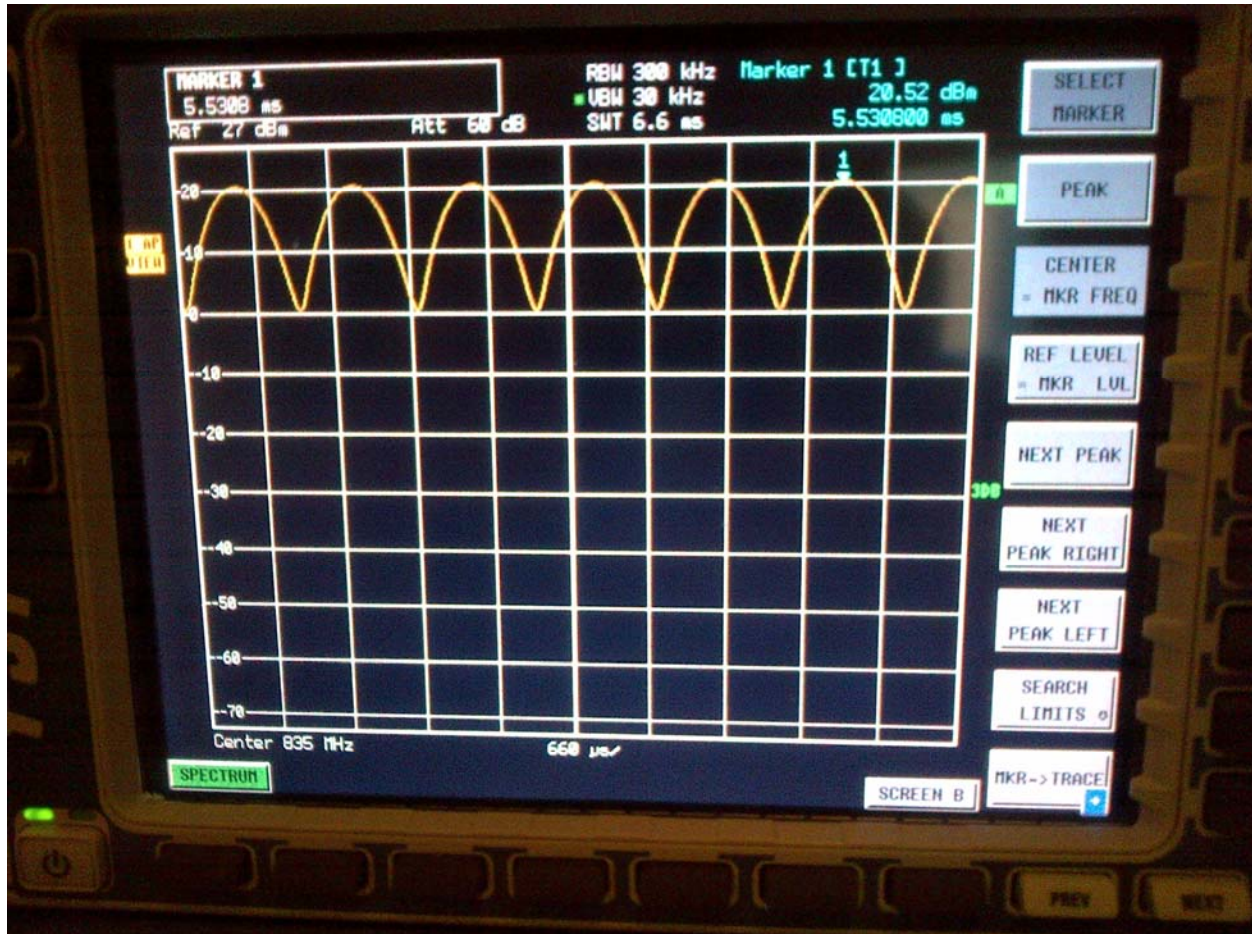
**CW 835 MHz**

Author Data  
**Daoud Attayi**

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 L6ARFK120LW**



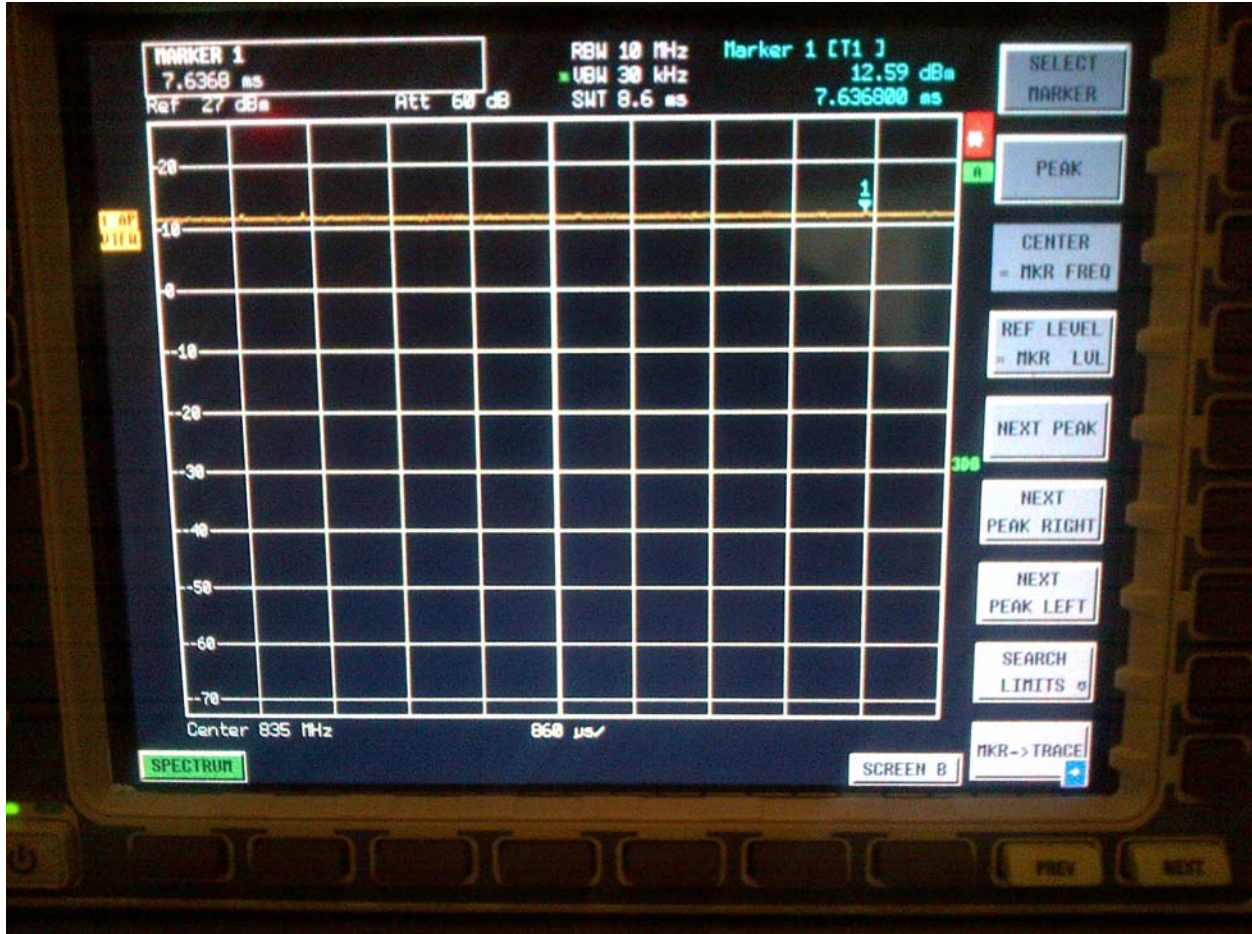
**AM 80% 835 MHz**

Author Data  
**Daoud Attayi**

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**Jan. 31, Feb. 17, June 18-Sep. 28, 2012**

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**L6ARFF90LW  
 L6ARFK120LW**



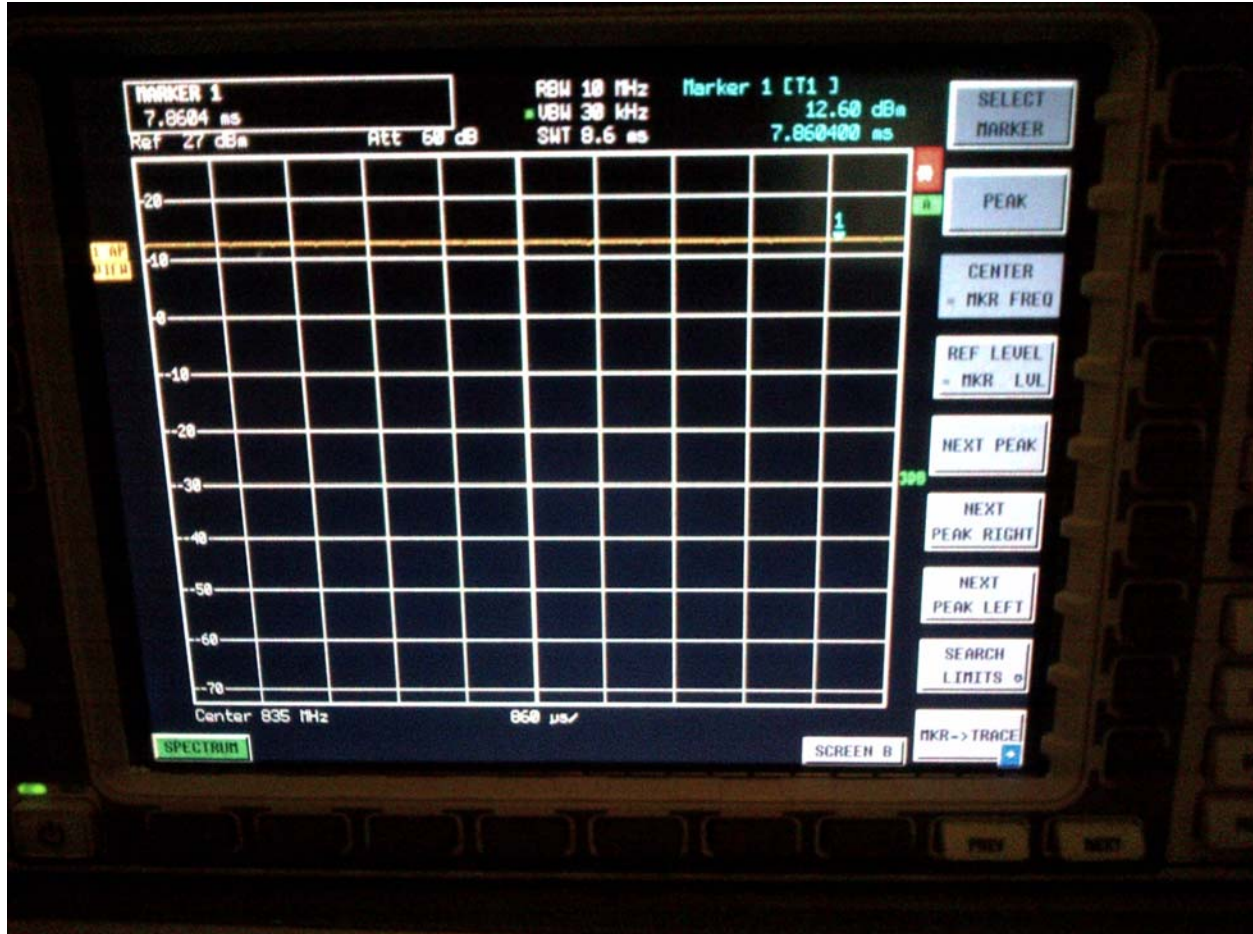
**UMTS 835 MHz**

Author Data  
**Daoud Attayi**

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Report No  
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FCC ID  
**L6ARFF90LW  
L6ARFK120LW**



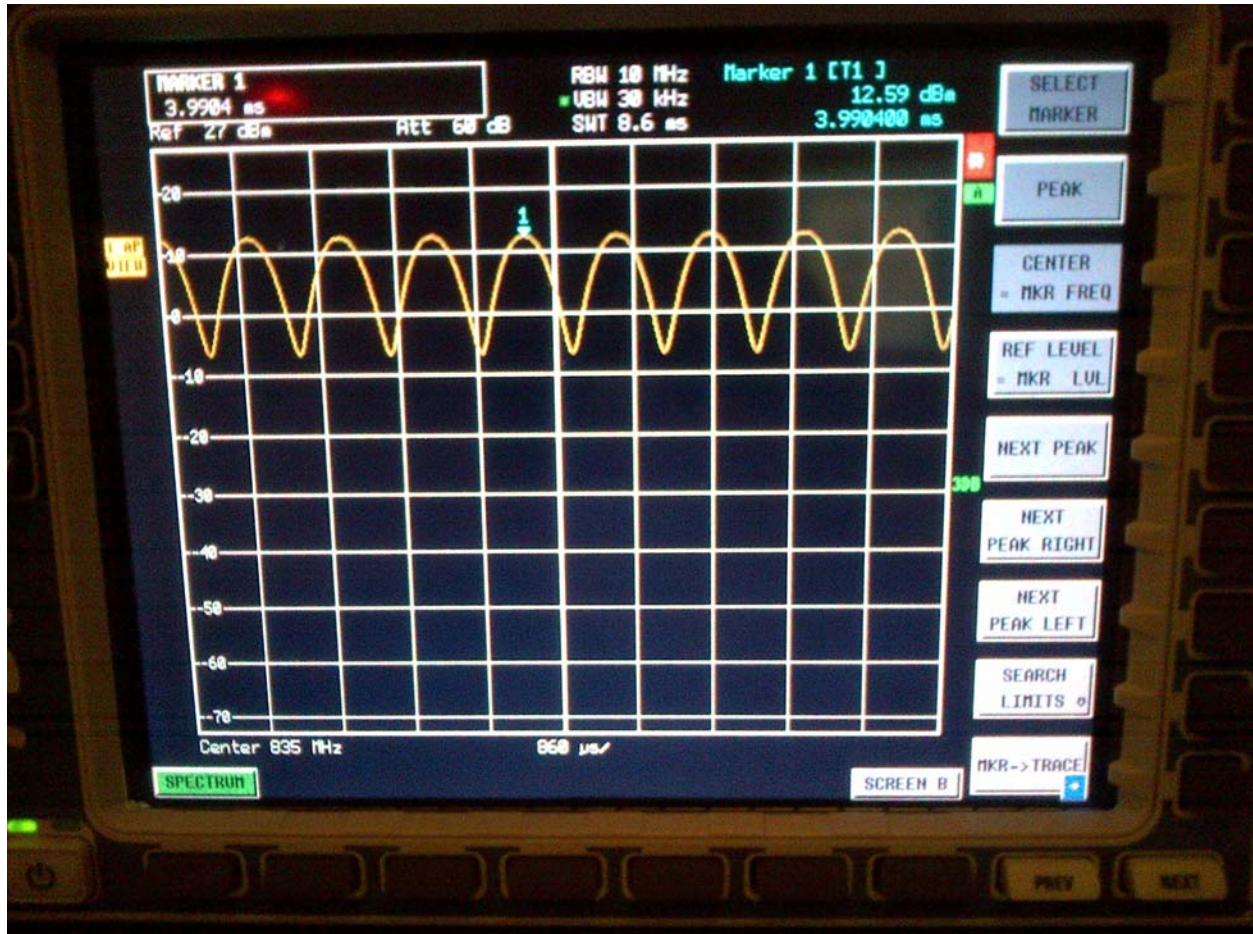
**CW 835 MHz**

Author Data  
**Daoud Attayi**

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**AM 80% 835 MHz**

Author Data  
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UMTS 1733 MHz

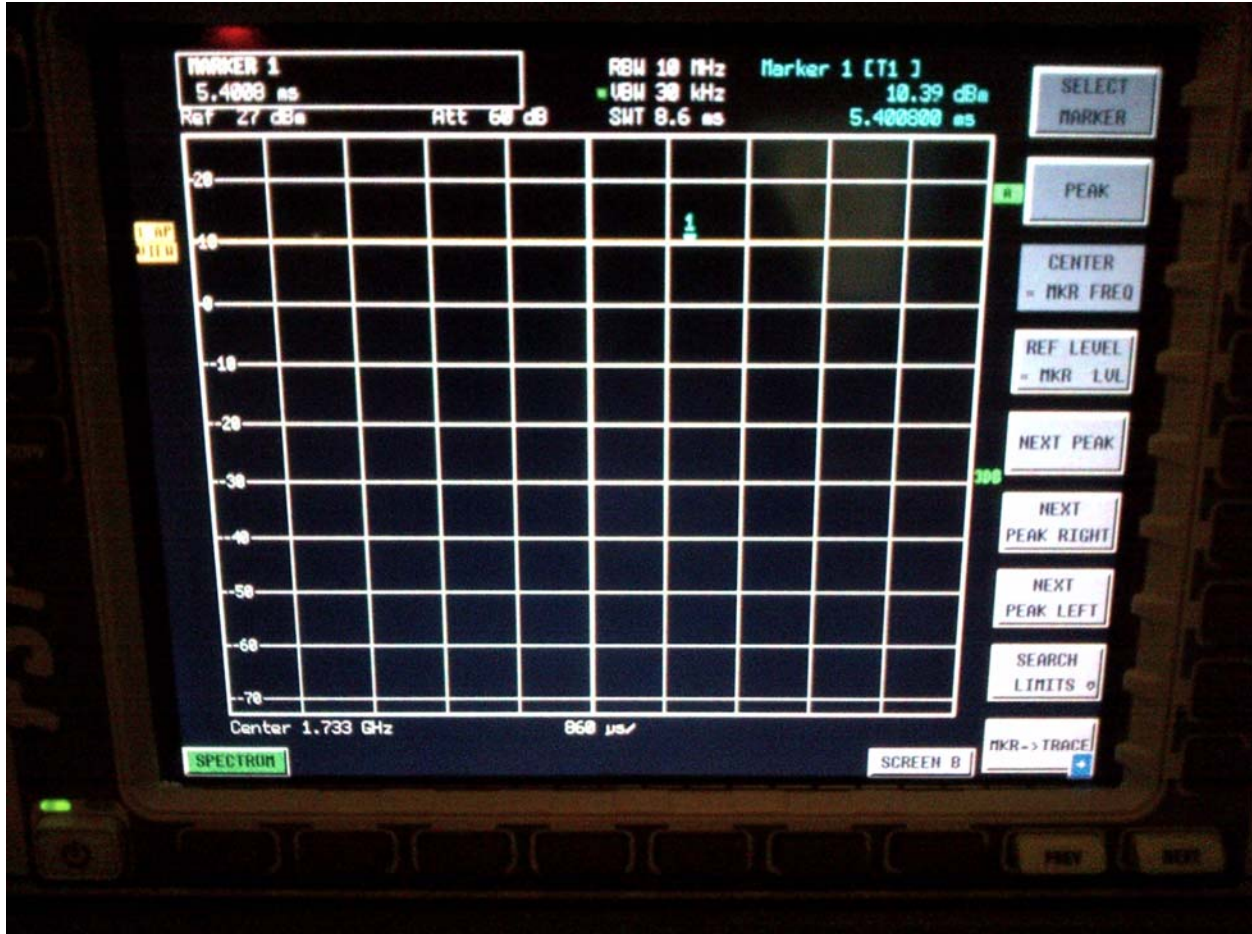


Author Data  
**Daoud Attayi**

Dates of Test  
**Jan. 31, Feb. 17, June 18-Sep. 28, 2012**

Report No  
**RTS-6012-1207-39B**

FCC ID  
**L6ARFF90LW  
 L6ARFK120LW**



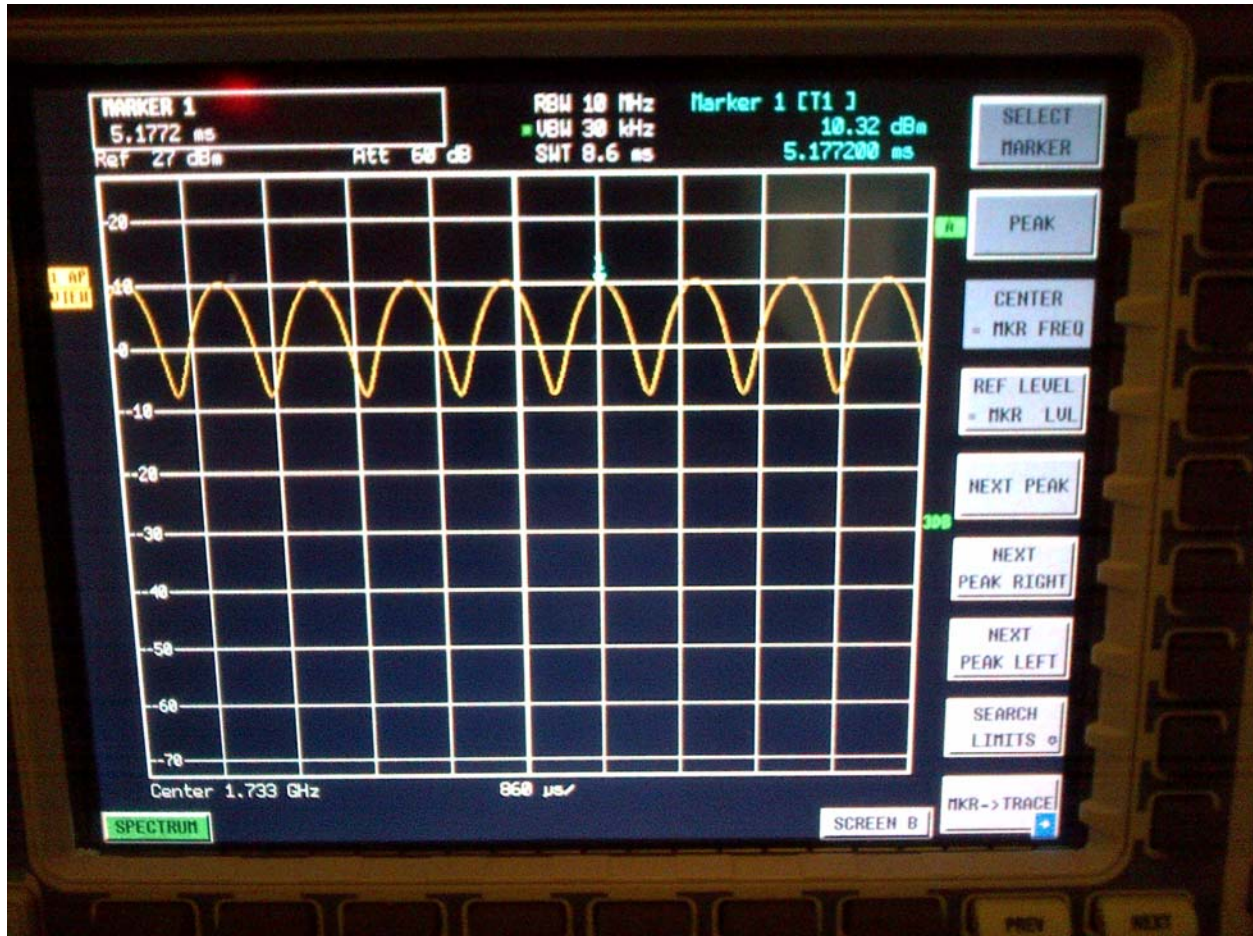
**CW 1733 MHz**

Author Data  
**Daoud Attayi**

Dates of Test  
**Jan. 31, Feb. 17, June 18-Sep. 28, 2012**

Report No  
**RTS-6012-1207-39B**

FCC ID  
**L6ARFF90LW  
 L6ARFK120LW**



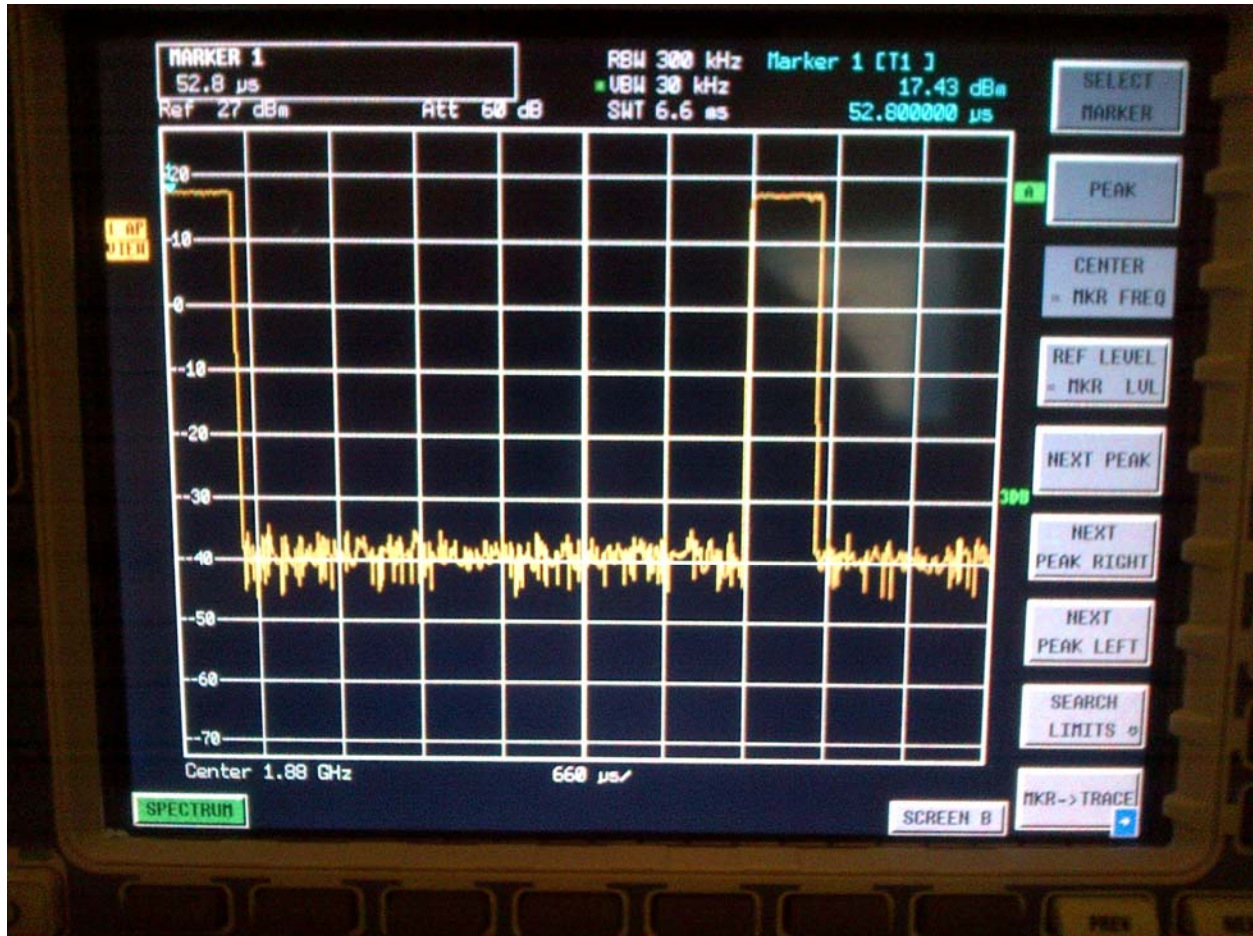
**AM80% 1733 MHz**

Author Data  
**Daoud Attayi**

Dates of Test  
**Jan. 31, Feb. 17, June 18-Sep. 28, 2012**

Report No  
**RTS-6012-1207-39B**

FCC ID  
**L6ARFF90LW  
L6ARFK120LW**



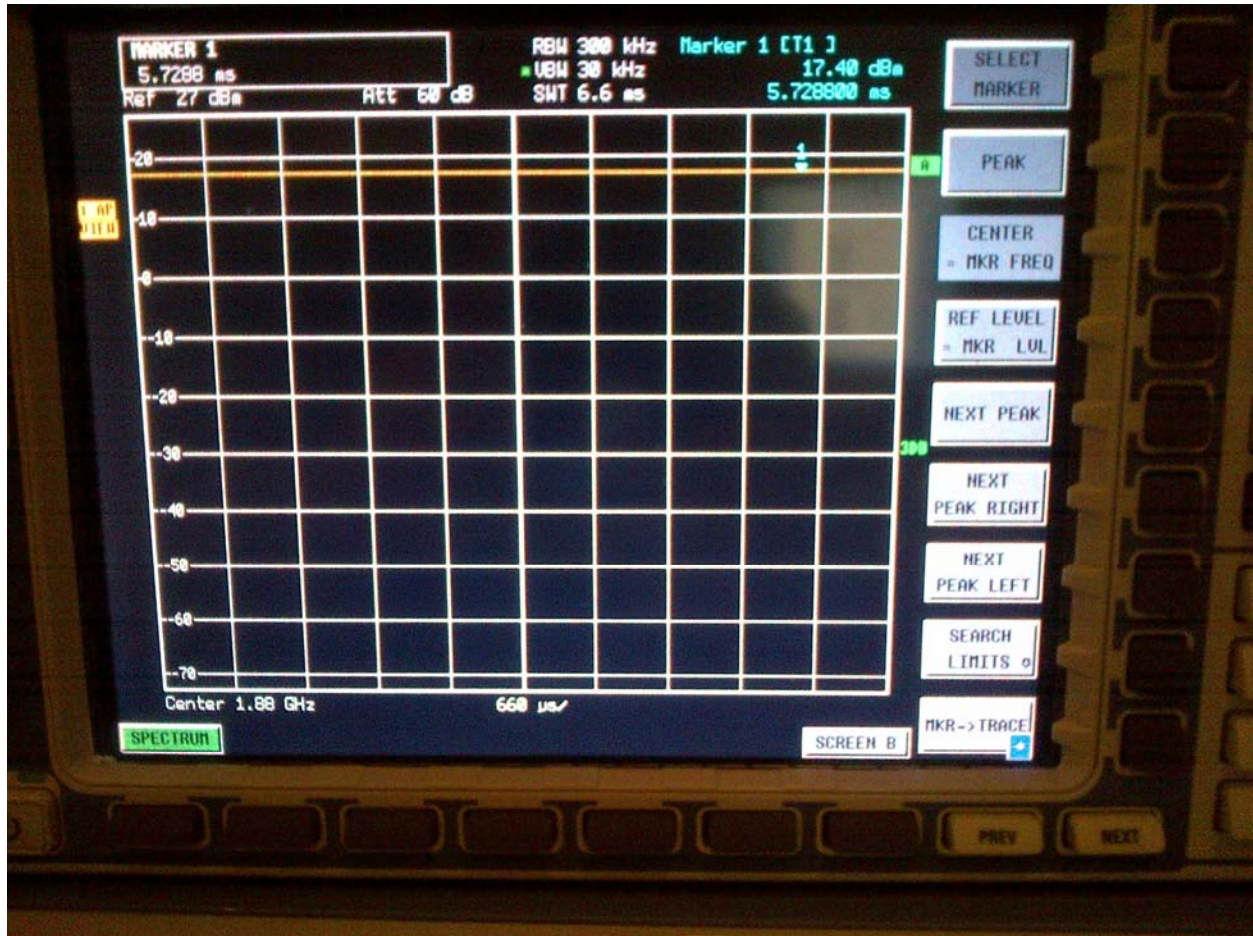
**GSM 1880 MHz**

Author Data  
**Daoud Attayi**

Dates of Test  
**Jan. 31, Feb. 17, June 18-Sep. 28, 2012**

Report No  
**RTS-6012-1207-39B**

FCC ID  
**L6ARFF90LW  
 L6ARFK120LW**



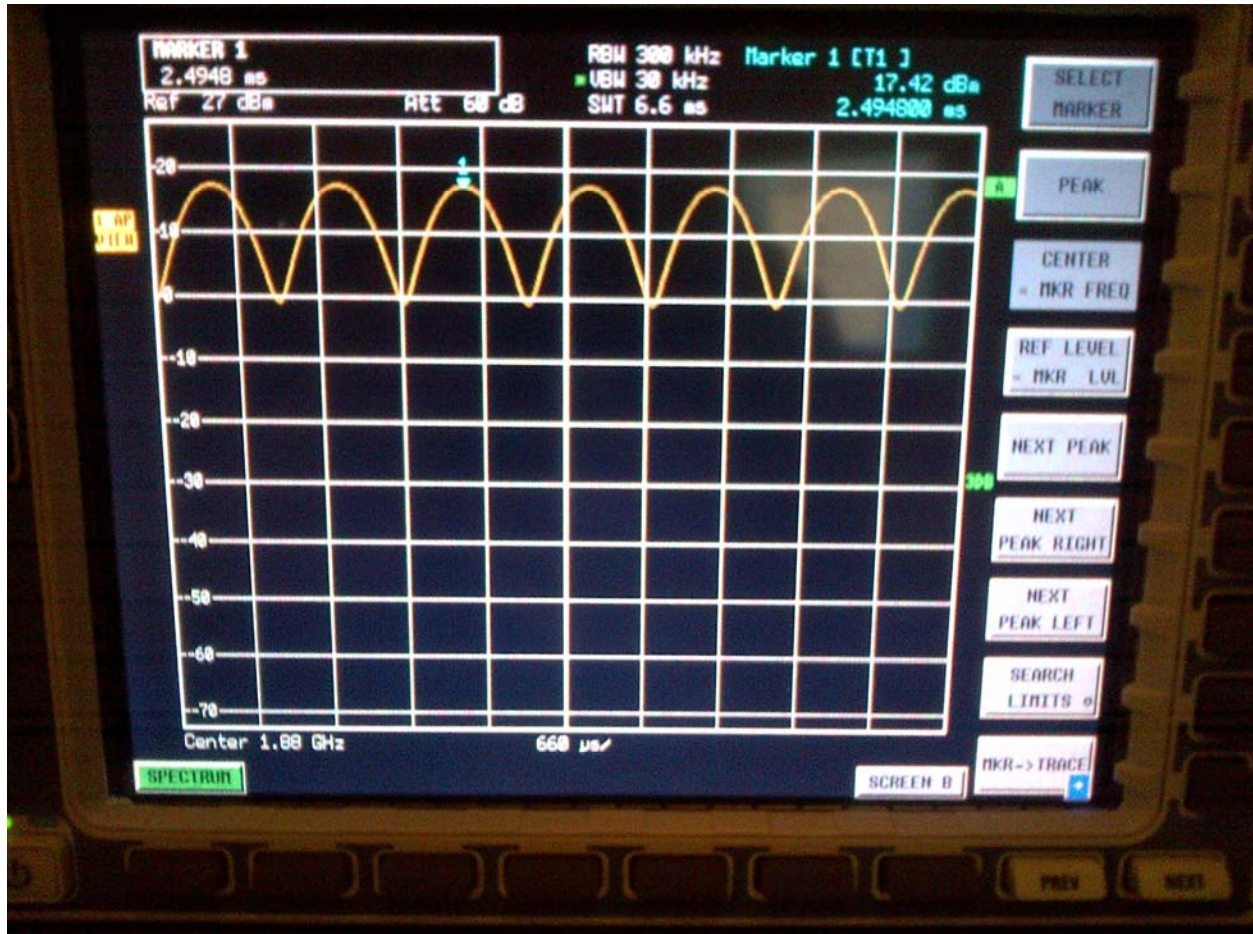
**CW 1880 MHz**

Author Data  
**Daoud Attayi**

Dates of Test  
**Jan. 31, Feb. 17, June 18-Sep. 28, 2012**

Report No  
**RTS-6012-1207-39B**

FCC ID  
**L6ARFF90LW  
L6ARFK120LW**



**AM 80 % 1880 MHz**

Author Data  
**Daoud Attayi**

Dates of Test  
**Jan. 31, Feb. 17, June 18-Sep. 28, 2012**

Report No  
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FCC ID  
**L6ARFF90LW  
 L6ARFK120LW**



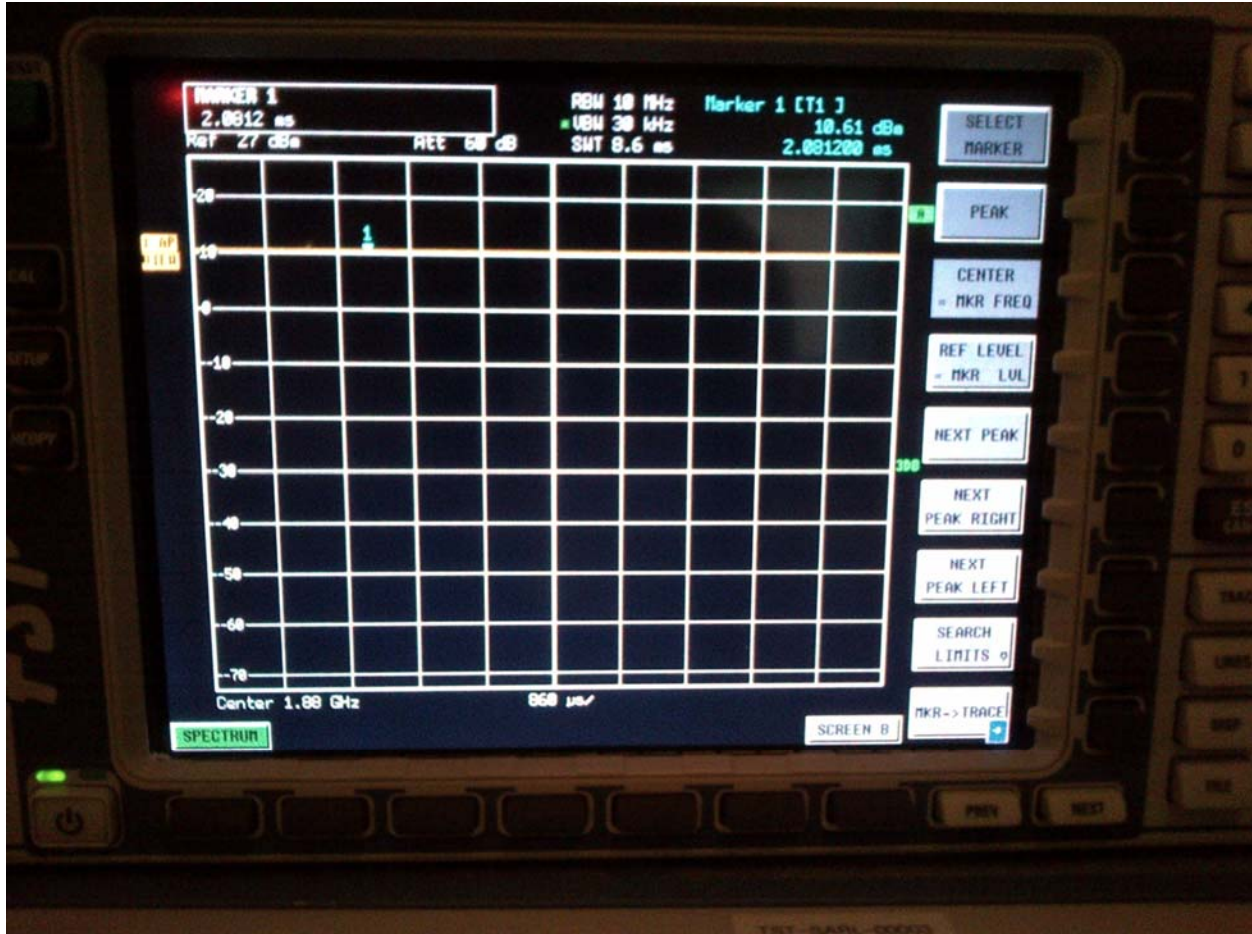
**UMTS 1880 MHz**

Author Data  
**Daoud Attayi**

Dates of Test  
**Jan. 31, Feb. 17, June 18-Sep. 28, 2012**

Report No  
**RTS-6012-1207-39B**

FCC ID  
**L6ARFF90LW  
L6ARFK120LW**



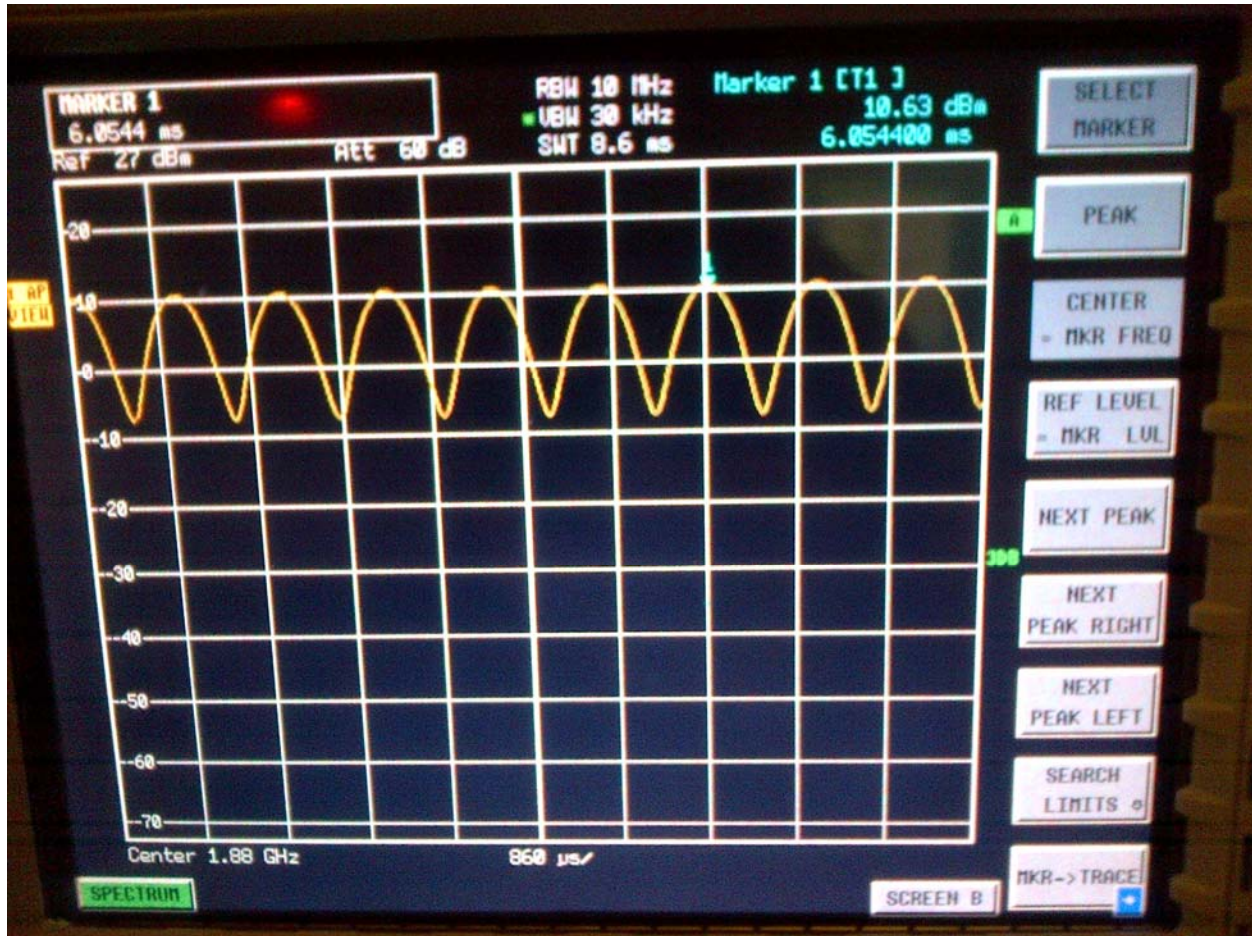
**CW 1880 MHz**

Author Data  
**Daoud Attayi**

Dates of Test  
**Jan. 31, Feb. 17, June 18-Sep. 28, 2012**

Report No  
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FCC ID  
**L6ARFF90LW  
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**AM 80 % 1880 MHz**



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

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Date/Time: 9/28/2012 1:33:02 PM

Test Laboratory: RIM Testing Services

### HAC RF\_E-Field\_validation\_835 MHz\_09\_28\_12

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

Communication System: CW; Frequency: 835 MHz

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

Phantom section: RF Section

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

DASY Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 1/9/2012
- Sensor-Surface: (Fix Surface), z = 4.7
- Electronics: DAE3 Sn473; Calibrated: 1/13/2012
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA
- DASYS2 52.8.0(692); SEMCAD X 14.6.4(4989)

### Dipole E-Field measurement/E Scan - measurement distance from the probe sensor center to CD835 Dipole = 10mm/Hearing Aid Compatibility Test

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

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 104.4 V/m; Power Drift = 0.03 dB

PMR not calibrated. PMF = 1.000 is applied.

E-field emissions = 171.2 V/m

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

PMF scaled E-field

Grid 1 <b>M4</b> <b>146.8 V/m</b>	Grid 2 <b>M4</b> <b>150.4 V/m</b>	Grid 3 <b>M4</b> <b>146.7 V/m</b>
Grid 4 <b>M4</b> <b>79.31 V/m</b>	Grid 5 <b>M4</b> <b>81.15 V/m</b>	Grid 6 <b>M4</b> <b>77.83 V/m</b>
Grid 7 <b>M4</b>	Grid 8 <b>M4</b>	Grid 9 <b>M4</b>

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Author Data  
**Daoud Attayi**

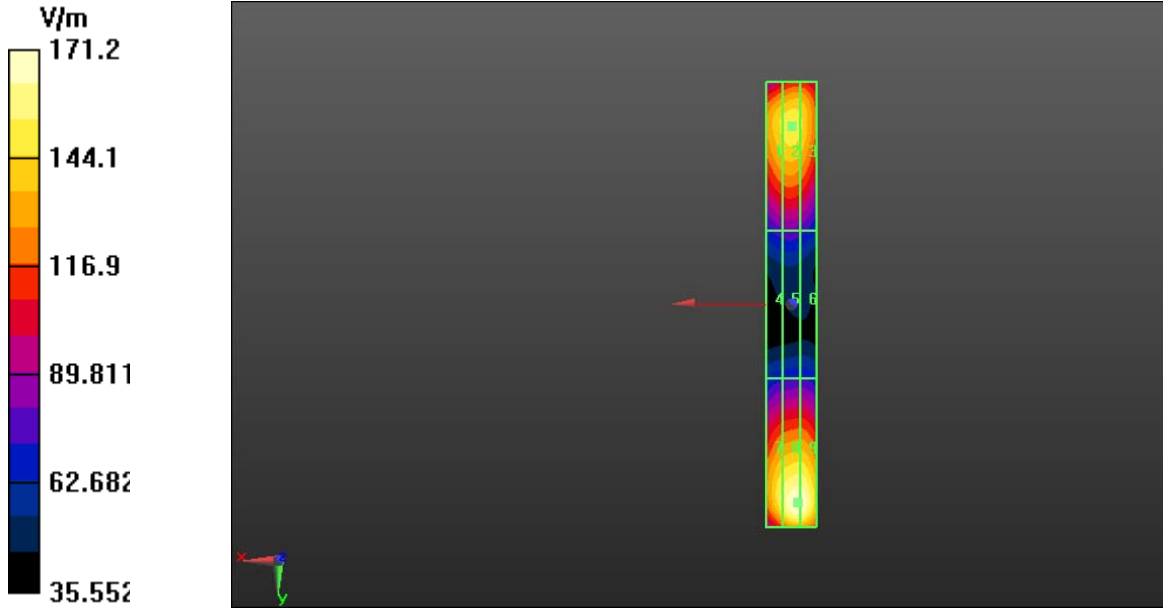
Dates of Test  
**Jan. 31, Feb. 17, June 18-Sep. 28, 2012**

Report No  
**RTS-6012-1207-39B**

FCC ID  
**L6ARFF90LW  
L6ARFK120LW**

<b>157.1 V/m</b>	<b>171.2 V/m</b>	<b>170.7 V/m</b>
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**Cursor:**  
Total = 171.2 V/m  
E Category: M4  
Location: -2.5, 80, 4.7 mm



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Date/Time: 6/28/2012 1:26:32 AM

Test Laboratory: RIM Testing Services

### **HAC RF\_E-Field\_validation\_835 MHz\_06\_28\_12**

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

Communication System: CW; Frequency: 835 MHz

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

Phantom section: RF Section

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

DASY Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 1/9/2012
- Sensor-Surface: (Fix Surface),  $z = 4.7$
- Electronics: DAE3 Sn473; Calibrated: 1/13/2012
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA
- DASYS2 52.8.0(692); SEMCAD X 14.6.4(4989)

**Dipole E-Field measurement/E Scan - measurement distance from the probe sensor center to CD835 Dipole = 10mm/Hearing Aid Compatibility Test**

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

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 102.0 V/m; Power Drift = -0.01 dB

PMR not calibrated. PMF = 1.000 is applied.

E-field emissions = 160.8 V/m

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

Author Data  
**Daoud Attayi**

Dates of Test  
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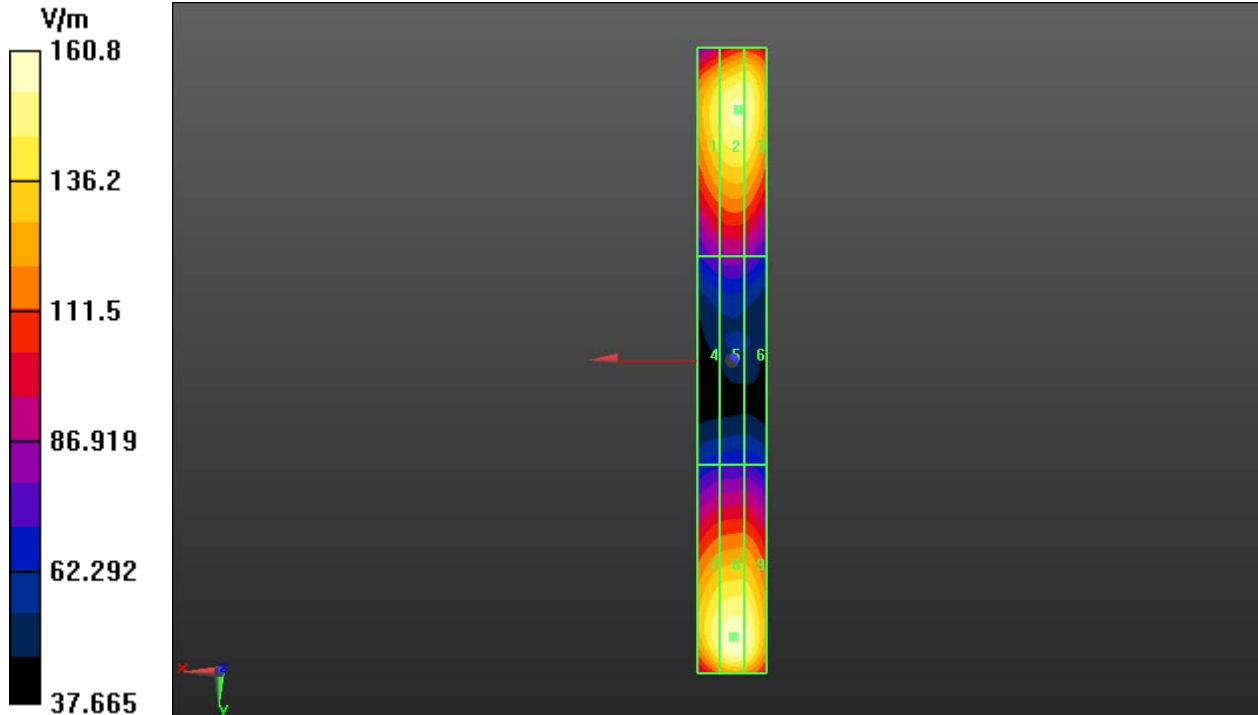
Report No  
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**L6ARFF90LW  
 L6ARFK120LW**

PMF scaled E-field

Grid 1 <b>M4</b> <b>147.1 V/m</b>	Grid 2 <b>M4</b> <b>154.8 V/m</b>	Grid 3 <b>M4</b> <b>154.0 V/m</b>
Grid 4 <b>M4</b> <b>81.97 V/m</b>	Grid 5 <b>M4</b> <b>84.87 V/m</b>	Grid 6 <b>M4</b> <b>82.87 V/m</b>
Grid 7 <b>M4</b> <b>153.8 V/m</b>	Grid 8 <b>M4</b> <b>160.8 V/m</b>	Grid 9 <b>M4</b> <b>157.7 V/m</b>

**Cursor:**  
 Total = 160.8 V/m  
 E Category: M4  
 Location: -0.5, 79.5, 4.7 mm



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Date/Time: 1/31/2012 2:20:06 PM

Test Laboratory: RIM Testing Services

### **HAC RF\_E-Field\_PMF\_GSM835 MHz\_01\_31\_12**

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

Communication System: GSM 835\_PMF, Communication System: CW, Communication System: AM 80%; Frequency: 835 MHz

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

Phantom section: RF Section

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

DASY Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 1/9/2012
- Sensor-Surface: (Fix Surface),  $z = 4.7$
- Electronics: DAE3 Sn472; Calibrated: 3/7/2011
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA
- DASYS2 52.8.0(692); SEMCAD X 14.6.4(4989)

### **Dipole E-Field measurement/E Scan - GSM 835\_PMF/Hearing Aid Compatibility Test (41x361x1):**

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

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 34.20 V/m; Power Drift = 0.04 dB

PMR not calibrated. PMF = 1.000 is applied.

E-field emissions = 51.25 V/m

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



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**L6ARFF90LW  
L6ARFK120LW**

PMF scaled E-field

Grid 1 <b>M4</b> <b>46.59 V/m</b>	Grid 2 <b>M4</b> <b>49.14 V/m</b>	Grid 3 <b>M4</b> <b>49.14 V/m</b>
Grid 4 <b>M4</b> <b>27.62 V/m</b>	Grid 5 <b>M4</b> <b>28.27 V/m</b>	Grid 6 <b>M4</b> <b>28.03 V/m</b>
Grid 7 <b>M4</b> <b>49.67 V/m</b>	Grid 8 <b>M4</b> <b>51.25 V/m</b>	Grid 9 <b>M4</b> <b>50.67 V/m</b>

**Cursor:**

Total = 51.249 V/m  
E Category: M4  
Location: -0.5, 79.5, 4.7 mm

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

Device Reference Point: 0, 0, -6.3 mm  
Reference Value = 105.5 V/m; Power Drift = 0.04 dB  
PMR not calibrated. PMF = 1.000 is applied.  
E-field emissions = 160.5 V/m

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

PMF scaled E-field

Grid 1 <b>M4</b> <b>144.7 V/m</b>	Grid 2 <b>M4</b> <b>152.0 V/m</b>	Grid 3 <b>M4</b> <b>151.2 V/m</b>
Grid 4 <b>M4</b> <b>81.25 V/m</b>	Grid 5 <b>M4</b> <b>83.39 V/m</b>	Grid 6 <b>M4</b> <b>81.16 V/m</b>
Grid 7 <b>M4</b> <b>156.0 V/m</b>	Grid 8 <b>M4</b> <b>160.5 V/m</b>	Grid 9 <b>M4</b> <b>155.5 V/m</b>

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**Cursor:**  
Total = 160.5 V/m  
E Category: M4  
Location: 0, 79, 4.7 mm

**Dipole E-Field measurement/E Scan - AM80%\_ 835\_PMF/Hearing Aid Compatibility Test (41x361x1):** Measurement grid: dx=5mm, dy=5mm

Device Reference Point: 0, 0, -6.3 mm  
Reference Value = 67.40 V/m; Power Drift = -0.05 dB  
PMR not calibrated. PMF = 1.000 is applied.  
E-field emissions = 101.2 V/m

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

PMF scaled E-field

Grid 1 <b>M4</b> <b>90.33 V/m</b>	Grid 2 <b>M4</b> <b>95.24 V/m</b>	Grid 3 <b>M4</b> <b>95.16 V/m</b>
Grid 4 <b>M4</b> <b>51.51 V/m</b>	Grid 5 <b>M4</b> <b>53.10 V/m</b>	Grid 6 <b>M4</b> <b>51.99 V/m</b>
Grid 7 <b>M4</b> <b>97.22 V/m</b>	Grid 8 <b>M4</b> <b>101.2 V/m</b>	Grid 9 <b>M4</b> <b>98.82 V/m</b>

**Cursor:**  
Total = 101.2 V/m  
E Category: M4  
Location: -0.5, 79, 4.7 mm

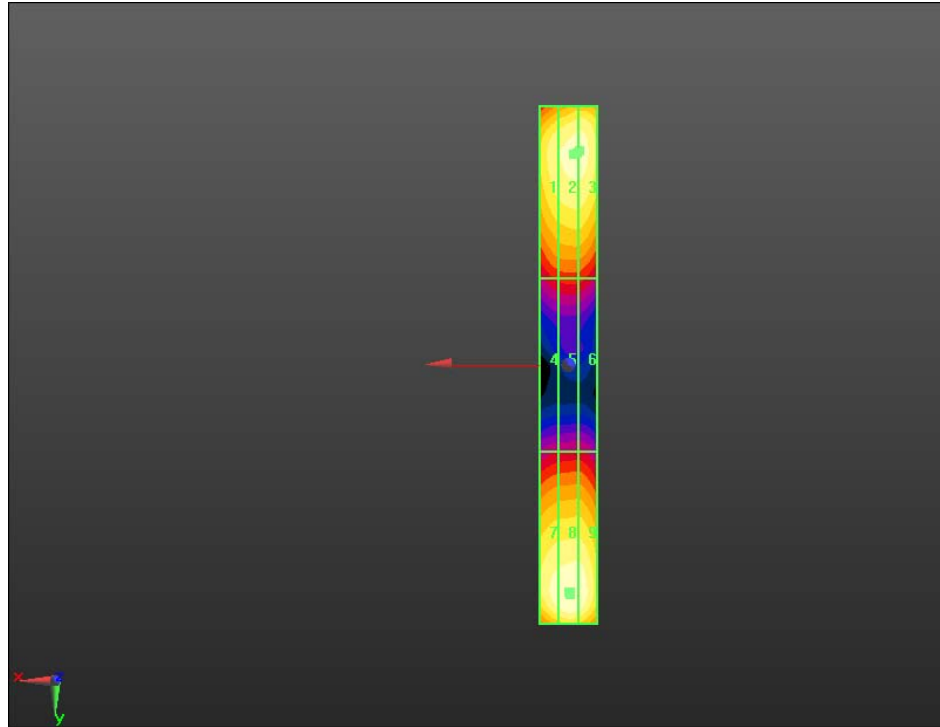
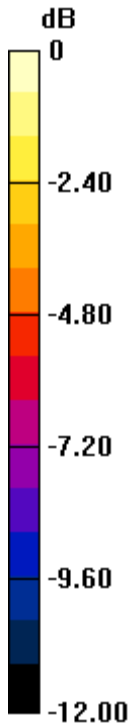


Author Data  
**Daoud Attayi**


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0 dB = 51.250V/m = 34.19 dB V/m

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Date/Time: 2/17/2012 12:24:15 PM

Test Laboratory: RIM Testing Services

### **HAC RF\_E-Field\_PMF\_UMTS835 MHz\_02\_17\_12**

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

Communication System: WCDMA FDD V, Communication System: CW, Communication System: AM 80%; Frequency: 835 MHz

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

Phantom section: RF Section

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

DASY Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 1/9/2012
- Sensor-Surface: (Fix Surface),  $z = 4.7$
- Electronics: DAE3 Sn472; Calibrated: 3/7/2011
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA
- DASYS 52.8.0(692); SEMCAD X 14.6.4(4989)

### **Dipole E-Field measurement/E Scan - UMTS 835\_PMF/Hearing Aid Compatibility Test (41x361x1):**

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

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 41.08 V/m; Power Drift = 0.03 dB

PMR not calibrated. PMF = 1.000 is applied.

E-field emissions = 64.41 V/m

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



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PMF scaled E-field

Grid 1 <b>M4</b> <b>53.11 V/m</b>	Grid 2 <b>M4</b> <b>55.59 V/m</b>	Grid 3 <b>M4</b> <b>55.40 V/m</b>
Grid 4 <b>M4</b> <b>29.72 V/m</b>	Grid 5 <b>M4</b> <b>30.66 V/m</b>	Grid 6 <b>M4</b> <b>29.79 V/m</b>
Grid 7 <b>M4</b> <b>61.55 V/m</b>	Grid 8 <b>M4</b> <b>64.41 V/m</b>	Grid 9 <b>M4</b> <b>63.22 V/m</b>

**Cursor:**

Total = 64.412 V/m

E Category: M4

Location: -0.5, 79, 4.7 mm

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

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 43.11 V/m; Power Drift = -0.14 dB

PMR not calibrated. PMF = 1.000 is applied.

E-field emissions = 68.64 V/m

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

PMF scaled E-field

Grid 1 <b>M4</b> <b>58.55 V/m</b>	Grid 2 <b>M4</b> <b>59.20 V/m</b>	Grid 3 <b>M4</b> <b>57.13 V/m</b>
Grid 4 <b>M4</b> <b>32.35 V/m</b>	Grid 5 <b>M4</b> <b>32.63 V/m</b>	Grid 6 <b>M4</b> <b>31.24 V/m</b>
Grid 7 <b>M4</b> <b>61.85 V/m</b>	Grid 8 <b>M4</b> <b>68.64 V/m</b>	Grid 9 <b>M4</b> <b>68.56 V/m</b>

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**Cursor:**  
Total = 68.635 V/m  
E Category: M4  
Location: -3, 79.5, 4.7 mm

**Dipole E-Field measurement/E Scan - AM80%\_ 835\_PMF/Hearing Aid Compatibility Test (41x361x1):** Measurement grid: dx=5mm, dy=5mm  
Device Reference Point: 0, 0, -6.3 mm  
Reference Value = 28.41 V/m; Power Drift = 0.09 dB  
PMR not calibrated. PMF = 1.000 is applied.  
E-field emissions = 45.21 V/m  
**Near-field category: M4 (AWF 0 dB)**

PMF scaled E-field

Grid 1 <b>M4</b> <b>38.28 V/m</b>	Grid 2 <b>M4</b> <b>38.73 V/m</b>	Grid 3 <b>M4</b> <b>37.25 V/m</b>
Grid 4 <b>M4</b> <b>21.72 V/m</b>	Grid 5 <b>M4</b> <b>21.89 V/m</b>	Grid 6 <b>M4</b> <b>20.80 V/m</b>
Grid 7 <b>M4</b> <b>40.90 V/m</b>	Grid 8 <b>M4</b> <b>45.21 V/m</b>	Grid 9 <b>M4</b> <b>45.16 V/m</b>

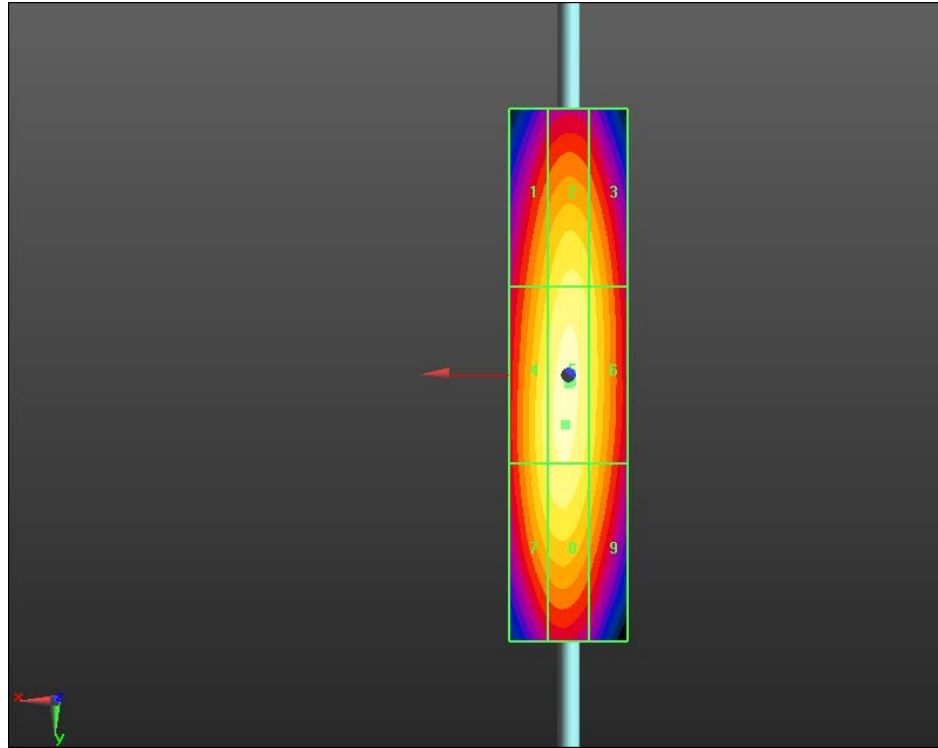
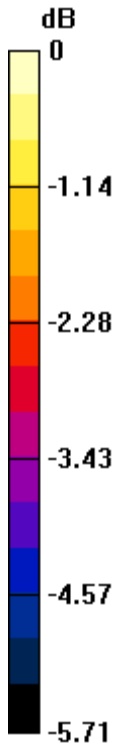
**Cursor:**  
Total = 45.209 V/m  
E Category: M4  
Location: -3, 79.5, 4.7 mm

Author Data  
**Daoud Attayi**

Dates of Test  
**Jan. 31, Feb. 17, June 18-Sep. 28, 2012**

Report No  
**RTS-6012-1207-39B**

FCC ID  
**L6ARFF90LW  
 L6ARFK120LW**



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

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Date/Time: 9/28/2012 2:29:40 PM

Test Laboratory: RIM Testing Services

### **HAC RF\_E-Field\_validation\_1880 MHz\_09\_28\_12**

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

Communication System: CW; Frequency: 1880 MHz

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

Phantom section: RF Section

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

DASY Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 1/9/2012
- Sensor-Surface: (Fix Surface),  $z = 4.7$
- Electronics: DAE3 Sn473; Calibrated: 1/13/2012
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA
- DASYS2 52.8.0(692); SEMCAD X 14.6.4(4989)

### **Dipole E-Field measurement/E Scan - measurement distance from the probe sensor center to CD1880 Dipole = 10mm/Hearing Aid Compatibility Test**

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

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 144.8 V/m; Power Drift = 0.04 dB

PMR not calibrated. PMF = 1.000 is applied.

E-field emissions = 130.9 V/m

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

PMF scaled E-field

Grid 1 <b>M2</b> <b>118.8 V/m</b>	Grid 2 <b>M2</b> <b>123.6 V/m</b>	Grid 3 <b>M2</b> <b>122.2 V/m</b>
Grid 4 <b>M3</b> <b>83.54 V/m</b>	Grid 5 <b>M3</b> <b>85.60 V/m</b>	Grid 6 <b>M3</b> <b>83.07 V/m</b>
Grid 7 <b>M2</b>	Grid 8 <b>M2</b>	Grid 9 <b>M2</b>

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Author Data  
**Daoud Attayi**

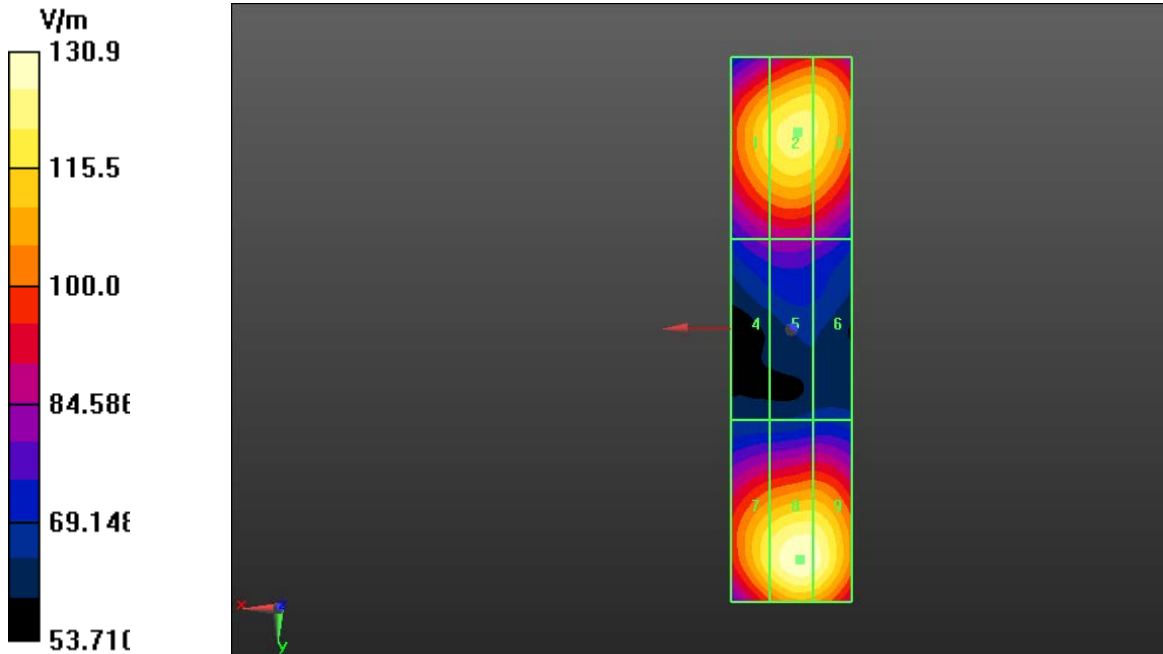
Dates of Test  
**Jan. 31, Feb. 17, June 18-Sep. 28, 2012**

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**RTS-6012-1207-39B**

FCC ID  
**L6ARFF90LW  
L6ARFK120LW**

<b>121.7 V/m</b>	<b>130.9 V/m</b>	<b>129.4 V/m</b>
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**Cursor:**  
Total = 130.9 V/m  
E Category: M2  
Location: -1.5, 38, 4.7 mm



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Date/Time: 6/28/2012 1:54:39 AM

Test Laboratory: RIM Testing Services

### **HAC RF\_E-Field\_validation\_1880 MHz\_06\_28\_12**

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

Communication System: CW; Frequency: 1880 MHz

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

Phantom section: RF Section

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

DASY Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 1/9/2012
- Sensor-Surface: (Fix Surface),  $z = 4.7$
- Electronics: DAE3 Sn473; Calibrated: 1/13/2012
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA
- DASYS2 52.8.0(692); SEMCAD X 14.6.4(4989)

### **Dipole E-Field measurement/E Scan - measurement distance from the probe sensor center to CD1880 Dipole = 10mm/Hearing Aid Compatibility Test**

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

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 152.6 V/m; Power Drift = -0.04 dB

PMR not calibrated. PMF = 1.000 is applied.

E-field emissions = 134.6 V/m

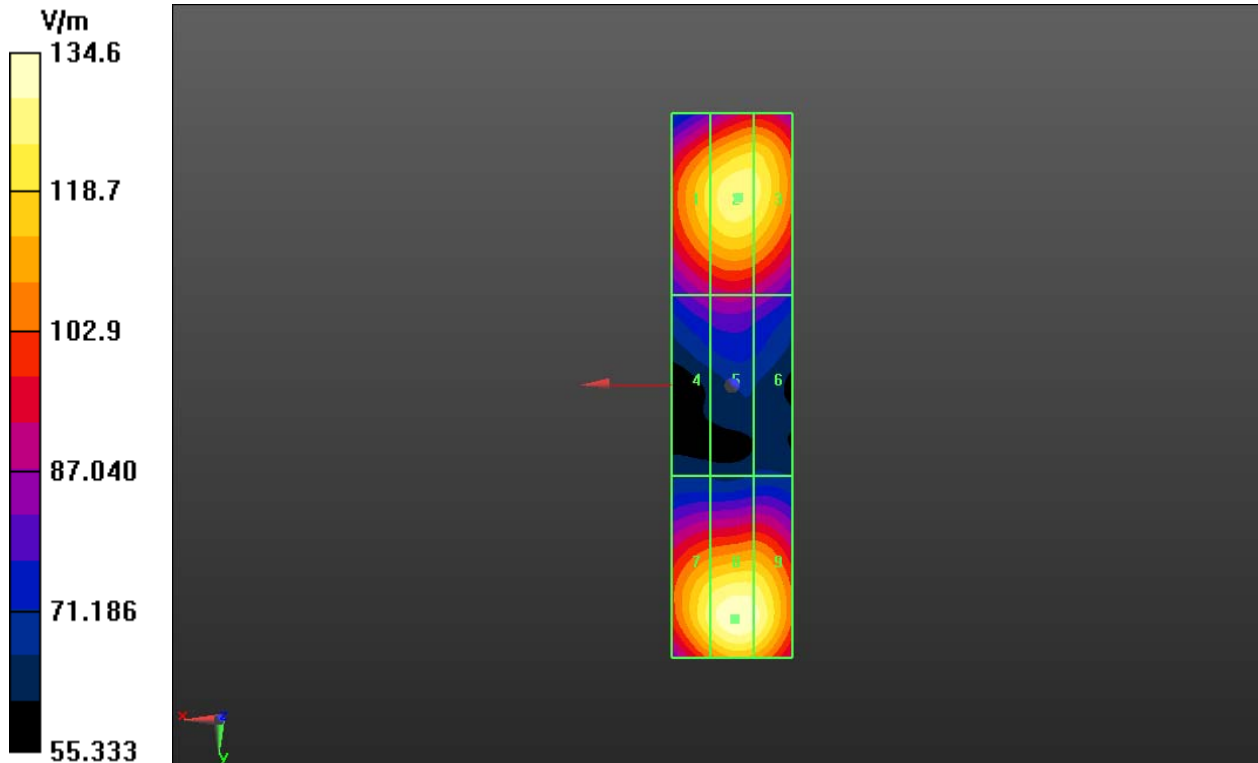
**Near-field category: M2 (AWF 0 dB)**



PMF scaled E-field

Grid 1 <b>M2</b> <b>122.0 V/m</b>	Grid 2 <b>M2</b> <b>127.9 V/m</b>	Grid 3 <b>M2</b> <b>126.5 V/m</b>
Grid 4 <b>M3</b> <b>88.18 V/m</b>	Grid 5 <b>M3</b> <b>91.05 V/m</b>	Grid 6 <b>M3</b> <b>88.28 V/m</b>
Grid 7 <b>M2</b> <b>127.2 V/m</b>	Grid 8 <b>M2</b> <b>134.6 V/m</b>	Grid 9 <b>M2</b> <b>132.1 V/m</b>

**Cursor:**  
 Total = 134.6 V/m  
 E Category: M2  
 Location: -0.5, 38.5, 4.7 mm



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Date/Time: 2/17/2012 3:04:25 PM

Test Laboratory: RIM Testing Services

### **HAC RF\_E-Field\_PMF\_UMTS1733 MHz\_02\_17\_12**

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

Communication System: WCDMA FDD IV, Communication System: CW, Communication System: AM 80%; Frequency: 1732.6 MHz, Frequency: 1733 MHz  
Medium parameters used:  $\sigma = 0$  mho/m,  $\epsilon_r = 1$ ;  $\rho = 0$  kg/m<sup>3</sup>  
Phantom section: RF Section  
Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 1/9/2012
- Sensor-Surface: (Fix Surface),  $z = 4.7$
- Electronics: DAE3 Sn472; Calibrated: 3/7/2011
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA
- DASYS2 52.8.0(692); SEMCAD X 14.6.4(4989)

### **Dipole E-Field measurement/E Scan - UMTS 1733\_PMF/Hearing Aid Compatibility Test (41x181x1):** Measurement grid: dx=5mm, dy=5mm

Device Reference Point: 0, 0, -6.3 mm  
Reference Value = 50.62 V/m; Power Drift = -0.07 dB  
PMR not calibrated. PMF = 1.000 is applied.  
E-field emissions = 45.31 V/m

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

PMF scaled E-field

Grid 1 <b>M4</b> <b>38.99 V/m</b>	Grid 2 <b>M4</b> <b>40.35 V/m</b>	Grid 3 <b>M4</b> <b>39.86 V/m</b>
Grid 4 <b>M4</b> <b>28.58 V/m</b>	Grid 5 <b>M4</b> <b>29.21 V/m</b>	Grid 6 <b>M4</b> <b>28.30 V/m</b>
Grid 7 <b>M4</b> <b>42.57 V/m</b>	Grid 8 <b>M4</b> <b>45.31 V/m</b>	Grid 9 <b>M4</b> <b>44.53 V/m</b>

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**Cursor:**

Total = 45.306 V/m

E Category: M4

Location: -1, 38, 4.7 mm

**Dipole E-Field measurement/E Scan- CW 1733\_PMF/Hearing Aid Compatibility Test (41x181x1):** Measurement grid: dx=5mm, dy=5mm

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 50.63 V/m; Power Drift = 0.07 dB

PMR not calibrated. PMF = 1.000 is applied.

E-field emissions = 46.45 V/m

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

PMF scaled E-field

Grid 1 <b>M4</b> <b>40.60 V/m</b>	Grid 2 <b>M4</b> <b>41.81 V/m</b>	Grid 3 <b>M4</b> <b>41.04 V/m</b>
Grid 4 <b>M4</b> <b>29.57 V/m</b>	Grid 5 <b>M4</b> <b>30.18 V/m</b>	Grid 6 <b>M4</b> <b>29.29 V/m</b>
Grid 7 <b>M4</b> <b>44.02 V/m</b>	Grid 8 <b>M4</b> <b>46.45 V/m</b>	Grid 9 <b>M4</b> <b>45.54 V/m</b>

**Cursor:**

Total = 46.446 V/m

E Category: M4

Location: -1, 38, 4.7 mm

**Dipole E-Field measurement/E Scan - AM80%\_ 1733\_PMF/Hearing Aid Compatibility Test (41x181x1):** Measurement grid: dx=5mm, dy=5mm

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 32.26 V/m; Power Drift = 0.12 dB

PMR not calibrated. PMF = 1.000 is applied.

E-field emissions = 29.45 V/m

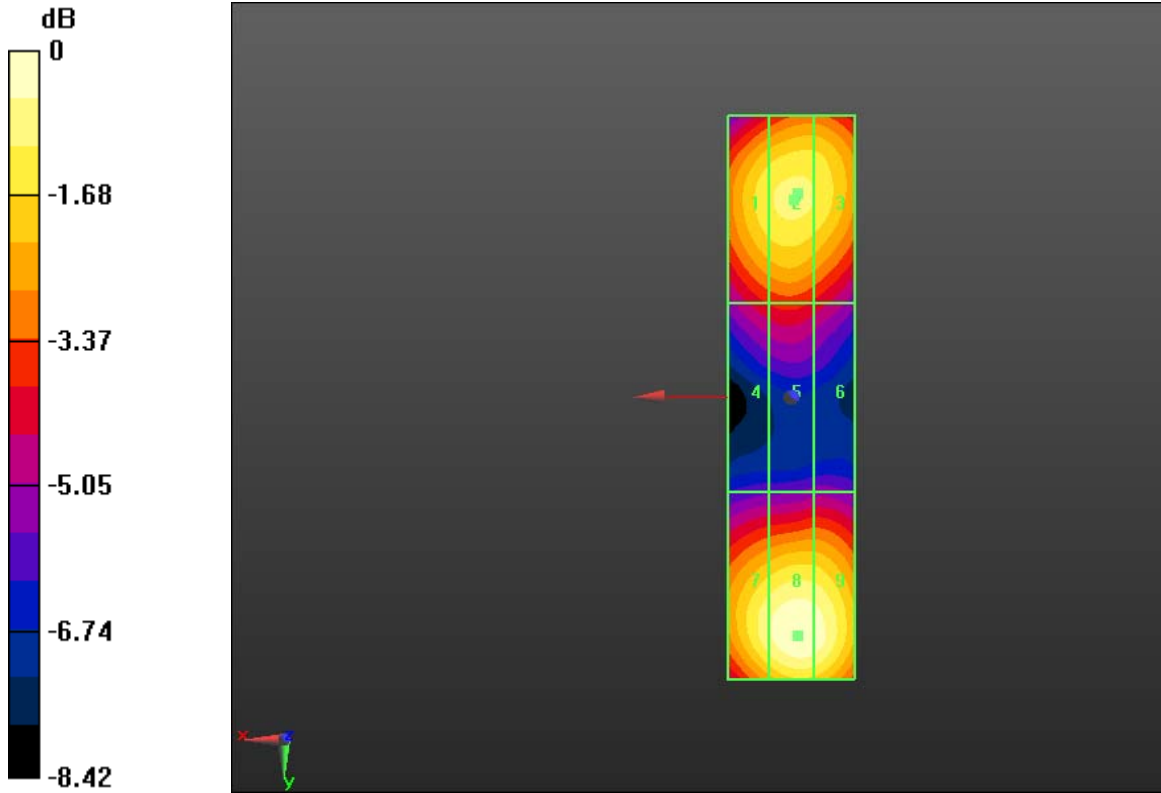
**Near-field category: M4 (AWF 0 dB)**

PMF scaled E-field

Grid 1 <b>M4</b> <b>25.68 V/m</b>	Grid 2 <b>M4</b> <b>26.42 V/m</b>	Grid 3 <b>M4</b> <b>25.96 V/m</b>
Grid 4 <b>M4</b>	Grid 5 <b>M4</b>	Grid 6 <b>M4</b>

<b>18.91 V/m</b>	<b>19.39 V/m</b>	<b>18.52 V/m</b>
Grid 7 <b>M4</b>	Grid 8 <b>M4</b>	Grid 9 <b>M4</b>
<b>27.45 V/m</b>	<b>29.45 V/m</b>	<b>28.94 V/m</b>

**Cursor:**  
 Total = 29.451 V/m  
 E Category: M4  
 Location: -1, 38, 4.7 mm



0 dB = 45.310V/m = 33.12 dB V/m

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Date/Time: 1/31/2012 1:55:07 PM

Test Laboratory: RIM Testing Services

### **HAC RF\_E-Field\_PMF\_GSM1880 MHz\_01\_31\_12**

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

Communication System: GSM 1880, Communication System: CW, Communication System: AM 80%; Frequency: 1880 MHz

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

Phantom section: RF Section

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

DASY Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 1/9/2012
- Sensor-Surface: (Fix Surface),  $z = 4.7$
- Electronics: DAE3 Sn472; Calibrated: 3/7/2011
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA
- DASYS2 52.8.0(692); SEMCAD X 14.6.4(4989)

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

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 34.29 V/m; Power Drift = 0.05 dB

PMR not calibrated. PMF = 1.000 is applied.


E-field emissions = 30.95 V/m

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

PMF scaled E-field

Grid 1 <b>M4</b> <b>27.89 V/m</b>	Grid 2 <b>M4</b> <b>29.29 V/m</b>	Grid 3 <b>M4</b> <b>29.22 V/m</b>
Grid 4 <b>M4</b> <b>19.87 V/m</b>	Grid 5 <b>M4</b> <b>20.63 V/m</b>	Grid 6 <b>M4</b> <b>20.20 V/m</b>
Grid 7 <b>M4</b> <b>29.49 V/m</b>	Grid 8 <b>M4</b> <b>30.95 V/m</b>	Grid 9 <b>M4</b> <b>30.55 V/m</b>

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**Cursor:**

Total = 30.947 V/m

E Category: M4

Location: -1, 38, 4.7 mm

**Dipole E-Field measurement/E Scan- CW 1800\_PMF/Hearing Aid Compatibility Test (41x181x1):** Measurement grid: dx=5mm, dy=5mm

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 102.4 V/m; Power Drift = -0.11 dB

PMR not calibrated. PMF = 1.000 is applied.

E-field emissions = 90.42 V/m

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

PMF scaled E-field

Grid 1 <b>M3</b> <b>82.60 V/m</b>	Grid 2 <b>M3</b> <b>86.68 V/m</b>	Grid 3 <b>M3</b> <b>86.04 V/m</b>
Grid 4 <b>M4</b> <b>58.55 V/m</b>	Grid 5 <b>M4</b> <b>60.47 V/m</b>	Grid 6 <b>M4</b> <b>58.89 V/m</b>
Grid 7 <b>M3</b> <b>85.63 V/m</b>	Grid 8 <b>M3</b> <b>90.42 V/m</b>	Grid 9 <b>M3</b> <b>88.30 V/m</b>

**Cursor:**

Total = 90.419 V/m

E Category: M3

Location: -0.5, 38, 4.7 mm

**Dipole E-Field measurement/E Scan - AM80%\_ 1880\_PMF/Hearing Aid Compatibility Test (41x181x1):** Measurement grid: dx=5mm, dy=5mm

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 64.56 V/m; Power Drift = 0.07 dB

PMR not calibrated. PMF = 1.000 is applied.

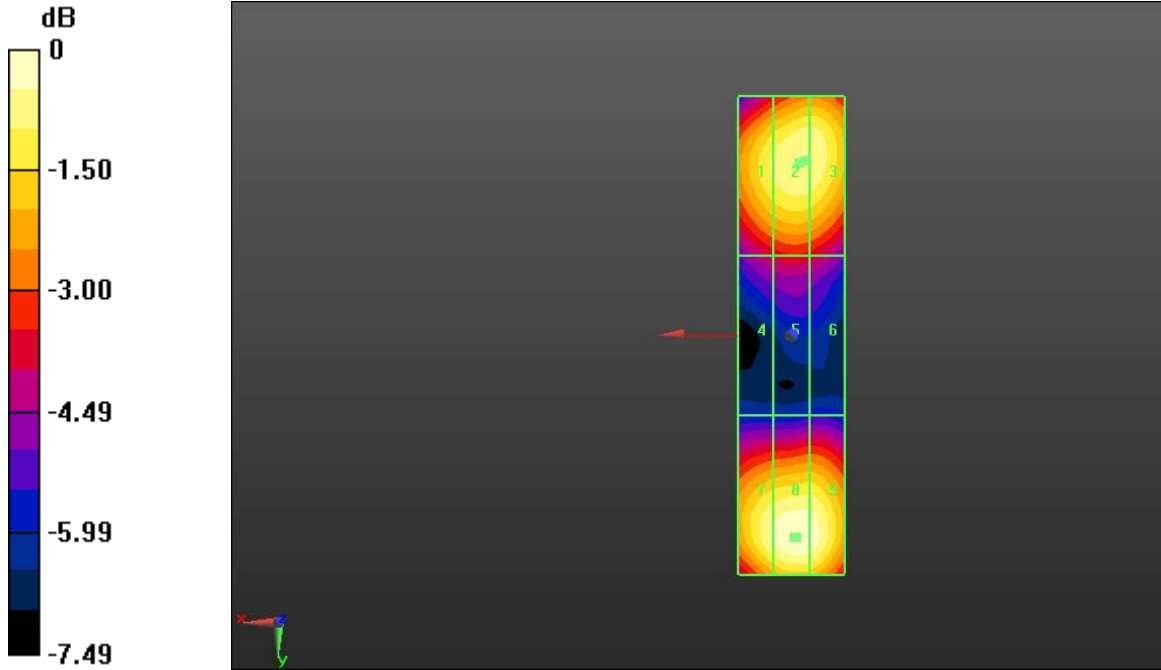
E-field emissions = 58.24 V/m

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

PMF scaled E-field

Grid 1 <b>M4</b> <b>52.36 V/m</b>	Grid 2 <b>M4</b> <b>55.29 V/m</b>	Grid 3 <b>M4</b> <b>55.10 V/m</b>
Grid 4 <b>M4</b> <b>37.30 V/m</b>	Grid 5 <b>M4</b> <b>38.47 V/m</b>	Grid 6 <b>M4</b> <b>37.60 V/m</b>
Grid 7 <b>M4</b> <b>55.71 V/m</b>	Grid 8 <b>M4</b> <b>58.24 V/m</b>	Grid 9 <b>M4</b> <b>56.94 V/m</b>

**Cursor:**  
 Total = 58.238 V/m  
 E Category: M4  
 Location: -0.5, 38, 4.7 mm



0 dB = 30.950V/m = 29.81 dB V/m

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Date/Time: 2/17/2012 2:20:23 PM

Test Laboratory: RIM Testing Services

### **HAC RF\_E-Field\_PMF\_UMTS1880 MHz\_02\_17\_12**

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

Communication System: WCDMA FDD II, Communication System: CW, Communication System: AM 80%; Frequency: 1880 MHz

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

Phantom section: RF Section

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

DASY Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 1/9/2012
- Sensor-Surface: (Fix Surface),  $z = 4.7$
- Electronics: DAE3 Sn472; Calibrated: 3/7/2011
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA
- DASYS 52.8.0(692); SEMCAD X 14.6.4(4989)

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

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 47.02 V/m; Power Drift = 0.01 dB

PMR not calibrated. PMF = 1.000 is applied.

E-field emissions = 42.43 V/m

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





Author Data  
**Daoud Attayi**

Dates of Test  
**Jan. 31, Feb. 17, June 18-Sep. 28, 2012**

Report No  
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FCC ID  
**L6ARFF90LW  
L6ARFK120LW**

PMF scaled E-field

Grid 1 <b>M4</b> <b>37.98 V/m</b>	Grid 2 <b>M4</b> <b>39.42 V/m</b>	Grid 3 <b>M4</b> <b>39.04 V/m</b>
Grid 4 <b>M4</b> <b>26.86 V/m</b>	Grid 5 <b>M4</b> <b>27.50 V/m</b>	Grid 6 <b>M4</b> <b>26.70 V/m</b>
Grid 7 <b>M4</b> <b>39.63 V/m</b>	Grid 8 <b>M4</b> <b>42.43 V/m</b>	Grid 9 <b>M4</b> <b>41.87 V/m</b>

**Cursor:**

Total = 42.427 V/m

E Category: M4

Location: -1, 38, 4.7 mm

**Dipole E-Field measurement/E Scan- CW 1800\_PMF/Hearing Aid Compatibility Test (41x181x1):** Measurement grid: dx=5mm, dy=5mm

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 47.33 V/m; Power Drift = -0.05 dB

PMR not calibrated. PMF = 1.000 is applied.

E-field emissions = 42.41 V/m

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

PMF scaled E-field

Grid 1 <b>M4</b> <b>38.23 V/m</b>	Grid 2 <b>M4</b> <b>39.51 V/m</b>	Grid 3 <b>M4</b> <b>39.41 V/m</b>
Grid 4 <b>M4</b> <b>26.94 V/m</b>	Grid 5 <b>M4</b> <b>27.41 V/m</b>	Grid 6 <b>M4</b> <b>26.77 V/m</b>
Grid 7 <b>M4</b> <b>40.02 V/m</b>	Grid 8 <b>M4</b> <b>42.41 V/m</b>	Grid 9 <b>M4</b> <b>41.99 V/m</b>

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**Cursor:**

Total = 42.409 V/m  
E Category: M4  
Location: -1.5, 38, 4.7 mm

**Dipole E-Field measurement/E Scan - AM80%\_ 1880\_PMF/Hearing Aid Compatibility Test (41x181x1):** Measurement grid: dx=5mm, dy=5mm

Device Reference Point: 0, 0, -6.3 mm  
Reference Value = 30.18 V/m; Power Drift = 0.06 dB  
PMR not calibrated. PMF = 1.000 is applied.  
E-field emissions = 27.40 V/m

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

PMF scaled E-field

Grid 1 <b>M4</b> <b>24.40 V/m</b>	Grid 2 <b>M4</b> <b>25.26 V/m</b>	Grid 3 <b>M4</b> <b>24.95 V/m</b>
Grid 4 <b>M4</b> <b>17.20 V/m</b>	Grid 5 <b>M4</b> <b>17.65 V/m</b>	Grid 6 <b>M4</b> <b>17.12 V/m</b>
Grid 7 <b>M4</b> <b>25.54 V/m</b>	Grid 8 <b>M4</b> <b>27.40 V/m</b>	Grid 9 <b>M4</b> <b>27.02 V/m</b>

**Cursor:**

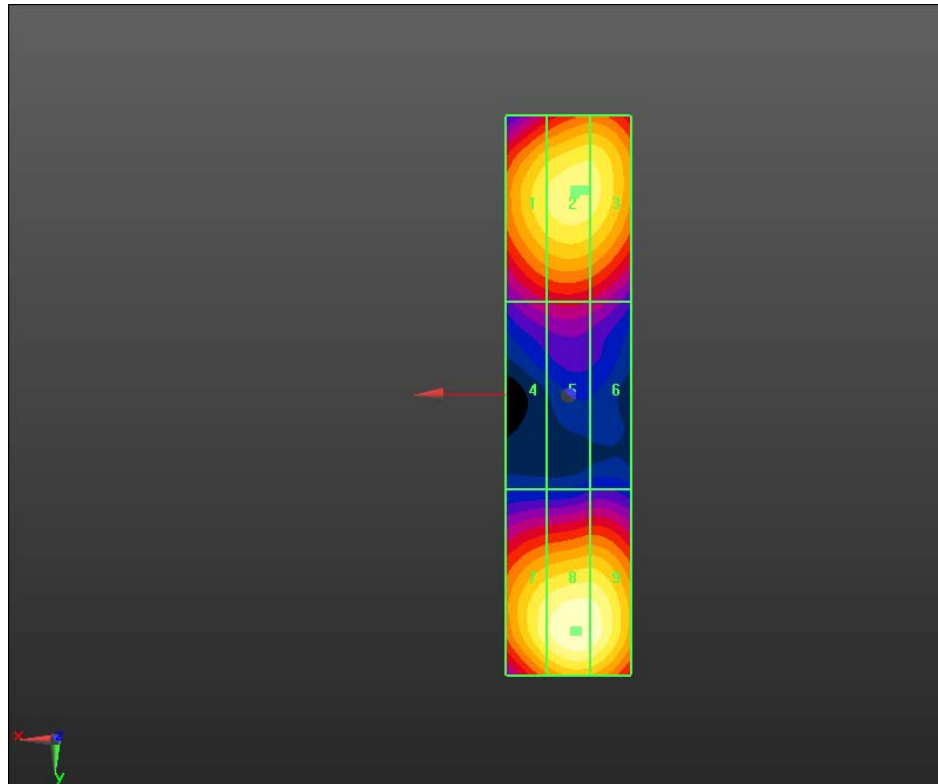
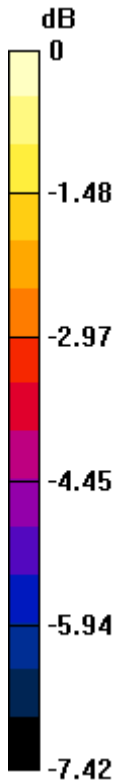
Total = 27.402 V/m  
E Category: M4  
Location: -1, 38, 4.7 mm

Author Data  
**Daoud Attayi**

Dates of Test  
**Jan. 31, Feb. 17, June 18-Sep. 28, 2012**

Report No  
**RTS-6012-1207-39B**

FCC ID  
**L6ARFF90LW  
L6ARFK120LW**



0 dB = 42.430V/m = 32.55 dB V/m

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Date/Time: 9/28/2012 3:00:56 PM

Test Laboratory: RIM Testing Services

### HAC RF\_H-Field\_validation\_835 MHz\_09\_28\_12

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

Communication System: CW; Frequency: 835 MHz

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

Phantom section: RF Section

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

DASY Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 11/8/2011
- Sensor-Surface: (Fix Surface), z = 4.7
- Electronics: DAE3 Sn473; Calibrated: 1/13/2012
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA
- DASYS 52.8.0(692); SEMCAD X 14.6.4(4989)

### Dipole H-Field measurement with H3DV6 probe/H Scan - measurement distance from the probe sensor center to CD835 Dipole = 10mm/Hearing Aid

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

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 0.49 V/m; Power Drift = 0.10 dB

PMR not calibrated. PMF = 1.000 is applied.

H-field emissions = 0.46 A/m

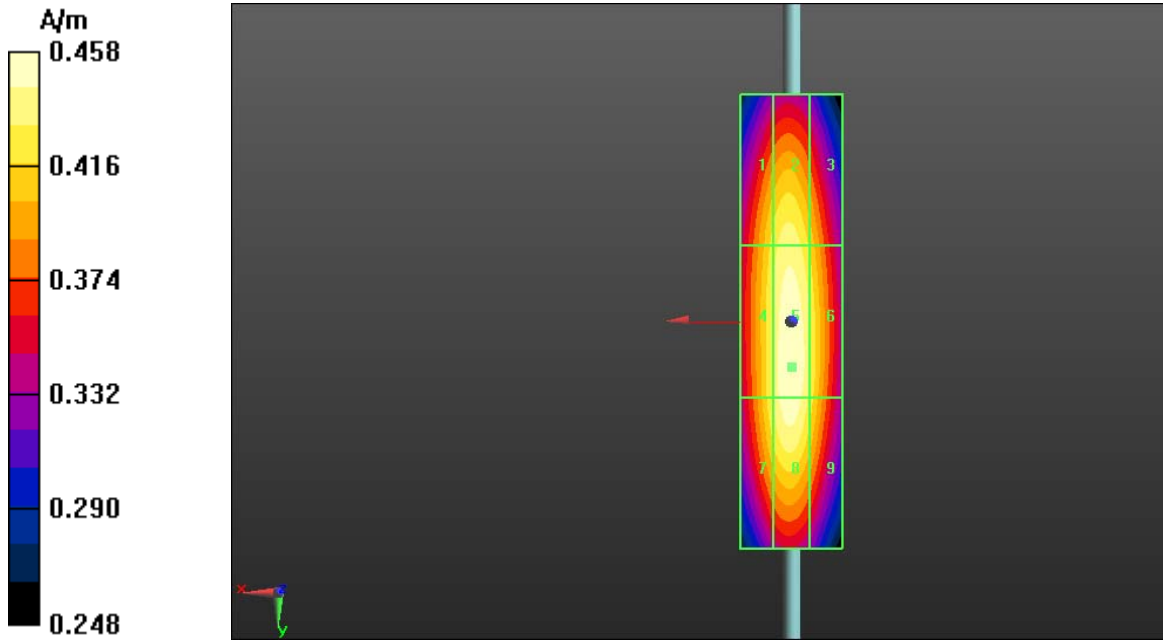
**Near-field category: M4 (AWF 0 dB)**

PMF scaled H-field

Grid 1 <b>M4</b> <b>0.42 A/m</b>	Grid 2 <b>M4</b> <b>0.44 A/m</b>	Grid 3 <b>M4</b> <b>0.42 A/m</b>
Grid 4 <b>M4</b> <b>0.44 A/m</b>	Grid 5 <b>M4</b> <b>0.46 A/m</b>	Grid 6 <b>M4</b> <b>0.43 A/m</b>
Grid 7 <b>M4</b>	Grid 8 <b>M4</b>	Grid 9 <b>M4</b>

<b>0.43 A/m</b>	<b>0.45 A/m</b>	<b>0.43 A/m</b>
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**Cursor:**  
 Total = 0.458 A/m  
 H Category: M4  
 Location: 0, 9, 4.7 mm



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Date/Time: 6/28/2012 2:59:51 AM

Test Laboratory: RIM Testing Services

**HAC RF\_H-Field\_validation\_835 MHz\_06\_28\_12**

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

Communication System: CW; Frequency: 835 MHz  
Medium parameters used:  $\sigma = 0$  mho/m,  $\epsilon_r = 1$ ;  $\rho = 0$  kg/m<sup>3</sup>  
Phantom section: RF Section  
Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 11/8/2011
- Sensor-Surface: (Fix Surface), z = 4.7
- Electronics: DAE3 Sn473; Calibrated: 1/13/2012
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA
- DASYS2 52.8.0(692); SEMCAD X 14.6.4(4989)

**Dipole H-Field measurement with H3DV6 probe/H Scan - measurement distance from the probe sensor center to CD835 Dipole = 10mm/Hearing Aid**

**Compatibility Test (41x181x1):** Measurement grid: dx=5mm, dy=5mm  
Device Reference Point: 0, 0, -6.3 mm  
Reference Value = 0.50 V/m; Power Drift = 0.10 dB  
PMR not calibrated. PMF = 1.000 is applied.  
H-field emissions = 0.47 A/m  
**Near-field category: M4 (AWF 0 dB)**

PMF scaled H-field

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

Author Data  
**Daoud Attayi**

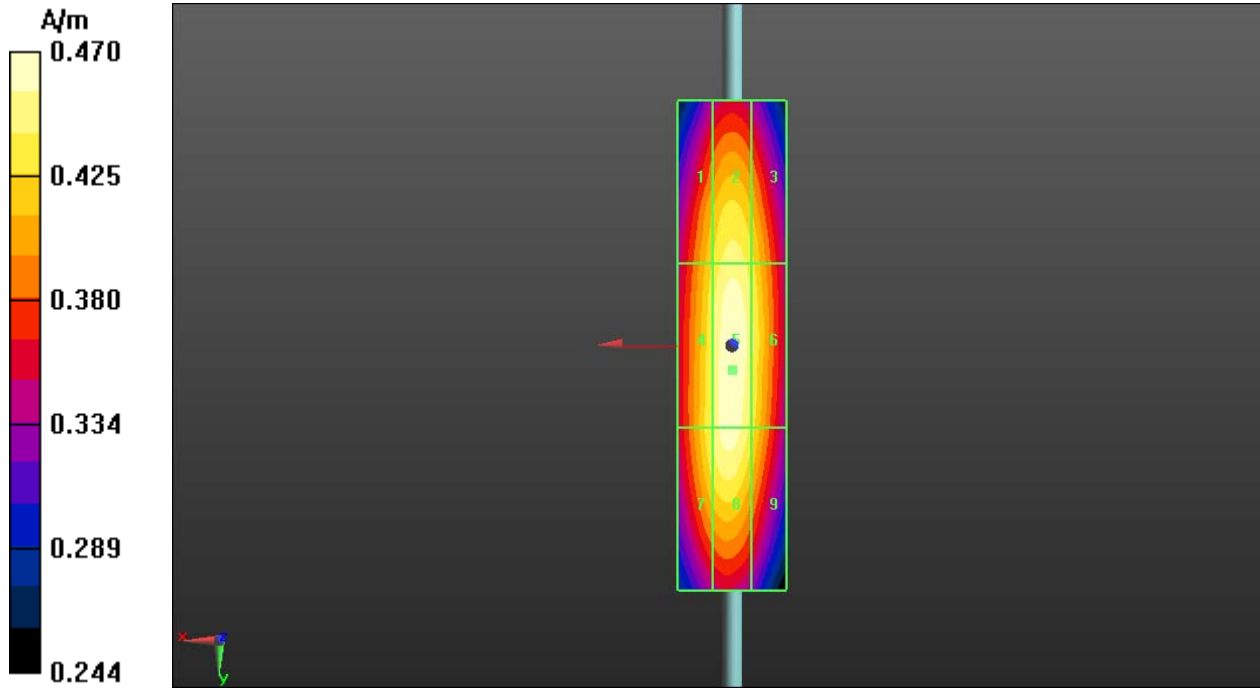
Dates of Test  
**Jan. 31, Feb. 17, June 18-Sep. 28, 2012**

Report No  
**RTS-6012-1207-39B**

FCC ID  
**L6ARFF90LW  
 L6ARFK120LW**

<b>0.44 A/m</b>	<b>0.46 A/m</b>	<b>0.43 A/m</b>
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**Cursor:**  
 Total = 0.470 A/m  
 H Category: M4  
 Location: 0, 4.5, 4.7 mm



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Date/Time: 1/31/2012 3:12:15 PM

Test Laboratory: RIM Testing Services

### **HAC RF\_H-Field\_PMF\_GSM835 MHz\_01\_31\_12**

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

Communication System: GSM 835\_PMF, Communication System: CW, Communication System: AM 80%; Frequency: 835 MHz  
Medium parameters used:  $\sigma = 0$  mho/m,  $\epsilon_r = 1$ ;  $\rho = 0$  kg/m<sup>3</sup>  
Phantom section: RF Section  
Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 11/8/2011
- Sensor-Surface: (Fix Surface), z = 4.7
- Electronics: DAE3 Sn472; Calibrated: 3/7/2011
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA
- DASYS 52.8.0(692); SEMCAD X 14.6.4(4989)

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

**835\_PMF/Hearing Aid Compatibility Test (41x181x1):** Measurement grid: dx=5mm, dy=5mm

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 0.17 V/m; Power Drift = -0.08 dB

PMR not calibrated. PMF = 1.000 is applied.

H-field emissions = 0.16 A/m

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



PMF scaled H-field

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

**Cursor:**

Total = 0.159 A/m

H Category: M4

Location: 0, 1, 4.7 mm

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

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

dx=5mm, dy=5mm

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 0.27 V/m; Power Drift = 0.03 dB

PMR not calibrated. PMF = 1.000 is applied.

H-field emissions = 0.47 A/m

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

PMF scaled H-field

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

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**Cursor:**

Total = 0.468 A/m  
H Category: M4  
Location: 0, 4, 4.7 mm

**Dipole H-Field measurement with H3DV6 probe/H Scan - AM80%\_PMF/Hearing Aid Compatibility Test (41x181x1):**

Measurement grid: dx=5mm, dy=5mm  
Device Reference Point: 0, 0, -6.3 mm  
Reference Value = 0.32 V/m; Power Drift = 0.04 dB  
PMR not calibrated. PMF = 1.000 is applied.  
H-field emissions = 0.30 A/m

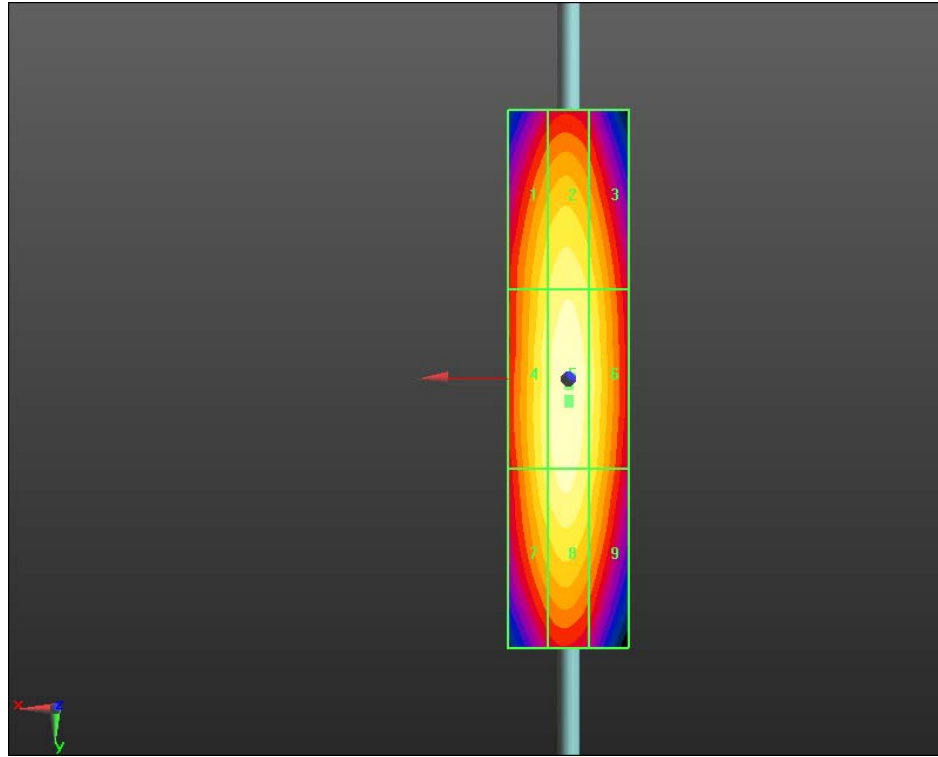
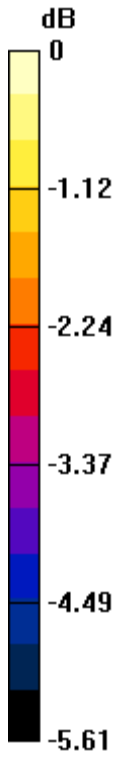
**Near-field category: M4 (AWF 0 dB)**

PMF scaled H-field

Grid 1 <b>M4</b> <b>0.28 A/m</b>	Grid 2 <b>M4</b> <b>0.29 A/m</b>	Grid 3 <b>M4</b> <b>0.27 A/m</b>
Grid 4 <b>M4</b> <b>0.29 A/m</b>	Grid 5 <b>M4</b> <b>0.30 A/m</b>	Grid 6 <b>M4</b> <b>0.28 A/m</b>
Grid 7 <b>M4</b> <b>0.28 A/m</b>	Grid 8 <b>M4</b> <b>0.30 A/m</b>	Grid 9 <b>M4</b> <b>0.28 A/m</b>

**Cursor:**

Total = 0.302 A/m  
H Category: M4  
Location: 0, 3.5, 4.7 mm



0 dB = 0.160A/m = -15.92 dB A/m

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Date/Time: 2/17/2012 4:08:25 PM

Test Laboratory: RIM Testing Services

### **HAC RF\_H-Field\_PMF\_UMTS835 MHz\_02\_17\_12**

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

Communication System: WCDMA FDD V, Communication System: CW, Communication System: AM 80%; Frequency: 835 MHz

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

Phantom section: RF Section

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

DASY Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 11/8/2011
- Sensor-Surface: (Fix Surface), z = 4.7
- Electronics: DAE3 Sn472; Calibrated: 3/7/2011
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA
- DASYS2 52.8.0(692); SEMCAD X 14.6.4(4989)

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

**835\_PMF/Hearing Aid Compatibility Test (41x181x1):** Measurement grid: dx=5mm, dy=5mm

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 0.19 V/m; Power Drift = 0.05 dB

PMR not calibrated. PMF = 1.000 is applied.

H-field emissions = 0.18 A/m

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



Author Data  
**Daoud Attayi**

Dates of Test  
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**L6ARFF90LW  
L6ARFK120LW**

PMF scaled H-field

Grid 1 <b>M4</b> <b>0.16 A/m</b>	Grid 2 <b>M4</b> <b>0.17 A/m</b>	Grid 3 <b>M4</b> <b>0.16 A/m</b>
Grid 4 <b>M4</b> <b>0.17 A/m</b>	Grid 5 <b>M4</b> <b>0.18 A/m</b>	Grid 6 <b>M4</b> <b>0.17 A/m</b>
Grid 7 <b>M4</b> <b>0.17 A/m</b>	Grid 8 <b>M4</b> <b>0.18 A/m</b>	Grid 9 <b>M4</b> <b>0.17 A/m</b>

**Cursor:**

Total = 0.181 A/m  
H Category: M4  
Location: 0.5, 8.5, 4.7 mm

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

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

dx=5mm, dy=5mm  
Device Reference Point: 0, 0, -6.3 mm  
Reference Value = 0.11 V/m; Power Drift = 0.08 dB  
PMR not calibrated. PMF = 1.000 is applied.  
H-field emissions = 0.20 A/m

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

PMF scaled H-field

Grid 1 <b>M4</b> <b>0.17 A/m</b>	Grid 2 <b>M4</b> <b>0.19 A/m</b>	Grid 3 <b>M4</b> <b>0.18 A/m</b>
Grid 4 <b>M4</b> <b>0.18 A/m</b>	Grid 5 <b>M4</b> <b>0.20 A/m</b>	Grid 6 <b>M4</b> <b>0.19 A/m</b>
Grid 7 <b>M4</b> <b>0.18 A/m</b>	Grid 8 <b>M4</b> <b>0.19 A/m</b>	Grid 9 <b>M4</b> <b>0.18 A/m</b>



Author Data <b>Daoud Attayi</b>	Dates of Test <b>Jan. 31, Feb. 17, June 18-Sep. 28, 2012</b>	Report No <b>RTS-6012-1207-39B</b>	FCC ID <b>L6ARFF90LW L6ARFK120LW</b>
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**Cursor:**  
 Total = 0.197 A/m  
 H Category: M4  
 Location: -0.5, 1, 4.7 mm

**Dipole H-Field measurement with H3DV6 probe/H Scan - AM80%\_PMF/Hearing Aid Compatibility Test (41x181x1):**

Measurement grid: dx=5mm, dy=5mm  
 Device Reference Point: 0, 0, -6.3 mm  
 Reference Value = 0.14 V/m; Power Drift = 0.10 dB  
 PMR not calibrated. PMF = 1.000 is applied.  
 H-field emissions = 0.13 A/m

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

PMF scaled H-field

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

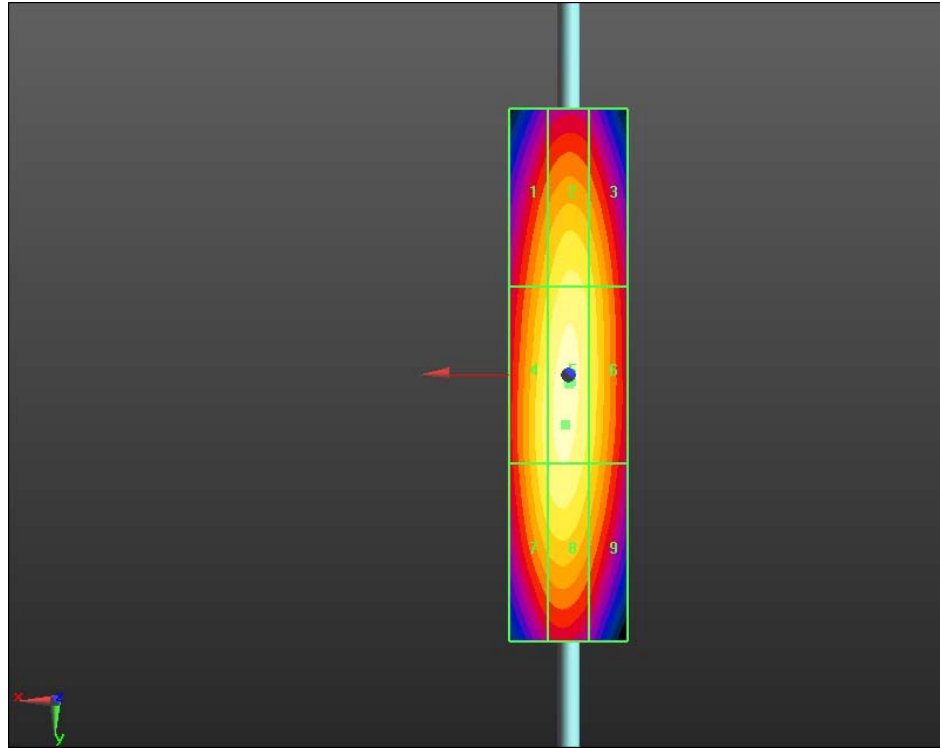
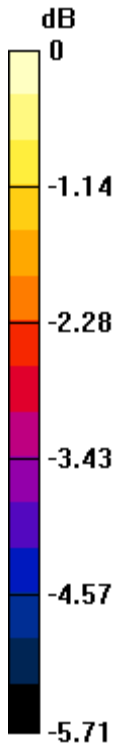
**Cursor:**  
 Total = 0.127 A/m  
 H Category: M4  
 Location: 0, 1.5, 4.7 mm

Author Data  
**Daoud Attayi**

Dates of Test  
**Jan. 31, Feb. 17, June 18-Sep. 28, 2012**

Report No  
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**L6ARFF90LW  
 L6ARFK120LW**



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

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Date/Time: 9/28/2012 2:45:31 PM

Test Laboratory: RIM Testing Services

### **HAC RF\_H-Field\_validation\_1880 MHz\_09\_28\_12**

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

Communication System: CW; Frequency: 1880 MHz

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

Phantom section: RF Section

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

DASY Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 11/8/2011
- Sensor-Surface: (Fix Surface), z = 4.7
- Electronics: DAE3 Sn473; Calibrated: 1/13/2012
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA
- DASYS 52.8.0(692); SEMCAD X 14.6.4(4989)

### **Dipole H-Field measurement with H3DV6 probe/H Scan - measurement distance from the probe sensor center to CD1880 Dipole = 10mm/Hearing Aid**

**Compatibility Test (41x101x1):** Measurement grid: dx=5mm, dy=5mm

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 0.48 V/m; Power Drift = -0.01 dB

PMR not calibrated. PMF = 1.000 is applied.

H-field emissions = 0.45 A/m

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

PMF scaled H-field

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



Author Data  
**Daoud Attayi**

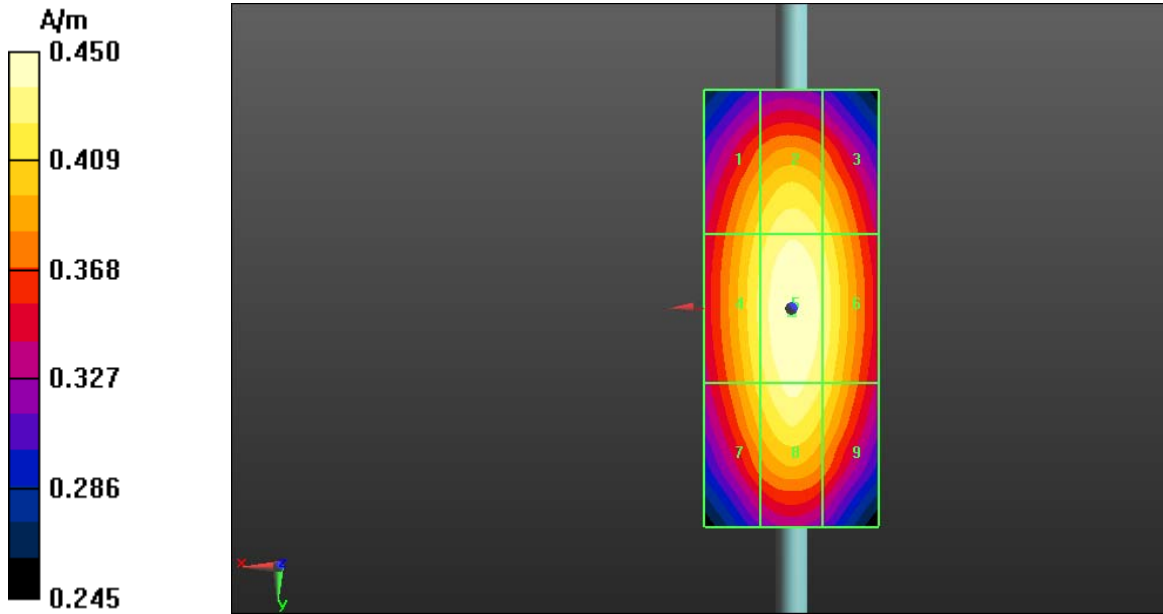
Dates of Test  
**Jan. 31, Feb. 17, June 18-Sep. 28, 2012**


Report No  
**RTS-6012-1207-39B**

FCC ID  
**L6ARFF90LW  
 L6ARFK120LW**

<b>0.42 A/m</b>	<b>0.44 A/m</b>	<b>0.42 A/m</b>
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**Cursor:**  
 Total = 0.450 A/m  
 H Category: M2  
 Location: 0, 0.5, 4.7 mm



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Date/Time: 6/28/2012 2:38:12 AM

Test Laboratory: RIM Testing Services

### **HAC RF\_H-Field\_validation\_1880 MHz\_06\_28\_12**

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

Communication System: CW; Frequency: 1880 MHz

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

Phantom section: RF Section

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

DASY Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 11/8/2011
- Sensor-Surface: (Fix Surface),  $z = 4.7$
- Electronics: DAE3 Sn473; Calibrated: 1/13/2012
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA
- DASYS2 52.8.0(692); SEMCAD X 14.6.4(4989)

**Dipole H-Field measurement with H3DV6 probe/H Scan - measurement distance from the probe sensor center to CD1880 Dipole = 10mm/Hearing Aid**

**Compatibility Test (41x101x1):** Measurement grid: dx=5mm, dy=5mm

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 0.50 V/m; Power Drift = -0.03 dB

PMR not calibrated. PMF = 1.000 is applied.

H-field emissions = 0.47 A/m

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

Author Data  
**Daoud Attayi**

Dates of Test  
**Jan. 31, Feb. 17, June 18-Sep. 28, 2012**

Report No  
**RTS-6012-1207-39B**

FCC ID  
**L6ARFF90LW  
 L6ARFK120LW**

PMF scaled H-field

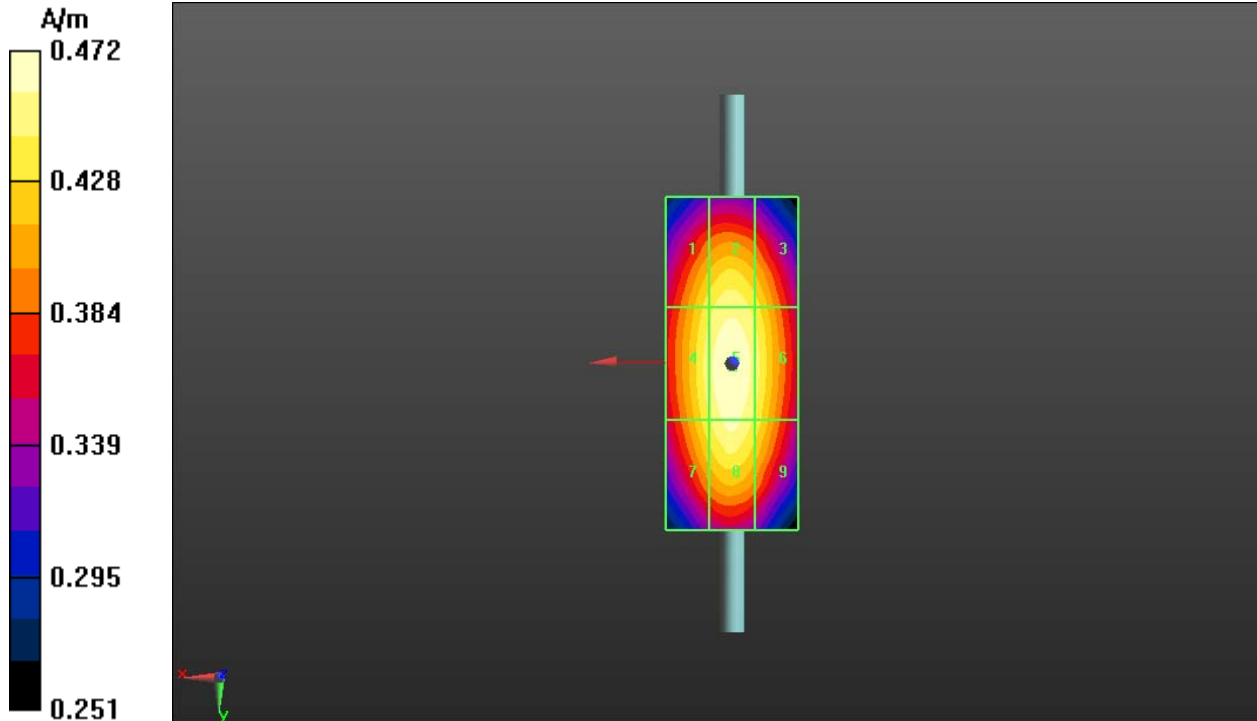
Grid 1 <b>M2</b> <b>0.44 A/m</b>	Grid 2 <b>M2</b> <b>0.45 A/m</b>	Grid 3 <b>M2</b> <b>0.44 A/m</b>
Grid 4 <b>M2</b> <b>0.45 A/m</b>	Grid 5 <b>M2</b> <b>0.47 A/m</b>	Grid 6 <b>M2</b> <b>0.45 A/m</b>
Grid 7 <b>M2</b> <b>0.44 A/m</b>	Grid 8 <b>M2</b> <b>0.46 A/m</b>	Grid 9 <b>M2</b> <b>0.44 A/m</b>

**Cursor:**

Total = 0.472 A/m

H Category: M2

Location: 0, 0.5, 4.7 mm



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Date/Time: 2/17/2012 3:27:55 PM

Test Laboratory: RIM Testing Services

### HAC RF\_H-Field\_PMF\_UMTS1733 MHz\_02\_17\_12

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

Communication System: WCDMA FDD IV, Communication System: CW, Communication System: AM 80%; Frequency: 1732.6 MHz, Frequency: 1733 MHz  
Medium parameters used:  $\sigma = 0$  mho/m,  $\epsilon_r = 1$ ;  $\rho = 0$  kg/m<sup>3</sup>  
Phantom section: RF Section  
Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 11/8/2011
- Sensor-Surface: (Fix Surface), z = 4.7
- Electronics: DAE3 Sn472; Calibrated: 3/7/2011
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA
- DASYS2 52.8.0(692); SEMCAD X 14.6.4(4989)

### Dipole H-Field measurement with H3DV6 probe/H Scan -UMTS

**1733\_PMF/Hearing Aid Compatibility Test (41x101x1):** Measurement grid: dx=5mm, dy=5mm

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 0.17 V/m; Power Drift = -0.03 dB

PMR not calibrated. PMF = 1.000 is applied.

H-field emissions = 0.16 A/m

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

PMF scaled H-field

Grid 1 <b>M4</b> <b>0.14 A/m</b>	Grid 2 <b>M4</b> <b>0.15 A/m</b>	Grid 3 <b>M4</b> <b>0.14 A/m</b>
Grid 4 <b>M4</b> <b>0.15 A/m</b>	Grid 5 <b>M4</b> <b>0.16 A/m</b>	Grid 6 <b>M4</b> <b>0.15 A/m</b>

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Grid 7 <b>M4</b> <b>0.14 A/m</b>	Grid 8 <b>M4</b> <b>0.15 A/m</b>	Grid 9 <b>M4</b> <b>0.14 A/m</b>
-------------------------------------	-------------------------------------	-------------------------------------

**Cursor:**  
Total = 0.157 A/m  
H Category: M4  
Location: 0, 0, 4.7 mm

**Dipole H-Field measurement with H3DV6 probe/H Scan - CW  
1733\_PMF/Hearing Aid Compatibility Test (41x101x1):** Measurement

grid: dx=5mm, dy=5mm  
Device Reference Point: 0, 0, -6.3 mm  
Reference Value = 0.17 V/m; Power Drift = -0.16 dB  
PMR not calibrated. PMF = 1.000 is applied.  
H-field emissions = 0.16 A/m

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

PMF scaled H-field

Grid 1 <b>M4</b> <b>0.14 A/m</b>	Grid 2 <b>M4</b> <b>0.15 A/m</b>	Grid 3 <b>M4</b> <b>0.14 A/m</b>
Grid 4 <b>M4</b> <b>0.15 A/m</b>	Grid 5 <b>M4</b> <b>0.16 A/m</b>	Grid 6 <b>M4</b> <b>0.15 A/m</b>
Grid 7 <b>M4</b> <b>0.14 A/m</b>	Grid 8 <b>M4</b> <b>0.15 A/m</b>	Grid 9 <b>M4</b> <b>0.14 A/m</b>

**Cursor:**  
Total = 0.157 A/m  
H Category: M4  
Location: -0.5, 0.5, 4.7 mm

**Dipole H-Field measurement with H3DV6 probe/H Scan -  
AM80%\_1733\_PMF/Hearing Aid Compatibility Test (41x101x1):**

Measurement grid: dx=5mm, dy=5mm  
Device Reference Point: 0, 0, -6.3 mm  
Reference Value = 0.11 V/m; Power Drift = -0.14 dB  
PMR not calibrated. PMF = 1.000 is applied.  
H-field emissions = 0.10 A/m

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

Author Data  
**Daoud Attayi**

Dates of Test  
**Jan. 31, Feb. 17, June 18-Sep. 28, 2012**

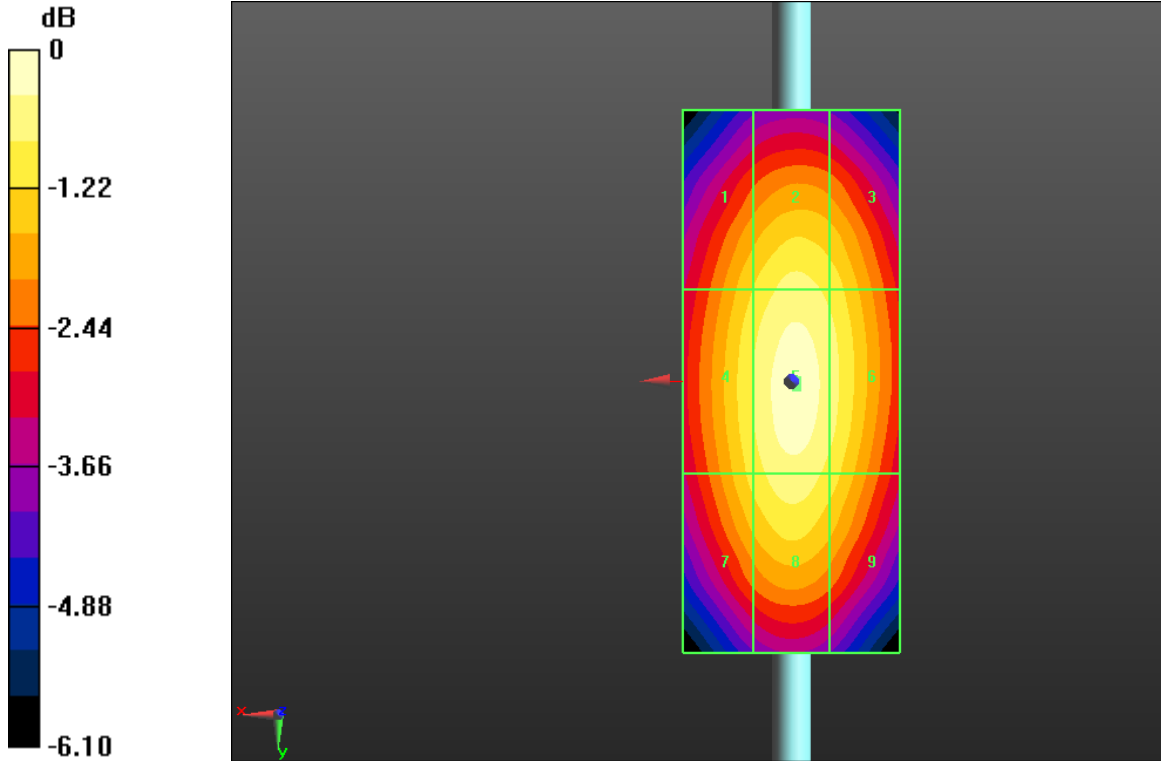
Report No  
**RTS-6012-1207-39B**

FCC ID  
**L6ARFF90LW  
 L6ARFK120LW**


PMF scaled H-field

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

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



0 dB = 0.160A/m = -15.92 dB A/m

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Date/Time: 1/31/2012 3:44:25 PM

Test Laboratory: RIM Testing Services

### **HAC RF\_H-Field\_PMF\_GSM1880 MHz\_01\_31\_12**

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

Communication System: GSM 1880\_PMF, Communication System: CW, Communication System: AM 80%; Frequency: 1880 MHz

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

Phantom section: RF Section

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

DASY Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 11/8/2011
- Sensor-Surface: (Fix Surface), z = 4.7
- Electronics: DAE3 Sn472; Calibrated: 3/7/2011
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA
- DASYS2 52.8.0(692); SEMCAD X 14.6.4(4989)

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

**1880\_PMF/Hearing Aid Compatibility Test (41x101x1):** Measurement grid: dx=5mm, dy=5mm

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 0.12 V/m; Power Drift = -0.04 dB

PMR not calibrated. PMF = 1.000 is applied.

H-field emissions = 0.11 A/m

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



Author Data  
**Daoud Attayi**

Dates of Test  
**Jan. 31, Feb. 17, June 18-Sep. 28, 2012**

Report No  
**RTS-6012-1207-39B**

FCC ID  
**L6ARFF90LW  
 L6ARFK120LW**

PMF scaled H-field

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

**Cursor:**

Total = 0.110 A/m  
 H Category: M4  
 Location: 0, 0.5, 4.7 mm

**Dipole H-Field measurement with H3DV6 probe/H Scan - CW  
 1800\_PMF/Hearing Aid Compatibility Test (41x101x1): Measurement**

grid: dx=5mm, dy=5mm  
 Device Reference Point: 0, 0, -6.3 mm  
 Reference Value = 0.35 V/m; Power Drift = 0.04 dB  
 PMR not calibrated. PMF = 1.000 is applied.  
 H-field emissions = 0.33 A/m

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

PMF scaled H-field

Grid 1 <b>M3</b> <b>0.30 A/m</b>	Grid 2 <b>M3</b> <b>0.32 A/m</b>	Grid 3 <b>M3</b> <b>0.31 A/m</b>
Grid 4 <b>M3</b> <b>0.31 A/m</b>	Grid 5 <b>M3</b> <b>0.33 A/m</b>	Grid 6 <b>M3</b> <b>0.31 A/m</b>
Grid 7 <b>M3</b> <b>0.30 A/m</b>	Grid 8 <b>M3</b> <b>0.32 A/m</b>	Grid 9 <b>M3</b> <b>0.30 A/m</b>



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**Cursor:**

Total = 0.327 A/m  
 H Category: M3  
 Location: 0, 0.5, 4.7 mm

**Dipole H-Field measurement with H3DV6 probe/H Scan - AM80%\_1880\_PMF/Hearing Aid Compatibility Test (41x101x1):**

Measurement grid: dx=5mm, dy=5mm  
 Device Reference Point: 0, 0, -6.3 mm  
 Reference Value = 0.23 V/m; Power Drift = 0.05 dB  
 PMR not calibrated. PMF = 1.000 is applied.  
 H-field emissions = 0.21 A/m

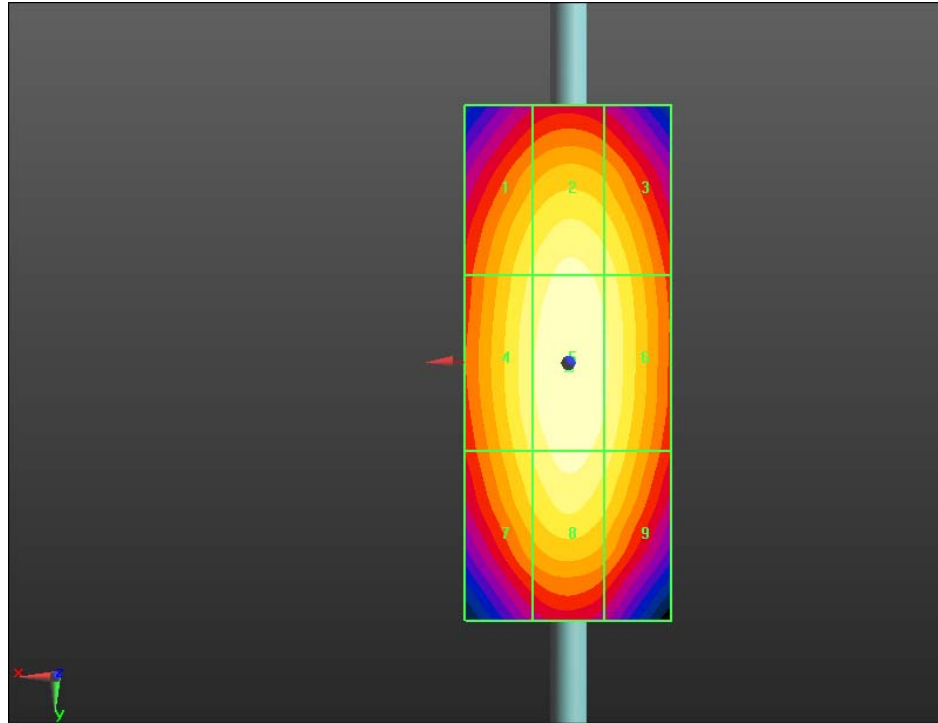
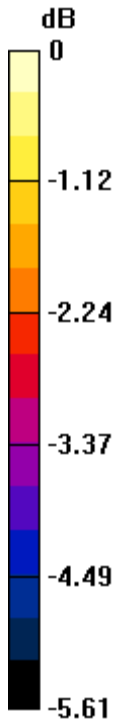
**Near-field category: M3 (AWF 0 dB)**

PMF scaled H-field

Grid 1 <b>M3</b> <b>0.20 A/m</b>	Grid 2 <b>M3</b> <b>0.21 A/m</b>	Grid 3 <b>M3</b> <b>0.20 A/m</b>
Grid 4 <b>M3</b> <b>0.20 A/m</b>	Grid 5 <b>M3</b> <b>0.21 A/m</b>	Grid 6 <b>M3</b> <b>0.20 A/m</b>
Grid 7 <b>M3</b> <b>0.20 A/m</b>	Grid 8 <b>M3</b> <b>0.21 A/m</b>	Grid 9 <b>M3</b> <b>0.20 A/m</b>

**Cursor:**

Total = 0.214 A/m  
 H Category: M3  
 Location: 0, 0, 4.7 mm



0 dB = 0.110A/m = -19.17 dB A/m

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Date/Time: 2/17/2012 3:56:44 PM

Test Laboratory: RIM Testing Services

## **HAC RF\_H-Field\_PMF\_UMTS1880 MHz\_02\_17\_12**

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

Communication System: WCDMA FDD II, Communication System: CW, Communication System: AM 80%; Frequency: 1880 MHz

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

Phantom section: RF Section

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

DASY Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 11/8/2011
- Sensor-Surface: (Fix Surface),  $z = 4.7$
- Electronics: DAE3 Sn472; Calibrated: 3/7/2011
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA
- DASYS2 52.8.0(692); SEMCAD X 14.6.4(4989)

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

**1880\_PMF/Hearing Aid Compatibility Test (41x101x1):** Measurement grid: dx=5mm, dy=5mm

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 0.16 V/m; Power Drift = 0.06 dB

PMR not calibrated. PMF = 1.000 is applied.

H-field emissions = 0.15 A/m

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



Author Data  
**Daoud Attayi**

Dates of Test  
**Jan. 31, Feb. 17, June 18-Sep. 28, 2012**

Report No  
**RTS-6012-1207-39B**

FCC ID  
**L6ARFF90LW  
L6ARFK120LW**

PMF scaled H-field

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

**Cursor:**

Total = 0.150 A/m  
H Category: M4  
Location: 0, 0.5, 4.7 mm

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

grid: dx=5mm, dy=5mm  
Device Reference Point: 0, 0, -6.3 mm  
Reference Value = 0.16 V/m; Power Drift = -0.01 dB  
PMR not calibrated. PMF = 1.000 is applied.  
H-field emissions = 0.15 A/m

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

PMF scaled H-field

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

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**Cursor:**

Total = 0.149 A/m  
H Category: M4  
Location: 0, 0.5, 4.7 mm

**Dipole H-Field measurement with H3DV6 probe/H Scan - AM80%\_1880\_PMF/Hearing Aid Compatibility Test (41x101x1):**

Measurement grid: dx=5mm, dy=5mm  
Device Reference Point: 0, 0, -6.3 mm  
Reference Value = 0.10 V/m; Power Drift = -0.07 dB  
PMR not calibrated. PMF = 1.000 is applied.  
H-field emissions = 0.10 A/m

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

PMF scaled H-field

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

**Cursor:**

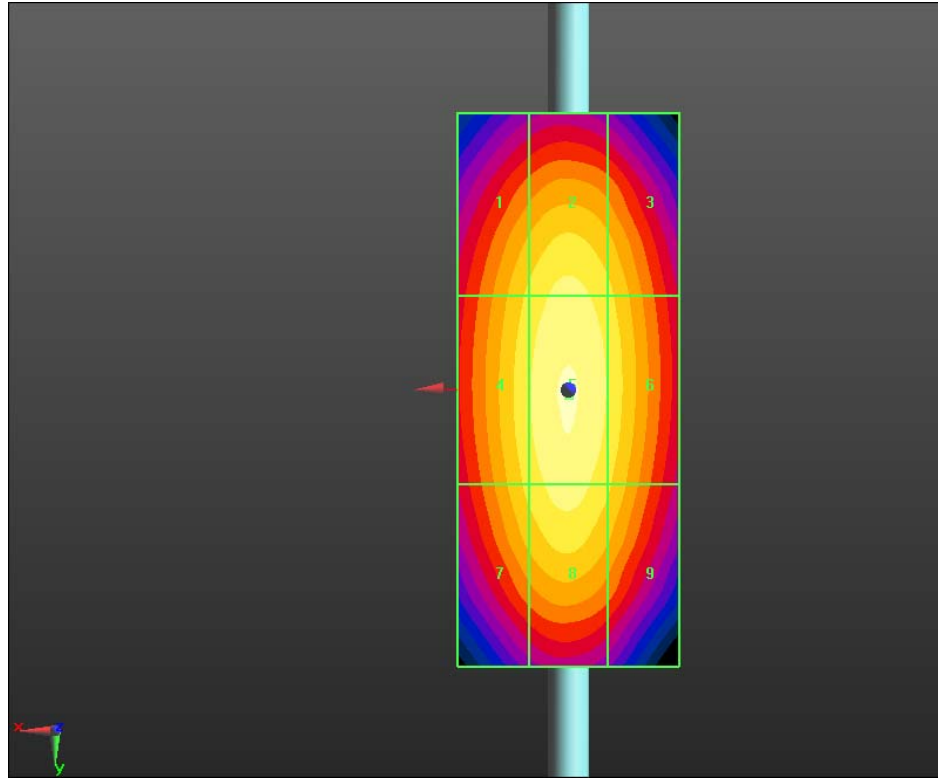
Total = 0.096 A/m  
H Category: M4  
Location: 0, 0, 4.7 mm

Author Data  
**Daoud Attayi**

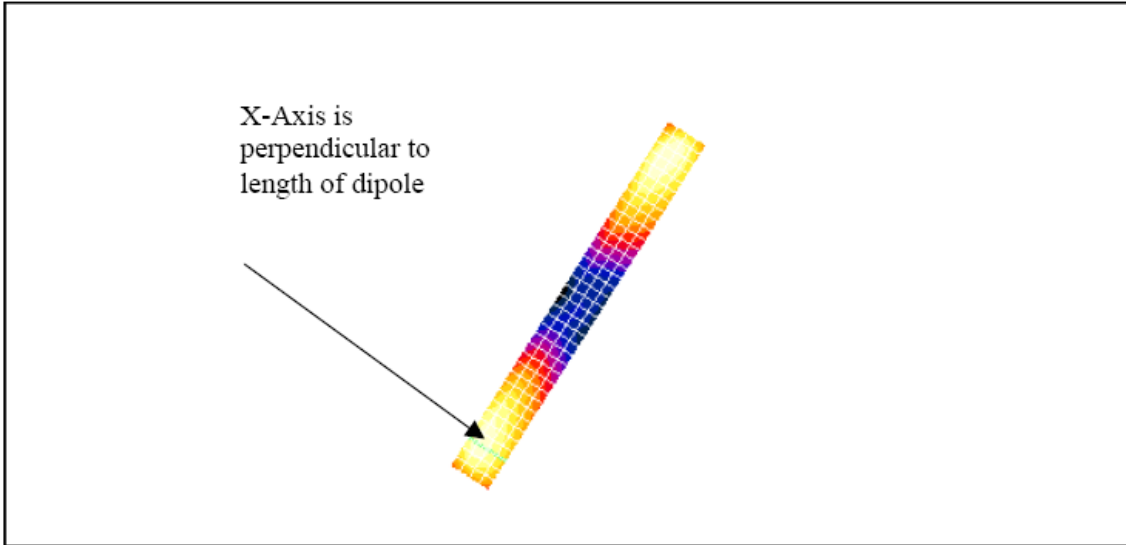
Dates of Test  
**Jan. 31, Feb. 17, June 18-Sep. 28, 2012**

Report No  
**RTS-6012-1207-39B**

FCC ID  
**L6ARFF90LW  
L6ARFK120LW**



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



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

#### Comparison of 5mm and 2mm step sizes

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



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

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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

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





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Author Data  
**Daoud Attayi**

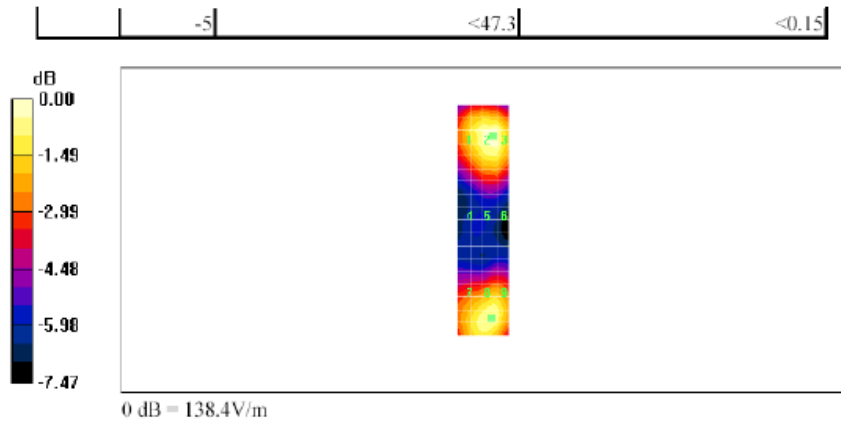
Dates of Test  
**Jan. 31, Feb. 17, June 18-Sep. 28, 2012**

Report No  
**RTS-6012-1207-39B**

FCC ID  
**L6ARFF90LW  
L6ARFK120LW**

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

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

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Author Data <b>Daoud Attayi</b>	Dates of Test <b>Jan. 31, Feb. 17, June 18-Sep. 28, 2012</b>	Report No <b>RTS-6012-1207-39B</b>	FCC ID <b>L6ARFF90LW L6ARFK120LW</b>
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Date/Time: 14/07/2005 11:44:51 AM

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

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

**Dipole Validation 1880 MHz\_2mm step\_E-Field 07\_14\_05**

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

Communication System: CW; Frequency: 1880 MHz; Duty Cycle: 1:1  
 Medium: Air Medium parameters used:  $\sigma = 0$  mho/m,  $\epsilon_r = 1$ ;  $\rho = 1000$  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

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



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Author Data  
**Daoud Attayi**

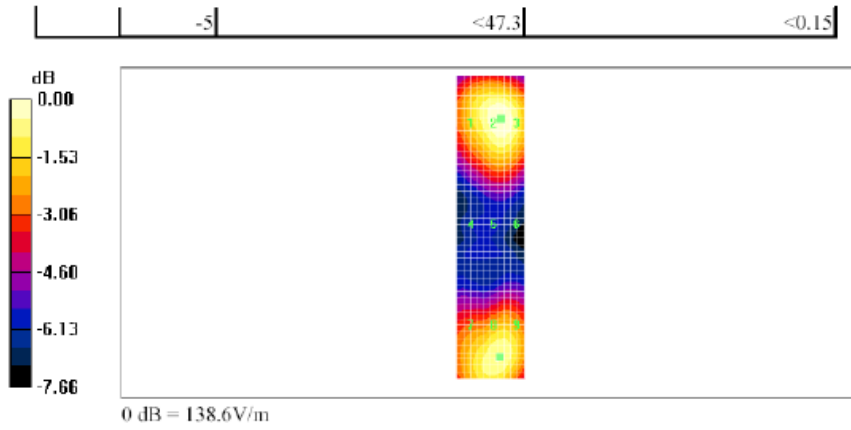
Dates of Test  
**Jan. 31, Feb. 17, June 18-Sep. 28, 2012**

Report No  
**RTS-6012-1207-39B**

FCC ID  
**L6ARFF90LW  
L6ARFK120LW**

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Author Data <b>Daoud Attayi</b>	Dates of Test <b>Jan. 31, Feb. 17, June 18-Sep. 28, 2012</b>	Report No <b>RTS-6012-1207-39B</b>	FCC ID <b>L6ARFF90LW L6ARFK120LW</b>
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Date/Time: 14/07/2005 12:43:02 PM

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

**HAC\_H\_Dipole\_CW 1880\_5 mm step\_07\_14\_05**

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

Communication System: CW; Frequency: 1880 MHz; Duty Cycle: 1:1  
 Medium: Air Medium parameters used:  $\sigma = 0$  mho/m,  $\epsilon_r = 1$ ;  $\rho = 1$  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**

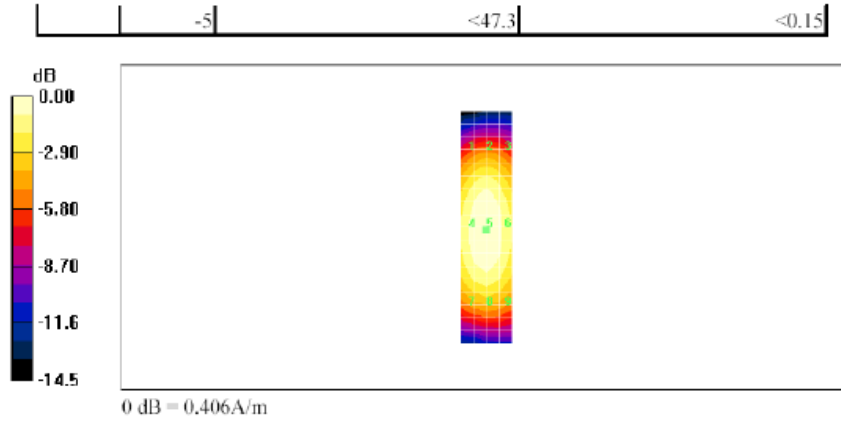
Dates of Test  
**Jan. 31, Feb. 17, June 18-Sep. 28, 2012**

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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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**Daoud Attayi**

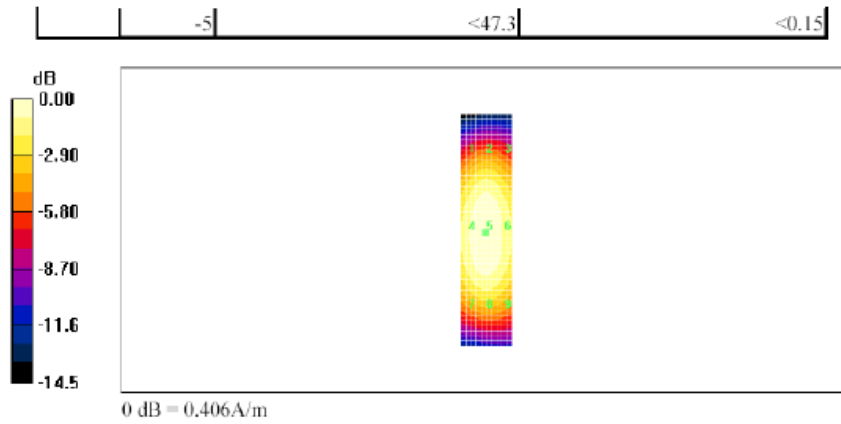
Dates of Test  
**Jan. 31, Feb. 17, June 18-Sep. 28, 2012**

Report No  
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### A.3 RF emission field plots



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Date/Time: 6/19/2012 2:39:21 AM

Test Laboratory: RIM Testing Services

## **HAC RF\_E-Field\_GSM850**

**DUT: BlackBerry Smartphone; Type: Sample ; Serial: 2A211C01**

Communication System: GSM 850; Frequency: 824.2 MHz, Frequency: 836.8 MHz, Frequency: 848.8 MHz

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

Phantom section: RF Section

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

DASY Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 1/9/2012
- Sensor-Surface: (Fix Surface),  $z = 8.7$
- Electronics: DAE3 Sn473; Calibrated: 1/13/2012
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA
- DASYS2 52.8.0(692); SEMCAD X 14.6.4(4989)

### **Device E-Field measurement with ER probe/E Scan - ER3D - 2007: 15 mm from Probe Center to Device\_Low\_Chan/Hearing Aid Compatibility Test**

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

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 68.05 V/m; Power Drift = -0.07 dB

PMR not calibrated. PMF = 3.130 is applied.

E-field emissions = 180.0 V/m

**Near-field category: M3 (AWF -5 dB)**



Author Data  
**Daoud Attayi**

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**L6ARFF90LW  
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PMF scaled E-field

Grid 1 <b>M4</b> <b>147.0 V/m</b>	Grid 2 <b>M3</b> <b>155.9 V/m</b>	Grid 3 <b>M3</b> <b>151.3 V/m</b>
Grid 4 <b>M3</b> <b>172.4 V/m</b>	Grid 5 <b>M3</b> <b>180.0 V/m</b>	Grid 6 <b>M3</b> <b>169.6 V/m</b>
Grid 7 <b>M3</b> <b>197.4 V/m</b>	Grid 8 <b>M3</b> <b>202.3 V/m</b>	Grid 9 <b>M3</b> <b>183.9 V/m</b>

**Cursor:**

Total = 202.3 V/m  
E Category: M3  
Location: 2, 25, 8.7 mm

**Device E-Field measurement with ER probe/E Scan - ER3D - 2007:  
15 mm from Probe Center to the Device\_Mid\_Chan/Hearing Aid**

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

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 72.12 V/m; Power Drift = -0.10 dB

PMR not calibrated. PMF = 3.130 is applied.

E-field emissions = 190.1 V/m

Near-field category: **M3 (AWF -5 dB)**

PMF scaled E-field

Grid 1 <b>M4</b> <b>149.1 V/m</b>	Grid 2 <b>M3</b> <b>166.3 V/m</b>	Grid 3 <b>M3</b> <b>163.6 V/m</b>
Grid 4 <b>M3</b> <b>176.6 V/m</b>	Grid 5 <b>M3</b> <b>190.1 V/m</b>	Grid 6 <b>M3</b> <b>183.7 V/m</b>
Grid 7 <b>M3</b> <b>203.9 V/m</b>	Grid 8 <b>M3</b> <b>213.2 V/m</b>	Grid 9 <b>M3</b> <b>198.3 V/m</b>

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**Cursor:**

Total = 213.2 V/m  
 E Category: M3  
 Location: 0.5, 25, 8.7 mm

**Device E-Field measurement with ER probe/E Scan - ER3D - 2007:  
 15 mm from Probe Center to the Device\_High\_Chan/Hearing Aid**

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

Device Reference Point: 0, 0, -6.3 mm  
 Reference Value = 75.05 V/m; Power Drift = 0.02 dB  
 PMR not calibrated. PMF = 3.130 is applied.  
 E-field emissions = 197.7 V/m

**Near-field category: M3 (AWF -5 dB)**

PMF scaled E-field

<b>Grid 1 M3</b> <b>158.1 V/m</b>	<b>Grid 2 M3</b> <b>180.6 V/m</b>	<b>Grid 3 M3</b> <b>176.3 V/m</b>
<b>Grid 4 M3</b> <b>179.4 V/m</b>	<b>Grid 5 M3</b> <b>197.7 V/m</b>	<b>Grid 6 M3</b> <b>193.7 V/m</b>
<b>Grid 7 M3</b> <b>203.0 V/m</b>	<b>Grid 8 M3</b> <b>213.6 V/m</b>	<b>Grid 9 M3</b> <b>204.4 V/m</b>

**Cursor:**

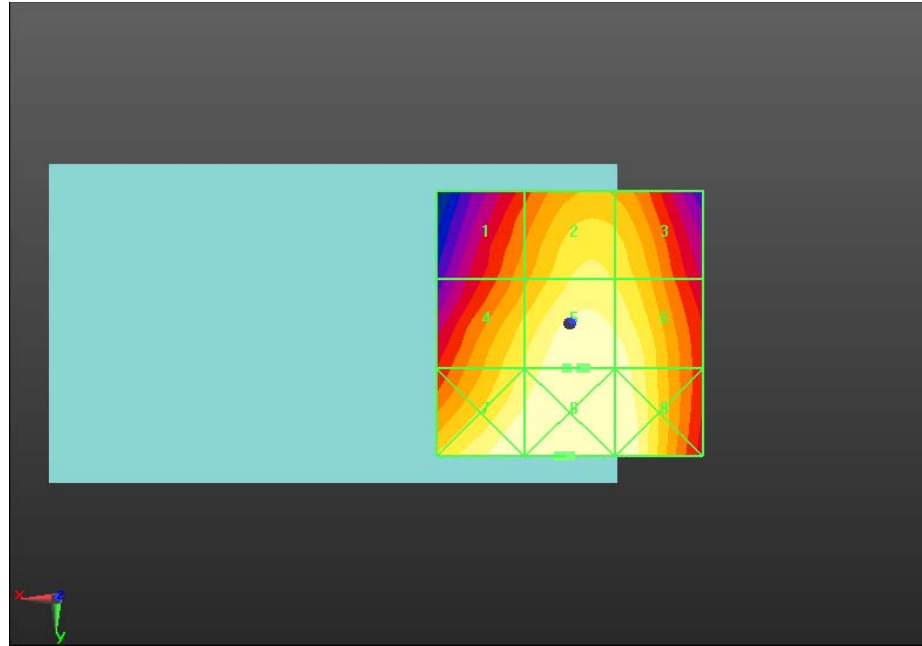
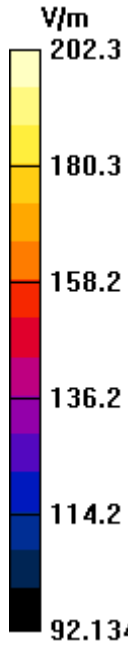
Total = 213.6 V/m  
 E Category: M3  
 Location: 0, 25, 8.7 mm

Author Data  
**Daoud Attayi**

Dates of Test  
**Jan. 31, Feb. 17, June 18-Sep. 28, 2012**

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L6ARFK120LW**



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Date/Time: 6/28/2012 3:51:52 AM

Test Laboratory: RIM Testing Services

### **HAC RF\_E-Field\_GSM850\_Tcoil**

**DUT: BlackBerry Smartphone; Type: Sample ; Serial: 2A211C01**

Communication System: GSM 850; Frequency: 848.8 MHz

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

Phantom section: RF Section

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

DASY Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 1/9/2012
- Sensor-Surface: (Fix Surface),  $z = 8.7$
- Electronics: DAE3 Sn473; Calibrated: 1/13/2012
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA
- DASYS 52.8.0(692); SEMCAD X 14.6.4(4989)

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

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

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 71.61 V/m; Power Drift = -0.00 dB

PMR not calibrated. PMF = 3.130 is applied.

E-field emissions = 162.3 V/m

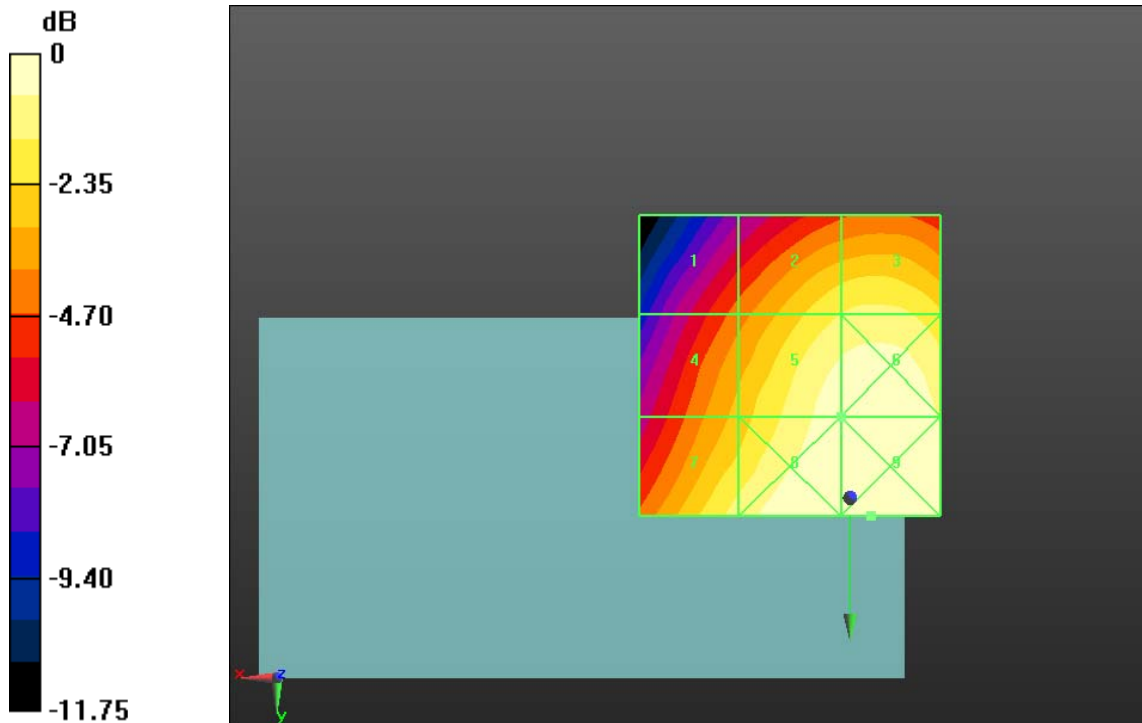
**Near-field category: M3 (AWF -5 dB)**

PMF scaled E-field

Grid 1 <b>M4</b> <b>102.5 V/m</b>	Grid 2 <b>M4</b> <b>140.4 V/m</b>	Grid 3 <b>M4</b> <b>144.2 V/m</b>
Grid 4 <b>M4</b> <b>121.8 V/m</b>	Grid 5 <b>M3</b> <b>162.3 V/m</b>	Grid 6 <b>M3</b> <b>167.0 V/m</b>
Grid 7 <b>M4</b> <b>146.3 V/m</b>	Grid 8 <b>M3</b> <b>179.5 V/m</b>	Grid 9 <b>M3</b> <b>182.3 V/m</b>

**Cursor:**

Total = 182.3 V/m  
 E Category: M3  
 Location: -3.5, 3, 8.7 mm



0 dB = 167.8V/m = 44.50 dB V/m

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Date/Time: 6/19/2012 4:43:39 AM

Test Laboratory: RIM Testing Services

### **HAC RF\_E-Field\_UMTS\_Band\_V**

**DUT: BlackBerry Smartphone; Type: Sample ; Serial: 2A211C01**

Communication System: WCDMA FDD V; Frequency: 826.4 MHz, Frequency: 836.4 MHz, Frequency: 846.6 MHz

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

Phantom section: RF Section

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

DASY Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 1/9/2012
- Sensor-Surface: (Fix Surface), z = 8.7
- Electronics: DAE3 Sn473; Calibrated: 1/13/2012
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA
- DASYS2 52.8.0(692); SEMCAD X 14.6.4(4989)

### **Device E-Field measurement with ER probe/E Scan - ER3D - 2007: 15 mm from Probe Center to Device\_Low\_Chan/Hearing Aid Compatibility Test**

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

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 63.06 V/m; Power Drift = -0.04 dB

PMR not calibrated. PMF = 1.070 is applied.

E-field emissions = 56.37 V/m

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



Author Data  
**Daoud Attayi**

Dates of Test  
**Jan. 31, Feb. 17, June 18-Sep. 28, 2012**

Report No  
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**L6ARFF90LW  
L6ARFK120LW**

PMF scaled E-field

Grid 1 <b>M4</b> <b>46.79 V/m</b>	Grid 2 <b>M4</b> <b>50.29 V/m</b>	Grid 3 <b>M4</b> <b>48.16 V/m</b>
Grid 4 <b>M4</b> <b>53.19 V/m</b>	Grid 5 <b>M4</b> <b>56.37 V/m</b>	Grid 6 <b>M4</b> <b>54.75 V/m</b>
Grid 7 <b>M4</b> <b>59.84 V/m</b>	Grid 8 <b>M4</b> <b>63.50 V/m</b>	Grid 9 <b>M4</b> <b>58.75 V/m</b>

**Cursor:**

Total = 63.500 V/m

E Category: M4

Location: -4, 25, 8.7 mm

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

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 61.40 V/m; Power Drift = -0.05 dB

PMR not calibrated. PMF = 1.070 is applied.

E-field emissions = 55.40 V/m

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

PMF scaled E-field

Grid 1 <b>M4</b> <b>44.29 V/m</b>	Grid 2 <b>M4</b> <b>48.68 V/m</b>	Grid 3 <b>M4</b> <b>47.65 V/m</b>
Grid 4 <b>M4</b> <b>51.53 V/m</b>	Grid 5 <b>M4</b> <b>55.40 V/m</b>	Grid 6 <b>M4</b> <b>53.66 V/m</b>
Grid 7 <b>M4</b> <b>59.45 V/m</b>	Grid 8 <b>M4</b> <b>61.52 V/m</b>	Grid 9 <b>M4</b> <b>57.30 V/m</b>



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**Cursor:**

Total = 61.523 V/m  
E Category: M4  
Location: 2, 25, 8.7 mm

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

Device Reference Point: 0, 0, -6.3 mm  
Reference Value = 66.64 V/m; Power Drift = -0.02 dB  
PMR not calibrated. PMF = 1.070 is applied.  
E-field emissions = 59.02 V/m

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

PMF scaled E-field

Grid 1 <b>M4</b> <b>49.09 V/m</b>	Grid 2 <b>M4</b> <b>53.53 V/m</b>	Grid 3 <b>M4</b> <b>52.27 V/m</b>
Grid 4 <b>M4</b> <b>55.63 V/m</b>	Grid 5 <b>M4</b> <b>59.02 V/m</b>	Grid 6 <b>M4</b> <b>56.81 V/m</b>
Grid 7 <b>M4</b> <b>61.61 V/m</b>	Grid 8 <b>M4</b> <b>64.35 V/m</b>	Grid 9 <b>M4</b> <b>59.30 V/m</b>

**Cursor:**

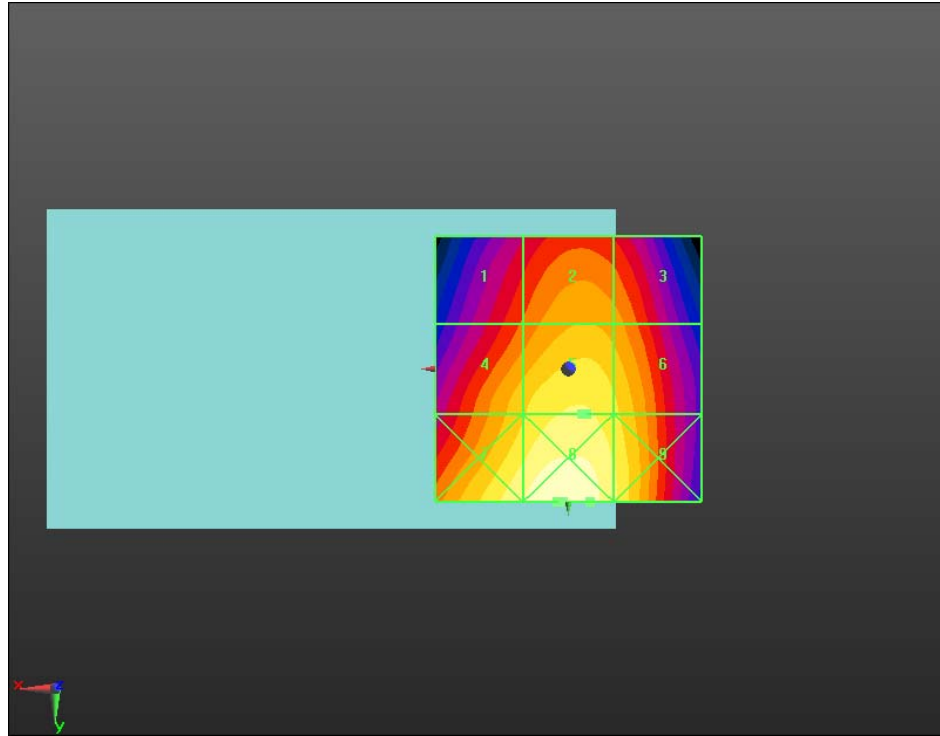
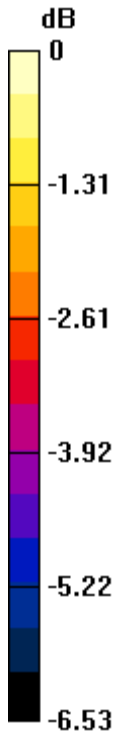
Total = 64.347 V/m  
E Category: M4  
Location: 1, 25, 8.7 mm

Author Data  
**Daoud Attayi**


Dates of Test  
**Jan. 31, Feb. 17, June 18-Sep. 28, 2012**

Report No  
**RTS-6012-1207-39B**

FCC ID  
**L6ARFF90LW  
 L6ARFK120LW**



0 dB = 63.500V/m = 36.06 dB V/m

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Date/Time: 6/28/2012 5:13:14 AM

Test Laboratory: RIM Testing Services

### **HAC RF\_E-Field\_UMTS\_Band\_V\_Tcoil**

**DUT: BlackBerry Smartphone; Type: Sample ; Serial: 2A211C01**

Communication System: WCDMA FDD V; Frequency: 846.6 MHz

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

Phantom section: RF Section

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

DASY Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 1/9/2012
- Sensor-Surface: (Fix Surface),  $z = 8.7$
- Electronics: DAE3 Sn473; Calibrated: 1/13/2012
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA
- DASYS2 52.8.0(692); SEMCAD X 14.6.4(4989)

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

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

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 69.12 V/m; Power Drift = -0.06 dB

PMR not calibrated. PMF = 1.070 is applied.

E-field emissions = 50.84 V/m

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

Author Data  
**Daoud Attayi**

Dates of Test  
**Jan. 31, Feb. 17, June 18-Sep. 28, 2012**

Report No  
**RTS-6012-1207-39B**

FCC ID  
**L6ARFF90LW  
 L6ARFK120LW**

PMF scaled E-field

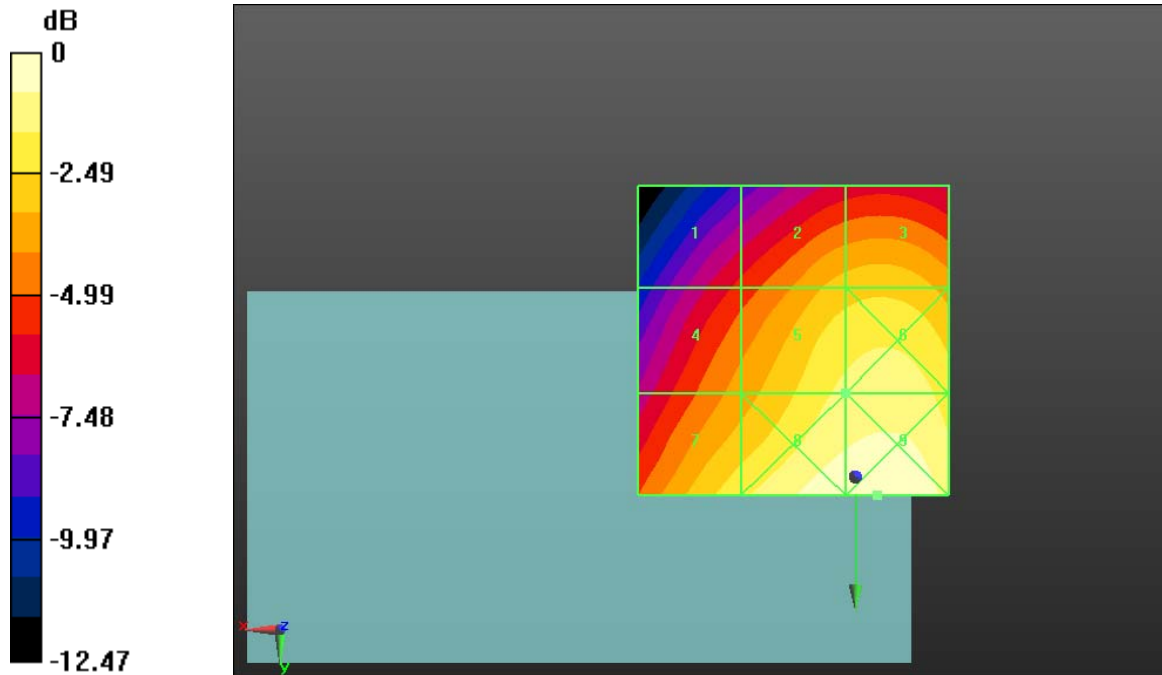
Grid 1 <b>M4</b> <b>31.83 V/m</b>	Grid 2 <b>M4</b> <b>42.99 V/m</b>	Grid 3 <b>M4</b> <b>44.08 V/m</b>
Grid 4 <b>M4</b> <b>39.06 V/m</b>	Grid 5 <b>M4</b> <b>50.84 V/m</b>	Grid 6 <b>M4</b> <b>52.34 V/m</b>
Grid 7 <b>M4</b> <b>48.44 V/m</b>	Grid 8 <b>M4</b> <b>59.26 V/m</b>	Grid 9 <b>M4</b> <b>60.02 V/m</b>

**Cursor:**

Total = 60.024 V/m

E Category: M4

Location: -3.5, 3, 8.7 mm



0 dB = 60.020V/m = 35.57 dB V/m

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Date/Time: 6/19/2012 3:03:00 AM

Test Laboratory: RIM Testing Services

### **HAC RF\_E-Field\_GSM1900**

**DUT: BlackBerry Smartphone; Type: Sample ; Serial: 2A211C01**

Communication System: GSM 1900; Frequency: 1850.2 MHz, Frequency: 1880 MHz, Frequency: 1909.8 MHz

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

Phantom section: RF Section

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

DASY Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 1/9/2012
- Sensor-Surface: (Fix Surface), z = 8.7
- Electronics: DAE3 Sn473; Calibrated: 1/13/2012
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA
- DASYS2 52.8.0(692); SEMCAD X 14.6.4(4989)

### **Device E-Field measurement with ER probe/E Scan - ER3D - 2007: 15 mm from Probe Center to Device\_Low\_Chan/Hearing Aid Compatibility Test**

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

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 9.78 V/m; Power Drift = -0.23 dB

PMR not calibrated. PMF = 2.920 is applied.

E-field emissions = 57.50 V/m

**Near-field category: M3 (AWF -5 dB)**



PMF scaled E-field

Grid 1 <b>M3</b> <b>56.06 V/m</b>	Grid 2 <b>M3</b> <b>57.50 V/m</b>	Grid 3 <b>M3</b> <b>50.95 V/m</b>
Grid 4 <b>M4</b> <b>30.10 V/m</b>	Grid 5 <b>M3</b> <b>49.47 V/m</b>	Grid 6 <b>M3</b> <b>50.09 V/m</b>
Grid 7 <b>M3</b> <b>54.03 V/m</b>	Grid 8 <b>M3</b> <b>77.37 V/m</b>	Grid 9 <b>M3</b> <b>77.14 V/m</b>

**Cursor:**

Total = 77.373 V/m  
E Category: M3  
Location: -7, 25, 8.7 mm

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

Device Reference Point: 0, 0, -6.3 mm  
Reference Value = 8.54 V/m; Power Drift = 0.04 dB  
PMR not calibrated. PMF = 2.920 is applied.  
E-field emissions = 52.54 V/m

**Near-field category: M3 (AWF -5 dB)**

PMF scaled E-field

Grid 1 <b>M3</b> <b>50.47 V/m</b>	Grid 2 <b>M3</b> <b>52.54 V/m</b>	Grid 3 <b>M3</b> <b>49.54 V/m</b>
Grid 4 <b>M4</b> <b>27.73 V/m</b>	Grid 5 <b>M4</b> <b>42.71 V/m</b>	Grid 6 <b>M4</b> <b>43.46 V/m</b>
Grid 7 <b>M4</b> <b>45.53 V/m</b>	Grid 8 <b>M3</b> <b>66.99 V/m</b>	Grid 9 <b>M3</b> <b>66.96 V/m</b>

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**Cursor:**

Total = 66.992 V/m  
E Category: M3  
Location: -8, 25, 8.7 mm

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

Device Reference Point: 0, 0, -6.3 mm  
Reference Value = 7.61 V/m; Power Drift = 0.15 dB  
PMR not calibrated. PMF = 2.920 is applied.  
E-field emissions = 56.08 V/m

**Near-field category: M3 (AWF -5 dB)**

PMF scaled E-field

Grid 1 <b>M3</b> <b>51.87 V/m</b>	Grid 2 <b>M3</b> <b>56.08 V/m</b>	Grid 3 <b>M3</b> <b>52.23 V/m</b>
Grid 4 <b>M4</b> <b>32.00 V/m</b>	Grid 5 <b>M4</b> <b>34.09 V/m</b>	Grid 6 <b>M4</b> <b>35.11 V/m</b>
Grid 7 <b>M4</b> <b>38.32 V/m</b>	Grid 8 <b>M3</b> <b>59.81 V/m</b>	Grid 9 <b>M3</b> <b>59.80 V/m</b>

**Cursor:**

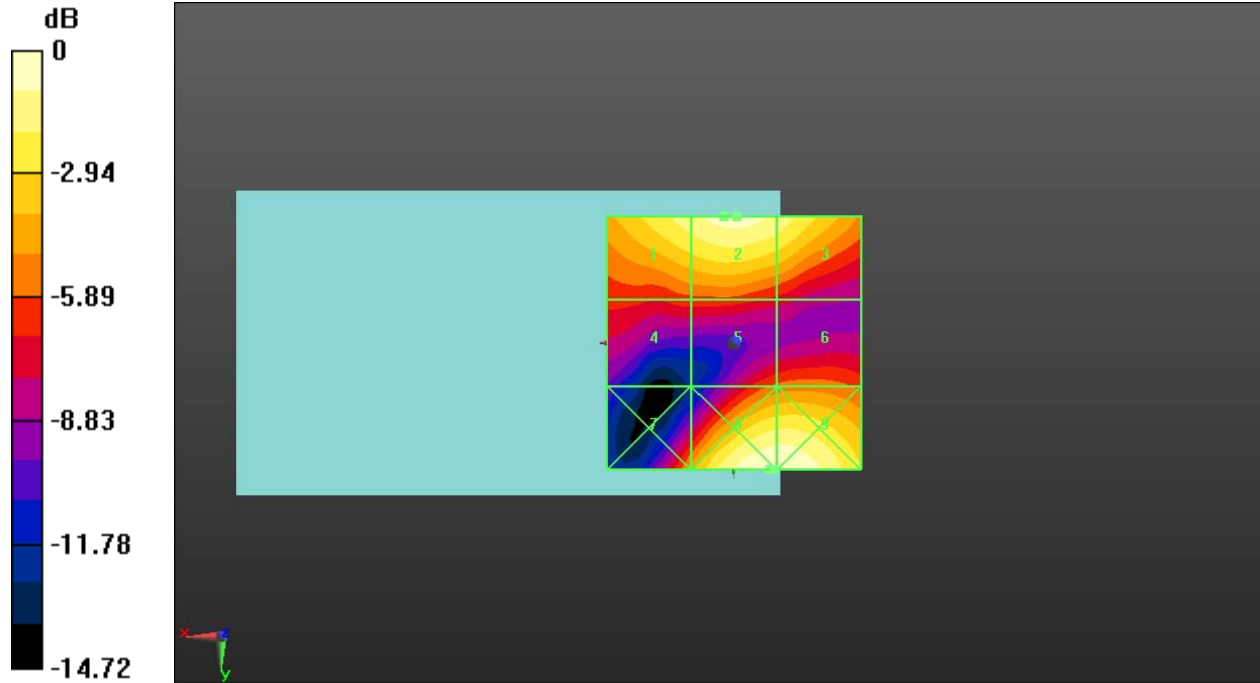
Total = 59.810 V/m  
E Category: M3  
Location: -8, 25, 8.7 mm

Author Data  
**Daoud Attayi**

Dates of Test  
**Jan. 31, Feb. 17, June 18-Sep. 28, 2012**


Report No  
**RTS-6012-1207-39B**

FCC ID  
**L6ARFF90LW  
L6ARFK120LW**



0 dB = 76.340V/m = 37.66 dB V/m



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Date/Time: 6/28/2012 5:01:14 AM

Test Laboratory: RIM Testing Services

### **HAC RF\_E-Field\_GSM1900\_Tcoil**

**DUT: BlackBerry Smartphone; Type: Sample ; Serial: 2A211C01**

Communication System: GSM 1900; Frequency: 1850.2 MHz

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

Phantom section: RF Section

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

DASY Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 1/9/2012
- Sensor-Surface: (Fix Surface),  $z = 8.7$
- Electronics: DAE3 Sn473; Calibrated: 1/13/2012
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA
- DASY52 52.8.0(692); SEMCAD X 14.6.4(4989)

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

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

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 8.86 V/m; Power Drift = -0.06 dB

PMR not calibrated. PMF = 2.920 is applied.

E-field emissions = 65.50 V/m

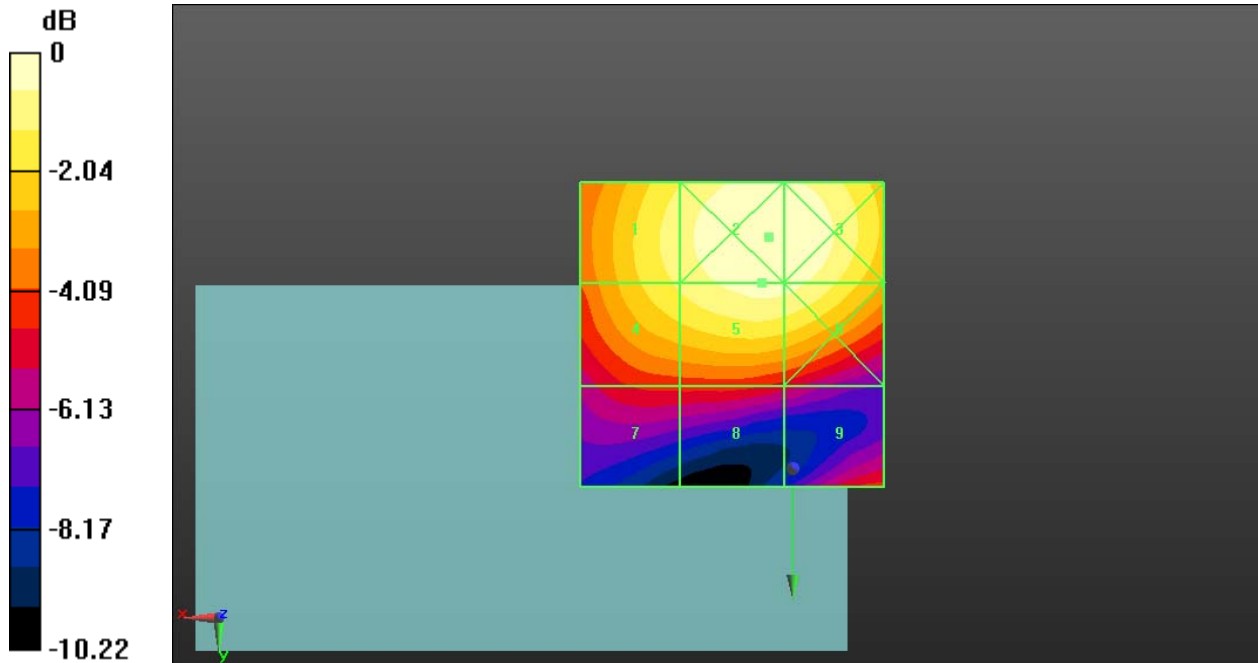
**Near-field category: M3 (AWF -5 dB)**

PMF scaled E-field

Grid 1 <b>M3</b> <b>61.18 V/m</b>	Grid 2 <b>M3</b> <b>68.97 V/m</b>	Grid 3 <b>M3</b> <b>68.74 V/m</b>
Grid 4 <b>M3</b> <b>59.09 V/m</b>	Grid 5 <b>M3</b> <b>65.50 V/m</b>	Grid 6 <b>M3</b> <b>65.03 V/m</b>
Grid 7 <b>M4</b> <b>40.55 V/m</b>	Grid 8 <b>M4</b> <b>40.83 V/m</b>	Grid 9 <b>M4</b> <b>40.74 V/m</b>

Cursor:

Total = 68.974 V/m  
 E Category: M3  
 Location: 4, -38, 8.7 mm



0 dB = 68.050V/m = 36.66 dB V/m

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Date/Time: 6/19/2012 3:24:35 AM

Test Laboratory: RIM Testing Services

## HAC RF\_E-Field\_UMTS\_Band\_II

**DUT: BlackBerry Smartphone; Type: Sample ; Serial: 2A211C01**

Communication System: WCDMA FDD II; Frequency: 1852.4 MHz, Frequency: 1880 MHz, Frequency: 1907.6 MHz

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

Phantom section: RF Section

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

DASY Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 1/9/2012
- Sensor-Surface: (Fix Surface), z = 8.7
- Electronics: DAE3 Sn473; Calibrated: 1/13/2012
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA
- DASYS2 52.8.0(692); SEMCAD X 14.6.4(4989)

### **Device E-Field measurement with ER probe/E Scan - ER3D - 2007: 15 mm from Probe Center to Device\_Low\_Chan/Hearing Aid Compatibility Test**

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

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 14.47 V/m; Power Drift = 0.13 dB

PMR not calibrated. PMF = 1.000 is applied.

E-field emissions = 28.41 V/m

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



PMF scaled E-field

Grid 1 <b>M4</b> <b>27.38 V/m</b>	Grid 2 <b>M4</b> <b>28.41 V/m</b>	Grid 3 <b>M4</b> <b>26.21 V/m</b>
Grid 4 <b>M4</b> <b>14.53 V/m</b>	Grid 5 <b>M4</b> <b>23.79 V/m</b>	Grid 6 <b>M4</b> <b>24.43 V/m</b>
Grid 7 <b>M4</b> <b>24.08 V/m</b>	Grid 8 <b>M4</b> <b>35.98 V/m</b>	Grid 9 <b>M4</b> <b>35.94 V/m</b>

**Cursor:**

Total = 35.981 V/m  
E Category: M4  
Location: -7.5, 25, 8.7 mm

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

Device Reference Point: 0, 0, -6.3 mm  
Reference Value = 13.46 V/m; Power Drift = -0.05 dB  
PMR not calibrated. PMF = 1.000 is applied.  
E-field emissions = 28.66 V/m

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

PMF scaled E-field

Grid 1 <b>M4</b> <b>27.85 V/m</b>	Grid 2 <b>M4</b> <b>28.66 V/m</b>	Grid 3 <b>M4</b> <b>26.08 V/m</b>
Grid 4 <b>M4</b> <b>15.11 V/m</b>	Grid 5 <b>M4</b> <b>23.26 V/m</b>	Grid 6 <b>M4</b> <b>23.92 V/m</b>
Grid 7 <b>M4</b> <b>24.30 V/m</b>	Grid 8 <b>M4</b> <b>35.93 V/m</b>	Grid 9 <b>M4</b> <b>35.88 V/m</b>

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**Cursor:**

Total = 35.931 V/m  
E Category: M4  
Location: -7.5, 25, 8.7 mm

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

Device Reference Point: 0, 0, -6.3 mm  
Reference Value = 12.40 V/m; Power Drift = 0.09 dB  
PMR not calibrated. PMF = 1.000 is applied.  
E-field emissions = 29.11 V/m

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

PMF scaled E-field

Grid 1 <b>M4</b> <b>27.34 V/m</b>	Grid 2 <b>M4</b> <b>29.11 V/m</b>	Grid 3 <b>M4</b> <b>27.36 V/m</b>
Grid 4 <b>M4</b> <b>15.37 V/m</b>	Grid 5 <b>M4</b> <b>19.64 V/m</b>	Grid 6 <b>M4</b> <b>20.33 V/m</b>
Grid 7 <b>M4</b> <b>22.11 V/m</b>	Grid 8 <b>M4</b> <b>32.43 V/m</b>	Grid 9 <b>M4</b> <b>32.33 V/m</b>

**Cursor:**

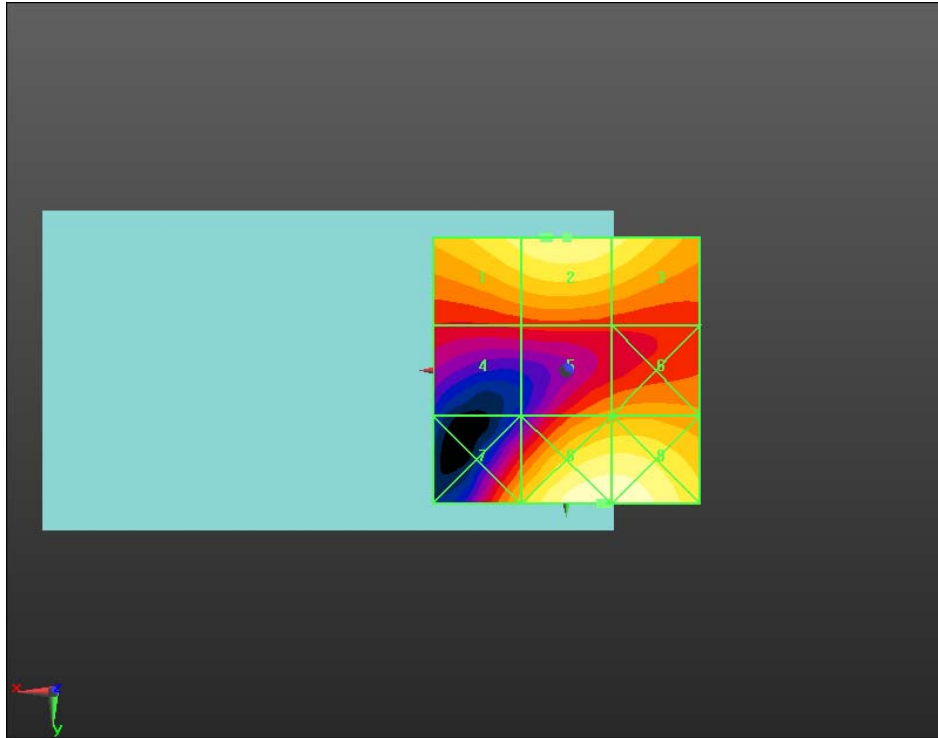
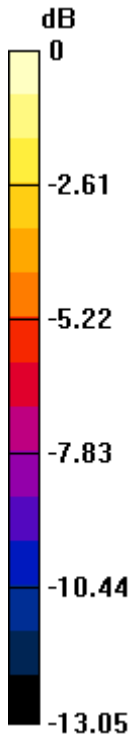
Total = 32.429 V/m  
E Category: M4  
Location: -6.5, 25, 8.7 mm

Author Data  
**Daoud Attayi**

Dates of Test  
**Jan. 31, Feb. 17, June 18-Sep. 28, 2012**

Report No  
**RTS-6012-1207-39B**

FCC ID  
**L6ARFF90LW  
L6ARFK120LW**



0 dB = 35.980V/m = 31.12 dB V/m

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Date/Time: 6/28/2012 5:19:43 AM

Test Laboratory: RIM Testing Services

## HAC RF\_E-Field\_UMTS\_Band\_II\_Tcoil

**DUT: BlackBerry Smartphone; Type: Sample ; Serial: 2A211C01**

Communication System: WCDMA FDD II; Frequency: 1907.6 MHz

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

Phantom section: RF Section

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

DASY Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 1/9/2012
- Sensor-Surface: (Fix Surface),  $z = 8.7$
- Electronics: DAE3 Sn473; Calibrated: 1/13/2012
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA
- DASYS 52.8.0(692); SEMCAD X 14.6.4(4989)

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

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

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 12.38 V/m; Power Drift = -0.13 dB

PMR not calibrated. PMF = 1.000 is applied.

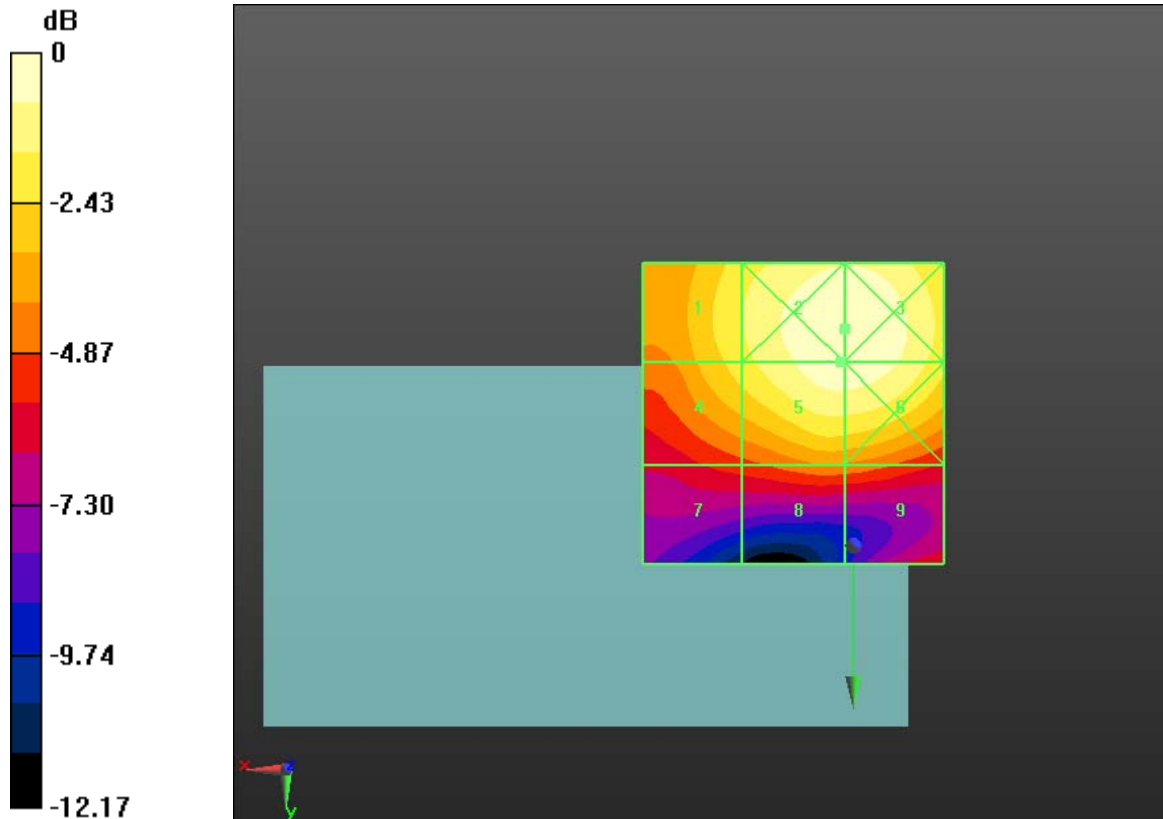
E-field emissions = 33.17 V/m

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

PMF scaled E-field

Grid 1 <b>M4</b> <b>28.27 V/m</b>	Grid 2 <b>M4</b> <b>34.11 V/m</b>	Grid 3 <b>M4</b> <b>34.11 V/m</b>
Grid 4 <b>M4</b> <b>27.21 V/m</b>	Grid 5 <b>M4</b> <b>33.17 V/m</b>	Grid 6 <b>M4</b> <b>33.16 V/m</b>
Grid 7 <b>M4</b> <b>18.87 V/m</b>	Grid 8 <b>M4</b> <b>21.37 V/m</b>	Grid 9 <b>M4</b> <b>21.16 V/m</b>

**Cursor:**  
 Total = 34.114 V/m  
 E Category: M4  
 Location: 1.5, -36, 8.7 mm



0 dB = 34.110V/m = 30.66 dB V/m



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Date/Time: 9/28/2012 3:49:27 PM

Test Laboratory: RIM Testing Services

### HAC RF\_E-Field\_GSM850

**DUT: BlackBerry Smartphone; Type: Sample ; Serial: 2A8C7018**

Communication System: GSM 850; Frequency: 848.8 MHz

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

Phantom section: RF Section

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

DASY Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 1/9/2012
- Sensor-Surface: (Fix Surface), z = 8.7
- Electronics: DAE3 Sn473; Calibrated: 1/13/2012
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA
- DASYS2 52.8.0(692); SEMCAD X 14.6.4(4989)

### Device E-Field measurement with ER probe/E Scan - ER3D - 2007: 15 mm from Probe Center to the Device\_High\_Chan/Hearing Aid Compatibility Test

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

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 77.11 V/m; Power Drift = -0.48 dB

PMR not calibrated. PMF = 3.130 is applied.

E-field emissions = 193.4 V/m

**Near-field category: M3 (AWF -5 dB)**

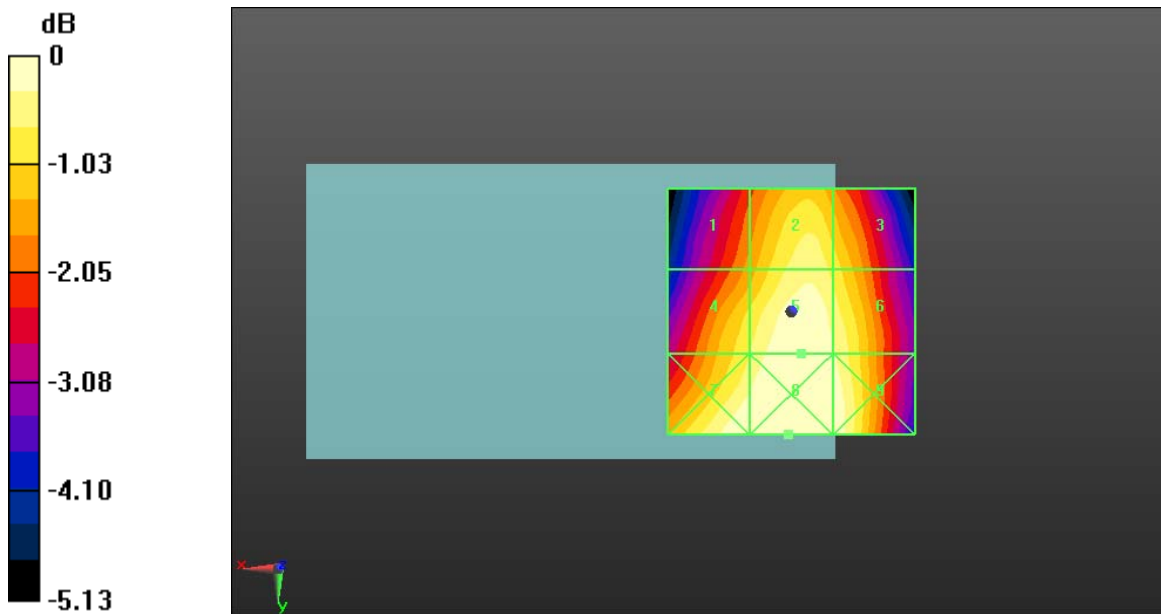
PMF scaled E-field

Grid 1 <b>M3</b> <b>159.9 V/m</b>	Grid 2 <b>M3</b> <b>181.6 V/m</b>	Grid 3 <b>M3</b> <b>173.9 V/m</b>
Grid 4 <b>M3</b> <b>176.2 V/m</b>	Grid 5 <b>M3</b> <b>193.4 V/m</b>	Grid 6 <b>M3</b> <b>184.6 V/m</b>

Grid 7 <b>M3</b> <b>196.1 V/m</b>	Grid 8 <b>M3</b> <b>207.4 V/m</b>	Grid 9 <b>M3</b> <b>192.3 V/m</b>
--------------------------------------	--------------------------------------	--------------------------------------

**Cursor:**

Total = 207.4 V/m  
 E Category: M3  
 Location: 0.5, 25, 8.7 mm



0 dB = 190.9V/m = 45.62 dB V/m

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Date/Time: 9/28/2012 4:32:44 PM

Test Laboratory: RIM Testing Services

### HAC RF\_E-Field\_UMTS\_Band\_V

**DUT: BlackBerry Smartphone; Type: Sample ; Serial: 2A8C7018**

Communication System: WCDMA FDD V; Frequency: 846.6 MHz

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

Phantom section: RF Section

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

DASY Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 1/9/2012
- Sensor-Surface: (Fix Surface), z = 8.7
- Electronics: DAE3 Sn473; Calibrated: 1/13/2012
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA
- DASYS 52.8.0(692); SEMCAD X 14.6.4(4989)

### Device E-Field measurement with ER probe/E Scan - ER3D - 2007: 15 mm from Probe Center to the Device\_High\_Chan/Hearing Aid Compatibility Test

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

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 74.15 V/m; Power Drift = 0.01 dB

PMR not calibrated. PMF = 1.070 is applied.

E-field emissions = 66.10 V/m

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

PMF scaled E-field

Grid 1 <b>M4</b> <b>54.79 V/m</b>	Grid 2 <b>M4</b> <b>59.64 V/m</b>	Grid 3 <b>M4</b> <b>58.00 V/m</b>
Grid 4 <b>M4</b> <b>61.21 V/m</b>	Grid 5 <b>M4</b> <b>66.10 V/m</b>	Grid 6 <b>M4</b> <b>63.14 V/m</b>
Grid 7 <b>M4</b>	Grid 8 <b>M4</b>	Grid 9 <b>M4</b>

Author Data  
**Daoud Attayi**

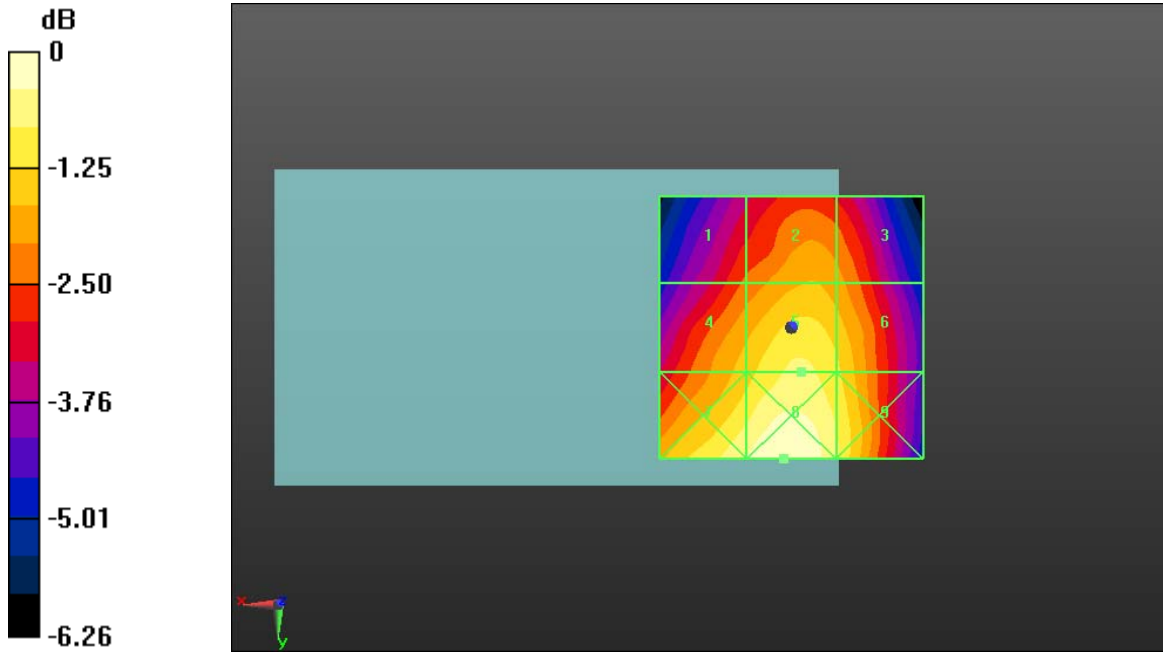
Dates of Test  
**Jan. 31, Feb. 17, June 18-Sep. 28, 2012**

Report No  
**RTS-6012-1207-39B**

FCC ID  
**L6ARFF90LW  
 L6ARFK120LW**

**68.95 V/m      72.07 V/m      66.05 V/m**

**Cursor:**  
 Total = 72.066 V/m  
 E Category: M4  
 Location: 1.5, 25, 8.7 mm



0 dB = 72.070V/m = 37.16 dB V/m

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Date/Time: 9/28/2012 4:04:39 PM

Test Laboratory: RIM Testing Services

### HAC RF\_E-Field\_GSM1900\_Tcoil

**DUT: BlackBerry Smartphone; Type: Sample ; Serial: 2A8C7018**

Communication System: GSM 1900; Frequency: 1850.2 MHz

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

Phantom section: RF Section

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

DASY Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 1/9/2012
- Sensor-Surface: (Fix Surface), z = 8.7
- Electronics: DAE3 Sn473; Calibrated: 1/13/2012
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA
- DASYS 52.8.0(692); SEMCAD X 14.6.4(4989)

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

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

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 10.52 V/m; Power Drift = -0.03 dB

PMR not calibrated. PMF = 2.920 is applied.

E-field emissions = 66.16 V/m

**Near-field category: M3 (AWF -5 dB)**

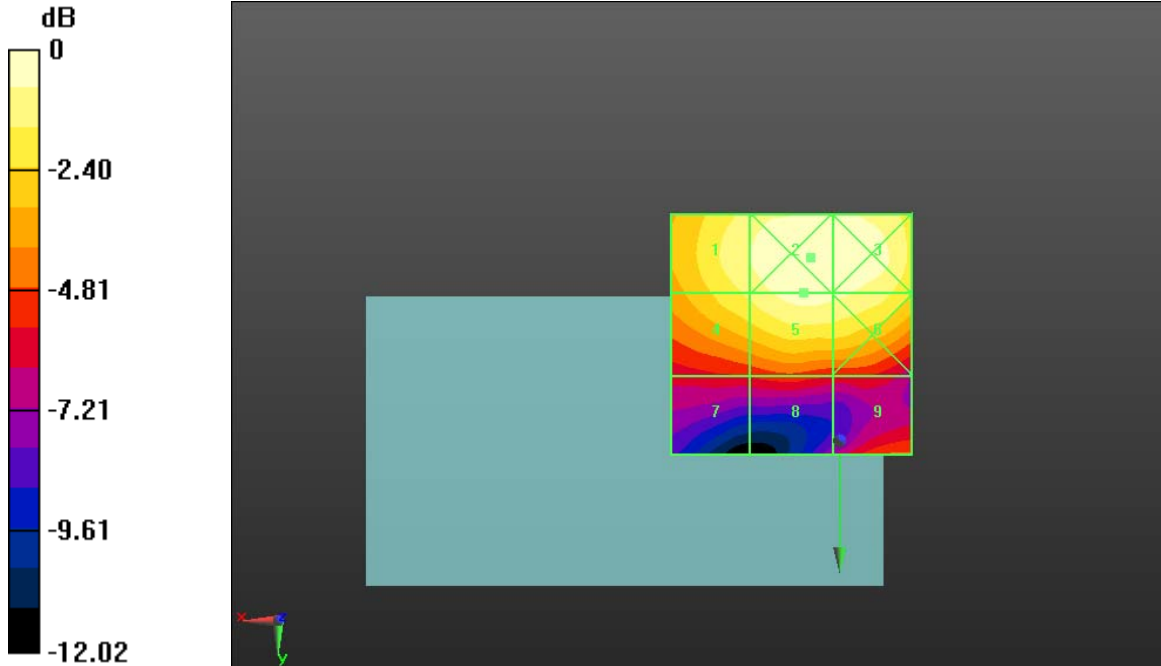
PMF scaled E-field

Grid 1 <b>M3</b> <b>63.35 V/m</b>	Grid 2 <b>M3</b> <b>70.18 V/m</b>	Grid 3 <b>M3</b> <b>69.27 V/m</b>
Grid 4 <b>M3</b> <b>58.97 V/m</b>	Grid 5 <b>M3</b> <b>66.16 V/m</b>	Grid 6 <b>M3</b> <b>64.92 V/m</b>
Grid 7 <b>M4</b> <b>36.74 V/m</b>	Grid 8 <b>M4</b> <b>39.00 V/m</b>	Grid 9 <b>M4</b> <b>41.35 V/m</b>

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**Cursor:**

Total = 70.178 V/m  
 E Category: M3  
 Location: 6, -38, 8.7 mm



0 dB = 69.240V/m = 36.81 dB V/m

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Date/Time: 9/28/2012 4:40:42 PM

Test Laboratory: RIM Testing Services

### HAC RF\_E-Field\_UMTS\_Band\_II\_Tcoil

**DUT: BlackBerry Smartphone; Type: Sample ; Serial: 2A8C7018**

Communication System: WCDMA FDD II; Frequency: 1907.6 MHz

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

Phantom section: RF Section

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

DASY Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 1/9/2012
- Sensor-Surface: (Fix Surface), z = 8.7
- Electronics: DAE3 Sn473; Calibrated: 1/13/2012
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA
- DASYS 52.8.0(692); SEMCAD X 14.6.4(4989)

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

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

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 12.09 V/m; Power Drift = -0.34 dB

PMR not calibrated. PMF = 1.000 is applied.

E-field emissions = 33.20 V/m

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

PMF scaled E-field

Grid 1 <b>M4</b> <b>28.15 V/m</b>	Grid 2 <b>M4</b> <b>34.09 V/m</b>	Grid 3 <b>M4</b> <b>34.10 V/m</b>
Grid 4 <b>M4</b> <b>26.97 V/m</b>	Grid 5 <b>M4</b> <b>33.20 V/m</b>	Grid 6 <b>M4</b> <b>33.20 V/m</b>
Grid 7 <b>M4</b> <b>18.38 V/m</b>	Grid 8 <b>M4</b> <b>21.22 V/m</b>	Grid 9 <b>M4</b> <b>21.22 V/m</b>

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**Daoud Attayi**

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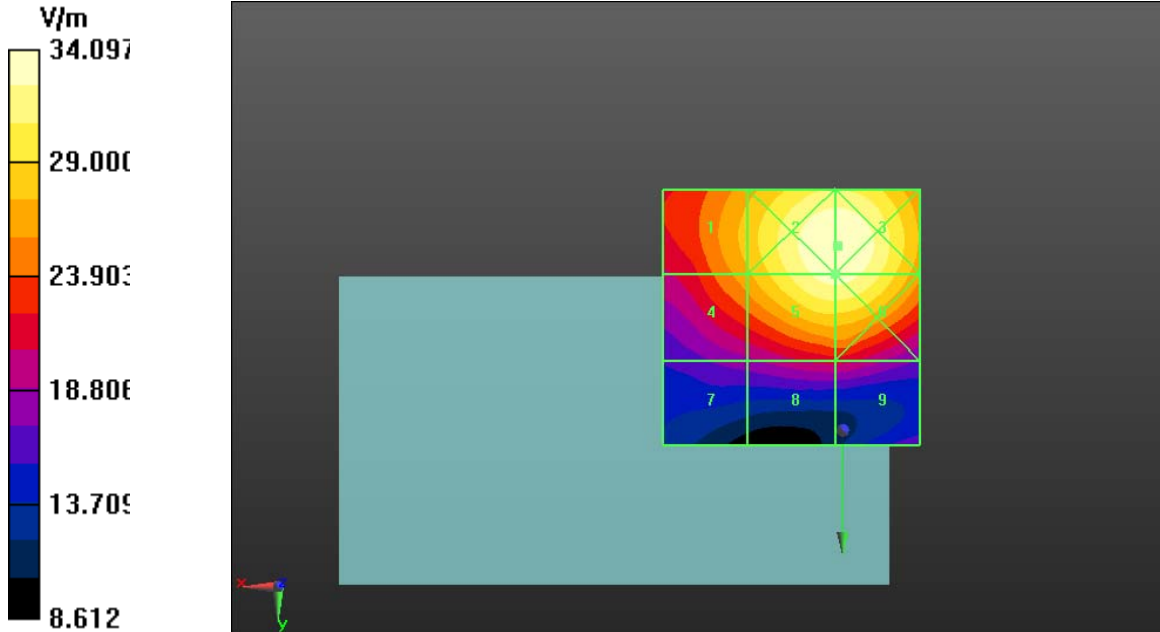
FCC ID  
**L6ARFF90LW  
L6ARFK120LW**

**Cursor:**

Total = 34.097 V/m

E Category: M4

Location: 1, -36, 8.7 mm





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Date/Time: 9/28/2012 3:18:53 PM

Test Laboratory: RIM Testing Services

### HAC RF\_E-Field\_UMTS\_Band\_IV

**DUT: BlackBerry Smartphone; Type: Sample ; Serial: 2A8C7018**

Communication System: WCDMA FDD IV; Frequency: 1712.4 MHz, Frequency: 1732.6 MHz, Frequency: 1752.6 MHz

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

Phantom section: RF Section

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

DASY Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 1/9/2012
- Sensor-Surface: (Fix Surface), z = 8.7
- Electronics: DAE3 Sn473; Calibrated: 1/13/2012
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA
- DASYS2 52.8.0(692); SEMCAD X 14.6.4(4989)

### Device E-Field measurement with ER probe/E Scan - ER3D - 2007: 15 mm from Probe Center to Device\_Low\_Chan/Hearing Aid Compatibility Test

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

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 30.19 V/m; Power Drift = -0.11 dB

PMR not calibrated. PMF = 1.030 is applied.

E-field emissions = 40.49 V/m

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

PMF scaled E-field

Grid 1 <b>M4</b> <b>36.35 V/m</b>	Grid 2 <b>M4</b> <b>31.55 V/m</b>	Grid 3 <b>M4</b> <b>26.72 V/m</b>
Grid 4 <b>M4</b> <b>26.46 V/m</b>	Grid 5 <b>M4</b> <b>40.39 V/m</b>	Grid 6 <b>M4</b> <b>40.49 V/m</b>
Grid 7 <b>M4</b>	Grid 8 <b>M4</b>	Grid 9 <b>M4</b>

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<b>44.43 V/m</b>	<b>55.48 V/m</b>	<b>54.39 V/m</b>
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**Cursor:**  
Total = 55.479 V/m  
E Category: M4  
Location: -5, 25, 8.7 mm

**Device E-Field measurement with ER probe/E Scan - ER3D - 2007:  
15 mm from Probe Center to the Device\_Mid\_Chan/Hearing Aid**

**Compatibility Test (101x101x1):** Measurement grid: dx=5mm, dy=5mm  
Device Reference Point: 0, 0, -6.3 mm  
Reference Value = 26.59 V/m; Power Drift = 0.19 dB  
PMR not calibrated. PMF = 1.030 is applied.  
E-field emissions = 40.65 V/m

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

PMF scaled E-field

Grid 1 <b>M4</b> <b>40.65 V/m</b>	Grid 2 <b>M4</b> <b>36.03 V/m</b>	Grid 3 <b>M4</b> <b>26.16 V/m</b>
Grid 4 <b>M4</b> <b>24.17 V/m</b>	Grid 5 <b>M4</b> <b>38.89 V/m</b>	Grid 6 <b>M4</b> <b>39.26 V/m</b>
Grid 7 <b>M4</b> <b>43.00 V/m</b>	Grid 8 <b>M4</b> <b>54.88 V/m</b>	Grid 9 <b>M4</b> <b>53.71 V/m</b>

**Cursor:**  
Total = 54.881 V/m  
E Category: M4  
Location: -5, 25, 8.7 mm

**Device E-Field measurement with ER probe/E Scan - ER3D - 2007:  
15 mm from Probe Center to the Device\_High\_Chan/Hearing Aid**

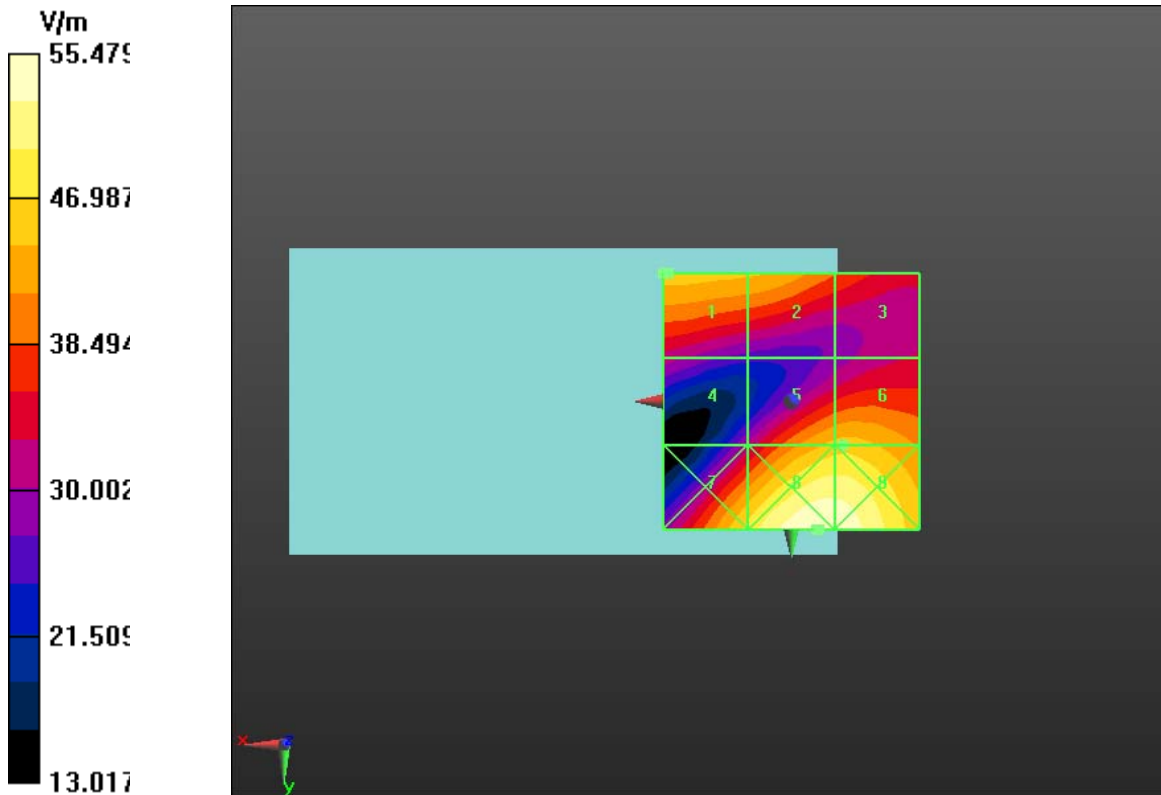
**Compatibility Test (101x101x1):** Measurement grid: dx=5mm, dy=5mm  
Device Reference Point: 0, 0, -6.3 mm  
Reference Value = 21.41 V/m; Power Drift = -0.09 dB  
PMR not calibrated. PMF = 1.030 is applied.  
E-field emissions = 36.53 V/m

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

PMF scaled E-field

Grid 1 <b>M4</b> <b>36.53 V/m</b>	Grid 2 <b>M4</b> <b>35.22 V/m</b>	Grid 3 <b>M4</b> <b>28.21 V/m</b>
Grid 4 <b>M4</b> <b>21.50 V/m</b>	Grid 5 <b>M4</b> <b>35.94 V/m</b>	Grid 6 <b>M4</b> <b>36.46 V/m</b>
Grid 7 <b>M4</b> <b>39.96 V/m</b>	Grid 8 <b>M4</b> <b>52.96 V/m</b>	Grid 9 <b>M4</b> <b>51.77 V/m</b>

**Cursor:**  
 Total = 52.960 V/m  
 E Category: M4  
 Location: -5.5, 25, 8.7 mm



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Date/Time: 9/28/2012 3:41:48 PM

Test Laboratory: RIM Testing Services

### HAC RF\_E-Field\_UMTS\_Band\_IV\_Tcoil

**DUT: BlackBerry Smartphone; Type: Sample ; Serial: 2A8C7018**

Communication System: WCDMA FDD IV; Frequency: 1732.6 MHz

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

Phantom section: RF Section

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

DASY Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 1/9/2012
- Sensor-Surface: (Fix Surface), z = 8.7
- Electronics: DAE3 Sn473; Calibrated: 1/13/2012
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA
- DASYS 52.8.0(692); SEMCAD X 14.6.4(4989)

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

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

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 21.16 V/m; Power Drift = 0.22 dB

PMR not calibrated. PMF = 1.030 is applied.

E-field emissions = 40.03 V/m

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

PMF scaled E-field

Grid 1 <b>M4</b> <b>42.71 V/m</b>	Grid 2 <b>M4</b> <b>42.72 V/m</b>	Grid 3 <b>M4</b> <b>40.96 V/m</b>
Grid 4 <b>M4</b> <b>40.03 V/m</b>	Grid 5 <b>M4</b> <b>40.02 V/m</b>	Grid 6 <b>M4</b> <b>37.66 V/m</b>
Grid 7 <b>M4</b> <b>26.42 V/m</b>	Grid 8 <b>M4</b> <b>24.44 V/m</b>	Grid 9 <b>M4</b> <b>29.50 V/m</b>

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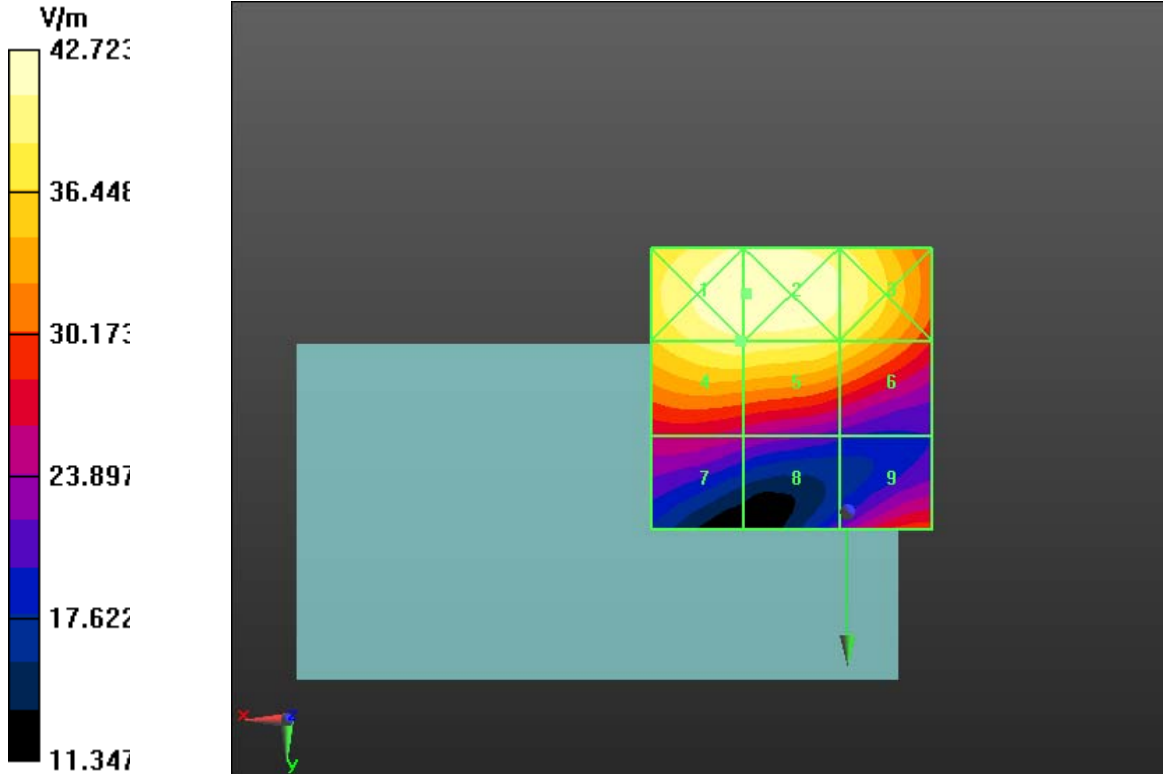
Author Data  
**Daoud Attayi**

Dates of Test  
**Jan. 31, Feb. 17, June 18-Sep. 28, 2012**

Report No  
**RTS-6012-1207-39B**

FCC ID  
**L6ARFF90LW  
L6ARFK120LW**

**Cursor:**  
Total = 42.723 V/m  
E Category: M4  
Location: 18, -39, 8.7 mm



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Date/Time: 6/19/2012 5:21:23 AM

Test Laboratory: RIM Testing Services

### **HAC RF\_H-Field\_GSM\_850**

**DUT: BlackBerry Smartphone; Type: Sample ; Serial: 2A211C01**

Communication System: GSM 850; Frequency: 824.2 MHz, Frequency: 836.8 MHz, Frequency: 848.8 MHz

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

Phantom section: RF Section

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

DASY Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 11/8/2011
- Sensor-Surface: (Fix Surface), z = 8.7
- Electronics: DAE3 Sn473; Calibrated: 1/13/2012
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA
- DASYS2 52.8.0(692); SEMCAD X 14.6.4(4989)

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

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

Device Reference Point: 0, 0, -6.3 mm

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

PMR not calibrated. PMF = 2.940 is applied.

H-field emissions = 0.25 A/m

**Near-field category: M4 (AWF -5 dB)**

PMF scaled H-field

<b>Grid 1 M4 0.35 A/m</b>	<b>Grid 2 M4 0.25 A/m</b>	<b>Grid 3 M4 0.17 A/m</b>
<b>Grid 4 M4 0.33 A/m</b>	<b>Grid 5 M4 0.24 A/m</b>	<b>Grid 6 M4 0.16 A/m</b>
<b>Grid 7 M4 0.34 A/m</b>	<b>Grid 8 M4 0.24 A/m</b>	<b>Grid 9 M4 0.15 A/m</b>

**Cursor:**

Total = 0.347 A/m  
H Category: M4  
Location: 25, -25, 8.7 mm

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

Device Reference Point: 0, 0, -6.3 mm  
Reference Value = 0.08 V/m; Power Drift = 0.21 dB  
PMR not calibrated. PMF = 2.940 is applied.  
H-field emissions = 0.27 A/m

**Near-field category: M4 (AWF -5 dB)**

PMF scaled H-field

<b>Grid 1 M4 0.36 A/m</b>	<b>Grid 2 M4 0.27 A/m</b>	<b>Grid 3 M4 0.18 A/m</b>
<b>Grid 4 M4 0.35 A/m</b>	<b>Grid 5 M4 0.26 A/m</b>	<b>Grid 6 M4 0.17 A/m</b>
<b>Grid 7 M4 0.37 A/m</b>	<b>Grid 8 M4 0.26 A/m</b>	<b>Grid 9 M4 0.17 A/m</b>

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**Cursor:**

Total = 0.365 A/m  
H Category: M4  
Location: 25, 25, 8.7 mm

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

Device Reference Point: 0, 0, -6.3 mm  
Reference Value = 0.09 V/m; Power Drift = -0.00 dB  
PMR not calibrated. PMF = 2.940 is applied.  
H-field emissions = 0.32 A/m

**Near-field category: M4 (AWF -5 dB)**

PMF scaled H-field

Grid 1 <b>M4</b> <b>0.39 A/m</b>	Grid 2 <b>M4</b> <b>0.29 A/m</b>	Grid 3 <b>M4</b> <b>0.19 A/m</b>
Grid 4 <b>M4</b> <b>0.40 A/m</b>	Grid 5 <b>M4</b> <b>0.30 A/m</b>	Grid 6 <b>M4</b> <b>0.20 A/m</b>
Grid 7 <b>M4</b> <b>0.43 A/m</b>	Grid 8 <b>M4</b> <b>0.32 A/m</b>	Grid 9 <b>M4</b> <b>0.22 A/m</b>

**Cursor:**

Total = 0.434 A/m  
H Category: M4  
Location: 25, 25, 8.7 mm

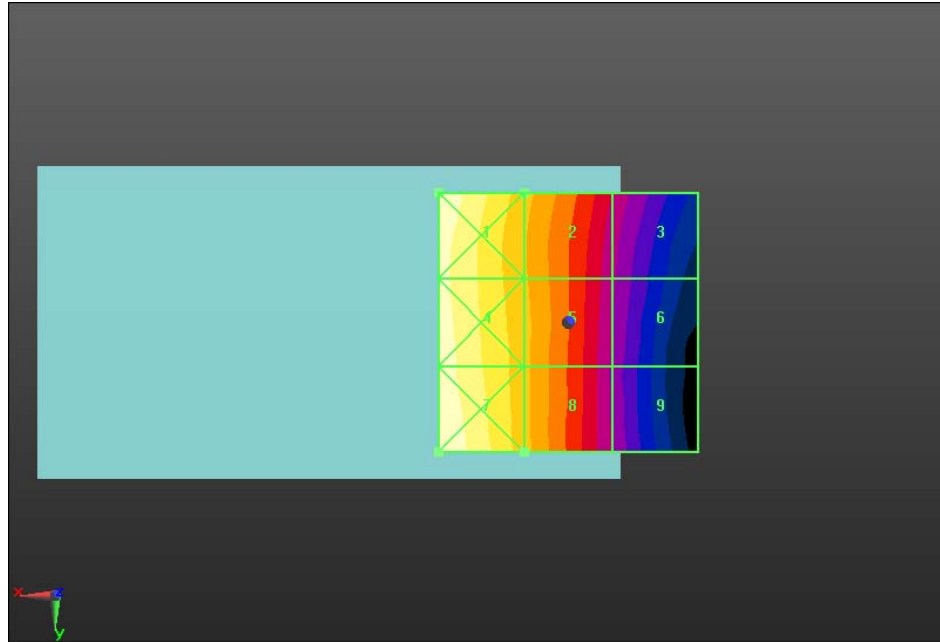
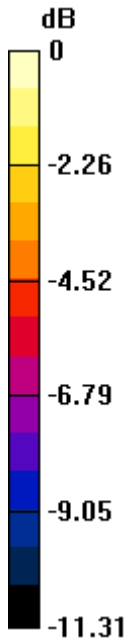


Author Data  
**Daoud Attayi**

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

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Date/Time: 6/28/2012 7:36:07 AM

Test Laboratory: RIM Testing Services

### **HAC RF\_H-Field\_GSM\_850\_Tcoil**

**DUT: BlackBerry Smartphone; Type: Sample ; Serial: 2A211C01**

Communication System: GSM 850; Frequency: 848.8 MHz

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

Phantom section: RF Section

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

DASY Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 11/8/2011
- Sensor-Surface: (Fix Surface),  $z = 8.7$
- Electronics: DAE3 Sn473; Calibrated: 1/13/2012
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA
- DASYS2 52.8.0(692); SEMCAD X 14.6.4(4989)

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

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

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 0.17 V/m; Power Drift = -0.18 dB

PMR not calibrated. PMF = 2.940 is applied.

H-field emissions = 0.48 A/m

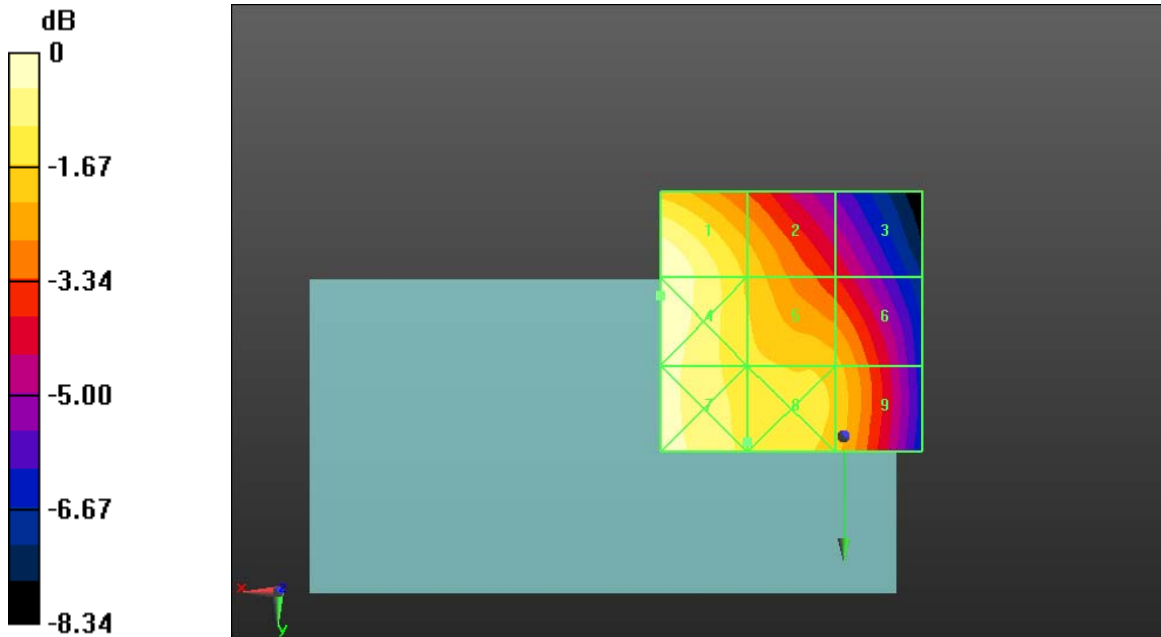
**Near-field category: M3 (AWF -5 dB)**

PMF scaled H-field

Grid 1 <b>M3</b> <b>0.48 A/m</b>	Grid 2 <b>M4</b> <b>0.38 A/m</b>	Grid 3 <b>M4</b> <b>0.30 A/m</b>
Grid 4 <b>M3</b> <b>0.48 A/m</b>	Grid 5 <b>M4</b> <b>0.40 A/m</b>	Grid 6 <b>M4</b> <b>0.37 A/m</b>
Grid 7 <b>M3</b> <b>0.46 A/m</b>	Grid 8 <b>M4</b> <b>0.41 A/m</b>	Grid 9 <b>M4</b> <b>0.38 A/m</b>

Cursor:

Total = 0.481 A/m  
 H Category: M3  
 Location: 35, -27, 8.7 mm



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

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Test Laboratory: RIM Testing Services

### **HAC RF\_H-Field\_UMTS\_Band\_V**

**DUT: BlackBerry Smartphone; Type: Sample ; Serial: 2A211C01**

Communication System: WCDMA FDD V; Frequency: 826.4 MHz, Frequency: 836.4 MHz, Frequency: 846.6 MHz

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

Phantom section: RF Section

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

DASY Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 11/8/2011
- Sensor-Surface: (Fix Surface), z = 8.7
- Electronics: DAE3 Sn473; Calibrated: 1/13/2012
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA
- DASYS2 52.8.0(692); SEMCAD X 14.6.4(4989)

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

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

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 0.08 V/m; Power Drift = -0.01 dB

PMR not calibrated. PMF = 1.090 is applied.

H-field emissions = 0.10 A/m

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



Author Data  
**Daoud Attayi**

Dates of Test  
**Jan. 31, Feb. 17, June 18-Sep. 28, 2012**

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**L6ARFF90LW  
L6ARFK120LW**

PMF scaled H-field

<b>Grid 1 M4</b> <b>0.14 A/m</b>	<b>Grid 2 M4</b> <b>0.10 A/m</b>	<b>Grid 3 M4</b> <b>0.07 A/m</b>
<b>Grid 4 M4</b> <b>0.13 A/m</b>	<b>Grid 5 M4</b> <b>0.09 A/m</b>	<b>Grid 6 M4</b> <b>0.06 A/m</b>
<b>Grid 7 M4</b> <b>0.14 A/m</b>	<b>Grid 8 M4</b> <b>0.09 A/m</b>	<b>Grid 9 M4</b> <b>0.06 A/m</b>

**Cursor:**

Total = 0.143 A/m  
H Category: M4  
Location: 25, 25, 8.7 mm

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

Device Reference Point: 0, 0, -6.3 mm  
Reference Value = 0.08 V/m; Power Drift = -0.17 dB  
PMR not calibrated. PMF = 1.090 is applied.  
H-field emissions = 0.10 A/m

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

PMF scaled H-field

<b>Grid 1 M4</b> <b>0.13 A/m</b>	<b>Grid 2 M4</b> <b>0.10 A/m</b>	<b>Grid 3 M4</b> <b>0.07 A/m</b>
<b>Grid 4 M4</b> <b>0.13 A/m</b>	<b>Grid 5 M4</b> <b>0.10 A/m</b>	<b>Grid 6 M4</b> <b>0.06 A/m</b>
<b>Grid 7 M4</b> <b>0.13 A/m</b>	<b>Grid 8 M4</b> <b>0.10 A/m</b>	<b>Grid 9 M4</b> <b>0.06 A/m</b>

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**Cursor:**

Total = 0.134 A/m  
H Category: M4  
Location: 25, 25, 8.7 mm

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

Device Reference Point: 0, 0, -6.3 mm  
Reference Value = 0.08 V/m; Power Drift = 0.01 dB  
PMR not calibrated. PMF = 1.090 is applied.  
H-field emissions = 0.11 A/m

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

PMF scaled H-field

Grid 1 <b>M4</b> <b>0.14 A/m</b>	Grid 2 <b>M4</b> <b>0.10 A/m</b>	Grid 3 <b>M4</b> <b>0.07 A/m</b>
Grid 4 <b>M4</b> <b>0.14 A/m</b>	Grid 5 <b>M4</b> <b>0.11 A/m</b>	Grid 6 <b>M4</b> <b>0.07 A/m</b>
Grid 7 <b>M4</b> <b>0.15 A/m</b>	Grid 8 <b>M4</b> <b>0.11 A/m</b>	Grid 9 <b>M4</b> <b>0.07 A/m</b>

**Cursor:**

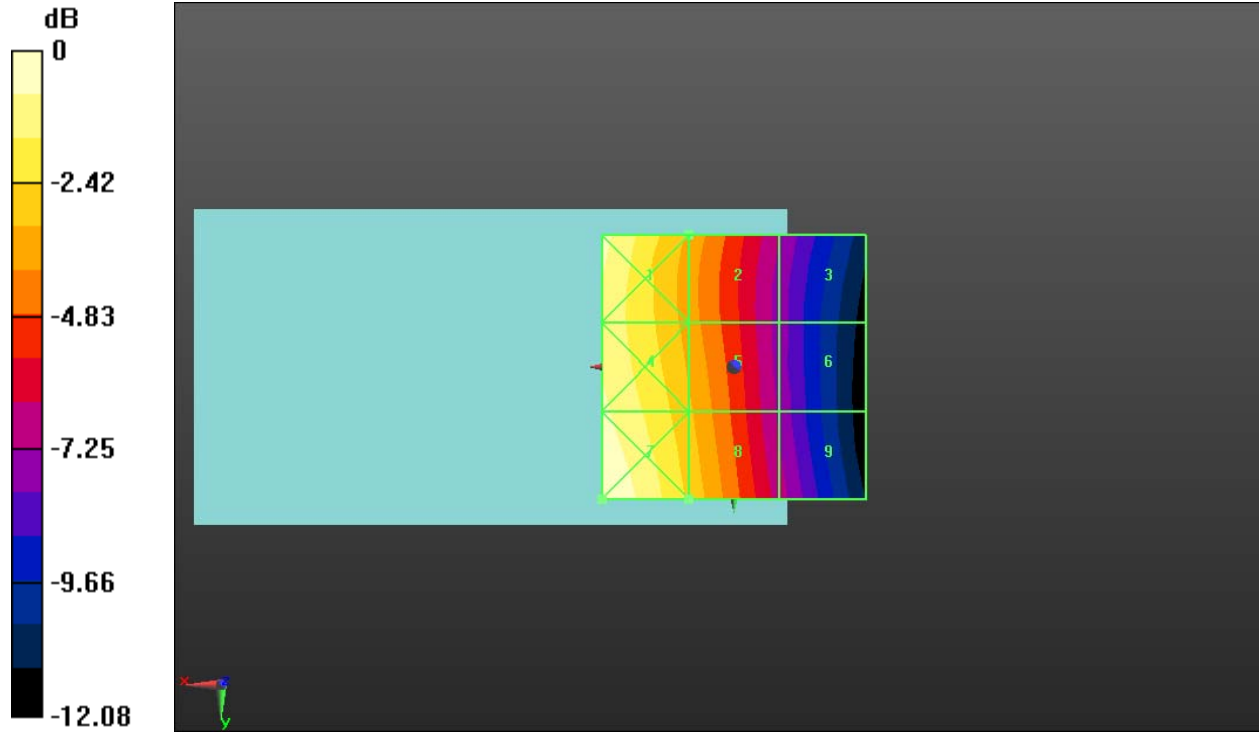
Total = 0.153 A/m  
H Category: M4  
Location: 25, 25, 8.7 mm

Author Data  
**Daoud Attayi**

Dates of Test  
**Jan. 31, Feb. 17, June 18-Sep. 28, 2012**

Report No  
**RTS-6012-1207-39B**

FCC ID  
**L6ARFF90LW  
L6ARFK120LW**



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

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Date/Time: 6/28/2012 7:58:29 AM

Test Laboratory: RIM Testing Services

### **HAC RF\_H-Field\_UMTS\_Band\_V\_Tcoil**

**DUT: BlackBerry Smartphone; Type: Sample ; Serial: 2A211C01**

Communication System: WCDMA FDD V; Frequency: 846.6 MHz

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

Phantom section: RF Section

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

DASY Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 11/8/2011
- Sensor-Surface: (Fix Surface),  $z = 8.7$
- Electronics: DAE3 Sn473; Calibrated: 1/13/2012
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA
- DASYS2 52.8.0(692); SEMCAD X 14.6.4(4989)

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

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

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 0.16 V/m; Power Drift = 0.03 dB

PMR not calibrated. PMF = 1.090 is applied.

H-field emissions = 0.14 A/m

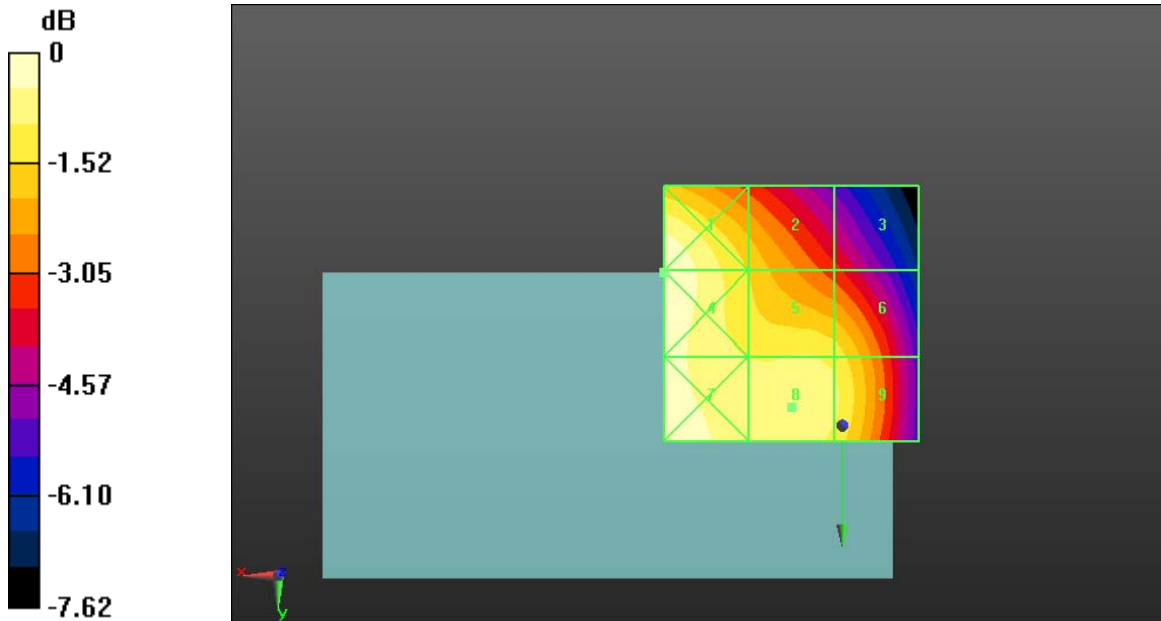
**Near-field category: M4 (AWF 0 dB)**



PMF scaled H-field

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

**Cursor:**  
 Total = 0.150 A/m  
 H Category: M4  
 Location: 35, -30, 8.7 mm



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

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Date/Time: 6/19/2012 5:39:30 AM

Test Laboratory: RIM Testing Services

## **HAC RF\_H-Field\_GSM\_1900**

**DUT: BlackBerry Smartphone; Type: Sample ; Serial: 2A211C01**

Communication System: GSM 1900; Frequency: 1850.2 MHz, Frequency: 1880 MHz, Frequency: 1909.8 MHz

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

Phantom section: RF Section

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

DASY Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 11/8/2011
- Sensor-Surface: (Fix Surface), z = 8.7
- Electronics: DAE3 Sn473; Calibrated: 1/13/2012
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA
- DASYS2 52.8.0(692); SEMCAD X 14.6.4(4989)

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

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

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 0.06 V/m; Power Drift = 0.12 dB

PMR not calibrated. PMF = 2.920 is applied.

H-field emissions = 0.16 A/m

**Near-field category: M3 (AWF -5 dB)**



PMF scaled H-field

Grid 1 <b>M3</b> <b>0.15 A/m</b>	Grid 2 <b>M3</b> <b>0.16 A/m</b>	Grid 3 <b>M3</b> <b>0.16 A/m</b>
Grid 4 <b>M4</b> <b>0.14 A/m</b>	Grid 5 <b>M3</b> <b>0.16 A/m</b>	Grid 6 <b>M3</b> <b>0.16 A/m</b>
Grid 7 <b>M3</b> <b>0.18 A/m</b>	Grid 8 <b>M3</b> <b>0.16 A/m</b>	Grid 9 <b>M4</b> <b>0.14 A/m</b>

**Cursor:**

Total = 0.179 A/m  
H Category: M3  
Location: 25, 25, 8.7 mm

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

Device Reference Point: 0, 0, -6.3 mm  
Reference Value = 0.06 V/m; Power Drift = 0.15 dB  
PMR not calibrated. PMF = 2.920 is applied.  
H-field emissions = 0.15 A/m

**Near-field category: M3 (AWF -5 dB)**

PMF scaled H-field

Grid 1 <b>M3</b> <b>0.15 A/m</b>	Grid 2 <b>M3</b> <b>0.15 A/m</b>	Grid 3 <b>M3</b> <b>0.15 A/m</b>
Grid 4 <b>M4</b> <b>0.13 A/m</b>	Grid 5 <b>M3</b> <b>0.15 A/m</b>	Grid 6 <b>M3</b> <b>0.15 A/m</b>
Grid 7 <b>M3</b> <b>0.16 A/m</b>	Grid 8 <b>M3</b> <b>0.15 A/m</b>	Grid 9 <b>M3</b> <b>0.14 A/m</b>

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**Cursor:**

Total = 0.160 A/m  
H Category: M3  
Location: 25, 25, 8.7 mm

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

Device Reference Point: 0, 0, -6.3 mm  
Reference Value = 0.07 V/m; Power Drift = 0.17 dB  
PMR not calibrated. PMF = 2.920 is applied.  
H-field emissions = 0.17 A/m

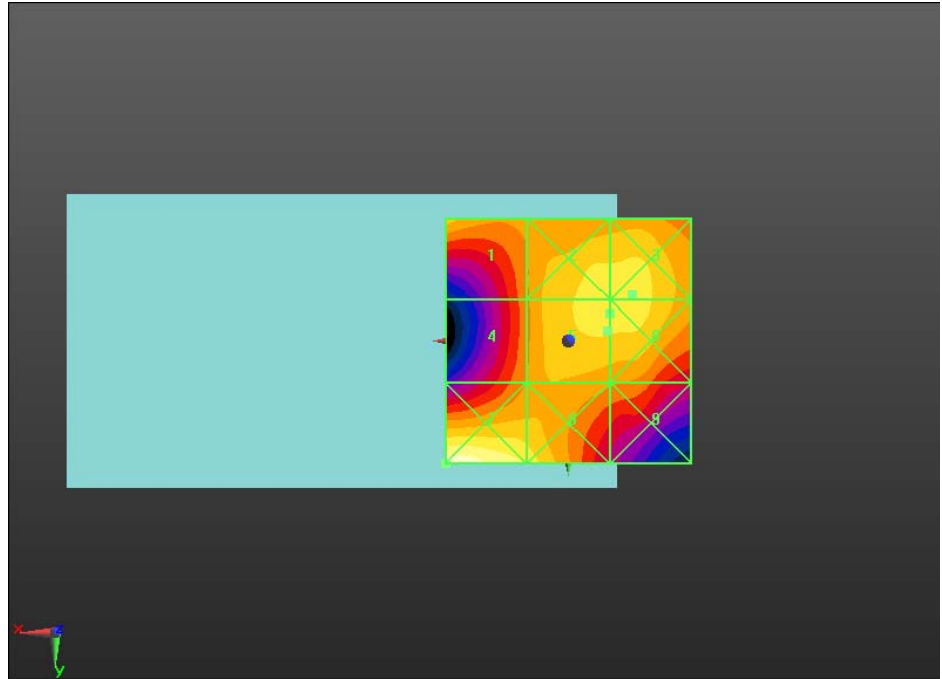
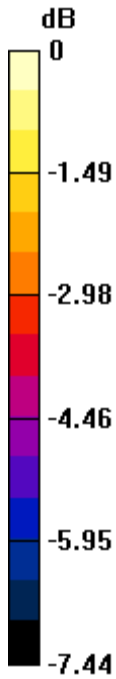
**Near-field category: M3 (AWF -5 dB)**

PMF scaled H-field

Grid 1 <b>M3</b> <b>0.15 A/m</b>	Grid 2 <b>M3</b> <b>0.17 A/m</b>	Grid 3 <b>M3</b> <b>0.17 A/m</b>
Grid 4 <b>M3</b> <b>0.14 A/m</b>	Grid 5 <b>M3</b> <b>0.17 A/m</b>	Grid 6 <b>M3</b> <b>0.17 A/m</b>
Grid 7 <b>M3</b> <b>0.16 A/m</b>	Grid 8 <b>M3</b> <b>0.16 A/m</b>	Grid 9 <b>M3</b> <b>0.16 A/m</b>

**Cursor:**

Total = 0.174 A/m  
H Category: M3  
Location: -8, -2, 8.7 mm



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

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Date/Time: 6/28/2012 7:43:32 AM

Test Laboratory: RIM Testing Services

### **HAC RF\_H-Field\_GSM\_1900\_Tcoil**

**DUT: BlackBerry Smartphone; Type: Sample ; Serial: 2A211C01**

Communication System: GSM 1900; Frequency: 1909.8 MHz

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

Phantom section: RF Section

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

DASY Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 11/8/2011
- Sensor-Surface: (Fix Surface),  $z = 8.7$
- Electronics: DAE3 Sn473; Calibrated: 1/13/2012
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA
- DASYS2 52.8.0(692); SEMCAD X 14.6.4(4989)

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

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

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 0.07 V/m; Power Drift = 0.35 dB

PMR not calibrated. PMF = 2.970 is applied.

H-field emissions = 0.18 A/m

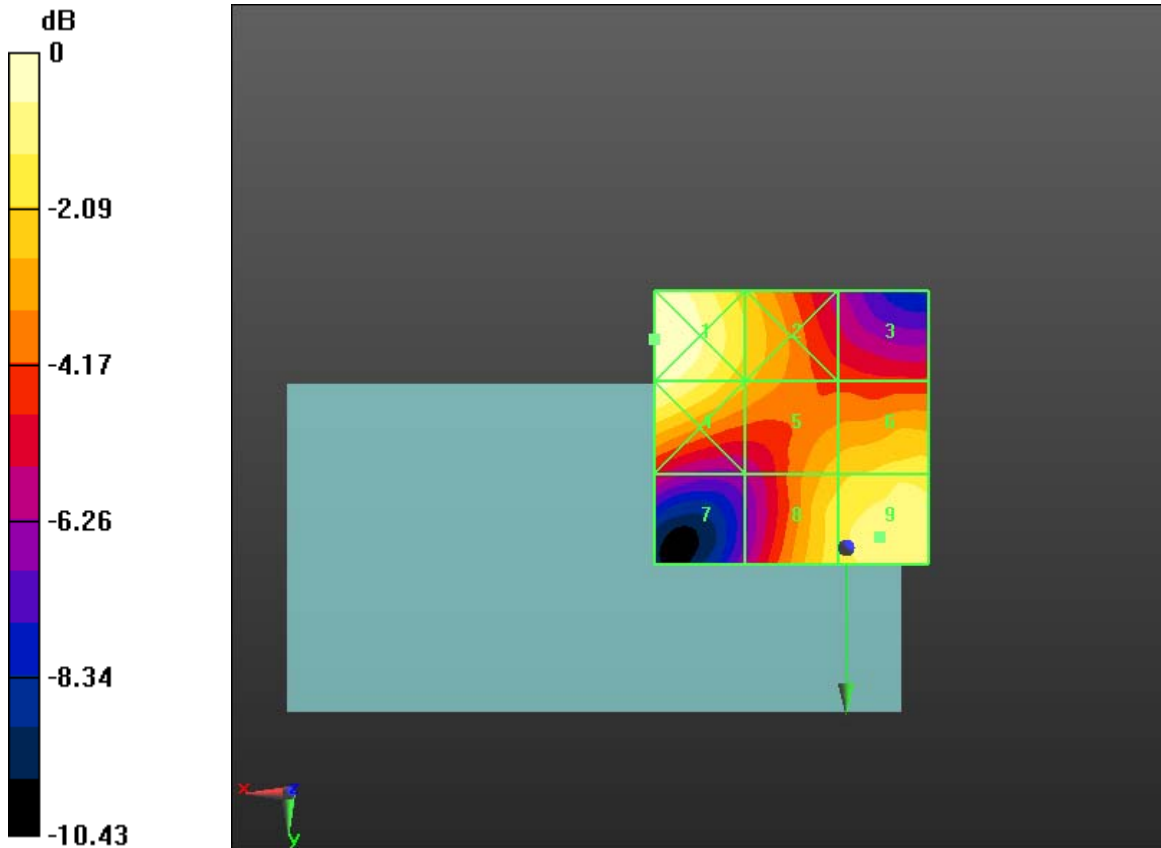
**Near-field category: M3 (AWF -5 dB)**

PMF scaled H-field

Grid 1 <b>M3</b> <b>0.21 A/m</b>	Grid 2 <b>M3</b> <b>0.16 A/m</b>	Grid 3 <b>M4</b> <b>0.12 A/m</b>
Grid 4 <b>M3</b> <b>0.20 A/m</b>	Grid 5 <b>M3</b> <b>0.15 A/m</b>	Grid 6 <b>M3</b> <b>0.17 A/m</b>
Grid 7 <b>M4</b> <b>0.11 A/m</b>	Grid 8 <b>M3</b> <b>0.17 A/m</b>	Grid 9 <b>M3</b> <b>0.18 A/m</b>

Cursor:

Total = 0.209 A/m  
 H Category: M3  
 Location: 35, -38, 8.7 mm



0 dB = 0.200A/m = -13.98 dB A/m



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Author Data

**Daoud Attayi**

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FCC ID

**L6ARFF90LW  
L6ARFK120LW**



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Date/Time: 6/19/2012 5:58:06 AM

Test Laboratory: RIM Testing Services

## **HAC RF\_H-Field\_UMTS\_Band\_II**

**DUT: BlackBerry Smartphone; Type: Sample ; Serial: 2A211C01**

Communication System: WCDMA FDD II; Frequency: 1852.4 MHz, Frequency: 1880 MHz, Frequency: 1907.6 MHz

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

Phantom section: RF Section

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

DASY Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 11/8/2011
- Sensor-Surface: (Fix Surface), z = 8.7
- Electronics: DAE3 Sn473; Calibrated: 1/13/2012
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA
- DASYS2 52.8.0(692); SEMCAD X 14.6.4(4989)

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

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

Device Reference Point: 0, 0, -6.3 mm

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

PMR not calibrated. PMF = 1.000 is applied.

H-field emissions = 0.09 A/m

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

PMF scaled H-field

Grid 1 <b>M4</b> <b>0.09 A/m</b>	Grid 2 <b>M4</b> <b>0.09 A/m</b>	Grid 3 <b>M4</b> <b>0.08 A/m</b>
Grid 4 <b>M4</b> <b>0.07 A/m</b>	Grid 5 <b>M4</b> <b>0.09 A/m</b>	Grid 6 <b>M4</b> <b>0.08 A/m</b>
Grid 7 <b>M4</b> <b>0.08 A/m</b>	Grid 8 <b>M4</b> <b>0.07 A/m</b>	Grid 9 <b>M4</b> <b>0.07 A/m</b>

**Cursor:**

Total = 0.088 A/m  
H Category: M4  
Location: 25, -25, 8.7 mm

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

Device Reference Point: 0, 0, -6.3 mm  
Reference Value = 0.10 V/m; Power Drift = 0.04 dB  
PMR not calibrated. PMF = 1.000 is applied.  
H-field emissions = 0.09 A/m

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

PMF scaled H-field

Grid 1 <b>M4</b> <b>0.08 A/m</b>	Grid 2 <b>M4</b> <b>0.09 A/m</b>	Grid 3 <b>M4</b> <b>0.09 A/m</b>
Grid 4 <b>M4</b> <b>0.08 A/m</b>	Grid 5 <b>M4</b> <b>0.09 A/m</b>	Grid 6 <b>M4</b> <b>0.09 A/m</b>
Grid 7 <b>M4</b> <b>0.09 A/m</b>	Grid 8 <b>M4</b> <b>0.08 A/m</b>	Grid 9 <b>M4</b> <b>0.08 A/m</b>

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**Cursor:**

Total = 0.088 A/m  
H Category: M4  
Location: 25, 25, 8.7 mm

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

Device Reference Point: 0, 0, -6.3 mm  
Reference Value = 0.11 V/m; Power Drift = -0.00 dB  
PMR not calibrated. PMF = 1.000 is applied.  
H-field emissions = 0.09 A/m

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

PMF scaled H-field

Grid 1 <b>M4</b> <b>0.08 A/m</b>	Grid 2 <b>M4</b> <b>0.09 A/m</b>	Grid 3 <b>M4</b> <b>0.09 A/m</b>
Grid 4 <b>M4</b> <b>0.08 A/m</b>	Grid 5 <b>M4</b> <b>0.09 A/m</b>	Grid 6 <b>M4</b> <b>0.09 A/m</b>
Grid 7 <b>M4</b> <b>0.08 A/m</b>	Grid 8 <b>M4</b> <b>0.09 A/m</b>	Grid 9 <b>M4</b> <b>0.08 A/m</b>

**Cursor:**

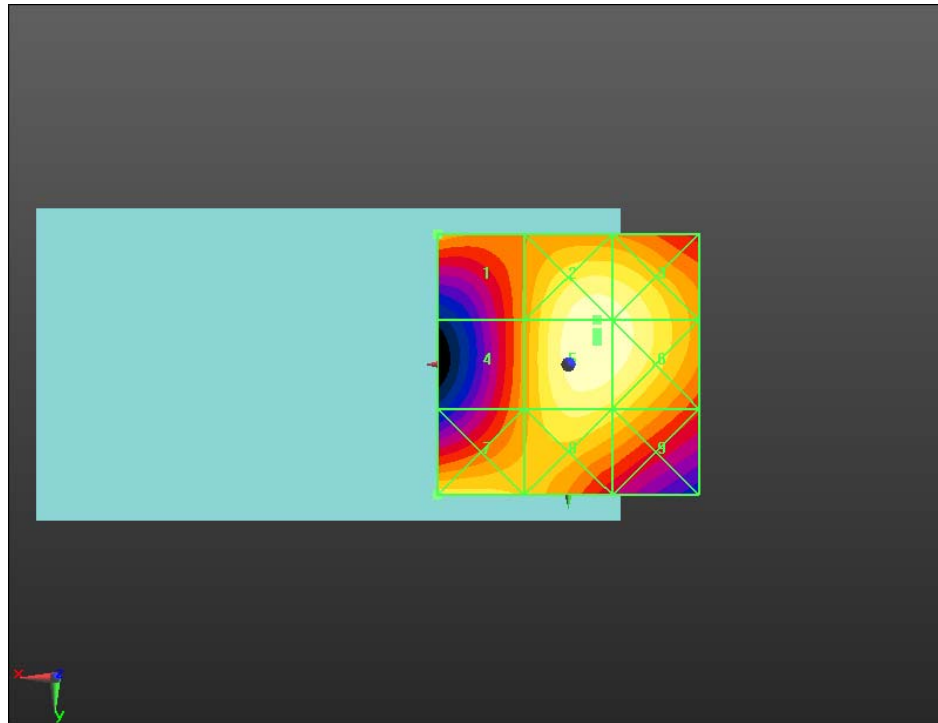
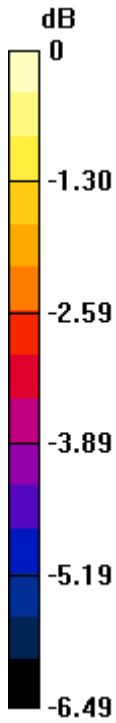
Total = 0.092 A/m  
H Category: M4  
Location: -5.5, -4.5, 8.7 mm

Author Data  
**Daoud Attayi**

Dates of Test  
**Jan. 31, Feb. 17, June 18-Sep. 28, 2012**

Report No  
**RTS-6012-1207-39B**

FCC ID  
**L6ARFF90LW  
L6ARFK120LW**



0 dB = 0.090A/m = -20.92 dB A/m

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Date/Time: 6/28/2012 7:50:29 AM

Test Laboratory: RIM Testing Services

## HAC RF\_H-Field\_UMTS\_Band\_II\_Tcoil

**DUT: BlackBerry Smartphone; Type: Sample ; Serial: 2A211C01**

Communication System: WCDMA FDD II; Frequency: 1907.6 MHz

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

Phantom section: RF Section

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

DASY Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 11/8/2011
- Sensor-Surface: (Fix Surface),  $z = 8.7$
- Electronics: DAE3 Sn473; Calibrated: 1/13/2012
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA
- DASYS2 52.8.0(692); SEMCAD X 14.6.4(4989)

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

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

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 0.11 V/m; Power Drift = -0.20 dB

PMR not calibrated. PMF = 1.000 is applied.

H-field emissions = 0.09 A/m

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

Author Data  
**Daoud Attayi**

Dates of Test  
**Jan. 31, Feb. 17, June 18-Sep. 28, 2012**

Report No  
**RTS-6012-1207-39B**

FCC ID  
**L6ARFF90LW  
 L6ARFK120LW**

PMF scaled H-field

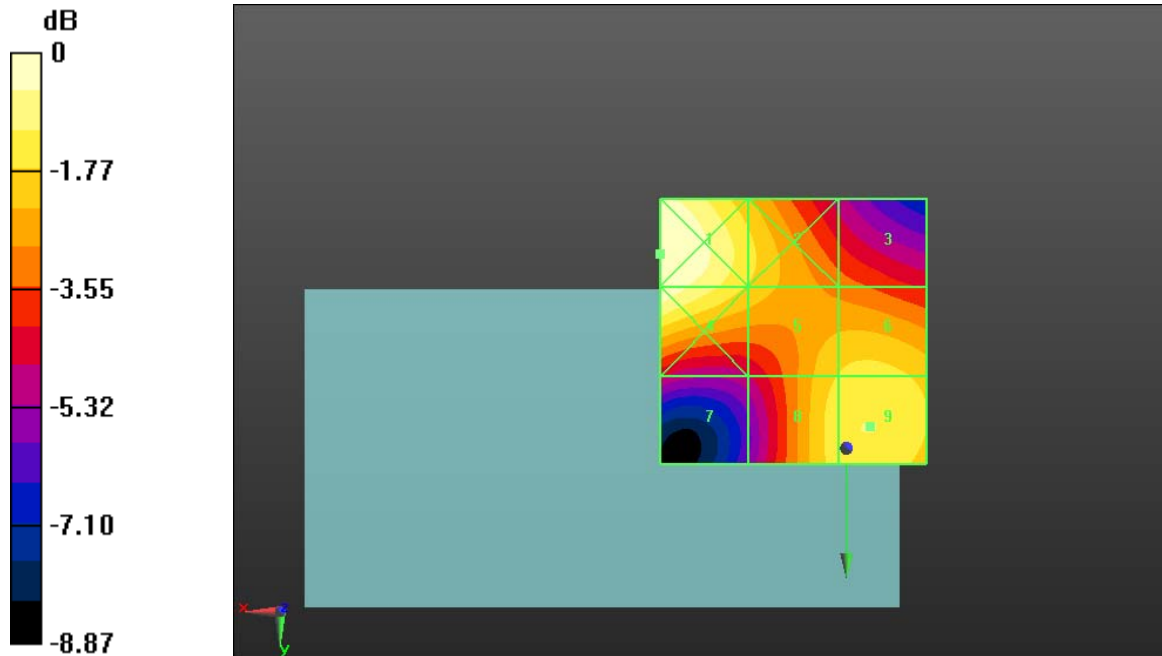
Grid 1 <b>M4</b> <b>0.10 A/m</b>	Grid 2 <b>M4</b> <b>0.08 A/m</b>	Grid 3 <b>M4</b> <b>0.07 A/m</b>
Grid 4 <b>M4</b> <b>0.10 A/m</b>	Grid 5 <b>M4</b> <b>0.08 A/m</b>	Grid 6 <b>M4</b> <b>0.08 A/m</b>
Grid 7 <b>M4</b> <b>0.06 A/m</b>	Grid 8 <b>M4</b> <b>0.08 A/m</b>	Grid 9 <b>M4</b> <b>0.09 A/m</b>

**Cursor:**

Total = 0.104 A/m

H Category: M4

Location: 35, -36.5, 8.7 mm



0 dB = 0.100A/m = -20.00 dB A/m

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Date/Time: 9/28/2012 5:35:16 PM

Test Laboratory: RIM Testing Services

### HAC RF\_H-Field\_GSM\_850

**DUT: BlackBerry Smartphone; Type: Sample ; Serial: 2A8C7018**

Communication System: GSM 850; Frequency: 848.8 MHz

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

Phantom section: RF Section

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

DASY Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 11/8/2011
- Sensor-Surface: (Fix Surface), z = 8.7
- Electronics: DAE3 Sn473; Calibrated: 1/13/2012
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA
- DASYS 52.8.0(692); SEMCAD X 14.6.4(4989)

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

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

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 0.08 V/m; Power Drift = -0.04 dB

PMR not calibrated. PMF = 2.940 is applied.

H-field emissions = 0.30 A/m

**Near-field category: M4 (AWF -5 dB)**

PMF scaled H-field

Grid 1 <b>M4</b> <b>0.38 A/m</b>	Grid 2 <b>M4</b> <b>0.27 A/m</b>	Grid 3 <b>M4</b> <b>0.18 A/m</b>
Grid 4 <b>M4</b> <b>0.37 A/m</b>	Grid 5 <b>M4</b> <b>0.28 A/m</b>	Grid 6 <b>M4</b> <b>0.18 A/m</b>
Grid 7 <b>M4</b>	Grid 8 <b>M4</b>	Grid 9 <b>M4</b>

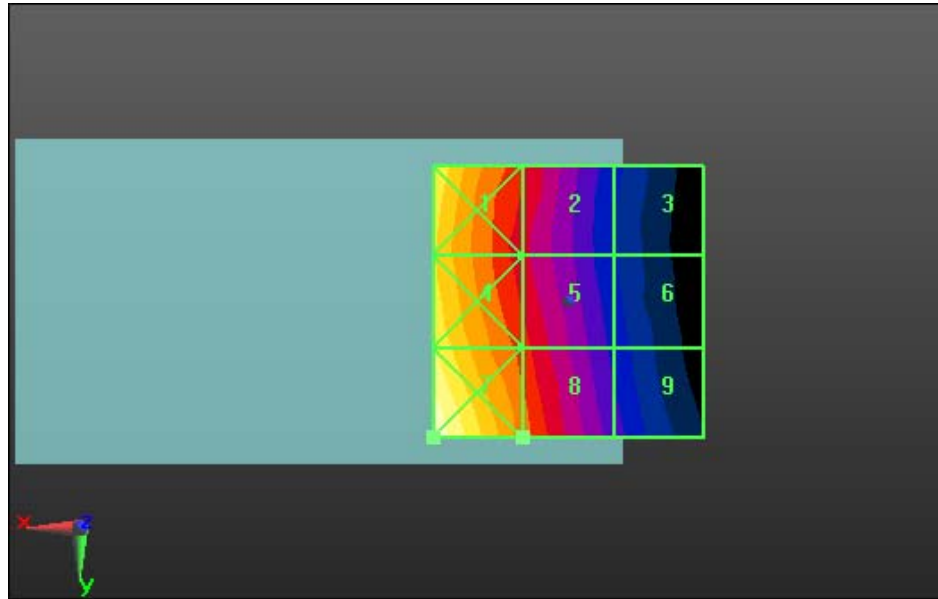
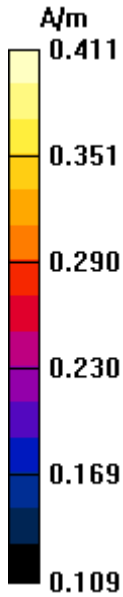
Author Data  
**Daoud Attayi**

Dates of Test  
**Jan. 31, Feb. 17, June 18-Sep. 28, 2012**

Report No  
**RTS-6012-1207-39B**

FCC ID  
**L6ARFF90LW  
 L6ARFK120LW**

<b>0.41 A/m</b>	<b>0.30 A/m</b>	<b>0.20 A/m</b>
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Date/Time: 9/28/2012 5:25:37 PM

Test Laboratory: RIM Testing Services

### HAC RF\_H-Field\_UMTS\_Band\_V\_Tcoil

**DUT: BlackBerry Smartphone; Type: Sample ; Serial: 2A8C7018**

Communication System: WCDMA FDD V; Frequency: 846.6 MHz

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

Phantom section: RF Section

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

DASY Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 11/8/2011
- Sensor-Surface: (Fix Surface), z = 8.7
- Electronics: DAE3 Sn473; Calibrated: 1/13/2012
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA
- DASYS 52.8.0(692); SEMCAD X 14.6.4(4989)

### Device H-Field measurement with H3DV6 probe/H Scan - H3DV6 - 2007: 15 mm from Probe Center to the Device\_Centre\_Telecoil/Hearing Aid Compatibility

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

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 0.07 V/m; Power Drift = 0.14 dB

PMR not calibrated. PMF = 1.090 is applied.

H-field emissions = 0.15 A/m

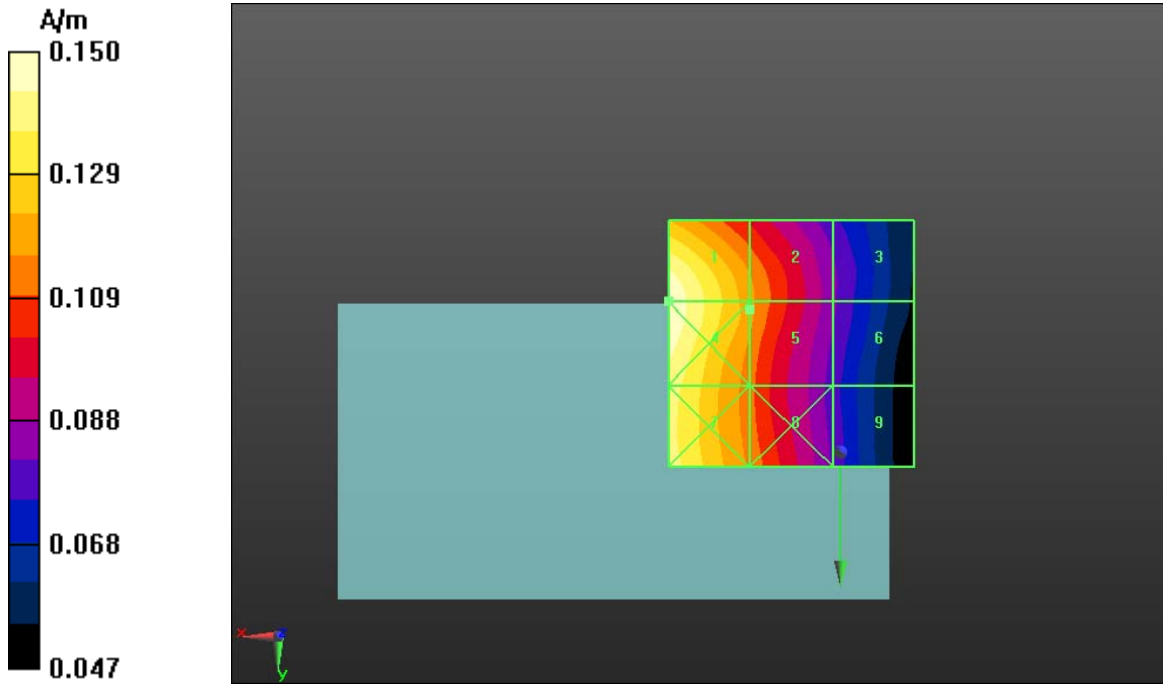
**Near-field category: M4 (AWF 0 dB)**


PMF scaled H-field

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



**Cursor:**  
 Total = 0.150 A/m  
 H Category: M4  
 Location: 35, -30.5, 8.7 mm



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Date/Time: 9/28/2012 5:41:22 PM

Test Laboratory: RIM Testing Services

### HAC RF\_H-Field\_GSM\_1900\_Tcoil

**DUT: BlackBerry Smartphone; Type: Sample ; Serial: 2A8C7018**

Communication System: GSM 1900; Frequency: 1909.8 MHz

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

Phantom section: RF Section

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

DASY Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 11/8/2011
- Sensor-Surface: (Fix Surface), z = 8.7
- Electronics: DAE3 Sn473; Calibrated: 1/13/2012
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA
- DASYS 52.8.0(692); SEMCAD X 14.6.4(4989)

### Device H-Field measurement with H3DV6 probe/H Scan - H3DV6 - 2007: 15 mm from Probe Center to the Device\_Centre\_Telecoil/Hearing Aid Compatibility

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

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 0.06 V/m; Power Drift = 0.08 dB

PMR not calibrated. PMF = 2.970 is applied.

H-field emissions = 0.16 A/m

**Near-field category: M3 (AWF -5 dB)**

PMF scaled H-field

Grid 1 <b>M3</b> <b>0.18 A/m</b>	Grid 2 <b>M3</b> <b>0.15 A/m</b>	Grid 3 <b>M4</b> <b>0.12 A/m</b>
Grid 4 <b>M3</b> <b>0.17 A/m</b>	Grid 5 <b>M3</b> <b>0.14 A/m</b>	Grid 6 <b>M3</b> <b>0.15 A/m</b>
Grid 7 <b>M4</b>	Grid 8 <b>M3</b>	Grid 9 <b>M3</b>



Author Data  
**Daoud Attayi**

Dates of Test  
**Jan. 31, Feb. 17, June 18-Sep. 28, 2012**

Report No  
**RTS-6012-1207-39B**

FCC ID  
**L6ARFF90LW  
 L6ARFK120LW**

<b>0.10 A/m</b>	<b>0.15 A/m</b>	<b>0.16 A/m</b>
-----------------	-----------------	-----------------

Category	AWF	Limits for E-Field Emissions (V/m) > 960MHz	Limits for H-Field Emissions (A/m) > 960MHz
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	0.14 - 0.25
M4	0	<63.1	<0.19
	-5	<47.3	<0.14
Category	AWF	Limits for E-Field Emissions (V/m) < 960MHz	Limits for H-Field Emissions (A/m) < 960 MHz
M1	0	631 - 1122	1.91 - 3.39
	-5	473.2 - 841.4	1.43 - 2.54
M2	0	354.8 - 631	1.07 - 1.91
	-5	266.1 - 473.2	0.8 - 1.43
M3	0	199.5 - 354.8	0.6 - 1.07
	-5	149.6 - 266.1	0.45 - 0.8
M4	0	<199.5	<0.6
	-5	<149.6	<0.45

**Cursor:**

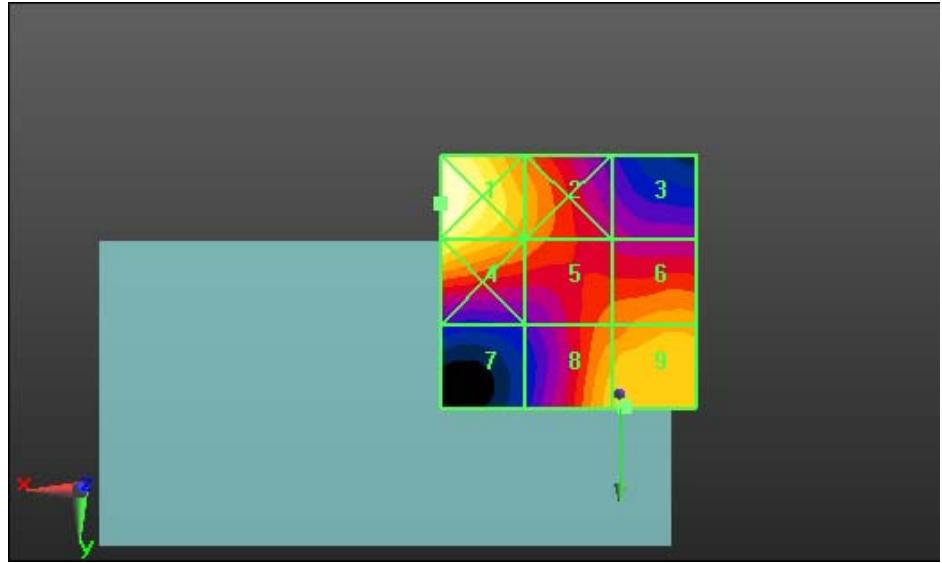
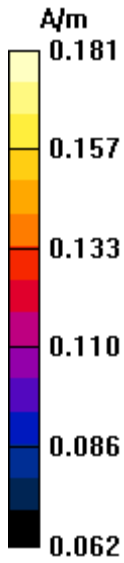
Total = 0.181 A/m  
 H Category: M3  
 Location: 35, -37.5, 8.7 mm

Author Data  
**Daoud Attayi**

Dates of Test  
**Jan. 31, Feb. 17, June 18-Sep. 28, 2012**

Report No  
**RTS-6012-1207-39B**

FCC ID  
**L6ARFF90LW  
L6ARFK120LW**



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Date/Time: 9/28/2012 4:56:16 PM

Test Laboratory: RIM Testing Services

### HAC RF\_H-Field\_UMTS\_Band\_II\_Tcoil

**DUT: BlackBerry Smartphone; Type: Sample ; Serial: 2A8C7018**

Communication System: WCDMA FDD II; Frequency: 1907.6 MHz

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

Phantom section: RF Section

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

DASY Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 11/8/2011
- Sensor-Surface: (Fix Surface), z = 8.7
- Electronics: DAE3 Sn473; Calibrated: 1/13/2012
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA
- DASYS 52.8.0(692); SEMCAD X 14.6.4(4989)

### Device H-Field measurement with H3DV6 probe/H Scan - H3DV6 - 2007: 15 mm from Probe Center to the Device\_Centre\_Telecoil/Hearing Aid Compatibility

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

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 0.10 V/m; Power Drift = -0.01 dB

PMR not calibrated. PMF = 1.000 is applied.

H-field emissions = 0.09 A/m

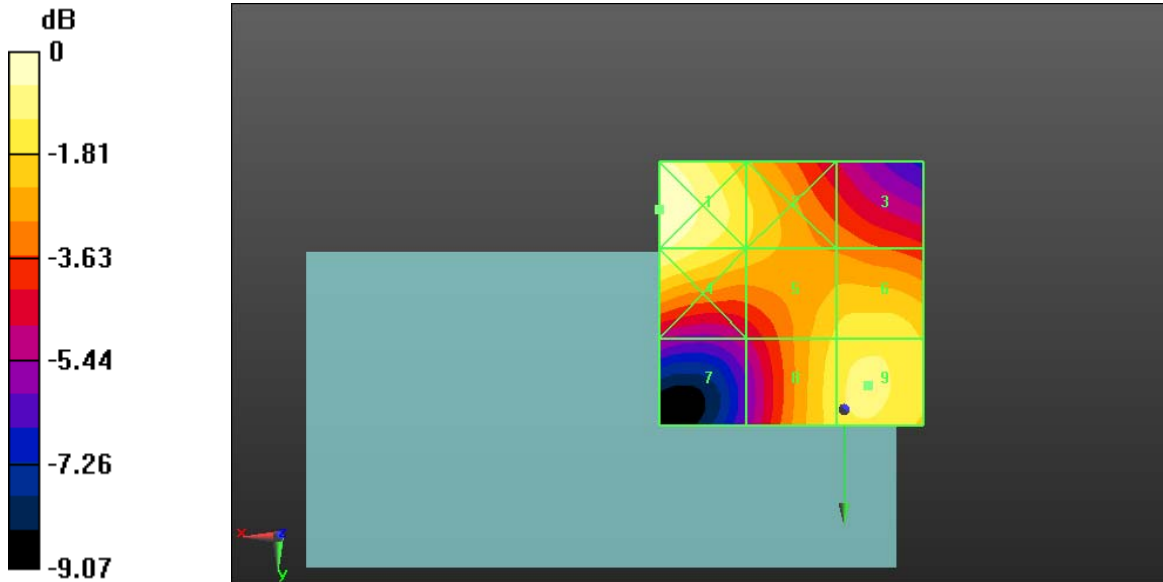
**Near-field category: M4 (AWF 0 dB)**

PMF scaled H-field

Grid 1 <b>M4</b> <b>0.10 A/m</b>	Grid 2 <b>M4</b> <b>0.08 A/m</b>	Grid 3 <b>M4</b> <b>0.07 A/m</b>
Grid 4 <b>M4</b> <b>0.10 A/m</b>	Grid 5 <b>M4</b> <b>0.08 A/m</b>	Grid 6 <b>M4</b> <b>0.09 A/m</b>
Grid 7 <b>M4</b>	Grid 8 <b>M4</b>	Grid 9 <b>M4</b>

<b>0.06 A/m</b>	<b>0.09 A/m</b>	<b>0.09 A/m</b>
-----------------	-----------------	-----------------

**Cursor:**  
 Total = 0.102 A/m  
 H Category: M4  
 Location: 35, -38, 8.7 mm



0 dB = 0.100A/m = -20.00 dB A/m

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Date/Time: 9/28/2012 5:02:56 PM

Test Laboratory: RIM Testing Services

### HAC RF\_H-Field\_UMTS\_Band\_IV

**DUT: BlackBerry Smartphone; Type: Sample ; Serial: 2A8C7018**

Communication System: WCDMA FDD IV; Frequency: 1712.4 MHz, Frequency: 1732.6 MHz, Frequency: 1752.6 MHz

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

Phantom section: RF Section

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

DASY Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 11/8/2011
- Sensor-Surface: (Fix Surface),  $z = 8.7$
- Electronics: DAE3 Sn473; Calibrated: 1/13/2012
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA
- DASYS2 52.8.0(692); SEMCAD X 14.6.4(4989)

### Device H-Field measurement with H3DV6 probe/H Scan - H3DV6 - 2007: 15 mm from Probe Center to the Device\_low\_chan/Hearing Aid Compatibility Test

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

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 0.13 V/m; Power Drift = -0.06 dB

PMR not calibrated. PMF = 1.000 is applied.

H-field emissions = 0.12 A/m

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

PMF scaled H-field

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

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<b>0.13 A/m</b>	<b>0.11 A/m</b>	<b>0.10 A/m</b>
-----------------	-----------------	-----------------

**Cursor:**  
Total = 0.132 A/m  
H Category: M4  
Location: 25, 25, 8.7 mm

**Device H-Field measurement with H3DV6 probe/H Scan - H3DV6 - 2007: 15 mm from Probe Center to the Device\_mid\_chan/Hearing Aid Compatibility Test (101x101x1):** Measurement grid: dx=5mm, dy=5mm  
Device Reference Point: 0, 0, -6.3 mm  
Reference Value = 0.14 V/m; Power Drift = -0.14 dB  
PMR not calibrated. PMF = 1.000 is applied.  
H-field emissions = 0.12 A/m  
**Near-field category: M4 (AWF 0 dB)**

PMF scaled H-field

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

**Cursor:**  
Total = 0.126 A/m  
H Category: M4  
Location: 25, 25, 8.7 mm

**Device H-Field measurement with H3DV6 probe/H Scan - H3DV6 - 2007: 15 mm from Probe Center to the Device\_high\_chan/Hearing Aid Compatibility Test (101x101x1):** Measurement grid: dx=5mm, dy=5mm  
Device Reference Point: 0, 0, -6.3 mm  
Reference Value = 0.14 V/m; Power Drift = -0.16 dB  
PMR not calibrated. PMF = 1.000 is applied.  
H-field emissions = 0.12 A/m  
**Near-field category: M4 (AWF 0 dB)**

PMF scaled H-field

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

**Cursor:**  
 Total = 0.122 A/m  
 H Category: M4  
 Location: 24.5, 25, 8.7 mm



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Date/Time: 9/28/2012 5:14:56 PM

Test Laboratory: RIM Testing Services

### HAC RF\_H-Field\_UMTS\_Band\_IV

**DUT: BlackBerry Smartphone; Type: Sample ; Serial: 2A8C7018**

Communication System: WCDMA FDD IV; Frequency: 1712.4 MHz

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

Phantom section: RF Section

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

DASY Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 11/8/2011
- Sensor-Surface: (Fix Surface), z = 8.7
- Electronics: DAE3 Sn473; Calibrated: 1/13/2012
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA
- DASYS 52.8.0(692); SEMCAD X 14.6.4(4989)

### Device H-Field measurement with H3DV6 probe/H Scan - H3DV6 - 2007: 15 mm from Probe Center to the Device\_Centre\_Telecoil/Hearing Aid Compatibility

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

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 0.13 V/m; Power Drift = -0.04 dB

PMR not calibrated. PMF = 1.000 is applied.

H-field emissions = 0.12 A/m

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

PMF scaled H-field

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

<b>0.10 A/m</b>	<b>0.12 A/m</b>	<b>0.12 A/m</b>
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**Cursor:**  
 Total = 0.118 A/m  
 H Category: M4  
 Location: 0, -6.5, 8.7 mm

