

		Document Annex A to Hearing Aid Compatibility RF Emissions Test Report for the BlackBerry® Smartphone model RFG81UW		Page 1 (95)
Author Data Daoud Attayi	Dates of Test Jan. 31, Feb. 17, May 31-June 01, 2012	Report No RTS-6011-1208-40	FCC ID L6ARFG80UW	

Annex A: Measurement data and plots

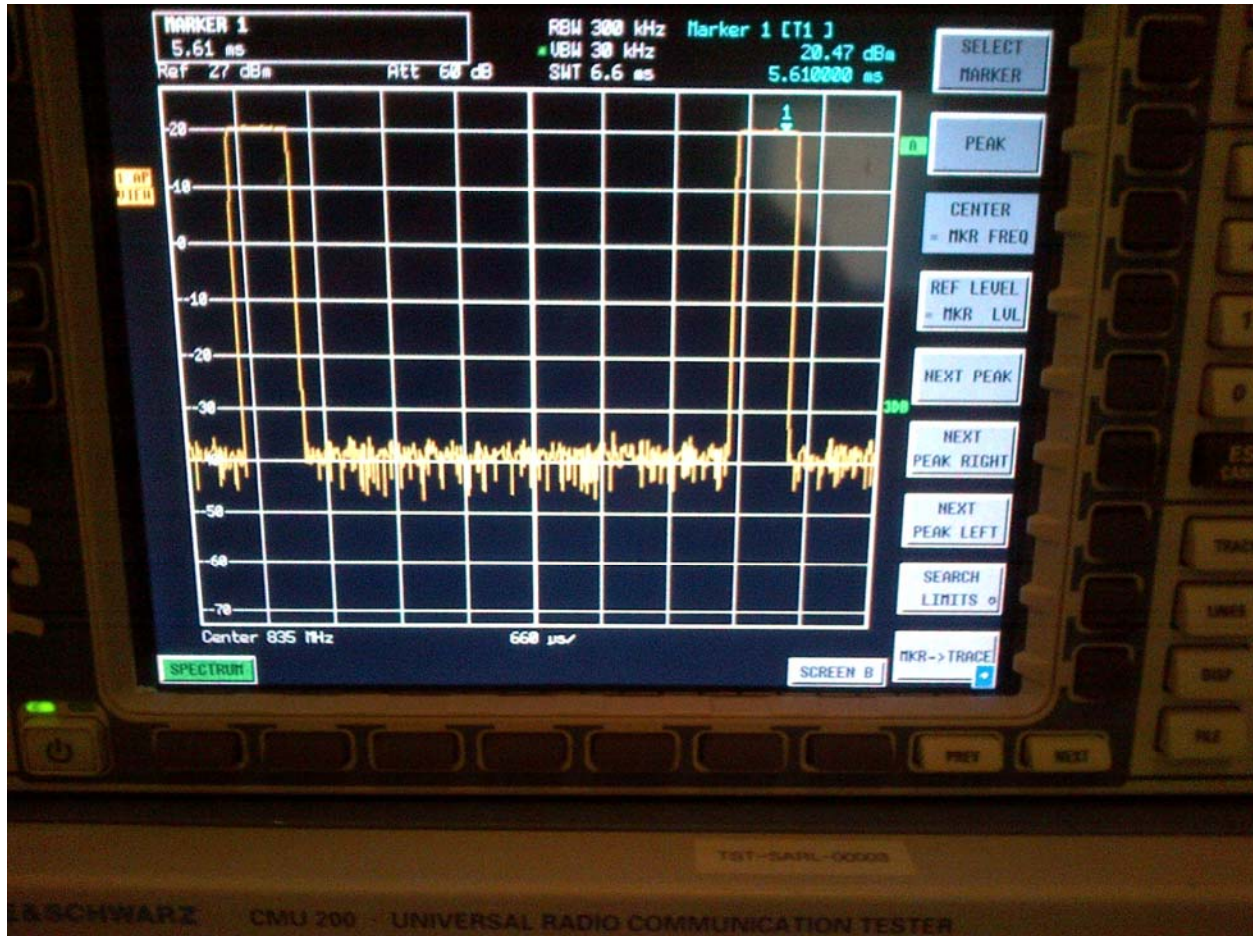
A.1 Spectrum analyser plots: GSM/UMTS, CW, 80%AM, signals

Author Data
Daoud Attayi

Dates of Test
Jan. 31, Feb. 17, May 31-June 01, 2012

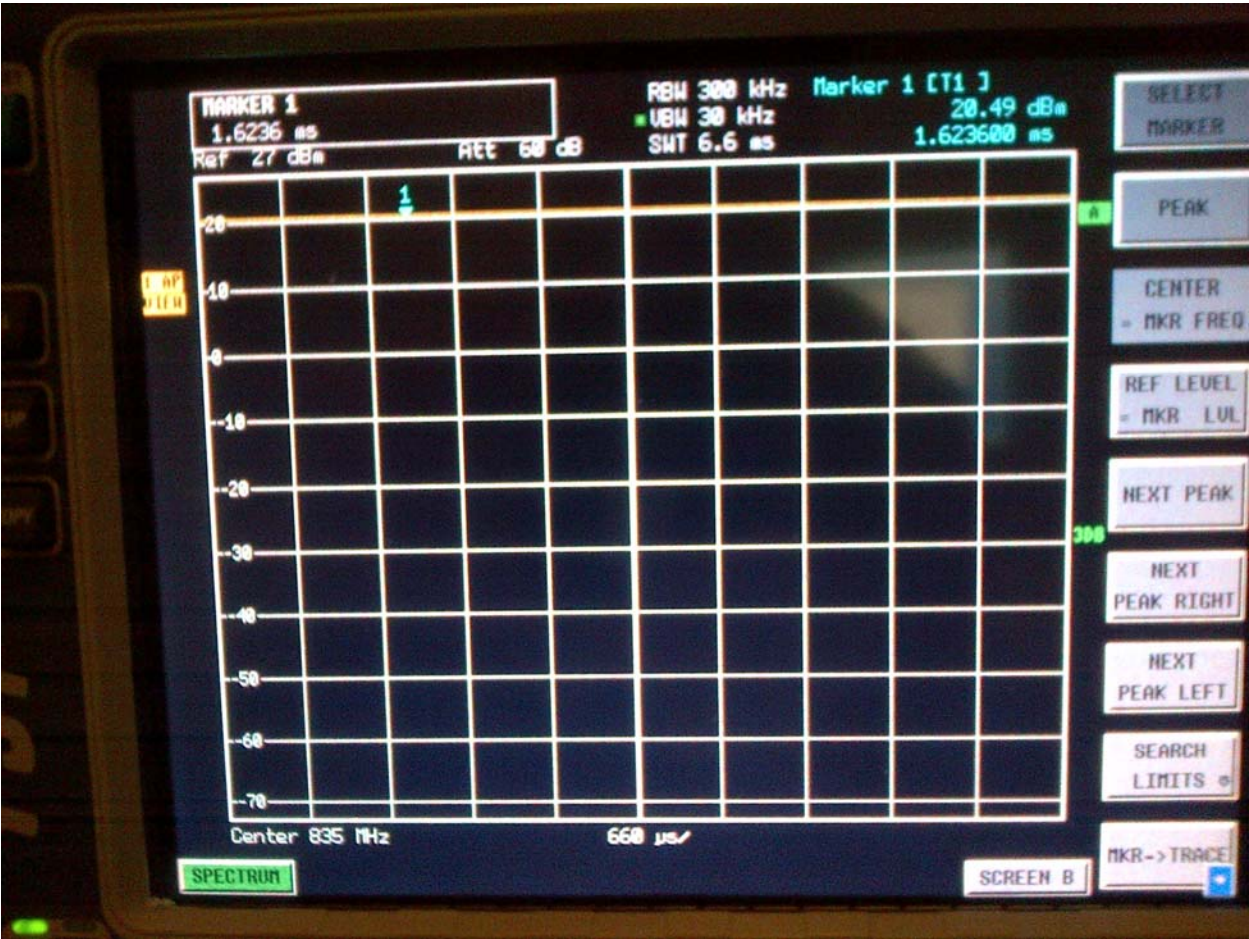
Report No
RTS-6011-1208-40

FCC ID
L6ARFG80UW



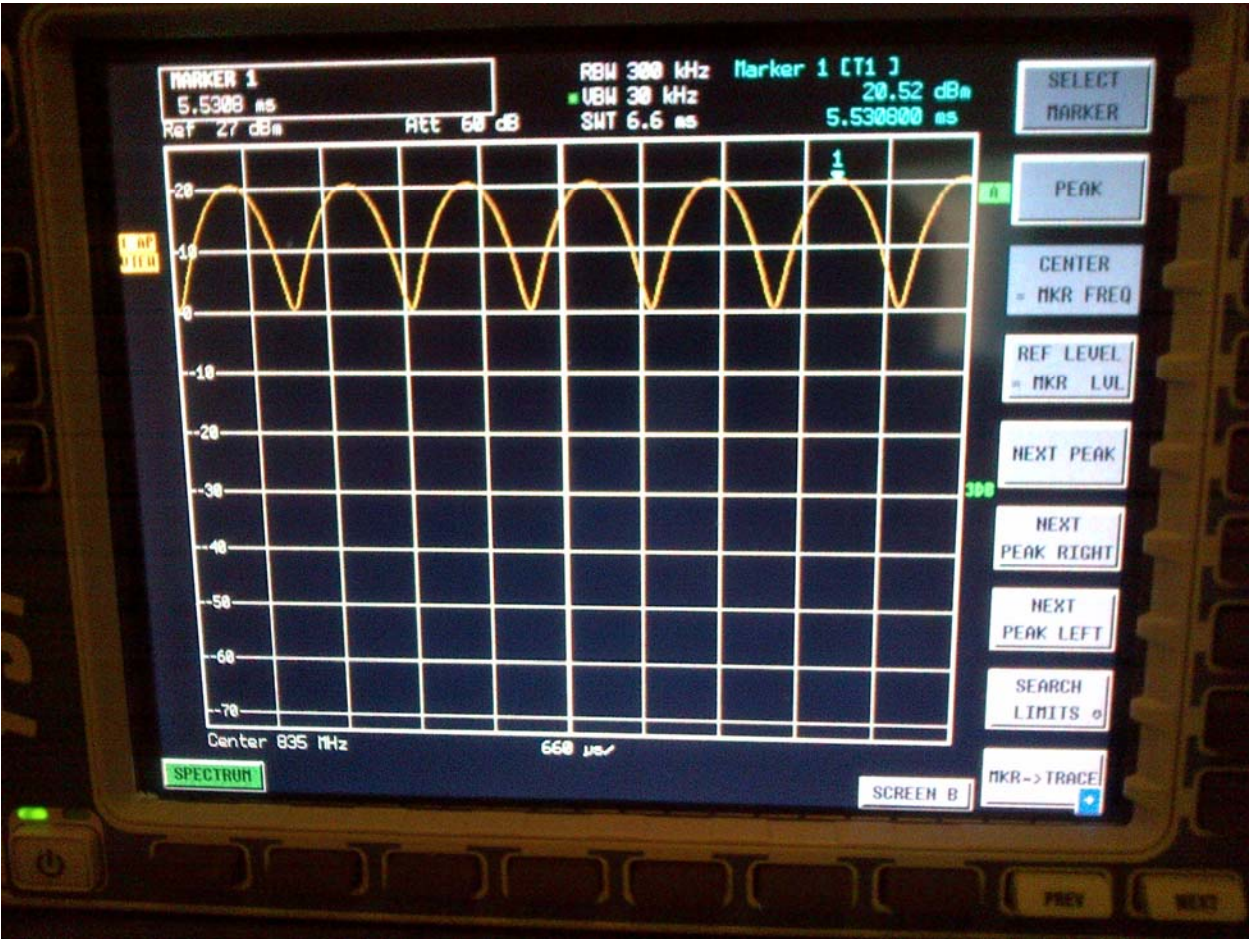
GSM 835 MHz

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CW 835 MHz

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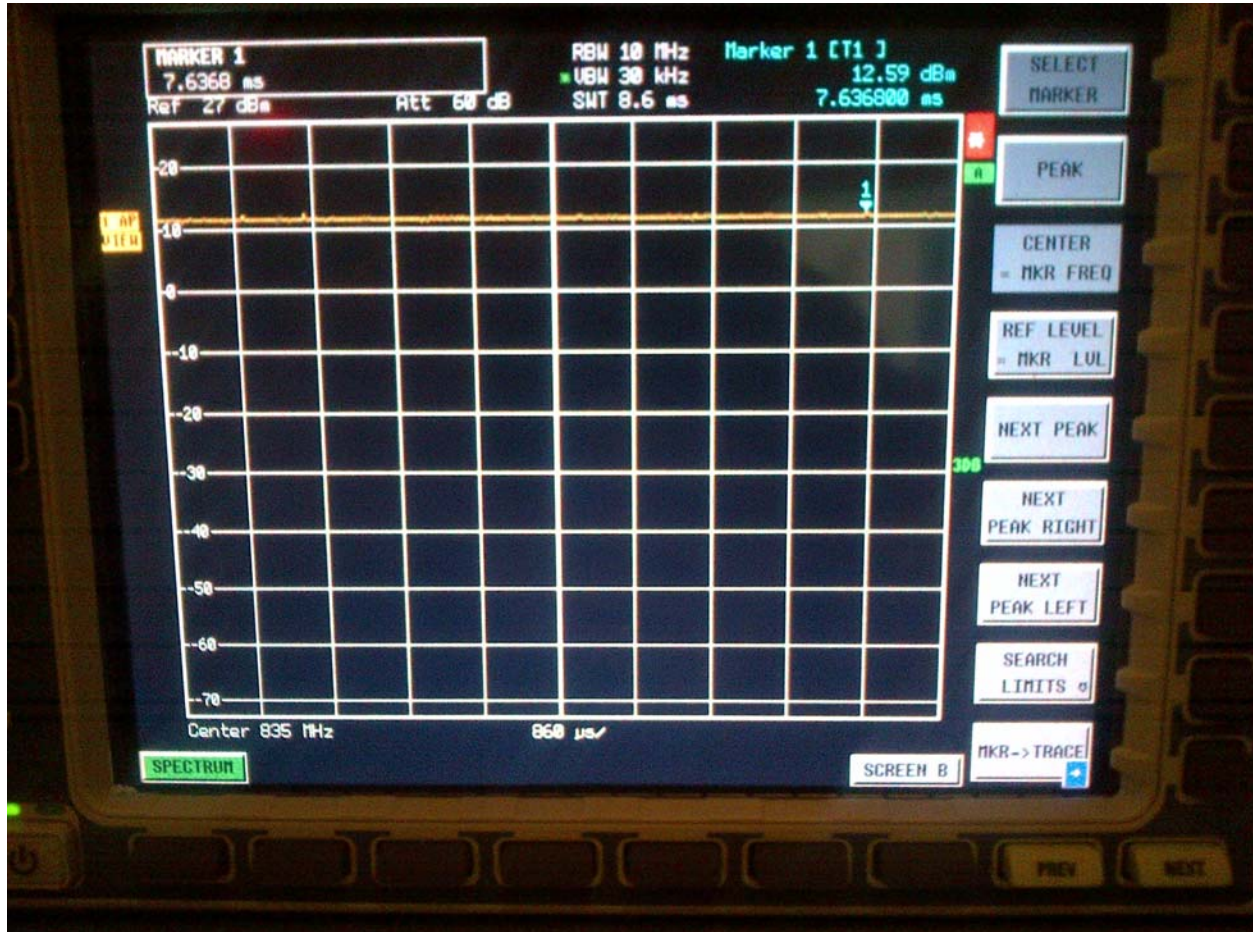
AM 80% 835 MHz

Author Data
Daoud Attayi

Dates of Test
Jan. 31, Feb. 17, May 31-June 01, 2012

Report No
RTS-6011-1208-40

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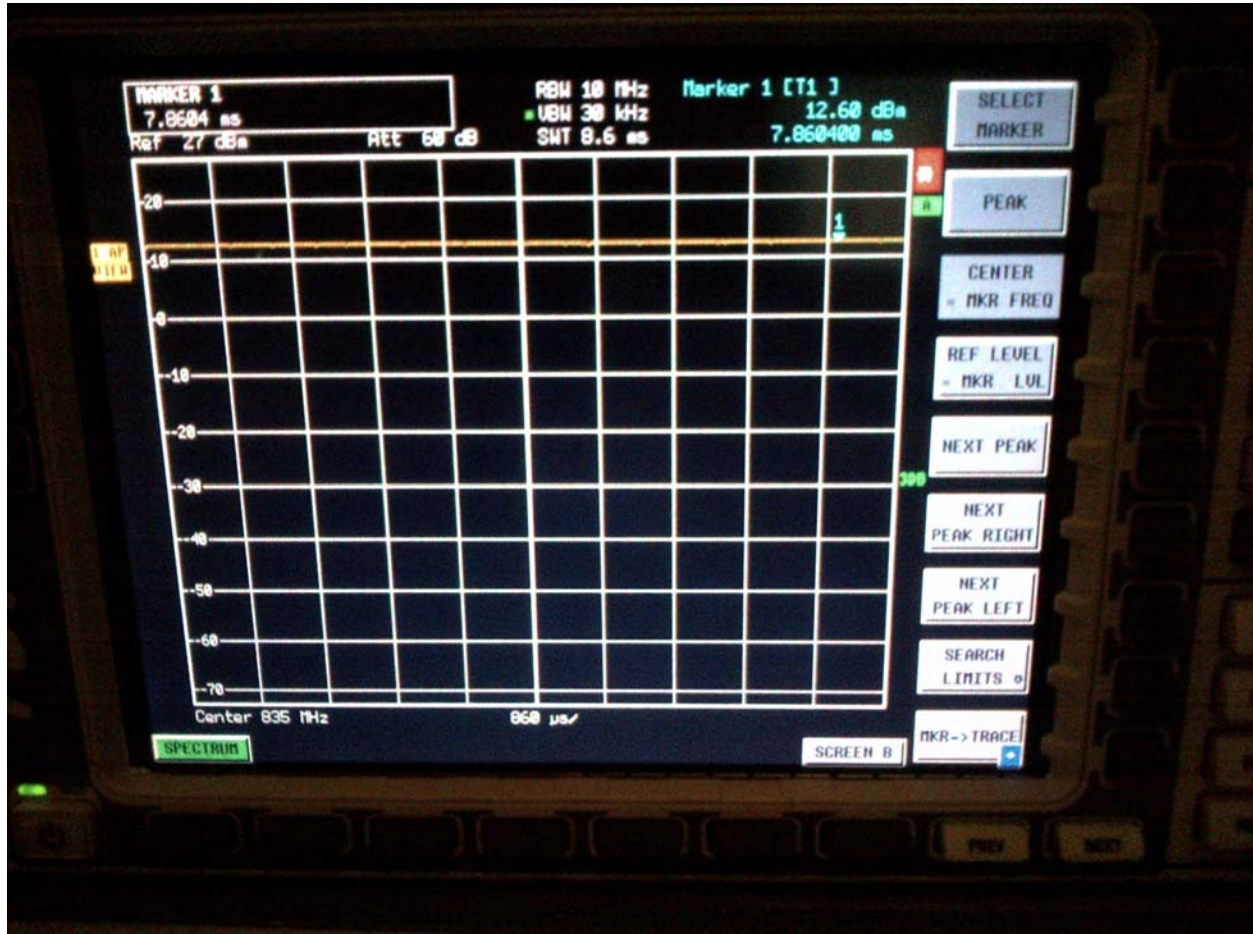
UMTS 835 MHz

Author Data
Daoud Attayi

Dates of Test
Jan. 31, Feb. 17, May 31-June 01, 2012

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L6ARFG80UW



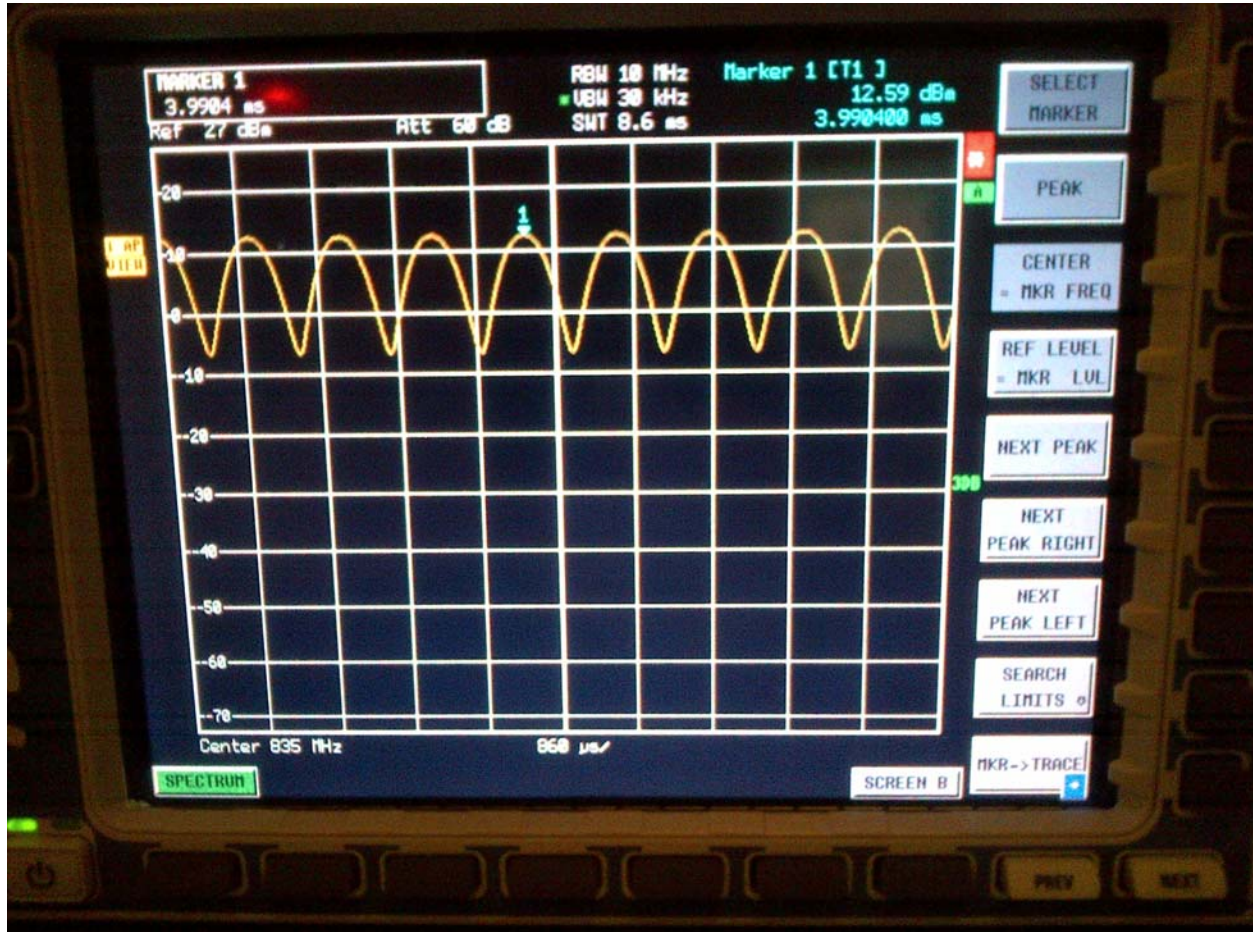
CW 835 MHz

Author Data
Daoud Attayi

Dates of Test
Jan. 31, Feb. 17, May 31-June 01, 2012

Report No
RTS-6011-1208-40

FCC ID
L6ARFG80UW



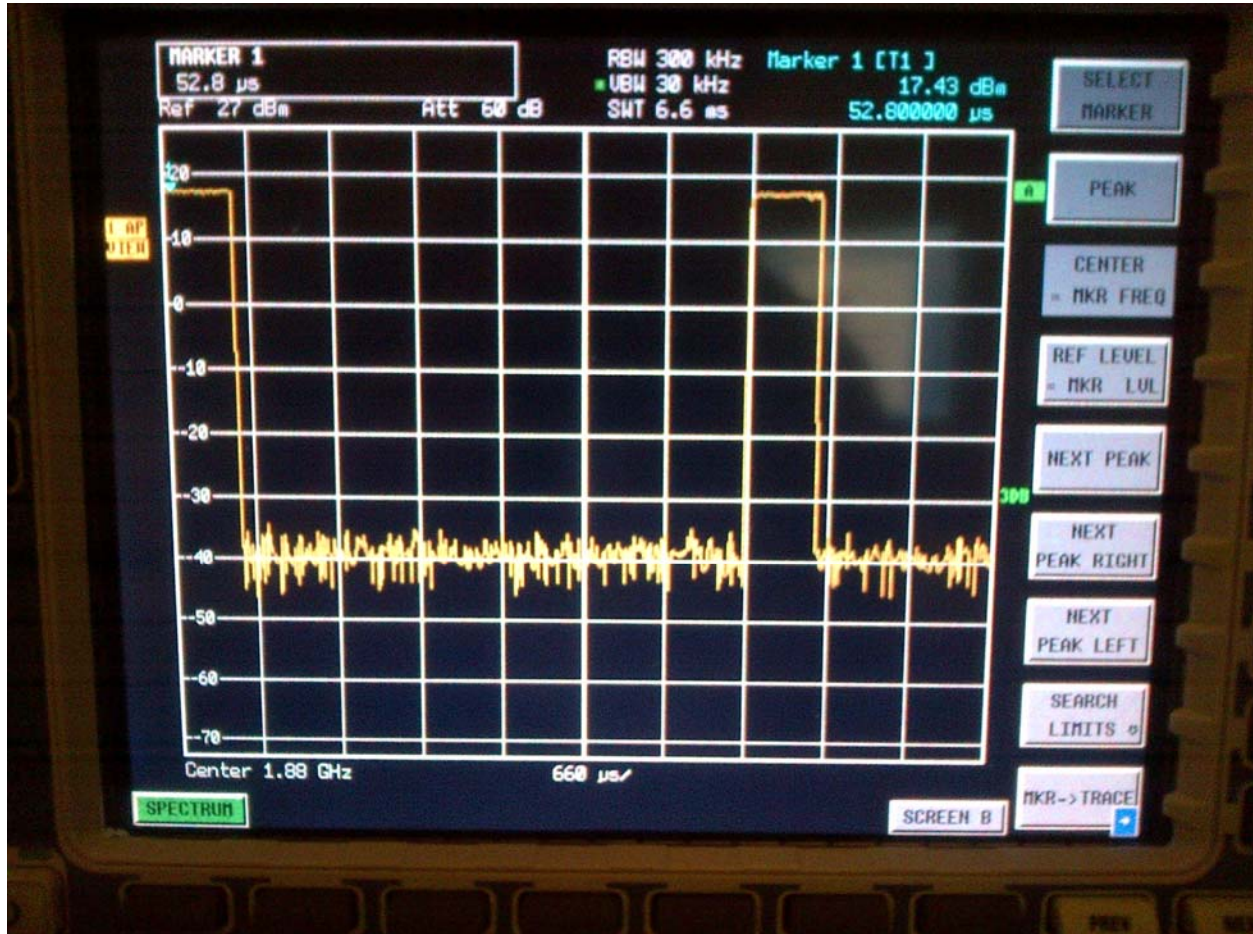
AM 80% 835 MHz

Author Data
Daoud Attayi

Dates of Test
Jan. 31, Feb. 17, May 31-June 01, 2012

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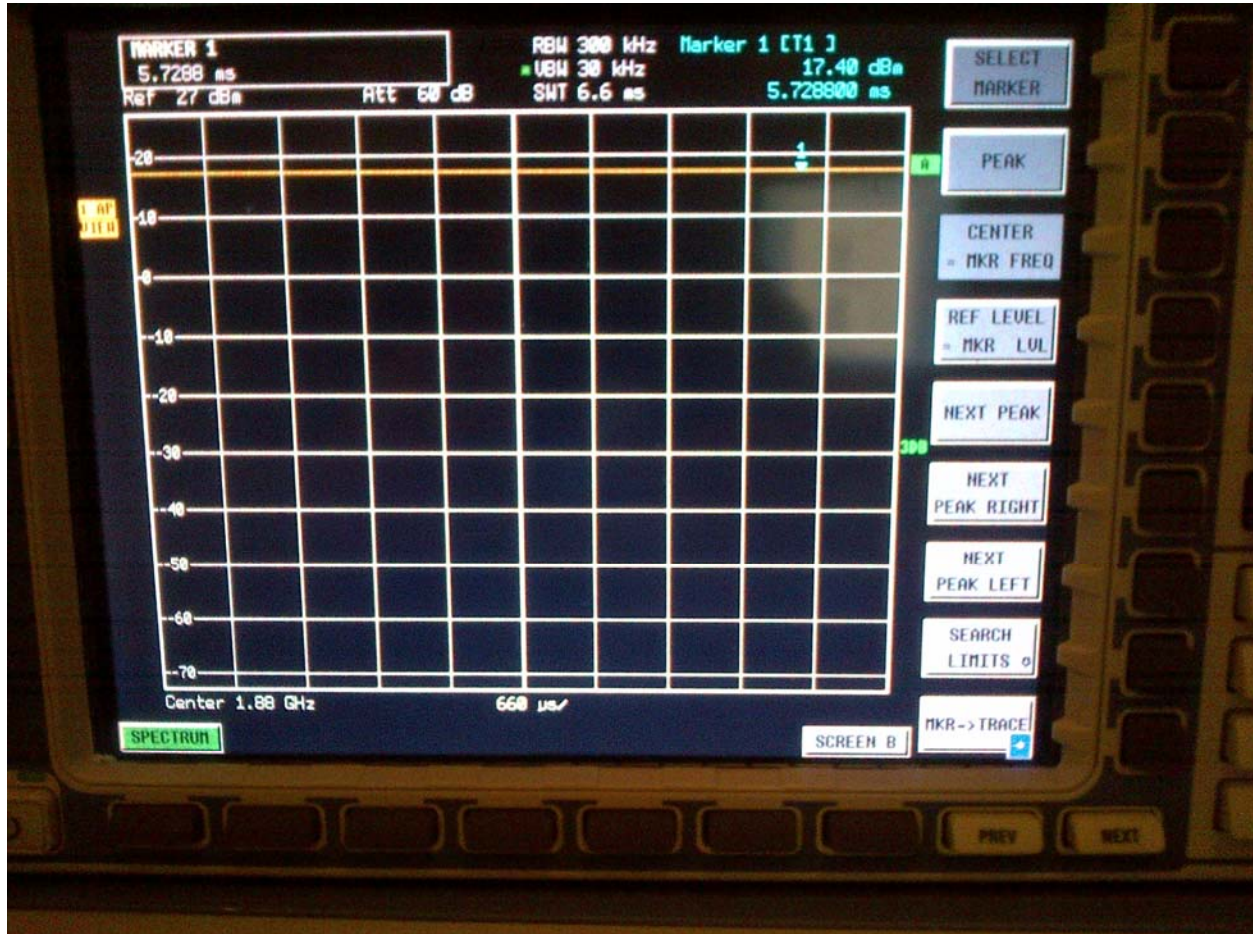
GSM 1880 MHz

Author Data
Daoud Attayi

Dates of Test
Jan. 31, Feb. 17, May 31-June 01, 2012

Report No
RTS-6011-1208-40

FCC ID
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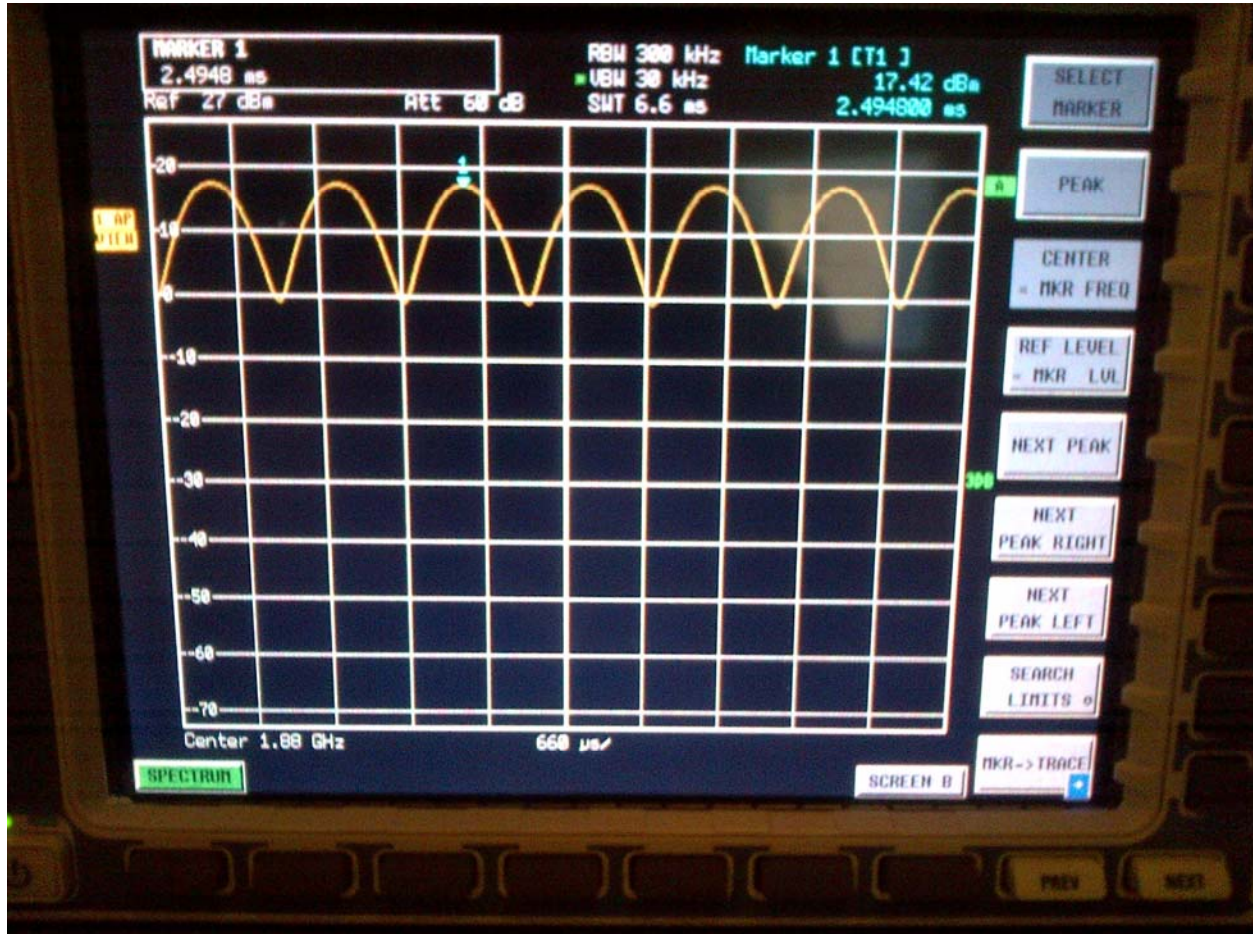
CW 1880 MHz

Author Data
Daoud Attayi

Dates of Test
Jan. 31, Feb. 17, May 31-June 01, 2012

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AM 80 % 1880 MHz

Author Data
Daoud Attayi

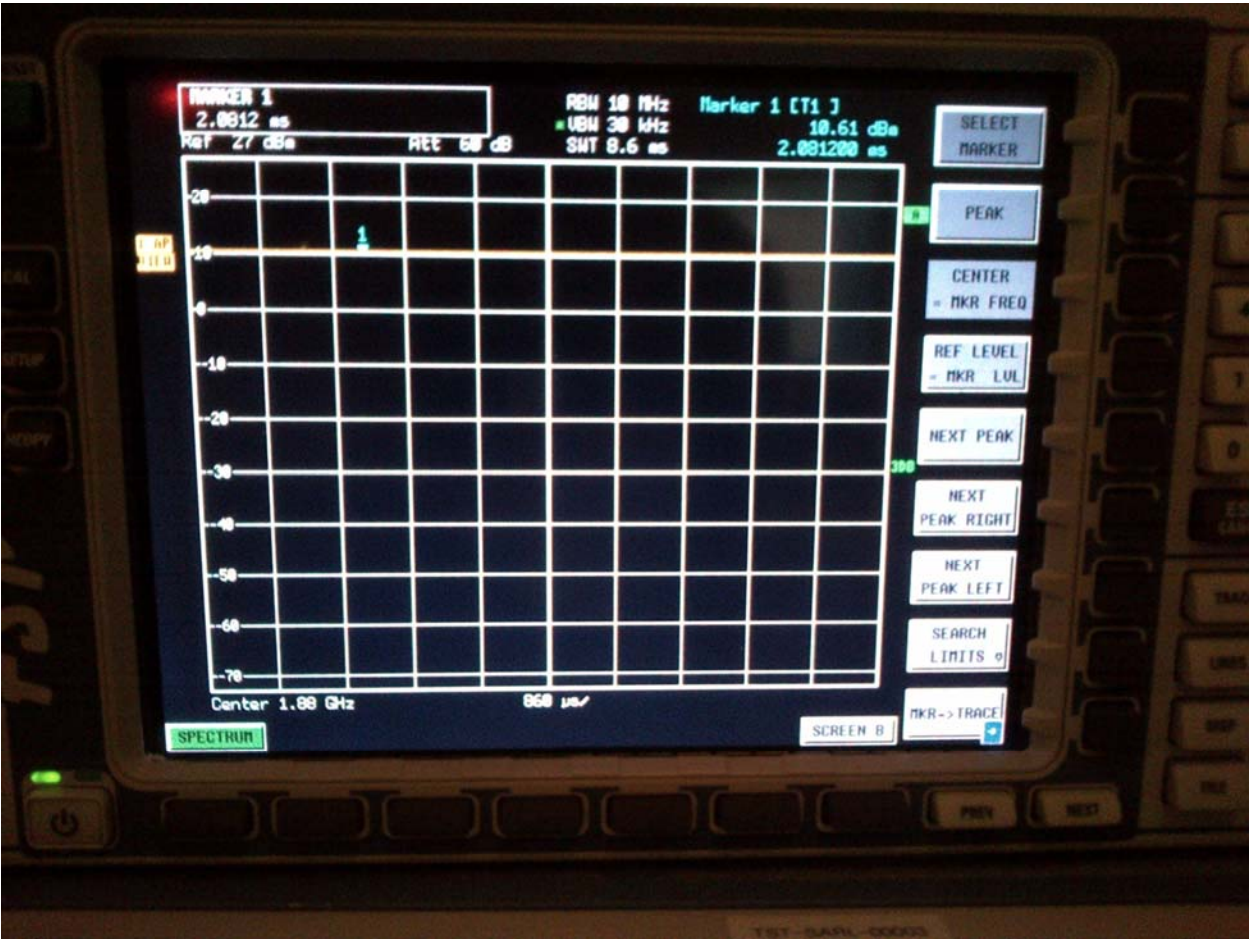
Dates of Test
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Report No
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FCC ID
L6ARFG80UW



UMTS 1880 MHz



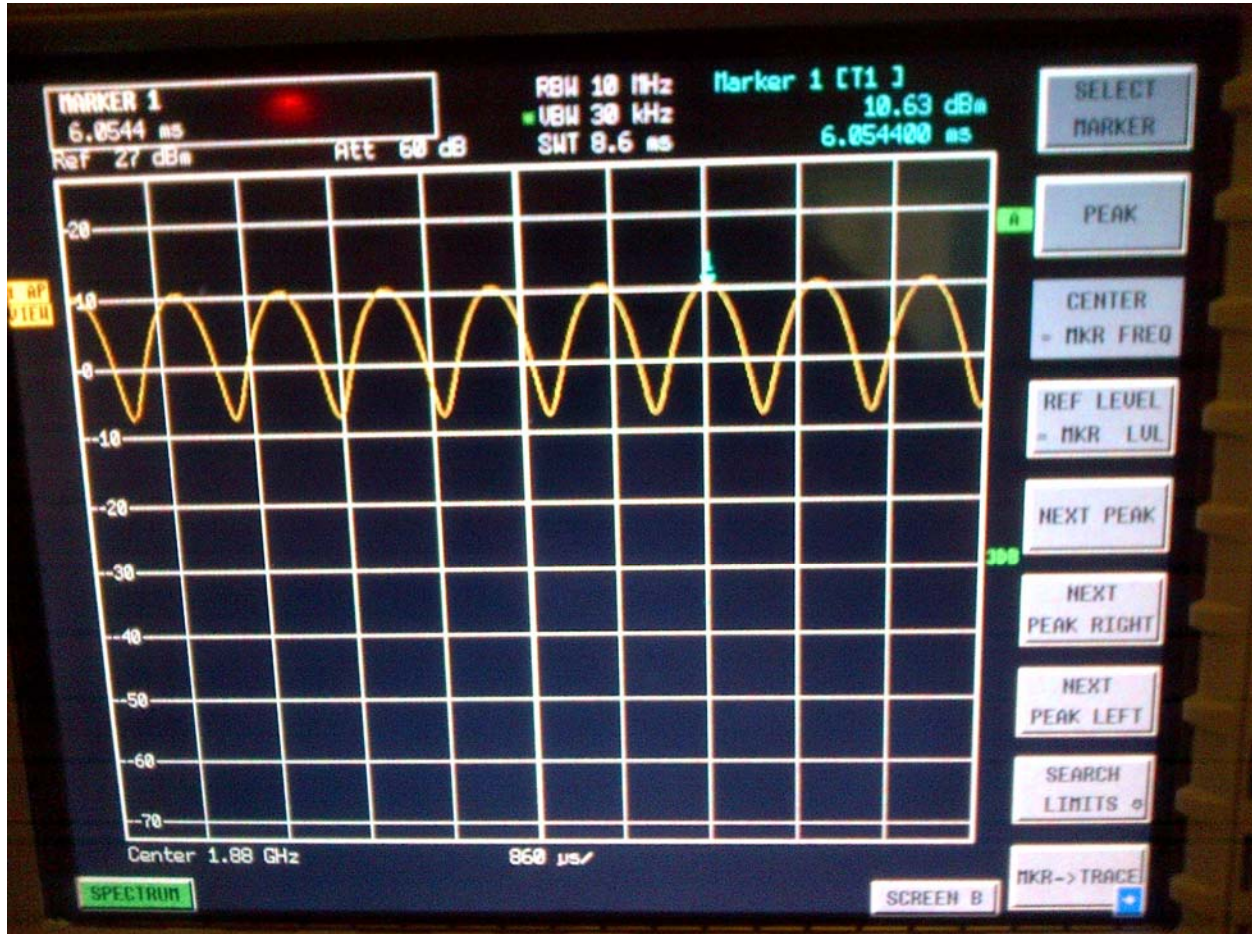
CW 1880 MHz

Author Data
Daoud Attayi

Dates of Test
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Report No
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FCC ID
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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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Daoud Attayi	Jan. 31, Feb. 17, May 31-June 01, 2012	RTS-6011-1208-40	L6ARFG80UW	

Date/Time: 6/1/2012 10:55:21 AM

Test Laboratory: RIM Testing Services

HAC RF_E-Field_validation_835 MHz_06_01_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/m³

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

Dipole E-Field measurement/E Scan - 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 = 105.1 V/m; Power Drift = 0.15 dB

PMR not calibrated. PMF = 1.000 is applied.

E-field emissions = 163.0 V/m

Near-field category: M4 (AWF 0 dB)

Author Data
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Dates of Test
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PMF scaled E-field

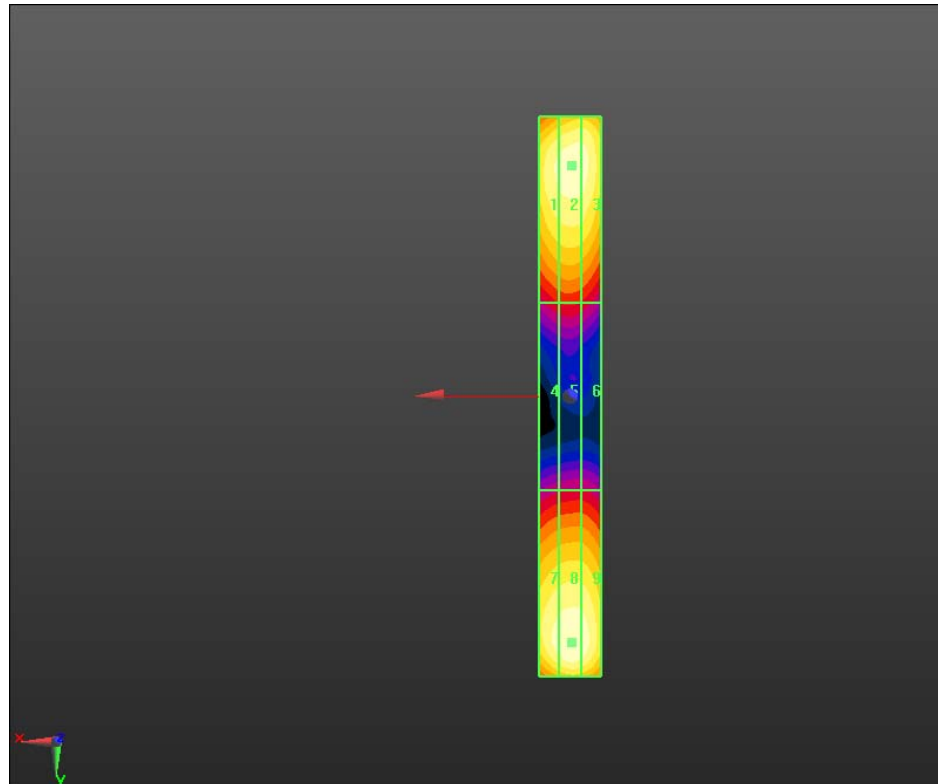
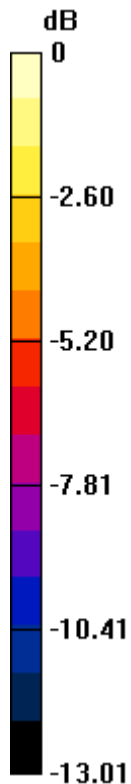
Grid 1 M4 151.9 V/m	Grid 2 M4 156.8 V/m	Grid 3 M4 155.3 V/m
Grid 4 M4 81.20 V/m	Grid 5 M4 83.08 V/m	Grid 6 M4 79.96 V/m
Grid 7 M4 156.2 V/m	Grid 8 M4 163.0 V/m	Grid 9 M4 158.8 V/m

Cursor:

Total = 163.0 V/m

E Category: M4

Location: -0.5, 79, 4.7 mm



0 dB = 163.0V/m = 44.24 dB V/m

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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/m³

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), $z = 4.7$
- Electronics: DAE3 Sn472; Calibrated: 3/7/2011
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA; Serial: **Not Specified**
- DASY52 52.8.0(692); SEMCAD X 14.6.4(4989)

Dipole E-Field measurement/E Scan - 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)

PMF scaled E-field

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

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

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

Cursor:

Total = 101.2 V/m

E Category: M4

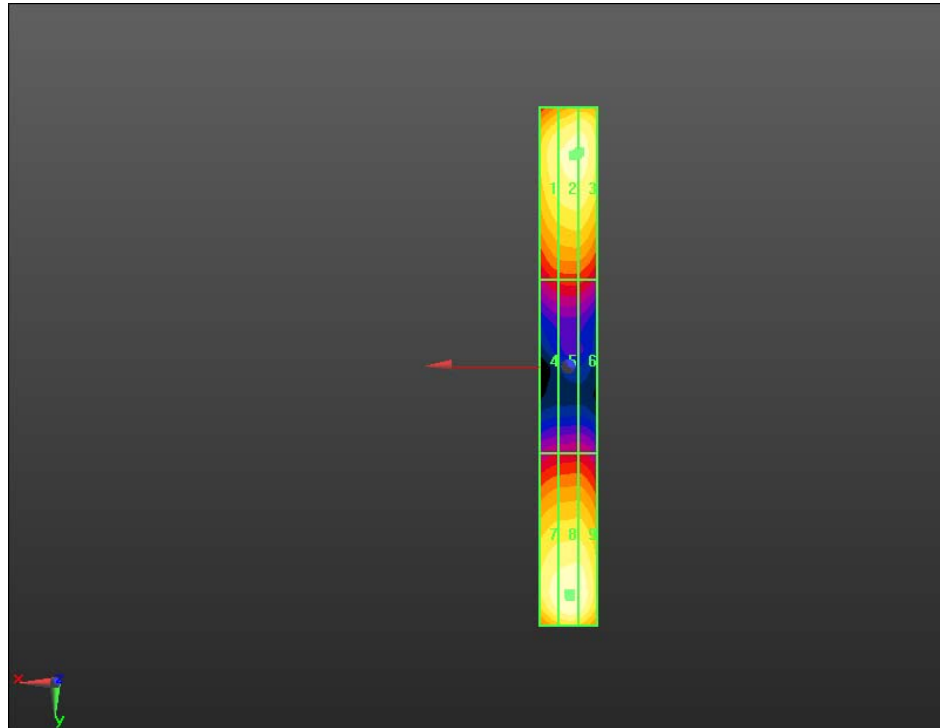
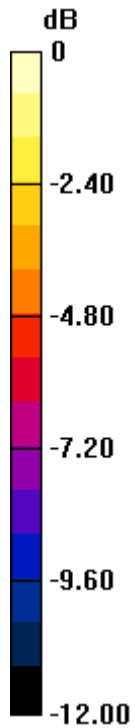
Location: -0.5, 79, 4.7 mm

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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/m³

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), $z = 4.7$
- Electronics: DAE3 Sn472; Calibrated: 3/7/2011
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA
- DASY52 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)

PMF scaled E-field

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

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

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

Cursor:

Total = 45.209 V/m

E Category: M4

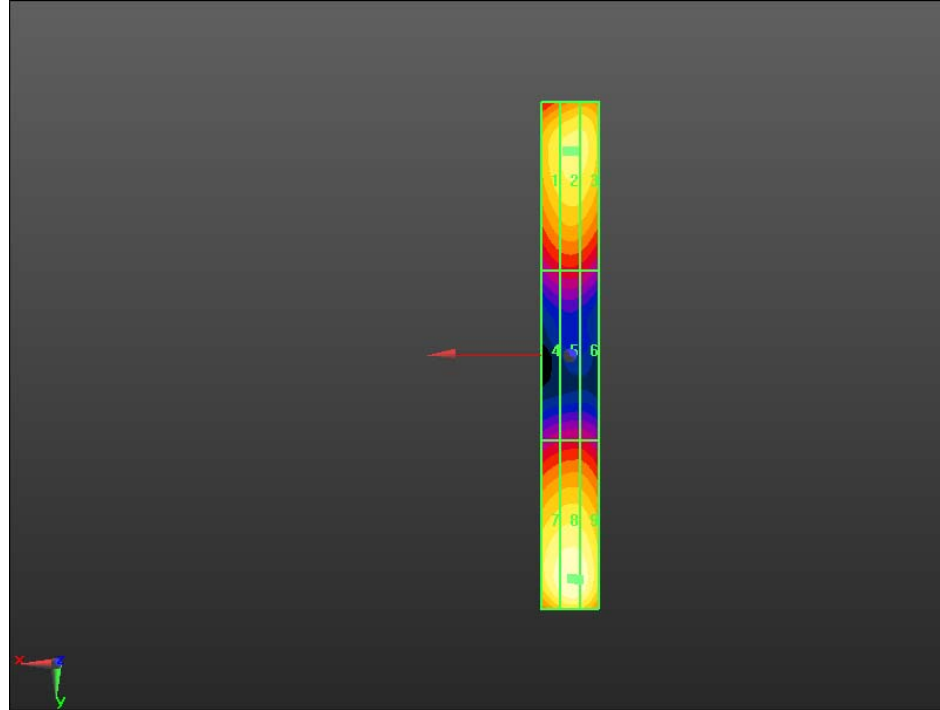
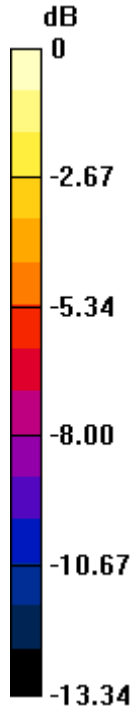
Location: -3, 79.5, 4.7 mm

Author Data
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0 dB = 64.410V/m = 36.18 dB V/m

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Date/Time: 6/1/2012 10:48:59 AM

Test Laboratory: RIM Testing Services

HAC RF_E-Field_validation_1880 MHz_06_01_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/m³

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 = 4.7
- Electronics: DAE3 Sn473; Calibrated: 1/13/2012
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA; Serial: **Not Specified**
- DASY52 52.8.0(692); SEMCAD X 14.6.4(4989)

Dipole E-Field measurement/E Scan - 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 = 140.8 V/m; Power Drift = -0.01 dB

PMR not calibrated. PMF = 1.000 is applied.

E-field emissions = 128.8 V/m

Near-field category: M2 (AWF 0 dB)

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PMF scaled E-field

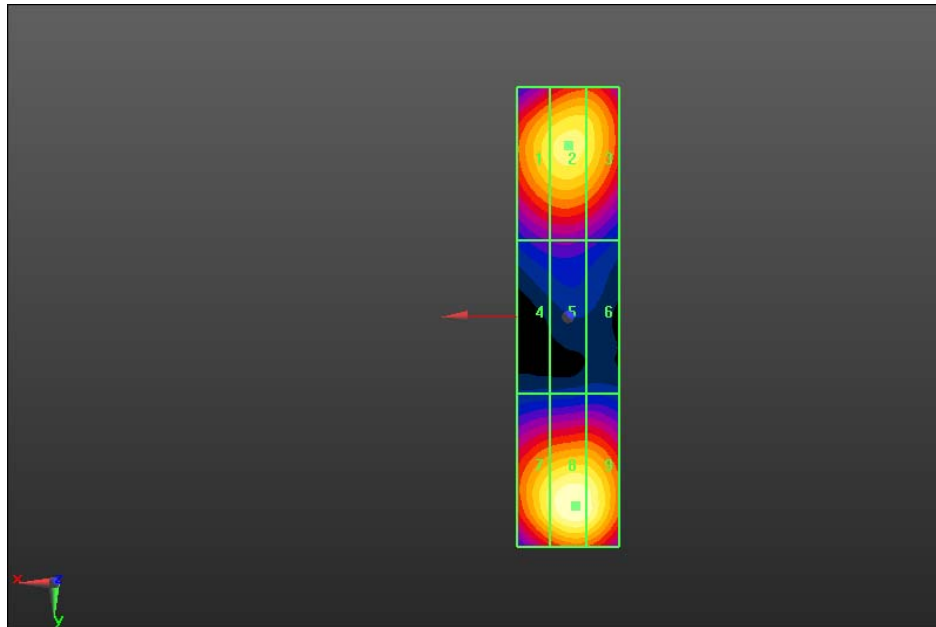
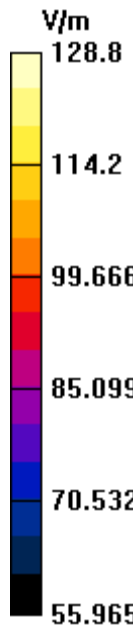
Grid 1 M2 118.3 V/m	Grid 2 M2 121.5 V/m	Grid 3 M2 118.8 V/m
Grid 4 M3 81.24 V/m	Grid 5 M3 82.44 V/m	Grid 6 M3 79.52 V/m
Grid 7 M2 121.4 V/m	Grid 8 M2 128.8 V/m	Grid 9 M2 126.9 V/m

Cursor:

Total = 128.8 V/m

E Category: M2

Location: -1.5, 37, 4.7 mm



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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/m³

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), $z = 4.7$
- Electronics: DAE3 Sn472; Calibrated: 3/7/2011
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA
- DASY52 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 M4 27.89 V/m	Grid 2 M4 29.29 V/m	Grid 3 M4 29.22 V/m
Grid 4 M4 19.87 V/m	Grid 5 M4 20.63 V/m	Grid 6 M4 20.20 V/m
Grid 7 M4 29.49 V/m	Grid 8 M4 30.95 V/m	Grid 9 M4 30.55 V/m

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

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)

Author Data
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L6ARFG80UW

PMF scaled E-field

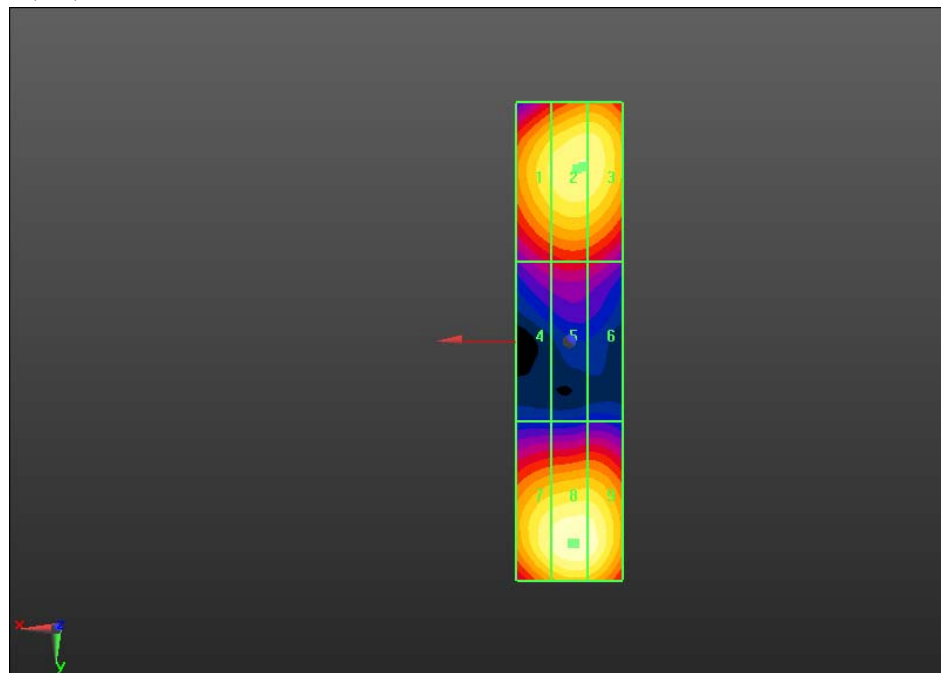
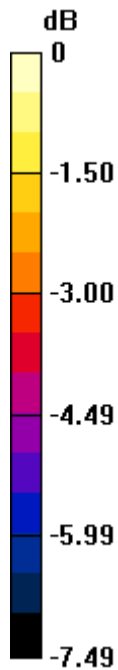
Grid 1 M4 52.36 V/m	Grid 2 M4 55.29 V/m	Grid 3 M4 55.10 V/m
Grid 4 M4 37.30 V/m	Grid 5 M4 38.47 V/m	Grid 6 M4 37.60 V/m
Grid 7 M4 55.71 V/m	Grid 8 M4 58.24 V/m	Grid 9 M4 56.94 V/m

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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Author Data Daoud Attayi	Dates of Test Jan. 31, Feb. 17, May 31-June 01, 2012	Report No RTS-6011-1208-40	FCC ID L6ARFG80UW	

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/m³

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), $z = 4.7$
- Electronics: DAE3 Sn472; Calibrated: 3/7/2011
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA
- DASY52 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)

PMF scaled E-field

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

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

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

Cursor:

Total = 27.402 V/m

E Category: M4

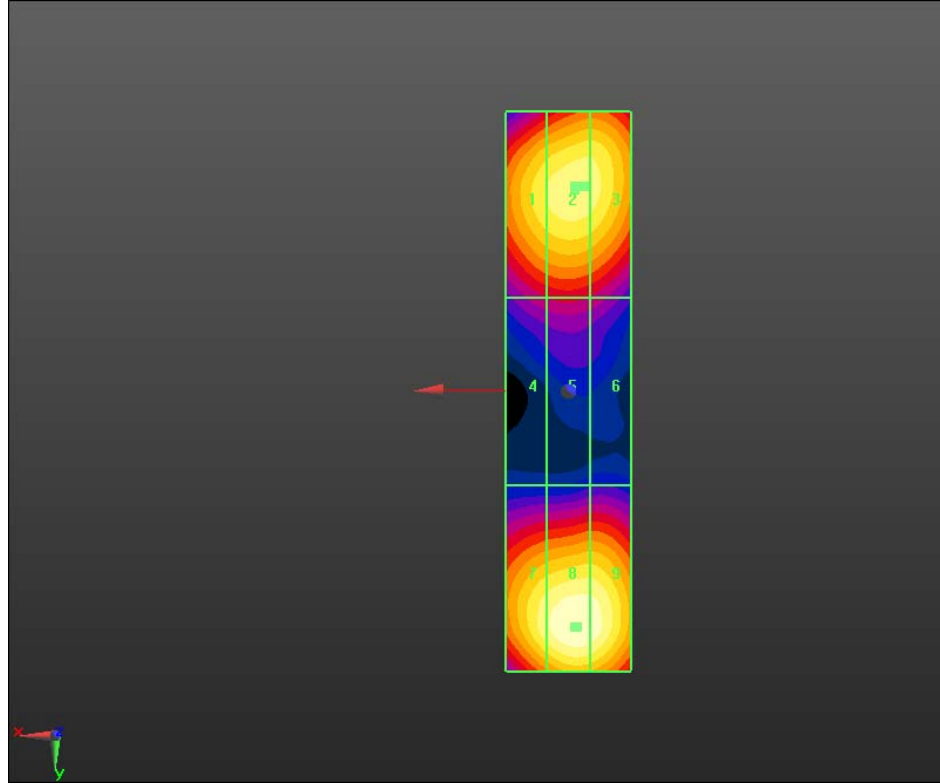
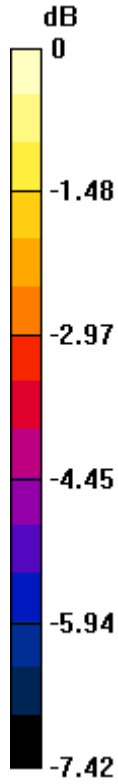
Location: -1, 38, 4.7 mm

Author Data
Daoud Attayi

Dates of Test
Jan. 31, Feb. 17, May 31-June 01, 2012

Report No
RTS-6011-1208-40

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

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Date/Time: 6/1/2012 10:21:31 AM

Test Laboratory: RIM Testing Services

HAC RF_H-Field_validation_835 MHz_06_01_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/m³

Phantom section: RF Section

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

DASY Configuration:

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

Dipole H-Field measurement with H3DV6 probe/H Scan - 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 = 0.03 dB

PMR not calibrated. PMF = 1.000 is applied.

H-field emissions = 0.47 A/m

Near-field category: M4 (AWF 0 dB)

Author Data
Daoud Attayi

Dates of Test
Jan. 31, Feb. 17, May 31-June 01, 2012

Report No
RTS-6011-1208-40

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PMF scaled H-field

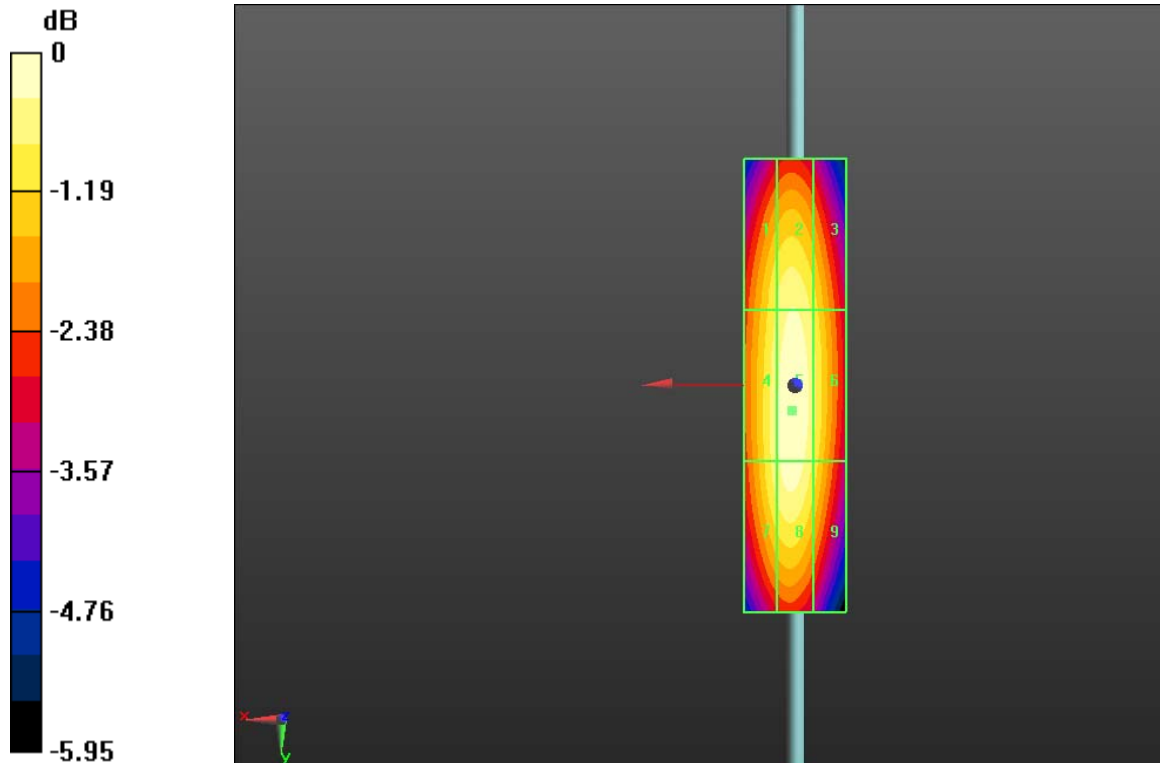
Grid 1 M4 0.43 A/m	Grid 2 M4 0.45 A/m	Grid 3 M4 0.42 A/m
Grid 4 M4 0.45 A/m	Grid 5 M4 0.47 A/m	Grid 6 M4 0.44 A/m
Grid 7 M4 0.44 A/m	Grid 8 M4 0.46 A/m	Grid 9 M4 0.43 A/m

Cursor:

Total = 0.469 A/m

H Category: M4

Location: 0.5, 5, 4.7 mm



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

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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/m³

Phantom section: RF Section

Measurement Standard: DASY5 (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
- DASY52 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: $dx=5$ mm, $dy=5$ mm

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)

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PMF scaled H-field

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

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

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

Cursor:

Total = 0.302 A/m

H Category: M4

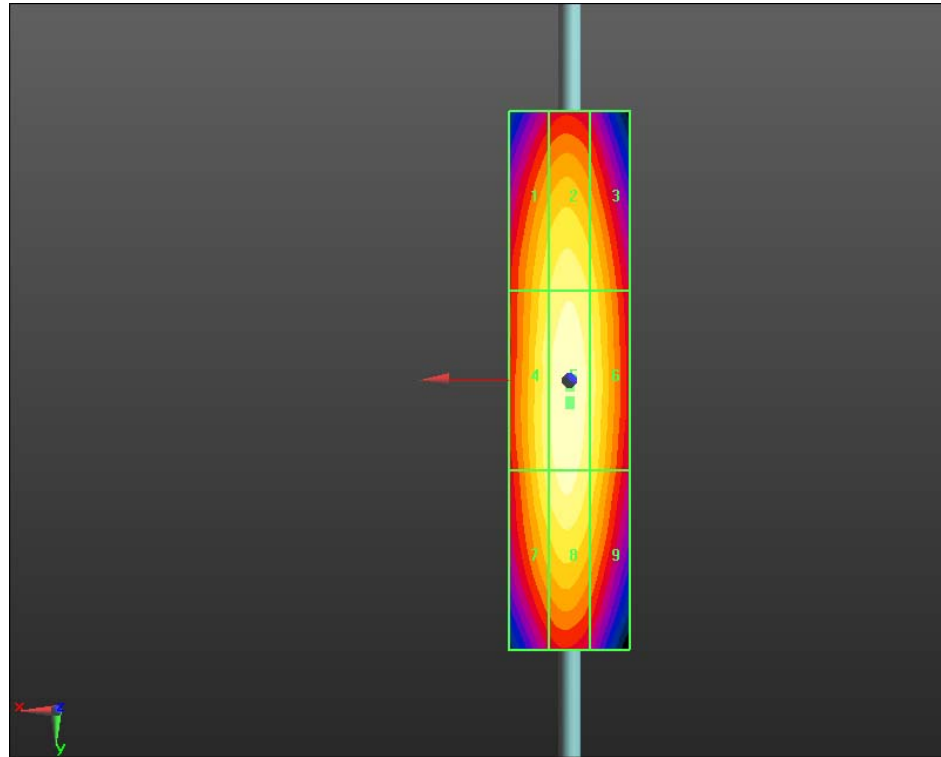
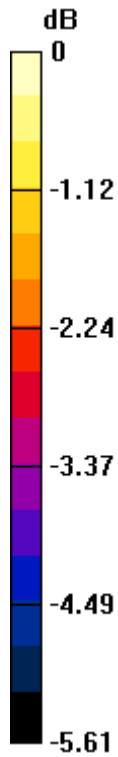
Location: 0, 3.5, 4.7 mm

Author Data
Daoud Attayi

Dates of Test
Jan. 31, Feb. 17, May 31-June 01, 2012

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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/m³

Phantom section: RF Section

Measurement Standard: DASY5 (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
- DASY52 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
Jan. 31, Feb. 17, May 31-June 01, 2012

Report No
RTS-6011-1208-40

FCC ID
L6ARFG80UW

PMF scaled H-field

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

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

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

Cursor:

Total = 0.127 A/m

H Category: M4

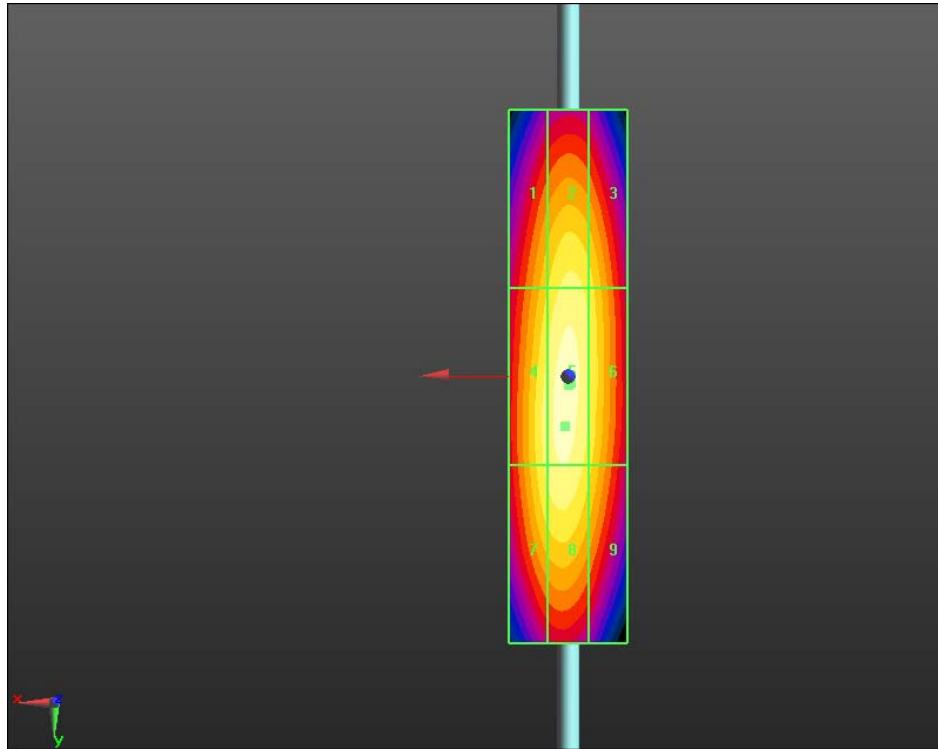
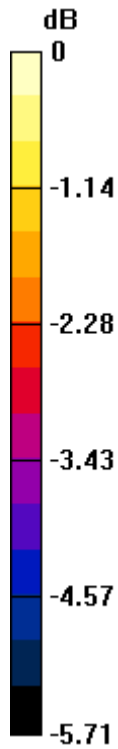
Location: 0, 1.5, 4.7 mm

Author Data
Daoud Attayi

Dates of Test
Jan. 31, Feb. 17, May 31-June 01, 2012

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

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Date/Time: 6/1/2012 10:29:55 AM

Test Laboratory: RIM Testing Services

HAC RF_H-Field_validation_1880 MHz_06_01_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/m³

Phantom section: RF Section

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

DASY Configuration:

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

**Dipole H-Field measurement with H3DV6 probe/H Scan - 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 = -0.00 dB

PMR not calibrated. PMF = 1.000 is applied.

H-field emissions = 0.45 A/m

Near-field category: M2 (AWF 0 dB)

Author Data
Daoud Attayi

Dates of Test
Jan. 31, Feb. 17, May 31-June 01, 2012

Report No
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FCC ID
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PMF scaled H-field

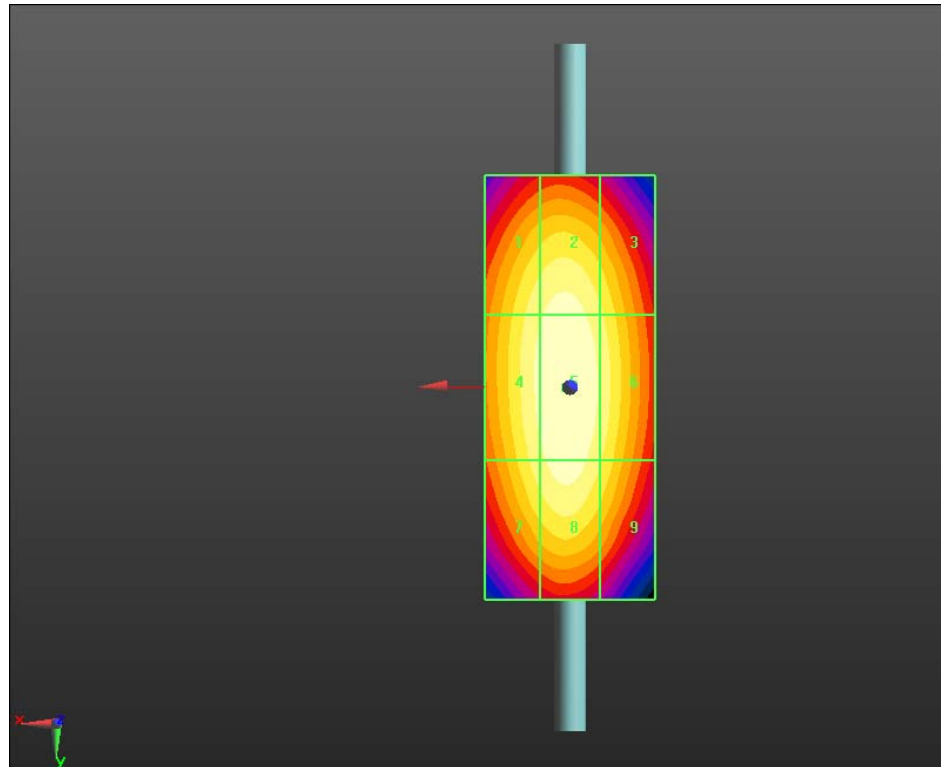
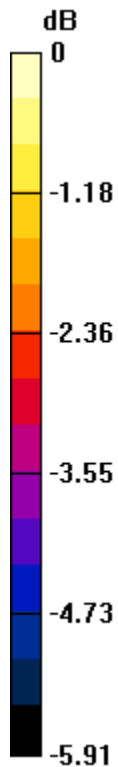
Grid 1 M2 0.43 A/m	Grid 2 M2 0.44 A/m	Grid 3 M2 0.42 A/m
Grid 4 M2 0.44 A/m	Grid 5 M2 0.45 A/m	Grid 6 M2 0.43 A/m
Grid 7 M2 0.42 A/m	Grid 8 M2 0.44 A/m	Grid 9 M2 0.41 A/m

Cursor:

Total = 0.453 A/m

H Category: M2

Location: 0.5, 0, 4.7 mm



0 dB = 0.450A/m = -6.94 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/m³

Phantom section: RF Section

Measurement Standard: DASY5 (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
- DASY52 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)

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PMF scaled H-field

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

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

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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 M3 0.20 A/m	Grid 2 M3 0.21 A/m	Grid 3 M3 0.20 A/m
Grid 4 M3 0.20 A/m	Grid 5 M3 0.21 A/m	Grid 6 M3 0.20 A/m
Grid 7 M3 0.20 A/m	Grid 8 M3 0.21 A/m	Grid 9 M3 0.20 A/m

Cursor:

Total = 0.214 A/m

H Category: M3

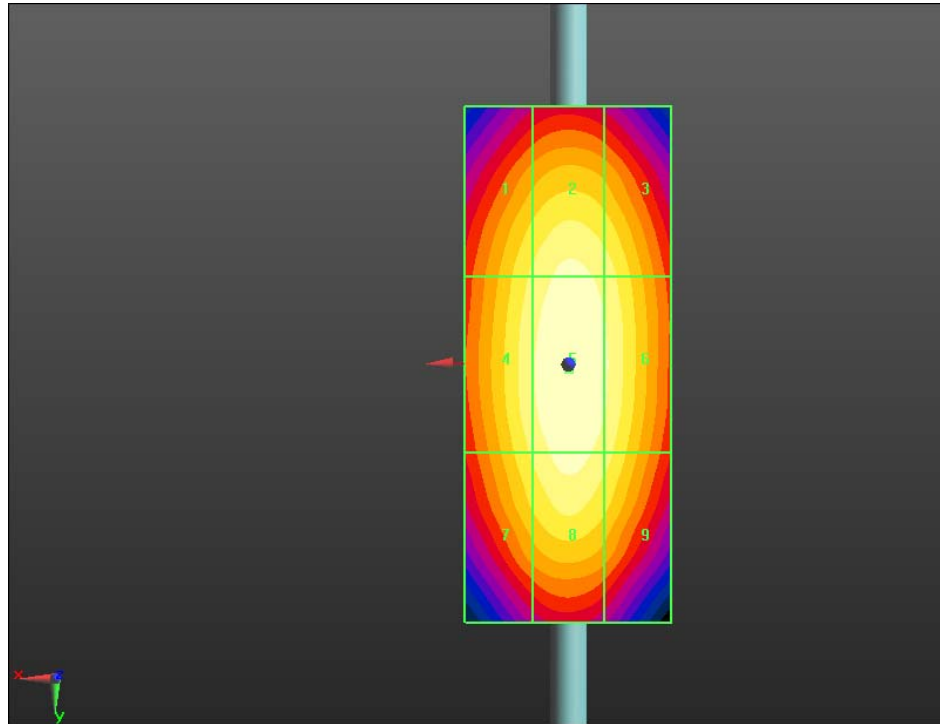
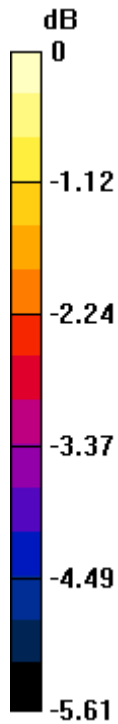
Location: 0, 0, 4.7 mm

Author Data
Daoud Attayi

Dates of Test
Jan. 31, Feb. 17, May 31-June 01, 2012

Report No
RTS-6011-1208-40

FCC ID
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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/m³

Phantom section: RF Section

Measurement Standard: DASY5 (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
- DASY52 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: $dx=5\text{mm}$, $dy=5\text{mm}$

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)

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PMF scaled H-field

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

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 M4 0.14 A/m	Grid 2 M4 0.14 A/m	Grid 3 M4 0.14 A/m
Grid 4 M4 0.14 A/m	Grid 5 M4 0.15 A/m	Grid 6 M4 0.14 A/m
Grid 7 M4 0.14 A/m	Grid 8 M4 0.15 A/m	Grid 9 M4 0.14 A/m

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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 M4 0.09 A/m	Grid 2 M4 0.09 A/m	Grid 3 M4 0.09 A/m
Grid 4 M4 0.09 A/m	Grid 5 M4 0.10 A/m	Grid 6 M4 0.09 A/m
Grid 7 M4 0.09 A/m	Grid 8 M4 0.09 A/m	Grid 9 M4 0.09 A/m

Cursor:

Total = 0.096 A/m

H Category: M4

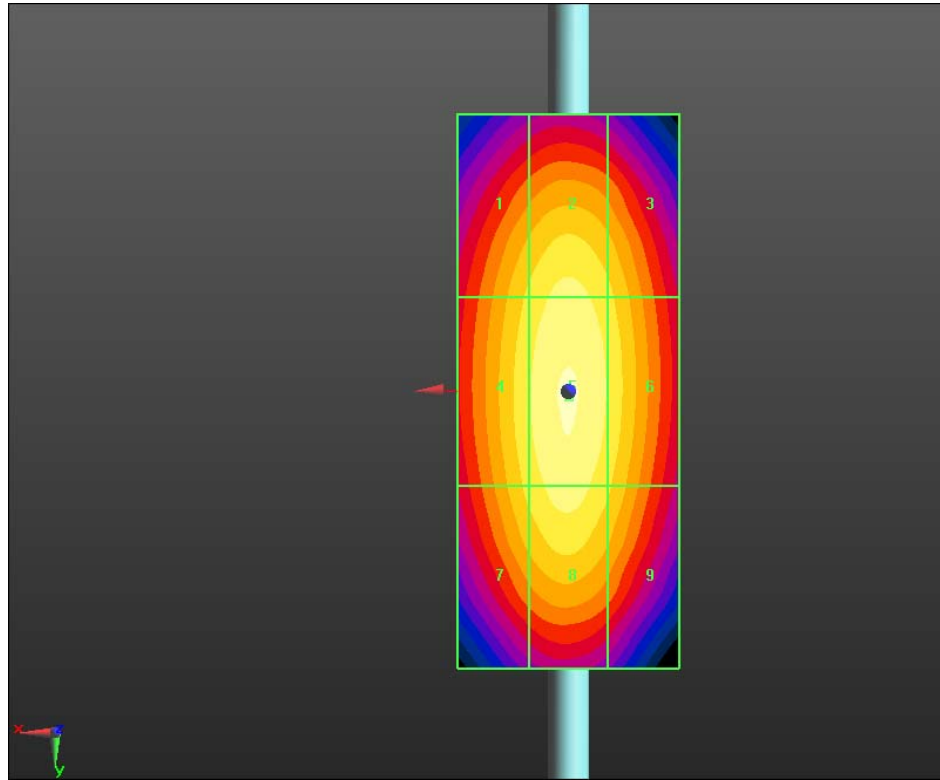
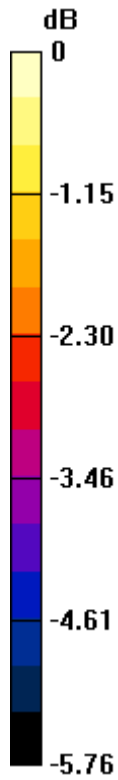
Location: 0, 0, 4.7 mm

Author Data
Daoud Attayi

Dates of Test
Jan. 31, Feb. 17, May 31-June 01, 2012

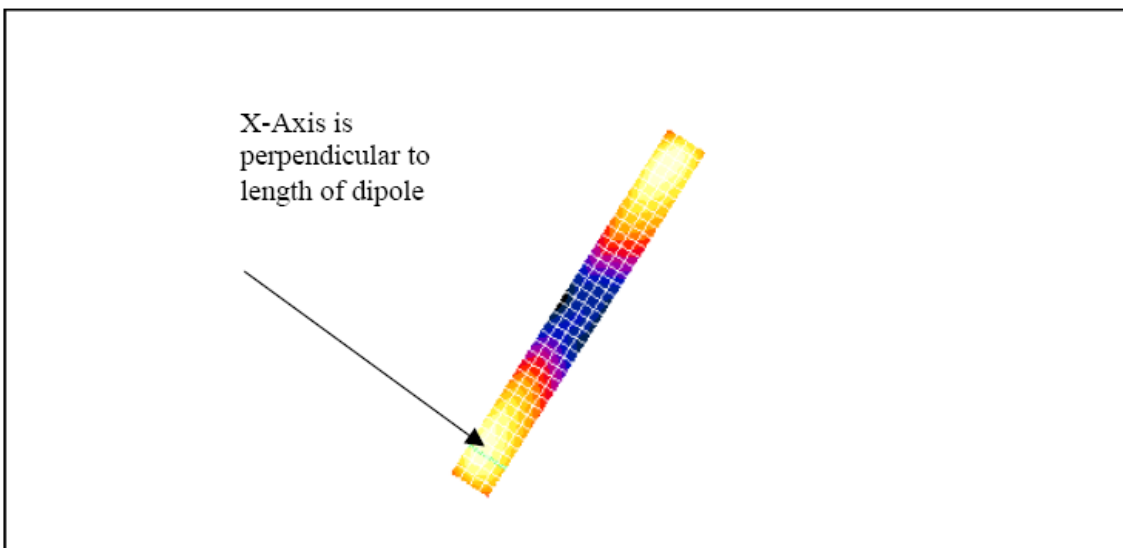
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0 dB = 0.150A/m = -16.48 dB A/m

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

Comparison of 5mm and 2mm step sizes

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

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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/m³
Phantom section: H Device Section

DASY4 Configuration:

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

E Scan 10mm above CD 1880 MHz/Hearing Aid Compatibility Test (5x19x1):

Measurement grid: dx=5mm, dy=5mm
Maximum value of Total (measured) = 134.8 V/m

E Scan 10mm above CD 1880 MHz/Hearing Aid Compatibility Test (41x181x1):

Measurement grid: dx=5mm, dy=5mm
Maximum value of Total field (slot averaged) = 131.0 V/m

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

E in V/m (Time averaged) E in V/m (Slot averaged)

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

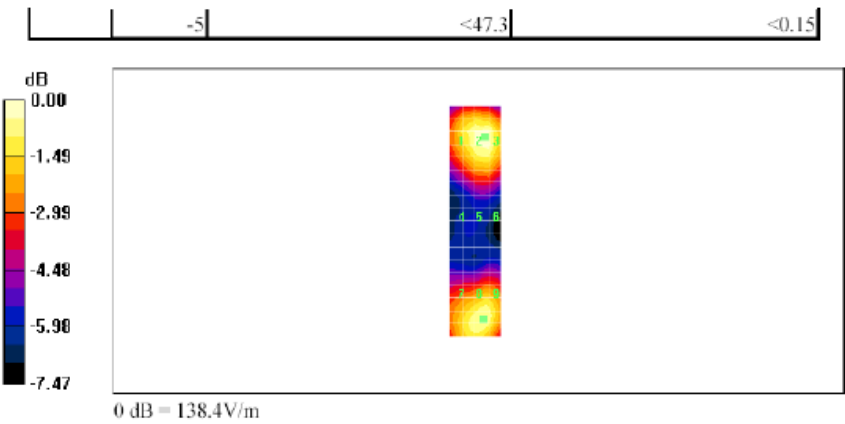
Category	AWF (dB)	Limits for E-Field Emissions (V/m)	Limits for H-Field Emissions (A/m)
M1	0	199.5 - 354.8	0.6 - 1.07
	-5	149.6 - 266.1	0.45 - 0.8
M2	0	112.2 - 199.5	0.34 - 0.6
	-5	84.1 - 149.6	0.25 - 0.45
M3	0	63.1 - 112.2	0.19 - 0.34
	-5	47.3 - 84.1	0.15 - 0.25
M4	0	<63.1	<0.19

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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/m³
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
123.1	138.6	138.6	123.1	138.6	138.6
Grid 4	Grid 5	Grid 6	Grid 4	Grid 5	Grid 6
81.4	92.1	91.6	81.4	92.1	91.6
Grid 7	Grid 8	Grid 9	Grid 7	Grid 8	Grid 9
121.3	131.2	131.0	121.3	131.2	131.0

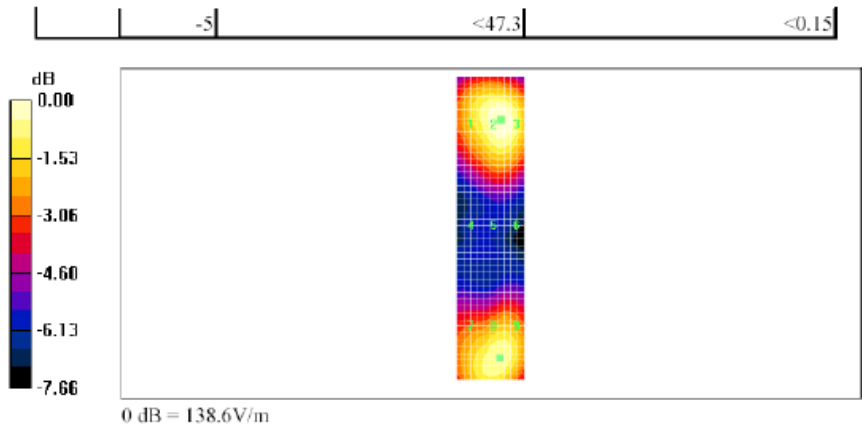
Category	AWF (dB)	Limits for E-Field Emissions (V/m)	Limits for H-Field Emissions (A/m)
M1	0	199.5 - 354.8	0.6 - 1.07
	-5	149.6 - 266.1	0.45 - 0.8
M2	0	112.2 - 199.5	0.34 - 0.6
	-5	84.1 - 149.6	0.25 - 0.45
M3	0	63.1 - 112.2	0.19 - 0.34
	-5	47.3 - 84.1	0.15 - 0.25
M4	0	<63.1	<0.19

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Author Data

Daoud Attayi

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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/m³

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
0.342	0.359	0.344	0.342	0.359	0.344
Grid 4	Grid 5	Grid 6	Grid 4	Grid 5	Grid 6
0.389	0.406	0.389	0.389	0.406	0.389
Grid 7	Grid 8	Grid 9	Grid 7	Grid 8	Grid 9
0.363	0.378	0.363	0.363	0.378	0.363

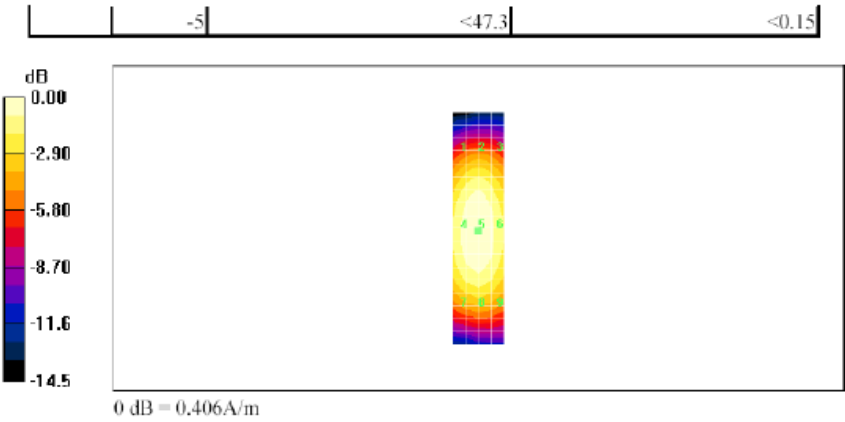
Category	AWF (dB)	Limits for E-Field Emissions (V/m)	Limits for H-Field Emissions (A/m)
M1	0	199.5 - 354.8	0.6 - 1.07
	-5	149.6 - 266.1	0.45 - 0.8
M2	0	112.2 - 199.5	0.34 - 0.6
	-5	84.1 - 149.6	0.25 - 0.45
M3	0	63.1 - 112.2	0.19 - 0.34
	-5	47.3 - 84.1	0.15 - 0.25
M4	0	<63.1	<0.19

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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/m³
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
0.347	0.361	0.348	0.347	0.361	0.348
Grid 4	Grid 5	Grid 6	Grid 4	Grid 5	Grid 6
0.394	0.406	0.391	0.394	0.406	0.391
Grid 7	Grid 8	Grid 9	Grid 7	Grid 8	Grid 9
0.367	0.380	0.365	0.367	0.380	0.365

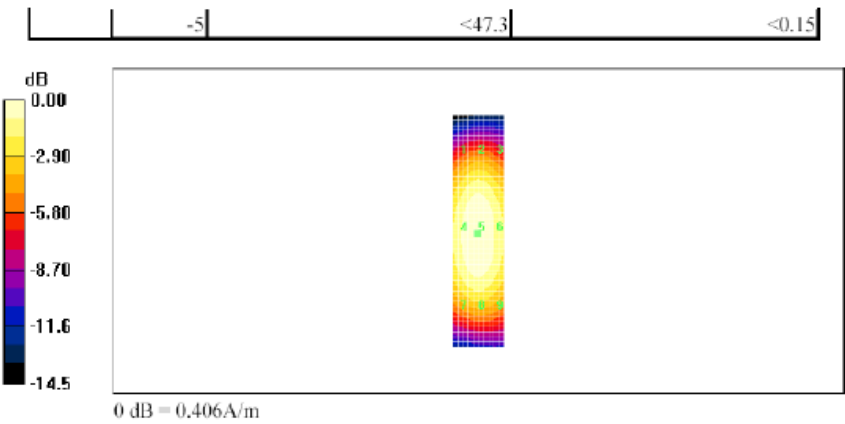
Category	AWF (dB)	Limits for E-Field Emissions (V/m)	Limits for H-Field Emissions (A/m)
M1	0	199.5 - 354.8	0.6 - 1.07
	-5	149.6 - 266.1	0.45 - 0.8
M2	0	112.2 - 199.5	0.34 - 0.6
	-5	84.1 - 149.6	0.25 - 0.45
M3	0	63.1 - 112.2	0.19 - 0.34
	-5	47.3 - 84.1	0.15 - 0.25
M4	0	<63.1	<0.19

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A.3 RF emission field plots

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Date/Time: 5/31/2012 8:04:24 PM

Test Laboratory: RIM Testing Services

HAC RF_E-Field_GSM850

DUT: BlackBerry Smartphone; Type: Sample ; Serial: 2A099B03

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/m³

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; Serial: **Not Specified**
- 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 Device_Low_Chan/Hearing Aid Compatibility Test

(101x101x1): Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 84.13 V/m; Power Drift = -0.05 dB

PMR not calibrated. PMF = 3.130 is applied.

E-field emissions = 205.5 V/m

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

PMF scaled E-field

Grid 1 M3 176.7 V/m	Grid 2 M3 192.4 V/m	Grid 3 M3 188.3 V/m
Grid 4 M3 191.0 V/m	Grid 5 M3 205.5 V/m	Grid 6 M3 199.1 V/m
Grid 7 M3 208.9 V/m	Grid 8 M3 217.7 V/m	Grid 9 M3 201.1 V/m

Cursor:

Total = 217.7 V/m
E Category: M3
Location: 1, 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 = 98.57 V/m; Power Drift = -0.00 dB

PMR not calibrated. PMF = 3.130 is applied.

E-field emissions = 244.5 V/m

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

PMF scaled E-field

Grid 1 M3 198.6 V/m	Grid 2 M3 228.5 V/m	Grid 3 M3 226.8 V/m
Grid 4 M3 219.7 V/m	Grid 5 M3 244.5 V/m	Grid 6 M3 239.8 V/m
Grid 7 M3 243.9 V/m	Grid 8 M3 259.0 V/m	Grid 9 M3 244.2 V/m

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Cursor:

Total = 259.0 V/m
E Category: M3
Location: 0, 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 = 93.28 V/m; Power Drift = -0.03 dB
PMR not calibrated. PMF = 3.130 is applied.
E-field emissions = 226.9 V/m

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

PMF scaled E-field

Grid 1 M3 190.9 V/m	Grid 2 M3 220.0 V/m	Grid 3 M3 217.0 V/m
Grid 4 M3 202.0 V/m	Grid 5 M3 226.9 V/m	Grid 6 M3 222.0 V/m
Grid 7 M3 216.1 V/m	Grid 8 M3 230.9 V/m	Grid 9 M3 221.7 V/m

Cursor:

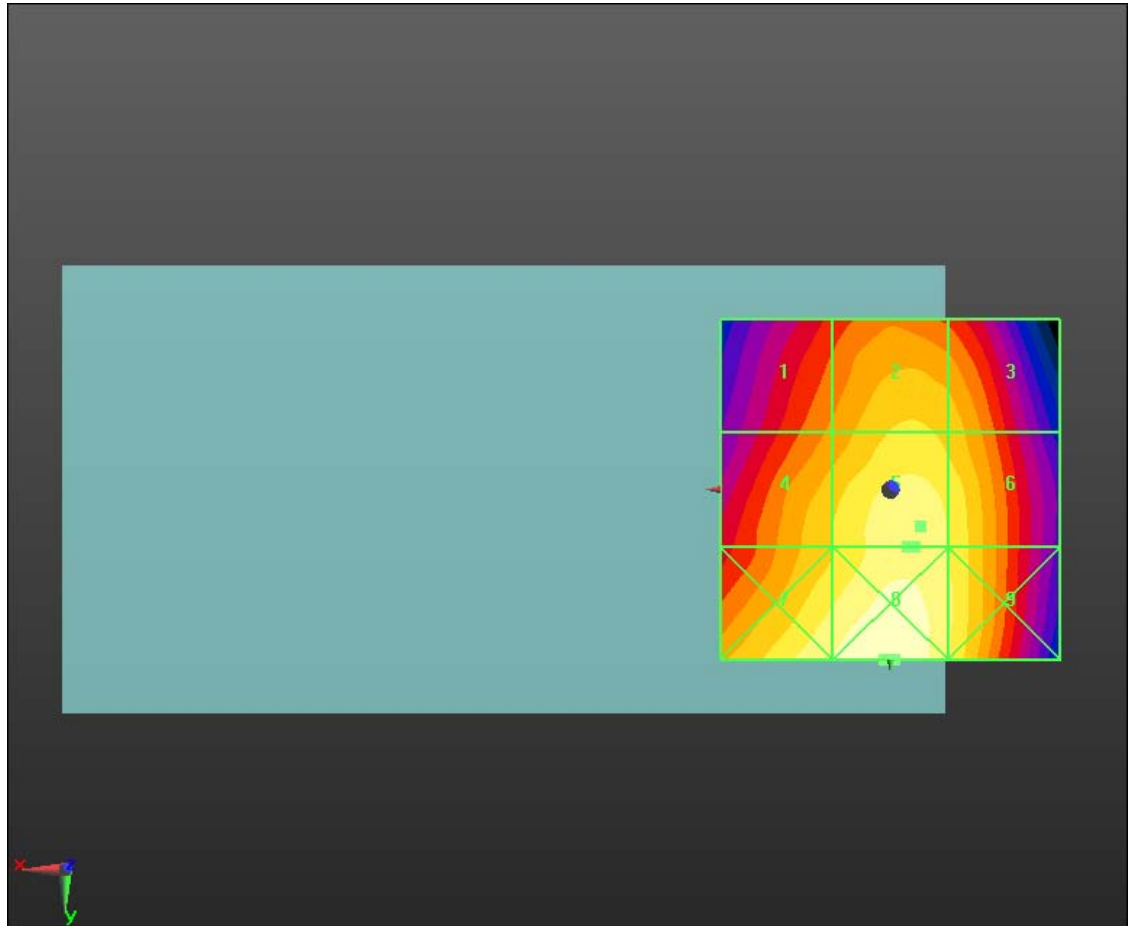
Total = 230.9 V/m
E Category: M3
Location: -0.5, 25, 8.7 mm

Author Data
Daoud Attayi

Dates of Test
Jan. 31, Feb. 17, May 31-June 01, 2012

Report No
RTS-6011-1208-40

FCC ID
L6ARFG80UW



0 dB = 217.7V/m = 46.76 dB V/m

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Author Data Daoud Attayi	Dates of Test Jan. 31, Feb. 17, May 31-June 01, 2012	Report No RTS-6011-1208-40	FCC ID L6ARFG80UW	

Date/Time: 5/31/2012 9:47:11 PM

Test Laboratory: RIM Testing Services

HAC RF_E-Field_UMTS_Band_V

DUT: BlackBerry Smartphone; Type: Sample ; Serial: 2A099B03

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/m³

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; Serial: **Not Specified**
- 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 Device_Low_Chan/Hearing Aid Compatibility Test

(101x101x1): Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 85.43 V/m; Power Drift = -0.03 dB

PMR not calibrated. PMF = 1.070 is applied.

E-field emissions = 72.06 V/m

Near-field category: M4 (AWF 0 dB)

PMF scaled E-field

Grid 1 M4 60.40 V/m	Grid 2 M4 67.36 V/m	Grid 3 M4 66.34 V/m
Grid 4 M4 66.08 V/m	Grid 5 M4 72.06 V/m	Grid 6 M4 69.86 V/m
Grid 7 M4 72.76 V/m	Grid 8 M4 76.49 V/m	Grid 9 M4 70.93 V/m

Cursor:

Total = 76.488 V/m

E Category: M4

Location: 0.5, 25, 8.7 mm

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

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 92.50 V/m; Power Drift = -0.01 dB

PMR not calibrated. PMF = 1.070 is applied.

E-field emissions = 79.48 V/m

Near-field category: M4 (AWF 0 dB)

PMF scaled E-field

Grid 1 M4 64.19 V/m	Grid 2 M4 73.81 V/m	Grid 3 M4 73.25 V/m
Grid 4 M4 71.22 V/m	Grid 5 M4 79.48 V/m	Grid 6 M4 78.66 V/m
Grid 7 M4 79.28 V/m	Grid 8 M4 84.40 V/m	Grid 9 M4 80.36 V/m

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Cursor:

Total = 84.399 V/m

E Category: M4

Location: -1, 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 = 103.8 V/m; Power Drift = 0.01 dB

PMR not calibrated. PMF = 1.070 is applied.

E-field emissions = 87.99 V/m

Near-field category: M4 (AWF 0 dB)

PMF scaled E-field

Grid 1 M4 72.81 V/m	Grid 2 M4 83.19 V/m	Grid 3 M4 82.27 V/m
Grid 4 M4 78.96 V/m	Grid 5 M4 87.99 V/m	Grid 6 M4 86.28 V/m
Grid 7 M4 86.09 V/m	Grid 8 M4 91.96 V/m	Grid 9 M4 87.26 V/m

Cursor:

Total = 91.963 V/m

E Category: M4

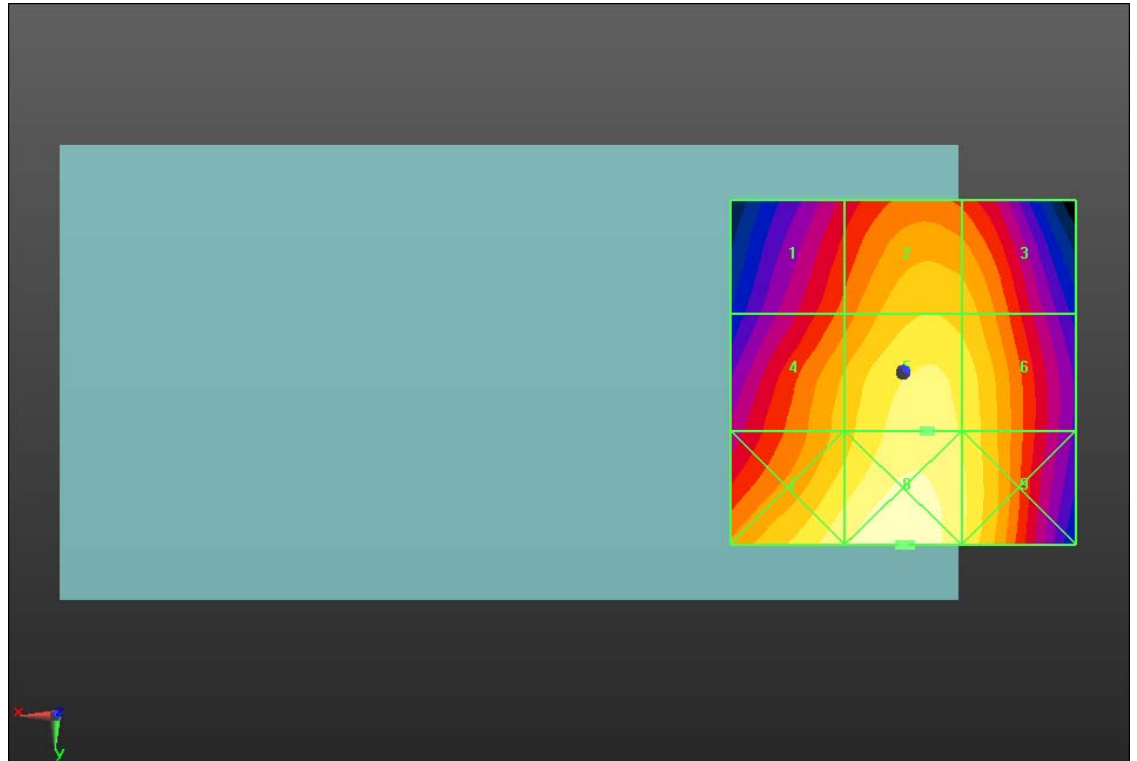
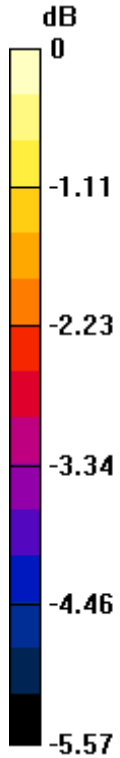
Location: 0, 25, 8.7 mm

Author Data
Daoud Attayi

Dates of Test
Jan. 31, Feb. 17, May 31-June 01, 2012

Report No
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0 dB = 76.490V/m = 37.67 dB V/m

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Author Data	Dates of Test	Report No	FCC ID	
Daoud Attayi	Jan. 31, Feb. 17, May 31-June 01, 2012	RTS-6011-1208-40	L6ARFG80UW	

Date/Time: 5/31/2012 9:24:49 PM

Test Laboratory: RIM Testing Services

HAC RF_E-Field_GSM1900

DUT: BlackBerry Smartphone; Type: Sample ; Serial: 2A099B03

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/m³

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; Serial: **Not Specified**
- 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 Device_Low_Chan/Hearing Aid Compatibility Test

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

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 17.02 V/m; Power Drift = -0.09 dB

PMR not calibrated. PMF = 2.921 is applied.

E-field emissions = 60.76 V/m

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

PMF scaled E-field

Grid 1 M3 60.76 V/m	Grid 2 M3 53.30 V/m	Grid 3 M4 42.58 V/m
Grid 4 M4 43.99 V/m	Grid 5 M3 59.74 V/m	Grid 6 M3 60.63 V/m
Grid 7 M4 42.94 V/m	Grid 8 M3 69.61 V/m	Grid 9 M3 69.61 V/m

Cursor:

Total = 69.607 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_Mid_Chan/Hearing Aid
Compatibility Test (101x101x1):** Measurement grid: dx=5mm, dy=5mm

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 25.24 V/m; Power Drift = 0.06 dB

PMR not calibrated. PMF = 2.921 is applied.

E-field emissions = 76.83 V/m

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

PMF scaled E-field

Grid 1 M3 70.14 V/m	Grid 2 M3 67.00 V/m	Grid 3 M3 67.00 V/m
Grid 4 M3 47.34 V/m	Grid 5 M3 76.83 V/m	Grid 6 M3 77.93 V/m
Grid 7 M4 42.92 V/m	Grid 8 M3 79.74 V/m	Grid 9 M3 80.22 V/m

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Cursor:

Total = 80.218 V/m
E Category: M3
Location: -10.5, 18.5, 8.7 mm

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

Device Reference Point: 0, 0, -6.3 mm
Reference Value = 17.32 V/m; Power Drift = 0.03 dB
PMR not calibrated. PMF = 2.921 is applied.
E-field emissions = 51.67 V/m

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

PMF scaled E-field

Grid 1 M3 50.34 V/m	Grid 2 M3 49.29 V/m	Grid 3 M3 49.14 V/m
Grid 4 M4 40.02 V/m	Grid 5 M3 51.67 V/m	Grid 6 M3 52.97 V/m
Grid 7 M4 32.15 V/m	Grid 8 M3 52.12 V/m	Grid 9 M3 53.39 V/m

Cursor:

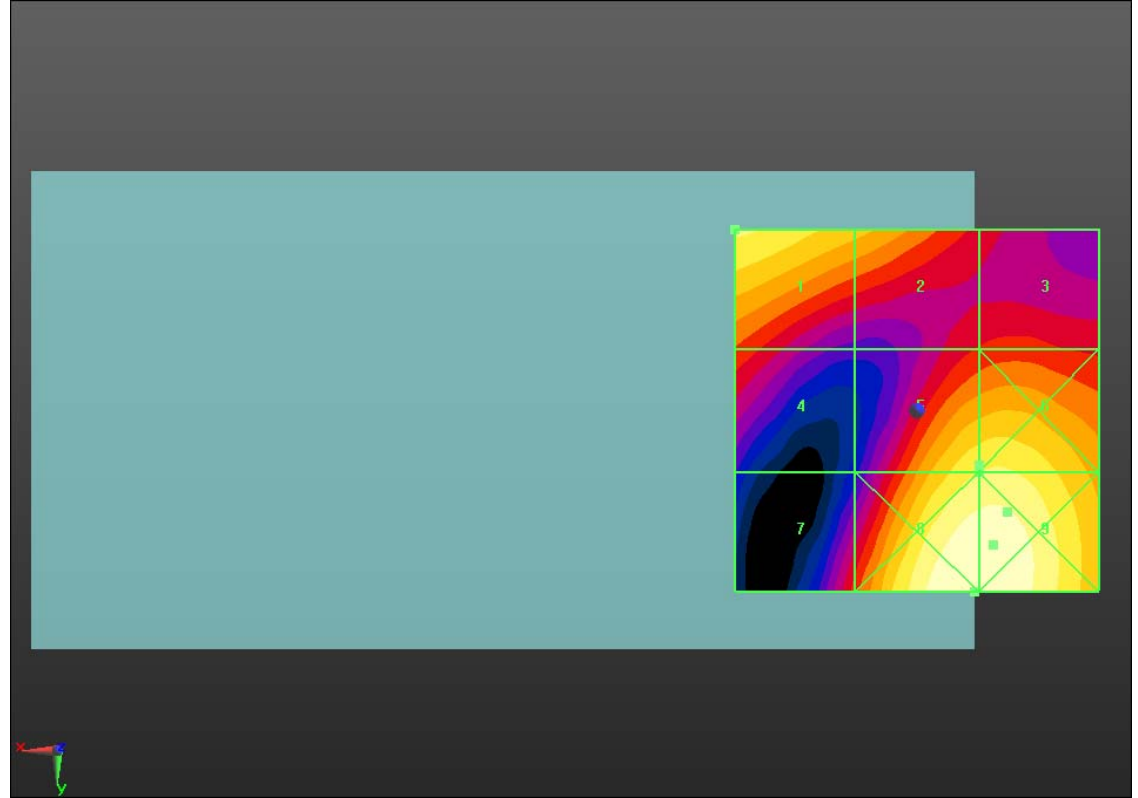
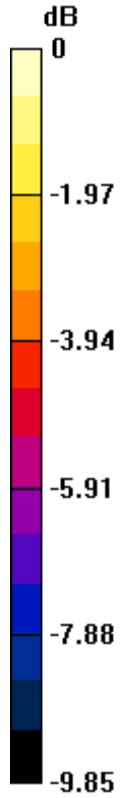
Total = 53.395 V/m
E Category: M3
Location: -12.5, 14, 8.7 mm

Author Data
Daoud Attayi

Dates of Test
Jan. 31, Feb. 17, May 31-June 01, 2012

Report No
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0 dB = 69.610V/m = 36.85 dB V/m

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Daoud Attayi	Jan. 31, Feb. 17, May 31-June 01, 2012	RTS-6011-1208-40	L6ARFG80UW	

Date/Time: 5/31/2012 10:17:04 PM

Test Laboratory: RIM Testing Services

HAC RF_E-Field_UMTS_Band_II

DUT: BlackBerry Smartphone; Type: Sample ; Serial: 2A099B03

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/m³

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; Serial: **Not Specified**
- 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 Device_Low_Chan/Hearing Aid Compatibility Test

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

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 25.56 V/m; Power Drift = -0.02 dB

PMR not calibrated. PMF = 1.000 is applied.

E-field emissions = 30.10 V/m

Near-field category: M4 (AWF 0 dB)

PMF scaled E-field

Grid 1 M4 29.76 V/m	Grid 2 M4 27.33 V/m	Grid 3 M4 22.41 V/m
Grid 4 M4 20.87 V/m	Grid 5 M4 30.10 V/m	Grid 6 M4 30.65 V/m
Grid 7 M4 21.15 V/m	Grid 8 M4 35.00 V/m	Grid 9 M4 35.00 V/m

Cursor:

Total = 35.002 V/m

E Category: M4

Location: -9, 24, 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 = 26.36 V/m; Power Drift = -0.07 dB

PMR not calibrated. PMF = 1.000 is applied.

E-field emissions = 28.30 V/m

Near-field category: M4 (AWF 0 dB)

PMF scaled E-field

Grid 1 M4 27.22 V/m	Grid 2 M4 23.85 V/m	Grid 3 M4 24.34 V/m
Grid 4 M4 19.20 V/m	Grid 5 M4 28.30 V/m	Grid 6 M4 28.85 V/m
Grid 7 M4 16.11 V/m	Grid 8 M4 29.69 V/m	Grid 9 M4 29.92 V/m

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Cursor:

Total = 29.915 V/m

E Category: M4

Location: -10.5, 19, 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 = 23.01 V/m; Power Drift = 0.02 dB

PMR not calibrated. PMF = 1.000 is applied.

E-field emissions = 24.04 V/m

Near-field category: M4 (AWF 0 dB)

PMF scaled E-field

Grid 1 M4 23.60 V/m	Grid 2 M4 21.71 V/m	Grid 3 M4 22.22 V/m
Grid 4 M4 18.18 V/m	Grid 5 M4 24.04 V/m	Grid 6 M4 24.72 V/m
Grid 7 M4 14.31 V/m	Grid 8 M4 24.43 V/m	Grid 9 M4 25.00 V/m

Cursor:

Total = 24.999 V/m

E Category: M4

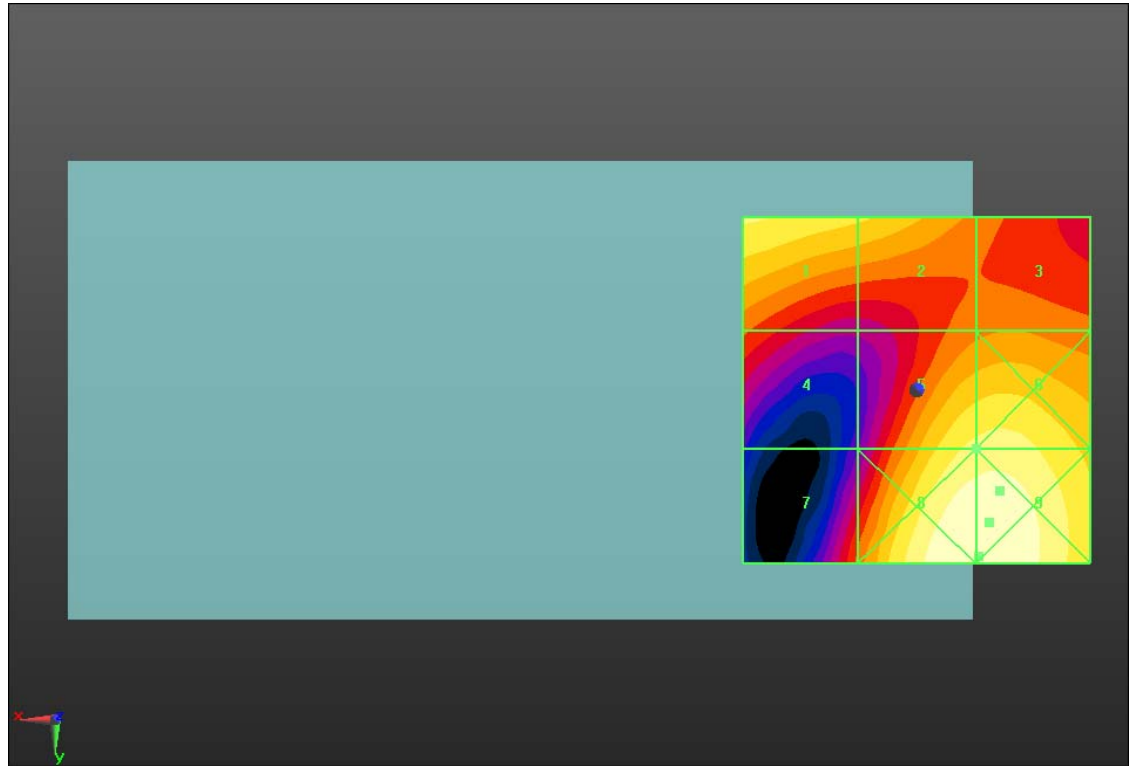
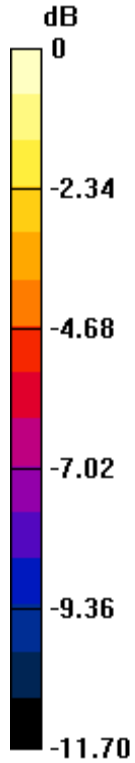
Location: -12, 14.5, 8.7 mm

Author Data
Daoud Attayi

Dates of Test
Jan. 31, Feb. 17, May 31-June 01, 2012

Report No
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FCC ID
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0 dB = 35.000V/m = 30.88 dB V/m

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Date/Time: 6/1/2012 12:16:55 AM

Test Laboratory: RIM Testing Services

HAC RF_H-Field_GSM_850

DUT: BlackBerry Smartphone; Type: Sample ; Serial: 2A099B03

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/m³

Phantom section: RF Section

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

DASY Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 11/8/2011
- Sensor-Surface: (Fix Surface), z = 8.7
- Electronics: DAE3 Sn473; Calibrated: 1/13/2012
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA; Serial: **Not Specified**
- DASY52 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 = 0.05 dB

PMR not calibrated. PMF = 2.940 is applied.

H-field emissions = 0.30 A/m

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

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PMF scaled H-field

Grid 1 M4 0.40 A/m	Grid 2 M4 0.30 A/m	Grid 3 M4 0.20 A/m
Grid 4 M4 0.37 A/m	Grid 5 M4 0.27 A/m	Grid 6 M4 0.18 A/m
Grid 7 M4 0.39 A/m	Grid 8 M4 0.27 A/m	Grid 9 M4 0.17 A/m

Cursor:

Total = 0.402 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 = 0.09 V/m; Power Drift = 0.09 dB
PMR not calibrated. PMF = 2.940 is applied.
H-field emissions = 0.37 A/m

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

PMF scaled H-field

Grid 1 M3 0.50 A/m	Grid 2 M4 0.37 A/m	Grid 3 M4 0.25 A/m
Grid 4 M3 0.46 A/m	Grid 5 M4 0.34 A/m	Grid 6 M4 0.22 A/m
Grid 7 M3 0.49 A/m	Grid 8 M4 0.35 A/m	Grid 9 M4 0.22 A/m

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Cursor:

Total = 0.503 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 = 0.10 V/m; Power Drift = 0.05 dB
PMR not calibrated. PMF = 2.940 is applied.
H-field emissions = 0.38 A/m

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

PMF scaled H-field

Grid 1 M3 0.50 A/m	Grid 2 M4 0.37 A/m	Grid 3 M4 0.25 A/m
Grid 4 M3 0.47 A/m	Grid 5 M4 0.35 A/m	Grid 6 M4 0.24 A/m
Grid 7 M3 0.52 A/m	Grid 8 M4 0.38 A/m	Grid 9 M4 0.25 A/m

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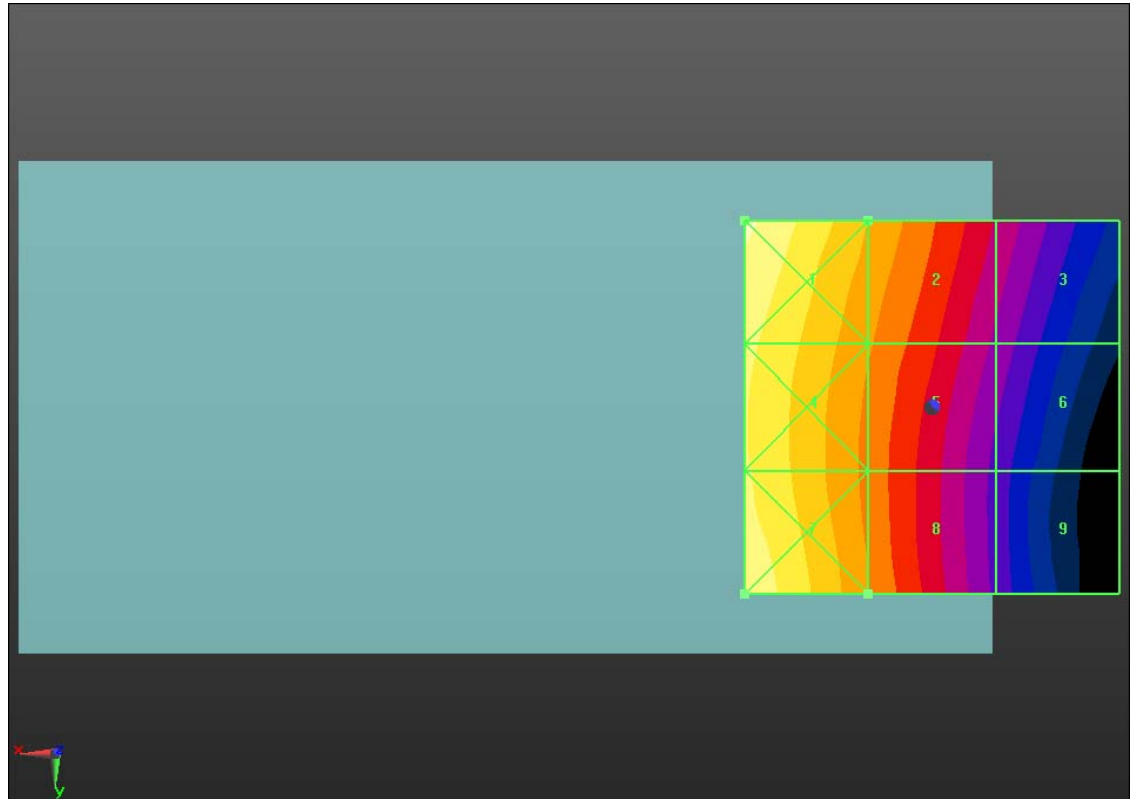
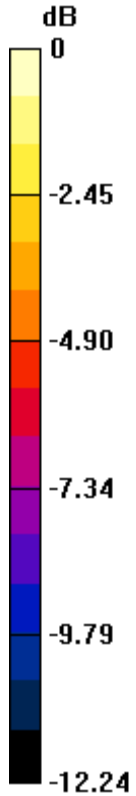
Total = 0.518 A/m
H Category: M3
Location: 25, 25, 8.7 mm

Author Data
Daoud Attayi

Dates of Test
Jan. 31, Feb. 17, May 31-June 01, 2012

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0 dB = 0.430A/m = -7.33 dB A/m

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Daoud Attayi	Jan. 31, Feb. 17, May 31-June 01, 2012	RTS-6011-1208-40	L6ARFG80UW	

Date/Time: 5/31/2012 11:38:02 PM

Test Laboratory: RIM Testing Services

HAC RF_H-Field_UMTS_Band_V

DUT: BlackBerry Smartphone; Type: Sample ; Serial: 2A099B03

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/m³

Phantom section: RF Section

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

DASY Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 11/8/2011
- Sensor-Surface: (Fix Surface), z = 8.7
- Electronics: DAE3 Sn473; Calibrated: 1/13/2012
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA; Serial: **Not Specified**
- DASY52 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 = -0.02 dB

PMR not calibrated. PMF = 1.090 is applied.

H-field emissions = 0.11 A/m

Near-field category: M4 (AWF 0 dB)

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PMF scaled H-field

Grid 1 M4 0.14 A/m	Grid 2 M4 0.11 A/m	Grid 3 M4 0.07 A/m
Grid 4 M4 0.13 A/m	Grid 5 M4 0.10 A/m	Grid 6 M4 0.06 A/m
Grid 7 M4 0.15 A/m	Grid 8 M4 0.11 A/m	Grid 9 M4 0.07 A/m

Cursor:

Total = 0.148 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 = 0.09 V/m; Power Drift = -0.01 dB

PMR not calibrated. PMF = 1.090 is applied.

H-field emissions = 0.12 A/m

Near-field category: M4 (AWF 0 dB)

PMF scaled H-field

Grid 1 M4 0.16 A/m	Grid 2 M4 0.12 A/m	Grid 3 M4 0.08 A/m
Grid 4 M4 0.15 A/m	Grid 5 M4 0.11 A/m	Grid 6 M4 0.07 A/m
Grid 7 M4 0.17 A/m	Grid 8 M4 0.12 A/m	Grid 9 M4 0.07 A/m

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Cursor:

Total = 0.165 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 = 0.10 V/m; Power Drift = 0.06 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 M4 0.19 A/m	Grid 2 M4 0.14 A/m	Grid 3 M4 0.10 A/m
Grid 4 M4 0.18 A/m	Grid 5 M4 0.14 A/m	Grid 6 M4 0.09 A/m
Grid 7 M4 0.20 A/m	Grid 8 M4 0.15 A/m	Grid 9 M4 0.09 A/m

Cursor:

Total = 0.200 A/m

H Category: M4

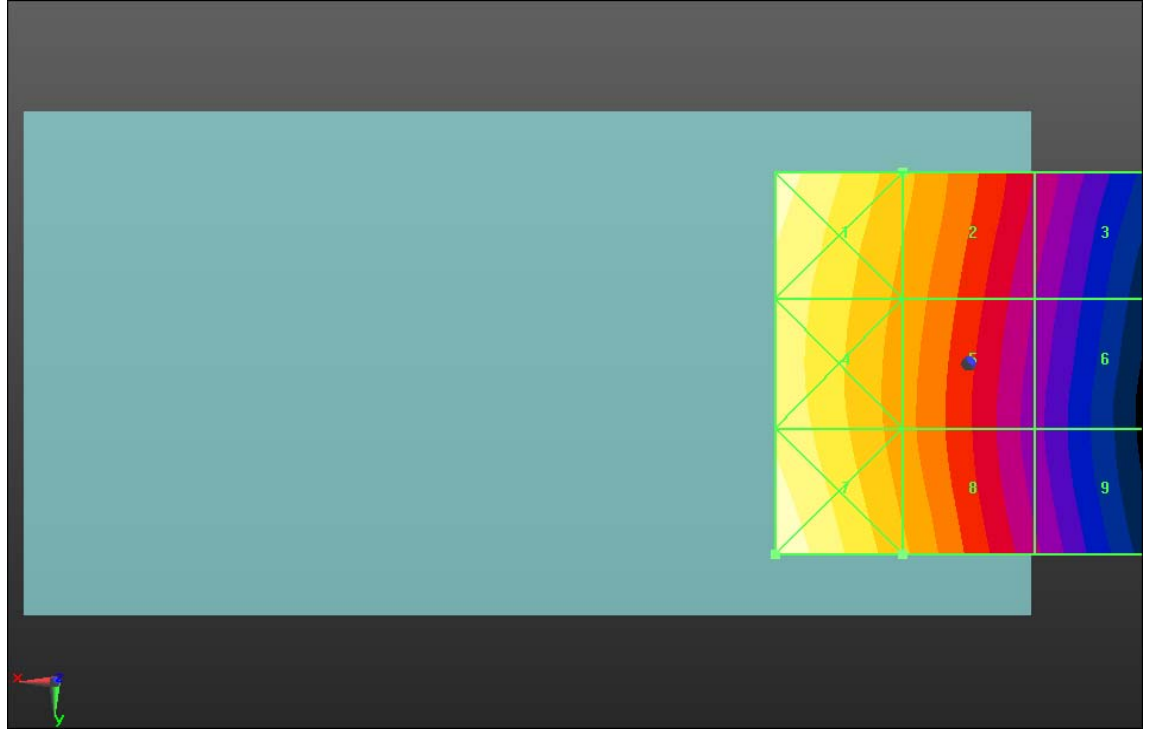
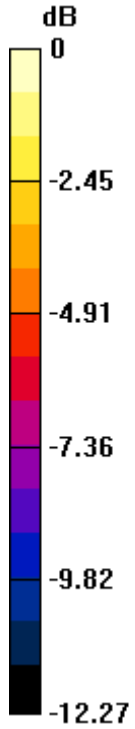
Location: 25, 25, 8.7 mm

Author Data
Daoud Attayi

Dates of Test
Jan. 31, Feb. 17, May 31-June 01, 2012

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

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Date/Time: 6/1/2012 12:33:46 AM

Test Laboratory: RIM Testing Services

HAC RF_H-Field_GSM_1900

DUT: BlackBerry Smartphone; Type: Sample ; Serial: 2A099B03

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/m³

Phantom section: RF Section

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

DASY Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 11/8/2011
- Sensor-Surface: (Fix Surface), z = 8.7
- Electronics: DAE3 Sn473; Calibrated: 1/13/2012
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA; Serial: **Not Specified**
- DASY52 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 = 0.20 dB

PMR not calibrated. PMF = 2.970 is applied.

H-field emissions = 0.17 A/m

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

PMF scaled H-field

Grid 1 M3 0.16 A/m	Grid 2 M3 0.17 A/m	Grid 3 M3 0.17 A/m
Grid 4 M3 0.16 A/m	Grid 5 M3 0.17 A/m	Grid 6 M3 0.17 A/m
Grid 7 M3 0.18 A/m	Grid 8 M3 0.17 A/m	Grid 9 M4 0.14 A/m

Cursor:

Total = 0.178 A/m

H Category: M3

Location: 18.5, 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 = -0.06 dB

PMR not calibrated. PMF = 2.970 is applied.

H-field emissions = 0.23 A/m

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

PMF scaled H-field

Grid 1 M3 0.23 A/m	Grid 2 M3 0.22 A/m	Grid 3 M3 0.21 A/m
Grid 4 M3 0.21 A/m	Grid 5 M3 0.22 A/m	Grid 6 M3 0.20 A/m
Grid 7 M3 0.23 A/m	Grid 8 M3 0.22 A/m	Grid 9 M3 0.18 A/m

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Cursor:

Total = 0.232 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 = 0.06 V/m; Power Drift = -0.06 dB
PMR not calibrated. PMF = 2.970 is applied.
H-field emissions = 0.20 A/m

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

PMF scaled H-field

Grid 1 M3 0.20 A/m	Grid 2 M3 0.18 A/m	Grid 3 M3 0.16 A/m
Grid 4 M3 0.18 A/m	Grid 5 M3 0.18 A/m	Grid 6 M3 0.16 A/m
Grid 7 M3 0.17 A/m	Grid 8 M3 0.17 A/m	Grid 9 M3 0.14 A/m

Cursor:

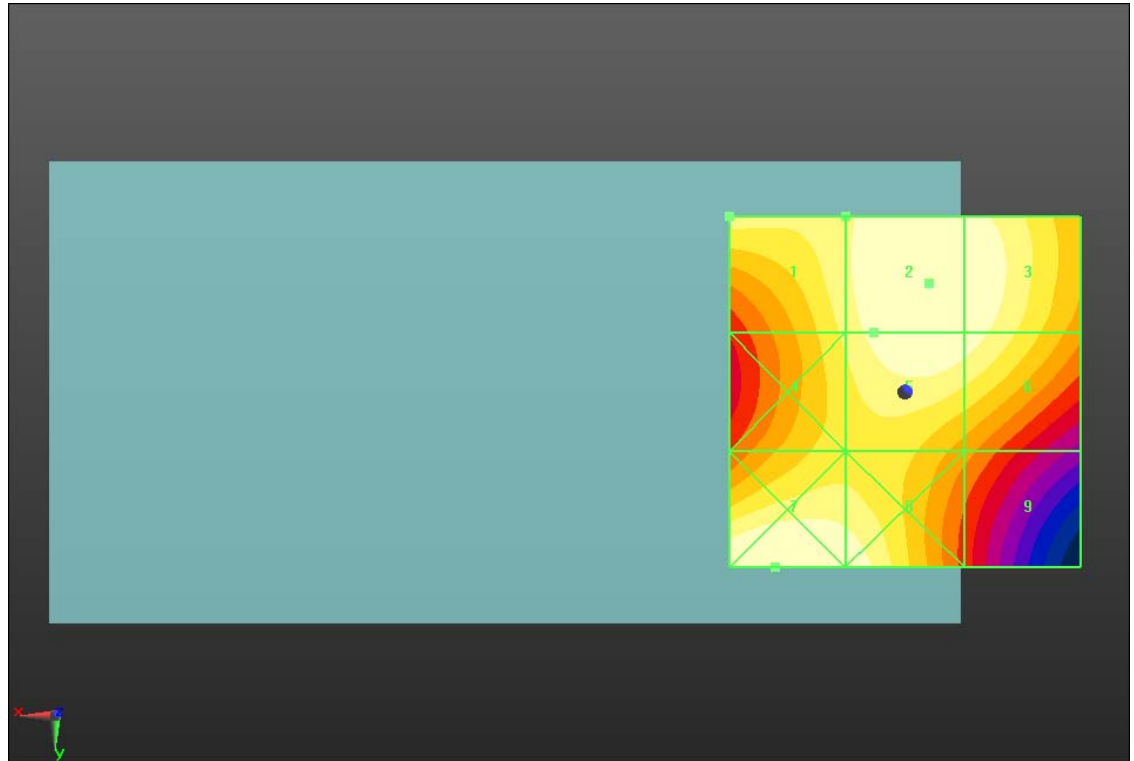
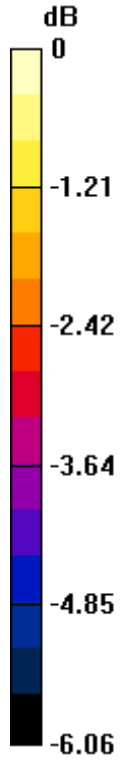
Total = 0.195 A/m
H Category: M3
Location: 25, -25, 8.7 mm

Author Data
Daoud Attayi

Dates of Test
Jan. 31, Feb. 17, May 31-June 01, 2012

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0 dB = 0.170A/m = -15.39 dB A/m

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Date/Time: 5/31/2012 11:23:23 PM

Test Laboratory: RIM Testing Services

HAC RF_H-Field_UMTS_Band_II

DUT: BlackBerry Smartphone; Type: Sample ; Serial: 2A099B03

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/m³

Phantom section: RF Section

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

DASY Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 11/8/2011
- Sensor-Surface: (Fix Surface), z = 8.7
- Electronics: DAE3 Sn473; Calibrated: 1/13/2012
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA; Serial: **Not Specified**
- DASY52 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 = 0.07 dB

PMR not calibrated. PMF = 1.000 is applied.

H-field emissions = 0.08 A/m

Near-field category: M4 (AWF 0 dB)

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PMF scaled H-field

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

Cursor:

Total = 0.088 A/m

H Category: M4

Location: 19.5, 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 = 0.04 dB

PMR not calibrated. PMF = 1.000 is applied.

H-field emissions = 0.08 A/m

Near-field category: M4 (AWF 0 dB)

PMF scaled H-field

Grid 1 M4 0.08 A/m	Grid 2 M4 0.08 A/m	Grid 3 M4 0.08 A/m
Grid 4 M4 0.07 A/m	Grid 5 M4 0.08 A/m	Grid 6 M4 0.07 A/m
Grid 7 M4 0.08 A/m	Grid 8 M4 0.08 A/m	Grid 9 M4 0.06 A/m

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Cursor:

Total = 0.083 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 = -0.12 dB

PMR not calibrated. PMF = 1.000 is applied.

H-field emissions = 0.08 A/m

Near-field category: M4 (AWF 0 dB)

PMF scaled H-field

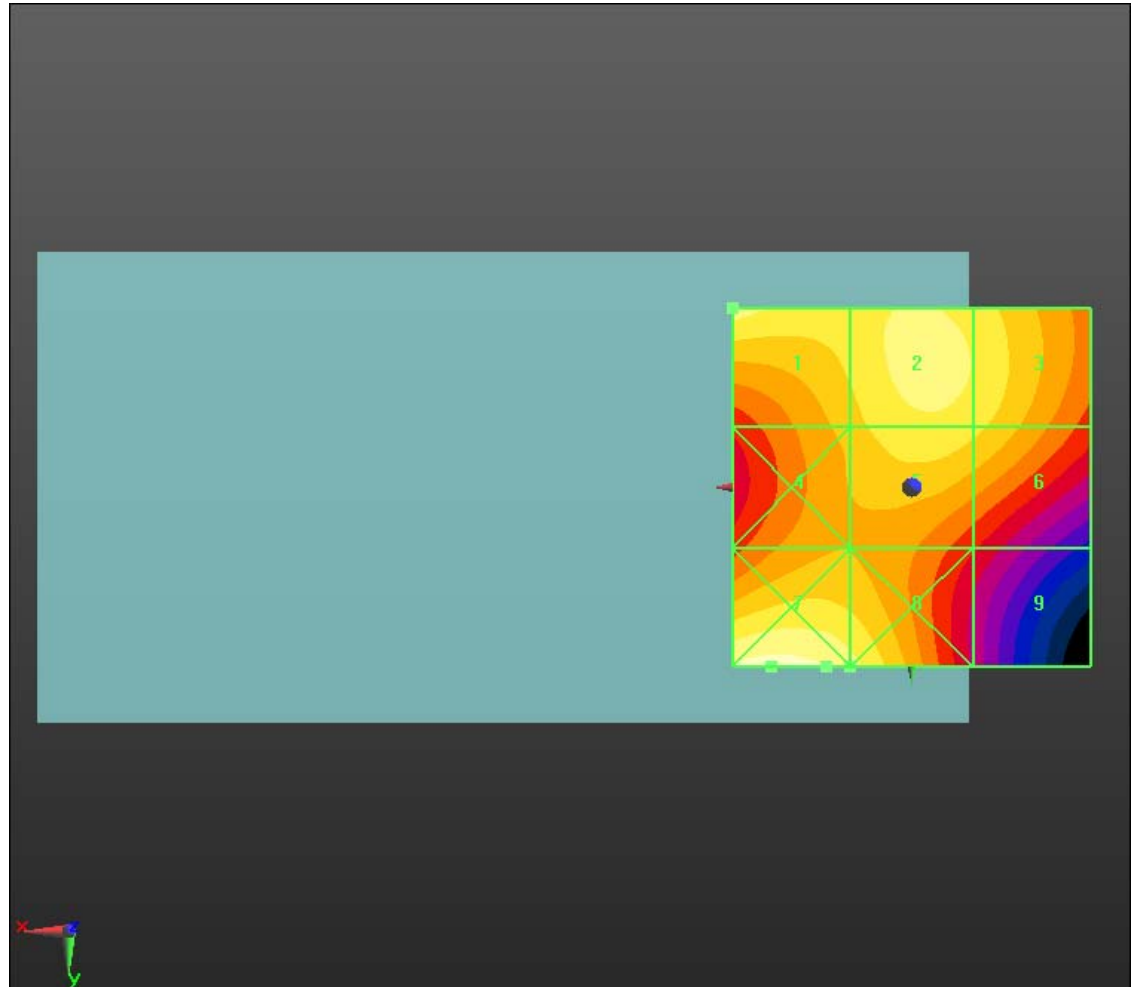
Grid 1 M4 0.08 A/m	Grid 2 M4 0.08 A/m	Grid 3 M4 0.07 A/m
Grid 4 M4 0.07 A/m	Grid 5 M4 0.07 A/m	Grid 6 M4 0.07 A/m
Grid 7 M4 0.08 A/m	Grid 8 M4 0.07 A/m	Grid 9 M4 0.06 A/m

Author Data
Daoud Attayi

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Jan. 31, Feb. 17, May 31-June 01, 2012

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