

Author Data
Daoud Attayi

Dates of Test

Sep 08-29, 2009

Report No

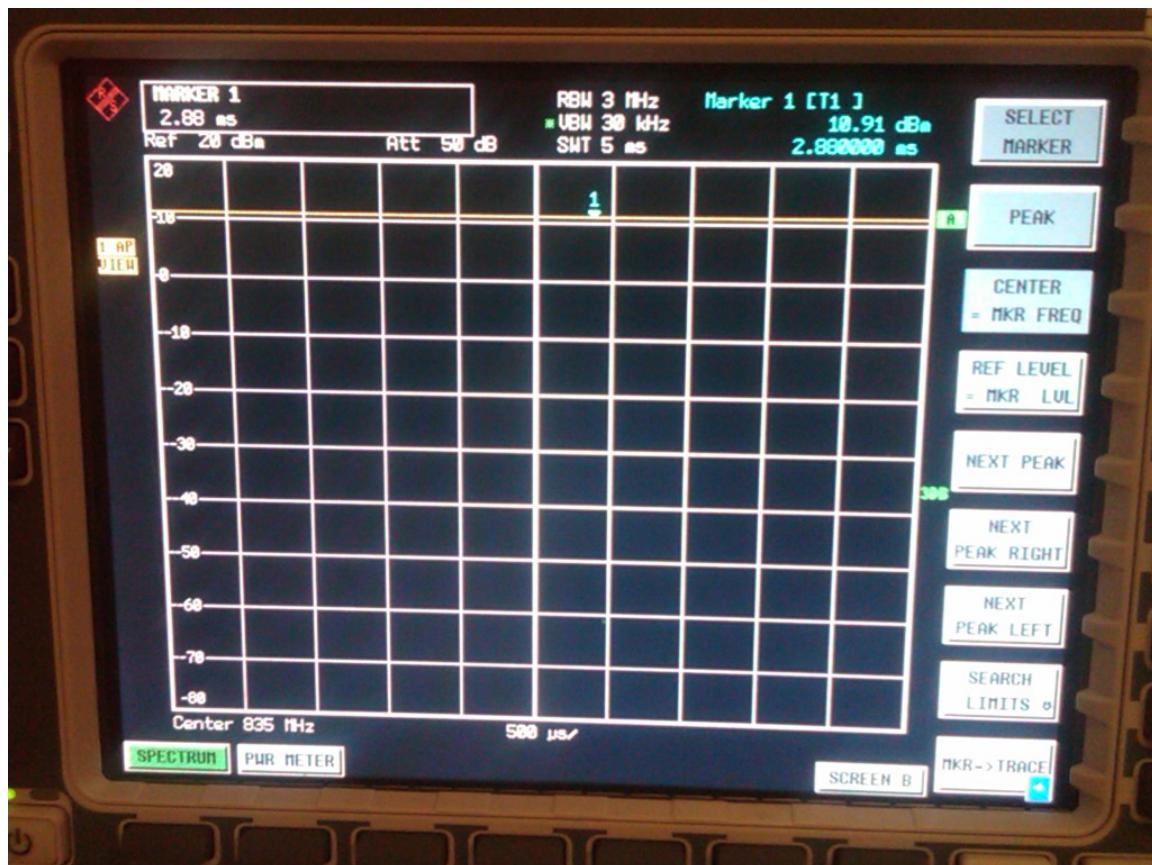
RTS-2068-0909-34 Rev 1

FCC ID

L6ARCL20CW

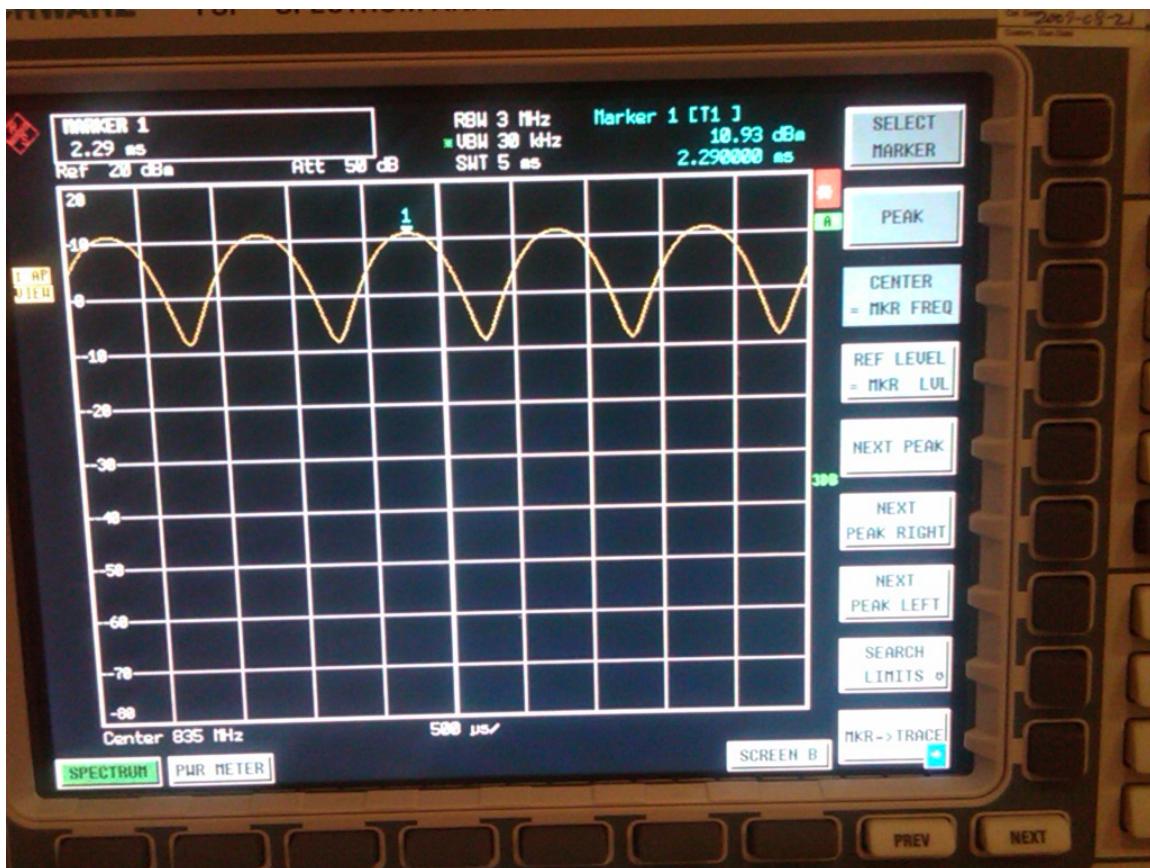
Annex A: Measurement data and plots

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



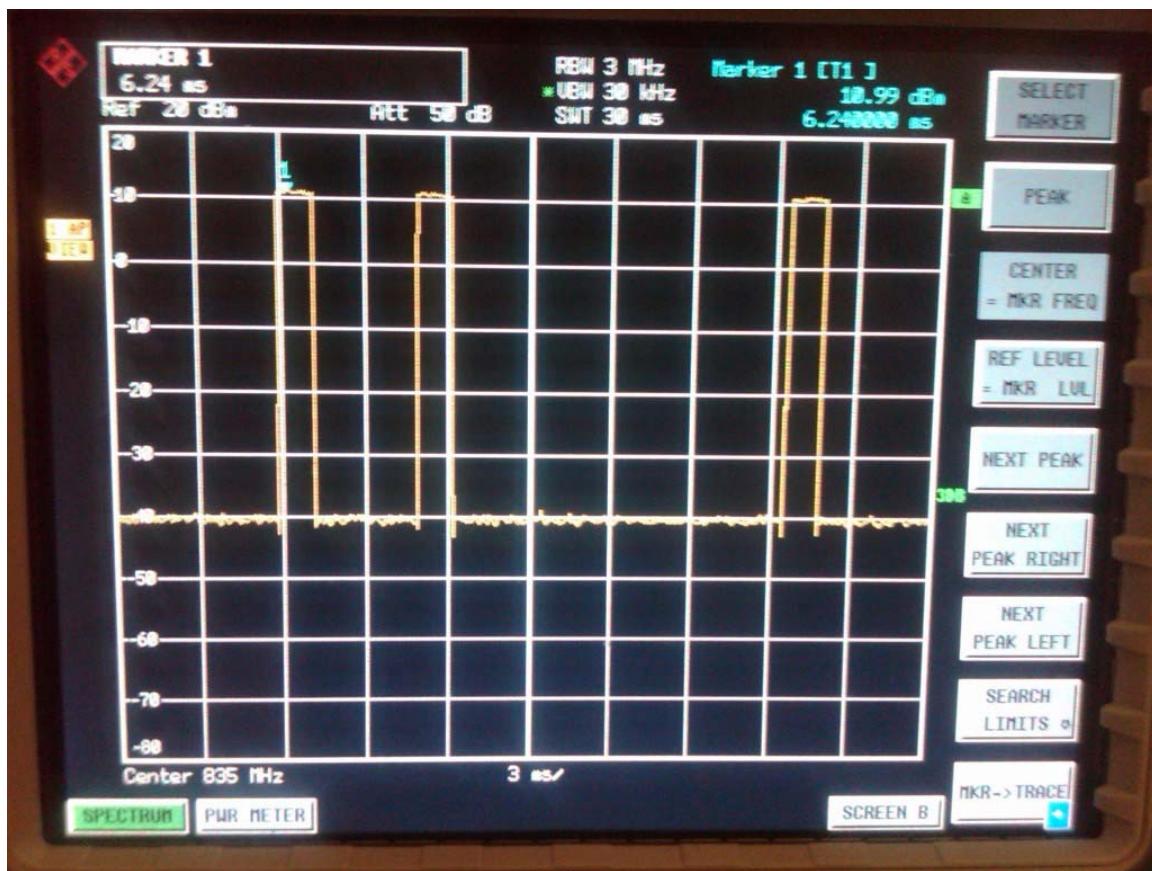
0 Hz Span CW Plot (835MHz)

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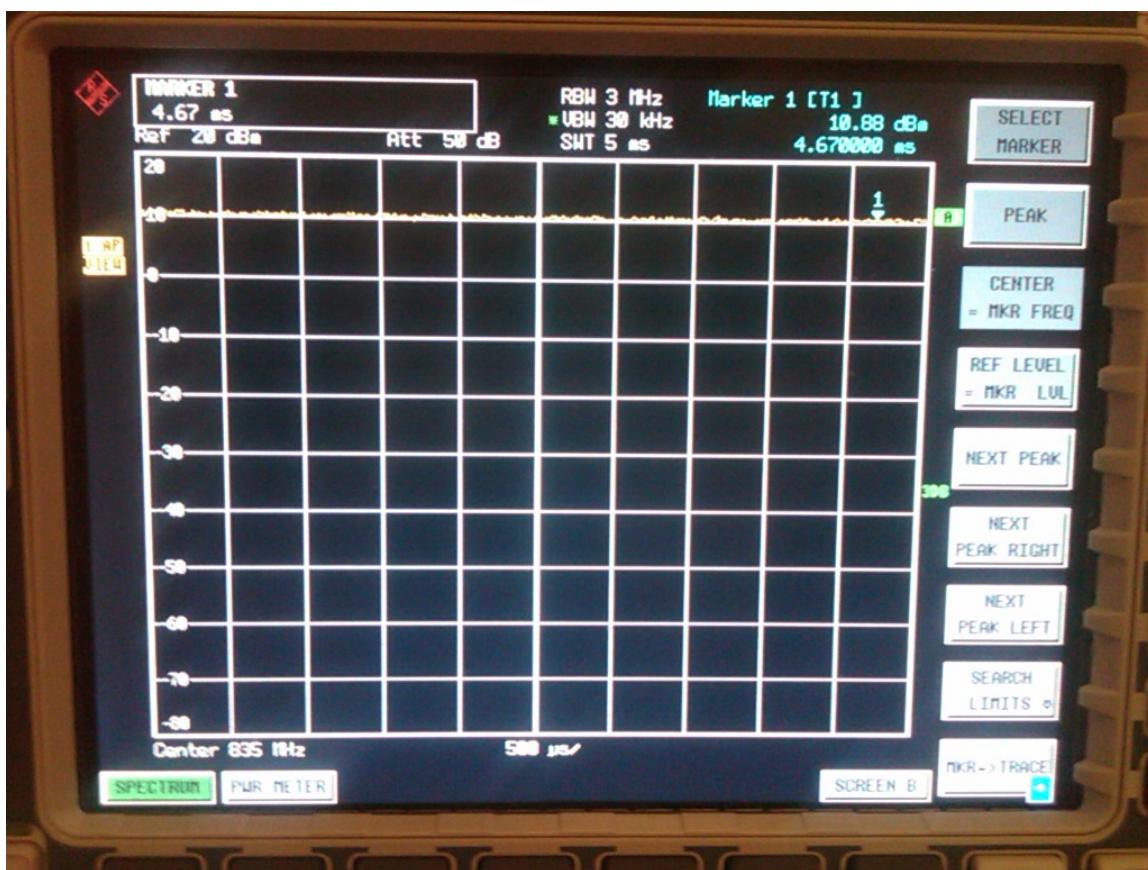
0 Hz Span 80% AM Plot (835MHz)

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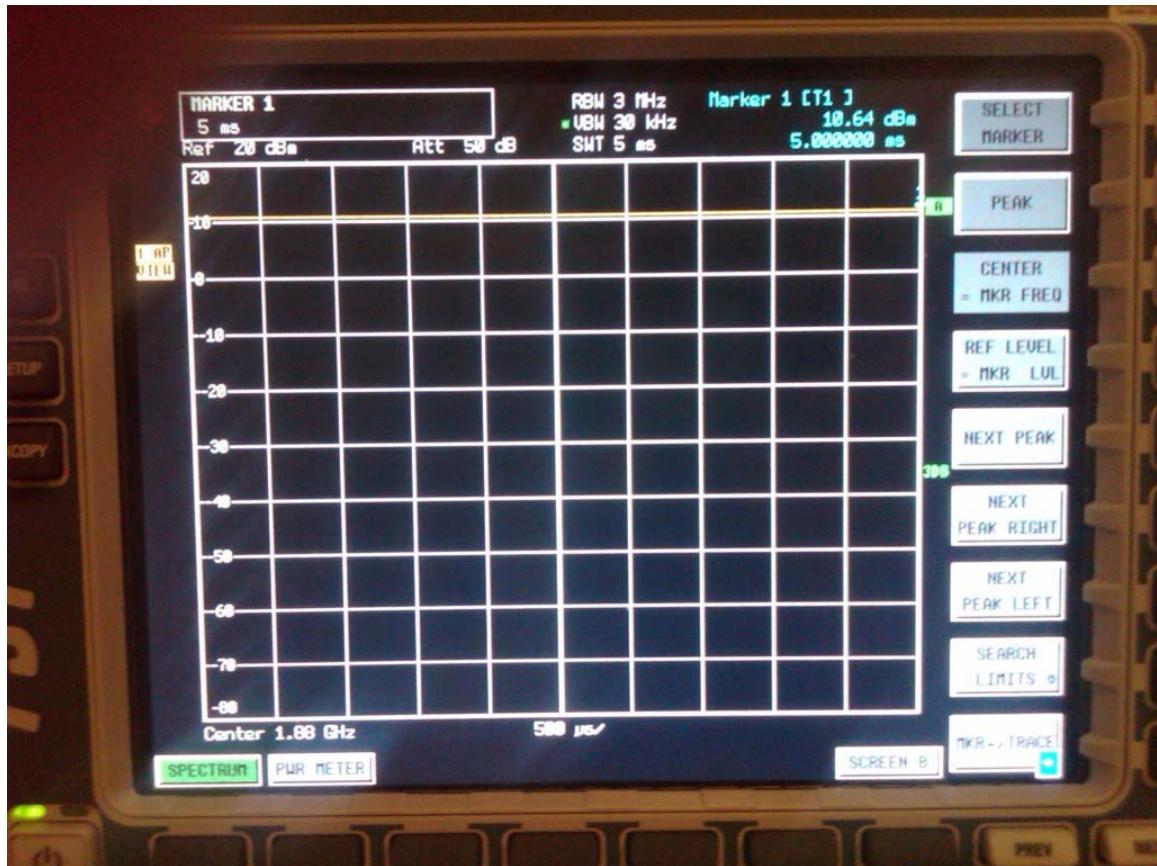
0 Hz Span CDMA 1/8th (835MHz)

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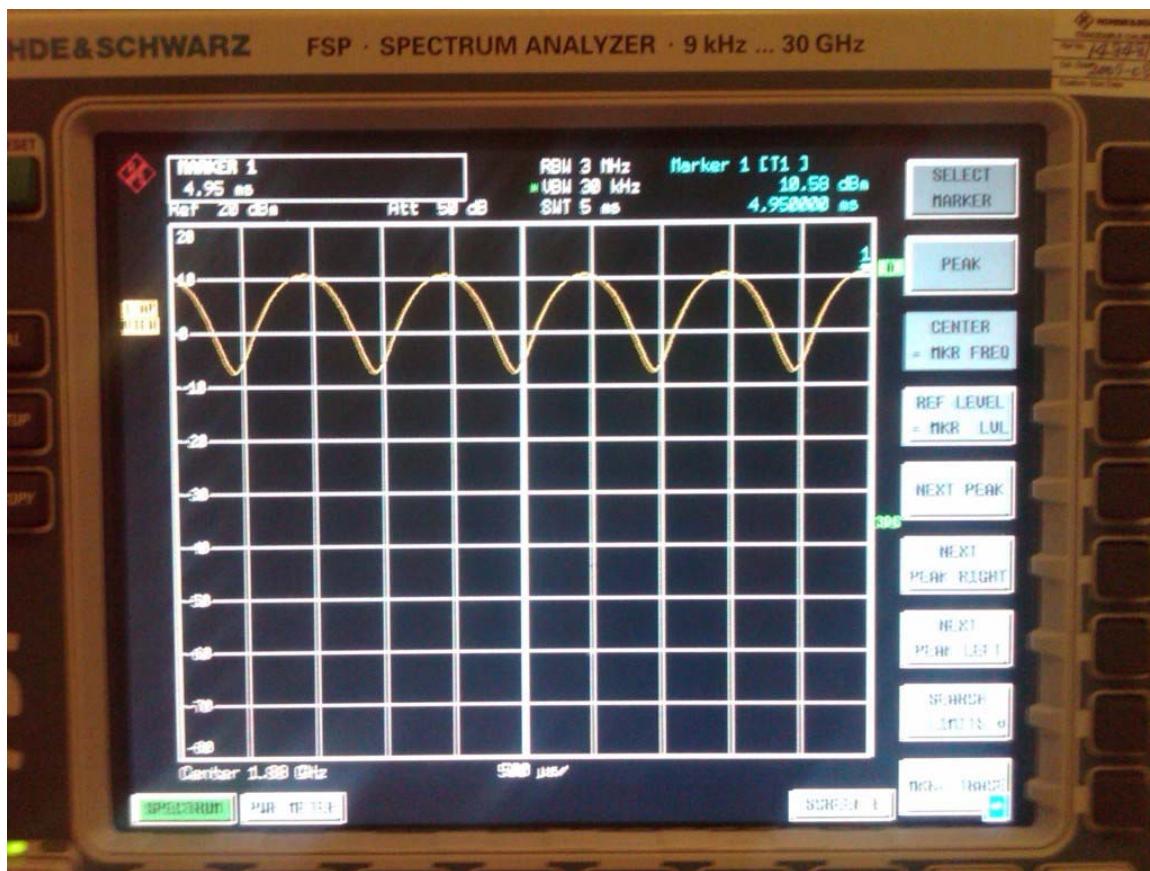
0 Hz Span CDMA (835MHz)

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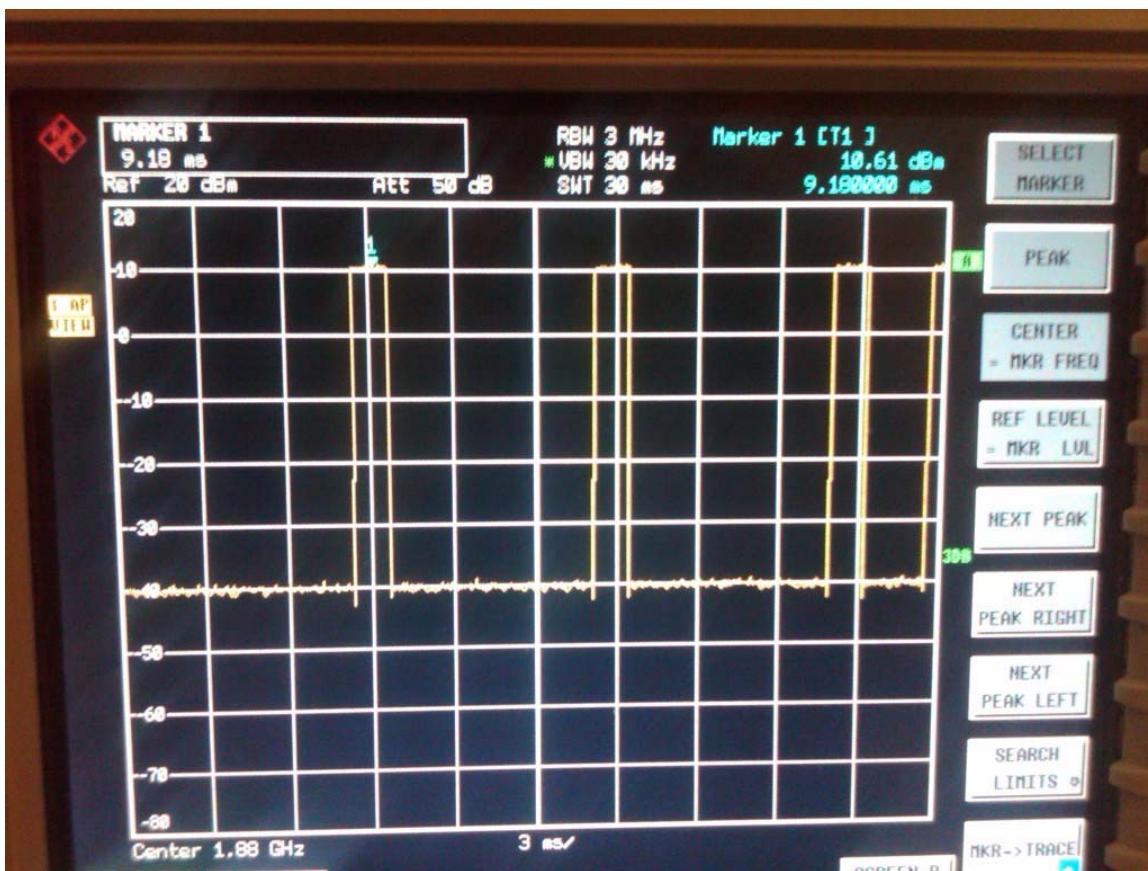
0 Hz Span CW Plot (1880MHz)

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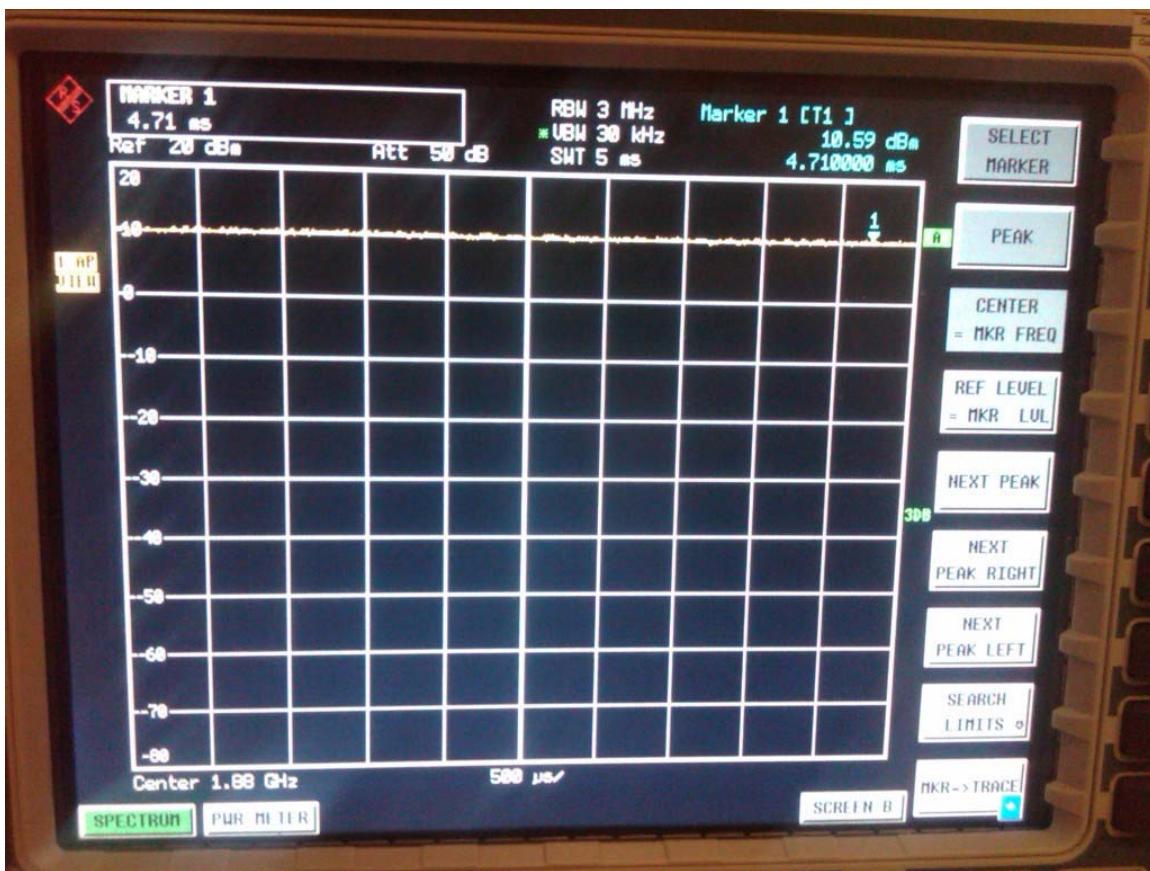
0 Hz Span 80% AM Plot (1880MHz)

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

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0 Hz Span CDMA (1880MHz)

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A.2 Dipole validation and probe modulation factor plots

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Date/Time: 08/09/2009 2:34:58 PM

Test Laboratory: RTS

File Name: [HAC_E_Dipole_CW835_20.00dBm.da4](#)

DUT: HAC-Dipole 835 MHz; Type: D835V3; Serial: Not Specified

Program Name: HAC RF E Dipole

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

Medium parameters used: $\sigma = 0$ mho/m, $\epsilon_r = 1$; $\rho = 1000$ kg/m³

Phantom section: RF Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 08/01/2009
- Sensor-Surface: 0mm (Fix Surface) Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 03/03/2009
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

E Scan - measurement distance from the probe sensor center to CD835 Dipole = 10mm/Hearing Aid Compatibility Test (5x37x1):

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

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 107.5 V/m; Power Drift = -0.001 dB

Maximum value of Total (measured) = 163.6 V/m

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

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

Maximum value of peak Total field = 166.6 V/m

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 107.5 V/m; Power Drift = -0.001 dB

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

Peak E-field in V/m

Grid 1	Grid 2	Grid 3
151.1 M4	161.4 M4	161.2 M4
Grid 4 84.1 M4	Grid 5 85.8 M4	Grid 6 82.6 M4
Grid 7 166.0 M4	Grid 8 166.6 M4	Grid 9 147.9 M4



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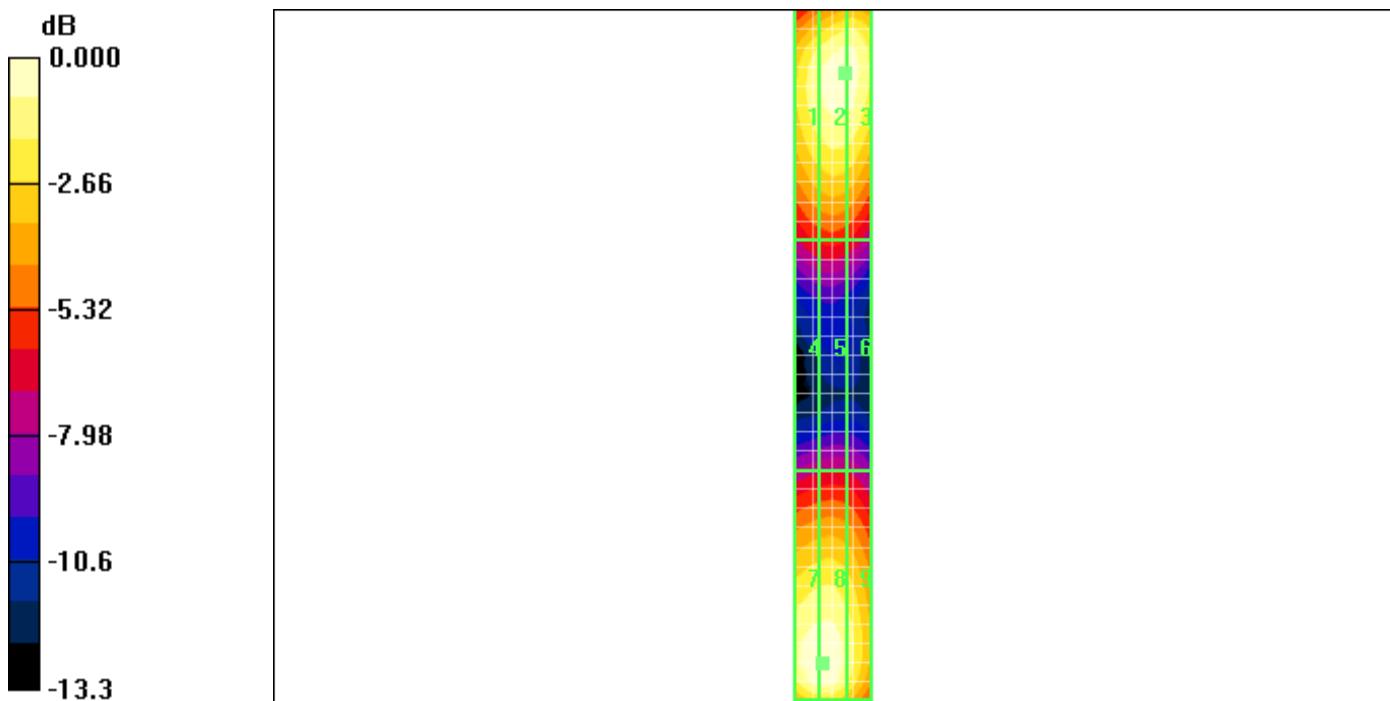
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0 dB = 166.6V/m

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Date/Time: 08/09/2009 12:23:41 PM

Test Laboratory: RTS

File Name: [HAC_E_Dipole_CW835_PMF_CDMA.da4](#)

DUT: HAC-Dipole 835 MHz; Type: D835V3; Serial: Not Specified

Program Name: HAC RF E Dipole

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

Medium parameters used: $\sigma = 0$ mho/m, $\epsilon_r = 1$; $\rho = 1000$ kg/m³

Phantom section: RF Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 08/01/2009
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 03/03/2009
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**E Scan - measurement distance from the probe sensor center to
CD835 Dipole = 10mm/Hearing Aid Compatibility Test (5x37x1):**

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

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 39.0 V/m; Power Drift = -0.156 dB

Maximum value of Total (measured) = 59.5 V/m

E Scan - measurement distance from the probe sensor center to

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CD835 Dipole = 10mm/Hearing Aid Compatibility Test (41x361x1):

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

Maximum value of peak Total field = 60.2 V/m

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 39.0 V/m; Power Drift = -0.156 dB

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

Peak E-field in V/m

Grid 1	Grid 2	Grid 3
55.3 M4	57.5 M4	56.7 M4
Grid 4 30.7 M4	Grid 5 30.8 M4	Grid 6 29.2 M4
Grid 7 59.8 M4	Grid 8 60.2 M4	Grid 9 56.0 M4



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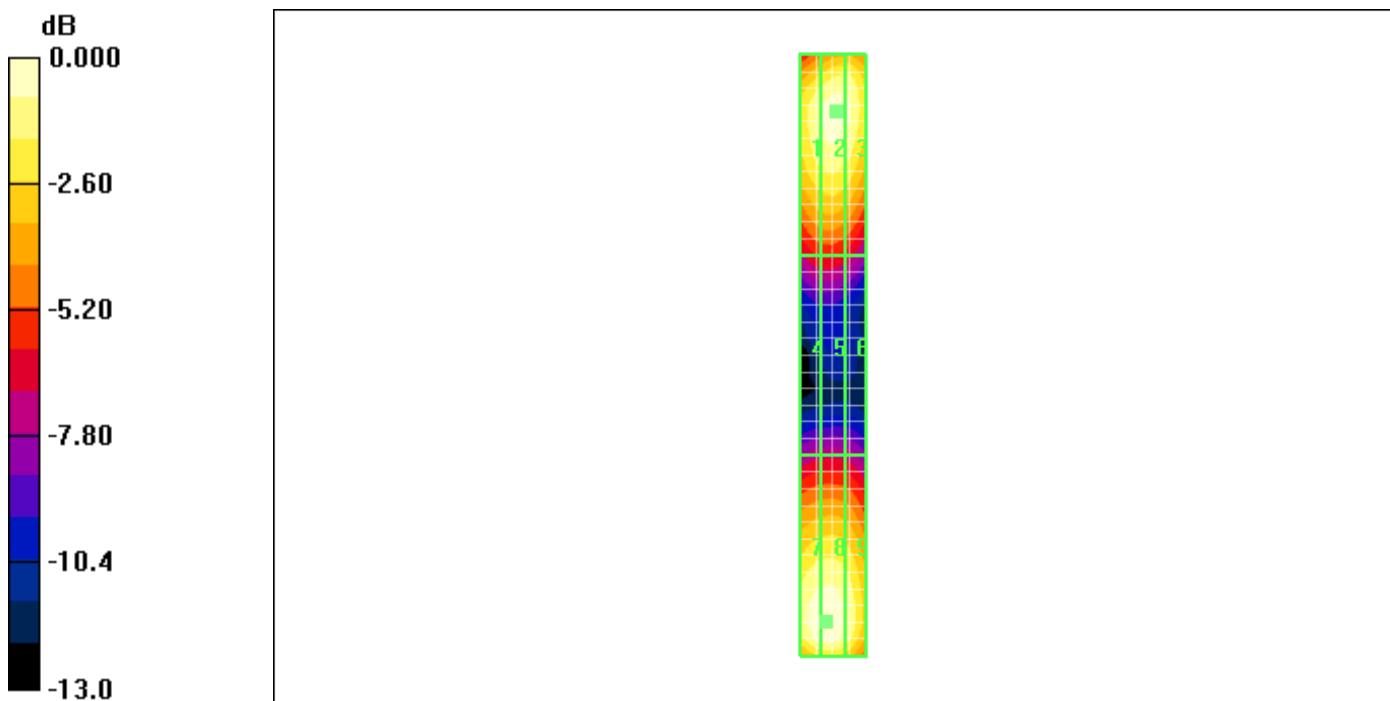
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Date/Time: 08/09/2009 12:32:27 PM

Test Laboratory: RTS

File Name: [HAC_E_Dipole_AM835_PMF_CDMA.da4](#)

DUT: HAC-Dipole 835 MHz; Type: D835V3; Serial: Not Specified

Program Name: HAC RF E Dipole

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

Medium parameters used: $\sigma = 0$ mho/m, $\epsilon_r = 1$; $\rho = 1000$ kg/m³

Phantom section: RF Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 08/01/2009
- Sensor-Surface: 0mm (Fix Surface) Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 03/03/2009
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

E Scan - measurement distance from the probe sensor center to CD835 Dipole = 10mm/Hearing Aid Compatibility Test (5x37x1):

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

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 24.6 V/m; Power Drift = 0.045 dB

Maximum value of Total (measured) = 38.3 V/m

E Scan - measurement distance from the probe sensor center to

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CD835 Dipole = 10mm/Hearing Aid Compatibility Test (41x361x1):

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

Maximum value of peak Total field = 38.5 V/m

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 24.6 V/m; Power Drift = 0.045 dB

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

Peak E-field in V/m

Grid 1 35.4 M4	Grid 2 36.7 M4	Grid 3 36.0 M4
Grid 4 19.6 M4	Grid 5 19.8 M4	Grid 6 18.6 M4
Grid 7 37.9 M4	Grid 8 38.5 M4	Grid 9 36.2 M4



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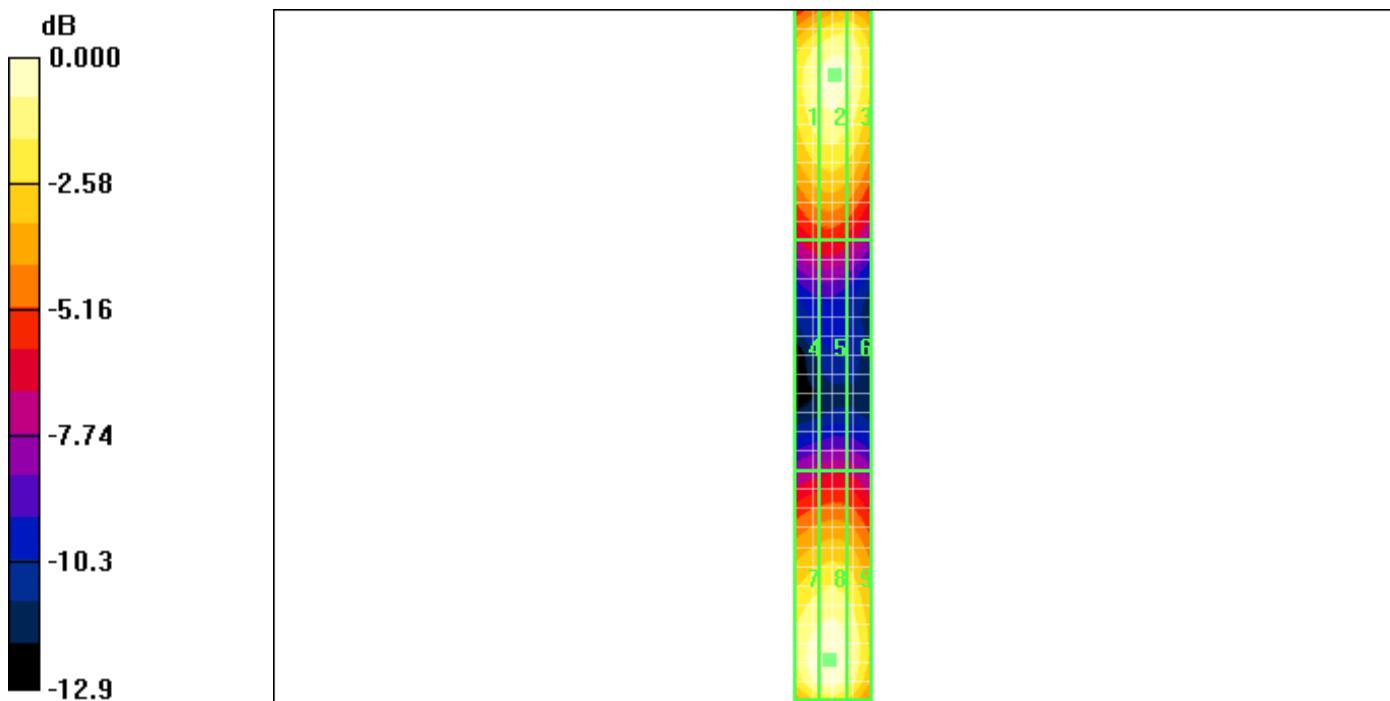
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0 dB = 38.5V/m

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Date/Time: 08/09/2009 12:08:00 PM

Test Laboratory: RTS

File Name: [HAC_E_Dipole_CDMA835_one_eighth.da4](#)

DUT: HAC-Dipole 835 MHz; Type: D835V3; Serial: Not Specified

Program Name: HAC RF E Dipole

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

Medium parameters used: $\sigma = 0$ mho/m, $\epsilon_r = 1$; $\rho = 1000$ kg/m³

Phantom section: RF Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 08/01/2009
- Sensor-Surface: 0mm (Fix Surface) Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 03/03/2009
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

E Scan - measurement distance from the probe sensor center to CD835 Dipole = 10mm/Hearing Aid Compatibility Test (5x37x1):

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

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 15.2 V/m; Power Drift = 0.332 dB

Maximum value of Total (measured) = 23.7 V/m

E Scan - measurement distance from the probe sensor center to

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CD835 Dipole = 10mm/Hearing Aid Compatibility Test (41x361x1):

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

Maximum value of peak Total field = 23.8 V/m

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 15.2 V/m; Power Drift = 0.332 dB

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

Peak E-field in V/m

Grid 1	Grid 2	Grid 3
20.3 M4	23.6 M4	23.8 M4
Grid 4	Grid 5	Grid 6
11.0 M4	11.3 M4	11.0 M4
Grid 7	Grid 8	Grid 9
21.1 M4	22.2 M4	20.1 M4



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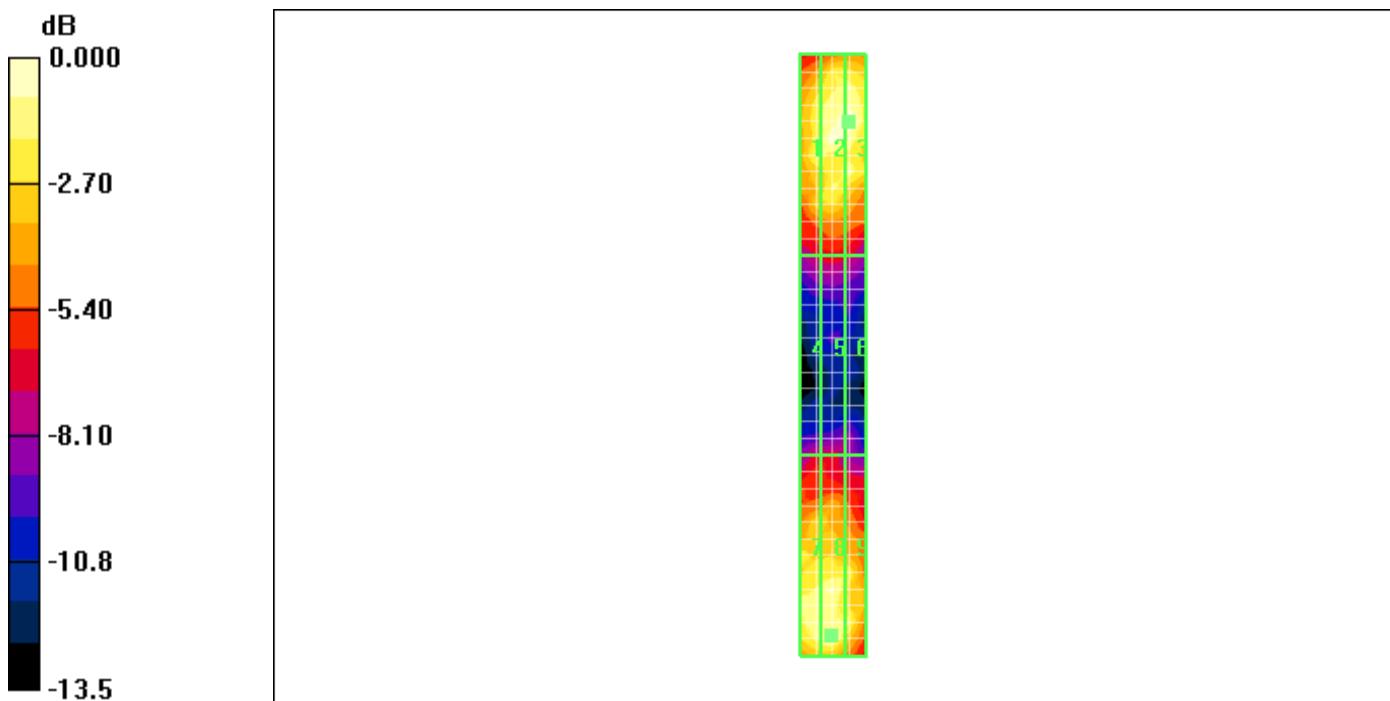
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0 dB = 23.8V/m

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Date/Time: 08/09/2009 11:58:56 AM

Test Laboratory: RTS

File Name: [HAC_E_Dipole_CDMA835.da4](#)

DUT: HAC-Dipole 835 MHz; Type: D835V3; Serial: Not Specified

Program Name: HAC RF E Dipole

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

Medium parameters used: $\sigma = 0$ mho/m, $\epsilon_r = 1$; $\rho = 1000$ kg/m³

Phantom section: RF Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 08/01/2009
- Sensor-Surface: 0mm (Fix Surface) Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 03/03/2009
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

E Scan - measurement distance from the probe sensor center to CD835 Dipole = 10mm/Hearing Aid Compatibility Test (5x37x1):

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

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 38.7 V/m; Power Drift = 0.000 dB

Maximum value of Total (measured) = 59.2 V/m

E Scan - measurement distance from the probe sensor center to

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CD835 Dipole = 10mm/Hearing Aid Compatibility Test (41x361x1):

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

Maximum value of peak Total field = 59.8 V/m

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 38.7 V/m; Power Drift = 0.000 dB

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

Peak E-field in V/m

Grid 1	Grid 2	Grid 3
53.2 M4	59.7 M4	59.8 M4
Grid 4 29.8 M4	Grid 5 31.2 M4	Grid 6 30.6 M4
Grid 7	Grid 8	Grid 9



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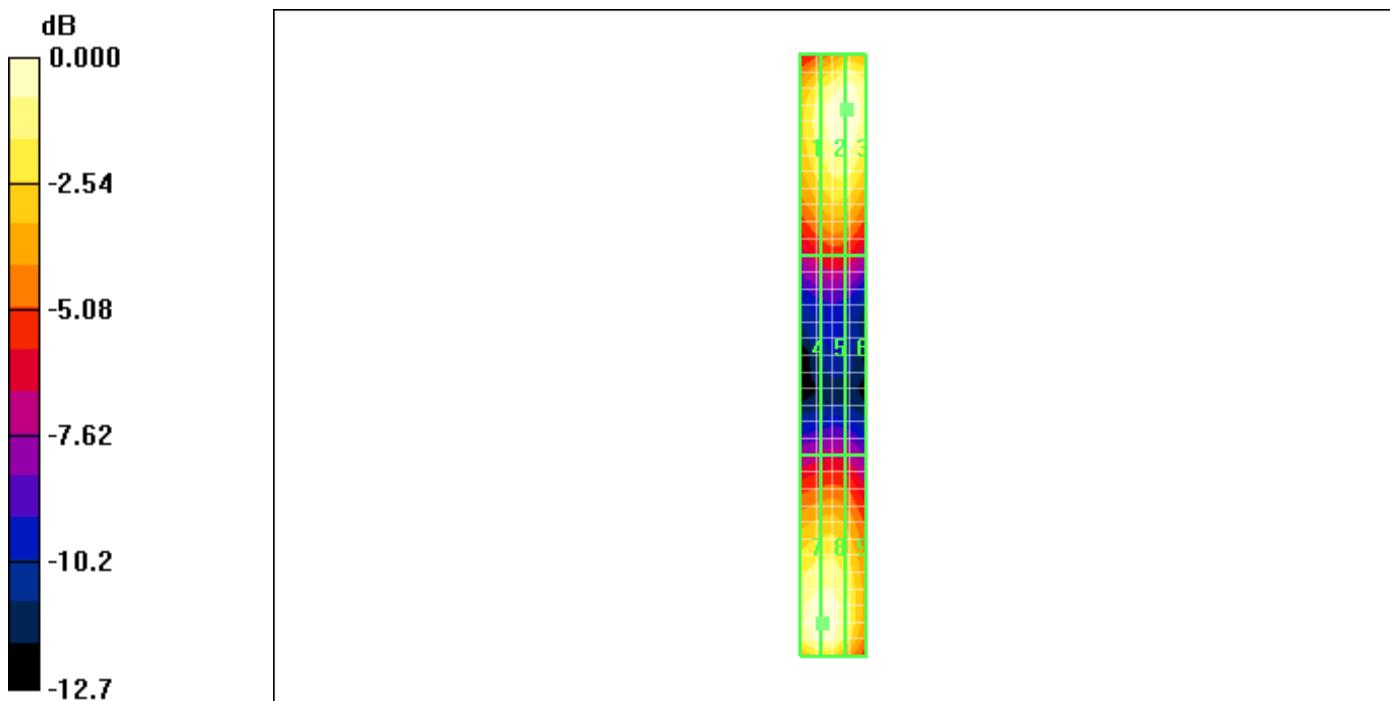
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0 dB = 59.8V/m

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Date/Time: 08/09/2009 2:25:45 PM

Test Laboratory: RTS

File Name: [HAC_E_Dipole_CW1880_20.00dBm.da4](#)

DUT: HAC Dipole 1880 MHz; Type: CD1880V3; Serial: Not Specified

Program Name: HAC RF E Dipole

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

Medium parameters used: $\sigma = 0$ mho/m, $\epsilon_r = 1$; $\rho = 1000$ kg/m³

Phantom section: RF Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 08/01/2009
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 03/03/2009
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

E Scan - measurement distance from the probe sensor center to CD1880 Dipole = 10mm/Hearing Aid Compatibility Test (5x19x1):

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

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 144.9 V/m; Power Drift = -0.037 dB

Maximum value of Total (measured) = 126.3 V/m

E Scan - measurement distance from the probe sensor center to

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CD1880 Dipole = 10mm/Hearing Aid Compatibility Test (41x181x1):

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

Maximum value of peak Total field = 127.9 V/m

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 144.9 V/m; Power Drift = -0.037 dB

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

Peak E-field in V/m

Grid 1 123.3 M2	Grid 2 127.0 M2	Grid 3 124.3 M2
Grid 4 86.0 M3	Grid 5 87.9 M3	Grid 6 84.1 M3
Grid 7 123.7 M2	Grid 8 127.9 M2	Grid 9 123.7 M2

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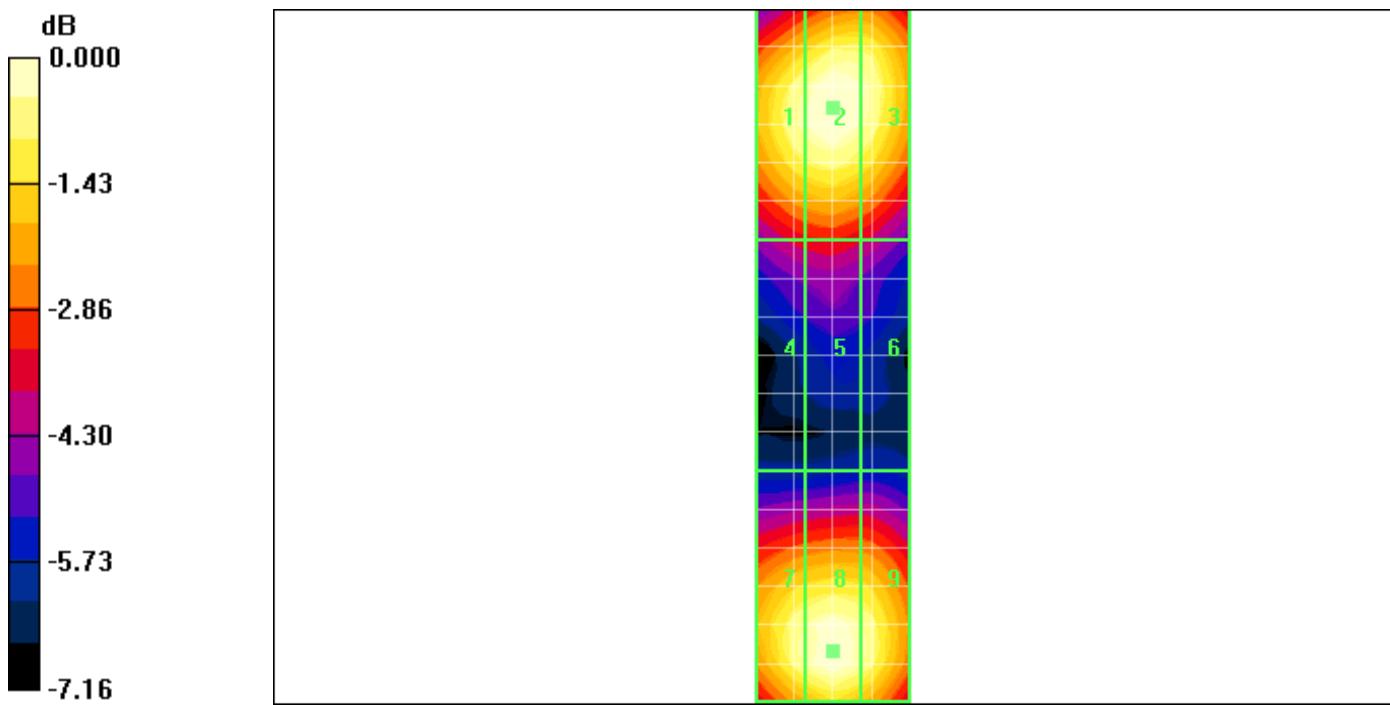
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Date/Time: 08/09/2009 11:34:21 AM

Test Laboratory: RTS

File Name: [HAC_E_Dipole_CW1880_PMF_CDMA.da4](#)

DUT: HAC Dipole 1880 MHz; Type: CD1880V3; Serial: Not Specified

Program Name: HAC RF E Dipole

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

Medium parameters used: $\sigma = 0$ mho/m, $\epsilon_r = 1$; $\rho = 1000$ kg/m³

Phantom section: RF Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 08/01/2009
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 03/03/2009
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

E Scan - measurement distance from the probe sensor center to CD1880 Dipole = 10mm/Hearing Aid Compatibility Test (5x19x1):

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

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 50.0 V/m; Power Drift = -0.065 dB

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

E Scan - measurement distance from the probe sensor center to

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CD1880 Dipole = 10mm/Hearing Aid Compatibility Test (41x181x1):

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

Maximum value of peak Total field = 44.4 V/m

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 50.0 V/m; Power Drift = -0.065 dB

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

Peak E-field in V/m

Grid 1 42.1 M4	Grid 2 43.6 M4	Grid 3 42.8 M4
Grid 4 29.5 M4	Grid 5 30.3 M4	Grid 6 29.2 M4
Grid 7 43.4 M4	Grid 8 44.4 M4	Grid 9 42.4 M4



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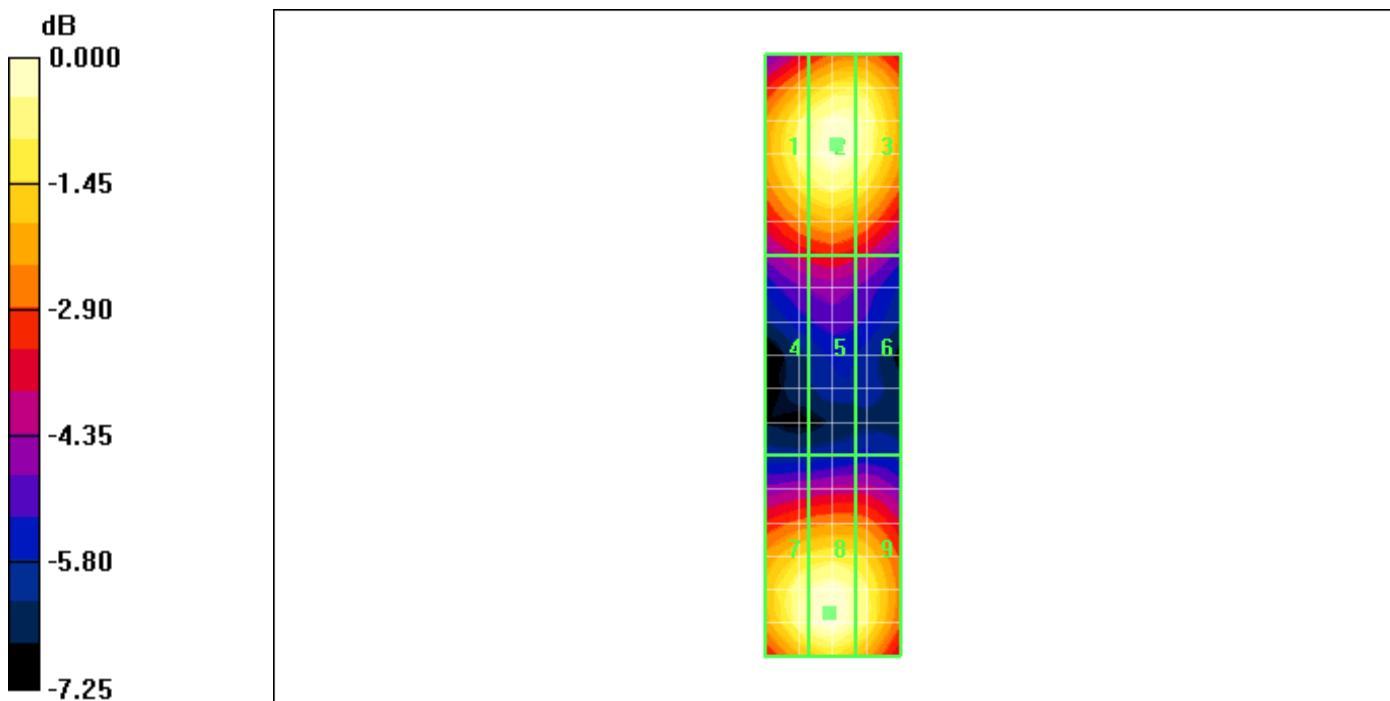
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Date/Time: 08/09/2009 12:52:30 PM

Test Laboratory: RTS

File Name: [HAC_E_Dipole_AM_1880_PMF_CDMA.da4](#)

DUT: HAC Dipole 1880 MHz; Type: CD1880V3; Serial: Not Specified

Program Name: HAC RF E Dipole

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

Medium parameters used: $\sigma = 0$ mho/m, $\epsilon_r = 1$; $\rho = 1000$ kg/m³

Phantom section: RF Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 08/01/2009
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 03/03/2009
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

E Scan - measurement distance from the probe sensor center to CD1880 Dipole = 10mm/Hearing Aid Compatibility Test (5x19x1):

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

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 31.7 V/m; Power Drift = 0.000 dB

Maximum value of Total (measured) = 27.6 V/m

E Scan - measurement distance from the probe sensor center to

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CD1880 Dipole = 10mm/Hearing Aid Compatibility Test (41x181x1):

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

Maximum value of peak Total field = 28.1 V/m

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 31.7 V/m; Power Drift = 0.000 dB

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

Peak E-field in V/m

Grid 1 26.6 M4	Grid 2 27.9 M4	Grid 3 27.7 M4
Grid 4 18.8 M4	Grid 5 19.2 M4	Grid 6 18.7 M4
Grid 7 27.4 M4	Grid 8 28.1 M4	Grid 9 26.8 M4



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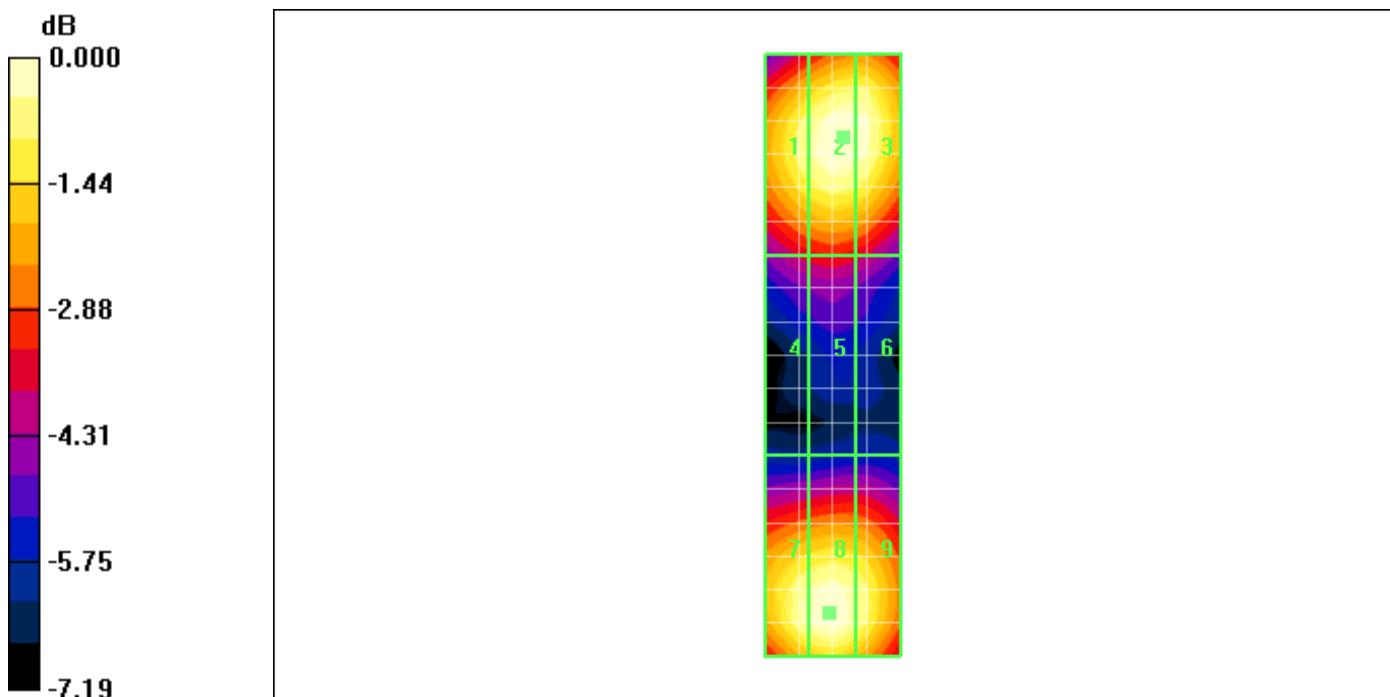
Dates of Test

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Date/Time: 08/09/2009 11:41:42 AM

Test Laboratory: RTS

File Name: [HAC_E_Dipole_CDMA1880_one_eighth_R2.da4](#)

DUT: HAC Dipole 1880 MHz; Type: CD1880V3; Serial: Not Specified

Program Name: HAC RF E Dipole

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

Medium parameters used: $\sigma = 0$ mho/m, $\epsilon_r = 1$; $\rho = 1000$ kg/m³

Phantom section: RF Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 08/01/2009
- Sensor-Surface: 0mm (Fix Surface) Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 03/03/2009
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

E Scan - measurement distance from the probe sensor center to CD1880 Dipole = 10mm/Hearing Aid Compatibility Test (5x19x1):

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

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 18.1 V/m; Power Drift = -0.066 dB

Maximum value of Total (measured) = 17.7 V/m

E Scan - measurement distance from the probe sensor center to

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CD1880 Dipole = 10mm/Hearing Aid Compatibility Test (41x181x1):

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

Maximum value of peak Total field = 17.8 V/m

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 18.1 V/m; Power Drift = -0.066 dB

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

Peak E-field in V/m

Grid 1	Grid 2	Grid 3
15.6 M4	17.4 M4	16.9 M4
Grid 4	Grid 5	Grid 6
10.6 M4	12.1 M4	10.5 M4
Grid 7	Grid 8	Grid 9
16.1 M4	17.8 M4	17.0 M4



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Daoud Attayi

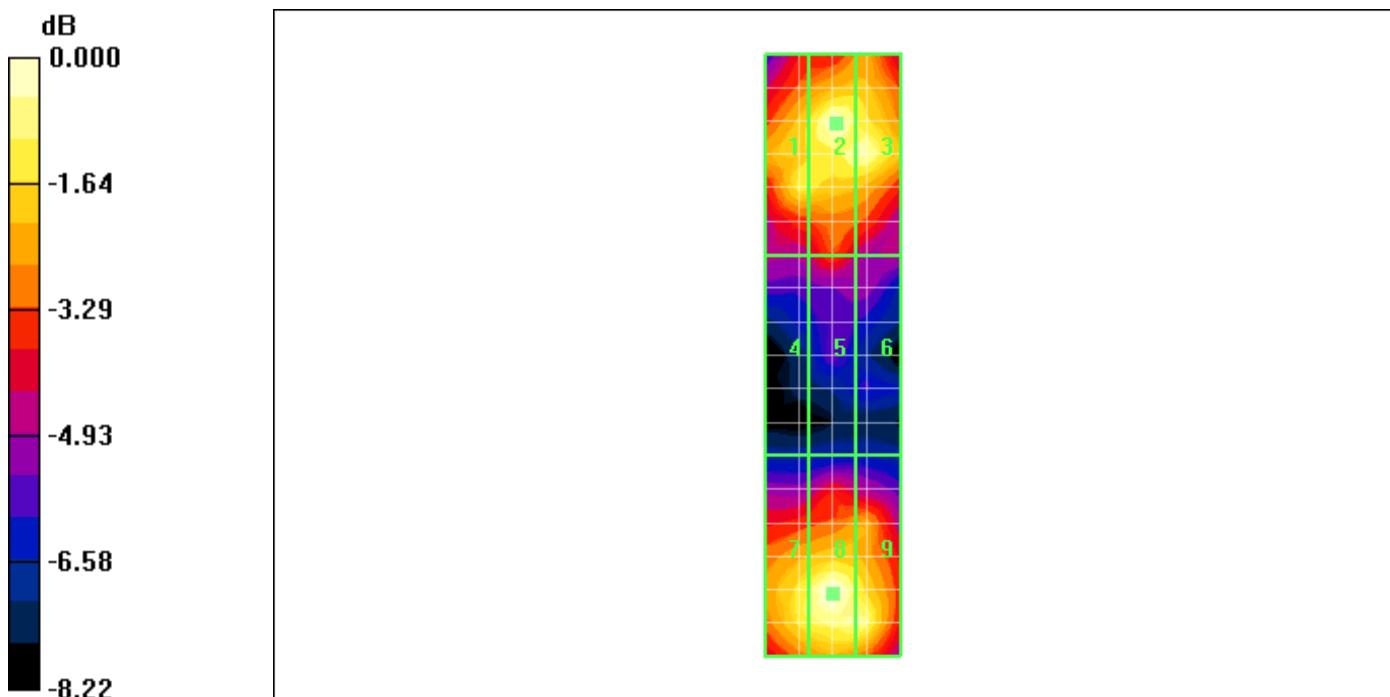
Dates of Test

Sep 08-29, 2009

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Date/Time: 08/09/2009 11:16:46 AM

Test Laboratory: RTS

File Name: [HAC_E_Dipole_CDMA1880.da4](#)

DUT: HAC Dipole 1880 MHz; Type: CD1880V3; Serial: Not Specified

Program Name: HAC RF E Dipole

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

Medium parameters used: $\sigma = 0$ mho/m, $\epsilon_r = 1$; $\rho = 1000$ kg/m³

Phantom section: RF Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 08/01/2009
- Sensor-Surface: 0mm (Fix Surface) Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 03/03/2009
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

E Scan - measurement distance from the probe sensor center to CD1880 Dipole = 10mm/Hearing Aid Compatibility Test (5x19x1):

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

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 51.2 V/m; Power Drift = -0.069 dB

Maximum value of Total (measured) = 44.4 V/m

E Scan - measurement distance from the probe sensor center to

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CD1880 Dipole = 10mm/Hearing Aid Compatibility Test (41x181x1):

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

Maximum value of peak Total field = 45.3 V/m

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 51.2 V/m; Power Drift = -0.069 dB

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

Peak E-field in V/m

Grid 1 42.0 M4	Grid 2 42.9 M4	Grid 3 42.2 M4
Grid 4 29.6 M4	Grid 5 30.1 M4	Grid 6 28.7 M4
Grid 7 43.6 M4	Grid 8 45.3 M4	Grid 9 43.9 M4



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Daoud Attayi

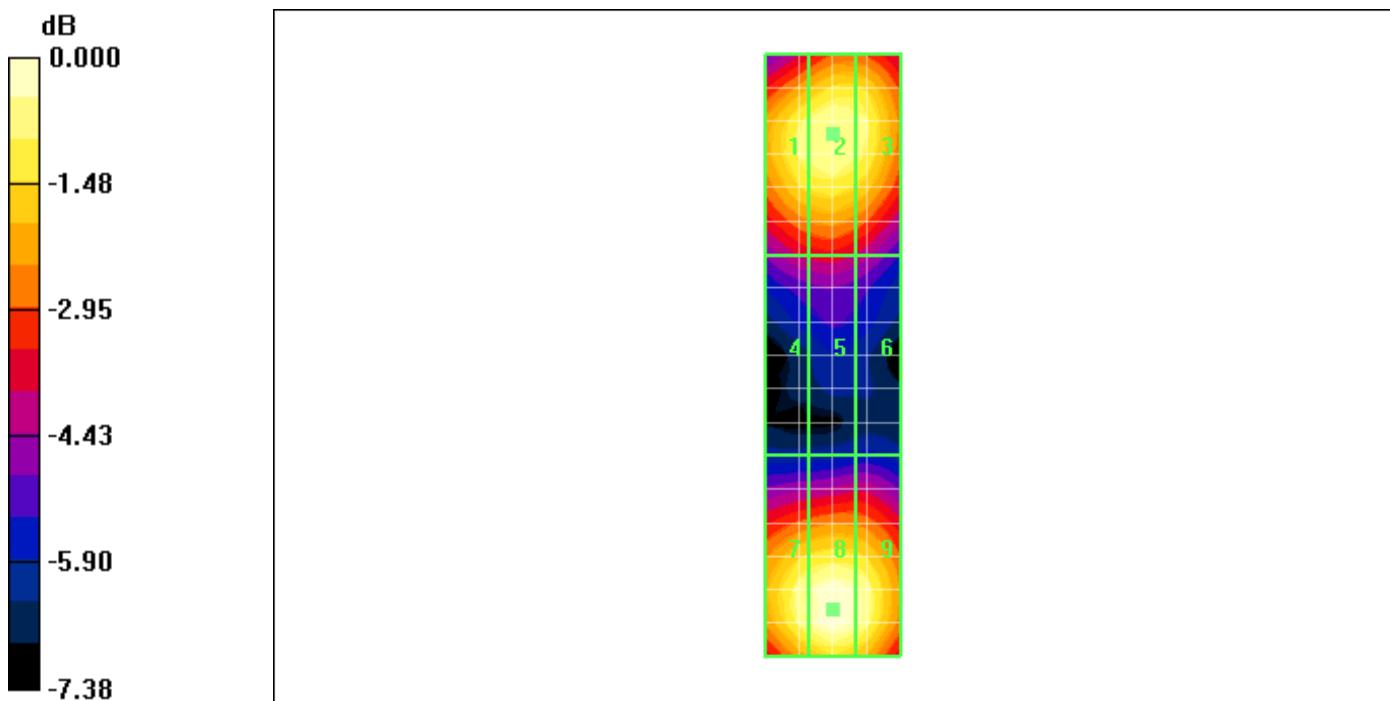
Dates of Test

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Date/Time: 08/09/2009 2:58:49 PM

Test Laboratory: RTS

File Name: [HAC_H_Dipole_CW835_20.00dBm.da4](#)

DUT: HAC-Dipole 835 MHz; Type: D835V3; Serial: Not Specified

Program Name: HAC RF H3DV6 Dipole

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

Medium parameters used: $\sigma = 0$ mho/m, $\epsilon_r = 1$; $\rho = 1$ kg/m³

Phantom section: RF Section

DASY4 Configuration:

- Probe: H3DV6 - SN6168; ; Calibrated: 03/03/2009
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 03/03/2009
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

H Scan - measurement distance from the probe sensor center to CD835 Dipole = 10mm/Hearing Aid Compatibility Test (5x13x1):

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

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.491 A/m; Power Drift = 0.032 dB

Maximum value of Total (measured) = 0.461 A/m

H Scan - measurement distance from the probe sensor center to

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CD835 Dipole = 10mm/Hearing Aid Compatibility Test (41x121x1):

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

Maximum value of peak Total field = 0.463 A/m

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.491 A/m; Power Drift = 0.032 dB

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

Peak H-field in A/m

Grid 1 0.436 M4	Grid 2 0.452 M4	Grid 3 0.433 M4
Grid 4 0.450 M4	Grid 5 0.463 M4	Grid 6 0.437 M4
Grid 7	Grid 8	Grid 9



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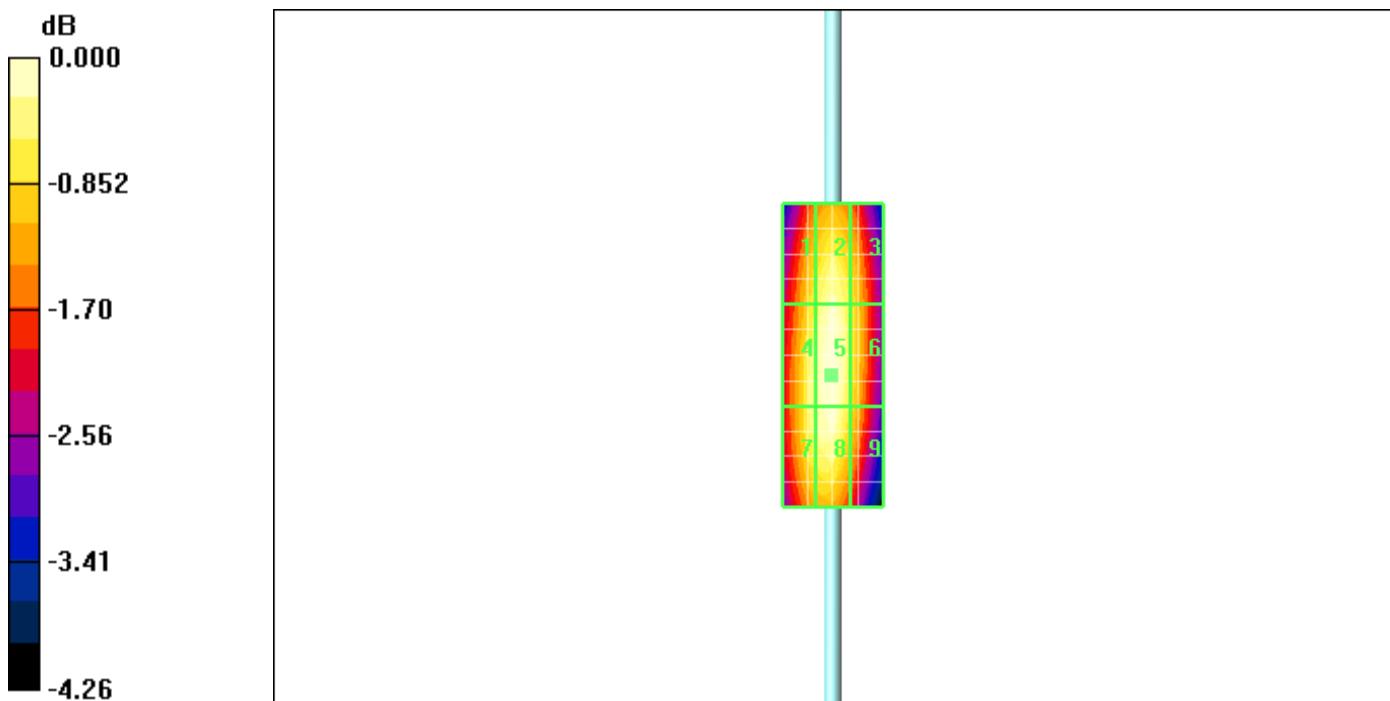
Dates of Test

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Date/Time: 08/09/2009 3:03:53 PM

Test Laboratory: RTS

File Name: [HAC_H_Dipole_CW835_PMF_CDMA.da4](#)

DUT: HAC-Dipole 835 MHz; Type: D835V3; Serial: Not Specified

Program Name: HAC RF H3DV6 Dipole

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

Medium parameters used: $\sigma = 0$ mho/m, $\epsilon_r = 1$; $\rho = 1$ kg/m³

Phantom section: RF Section

DASY4 Configuration:

- Probe: H3DV6 - SN6168; ; Calibrated: 03/03/2009
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 03/03/2009
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

H Scan - measurement distance from the probe sensor center to CD835 Dipole = 10mm/Hearing Aid Compatibility Test (5x13x1):

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

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.180 A/m; Power Drift = -0.025 dB

Maximum value of Total (measured) = 0.169 A/m

H Scan - measurement distance from the probe sensor center to

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CD835 Dipole = 10mm/Hearing Aid Compatibility Test (41x121x1):

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

Maximum value of peak Total field = 0.170 A/m

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.180 A/m; Power Drift = -0.025 dB

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

Peak H-field in A/m

Grid 1 0.158 M4	Grid 2 0.165 M4	Grid 3 0.158 M4
Grid 4 0.165 M4	Grid 5 0.170 M4	Grid 6 0.160 M4
Grid 7 0.165 M4	Grid 8 0.169 M4	Grid 9 0.158 M4

Author Data
Daoud Attayi

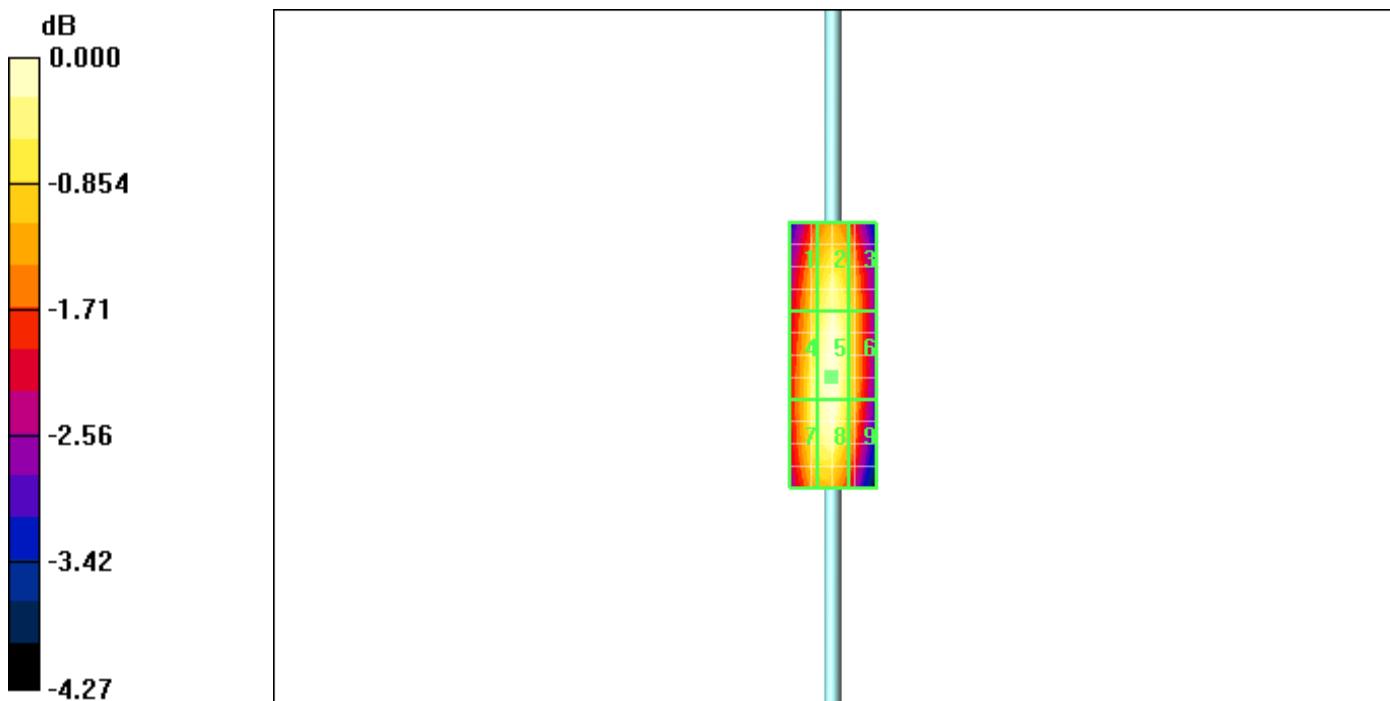
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0 dB = 0.170A/m

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Date/Time: 08/09/2009 3:13:14 PM

Test Laboratory: RTS

File Name: [HAC_H_Dipole_AM835_PMF_CDMA.da4](#)

DUT: HAC-Dipole 835 MHz; Type: D835V3; Serial: Not Specified

Program Name: HAC RF H3DV6 Dipole

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

Medium parameters used: $\sigma = 0$ mho/m, $\epsilon_r = 1$; $\rho = 1$ kg/m³

Phantom section: RF Section

DASY4 Configuration:

- Probe: H3DV6 - SN6168; ; Calibrated: 03/03/2009
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 03/03/2009
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

H Scan - measurement distance from the probe sensor center to CD835 Dipole = 10mm/Hearing Aid Compatibility Test (5x13x1):

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

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.115 A/m; Power Drift = -0.060 dB

Maximum value of Total (measured) = 0.107 A/m

H Scan - measurement distance from the probe sensor center to

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CD835 Dipole = 10mm/Hearing Aid Compatibility Test (41x121x1):

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

Maximum value of peak Total field = 0.107 A/m

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.115 A/m; Power Drift = -0.060 dB

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

Peak H-field in A/m

Grid 1 0.101 M4	Grid 2 0.105 M4	Grid 3 0.100 M4
Grid 4 0.105 M4	Grid 5 0.107 M4	Grid 6 0.101 M4
Grid 7 0.104 M4	Grid 8 0.107 M4	Grid 9 0.099 M4



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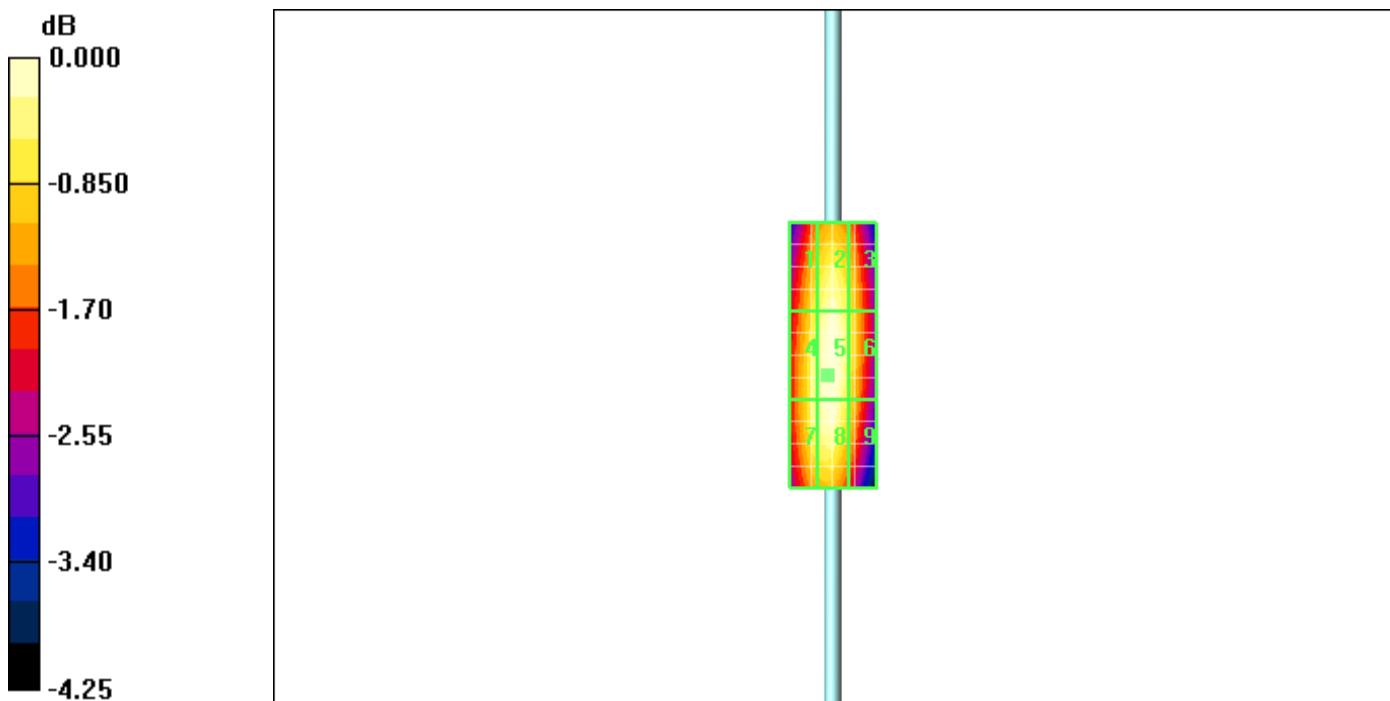
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Date/Time: 08/09/2009 4:18:52 PM

Test Laboratory: RTS

File Name: [HAC_H_Dipole_CDMA835_one_eighth.da4](#)

DUT: HAC-Dipole 835 MHz; Type: D835V3; Serial: Not Specified

Program Name: HAC RF H3DV6 Dipole

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

Medium parameters used: $\sigma = 0$ mho/m, $\epsilon_r = 1$; $\rho = 1$ kg/m³

Phantom section: RF Section

DASY4 Configuration:

- Probe: H3DV6 - SN6168; ; Calibrated: 03/03/2009
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 03/03/2009
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

H Scan - measurement distance from the probe sensor center to CD835 Dipole = 10mm/Hearing Aid Compatibility Test (5x13x1):

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

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.072 A/m; Power Drift = -0.158 dB

Maximum value of Total (measured) = 0.069 A/m

H Scan - measurement distance from the probe sensor center to

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CD835 Dipole = 10mm/Hearing Aid Compatibility Test (41x121x1):

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

Maximum value of peak Total field = 0.069 A/m

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.072 A/m; Power Drift = -0.158 dB

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

Peak H-field in A/m

Grid 1 0.064 M4	Grid 2 0.067 M4	Grid 3 0.059 M4
Grid 4 0.061 M4	Grid 5 0.069 M4	Grid 6 0.063 M4
Grid 7 0.059 M4	Grid 8 0.066 M4	Grid 9 0.061 M4



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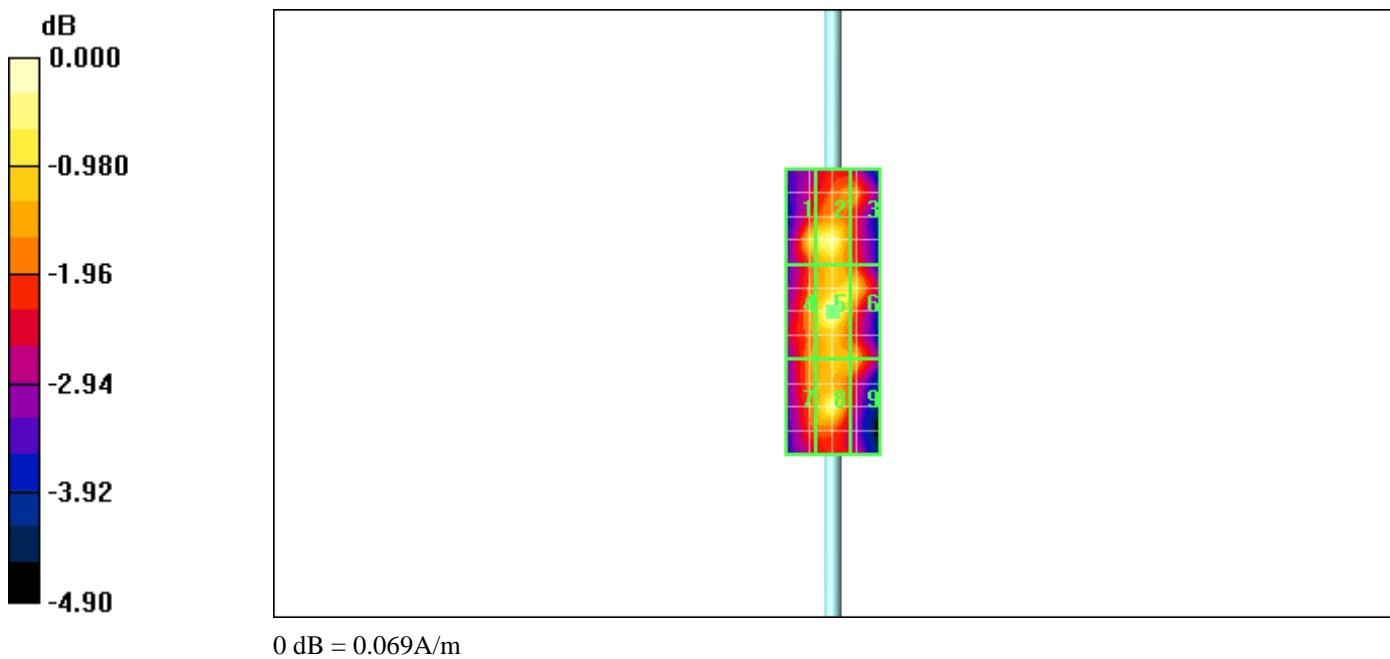
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Date/Time: 08/09/2009 4:12:36 PM

Test Laboratory: RTS

File Name: [HAC_H_Dipole_CDMA835.da4](#)

DUT: HAC-Dipole 835 MHz; Type: D835V3; Serial: Not Specified

Program Name: HAC RF H3DV6 Dipole

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

Medium parameters used: $\sigma = 0$ mho/m, $\epsilon_r = 1$; $\rho = 1$ kg/m³

Phantom section: RF Section

DASY4 Configuration:

- Probe: H3DV6 - SN6168; ; Calibrated: 03/03/2009
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 03/03/2009
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

H Scan - measurement distance from the probe sensor center to CD835 Dipole = 10mm/Hearing Aid Compatibility Test (5x13x1):

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

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.178 A/m; Power Drift = -0.004 dB

Maximum value of Total (measured) = 0.168 A/m

H Scan - measurement distance from the probe sensor center to

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CD835 Dipole = 10mm/Hearing Aid Compatibility Test (41x121x1):

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

Maximum value of peak Total field = 0.168 A/m

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.178 A/m; Power Drift = -0.004 dB

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

Peak H-field in A/m

Grid 1 0.158 M4	Grid 2 0.164 M4	Grid 3 0.156 M4
Grid 4 0.164 M4	Grid 5 0.168 M4	Grid 6 0.158 M4
Grid 7 0.164 M4	Grid 8 0.167 M4	Grid 9 0.156 M4



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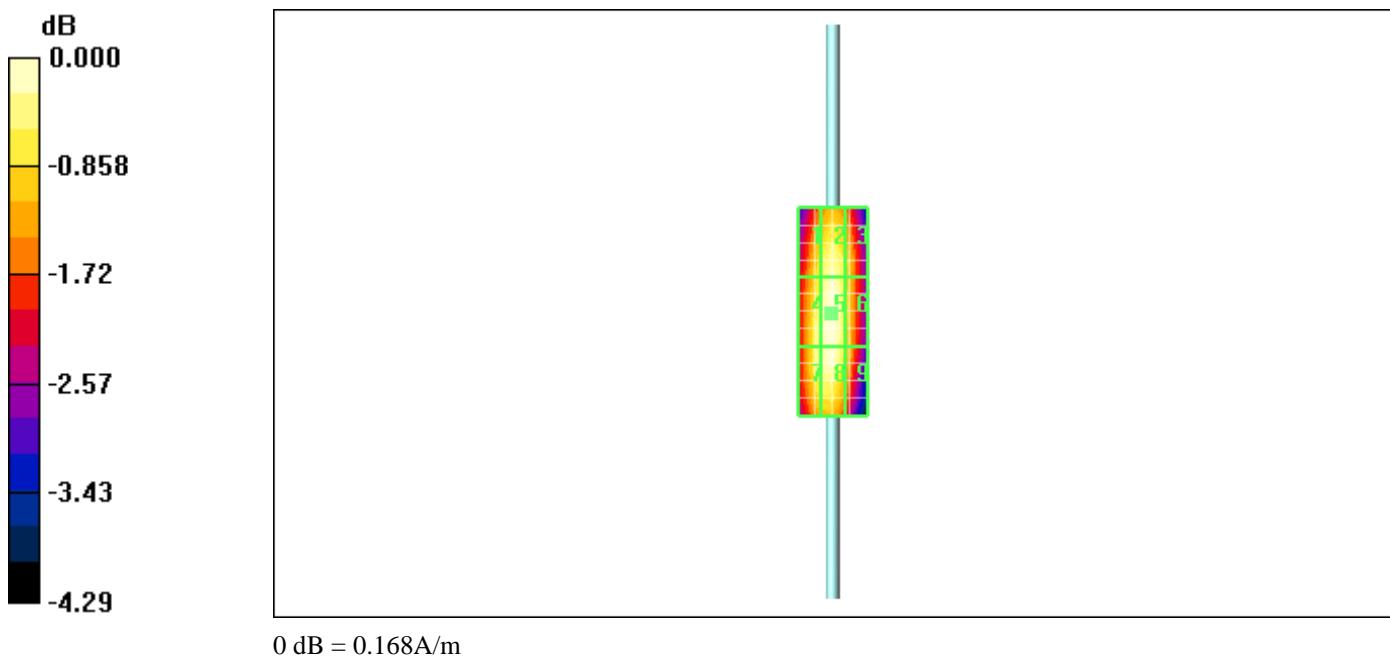
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Date/Time: 08/09/2009 4:52:08 PM

Test Laboratory: RTS

File Name: [HAC_H_Dipole_CW1880_20.00dBm.da4](#)

DUT: HAC Dipole 1880 MHz; Type: CD1880V3; Serial: Not Specified

Program Name: HAC RF H3DV6 Dipole

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

Medium parameters used: $\sigma = 0$ mho/m, $\epsilon_r = 1$; $\rho = 1$ kg/m³

Phantom section: RF Section

DASY4 Configuration:

- Probe: H3DV6 - SN6168; ; Calibrated: 03/03/2009
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 03/03/2009
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

H Scan - measurement distance from the probe sensor center to CD1880 Dipole = 10mm/Hearing Aid Compatibility Test (5x13x1):

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

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.473 A/m; Power Drift = -0.058 dB

Maximum value of Total (measured) = 0.446 A/m

H Scan - measurement distance from the probe sensor center to

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CD1880 Dipole = 10mm/Hearing Aid Compatibility Test (41x121x1):

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

Maximum value of peak Total field = 0.447 A/m

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.473 A/m; Power Drift = -0.058 dB

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

Peak H-field in A/m

Grid 1 0.415 M2	Grid 2 0.428 M2	Grid 3 0.405 M2
Grid 4 0.433 M2	Grid 5 0.447 M2	Grid 6 0.420 M2
Grid 7	Grid 8	Grid 9



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Daoud Attayi

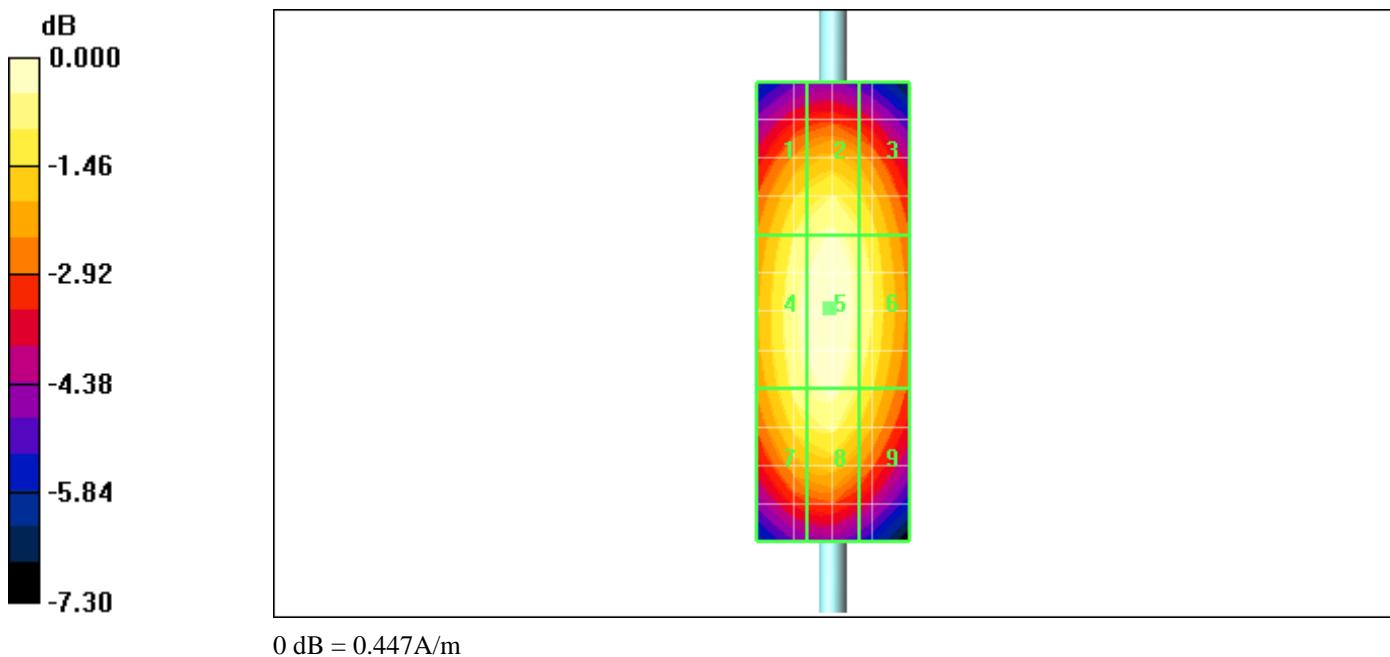
Dates of Test

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Date/Time: 08/09/2009 4:41:22 PM

Test Laboratory: RTS

File Name: [HAC_H_Dipole_CW1880_PMF_CDMA.da4](#)

DUT: HAC Dipole 1880 MHz; Type: CD1880V3; Serial: Not Specified

Program Name: HAC RF H3DV6 Dipole

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

Medium parameters used: $\sigma = 0$ mho/m, $\epsilon_r = 1$; $\rho = 1$ kg/m³

Phantom section: RF Section

DASY4 Configuration:

- Probe: H3DV6 - SN6168; ; Calibrated: 03/03/2009
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 03/03/2009
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

H Scan - measurement distance from the probe sensor center to CD1880 Dipole = 10mm/Hearing Aid Compatibility Test (5x13x1):

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

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.164 A/m; Power Drift = 0.000 dB

Maximum value of Total (measured) = 0.153 A/m

H Scan - measurement distance from the probe sensor center to

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CD1880 Dipole = 10mm/Hearing Aid Compatibility Test (41x121x1):

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

Maximum value of peak Total field = 0.153 A/m

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.164 A/m; Power Drift = 0.000 dB

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

Peak H-field in A/m

Grid 1 0.142 M4	Grid 2 0.147 M4	Grid 3 0.140 M4
Grid 4 0.150 M4	Grid 5 0.153 M4	Grid 6 0.144 M4
Grid 7	Grid 8	Grid 9



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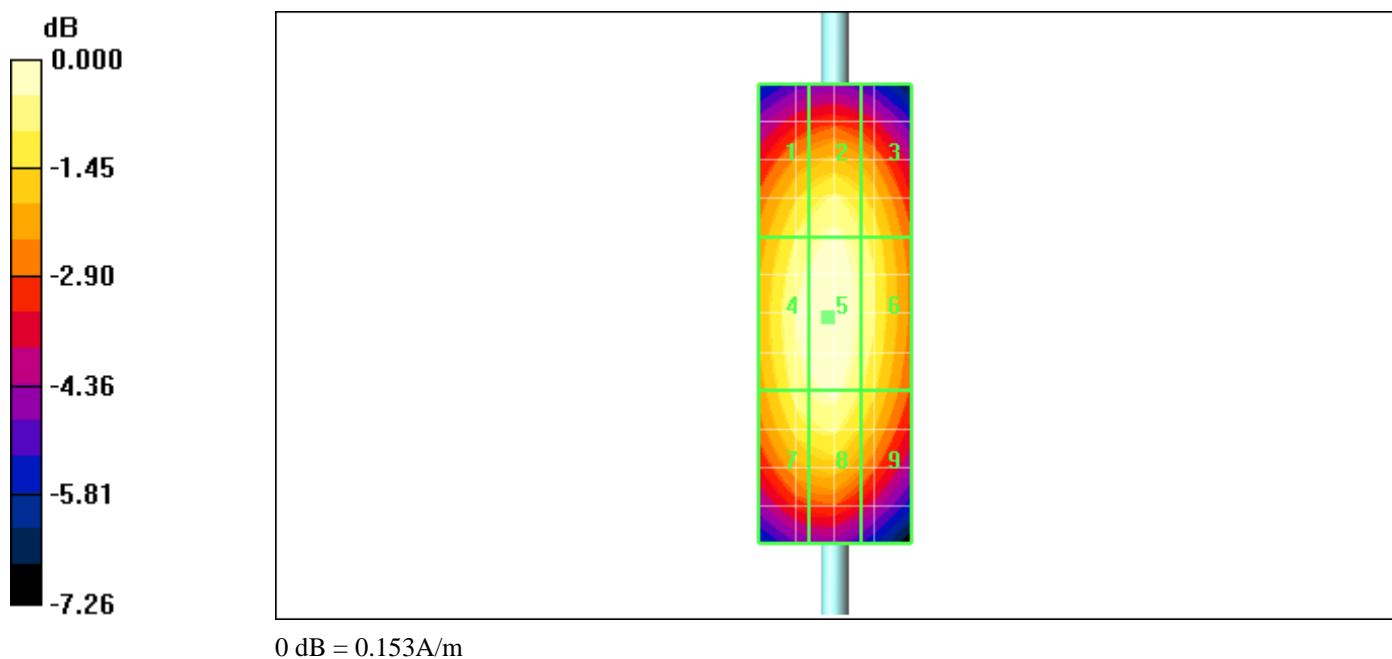
Dates of Test

Sep 08-29, 2009

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Date/Time: 08/09/2009 4:46:13 PM

Test Laboratory: RTS

File Name: [HAC_H_Dipole_AM1880_PMF_CDMA.da4](#)

DUT: HAC Dipole 1880 MHz; Type: CD1880V3; Serial: Not Specified

Program Name: HAC RF H3DV6 Dipole

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

Medium parameters used: $\sigma = 0$ mho/m, $\epsilon_r = 1$; $\rho = 1$ kg/m³

Phantom section: TCoil Section

DASY4 Configuration:

- Probe: H3DV6 - SN6168; ; Calibrated: 03/03/2009
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 03/03/2009
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

H Scan - measurement distance from the probe sensor center to CD1880 Dipole = 10mm/Hearing Aid Compatibility Test (5x19x1):

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

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.104 A/m; Power Drift = 0.056 dB

Maximum value of Total (measured) = 0.098 A/m

H Scan - measurement distance from the probe sensor center to

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CD1880 Dipole = 10mm/Hearing Aid Compatibility Test (41x181x1):

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

Maximum value of peak Total field = 0.098 A/m

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.104 A/m; Power Drift = 0.056 dB

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

Peak H-field in A/m

Grid 1 0.086 M4	Grid 2 0.088 M4	Grid 3 0.084 M4
Grid 4 0.095 M4	Grid 5 0.098 M4	Grid 6 0.093 M4
Grid 7 0.087 M4	Grid 8 0.089 M4	Grid 9 0.083 M4



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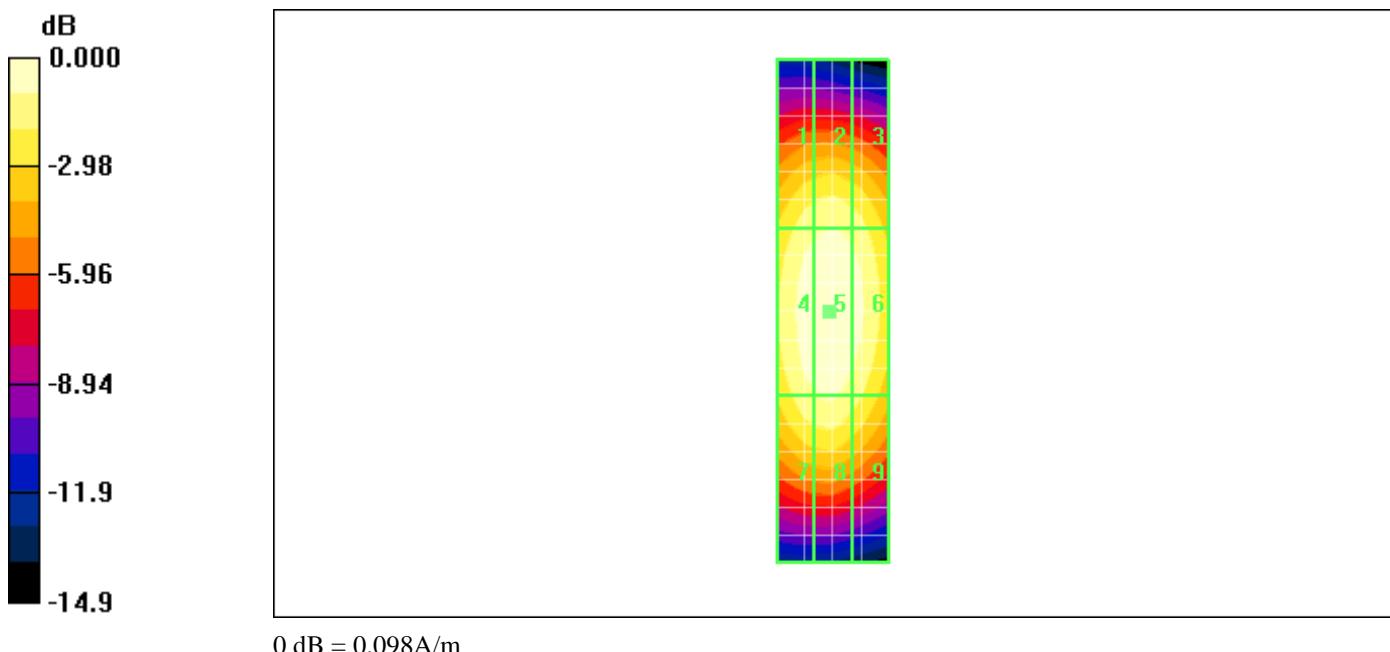
Dates of Test

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Date/Time: 08/09/2009 4:36:06 PM

Test Laboratory: RTS

File Name: [HAC_H_Dipole_CDMA1880_one_eighth.da4](#)

DUT: HAC Dipole 1880 MHz; Type: CD1880V3; Serial: Not Specified

Program Name: HAC RF H3DV6 Dipole

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

Medium parameters used: $\sigma = 0$ mho/m, $\epsilon_r = 1$; $\rho = 1$ kg/m³

Phantom section: RF Section

DASY4 Configuration:

- Probe: H3DV6 - SN6168; ; Calibrated: 03/03/2009
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 03/03/2009
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

H Scan - measurement distance from the probe sensor center to CD1880 Dipole = 10mm/Hearing Aid Compatibility Test (5x13x1):

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

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.061 A/m; Power Drift = -0.066 dB

Maximum value of Total (measured) = 0.066 A/m

H Scan - measurement distance from the probe sensor center to

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CD1880 Dipole = 10mm/Hearing Aid Compatibility Test (41x121x1):

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

Maximum value of peak Total field = 0.066 A/m

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.061 A/m; Power Drift = -0.066 dB

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

Peak H-field in A/m

Grid 1 0.059 M4	Grid 2 0.059 M4	Grid 3 0.055 M4
Grid 4 0.063 M4	Grid 5 0.066 M4	Grid 6 0.061 M4
Grid 7 0.062 M4	Grid 8 0.065 M4	Grid 9 0.056 M4



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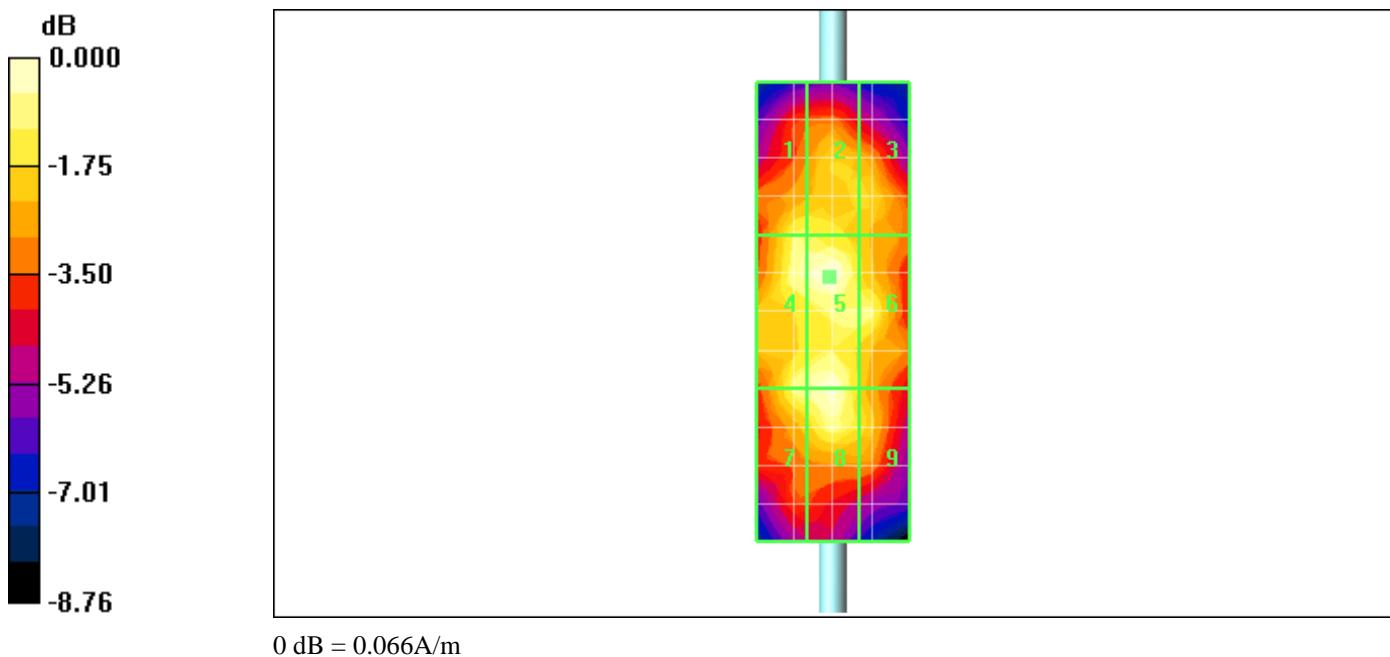
Dates of Test

Sep 08-29, 2009

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Date/Time: 08/09/2009 4:30:30 PM

Test Laboratory: RTS

File Name: [HAC_H_Dipole_CDMA1880.da4](#)

DUT: HAC Dipole 1880 MHz; Type: CD1880V3; Serial: Not Specified

Program Name: HAC RF H3DV6 Dipole

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

Medium parameters used: $\sigma = 0$ mho/m, $\epsilon_r = 1$; $\rho = 1$ kg/m³

Phantom section: RF Section

DASY4 Configuration:

- Probe: H3DV6 - SN6168; ; Calibrated: 03/03/2009
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 03/03/2009
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

H Scan - measurement distance from the probe sensor center to CD1880 Dipole = 10mm/Hearing Aid Compatibility Test (5x13x1):

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

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.167 A/m; Power Drift = 0.227 dB

Maximum value of Total (measured) = 0.160 A/m

H Scan - measurement distance from the probe sensor center to

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CD1880 Dipole = 10mm/Hearing Aid Compatibility Test (41x121x1):

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

Maximum value of peak Total field = 0.160 A/m

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.167 A/m; Power Drift = 0.227 dB

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

Peak H-field in A/m

Grid 1 0.147 M4	Grid 2 0.153 M4	Grid 3 0.144 M4
Grid 4 0.154 M4	Grid 5 0.160 M4	Grid 6 0.150 M4
Grid 7 0.149 M4	Grid 8 0.154 M4	Grid 9 0.142 M4



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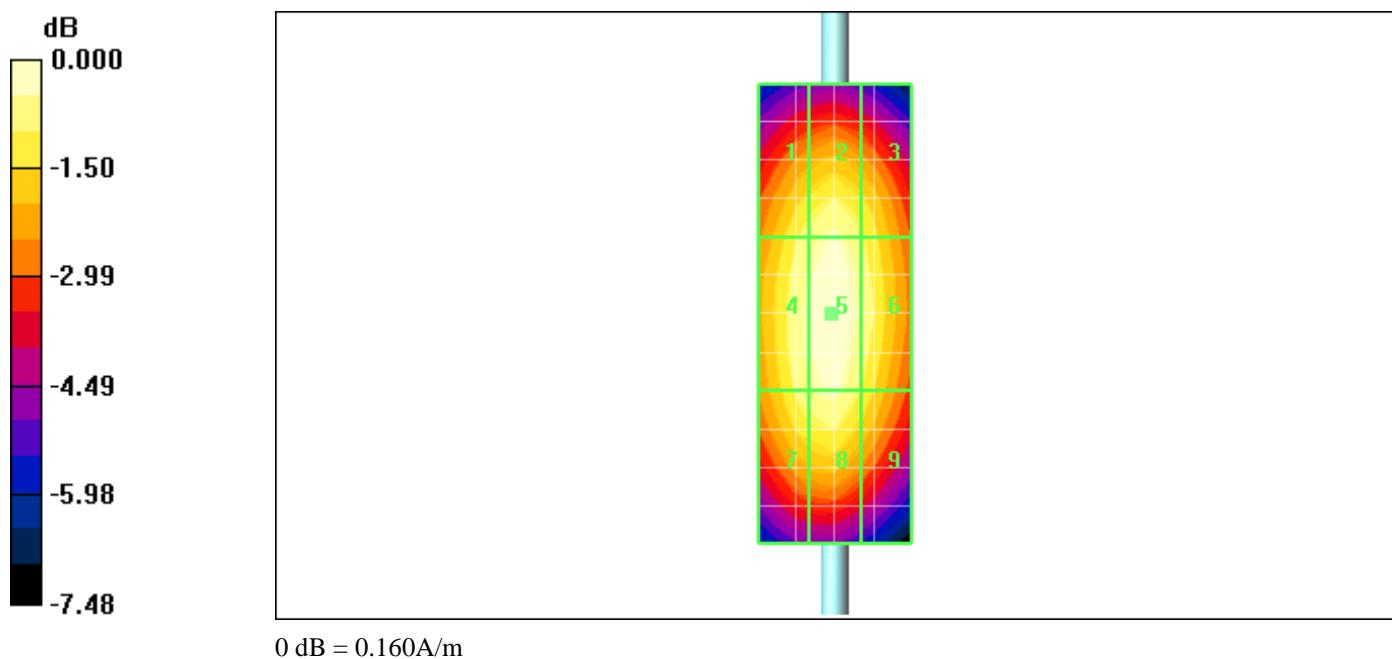
Dates of Test

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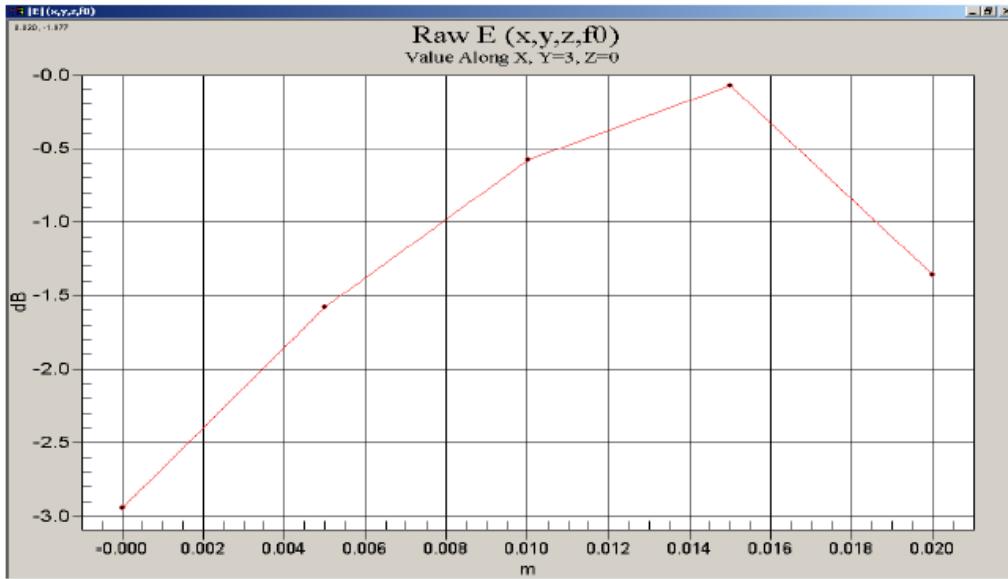
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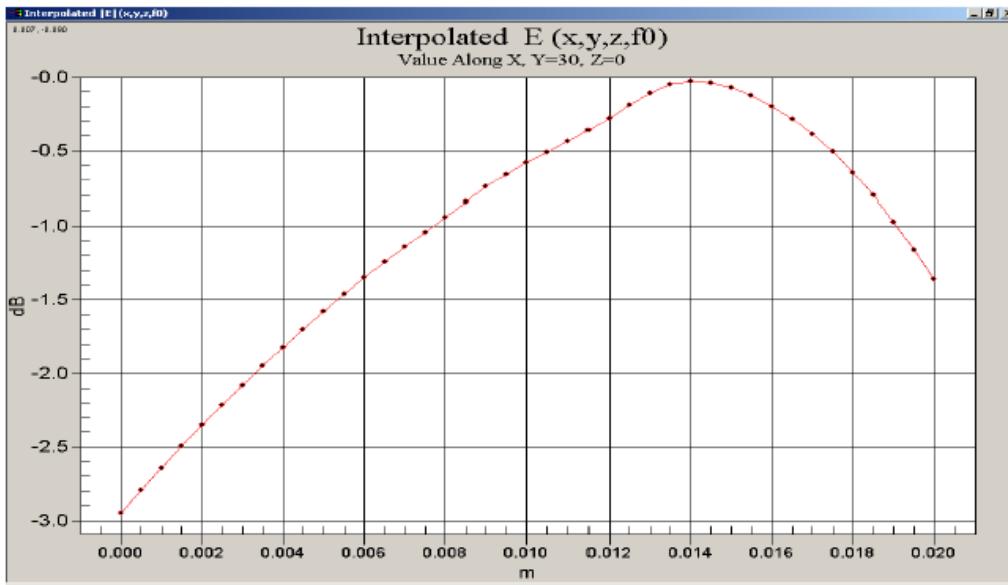
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Justification of Step Size and Interpolation

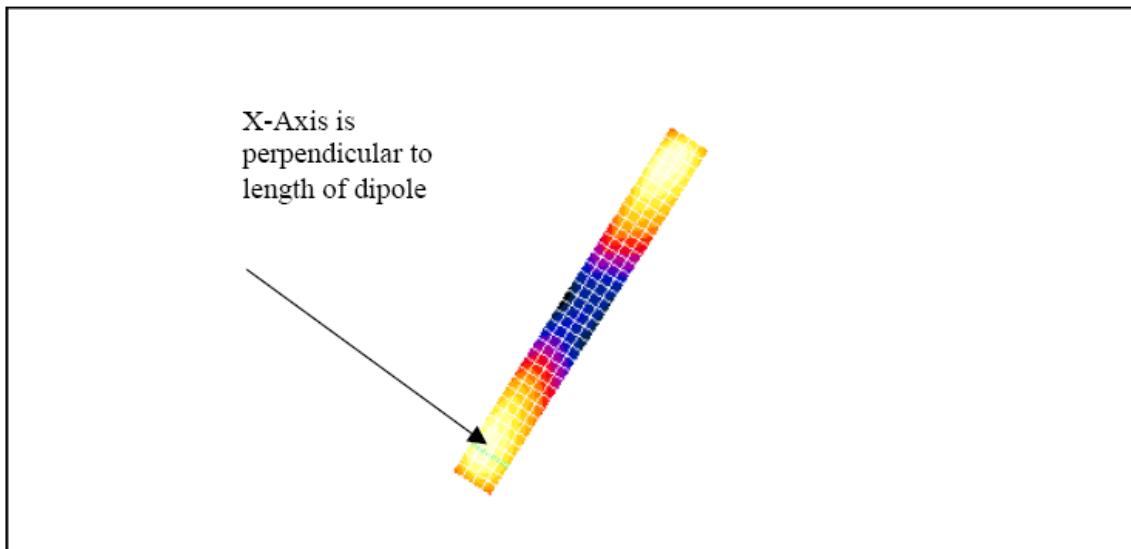
This section demonstrates that a 5mm step size with interpolation provides sufficient resolution for RF emissions measurements. The DASY 4 uses interpolation algorithms to derive 9 interpolated points between every measured point.



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



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



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
80.9	92.3	92.2	80.9	92.3	92.2
119.8	131.0	130.7	119.8	131.0	130.7

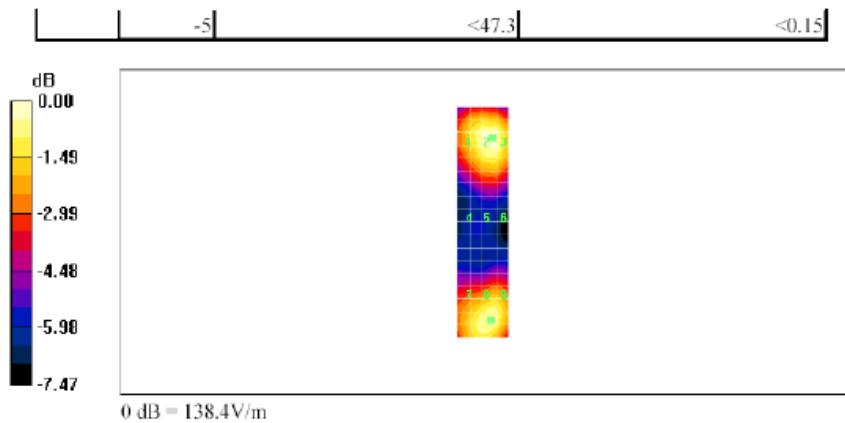
Category	AWF (dB)	Limits for E-Field Emissions (V/m)	Limits for H-Field Emissions (A/m)
M1	0	199.5 - 354.8	0.6 - 1.07
	-5	149.6 - 266.1	0.45 - 0.8
M2	0	112.2 - 199.5	0.34 - 0.6
	-5	84.1 - 149.6	0.25 - 0.45
M3	0	63.1 - 112.2	0.19 - 0.34
	-5	47.3 - 84.1	0.15 - 0.25
M4	0	<63.1	<0.19

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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
81.4	92.1	91.6	81.4	92.1	91.6
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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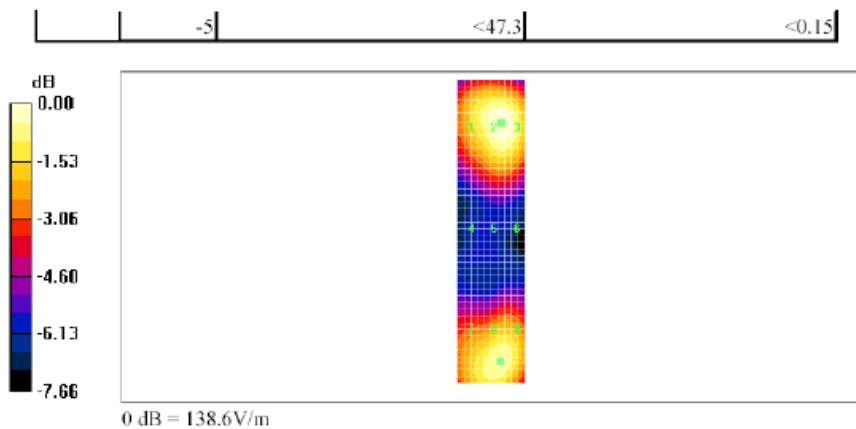
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Date/Time: 14/07/2005 12:43:02 PM

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
0.389	0.406	0.389	0.389	0.406	0.389
0.363	0.378	0.363	0.363	0.378	0.363

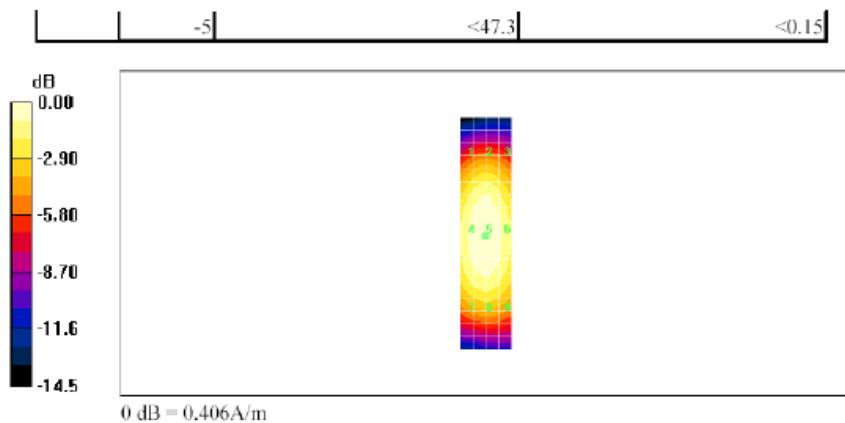
Category	AWF (dB)	Limits for E-Field Emissions (V/m)	Limits for H-Field Emissions (A/m)
M1	0	199.5 - 354.8	0.6 - 1.07
	-5	149.6 - 266.1	0.45 - 0.8
M2	0	112.2 - 199.5	0.34 - 0.6
	-5	84.1 - 149.6	0.25 - 0.45
M3	0	63.1 - 112.2	0.19 - 0.34
	-5	47.3 - 84.1	0.15 - 0.25
M4	0	<63.1	<0.19

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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
0.394	0.406	0.391	0.394	0.406	0.391
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

file:///C:/Program%20Files/DASY4/Print_Templates/HAC_H_Dipole_CW%201880_2%... 14/07/2005



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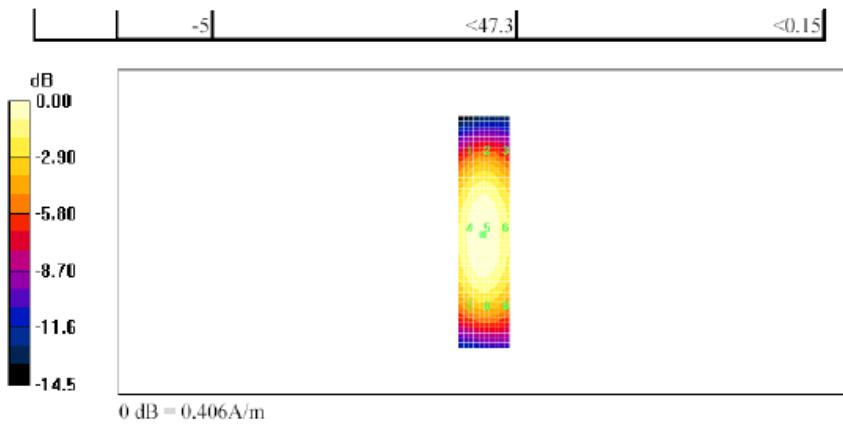
RTS-2068-0909-34 Rev 1

FCC ID

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

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file:///C:/Program%20Files/DASY4/Print_Templates/HAC_H_Dipole_CW%201880_2%... 14/07/2005

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Date/Time: 09/09/2009 9:31:22 AM

Test Laboratory: RTS

File Name: [HAC_E_CDMA_800_low chan.da4](#)

DUT: BlackBerry Smartphone; Type: Brick; Serial: Not Specified

Program Name: HAC RF ER3D Device

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

Medium parameters used: $\sigma = 0$ mho/m, $\epsilon_r = 1$; $\rho = 1000$ kg/m³

Phantom section: RF Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 08/01/2009
- Sensor-Surface: 0mm (Fix Surface) Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 03/03/2009
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

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

dx=5mm, dy=5mm

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 125.4 V/m; Power Drift = -0.139 dB

Maximum value of Total (measured) = 96.3 V/m

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

Maximum value of peak Total field = 97.5 V/m

Probe Modulation Factor = 1.01

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 125.4 V/m; Power Drift = -0.139 dB

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

Peak E-field in V/m

Grid 1	Grid 2	Grid 3
84.7 M4	95.0 M4	92.9 M4
Grid 4	Grid 5	Grid 6
86.3 M4	97.5 M4	95.6 M4
Grid 7	Grid 8	Grid 9
85.4 M4	95.9 M4	93.7 M4



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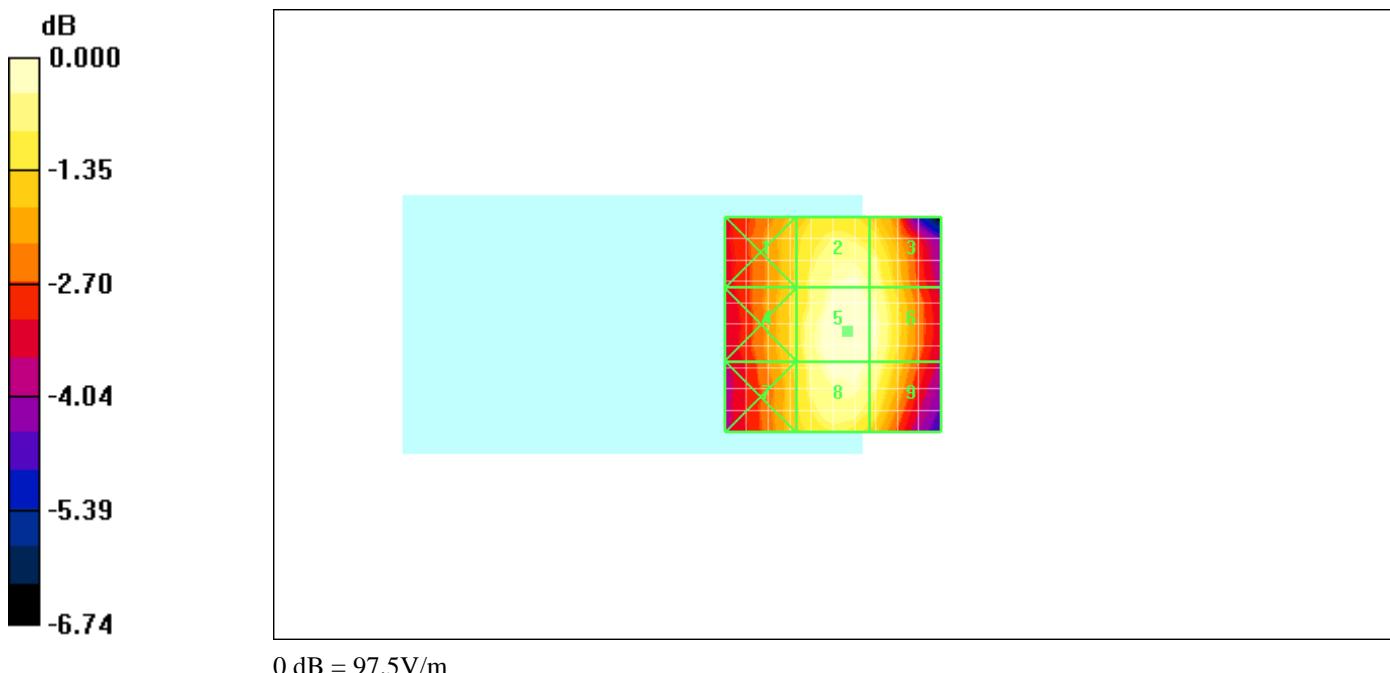
Dates of Test

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Date/Time: 09/09/2009 9:39:04 AM

Test Laboratory: RTS

File Name: [HAC_E_CDMA_800_mid chan.da4](#)

DUT: BlackBerry Smartphone; Type: Brick; Serial: Not Specified

Program Name: HAC RF ER3D Device

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

Medium parameters used: $\sigma = 0$ mho/m, $\epsilon_r = 1$; $\rho = 1000$ kg/m³

Phantom section: RF Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 08/01/2009
- Sensor-Surface: 0mm (Fix Surface) Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 03/03/2009
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

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

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 109.1 V/m; Power Drift = 0.082 dB

Maximum value of Total (measured) = 87.3 V/m

E Scan - ER3D - 2007: 15 mm from Probe Center to the

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Device/Hearing Aid Compatibility Test (101x101x1): Measurement grid:

dx=5mm, dy=5mm

Maximum value of peak Total field = 88.3 V/m

Probe Modulation Factor = 1.01

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 109.1 V/m; Power Drift = 0.082 dB

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

Peak E-field in V/m

Grid 1	Grid 2	Grid 3
72.9 M4	85.6 M4	84.6 M4
75.0 M4	88.3 M4	86.9 M4
74.4 M4	87.3 M4	85.5 M4



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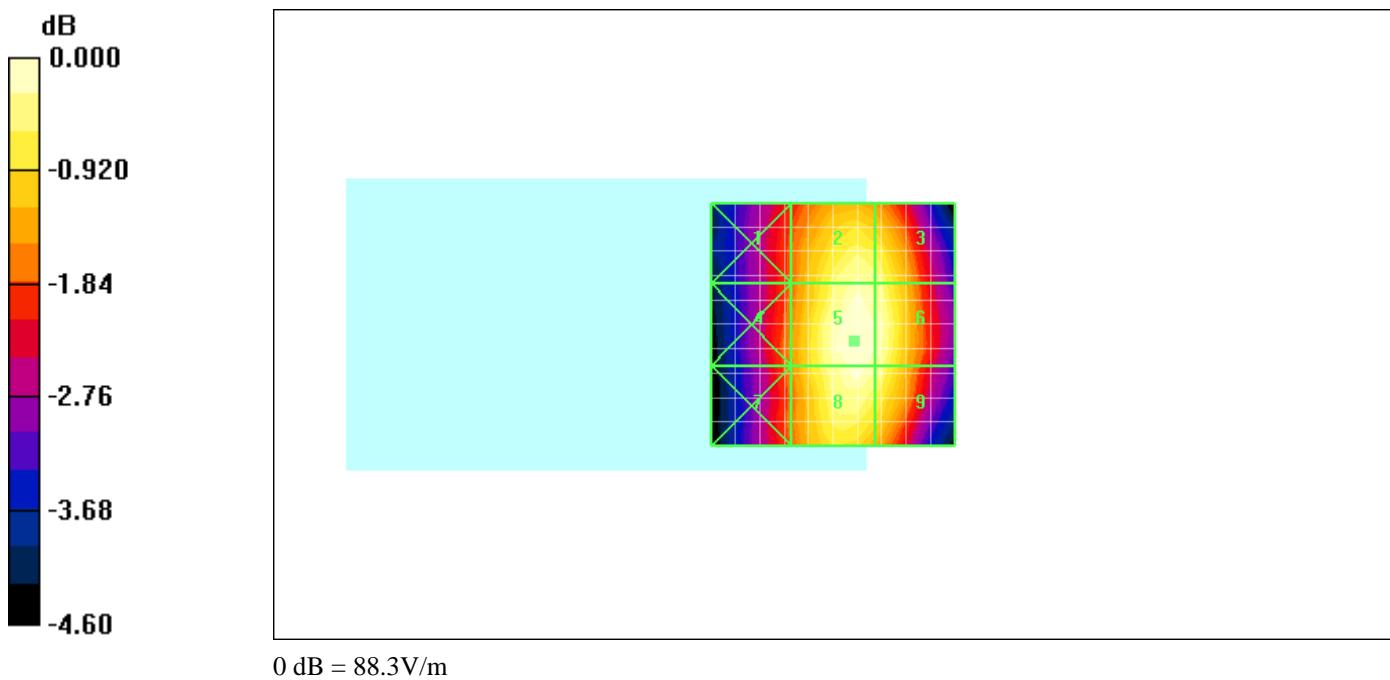
Dates of Test

Sep 08-29, 2009

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Date/Time: 09/09/2009 9:48:54 AM

Test Laboratory: RTS

File Name: [HAC_E_CDMA_800_high chan.da4](#)

DUT: BlackBerry Smartphone; Type: Brick; Serial: Not Specified

Program Name: HAC RF ER3D Device

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

Medium parameters used: $\sigma = 0$ mho/m, $\epsilon_r = 1$; $\rho = 1000$ kg/m³

Phantom section: RF Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 08/01/2009
- Sensor-Surface: 0mm (Fix Surface) Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 03/03/2009
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

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

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 110.4 V/m; Power Drift = -0.009 dB

Maximum value of Total (measured) = 86.0 V/m

E Scan - ER3D - 2007: 15 mm from Probe Center to the

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Device/Hearing Aid Compatibility Test (101x101x1): Measurement grid:

dx=5mm, dy=5mm

Maximum value of peak Total field = 87.1 V/m

Probe Modulation Factor = 1.01

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 110.4 V/m; Power Drift = -0.009 dB

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

Peak E-field in V/m

Grid 1	Grid 2	Grid 3
73.9 M4	85.5 M4	84.4 M4
Grid 4 75.3 M4	Grid 5 87.1 M4	Grid 6 86.3 M4
Grid 7 73.8 M4	Grid 8 85.2 M4	Grid 9 84.2 M4



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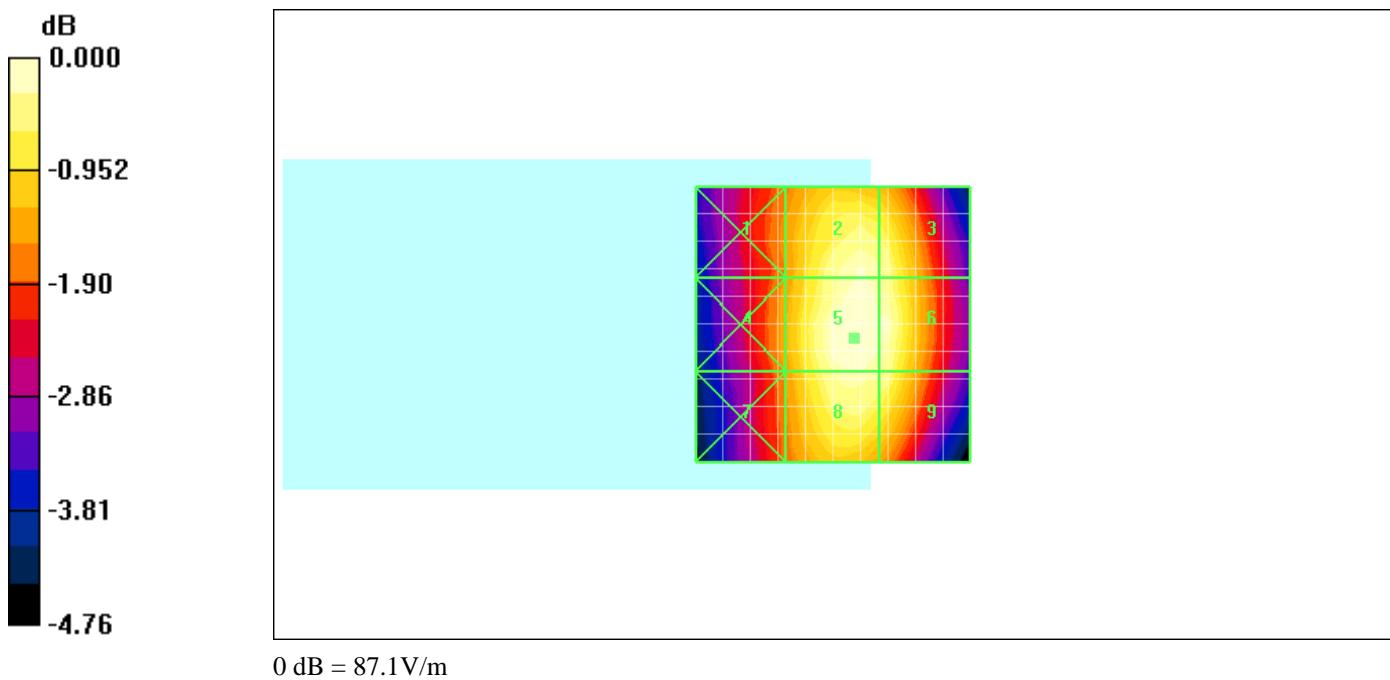
Dates of Test

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Date/Time: 09/09/2009 9:56:51 AM

Test Laboratory: RTS

File Name: [HAC_E_CDMA_800_low chan_one_eighth.da4](#)

DUT: BlackBerry Smartphone; Type: Brick; Serial: Not Specified

Program Name: HAC RF ER3D Device

Communication System: CDMA 800; Frequency: 824.7 MHz; Duty Cycle: 1:8.3

Medium parameters used: $\sigma = 0$ mho/m, $\epsilon_r = 1$; $\rho = 1000$ kg/m³

Phantom section: RF Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 08/01/2009
- Sensor-Surface: 0mm (Fix Surface) Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 03/03/2009
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

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

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 44.7 V/m; Power Drift = -0.036 dB

Maximum value of Total (measured) = 38.3 V/m

E Scan - ER3D - 2007: 15 mm from Probe Center to the

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Device/Hearing Aid Compatibility Test (101x101x1): Measurement grid:

dx=5mm, dy=5mm

Maximum value of peak Total field = 96.9 V/m

Probe Modulation Factor = 2.53

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 44.7 V/m; Power Drift = -0.036 dB

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

Peak E-field in V/m

Grid 1	Grid 2	Grid 3
85.7 M4	88.8 M4	79.5 M4
Grid 4 81.2 M4	Grid 5 96.9 M4	Grid 6 93.0 M4
Grid 7 85.9 M4	Grid 8 93.5 M4	Grid 9 86.5 M4



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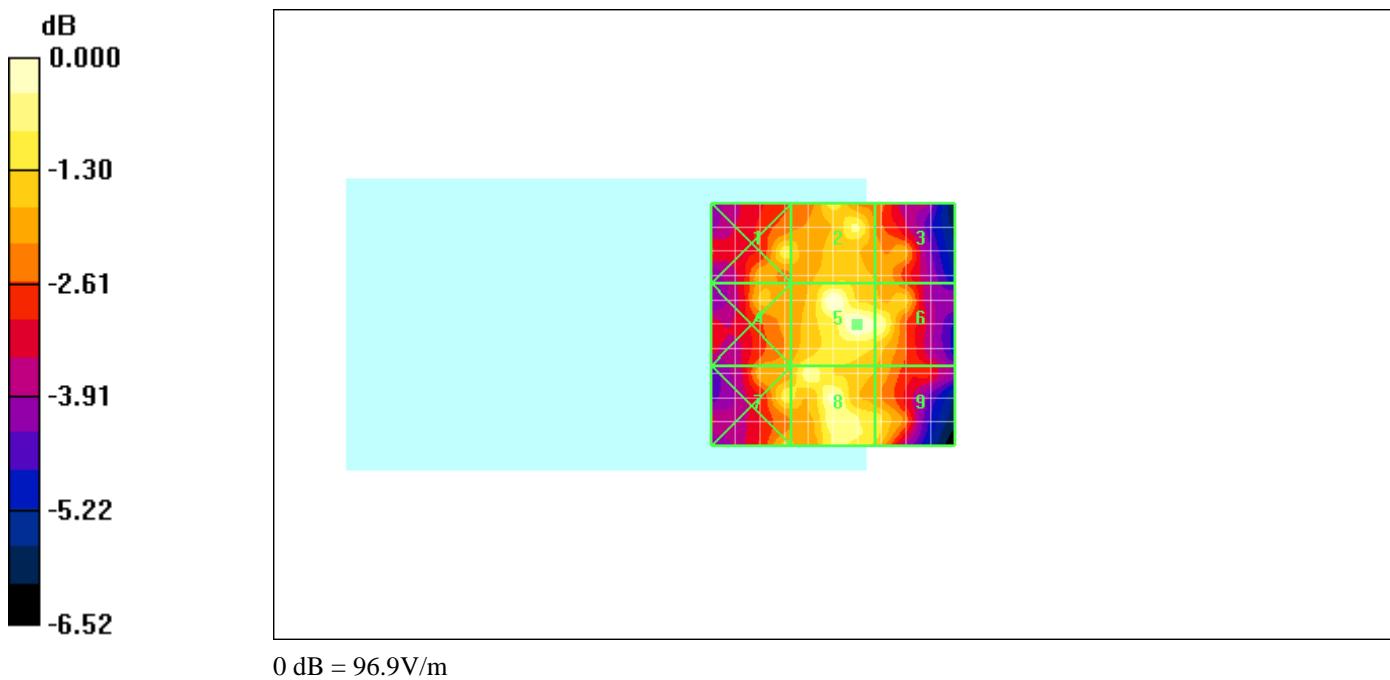
Dates of Test

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Date/Time: 09/09/2009 10:05:24 AM

Test Laboratory: RTS

File Name: [HAC_E_CDMA_800_mid chan_one_eighth.da4](#)

DUT: BlackBerry Smartphone; Type: Brick; Serial: Not Specified

Program Name: HAC RF ER3D Device

Communication System: CDMA 800 1/8 th; Frequency: 836.52 MHz; Duty Cycle: 1:8.3

Medium parameters used: $\sigma = 0$ mho/m, $\epsilon_r = 1$; $\rho = 1000$ kg/m³

Phantom section: RF Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 08/01/2009
- Sensor-Surface: 0mm (Fix Surface) Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 03/03/2009
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

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

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 41.2 V/m; Power Drift = 0.103 dB

Maximum value of Total (measured) = 35.8 V/m

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

Maximum value of peak Total field = 88.2 V/m

Probe Modulation Factor = 2.46

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 41.2 V/m; Power Drift = 0.103 dB

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

Peak E-field in V/m

Grid 1	Grid 2	Grid 3
74.3 M4	84.7 M4	76.9 M4
Grid 4	Grid 5	Grid 6
77.7 M4	88.2 M4	87.0 M4
Grid 7	Grid 8	Grid 9
75.3 M4	87.3 M4	77.7 M4



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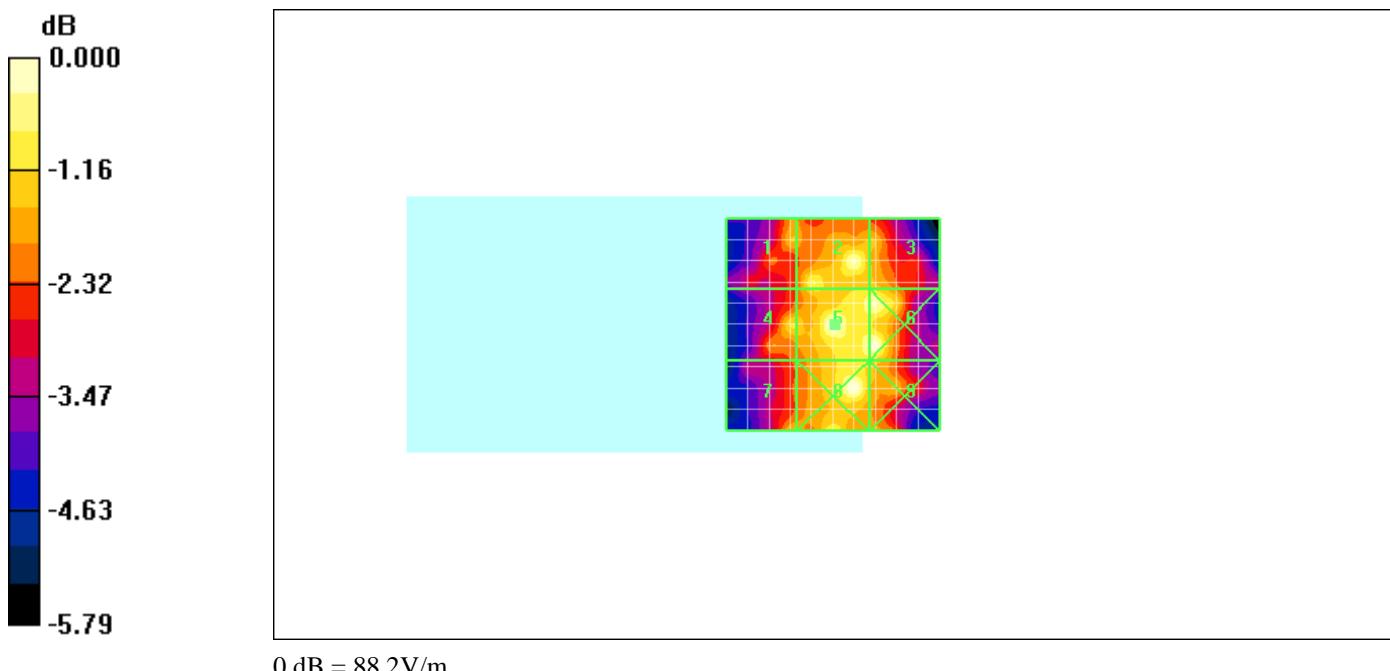
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Date/Time: 09/09/2009 10:13:00 AM

Test Laboratory: RTS

File Name: [HAC_E_CDMA_800_high_chan_one_eighth.da4](#)

DUT: BlackBerry Smartphone; Type: Brick; Serial: Not Specified

Program Name: HAC RF ER3D Device

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

Medium parameters used: $\sigma = 0$ mho/m, $\epsilon_r = 1$; $\rho = 1000$ kg/m³

Phantom section: RF Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 08/01/2009
- Sensor-Surface: 0mm (Fix Surface) Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 03/03/2009
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

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

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 41.2 V/m; Power Drift = 0.028 dB

Maximum value of Total (measured) = 35.3 V/m

E Scan - ER3D - 2007: 15 mm from Probe Center to the

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Device/Hearing Aid Compatibility Test (101x101x1): Measurement grid:

dx=5mm, dy=5mm

Maximum value of peak Total field = 89.4 V/m

Probe Modulation Factor = 2.53

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 41.2 V/m; Power Drift = 0.028 dB

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

Peak E-field in V/m

Grid 1 77.6 M4	Grid 2 85.5 M4	Grid 3 75.8 M4
Grid 4 72.3 M4	Grid 5 89.4 M4	Grid 6 86.9 M4
Grid 7 71.1 M4	Grid 8 84.3 M4	Grid 9 77.6 M4



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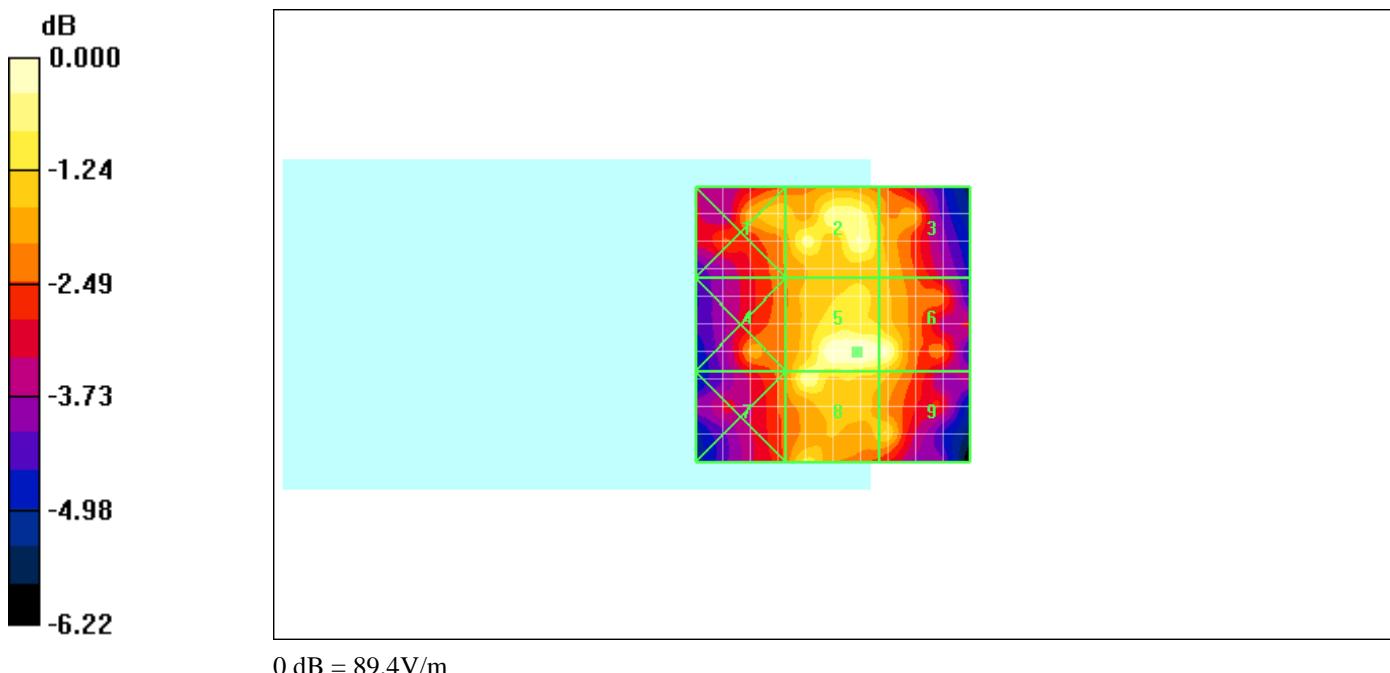
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Date/Time: 29/09/2009 11:11:31 AM

Test Laboratory: RTS

File Name: [HAC_E_CDMA_800_low chan_Rev 3.da4](#)

DUT: BlackBerry Smartphone; Type: Clamshell; Serial: Not Specified

Program Name: HAC RF ER3D Device

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

Medium parameters used: $\sigma = 0$ mho/m, $\epsilon_r = 1$; $\rho = 1000$ kg/m³

Phantom section: RF Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 08/01/2009
- Sensor-Surface: 0mm (Fix Surface) Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 03/03/2009
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

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

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 123.9 V/m; Power Drift = 0.007 dB

Maximum value of Total (measured) = 92.9 V/m

E Scan - ER3D - 2007: 15 mm from Probe Center to the

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Device/Hearing Aid Compatibility Test (101x101x1): Measurement grid:

dx=5mm, dy=5mm

Maximum value of peak Total field = 94.1 V/m

Probe Modulation Factor = 1.01

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 123.9 V/m; Power Drift = 0.007 dB

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

Peak E-field in V/m

Grid 1	Grid 2	Grid 3
85.0 M4	91.9 M4	87.3 M4
86.2 M4	94.1 M4	89.6 M4
85.3 M4	92.3 M4	88.0 M4



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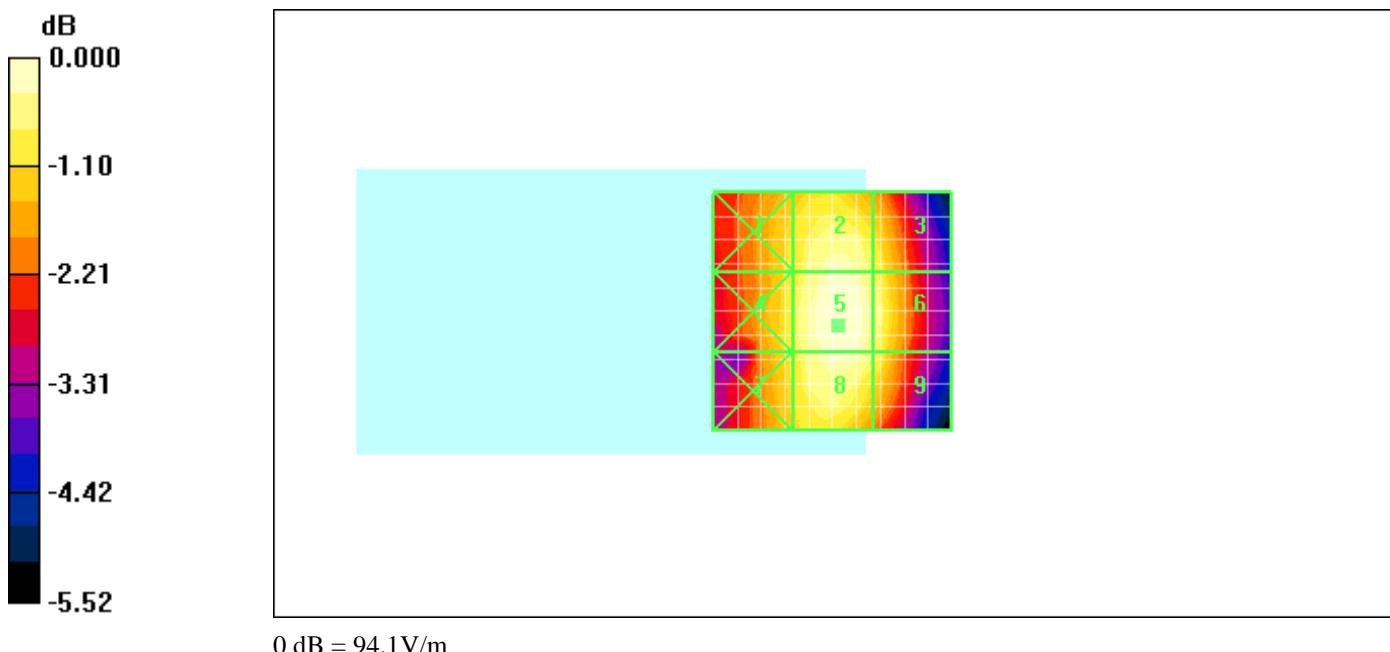
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Date/Time: 29/09/2009 11:21:25 AM

Test Laboratory: RTS

File Name: [HAC_E_CDMA_800_low chan_T_coil_centre_Rev 3.da4](#)

DUT: BlackBerry Smartphone; Type: Clamshell; Serial: Not Specified

Program Name: HAC RF ER3D Device

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

Medium parameters used: $\sigma = 0$ mho/m, $\epsilon_r = 1$; $\rho = 1000$ kg/m³

Phantom section: RF Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 08/01/2009
- Sensor-Surface: 0mm (Fix Surface) Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 03/03/2009
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

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

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 124.3 V/m; Power Drift = -0.016 dB

Maximum value of Total (measured) = 92.5 V/m

E Scan - ER3D - 2007: 15 mm from Probe Center to the

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Author Data Daoud Attayi	Dates of Test Sep 08-29, 2009	Report No RTS-2068-0909-34 Rev 1 FCC ID L6ARCL20CW

Device/Hearing Aid Compatibility Test (101x101x1): Measurement grid:

dx=5mm, dy=5mm

Maximum value of peak Total field = 94.0 V/m

Probe Modulation Factor = 1.01

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 124.3 V/m; Power Drift = -0.016 dB

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

Peak E-field in V/m

Grid 1	Grid 2	Grid 3
83.5 M4	88.4 M4	84.3 M4
Grid 4 86.1 M4	Grid 5 93.9 M4	Grid 6 89.9 M4
Grid 7 86.2 M4	Grid 8 94.0 M4	Grid 9 89.9 M4



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Daoud Attayi

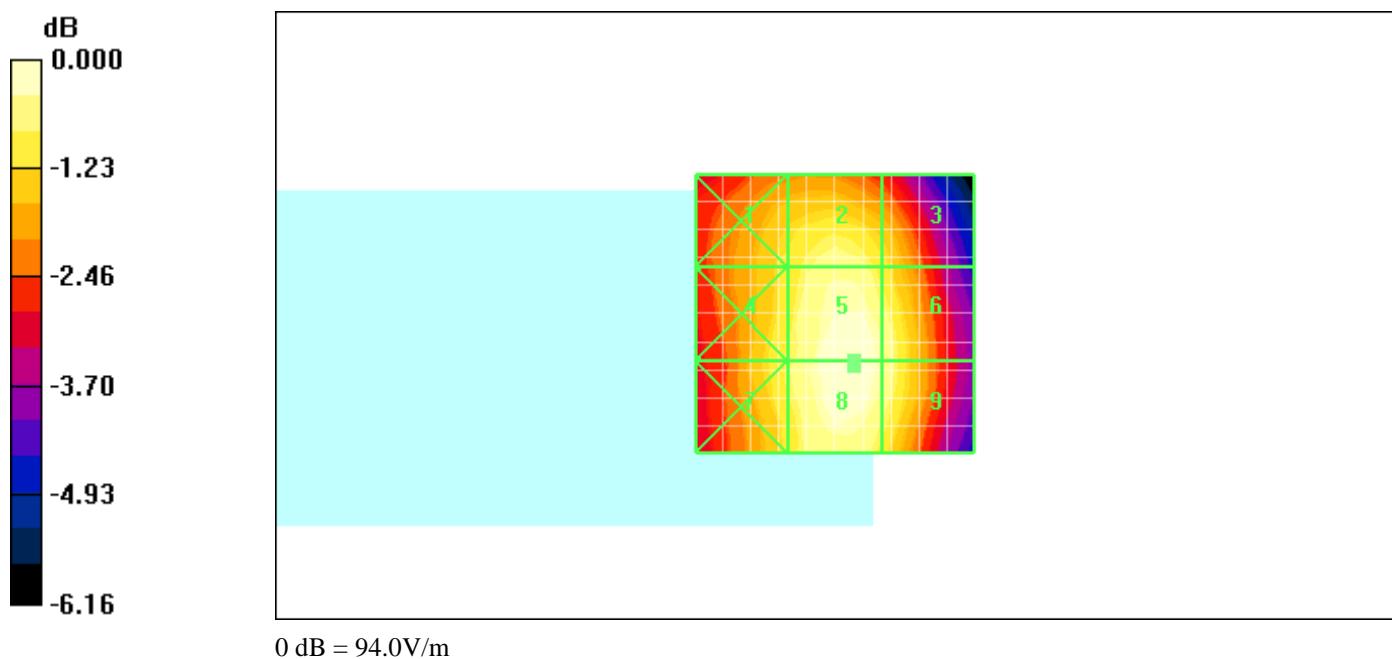
Dates of Test

Sep 08-29, 2009

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FCC ID

L6ARCL20CW

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Date/Time: 29/09/2009 11:30:59 AM

Test Laboratory: RTS

File Name: [HAC_E_CDMA_800_low chan_one_eighth_Rev 3.da4](#)

DUT: BlackBerry Smartphone; Type: Clamshell; Serial: Not Specified

Program Name: HAC RF ER3D Device

Communication System: CDMA 800; Frequency: 824.7 MHz; Duty Cycle: 1:8.3

Medium parameters used: $\sigma = 0$ mho/m, $\epsilon_r = 1$; $\rho = 1000$ kg/m³

Phantom section: RF Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 08/01/2009
- Sensor-Surface: 0mm (Fix Surface) Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 03/03/2009
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

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

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 44.8 V/m; Power Drift = -0.155 dB

Maximum value of Total (measured) = 33.0 V/m

E Scan - ER3D - 2007: 15 mm from Probe Center to the

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Device/Hearing Aid Compatibility Test (101x101x1): Measurement grid:

dx=5mm, dy=5mm

Maximum value of peak Total field = 83.8 V/m

Probe Modulation Factor = 2.53

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 44.8 V/m; Power Drift = -0.155 dB

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

Peak E-field in V/m

Grid 1	Grid 2	Grid 3
75.6 M4	81.1 M4	77.6 M4
77.3 M4	83.8 M4	79.5 M4
75.9 M4	82.3 M4	78.7 M4



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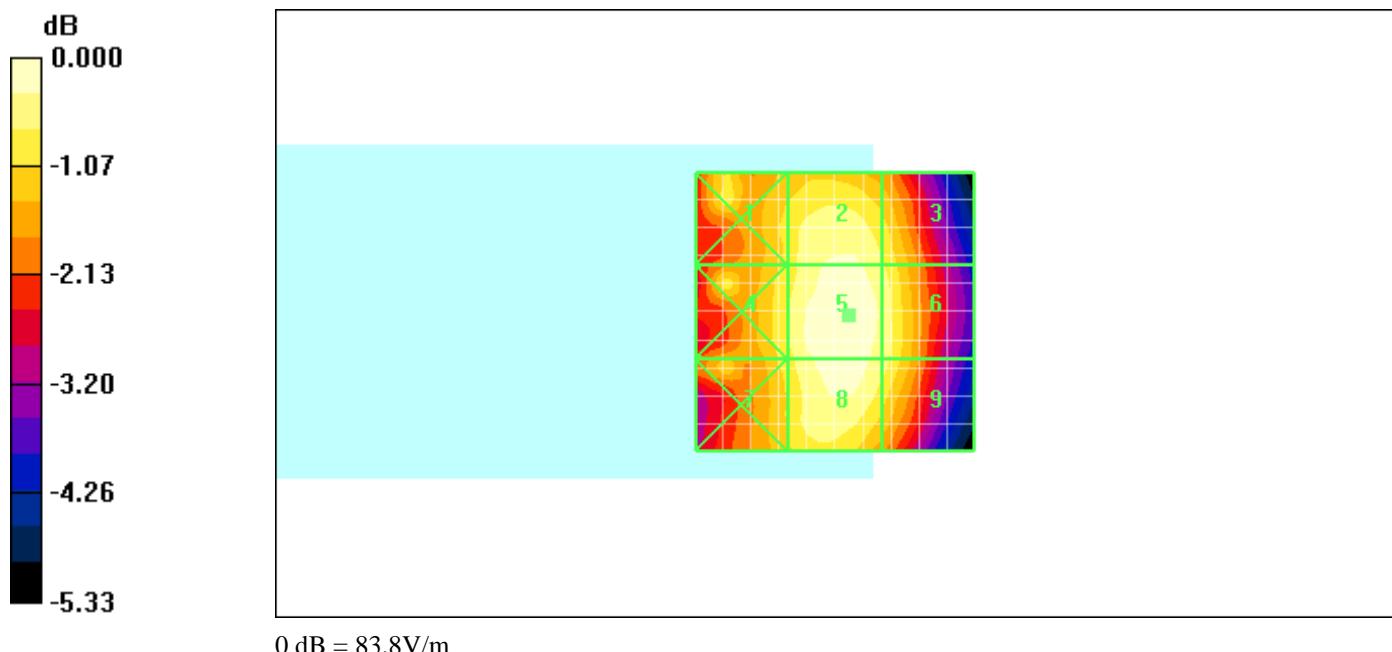
Dates of Test

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Date/Time: 29/09/2009 11:37:25 AM

Test Laboratory: RTS

File Name: [HAC_E_CDMA_800_low chan_one_eighth_Rev 3_T-Coil centre.da4](#)

DUT: BlackBerry Smartphone; Type: Clamshell; Serial: Not Specified

Program Name: HAC RF ER3D Device

Communication System: CDMA 800; Frequency: 824.7 MHz; Duty Cycle: 1:8.3

Medium parameters used: $\sigma = 0$ mho/m, $\epsilon_r = 1$; $\rho = 1000$ kg/m³

Phantom section: RF Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 08/01/2009
- Sensor-Surface: 0mm (Fix Surface) Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 03/03/2009
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

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

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 43.9 V/m; Power Drift = 0.179 dB

Maximum value of Total (measured) = 33.4 V/m

E Scan - ER3D - 2007: 15 mm from Probe Center to the

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Device/Hearing Aid Compatibility Test (101x101x1): Measurement grid:

dx=5mm, dy=5mm

Maximum value of peak Total field = 84.7 V/m

Probe Modulation Factor = 2.53

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 43.9 V/m; Power Drift = 0.179 dB

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

Peak E-field in V/m

Grid 1	Grid 2	Grid 3
75.7 M4	79.9 M4	76.3 M4
Grid 4	Grid 5	Grid 6
77.8 M4	84.6 M4	80.7 M4
Grid 7	Grid 8	Grid 9
77.8 M4	84.7 M4	80.8 M4

Author Data
Daoud Attayi

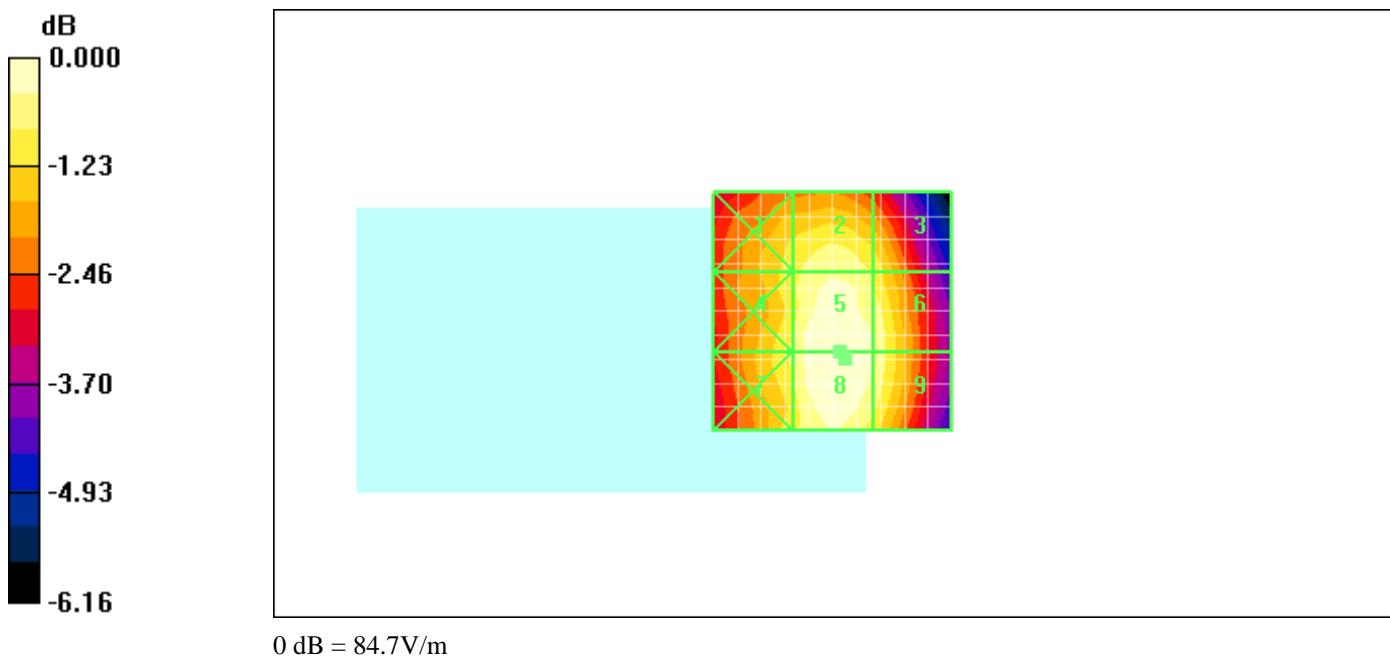
Dates of Test

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Date/Time: 09/09/2009 10:29:18 AM

Test Laboratory: RTS

File Name: [HAC_E_CDMA_1900_low chan.da4](#)

DUT: BlackBerry Smartphone; Type: Brick; Serial: Not Specified

Program Name: HAC RF ER3D Device

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

Medium parameters used: $\sigma = 0$ mho/m, $\epsilon_r = 1$; $\rho = 1000$ kg/m³

Phantom section: RF Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 08/01/2009
- Sensor-Surface: 0mm (Fix Surface) Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 03/03/2009
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

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

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 42.9 V/m; Power Drift = 0.053 dB

Maximum value of Total (measured) = 50.1 V/m

E Scan - ER3D - 2007: 15 mm from Probe Center to the

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Device/Hearing Aid Compatibility Test (101x101x1): Measurement grid:

dx=5mm, dy=5mm

Maximum value of peak Total field = 49.2 V/m

Probe Modulation Factor = 0.980

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 42.9 V/m; Power Drift = 0.053 dB

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

Peak E-field in V/m

Grid 1	Grid 2	Grid 3
41.2 M4	49.2 M4	48.2 M4
Grid 4 32.8 M4	Grid 5 43.1 M4	Grid 6 42.5 M4
Grid 7	Grid 8	Grid 9



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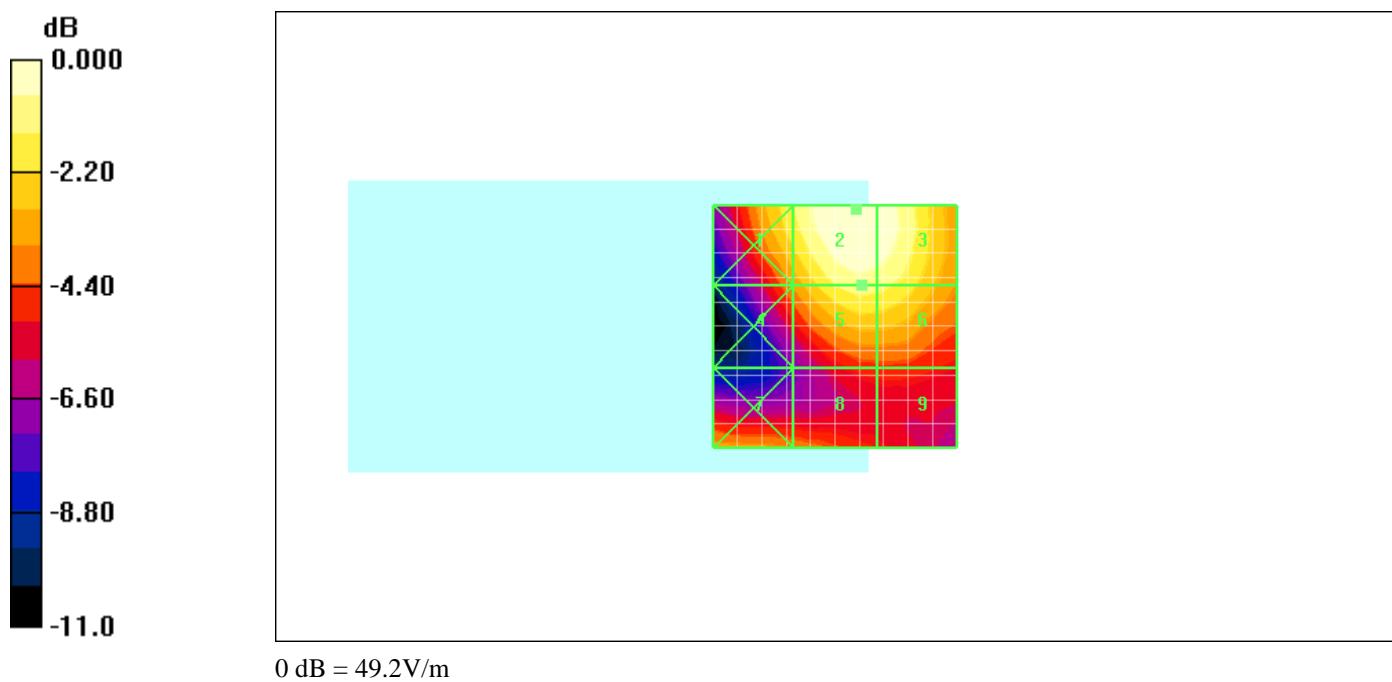
Dates of Test

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Date/Time: 09/09/2009 10:46:13 AM

Test Laboratory: RTS

File Name: [HAC_E_CDMA_1900_mid chan.da4](#)

DUT: BlackBerry Smartphone; Type: Brick; Serial: Not Specified

Program Name: HAC RF ER3D Device

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

Medium parameters used: $\sigma = 0$ mho/m, $\epsilon_r = 1$; $\rho = 1000$ kg/m³

Phantom section: RF Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 08/01/2009
- Sensor-Surface: 0mm (Fix Surface) Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 03/03/2009
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

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

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 26.5 V/m; Power Drift = 0.189 dB

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

E Scan - ER3D - 2007: 15 mm from Probe Center to the

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Device/Hearing Aid Compatibility Test (101x101x1): Measurement grid:

dx=5mm, dy=5mm

Maximum value of peak Total field = 35.8 V/m

Probe Modulation Factor = 0.980

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 26.5 V/m; Power Drift = 0.189 dB

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

Peak E-field in V/m

Grid 1 29.9 M4	Grid 2 35.8 M4	Grid 3 35.3 M4
Grid 4 23.1 M4	Grid 5 29.7 M4	Grid 6 29.7 M4



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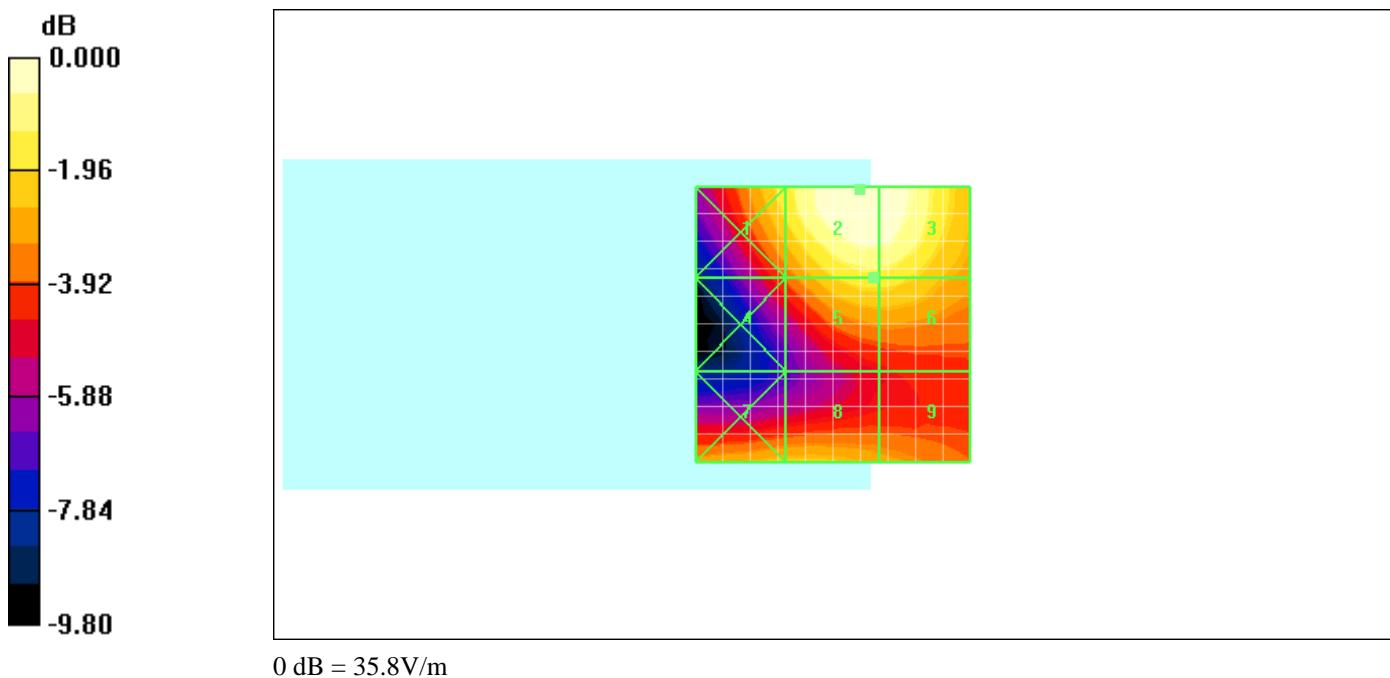
Dates of Test

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Date/Time: 09/09/2009 10:52:12 AM

Test Laboratory: RTS

File Name: [HAC_E_CDMA_1900_high chan.da4](#)

DUT: BlackBerry Smartphone; Type: Brick; Serial: Not Specified

Program Name: HAC RF ER3D Device

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

Medium parameters used: $\sigma = 0$ mho/m, $\epsilon_r = 1$; $\rho = 1000$ kg/m³

Phantom section: RF Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 08/01/2009
- Sensor-Surface: 0mm (Fix Surface) Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 03/03/2009
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

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

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 20.4 V/m; Power Drift = -0.093 dB

Maximum value of Total (measured) = 28.7 V/m

E Scan - ER3D - 2007: 15 mm from Probe Center to the

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Device/Hearing Aid Compatibility Test (101x101x1): Measurement grid:

dx=5mm, dy=5mm

Maximum value of peak Total field = 28.3 V/m

Probe Modulation Factor = 0.980

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 20.4 V/m; Power Drift = -0.093 dB

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

Peak E-field in V/m

Grid 1	Grid 2	Grid 3
25.3 M4	28.3 M4	27.8 M4
Grid 4	Grid 5	Grid 6
19.3 M4	23.2 M4	23.0 M4
Grid 7	Grid 8	Grid 9
22.8 M4	23.1 M4	21.9 M4



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Daoud Attayi

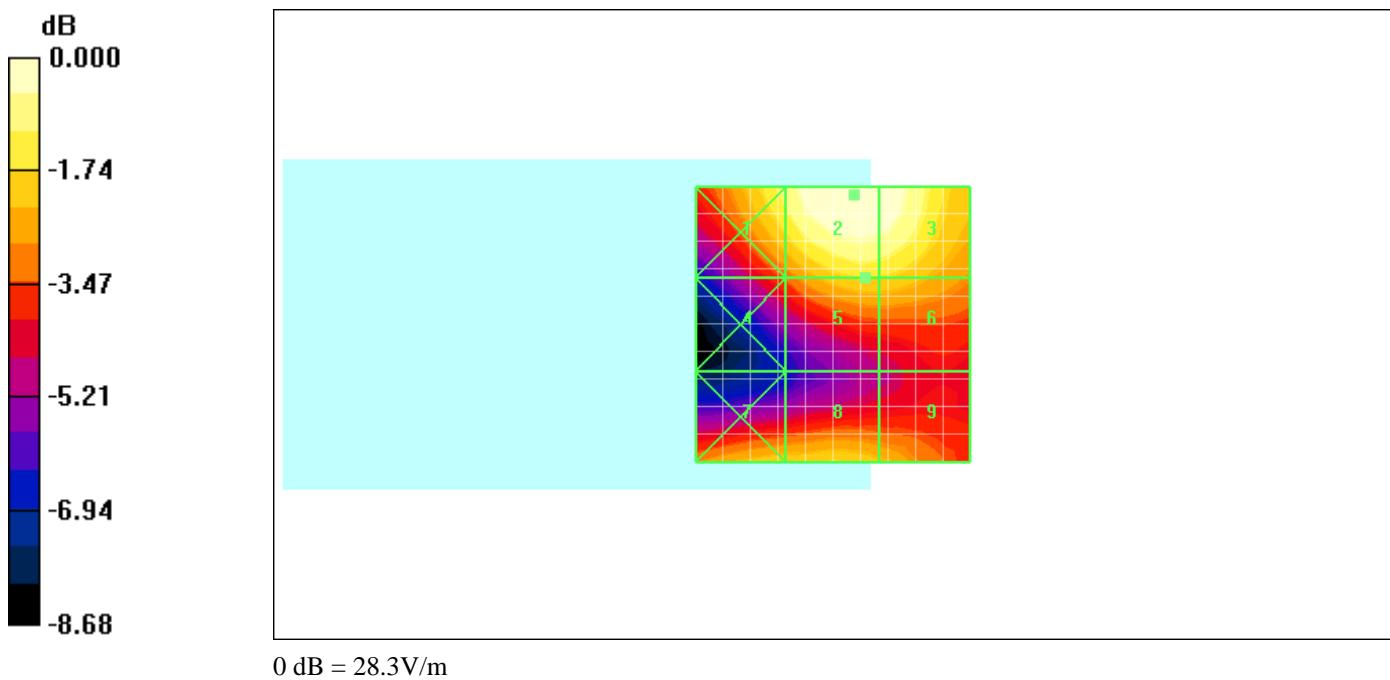
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Date/Time: 09/09/2009 10:58:52 AM

Test Laboratory: RTS

File Name: [HAC_E_CDMA_1900_low chan_one_eighth.da4](#)

DUT: BlackBerry Smartphone; Type: Brick; Serial: Not Specified

Program Name: HAC RF ER3D Device

Communication System: CDMA 1900; Frequency: 1851.25 MHz; Duty Cycle: 1:8.3

Medium parameters used: $\sigma = 0$ mho/m, $\epsilon_r = 1$; $\rho = 1000$ kg/m³

Phantom section: RF Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 08/01/2009
- Sensor-Surface: 0mm (Fix Surface) Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 03/03/2009
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

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

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 15.6 V/m; Power Drift = -0.046 dB

Maximum value of Total (measured) = 19.9 V/m

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

Maximum value of peak Total field = 49.7 V/m

Probe Modulation Factor = 2.49

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 15.6 V/m; Power Drift = -0.046 dB

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

Peak E-field in V/m

Grid 1	Grid 2	Grid 3
37.4 M4	49.7 M4	49.4 M4
Grid 4	Grid 5	Grid 6
32.5 M4	40.8 M4	38.5 M4
Grid 7	Grid 8	Grid 9
33.9 M4	29.6 M4	26.5 M4



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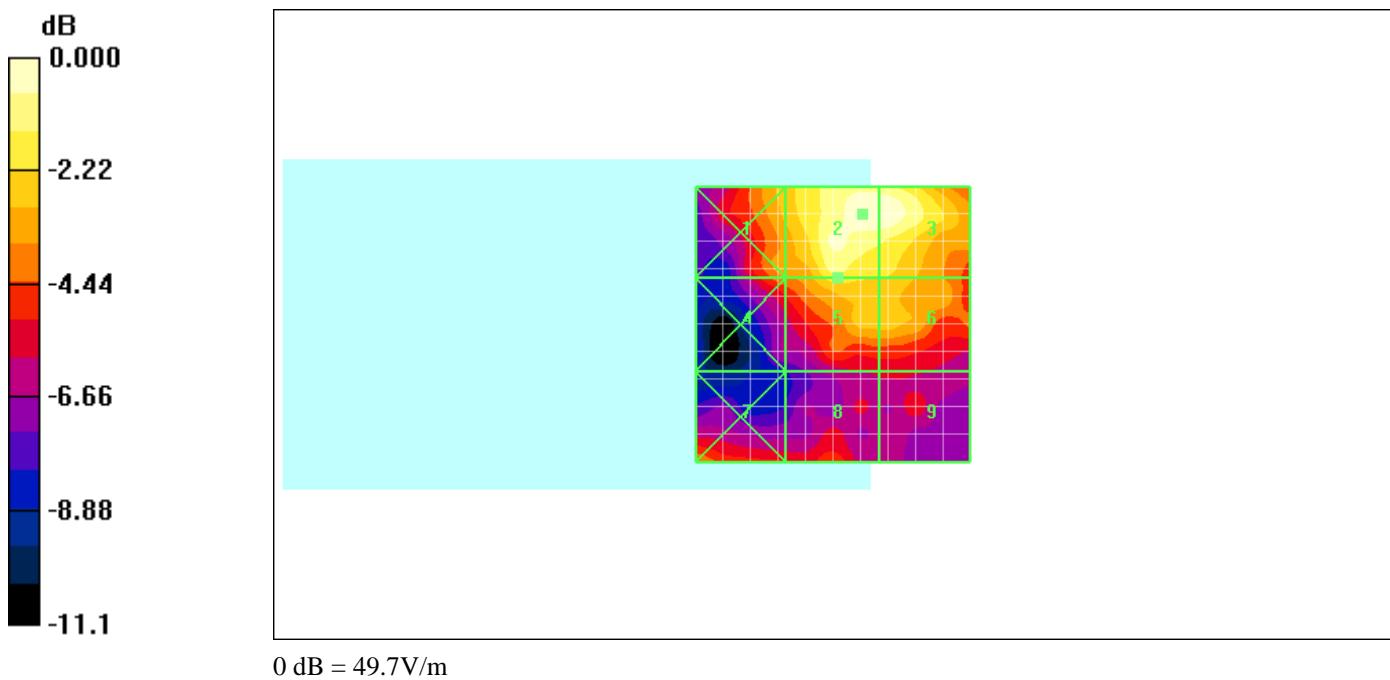
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Date/Time: 09/09/2009 11:10:47 AM

Test Laboratory: RTS

File Name: [HAC_E_CDMA_1900_mid chan_one_eighth.da4](#)

DUT: BlackBerry Smartphone; Type: Brick; Serial: Not Specified

Program Name: HAC RF ER3D Device

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

Medium parameters used: $\sigma = 0$ mho/m, $\epsilon_r = 1$; $\rho = 1000$ kg/m³

Phantom section: RF Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 08/01/2009
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 03/03/2009
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

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

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 10.9 V/m; Power Drift = 0.068 dB

Maximum value of Total (measured) = 14.1 V/m

E Scan - ER3D - 2007: 15 mm from Probe Center to the

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Device/Hearing Aid Compatibility Test (101x101x1): Measurement grid:

dx=5mm, dy=5mm

Maximum value of peak Total field = 35.2 V/m

Probe Modulation Factor = 2.49

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 10.9 V/m; Power Drift = 0.068 dB

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

Peak E-field in V/m

Grid 1	Grid 2	Grid 3
28.6 M4	35.2 M4	35.1 M4
20.7 M4	29.5 M4	29.8 M4
24.7 M4	25.4 M4	25.6 M4



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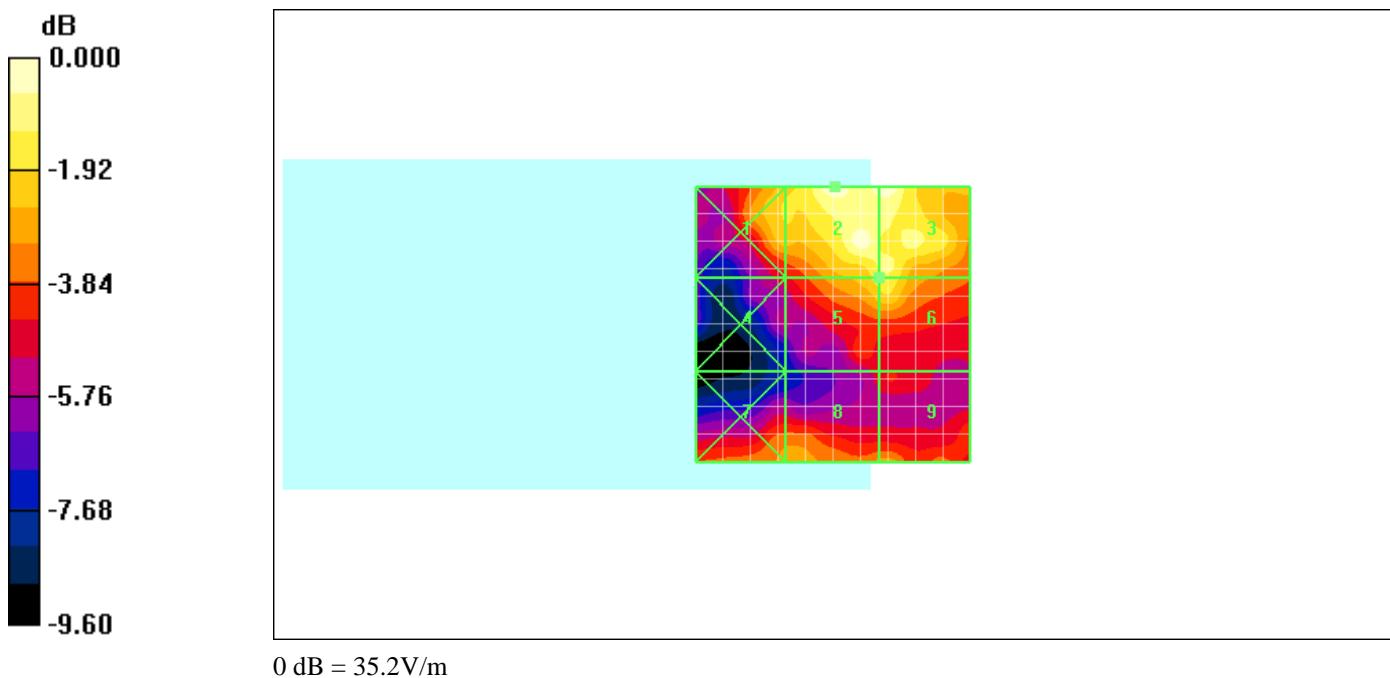
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Date/Time: 09/09/2009 11:18:12 AM

Test Laboratory: RTS

File Name: [HAC_E_CDMA_1900_high_chan_one_eighth.da4](#)

DUT: BlackBerry Smartphone; Type: Brick; Serial: Not Specified

Program Name: HAC RF ER3D Device

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

Medium parameters used: $\sigma = 0$ mho/m, $\epsilon_r = 1$; $\rho = 1000$ kg/m³

Phantom section: RF Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 08/01/2009
- Sensor-Surface: 0mm (Fix Surface) Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 03/03/2009
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

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

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 7.19 V/m; Power Drift = 0.074 dB

Maximum value of Total (measured) = 11.7 V/m

E Scan - ER3D - 2007: 15 mm from Probe Center to the

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Device/Hearing Aid Compatibility Test (101x101x1): Measurement grid:

dx=5mm, dy=5mm

Maximum value of peak Total field = 29.1 V/m

Probe Modulation Factor = 2.49

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 7.19 V/m; Power Drift = 0.074 dB

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

Peak E-field in V/m

Grid 1	Grid 2	Grid 3
23.8 M4	29.1 M4	26.3 M4
Grid 4	Grid 5	Grid 6
17.8 M4	21.7 M4	24.1 M4
Grid 7	Grid 8	Grid 9
21.3 M4	23.8 M4	21.0 M4



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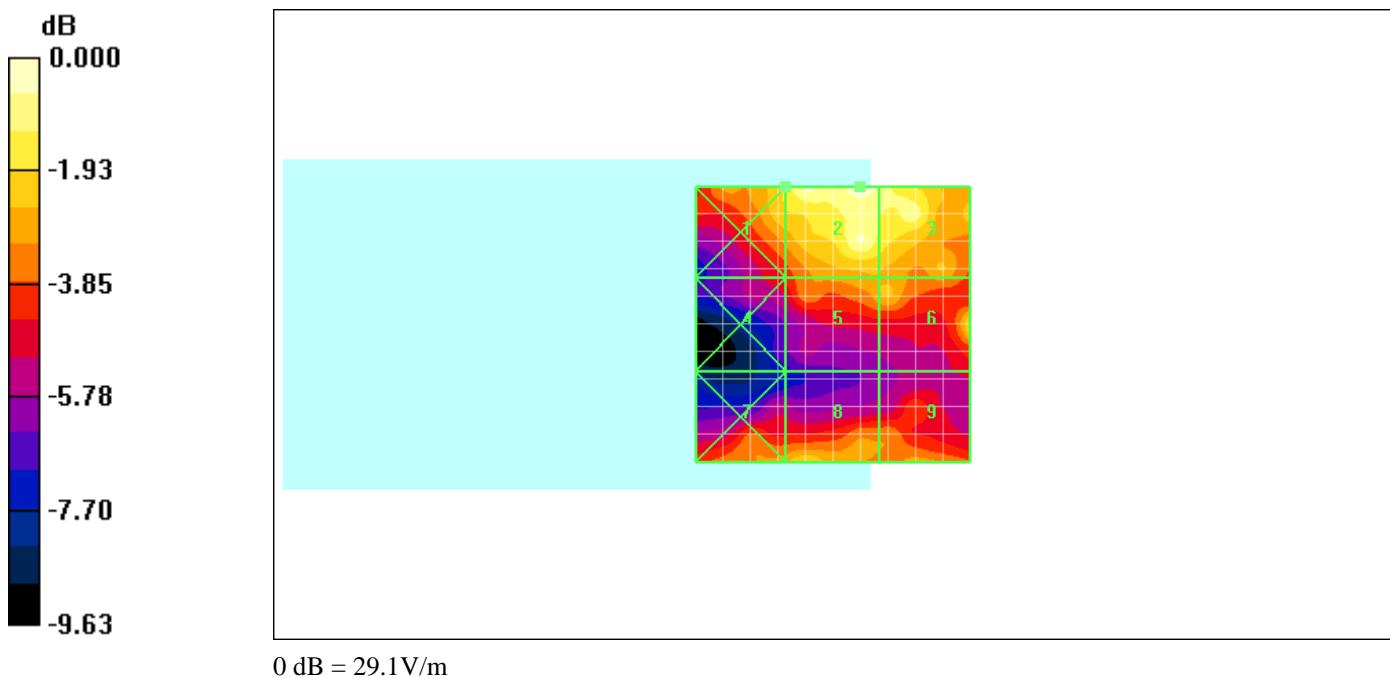
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Date/Time: 29/09/2009 12:12:06 PM

Test Laboratory: RTS

File Name: [HAC_E_CDMA_1900_low chan_Rev 3.da4](#)

DUT: BlackBerry Smartphone; Type: Clamshell; Serial: Not Specified

Program Name: HAC RF ER3D Device

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

Medium parameters used: $\sigma = 0$ mho/m, $\epsilon_r = 1$; $\rho = 1000$ kg/m³

Phantom section: RF Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 08/01/2009
- Sensor-Surface: 0mm (Fix Surface) Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 03/03/2009
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

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

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 44.0 V/m; Power Drift = 0.000 dB

Maximum value of Total (measured) = 49.5 V/m

E Scan - ER3D - 2007: 15 mm from Probe Center to the

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Device/Hearing Aid Compatibility Test (101x101x1): Measurement grid:

dx=5mm, dy=5mm

Maximum value of peak Total field = 48.7 V/m

Probe Modulation Factor = 0.980

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 44.0 V/m; Power Drift = 0.000 dB

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

Peak E-field in V/m

Grid 1 41.5 M4	Grid 2 48.7 M4	Grid 3 47.3 M4
Grid 4 33.3 M4	Grid 5 42.5 M4	Grid 6 42.1 M4
Grid 7 33.1 M4	Grid 8 30.6 M4	Grid 9 28.8 M4



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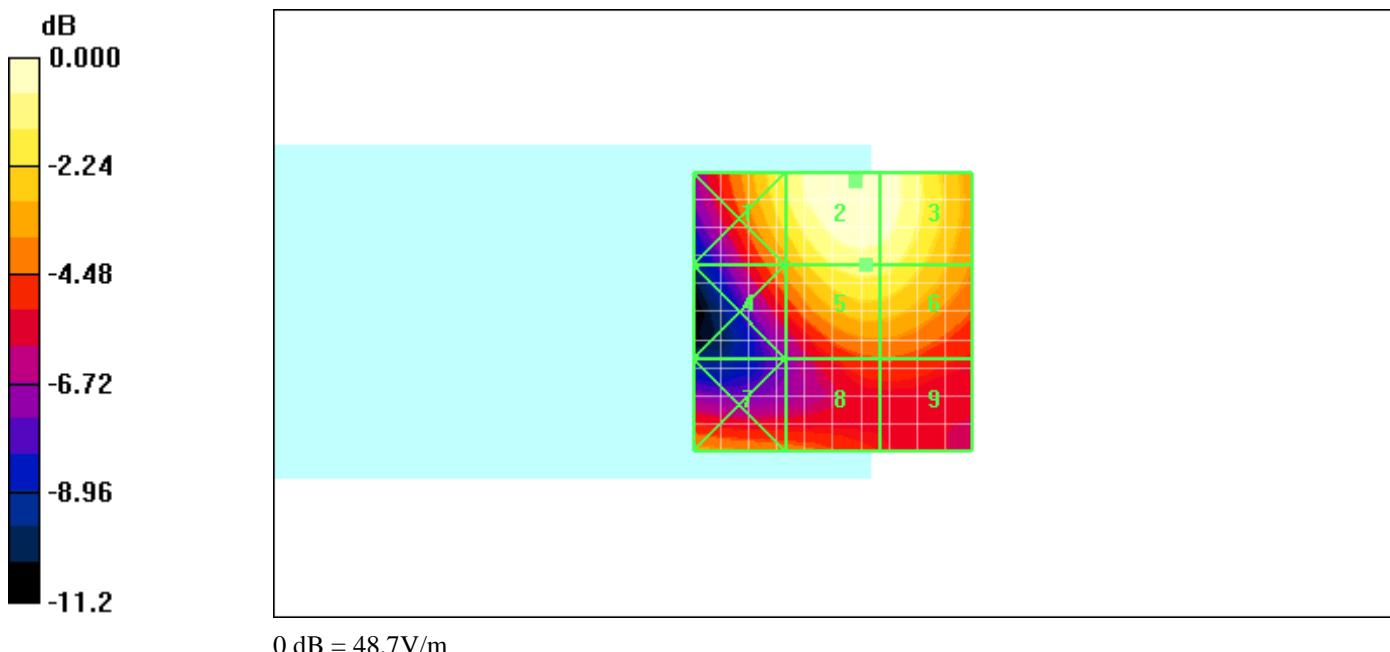
Dates of Test

Sep 08-29, 2009

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FCC ID

L6ARCL20CW

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Date/Time: 29/09/2009 12:21:04 PM

Test Laboratory: RTS

File Name: [HAC_E_CDMA_1900_low chan_Rev 3_T_coil_centre.da4](#)

DUT: BlackBerry Smartphone; Type: Clamshell; Serial: Not Specified

Program Name: HAC RF ER3D Device

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

Medium parameters used: $\sigma = 0$ mho/m, $\epsilon_r = 1$; $\rho = 1000$ kg/m³

Phantom section: RF Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 08/01/2009
- Sensor-Surface: 0mm (Fix Surface) Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 03/03/2009
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

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

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 44.5 V/m; Power Drift = -0.103 dB

Maximum value of Total (measured) = 49.8 V/m

E Scan - ER3D - 2007: 15 mm from Probe Center to the

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Device/Hearing Aid Compatibility Test (101x101x1): Measurement grid:

dx=5mm, dy=5mm

Maximum value of peak Total field = 49.0 V/m

Probe Modulation Factor = 0.980

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 44.5 V/m; Power Drift = -0.103 dB

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

Peak E-field in V/m

Grid 1 46.4 M4	Grid 2 49.0 M4	Grid 3 43.6 M4
Grid 4 45.1 M4	Grid 5 48.3 M4	Grid 6 43.4 M4
Grid 7 32.9 M4	Grid 8 37.3 M4	Grid 9 35.0 M4



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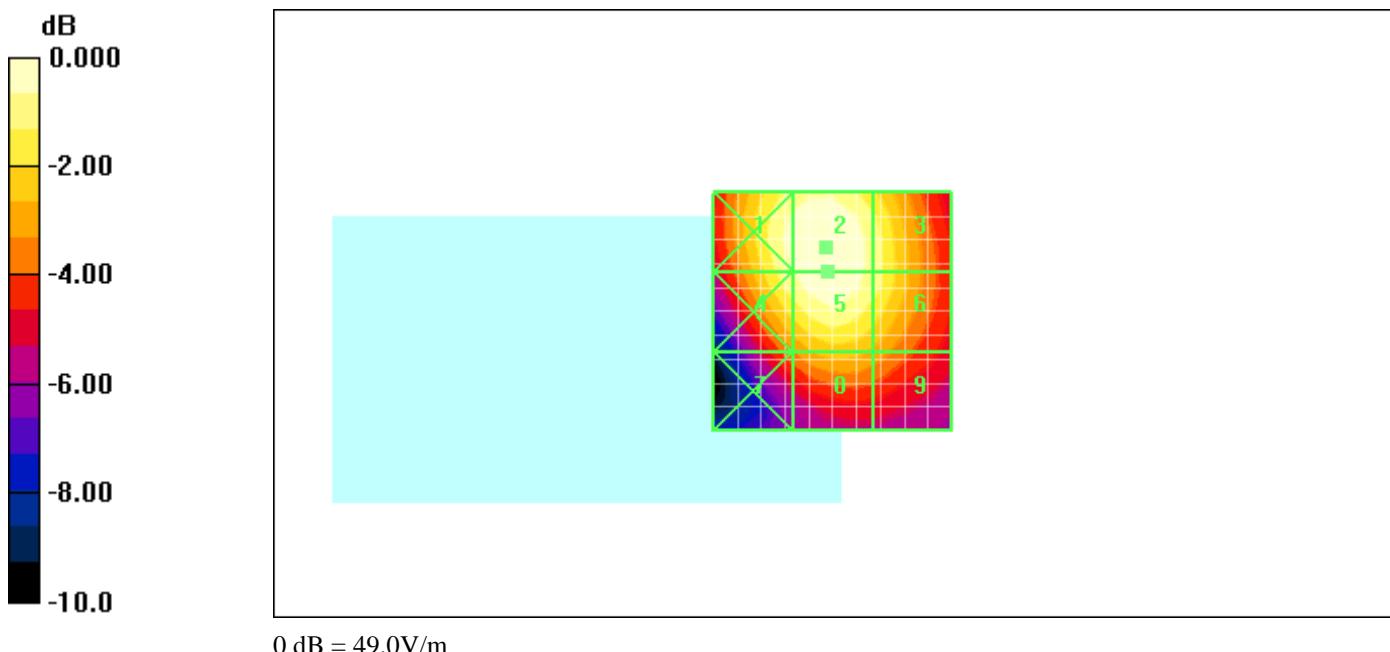
Dates of Test

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Date/Time: 29/09/2009 12:27:48 PM

Test Laboratory: RTS

File Name: [HAC_E_CDMA_1900_low chan_one_eighth_Rev 3.da4](#)

DUT: BlackBerry Smartphone; Type: Clamshell; Serial: Not Specified

Program Name: HAC RF ER3D Device

Communication System: CDMA 1900; Frequency: 1851.25 MHz; Duty Cycle: 1:8.3

Medium parameters used: $\sigma = 0$ mho/m, $\epsilon_r = 1$; $\rho = 1000$ kg/m³

Phantom section: RF Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 08/01/2009
- Sensor-Surface: 0mm (Fix Surface) Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 03/03/2009
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

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

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 15.5 V/m; Power Drift = -0.065 dB

Maximum value of Total (measured) = 19.6 V/m

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

Maximum value of peak Total field = 49.0 V/m

Probe Modulation Factor = 2.49

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 15.5 V/m; Power Drift = -0.065 dB

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

Peak E-field in V/m

Grid 1	Grid 2	Grid 3
37.3 M4	49.0 M4	43.6 M4
Grid 4	Grid 5	Grid 6
29.6 M4	40.7 M4	41.2 M4
Grid 7	Grid 8	Grid 9
33.5 M4	30.6 M4	29.0 M4

Author Data
Daoud Attayi

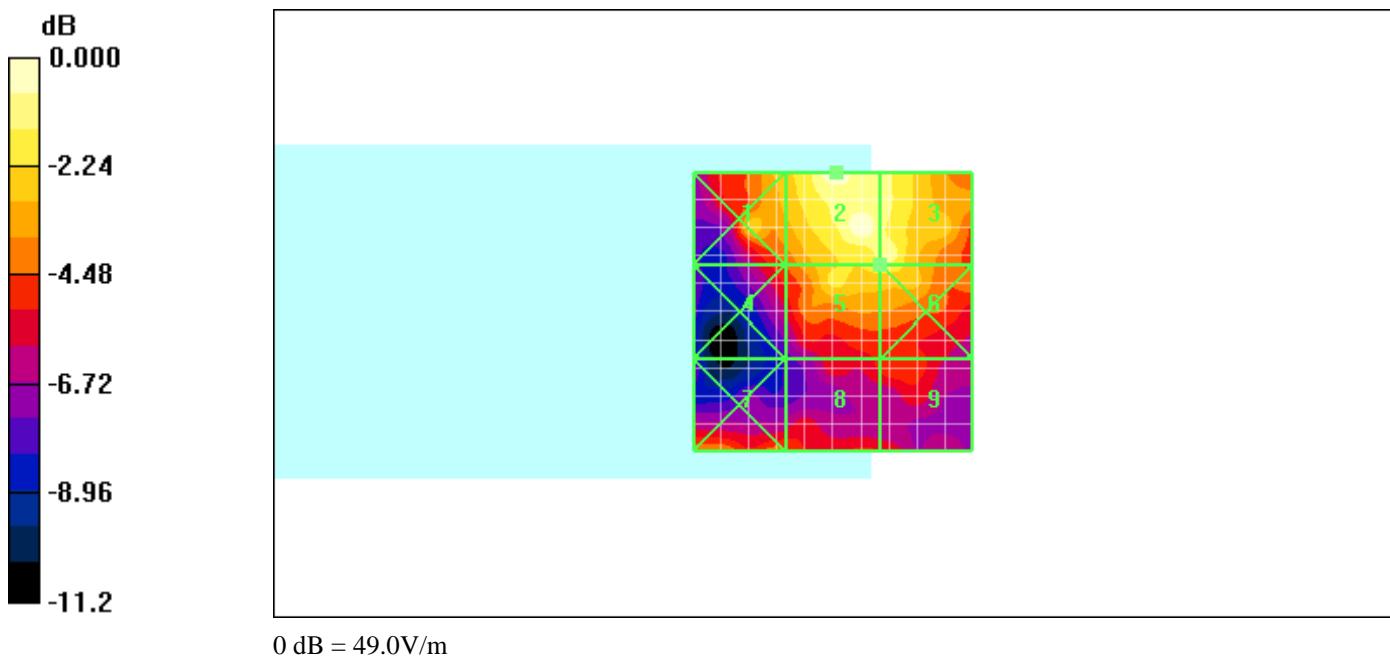
Dates of Test

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Date/Time: 29/09/2009 12:33:13 PM

Test Laboratory: RTS

File Name: [HAC_E_CDMA_1900_low chan_one_eighth_Rev 3_T_coil_centre.da4](#)

DUT: BlackBerry Smartphone; Type: Clamshell; Serial: Not Specified

Program Name: HAC RF ER3D Device

Communication System: CDMA 1900; Frequency: 1851.25 MHz; Duty Cycle: 1:8.3

Medium parameters used: $\sigma = 0$ mho/m, $\epsilon_r = 1$; $\rho = 1000$ kg/m³

Phantom section: RF Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 08/01/2009
- Sensor-Surface: 0mm (Fix Surface) Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 03/03/2009
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

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

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 17.5 V/m; Power Drift = -1.05 dB

Maximum value of Total (measured) = 19.4 V/m

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

Maximum value of peak Total field = 48.5 V/m

Probe Modulation Factor = 2.49

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 17.5 V/m; Power Drift = -1.05 dB

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

Peak E-field in V/m

Grid 1	Grid 2	Grid 3
46.0 M4	48.5 M4	39.8 M4
Grid 4	Grid 5	Grid 6
40.2 M4	45.3 M4	40.8 M4
Grid 7	Grid 8	Grid 9
29.7 M4	33.5 M4	31.6 M4



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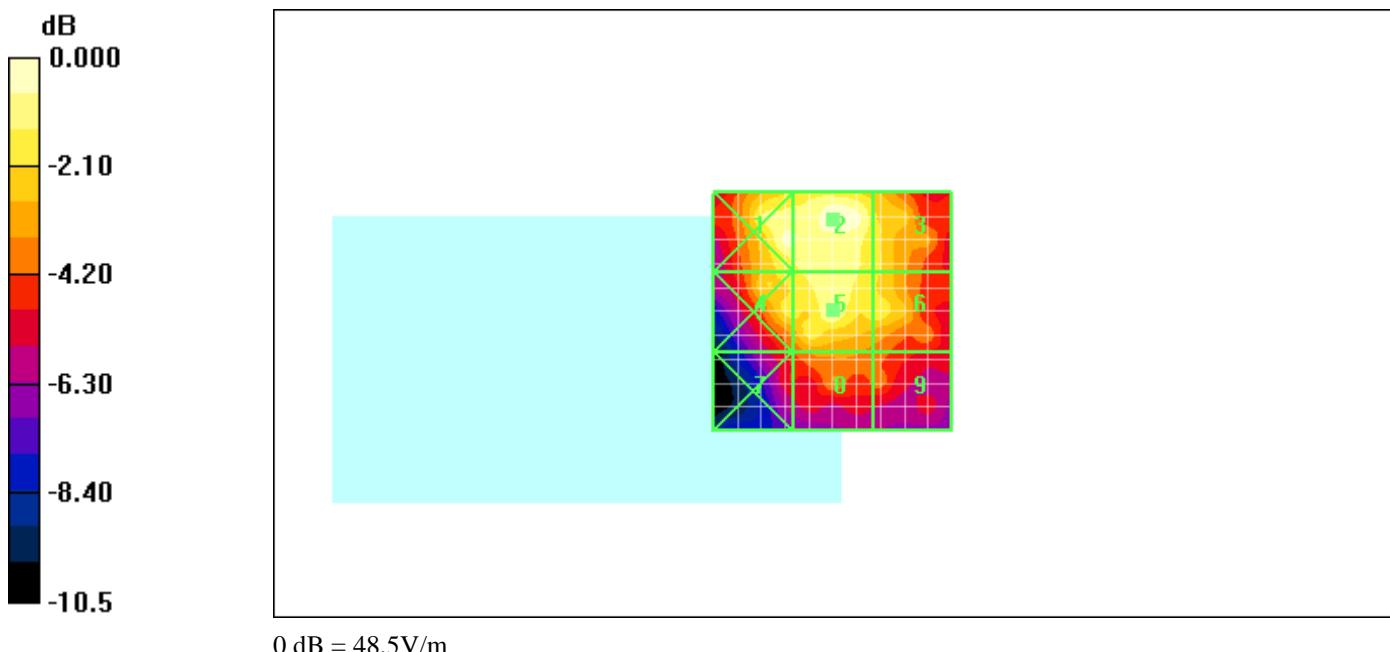
Dates of Test

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Date/Time: 09/09/2009 11:41:14 AM

Test Laboratory: RTS

File Name: [HAC_H_CDMA_800_low_chan.da4](#)

DUT: BlackBerry Smartphone; Type: Sample ; Serial: Not Specified

Program Name: HAC RF H3DV6 Device

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

Medium parameters used: $\sigma = 0 \text{ mho/m}$, $\epsilon_r = 1$; $\rho = 1 \text{ kg/m}^3$

Phantom section: RF Section

DASY4 Configuration:

- Probe: H3DV6 - SN6168; ; Calibrated: 03/03/2009
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 03/03/2009
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

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

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.102 A/m; Power Drift = -0.078 dB

Maximum value of Total (measured) = 0.192 A/m

H Scan - H3DV6 - 2007: 15 mm from Probe Center to the

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Device/Hearing Aid Compatibility Test (101x101x1): Measurement grid:

dx=5mm, dy=5mm

Maximum value of peak Total field = 0.139 A/m

Probe Modulation Factor = 1.01

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.102 A/m; Power Drift = -0.078 dB

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

Peak H-field in A/m

Grid 1	Grid 2	Grid 3
0.194 M4	0.139 M4	0.089 M4
Grid 4 0.178 M4	Grid 5 0.126 M4	Grid 6 0.079 M4
Grid 7 0.191 M4	Grid 8 0.132 M4	Grid 9 0.080 M4



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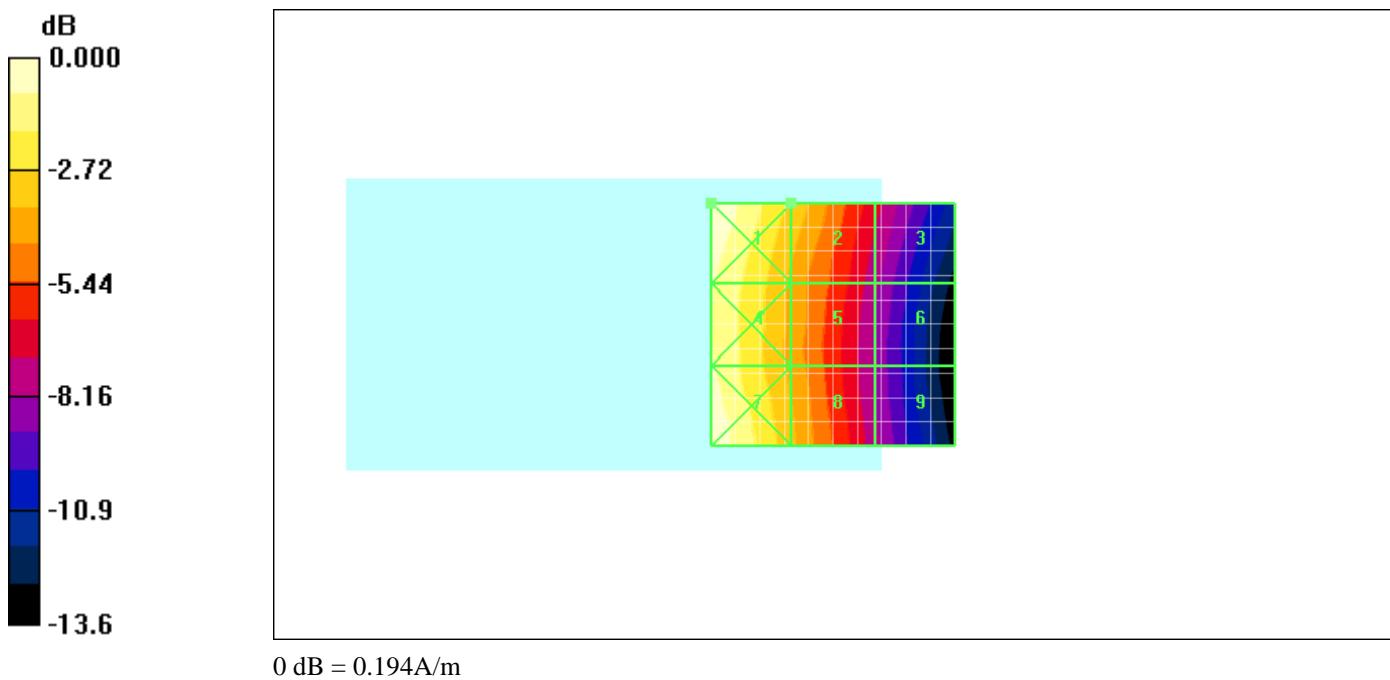
Dates of Test

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Date/Time: 09/09/2009 11:55:01 AM

Test Laboratory: RTS

File Name: [HAC_H_CDMA_800_mid_chan.da4](#)

DUT: BlackBerry Smartphone; Type: Sample ; Serial: Not Specified

Program Name: HAC RF H3DV6 Device

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

Medium parameters used: $\sigma = 0$ mho/m, $\epsilon_r = 1$; $\rho = 1$ kg/m³

Phantom section: RF Section

DASY4 Configuration:

- Probe: H3DV6 - SN6168; ; Calibrated: 03/03/2009
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 03/03/2009
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

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

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.099 A/m; Power Drift = 0.157 dB

Maximum value of Total (measured) = 0.183 A/m

H Scan - H3DV6 - 2007: 15 mm from Probe Center to the

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Device/Hearing Aid Compatibility Test (101x101x1): Measurement grid:

dx=5mm, dy=5mm

Maximum value of peak Total field = 0.134 A/m

Probe Modulation Factor = 1.01

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.099 A/m; Power Drift = 0.157 dB

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

Peak H-field in A/m

Grid 1 0.184 M4	Grid 2 0.134 M4	Grid 3 0.089 M4
Grid 4 0.170 M4	Grid 5 0.123 M4	Grid 6 0.080 M4
Grid 7 0.185 M4	Grid 8 0.133 M4	Grid 9 0.085 M4



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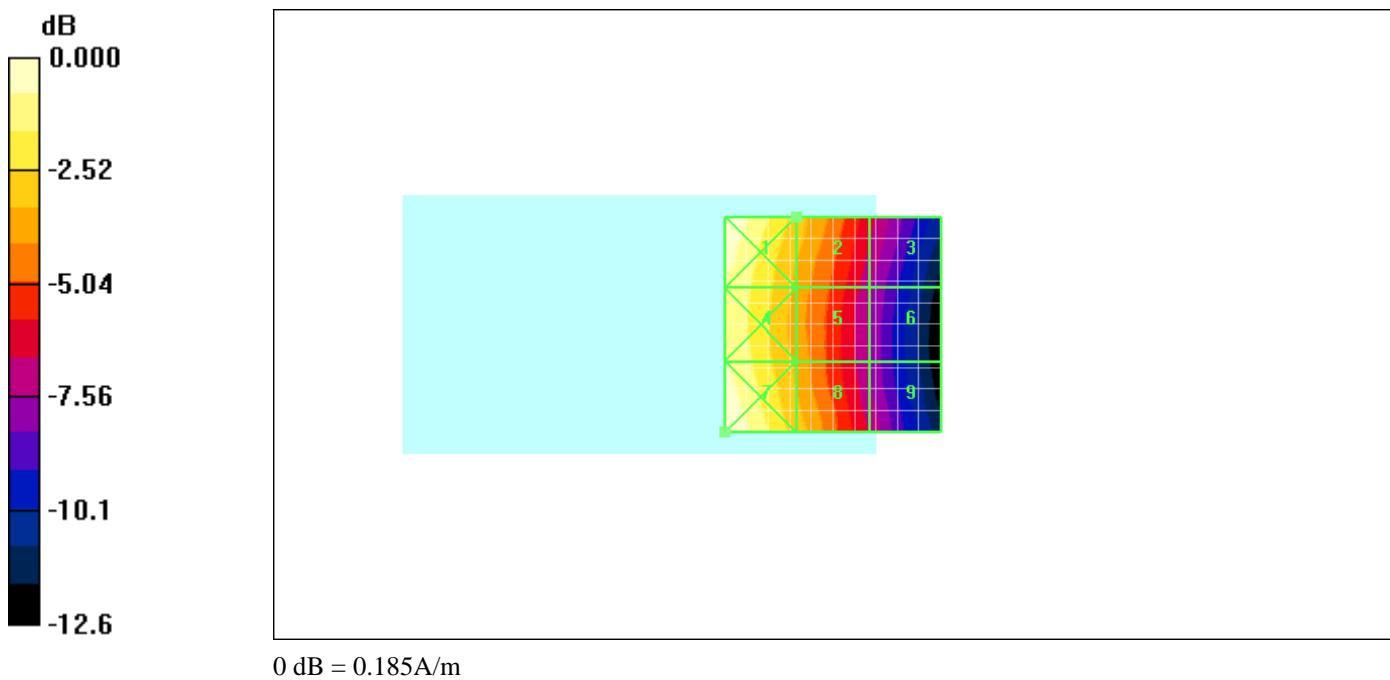
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Date/Time: 09/09/2009 12:03:06 PM

Test Laboratory: RTS

File Name: [HAC_H_CDMA_800_high_chan.da4](#)

DUT: BlackBerry Smartphone; Type: Sample ; Serial: Not Specified

Program Name: HAC RF H3DV6 Device

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

Medium parameters used: $\sigma = 0$ mho/m, $\epsilon_r = 1$; $\rho = 1$ kg/m³

Phantom section: RF Section

DASY4 Configuration:

- Probe: H3DV6 - SN6168; ; Calibrated: 03/03/2009
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 03/03/2009
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

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

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.109 A/m; Power Drift = -0.042 dB

Maximum value of Total (measured) = 0.191 A/m

H Scan - H3DV6 - 2007: 15 mm from Probe Center to the

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Device/Hearing Aid Compatibility Test (101x101x1): Measurement grid:

dx=5mm, dy=5mm

Maximum value of peak Total field = 0.145 A/m

Probe Modulation Factor = 1.01

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.109 A/m; Power Drift = -0.042 dB

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

Peak H-field in A/m

Grid 1 0.183 M4	Grid 2 0.134 M4	Grid 3 0.086 M4
Grid 4 0.179 M4	Grid 5 0.132 M4	Grid 6 0.088 M4
Grid 7 0.193 M4	Grid 8 0.145 M4	Grid 9 0.095 M4



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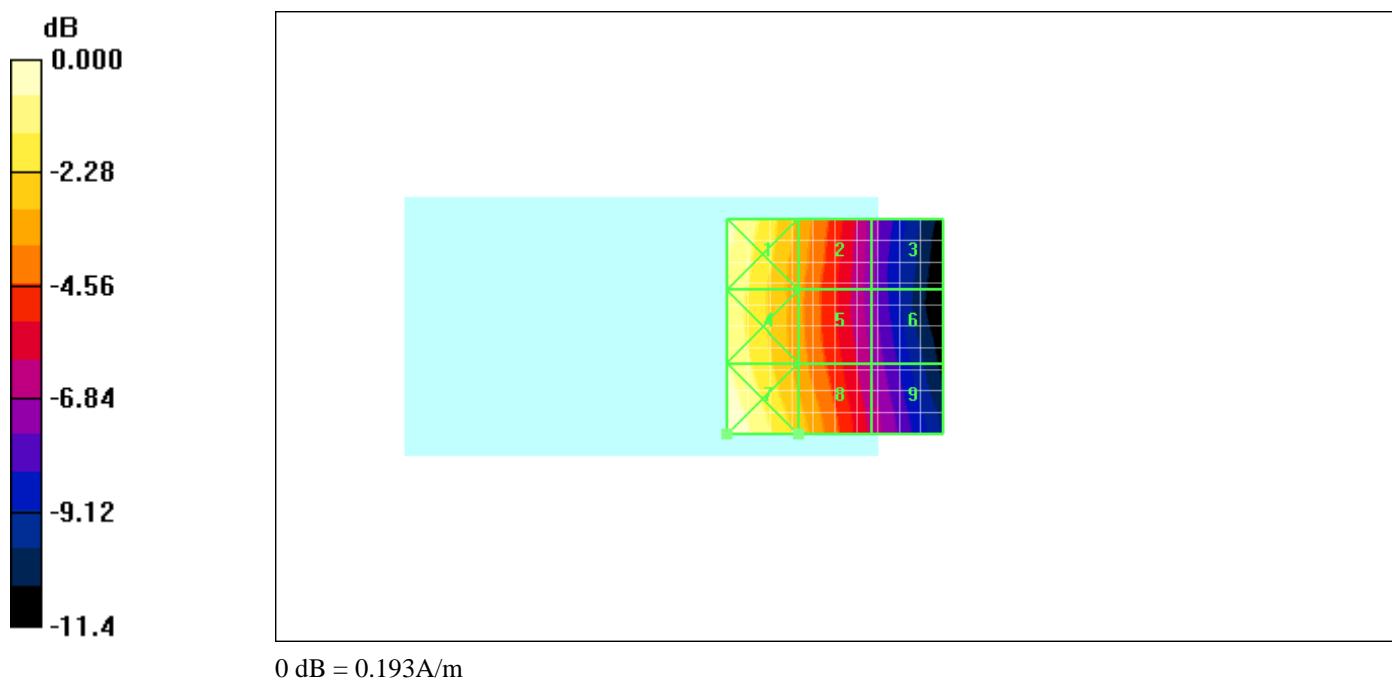
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Date/Time: 09/09/2009 12:15:26 PM

Test Laboratory: RTS

File Name: [HAC_H_CDMA_800_low_chan_one_eighth.da4](#)

DUT: BlackBerry Smartphone; Type: Sample ; Serial: Not Specified

Program Name: HAC RF H3DV6 Device

Communication System: CDMA 800 1/8 th; Frequency: 824.7 MHz; Duty Cycle: 1:8.3

Medium parameters used: $\sigma = 0$ mho/m, $\epsilon_r = 1$; $\rho = 1$ kg/m³

Phantom section: RF Section

DASY4 Configuration:

- Probe: H3DV6 - SN6168; ; Calibrated: 03/03/2009
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 03/03/2009
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

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

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.035 A/m; Power Drift = 0.155 dB

Maximum value of Total (measured) = 0.072 A/m

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

Maximum value of peak Total field = 0.126 A/m

Probe Modulation Factor = 2.46

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.035 A/m; Power Drift = 0.155 dB

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

Peak H-field in A/m

Grid 1	Grid 2	Grid 3
0.178 M4	0.126 M4	0.080 M4
Grid 4	Grid 5	Grid 6
0.173 M4	0.116 M4	0.073 M4
Grid 7	Grid 8	Grid 9
0.172 M4	0.124 M4	0.072 M4



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Daoud Attayi

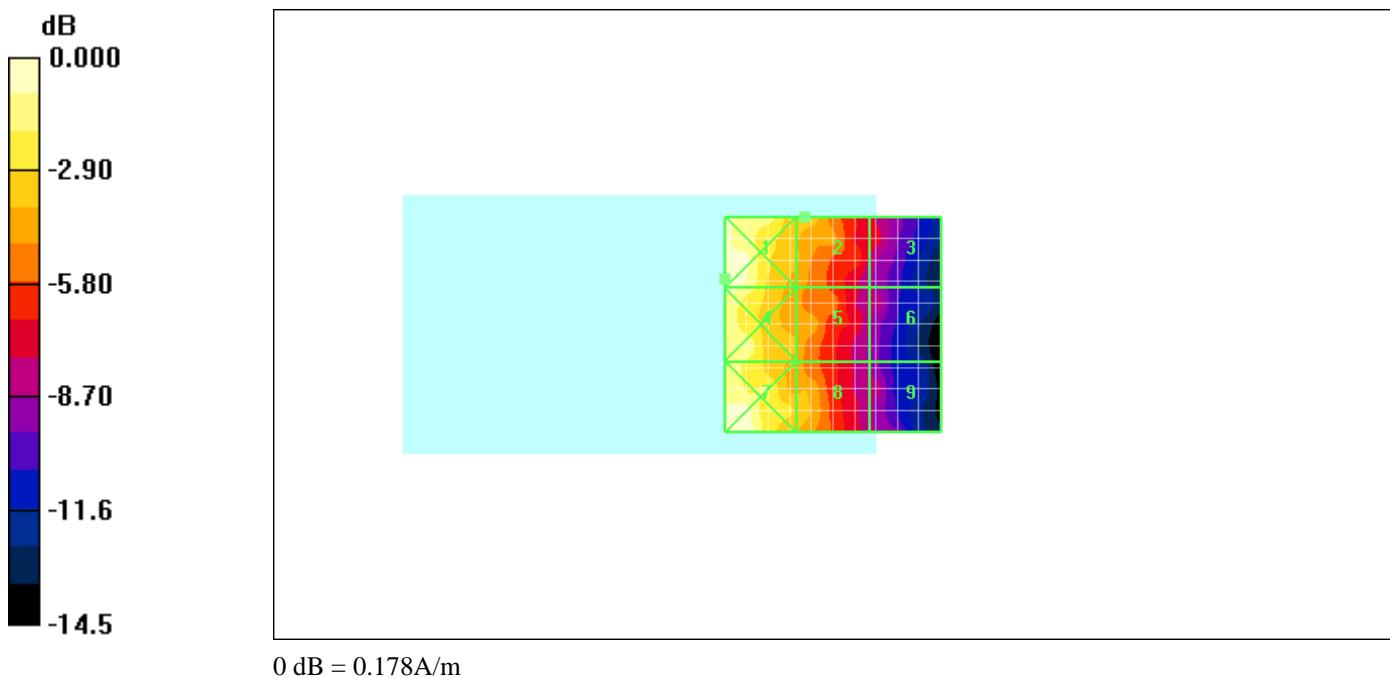
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Date/Time: 09/09/2009 12:43:19 PM

Test Laboratory: RTS

File Name: [HAC_H_CDMA_800_mid_chan_one_eighth.da4](#)

DUT: BlackBerry Smartphone; Type: Sample ; Serial: Not Specified

Program Name: HAC RF H3DV6 Device

Communication System: CDMA 800 1/8 th; Frequency: 836.52 MHz; Duty Cycle: 1:8.3

Medium parameters used: $\sigma = 0$ mho/m, $\epsilon_r = 1$; $\rho = 1$ kg/m³

Phantom section: RF Section

DASY4 Configuration:

- Probe: H3DV6 - SN6168; ; Calibrated: 03/03/2009
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 03/03/2009
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

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

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.038 A/m; Power Drift = 1.06 dB

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

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

Maximum value of peak Total field = 0.238 A/m

Probe Modulation Factor = 2.46

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.038 A/m; Power Drift = 1.06 dB

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

Peak H-field in A/m

Grid 1	Grid 2	Grid 3
0.372 M4	0.168 M4	0.163 M4
Grid 4	Grid 5	Grid 6
0.313 M4	0.238 M4	0.129 M4
Grid 7	Grid 8	Grid 9
0.195 M4	0.156 M4	0.118 M4



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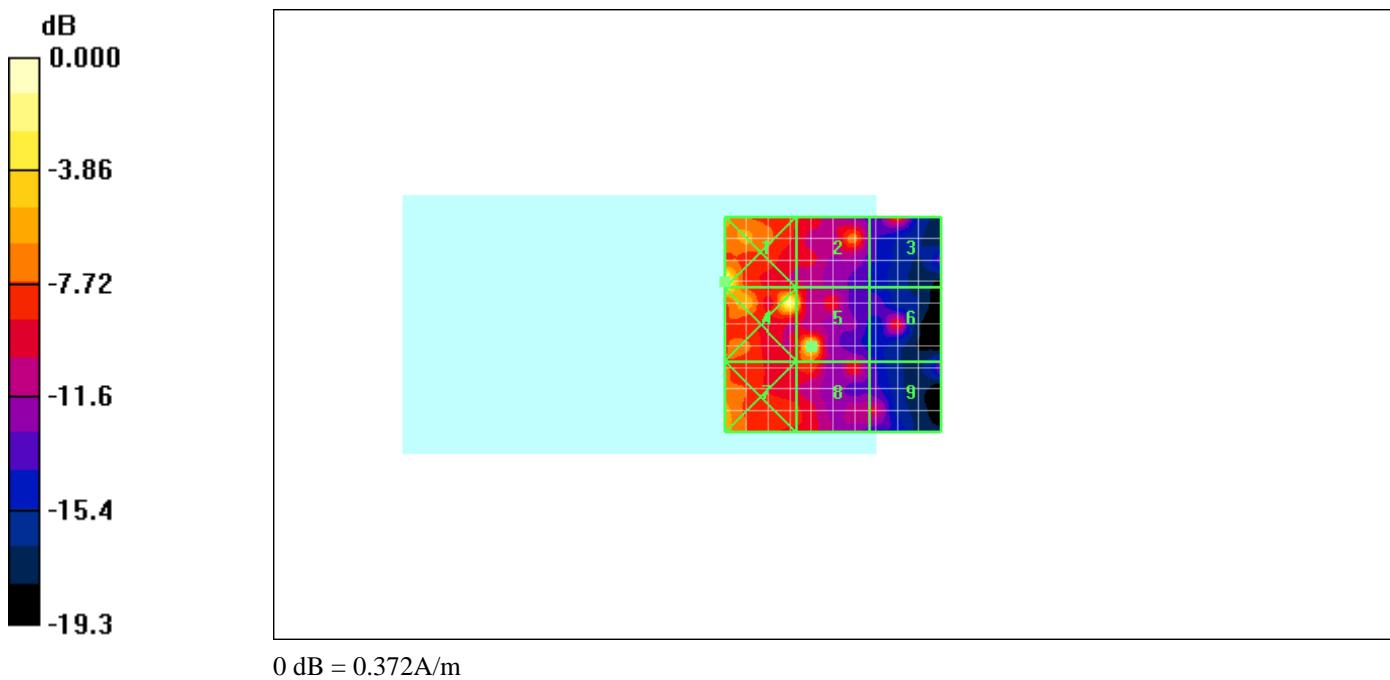
Dates of Test

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Date/Time: 09/09/2009 1:03:50 PM

Test Laboratory: RTS

File Name: [HAC_H_CDMA_800_high_chan_one_eighth.da4](#)

DUT: BlackBerry Smartphone; Type: Sample ; Serial: Not Specified

Program Name: HAC RF H3DV6 Device

Communication System: CDMA 800 1/8 th; Frequency: 824.7 MHz; Duty Cycle: 1:8.3

Medium parameters used: $\sigma = 0$ mho/m, $\epsilon_r = 1$; $\rho = 1$ kg/m³

Phantom section: RF Section

DASY4 Configuration:

- Probe: H3DV6 - SN6168; ; Calibrated: 03/03/2009
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 03/03/2009
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

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

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.042 A/m; Power Drift = 8.64 dB

Maximum value of Total (measured) = 0.107 A/m

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

Maximum value of peak Total field = 0.215 A/m

Probe Modulation Factor = 2.46

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.042 A/m; Power Drift = 8.64 dB

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

Peak H-field in A/m

Grid 1	Grid 2	Grid 3
0.239 M4	0.191 M4	0.124 M4
Grid 4	Grid 5	Grid 6
0.262 M4	0.215 M4	0.142 M4
Grid 7	Grid 8	Grid 9
0.195 M4	0.191 M4	0.163 M4



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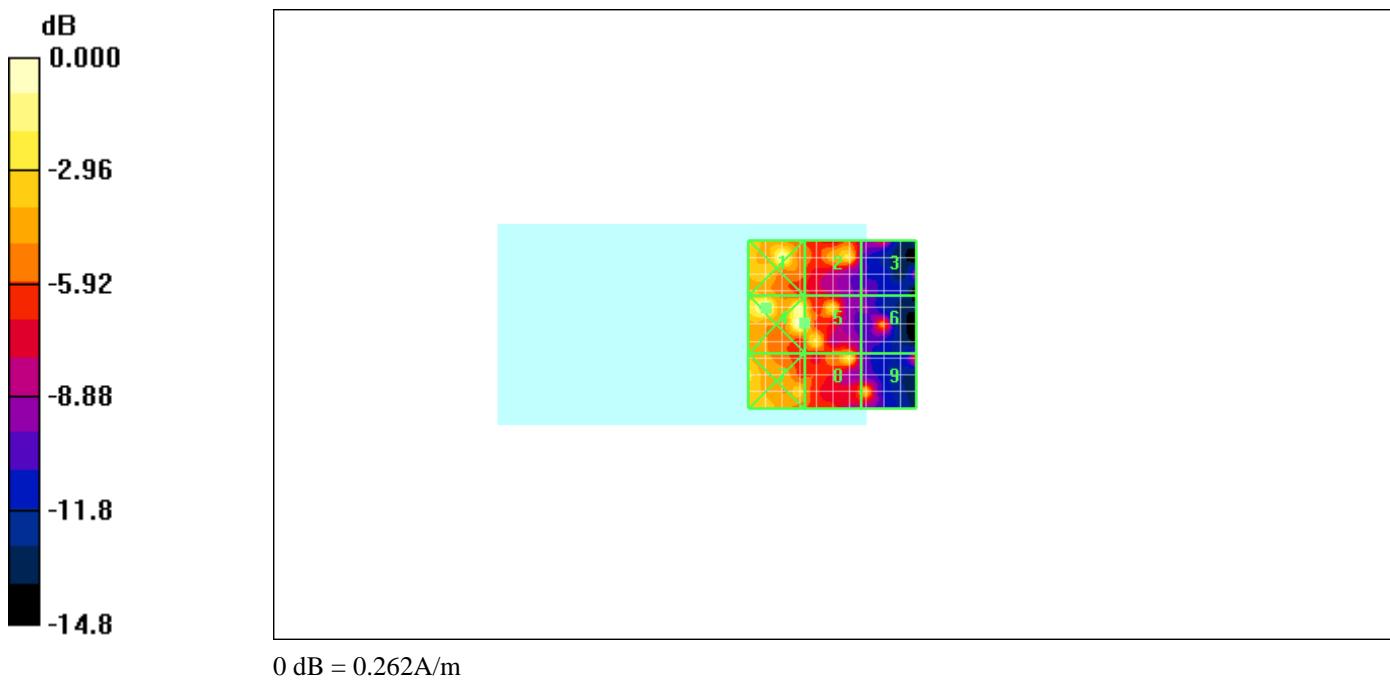
Dates of Test

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Report No

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Date/Time: 29/09/2009 1:33:32 PM

Test Laboratory: RTS

File Name: [HAC_H_CDMA_800_high_chan_Rev 3.da4](#)

DUT: BlackBerry Smartphone; Type: Sample ; Serial: Not Specified

Program Name: HAC RF H3DV6 Device

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

Medium parameters used: $\sigma = 0 \text{ mho/m}$, $\epsilon_r = 1$; $\rho = 1 \text{ kg/m}^3$

Phantom section: RF Section

DASY4 Configuration:

- Probe: H3DV6 - SN6168; ; Calibrated: 03/03/2009
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 03/03/2009
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

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

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.116 A/m; Power Drift = -0.117 dB

Maximum value of Total (measured) = 0.204 A/m

H Scan - H3DV6 - 2007: 15 mm from Probe Center to the

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Device/Hearing Aid Compatibility Test (101x101x1): Measurement grid:

dx=5mm, dy=5mm

Maximum value of peak Total field = 0.153 A/m

Probe Modulation Factor = 1.01

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.116 A/m; Power Drift = -0.117 dB

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

Peak H-field in A/m

Grid 1 0.198 M4	Grid 2 0.145 M4	Grid 3 0.093 M4
Grid 4 0.190 M4	Grid 5 0.142 M4	Grid 6 0.095 M4
Grid 7 0.206 M4	Grid 8 0.153 M4	Grid 9 0.102 M4



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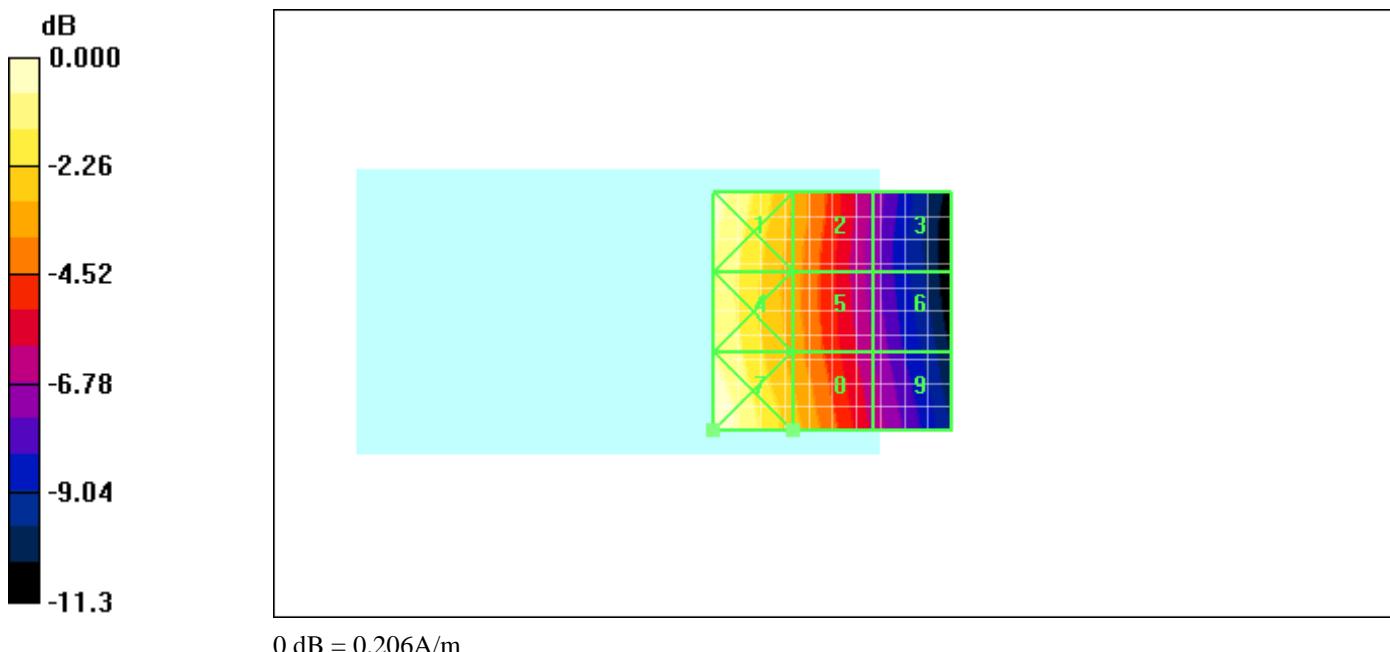
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Date/Time: 29/09/2009 1:39:33 PM

Test Laboratory: RTS

File Name: [HAC_H_CDMA_800_high_chan_Rev 3_T_coil_centre.da4](#)

DUT: BlackBerry Smartphone; Type: Sample ; Serial: Not Specified

Program Name: HAC RF H3DV6 Device

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

Medium parameters used: $\sigma = 0$ mho/m, $\epsilon_r = 1$; $\rho = 1$ kg/m³

Phantom section: RF Section

DASY4 Configuration:

- Probe: H3DV6 - SN6168; ; Calibrated: 03/03/2009
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 03/03/2009
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

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

dx=5mm, dy=5mm

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.114 A/m; Power Drift = -0.073 dB

Maximum value of Total (measured) = 0.193 A/m

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

Maximum value of peak Total field = 0.145 A/m

Probe Modulation Factor = 1.01

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.114 A/m; Power Drift = -0.073 dB

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

Peak H-field in A/m

Grid 1	Grid 2	Grid 3
0.196 M4	0.143 M4	0.090 M4
Grid 4	Grid 5	Grid 6
0.189 M4	0.141 M4	0.090 M4
Grid 7	Grid 8	Grid 9
0.195 M4	0.145 M4	0.095 M4



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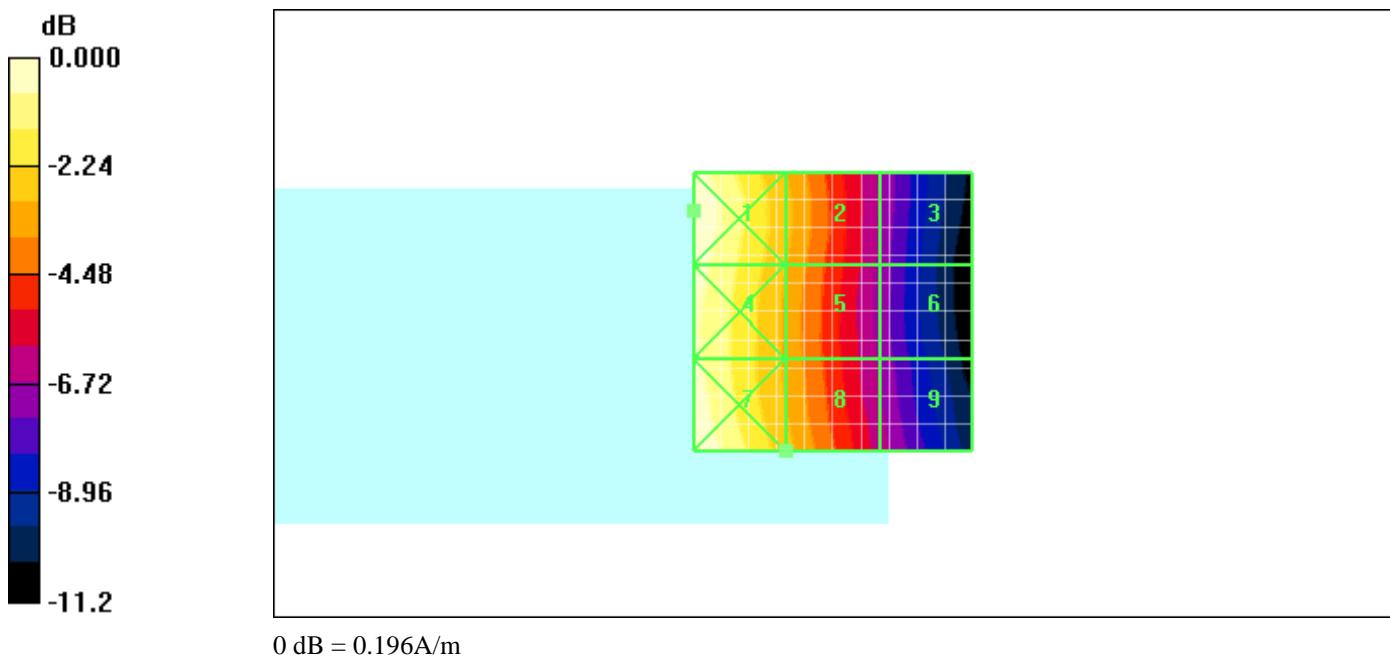
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Date/Time: 29/09/2009 1:47:52 PM

Test Laboratory: RTS

File Name: [HAC_H_CDMA_800_mid_chan_one_eighth_Rev 3.da4](#)

DUT: BlackBerry Smartphone; Type: Sample ; Serial: Not Specified

Program Name: HAC RF H3DV6 Device

Communication System: CDMA 800 1/8 th; Frequency: 836.52 MHz; Duty Cycle: 1:8.3

Medium parameters used: $\sigma = 0$ mho/m, $\epsilon_r = 1$; $\rho = 1$ kg/m³

Phantom section: RF Section

DASY4 Configuration:

- Probe: H3DV6 - SN6168; ; Calibrated: 03/03/2009
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 03/03/2009
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

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

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.036 A/m; Power Drift = -0.017 dB

Maximum value of Total (measured) = 0.076 A/m

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

Maximum value of peak Total field = 0.122 A/m

Probe Modulation Factor = 2.46

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.036 A/m; Power Drift = -0.017 dB

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

Peak H-field in A/m

Grid 1	Grid 2	Grid 3
0.188 M4	0.118 M4	0.077 M4
0.155 M4	0.117 M4	0.070 M4
0.163 M4	0.122 M4	0.071 M4

Author Data
Daoud Attayi

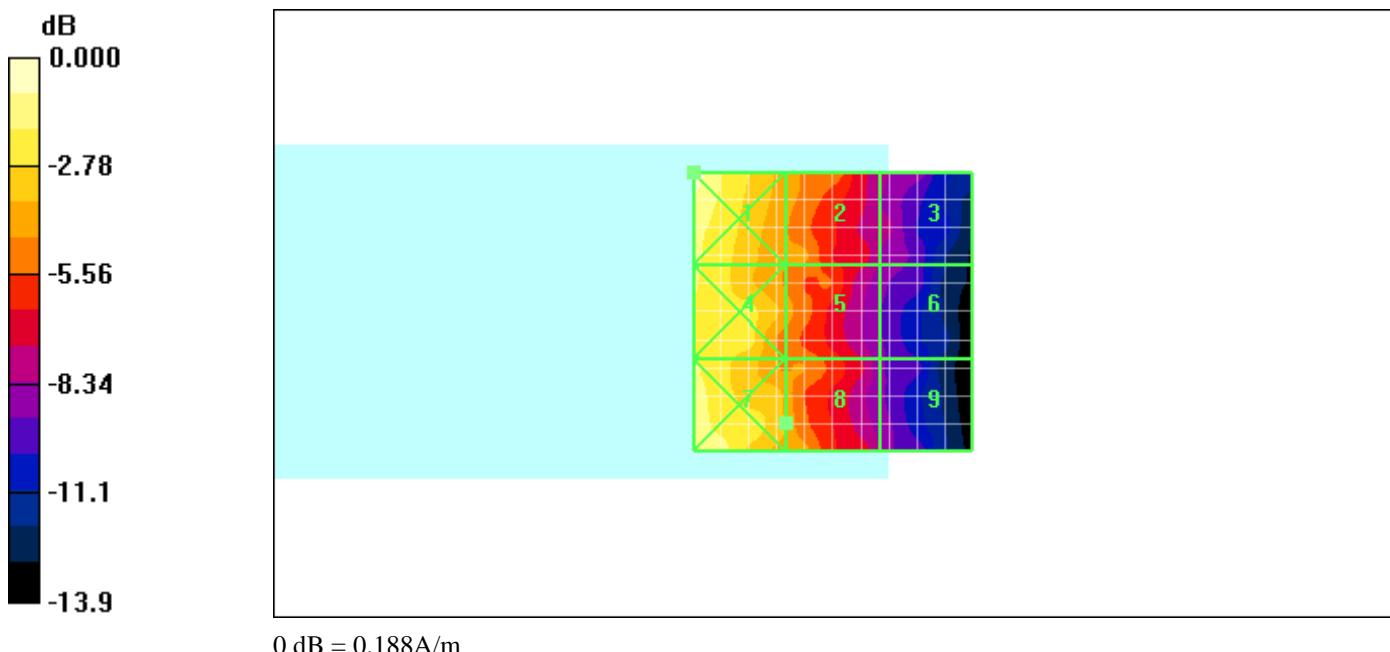
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Date/Time: 29/09/2009 1:54:06 PM

Test Laboratory: RTS

File Name: [HAC_H_CDMA_800_mid_chan_one_eighth_Rev 3_T_Coil_Centre.da4](#)

DUT: BlackBerry Smartphone; Type: Sample ; Serial: Not Specified

Program Name: HAC RF H3DV6 Device

Communication System: CDMA 800 1/8 th; Frequency: 836.52 MHz; Duty Cycle: 1:8.3

Medium parameters used: $\sigma = 0$ mho/m, $\epsilon_r = 1$; $\rho = 1$ kg/m³

Phantom section: RF Section

DASY4 Configuration:

- Probe: H3DV6 - SN6168; ; Calibrated: 03/03/2009
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 03/03/2009
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

H Scan - H3DV6 - 2007: 15 mm from Probe Center to the

Device/Hearing Aid Compatibility Test (11x11x1): Measurement grid:

dx=5mm, dy=5mm

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.036 A/m; Power Drift = -0.094 dB

Maximum value of Total (measured) = 0.071 A/m

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

Maximum value of peak Total field = 0.131 A/m

Probe Modulation Factor = 2.46

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.036 A/m; Power Drift = -0.094 dB

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

Peak H-field in A/m

Grid 1 0.167 M4	Grid 2 0.131 M4	Grid 3 0.083 M4
Grid 4 0.175 M4	Grid 5 0.123 M4	Grid 6 0.075 M4
Grid 7 0.170 M4	Grid 8 0.121 M4	Grid 9 0.077 M4



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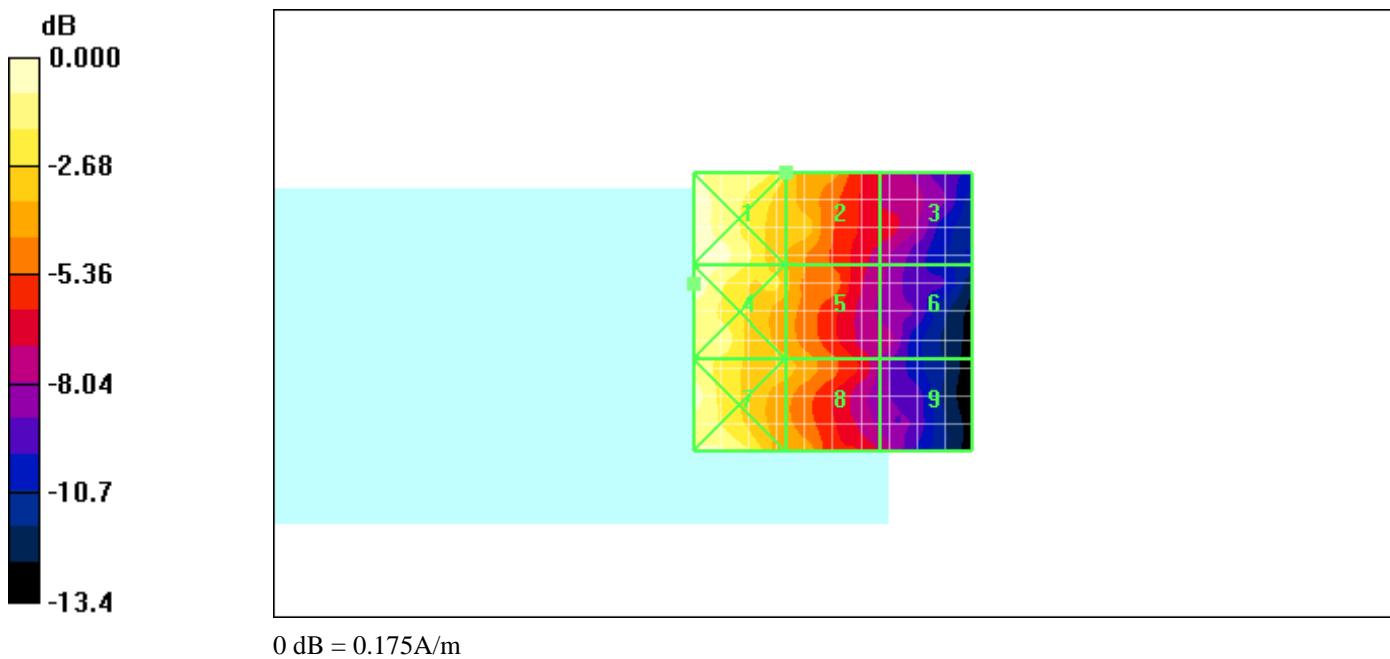
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Date/Time: 09/09/2009 1:57:57 PM

Test Laboratory: RTS

File Name: [HAC_H_CDMA_1900_low_chan.da4](#)

DUT: BlackBerry Smartphone; Type: Sample ; Serial: Not Specified

Program Name: HAC RF H3DV6 Device

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

Medium parameters used: $\sigma = 0$ mho/m, $\epsilon_r = 1$; $\rho = 1$ kg/m³

Phantom section: RF Section

DASY4 Configuration:

- Probe: H3DV6 - SN6168; ; Calibrated: 03/03/2009
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 03/03/2009
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

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

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.122 A/m; Power Drift = -0.134 dB

Maximum value of Total (measured) = 0.136 A/m

H Scan - H3DV6 - 2007: 15 mm from Probe Center to the

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Device/Hearing Aid Compatibility Test (101x101x1): Measurement grid:

dx=5mm, dy=5mm

Maximum value of peak Total field = 0.108 A/m

Probe Modulation Factor = 0.960

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.122 A/m; Power Drift = -0.134 dB

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

Peak H-field in A/m

Grid 1	Grid 2	Grid 3
0.131 M4	0.106 M4	0.088 M4
Grid 4	Grid 5	Grid 6
0.102 M4	0.108 M4	0.105 M4
Grid 7	Grid 8	Grid 9
0.109 M4	0.108 M4	0.105 M4



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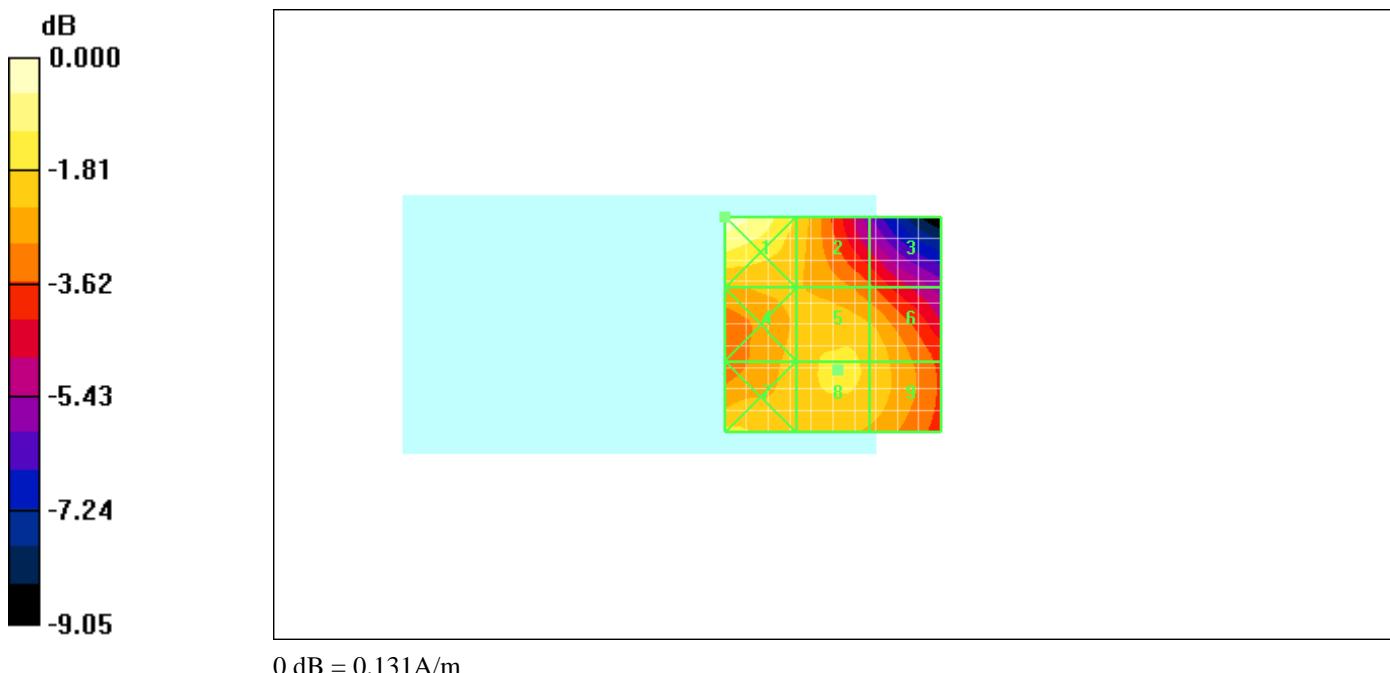
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Date/Time: 09/09/2009 2:04:42 PM

Test Laboratory: RTS

File Name: [HAC_H_CDMA_1900_mid_chan.da4](#)

DUT: BlackBerry Smartphone; Type: Sample ; Serial: Not Specified

Program Name: HAC RF H3DV6 Device

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

Medium parameters used: $\sigma = 0$ mho/m, $\epsilon_r = 1$; $\rho = 1$ kg/m³

Phantom section: RF Section

DASY4 Configuration:

- Probe: H3DV6 - SN6168; ; Calibrated: 03/03/2009
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 03/03/2009
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

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

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.097 A/m; Power Drift = 0.221 dB

Maximum value of Total (measured) = 0.097 A/m

H Scan - H3DV6 - 2007: 15 mm from Probe Center to the

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Device/Hearing Aid Compatibility Test (101x101x1): Measurement grid:

dx=5mm, dy=5mm

Maximum value of peak Total field = 0.090 A/m

Probe Modulation Factor = 0.960

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.097 A/m; Power Drift = 0.221 dB

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

Peak H-field in A/m

Grid 1 0.090 M4	Grid 2 0.075 M4	Grid 3 0.073 M4
Grid 4 0.079 M4	Grid 5 0.086 M4	Grid 6 0.085 M4
Grid 7 0.093 M4	Grid 8 0.086 M4	Grid 9 0.085 M4



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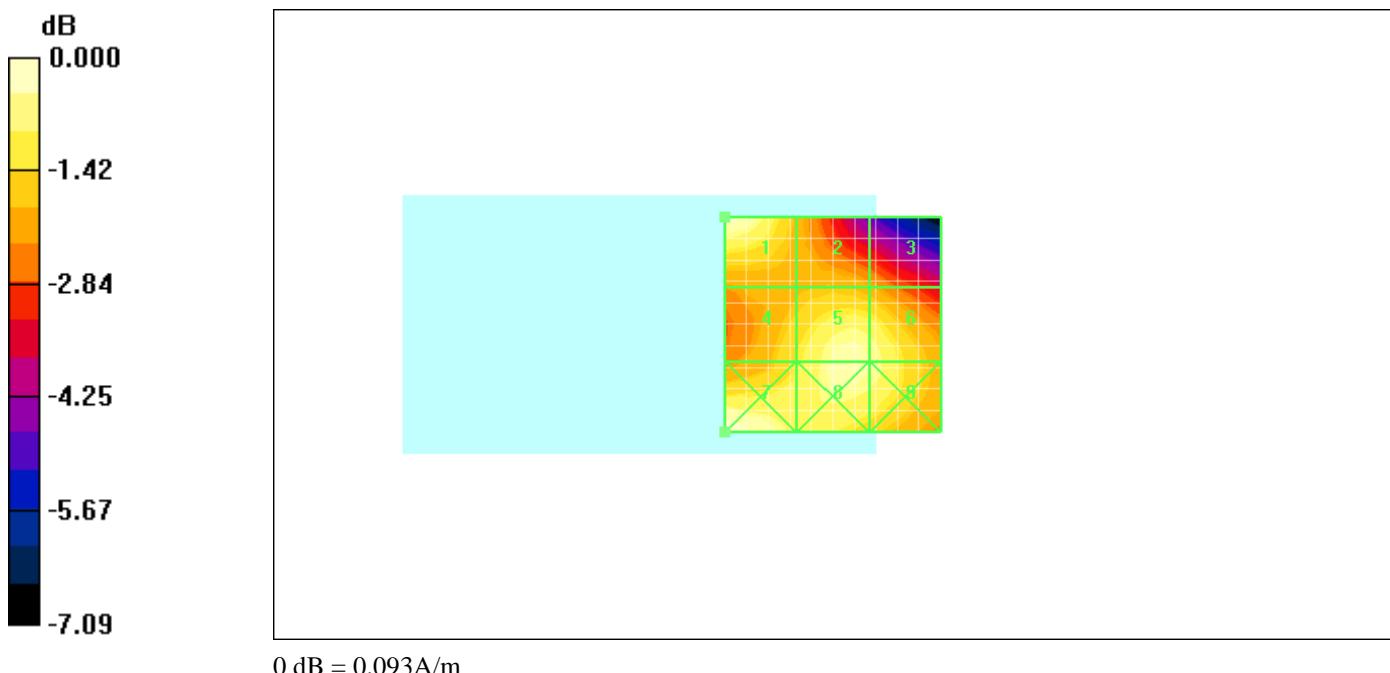
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Date/Time: 09/09/2009 2:12:47 PM

Test Laboratory: RTS

File Name: [HAC_H_CDMA_1900_high_chan.da4](#)

DUT: BlackBerry Smartphone; Type: Sample ; Serial: Not Specified

Program Name: HAC RF H3DV6 Device

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

Medium parameters used: $\sigma = 0$ mho/m, $\epsilon_r = 1$; $\rho = 1$ kg/m³

Phantom section: RF Section

DASY4 Configuration:

- Probe: H3DV6 - SN6168; ; Calibrated: 03/03/2009
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 03/03/2009
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

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

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.084 A/m; Power Drift = 0.089 dB

Maximum value of Total (measured) = 0.084 A/m

H Scan - H3DV6 - 2007: 15 mm from Probe Center to the

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Device/Hearing Aid Compatibility Test (101x101x1): Measurement grid:

dx=5mm, dy=5mm

Maximum value of peak Total field = 0.074 A/m

Probe Modulation Factor = 0.960

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.084 A/m; Power Drift = 0.089 dB

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

Peak H-field in A/m

Grid 1 0.074 M4	Grid 2 0.066 M4	Grid 3 0.064 M4
Grid 4 0.066 M4	Grid 5 0.072 M4	Grid 6 0.071 M4
Grid 7 0.081 M4	Grid 8 0.072 M4	Grid 9 0.071 M4



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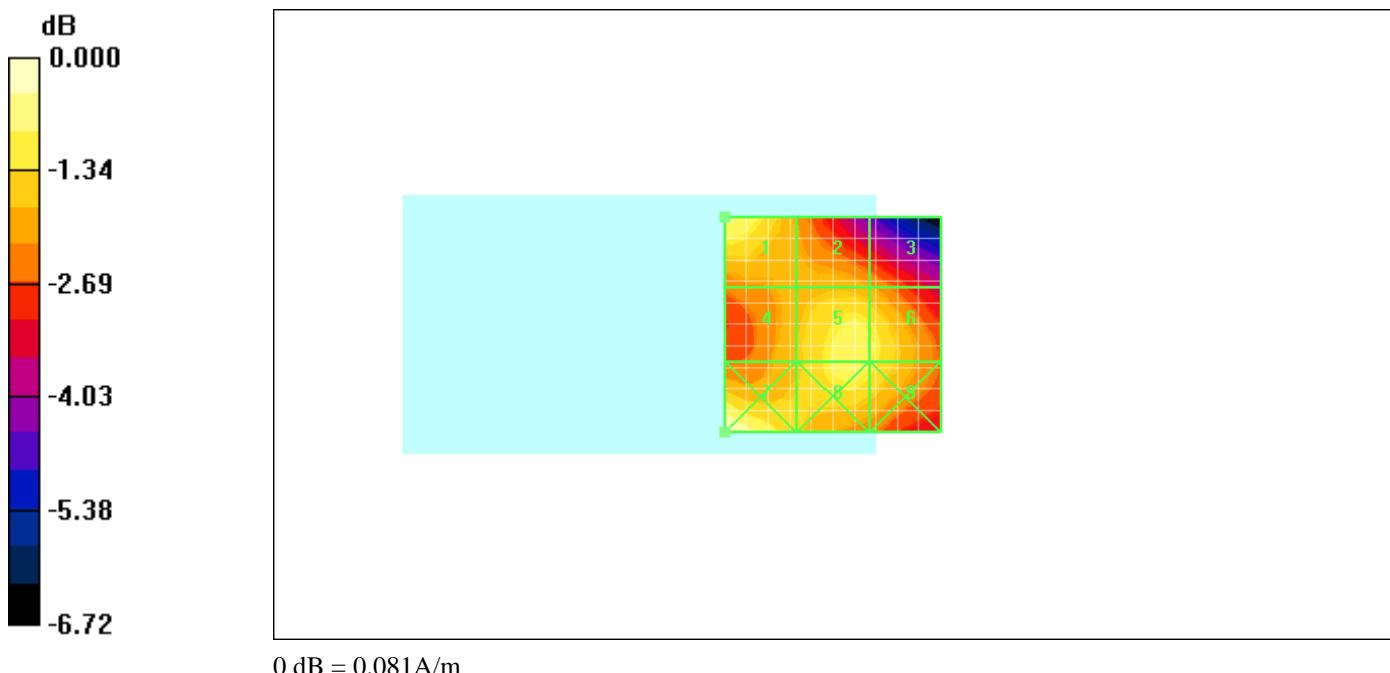
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Date/Time: 09/09/2009 2:21:51 PM

Test Laboratory: RTS

File Name: [HAC_H_CDMA_1900_low_chan_one_eighth.da4](#)

DUT: BlackBerry Smartphone; Type: Sample ; Serial: Not Specified

Program Name: HAC RF H3DV6 Device

Communication System: CDMA 1900; Frequency: 1851.25 MHz; Duty Cycle: 1:8.3

Medium parameters used: $\sigma = 0$ mho/m, $\epsilon_r = 1$; $\rho = 1$ kg/m³

Phantom section: RF Section

DASY4 Configuration:

- Probe: H3DV6 - SN6168; ; Calibrated: 03/03/2009
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 03/03/2009
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

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

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.043 A/m; Power Drift = 0.139 dB

Maximum value of Total (measured) = 0.048 A/m

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

Maximum value of peak Total field = 0.101 A/m

Probe Modulation Factor = 2.32

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.043 A/m; Power Drift = 0.139 dB

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

Peak H-field in A/m

Grid 1 0.113 M4	Grid 2 0.096 M4	Grid 3 0.073 M4
Grid 4 0.095 M4	Grid 5 0.100 M4	Grid 6 0.089 M4
Grid 7 0.103 M4	Grid 8 0.101 M4	Grid 9 0.098 M4



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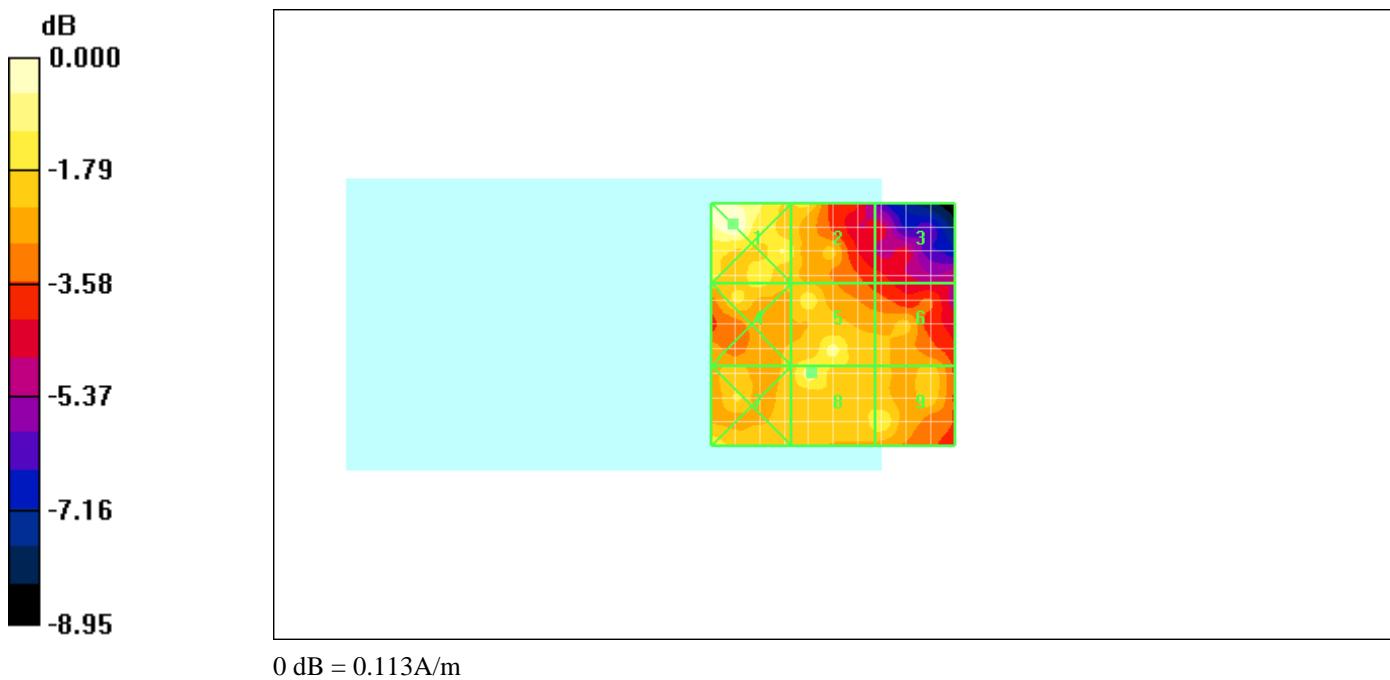
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Date/Time: 09/09/2009 2:57:05 PM

Test Laboratory: RTS

File Name: [HAC_H_CDMA_1900_mid_chan_one_eighth.da4](#)

DUT: BlackBerry Smartphone; Type: Sample ; Serial: Not Specified

Program Name: HAC RF H3DV6 Device

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

Medium parameters used: $\sigma = 0$ mho/m, $\epsilon_r = 1$; $\rho = 1$ kg/m³

Phantom section: RF Section

DASY4 Configuration:

- Probe: H3DV6 - SN6168; ; Calibrated: 03/03/2009
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 03/03/2009
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

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

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.036 A/m; Power Drift = -0.164 dB

Maximum value of Total (measured) = 0.039 A/m

H Scan - H3DV6 - 2007: 15 mm from Probe Center to the

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Device/Hearing Aid Compatibility Test (101x101x1): Measurement grid:

dx=5mm, dy=5mm

Maximum value of peak Total field = 0.086 A/m

Probe Modulation Factor = 2.32

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.036 A/m; Power Drift = -0.164 dB

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

Peak H-field in A/m

Grid 1 0.086 M4	Grid 2 0.074 M4	Grid 3 0.065 M4
Grid 4 0.076 M4	Grid 5 0.079 M4	Grid 6 0.074 M4
Grid 7 0.091 M4	Grid 8 0.082 M4	Grid 9 0.082 M4



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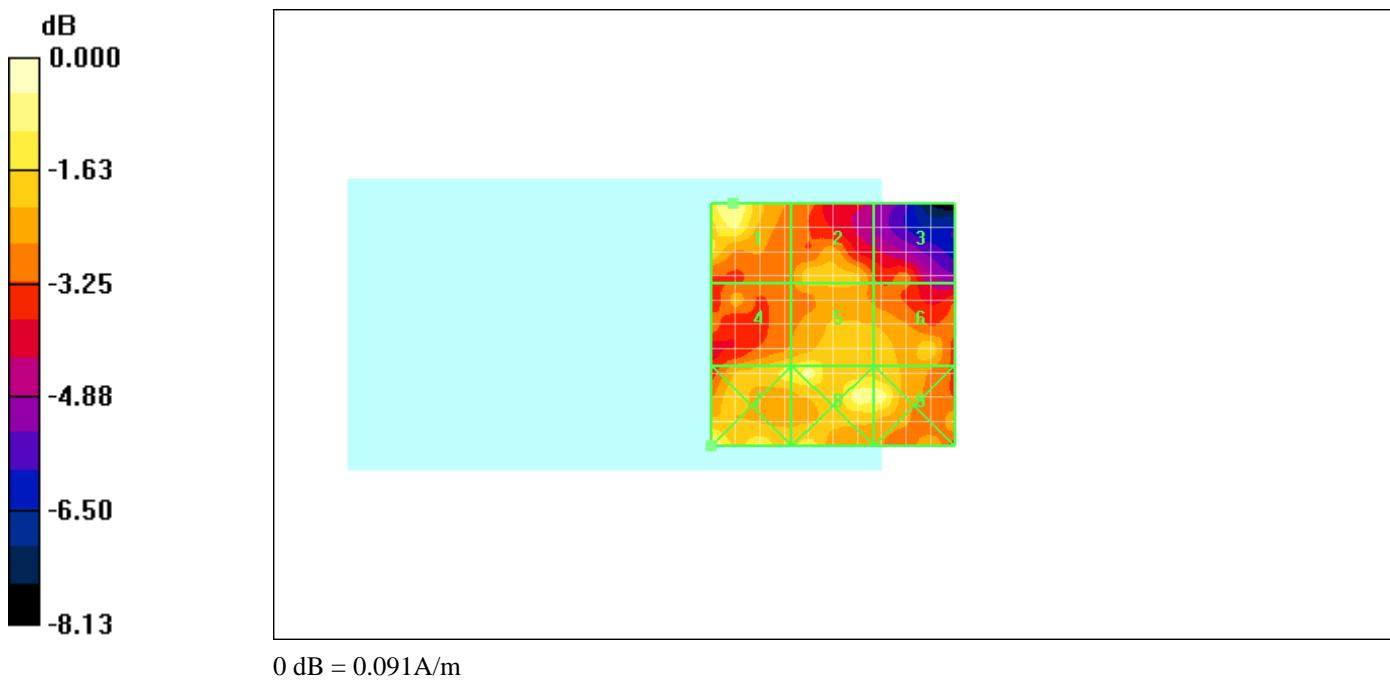
Dates of Test

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Date/Time: 09/09/2009 3:11:12 PM

Test Laboratory: RTS

File Name: [HAC_H_CDMA_1900_high_chan_one_eighth.da4](#)

DUT: BlackBerry Smartphone; Type: Sample ; Serial: Not Specified

Program Name: HAC RF H3DV6 Device

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

Medium parameters used: $\sigma = 0$ mho/m, $\epsilon_r = 1$; $\rho = 1$ kg/m³

Phantom section: RF Section

DASY4 Configuration:

- Probe: H3DV6 - SN6168; ; Calibrated: 03/03/2009
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 03/03/2009
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

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

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.031 A/m; Power Drift = 0.010 dB

Maximum value of Total (measured) = 0.032 A/m

H Scan - H3DV6 - 2007: 15 mm from Probe Center to the

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Device/Hearing Aid Compatibility Test (101x101x1): Measurement grid:

dx=5mm, dy=5mm

Maximum value of peak Total field = 0.072 A/m

Probe Modulation Factor = 2.32

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.031 A/m; Power Drift = 0.010 dB

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

Peak H-field in A/m

Grid 1 0.074 M4	Grid 2 0.063 M4	Grid 3 0.057 M4
Grid 4 0.062 M4	Grid 5 0.072 M4	Grid 6 0.070 M4
Grid 7 0.072 M4	Grid 8 0.070 M4	Grid 9 0.071 M4



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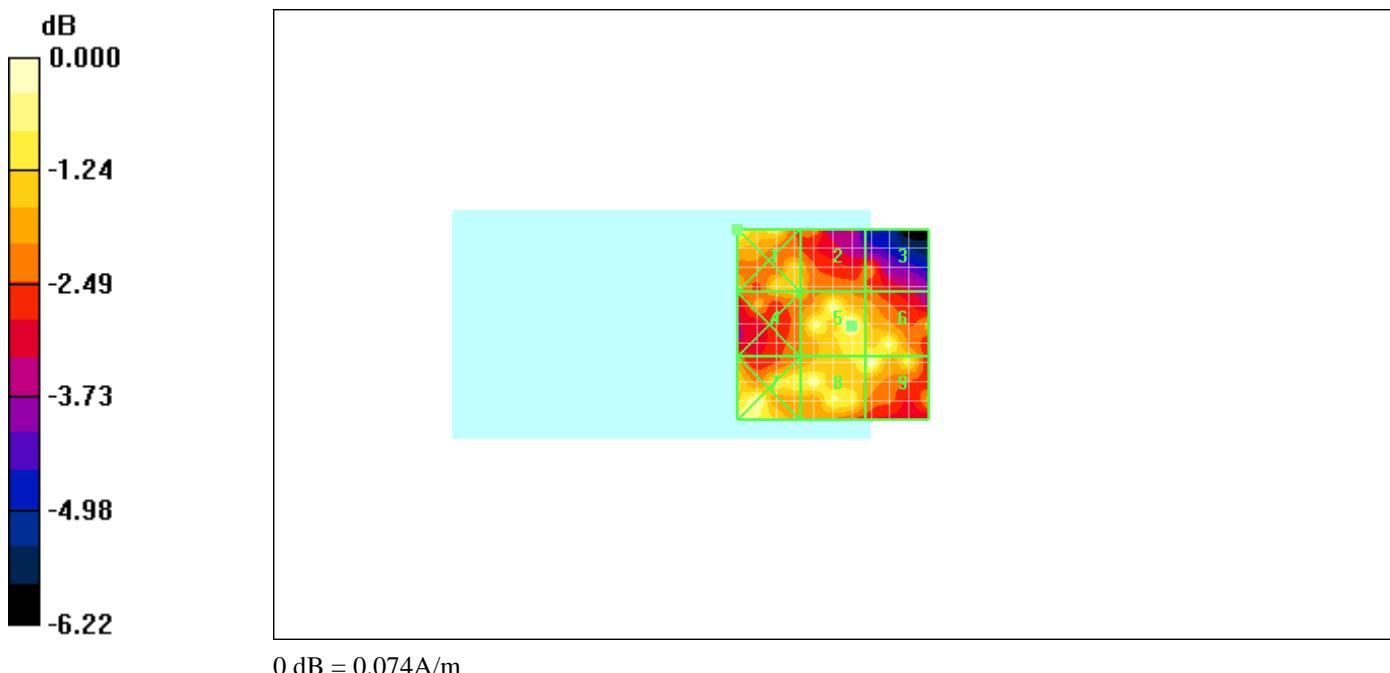
Dates of Test

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Date/Time: 29/09/2009 2:03:03 PM

Test Laboratory: RTS

File Name: [HAC_H_CDMA_1900_low_chan_Rev 3.da4](#)

DUT: BlackBerry Smartphone; Type: Sample ; Serial: Not Specified

Program Name: HAC RF H3DV6 Device

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

Medium parameters used: $\sigma = 0$ mho/m, $\epsilon_r = 1$; $\rho = 1$ kg/m³

Phantom section: RF Section

DASY4 Configuration:

- Probe: H3DV6 - SN6168; ; Calibrated: 03/03/2009
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 03/03/2009
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

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

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.115 A/m; Power Drift = 0.118 dB

Maximum value of Total (measured) = 0.131 A/m

H Scan - H3DV6 - 2007: 15 mm from Probe Center to the

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Device/Hearing Aid Compatibility Test (101x101x1): Measurement grid:

dx=5mm, dy=5mm

Maximum value of peak Total field = 0.104 A/m

Probe Modulation Factor = 0.960

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.115 A/m; Power Drift = 0.118 dB

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

Peak H-field in A/m

Grid 1	Grid 2	Grid 3
0.126 M4	0.102 M4	0.082 M4
Grid 4	Grid 5	Grid 6
0.100 M4	0.103 M4	0.100 M4
Grid 7	Grid 8	Grid 9
0.102 M4	0.104 M4	0.100 M4



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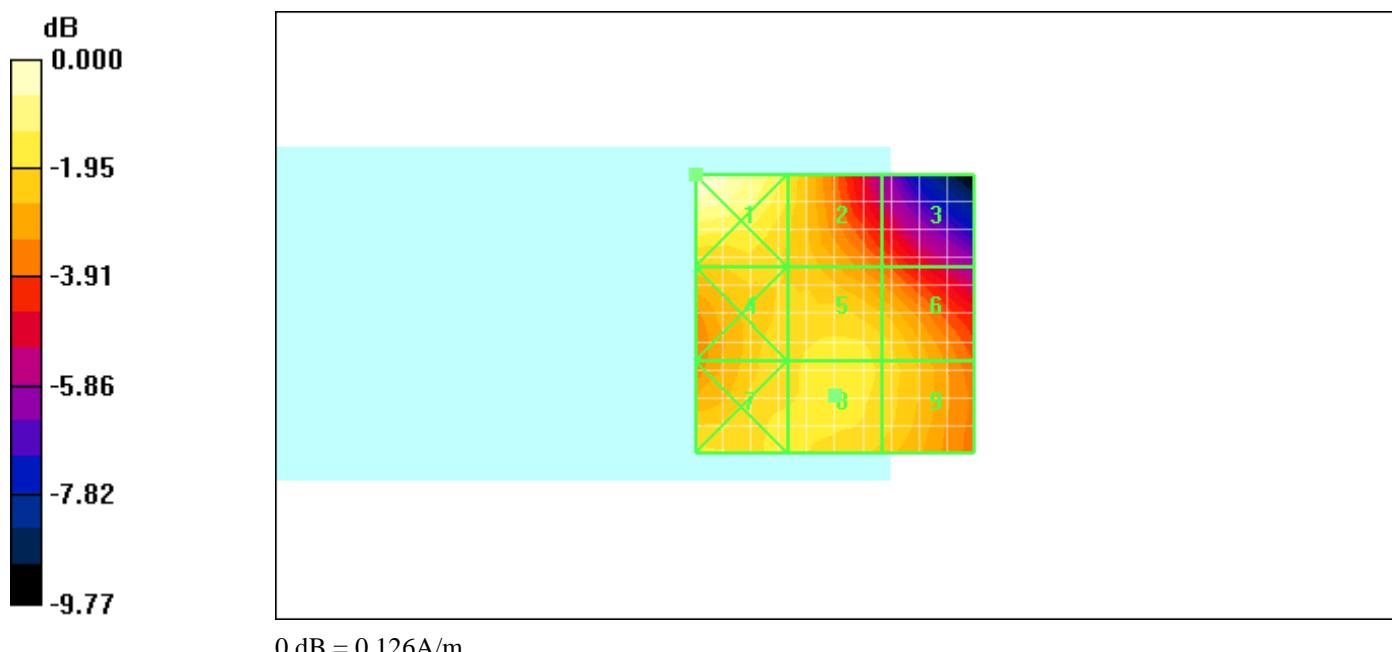
Dates of Test

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Date/Time: 29/09/2009 2:08:49 PM

Test Laboratory: RTS

File Name: [HAC_H_CDMA_1900_low_chan_Rev 3_T_coil_centre.da4](#)

DUT: BlackBerry Smartphone; Type: Sample ; Serial: Not Specified

Program Name: HAC RF H3DV6 Device

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

Medium parameters used: $\sigma = 0$ mho/m, $\epsilon_r = 1$; $\rho = 1$ kg/m³

Phantom section: RF Section

DASY4 Configuration:

- Probe: H3DV6 - SN6168; ; Calibrated: 03/03/2009
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 03/03/2009
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

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

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.116 A/m; Power Drift = -0.024 dB

Maximum value of Total (measured) = 0.129 A/m

H Scan - H3DV6 - 2007: 15 mm from Probe Center to the

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Device/Hearing Aid Compatibility Test (101x101x1): Measurement grid:

dx=5mm, dy=5mm

Maximum value of peak Total field = 0.103 A/m

Probe Modulation Factor = 0.960

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.116 A/m; Power Drift = -0.024 dB

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

Peak H-field in A/m

Grid 1	Grid 2	Grid 3
0.124 M4	0.091 M4	0.060 M4
Grid 4 0.110 M4	Grid 5 0.097 M4	Grid 6 0.085 M4
Grid 7 0.103 M4	Grid 8 0.103 M4	Grid 9 0.095 M4

Author Data
Daoud Attayi

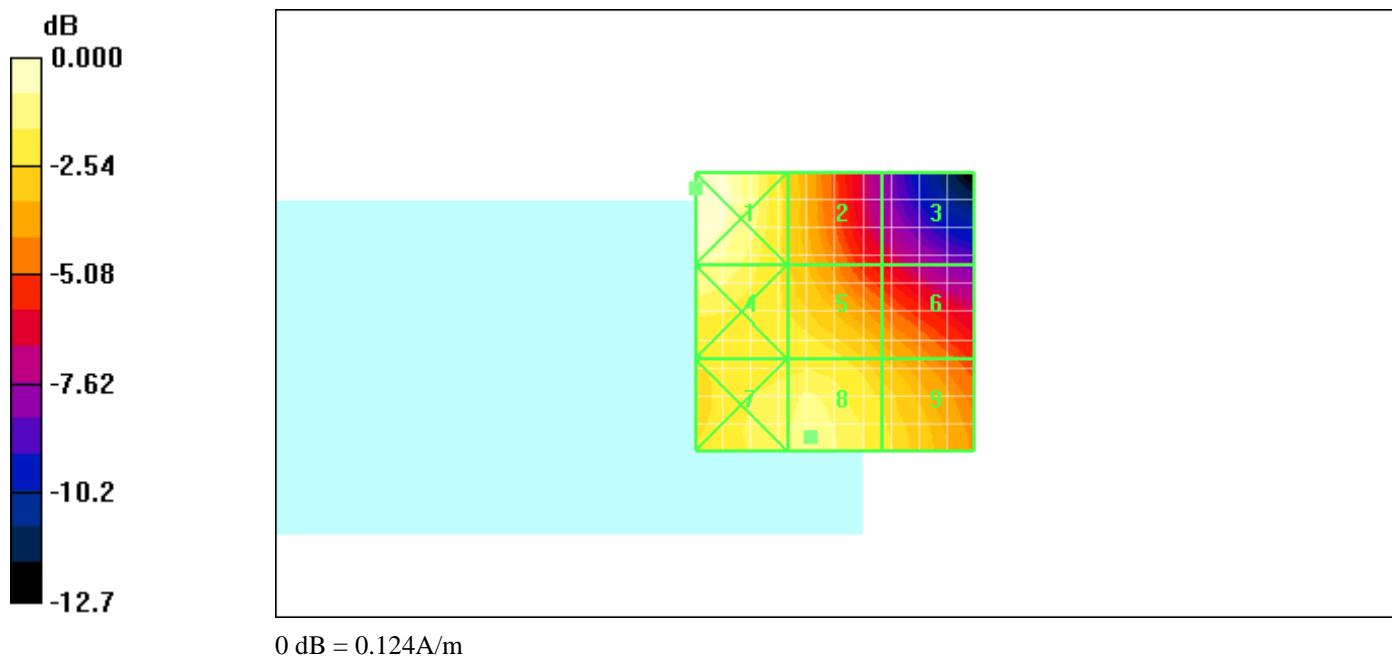
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Date/Time: 29/09/2009 2:15:37 PM

Test Laboratory: RTS

File Name: [HAC_H_CDMA_1900_low_chan_one_eighth_Rev 3.da4](#)

DUT: BlackBerry Smartphone; Type: Sample ; Serial: Not Specified

Program Name: HAC RF H3DV6 Device

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

Cycle: 1:8.3

Medium parameters used: $\sigma = 0$ mho/m, $\epsilon_r = 1$; $\rho = 1$ kg/m³

Phantom section: RF Section

DASY4 Configuration:

- Probe: H3DV6 - SN6168; ; Calibrated: 03/03/2009
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 03/03/2009
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

H Scan - H3DV6 - 2007: 15 mm from Probe Center to the

Device/Hearing Aid Compatibility Test (11x11x1): Measurement grid:

dx=5mm, dy=5mm

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.041 A/m; Power Drift = 0.040 dB

Maximum value of Total (measured) = 0.053 A/m

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

Maximum value of peak Total field = 0.095 A/m

Probe Modulation Factor = 2.32

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.041 A/m; Power Drift = 0.040 dB

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

Peak H-field in A/m

Grid 1	Grid 2	Grid 3
0.122 M4	0.095 M4	0.077 M4
Grid 4	Grid 5	Grid 6
0.094 M4	0.094 M4	0.095 M4
Grid 7	Grid 8	Grid 9
0.101 M4	0.095 M4	0.091 M4



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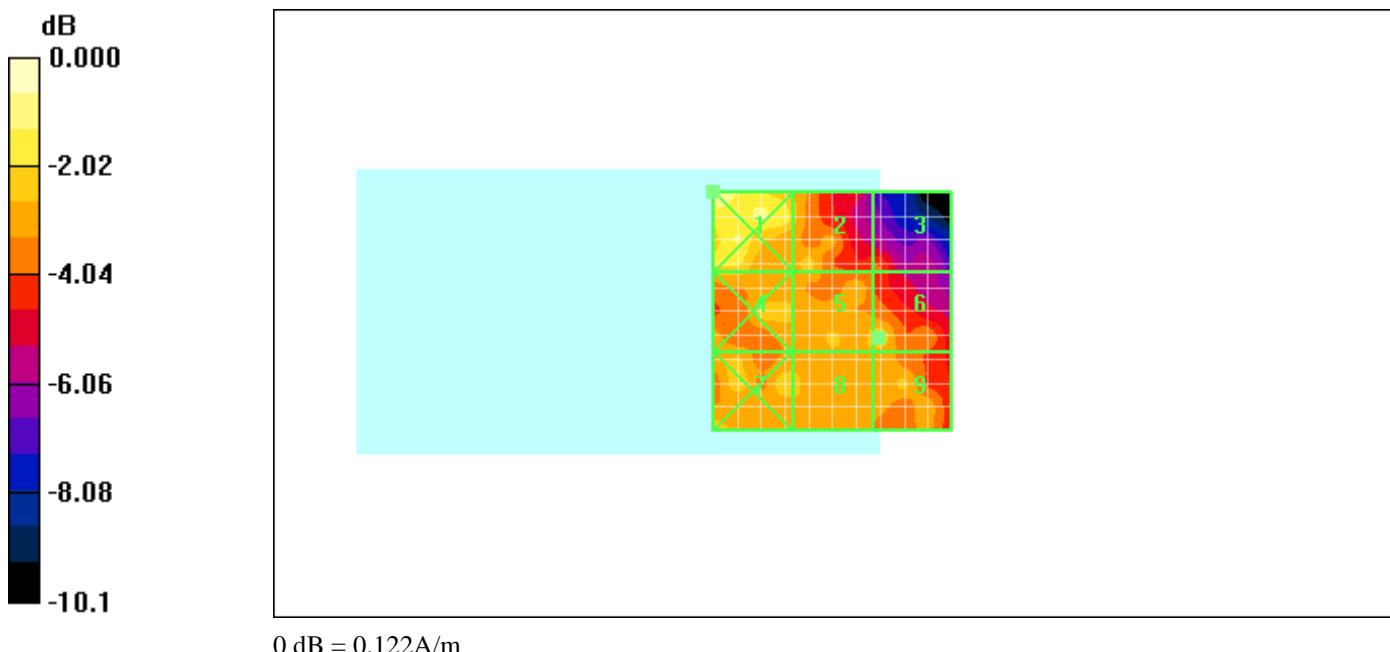
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Date/Time: 29/09/2009 2:21:18 PM

Test Laboratory: RTS

File Name: [HAC_H_CDMA_1900_low_chan_one_eighth_Rev 3_T_Coil_centre.da4](#)

DUT: BlackBerry Smartphone; Type: Sample ; Serial: Not Specified

Program Name: HAC RF H3DV6 Device

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

Cycle: 1:8.3

Medium parameters used: $\sigma = 0$ mho/m, $\epsilon_r = 1$; $\rho = 1$ kg/m³

Phantom section: RF Section

DASY4 Configuration:

- Probe: H3DV6 - SN6168; ; Calibrated: 03/03/2009
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 03/03/2009
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

H Scan - H3DV6 - 2007: 15 mm from Probe Center to the

Device/Hearing Aid Compatibility Test (11x11x1): Measurement grid:

dx=5mm, dy=5mm

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.042 A/m; Power Drift = -0.064 dB

Maximum value of Total (measured) = 0.052 A/m

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

Maximum value of peak Total field = 0.097 A/m

Probe Modulation Factor = 2.32

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.042 A/m; Power Drift = -0.064 dB

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

Peak H-field in A/m

Grid 1 0.121 M4	Grid 2 0.089 M4	Grid 3 0.053 M4
Grid 4 0.099 M4	Grid 5 0.092 M4	Grid 6 0.078 M4
Grid 7 0.099 M4	Grid 8 0.097 M4	Grid 9 0.095 M4



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