Annex A: Measurement plots and data

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

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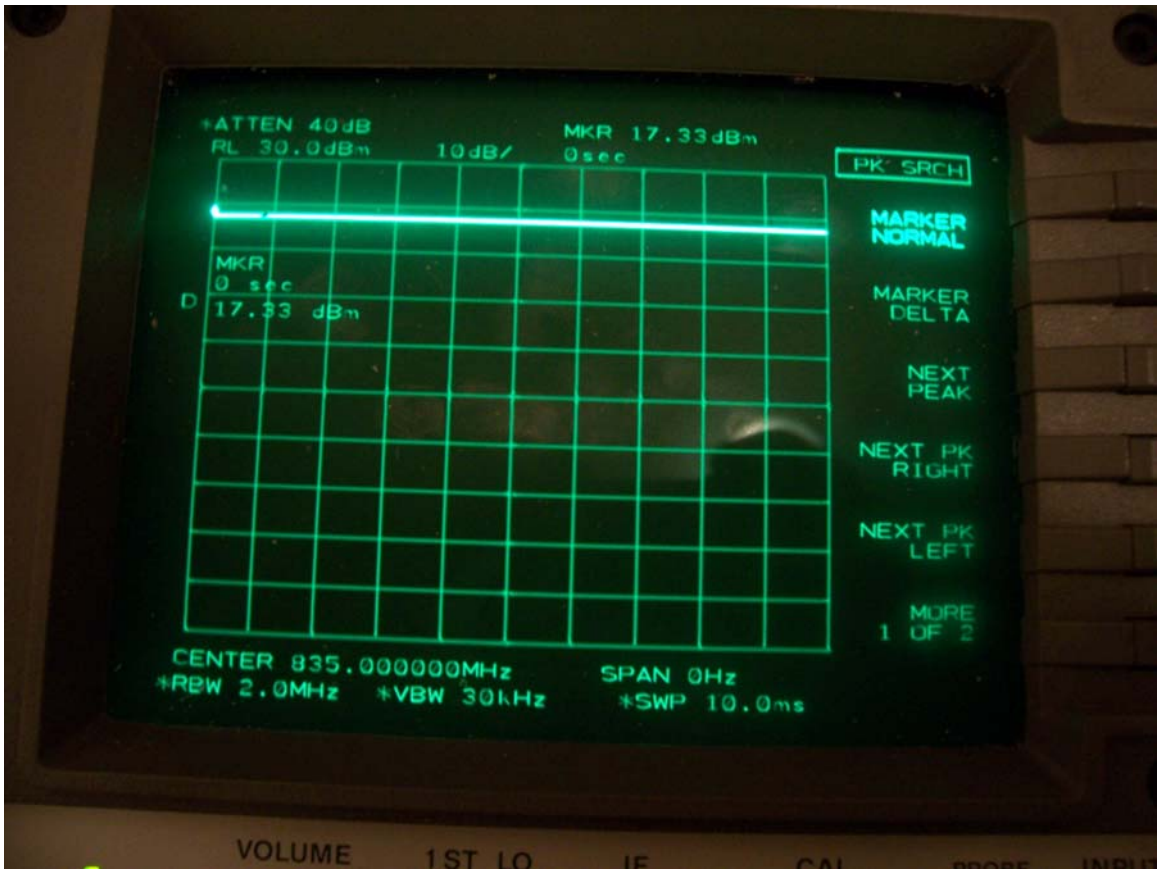

0 Hz Span CW Plot (835MHz)

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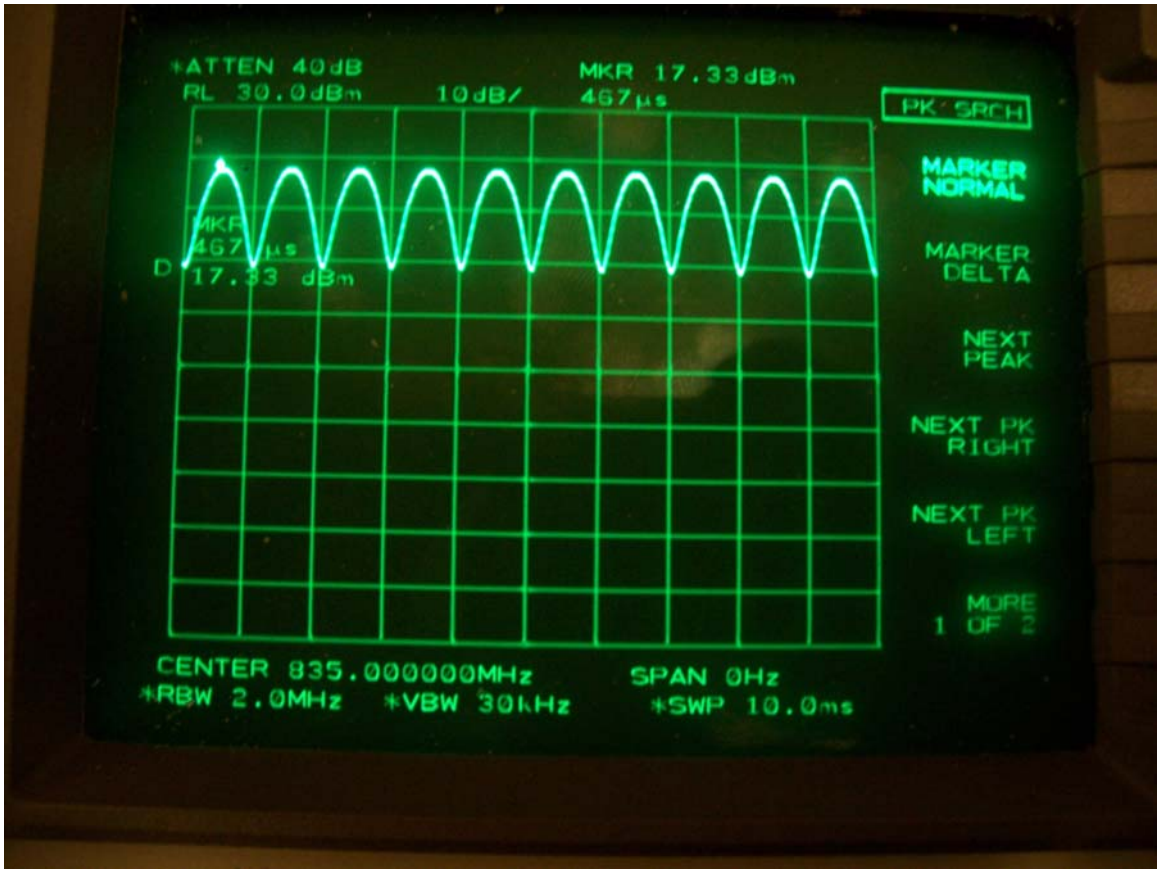

0 Hz Span 80% AM Plot (835MHz)

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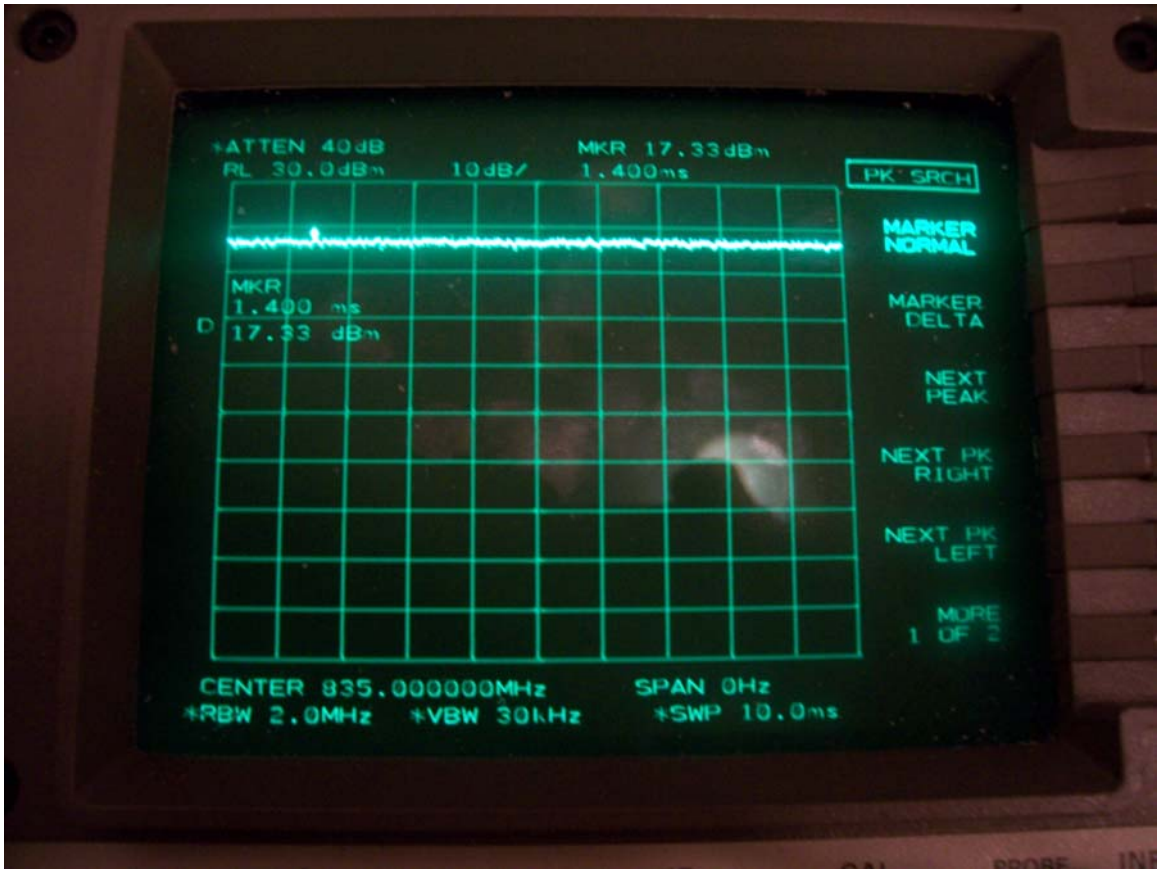

0 Hz Span CDMA Full Rate (835MHz)

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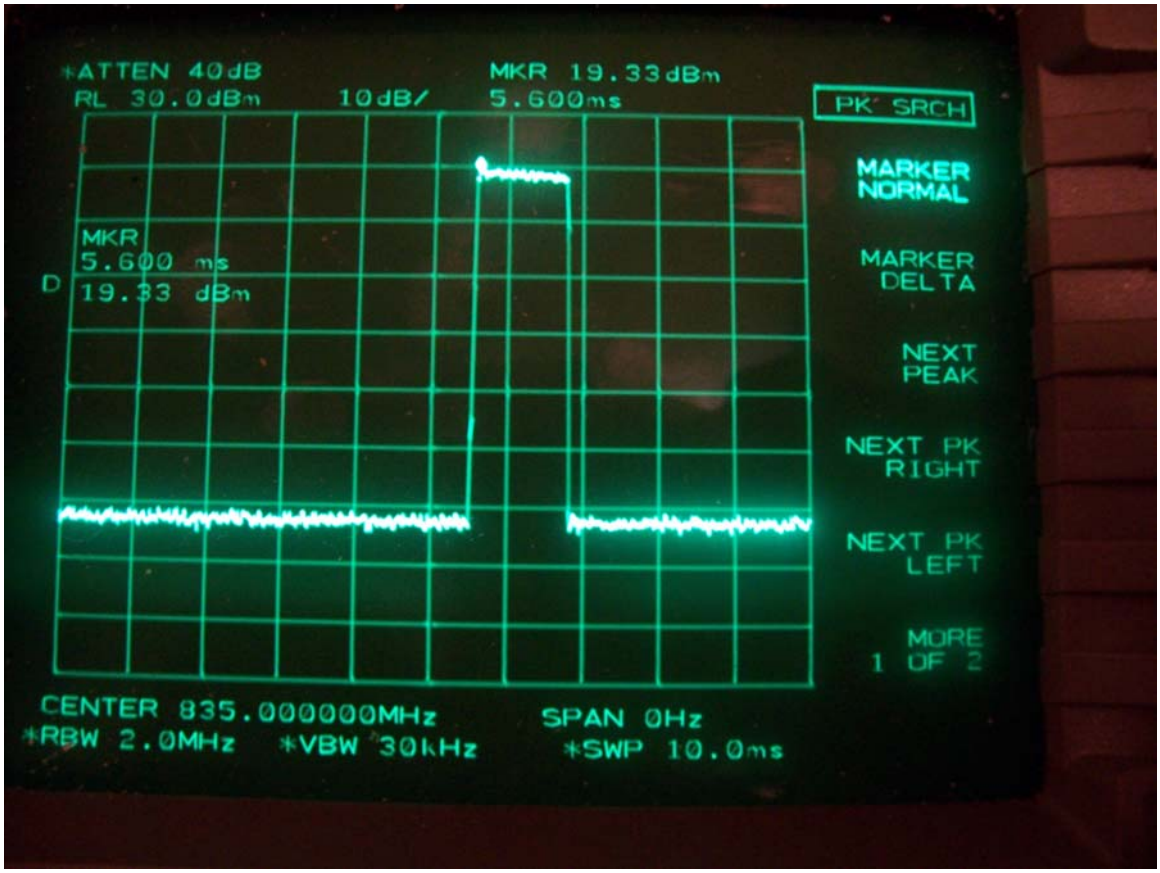

0 Hz Span CDMA 1/8 Rate (835MHz)

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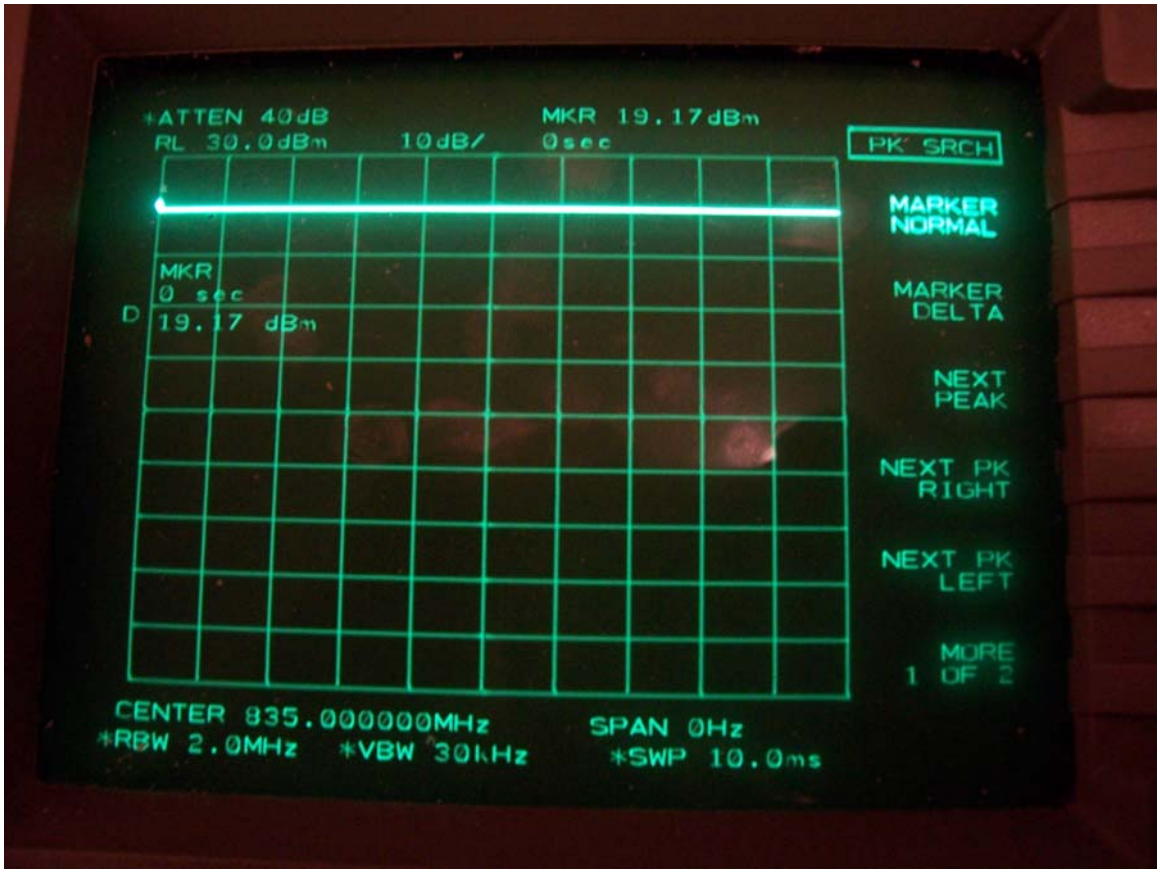

0 Hz Span CW for CDMA 1/8 Rate (835MHz)

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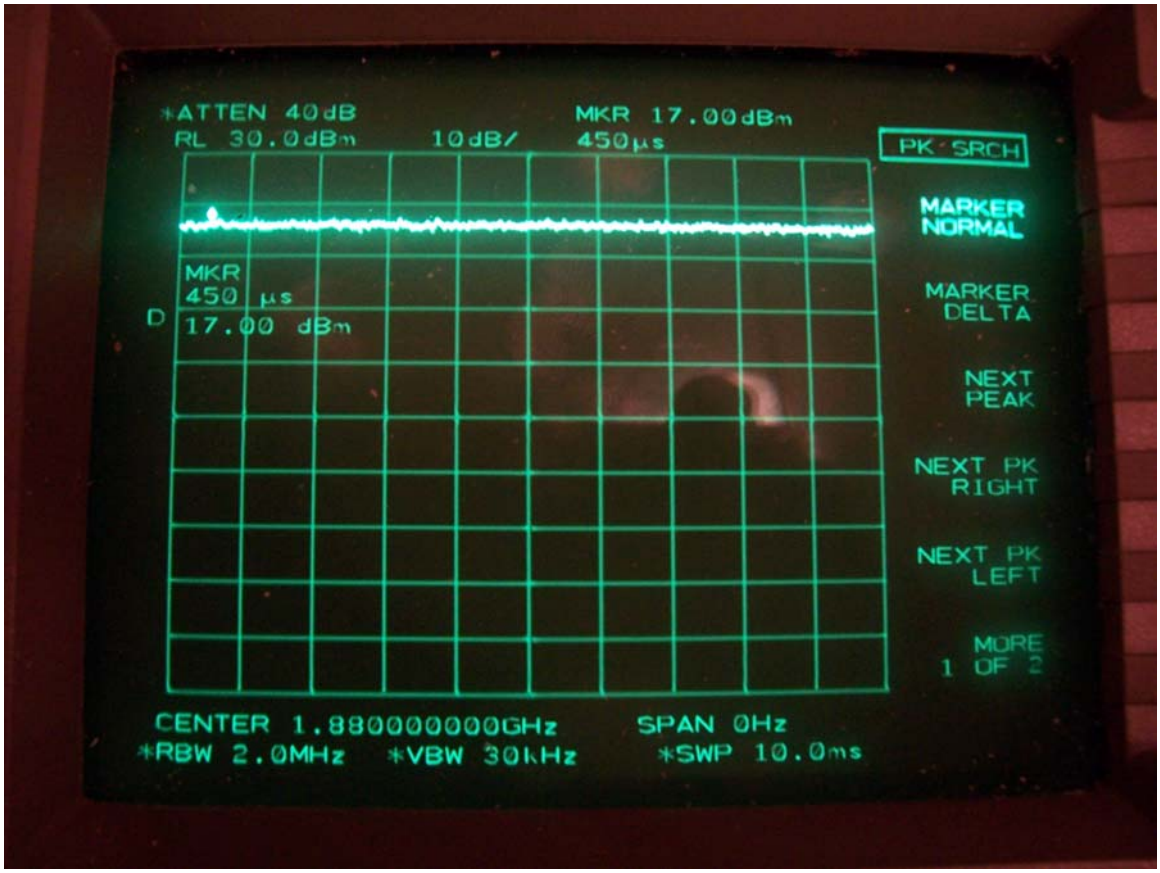

0 Hz Span CDMA Full Rate (1880MHz)

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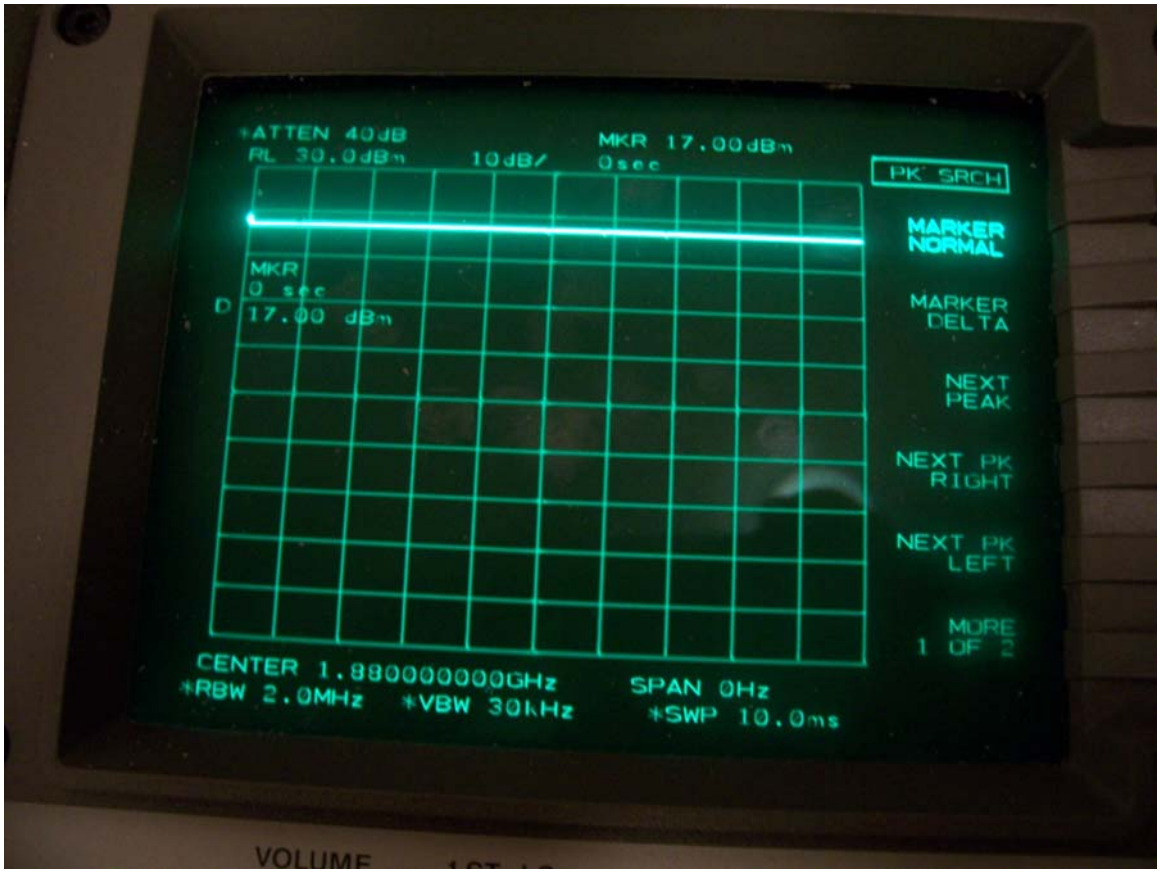

0 Hz Span CW Plot (1880MHz)

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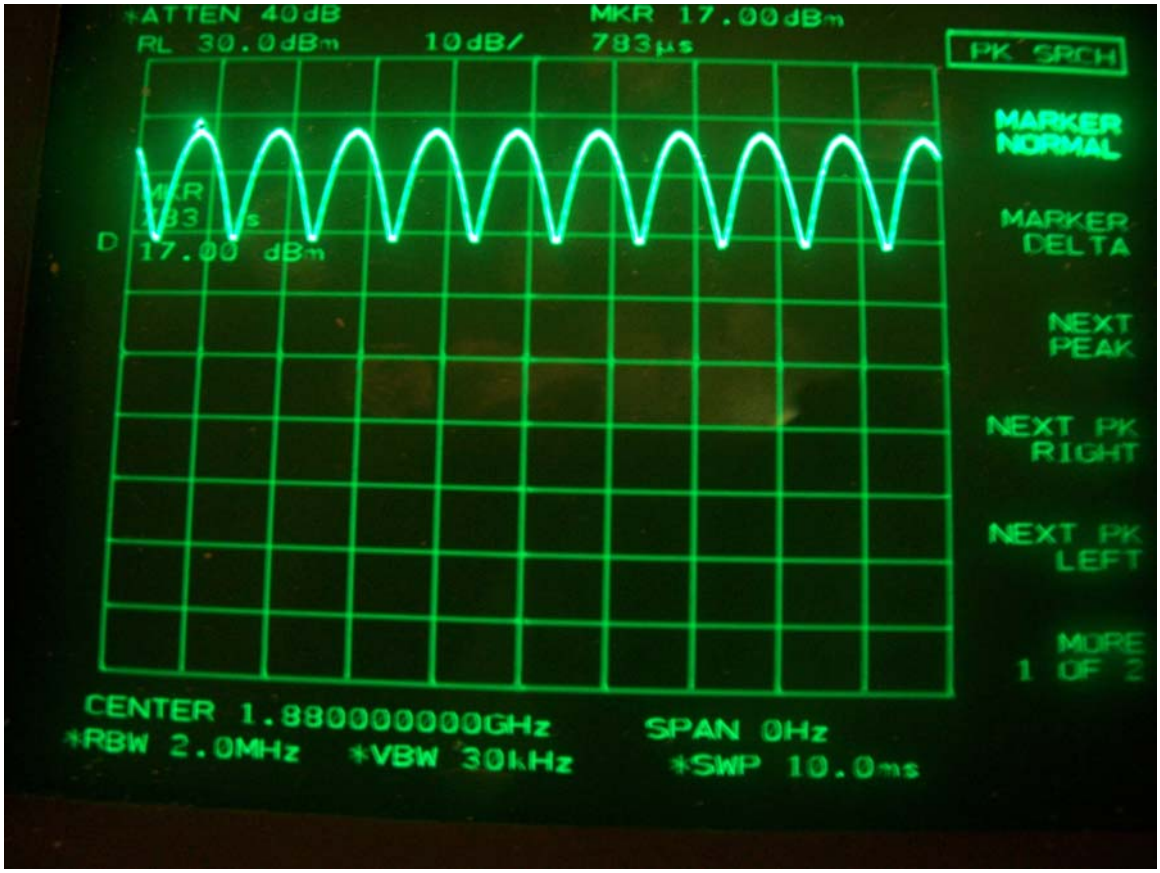

0 Hz Span 80% AM Plot (1880MHz)

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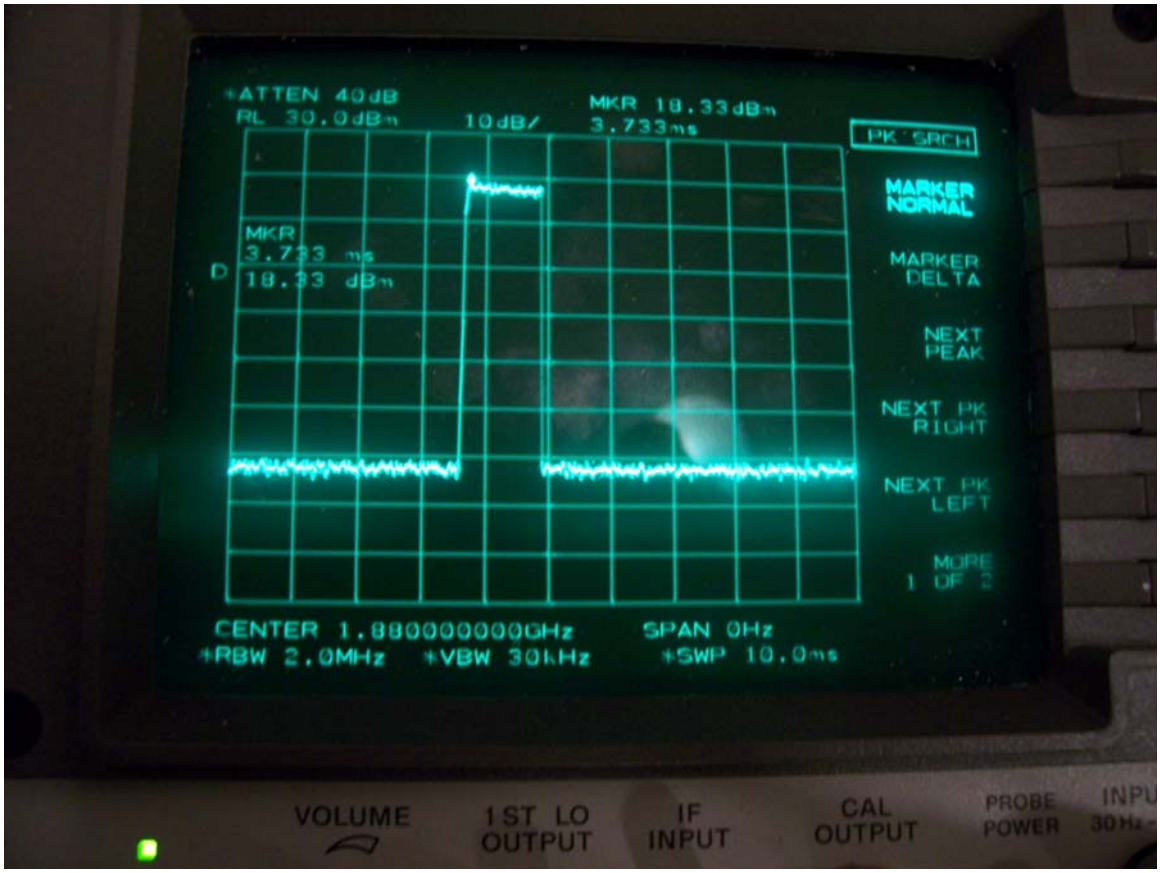

0 Hz Span CDMA 1/8 Rate (1880MHz)

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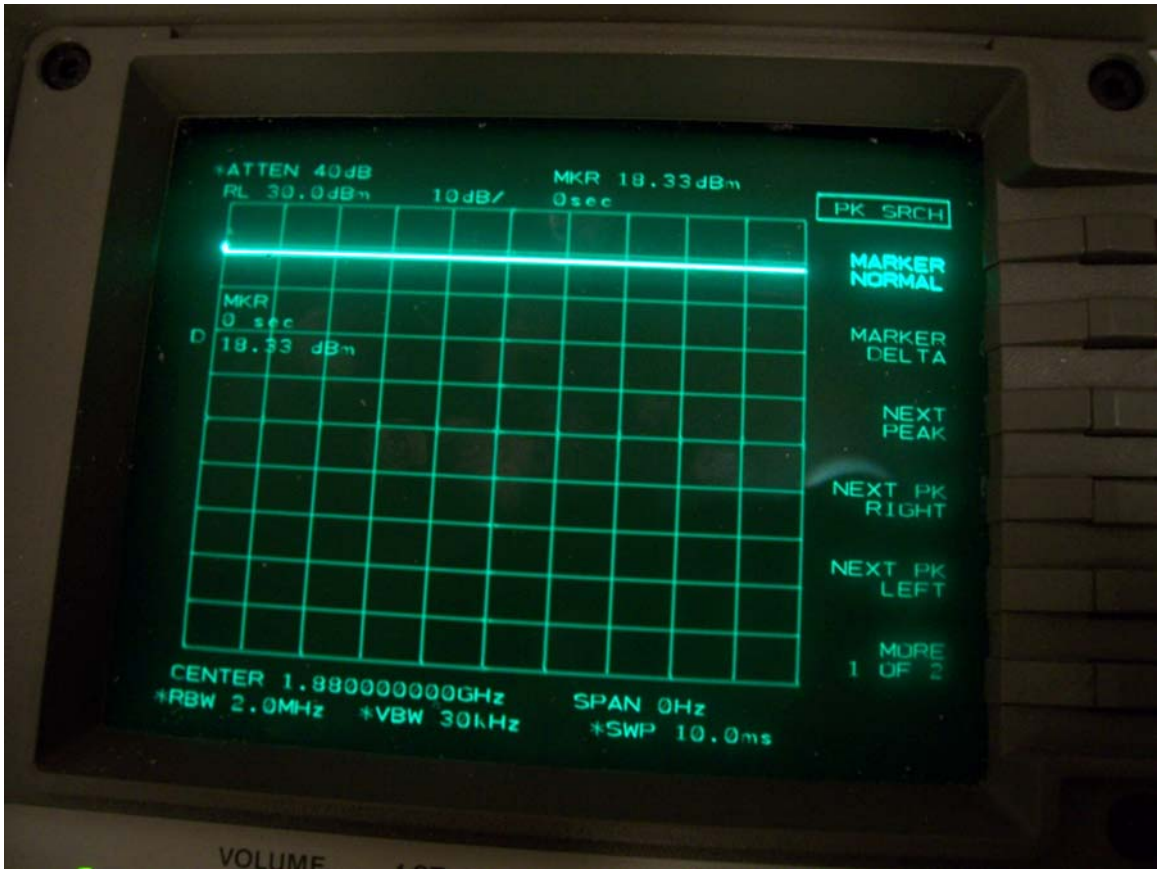

0 Hz Span CW for CDMA 1/8 Rate (1880MHz)

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A.2 Dipole validation and probe modulation factor plots

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Date/Time: 18/12/2007 3:00:00 PM

Test Laboratory: RTS
File Name: HAC_E_835MHz_CW_20dBm.da4

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

Communication System: CW; Frequency: 835 MHz;Duty Cycle: 1:1
Medium parameters used: σ = 0 mho/m, ε_r = 1; ρ = 1000 kg/m^3
Phantom section: E Device Section

DASY4 Configuration:
- Probe: ER3DV6 - SN2285; ConvF(1, 1, 1); Calibrated: 12/03/2007
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 07/03/2007
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

E Scan - ER probe center 10mm above CD835 Dipole/Hearing Aid Compatibility Test (5x37x1): Measurement grid: dx=5mm, dy=5mm
Probe Modulation Factor = 1.00
Reference Value = 54.9 V/m; Power Drift = -0.147 dB
Maximum value of Total (measured) = 170.8 V/m

E Scan - ER probe center 10mm above CD835 Dipole/Hearing Aid Compatibility Test (41x361x1): Measurement grid: dx=5mm, dy=5mm
Maximum value of peak Total field = 170.9 V/m
Probe Modulation Factor = 1.00
Reference Value = 54.9 V/m; Power Drift = -0.147 dB
Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak E-field in V/m

Grid **169.0**	Grid **170.8**	Grid **157.8**
Grid **84.6**	Grid **85.9**	Grid **80.2**
Grid	Grid	Grid

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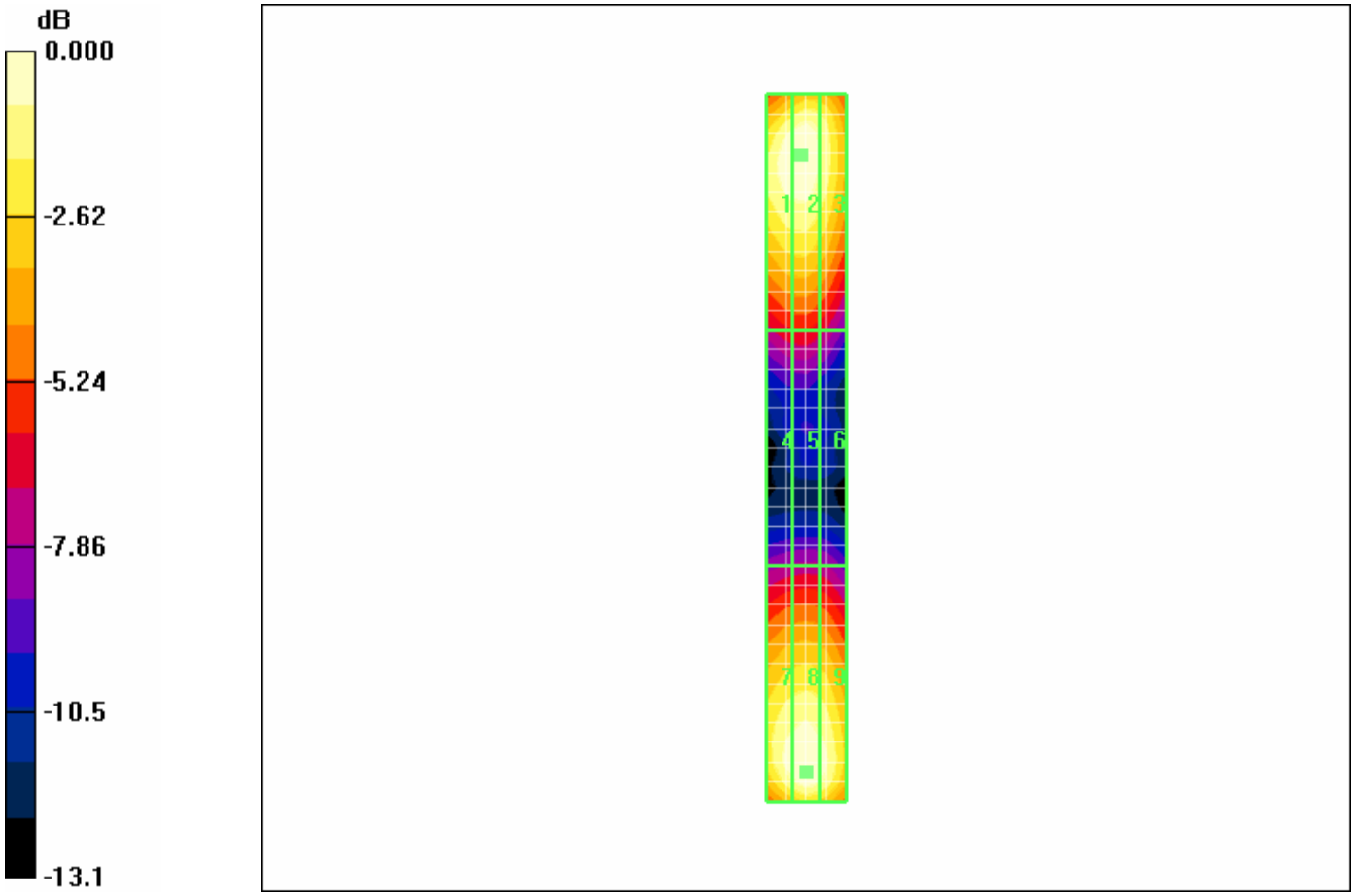

0 dB = 170.9V/m

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Date/Time: 19/12/2007 4:29:03 PM

Test Laboratory: RTS
File Name: HAC_E_835MHz_CW_17_33dBm.da4

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

Communication System: CW; Frequency: 835 MHz;Duty Cycle: 1:1
Medium parameters used: σ = 0 mho/m, ε_r = 1; ρ = 1000 kg/m^3
Phantom section: E Device Section

DASY4 Configuration:
- Probe: ER3DV6 - SN2285; ConvF(1, 1, 1); Calibrated: 12/03/2007
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 07/03/2007
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

E Scan - ER probe center 10mm above CD835 Dipole/Hearing Aid Compatibility Test (5x37x1): Measurement grid: dx=5mm, dy=5mm
Probe Modulation Factor = 1.00
Reference Value = 37.4 V/m; Power Drift = -0.027 dB
Maximum value of Total (measured) = 108.6 V/m

E Scan - ER probe center 10mm above CD835 Dipole/Hearing Aid Compatibility Test (41x361x1): Measurement grid: dx=5mm, dy=5mm
Maximum value of peak Total field = 108.8 V/m
Probe Modulation Factor = 1.00
Reference Value = 37.4 V/m; Power Drift = -0.027 dB
Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak E-field in V/m

Grid **105.1**	Grid **108.8**	Grid **103.8**
Grid **46.9**	Grid **48.0**	Grid **46.0**
Grid	Grid	Grid

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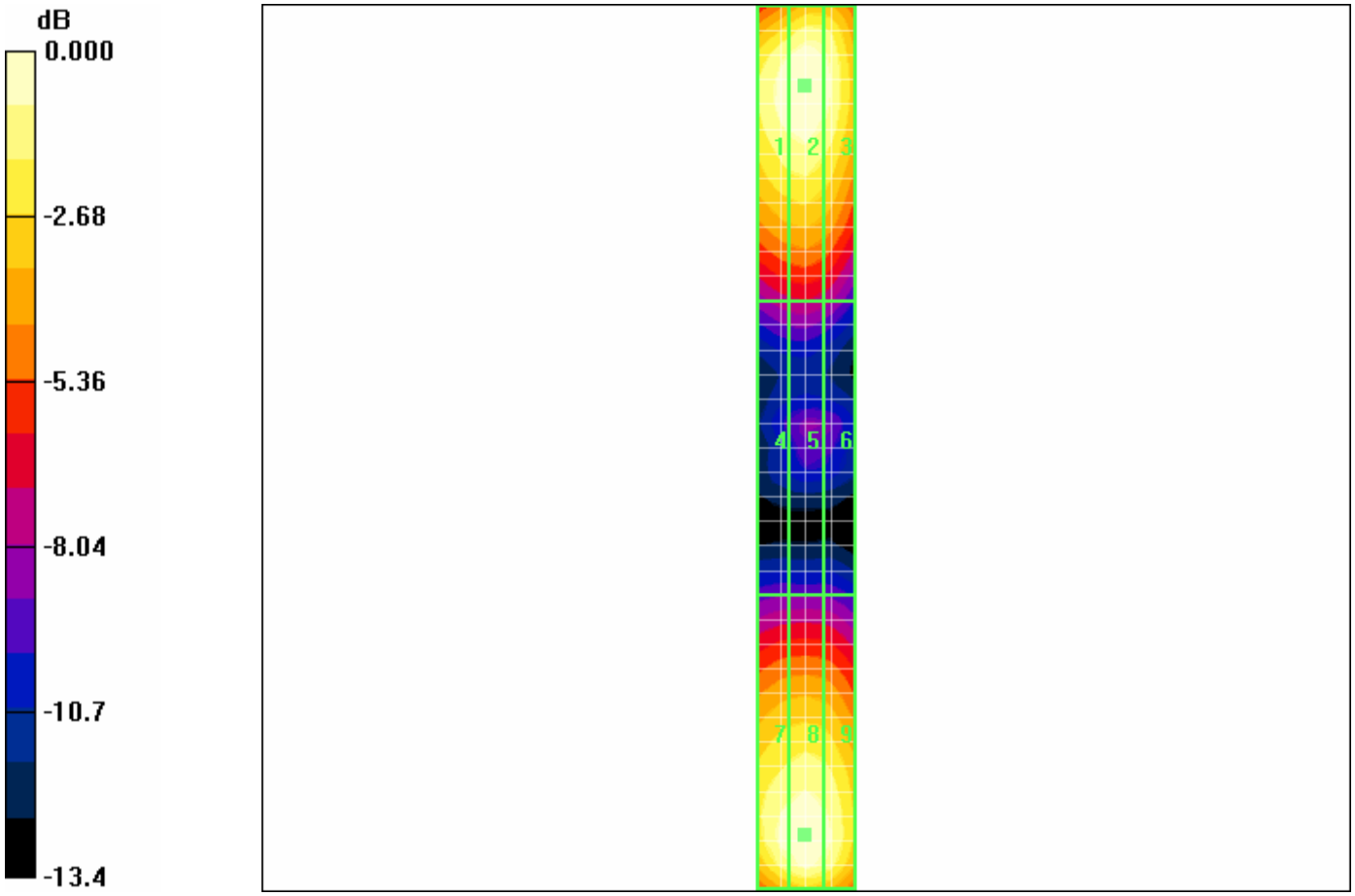

0 dB = 108.8V/m

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Date/Time: 19/12/2007 4:35:54 PM

Test Laboratory: RTS
File Name: HAC_E_835MHz_AM80%_17_33dBm.da4

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

Communication System: 80 % AM; Frequency: 835 MHz;Duty Cycle: 1:1
Medium parameters used: σ = 0 mho/m, ε_r = 1; ρ = 1000 kg/m^3
Phantom section: E Device Section

DASY4 Configuration:
- Probe: ER3DV6 - SN2285; ConvF(1, 1, 1); Calibrated: 12/03/2007
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 07/03/2007
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

E Scan - ER probe center 10mm above CD835 Dipole/Hearing Aid Compatibility Test (5x37x1): Measurement grid: dx=5mm, dy=5mm
Probe Modulation Factor = 1.00
Reference Value = 24.7 V/m; Power Drift = -0.053 dB
Maximum value of Total (measured) = 71.2 V/m

E Scan - ER probe center 10mm above CD835 Dipole/Hearing Aid Compatibility Test (41x361x1): Measurement grid: dx=5mm, dy=5mm
Maximum value of peak Total field = 71.4 V/m
Probe Modulation Factor = 1.00
Reference Value = 24.7 V/m; Power Drift = -0.053 dB
Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak E-field in V/m

Grid **69.8**	Grid **71.4**	Grid **67.6**
Grid **31.3**	Grid **32.1**	Grid **30.3**
Grid	Grid	Grid

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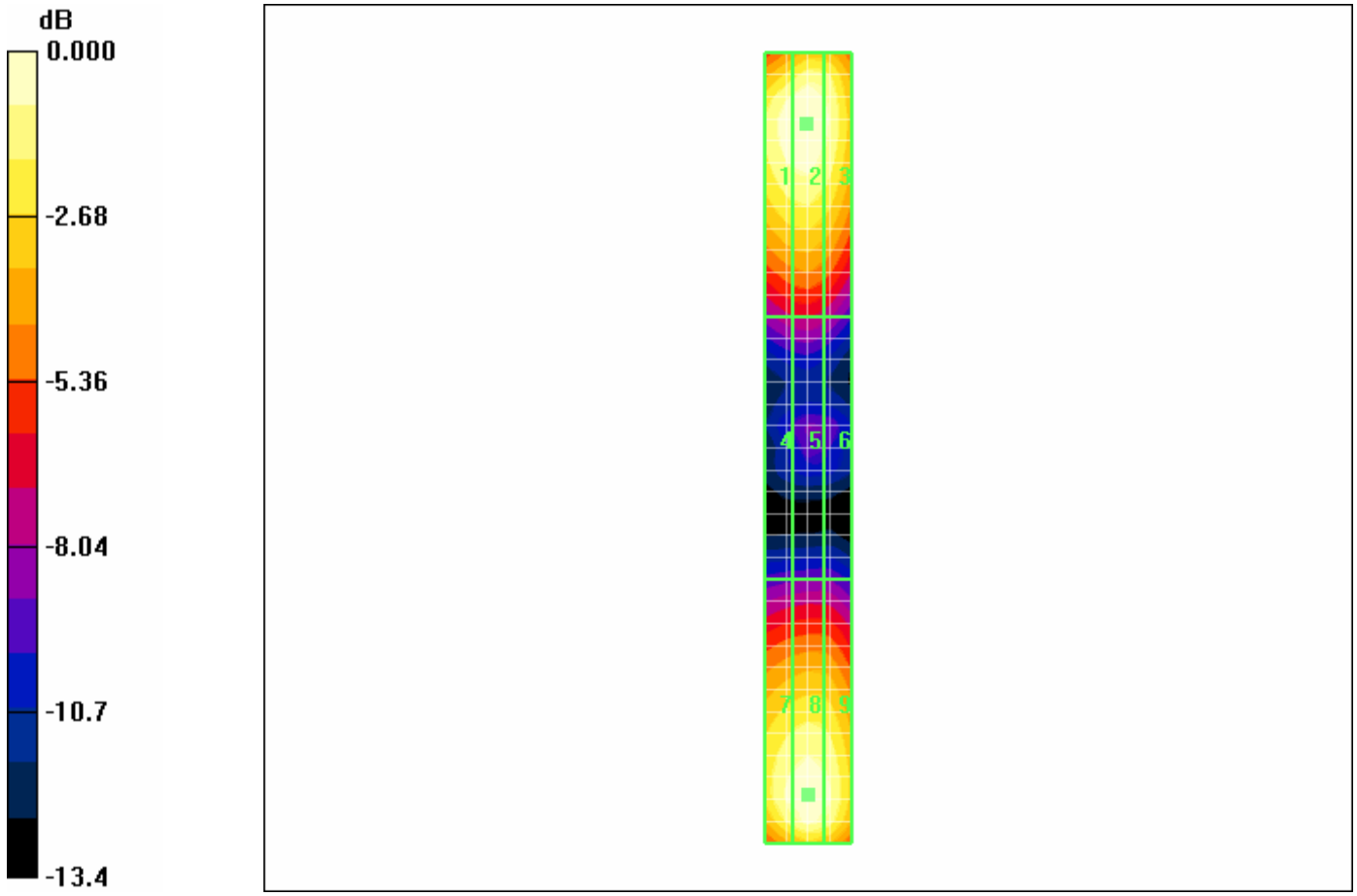

0 dB = 71.4V/m

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Date/Time: 19/12/2007 4:12:19 PM

Test Laboratory: RTS
File Name: HAC_E_CDMA835MHz_FullRate_17_3dBm.da4

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

Communication System: CDMA 800; Frequency: 835 MHz;Duty Cycle: 1:1
Medium parameters used: σ = 0 mho/m, ε_r = 1; ρ = 1000 kg/m^3
Phantom section: E Device Section

DASY4 Configuration:
- Probe: ER3DV6 - SN2285; ConvF(1, 1, 1); Calibrated: 12/03/2007
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 07/03/2007
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

E Scan - ER probe center 10mm above CD835 Dipole/Hearing Aid Compatibility Test (5x37x1): Measurement grid: dx=5mm, dy=5mm
Probe Modulation Factor = 1.00
Reference Value = 40.0 V/m; Power Drift = 0.006 dB
Maximum value of Total (measured) = 135.5 V/m

E Scan - ER probe center 10mm above CD835 Dipole/Hearing Aid Compatibility Test (41x361x1): Measurement grid: dx=5mm, dy=5mm
Maximum value of peak Total field = 131.6 V/m
Probe Modulation Factor = 1.00
Reference Value = 40.0 V/m; Power Drift = 0.006 dB
Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak E-field in V/m

Grid **127.7**	Grid **131.6**	Grid **125.1**
Grid **62.7**	Grid **64.5**	Grid **62.0**
Grid	Grid	Grid

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E Scan - ER probe center 10mm above CD835 Dipole/Hearing Aid Compatibility Test (41x361x1): Measurement grid: dx=5mm, dy=5mm
Maximum value of peak Total field = 135.7 V/m
Probe Modulation Factor = 1.00
Reference Value = 40.0 V/m; Power Drift = 0.006 dB
Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak E-field in V/m

Grid **127.7**	Grid **131.6**	Grid **125.1**
Grid **62.7**	Grid **64.5**	Grid **62.0**
Grid **131.0**	Grid **135.7**	Grid **130.5**

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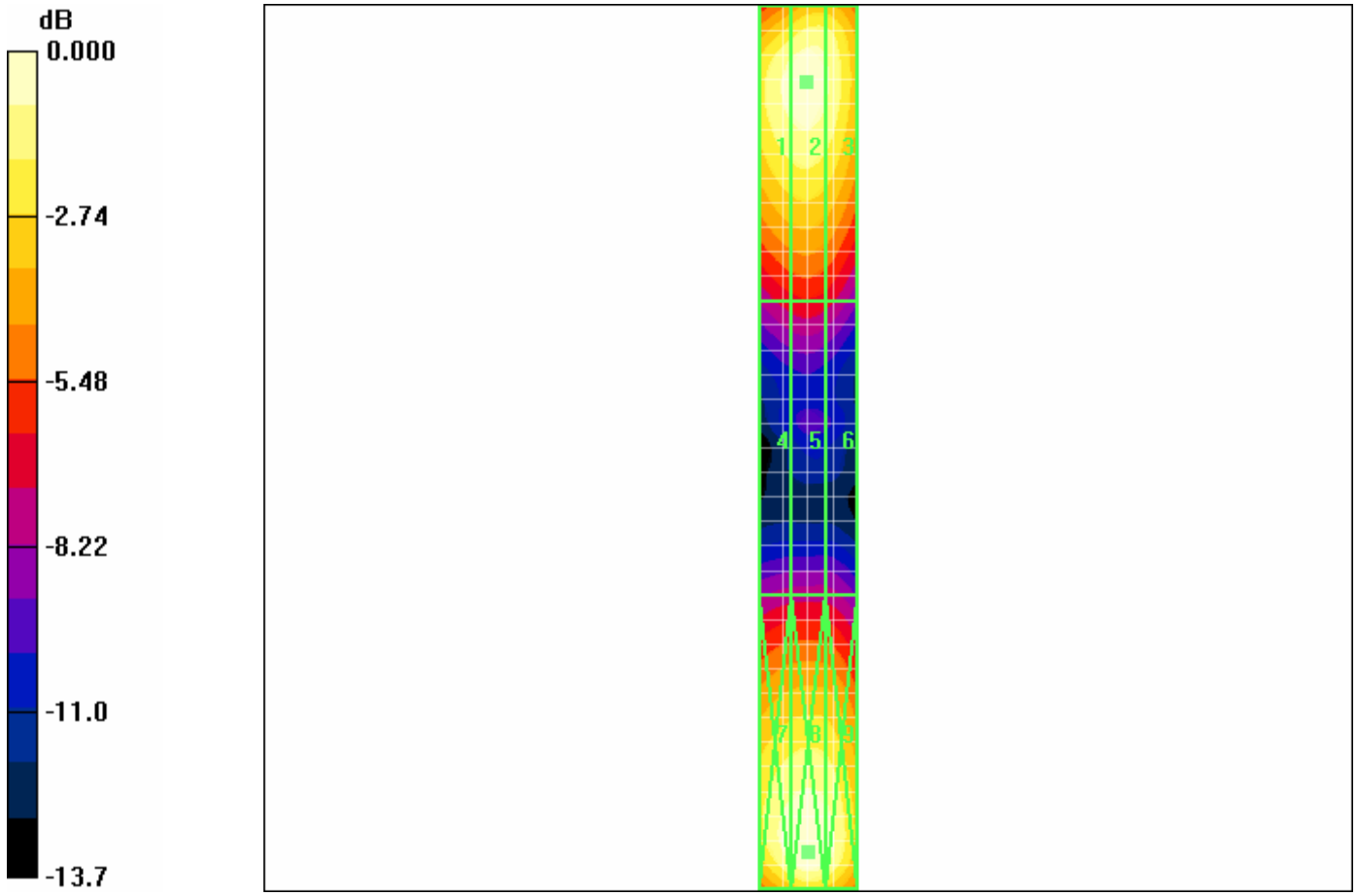

0 dB = 135.7V/m

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Date/Time: 19/12/2007 4:21:56 PM

Test Laboratory: RTS
File Name: HAC_E_835MHz_CW_19_3dBm.da4

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

Communication System: CW; Frequency: 835 MHz;Duty Cycle: 1:1
Medium parameters used: $\sigma = 0$ mho/m, $\varepsilon_r = 1$; $\rho = 1000$ kg/m^3
Phantom section: E Device Section

DASY4 Configuration:
- Probe: ER3DV6 - SN2285; ConvF(1, 1, 1); Calibrated: 12/03/2007
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 07/03/2007
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

E Scan - ER probe center 10mm above CD835 Dipole/Hearing Aid Compatibility Test (5x37x1): Measurement grid: dx=5mm, dy=5mm
Probe Modulation Factor = 1.00
Reference Value = 47.6 V/m; Power Drift = -0.015 dB
Maximum value of Total (measured) = 138.9 V/m

E Scan - ER probe center 10mm above CD835 Dipole/Hearing Aid Compatibility Test (41x361x1): Measurement grid: dx=5mm, dy=5mm
Maximum value of peak Total field = 139.4 V/m
Probe Modulation Factor = 1.00
Reference Value = 47.6 V/m; Power Drift = -0.015 dB
Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak E-field in V/m

Grid **136.1**	Grid **139.4**	Grid **131.1**
Grid **60.1**	Grid **61.4**	Grid **57.9**
Grid	Grid	Grid

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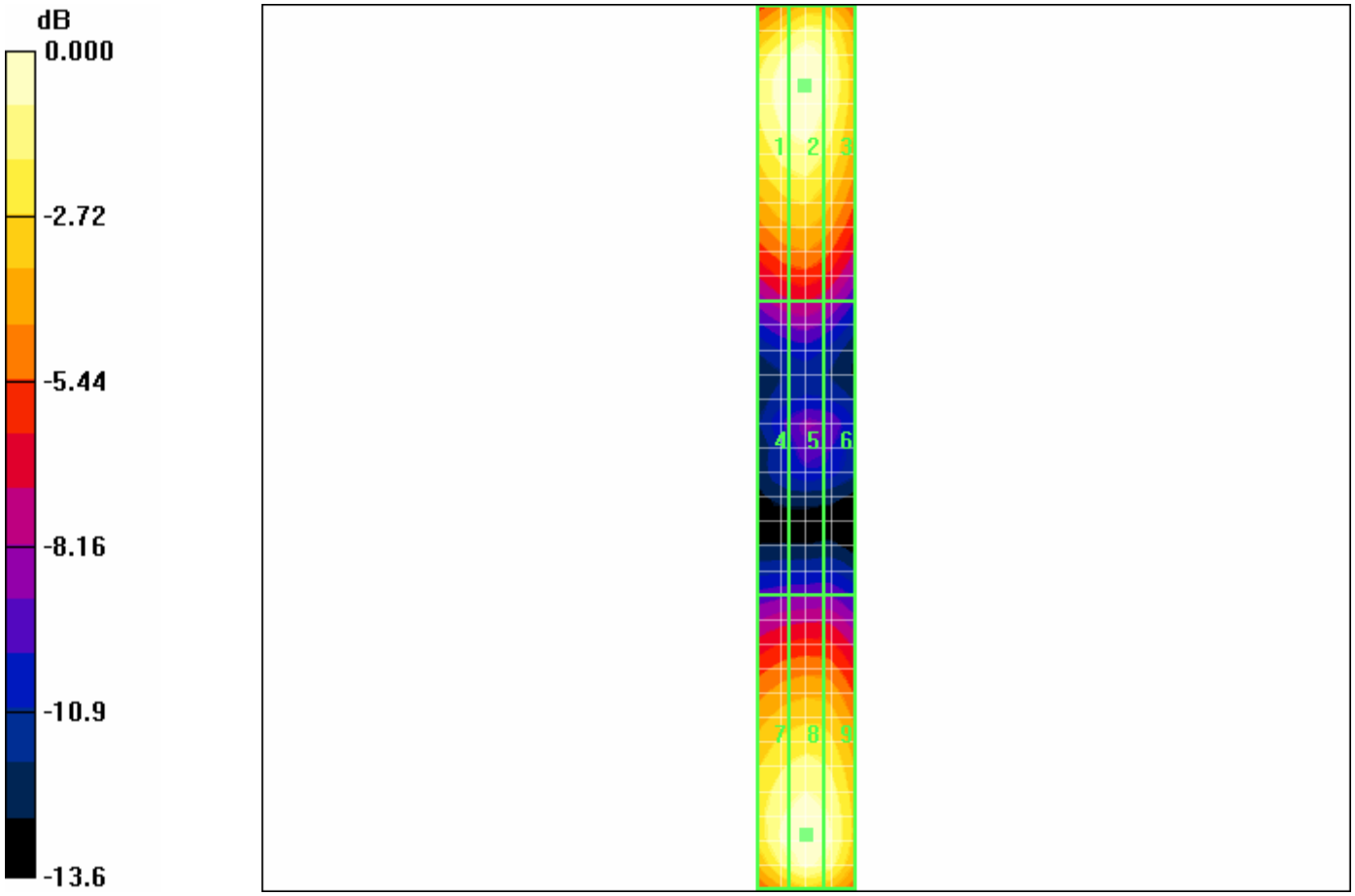

0 dB = 139.4V/m

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Date/Time: 19/12/2007 4:03:37 PM

Test Laboratory: RTS
File Name: HAC_E_CDMA835MHz_1/8th_19_3dBm.da4

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

Communication System: CDMA 800; Frequency: 835 MHz;Duty Cycle: 1:8
Medium parameters used: σ = 0 mho/m, ε_r = 1; ρ = 1000 kg/m^3
Phantom section: E Device Section

DASY4 Configuration:
- Probe: ER3DV6 - SN2285; ConvF(1, 1, 1); Calibrated: 12/03/2007
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 07/03/2007
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

E Scan - ER probe center 10mm above CD835 Dipole/Hearing Aid Compatibility Test (5x37x1): Measurement grid: dx=5mm, dy=5mm
Probe Modulation Factor = 1.00
Reference Value = 18.1 V/m; Power Drift = -0.136 dB
Maximum value of Total (measured) = 66.2 V/m

E Scan - ER probe center 10mm above CD835 Dipole/Hearing Aid Compatibility Test (41x361x1): Measurement grid: dx=5mm, dy=5mm
Maximum value of peak Total field = 66.4 V/m
Probe Modulation Factor = 1.00
Reference Value = 18.1 V/m; Power Drift = -0.136 dB
Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak E-field in V/m

Grid **60.8**	Grid **60.8**	Grid **56.6**
Grid **30.1**	Grid **30.1**	Grid **27.8**
Grid	Grid	Grid

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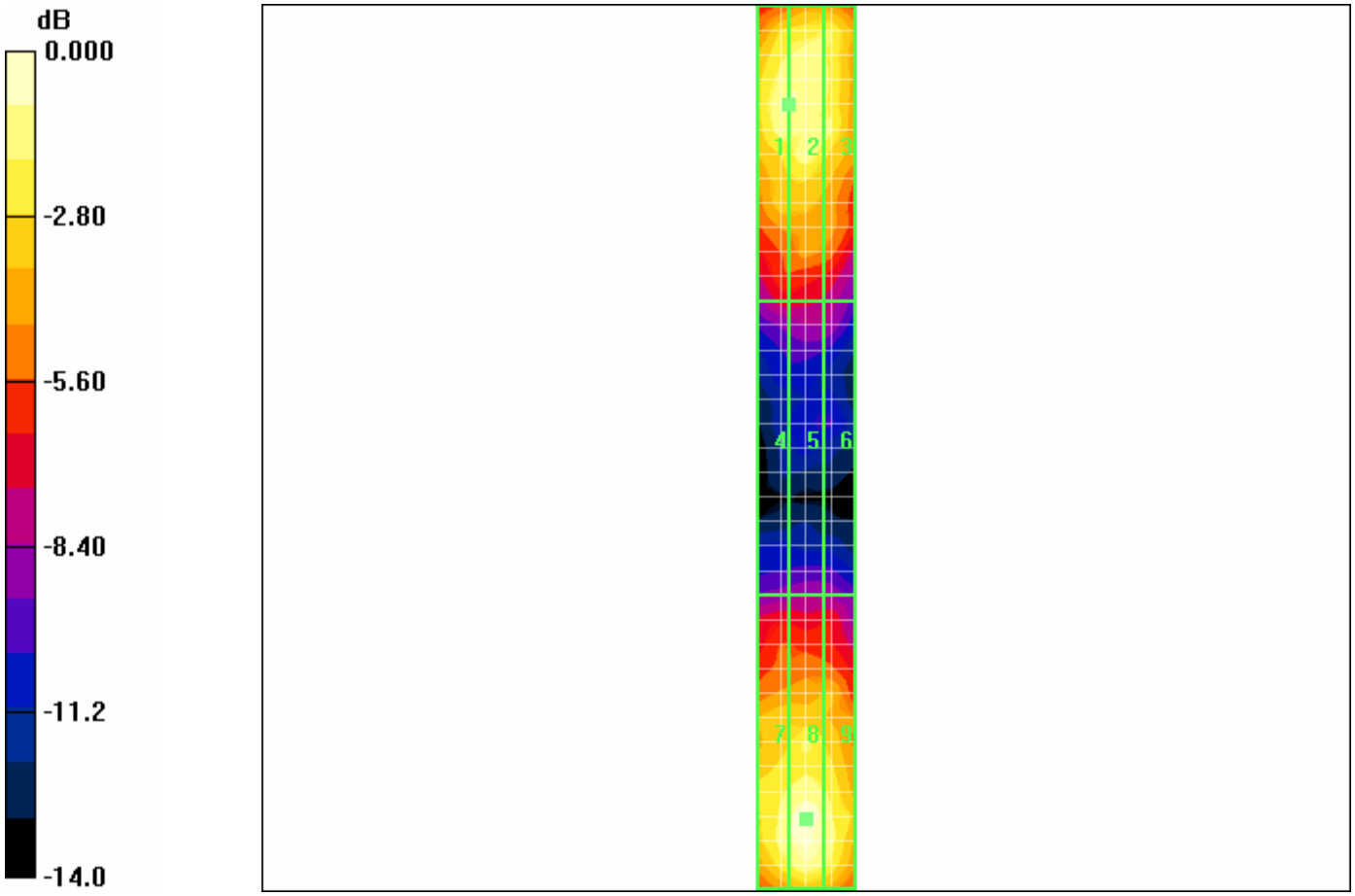

0 dB = 66.4V/m

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Date/Time: 18/12/2007 2:22:51 PM

Test Laboratory: RTS
File Name: HAC_E_1880MHz_CW_20dBm.da4

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

Communication System: CW; Frequency: 1880 MHz;Duty Cycle: 1:1
Medium parameters used: σ = 0 mho/m, ε_r = 1; ρ = 1000 kg/m^3
Phantom section: E Device Section

DASY4 Configuration:
- Probe: ER3DV6 - SN2285; ConvF(1, 1, 1); Calibrated: 12/03/2007
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 07/03/2007
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

E Scan - ER probe center 10mm above CD1880 Dipole/Hearing Aid Compatibility Test (5x19x1): Measurement grid: dx=5mm, dy=5mm
Probe Modulation Factor = 1.00
Reference Value = 70.9 V/m; Power Drift = 0.032 dB
Maximum value of Total (measured) = 134.5 V/m

E Scan - ER probe center 10mm above CD1880 Dipole/Hearing Aid Compatibility Test (41x181x1): Measurement grid: dx=5mm, dy=5mm
Maximum value of peak Total field = 137.5 V/m
Probe Modulation Factor = 1.00
Reference Value = 70.9 V/m; Power Drift = 0.032 dB
Hearing Aid Near-Field Category: M2 (AWF 0 dB)

Peak E-field in V/m

Grid **128.5**	Grid **133.2**	Grid **129.6**
Grid **87.5**	Grid **89.9**	Grid **84.8**
Grid	Grid	Grid

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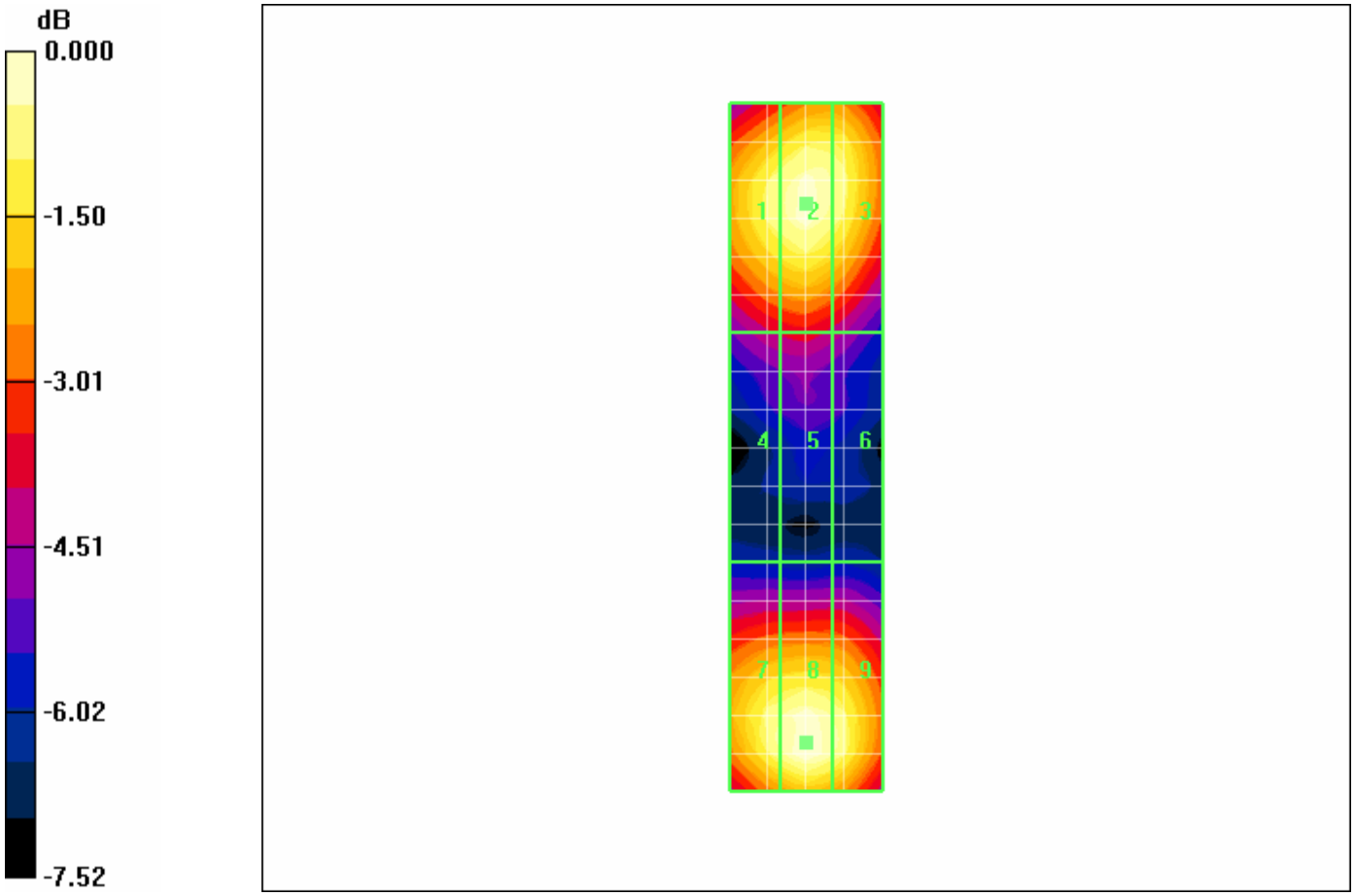

0 dB = 137.5V/m

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Date/Time: 19/12/2007 1:46:36 PM

Test Laboratory: RTS
File Name: HAC_E_1880MHz_CW_17dBm.da4

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

Communication System: CDMA 1900; Frequency: 1880 MHz;Duty Cycle: 1:1
Medium parameters used: σ = 0 mho/m, ε_r = 1; ρ = 1000 kg/m^3
Phantom section: E Device Section

DASY4 Configuration:
- Probe: ER3DV6 - SN2285; ConvF(1, 1, 1); Calibrated: 12/03/2007
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 07/03/2007
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

E Scan - ER probe center 10mm above CD1880 Dipole/Hearing Aid Compatibility Test (5x19x1): Measurement grid: dx=5mm, dy=5mm
Probe Modulation Factor = 1.00
Reference Value = 50.0 V/m; Power Drift = 0.015 dB
Maximum value of Total (measured) = 95.2 V/m

E Scan - ER probe center 10mm above CD1880 Dipole/Hearing Aid Compatibility Test (41x181x1): Measurement grid: dx=5mm, dy=5mm
Maximum value of peak Total field = 96.0 V/m
Probe Modulation Factor = 1.00
Reference Value = 50.0 V/m; Power Drift = 0.015 dB
Hearing Aid Near-Field Category: M3 (AWF 0 dB)

Peak E-field in V/m

Grid **92.4**	Grid **96.0**	Grid **93.5**
Grid **62.4**	Grid **64.1**	Grid **60.6**
Grid	Grid	Grid

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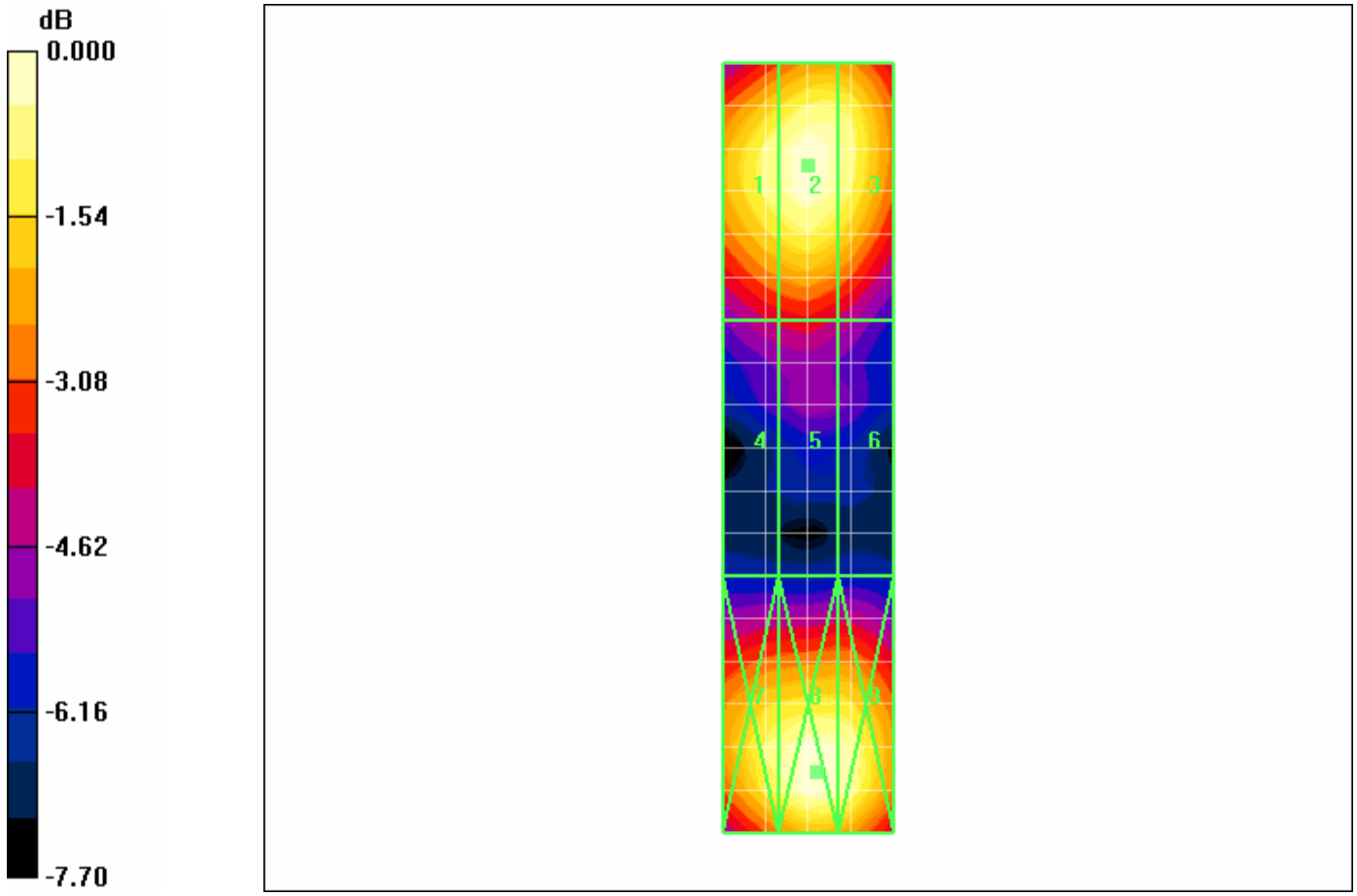

0 dB = 98.0V/m

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Date/Time: 19/12/2007 1:56:45 PM

Test Laboratory: RTS
File Name: HAC_E_1880MHz_80%AM_17_0dBm.da4

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

Communication System: 80% AM; Frequency: 1880 MHz;Duty Cycle: 1:1
Medium parameters used: σ = 0 mho/m, ε_r = 1; ρ = 1000 kg/m^3
Phantom section: E Device Section

DASY4 Configuration:
- Probe: ER3DV6 - SN2285; ConvF(1, 1, 1); Calibrated: 12/03/2007
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 07/03/2007
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

E Scan - ER probe center 10mm above CD1880 Dipole/Hearing Aid Compatibility Test (5x19x1): Measurement grid: dx=5mm, dy=5mm
Probe Modulation Factor = 1.00
Reference Value = 31.6 V/m; Power Drift = -0.001 dB
Maximum value of Total (measured) = 60.4 V/m

E Scan - ER probe center 10mm above CD1880 Dipole/Hearing Aid Compatibility Test (41x181x1): Measurement grid: dx=5mm, dy=5mm
Maximum value of peak Total field = 62.1 V/m
Probe Modulation Factor = 1.00
Reference Value = 31.6 V/m; Power Drift = -0.001 dB
Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak E-field in V/m

Grid **58.7**	Grid **60.8**	Grid **59.3**
Grid **39.8**	Grid **40.8**	Grid **38.5**
Grid	Grid	Grid

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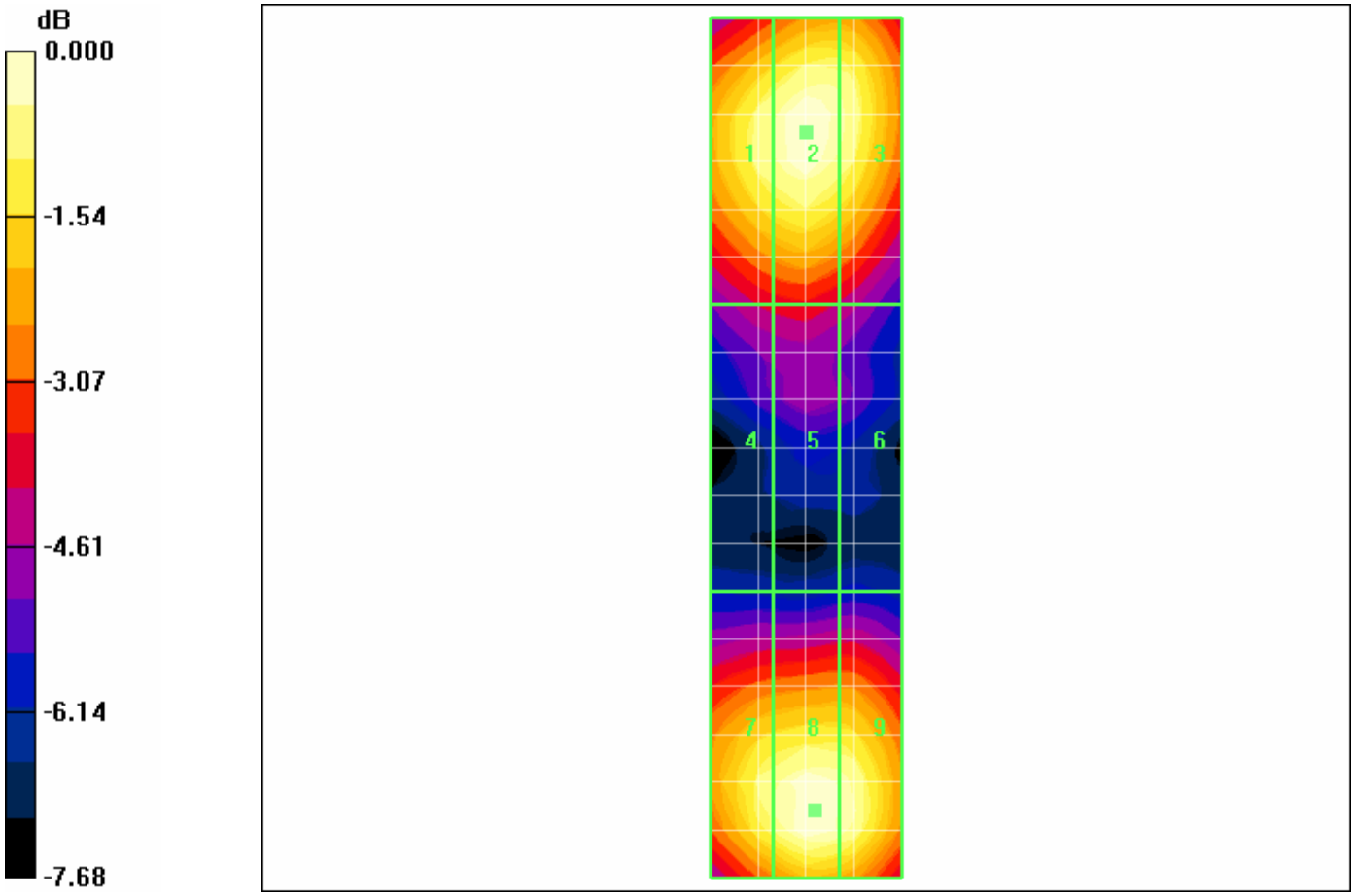

0 dB = 62.1V/m

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Date/Time: 19/12/2007 1:56:45 PM

Test Laboratory: RTS
File Name: HAC_E_1880MHz_80%AM_17_0dBm.da4

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

Communication System: 80% AM; Frequency: 1880 MHz;Duty Cycle: 1:1
Medium parameters used: σ = 0 mho/m, ε_r = 1; ρ = 1000 kg/m^3
Phantom section: E Device Section

DASY4 Configuration:
- Probe: ER3DV6 - SN2285; ConvF(1, 1, 1); Calibrated: 12/03/2007
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 07/03/2007
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

E Scan - ER probe center 10mm above CD1880 Dipole/Hearing Aid Compatibility Test (5x19x1): Measurement grid: dx=5mm, dy=5mm
Probe Modulation Factor = 1.00
Reference Value = 31.6 V/m; Power Drift = -0.001 dB
Maximum value of Total (measured) = 60.4 V/m

E Scan - ER probe center 10mm above CD1880 Dipole/Hearing Aid Compatibility Test (41x181x1): Measurement grid: dx=5mm, dy=5mm
Maximum value of peak Total field = 62.1 V/m
Probe Modulation Factor = 1.00
Reference Value = 31.6 V/m; Power Drift = -0.001 dB
Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak E-field in V/m

Grid **58.7**	Grid **60.8**	Grid **59.3**
Grid **39.8**	Grid **40.8**	Grid **38.5**
Grid	Grid	Grid

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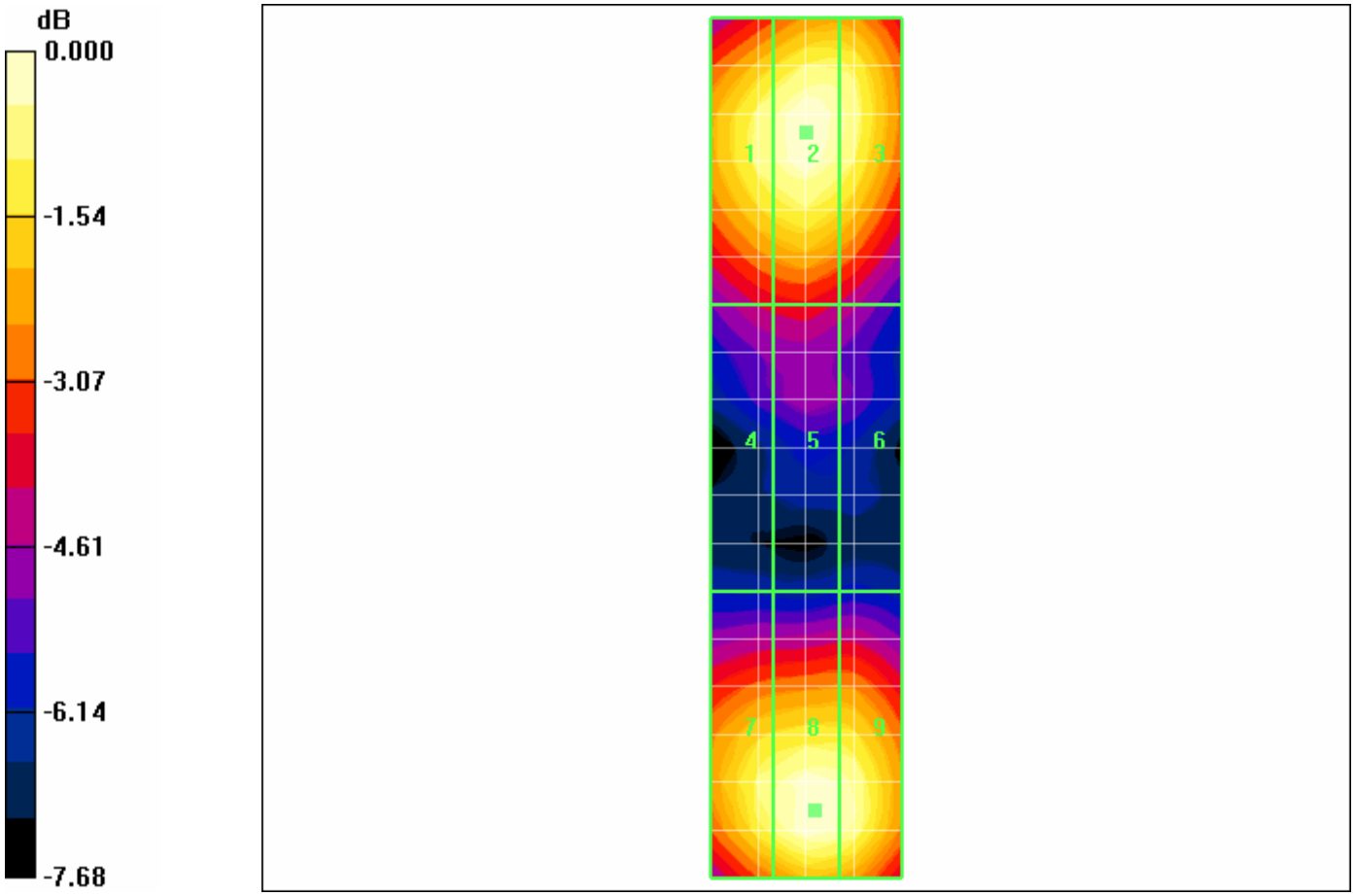

0 dB = 62.1V/m

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Date/Time: 19/12/2007 2:08:16 PM

Test Laboratory: RTS
File Name: HAC_E_CDMA1880MHz_FullRate_17dBm.da4

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

Communication System: CDMA 1900; Frequency: 1880 MHz;Duty Cycle: 1:1
Medium parameters used: σ = 0 mho/m, ε_r = 1; ρ = 1000 kg/m^3
Phantom section: E Device Section

DASY4 Configuration:
- Probe: ER3DV6 - SN2285; ConvF(1, 1, 1); Calibrated: 12/03/2007
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 07/03/2007
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

E Scan - ER probe center 10mm above CD1880 Dipole/Hearing Aid Compatibility Test (5x19x1): Measurement grid: dx=5mm, dy=5mm
Probe Modulation Factor = 1.00
Reference Value = 50.1 V/m; Power Drift = 0.011 dB
Maximum value of Total (measured) = 96.8 V/m

E Scan - ER probe center 10mm above CD1880 Dipole/Hearing Aid Compatibility Test (41x181x1): Measurement grid: dx=5mm, dy=5mm
Maximum value of peak Total field = 99.7 V/m
Probe Modulation Factor = 1.00
Reference Value = 50.1 V/m; Power Drift = 0.011 dB
Hearing Aid Near-Field Category: M3 (AWF 0 dB)

Peak E-field in V/m

Grid **92.9**	Grid **96.7**	Grid **94.3**
Grid **62.8**	Grid **64.6**	Grid **61.2**
Grid	Grid	Grid

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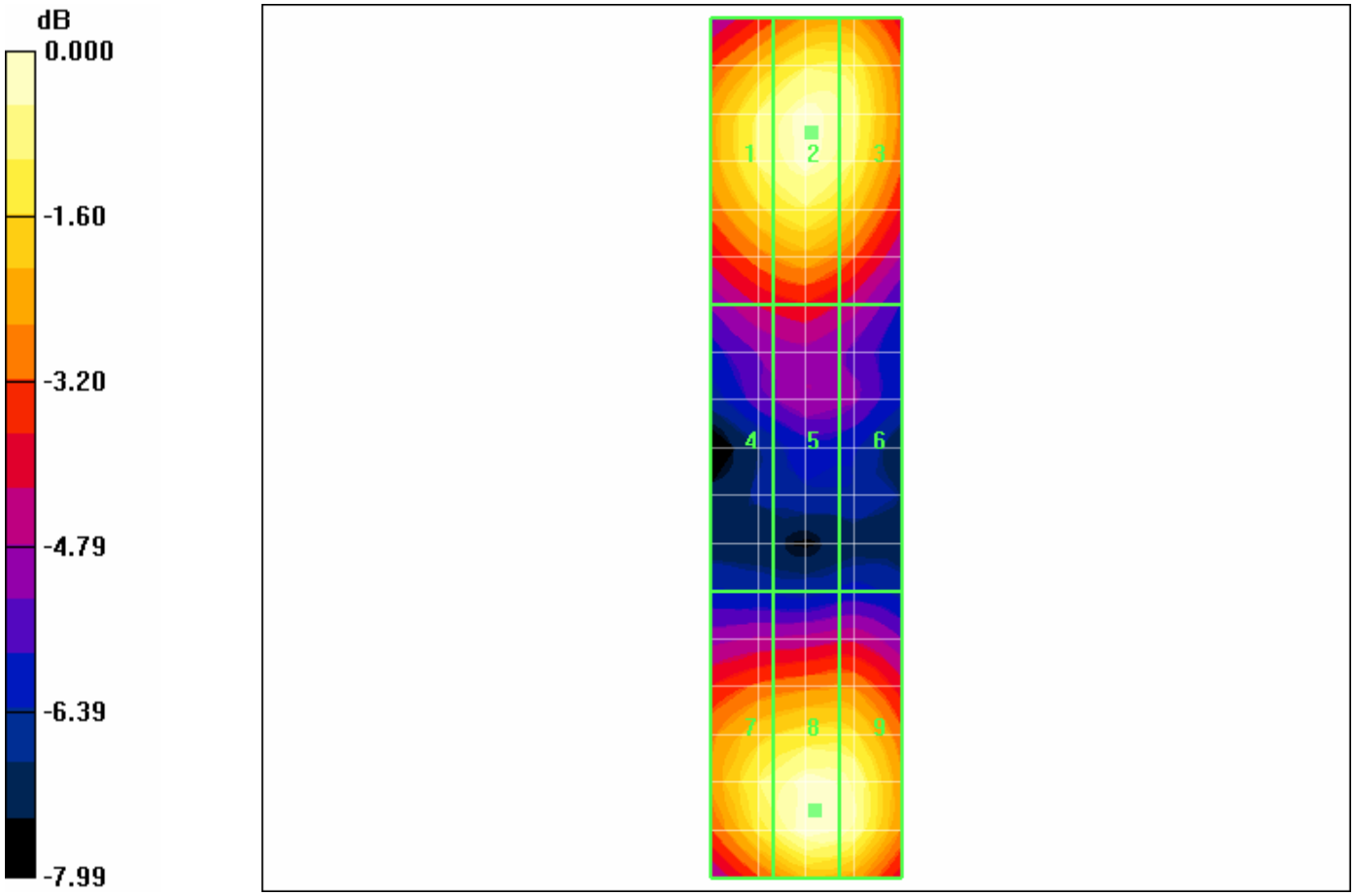

0 dB = 99.7V/m

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Date/Time: 19/12/2007 1:52:28 PM

Test Laboratory: RTS
File Name: HAC_E_1880MHz_CW_18_33dBm.da4

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

Communication System: CW; Frequency: 1880 MHz;Duty Cycle: 1:1
Medium parameters used: $\sigma = 0$ mho/m, $\varepsilon_r = 1$; $\rho = 1000$ kg/m^3
Phantom section: E Device Section

DASY4 Configuration:
- Probe: ER3DV6 - SN2285; ConvF(1, 1, 1); Calibrated: 12/03/2007
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 07/03/2007
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

E Scan - ER probe center 10mm above CD1880 Dipole/Hearing Aid Compatibility Test (5x19x1): Measurement grid: dx=5mm, dy=5mm
Probe Modulation Factor = 1.00
Reference Value = 59.3 V/m; Power Drift = -0.021 dB
Maximum value of Total (measured) = 113.8 V/m

E Scan - ER probe center 10mm above CD1880 Dipole/Hearing Aid Compatibility Test (41x181x1): Measurement grid: dx=5mm, dy=5mm
Maximum value of peak Total field = 117.1 V/m
Probe Modulation Factor = 1.00
Reference Value = 59.3 V/m; Power Drift = -0.021 dB
Hearing Aid Near-Field Category: M2 (AWF 0 dB)

Peak E-field in V/m

Grid **109.4**	Grid **113.6**	Grid **111.2**
Grid **73.9**	Grid **75.6**	Grid **71.9**
Grid	Grid	Grid

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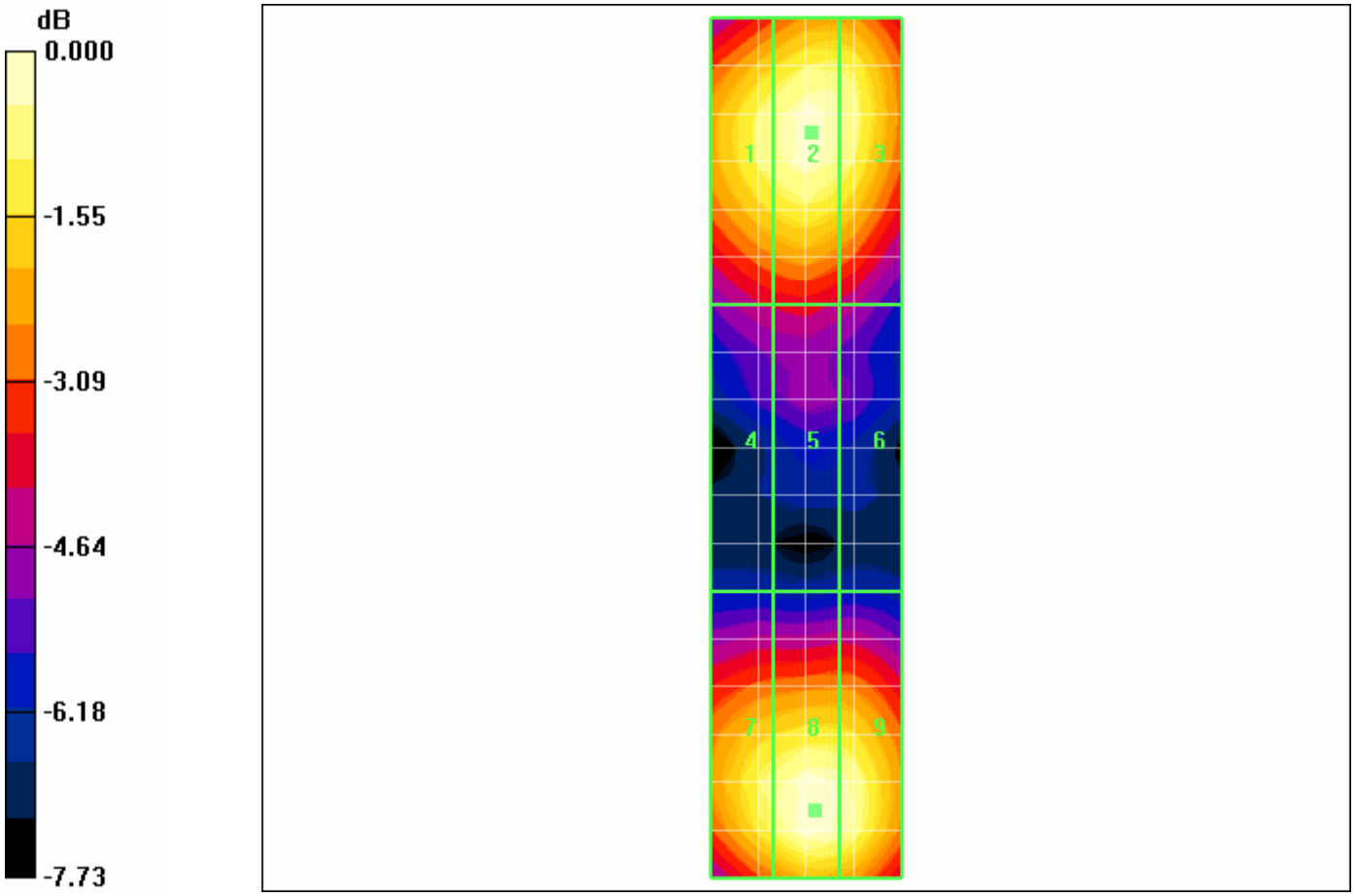

0 dB = 117.1V/m

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Date/Time: 19/12/2007 2:13:31 PM

Test Laboratory: RTS
File Name: HAC_E_CDMA1880MHz_1/8th_18.33dBm.da4

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

Communication System: CDMA 1900; Frequency: 1880 MHz;Duty Cycle: 1:8
Medium parameters used: σ = 0 mho/m, ε_r = 1; ρ = 1000 kg/m^3
Phantom section: E Device Section

DASY4 Configuration:
- Probe: ER3DV6 - SN2285; ConvF(1, 1, 1); Calibrated: 12/03/2007
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 07/03/2007
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

E Scan - ER probe center 10mm above CD1880 Dipole/Hearing Aid Compatibility Test (5x19x1): Measurement grid: dx=5mm, dy=5mm
Probe Modulation Factor = 1.00
Reference Value = 21.2 V/m; Power Drift = -0.036 dB
Maximum value of Total (measured) = 43.0 V/m

E Scan - ER probe center 10mm above CD1880 Dipole/Hearing Aid Compatibility Test (41x181x1): Measurement grid: dx=5mm, dy=5mm
Maximum value of peak Total field = 43.1 V/m
Probe Modulation Factor = 1.00
Reference Value = 21.2 V/m; Power Drift = -0.036 dB
Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak E-field in V/m

Grid **37.6**	Grid **43.1**	Grid **41.1**
Grid **24.8**	Grid **25.8**	Grid **23.9**
Grid	Grid	Grid

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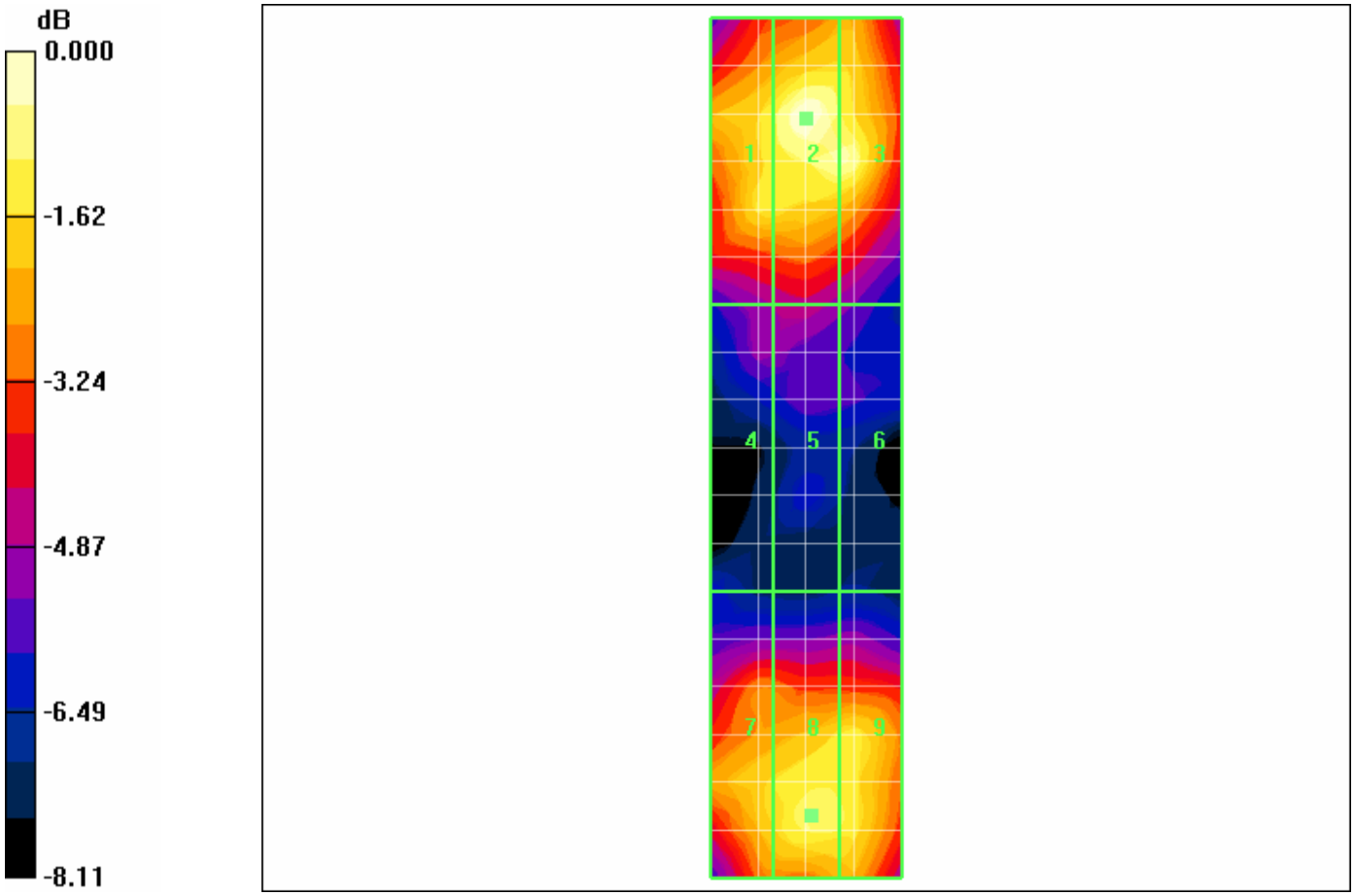

0 dB = 43.1V/m

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Date/Time: 18/12/2007 3:11:25 PM

Test Laboratory: RTS
File Name: HAC_H_835MHz_CW_20dBm.da4

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

Communication System: CW; Frequency: 835 MHz;Duty Cycle: 1:1
Medium parameters used: σ = 0 mho/m, ε_r = 1; ρ = 1 kg/m^3
Phantom section: E Device Section

DASY4 Configuration:
- Probe: H3DV6 - SN6105; ; Calibrated: 09/11/2007
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 07/03/2007
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

H Scan - H3DV5 probe center 10mm above CD835 Dipole/Hearing Aid Compatibility Test (5x37x1): Measurement grid: dx=5mm, dy=5mm
Probe Modulation Factor = 1.00
Reference Value = 0.465 A/m; Power Drift = -0.044 dB
Maximum value of Total (measured) = 0.440 A/m

H Scan - H3DV5 probe center 10mm above CD835 Dipole/Hearing Aid Compatibility Test (41x361x1): Measurement grid: dx=5mm, dy=5mm
Maximum value of peak Total field = 0.440 A/m
Probe Modulation Factor = 1.00
Reference Value = 0.465 A/m; Power Drift = -0.044 dB
Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak H-field in A/m

Grid **0.367**	Grid **0.392**	Grid **0.372**
Grid **0.413**	Grid **0.440**	Grid **0.418**
Grid	Grid	Grid

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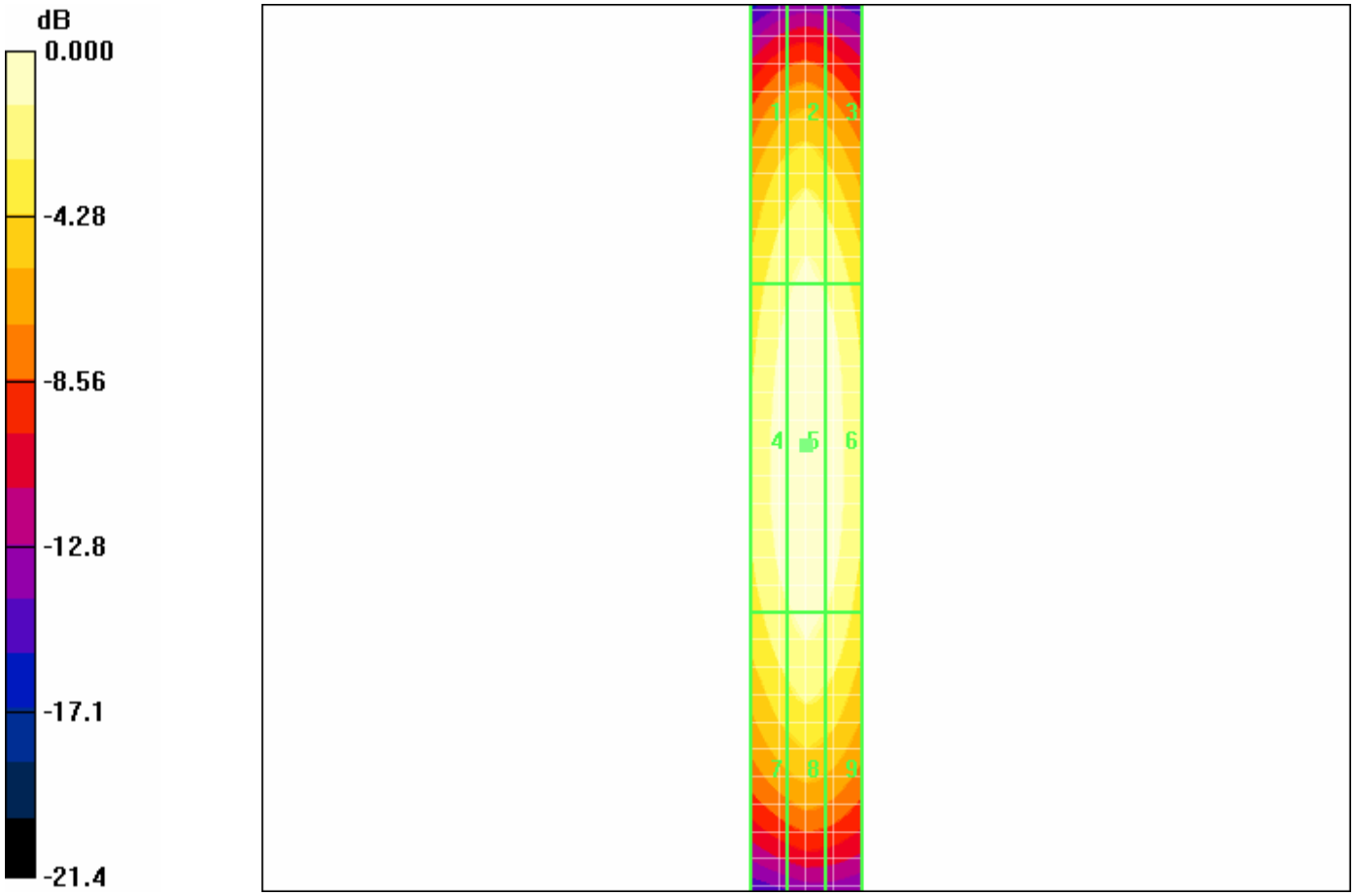

0 dB = 0.440A/m

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Date/Time: 19/12/2007 3:12:40 PM

Test Laboratory: RTS
File Name: HAC_H_835MHz_CW_17_33dBm.da4

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

Communication System: CW; Frequency: 835 MHz;Duty Cycle: 1:1
Medium parameters used: σ = 0 mho/m, ε_r = 1; ρ = 1 kg/m^3
Phantom section: E Device Section

DASY4 Configuration:
- Probe: H3DV6 - SN6105; ; Calibrated: 09/11/2007
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 07/03/2007
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

H Scan - H3DV5 probe center 10mm above CD835 Dipole/Hearing Aid Compatibility Test (5x25x1): Measurement grid: dx=5mm, dy=5mm
Probe Modulation Factor = 1.00
Reference Value = 0.322 A/m; Power Drift = 0.109 dB
Maximum value of Total (measured) = 0.322 A/m

H Scan - H3DV5 probe center 10mm above CD835 Dipole/Hearing Aid Compatibility Test (41x241x1): Measurement grid: dx=5mm, dy=5mm
Maximum value of peak Total field = 0.322 A/m
Probe Modulation Factor = 1.00
Reference Value = 0.322 A/m; Power Drift = 0.109 dB
Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak H-field in A/m

Grid **0.302**	Grid **0.321**	Grid **0.303**
Grid **0.302**	Grid **0.322**	Grid **0.304**
Grid	Grid	Grid

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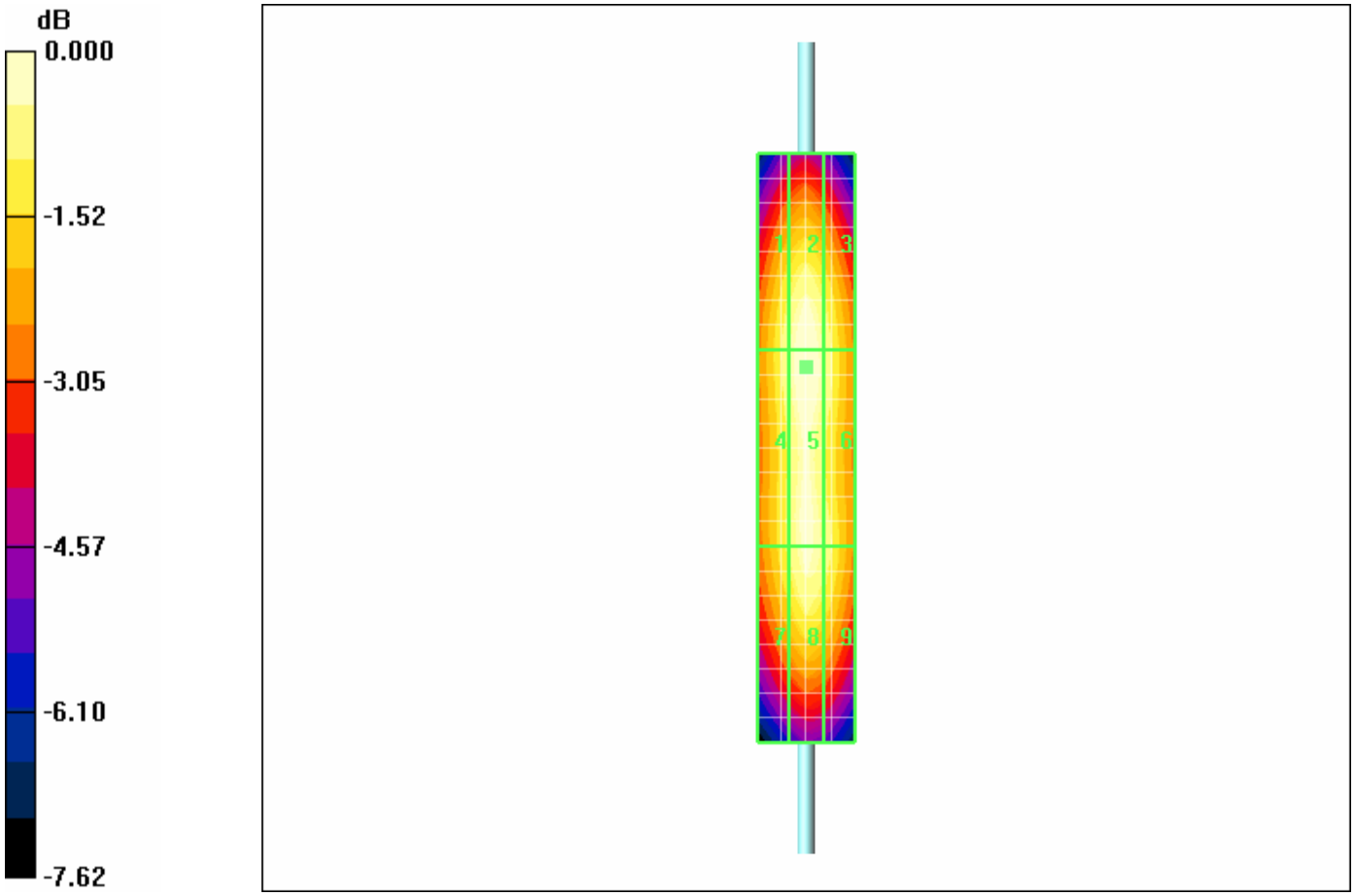

0 dB = 0.322A/m

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Date/Time: 19/12/2007 3:20:33 PM

Test Laboratory: RTS
File Name: HAC_H_835MHz_80%am_17_33dBm.da4

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

Communication System: 80% AM; Frequency: 835 MHz;Duty Cycle: 1:1
Medium parameters used: σ = 0 mho/m, ε_r = 1; ρ = 1 kg/m^3
Phantom section: E Device Section

DASY4 Configuration:
- Probe: H3DV6 - SN6105; ; Calibrated: 09/11/2007
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 07/03/2007
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

H Scan - H3DV5 probe center 10mm above CD835 Dipole/Hearing Aid Compatibility Test (5x25x1): Measurement grid: dx=5mm, dy=5mm
Probe Modulation Factor = 1.00
Reference Value = 0.212 A/m; Power Drift = 0.043 dB
Maximum value of Total (measured) = 0.210 A/m

H Scan - H3DV5 probe center 10mm above CD835 Dipole/Hearing Aid Compatibility Test (41x241x1): Measurement grid: dx=5mm, dy=5mm
Maximum value of peak Total field = 0.210 A/m
Probe Modulation Factor = 1.00
Reference Value = 0.212 A/m; Power Drift = 0.043 dB
Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak H-field in A/m

Grid **0.196**	Grid **0.209**	Grid **0.199**
Grid **0.197**	Grid **0.210**	Grid **0.200**
Grid	Grid	Grid

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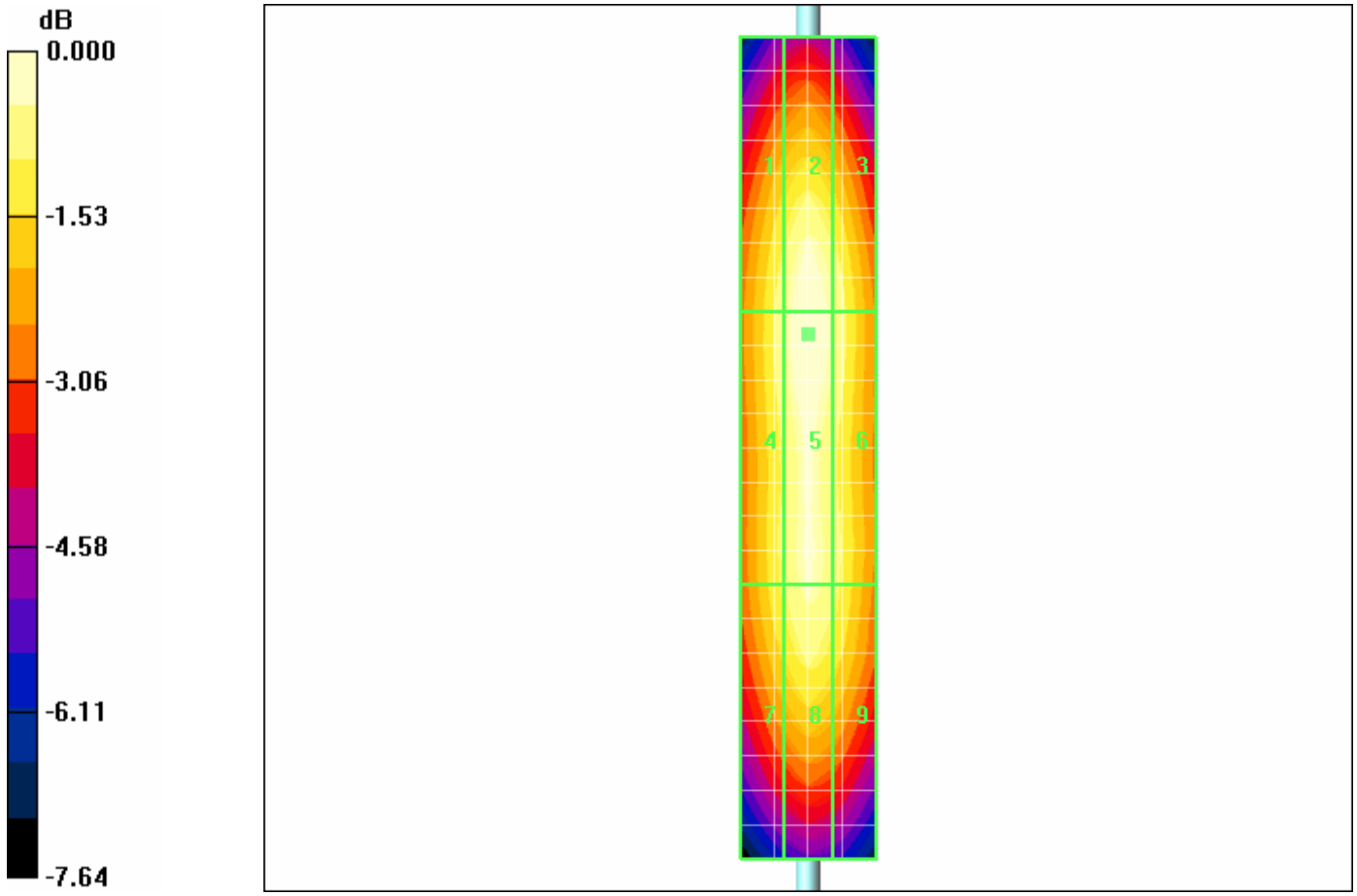

0 dB = 0.210A/m

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Date/Time: 19/12/2007 3:39:42 PM

Test Laboratory: RTS
File Name: HAC_H_CDMA_835MHz_17_33dBm.da4

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

Communication System: CDMA 800; Frequency: 835 MHz;Duty Cycle: 1:1
Medium parameters used: σ = 0 mho/m, ε_r = 1; ρ = 1 kg/m^3
Phantom section: E Device Section

DASY4 Configuration:
- Probe: H3DV6 - SN6105; ; Calibrated: 09/11/2007
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 07/03/2007
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

H Scan - H3DV5 probe center 10mm above CD835 Dipole/Hearing Aid Compatibility Test (5x25x1): Measurement grid: dx=5mm, dy=5mm
Probe Modulation Factor = 1.00
Reference Value = 0.360 A/m; Power Drift = -0.134 dB
Maximum value of Total (measured) = 0.341 A/m

H Scan - H3DV5 probe center 10mm above CD835 Dipole/Hearing Aid Compatibility Test (41x241x1): Measurement grid: dx=5mm, dy=5mm
Maximum value of peak Total field = 0.341 A/m
Probe Modulation Factor = 1.00
Reference Value = 0.360 A/m; Power Drift = -0.134 dB
Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak H-field in A/m

Grid **0.301**	Grid **0.322**	Grid **0.301**
Grid **0.322**	Grid **0.341**	Grid **0.323**
Grid	Grid	Grid

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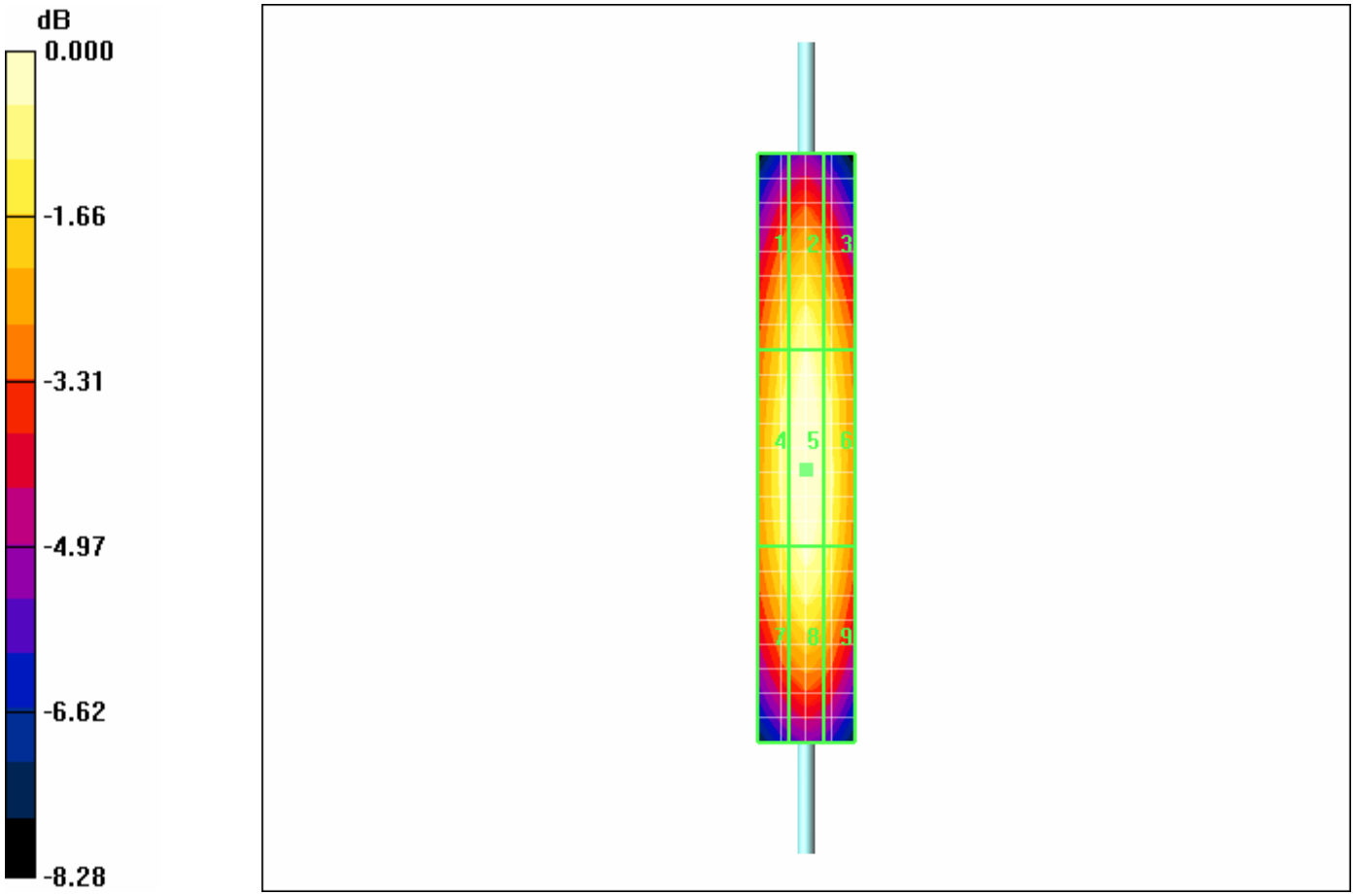

0 dB = 0.341A/m

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Date/Time: 19/12/2007 3:06:43 PM

Test Laboratory: RTS
File Name: HAC_H_835MHz_CW_19_33dBm.da4

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

Communication System: CW; Frequency: 835 MHz;Duty Cycle: 1:1
Medium parameters used: σ = 0 mho/m, ε_r = 1; ρ = 1 kg/m^3
Phantom section: E Device Section

DASY4 Configuration:
- Probe: H3DV6 - SN6105; ; Calibrated: 09/11/2007
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 07/03/2007
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

H Scan - H3DV5 probe center 10mm above CD835 Dipole/Hearing Aid Compatibility Test (5x25x1): Measurement grid: dx=5mm, dy=5mm
Probe Modulation Factor = 1.00
Reference Value = 0.413 A/m; Power Drift = -0.089 dB
Maximum value of Total (measured) = 0.409 A/m

H Scan - H3DV5 probe center 10mm above CD835 Dipole/Hearing Aid Compatibility Test (41x241x1): Measurement grid: dx=5mm, dy=5mm
Maximum value of peak Total field = 0.410 A/m
Probe Modulation Factor = 1.00
Reference Value = 0.413 A/m; Power Drift = -0.089 dB
Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak H-field in A/m

Grid **0.378**	Grid **0.409**	Grid **0.389**
Grid **0.379**	Grid **0.410**	Grid **0.390**
Grid	Grid	Grid

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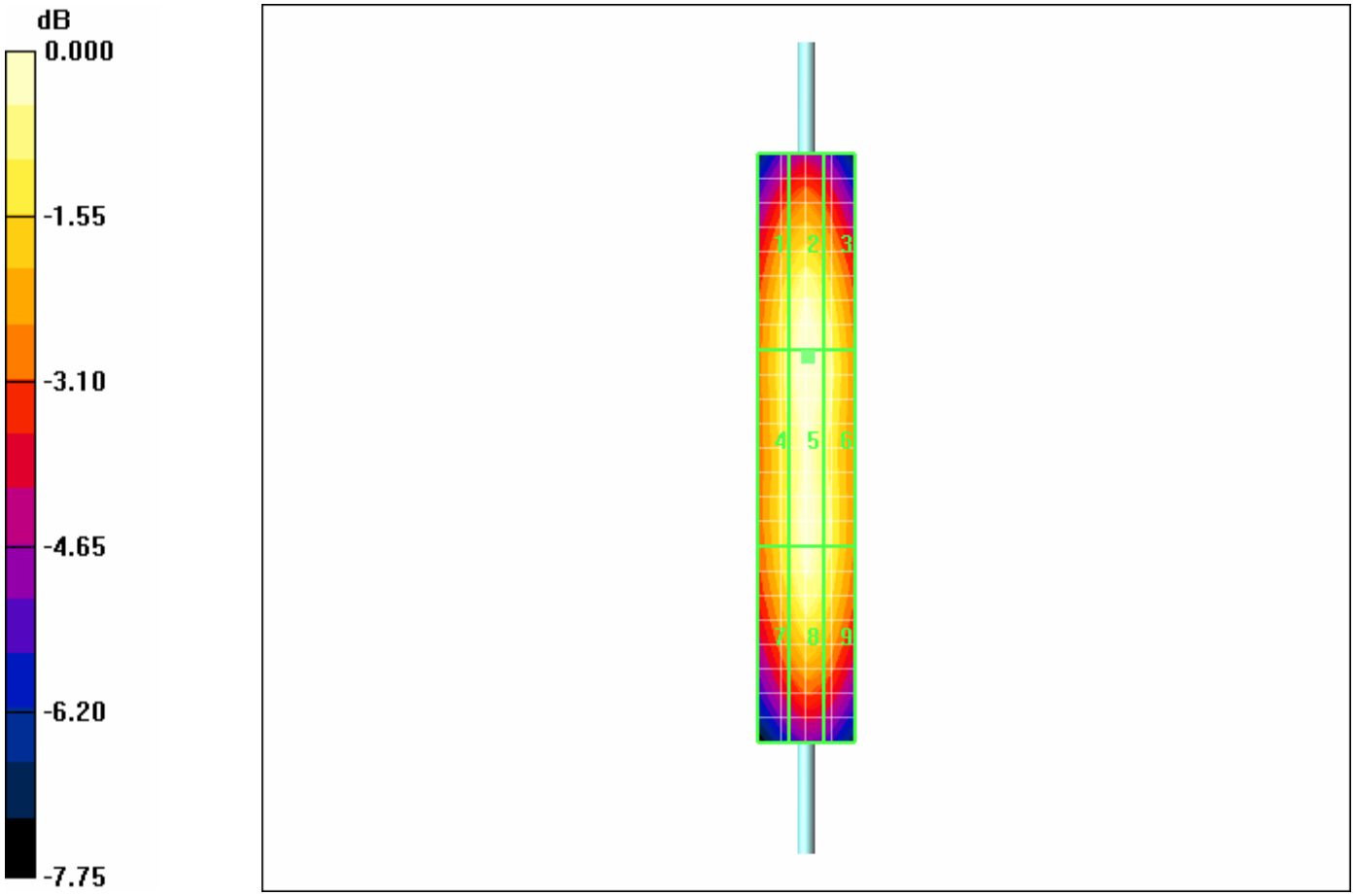

0 dB = 0.410A/m

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Date/Time: 19/12/2007 3:47:42 PM

Test Laboratory: RTS
File Name: HAC_H_CDMA_835MHz_1/8th_19_33dBm.da4

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

Communication System: CDMA 800; Frequency: 835 MHz;Duty Cycle: 1:8
Medium parameters used: σ = 0 mho/m, ε_r = 1; ρ = 1 kg/m^3
Phantom section: E Device Section

DASY4 Configuration:
- Probe: H3DV6 - SN6105; ; Calibrated: 09/11/2007
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 07/03/2007
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

H Scan - H3DV5 probe center 10mm above CD835 Dipole/Hearing Aid Compatibility Test (5x25x1): Measurement grid: dx=5mm, dy=5mm
Probe Modulation Factor = 1.00
Reference Value = 0.167 A/m; Power Drift = 0.422 dB
Maximum value of Total (measured) = 0.170 A/m

H Scan - H3DV5 probe center 10mm above CD835 Dipole/Hearing Aid Compatibility Test (41x241x1): Measurement grid: dx=5mm, dy=5mm
Maximum value of peak Total field = 0.170 A/m
Probe Modulation Factor = 1.00
Reference Value = 0.167 A/m; Power Drift = 0.422 dB
Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak H-field in A/m

Grid **0.141**	Grid **0.163**	Grid **0.143**
Grid **0.161**	Grid **0.170**	Grid **0.162**
Grid	Grid	Grid

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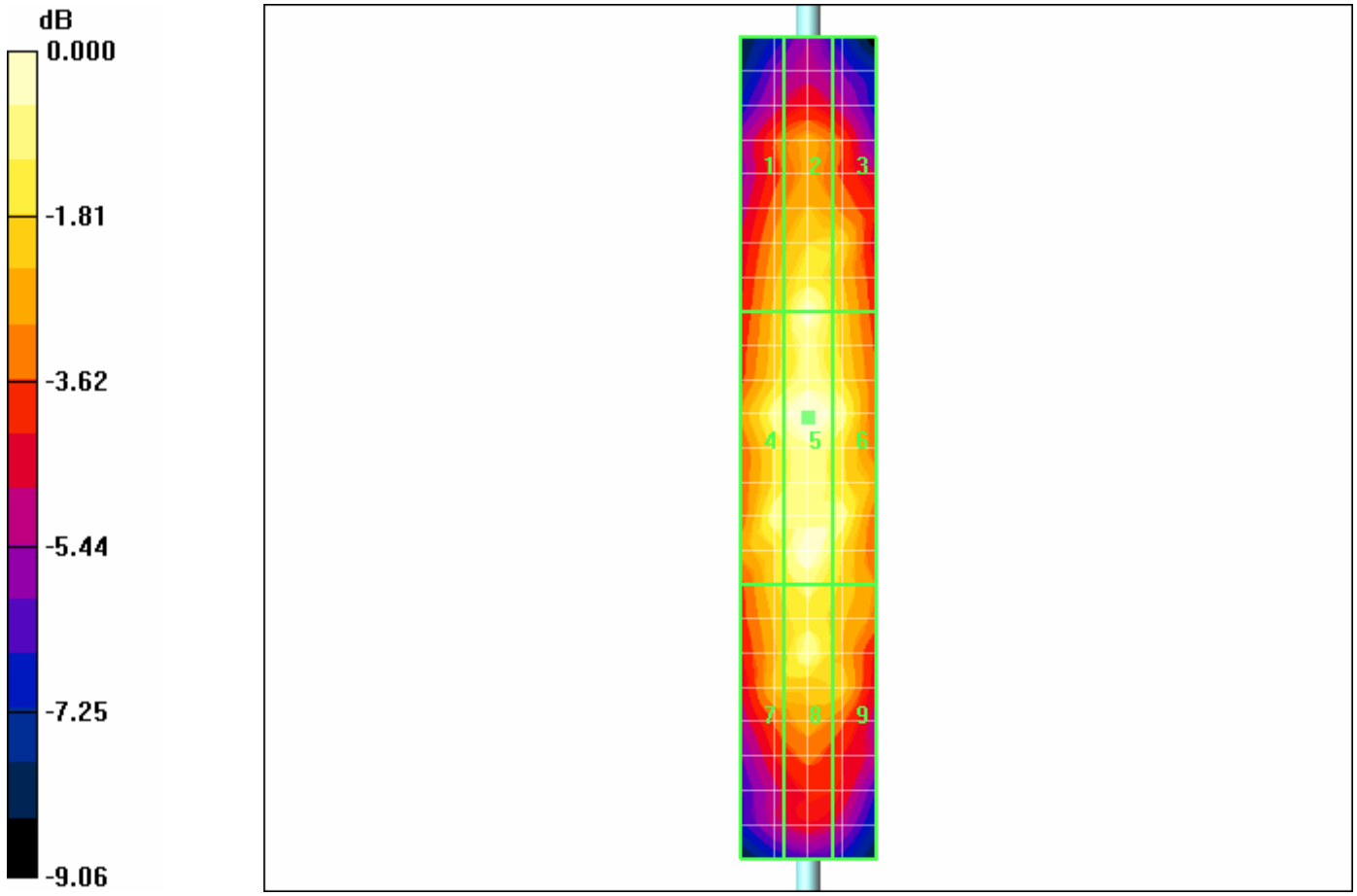

0 dB = 0.170A/m

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Date/Time: 18/12/2007 3:21:10 PM

Test Laboratory: RTS
File Name: HAC_H_1880MHz_CW_20dBm.da4

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

Communication System: CW; Frequency: 1880 MHz;Duty Cycle: 1:1
Medium parameters used: σ = 0 mho/m, ε_r = 1; ρ = 1 kg/m^3
Phantom section: E Device Section

DASY4 Configuration:
- Probe: H3DV6 - SN6105; ; Calibrated: 09/11/2007
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 07/03/2007
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

H Scan - H3DV5 probe center 10mm above CD1880 Dipole/Hearing Aid Compatibility Test (5x19x1): Measurement grid: dx=5mm, dy=5mm
Probe Modulation Factor = 1.00
Reference Value = 0.467 A/m; Power Drift = 0.067 dB
Maximum value of Total (measured) = 0.445 A/m

H Scan - H3DV5 probe center 10mm above CD1880 Dipole/Hearing Aid Compatibility Test (41x181x1): Measurement grid: dx=5mm, dy=5mm
Maximum value of peak Total field = 0.445 A/m
Probe Modulation Factor = 1.00
Reference Value = 0.467 A/m; Power Drift = 0.067 dB
Hearing Aid Near-Field Category: M2 (AWF 0 dB)

Peak H-field in A/m

Grid **0.376**	Grid **0.407**	Grid **0.394**
Grid **0.423**	Grid **0.445**	Grid **0.425**
Grid	Grid	Grid

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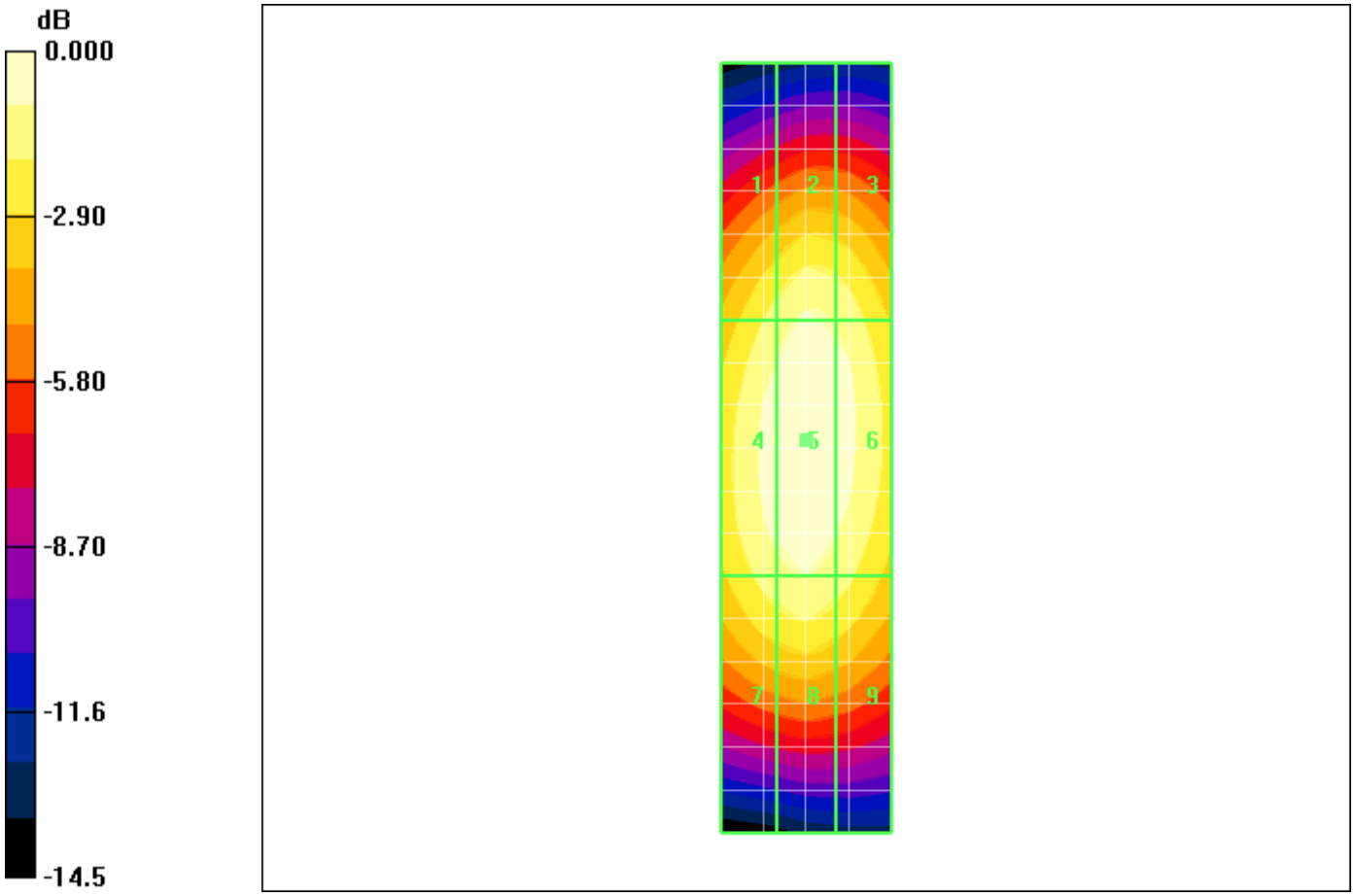

0 dB = 0.445A/m

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Date/Time: 19/12/2007 2:42:54 PM

Test Laboratory: RTS
File Name: HAC_H_1880MHz_CW_17dBm.da4

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

Communication System: CW; Frequency: 1880 MHz;Duty Cycle: 1:1
Medium parameters used: σ = 0 mho/m, ε_r = 1; ρ = 1 kg/m^3
Phantom section: E Device Section

DASY4 Configuration:
- Probe: H3DV6 - SN6105; ; Calibrated: 09/11/2007
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 07/03/2007
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

H Scan - H3DV5 probe center 10mm above CD1880 Dipole/Hearing Aid Compatibility Test (5x19x1): Measurement grid: dx=5mm, dy=5mm
Probe Modulation Factor = 1.00
Reference Value = 0.332 A/m; Power Drift = -0.023 dB
Maximum value of Total (measured) = 0.314 A/m

H Scan - H3DV5 probe center 10mm above CD1880 Dipole/Hearing Aid Compatibility Test (41x181x1): Measurement grid: dx=5mm, dy=5mm
Maximum value of peak Total field = 0.314 A/m
Probe Modulation Factor = 1.00
Reference Value = 0.332 A/m; Power Drift = -0.023 dB
Hearing Aid Near-Field Category: M3 (AWF 0 dB)

Peak H-field in A/m

Grid **0.268**	Grid **0.287**	Grid **0.274**
Grid **0.298**	Grid **0.314**	Grid **0.300**
Grid	Grid	Grid

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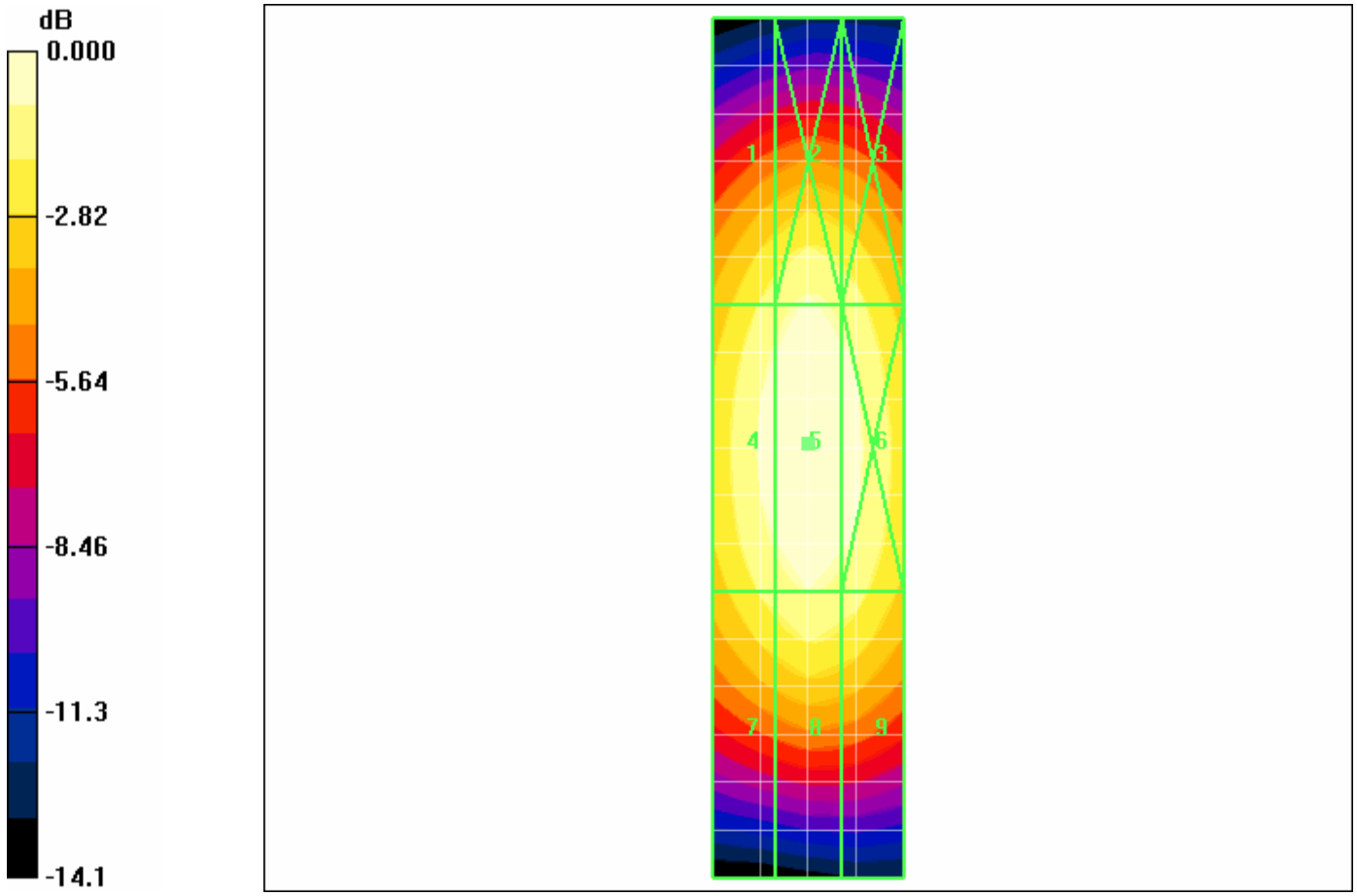

0 dB = 0.314A/m

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Date/Time: 19/12/2007 2:47:41 PM

Test Laboratory: RTS
File Name: HAC_H_1880MHz_80%AM_17dBm.da4

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

Communication System: 80% AM; Frequency: 1880 MHz;Duty Cycle: 1:1
Medium parameters used: σ = 0 mho/m, ε_r = 1; ρ = 1 kg/m^3
Phantom section: E Device Section

DASY4 Configuration:
- Probe: H3DV6 - SN6105; ; Calibrated: 09/11/2007
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 07/03/2007
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

H Scan - H3DV5 probe center 10mm above CD1880 Dipole/Hearing Aid Compatibility Test (5x19x1): Measurement grid: dx=5mm, dy=5mm
Probe Modulation Factor = 1.00
Reference Value = 0.214 A/m; Power Drift = -0.045 dB
Maximum value of Total (measured) = 0.201 A/m

H Scan - H3DV5 probe center 10mm above CD1880 Dipole/Hearing Aid Compatibility Test (41x181x1): Measurement grid: dx=5mm, dy=5mm
Maximum value of peak Total field = 0.201 A/m
Probe Modulation Factor = 1.00
Reference Value = 0.214 A/m; Power Drift = -0.045 dB
Hearing Aid Near-Field Category: M3 (AWF 0 dB)

Peak H-field in A/m

Grid **0.172**	Grid **0.183**	Grid **0.175**
Grid **0.191**	Grid **0.201**	Grid **0.192**
Grid	Grid	Grid

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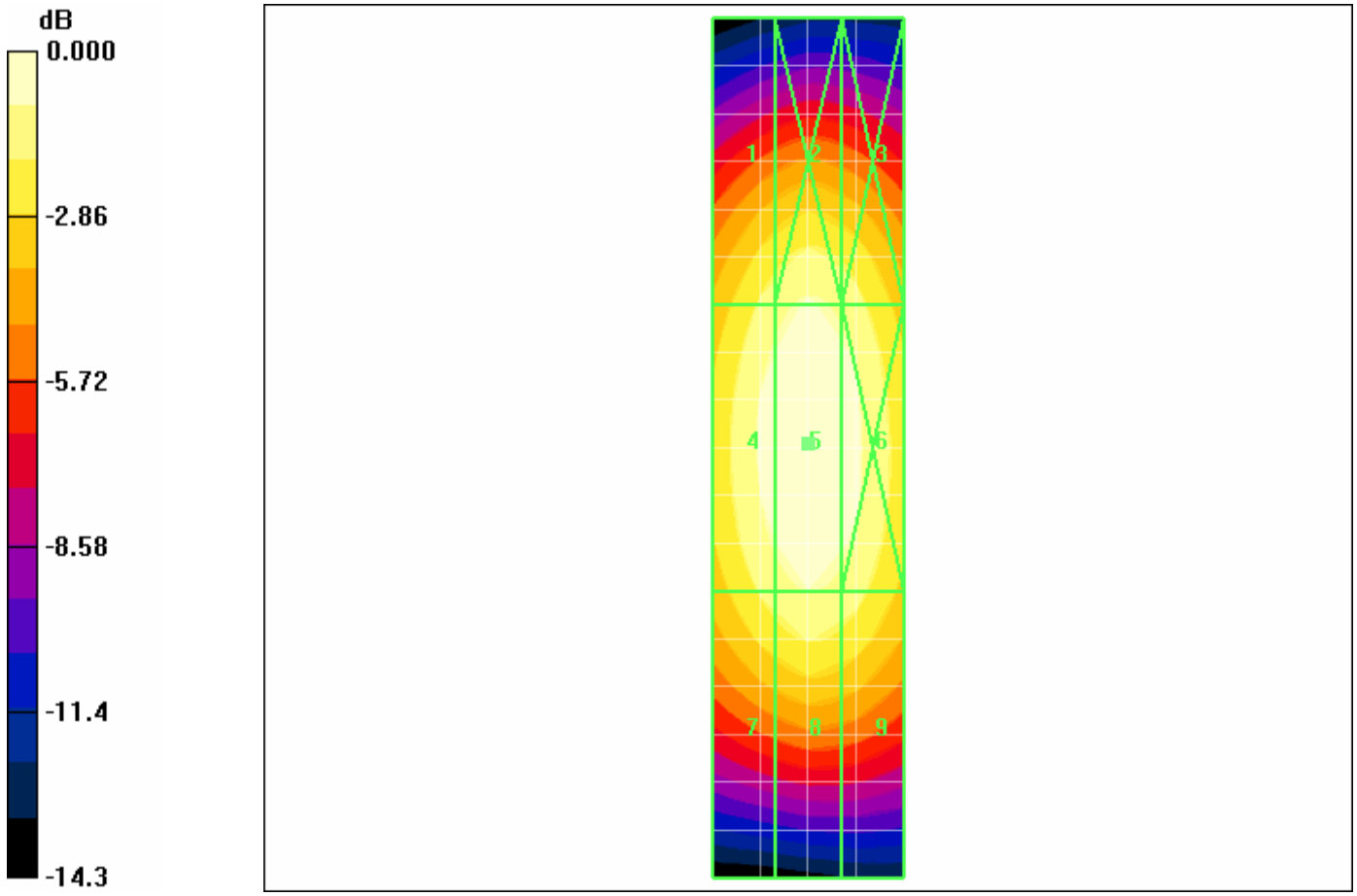

0 dB = 0.201A/m

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Date/Time: 19/12/2007 2:32:21 PM

Test Laboratory: RTS
File Name: HAC_H_CDMA1880MHz_FullRate_17dBm.da4

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

Communication System: CDMA 1900; Frequency: 1880 MHz;Duty Cycle: 1:1
Medium parameters used: σ = 0 mho/m, ε_r = 1; ρ = 1 kg/m^3
Phantom section: E Device Section

DASY4 Configuration:
- Probe: H3DV6 - SN6105; ; Calibrated: 09/11/2007
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 07/03/2007
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

H Scan - H3DV5 probe center 10mm above CD1880 Dipole/Hearing Aid Compatibility Test (5x19x1): Measurement grid: dx=5mm, dy=5mm
Probe Modulation Factor = 1.00
Reference Value = 0.345 A/m; Power Drift = -0.044 dB
Maximum value of Total (measured) = 0.322 A/m

H Scan - H3DV5 probe center 10mm above CD1880 Dipole/Hearing Aid Compatibility Test (41x181x1): Measurement grid: dx=5mm, dy=5mm
Maximum value of peak Total field = 0.322 A/m
Probe Modulation Factor = 1.00
Reference Value = 0.345 A/m; Power Drift = -0.044 dB
Hearing Aid Near-Field Category: M3 (AWF 0 dB)

Peak H-field in A/m

Grid **0.274**	Grid **0.293**	Grid **0.279**
Grid **0.304**	Grid **0.322**	Grid **0.307**
Grid	Grid	Grid

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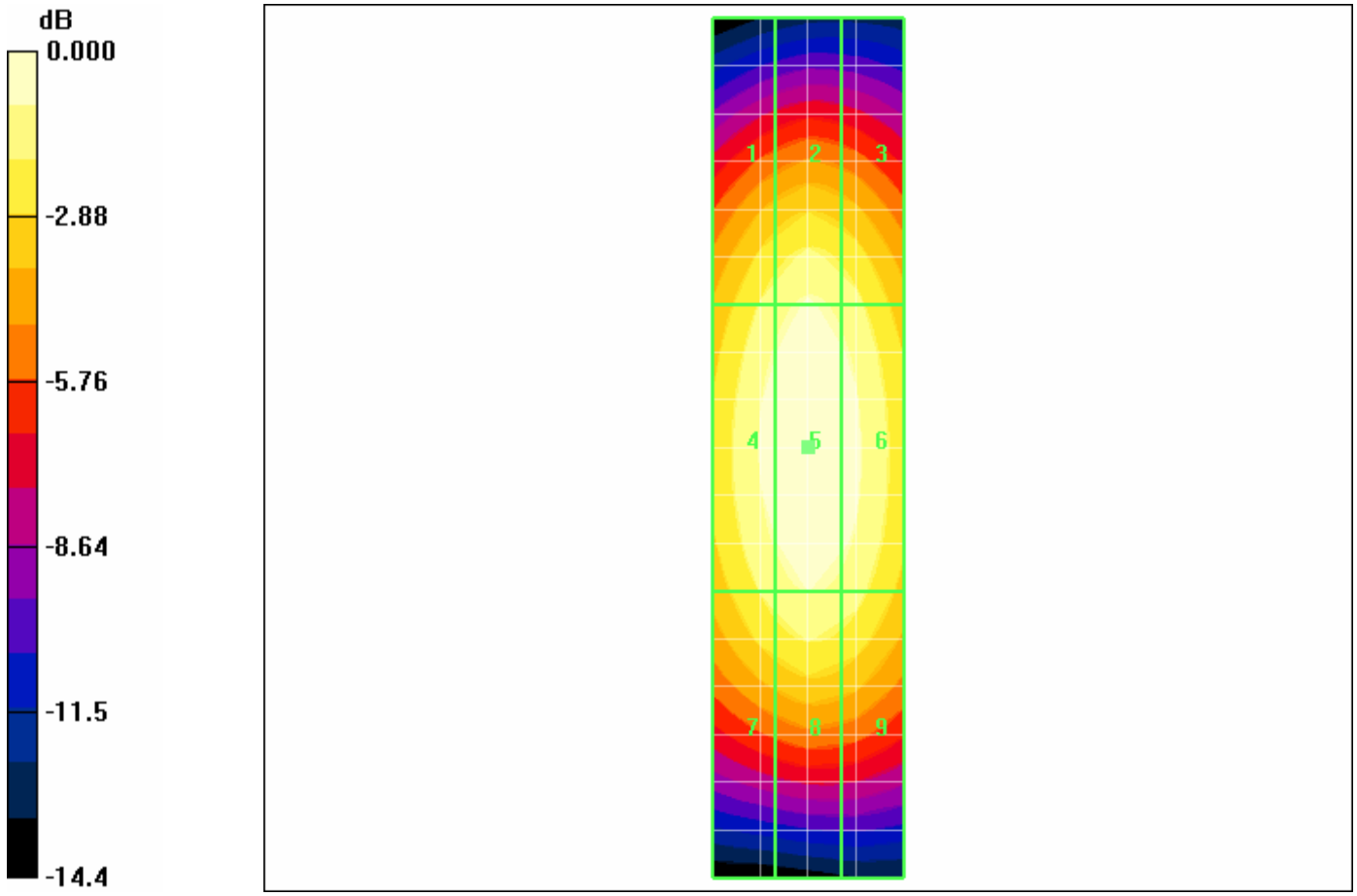

0 dB = 0.322A/m

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Date/Time: 19/12/2007 2:38:09 PM

Test Laboratory: RTS
File Name: HAC_H_1880MHz_CW_18_33.da4

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

Communication System: CW; Frequency: 1880 MHz;Duty Cycle: 1:1
Medium parameters used: σ = 0 mho/m, ε_r = 1; ρ = 1 kg/m^3
Phantom section: E Device Section

DASY4 Configuration:
- Probe: H3DV6 - SN6105; ; Calibrated: 09/11/2007
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 07/03/2007
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

H Scan - H3DV5 probe center 10mm above CD1880 Dipole/Hearing Aid Compatibility Test (5x19x1): Measurement grid: dx=5mm, dy=5mm
Probe Modulation Factor = 1.00
Reference Value = 0.396 A/m; Power Drift = -0.041 dB
Maximum value of Total (measured) = 0.372 A/m

H Scan - H3DV5 probe center 10mm above CD1880 Dipole/Hearing Aid Compatibility Test (41x181x1): Measurement grid: dx=5mm, dy=5mm
Maximum value of peak Total field = 0.372 A/m
Probe Modulation Factor = 1.00
Reference Value = 0.396 A/m; Power Drift = -0.041 dB
Hearing Aid Near-Field Category: M2 (AWF 0 dB)

Peak H-field in A/m

Grid **0.320**	Grid **0.339**	Grid **0.323**
Grid **0.353**	Grid **0.372**	Grid **0.354**
Grid	Grid	Grid

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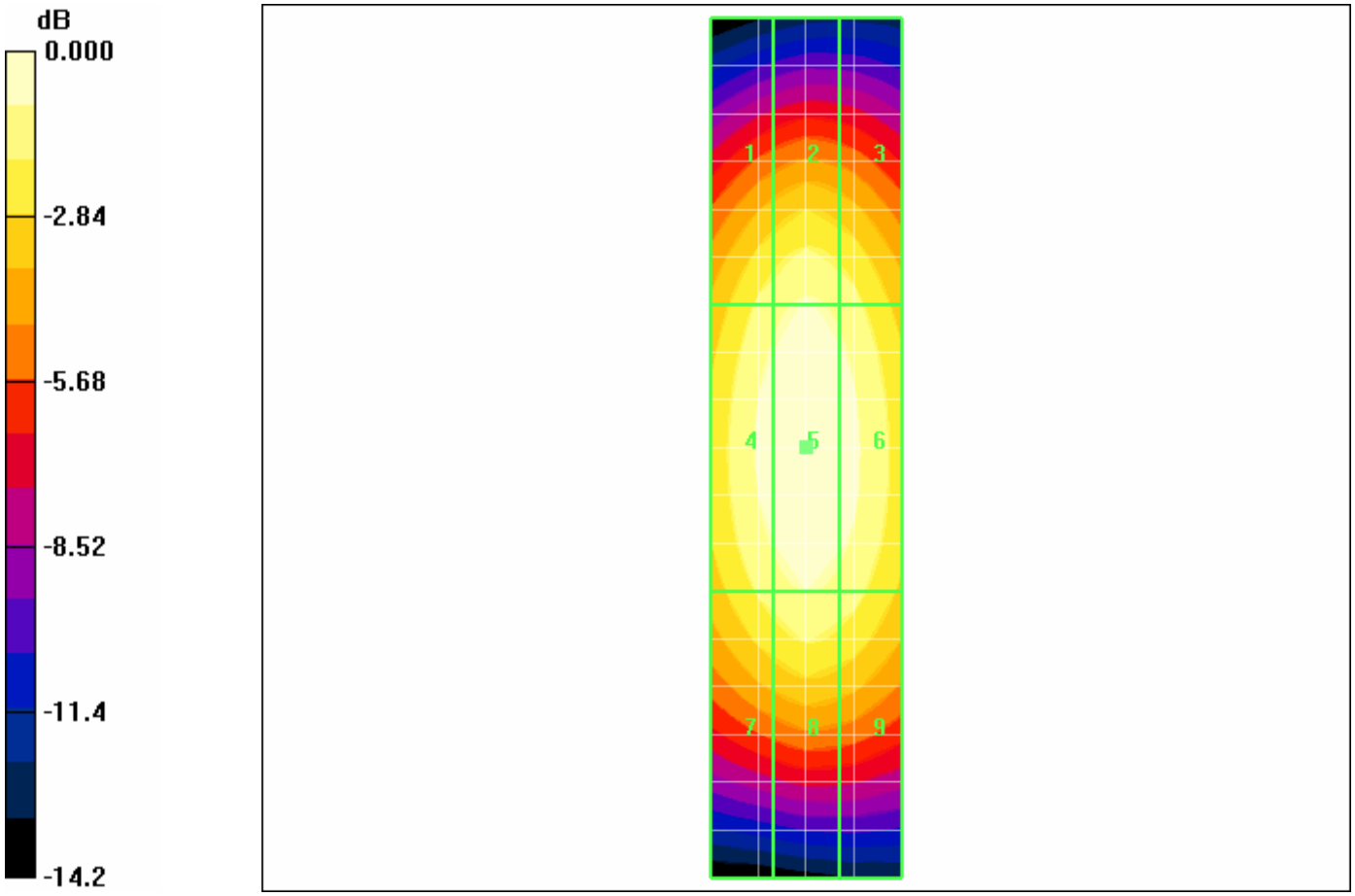

0 dB = 0.372A/m

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Date/Time: 19/12/2007 2:25:14 PM

Test Laboratory: RTS
File Name: HAC_H_CDMA1880MHz_1/8th_18_33dBm.da4

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

Communication System: CDMA 1900; Frequency: 1880 MHz;Duty Cycle: 1:8
Medium parameters used: σ = 0 mho/m, ε_r = 1; ρ = 1 kg/m^3
Phantom section: E Device Section

DASY4 Configuration:
- Probe: H3DV6 - SN6105; ; Calibrated: 09/11/2007
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 07/03/2007
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

H Scan - H3DV5 probe center 10mm above CD1880 Dipole/Hearing Aid Compatibility Test (5x19x1): Measurement grid: dx=5mm, dy=5mm
Probe Modulation Factor = 1.00
Reference Value = 0.158 A/m; Power Drift = -0.026 dB
Maximum value of Total (measured) = 0.155 A/m

H Scan - H3DV5 probe center 10mm above CD1880 Dipole/Hearing Aid Compatibility Test (41x181x1): Measurement grid: dx=5mm, dy=5mm
Maximum value of peak Total field = 0.155 A/m
Probe Modulation Factor = 1.00
Reference Value = 0.158 A/m; Power Drift = -0.026 dB
Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak H-field in A/m

Grid **0.119**	Grid **0.129**	Grid **0.128**
Grid **0.144**	Grid **0.155**	Grid **0.141**
Grid	Grid	Grid

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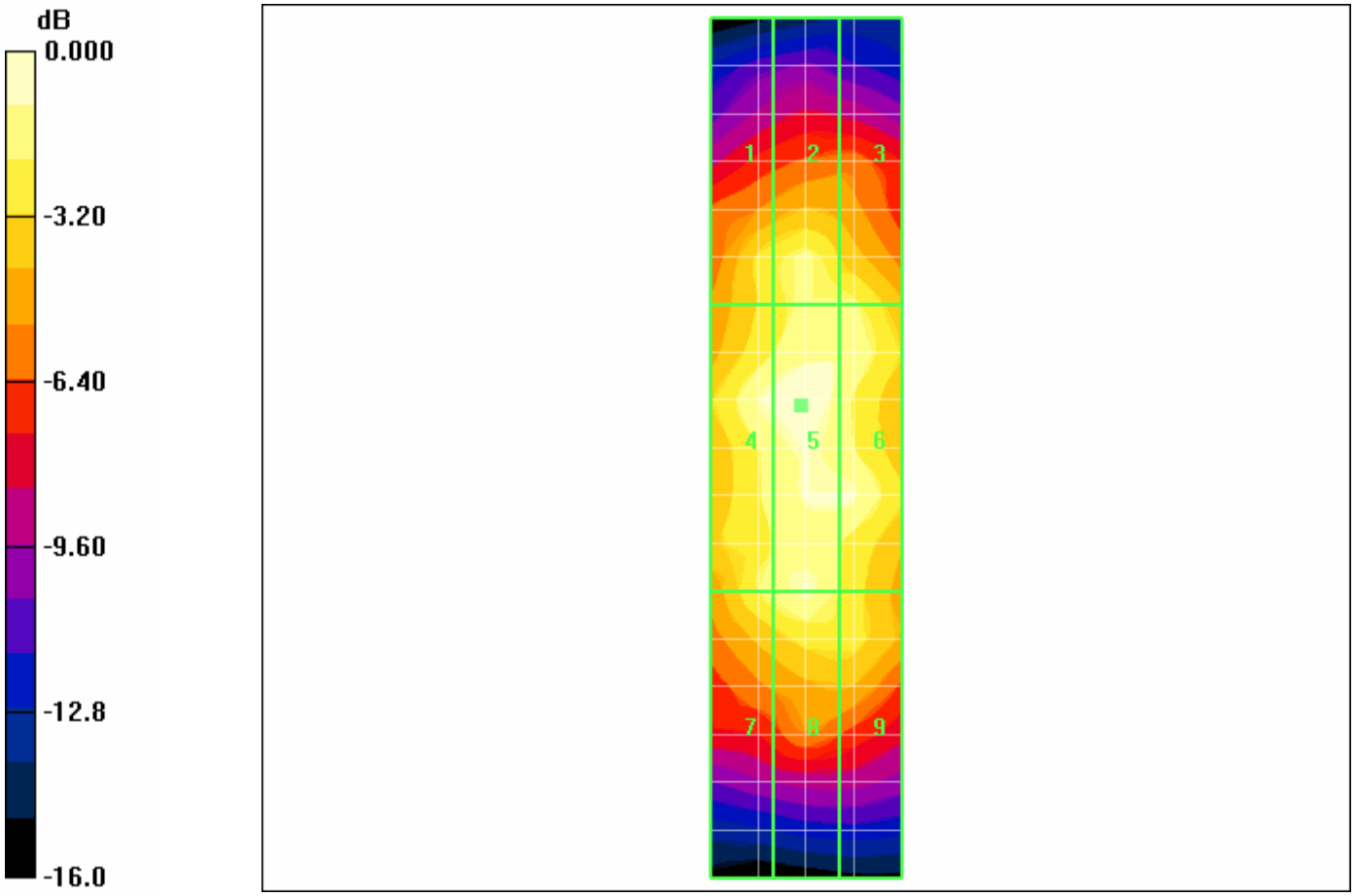

0 dB = 0.155A/m

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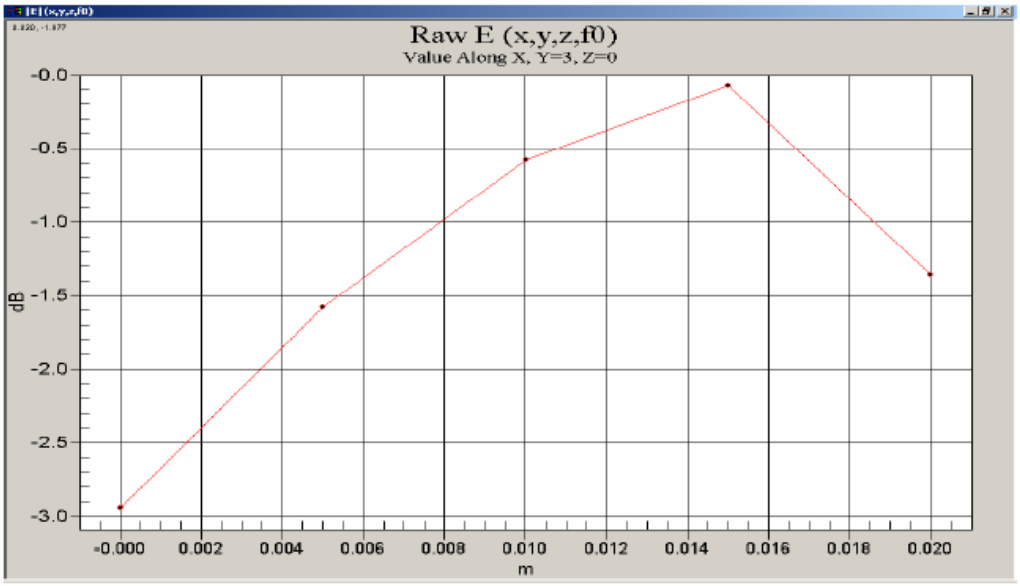
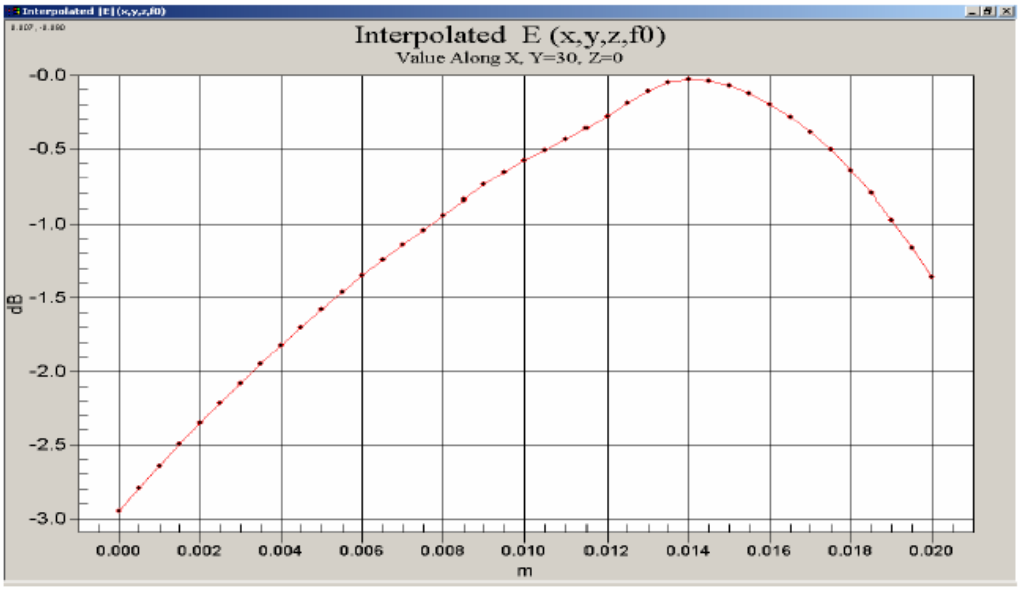
Justification of Step Size and Interpolation

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.

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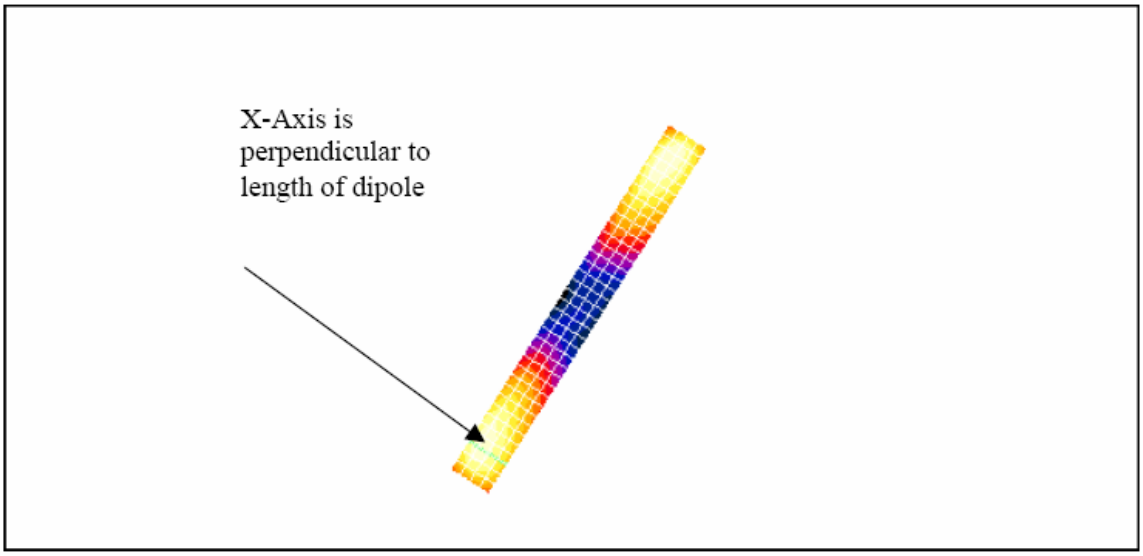

The green line in this figure shows the axis along which the points lie.

Comparison of 5mm and 2mm step sizes

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

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

Lab: RIM Testing Services (RTS)

Dipole Validation 1880 MHz_E-Field 07_14_05

DUT: HAC Dipole 1880 MHz; Type: CD1880V3

Communication System: CW; Frequency: 1880 MHz;Duty Cycle: 1:1
Medium: Air Medium parameters used: σ = 0 mho/m, ε_r = 1; ρ = 1000 kg/m^3
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)

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

E in V/m (Slot averaged)

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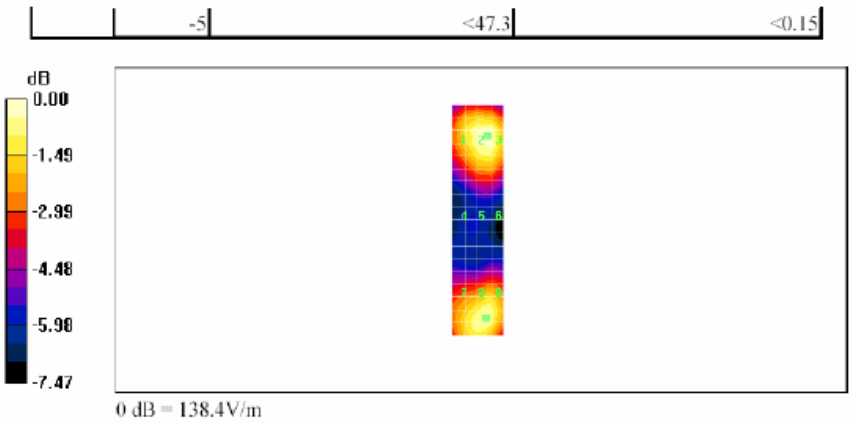

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Date/Time: 14/07/2005 11:44:51 AM

Lab: RIM Testing Services (RTS)

Dipole Validation 1880 MHz_2mm step_E-Field 07_14_05

DUT: HAC Dipole 1880 MHz; Type: CD1880V3

Communication System: CW; Frequency: 1880 MHz;Duty Cycle: 1:1
Medium: Air Medium parameters used: σ = 0 mho/m, ε_r = 1; ρ = 1000 kg/m^3
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)

Grid 1	Grid 2	Grid 3
123.1	**138.6**	**138.6**
Grid 4	Grid 5	Grid 6
81.4	**92.1**	**91.6**
Grid 7	Grid 8	Grid 9
121.3	**131.2**	**131.0**

E in V/m (Slot averaged)

Grid 1	Grid 2	Grid 3
123.1	**138.6**	**138.6**
Grid 4	Grid 5	Grid 6
81.4	**92.1**	**91.6**
Grid 7	Grid 8	Grid 9
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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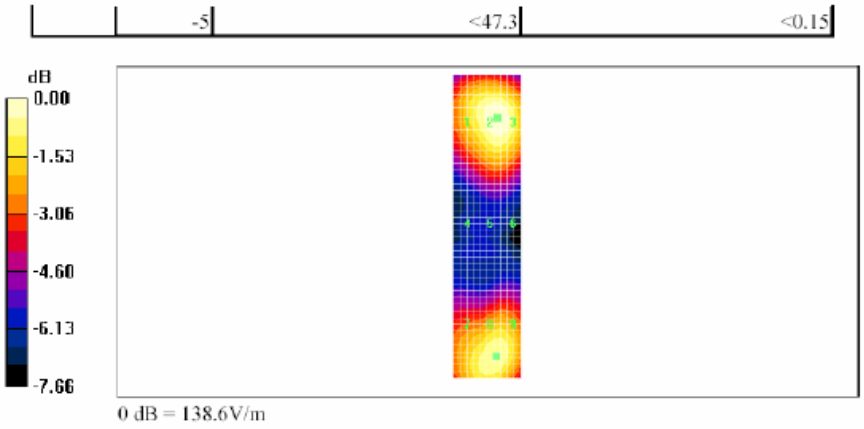
Date/Time: 14/07/2005 11:44:51 AM



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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, $\varepsilon_r = 1$; $\rho = 1$ kg/m^3
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)

Grid 1	Grid 2	Grid 3
0.342	**0.359**	**0.344**
Grid 4	Grid 5	Grid 6
0.389	**0.406**	**0.389**
Grid 7	Grid 8	Grid 9
0.363	**0.378**	**0.363**

H in A/m (Slot averaged)

Grid 1	Grid 2	Grid 3
0.342	**0.359**	**0.344**
Grid 4	Grid 5	Grid 6
0.389	**0.406**	**0.389**
Grid 7	Grid 8	Grid 9
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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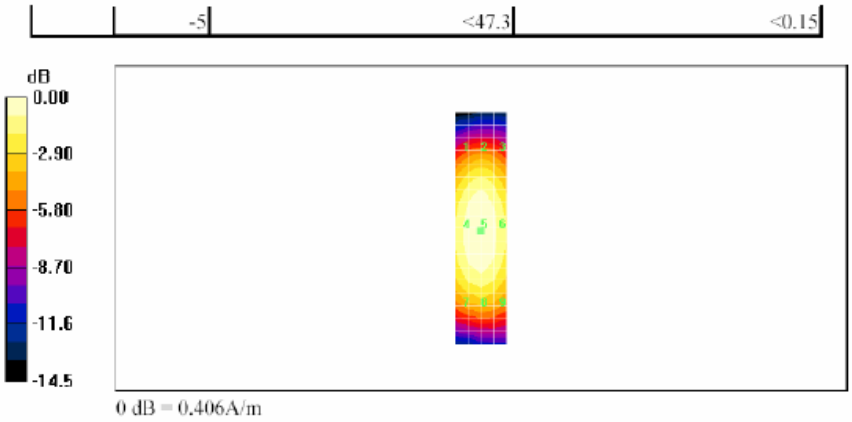

0 dB = 0.406A/m

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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: σ = 0 mho/m, ε_r = 1; ρ = 1 kg/m^3
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)

Grid 1 **0.347**	Grid 2 **0.361**	Grid 3 **0.348**
Grid 4 **0.394**	Grid 5 **0.406**	Grid 6 **0.391**
Grid 7 **0.367**	Grid 8 **0.380**	Grid 9 **0.365**

H in A/m (Slot averaged)

Grid 1 **0.347**	Grid 2 **0.361**	Grid 3 **0.348**
Grid 4 **0.394**	Grid 5 **0.406**	Grid 6 **0.391**
Grid 7 **0.367**	Grid 8 **0.380**	Grid 9 **0.365**

Category	AWF (dB)	Limits for E-Field Emissions (V/m)	Limits for H-Field Emissions (A/m)
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M3	0	63.1 - 112.2	0.19 - 0.34
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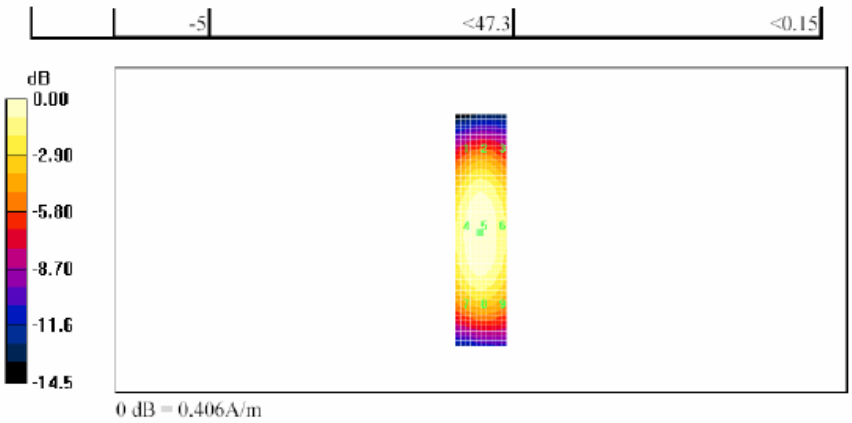

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