APPENDIX C (DIPOLE VALIDATION)

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Test Laboratory: HCT CO., LTD.

Ambient Temperature 21.3 °C

Test Date Jul. 19, 2012

DUT: HAC-Dipole 835 MHz; Type: D835V3

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

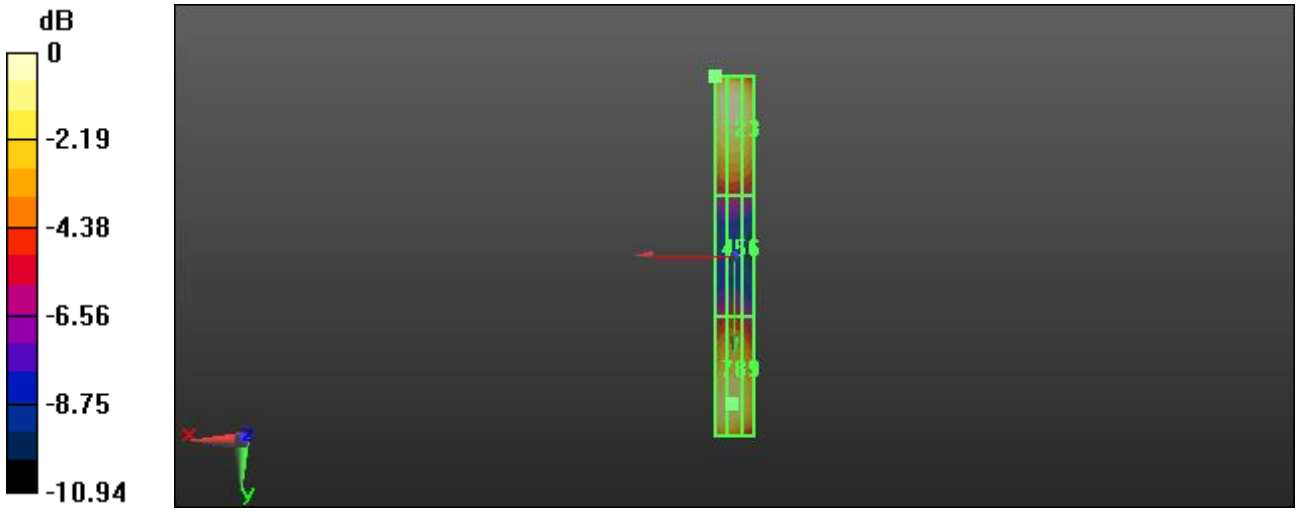
DASY5 Configuration:

- Probe: ER3DV6 - SN2343; ConvF(1, 1, 1); Calibrated: 2012-05-22;
- Sensor-Surface: (Fix Surface)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.6 (6477)

Dipole E-Field measurement (E-field scan for ANSI C63.19-2007 & -2011 compliance)/E Scan - measurement distance from the probe sensor center to CD835 = 10mm/Hearing Aid Compatibility Test at 10mm distance (41x361x1):
Measurement grid: dx=5mm, dy=5mm
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 120.4 V/m; Power Drift = -0.05 dB
PMR not calibrated. PMF = 1.000 is applied.
E-field emissions = 169.3 V/m
Near-field category: M4 (AWF 0 dB)

PMF scaled E-field

Grid 1 **M4** 168.7 V/m	Grid 2 **M4** 169.3 V/m	Grid 3 **M4** 159.3 V/m
Grid 4 **M4** 92.89 V/m	Grid 5 **M4** 93.69 V/m	Grid 6 **M4** 87.22 V/m
Grid 7 **M4** 156.7 V/m	Grid 8 **M4** 157.7 V/m	Grid 9 **M4** 149.9 V/m



0 dB = 169.3 V/m = 44.57 dB V/m

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Test Laboratory: HCT CO., LTD.

Ambient Temperature 21.3 °C

Test Date Jul. 19, 2012

DUT: HAC Dipole 1880 MHz; Type: CD1880V3

Communication System: CW; Frequency: 1800 MHz; Duty Cycle: 1:1
Medium parameters used: σ = 0 mho/m, ε_r = 1; ρ = 0 kg/m^3
Phantom section: RF Section

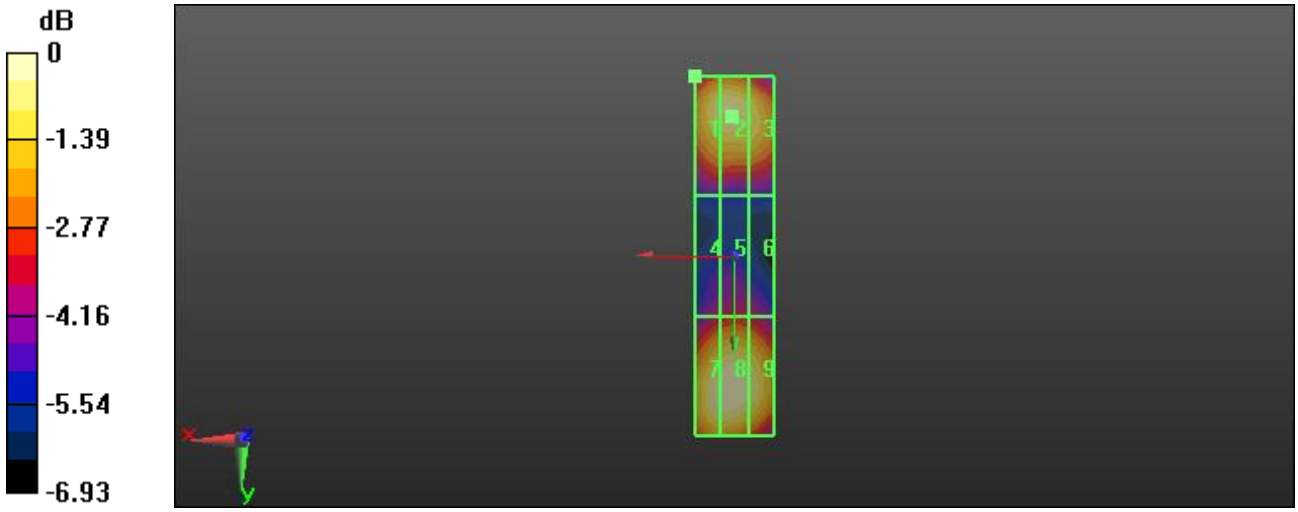
DASY5 Configuration:

- Probe: ER3DV6 - SN2343; ConvF(1, 1, 1); Calibrated: 2012-05-22;
- Sensor-Surface: (Fix Surface)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.6 (6477)

Dipole E-Field measurement (E-field scan for ANSI C63.19-2007 & -2011 compliance)/E Scan - measurement distance from the probe sensor center to CD1880 = 10mm/Hearing Aid Compatibility Test at 10mm distance (41x181x1):
Measurement grid: dx=5mm, dy=5mm
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 140.3 V/m; Power Drift = 0.00 dB
PMR not calibrated. PMF = 1.000 is applied.
E-field emissions = 137.5 V/m
Near-field category: M2 (AWF 0 dB)

PMF scaled E-field

Grid 1 M2 129.2 V/m	Grid 2 M2 131.4 V/m	Grid 3 M2 126.2 V/m
Grid 4 M3 91.12 V/m	Grid 5 M3 93.36 V/m	Grid 6 M3 91.26 V/m
Grid 7 M2 136.1 V/m	Grid 8 M2 137.5 V/m	Grid 9 M2 131.7 V/m



0 dB = 137.5 V/m = 42.77 dB V/m

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Test Laboratory: HCT CO., LTD.

Ambient Temperature 21.3 °C

Test Date Jul. 20, 2012

DUT: HAC-Dipole 835 MHz; Type: D835V3

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

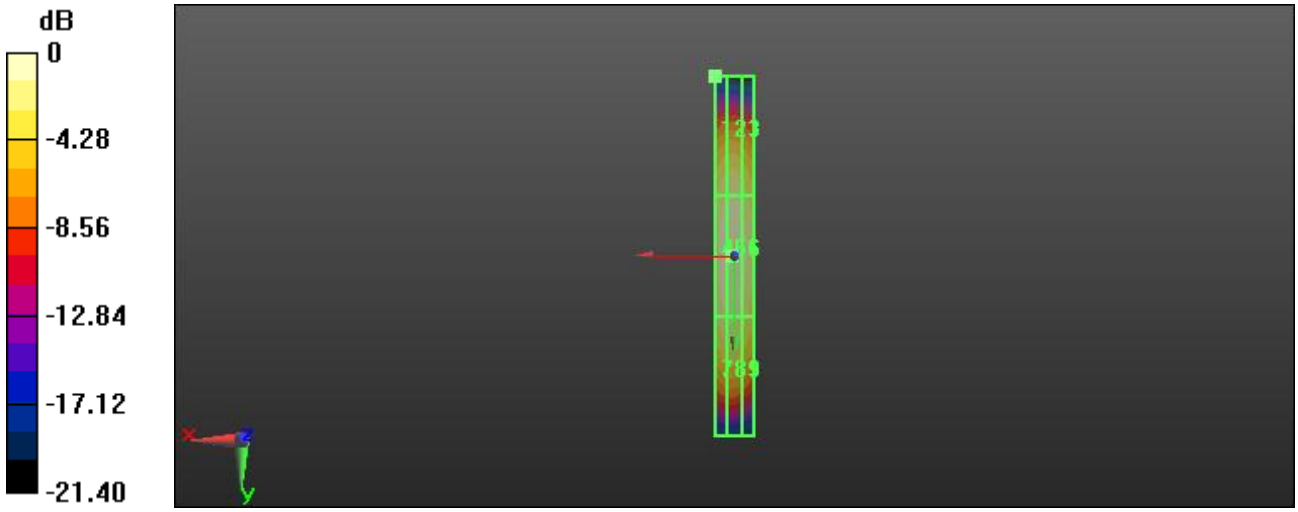
DASY5 Configuration:

- Probe: H3DV6 - SN6101; ; Calibrated: 2012-05-22
- Sensor-Surface: (Fix Surface)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.6 (6477)

Dipole H-Field measurement with H3DV6 probe (H-field scan for ANSI C63.19-2007 compliance)/H Scan - measurement distance from the probe sensor center to CD835 Dipole = 10mm/Hearing Aid Compatibility Test (41x361x1): Measurement grid: dx=5mm, dy=5mm
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 0.5160 A/m; Power Drift = 0.04 dB
PMR not calibrated. PMF = 1.000 is applied.
H-field emissions = 0.4879 A/m
Near-field category: M4 (AWF 0 dB)

PMF scaled H-field

Grid 1 **M4** **0.412 A/m**	Grid 2 **M4** **0.426 A/m**	Grid 3 **M4** **0.394 A/m**
Grid 4 **M4** **0.474 A/m**	Grid 5 **M4** **0.488 A/m**	Grid 6 **M4** **0.452 A/m**
Grid 7 **M4** **0.420 A/m**	Grid 8 **M4** **0.431 A/m**	Grid 9 **M4** **0.394 A/m**



0 dB = 0.4879 A/m = -6.23 dB A/m

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Test Laboratory: HCT CO., LTD.

Ambient Temperature 21.3 °C

Test Date Jul. 20, 2012

DUT: HAC Dipole 1880 MHz; Type: CD1880V3

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

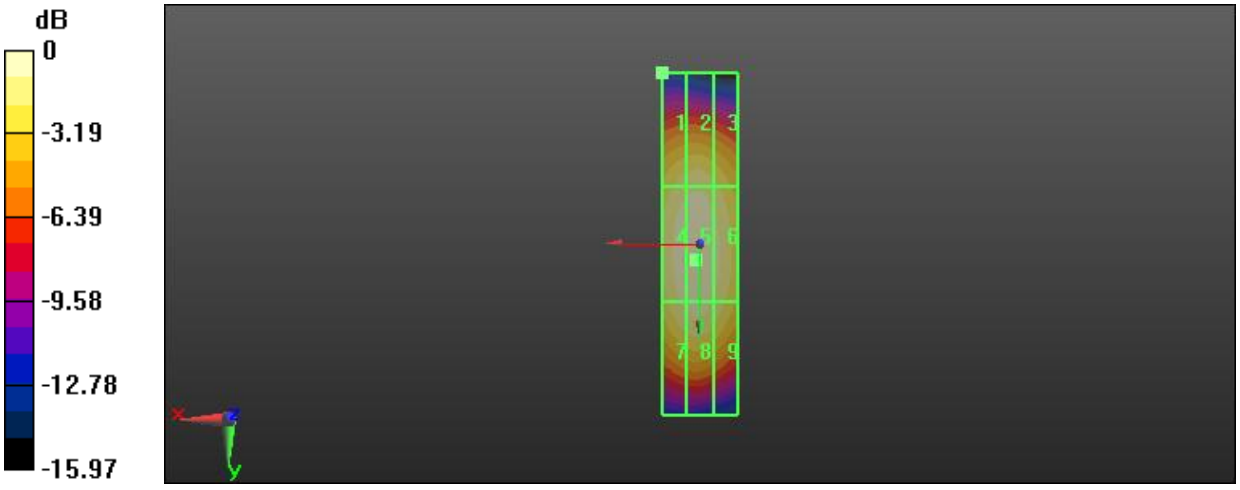
DASY5 Configuration:

- Probe: H3DV6 - SN6101; ; Calibrated: 2012-05-22
- Sensor-Surface: (Fix Surface)
- Electronics: DAE4 Sn648; Calibrated: 2012-04-27
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.6 (6477)

Dipole H-Field measurement with H3DV6 probe (H-field scan for ANSI C63.19-2007 compliance)/H Scan - measurement distance from the probe sensor center to CD1880 Dipole = 10mm/Hearing Aid Compatibility Test (41x181x1): Measurement grid: dx=5mm, dy=5mm
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 0.4760 A/m; Power Drift = -0.00 dB
PMR not calibrated. PMF = 1.000 is applied.
H-field emissions = 0.4527 A/m
Near-field category: M2 (AWF 0 dB)

PMF scaled H-field

Grid 1 M2 0.384 A/m	Grid 2 M2 0.394 A/m	Grid 3 M2 0.368 A/m
Grid 4 M2 0.440 A/m	Grid 5 M2 0.453 A/m	Grid 6 M2 0.421 A/m
Grid 7 M2 0.415 A/m	Grid 8 M2 0.429 A/m	Grid 9 M2 0.395 A/m



0 dB = 0.4527 A/m = -6.88 dB A/m

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