

## APPENDIX A. HAC TEST PLOTS

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Test Laboratory: HCT CO., LTD.

Ambient Temperature / Channel 21.4 °C /128

Test Date Mar. 05, 2014

**DUT: C6530N; Type: Bar; Serial: #1**  
**Procedure Name: E Scan - ER3D: 15 mm from Probe Center to the Device**

Communication System: UID 10021 - CAA, GSM-FDD (TDMA, GMSK); Frequency: 824.2 MHz; Duty Cycle: 1:8.6896

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

Phantom section: RF Section

DASY5 Configuration:

- Probe: ER3DV6 - SN2343; ConvF(1, 1, 1); Calibrated: 2013-03-15;
- Sensor-Surface: (Fix Surface)
- Electronics: DAE4 Sn869; Calibrated: 2013-09-30
- Phantom: HAC Test Arch with AMCC\_2014\_02\_21; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

**Device E-Field measurement (E-field scan for ANSI C63.19-2007 & -2011 compliance)/E Scan - ER3D: 15 mm from Probe Center to the Device/Hearing Aid Compatibility Test (101x101x1):** Interpolated grid: dx=0.5000 mm, dy=0.5000 mm

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 58.10 V/m; Power Drift = -0.04 dB

Applied MIF = 3.63 dB

RF audio interference level = 37.97 dBV/m

**Emission category: M4**

MIF scaled E-field

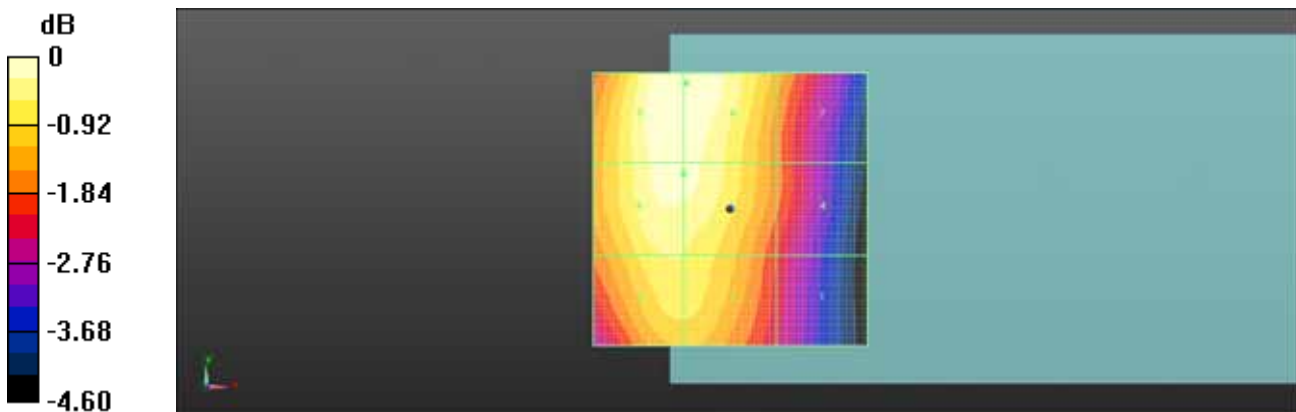
Grid 1 M4 35.86 dBV/m	Grid 2 M4 37.36 dBV/m	Grid 3 M4 37.38 dBV/m
Grid 4 M4 36.31 dBV/m	Grid 5 M4 37.76 dBV/m	Grid 6 M4 37.77 dBV/m
Grid 7 M4 36.64 dBV/m	Grid 8 M4 37.97 dBV/m	Grid 9 M4 37.97 dBV/m

**Cursor:**

Total = 37.97 dBV/m

E Category: M4

Location: -8, 23, 8.7 mm



0 dB = 79.19 V/m = 37.97 dBV/m

Test Laboratory: HCT CO., LTD.  
 Ambient Temperature / Channel 21.4 °C /190  
 Test Date Mar. 05, 2014

**DUT: C6530N; Type: Bar; Serial: #1**  
**Procedure Name: E Scan - ER3D: 15 mm from Probe Center to the Device**

Communication System: UID 10021 - CAA, GSM-FDD (TDMA, GMSK); Frequency: 836.6 MHz; Duty Cycle: 1:8.6896  
 Medium parameters used:  $\sigma = 0$  S/m,  $\epsilon_r = 1$ ;  $\rho = 0$  kg/m<sup>3</sup>  
 Phantom section: RF Section

DASY5 Configuration:

- Probe: ER3DV6 - SN2343; ConvF(1, 1, 1); Calibrated: 2013-03-15;
- Sensor-Surface: (Fix Surface)
- Electronics: DAE4 Sn869; Calibrated: 2013-09-30
- Phantom: HAC Test Arch with AMCC\_2014\_02\_21; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

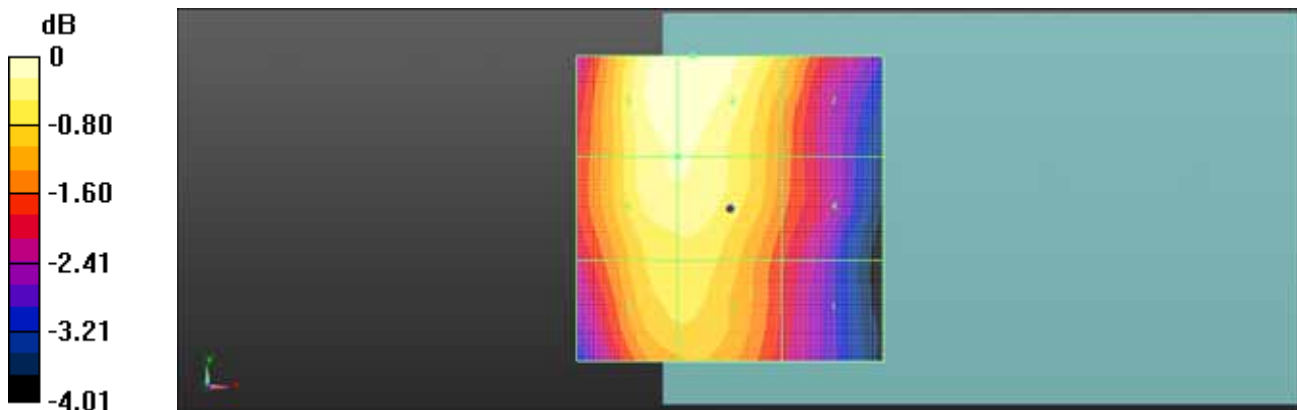
**Device E-Field measurement (E-field scan for ANSI C63.19-2007 & -2011 compliance)/E Scan - ER3D: 15 mm from Probe Center to the Device/Hearing Aid Compatibility Test (101x101x1):** Interpolated grid: dx=0.5000 mm, dy=0.5000 mm  
 Device Reference Point: 0, 0, -6.3 mm  
 Reference Value = 52.62 V/m; Power Drift = -0.05 dB  
 Applied MIF = 3.63 dB  
 RF audio interference level = 36.85 dBV/m  
**Emission category: M4**

MIF scaled E-field

Grid 1 M4 35.04 dBV/m	Grid 2 M4 36.24 dBV/m	Grid 3 M4 36.24 dBV/m
Grid 4 M4 35.45 dBV/m	Grid 5 M4 36.61 dBV/m	Grid 6 M4 36.61 dBV/m
Grid 7 M4 35.94 dBV/m	Grid 8 M4 36.85 dBV/m	Grid 9 M4 36.84 dBV/m

**Cursor:**

Total = 36.85 dBV/m  
 E Category: M4  
 Location: -6, 25, 8.7 mm



0 dB = 69.61 V/m = 36.85 dBV/m

Test Laboratory: HCT CO., LTD.  
 Ambient Temperature / Channel 21.4 °C /251  
 Test Date Mar. 05, 2014

**DUT: C6530N; Type: Bar; Serial: #1**  
**Procedure Name: E Scan - ER3D: 15 mm from Probe Center to the Device**

Communication System: UID 10021 - CAA, GSM-FDD (TDMA, GMSK); Frequency: 848.6 MHz; Duty Cycle: 1:8.6896  
 Medium parameters used:  $\sigma = 0$  S/m,  $\epsilon_r = 1$ ;  $\rho = 0$  kg/m<sup>3</sup>  
 Phantom section: RF Section

DASY5 Configuration:

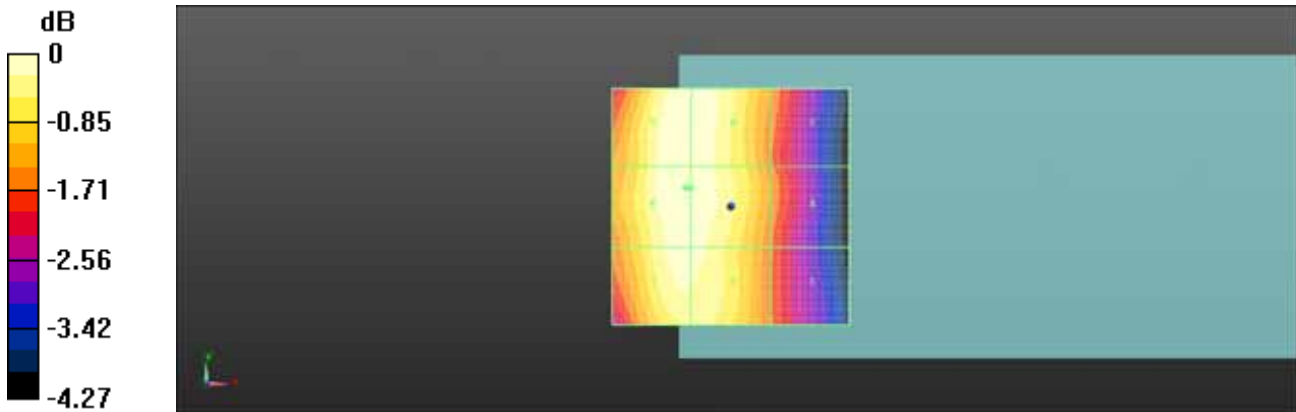
- Probe: ER3DV6 - SN2343; ConvF(1, 1, 1); Calibrated: 2013-03-15;
- Sensor-Surface: (Fix Surface)
- Electronics: DAE4 Sn869; Calibrated: 2013-09-30
- Phantom: HAC Test Arch with AMCC\_2014\_02\_21; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

**Device E-Field measurement (E-field scan for ANSI C63.19-2007 & -2011 compliance)/E Scan - ER3D: 15 mm from Probe Center to the Device/Hearing Aid Compatibility Test (101x101x1):** Interpolated grid: dx=0.5000 mm, dy=0.5000 mm  
 Device Reference Point: 0, 0, -6.3 mm  
 Reference Value = 57.38 V/m; Power Drift = 0.07 dB  
 Applied MIF = 3.63 dB  
 RF audio interference level = 37.51 dBV/m  
**Emission category: M4**

MIF scaled E-field

Grid 1 M4 35.86 dBV/m	Grid 2 M4 37.33 dBV/m	Grid 3 M4 37.33 dBV/m
Grid 4 M4 36.08 dBV/m	Grid 5 M4 37.5 dBV/m	Grid 6 M4 37.51 dBV/m
Grid 7 M4 36.1 dBV/m	Grid 8 M4 37.47 dBV/m	Grid 9 M4 37.47 dBV/m

**Cursor:**  
 Total = 37.51 dBV/m  
 E Category: M4  
 Location: -9.5, 4, 8.7 mm



0 dB = 75.11 V/m = 37.51 dBV/m

Test Laboratory: HCT CO., LTD.  
 Ambient Temperature / Channel 21.4 °C /512  
 Test Date Mar. 05, 2014

**DUT: C6530N; Type: Bar; Serial: #1**  
**Procedure Name: E Scan - ER3D: 15 mm from Probe Center to the Device**

Communication System: UID 10021 - CAA, GSM-FDD (TDMA, GMSK); Frequency: 1850.2 MHz; Duty Cycle: 1:8.6896  
 Medium parameters used:  $\sigma = 0$  S/m,  $\epsilon_r = 1$ ;  $\rho = 0$  kg/m<sup>3</sup>  
 Phantom section: RF Section

DASY5 Configuration:

- Probe: ER3DV6 - SN2343; ConvF(1, 1, 1); Calibrated: 2013-03-15;
- Sensor-Surface: (Fix Surface)
- Electronics: DAE4 Sn869; Calibrated: 2013-09-30
- Phantom: HAC Test Arch with AMCC\_2014\_02\_21; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

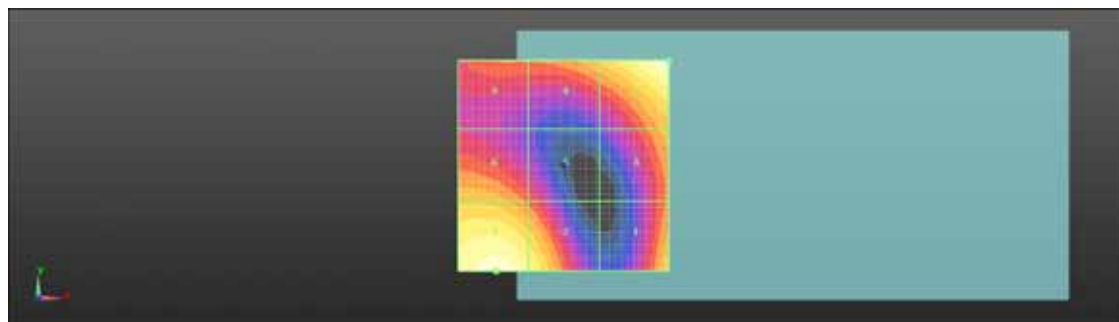
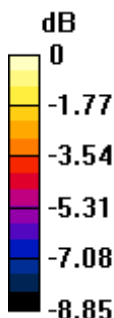
**Device E-Field measurement (E-field scan for ANSI C63.19-2007 & -2011 compliance)/E Scan - ER3D: 15 mm from Probe Center to the Device/Hearing Aid Compatibility Test (101x101x1):** Interpolated grid: dx=0.5000 mm, dy=0.5000 mm  
 Device Reference Point: 0, 0, -6.3 mm  
 Reference Value = 11.20 V/m; Power Drift = 0.10 dB  
 Applied MIF = 3.63 dB  
 RF audio interference level = 32.92 dBV/m  
**Emission category: M3**

MIF scaled E-field

Grid 1 M3 30.95 dBV/m	Grid 2 M3 31.88 dBV/m	Grid 3 M3 32.63 dBV/m
Grid 4 M3 30.38 dBV/m	Grid 5 M4 29.24 dBV/m	Grid 6 M3 30.54 dBV/m
Grid 7 M3 32.92 dBV/m	Grid 8 M3 30.74 dBV/m	Grid 9 M4 29.52 dBV/m

**Cursor:**

Total = 32.92 dBV/m  
 E Category: M3  
 Location: 25, 25, 8.7 mm



0 dB = 44.28 V/m = 32.92 dBV/m

Test Laboratory: HCT CO., LTD.  
 Ambient Temperature / Channel 21.4 °C /661  
 Test Date Mar. 05, 2014

**DUT: C6530N; Type: Bar; Serial: #1**  
**Procedure Name: E Scan - ER3D: 15 mm from Probe Center to the Device**

Communication System: UID 10021-CAA, GSM-FDD (TDMA, GMSK); Frequency: 1880 MHz; Duty Cycle: 1:8.6896  
 Medium parameters used:  $\sigma = 0$  S/m,  $\epsilon_r = 1$ ;  $\rho = 0$  kg/m<sup>3</sup>  
 Phantom section: RF Section

DASY5 Configuration:

- Probe: ER3DV6 - SN2343; ConvF(1, 1, 1); Calibrated: 2013-03-15;
- Sensor-Surface: (Fix Surface)
- Electronics: DAE4 Sn869; Calibrated: 2013-09-30
- Phantom: HAC Test Arch with AMCC\_2014\_02\_21; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

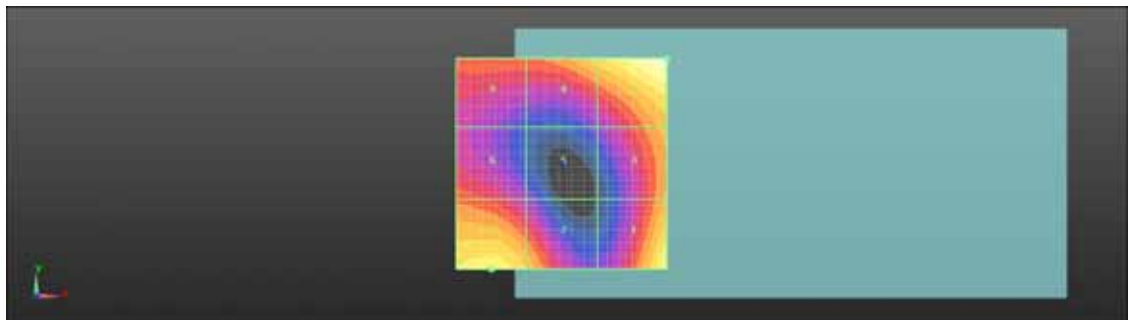
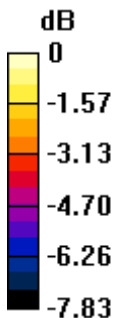
**Device E-Field measurement (E-field scan for ANSI C63.19-2007 & -2011 compliance)/E Scan - ER3D: 15 mm from Probe Center to the Device/Hearing Aid Compatibility Test (101x101x1): Interpolated grid: dx=0.5000 mm, dy=0.5000 mm**  
 Device Reference Point: 0, 0, -6.3 mm  
 Reference Value = 11.30 V/m; Power Drift = -0.12 dB  
 Applied MIF = 3.63 dB  
 RF audio interference level = 32.49 dBV/m  
**Emission category: M3**

MIF scaled E-field

Grid 1 M3 31.66 dBV/m	Grid 2 M3 30.44 dBV/m	Grid 3 M3 31.29 dBV/m
Grid 4 M3 30.18 dBV/m	Grid 5 M4 27.49 dBV/m	Grid 6 M4 29.27 dBV/m
Grid 7 M3 32.49 dBV/m	Grid 8 M3 30.78 dBV/m	Grid 9 M4 29.28 dBV/m

**Cursor:**

Total = 32.49 dBV/m  
 E Category: M3  
 Location: 25, 25, 8.7 mm



0 dB = 42.13 V/m = 32.49 dBV/m

Test Laboratory: HCT CO., LTD.  
 Ambient Temperature / Channel 21.4 °C / 810  
 Test Date Mar. 05, 2014

**DUT: C6530N; Type: Bar; Serial: #1**  
**Procedure Name: E Scan - ER3D: 15 mm from Probe Center to the Device**

Communication System: UID 10021 - CAA, GSM-FDD (TDMA, GMSK); Frequency: 1909.8 MHz; Duty Cycle: 1:8.6896  
 Medium parameters used:  $\sigma = 0$  S/m,  $\epsilon_r = 1$ ;  $\rho = 0$  kg/m<sup>3</sup>  
 Phantom section: RF Section

DASY5 Configuration:

- Probe: ER3DV6 - SN2343; ConvF(1, 1, 1); Calibrated: 2013-03-15;
- Sensor-Surface: (Fix Surface)
- Electronics: DAE4 Sn869; Calibrated: 2013-09-30
- Phantom: HAC Test Arch with AMCC\_2014\_02\_21; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

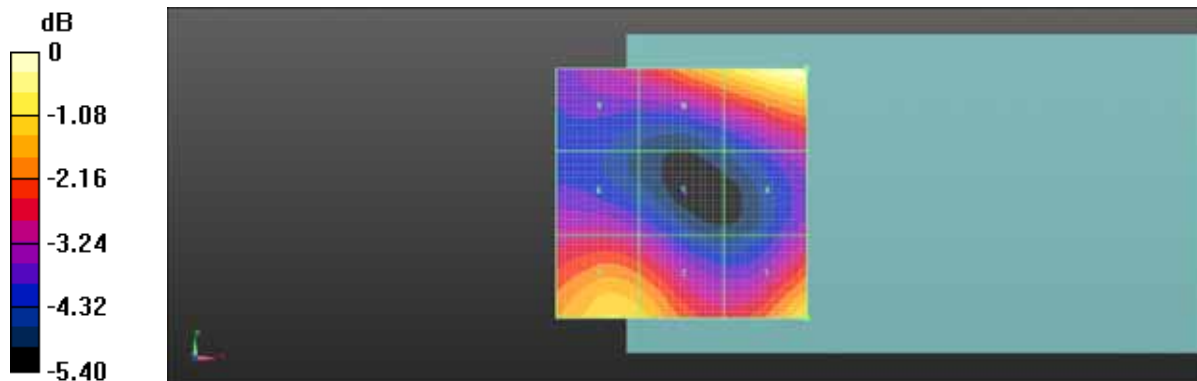
**Device E-Field measurement (E-field scan for ANSI C63.19-2007 & -2011 compliance)/E Scan - ER3D: 15 mm from Probe Center to the Device/Hearing Aid Compatibility Test (101x101x1):** Interpolated grid: dx=0.5000 mm, dy=0.5000 mm  
 Device Reference Point: 0, 0, -6.3 mm  
 Reference Value = 15.86 V/m; Power Drift = -0.18 dB  
 Applied MIF = 3.63 dB  
 RF audio interference level = 32.09 dBV/m  
**Emission category: M3**

MIF scaled E-field

Grid 1 M3 31.14 dBV/m	Grid 2 M3 30.82 dBV/m	Grid 3 M3 31.04 dBV/m
Grid 4 M4 28.9 dBV/m	Grid 5 M4 28.73 dBV/m	Grid 6 M4 29.14 dBV/m
Grid 7 M3 32.09 dBV/m	Grid 8 M3 30.92 dBV/m	Grid 9 M4 29.22 dBV/m

**Cursor:**

Total = 32.09 dBV/m  
 E Category: M3  
 Location: 25, 25, 8.7 mm



0 dB = 40.20 V/m = 32.08 dBV/m