

## **ATTACHMENT B – DIPOLE VALIDATION**

## ■ Validation Data (E-Field CDMA)

Test Laboratory: HCT

**DUT: HAC-Dipole 835 MHz; Type: D835V3**

**Program Name: HAC E Dipole**

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

Medium parameters used:  $\sigma = 0 \text{ mho/m}$ ,  $\epsilon_r = 1$ ;  $\rho = 1000 \text{ kg/m}^3$

Phantom section: H Dipole Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2343; ConvF(1, 1, 1); Calibrated: 2005-04-27

- Sensor-Surface: (Fix Surface)

- Electronics: DAE3 Sn447; Calibrated: 2005-05-27

- Phantom: HAC Test Arch; Type: SD HAC P01 BA

### E Scan 10mm above CD 835 MHz/Hearing Aid Compatibility Test (41x361x1):

Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$

Maximum value of peak Total field = 181.0 V/m

Probe Modulation Factor = 1.00

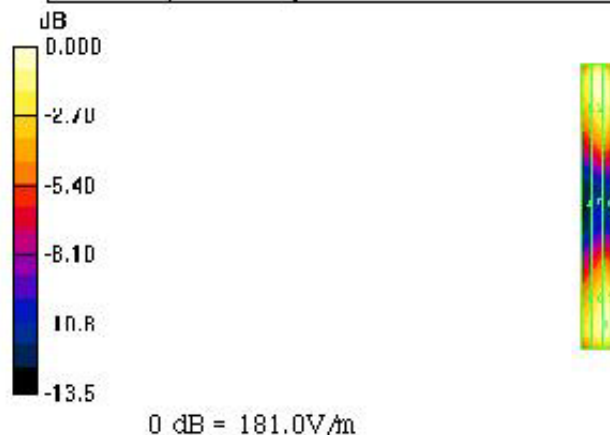
Reference Value = 55.2 V/m; Power Drift = -0.048 dB

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

Peak E-field in V/m

|              |              |              |
|--------------|--------------|--------------|
| Grid 1       | Grid 2       | Grid 3       |
| <b>161.9</b> | <b>181.0</b> | <b>178.7</b> |
| Grid 4       | Grid 5       | Grid 6       |
| <b>74.9</b>  | <b>91.8</b>  | <b>92.5</b>  |
| Grid 7       | Grid 8       | Grid 9       |
| <b>146.8</b> | <b>176.2</b> | <b>178.3</b> |

| 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                              |
|          | -5       | <47.3                              | <0.15                              |



## Validation Data (E-Field PCS)

Test Laboratory: HCT

**DUT: HAC Dipole 1880 MHz; Type: CD1880V3**

**Program Name: HAC 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/m<sup>3</sup>

Phantom section: E Dipole Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2343; ConvF(1, 1, 1); Calibrated: 2005-04-27

- Sensor-Surface: (Fix Surface)

- Electronics: DAE3 Sn447; Calibrated: 2005-05-27

- Phantom: HAC Test Arch; Type: SD HAC P01 BA

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

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

Maximum value of peak Total field = 143.7 V/m

Probe Modulation Factor = 1.00

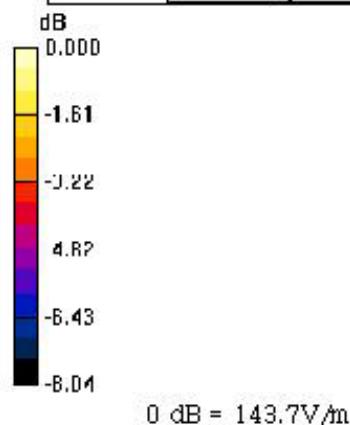
Reference Value = 70.8 V/m; Power Drift = -0.034 dB

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

Peak E-field in V/m

|              |              |              |
|--------------|--------------|--------------|
| Grid 1       | Grid 2       | Grid 3       |
| <b>142.8</b> | <b>143.1</b> | <b>132.1</b> |
| Grid 4       | Grid 5       | Grid 6       |
| <b>88.3</b>  | <b>89.6</b>  | <b>83.5</b>  |
| Grid 7       | Grid 8       | Grid 9       |
| <b>139.8</b> | <b>143.7</b> | <b>135.6</b> |

| 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                              |
|          | -5       | <47.3                              | <0.15                              |



## Validation Data (H-Field CDMA)

Test Laboratory: HCT

**DUT: HA C-Dipole 835 MHz; Type: D835V3**

**Program Name: HAC H Dipole**

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

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

Phantom section: H Dipole Section

DASY4 Configuration:

- Probe: H3DV6 - SN6101; ; Calibrated: 2002-01-07

- Sensor-Surface: (Fix Surface)

- Electronics: DAE3 Sn447; Calibrated: 2005-05-27

- Phantom: HAC Test Arch; Type: SD HAC P01 BA

### H Scan 10mm above CD 835 MHz/Hearing Aid Compatibility Test (41x361x1):

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

Maximum value of peak Total field = 0.459 A/m

Probe Modulation Factor = 1.00

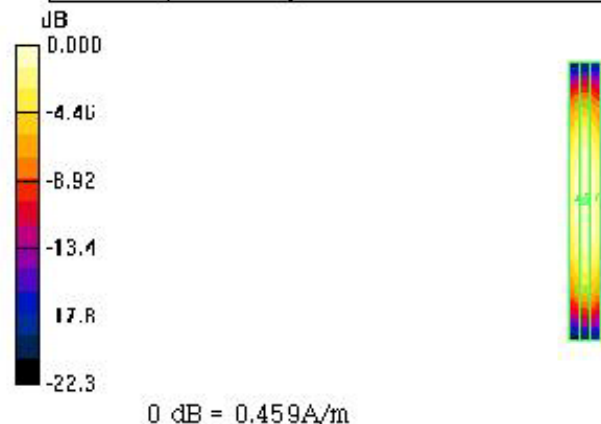
Reference Value = 0.485 A/m; Power Drift = -0.043 dB

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

Peak H-field in A/m

|              |              |              |
|--------------|--------------|--------------|
| Grid 1       | Grid 2       | Grid 3       |
| <b>0.388</b> | <b>0.409</b> | <b>0.388</b> |
| Grid 4       | Grid 5       | Grid 6       |
| <b>0.430</b> | <b>0.459</b> | <b>0.442</b> |
| Grid 7       | Grid 8       | Grid 9       |
| <b>0.372</b> | <b>0.404</b> | <b>0.392</b> |

| 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                              |
|          | -5       | <47.3                              | <0.15                              |



## Validation Data (H-Field PCS)

Test Laboratory: HCT

**DUT: HAC Dipole 1880 MHz; Type: CD1880V3**

**Program Name: HAC H Dipole**

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

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

Phantom section: H Dipole Section

DASY4 Configuration:

- Probe: H3DV6 - SN6101; ; Calibrated: 2002-01-07

- Sensor-Surface: (Fix Surface)

- Electronics: DAE3 Sn447; Calibrated: 2005-05-27

- Phantom: HAC Test Arch; Type: SD HAC P01 BA

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

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

Maximum value of peak Total field = 0.481 A/m

Probe Modulation Factor = 1.00

Reference Value = 0.511 A/m; Power Drift = -0.018 dB

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

Peak H-field in A/m

|              |              |              |
|--------------|--------------|--------------|
| Grid 1       | Grid 2       | Grid 3       |
| <b>0.413</b> | <b>0.443</b> | <b>0.427</b> |
| Grid 4       | Grid 5       | Grid 6       |
| <b>0.450</b> | <b>0.481</b> | <b>0.464</b> |
| Grid 7       | Grid 8       | Grid 9       |
| <b>0.408</b> | <b>0.442</b> | <b>0.427</b> |

| 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                              |
|          | -5       | <47.3                              | <0.15                              |

