

APPENDIX C (DIPOLE VALIDATION)

Test Laboratory: HYUNDAI CALIBRATION & CERTIFICATION TECHNOLOGIES CO., LTD.
 Ambient Temperature 22.7 °C
 Test Date July 3, 2007

DUT: HAC-Dipole 835 MHz; Type: D835V3; Serial:1024
Program Name: HAC 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: E Dipole Section ; Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

DASY4 Configuration:

- Probe: ER3DV6 - SN2343; ConvF(1, 1, 1); Calibrated: 2007-06-25
- Sensor-Surface: (Fix Surface)
- Electronics: DAE4 Sn447; Calibrated: 2007-03-06
- Phantom: HAC Test Arch; Type: SD HAC P01 BA

E Scan 10mm above CD 1880 MHz/Hearing Aid Compatibility Test (41x361x1): Measurement grid: dx=5mm, dy=5mm

Maximum value of peak Total field = 175.8 V/m

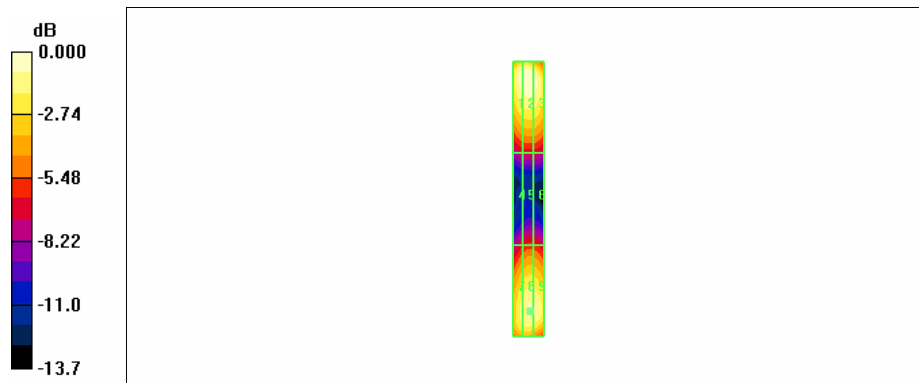
Probe Modulation Factor = 1.00

Reference Value = 121.5 V/m; Power Drift = -0.033 dB

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

Peak E-field in V/m

Grid 1	Grid 2	Grid 3
173.2	175.8	168.4
Grid 4	Grid 5	Grid 6
83.1	88.3	87.3
Grid 7	Grid 8	Grid 9
153.2	161.4	160.4



0 dB = 175.8V/m

Test Laboratory: HYUNDAI CALIBRATION & CERTIFICATION TECHNOLOGIES CO., LTD.
Ambient Temperature 22.7 °C
Test Date July 3, 2007

DUT: HAC Dipole 1880 MHz; **Type:** CD1880V3; **Serial:**1019
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/m³
Phantom section: E Dipole Section ; Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

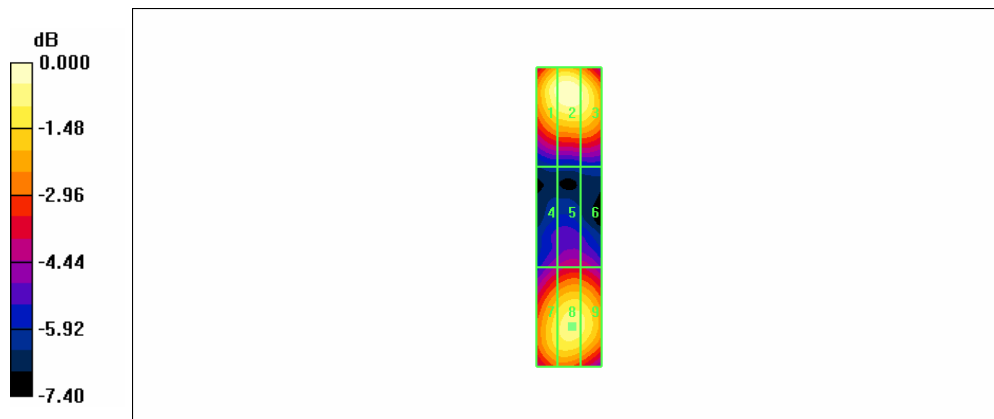
DASY4 Configuration:

- Probe: ER3DV6 - SN2343; ConvF(1, 1, 1); Calibrated: 2007-06-25
- Sensor-Surface: (Fix Surface)
- Electronics: DAE4 Sn447; Calibrated: 2007-03-06
- 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 = 142.7 V/m
Probe Modulation Factor = 1.00
Reference Value = 135.4 V/m; Power Drift = -0.003 dB
Hearing Aid Near-Field Category: M2 (AWF 0 dB)

Peak E-field in V/m

Grid 1	Grid 2	Grid 3
138.3	142.7	136.8
Grid 4	Grid 5	Grid 6
86.7	91.3	90.7
Grid 7	Grid 8	Grid 9
126.1	131.8	130.3



0 dB = 142.7V/m

Test Laboratory: HYUNDAI CALIBRATION & CERTIFICATION TECHNOLOGIES CO., LTD.
 Ambient Temperature 22.7 °C
 Test Date July 3, 2007

DUT: HAC-Dipole 835 MHz; Type: D835V3; Serial:1024
Program Name: HAC H 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: H Dipole Section ; Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

DASY4 Configuration:

- Probe: H3DV6 - SN6101; ; Calibrated: 2006-07-12
- Sensor-Surface: (Fix Surface)
- Electronics: DAE4 Sn447; Calibrated: 2007-03-06
- 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 = 0.474 A/m

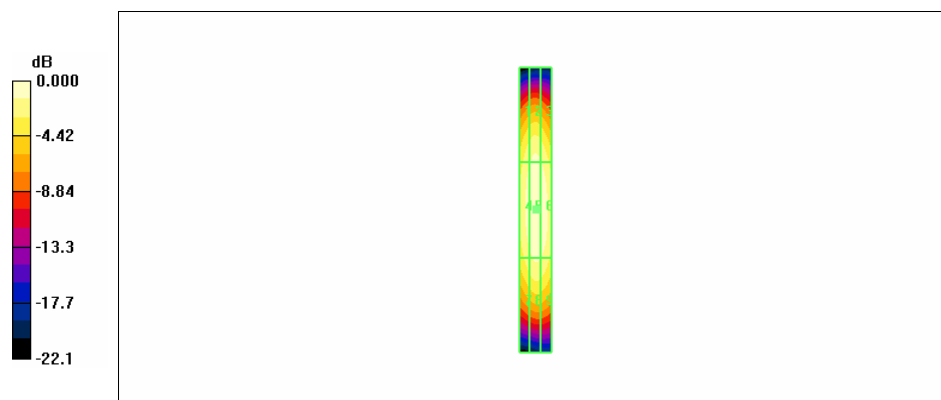
Probe Modulation Factor = 1.00

Reference Value = 0.507 A/m; Power Drift = -0.030 dB

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

Peak H-field in A/m

Grid 1	Grid 2	Grid 3
0.398	0.425	0.405
Grid 4	Grid 5	Grid 6
0.441	0.474	0.456
Grid 7	Grid 8	Grid 9
0.385	0.414	0.401



0 dB = 0.474A/m

Test Laboratory: HYUNDAI CALIBRATION & CERTIFICATION TECHNOLOGIES CO., LTD.
 Ambient Temperature 22.7 °C
 Test Date July 3, 2007

DUT: HAC Dipole 1880 MHz; **Type:** CD1880V3; **Serial:**1019
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/m³
 Phantom section: H Dipole Section ; Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 159

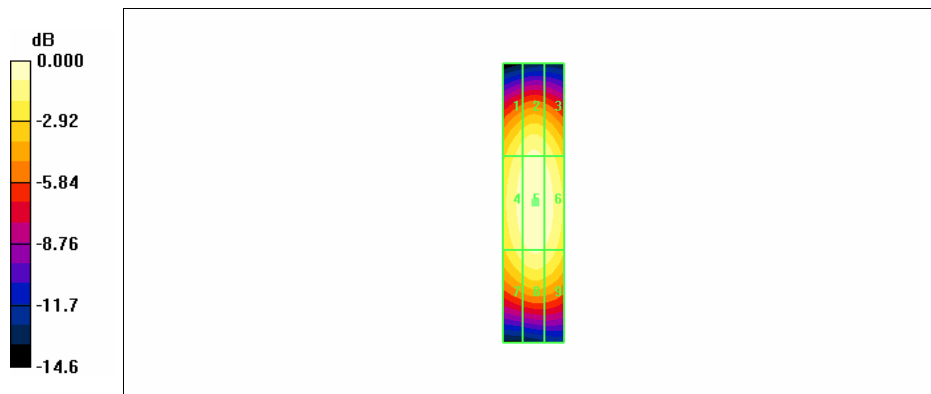
DASY4 Configuration:

- Probe: H3DV6 - SN6101; ; Calibrated: 2006-07-12
- Sensor-Surface: (Fix Surface)
- Electronics: DAE4 Sn447; Calibrated: 2007-03-06
- 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 = 0.435 A/m
 Probe Modulation Factor = 1.00
 Reference Value = 0.460 A/m; Power Drift = 0.019 dB
Hearing Aid Near-Field Category: M2 (AWF 0 dB)

Peak H-field in A/m

Grid 1	Grid 2	Grid 3
0.379	0.403	0.384
Grid 4	Grid 5	Grid 6
0.411	0.435	0.420
Grid 7	Grid 8	Grid 9
0.374	0.398	0.386



0 dB = 0.435A/m