

ATTACHMENT C – PROBE MODULATION FACTOR

■ Probe Modulation Factor (E-Field 835MHz CW)

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: $\sigma = 0$ mho/m, $\epsilon_r = 1$; $\rho = 1000$ kg/m³

Phantom section: E Dipole Section

DASY4 Configuration:

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

- Sensor-Surface: (Fix Surface)

- Electronics: DAE4 Sn614; Calibrated: 2005-04-21

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

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

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

Maximum value of peak Total field = 180.3 V/m

Probe Modulation Factor = 1.00

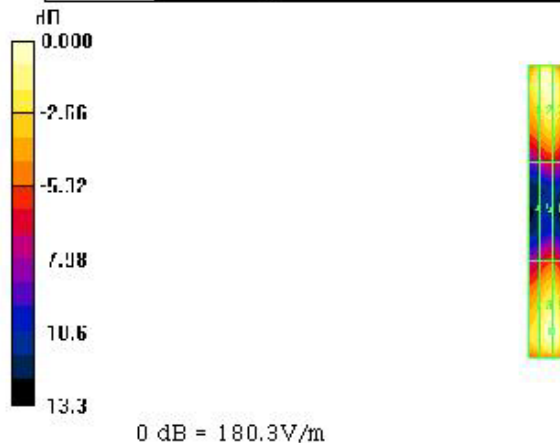
Reference Value = 118.6 V/m; Power Drift = 0.026 dB

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

Peak E-field in V/m

Grid 1	Grid 2	Grid 3
165.9	180.3	173.2
Grid 4	Grid 5	Grid 6
81.4	94.1	94.1
Grid 7	Grid 8	Grid 9
152.4	176.2	176.2

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



■ Probe Modulation Factor (E-Field 835MHz AM80)

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: $\sigma = 0$ mho/m, $\epsilon_r = 1$; $\rho = 1000$ kg/m³
Phantom section: E Dipole Section

DASY4 Configuration:
- Probe: ER3DV6 - SN2343; ConvF(1, 1, 1); Calibrated: 2005-04-27
- Sensor-Surface: (Fix Surface)
- Electronics: DAE4 Sn614; Calibrated: 2005-04-21
- Phantom: HAC Test Arch; Type: SDHAC F01 BA

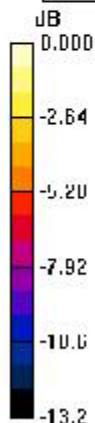
E Scan 10mm above CD 835 MHz/Hearing Aid Compatibility Test (41x361x1):

Measurement grid: dx=5mm, dy=5mm
Maximum value of peak Total field = 131.9 V/m
Probe Modulation Factor = 1.00
Reference Value = 88.0 V/m; Power Drift = -0.018 dB
Hearing Aid Near-Field Category: M2 (AWF 0 dB)

Peak E-field in V/m

Grid 1	Grid 2	Grid 3
118.6	131.9	130.2
Grid 4	Grid 5	Grid 6
61.0	69.5	69.4
Grid 7	Grid 8	Grid 9
111.6	125.3	125.1

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



0 dB = 131.9V/m

■ Probe Modulation Factor (E-Field 835MHz 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: $\sigma = 0$ mho/m, $\epsilon_r = 1$; $\rho = 1000$ kg/m³
Phantom section: E Dipole Section

DASY4 Configuration:
- Probe: ER3DV6 - SN2343; ConvF(1, 1, 1); Calibrated: 2005-04-27
- Sensor-Surface: (Fix Surface)
- Electronics: DAE4 Sn614; Calibrated: 2005-04-21
- Phantom: HAC Test Arch; Type: SD HAC P01 BA

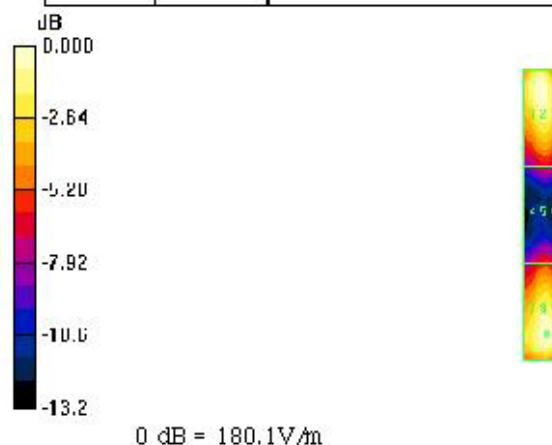
E Scan 10mm above CD 835 MHz/Hearing Aid Compatibility Test (41x361x1):

Measurement grid: dx=5mm, dy=5mm
Maximum value of peak Total field = 180.1 V/m
Probe Modulation Factor = 1.00
Reference Value = 112.2 V/m; Power Drift = 0.186 dB
Hearing Aid Hear-Field Category: M2 (AWF 0 dB)

Peak E-field in V/m

Grid 1	Grid 2	Grid 3
166.3	180.1	172.8
Grid 4	Grid 5	Grid 6
79.8	93.9	94.0
Grid 7	Grid 8	Grid 9
151.6	178.9	179.4

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



■ Probe Modulation Factor (E-Field 1880MHz CW)

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, $\epsilon_r = 1$; $\rho = 1000$ kg/m³
Phantom section: E Dipole Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2343; ConvF(1, 1, 1); Calibrated: 2005-04-27
- Sensor-Surface: (Fix Surface)
- Electronics: DAE4 Sn614; Calibrated: 2005-04-21
- Phantom: HAC Test Arch; Type: SDHAC P01 BA

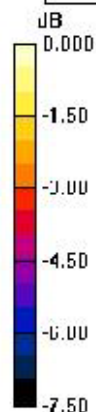
E Scan 10mm above CD 1880 MHz/Hearing Aid Compatibility Test (41x181x1):

Measurement grid: dx=5mm, dy=5mm
Maximum value of peak Total field = 141.7 V/m
Probe Modulation Factor = 1.00
Reference Value = 158.4 V/m; Power Drift = -0.032 dB
Hearing Aid Hear-Field Category: M2 (AWF 0 dB)

Peak E-field in V/m

Grid 1	Grid 2	Grid 3
141.7	141.7	125.0
Grid 4	Grid 5	Grid 6
89.6	89.5	78.8
Grid 7	Grid 8	Grid 9
140.2	140.2	123.8

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



0 dB = 141.7V/m

■ Probe Modulation Factor (E-Field 1880MHz AM80)

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: $\sigma = 0 \text{ mho/m}$, $\epsilon_r = 1$; $\rho = 1000 \text{ kg/m}^3$
Phantom section: E Dipole Section

DASY4 Configuration:
- Probe: ER3DV6 - SN2343; ConvF(1, 1, 1); Calibrated: 2005-04-27
- Sensor-Surface: (Fix Surface)
- Electronics: DAE4 Sn614; Calibrated: 2005-04-21
- Phantom: HAC Test Arch; Type: SD HAC P01 BA

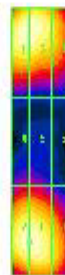
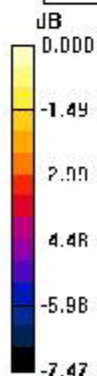
E Scan 10mm above CD 1880 MHz/Hearing Aid Compatibility Test (41x181x1):

Measurement grid: dx=5mm, dy=5mm
Maximum value of peak Total field = 87.7 V/m
Probe Modulation Factor = 1.00
Reference Value = 87.5 V/m; Power Drift = 0.028 dB
Hearing Aid Hear-Field Category: M3 (AWF 0 dB)

Peak E-field in V/m

Grid 1	Grid 2	Grid 3
87.7	87.7	77.7
Grid 4	Grid 5	Grid 6
55.5	55.4	48.8
Grid 7	Grid 8	Grid 9
86.6	86.6	77.1

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



0 dB = 87.7V/m

■ Probe Modulation Factor (E-Field 1880MHz CDMA)

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: $\sigma = 0 \text{ mho/m}$, $\epsilon_r = 1$; $\rho = 1000 \text{ kg/m}^3$
Phantom section: E Dipole Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2343; ConvF(1, 1, 1); Calibrated: 2005-04-27
- Sensor-Surface: (Fix Surface)
- Electronics: DAE4 Sn614; Calibrated: 2005-04-21
- Phantom: HAC Test Arch; Type: SDHAC P01 BA

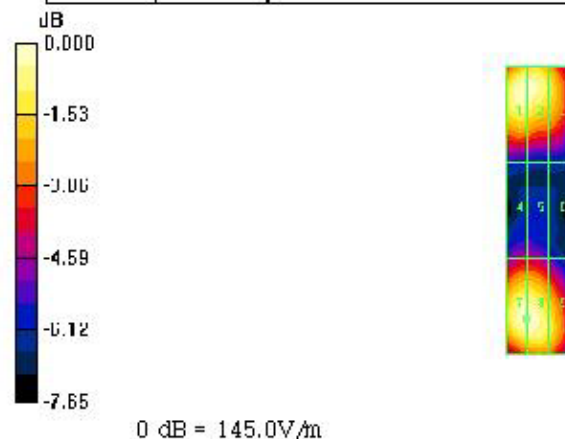
E Scan 10mm above CD 1880 MHz/Hearing Aid Compatibility Test (41x181x1):

Measurement grid: dx=5mm dy=5mm
Maximum value of peak Total field = 145.0 V/m
Probe Modulation Factor = 1.00
Reference Value = 162.2 V/m; Power Drift = -0.014 dB
Hearing Aid Hear-Field Category: M2 (AWF 0 dB)

Peak E-field in V/m

Grid 1	Grid 2	Grid 3
145.0	144.8	126.9
Grid 4	Grid 5	Grid 6
89.7	89.7	79.6
Grid 7	Grid 8	Grid 9
144.6	144.6	126.4

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



■ Probe Modulation Factor (H-Field 835MHz CW)

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: $\sigma = 0$ mho/m, $\epsilon_r = 1$; $\rho = 1$ kg/m³

Phantom section: H Dipole Section

DASY4 Configuration:

- Probe: H3DV6 - SN6101; ; Calibrated: 2005-07-20

- Sensor-Surface: (Fix Surface)

- Electronics: DAE4 Sn614; Calibrated: 2005-04-21

- Phantom: HAC Test Arch; Type: SDHAC 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 = 0.491 A/m

Probe Modulation Factor = 1.00

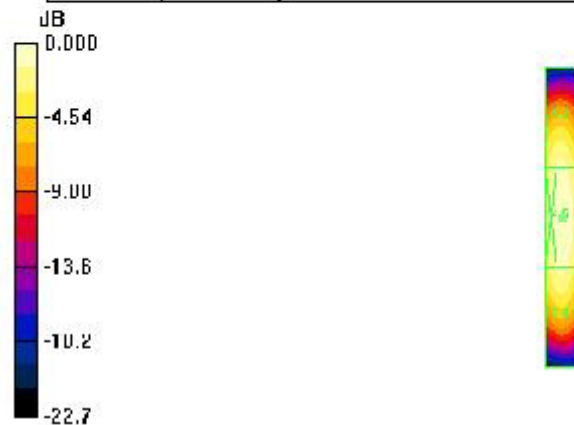
Reference Value = 0.521 A/m; Power Drift = 0.048 dB

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

Peak H-field in A/m

Grid 1	Grid 2	Grid 3
0.418	0.432	0.399
Grid 4	Grid 5	Grid 6
0.473	0.491	0.455
Grid 7	Grid 8	Grid 9
0.416	0.432	0.399

Category	AWF (dB)	Limits for E-Field Emissions (V/m)	Limits for H-Field Emissions (A/m)
M1	0		199.5 - 354.8
	-5		149.6 - 266.1
M2	0		112.2 - 199.5
	-5		84.1 - 149.6
M3	0		63.1 - 112.2
	-5		47.3 - 84.1
M4	0		<63.1
	-5		<47.3



0 dB = 0.491 A/m

■ Probe Modulation Factor (H-Field 835MHz AM80)

Test Laboratory: HCT

DUT: HA C-Dipole 835 MHz; Type: D835V3
Program Name: HAC E Dipole

Communication System: CW; Frequency: 835 MHz; Duty Cycle: 1:1
Medium parameters used: $\sigma = 0$ mho/m, $\epsilon_r = 1$; $\rho = 1$ kg/m³
Phantom section: H Dipole Section

DASY4 Configuration:
- Probe: H3DV6 - SN6101; ; Calibrated: 2005-07-20
- Sensor-Surface: (Fix Surface)
- Electronics: DAE4 Sn614; Calibrated: 2005-04-21
- Phantom: HAC Test Arch; Type: SD HAC P01 BA

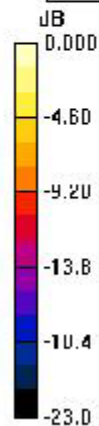
H Scan 10mm above CD 835 MHz/Hearing Aid Compatibility Test (41x361x1):

Measurement grid: dx=5mm, dy=5mm
Maximum value of peak Total field = 0.321 A/m
Probe Modulation Factor = 1.00
Reference Value = 0.344 A/m; Power Drift = -0.085 dB
Hearing Aid Hear-Field Category: M3 (AWF 0 dB)

Peak H-field in A/m

Grid 1	Grid 2	Grid 3
0.273	0.281	0.259
Grid 4	Grid 5	Grid 6
0.308	0.321	0.297
Grid 7	Grid 8	Grid 9
0.270	0.281	0.260

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



0 dB = 0.321 A/m

■ Probe Modulation Factor (H-Field 835MHz CDMA)

Test Laboratory: HCT

DUT: HA C-Dipole 835 MHz; Type: D835V3
Program Name: HAC E Dipole

Communication System: CW; Frequency: 835 MHz; Duty Cycle: 1:1
Medium parameters used: $\sigma = 0 \text{ rho/m}$, $\epsilon_r = 1$; $\rho = 1 \text{ kg/m}^3$
Phantom section: H Dipole Section

DASY4 Configuration:

- Probe: H3DV6 - SN6101; ; Calibrated: 2005-07-20
- Sensor-Surface: (Fix Surface)
- Electronics: DAE4 Sn614; Calibrated: 2005-04-21
- Phantom: HAC Test Arch; Type: SD HAC P01 BA

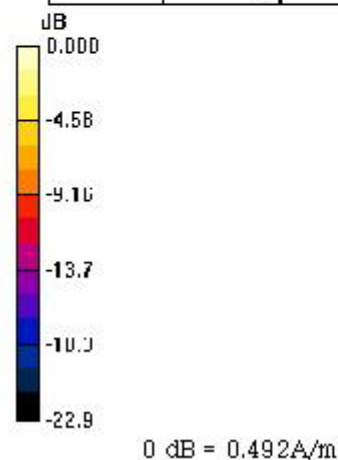
H Scan 10mm above CD 835 MHz/Hearing Aid Compatibility Test (41x361x1):

Measurement grid: $d_x=5\text{mm}$, $d_y=5\text{mm}$
Maximum value of peak Total field = 0.492 A/m
Probe Modulation Factor = 1.00
Reference Value = 0.519 A/m; Power Drift = 0.052 dB
Hearing Aid Hear-Field Category: M2 (AWF 0 dB)

Peak H-field in A/m

Grid 1	Grid 2	Grid 3
0.425	0.436	0.400
Grid 4	Grid 5	Grid 6
0.474	0.492	0.455
Grid 7	Grid 8	Grid 9
0.413	0.430	0.398

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



■ Probe Modulation Factor (H-Field 1880MHz CW)

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: $\sigma = 0$ rho/m, $\epsilon_r = 1$; $\rho = 1$ kg/m³
Phantom section: H Dipole Section

DASY4 Configuration:
- Probe: H3DV6 - SN6101; ; Calibrated: 2005-07-20
- Sensor-Surface: (Fix Surface)
- Electronics: DAE4 Sn614; Calibrated: 2005-04-21
- Phantom: HAC Test Arch; Type: SDHAC F01 BA

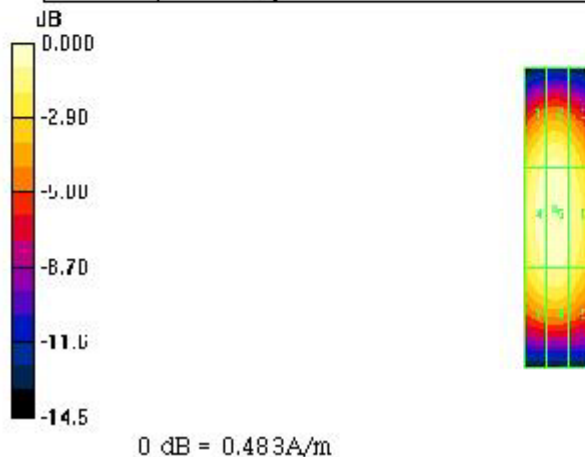
H Scan 10mm above CD 1880 MHz/Hearing Aid Compatibility Test (41x181x1):

Measurement grid: dx=5mm, dy=5mm
Maximum value of peak Total field = 0.488 A/m
Probe Modulation Factor = 1.00
Reference Value = 0.502 A/m; Power Drift = 0.058 dB
Hearing Aid Hear-Field Category: M2 (AWF 0 dB)

Peak H-field in A/m

Grid 1	Grid 2	Grid 3
0.436	0.451	0.410
Grid 4	Grid 5	Grid 6
0.470	0.483	0.445
Grid 7	Grid 8	Grid 9
0.425	0.437	0.405

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



■ Probe Modulation Factor (H-Field 1880MHz AM80)

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/m³

Phantom section: H Dipole Section

DASY4 Configuration:

- Probe: H3DV6 - SN6101; ; Calibrated: 2005-07-20

- Sensor-Surface: (Fix Surface)

- Electronics: DAE4 Sn614; Calibrated: 2005-04-21

- Phantom: HAC Test Arch; Type: SDHAC 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 = 0.316 A/m

Probe Modulation Factor = 1.00

Reference Value = 0.388 A/m; Power Drift = 0.105 dB

Hearing Aid Hear-Field Category: M3 (AWF 0 dB)

Peak H-field in A/m

Grid 1	Grid 2	Grid 3
0.283	0.294	0.265
Grid 4	Grid 5	Grid 6
0.306	0.316	0.288
Grid 7	Grid 8	Grid 9
0.275	0.285	0.261

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



■ Probe Modulation Factor (H-Field 1880MHz CDMA)

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/m³

Phantom section: H Dipole Section

DASY4 Configuration:

- Probe: H3DV6 - SN6101; ; Calibrated: 2005-07-20
- Sensor-Surface: (Fix Surface)
- Electronics: DAE4 Sn614; Calibrated: 2005-04-21
- Phantom: HAC Test Arch; Type: SDHAC 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 = 0.505 A/m

Probe Modulation Factor = 1.00

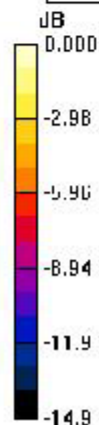
Reference Value = 0.548 A/m; Power Drift = 0.098 dB

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

Peak H-field in A/m

Grid 1	Grid 2	Grid 3
0.452	0.474	0.421
Grid 4	Grid 5	Grid 6
0.488	0.505	0.464
Grid 7	Grid 8	Grid 9
0.439	0.456	0.415

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



0 dB = 0.505 A/m