

Test Laboratory: Compliance Certification Services

### UMTS1700 HAC\_ER\_Device

DUT: Intermecc; Type: CN50; Serial: 328V0800138

Communication System: UMTS Band IV; Frequency: 1712.4 MHz; Duty Cycle: 1:1

Medium parameters used:  $\sigma = 0$  mho/m,  $\epsilon_r = 1$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: RF Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2339; ConvF(1, 1, 1); Calibrated: 2/9/2009
- Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn427; Calibrated: 10/20/2008
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA; Serial: 100x
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

### E Scan - L-ch/Hearing Aid Compatibility Test (101x101x1): Measurement grid: dx=5mm, dy=5mm

Maximum value of peak Total field = 11.7 V/m

Probe Modulation Factor = 0.920

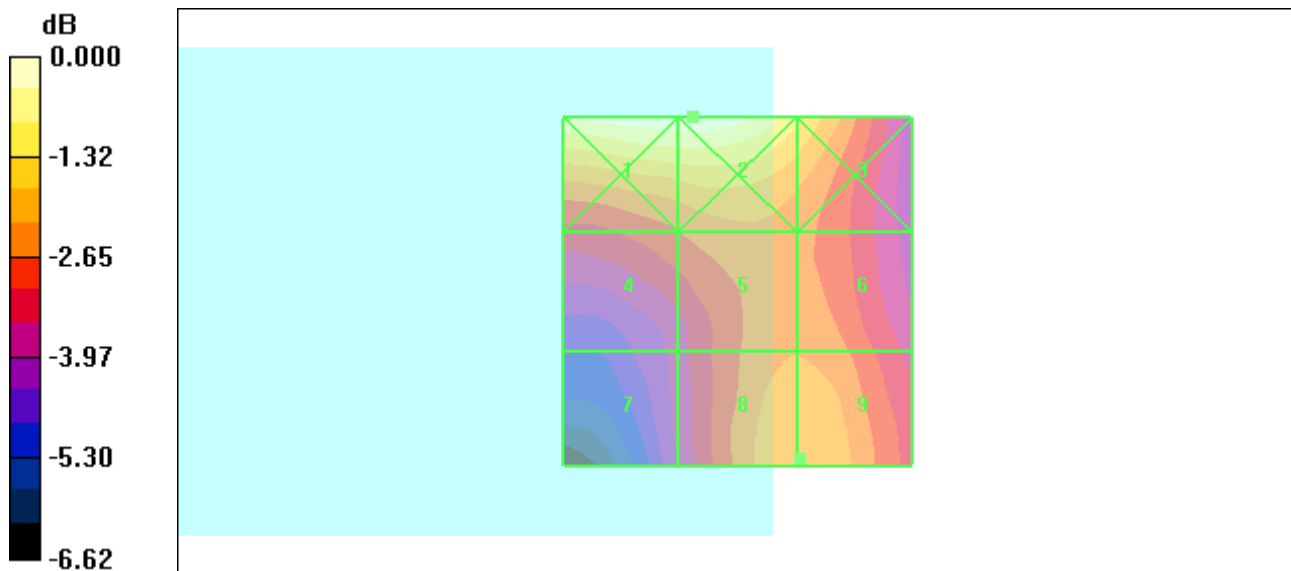
Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 14.0 V/m; Power Drift = 0.149 dB

Hearing Aid Near-Field Category: **M4 (AWF 0 dB)**

Peak E-field in V/m

Grid 1 <b>14.3 M4</b>	Grid 2 <b>14.4 M4</b>	Grid 3 <b>12.6 M4</b>
Grid 4 <b>10.6 M4</b>	Grid 5 <b>11.2 M4</b>	Grid 6 <b>11.2 M4</b>
Grid 7 <b>9.37 M4</b>	Grid 8 <b>11.7 M4</b>	Grid 9 <b>11.7 M4</b>



0 dB = 14.4V/m

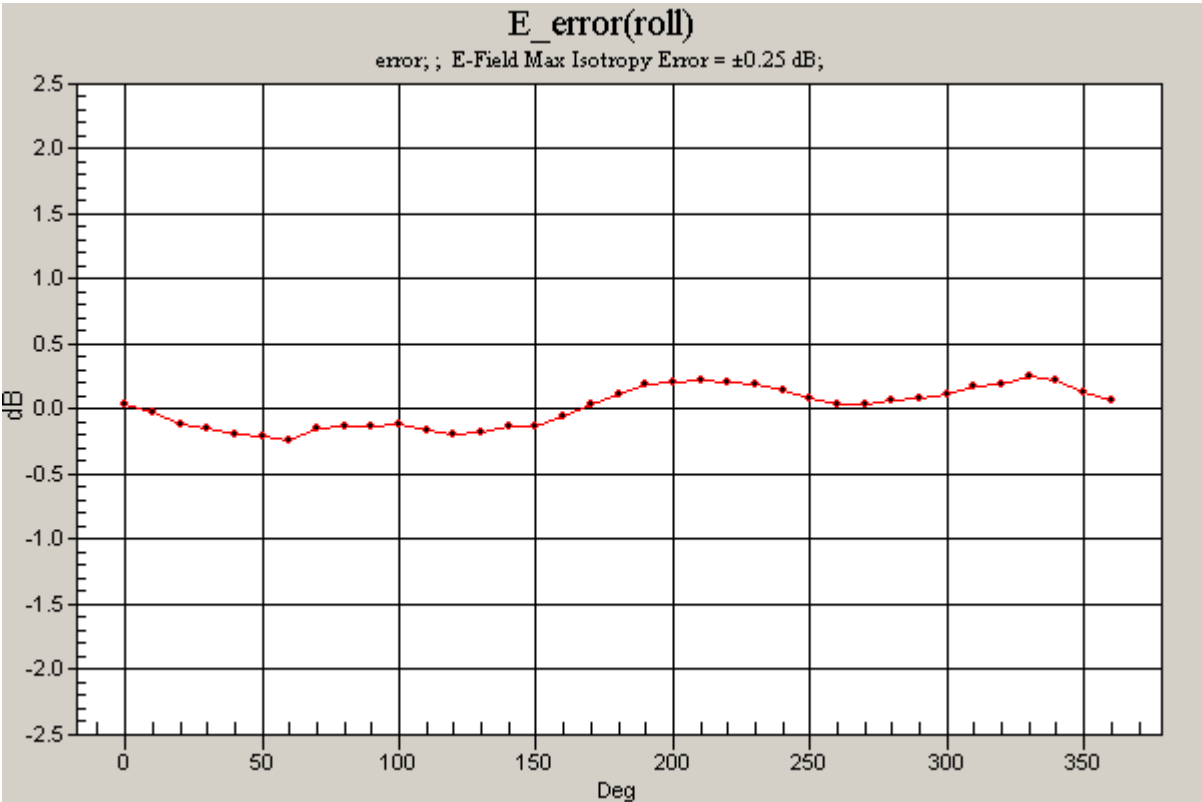
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### UMTS1700 HAC\_ER\_Device

DUT: Intermecc; Type: CN50; Serial: 328V0800138

Communication System: UMTS Band IV; Frequency: 1712.4 MHz; Duty Cycle: 1:1

**E Scan - L-ch/Rotation (1D):** 37 rotation steps; E-Field Max Isotropy Error =  $\pm 0.25$  dB;



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### UMTS1700 HAC\_ER\_Device

DUT: Intermecc; Type: CN50; Serial: 328V0800138

Communication System: UMTS Band IV; Frequency: 1732.4 MHz; Duty Cycle: 1:1

Medium parameters used:  $\sigma = 0$  mho/m,  $\epsilon_r = 1$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: RF Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2339; ConvF(1, 1, 1); Calibrated: 2/9/2009

- Sensor-Surface: (Fix Surface)

- Electronics: DAE3 Sn427; Calibrated: 10/20/2008

- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA; Serial: 100x

- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

### E Scan - M-ch/Hearing Aid Compatibility Test (101x101x1): Measurement grid: dx=5mm, dy=5mm

Maximum value of peak Total field = 14.0 V/m

Probe Modulation Factor = 0.920

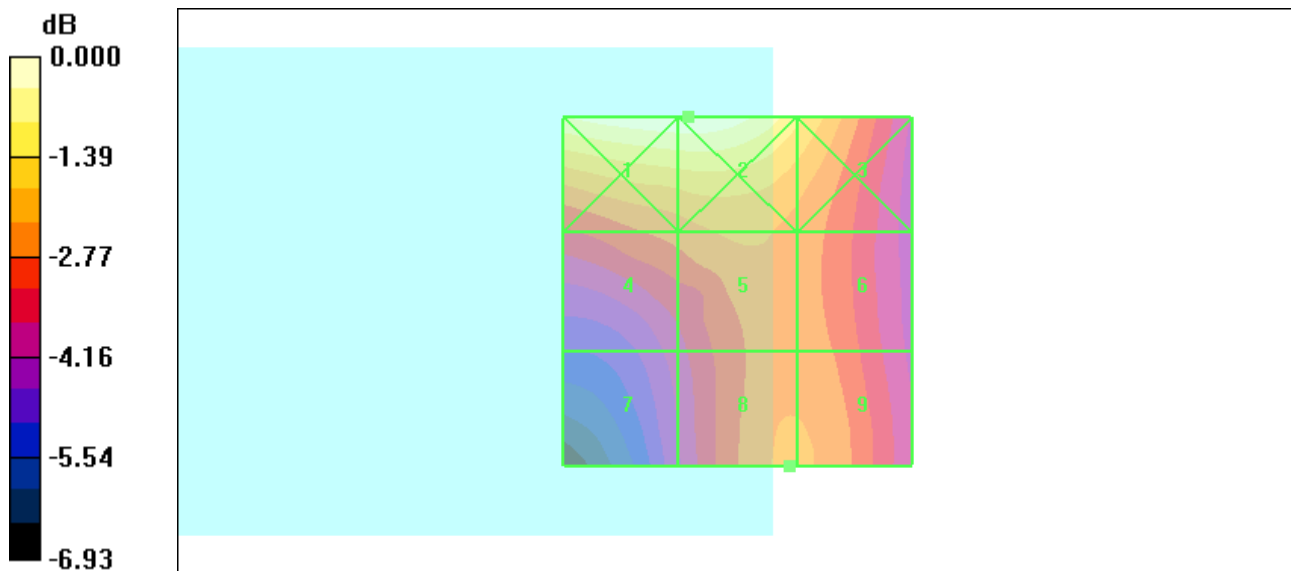
Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 17.8 V/m; Power Drift = 0.149 dB

Hearing Aid Near-Field Category: **M4 (AWF 0 dB)**

Peak E-field in V/m

Grid 1 <b>18.1 M4</b>	Grid 2 <b>18.1 M4</b>	Grid 3 <b>15.7 M4</b>
Grid 4 <b>13.5 M4</b>	Grid 5 <b>14.0 M4</b>	Grid 6 <b>13.6 M4</b>
Grid 7 <b>11.6 M4</b>	Grid 8 <b>14.0 M4</b>	Grid 9 <b>14.0 M4</b>



0 dB = 18.1V/m

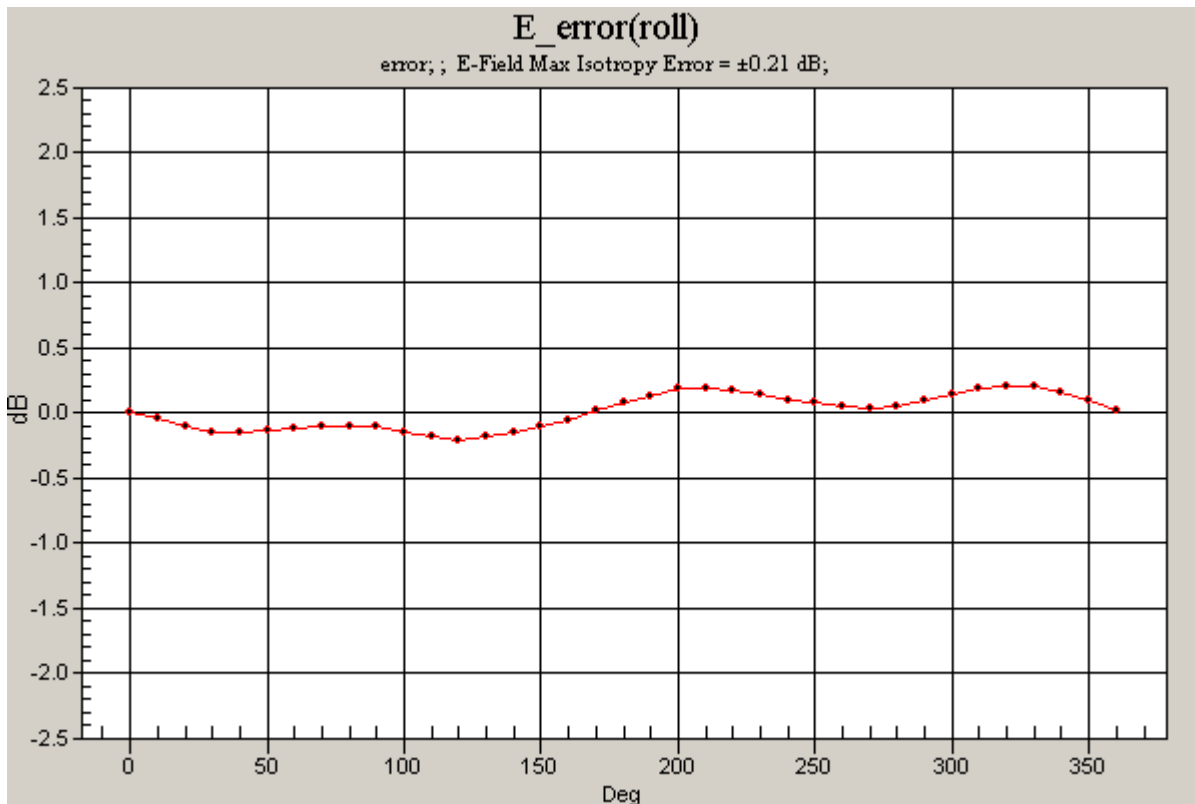
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### UMTS1700 HAC\_ER\_Device

DUT: Intermec; Type: CN50; Serial: 328V0800138

Communication System: UMTS Band IV; Frequency: 1732.4 MHz;Duty Cycle: 1:1

**E Scan - M-ch/Rotation (1D):** 37 rotation steps; E-Field Max Isotropy Error =  $\pm 0.21$  dB;



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### UMTS1700 HAC\_ER\_Device

DUT: Intermecc; Type: CN50; Serial: 328V0800138

Communication System: UMTS Band IV; Frequency: 1754 MHz; Duty Cycle: 1:1

Medium parameters used:  $\sigma = 0$  mho/m,  $\epsilon_r = 1$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: RF Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2339; ConvF(1, 1, 1); Calibrated: 2/9/2009

- Sensor-Surface: (Fix Surface)

- Electronics: DAE3 Sn427; Calibrated: 10/20/2008

- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA; Serial: 100x

- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

### E Scan - H-ch/Hearing Aid Compatibility Test (101x101x1): Measurement grid: dx=5mm, dy=5mm

Maximum value of peak Total field = 15.7 V/m

Probe Modulation Factor = 0.900

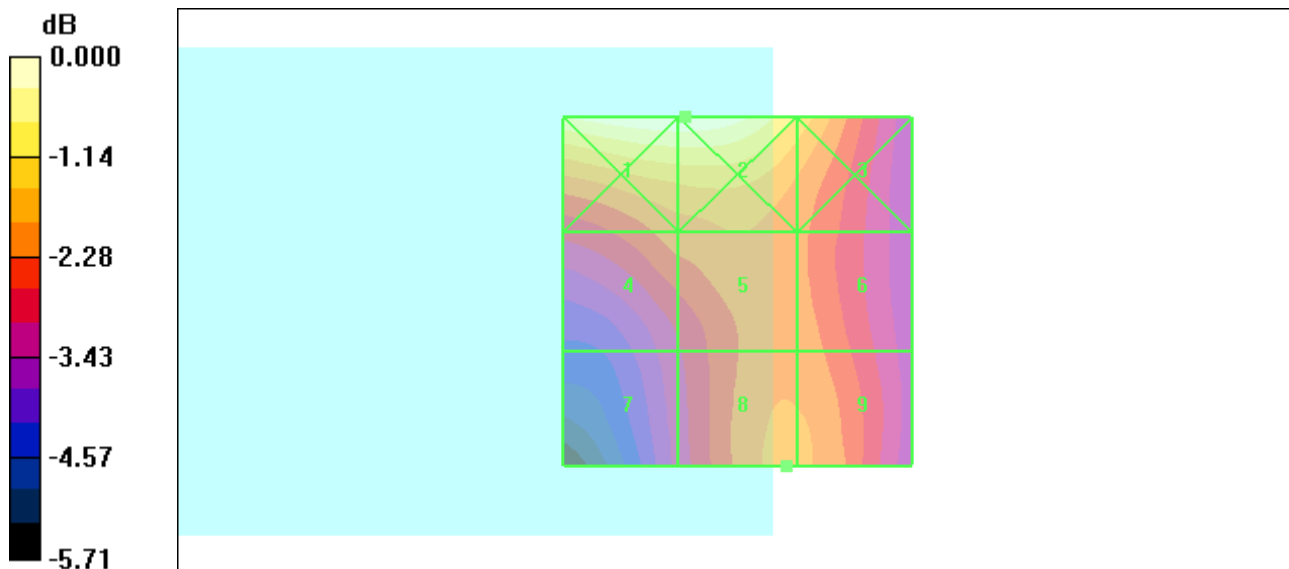
Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 20.5 V/m; Power Drift = -0.043 dB

Hearing Aid Near-Field Category: **M4 (AWF 0 dB)**

Peak E-field in V/m

Grid 1 <b>19.3 M4</b>	Grid 2 <b>19.3 M4</b>	Grid 3 <b>16.9 M4</b>
Grid 4 <b>15.2 M4</b>	Grid 5 <b>15.5 M4</b>	Grid 6 <b>15.2 M4</b>
Grid 7 <b>13.5 M4</b>	Grid 8 <b>15.7 M4</b>	Grid 9 <b>15.7 M4</b>



0 dB = 19.3V/m

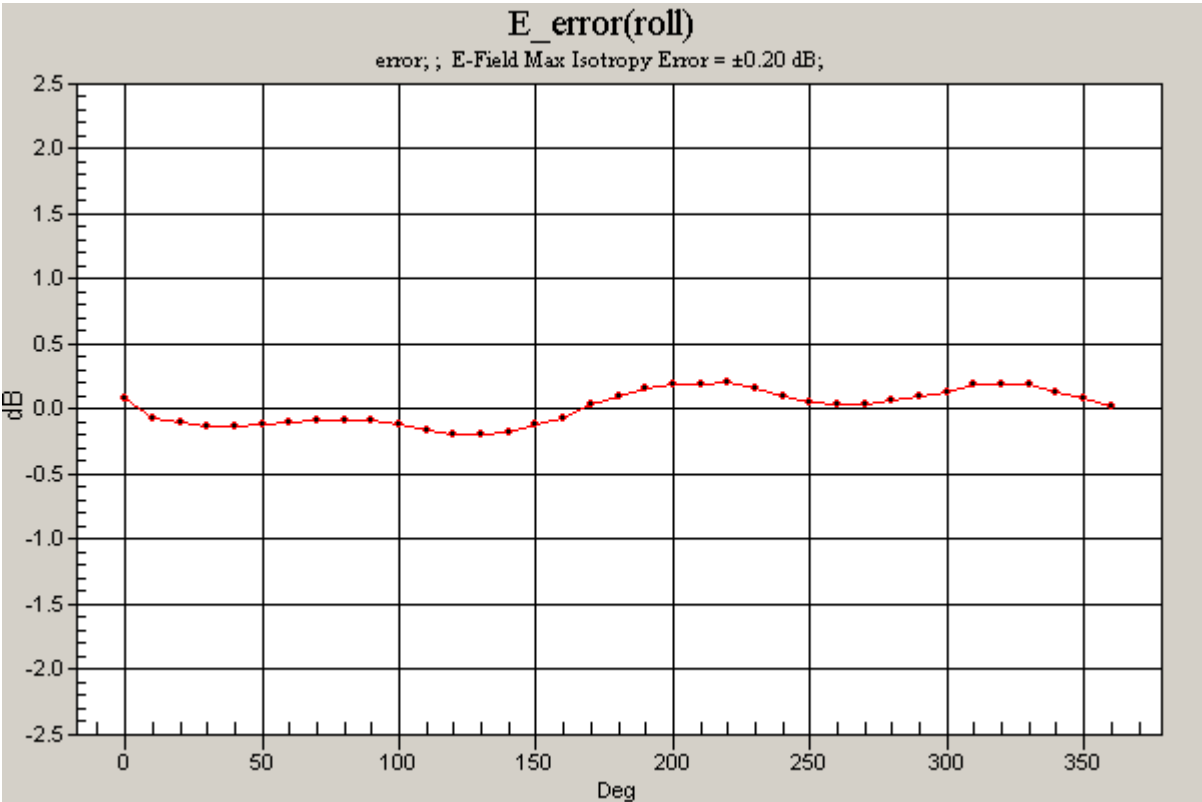
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# UMTS1700 HAC\_ER\_Device

DUT: Intermec; Type: CN50; Serial: 328V0800138

Communication System: UMTS Band IV; Frequency: 1754 MHz;Duty Cycle: 1:1

**E Scan - H-ch/Rotation (1D):** 37 rotation steps; E-Field Max Isotropy Error =  $\pm 0.20$  dB;



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### UMTS1700 HAC\_H3DV6\_Device

DUT: Intermecc; Type: CN50; Serial: 328V0800138

Communication System: UMTS Band IV; Frequency: 1712.4 MHz; Duty Cycle: 1:1

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

Phantom section: RF Section

DASY4 Configuration:

- Probe: H3DV6 - SN6157; ; Calibrated: 2/10/2009
- Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn427; Calibrated: 10/20/2008
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA; Serial: 100x
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

### H Scan - L-ch/Hearing Aid Compatibility Test (101x101x1): Measurement grid: dx=5mm, dy=5mm

Maximum value of peak Total field = 0.032 A/m

Probe Modulation Factor = 0.900

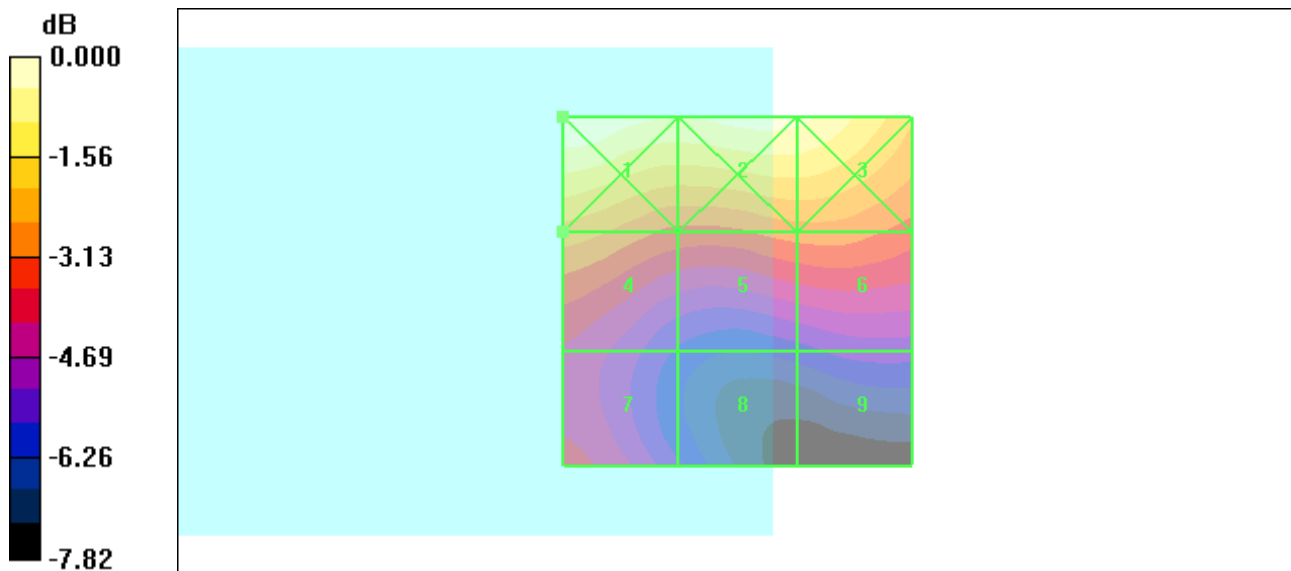
Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.030 A/m; Power Drift = 0.043 dB

**Hearing Aid Near-Field Category: M4 (AWF 0 dB)**

Peak H-field in A/m

Grid 1 <b>0.042 M4</b>	Grid 2 <b>0.041 M4</b>	Grid 3 <b>0.040 M4</b>
Grid 4 <b>0.032 M4</b>	Grid 5 <b>0.030 M4</b>	Grid 6 <b>0.030 M4</b>
Grid 7 <b>0.027 M4</b>	Grid 8 <b>0.022 M4</b>	Grid 9 <b>0.022 M4</b>



0 dB = 0.042A/m

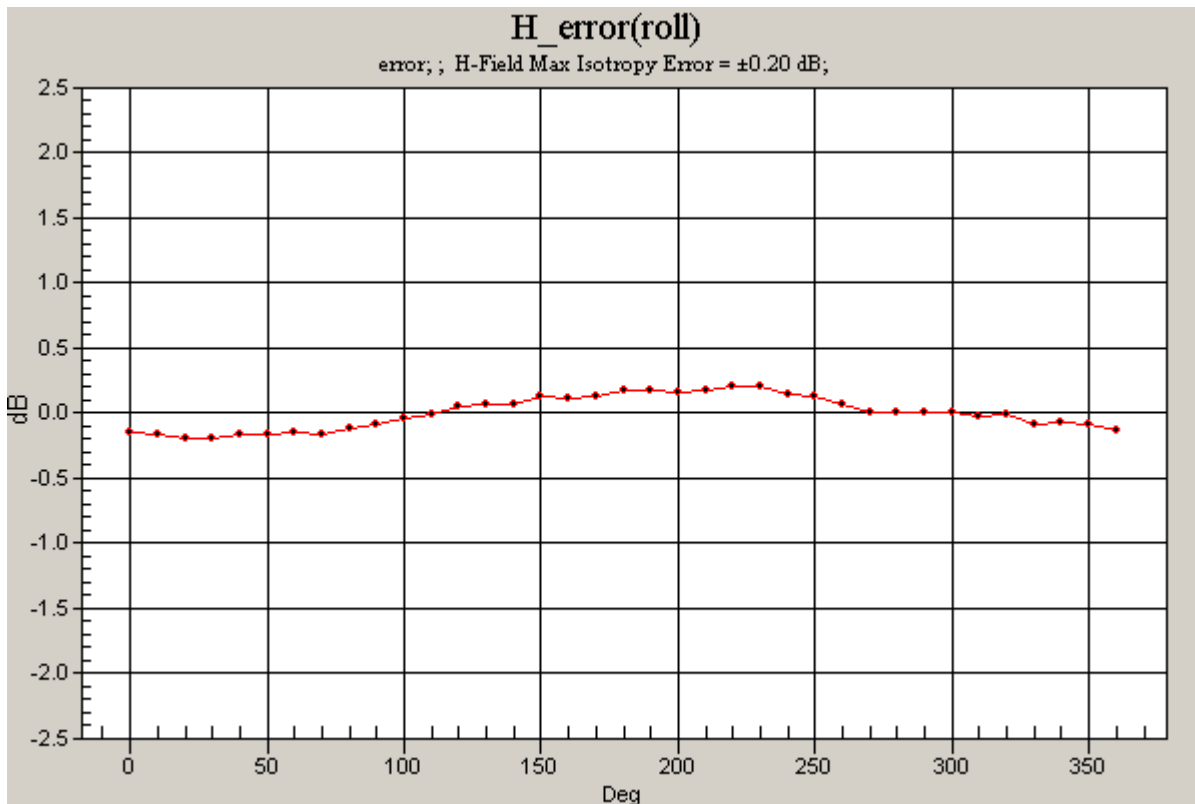
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### UMTS1700 HAC\_H3DV6\_Device

DUT: Intermec; Type: CN50; Serial: 328V0800138

Communication System: UMTS Band IV; Frequency: 1712.4 MHz; Duty Cycle: 1:1

**H Scan - L-ch/Rotation (1D):** 37 rotation steps; H-Field Max Isotropy Error =  $\pm 0.20$  dB;





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### UMTS1700 HAC\_H3DV6\_Device

DUT: Intermecc; Type: CN50; Serial: 328V0800138

Communication System: UMTS Band IV; Frequency: 1732.4 MHz; Duty Cycle: 1:1

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

Phantom section: RF Section

DASY4 Configuration:

- Probe: H3DV6 - SN6157; ; Calibrated: 2/10/2009

- Sensor-Surface: (Fix Surface)

- Electronics: DAE3 Sn427; Calibrated: 10/20/2008

- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA; Serial: 100x

- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

### H Scan - M-ch/Hearing Aid Compatibility Test (101x101x1): Measurement grid: dx=5mm, dy=5mm

Maximum value of peak Total field = 0.039 A/m

Probe Modulation Factor = 0.900

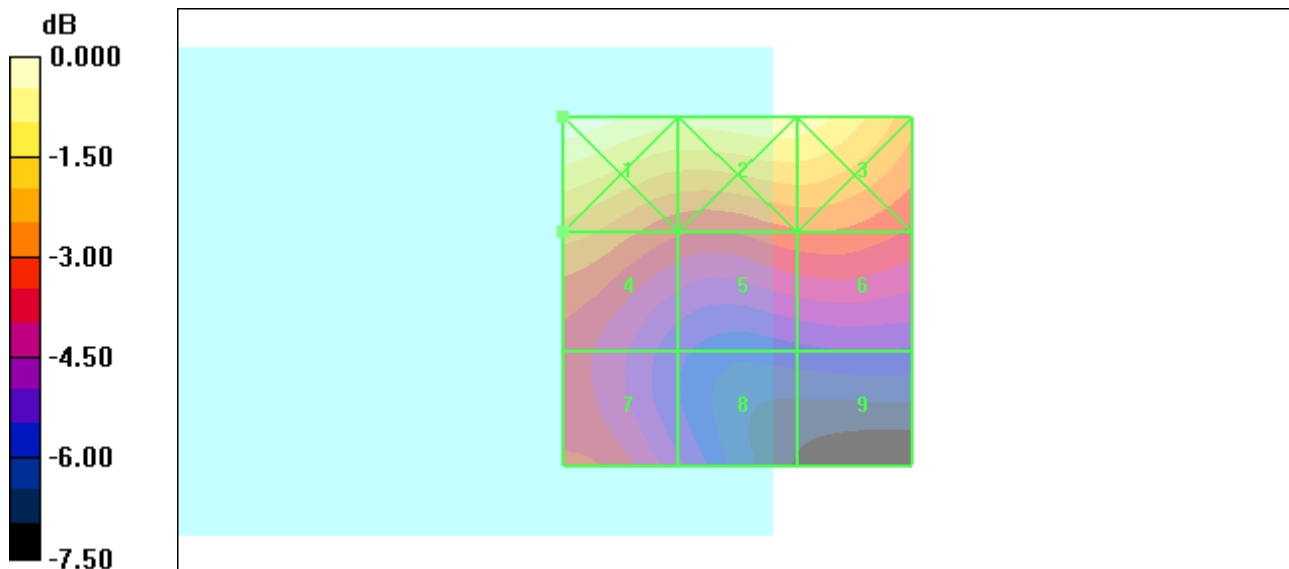
Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.037 A/m; Power Drift = 0.144 dB

Hearing Aid Near-Field Category: **M4 (AWF 0 dB)**

Peak H-field in A/m

Grid 1 <b>0.050 M4</b>	Grid 2 <b>0.047 M4</b>	Grid 3 <b>0.046 M4</b>
Grid 4 <b>0.039 M4</b>	Grid 5 <b>0.035 M4</b>	Grid 6 <b>0.035 M4</b>
Grid 7 <b>0.035 M4</b>	Grid 8 <b>0.029 M4</b>	Grid 9 <b>0.027 M4</b>



0 dB = 0.050A/m

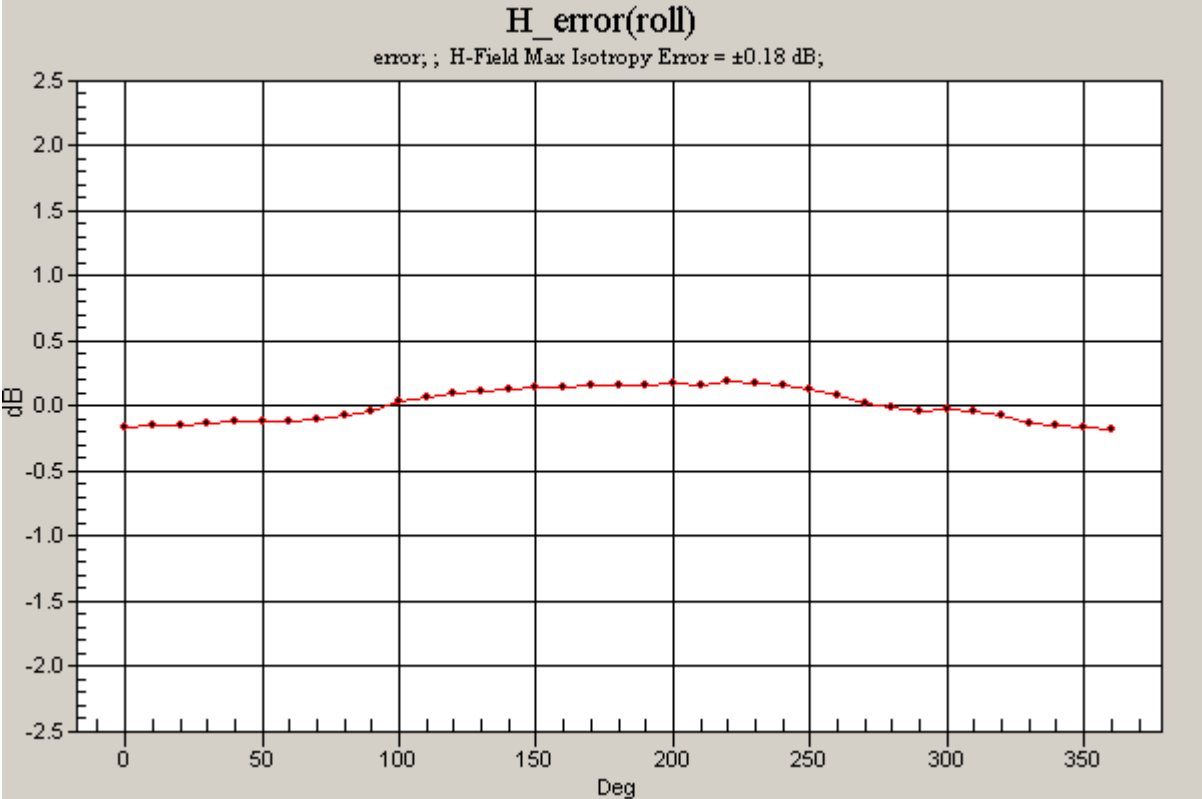
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### UMTS1700 HAC\_H3DV6\_Device

DUT: Intermec; Type: CN50; Serial: 328V0800138

Communication System: UMTS Band IV; Frequency: 1732.4 MHz;Duty Cycle: 1:1

**H Scan - M-ch/Rotation (1D):** 37 rotation steps; H-Field Max Isotropy Error =  $\pm 0.18$  dB;



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### UMTS1700 HAC\_H3DV6\_Device

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Communication System: UMTS Band IV; Frequency: 1754 MHz; Duty Cycle: 1:1

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

Phantom section: RF Section

DASY4 Configuration:

- Probe: H3DV6 - SN6157; ; Calibrated: 2/10/2009

- Sensor-Surface: (Fix Surface)

- Electronics: DAE3 Sn427; Calibrated: 10/20/2008

- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA; Serial: 100x

- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

### H Scan - H-ch/Hearing Aid Compatibility Test (101x101x1): Measurement grid: dx=5mm, dy=5mm

Maximum value of peak Total field = 0.042 A/m

Probe Modulation Factor = 0.900

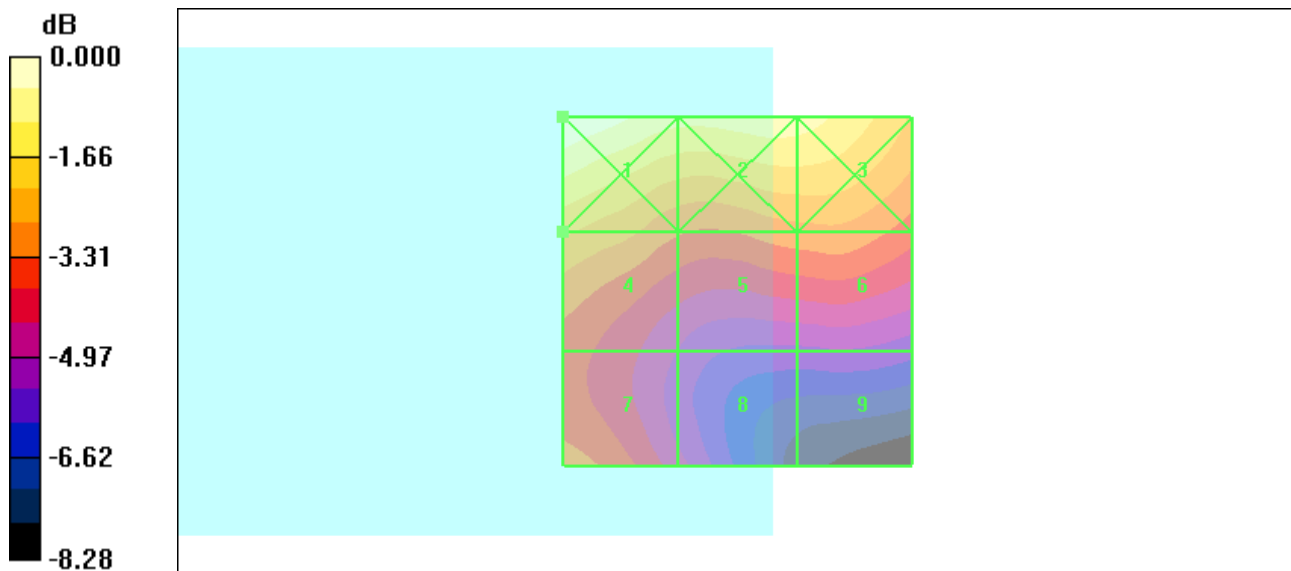
Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.042 A/m; Power Drift = 0.112 dB

Hearing Aid Near-Field Category: **M4 (AWF 0 dB)**

Peak H-field in A/m

Grid 1 <b>0.054 M4</b>	Grid 2 <b>0.050 M4</b>	Grid 3 <b>0.049 M4</b>
Grid 4 <b>0.042 M4</b>	Grid 5 <b>0.038 M4</b>	Grid 6 <b>0.039 M4</b>
Grid 7 <b>0.038 M4</b>	Grid 8 <b>0.031 M4</b>	Grid 9 <b>0.029 M4</b>



0 dB = 0.054A/m

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### UMTS1700 HAC\_H3DV6\_Device

DUT: Intermecc; Type: CN50; Serial: 328V0800138

Communication System: UMTS Band IV; Frequency: 1754 MHz; Duty Cycle: 1:1

**H Scan - H-ch/Rotation (1D):** 37 rotation steps; H-Field Max Isotropy Error =  $\pm 0.24$  dB;

