

Test Laboratory: UL CCS SAR Lab C

**GSM 850**

Communication System: GPRS-FDD (TDMA, GMSK, 1 slot); Frequency: 824.4 MHz; Duty Cycle: 1:8.00018

Phantom section: RF Section

DASY5 Configuration:

- Probe: ER3DV6 - SN2339; ConvF(1, 1, 1); Calibrated: 1/20/2012

- Sensor-Surface: (Fix Surface)

- Electronics: DAE4 Sn1239; Calibrated: 6/6/2012

- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB

- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.4.5 (3634)

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

Maximum value of peak Total field = 132.0 V/m

Probe Modulation Factor = 2.790

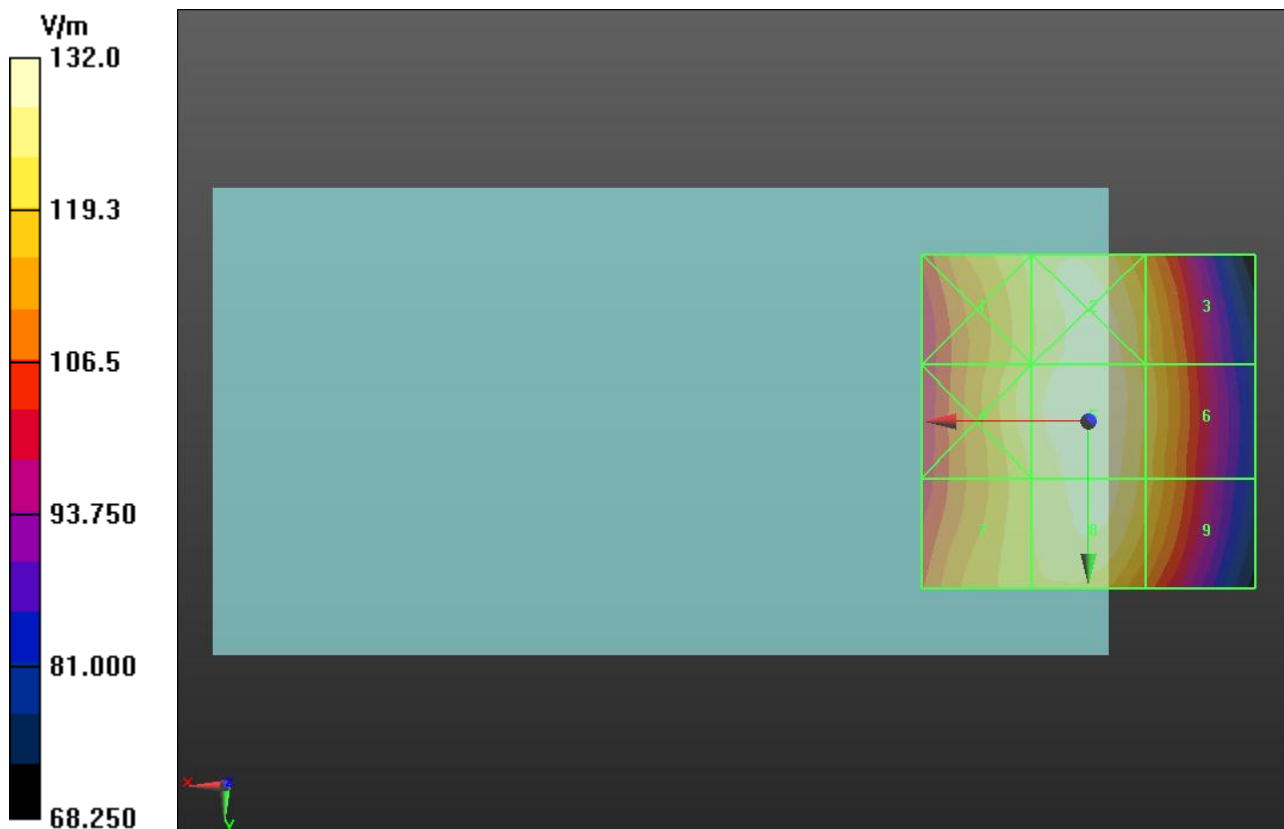
Device Reference Point: 0, 0, -6.3 mm

Reference Value = 63.528 V/m; Power Drift = -0.08 dB

**Hearing Aid Near-Field Category: M4 (AWF -5 dB)**

Peak E-field in V/m

Grid 1 <b>124.8 M4</b>	Grid 2 <b>130.2 M4</b>	Grid 3 <b>121.9 M4</b>
Grid 4 <b>126.5 M4</b>	Grid 5 <b>132.0 M4</b>	Grid 6 <b>123.3 M4</b>
Grid 7 <b>123.7 M4</b>	Grid 8 <b>130.1 M4</b>	Grid 9 <b>121.7 M4</b>



Test Laboratory: UL CCS SAR Lab C

**GSM 850**

Communication System: GPRS-FDD (TDMA, GMSK, 1 slot); Frequency: 836.6 MHz; Duty Cycle: 1:8.00018

Phantom section: RF Section

DASY5 Configuration:

- Probe: ER3DV6 - SN2339; ConvF(1, 1, 1); Calibrated: 1/20/2012
- Sensor-Surface: (Fix Surface)
- Electronics: DAE4 Sn1239; Calibrated: 6/6/2012
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.4.5 (3634)

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

Maximum value of peak Total field = 156.1 V/m

Probe Modulation Factor = 2.790

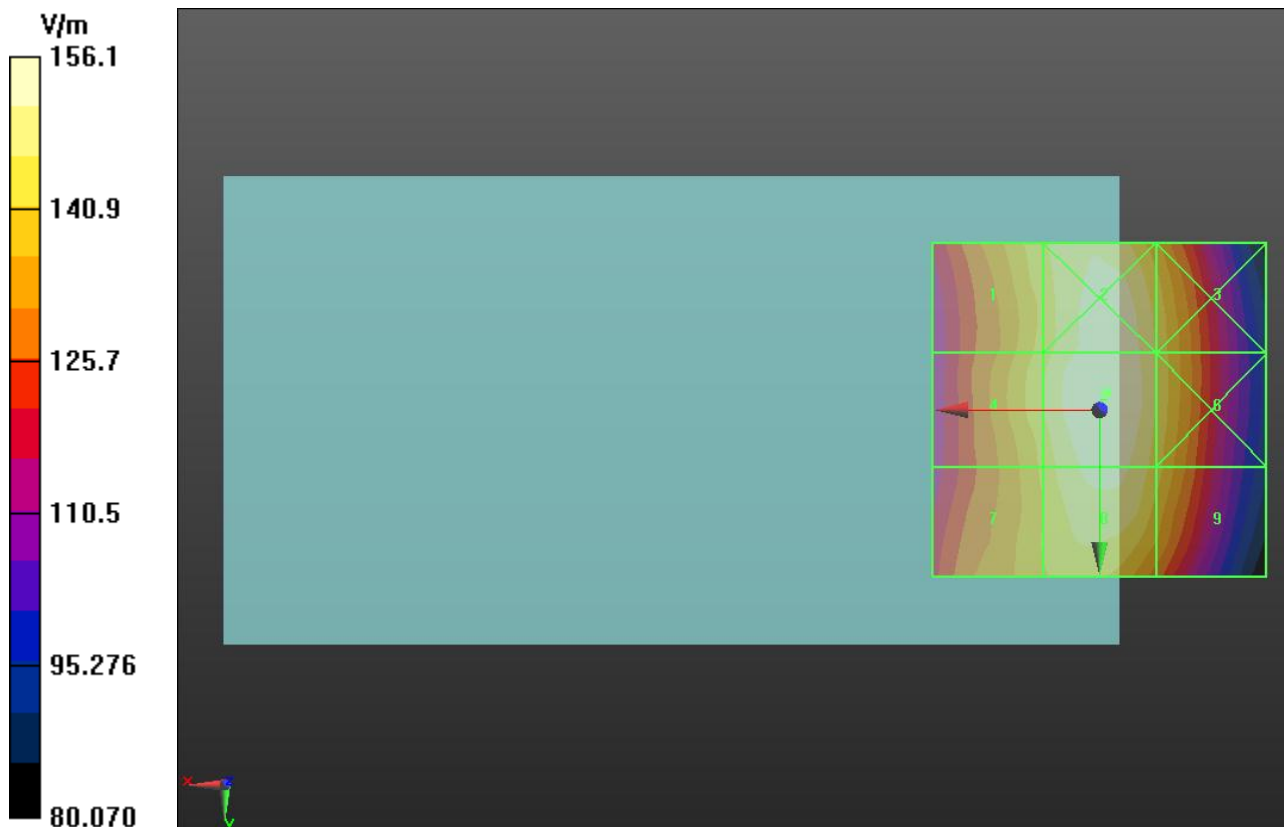
Device Reference Point: 0, 0, -6.3 mm

Reference Value = 74.184 V/m; Power Drift = -0.10 dB

**Hearing Aid Near-Field Category: M3 (AWF -5 dB)**

Peak E-field in V/m

Grid 1 <b>145.0 M4</b>	Grid 2 <b>154.7 M3</b>	Grid 3 <b>145.6 M4</b>
Grid 4 <b>146.0 M4</b>	Grid 5 <b>156.1 M3</b>	Grid 6 <b>146.0 M4</b>
Grid 7 <b>142.2 M4</b>	Grid 8 <b>153.0 M3</b>	Grid 9 <b>143.3 M4</b>



Test Laboratory: UL CCS SAR Lab C

**GSM 850**

Communication System: GPRS-FDD (TDMA, GMSK, 1 slot); Frequency: 848.8 MHz; Duty Cycle: 1:8.00018

Phantom section: RF Section

DASY5 Configuration:

- Probe: ER3DV6 - SN2339; ConvF(1, 1, 1); Calibrated: 1/20/2012
- Sensor-Surface: (Fix Surface)
- Electronics: DAE4 Sn1239; Calibrated: 6/6/2012
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.4.5 (3634)

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

Maximum value of peak Total field = 162.4 V/m

Probe Modulation Factor = 2.790

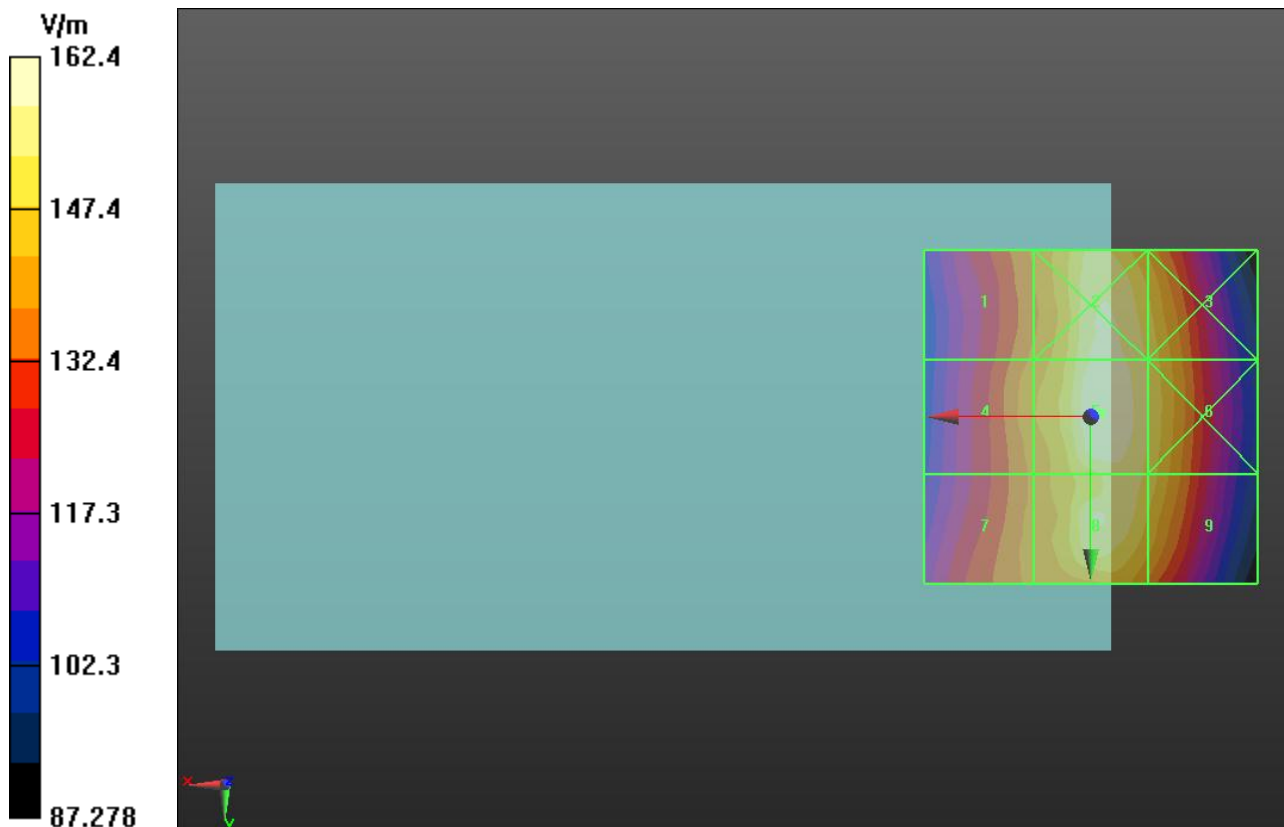
Device Reference Point: 0, 0, -6.3 mm

Reference Value = 72.184 V/m; Power Drift = 0.36 dB

**Hearing Aid Near-Field Category: M3 (AWF -5 dB)**

Peak E-field in V/m

Grid 1 <b>139.0 M4</b>	Grid 2 <b>159.6 M3</b>	Grid 3 <b>151.7 M3</b>
Grid 4 <b>142.3 M4</b>	Grid 5 <b>162.4 M3</b>	Grid 6 <b>153.0 M3</b>
Grid 7 <b>140.0 M4</b>	Grid 8 <b>157.8 M3</b>	Grid 9 <b>151.0 M3</b>



Test Laboratory: UL CCS SAR Lab C

**GSM 1900**

Communication System: GPRS-FDD (TDMA, GMSK, 1 slot); Frequency: 1850.2 MHz; Duty Cycle: 1:8.00018

Phantom section: RF Section

DASY5 Configuration:

- Probe: ER3DV6 - SN2339; ConvF(1, 1, 1); Calibrated: 1/20/2012
- Sensor-Surface: (Fix Surface)
- Electronics: DAE4 Sn1239; Calibrated: 6/6/2012
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.4.5 (3634)

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

Maximum value of peak Total field = 46.428 V/m

Probe Modulation Factor = 2.820

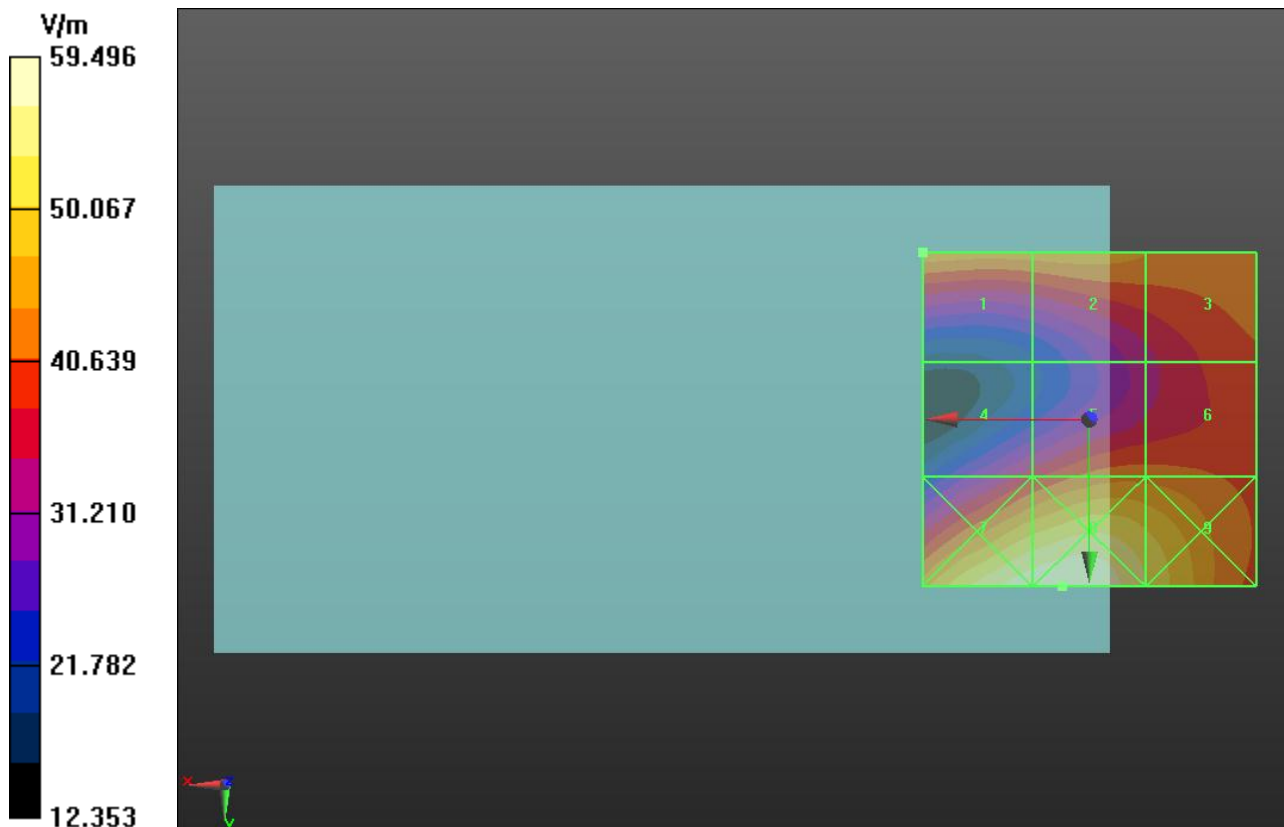
Device Reference Point: 0, 0, -6.3 mm

Reference Value = 11.992 V/m; Power Drift = 0.08 dB

**Hearing Aid Near-Field Category: M4 (AWF -5 dB)**

Peak E-field in V/m

Grid 1 <b>46.428 M4</b>	Grid 2 <b>46.340 M4</b>	Grid 3 <b>44.066 M4</b>
Grid 4 <b>36.624 M4</b>	Grid 5 <b>42.892 M4</b>	Grid 6 <b>42.680 M4</b>
Grid 7 <b>58.661 M3</b>	Grid 8 <b>59.496 M3</b>	Grid 9 <b>53.031 M3</b>



Test Laboratory: UL CCS SAR Lab C

**GSM 1900**

Communication System: GPRS-FDD (TDMA, GMSK, 1 slot); Frequency: 1880 MHz; Duty Cycle: 1:8.00018

Phantom section: RF Section

DASY5 Configuration:

- Probe: ER3DV6 - SN2339; ConvF(1, 1, 1); Calibrated: 1/20/2012
- Sensor-Surface: (Fix Surface)
- Electronics: DAE4 Sn1239; Calibrated: 6/6/2012
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.4.5 (3634)

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

Maximum value of peak Total field = 52.443 V/m

Probe Modulation Factor = 2.820

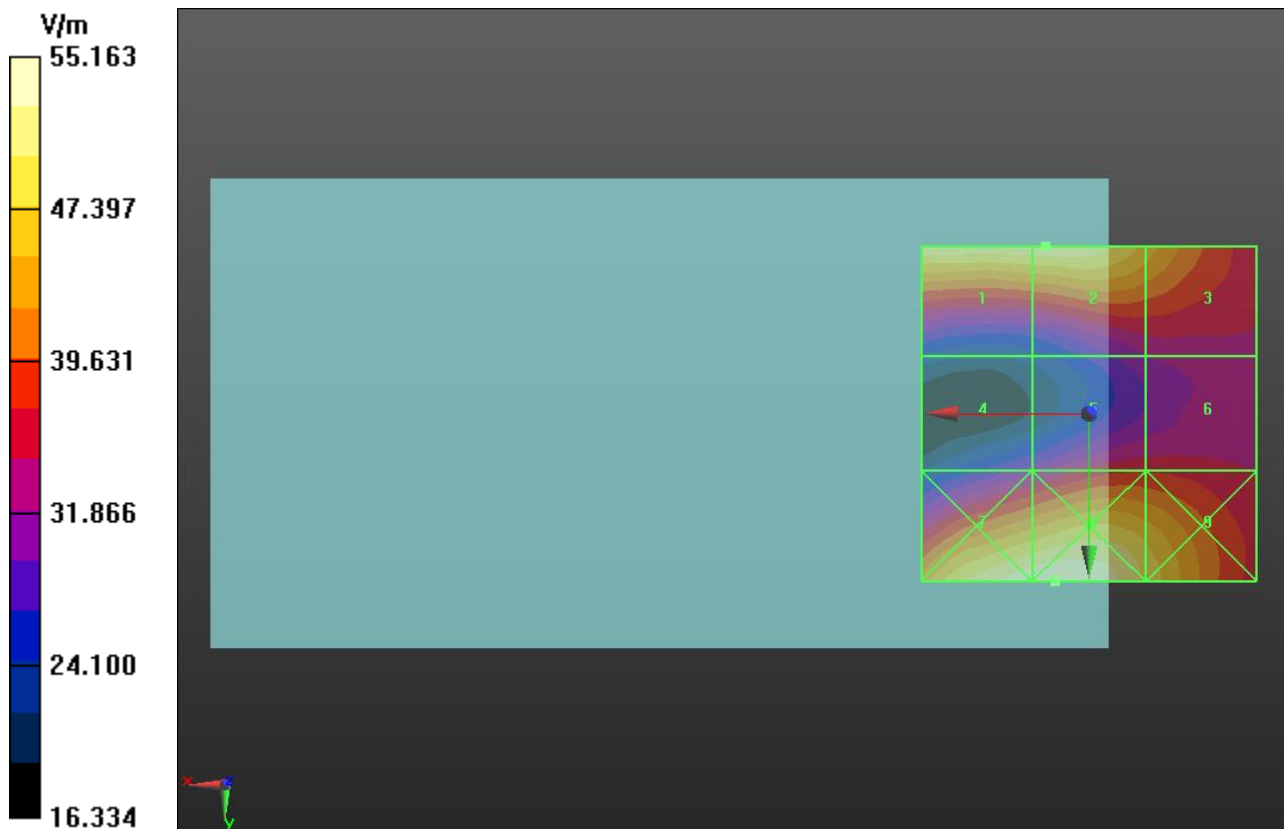
Device Reference Point: 0, 0, -6.3 mm

Reference Value = 10.248 V/m; Power Drift = -0.20 dB

**Hearing Aid Near-Field Category: M3 (AWF -5 dB)**

Peak E-field in V/m

Grid 1 <b>52.356 M3</b>	Grid 2 <b>52.443 M3</b>	Grid 3 <b>46.364 M4</b>
Grid 4 <b>30.904 M4</b>	Grid 5 <b>36.904 M4</b>	Grid 6 <b>36.832 M4</b>
Grid 7 <b>54.691 M3</b>	Grid 8 <b>55.163 M3</b>	Grid 9 <b>49.437 M3</b>



Test Laboratory: UL CCS SAR Lab C

**GSM 1900**

Communication System: GPRS-FDD (TDMA, GMSK, 1 slot); Frequency: 1909.8 MHz; Duty Cycle: 1:8.00018

Phantom section: RF Section

DASY5 Configuration:

- Probe: ER3DV6 - SN2339; ConvF(1, 1, 1); Calibrated: 1/20/2012
- Sensor-Surface: (Fix Surface)
- Electronics: DAE4 Sn1239; Calibrated: 6/6/2012
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.4.5 (3634)

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

Maximum value of peak Total field = 58.991 V/m

Probe Modulation Factor = 2.820

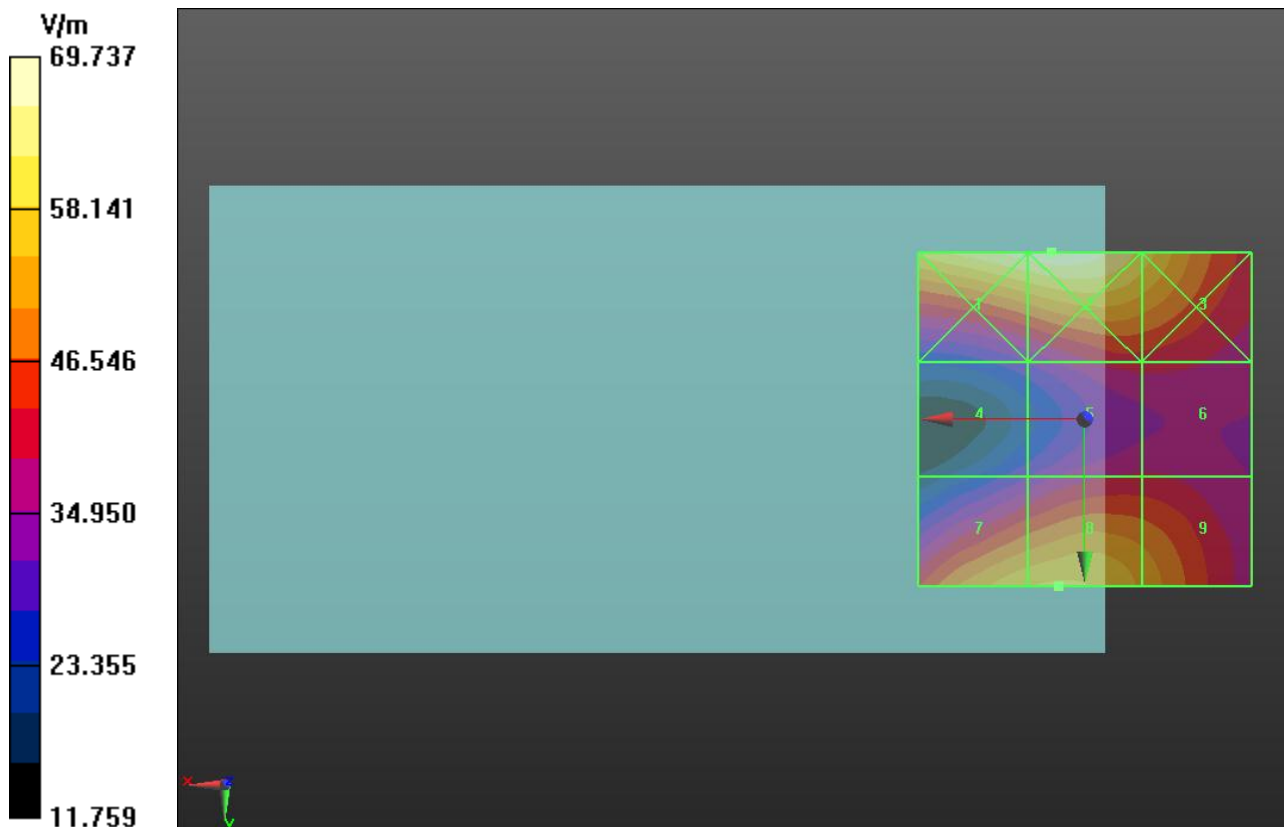
Device Reference Point: 0, 0, -6.3 mm

Reference Value = 13.076 V/m; Power Drift = -0.21 dB

**Hearing Aid Near-Field Category: M3 (AWF -5 dB)**

Peak E-field in V/m

Grid 1 <b>68.306 M3</b>	Grid 2 <b>69.737 M3</b>	Grid 3 <b>60.697 M3</b>
Grid 4 <b>31.553 M4</b>	Grid 5 <b>40.911 M4</b>	Grid 6 <b>40.759 M4</b>
Grid 7 <b>58.129 M3</b>	Grid 8 <b>58.991 M3</b>	Grid 9 <b>53.575 M3</b>



Test Laboratory: UL CCS SAR Lab C

**W-CDMA Band V**

Communication System: UMTS-FDD (WCDMA); Frequency: 826.4 MHz; Duty Cycle: 1:1

Phantom section: RF Section

DASY5 Configuration:

- Probe: ER3DV6 - SN2339; ConvF(1, 1, 1); Calibrated: 1/20/2012

- Sensor-Surface: (Fix Surface)

- Electronics: DAE4 Sn1239; Calibrated: 6/6/2012

- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB

- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.4.5 (3634)

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

Maximum value of peak Total field = 52.911 V/m

Probe Modulation Factor = 0.890

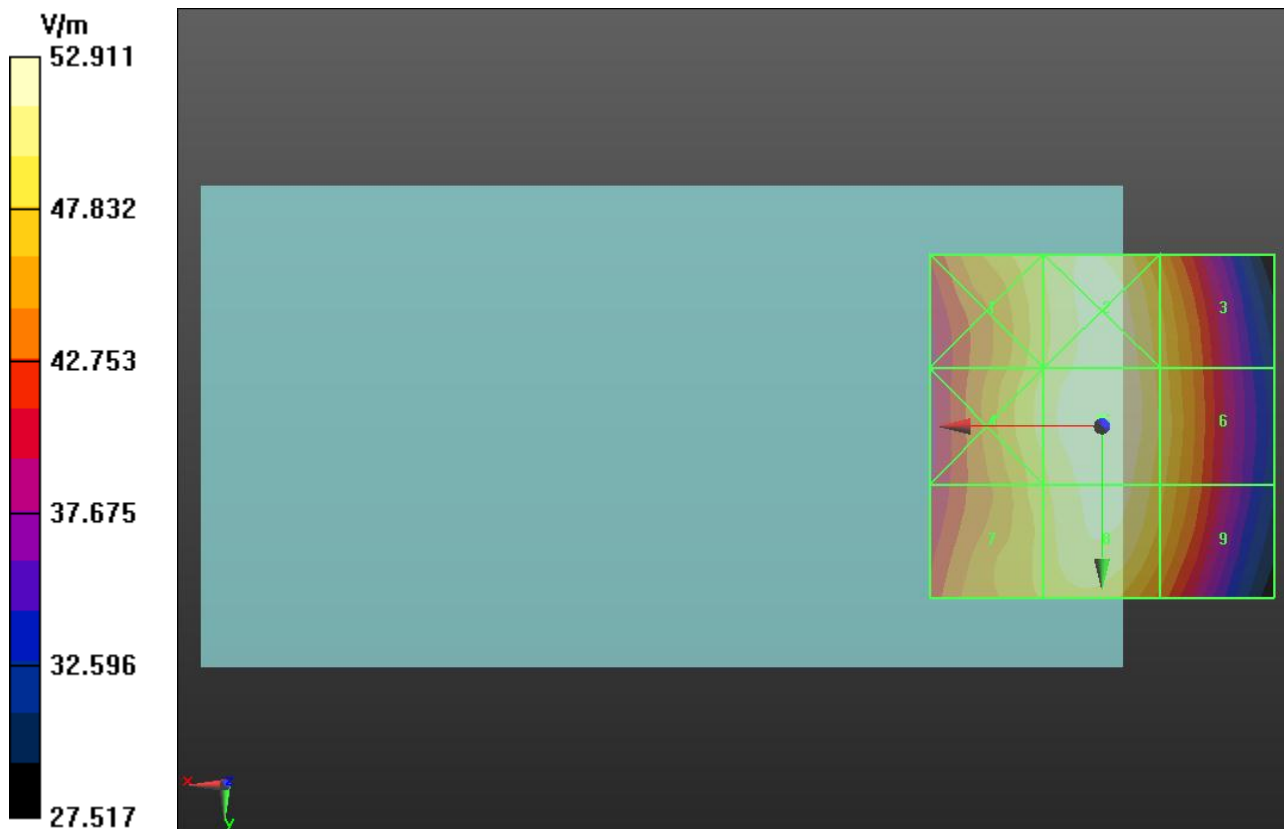
Device Reference Point: 0, 0, -6.3 mm

Reference Value = 78.055 V/m; Power Drift = 0.06 dB

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

Peak E-field in V/m

Grid 1 <b>49.714 M4</b>	Grid 2 <b>52.236 M4</b>	Grid 3 <b>48.879 M4</b>
Grid 4 <b>50.312 M4</b>	Grid 5 <b>52.911 M4</b>	Grid 6 <b>49.388 M4</b>
Grid 7 <b>49.134 M4</b>	Grid 8 <b>52.069 M4</b>	Grid 9 <b>48.447 M4</b>



Test Laboratory: UL CCS SAR Lab C

**W-CDMA Band V**

Communication System: UMTS-FDD (WCDMA); Frequency: 836.4 MHz; Duty Cycle: 1:1

Phantom section: RF Section

DASY5 Configuration:

- Probe: ER3DV6 - SN2339; ConvF(1, 1, 1); Calibrated: 1/20/2012

- Sensor-Surface: (Fix Surface)

- Electronics: DAE4 Sn1239; Calibrated: 6/6/2012

- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB

- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.4.5 (3634)

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

Maximum value of peak Total field = 50.951 V/m

Probe Modulation Factor = 0.890

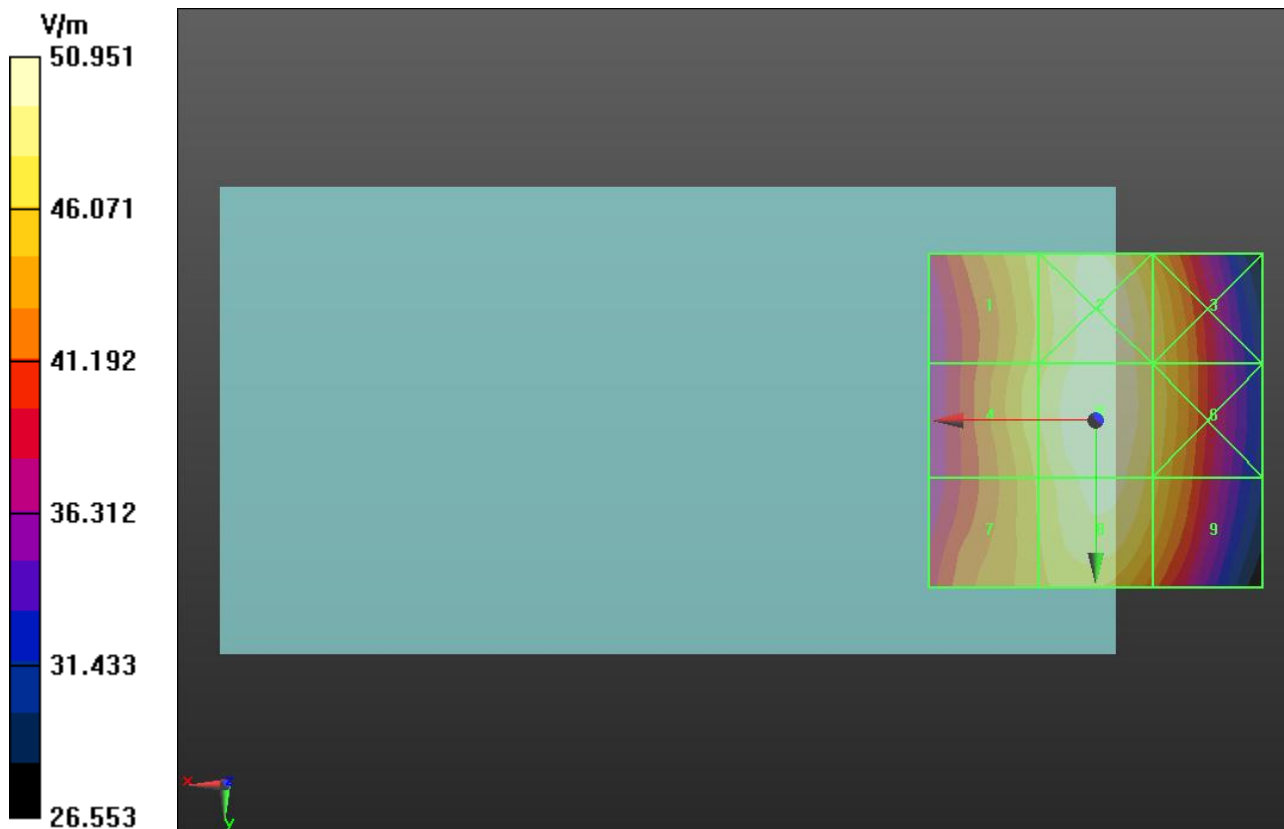
Device Reference Point: 0, 0, -6.3 mm

Reference Value = 74.637 V/m; Power Drift = 0.14 dB

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

Peak E-field in V/m

Grid 1 <b>47.170 M4</b>	Grid 2 <b>50.462 M4</b>	Grid 3 <b>47.784 M4</b>
Grid 4 <b>47.719 M4</b>	Grid 5 <b>50.951 M4</b>	Grid 6 <b>47.927 M4</b>
Grid 7 <b>46.488 M4</b>	Grid 8 <b>49.987 M4</b>	Grid 9 <b>46.954 M4</b>





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**W-CDMA Band V**

Communication System: UMTS-FDD (WCDMA); Frequency: 846.6 MHz; Duty Cycle: 1:1

Phantom section: RF Section

DASY5 Configuration:

- Probe: ER3DV6 - SN2339; ConvF(1, 1, 1); Calibrated: 1/20/2012

- Sensor-Surface: (Fix Surface)

- Electronics: DAE4 Sn1239; Calibrated: 6/6/2012

- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB

- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.4.5 (3634)

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

Maximum value of peak Total field = 49.316 V/m

Probe Modulation Factor = 0.890

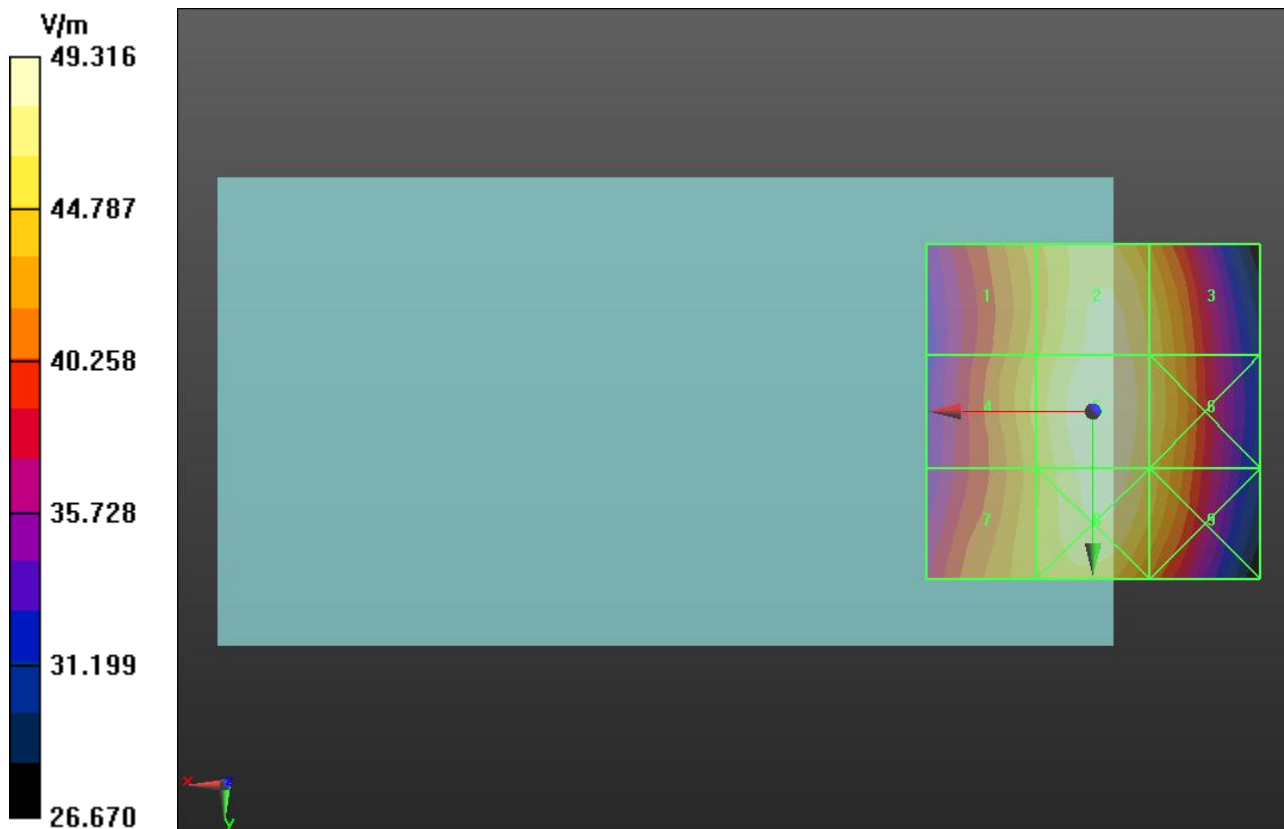
Device Reference Point: 0, 0, -6.3 mm

Reference Value = 72.396 V/m; Power Drift = -0.004 dB

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

Peak E-field in V/m

Grid 1 <b>44.447 M4</b>	Grid 2 <b>48.531 M4</b>	Grid 3 <b>46.301 M4</b>
Grid 4 <b>45.345 M4</b>	Grid 5 <b>49.316 M4</b>	Grid 6 <b>46.790 M4</b>
Grid 7 <b>44.846 M4</b>	Grid 8 <b>48.627 M4</b>	Grid 9 <b>45.968 M4</b>



Test Laboratory: UL CCS SAR Lab C

**W-CDMA Band IV**

Communication System: UMTS-FDD (WCDMA); Frequency: 1712.4 MHz; Duty Cycle: 1:1

Phantom section: RF Section

DASY5 Configuration:

- Probe: ER3DV6 - SN2339; ConvF(1, 1, 1); Calibrated: 1/20/2012
- Sensor-Surface: (Fix Surface)
- Electronics: DAE4 Sn1239; Calibrated: 6/6/2012
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.4.5 (3634)

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

Maximum value of peak Total field = 36.479 V/m

Probe Modulation Factor = 0.960

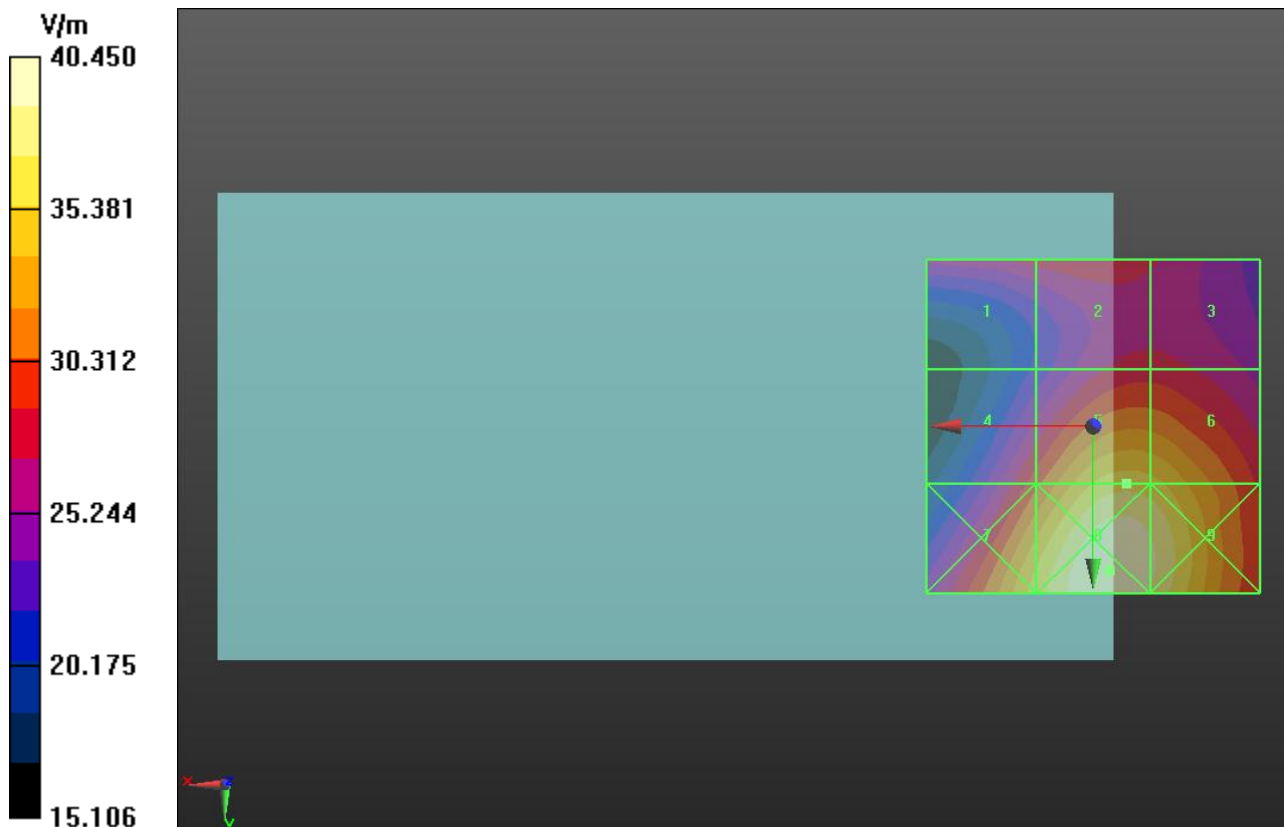
Device Reference Point: 0, 0, -6.3 mm

Reference Value = 40.455 V/m; Power Drift = 0.0094 dB

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

Peak E-field in V/m

Grid 1 <b>27.923 M4</b>	Grid 2 <b>28.579 M4</b>	Grid 3 <b>27.838 M4</b>
Grid 4 <b>29.864 M4</b>	Grid 5 <b>36.479 M4</b>	Grid 6 <b>36.017 M4</b>
Grid 7 <b>36.258 M4</b>	Grid 8 <b>40.450 M4</b>	Grid 9 <b>39.129 M4</b>



Test Laboratory: UL CCS SAR Lab C

**W-CDMA Band IV**

Communication System: UMTS-FDD (WCDMA); Frequency: 1732.4 MHz; Duty Cycle: 1:1

Phantom section: RF Section

DASY5 Configuration:

- Probe: ER3DV6 - SN2339; ConvF(1, 1, 1); Calibrated: 1/20/2012
- Sensor-Surface: (Fix Surface)
- Electronics: DAE4 Sn1239; Calibrated: 6/6/2012
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.4.5 (3634)

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

Maximum value of peak Total field = 33.074 V/m

Probe Modulation Factor = 0.960

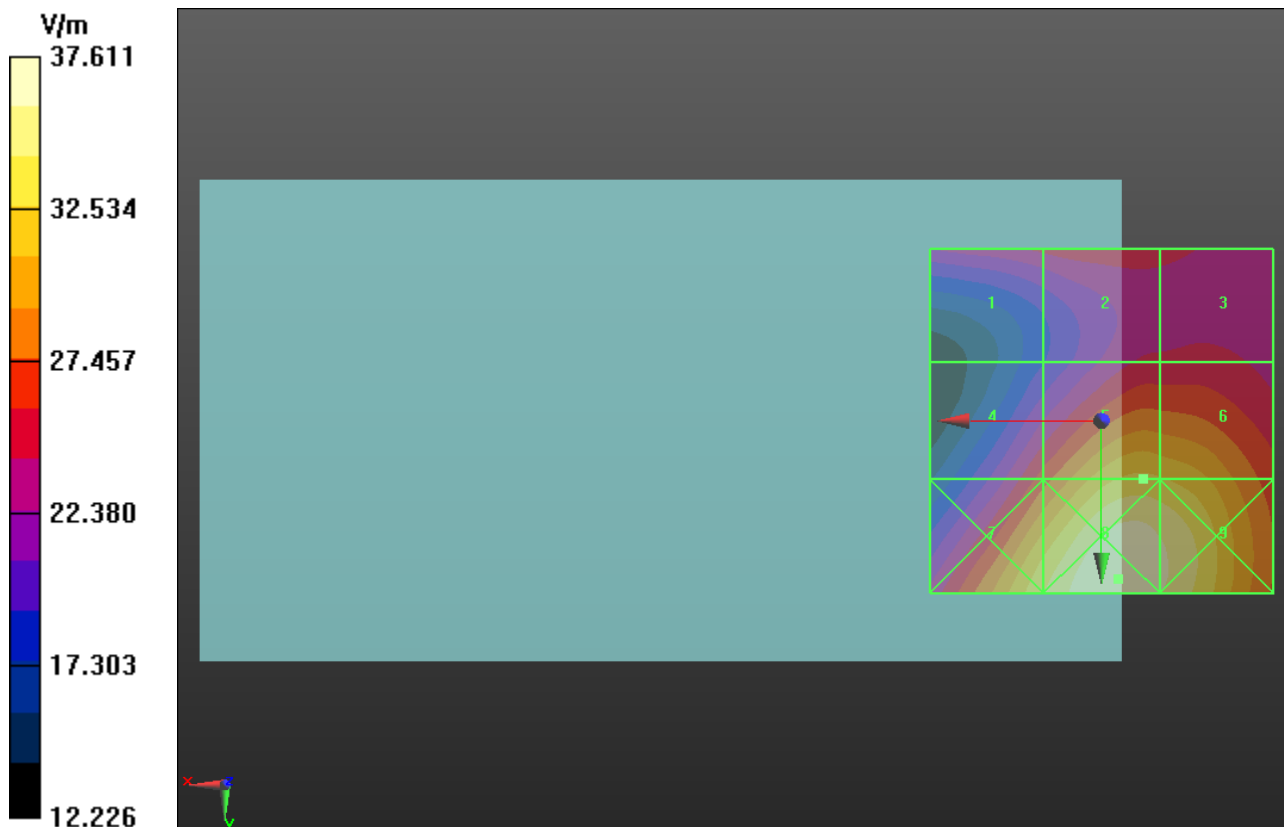
Device Reference Point: 0, 0, -6.3 mm

Reference Value = 34.870 V/m; Power Drift = 0.14 dB

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

Peak E-field in V/m

Grid 1 <b>24.625 M4</b>	Grid 2 <b>25.356 M4</b>	Grid 3 <b>24.789 M4</b>
Grid 4 <b>26.744 M4</b>	Grid 5 <b>33.074 M4</b>	Grid 6 <b>32.739 M4</b>
Grid 7 <b>34.173 M4</b>	Grid 8 <b>37.611 M4</b>	Grid 9 <b>36.407 M4</b>



Test Laboratory: UL CCS SAR Lab C

**W-CDMA Band IV**

Communication System: UMTS-FDD (WCDMA); Frequency: 1752.5 MHz; Duty Cycle: 1:1

Phantom section: RF Section

DASY5 Configuration:

- Probe: ER3DV6 - SN2339; ConvF(1, 1, 1); Calibrated: 1/20/2012

- Sensor-Surface: (Fix Surface)

- Electronics: DAE4 Sn1239; Calibrated: 6/6/2012

- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB

- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.4.5 (3634)

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

Maximum value of peak Total field = 29.544 V/m

Probe Modulation Factor = 0.960

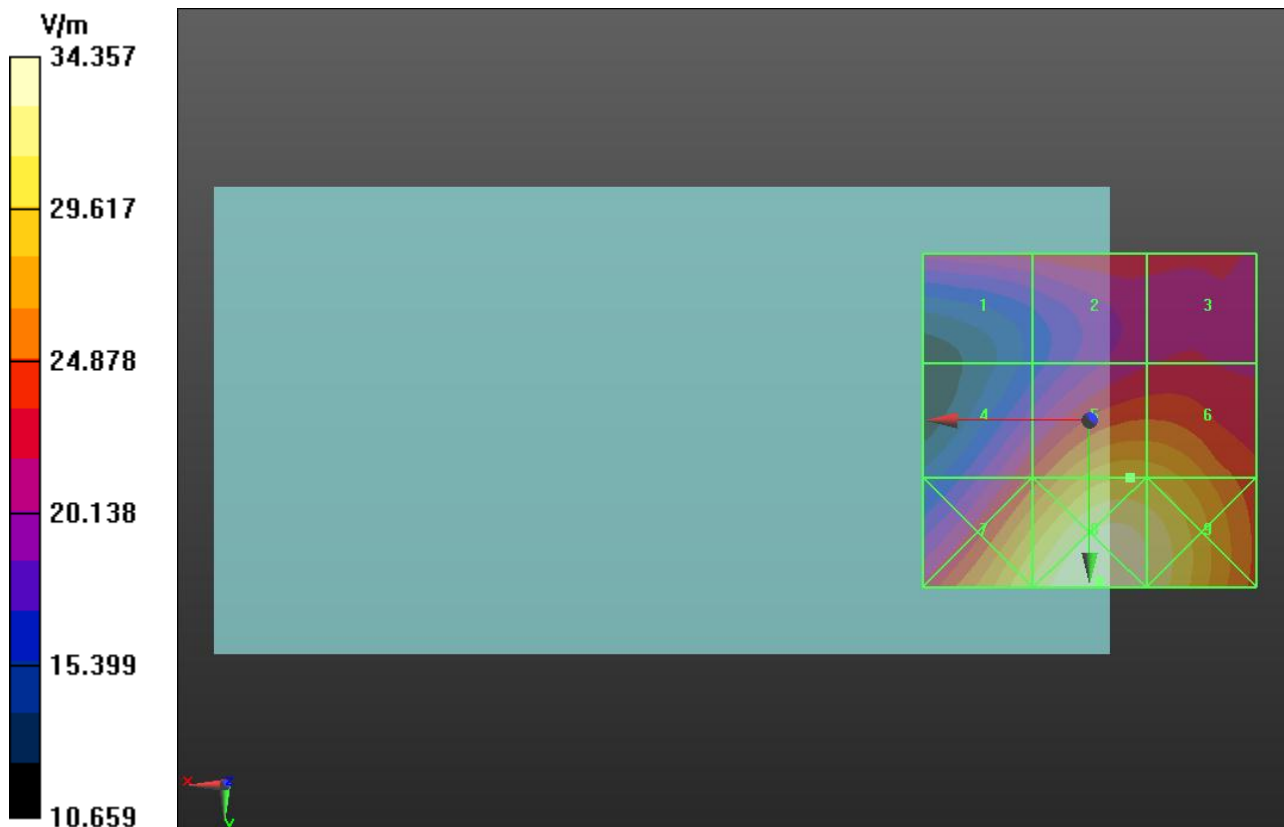
Device Reference Point: 0, 0, -6.3 mm

Reference Value = 30.453 V/m; Power Drift = -0.0098 dB

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

Peak E-field in V/m

Grid 1 <b>22.502 M4</b>	Grid 2 <b>23.350 M4</b>	Grid 3 <b>22.671 M4</b>
Grid 4 <b>24.029 M4</b>	Grid 5 <b>29.544 M4</b>	Grid 6 <b>29.320 M4</b>
Grid 7 <b>31.586 M4</b>	Grid 8 <b>34.357 M4</b>	Grid 9 <b>32.936 M4</b>



Test Laboratory: UL CCS SAR Lab C

## W-CDMA Band II

Communication System: UMTS-FDD (WCDMA); Frequency: 1852.4 MHz; Duty Cycle: 1:1

Phantom section: RF Section

DASY5 Configuration:

- Probe: ER3DV6 - SN2339; ConvF(1, 1, 1); Calibrated: 1/20/2012
- Sensor-Surface: (Fix Surface)
- Electronics: DAE4 Sn1239; Calibrated: 6/6/2012
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.4.5 (3634)

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

Maximum value of peak Total field = 21.987 V/m

Probe Modulation Factor = 0.960

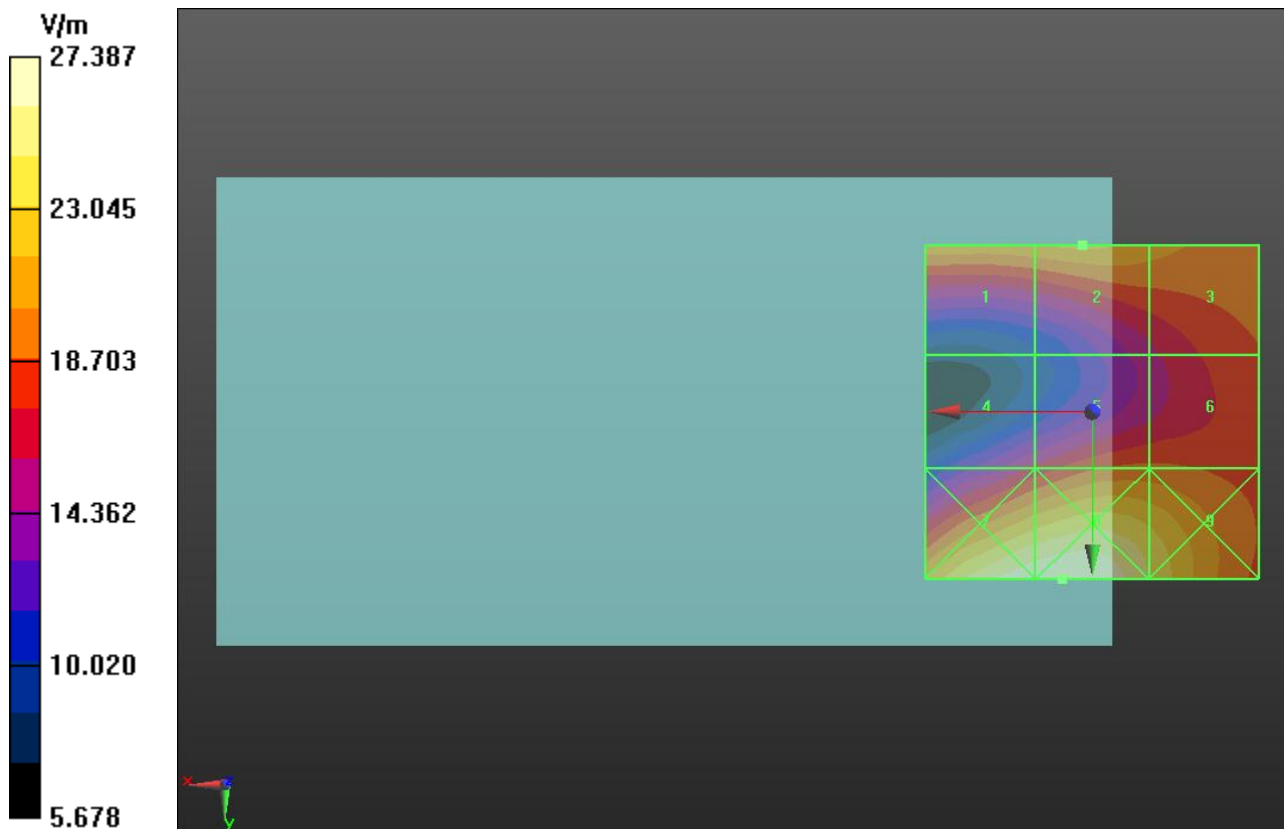
Device Reference Point: 0, 0, -6.3 mm

Reference Value = 15.160 V/m; Power Drift = 0.0045 dB

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

Peak E-field in V/m

Grid 1 <b>21.645 M4</b>	Grid 2 <b>21.987 M4</b>	Grid 3 <b>20.929 M4</b>
Grid 4 <b>16.364 M4</b>	Grid 5 <b>19.178 M4</b>	Grid 6 <b>19.157 M4</b>
Grid 7 <b>27.114 M4</b>	Grid 8 <b>27.387 M4</b>	Grid 9 <b>24.495 M4</b>



Test Laboratory: UL CCS SAR Lab C

**W-CDMA Band II**

Communication System: UMTS-FDD (WCDMA); Frequency: 1880 MHz; Duty Cycle: 1:1

Phantom section: RF Section

DASY5 Configuration:

- Probe: ER3DV6 - SN2339; ConvF(1, 1, 1); Calibrated: 1/20/2012

- Sensor-Surface: (Fix Surface)

- Electronics: DAE4 Sn1239; Calibrated: 6/6/2012

- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB

- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.4.5 (3634)

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

Maximum value of peak Total field = 24.709 V/m

Probe Modulation Factor = 0.960

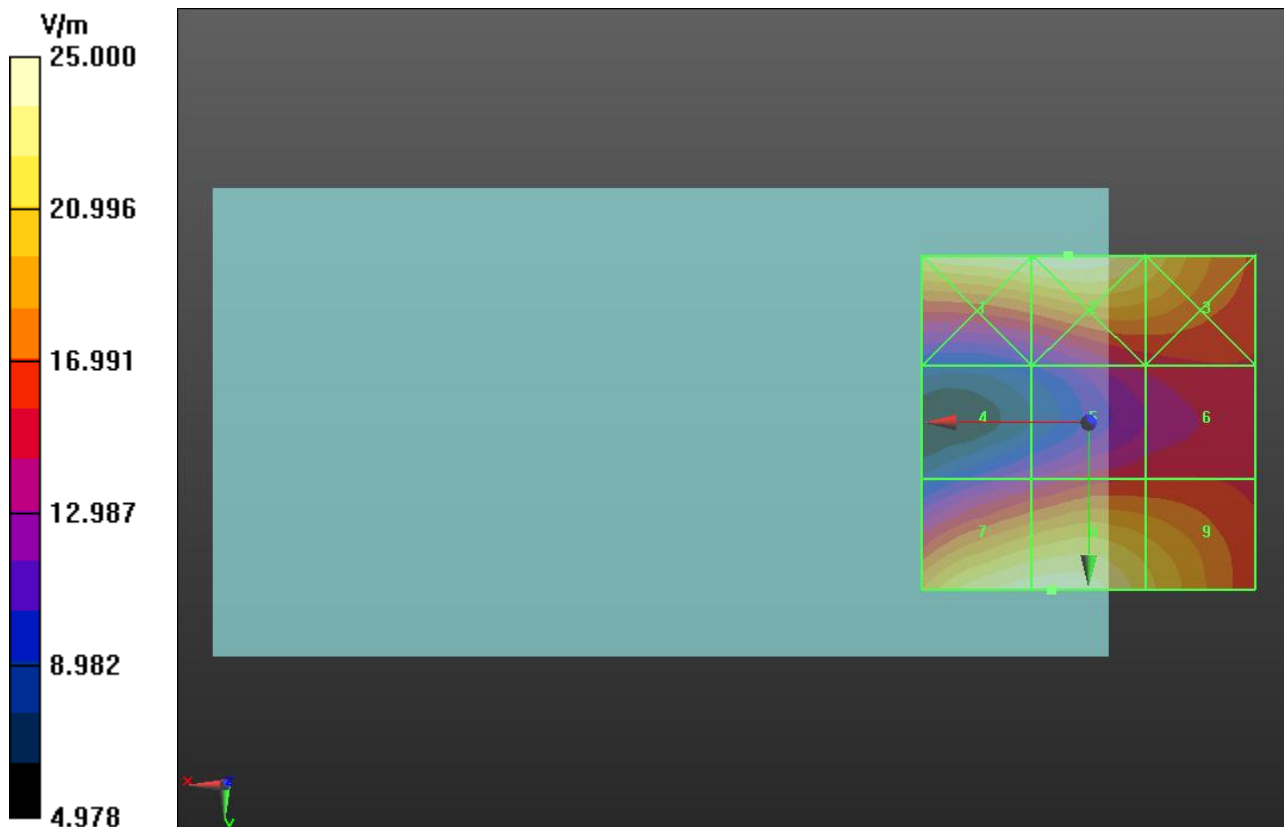
Device Reference Point: 0, 0, -6.3 mm

Reference Value = 12.540 V/m; Power Drift = -0.14 dB

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

Peak E-field in V/m

Grid 1 <b>24.596 M4</b>	Grid 2 <b>25.000 M4</b>	Grid 3 <b>22.367 M4</b>
Grid 4 <b>13.151 M4</b>	Grid 5 <b>15.782 M4</b>	Grid 6 <b>15.878 M4</b>
Grid 7 <b>24.556 M4</b>	Grid 8 <b>24.709 M4</b>	Grid 9 <b>21.567 M4</b>



Test Laboratory: UL CCS SAR Lab C

**W-CDMA Band II**

Communication System: UMTS-FDD (WCDMA); Frequency: 1907.6 MHz; Duty Cycle: 1:1

Phantom section: RF Section

DASY5 Configuration:

- Probe: ER3DV6 - SN2339; ConvF(1, 1, 1); Calibrated: 1/20/2012
- Sensor-Surface: (Fix Surface)
- Electronics: DAE4 Sn1239; Calibrated: 6/6/2012
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.4.5 (3634)

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

Maximum value of peak Total field = 25.530 V/m

Probe Modulation Factor = 0.960

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 17.505 V/m; Power Drift = -0.32 dB

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

Peak E-field in V/m

Grid 1 <b>30.069 M4</b>	Grid 2 <b>31.142 M4</b>	Grid 3 <b>27.691 M4</b>
Grid 4 <b>14.082 M4</b>	Grid 5 <b>18.929 M4</b>	Grid 6 <b>18.950 M4</b>
Grid 7 <b>25.530 M4</b>	Grid 8 <b>25.502 M4</b>	Grid 9 <b>22.504 M4</b>

