Date: 9/9/2012

Test Laboratory: UL CCS SAR Lab C

GSM 850

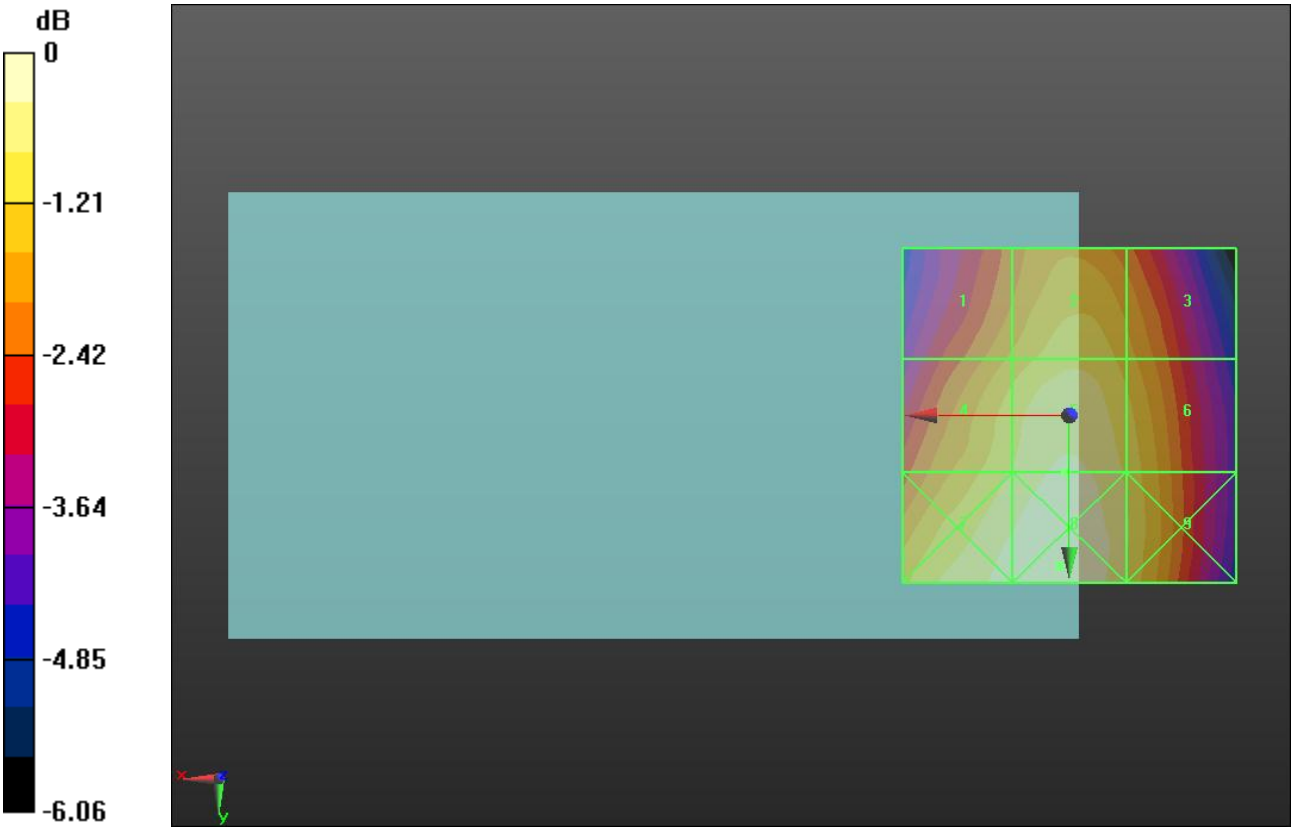
Communication System: GPRS-FDD (TDMA, GMSK, 1 slot); Frequency: 824.4 MHz; Duty Cycle: 1:8.00018
Phantom section: RF Section
DASY5 Configuration:
- Probe: ER3DV6 - SN2339; ConvF(1, 1, 1); Calibrated: 1/20/2012
- Sensor-Surface: (Fix Surface)
- Electronics: DAE4 Sn1239; Calibrated: 6/6/2012
- Phantom: 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 = 113.4 V/m
Probe Modulation Factor = 2.790
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 50.583 V/m; Power Drift = 0.03 dB
Hearing Aid Near-Field Category: M4 (AWF -5 dB)

Peak E-field in V/m

Grid 1 **99.134 M4**	Grid 2 **106.3 M4**	Grid 3 **100.3 M4**
Grid 4 **108.1 M4**	Grid 5 **113.4 M4**	Grid 6 **106.6 M4**
Grid 7 **115.0 M4**	Grid 8 **117.9 M4**	Grid 9 **108.2 M4**



0 dB = 117.9V/m

Date: 9/9/2012

Test Laboratory: UL CCS SAR Lab C

GSM 850

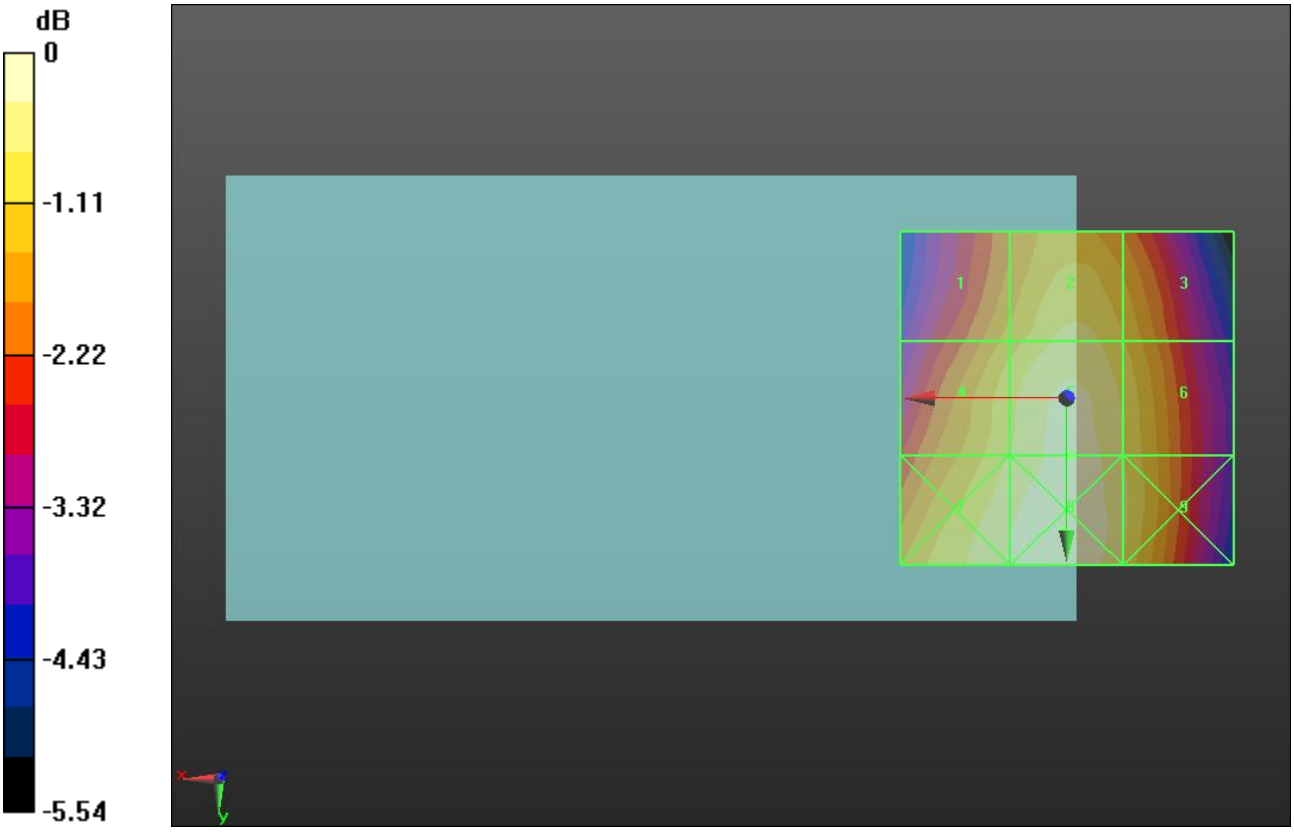
Communication System: GPRS-FDD (TDMA, GMSK, 1 slot); Frequency: 836.6 MHz; Duty Cycle: 1:8.00018
Phantom section: RF Section
DASY5 Configuration:
- Probe: ER3DV6 - SN2339; ConvF(1, 1, 1); Calibrated: 1/20/2012
- Sensor-Surface: (Fix Surface)
- Electronics: DAE4 Sn1239; Calibrated: 6/6/2012
- Phantom: 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 = 103.5 V/m
Probe Modulation Factor = 2.790
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 46.672 V/m; Power Drift = 0.0057 dB
Hearing Aid Near-Field Category: M4 (AWF -5 dB)

Peak E-field in V/m

Grid 1 **91.382 M4**	Grid 2 **98.812 M4**	Grid 3 **93.711 M4**
Grid 4 **97.622 M4**	Grid 5 **103.5 M4**	Grid 6 **97.667 M4**
Grid 7 **101.9 M4**	Grid 8 **106.0 M4**	Grid 9 **98.490 M4**



0 dB = 106.0V/m

Date: 9/9/2012

Test Laboratory: UL CCS SAR Lab C

GSM 850

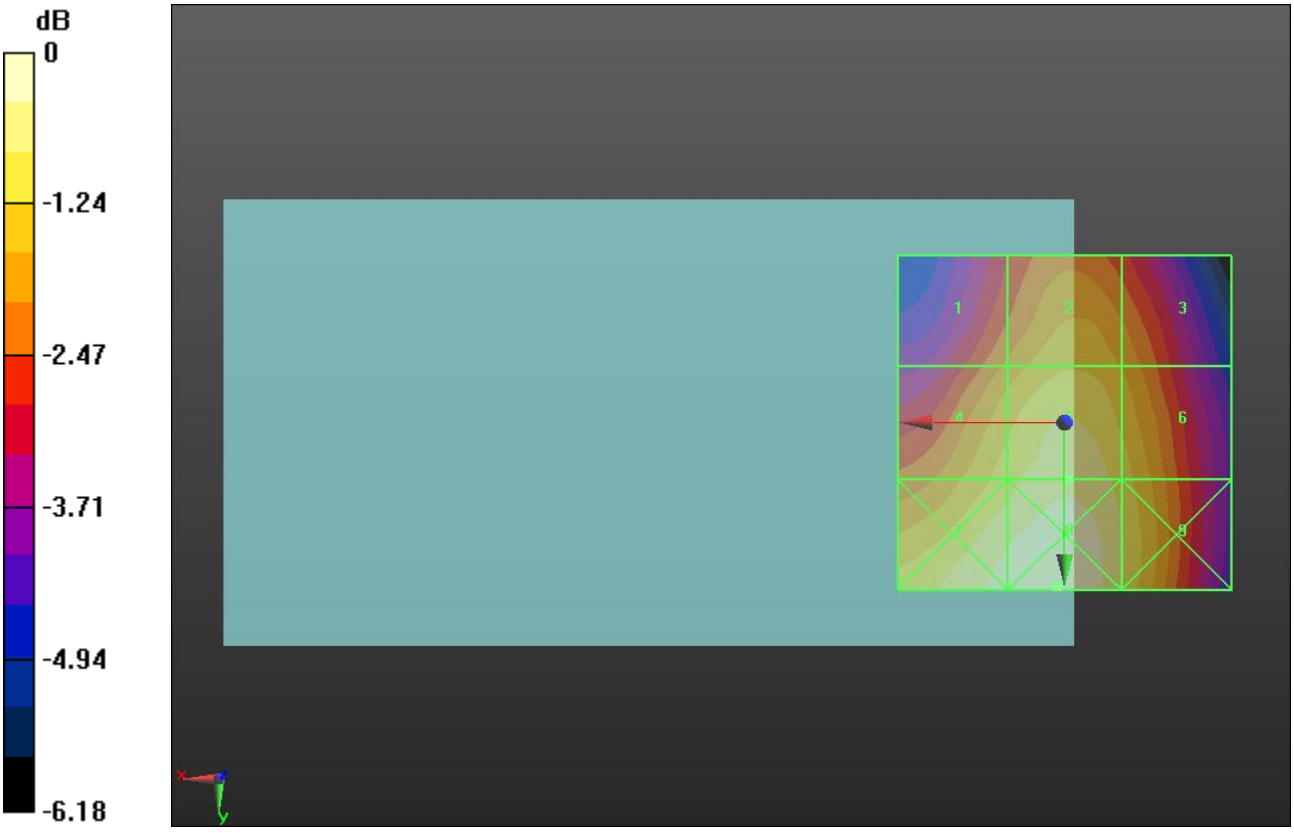
Communication System: GPRS-FDD (TDMA, GMSK, 1 slot); Frequency: 848.8 MHz; Duty Cycle: 1:8.00018
Phantom section: RF Section
DASY5 Configuration:
- Probe: ER3DV6 - SN2339; ConvF(1, 1, 1); Calibrated: 1/20/2012
- Sensor-Surface: (Fix Surface)
- Electronics: DAE4 Sn1239; Calibrated: 6/6/2012
- Phantom: 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 = 81.172 V/m
Probe Modulation Factor = 2.790
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 35.768 V/m; Power Drift = -0.07 dB
Hearing Aid Near-Field Category: M4 (AWF -5 dB)

Peak E-field in V/m

Grid 1 **68.781 M4**	Grid 2 **74.404 M4**	Grid 3 **71.004 M4**
Grid 4 **76.675 M4**	Grid 5 **81.172 M4**	Grid 6 **76.701 M4**
Grid 7 **83.725 M4**	Grid 8 **86.006 M4**	Grid 9 **79.000 M4**



0 dB = 86.010V/m

Date: 9/9/2012

Test Laboratory: UL CCS SAR Lab C

GSM 1900

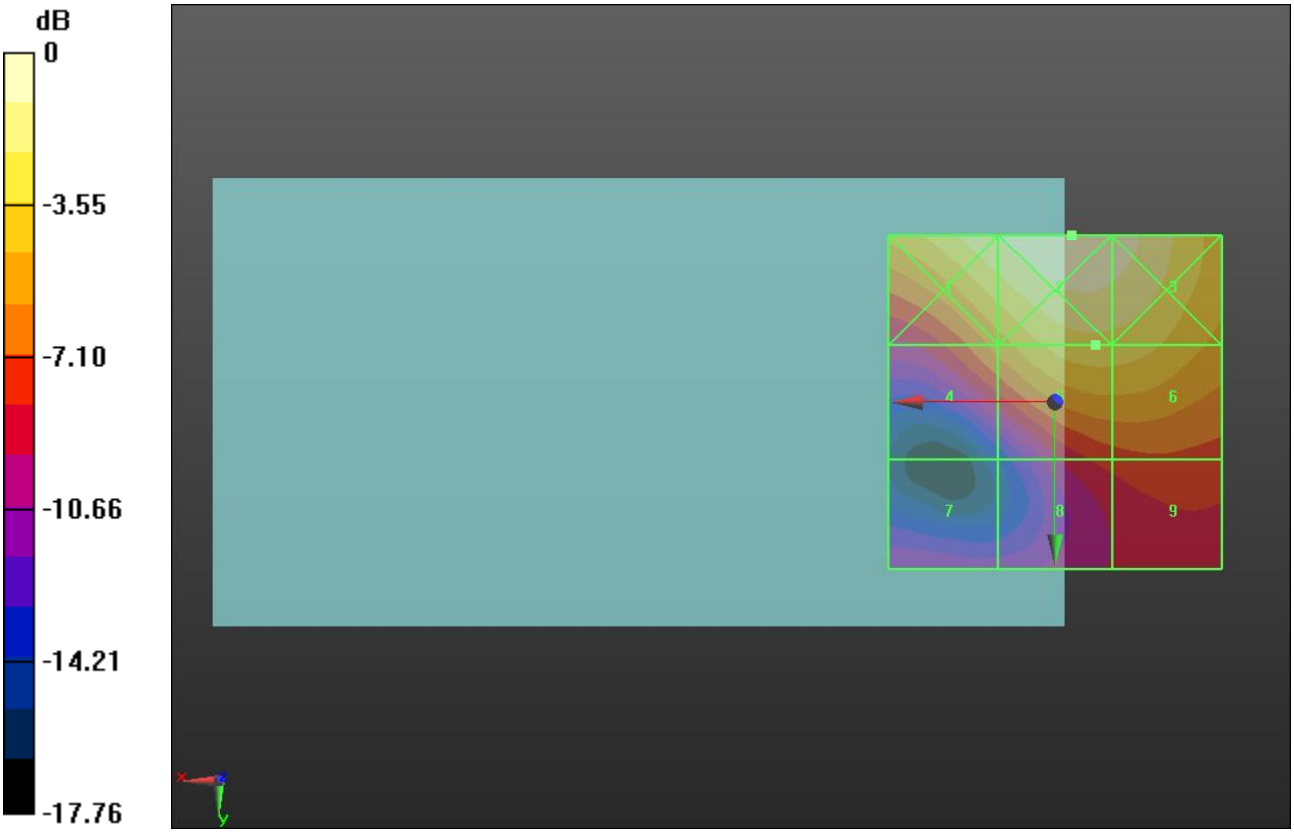
Communication System: GPRS-FDD (TDMA, GMSK, 1 slot); Frequency: 1850.2 MHz; Duty Cycle: 1:8.00018
Phantom section: RF Section
DASY5 Configuration:
- Probe: ER3DV6 - SN2339; ConvF(1, 1, 1); Calibrated: 1/20/2012
- Sensor-Surface: (Fix Surface)
- Electronics: DAE4 Sn1239; Calibrated: 6/6/2012
- Phantom: 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 = 55.895 V/m
Probe Modulation Factor = 2.820
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 17.472 V/m; Power Drift = -0.10 dB
Hearing Aid Near-Field Category: M3 (AWF -5 dB)

Peak E-field in V/m

Grid 1 **68.060 M3**	Grid 2 **76.796 M3**	Grid 3 **72.881 M3**
Grid 4 **41.263 M4**	Grid 5 **55.895 M3**	Grid 6 **55.314 M3**
Grid 7 **22.818 M4**	Grid 8 **31.617 M4**	Grid 9 **33.375 M4**



0 dB = 76.800V/m

Date: 9/9/2012

Test Laboratory: UL CCS SAR Lab C

GSM 1900

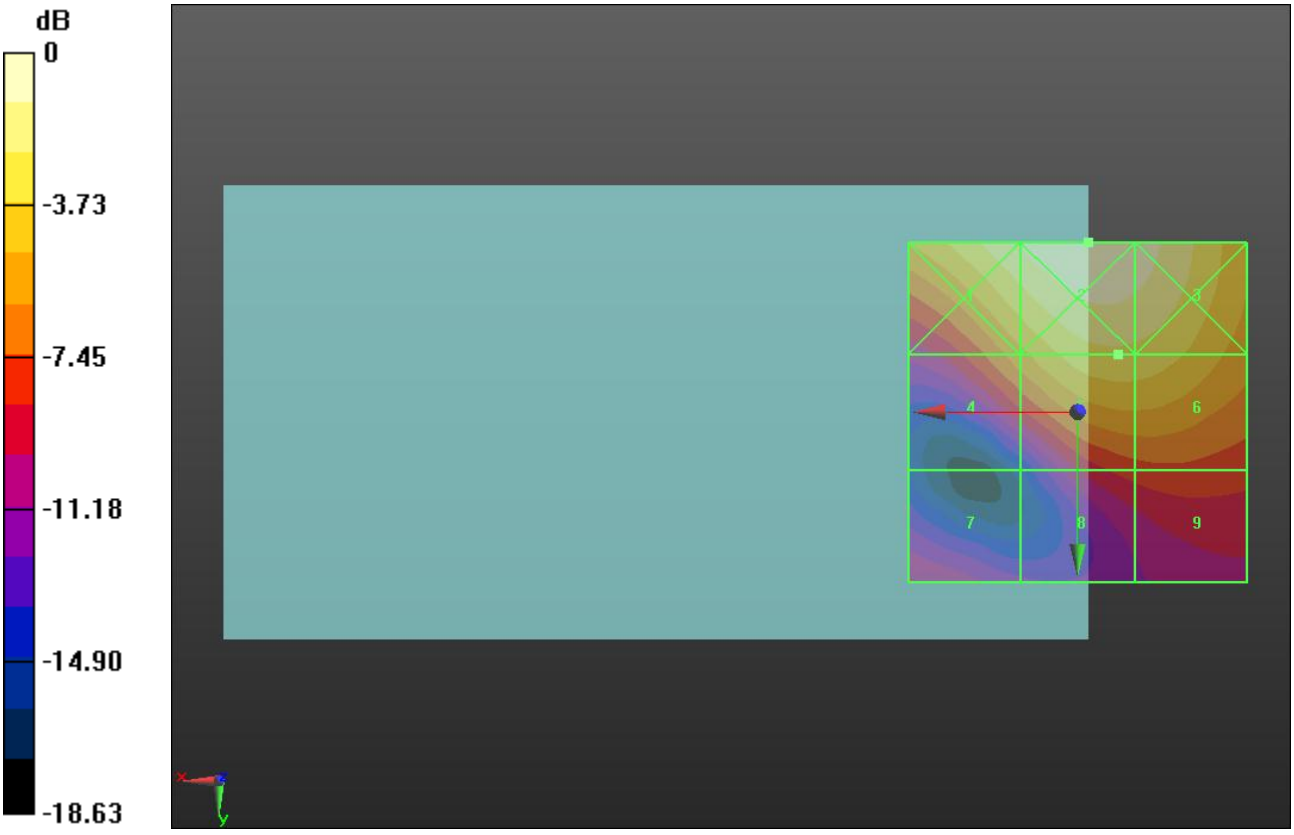
Communication System: GPRS-FDD (TDMA, GMSK, 1 slot); Frequency: 1880 MHz; Duty Cycle: 1:8.00018
Phantom section: RF Section
DASY5 Configuration:
- Probe: ER3DV6 - SN2339; ConvF(1, 1, 1); Calibrated: 1/20/2012
- Sensor-Surface: (Fix Surface)
- Electronics: DAE4 Sn1239; Calibrated: 6/6/2012
- Phantom: 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 = 64.712 V/m
Probe Modulation Factor = 2.820
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 20.733 V/m; Power Drift = -0.00096 dB
Hearing Aid Near-Field Category: M3 (AWF -5 dB)

Peak E-field in V/m

Grid 1 **78.399 M3**	Grid 2 **88.732 M2**	Grid 3 **83.256 M3**
Grid 4 **47.709 M3**	Grid 5 **64.712 M3**	Grid 6 **63.962 M3**
Grid 7 **28.648 M4**	Grid 8 **35.325 M4**	Grid 9 **36.643 M4**



0 dB = 88.730V/m

Date: 9/9/2012

Test Laboratory: UL CCS SAR Lab C

GSM 1900

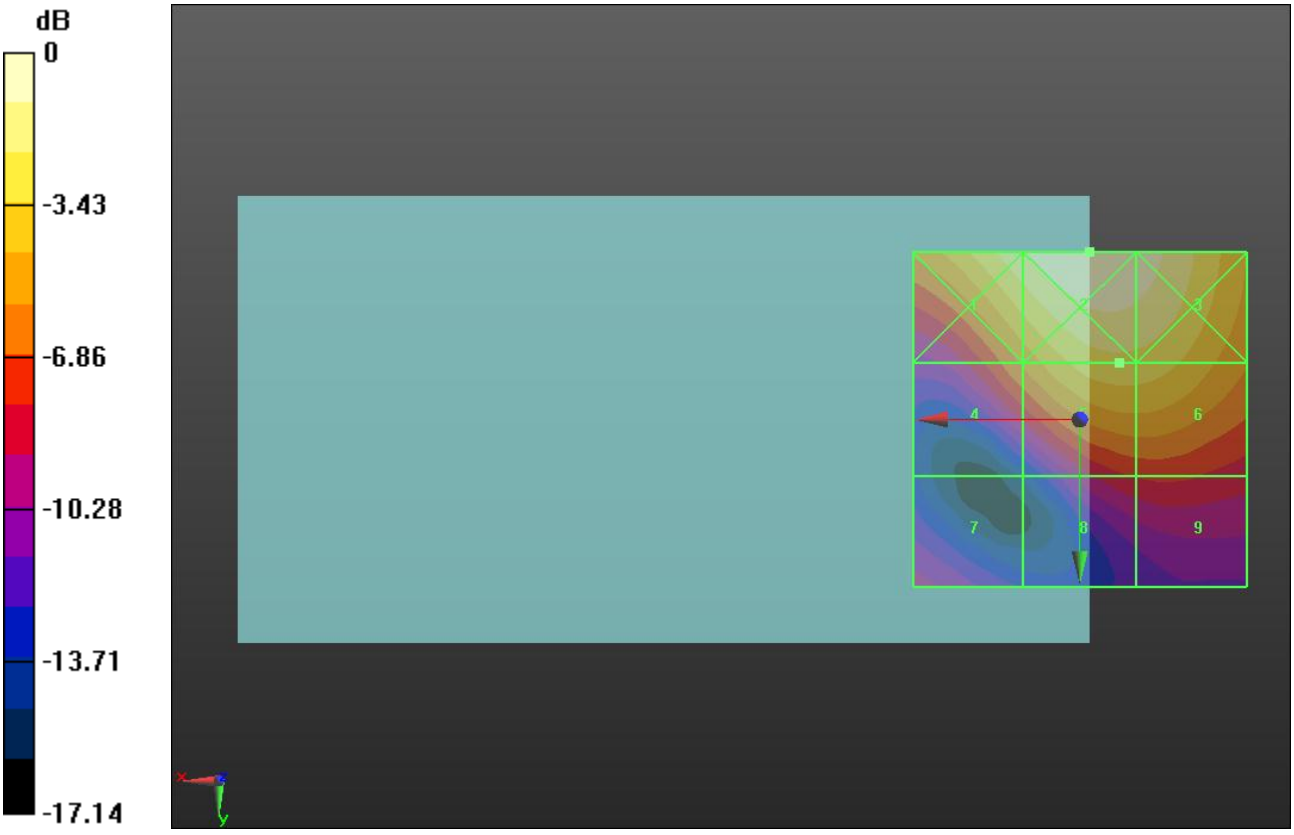
Communication System: GPRS-FDD (TDMA, GMSK, 1 slot); Frequency: 1909.8 MHz; Duty Cycle: 1:8.00018
Phantom section: RF Section
DASY5 Configuration:
- Probe: ER3DV6 - SN2339; ConvF(1, 1, 1); Calibrated: 1/20/2012
- Sensor-Surface: (Fix Surface)
- Electronics: DAE4 Sn1239; Calibrated: 6/6/2012
- Phantom: 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 = 68.121 V/m
Probe Modulation Factor = 2.820
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 21.693 V/m; Power Drift = 0.0024 dB
Hearing Aid Near-Field Category: M3 (AWF -5 dB)

Peak E-field in V/m

Grid 1 **79.230 M3**	Grid 2 **91.928 M2**	Grid 3 **87.220 M2**
Grid 4 **48.994 M3**	Grid 5 **68.121 M3**	Grid 6 **67.542 M3**
Grid 7 **29.962 M4**	Grid 8 **37.020 M4**	Grid 9 **37.906 M4**



0 dB = 91.930V/m

Date: 9/9/2012

Test Laboratory: UL CCS SAR Lab C

W-CDMA Band V

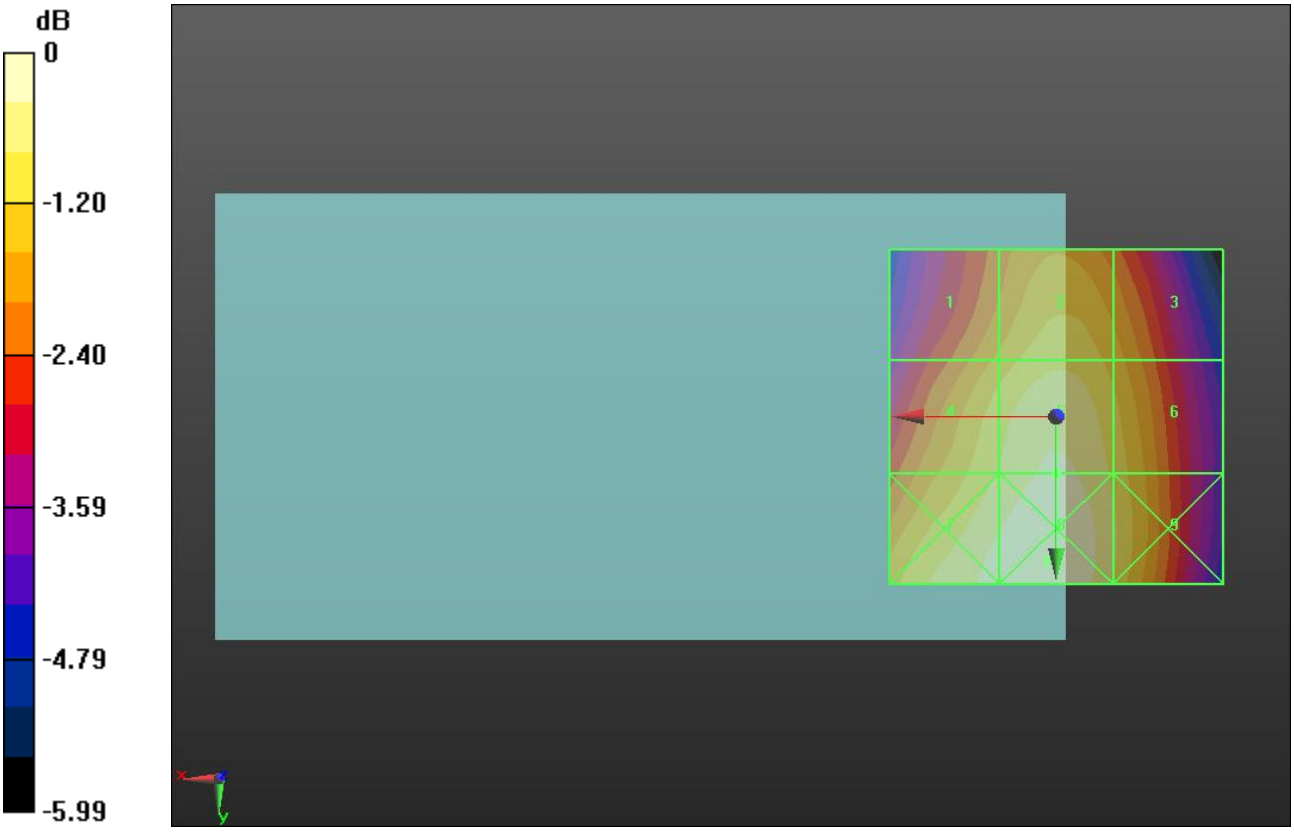
Communication System: UMTS-FDD (WCDMA); Frequency: 826.4 MHz; Duty Cycle: 1:1
Phantom section: RF Section
DASY5 Configuration:
- Probe: ER3DV6 - SN2339; ConvF(1, 1, 1); Calibrated: 1/20/2012
- Sensor-Surface: (Fix Surface)
- Electronics: DAE4 Sn1239; Calibrated: 6/6/2012
- Phantom: HAC Test Arch with 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 = 29.282 V/m
Probe Modulation Factor = 0.890
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 41.055 V/m; Power Drift = -0.007 dB
Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak E-field in V/m

Grid 1 **25.642 M4**	Grid 2 **27.448 M4**	Grid 3 **25.988 M4**
Grid 4 **27.906 M4**	Grid 5 **29.282 M4**	Grid 6 **27.480 M4**
Grid 7 **29.625 M4**	Grid 8 **30.385 M4**	Grid 9 **28.025 M4**



0 dB = 30.390V/m

Date: 9/9/2012

Test Laboratory: UL CCS SAR Lab C

W-CDMA Band V

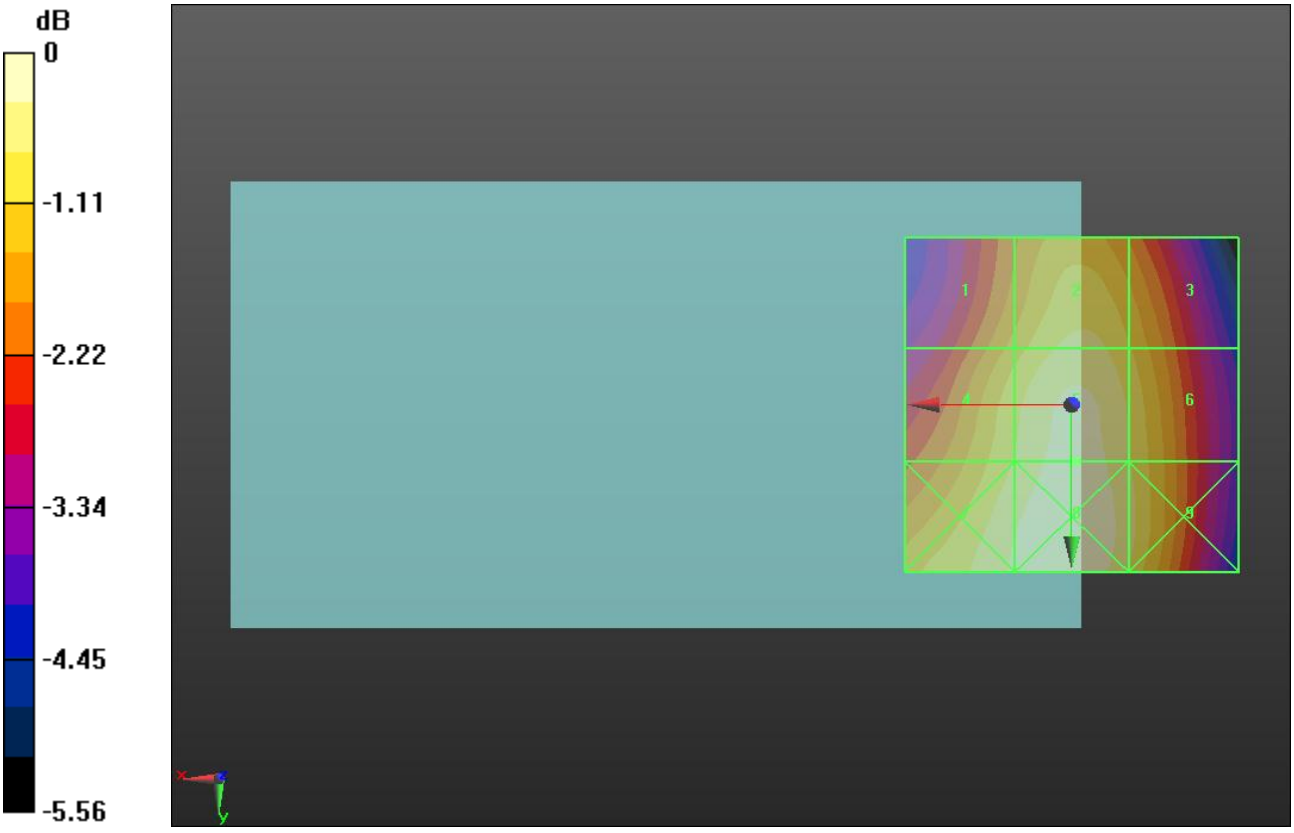
Communication System: UMTS-FDD (WCDMA); Frequency: 836.6 MHz; Duty Cycle: 1:1
Phantom section: RF Section
DASY5 Configuration:
- Probe: ER3DV6 - SN2339; ConvF(1, 1, 1); Calibrated: 1/20/2012
- Sensor-Surface: (Fix Surface)
- Electronics: DAE4 Sn1239; Calibrated: 6/6/2012
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB
- Measurement SW: DASY52, Version 52.8 (1);SEMCAD X Version 14.4.5 (3634)

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

Maximum value of peak Total field = 27.128 V/m
Probe Modulation Factor = 0.890
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 38.341 V/m; Power Drift = 0.0052 dB
Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak E-field in V/m

Grid 1 **23.908 M4**	Grid 2 **25.855 M4**	Grid 3 **24.570 M4**
Grid 4 **25.609 M4**	Grid 5 **27.128 M4**	Grid 6 **25.648 M4**
Grid 7 **26.769 M4**	Grid 8 **27.758 M4**	Grid 9 **25.930 M4**



0 dB = 27.760V/m

Date: 9/9/2012

Test Laboratory: UL CCS SAR Lab C

W-CDMA Band V

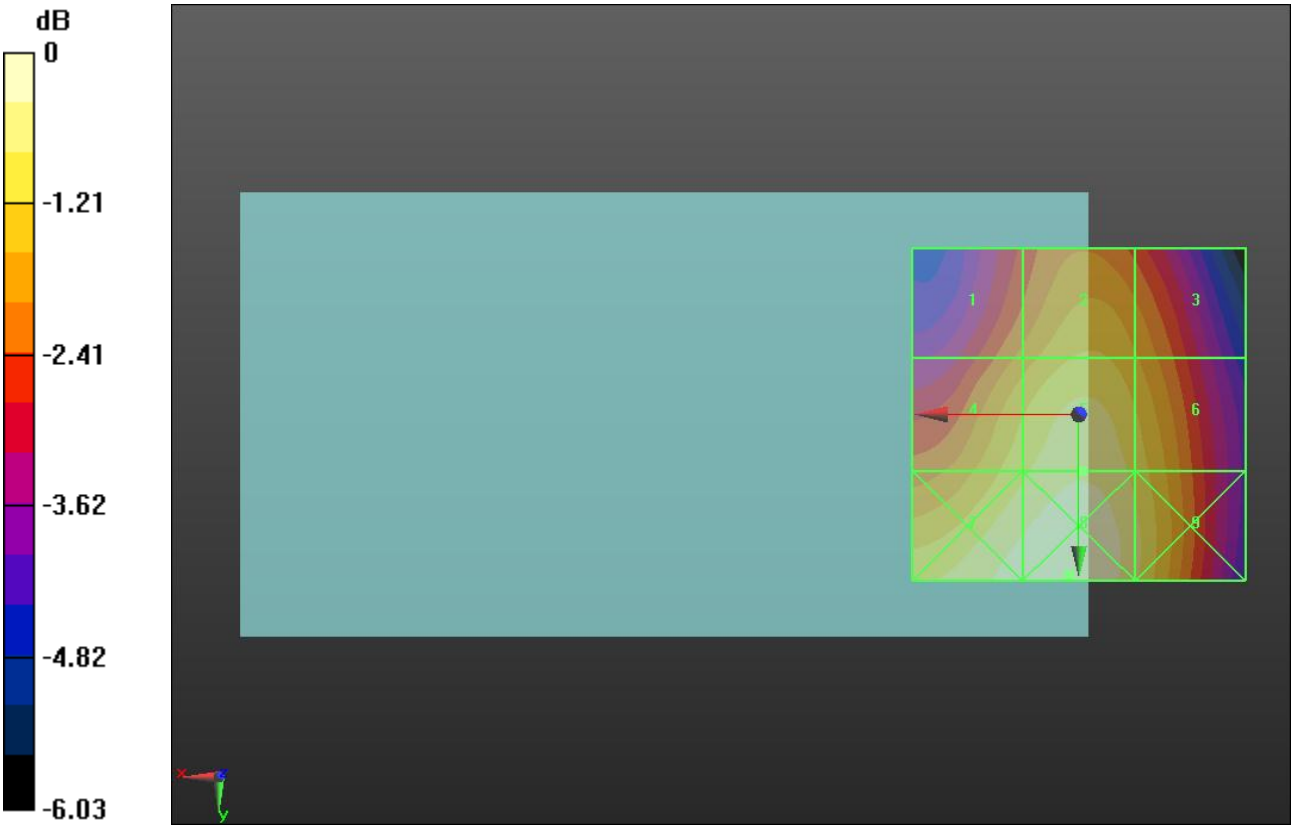
Communication System: UMTS-FDD (WCDMA); Frequency: 846.6 MHz; Duty Cycle: 1:1
Phantom section: RF Section
DASY5 Configuration:
- Probe: ER3DV6 - SN2339; ConvF(1, 1, 1); Calibrated: 1/20/2012
- Sensor-Surface: (Fix Surface)
- Electronics: DAE4 Sn1239; Calibrated: 6/6/2012
- Phantom: HAC Test Arch with 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 = 22.619 V/m
Probe Modulation Factor = 0.890
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 31.315 V/m; Power Drift = -0.02 dB
Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak E-field in V/m

Grid 1 **19.270 M4**	Grid 2 **20.903 M4**	Grid 3 **19.933 M4**
Grid 4 **21.506 M4**	Grid 5 **22.619 M4**	Grid 6 **21.398 M4**
Grid 7 **23.346 M4**	Grid 8 **23.833 M4**	Grid 9 **22.028 M4**



0 dB = 23.830V/m

Date: 9/9/2012

Test Laboratory: UL CCS SAR Lab C

W-CDMA Band IV

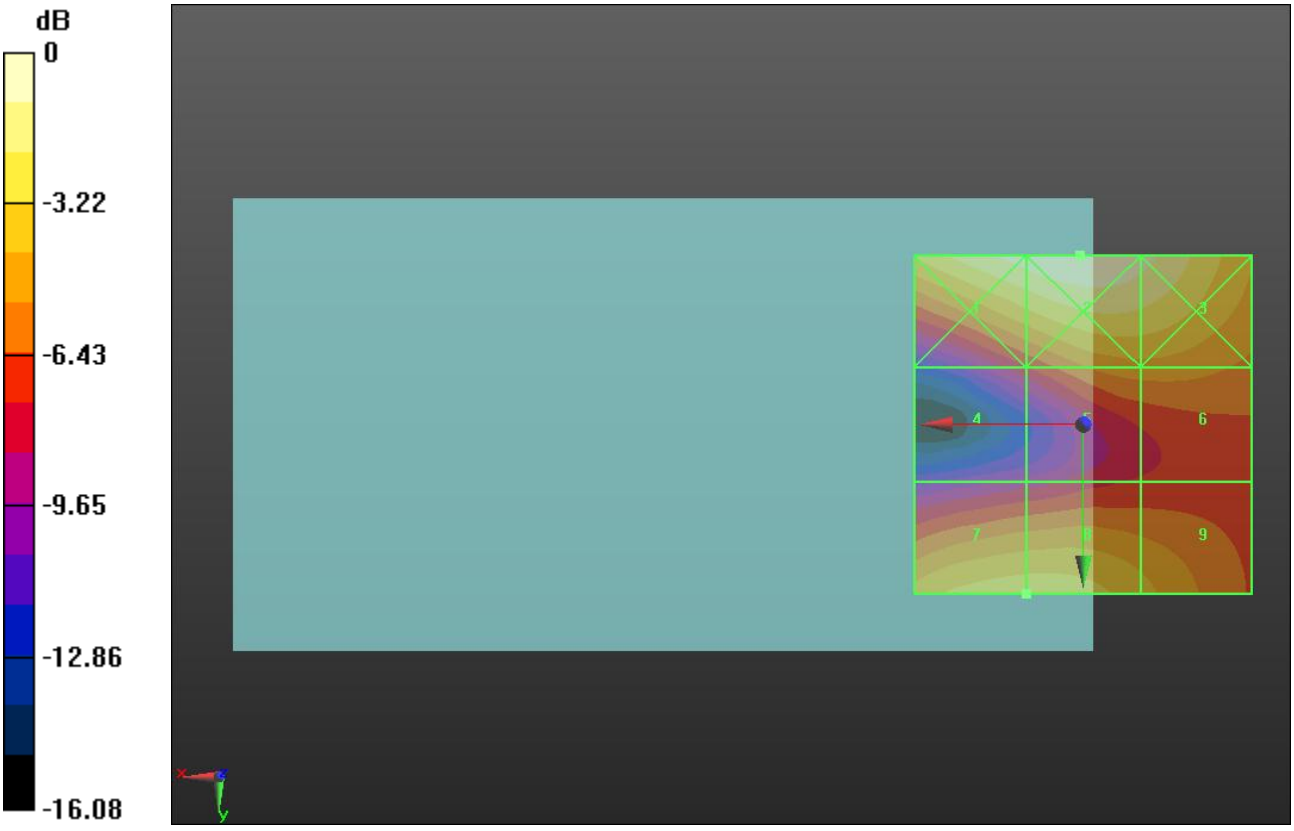
Communication System: UMTS-FDD (WCDMA); Frequency: 1712.4 MHz; Duty Cycle: 1:1
Phantom section: RF Section
DASY5 Configuration:
- Probe: ER3DV6 - SN2339; ConvF(1, 1, 1); Calibrated: 1/20/2012
- Sensor-Surface: (Fix Surface)
- Electronics: DAE4 Sn1239; Calibrated: 6/6/2012
- Phantom: HAC Test Arch with 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 = 21.224 V/m
Probe Modulation Factor = 0.960
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 11.738 V/m; Power Drift = 0.02 dB
Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak E-field in V/m

Grid 1 **26.909 M4**	Grid 2 **28.477 M4**	Grid 3 **26.284 M4**
Grid 4 **11.967 M4**	Grid 5 **16.608 M4**	Grid 6 **16.632 M4**
Grid 7 **21.224 M4**	Grid 8 **21.224 M4**	Grid 9 **18.250 M4**



0 dB = 28.480V/m

Date: 9/9/2012

Test Laboratory: UL CCS SAR Lab C

W-CDMA Band IV

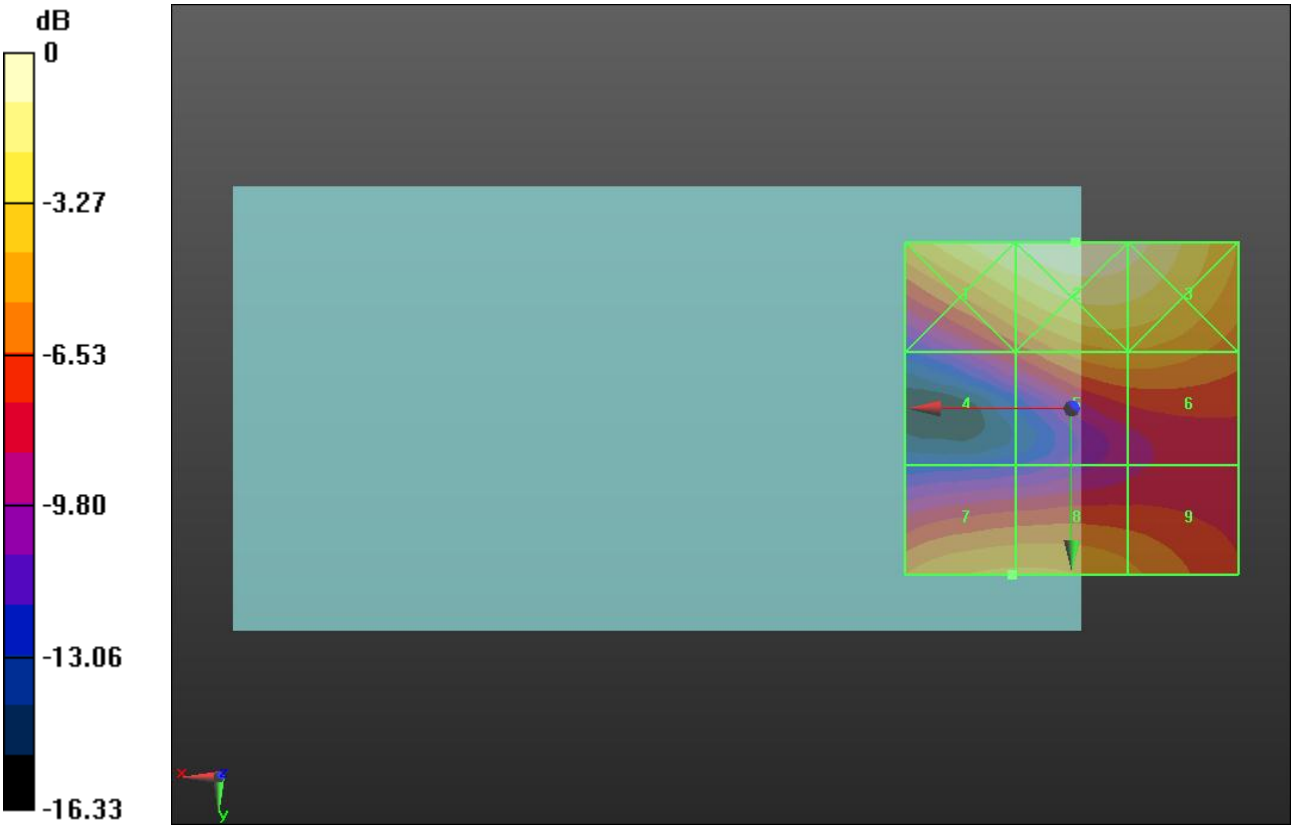
Communication System: UMTS-FDD (WCDMA); Frequency: 1732.4 MHz; Duty Cycle: 1:1
Phantom section: RF Section
DASY5 Configuration:
- Probe: ER3DV6 - SN2339; ConvF(1, 1, 1); Calibrated: 1/20/2012
- Sensor-Surface: (Fix Surface)
- Electronics: DAE4 Sn1239; Calibrated: 6/6/2012
- Phantom: HAC Test Arch with 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 = 19.183 V/m
Probe Modulation Factor = 0.960
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 12.449 V/m; Power Drift = -0.01 dB
Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak E-field in V/m

Grid 1 **28.021 M4**	Grid 2 **30.596 M4**	Grid 3 **28.761 M4**
Grid 4 **13.241 M4**	Grid 5 **18.310 M4**	Grid 6 **18.289 M4**
Grid 7 **19.183 M4**	Grid 8 **19.183 M4**	Grid 9 **17.027 M4**



0 dB = 30.600V/m

Date: 9/9/2012

Test Laboratory: UL CCS SAR Lab C

W-CDMA Band IV

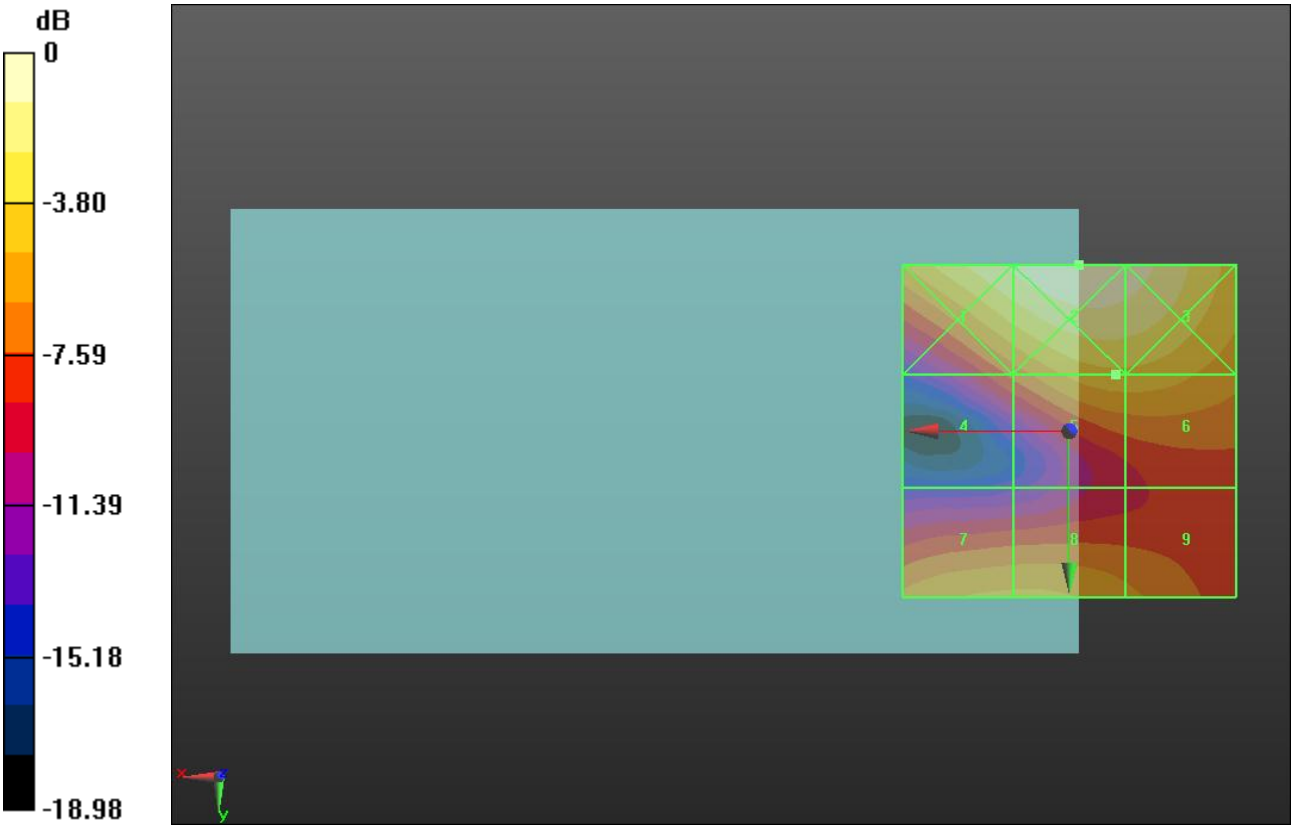
Communication System: UMTS-FDD (WCDMA); Frequency: 1752.5 MHz; Duty Cycle: 1:1
Phantom section: RF Section
DASY5 Configuration:
- Probe: ER3DV6 - SN2339; ConvF(1, 1, 1); Calibrated: 1/20/2012
- Sensor-Surface: (Fix Surface)
- Electronics: DAE4 Sn1239; Calibrated: 6/6/2012
- Phantom: HAC Test Arch with 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 = 16.793 V/m
Probe Modulation Factor = 0.960
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 12.219 V/m; Power Drift = -0.05 dB
Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak E-field in V/m

Grid 1 **24.171 M4**	Grid 2 **26.962 M4**	Grid 3 **25.402 M4**
Grid 4 **11.796 M4**	Grid 5 **16.793 M4**	Grid 6 **16.750 M4**
Grid 7 **15.598 M4**	Grid 8 **15.657 M4**	Grid 9 **13.626 M4**



0 dB = 26.960V/m

Date: 9/9/2012

Test Laboratory: UL CCS SAR Lab C

W-CDMA Band II

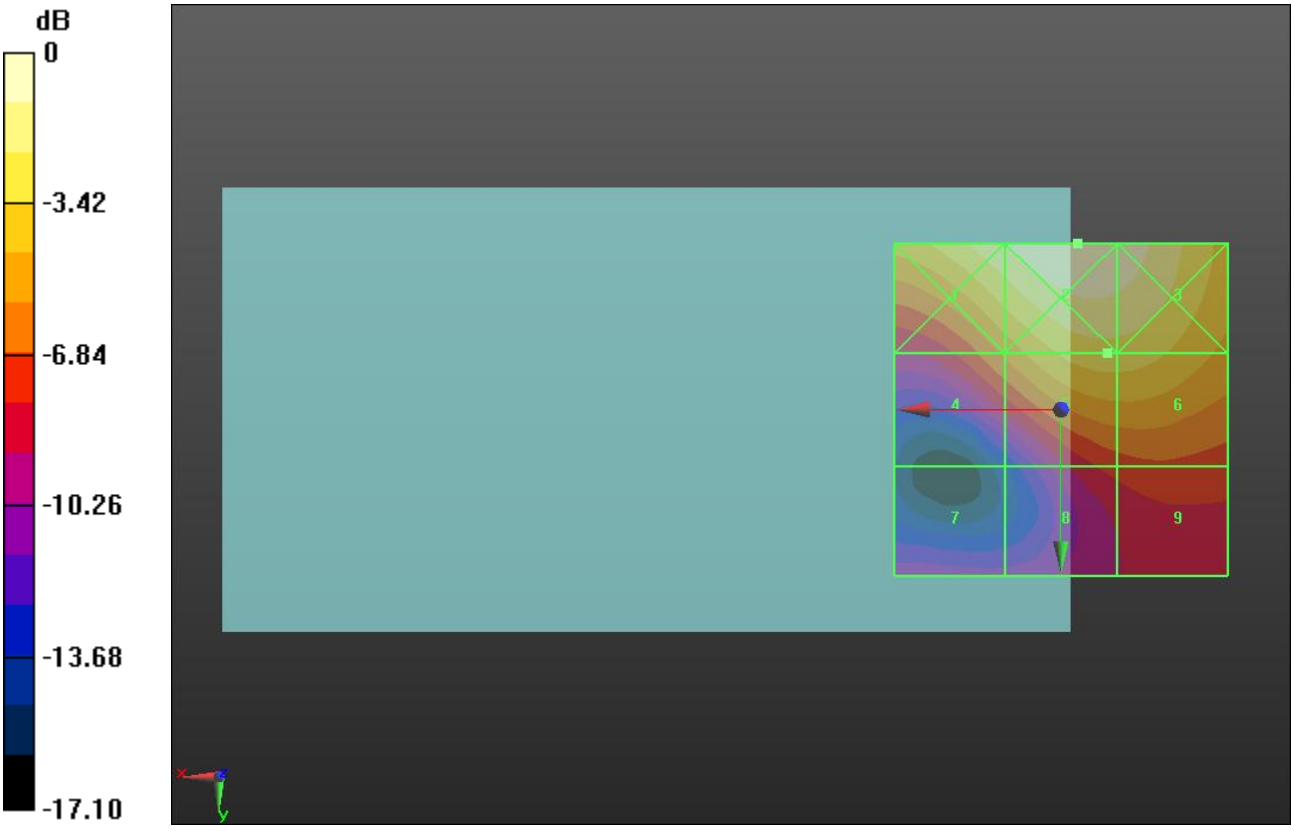
Communication System: UMTS-FDD (WCDMA); Frequency: 1852.4 MHz; Duty Cycle: 1:1
Phantom section: RF Section
DASY5 Configuration:
- Probe: ER3DV6 - SN2339; ConvF(1, 1, 1); Calibrated: 1/20/2012
- Sensor-Surface: (Fix Surface)
- Electronics: DAE4 Sn1239; Calibrated: 6/6/2012
- Phantom: HAC Test Arch with 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 = 24.662 V/m
Probe Modulation Factor = 0.960
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 22.306 V/m; Power Drift = -0.006 dB
Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak E-field in V/m

Grid 1 **29.591 M4**	Grid 2 **33.780 M4**	Grid 3 **32.322 M4**
Grid 4 **18.022 M4**	Grid 5 **24.662 M4**	Grid 6 **24.575 M4**
Grid 7 **9.993 M4**	Grid 8 **14.354 M4**	Grid 9 **15.081 M4**



0 dB = 33.780V/m

Date: 9/9/2012

Test Laboratory: UL CCS SAR Lab C

W-CDMA Band II

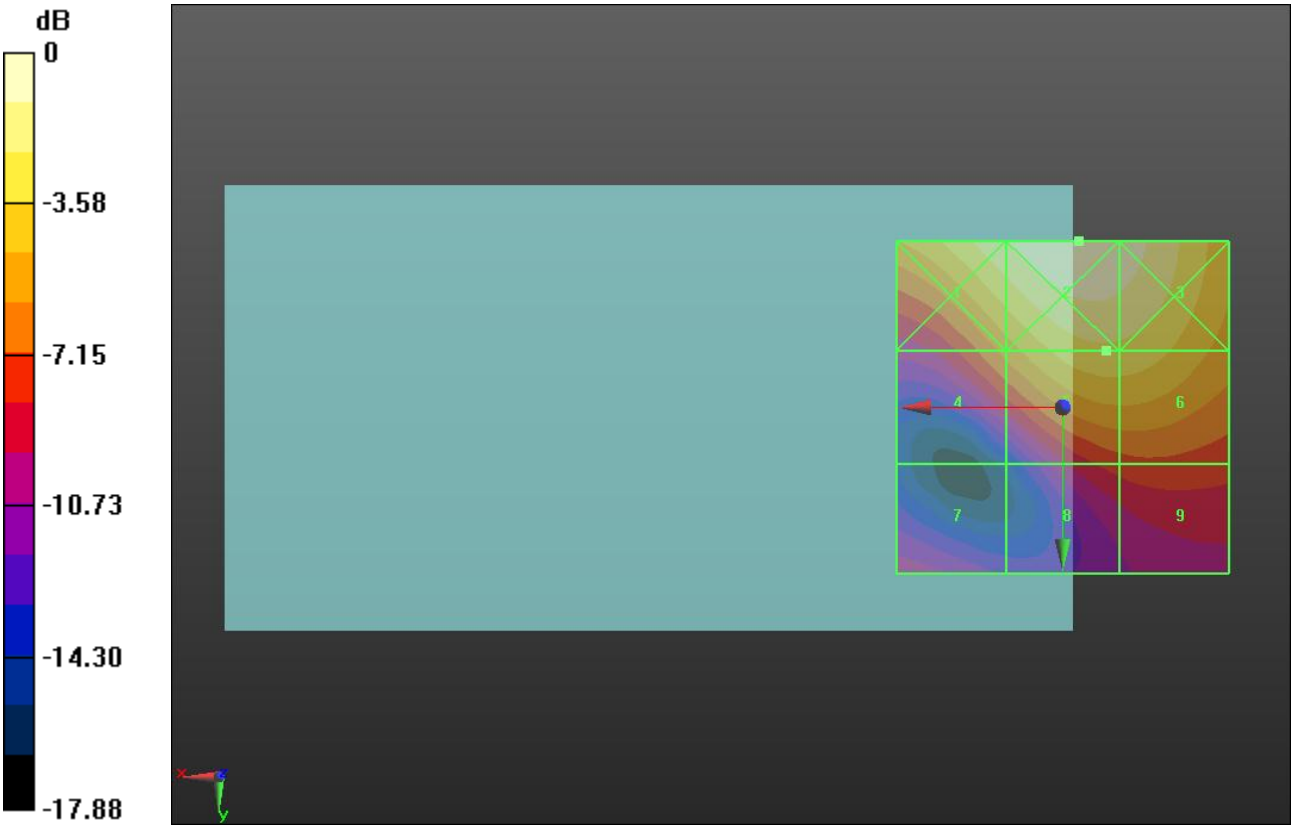
Communication System: UMTS-FDD (WCDMA); Frequency: 1880 MHz; Duty Cycle: 1:1
Phantom section: RF Section
DASY5 Configuration:
- Probe: ER3DV6 - SN2339; ConvF(1, 1, 1); Calibrated: 1/20/2012
- Sensor-Surface: (Fix Surface)
- Electronics: DAE4 Sn1239; Calibrated: 6/6/2012
- Phantom: HAC Test Arch with 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 = 29.257 V/m
Probe Modulation Factor = 0.960
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 27.001 V/m; Power Drift = -0.03 dB
Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak E-field in V/m

Grid 1 **34.472 M4**	Grid 2 **39.642 M4**	Grid 3 **37.625 M4**
Grid 4 **21.053 M4**	Grid 5 **29.257 M4**	Grid 6 **29.061 M4**
Grid 7 **12.687 M4**	Grid 8 **16.311 M4**	Grid 9 **16.894 M4**



0 dB = 39.640V/m

Date: 9/9/2012

Test Laboratory: UL CCS SAR Lab C

W-CDMA Band II

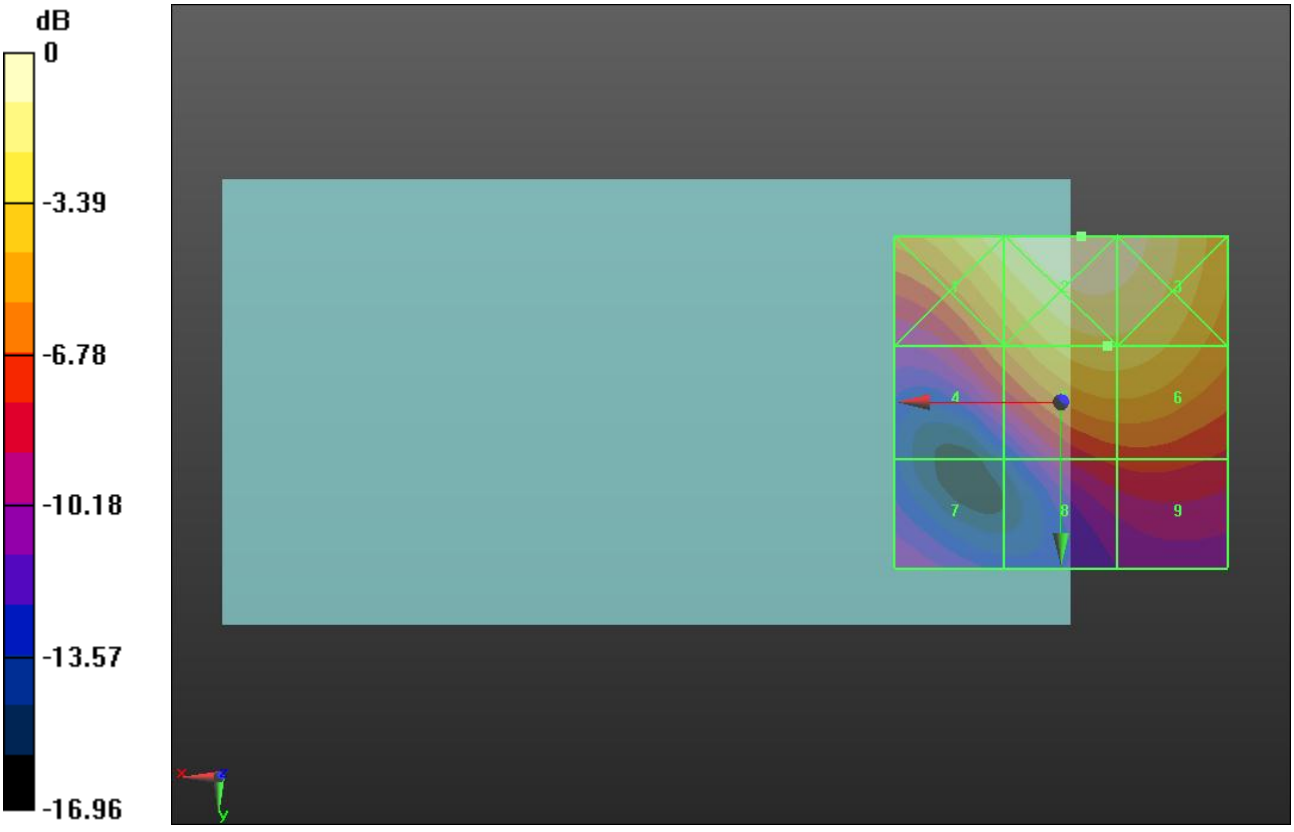
Communication System: UMTS-FDD (WCDMA); Frequency: 1907.6 MHz; Duty Cycle: 1:1
Phantom section: RF Section
DASY5 Configuration:
- Probe: ER3DV6 - SN2339; ConvF(1, 1, 1); Calibrated: 1/20/2012
- Sensor-Surface: (Fix Surface)
- Electronics: DAE4 Sn1239; Calibrated: 6/6/2012
- Phantom: HAC Test Arch with 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 = 30.319 V/m
Probe Modulation Factor = 0.960
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 28.212 V/m; Power Drift = -0.02 dB
Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak E-field in V/m

Grid 1 **34.575 M4**	Grid 2 **40.533 M4**	Grid 3 **38.861 M4**
Grid 4 **21.469 M4**	Grid 5 **30.319 M4**	Grid 6 **30.183 M4**
Grid 7 **12.623 M4**	Grid 8 **17.104 M4**	Grid 9 **17.516 M4**



0 dB = 40.530V/m