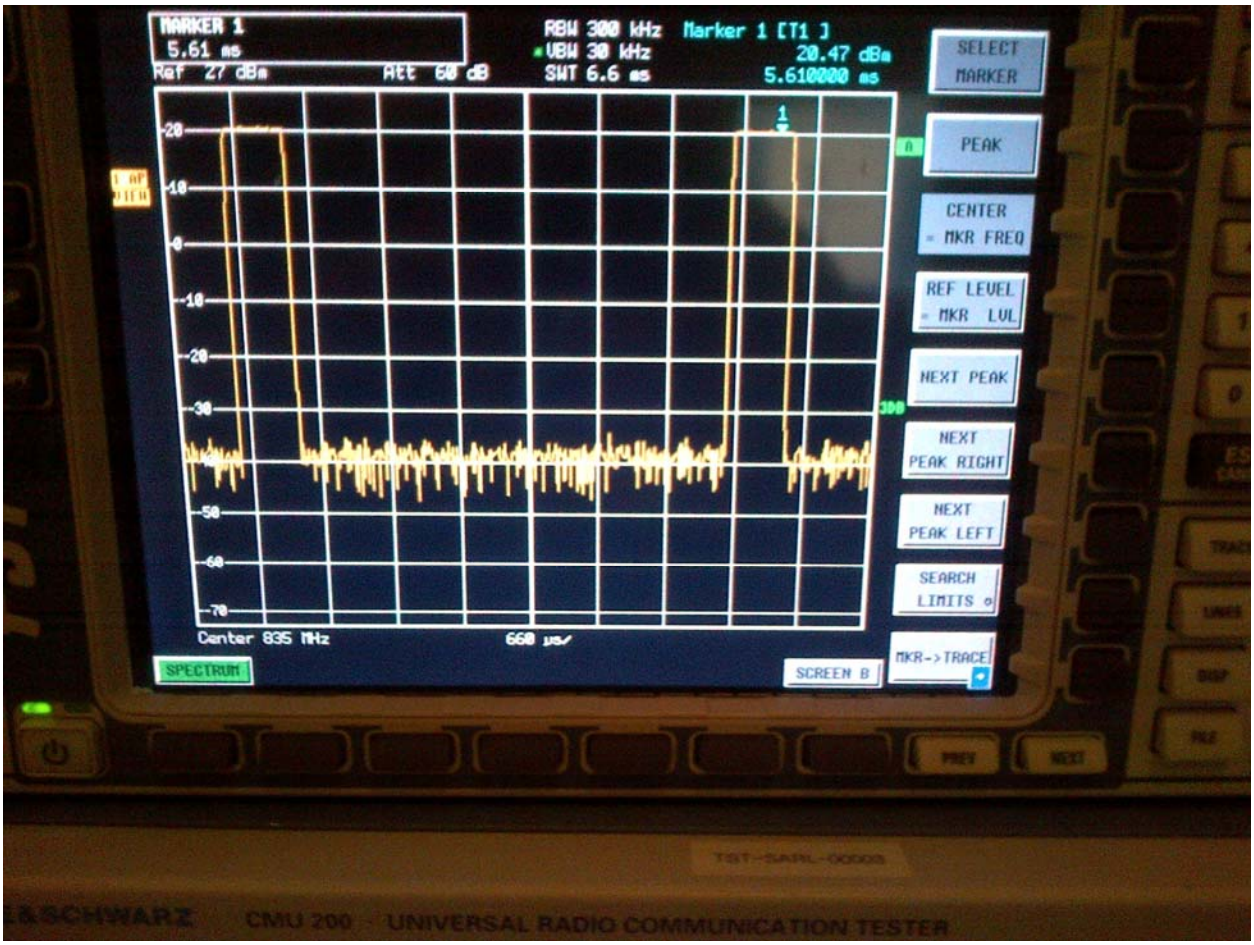
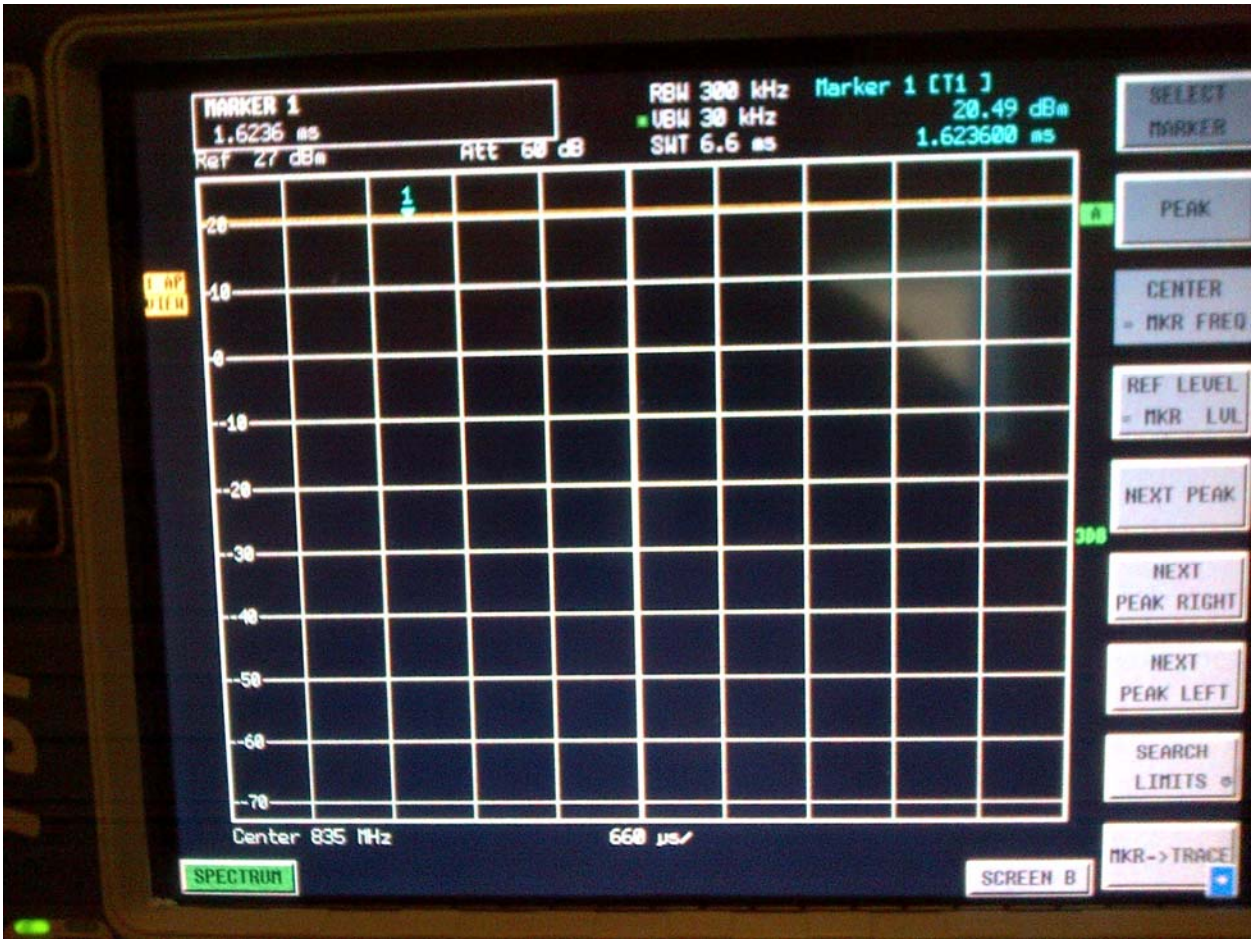
Annex A: Measurement data and plots

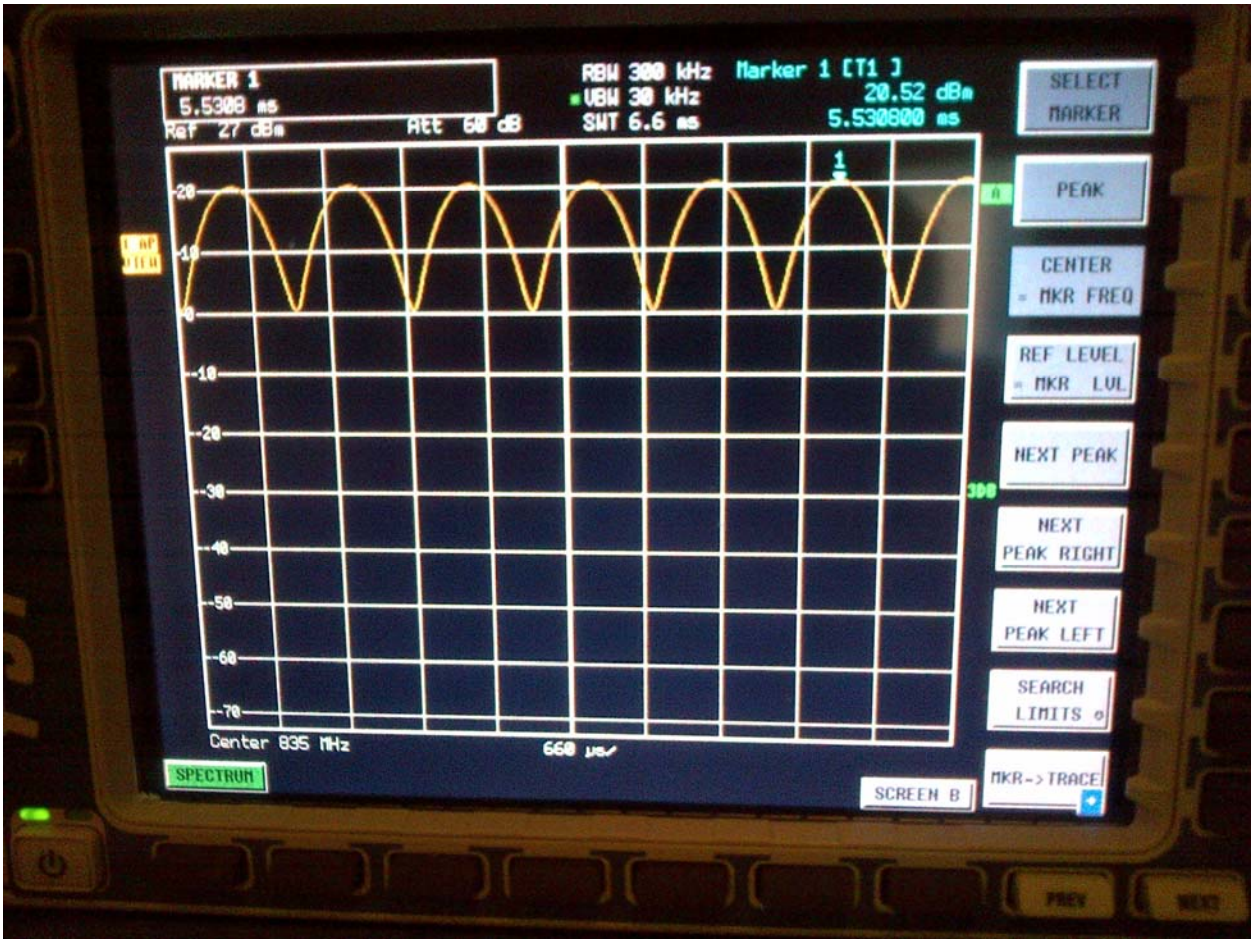
A.1 Spectrum analyser plots: GSM, UMTS, CDMA, CW, 80%AM, signals



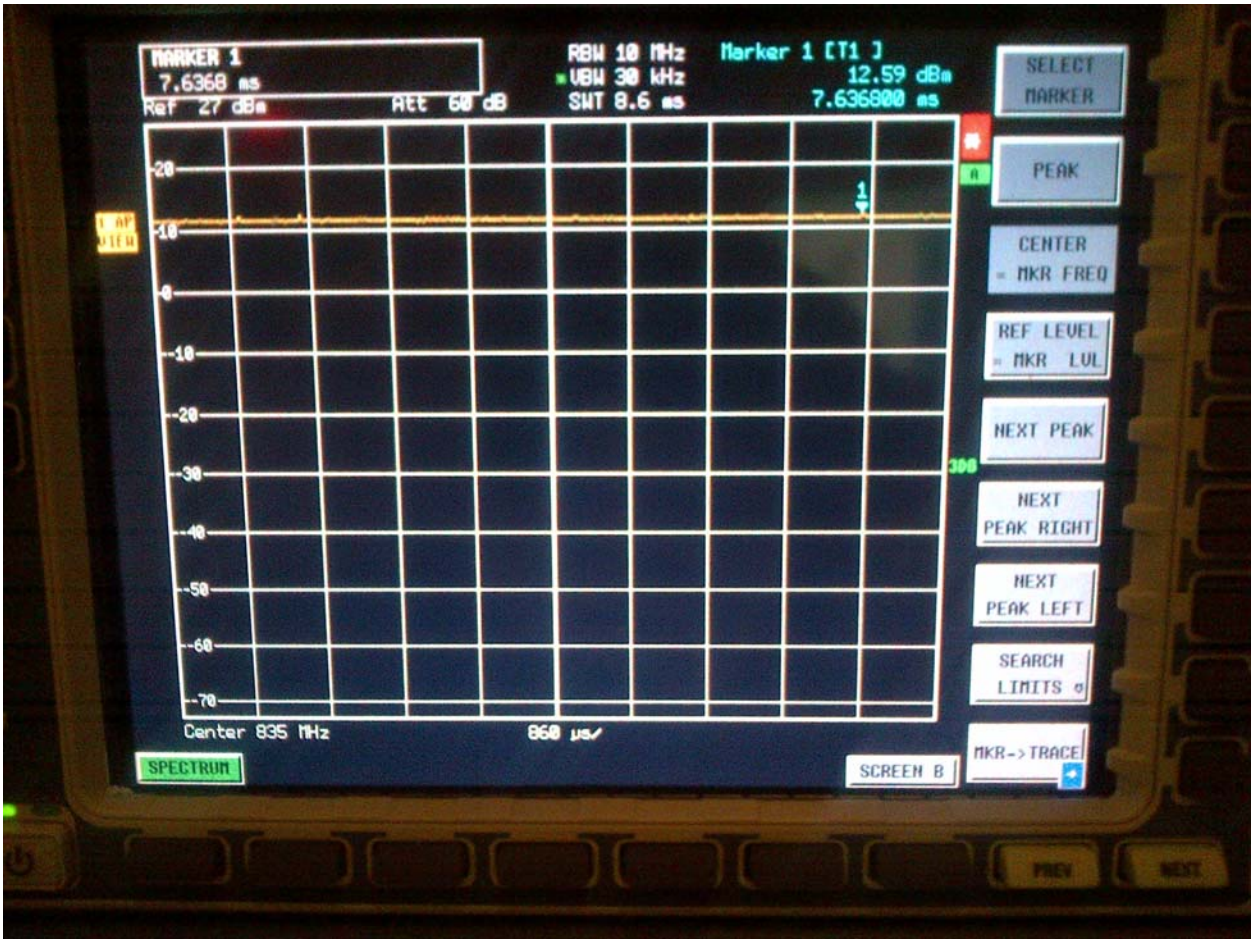
GSM 835 MHz



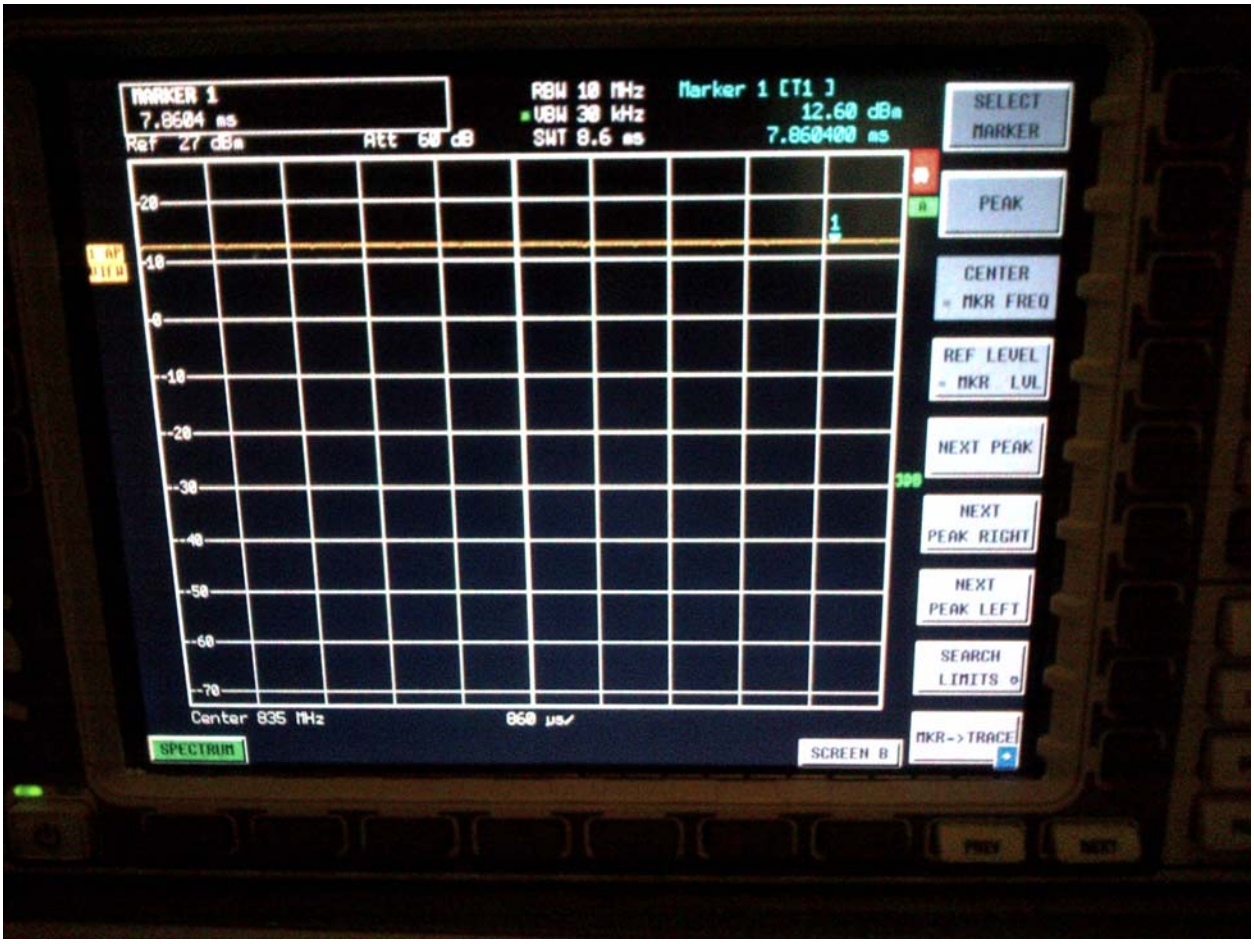
CW 835 MHz



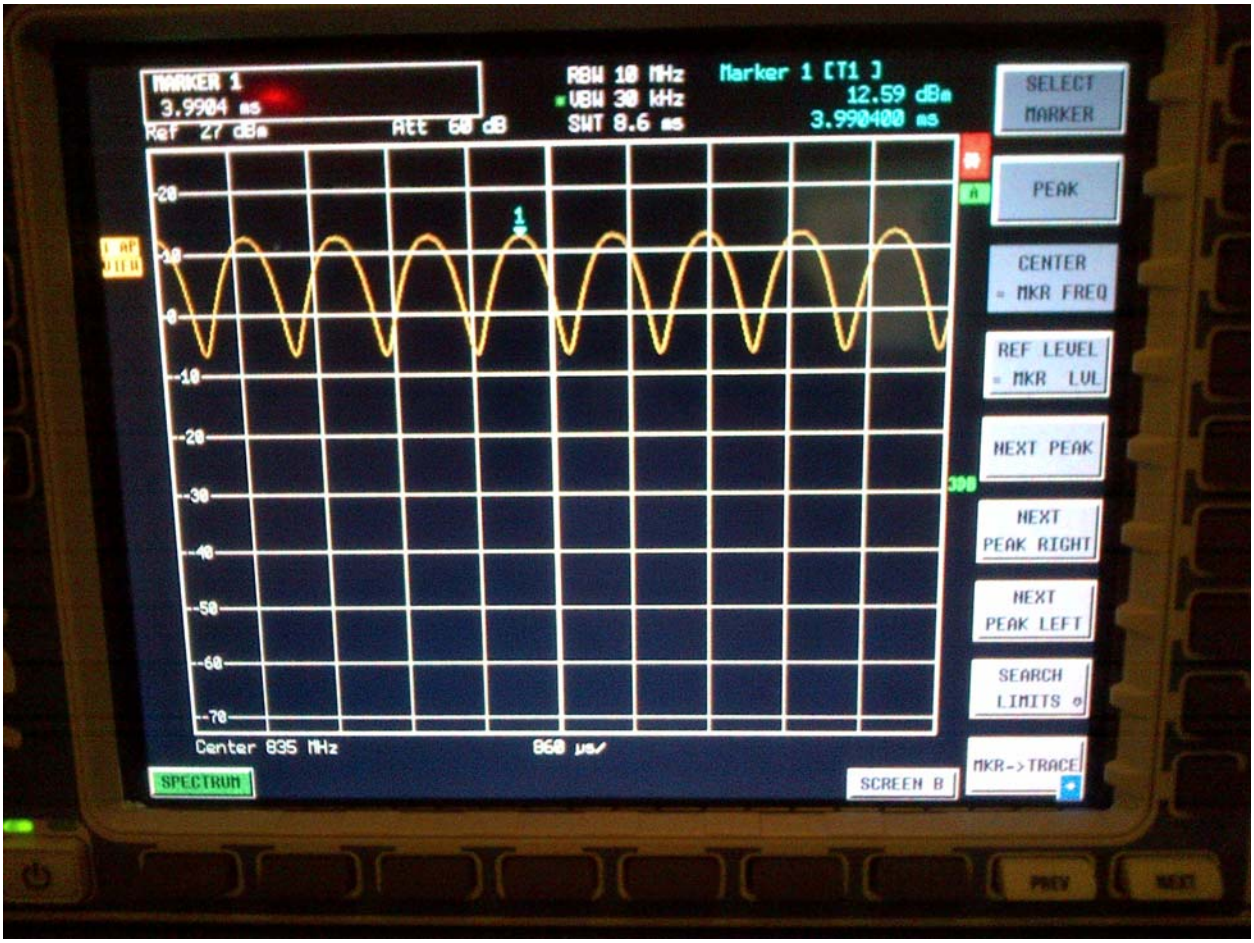
AM 80% 835 MHz



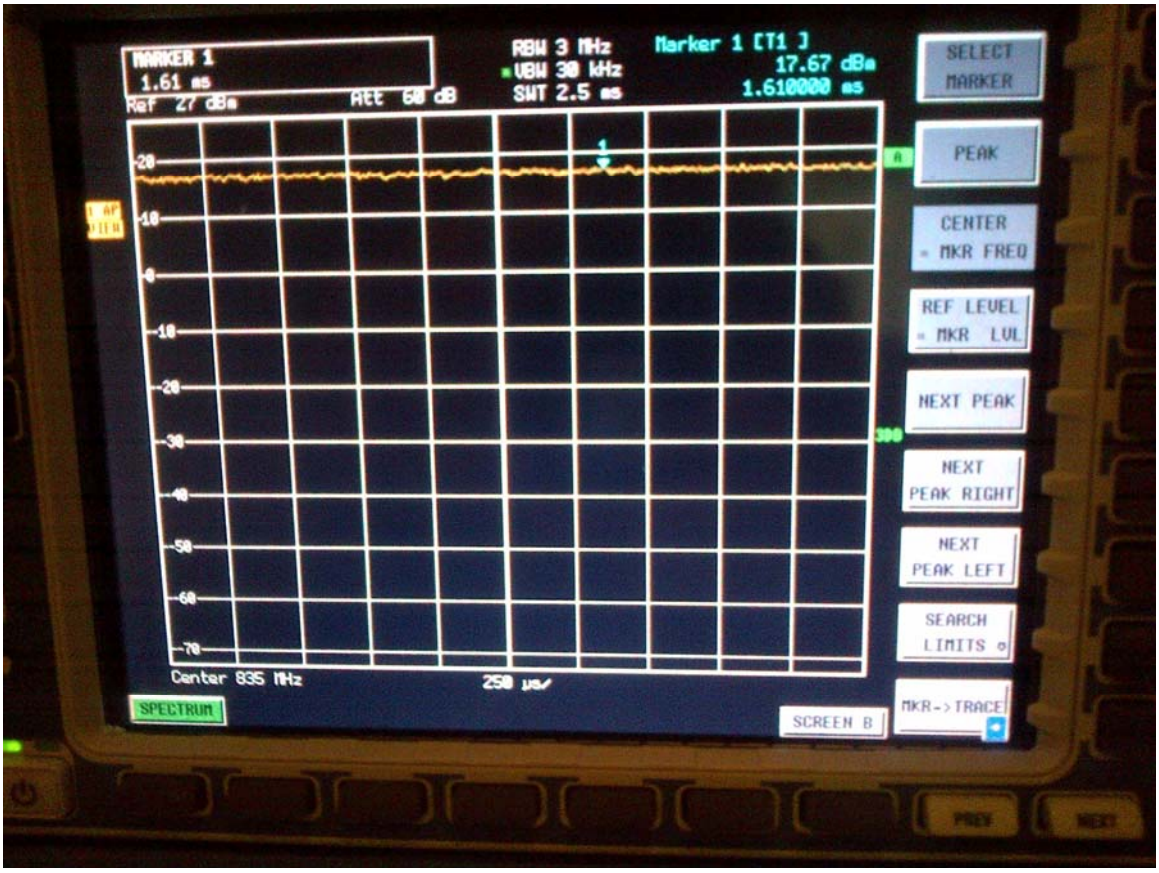
UMTS 835 MHz



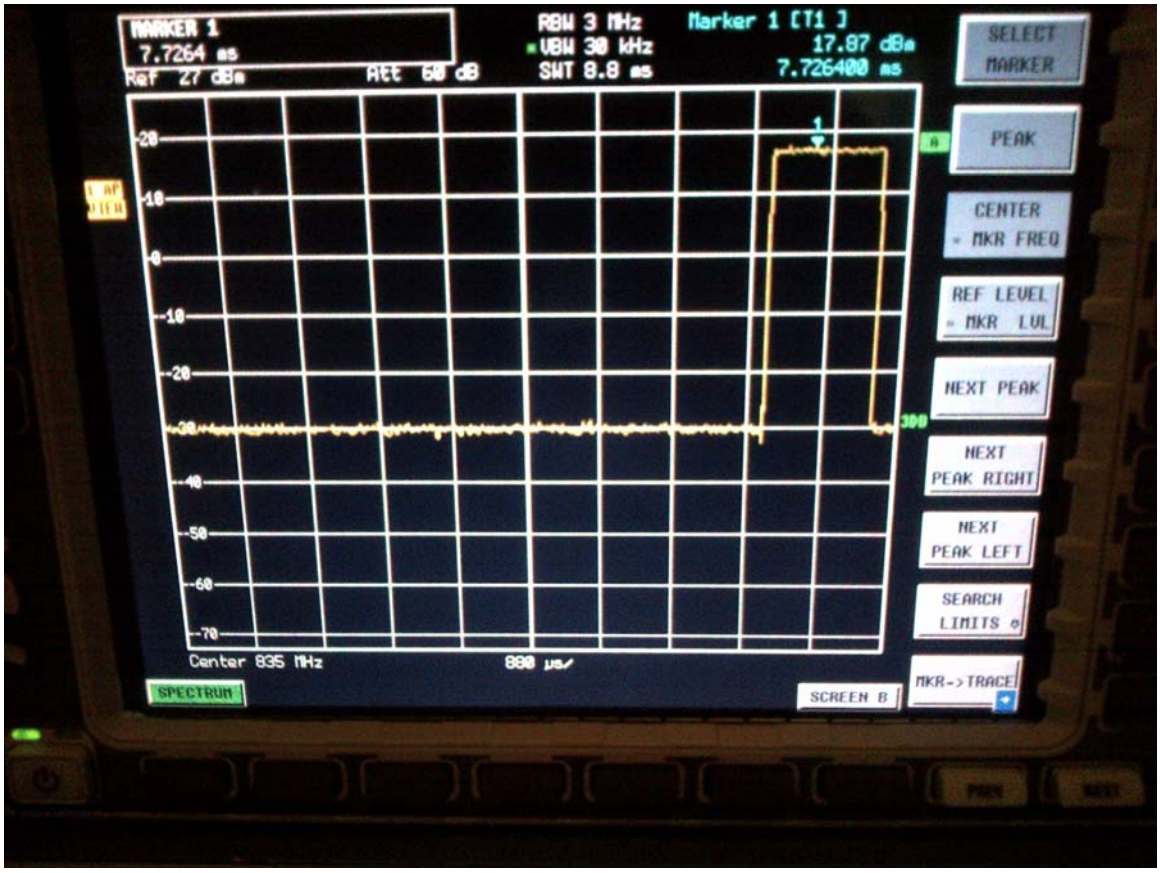
CW 835 MHz



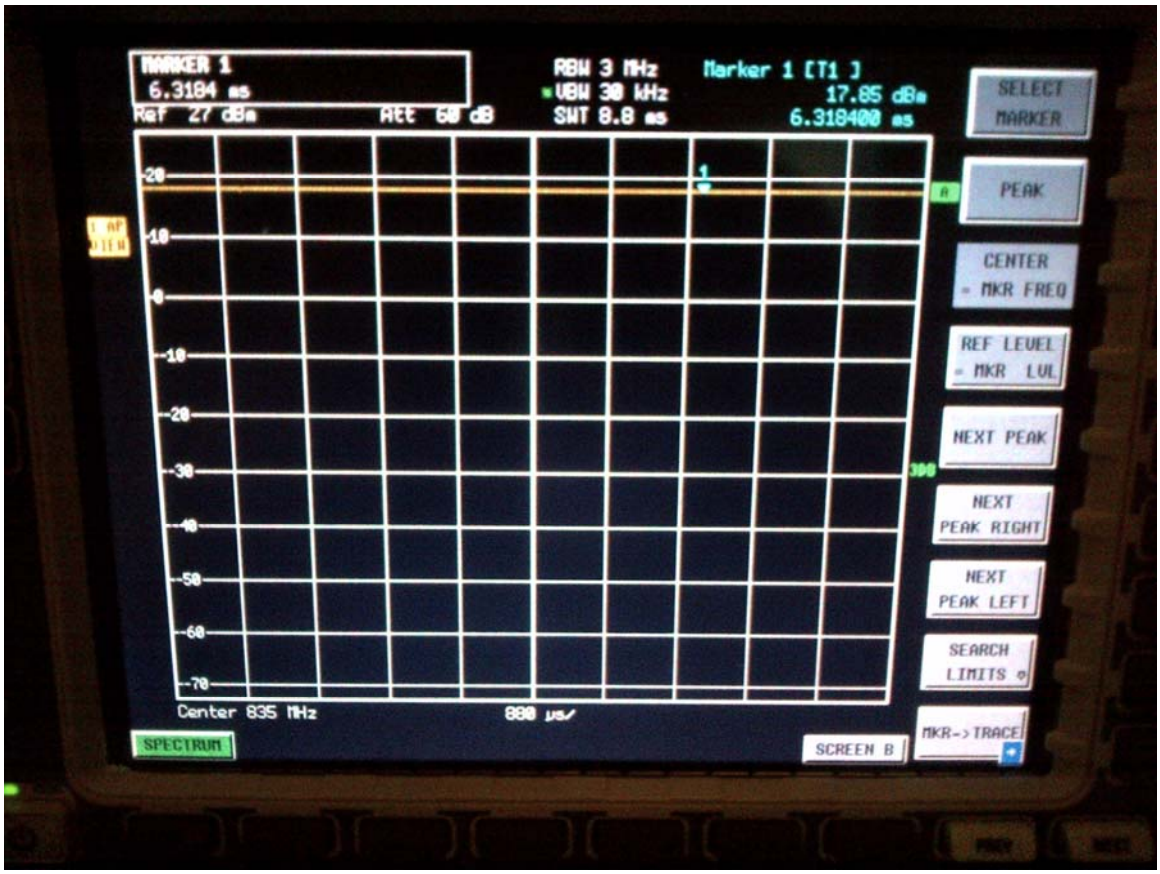
AM 80% 835 MHz



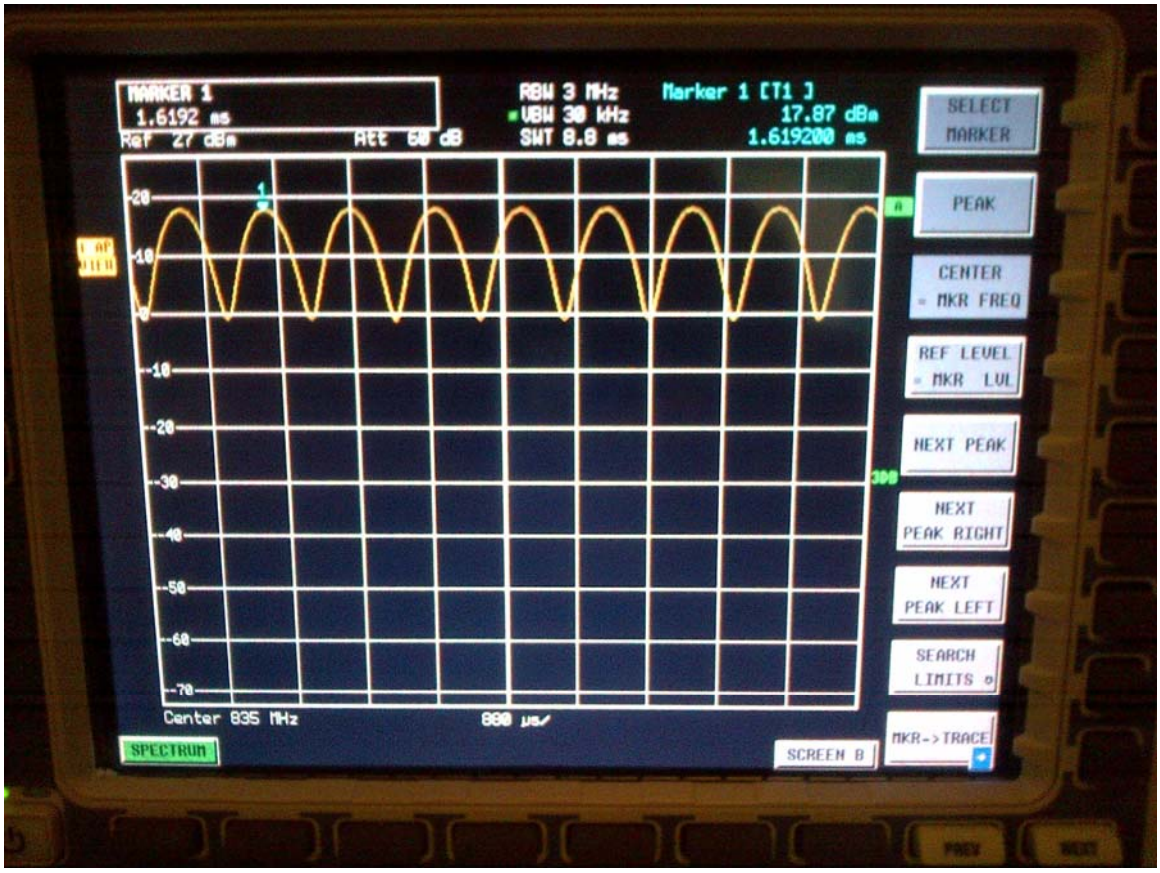
CDMA 835 MHz (BC0)



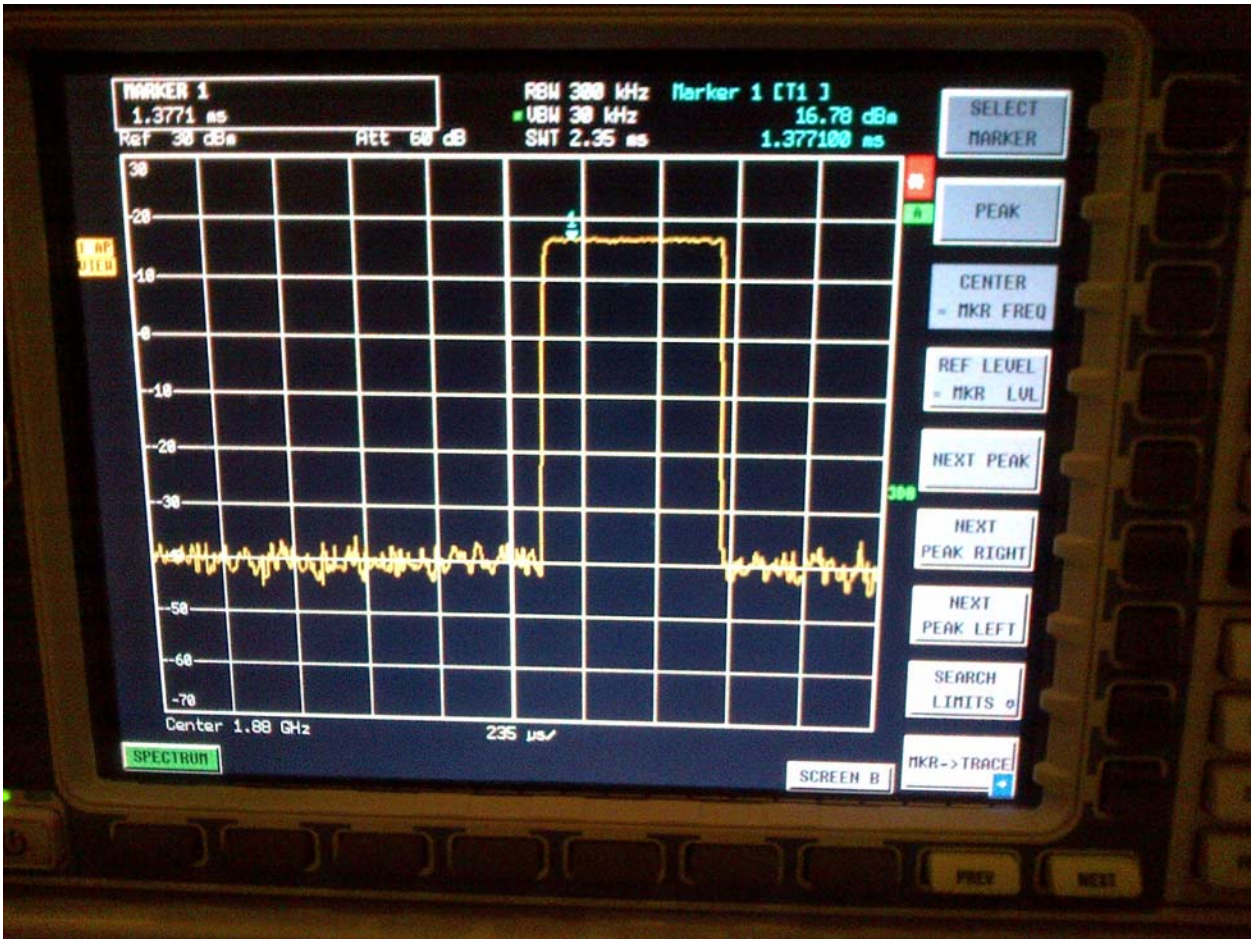
CDMA 835 MHz (BC0) 1/8th



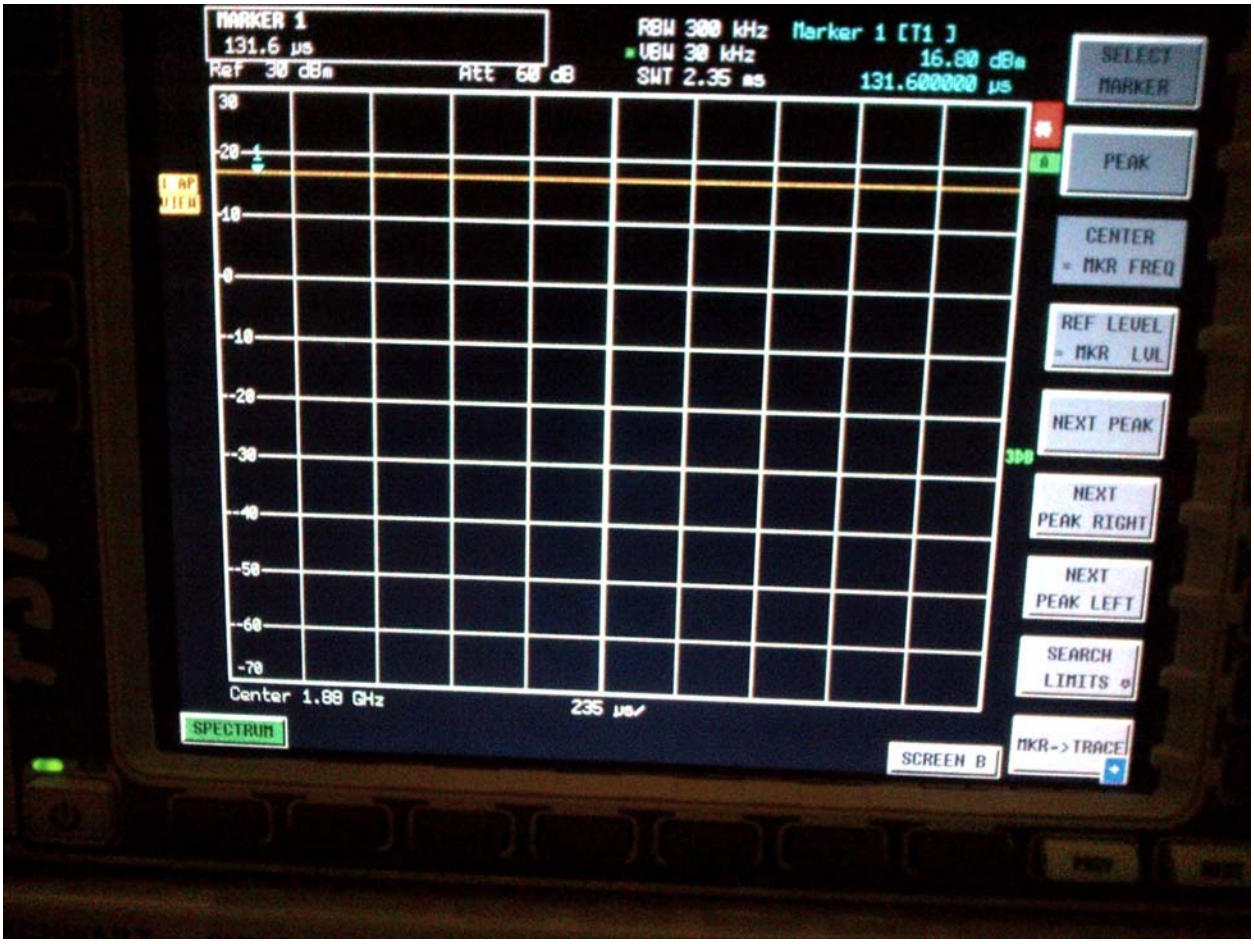
CW 835 MHz



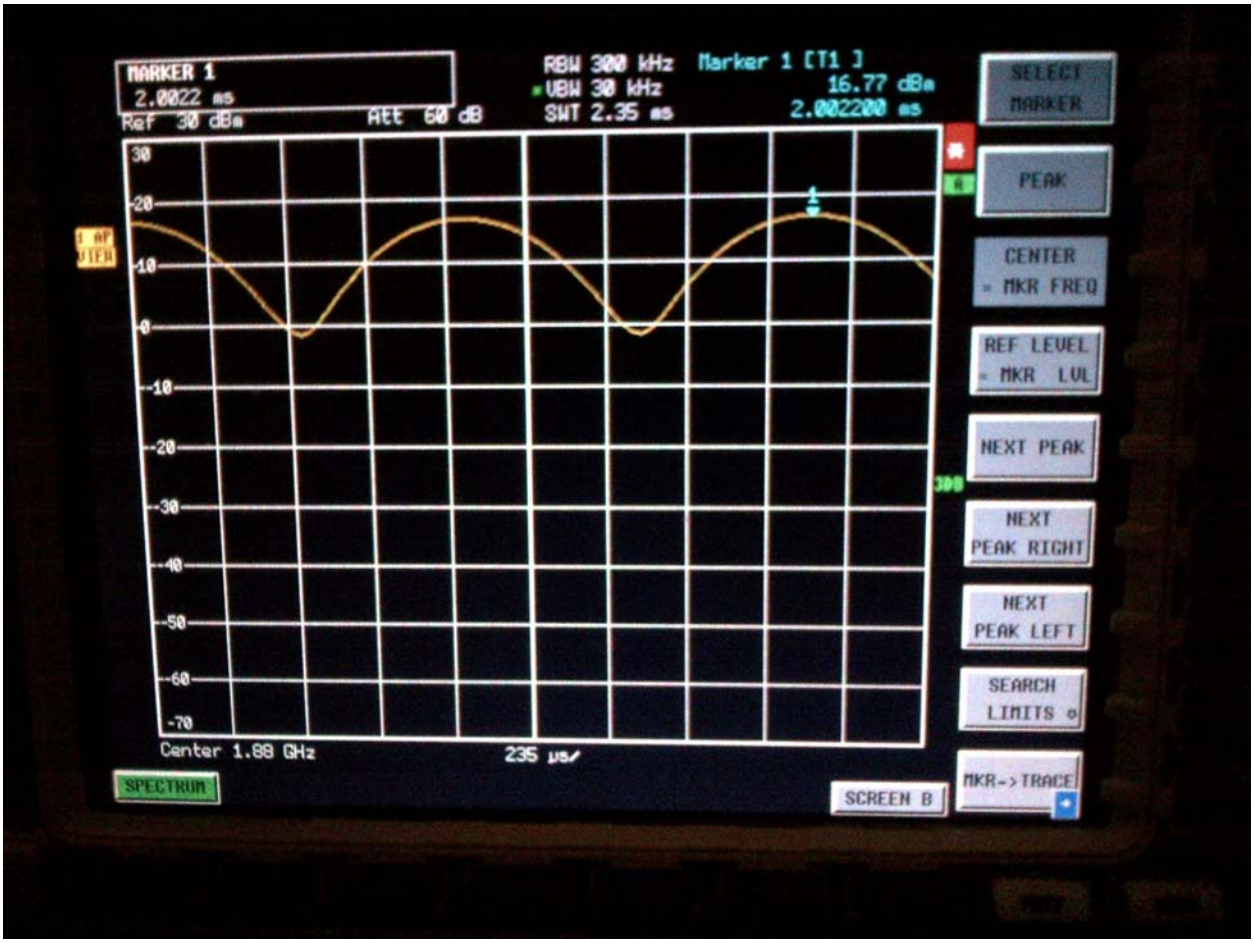
AM 80% 835 MHz



GSM 1880 MHz

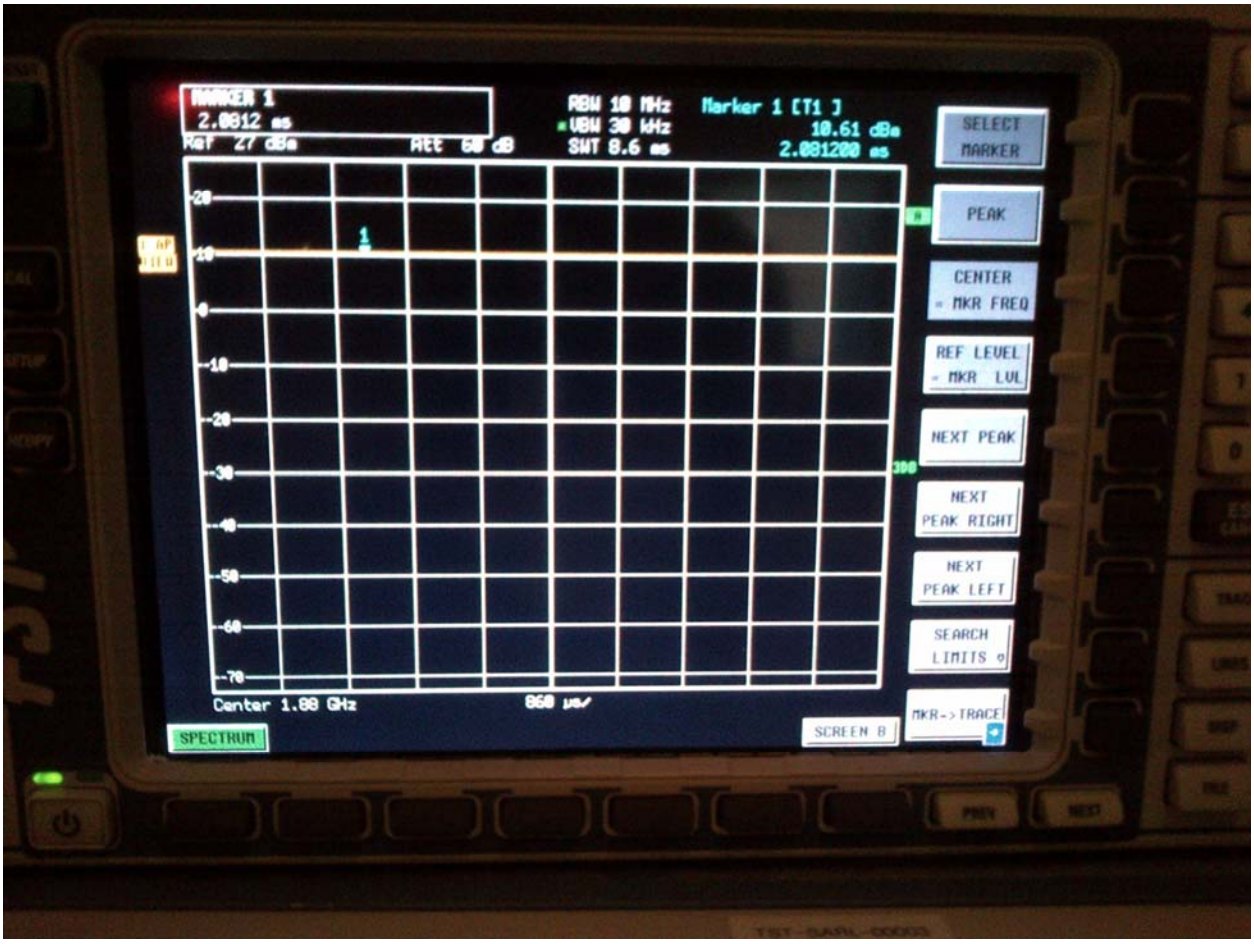


CW 1880 MHz

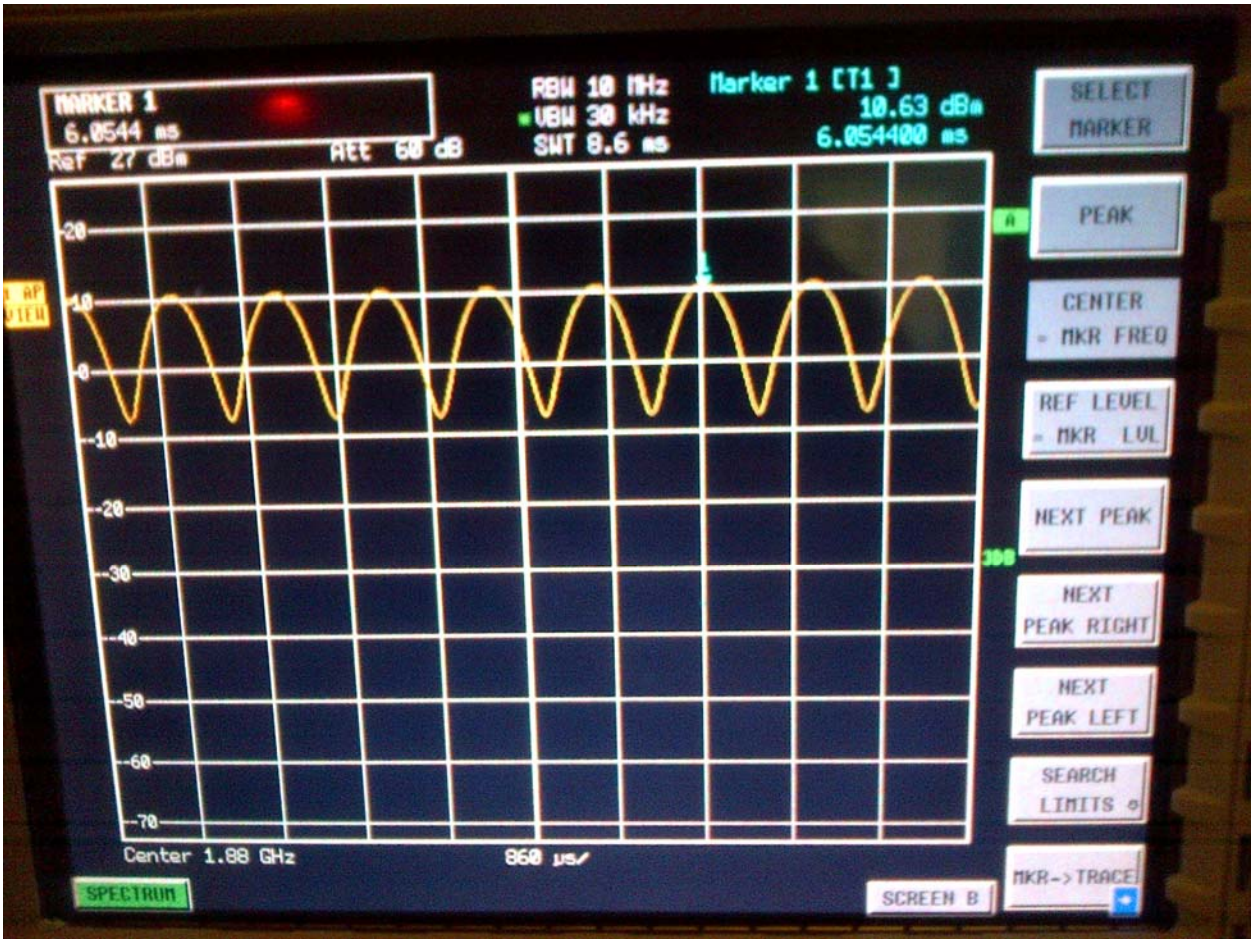


AM 80 % 1880 MHz

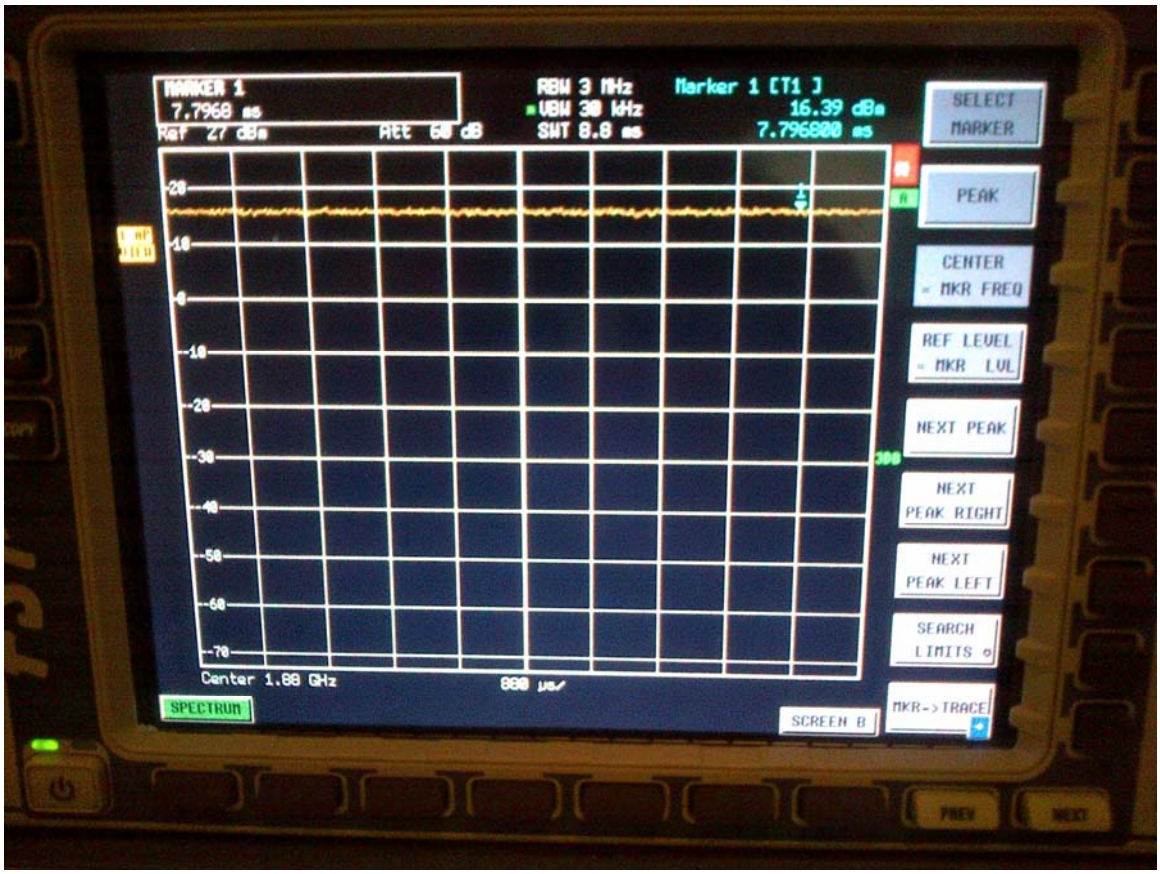
UMTS 1880 MHz



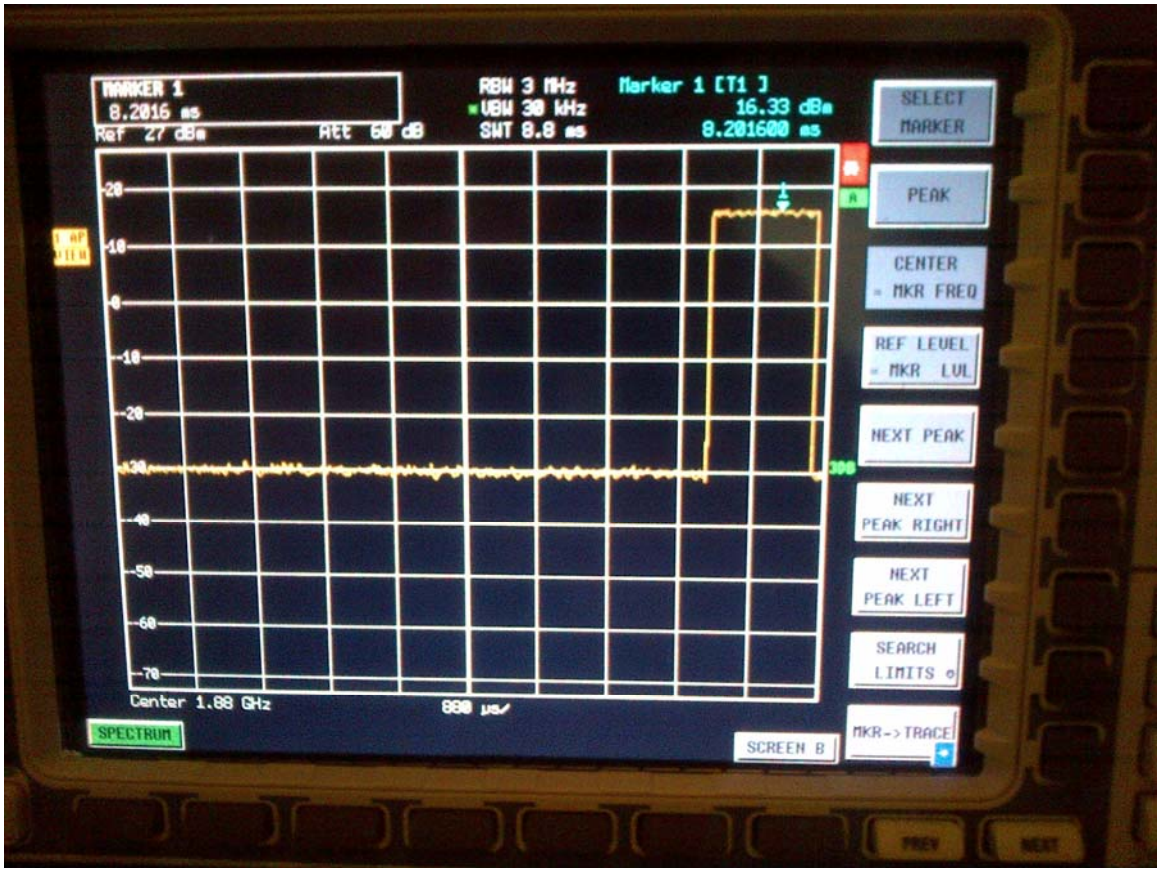
CW 1880 MHz



AM 80 % 1880 MHz

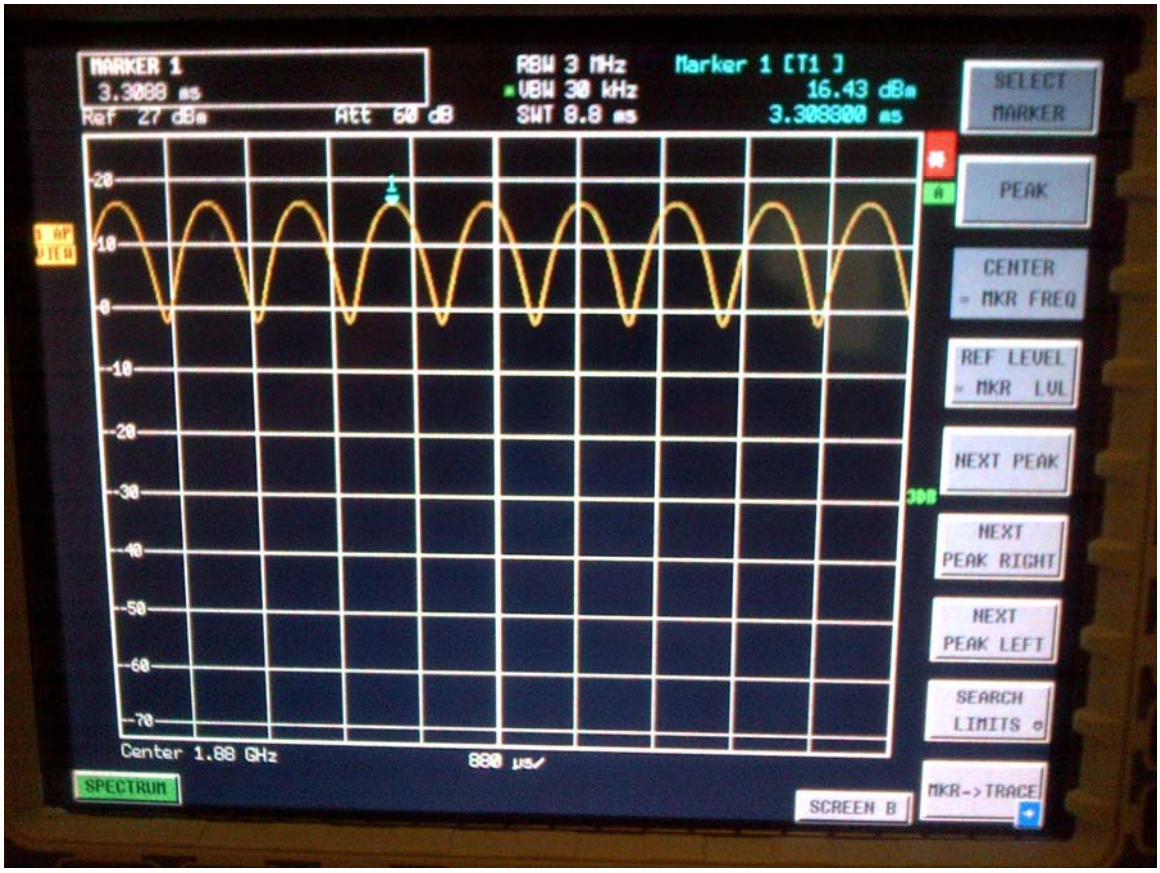


CDMA 1880 MHz (BC1)



CDMA 1880 MHz (BC1) 1/8 th

CW 1880 MHz



AM 80% 1880 MHz

A.2 Dipole validation and probe modulation factor plots

Date/Time: 4/24/2013 3:48:05 PM

Test Laboratory: RIM Testing Services

HAC RF_E-Field_validation_835 MHz_04_24_13

DUT: HAC-Dipole 835 MHz; Type: CD835V3; Serial: 1011

Communication System: CW; Frequency: 835 MHz
Medium parameters used: $\sigma = 0$ S/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m^3
Phantom section: RF Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 1/11/2013;
- Sensor-Surface: (Fix Surface), z = 4.7
- Electronics: DAE4 Sn881; Calibrated: 1/14/2013
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA
- DASY52 52.8.4(1052); SEMCAD X 14.6.8(7028)

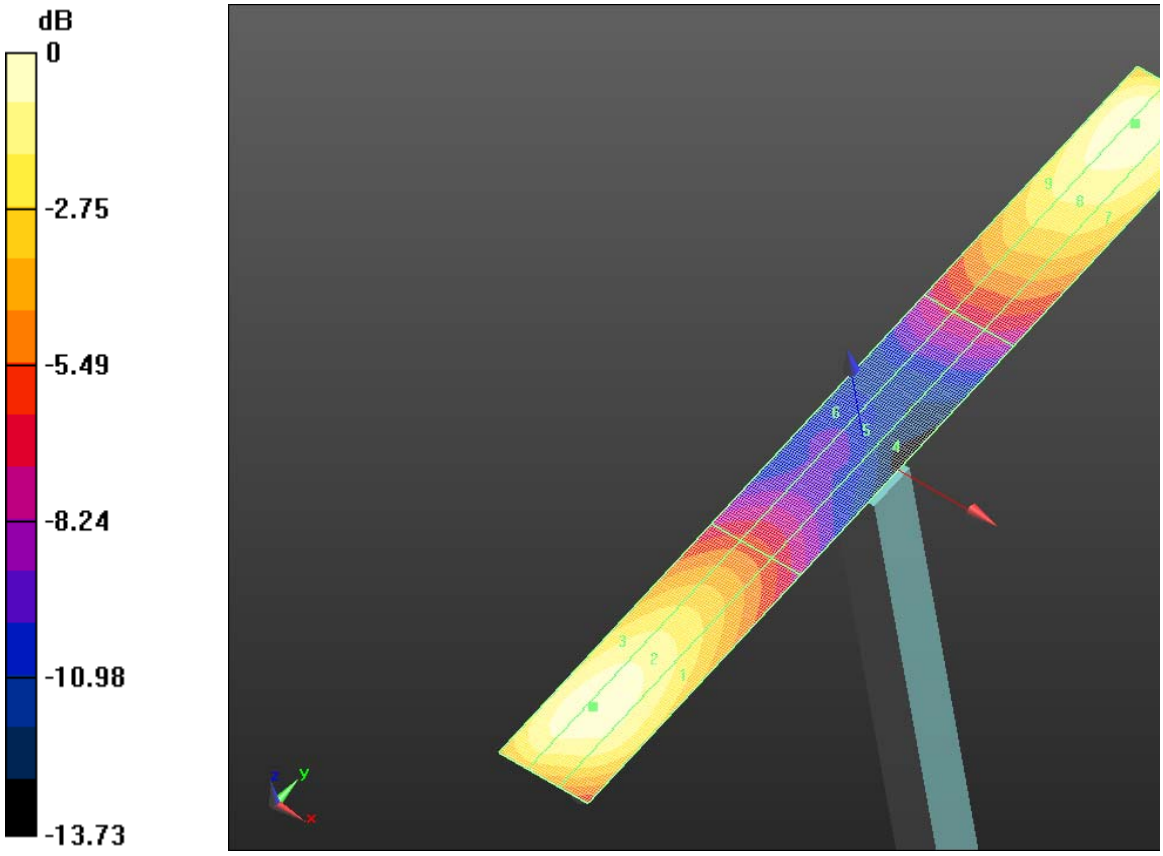
Dipole E-Field measurement/E Scan - measurement distance from the probe sensor center to CD835 Dipole = 10mm/Hearing Aid Compatibility Test (41x361x1): Interpolated grid: dx=0.5000 mm, dy=0.5000 mm
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 106.1 V/m; Power Drift = -0.02 dB
PMR not calibrated. PMF = 1.000 is applied.
E-field emissions = 168.2 V/m
Near-field category: M4 (AWF 0 dB)

PMF scaled E-field

Grid 1 **M4** **153.8 V/m**	Grid 2 **M4** **164.4 V/m**	Grid 3 **M4** **164.1 V/m**
Grid 4 **M4** **81.96 V/m**	Grid 5 **M4** **85.57 V/m**	Grid 6 **M4** **84.27 V/m**
Grid 7 **M4**	Grid 8 **M4**	Grid 9 **M4**

154.3 V/m	**168.2 V/m**	**167.7 V/m**

Cursor:
Total = 168.2 V/m
E Category: M4
Location: -2.5, 80, 4.7 mm



0 dB = 168.2 V/m = 44.52 dBV/m

Date/Time: 6/28/2012 1:13:34 PM

Test Laboratory: RIM Testing Services

HAC RF_E-Field_PMF_GSM835 MHz_06_28_12

DUT: HAC-Dipole 835 MHz; Type: D835V3; Serial: 1011

Communication System: GSM 835_PMF, Communication System: CW, Communication System: AM 80%; Frequency: 835 MHz
Medium parameters used: $\sigma = 0$ mho/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m^3
Phantom section: RF Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 1/9/2012
- Sensor-Surface: (Fix Surface), z = 4.7
- Electronics: DAE3 Sn473; Calibrated: 1/13/2012
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA
- DASY52 52.8.0(692); SEMCAD X 14.6.4(4989)

Dipole E-Field measurement/E Scan - GSM 835_PMF/Hearing Aid Compatibility Test (41x361x1): Measurement grid: dx=5mm, dy=5mm
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 34.76 V/m; Power Drift = -0.00 dB
PMR not calibrated. PMF = 1.000 is applied.
E-field emissions = 54.25 V/m
Near-field category: M4 (AWF 0 dB)

PMF scaled E-field

Grid 1 **M4** **49.26 V/m**	Grid 2 **M4** **51.48 V/m**	Grid 3 **M4** **51.48 V/m**
Grid 4 **M4** **27.95 V/m**	Grid 5 **M4** **28.56 V/m**	Grid 6 **M4** **28.13 V/m**
Grid 7 **M4** **51.48 V/m**	Grid 8 **M4** **54.25 V/m**	Grid 9 **M4** **53.95 V/m**

Cursor:
Total = 54.247 V/m
E Category: M4
Location: -2.5, 80.5, 4.7 mm

Dipole E-Field measurement/E Scan - CW 835_PMF/Hearing Aid Compatibility Test (41x361x1): Measurement grid: dx=5mm, dy=5mm

Device Reference Point: 0, 0, -6.3 mm
Reference Value = 103.0 V/m; Power Drift = -0.02 dB
PMR not calibrated. PMF = 1.000 is applied.
E-field emissions = 162.8 V/m
Near-field category: M4 (AWF 0 dB)

PMF scaled E-field

Grid 1 **M4** **148.5 V/m**	Grid 2 **M4** **160.5 V/m**	Grid 3 **M4** **160.4 V/m**
Grid 4 **M4** **82.74 V/m**	Grid 5 **M4** **86.24 V/m**	Grid 6 **M4** **84.62 V/m**
Grid 7 **M4** **158.1 V/m**	Grid 8 **M4** **162.8 V/m**	Grid 9 **M4** **155.2 V/m**

Cursor:
Total = 162.8 V/m
E Category: M4
Location: 0.5, 79.5, 4.7 mm

Dipole E-Field measurement/E Scan - AM80%_ 835_PMF/Hearing Aid Compatibility Test (41x361x1): Measurement grid: dx=5mm, dy=5mm

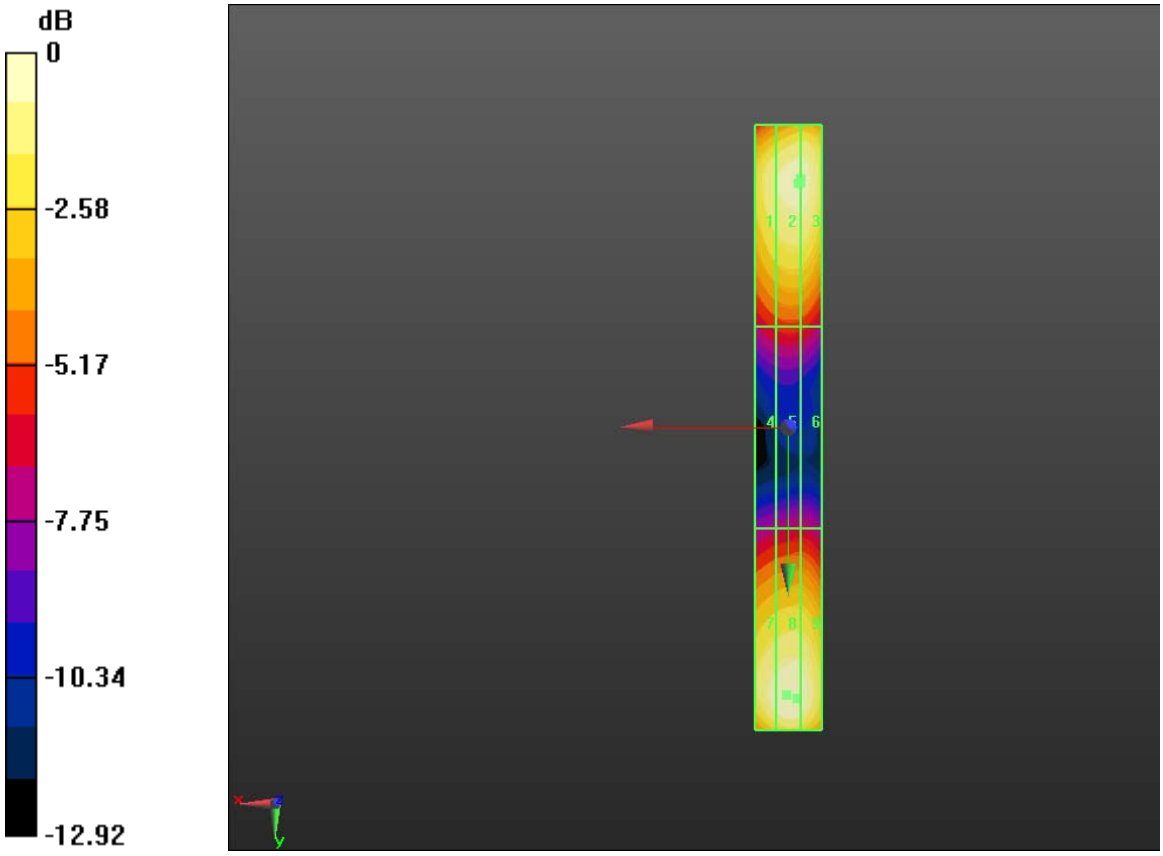
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 64.73 V/m; Power Drift = 0.02 dB
PMR not calibrated. PMF = 1.000 is applied.
E-field emissions = 102.0 V/m
Near-field category: M4 (AWF 0 dB)

PMF scaled E-field

Grid 1 **M4** **93.30 V/m**	Grid 2 **M4** **100.3 V/m**	Grid 3 **M4** **100.3 V/m**
Grid 4 **M4**	Grid 5 **M4**	Grid 6 **M4**

52.75 V/m	**54.62 V/m**	**53.83 V/m**
Grid 7 **M4** **99.38 V/m**	Grid 8 **M4** **102.0 V/m**	Grid 9 **M4** **97.92 V/m**

Cursor:
Total = 102.0 V/m
E Category: M4
Location: 0.5, 79.5, 4.7 mm



0 dB = 54.250V/m = 34.69 dB V/m

Date/Time: 2/17/2012 12:24:15 PM

Test Laboratory: RIM Testing Services

HAC RF_E-Field_PMF_UMTS835 MHz_02_17_12

DUT: HAC-Dipole 835 MHz; Type: D835V3; Serial: 1011

Communication System: WCDMA FDD V, Communication System: CW, Communication System: AM 80%; Frequency: 835 MHz
Medium parameters used: $\sigma = 0$ mho/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m^3
Phantom section: RF Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 1/9/2012
- Sensor-Surface: (Fix Surface), z = 4.7
- Electronics: DAE3 Sn472; Calibrated: 3/7/2011
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA
- DASY52 52.8.0(692); SEMCAD X 14.6.4(4989)

Dipole E-Field measurement/E Scan - UMTS 835_PMF/Hearing Aid Compatibility Test (41x361x1): Measurement grid: dx=5mm, dy=5mm
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 41.08 V/m; Power Drift = 0.03 dB
PMR not calibrated. PMF = 1.000 is applied.
E-field emissions = 64.41 V/m
Near-field category: M4 (AWF 0 dB)

PMF scaled E-field

Grid 1 **M4** **53.11 V/m**	Grid 2 **M4** **55.59 V/m**	Grid 3 **M4** **55.40 V/m**
Grid 4 **M4** **29.72 V/m**	Grid 5 **M4** **30.66 V/m**	Grid 6 **M4** **29.79 V/m**
Grid 7 **M4** **61.55 V/m**	Grid 8 **M4** **64.41 V/m**	Grid 9 **M4** **63.22 V/m**

Cursor:
Total = 64.412 V/m
E Category: M4
Location: -0.5, 79, 4.7 mm

Dipole E-Field measurement/E Scan - CW 835_PMF/Hearing Aid Compatibility Test (41x361x1): Measurement grid: dx=5mm, dy=5mm

Device Reference Point: 0, 0, -6.3 mm
Reference Value = 43.11 V/m; Power Drift = -0.14 dB
PMR not calibrated. PMF = 1.000 is applied.
E-field emissions = 68.64 V/m
Near-field category: M4 (AWF 0 dB)

PMF scaled E-field

Grid 1 **M4** **58.55 V/m**	Grid 2 **M4** **59.20 V/m**	Grid 3 **M4** **57.13 V/m**
Grid 4 **M4** **32.35 V/m**	Grid 5 **M4** **32.63 V/m**	Grid 6 **M4** **31.24 V/m**
Grid 7 **M4** **61.85 V/m**	Grid 8 **M4** **68.64 V/m**	Grid 9 **M4** **68.56 V/m**

Cursor:
Total = 68.635 V/m
E Category: M4
Location: -3, 79.5, 4.7 mm

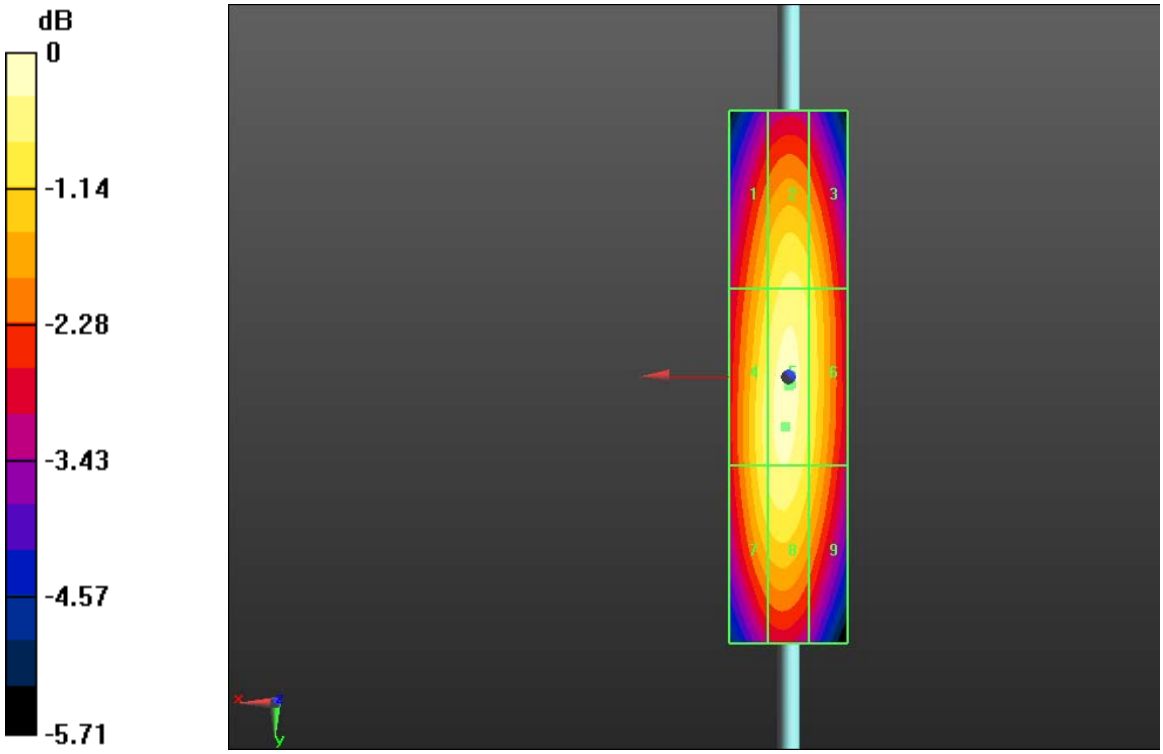
Dipole E-Field measurement/E Scan - AM80%_ 835_PMF/Hearing Aid Compatibility Test (41x361x1): Measurement grid: dx=5mm, dy=5mm

Device Reference Point: 0, 0, -6.3 mm
Reference Value = 28.41 V/m; Power Drift = 0.09 dB
PMR not calibrated. PMF = 1.000 is applied.
E-field emissions = 45.21 V/m
Near-field category: M4 (AWF 0 dB)

PMF scaled E-field

Grid 1 **M4** **38.28 V/m**	Grid 2 **M4** **38.73 V/m**	Grid 3 **M4** **37.25 V/m**
Grid 4 **M4** **21.72 V/m**	Grid 5 **M4** **21.89 V/m**	Grid 6 **M4** **20.80 V/m**
Grid 7 **M4** **40.90 V/m**	Grid 8 **M4** **45.21 V/m**	Grid 9 **M4** **45.16 V/m**

Cursor:
Total = 45.209 V/m
E Category: M4
Location: -3, 79.5, 4.7 mm



0 dB = 0.180A/m = -14.89 dB A/m

Test Laboratory: RIM Testing Services

HAC RF_E-Field_PMF_CDMA835 MHz_02_29_12

DUT: HAC-Dipole 835 MHz; Type: D835V3; Serial: 1011

Communication System: CDMA 850, Communication System: CDMA 850 1/8th, Communication System: CW, Communication System: AM 80%; Frequency: 835 MHz

Medium parameters used: $\sigma = 0$ mho/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m^3

Phantom section: RF Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 1/9/2012
- Sensor-Surface: (Fix Surface), z = 4.7
- Electronics: DAE3 Sn473; Calibrated: 1/13/2012
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- DASY52 52.8.0(692); SEMCAD X 14.6.4(4989)

Dipole E-Field measurement/E Scan - CDMA FR 835_PMF/Hearing Aid Compatibility Test (41x361x1): Measurement grid: dx=5mm, dy=5mm

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 79.95 V/m; Power Drift = -0.18 dB

PMR not calibrated. PMF = 1.000 is applied.

E-field emissions = 118.9 V/m

Near-field category: M4 (AWF 0 dB)

PMF scaled E-field

Grid 1 **M4** **104.7 V/m**	Grid 2 **M4** **108.7 V/m**	Grid 3 **M4** **107.6 V/m**
Grid 4 **M4** **56.56 V/m**	Grid 5 **M4** **57.99 V/m**	Grid 6 **M4** **56.06 V/m**
Grid 7 **M4** **112.0 V/m**	Grid 8 **M4** **118.9 V/m**	Grid 9 **M4** **116.1 V/m**

Cursor:
Total = 118.9 V/m
E Category: M4
Location: -0.5, 79, 4.7 mm

Dipole E-Field measurement/E Scan - CDMA 1/8th 835_PMF 2/Hearing Aid Compatibility Test (41x361x1): Measurement grid: dx=5mm, dy=5mm

Device Reference Point: 0, 0, -6.3 mm
Reference Value = 30.10 V/m; Power Drift = 0.23 dB
PMR not calibrated. PMF = 1.000 is applied.
E-field emissions = 43.21 V/m
Near-field category: M4 (AWF 0 dB)

PMF scaled E-field

Grid 1 **M4** **39.00 V/m**	Grid 2 **M4** **41.81 V/m**	Grid 3 **M4** **39.31 V/m**
Grid 4 **M4** **20.47 V/m**	Grid 5 **M4** **22.99 V/m**	Grid 6 **M4** **20.34 V/m**
Grid 7 **M4** **41.05 V/m**	Grid 8 **M4** **43.21 V/m**	Grid 9 **M4** **42.62 V/m**

Cursor:
Total = 43.214 V/m
E Category: M4
Location: -0.5, 84, 4.7 mm

Dipole E-Field measurement/E Scan - CW 835_PMF/Hearing Aid Compatibility Test (41x361x1): Measurement grid: dx=5mm, dy=5mm

Device Reference Point: 0, 0, -6.3 mm
Reference Value = 82.56 V/m; Power Drift = -0.07 dB
PMR not calibrated. PMF = 1.000 is applied.
E-field emissions = 125.5 V/m
Near-field category: M4 (AWF 0 dB)

PMF scaled E-field

Grid 1 **M4** **110.7 V/m**	Grid 2 **M4** **114.9 V/m**	Grid 3 **M4** **113.7 V/m**
Grid 4 **M4** **60.24 V/m**	Grid 5 **M4** **61.44 V/m**	Grid 6 **M4** **59.31 V/m**
Grid 7 **M4** **119.5 V/m**	Grid 8 **M4** **125.5 V/m**	Grid 9 **M4** **122.3 V/m**

Cursor:
Total = 125.5 V/m
E Category: M4
Location: -0.5, 79, 4.7 mm

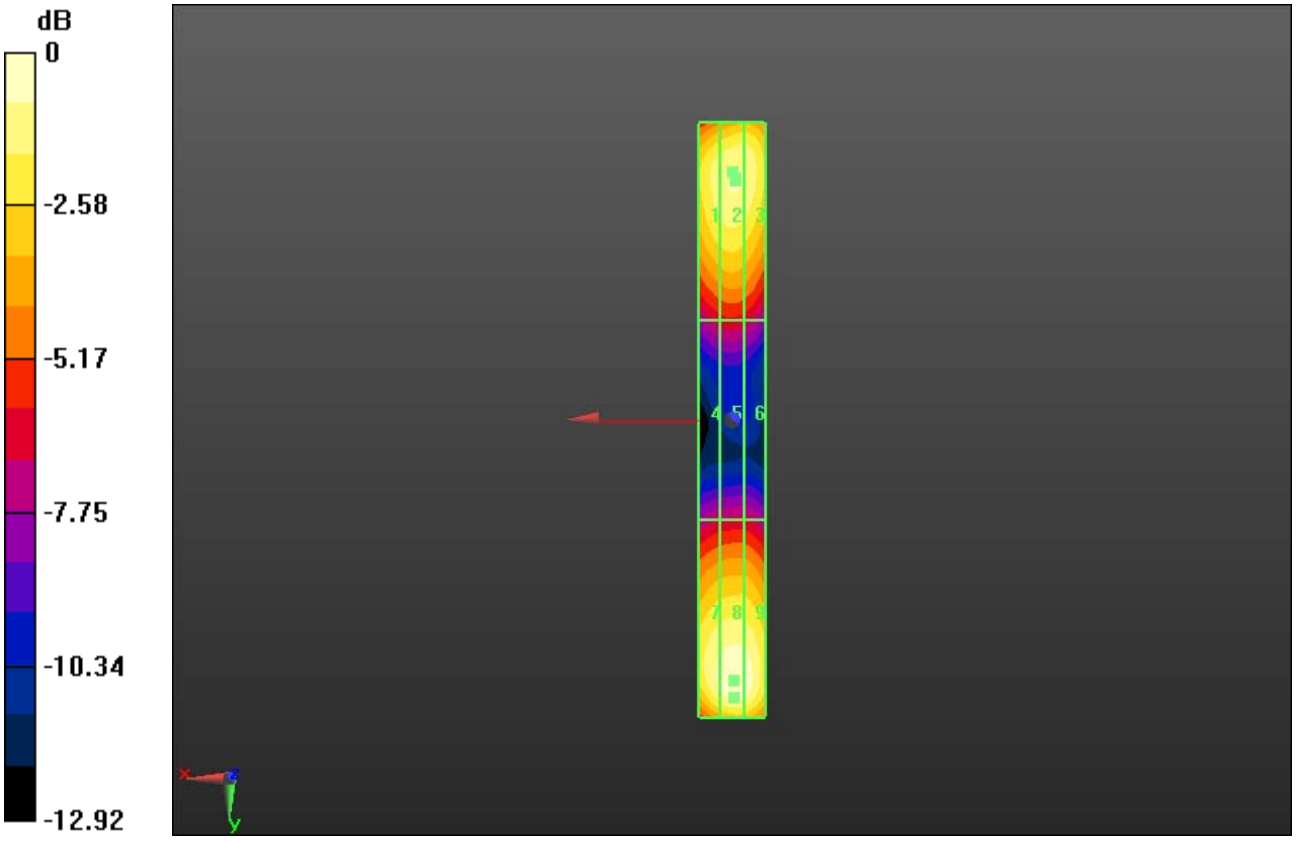
Dipole E-Field measurement/E Scan - AM80%_ 835_PMF/Hearing Aid Compatibility Test (41x361x1): Measurement grid: dx=5mm, dy=5mm

Device Reference Point: 0, 0, -6.3 mm
Reference Value = 51.22 V/m; Power Drift = 0.06 dB
PMR not calibrated. PMF = 1.000 is applied.
E-field emissions = 78.06 V/m
Near-field category: M4 (AWF 0 dB)

PMF scaled E-field

Grid 1 **M4** **69.60 V/m**	Grid 2 **M4** **71.98 V/m**	Grid 3 **M4** **71.35 V/m**
Grid 4 **M4** **38.16 V/m**	Grid 5 **M4** **38.79 V/m**	Grid 6 **M4** **37.51 V/m**
Grid 7 **M4** **74.44 V/m**	Grid 8 **M4** **78.06 V/m**	Grid 9 **M4** **76.37 V/m**

Cursor:
Total = 78.060 V/m
E Category: M4
Location: -0.5, 79, 4.7 mm



0 dB = 118.9V/m = 41.50 dB V/m

Date/Time: 4/24/2013 3:08:00 PM

Test Laboratory: RIM Testing Services

HAC RF_E-Field_validation_1880 MHz_04_24_13

DUT: HAC Dipole 1880 MHz; Type: CD1880V3; Serial: 1008

Communication System: CW; Frequency: 1880 MHz
Medium parameters used: $\sigma = 0$ S/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m^3
Phantom section: RF Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 1/11/2013;
- Sensor-Surface: (Fix Surface), z = 4.7
- Electronics: DAE4 Sn881; Calibrated: 1/14/2013
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- DASY52 52.8.4(1052); SEMCAD X 14.6.8(7028)

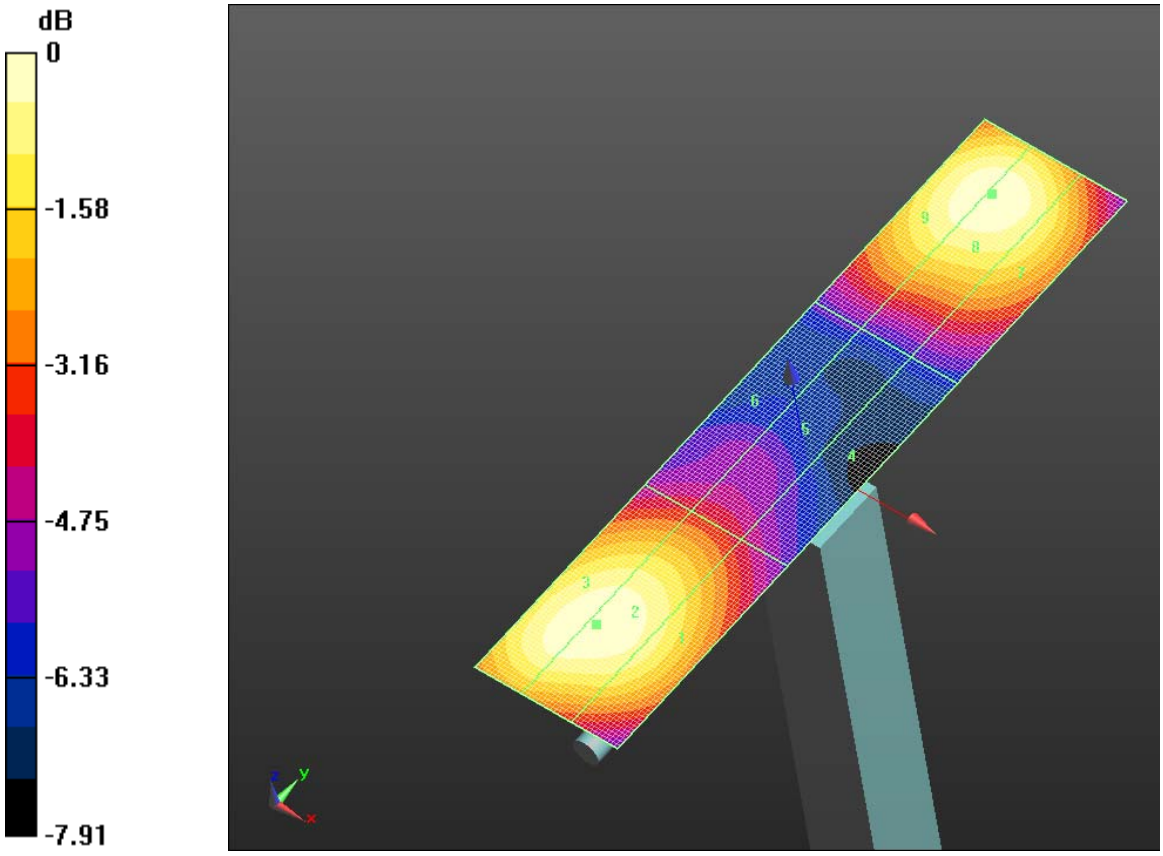
Dipole E-Field measurement/E Scan - measurement distance from the probe sensor center to CD1880 Dipole = 10mm/Hearing Aid Compatibility Test (41x181x1): Interpolated grid: dx=0.5000 mm, dy=0.5000 mm
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 142.0 V/m; Power Drift = -0.05 dB
PMR not calibrated. PMF = 1.000 is applied.
E-field emissions = 131.0 V/m
Near-field category: M2 (AWF 0 dB)

PMF scaled E-field

Grid 1 **M2** **121.1 V/m**	Grid 2 **M2** **130.6 V/m**	Grid 3 **M2** **130.4 V/m**
Grid 4 **M3** **82.22 V/m**	Grid 5 **M3** **87.04 V/m**	Grid 6 **M3** **85.72 V/m**
Grid 7 **M2**	Grid 8 **M2**	Grid 9 **M2**

118.4 V/m	**131.0 V/m**	**130.8 V/m**

Cursor:
Total = 131.0 V/m
E Category: M2
Location: -3, 37.5, 4.7 mm



0 dB = 131.0 V/m = 42.35 dBV/m

Date/Time: 6/28/2012 12:54:33 PM

Test Laboratory: RIM Testing Services

HAC RF_E-Field_PMF_GSM1880 MHz_06_28_12

DUT: HAC Dipole 1880 MHz; Type: CD1880V3; Serial: 1008

Communication System: GSM 1880, Communication System: CW, Communication System: AM 80%; Frequency: 1880 MHz
Medium parameters used: $\sigma = 0$ mho/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m^3
Phantom section: RF Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 1/9/2012
- Sensor-Surface: (Fix Surface), z = 4.7
- Electronics: DAE3 Sn473; Calibrated: 1/13/2012
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA
- DASY52 52.8.0(692); SEMCAD X 14.6.4(4989)

Dipole E-Field measurement/E Scan - GSM 1880_PMF/Hearing Aid Compatibility Test (41x181x1): Measurement grid: dx=5mm, dy=5mm
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 33.26 V/m; Power Drift = 0.00 dB
PMR not calibrated. PMF = 1.000 is applied.
E-field emissions = 29.81 V/m
Near-field category: M4 (AWF 0 dB)

PMF scaled E-field

Grid 1 **M4** **27.34 V/m**	Grid 2 **M4** **28.65 V/m**	Grid 3 **M4** **28.59 V/m**
Grid 4 **M4** **19.83 V/m**	Grid 5 **M4** **20.51 V/m**	Grid 6 **M4** **20.10 V/m**
Grid 7 **M4** **28.20 V/m**	Grid 8 **M4** **29.81 V/m**	Grid 9 **M4** **29.37 V/m**

Cursor:
Total = 29.810 V/m
E Category: M4
Location: -1, 38.5, 4.7 mm

Dipole E-Field measurement/E Scan- CW 1800_PMF/Hearing Aid Compatibility Test (41x181x1): Measurement grid: dx=5mm, dy=5mm

Device Reference Point: 0, 0, -6.3 mm
Reference Value = 95.34 V/m; Power Drift = 0.01 dB
PMR not calibrated. PMF = 1.000 is applied.
E-field emissions = 84.88 V/m
Near-field category: M3 (AWF 0 dB)

PMF scaled E-field

Grid 1 **M3** **78.80 V/m**	Grid 2 **M3** **82.95 V/m**	Grid 3 **M3** **82.43 V/m**
Grid 4 **M4** **56.84 V/m**	Grid 5 **M4** **58.53 V/m**	Grid 6 **M4** **56.53 V/m**
Grid 7 **M3** **80.11 V/m**	Grid 8 **M3** **84.88 V/m**	Grid 9 **M3** **83.31 V/m**

Cursor:
Total = 84.885 V/m
E Category: M3
Location: -0.5, 38.5, 4.7 mm

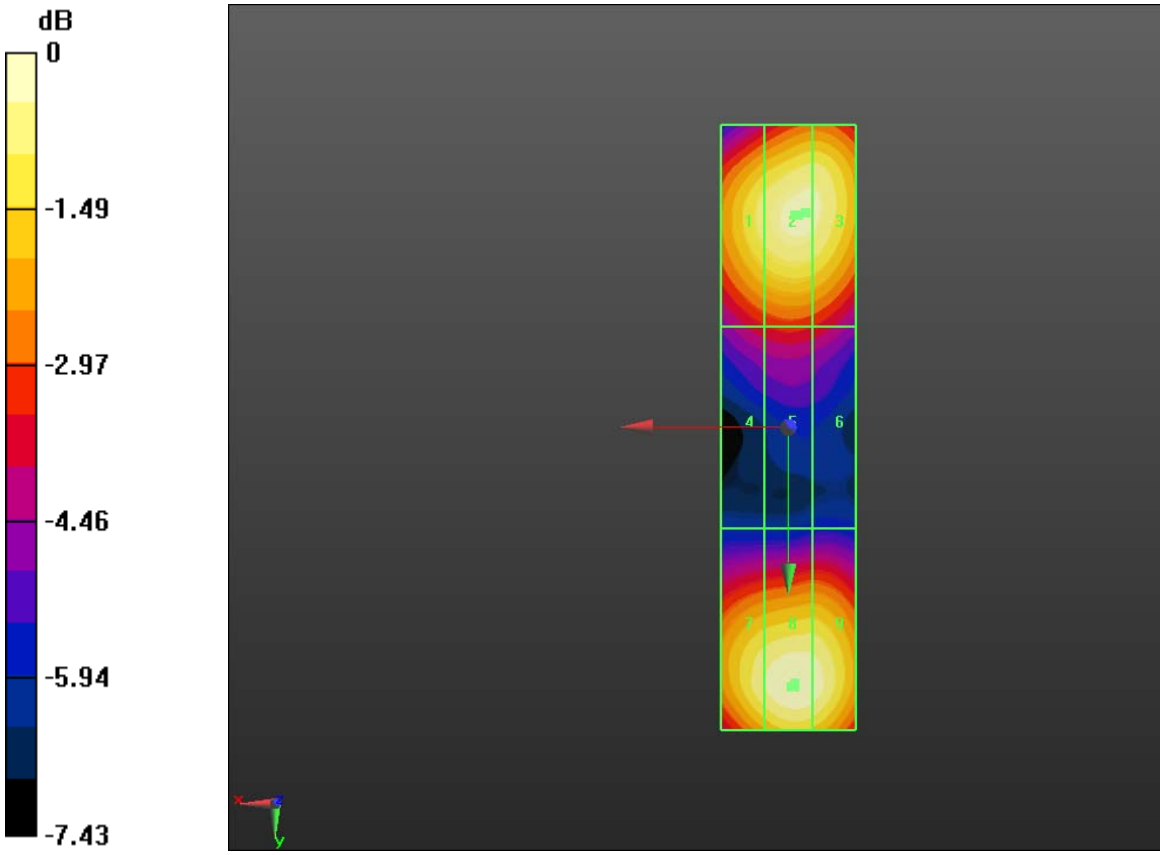
Dipole E-Field measurement/E Scan - AM80%_ 1880_PMF/Hearing Aid Compatibility Test (41x181x1): Measurement grid: dx=5mm, dy=5mm

Device Reference Point: 0, 0, -6.3 mm
Reference Value = 60.62 V/m; Power Drift = -0.03 dB
PMR not calibrated. PMF = 1.000 is applied.
E-field emissions = 53.60 V/m
Near-field category: M4 (AWF 0 dB)

PMF scaled E-field

Grid 1 **M4** **49.75 V/m**	Grid 2 **M4** **52.55 V/m**	Grid 3 **M4** **52.06 V/m**
Grid 4 **M4** **35.78 V/m**	Grid 5 **M4** **36.92 V/m**	Grid 6 **M4** **36.02 V/m**
Grid 7 **M4** **50.66 V/m**	Grid 8 **M4** **53.60 V/m**	Grid 9 **M4** **52.63 V/m**

Cursor:
Total = 53.599 V/m
E Category: M4
Location: -1, 38, 4.7 mm



0 dB = 29.810V/m = 29.49 dB V/m

Date/Time: 2/17/2012 2:20:23 PM

Test Laboratory: RIM Testing Services

HAC RF_E-Field_PMF_UMTS1880 MHz_02_17_12

DUT: HAC Dipole 1880 MHz; Type: CD1880V3; Serial: 1008

Communication System: WCDMA FDD II, Communication System: CW, Communication System: AM 80%; Frequency: 1880 MHz
Medium parameters used: $\sigma = 0$ mho/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m^3
Phantom section: RF Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 1/9/2012
- Sensor-Surface: (Fix Surface), z = 4.7
- Electronics: DAE3 Sn472; Calibrated: 3/7/2011
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA
- DASY52 52.8.0(692); SEMCAD X 14.6.4(4989)

Dipole E-Field measurement/E Scan - UMTS 1880_PMF/Hearing Aid Compatibility Test (41x181x1): Measurement grid: dx=5mm, dy=5mm
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 47.02 V/m; Power Drift = 0.01 dB
PMR not calibrated. PMF = 1.000 is applied.
E-field emissions = 42.43 V/m
Near-field category: M4 (AWF 0 dB)

PMF scaled E-field

Grid 1 **M4** **37.98 V/m**	Grid 2 **M4** **39.42 V/m**	Grid 3 **M4** **39.04 V/m**
Grid 4 **M4** **26.86 V/m**	Grid 5 **M4** **27.50 V/m**	Grid 6 **M4** **26.70 V/m**
Grid 7 **M4** **39.63 V/m**	Grid 8 **M4** **42.43 V/m**	Grid 9 **M4** **41.87 V/m**

Cursor:
Total = 42.427 V/m
E Category: M4
Location: -1, 38, 4.7 mm

Dipole E-Field measurement/E Scan- CW 1800_PMF/Hearing Aid Compatibility Test (41x181x1): Measurement grid: dx=5mm, dy=5mm

Device Reference Point: 0, 0, -6.3 mm
Reference Value = 47.33 V/m; Power Drift = -0.05 dB
PMR not calibrated. PMF = 1.000 is applied.
E-field emissions = 42.41 V/m
Near-field category: M4 (AWF 0 dB)

PMF scaled E-field

Grid 1 **M4** **38.23 V/m**	Grid 2 **M4** **39.51 V/m**	Grid 3 **M4** **39.41 V/m**
Grid 4 **M4** **26.94 V/m**	Grid 5 **M4** **27.41 V/m**	Grid 6 **M4** **26.77 V/m**
Grid 7 **M4** **40.02 V/m**	Grid 8 **M4** **42.41 V/m**	Grid 9 **M4** **41.99 V/m**

Cursor:
Total = 42.409 V/m
E Category: M4
Location: -1.5, 38, 4.7 mm

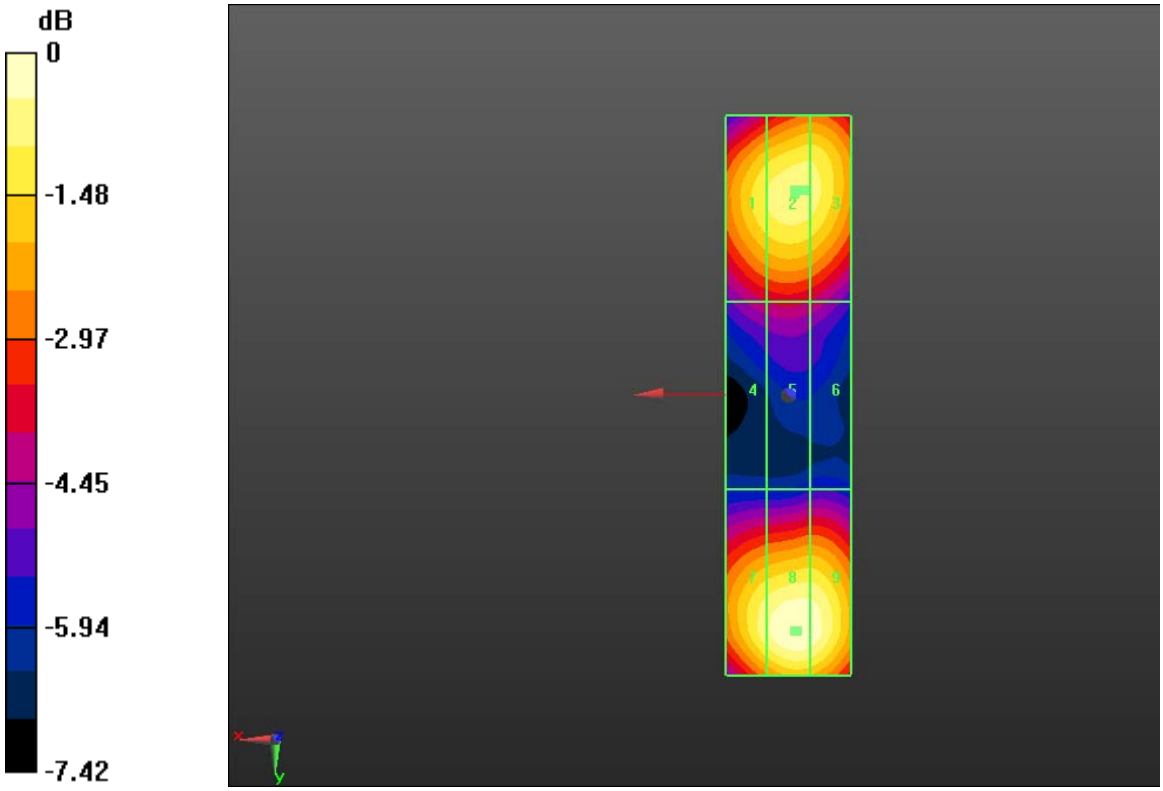
Dipole E-Field measurement/E Scan - AM80%_ 1880_PMF/Hearing Aid Compatibility Test (41x181x1): Measurement grid: dx=5mm, dy=5mm

Device Reference Point: 0, 0, -6.3 mm
Reference Value = 30.18 V/m; Power Drift = 0.06 dB
PMR not calibrated. PMF = 1.000 is applied.
E-field emissions = 27.40 V/m
Near-field category: M4 (AWF 0 dB)

PMF scaled E-field

Grid 1 **M4** **24.40 V/m**	Grid 2 **M4** **25.26 V/m**	Grid 3 **M4** **24.95 V/m**
Grid 4 **M4** **17.20 V/m**	Grid 5 **M4** **17.65 V/m**	Grid 6 **M4** **17.12 V/m**
Grid 7 **M4** **25.54 V/m**	Grid 8 **M4** **27.40 V/m**	Grid 9 **M4** **27.02 V/m**

Cursor:
Total = 27.402 V/m
E Category: M4
Location: -1, 38, 4.7 mm



0 dB = 42.430V/m = 32.55 dB V/m

Test Laboratory: RIM Testing Services

HAC RF_E-Field_PMF_CDMA1880 MHz_02_29_12

DUT: HAC Dipole 1880 MHz; Type: CD1880V3; Serial: 1008

Communication System: CDMA 1900, Communication System: CDMA 1900 1/8th, Communication System: CW, Communication System: AM 80%; Frequency: 1880 MHz

Medium parameters used: σ = 0 mho/m, ε_r = 1; ρ = 0 kg/m^3

Phantom section: RF Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 1/9/2012
- Sensor-Surface: (Fix Surface), z = 4.7
- Electronics: DAE3 Sn473; Calibrated: 1/13/2012
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- DASY52 52.8.0(692); SEMCAD X 14.6.4(4989)

Dipole E-Field measurement/E Scan - CDMA FR 1880_PMF/Hearing Aid Compatibility Test (41x181x1): Measurement grid: dx=5mm, dy=5mm

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 87.80 V/m; Power Drift = 0.04 dB

PMR not calibrated. PMF = 1.000 is applied.

E-field emissions = 80.60 V/m

Near-field category: M3 (AWF 0 dB)

PMF scaled E-field

Grid 1 **M3** **73.45 V/m**	Grid 2 **M3** **76.11 V/m**	Grid 3 **M3** **74.97 V/m**
Grid 4 **M4** **50.62 V/m**	Grid 5 **M4** **51.75 V/m**	Grid 6 **M4** **50.16 V/m**
Grid 7 **M3** **76.91 V/m**	Grid 8 **M3** **80.60 V/m**	Grid 9 **M3** **78.58 V/m**

Cursor:
Total = 80.601 V/m
E Category: M3
Location: -0.5, 37.5, 4.7 mm

Dipole E-Field measurement/E Scan - CDMA 1/8th 1880_PMF 2/Hearing Aid Compatibility Test (41x181x1): Measurement grid: dx=5mm, dy=5mm

Device Reference Point: 0, 0, -6.3 mm
Reference Value = 30.81 V/m; Power Drift = 0.09 dB
PMR not calibrated. PMF = 1.000 is applied.
E-field emissions = 30.61 V/m
Near-field category: M4 (AWF 0 dB)

PMF scaled E-field

Grid 1 **M4** **28.31 V/m**	Grid 2 **M4** **30.22 V/m**	Grid 3 **M4** **28.54 V/m**
Grid 4 **M4** **18.23 V/m**	Grid 5 **M4** **20.72 V/m**	Grid 6 **M4** **18.32 V/m**
Grid 7 **M4** **26.79 V/m**	Grid 8 **M4** **30.61 V/m**	Grid 9 **M4** **30.61 V/m**

Cursor:
Total = 30.614 V/m
E Category: M4
Location: -3.5, 36, 4.7 mm

Dipole E-Field measurement/E Scan- CW 1880_PMF/Hearing Aid Compatibility Test (41x181x1): Measurement grid: dx=5mm, dy=5mm

Device Reference Point: 0, 0, -6.3 mm
Reference Value = 90.26 V/m; Power Drift = -0.02 dB
PMR not calibrated. PMF = 1.000 is applied.
E-field emissions = 81.58 V/m
Near-field category: M3 (AWF 0 dB)

PMF scaled E-field

Grid 1 **M3** **75.79 V/m**	Grid 2 **M3** **78.08 V/m**	Grid 3 **M3** **77.27 V/m**
Grid 4 **M4** **52.44 V/m**	Grid 5 **M4** **53.31 V/m**	Grid 6 **M4** **51.71 V/m**
Grid 7 **M3** **78.00 V/m**	Grid 8 **M3** **81.58 V/m**	Grid 9 **M3** **79.79 V/m**

Cursor:
Total = 81.580 V/m
E Category: M3
Location: -0.5, 37.5, 4.7 mm

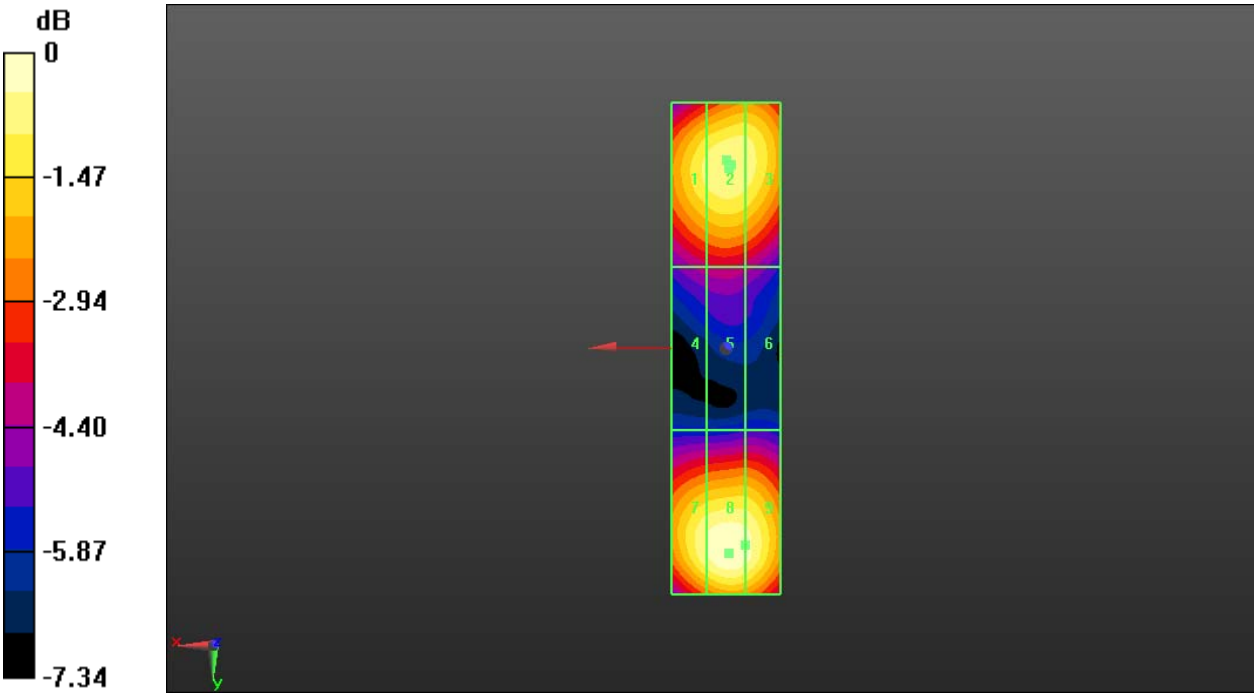
Dipole E-Field measurement/E Scan - AM80%_ 1880_PMF/Hearing Aid Compatibility Test (41x181x1): Measurement grid: dx=5mm, dy=5mm

Device Reference Point: 0, 0, -6.3 mm
Reference Value = 56.79 V/m; Power Drift = 0.05 dB
PMR not calibrated. PMF = 1.000 is applied.
E-field emissions = 52.04 V/m
Near-field category: M4 (AWF 0 dB)

PMF scaled E-field

Grid 1 **M4** **47.54 V/m**	Grid 2 **M4** **49.44 V/m**	Grid 3 **M4** **48.95 V/m**
Grid 4 **M4** **33.05 V/m**	Grid 5 **M4** **33.87 V/m**	Grid 6 **M4** **32.89 V/m**
Grid 7 **M4** **49.67 V/m**	Grid 8 **M4** **52.04 V/m**	Grid 9 **M4** **50.92 V/m**

Cursor:
Total = 52.041 V/m
E Category: M4
Location: -0.5, 37.5, 4.7 mm



0 dB = 80.600V/m = 38.13 dB V/m

Date/Time: 4/24/2013 4:14:18 PM

Test Laboratory: RIM Testing Services

HAC RF_H-Field_validation_835 MHz_04_24_13

DUT: HAC-Dipole 835 MHz; Type: CD835V3; Serial: 1011

Communication System: CW; Frequency: 835 MHz
Medium parameters used: $\sigma = 0$ S/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m^3
Phantom section: RF Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 11/9/2012
- Sensor-Surface: (Fix Surface), z = 4.7
- Electronics: DAE4 Sn881; Calibrated: 1/14/2013
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA; Serial
- DASY52 52.8.4(1052); SEMCAD X 14.6.8(7028)

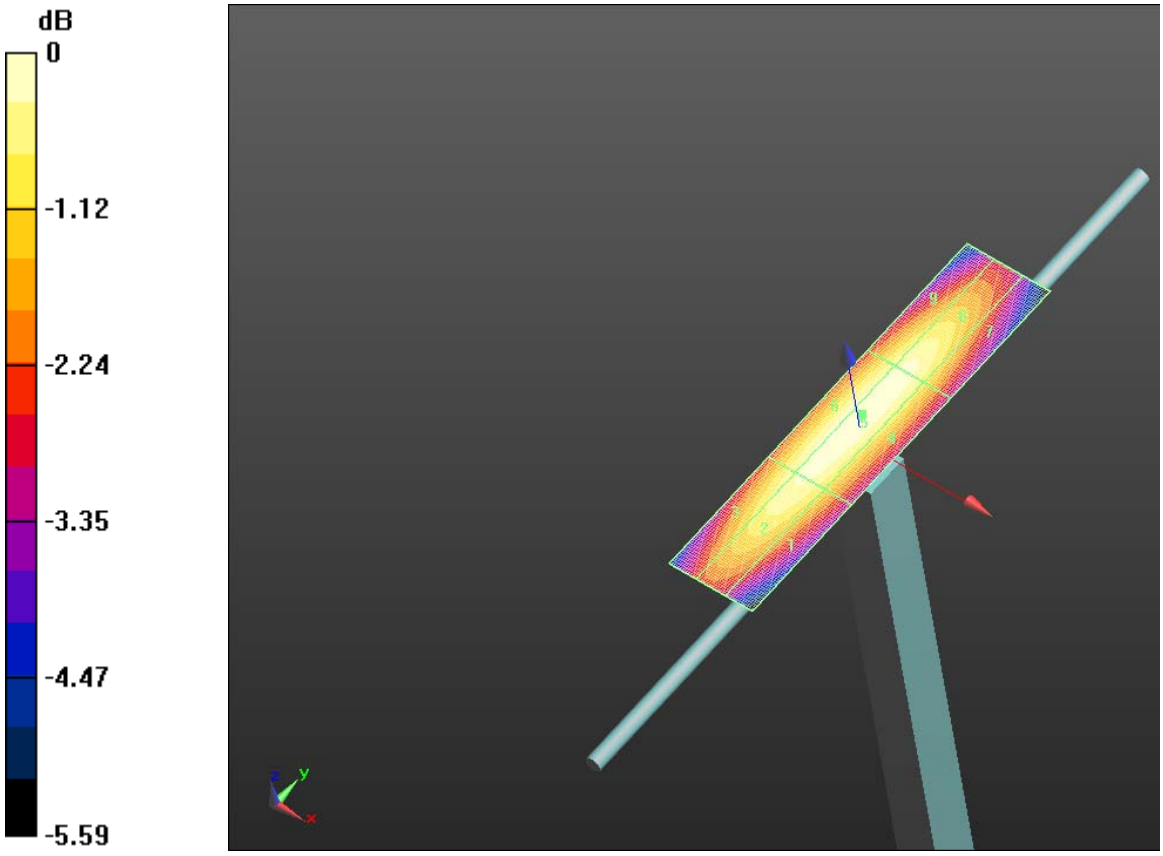
Dipole H-Field measurement with H3DV6 probe/H Scan - measurement distance from the probe sensor center to CD835 Dipole = 10mm/Hearing Aid Compatibility Test (41x181x1): Interpolated grid: dx=0.5000 mm, dy=0.5000 mm
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 0.5000 A/m; Power Drift = -0.04 dB
PMR not calibrated. PMF = 1.000 is applied.
H-field emissions = 0.4745 A/m
Near-field category: M4 (AWF 0 dB)

PMF scaled H-field

Grid 1 **M4** **0.416 A/m**	Grid 2 **M4** **0.459 A/m**	Grid 3 **M4** **0.452 A/m**
Grid 4 **M4** **0.431 A/m**	Grid 5 **M4** **0.474 A/m**	Grid 6 **M4** **0.465 A/m**
Grid 7 **M4**	Grid 8 **M4**	Grid 9 **M4**

0.425 A/m	**0.462 A/m**	**0.449 A/m**

Cursor:
Total = 0.4744 A/m
H Category: M4
Location: -1.5, 2.5, 4.7 mm



0 dB = 0.4744 A/m = -6.48 dBA/m

Date/Time: 6/28/2012 11:48:13 AM

Test Laboratory: RIM Testing Services

HAC RF_H-Field_PMF_GSM835 MHz_06_28_12

DUT: HAC-Dipole 835 MHz; Type: D835V3; Serial: 1011

Communication System: GSM 835_PMF, Communication System: CW, Communication System: AM 80%; Frequency: 835 MHz
Medium parameters used: $\sigma = 0$ mho/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m^3
Phantom section: RF Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 11/8/2011
- Sensor-Surface: (Fix Surface), z = 4.7
- Electronics: DAE3 Sn473; Calibrated: 1/13/2012
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA
- DASY52 52.8.0(692); SEMCAD X 14.6.4(4989)

Dipole H-Field measurement with H3DV6 probe/H Scan - GSM 835_PMF/Hearing Aid Compatibility Test (41x181x1): Measurement grid: dx=5mm, dy=5mm
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 0.17 V/m; Power Drift = -0.01 dB
PMR not calibrated. PMF = 1.000 is applied.
H-field emissions = 0.16 A/m
Near-field category: M4 (AWF 0 dB)

PMF scaled H-field

Grid 1 **M4** **0.15 A/m**	Grid 2 **M4** **0.16 A/m**	Grid 3 **M4** **0.15 A/m**
Grid 4 **M4**	Grid 5 **M4**	Grid 6 **M4**

0.16 A/m	**0.16 A/m**	**0.16 A/m**
Grid 7 **M4** **0.15 A/m**	Grid 8 **M4** **0.16 A/m**	Grid 9 **M4** **0.15 A/m**

Cursor:
Total = 0.163 A/m
H Category: M4
Location: 0, 8.5, 4.7 mm

Dipole H-Field measurement with H3DV6 probe/H Scan - CW 835_PMF/Hearing Aid Compatibility Test (41x181x1): Measurement grid: dx=5mm, dy=5mm

Device Reference Point: 0, 0, -6.3 mm
Reference Value = 0.28 V/m; Power Drift = 0.08 dB
PMR not calibrated. PMF = 1.000 is applied.
H-field emissions = 0.47 A/m
Near-field category: M4 (AWF 0 dB)

PMF scaled H-field

Grid 1 **M4** **0.44 A/m**	Grid 2 **M4** **0.46 A/m**	Grid 3 **M4** **0.44 A/m**
Grid 4 **M4** **0.45 A/m**	Grid 5 **M4** **0.47 A/m**	Grid 6 **M4** **0.45 A/m**
Grid 7 **M4** **0.45 A/m**	Grid 8 **M4** **0.47 A/m**	Grid 9 **M4** **0.44 A/m**

Cursor:
Total = 0.471 A/m
H Category: M4
Location: 0, 8, 4.7 mm

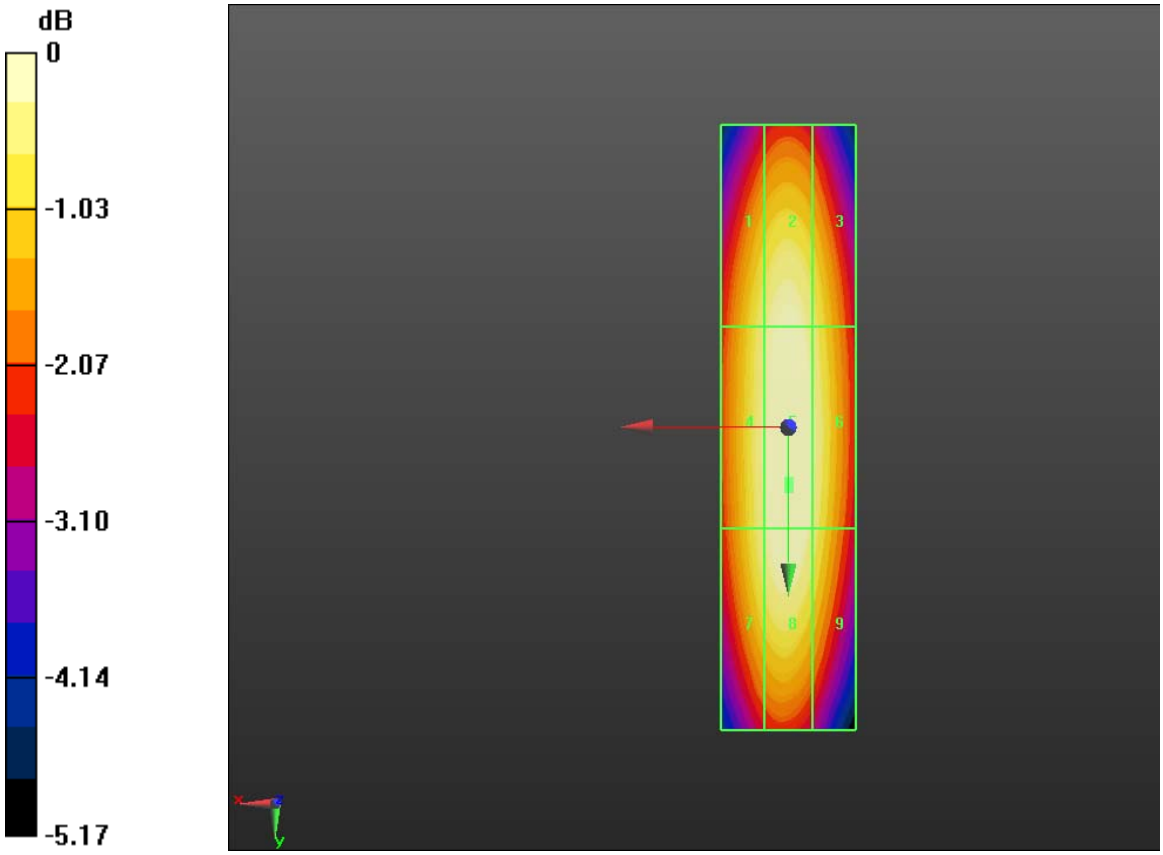
Dipole H-Field measurement with H3DV6 probe/H Scan - AM80%_PMF/Hearing Aid Compatibility Test (41x181x1):

Measurement grid: dx=5mm, dy=5mm
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 0.32 V/m; Power Drift = 0.12 dB
PMR not calibrated. PMF = 1.000 is applied.
H-field emissions = 0.30 A/m
Near-field category: M4 (AWF 0 dB)

PMF scaled H-field

Grid 1 **M4** **0.28 A/m**	Grid 2 **M4** **0.29 A/m**	Grid 3 **M4** **0.28 A/m**
Grid 4 **M4** **0.29 A/m**	Grid 5 **M4** **0.30 A/m**	Grid 6 **M4** **0.29 A/m**
Grid 7 **M4** **0.29 A/m**	Grid 8 **M4** **0.30 A/m**	Grid 9 **M4** **0.28 A/m**

Cursor:
Total = 0.304 A/m
H Category: M4
Location: 0, 9, 4.7 mm



0 dB = 0.160A/m = -15.92 dB A/m

Date/Time: 2/17/2012 4:08:25 PM

Test Laboratory: RIM Testing Services

HAC RF_H-Field_PMF_UMTS835 MHz_02_17_12

DUT: HAC-Dipole 835 MHz; Type: D835V3; Serial: 1011

Communication System: WCDMA FDD V, Communication System: CW, Communication System: AM 80%; Frequency: 835 MHz
Medium parameters used: $\sigma = 0$ mho/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m^3
Phantom section: RF Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 11/8/2011
- Sensor-Surface: (Fix Surface), z = 4.7
- Electronics: DAE3 Sn472; Calibrated: 3/7/2011
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA
- DASY52 52.8.0(692); SEMCAD X 14.6.4(4989)

Dipole H-Field measurement with H3DV6 probe/H Scan - UMTS 835_PMF/Hearing Aid Compatibility Test (41x181x1): Measurement grid: dx=5mm, dy=5mm
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 0.19 V/m; Power Drift = 0.05 dB
PMR not calibrated. PMF = 1.000 is applied.
H-field emissions = 0.18 A/m
Near-field category: M4 (AWF 0 dB)

PMF scaled H-field

Grid 1 **M4** **0.16 A/m**	Grid 2 **M4** **0.17 A/m**	Grid 3 **M4** **0.16 A/m**
Grid 4 **M4** **0.17 A/m**	Grid 5 **M4** **0.18 A/m**	Grid 6 **M4** **0.17 A/m**
Grid 7 **M4** **0.17 A/m**	Grid 8 **M4** **0.18 A/m**	Grid 9 **M4** **0.17 A/m**

Cursor:
Total = 0.181 A/m
H Category: M4
Location: 0.5, 8.5, 4.7 mm

Dipole H-Field measurement with H3DV6 probe/H Scan - CW 835_PMF/Hearing Aid Compatibility Test (41x181x1): Measurement grid: dx=5mm, dy=5mm
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 0.11 V/m; Power Drift = 0.08 dB
PMR not calibrated. PMF = 1.000 is applied.
H-field emissions = 0.20 A/m
Near-field category: M4 (AWF 0 dB)

PMF scaled H-field

Grid 1 **M4** **0.17 A/m**	Grid 2 **M4** **0.19 A/m**	Grid 3 **M4** **0.18 A/m**
Grid 4 **M4** **0.18 A/m**	Grid 5 **M4** **0.20 A/m**	Grid 6 **M4** **0.19 A/m**
Grid 7 **M4** **0.18 A/m**	Grid 8 **M4** **0.19 A/m**	Grid 9 **M4** **0.18 A/m**

Cursor:
Total = 0.197 A/m
H Category: M4
Location: -0.5, 1, 4.7 mm

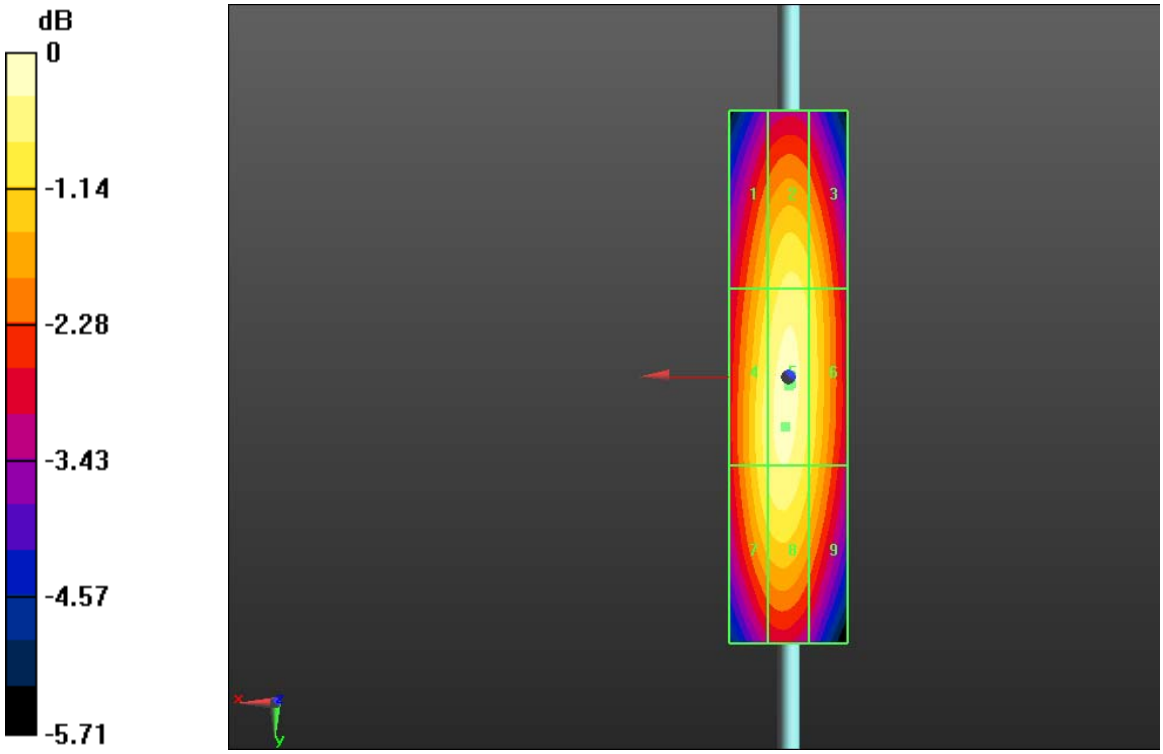
Dipole H-Field measurement with H3DV6 probe/H Scan - AM80%_PMF/Hearing Aid Compatibility Test (41x181x1):

Measurement grid: dx=5mm, dy=5mm
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 0.14 V/m; Power Drift = 0.10 dB
PMR not calibrated. PMF = 1.000 is applied.
H-field emissions = 0.13 A/m
Near-field category: M4 (AWF 0 dB)

PMF scaled H-field

Grid 1 **M4** **0.11 A/m**	Grid 2 **M4** **0.12 A/m**	Grid 3 **M4** **0.12 A/m**
Grid 4 **M4** **0.12 A/m**	Grid 5 **M4** **0.13 A/m**	Grid 6 **M4** **0.12 A/m**
Grid 7 **M4** **0.12 A/m**	Grid 8 **M4** **0.12 A/m**	Grid 9 **M4** **0.12 A/m**

Cursor:
Total = 0.127 A/m
H Category: M4
Location: 0, 1.5, 4.7 mm



0 dB = 0.180A/m = -14.89 dB A/m

Test Laboratory: RIM Testing Services

HAC RF_H-Field_PMF_CDMA835 MHz_02_29_12

DUT: HAC-Dipole 835 MHz; Type: D835V3; Serial: 1011

Communication System: CDMA 850, Communication System: CDMA 850 1/8th, Communication System: CW, Communication System: AM 80%; Frequency: 835 MHz

Medium parameters used: σ = 0 mho/m, ε_r = 1; ρ = 0 kg/m^3

Phantom section: RF Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 11/8/2011
- Sensor-Surface: (Fix Surface), z = 4.7
- Electronics: DAE3 Sn473; Calibrated: 1/13/2012
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA
- DASY52 52.8.0(692); SEMCAD X 14.6.4(4989)

Dipole H-Field measurement with H3DV6 probe/H Scan - CDMA FR 835_PMF/Hearing Aid Compatibility Test (41x181x1): Measurement grid: dx=5mm, dy=5mm

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 0.37 V/m; Power Drift = 0.11 dB

PMR not calibrated. PMF = 1.000 is applied.

H-field emissions = 0.34 A/m

Near-field category: M4 (AWF 0 dB)

PMF scaled H-field

Grid 1 **M4** **0.32 A/m**	Grid 2 **M4** **0.33 A/m**	Grid 3 **M4** **0.32 A/m**
Grid 4 **M4** **0.33 A/m**	Grid 5 **M4** **0.34 A/m**	Grid 6 **M4** **0.33 A/m**
Grid 7 **M4** **0.32 A/m**	Grid 8 **M4** **0.34 A/m**	Grid 9 **M4** **0.32 A/m**

Cursor:
Total = 0.344 A/m
H Category: M4
Location: 0, 1.5, 4.7 mm

Dipole H-Field measurement with H3DV6 probe/H Scan - CDMA 1/8th 835_PMF 2/Hearing Aid Compatibility Test (41x181x1): Measurement grid: dx=5mm, dy=5mm
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 0.13 V/m; Power Drift = 0.09 dB
PMR not calibrated. PMF = 1.000 is applied.
H-field emissions = 0.13 A/m
Near-field category: M4 (AWF 0 dB)

PMF scaled H-field

Grid 1 **M4** **0.12 A/m**	Grid 2 **M4** **0.12 A/m**	Grid 3 **M4** **0.12 A/m**
Grid 4 **M4** **0.13 A/m**	Grid 5 **M4** **0.13 A/m**	Grid 6 **M4** **0.12 A/m**
Grid 7 **M4** **0.12 A/m**	Grid 8 **M4** **0.13 A/m**	Grid 9 **M4** **0.12 A/m**

Cursor:
Total = 0.134 A/m
H Category: M4
Location: 0, 0, 4.7 mm

Dipole H-Field measurement with H3DV6 probe/H Scan - CW 835_PMF/Hearing Aid Compatibility Test (41x181x1): Measurement grid: dx=5mm, dy=5mm

Device Reference Point: 0, 0, -6.3 mm
Reference Value = 0.39 V/m; Power Drift = 0.08 dB
PMR not calibrated. PMF = 1.000 is applied.
H-field emissions = 0.35 A/m
Near-field category: M4 (AWF 0 dB)

PMF scaled H-field

Grid 1 **M4** **0.32 A/m**	Grid 2 **M4** **0.34 A/m**	Grid 3 **M4** **0.32 A/m**
Grid 4 **M4** **0.34 A/m**	Grid 5 **M4** **0.35 A/m**	Grid 6 **M4** **0.33 A/m**
Grid 7 **M4** **0.33 A/m**	Grid 8 **M4** **0.35 A/m**	Grid 9 **M4** **0.33 A/m**

Cursor:
Total = 0.355 A/m
H Category: M4
Location: 0, 5, 4.7 mm

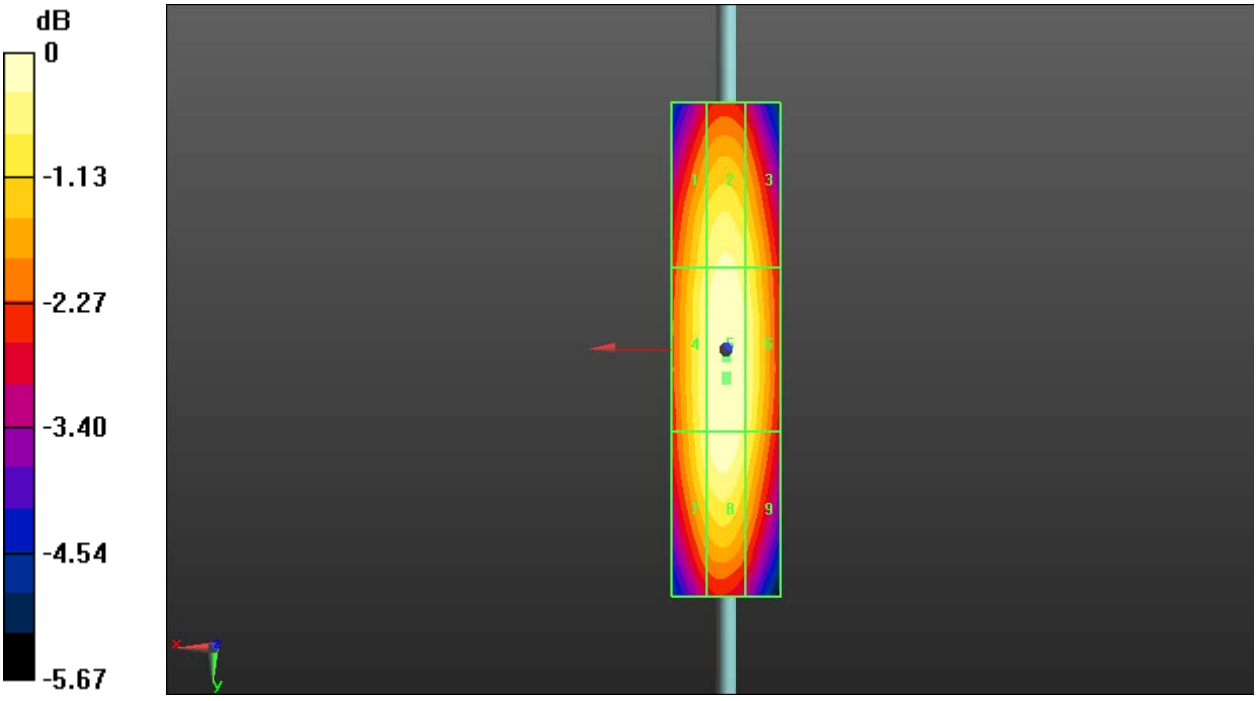
Dipole H-Field measurement with H3DV6 probe/H Scan - AM80%_PMF/Hearing Aid Compatibility Test (41x181x1): Measurement grid: dx=5mm, dy=5mm

Device Reference Point: 0, 0, -6.3 mm
Reference Value = 0.24 V/m; Power Drift = -0.02 dB
PMR not calibrated. PMF = 1.000 is applied.
H-field emissions = 0.23 A/m
Near-field category: M4 (AWF 0 dB)

PMF scaled H-field

Grid 1 **M4** **0.20 A/m**	Grid 2 **M4** **0.21 A/m**	Grid 3 **M4** **0.20 A/m**
Grid 4 **M4** **0.21 A/m**	Grid 5 **M4** **0.23 A/m**	Grid 6 **M4** **0.22 A/m**
Grid 7 **M4** **0.21 A/m**	Grid 8 **M4** **0.22 A/m**	Grid 9 **M4** **0.21 A/m**

Cursor:
Total = 0.227 A/m
H Category: M4
Location: 0, 5.5, 4.7 mm



0 dB = 0.340A/m = -9.37 dB A/m

Date/Time: 4/24/2013 4:30:53 PM

Test Laboratory: RIM Testing Services

HAC RF_H-Field_validation_1880 MHz_04_24_13

DUT: HAC Dipole 1880 MHz; Type: CD1880V3; Serial: 1008

Communication System: CW; Frequency: 1880 MHz
Medium parameters used: $\sigma = 0$ S/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m^3
Phantom section: RF Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 11/9/2012
- Sensor-Surface: (Fix Surface), z = 4.7
- Electronics: DAE4 Sn881; Calibrated: 1/14/2013
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA
- DASY52 52.8.4(1052); SEMCAD X 14.6.8(7028)

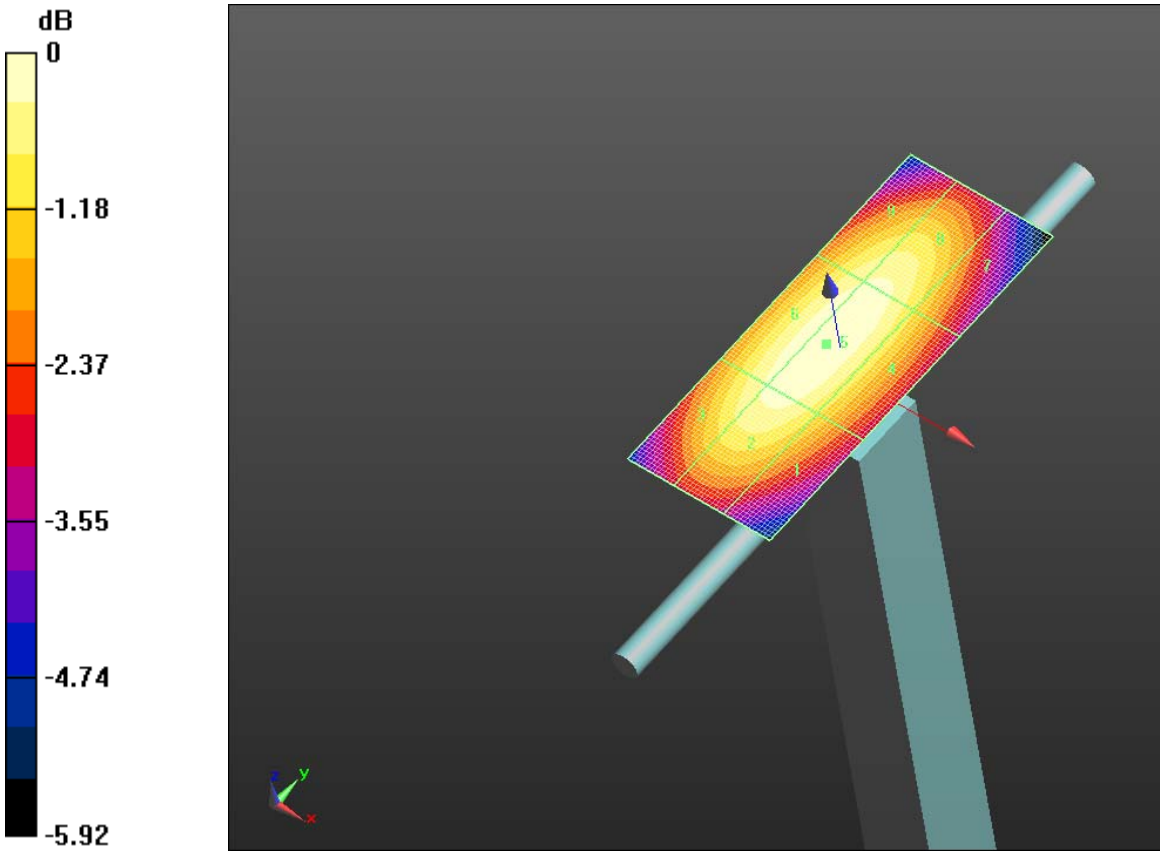
Dipole H-Field measurement with H3DV6 probe/H Scan - measurement distance from the probe sensor center to CD1880 Dipole = 10mm/Hearing Aid Compatibility Test (41x101x1): Interpolated grid: dx=0.5000 mm, dy=0.5000 mm
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 0.5110 A/m; Power Drift = -0.06 dB
PMR not calibrated. PMF = 1.000 is applied.
H-field emissions = 0.4847 A/m
Near-field category: M2 (AWF 0 dB)

PMF scaled H-field

Grid 1 **M2** **0.427 A/m**	Grid 2 **M2** **0.473 A/m**	Grid 3 **M2** **0.467 A/m**
Grid 4 **M2** **0.438 A/m**	Grid 5 **M2** **0.485 A/m**	Grid 6 **M2** **0.479 A/m**
Grid 7 **M2**	Grid 8 **M2**	Grid 9 **M2**

0.427 A/m	**0.470 A/m**	**0.463 A/m**

Cursor:
Total = 0.4847 A/m
H Category: M2
Location: -1.5, -0.5, 4.7 mm



0 dB = 0.4847 A/m = -6.29 dBA/m

Date/Time: 6/28/2012 12:25:06 PM

Test Laboratory: RIM Testing Services

HAC RF_H-Field_PMF_GSM1880 MHz_06_28_12

DUT: HAC Dipole 1880 MHz; Type: CD1880V3; Serial: 1008

Communication System: GSM 1880_PMF, Communication System: CW, Communication System: AM 80%; Frequency: 1880 MHz
Medium parameters used: $\sigma = 0$ mho/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m^3
Phantom section: RF Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 11/8/2011
- Sensor-Surface: (Fix Surface), z = 4.7
- Electronics: DAE3 Sn473; Calibrated: 1/13/2012
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA
- DASY52 52.8.0(692); SEMCAD X 14.6.4(4989)

Dipole H-Field measurement with H3DV6 probe/H Scan -GSM 1880_PMF/Hearing Aid Compatibility Test (41x101x1): Measurement grid: dx=5mm, dy=5mm
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 0.11 V/m; Power Drift = -0.01 dB
PMR not calibrated. PMF = 1.000 is applied.
H-field emissions = 0.11 A/m
Near-field category: M4 (AWF 0 dB)

PMF scaled H-field

Grid 1 **M4** **0.10 A/m**	Grid 2 **M4** **0.10 A/m**	Grid 3 **M4** **0.10 A/m**
Grid 4 **M4**	Grid 5 **M4**	Grid 6 **M4**

0.10 A/m	**0.11 A/m**	**0.10 A/m**
Grid 7 **M4** **0.10 A/m**	Grid 8 **M4** **0.10 A/m**	Grid 9 **M4** **0.10 A/m**

Cursor:
Total = 0.105 A/m
H Category: M4
Location: 0, 0.5, 4.7 mm

Dipole H-Field measurement with H3DV6 probe/H Scan - CW 1800_PMF/Hearing Aid Compatibility Test (41x101x1): Measurement

grid: dx=5mm, dy=5mm
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 0.32 V/m; Power Drift = 0.00 dB
PMR not calibrated. PMF = 1.000 is applied.
H-field emissions = 0.30 A/m
Near-field category: M3 (AWF 0 dB)

PMF scaled H-field

Grid 1 **M3** **0.28 A/m**	Grid 2 **M3** **0.29 A/m**	Grid 3 **M3** **0.28 A/m**
Grid 4 **M3** **0.29 A/m**	Grid 5 **M3** **0.30 A/m**	Grid 6 **M3** **0.29 A/m**
Grid 7 **M3** **0.28 A/m**	Grid 8 **M3** **0.29 A/m**	Grid 9 **M3** **0.28 A/m**

Cursor:
Total = 0.300 A/m
H Category: M3
Location: 0, 1, 4.7 mm

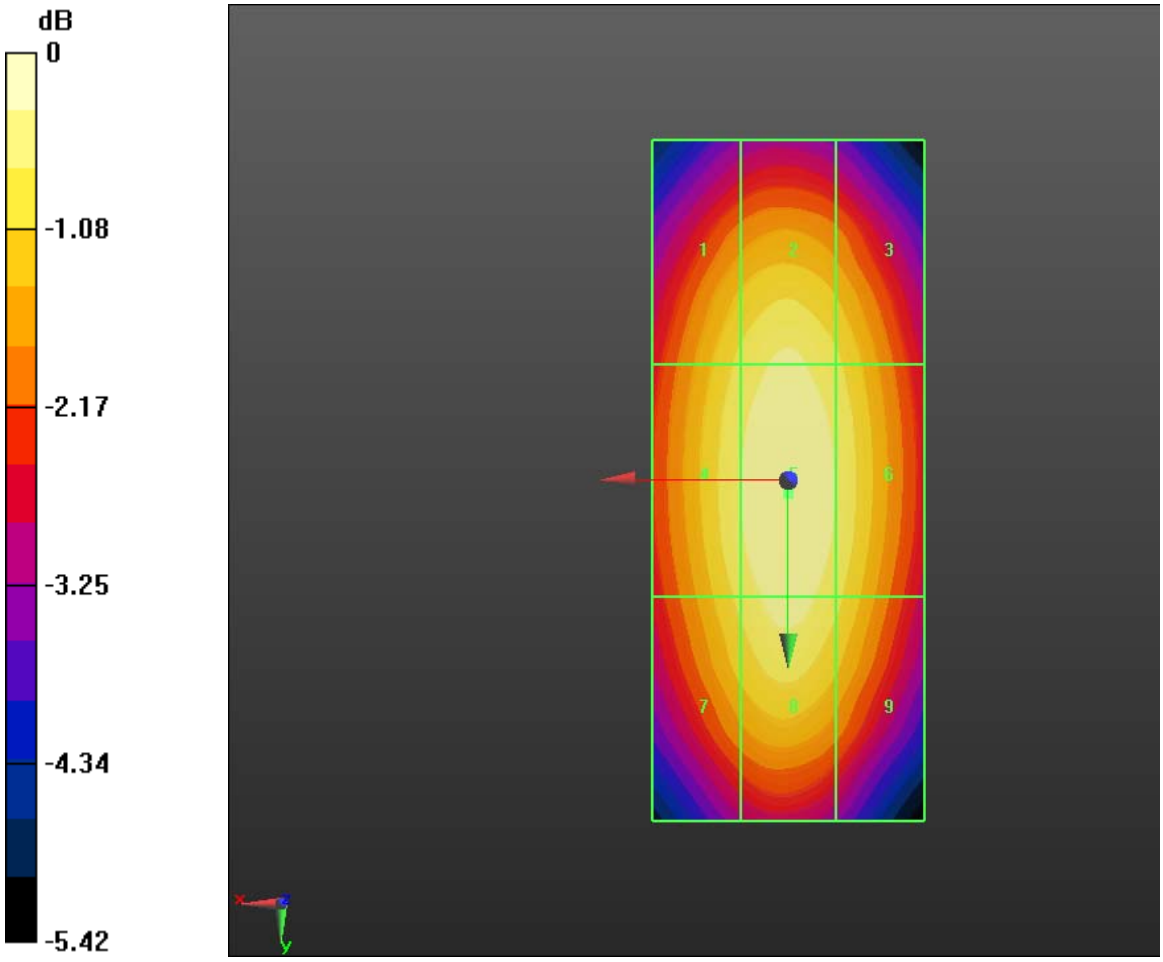
Dipole H-Field measurement with H3DV6 probe/H Scan - AM80%_1880_PMF/Hearing Aid Compatibility Test (41x101x1):

Measurement grid: dx=5mm, dy=5mm
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 0.21 V/m; Power Drift = 0.02 dB
PMR not calibrated. PMF = 1.000 is applied.
H-field emissions = 0.19 A/m
Near-field category: M3 (AWF 0 dB)

PMF scaled H-field

Grid 1 **M4** **0.18 A/m**	Grid 2 **M4** **0.19 A/m**	Grid 3 **M4** **0.18 A/m**
Grid 4 **M4** **0.19 A/m**	Grid 5 **M3** **0.19 A/m**	Grid 6 **M4** **0.19 A/m**
Grid 7 **M4** **0.18 A/m**	Grid 8 **M3** **0.19 A/m**	Grid 9 **M4** **0.18 A/m**

Cursor:
Total = 0.194 A/m
H Category: M3
Location: 0, 0.5, 4.7 mm



0 dB = 0.110A/m = -19.17 dB A/m

Date/Time: 2/17/2012 3:56:44 PM

Test Laboratory: RIM Testing Services

HAC RF_H-Field_PMF_UMTS1880 MHz_02_17_12

DUT: HAC Dipole 1880 MHz; Type: CD1880V3; Serial: 1008

Communication System: WCDMA FDD II, Communication System: CW, Communication System: AM 80%; Frequency: 1880 MHz
Medium parameters used: $\sigma = 0$ mho/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m^3
Phantom section: RF Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 11/8/2011
- Sensor-Surface: (Fix Surface), z = 4.7
- Electronics: DAE3 Sn472; Calibrated: 3/7/2011
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA
- DASY52 52.8.0(692); SEMCAD X 14.6.4(4989)

Dipole H-Field measurement with H3DV6 probe/H Scan -UMTS 1880_PMF/Hearing Aid Compatibility Test (41x101x1): Measurement grid: dx=5mm, dy=5mm
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 0.16 V/m; Power Drift = 0.06 dB
PMR not calibrated. PMF = 1.000 is applied.
H-field emissions = 0.15 A/m
Near-field category: M4 (AWF 0 dB)

PMF scaled H-field

Grid 1 **M4** **0.14 A/m**	Grid 2 **M4** **0.14 A/m**	Grid 3 **M4** **0.14 A/m**
Grid 4 **M4** **0.14 A/m**	Grid 5 **M4** **0.15 A/m**	Grid 6 **M4** **0.14 A/m**
Grid 7 **M4** **0.14 A/m**	Grid 8 **M4** **0.15 A/m**	Grid 9 **M4** **0.14 A/m**

Cursor:
Total = 0.150 A/m
H Category: M4
Location: 0, 0.5, 4.7 mm

Dipole H-Field measurement with H3DV6 probe/H Scan - CW 1880_PMF/Hearing Aid Compatibility Test (41x101x1): Measurement grid: dx=5mm, dy=5mm
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 0.16 V/m; Power Drift = -0.01 dB
PMR not calibrated. PMF = 1.000 is applied.
H-field emissions = 0.15 A/m
Near-field category: M4 (AWF 0 dB)

PMF scaled H-field

Grid 1 **M4** **0.14 A/m**	Grid 2 **M4** **0.14 A/m**	Grid 3 **M4** **0.14 A/m**
Grid 4 **M4** **0.14 A/m**	Grid 5 **M4** **0.15 A/m**	Grid 6 **M4** **0.14 A/m**
Grid 7 **M4** **0.14 A/m**	Grid 8 **M4** **0.15 A/m**	Grid 9 **M4** **0.14 A/m**

Cursor:
Total = 0.149 A/m
H Category: M4
Location: 0, 0.5, 4.7 mm

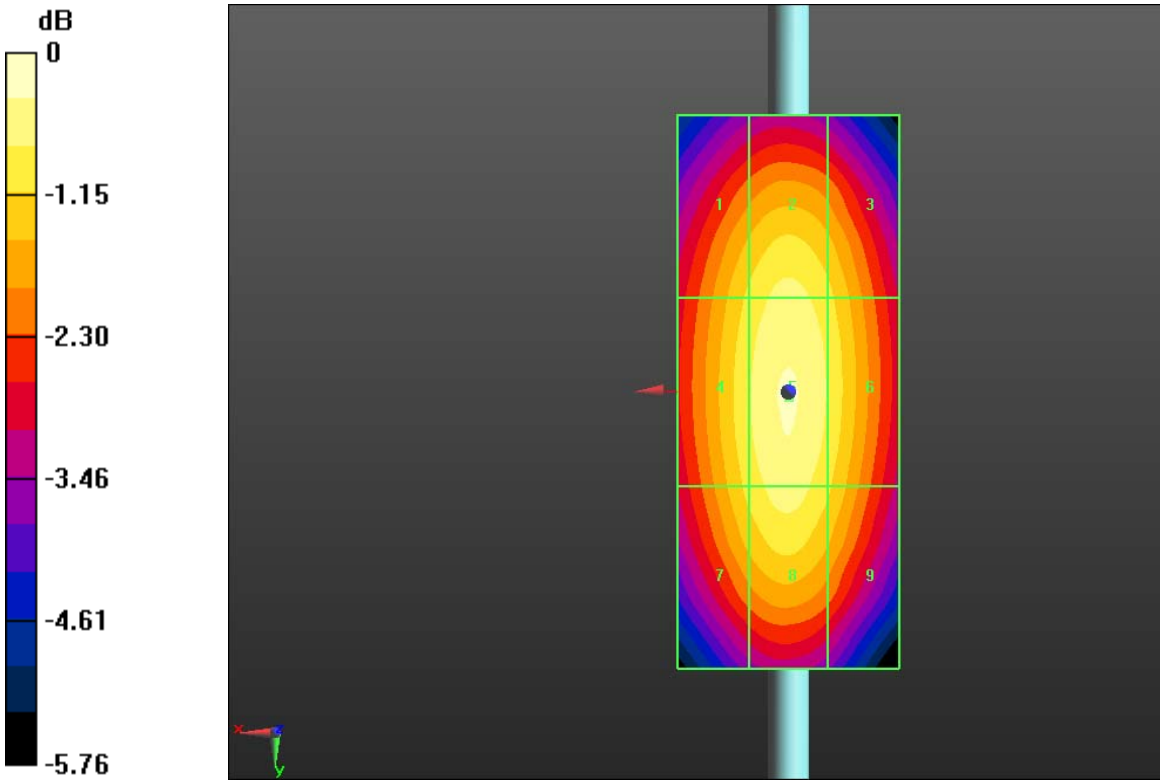
Dipole H-Field measurement with H3DV6 probe/H Scan - AM80%_1880_PMF/Hearing Aid Compatibility Test (41x101x1):

Measurement grid: dx=5mm, dy=5mm
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 0.10 V/m; Power Drift = -0.07 dB
PMR not calibrated. PMF = 1.000 is applied.
H-field emissions = 0.10 A/m
Near-field category: M4 (AWF 0 dB)

PMF scaled H-field

Grid 1 **M4** **0.09 A/m**	Grid 2 **M4** **0.09 A/m**	Grid 3 **M4** **0.09 A/m**
Grid 4 **M4** **0.09 A/m**	Grid 5 **M4** **0.10 A/m**	Grid 6 **M4** **0.09 A/m**
Grid 7 **M4** **0.09 A/m**	Grid 8 **M4** **0.09 A/m**	Grid 9 **M4** **0.09 A/m**

Cursor:
Total = 0.096 A/m
H Category: M4
Location: 0, 0, 4.7 mm



0 dB = 0.150A/m = -16.48 dB A/m

Test Laboratory: RIM Testing Services

HAC RF_H-Field_PMF_CDMA1880 MHz_02_29_12

DUT: HAC Dipole 1880 MHz; Type: CD1880V3; Serial: 1008

Communication System: CDMA 1900, Communication System: CDMA 1900 1/8th, Communication System: CW, Communication System: AM 80%; Frequency: 1880 MHz

Medium parameters used: σ = 0 mho/m, ε_r = 1; ρ = 0 kg/m^3

Phantom section: RF Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 11/8/2011
- Sensor-Surface: (Fix Surface), z = 4.7
- Electronics: DAE3 Sn473; Calibrated: 1/13/2012
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA
- DASY52 52.8.0(692); SEMCAD X 14.6.4(4989)

Dipole H-Field measurement with H3DV6 probe/H Scan -CDMA FR 1880_PMF/Hearing Aid Compatibility Test (41x101x1): Measurement grid: dx=5mm, dy=5mm

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 0.31 V/m; Power Drift = -0.05 dB

PMR not calibrated. PMF = 1.000 is applied.

H-field emissions = 0.29 A/m

Near-field category: M3 (AWF 0 dB)

PMF scaled H-field

Grid 1 **M3** **0.27 A/m**	Grid 2 **M3** **0.28 A/m**	Grid 3 **M3** **0.27 A/m**
Grid 4 **M3** **0.28 A/m**	Grid 5 **M3** **0.29 A/m**	Grid 6 **M3** **0.28 A/m**
Grid 7 **M3** **0.27 A/m**	Grid 8 **M3** **0.28 A/m**	Grid 9 **M3** **0.27 A/m**

Cursor:
Total = 0.293 A/m
H Category: M3
Location: 0, -0.5, 4.7 mm

Dipole H-Field measurement with H3DV6 probe/H Scan -CDMA 1/8th 1880_PMF 2/Hearing Aid Compatibility Test (41x101x1): Measurement grid: dx=5mm, dy=5mm
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 0.12 V/m; Power Drift = -0.90 dB
PMR not calibrated. PMF = 1.000 is applied.
H-field emissions = 0.11 A/m
Near-field category: M4 (AWF 0 dB)

PMF scaled H-field

Grid 1 **M4** **0.10 A/m**	Grid 2 **M4** **0.10 A/m**	Grid 3 **M4** **0.09 A/m**
Grid 4 **M4** **0.10 A/m**	Grid 5 **M4** **0.11 A/m**	Grid 6 **M4** **0.10 A/m**
Grid 7 **M4** **0.09 A/m**	Grid 8 **M4** **0.11 A/m**	Grid 9 **M4** **0.09 A/m**

Cursor:
Total = 0.111 A/m
H Category: M4
Location: 0, 0, 4.7 mm

Dipole H-Field measurement with H3DV6 probe/H Scan - CW 1880_PMF/Hearing Aid Compatibility Test (41x101x1): Measurement grid: dx=5mm, dy=5mm

Device Reference Point: 0, 0, -6.3 mm
Reference Value = 0.31 V/m; Power Drift = -0.01 dB
PMR not calibrated. PMF = 1.000 is applied.
H-field emissions = 0.29 A/m
Near-field category: M3 (AWF 0 dB)

PMF scaled H-field

Grid 1 **M3** **0.27 A/m**	Grid 2 **M3** **0.28 A/m**	Grid 3 **M3** **0.27 A/m**
Grid 4 **M3** **0.28 A/m**	Grid 5 **M3** **0.29 A/m**	Grid 6 **M3** **0.28 A/m**
Grid 7 **M3** **0.27 A/m**	Grid 8 **M3** **0.28 A/m**	Grid 9 **M3** **0.26 A/m**

Cursor:
Total = 0.289 A/m
H Category: M3
Location: 0, 0, 4.7 mm

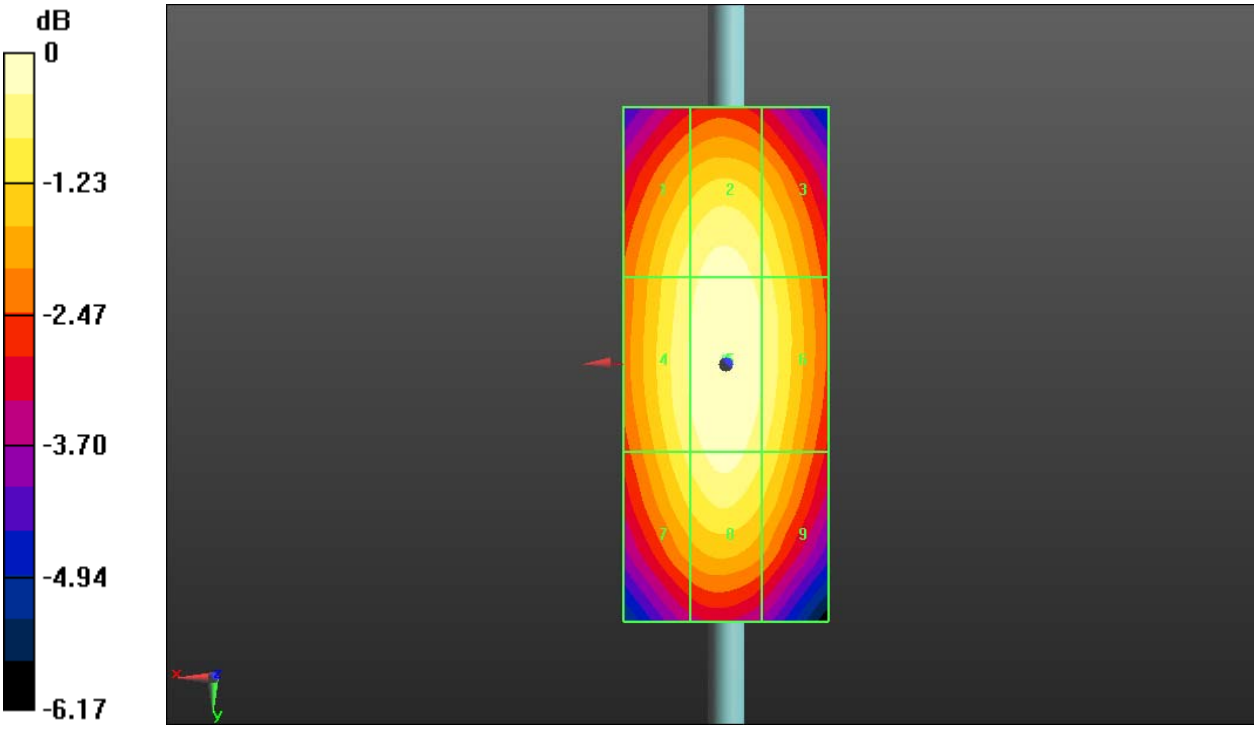
Dipole H-Field measurement with H3DV6 probe/H Scan - AM80%_1880_PMF/Hearing Aid Compatibility Test (41x101x1): Measurement grid: dx=5mm, dy=5mm

Device Reference Point: 0, 0, -6.3 mm
Reference Value = 0.20 V/m; Power Drift = 0.04 dB
PMR not calibrated. PMF = 1.000 is applied.
H-field emissions = 0.19 A/m
Near-field category: M4 (AWF 0 dB)

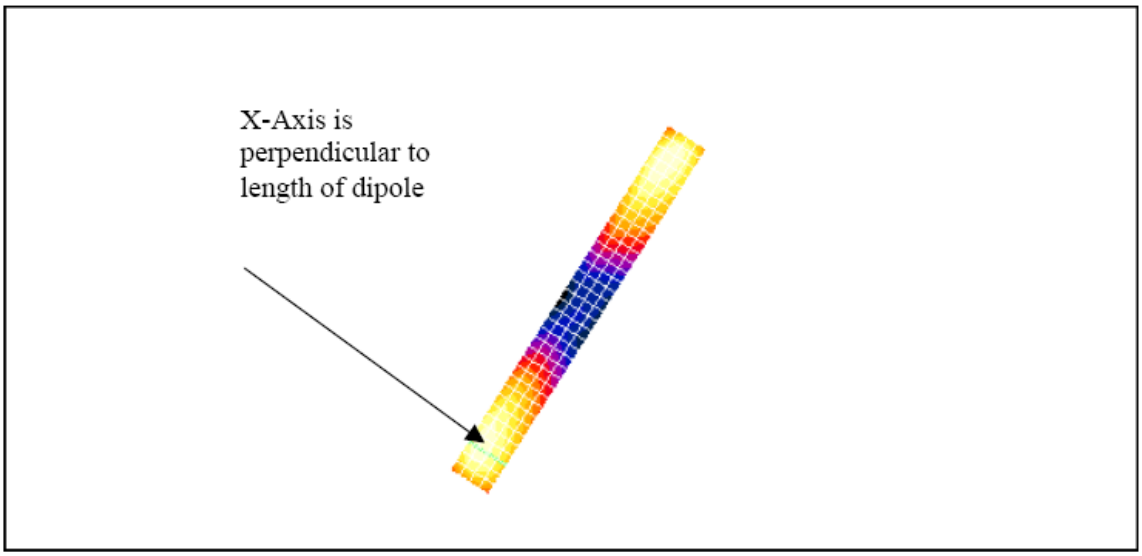
PMF scaled H-field

Grid 1 **M4** **0.17 A/m**	Grid 2 **M4** **0.18 A/m**	Grid 3 **M4** **0.17 A/m**
Grid 4 **M4** **0.18 A/m**	Grid 5 **M4** **0.19 A/m**	Grid 6 **M4** **0.18 A/m**
Grid 7 **M4** **0.17 A/m**	Grid 8 **M4** **0.18 A/m**	Grid 9 **M4** **0.17 A/m**

Cursor:
Total = 0.187 A/m
H Category: M4
Location: 0, 0, 4.7 mm



0 dB = 0.290A/m = -10.75 dB A/m



The green line in this figure shows the axis along which the points lie.

Comparison of 5mm and 2mm step sizes

An additional set of measurements was taken: dipole validations were performed using 5mm and 2mm step sizes. The delta between the two readings is insignificant for both field types (< 0.4% for E and 0% for H), demonstrating that 5mm is sufficient. The plots follow.

Date/Time: 14/07/2005 11:35:24 AM

Lab: RIM Testing Services (RTS)

Dipole Validation 1880 MHz_E-Field 07_14_05

DUT: HAC Dipole 1880 MHz; Type: CD1880V3

Communication System: CW; Frequency: 1880 MHz;Duty Cycle: 1:1
Medium: Air Medium parameters used: $\sigma = 0$ mho/m, $\varepsilon_r = 1$; $\rho = 1000$ kg/m^3
Phantom section: H Device Section

DASY4 Configuration:
- Probe: ER3DV6 - SN2285; ConvF(1, 1, 1); Calibrated: 10/12/2004
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 03/01/2005
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

E Scan 10mm above CD 1880 MHz/Hearing Aid Compatibility Test (5x19x1):
Measurement grid: dx=5mm, dy=5mm
Maximum value of Total (measured) = 134.8 V/m

E Scan 10mm above CD 1880 MHz/Hearing Aid Compatibility Test (41x181x1):
Measurement grid: dx=5mm, dy=5mm
Maximum value of Total field (slot averaged) = 131.0 V/m
Hearing Aid Near-Field Category: M2 (AWF 0 dB)

E in V/m (Time averaged)

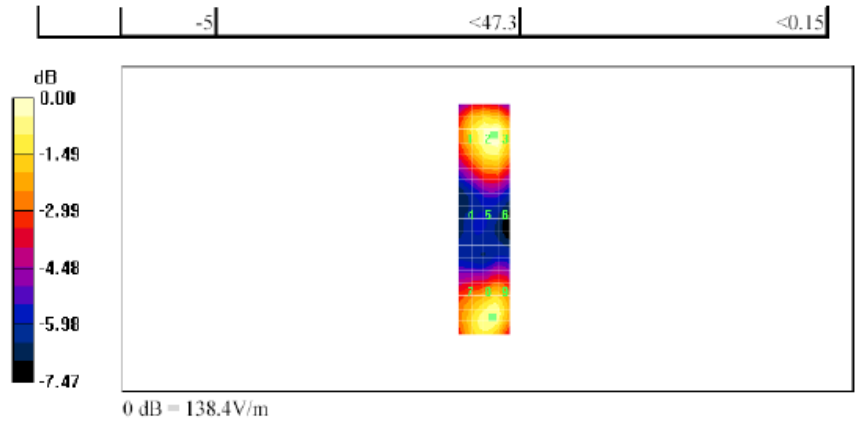
Grid 1 **123.2**	Grid 2 **138.1**	Grid 3 **138.4**
Grid 4 **80.9**	Grid 5 **92.3**	Grid 6 **92.2**
Grid 7 **119.8**	Grid 8 **131.0**	Grid 9 **130.7**

E in V/m (Slot averaged)

Grid 1 **123.2**	Grid 2 **138.1**	Grid 3 **138.4**
Grid 4 **80.9**	Grid 5 **92.3**	Grid 6 **92.2**
Grid 7 **119.8**	Grid 8 **131.0**	Grid 9 **130.7**

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

Date/Time: 14/07/2005 11:35:24 AM



Date/Time: 14/07/2005 11:44:51 AM

Lab: RIM Testing Services (RTS)

Dipole Validation 1880 MHz_2mm step_E-Field 07_14_05

DUT: HAC Dipole 1880 MHz; Type: CD1880V3

Communication System: CW; Frequency: 1880 MHz;Duty Cycle: 1:1
Medium: Air Medium parameters used: $\sigma = 0$ mho/m, $\varepsilon_r = 1$; $\rho = 1000$ kg/m^3
Phantom section: H Device Section

DASY4 Configuration:
- Probe: ER3DV6 - SN2285; ConvF(1, 1, 1); Calibrated: 10/12/2004
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 03/01/2005
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

E Scan 10mm above CD 1880 MHz/Hearing Aid Compatibility Test (11x46x1):
Measurement grid: dx=2mm, dy=2mm
Maximum value of Total (measured) = 138.0 V/m

E Scan 10mm above CD 1880 MHz/Hearing Aid Compatibility Test (101x451x1):
Measurement grid: dx=2mm, dy=2mm
Maximum value of Total field (slot averaged) = 131.2 V/m
Hearing Aid Near-Field Category: M2 (AWF 0 dB)

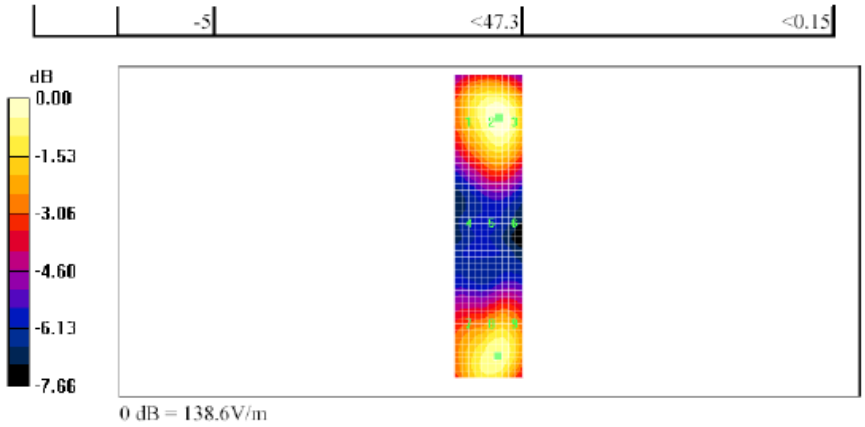
E in V/m (Time averaged)

Grid 1 **123.1**	Grid 2 **138.6**	Grid 3 **138.6**
Grid 4 **81.4**	Grid 5 **92.1**	Grid 6 **91.6**
Grid 7 **121.3**	Grid 8 **131.2**	Grid 9 **131.0**

E in V/m (Slot averaged)

Grid 1 **123.1**	Grid 2 **138.6**	Grid 3 **138.6**
Grid 4 **81.4**	Grid 5 **92.1**	Grid 6 **91.6**
Grid 7 **121.3**	Grid 8 **131.2**	Grid 9 **131.0**

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



Date/Time: 14/07/2005 12:43:02 PM

Lab: RIM Testing Services (RTS)

HAC_H_Dipole_CW 1880_5 mm step_07_14_05

DUT: HAC Dipole 1880 MHz; Type: CD1880V3

Communication System: CW; Frequency: 1880 MHz;Duty Cycle: 1:1
Medium: Air Medium parameters used: σ = 0 mho/m, ε_r = 1; ρ = 1 kg/m^3
Phantom section: H Dipole Section

DASY4 Configuration:
- Probe: H3DV6 - SN6105; ; Calibrated: 10/12/2004
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 03/01/2005
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

H Scan 10mm above CD 1880 MHz/Hearing Aid Compatibility Test (5x19x1):
Measurement grid: dx=5mm, dy=5mm
Maximum value of Total (measured) = 0.406 A/m

H Scan 10mm above CD 1880 MHz/Hearing Aid Compatibility Test (41x181x1):
Measurement grid: dx=5mm, dy=5mm
Maximum value of Total field (slot averaged) = 0.406 A/m
Hearing Aid Near-Field Category: M2 (AWF 0 dB)

H in A/m (Time averaged)

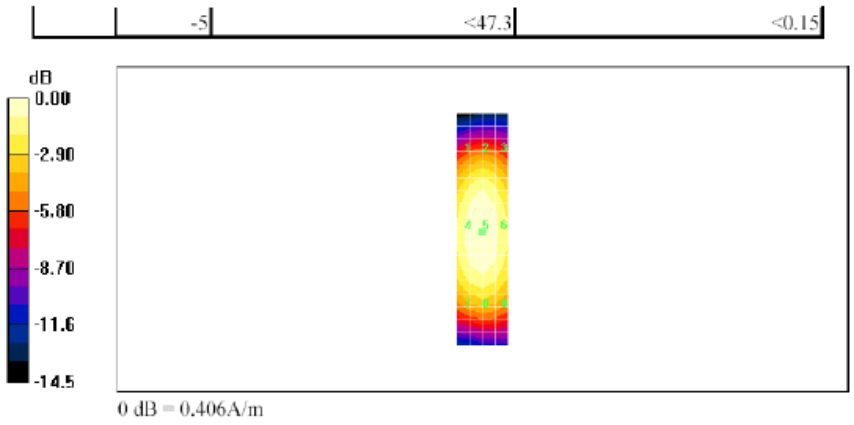
Grid 1	Grid 2	Grid 3
0.342	**0.359**	**0.344**
Grid 4	Grid 5	Grid 6
0.389	**0.406**	**0.389**
Grid 7	Grid 8	Grid 9
0.363	**0.378**	**0.363**

H in A/m (Slot averaged)

Grid 1	Grid 2	Grid 3
0.342	**0.359**	**0.344**
Grid 4	Grid 5	Grid 6
0.389	**0.406**	**0.389**
Grid 7	Grid 8	Grid 9
0.363	**0.378**	**0.363**

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

Date/Time: 14/07/2005 12:43:02 PM



0 dB = 0.406A/m

Date/Time: 14/07/2005 12:53:40 PM

Lab: RIM Testing Services (RTS)

HAC_H_Dipole_CW 1880_2 mm step_07_14_05

DUT: HAC Dipole 1880 MHz; Type: CD1880V3

Communication System: CW; Frequency: 1880 MHz;Duty Cycle: 1:1
Medium: Air Medium parameters used: $\sigma = 0$ mho/m, $\varepsilon_r = 1$; $\rho = 1$ kg/m^3
Phantom section: H Dipole Section

DASY4 Configuration:
- Probe: H3DV6 - SN6105; ; Calibrated: 10/12/2004
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 03/01/2005
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

H Scan 10mm above CD 1880 MHz/Hearing Aid Compatibility Test (11x46x1):
Measurement grid: dx=2mm, dy=2mm
Maximum value of Total (measured) = 0.406 A/m

H Scan 10mm above CD 1880 MHz/Hearing Aid Compatibility Test (101x451x1):
Measurement grid: dx=2mm, dy=2mm
Maximum value of Total field (slot averaged) = 0.406 A/m
Hearing Aid Near-Field Category: M2 (AWF 0 dB)

H in A/m (Time averaged)

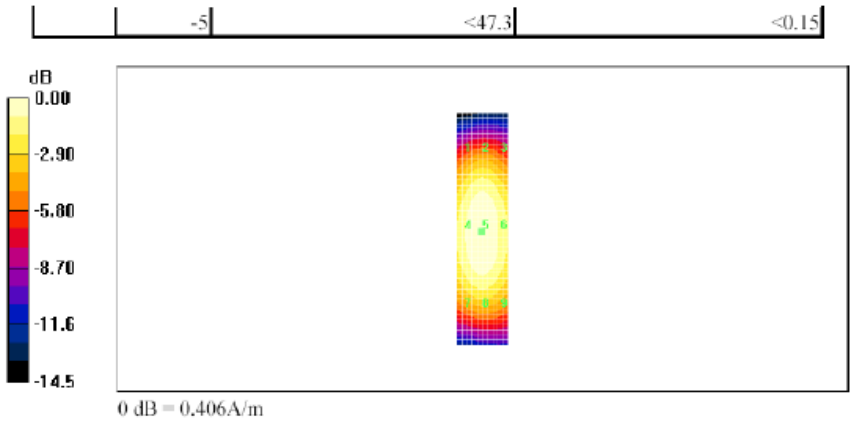
Grid 1 **0.347**	Grid 2 **0.361**	Grid 3 **0.348**
Grid 4 **0.394**	Grid 5 **0.406**	Grid 6 **0.391**
Grid 7 **0.367**	Grid 8 **0.380**	Grid 9 **0.365**

H in A/m (Slot averaged)

Grid 1 **0.347**	Grid 2 **0.361**	Grid 3 **0.348**
Grid 4 **0.394**	Grid 5 **0.406**	Grid 6 **0.391**
Grid 7 **0.367**	Grid 8 **0.380**	Grid 9 **0.365**

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

Date/Time: 14/07/2005 12:53:40 PM



A.3 RF emission field plots

Date/Time: 4/26/2013 3:29:20 AM

Test Laboratory: RIM Testing Services

HAC RF_E-Field_GSM850

DUT: BlackBerry Smartphone; Type: Sample ; Serial: 333CB445

Communication System: GSM 850; Frequency: 824.2 MHz, Frequency: 836.8 MHz, Frequency: 848.8 MHz
Medium parameters used: $\sigma = 0$ S/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m^3
Phantom section: RF Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 1/11/2013;
- Sensor-Surface: (Fix Surface), z = 8.7
- Electronics: DAE4 Sn881; Calibrated: 1/14/2013
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA
- DASY52 52.8.4(1052); SEMCAD X 14.6.8(7028)

Device E-Field measurement with ER probe/E Scan - ER3D - 2007: 15 mm from Probe Center to Device_Low_Chan/Hearing Aid Compatibility Test (101x101x1): Interpolated grid: dx=0.5000 mm, dy=0.5000 mm

Device Reference Point: 0, 0, -6.3 mm
Reference Value = 67.32 V/m; Power Drift = -0.09 dB
PMR not calibrated. PMF = 3.000 is applied.
E-field emissions = 174.1 V/m
Near-field category: M3 (AWF -5 dB)

PMF scaled E-field

Grid 1 **M4** **144.3 V/m**	Grid 2 **M3** **170.0 V/m**	Grid 3 **M3** **170.2 V/m**
Grid 4 **M4** **142.8 V/m**	Grid 5 **M3** **174.1 V/m**	Grid 6 **M3** **174.3 V/m**

Grid 7 **M4** **142.2 V/m**	Grid 8 **M3** **171.3 V/m**	Grid 9 **M3** **171.4 V/m**

Cursor:
Total = 174.3 V/m
E Category: M3
Location: -9, 0.5, 8.7 mm

Device E-Field measurement with ER probe/E Scan - ER3D - 2007: 15 mm from Probe Center to the Device_Mid_Chan/Hearing Aid Compatibility Test (101x101x1): Interpolated grid: dx=0.5000 mm, dy=0.5000 mm

Device Reference Point: 0, 0, -6.3 mm
Reference Value = 73.61 V/m; Power Drift = 0.01 dB
PMR not calibrated. PMF = 3.000 is applied.
E-field emissions = 196.9 V/m
Near-field category: M3 (AWF -5 dB)

PMF scaled E-field

Grid 1 **M3** **156.7 V/m**	Grid 2 **M3** **192.3 V/m**	Grid 3 **M3** **193.4 V/m**
Grid 4 **M3** **153.9 V/m**	Grid 5 **M3** **196.9 V/m**	Grid 6 **M3** **197.7 V/m**
Grid 7 **M3** **151.8 V/m**	Grid 8 **M3** **193.9 V/m**	Grid 9 **M3** **194.3 V/m**

Cursor:
Total = 197.7 V/m
E Category: M3
Location: -10, 0.5, 8.7 mm

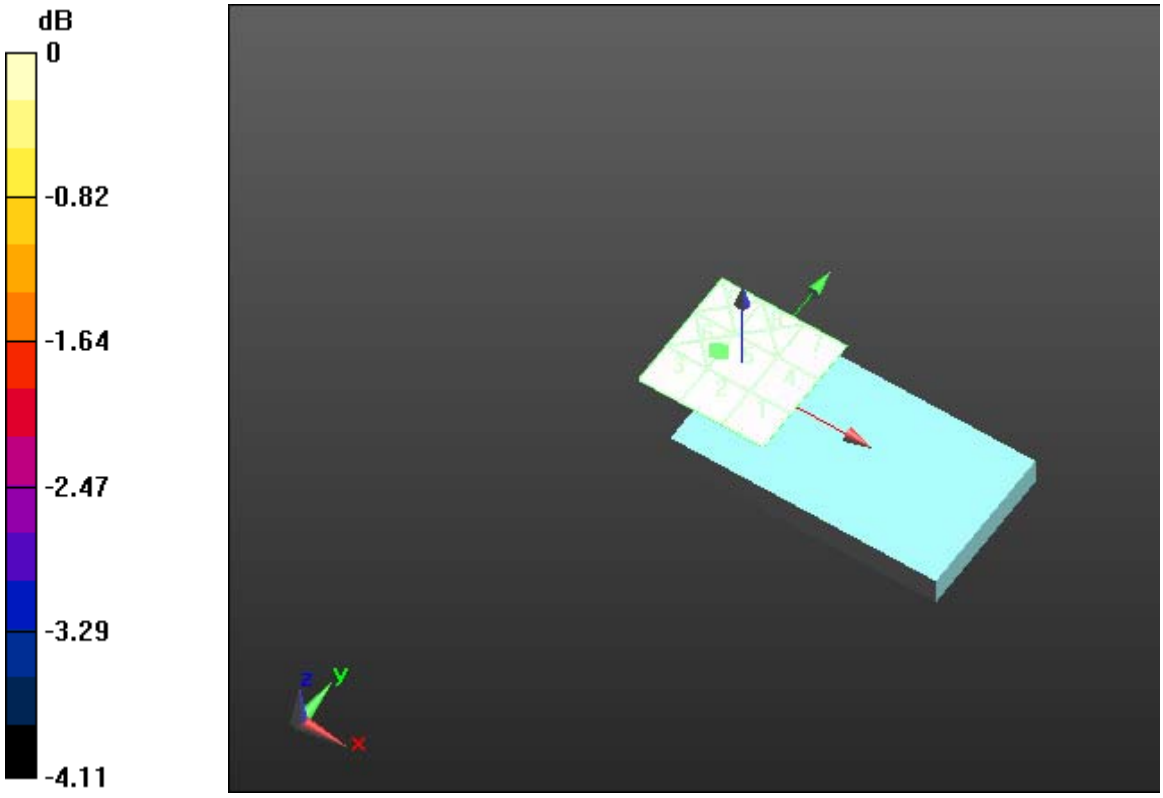
Device E-Field measurement with ER probe/E Scan - ER3D - 2007: 15 mm from Probe Center to the Device_High_Chan/Hearing Aid Compatibility Test (101x101x1): Interpolated grid: dx=0.5000 mm, dy=0.5000 mm

Device Reference Point: 0, 0, -6.3 mm
Reference Value = 69.50 V/m; Power Drift = 0.04 dB
PMR not calibrated. PMF = 3.000 is applied.
E-field emissions = 187.2 V/m
Near-field category: M3 (AWF -5 dB)

PMF scaled E-field

Grid 1 **M4** **149.4 V/m**	Grid 2 **M3** **184.6 V/m**	Grid 3 **M3** **185.4 V/m**
Grid 4 **M4** **144.5 V/m**	Grid 5 **M3** **187.2 V/m**	Grid 6 **M3** **188.1 V/m**
Grid 7 **M4** **139.0 V/m**	Grid 8 **M3** **182.6 V/m**	Grid 9 **M3** **183.2 V/m**

Cursor:
Total = 188.1 V/m
E Category: M3
Location: -10, -0.5, 8.7 mm



0 dB = 167.4 V/m = 44.48 dBV/m

Date/Time: 4/26/2013 3:54:49 AM

Test Laboratory: RIM Testing Services

HAC RF_E-Field_GSM850_Telecoil

DUT: BlackBerry Smartphone; Type: Sample ; Serial: 333CB445

Communication System: GSM 850; Frequency: 836.8 MHz
Medium parameters used: $\sigma = 0$ S/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m^3
Phantom section: RF Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 1/11/2013;
- Sensor-Surface: (Fix Surface), z = 8.7
- Electronics: DAE4 Sn881; Calibrated: 1/14/2013
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA
- DASY52 52.8.4(1052); SEMCAD X 14.6.8(7028)

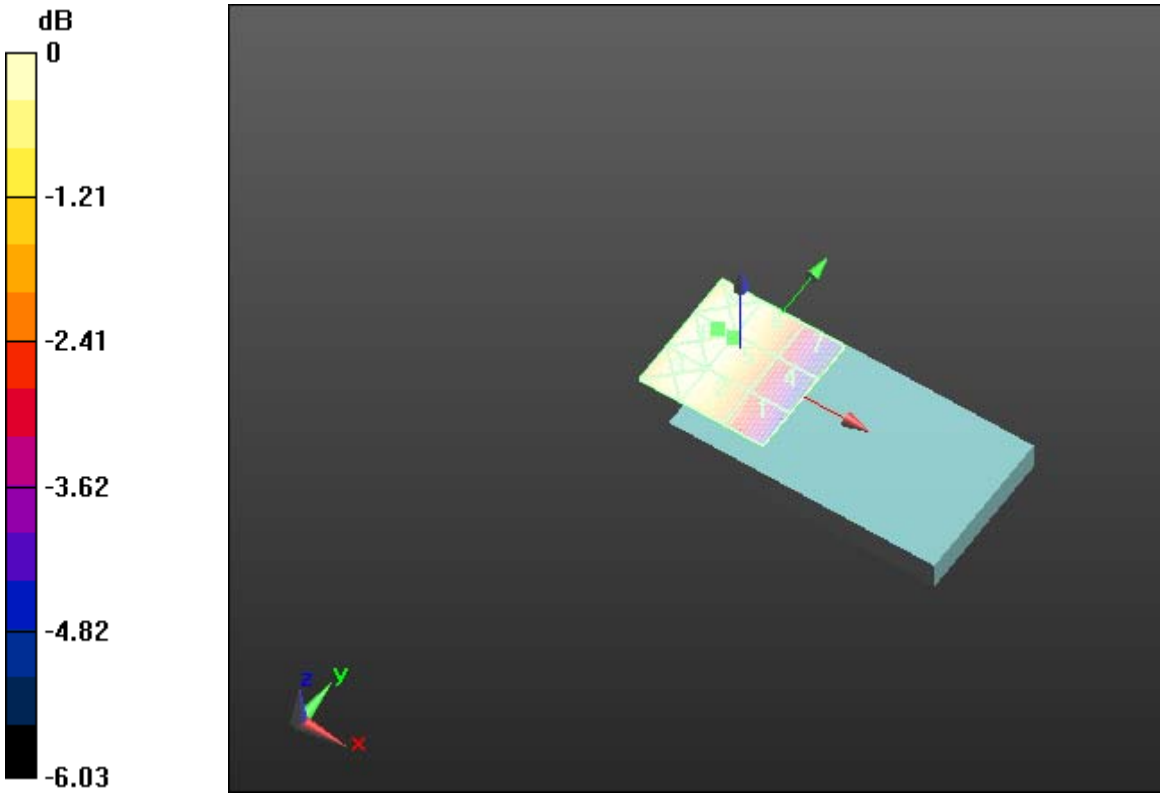
Device E-Field measurement with ER probe/E Scan - ER3D - 2007: 15 mm from Probe Center to the Device_telecoil/Hearing Aid Compatibility Test (101x101x1):

Interpolated grid: dx=0.5000 mm, dy=0.5000 mm
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 73.03 V/m; Power Drift = -0.07 dB
PMR not calibrated. PMF = 3.000 is applied.
E-field emissions = 187.7 V/m
Near-field category: M3 (AWF -5 dB)

PMF scaled E-field

Grid 1 **M4** **146.7 V/m**	Grid 2 **M3** **182.7 V/m**	Grid 3 **M3** **188.6 V/m**
Grid 4 **M4** **142.4 V/m**	Grid 5 **M3** **187.7 V/m**	Grid 6 **M3** **194.2 V/m**
Grid 7 **M4** **141.6 V/m**	Grid 8 **M3** **187.6 V/m**	Grid 9 **M3** **194.0 V/m**

Cursor:
Total = 194.2 V/m
E Category: M3
Location: -10.5, 2, 8.7 mm



0 dB = 186.5 V/m = 45.41 dBV/m

Date/Time: 4/26/2013 5:29:13 AM

Test Laboratory: RIM Testing Services

HAC RF_E-Field_UMTS_Band_V

DUT: BlackBerry Smartphone; Type: Sample ; Serial: 333CB445

Communication System: WCDMA FDD V; Frequency: 826.4 MHz, Frequency: 836.4 MHz, Frequency: 846.6 MHz
Medium parameters used: $\sigma = 0$ S/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m^3
Phantom section: RF Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 1/11/2013;
- Sensor-Surface: (Fix Surface), z = 8.7
- Electronics: DAE4 Sn881; Calibrated: 1/14/2013
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA
- DASY52 52.8.4(1052); SEMCAD X 14.6.8(7028)

Device E-Field measurement with ER probe/E Scan - ER3D - 2007: 15 mm from Probe Center to Device_Low_Chan/Hearing Aid Compatibility Test (101x101x1): Interpolated grid: dx=0.5000 mm, dy=0.5000 mm

Device Reference Point: 0, 0, -6.3 mm
Reference Value = 64.33 V/m; Power Drift = 0.07 dB
PMR not calibrated. PMF = 1.070 is applied.
E-field emissions = 59.88 V/m
Near-field category: M4 (AWF 0 dB)

PMF scaled E-field

Grid 1 **M4** **49.13 V/m**	Grid 2 **M4** **58.38 V/m**	Grid 3 **M4** **58.43 V/m**
Grid 4 **M4** **49.02 V/m**	Grid 5 **M4** **59.88 V/m**	Grid 6 **M4** **59.94 V/m**
Grid 7 **M4**	Grid 8 **M4**	Grid 9 **M4**

48.81 V/m	58.97 V/m	59.00 V/m

Cursor:
Total = 59.94 V/m
E Category: M4
Location: -9.5, 1, 8.7 mm

Device E-Field measurement with ER probe/E Scan - ER3D - 2007: 15 mm from Probe Center to the Device_Mid_Chan/Hearing Aid Compatibility Test (101x101x1): Interpolated grid: dx=0.5000 mm, dy=0.5000 mm

Device Reference Point: 0, 0, -6.3 mm
Reference Value = 80.62 V/m; Power Drift = 0.01 dB
PMR not calibrated. PMF = 1.070 is applied.
E-field emissions = 76.92 V/m
Near-field category: M4 (AWF 0 dB)

PMF scaled E-field

Grid 1 **M4** **61.03 V/m**	Grid 2 **M4** **75.11 V/m**	Grid 3 **M4** **75.43 V/m**
Grid 4 **M4** **60.36 V/m**	Grid 5 **M4** **76.92 V/m**	Grid 6 **M4** **77.21 V/m**
Grid 7 **M4** **59.88 V/m**	Grid 8 **M4** **75.85 V/m**	Grid 9 **M4** **76.00 V/m**

Cursor:
Total = 77.21 V/m
E Category: M4
Location: -10, 1.5, 8.7 mm

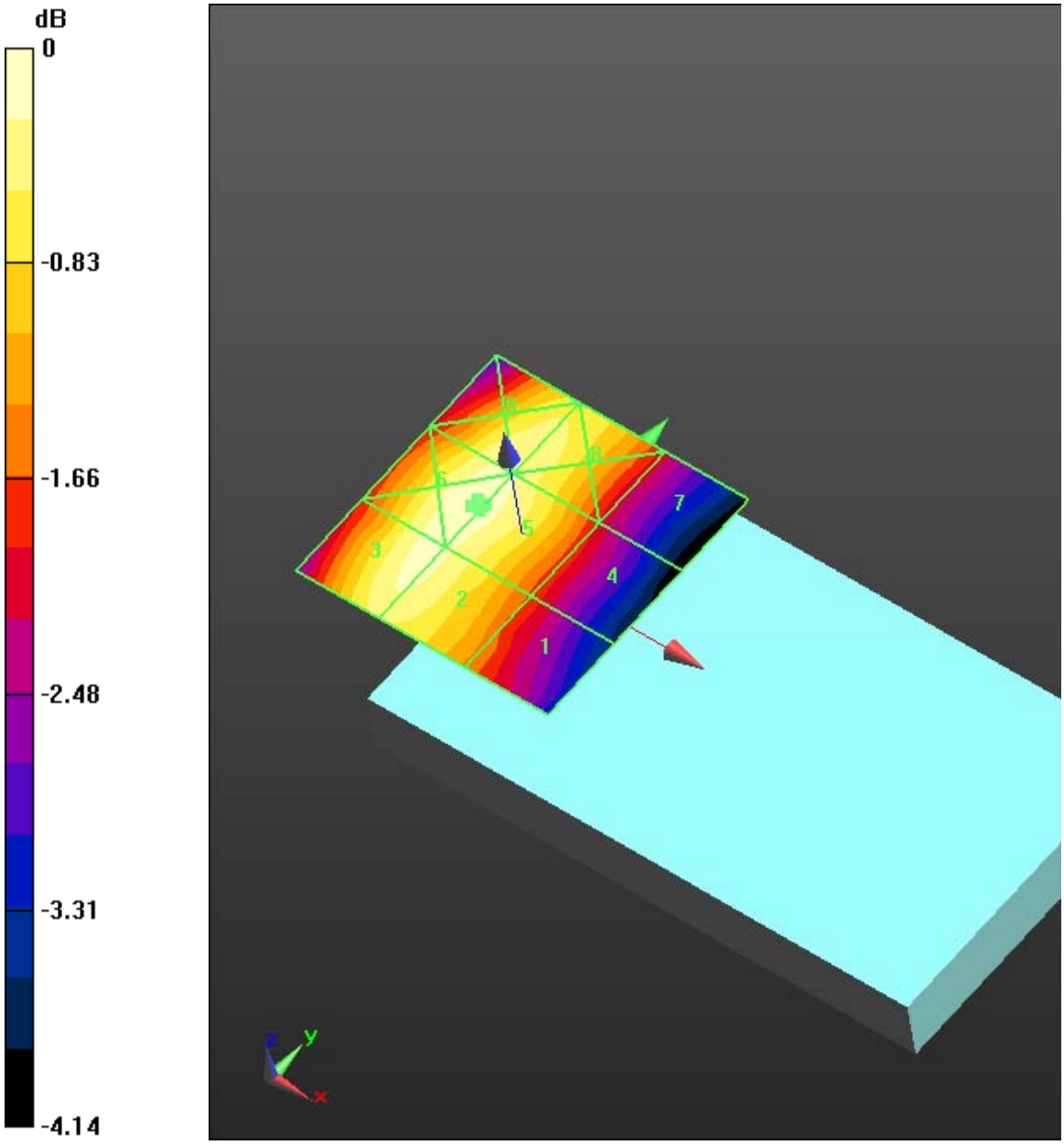
Device E-Field measurement with ER probe/E Scan - ER3D - 2007: 15 mm from Probe Center to the Device_High_Chan/Hearing Aid Compatibility Test (101x101x1): Interpolated grid: dx=0.5000 mm, dy=0.5000 mm

Device Reference Point: 0, 0, -6.3 mm
Reference Value = 77.75 V/m; Power Drift = 0.14 dB
PMR not calibrated. PMF = 1.070 is applied.
E-field emissions = 74.61 V/m
Near-field category: M4 (AWF 0 dB)

PMF scaled E-field

Grid 1 **M4** **61.15 V/m**	Grid 2 **M4** **73.29 V/m**	Grid 3 **M4** **73.67 V/m**
Grid 4 **M4** **58.84 V/m**	Grid 5 **M4** **74.61 V/m**	Grid 6 **M4** **75.09 V/m**
Grid 7 **M4** **56.67 V/m**	Grid 8 **M4** **72.56 V/m**	Grid 9 **M4** **72.90 V/m**

Cursor:
Total = 75.09 V/m
E Category: M4
Location: -10, 0, 8.7 mm



0 dB = 59.94 V/m = 35.55 dBV/m

Date/Time: 4/26/2013 5:33:49 AM

Test Laboratory: RIM Testing Services

HAC RF_E-Field_UMTS_Band_V_Telecoil

DUT: BlackBerry Smartphone; Type: Sample ; Serial: 333CB445

Communication System: WCDMA FDD V; Frequency: 836.4 MHz
Medium parameters used: $\sigma = 0$ S/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m^3
Phantom section: RF Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 1/11/2013;
- Sensor-Surface: (Fix Surface), z = 8.7
- Electronics: DAE4 Sn881; Calibrated: 1/14/2013
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA; Serial: Not Specified
- DASY52 52.8.4(1052); SEMCAD X 14.6.8(7028)

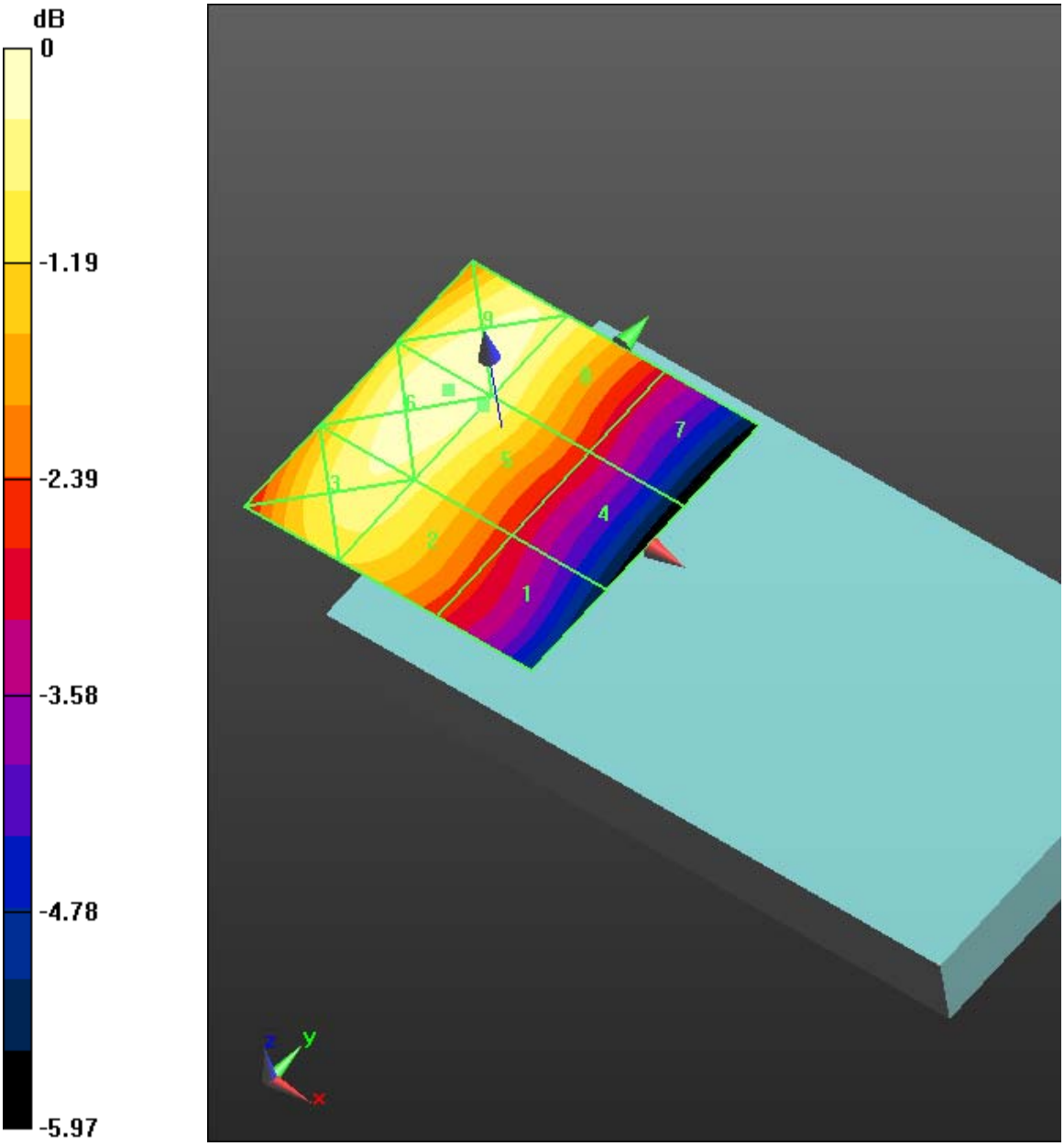
Device E-Field measurement with ER probe/E Scan - ER3D - 2007: 15 mm from Probe Center to the Device_telecoil/Hearing Aid Compatibility Test (101x101x1):

Interpolated grid: dx=0.5000 mm, dy=0.5000 mm
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 80.99 V/m; Power Drift = 0.00 dB
PMR not calibrated. PMF = 1.070 is applied.
E-field emissions = 74.64 V/m
Near-field category: M4 (AWF 0 dB)

PMF scaled E-field

Grid 1 **M4** **57.77 V/m**	Grid 2 **M4** **72.23 V/m**	Grid 3 **M4** **74.67 V/m**
Grid 4 **M4** **56.45 V/m**	Grid 5 **M4** **74.64 V/m**	Grid 6 **M4** **77.59 V/m**
Grid 7 **M4** **56.24 V/m**	Grid 8 **M4** **74.55 V/m**	Grid 9 **M4** **77.46 V/m**

Cursor:
Total = 77.59 V/m
E Category: M4
Location: -10, 1, 8.7 mm



0 dB = 77.59 V/m = 37.80 dBV/m

Date/Time: 4/26/2013 4:05:12 AM

Test Laboratory: RIM Testing Services

HAC RF_E-Field_GSM1900

DUT: BlackBerry Smartphone; Type: Sample ; Serial: 333CB445

Communication System: GSM 1900; Frequency: 1850.2 MHz, Frequency: 1880 MHz, Frequency: 1909.8 MHz
Medium parameters used: $\sigma = 0$ S/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m^3
Phantom section: RF Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 1/11/2013;
- Sensor-Surface: (Fix Surface), z = 8.7
- Electronics: DAE4 Sn881; Calibrated: 1/14/2013
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA
- DASY52 52.8.4(1052); SEMCAD X 14.6.8(7028)

Device E-Field measurement with ER probe/E Scan - ER3D - 2007: 15 mm from Probe Center to Device_Low_Chan/Hearing Aid Compatibility Test (101x101x1): Interpolated grid: dx=0.5000 mm, dy=0.5000 mm

Device Reference Point: 0, 0, -6.3 mm
Reference Value = 11.05 V/m; Power Drift = 0.11 dB
PMR not calibrated. PMF = 2.850 is applied.
E-field emissions = 53.51 V/m
Near-field category: M3 (AWF -5 dB)

PMF scaled E-field

Grid 1 **M3** **48.50 V/m**	Grid 2 **M3** **53.51 V/m**	Grid 3 **M3** **52.34 V/m**
Grid 4 **M4** **30.61 V/m**	Grid 5 **M4** **44.75 V/m**	Grid 6 **M4** **45.14 V/m**

Grid 7 **M3** **55.63 V/m**	Grid 8 **M3** **69.11 V/m**	Grid 9 **M3** **68.44 V/m**

Cursor:
Total = 69.11 V/m
E Category: M3
Location: -6, 25, 8.7 mm

Device E-Field measurement with ER probe/E Scan - ER3D - 2007: 15 mm from Probe Center to the Device_Mid_Chan/Hearing Aid Compatibility Test (101x101x1): Interpolated grid: dx=0.5000 mm, dy=0.5000 mm

Device Reference Point: 0, 0, -6.3 mm
Reference Value = 8.576 V/m; Power Drift = 0.15 dB
PMR not calibrated. PMF = 2.850 is applied.
E-field emissions = 54.98 V/m
Near-field category: M3 (AWF -5 dB)

PMF scaled E-field

Grid 1 **M3** **49.69 V/m**	Grid 2 **M3** **54.98 V/m**	Grid 3 **M3** **54.48 V/m**
Grid 4 **M4** **27.48 V/m**	Grid 5 **M4** **42.90 V/m**	Grid 6 **M4** **44.27 V/m**
Grid 7 **M3** **54.60 V/m**	Grid 8 **M3** **71.25 V/m**	Grid 9 **M3** **71.00 V/m**

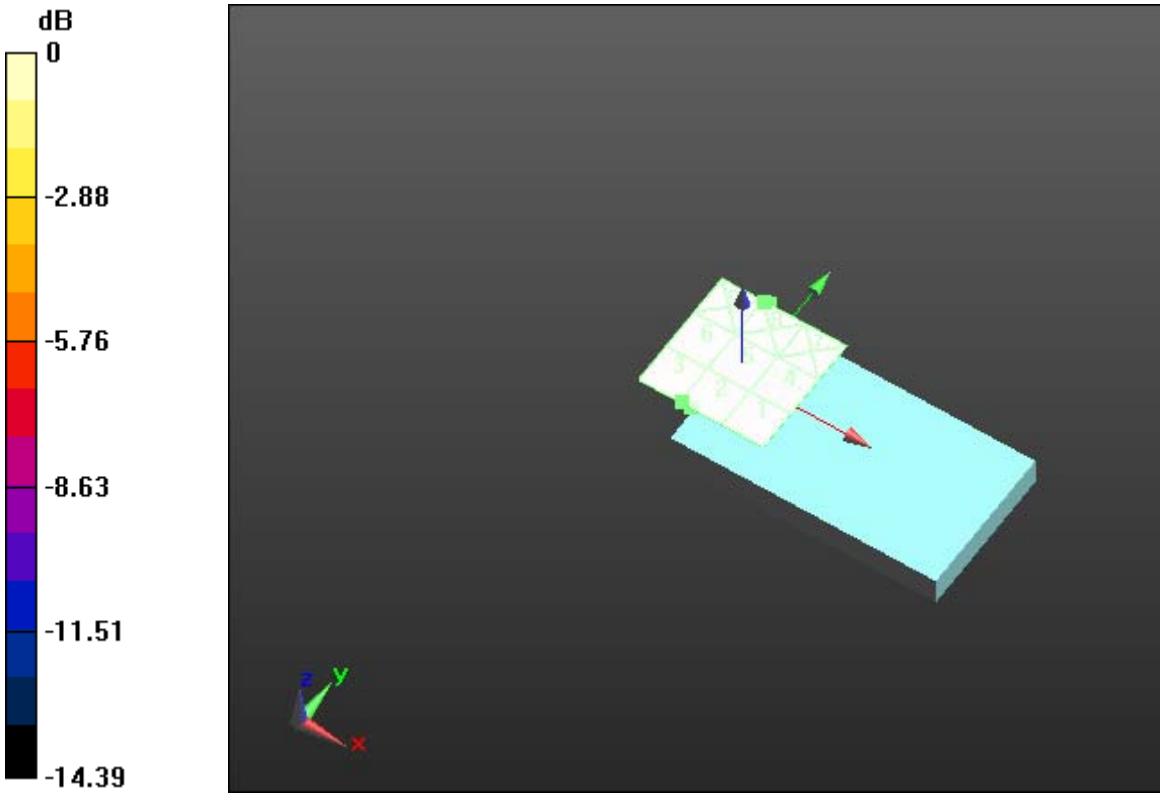
Cursor:
Total = 71.25 V/m
E Category: M3
Location: -7, 25, 8.7 mm

Device E-Field measurement with ER probe/E Scan - ER3D - 2007: 15 mm from Probe Center to the Device_High_Chan/Hearing Aid Compatibility Test (101x101x1): Interpolated grid: dx=0.5000 mm, dy=0.5000 mm
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 7.786 V/m; Power Drift = 0.01 dB
PMR not calibrated. PMF = 2.850 is applied.
E-field emissions = 50.67 V/m
Near-field category: M3 (AWF -5 dB)

PMF scaled E-field

Grid 1 **M4** **40.87 V/m**	Grid 2 **M3** **50.67 V/m**	Grid 3 **M3** **50.64 V/m**
Grid 4 **M4** **22.34 V/m**	Grid 5 **M4** **38.28 V/m**	Grid 6 **M4** **39.79 V/m**
Grid 7 **M4** **47.07 V/m**	Grid 8 **M3** **64.14 V/m**	Grid 9 **M3** **64.14 V/m**

Cursor:
Total = 64.14 V/m
E Category: M3
Location: -8, 25, 8.7 mm



0 dB = 69.86 V/m = 36.88 dBV/m

Date/Time: 4/26/2013 4:38:11 AM

Test Laboratory: RIM Testing Services

HAC RF_E-Field_GSM1900_Telecoil

DUT: BlackBerry Smartphone; Type: Sample ; Serial: 333CB445

Communication System: GSM 1900; Frequency: 1880 MHz
Medium parameters used: $\sigma = 0$ S/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m^3
Phantom section: RF Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 1/11/2013;
- Sensor-Surface: (Fix Surface), z = 8.7
- Electronics: DAE4 Sn881; Calibrated: 1/14/2013
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA
- DASY52 52.8.4(1052); SEMCAD X 14.6.8(7028)

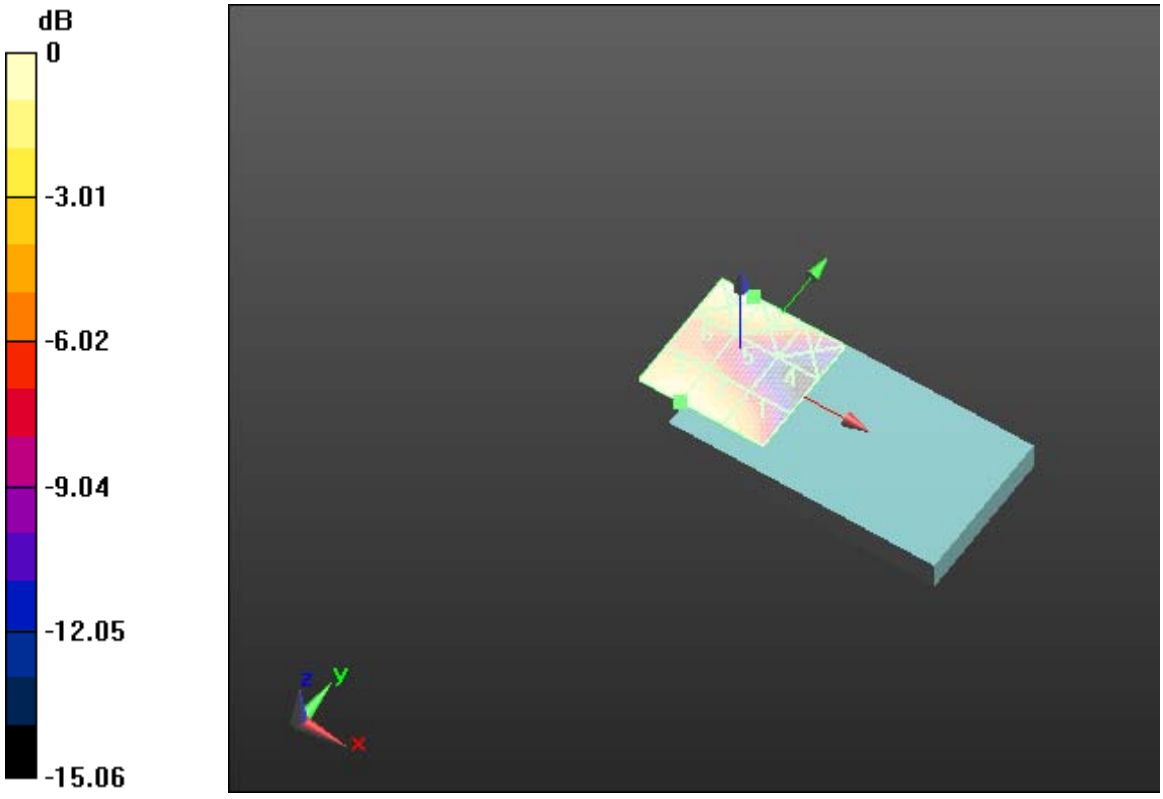
Device E-Field measurement with ER probe/E Scan - ER3D - 2007: 15 mm from Probe Center to the Device_telecoil/Hearing Aid Compatibility Test (101x101x1):

Interpolated grid: dx=0.5000 mm, dy=0.5000 mm
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 8.846 V/m; Power Drift = -0.09 dB
PMR not calibrated. PMF = 2.850 is applied.
E-field emissions = 57.92 V/m
Near-field category: M3 (AWF -5 dB)

PMF scaled E-field

Grid 1 **M3** **50.67 V/m**	Grid 2 **M3** **57.92 V/m**	Grid 3 **M3** **57.92 V/m**
Grid 4 **M4** **28.11 V/m**	Grid 5 **M4** **36.67 V/m**	Grid 6 **M4** **37.99 V/m**
Grid 7 **M4** **38.79 V/m**	Grid 8 **M3** **60.40 V/m**	Grid 9 **M3** **61.69 V/m**

Cursor:
Total = 61.69 V/m
E Category: M3
Location: -8, 20, 8.7 mm



0 dB = 62.36 V/m = 35.90 dBV/m

Date/Time: 4/26/2013 4:56:24 AM

Test Laboratory: RIM Testing Services

HAC RF_E-Field_UMTS_Band_II

DUT: BlackBerry Smartphone; Type: Sample ; Serial: 333CB445

Communication System: WCDMA FDD II; Frequency: 1852.4 MHz, Frequency: 1880 MHz, Frequency: 1907.6 MHz
Medium parameters used: $\sigma = 0$ S/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m^3
Phantom section: RF Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 1/11/2013;
- Sensor-Surface: (Fix Surface), z = 8.7
- Electronics: DAE4 Sn881; Calibrated: 1/14/2013
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- DASY52 52.8.4(1052); SEMCAD X 14.6.8(7028)

Device E-Field measurement with ER probe/E Scan - ER3D - 2007: 15 mm from Probe Center to Device_Low_Chan/Hearing Aid Compatibility Test (101x101x1): Interpolated grid: dx=0.5000 mm, dy=0.5000 mm

Device Reference Point: 0, 0, -6.3 mm
Reference Value = 16.55 V/m; Power Drift = 0.01 dB
PMR not calibrated. PMF = 1.000 is applied.
E-field emissions = 28.77 V/m
Near-field category: M4 (AWF 0 dB)

PMF scaled E-field

Grid 1 **M4** **26.07 V/m**	Grid 2 **M4** **28.77 V/m**	Grid 3 **M4** **28.15 V/m**
Grid 4 **M4** **16.74 V/m**	Grid 5 **M4** **23.35 V/m**	Grid 6 **M4** **23.61 V/m**
Grid 7 **M4**	Grid 8 **M4**	Grid 9 **M4**

29.16 V/m	**35.61 V/m**	**35.44 V/m**

Cursor:
Total = 35.61 V/m
E Category: M4
Location: -6, 25, 8.7 mm

Device E-Field measurement with ER probe/E Scan - ER3D - 2007: 15 mm from Probe Center to the Device_Mid_Chan/Hearing Aid Compatibility Test (101x101x1): Interpolated grid: dx=0.5000 mm, dy=0.5000 mm

Device Reference Point: 0, 0, -6.3 mm
Reference Value = 14.60 V/m; Power Drift = -0.15 dB
PMR not calibrated. PMF = 1.000 is applied.
E-field emissions = 28.01 V/m
Near-field category: M4 (AWF 0 dB)

PMF scaled E-field

Grid 1 **M4** **24.97 V/m**	Grid 2 **M4** **28.01 V/m**	Grid 3 **M4** **27.83 V/m**
Grid 4 **M4** **14.93 V/m**	Grid 5 **M4** **22.90 V/m**	Grid 6 **M4** **23.39 V/m**
Grid 7 **M4** **28.44 V/m**	Grid 8 **M4** **37.03 V/m**	Grid 9 **M4** **36.96 V/m**

Cursor:
Total = 37.03 V/m
E Category: M4
Location: -7.5, 25, 8.7 mm

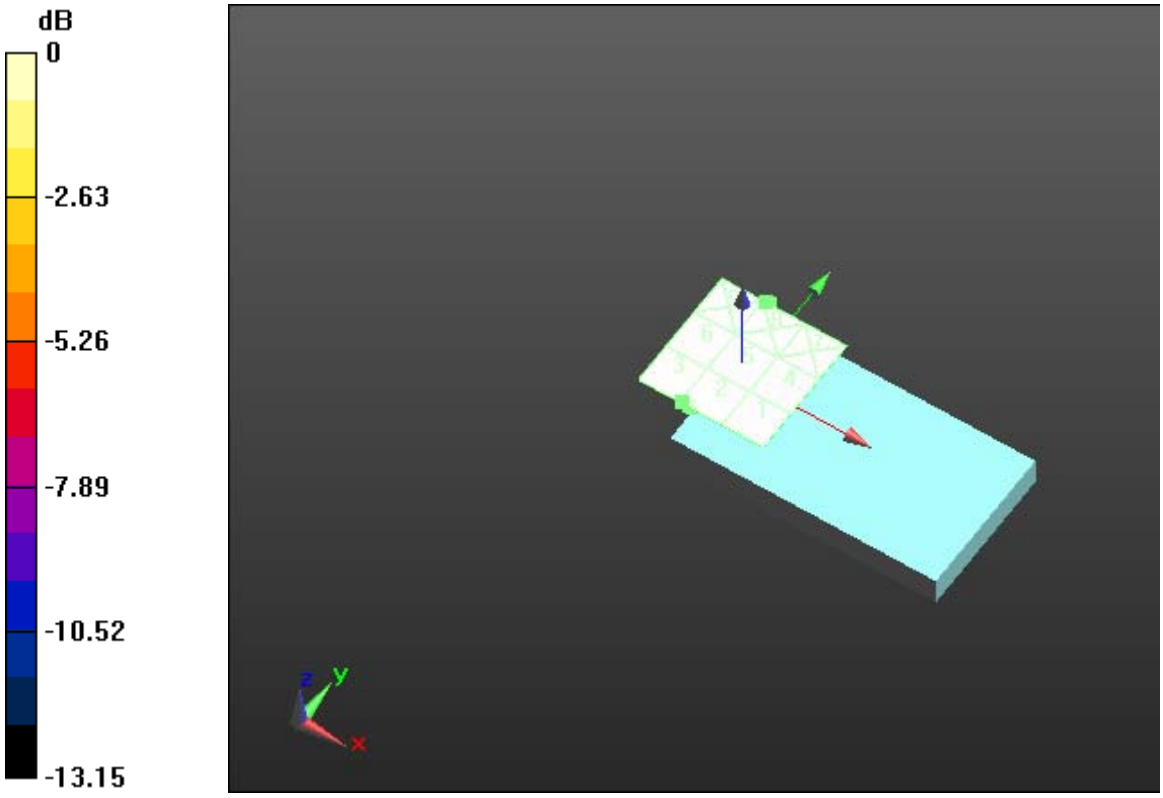
Device E-Field measurement with ER probe/E Scan - ER3D - 2007: 15 mm from Probe Center to the Device_High_Chan/Hearing Aid Compatibility Test (101x101x1): Interpolated grid: dx=0.5000 mm, dy=0.5000 mm

Device Reference Point: 0, 0, -6.3 mm
Reference Value = 13.13 V/m; Power Drift = -0.09 dB
PMR not calibrated. PMF = 1.000 is applied.
E-field emissions = 26.13 V/m
Near-field category: M4 (AWF 0 dB)

PMF scaled E-field

Grid 1 **M4** **21.80 V/m**	Grid 2 **M4** **26.13 V/m**	Grid 3 **M4** **26.11 V/m**
Grid 4 **M4** **12.66 V/m**	Grid 5 **M4** **20.16 V/m**	Grid 6 **M4** **20.67 V/m**
Grid 7 **M4** **24.70 V/m**	Grid 8 **M4** **32.81 V/m**	Grid 9 **M4** **32.75 V/m**

Cursor:
Total = 32.81 V/m
E Category: M4
Location: -7.5, 25, 8.7 mm



0 dB = 35.61 V/m = 31.03 dBV/m

Date/Time: 4/26/2013 11:38:47 AM

Test Laboratory: RIM Testing Services

HAC RF_E-Field_UMTS_Band_II_Telecoil

DUT: BlackBerry Smartphone; Type: Sample ; Serial: 333CB445

Communication System: WCDMA FDD II; Frequency: 1852.4 MHz
Medium parameters used: $\sigma = 0$ S/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m^3
Phantom section: RF Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 1/11/2013;
- Sensor-Surface: (Fix Surface), z = 8.7
- Electronics: DAE4 Sn881; Calibrated: 1/14/2013
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA
- DASY52 52.8.4(1052); SEMCAD X 14.6.8(7028)

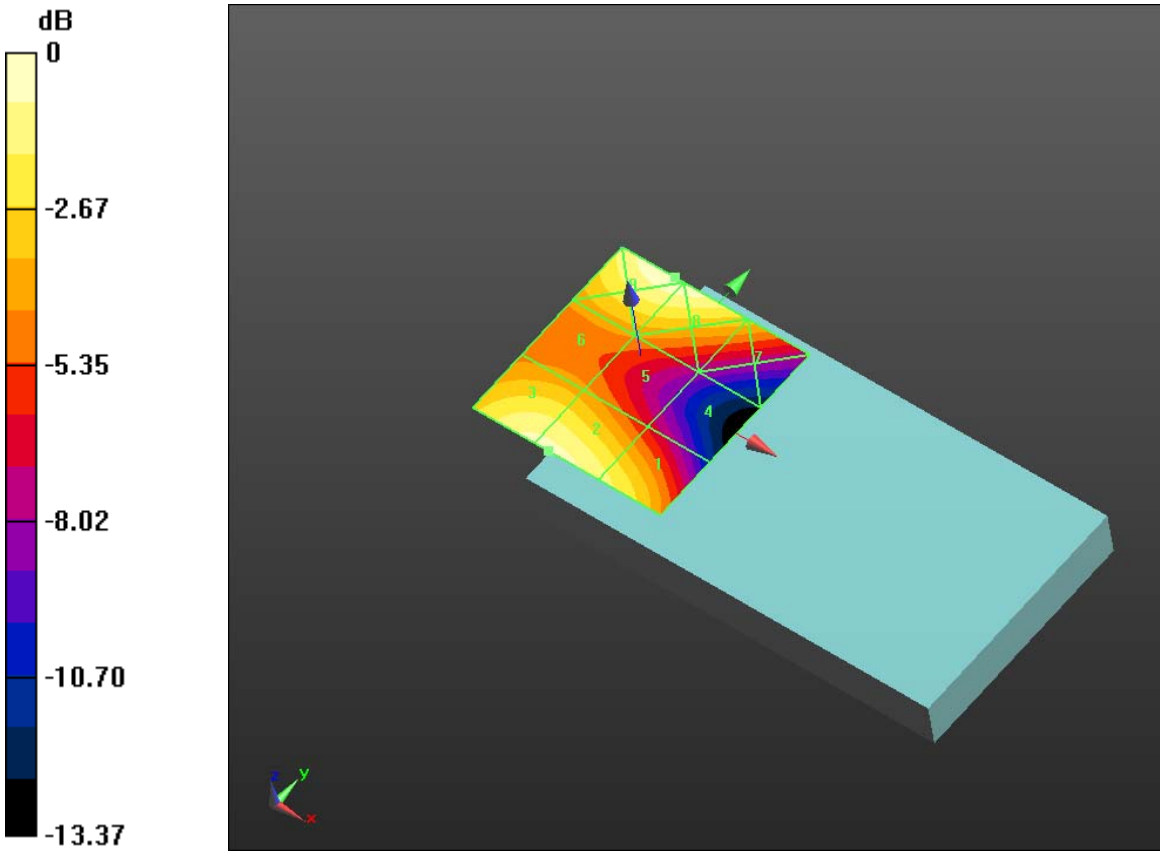
Device E-Field measurement with ER probe/E Scan - ER3D - 2007: 15 mm from Probe Center to the Device_telecoil/Hearing Aid Compatibility Test (101x101x1):

Interpolated grid: dx=0.5000 mm, dy=0.5000 mm
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 17.27 V/m; Power Drift = -0.18 dB
PMR not calibrated. PMF = 1.000 is applied.
E-field emissions = 29.49 V/m
Near-field category: M4 (AWF 0 dB)

PMF scaled E-field

Grid 1 **M4** **27.03 V/m**	Grid 2 **M4** **29.49 V/m**	Grid 3 **M4** **29.40 V/m**
Grid 4 **M4** **15.14 V/m**	Grid 5 **M4** **19.57 V/m**	Grid 6 **M4** **20.02 V/m**
Grid 7 **M4** **22.33 V/m**	Grid 8 **M4** **31.12 V/m**	Grid 9 **M4** **31.36 V/m**

Cursor:
Total = 31.36 V/m
E Category: M4
Location: -7, 20, 8.7 mm



0 dB = 31.36 V/m = 29.93 dBV/m

Date/Time: 4/26/2013 10:18:46 AM

Test Laboratory: RIM Testing Services

HAC RF_E-Field_CDMA850

DUT: BlackBerry Smartphone; Type: Sample ; Serial: 333CB445

Communication System: CDMA 850, Communication System: CDMA 850 1/8th Rate;
Frequency: 824.7 MHz, Frequency: 836.52 MHz, Frequency: 848.52 MHz
Medium parameters used: $\sigma = 0$ S/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m^3
Phantom section: RF Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 1/11/2013;
- Sensor-Surface: (Fix Surface), z = 8.7
- Electronics: DAE4 Sn881; Calibrated: 1/14/2013
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA
- DASY52 52.8.4(1052); SEMCAD X 14.6.8(7028)

Device E-Field measurement with ER probe/E Scan - ER3D - 2007: 15 mm from Probe Center to Device_Low_Chan_Full_Rate/Hearing Aid Compatibility Test (101x101x1): Interpolated grid: dx=0.5000 mm, dy=0.5000 mm
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 55.05 V/m; Power Drift = 0.10 dB
PMR not calibrated. PMF = 1.060 is applied.
E-field emissions = 49.89 V/m
Near-field category: M4 (AWF 0 dB)

PMF scaled E-field

Grid 1 **M4** **44.38 V/m**	Grid 2 **M4** **49.40 V/m**	Grid 3 **M4** **49.28 V/m**
Grid 4 **M4** **42.34 V/m**	Grid 5 **M4** **49.89 V/m**	Grid 6 **M4** **49.89 V/m**
Grid 7 **M4**	Grid 8 **M4**	Grid 9 **M4**

41.10 V/m	48.62 V/m	48.62 V/m

Cursor:
Total = 49.89 V/m
E Category: M4
Location: -8, -0.5, 8.7 mm

Device E-Field measurement with ER probe/E Scan - ER3D - 2007: 15 mm from Probe Center to the Device_Mid_Chan_Full_Rate/Hearing Aid Compatibility Test (101x101x1): Interpolated grid: dx=0.5000 mm, dy=0.5000 mm

Device Reference Point: 0, 0, -6.3 mm
Reference Value = 60.95 V/m; Power Drift = -0.03 dB
PMR not calibrated. PMF = 1.060 is applied.
E-field emissions = 56.99 V/m
Near-field category: M4 (AWF 0 dB)

PMF scaled E-field

Grid 1 **M4** **46.57 V/m**	Grid 2 **M4** **55.15 V/m**	Grid 3 **M4** **55.17 V/m**
Grid 4 **M4** **45.55 V/m**	Grid 5 **M4** **56.99 V/m**	Grid 6 **M4** **57.14 V/m**
Grid 7 **M4** **44.95 V/m**	Grid 8 **M4** **56.26 V/m**	Grid 9 **M4** **56.35 V/m**

Cursor:
Total = 57.14 V/m
E Category: M4
Location: -9.5, 1, 8.7 mm

Device E-Field measurement with ER probe/E Scan - ER3D - 2007: 15 mm from Probe Center to the Device_High_Chan_Full_Rate/Hearing Aid Compatibility Test (101x101x1): Interpolated grid: dx=0.5000 mm, dy=0.5000 mm

Device Reference Point: 0, 0, -6.3 mm
Reference Value = 72.50 V/m; Power Drift = 0.06 dB
PMR not calibrated. PMF = 1.060 is applied.
E-field emissions = 67.18 V/m
Near-field category: M4 (AWF 0 dB)

PMF scaled E-field

Grid 1 **M4** **55.38 V/m**	Grid 2 **M4** **65.92 V/m**	Grid 3 **M4** **66.03 V/m**
Grid 4 **M4** **53.74 V/m**	Grid 5 **M4** **67.18 V/m**	Grid 6 **M4** **67.30 V/m**
Grid 7 **M4** **52.26 V/m**	Grid 8 **M4** **66.51 V/m**	Grid 9 **M4** **66.69 V/m**

Cursor:
Total = 67.30 V/m
E Category: M4
Location: -9.5, 0.5, 8.7 mm

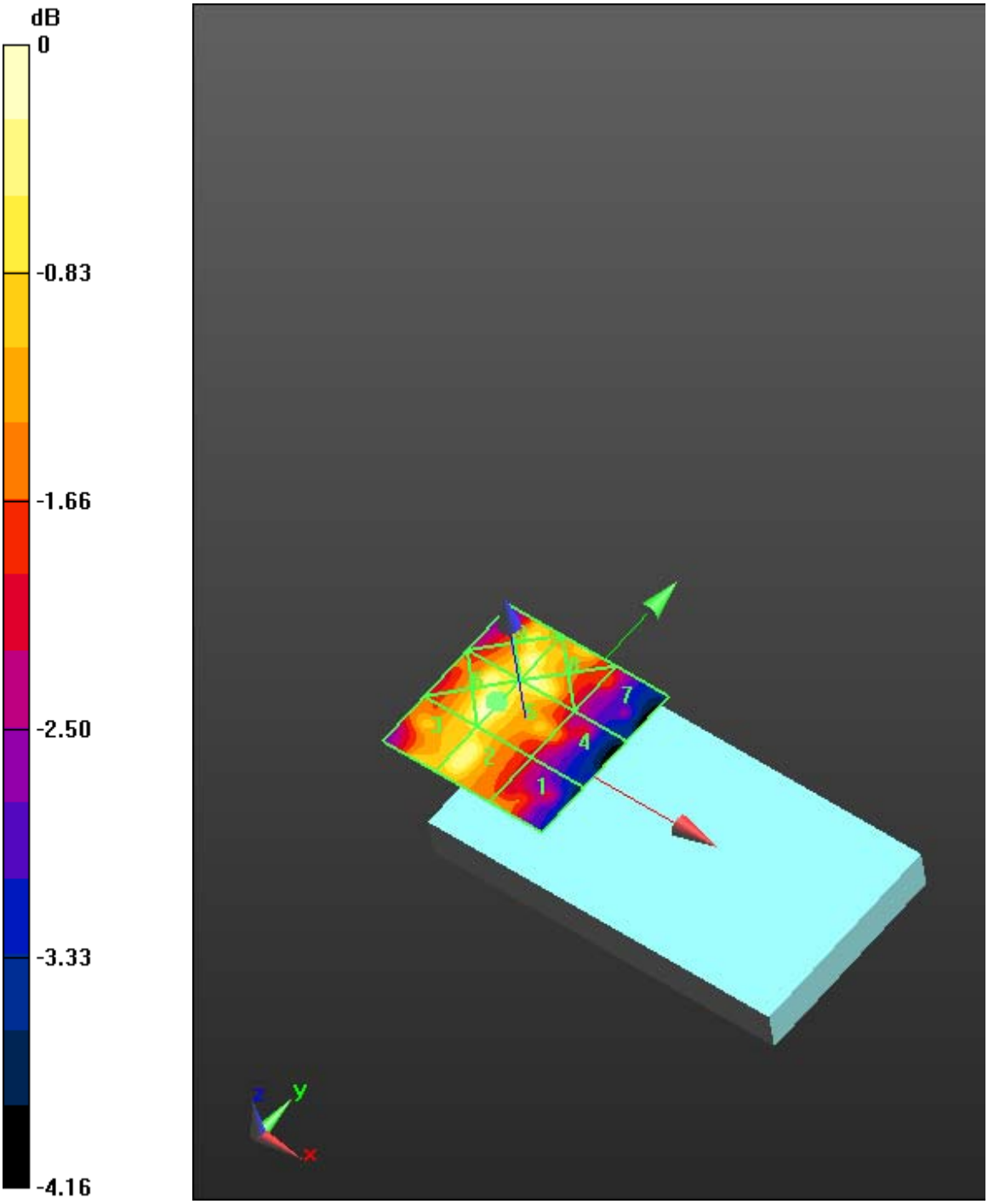
Device E-Field measurement with ER probe/E Scan - ER3D - 2007: 15 mm from Probe Center to the Device_High_Chan_1/8th_Rate/Hearing Aid Compatibility Test (101x101x1): Interpolated grid: dx=0.5000 mm, dy=0.5000 mm

Device Reference Point: 0, 0, -6.3 mm
Reference Value = 25.80 V/m; Power Drift = 0.24 dB
PMR not calibrated. PMF = 2.900 is applied.
E-field emissions = 74.78 V/m
Near-field category: M4 (AWF 0 dB)

PMF scaled E-field

Grid 1 **M4** **61.33 V/m**	Grid 2 **M4** **73.02 V/m**	Grid 3 **M4** **67.44 V/m**
Grid 4 **M4** **60.26 V/m**	Grid 5 **M4** **74.78 V/m**	Grid 6 **M4** **76.77 V/m**
Grid 7 **M4** **56.97 V/m**	Grid 8 **M4** **73.83 V/m**	Grid 9 **M4** **73.67 V/m**

Cursor:
Total = 76.77 V/m
E Category: M4
Location: -10, -0.5, 8.7 mm



0 dB = 49.89 V/m = 33.96 dBV/m

Date/Time: 4/26/2013 11:21:31 AM

Test Laboratory: RIM Testing Services

HAC RF_E-Field_CDMA850_Telecoil

DUT: BlackBerry Smartphone; Type: Sample ; Serial: 333CB445

Communication System: CDMA 850 1/8th Rate; Frequency: 848.52 MHz
Medium parameters used: $\sigma = 0$ S/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m^3
Phantom section: RF Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 1/11/2013;
- Sensor-Surface: (Fix Surface), z = 8.7
- Electronics: DAE4 Sn881; Calibrated: 1/14/2013
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA
- DASY52 52.8.4(1052); SEMCAD X 14.6.8(7028)

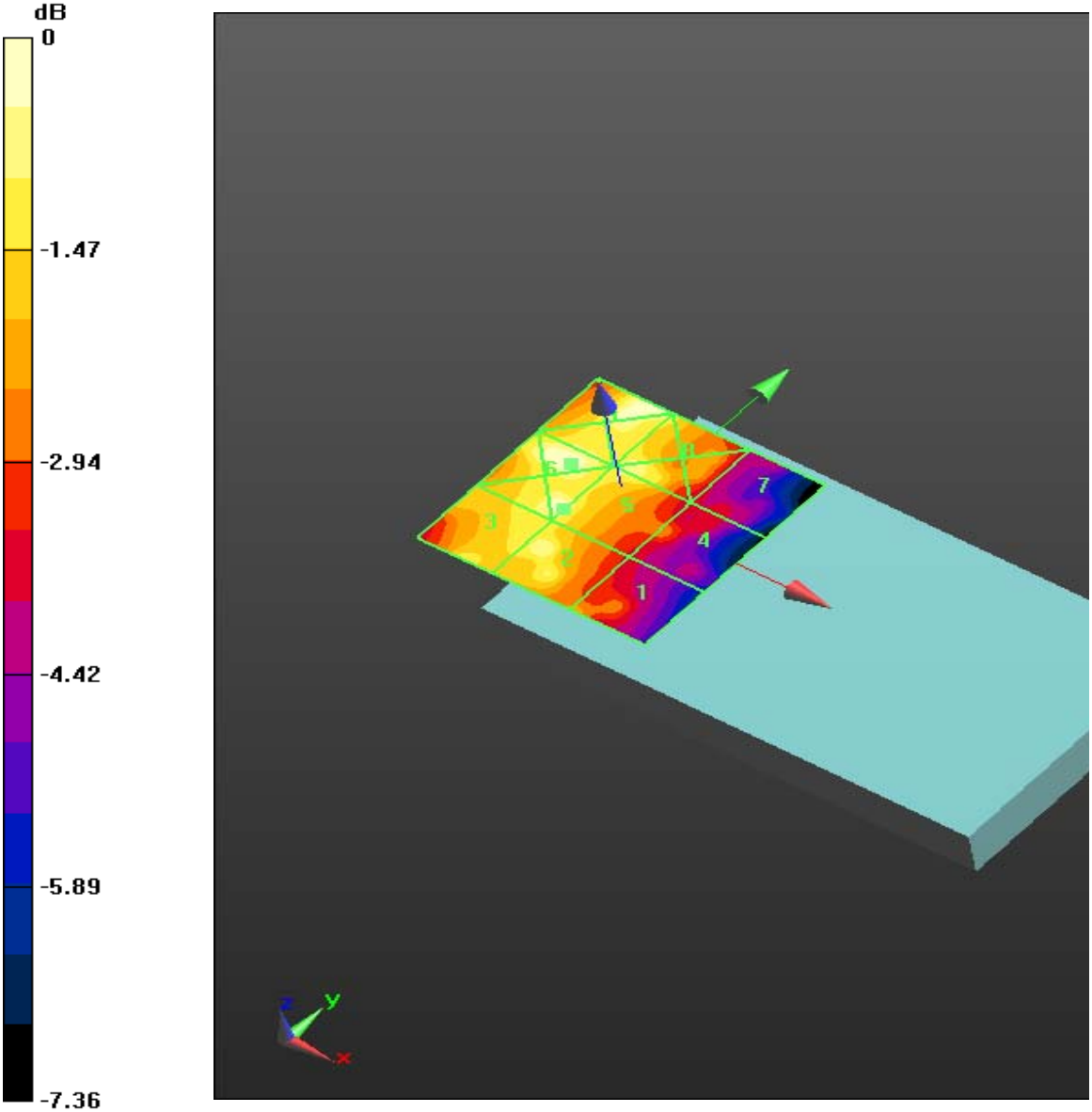
Device E-Field measurement with ER probe/E Scan - ER3D - 2007: 15 mm from Probe Center to the_Device_High_Chan_1/8th_Rate_Telecoil/Hearing Aid Compatibility Test (101x101x1): Interpolated grid: dx=0.5000 mm, dy=0.5000 mm
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 30.68 V/m; Power Drift = -1.10 dB
PMR not calibrated. PMF = 2.900 is applied.
E-field emissions = 72.82 V/m
Near-field category: M4 (AWF 0 dB)

PMF scaled E-field

Grid 1 **M4** **60.59 V/m**	Grid 2 **M4** **72.61 V/m**	Grid 3 **M4** **68.83 V/m**
Grid 4 **M4** **57.06 V/m**	Grid 5 **M4** **72.81 V/m**	Grid 6 **M4** **77.14 V/m**
Grid 7 **M4**	Grid 8 **M4**	Grid 9 **M4**

51.08 V/m	**72.56 V/m**	**76.02 V/m**

Cursor:
Total = 77.14 V/m
E Category: M4
Location: -11, 0, 8.7 mm



0 dB = 77.13 V/m = 37.74 dBV/m

Date/Time: 4/26/2013 5:50:59 AM

Test Laboratory: RIM Testing Services

HAC RF_E-Field_CDMA1900

DUT: BlackBerry Smartphone; Type: Sample ; Serial: 333CB445

Communication System: CDMA 1900, Communication System: CDMA 1900 1/8th Rate;
Frequency: 1851.25 MHz, Frequency: 1880 MHz, Frequency: 1908.5 MHz
Medium parameters used: $\sigma = 0$ S/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m^3
Phantom section: RF Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 1/11/2013;
- Sensor-Surface: (Fix Surface), z = 8.7
- Electronics: DAE4 Sn881; Calibrated: 1/14/2013
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA
- DASY52 52.8.4(1052); SEMCAD X 14.6.8(7028)

Device E-Field measurement with ER probe/E Scan - ER3D - 2007: 15 mm from Probe Center to Device_Low_Chan_Full_Rate/Hearing Aid Compatibility Test (101x101x1): Interpolated grid: dx=0.5000 mm, dy=0.5000 mm
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 20.20 V/m; Power Drift = -0.07 dB
PMR not calibrated. PMF = 1.010 is applied.
E-field emissions = 24.64 V/m
Near-field category: M4 (AWF 0 dB)

PMF scaled E-field

Grid 1 **M4** **22.84 V/m**	Grid 2 **M4** **24.64 V/m**	Grid 3 **M4** **23.92 V/m**
Grid 4 **M4** **15.48 V/m**	Grid 5 **M4** **22.32 V/m**	Grid 6 **M4** **22.85 V/m**
Grid 7 **M4**	Grid 8 **M4**	Grid 9 **M4**

19.39 V/m	28.55 V/m	28.54 V/m

Cursor:
Total = 28.55 V/m
E Category: M4
Location: -8, 25, 8.7 mm

Device E-Field measurement with ER probe/E Scan - ER3D - 2007: 15 mm from Probe Center to the Device_Mid_Chan_Full_Rate/Hearing Aid Compatibility Test (101x101x1): Interpolated grid: dx=0.5000 mm, dy=0.5000 mm

Device Reference Point: 0, 0, -6.3 mm
Reference Value = 18.42 V/m; Power Drift = -0.02 dB
PMR not calibrated. PMF = 1.010 is applied.
E-field emissions = 23.42 V/m
Near-field category: M4 (AWF 0 dB)

PMF scaled E-field

Grid 1 **M4** **22.23 V/m**	Grid 2 **M4** **23.42 V/m**	Grid 3 **M4** **22.95 V/m**
Grid 4 **M4** **13.70 V/m**	Grid 5 **M4** **21.97 V/m**	Grid 6 **M4** **22.88 V/m**
Grid 7 **M4** **19.17 V/m**	Grid 8 **M4** **29.15 V/m**	Grid 9 **M4** **29.20 V/m**

Cursor:
Total = 29.20 V/m
E Category: M4
Location: -9.5, 25, 8.7 mm

Device E-Field measurement with ER probe/E Scan - ER3D - 2007: 15 mm from Probe Center to the Device_High_Chan_Full_Rate/Hearing Aid Compatibility Test (101x101x1): Interpolated grid: dx=0.5000 mm, dy=0.5000 mm

Device Reference Point: 0, 0, -6.3 mm
Reference Value = 19.76 V/m; Power Drift = -0.20 dB
PMR not calibrated. PMF = 1.010 is applied.
E-field emissions = 28.70 V/m
Near-field category: M4 (AWF 0 dB)

PMF scaled E-field

Grid 1 **M4** **26.31 V/m**	Grid 2 **M4** **28.70 V/m**	Grid 3 **M4** **28.23 V/m**
Grid 4 **M4** **16.59 V/m**	Grid 5 **M4** **23.15 V/m**	Grid 6 **M4** **24.03 V/m**
Grid 7 **M4** **20.91 V/m**	Grid 8 **M4** **32.82 V/m**	Grid 9 **M4** **32.91 V/m**

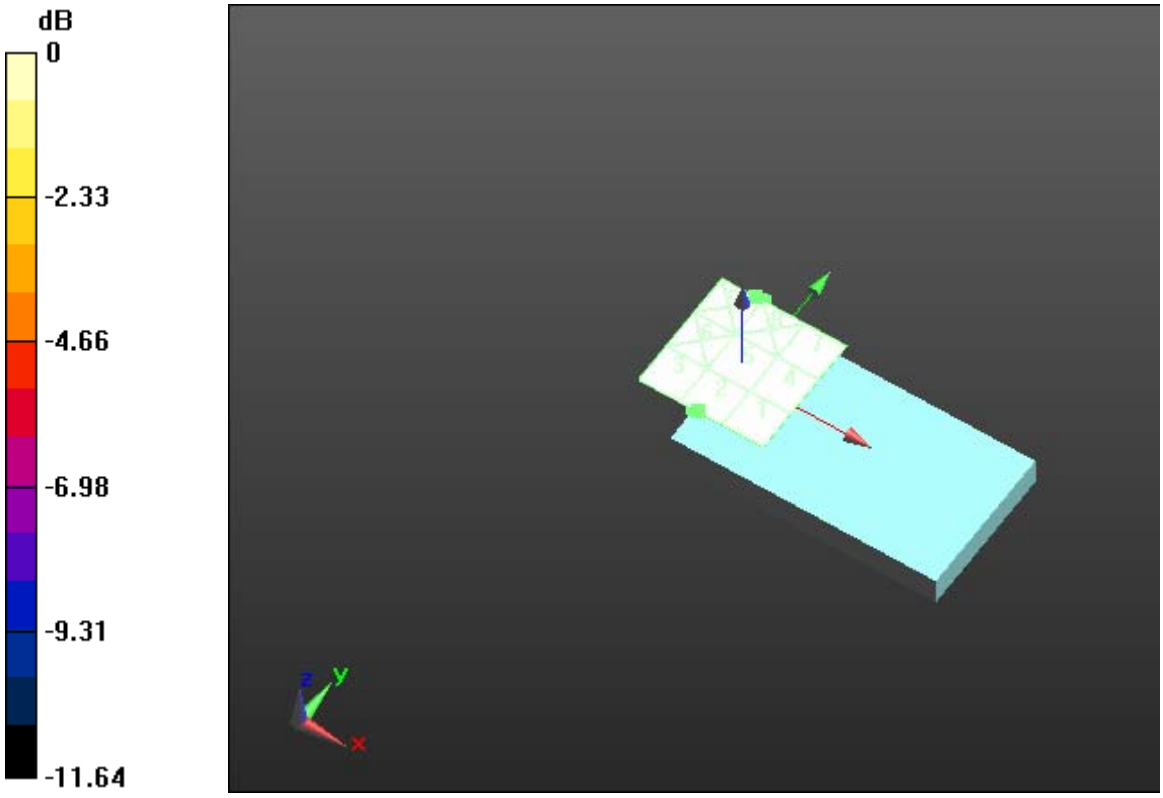
Cursor:
Total = 32.91 V/m
E Category: M4
Location: -9.5, 25, 8.7 mm

Device E-Field measurement with ER probe/E Scan - ER3D - 2007: 15 mm from Probe Center to the Device_High_Chan_1/8th_Rate/Hearing Aid Compatibility Test (101x101x1): Interpolated grid: dx=0.5000 mm, dy=0.5000 mm

Device Reference Point: 0, 0, -6.3 mm
Reference Value = 6.951 V/m; Power Drift = -0.28 dB
PMR not calibrated. PMF = 2.670 is applied.
E-field emissions = 26.31 V/m
Near-field category: M4 (AWF 0 dB)

PMF scaled E-field

Grid 1 **M4** **24.31 V/m**	Grid 2 **M4** **26.31 V/m**	Grid 3 **M4** **26.12 V/m**
Grid 4 **M4** **15.49 V/m**	Grid 5 **M4** **20.76 V/m**	Grid 6 **M4** **21.89 V/m**
Grid 7 **M4** **18.52 V/m**	Grid 8 **M4** **32.51 V/m**	Grid 9 **M4** **33.86 V/m**



0 dB = 28.26 V/m = 29.02 dBV/m

Date/Time: 4/26/2013 6:14:05 AM

Test Laboratory: RIM Testing Services

HAC RF_E-Field_CDMA1900_Telecoil

DUT: BlackBerry Smartphone; Type: Sample ; Serial: 333CB445

Communication System: CDMA 1900; Frequency: 1908.5 MHz
Medium parameters used: $\sigma = 0$ S/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m^3
Phantom section: RF Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

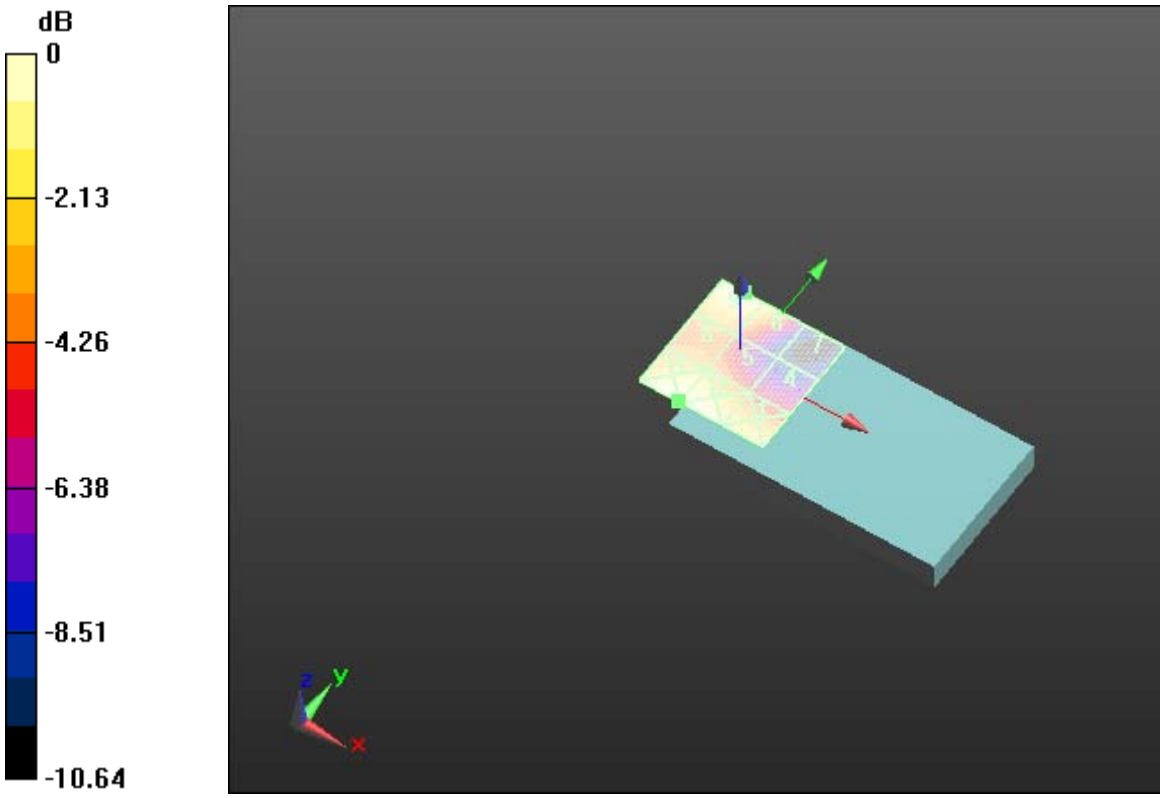
- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 1/11/2013;
- Sensor-Surface: (Fix Surface), z = 8.7
- Electronics: DAE4 Sn881; Calibrated: 1/14/2013
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA
- DASY52 52.8.4(1052); SEMCAD X 14.6.8(7028)

Device E-Field measurement with ER probe/E Scan - ER3D - 2007: 15 mm from Probe Center to the_Device_High_Chan_Full_Rate_Telecoil/Hearing Aid Compatibility Test (101x101x1): Interpolated grid: dx=0.5000 mm, dy=0.5000 mm
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 19.23 V/m; Power Drift = 0.00 dB
PMR not calibrated. PMF = 1.010 is applied.
E-field emissions = 30.45 V/m
Near-field category: M4 (AWF 0 dB)

PMF scaled E-field

Grid 1 **M4** **27.33 V/m**	Grid 2 **M4** **30.70 V/m**	Grid 3 **M4** **30.71 V/m**
Grid 4 **M4** **17.91 V/m**	Grid 5 **M4** **22.05 V/m**	Grid 6 **M4** **22.23 V/m**
Grid 7 **M4**	Grid 8 **M4**	Grid 9 **M4**

14.08 V/m	**28.18 V/m**	**30.45 V/m**



0 dB = 30.40 V/m = 29.66 dBV/m

Date/Time: 4/26/2013 12:02:31 PM

Test Laboratory: RIM Testing Services

HAC RF_E-Field_GSM1900_2100mA_Battery

DUT: BlackBerry Smartphone; Type: Sample ; Serial: 333CB445

Communication System: GSM 1900; Frequency: 1880 MHz
Medium parameters used: $\sigma = 0$ S/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m^3
Phantom section: RF Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 1/11/2013;
- Sensor-Surface: (Fix Surface), z = 8.7
- Electronics: DAE4 Sn881; Calibrated: 1/14/2013
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA
- DASY52 52.8.4(1052); SEMCAD X 14.6.8(7028)

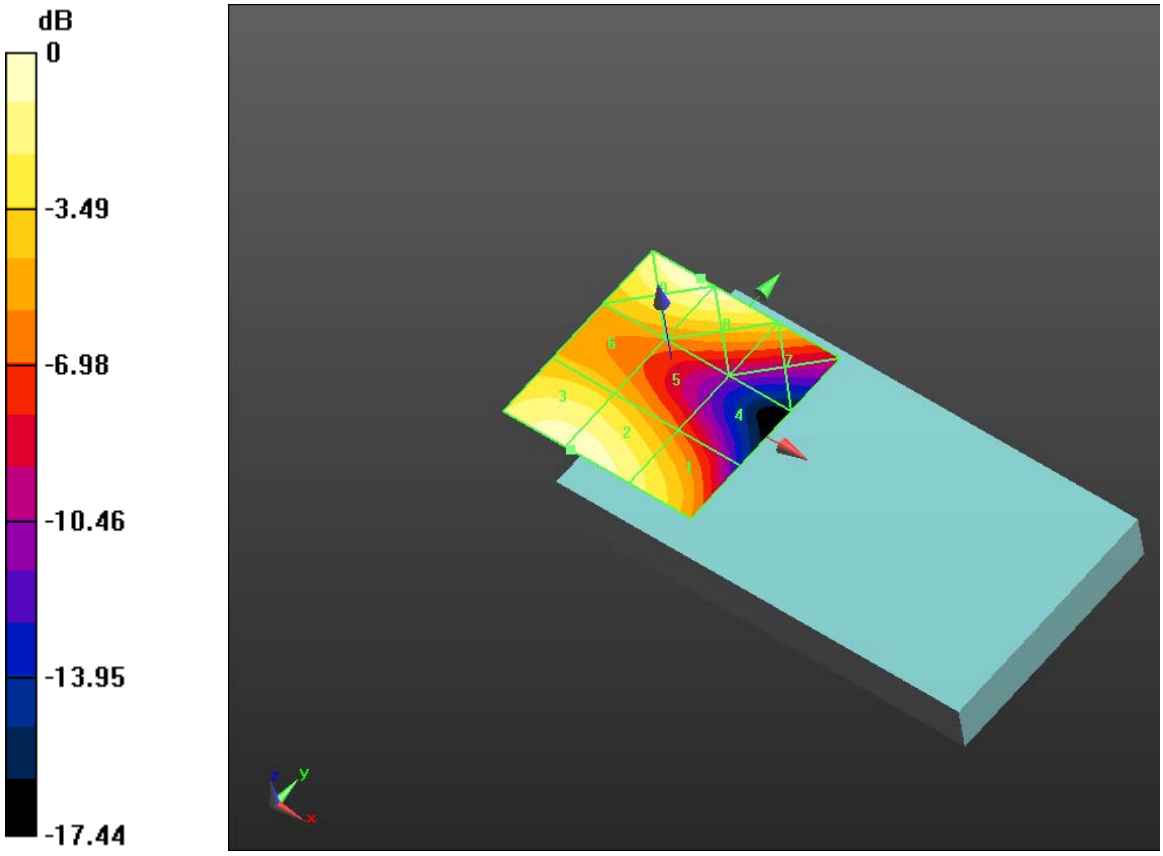
Device E-Field measurement with ER probe/E Scan - ER3D - 2007: 15 mm from Probe Center to the Device_telecoil_2100mA_Battery/Hearing Aid Compatibility Test (101x101x1): Interpolated grid: dx=0.5000 mm, dy=0.5000 mm
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 7.944 V/m; Power Drift = 0.53 dB
PMR not calibrated. PMF = 2.850 is applied.
E-field emissions = 57.05 V/m
Near-field category: M3 (AWF -5 dB)

PMF scaled E-field

Grid 1 **M3** **49.23 V/m**	Grid 2 **M3** **57.05 V/m**	Grid 3 **M3** **56.95 V/m**
Grid 4 **M4** **27.25 V/m**	Grid 5 **M4** **36.45 V/m**	Grid 6 **M4** **37.20 V/m**
Grid 7 **M4**	Grid 8 **M3**	Grid 9 **M3**

39.03 V/m	**57.46 V/m**	**58.35 V/m**

Cursor:
Total = 58.35 V/m
E Category: M3
Location: -8, 20, 8.7 mm



0 dB = 58.99 V/m = 35.42 dBV/m

Date/Time: 4/28/2013 1:54:21 AM

Test Laboratory: RIM Testing Services

HAC RF_H-Field_GSM_850

DUT: BlackBerry Smartphone; Type: Sample; Serial: 333CB445

Communication System: GSM 850; Frequency: 824.2 MHz, Frequency: 836.8 MHz, Frequency: 848.8 MHz
Medium parameters used: $\sigma = 0$ S/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m^3
Phantom section: RF Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 11/9/2012
- Sensor-Surface: (Fix Surface), z = 8.7
- Electronics: DAE4 Sn881; Calibrated: 1/14/2013
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA
- DASY52 52.8.4(1052); SEMCAD X 14.6.8(7028)

Device H-Field measurement with H3DV6 probe/H Scan - H3DV6 - 2007: 15 mm from Probe Center to the Device_low_chan/Hearing Aid Compatibility Test (101x101x1): Interpolated grid: dx=0.5000 mm, dy=0.5000 mm
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 0.06800 A/m; Power Drift = -0.02 dB
PMR not calibrated. PMF = 2.890 is applied.
H-field emissions = 0.3059 A/m
Near-field category: M4 (AWF -5 dB)

PMF scaled H-field

Grid 1 **M4** **0.306 A/m**	Grid 2 **M4** **0.226 A/m**	Grid 3 **M4** **0.145 A/m**
Grid 4 **M4** **0.336 A/m**	Grid 5 **M4** **0.249 A/m**	Grid 6 **M4** **0.173 A/m**
Grid 7 **M4**	Grid 8 **M4**	Grid 9 **M4**

0.399 A/m	**0.296 A/m**	**0.204 A/m**

Device H-Field measurement with H3DV6 probe/H Scan - H3DV6 - 2007: 15 mm from Probe Center to the Device_mid_chan/Hearing Aid Compatibility Test (101x101x1): Interpolated grid: dx=0.5000 mm, dy=0.5000 mm
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 0.07300 A/m; Power Drift = 0.13 dB
PMR not calibrated. PMF = 2.890 is applied.
H-field emissions = 0.3397 A/m
Near-field category: M4 (AWF -5 dB)

PMF scaled H-field

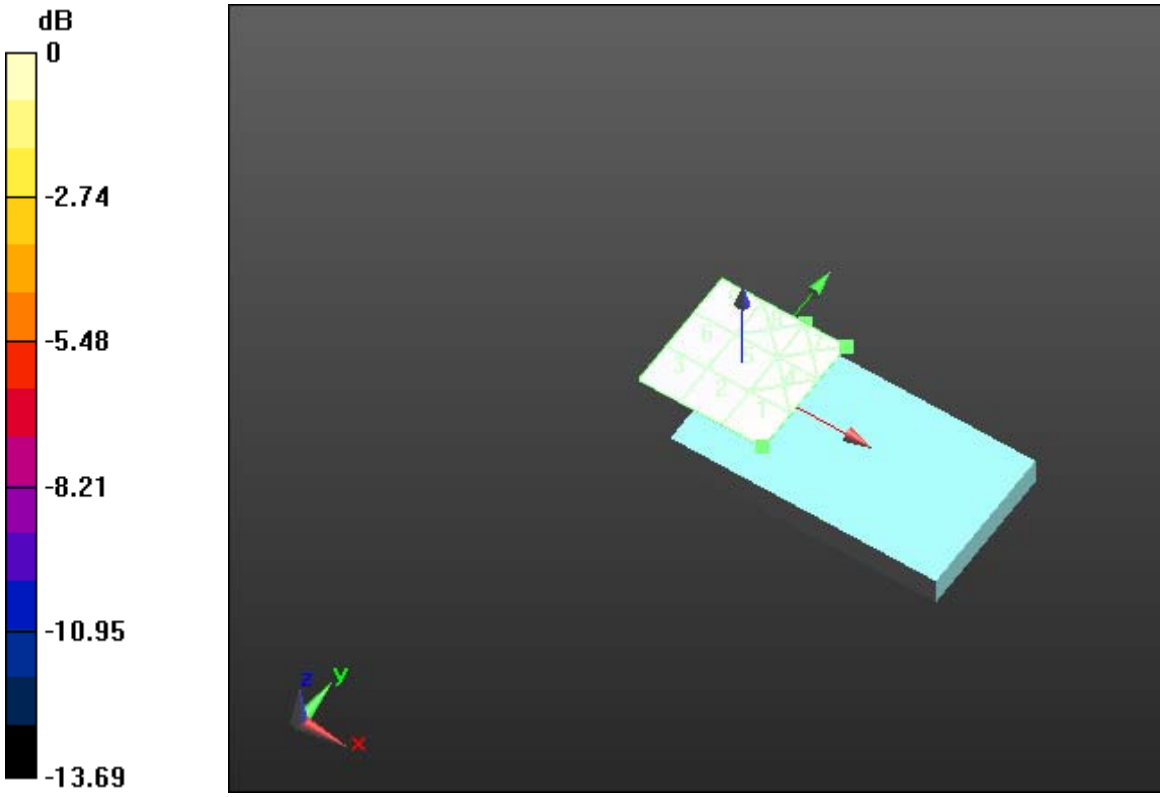
Grid 1 **M4** **0.340 A/m**	Grid 2 **M4** **0.249 A/m**	Grid 3 **M4** **0.154 A/m**
Grid 4 **M4** **0.367 A/m**	Grid 5 **M4** **0.274 A/m**	Grid 6 **M4** **0.184 A/m**
Grid 7 **M4** **0.440 A/m**	Grid 8 **M4** **0.326 A/m**	Grid 9 **M4** **0.222 A/m**

Device H-Field measurement with H3DV6 probe/H Scan - H3DV6 - 2007: 15 mm from Probe Center to the Device_high_chan/Hearing Aid Compatibility Test (101x101x1): Interpolated grid: dx=0.5000 mm, dy=0.5000 mm
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 0.07800 A/m; Power Drift = 0.09 dB
PMR not calibrated. PMF = 2.890 is applied.
H-field emissions = 0.3347 A/m
Near-field category: M4 (AWF -5 dB)

PMF scaled H-field

Grid 1 **M4** **0.335 A/m**	Grid 2 **M4** **0.259 A/m**	Grid 3 **M4** **0.178 A/m**

Grid 4 **M4** **0.362 A/m**	Grid 5 **M4** **0.285 A/m**	Grid 6 **M4** **0.206 A/m**
Grid 7 **M4** **0.431 A/m**	Grid 8 **M4** **0.336 A/m**	Grid 9 **M4** **0.246 A/m**



0 dB = 0.3974 A/m = -8.02 dBA/m

Date/Time: 4/28/2013 2:13:10 AM

Test Laboratory: RIM Testing Services

HAC RF_H-Field_GSM_850_Telecoil

DUT: BlackBerry Smartphone; Type: Sample; Serial: 333CB445

Communication System: GSM 850; Frequency: 836.8 MHz
Medium parameters used: $\sigma = 0$ S/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m^3
Phantom section: RF Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

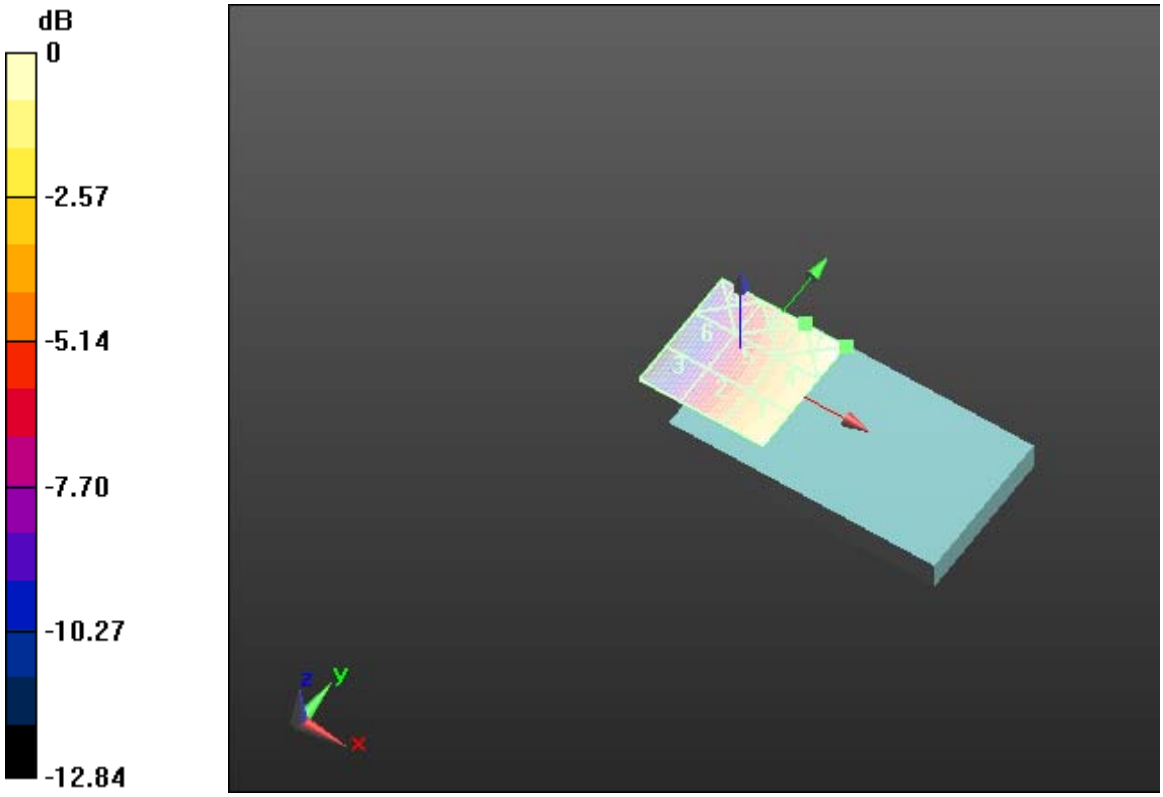
- Probe: H3DV6 - SN6105; ; Calibrated: 11/9/2012
- Sensor-Surface: (Fix Surface), z = 8.7
- Electronics: DAE4 Sn881; Calibrated: 1/14/2013
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA
- DASY52 52.8.4(1052); SEMCAD X 14.6.8(7028)

Device H-Field measurement with H3DV6 probe/H Scan - H3DV6 - 2007: 15 mm from Probe Center to the Device_telecoil/Hearing Aid Compatibility Test (101x101x1): Interpolated grid: dx=0.5000 mm, dy=0.5000 mm
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 0.07200 A/m; Power Drift = 0.12 dB
PMR not calibrated. PMF = 2.890 is applied.
H-field emissions = 0.3672 A/m
Near-field category: M4 (AWF -5 dB)

PMF scaled H-field

Grid 1 **M4** **0.367 A/m**	Grid 2 **M4** **0.277 A/m**	Grid 3 **M4** **0.179 A/m**
Grid 4 **M4** **0.366 A/m**	Grid 5 **M4** **0.282 A/m**	Grid 6 **M4** **0.190 A/m**
Grid 7 **M4**	Grid 8 **M4**	Grid 9 **M4**

0.428 A/m	**0.326 A/m**	**0.222 A/m**



0 dB = 0.4267 A/m = -7.40 dBA/m

Date/Time: 4/28/2013 1:16:48 AM

Test Laboratory: RIM Testing Services

HAC RF_H-Field_UMTS_Band_V

DUT: BlackBerry Smartphone; Type: Sample; Serial: 333CB445

Communication System: WCDMA FDD V; Frequency: 826.4 MHz, Frequency: 836.4 MHz, Frequency: 846.6 MHz
Medium parameters used: $\sigma = 0$ S/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m^3
Phantom section: RF Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 11/9/2012
- Sensor-Surface: (Fix Surface), z = 8.7
- Electronics: DAE4 Sn881; Calibrated: 1/14/2013
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA
- DASY52 52.8.4(1052); SEMCAD X 14.6.8(7028)

Device H-Field measurement with H3DV6 probe/H Scan - H3DV6 - 2007: 15 mm from Probe Center to the Device_low_chan/Hearing Aid Compatibility Test (101x101x1): Interpolated grid: dx=0.5000 mm, dy=0.5000 mm
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 0.06700 A/m; Power Drift = 0.13 dB
PMR not calibrated. PMF = 1.090 is applied.
H-field emissions = 0.1128 A/m
Near-field category: M4 (AWF 0 dB)

PMF scaled H-field

Grid 1 **M4** **0.113 A/m**	Grid 2 **M4** **0.084 A/m**	Grid 3 **M4** **0.055 A/m**
Grid 4 **M4** **0.126 A/m**	Grid 5 **M4** **0.094 A/m**	Grid 6 **M4** **0.066 A/m**
Grid 7 **M4**	Grid 8 **M4**	Grid 9 **M4**

0.152 A/m	**0.113 A/m**	**0.079 A/m**

Cursor:
Total = 0.1521 A/m
H Category: M4
Location: 25, 25, 8.7 mm

Device H-Field measurement with H3DV6 probe/H Scan - H3DV6 - 2007: 15 mm from Probe Center to the Device_mid_chan/Hearing Aid Compatibility Test (101x101x1):

Interpolated grid: dx=0.5000 mm, dy=0.5000 mm
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 0.08000 A/m; Power Drift = 0.05 dB
PMR not calibrated. PMF = 1.090 is applied.
H-field emissions = 0.1420 A/m
Near-field category: M4 (AWF 0 dB)

PMF scaled H-field

Grid 1 **M4** **0.142 A/m**	Grid 2 **M4** **0.105 A/m**	Grid 3 **M4** **0.065 A/m**
Grid 4 **M4** **0.150 A/m**	Grid 5 **M4** **0.113 A/m**	Grid 6 **M4** **0.076 A/m**
Grid 7 **M4** **0.180 A/m**	Grid 8 **M4** **0.134 A/m**	Grid 9 **M4** **0.092 A/m**

Cursor:
Total = 0.1799 A/m
H Category: M4
Location: 25, 25, 8.7 mm

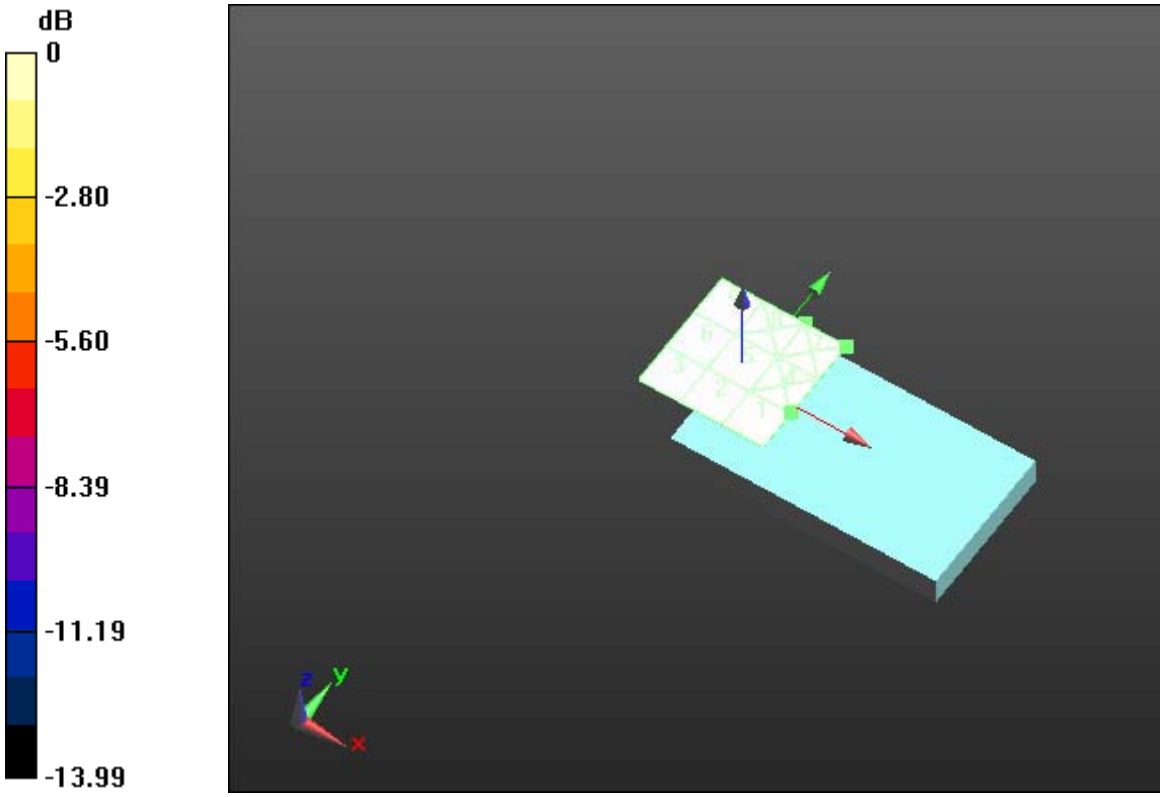
Device H-Field measurement with H3DV6 probe/H Scan - H3DV6 - 2007: 15 mm from Probe Center to the Device_high_chan/Hearing Aid Compatibility Test (101x101x1): Interpolated grid: dx=0.5000 mm, dy=0.5000 mm

Device Reference Point: 0, 0, -6.3 mm
Reference Value = 0.08800 A/m; Power Drift = 0.00 dB
PMR not calibrated. PMF = 1.090 is applied.
H-field emissions = 0.1408 A/m
Near-field category: M4 (AWF 0 dB)

PMF scaled H-field

Grid 1 **M4** **0.141 A/m**	Grid 2 **M4** **0.109 A/m**	Grid 3 **M4** **0.073 A/m**
Grid 4 **M4** **0.156 A/m**	Grid 5 **M4** **0.122 A/m**	Grid 6 **M4** **0.086 A/m**
Grid 7 **M4** **0.187 A/m**	Grid 8 **M4** **0.145 A/m**	Grid 9 **M4** **0.103 A/m**

Cursor:
Total = 0.1873 A/m
H Category: M4
Location: 25, 25, 8.7 mm



0 dB = 0.1521 A/m = -16.36 dBA/m

Date/Time: 4/28/2013 1:30:12 AM

Test Laboratory: RIM Testing Services

HAC RF_H-Field_UMTS_Band_V_Telecoil

DUT: BlackBerry Smartphone; Type: Sample; Serial: 333CB445

Communication System: WCDMA FDD V; Frequency: 836.4 MHz
Medium parameters used: $\sigma = 0$ S/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m^3
Phantom section: RF Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 11/9/2012
- Sensor-Surface: (Fix Surface), z = 8.7
- Electronics: DAE4 Sn881; Calibrated: 1/14/2013
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA
- DASY52 52.8.4(1052); SEMCAD X 14.6.8(7028)

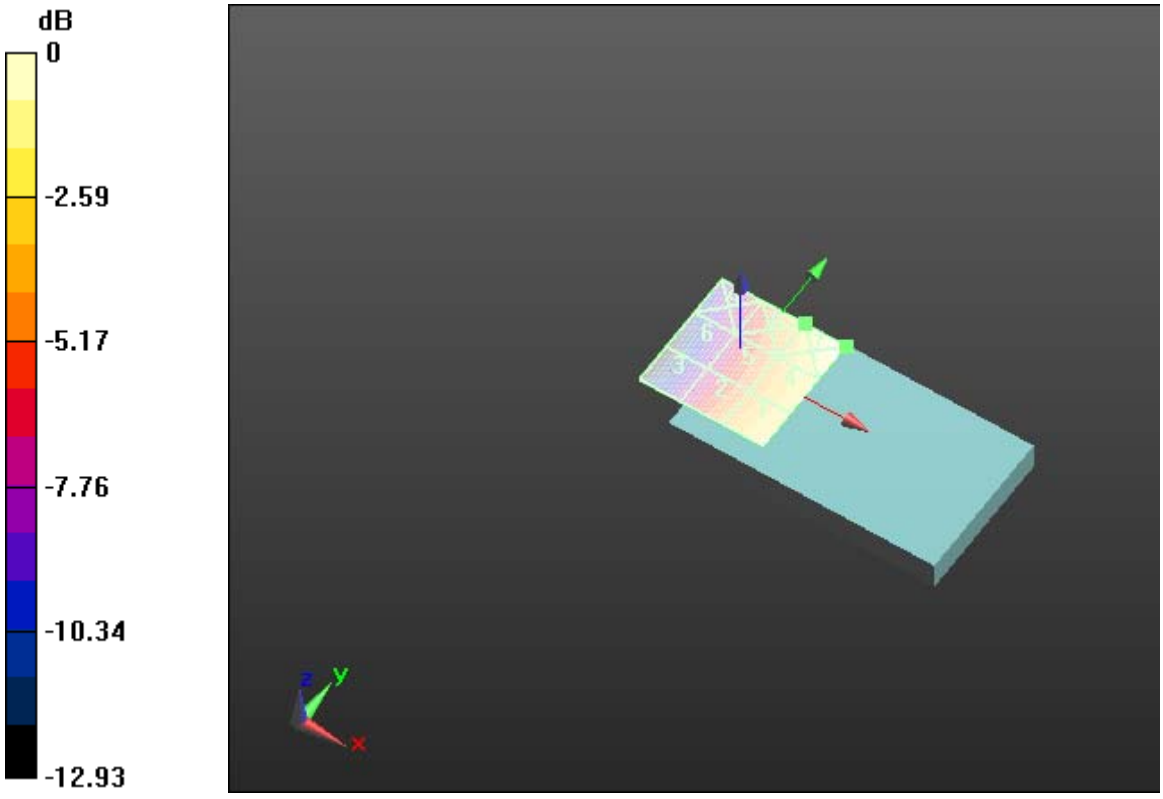
Device H-Field measurement with H3DV6 probe/H Scan - H3DV6 - 2007: 15 mm from Probe Center to the Device_telecoil/Hearing Aid Compatibility Test (101x101x1): Interpolated grid: dx=0.5000 mm, dy=0.5000 mm
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 0.08000 A/m; Power Drift = 0.01 dB
PMR not calibrated. PMF = 1.090 is applied.
H-field emissions = 0.1533 A/m
Near-field category: M4 (AWF 0 dB)

PMF scaled H-field

Grid 1 **M4** **0.153 A/m**	Grid 2 **M4** **0.116 A/m**	Grid 3 **M4** **0.075 A/m**
Grid 4 **M4** **0.153 A/m**	Grid 5 **M4** **0.119 A/m**	Grid 6 **M4** **0.080 A/m**
Grid 7 **M4**	Grid 8 **M4**	Grid 9 **M4**

0.180 A/m	**0.138 A/m**	**0.095 A/m**

Cursor:
Total = 0.1802 A/m
H Category: M4
Location: 29, 20, 8.7 mm



0 dB = 0.1802 A/m = -14.88 dBA/m

Date/Time: 4/28/2013 1:35:31 AM

Test Laboratory: RIM Testing Services

HAC RF_H-Field_GSM_1900

DUT: BlackBerry Smartphone; Type: Sample; Serial: 333CB445

Communication System: GSM 1900; Frequency: 1850.2 MHz, Frequency: 1880 MHz, Frequency: 1909.8 MHz
Medium parameters used: $\sigma = 0$ S/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m^3
Phantom section: RF Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 11/9/2012
- Sensor-Surface: (Fix Surface), z = 8.7
- Electronics: DAE4 Sn881; Calibrated: 1/14/2013
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA
- DASY52 52.8.4(1052); SEMCAD X 14.6.8(7028)

Device H-Field measurement with H3DV6 probe/H Scan - H3DV6 - 2007: 15 mm from Probe Center to the Device_low_chan/Hearing Aid Compatibility Test (101x101x1): Interpolated grid: dx=0.5000 mm, dy=0.5000 mm
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 0.05100 A/m; Power Drift = -0.10 dB
PMR not calibrated. PMF = 2.860 is applied.
H-field emissions = 0.1488 A/m
Near-field category: M3 (AWF -5 dB)

PMF scaled H-field

Grid 1 **M4** **0.105 A/m**	Grid 2 **M3** **0.144 A/m**	Grid 3 **M3** **0.145 A/m**
Grid 4 **M4** **0.116 A/m**	Grid 5 **M3** **0.148 A/m**	Grid 6 **M3** **0.149 A/m**
Grid 7 **M3**	Grid 8 **M3**	Grid 9 **M3**

0.169 A/m	**0.141 A/m**	**0.142 A/m**

Cursor:
Total = 0.1685 A/m
H Category: M3
Location: 25, 25, 8.7 mm

Device H-Field measurement with H3DV6 probe/H Scan - H3DV6 - 2007: 15 mm from Probe Center to the Device_mid_chan/Hearing Aid Compatibility Test (101x101x1): Interpolated grid: dx=0.5000 mm, dy=0.5000 mm

Device Reference Point: 0, 0, -6.3 mm
Reference Value = 0.05300 A/m; Power Drift = 0.19 dB
PMR not calibrated. PMF = 2.860 is applied.
H-field emissions = 0.1602 A/m
Near-field category: M3 (AWF -5 dB)

PMF scaled H-field

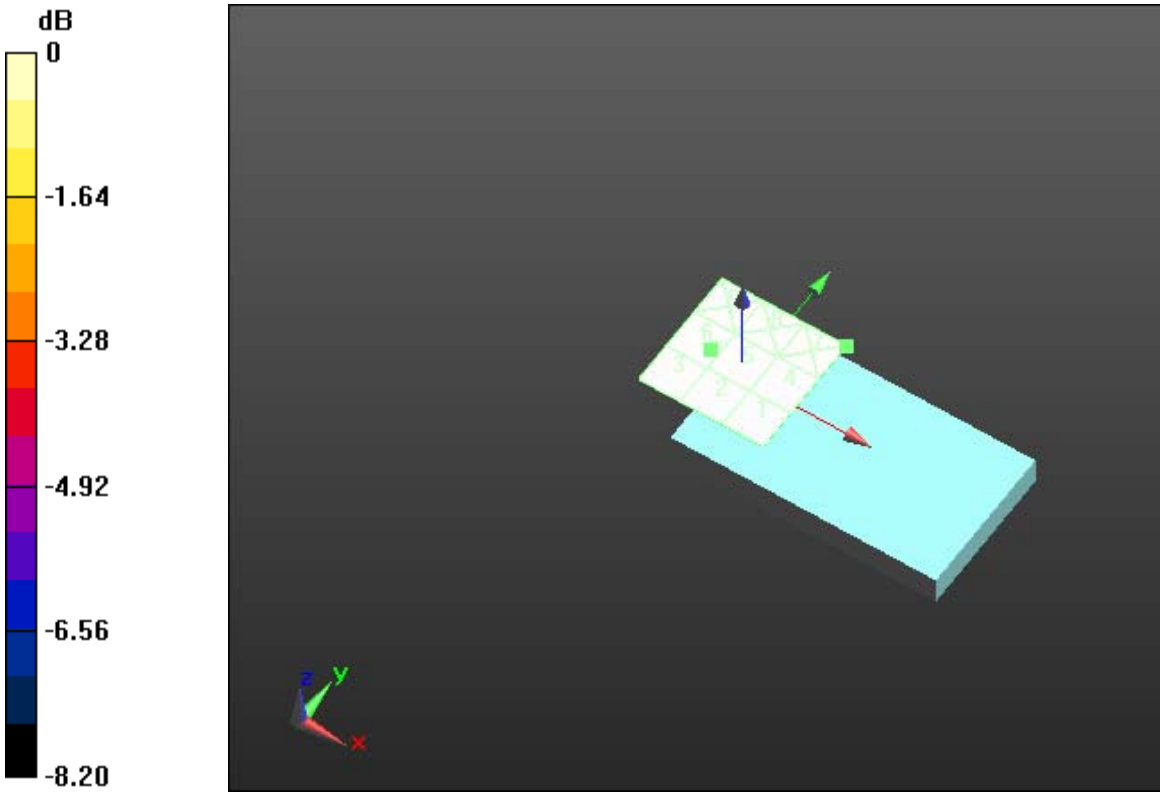
Grid 1 **M4** **0.105 A/m**	Grid 2 **M3** **0.152 A/m**	Grid 3 **M3** **0.153 A/m**
Grid 4 **M4** **0.119 A/m**	Grid 5 **M3** **0.159 A/m**	Grid 6 **M3** **0.160 A/m**
Grid 7 **M3** **0.163 A/m**	Grid 8 **M3** **0.154 A/m**	Grid 9 **M3** **0.155 A/m**

Device H-Field measurement with H3DV6 probe/H Scan - H3DV6 - 2007: 15 mm from Probe Center to the Device_high_chan/Hearing Aid Compatibility Test (101x101x1): Interpolated grid: dx=0.5000 mm, dy=0.5000 mm

Device Reference Point: 0, 0, -6.3 mm
Reference Value = 0.05500 A/m; Power Drift = -0.07 dB
PMR not calibrated. PMF = 2.860 is applied.
H-field emissions = 0.1635 A/m
Near-field category: M3 (AWF -5 dB)

PMF scaled H-field

Grid 1 **M4** **0.108 A/m**	Grid 2 **M3** **0.156 A/m**	Grid 3 **M3** **0.159 A/m**
Grid 4 **M4** **0.126 A/m**	Grid 5 **M3** **0.161 A/m**	Grid 6 **M3** **0.163 A/m**
Grid 7 **M3** **0.175 A/m**	Grid 8 **M3** **0.156 A/m**	Grid 9 **M3** **0.157 A/m**



0 dB = 0.1697 A/m = -15.41 dBA/m

Date/Time: 4/28/2013 1:48:38 AM

Test Laboratory: RIM Testing Services

HAC RF_H-Field_GSM_1900_Telecoil

DUT: BlackBerry Smartphone; Type: Sample; Serial: 333CB445

Communication System: GSM 1900; Frequency: 1909.8 MHz
Medium parameters used: $\sigma = 0$ S/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m^3
Phantom section: RF Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 11/9/2012
- Sensor-Surface: (Fix Surface), z = 8.7
- Electronics: DAE4 Sn881; Calibrated: 1/14/2013
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA
- DASY52 52.8.4(1052); SEMCAD X 14.6.8(7028)

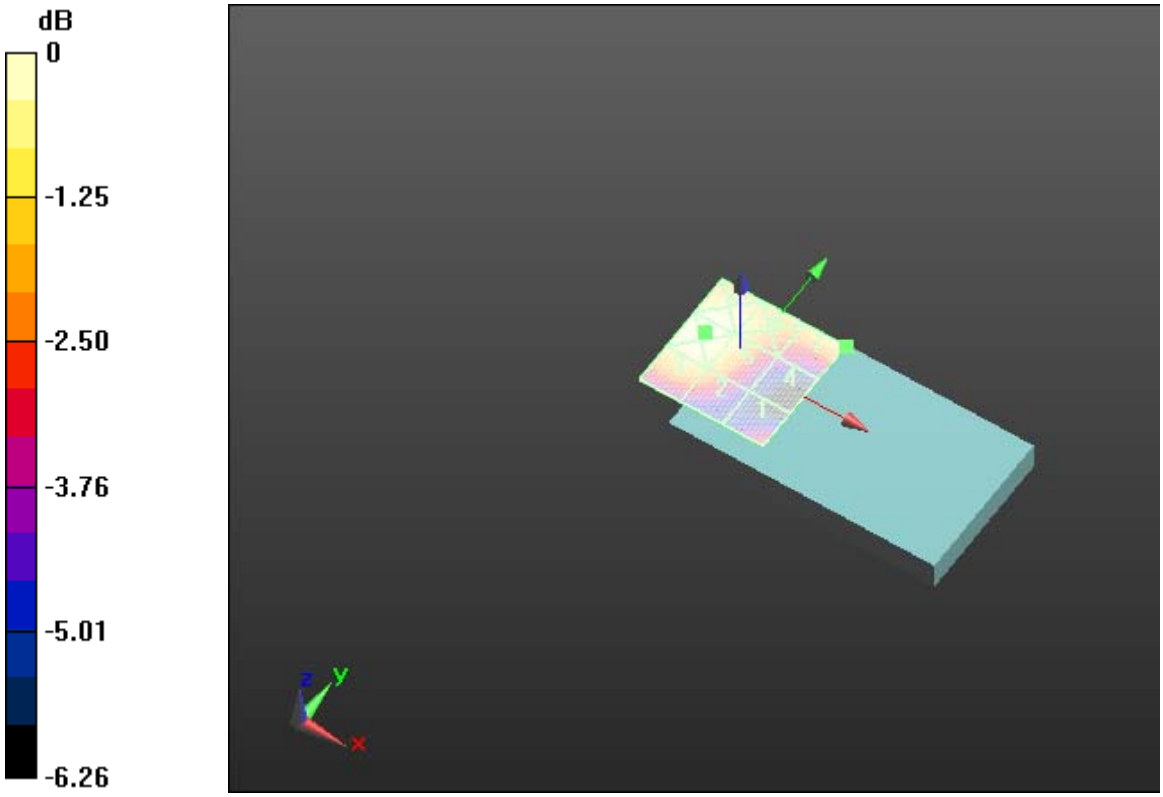
Device H-Field measurement with H3DV6 probe/H Scan - H3DV6 - 2007: 15 mm from Probe Center to the Device_telecoil/Hearing Aid Compatibility Test (101x101x1): Interpolated grid: dx=0.5000 mm, dy=0.5000 mm
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 0.05400 A/m; Power Drift = 0.06 dB
PMR not calibrated. PMF = 2.860 is applied.
H-field emissions = 0.1545 A/m
Near-field category: M3 (AWF -5 dB)

PMF scaled H-field

Grid 1 **M4** **0.127 A/m**	Grid 2 **M4** **0.138 A/m**	Grid 3 **M3** **0.148 A/m**
Grid 4 **M4** **0.108 A/m**	Grid 5 **M3** **0.151 A/m**	Grid 6 **M3** **0.160 A/m**
Grid 7 **M3**	Grid 8 **M3**	Grid 9 **M3**

0.155 A/m	**0.150 A/m**	**0.158 A/m**

Cursor:
Total = 0.1599 A/m
H Category: M3
Location: -13, -1.5, 8.7 mm



0 dB = 0.1610 A/m = -15.86 dBA/m

Date/Time: 4/28/2013 12:56:43 AM

Test Laboratory: RIM Testing Services

HAC RF_H-Field_UMTS_Band_II

DUT: BlackBerry Smartphone; Type: Sample; Serial: 333CB445

Communication System: WCDMA FDD II; Frequency: 1852.4 MHz, Frequency: 1880 MHz, Frequency: 1907.6 MHz
Medium parameters used: $\sigma = 0$ S/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m^3
Phantom section: RF Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 11/9/2012
- Sensor-Surface: (Fix Surface), z = 8.7
- Electronics: DAE4 Sn881; Calibrated: 1/14/2013
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA
- DASY52 52.8.4(1052); SEMCAD X 14.6.8(7028)

Device H-Field measurement with H3DV6 probe/H Scan - H3DV6 - 2007: 15 mm from Probe Center to the Device_low_chan/Hearing Aid Compatibility Test (101x101x1): Interpolated grid: dx=0.5000 mm, dy=0.5000 mm
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 0.07900 A/m; Power Drift = 0.05 dB
PMR not calibrated. PMF = 1.000 is applied.
H-field emissions = 0.08345 A/m
Near-field category: M4 (AWF 0 dB)

PMF scaled H-field

Grid 1 **M4** **0.058 A/m**	Grid 2 **M4** **0.081 A/m**	Grid 3 **M4** **0.082 A/m**
Grid 4 **M4** **0.060 A/m**	Grid 5 **M4** **0.083 A/m**	Grid 6 **M4** **0.083 A/m**

Grid 7 **M4** **0.085 A/m**	Grid 8 **M4** **0.079 A/m**	Grid 9 **M4** **0.079 A/m**

Cursor:
Total = 0.08488 A/m
H Category: M4
Location: 25, 25, 8.7 mm

Device H-Field measurement with H3DV6 probe/H Scan - H3DV6 - 2007: 15 mm from Probe Center to the Device_mid_chan/Hearing Aid Compatibility Test (101x101x1):

Interpolated grid: dx=0.5000 mm, dy=0.5000 mm
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 0.07900 A/m; Power Drift = 0.00 dB
PMR not calibrated. PMF = 1.000 is applied.
H-field emissions = 0.08192 A/m
Near-field category: M4 (AWF 0 dB)

PMF scaled H-field

Grid 1 **M4** **0.054 A/m**	Grid 2 **M4** **0.078 A/m**	Grid 3 **M4** **0.079 A/m**
Grid 4 **M4** **0.062 A/m**	Grid 5 **M4** **0.081 A/m**	Grid 6 **M4** **0.082 A/m**
Grid 7 **M4** **0.089 A/m**	Grid 8 **M4** **0.079 A/m**	Grid 9 **M4** **0.080 A/m**

Cursor:
Total = 0.08854 A/m
H Category: M4
Location: 25, 25, 8.7 mm

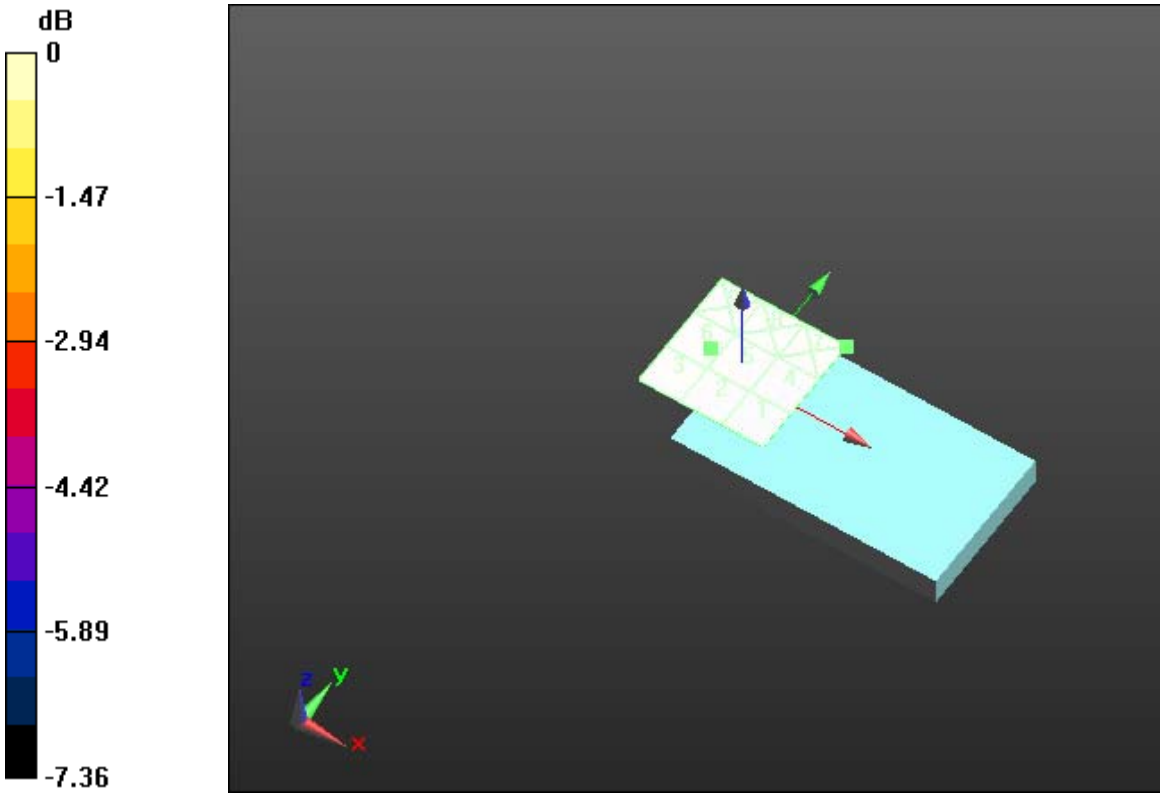
Device H-Field measurement with H3DV6 probe/H Scan - H3DV6 - 2007: 15 mm from Probe Center to the Device_high_chan/Hearing Aid Compatibility Test (101x101x1): Interpolated grid: dx=0.5000 mm, dy=0.5000 mm

Device Reference Point: 0, 0, -6.3 mm
Reference Value = 0.08000 A/m; Power Drift = 0.11 dB
PMR not calibrated. PMF = 1.000 is applied.
H-field emissions = 0.08486 A/m
Near-field category: M4 (AWF 0 dB)

PMF scaled H-field

Grid 1 **M4** **0.054 A/m**	Grid 2 **M4** **0.081 A/m**	Grid 3 **M4** **0.083 A/m**
Grid 4 **M4** **0.065 A/m**	Grid 5 **M4** **0.083 A/m**	Grid 6 **M4** **0.085 A/m**
Grid 7 **M4** **0.091 A/m**	Grid 8 **M4** **0.081 A/m**	Grid 9 **M4** **0.081 A/m**

Cursor:
Total = 0.09057 A/m
H Category: M4
Location: 25, 25, 8.7 mm



0 dB = 0.08488 A/m = -21.42 dBA/m

Date/Time: 4/28/2013 1:12:09 AM

Test Laboratory: RIM Testing Services

HAC RF_H-Field_UMTS_Band_II_Telecoil

DUT: BlackBerry Smartphone; Type: Sample; Serial: 333CB445

Communication System: WCDMA FDD II; Frequency: 1907.6 MHz
Medium parameters used: $\sigma = 0$ S/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m^3
Phantom section: RF Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 11/9/2012
- Sensor-Surface: (Fix Surface), z = 8.7
- Electronics: DAE4 Sn881; Calibrated: 1/14/2013
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA
- DASY52 52.8.4(1052); SEMCAD X 14.6.8(7028)

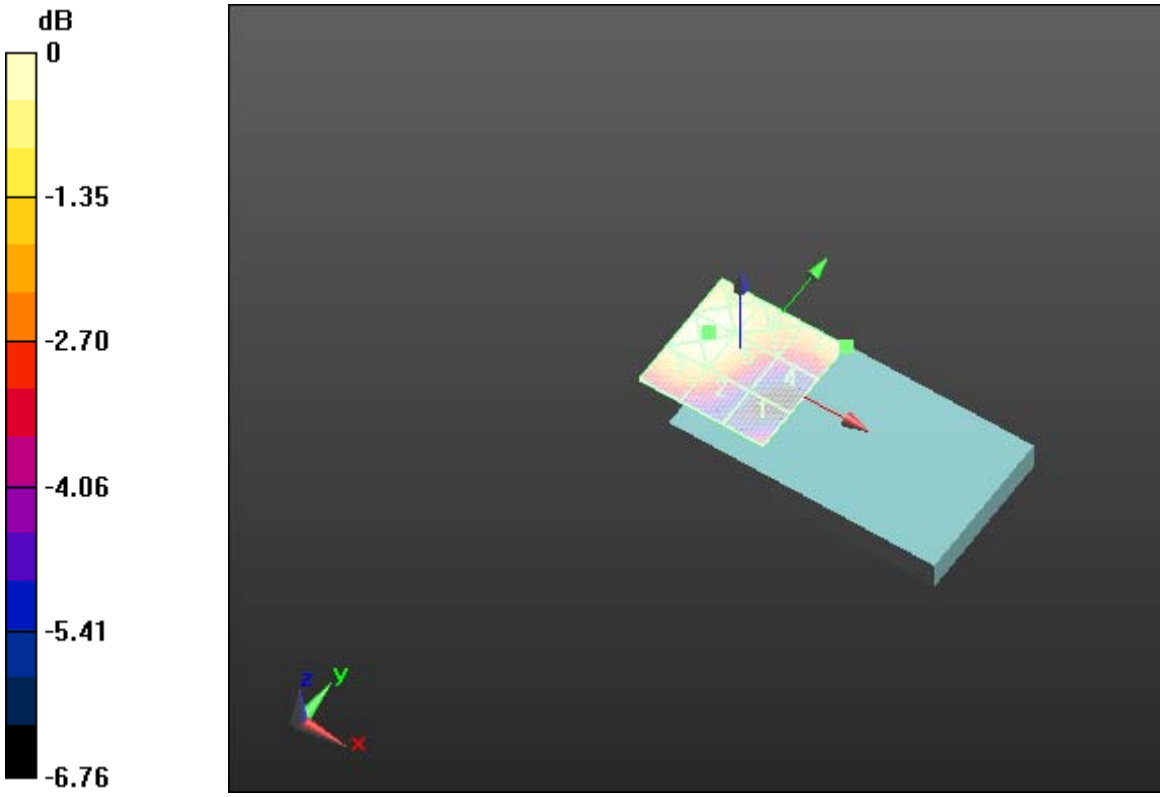
Device H-Field measurement with H3DV6 probe/H Scan - H3DV6 - 2007: 15 mm from Probe Center to the Device_telecoil/Hearing Aid Compatibility Test (101x101x1): Interpolated grid: dx=0.5000 mm, dy=0.5000 mm
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 0.08100 A/m; Power Drift = -0.03 dB
PMR not calibrated. PMF = 1.000 is applied.
H-field emissions = 0.08220 A/m
Near-field category: M4 (AWF 0 dB)

PMF scaled H-field

Grid 1 **M4** **0.063 A/m**	Grid 2 **M4** **0.072 A/m**	Grid 3 **M4** **0.078 A/m**
Grid 4 **M4** **0.057 A/m**	Grid 5 **M4** **0.079 A/m**	Grid 6 **M4** **0.084 A/m**
Grid 7 **M4**	Grid 8 **M4**	Grid 9 **M4**

0.082 A/m	**0.079 A/m**	**0.083 A/m**

Cursor:
Total = 0.08413 A/m
H Category: M4
Location: -12.5, -1, 8.7 mm



0 dB = 0.08413 A/m = -21.50 dBA/m

Date/Time: 4/28/2013 2:51:43 AM

Test Laboratory: RIM Testing Services

HAC RF_H-Field_CDMA850

DUT: BlackBerry Smartphone; Type: Sample; Serial: 333CB445

Communication System: CDMA 850, Communication System: CDMA 850 1/8th Rate;
Frequency: 824.7 MHz, Frequency: 836.52 MHz, Frequency: 848.52 MHz
Medium parameters used: $\sigma = 0$ S/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m^3
Phantom section: RF Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 11/9/2012
- Sensor-Surface: (Fix Surface), z = 8.7
- Electronics: DAE4 Sn881; Calibrated: 1/14/2013
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA
- DASY52 52.8.4(1052); SEMCAD X 14.6.8(7028)

Device H-Field measurement with H3DV6 probe/H Scan - H3DV6 - 2007: 15 mm from Probe Center to the Device_low_chan_Full_Rate/Hearing Aid Compatibility Test (101x101x1): Interpolated grid: dx=0.5000 mm, dy=0.5000 mm
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 0.05500 A/m; Power Drift = 0.00 dB
PMR not calibrated. PMF = 1.030 is applied.
H-field emissions = 0.1231 A/m
Near-field category: M4 (AWF 0 dB)

PMF scaled H-field

Grid 1 **M4** **0.123 A/m**	Grid 2 **M4** **0.089 A/m**	Grid 3 **M4** **0.062 A/m**
Grid 4 **M4** **0.101 A/m**	Grid 5 **M4** **0.074 A/m**	Grid 6 **M4** **0.051 A/m**
Grid 7 **M4**	Grid 8 **M4**	Grid 9 **M4**

0.088 A/m	**0.065 A/m**	**0.042 A/m**

Cursor:
Total = 0.1231 A/m
H Category: M4
Location: 25, -25, 8.7 mm

Device H-Field measurement with H3DV6 probe/H Scan - H3DV6 - 2007: 15 mm from Probe Center to the Device_mid_chan_Full_Rate/Hearing Aid Compatibility Test (101x101x1): Interpolated grid: dx=0.5000 mm, dy=0.5000 mm

Device Reference Point: 0, 0, -6.3 mm
Reference Value = 0.06500 A/m; Power Drift = -0.12 dB
PMR not calibrated. PMF = 1.030 is applied.
H-field emissions = 0.1304 A/m
Near-field category: M4 (AWF 0 dB)

PMF scaled H-field

Grid 1 **M4** **0.130 A/m**	Grid 2 **M4** **0.097 A/m**	Grid 3 **M4** **0.069 A/m**
Grid 4 **M4** **0.109 A/m**	Grid 5 **M4** **0.083 A/m**	Grid 6 **M4** **0.057 A/m**
Grid 7 **M4** **0.100 A/m**	Grid 8 **M4** **0.076 A/m**	Grid 9 **M4** **0.049 A/m**

Cursor:
Total = 0.1304 A/m
H Category: M4
Location: 25, -25, 8.7 mm

Device H-Field measurement with H3DV6 probe/H Scan - H3DV6 - 2007: 15 mm from Probe Center to the Device_high_chan_Full_Rate/Hearing Aid Compatibility Test (101x101x1): Interpolated grid: dx=0.5000 mm, dy=0.5000 mm

Device Reference Point: 0, 0, -6.3 mm
Reference Value = 0.08200 A/m; Power Drift = 0.01 dB
PMR not calibrated. PMF = 1.030 is applied.
H-field emissions = 0.1551 A/m
Near-field category: M4 (AWF 0 dB)

PMF scaled H-field

Grid 1 **M4** **0.155 A/m**	Grid 2 **M4** **0.120 A/m**	Grid 3 **M4** **0.084 A/m**
Grid 4 **M4** **0.135 A/m**	Grid 5 **M4** **0.106 A/m**	Grid 6 **M4** **0.074 A/m**
Grid 7 **M4** **0.131 A/m**	Grid 8 **M4** **0.102 A/m**	Grid 9 **M4** **0.072 A/m**

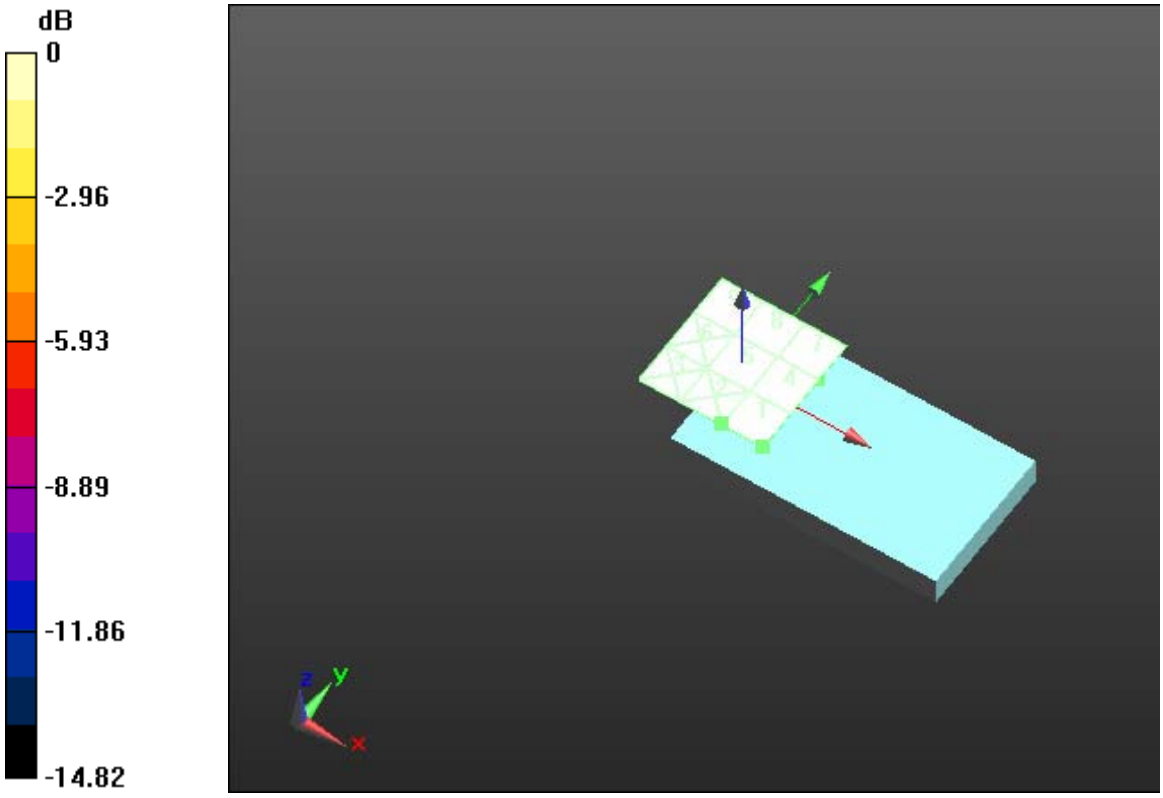
Cursor:
Total = 0.1551 A/m
H Category: M4
Location: 25, -25, 8.7 mm

Device H-Field measurement with H3DV6 probe/H Scan - H3DV6 - 2007: 15 mm from Probe Center to the Device_high_chan_1/8th_Rate/Hearing Aid Compatibility Test (101x101x1): Interpolated grid: dx=0.5000 mm, dy=0.5000 mm

Device Reference Point: 0, 0, -6.3 mm
Reference Value = 0.03000 A/m; Power Drift = 0.19 dB
PMR not calibrated. PMF = 2.650 is applied.
H-field emissions = 0.1488 A/m
Near-field category: M4 (AWF 0 dB)

PMF scaled H-field

Grid 1 **M4** **0.149 A/m**	Grid 2 **M4** **0.111 A/m**	Grid 3 **M4** **0.079 A/m**
Grid 4 **M4** **0.128 A/m**	Grid 5 **M4** **0.099 A/m**	Grid 6 **M4** **0.068 A/m**
Grid 7 **M4** **0.122 A/m**	Grid 8 **M4** **0.096 A/m**	Grid 9 **M4** **0.067 A/m**



0 dB = 0.1231 A/m = -18.19 dBA/m

Date/Time: 4/28/2013 3:10:29 AM

Test Laboratory: RIM Testing Services

HAC RF_H-Field_CDMA850_Telecoil

DUT: BlackBerry Smartphone; Type: Sample; Serial: 333CB445

Communication System: CDMA 850; Frequency: 848.52 MHz
Medium parameters used: $\sigma = 0$ S/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m^3
Phantom section: RF Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 11/9/2012
- Sensor-Surface: (Fix Surface), z = 8.7
- Electronics: DAE4 Sn881; Calibrated: 1/14/2013
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA
- DASY52 52.8.4(1052); SEMCAD X 14.6.8(7028)

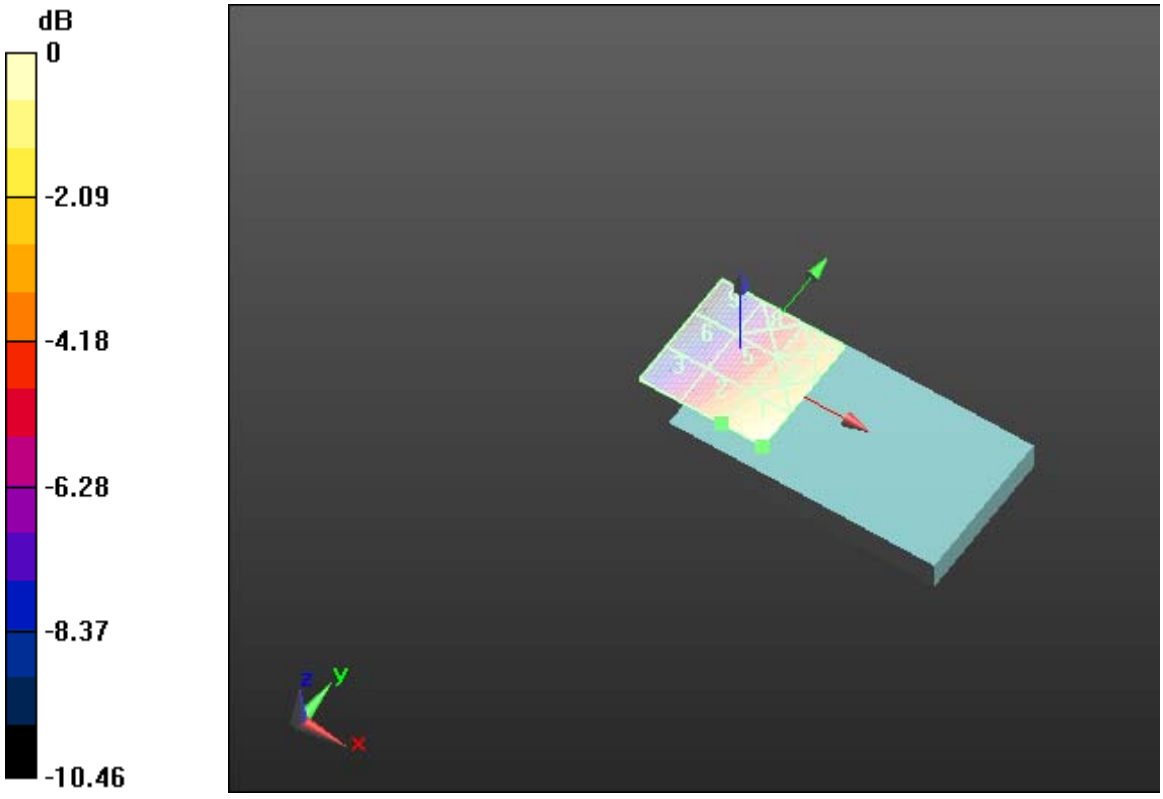
Device H-Field measurement with H3DV6 probe/H Scan - H3DV6 - 2007: 15 mm from Probe Center to the Device_telecoil_Full_Rate/Hearing Aid Compatibility Test (101x101x1): Interpolated grid: dx=0.5000 mm, dy=0.5000 mm
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 0.08500 A/m; Power Drift = -0.18 dB
PMR not calibrated. PMF = 1.060 is applied.
H-field emissions = 0.1793 A/m
Near-field category: M4 (AWF 0 dB)

PMF scaled H-field

Grid 1 **M4** **0.179 A/m**	Grid 2 **M4** **0.141 A/m**	Grid 3 **M4** **0.098 A/m**
Grid 4 **M4** **0.156 A/m**	Grid 5 **M4** **0.122 A/m**	Grid 6 **M4** **0.086 A/m**
Grid 7 **M4**	Grid 8 **M4**	Grid 9 **M4**

0.142 A/m	**0.112 A/m**	**0.080 A/m**

Cursor:
Total = 0.1793 A/m
H Category: M4
Location: 29, -30, 8.7 mm



0 dB = 0.1793 A/m = -14.93 dBA/m

Date/Time: 4/28/2013 2:21:18 AM

Test Laboratory: RIM Testing Services

HAC RF_H-Field_CDMA1900

DUT: BlackBerry Smartphone; Type: Sample; Serial: 333CB445

Communication System: CDMA 1900, Communication System: CDMA 1900 1/8th Rate;
Frequency: 1851.25 MHz, Frequency: 1880 MHz, Frequency: 1908.5 MHz
Medium parameters used: $\sigma = 0$ S/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m^3
Phantom section: RF Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 11/9/2012
- Sensor-Surface: (Fix Surface), z = 8.7
- Electronics: DAE4 Sn881; Calibrated: 1/14/2013
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA
- DASY52 52.8.4(1052); SEMCAD X 14.6.8(7028)

Device H-Field measurement with H3DV6 probe/H Scan - H3DV6 - 2007: 15 mm from Probe Center to the Device_low_chan_Full_Rate/Hearing Aid Compatibility Test (101x101x1): Interpolated grid: dx=0.5000 mm, dy=0.5000 mm
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 0.06000 A/m; Power Drift = -0.06 dB
PMR not calibrated. PMF = 0.9900 is applied.
H-field emissions = 0.07762 A/m
Near-field category: M4 (AWF 0 dB)

PMF scaled H-field

Grid 1 **M4** **0.078 A/m**	Grid 2 **M4** **0.061 A/m**	Grid 3 **M4** **0.061 A/m**
Grid 4 **M4** **0.055 A/m**	Grid 5 **M4** **0.060 A/m**	Grid 6 **M4** **0.061 A/m**
Grid 7 **M4**	Grid 8 **M4**	Grid 9 **M4**

0.060 A/m	**0.052 A/m**	**0.052 A/m**

Device H-Field measurement with H3DV6 probe/H Scan - H3DV6 - 2007: 15 mm from Probe Center to the Device_mid_chan_Full_Rate/Hearing Aid Compatibility Test (101x101x1):

Interpolated grid: dx=0.5000 mm, dy=0.5000 mm
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 0.06800 A/m; Power Drift = -0.06 dB
PMR not calibrated. PMF = 0.9900 is applied.
H-field emissions = 0.07666 A/m
Near-field category: M4 (AWF 0 dB)

PMF scaled H-field

Grid 1 **M4** **0.077 A/m**	Grid 2 **M4** **0.065 A/m**	Grid 3 **M4** **0.065 A/m**
Grid 4 **M4** **0.056 A/m**	Grid 5 **M4** **0.065 A/m**	Grid 6 **M4** **0.065 A/m**
Grid 7 **M4** **0.067 A/m**	Grid 8 **M4** **0.058 A/m**	Grid 9 **M4** **0.058 A/m**

Device H-Field measurement with H3DV6 probe/H Scan - H3DV6 - 2007: 15 mm from Probe Center to the Device_high_chan_Full_Rate/Hearing Aid Compatibility Test (101x101x1):

Interpolated grid: dx=0.5000 mm, dy=0.5000 mm
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 0.08400 A/m; Power Drift = -0.01 dB
PMR not calibrated. PMF = 0.9900 is applied.
H-field emissions = 0.08337 A/m
Near-field category: M4 (AWF 0 dB)

PMF scaled H-field

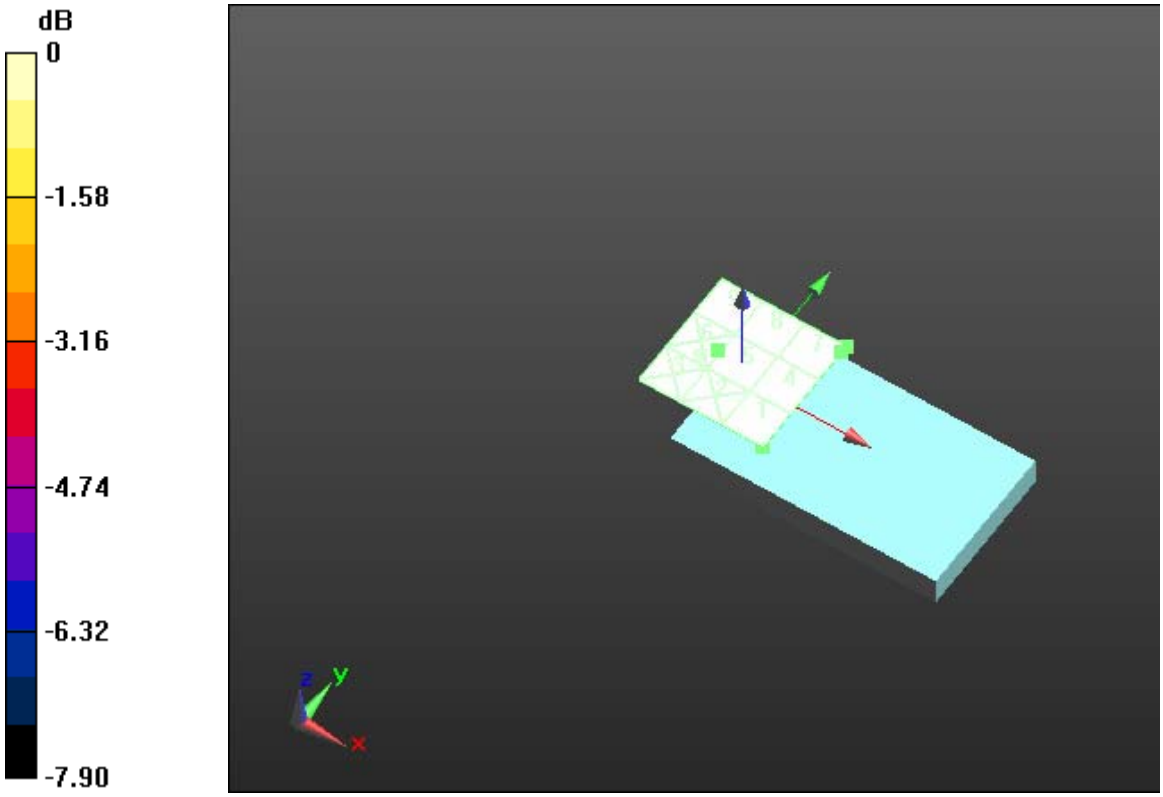
Grid 1 **M4** **0.079 A/m**	Grid 2 **M4** **0.082 A/m**	Grid 3 **M4** **0.083 A/m**

Grid 4 **M4** **0.066 A/m**	Grid 5 **M4** **0.082 A/m**	Grid 6 **M4** **0.083 A/m**
Grid 7 **M4** **0.083 A/m**	Grid 8 **M4** **0.076 A/m**	Grid 9 **M4** **0.076 A/m**

Device H-Field measurement with H3DV6 probe/H Scan - H3DV6 - 2007: 15 mm from Probe Center to the Device_high_chan_1/8th_Rate/Hearing Aid Compatibility Test (101x101x1): Interpolated grid: dx=0.5000 mm, dy=0.5000 mm
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 0.02600 A/m; Power Drift = 0.18 dB
PMR not calibrated. PMF = 2.600 is applied.
H-field emissions = 0.07824 A/m
Near-field category: M4 (AWF 0 dB)

PMF scaled H-field

Grid 1 **M4** **0.069 A/m**	Grid 2 **M4** **0.069 A/m**	Grid 3 **M4** **0.078 A/m**
Grid 4 **M4** **0.059 A/m**	Grid 5 **M4** **0.076 A/m**	Grid 6 **M4** **0.079 A/m**
Grid 7 **M4** **0.078 A/m**	Grid 8 **M4** **0.072 A/m**	Grid 9 **M4** **0.067 A/m**



0 dB = 0.07762 A/m = -22.20 dBA/m

Date/Time: 4/28/2013 2:45:59 AM

Test Laboratory: RIM Testing Services

HAC RF_H-Field_CDMA1900_Telecoil

DUT: BlackBerry Smartphone; Type: Sample; Serial: 333CB445

Communication System: CDMA 1900; Frequency: 1880 MHz
Medium parameters used: $\sigma = 0$ S/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m^3
Phantom section: RF Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

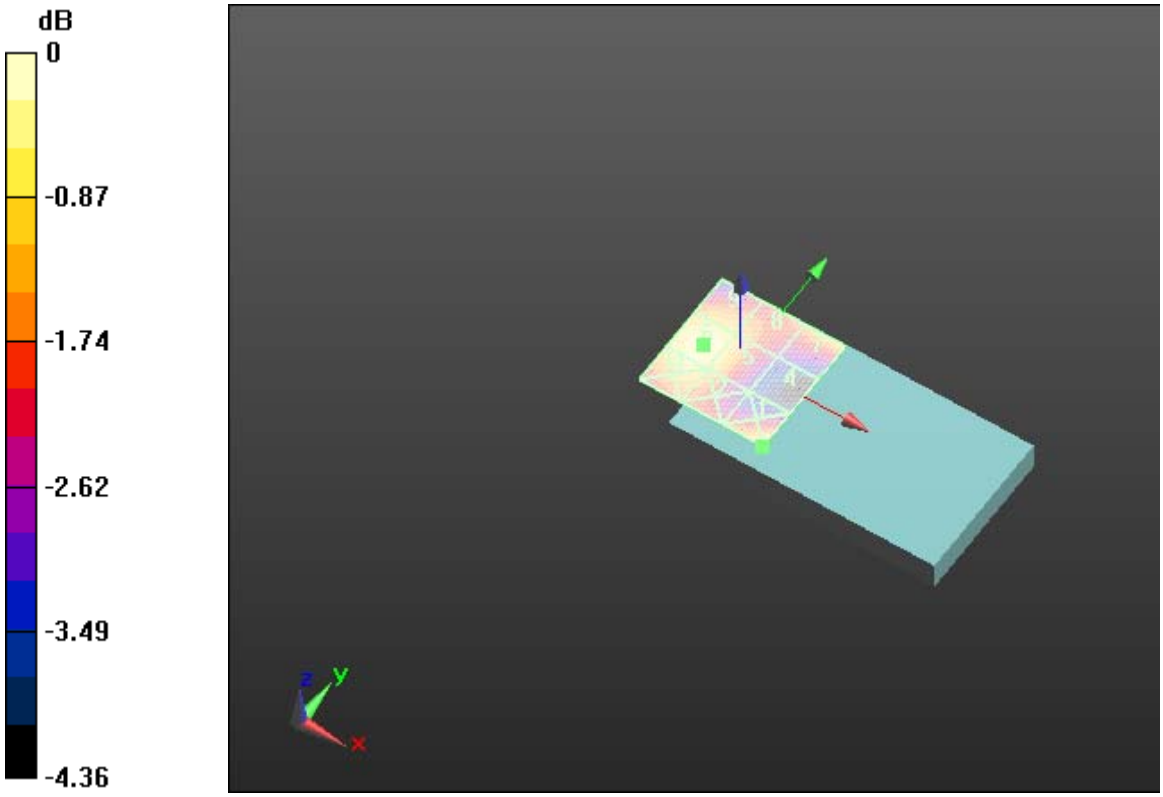
- Probe: H3DV6 - SN6105; ; Calibrated: 11/9/2012
- Sensor-Surface: (Fix Surface), z = 8.7
- Electronics: DAE4 Sn881; Calibrated: 1/14/2013
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BADASY52 52.8.4(1052); SEMCAD X 14.6.8(7028)

Device H-Field meausrement with H3DV6 probe/H Scan - H3DV6 - 2007: 15 mm from Probe Center to the Device_telecoil_Full_Rate/Hearing Aid Compatibility Test (101x101x1): Interpolated grid: dx=0.5000 mm, dy=0.5000 mm
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 0.08000 A/m; Power Drift = 0.07 dB
PMR not calibrated. PMF = 0.9900 is applied.
H-field emissions = 0.07927 A/m
Near-field category: M4 (AWF 0 dB)

PMF scaled H-field

Grid 1 **M4** **0.082 A/m**	Grid 2 **M4** **0.074 A/m**	Grid 3 **M4** **0.077 A/m**
Grid 4 **M4** **0.059 A/m**	Grid 5 **M4** **0.076 A/m**	Grid 6 **M4** **0.079 A/m**

Grid 7 **M4**	Grid 8 **M4**	Grid 9 **M4**
0.074 A/m	**0.073 A/m**	**0.074 A/m**



0 dB = 0.08178 A/m = -21.75 dBA/m

Date/Time: 4/28/2013 3:29:44 AM

Test Laboratory: RIM Testing Services

HAC RF_H-Field_GSM_1900_2100mA

DUT: BlackBerry Smartphone; Type: Sample; Serial: 333CB445

Communication System: GSM 1900; Frequency: 1909.8 MHz
Medium parameters used: $\sigma = 0$ S/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m^3
Phantom section: RF Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 11/9/2012
- Sensor-Surface: (Fix Surface), z = 8.7
- Electronics: DAE4 Sn881; Calibrated: 1/14/2013
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA
- DASY52 52.8.4(1052); SEMCAD X 14.6.8(7028)

Device H-Field meausrement with H3DV6 probe/H Scan - H3DV6 - 2007: 15 mm from Probe Center to the Device_telecoil_2100mA_Battery/Hearing Aid Compatibility Test (101x101x1): Interpolated grid: dx=0.5000 mm, dy=0.5000 mm
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 0.05500 A/m; Power Drift = 0.03 dB
PMR not calibrated. PMF = 2.860 is applied.
H-field emissions = 0.1522 A/m
Near-field category: M3 (AWF -5 dB)

PMF scaled H-field

Grid 1 **M4** **0.133 A/m**	Grid 2 **M4** **0.140 A/m**	Grid 3 **M3** **0.147 A/m**
Grid 4 **M4** **0.108 A/m**	Grid 5 **M3** **0.152 A/m**	Grid 6 **M3** **0.159 A/m**
Grid 7 **M3**	Grid 8 **M3**	Grid 9 **M3**

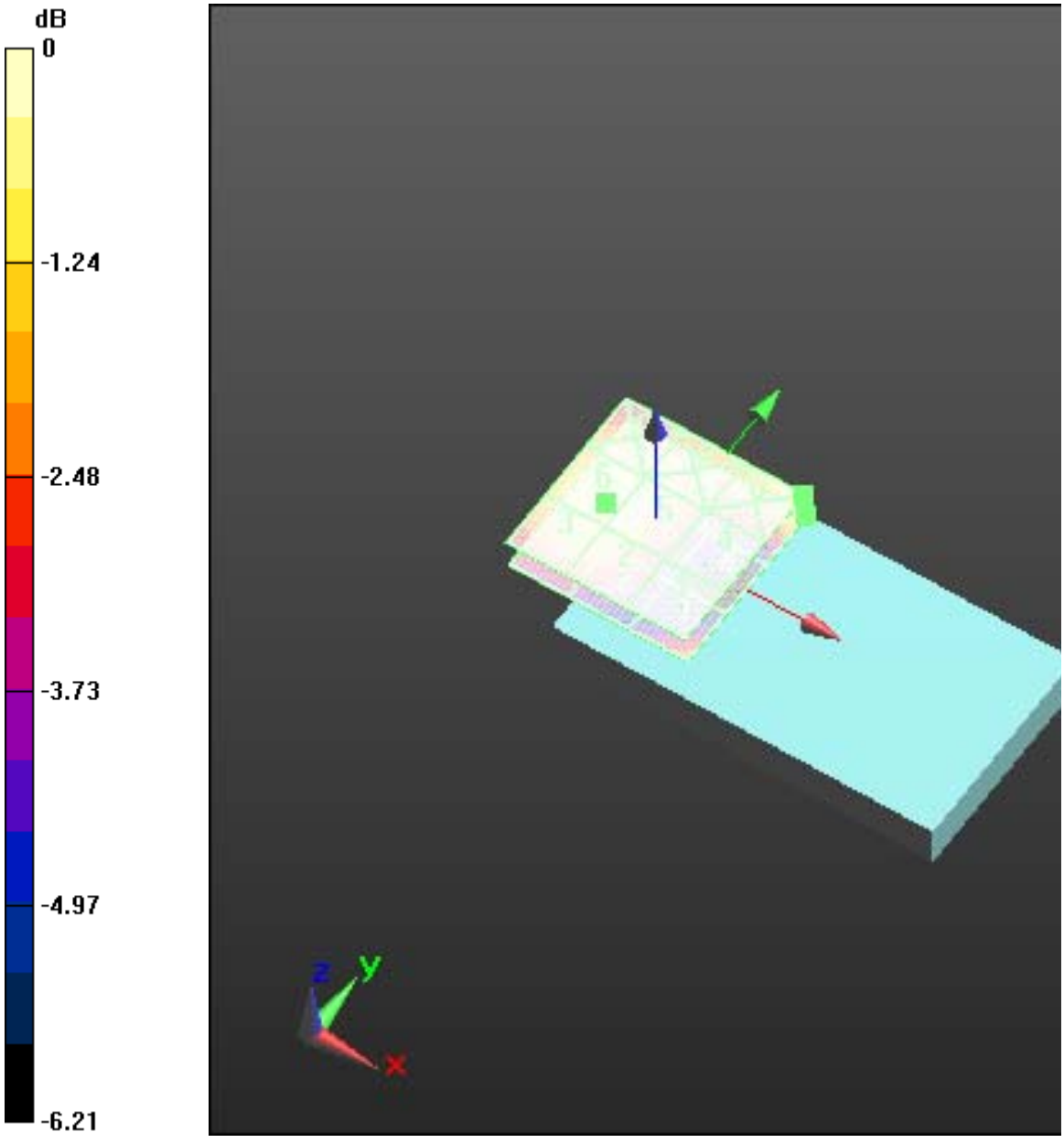
0.152 A/m	0.151 A/m	0.158 A/m

Device H-Field meausrement with H3DV6 probe/H Scan - H3DV6 - 2007: 15 mm from Probe Center to the Device_high_chan_2100mA_Battery/Hearing Aid Compatibility Test (101x101x1): Interpolated grid: dx=0.5000 mm, dy=0.5000 mm

Device Reference Point: 0, 0, -6.3 mm
Reference Value = 0.05500 A/m; Power Drift = -0.03 dB
PMR not calibrated. PMF = 2.860 is applied.
H-field emissions = 0.1597 A/m
Near-field category: M3 (AWF -5 dB)

PMF scaled H-field

Grid 1 **M4** **0.108 A/m**	Grid 2 **M3** **0.154 A/m**	Grid 3 **M3** **0.156 A/m**
Grid 4 **M4** **0.122 A/m**	Grid 5 **M3** **0.158 A/m**	Grid 6 **M3** **0.160 A/m**
Grid 7 **M3** **0.170 A/m**	Grid 8 **M3** **0.153 A/m**	Grid 9 **M3** **0.153 A/m**



0 dB = 0.1605 A/m = -15.89 dBA/m