



Appendix B HAC Measurement Plots

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HAC Measurement plots of GSM850
HAC Measurement plots of GSM1900

Test Laboratory: HUAWEI SAR/HAC Lab

HAC_ER3DV6_H891L-GSM850-251CH

DUT: H891L; Type: Smart Phone; Serial: SAR1

Communication System: UID 10021 - DAB, GSM-FDD (TDMA, GMSK); Frequency: 848.8 MHz; Duty Cycle: 1:8.6896

Medium parameters used: $\sigma = 0 \text{ S/m}$, $\epsilon_r = 1$; $\rho = 0 \text{ kg/m}^3$

Phantom section: RF Section

DASY Configuration:

- Probe: ER3DV6 - SN2344; ConvF(1, 1, 1); Calibrated: 2014-6-20;
- Sensor-Surface: (Fix Surface), $z = 8.7$
- Electronics: DAE4 Sn851; Calibrated: 2014-7-24
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA; Serial: 1053
- DASY52 52.8(1222); SEMCAD X 14.6.10(7331)

Device E-Field measurement (E-field scan for ANSI C63.19-2011 compliance)/E Scan - ER3D: 15 mm from Probe Center to the Device/Hearing Aid Compatibility Test (101x101x1): Interpolated grid: $dx=0.5000 \text{ mm}$, $dy=0.5000 \text{ mm}$

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 71.98 V/m; Power Drift = -0.00 dB

Applied MIF = 3.63 dB

RF audio interference level = 38.98 dBV/m

Emission category: M4

MIF scaled E-field

Grid 1 M4 37.41 dBV/m	Grid 2 M4 38.73 dBV/m	Grid 3 M4 38.66 dBV/m
Grid 4 M4 37.72 dBV/m	Grid 5 M4 38.98 dBV/m	Grid 6 M4 38.86 dBV/m
Grid 7 M4 37.78 dBV/m	Grid 8 M4 38.86 dBV/m	Grid 9 M4 38.78 dBV/m

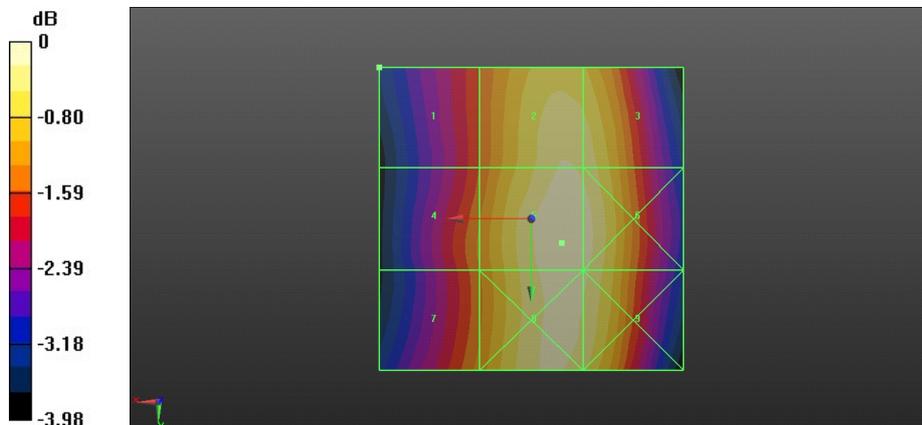
Category	Limits for E-Field Emissions < 960MHz	Limits for E-Field Emissions > 960MHz
M1	50 dBV/m - 55 dB V/m	40 dBV/m - 45 dB V/m
M2	45 dBV/m - 50 dB V/m	35 dBV/m - 40 dB V/m
M3	40 dBV/m - 45 dB V/m	30 dBV/m - 35 dB V/m
M4	<40 dBV/m	<30 dBV/m

Cursor:

Total = 35.53 dBV/m

E Category: M4

Location: 25, -25, 8.7 mm



0 dB = 88.88 V/m = 38.98 dBV/m

Test Laboratory: HUAWEI SAR/HAC Lab

HAC_ER3DV6_H891L-GSM850-190CH

DUT: H891L; Type: Smart Phone; Serial: SARI

Communication System: UID 10021 - DAB, GSM-FDD (TDMA, GMSK); Frequency: 836.6 MHz; Duty Cycle: 1:8.6896

Medium parameters used: $\sigma = 0 \text{ S/m}$, $\epsilon_r = 1$; $\rho = 0 \text{ kg/m}^3$

Phantom section: RF Section

DASY Configuration:

- Probe: ER3DV6 - SN2344; ConvF(1, 1, 1); Calibrated: 2014-6-20;
- Sensor-Surface: (Fix Surface), $z = 8.7$
- Electronics: DAE4 Sn851; Calibrated: 2014-7-24
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA; Serial: 1053
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Device E-Field measurement (E-field scan for ANSI C63.19-2011 compliance)/E Scan - ER3D: 15 mm from Probe Center to the Device/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 = 74.11 V/m; Power Drift = 0.01 dB

Applied MIF = 3.63 dB

RF audio interference level = 39.31 dBV/m

Emission category: M4

MIF scaled E-field

Grid 1 M4 37.75 dBV/m	Grid 2 M4 39 dBV/m	Grid 3 M4 38.94 dBV/m
Grid 4 M4 38.04 dBV/m	Grid 5 M4 39.31 dBV/m	Grid 6 M4 39.21 dBV/m
Grid 7 M4 38.26 dBV/m	Grid 8 M4 39.27 dBV/m	Grid 9 M4 39.17 dBV/m

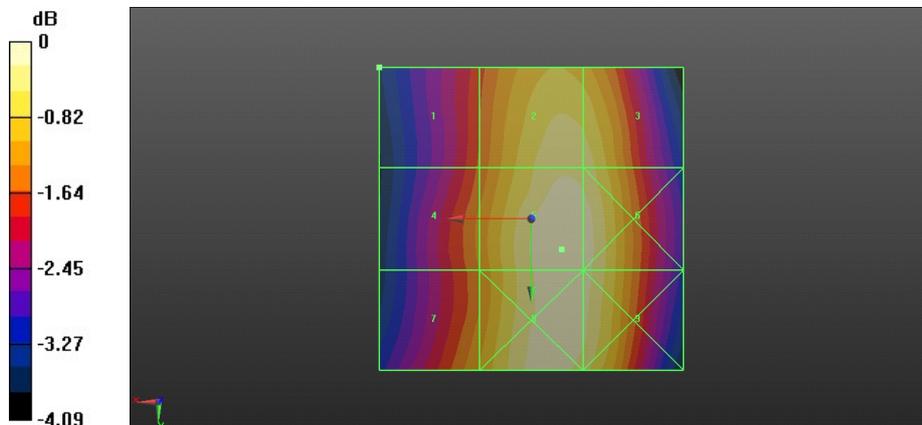
Category	Limits for E-Field Emissions < 960MHz	Limits for E-Field Emissions > 960MHz
M1	50 dBV/m - 55 dB V/m	40 dBV/m - 45 dB V/m
M2	45 dBV/m - 50 dB V/m	35 dBV/m - 40 dB V/m
M3	40 dBV/m - 45 dB V/m	30 dBV/m - 35 dB V/m
M4	<40 dBV/m	<30 dBV/m

Cursor:

Total = 35.74 dBV/m

E Category: M4

Location: 25, -25, 8.7 mm



0 dB = 92.33 V/m = 39.31 dBV/m

Test Laboratory: HUAWEI SAR/HAC Lab

HAC_ER3DV6_H891L-GSM850-128CH

DUT: H891L; Type: Smart Phone; Serial: SAR1

Communication System: UID 10021 - DAB, GSM-FDD (TDMA, GMSK); Frequency: 824.2 MHz; Duty Cycle: 1:8.6896

Medium parameters used: $\sigma = 0 \text{ S/m}$, $\epsilon_r = 1$; $\rho = 0 \text{ kg/m}^3$

Phantom section: RF Section

DASY Configuration:

- Probe: ER3DV6 - SN2344; ConvF(1, 1, 1); Calibrated: 2014-6-20;
- Sensor-Surface: (Fix Surface), $z = 8.7$
- Electronics: DAE4 Sn851; Calibrated: 2014-7-24
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA; Serial: 1053
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Device E-Field measurement (E-field scan for ANSI C63.19-2011 compliance)/E Scan - ER3D: 15 mm from Probe Center to the Device/Hearing Aid Compatibility Test (101x101x1): Interpolated grid: $dx=0.5000 \text{ mm}$, $dy=0.5000 \text{ mm}$

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 81.72 V/m; Power Drift = -0.04 dB

Applied MIF = 3.63 dB

RF audio interference level = 40.02 dBV/m

Emission category: M3

MIF scaled E-field

Grid 1 M4 38.59 dBV/m	Grid 2 M4 39.73 dBV/m	Grid 3 M4 39.61 dBV/m
Grid 4 M4 38.92 dBV/m	Grid 5 M3 40.02 dBV/m	Grid 6 M4 39.81 dBV/m
Grid 7 M4 39.01 dBV/m	Grid 8 M4 39.96 dBV/m	Grid 9 M4 39.79 dBV/m

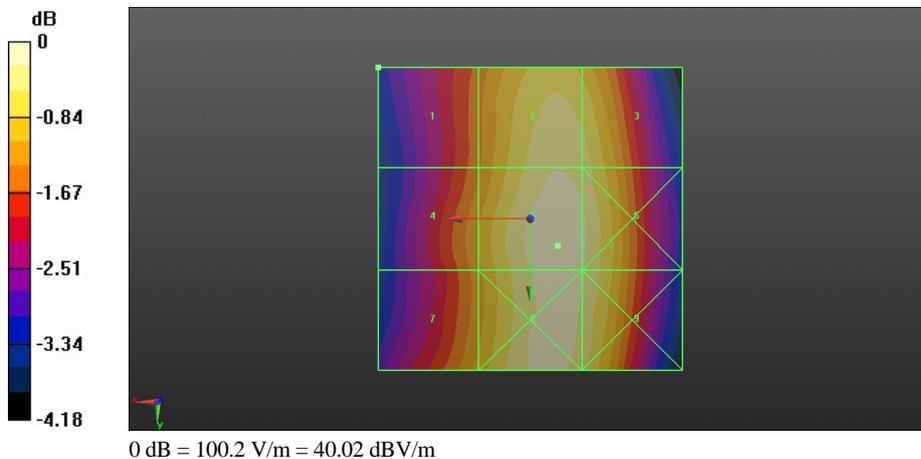
Category	Limits for E-Field Emissions < 960MHz	Limits for E-Field Emissions > 960MHz
M1	50 dBV/m - 55 dB V/m	40 dBV/m - 45 dB V/m
M2	45 dBV/m - 50 dB V/m	35 dBV/m - 40 dB V/m
M3	40 dBV/m - 45 dB V/m	30 dBV/m - 35 dB V/m
M4	<40 dBV/m	<30 dBV/m

Cursor:

Total = 36.80 dBV/m

E Category: M4

Location: 25, -25, 8.7 mm



Test Laboratory: HUAWEI SAR/HAC Lab

HAC_ER3DV6_H891L-GSM1900-810CH

DUT: H891L; Type: Smart Phone; Serial: SAR1

Communication System: UID 10021 - DAB, GSM-FDD (TDMA, GMSK); Frequency: 1909.8 MHz; Duty Cycle: 1:8.6896

Medium parameters used: $\sigma = 0 \text{ S/m}$, $\epsilon_r = 1$; $\rho = 0 \text{ kg/m}^3$

Phantom section: RF Section

DASY Configuration:

- Probe: ER3DV6 - SN2344; ConvF(1, 1, 1); Calibrated: 2014-6-20;
- Sensor-Surface: (Fix Surface), $z = 8.7$
- Electronics: DAE4 Sn851; Calibrated: 2014-7-24
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA; Serial: 1053
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Device E-Field measurement (E-field scan for ANSI C63.19-2011 compliance)/E Scan - ER3D: 15 mm from Probe Center to the Device/Hearing Aid Compatibility Test (101x101x1): Interpolated grid: $dx=0.5000 \text{ mm}$, $dy=0.5000 \text{ mm}$

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 15.26 V/m; Power Drift = 0.10 dB

Applied MIF = 3.63 dB

RF audio interference level = 28.93 dBV/m

Emission category: M4

MIF scaled E-field

Grid 1 M4 28.47 dBV/m	Grid 2 M3 30.9 dBV/m	Grid 3 M3 30.87 dBV/m
Grid 4 M4 25.45 dBV/m	Grid 5 M4 28.93 dBV/m	Grid 6 M4 28.93 dBV/m
Grid 7 M4 24.01 dBV/m	Grid 8 M4 24.35 dBV/m	Grid 9 M4 25.17 dBV/m

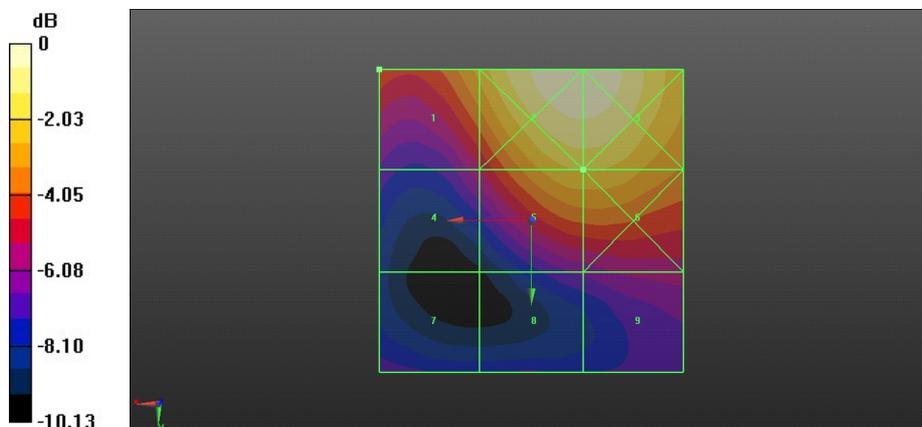
Category	Limits for E-Field Emissions < 960MHz	Limits for E-Field Emissions > 960MHz
M1	50 dBV/m - 55 dB V/m	40 dBV/m - 45 dB V/m
M2	45 dBV/m - 50 dB V/m	35 dBV/m - 40 dB V/m
M3	40 dBV/m - 45 dB V/m	30 dBV/m - 35 dB V/m
M4	<40 dBV/m	<30 dBV/m

Cursor:

Total = 26.86 dBV/m

E Category: M4

Location: 25, -25, 8.7 mm



0 dB = 35.06 V/m = 30.90 dBV/m

Test Laboratory: HUAWEI SAR/HAC Lab

HAC_ER3DV6_H891L-GSM1900-661CH

DUT: H891L; Type: Smart Phone; Serial: SAR1

Communication System: UID 10021 - DAB, GSM-FDD (TDMA, GMSK); Frequency: 1880 MHz; Duty Cycle: 1:8.6896

Medium parameters used: $\sigma = 0 \text{ S/m}$, $\epsilon_r = 1$; $\rho = 0 \text{ kg/m}^3$

Phantom section: RF Section

DASY Configuration:

- Probe: ER3DV6 - SN2344; ConvF(1, 1, 1); Calibrated: 2014-6-20;
- Sensor-Surface: (Fix Surface), $z = 8.7$
- Electronics: DAE4 Sn851; Calibrated: 2014-7-24
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA; Serial: 1053
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Device E-Field measurement (E-field scan for ANSI C63.19-2011 compliance)/E Scan - ER3D: 15 mm from Probe Center to the Device/Hearing Aid Compatibility Test (101x101x1); Interpolated grid: $dx=0.5000 \text{ mm}$, $dy=0.5000 \text{ mm}$

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 15.73 V/m; Power Drift = 0.07 dB

Applied MIF = 3.63 dB

RF audio interference level = 29.63 dBV/m

Emission category: M4

MIF scaled E-field

Grid 1 M4 29.64 dBV/m	Grid 2 M3 31.85 dBV/m	Grid 3 M3 31.8 dBV/m
Grid 4 M4 26.23 dBV/m	Grid 5 M4 29.63 dBV/m	Grid 6 M4 29.63 dBV/m
Grid 7 M4 24.6 dBV/m	Grid 8 M4 24.53 dBV/m	Grid 9 M4 25.31 dBV/m

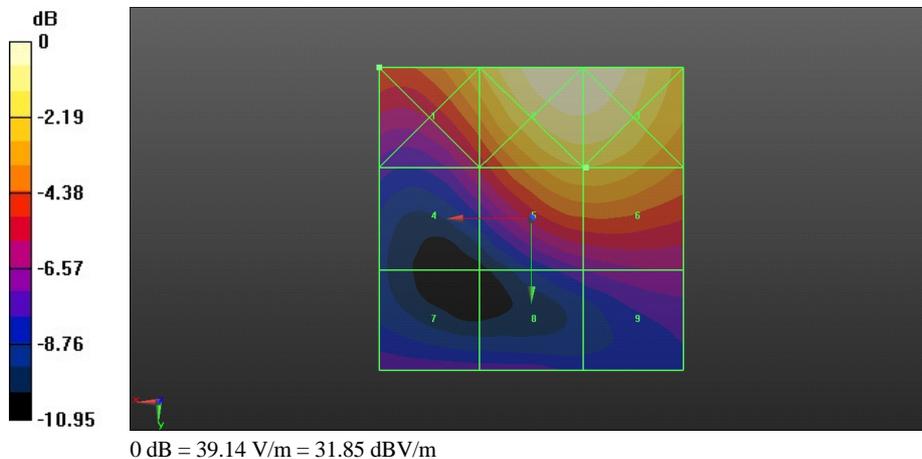
Category	Limits for E-Field Emissions < 960MHz	Limits for E-Field Emissions > 960MHz
M1	50 dBV/m - 55 dB V/m	40 dBV/m - 45 dB V/m
M2	45 dBV/m - 50 dB V/m	35 dBV/m - 40 dB V/m
M3	40 dBV/m - 45 dB V/m	30 dBV/m - 35 dB V/m
M4	<40 dBV/m	<30 dBV/m

Cursor:

Total = 27.52 dBV/m

E Category: M4

Location: 25, -25, 8.7 mm



Test Laboratory: HUAWEI SAR/HAC Lab

HAC_ER3DV6_H891L-GSM1900-512CH

DUT: H891L; Type: Smart Phone; Serial: SAR1

Communication System: UID 10021 - DAB, GSM-FDD (TDMA, GMSK); Frequency: 1850.2 MHz; Duty Cycle: 1:8.6896

Medium parameters used: $\sigma = 0 \text{ S/m}$, $\epsilon_r = 1$; $\rho = 0 \text{ kg/m}^3$

Phantom section: RF Section

DASY Configuration:

- Probe: ER3DV6 - SN2344; ConvF(1, 1, 1); Calibrated: 2014-6-20;
- Sensor-Surface: (Fix Surface), $z = 8.7$
- Electronics: DAE4 Sn851; Calibrated: 2014-7-24
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA; Serial: 1053
- DASY52 52.8(1222); SEMCAD X 14.6.10(7331)

Device E-Field measurement (E-field scan for ANSI C63.19-2011 compliance)/E Scan - ER3D: 15 mm from Probe Center to the Device/Hearing Aid Compatibility Test (101x101x1): Interpolated grid: $dx=0.5000 \text{ mm}$, $dy=0.5000 \text{ mm}$

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 17.57 V/m; Power Drift = -0.02 dB

Applied MIF = 3.63 dB

RF audio interference level = 29.80 dBV/m

Emission category: M4

MIF scaled E-field

Grid 1 M4 29.76 dBV/m	Grid 2 M3 31.82 dBV/m	Grid 3 M3 31.79 dBV/m
Grid 4 M4 26.79 dBV/m	Grid 5 M4 29.8 dBV/m	Grid 6 M4 29.8 dBV/m
Grid 7 M4 24.65 dBV/m	Grid 8 M4 24.99 dBV/m	Grid 9 M4 25.54 dBV/m

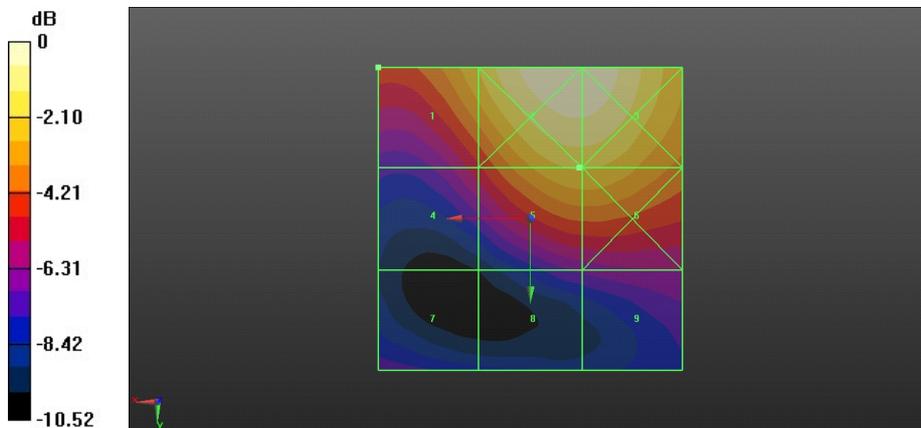
Category	Limits for E-Field Emissions < 960MHz	Limits for E-Field Emissions > 960MHz
M1	50 dBV/m - 55 dB V/m	40 dBV/m - 45 dB V/m
M2	45 dBV/m - 50 dB V/m	35 dBV/m - 40 dB V/m
M3	40 dBV/m - 45 dB V/m	30 dBV/m - 35 dB V/m
M4	<40 dBV/m	<30 dBV/m

Cursor:

Total = 27.36 dBV/m

E Category: M4

Location: 25, -25, 8.7 mm



0 dB = 39.00 V/m = 31.82 dBV/m