



## Appendix B HAC Measurement Plots

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Test Laboratory: HUAWEI SAR/HAC Lab

**HAC\_ER3DV6\_Y538-A1-GSM850-251CH**

**DUT: Y538-A1; 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 - SN2441; ConvF(1, 1, 1); Calibrated: 2014-11-21;
- 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 = 74.86 V/m; Power Drift = -0.01 dB

Applied MIF = 3.63 dB

RF audio interference level = 38.55 dBV/m

**Emission category: M4**

MIF scaled E-field

Grid 1 M4 <b>37.85 dBV/m</b>	Grid 2 M4 <b>38.4 dBV/m</b>	Grid 3 M4 <b>37.81 dBV/m</b>
Grid 4 M4 <b>38.09 dBV/m</b>	Grid 5 M4 <b>38.55 dBV/m</b>	Grid 6 M4 <b>38.13 dBV/m</b>
Grid 7 M4 <b>38.21 dBV/m</b>	Grid 8 M4 <b>38.39 dBV/m</b>	Grid 9 M4 <b>38.03 dBV/m</b>

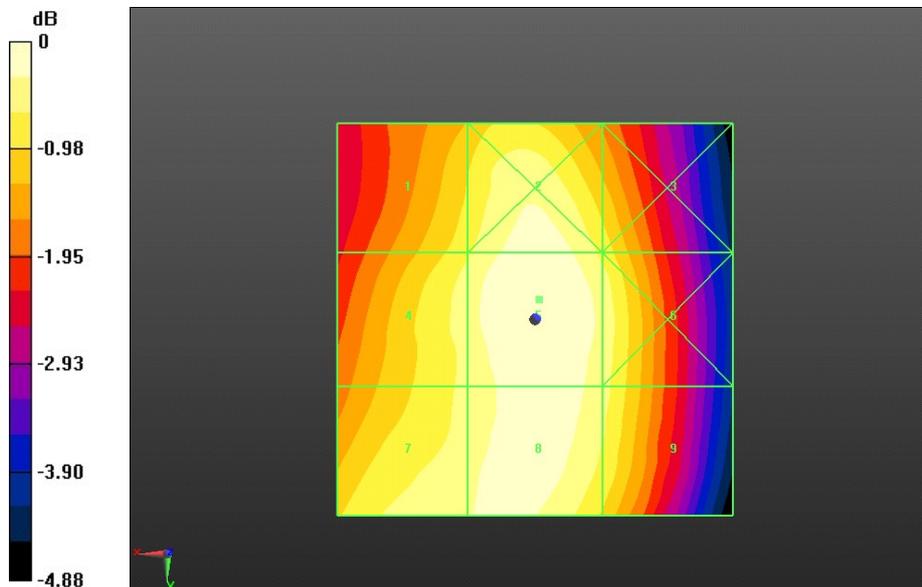
Category	Limits for E-Field Emissions < 960MHz	Limits for E-Field Emissions > 960MHz
M1	50 dBV/m - 55 dB V/m	40 dBV/m - 45 dB V/m
M2	45 dBV/m - 50 dB V/m	35 dBV/m - 40 dB V/m
M3	40 dBV/m - 45 dB V/m	30 dBV/m - 35 dB V/m
M4	<40 dBV/m	<30 dBV/m

**Cursor:**

Total = 38.55 dBV/m

E Category: M4

Location: -0.5, -2.5, 8.7 mm



0 dB = 84.64 V/m = 38.55 dBV/m

Test Laboratory: HUAWEI SAR/HAC Lab

**HAC\_ER3DV6\_Y538-A1-GSM850-190CH**

**DUT: Y538-A1; Type: Smart Phone; Serial: SAR1**

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 - SN2441; ConvF(1, 1, 1); Calibrated: 2014-11-21;
- 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 = 56.31 V/m; Power Drift = 0.01 dB

Applied MIF = 3.63 dB

RF audio interference level = 37.18 dBV/m

**Emission category: M4**

MIF scaled E-field

Grid 1 M4 <b>36.45 dBV/m</b>	Grid 2 M4 <b>38.88 dBV/m</b>	Grid 3 M4 <b>38.86 dBV/m</b>
Grid 4 M4 <b>35.7 dBV/m</b>	Grid 5 M4 <b>37.18 dBV/m</b>	Grid 6 M4 <b>37.18 dBV/m</b>
Grid 7 M4 <b>35.51 dBV/m</b>	Grid 8 M4 <b>36.47 dBV/m</b>	Grid 9 M4 <b>36.38 dBV/m</b>

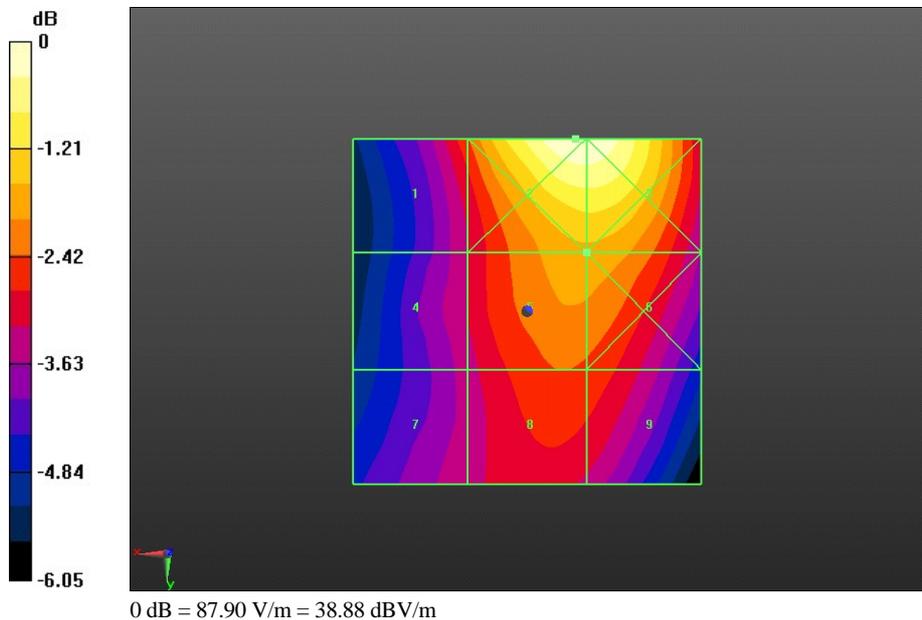
Category	Limits for E-Field Emissions < 960MHz	Limits for E-Field Emissions > 960MHz
M1	50 dBV/m - 55 dB V/m	40 dBV/m - 45 dB V/m
M2	45 dBV/m - 50 dB V/m	35 dBV/m - 40 dB V/m
M3	40 dBV/m - 45 dB V/m	30 dBV/m - 35 dB V/m
M4	<40 dBV/m	<30 dBV/m

**Cursor:**

Total = 38.88 dBV/m

E Category: M4

Location: -7, -25, 8.7 mm



Test Laboratory: HUAWEI SAR/HAC Lab

**HAC\_ER3DV6\_Y538-A1-GSM850-128CH**

**DUT: Y538-A1; 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 - SN2441; ConvF(1, 1, 1); Calibrated: 2014-11-21;
- 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 = 63.13 V/m; Power Drift = -0.04 dB

Applied MIF = 3.63 dB

RF audio interference level = 37.74 dBV/m

**Emission category: M4**

MIF scaled E-field

Grid 1 M4 37.03 dBV/m	Grid 2 M4 38.77 dBV/m	Grid 3 M4 38.71 dBV/m
Grid 4 M4 36.6 dBV/m	Grid 5 M4 37.74 dBV/m	Grid 6 M4 37.71 dBV/m
Grid 7 M4 36.29 dBV/m	Grid 8 M4 37.22 dBV/m	Grid 9 M4 37.17 dBV/m

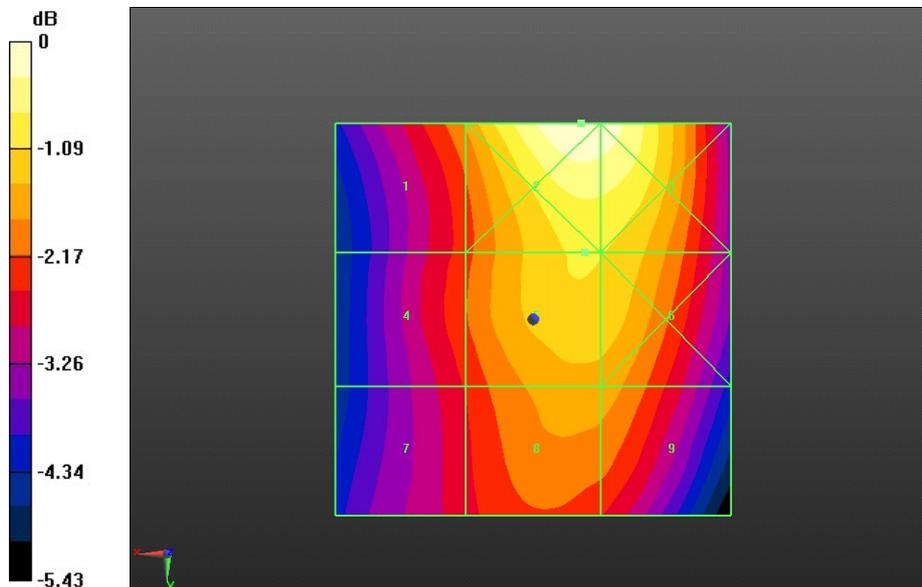
Category	Limits for E-Field Emissions < 960MHz	Limits for E-Field Emissions > 960MHz
M1	50 dBV/m - 55 dB V/m	40 dBV/m - 45 dB V/m
M2	45 dBV/m - 50 dB V/m	35 dBV/m - 40 dB V/m
M3	40 dBV/m - 45 dB V/m	30 dBV/m - 35 dB V/m
M4	<40 dBV/m	<30 dBV/m

**Cursor:**

Total = 38.77 dBV/m

E Category: M4

Location: -6, -25, 8.7 mm



0 dB = 86.83 V/m = 38.77 dBV/m

Test Laboratory: HUAWEI SAR/HAC Lab

**HAC\_ER3DV6\_Y538-A1-GSM1900-810CH**

**DUT: Y538-A1; 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 - SN2441; ConvF(1, 1, 1); Calibrated: 2014-11-21;
- 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 = 22.75 V/m; Power Drift = 0.05 dB

Applied MIF = 3.63 dB

RF audio interference level = 30.63 dBV/m

**Emission category: M3**

MIF scaled E-field

Grid 1 M4 26.03 dBV/m	Grid 2 M4 28.16 dBV/m	Grid 3 M4 28.28 dBV/m
Grid 4 M4 27.24 dBV/m	Grid 5 M3 30.63 dBV/m	Grid 6 M3 30.63 dBV/m
Grid 7 M4 29.33 dBV/m	Grid 8 M3 30.97 dBV/m	Grid 9 M3 30.97 dBV/m

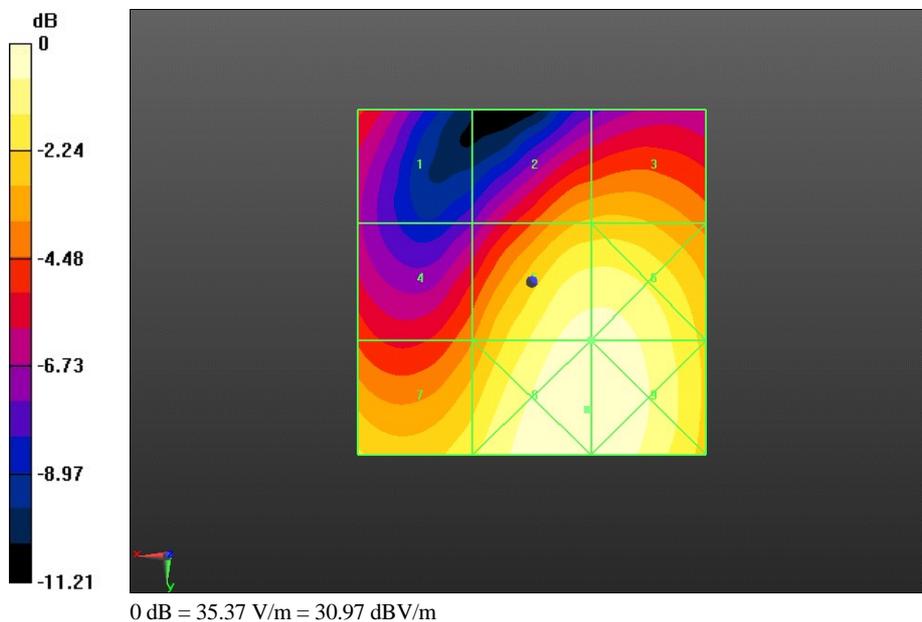
Category	Limits for E-Field Emissions < 960MHz	Limits for E-Field Emissions > 960MHz
M1	50 dBV/m - 55 dB V/m	40 dBV/m - 45 dB V/m
M2	45 dBV/m - 50 dB V/m	35 dBV/m - 40 dB V/m
M3	40 dBV/m - 45 dB V/m	30 dBV/m - 35 dB V/m
M4	<40 dBV/m	<30 dBV/m

**Cursor:**

Total = 30.97 dBV/m

E Category: M3

Location: -8, 18.5, 8.7 mm



Test Laboratory: HUAWEI SAR/HAC Lab

**HAC\_ER3DV6\_Y538-A1-GSM1900-661CH**

**DUT: Y538-A1; 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 - SN2441; ConvF(1, 1, 1); Calibrated: 2014-11-21;
- 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 = 24.90 V/m; Power Drift = 0.01 dB

Applied MIF = 3.63 dB

RF audio interference level = 30.82 dBV/m

**Emission category: M3**

MIF scaled E-field

Grid 1 M4 <b>26.11 dBV/m</b>	Grid 2 M4 <b>29.05 dBV/m</b>	Grid 3 M4 <b>29.17 dBV/m</b>
Grid 4 M4 <b>26.87 dBV/m</b>	Grid 5 M3 <b>30.82 dBV/m</b>	Grid 6 M3 <b>30.82 dBV/m</b>
Grid 7 M4 <b>28.37 dBV/m</b>	Grid 8 M3 <b>31 dBV/m</b>	Grid 9 M3 <b>31 dBV/m</b>

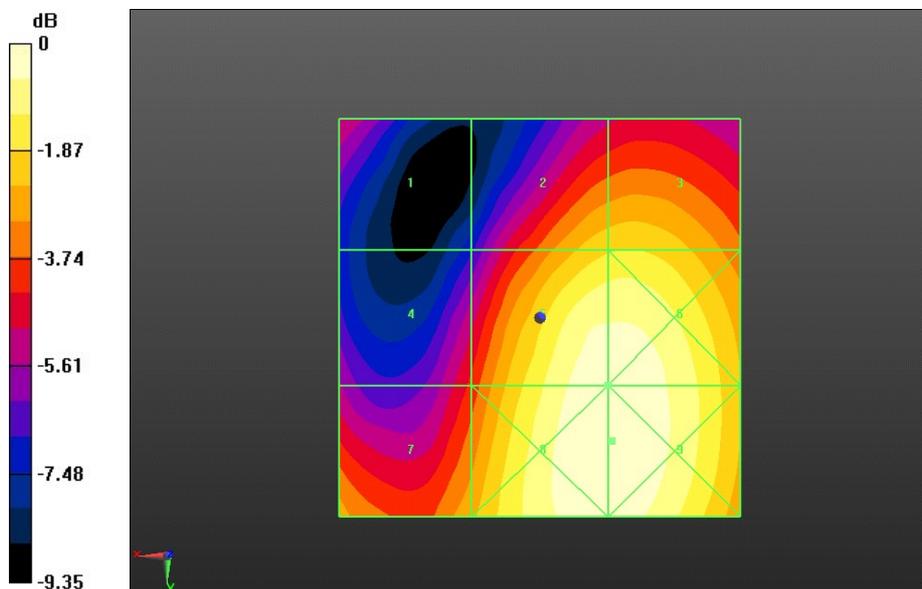
Category	Limits for E-Field Emissions < 960MHz	Limits for E-Field Emissions > 960MHz
M1	50 dBV/m - 55 dB V/m	40 dBV/m - 45 dB V/m
M2	45 dBV/m - 50 dB V/m	35 dBV/m - 40 dB V/m
M3	40 dBV/m - 45 dB V/m	30 dBV/m - 35 dB V/m
M4	<40 dBV/m	<30 dBV/m

**Cursor:**

Total = 31.00 dBV/m

E Category: M3

Location: -9, 15.5, 8.7 mm



0 dB = 35.48 V/m = 31.00 dBV/m

Test Laboratory: HUAWEI SAR/HAC Lab

**HAC\_ER3DV6\_Y538-A1-GSM1900-512CH**

**DUT: Y538-A1; 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 - SN2441; ConvF(1, 1, 1); Calibrated: 2014-11-21;
- 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 = 25.07 V/m; Power Drift = 0.05 dB

Applied MIF = 3.63 dB

RF audio interference level = 31.25 dBV/m

**Emission category: M3**

MIF scaled E-field

Grid 1 M4 26.34 dBV/m	Grid 2 M4 28.97 dBV/m	Grid 3 M4 29.05 dBV/m
Grid 4 M4 27.49 dBV/m	Grid 5 M3 31.25 dBV/m	Grid 6 M3 31.25 dBV/m
Grid 7 M4 29.26 dBV/m	Grid 8 M3 31.49 dBV/m	Grid 9 M3 31.49 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 = 31.49 dBV/m

E Category: M3

Location: -8, 17.5, 8.7 mm

