



Appendix B. HAC RF Measurement Plots

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HAC RF Measurement plots of GSM850
HAC RF Measurement plots of GSM1900

Test Laboratory: HUAWEI SAR/HAC Lab

HAC_ER3DV6_BLN-L24-GSM850-251CH**DUT: BLN-L24; 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: $\sigma = 0$ S/m, $\epsilon_r = 1$; $\rho = 0$ kg/m³

Phantom section: RF Section

DASY Configuration:

- Probe: ER3DV6 - SN2441; ConvF(1, 1, 1); Calibrated: 2015-11-25;
- Sensor-Surface: (Fix Surface), $z = 8.7$
- Electronics: DAE4 Sn852; Calibrated: 2016-4-20
- 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 = 50.72 V/m; Power Drift = 0.01 dB

Applied MIF = 3.63 dB

RF audio interference level = 36.44 dBV/m

Emission category: M4**MIF scaled E-field**

Grid 1 M4 34.59 dBV/m	Grid 2 M4 35.75 dBV/m	Grid 3 M4 35.73 dBV/m
Grid 4 M4 35.06 dBV/m	Grid 5 M4 36.44 dBV/m	Grid 6 M4 36.44 dBV/m
Grid 7 M4 35.83 dBV/m	Grid 8 M4 36.84 dBV/m	Grid 9 M4 36.81 dBV/m

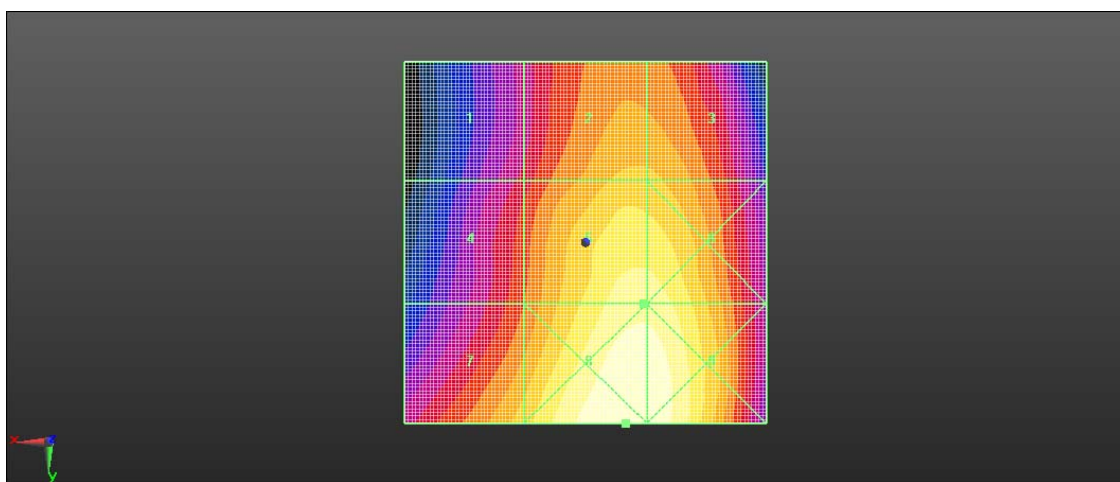
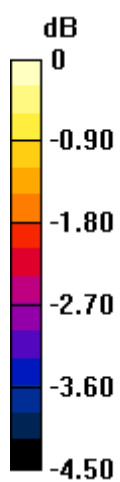
Category	Limits for E-Field Emissions < 960MHz	Limits for E-Field Emissions > 960MHz
M1	50 dBV/m - 55 dB V/m	40 dBV/m - 45 dB V/m
M2	45 dBV/m - 50 dB V/m	35 dBV/m - 40 dB V/m
M3	40 dBV/m - 45 dB V/m	30 dBV/m - 35 dB V/m
M4	<40 dBV/m	<30 dBV/m

Cursor:

Total = 36.84 dBV/m

E Category: M4

Location: -5.5, 25, 8.7 mm



0 dB = 69.52 V/m = 36.84 dBV/m

Test Laboratory: HUAWEI SAR/HAC Lab

HAC_ER3DV6_BLN-L24-GSM850-190CH**DUT: BLN-L24; 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: $\sigma = 0$ S/m, $\epsilon_r = 1$; $\rho = 0$ kg/m³

Phantom section: RF Section

DASY Configuration:

- ι Probe: ER3DV6 - SN2441; ConvF(1, 1, 1); Calibrated: 2015-11-25;
- ι Sensor-Surface: (Fix Surface), $z = 8.7$
- ι Electronics: DAE4 Sn852; Calibrated: 2016-4-20
- ι Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA; Serial: 1053
- ι 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 = 48.64 V/m; Power Drift = -0.01 dB

Applied MIF = 3.63 dB

RF audio interference level = 36.05 dBV/m

Emission category: M4**MIF scaled E-field**

Grid 1 M4 34.25 dBV/m	Grid 2 M4 35.37 dBV/m	Grid 3 M4 35.34 dBV/m
Grid 4 M4 34.74 dBV/m	Grid 5 M4 36.05 dBV/m	Grid 6 M4 36.04 dBV/m
Grid 7 M4 35.46 dBV/m	Grid 8 M4 36.48 dBV/m	Grid 9 M4 36.42 dBV/m

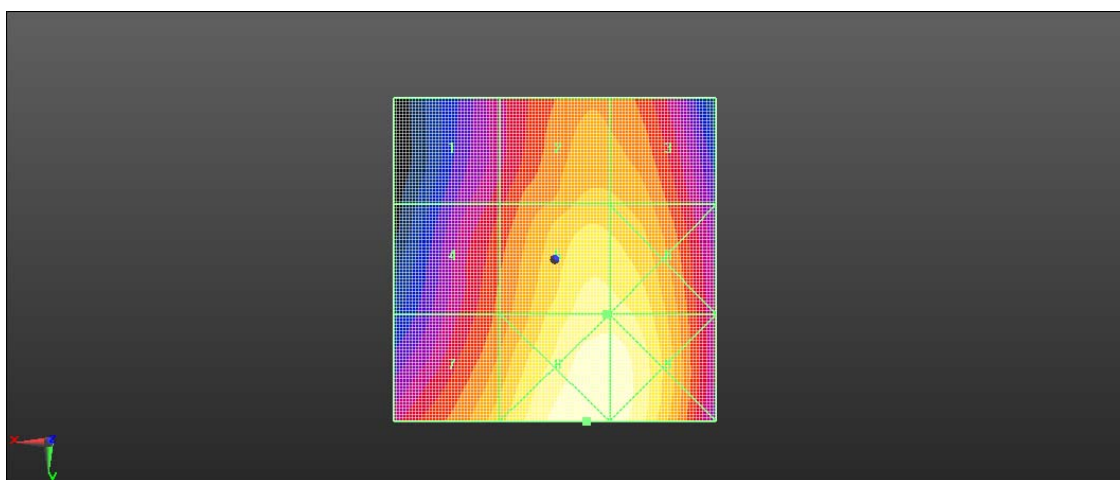
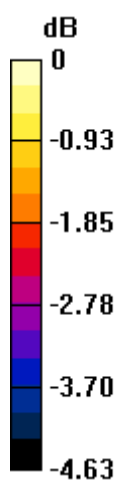
Category	Limits for E-Field Emissions < 960MHz	Limits for E-Field Emissions > 960MHz
M1	50 dBV/m - 55 dB V/m	40 dBV/m - 45 dB V/m
M2	45 dBV/m - 50 dB V/m	35 dBV/m - 40 dB V/m
M3	40 dBV/m - 45 dB V/m	30 dBV/m - 35 dB V/m
M4	<40 dBV/m	<30 dBV/m

Cursor:

Total = 36.48 dBV/m

E Category: M4

Location: -5, 25, 8.7 mm



0 dB = 66.67 V/m = 36.48 dBV/m

Test Laboratory: HUAWEI SAR/HAC Lab

HAC_ER3DV6_BLN-L24-GSM850-128CH**DUT: BLN-L24; 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: $\sigma = 0$ S/m, $\epsilon_r = 1$; $\rho = 0$ kg/m³

Phantom section: RF Section

DASY Configuration:

- Probe: ER3DV6 - SN2441; ConvF(1, 1, 1); Calibrated: 2015-11-25;
- Sensor-Surface: (Fix Surface), $z = 8.7$
- Electronics: DAE4 Sn852; Calibrated: 2016-4-20
- 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 = 42.62 V/m; Power Drift = -0.02 dB

Applied MIF = 3.63 dB

RF audio interference level = 34.91 dBV/m

Emission category: M4

MIF scaled E-field

Grid 1 M4 33 dBV/m	Grid 2 M4 34.28 dBV/m	Grid 3 M4 34.28 dBV/m
Grid 4 M4 33.41 dBV/m	Grid 5 M4 34.91 dBV/m	Grid 6 M4 34.91 dBV/m
Grid 7 M4 34.16 dBV/m	Grid 8 M4 35.26 dBV/m	Grid 9 M4 35.24 dBV/m

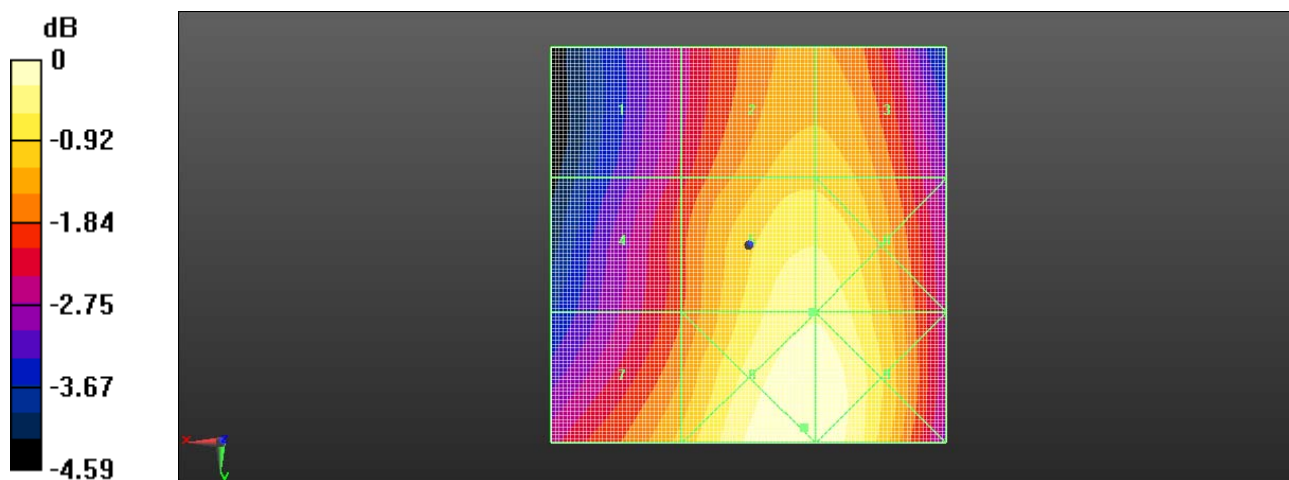
Category	Limits for E-Field Emissions < 960MHz	Limits for E-Field Emissions > 960MHz
M1	50 dBV/m - 55 dB V/m	40 dBV/m - 45 dB V/m
M2	45 dBV/m - 50 dB V/m	35 dBV/m - 40 dB V/m
M3	40 dBV/m - 45 dB V/m	30 dBV/m - 35 dB V/m
M4	<40 dBV/m	<30 dBV/m

Cursor:

Total = 35.26 dBV/m

E Category: M4

Location: -7, 23, 8.7 mm



Test Laboratory: HUAWEI SAR/HAC Lab

HAC_ER3DV6_BLN-L24-GSM1900-810CH**DUT: BLN-L24; 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: $\sigma = 0$ S/m, $\epsilon_r = 1$; $\rho = 0$ kg/m³

Phantom section: RF Section

DASY Configuration:

- ⌵ Probe: ER3DV6 - SN2441; ConvF(1, 1, 1); Calibrated: 2015-11-25;
- ⌵ Sensor-Surface: (Fix Surface), $z = 8.7$
- ⌵ Electronics: DAE4 Sn852; Calibrated: 2016-4-20
- ⌵ 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 = 18.60 V/m; Power Drift = -0.10 dB

Applied MIF = 3.63 dB

RF audio interference level = 30.33 dBV/m

Emission category: M3**MIF scaled E-field**

Grid 1 M4 28.6 dBV/m	Grid 2 M3 30.46 dBV/m	Grid 3 M3 30.56 dBV/m
Grid 4 M4 26.35 dBV/m	Grid 5 M3 30.05 dBV/m	Grid 6 M3 30.61 dBV/m
Grid 7 M4 26.27 dBV/m	Grid 8 M4 29.61 dBV/m	Grid 9 M3 30.33 dBV/m

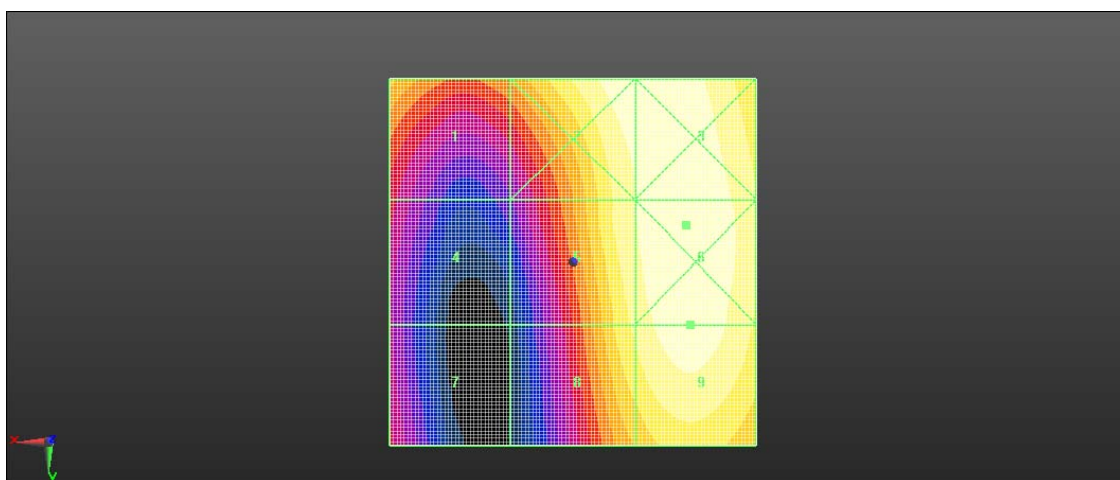
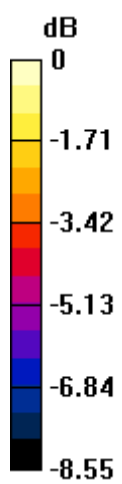
Category	Limits for E-Field Emissions < 960MHz	Limits for E-Field Emissions > 960MHz
M1	50 dBV/m - 55 dB V/m	40 dBV/m - 45 dB V/m
M2	45 dBV/m - 50 dB V/m	35 dBV/m - 40 dB V/m
M3	40 dBV/m - 45 dB V/m	30 dBV/m - 35 dB V/m
M4	<40 dBV/m	<30 dBV/m

Cursor:

Total = 30.61 dBV/m

E Category: M3

Location: -15.5, -5, 8.7 mm



0 dB = 33.93 V/m = 30.61 dBV/m

Test Laboratory: HUAWEI SAR/HAC Lab

HAC_ER3DV6_BLN-L24-GSM1900-661CH**DUT: BLN-L24; 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: $\sigma = 0$ S/m, $\epsilon_r = 1$; $\rho = 0$ kg/m³

Phantom section: RF Section

DASY Configuration:

- ⌵ Probe: ER3DV6 - SN2441; ConvF(1, 1, 1); Calibrated: 2015-11-25;
- ⌵ Sensor-Surface: (Fix Surface), $z = 8.7$
- ⌵ Electronics: DAE4 Sn852; Calibrated: 2016-4-20
- ⌵ 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 = 22.58 V/m; Power Drift = 0.01 dB

Applied MIF = 3.63 dB

RF audio interference level = 31.16 dBV/m

Emission category: M3**MIF scaled E-field**

Grid 1 M4 28.91 dBV/m	Grid 2 M3 31.07 dBV/m	Grid 3 M3 31.41 dBV/m
Grid 4 M4 26.1 dBV/m	Grid 5 M3 31.16 dBV/m	Grid 6 M3 31.53 dBV/m
Grid 7 M4 25.79 dBV/m	Grid 8 M3 30.8 dBV/m	Grid 9 M3 31.34 dBV/m

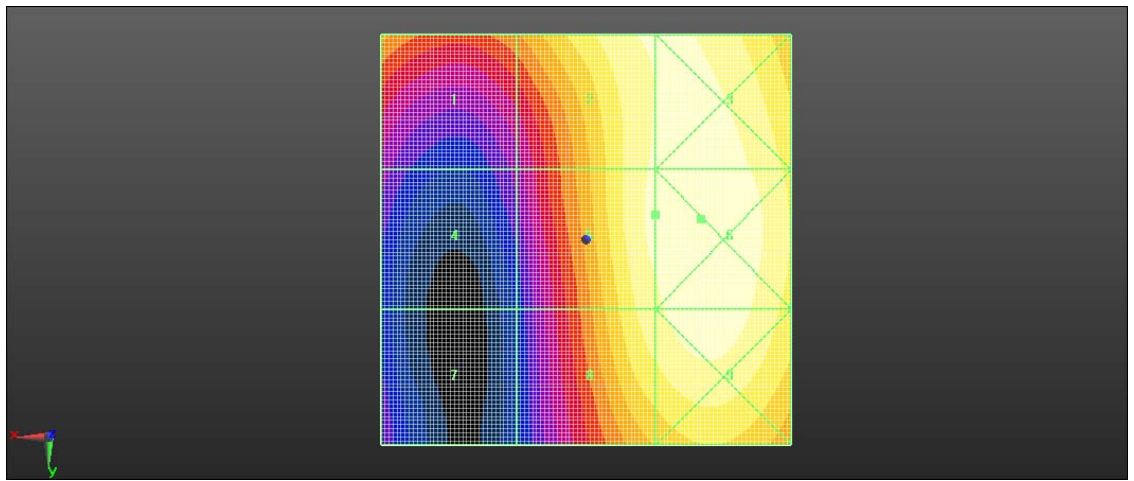
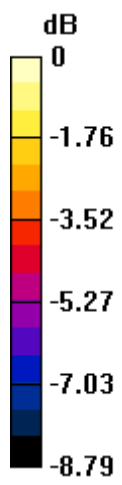
Category	Limits for E-Field Emissions < 960MHz	Limits for E-Field Emissions > 960MHz
M1	50 dBV/m - 55 dB V/m	40 dBV/m - 45 dB V/m
M2	45 dBV/m - 50 dB V/m	35 dBV/m - 40 dB V/m
M3	40 dBV/m - 45 dB V/m	30 dBV/m - 35 dB V/m
M4	<40 dBV/m	<30 dBV/m

Cursor:

Total = 31.53 dBV/m

E Category: M3

Location: -14, -2.5, 8.7 mm



0 dB = 37.73 V/m = 31.53 dBV/m

Test Laboratory: HUAWEI SAR/HAC Lab

HAC_ER3DV6_BLN-L24-GSM1900-512CH**DUT: BLN-L24; 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: $\sigma = 0$ S/m, $\epsilon_r = 1$; $\rho = 0$ kg/m³

Phantom section: RF Section

DASY Configuration:

- ι Probe: ER3DV6 - SN2441; ConvF(1, 1, 1); Calibrated: 2015-11-25;
- ι Sensor-Surface: (Fix Surface), z = 8.7
- ι Electronics: DAE4 Sn852; Calibrated: 2016-4-20
- ι Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA; Serial: 1053
- ι 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 = 21.33 V/m; Power Drift = 0.01 dB

Applied MIF = 3.63 dB

RF audio interference level = 30.70 dBV/m

Emission category: M3**MIF scaled E-field**

Grid 1 M4 28.29 dBV/m	Grid 2 M3 30.86 dBV/m	Grid 3 M3 30.99 dBV/m
Grid 4 M4 26.36 dBV/m	Grid 5 M3 30.7 dBV/m	Grid 6 M3 30.99 dBV/m
Grid 7 M4 25.89 dBV/m	Grid 8 M4 29.87 dBV/m	Grid 9 M3 30.34 dBV/m

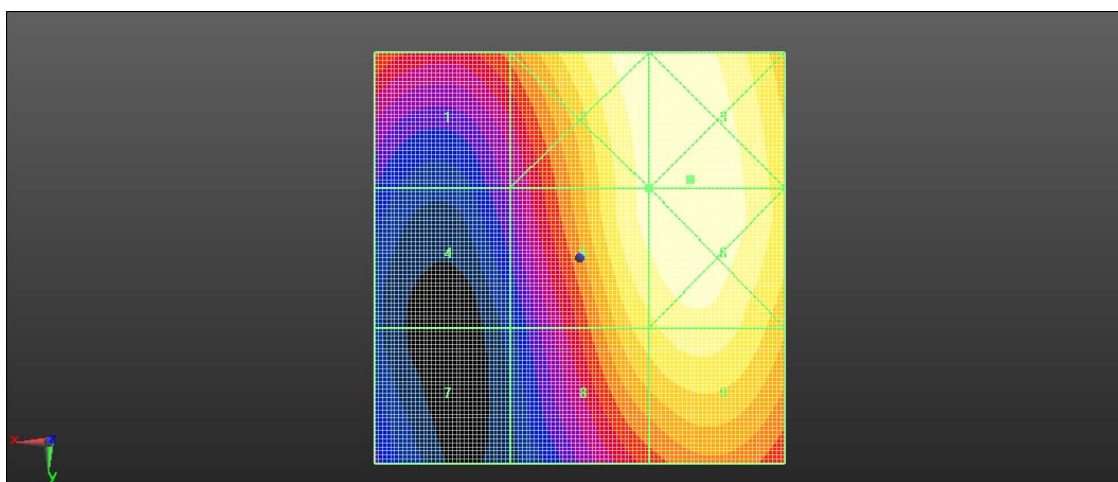
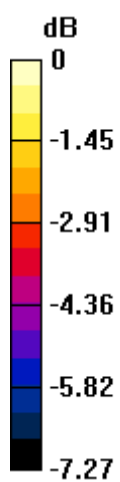
Category	Limits for E-Field Emissions < 960MHz	Limits for E-Field Emissions > 960MHz
M1	50 dBV/m - 55 dB V/m	40 dBV/m - 45 dB V/m
M2	45 dBV/m - 50 dB V/m	35 dBV/m - 40 dB V/m
M3	40 dBV/m - 45 dB V/m	30 dBV/m - 35 dB V/m
M4	<40 dBV/m	<30 dBV/m

Cursor:

Total = 30.99 dBV/m

E Category: M3

Location: -13.5, -9.5, 8.7 mm



0 dB = 35.44 V/m = 30.99 dBV/m