HAC-RF Emission

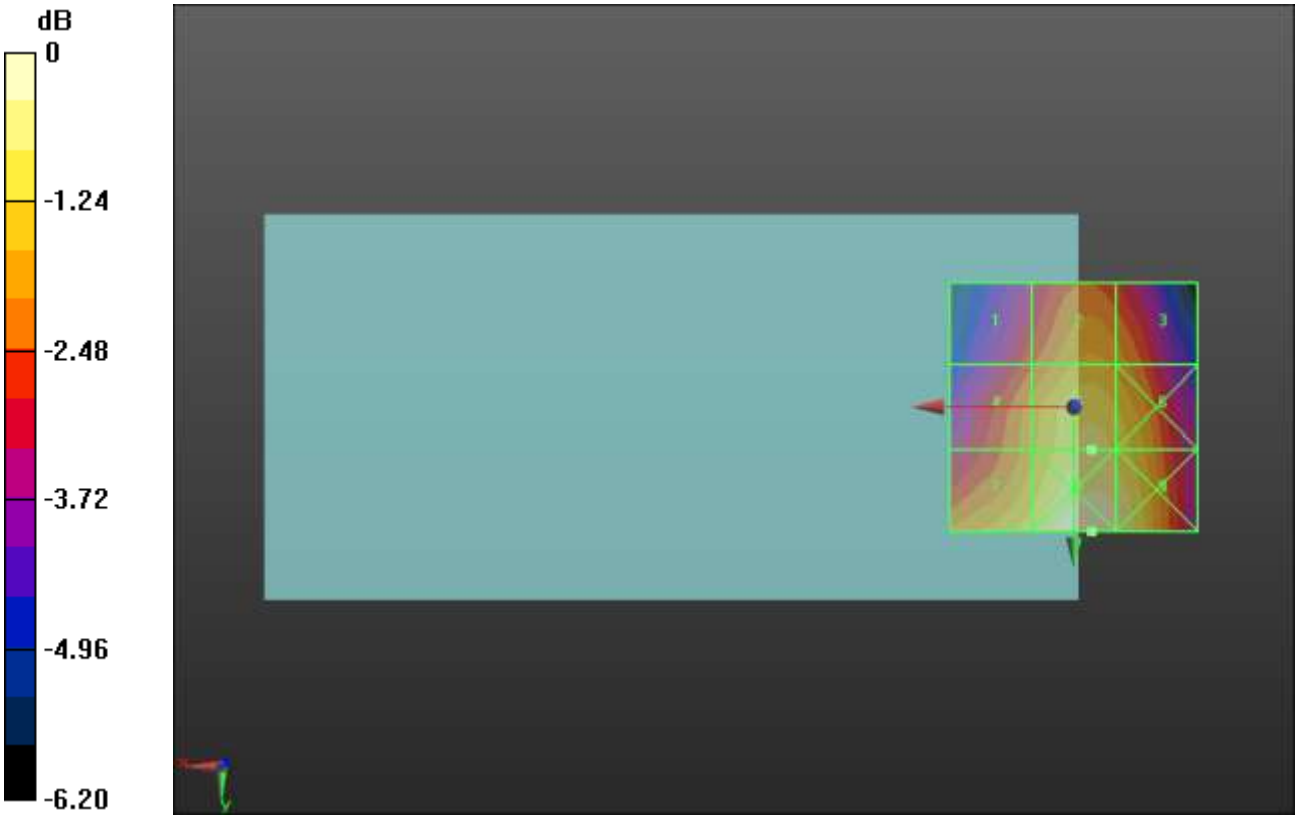
Communication System: UID 10021 - CAA, GSM-FDD (TDMA, GMSK); Frequency: 824.2 MHz; Duty Cycle: 1:8.6896
Phantom section: RF Section
DASY5 Configuration:
- Probe: EF3DV3 - SN4041; ConvF(1, 1, 1) @ 824.2 MHz; Calibrated: 3/22/2019
- Sensor-Surface: (Fix Surface)
- Electronics: DAE4 Sn1472; Calibrated: 3/21/2019
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB
- Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7470)

GSM850 E-Field measurement/Voice_ch 128/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 = 31.68 V/m; Power Drift = -0.08 dB
Applied MIF = 3.63 dB
RF audio interference level = 31.21 dBV/m
Emission category: M4

MIF scaled E-field

Grid 1 **M4** **29.39 dBV/m**	Grid 2 **M4** **30.41 dBV/m**	Grid 3 **M4** **30.15 dBV/m**
Grid 4 **M4** **30.14 dBV/m**	Grid 5 **M4** **31.21 dBV/m**	Grid 6 **M4** **31.01 dBV/m**
Grid 7 **M4** **31 dBV/m**	Grid 8 **M4** **31.91 dBV/m**	Grid 9 **M4** **31.62 dBV/m**



0 dB = 39.42 V/m = 31.91 dBV/m

HAC-RF Emission

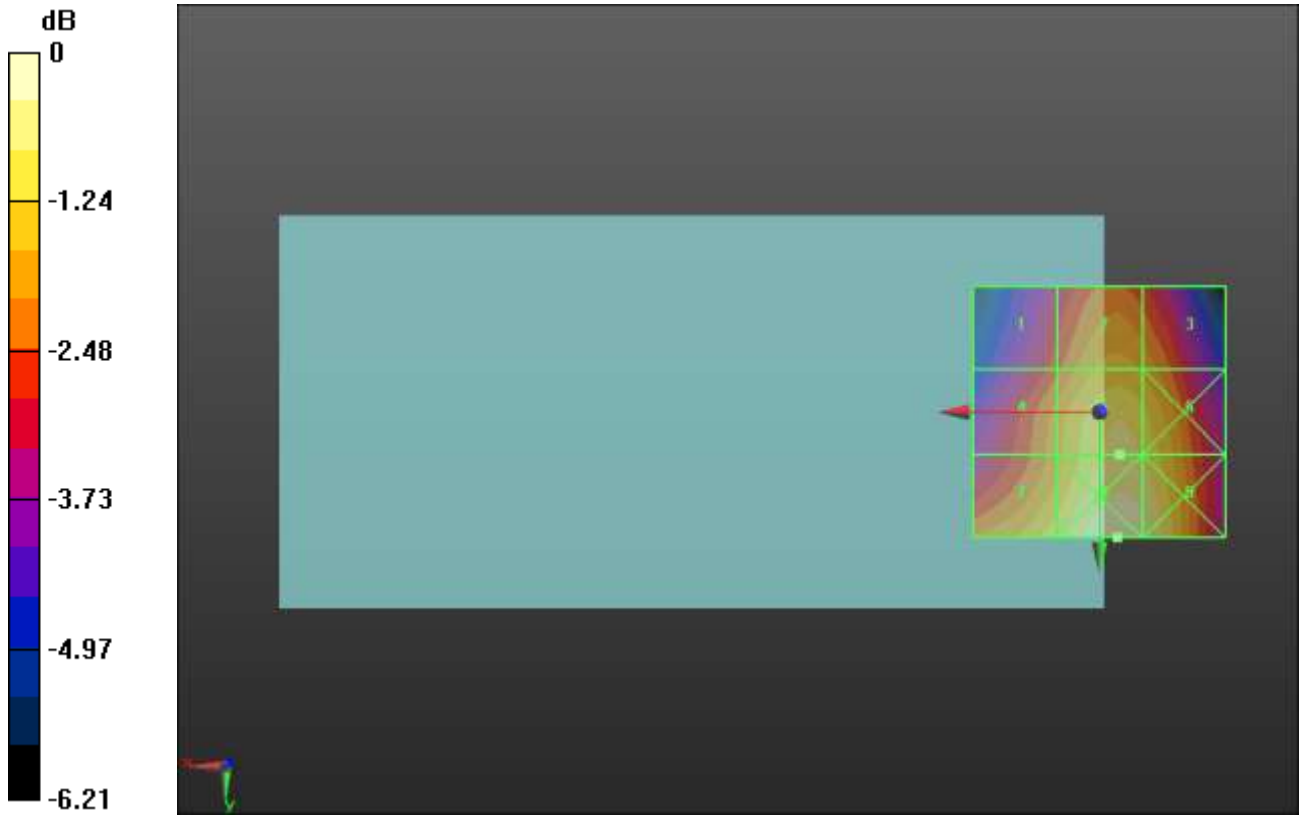
Communication System: UID 10021 - CAA, GSM-FDD (TDMA, GMSK); Frequency: 836.6 MHz; Duty Cycle: 1:8.6896
Phantom section: RF Section
DASY5 Configuration:
- Probe: EF3DV3 - SN4041; ConvF(1, 1, 1) @ 836.6 MHz; Calibrated: 3/22/2019
- Sensor-Surface: (Fix Surface)
- Electronics: DAE4 Sn1472; Calibrated: 3/21/2019
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB
- Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7470)

GSM850 E-Field measurement/Voice_ch 190/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 = 36.99 V/m; Power Drift = -0.07 dB
Applied MIF = 3.63 dB
RF audio interference level = 32.53 dBV/m
Emission category: M4

MIF scaled E-field

Grid 1 **M4** **30.64 dBV/m**	Grid 2 **M4** **31.76 dBV/m**	Grid 3 **M4** **31.5 dBV/m**
Grid 4 **M4** **31.42 dBV/m**	Grid 5 **M4** **32.53 dBV/m**	Grid 6 **M4** **32.34 dBV/m**
Grid 7 **M4** **32.32 dBV/m**	Grid 8 **M4** **33.21 dBV/m**	Grid 9 **M4** **32.93 dBV/m**



0 dB = 45.77 V/m = 33.21 dBV/m

HAC-RF Emission

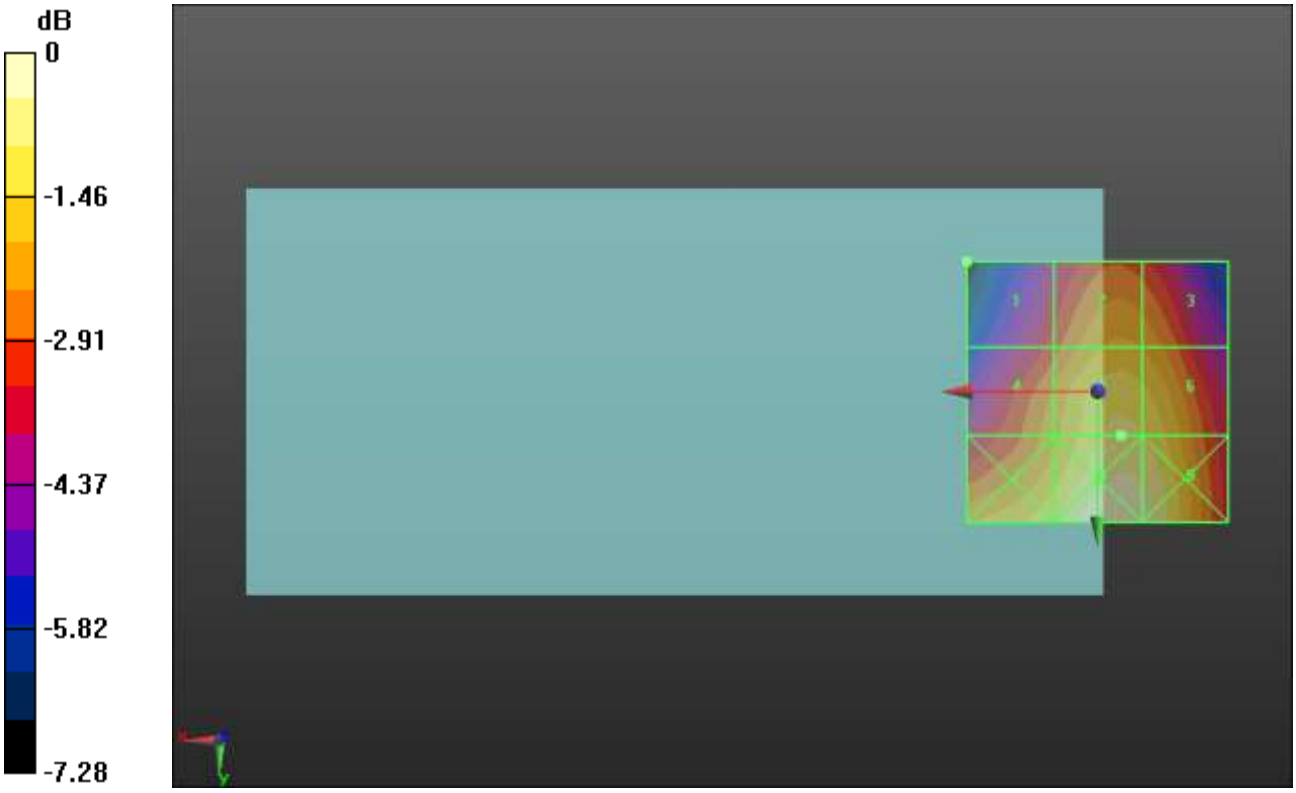
Communication System: UID 10021 - DAB, GSM-FDD (TDMA, GMSK); Frequency: 848.8 MHz; Duty Cycle: 1:8.6896
Phantom section: RF Section
DASY5 Configuration:
- Probe: EF3DV3 - SN4041; ConvF(1, 1, 1) @ 848.8 MHz; Calibrated: 3/22/2019
- Sensor-Surface: (Fix Surface)
- Electronics: DAE4 Sn1472; Calibrated: 3/21/2019
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB
- Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7470)

GSM850 E-Field measurement/Voice_ch 251/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 = 38.47 V/m; Power Drift = -0.07 dB
Applied MIF = 3.63 dB
RF audio interference level = 33.03 dBV/m
Emission category: M4

MIF scaled E-field

Grid 1 **M4** **30.76 dBV/m**	Grid 2 **M4** **32.06 dBV/m**	Grid 3 **M4** **31.88 dBV/m**
Grid 4 **M4** **31.77 dBV/m**	Grid 5 **M4** **33.03 dBV/m**	Grid 6 **M4** **32.89 dBV/m**
Grid 7 **M4** **32.92 dBV/m**	Grid 8 **M4** **33.86 dBV/m**	Grid 9 **M4** **33.62 dBV/m**



0 dB = 49.32 V/m = 33.86 dBV/m

HAC-RF Emission

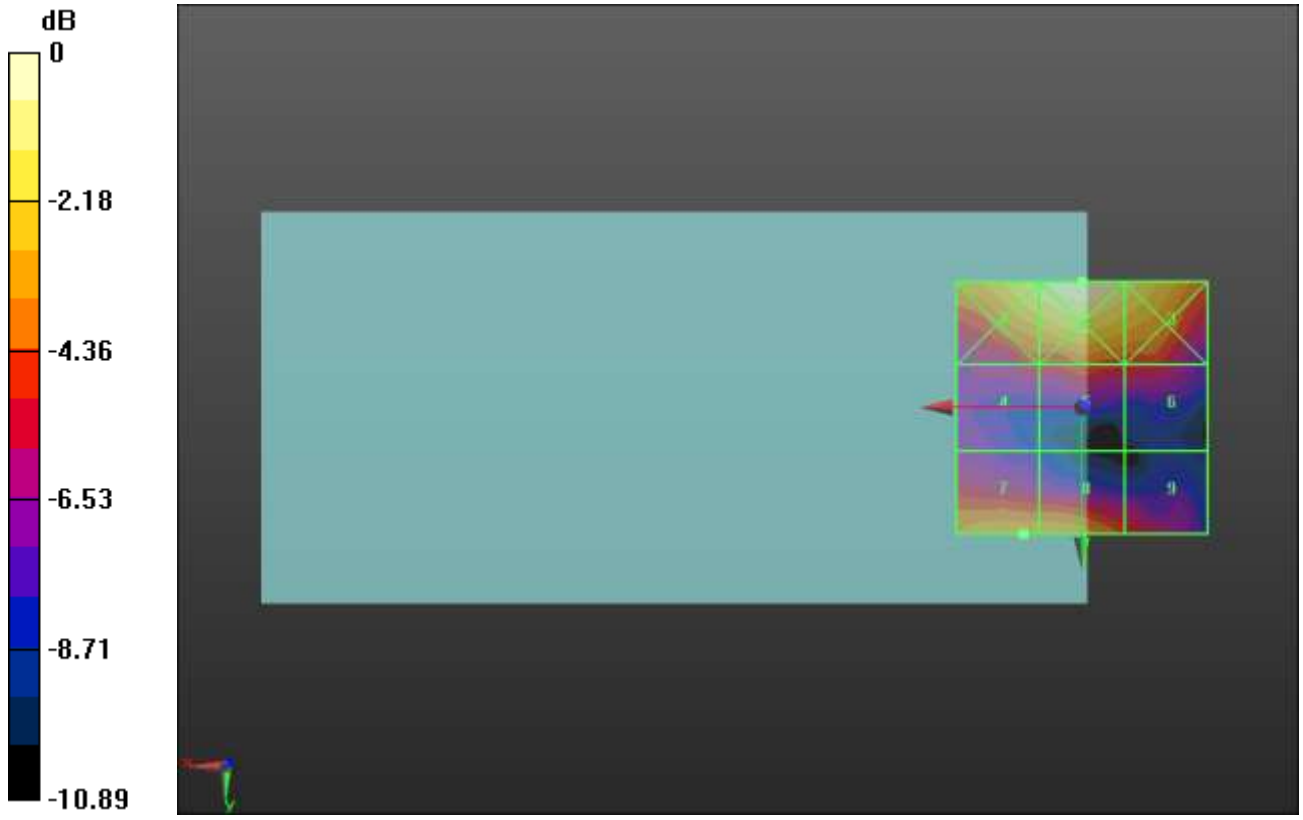
Communication System: UID 10021 - CAA, GSM-FDD (TDMA, GMSK); Frequency: 1850.2 MHz; Duty Cycle: 1:8.6896
Phantom section: RF Section
DASY5 Configuration:
- Probe: EF3DV3 - SN4041; ConvF(1, 1, 1) @ 1850.2 MHz; Calibrated: 3/22/2019
- Sensor-Surface: (Fix Surface)
- Electronics: DAE4 Sn1472; Calibrated: 3/21/2019
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB
- Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7470)

GSM1900 E-Field measurement/Voice_ch 512/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 = 5.318 V/m; Power Drift = -0.17 dB
Applied MIF = 3.63 dB
RF audio interference level = 21.23 dBV/m
Emission category: M4

MIF scaled E-field

Grid 1 **M4** **23.36 dBV/m**	Grid 2 **M4** **24.22 dBV/m**	Grid 3 **M4** **23.24 dBV/m**
Grid 4 **M4** **19.13 dBV/m**	Grid 5 **M4** **19.85 dBV/m**	Grid 6 **M4** **19.3 dBV/m**
Grid 7 **M4** **21.23 dBV/m**	Grid 8 **M4** **21.22 dBV/m**	Grid 9 **M4** **19.33 dBV/m**



0 dB = 16.25 V/m = 24.22 dBV/m

HAC-RF Emission

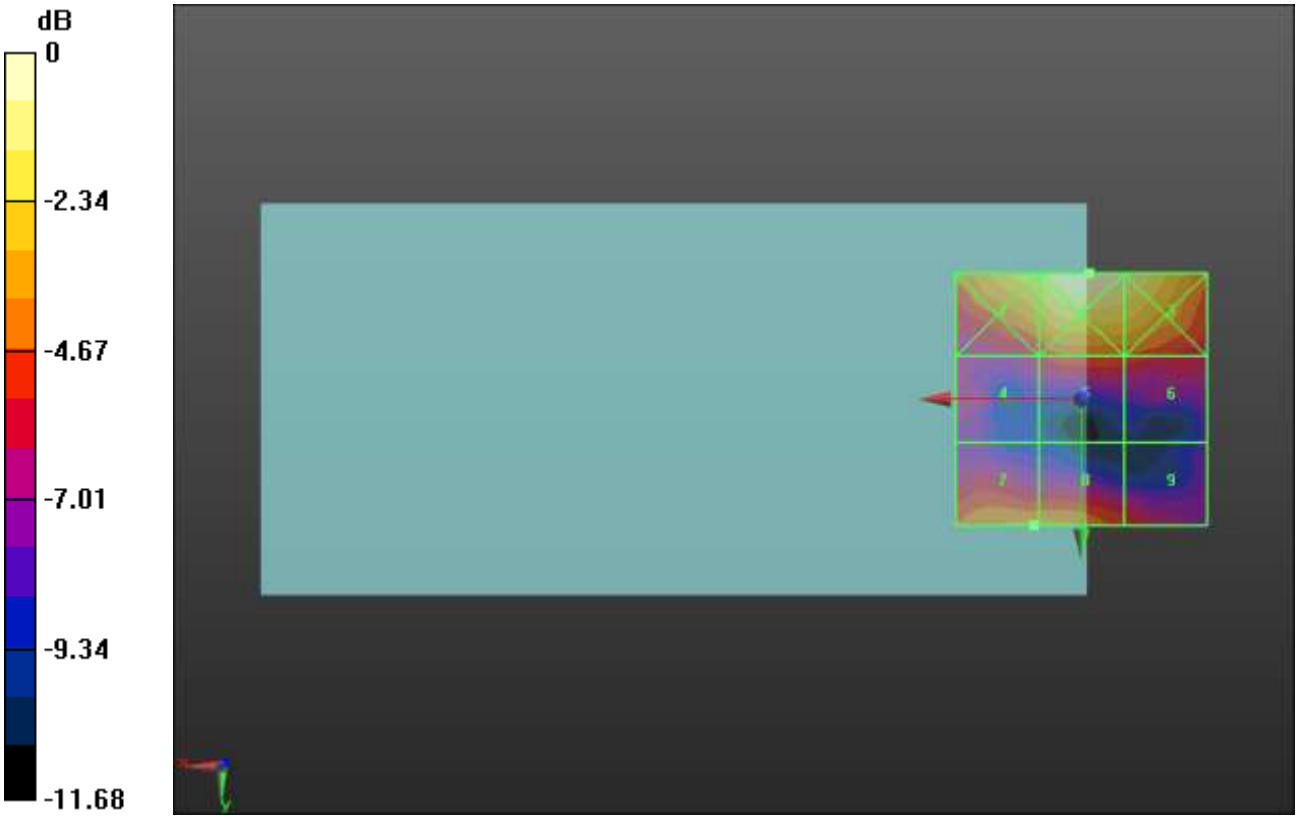
Communication System: UID 10021 - CAA, GSM-FDD (TDMA, GMSK); Frequency: 1880 MHz; Duty Cycle: 1:8.6896
Phantom section: RF Section
DASY5 Configuration:
- Probe: EF3DV3 - SN4041; ConvF(1, 1, 1) @ 1880 MHz; Calibrated: 3/22/2019
- Sensor-Surface: (Fix Surface)
- Electronics: DAE4 Sn1472; Calibrated: 3/21/2019
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB
- Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7470)

GSM1900 E-Field measurement/Voice_ch 661/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 = 5.086 V/m; Power Drift = 0.12 dB
Applied MIF = 3.63 dB
RF audio interference level = 20.60 dBV/m
Emission category: M4

MIF scaled E-field

Grid 1 **M4** **22.63 dBV/m**	Grid 2 **M4** **24.05 dBV/m**	Grid 3 **M4** **23.44 dBV/m**
Grid 4 **M4** **18.2 dBV/m**	Grid 5 **M4** **19.4 dBV/m**	Grid 6 **M4** **19.28 dBV/m**
Grid 7 **M4** **20.6 dBV/m**	Grid 8 **M4** **20.59 dBV/m**	Grid 9 **M4** **18.86 dBV/m**



0 dB = 15.94 V/m = 24.05 dBV/m

HAC-RF Emission

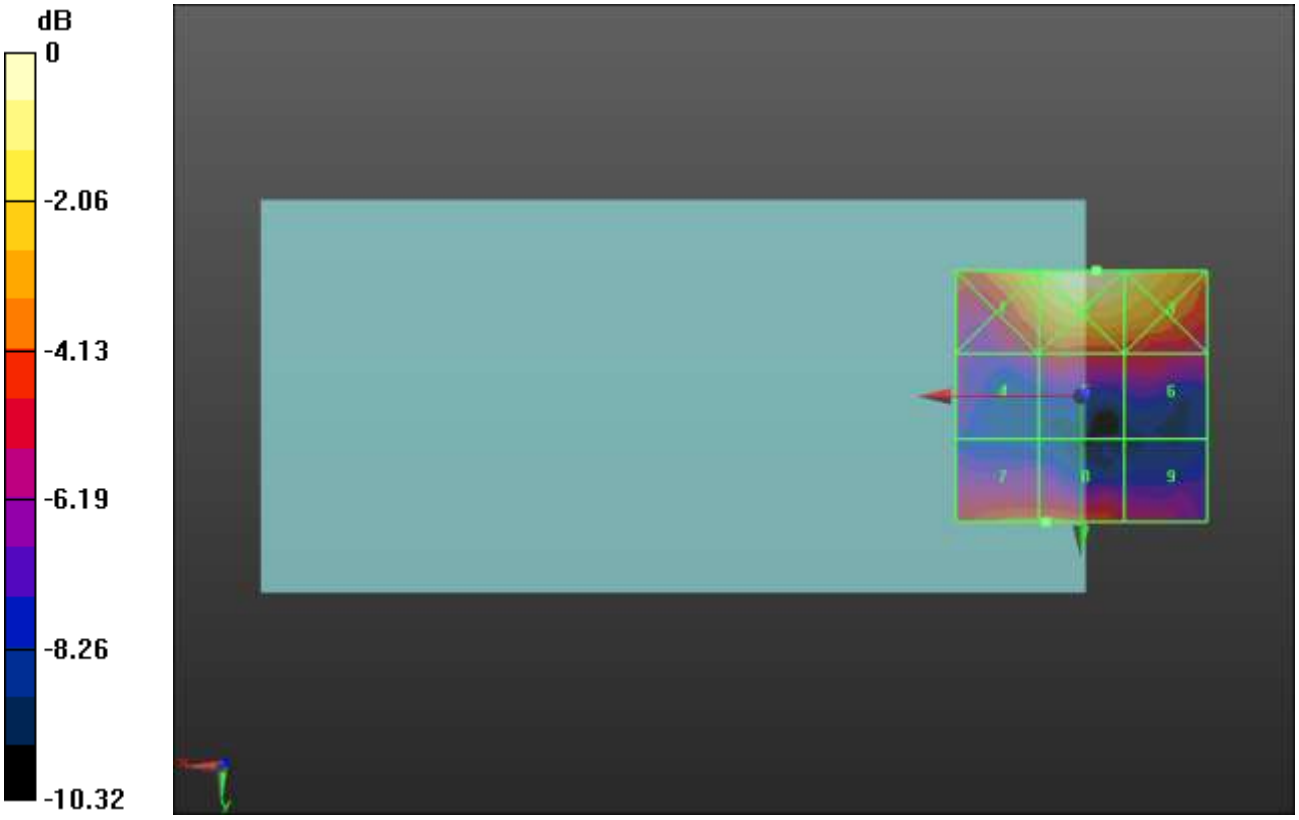
Communication System: UID 10021 - CAA, GSM-FDD (TDMA, GMSK); Frequency: 1909.8 MHz; Duty Cycle: 1:8.6896
Phantom section: RF Section
DASY5 Configuration:
- Probe: EF3DV3 - SN4041; ConvF(1, 1, 1) @ 1909.8 MHz; Calibrated: 3/22/2019
- Sensor-Surface: (Fix Surface)
- Electronics: DAE4 Sn1472; Calibrated: 3/21/2019
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB
- Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7470)

GSM1900 E-Field measurement/Voice_ch 810/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 = 5.055 V/m; Power Drift = 0.05 dB
Applied MIF = 3.63 dB
RF audio interference level = 20.17 dBV/m
Emission category: M4

MIF scaled E-field

Grid 1 **M4** **22.63 dBV/m**	Grid 2 **M4** **23.84 dBV/m**	Grid 3 **M4** **23.23 dBV/m**
Grid 4 **M4** **18.53 dBV/m**	Grid 5 **M4** **19.37 dBV/m**	Grid 6 **M4** **19.06 dBV/m**
Grid 7 **M4** **20.15 dBV/m**	Grid 8 **M4** **20.17 dBV/m**	Grid 9 **M4** **18.76 dBV/m**



0 dB = 15.56 V/m = 23.84 dBV/m

HAC-RF Emission

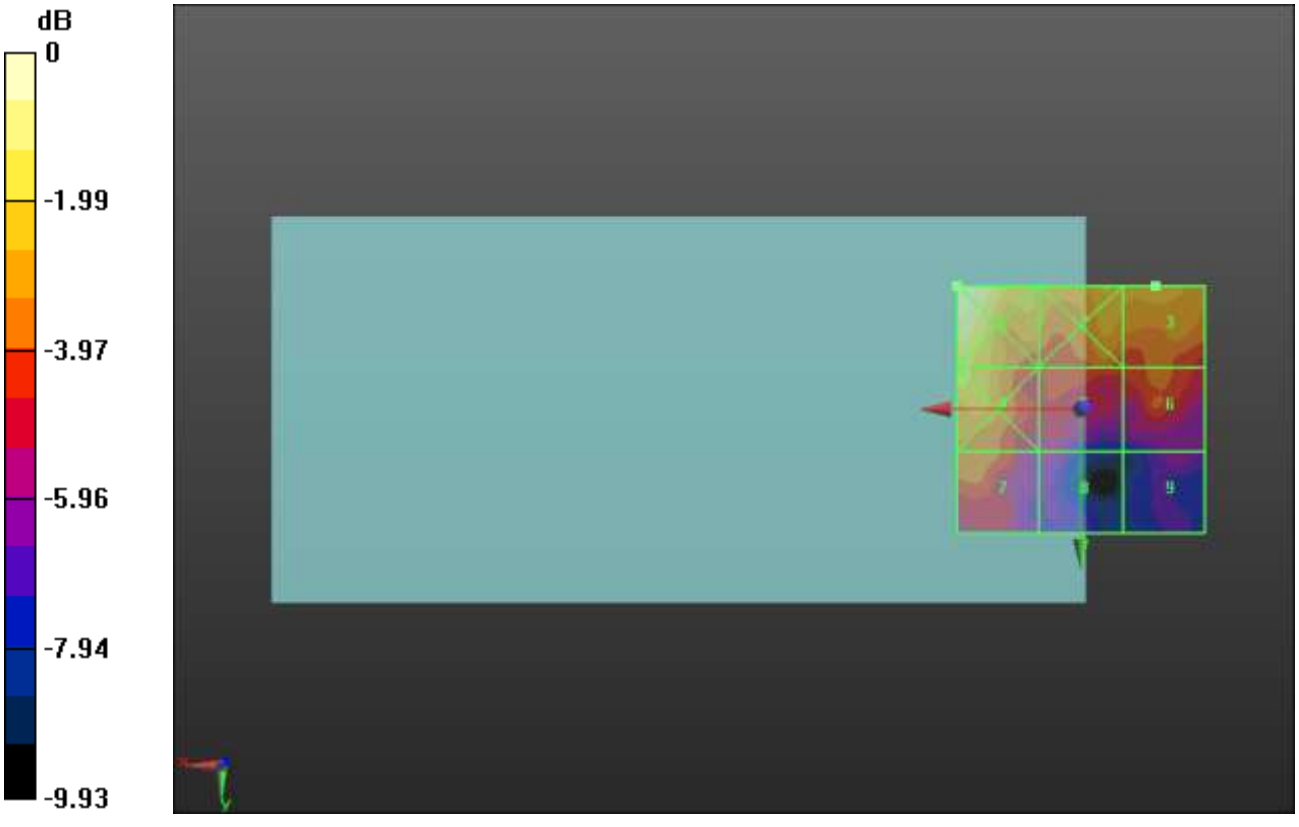
Communication System: UID 10173 - CAG, LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM); Frequency: 2506 MHz; Duty Cycle: 1:8.87156
Phantom section: RF Section
DASY5 Configuration:
- Probe: EF3DV3 - SN4041; ConvF(1, 1, 1) @ 2506 MHz; Calibrated: 3/22/2019
- Sensor-Surface: (Fix Surface)
- Electronics: DAE4 Sn1472; Calibrated: 3/21/2019
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB
- Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7470)

LTE Band 41 E-Field measurement/SC-FDMA RB 1,50 20 MHz 16QAM Ch. 39750/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 = 4.203 V/m; Power Drift = -0.19 dB
Applied MIF = -1.44 dB
RF audio interference level = 13.57 dBV/m
Emission category: M4

MIF scaled E-field

Grid 1 **M4** **15.86 dBV/m**	Grid 2 **M4** **14.05 dBV/m**	Grid 3 **M4** **13.57 dBV/m**
Grid 4 **M4** **14.05 dBV/m**	Grid 5 **M4** **12.06 dBV/m**	Grid 6 **M4** **12.19 dBV/m**
Grid 7 **M4** **12.41 dBV/m**	Grid 8 **M4** **10.2 dBV/m**	Grid 9 **M4** **9.76 dBV/m**



0 dB = 6.210 V/m = 15.86 dBV/m

HAC-RF Emission

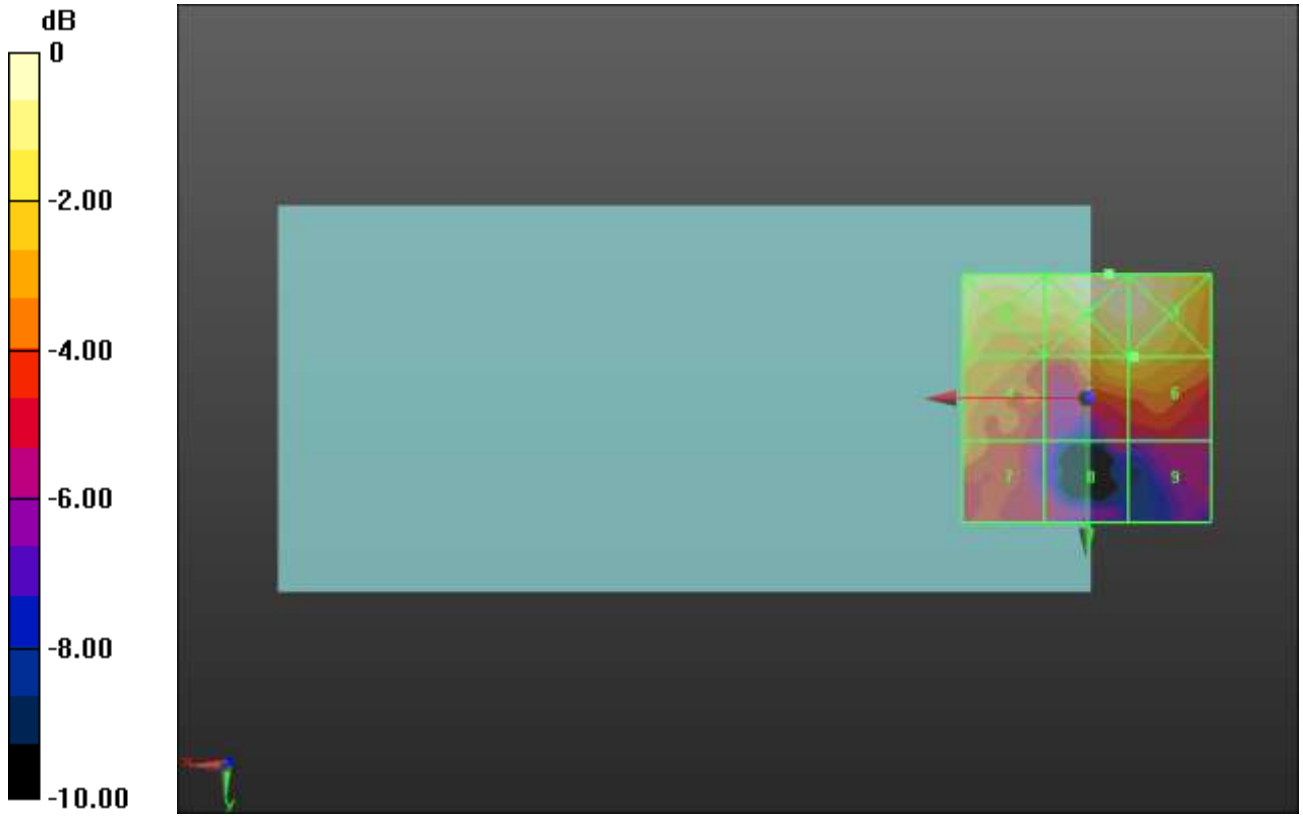
Communication System: UID 10173 - CAG, LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM); Frequency: 2549.5 MHz; Duty Cycle: 1:8.87156
Phantom section: RF Section
DASY5 Configuration:
- Probe: EF3DV3 - SN4041; ConvF(1, 1, 1) @ 2549.5 MHz; Calibrated: 3/22/2019
- Sensor-Surface: (Fix Surface)
- Electronics: DAE4 Sn1472; Calibrated: 3/21/2019
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB
- Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7470)

LTE Band 41 E-Field measurement/SC-FDMA RB 1,50 20 MHz 16QAM Ch. 40185/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 = 5.249 V/m; Power Drift = -0.18 dB
Applied MIF = -1.44 dB
RF audio interference level = 14.03 dBV/m
Emission category: M4

MIF scaled E-field

Grid 1 **M4** **15.02 dBV/m**	Grid 2 **M4** **15.63 dBV/m**	Grid 3 **M4** **15.39 dBV/m**
Grid 4 **M4** **13.64 dBV/m**	Grid 5 **M4** **14.02 dBV/m**	Grid 6 **M4** **14.03 dBV/m**
Grid 7 **M4** **12.97 dBV/m**	Grid 8 **M4** **10.51 dBV/m**	Grid 9 **M4** **10.34 dBV/m**



0 dB = 6.047 V/m = 15.63 dBV/m

HAC-RF Emission

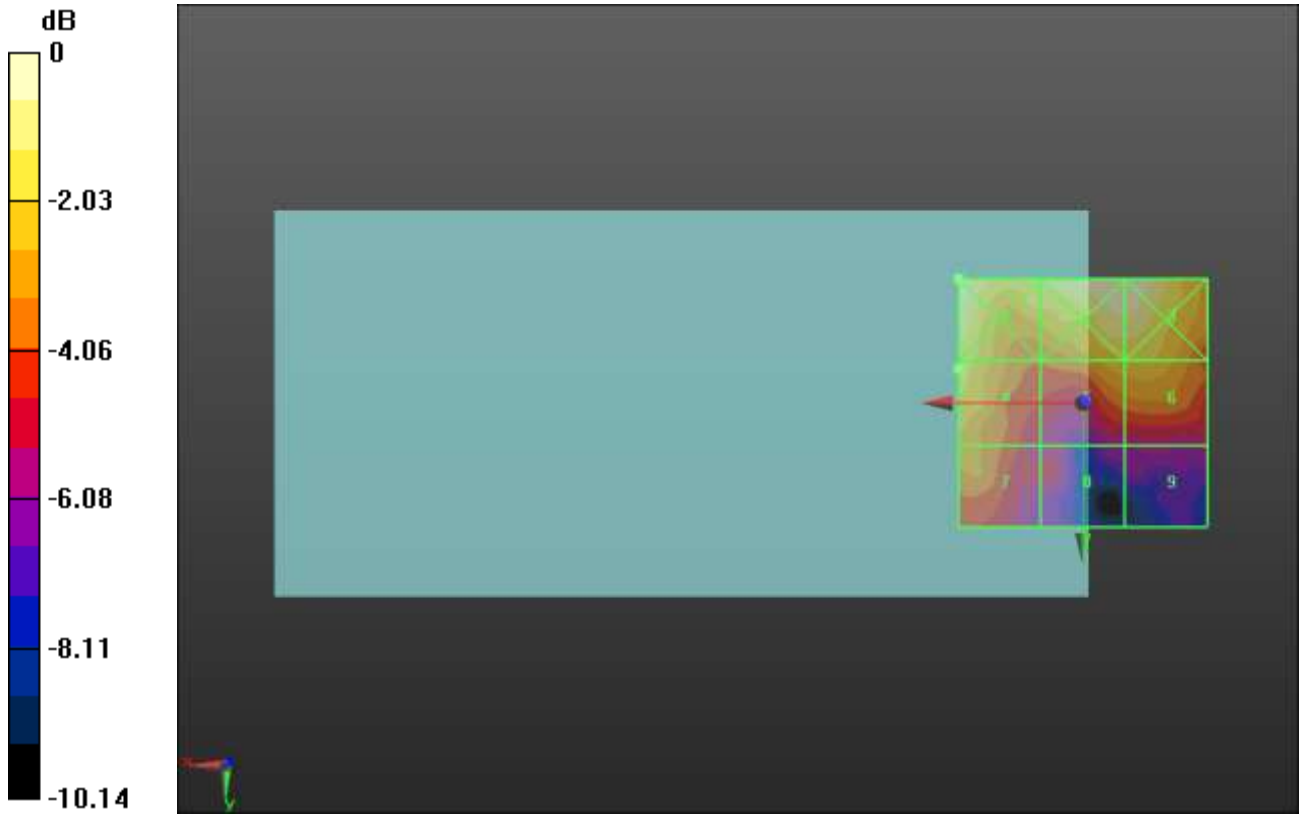
Communication System: UID 10173 - CAG, LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM); Frequency: 2593 MHz; Duty Cycle: 1:8.87156
Phantom section: RF Section
DASY5 Configuration:
- Probe: EF3DV3 - SN4041; ConvF(1, 1, 1) @ 2593 MHz; Calibrated: 3/22/2019
- Sensor-Surface: (Fix Surface)
- Electronics: DAE4 Sn1472; Calibrated: 3/21/2019
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB
- Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7470)

LTE Band 41 E-Field measurement/SC-FDMA RB 1,50 20 MHz 16QAM Ch. 40620/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 = 5.179 V/m; Power Drift = 0.00 dB
Applied MIF = -1.44 dB
RF audio interference level = 15.13 dBV/m
Emission category: M4

MIF scaled E-field

Grid 1 **M4** **16.73 dBV/m**	Grid 2 **M4** **16.59 dBV/m**	Grid 3 **M4** **16.59 dBV/m**
Grid 4 **M4** **15.13 dBV/m**	Grid 5 **M4** **14.63 dBV/m**	Grid 6 **M4** **14.7 dBV/m**
Grid 7 **M4** **13.85 dBV/m**	Grid 8 **M4** **11.52 dBV/m**	Grid 9 **M4** **11.04 dBV/m**



0 dB = 6.866 V/m = 16.73 dBV/m

HAC-RF Emission

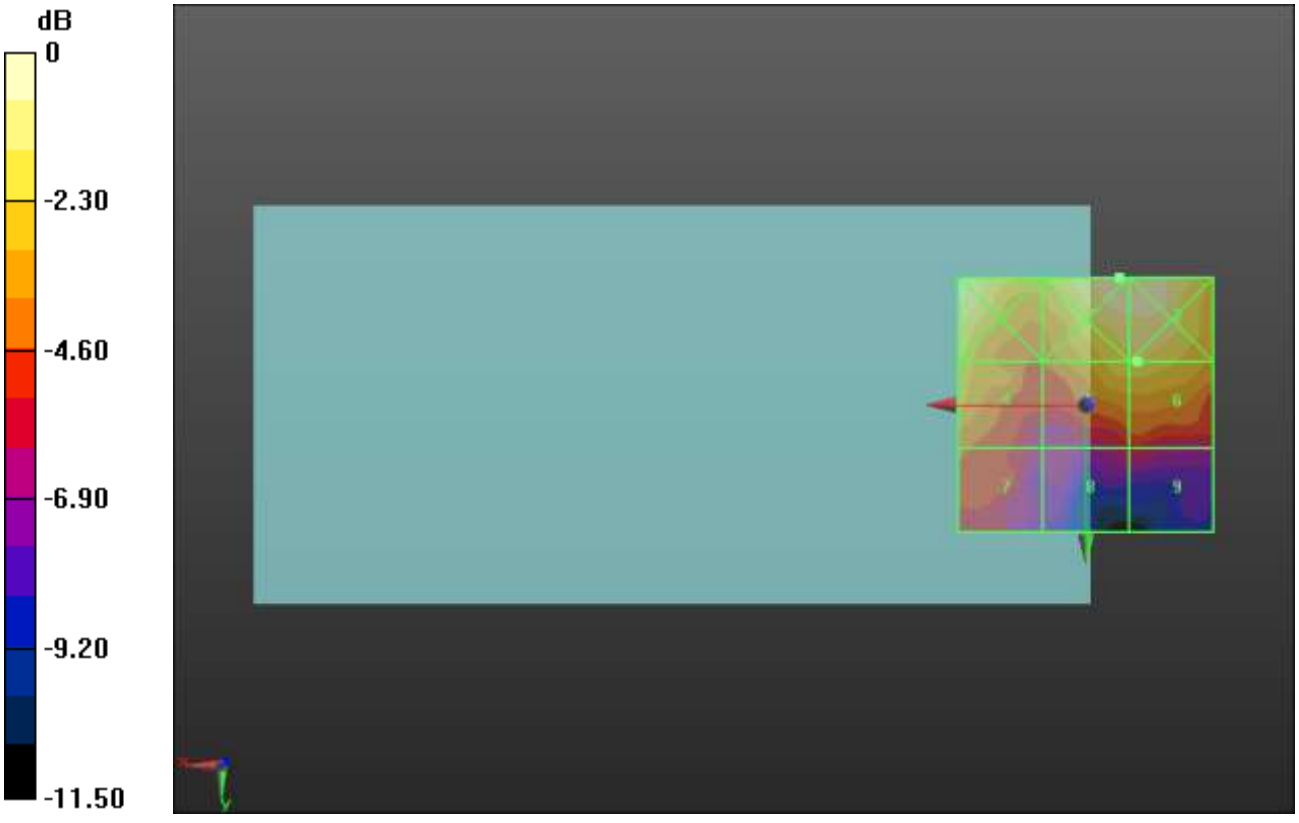
Communication System: UID 10173 - CAG, LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM); Frequency: 2636.5 MHz; Duty Cycle: 1:8.87156
Phantom section: RF Section
DASY5 Configuration:
- Probe: EF3DV3 - SN4041; ConvF(1, 1, 1) @ 2636.5 MHz; Calibrated: 3/22/2019
- Sensor-Surface: (Fix Surface)
- Electronics: DAE4 Sn1472; Calibrated: 3/21/2019
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB
- Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7470)

LTE Band 41 E-Field measurement/SC-FDMA RB 1,50 20 MHz 16QAM Ch. 41055/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 = 6.617 V/m; Power Drift = -0.16 dB
Applied MIF = -1.44 dB
RF audio interference level = 15.32 dBV/m
Emission category: M4

MIF scaled E-field

Grid 1 **M4** **16.76 dBV/m**	Grid 2 **M4** **16.98 dBV/m**	Grid 3 **M4** **16.91 dBV/m**
Grid 4 **M4** **14.92 dBV/m**	Grid 5 **M4** **15.26 dBV/m**	Grid 6 **M4** **15.32 dBV/m**
Grid 7 **M4** **12.68 dBV/m**	Grid 8 **M4** **11.31 dBV/m**	Grid 9 **M4** **11.39 dBV/m**



0 dB = 7.059 V/m = 16.97 dBV/m

HAC-RF Emission

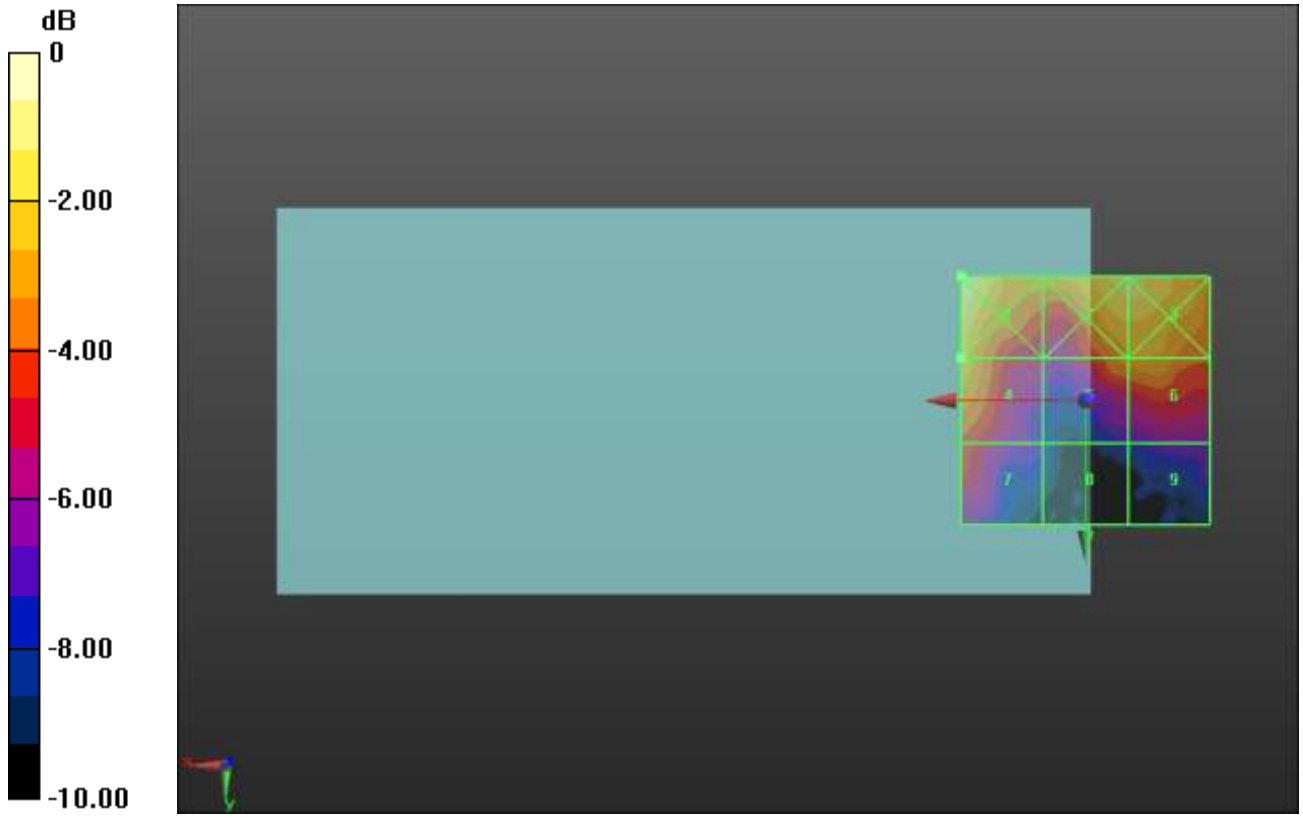
Communication System: UID 10173 - CAG, LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM); Frequency: 2680 MHz; Duty Cycle: 1:8.87156
Phantom section: RF Section
DASY5 Configuration:
- Probe: EF3DV3 - SN4041; ConvF(1, 1, 1) @ 2680 MHz; Calibrated: 3/22/2019
- Sensor-Surface: (Fix Surface)
- Electronics: DAE4 Sn1472; Calibrated: 3/21/2019
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB
- Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7470)

LTE Band 41 E-Field measurement/SC-FDMA RB 1,50 20 MHz 16QAM Ch. 41490/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 = 5.529 V/m; Power Drift = 0.13 dB
Applied MIF = -1.44 dB
RF audio interference level = 15.56 dBV/m
Emission category: M4

MIF scaled E-field

Grid 1 **M4** **17.44 dBV/m**	Grid 2 **M4** **16.31 dBV/m**	Grid 3 **M4** **16.31 dBV/m**
Grid 4 **M4** **15.56 dBV/m**	Grid 5 **M4** **14.5 dBV/m**	Grid 6 **M4** **14.75 dBV/m**
Grid 7 **M4** **13.35 dBV/m**	Grid 8 **M4** **9.99 dBV/m**	Grid 9 **M4** **10.87 dBV/m**



0 dB = 7.449 V/m = 17.44 dBV/m

HAC-RF Emission

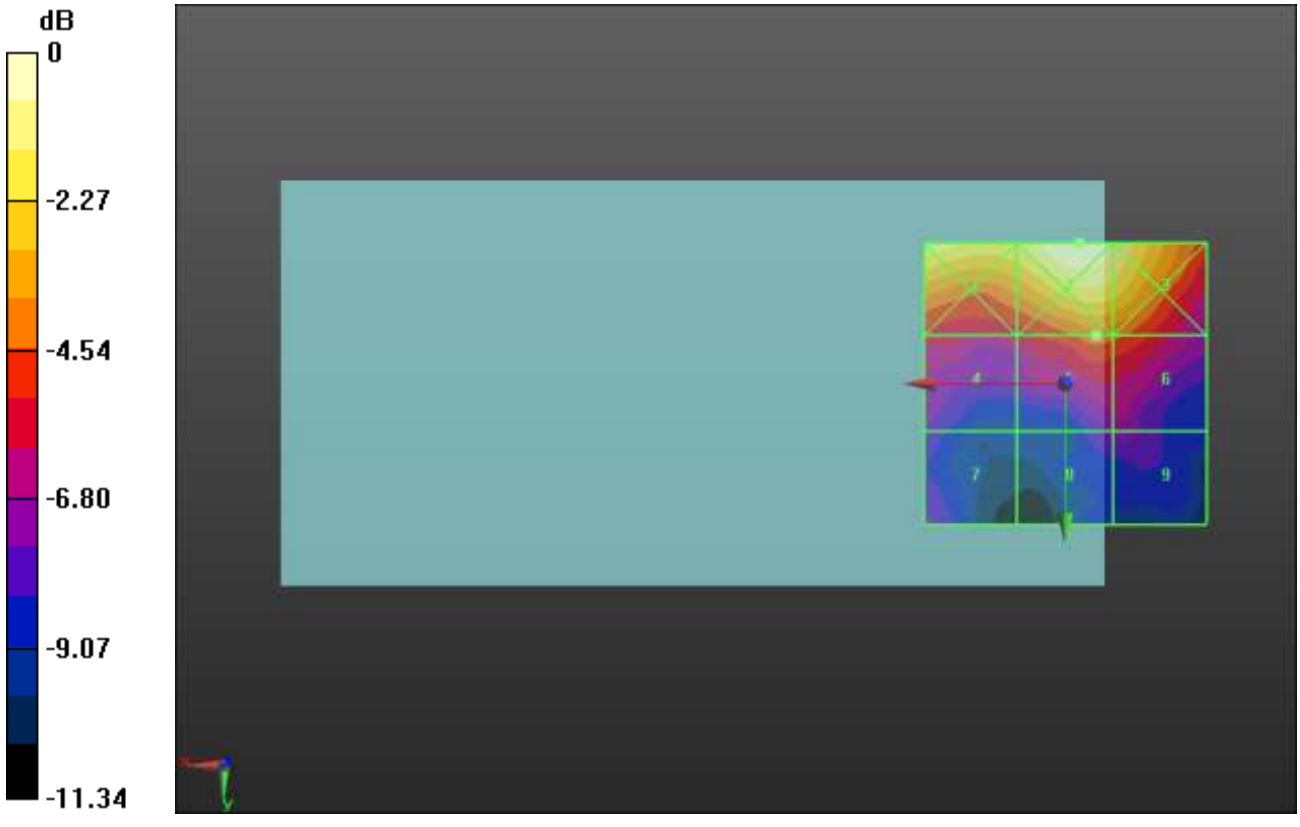
Communication System: UID 10030 - CAA, IEEE 802.15.1 Bluetooth (GFSK, DH1); Frequency: 2402 MHz; Duty Cycle: 1:3.38844
Phantom section: RF Section
DASY5 Configuration:
- Probe: EF3DV3 - SN4041; ConvF(1, 1, 1) @ 2402 MHz; Calibrated: 3/22/2019
- Sensor-Surface: (Fix Surface)
- Electronics: DAE4 Sn1472; Calibrated: 3/21/2019
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB
- Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7470)

Bluetooth E-Field measurement/GFSK DH1 Ch. 0/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 = 6.477 V/m; Power Drift = 0.23 dB
Applied MIF = 1.02 dB
RF audio interference level = 17.99 dBV/m
Emission category: M4

MIF scaled E-field

Grid 1 **M4** **21.15 dBV/m**	Grid 2 **M4** **22.11 dBV/m**	Grid 3 **M4** **21.46 dBV/m**
Grid 4 **M4** **16.51 dBV/m**	Grid 5 **M4** **17.99 dBV/m**	Grid 6 **M4** **17.81 dBV/m**
Grid 7 **M4** **14.77 dBV/m**	Grid 8 **M4** **14.74 dBV/m**	Grid 9 **M4** **14.81 dBV/m**



0 dB = 12.75 V/m = 22.11 dBV/m

HAC-RF Emission

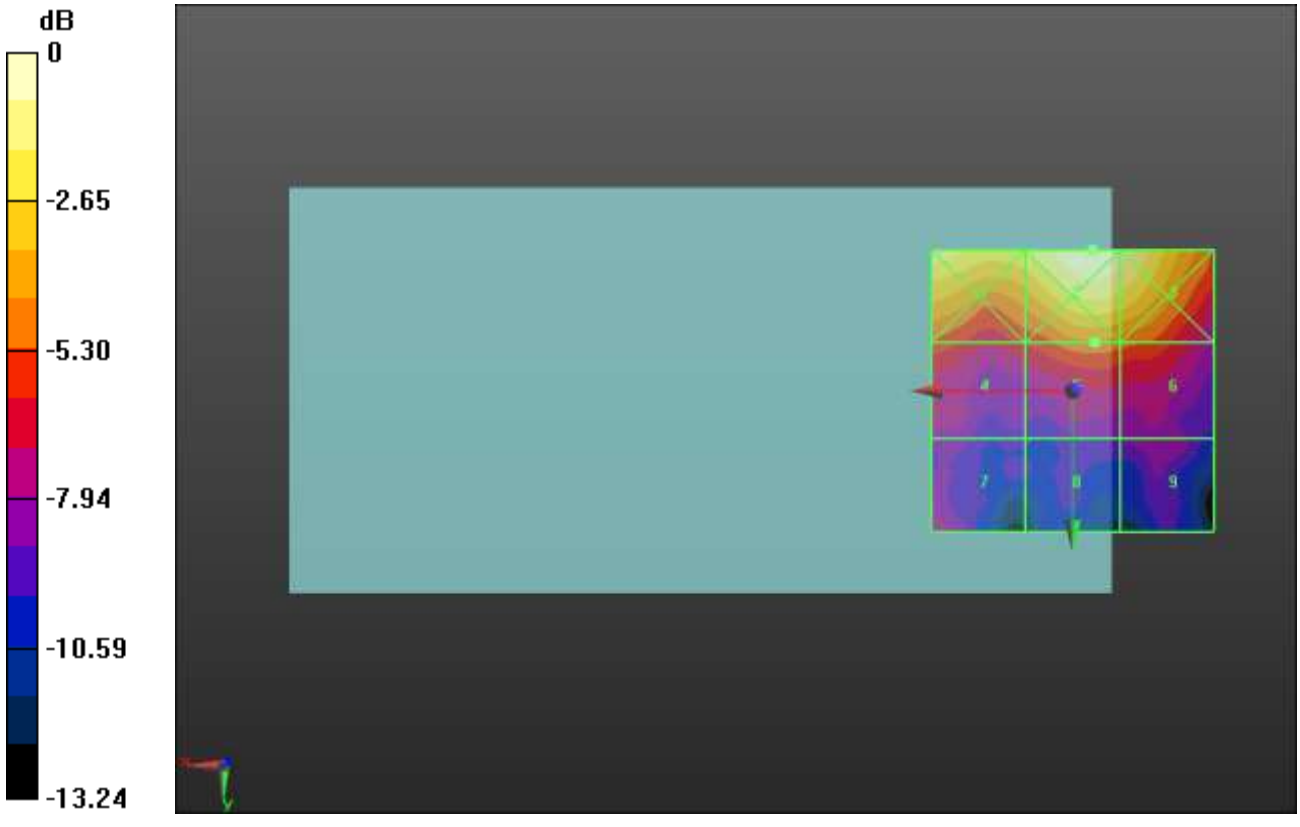
Communication System: UID 10030 - CAA, IEEE 802.15.1 Bluetooth (GFSK, DH1); Frequency: 2441 MHz; Duty Cycle: 1:3.38844
Phantom section: RF Section
DASY5 Configuration:
- Probe: EF3DV3 - SN4041; ConvF(1, 1, 1) @ 2441 MHz; Calibrated: 3/22/2019
- Sensor-Surface: (Fix Surface)
- Electronics: DAE4 Sn1472; Calibrated: 3/21/2019
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB
- Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7470)

Bluetooth E-Field measurement/GFSK DH1 Ch. 39/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 = 6.392 V/m; Power Drift = -0.17 dB
Applied MIF = 1.02 dB
RF audio interference level = 18.32 dBV/m
Emission category: M4

MIF scaled E-field

Grid 1 **M4** **21.83 dBV/m**	Grid 2 **M4** **22.85 dBV/m**	Grid 3 **M4** **22.39 dBV/m**
Grid 4 **M4** **17.37 dBV/m**	Grid 5 **M4** **18.32 dBV/m**	Grid 6 **M4** **17.96 dBV/m**
Grid 7 **M4** **15.39 dBV/m**	Grid 8 **M4** **14.11 dBV/m**	Grid 9 **M4** **14.61 dBV/m**



0 dB = 13.88 V/m = 22.85 dBV/m

HAC-RF Emission

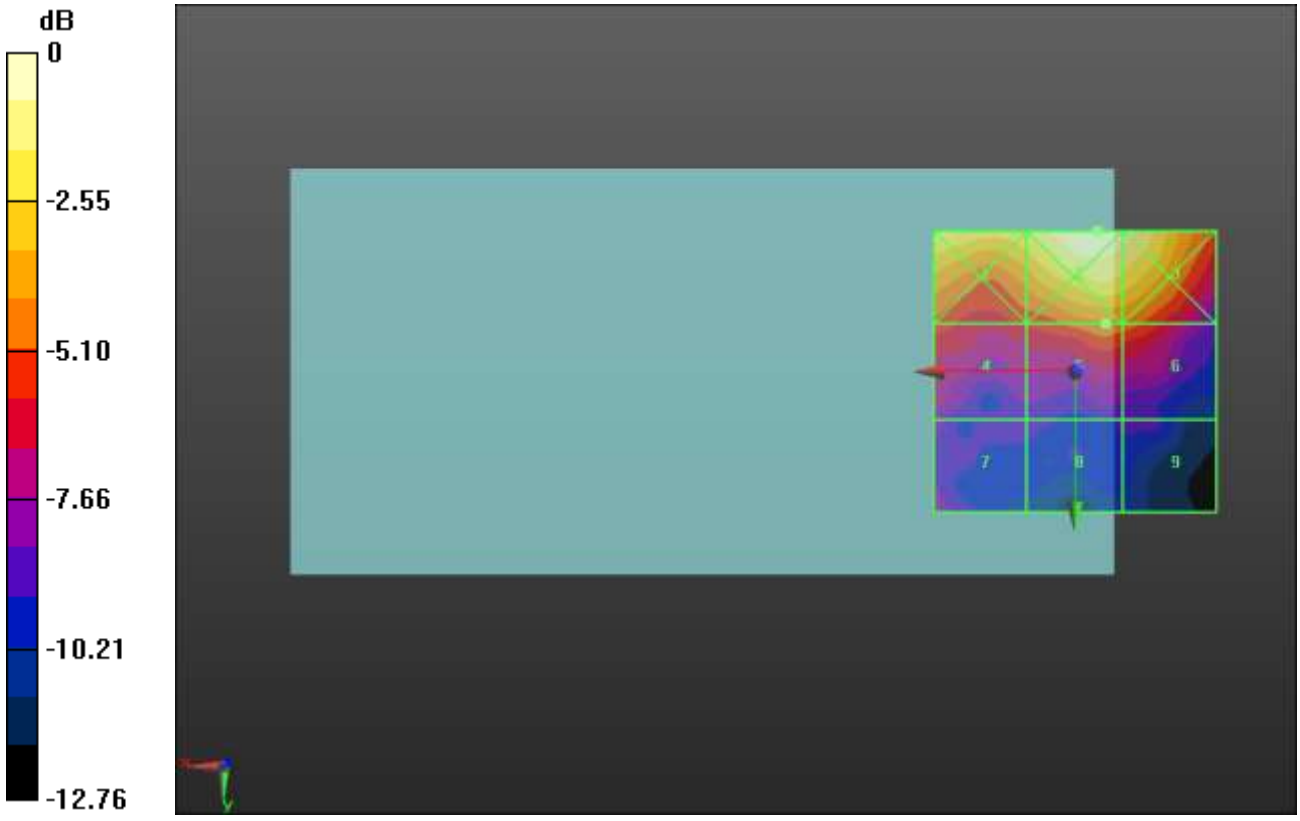
Communication System: UID 10030 - CAA, IEEE 802.15.1 Bluetooth (GFSK, DH1); Frequency: 2480 MHz; Duty Cycle: 1:3.38844
Phantom section: RF Section
DASY5 Configuration:
- Probe: EF3DV3 - SN4041; ConvF(1, 1, 1) @ 2480 MHz; Calibrated: 3/22/2019
- Sensor-Surface: (Fix Surface)
- Electronics: DAE4 Sn1472; Calibrated: 3/21/2019
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BB
- Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7470)

Bluetooth E-Field measurement/GFSK DH1 Ch. 78/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 = 5.882 V/m; Power Drift = 0.31 dB
Applied MIF = 1.02 dB
RF audio interference level = 17.90 dBV/m
Emission category: M4

MIF scaled E-field

Grid 1 **M4** **21.14 dBV/m**	Grid 2 **M4** **22.33 dBV/m**	Grid 3 **M4** **21.91 dBV/m**
Grid 4 **M4** **16.98 dBV/m**	Grid 5 **M4** **17.9 dBV/m**	Grid 6 **M4** **17.79 dBV/m**
Grid 7 **M4** **14.7 dBV/m**	Grid 8 **M4** **13.67 dBV/m**	Grid 9 **M4** **13.36 dBV/m**



0 dB = 13.07 V/m = 22.33 dBV/m