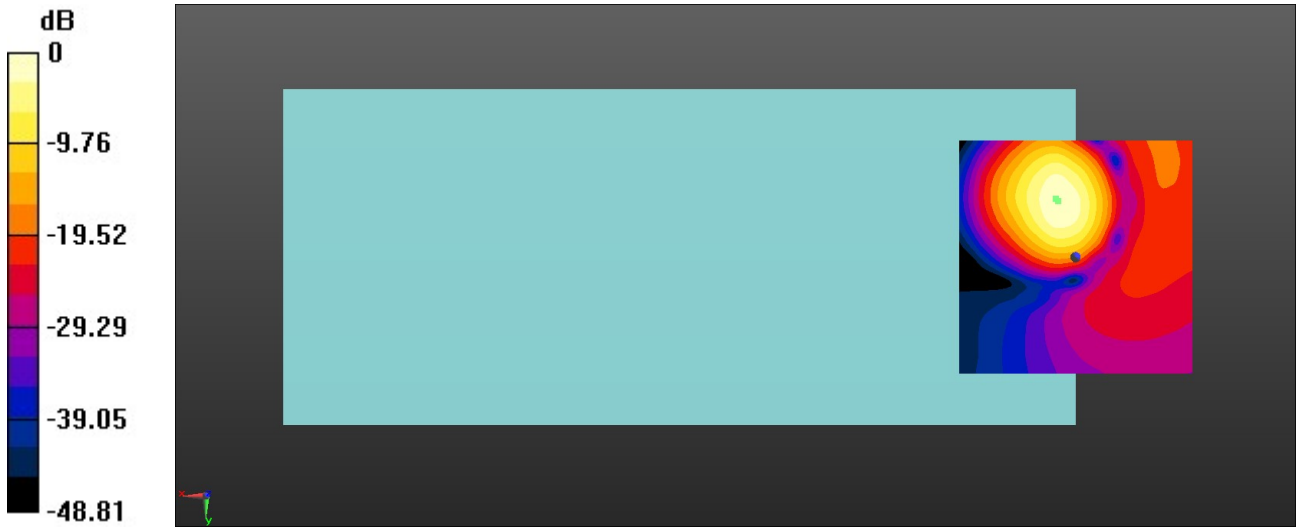
**1_HAC T-Coil GSM850_Voice_Ch189(Z)**

Communication System: UID 0, GSM850 (0); Frequency: 836.4 MHz;Duty Cycle: 1:8.3
Medium: Air Medium parameters used: $\sigma = 0$ S/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m$^3$
Ambient Temperature：23.3 °C;

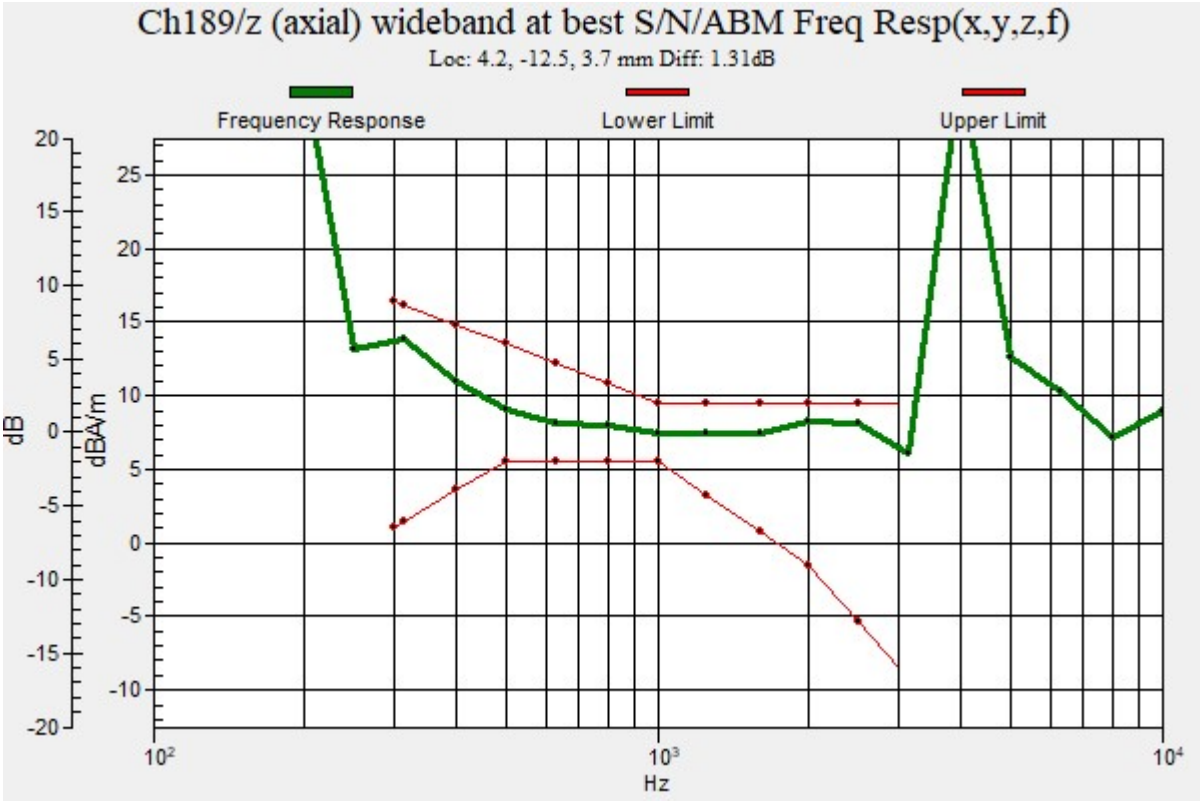
DASY5 Configuration:
- Probe: AM1DV3 - 3093; Calibrated: 2023/1/31
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE4 Sn1338; Calibrated: 2022/12/15
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

## Ch189/z (axial) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1):

Interpolated grid: dx=1.000 mm, dy=1.000 mm
ABM1/ABM2 = 42.47 dB
ABM1 comp = 9.12 dBA/m
Location: 3.8, -12.1, 3.7 mm




0 dB = 132.9 = 42.47 dB


Ch189/z (axial) wideband at best S/N/ABM Freq Resp(x,y,z,f)
Loc: 4.2, -12.5, 3.7 mm Diff: 1.31dB
Frequency Response
Lower Limit
Upper Limit
dB
dBA/m
Hz

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2023/11/19

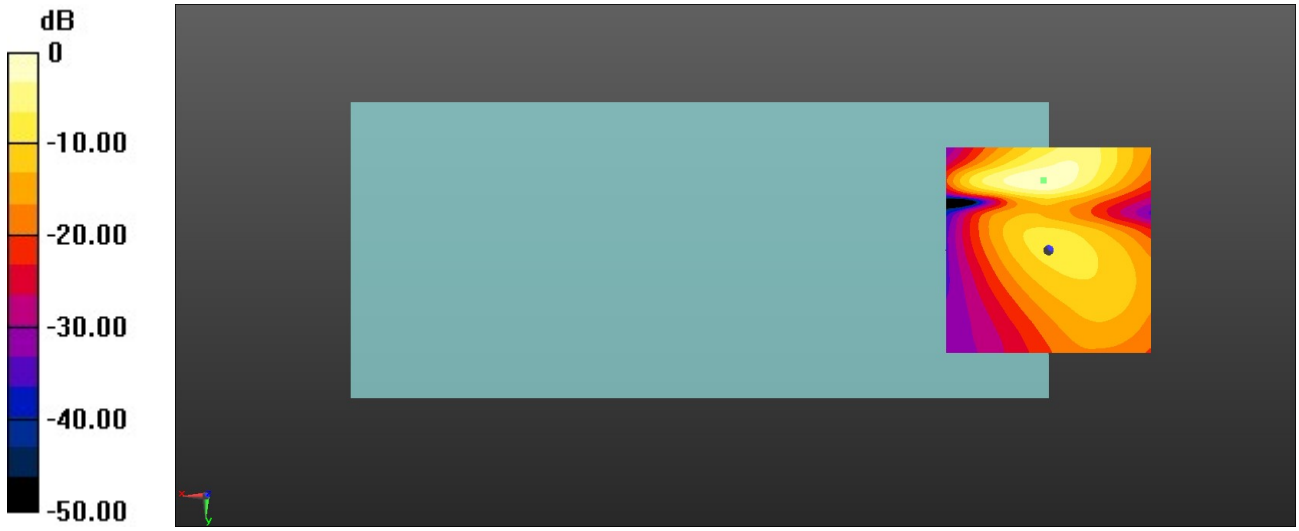
**1_HAC T-Coil GSM850_Voice_Ch189(Y)**

Communication System: UID 0, GSM850 (0); Frequency: 836.4 MHz;Duty Cycle: 1:8.3
Medium: Air Medium parameters used: $\sigma = 0$ S/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m$^3$
Ambient Temperature：23.3 °C;

DASY5 Configuration:
- Probe: AM1DV3 - 3093; Calibrated: 2023/1/31
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE4 Sn1338; Calibrated: 2022/12/15
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

## Ch189/y (transversal) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1):

Interpolated grid: dx=1.000 mm, dy=1.000 mm
ABM1/ABM2 = 44.23 dB
ABM1 comp = -0.22 dBA/m
Location: 1.3, -17.1, 3.7 mm




0 dB = 162.7 = 44.23 dB

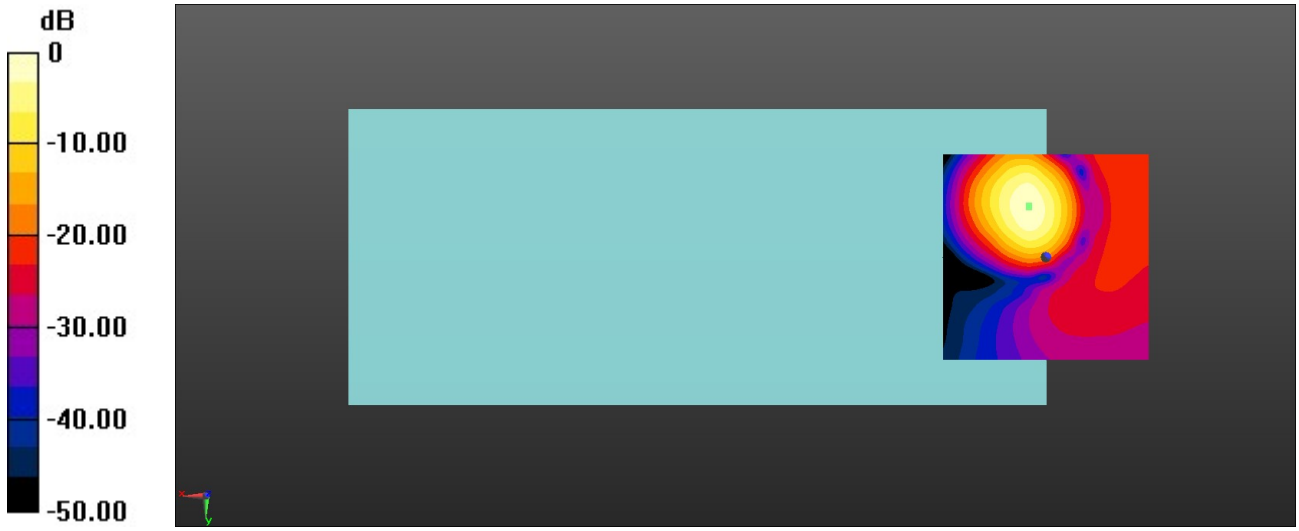
**2_HAC T-Coil GSM1900_Voice_Ch661(Z)**

Communication System: UID 0, PCS (0); Frequency: 1880 MHz;Duty Cycle: 1:8.3
Medium: Air Medium parameters used: $\sigma = 0$ S/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m$^3$
Ambient Temperature：23.3 °C;

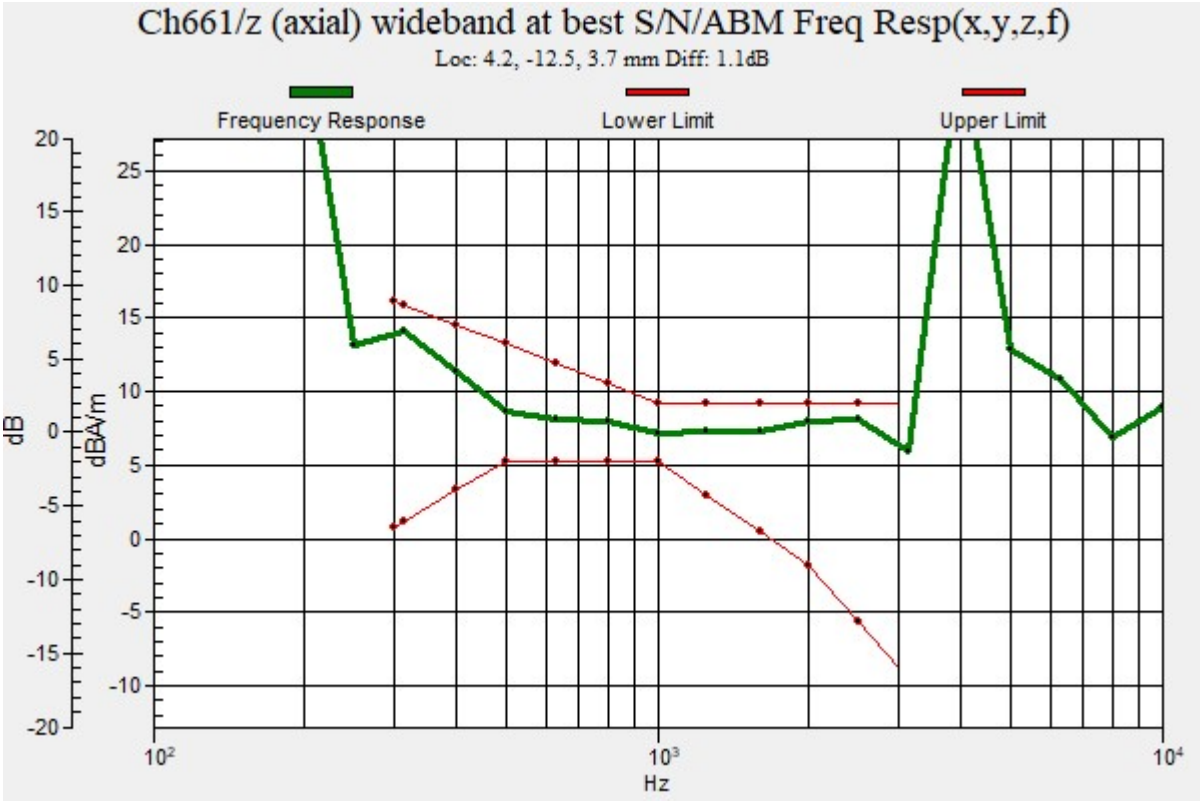
DASY5 Configuration:
- Probe: AM1DV3 - 3093; Calibrated: 2023/1/31
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE4 Sn1338; Calibrated: 2022/12/15
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

## Ch661/z (axial) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1):

Interpolated grid: dx=1.000 mm, dy=1.000 mm
ABM1/ABM2 = 52.02 dB
ABM1 comp = 9.80 dBA/m
Location: 4.2, -12.1, 3.7 mm




0 dB = 399.1 = 52.02 dB


Ch661/z (axial) wideband at best S/N/ABM Freq Resp(x,y,z,f)
Loc: 4.2, -12.5, 3.7 mm Diff: 1.1dB
Frequency Response
Lower Limit
Upper Limit
dB
dBA/m
Hz

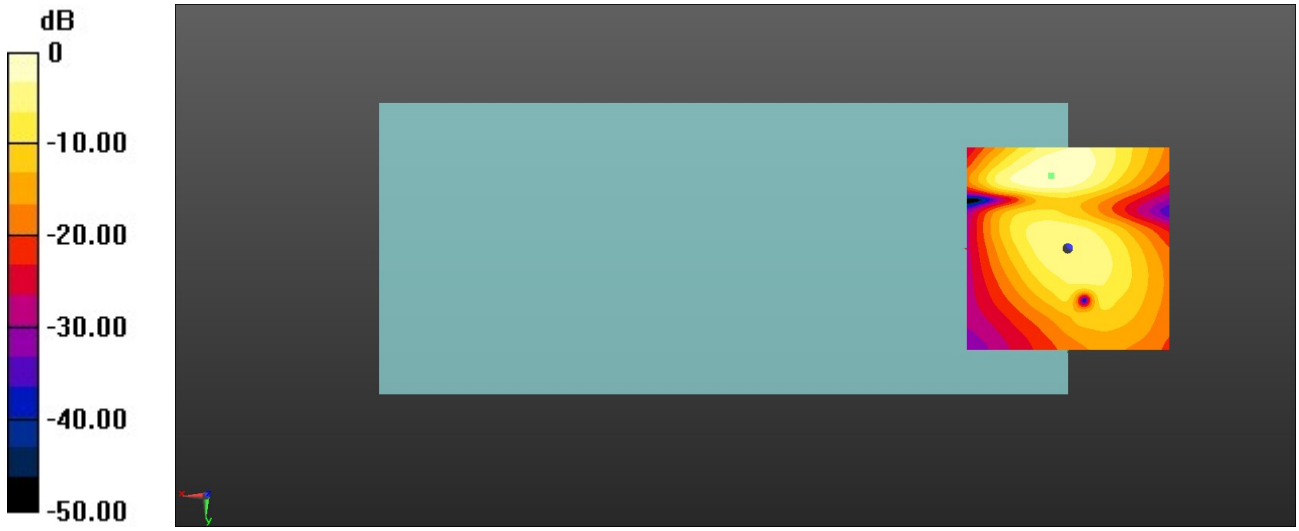
**2_HAC T-Coil GSM1900_Voice_Ch661(Y)**

Communication System: UID 0, PCS (0); Frequency: 1880 MHz;Duty Cycle: 1:8.3
Medium: Air Medium parameters used: $\sigma = 0$ S/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m$^3$
Ambient Temperature：23.3 °C;

DASY5 Configuration:
- Probe: AM1DV3 - 3093; Calibrated: 2023/1/31
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE4 Sn1338; Calibrated: 2022/12/15
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

## Ch661/y (transversal) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1):

Interpolated grid: dx=1.000 mm, dy=1.000 mm
ABM1/ABM2 = 47.94 dB
ABM1 comp = 2.86 dBA/m
Location: 4.2, -17.9, 3.7 mm




0 dB = 249.6 = 47.94 dB

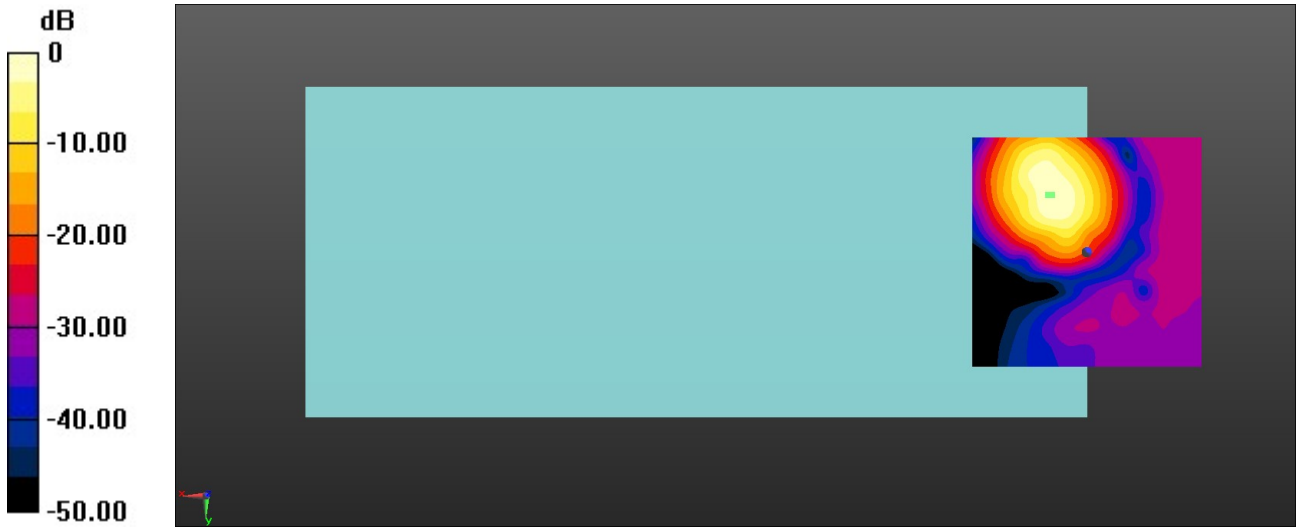
**3_HAC T-Coil WCDMA II_Voice_Ch9400(Z)**

Communication System: UID 0, WCDMA (0); Frequency: 1880 MHz;Duty Cycle: 1:1
Medium: Air Medium parameters used: $\sigma = 0$ S/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m$^3$
Ambient Temperature：23.3 °C;

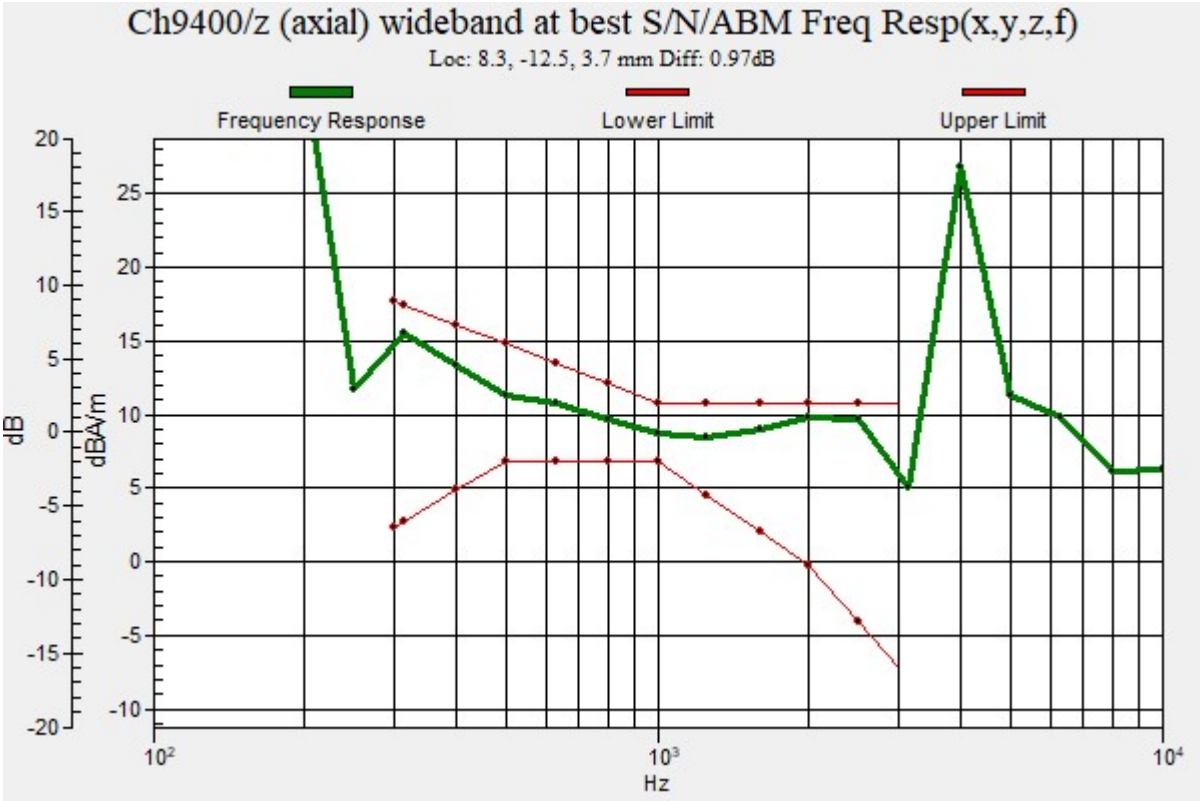
DASY5 Configuration:
- Probe: AM1DV3 - 3093; Calibrated: 2023/1/31
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE4 Sn1338; Calibrated: 2022/12/15
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

## Ch9400/z (axial) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1):

Interpolated grid: dx=1.000 mm, dy=1.000 mm
ABM1/ABM2 = 60.92 dB
ABM1 comp = 12.03 dBA/m
Location: 7.5, -12.5, 3.7 mm




0 dB = 1112 = 60.92 dB


Ch9400/z (axial) wideband at best S/N/ABM Freq Resp(x,y,z,f)
Loc: 8.3, -12.5, 3.7 mm Diff: 0.97dB
Frequency Response
Lower Limit
Upper Limit
dB
dBA/m
Hz

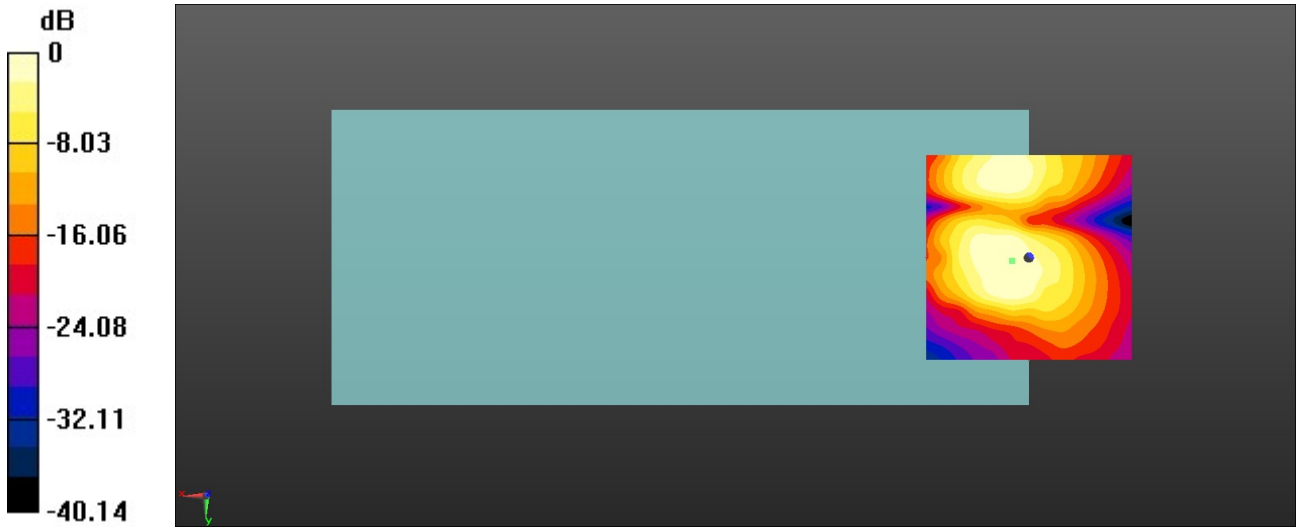
**3_HAC T-Coil WCDMA II_Voice_Ch9400(Y)**

Communication System: UID 0, WCDMA (0); Frequency: 1880 MHz;Duty Cycle: 1:1
Medium: Air Medium parameters used: $\sigma = 0$ S/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m$^3$
Ambient Temperature：23.3 °C;

DASY5 Configuration:
- Probe: AM1DV3 - 3093; Calibrated: 2023/1/31
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE4 Sn1338; Calibrated: 2022/12/15
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

## Ch9400/y (transversal) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1):

Interpolated grid: dx=1.000 mm, dy=1.000 mm
ABM1/ABM2 = 51.17 dB
ABM1 comp = 2.02 dBA/m
Location: 4.2, 0.8, 3.7 mm




0 dB = 362.0 = 51.17 dB

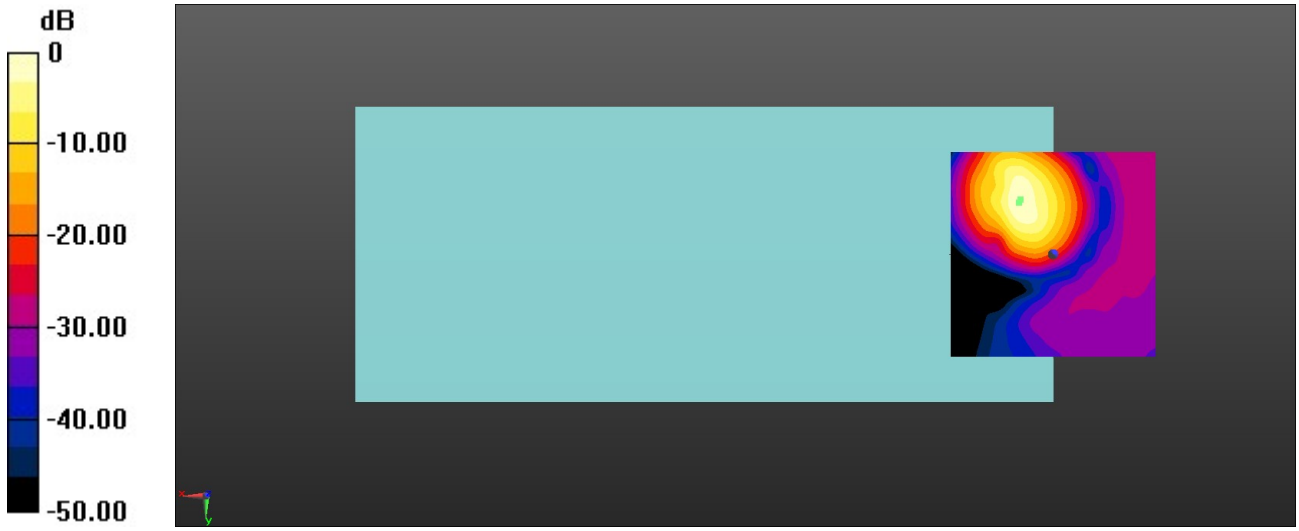
**4_HAC T-Coil WCDMA IV_Voice_Ch1413(Z)**

Communication System: UID 0, WCDMA (0); Frequency: 1732.6 MHz;Duty Cycle: 1:1
Medium: Air Medium parameters used: $\sigma = 0$ S/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m$^3$
Ambient Temperature：23.3 °C;

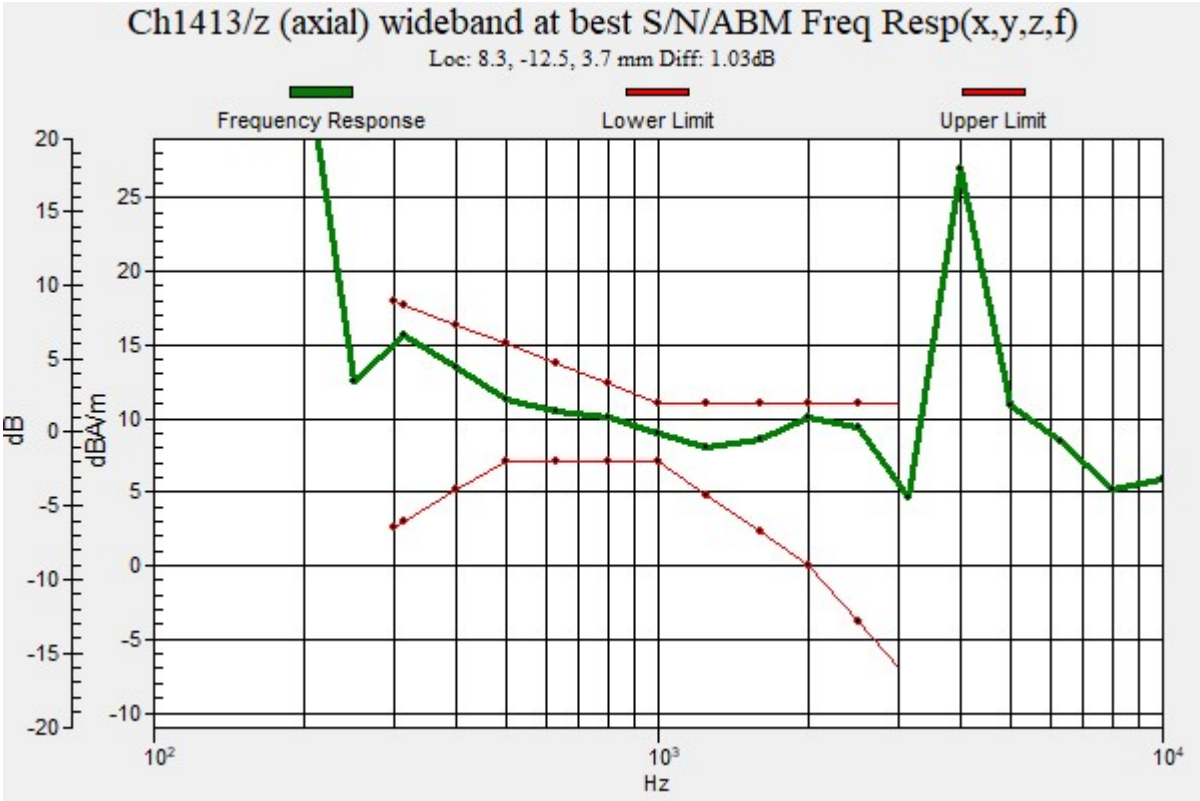
DASY5 Configuration:
- Probe: AM1DV3 - 3093; Calibrated: 2023/1/31
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE4 Sn1338; Calibrated: 2022/12/15
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

## Ch1413/z (axial) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1):

Interpolated grid: dx=1.000 mm, dy=1.000 mm
ABM1/ABM2 = 61.65 dB
ABM1 comp = 12.26 dBA/m
Location: 7.9, -13.3, 3.7 mm




0 dB = 1209 = 61.65 dB


Ch1413/z (axial) wideband at best S/N/ABM Freq Resp(x,y,z,f)
Loc: 8.3, -12.5, 3.7 mm Diff: 1.03dB
Frequency Response
Lower Limit
Upper Limit
dB
dBA/m
Hz

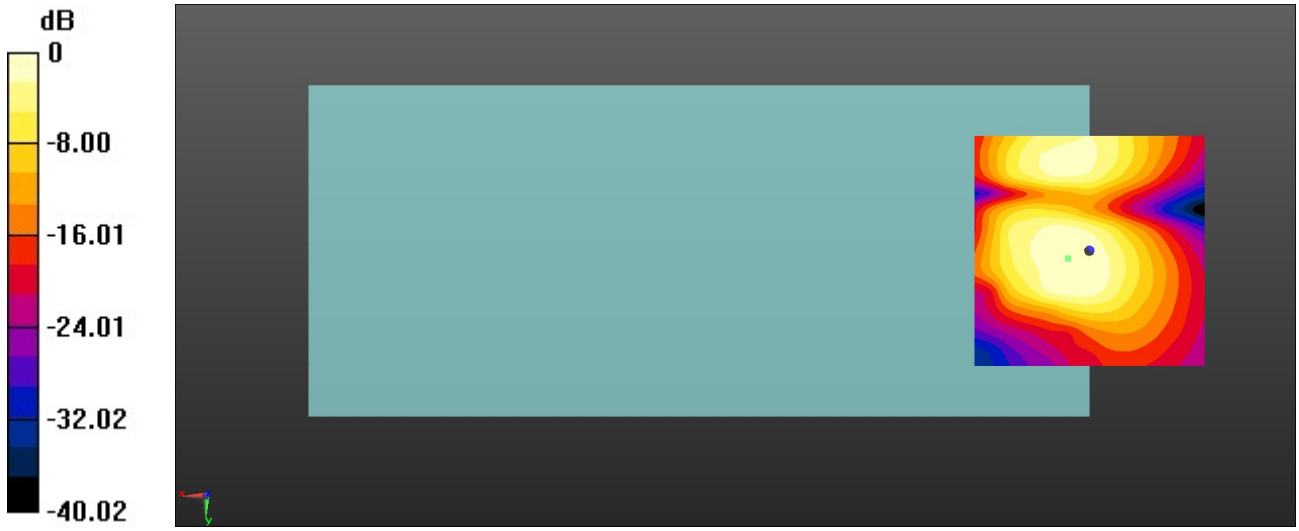
**4_HAC T-Coil WCDMA IV_Voice_Ch1413(Y)**

Communication System: UID 0, WCDMA (0); Frequency: 1732.6 MHz;Duty Cycle: 1:1
Medium: Air Medium parameters used: $\sigma = 0$ S/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m$^3$
Ambient Temperature：23.3 °C;

DASY5 Configuration:
- Probe: AM1DV3 - 3093; Calibrated: 2023/1/31
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE4 Sn1338; Calibrated: 2022/12/15
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

## Ch1413/y (transversal) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1):

Interpolated grid: dx=1.000 mm, dy=1.000 mm
ABM1/ABM2 = 51.12 dB
ABM1 comp = 1.80 dBA/m
Location: 4.6, 1.7, 3.7 mm




0 dB = 359.9 = 51.12 dB

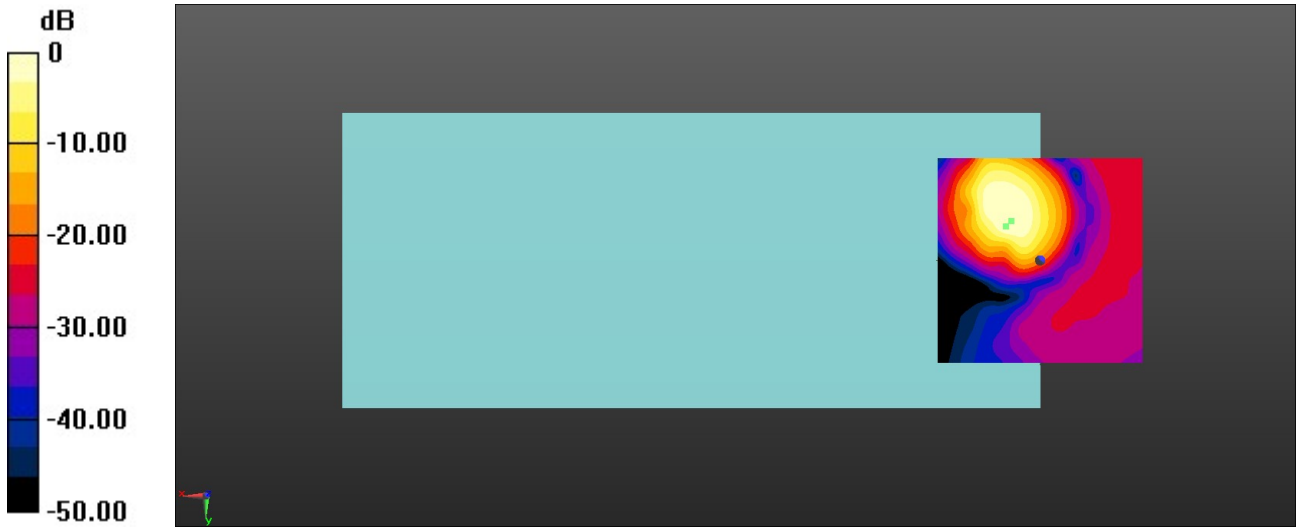
**5_HAC T-Coil WCDMA V_Voice_Ch4182(Z)**

Communication System: UID 0, WCDMA (0); Frequency: 836.4 MHz;Duty Cycle: 1:1
Medium: Air Medium parameters used: $\sigma = 0$ S/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m$^3$
Ambient Temperature：23.3 °C;

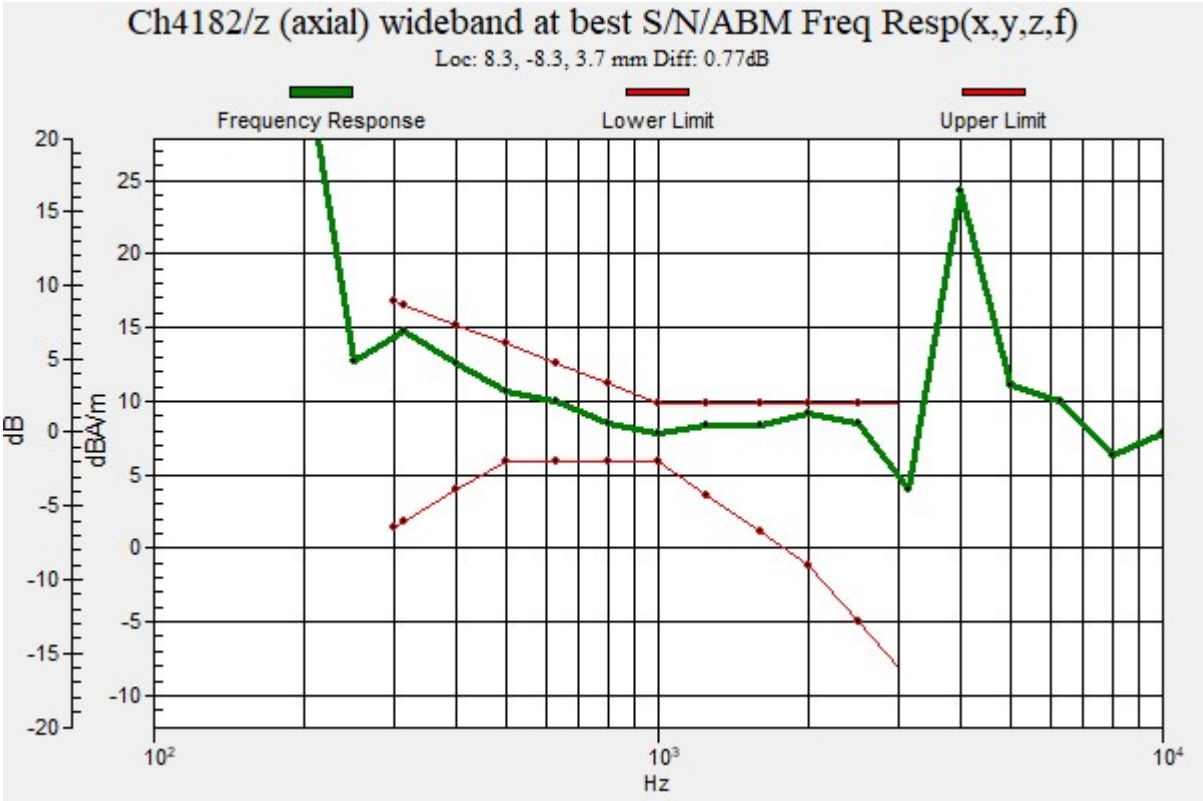
DASY5 Configuration:
- Probe: AM1DV3 - 3093; Calibrated: 2023/1/31
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE4 Sn1338; Calibrated: 2022/12/15
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

## Ch4182/z (axial) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1):

Interpolated grid: dx=1.000 mm, dy=1.000 mm
ABM1/ABM2 = 59.19 dB
ABM1 comp = 11.24 dBA/m
Location: 7.1, -9.6, 3.7 mm




0 dB = 910.7 = 59.19 dB


Ch4182/z (axial) wideband at best S/N/ABM Freq Resp(x,y,z,f)
Loc: 8.3, -8.3, 3.7 mm Diff: 0.77dB
Frequency Response
Lower Limit
Upper Limit
dB
dBA/m
Hz

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2023/11/19

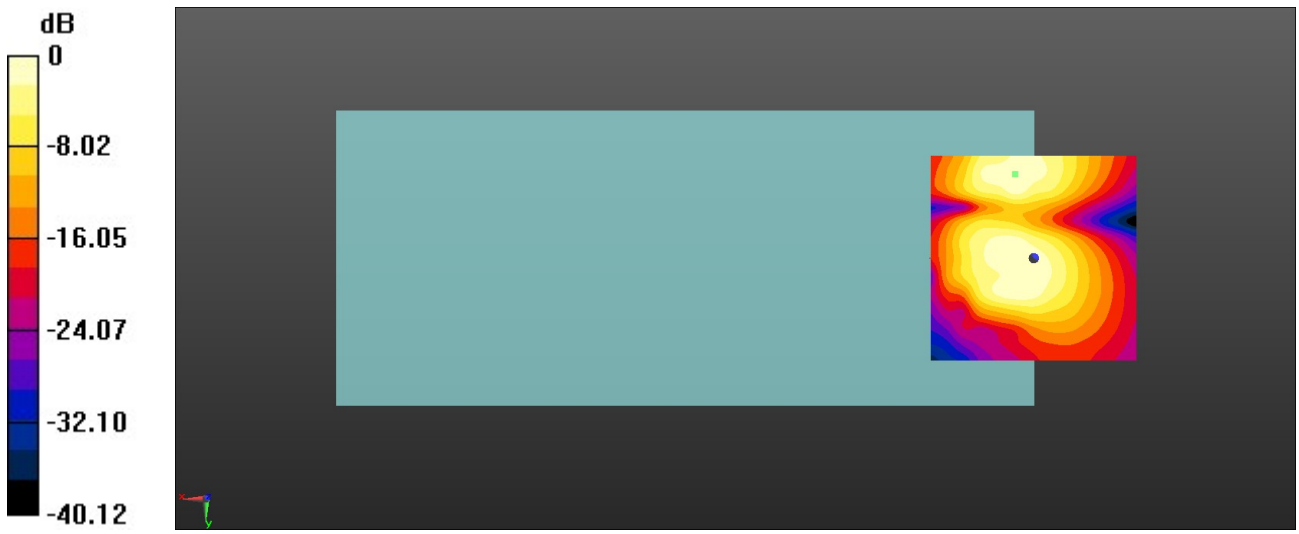
**5_HAC T-Coil WCDMA V_Voice_Ch4182(Y)**

Communication System: UID 0, WCDMA (0); Frequency: 836.4 MHz;Duty Cycle: 1:1
Medium: Air Medium parameters used: $\sigma = 0$ S/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m$^3$
Ambient Temperature：23.3 °C;

DASY5 Configuration:
- Probe: AM1DV3 - 3093; Calibrated: 2023/1/31
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE4 Sn1338; Calibrated: 2022/12/15
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

## Ch4182/y (transversal) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1):

Interpolated grid: dx=1.000 mm, dy=1.000 mm
ABM1/ABM2 = 51.30 dB
ABM1 comp = 2.68 dBA/m
Location: 4.6, -20.4, 3.7 mm




0 dB = 367.5 = 51.30 dB

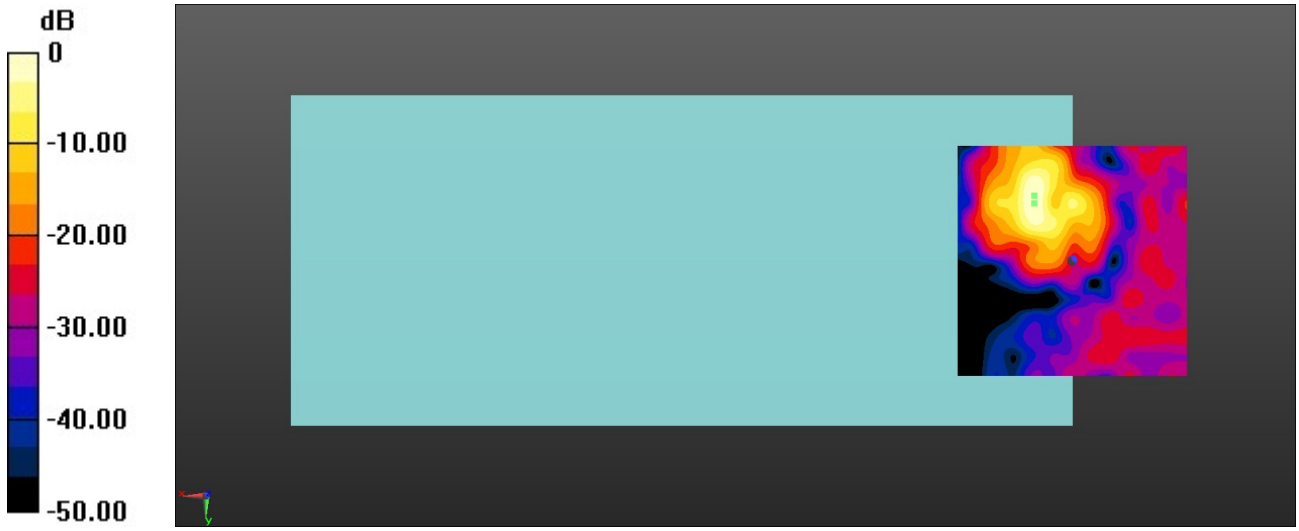
**6_HAC T-Coil_LTE Band 7_20M_16QAM_1RB_0Offset_Ch21100(Z)**

Communication System: UID 0, LTE-FDD (0); Frequency: 2535 MHz;Duty Cycle: 1:1
Medium: Air Medium parameters used: $\sigma = 0$ S/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m$^3$
Ambient Temperature：23.3 °C;

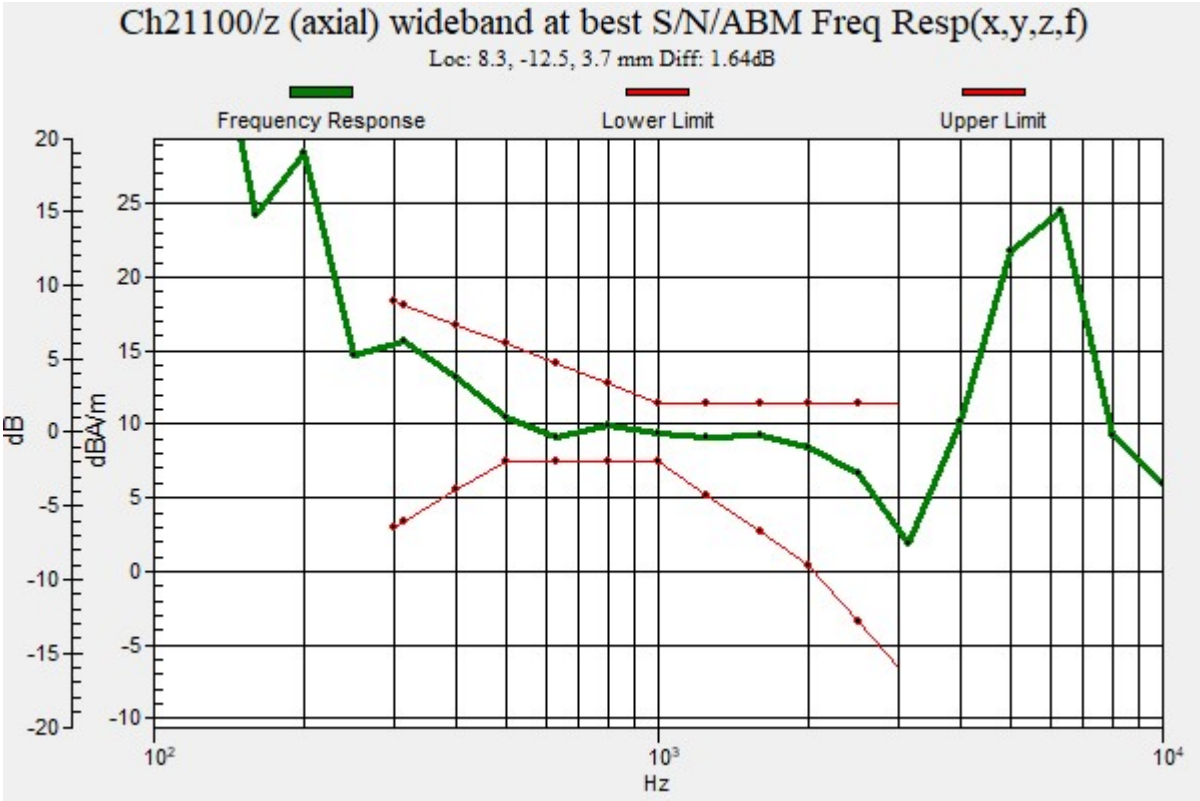
DASY5 Configuration:
- Probe: AM1DV3 - 3093; Calibrated: 2023/1/31
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE4 Sn1338; Calibrated: 2022/12/15
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

## Ch21100/z (axial) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1):

Interpolated grid: dx=1.000 mm, dy=1.000 mm
ABM1/ABM2 = 52.32 dB
ABM1 comp = 9.58 dBA/m
Location: 8.3, -14.2, 3.7 mm




0 dB = 413.0 = 52.32 dB


Ch21100/z (axial) wideband at best S/N/ABM Freq Resp(x,y,z,f)
Loc: 8.3, -12.5, 3.7 mm Diff: 1.64dB
Frequency Response
Lower Limit
Upper Limit
dB
dBA/m
Hz

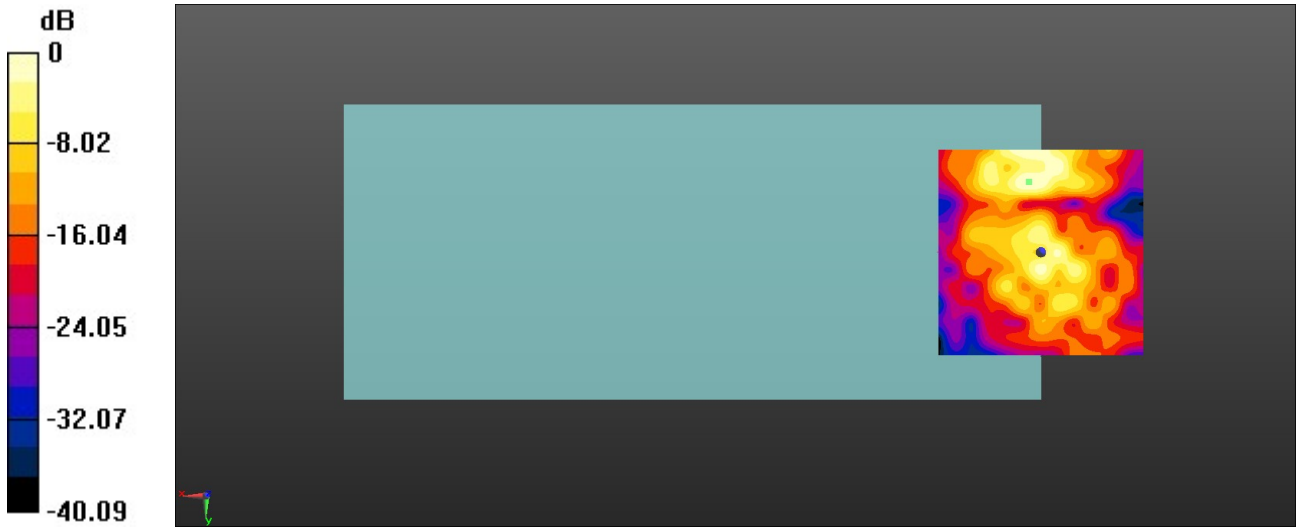
**6_HAC T-Coil_LTE Band 7_20M_16QAM_1RB_0Offset_Ch21100(Y)**

Communication System: UID 0, LTE-FDD (0); Frequency: 2535 MHz;Duty Cycle: 1:1
Medium: Air Medium parameters used: $\sigma = 0$ S/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m$^3$
Ambient Temperature：23.3 °C;

DASY5 Configuration:
- Probe: AM1DV3 - 3093; Calibrated: 2023/1/31
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE4 Sn1338; Calibrated: 2022/12/15
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

## Ch21100/y (transversal) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1):

Interpolated grid: dx=1.000 mm, dy=1.000 mm
ABM1/ABM2 = 45.27 dB
ABM1 comp = -2.40 dBA/m
Location: 2.9, -17.1, 3.7 mm




0 dB = 183.4 = 45.27 dB

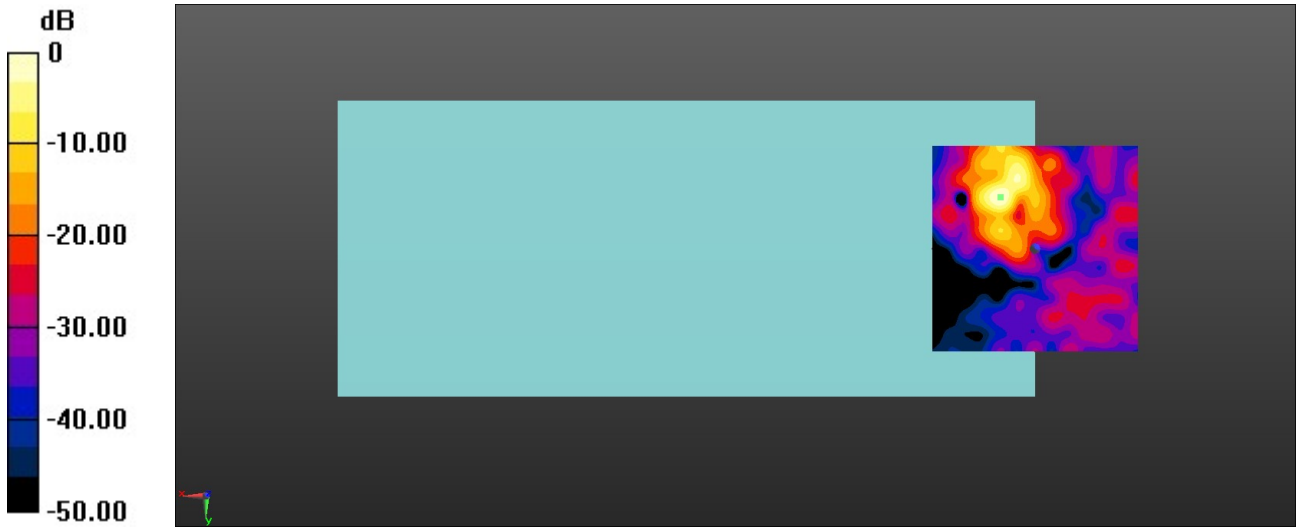
**7_HAC T-Coil_LTE Band 12_10M_16QAM_1RB_0Offset_Ch23095(Z)**

Communication System: UID 0, LTE-FDD (0); Frequency: 707.5 MHz;Duty Cycle: 1:1
Medium: Air Medium parameters used: $\sigma = 0$ S/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m$^3$
Ambient Temperature：23.3 °C;

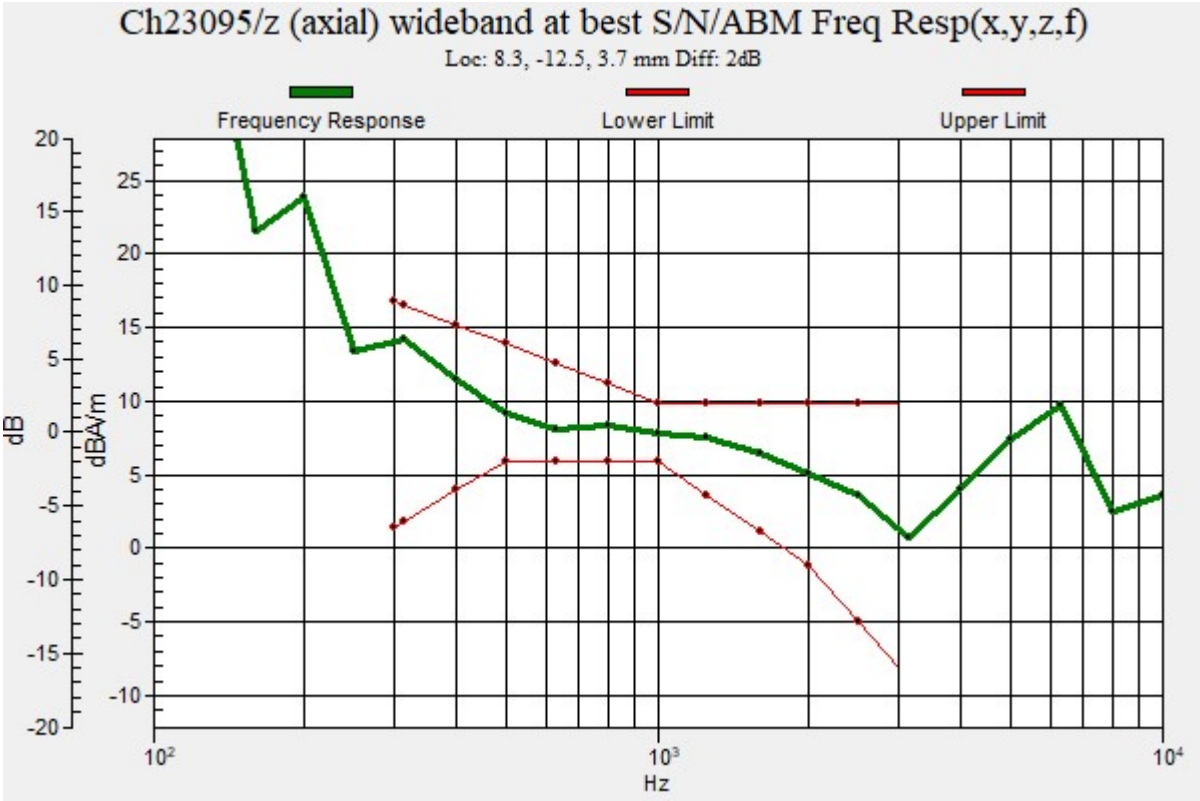
DASY5 Configuration:
- Probe: AM1DV3 - 3093; Calibrated: 2023/1/31
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE4 Sn1338; Calibrated: 2022/12/15
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

## Ch23095/z (axial) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1):

Interpolated grid: dx=1.000 mm, dy=1.000 mm
ABM1/ABM2 = 51.14 dB
ABM1 comp = 6.12 dBA/m
Location: 8.3, -12.5, 3.7 mm




0 dB = 360.5 = 51.14 dB


Ch23095/z (axial) wideband at best S/N/ABM Freq Resp(x,y,z,f)
Loc: 8.3, -12.5, 3.7 mm Diff: 2dB
Frequency Response
Lower Limit
Upper Limit
dB
dBA/m
Hz

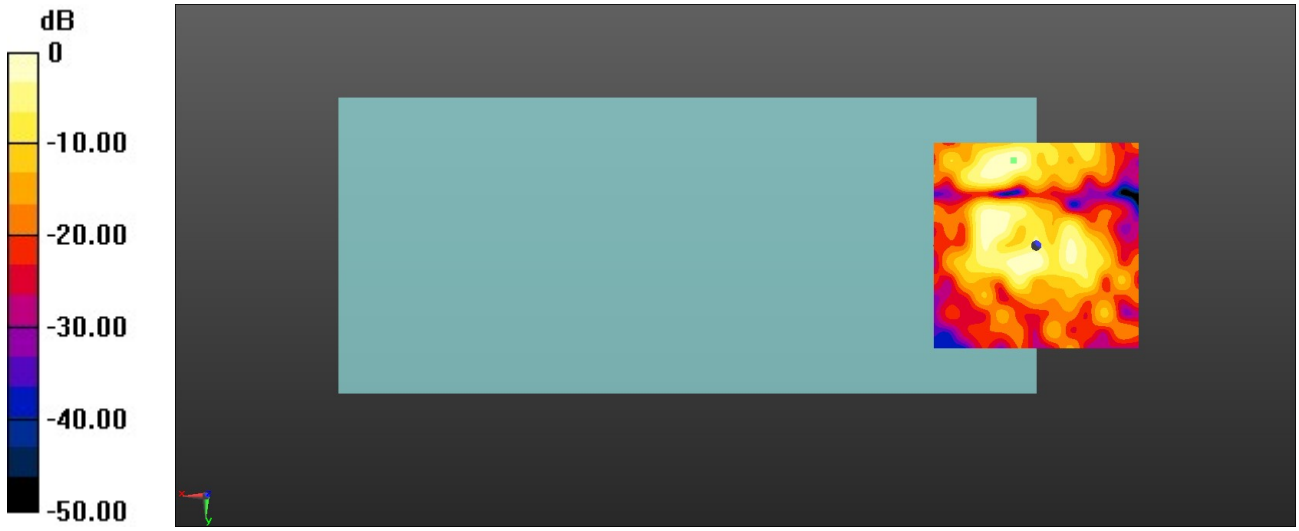
**7_HAC T-Coil_LTE Band 12_10M_16QAM_1RB_0Offset_Ch23095(Y)**

Communication System: UID 0, LTE-FDD (0); Frequency: 707.5 MHz;Duty Cycle: 1:1
Medium: Air Medium parameters used: $\sigma = 0$ S/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m$^3$
Ambient Temperature：23.3 °C;

DASY5 Configuration:
- Probe: AM1DV3 - 3093; Calibrated: 2023/1/31
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE4 Sn1338; Calibrated: 2022/12/15
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

## Ch23095/y (transversal) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1):

Interpolated grid: dx=1.000 mm, dy=1.000 mm
ABM1/ABM2 = 43.20 dB
ABM1 comp = -1.29 dBA/m
Location: 5.4, -20.8, 3.7 mm




0 dB = 144.5 = 43.20 dB

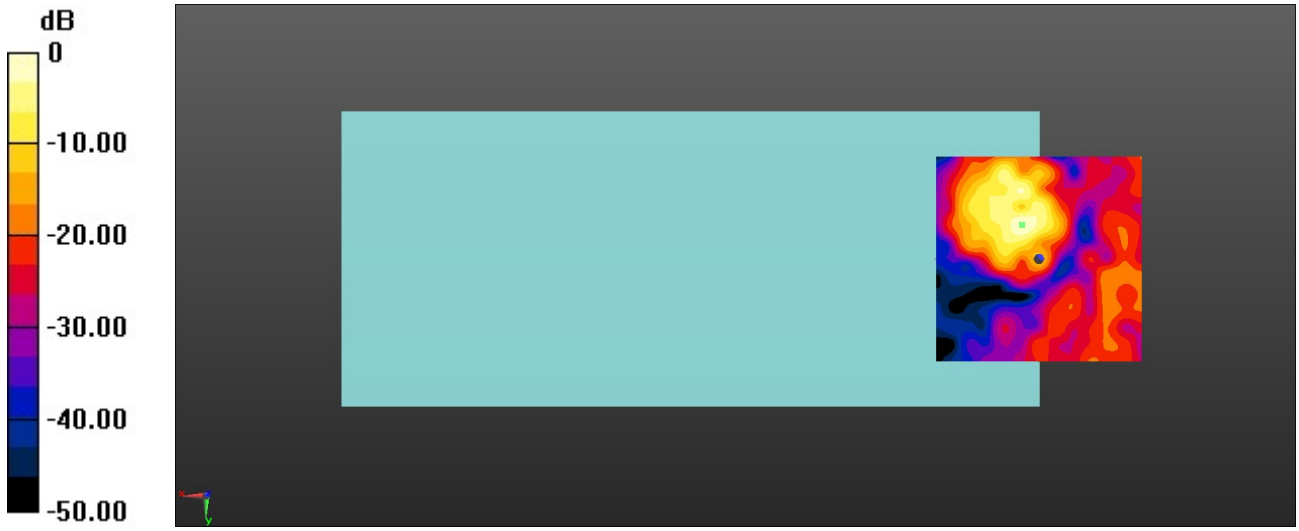
**8_HAC T-Coil_LTE Band 13_10M_16QAM_1RB_0Offset_Ch23230(Z)**

Communication System: UID 0, LTE-FDD (0); Frequency: 782 MHz;Duty Cycle: 1:1
Medium: Air Medium parameters used: $\sigma = 0$ S/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m$^3$
Ambient Temperature：23.3 °C;

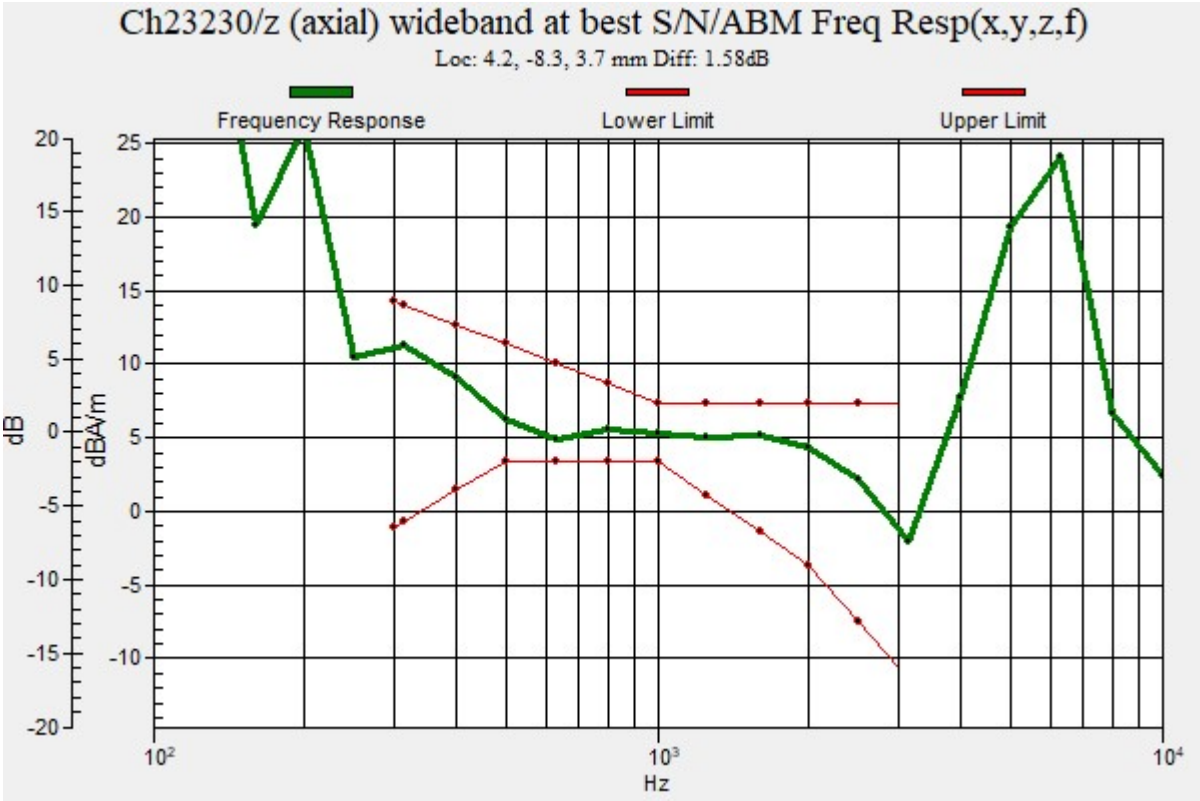
DASY5 Configuration:
- Probe: AM1DV3 - 3093; Calibrated: 2023/1/31
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE4 Sn1338; Calibrated: 2022/12/15
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

## Ch23230/z (axial) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1):

Interpolated grid: dx=1.000 mm, dy=1.000 mm
ABM1/ABM2 = 45.69 dB
ABM1 comp = 4.62 dBA/m
Location: 4.2, -8.3, 3.7 mm




0 dB = 192.5 = 45.69 dB


Ch23230/z (axial) wideband at best S/N/ABM Freq Resp(x,y,z,f)
Loc: 4.2, -8.3, 3.7 mm Diff: 1.58dB
Frequency Response
Lower Limit
Upper Limit
dB
dBA/m
Hz

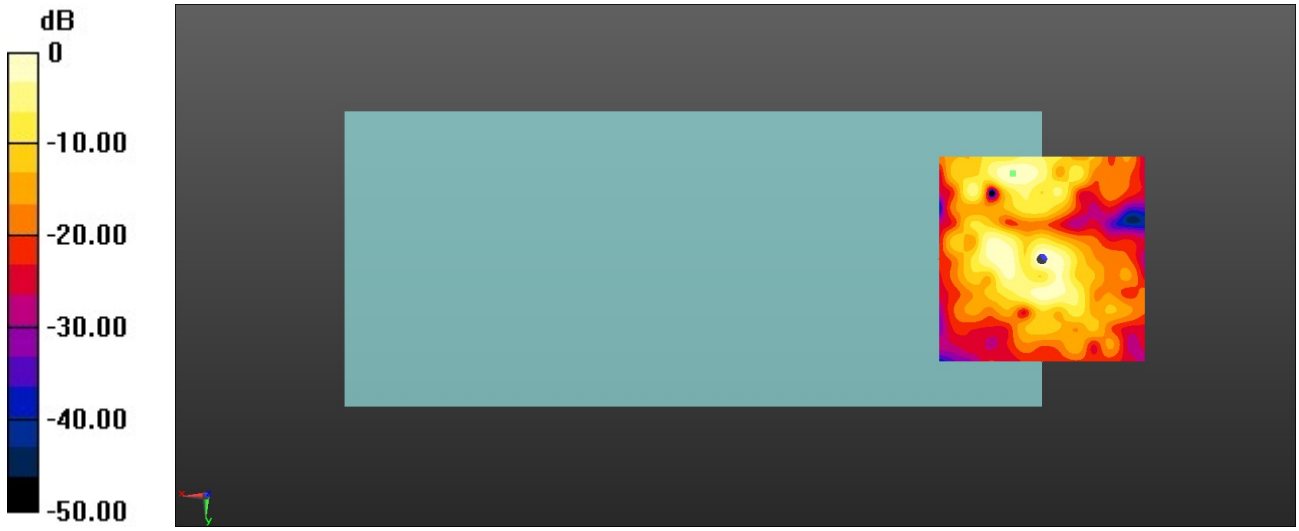
**8_HAC T-Coil_LTE Band 13_10M_16QAM_1RB_0Offset_Ch23230(Y)**

Communication System: UID 0, LTE-FDD (0); Frequency: 782 MHz;Duty Cycle: 1:1
Medium: Air Medium parameters used: $\sigma = 0$ S/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m$^3$
Ambient Temperature：23.3 °C;

DASY5 Configuration:
- Probe: AM1DV3 - 3093; Calibrated: 2023/1/31
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE4 Sn1338; Calibrated: 2022/12/15
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

## Ch23230/y (transversal) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1):

Interpolated grid: dx=1.000 mm, dy=1.000 mm
ABM1/ABM2 = 46.79 dB
ABM1 comp = 0.82 dBA/m
Location: 7.1, -20.8, 3.7 mm




0 dB = 218.4 = 46.79 dB

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2023/11/21

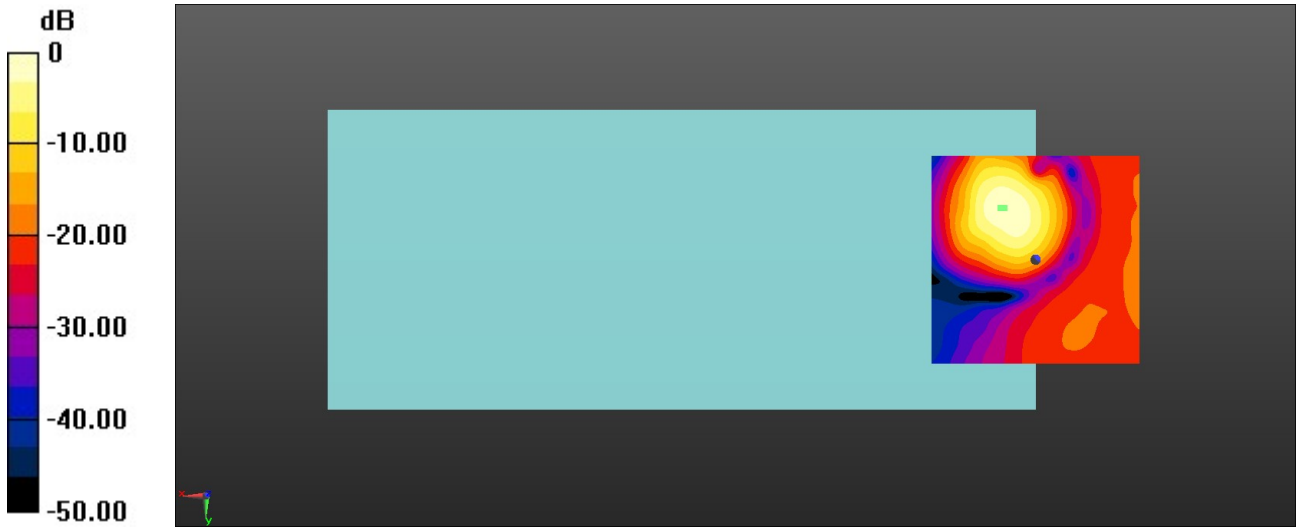
**9_HAC T-Coil_LTE Band 14_10M_16QAM_1RB_0Offset_Ch23330(Z)**

Communication System: UID 0, LTE-FDD (0); Frequency: 793 MHz;Duty Cycle: 1:1
Medium: Air Medium parameters used: $\sigma = 0$ S/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m$^3$
Ambient Temperature：23.3 °C;

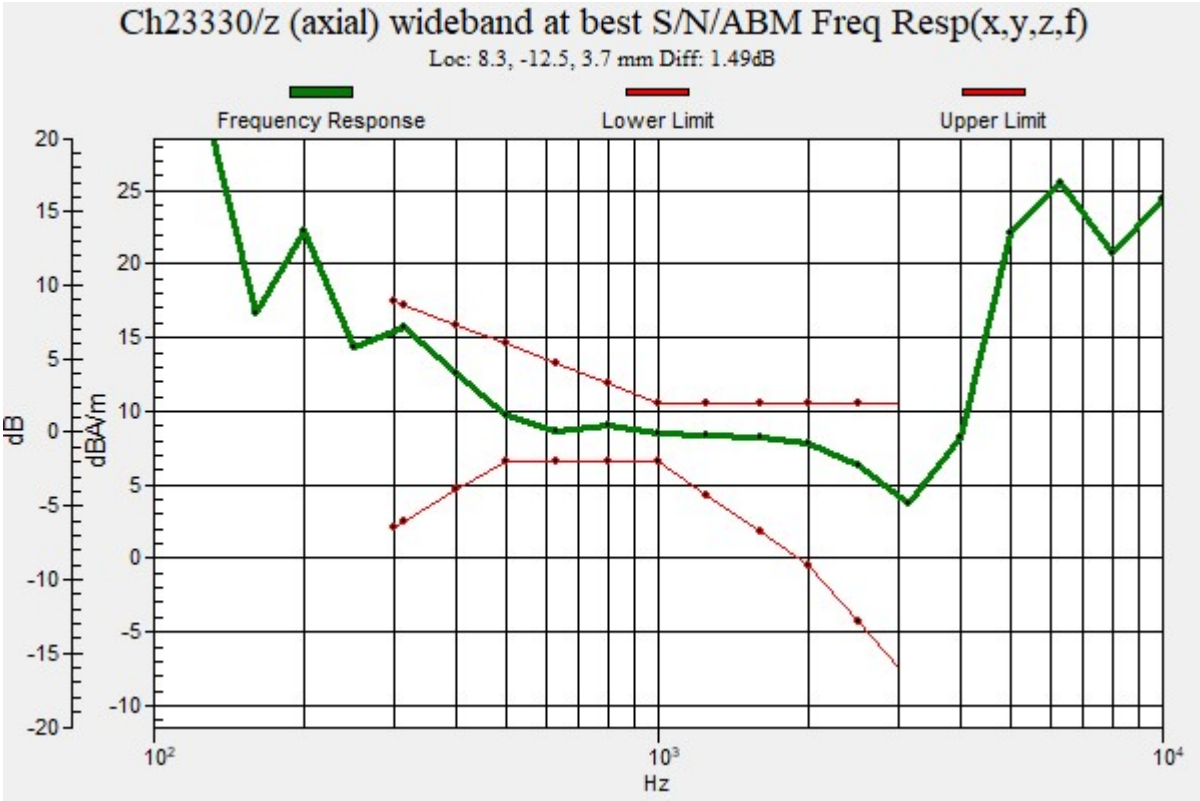
DASY5 Configuration:
- Probe: AM1DV3 - 3093; Calibrated: 2023/1/31
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE4 Sn1338; Calibrated: 2022/12/15
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

## Ch23330/z (axial) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1):

Interpolated grid: dx=1.000 mm, dy=1.000 mm
ABM1/ABM2 = 47.97 dB
ABM1 comp = 11.35 dBA/m
Location: 7.5, -12.5, 3.7 mm




0 dB = 250.3 = 47.97 dB


Ch23330/z (axial) wideband at best S/N/ABM Freq Resp(x,y,z,f)
Loc: 8.3, -12.5, 3.7 mm Diff: 1.49dB
Frequency Response
Lower Limit
Upper Limit
dB
dBA/m
Hz