# Annex C Plots of T-Coil Test Results

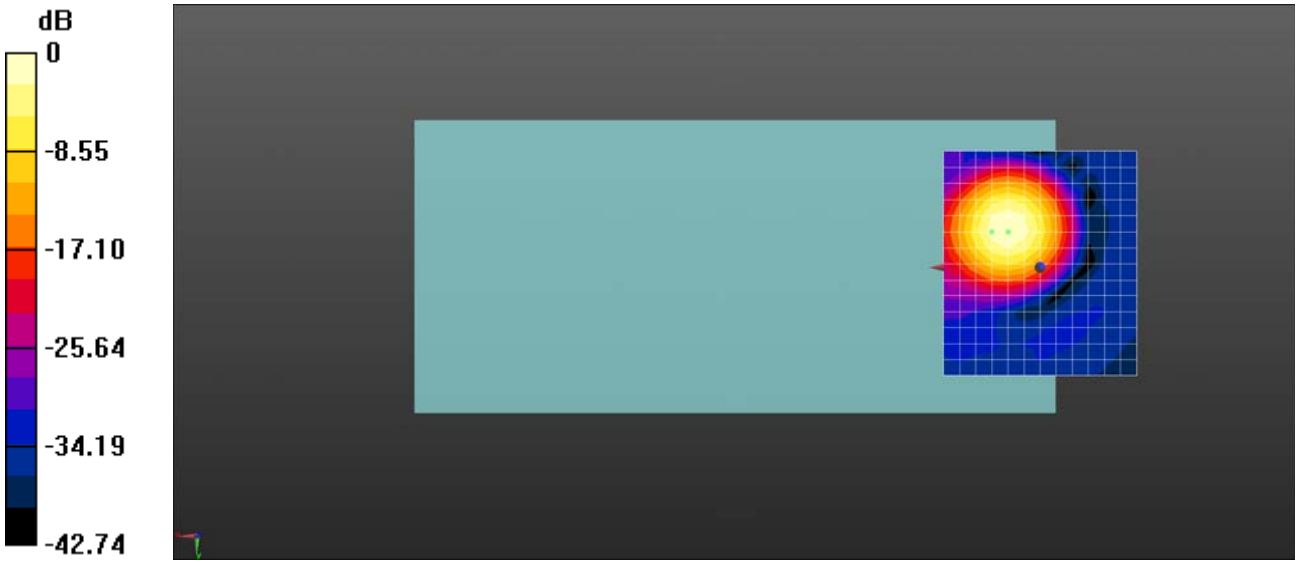
Test Laboratory: Shenzhen Morlab Communications Technology Co., Ltd. Date: 2023.01.11

## HAC_T-Coil_GSM1900_GSM Voice_Ch661_Z

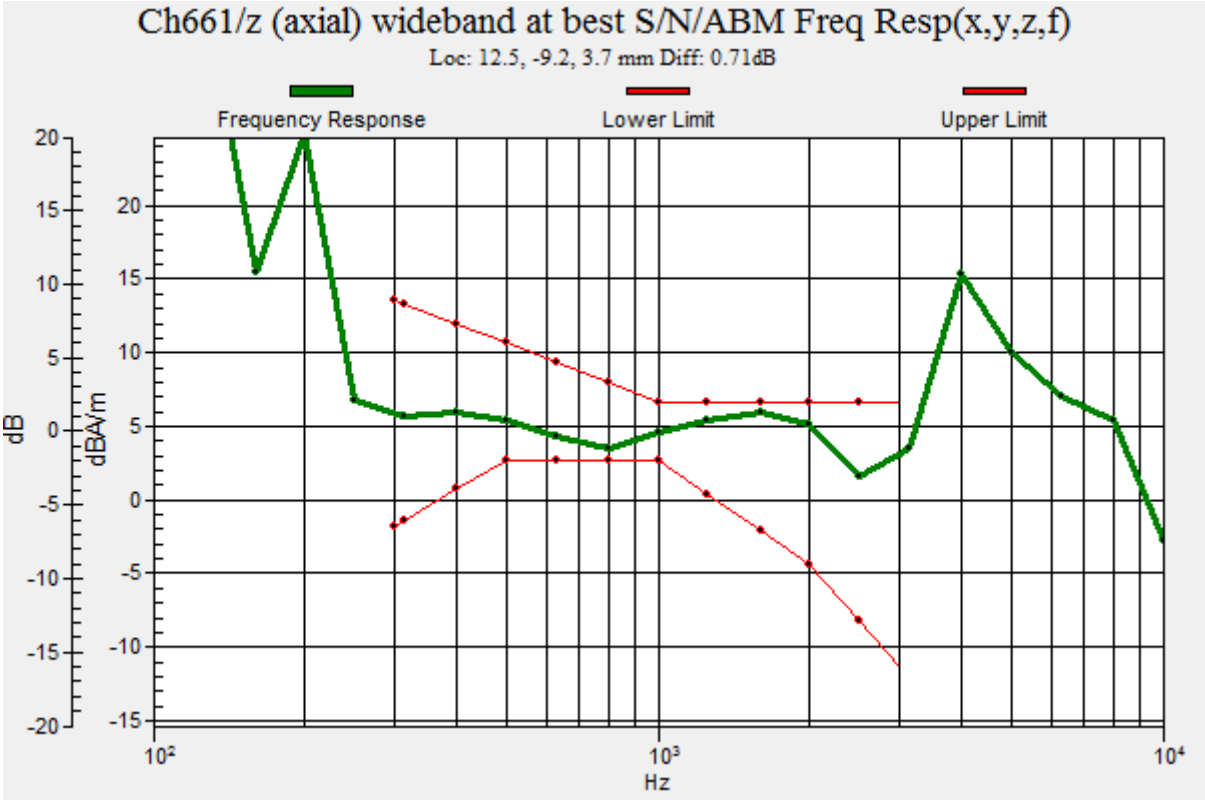
Communication System: UID 10021 - DAB, GSM-FDD (TDMA, GMSK); Frequency: 1880 MHz;Duty Cycle: 1:8.6896
Medium: Air Medium parameters used: $\sigma = 0$ S/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m$^3$
Ambient Temperature：23.2 ℃

DASY5 Configuration:
- Probe: AM1DV3 - 3128; ; Calibrated: 2022.07.19
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE4 SSn1643; Calibrated: 2022.12.30
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Ch661/z (axial) 4.2mm 50 x 50/ABM SNR(x,y,z) (13x15x1):** Measurement grid: dx=10mm, dy=10mm
ABM1/ABM2 = 35.13 dB
ABM1 comp = 4.74 dBA/m
BWC Factor = 0.07 dB
Location: 12.5, -9.2, 3.7 mm




0 dB = 57.05 = 35.13 dB


Ch661/z (axial) wideband at best S/N/ABM Freq Resp(x,y,z,f)
Loc: 12.5, -9.2, 3.7 mm Diff: 0.71dB
Frequency Response
Lower Limit
Upper Limit
dB
dBA/m
Hz
20
15
10
5
0
-5
-10
-15
-20
$10^2$
$10^3$
$10^4$

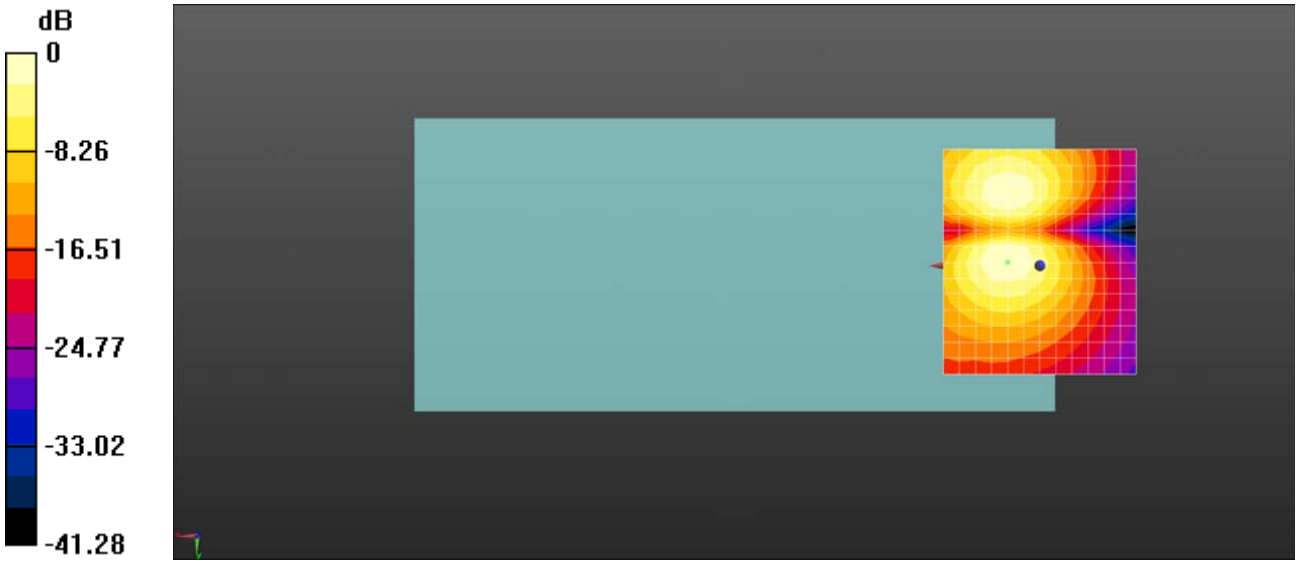
Test Laboratory: Shenzhen Morlab Communications Technology Co., Ltd. Date: 2023.01.11

## HAC_T-Coil_GSM1900_GSM Voice_Ch661_Y

Communication System: UID 10021 - DAB, GSM-FDD (TDMA, GMSK); Frequency: 1880 MHz;Duty Cycle: 1:8.6896
Medium: Air Medium parameters used: $\sigma = 0$ S/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m$^3$
Ambient Temperature：23.2 ℃

DASY5 Configuration:
- Probe: AM1DV3 - 3128; ; Calibrated: 2022.07.19
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE4 Sn1643; Calibrated: 2022.12.30
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Ch661/y (transversal) 4.2mm 50 x 50/ABM SNR(x,y,z) (13x15x1):** Measurement grid: dx=10mm, dy=10mm
ABM1/ABM2 = 33.83 dB
ABM1 comp = -1.33 dBA/m
BWC Factor = 0.07 dB
Location: 8.3, -0.8, 3.7 mm




0 dB = 49.16 = 33.83 dB

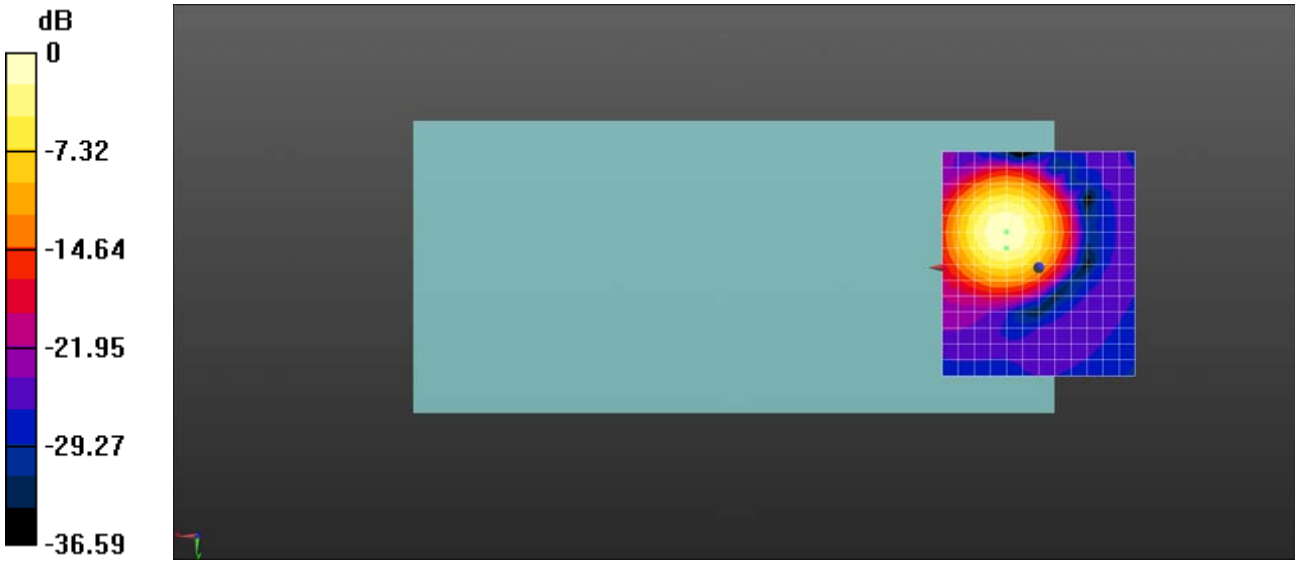
Test Laboratory: Shenzhen Morlab Communications Technology Co., Ltd. Date: 2023.01.11

## HAC_T-Coil_WCDMA Band II_AMR 12.2Kbps_Ch9400_Z

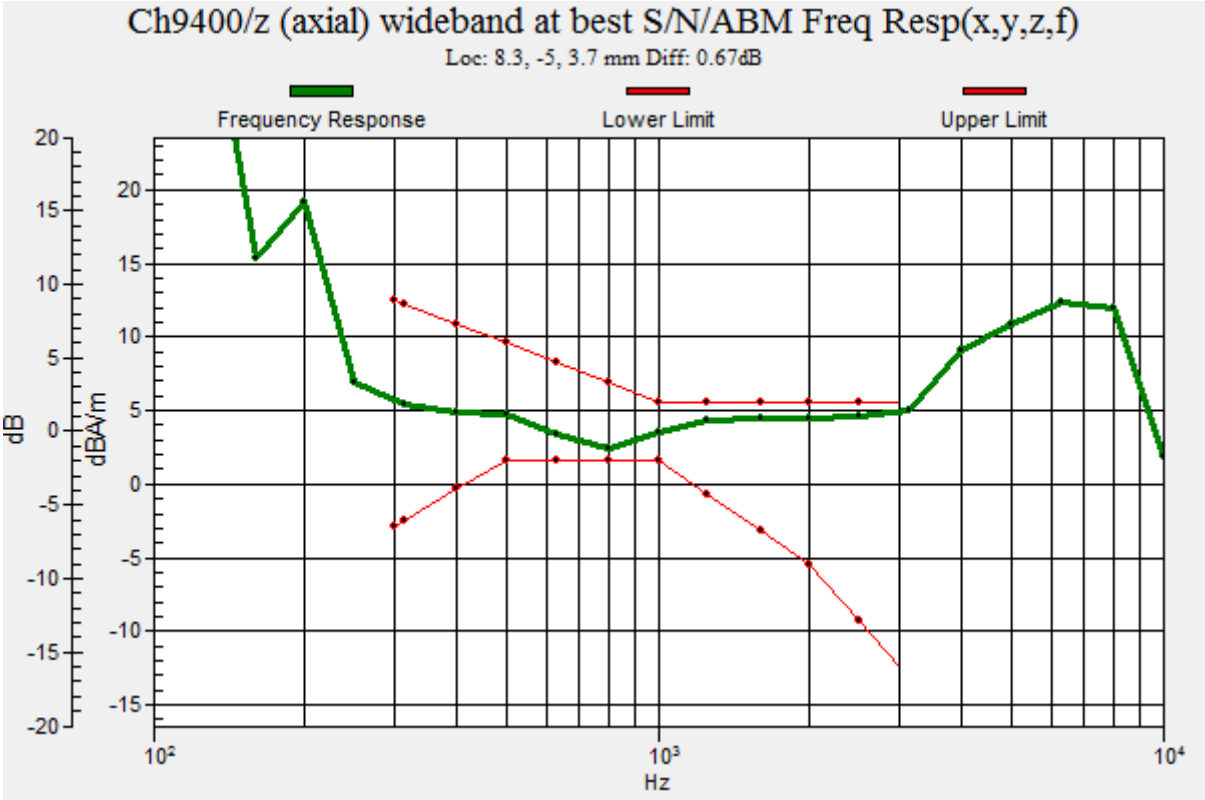
Communication System: UID 10011 - CAB, UMTS-FDD (WCDMA); Frequency: 1880 MHz;Duty Cycle: 1:1.95434
Medium: Air Medium parameters used: $\sigma = 0$ S/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m$^3$
Ambient Temperature：23.2 ℃

DASY5 Configuration:
- Probe: AM1DV3 - 3128; ; Calibrated: 2022.07.19
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE4 Sn1643; Calibrated: 2022.12.30
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Ch9400/z (axial) 4.2mm 50 x 50/ABM SNR(x,y,z) (13x15x1):** Measurement grid: dx=10mm, dy=10mm
ABM1/ABM2 = 37.07 dB
ABM1 comp = 5.13 dBA/m
BWC Factor = 0.05 dB
Location: 8.3, -5, 3.7 mm




0 dB = 71.41 = 37.08 dB


Ch9400/z (axial) wideband at best S/N/ABM Freq Resp(x,y,z,f)
Loc: 8.3, -5, 3.7 mm Diff: 0.67dB
Frequency Response
Lower Limit
Upper Limit
dB
dBA/m
20
15
10
5
0
-5
-10
-15
-20
$10^2$
$10^3$
$10^4$
Hz

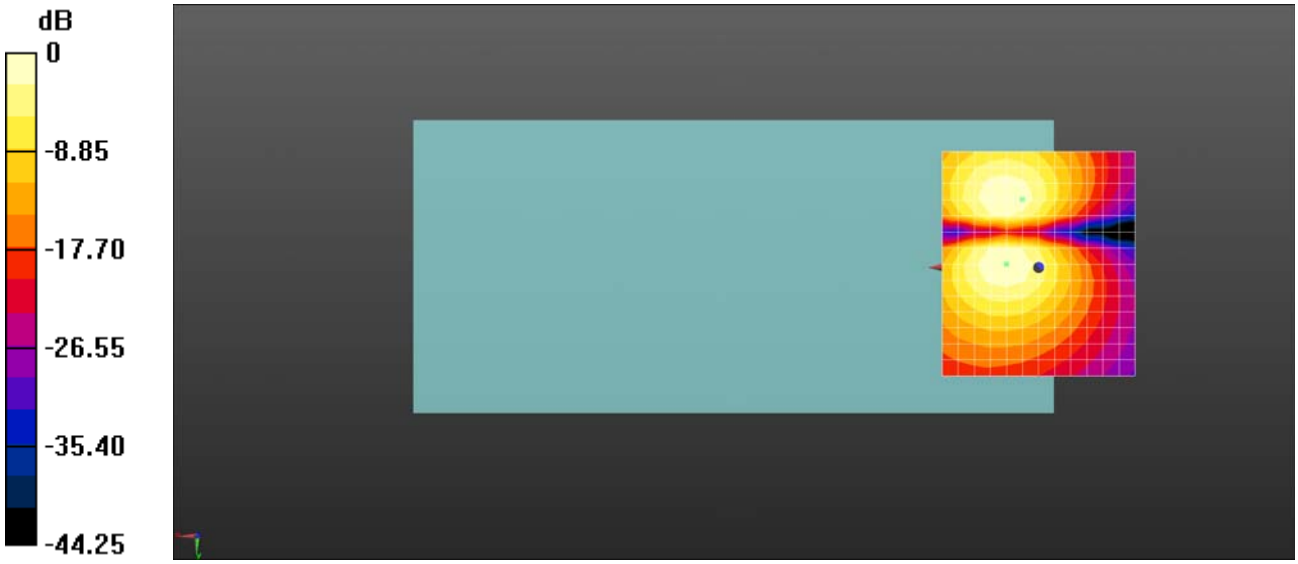
Test Laboratory: Shenzhen Morlab Communications Technology Co., Ltd. Date: 2023.01.11

## HAC_T-Coil_WCDMA Band II_AMR 12.2Kbps_Ch9400_Y

Communication System: UID 10011 - CAB, UMTS-FDD (WCDMA); Frequency: 1880 MHz;Duty Cycle: 1:1.95434
Medium: Air Medium parameters used: $\sigma = 0$ S/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m$^3$
Ambient Temperature：23.2 ℃

DASY5 Configuration:
- Probe: AM1DV3 - 3128; ; Calibrated: 2022.07.19
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE4 Sn1643; Calibrated: 2022.12.30
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Ch9400/y (transversal) 4.2mm 50 x 50/ABM SNR(x,y,z) (13x15x1):** Measurement grid: dx=10mm, dy=10mm
ABM1/ABM2 = 36.85 dB
ABM1 comp = -2.15 dBA/m
BWC Factor = 0.05 dB
Location: 4.2, -17.5, 3.7 mm




0 dB = 69.57 = 36.85 dB

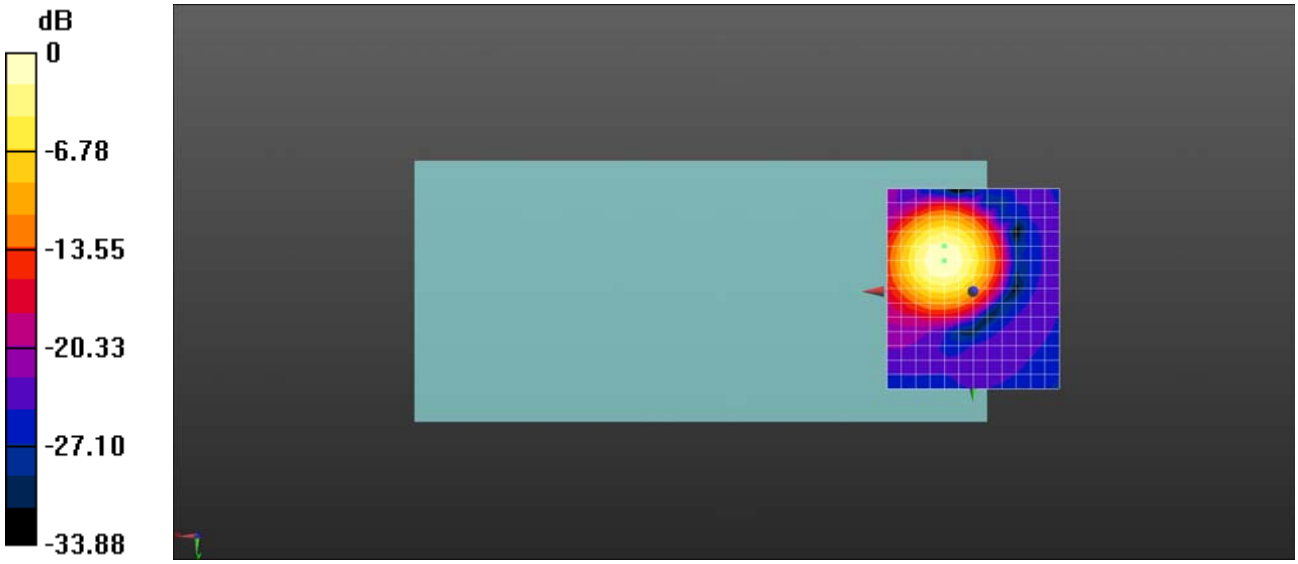
Test Laboratory: Shenzhen Morlab Communications Technology Co., Ltd. Date: 2023.01.11

## HAC_T-Coil_WCDMA Band IV_AMR 12.2Kbps_Ch1413_Z

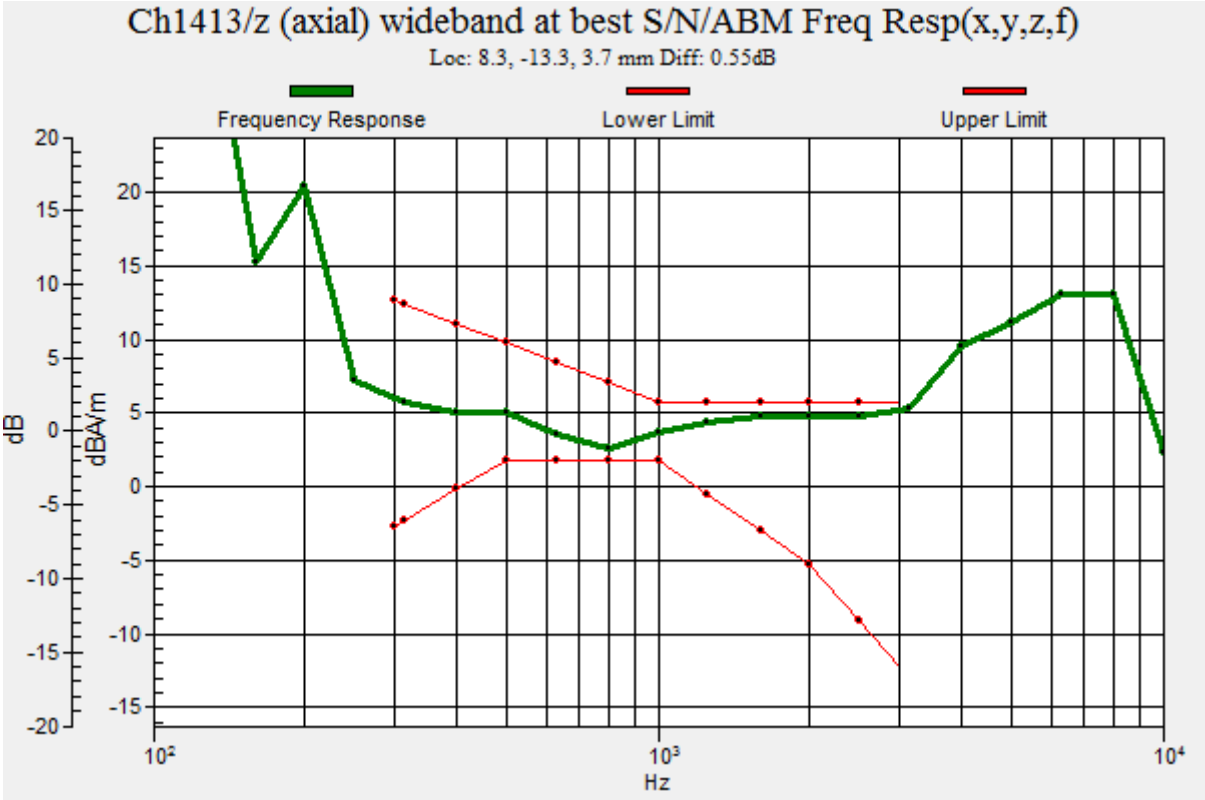
Communication System: UID 10011 - CAB, UMTS-FDD (WCDMA); Frequency: 1732.4 MHz;Duty Cycle: 1:1.95434
Medium: Air Medium parameters used: $\sigma = 0$ S/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m$^3$
Ambient Temperature：23.2 ℃

DASY5 Configuration:
- Probe: AM1DV3 - 3128; ; Calibrated: 2022.07.19
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE4 Sn1643; Calibrated: 2022.12.30
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Ch1413/z (axial) 4.2mm 50 x 50/ABM SNR(x,y,z) (13x15x1):** Measurement grid: dx=10mm, dy=10mm
ABM1/ABM2 = 37.26 dB
ABM1 comp = 5.29 dBA/m
BWC Factor = 0.04 dB
Location: 8.3, -13.3, 3.7 mm




0 dB = 72.93 = 37.26 dB


Ch1413/z (axial) wideband at best S/N/ABM Freq Resp(x,y,z,f)
Loc: 8.3, -13.3, 3.7 mm Diff: 0.55dB
Frequency Response
Lower Limit
Upper Limit
dB
dBA/m
Hz
20
15
10
5
0
-5
-10
-15
-20
10²
10³
10⁴

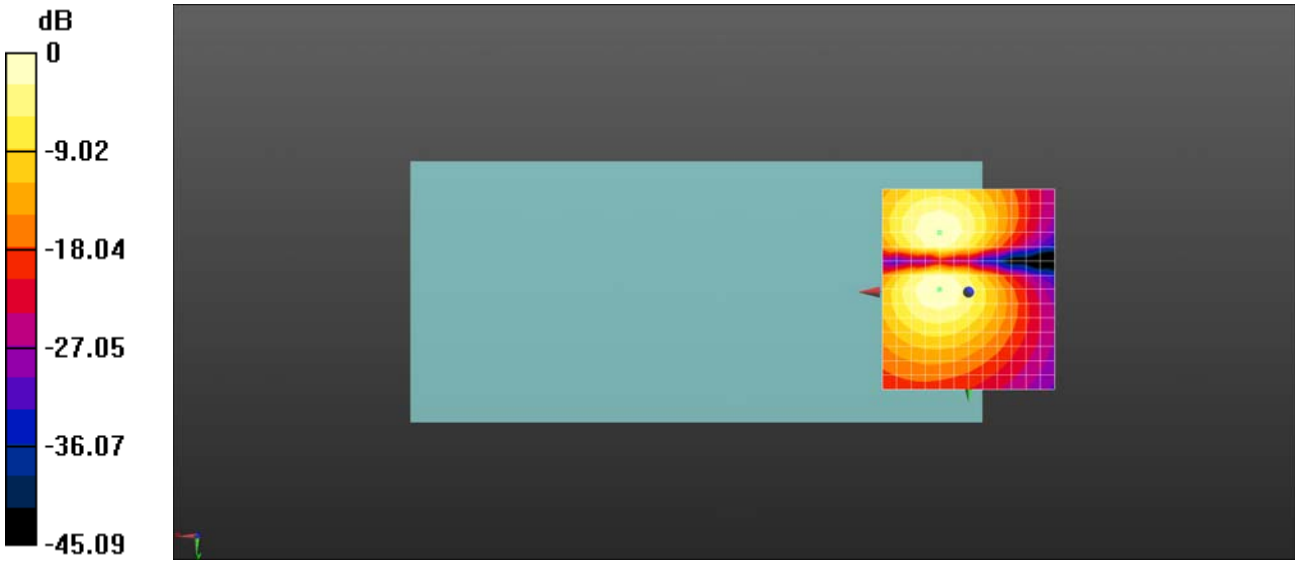
Test Laboratory: Shenzhen Morlab Communications Technology Co., Ltd. Date: 2023.01.11

## HAC_T-Coil_WCDMA Band IV_AMR 12.2Kbps_Ch1413_Y

Communication System: UID 10011 - CAB, UMTS-FDD (WCDMA); Frequency: 1732.4 MHz;Duty Cycle: 1:1.95434
Medium: Air Medium parameters used: $\sigma = 0$ S/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m$^3$
Ambient Temperature：23.2 ℃

DASY5 Configuration:
- Probe: AM1DV3 - 3128; ; Calibrated: 2022.07.19
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE4 Sn1643; Calibrated: 2022.12.30
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Ch1413/y (transversal) 4.2mm 50 x 50/ABM SNR(x,y,z) (13x15x1):** Measurement grid: dx=10mm, dy=10mm
ABM1/ABM2 = 36.88 dB
ABM1 comp = -0.81 dBA/m
BWC Factor = 0.04 dB
Location: 8.3, -17.5, 3.7 mm




0 dB = 69.82 = 36.88 dB

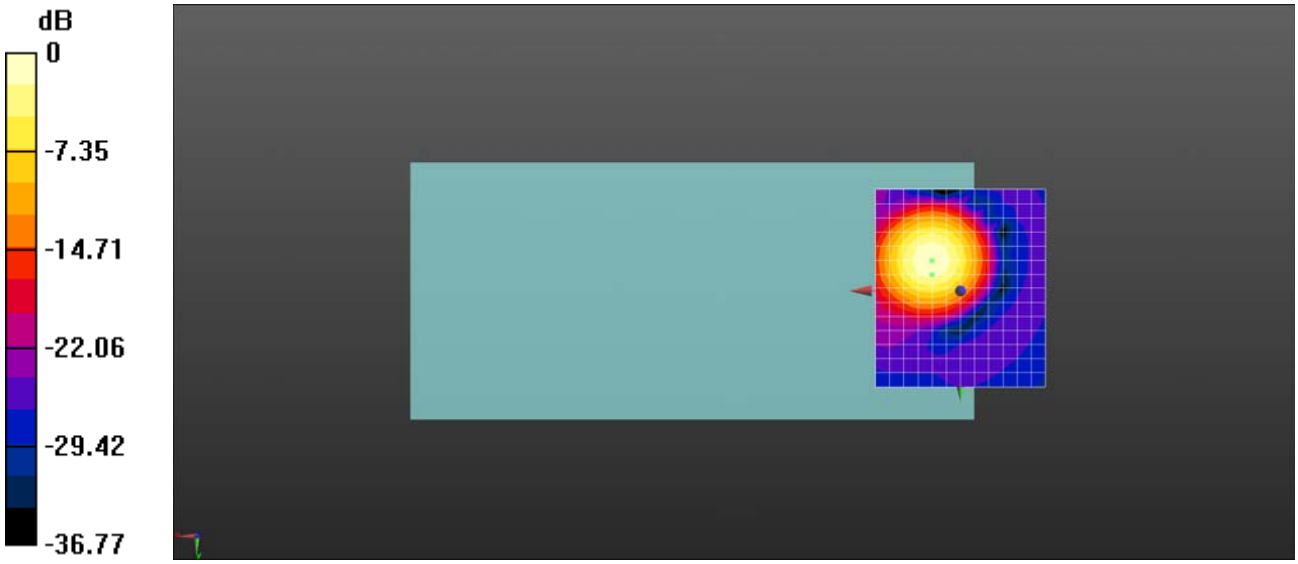
Test Laboratory: Shenzhen Morlab Communications Technology Co., Ltd. Date: 2023.01.11

## HAC_T-Coil_WCDMA Band V_AMR 12.2Kbps_Ch4182_Z

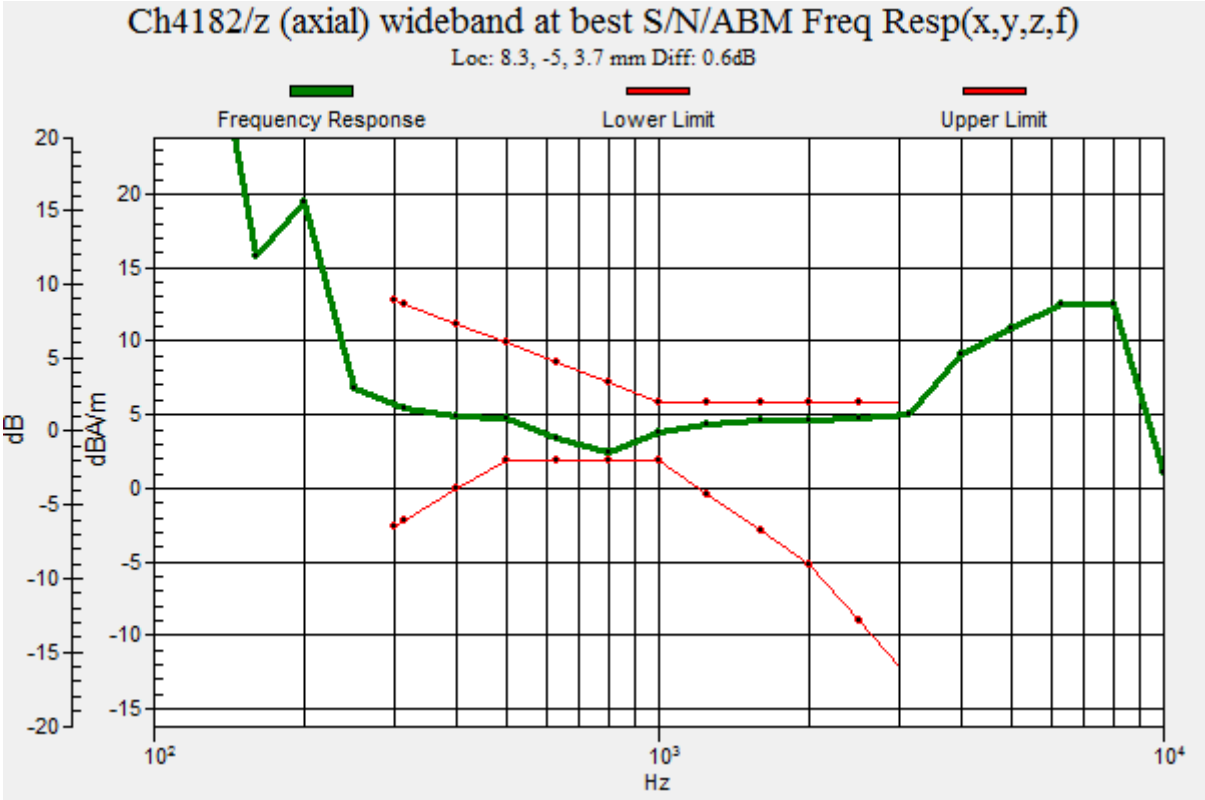
Communication System: UID 10011 - CAB, UMTS-FDD (WCDMA); Frequency: 836.4 MHz;Duty Cycle: 1:1.95434
Medium: Air Medium parameters used: $\sigma = 0$ S/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m$^3$
Ambient Temperature：23.2 ℃

DASY5 Configuration:
- Probe: AM1DV3 - 3128; ; Calibrated: 2022.07.19
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE4 Sn1643; Calibrated: 2022.12.30
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Ch4182/z (axial) 4.2mm 50 x 50/ABM SNR(x,y,z) (13x15x1):** Measurement grid: dx=10mm, dy=10mm
ABM1/ABM2 = 37.25 dB
ABM1 comp = 5.09 dBA/m
BWC Factor = 0.04 dB
Location: 8.3, -5, 3.7 mm




0 dB = 72.82 = 37.25 dB


Ch4182/z (axial) wideband at best S/N/ABM Freq Resp(x,y,z,f)
Loc: 8.3, -5, 3.7 mm Diff: 0.6dB
Frequency Response
Lower Limit
Upper Limit
dB
dBA/m
Hz
20
15
10
5
0
-5
-10
-15
-20
10²
10³
10⁴

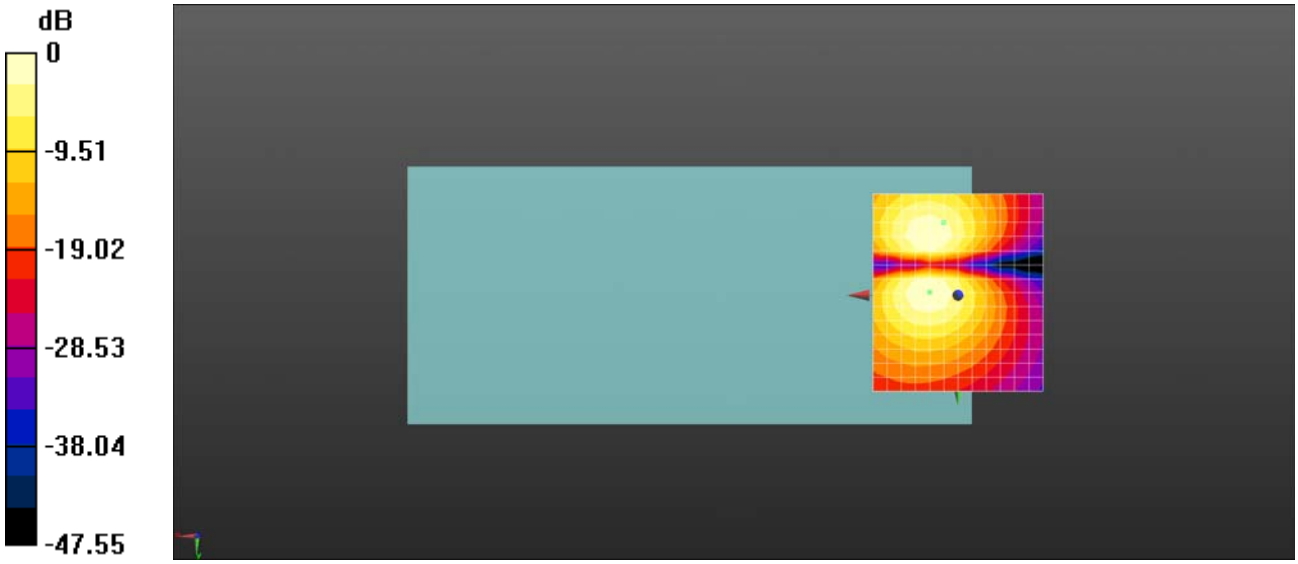
Test Laboratory: Shenzhen Morlab Communications Technology Co., Ltd. Date: 2023.01.11

## HAC_T-Coil_WCDMA Band V_AMR 12.2Kbps_Ch4182_Y

Communication System: UID 10011 - CAB, UMTS-FDD (WCDMA); Frequency: 836.4 MHz;Duty Cycle: 1:1.95434
Medium: Air Medium parameters used: $\sigma = 0$ S/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m$^3$
Ambient Temperature：23.2 ℃

DASY5 Configuration:
- Probe: AM1DV3 - 3128; ; Calibrated: 2022.07.19
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE4 Sn1643; Calibrated: 2022.12.30
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Ch4182/y (transversal) 4.2mm 50 x 50/ABM SNR(x,y,z) (13x15x1):** Measurement grid: dx=10mm, dy=10mm
ABM1/ABM2 = 36.90 dB
ABM1 comp = -3.42 dBA/m
BWC Factor = 0.04 dB
Location: 4.2, -21.7, 3.7 mm




0 dB = 69.98 = 36.90 dB

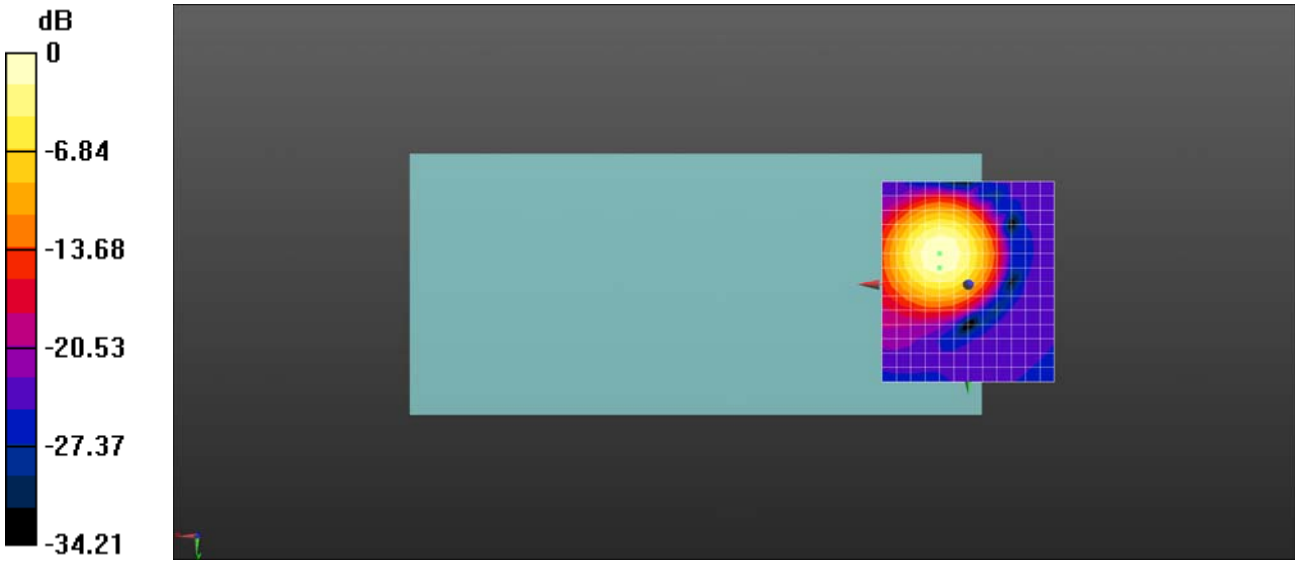
Test Laboratory: Shenzhen Morlab Communications Technology Co., Ltd. Date: 2023.01.10

## HAC_T-Coil_LTE Band 2_20MHz_QPSK_1RB_0offset_12.2Kbps_Ch18900_Z

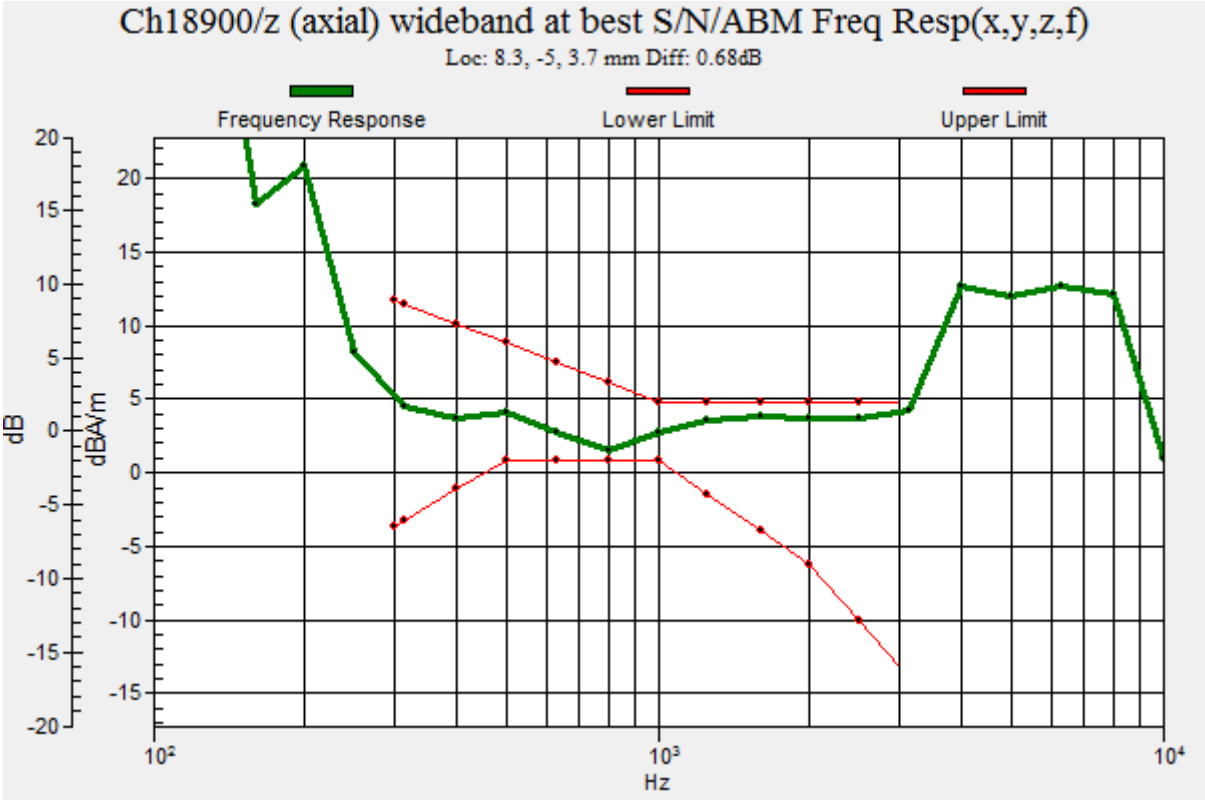
Communication System: UID 10169 - CAB, LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK);
Frequency: 1880 MHz;Duty Cycle: 1:3.74111
Medium: Air Medium parameters used: $\sigma = 0$ S/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m$^3$
Ambient Temperature：23.2 ℃

DASY5 Configuration:
- Probe: AM1DV3 - 3128; ; Calibrated: 2022.07.19
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE4 Sn1643; Calibrated: 2022.12.30
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Ch18900/z (axial) 4.2mm 50 x 50/ABM SNR(x,y,z) (13x15x1):** Measurement grid:
dx=10mm, dy=10mm
ABM1/ABM2 = 33.71 dB
ABM1 comp = 4.16 dBA/m
BWC Factor = 0.04 dB
Location: 8.3, -5, 3.7 mm




0 dB = 48.49 = 33.71 dB


Ch18900/z (axial) wideband at best S/N/ABM Freq Resp(x,y,z,f)
Loc: 8.3, -5, 3.7 mm Diff: 0.68dB
Frequency Response
Lower Limit
Upper Limit
dB
dBA/m
20
15
10
5
0
-5
-10
-15
-20
$10^2$
$10^3$
$10^4$
Hz

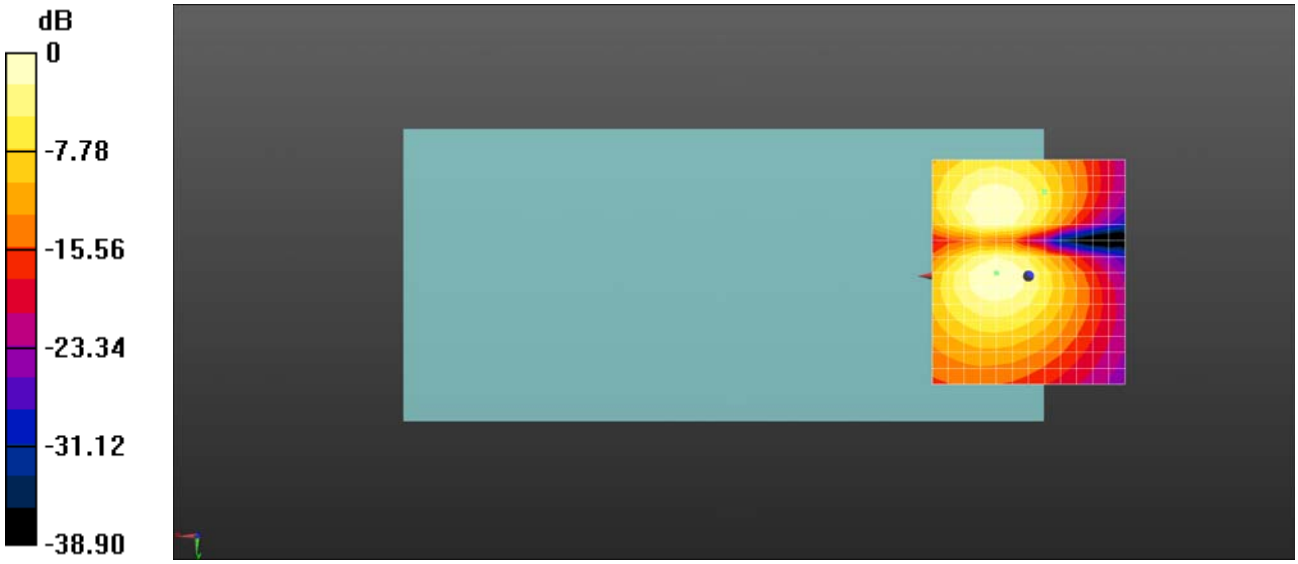
Test Laboratory: Shenzhen Morlab Communications Technology Co., Ltd. Date: 2023.01.10

## HAC_T-Coil_LTE Band 2_20MHz_QPSK_1RB_0offset_12.2Kbps_Ch18900_Y

Communication System: UID 10169 - CAB, LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK);
Frequency: 1880 MHz;Duty Cycle: 1:3.74111
Medium: Air Medium parameters used: $\sigma = 0$ S/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m$^3$
Ambient Temperature：23.2 ℃

DASY5 Configuration:
- Probe: AM1DV3 - 3128; ; Calibrated: 2022.07.19
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE4 Sn1643; Calibrated: 2022.12.30
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Ch18900/y (transversal) 4.2mm 50 x 50/ABM SNR(x,y,z) (13x15x1):** Measurement grid: dx=10mm, dy=10mm
ABM1/ABM2 = 32.91 dB
ABM1 comp = -10.82 dBA/m
BWC Factor = 0.04 dB
Location: -4.2, -21.7, 3.7 mm




0 dB = 44.20 = 32.91 dB

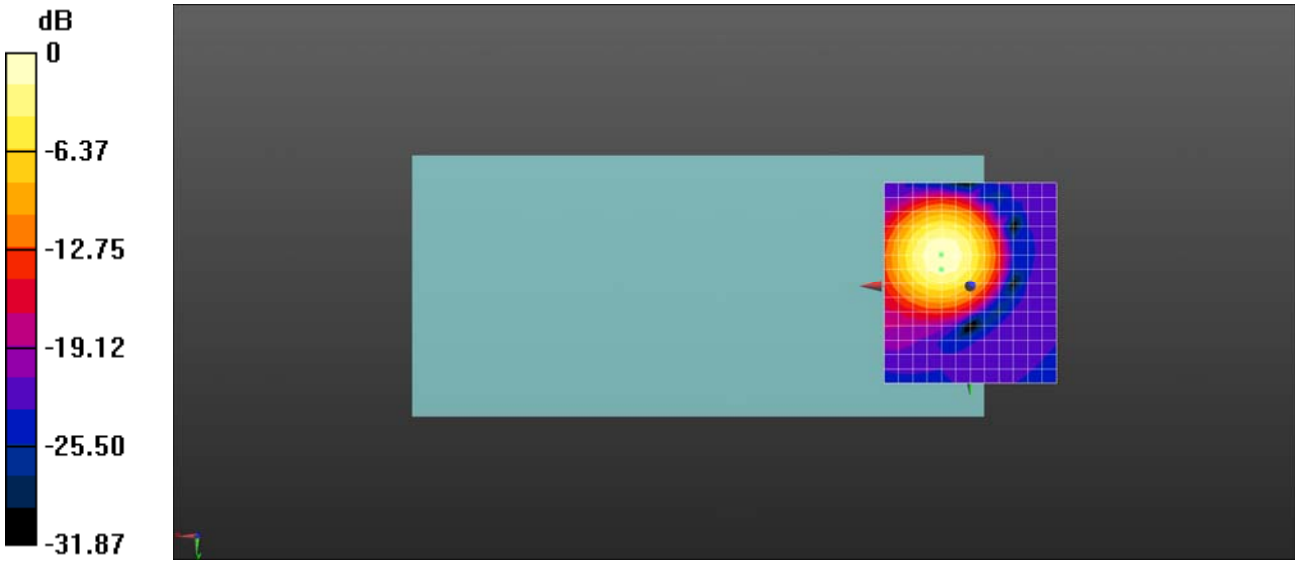
Test Laboratory: Shenzhen Morlab Communications Technology Co., Ltd. Date: 2023.01.10

## HAC_T-Coil_LTE Band 4_20MHz_QPSK_1RB_0offset_12.2Kbps_Ch20175_Z

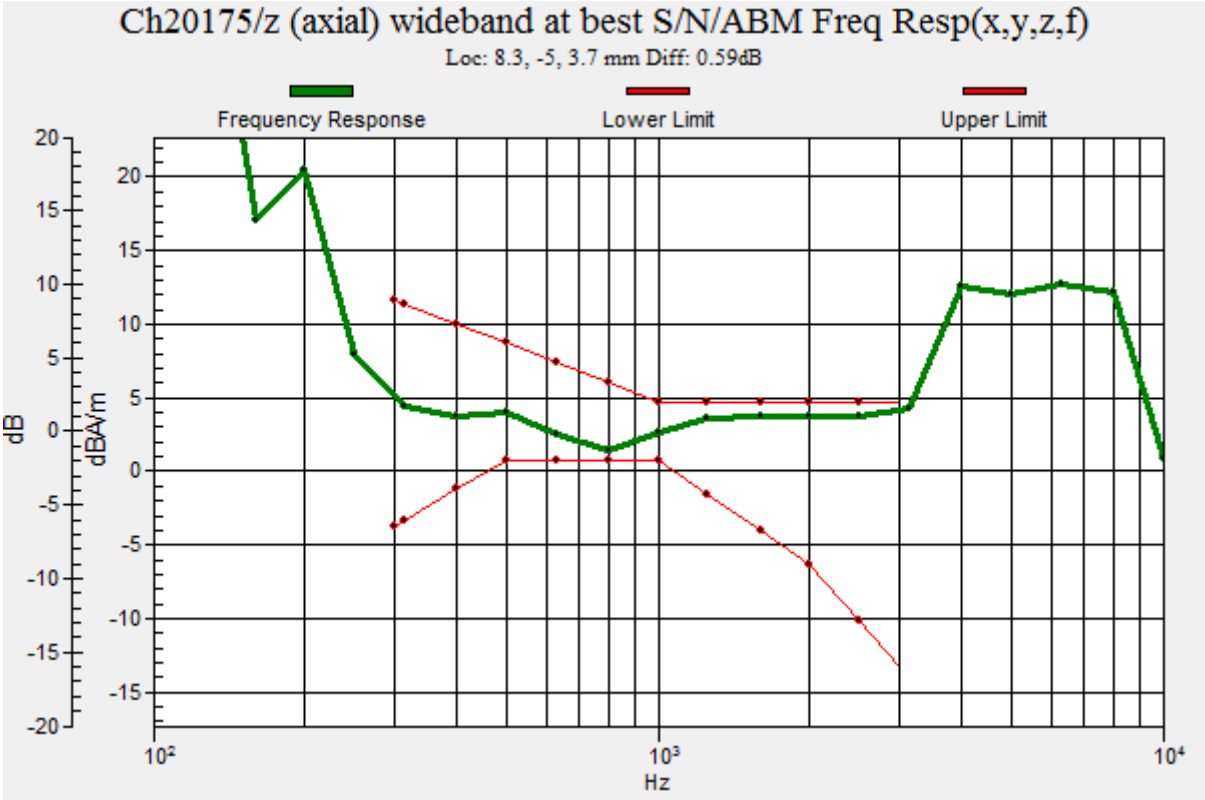
Communication System: UID 10169 - CAB, LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK);
Frequency: 1732.5 MHz;Duty Cycle: 1:3.74111
Medium: Air Medium parameters used: $\sigma = 0$ S/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m$^3$
Ambient Temperature：23.2 ℃

DASY5 Configuration:
- Probe: AM1DV3 - 3128; ; Calibrated: 2022.07.19
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE4 Sn1643; Calibrated: 2022.12.30
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Ch20175/z (axial) 4.2mm 50 x 50/ABM SNR(x,y,z) (13x15x1):** Measurement grid:
dx=10mm, dy=10mm
ABM1/ABM2 = 33.32 dB
ABM1 comp = 4.02 dBA/m
BWC Factor = 0.07 dB
Location: 8.3, -5, 3.7 mm




0 dB = 46.33 = 33.32 dB


Ch20175/z (axial) wideband at best S/N/ABM Freq Resp(x,y,z,f)
Loc: 8.3, -5, 3.7 mm Diff: 0.59dB
Frequency Response
Lower Limit
Upper Limit
dB
dBA/m
20
15
10
5
0
-5
-10
-15
-20
$10^2$
$10^3$
$10^4$
Hz

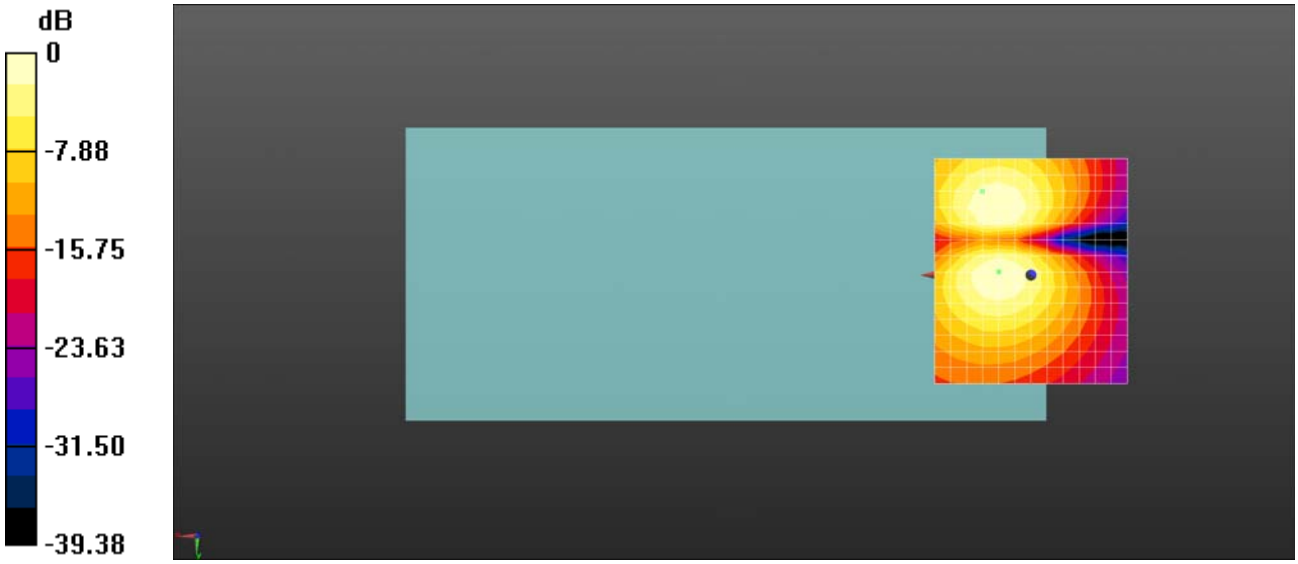
Test Laboratory: Shenzhen Morlab Communications Technology Co., Ltd. Date: 2023.01.10

## HAC_T-Coil_LTE Band 4_20MHz_QPSK_1RB_0offset_12.2Kbps_Ch20175_Y

Communication System: UID 10169 - CAB, LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK);
Frequency: 1732.5 MHz;Duty Cycle: 1:3.74111
Medium: Air Medium parameters used: $\sigma = 0$ S/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m$^3$
Ambient Temperature：23.2 ℃

DASY5 Configuration:
- Probe: AM1DV3 - 3128; ; Calibrated: 2022.07.19
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE4 Sn1643; Calibrated: 2022.12.30
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Ch20175/y (transversal) 4.2mm 50 x 50/ABM SNR(x,y,z) (13x15x1):** Measurement grid: dx=10mm, dy=10mm
ABM1/ABM2 = 33.09 dB
ABM1 comp = -4.54 dBA/m
BWC Factor = 0.07 dB
Location: 12.5, -21.7, 3.7 mm




0 dB = 45.11 = 33.09 dB

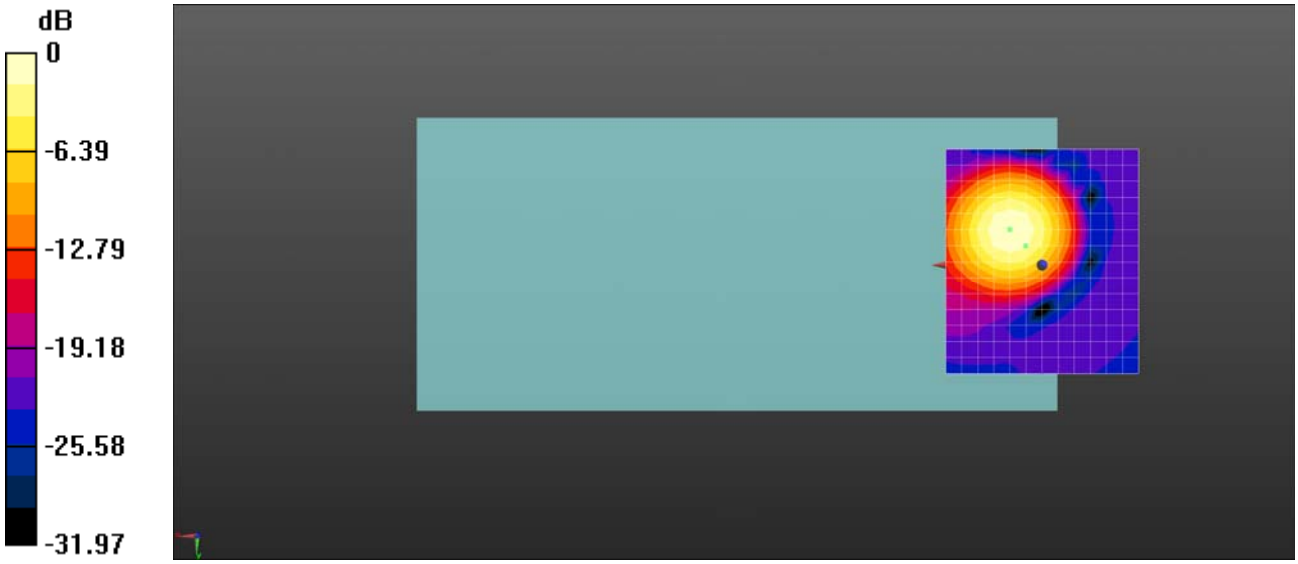
Test Laboratory: Shenzhen Morlab Communications Technology Co., Ltd. Date: 2023.01.10

## HAC_T-Coil_LTE Band 5_10MHz_QPSK_1RB_0offset_12.2Kbps_Ch20525_Z

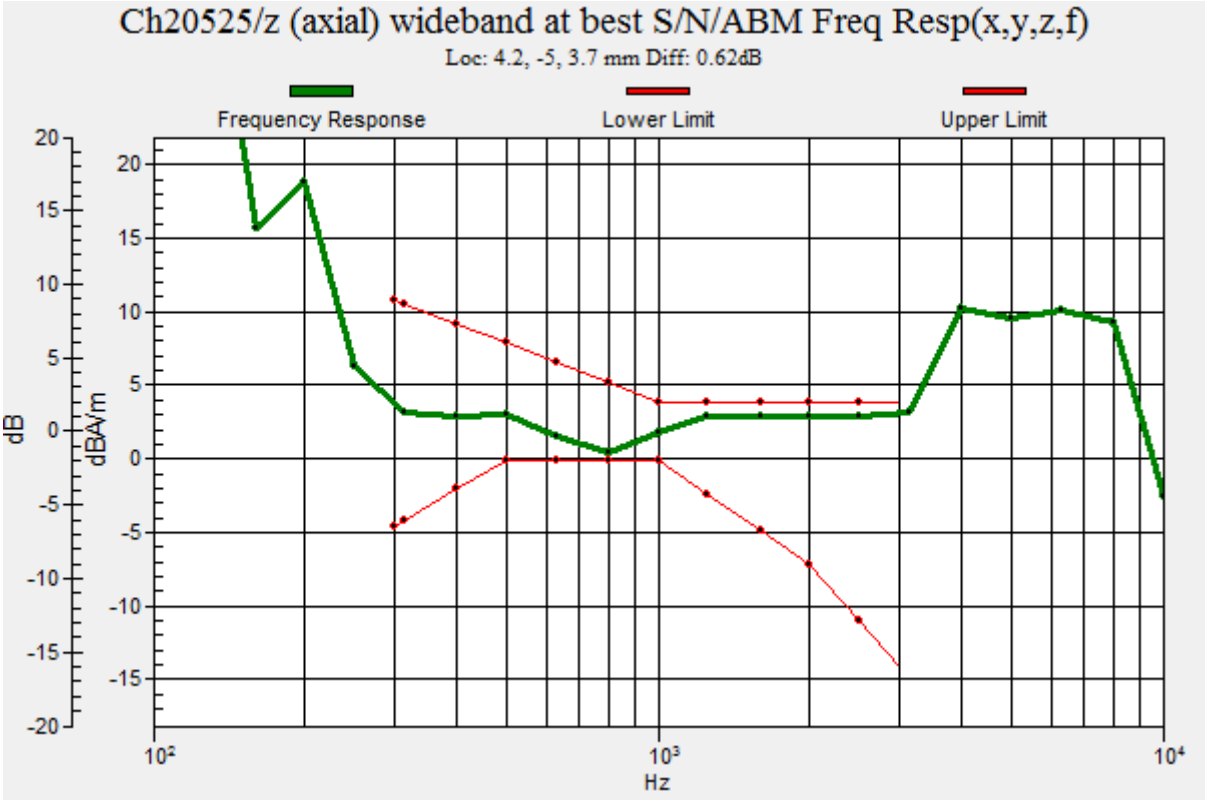
Communication System: UID 10175 - CAB, LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK);
Frequency: 836.5 MHz;Duty Cycle: 1:3.7325
Medium: Air Medium parameters used: $\sigma = 0$ S/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m$^3$
Ambient Temperature：23.2 ℃

DASY5 Configuration:
- Probe: AM1DV3 - 3128; ; Calibrated: 2022.07.19
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE4 Sn1643; Calibrated: 2022.12.30
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Ch20525/z (axial) 4.2mm 50 x 50/ABM SNR(x,y,z) (13x15x1):** Measurement grid:
dx=10mm, dy=10mm
ABM1/ABM2 = 33.57 dB
ABM1 comp = 2.99 dBA/m
BWC Factor = 0.04 dB
Location: 4.2, -5, 3.7 mm




0 dB = 47.72 = 33.57 dB


Ch20525/z (axial) wideband at best S/N/ABM Freq Resp(x,y,z,f)
Loc: 4.2, -5, 3.7 mm Diff: 0.62dB
Frequency Response
Lower Limit
Upper Limit
dB
dBA/m
20
15
10
5
0
-5
-10
-15
-20
$10^2$
$10^3$
$10^4$
Hz

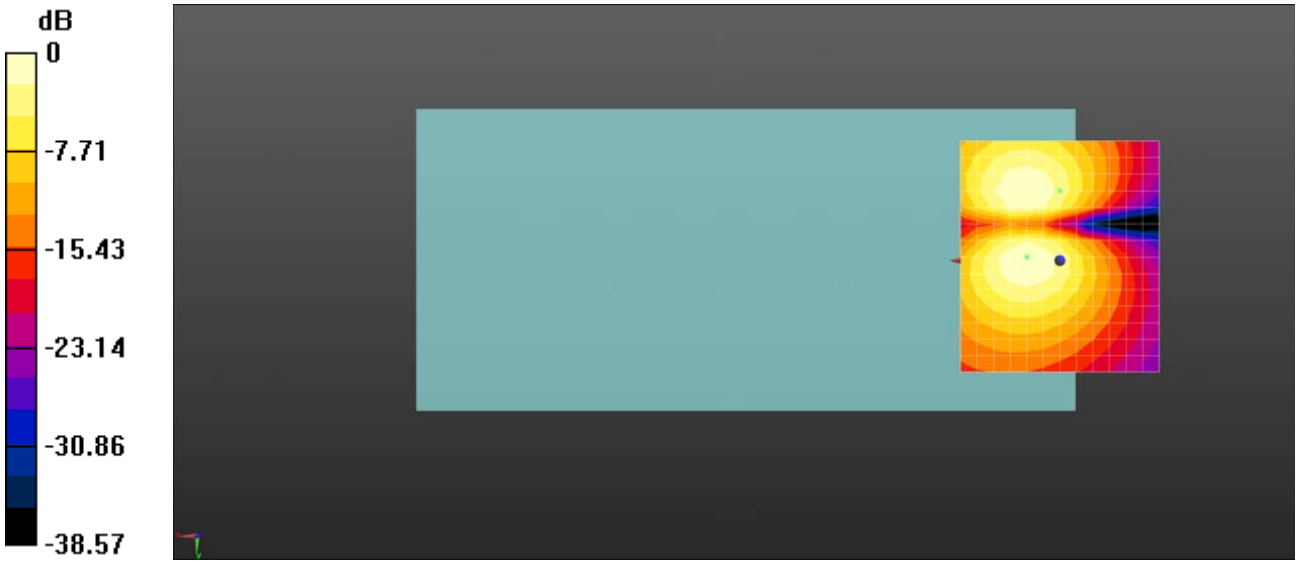
Test Laboratory: Shenzhen Morlab Communications Technology Co., Ltd. Date: 2023.01.10

## HAC_T-Coil_LTE Band 5_10MHz_QPSK_1RB_0offset_12.2Kbps_Ch20525_Y

Communication System: UID 10175 - CAB, LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK);
Frequency: 836.5 MHz;Duty Cycle: 1:3.7325
Medium: Air Medium parameters used: $\sigma = 0$ S/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m$^3$
Ambient Temperature：23.2 ℃

DASY5 Configuration:
- Probe: AM1DV3 - 3128; ; Calibrated: 2022.07.19
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE4 Sn1643; Calibrated: 2022.12.30
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Ch20525/y (transversal) 4.2mm 50 x 50/ABM SNR(x,y,z) (13x15x1):** Measurement grid: dx=10mm, dy=10mm
ABM1/ABM2 = 33.15 dB
ABM1 comp = -6.53 dBA/m
BWC Factor = 0.04 dB
Location: 0, -17.5, 3.7 mm




0 dB = 45.44 = 33.15 dB

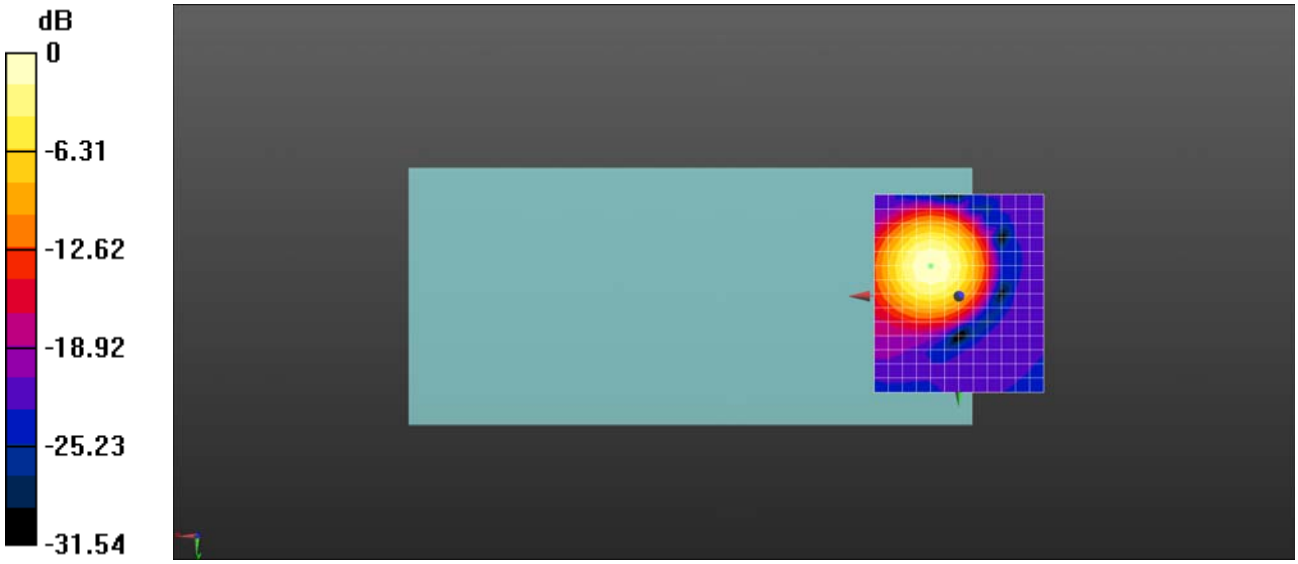
Test Laboratory: Shenzhen Morlab Communications Technology Co., Ltd. Date: 2023.01.10

## HAC_T-Coil_LTE Band 7_20MHz_QPSK_1RB_0offset_12.2Kbps_Ch21100_Z

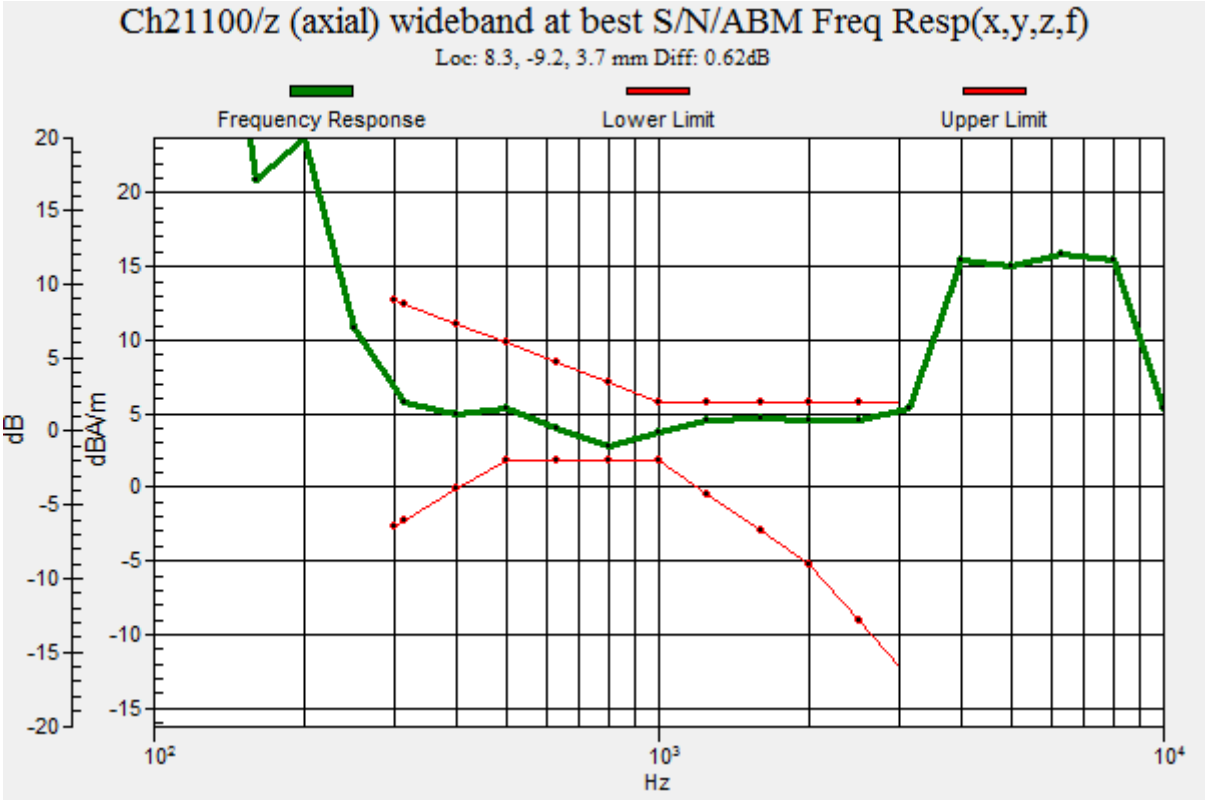
Communication System: UID 10169 - CAB, LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK);
Frequency: 2535 MHz;Duty Cycle: 1:3.74111
Medium: Air Medium parameters used: $\sigma = 0$ S/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m$^3$
Ambient Temperature：23.2 ℃

DASY5 Configuration:
- Probe: AM1DV3 - 3128; ; Calibrated: 2022.07.19
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE4 Sn1643; Calibrated: 2022.12.30
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Ch21100/z (axial) 4.2mm 50 x 50/ABM SNR(x,y,z) (13x15x1):** Measurement grid:
dx=10mm, dy=10mm
ABM1/ABM2 = 33.47 dB
ABM1 comp = 5.60 dBA/m
BWC Factor = 0.04 dB
Location: 8.3, -9.2, 3.7 mm




0 dB = 47.15 = 33.47 dB


Ch21100/z (axial) wideband at best S/N/ABM Freq Resp(x,y,z,f)
Loc: 8.3, -9.2, 3.7 mm Diff: 0.62dB
Frequency Response
Lower Limit
Upper Limit
dB
dBA/m
Hz

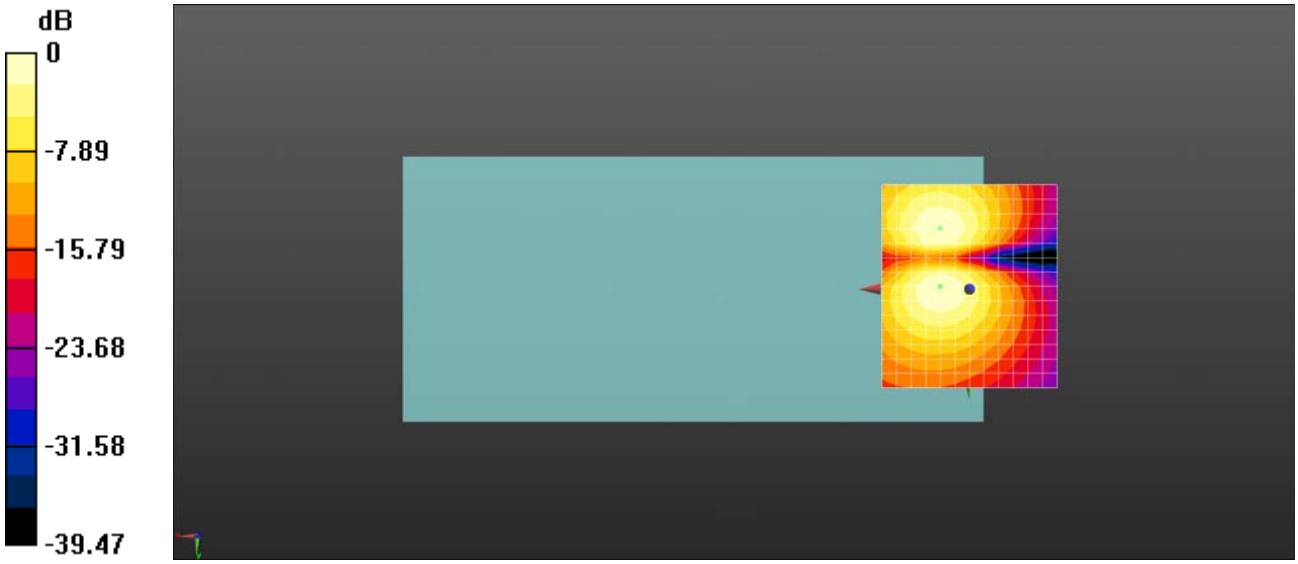
Test Laboratory: Shenzhen Morlab Communications Technology Co., Ltd. Date: 2023.01.10

## HAC_T-Coil_LTE Band 7_20MHz_QPSK_1RB_0offset_12.2Kbps_Ch21100_Y

Communication System: UID 10169 - CAB, LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK);
Frequency: 2535 MHz;Duty Cycle: 1:3.74111
Medium: Air Medium parameters used: $\sigma = 0$ S/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m$^3$
Ambient Temperature：23.2 ℃

DASY5 Configuration:
- Probe: AM1DV3 - 3128; ; Calibrated: 2022.07.19
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE4 Sn1643; Calibrated: 2022.12.30
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Ch21100/y (transversal) 4.2mm 50 x 50/ABM SNR(x,y,z) (13x15x1):** Measurement grid: dx=10mm, dy=10mm
ABM1/ABM2 = 33.15 dB
ABM1 comp = -2.48 dBA/m
BWC Factor = 0.04 dB
Location: 8.3, -17.5, 3.7 mm




0 dB = 45.43 = 33.15 dB

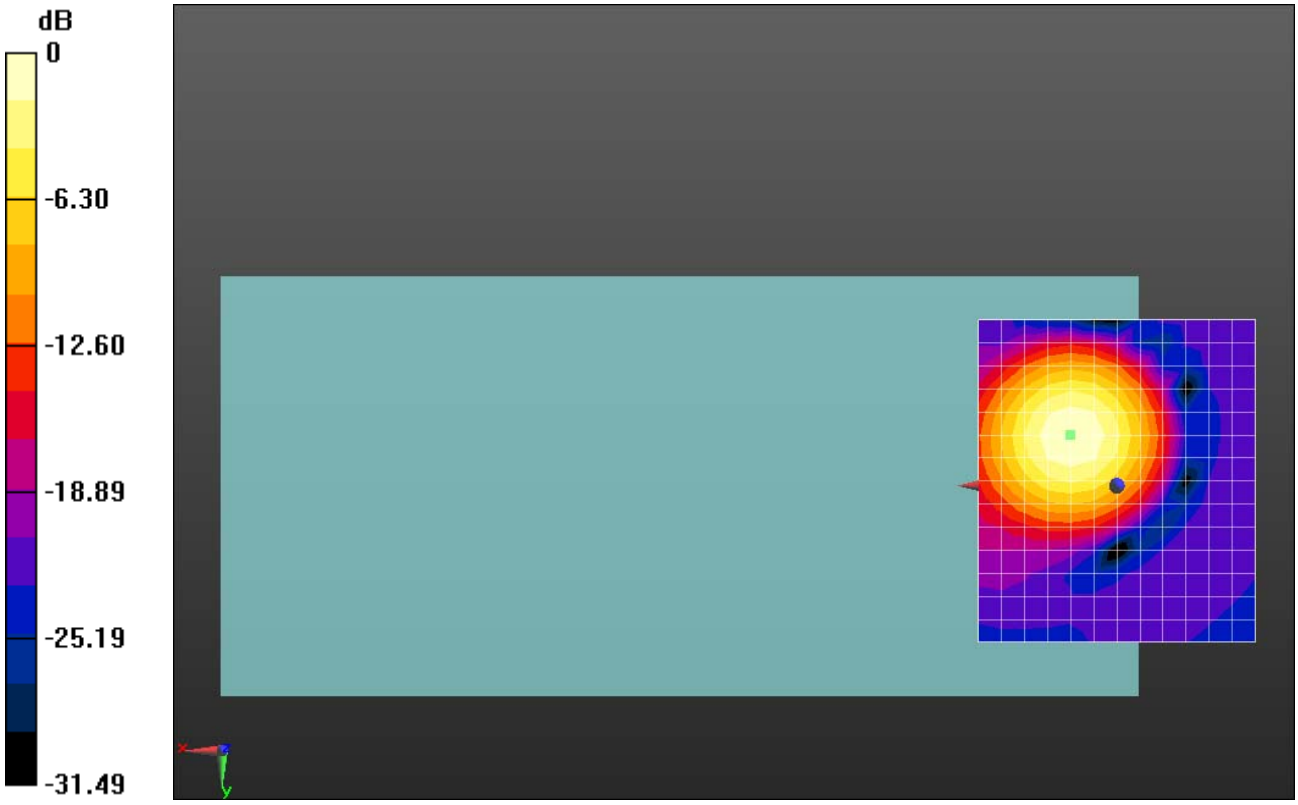
Test Laboratory: Shenzhen Morlab Communications Technology Co., Ltd. Date: 2023.01.10

## HAC_T-Coil_LTE Band 12_10MHz_QPSK_1RB_0offset_12.2Kbps_Ch23095_Z

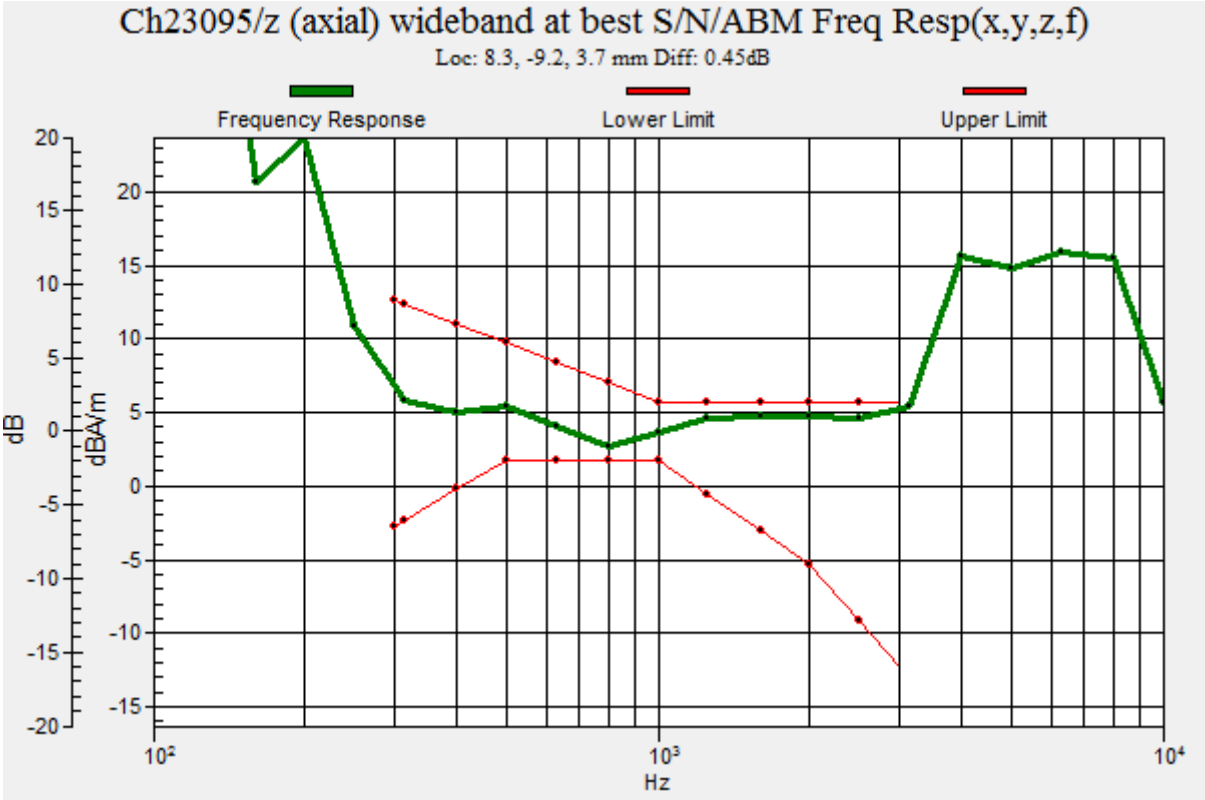
Communication System: UID 10175 - CAB, LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK);
Frequency: 707.5 MHz;Duty Cycle: 1:3.7325
Medium: Air Medium parameters used: $\sigma = 0$ S/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m$^3$
Ambient Temperature：23.2 ℃

DASY5 Configuration:
- Probe: AM1DV3 - 3128; ; Calibrated: 2022.07.19
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE4 Sn1643; Calibrated: 2022.12.30
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Ch23095/z (axial) 4.2mm 50 x 50/ABM SNR(x,y,z) (13x15x1):** Measurement grid:
dx=10mm, dy=10mm
ABM1/ABM2 = 33.45 dB
ABM1 comp = 5.61 dBA/m
BWC Factor = 0.04 dB
Location: 8.3, -9.2, 3.7 mm




0 dB = 47.06 = 33.45 dB


Ch23095/z (axial) wideband at best S/N/ABM Freq Resp(x,y,z,f)
Loc: 8.3, -9.2, 3.7 mm Diff: 0.45dB
Frequency Response
Lower Limit
Upper Limit
dB
dBA/m
Hz
20
15
10
5
0
-5
-10
-15
-20
10²
10³
10⁴

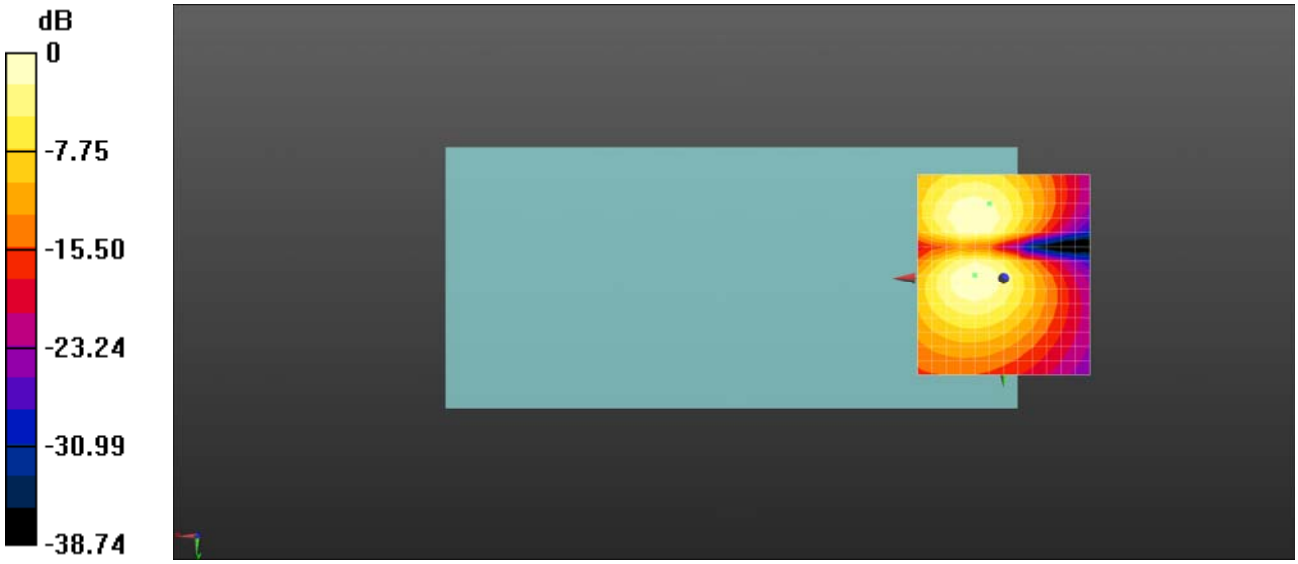
Test Laboratory: Shenzhen Morlab Communications Technology Co., Ltd. Date: 2023.01.10

## HAC_T-Coil_LTE Band 12_10MHz_QPSK_1RB_0offset_12.2Kbps_Ch23095_Y

Communication System: UID 10175 - CAB, LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK);
Frequency: 707.5 MHz;Duty Cycle: 1:3.7325
Medium: Air Medium parameters used: $\sigma = 0$ S/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m$^3$
Ambient Temperature：23.2 ℃

DASY5 Configuration:
- Probe: AM1DV3 - 3128; ; Calibrated: 2022.07.19
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE4 Sn1643; Calibrated: 2022.12.30
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Ch23095/y (transversal) 4.2mm 50 x 50/ABM SNR(x,y,z) (13x15x1):** Measurement grid: dx=10mm, dy=10mm
ABM1/ABM2 = 33.06 dB
ABM1 comp = -4.91 dBA/m
BWC Factor = 0.04 dB
Location: 4.2, -21.7, 3.7 mm




0 dB = 44.99 = 33.06 dB

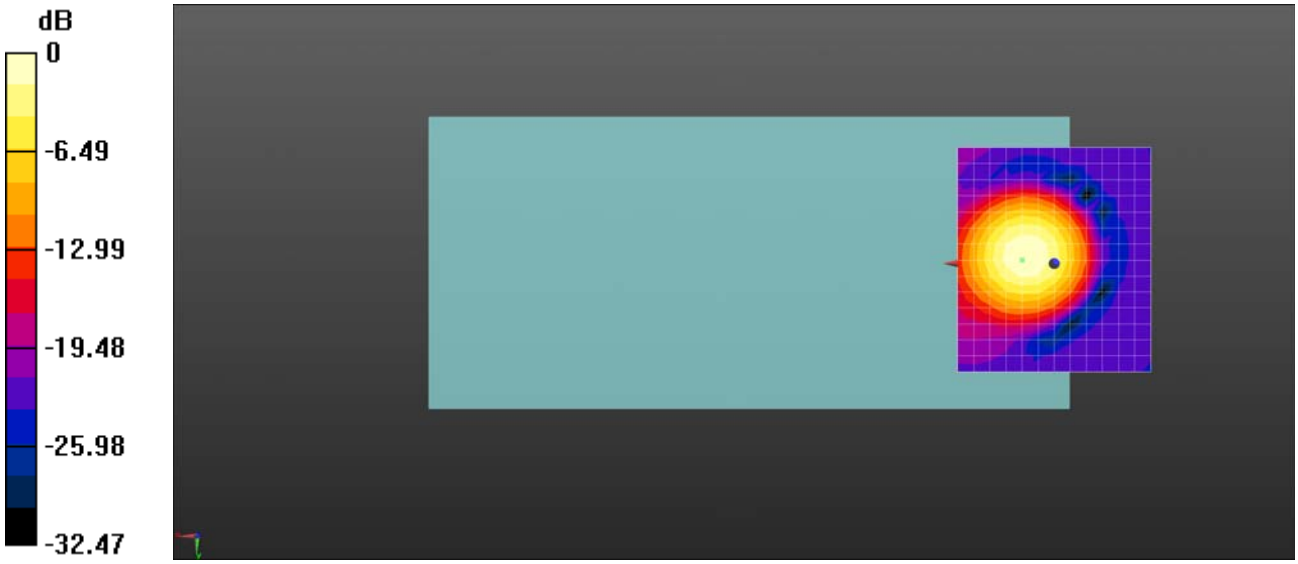
Test Laboratory: Shenzhen Morlab Communications Technology Co., Ltd. Date: 2023.01.11

## HAC_T-Coil_LTE Band 13_10MHz_QPSK_1RB_0offset_12.2Kbps_Ch23230_Z

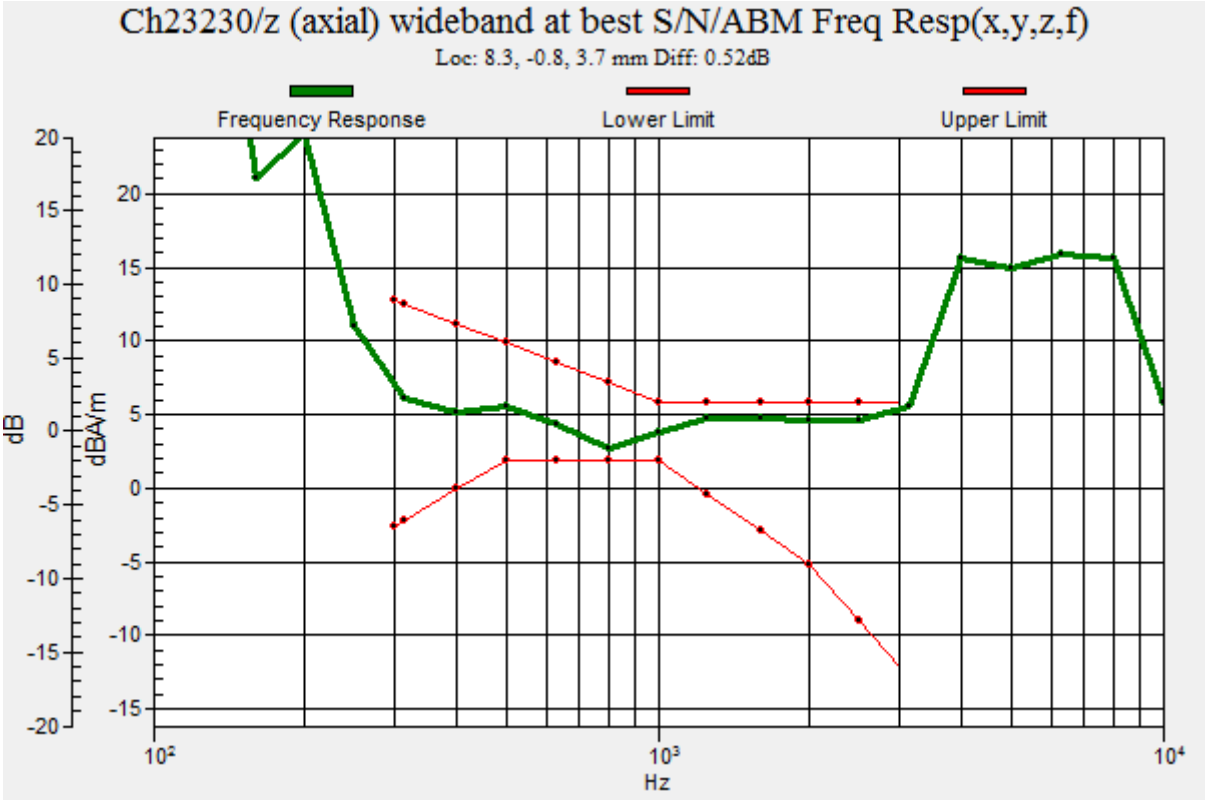
Communication System: UID 10175 - CAB, LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK);
Frequency: 782 MHz;Duty Cycle: 1:3.7325
Medium: Air Medium parameters used: $\sigma = 0$ S/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m$^3$
Ambient Temperature：23.2 ℃

DASY5 Configuration:
- Probe: AM1DV3 - 3128; ; Calibrated: 2022.07.19
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE4 Sn1643; Calibrated: 2022.12.30
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Ch23230/z (axial) 4.2mm 50 x 50/ABM SNR(x,y,z) (13x15x1):** Measurement grid:
dx=10mm, dy=10mm
ABM1/ABM2 = 33.56 dB
ABM1 comp = 5.75 dBA/m
BWC Factor = 0.04 dB
Location: 8.3, -0.8, 3.7 mm




0 dB = 47.65 = 33.56 dB


Ch23230/z (axial) wideband at best S/N/ABM Freq Resp(x,y,z,f)
Loc: 8.3, -0.8, 3.7 mm Diff: 0.52dB
Frequency Response
Lower Limit
Upper Limit
dB
dBA/m
Hz

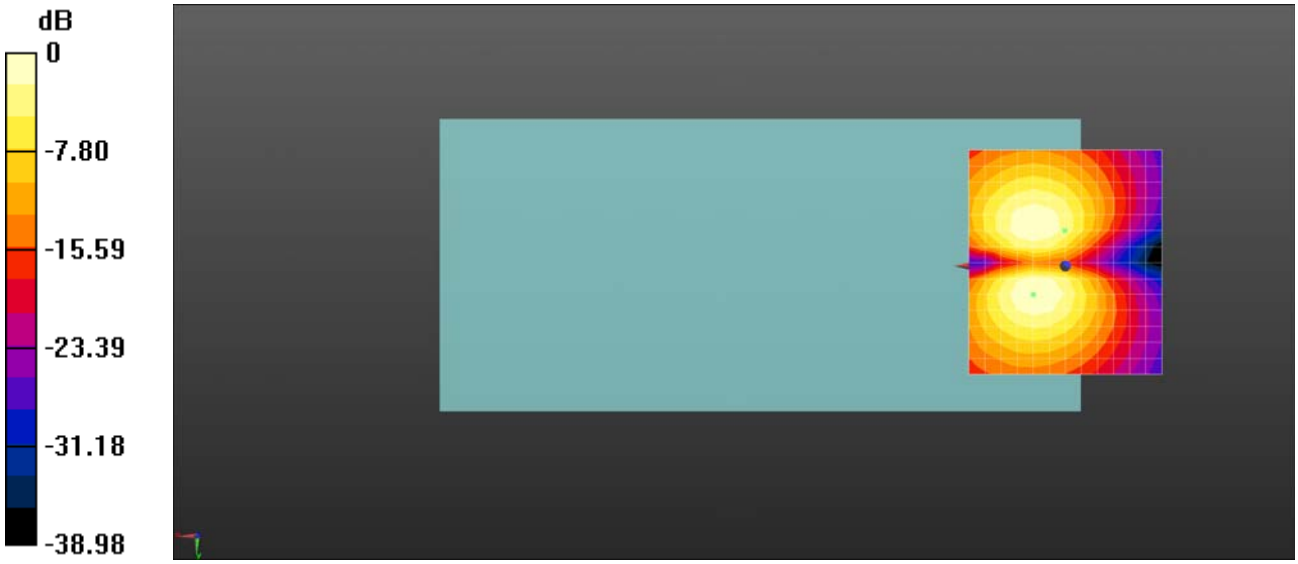
Test Laboratory: Shenzhen Morlab Communications Technology Co., Ltd. Date: 2023.01.11

## HAC_T-Coil_LTE Band 13_10MHz_QPSK_1RB_0offset_12.2Kbps_Ch23230_Y

Communication System: UID 10175 - CAB, LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK);
Frequency: 782 MHz;Duty Cycle: 1:3.7325
Medium: Air Medium parameters used: $\sigma = 0$ S/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m$^3$
Ambient Temperature：23.2 ℃

DASY5 Configuration:
- Probe: AM1DV3 - 3128; ; Calibrated: 2022.07.19
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE4 Sn1643; Calibrated: 2022.12.30
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Ch23230/y (transversal) 4.2mm 50 x 50/ABM SNR(x,y,z) (13x15x1):** Measurement grid: dx=10mm, dy=10mm
ABM1/ABM2 = 33.70 dB
ABM1 comp = -5.49 dBA/m
BWC Factor = 0.04 dB
Location: 0, -9.2, 3.7 mm




0 dB = 48.43 = 33.70 dB

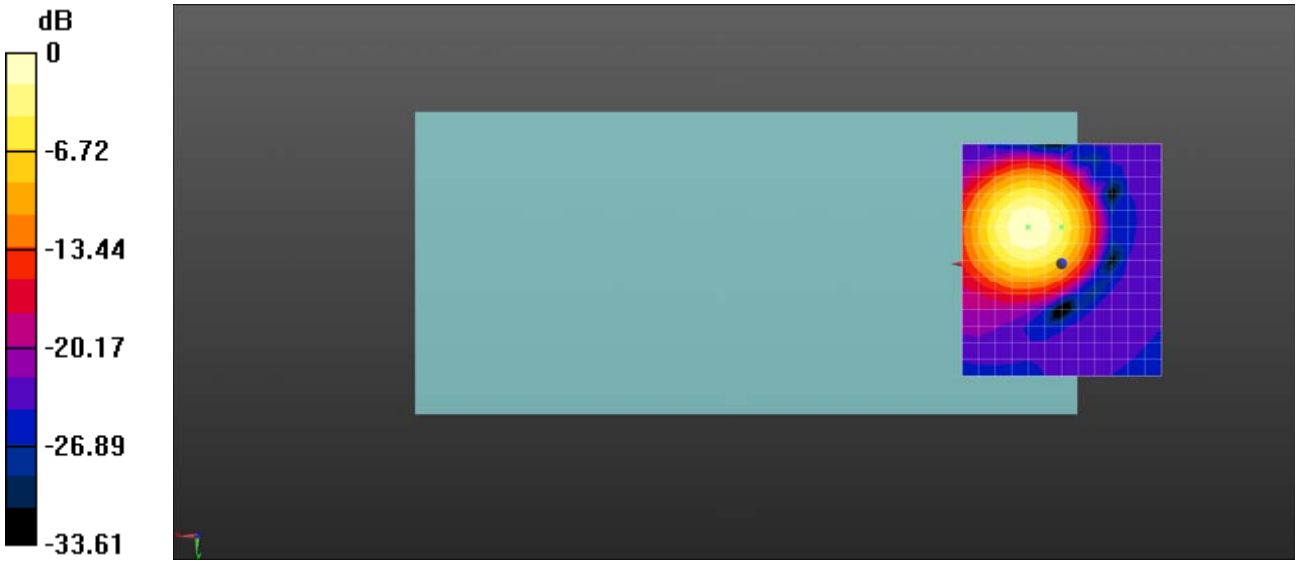
Test Laboratory: Shenzhen Morlab Communications Technology Co., Ltd. Date: 2023.01.10

## HAC_T-Coil_LTE Band 17_10MHz_QPSK_1RB_0offset_12.2Kbps_Ch23790_Z

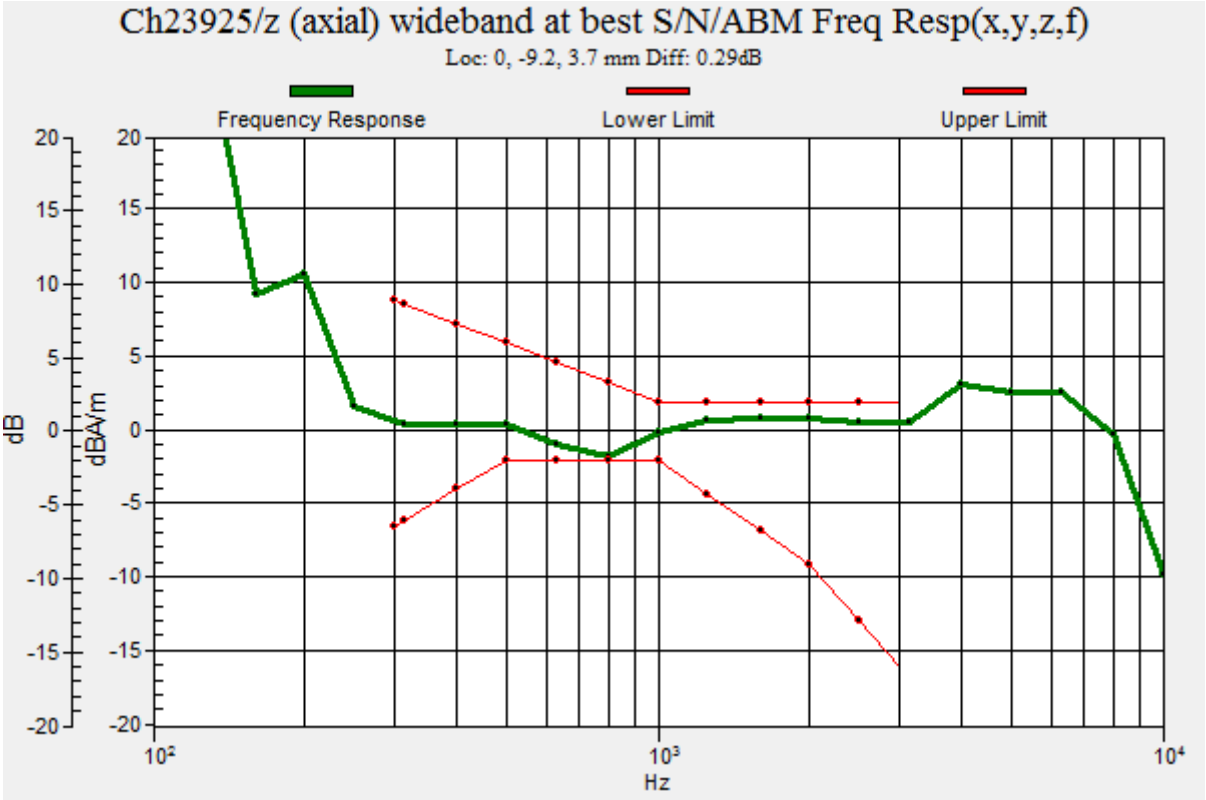
Communication System: UID 10175 - CAB, LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK);
Frequency: 710 MHz;Duty Cycle: 1:3.7325
Medium: Air Medium parameters used: $\sigma = 0$ S/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m$^3$
Ambient Temperature：23.2 ℃

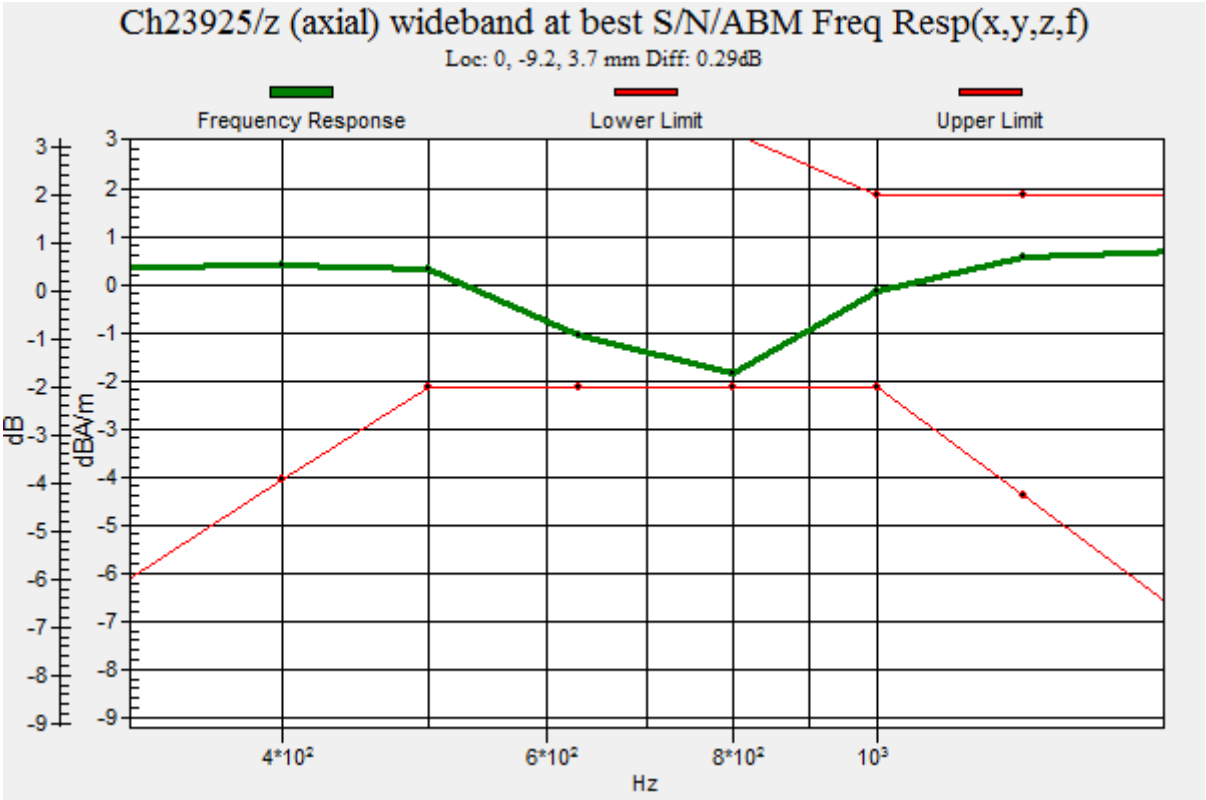
DASY5 Configuration:
- Probe: AM1DV3 - 3128; ; Calibrated: 2022.07.19
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE4 Sn1643; Calibrated: 2022.12.30
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Ch23790/z (axial) 4.2mm 50 x 50/ABM SNR(x,y,z) (13x15x1):** Measurement grid:
dx=10mm, dy=10mm
ABM1/ABM2 = 33.58 dB
ABM1 comp = 0.11 dBA/m
BWC Factor = 0.04 dB
Location: 0, -9.2, 3.7 mm




0 dB = 47.75 = 33.58 dB


Ch23925/z (axial) wideband at best S/N/ABM Freq Resp(x,y,z,f)
Loc: 0, -9.2, 3.7 mm Diff: 0.29dB
Frequency Response
Lower Limit
Upper Limit
dB
dBA/m
Hz


Ch23925/z (axial) wideband at best S/N/ABM Freq Resp(x,y,z,f)
Loc: 0, -9.2, 3.7 mm Diff: 0.29dB
Frequency Response
Lower Limit
Upper Limit
dB
dBA/m
Hz

Test Laboratory: Shenzhen Morlab Communications Technology Co., Ltd. Date: 2023.01.10

## HAC_T-Coil_LTE Band 17_10MHz_QPSK_1RB_0offset_12.2Kbps_Ch23790_Y

Communication System: UID 10175 - CAB, LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK);
Frequency: 710 MHz;Duty Cycle: 1:3.7325
Medium: Air Medium parameters used: $\sigma = 0$ S/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m$^3$
Ambient Temperature：23.2 ℃

DASY5 Configuration:
- Probe: AM1DV3 - 3128; ; Calibrated: 2022.07.19
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE4 Sn1643; Calibrated: 2022.12.30
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Ch23790/y (transversal) 4.2mm 50 x 50/ABM SNR(x,y,z) (13x15x1):** Measurement grid: dx=10mm, dy=10mm
ABM1/ABM2 = 33.30 dB
ABM1 comp = -2.38 dBA/m
BWC Factor = 0.04 dB
Location: 8.3, -17.5, 3.7 mm


0 dB = 46.24 = 33.30 dB

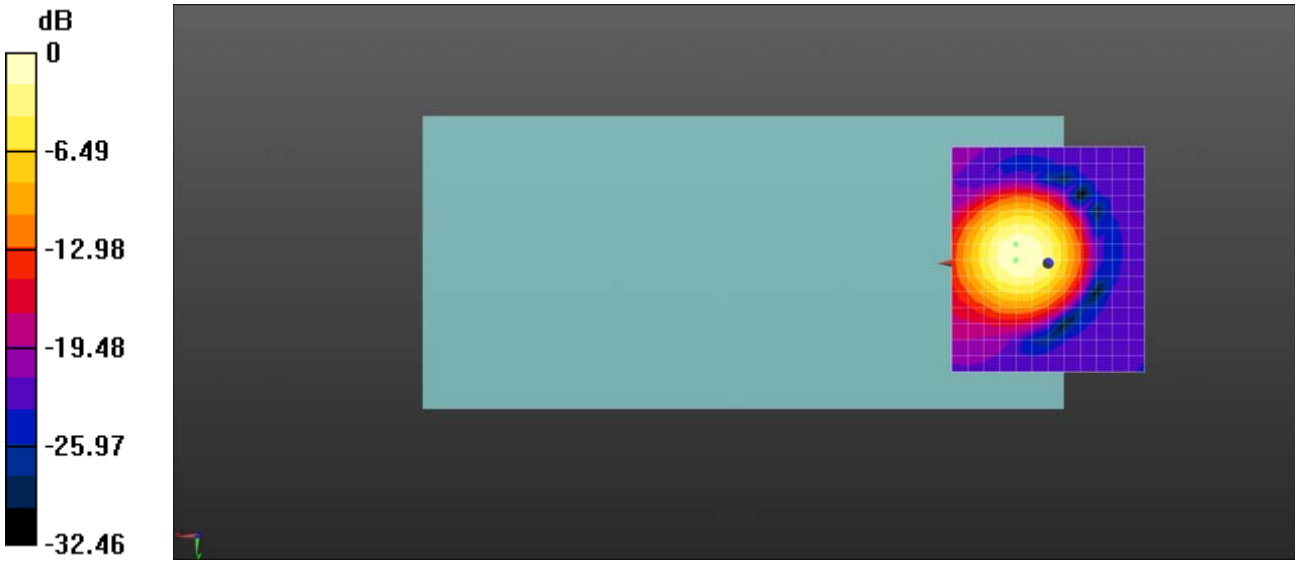
Test Laboratory: Shenzhen Morlab Communications Technology Co., Ltd. Date: 2023.01.11

## HAC_T-Coil_LTE Band 18_10MHz_QPSK_1RB_0offset_12.2Kbps_Ch23925_Z

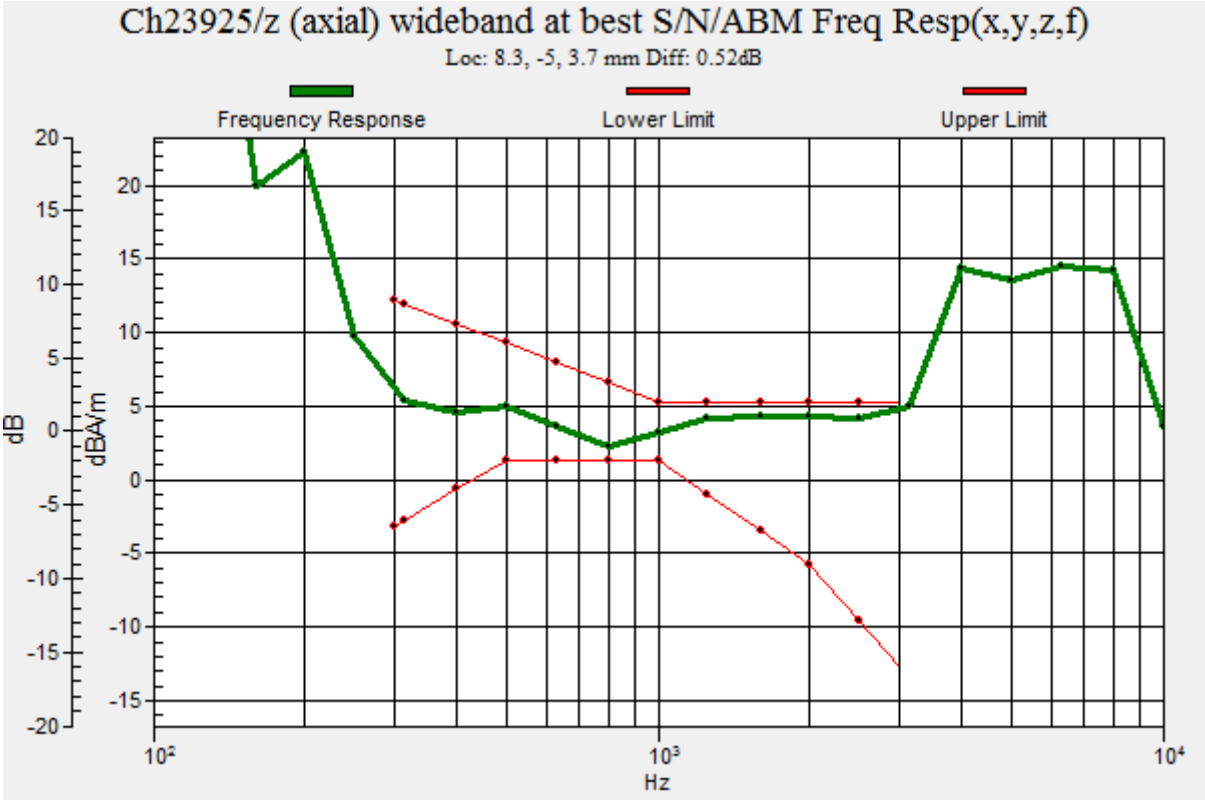
Communication System: UID 10175 - CAB, LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK);
Frequency: 822.5 MHz;Duty Cycle: 1:3.7325
Medium: Air Medium parameters used: $\sigma = 0$ S/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m$^3$
Ambient Temperature：23.2 ℃

DASY5 Configuration:
- Probe: AM1DV3 - 3128; ; Calibrated: 2022.07.19
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE4 Sn1643; Calibrated: 2022.12.30
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Ch23925/z (axial) 4.2mm 50 x 50/ABM SNR(x,y,z) (13x15x1):** Measurement grid:
dx=10mm, dy=10mm
ABM1/ABM2 = 33.52 dB
ABM1 comp = 5.07 dBA/m
BWC Factor = 0.04 dB
Location: 8.3, -5, 3.7 mm




0 dB = 47.40 = 33.52 dB


Ch23925/z (axial) wideband at best S/N/ABM Freq Resp(x,y,z,f)
Loc: 8.3, -5, 3.7 mm Diff: 0.52dB
Frequency Response
Lower Limit
Upper Limit
dB
dBA/m
20
15
10
5
0
-5
-10
-15
-20
$10^2$
$10^3$
$10^4$
Hz

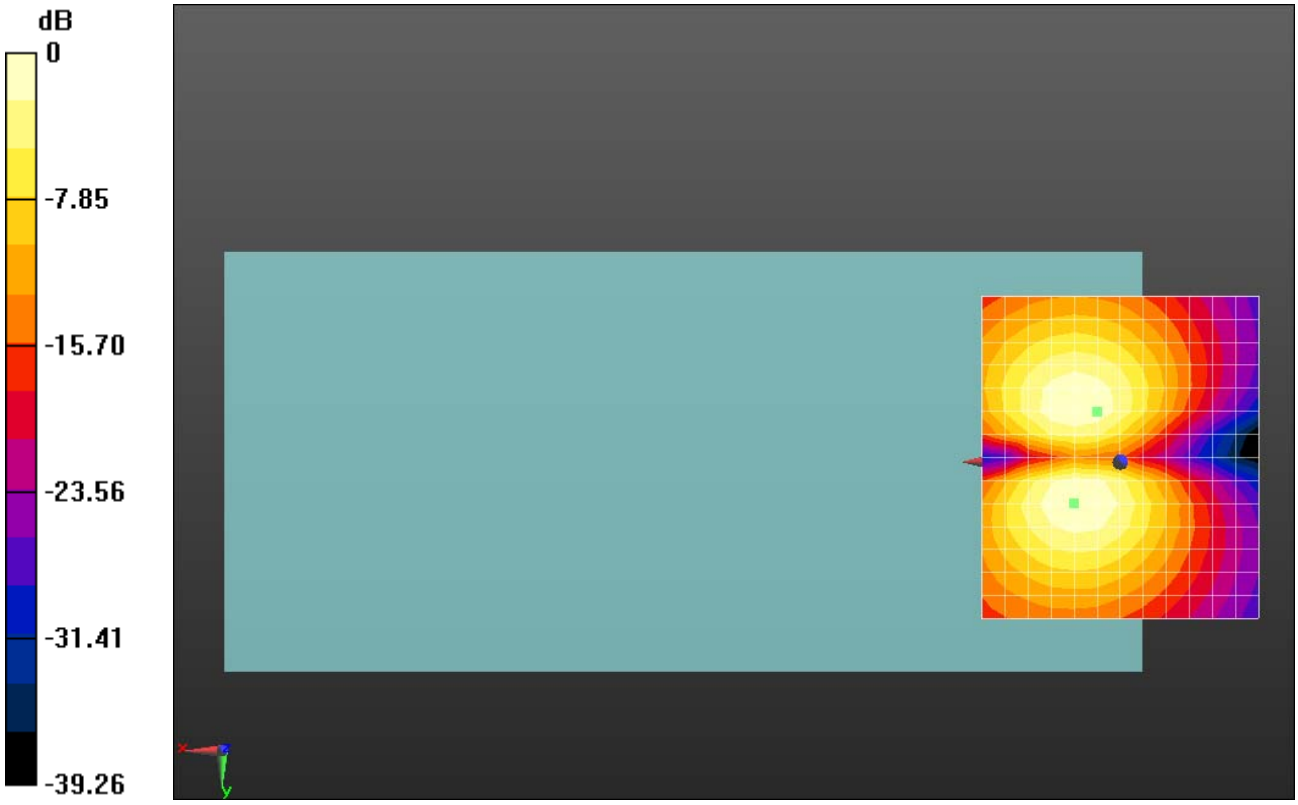
Test Laboratory: Shenzhen Morlab Communications Technology Co., Ltd. Date: 2023.01.11

## HAC_T-Coil_LTE Band 18_10MHz_QPSK_1RB_0offset_12.2Kbps_Ch23925_Y

Communication System: UID 10175 - CAB, LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK);
Frequency: 822.5 MHz;Duty Cycle: 1:3.7325
Medium: Air Medium parameters used: $\sigma = 0$ S/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m$^3$
Ambient Temperature：23.2 ℃

DASY5 Configuration:
- Probe: AM1DV3 - 3128; ; Calibrated: 2022.07.19
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE4 Sn1643; Calibrated: 2022.12.30
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Ch23925/y (transversal) 4.2mm 50 x 50/ABM SNR(x,y,z) (13x15x1):** Measurement grid: dx=10mm, dy=10mm
ABM1/ABM2 = 33.55 dB
ABM1 comp = -2.82 dBA/m
BWC Factor = 0.04 dB
Location: 4.2, -9.2, 3.7 mm




0 dB = 47.56 = 33.54 dB

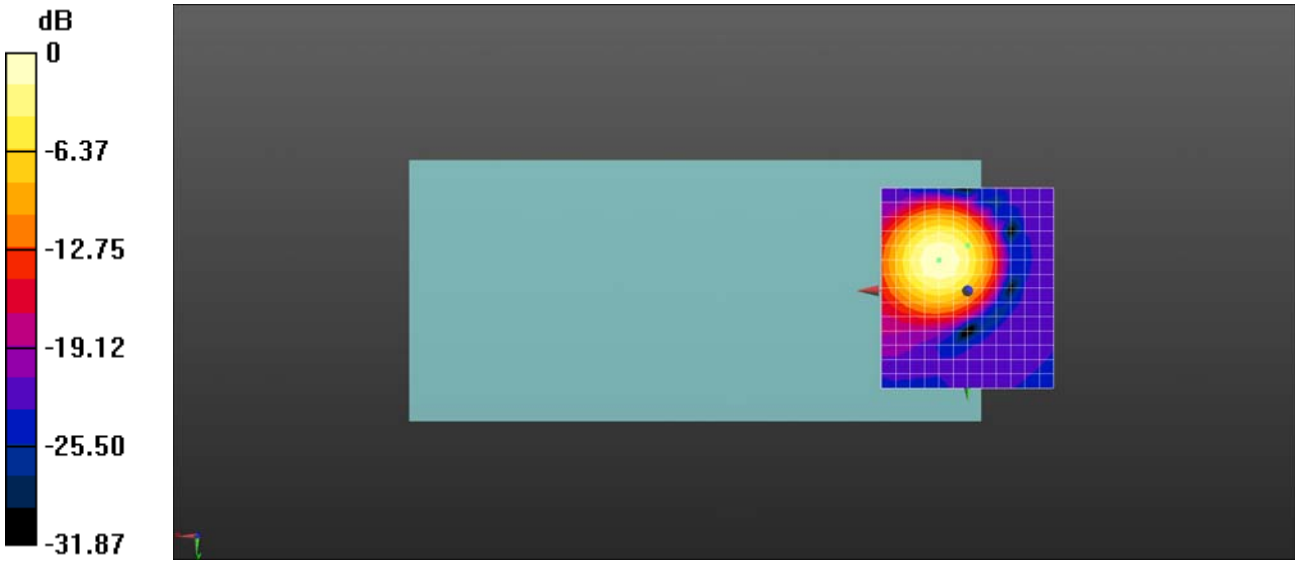
Test Laboratory: Shenzhen Morlab Communications Technology Co., Ltd. Date: 2023.01.10

## HAC_T-Coil_LTE Band 25_20MHz_QPSK_1RB_0offset_12.2Kbps_Ch26365_Z

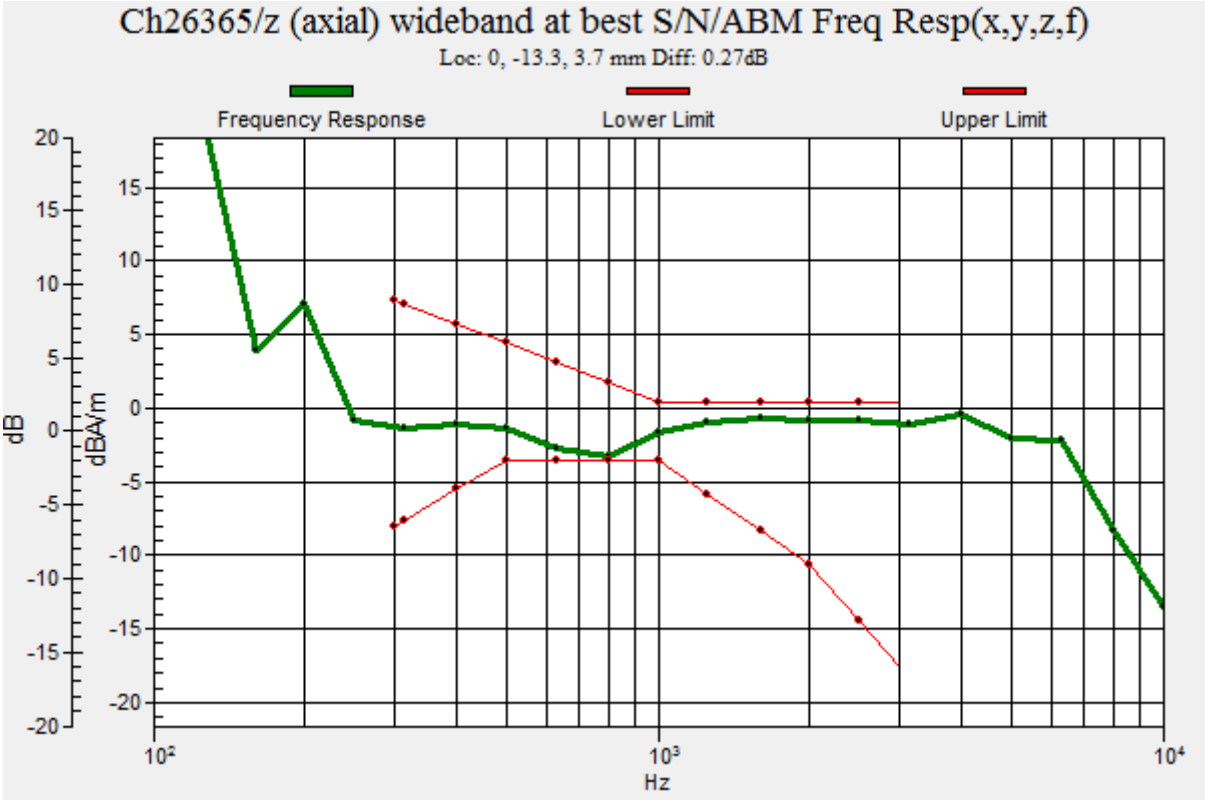
Communication System: UID 10169 - CAB, LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK);
Frequency: 1882.5 MHz;Duty Cycle: 1:3.74111
Medium: Air Medium parameters used: $\sigma = 0$ S/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m$^3$
Ambient Temperature：23.2 ℃

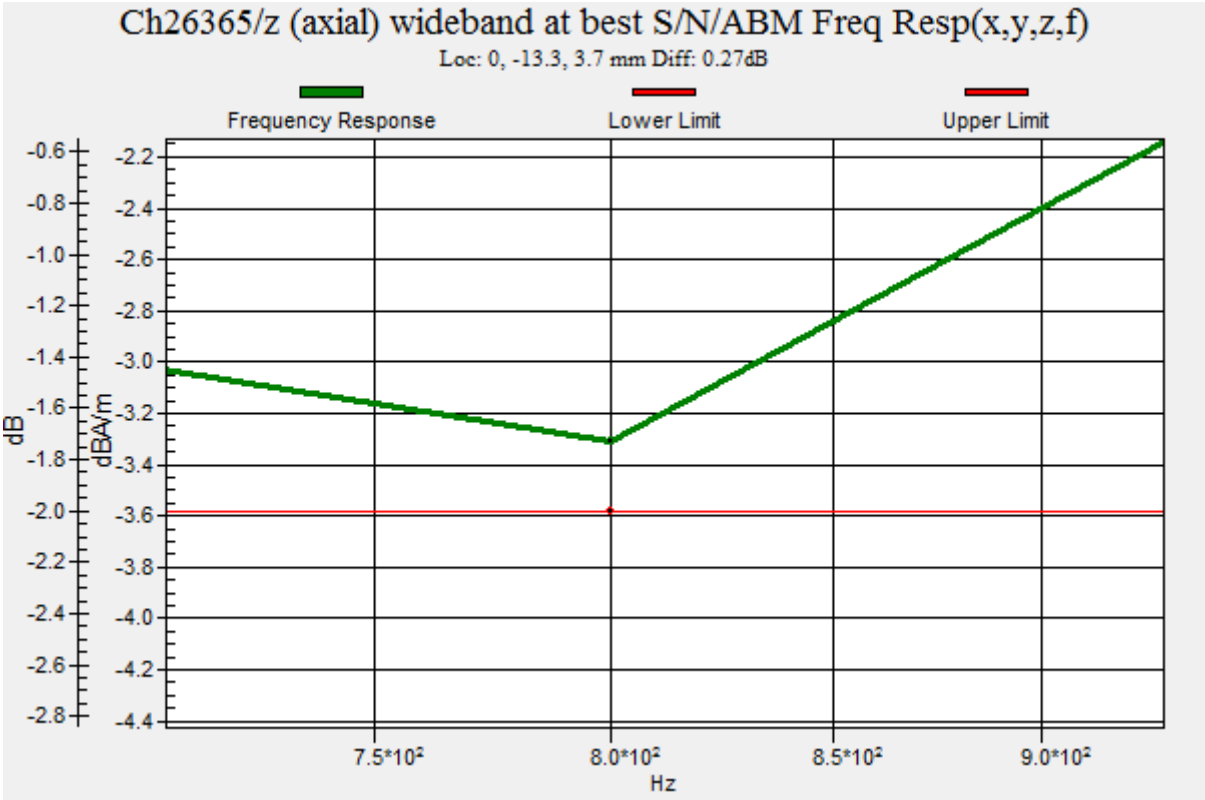
DASY5 Configuration:
- Probe: AM1DV3 - 3128; ; Calibrated: 2022.07.19
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE4 Sn1643; Calibrated: 2022.12.30
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Ch26365/z (axial) 4.2mm 50 x 50/ABM SNR(x,y,z) (13x15x1):** Measurement grid:
dx=10mm, dy=10mm
ABM1/ABM2 = 33.46 dB
ABM1 comp = -1.81 dBA/m
BWC Factor = 0.05 dB
Location: 0, -13.3, 3.7 mm




0 dB = 47.08 = 33.46 dB


Ch26365/z (axial) wideband at best S/N/ABM Freq Resp(x,y,z,f)
Loc: 0, -13.3, 3.7 mm Diff: 0.27dB
Frequency Response
Lower Limit
Upper Limit
dB
dBA/m
Hz


Ch26365/z (axial) wideband at best S/N/ABM Freq Resp(x,y,z,f)
Loc: 0, -13.3, 3.7 mm Diff: 0.27dB
Frequency Response
Lower Limit
Upper Limit
dB
dBA/m
Hz

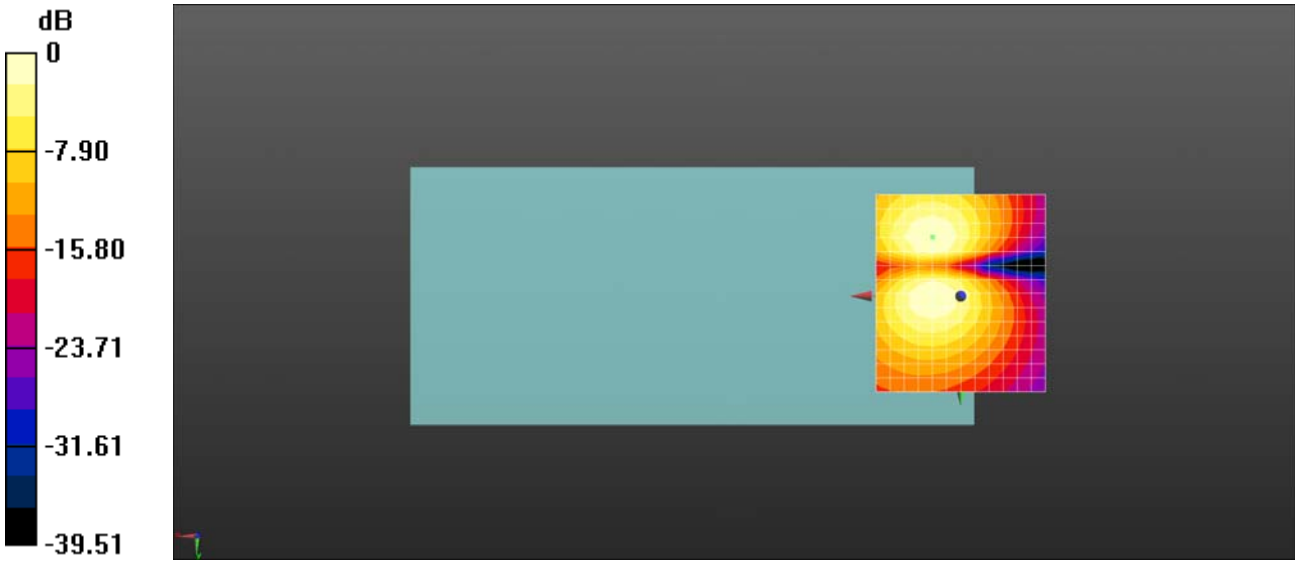
Test Laboratory: Shenzhen Morlab Communications Technology Co., Ltd. Date: 2023.01.10

## HAC_T-Coil_LTE Band 25_20MHz_QPSK_1RB_0offset_12.2Kbps_Ch26365_Y

Communication System: UID 10169 - CAB, LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK);
Frequency: 1882.5 MHz;Duty Cycle: 1:3.74111
Medium: Air Medium parameters used: $\sigma = 0$ S/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m$^3$
Ambient Temperature：23.2 ℃

DASY5 Configuration:
- Probe: AM1DV3 - 3128; ; Calibrated: 2022.07.19
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE4 Sn1643; Calibrated: 2022.12.30
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Ch26365/y (transversal) 4.2mm 50 x 50/ABM SNR(x,y,z) (13x15x1):** Measurement grid: dx=10mm, dy=10mm
ABM1/ABM2 = 33.46 dB
ABM1 comp = -2.33 dBA/m
BWC Factor = 0.05 dB
Location: 8.3, -17.5, 3.7 mm




0 dB = 47.09 = 33.46 dB

Test Laboratory: Shenzhen Morlab Communications Technology Co., Ltd. Date: 2023.01.11

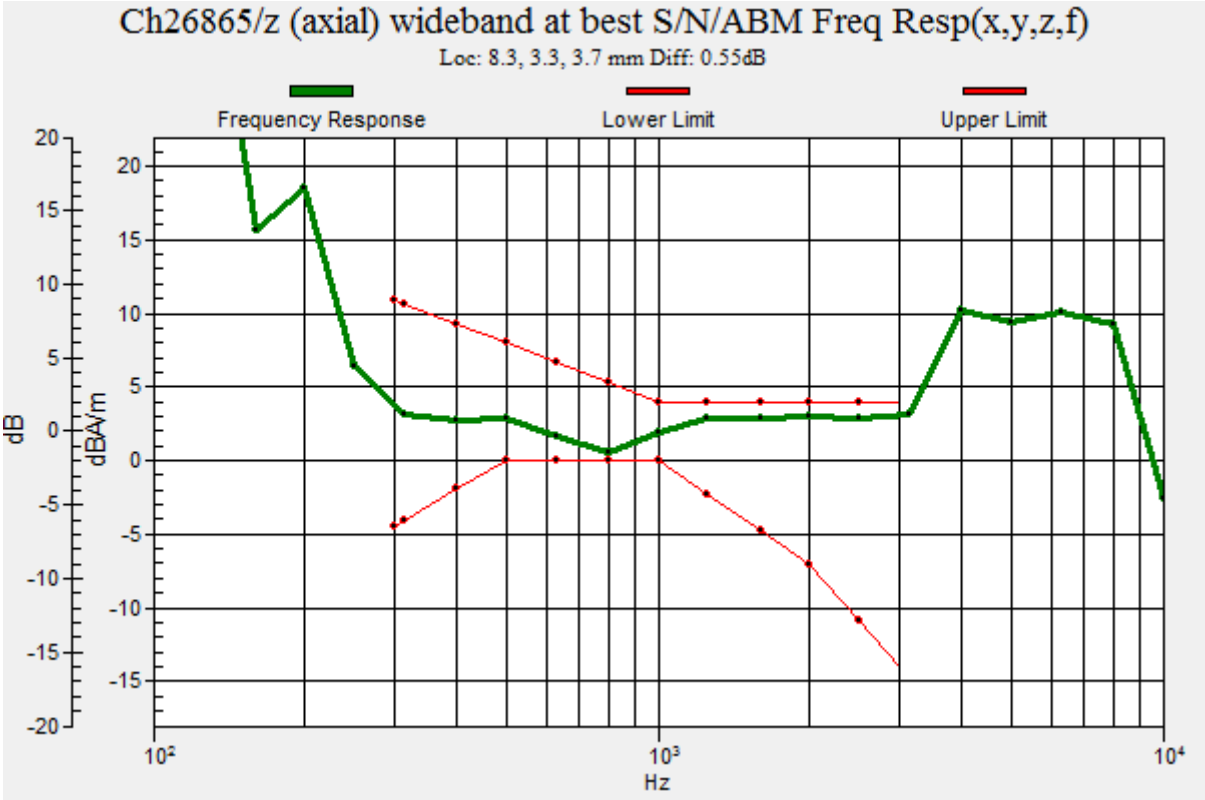
## HAC_T-Coil_LTE Band 26_15MHz_QPSK_1RB_0offset_12.2Kbps_Ch26865_Z

Communication System: UID 10181 - CAB, LTE-FDD (SC-FDMA, 1 RB, 15 MHz, QPSK);
Frequency: 831.5 MHz;Duty Cycle: 1:3.7325
Medium: Air Medium parameters used: $\sigma = 0$ S/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m$^3$
Ambient Temperature：23.2 ℃

DASY5 Configuration:
- Probe: AM1DV3 - 3128; ; Calibrated: 2022.07.19
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE4 Sn1643; Calibrated: 2022.12.30
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Ch26865/z (axial) 4.2mm 50 x 50/ABM SNR(x,y,z) (13x15x1):** Measurement grid:
dx=10mm, dy=10mm
ABM1/ABM2 = 33.52 dB
ABM1 comp = 2.82 dBA/m
BWC Factor = 0.04 dB
Location: 8.3, 3.3, 3.7 mm


0 dB = 47.43 = 33.52 dB


Ch26865/z (axial) wideband at best S/N/ABM Freq Resp(x,y,z,f)
Loc: 8.3, 3.3, 3.7 mm Diff: 0.55dB
Frequency Response
Lower Limit
Upper Limit
dB
dBA/m
Hz
20
15
10
5
0
-5
-10
-15
-20
10²
10³
10⁴

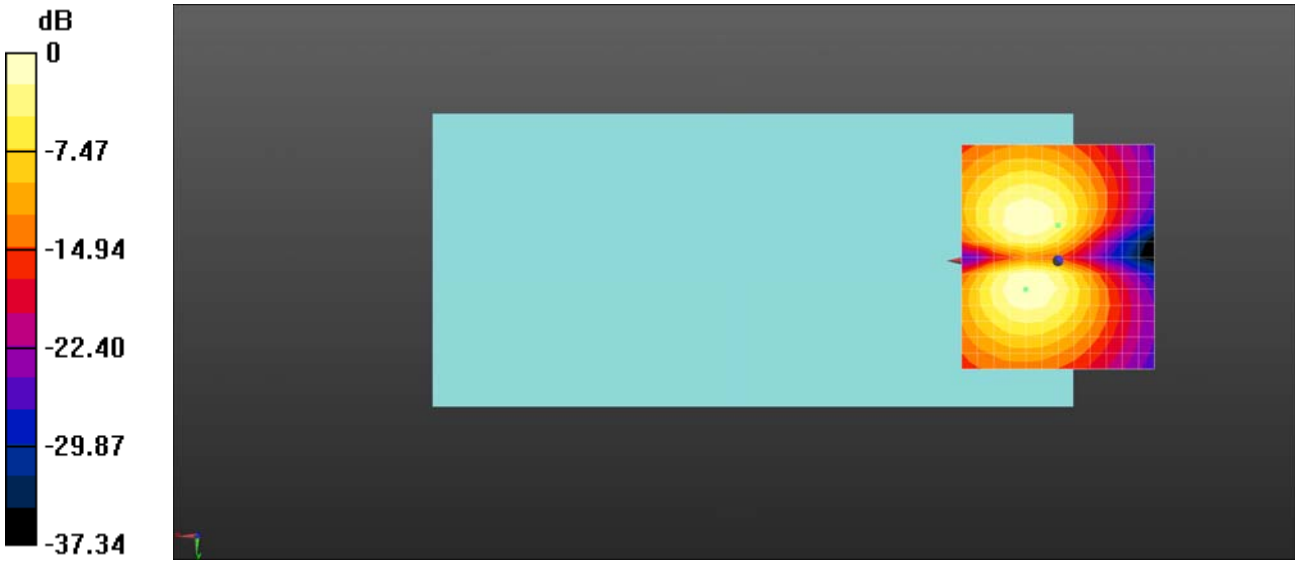
Test Laboratory: Shenzhen Morlab Communications Technology Co., Ltd. Date: 2023.01.11

## HAC_T-Coil_LTE Band 26_15MHz_QPSK_1RB_0offset_12.2Kbps_Ch26865_Y

Communication System: UID 10181 - CAB, LTE-FDD (SC-FDMA, 1 RB, 15 MHz, QPSK);
Frequency: 831.5 MHz;Duty Cycle: 1:3.7325
Medium: Air Medium parameters used: $\sigma = 0$ S/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m$^3$
Ambient Temperature：23.2 ℃

DASY5 Configuration:
- Probe: AM1DV3 - 3128; ; Calibrated: 2022.07.19
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE4 Sn1643; Calibrated: 2022.12.30
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Ch26865/y (transversal) 4.2mm 50 x 50/ABM SNR(x,y,z) (13x15x1):** Measurement grid: dx=10mm, dy=10mm
ABM1/ABM2 = 33.49 dB
ABM1 comp = -5.55 dBA/m
BWC Factor = 0.04 dB
Location: 0, -9.2, 3.7 mm




0 dB = 47.25 = 33.49 dB

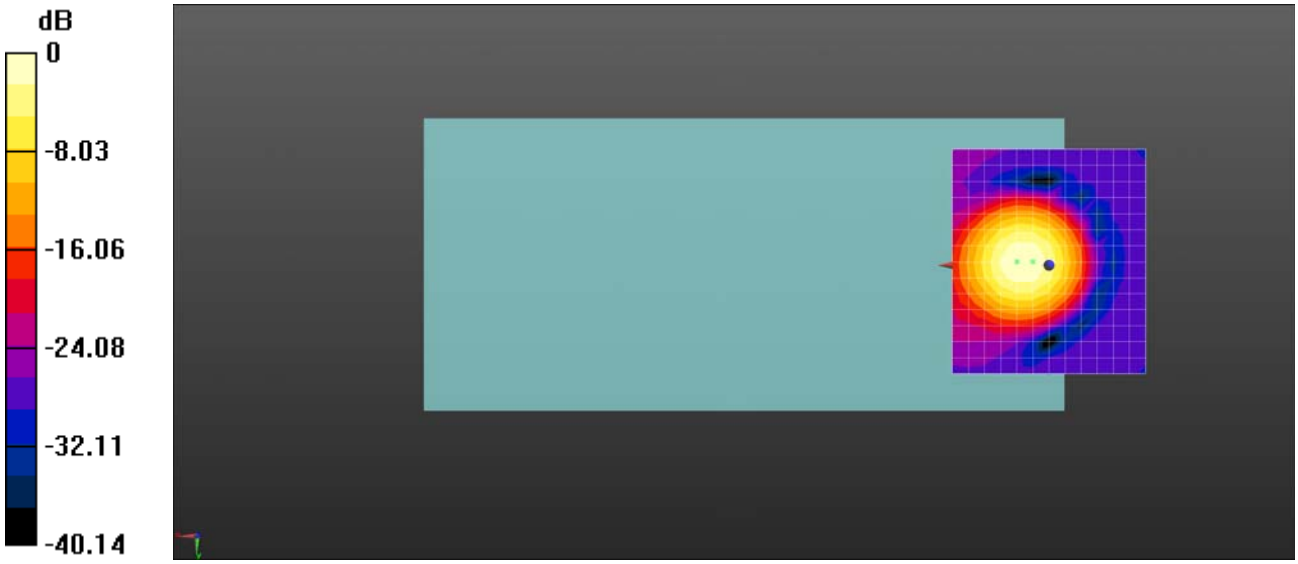
Test Laboratory: Shenzhen Morlab Communications Technology Co., Ltd. Date: 2023.01.11

## HAC_T-Coil_LTE Band 38_20MHz_QPSK_1RB_0offset_12.2Kbps_Ch38000_Z

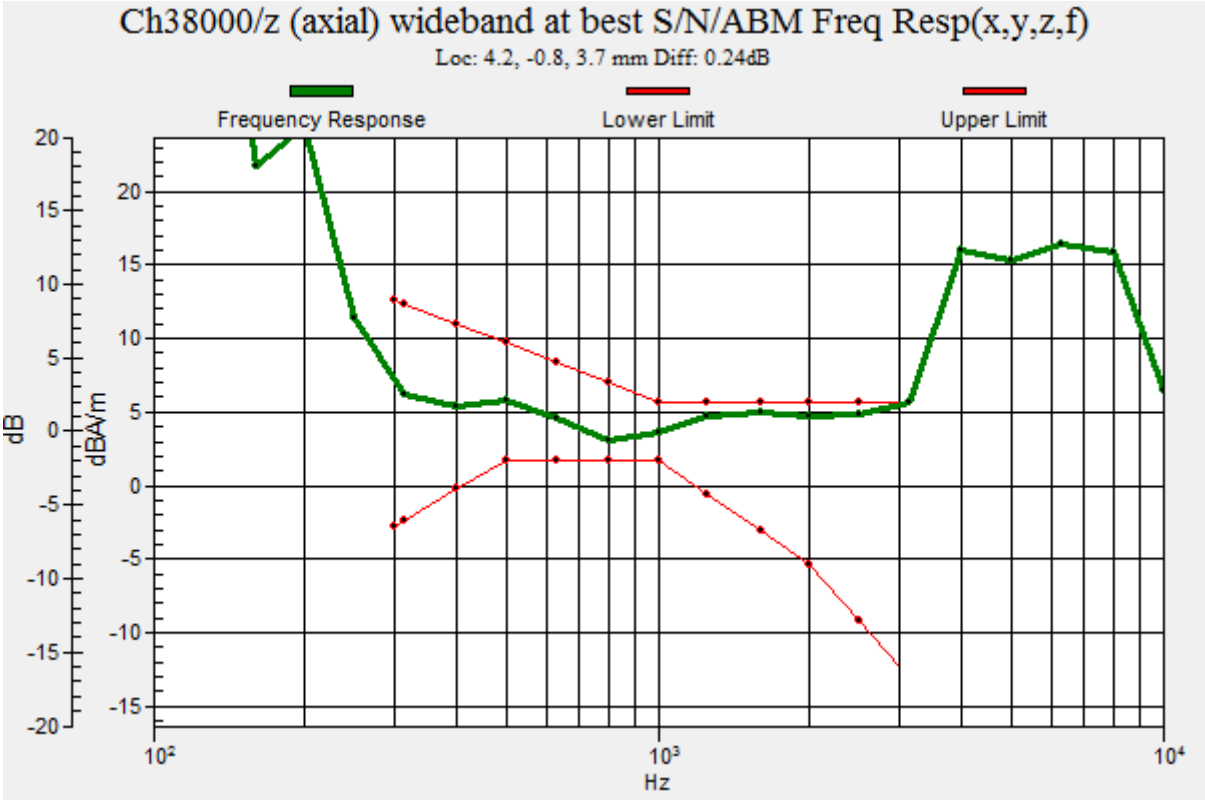
Communication System: UID 10172 - CAB, LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK);
Frequency: 2595 MHz;Duty Cycle: 1:8.33681
Medium: Air Medium parameters used: $\sigma = 0$ S/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m$^3$
Ambient Temperature：23.2 ℃

DASY5 Configuration:
- Probe: AM1DV3 - 3128; ; Calibrated: 2022.07.19
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE4 Sn1643; Calibrated: 2022.12.30
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Ch38000/z (axial) 4.2mm 50 x 50/ABM SNR(x,y,z) (13x15x1):** Measurement grid:
dx=10mm, dy=10mm
ABM1/ABM2 = 33.17 dB
ABM1 comp = 5.91 dBA/m
BWC Factor = 0.04 dB
Location: 4.2, -0.8, 3.7 mm




0 dB = 45.56 = 33.17 dB


Ch38000/z (axial) wideband at best S/N/ABM Freq Resp(x,y,z,f)
Loc: 4.2, -0.8, 3.7 mm Diff: 0.24dB
Frequency Response
Lower Limit
Upper Limit
dB
dBA/m
Hz
20
15
10
5
0
-5
-10
-15
-20
10²
10³
10⁴

Test Laboratory: Shenzhen Morlab Communications Technology Co., Ltd. Date: 2023.01.11

## HAC_T-Coil_LTE Band 38_20MHz_QPSK_1RB_0offset_12.2Kbps_Ch38000_Y

Communication System: UID 10172 - CAB, LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK);
Frequency: 2595 MHz;Duty Cycle: 1:8.33681
Medium: Air Medium parameters used: $\sigma = 0$ S/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m$^3$
Ambient Temperature：23.2 ℃

DASY5 Configuration:
- Probe: AM1DV3 - 3128; ; Calibrated: 2022.07.19
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE4 Sn1643; Calibrated: 2022.12.30
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Ch38000/y (transversal) 4.2mm 50 x 50/ABM SNR(x,y,z) (13x15x1):** Measurement grid: dx=10mm, dy=10mm
ABM1/ABM2 = 32.77 dB
ABM1 comp = -4.24 dBA/m
BWC Factor = 0.04 dB
Location: 0, 7.5, 3.7 mm


0 dB = 43.51 = 32.77 dB

Test Laboratory: Shenzhen Morlab Communications Technology Co., Ltd. Date: 2023.01.11

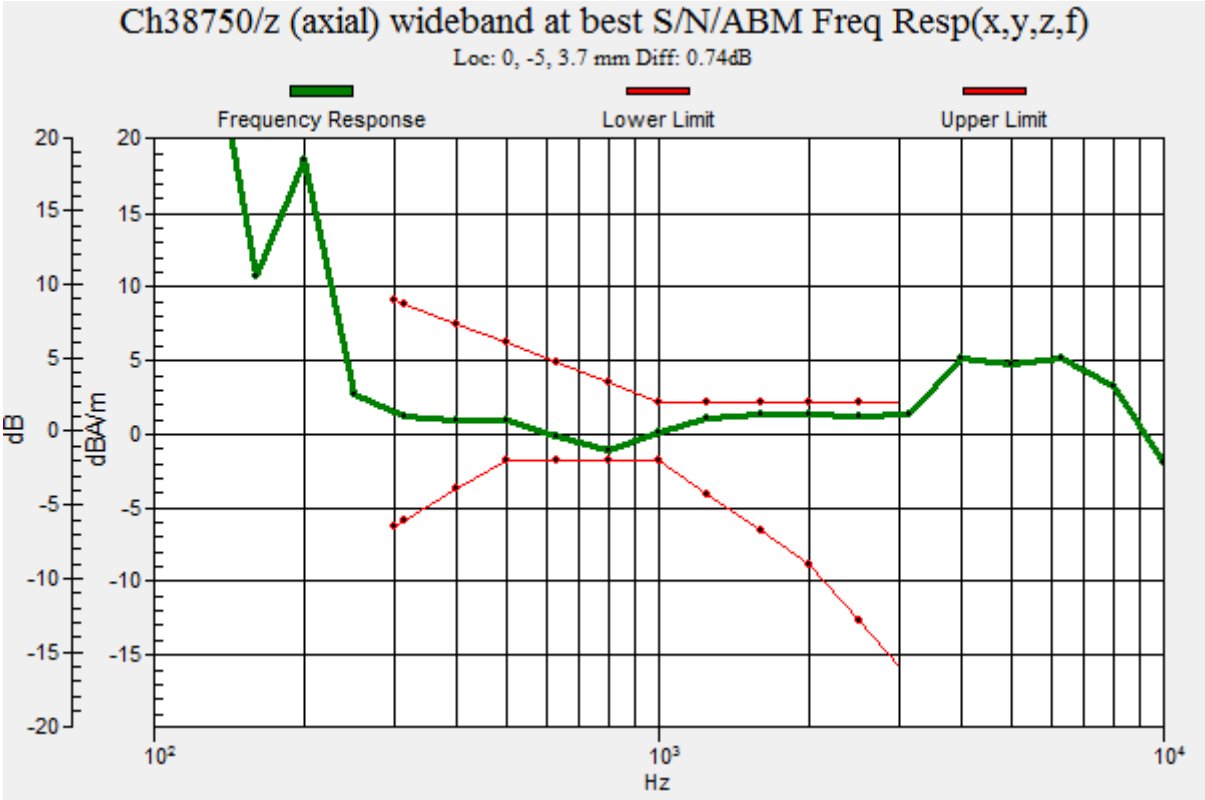
## HAC_T-Coil_LTE Band 40A_10MHz_QPSK_1RB_0offset_12.2Kbps_Ch38750_Z

Communication System: UID 10237 - CAB, LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK);
Frequency: 2310 MHz;Duty Cycle: 1:8.33681
Medium: Air Medium parameters used: $\sigma = 0$ S/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m$^3$
Ambient Temperature：23.2 ℃

DASY5 Configuration:
- Probe: AM1DV3 - 3128; ; Calibrated: 2022.07.19
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE4 Sn1643; Calibrated: 2022.12.30
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Ch38750/z (axial) 4.2mm 50 x 50/ABM SNR(x,y,z) (13x15x1):** Measurement grid:
dx=10mm, dy=10mm
ABM1/ABM2 = 32.32 dB
ABM1 comp = 0.70 dBA/m
BWC Factor = 0.04 dB
Location: 0, -5, 3.7 mm


0 dB = 41.31 = 32.32 dB


Ch38750/z (axial) wideband at best S/N/ABM Freq Resp(x,y,z,f)
Loc: 0, -5, 3.7 mm Diff: 0.74dB
Frequency Response
Lower Limit
Upper Limit
dB
dBA/m
20
15
10
5
0
-5
-10
-15
-20
10²
10³
10⁴
Hz

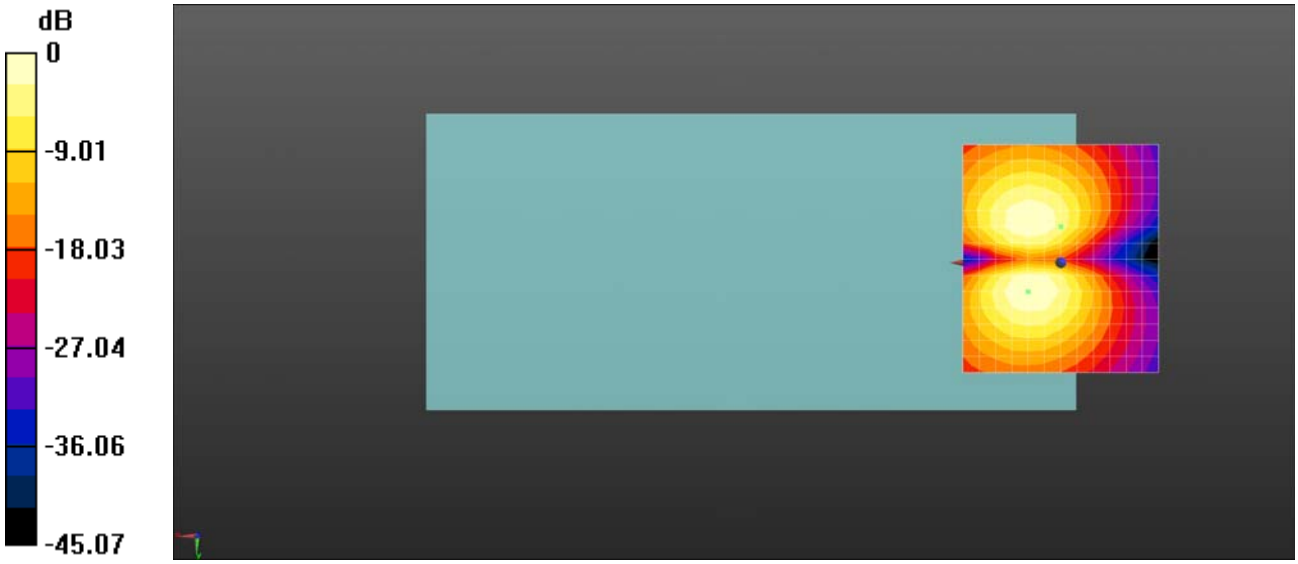
Test Laboratory: Shenzhen Morlab Communications Technology Co., Ltd. Date: 2023.01.11

## HAC_T-Coil_LTE Band 40A_10MHz_QPSK_1RB_0offset_12.2Kbps_Ch38750_Y

Communication System: UID 10237 - CAB, LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK);
Frequency: 2310 MHz;Duty Cycle: 1:8.33681
Medium: Air Medium parameters used: $\sigma = 0$ S/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m$^3$
Ambient Temperature：23.2 ℃

DASY5 Configuration:
- Probe: AM1DV3 - 3128; ; Calibrated: 2022.07.19
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE4 Sn1643; Calibrated: 2022.12.30
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Ch38750/y (transversal) 4.2mm 50 x 50/ABM SNR(x,y,z) (13x15x1):** Measurement grid: dx=10mm, dy=10mm
ABM1/ABM2 = 31.35 dB
ABM1 comp = -5.60 dBA/m
BWC Factor = 0.04 dB
Location: 0, -9.2, 3.7 mm




0 dB = 36.93 = 31.35 dB

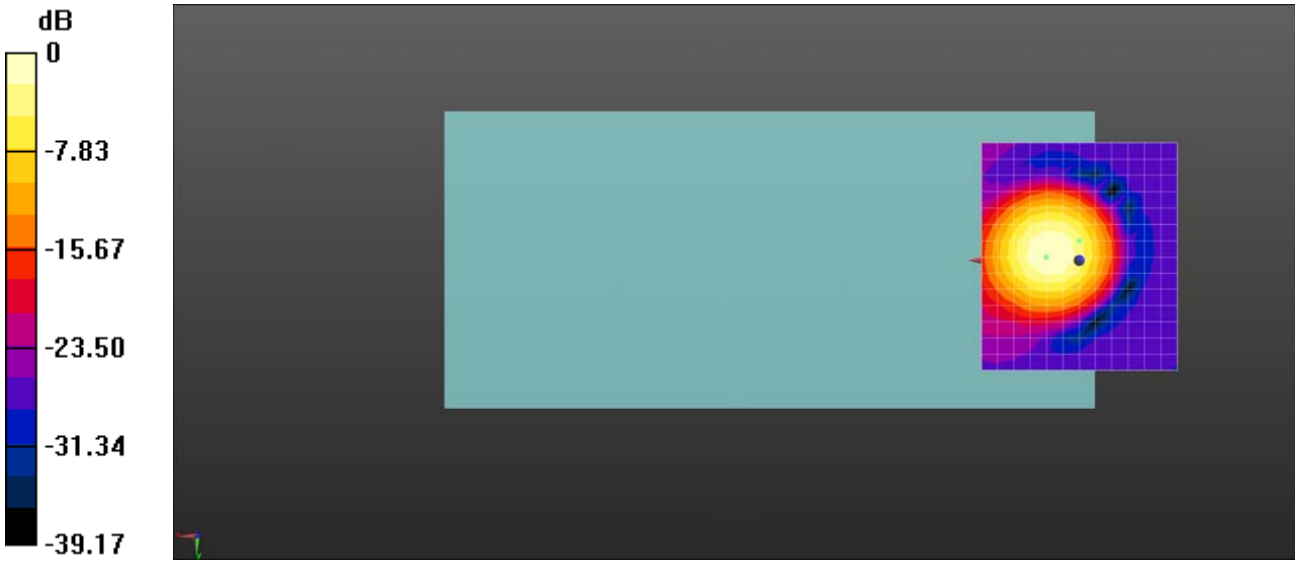
Test Laboratory: Shenzhen Morlab Communications Technology Co., Ltd. Date: 2023.01.11

## HAC_T-Coil_LTE Band 40B_10MHz_QPSK_1RB_0offset_12.2Kbps_Ch39200_Z

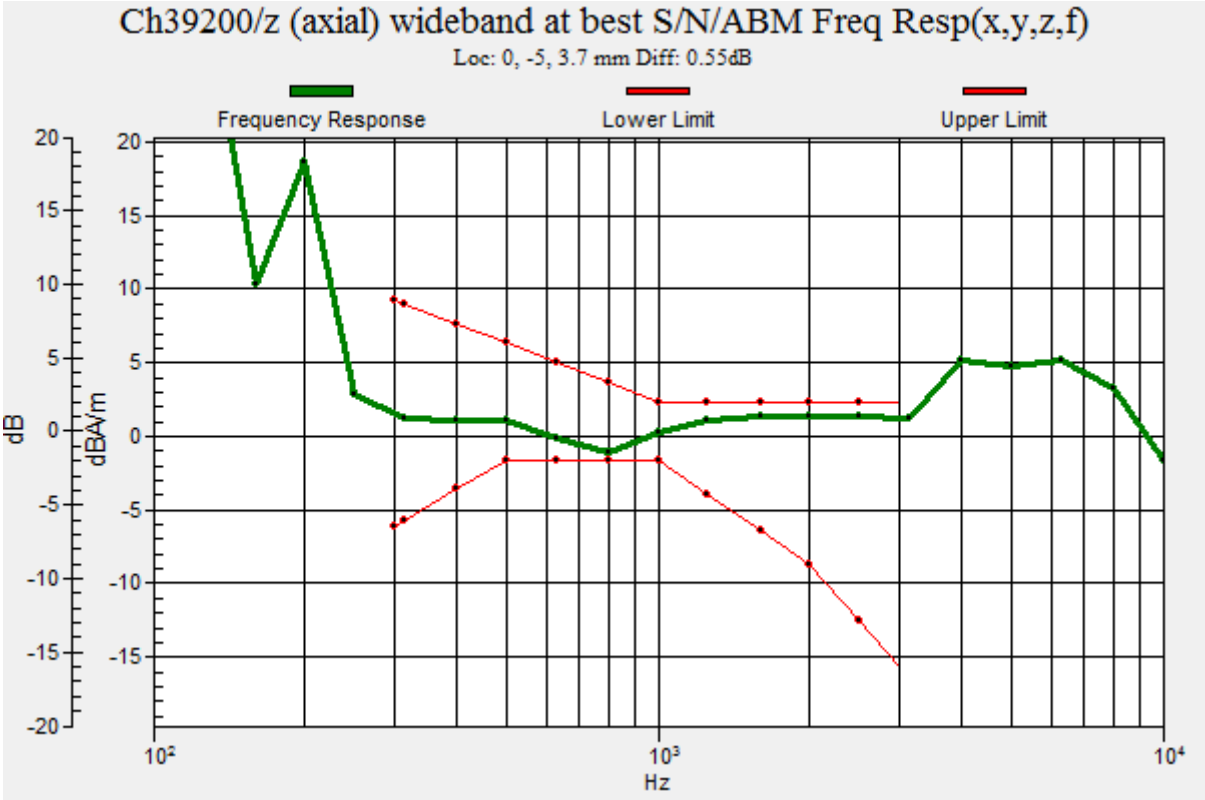
Communication System: UID 10237 - CAB, LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK);
Frequency: 2355 MHz;Duty Cycle: 1:8.33681
Medium: Air Medium parameters used: $\sigma = 0$ S/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m$^3$
Ambient Temperature：23.2 ℃

DASY5 Configuration:
- Probe: AM1DV3 - 3128; ; Calibrated: 2022.07.19
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE4 Sn1643; Calibrated: 2022.12.30
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Ch39200/z (axial) 4.2mm 50 x 50/ABM SNR(x,y,z) (13x15x1):** Measurement grid:
dx=10mm, dy=10mm
ABM1/ABM2 = 32.41 dB
ABM1 comp = 0.67 dBA/m
BWC Factor = 0.04 dB
Location: 0, -5, 3.7 mm




0 dB = 41.73 = 32.41 dB


Ch39200/z (axial) wideband at best S/N/ABM Freq Resp(x,y,z,f)
Loc: 0, -5, 3.7 mm Diff: 0.55dB
Frequency Response
Lower Limit
Upper Limit
dB
dBA/m
20
15
10
5
0
-5
-10
-15
-20
10²
10³
10⁴
Hz

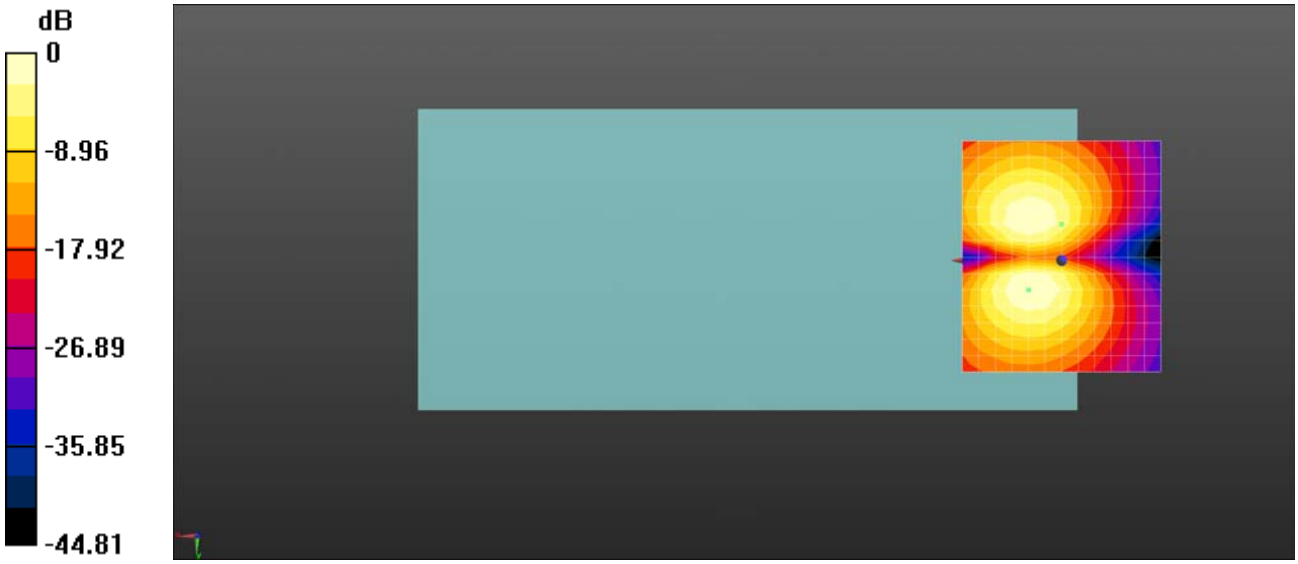
Test Laboratory: Shenzhen Morlab Communications Technology Co., Ltd. Date: 2023.01.11

## HAC_T-Coil_LTE Band 40B_10MHz_QPSK_1RB_0offset_12.2Kbps_Ch39200_Y

Communication System: UID 10237 - CAB, LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK);
Frequency: 2355 MHz;Duty Cycle: 1:8.33681
Medium: Air Medium parameters used: $\sigma = 0$ S/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m$^3$
Ambient Temperature：23.2 ℃

DASY5 Configuration:
- Probe: AM1DV3 - 3128; ; Calibrated: 2022.07.19
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE4 Sn1643; Calibrated: 2022.12.30
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Ch39200/y (transversal) 4.2mm 50 x 50/ABM SNR(x,y,z) (13x15x1):** Measurement grid: dx=10mm, dy=10mm
ABM1/ABM2 = 31.37 dB
ABM1 comp = -5.46 dBA/m
BWC Factor = 0.04 dB
Location: 0, -9.2, 3.7 mm




0 dB = 37.01 = 31.37 dB

Test Laboratory: Shenzhen Morlab Communications Technology Co., Ltd. Date: 2023.01.11

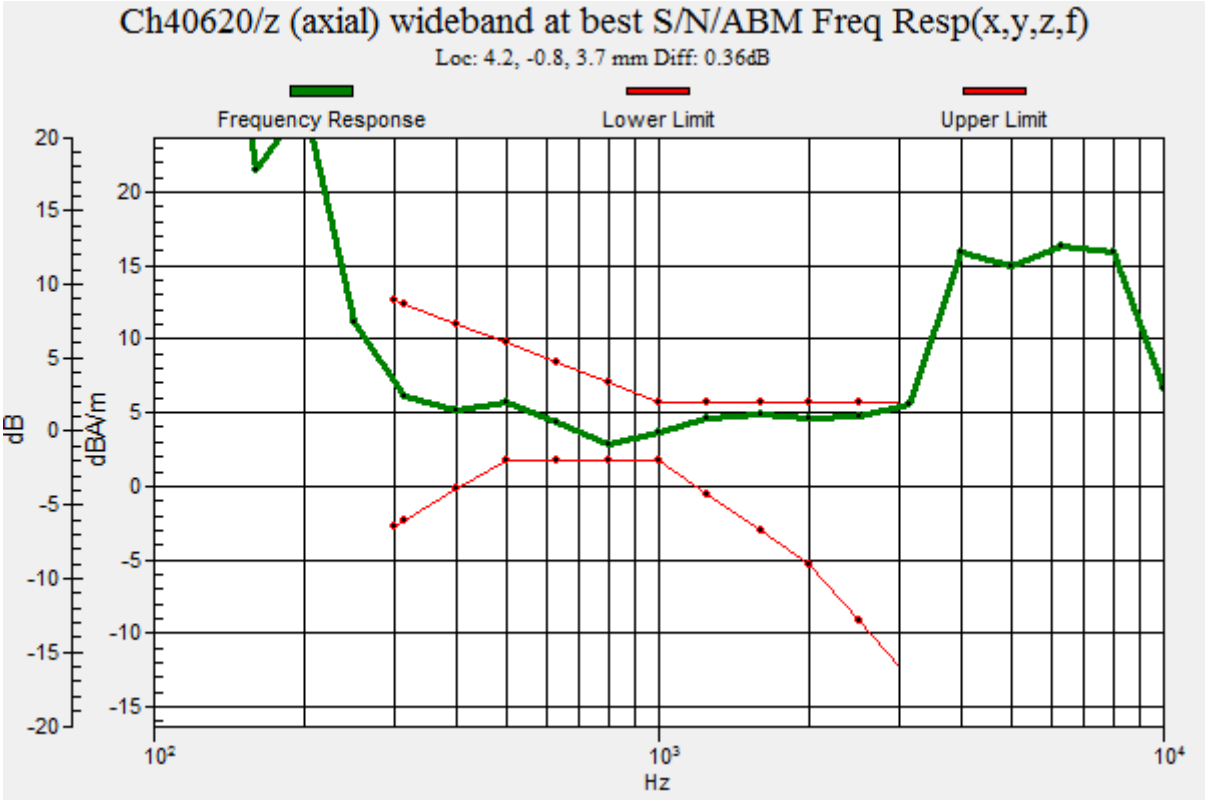
## HAC_T-Coil_LTE Band 41_20MHz_QPSK_1RB_0offset_12.2Kbps_Ch40620_Z

Communication System: UID 10172 - CAB, LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK);
Frequency: 2593 MHz;Duty Cycle: 1:8.33681
Medium: Air Medium parameters used: $\sigma = 0$ S/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m$^3$
Ambient Temperature：23.2 ℃

DASY5 Configuration:
- Probe: AM1DV3 - 3128; ; Calibrated: 2022.07.19
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE4 Sn1643; Calibrated: 2022.12.30
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Ch40620/z (axial) 4.2mm 50 x 50/ABM SNR(x,y,z) (13x15x1):** Measurement grid:
dx=10mm, dy=10mm
ABM1/ABM2 = 33.03 dB
ABM1 comp = 5.81 dBA/m
BWC Factor = 0.04 dB
Location: 4.2, -0.8, 3.7 mm


0 dB = 44.84 = 33.03 dB


Ch40620/z (axial) wideband at best S/N/ABM Freq Resp(x,y,z,f)
Loc: 4.2, -0.8, 3.7 mm Diff: 0.36dB
Frequency Response
Lower Limit
Upper Limit
dB
dBA/m
Hz

Test Laboratory: Shenzhen Morlab Communications Technology Co., Ltd. Date: 2023.01.11

## HAC_T-Coil_LTE Band 41_20MHz_QPSK_1RB_0offset_12.2Kbps_Ch40620_Y

Communication System: UID 10172 - CAB, LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK);
Frequency: 2593 MHz;Duty Cycle: 1:8.33681
Medium: Air Medium parameters used: $\sigma = 0$ S/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m$^3$
Ambient Temperature：23.2 ℃

DASY5 Configuration:
- Probe: AM1DV3 - 3128; ; Calibrated: 2022.07.19
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE4 Sn1643; Calibrated: 2022.12.30
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Ch40620/y (transversal) 4.2mm 50 x 50/ABM SNR(x,y,z) (13x15x1):** Measurement grid: dx=10mm, dy=10mm
ABM1/ABM2 = 32.87 dB
ABM1 comp = -4.30 dBA/m
BWC Factor = 0.04 dB
Location: 0, 7.5, 3.7 mm


0 dB = 43.98 = 32.87 dB

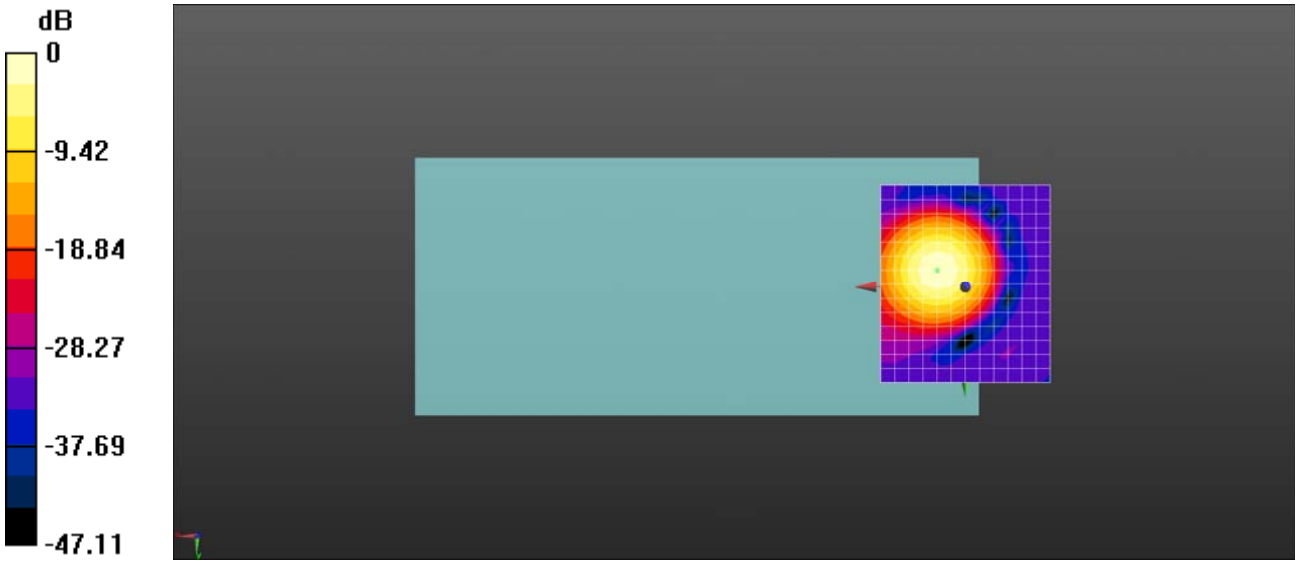
Test Laboratory: Shenzhen Morlab Communications Technology Co., Ltd. Date: 2023.02.07

## HAC_T-Coil_LTE Band 48_20MHz_QPSK_1RB_0offset_12.2Kbps_Ch55990_Z

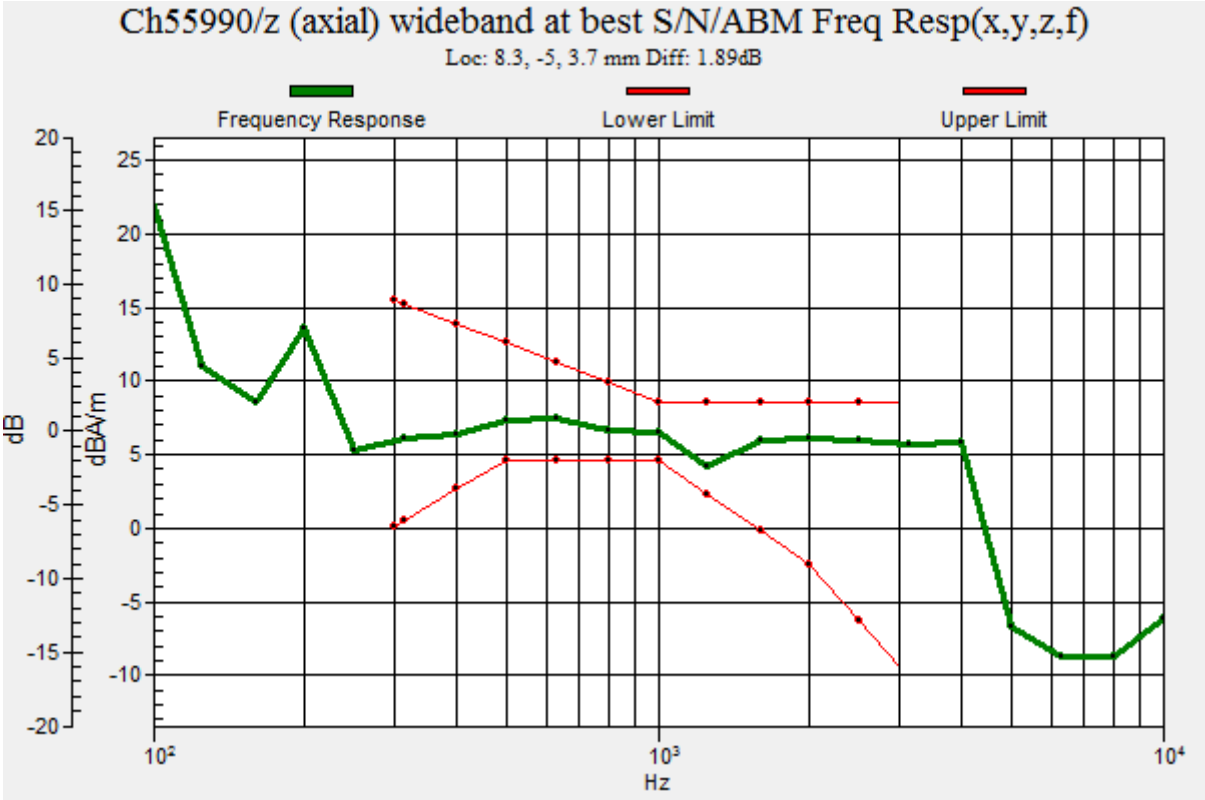
Communication System: UID 10172 - CAB, LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK);
Frequency: 3625 MHz;Duty Cycle: 1:8.33681
Medium: Air Medium parameters used: $\sigma = 0$ S/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m$^3$
Ambient Temperature：23.2 ℃

DASY5 Configuration:
- Probe: AM1DV3 - 3128; ; Calibrated: 2022.07.19
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE4 Sn1643; Calibrated: 2022.12.30
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Ch55990/z (axial) 4.2mm 50 x 50/ABM SNR(x,y,z) (13x15x1):** Measurement grid:
dx=10mm, dy=10mm
ABM1/ABM2 = 34.69 dB
ABM1 comp = 6.68 dBA/m
BWC Factor = 0.15 dB
Location: 8.3, -5, 3.7 mm




0 dB = 54.29 = 34.69 dB


Ch55990/z (axial) wideband at best S/N/ABM Freq Resp(x,y,z,f)
Loc: 8.3, -5, 3.7 mm Diff: 1.89dB
Frequency Response
Lower Limit
Upper Limit
dB
dBA/m
Hz
20
15
10
5
0
-5
-10
-15
-20
25
20
15
10
5
0
-5
-10
$10^2$
$10^3$
$10^4$

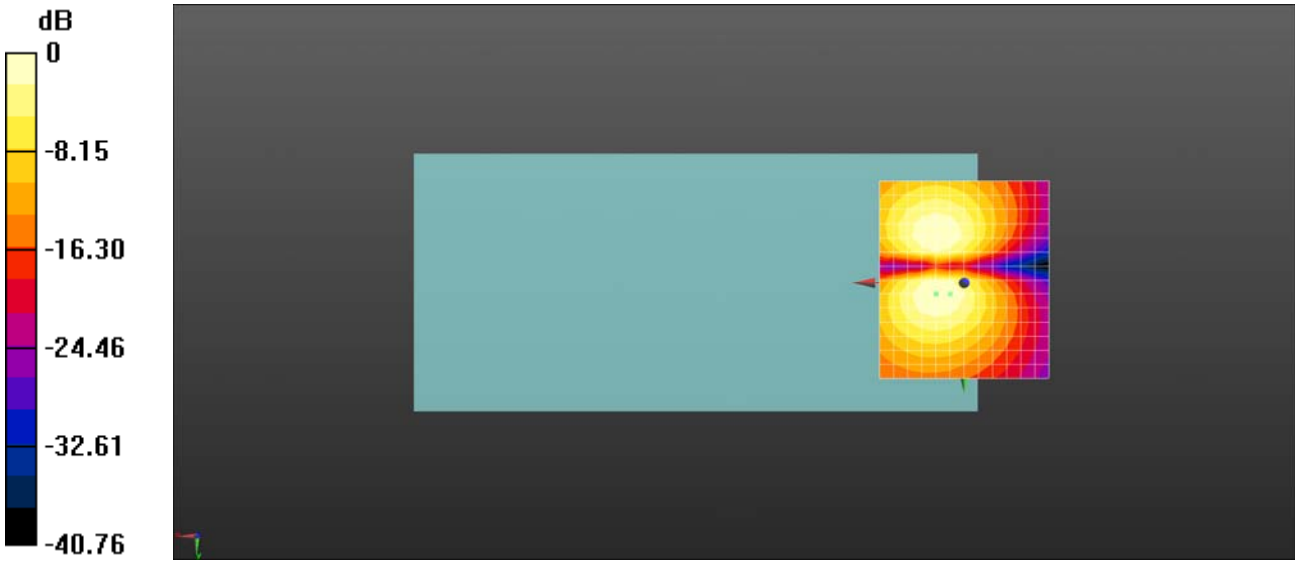
Test Laboratory: Shenzhen Morlab Communications Technology Co., Ltd. Date: 2023.02.07

## HAC_T-Coil_LTE Band 48_20MHz_QPSK_1RB_0offset_12.2Kbps_Ch55990_Y

Communication System: UID 10172 - CAB, LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK);
Frequency: 3625 MHz;Duty Cycle: 1:8.33681
Medium: Air Medium parameters used: $\sigma = 0$ S/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m$^3$
Ambient Temperature：23.2 ℃

DASY5 Configuration:
- Probe: AM1DV3 - 3128; ; Calibrated: 2022.07.19
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE4 Sn1643; Calibrated: 2022.12.30
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Ch55990/y (transversal) 4.2mm 50 x 50/ABM SNR(x,y,z) (13x15x1):** Measurement grid: dx=10mm, dy=10mm
ABM1/ABM2 = 34.37 dB
ABM1 comp = -1.26 dBA/m
BWC Factor = 0.15 dB
Location: 4.2, 3.3, 3.7 mm




0 dB = 52.29 = 34.37 dB

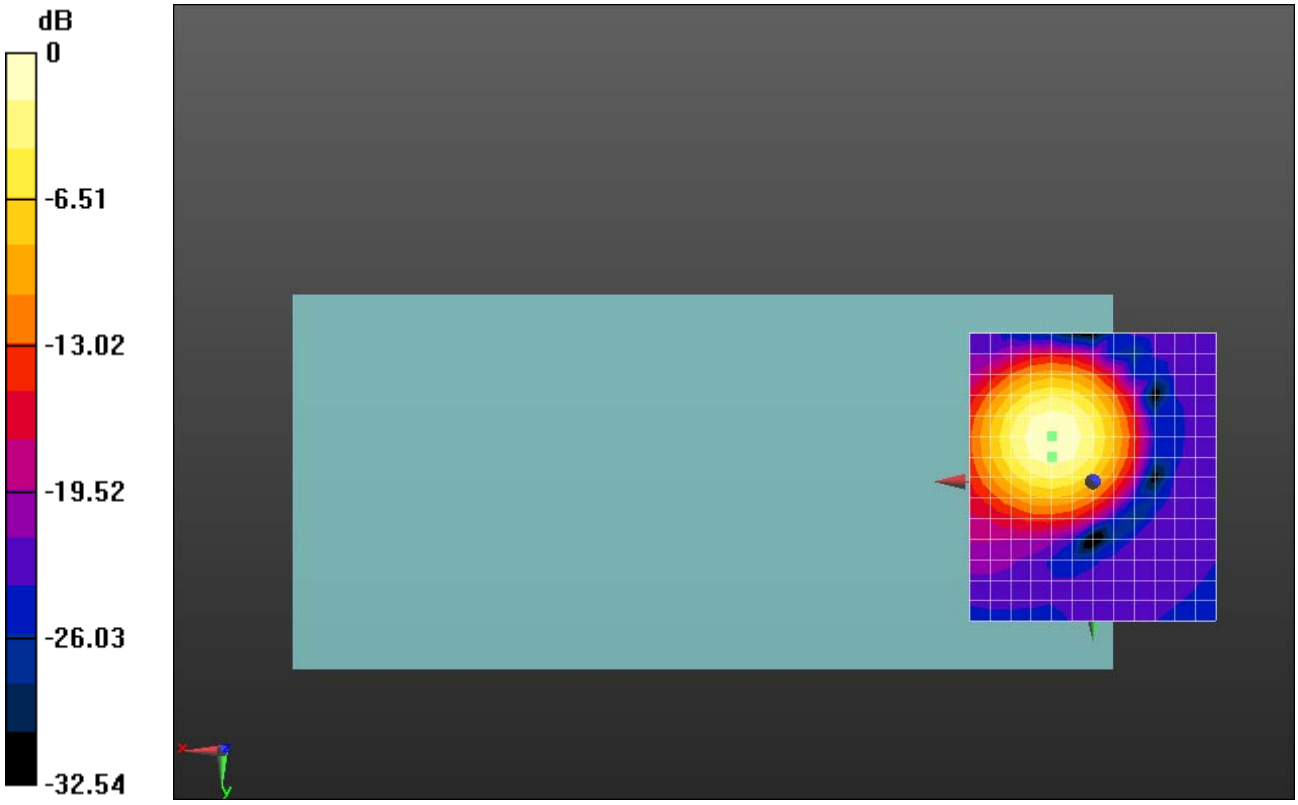
Test Laboratory: Shenzhen Morlab Communications Technology Co., Ltd. Date: 2023.01.10

## HAC_T-Coil_LTE Band 66_20MHz_QPSK_1RB_0offset_12.2Kbps_Ch132322_Z

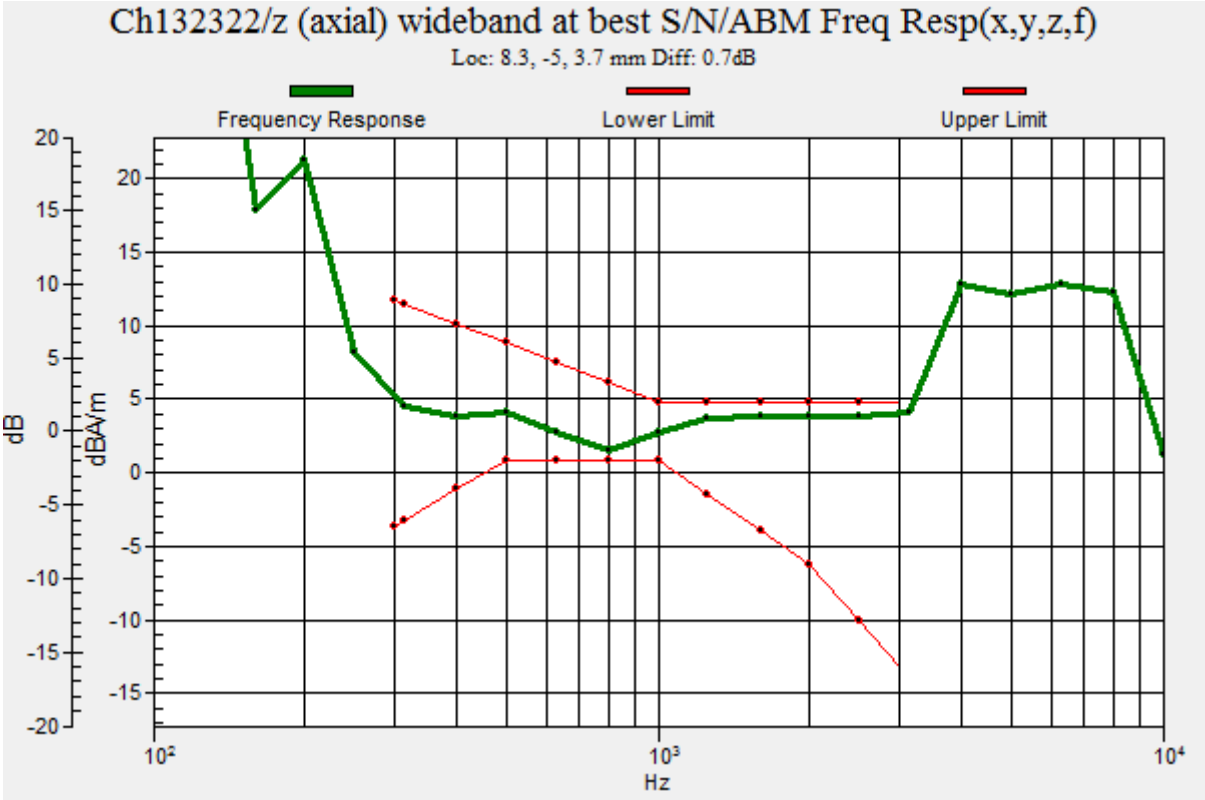
Communication System: UID 0, LTE-FDD (SC-FDMA, 1RB, 20MHz, QPSK) (0); Frequency: 1745 MHz;Duty Cycle: 1:3.74111
Medium: Air Medium parameters used: $\sigma = 0$ S/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m$^3$
Ambient Temperature：23.2 ℃

DASY5 Configuration:
- Probe: AM1DV3 - 3128; ; Calibrated: 2022.07.19
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE4 Sn1643; Calibrated: 2022.12.30
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Ch132322/z (axial) 4.2mm 50 x 50/ABM SNR(x,y,z) (13x15x1):** Measurement grid: dx=10mm, dy=10mm
ABM1/ABM2 = 33.69 dB
ABM1 comp = 4.16 dBA/m
BWC Factor = 0.04 dB
Location: 8.3, -5, 3.7 mm




0 dB = 48.39 = 33.70 dB


Ch132322/z (axial) wideband at best S/N/ABM Freq Resp(x,y,z,f)
Loc: 8.3, -5, 3.7 mm Diff: 0.7dB
Frequency Response
Lower Limit
Upper Limit
dB
dBA/m
20
15
10
5
0
-5
-10
-15
-20
$10^2$
$10^3$
$10^4$
Hz

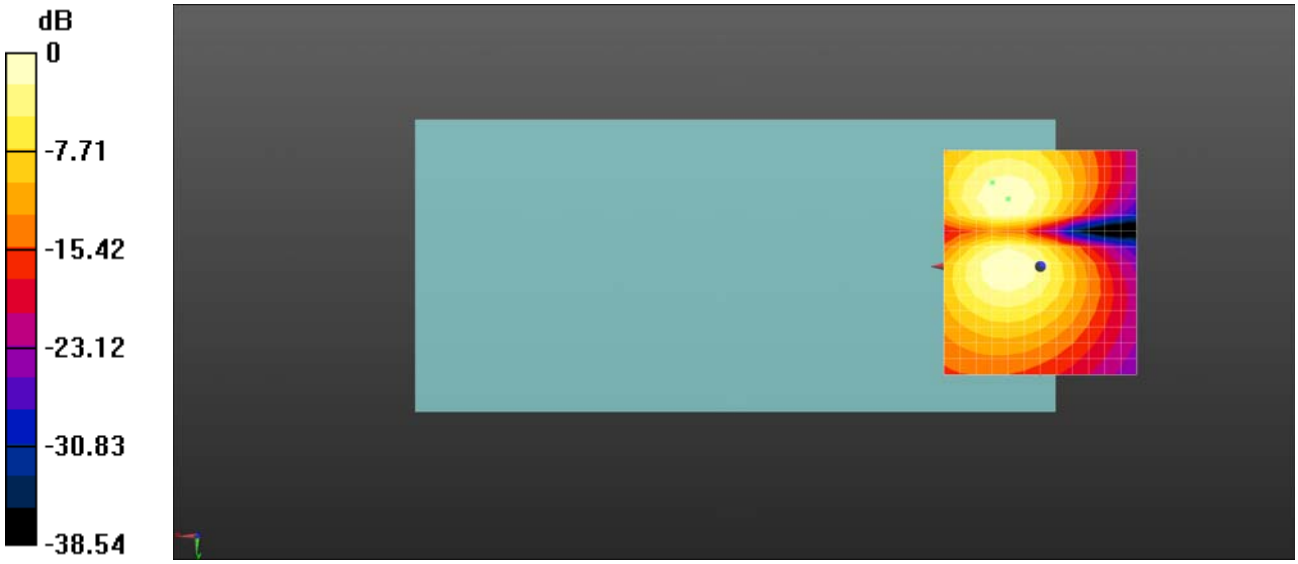
Test Laboratory: Shenzhen Morlab Communications Technology Co., Ltd. Date: 2023.01.10

## HAC_T-Coil_LTE Band 66_20MHz_QPSK_1RB_0offset_12.2Kbps_Ch132322_Y

Communication System: UID 0, LTE-FDD (SC-FDMA, 1RB, 20MHz, QPSK) (0); Frequency: 1745 MHz;Duty Cycle: 1:3.74111
Medium: Air Medium parameters used: $\sigma = 0$ S/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m$^3$
Ambient Temperature：23.2 ℃

DASY5 Configuration:
- Probe: AM1DV3 - 3128; ; Calibrated: 2022.07.19
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE4 Sn1643; Calibrated: 2022.12.30
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Ch132322/y (transversal) 4.2mm 50 x 50/ABM SNR(x,y,z) (13x15x1):** Measurement grid: dx=10mm, dy=10mm
ABM1/ABM2 = 33.26 dB
ABM1 comp = -4.68 dBA/m
BWC Factor = 0.04 dB
Location: 12.5, -21.7, 3.7 mm




0 dB = 46.01 = 33.26 dB

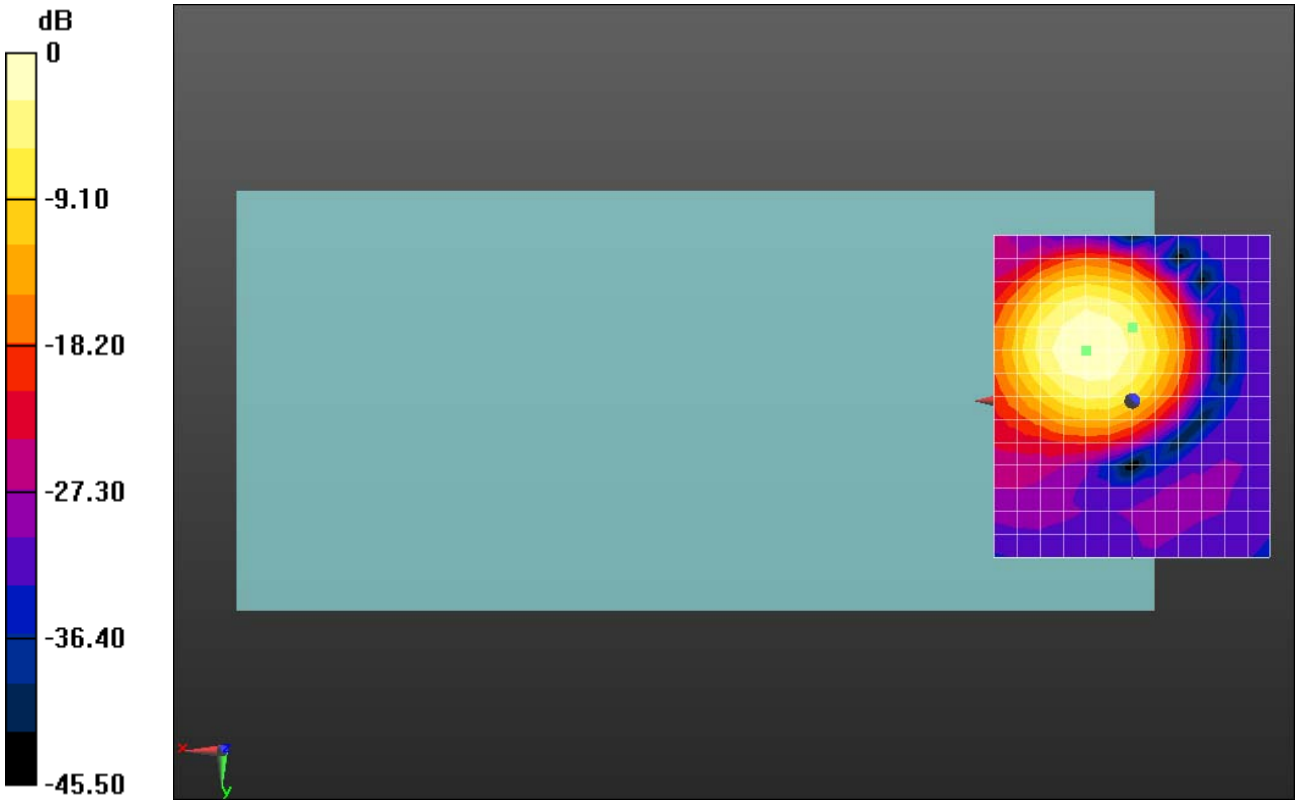
Test Laboratory: Shenzhen Morlab Communications Technology Co., Ltd. Date: 2023.01.11

## HAC_T-Coil_VoWiFi 2.4GHz_802.11b 1Mbps_AMR 4.75Kbps_Ch6_Z

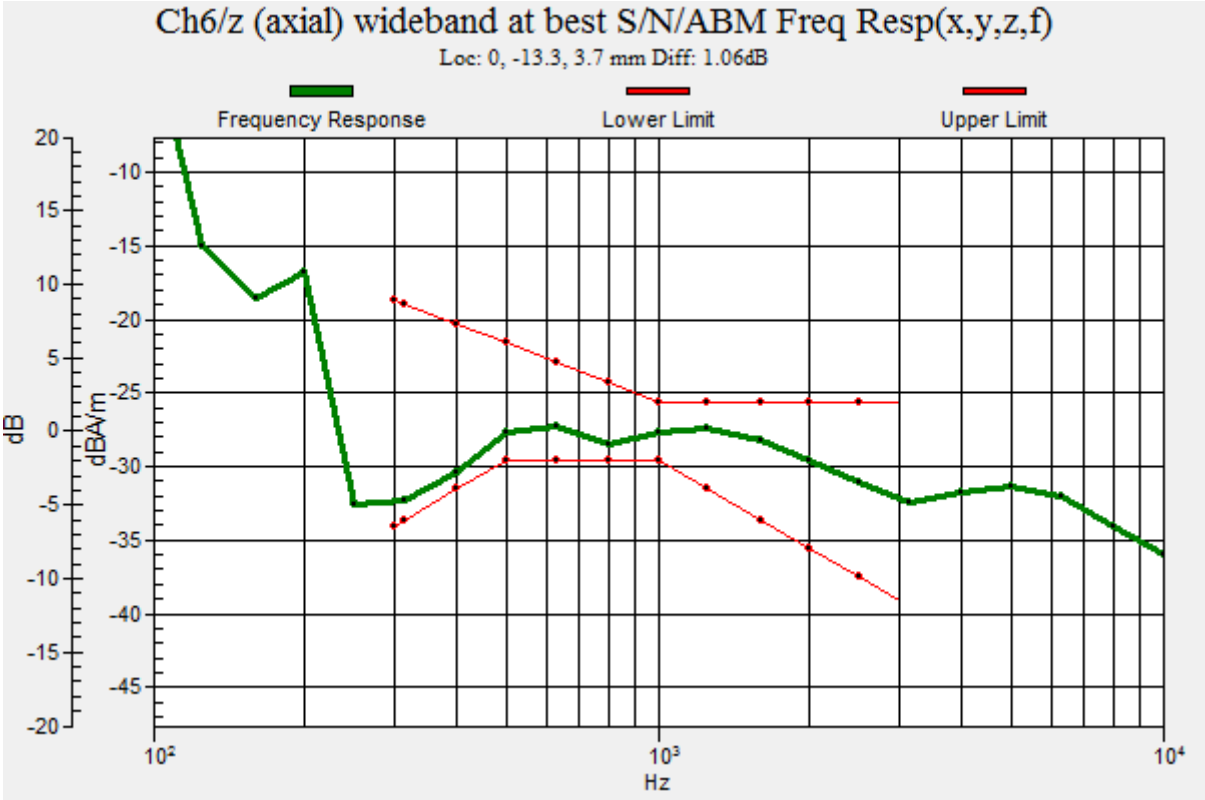
Communication System: UID 10415 - AAA, IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 99pc duty cycle); Frequency: 2437 MHz;Duty Cycle: 1:1.42561
Medium: Air Medium parameters used: $\sigma = 0$ S/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m$^3$
Ambient Temperature：23.2 ℃

DASY5 Configuration:
- Probe: AM1DV3 - 3128; ; Calibrated: 2022.07.19
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE4 Sn1643; Calibrated: 2022.12.30
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Ch6/z (axial) 4.2mm 50 x 50/ABM SNR(x,y,z) (13x15x1):** Measurement grid: dx=10mm, dy=10mm
ABM1/ABM2 = 54.20 dB
ABM1 comp = 8.79 dBA/m
BWC Factor = 0.04 dB
Location: 0, -13.3, 3.7 mm




0 dB = 512.8 = 54.20 dB


Ch6/z (axial) wideband at best S/N/ABM Freq Resp(x,y,z,f)
Loc: 0, -13.3, 3.7 mm Diff: 1.06dB
Frequency Response
Lower Limit
Upper Limit
dB
dBA/m
Hz
20
15
10
5
0
-5
-10
-15
-20
-10
-15
-20
-25
-30
-35
-40
-45
10²
10³
10⁴

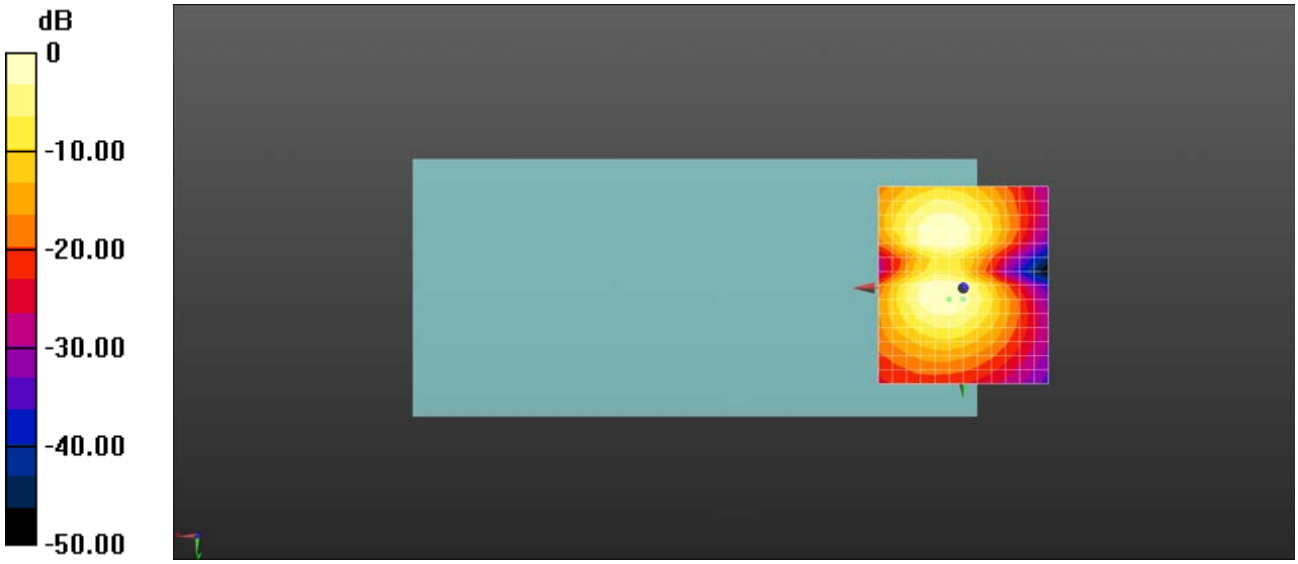
Test Laboratory: Shenzhen Morlab Communications Technology Co., Ltd. Date: 2023.01.11

## HAC_T-Coil_VoWiFi 2.4GHz_802.11b 1Mbps_AMR 4.75Kbps_Ch6_Y

Communication System: UID 10415 - AAA, IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 99pc duty cycle); Frequency: 2437 MHz;Duty Cycle: 1:1.42561
Medium: Air Medium parameters used: $\sigma = 0$ S/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m$^3$
Ambient Temperature：23.2 ℃

DASY5 Configuration:
- Probe: AM1DV3 - 3128; ; Calibrated: 2022.07.19
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE4 Sn1643; Calibrated: 2022.12.30
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Ch6/y (transversal) 4.2mm 50 x 50/ABM SNR(x,y,z) (13x15x1):** Measurement grid: dx=10mm, dy=10mm
ABM1/ABM2 = 57.17 dB
ABM1 comp = 5.97 dBA/m
BWC Factor = 0.04 dB
Location: 0, 3.3, 3.7 mm




0 dB = 722.0 = 57.17 dB

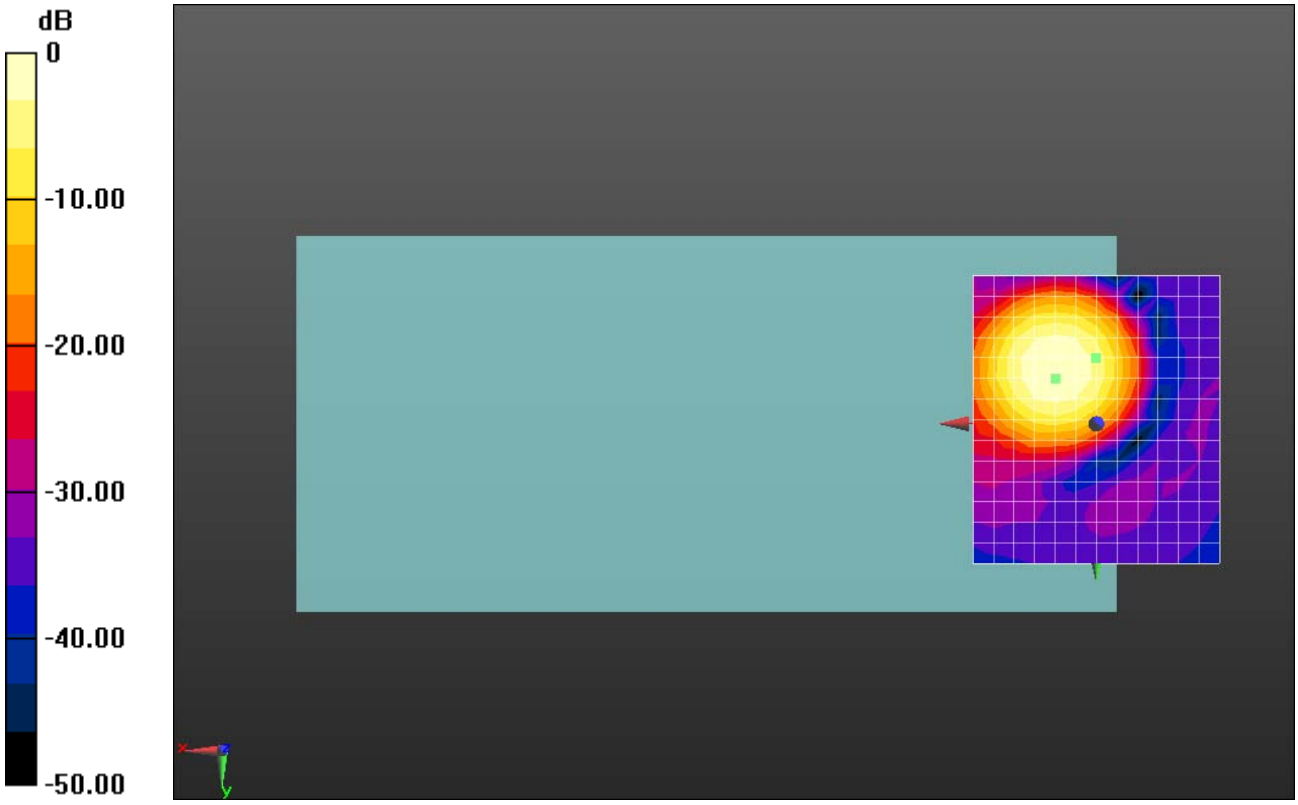
Test Laboratory: Shenzhen Morlab Communications Technology Co., Ltd. Date: 2023.01.11

## HAC_T-Coil_VoWiFi 2.4GHz_802.11g 6Mbps_AMR 4.75Kbps_Ch6_Z

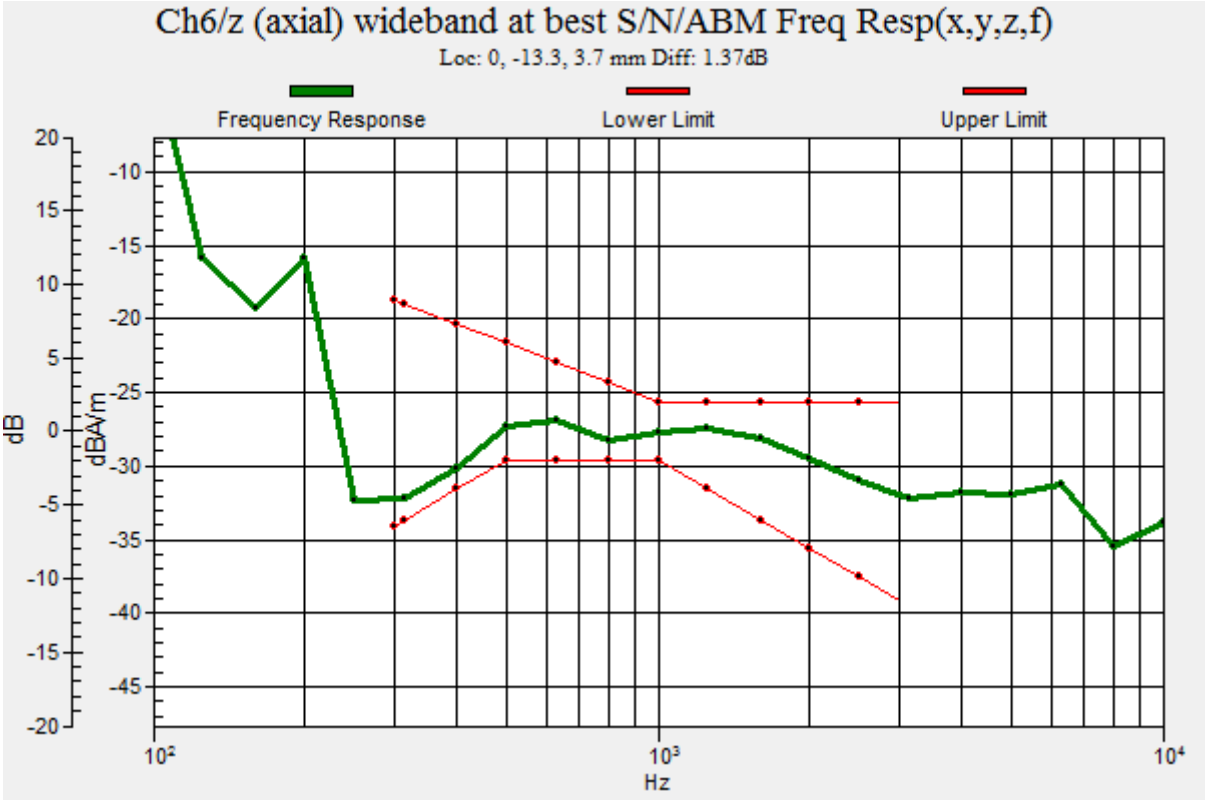
Communication System: UID 10419 - AAA, IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 99pc duty cycle, Short preambule); Frequency: 2437 MHz;Duty Cycle: 1:6.59174
Medium: Air Medium parameters used: $\sigma = 0$ S/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m$^3$
Ambient Temperature：23.2 ℃

DASY5 Configuration:
- Probe: AM1DV3 - 3128; ; Calibrated: 2022.07.19
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE4 Sn1643; Calibrated: 2022.12.30
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Ch6/z (axial) 4.2mm 50 x 50/ABM SNR(x,y,z) (13x15x1):** Measurement grid: dx=10mm, dy=10mm
ABM1/ABM2 = 55.17 dB
ABM1 comp = 8.93 dBA/m
BWC Factor = 0.04 dB
Location: 0, -13.3, 3.7 mm




0 dB = 573.7 = 55.17 dB


Ch6/z (axial) wideband at best S/N/ABM Freq Resp(x,y,z,f)
Loc: 0, -13.3, 3.7 mm Diff: 1.37dB
Frequency Response
Lower Limit
Upper Limit
dB
dBA/m
Hz
20
15
10
5
0
-5
-10
-15
-20
-10
-15
-20
-25
-30
-35
-40
-45
10²
10³
10⁴

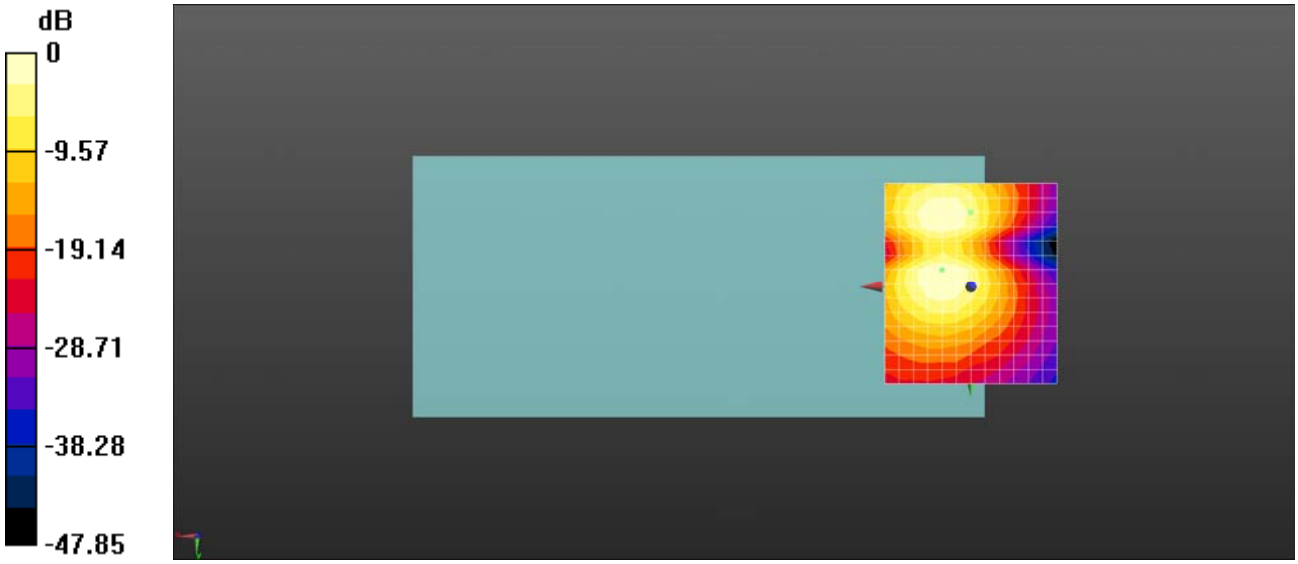
Test Laboratory: Shenzhen Morlab Communications Technology Co., Ltd. Date: 2023.01.11

## HAC_T-Coil_VoWiFi 2.4GHz_802.11g 6Mbps_AMR 4.75Kbps_Ch6_Y

Communication System: UID 10419 - AAA, IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 99pc duty cycle, Short preambule); Frequency: 2437 MHz;Duty Cycle: 1:6.59174
Medium: Air Medium parameters used: $\sigma = 0$ S/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m$^3$
Ambient Temperature：23.2 ℃

DASY5 Configuration:
- Probe: AM1DV3 - 3128; ; Calibrated: 2022.07.19
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE4 Sn1643; Calibrated: 2022.12.30
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Ch6/y (transversal) 4.2mm 50 x 50/ABM SNR(x,y,z) (13x15x1):** Measurement grid: dx=10mm, dy=10mm
ABM1/ABM2 = 55.95 dB
ABM1 comp = 4.42 dBA/m
BWC Factor = 0.04 dB
Location: 0, -21.7, 3.7 mm




0 dB = 627.2 = 55.95 dB

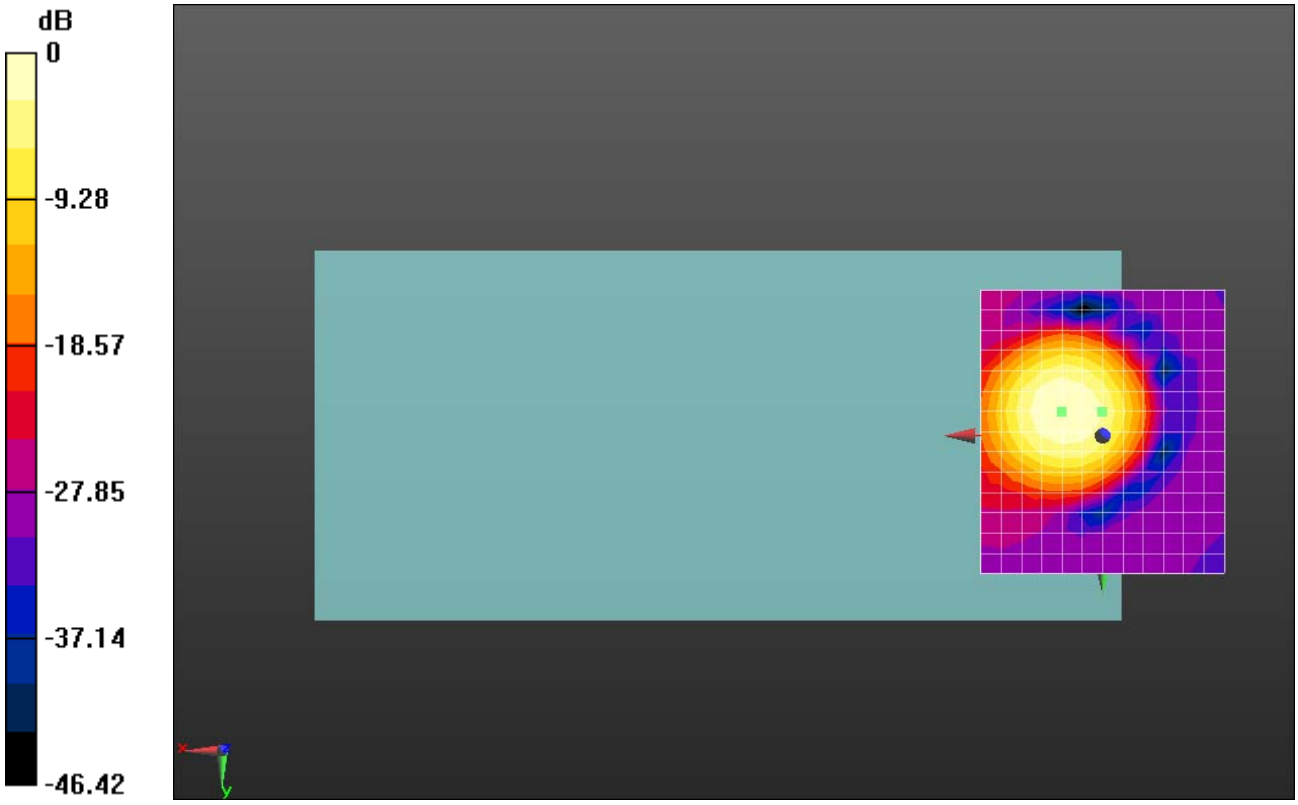
Test Laboratory: Shenzhen Morlab Communications Technology Co., Ltd. Date: 2023.01.11

## HAC_T-Coil_VoWiFi 2.4GHz_802.11n-HT20 MCS0_AMR 4.75Kbps_Ch6_Z

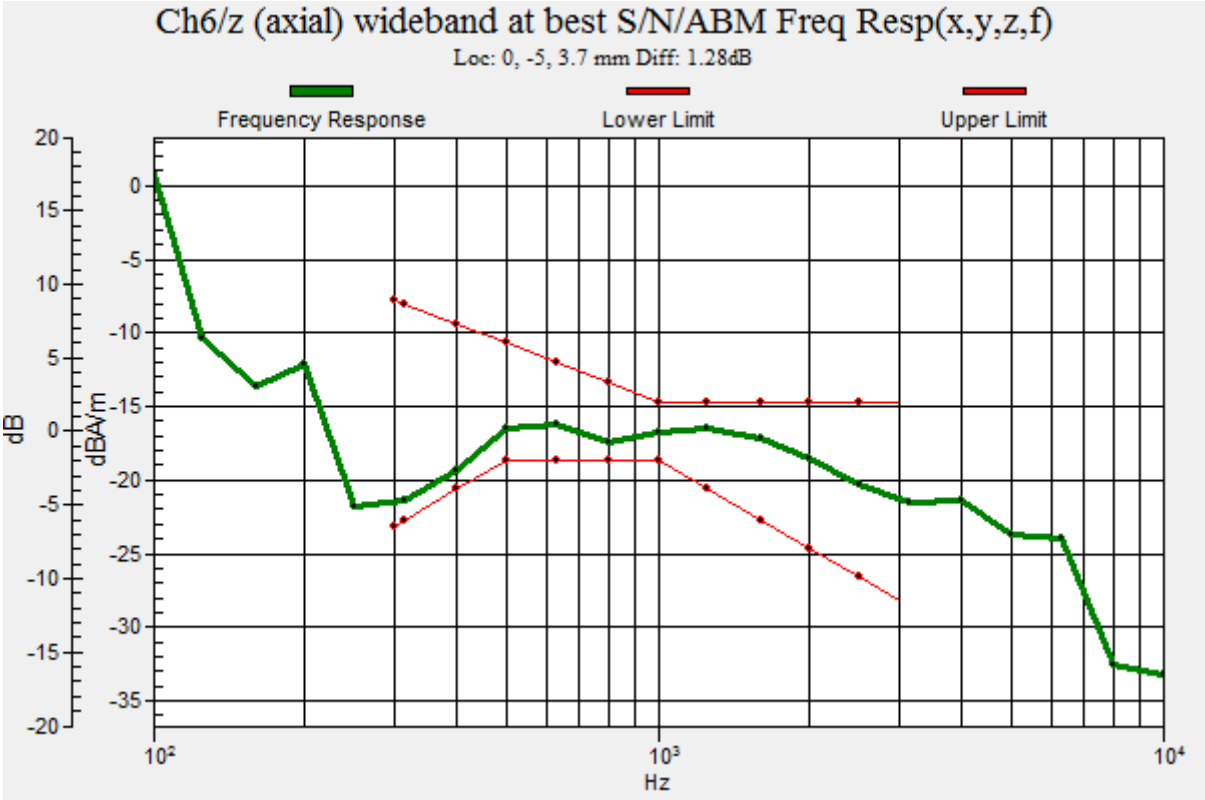
Communication System: UID 10193 - CAA, IEEE 802.11n (HT Greenfield, 6.5 Mbps, BPSK); Frequency: 2437 MHz;Duty Cycle: 1:6.44169
Medium: Air Medium parameters used: $\sigma = 0$ S/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m$^3$
Ambient Temperature：23.2 ℃

DASY5 Configuration:
- Probe: AM1DV3 - 3128; ; Calibrated: 2022.07.19
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE4 Sn1643; Calibrated: 2022.12.30
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Ch6/z (axial) 4.2mm 50 x 50/ABM SNR(x,y,z) (13x15x1):** Measurement grid: dx=10mm, dy=10mm
ABM1/ABM2 = 56.83 dB
ABM1 comp = 10.28 dBA/m
BWC Factor = 0.04 dB
Location: 0, -5, 3.7 mm




0 dB = 693.8 = 56.82 dB


Ch6/z (axial) wideband at best S/N/ABM Freq Resp(x,y,z,f)
Loc: 0, -5, 3.7 mm Diff: 1.28dB
Frequency Response
Lower Limit
Upper Limit
dB
dBA/m
Hz
20
15
10
5
0
-5
-10
-15
-20
0
-5
-10
-15
-20
-25
-30
-35
10²
10³
10⁴

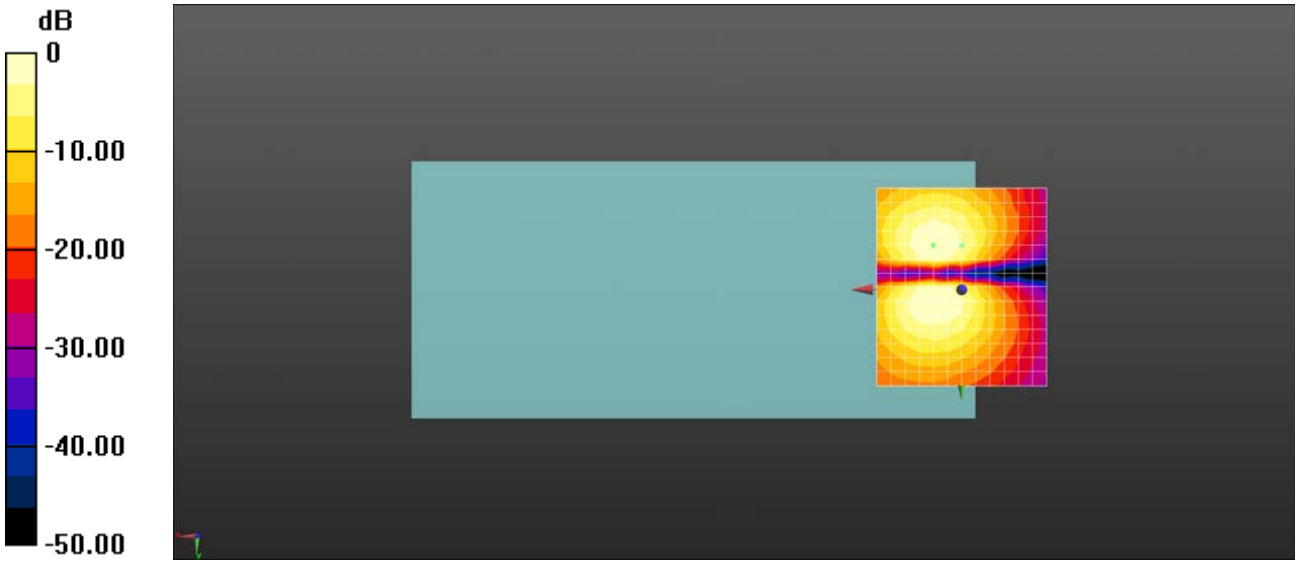
Test Laboratory: Shenzhen Morlab Communications Technology Co., Ltd. Date: 2023.01.11

## HAC_T-Coil_VoWiFi 2.4GHz_802.11n-HT20 MCS0_AMR 4.75Kbps_Ch6_Y

Communication System: UID 10193 - CAA, IEEE 802.11n (HT Greenfield, 6.5 Mbps, BPSK);
Frequency: 2437 MHz;Duty Cycle: 1:6.44169
Medium: Air Medium parameters used: $\sigma = 0$ S/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m$^3$
Ambient Temperature：23.2 ℃

DASY5 Configuration:
- Probe: AM1DV3 - 3128; ; Calibrated: 2022.07.19
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE4 Sn1643; Calibrated: 2022.12.30
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Ch6/y (transversal) 4.2mm 50 x 50/ABM SNR(x,y,z) (13x15x1):** Measurement grid: dx=10mm, dy=10mm
ABM1/ABM2 = 55.17 dB
ABM1 comp = 5.01 dBA/m
BWC Factor = 0.04 dB
Location: 0, -13.3, 3.7 mm




0 dB = 573.6 = 55.17 dB

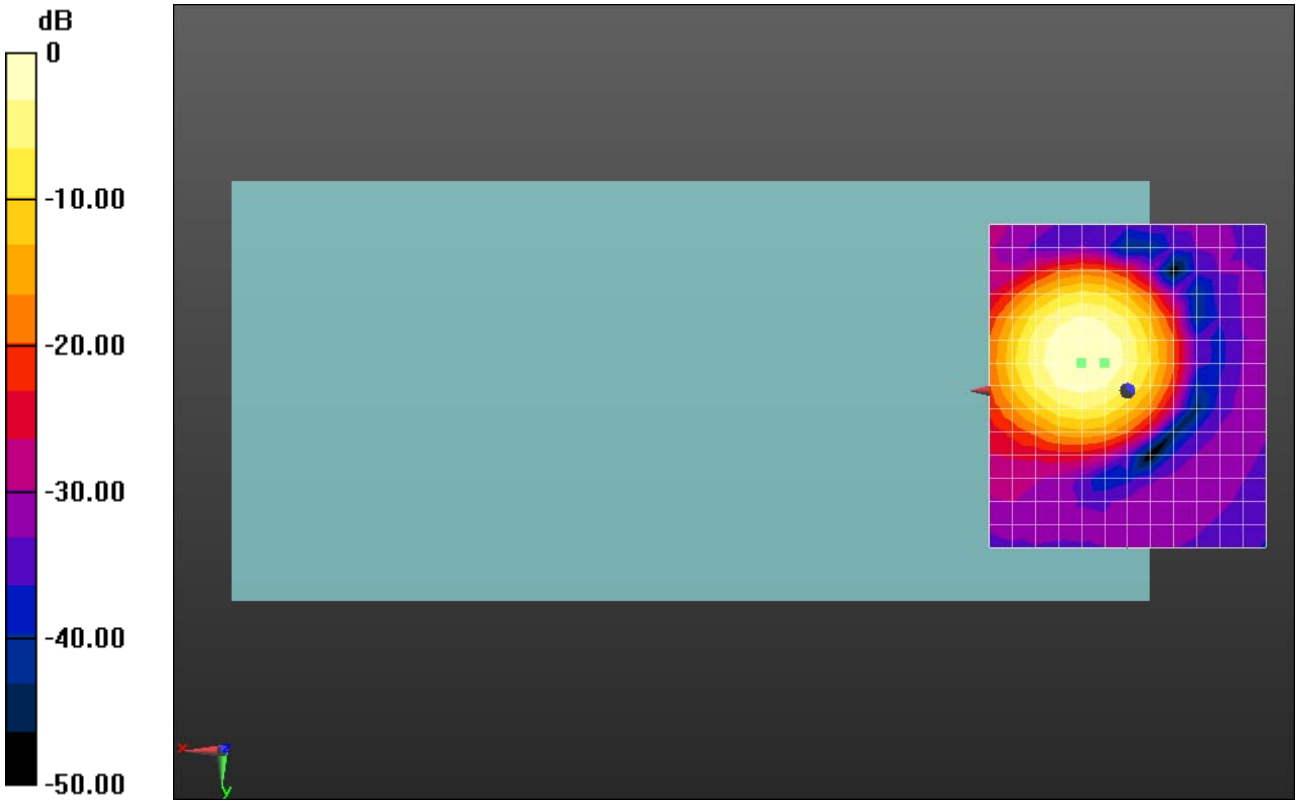
Test Laboratory: Shenzhen Morlab Communications Technology Co., Ltd. Date: 2023.01.11

## HAC_T-Coil_VoWiFi 2.4GHz_802.11n-HT40 MCS0_AMR 4.75Kbps_Ch6_Z

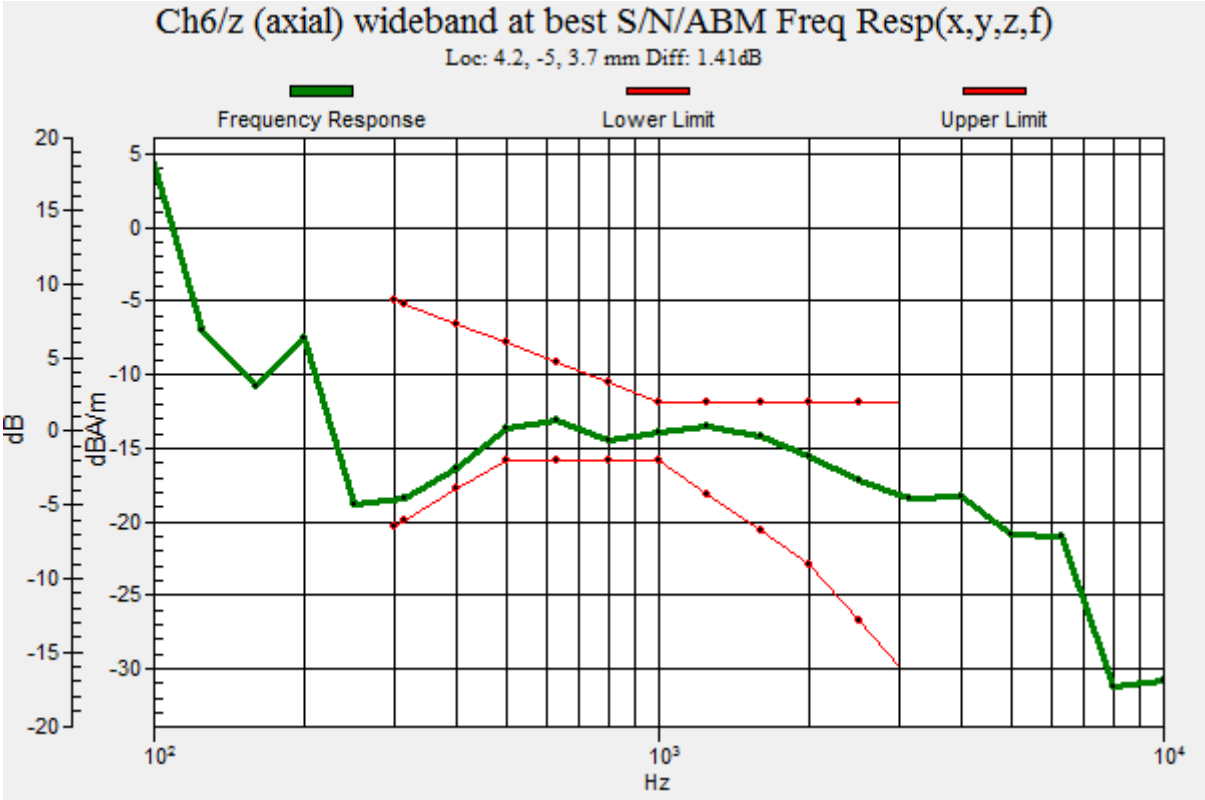
Communication System: UID 10114 - CAA, IEEE 802.11n (HT Greenfield, 13.5 Mbps, BPSK); Frequency: 2437 MHz;Duty Cycle: 1:6.45654
Medium: Air Medium parameters used: $\sigma = 0$ S/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m$^3$
Ambient Temperature：23.2 ℃

DASY5 Configuration:
- Probe: AM1DV3 - 3128; ; Calibrated: 2022.07.19
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE4 Sn1643; Calibrated: 2022.12.30
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Ch6/z (axial) 4.2mm 50 x 50/ABM SNR(x,y,z) (13x15x1):** Measurement grid: dx=10mm, dy=10mm
ABM1/ABM2 = 62.66 dB
ABM1 comp = 12.20 dBA/m
BWC Factor = 0.05 dB
Location: 4.2, -5, 3.7 mm




0 dB = 1359 = 62.66 dB


Ch6/z (axial) wideband at best S/N/ABM Freq Resp(x,y,z,f)
Loc: 4.2, -5, 3.7 mm Diff: 1.41dB
Frequency Response
Lower Limit
Upper Limit
dB
dBA/m
Hz
20
15
10
5
0
-5
-10
-15
-20
5
0
-5
-10
-15
-20
-25
-30
10²
10³
10⁴

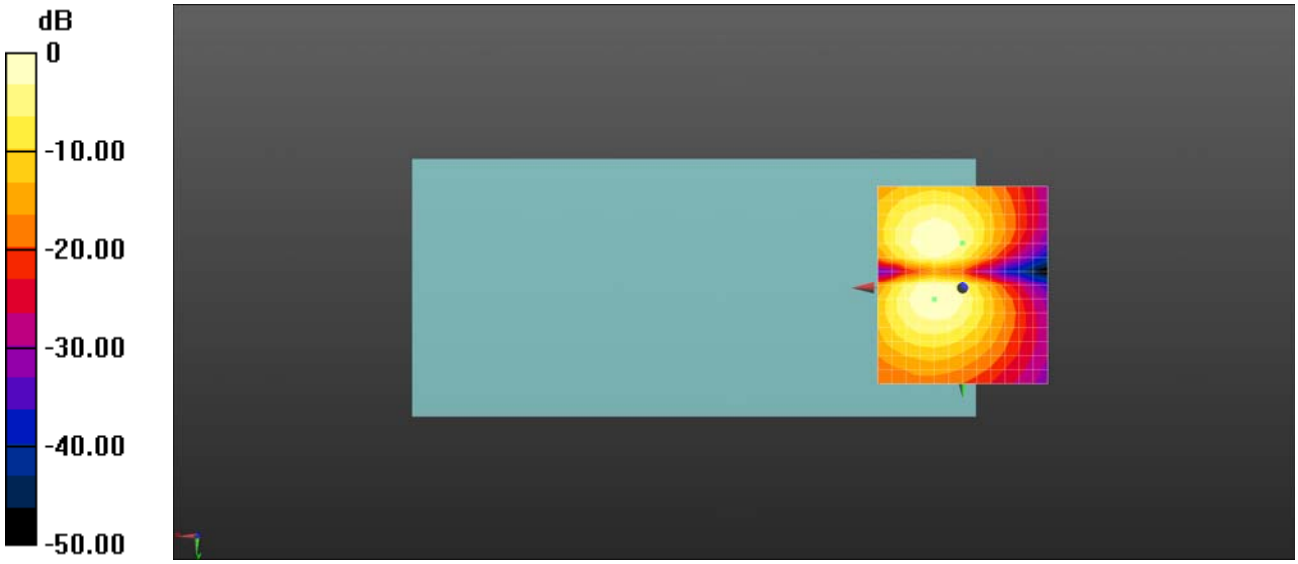
Test Laboratory: Shenzhen Morlab Communications Technology Co., Ltd. Date: 2023.01.11

## HAC_T-Coil_VoWiFi 2.4GHz_802.11n-HT40 MCS0_AMR 4.75Kbps_Ch6_Y

Communication System: UID 10114 - CAA, IEEE 802.11n (HT Greenfield, 13.5 Mbps, BPSK); Frequency: 2437 MHz;Duty Cycle: 1:6.45654
Medium: Air Medium parameters used: $\sigma = 0$ S/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m$^3$
Ambient Temperature：23.2 ℃

DASY5 Configuration:
- Probe: AM1DV3 - 3128; ; Calibrated: 2022.07.19
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE4 Sn1643; Calibrated: 2022.12.30
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Ch6/y (transversal) 4.2mm 50 x 50/ABM SNR(x,y,z) (13x15x1):** Measurement grid: dx=10mm, dy=10mm
ABM1/ABM2 = 55.52 dB
ABM1 comp = 4.87 dBA/m
BWC Factor = 0.05 dB
Location: 0, -13.3, 3.7 mm




0 dB = 597.2 = 55.52 dB

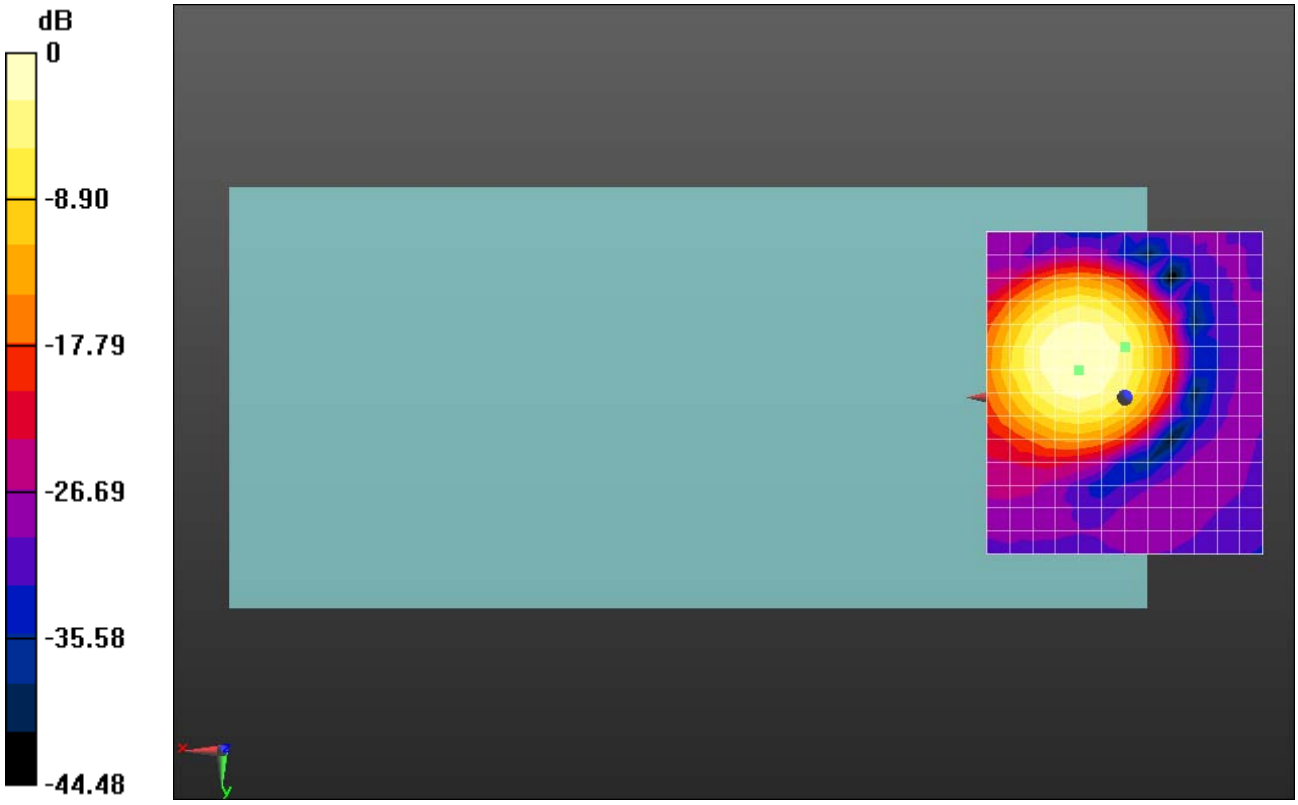
Test Laboratory: Shenzhen Morlab Communications Technology Co., Ltd. Date: 2023.01.11

## HAC_T-Coil_VoWiFi 2.4GHz_802.11ac-VHT20 MCS0_AMR 4.75Kbps_Ch6_Z

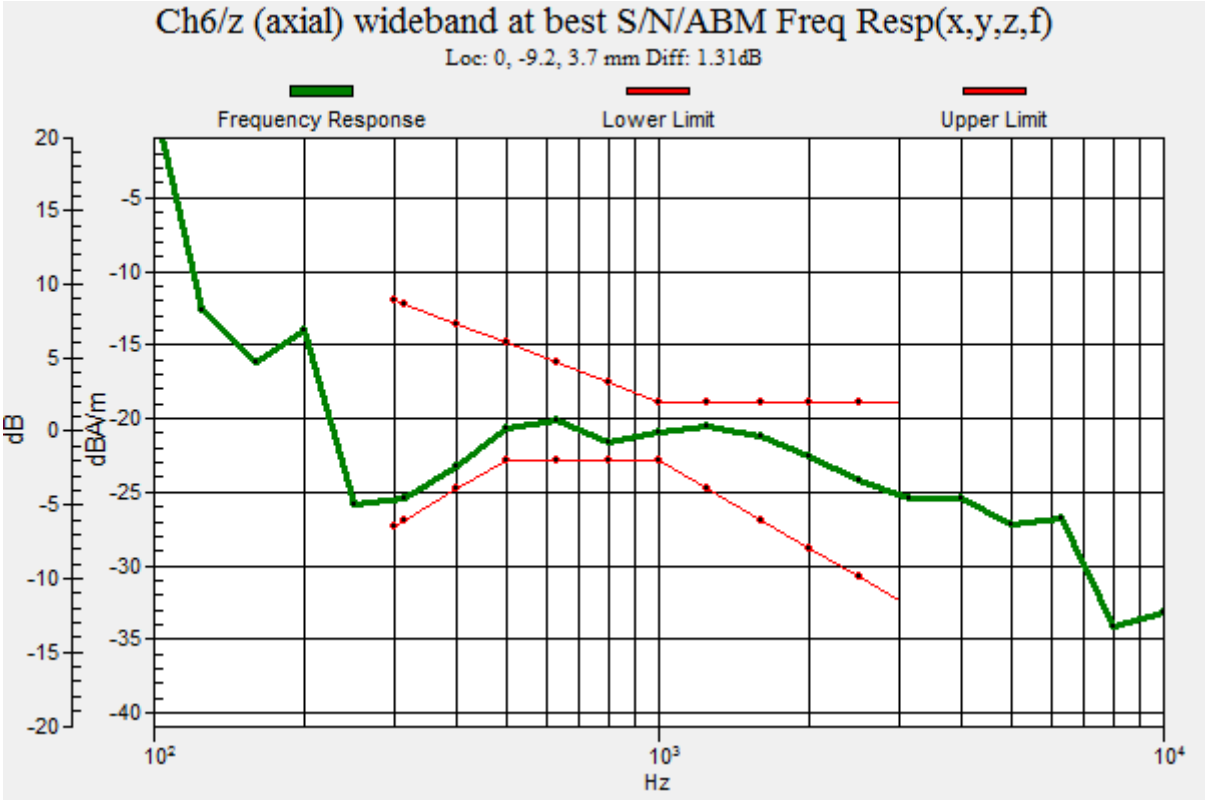
Communication System: UID 10415 - AAA, IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 99pc duty cycle); Frequency: 2437 MHz;Duty Cycle: 1:1.42561
Medium: Air Medium parameters used: $\sigma = 0$ S/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m$^3$
Ambient Temperature：23.2 ℃

DASY5 Configuration:
- Probe: AM1DV3 - 3128; ; Calibrated: 2022.07.19
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE4 Sn1643; Calibrated: 2022.12.30
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Ch6/z (axial) 4.2mm 50 x 50/ABM SNR(x,y,z) (13x15x1):** Measurement grid: dx=10mm, dy=10mm
ABM1/ABM2 = 55.35 dB
ABM1 comp = 9.19 dBA/m
BWC Factor = 0.05 dB
Location: 0, -9.2, 3.7 mm




0 dB = 585.7 = 55.35 dB


Ch6/z (axial) wideband at best S/N/ABM Freq Resp(x,y,z,f)
Loc: 0, -9.2, 3.7 mm Diff: 1.31dB
Frequency Response
Lower Limit
Upper Limit
dB
dBA/m
Hz
20
15
10
5
0
-5
-10
-15
-20
-5
-10
-15
-20
-25
-30
-35
-40
10²
10³
10⁴

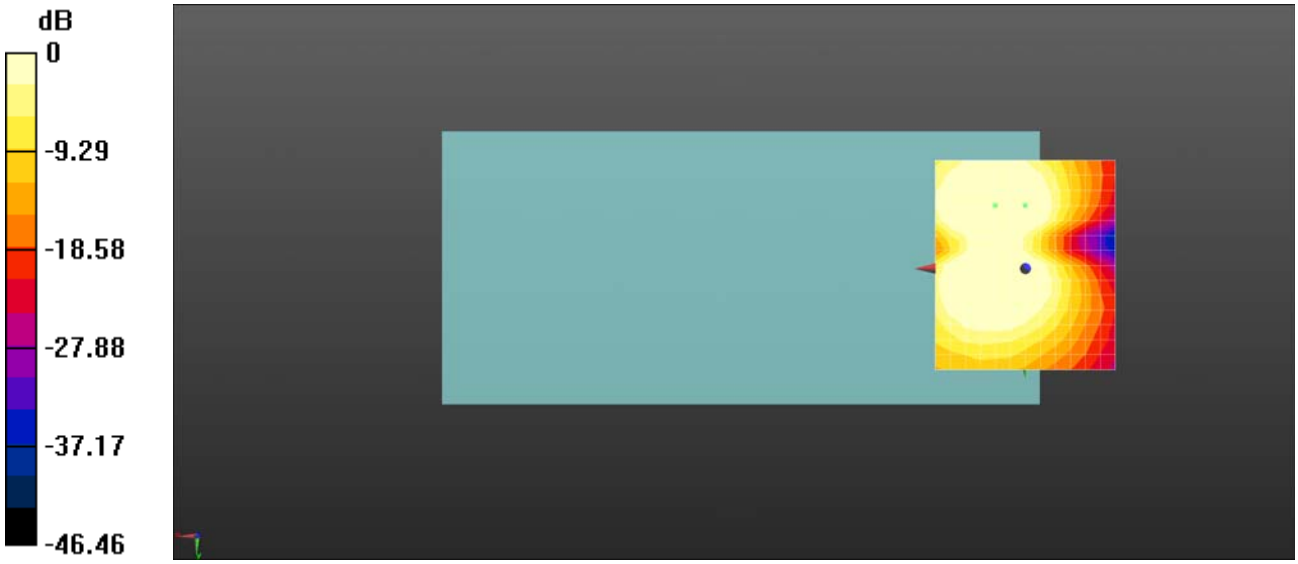
Test Laboratory: Shenzhen Morlab Communications Technology Co., Ltd. Date: 2023.01.11

## HAC_T-Coil_VoWiFi 2.4GHz_802.11ac-VHT20 MCS0_AMR 4.75Kbps_Ch6_Y

Communication System: UID 10415 - AAA, IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 99pc duty cycle); Frequency: 2437 MHz;Duty Cycle: 1:1.42561
Medium: Air Medium parameters used: $\sigma = 0$ S/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m$^3$
Ambient Temperature：23.2 ℃

DASY5 Configuration:
- Probe: AM1DV3 - 3128; ; Calibrated: 2022.07.19
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE4 Sn1643; Calibrated: 2022.12.30
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Ch6/y (transversal) 4.2mm 50 x 50/ABM SNR(x,y,z) (13x15x1):** Measurement grid: dx=10mm, dy=10mm
ABM1/ABM2 = 56.18 dB
ABM1 comp = 3.94 dBA/m
BWC Factor = 0.05 dB
Location: 0, -17.5, 3.7 mm




0 dB = 644.2 = 56.18 dB

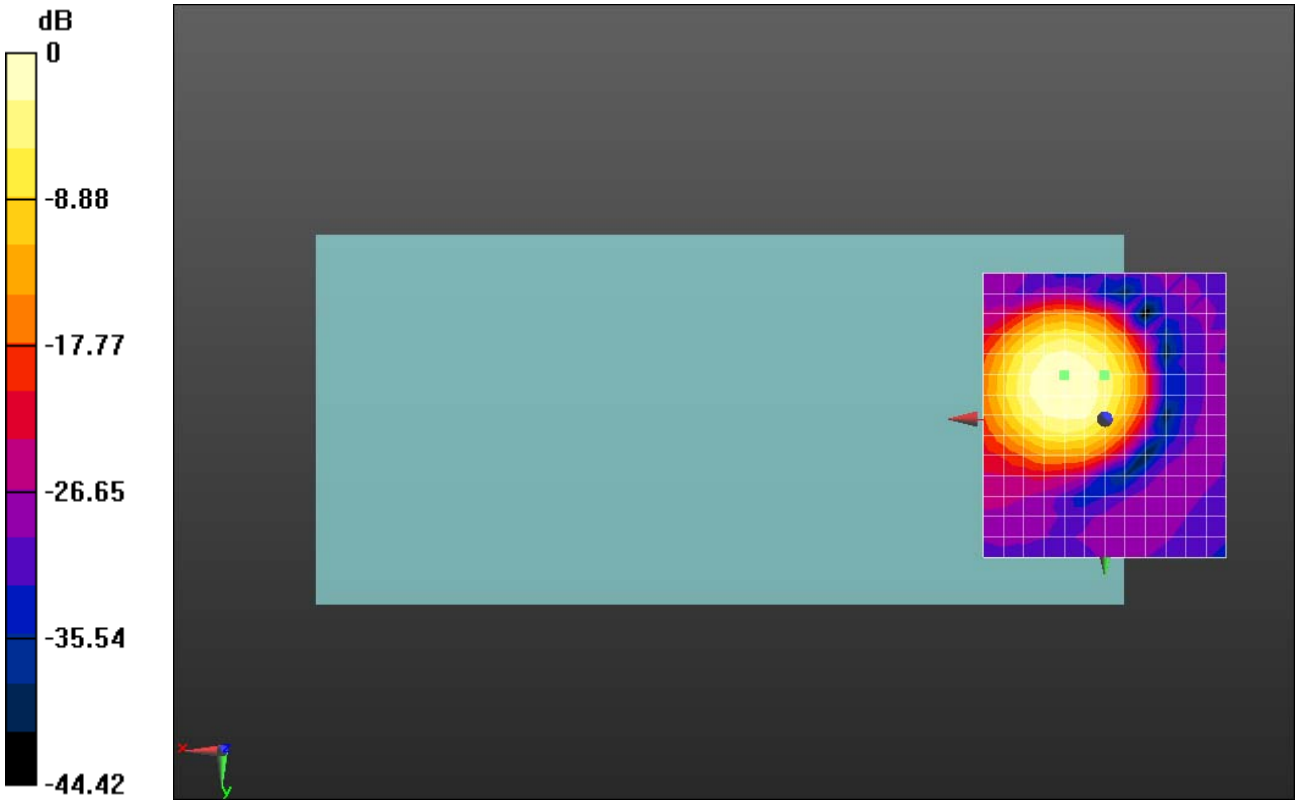
Test Laboratory: Shenzhen Morlab Communications Technology Co., Ltd. Date: 2023.01.11

## HAC_T-Coil_VoWiFi 2.4GHz_802.11ac-VHT40 MCS0_AMR 4.75Kbps_Ch6_Z

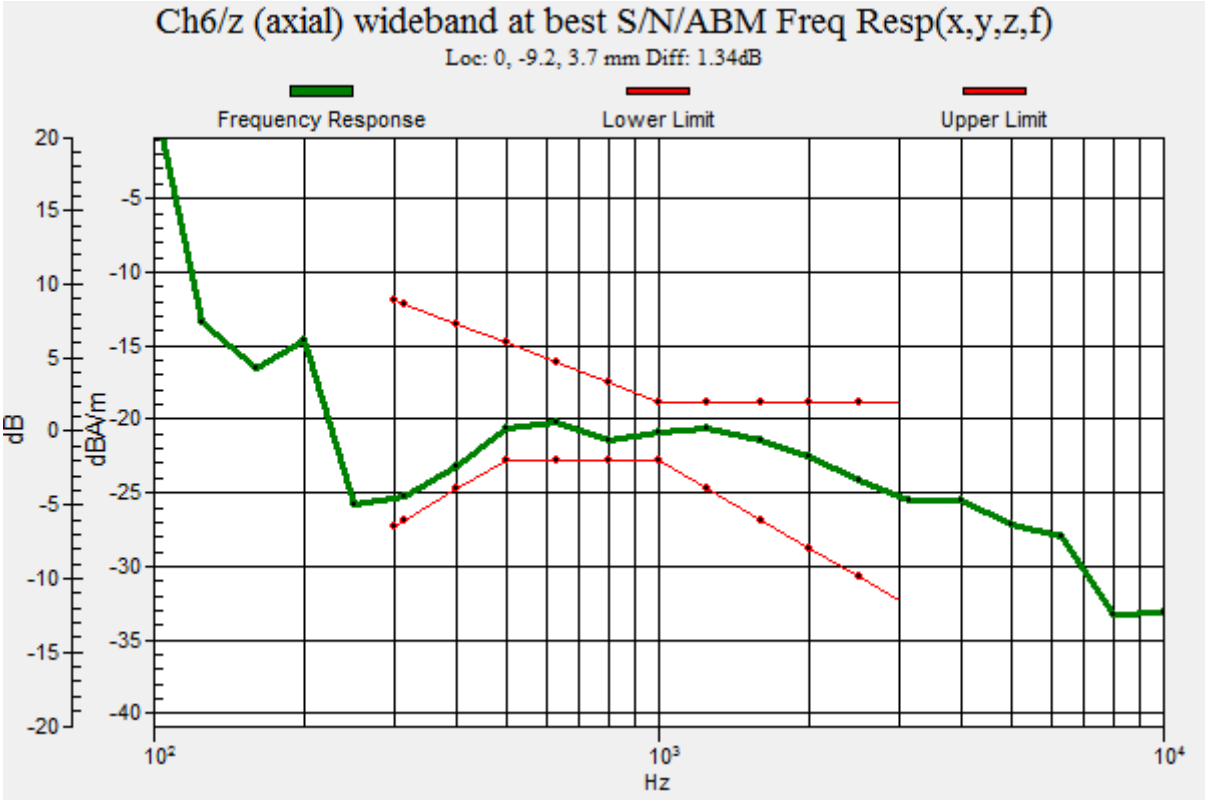
Communication System: UID 10415 - AAA, IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 99pc duty cycle); Frequency: 2437 MHz;Duty Cycle: 1:1.42561
Medium: Air Medium parameters used: $\sigma = 0$ S/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m$^3$
Ambient Temperature：23.2 ℃

DASY5 Configuration:
- Probe: AM1DV3 - 3128; ; Calibrated: 2022.07.19
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE4 Sn1643; Calibrated: 2022.12.30
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Ch6/z (axial) 4.2mm 50 x 50/ABM SNR(x,y,z) (13x15x1):** Measurement grid: dx=10mm, dy=10mm
ABM1/ABM2 = 54.37 dB
ABM1 comp = 8.65 dBA/m
BWC Factor = 0.04 dB
Location: 0, -9.2, 3.7 mm




0 dB = 522.9 = 54.37 dB


Ch6/z (axial) wideband at best S/N/ABM Freq Resp(x,y,z,f)
Loc: 0, -9.2, 3.7 mm Diff: 1.34dB
Frequency Response
Lower Limit
Upper Limit
dB
dBA/m
Hz
20
15
10
5
0
-5
-10
-15
-20
-5
-10
-15
-20
-25
-30
-35
-40
10²
10³
10⁴

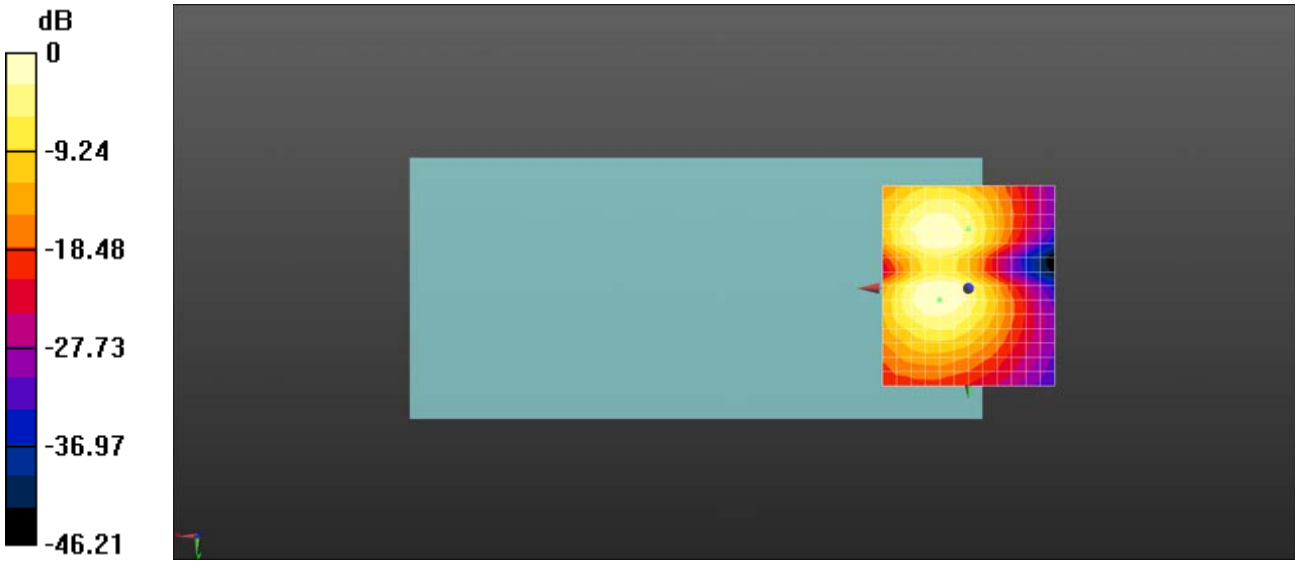
Test Laboratory: Shenzhen Morlab Communications Technology Co., Ltd. Date: 2023.01.11

## HAC_T-Coil_VoWiFi 2.4GHz_802.11ac-VHT40 MCS0_AMR 4.75Kbps_Ch6_Y

Communication System: UID 10415 - AAA, IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 99pc duty cycle); Frequency: 2437 MHz;Duty Cycle: 1:1.42561
Medium: Air Medium parameters used: $\sigma = 0$ S/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m$^3$
Ambient Temperature：23.2 ℃

DASY5 Configuration:
- Probe: AM1DV3 - 3128; ; Calibrated: 2022.07.19
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE4 Sn1643; Calibrated: 2022.12.30
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Ch6/y (transversal) 4.2mm 50 x 50/ABM SNR(x,y,z) (13x15x1):** Measurement grid: dx=10mm, dy=10mm
ABM1/ABM2 = 56.21 dB
ABM1 comp = 4.11 dBA/m
BWC Factor = 0.04 dB
Location: 0, -17.5, 3.7 mm




0 dB = 646.6 = 56.21 dB

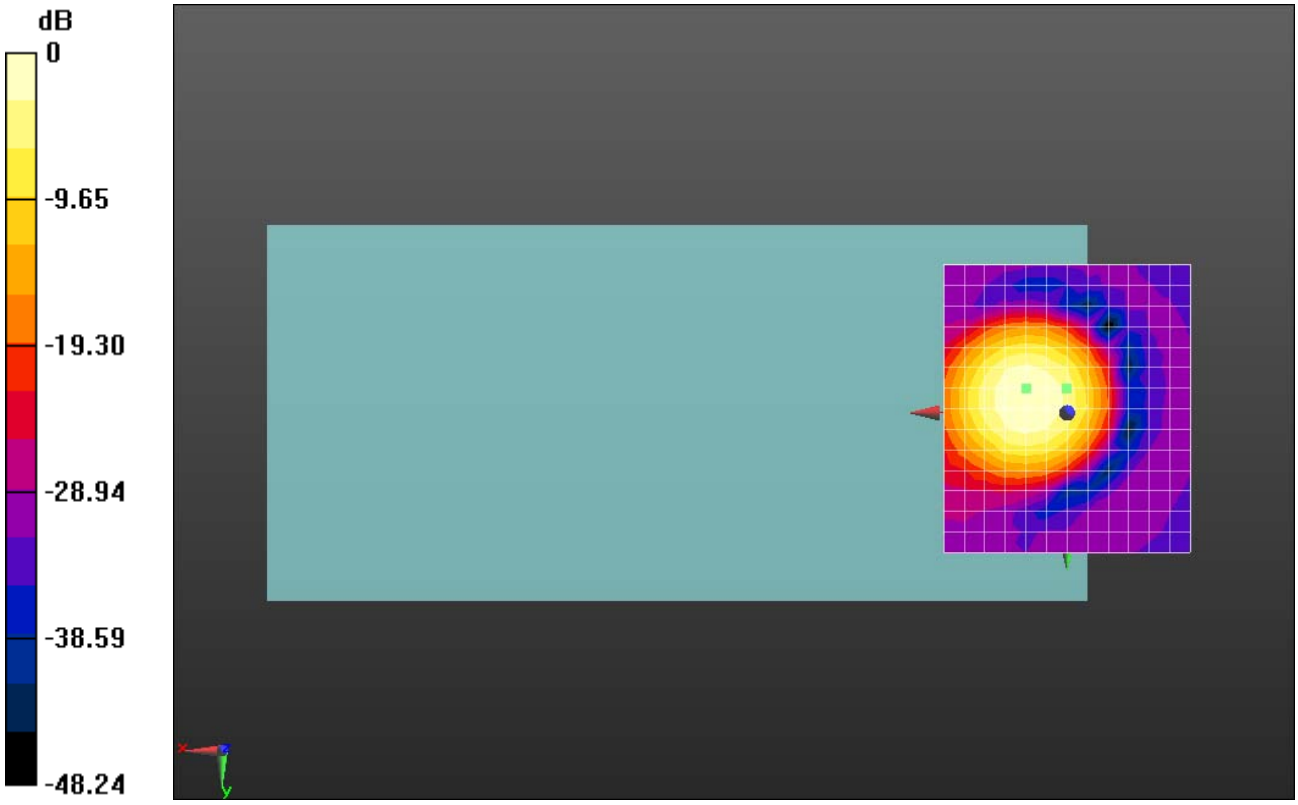
Test Laboratory: Shenzhen Morlab Communications Technology Co., Ltd. Date: 2023.01.11

## HAC_T-Coil_VoWiFi 5.2GHz_802.11a 6Mbps_AMR 4.75Kbps_Ch44_Z

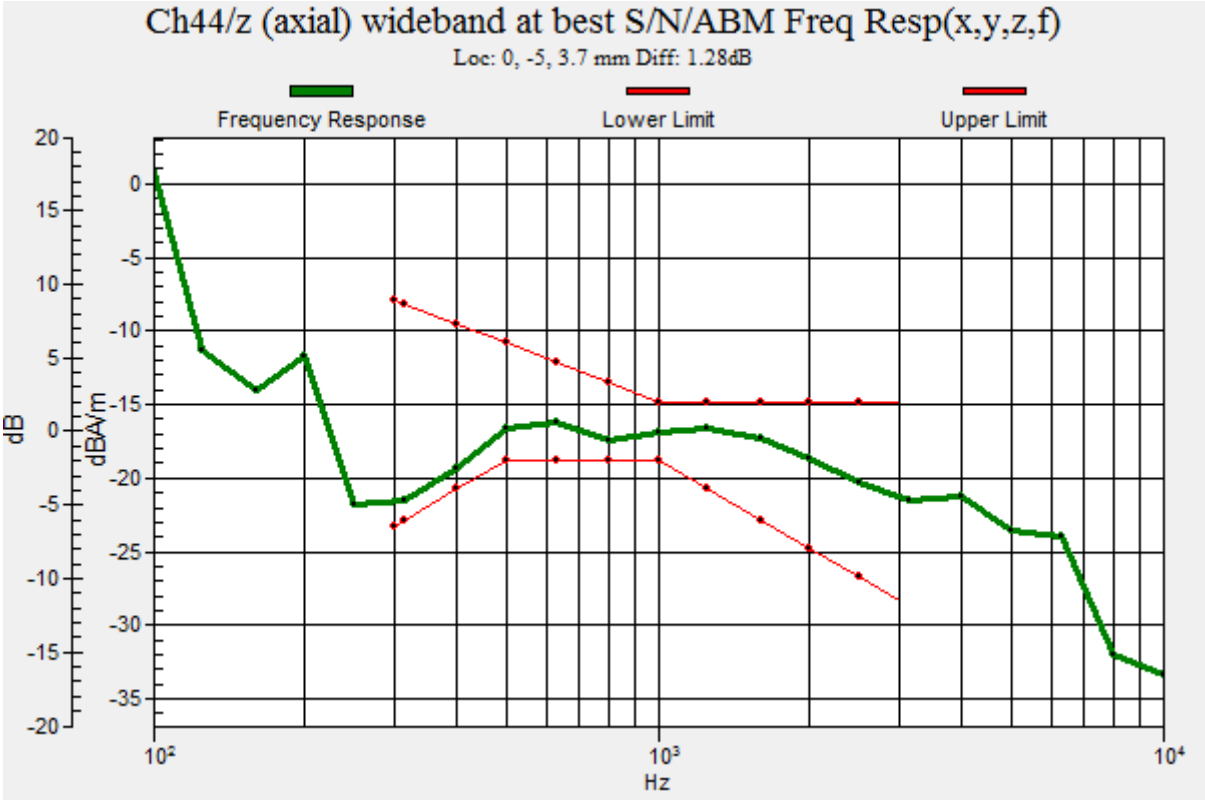
Communication System: UID 10317 - AAA, IEEE 802.11a WiFi 5 GHz (OFDM, 6 Mbps, 96pc duty cycle); Frequency: 5220 MHz;Duty Cycle: 1:6.85488
Medium: Air Medium parameters used: $\sigma = 0$ S/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m$^3$
Ambient Temperature：23.2 ℃

DASY5 Configuration:
- Probe: AM1DV3 - 3128; ; Calibrated: 2022.07.19
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE4 Sn1643; Calibrated: 2022.12.30
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Ch44/z (axial) 4.2mm 50 x 50/ABM SNR(x,y,z) (13x15x1):** Measurement grid: dx=10mm, dy=10mm
ABM1/ABM2 = 59.30 dB
ABM1 comp = 9.18 dBA/m
BWC Factor = 0.08 dB
Location: 0, -5, 3.7 mm




0 dB = 922.7 = 59.30 dB


Ch44/z (axial) wideband at best S/N/ABM Freq Resp(x,y,z,f)
Loc: 0, -5, 3.7 mm Diff: 1.28dB
Frequency Response
Lower Limit
Upper Limit
dB
dBA/m
Hz
20
15
10
5
0
-5
-10
-15
-20
0
-5
-10
-15
-20
-25
-30
-35
10²
10³
10⁴

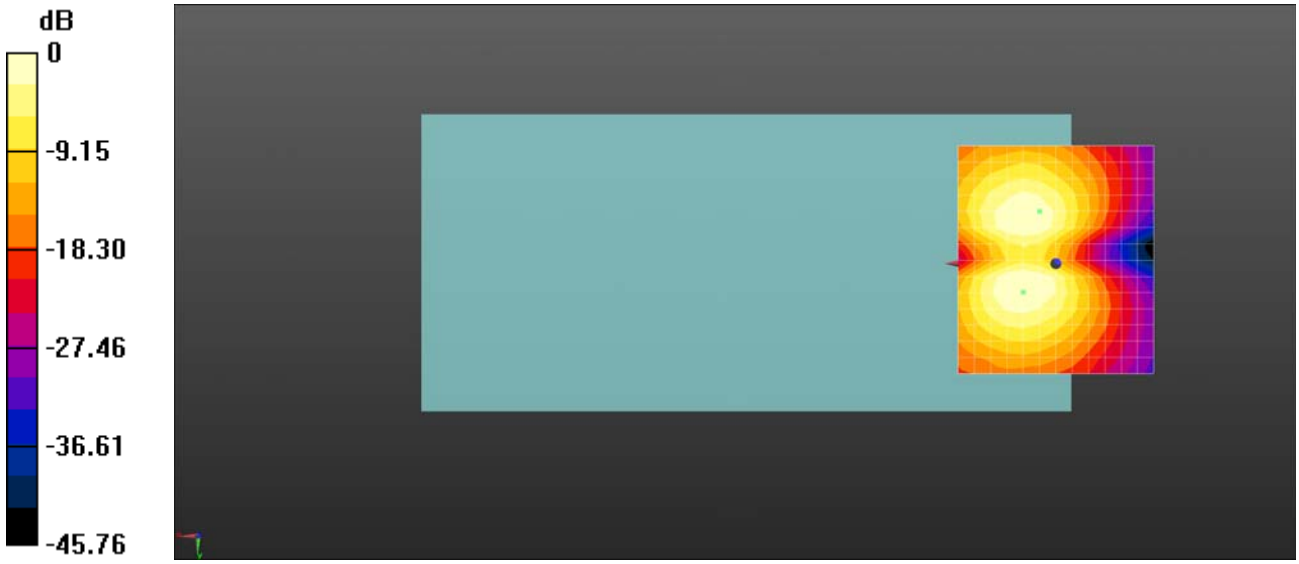
Test Laboratory: Shenzhen Morlab Communications Technology Co., Ltd. Date: 2023.01.11

## HAC_T-Coil_VoWiFi 5.2GHz_802.11a 6Mbps_AMR 4.75Kbps_Ch44_Y

Communication System: UID 10317 - AAA, IEEE 802.11a WiFi 5 GHz (OFDM, 6 Mbps, 96pc duty cycle); Frequency: 5220 MHz;Duty Cycle: 1:6.85488
Medium: Air Medium parameters used: $\sigma = 0$ S/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m$^3$
Ambient Temperature：23.2 ℃

DASY5 Configuration:
- Probe: AM1DV3 - 3128; ; Calibrated: 2022.07.19
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE4 Sn1643; Calibrated: 2022.12.30
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Ch44/y (transversal) 4.2mm 50 x 50/ABM SNR(x,y,z) (13x15x1):** Measurement grid: dx=10mm, dy=10mm
ABM1/ABM2 = 58.20 dB
ABM1 comp = 6.62 dBA/m
BWC Factor = 0.08 dB
Location: 4.2, -13.3, 3.7 mm




0 dB = 813.3 = 58.21 dB

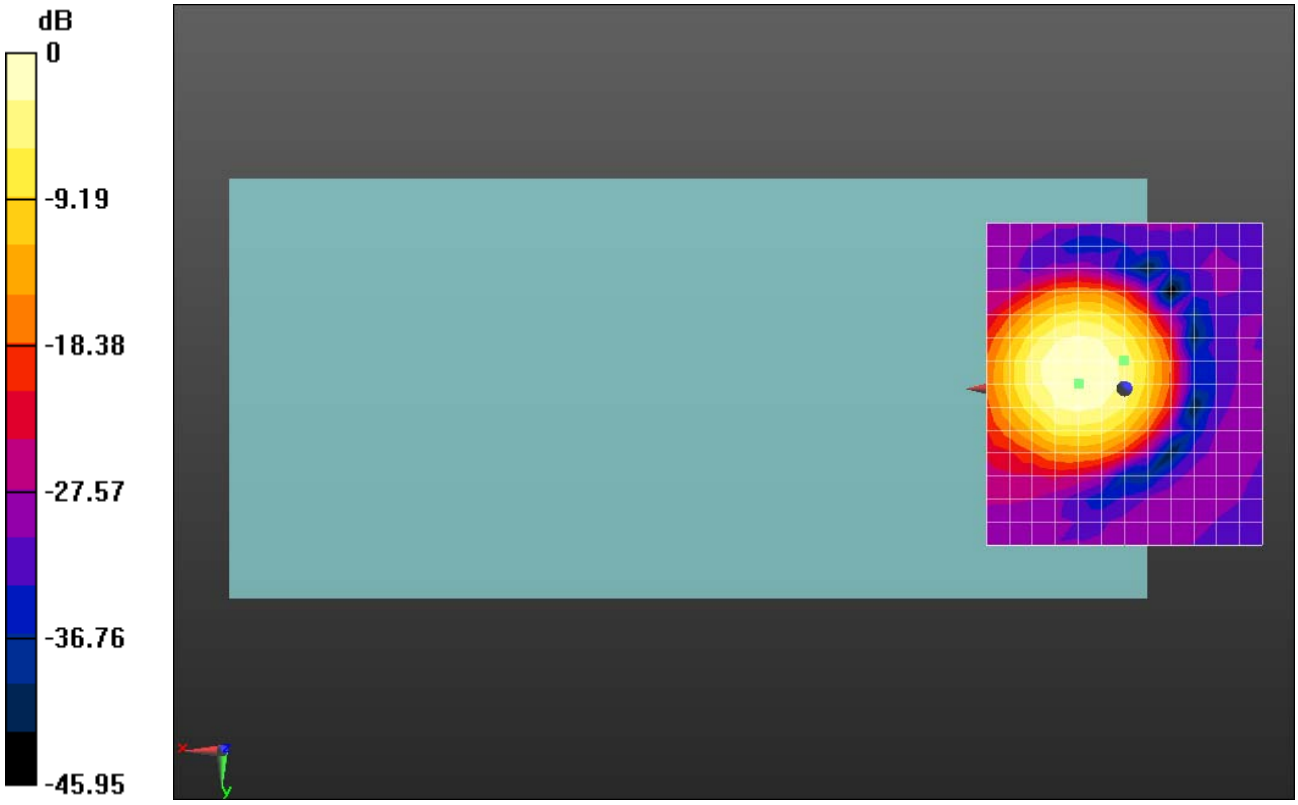
Test Laboratory: Shenzhen Morlab Communications Technology Co., Ltd. Date: 2023.01.12

## HAC_T-Coil_VoWiFi 5.3GHz_802.11a 6Mbps_AMR 4.75Kbps_Ch60_Z

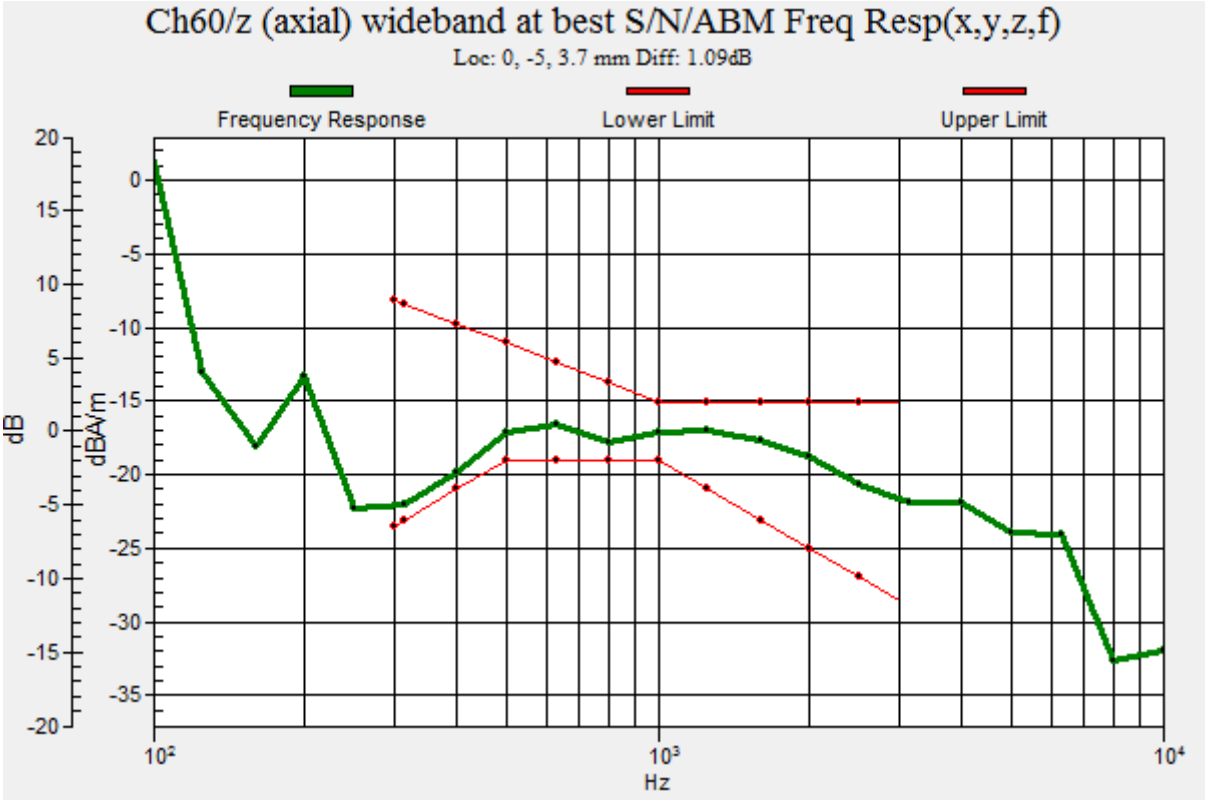
Communication System: UID 10317 - AAA, IEEE 802.11a WiFi 5 GHz (OFDM, 6 Mbps, 96pc duty cycle); Frequency: 5300 MHz;Duty Cycle: 1:6.85488
Medium: Air Medium parameters used: $\sigma = 0$ S/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m$^3$
Ambient Temperature：23.2 ℃

DASY5 Configuration:
- Probe: AM1DV3 - 3128; ; Calibrated: 2022.07.19
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE4 Sn1643; Calibrated: 2022.12.30
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Ch60/z (axial) 4.2mm 50 x 50/ABM SNR(x,y,z) (13x15x1):** Measurement grid: dx=10mm, dy=10mm
ABM1/ABM2 = 59.30 dB
ABM1 comp = 9.09 dBA/m
BWC Factor = 0.04 dB
Location: 0, -5, 3.7 mm




0 dB = 923.0 = 59.30 dB


Ch60/z (axial) wideband at best S/N/ABM Freq Resp(x,y,z,f)
Loc: 0, -5, 3.7 mm Diff: 1.09dB
Frequency Response
Lower Limit
Upper Limit
dB
dBA/m
Hz
20
15
10
5
0
-5
-10
-15
-20
0
-5
-10
-15
-20
-25
-30
-35
10²
10³
10⁴

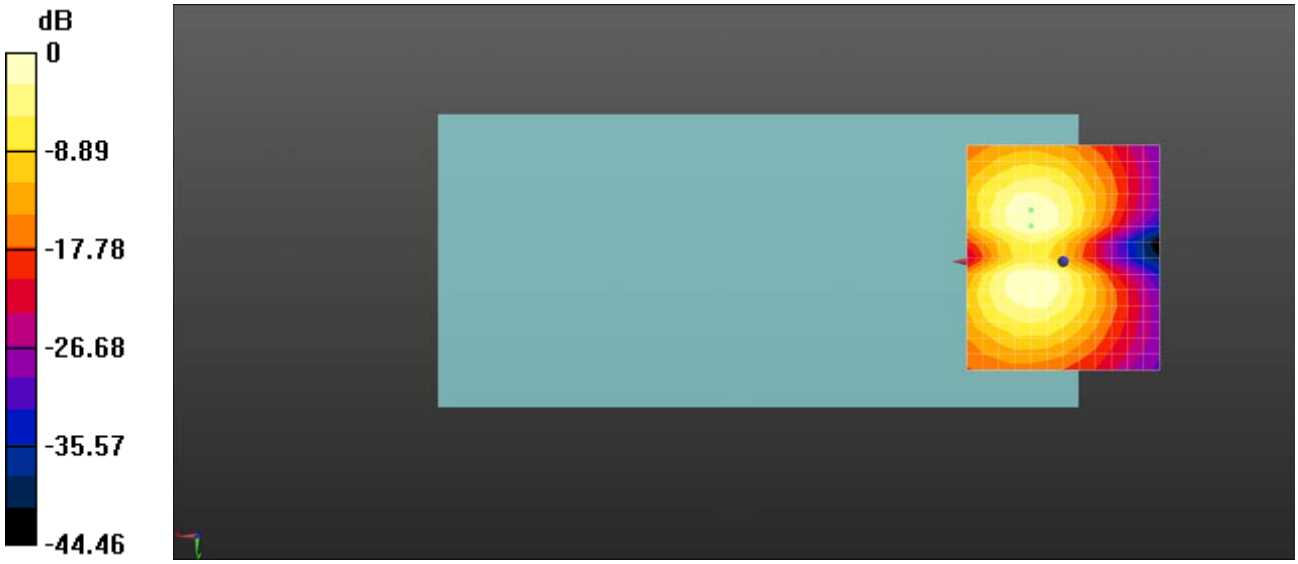
Test Laboratory: Shenzhen Morlab Communications Technology Co., Ltd. Date: 2023.01.12

## HAC_T-Coil_VoWiFi 5.3GHz_802.11a 6Mbps_AMR 4.75Kbps_Ch60_Y

Communication System: UID 10317 - AAA, IEEE 802.11a WiFi 5 GHz (OFDM, 6 Mbps, 96pc duty cycle); Frequency: 5300 MHz;Duty Cycle: 1:6.85488
Medium: Air Medium parameters used: $\sigma = 0$ S/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m$^3$
Ambient Temperature：23.2 ℃

DASY5 Configuration:
- Probe: AM1DV3 - 3128; ; Calibrated: 2022.07.19
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE4 Sn1643; Calibrated: 2022.12.30
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Ch60/y (transversal) 4.2mm 50 x 50/ABM SNR(x,y,z) (13x15x1):** Measurement grid: dx=10mm, dy=10mm
ABM1/ABM2 = 56.96 dB
ABM1 comp = 7.37 dBA/m
BWC Factor = 0.04 dB
Location: 8.3, -13.3, 3.7 mm




0 dB = 705.0 = 56.96 dB

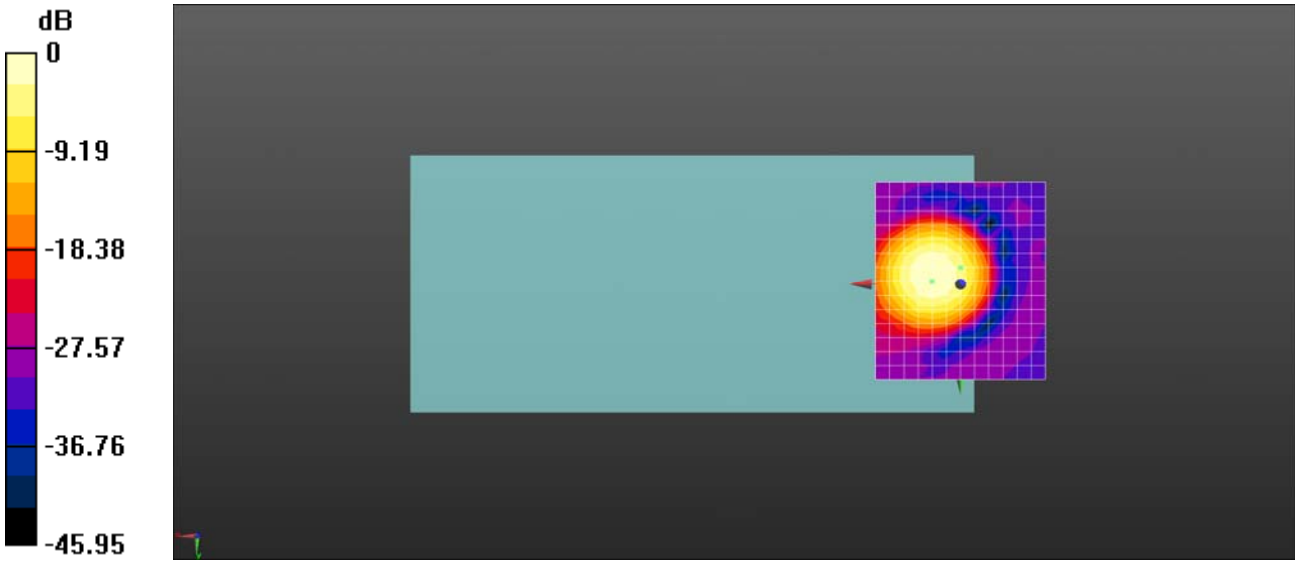
Test Laboratory: Shenzhen Morlab Communications Technology Co., Ltd. Date: 2023.01.12

## HAC_T-Coil_VoWiFi 5.5GHz_802.11a 6Mbps_AMR 4.75Kbps_Ch120_Z

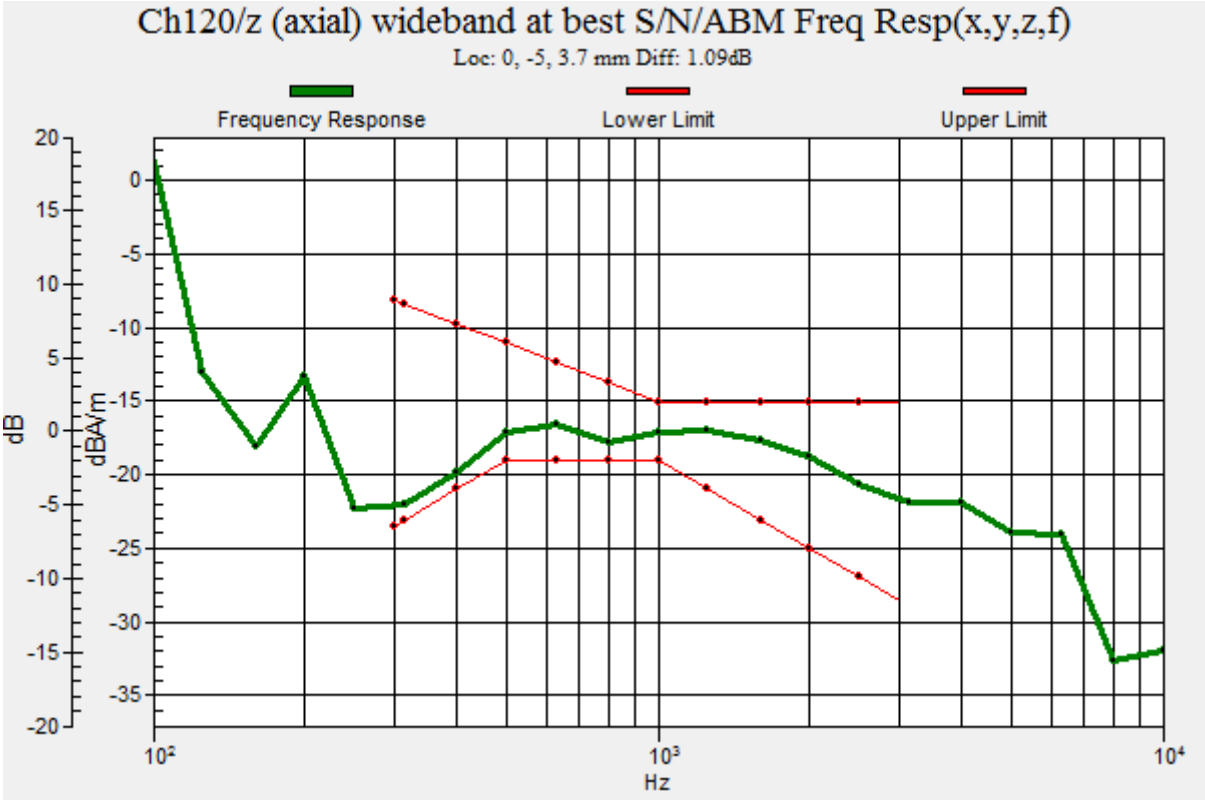
Communication System: UID 10317 - AAA, IEEE 802.11a WiFi 5 GHz (OFDM, 6 Mbps, 96pc duty cycle); Frequency: 5600 MHz;Duty Cycle: 1:6.85488
Medium: Air Medium parameters used: $\sigma = 0$ S/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m$^3$
Ambient Temperature：23.2 ℃

DASY5 Configuration:
- Probe: AM1DV3 - 3128; ; Calibrated: 2022.07.19
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE4 Sn1643; Calibrated: 2022.12.30
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Ch120/z (axial) 4.2mm 50 x 50/ABM SNR(x,y,z) (13x15x1):** Measurement grid: dx=10mm, dy=10mm
ABM1/ABM2 = 59.56 dB
ABM1 comp = 7.03 dBA/m
BWC Factor = 0.04 dB
Location: 0, -5, 3.7 mm




0 dB = 300.61 = 49.56 dB


Ch120/z (axial) wideband at best S/N/ABM Freq Resp(x,y,z,f)
Loc: 0, -5, 3.7 mm Diff: 1.09dB
Frequency Response
Lower Limit
Upper Limit
dB
dBA/m
Hz
20
15
10
5
0
-5
-10
-15
-20
0
-5
-10
-15
-20
-25
-30
-35
10²
10³
10⁴

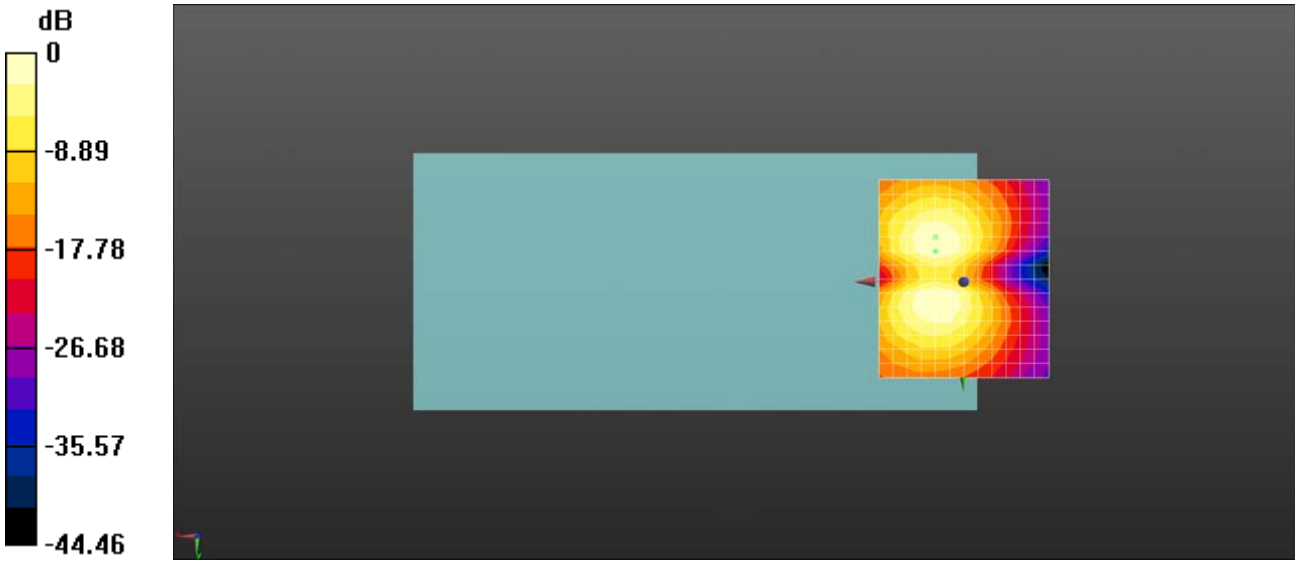
Test Laboratory: Shenzhen Morlab Communications Technology Co., Ltd. Date: 2023.01.12

## HAC_T-Coil_VoWiFi 5.5GHz_802.11a 6Mbps_AMR 4.75Kbps_Ch120_Y

Communication System: UID 10317 - AAA, IEEE 802.11a WiFi 5 GHz (OFDM, 6 Mbps, 96pc duty cycle); Frequency: 5600 MHz;Duty Cycle: 1:6.85488
Medium: Air Medium parameters used: $\sigma = 0$ S/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m$^3$
Ambient Temperature：23.2 ℃

DASY5 Configuration:
- Probe: AM1DV3 - 3128; ; Calibrated: 2022.07.19
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE4 Sn1643; Calibrated: 2022.12.30
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Ch120/y (transversal) 4.2mm 50 x 50/ABM SNR(x,y,z) (13x15x1):** Measurement grid: dx=10mm, dy=10mm
ABM1/ABM2 = 55.42 dB
ABM1 comp = 5.29 dBA/m
BWC Factor = 0.04 dB
Location: 8.3, -13.3, 3.7 mm




0 dB = 372.39 = 51.42 dB

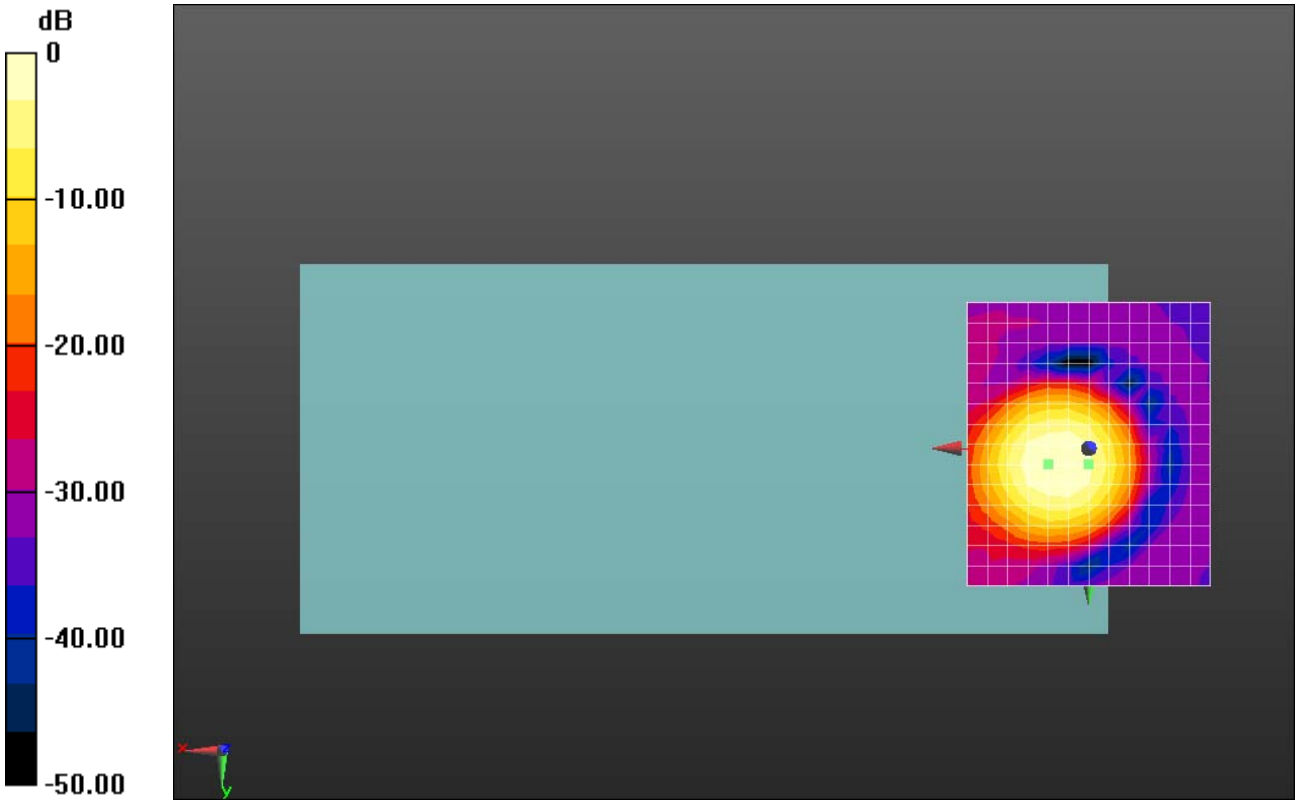
Test Laboratory: Shenzhen Morlab Communications Technology Co., Ltd. Date: 2023.01.12

## HAC_T-Coil_VoWiFi 5.8GHz_802.11a 6Mbps_AMR 4.75Kbps_Ch157_Z

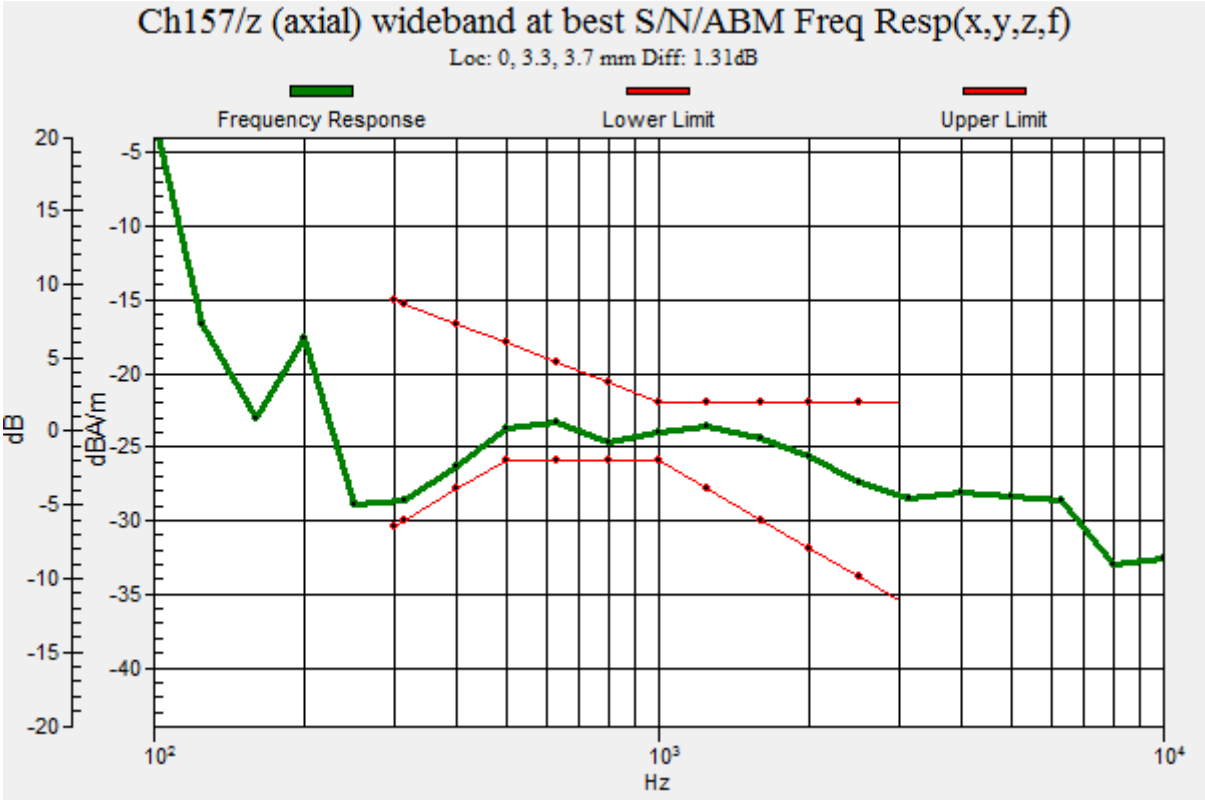
Communication System: UID 10317 - AAA, IEEE 802.11a WiFi 5 GHz (OFDM, 6 Mbps, 96pc duty cycle); Frequency: 5785 MHz;Duty Cycle: 1:6.85488
Medium: Air Medium parameters used: $\sigma = 0$ S/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m$^3$
Ambient Temperature：23.2 ℃

DASY5 Configuration:
- Probe: AM1DV3 - 3128; ; Calibrated: 2022.07.19
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE4 Sn1643; Calibrated: 2022.12.30
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Ch157/z (axial) 4.2mm 50 x 50/ABM SNR(x,y,z) (13x15x1):** Measurement grid: dx=10mm, dy=10mm
ABM1/ABM2 = 57.46 dB
ABM1 comp = 10.75 dBA/m
BWC Factor = 0.04 dB
Location: 0, 3.3, 3.7 mm




0 dB = 939.7 = 59.46 dB


Ch157/z (axial) wideband at best S/N/ABM Freq Resp(x,y,z,f)
Loc: 0, 3.3, 3.7 mm Diff: 1.31dB
Frequency Response
Lower Limit
Upper Limit
dB
dBA/m
Hz
20
15
10
5
0
-5
-10
-15
-20
-5
-10
-15
-20
-25
-30
-35
-40
10²
10³
10⁴

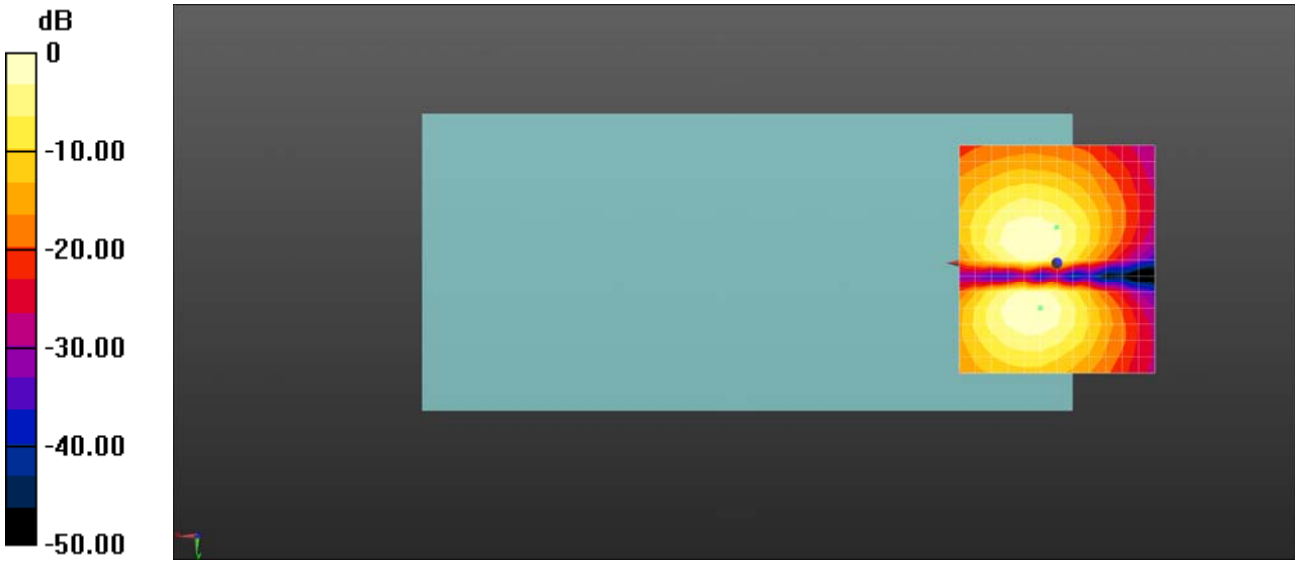
Test Laboratory: Shenzhen Morlab Communications Technology Co., Ltd. Date: 2023.01.12

## HAC_T-Coil_VoWiFi 5.8GHz_802.11a 6Mbps_AMR 4.75Kbps_Ch157_Y

Communication System: UID 10317 - AAA, IEEE 802.11a WiFi 5 GHz (OFDM, 6 Mbps, 96pc duty cycle); Frequency: 5785 MHz;Duty Cycle: 1:6.85488
Medium: Air Medium parameters used: $\sigma = 0$ S/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m$^3$
Ambient Temperature：23.2 ℃

DASY5 Configuration:
- Probe: AM1DV2 - 1048; ; Calibrated: 2022.02.22
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE4 Sn1643; Calibrated: 2022.12.30
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Ch157/y (transversal) 4.2mm 50 x 50/ABM SNR(x,y,z) (13x15x1):** Measurement grid: dx=10mm, dy=10mm
ABM1/ABM2 = 54.86 dB
ABM1 comp = 5.63 dBA/m
BWC Factor = 0.04 dB
Location: 0, -9.2, 3.7 mm




0 dB = 781.8 = 57.86 dB

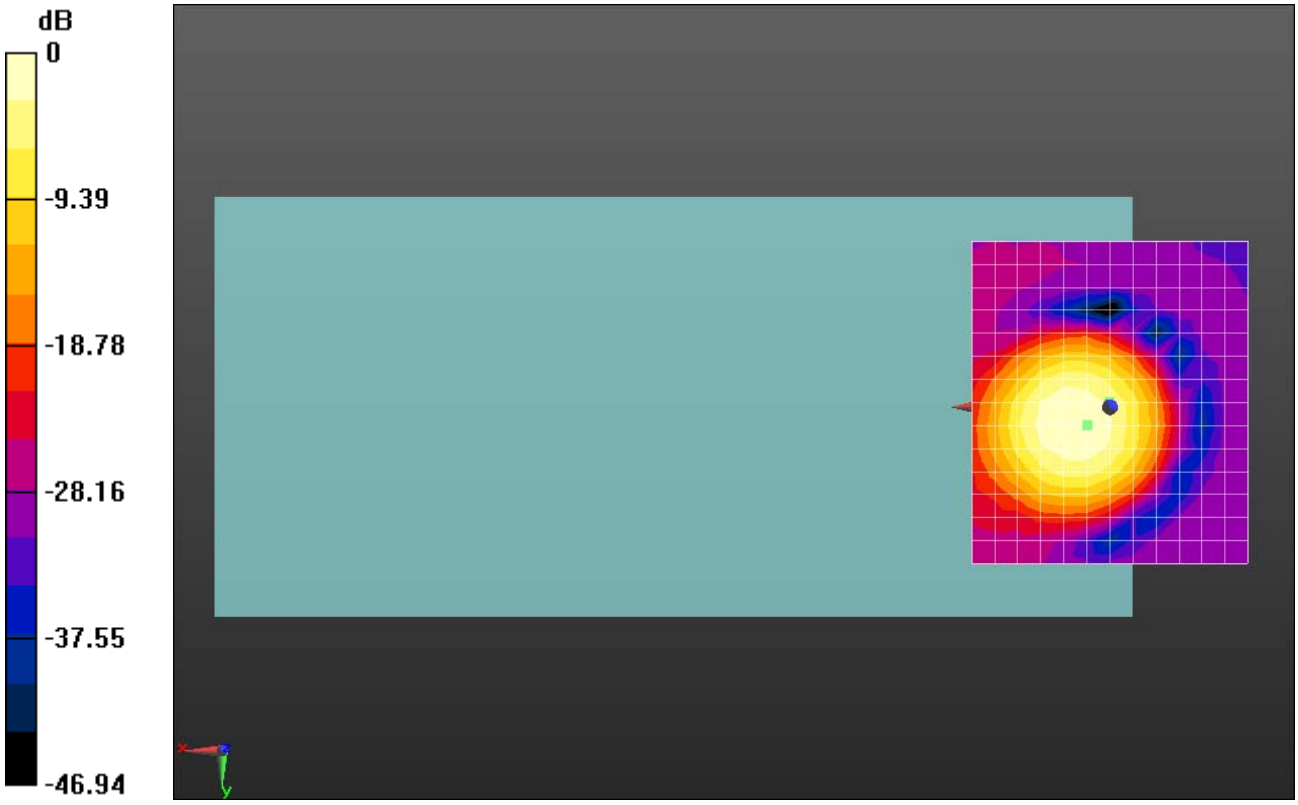
Test Laboratory: Shenzhen Morlab Communications Technology Co., Ltd. Date: 2023.01.12

## HAC_T-Coil_VoWiFi 5.8GHz_802.11n-HT20 MCS0_AMR 4.75Kbps_Ch157_Z

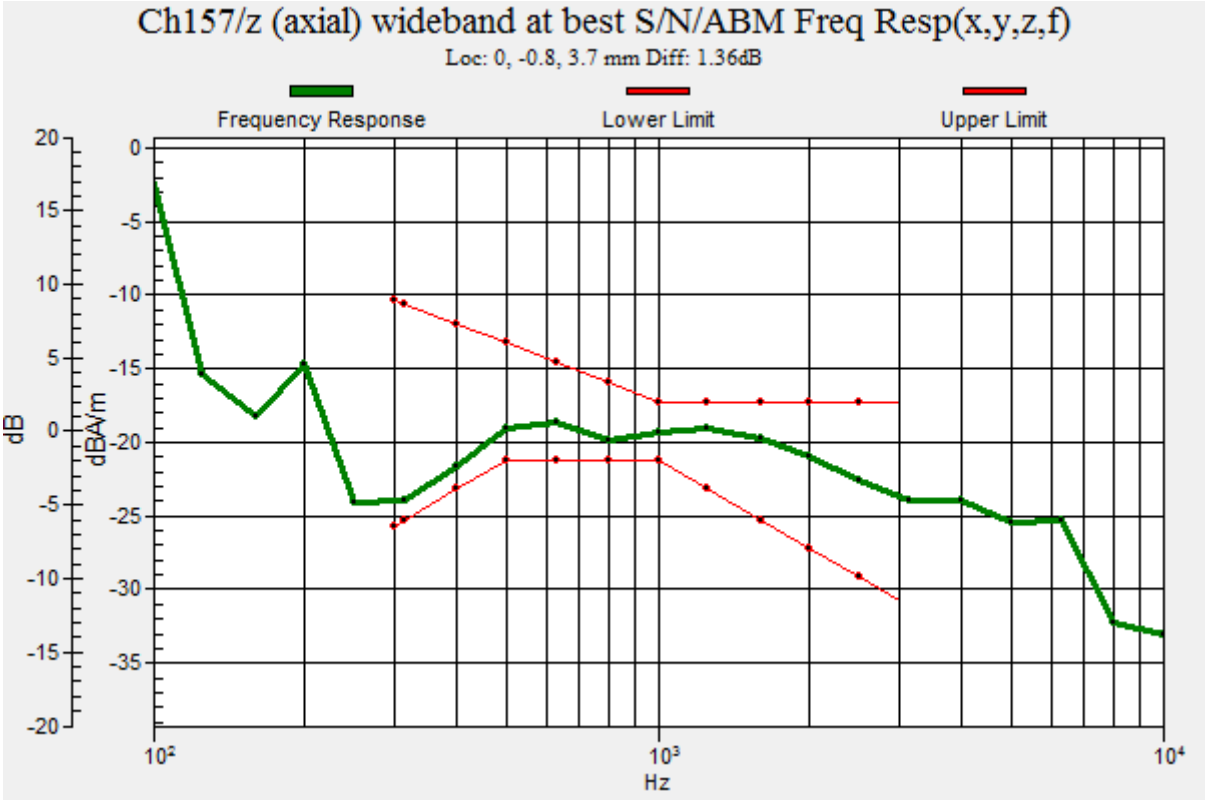
Communication System: UID 10196 - CAA, IEEE 802.11n (HT Mixed, 6.5 Mbps, BPSK);
Frequency: 5785 MHz;Duty Cycle: 1:6.45654
Medium: Air Medium parameters used: $\sigma = 0$ S/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m$^3$
Ambient Temperature：23.2 ℃

DASY5 Configuration:
- Probe: AM1DV3 - 3128; ; Calibrated: 2022.07.19
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE4 Sn1643; Calibrated: 2022.12.30
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Ch157/z (axial) 4.2mm 50 x 50/ABM SNR(x,y,z) (13x15x1):** Measurement grid: dx=10mm, dy=10mm
ABM1/ABM2 = 58.66 dB
ABM1 comp = 9.87 dBA/m
BWC Factor = 0.04 dB
Location: 0, -0.8, 3.7 mm




0 dB = 857.0 = 58.66 dB


Ch157/z (axial) wideband at best S/N/ABM Freq Resp(x,y,z,f)
Loc: 0, -0.8, 3.7 mm Diff: 1.36dB
Frequency Response
Lower Limit
Upper Limit
dB
dBA/m
Hz
20
15
10
5
0
-5
-10
-15
-20
0
-5
-10
-15
-20
-25
-30
-35
10²
10³
10⁴

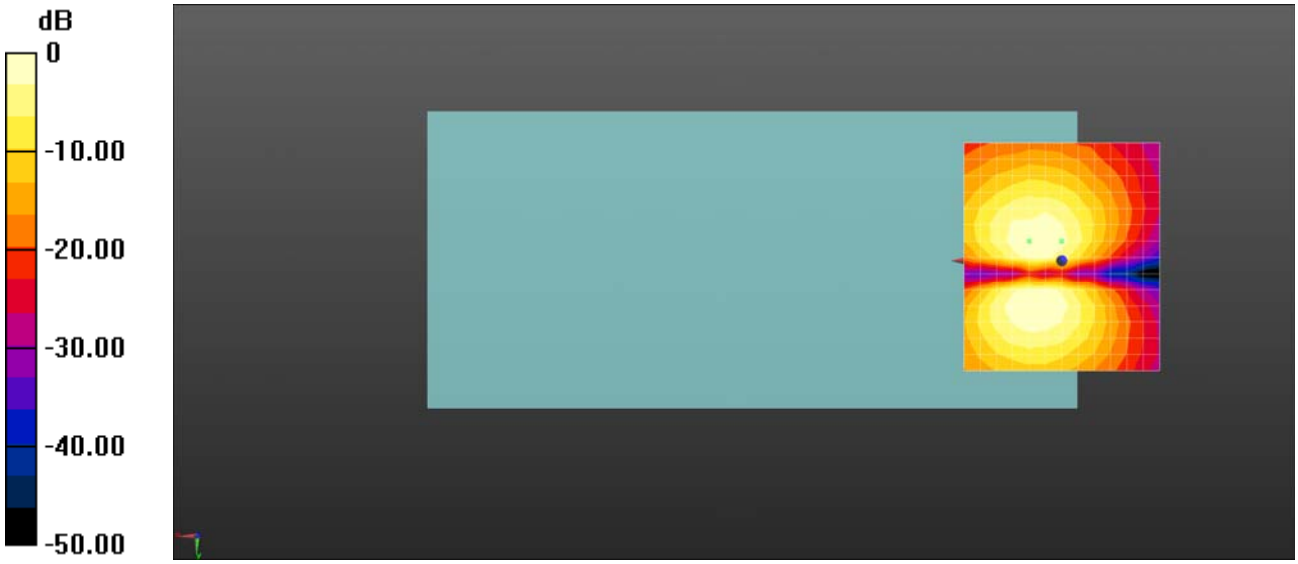
Test Laboratory: Shenzhen Morlab Communications Technology Co., Ltd. Date: 2023.01.12

## HAC_T-Coil_VoWiFi 5.8GHz_802.11n-HT20 MCS0_AMR 4.75Kbps_Ch157_Y

Communication System: UID 10196 - CAA, IEEE 802.11n (HT Mixed, 6.5 Mbps, BPSK);
Frequency: 5785 MHz;Duty Cycle: 1:6.45654
Medium: Air Medium parameters used: $\sigma = 0$ S/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m$^3$
Ambient Temperature：23.2 ℃

DASY5 Configuration:
- Probe: AM1DV3 - 3128; ; Calibrated: 2022.07.19
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE4 Sn1643; Calibrated: 2022.12.30
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Ch157/y (transversal) 4.2mm 50 x 50/ABM SNR(x,y,z) (13x15x1):** Measurement grid: dx=10mm, dy=10mm
ABM1/ABM2 = 57.70 dB
ABM1 comp = 6.32 dBA/m
BWC Factor = 0.04 dB
Location: 0, -5, 3.7 mm




0 dB = 767.7 = 57.70 dB

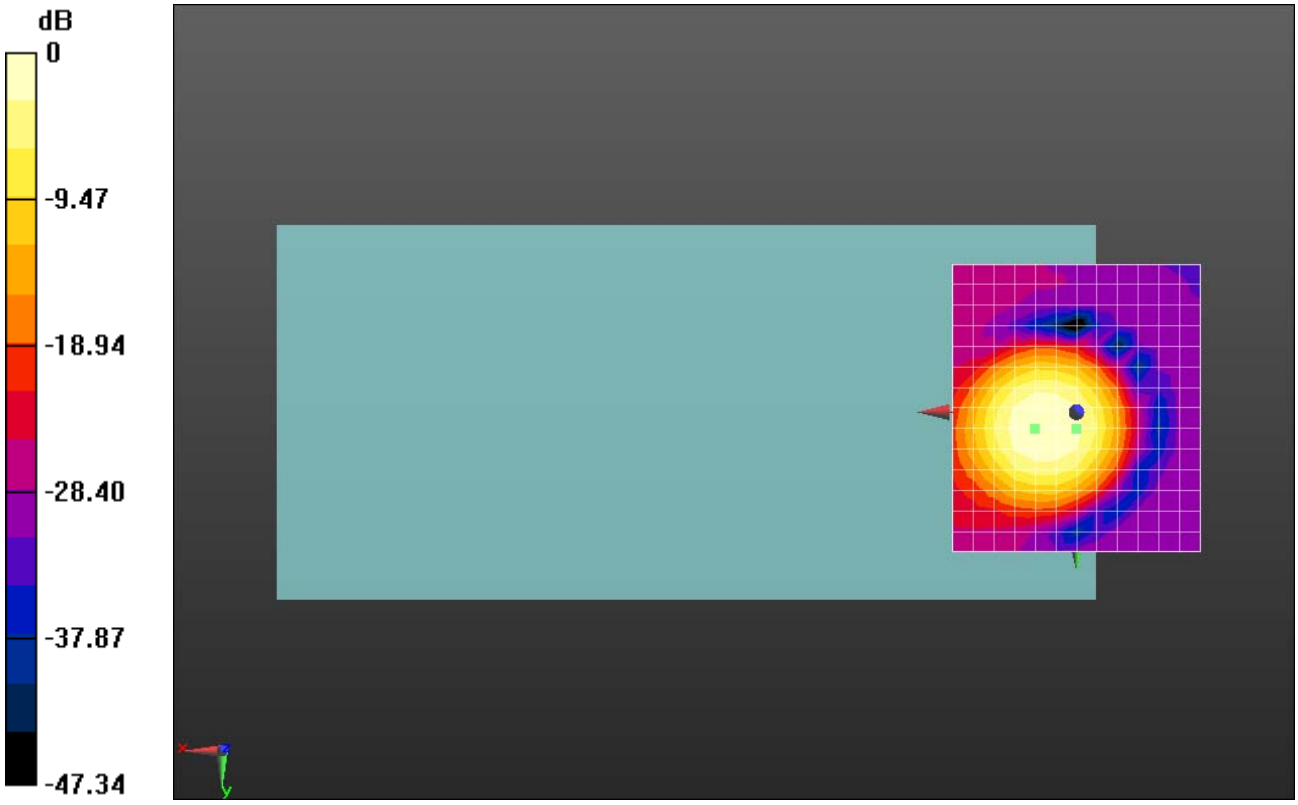
Test Laboratory: Shenzhen Morlab Communications Technology Co., Ltd. Date: 2023.01.12

## HAC_T-Coil_VoWiFi 5.8GHz_802.11n-HT40 MCS0_AMR 4.75Kbps_Ch159_Z

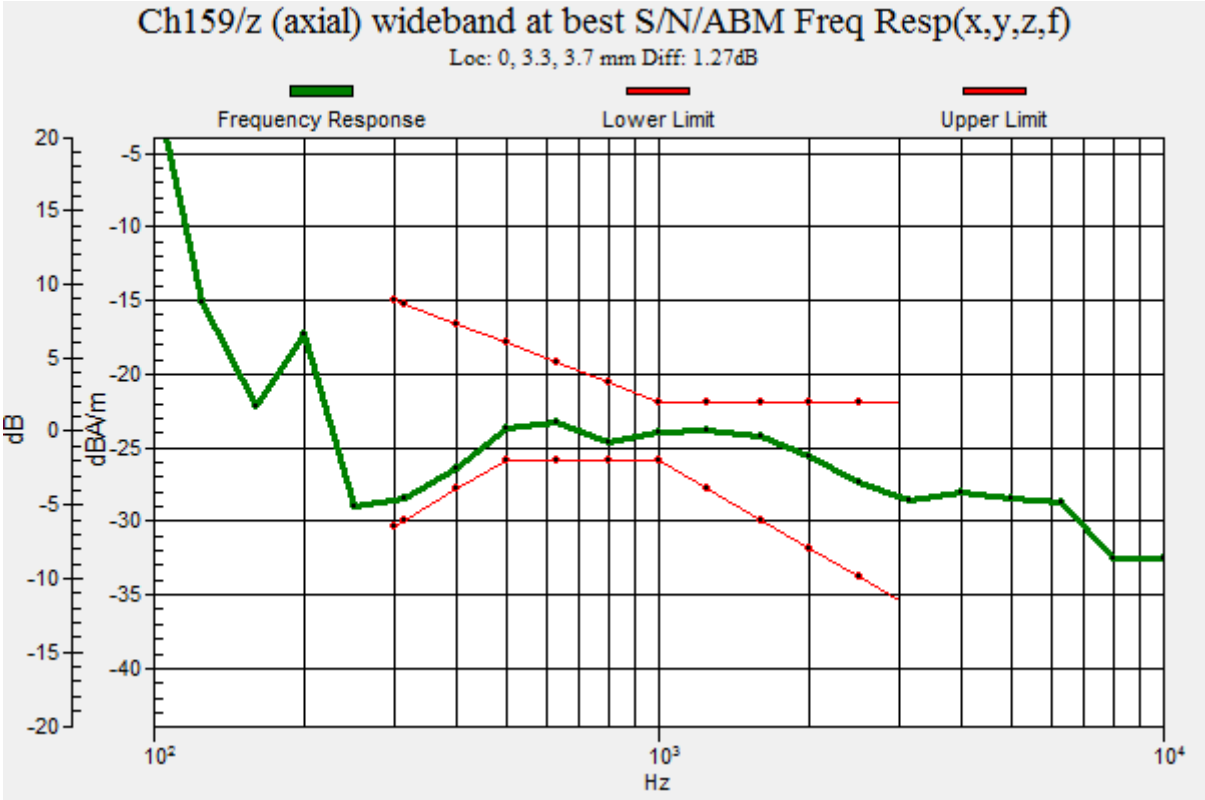
Communication System: UID 10114 - CAA, IEEE 802.11n (HT Greenfield, 13.5 Mbps, BPSK); Frequency: 5795 MHz;Duty Cycle: 1:6.45654
Medium: Air Medium parameters used: $\sigma = 0$ S/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m$^3$
Ambient Temperature：23.2 ℃

DASY5 Configuration:
- Probe: AM1DV3 - 3128; ; Calibrated: 2022.07.19
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE4 Sn1643; Calibrated: 2022.12.30
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Ch159/z (axial) 4.2mm 50 x 50/ABM SNR(x,y,z) (13x15x1):** Measurement grid: dx=10mm, dy=10mm
ABM1/ABM2 = 58.84 dB
ABM1 comp = 11.01 dBA/m
BWC Factor = 0.04 dB
Location: 0, 3.3, 3.7 mm




0 dB = 874.9 = 58.84 dB


Ch159/z (axial) wideband at best S/N/ABM Freq Resp(x,y,z,f)
Loc: 0, 3.3, 3.7 mm Diff: 1.27dB
Frequency Response
Lower Limit
Upper Limit
dB
dBA/m
Hz
20
15
10
5
0
-5
-10
-15
-20
-5
-10
-15
-20
-25
-30
-35
-40
10²
10³
10⁴

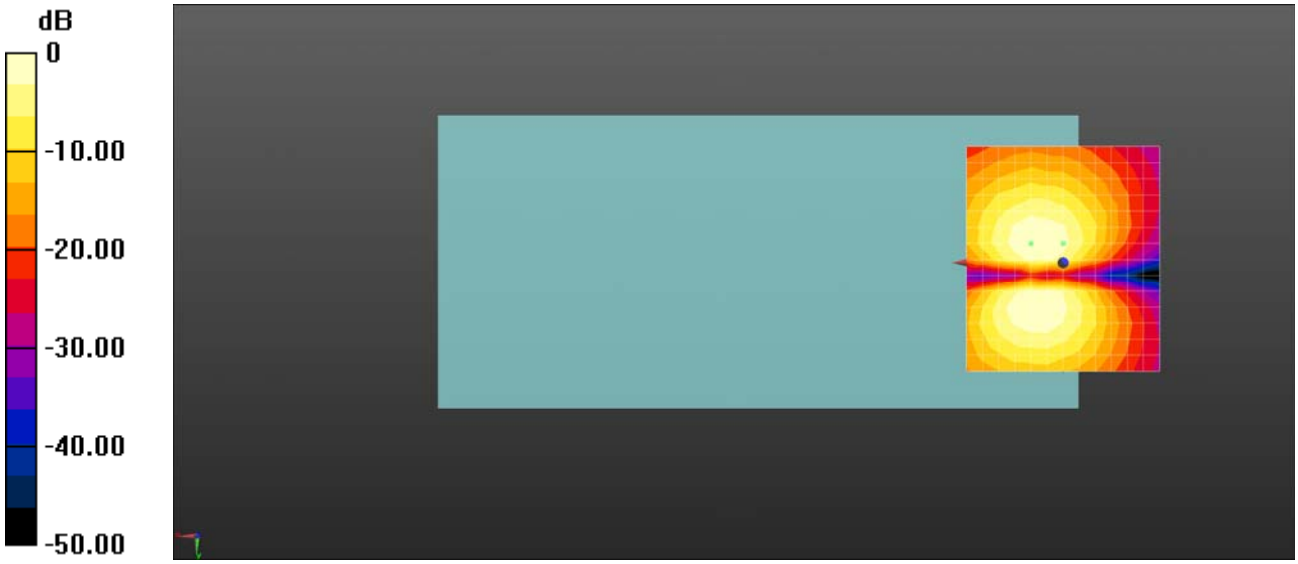
Test Laboratory: Shenzhen Morlab Communications Technology Co., Ltd. Date: 2023.01.12

## HAC_T-Coil_VoWiFi 5.8GHz_802.11n-HT40 MCS0_AMR 4.75Kbps_Ch159_Y

Communication System: UID 10114 - CAA, IEEE 802.11n (HT Greenfield, 13.5 Mbps, BPSK); Frequency: 5795 MHz;Duty Cycle: 1:6.45654
Medium: Air Medium parameters used: $\sigma = 0$ S/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m$^3$
Ambient Temperature：23.2 ℃

DASY5 Configuration:
- Probe: AM1DV3 - 3128; ; Calibrated: 2022.07.19
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE4 Sn1643; Calibrated: 2022.12.30
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Ch159/y (transversal) 4.2mm 50 x 50/ABM SNR(x,y,z) (13x15x1):** Measurement grid: dx=10mm, dy=10mm
ABM1/ABM2 = 58.08 dB
ABM1 comp = 6.29 dBA/m
BWC Factor = 0.04 dB
Location: 0, -5, 3.7 mm




0 dB = 801.6 = 58.08 dB

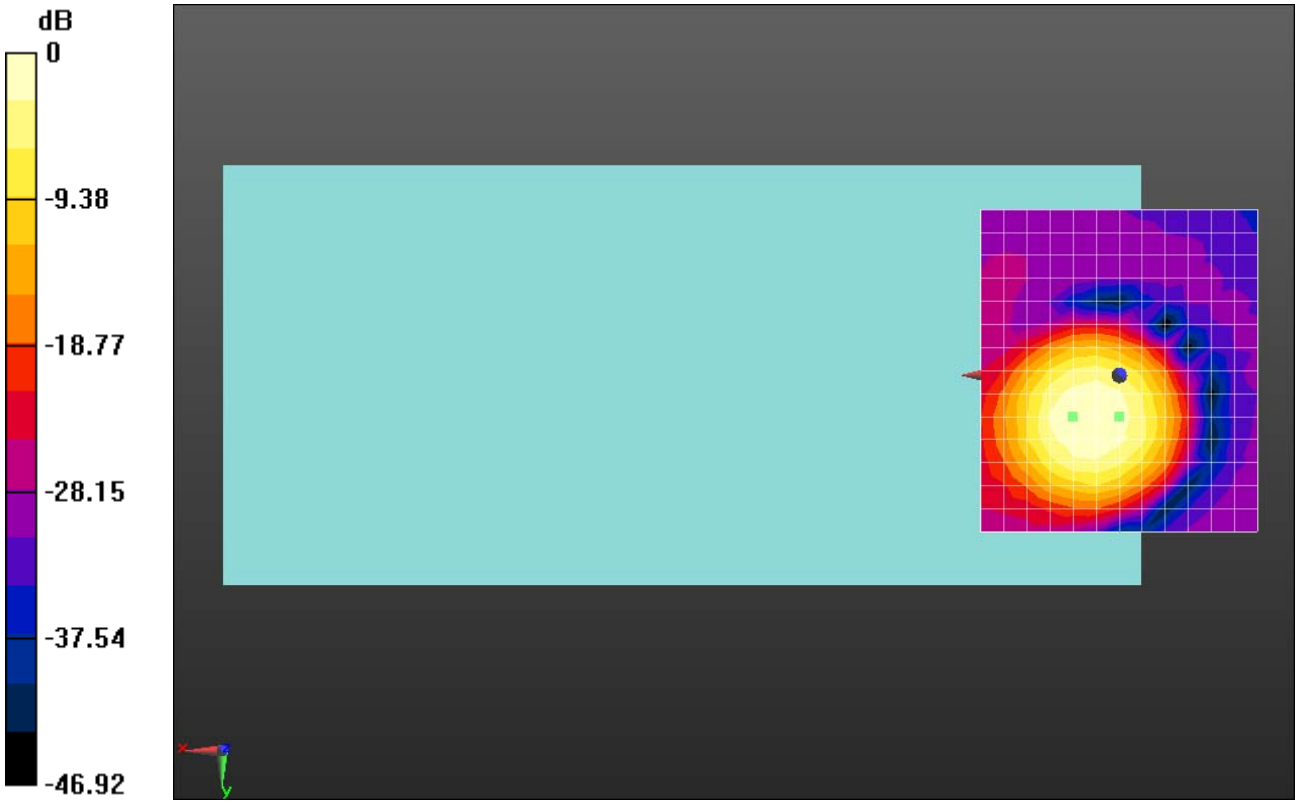
Test Laboratory: Shenzhen Morlab Communications Technology Co., Ltd. Date: 2023.01.12

## HAC_T-Coil_VoWiFi 5.8GHz_802.11ac-VHT20 MCS0_AMR 4.75Kbps_Ch157_Z

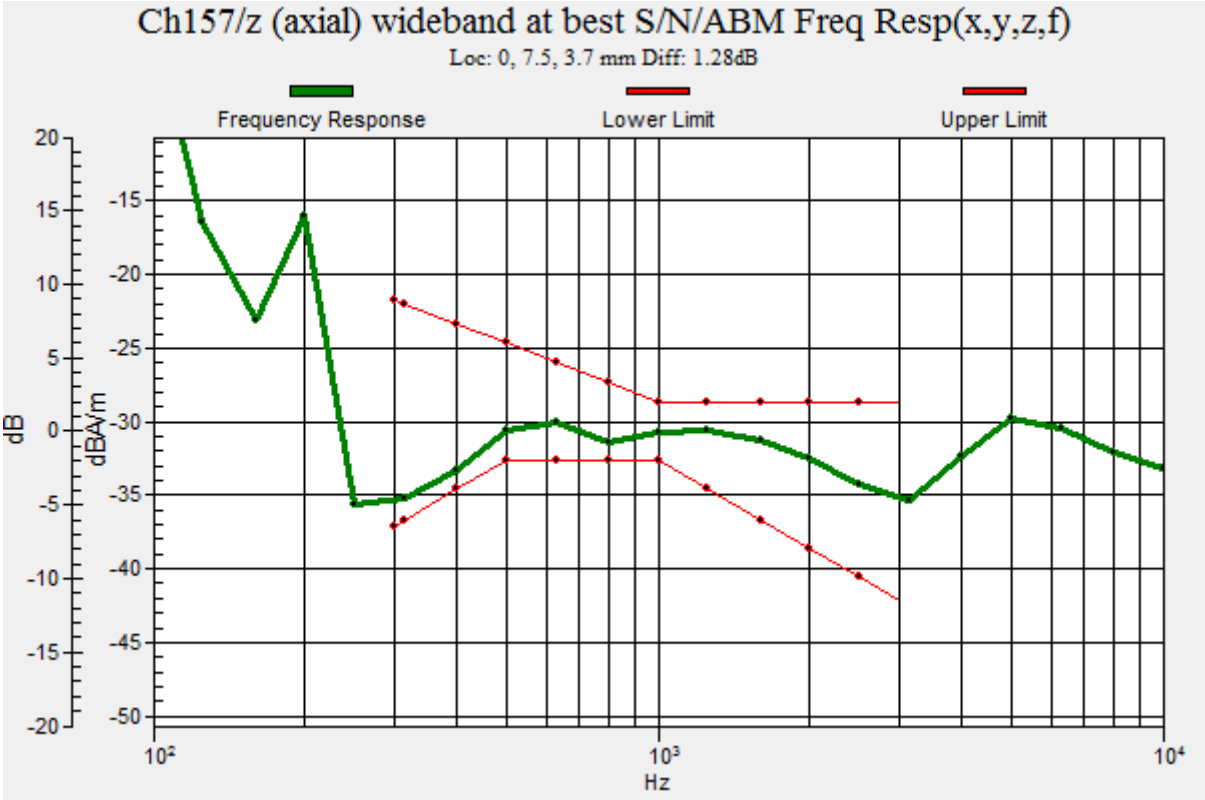
Communication System: UID 10400 - AAA, IEEE 802.11ac WiFi (20MHz, 64-QAM, 99pc duty cycle); Frequency: 5785 MHz;Duty Cycle: 1:6.87068
Medium: Air Medium parameters used: $\sigma = 0$ S/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m$^3$
Ambient Temperature：23.2 ℃

DASY5 Configuration:
- Probe: AM1DV3 - 3128; ; Calibrated: 2022.07.19
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE4 Sn1643; Calibrated: 2022.12.30
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Ch157/z (axial) 4.2mm 50 x 50/ABM SNR(x,y,z) (13x15x1):** Measurement grid: dx=10mm, dy=10mm
ABM1/ABM2 = 58.26 dB
ABM1 comp = 11.94 dBA/m
BWC Factor = 0.04 dB
Location: 0, 7.5, 3.7 mm




0 dB = 818.7 = 58.26 dB


Ch157/z (axial) wideband at best S/N/ABM Freq Resp(x,y,z,f)
Loc: 0, 7.5, 3.7 mm Diff: 1.28dB
Frequency Response
Lower Limit
Upper Limit
dB
dBA/m
Hz
20
15
10
5
0
-5
-10
-15
-20
-15
-20
-25
-30
-35
-40
-45
-50
10²
10³
10⁴

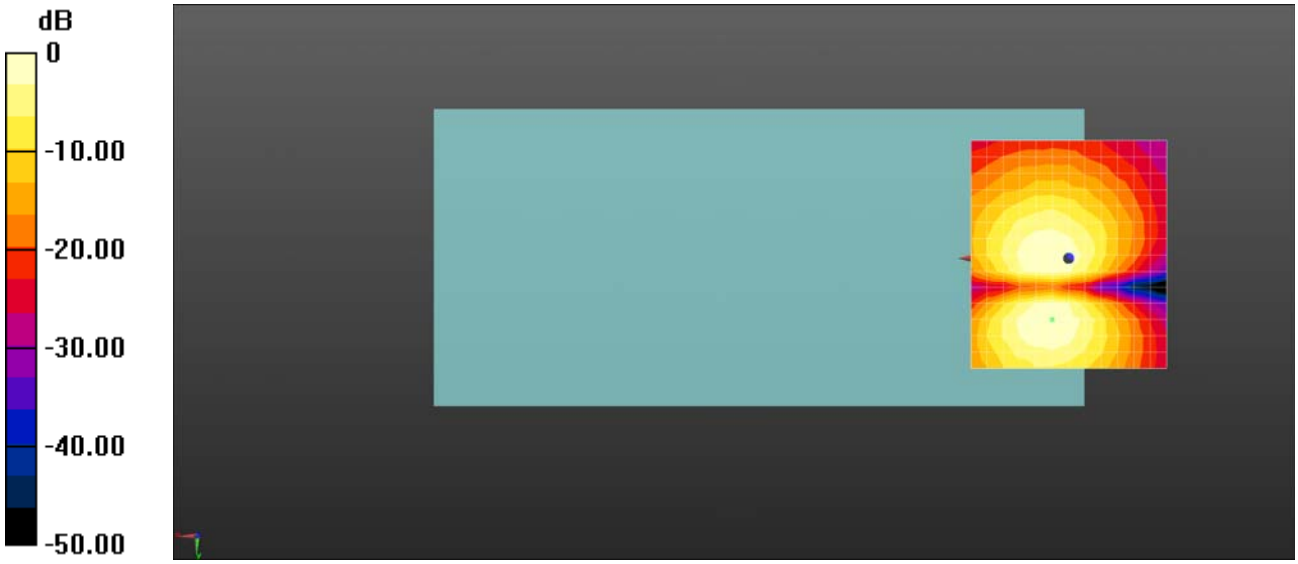
Test Laboratory: Shenzhen Morlab Communications Technology Co., Ltd. Date: 2023.01.12

## HAC_T-Coil_VoWiFi 5.8GHz_802.11ac-VHT20 MCS0_AMR 4.75Kbps_Ch157_Y

Communication System: UID 10400 - AAA, IEEE 802.11ac WiFi (20MHz, 64-QAM, 99pc duty cycle); Frequency: 5785 MHz;Duty Cycle: 1:6.87068
Medium: Air Medium parameters used: $\sigma = 0$ S/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m$^3$
Ambient Temperature：23.2 ℃

DASY5 Configuration:
- Probe: AM1DV3 - 3128; ; Calibrated: 2022.07.19
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE4 Sn1643; Calibrated: 2022.12.30
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Ch157/y (transversal) 4.2mm 50 x 50/ABM SNR(x,y,z) (13x15x1):** Measurement grid: dx=10mm, dy=10mm
ABM1/ABM2 = 57.07 dB
ABM1 comp = 6.71 dBA/m
BWC Factor = 0.04 dB
Location: 0, -0.8, 3.7 mm




0 dB = 713.6 = 57.07 dB

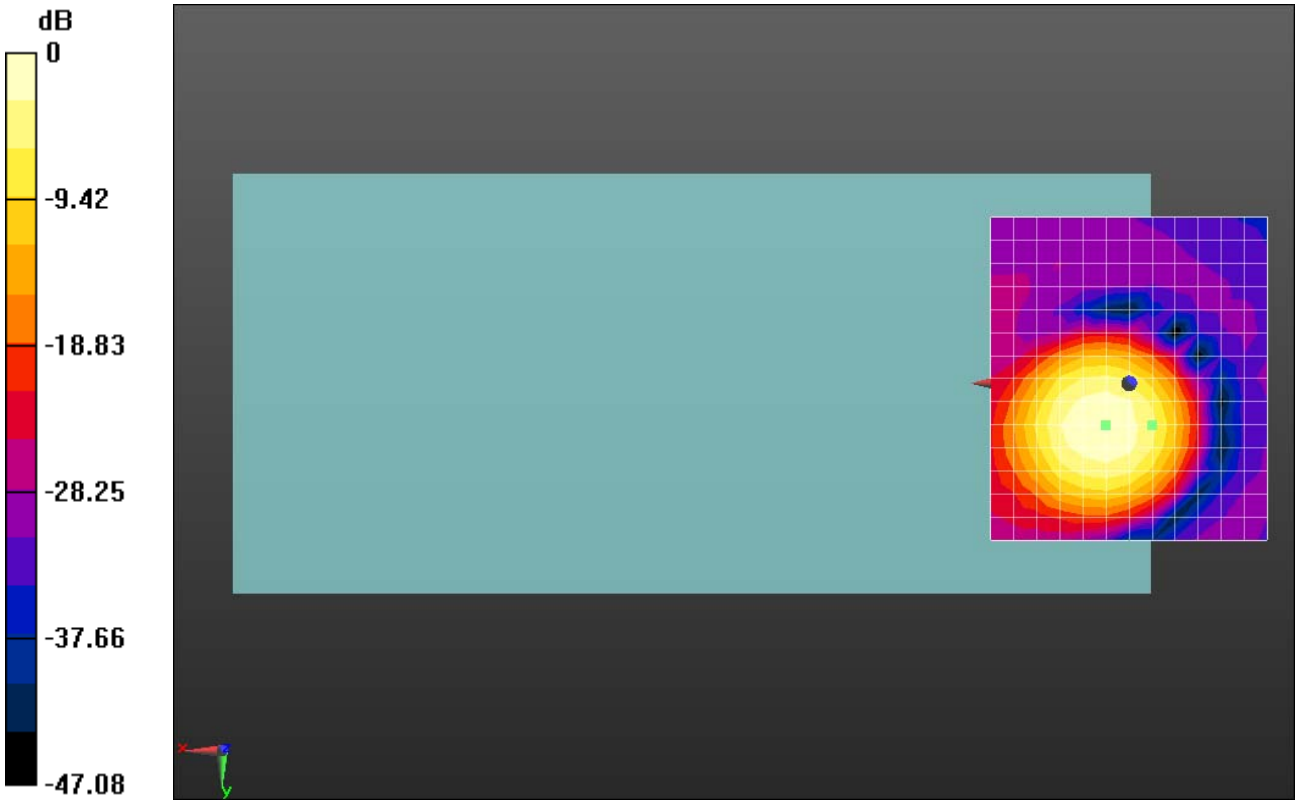
Test Laboratory: Shenzhen Morlab Communications Technology Co., Ltd. Date: 2023.01.12

## HAC_T-Coil_VoWiFi 5.8GHz_802.11ac-VHT40 MCS0_AMR 4.75Kbps_Ch159_Z

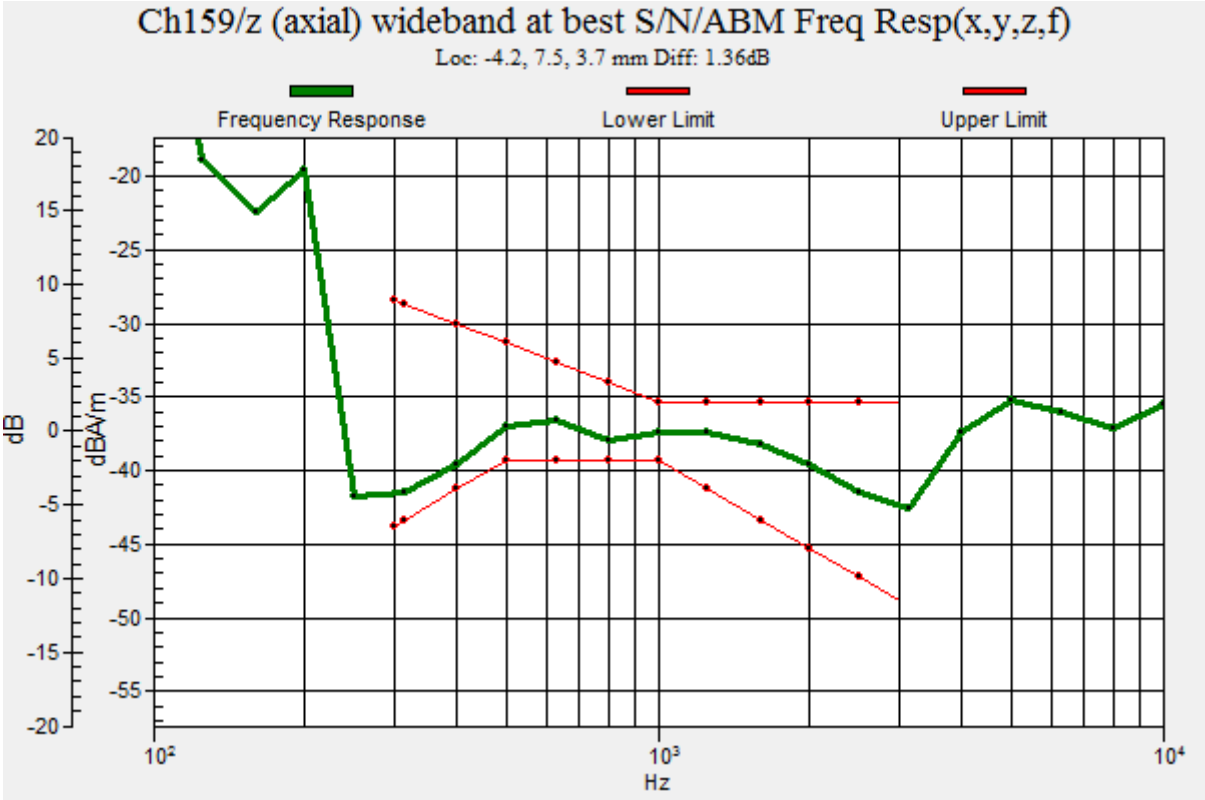
Communication System: UID 10401 - AAA, IEEE 802.11ac WiFi (40MHz, 64-QAM, 99pc duty cycle); Frequency: 5795 MHz;Duty Cycle: 1:7.24436
Medium: Air Medium parameters used: $\sigma = 0$ S/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m$^3$
Ambient Temperature：23.2 ℃

DASY5 Configuration:
- Probe: AM1DV3 - 3128; ; Calibrated: 2022.07.19
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE4 Sn1643; Calibrated: 2022.12.30
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Ch159/z (axial) 4.2mm 50 x 50/ABM SNR(x,y,z) (13x15x1):** Measurement grid: dx=10mm, dy=10mm
ABM1/ABM2 = 59.22 dB
ABM1 comp = 8.16 dBA/m
BWC Factor = 0.04 dB
Location: -4.2, 7.5, 3.7 mm




0 dB = 913.7 = 59.22 dB


Ch159/z (axial) wideband at best S/N/ABM Freq Resp(x,y,z,f)
Loc: -4.2, 7.5, 3.7 mm Diff: 1.36dB
Frequency Response
Lower Limit
Upper Limit
dB
dBA/m
Hz
20
15
10
5
0
-5
-10
-15
-20
-20
-25
-30
-35
-40
-45
-50
-55
10²
10³
10⁴

Test Laboratory: Shenzhen Morlab Communications Technology Co., Ltd. Date: 2023.01.12

## HAC_T-Coil_VoWiFi 5.8GHz_802.11ac-VHT40 MCS0_AMR 4.75Kbps_Ch159_Y

Communication System: UID 10401 - AAA, IEEE 802.11ac WiFi (40MHz, 64-QAM, 99pc duty cycle); Frequency: 5795 MHz;Duty Cycle: 1:7.24436
Medium: Air Medium parameters used: $\sigma = 0$ S/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m$^3$
Ambient Temperature：23.2 ℃

DASY5 Configuration:
- Probe: AM1DV3 - 3128; ; Calibrated: 2022.07.19
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE4 Sn1643; Calibrated: 2022.12.30
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Ch159/y (transversal) 4.2mm 50 x 50/ABM SNR(x,y,z) (13x15x1):** Measurement grid: dx=10mm, dy=10mm
ABM1/ABM2 = 56.84 dB
ABM1 comp = 5.84 dBA/m
BWC Factor = 0.04 dB
Location: 0, -5, 3.7 mm


0 dB = 695.3 = 56.84 dB

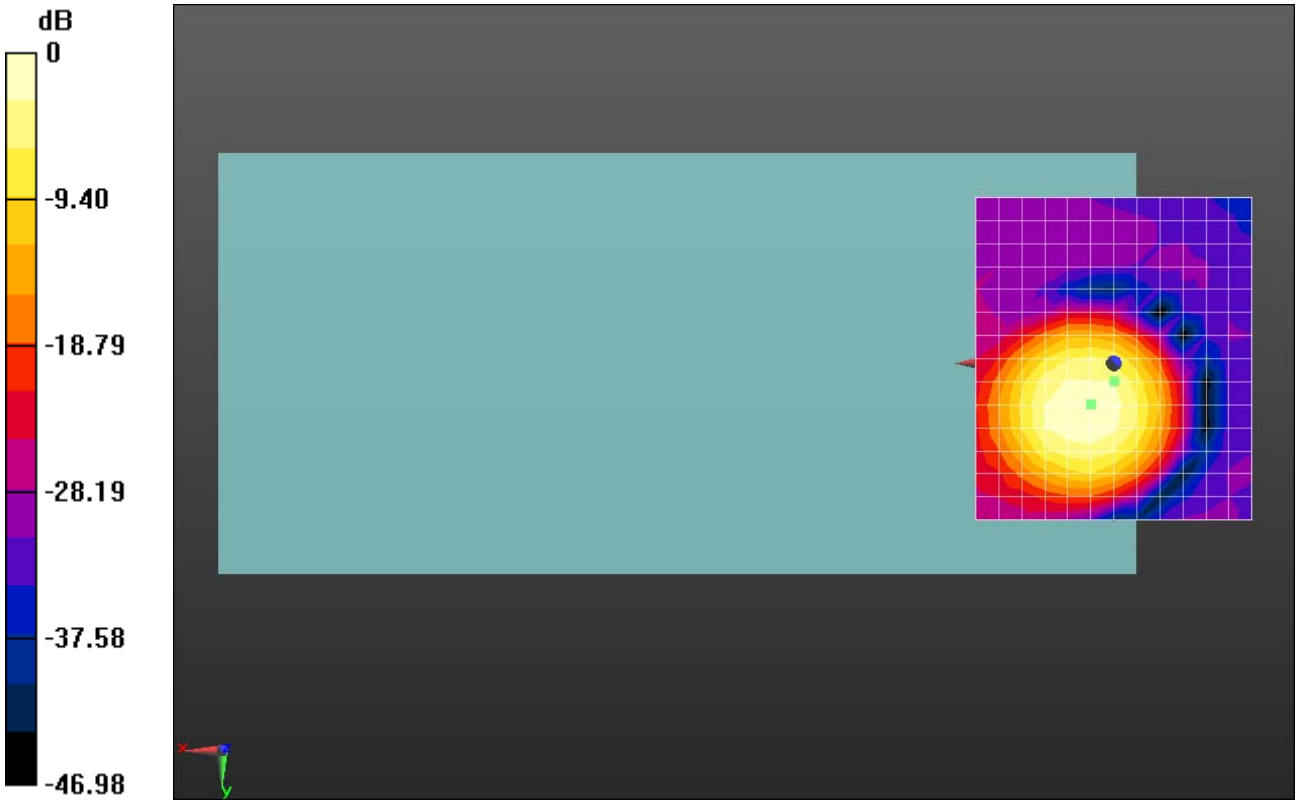
Test Laboratory: Shenzhen Morlab Communications Technology Co., Ltd. Date: 2023.01.12

## HAC_T-Coil_VoWiFi 5.8GHz_802.11ac-VHT80 MCS0_AMR 4.75Kbps_Ch155_Z

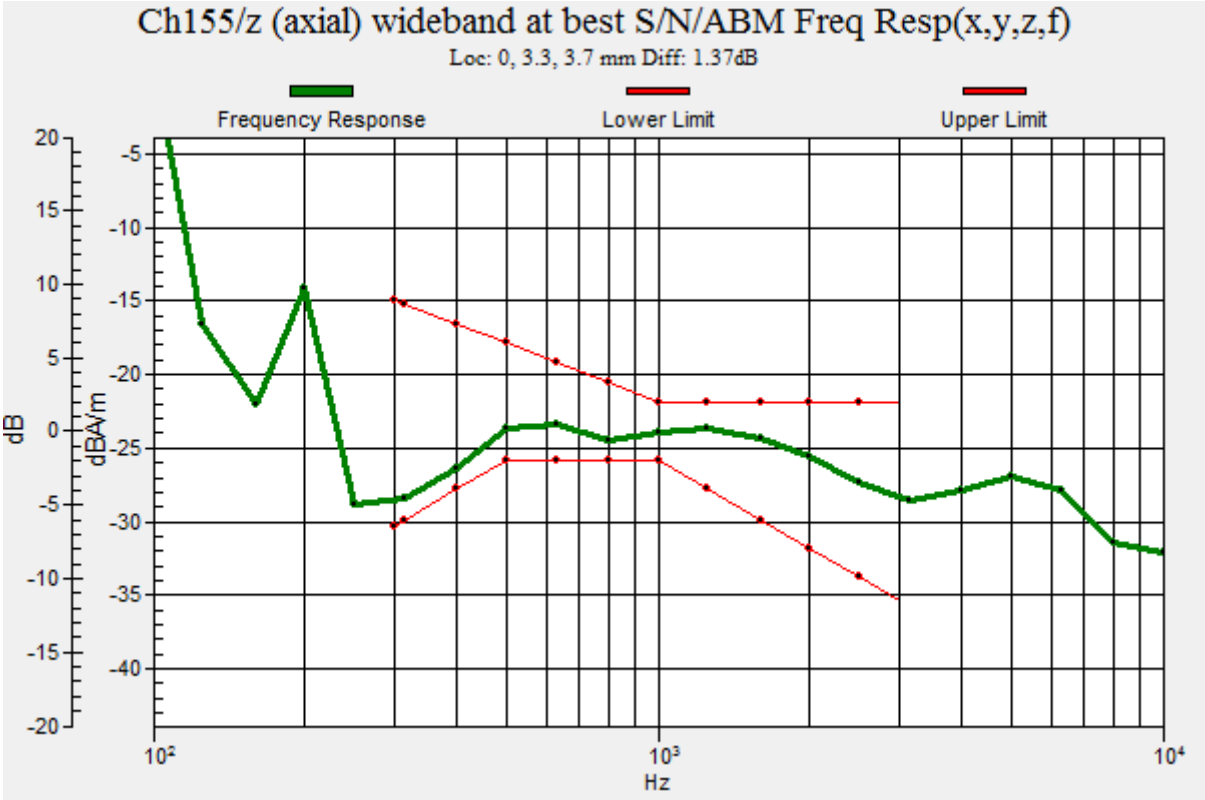
Communication System: UID 10118 - CAA, IEEE 802.11n (HT Mixed, 81 Mbps, 16-QAM);
Frequency: 5775 MHz;Duty Cycle: 1:7.2277
Medium: Air Medium parameters used: $\sigma = 0$ S/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m$^3$
Ambient Temperature：23.2 ℃

DASY5 Configuration:
- Probe: AM1DV3 - 3128; ; Calibrated: 2022.07.19
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE4 Sn1643; Calibrated: 2022.12.30
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Ch155/z (axial) 4.2mm 50 x 50/ABM SNR(x,y,z) (13x15x1):** Measurement grid: dx=10mm, dy=10mm
ABM1/ABM2 = 58.73 dB
ABM1 comp = 10.24 dBA/m
BWC Factor = 0.07 dB
Location: 0, 3.3, 3.7 mm




0 dB = 864.5 = 58.74 dB


Ch155/z (axial) wideband at best S/N/ABM Freq Resp(x,y,z,f)
Loc: 0, 3.3, 3.7 mm Diff: 1.37dB
Frequency Response
Lower Limit
Upper Limit
dB
dBA/m
Hz
20
15
10
5
0
-5
-10
-15
-20
-5
-10
-15
-20
-25
-30
-35
-40
10²
10³
10⁴

Test Laboratory: Shenzhen Morlab Communications Technology Co., Ltd. Date: 2023.01.12

## HAC_T-Coil_VoWiFi 5.8GHz_802.11ac-VHT80 MCS0_AMR 4.75Kbps_Ch155_Y

Communication System: UID 10118 - CAA, IEEE 802.11n (HT Mixed, 81 Mbps, 16-QAM);
Frequency: 5775 MHz;Duty Cycle: 1:7.2277
Medium: Air Medium parameters used: $\sigma = 0$ S/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m$^3$
Ambient Temperature：23.2 ℃

DASY5 Configuration:
- Probe: AM1DV3 - 3128; ; Calibrated: 2022.07.19
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE4 Sn1643; Calibrated: 2022.12.30
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Ch155/y (transversal) 4.2mm 50 x 50/ABM SNR(x,y,z) (13x15x1):** Measurement grid: dx=10mm, dy=10mm
ABM1/ABM2 = 58.26 dB
ABM1 comp = 6.50 dBA/m
BWC Factor = 0.07 dB
Location: 0, -0.8, 3.7 mm


0 dB = 818.1 = 58.26 dB

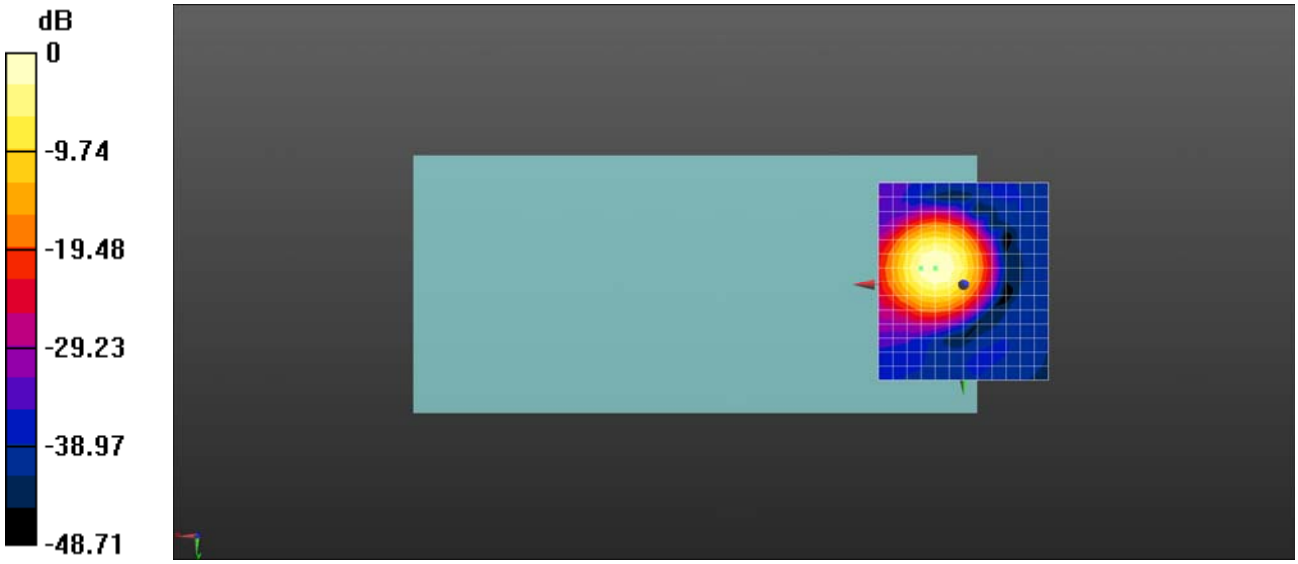
Test Laboratory: Shenzhen Morlab Communications Technology Co., Ltd. Date: 2023.01.12

## HAC_T-Coil_OTT VoIP_GSM1900_EDGE (4TX slots)_Ch661_Z

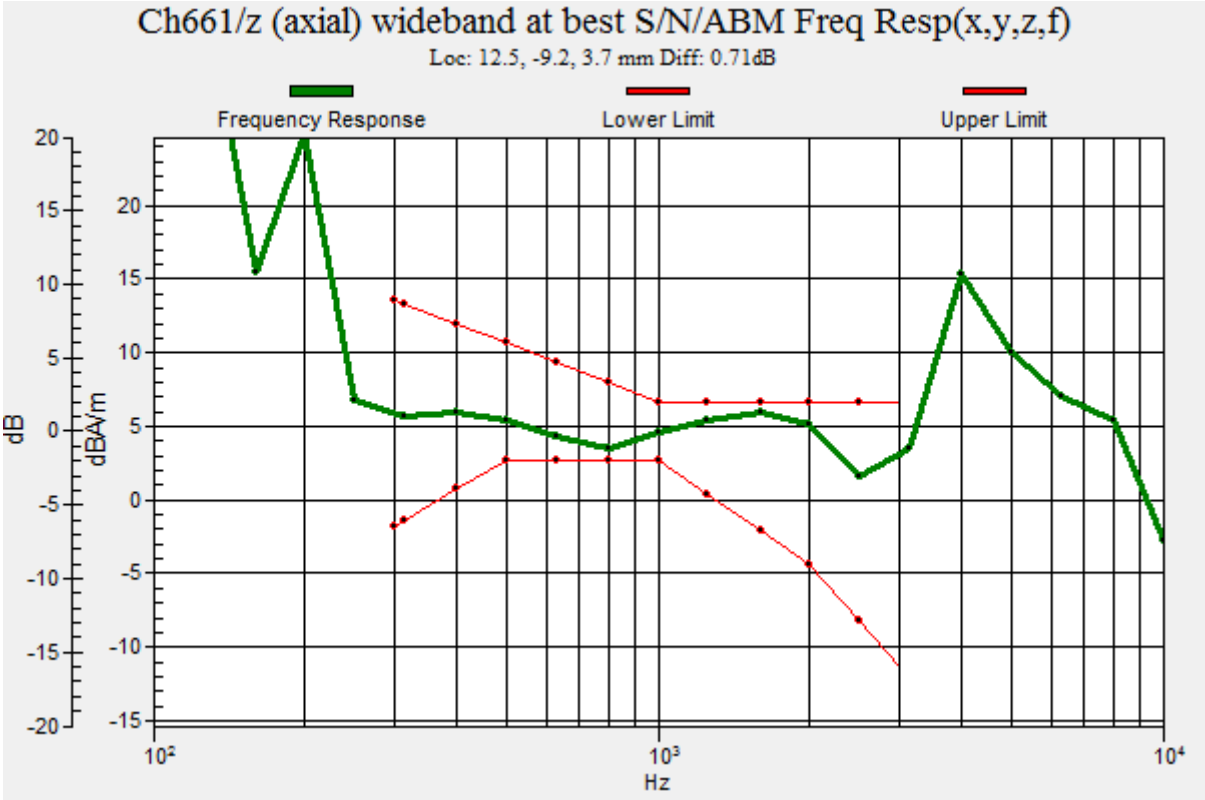
Communication System: UID 10021 - DAB, GSM-FDD (TDMA, GMSK); Frequency: 1880 MHz;Duty Cycle: 1:8.6896
Medium: Air Medium parameters used: $\sigma = 0$ S/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m$^3$
Ambient Temperature：23.2 ℃

DASY5 Configuration:
- Probe: AM1DV2 - 1048; ; Calibrated: 2022.02.22
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE4 Sn1643; Calibrated: 2022.12.30
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Ch661/z (axial) 4.2mm 50 x 50/ABM SNR(x,y,z) (13x15x1):** Measurement grid: dx=10mm, dy=10mm
ABM1/ABM2 = 41.41 dB
ABM1 comp = 3.92 dBA/m
BWC Factor = 0.04 dB
Location: 12.5, -5, 3.7 mm




0 dB = 117.7 = 41.42 dB


Ch661/z (axial) wideband at best S/N/ABM Freq Resp(x,y,z,f)
Loc: 12.5, -9.2, 3.7 mm Diff: 0.71dB
Frequency Response
Lower Limit
Upper Limit
dB
dBA/m
Hz
20
15
10
5
0
-5
-10
-15
-20
$10^2$
$10^3$
$10^4$

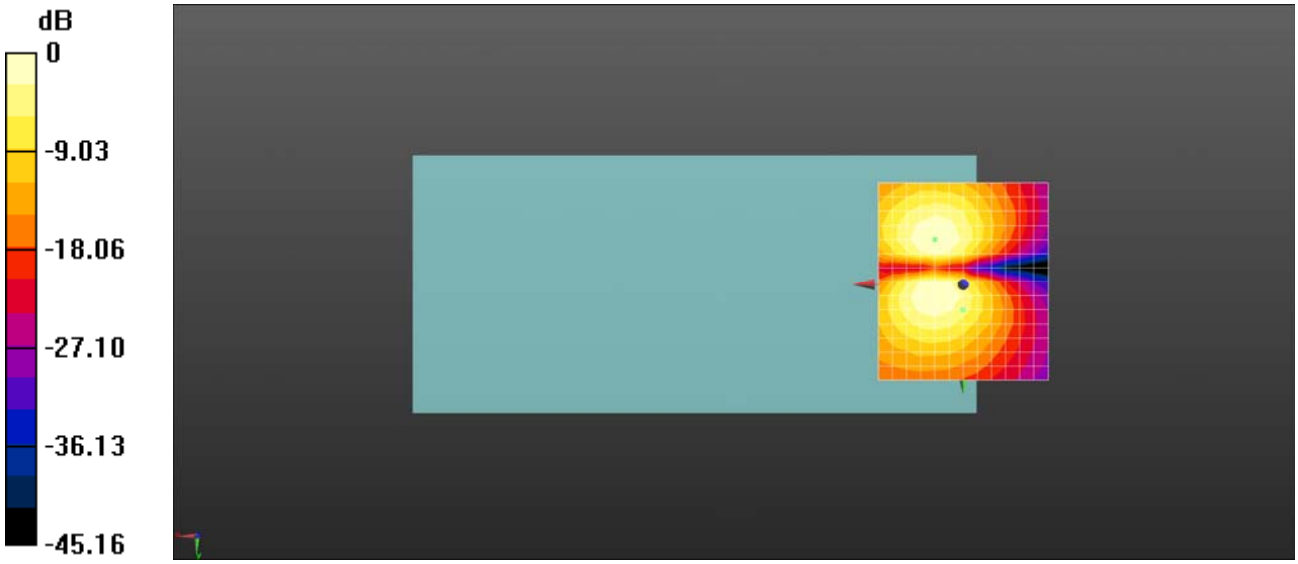
Test Laboratory: Shenzhen Morlab Communications Technology Co., Ltd. Date: 2023.01.12

## HAC_T-Coil_OTT VoIP_GSM1900_EDGE (4TX slots)_Ch661_Y

Communication System: UID 10021 - DAB, GSM-FDD (TDMA, GMSK); Frequency: 1880 MHz;Duty Cycle: 1:8.6896
Medium: Air Medium parameters used: $\sigma = 0$ S/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m$^3$
Ambient Temperature：23.2 ℃

DASY5 Configuration:
- Probe: AM1DV2 - 1048; ; Calibrated: 2022.02.22
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE4 Sn1643; Calibrated: 2022.12.30
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Ch661/y (transversal) 4.2mm 50 x 50/ABM SNR(x,y,z) (13x15x1):** Measurement grid: dx=10mm, dy=10mm
ABM1/ABM2 = 36.37 dB
ABM1 comp = -7.54 dBA/m
BWC Factor = 0.04 dB
Location: 0, 7.5, 3.7 mm




0 dB = 65.85 = 36.37 dB

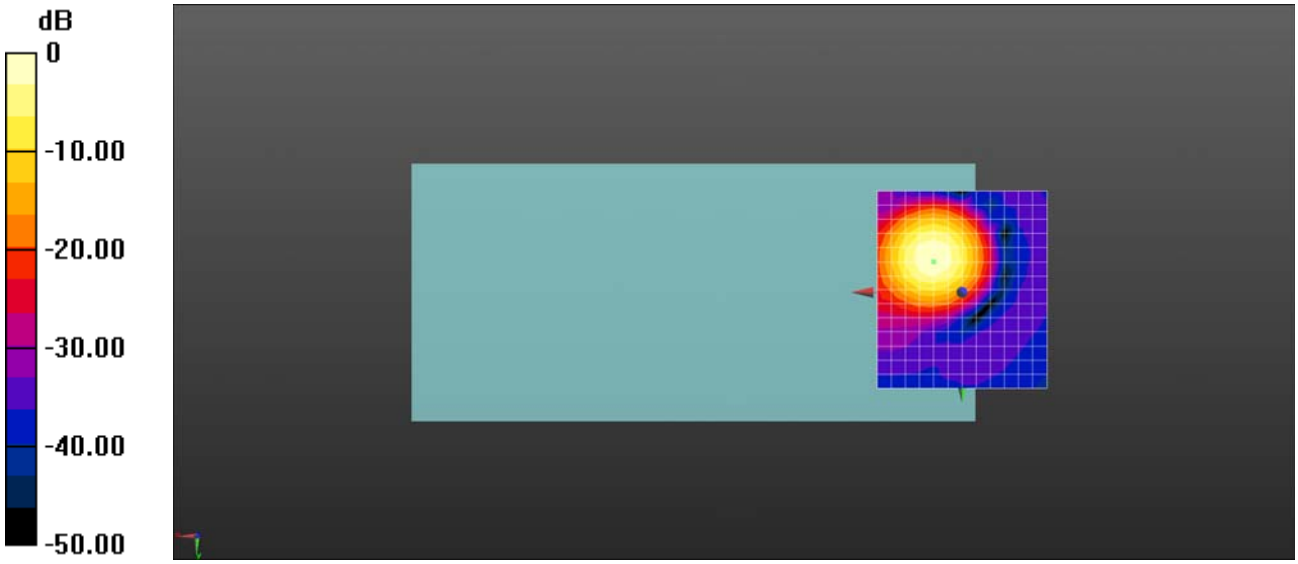
Test Laboratory: Shenzhen Morlab Communications Technology Co., Ltd. Date: 2023.01.12

## HAC_T-Coil_OTT VoIP_WCDMA Band II_HSPA_Ch9400_Z

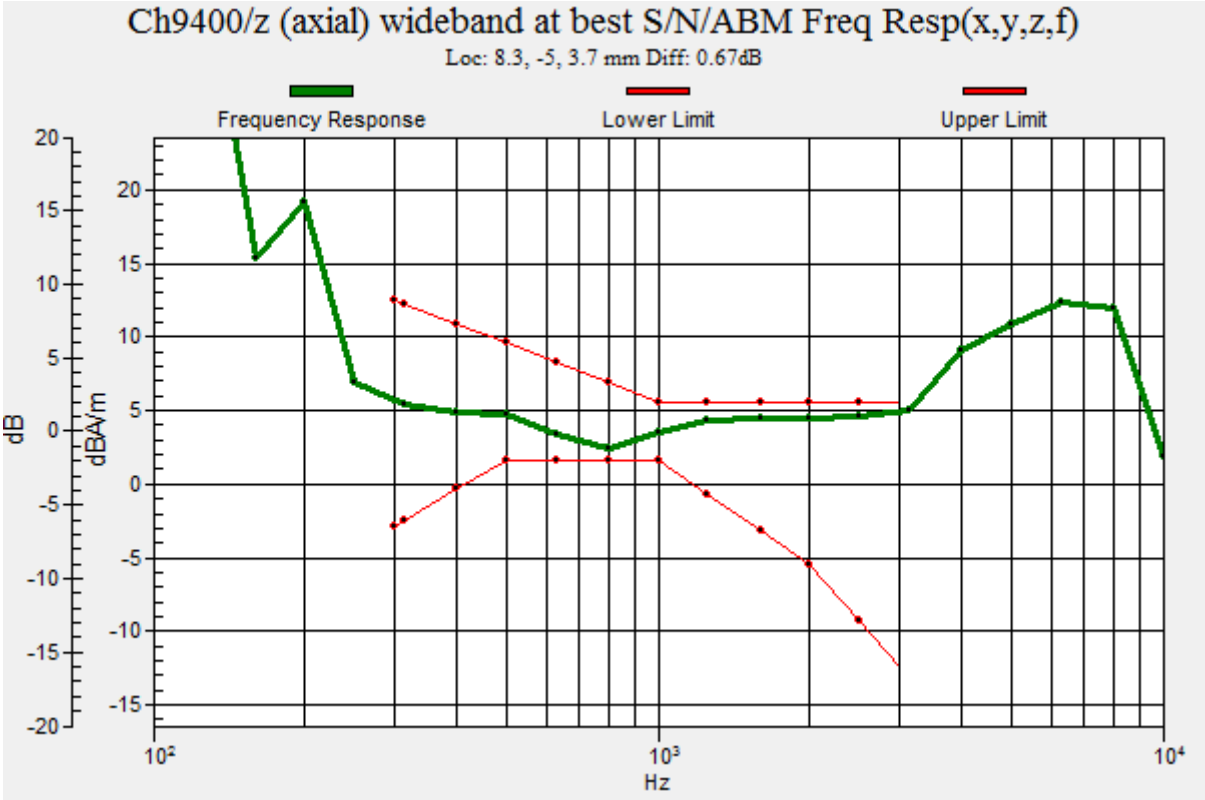
Communication System: UID 10011 - CAB, UMTS-FDD (WCDMA); Frequency: 1880 MHz;Duty Cycle: 1:1.95434
Medium: Air Medium parameters used: $\sigma = 0$ S/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m$^3$
Ambient Temperature：23.2 ℃

DASY5 Configuration:
- Probe: AM1DV2 - 1048; ; Calibrated: 2022.02.22
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE4 Sn1643; Calibrated: 2022.12.30
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Ch9400/z (axial) 4.2mm 50 x 50/ABM SNR(x,y,z) (13x15x1):** Measurement grid: dx=10mm, dy=10mm
ABM1/ABM2 = 43.53 dB
ABM1 comp = -5.76 dBA/m
BWC Factor = 0.04 dB
Location: 8.3, -9.2, 3.7 mm




0 dB = 150.1 = 43.53 dB


Ch9400/z (axial) wideband at best S/N/ABM Freq Resp(x,y,z,f)
Loc: 8.3, -5, 3.7 mm Diff: 0.67dB
Frequency Response
Lower Limit
Upper Limit
dB
dBA/m
20
15
10
5
0
-5
-10
-15
-20
$10^2$
$10^3$
$10^4$
Hz

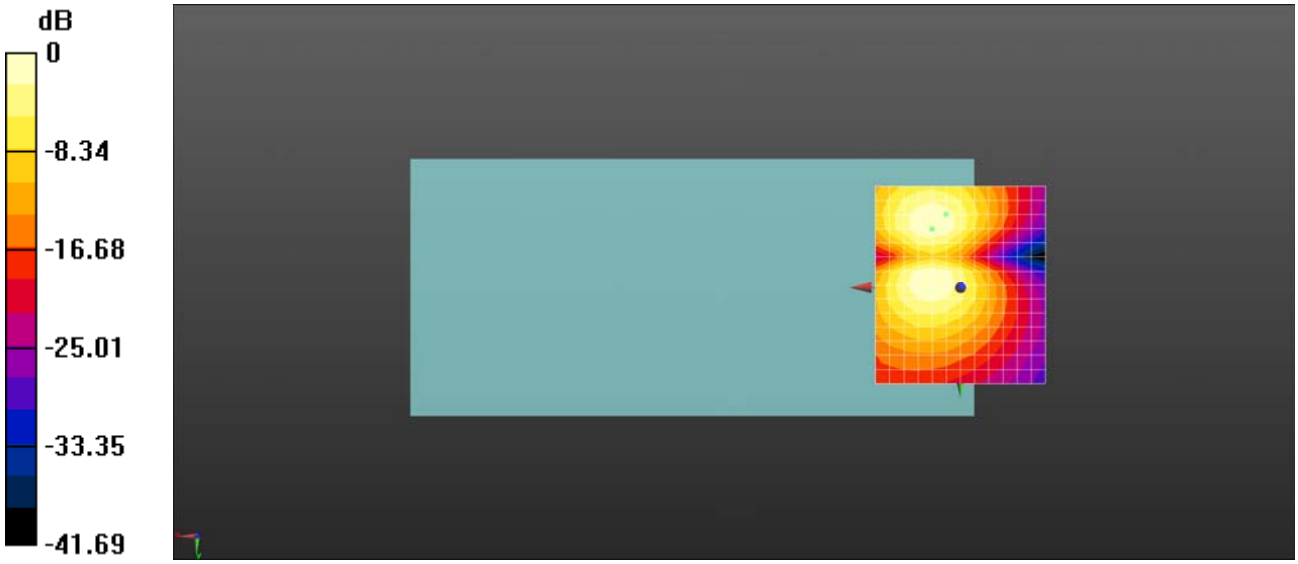
Test Laboratory: Shenzhen Morlab Communications Technology Co., Ltd. Date: 2023.01.12

## HAC_T-Coil_OTT VoIP_WCDMA Band II_HSPA_Ch9400_Y

Communication System: UID 10011 - CAB, UMTS-FDD (WCDMA); Frequency: 1880 MHz;Duty Cycle: 1:1.95434
Medium: Air Medium parameters used: $\sigma = 0$ S/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m$^3$
Ambient Temperature：23.2 ℃

DASY5 Configuration:
- Probe: AM1DV2 - 1048; ; Calibrated: 2022.02.22
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE4 Sn1643; Calibrated: 2022.12.30
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Ch9400/y (transversal) 4.2mm 50 x 50/ABM SNR(x,y,z) (13x15x1):** Measurement grid: dx=10mm, dy=10mm
ABM1/ABM2 = 33.24 dB
ABM1 comp = -15.74 dBA/m
BWC Factor = 0.04 dB
Location: 4.2, -21.7, 3.7 mm




0 dB = 45.90 = 33.24 dB

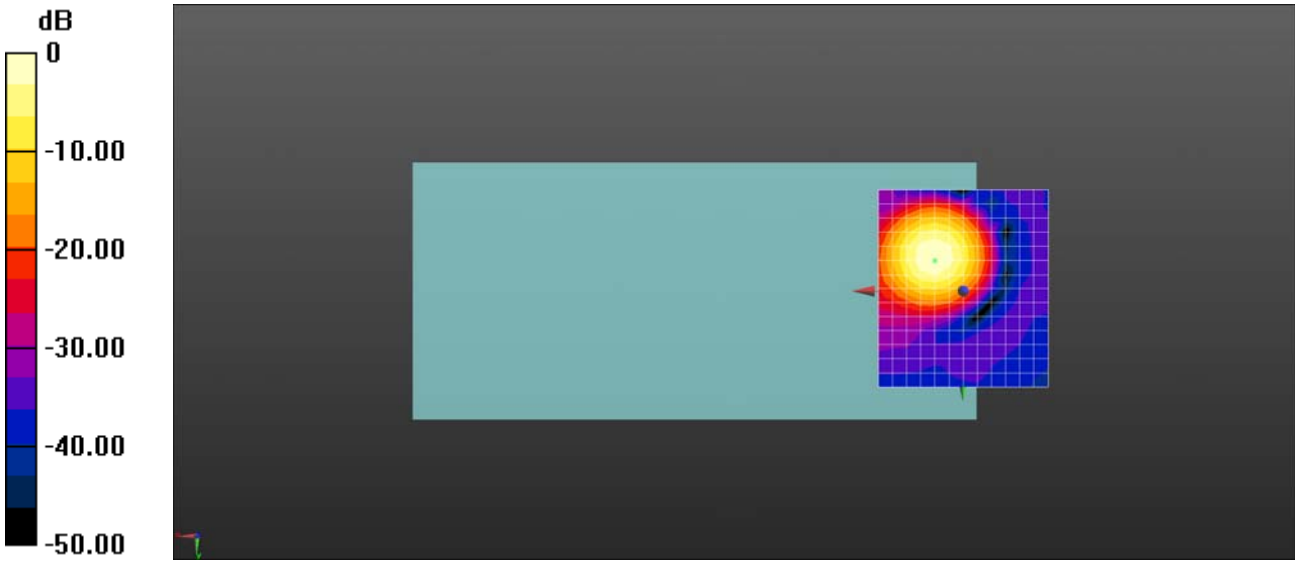
Test Laboratory: Shenzhen Morlab Communications Technology Co., Ltd. Date: 2023.01.12

## HAC_T-Coil_OTT VoIP_WCDMA Band V_HSPA_Ch4182_Z

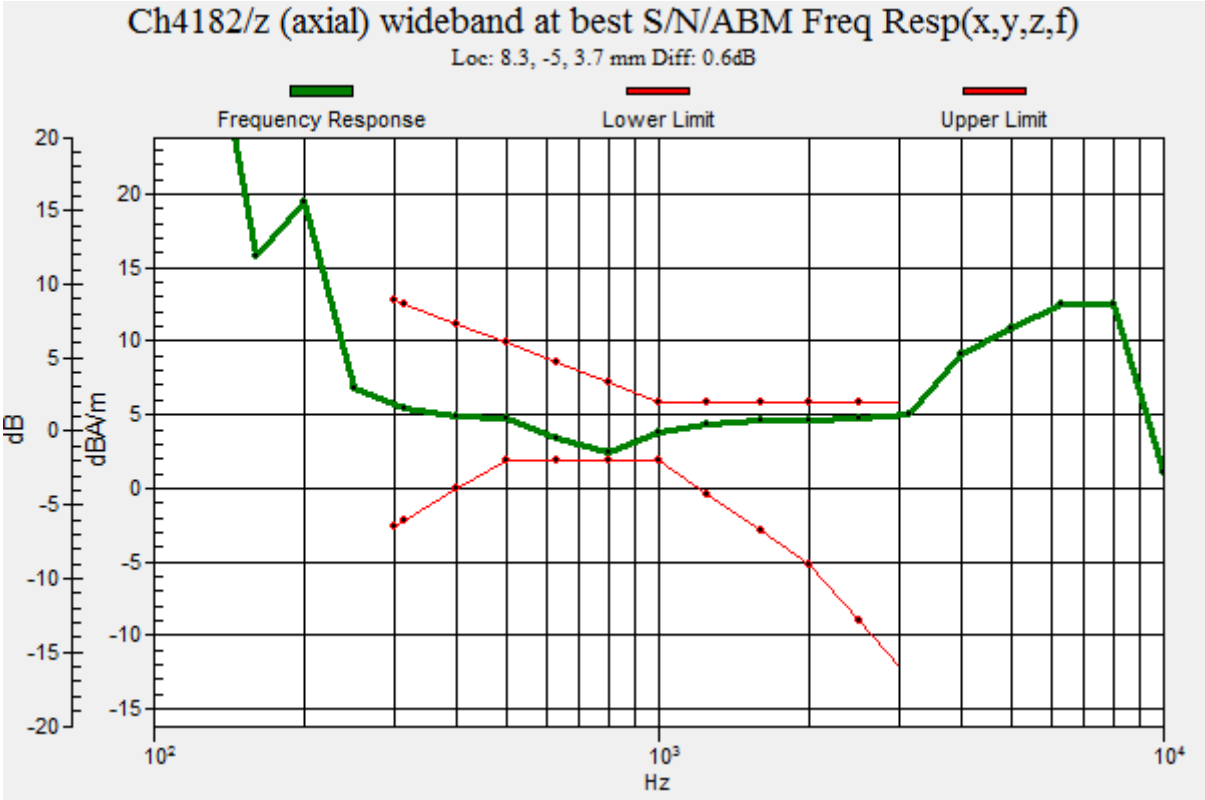
Communication System: UID 10011 - CAB, UMTS-FDD (WCDMA); Frequency: 836.4 MHz;Duty Cycle: 1:1.95434
Medium: Air Medium parameters used: $\sigma = 0$ S/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m$^3$
Ambient Temperature：23.2 ℃

DASY5 Configuration:
- Probe: AM1DV2 - 1048; ; Calibrated: 2022.02.22
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE4 Sn1643; Calibrated: 2022.12.30
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Ch4182/z (axial) 4.2mm 50 x 50/ABM SNR(x,y,z) (13x15x1):** Measurement grid: dx=10mm, dy=10mm
ABM1/ABM2 = 43.32 dB
ABM1 comp = -5.72 dBA/m
BWC Factor = 0.05 dB
Location: 8.3, -9.2, 3.7 mm




0 dB = 146.6 = 43.32 dB


Ch4182/z (axial) wideband at best S/N/ABM Freq Resp(x,y,z,f)
Loc: 8.3, -5, 3.7 mm Diff: 0.6dB
Frequency Response
Lower Limit
Upper Limit
dB
dBA/m
Hz
20
15
10
5
0
-5
-10
-15
-20
10²
10³
10⁴

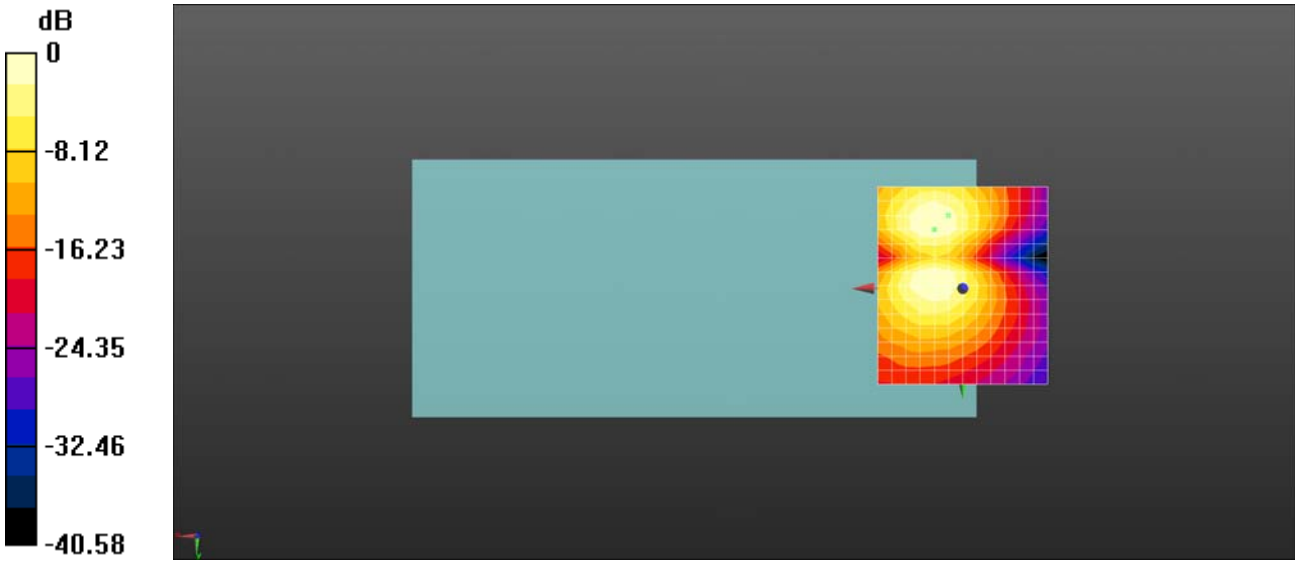
Test Laboratory: Shenzhen Morlab Communications Technology Co., Ltd. Date: 2023.01.12

## HAC_T-Coil_OTT VoIP_WCDMA Band V_HSPA_Ch4182_Y

Communication System: UID 10011 - CAB, UMTS-FDD (WCDMA); Frequency: 836.4 MHz;Duty Cycle: 1:1.95434
Medium: Air Medium parameters used: $\sigma = 0$ S/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m$^3$
Ambient Temperature：23.2 ℃

DASY5 Configuration:
- Probe: AM1DV2 - 1048; ; Calibrated: 2022.02.22
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE4 Sn1643; Calibrated: 2022.12.30
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Ch4182/y (transversal) 4.2mm 50 x 50/ABM SNR(x,y,z) (13x15x1):** Measurement grid: dx=10mm, dy=10mm
ABM1/ABM2 = 33.13 dB
ABM1 comp = -15.52 dBA/m
BWC Factor = 0.05 dB
Location: 4.2, -21.7, 3.7 mm




0 dB = 45.35 = 33.13 dB

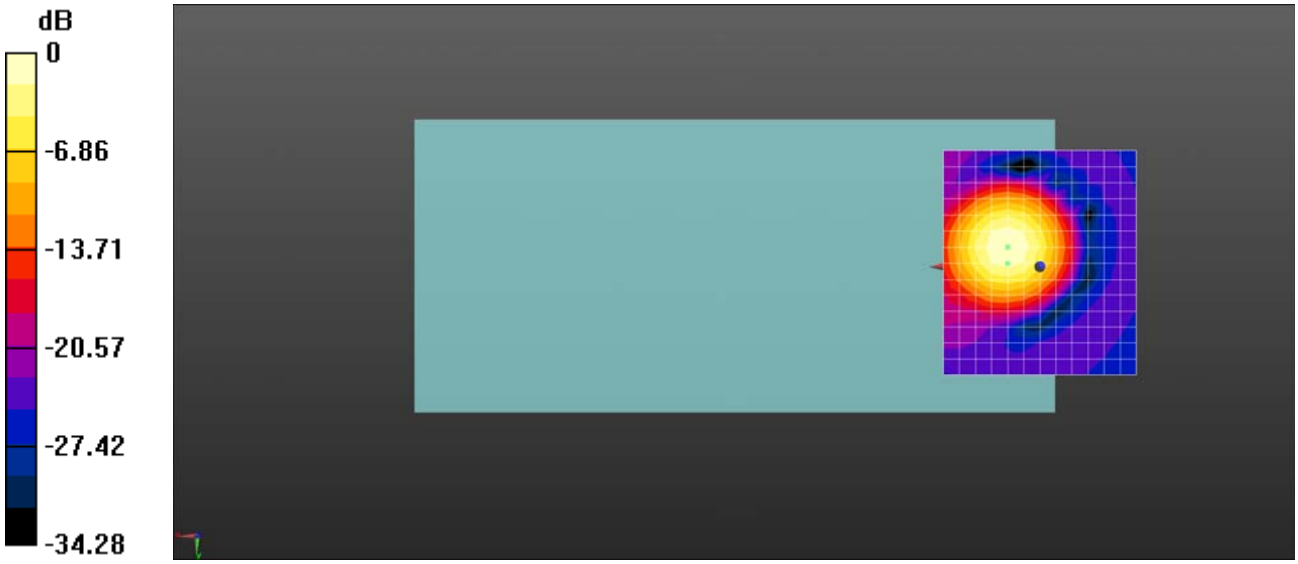
Test Laboratory: Shenzhen Morlab Communications Technology Co., Ltd. Date: 2023.01.12

## HAC_T-Coil_VoIP_LTE Band 4_20MHz_QPSK_1RB_0offset_12.2Kbps_Ch20175_Z

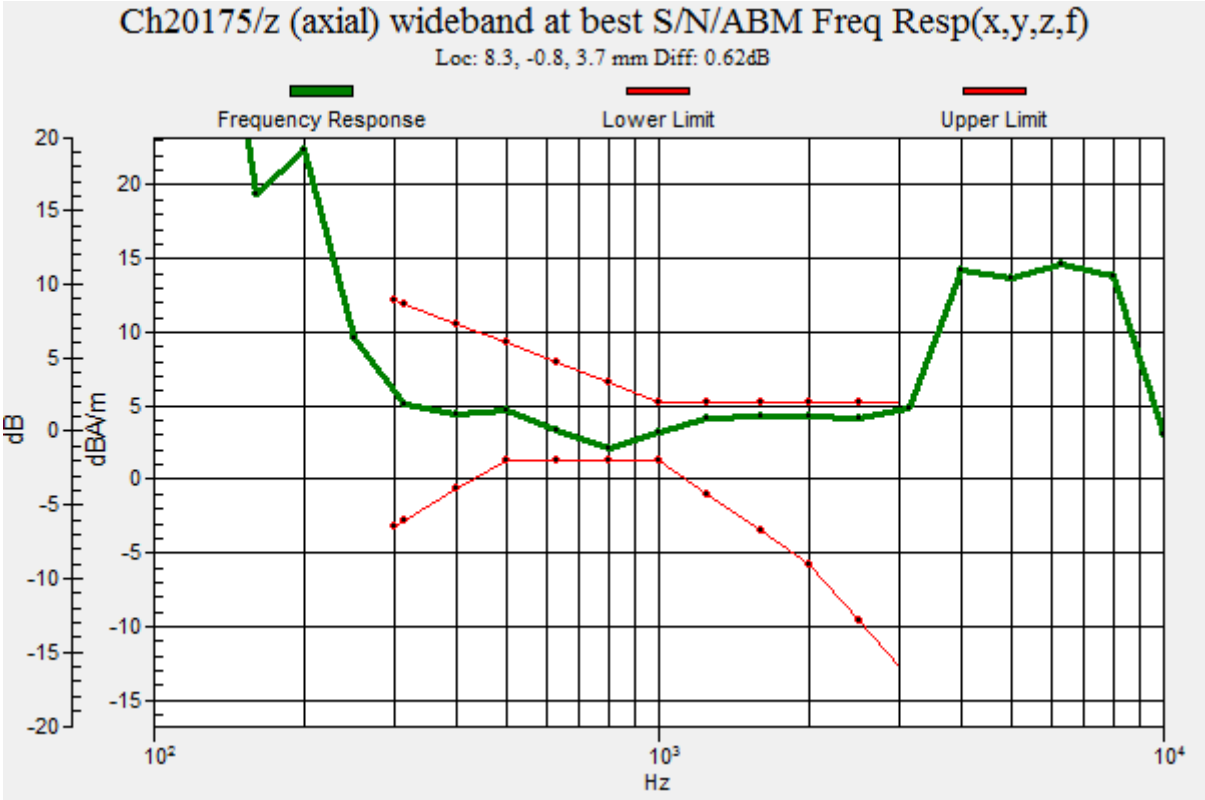
Communication System: UID 10169 - CAB, LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK);
Frequency: 1732.5 MHz;Duty Cycle: 1:3.74111
Medium: Air Medium parameters used: $\sigma = 0$ S/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m$^3$
Ambient Temperature：23.2 ℃

DASY5 Configuration:
- Probe: AM1DV2 - 1048; ; Calibrated: 2022.02.22
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE4 Sn1643; Calibrated: 2022.12.30
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Ch20175/z (axial) 4.2mm 50 x 50/ABM SNR(x,y,z) (13x15x1):** Measurement grid:
dx=10mm, dy=10mm
ABM1/ABM2 = 33.77 dB
ABM1 comp = 5.01 dBA/m
BWC Factor = 0.04 dB
Location: 8.3, -0.8, 3.7 mm




0 dB = 48.82 = 33.77 dB


Ch20175/z (axial) wideband at best S/N/ABM Freq Resp(x,y,z,f)
Loc: 8.3, -0.8, 3.7 mm Diff: 0.62dB
Frequency Response
Lower Limit
Upper Limit
dB
dBA/m
20
15
10
5
0
-5
-10
-15
-20
$10^2$
$10^3$
$10^4$
Hz

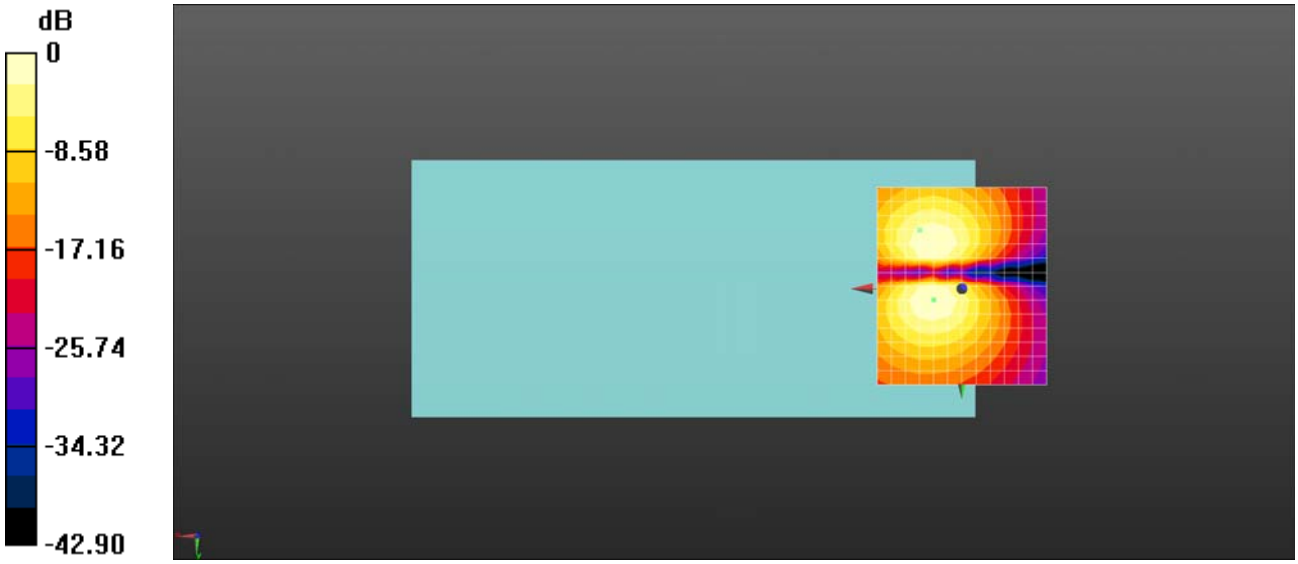
Test Laboratory: Shenzhen Morlab Communications Technology Co., Ltd. Date: 2023.01.12

## HAC_T-Coil_VoIP_LTE Band 4_20MHz_QPSK_1RB_0offset_12.2Kbps_Ch20175_Y

Communication System: UID 10169 - CAB, LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK);
Frequency: 1732.5 MHz;Duty Cycle: 1:3.74111
Medium: Air Medium parameters used: $\sigma = 0$ S/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m$^3$
Ambient Temperature：23.2 ℃

DASY5 Configuration:
- Probe: AM1DV2 - 1048; ; Calibrated: 2022.02.22
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE4 Sn1643; Calibrated: 2022.12.30
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Ch20175/y (transversal) 4.2mm 50 x 50/ABM SNR(x,y,z) (13x15x1):** Measurement grid: dx=10mm, dy=10mm
ABM1/ABM2 = 33.53 dB
ABM1 comp = -3.48 dBA/m
BWC Factor = 0.04 dB
Location: 12.5, -17.5, 3.7 mm




0 dB = 47.46 = 33.53 dB

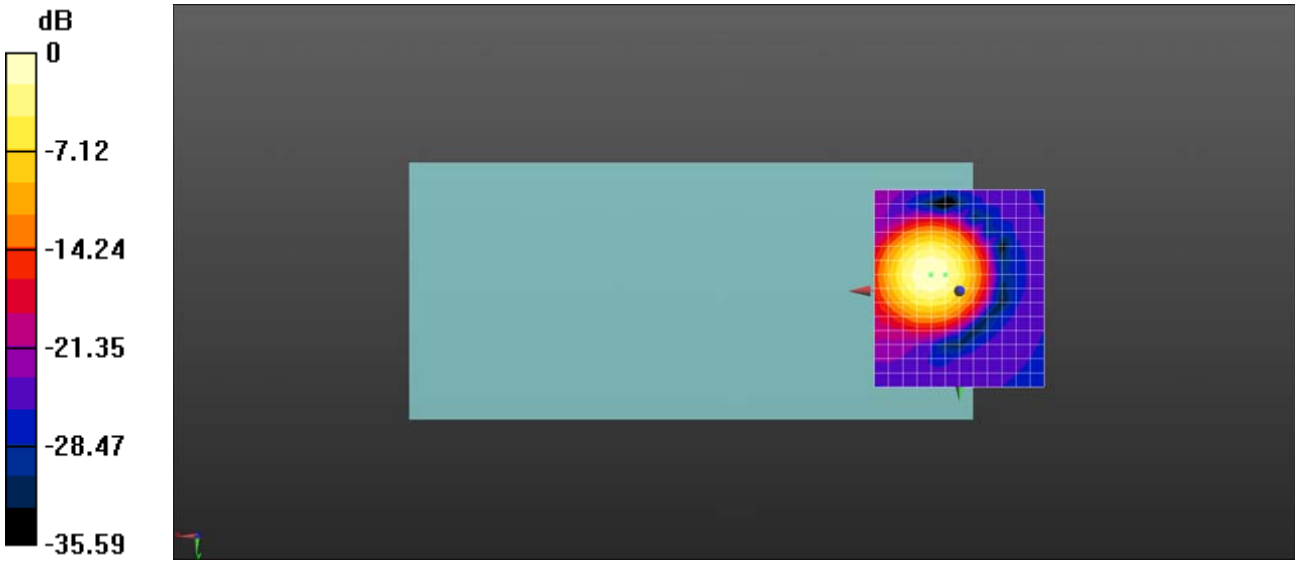
Test Laboratory: Shenzhen Morlab Communications Technology Co., Ltd. Date: 2023.01.12

## HAC_T-Coil_VoIP_LTE Band 17_10MHz_QPSK_1RB_0offset_12.2Kbps_Ch23790_Z

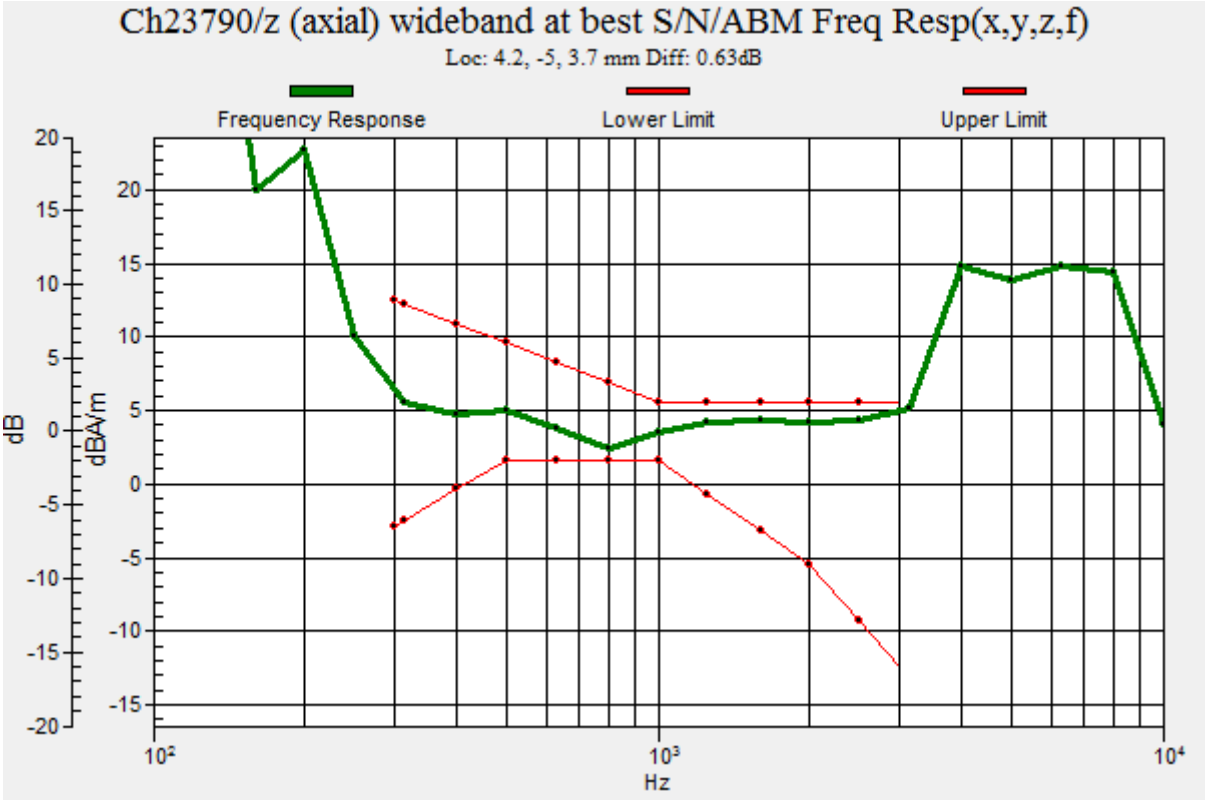
Communication System: UID 10175 - CAB, LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK);
Frequency: 710 MHz;Duty Cycle: 1:3.7325
Medium: Air Medium parameters used: $\sigma = 0$ S/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m$^3$
Ambient Temperature：23.2 ℃

DASY5 Configuration:
- Probe: AM1DV2 - 1048; ; Calibrated: 2022.02.22
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE4 Sn1643; Calibrated: 2022.12.30
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Ch23790/z (axial) 4.2mm 50 x 50/ABM SNR(x,y,z) (13x15x1):** Measurement grid:
dx=10mm, dy=10mm
ABM1/ABM2 = 33.50 dB
ABM1 comp = 5.13 dBA/m
BWC Factor = 0.05 dB
Location: 4.2, -5, 3.7 mm




0 dB = 47.31 = 33.50 dB


Ch23790/z (axial) wideband at best S/N/ABM Freq Resp(x,y,z,f)
Loc: 4.2, -5, 3.7 mm Diff: 0.63dB
Frequency Response
Lower Limit
Upper Limit
dB
dBA/m
20
15
10
5
0
-5
-10
-15
-20
$10^2$
$10^3$
$10^4$
Hz

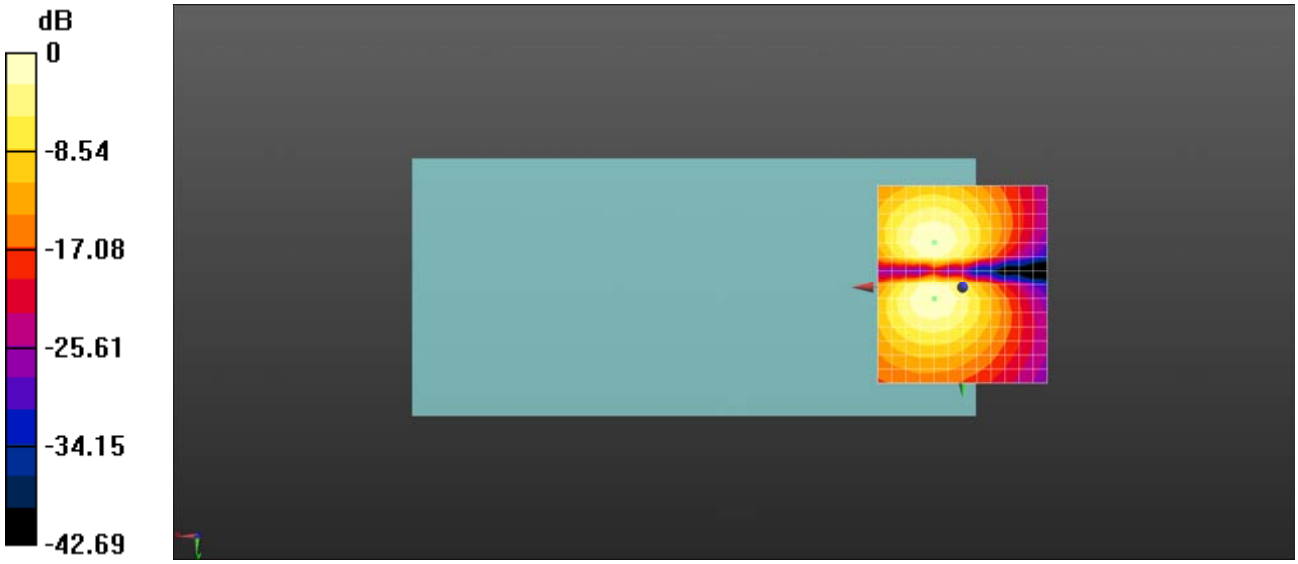
Test Laboratory: Shenzhen Morlab Communications Technology Co., Ltd. Date: 2023.01.12

## HAC_T-Coil_VoIP_LTE Band 17_10MHz_QPSK_1RB_0offset_12.2Kbps_Ch23790_Y

Communication System: UID 10175 - CAB, LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK);
Frequency: 710 MHz;Duty Cycle: 1:3.7325
Medium: Air Medium parameters used: $\sigma = 0$ S/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m$^3$
Ambient Temperature：23.2 ℃

DASY5 Configuration:
- Probe: AM1DV2 - 1048; ; Calibrated: 2022.02.22
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE4 Sn1643; Calibrated: 2022.12.30
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Ch23790/y (transversal) 4.2mm 50 x 50/ABM SNR(x,y,z) (13x15x1):** Measurement grid: dx=10mm, dy=10mm
ABM1/ABM2 = 33.57 dB
ABM1 comp = -1.18 dBA/m
BWC Factor = 0.05 dB
Location: 8.3, -13.3, 3.7 mm




0 dB = 47.72 = 33.57 dB

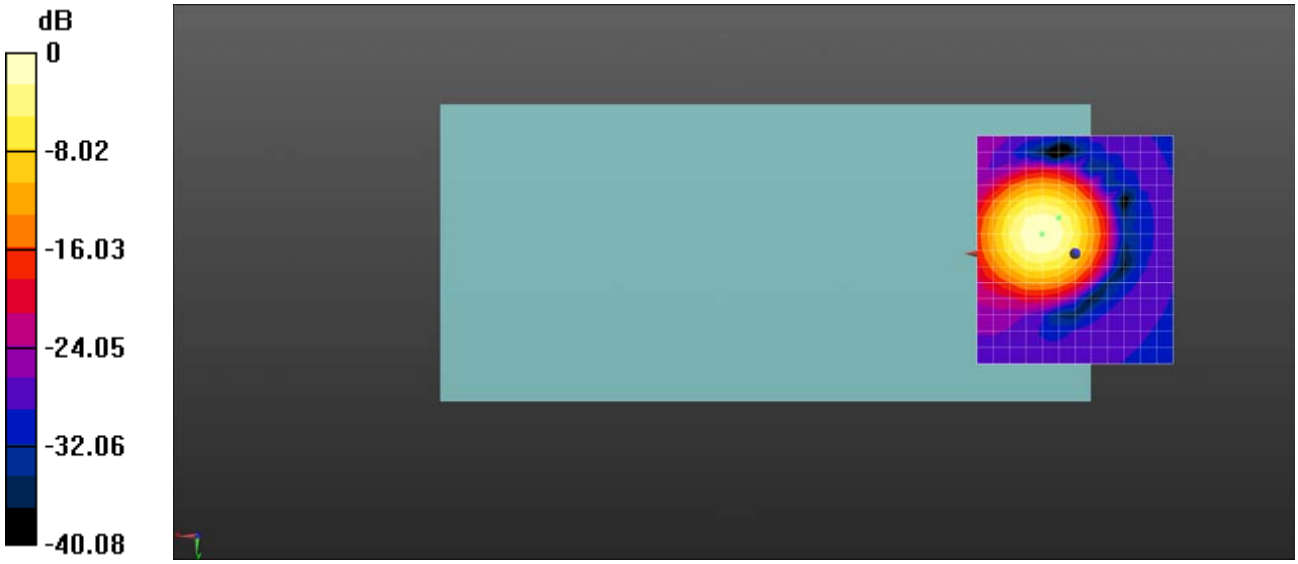
Test Laboratory: Shenzhen Morlab Communications Technology Co., Ltd. Date: 2023.01.12

# HAC_T-Coil_VoIP_LTE Band 40B_10MHz_QPSK_1RB_0offset_12.2Kbps_Ch39200_Z

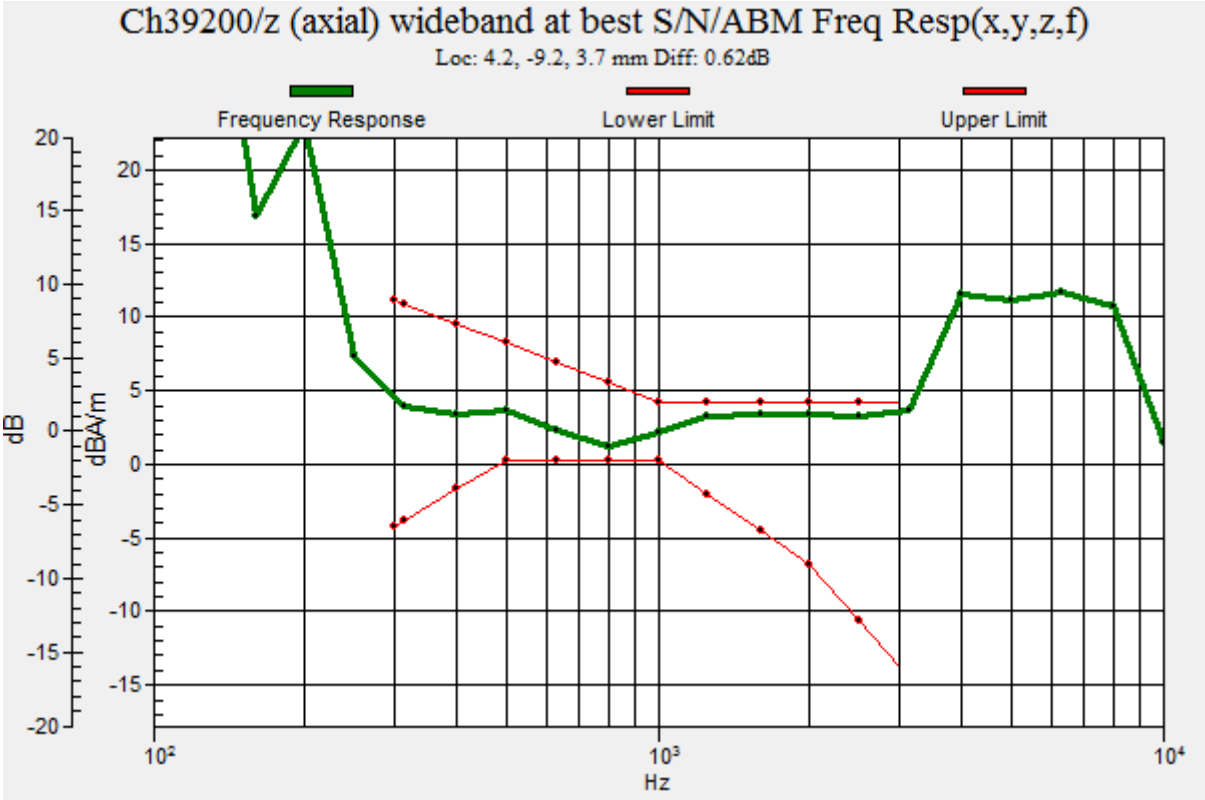
Communication System: UID 10237 - CAB, LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK);
Frequency: 2355 MHz;Duty Cycle: 1:8.33681
Medium: Air Medium parameters used: $\sigma = 0$ S/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m$^3$
Ambient Temperature：23.2 ℃

DASY5 Configuration:
- Probe: AM1DV2 - 1048; ; Calibrated: 2022.02.22
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE4 Sn1643; Calibrated: 2022.12.30.
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Ch39200/z (axial) 4.2mm 50 x 50/ABM SNR(x,y,z) (13x15x1):** Measurement grid:
dx=10mm, dy=10mm
ABM1/ABM2 = 32.74 dB
ABM1 comp = 3.34 dBA/m
BWC Factor = 0.04 dB
Location: 4.2, -9.2, 3.7 mm




0 dB = 43.34 = 32.74 dB


Ch39200/z (axial) wideband at best S/N/ABM Freq Resp(x,y,z,f)
Loc: 4.2, -9.2, 3.7 mm Diff: 0.62dB
Frequency Response
Lower Limit
Upper Limit
dB
dBA/m
20
15
10
5
0
-5
-10
-15
-20
10²
10³
10⁴
Hz

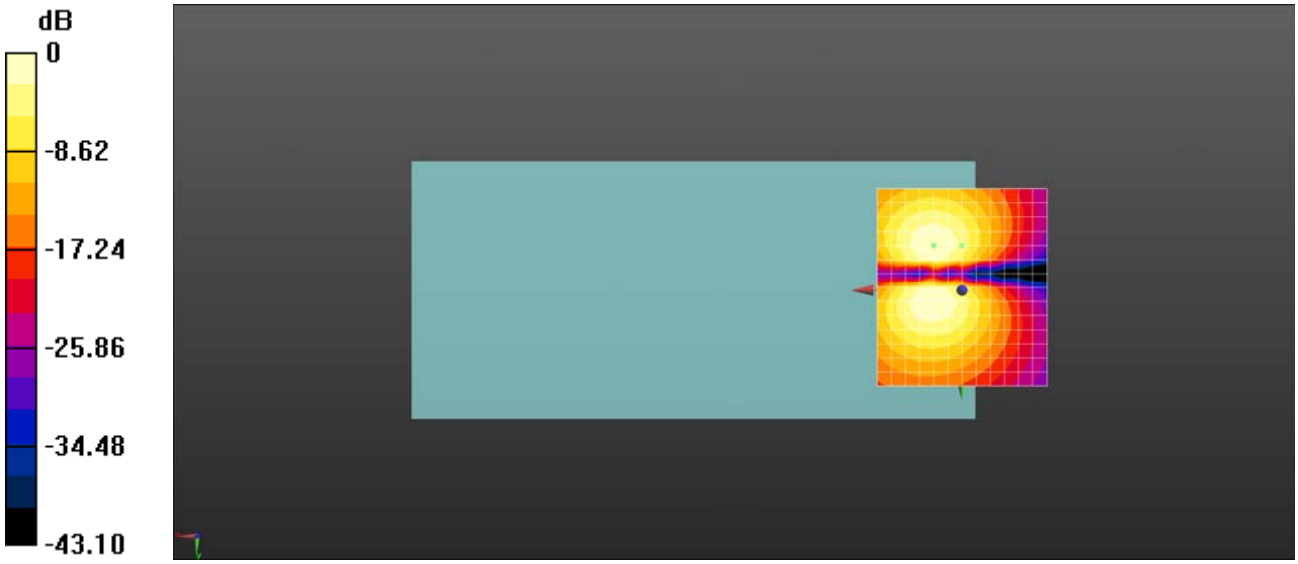
Test Laboratory: Shenzhen Morlab Communications Technology Co., Ltd. Date: 2023.01.12

## HAC_T-Coil_VoIP_LTE Band 40B_10MHz_QPSK_1RB_0offset_12.2Kbps_Ch39200_Y

Communication System: UID 10237 - CAB, LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK);
Frequency: 2355 MHz;Duty Cycle: 1:8.33681
Medium: Air Medium parameters used: $\sigma = 0$ S/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m$^3$
Ambient Temperature：23.2 ℃

DASY5 Configuration:
- Probe: AM1DV2 - 1048; ; Calibrated: 2022.02.22
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE4 Sn1643; Calibrated: 2022.12.30
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Ch39200/y (transversal) 4.2mm 50 x 50/ABM SNR(x,y,z) (13x15x1):** Measurement grid: dx=10mm, dy=10mm
ABM1/ABM2 = 31.28 dB
ABM1 comp = -5.39 dBA/m
BWC Factor = 0.04 dB
Location: 0, -13.3, 3.7 mm




0 dB = 36.65 = 31.28 dB

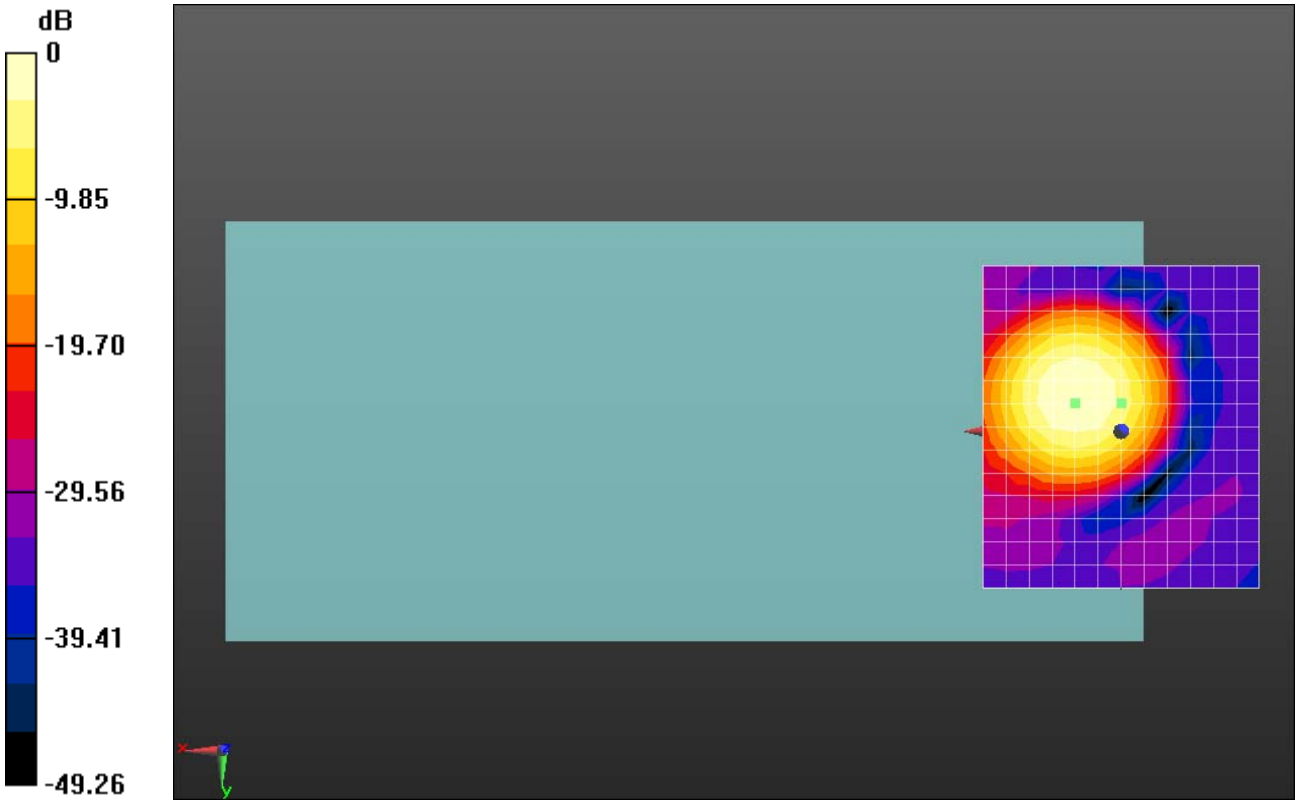
Test Laboratory: Shenzhen Morlab Communications Technology Co., Ltd. Date: 2023.01.12

## HAC_T-Coil_VoIP_VoWiFi 5.3GHz_802.11a 6Mbps_AMR 4.75Kbps_Ch60_Z

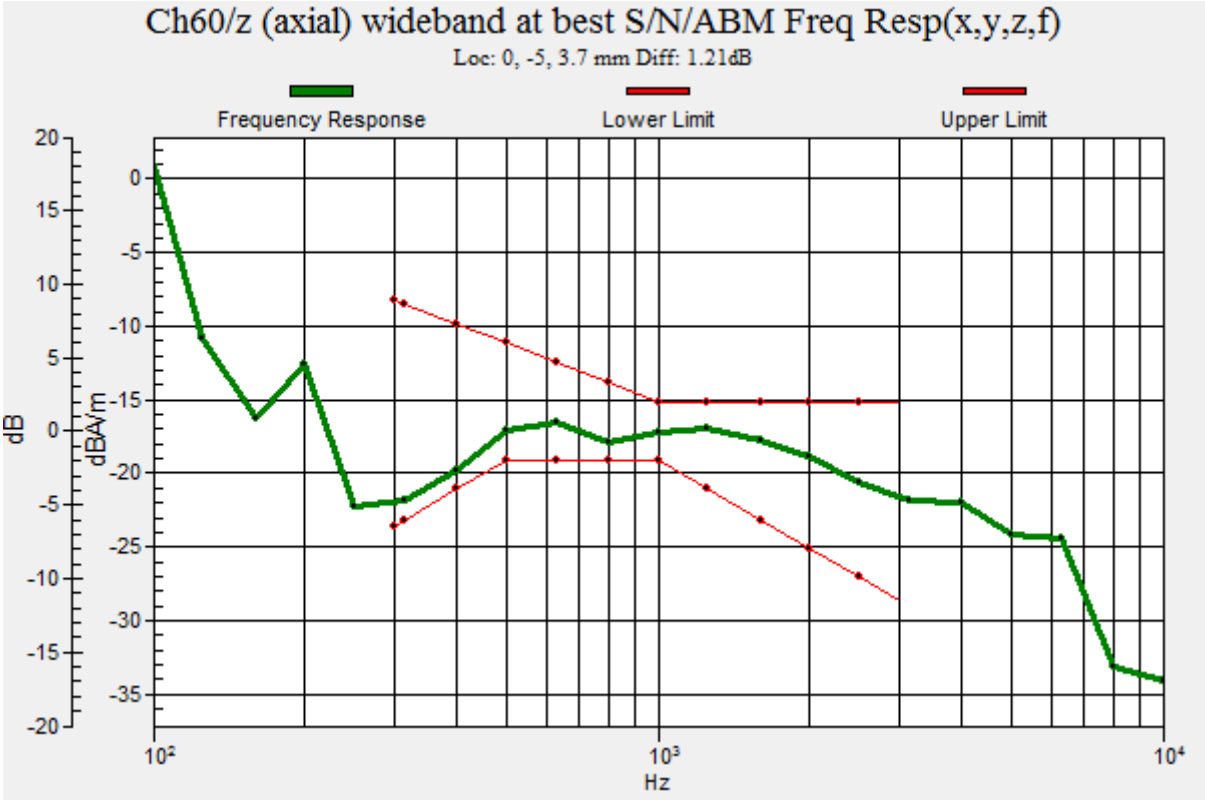
Communication System: UID 10317 - AAA, IEEE 802.11a WiFi 5 GHz (OFDM, 6 Mbps, 96pc duty cycle); Frequency: 5300 MHz;Duty Cycle: 1:6.85488
Medium: Air Medium parameters used: $\sigma = 0$ S/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m$^3$
Ambient Temperature：23.2 ℃

DASY5 Configuration:
- Probe: AM1DV2 - 1048; ; Calibrated: 2022.02.22
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE4 Sn1643; Calibrated: 2022.12.30
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Ch60/z (axial) 4.2mm 50 x 50/ABM SNR(x,y,z) (13x15x1):** Measurement grid: dx=10mm, dy=10mm
ABM1/ABM2 = 58.94 dB
ABM1 comp = 9.31 dBA/m
BWC Factor = 0.05 dB
Location: 0, -5, 3.7 mm




0 dB = 885.2 = 58.94 dB


Ch60/z (axial) wideband at best S/N/ABM Freq Resp(x,y,z,f)
Loc: 0, -5, 3.7 mm Diff: 1.21dB
Frequency Response
Lower Limit
Upper Limit
dB
dBA/m
Hz
20
15
10
5
0
-5
-10
-15
-20
0
-5
-10
-15
-20
-25
-30
-35
10²
10³
10⁴

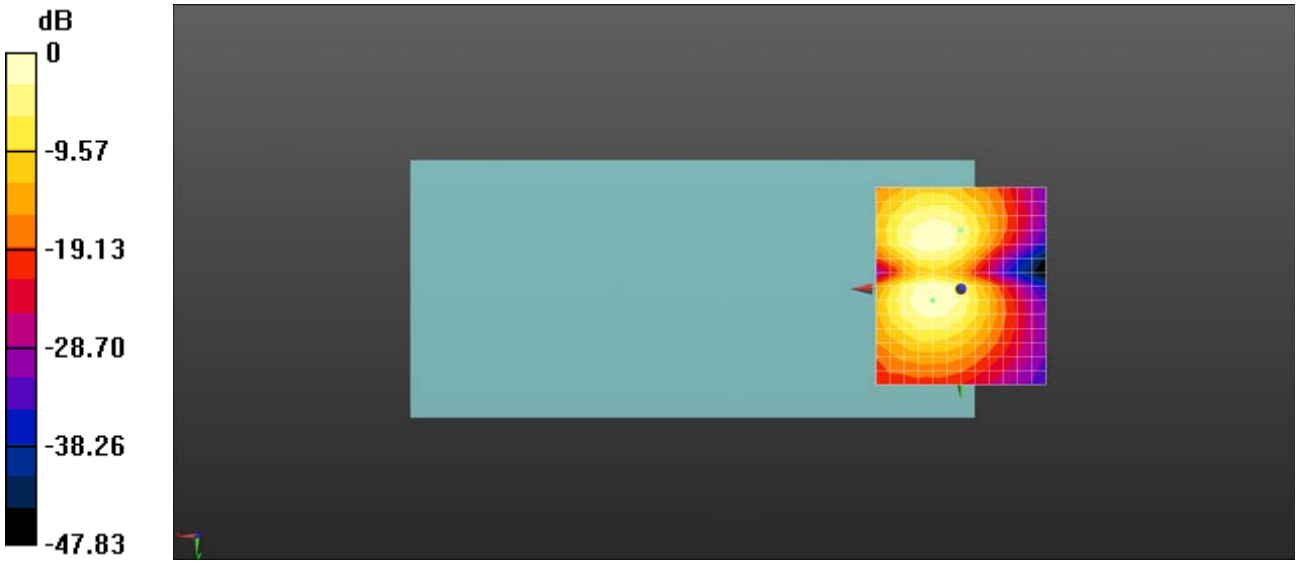
Test Laboratory: Shenzhen Morlab Communications Technology Co., Ltd. Date: 2023.01.12

## HAC_T-Coil_VoIP_VoWiFi 5.3GHz_802.11a 6Mbps_AMR 4.75Kbps_Ch60_Y

Communication System: UID 10317 - AAA, IEEE 802.11a WiFi 5 GHz (OFDM, 6 Mbps, 96pc duty cycle); Frequency: 5300 MHz;Duty Cycle: 1:6.85488
Medium: Air Medium parameters used: $\sigma = 0$ S/m, $\varepsilon_r = 1$; $\rho = 0$ kg/m$^3$
Ambient Temperature：23.2 ℃

DASY5 Configuration:
- Probe: AM1DV2 - 1048; ; Calibrated: 2022.02.22
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE4 Sn1643; Calibrated: 2022.12.30
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Ch60/y (transversal) 4.2mm 50 x 50/ABM SNR(x,y,z) (13x15x1):** Measurement grid: dx=10mm, dy=10mm
ABM1/ABM2 = 56.76 dB
ABM1 comp = 4.74 dBA/m
BWC Factor = 0.05 dB
Location: 0, -17.5, 3.7 mm




0 dB = 688.5 = 56.76 dB