
Test Report FOR HAC T-coil

Report No. : SRTC2020-9004(F)-20050704(M)

Product Name: LTE,WCDMA,GSM(GPRS)

Multi-Mode Digital Mobile Phone

Product Model: Z6250CC

Applicant: ZTE Corporation

Manufacturer: ZTE Corporation

Specification: FCC Part 20.19

ANSI C63.19

FCC ID: SRQ-Z6250CC

The State Radio_monitoring_center Testing Center (SRTC)
15th Building, No.30, Shixing Street, Shijingshan District, Beijing,
P.R.China

Tel: 86-10-57996183 Fax: 86-10-57996388

Contents

| | |
|--|-----------|
| 1 GENERAL INFORMATION | 2 |
| 1.1 Notes of the test report | 2 |
| 1.2 Information about the testing laboratory | 2 |
| 1.3 Applicant’s details | 2 |
| 1.4 Manufacturer’s details..... | 2 |
| 1.5 Test Environment..... | 3 |
| 2 DESCRIPTION OF THE DEVICE UNDER TEST..... | 4 |
| 2.1 Final Equipment Build Status..... | 4 |
| 2.2 Support Equipment..... | 5 |
| 3 REFERENCE SPECIFICATIONS..... | 5 |
| 4 RESULT SUMMAR..... | 6 |
| 5 Test Procedures for all Technologies..... | 7 |
| 6 Audio Level and Gain Measurements..... | 12 |
| 7 Description of the test Position..... | 15 |
| 7.1 Test positions..... | 15 |
| 7.2 T-coil Requirements and Category Limits..... | 16 |
| 8 Measurement uncertainty..... | 18 |
| 9 Air Interfaces and Operating Mode..... | 19 |
| 10 T-Coil testing..... | 21 |
| 10 .1 GSM Test Result..... | 22 |
| 10 .2 WCDMA Test Result..... | 23 |
| 10 .3 VOLTE Test Result..... | 24 |
| 10 .4 VOWIFI Test Result..... | 27 |
| 11 Test Equipments..... | 28 |
| 11.1 Audio Magnetic Probe AM1DV2..... | 29 |
| 11.2 Audio Magnetic Measurement Instrument AMMI..... | 29 |
| 11.3 Audio Magnetic calibration Coil AMCC..... | 29 |
| ANNEX A: TEST PLOTS..... | 30 |

1 GENERAL INFORMATION

1.1 Notes of the test report

The test report may only be reproduced or published in full. Reproduction or publication of extracts from the report requires the prior written permission of The State Radio_monitoring_center Testing Center (SRTC).

The test results relate only to individual items of the samples which have been tested.

The certification and accreditation identifiers used in this report shall not be applicable to the tested or calibrated samples thereof. The manufacturer shall not mark the tested samples or items (or a separate part of the item) with the identifiers of certification and accreditation to mislead relevant parties about the tested samples or items.

1.2 Information about the testing laboratory

| | |
|--------------------|--|
| Company: | The State Radio_monitoring_center Testing Center (SRTC) |
| Address: | 15th Building, No.30 Shixing Street, Shijingshan District, Beijing P.R.China |
| City: | Beijing |
| Country or Region: | P.R.China |
| Contacted person: | Liu Jia |
| Tel: | +86 10 57996183 |
| Fax: | +86 10 57996388 |
| Email: | liujiaf@srtc.org.cn |

1.3 Applicant's details

| | |
|--------------------|--|
| Company: | ZTE Corporation |
| Address: | ZTE Plaza, Keji Road South, Hi-Tech, Industrial Park, Nanshan District, Shenzhen, Guangdong, 518057, P.R.China |
| City: | Shenzhen |
| Country or Region: | P.R.China |
| Contacted person: | Zhao Yang |
| Tel: | 86-029-83637990 |
| Email: | zhao.yangxa@zte.com.cn |

1.4 Manufacturer's details

| | |
|----------|-----------------|
| Company: | ZTE Corporation |
|----------|-----------------|

| | |
|--------------------|--|
| Address: | ZTE Plaza, Keji Road South, Hi-Tech, Industrial Park, Nanshan District, Shenzhen, Guangdong, 518057, P.R.China |
| City: | Shenzhen |
| Country or Region: | P.R.China |
| Contacted person: | Zhao Yang |
| Tel: | 86-029-83637990 |
| Email: | zhao.yangxa@zte.com.cn |

1.5 Test Environment

| | |
|---|------------|
| Date of Receipt of test sample at SRTC: | 2020.05.07 |
| Testing Start Date: | 2020.05.08 |
| Testing End Date: | 2020.06.12 |

| Environmental Data: | Temperature (°C) | Humidity (%) |
|---------------------|------------------|--------------|
| Ambient | 22 | 40 |

| | |
|---------------------------------|-----|
| Normal Supply Voltage (V d.c.): | 3.7 |
|---------------------------------|-----|

2 DESCRIPTION OF THE DEVICE UNDER TEST

2.1 Final Equipment Build Status

| | |
|---|---|
| Wireless Technology and Frequency Bands | <input checked="" type="checkbox"/> GSM Band: GSM850/PCS1900 <input checked="" type="checkbox"/> WCDMA Band: FDD2/4/5 <input checked="" type="checkbox"/> LTE Band: 2/4/5/12/25/41/66/71 <input checked="" type="checkbox"/> Bluetooth Band: 2.4GHz <input checked="" type="checkbox"/> Wi-Fi Band: 2.4GHz ,5GHz(U-NII-1,U-NII-3) |
| Mode | GSM <input checked="" type="checkbox"/> Voice (GMSK) <input checked="" type="checkbox"/> GPRS (GMSK) <input checked="" type="checkbox"/> EGPRS (GMSK/8PSK) WCDMA <input checked="" type="checkbox"/> UMTS Rel. 99 (Voice & Data) <input checked="" type="checkbox"/> HSDPA (Rel. 5) <input checked="" type="checkbox"/> HSUPA (Rel. 6) <input checked="" type="checkbox"/> HSPA+ (Rel.7) <input checked="" type="checkbox"/> DC-HSDPA (Rel.8) Wi-Fi (802.11b/g/n/ac) <input type="checkbox"/> 802.11a <input checked="" type="checkbox"/> 802.11b <input checked="" type="checkbox"/> 802.11g <input checked="" type="checkbox"/> 802.11n* (20MHz) <input checked="" type="checkbox"/> 802.11n *(40MHz) <input checked="" type="checkbox"/> 802.11ac (20MHz) <input checked="" type="checkbox"/> 802.11ac (40MHz) <input checked="" type="checkbox"/> 802.11ac (80MHz) <input type="checkbox"/> 802.11ac (160MHz) Bluetooth <input checked="" type="checkbox"/> BR(GFSK) <input checked="" type="checkbox"/> EDR($\pi/4$ DQPSK , 8-DPSK) <input checked="" type="checkbox"/> BLE(GFSK) LTE <input checked="" type="checkbox"/> QPSK <input checked="" type="checkbox"/> 16QAM <input checked="" type="checkbox"/> 64QAM |
| Note | For WLAN 2.4GHz, 802.11n support 20MHz bandwidth only. For WLAN 5GHz, 802.11n support both 20MHz and 40MHz bandwidth, but do not support 802.11a. |

2.2 Support Equipment

The following support equipment was used to exercise the DUT during testing:




| | |
|-----------------|---|
| State of sample | Normal |
| Batteries | Li3949T44P8h906450/ Fouzhou SUCD co.ltd |
| H/W Version | Z6250CCHW1.0 |
| S/W Version | Z6250CCV1.0.0B02 |
| IMEI | 860938040002537/860938040002925 |
| Normal | operation |
| Back | The Back Cover is not removable |
| Notes | --- |

3 REFERENCE SPECIFICATIONS

| Specification | Version | Title |
|---------------|---------|---|
| Part 20.19 | 2019 | Hearing aid-compatible mobile handsets. |
| C63.19 | 2011 | American National Standard Methods of Measurement of Compatibility between Wireless Communications Devices and Hearing Aids |
| 285076 D01 | v05 | HAC Guidance |
| 285076 D02 | v03 | T-Coil Testing |

4 RESULT SUMMAR

| Band | Category assessment T-coil signal quality | Pass/Fail |
|-------------------------------|--|-------------|
| GSM850 | T3 | PASS |
| GSM1900 | T3 | PASS |
| WCDMA BAND2 | T4 | PASS |
| WCDMA BAND4 | T4 | PASS |
| WCDMA BAND5 | T4 | PASS |
| LTE BAND2 | T4 | PASS |
| LTE BAND4 | T4 | PASS |
| LTE BAND5 | T4 | PASS |
| LTE BAND12 | T4 | PASS |
| LTE BAND25 | T4 | PASS |
| LTE BAND41(Power Class2&3) | T4 | PASS |
| LTE BAND66 | T4 | PASS |
| LTE BAND71 | T4 | PASS |
| WIFI 2.4GHz | T4 | PASS |
| WIFI 5GHz UNII-1 | T4 | PASS |
| WIFI 5GHz UNII-3 | T4 | PASS |
| Final T Category | T3 | PASS |

| | |
|--|---|
| This Test Report Is Approved by: Mr. Peng Zhen  | Review by: Mr. Li Bin  |
| Tested and issued by: Mr. Chang Tianyu  | Approved date: 2020/06/12 |

5 Test Procedures for all Technologies

Referenced to ANSI C63.19, Section 7.4,

This section describes the describes the procedures used to measure the ABM (T-Coil) performance of the WD. In addition to measuring the absolute signal levels, the A-weighted magnitude of the unintended signal shall also be determined. In order to assure that the required signal quality is measured, the measurement of the intended signal and the measurement of the unintended signal must be made at the same location for all measurement positions. In addition, the RF field strength at each measurement location must be at or below that required for the assigned category.

Measurements shall not include undesired properties from the WD's RF field; therefore, use of a coaxial connection to a base station simulator or non-radiating load may be necessary. However, even then with a coaxial connection to a base station simulator or non-radiating load there may still be RF leakage from the WD, which may interfere with the desired measurement. Pre-measurement checks should be made to avoid this possibility. All measurements shall be done with the WD operating on battery power with an appropriate normal speech audio signal input level given in Table 7.1. If the device display can be turned off during a phone call then that may be done during the measurement as well.

Measurements shall be performed at two locations specified in A.3, with the correct probe orientation for a particular location, in a multistage sequence by first measuring the field intensity of the desired T-Coil signal (ABM1) that is useful to a hearing aid T-Coil. The undesired magnetic components (ABM2) must be measured at the same location as the desired ABM or T-Coil signal (ABM1), and the ratio of desired to undesired ABM signals must be calculated. For the perpendicular field location, only the ABM1 frequency response shall be determined in a third measurement stage. The flow chart in Figure 7.3 illustrates this three-stage, two orientation process.

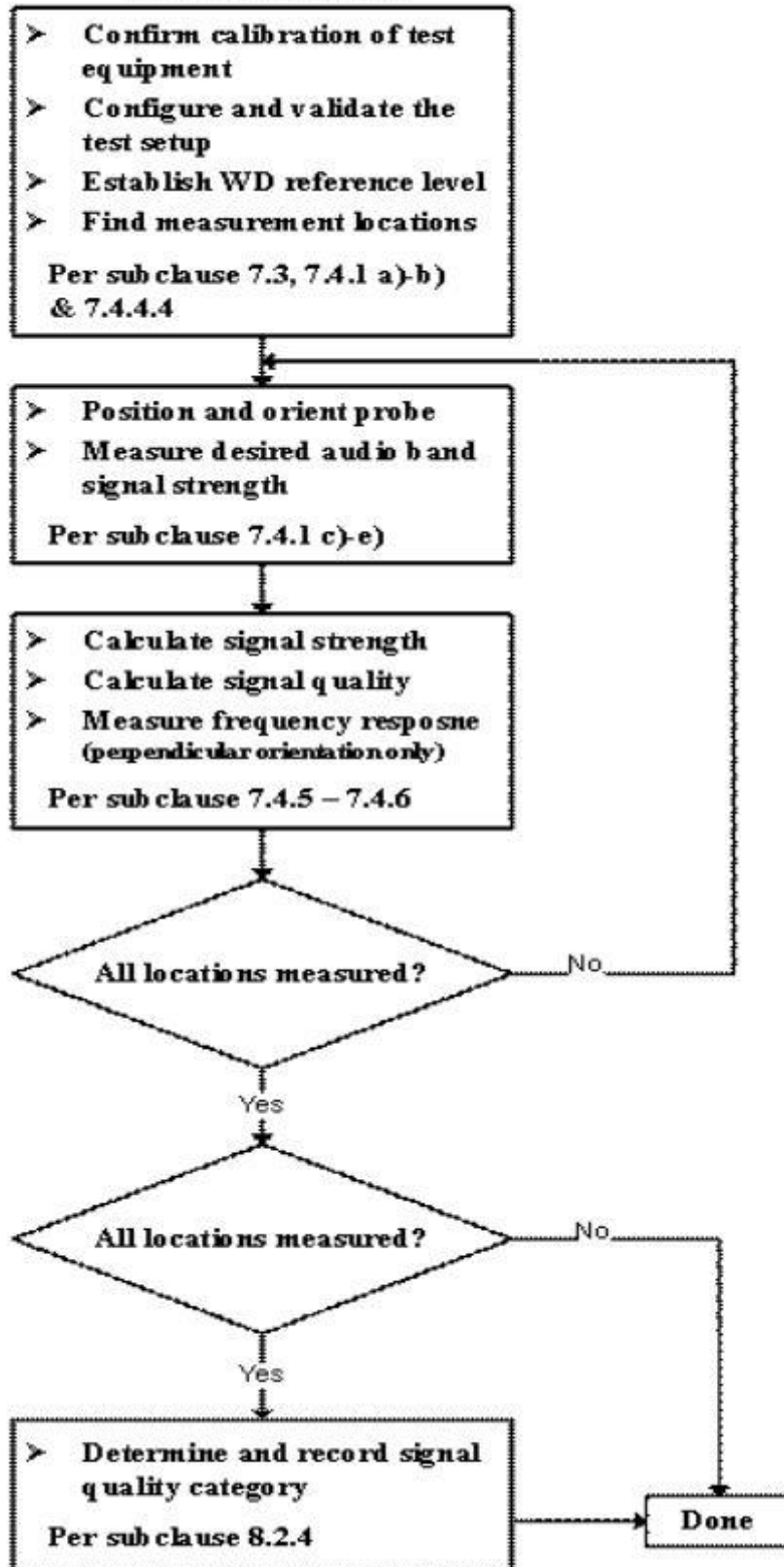
The following steps summarize the basic test flow for determining ABM1 and ABM2. These steps assume that a sine wave or narrowband 1/3 octave signal can be used for the measurement of ABM1.

- a. A validation of the test setup and instrumentation may be performed using a TMFS or Helmholtz coil. Measure the emissions and confirm that they are within the specified tolerance.
- b. Position the WD in the test setup and connect the WD RF connector to a base station simulator or a non-radiating load as shown in Figure 7.1 or Figure 7.2. Confirm that equipment that requires calibration has been calibrated, and that the noise level meets the requirements given in 7.3.1.
- c. The drive level to the WD is set such that the reference input level specified

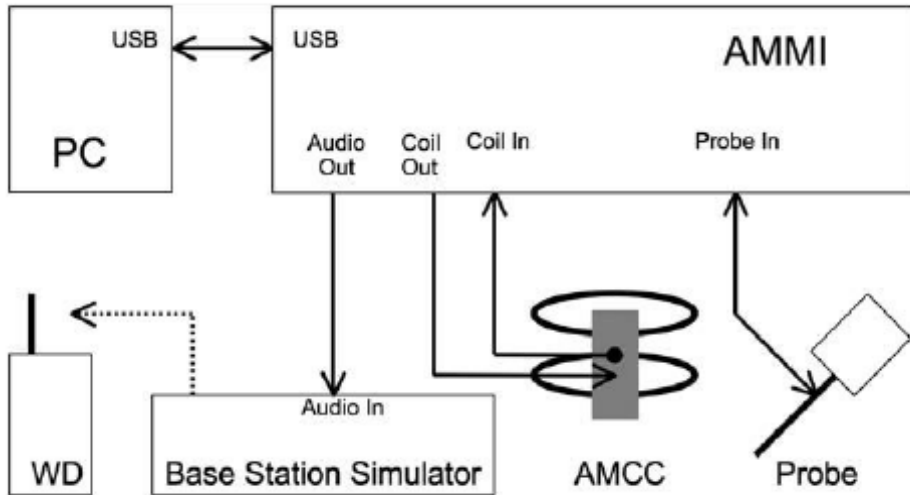
in Table 7.1 is input to the base station simulator (or manufacturer's test mode equivalent) in the 1 kHz, 1/3 octave band. This drive level shall be used for the T-Coil signal test (ABM1) at $f = 1$ kHz. Either a sine wave at 1025 Hz or a voice-like signal, band-limited to the 1 kHz 1/3 octave, as defined in 7.4.2, shall be used for the reference audio signal. If interference is found at 1025 Hz an alternative nearby reference audio signal frequency may be used.⁴⁶ The same drive level will be used for the ABM1 frequency response measurements at each 1/3 octave band center frequency. The WD volume control may be set at any level up to maximum, provided that a signal at any frequency at maximum modulation would not result in clipping or signal overload.

- d. Determine the magnetic measurement locations for the WD device (A.3), if not already specified by the manufacturer, as described in 7.4.4.1.1 and 7.4.4.2.
- e. At each measurement location, measure and record the desired T-Coil magnetic signals (ABM1 at f_i) as described in 7.4.4.2 in each individual ISO 266-1975 R10 standard 1/3 octave band. The desired audio band input frequency (f_i) shall be centered in each 1/3 octave band maintaining the same drive level as determined in item c) and the reading taken for that band.
- f. Equivalent methods of determining the frequency response may also be employed, such as fast Fourier transform (FFT) analysis using noise excitation or input-output comparison using simulated speech. The full-band integrated probe output, as specified in D.9, may be used, as long as the appropriate calibration curve is applied to the measured result, so as to yield an accurate measurement of the field magnitude. (The resulting measurement shall be an accurate measurement in dB A/m.)
- g. All Measurements of the desired signal shall be shown to be of the desired signal and not of an undesired signal. This may be shown by turning the desired signal ON and OFF with the probe measuring the same location. If the scanning method is used the scans shall show that all measurement points selected for the ABM1 measurement meet the ambient and test system noise criteria in ANSI C63.19 clause 7.3.1.
- h. At the measurement location for each orientation, measure and record the undesired broadband audio magnetic signal (ABM2) as specified in 7.4.4.4 with no audio signal applied (or digital zero applied, if appropriate) using A-weighting and the half-band integrator. Calculate the ratio of the desired to undesired signal strength (i.e., signal quality).
- i. Obtain the data from the postprocessor, SEMCAD, and determine the category that properly classifies the signal quality based on Table 8.5.

Test Instructions



WD T-Coil signal test flowchart



Test Setup Diagram

For GSM / UMTS test setup and input level, the correct input level definition is via a communication tester CMU200's "Decoder Cal" and "Codec Cal" with audio option to set the correct audio input levels.

For VoLTE and VoWiFi the test setup used is via the callbox of CMW500 for T-coil measurement, The DAU of the CMW500 was used to simulate the IMS(CDMA2000 do not need IMS registration). The CMW500 can be manually configured to ensure and control the speech input level result is -16dBm0 for VoLTE, -20dBm0 for VoWiFi when the device during the IMS connection.

For GSM / UMTS test setup and input level, the correct input level definition is via a communication tester **CMU200**'s "Decoder Cal" and "Codec Cal" with audio option B52 and B85

The following options units on **CMW500** were used to simulate the VoLTE /VOWIFI (IMS,EPDG,DNS inside DAU with Audio Board) for testing.

| Firmware License Keys | Software Name |
|-----------------------|------------------------------|
| CMW-PS505 | Basic Assembly |
| CMW-S052S | SSD Driver |
| CMW-S100D | Baseband Measurement Unit |
| CMW-S550N | Flexible Internal Connection |
| CMW-S570B | RF Converter |
| CMW-S590D | Advanced Frontend |
| CMW-S600B | Front Panel with Display |
| CMW-PS505 | Basic Assembly |
| CMW-S052S | SSD Driver |

Hardware Options and Accessory:

| | |
|------------------|--|
| CMW-B400B | Audio Board |
| CMW-B405A | CODEC Board |
| CMW-B500I | Signaling Unit for LTE and WLAN |
| CMW-B612A | GPIB Connector |
| CMW-B660H | Option Carrier |
| CMW-B661H | Ethernet Switch Board |
| CMW-B690B | OXCO |
| CMW-KB036 | 6 GHz Extension |
| CMW-Z06 | Test USIM Card |
| CMW-B450H | Data Application Unit (DAU) for IMS Server and IP Emulation |

Software Options:

| | |
|-----------|---|
| CMW-K0 | |
| CMW-KS104 | Software License for EVS |
| CMW-PK45 | Software License Package for IP Network Emulation |
| CMW-PK50 | Software License Package for LTE |
| CMW-PK65 | Software License Package for WLAN |

6 Audio Level and Gain Measurements

According to C63 .19and KDB 285076 D02v03 , the input audio level showing below:

- GSM input level: -16dBm0
- UMTS input level: -16dBm0
- VoLTE input level: -16dBm0
- VoWiFi input level: -20dBm0

The table of **Required gain** showing below is given by SPEAG, And we used these parameters to determine the **Gain setting** on the software DASY52 perform HAC T-coil test.

| Signal [file name] | Duration [s] | Peak-to-RMS [dB] | RMS [dB] | Required gain factor *) | Gain setting |
|--------------------------------|-----------------|---------------------|-------------|----------------------------|-----------------|
| 1kHz sine | --- | 3.0 | 0.0 | 1.00 | |
| 48k_1.025kHz_10s.wav | 10 | 3.0 | 0.0 | 1.00 | |
| 48k_1kHz_3.15kHz_10s.wav | 10 | 6.0 | -3.0 | 1.42 | |
| 48k_315Hz_1kHz_10s.wav | 10 | 6.0 | -2.9 | 1.40 | |
| 48k_csek_8k_441_white_10s.wav | 10 | 13.8 | -10.5 | 3.34 | |
| 48k_multisine_50-5000_10s.wav | 10 | 11.1 | -7.9 | 2.49 | |
| 48k_multisine_50-10000_10s.wav | 10 | 10.8 | -7.7 | 2.42 | |
| 48k_voice_1kHz_1s.wav | 1 | 16.2 | -12.7 | 4.33 | |
| 48k_voice_300-3000_2s.wav | 2 | 21.6 | -18.6 | 8.48 | |
| 48k_normal (example) | 51 | 25.4 | -22.42 | 13.21 | |

(*) The gain for the specific signal shall typically be multiplied by this factor to achieve approx. the same level as for the 1kHz sine signal.

Note: For protocols not listed in Table 7.1 of ANSI C63.19 or the ANSI C63.19 VoLTE interpretation, the average speech level of -20 dBm0 should be used

For GSM/UMTS test, we use uncalibrated simulator CMU200 the reference level in dBm0 depend on the instrument, the signaling unit used and on the AMMI.

The gain level determination to obtain a specific level in dBm0 with R&S CMU200 describe as following procedure.

Step1: **Decoder Calibration** on the CMU200.

The value of AMCC coil in_RMS (dBv) is -2.42dBV is equal to the reference input level of 3.14dBm0

Step2: **Codec Calibration** on the CMU200.

Measure the AMMI 1KHz sine with gain 10(20dB) looped through the CMU200 using AMMI 'Coil_In' and "Coil_In' signal reading is -19.71dBV corresponds to a level -14.15 dBm0

Step3: **Calculate the required gain** for a '1 kHz Sine'.

The desire input level is -16dBm0 for GSM and WCDMA, so the **required gain** is $(-16\text{dBm0}) - (-14.15\text{dBm0}) + 20\text{ dB} = 18.15\text{ dB}$ (gain dB)=8.08 (gain linear)

The desire input level is -18dBm0 for CDMA, so the **required gain** is $(-18\text{dBm0}) - (-14.15\text{dBm0}) + 20\text{ dB} = 16.15\text{ dB}$ (gain dB)= 6.42 (gain linear)

Step4: **Gain setting for several audio files (required gain* gain factor).**

| Mode | Signal Type | Duratio n (s) | Peak to RMS (dB) | Peak to RMS (dB) | Require d Gain Factor | Calculated Gain Setting |
|----------------------------|---------------------------|---------------------|---------------------------|---------------------------|-----------------------------|-------------------------------|
| GSM/ WCDMA (-16dBm0) | 1kHz sine | --- | 3 | 0 | 1 | 8.08 |
| | 48k_voice_1kHz | 1 | 16.2 | -12.7 | 4.33 | 34.99 |
| | 48k_voice_300Hz ~ 3kHz | 2 | 21.6 | -18.6 | 8.48 | 68.52 |

For VoLTE/VoWIFI test, we use simulators with calibrated inputs CMW500 where the input sensitivity dBm0 per input voltage is known or can be set, the relation between the analog input voltage and the internal level in dBm0 can be determined.

The gain level determination to obtain a specific level in dBm0 with CMW500 describe as following procedure.

Step1: Define CMW500 analog input voltage on the CMW500.

The value of Speech_In Sensitivity is 1.8V_fullscale is equal to the reference input level of 3.14dBm0, Full scale input level converted to dBV_RMS is 2.10

Step2: Connect AMMI “Audio Out” to “AMMI Coil In” via BNC-XLR adapter.

Measure the AMMI 1KHz sine with gain 100(40dB) "Coil_In' signal reading is 3.37 dBV ,Impedence corrected "Coil_In' signal reading is 3.37 dBV -0.15dB= 3.22dBV corresponds to a level 4.26 dBm0

Step3: Calculate the required gain for a '1 kHz Sine'.

When the desire input level is -18dBm0 for CDMA, the **required gain** is (-18dBm0) – (4.26dBm0) + 40 dB=17.74 dB (gain dB)= 7.71 (gain linear)

When the desire input level is -16dBm0 for LTE, the **required gain** is (-16dBm0) – (4.26dBm0) + 40 dB=19.74 dB (gain dB)= 9.70 (gain linear)

When the desire input level is -20dBm0 for WIFI, the **required gain** is (-20dBm0) – (4.26dBm0) + 40 dB=15.74 dB (gain dB)= 6.12 (gain linear)

Step4: Gain setting for several audio files (required gain* gain factor).

| Mode | Signal Type | Duration (s) | Peak to RMS (dB) | Peak to RMS (dB) | Required Gain Factor | Calculated Gain Setting |
|----------------|-------------------------|--------------|------------------|------------------|----------------------|-------------------------|
| LTE (-16dBm0) | 1kHz sine | --- | 3 | 0 | 1 | 9.70 |
| | 48k_voice_1k Hz | 1 | 16.2 | -12.7 | 4.33 | 42.00 |
| | 48k_voice_30 0Hz ~ 3kHz | 2 | 21.6 | -18.6 | 8.48 | 82.26 |
| WIFI (-20dBm0) | 1kHz sine | --- | 3 | 0 | 1 | 6.12 |
| | 48k_voice_1k Hz | 1 | 16.2 | -12.7 | 4.33 | 26.50 |
| | 48k_voice_30 0Hz ~ 3kHz | 2 | 21.6 | -18.6 | 8.48 | 51.90 |

7 Description of the test Position

7.1 Test positions

The device was positioned such that Device Reference plane was touching the bottom of the Test Arch. The scan is centered at the acoustic output by aligning the acoustic output with the intersection of the Test Arch's middle bar and dielectric wire. The WD is positioned always this way to ensure repeatability of the measurements. Coordinate system depicted below is used to define exact locations of measurement points relative to the center of the acoustic output.

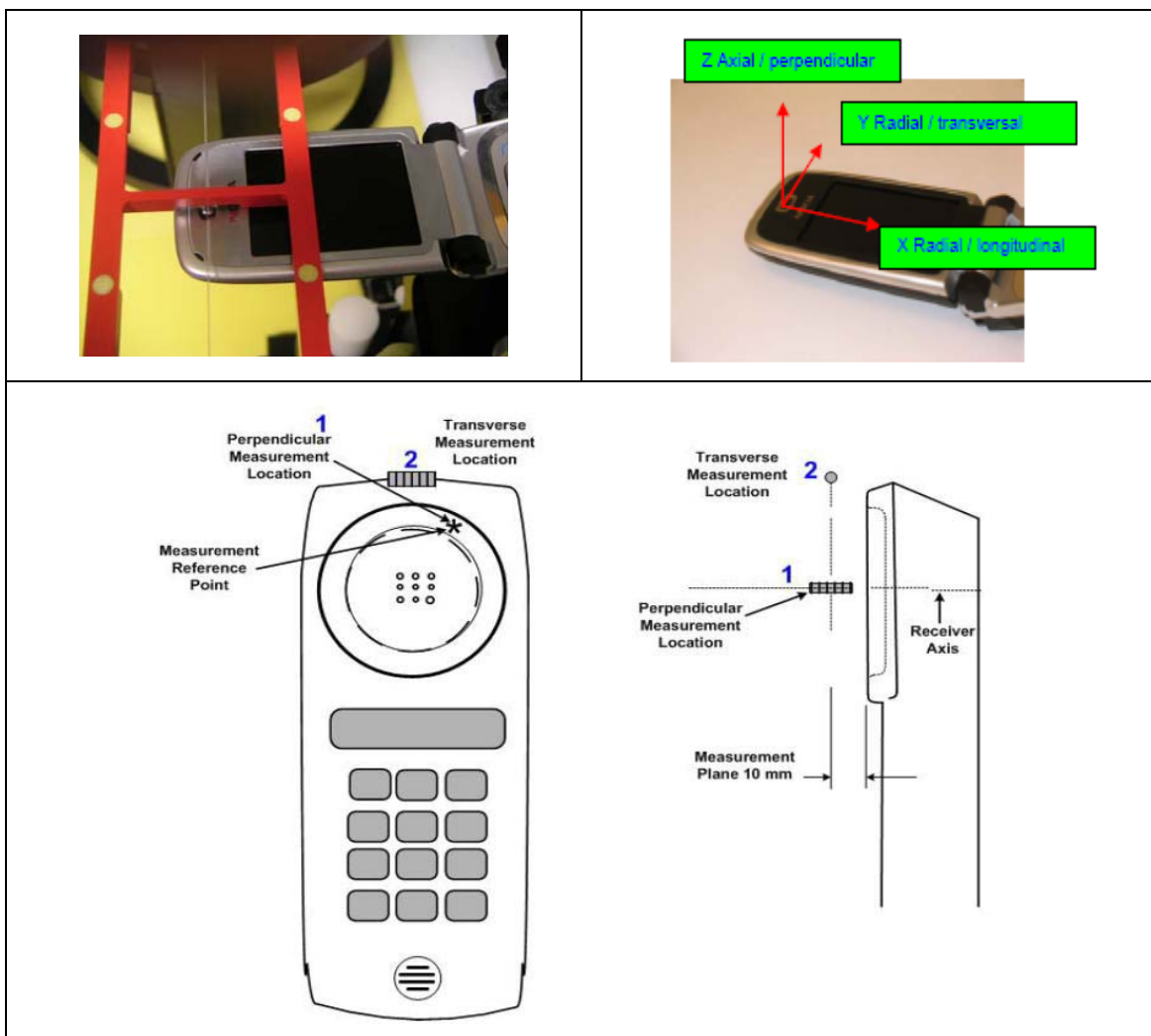


Photo of the device positioned under Test Arch and coordinate system (The EUT in picture is generic phone sample and does not represent the actual equipment under test)

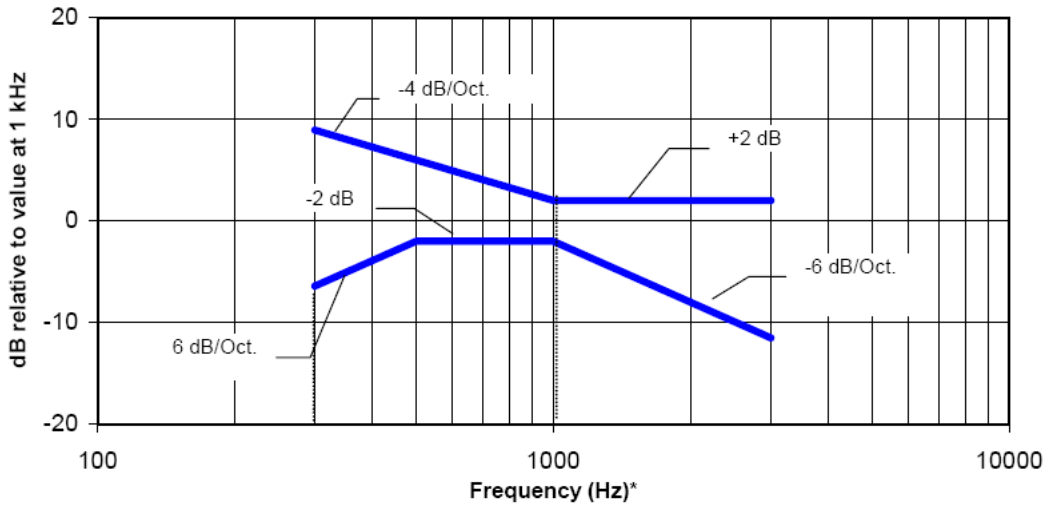
7.2 T-coil Requirements and Category Limits

Signal to Noise :This section provides the signal quality requirement for the intended T-Coil signal from a WD. Only the RF immunity of the hearing aid is measured in T-Coil mode. It is assumed that a hearing aid can have no immunity to an interference signal in the audio band, which is the intended reception band for this mode. So, the only criterion that can be measured is the RF immunity in T-Coil Mode. The RF measurements made for the T-Coil evaluation are used to assign the category T1 through T4.

| Category | Telephone parameters WD signal quality [(signal + noise)-to-noise ratio in decibels] |
|-------------|--|
| Category T1 | 0 dB to 10 dB |
| Category T2 | 10 dB to 20 dB |
| Category T3 | 20 dB to 30 dB |
| Category T4 | > 30 dB |

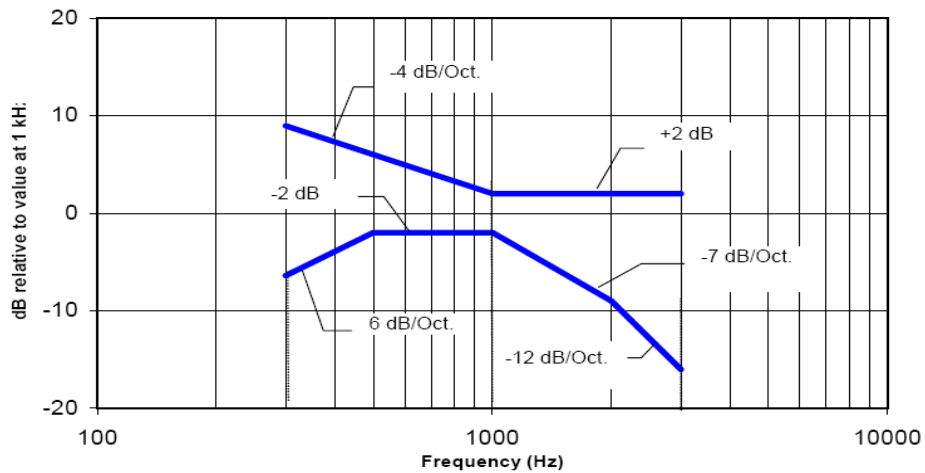
Frequency Response

The frequency response of the perpendicular component of the magnetic field, measured in 1/3 octave bands, shall follow the response curve specified in this sub-clause, over the frequency range 300 Hz to 3000 Hz.



NOTE—Frequency response is between 300 Hz and 3000 Hz.

Magnetic field frequency response for WDs with a field ≤ -15 dB (A/m) at 1 kHz



NOTE—Frequency response is between 300 Hz and 3000 Hz.

Magnetic field frequency response for WDs with a field that exceeds -15 dB(A/m) at 1 kHz

8 Measurement uncertainty

| Uncertainty of Audio Band Magnetic Measurements | | | | | | | |
|---|------------|-------------|------------|----------------|----------------|----------------|----------------|
| Error Description | Unc. Value | Prob. Dist. | Div. | (c_i) ABM1 | (c_i) ABM2 | Std. Unc. ABM1 | Std. Unc. ABM2 |
| Probe Sensitivity | | | | | | | |
| Reference Level | ±3.0% | N | 1 | 1 | 1 | ±3.0% | ±3.0% |
| AMCC Geometry | ±0.4% | R | $\sqrt{3}$ | 1 | 1 | ±0.2% | ±0.2% |
| AMCC Current | ±1.0% | R | $\sqrt{3}$ | 1 | 1 | ±0.6% | ±0.6% |
| Probe Positioning during Calibr. | ±0.1% | R | $\sqrt{3}$ | 1 | 1 | ±0.1% | ±0.1% |
| Noise Contribution | ±0.7% | R | $\sqrt{3}$ | 0.0143 | 1 | ±0.0% | ±0.4% |
| Frequency Slope | ±5.9% | R | $\sqrt{3}$ | 0.1 | 1.0 | ±0.3% | ±3.5% |
| Probe System | | | | | | | |
| Repeatability / Drift | ±1.0% | R | $\sqrt{3}$ | 1 | 1 | ±0.6% | ±0.6% |
| Linearity / Dynamic Range | ±0.6% | R | $\sqrt{3}$ | 1 | 1 | ±0.4% | ±0.4% |
| Acoustic Noise | ±1.0% | R | $\sqrt{3}$ | 0.1 | 1 | ±0.1% | ±0.6% |
| Probe Angle | ±2.3% | R | $\sqrt{3}$ | 1 | 1 | ±1.4% | ±1.4% |
| Spectral Processing | ±0.9% | R | $\sqrt{3}$ | 1 | 1 | ±0.5% | ±0.5% |
| Integration Time | ±0.6% | N | 1 | 1 | 5 | ±0.6% | ±3.0% |
| Field Disturbation | ±0.2% | R | $\sqrt{3}$ | 1 | 1 | ±0.1% | ±0.1% |
| Test Signal | | | | | | | |
| Ref. Signal Spectral Response | ±0.6% | R | $\sqrt{3}$ | 0 | 1 | ±0.0% | ±0.4% |
| Positioning | | | | | | | |
| Probe Positioning | ±1.9% | R | $\sqrt{3}$ | 1 | 1 | ±1.1% | ±1.1% |
| Phantom Thickness | ±0.9% | R | $\sqrt{3}$ | 1 | 1 | ±0.5% | ±0.5% |
| DUT Positioning | ±1.9% | R | $\sqrt{3}$ | 1 | 1 | ±1.1% | ±1.1% |
| External Contributions | | | | | | | |
| RF Interference | ±0.0% | R | $\sqrt{3}$ | 1 | 0.3 | ±0.0% | ±0.0% |
| Test Signal Variation | ±2.0% | R | $\sqrt{3}$ | 1 | 1 | ±1.2% | ±1.2% |
| Combined Uncertainty | | | | | | | |
| Combined Std. Uncertainty (ABM Field) | | | | | | ±4.1% | ±6.1% |
| Expanded Std. Uncertainty | | | | | | ±8.1% | ±12.3% |

9 Air Interfaces and Operating Mode

CMRS mode

| Air interface | Bands (MHz) | Type | ANSI C63.19 Tested | Simultaneous Transmitter | Voice Service | Power Reduction |
|---------------|-------------|------|--------------------|--------------------------|----------------|-----------------|
| GSM | GSM850 | VO | YES | WLAN, BT | GSM CS Voice | NA |
| | GSM1900 | | YES | WLAN, BT | GSM CS Voice | NA |
| WCDMA (UMTS) | Band 2 | VO | YES | WLAN, BT | WCDMA CS Voice | NA |
| | Band 4 | VO | YES | WLAN, BT | WCDMA CS Voice | NA |
| | Band 5 | VO | YES | WLAN, BT | WCDMA CS Voice | NA |
| LTE (FDD) | LTE BAND2 | VO | NO | WLAN, BT | VoLTE | NA |
| | LTE BAND4 | | | WLAN, BT | | NA |
| | LTE BAND5 | | | WLAN, BT | | NA |
| | LTE BAND12 | | | WLAN, BT | | NA |
| | LTE BAND25 | | | WLAN, BT | | NA |
| | LTE BAND66 | | | WLAN, BT | | NA |
| | LTE BAND71 | | | WLAN, BT | | NA |
| LTE (TDD) | LTE BAND41 | VO | YES | WLAN, BT | VoLTE | NA |

| Air interface | Bands (MHz) | Type | ANSI C63.19 Tested | Simultaneous Transmitter | Voice Service | Power Reduction |
|---------------|---------------|------|--------------------|--------------------------|---------------|-----------------|
| WLAN | 2.4GHz | VO | YES | WWAN | VoWiFi | NA |
| | 5GHz(U-NII-1) | | | WWAN | | NA |
| | 5GHz(U-NII-3) | | | WWAN | | NA |

Abbreviation Type

VO=CMRS Voice Service

DT = Digital Transport

VD= Voice Service and Digital Transport

BT=Bluetooth (include BLE)

Note:

1). For Simultaneous transmission, WLAN and BT share the same antenna, so they can't work together at the same time.

2): According to KDB 285076, we don't need consider OTT mode as there are no 3rd VOIP Apps pre-installed by the manufacturer.

10 T-Coil testing

General illustration:

1. The middle channel of each frequency band is used for T-Coil testing according ANSI C63.19.
2. For VoLTE or VoWiFi ,Codec investigation is choose either one radio configuration and an investigation was performed, the following tests use worst codec for the handset.
3. For VoLTE or VoWiFi, Radio configuration investigation is choose worst codec from codec investigation to determine the worst radio configuration on all frequency band, data rates and modulations and RB configuration,
4. All the data showing on the section “Tests Results” used the worst features (codec and radio configuration) determined by codec investigation (illustration2) and Radio configuration investigation (illustration3).
5. According to 3GPP 36.211 Table 4.2-2, TDD-LTE supports uplink-downlink configuration from 0 to 6, an additional parameter investigation was performed to determine the worst-case uplink-downlink and with the FDD-LTE worst case radio configuration.
6. Phone Condition: Mute on; Backlight off; Max Volume

10.1 GSM Test Result

Codec Investigation

| codec | Full rate version1 | Half rate version1 | Worst Orientation | Band/channel |
|---------------|--------------------|--------------------|-------------------|-------------------|
| ABM1 [dB A/m] | -4.26 | -4.35 | Axial(Y) | GSM850 /CH 189 |
| ABM2 [dB A/m] | -31.32 | -31.46 | | |
| SNR [dB] | 27.06 | 27.11 | | |

Tests Results

We use codec **Full rate version1** perform all the test below.

| Air interface | Channel | Orientation | ABM1 dB(A/m) | ABM2 dB(A/m) | Signal Quality dB | T-Rating ANSI C63.19 | Freq. Response |
|---------------|---------|-------------|-----------------|-----------------|-------------------------|----------------------------|-------------------|
| GSM850 | 189 | Radial (Y) | -4.26 | -31.32 | 27.06 | T3 | --- |
| | | Axial (Z) | 1.00 | -29.79 | 30.79 | T4 | Pass |
| GSM1900 | 661 | Radial (Y) | -7.88 | -37.35 | 29.47 | T3 | --- |
| | | Axial (Z) | 2.71 | -33.51 | 36.22 | T4 | Pass |

10.2 WCDMA Test Result

Codec Investigation

| codec | AMR-NB 4.75Kbps | AMR-NB 7.95Kbps | AMR-NB 12.2Kbps | Worst Orientation | Band/channel |
|---------------|--------------------|--------------------|--------------------|----------------------|-----------------------|
| ABM1 [dB A/m] | -1.27 | -1.43 | -1.18 | Axial(Z) | WCDMA Band2/CH9400 |
| ABM2 [dB A/m] | -50.44 | -50.86 | -50.75 | | |
| SNR [dB] | 49.17 | 49.43 | 49.57 | | |

Tests Results

We use codec **AMR-NB 4.75Kbps** perform all the test below.

| Air interface | Channel | Orientation | ABM1 dB(A/m) | ABM2 dB(A/m) | Signal Quality dB | T-Rating ANSI C63.19 | Freq. Response |
|----------------|---------|-------------|-----------------|-----------------|-------------------------|----------------------------|-------------------|
| WCDMA BAND2 | 9400 | Radial (Y) | -3.7 | -53.58 | 49.88 | T4 | --- |
| | | Axial (Z) | -1.27 | -50.44 | 49.17 | T4 | Pass |
| WCDMA BAND4 | 1413 | Radial (Y) | -3.63 | -53.64 | 50.01 | T4 | --- |
| | | Axial (Z) | 1.97 | -49.29 | 51.26 | T4 | Pass |
| WCDMA BAND5 | 4182 | Radial (Y) | -2.46 | -53.48 | 51.02 | T4 | --- |
| | | Axial (Z) | 3.66 | -47.76 | 51.42 | T4 | Pass |

10 .3 VOLTE Test Result

Codec Investigation

AMR Codec Investigation

| codec | AMR -NB 4.75Kbps | AMR -NB 12.2Kbps | AMR –WB 6.6Kbps | AMR –WB 23.85Kbps | Worst Orientation | Band/ BW/ channel/ Modulation |
|---------------|-----------------------------|---------------------|--------------------|----------------------|----------------------|---------------------------------------|
| ABM1 [dB A/m] | -5.95 | -4.36 | -5.18 | -3.92 | Axial(Y) | LTE BAND2 / 20MHz/CH18 900/QPSK |
| ABM2 [dB A/m] | -51.93 | -52.21 | -51.25 | -51.75 | | |
| SNR [dB] | 45.98 | 47.85 | 46.07 | 47.83 | | |

Note: The product does not support EVS Codec.

Radio Configuration Investigation

For the radio configuration investigation (FDD-LTE, TDD-LTE), we use codec **AMR-NB4.75Kbps** determined by Codec Investigation which represents the worst codec future.

| Air interface | BW | Modulation | RB Size/offset | Channel | Power Class | UL-DL Configuration | ABM1 with Worst Orientation [dB A/m] | ABM2 with Worst Orientation [dB A/m] | Signal Quality dB |
|----------------|-----------|-------------|----------------|--------------|-------------|---------------------|--------------------------------------|--------------------------------------|-------------------|
| FDD-LTE BAND2 | 1.4 | QPSK | 1/0 | 18900 | 3 | --- | -5.84 | -52.43 | 46.59 |
| | 3 | QPSK | 1/0 | 18900 | 3 | --- | -5.77 | -51.93 | 46.16 |
| | 5 | QPSK | 1/0 | 18900 | 3 | --- | -5.84 | -52.27 | 46.42 |
| | 10 | QPSK | 1/0 | 18900 | 3 | --- | -5.50 | -51.96 | 46.46 |
| | 15 | QPSK | 1/0 | 18900 | 3 | --- | -5.46 | -52.26 | 46.80 |
| | 20 | QPSK | 1/0 | 18900 | 3 | --- | -5.95 | -51.93 | 45.98 |
| | 20 | 16QAM | 1/0 | 18900 | 3 | --- | -5.84 | -52.02 | 46.17 |
| | 20 | 64QAM | 1/0 | 18900 | 3 | --- | -5.86 | -51.97 | 46.10 |
| | 20 | QPSK | 50/0 | 18900 | 3 | --- | -5.47 | -52.43 | 46.96 |
| | 20 | QPSK | 100/0 | 18900 | 3 | --- | -5.68 | -52.29 | 46.61 |
| TDD-LTE BAND41 | 20 | QPSK | 1/0 | 40620 | 3 | 0 | -4.08 | -46.72 | 42.65 |
| | 20 | QPSK | 1/0 | 40620 | 2 | 0 | -3.93 | -46.59 | 42.66 |
| | 20 | QPSK | 1/0 | 40620 | 3 | 1 | -3.81 | -46.71 | 42.89 |
| | 20 | QPSK | 1/0 | 40620 | 3 | 2 | -4.01 | -47.05 | 43.04 |
| | 20 | QPSK | 1/0 | 40620 | 3 | 3 | -4.16 | -46.99 | 42.84 |
| | 20 | QPSK | 1/0 | 40620 | 3 | 4 | -3.79 | -46.64 | 42.85 |
| | 20 | QPSK | 1/0 | 40620 | 3 | 5 | -4.26 | -46.58 | 42.32 |
| | 20 | QPSK | 1/0 | 40620 | 3 | 6 | -3.84 | -46.64 | 42.79 |

FDD:

Step1: SRTC evaluate the worst bandwidth.

Step2: then evaluate the worst modulation type based on step1.

Step3: and finally evaluate the RB allocation based on previous steps.

TDD

Step1: SRTC check the different power classes based on the worst parameter evaluated by FDD-LTE mode.

Step2: then take "UL-DL Configuration" into consideration.

Summary Tests Results

Refers to previous investigation, we use the worst codec **AMR –NB 4.75Kbps** and the worst configuration showing below perform all the test for each LTE bands.

Configuration for FDD-LTE:

MAX Bandwidth, QPSK, 1RB@0

Configuration for TDD-LTE:

MAX Bandwidth, QPSK, 1RB@ 0/lowest power class/UL-DL config5

| Air interface | Channel | Orientation | ABM1 dB(A/m) | ABM2 dB(A/m) | Signal Quality dB | T-Rating ANSI C63.19 | Freq. Response |
|-------------------|---------|-------------|-----------------|-----------------|-------------------------|-------------------------|-------------------|
| FDD-LTE BAND2 | 18900 | Radial (Y) | -5.95 | -51.93 | 45.98 | T4 | --- |
| | | Axial (Z) | 2.67 | -45.04 | 47.71 | T4 | Pass |
| FDD-LTE BAND4 | 20175 | Radial (Y) | -6.10 | -53.96 | 47.86 | T4 | --- |
| | | Axial (Z) | 0.77 | -47.87 | 48.64 | T4 | Pass |
| FDD-LTE BAND5 | 20525 | Radial (Y) | -4.56 | -51.32 | 46.76 | T4 | --- |
| | | Axial (Z) | 2.28 | -46.25 | 48.53 | T4 | Pass |
| FDD-LTE BAND12 | 23095 | Radial (Y) | -4.41 | -49.65 | 45.24 | T4 | --- |
| | | Axial (Z) | 4.11 | -43.29 | 47.40 | T4 | Pass |
| FDD-LTE BAND25 | 26365 | Radial (Y) | -5.83 | -50.93 | 45.10 | T4 | --- |
| | | Axial (Z) | 2.91 | -44.32 | 47.23 | T4 | Pass |
| FDD-LTE BAND41 | 40620 | Radial (Y) | -4.26 | -46.58 | 42.32 | T4 | --- |
| | | Axial (Z) | 3.77 | -39.30 | 43.07 | T4 | Pass |
| FDD-LTE BAND66 | 132322 | Radial (Y) | -6.02 | -53.20 | 47.18 | T4 | --- |
| | | Axial (Z) | 0.55 | -47.82 | 48.37 | T4 | Pass |
| FDD-LTE BAND71 | 133322 | Radial (Y) | -4.27 | -49.78 | 45.51 | T4 | --- |
| | | Axial (Z) | 5.31 | -43.99 | 49.30 | T4 | Pass |

10.4 VOWIFI Test Result

Codec Investigation

AMR Codec Investigation

| codec | AMR -NB 4.75Kbps | AMR -NB 12.2Kbps | AMR-WB 6.6Kbps | AMR -WB 23.85Kbps | Worst Orientation | Band/channel/Rate |
|---------------|---------------------|---------------------|---------------------------|----------------------|----------------------|---------------------------|
| ABM1 [dB A/m] | -5.91 | -5.59 | -5.93 | -5.63 | Axial(Z) | 802.11b 2.4GHz/6/1Mbps |
| ABM2 [dB A/m] | -54.17 | -54.30 | -53.96 | -54.36 | | |
| SNR [dB] | 48.26 | 48.70 | 48.02 | 48.73 | | |

Radio Configuration Investigation

For WIFI radio configuration investigation, we use codec **AMR-WB6.6 Kbps** determined by Codec Investigation which represents the worst codec future.

| Air interface | | BW | Data rate | Channel | ABM1 [dB A/m] Axial(Z) | ABM2[dB A/m] Axial(Z) | Signal Quality dB |
|---------------|---------------------|-----------|-------------|---------|--------------------------------|-------------------------------|-------------------------|
| 2.4GHz | 802.11b | 20 | 1M | 6 | -5.79 | -54.33 | 48.54 |
| | 802.11b | 20 | 11M | 6 | -5.67 | -54.24 | 48.56 |
| | 802.11g | 20 | 6M | 6 | -5.98 | -53.92 | 47.94 |
| | 802.11g | 20 | 54M | 6 | -5.73 | -54.27 | 48.54 |
| | 802.11n-HT20 | 20 | MCS0 | 6 | -5.79 | -54.28 | 48.49 |
| | 802.11n-HT20 | 20 | MCS7 | 6 | -5.61 | -54.24 | 48.63 |
| 5GHz U-NII-1 | 802.11n-HT20 | 20 | MCS0 | 40 | -4.34 | -51.21 | 46.87 |
| | 802.11n-HT20 | 20 | MCS7 | 40 | -4.31 | -51.41 | 47.10 |
| | 802.11n-HT40 | 40 | MCS0 | 38 | -4.07 | -51.37 | 47.30 |
| | 802.11n-HT40 | 40 | MCS7 | 38 | -4.30 | -51.52 | 47.21 |
| | 802.11ac-HT20 | 20 | MCS0 | 40 | -4.22 | -51.25 | 47.03 |
| | 802.11ac-HT20 | 20 | MCS8 | 40 | -4.21 | -51.42 | 47.21 |
| | 802.11ac-HT40 | 40 | MCS0 | 38 | -4.02 | -51.52 | 47.50 |
| | 802.11ac-HT40 | 40 | MCS9 | 38 | -4.02 | -51.69 | 47.67 |
| | 802.11ac-HT80 | 80 | MCS0 | 42 | -4.03 | -51.53 | 47.50 |
| 802.11ac-HT80 | 80 | MCS9 | 42 | -4.32 | -51.32 | 47.00 | |

Summary Tests Results

We use codec **AMR-WB 6.6 Kbps** and the worst configuration describe as below perform the test for each WIFI bands.

Configuration for WIFI 2.4GHz use **802.11g 6Mbps**

Configuration for WIFI 5GHz U-NII-1 & U-NII-3 use **802.11n HT20 MCS0**

| Air interface | Mode | Channel | Orientati on | ABM1 dB(A/m) | ABM2 dB(A/m) | Signal Quality dB | T-Rati ng ANSI C63.19 | Freq. Respon se |
|------------------|-------------------|---------|--------------|--------------|--------------|-------------------|-----------------------|-----------------|
| WIFI2.4GHz | 802.11g 6Mbps | 6 | Radial(Y) | -5.98 | -53.92 | 47.94 | T4 | --- |
| | | | Axial (Z) | 2.22 | -46.36 | 48.58 | T4 | Pass |
| WIFI5GHz U-NII-1 | 802.11n HT20 MCS0 | 40 | Radial(Y) | -4.34 | -51.21 | 46.87 | T4 | --- |
| | | | Axial (Z) | 1.76 | -45.95 | 47.71 | T4 | Pass |
| WIFI5GHz U-NII-3 | 802.11n HT20 MCS0 | 157 | Radial(Y) | -5.63 | -53.26 | 47.63 | T4 | --- |
| | | | Axial (Z) | 3.28 | -45.01 | 48.29 | T4 | Pass |

11 Test Equipments

The measurements were performed using an automated near-field scanning system, DASY5, manufactured by Schmid & Partner Engineering AG (SPEAG) in Switzerland.

The following table lists calibration dates of components:

| Test equipment | Model | S/N | Cal Date | Cal Due Date |
|---------------------------------------|--------|--------|------------|--------------|
| DAE | DAE 4 | 546 | 2019.09.28 | 2020.09.27 |
| Audio Magnetic Probe | AM1DV2 | 1021 | 2019.09.24 | 2020.09.23 |
| Audio Magnetic Measurement Instrument | TMFS | 1013 | 2019.09.24 | 2020.09.23 |
| Radio Tester | CMU200 | 114666 | 2019.08.20 | 2020.08.19 |
| Radio Tester | CMW500 | 102143 | 2019.07.11 | 2020.07.10 |

| Support equipment | S/N |
|-------------------|------|
| AMMI | 1045 |
| HAC Phantom part1 | 1080 |
| HAC Phantom part2 | 1042 |

11.1 Audio Magnetic Probe AM1DV2

| | |
|--------------------|--|
| Construction | Fully RF shielded metal construction (RF sensitivity<-100 dB) |
| System Calibration | Calibrated using Helmholtz coil according to manufacturers instructions |
| Frequency | 0.1-20kHz(HOX!test signal is limited to required BW of 300 to 3000Hz,ANSI C63.19); |
| Sensitivity | <-50dB A/m |
| Dimensions | Overall length:290mm; Tip diameter:6mm |

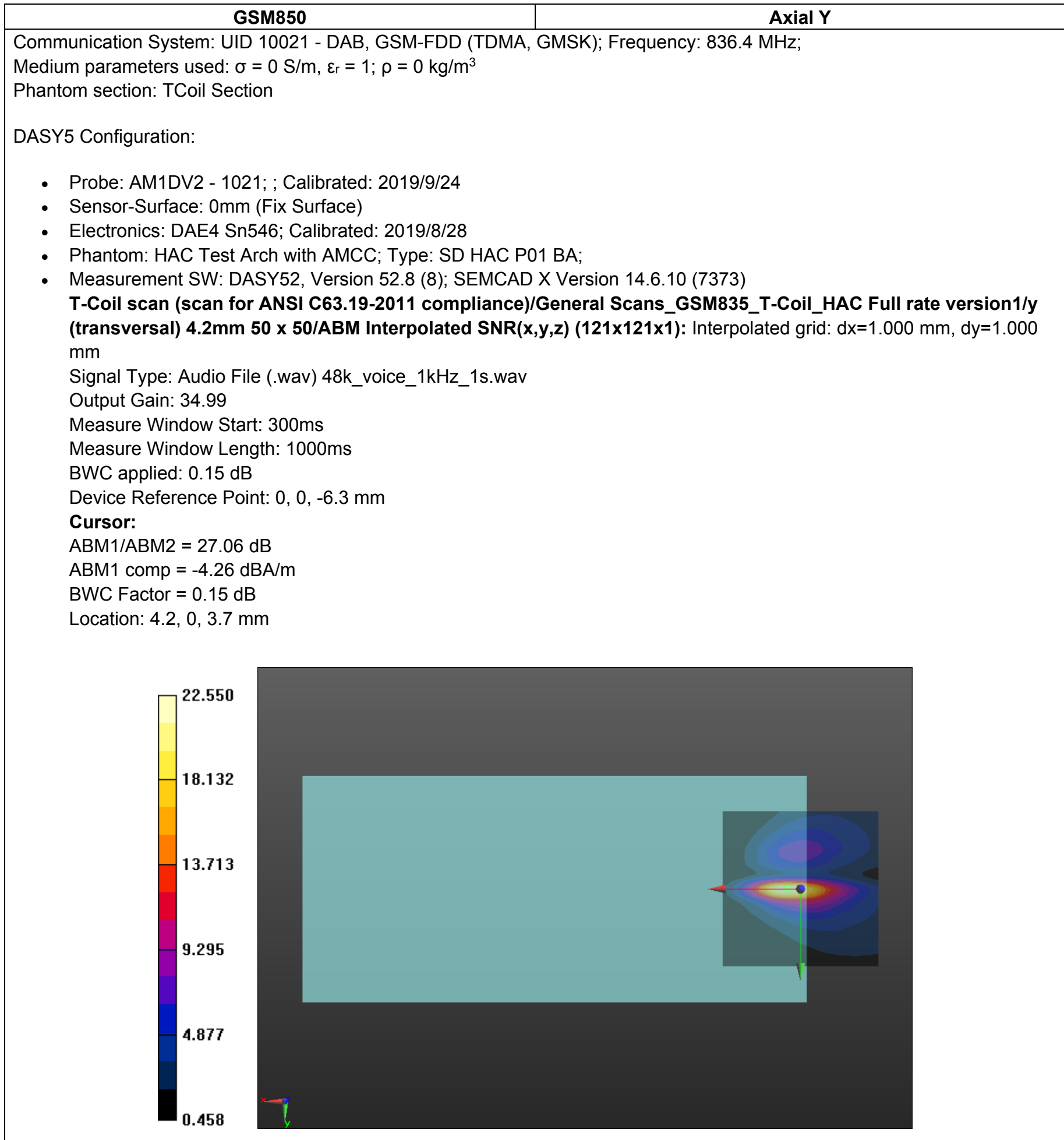
11.2 Audio Magnetic Measurement Instrument AMMI

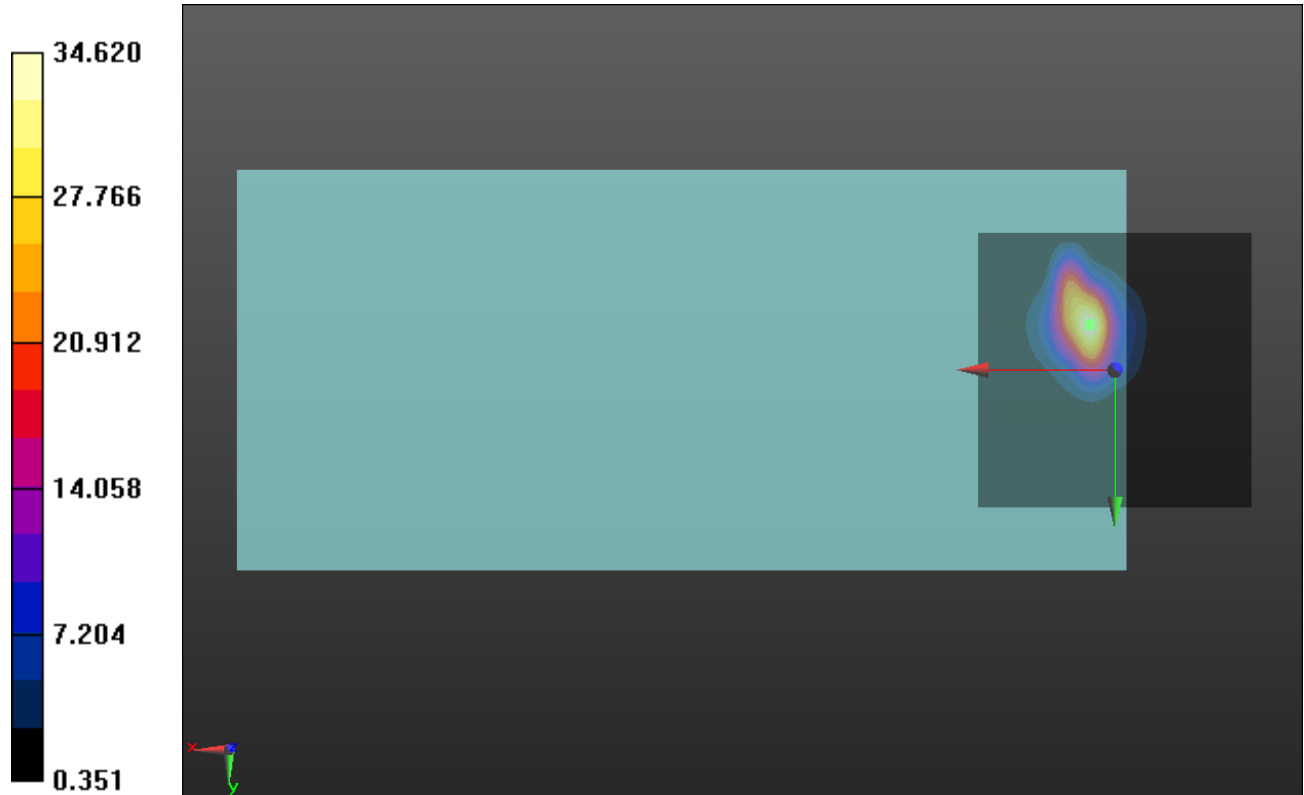
| | |
|------------------------|---|
| Sampling rate | 48kHz/24bit |
| Dynamic Range | 85dB |
| Test Signal generation | User selectable and predefined(via pc) |
| System calibration | Auto-calibration/full system calibration using AMCC with monitor output |

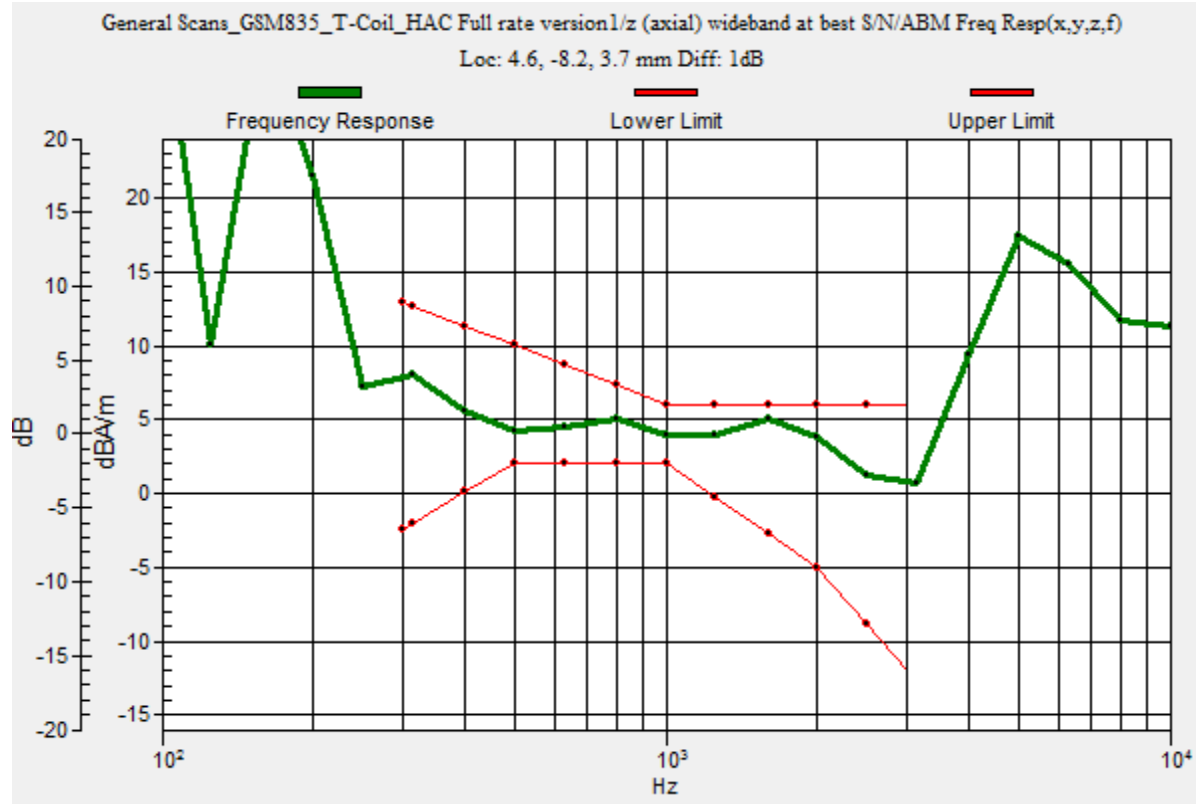
11.3 Audio Magnetic calibration Coil AMCC

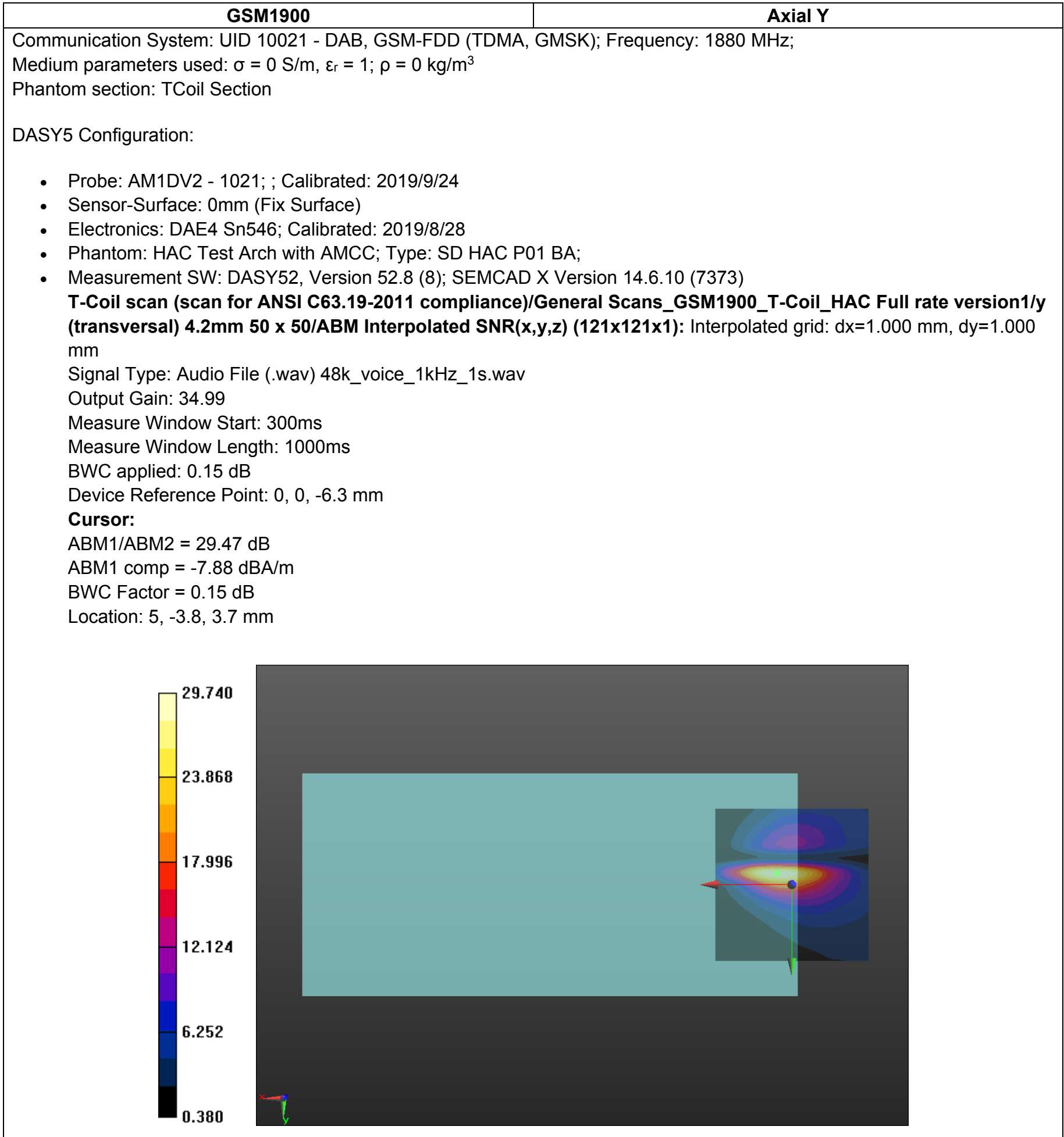
| | |
|------------|--|
| Dimensions | 370 x 370 x 196 mm (ANSI-C63.19 compliant) |
|------------|--|

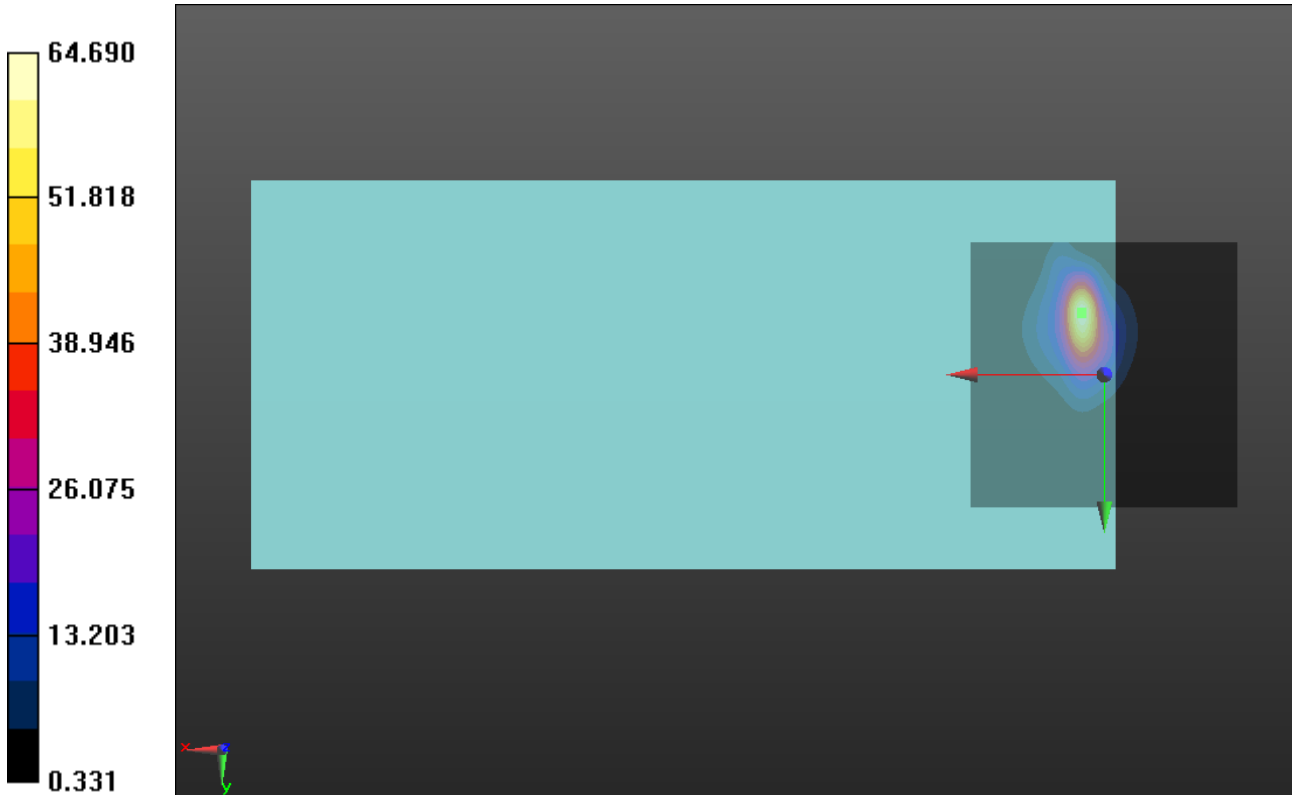
ANNEX A: TEST PLOTS

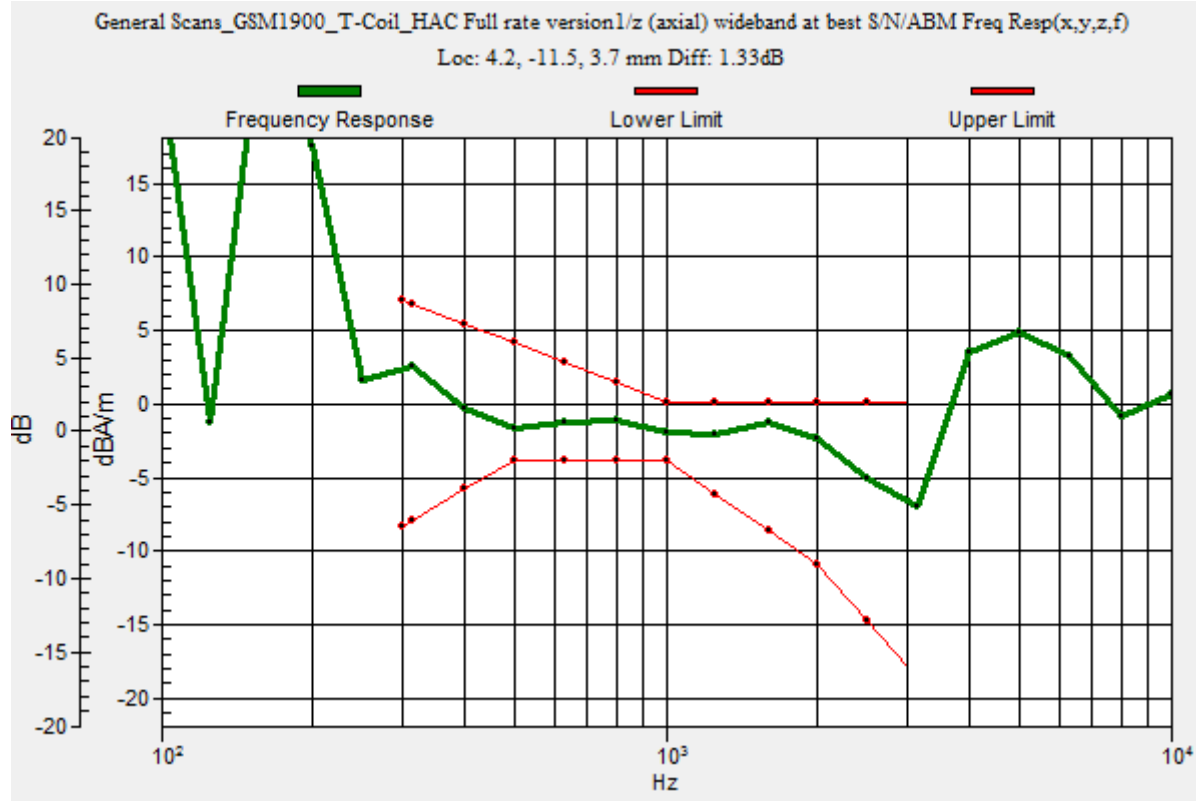


| GSM850 | Axial Z & Frequency Resp. |
|---|---------------------------|
| <p>Communication System: UID 10021 - DAB, GSM-FDD (TDMA, GMSK); Frequency: 836.4 MHz; Medium parameters used: $\sigma = 0$ S/m, $\epsilon_r = 1$; $\rho = 0$ kg/m³ Phantom section: TCoil Section</p> | |
| <p>DASY5 Configuration:</p> | |
| <ul style="list-style-type: none"> • Probe: AM1DV2 - 1021; ; Calibrated: 2019/9/24 • Sensor-Surface: 0mm (Fix Surface) • Electronics: DAE4 Sn546; Calibrated: 2019/8/28 • Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA; • Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7373) | |
| <p>T-Coil scan (scan for ANSI C63.19-2011 compliance)/General Scans_GSM835_T-Coil_HAC Full rate version1/z (axial) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm Signal Type: Audio File (.wav) 48k_voice_1kHz_1s.wav Output Gain: 34.99 Measure Window Start: 300ms Measure Window Length: 1000ms BWC applied: 0.15 dB Device Reference Point: 0, 0, -6.3 mm Cursor: ABM1/ABM2 = 30.79 dB ABM1 comp = 6.00 dBA/m BWC Factor = 0.15 dB Location: 4.6, -8.3, 3.7 mm</p> | |
| <p>T-Coil scan (scan for ANSI C63.19-2011 compliance)/General Scans_GSM835_T-Coil_HAC Full rate version1/z (axial) wideband at best S/N/ABM Freq Resp(x,y,z,f) (1x1x1): Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k_voice_300-3000_2s.wav Output Gain: 68.52 Measure Window Start: 300ms Measure Window Length: 2000ms BWC applied: 10.79 dB Device Reference Point: 0, 0, -6.3 mm Cursor: Diff = 1.00 dB BWC Factor = 10.79 dB Location: 4.6, -8.2, 3.7 mm</p> | |
|  | |





| GSM1900 | Axial Z & Frequency Resp. |
|---|---------------------------|
| <p>Communication System: UID 10021 - DAB, GSM-FDD (TDMA, GMSK); Frequency: 1880 MHz; Medium parameters used: $\sigma = 0$ S/m, $\epsilon_r = 1$; $\rho = 0$ kg/m³ Phantom section: TCoil Section</p> | |
| <p>DASY5 Configuration:</p> | |
| <ul style="list-style-type: none"> Probe: AM1DV2 - 1021; ; Calibrated: 2019/9/24 Sensor-Surface: 0mm (Fix Surface) Electronics: DAE4 Sn546; Calibrated: 2019/8/28 Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA; Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7373) | |
| <p>T-Coil scan (scan for ANSI C63.19-2011 compliance)/General Scans_GSM1900_T-Coil_HAC Full rate version1/z (axial) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm Signal Type: Audio File (.wav) 48k_voice_1kHz_1s.wav Output Gain: 34.99 Measure Window Start: 300ms Measure Window Length: 1000ms BWC applied: 0.15 dB Device Reference Point: 0, 0, -6.3 mm Cursor: ABM1/ABM2 = 36.22 dB ABM1 comp = 2.71 dBA/m BWC Factor = 0.15 dB Location: 4.2, -11.7, 3.7 mm</p> | |
| <p>T-Coil scan (scan for ANSI C63.19-2011 compliance)/General Scans_GSM1900_T-Coil_HAC Full rate version1/z (axial) wideband at best S/N/ABM Freq Resp(x,y,z,f) (1x1x1): Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k_voice_300-3000_2s.wav Output Gain: 68.52 Measure Window Start: 300ms Measure Window Length: 2000ms BWC applied: 10.79 dB Device Reference Point: 0, 0, -6.3 mm Cursor: Diff = 1.33 dB BWC Factor = 10.79 dB Location: 4.2, -11.5, 3.7 mm</p> | |
|  | |



WCDMA BAND2

Axial Y

Communication System: UID 10460 - AAA, UMTS-FDD (WCDMA, AMR); Frequency: 1880 MHz;
Medium parameters used: $\sigma = 0$ S/m, $\epsilon_r = 1$; $\rho = 0$ kg/m³
Phantom section: TCoil Section

DASY5 Configuration:

- Probe: AM1DV2 - 1021; ; Calibrated: 2019/9/24
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE4 Sn546; Calibrated: 2019/8/28
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7373)

T-Coil scan (scan for ANSI C63.19-2011 compliance)/General Scans_WCDMA 2_T-Coil_HAC AMR 4.75Kbps 2/y (transversal) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Signal Type: Audio File (.wav) 48k_voice_1kHz_1s.wav

Output Gain: 34.99

Measure Window Start: 300ms

Measure Window Length: 1000ms

BWC applied: 0.15 dB

Device Reference Point: 0, 0, -6.3 mm

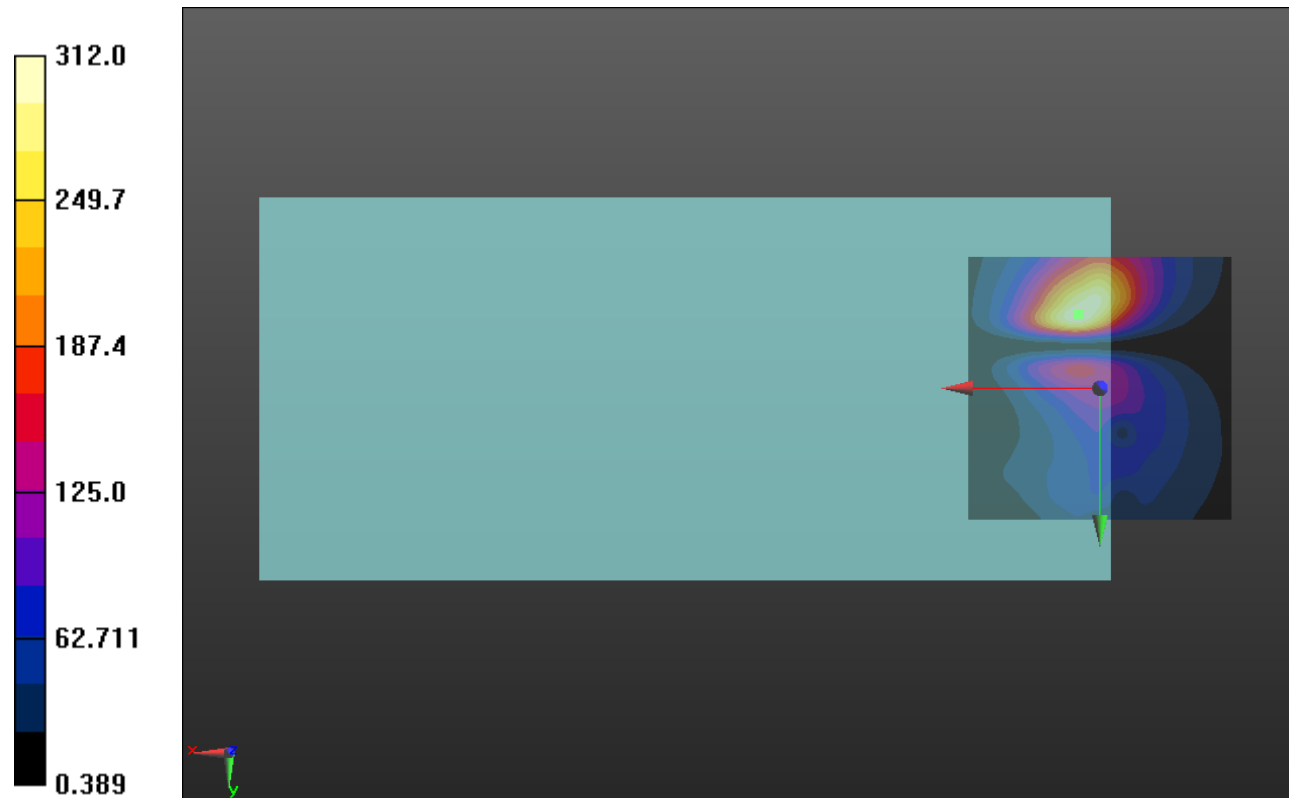
Cursor:

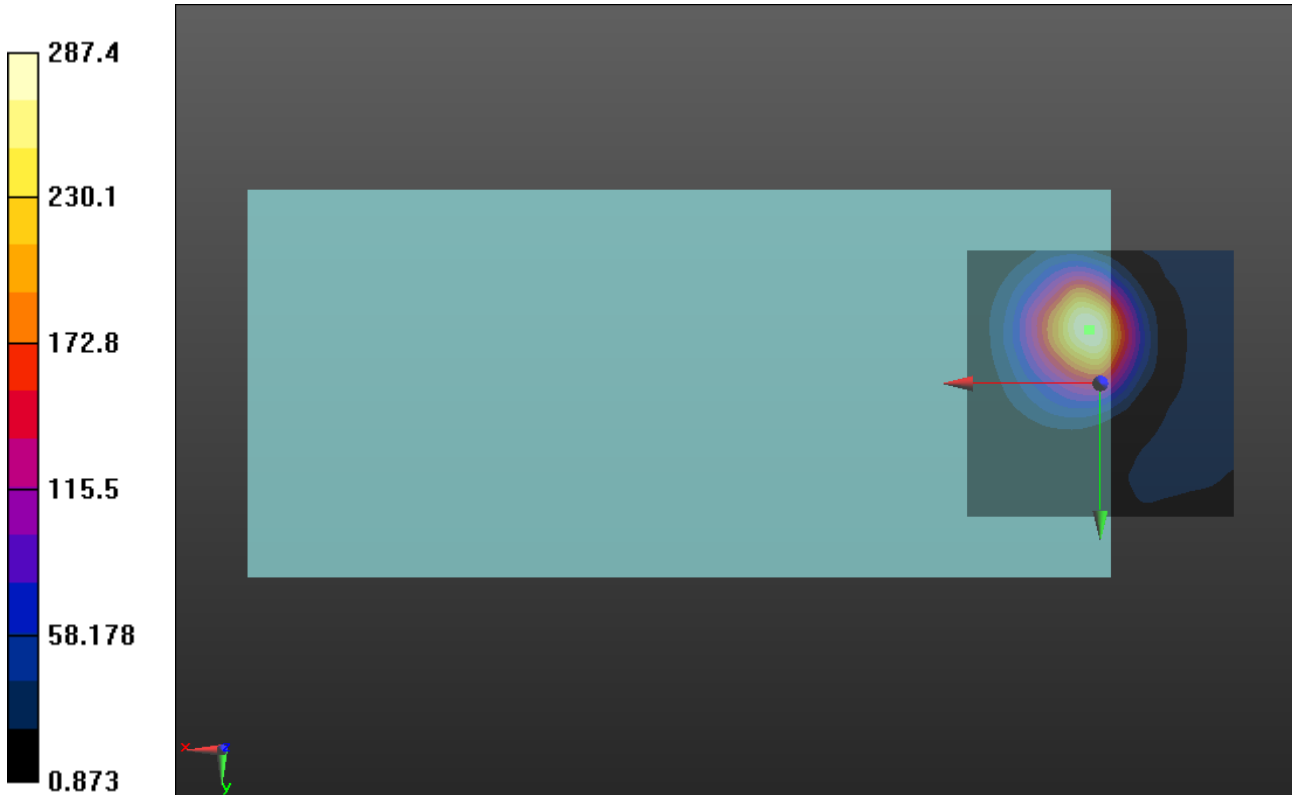
ABM1/ABM2 = 49.88 dB

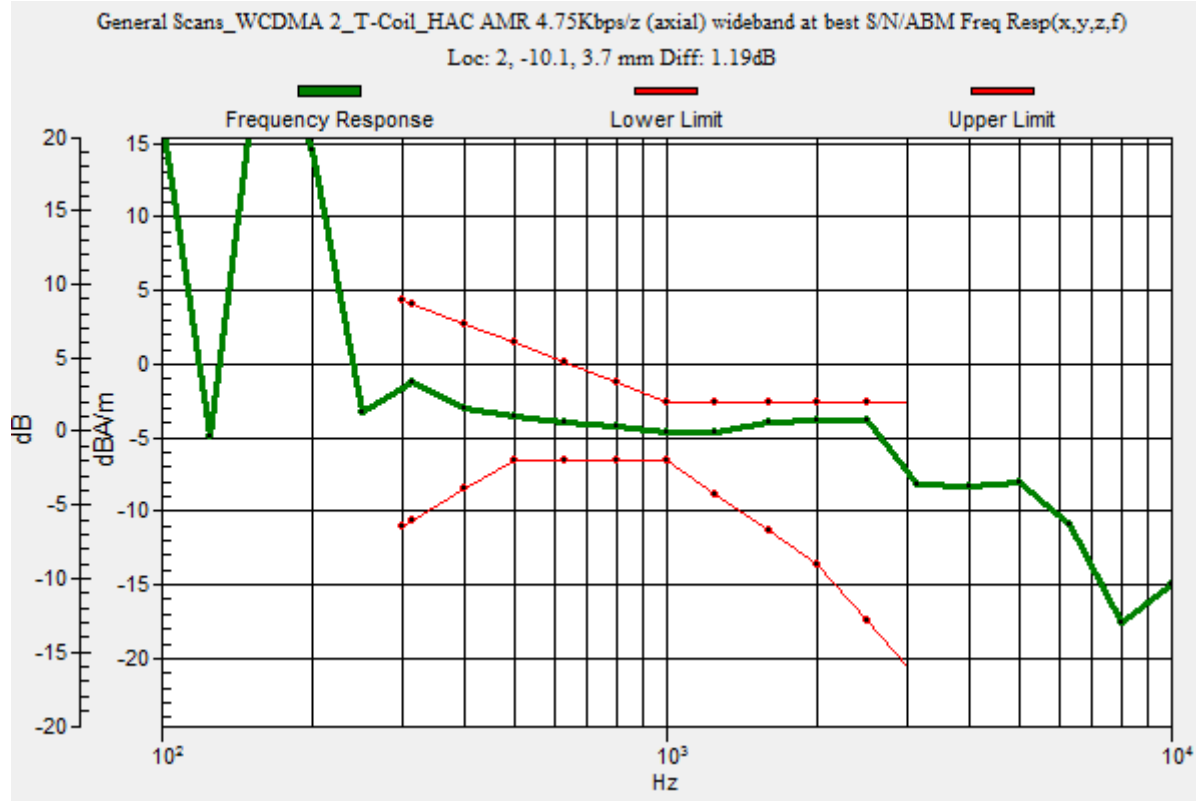
ABM1 comp = -3.70 dBA/m

BWC Factor = 0.15 dB

Location: 4.2, -14.2, 3.7 mm



| WCDMA BAND2 | Axial Z & Frequency Resp. |
|--|---------------------------|
| <p>Communication System: UID 10460 - AAA, UMTS-FDD (WCDMA, AMR); Frequency: 1880 MHz; Medium parameters used: $\sigma = 0$ S/m, $\epsilon_r = 1$; $\rho = 0$ kg/m³ Phantom section: TCoil Section</p> | |
| <p>DASY5 Configuration:</p> | |
| <ul style="list-style-type: none"> Probe: AM1DV2 - 1021; ; Calibrated: 2019/9/24 Sensor-Surface: 0mm (Fix Surface) Electronics: DAE4 Sn546; Calibrated: 2019/8/28 Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA; Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7373) | |
| <p>T-Coil scan (scan for ANSI C63.19-2011 compliance)/General Scans_WCDMA 2_T-Coil_HAC AMR 4.75Kbps/z (axial) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm Signal Type: Audio File (.wav) 48k_voice_1kHz_1s.wav Output Gain: 34.99 Measure Window Start: 300ms Measure Window Length: 1000ms BWC applied: 0.15 dB Device Reference Point: 0, 0, -6.3 mm Cursor: ABM1/ABM2 = 49.17 dB ABM1 comp = -1.27 dBA/m BWC Factor = 0.15 dB Location: 2.1, -10, 3.7 mm</p> | |
| <p>T-Coil scan (scan for ANSI C63.19-2011 compliance)/General Scans_WCDMA 2_T-Coil_HAC AMR 4.75Kbps/z (axial) wideband at best S/N/ABM Freq Resp(x,y,z,f) (1x1x1): Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k_voice_300-3000_2s.wav Output Gain: 68.52 Measure Window Start: 300ms Measure Window Length: 2000ms BWC applied: 10.79 dB Device Reference Point: 0, 0, -6.3 mm Cursor: Diff = 1.19 dB BWC Factor = 10.79 dB Location: 2, -10.1, 3.7 mm</p> | |
|  | |



WCDMA BAND4

Axial Y

Communication System: UID 10460 - AAA, UMTS-FDD (WCDMA, AMR); Frequency: 1732.6 MHz;
Medium parameters used: $\sigma = 0$ S/m, $\epsilon_r = 1$; $\rho = 0$ kg/m³
Phantom section: TCoil Section

DASY5 Configuration:

- Probe: AM1DV2 - 1021; ; Calibrated: 2019/9/24
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE4 Sn546; Calibrated: 2019/8/28
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7373)

T-Coil scan (scan for ANSI C63.19-2011 compliance)/General Scans_WCDMA 4_T-Coil_HAC AMR 4.75Kbps/y (transversal) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Signal Type: Audio File (.wav) 48k_voice_1kHz_1s.wav

Output Gain: 34.99

Measure Window Start: 300ms

Measure Window Length: 1000ms

BWC applied: 0.15 dB

Device Reference Point: 0, 0, -6.3 mm

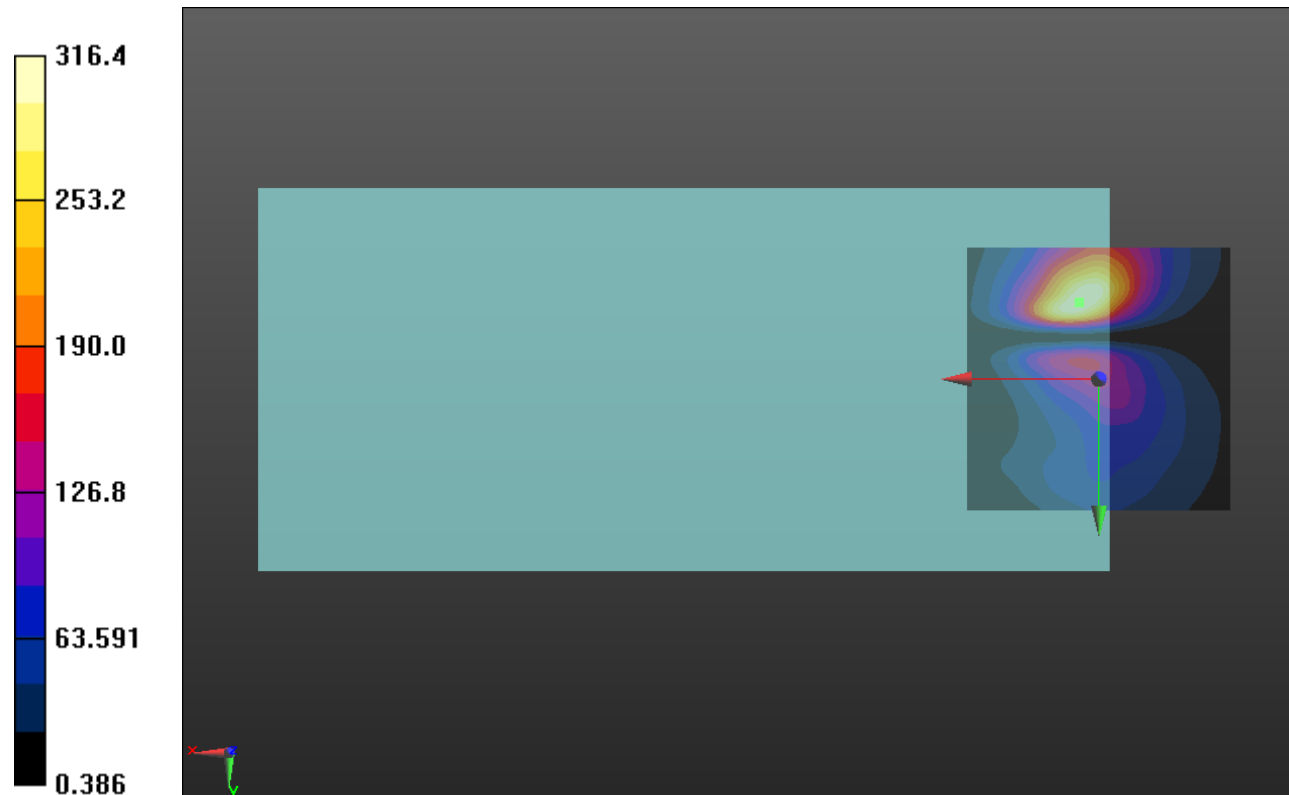
Cursor:

ABM1/ABM2 = 50.01 dB

ABM1 comp = -3.63 dBA/m

BWC Factor = 0.15 dB

Location: 3.8, -14.6, 3.7 mm



WCDMA BAND4

Axial Z & Frequency Resp.

Communication System: UID 10460 - AAA, UMTS-FDD (WCDMA, AMR); Frequency: 1732.6 MHz;
Medium parameters used: $\sigma = 0$ S/m, $\epsilon_r = 1$; $\rho = 0$ kg/m³
Phantom section: TCoil Section

DASY5 Configuration:

- Probe: AM1DV2 - 1021; ; Calibrated: 2019/9/24
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE4 Sn546; Calibrated: 2019/8/28
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7373)

T-Coil scan (scan for ANSI C63.19-2011 compliance)/General Scans_WCDMA 4_T-Coil_HAC AMR 4.75Kbps/z (axial) 4.2mm 50 x 50/ABM SNR(x,y,z) (13x13x1): Measurement grid: dx=10mm, dy=10mm

Signal Type: Audio File (.wav) 48k_voice_1kHz_1s.wav

Output Gain: 34.99

Measure Window Start: 300ms

Measure Window Length: 1000ms

BWC applied: 0.15 dB

Device Reference Point: 0, 0, -6.3 mm

Cursor:

ABM1/ABM2 = 51.26 dB

ABM1 comp = 1.97 dBA/m

BWC Factor = 0.15 dB

Location: 4.2, -12.5, 3.7 mm

T-Coil scan (scan for ANSI C63.19-2011 compliance)/General Scans_WCDMA 4_T-Coil_HAC AMR 4.75Kbps/z (axial) wideband at best S/N/ABM Freq Resp(x,y,z,f) (1x1x1): Measurement grid: dx=10mm, dy=10mm

Signal Type: Audio File (.wav) 48k_voice_300-3000_2s.wav

Output Gain: 68.52

Measure Window Start: 300ms

Measure Window Length: 2000ms

BWC applied: 10.79 dB

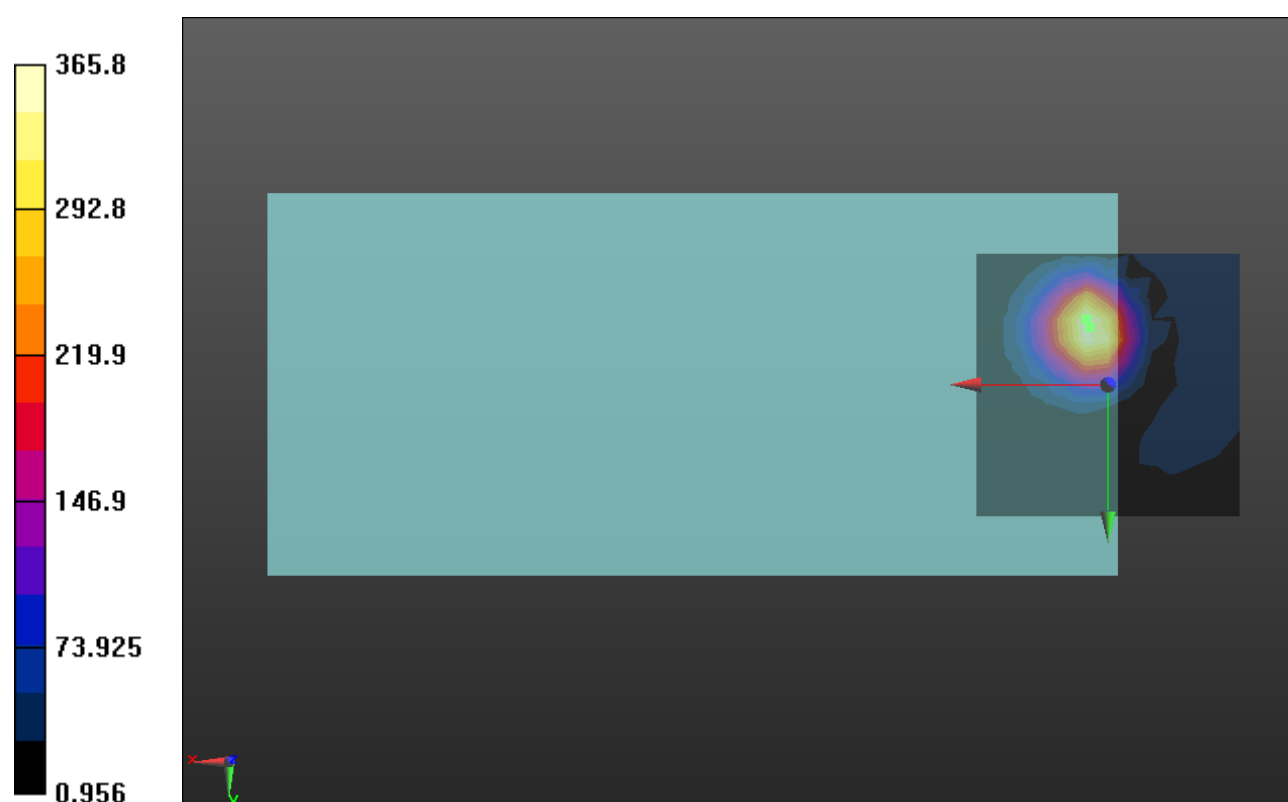
Device Reference Point: 0, 0, -6.3 mm

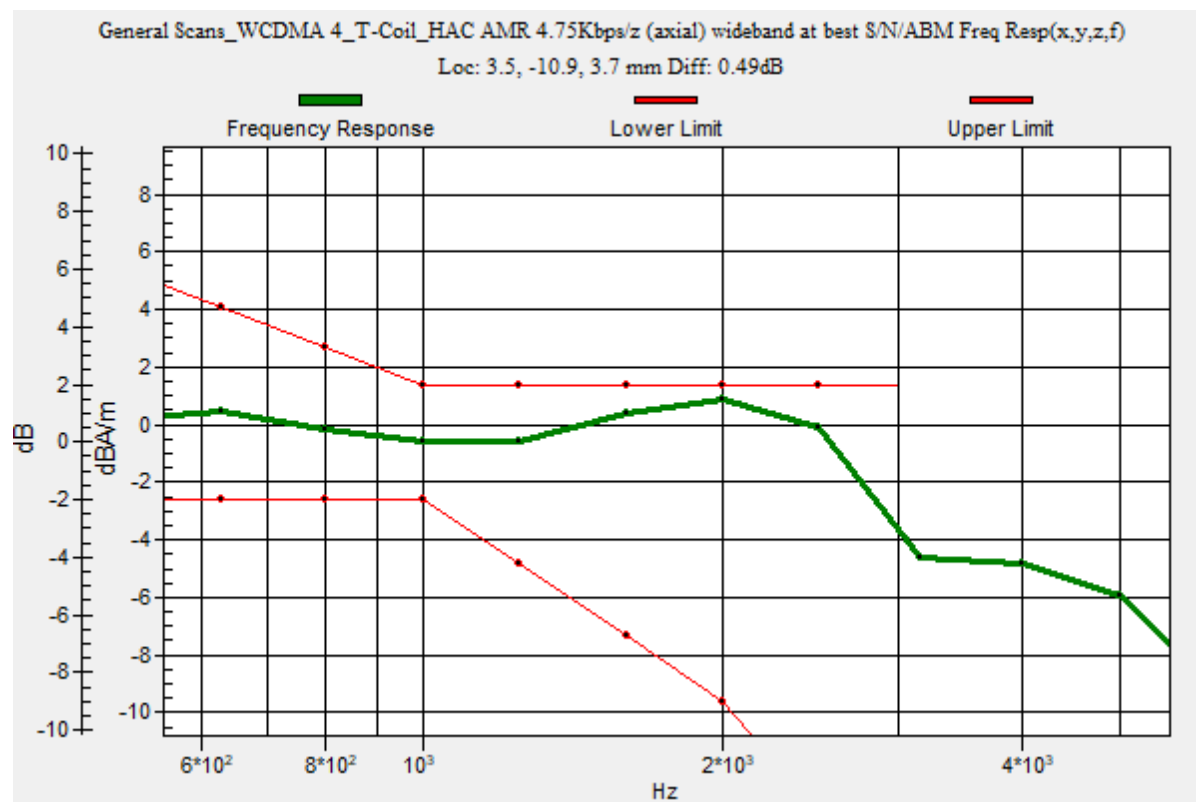
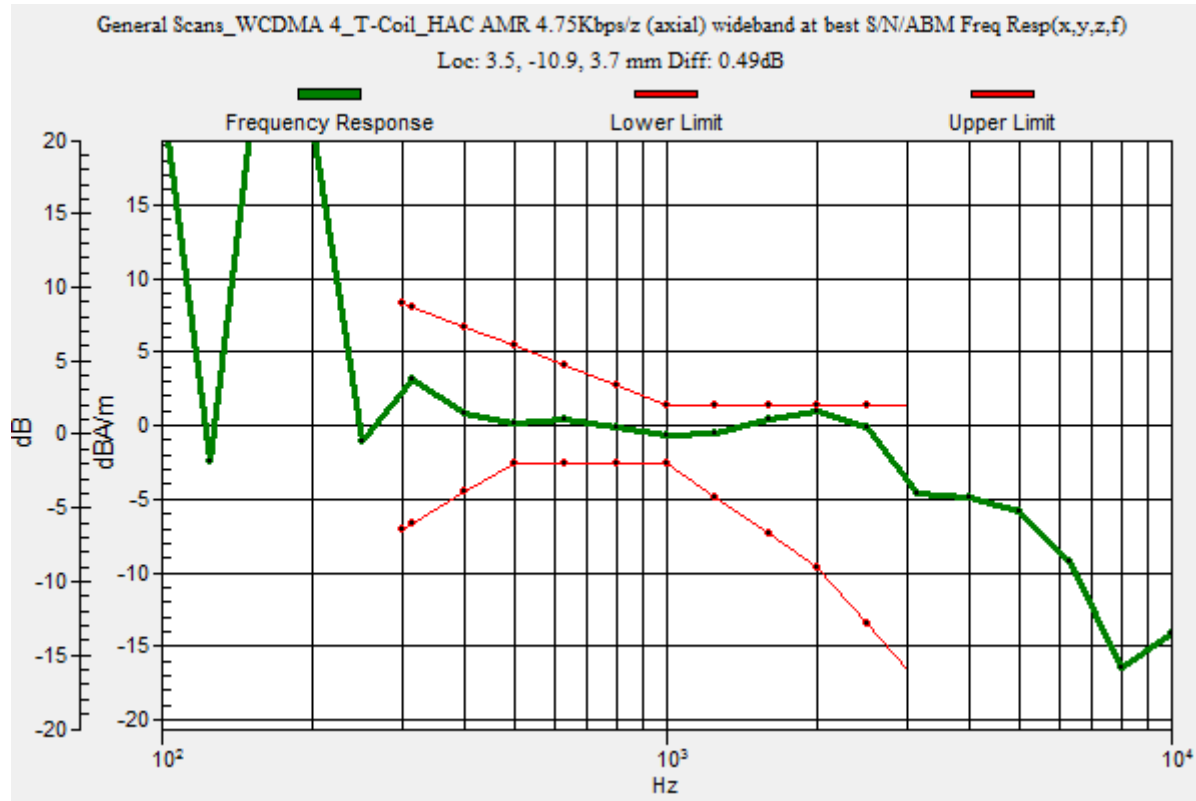
Cursor:

Diff = 0.49 dB

BWC Factor = 10.79 dB

Location: 3.5, -10.9, 3.7 mm





WCDMA BAND5

Axial Y

Communication System: UID 10460 - AAA, UMTS-FDD (WCDMA, AMR); Frequency: 836.6 MHz;
Medium parameters used: $\sigma = 0$ S/m, $\epsilon_r = 1$; $\rho = 0$ kg/m³
Phantom section: TCoil Section

DASY5 Configuration:

- Probe: AM1DV2 - 1021; ; Calibrated: 2019/9/24
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE4 Sn546; Calibrated: 2019/8/28
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7373)

T-Coil scan (scan for ANSI C63.19-2011 compliance)/General Scans_WCDMA 5_T-Coil_HAC AMR 4.75Kbps/y (transversal) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Signal Type: Audio File (.wav) 48k_voice_1kHz_1s.wav

Output Gain: 34.99

Measure Window Start: 300ms

Measure Window Length: 1000ms

BWC applied: 0.15 dB

Device Reference Point: 0, 0, -6.3 mm

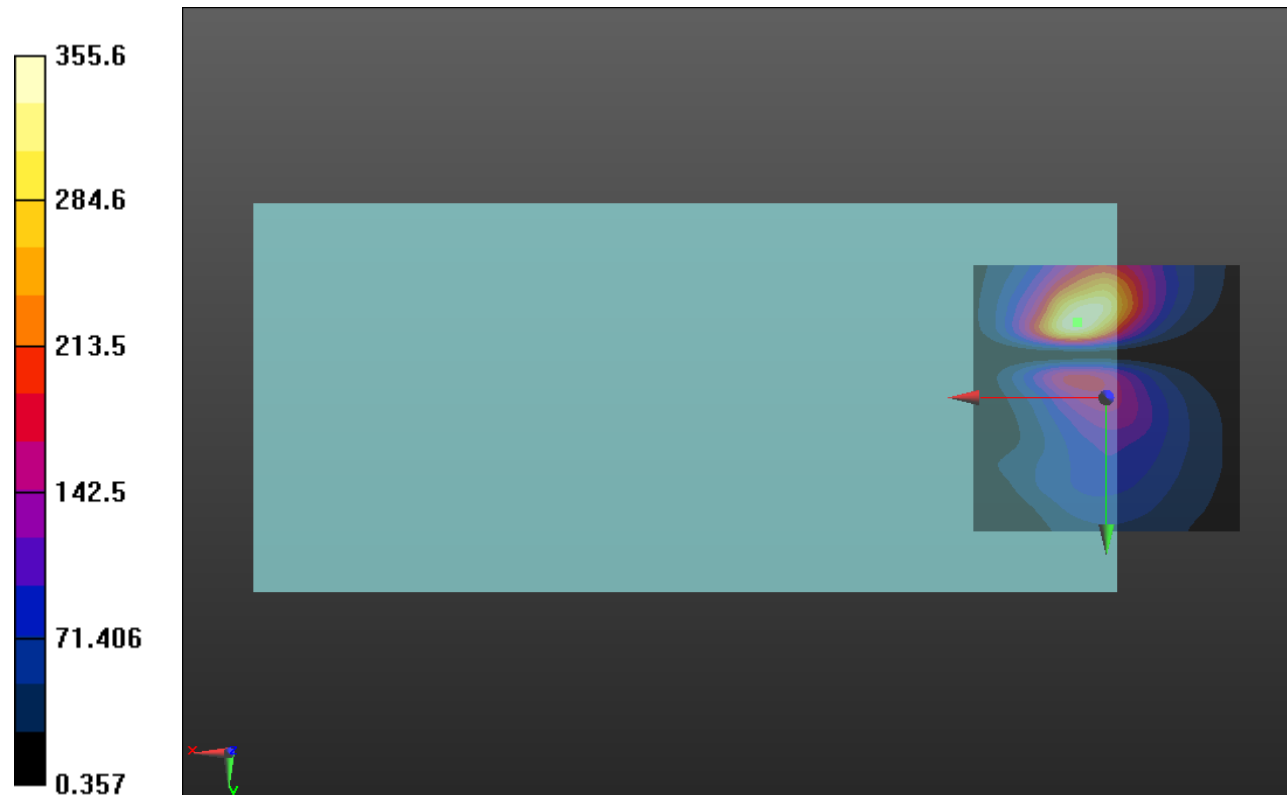
Cursor:

ABM1/ABM2 = 51.02 dB

ABM1 comp = -2.46 dBA/m

BWC Factor = 0.15 dB

Location: 5.4, -14.2, 3.7 mm



WCDMA BAND5

Axial Z & Frequency Resp.

Communication System: UID 10460 - AAA, UMTS-FDD (WCDMA, AMR); Frequency: 836.6 MHz;
Medium parameters used: $\sigma = 0$ S/m, $\epsilon_r = 1$; $\rho = 0$ kg/m³
Phantom section: TCoil Section

DASY5 Configuration:

- Probe: AM1DV2 - 1021; ; Calibrated: 2019/9/24
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE4 Sn546; Calibrated: 2019/8/28
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7373)

T-Coil scan (scan for ANSI C63.19-2011 compliance)/General Scans_WCDMA 5_T-Coil_HAC AMR 4.75Kbps/z (axial) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Signal Type: Audio File (.wav) 48k_voice_1kHz_1s.wav

Output Gain: 34.99

Measure Window Start: 300ms

Measure Window Length: 1000ms

BWC applied: 0.15 dB

Device Reference Point: 0, 0, -6.3 mm

Cursor:

ABM1/ABM2 = 51.42 dB

ABM1 comp = 3.66 dBA/m

BWC Factor = 0.15 dB

Location: 4.2, -9.2, 3.7 mm

T-Coil scan (scan for ANSI C63.19-2011 compliance)/General Scans_WCDMA 5_T-Coil_HAC AMR 4.75Kbps/z (axial) wideband at best S/N/ABM Freq Resp(x,y,z,f) (1x1x1): Measurement grid: dx=10mm, dy=10mm

Signal Type: Audio File (.wav) 48k_voice_300-3000_2s.wav

Output Gain: 68.52

Measure Window Start: 300ms

Measure Window Length: 2000ms

BWC applied: 10.79 dB

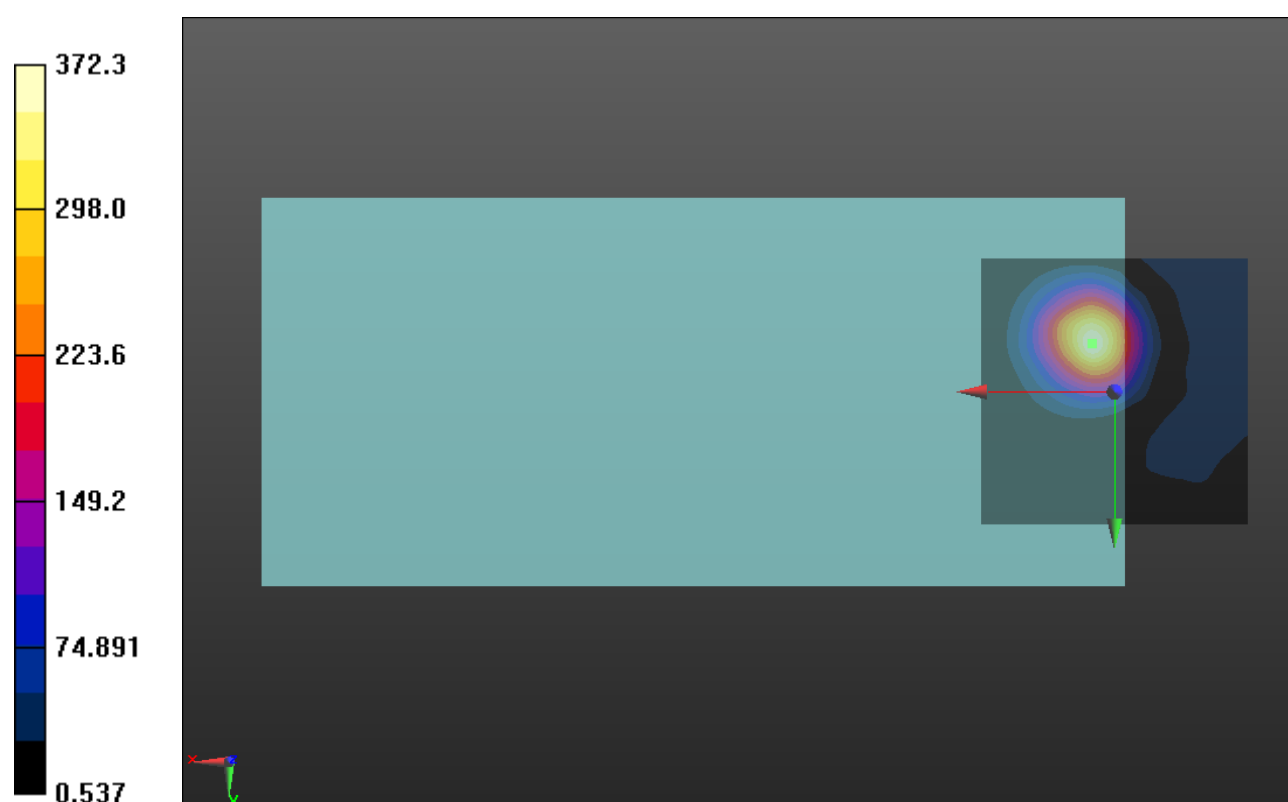
Device Reference Point: 0, 0, -6.3 mm

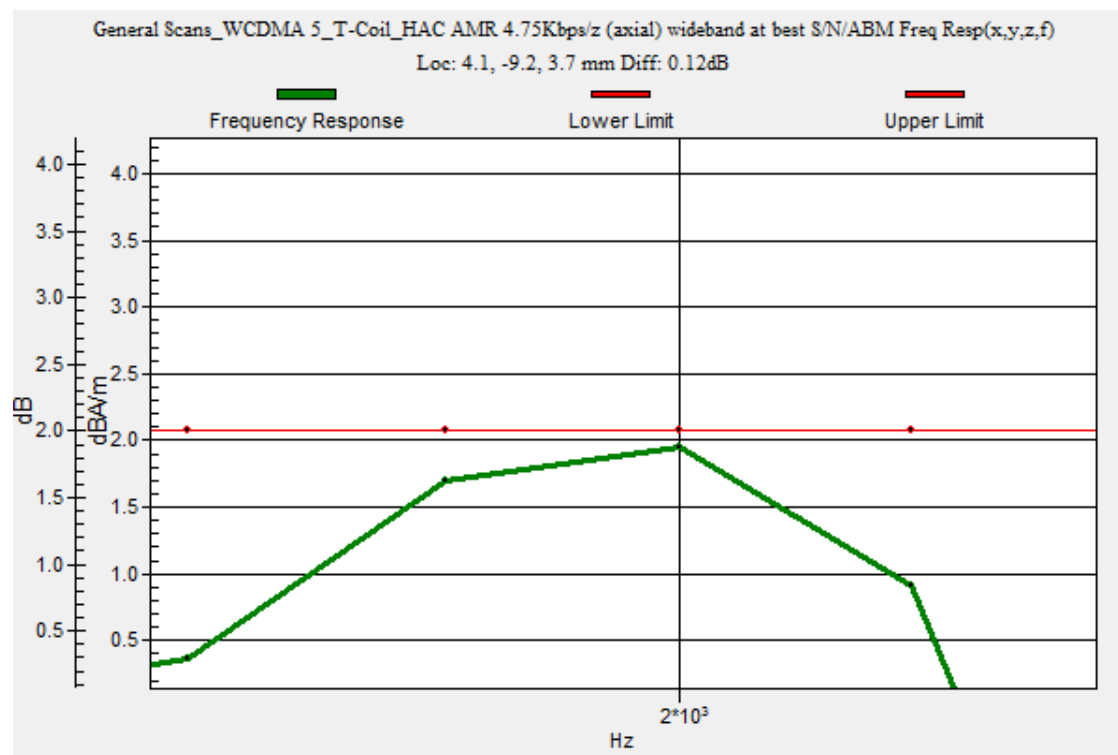
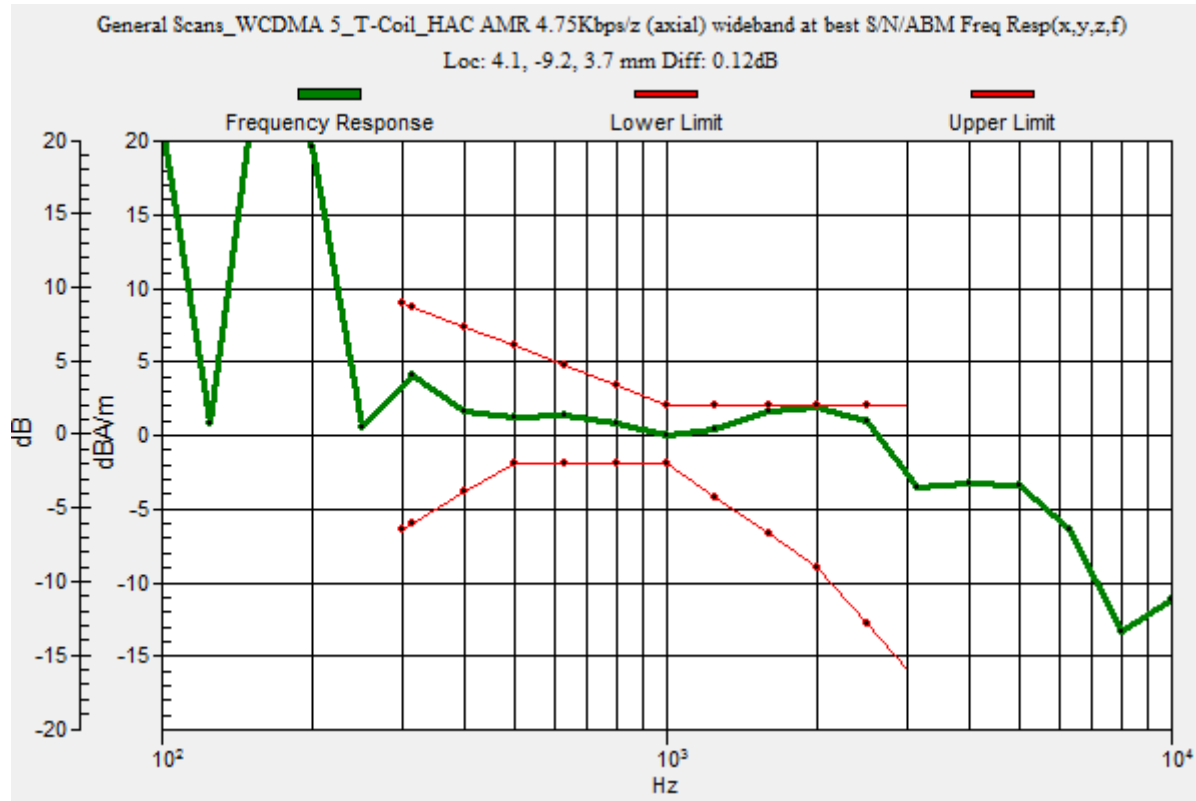
Cursor:

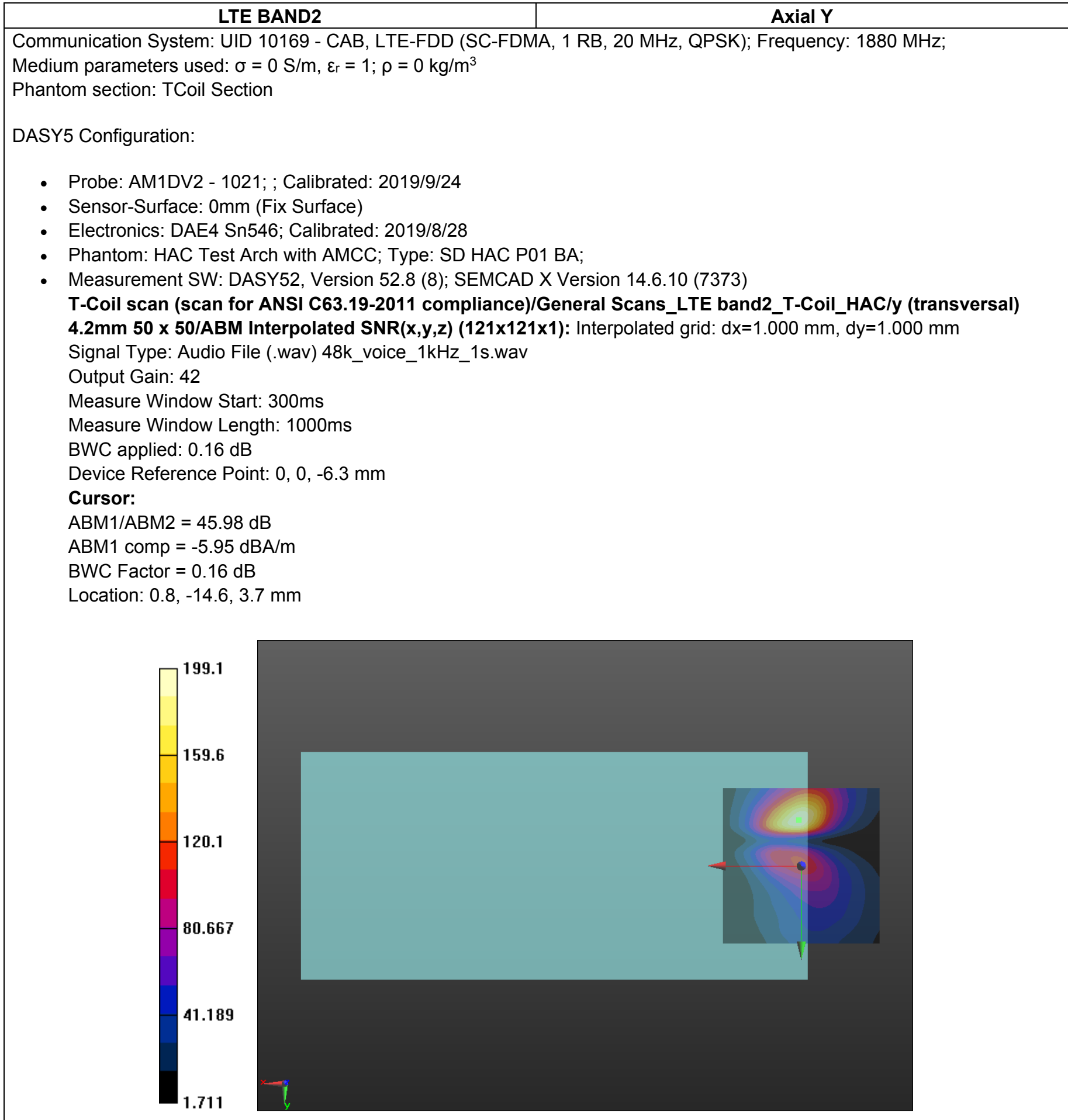
Diff = 0.12 dB

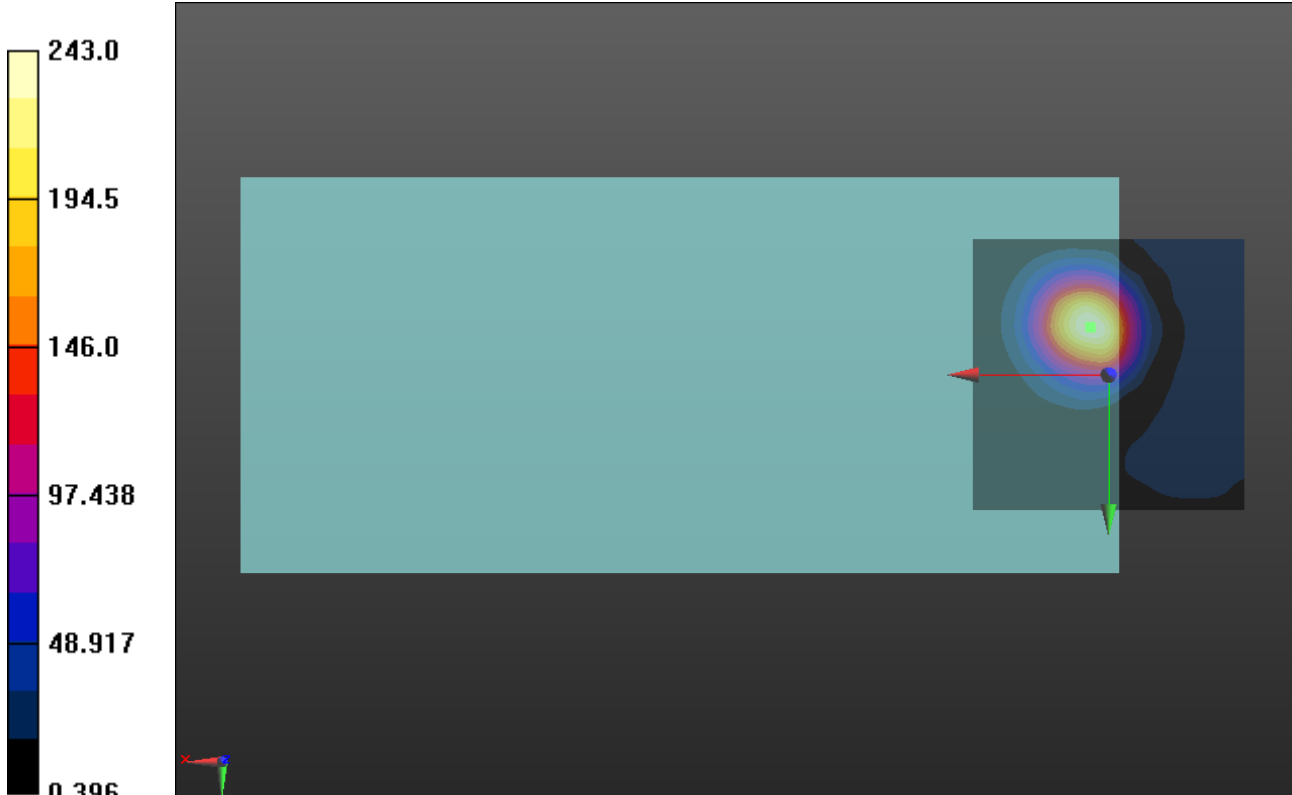
BWC Factor = 10.79 dB

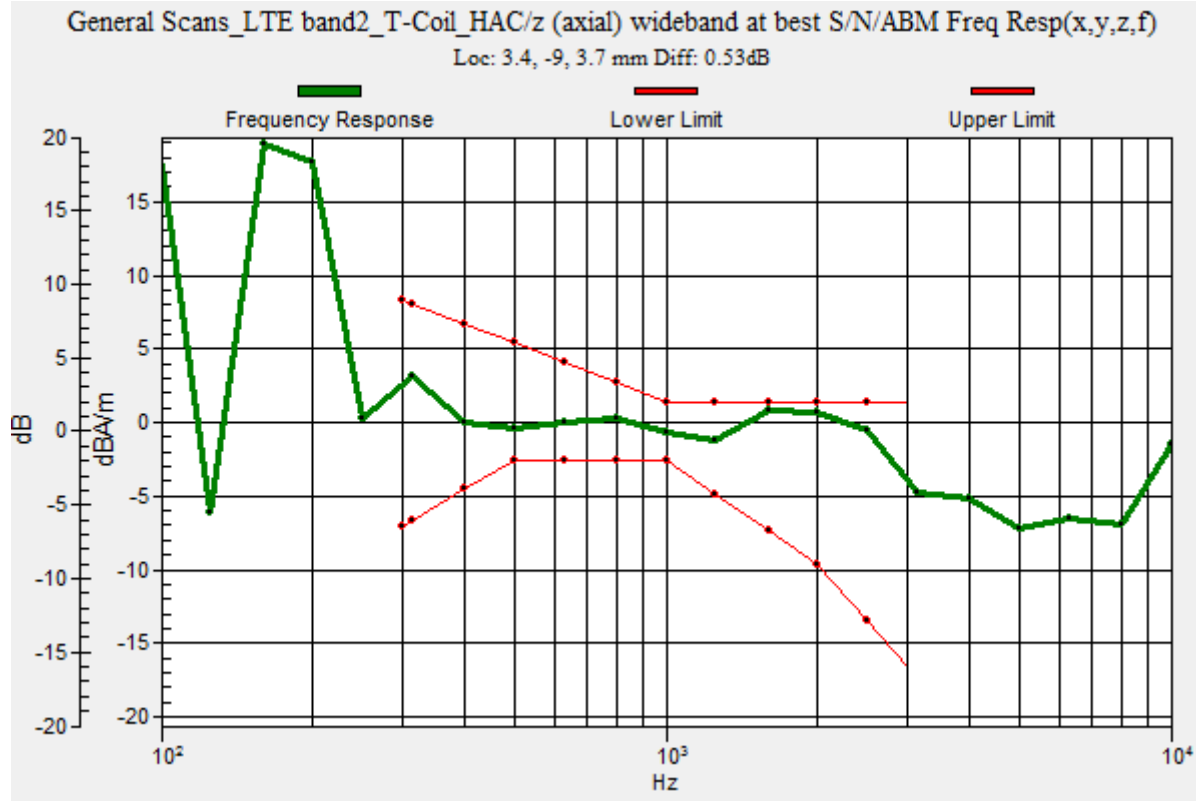
Location: 4.1, -9.2, 3.7 mm

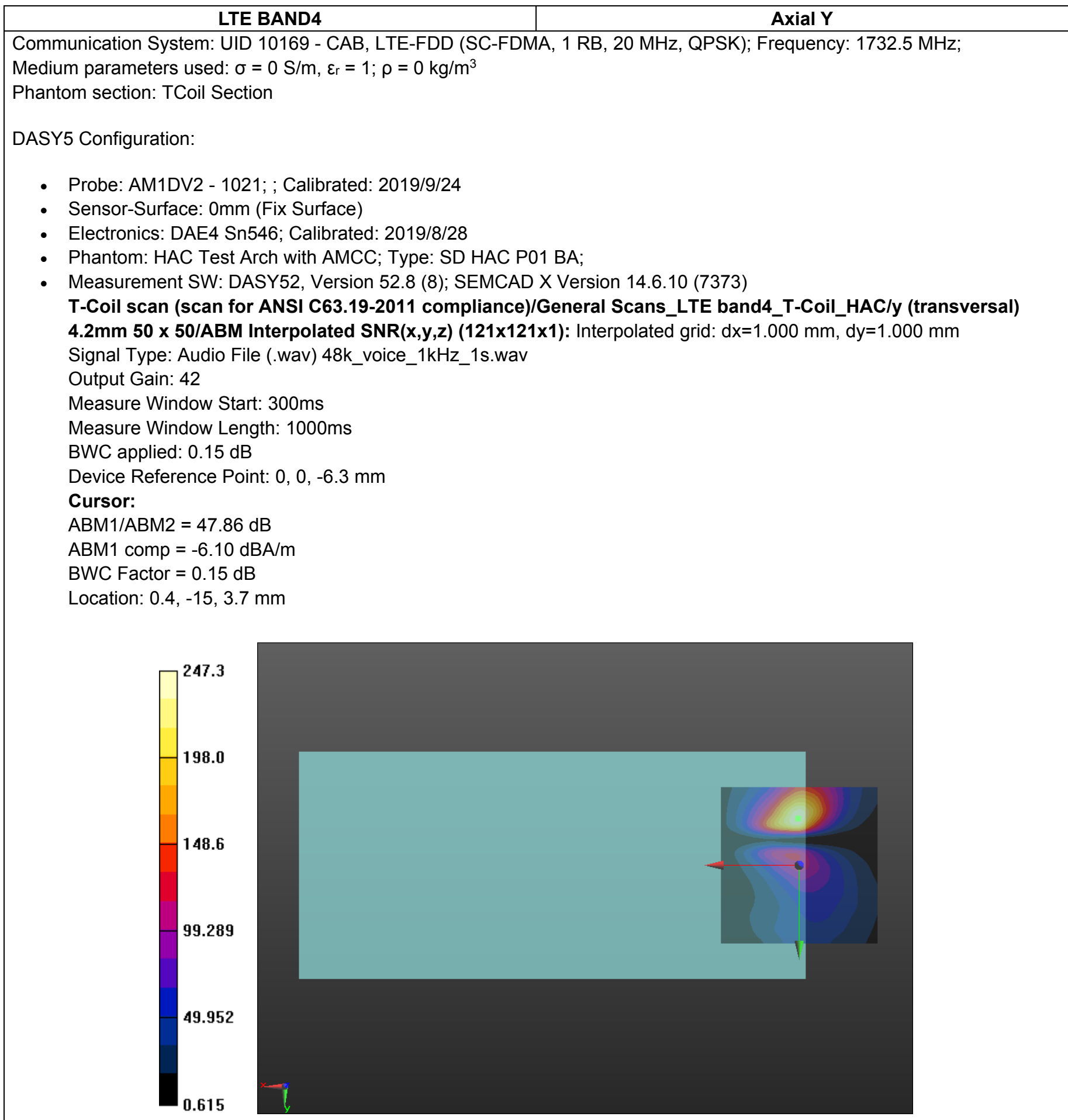


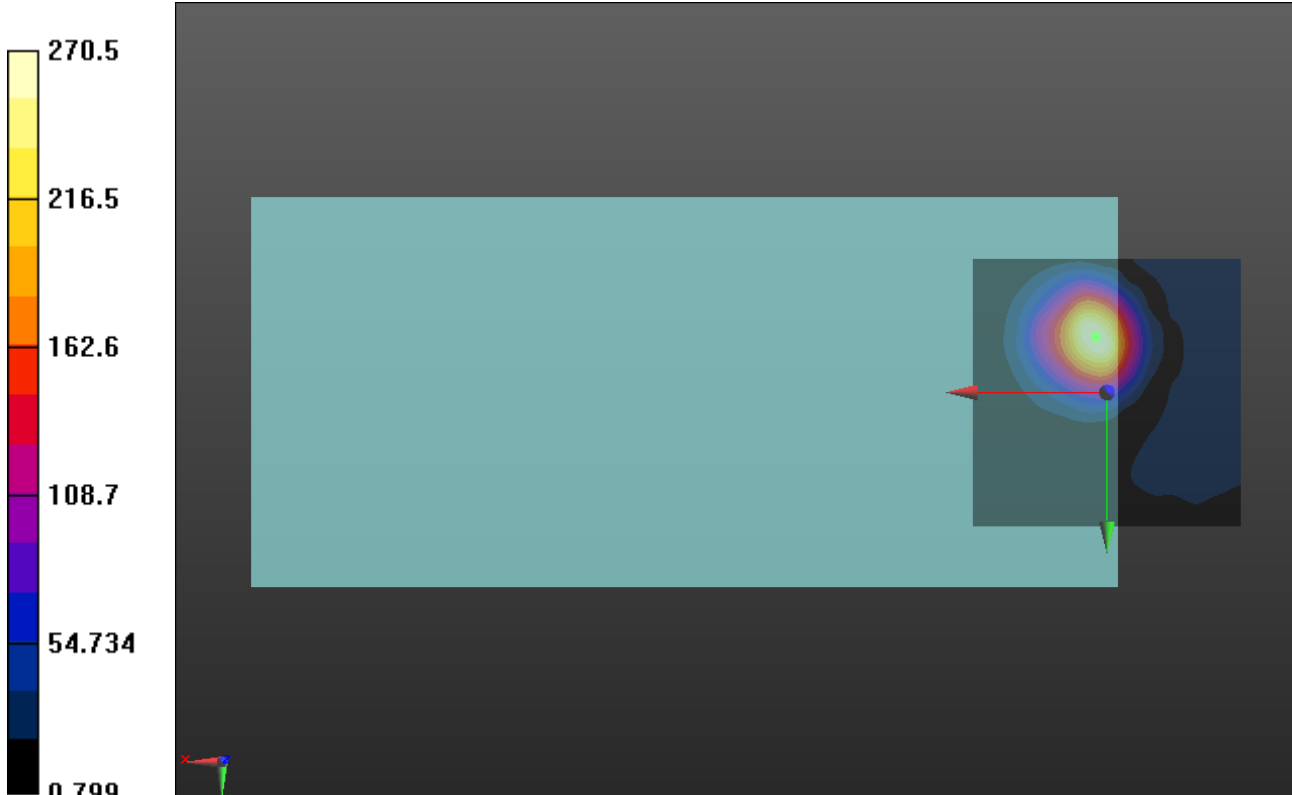


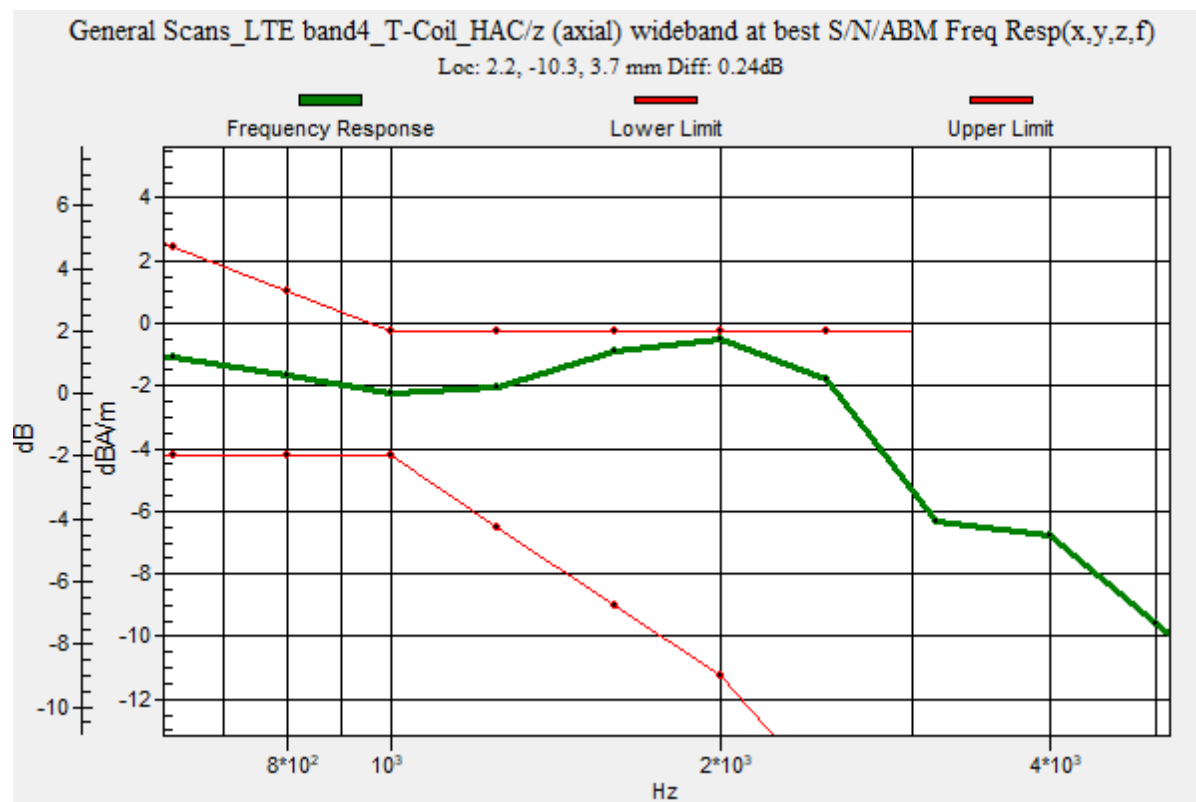
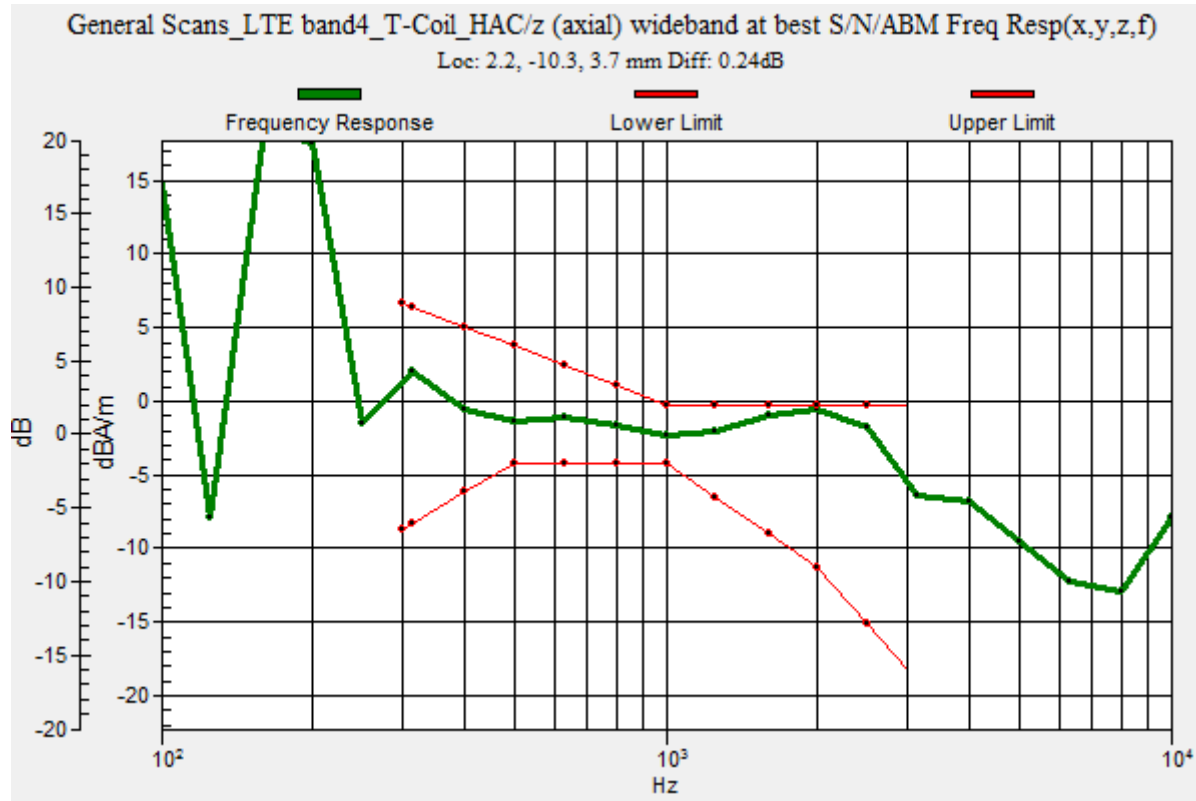


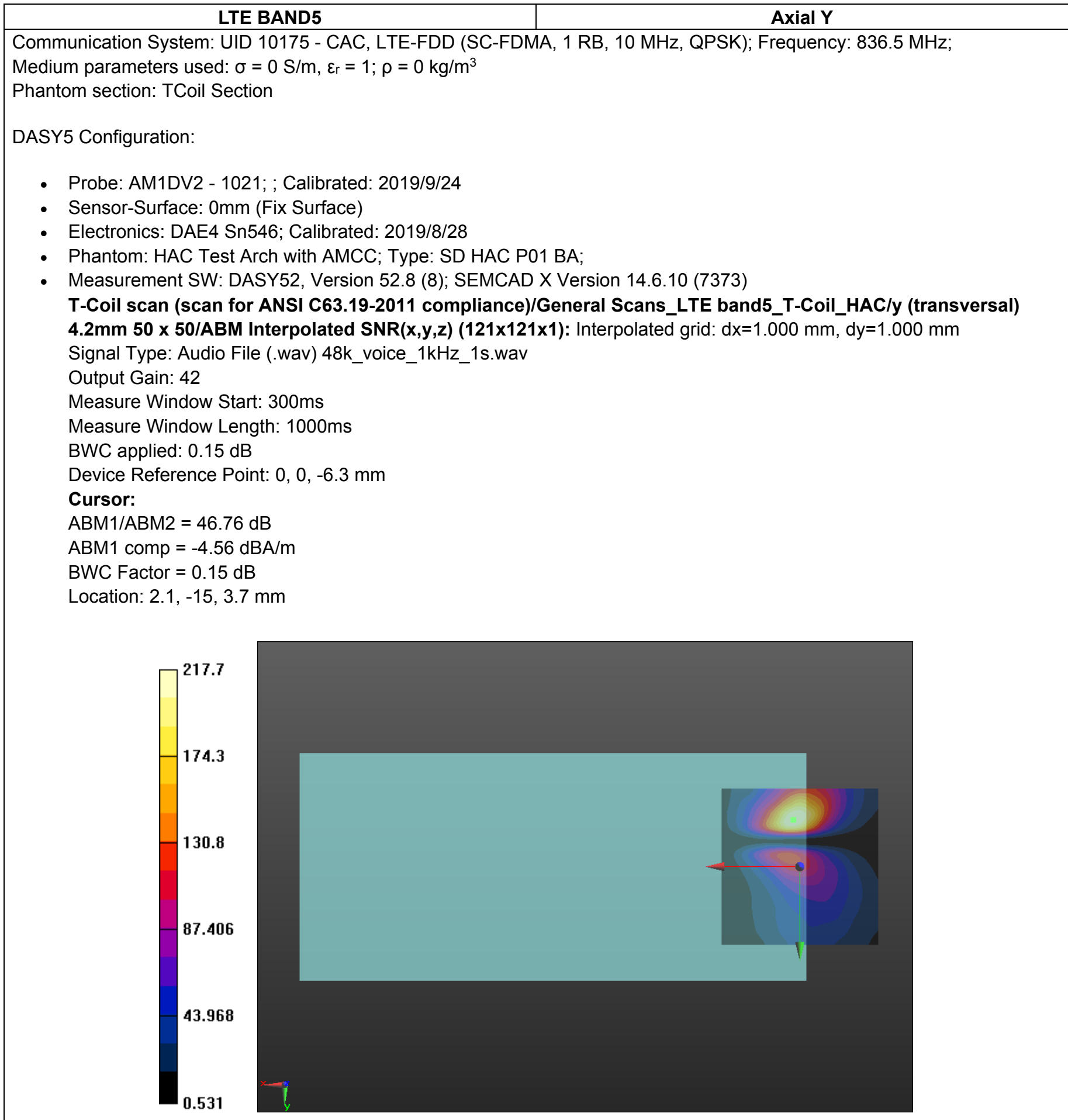
| LTE BAND2 | Axial Z & Frequency Resp. |
|--|---------------------------|
| <p>Communication System: UID 10169 - CAB, LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK); Frequency: 1880 MHz; Medium parameters used: $\sigma = 0$ S/m, $\epsilon_r = 1$; $\rho = 0$ kg/m³ Phantom section: TCoil Section</p> | |
| <p>DASY5 Configuration:</p> <ul style="list-style-type: none"> Probe: AM1DV2 - 1021; ; Calibrated: 2019/9/24 Sensor-Surface: 0mm (Fix Surface) Electronics: DAE4 Sn546; Calibrated: 2019/8/28 Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA; Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7373) <p>T-Coil scan (scan for ANSI C63.19-2011 compliance)/General Scans_LTE band2_T-Coil_HAC/z (axial) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm Signal Type: Audio File (.wav) 48k_voice_1kHz_1s.wav Output Gain: 42 Measure Window Start: 300ms Measure Window Length: 1000ms BWC applied: 0.16 dB Device Reference Point: 0, 0, -6.3 mm</p> <p>Cursor: ABM1/ABM2 = 47.71 dB ABM1 comp = 2.67 dBA/m BWC Factor = 0.16 dB Location: 3.3, -8.8, 3.7 mm</p> <p>T-Coil scan (scan for ANSI C63.19-2011 compliance)/General Scans_LTE band2_T-Coil_HAC/z (axial) wideband at best S/N/ABM Freq Resp(x,y,z,f) (1x1x1): Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k_voice_300-3000_2s.wav Output Gain: 82.26 Measure Window Start: 300ms Measure Window Length: 2000ms BWC applied: 10.79 dB Device Reference Point: 0, 0, -6.3 mm</p> <p>Cursor: Diff = 0.53 dB BWC Factor = 10.79 dB Location: 3.4, -9, 3.7 mm</p> | |
|  | |

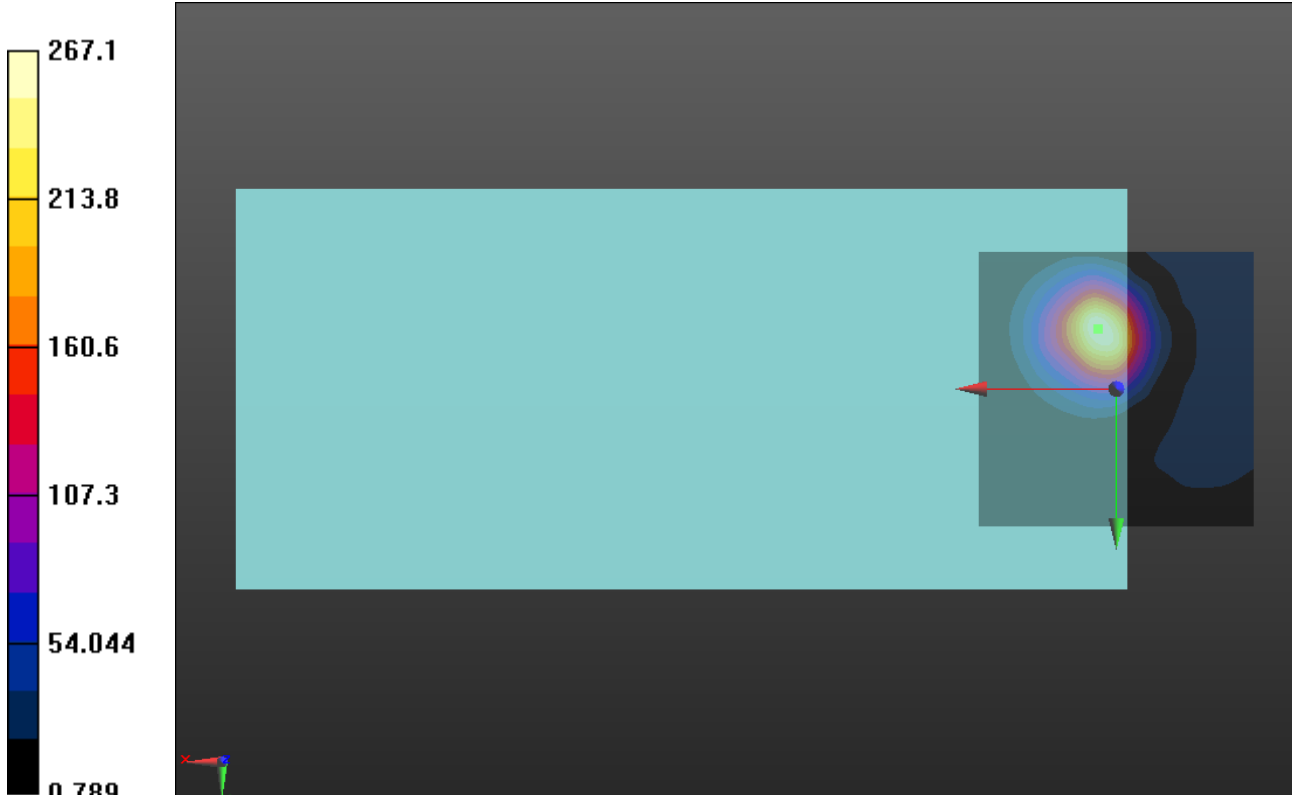


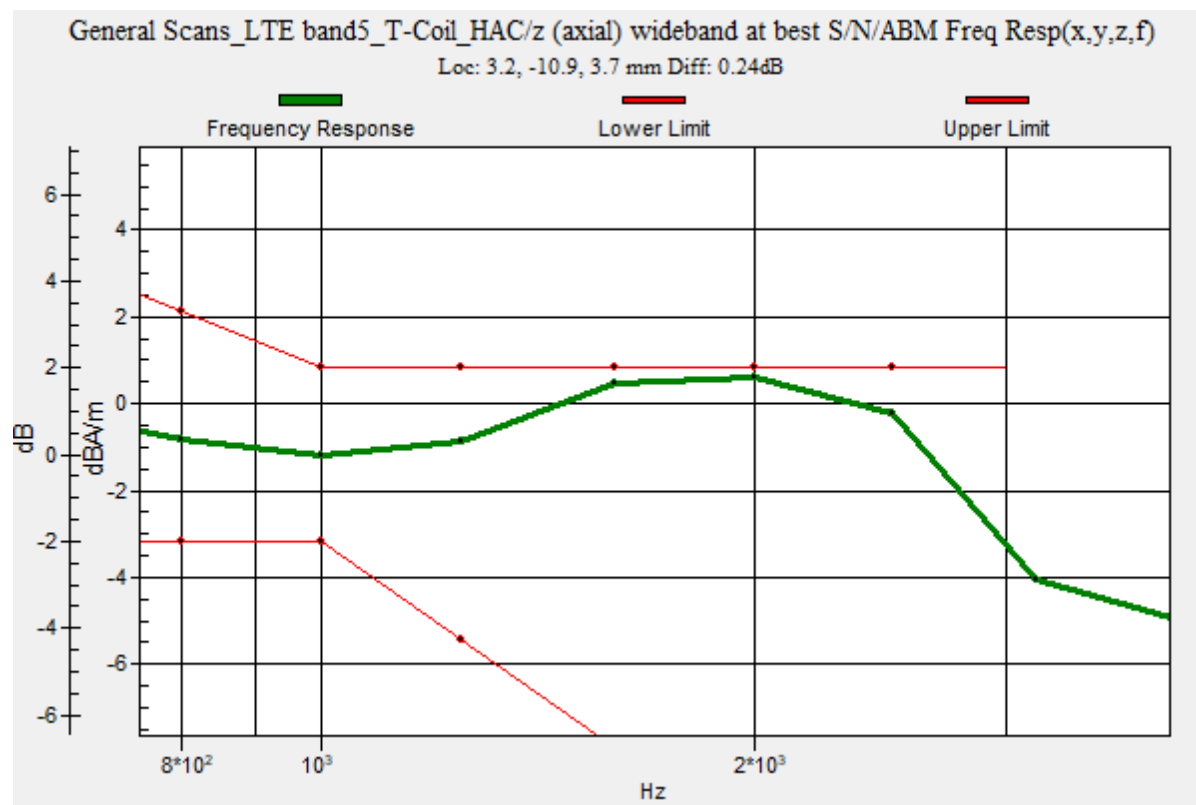
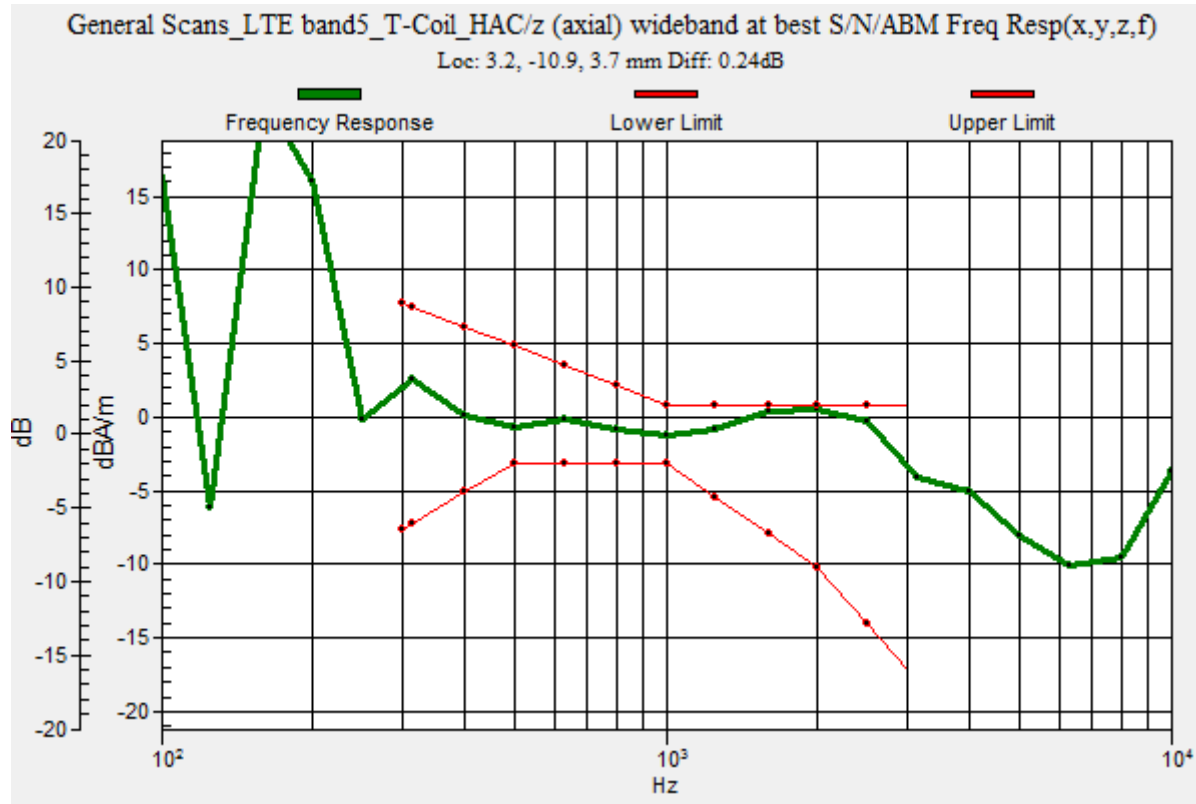


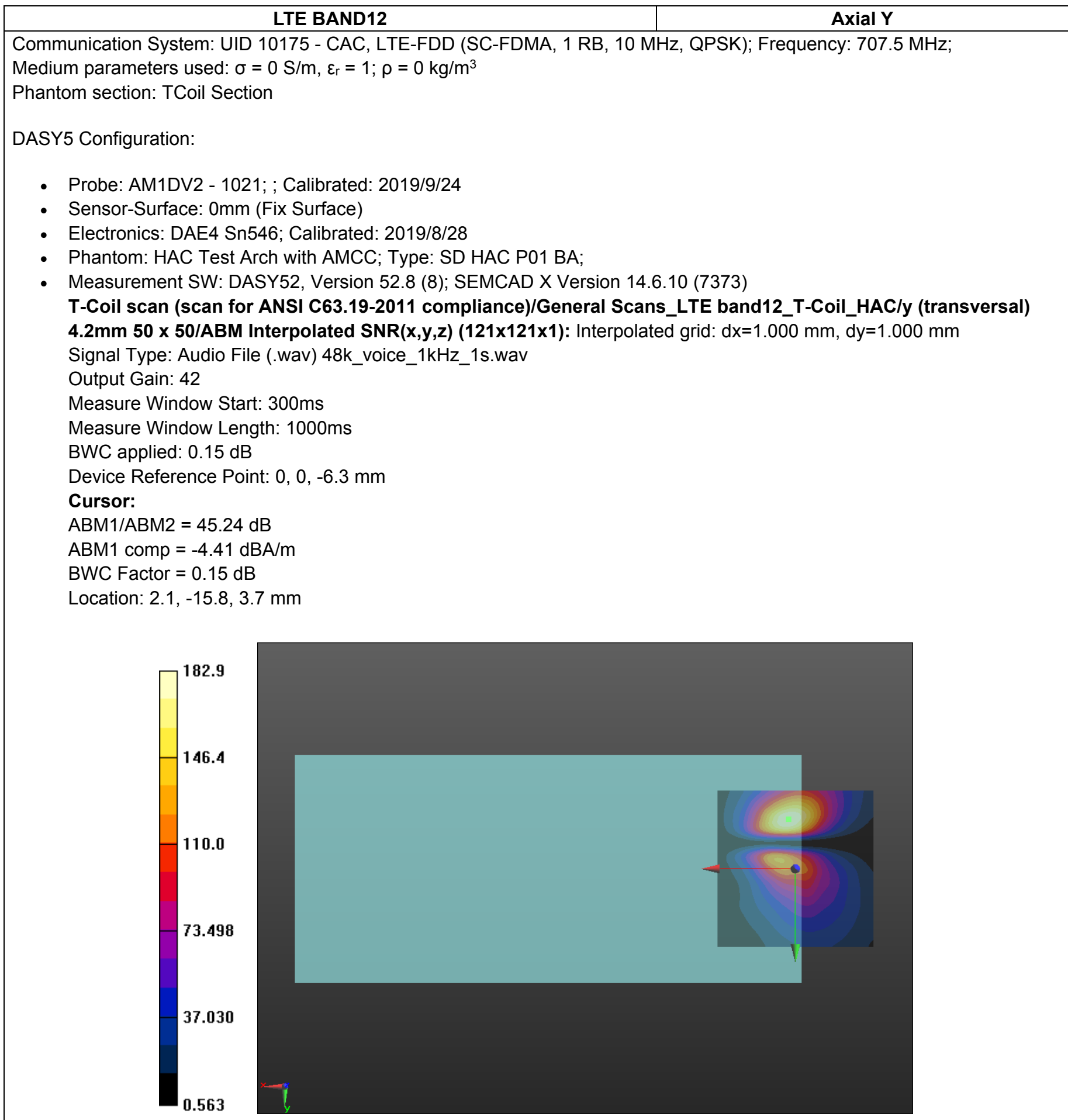
| LTE BAND4 | Axial Z & Frequency Resp. |
|--|---------------------------|
| <p>Communication System: UID 10169 - CAB, LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK); Frequency: 1732.5 MHz; Medium parameters used: $\sigma = 0$ S/m, $\epsilon_r = 1$; $\rho = 0$ kg/m³ Phantom section: TCoil Section</p> | |
| <p>DASY5 Configuration:</p> <ul style="list-style-type: none"> Probe: AM1DV2 - 1021; ; Calibrated: 2019/9/24 Sensor-Surface: 0mm (Fix Surface) Electronics: DAE4 Sn546; Calibrated: 2019/8/28 Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA; Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7373) <p>T-Coil scan (scan for ANSI C63.19-2011 compliance)/General Scans_LTE band4_T-Coil_HAC/z (axial) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm Signal Type: Audio File (.wav) 48k_voice_1kHz_1s.wav Output Gain: 42 Measure Window Start: 300ms Measure Window Length: 1000ms BWC applied: 0.15 dB Device Reference Point: 0, 0, -6.3 mm</p> <p>Cursor: ABM1/ABM2 = 48.64 dB ABM1 comp = 0.77 dBA/m BWC Factor = 0.15 dB Location: 2.1, -10.4, 3.7 mm</p> <p>T-Coil scan (scan for ANSI C63.19-2011 compliance)/General Scans_LTE band4_T-Coil_HAC/z (axial) wideband at best S/N/ABM Freq Resp(x,y,z,f) (1x1x1): Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k_voice_300-3000_2s.wav Output Gain: 82.26 Measure Window Start: 300ms Measure Window Length: 2000ms BWC applied: 10.79 dB Device Reference Point: 0, 0, -6.3 mm</p> <p>Cursor: Diff = 0.24 dB BWC Factor = 10.79 dB Location: 2.2, -10.3, 3.7 mm</p> | |
|  | |

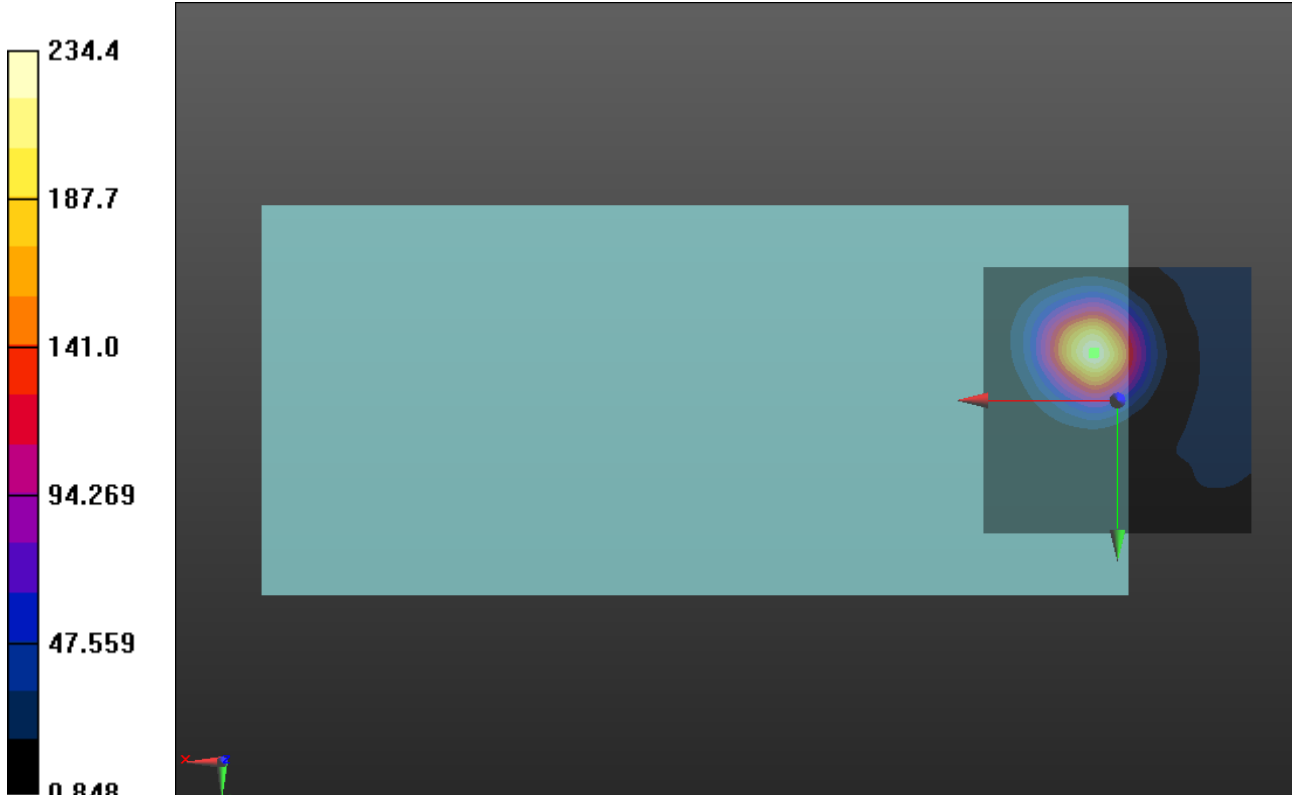


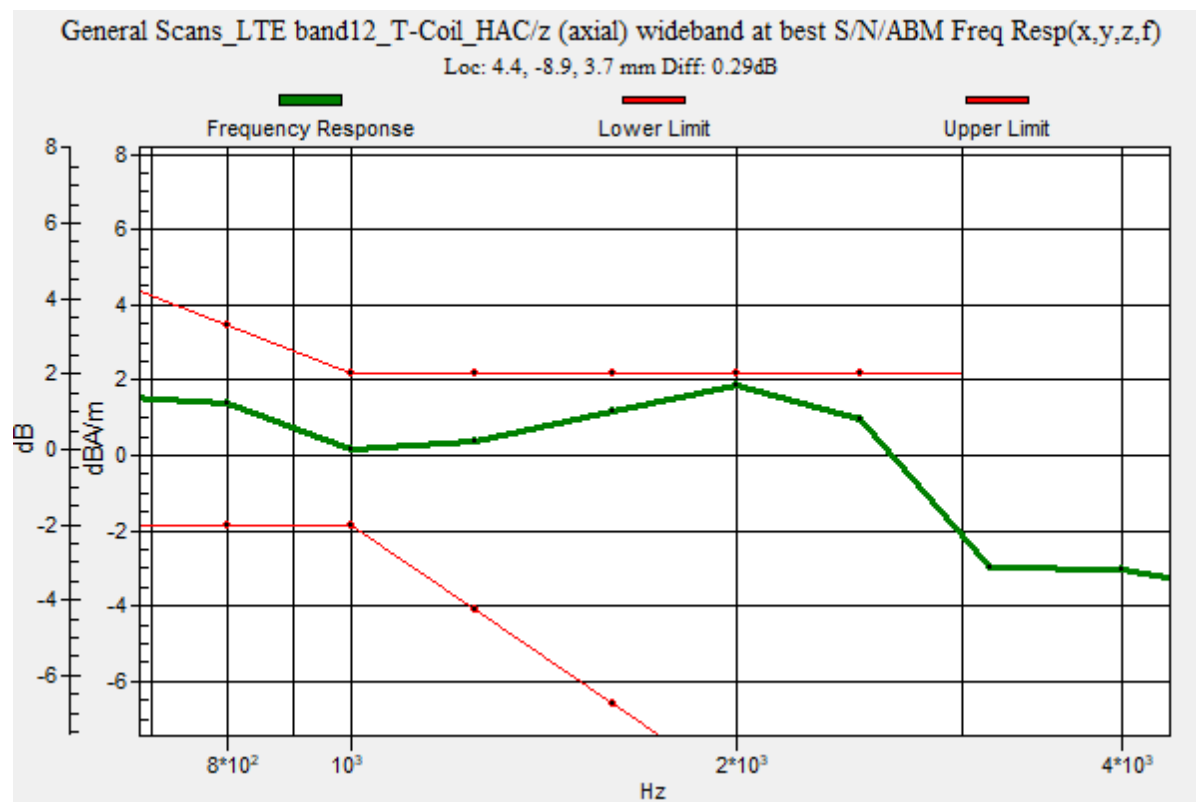
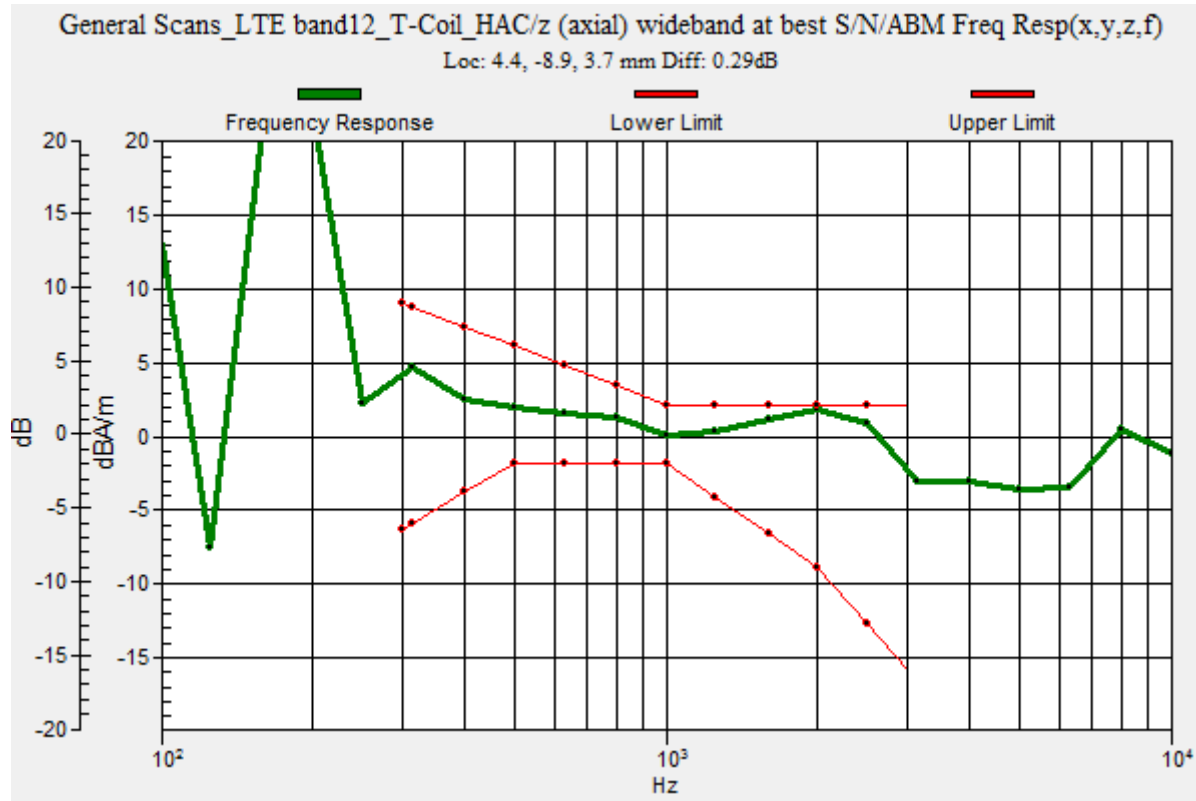


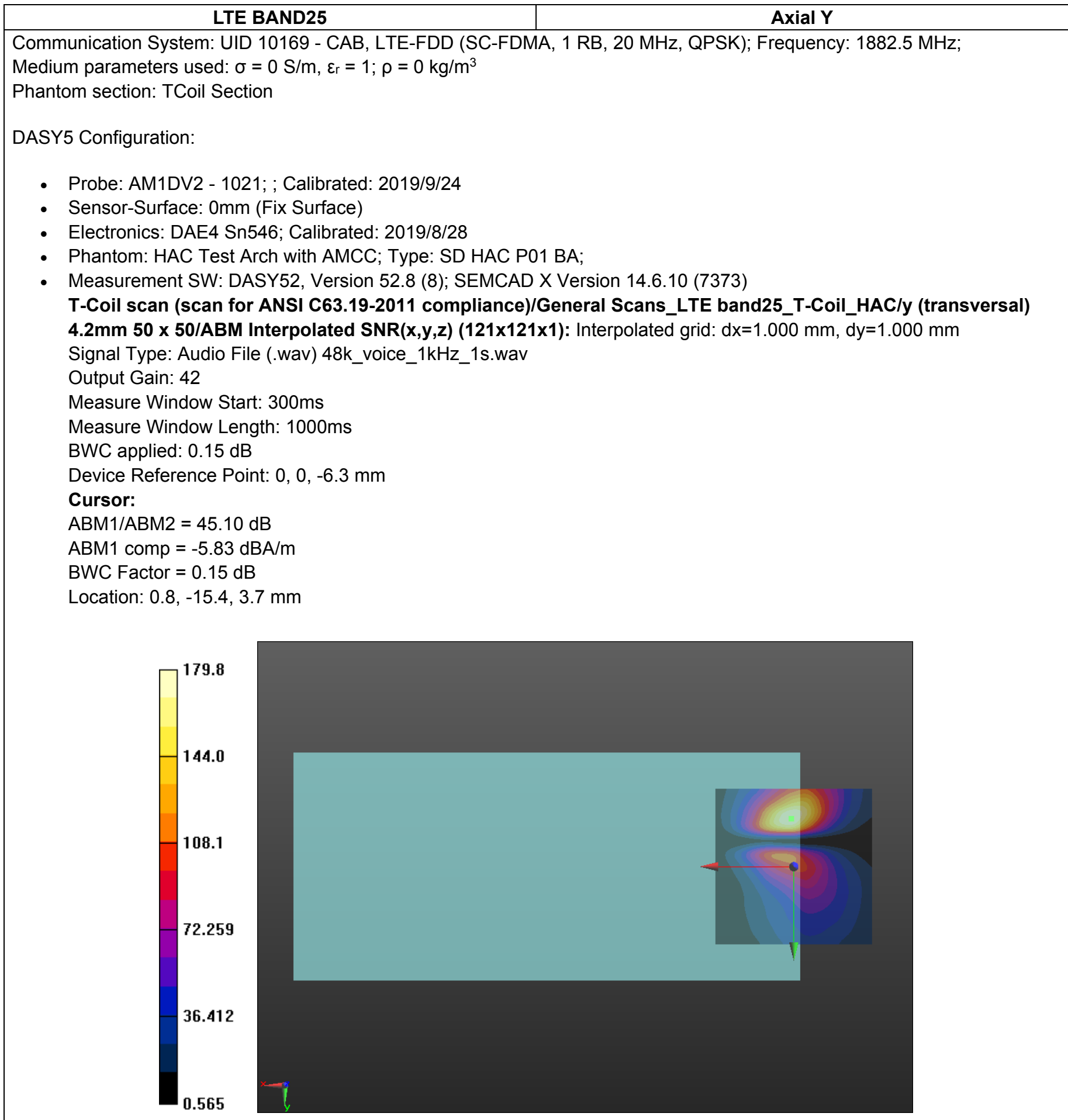
| LTE BAND5 | Axial Z & Frequency Resp. |
|--|---------------------------|
| <p>Communication System: UID 10175 - CAC, LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK); Frequency: 836.5 MHz; Medium parameters used: $\sigma = 0$ S/m, $\epsilon_r = 1$; $\rho = 0$ kg/m³ Phantom section: TCoil Section</p> | |
| <p>DASY5 Configuration:</p> | |
| <ul style="list-style-type: none"> Probe: AM1DV2 - 1021; ; Calibrated: 2019/9/24 Sensor-Surface: 0mm (Fix Surface) Electronics: DAE4 Sn546; Calibrated: 2019/8/28 Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA; Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7373) | |
| <p>T-Coil scan (scan for ANSI C63.19-2011 compliance)/General Scans_LTE band5_T-Coil_HAC/z (axial) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm Signal Type: Audio File (.wav) 48k_voice_1kHz_1s.wav Output Gain: 42 Measure Window Start: 300ms Measure Window Length: 1000ms BWC applied: 0.15 dB Device Reference Point: 0, 0, -6.3 mm</p> | |
| <p>Cursor: ABM1/ABM2 = 48.53 dB ABM1 comp = 2.28 dBA/m BWC Factor = 0.15 dB Location: 3.3, -10.8, 3.7 mm</p> | |
| <p>T-Coil scan (scan for ANSI C63.19-2011 compliance)/General Scans_LTE band5_T-Coil_HAC/z (axial) wideband at best S/N/ABM Freq Resp(x,y,z,f) (1x1x1): Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k_voice_300-3000_2s.wav Output Gain: 82.26 Measure Window Start: 300ms Measure Window Length: 2000ms BWC applied: 10.79 dB Device Reference Point: 0, 0, -6.3 mm</p> | |
| <p>Cursor: Diff = 0.24 dB BWC Factor = 10.79 dB Location: 3.2, -10.9, 3.7 mm</p> | |
|  | |

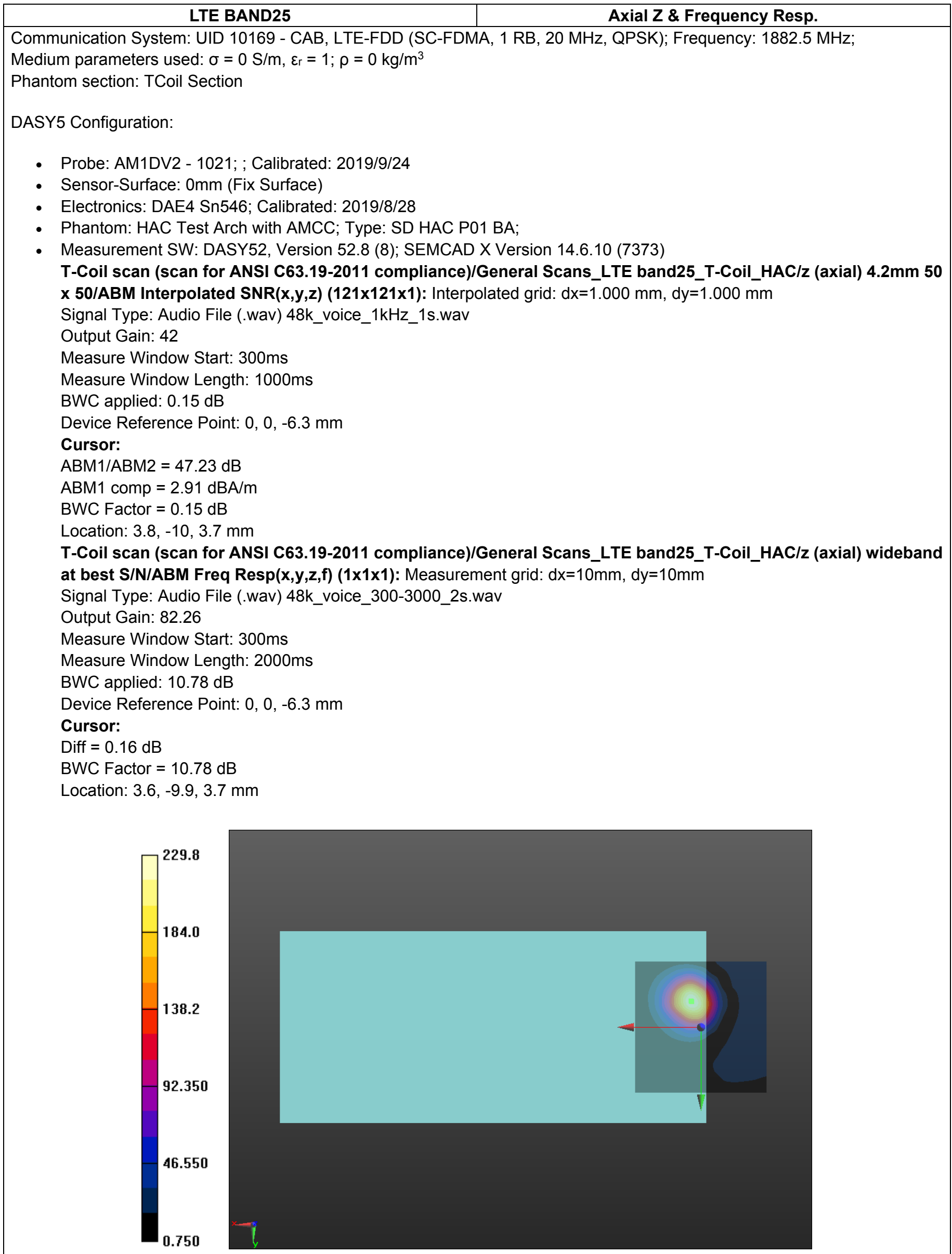


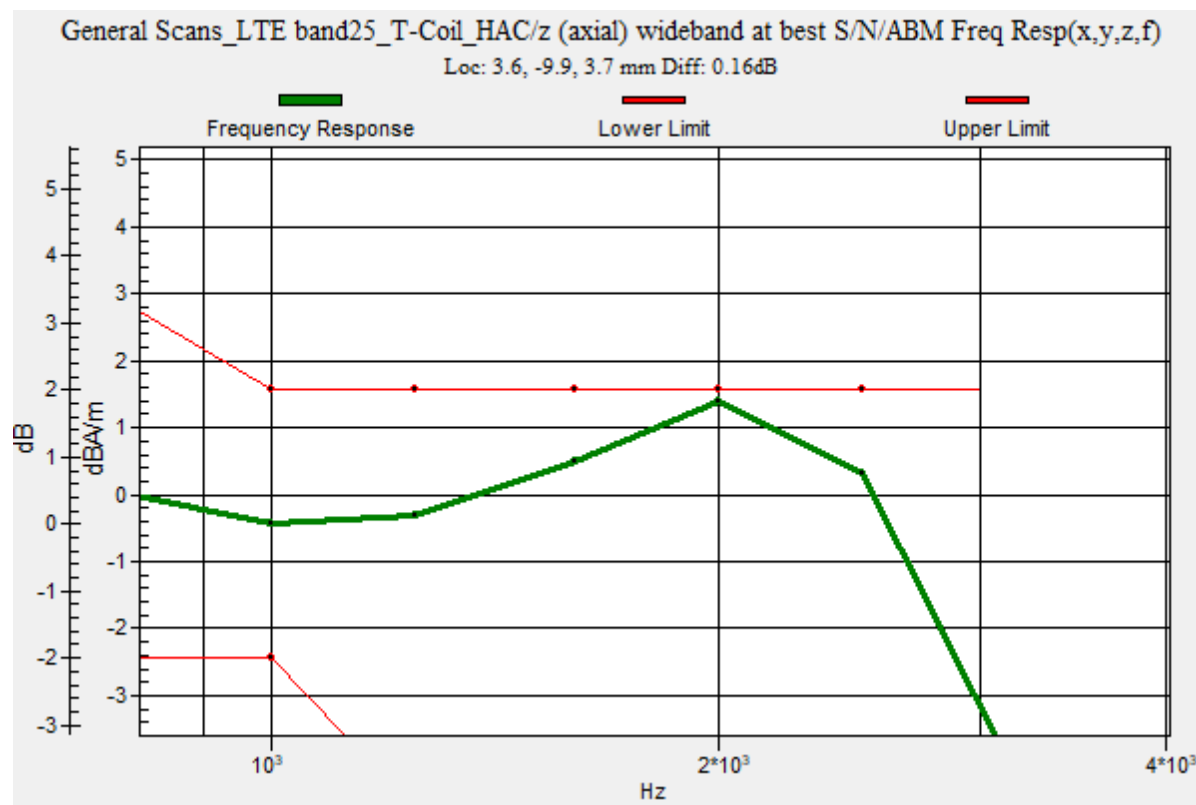
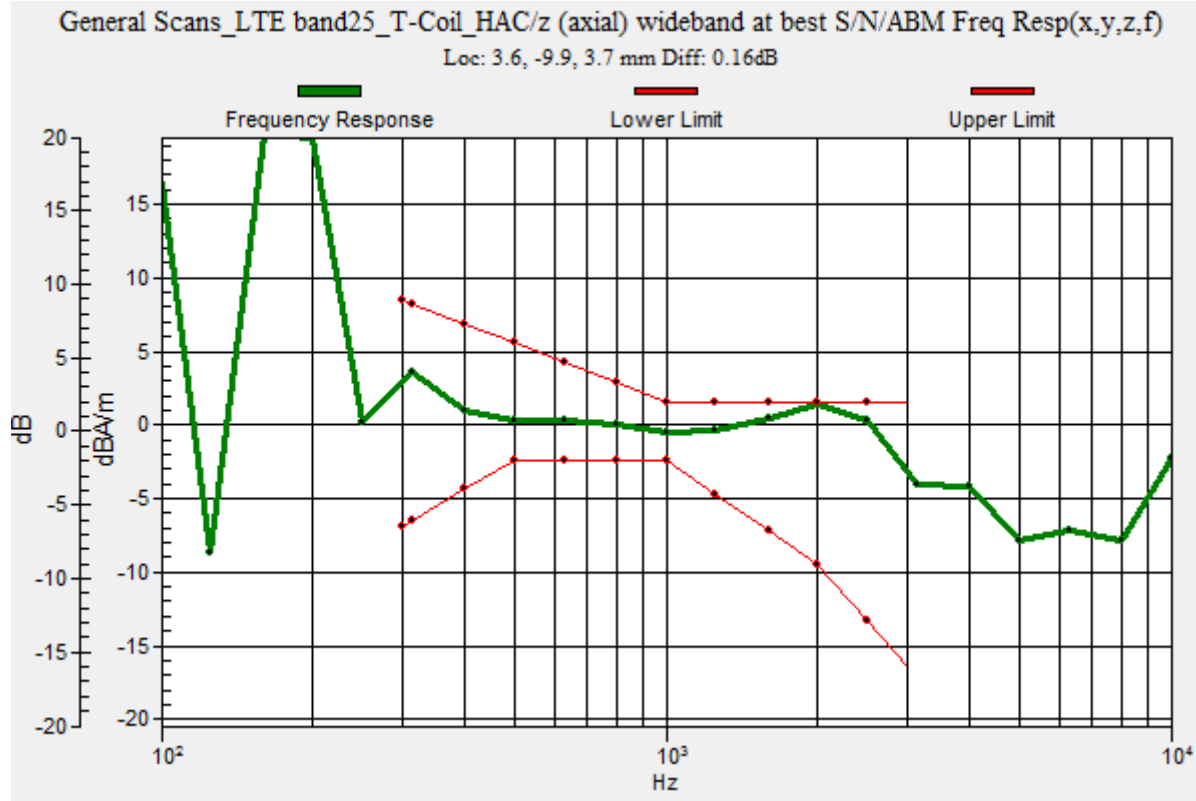


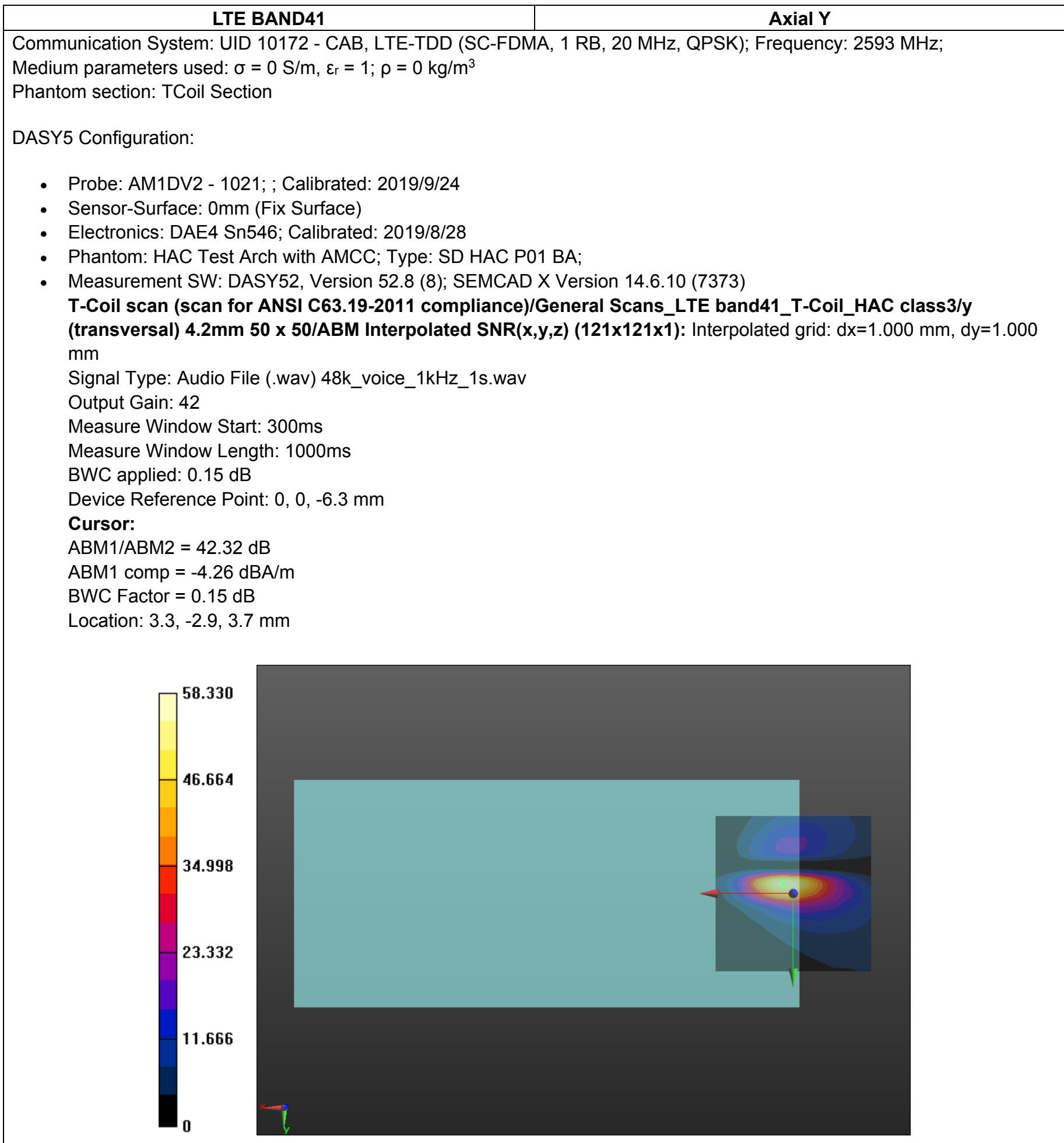
| LTE BAND12 | Axial Z & Frequency Resp. |
|---|---------------------------|
| <p>Communication System: UID 10175 - CAC, LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK); Frequency: 707.5 MHz; Medium parameters used: $\sigma = 0$ S/m, $\epsilon_r = 1$; $\rho = 0$ kg/m³ Phantom section: TCoil Section</p> | |
| <p>DASY5 Configuration:</p> | |
| <ul style="list-style-type: none"> Probe: AM1DV2 - 1021; ; Calibrated: 2019/9/24 Sensor-Surface: 0mm (Fix Surface) Electronics: DAE4 Sn546; Calibrated: 2019/8/28 Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA; Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7373) | |
| <p>T-Coil scan (scan for ANSI C63.19-2011 compliance)/General Scans_LTE band12_T-Coil_HAC/z (axial) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm Signal Type: Audio File (.wav) 48k_voice_1kHz_1s.wav Output Gain: 42 Measure Window Start: 300ms Measure Window Length: 1000ms BWC applied: 0.15 dB Device Reference Point: 0, 0, -6.3 mm</p> | |
| <p>Cursor: ABM1/ABM2 = 47.40 dB ABM1 comp = 4.11 dBA/m BWC Factor = 0.15 dB Location: 4.6, -8.8, 3.7 mm</p> | |
| <p>T-Coil scan (scan for ANSI C63.19-2011 compliance)/General Scans_LTE band12_T-Coil_HAC/z (axial) wideband at best S/N/ABM Freq Resp(x,y,z,f) (1x1x1): Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k_voice_300-3000_2s.wav Output Gain: 82.26 Measure Window Start: 300ms Measure Window Length: 2000ms BWC applied: 10.79 dB Device Reference Point: 0, 0, -6.3 mm</p> | |
| <p>Cursor: Diff = 0.29 dB BWC Factor = 10.79 dB Location: 4.4, -8.9, 3.7 mm</p> | |
|  | |

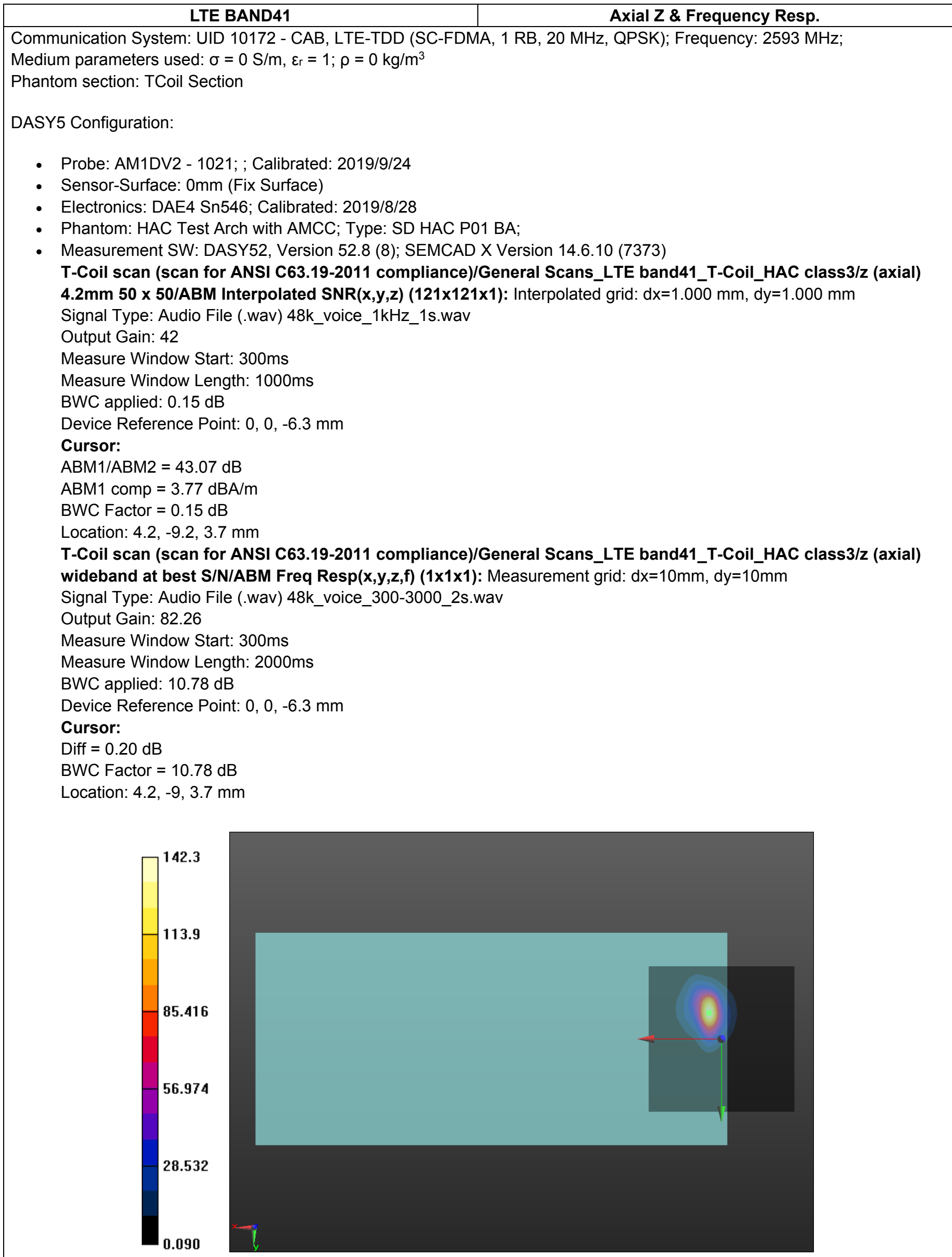


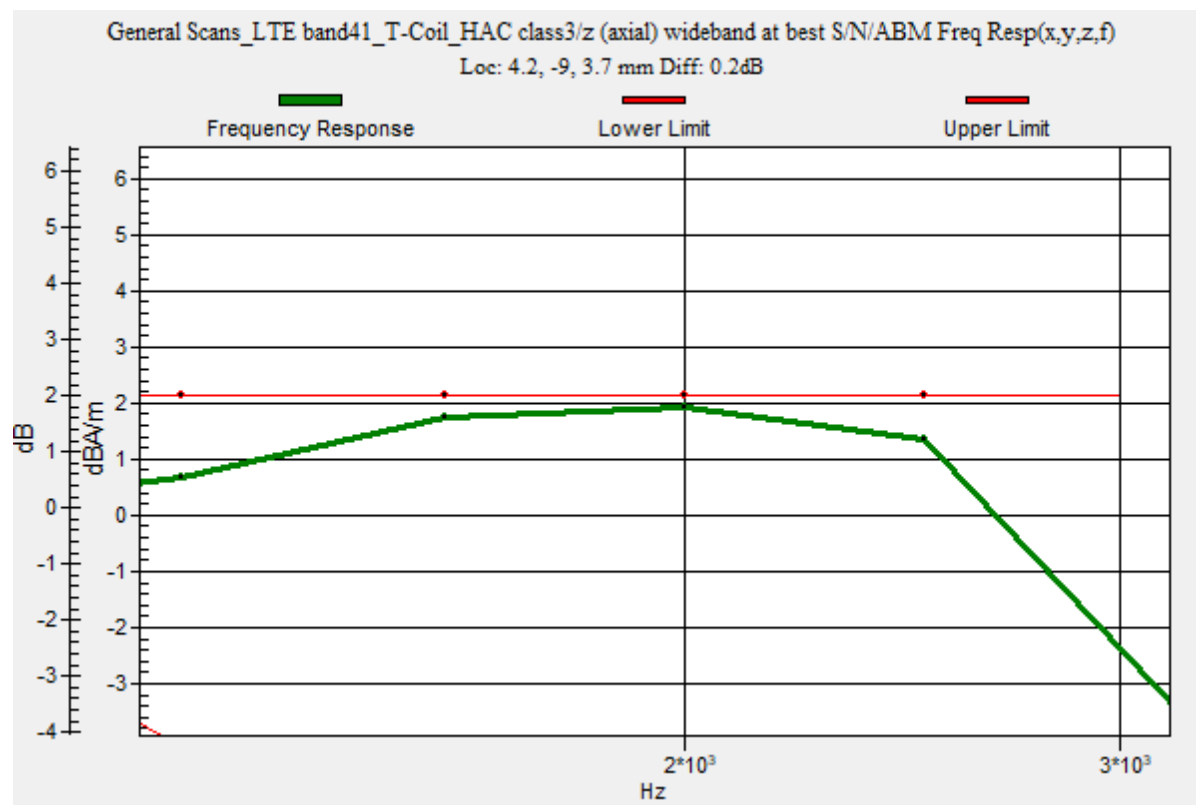
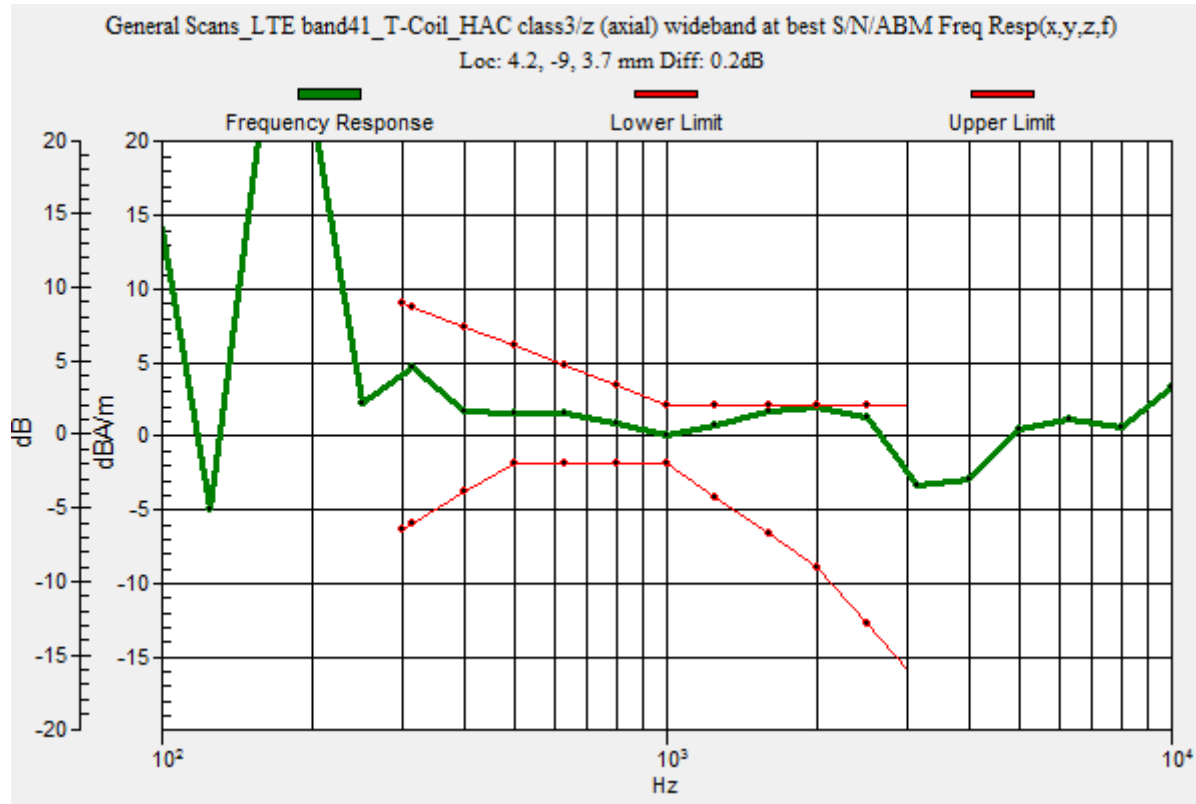


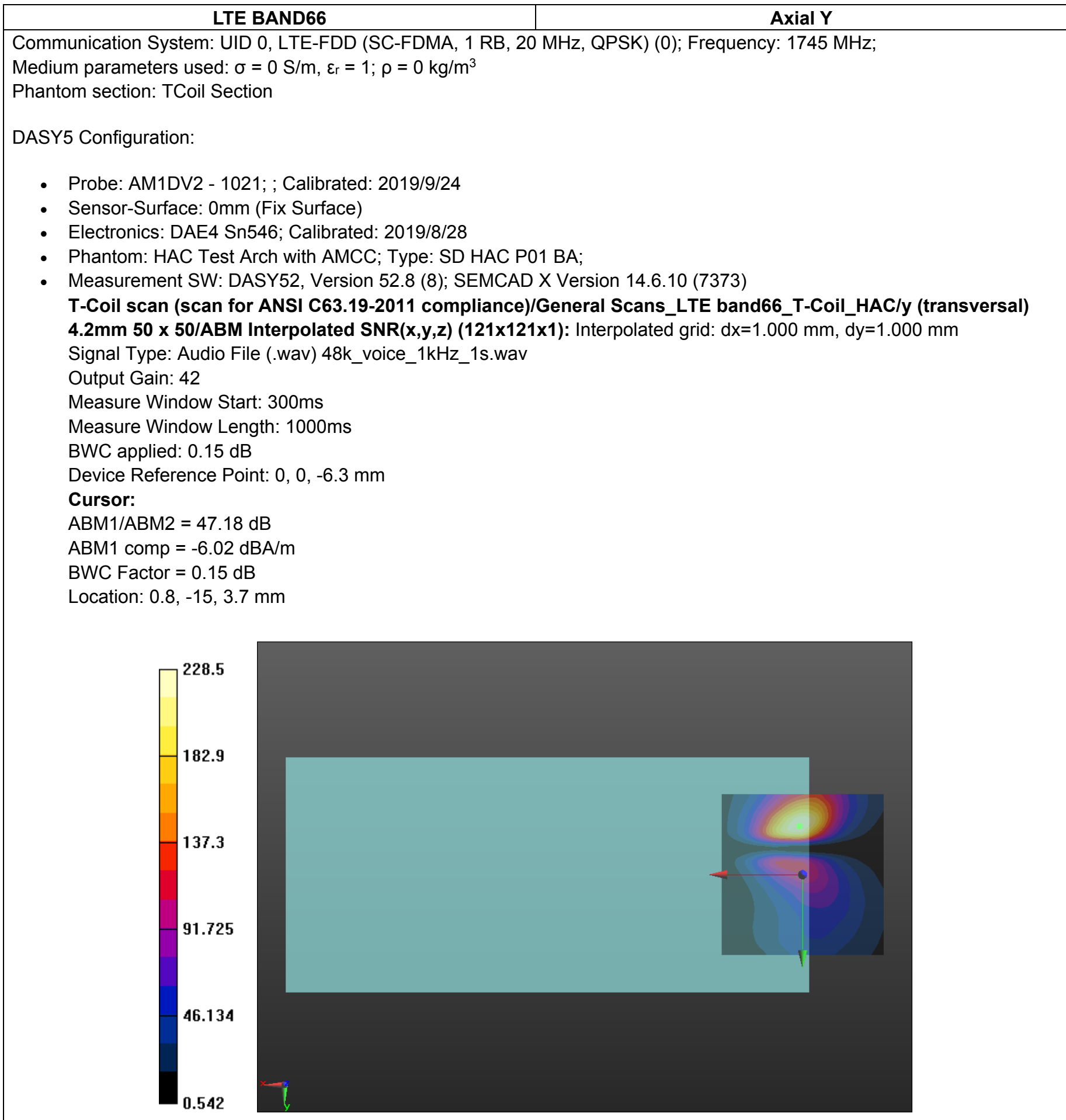


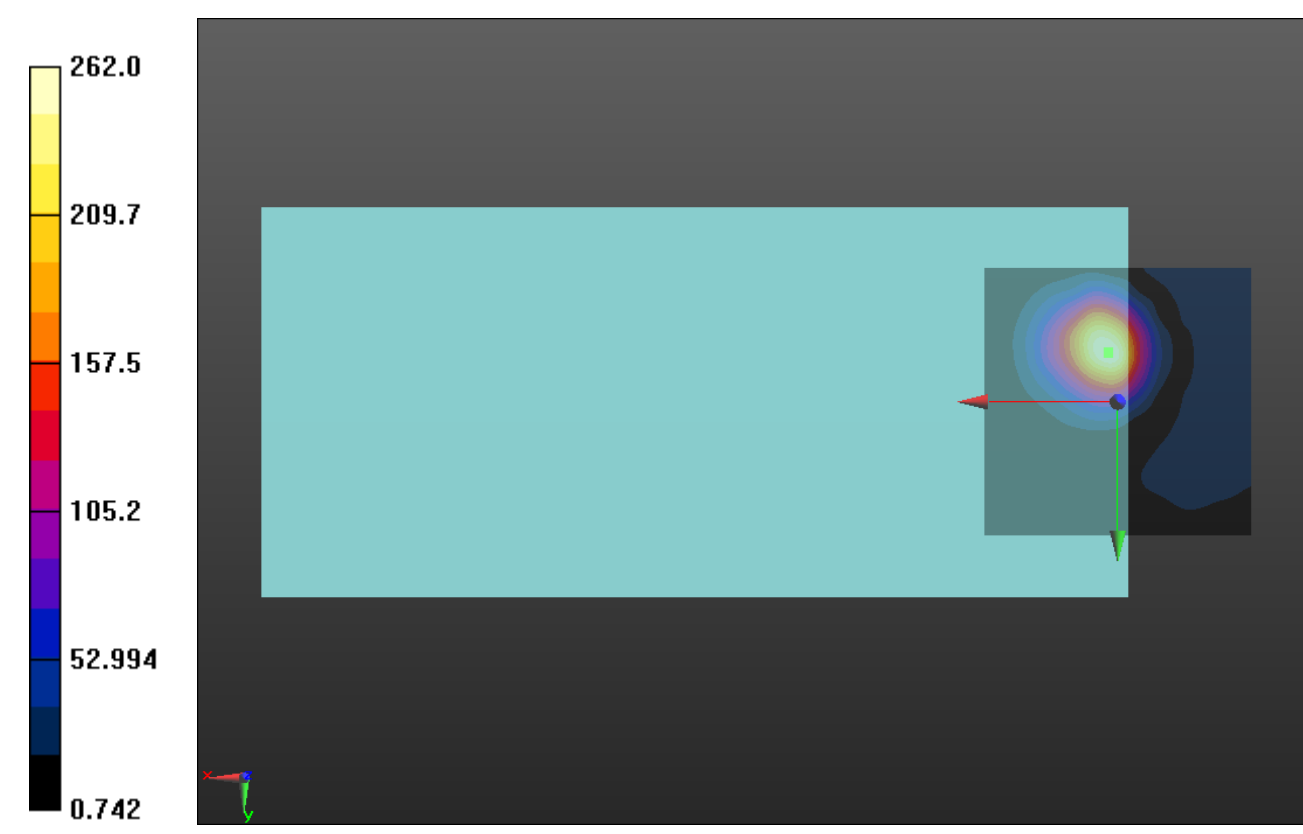


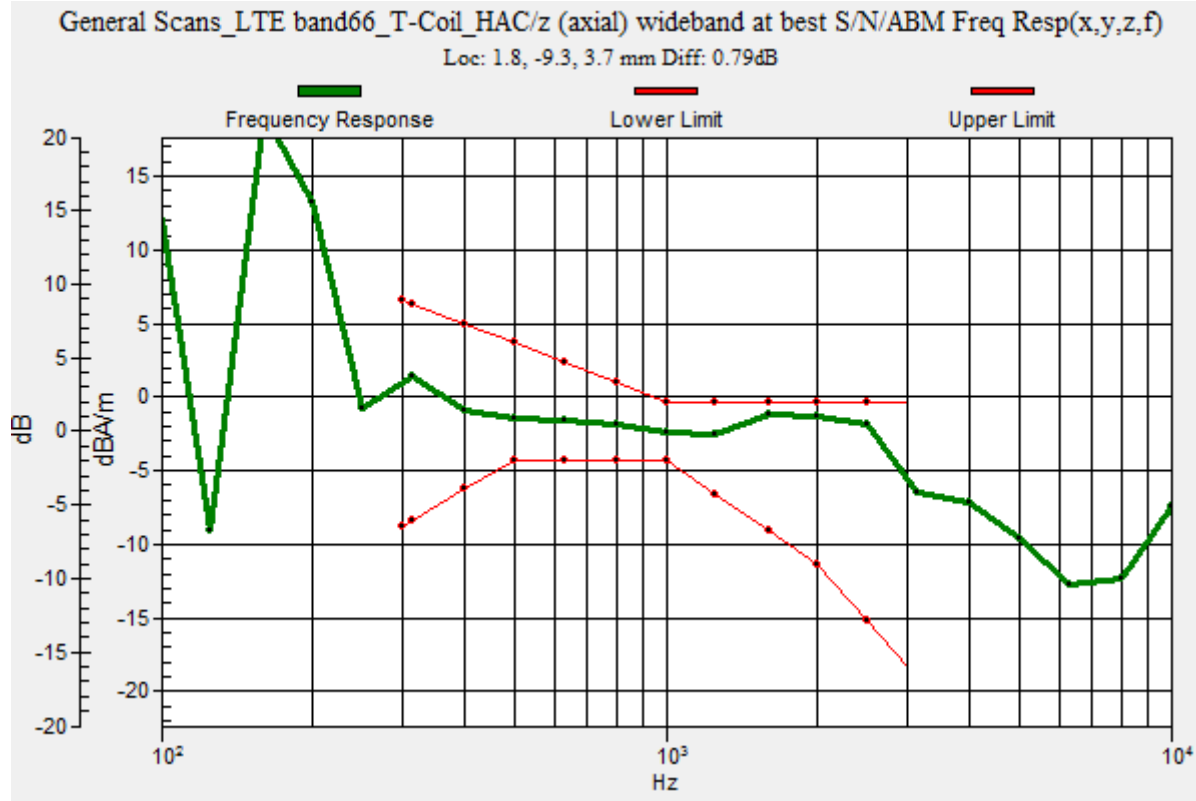


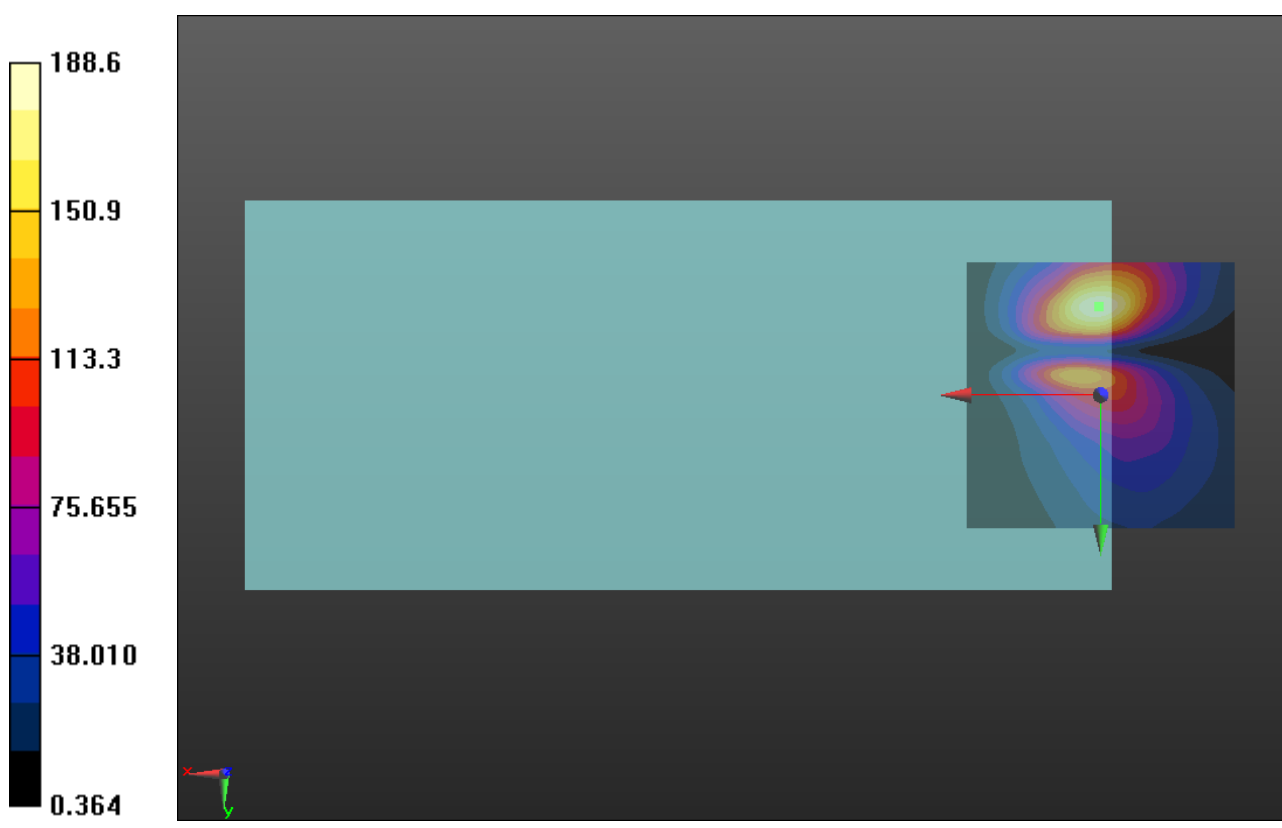


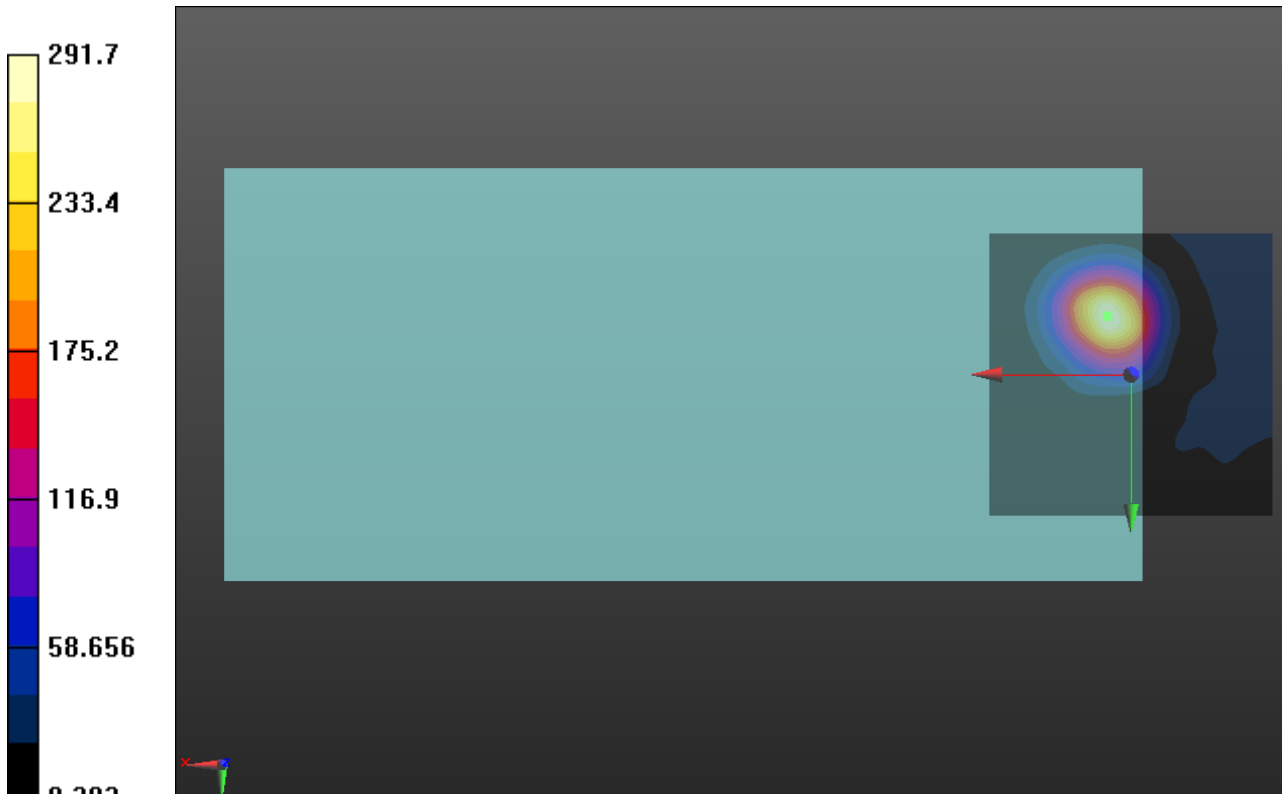


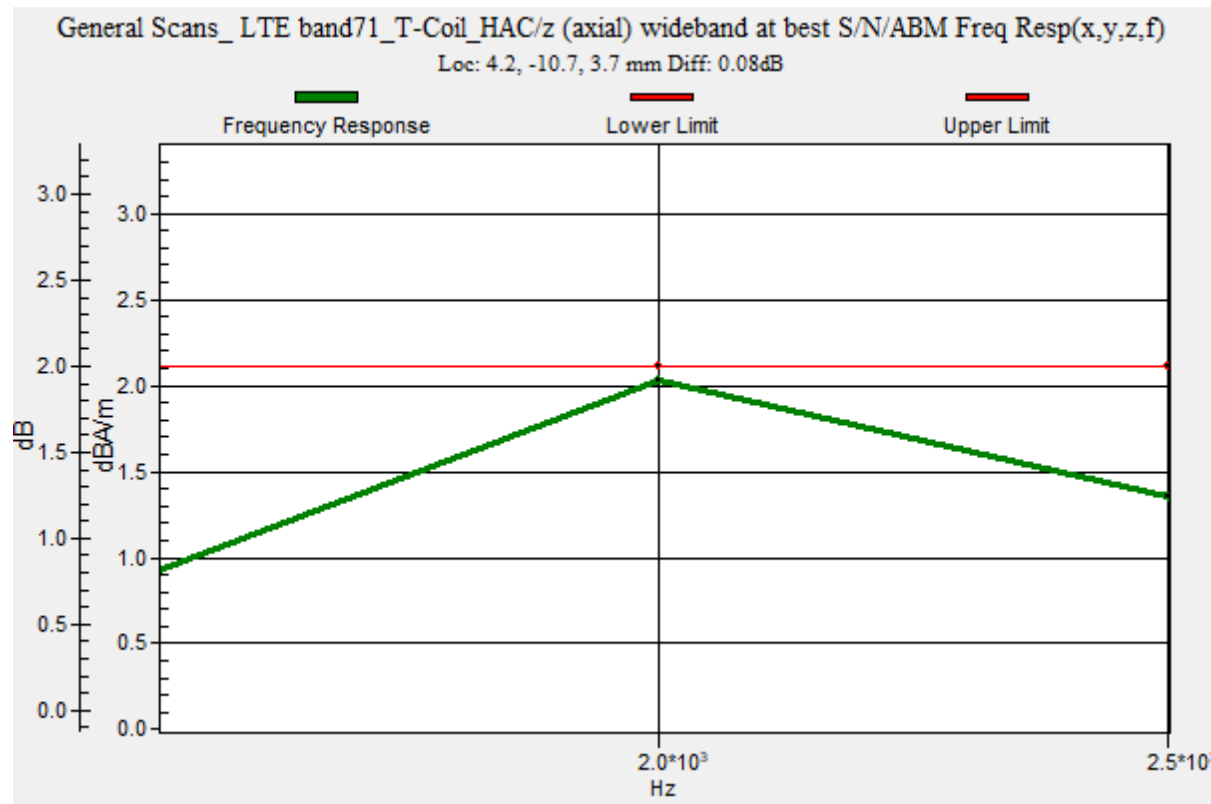
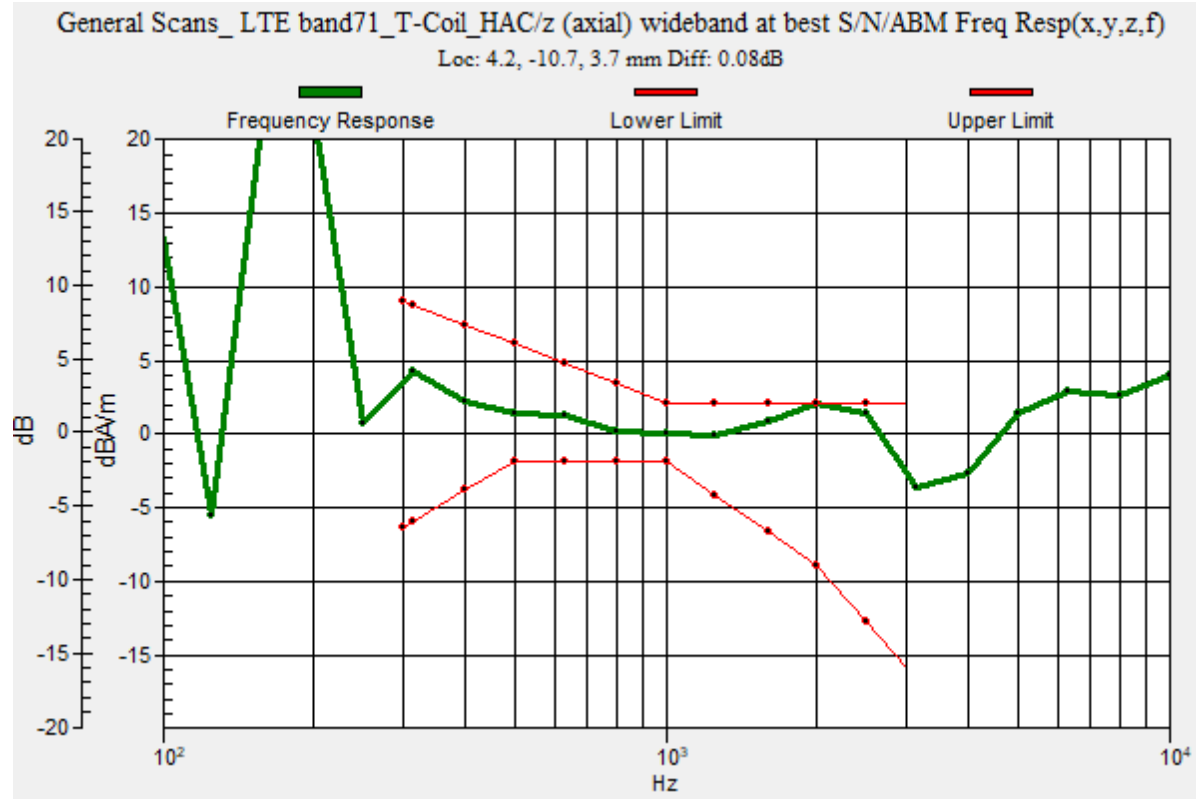


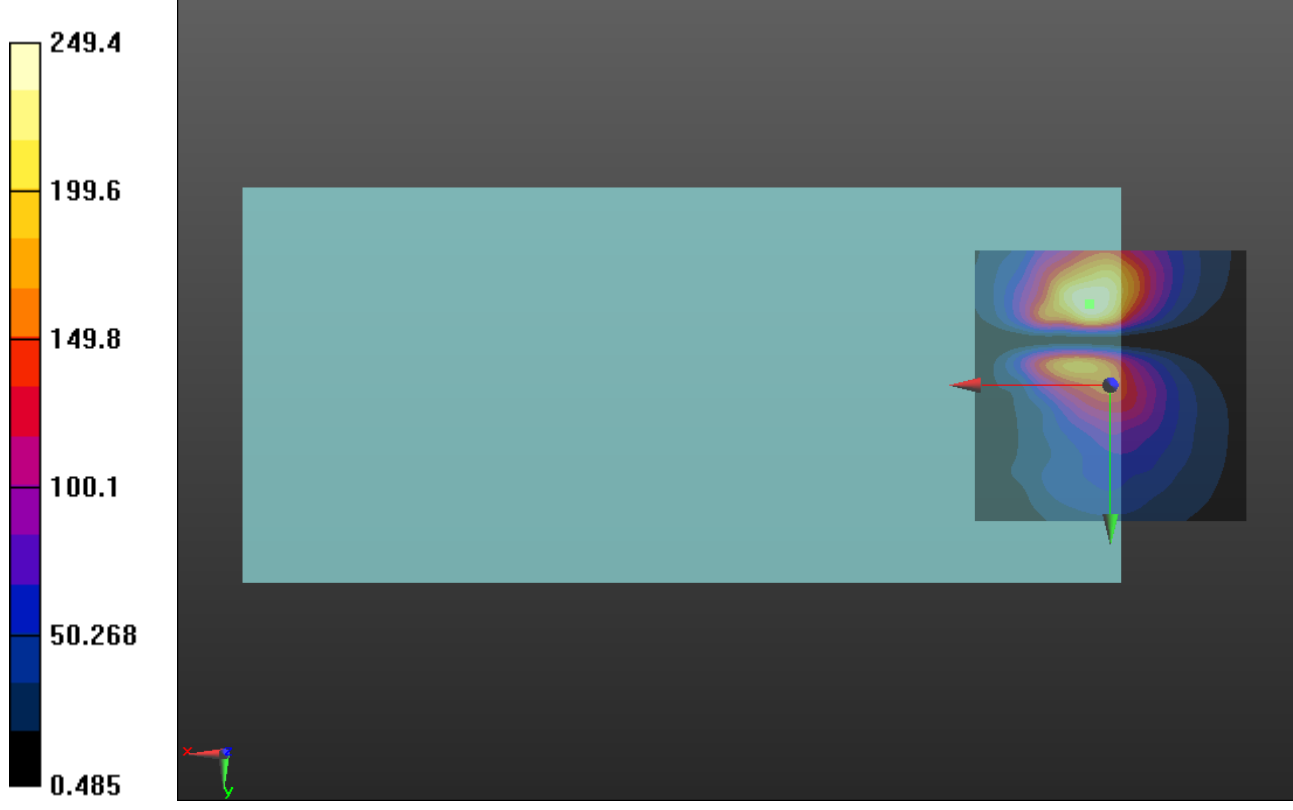
| LTE BAND66 | Axial Z & Frequency Resp. |
|---|---------------------------|
| <p>Communication System: UID 0, LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK) (0); Frequency: 1745 MHz; Medium parameters used: $\sigma = 0$ S/m, $\epsilon_r = 1$; $\rho = 0$ kg/m³ Phantom section: TCoil Section</p> | |
| <p>DASY5 Configuration:</p> | |
| <ul style="list-style-type: none"> Probe: AM1DV2 - 1021; ; Calibrated: 2019/9/24 Sensor-Surface: 0mm (Fix Surface) Electronics: DAE4 Sn546; Calibrated: 2019/8/28 Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA; Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7373) | |
| <p>T-Coil scan (scan for ANSI C63.19-2011 compliance)/General Scans_LTE band66_T-Coil_HAC/z (axial) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm Signal Type: Audio File (.wav) 48k_voice_1kHz_1s.wav Output Gain: 42 Measure Window Start: 300ms Measure Window Length: 1000ms BWC applied: 0.15 dB Device Reference Point: 0, 0, -6.3 mm</p> | |
| <p>Cursor: ABM1/ABM2 = 48.37 dB ABM1 comp = 0.55 dBA/m BWC Factor = 0.15 dB Location: 1.7, -9.2, 3.7 mm</p> | |
| <p>T-Coil scan (scan for ANSI C63.19-2011 compliance)/General Scans_LTE band66_T-Coil_HAC/z (axial) wideband at best S/N/ABM Freq Resp(x,y,z,f) (1x1x1): Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k_voice_300-3000_2s.wav Output Gain: 82.26 Measure Window Start: 300ms Measure Window Length: 2000ms BWC applied: 10.79 dB Device Reference Point: 0, 0, -6.3 mm</p> | |
| <p>Cursor: Diff = 0.79 dB BWC Factor = 10.79 dB Location: 1.8, -9.3, 3.7 mm</p> | |
|  | |



| LTE BAND71 | Axial Y |
|--|---------|
| <p>Communication System: UID 0, LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK) (0); Frequency: 683 MHz; Medium parameters used: $\sigma = 0$ S/m, $\epsilon_r = 1$; $\rho = 0$ kg/m³ Phantom section: TCoil Section</p> <p>DASY5 Configuration:</p> <ul style="list-style-type: none"> Probe: AM1DV2 - 1021; ; Calibrated: 2019/9/24 Sensor-Surface: 0mm (Fix Surface) Electronics: DAE4 Sn546; Calibrated: 2019/8/28 Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA; Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7373) <p>T-Coil scan (scan for ANSI C63.19-2011 compliance)/General Scans_LTE band71_T-Coil_HAC/y (transversal) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm Signal Type: Audio File (.wav) 48k_voice_1kHz_1s.wav Output Gain: 42 Measure Window Start: 300ms Measure Window Length: 1000ms BWC applied: 0.16 dB Device Reference Point: 0, 0, -6.3 mm</p> <p>Cursor: ABM1/ABM2 = 45.51 dB ABM1 comp = -4.27 dBA/m BWC Factor = 0.16 dB Location: 0.4, -16.7, 3.7 mm</p>  | |

| LTE BAND71 | Axial Z & Frequency Resp. |
|---|---------------------------|
| <p>Communication System: UID 0, LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK) (0); Frequency: 683 MHz; Medium parameters used: $\sigma = 0$ S/m, $\epsilon_r = 1$; $\rho = 0$ kg/m³ Phantom section: TCoil Section</p> <p>DASY5 Configuration:</p> <ul style="list-style-type: none"> Probe: AM1DV2 - 1021; ; Calibrated: 2019/9/24 Sensor-Surface: 0mm (Fix Surface) Electronics: DAE4 Sn546; Calibrated: 2019/8/28 Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA; Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7373) <p>T-Coil scan (scan for ANSI C63.19-2011 compliance)/General Scans_LTE band71_T-Coil_HAC/z (axial) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm Signal Type: Audio File (.wav) 48k_voice_1kHz_1s.wav Output Gain: 42 Measure Window Start: 300ms Measure Window Length: 1000ms BWC applied: 0.16 dB Device Reference Point: 0, 0, -6.3 mm</p> <p>Cursor: ABM1/ABM2 = 49.30 dB ABM1 comp = 5.31 dBA/m BWC Factor = 0.16 dB Location: 4.2, -10.4, 3.7 mm</p>  | |



| WIFI 2.4G 802.11g | Axial Y |
|---|---------|
| <p>Communication System: UID 10418 - AAA, IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 99pc duty cycle, Long preamble); Frequency: 2412 MHz; Medium parameters used: $\sigma = 0$ S/m, $\epsilon_r = 1$; $\rho = 0$ kg/m³ Phantom section: TCoil Section</p> | |
| <p>DASY5 Configuration:</p> | |
| <ul style="list-style-type: none"> Probe: AM1DV2 - 1021; ; Calibrated: 2019/9/24 Sensor-Surface: 0mm (Fix Surface) Electronics: DAE4 Sn546; Calibrated: 2019/8/28 Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA; Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7373) | |
| <p>T-Coil scan (scan for ANSI C63.19-2011 compliance)/General Scans_WIFI2.4G 802.11g T-Coil_HAC/y (transversal) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm</p> | |
| <p>Signal Type: Audio File (.wav) 48k_voice_1kHz_1s.wav</p> | |
| <p>Output Gain: 26.5</p> | |
| <p>Measure Window Start: 300ms</p> | |
| <p>Measure Window Length: 1000ms</p> | |
| <p>BWC applied: 0.16 dB</p> | |
| <p>Device Reference Point: 0, 0, -6.3 mm</p> | |
| <p>Cursor:</p> | |
| <p>ABM1/ABM2 = 47.94 dB</p> | |
| <p>ABM1 comp = -5.98 dBA/m</p> | |
| <p>BWC Factor = 0.16 dB</p> | |
| <p>Location: 3.8, -15, 3.7 mm</p> | |
|  | |

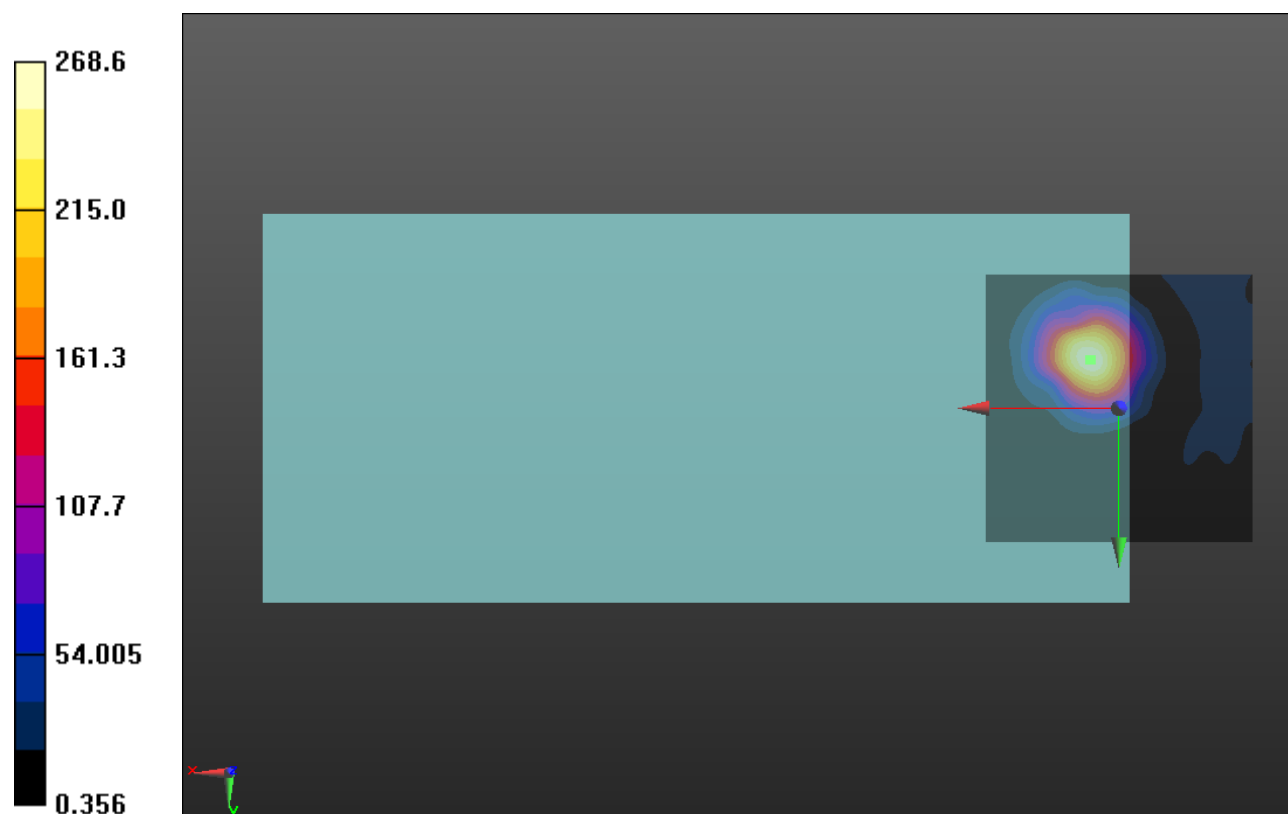
WIFI 2.4G 802.11g

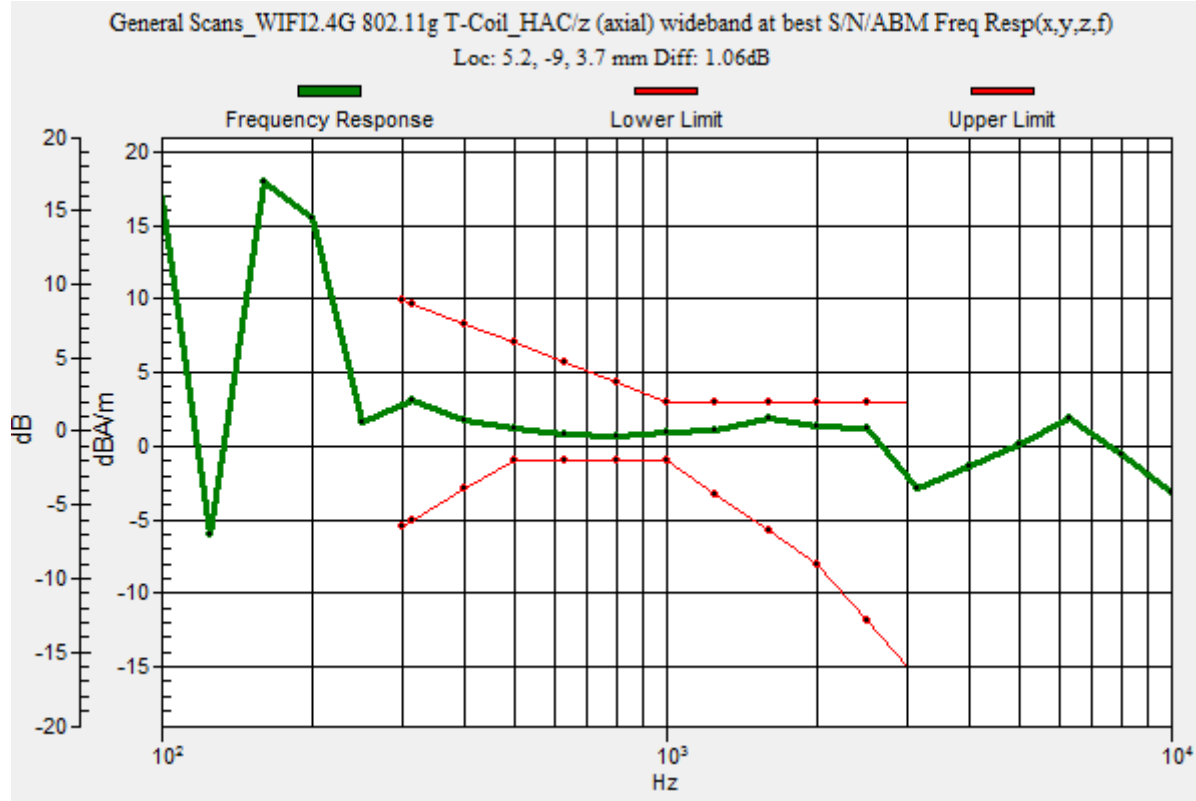
Axial Z & Frequency Resp.

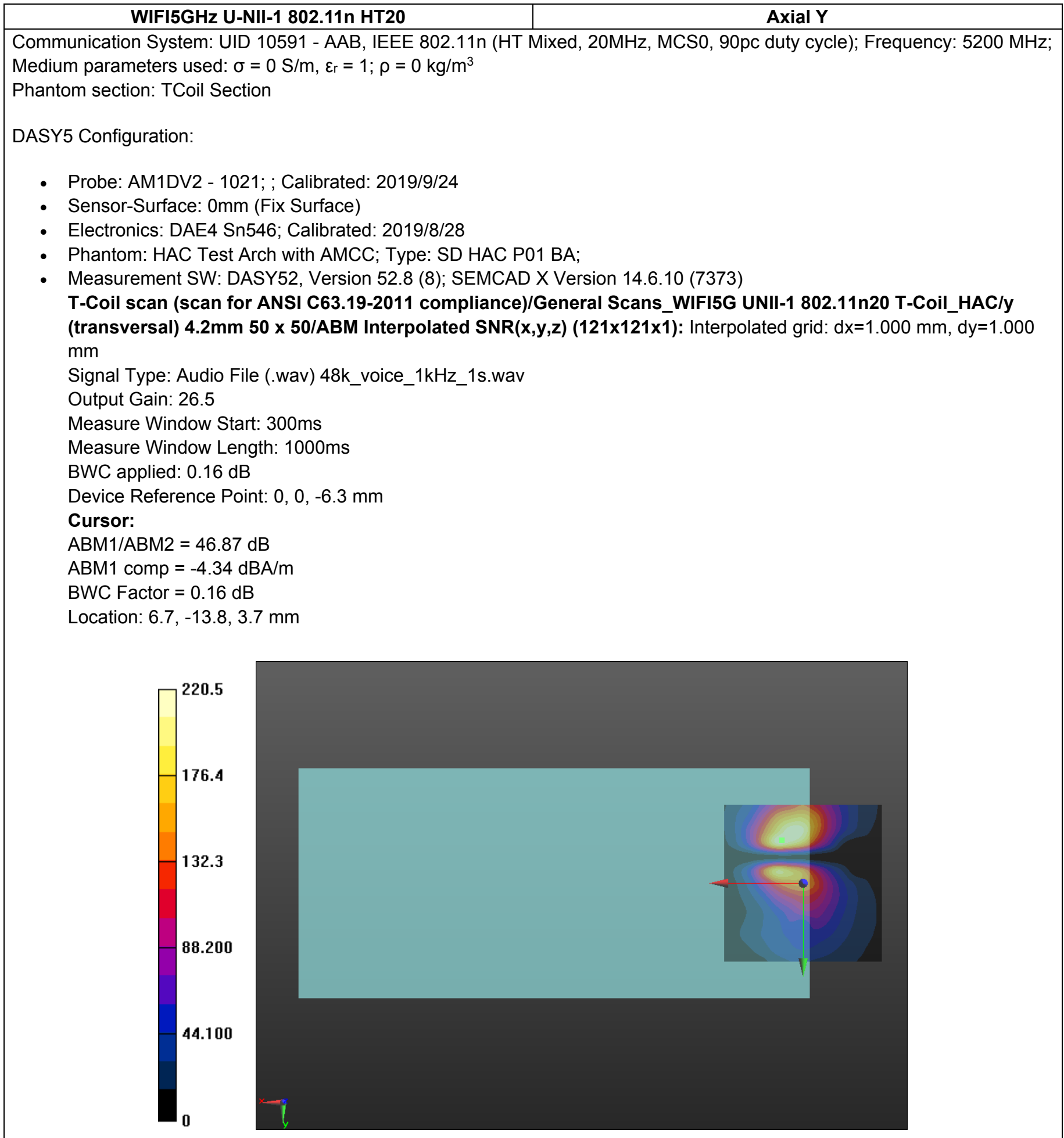
Communication System: UID 10418 - AAA, IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 99pc duty cycle, Long preamble); Frequency: 2412 MHz;
Medium parameters used: $\sigma = 0$ S/m, $\epsilon_r = 1$; $\rho = 0$ kg/m³
Phantom section: TCoil Section

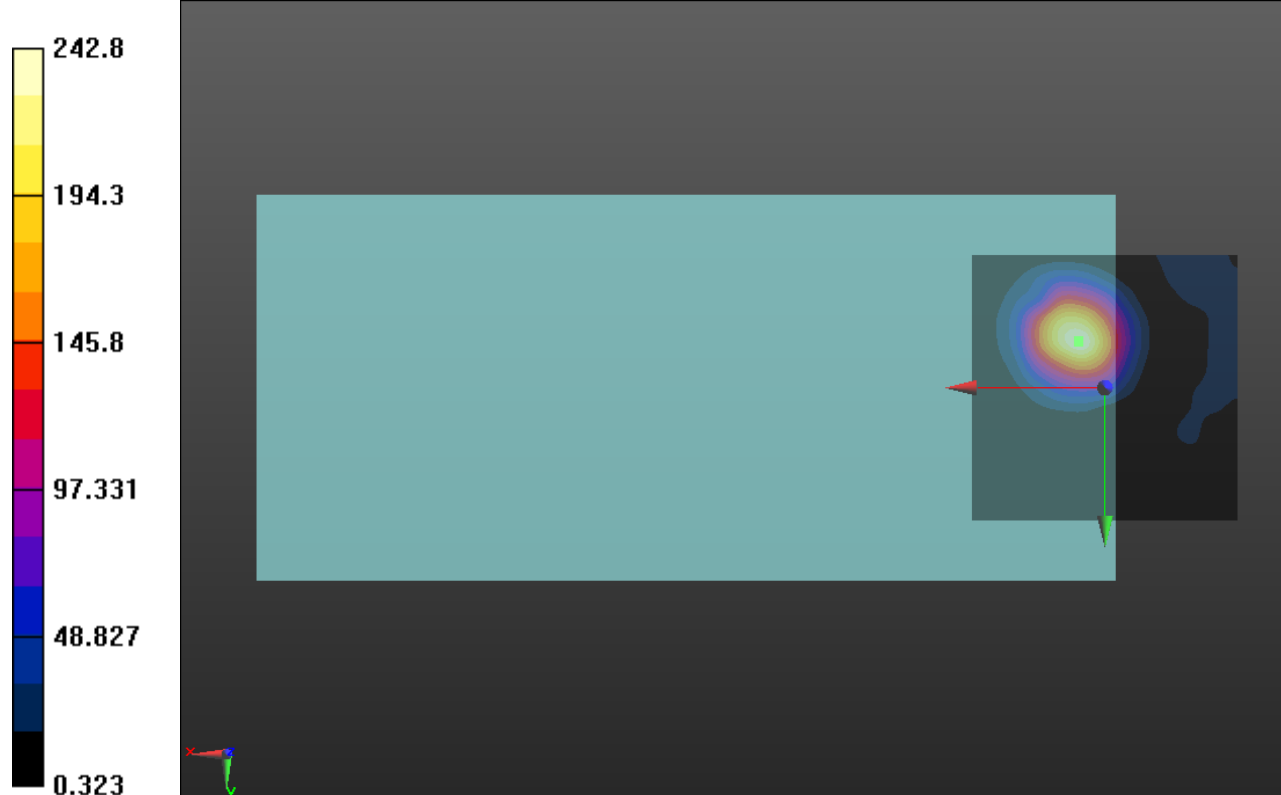
DASY5 Configuration:

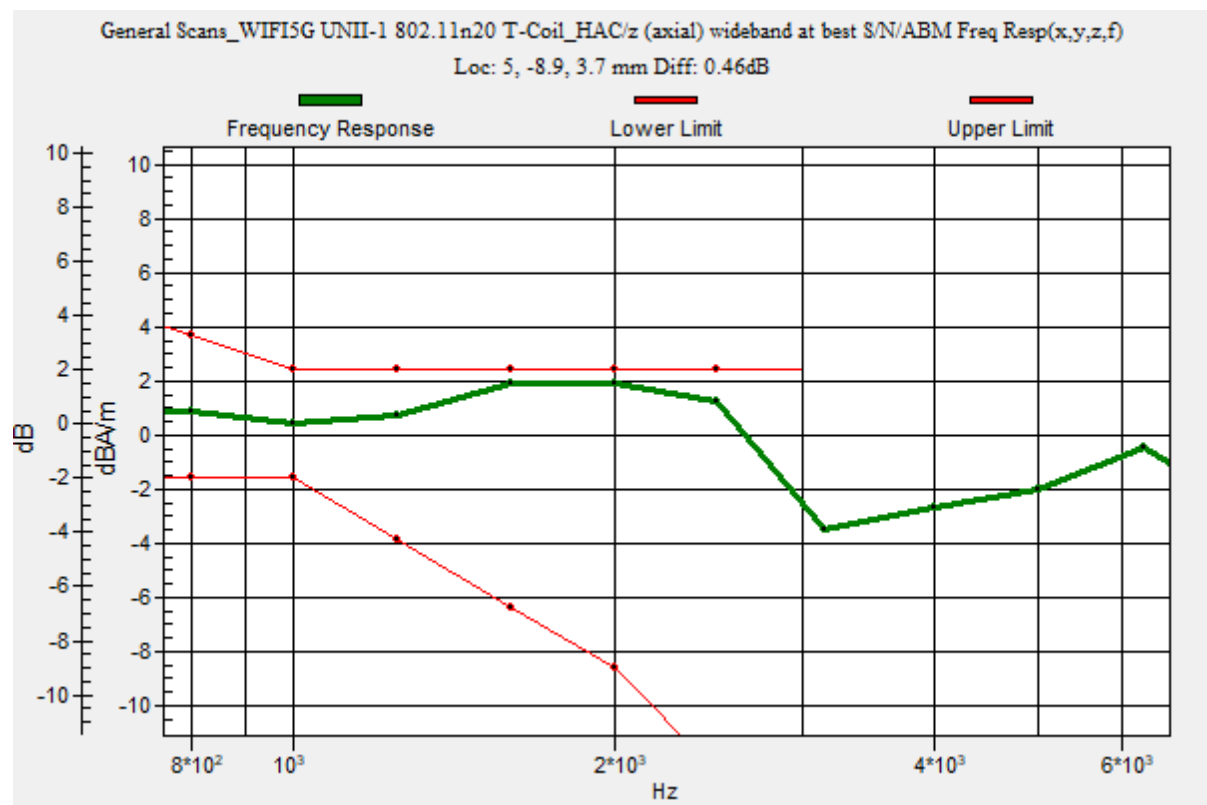
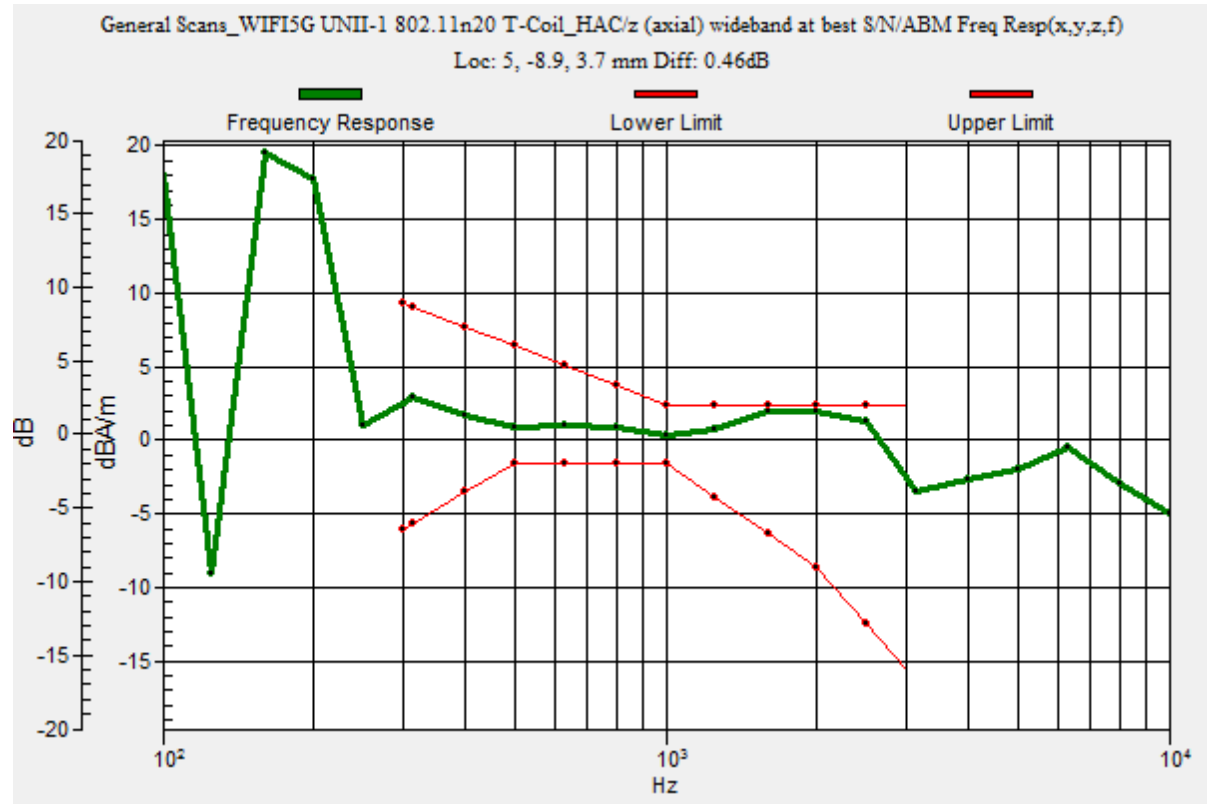
- Probe: AM1DV2 - 1021; ; Calibrated: 2019/9/24
 - Sensor-Surface: 0mm (Fix Surface)
 - Electronics: DAE4 Sn546; Calibrated: 2019/8/28
 - Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA;
 - Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7373)
- T-Coil scan (scan for ANSI C63.19-2011 compliance)/General Scans_WIFI2.4G 802.11g T-Coil_HAC/z (axial) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1):** Interpolated grid: dx=1.000 mm, dy=1.000 mm
Signal Type: Audio File (.wav) 48k_voice_1kHz_1s.wav
Output Gain: 26.5
Measure Window Start: 300ms
Measure Window Length: 1000ms
BWC applied: 0.16 dB
Device Reference Point: 0, 0, -6.3 mm
- Cursor:**
ABM1/ABM2 = 48.58 dB
ABM1 comp = 2.22 dBA/m
BWC Factor = 0.16 dB
Location: 5.4, -9.2, 3.7 mm
- T-Coil scan (scan for ANSI C63.19-2011 compliance)/General Scans_WIFI2.4G 802.11g T-Coil_HAC/z (axial) wideband at best S/N/ABM Freq Resp(x,y,z,f) (1x1x1):** Measurement grid: dx=10mm, dy=10mm
Signal Type: Audio File (.wav) 48k_voice_300-3000_2s.wav
Output Gain: 51.9
Measure Window Start: 300ms
Measure Window Length: 2000ms
BWC applied: 10.80 dB
Device Reference Point: 0, 0, -6.3 mm
- Cursor:**
Diff = 1.06 dB
BWC Factor = 10.80 dB
Location: 5.2, -9, 3.7 mm

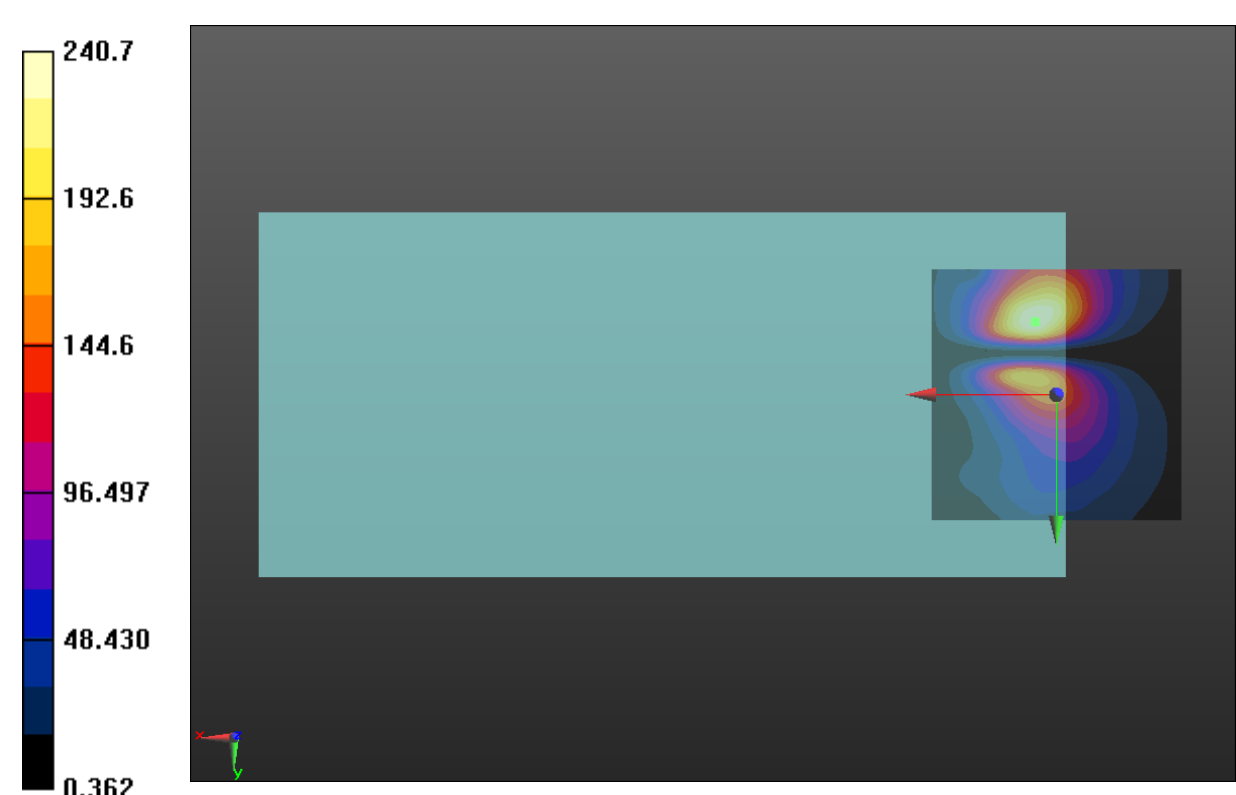


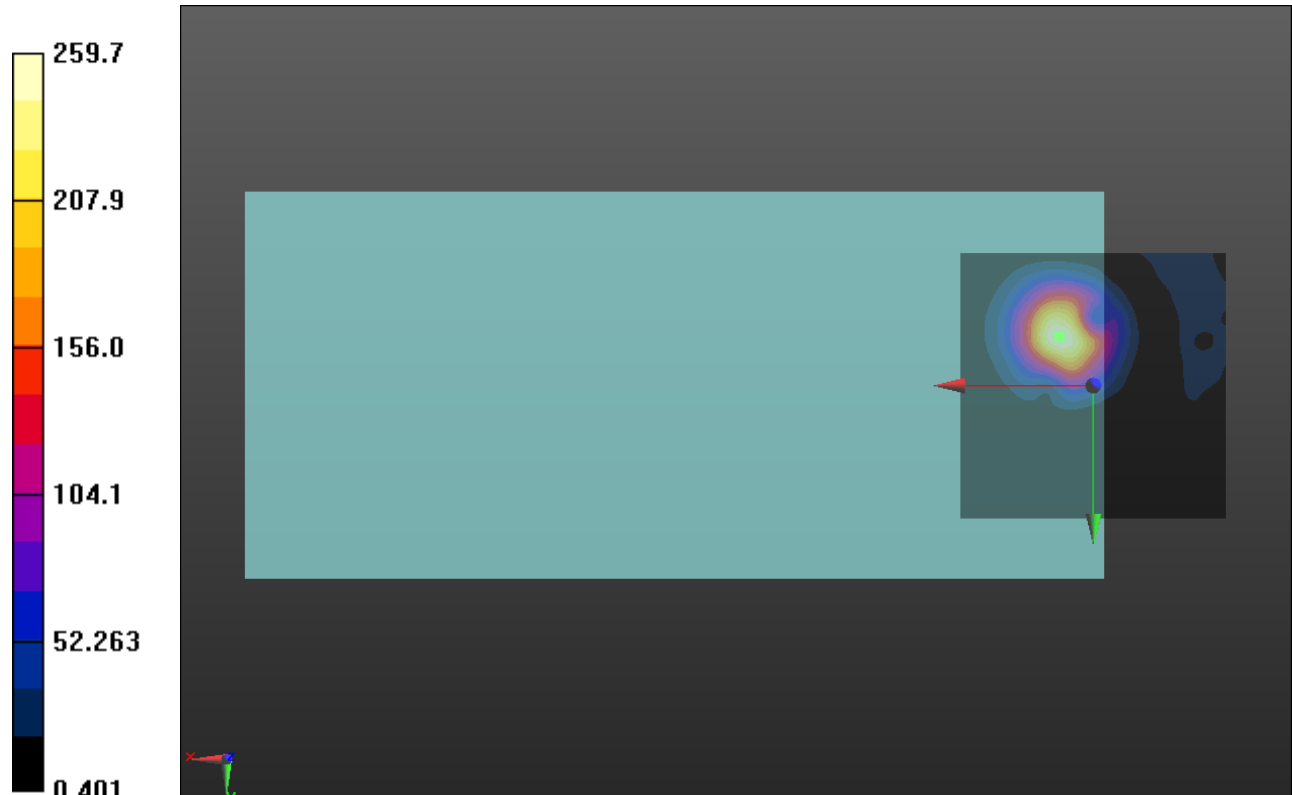




| WIFI5GHz U-NII-1 802.11n HT20 | Axial Z & Frequency Resp. |
|--|---------------------------|
| <p>Communication System: UID 10591 - AAB, IEEE 802.11n (HT Mixed, 20MHz, MCS0, 90pc duty cycle); Frequency: 5200 MHz; Medium parameters used: $\sigma = 0$ S/m, $\epsilon_r = 1$; $\rho = 0$ kg/m³ Phantom section: TCoil Section</p> | |
| <p>DASY5 Configuration:</p> | |
| <ul style="list-style-type: none"> • Probe: AM1DV2 - 1021; ; Calibrated: 2019/9/24 • Sensor-Surface: 0mm (Fix Surface) • Electronics: DAE4 Sn546; Calibrated: 2019/8/28 • Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA; • Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7373) | |
| <p>T-Coil scan (scan for ANSI C63.19-2011 compliance)/General Scans_WIFI5G UNII-1 802.11n20 T-Coil_HAC/z (axial) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm Signal Type: Audio File (.wav) 48k_voice_1kHz_1s.wav Output Gain: 26.5 Measure Window Start: 300ms Measure Window Length: 1000ms BWC applied: 0.16 dB Device Reference Point: 0, 0, -6.3 mm Cursor: ABM1/ABM2 = 47.71 dB ABM1 comp = 1.76 dBA/m BWC Factor = 0.16 dB Location: 5, -8.8, 3.7 mm</p> | |
| <p>T-Coil scan (scan for ANSI C63.19-2011 compliance)/General Scans_WIFI5G UNII-1 802.11n20 T-Coil_HAC/z (axial) wideband at best S/N/ABM Freq Resp(x,y,z,f) (1x1x1): Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k_voice_300-3000_2s.wav Output Gain: 51.9 Measure Window Start: 300ms Measure Window Length: 2000ms BWC applied: 10.80 dB Device Reference Point: 0, 0, -6.3 mm Cursor: Diff = 0.46 dB BWC Factor = 10.80 dB Location: 5, -8.9, 3.7 mm</p> | |
|  | |



| WIFI5GHz U-NII-3 802.11n HT20 | Axial Y |
|--|---------|
| <p>Communication System: UID 10591 - AAB, IEEE 802.11n (HT Mixed, 20MHz, MCS0, 90pc duty cycle); Frequency: 5785 MHz; Medium parameters used: $\sigma = 0$ S/m, $\epsilon_r = 1$; $\rho = 0$ kg/m³ Phantom section: TCoil Section</p> | |
| <p>DASY5 Configuration:</p> <ul style="list-style-type: none"> Probe: AM1DV2 - 1021; ; Calibrated: 2019/9/24 Sensor-Surface: 0mm (Fix Surface) Electronics: DAE4 Sn546; Calibrated: 2019/8/28 Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA; Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7373) <p>T-Coil scan (scan for ANSI C63.19-2011 compliance)/General Scans_WIFI5G UNII-3 802.11n20 T-Coil_HAC/y (transversal) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm</p> <p>Signal Type: Audio File (.wav) 48k_voice_1kHz_1s.wav Output Gain: 26.5 Measure Window Start: 300ms Measure Window Length: 1000ms BWC applied: 0.16 dB Device Reference Point: 0, 0, -6.3 mm</p> <p>Cursor: ABM1/ABM2 = 47.63 dB ABM1 comp = -5.63 dBA/m BWC Factor = 0.16 dB Location: 4.2, -14.6, 3.7 mm</p> | |
|  | |

| WIFI5GHz U-NII-3 802.11n HT20 | Axial Z & Frequency Resp. |
|---|---------------------------|
| <p>Communication System: UID 10591 - AAB, IEEE 802.11n (HT Mixed, 20MHz, MCS0, 90pc duty cycle); Frequency: 5785 MHz; Medium parameters used: $\sigma = 0$ S/m, $\epsilon_r = 1$; $\rho = 0$ kg/m³ Phantom section: TCoil Section</p> | |
| <p>DASY5 Configuration:</p> <ul style="list-style-type: none"> Probe: AM1DV2 - 1021; ; Calibrated: 2019/9/24 Sensor-Surface: 0mm (Fix Surface) Electronics: DAE4 Sn546; Calibrated: 2019/8/28 Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA; Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7373) <p>T-Coil scan (scan for ANSI C63.19-2011 compliance)/General Scans_WIFI5G UNII-3 802.11n20 T-Coil_HAC/z (axial) 4.2mm 50 x 50/ABM Interpolated SNR(x,y,z) (121x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm Signal Type: Audio File (.wav) 48k_voice_1kHz_1s.wav Output Gain: 26.5 Measure Window Start: 300ms Measure Window Length: 1000ms BWC applied: 0.16 dB Device Reference Point: 0, 0, -6.3 mm</p> <p>Cursor: ABM1/ABM2 = 48.29 dB ABM1 comp = 3.28 dBA/m BWC Factor = 0.16 dB Location: 6.3, -9.2, 3.7 mm</p> <p>T-Coil scan (scan for ANSI C63.19-2011 compliance)/General Scans_WIFI5G UNII-3 802.11n20 T-Coil_HAC/z (axial) wideband at best S/N/ABM Freq Resp(x,y,z,f) (1x1x1): Measurement grid: dx=10mm, dy=10mm Signal Type: Audio File (.wav) 48k_voice_300-3000_2s.wav Output Gain: 51.9 Measure Window Start: 300ms Measure Window Length: 2000ms BWC applied: 10.80 dB Device Reference Point: 0, 0, -6.3 mm</p> <p>Cursor: Diff = 1.10 dB BWC Factor = 10.80 dB Location: 6.5, -9.2, 3.7 mm</p> | |
|  | |

