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# NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

# GB/T 25102.8-2017

Replacing GB/T 11453-1989

## Electroacoustics -- Hearing aids -- Part 8: Methods of measurement of performance characteristics of hearing aids under simulated in situ working conditions

电声学 助听器 第8部分：模拟实际工作条件下的助听器性能测量方法

**(English Translation)**

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## Foreword

GB/T 25102 "electroacoustic hearing aids" includes the following sections.

--- Part 0. Measurement of electroacoustic characteristics;

--- Part 1. Hearing aids with inductive pickup coil input;

--- Part 2. Hearing aids with automatic gain control circuit;

--- Part 3. Hearing aid not completely worn on the listener;

--- Part 4. Hearing aids with induction loop system magnetic field strength;

--- Part 5. Plug nipple;

--- Part 6. Hearing aid input circuit characteristics;

--- Part 7. Measurement of performance characteristics of quality assurance in the manufacture, supply and delivery of hearing aids;

--- Part 8. Simulation of actual hearing aid performance measurement methods;

--- Part 9. Hearing aids with bone oscillator output characteristics of measurement methods;

--- Part 11. Symbols and marking of hearing aids and related equipment;

--- Part 12. Size of the electrical connector system;

--- Part 13. Electromagnetic compatibility (EMC);

--- Part 14. Specification of digital interface;

--- Part 15. Method of characterizing hearing aid signal processing using speech-like signals.

This section GB/T 25102 Part 8.

This section drafted in accordance with GB/T 1.1-2009 given rules.

This Part replaces GB/T 11453-1989 "Simulation of actual operating conditions hearing aid performance measurement." this section compared with GB/T 11453-1989, in addition to



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editorial changes outside the main changes are as follows.

--- Added hearing aid in the simulation of the actual working conditions of a simplified test method (see 7.8);

--- Increased hearing aid microphone directional directivity index (DI) description and methods (see 7.6.4);

--- Given the maximum allowable measurement expansion uncertainty (see Chapter 9).

This section uses the translation method identical with the International Standard IEC 60118-8:2005 "Electroacoustic hearing aids Part 8. Simulation of real workers Hearing aids for the performance measurement conditions. " the documents of our country that are consistent with the corresponding international documents that are normative references in this section are as follows.

--- GB/T 3769-2010 Electroacoustic mapping of frequency characteristics and polar scale scale and size (IEC 60263:1982, IDT);

--- GB/T 25102.100-2010 Electroacoustic hearing aids Part 0. Measurement of electroacoustic properties (IEC 60118-0:1983, MOD).

This part is proposed by the Ministry of Industry and Information Technology of the People's Republic of China.

This part of the National Electroacoustic Standardization Technical Committee (SAC/TC23) centralized.

This part of the drafting unit.Jiangsu Medical Device Inspection Institute, China Electronics Technology Group Corporation Institute of the Third Shanghai Measurement and Testing Technology Technology Research Institute, Shanghai Food and Drug Administration Certification Review Center, Xitian extension hearing technology (Suzhou) Co., Ltd., Sonovar hearing technology Surgery (Shanghai) Co., Ltd.

## Introduction

Measurement methods that take into account the wearer's influence on the acoustic performance of a hearing aid are important, especially when the measurement results aid in the selection of a hearing aid.

In contrast to the standards that focus on type approval and quality control (eg IEC 60118-0 and IEC 60118-7), this section provides information and options Hearing aids are more relevant.

This part of the measurement method requires the use of some equipment, such as the need for human models to simulate the wearer, which is to establish a reliable simulation of the actual A hearing aid measurement method is required. In order to simulate the



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performance measurement of the hearing aid under actual working conditions, it is necessary to establish several fingers south. This section describes these recommended methods.

Electroacoustic hearing aids Part 8. Simulate actual working conditions Hearing aid performance measurement method

## 1 Scope

This section GB/T 25102 specifies the measurement of the acoustic effects of adult hearing aids on hearing aids.

This section applies to the establishment of simulated hearing aid performance measurement under actual working conditions, proposed a simulation of the actual conditions of hearing aid A simplified method of measurement and a method of determining the directional index (DI) in the horizontal direction of a directional microphone in a hearing aid.

In addition, this section provides tolerance. Only when the actual results of the test laboratory include extended uncertainties completely fall under this Part of the provisions of the Umax value of the extension of the tolerance, in order to prove compliance with this section.

## 2 Normative references

The following documents for the application of this document is essential. For dated references, only the dated version applies to this article Pieces. For undated references, the latest edition (including all amendments) applies to this document.

Hearing aids - Part 0. Measurement of electroacoustic properties (Hearingaids - Part 0. Measurement of a electroacousticalcharacteristics) IEC 60263 to draw frequency characteristics and polar scale scale and size (Scalesandsizesforplottingfrequency characteristicsandpolardiagrams) IEC 60711 plugs plugged ear measurement ear simulator (Occluded-earsimulatorforthemeasurementof earphonescoupledtotheearbyearinserts) IEC 60959 Air-Conducted Hearing Aid Provisional head and torso simulators for acoustic measurements simulatorforacousticmeasurementsofairconductionhearingaids)

## 3 Terms and definitions

The following terms and definitions apply to this document.

Sound pressure level the reference pressure for all SPLs in this section is 20μPa.

Ear wing simulator pinnasimulator A device that approximates the average adult ear shape and size.



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