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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

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Electrotechnical terminology - Micro-electromechanical devices

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Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for Standardization Work Part 1. Structure and Drafting Rules of Standardization Documents"

Drafting.

This document is part 104 of GB/T 2900 "Electrical Engineering Terminology". GB/T 2900 has published more than 100 parts.

This document is equivalent to IEC 60050-523.2018 "International Electrotechnical Vocabulary Part 523. Micro-Electro-Mechanical Devices".

This document has made the following minimal editorial changes.

---Modified the standard name;

---Added references.

Introduction

The GB/T 2900 series of national standards for electrotechnical terminology corresponds to the international standard of IEC 60050 series of international electrotechnical terms.

According to IEC

The classification of the field of engineering, the series of standards for electrical engineering terminology is divided into 9 categories. 1) basic concepts; 2) electrical materials; 3) instrumentation; 4) electrical equipment; 5) electrical

Sub-equipment; 6) power generation, transmission and distribution; 7) telecommunications technology; 8) special applications; 9) standardization.

This document is equivalent to IEC 60050-523.2018 "International Electrotechnical

Vocabulary Part 523. Micro-Electro-Mechanical Devices", which belongs to Part 5

Sub-equipment is a general and basic term for micro-electromechanical devices, which can provide assistance in the formulation and revision of technical standards and technical exchanges in this field.

GB/T 2900 Electrotechnical Terminology Series National Standard Part 5 "Electronic Equipment" published standards include.

---GB/T 2900.33-2004 Electrical terminology power electronics technology (IEC 60050-551..1998, IEC 60050-551-20.

2001, IDT);

---GB/T 2900.66-2004 electrotechnical terminology for semiconductor devices and integrated circuits (IEC 60050-521.2002, IDT);

---GB/T 4210-2015 Electrotechnical terminology Electromechanical components for electronic equipment (IEC 60050-581.2008, IDT).

Electrotechnical terminology microelectromechanical device

1 Scope

This document defines the general purpose, science and engineering, material science, functional elements, processing technology, bonding assembly technology, measurement Technology and application related terms.

This document applies to the field of micro-electromechanical technology.

2 Normative references

There are no normative references in this document.

3.1 General terms

523-01-01

Micro-electromechanical device

Microelectromechanical devices

A micro device that integrates sensors, actuators, sensors, resonators, oscillators, mechanical parts and/or circuits.

Note. On the micro-scale, related technologies and basic technologies (such as design, materials, processing, functional components, system control, energy supply, bonding and assembly, circuits), basic technologies

Basic sciences (such as microscience and engineering), as well as thermodynamics and tribology are very different. If the MEMS device constitutes a system, it is sometimes called

MEMS is the abbreviation of "Micro-Electro-Mechanical System".

[Source. IEC 62047-1.2016, 2.1.1]

523-01-02

Microsystem technology; MST

The use of micro-machining to realize the technology of micro-electrical, optical and mechanical systems and their components.

Note. The term MST is mainly used in Europe.

[Source. IEC 62047-1.2016, 2.1.2741-01-03]

523-01-03

Micromachine

Miniaturized devices whose component sizes are several millimeters or less.

Note. Including various functional devices. Such as the use of micro-mechanical technology sensors.

[Source. IEC 62047-1.2016, 2.1.3.1]

3.2 Science and Engineering

523-02-01

Scale effect

A phenomenon in which the properties and characteristics change due to changes in one or more dimensions.

Note. The volume of an object is proportional to the third power of its length dimension, and the surface area is proportional to the second power. The results show that in the microscopic world, the effect of surface forces

Use a force greater than that of the object. For example, the dominant force in the motion of microscopic objects is not inertial force, but electrostatic force or viscous force. Material properties of microscopic objects