

ICS 29.020

CCS J 09



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

GB/T 5226.33-2017

**Electrical safety of machinery -- Electrical equipment of
machines -- Part 33: Requirements for semiconductor
fabrication equipment**

Issued on: October 14, 2017

Implemented on: May 1, 2018

**Issued by: General Administration of Quality Supervision, Inspection and
Quarantine of the People's Republic of China, Standardization
Administration of the People's Republic of China**

Table of Contents

Foreword

1 Scope

2 Normative references

Foreword

GB/T 5226 "mechanical and electrical safety mechanical and electrical equipment" to be divided into sections published, has released the following sections.

--- Part 1. General technical conditions;

--- Part 6. Construction machinery and technical conditions;

--- Part 11. Technical conditions for high-voltage equipment with voltage higher than 1000Va.c. Or 1500Vd.c. But not exceeding 36kV;

--- Part 31 - Special safety and electromagnetic compatibility requirements for sewing machines, sewing units and systems;

--- Part 32. General technical requirements for lifting machinery;

--- Part 33. Semiconductor equipment technical conditions.

This section GB/T 5226 Part 33.

This section drafted according to GB/T 1.1-2009 given rules.

This section uses the translation method identical with IEC 60204-33.2009 "Mechanical safety machinery and electrical equipment Part 33. Semiconductor equipment

Preparation of technical conditions "(1st edition, English version).

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 156-2007 standard voltage (IEC 60038.2002, MOD)

--- GB/T 4208-2017 Enclosure rating (IP code) (IEC 60529.2001, IDT)

--- GB/T 4728 (all parts) Electrical diagrams with graphical symbols [IEC 60617 (all parts)]

--- GB 4943.1-2011 Information technology equipment safety Part 1. General requirements (IEC 60950-1.2005, MOD)

--- GB/T 5169.16-2008 Fire hazard testing for electrician and electronic products - Part 16.

Test flame 50W level and vertical

Straight flame test method (IEC 60695-11-10:2003, IDT)

--- GB/T 5465 (all parts) Graphical symbols for electrical equipment [IEC 60417 (all parts)]

--- GB/T 16855 (all parts) Mechanical safety control systems related to safety components [ISO 13849 (all parts)]

--- GB/T 16855.1-2008 Safety of Machinery for Safety of Machinery-Part 1. Design Principles (ISO 13849-

1:2006, IDT)

--- GB/T 18209 (All Parts) Mechanical Safety Instructions, Signs and Operations [IEC 61310 (All Parts)]

--- GB/T 19212.1-2016 Safety of transformers, reactors, power supply units and combinations - Part 1. General requirements and tests

Inspection (IEC 61558-1:2009, MOD)

--- GB/T 19671-2005 mechanical safety two-hand control device functional status and design principles (ISO 13851:2002,

MOD)

--- GB/T 20438 (all parts) Functional safety of electrical/electronic/programmable electronic safety-related systems [IEC 61508

section)]

This section made the following editorial changes.

--- Standard name changed to "mechanical and electrical safety machinery and electrical equipment Part 33. Semiconductor equipment, technical conditions."

This part is proposed by China Machinery Industry Federation.

This part of the National Industrial Machinery Electrical System Standardization Technical Committee (SAC/TC231) centralized.

This section is responsible for drafting unit. Semiconductor Devices (Shanghai) Co., Ltd..

This section participates in the drafting unit. Beijing Machine Tool Research Institute, Shanghai Microelectronics Equipment Co., Ltd., Beijing North Microelectronics Base Equipment Technology

Research Center Co., Ltd., Shenyang Tuo Jing Technology Co., Ltd., Beijing Seven Star Huachuang Electronics Co., Ltd., Sheng photoelectric equipment

Sea) Co., Ltd., Ideal Solar (Shanghai) Co., Ltd., Shengmei Semiconductor Equipment

(Shanghai) Co., Ltd.

1 Scope

This section GB/T 5226 specifies the manufacture, measurement, assembly and testing of semiconductor equipment related to electrical, electronic and programmable electronic

Equipment and system safety requirements.

Note 1. The term "electrical" in this section includes three aspects of electrical, electronic and programmable electronic equipment (such as electrical equipment refers to electrical equipment, electronic equipment and programmable

Electronic equipment).

NOTE 2 For the purposes of this standard, the term "Person" generally refers to any individual including the person assigned, used and managed by the user or his agent.

The equipment referred to in this section starts from the power lead-in of mechanical and electrical equipment (see 5.1).

Note 3. GB/T 16895 series of standards for building electrical installations are given.

This section applies to electrical equipment or electrical equipment components, the nominal voltage does not exceed 1000Va.c. Or 1500Vd.c., rated frequency

Not more than.200Hz. For higher voltages or frequencies, special requirements may be required.

Note 4. Electrical equipment within the derived voltage exceeds the supply voltage limit is still within the scope of this section.

This section includes protective measures for electrical safety hazards and electrical interlock protection circuit for non-electrical safety hazards, but does not cover

All requirements for personal safety protection (such as chemical, mechanical and radiation hazards) as prescribed by other standards or regulations. Each type

The machinery meets its specific requirements to provide adequate safety.

The following electrical installations for semiconductor manufacturing equipment shall provide additional and special technical requirements.

- Use, processing or production of explosive materials;
- Used in flammable and explosive environment;
- There is a special risk when producing or using a material;
- As lifting machinery (included in IEC 60204-32).

This section does not include semiconductor equipment performance or functional specifications. This section does not involve may have an impact on human health from Semiconductor equipment emissions (such as electromagnetic fields, noise).

This section does not specify the electromagnetic compatibility (EMC) requirements.

2 Normative references

The following documents for the application of this document is essential. For dated references, only the dated version applies to this edition

file. For undated references, the latest edition (including all amendments) applies to this document.

GB/T 4025-2010 man-machine interface markings of the basic and safety rules Indicator and operating device coding rules

(IEC 60073.2002, IDT)

GB/T 4026-2010 man-machine interface signs the basic and safety rules Identification of equipment terminals and conductor terminals

(IEC 60445.2006, IDT)

GB/T 4205-2010 man-machine interface mark the basic rules and safety rules of operation (IEC 60447.2004, IDT)

GB 4793.1-2007 Safety requirements for electrical equipment for measurement, control and laboratory use - Part 1. General requirements (IEC 61010-

1.2001, IDT)

Basic and safety rules for marking of human machine interfaces - Conductor color or alphanumeric identification (IEC 60446).

2007, IDT)