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

GB/T 11498-2018

Replacing GB/T 11498-1989

**Semiconductor devices -- Integrated circuits -- Part 21: Sectional
specification for film integrated circuits and hybrid film integrated
circuits on the basis of the qualification approval procedures**

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Foreword

The Semiconductor Device IC has or plans to release the following sections.

--- GB/T 16464-1996 Semiconductor device integrated circuits - Part 1. General (idtIEC 60748-1.1984)

--- GB/T 17574-1998 Semiconductor device integrated circuits - Part 2. Digital integrated circuits (idtIEC 60748-2.1985)

--- GB/T 17940-2000 Semiconductor device integrated circuits - Part 3. Analog integrated circuits (idtIEC 60748-3.1986)

--- GB/T 18500.1-2001 Semiconductor device integrated circuits - Part 4. Interface integrated circuits - Part 1

Word/Analog Converter (DAC) Blank Detail Specification (idtIEC 60748-4-1.1993)

--- GB/T 18500.2-2001 Semiconductor device integrated circuits - Part 4. Interface integrated circuits - Part 2

Analog/Digital Converter (ADC) Blank Detail Specification (idtIEC 60748-4-2.1993)

--- GB/T 20515-2006 Semiconductor device integrated circuits - Part 5. Semi-custom integrated circuits (idtIEC 60748-5)

--- GB/T 12750-2006 Semiconductor device integrated circuits Part 11. Semiconductor integrated circuit sub-specification (excluding mixed

Combined circuit) (idtIEC 60748-11.1990)

---GB/T 8976-1996 General specification for membrane integrated circuits and hybrid film

integrated circuits (idt IEC 60748-20.1988)

Specification (using accreditation procedures) (IEC 60748-21.1997, IDT)

--- GB/T 13062-2018 Semiconductor device integrated circuits - Part 21-1. Membrane integrated circuits and hybrid film integrated circuits

Blank detail specification (using accreditation approval procedure) (IEC 60748-21-1.1997, IDT)

--- GB/T 16465-1996 Membrane integrated circuit and hybrid film integrated circuit sub-specification (using capability approval procedure) (idt IEC 60748-22)

--- GB/T 16466-1996 Membrane integrated circuit and hybrid film integrated circuit blank detailed specification (using capability approval procedure) (idt IEC 60748-22-1)

This part is the 21st part of "Semiconductor Device Integrated Circuits".

This part is drafted in accordance with the rules given in GB/T 1.1-2009.

This part replaces GB/T 11498-1989 "Subsidiary for Membrane Integrated Circuits and Mixed Film Integrated Circuits (using the Approved Approval Procedure)", and

The main technical changes in GB/T 11498-1989 are as follows.

--- The test program is extended from one authentication program to two authentication programs, program A and program B.

This section uses the translation method equivalent to IEC 60748-21.1997 "Semiconductor device integrated circuits Part 21. Membrane integrated circuits

And hybrid film integrated circuits sub-specification (using the appraisal approval procedure).

This section has made the following editorial changes.

--- IEC original text is "by batch and cycle test based on the approval process see Table 2 and Table 3 or Table 6 and Table 7" is incorrect, is now changed

"See Tables 2 and 3 or Tables 6 and 7 for the quality consistency test procedures based on batch and cycle tests" (see 3.2);

--- IEC original text "Assessment level should be selected from Table 2 or Table 6 and Table 3 or Table 2" is incorrect, changed to "Assessment level should be from Table 2 or

"Selected in Table 6 and Table 3 or Table 7" (see 3.3);

--- After the test of group C2, C3, C4, and D1 in Table 3b, add a footnote. It is

recommended to perform the end point electrical test after the test (see Table 3b).

--- Table 1.2 in the 1.2 group solderability test original "ND" is non-destructive, the nature of the test is destructive, so changed

"D" (see Table 5).

1 Scope and purpose

This part of the "Semiconductor Device Integrated Circuit" is suitable for manufacturing as a circuit in a directory or a custom circuit, and its quality is to be authenticated.

Approved as a basis for evaluation of membrane integrated circuits and hybrid membrane integrated circuits.

The purpose of this section is to provide priority values for ratings and characteristics, select appropriate test and measurement methods from the general specifications, and give roots

The general performance requirements for the detailed specification of membrane integrated circuits and hybrid film integrated circuits are established in this section.

The concept of priority values applies directly to the circuitry within the directory, but does not have to be applied to custom circuits.

The severity and requirements of the test specified in the detailed specifications established in this section may be equal to or higher than the performance level of the sub-specification.

There is a lower level of performance.

There are one or more blank detail specifications associated with this section, and each blank detail specification is numbered. Fill in according to 2.3

Write a blank detail specification that constitutes a detailed specification. According to the IEC Q system, such detailed specifications can be used for membrane integrated circuits and hybrids.

Membrane integrated circuit qualification approval and quality consistency testing.

Note. There are two options for the test procedure. Program A and Program B. However, the exchange of individual test items between Program A and Program B is not permitted.

Generally, the program A is more suitable for a passive component-based film integrated circuit, and the program B is more suitable for a film integrated circuit based on a semiconductor integrated circuit technology.

2.1 Normative references

The following documents are indispensable for the application of this document. For dated

references, only dated versions apply to this article.

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

GB/T 2471-1995 resistor and capacitor priority number system (idt IEC 60063.1963)

GB/T 8976-1996 General specification for membrane integrated circuits and hybrid film integrated circuits (idt IEC 60748-20.1988)

IEC 60748-20-1.1994 Semiconductor device integrated circuits - Part 20-1. General rules for film integrated circuits and hybrid film integrated circuits

Part 1. Internal Visual Inspection Requirements

(Semiconductor devices-Integrated circuits-Part 20. Generic specification

for film integrated circuits and hybrid film integrated circuits-Section 1. Requirements for inter-

Nal visual examination)

2.2 Priority Ratings and Characteristics

The voltage and current should be selected from the priority values given in GB/T 17573-1998; resistors and capacitors should be selected from GB/T 2471-

The priority values given in.1995; custom circuits can choose their own ratings and tolerances.

2.3 What should be specified in the detailed specification

Detailed specifications are based on detailed blank specifications.

The severity level specified in the detailed specification shall not be less than the severity level specified in the general specification or sub-specification. Should be included if more stringent requirements are included

Detailed specifications, and pointed out in the test table, as indicated by "**".