

ICS 19.020
CCS A21



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

GB/T 4798.9-2012

**Classification of environmental conditions - Classification of
groups of environmental parameters and their severities -
Microclimates inside products**

环境条件分类 环境参数组分类及其严酷程度分级 产品内部的微气候

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Foreword

GB/T 4798 standard currently divided into nine sections.

--- GB/T 4798.1 Application of electric and electronic products environmental conditions - Part 1. Storage

--- GB/T 4798.2 Application of electric and electronic products environmental conditions - Part 2. Transport

--- GB/T 4798.3 Application of electric and electronic products environmental conditions - Part 3. Stationary use at weather protected locations

--- GB/T 4798.4 Application of electric and electronic products environmental conditions - Part 4. No fixed workplace climate protection use

--- GB/T 4798.5 Application of electric and electronic products environmental conditions - Part 5. Ground vehicle

--- GB/T 4798.6 Classification of environmental conditions classification groups of environmental parameters and their severities Ship

--- GB/T 4798.7 Application of electric and electronic products environmental conditions - Part 7. Portable and non-stationary use

--- GB/T 4798.9 Classification of environmental conditions classification groups of environmental parameters and their severities microclimate inside the product

--- GB/T 4798.10 electric and electronic products application environment conditions
Introduction This is Part 9 GB/T 4798's. Rules in this section in accordance with GB/T 1.1-2009 given draft. This Part replaces GB/T 4798.9-1997 "Environmental conditions for electric and electronic applications microclimate inside the product," and GB/T 4798.9-1997 compared to the main changes are as follows:

--- Deleting IEC foreword;

--- Added Appendix NA (informative). This section uses the translation method identical with IEC 60721-3-9.1993 "Classification of environmental conditions - Part 3. Environmental

parameters and their severities, etc. Classification and grading level group Section 9. Product internal micro-climate "version 1 and amendment No. 1 single (1994-12) and the" No. 1 for a single amendment Errata "(1995), and made the following editorial changes.

--- Deleted IEC 60721-3-9 foreword;

--- Increase the national standard foreword;

1 Scope

GB/T 4798.9-2012 deals with the environment inside a product rather than around it. The rest of the GB/T 4798 series classifies the conditions equipment is exposed to - weather-protected locations, vehicles, ships. This part addresses the fact that a component sitting inside an enclosure does not experience those conditions: it experiences a microclimate created by the enclosure and by the heat the equipment itself dissipates, which is usually hotter than the outside air and can be more humid in the places that matter, since a surface cooler than the air around it will condense water on itself whatever the room is doing. Specifying a component against the external environment therefore understates what it has to survive. This part of GB/T 4798 classifies the microclimatic conditions that internal components - basic parts, components and built-in equipment - may encounter when the product is used under the climatic conditions of IEC 60721-3-3 or IEC 60721-3-4, giving the severity grades for high temperature and high relative humidity and addressing other parameters such as low temperature. Under ICS 19.020 and CCS A21, it is written for equipment designers, component selection engineers and the reliability specialists who set qualification conditions.

This section GB/T 4798 provisions of the product under the climatic conditions IEC 60721-3-3 or IEC 60721-3-4 when its internal Components (basic parts, components, and built-in equipment) level may encounter a variety of micro-climate conditions. Microclimate parameters of high temperatures and high relative humidity. Some other climate parameters such as low temperature grades of the element may also have attached Add impact, but not considered in this section. Taking into account the typical high temperature limit, the provisions of the limited number of micro-climate levels. Users of this section should be used to meet the intended use of the lowest level.

2 Normative references

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

IEC 60721-1.1990 Classification of environmental conditions - Part 1. Environmental parameters and their severities (Classification of environmental conditions-Part 1. Environmental parameters and their severities)

IEC 60721-2-1:1982, AMD1. 1987 Classification of environmental conditions Part 2. Environmental conditions appearing in nature - Section 1. Temperature and humidity (Classification of environmental conditions - Part 2. Environmental conditions appearing in nature - Section 1. Temperature and humidity) IEC 60721-3-

0 Classification of environmental conditions - Part 3. Environmental conditions and their severities Section 0. Introduction (Classification of environmental conditions - Part 3. Classification of groups of environmental parameters and their severities - Section 0. Introduction) IEC 60721-3-

3 Classification of environmental conditions Part 3. Environmental conditions and their severities - Section 3. weather protected locations fixed Use (Classification of environmental conditions - Part 3-3. Classification of groups of environmental parameters and their severities - Section 3. Stationary use at weather protected locations) IEC 60721-3-

4 Classification of environmental conditions - Part 4. Environmental conditions and their severities - Section 4. No fixed workplace climate protection Use (Classification of environmental conditions - Part 3. Classification of groups of environmental parameters and their severities - Section 4. Stationary use at non-weather protected locations)

3 Definitions

In addition to IEC 60721-1:1990 is defined in Chapter 3, the present section also uses the following definitions.

3.1 Microclimate microclimate Product components installed inside the climatic conditions at here only consider the air temperature and air humidity.

3.2 Microclimate level microclimatic class Binned micro-climate, the climate grade (IEC 60721-3-3 or IEC 60721-3-4 regulations), high air temperature rating (see Table 1a)) GB/T 4798.9-2012/IEC 60721-3-9:1993