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

GB/T 44069.10-2026

Replacing GB/T 20873-2007

**Ferrite cores - Guidelines on dimensions and the limits of
surface irregularities - Part 10: PM-cores and associated parts**

铁氧体磁心 尺寸和表面缺陷极限导则 第10部分：PM型磁心及其附件

(English Translation)

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Foreword

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

Drafting.

This document is Part 10 of GB/T 44069, "Limits and Limits for Dimensions and Surface Defects of Ferrite Cores". GB/T 44069 has been...

The following sections were published.

- Part 4: RM type magnetic core;
- Part 5: EP type magnetic cores and accessories for inductors and transformers;
- Part 6: ETD type magnetic cores for power supplies;
- Part 9: Planar Magnetic Cores;
- Part 10: PM Type Magnetic Cores and Accessories;
- Part 12: Toroidal Core;
- Part 13: PQ Type Magnetic Core;
- Part 14: EFD type magnetic core.

This document supersedes GB/T 20873-2007 "Dimensions of PM cores and accessories made of magnetic oxides", and is consistent with GB/T 20873-Compared to 2007, aside from structural adjustments and editorial changes, the main technical changes are as follows.

- The file range has been changed (see Chapter 1, GB/T 20873-2007);
- The valid parameters in Table 2 have been changed and recalculated according to IEC 60205 (see 4.2.2, 4.1.2 of GB/T 20873-2007);

This document is equivalent to IEC 63093-10:2026 "Limits and limits for dimensional and surface defects of ferrite cores - Part 10: PM type".

Magnetic core and its accessories.

Please note that some content in this document may involve patents. The issuing organization of this document assumes no responsibility for identifying patents.

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

This document is under the jurisdiction of the National Technical Committee on Standardization of Magnetic Components and Ferrite Materials (SAC/TC89).

Introduction

Due to the manufacturing process and the physical characteristics of the product, ferrite cores may exhibit certain physical defects, such as chipping, irregular edges, etc.

Cracks, flash, and sticking. The tolerance for these surface defects depends primarily on the type, location, and size of the defect, as well as the structure of the magnetic core.

GB/T 44069, "Guidelines for Limits of Dimensions and Surface Defects in Ferrite Cores," mainly specifies the core series (such as RM type cores, pot-shaped cores, and toroidal cores).

The limits of size and surface defects (such as shaped magnetic cores). GB/T 44069 is proposed to consist of the following parts.

---Part 1: General Specifications. The purpose is to establish general principles for the dimensional description and surface defect constraints of ferrite cores.

---Part 2: Pot Cores for Communication, Power Supply, and Filtering. The aim is to establish the dimensional and surface defect tolerances for pot cores.

limit.

---Part 3: Ferrite Semi-Canister Cores for Inductive Proximity Switches. The purpose is to determine the dimensions and surface defects of the semi-canister cores.

---Part 4: RM Type Cores. The purpose is to establish the dimensional and surface defect tolerance limits for RM type cores.

---Part 5: EP-type magnetic cores and accessories for inductors and transformers. The purpose is to establish the dimensions and surface defects of EP-type magnetic cores.

Trapped to the limit.

---Part 6: ETD type magnetic cores for power supplies. The purpose is to establish the dimensional and surface defect tolerance limits for ETD type magnetic cores.

---Part 7: EER Type Cores. The purpose is to establish the dimensional and surface defect tolerance limits for EER type cores.

---Part 8: Type E Cores. The purpose is to establish the dimensional and surface defect tolerance limits for Type E cores.

---Part 9: Planar Magnetic Cores. The purpose is to establish the dimensions and permissible limits for surface defects in planar magnetic cores.

---Part 10: PM Type Cores and Accessories. The purpose is to establish the dimensional and surface defect tolerance limits for PM type cores.

---Part 11: EC type magnetic cores for power supplies. The purpose is to establish the

dimensional and surface defect tolerance limits for EC type magnetic cores.

---Part 12: Toroidal Cores. The purpose is to establish the dimensions and surface defect tolerance limits for toroidal cores.

---Part 13: PQ Type Cores. The purpose is to establish the dimensional and surface defect tolerance limits for PQ type cores.

---Part 14: EFD Type Cores. The purpose is to establish the dimensional and surface defect tolerance limits for EFD type cores.

---Part 15: U-shaped cores. The purpose is to establish the dimensional and surface defect tolerance limits for U-shaped cores.

---Part 16: SQ Type Core. The purpose is to establish the dimensional and surface defect tolerance limits for SQ type cores.

---Part 17: Balun Cores. The purpose is to establish the dimensional and surface defect tolerance limits for balun cores.

After years of development and improvement, PM-type magnetic cores have optimized structure and dimensions, making them the preferred components for electronic transformers, inductors, and other electronic devices.

However, the wide variety of core sizes makes manufacturing management and design optimization difficult, and surface defects such as cracks, chipping, and porosity can occur during production.

Traps can affect the final electromagnetic properties of magnetic cores, thus impacting their performance in actual use. This document primarily specifies the dimensions of PM type magnetic cores.

The limits of permissible surface defects help companies in this field improve technical specifications, enhance product quality, standardize production and trading practices, and promote enterprise development.

Limits of Ferrite Core Size and Surface Defects Part 10: PM Type Magnetic Cores and Accessories

1 Scope

This document specifies the key dimensions related to mechanical interchangeability of preferred series PM-type magnetic cores made of magnetic oxides, along with the magnetic cores themselves.

The basic dimensions of the coil bobbin used, and the positions of the coil bobbin lead pins on the printed circuit board related to the bottom profile of the magnetic core, are also given.