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Ferrite cores – Dimensions –

Part 9: Planar cores

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

FERRITE CORES – DIMENSIONS –

Part 9: Planar cores

FOREWORD

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International Standard IEC 62317-9 has been prepared IEC technical committee 51: Magnetic components and ferrite materials.

This International Standard cancels and replaces IEC 61860 published in 2000. This edition constitutes a technical revision. This International Standard includes the following significant technical changes and additions with respect to IEC 61860:2000:

a) addition of the planar EL family of cores;
b) addition of the low-profile ER family of cores;
c) the low-profile RM-family defined in IEC 61860:2000 has been moved to IEC 62137-4 for RM-cores and associated parts.

This consolidated version of IEC 62317-9 consists of the first edition (2006) [documents 51/849/FDIS and 51/858/RVD] and its amendment 1 (2007) [documents 51/866/CDV and 51/876/RVC].

The technical content is therefore identical to the base edition and its amendment and has been prepared for user convenience.

It bears the edition number 1.1.

A vertical line in the margin shows where the base publication has been modified by amendment 1.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

IEC 62317 consists of the following parts, under the general title *Ferrite cores – Dimensions*:

Part 1: General (under consideration)
Part 2: Pot cores (under consideration, currently available as IEC 60133)
Part 3: Half pot cores (under consideration, currently available as IEC 62323)
Part 4: RM-cores and associated parts
Part 5: EP-cores (under consideration, currently available as IEC 61596)
Part 6: ETD-cores (under consideration, currently available as IEC 61185)
Part 7: EER-cores
Part 8: E-cores
Part 9: Planar cores
Part 10: PM-cores (under consideration, currently available as IEC 61247)
Part 11: EC-cores (under consideration, currently available as IEC 60647)
Part 12: Uncoated ring cores (under consideration, currently available as IEC 61604)

The committee has decided that the contents of the base publication and its amendments will remain unchanged until the maintenance result date indicated on the IEC web site under "http://webstore.iec.ch" in the data related to the specific publication. At this date, the publication will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

A bilingual version of this publication may be issued at a later date.

INTRODUCTION

Nowadays, d.c.-d.c. converter power supplies increasingly employ transformers and chokes the windings of which are made of multi-layer printed circuit board or the windings are constructed in the motherboard, rather than the transformers wound by conventional copper wires. This part of IEC 62317 specifies the optimum shapes and dimensions of cores for SMD (Surface Mounted Device) and of cores for which the windings are constructed in the motherboard. The motherboard has slots cut out to accept the ferrite cores. This is called the total integration in a multi-layer motherboard. The core shape specified in this part of IEC 62317 satisfies the demand for lower profile as well as for smaller floor space.

FERRITE CORES – DIMENSIONS –

Part 9: Planar cores

1 Scope

This International Standard specifies the shapes and dimensions of ferrite cores for inductive components (transformers and chokes) of which the coil is typically constructed by multi-layer board or the coil is part of the motherboard.

The general consideration upon which the design of this range of cores is based is given in Annex A.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 60205, *Calculation of the effective parameters of magnetic piece parts*

IEC 62317-4:2005, *Ferrite cores – Dimensions – Part 4: RM cores and associated parts*