



## **Ferrites and accessories**

### Standards and specifications

Date: September 2006

## Standards and specifications

### 1 IEC standards

Please refer also the latest CO publications ([www.iec.ch](http://www.iec.ch))

| Standard            | Title  |
|---------------------|--|
| IEC 60133 Ed. 4.0   | Dimensions of pot cores made of magnetic oxides and associated parts (will be replaced by IEC 62317-2)   |
| IEC 60205 Ed.3.0    | Calculation of the effective parameters of magnetic piece parts  |
| IEC 60401-1 Ed. 1.0 | Terms and nomenclature for cores made of magnetically soft ferrites – Part 1: Terms used for physical irregularities   |
| IEC 60401-2 Ed. 1.0 | Terms and nomenclature for cores made of magnetically soft ferrites – Part 2: Reference of dimensions  |
| IEC 60401-3 Ed. 1.0 | Terms and nomenclature for cores made of magnetically soft ferrites – Part 3: Guidelines on the format of data appearing in manufacturers' catalogues of transformers and inductor cores |
| IEC 60424-1 Ed. 1.0 | Ferrite cores – Guide on the limits of surface irregularities – Part 1: General specification  |
| IEC 60424-2 Ed. 1.0 | Guidance of the limits of surface irregularities of ferrite cores – Part 2: RM cores   |
| IEC 60424-3 Ed. 1.0 | Ferrite cores – Guide on the limits of surface irregularities – Part 3: ETD cores and E cores  |
| IEC 60424-4 Ed. 1.0 | Ferrite cores – Guide on the limits of surface irregularities – Part 4: Ring cores   |
| IEC 60647 Ed. 1.0   | Dimensions for magnetic oxide cores intended for use in power supplies (EC cores) (will be replaced by IEC 62317-11)   |
| IEC 60732 Ed. 1.0   | Measuring methods for cylinder cores, tube cores and screw cores of magnetic oxides  |
| IEC 61185 Ed. 2.0   | Magnetic oxide cores (ETD cores) intended for use in power supply applications – Dimensions (will be replaced by IEC 62317-6)  |
| IEC 61246 Ed. 1.1   | Magnetic oxide cores (E cores) of rectangular cross-section and associated parts – Dimensions (will be replaced by IEC 62317-8)  |
| IEC 61247 Ed. 1.0   | PM cores made of magnetic oxides and associated parts – Dimensions (will be replaced by IEC 63217-10)  |
| IEC 61332 Ed. 2.0   | Soft ferrite material classification   |
| IEC 61333 Ed. 1.0   | Marking on U and E ferrite cores   |
| IEC 61596 Ed. 1.0   | Magnetic oxide EP cores and associated parts for use in inductors and transformers – Dimensions (will be replaced by IEC 62317-5)  |

## Standards and specifications

| Standard             | Title   |
|----------------------|---|
| IEC 61631 Ed. 1.0    | Test method for the mechanical strength of cores made of magnetic oxides  |
| IEC 62044-1 Ed. 1.0  | Cores made of soft magnetic materials – Measuring methods – Part 1: Generic specification   |
| IEC 62044-2 Ed. 1.0  | Cores made of soft magnetic materials – Measuring methods – Part 2: Magnetic properties at low excitation level                         |
| IEC 62044-3 Ed. 1.0  | Cores made of soft magnetic materials – Measuring methods – Part 3: Magnetic properties at high excitation level                        |
| IEC 62317-4 Ed. 1.0  | Ferrite cores – Dimensions – Part 4: RM cores and associated parts (replaces IEC 60431 Ed. 2.0)   |
| IEC 62317-7 Ed. 1.0  | Ferrite cores – Dimensions – Part 7: EER cores  |
| IEC 62317-9 Ed. 1.0  | Ferrite cores – Dimensions – Part 9: Planar cores (replaces IEC 61860 Ed. 1.0: Dimensions of low-profile cores made of magnetic oxides) |
| IEC 62323 Ed. 1.0    | Dimensions of half pot cores made of magnetic oxides for inductive proximity switches (will be replaced by IEC 62317-3)                 |
| IEC 62358 Ed. 1.0    | Ferrite cores – Standard inductance factor ( $A_L$ ) and its tolerance  |
| IEC/TR 61604 Ed. 1.0 | Dimensions of uncoated ring cores of magnetic oxides (will be replaced by IEC 62317-12)   |

## 1.1 Quality assessment

The IEC standards mainly specify dimensions, designations and magnetic characteristics, whereas the European system of quality assessment CECC and the harmonized DIN-CECC standards additionally define methods of measurement and quality levels.

Since 1982 the IEC has been establishing the so-called IEC Q-system, which will have worldwide applicability. German DIN IEC standards are being harmonized with this quality system.

CECC and IEC-Q standards have a similar structure: they are subdivided into generic specifications (GS), sectional specifications (SS) and blank detail specifications (BDS). The numbering system of QC is analogous to that of CECC.

The detail specifications of CECC and IEC do not fully correspond to each other.

A quality assessment system of “Capability Approval” for the production of ferrite parts is being established.