

# DATA SHEET

## **ETD44** ETD cores and accessories

Product specification  
File under Magnetic Products, MA01

1997 Nov 21

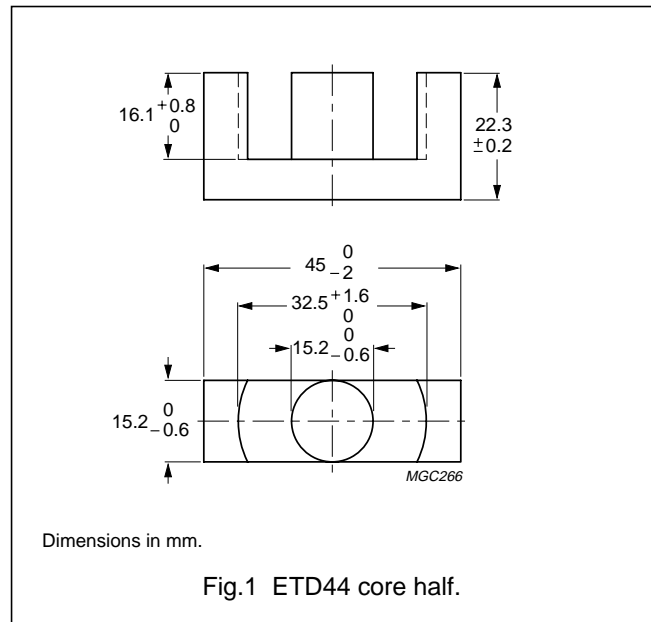
ETD cores and accessories

ETD44

CORE SETS

Effective core parameters

| SYMBOL        | PARAMETER         | VALUE | UNIT             |
|---------------|-------------------|-------|------------------|
| $\Sigma(l/A)$ | core factor (C1)  | 0.589 | mm <sup>-1</sup> |
| $V_e$         | effective volume  | 17800 | mm <sup>3</sup>  |
| $l_e$         | effective length  | 103   | mm               |
| $A_e$         | effective area    | 173   | mm <sup>2</sup>  |
| $A_{min}$     | minimum area      | 172   | mm <sup>2</sup>  |
| m             | mass of core half | ≈47   | g                |



Core halves

Clamping force 40 ±20 N. Gapped cores are available on request.

| GRADE                   | $A_L$ (nH) | $\mu_e$ | AIR GAP (μm) | TYPE NUMBER |
|-------------------------|------------|---------|--------------|-------------|
| 3C30 <small>des</small> | 3100 ±25%  | ≈1550   | ≈0           | ETD44-3C30  |
| 3C85                    | 3800 ±25%  | ≈1900   | ≈0           | ETD44-3C85  |
| 3C90 <small>des</small> | 3800 ±25%  | ≈1900   | ≈0           | ETD44-3C90  |
| 3F3 <small>des</small>  | 3500 ±25%  | ≈1780   | ≈0           | ETD44-3F3   |

Properties of core sets under power conditions

| GRADE | B (mT) at                                 | CORE LOSS (W) at                          |  |   |
|-------|---|---|--|---|
|       | H = 250 A/m;<br>f = 25 kHz;<br>T = 100 °C | f = 25 kHz;<br>Ḃ = 200 mT;<br>T = 100 °C | f = 100 kHz;<br>Ḃ = 100 mT;<br>T = 100 °C | f = 400 kHz;<br>Ḃ = 50 mT;<br>T = 100 °C |
| 3C30  | ≥360                                      | ≤2.0                                      | ≤2.2                                       | –   |
| 3C85  | ≥320                                      | ≤2.5                                      | ≤3.0                                       | –   |
| 3C90  | ≥330                                      | ≤2.0                                      | ≤2.2                                       | ≤   |
| 3F3   | ≥320                                      | –   | ≤2.2                                       | ≤ 3.9                                     |

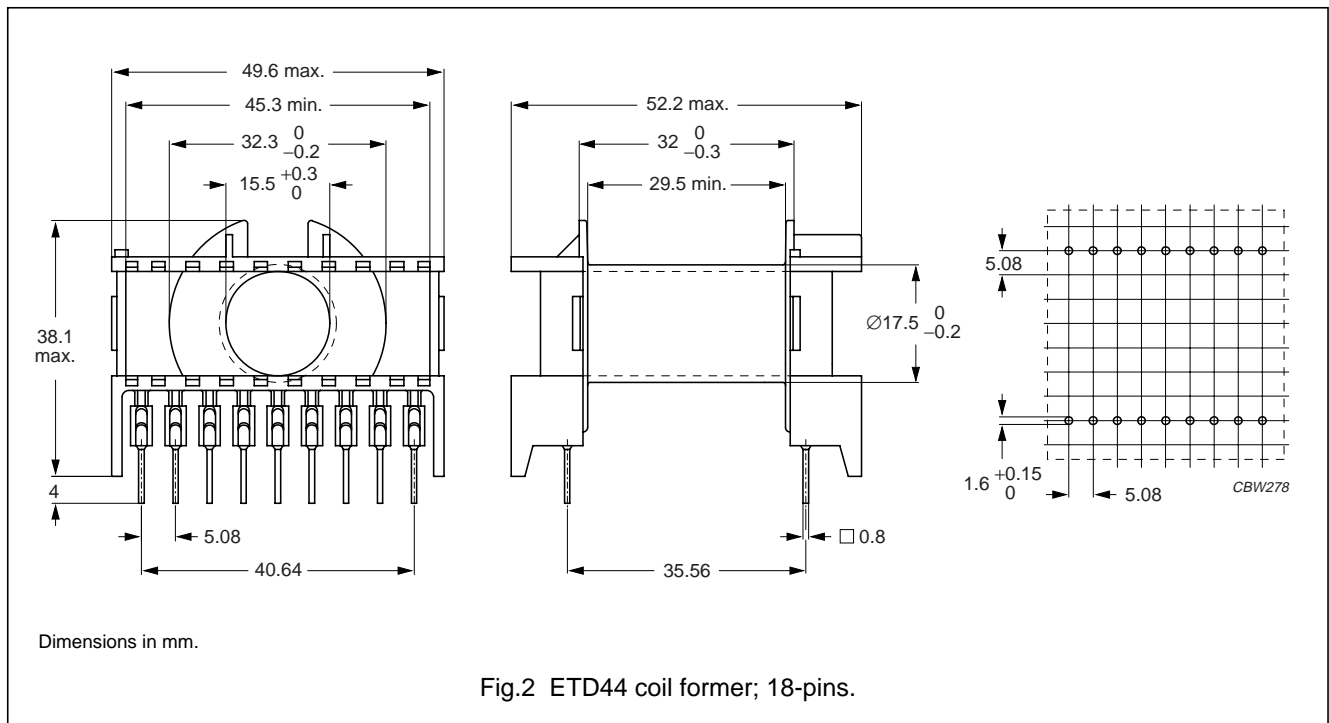
ETD cores and accessories

ETD44

COIL FORMERS

General data 18-pins ETD44 coil former

| PARAMETER                     | SPECIFICATION  |
|-------------------------------|--|
| Coil former material          | polybutyleneterephthalate (PBT), glass-reinforced, flame retardant in accordance with "UL 94V-0"; UL file number E45329(R) |
| Pin material                  | copper-tin alloy (CuSn), tin-lead alloy (SnPb) plated  |
| Maximum operating temperature | 155 °C, "IEC 85" class F   |
| Resistance to soldering heat  | "IEC 68-2-20", Part 2, Test Tb, method 1B, 350 °C, 3.5 s   |
| Solderability                 | "IEC 68-2-20", Part 2, Test Ta, method 1   |



Winding data for 18-pins ETD44 coil former

| NUMBER OF SECTIONS | WINDING AREA (mm <sup>2</sup> ) | MINIMUM WINDING WIDTH (mm) | AVERAGE LENGTH OF TURN (mm) | TYPE NUMBER      |
|--------------------|---------------------------------|----------------------------|-----------------------------|------------------|
| 1                  | 214                             | 29.5                       | 77                          | CPH-ETD44-1S-18P |

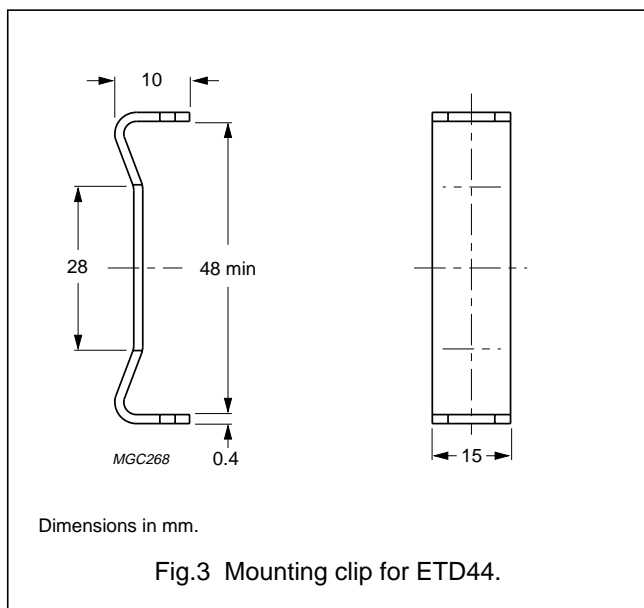
ETD cores and accessories

ETD44

**MOUNTING PARTS**

**General data**

| ITEM          | REMARKS                   | FIGURE | TYPE NUMBER |
|---------------|---------------------------|--------|-------------|
| Mounting clip | material: stainless steel | 3      | CLI-ETD44   |



## ETD cores and accessories

## ETD44




## DEFINITIONS

| Data sheet status   |   |
|---|---|
| Objective specification   | This data sheet contains target or goal specifications for product development.       |
| Preliminary specification   | This data sheet contains preliminary data; supplementary data may be published later. |
| Product specification   | This data sheet contains final product specifications.                                |
| Application information   |   |
| Where application information is given, it is advisory and does not form part of the specification. |   |

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|-----------|---|--|
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