

# DATA SHEET

## **ETD49** ETD cores and accessories

Product specification  
Supersedes data of November 1997  
File under Ferrite Ceramics, MA01

2000 Apr 20

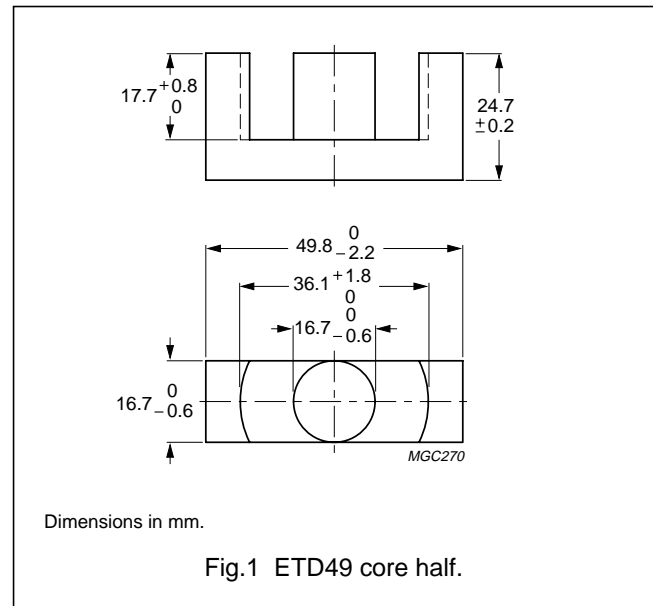
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CORE SETS

Effective core parameters

SYMBOL	PARAMETER	VALUE	UNIT
$\Sigma(I/A)$	core factor (C1)	0.534	mm <sup>-1</sup>
$V_e$	effective volume	24000	mm <sup>3</sup>
$l_e$	effective length	114	mm
$A_e$	effective area	211	mm <sup>2</sup>
$A_{min}$	minimum area	209	mm <sup>2</sup>
m	mass of core half	≈62	g



Core halves

Clamping force for  $A_L$  measurements, 50 ±20 N. Gapped cores are available on request.

GRADE	$A_L$ (nH)	$\mu_e$	AIR GAP ( $\mu\text{m}$ )	TYPE NUMBER
3C90	4200 ±25%	≈1950	≈0	ETD49-3C90
3F3	3900 ±25%	≈1800	≈0	ETD49-3F3

Properties of core sets under power conditions

GRADE	B (mT) at	CORE LOSS (W) at		
	H = 250 A/m; f = 25 kHz; T = 100 °C	f = 25 kHz; $\hat{B}$ = 200 mT; T = 100 °C	f = 100 kHz; $\hat{B}$ = 100 mT; T = 100 °C	f = 400 kHz; $\hat{B}$ = 50 mT; T = 100 °C
3C90	≥330	≤2.9	≤3.1	–
3F3	≥320	–	≤3.0	≤5.4

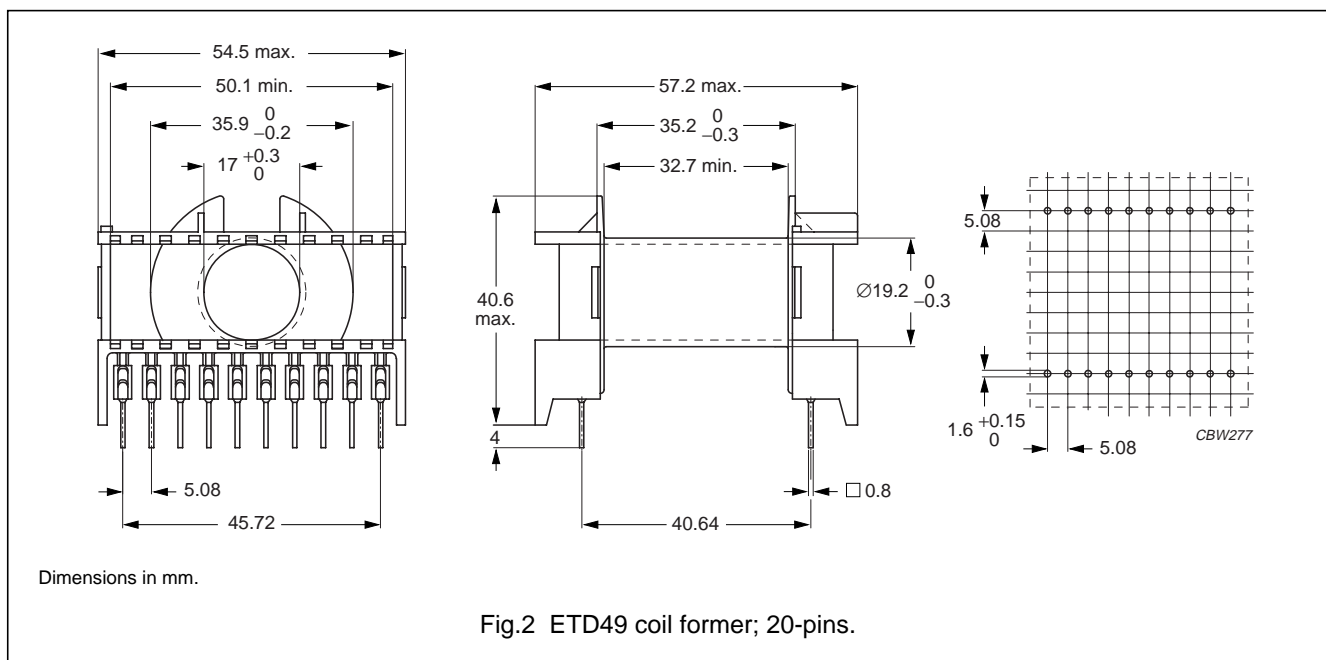
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COIL FORMERS

General data 20-pins ETD49 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 60085", class F
Resistance to soldering heat	"IEC 60068-2-20", Part 2, Test Tb, method 1B, 350 °C, 3.5 s
Solderability	"IEC 60068-2-20", Part 2, Test Ta, method 1



Winding data for 20-pins ETD49 coil former

NUMBER OF SECTIONS	WINDING AREA (mm <sup>2</sup> )	MINIMUM WINDING WIDTH (mm)	AVERAGE LENGTH OF TURN (mm)	TYPE NUMBER
1	273	32.7	85	CPH-ETD49-1S-20P <sup>(1)</sup>

Note

- 1. Also available with Ø1.0 mm pins.

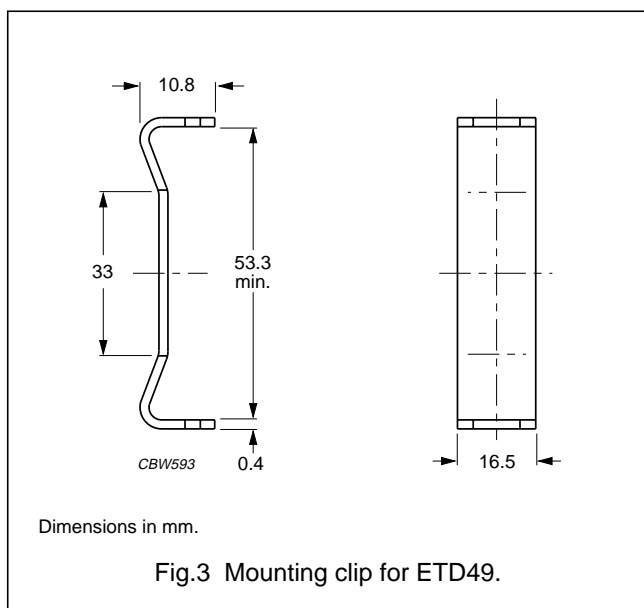
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**MOUNTING PARTS**

**General data**

ITEM	REMARKS	FIGURE	TYPE NUMBER
Mounting clip	material: stainless steel	3	CLI-ETD49



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## DATA SHEET STATUS DEFINITIONS

DATA SHEET STATUS	PRODUCT STATUS	DEFINITIONS
Preliminary specification	Development	This data sheet contains preliminary data. Philips Components reserves the right to make changes at any time without notice in order to improve design and supply the best possible product.
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