

# DATA SHEET

**ETD59**

**ETD cores and accessories**

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

2000 Apr 20

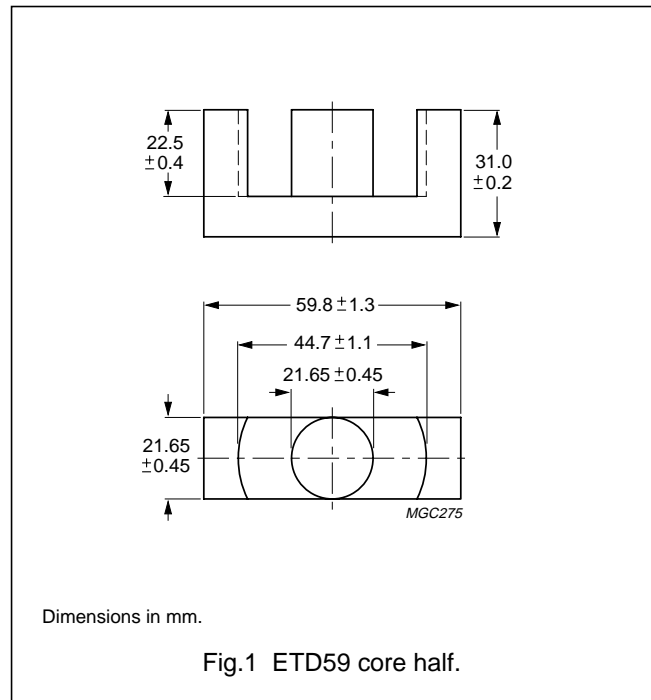
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CORE SETS

Effective core parameters

SYMBOL	PARAMETER	VALUE	UNIT
$\Sigma(l/A)$	core factor (C1)	0.378	mm <sup>-1</sup>
$V_e$	effective volume	51500	mm <sup>3</sup>
$l_e$	effective length	139	mm
$A_e$	effective area	368	mm <sup>2</sup>
$A_{min}$	minimum area	360	mm <sup>2</sup>
m	mass of core half	≈130	g



Core halves

Clamping force for  $A_L$  measurements, 70 ±20 N. Gapped cores are available on request.

GRADE	$A_L$ (nH)	$\mu_e$	AIR GAP ( $\mu$ m)	TYPE NUMBER
3C90	6000 ±25%	≈1950	≈0	ETD59-3C90
3F3	5600 ±25%	≈1800	≈0	ETD59-3F3

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; $\dot{B}$ = 200 mT; T = 100 °C	f = 100 kHz; $\dot{B}$ = 100 mT; T = 100 °C	f = 400 kHz; $\dot{B}$ = 50 mT; T = 100 °C
3C90	≥330	≤6.2	≤7.3	–
3F3	≥320	–	≤6.7	≤12.8

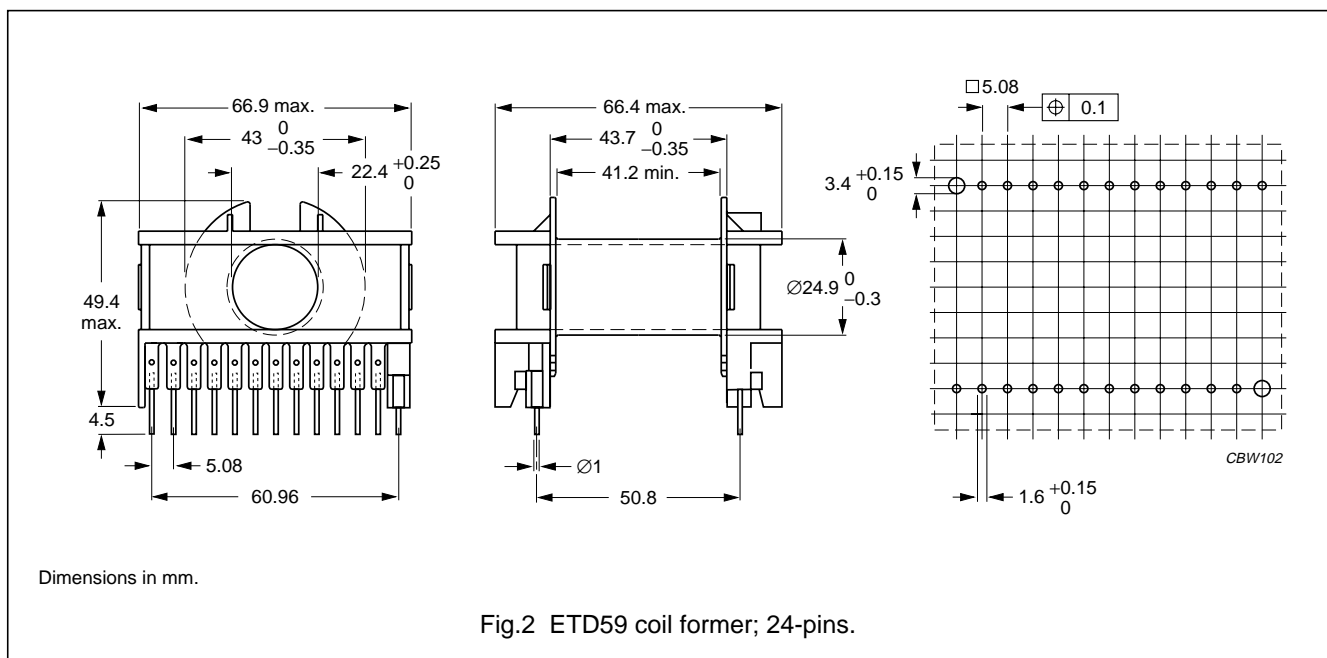
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COIL FORMER

General data 24-pins ETD59 coil former

PARAMETER	SPECIFICATION
Coil former material	polybutyleneterephthalate (PBT), glass-reinforced, flame retardant in accordance with "UL 94V-0"; UL file number E41613(M)
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 24-pins ETD59 coil former

NUMBER OF SECTIONS	WINDING AREA (mm <sup>2</sup> )	MINIMUM WINDING WIDTH (mm)	AVERAGE LENGTH OF TURN (mm)	TYPE NUMBER
1	366	41.2	106	CPH-ETD59-1S-24P

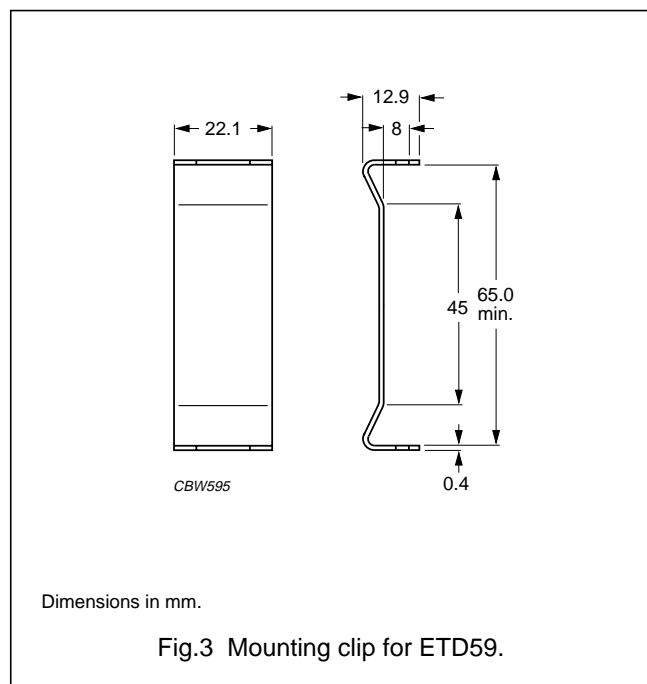
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**MOUNTING PARTS**

**General data**

ITEM	REMARKS	FIGURE	TYPE NUMBER
Mounting clip	material: stainless steel	3	CLI-ETD59



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**DATA SHEET STATUS DEFINITIONS**

DATA SHEET STATUS	PRODUCT STATUS	DEFINITIONS
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Product specification	Production	This data sheet contains final specifications. 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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