

DATA SHEET

EP13/LP

EP cores and accessories

Supersedes data of February 2002

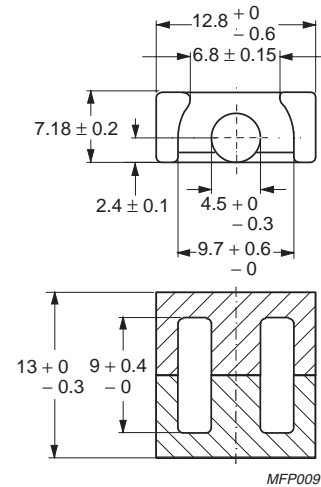
2004 Sep 01



FERROXCUBE
A YAGEO COMPANY

CORE SETS**Effective core parameters**



SYMBOL	PARAMETER	VALUE	UNIT
$\Sigma(l/A)$	core factor (C1)	1.42	mm ⁻¹
V_e	effective volume	501	mm ³
l_e	effective length	26.7	mm
A_e	effective area	18.8	mm ²
A_{min}	minimum area	14.9	mm ²
m	mass of core set	≈ 2.4	g




Dimensions in mm.

Fig. 1 EP13/LP core set.

Core sets for general purpose transformers and power applicationsClamping force for A_L measurements, 30 ± 10 N.

GRADE	A_L (nH)	μ_e	AIR GAP (μm)	TYPE NUMBER
3C94	$1400 \pm 25 \%$	≈ 1580	≈ 0	EP13/LP-3C94
3C96 	$1200 \pm 25 \%$	≈ 1360	≈ 0	EP13/LP-3C96
3F35 	$950 \pm 25 \%$	≈ 1070	≈ 0	EP13/LP-3F35

Core sets for filter applicationsClamping force for A_L measurements, 30 ± 10 N.

GRADE	A_L (nH)	μ_e	AIR GAP (μm)	TYPE NUMBER
3B46 	$2000 \pm 25 \%$	≈ 2260	≈ 0	EP13/LP-3B46

EP cores and accessories

EP13/LP

Core sets of high permeability gradesClamping force for A_L measurements, 30 ± 10 N.

GRADE	A_L (nH)	μ_e	AIR GAP (μm)	TYPE NUMBER
3E55 <small>des</small>	$100 \pm 3 \%$	≈ 113	≈ 300	EP13/LP-3E55-A100
	$160 \pm 3 \%$	≈ 181	≈ 170	EP13/LP-3E55-A160
	$250 \pm 5 \%$	≈ 282	≈ 100	EP13/LP-3E55-A250
	$315 \pm 5 \%$	≈ 356	≈ 80	EP13/LP-3E55-A315
	$400 \pm 8 \%$	≈ 452	≈ 60	EP13/LP-3E55-A400
	$630 \pm 15 \%$	≈ 712	≈ 35	EP13/LP-3E55-A630
	$6000 + 40 / - 30 \%$	≈ 6780	≈ 0	EP13/LP-3E55
3E6	$6700 + 40 / - 30 \%$	≈ 7570	≈ 0	EP13/LP-3E6

Properties of core sets under power conditions

GRADE	B (mT) at	CORE LOSS (W) at			
	H = 250 A/m; f = 10 kHz; T = 100 °C	f = 100 kHz; $\hat{B} = 100$ mT; T = 100 °C	f = 100 kHz; $\hat{B} = 200$ mT; T = 100 °C	f = 500 kHz; $\hat{B} = 50$ mT; T = 100 °C	f = 500 kHz; $\hat{B} = 100$ mT; T = 100 °C
3C94	≥ 320	≤ 0.04	≤ 0.25	–	–
3C96	≥ 340	≤ 0.03	≤ 0.2	≤ 0.16	–
3F35	≥ 300	–	–	≤ 0.06	≤ 0.5

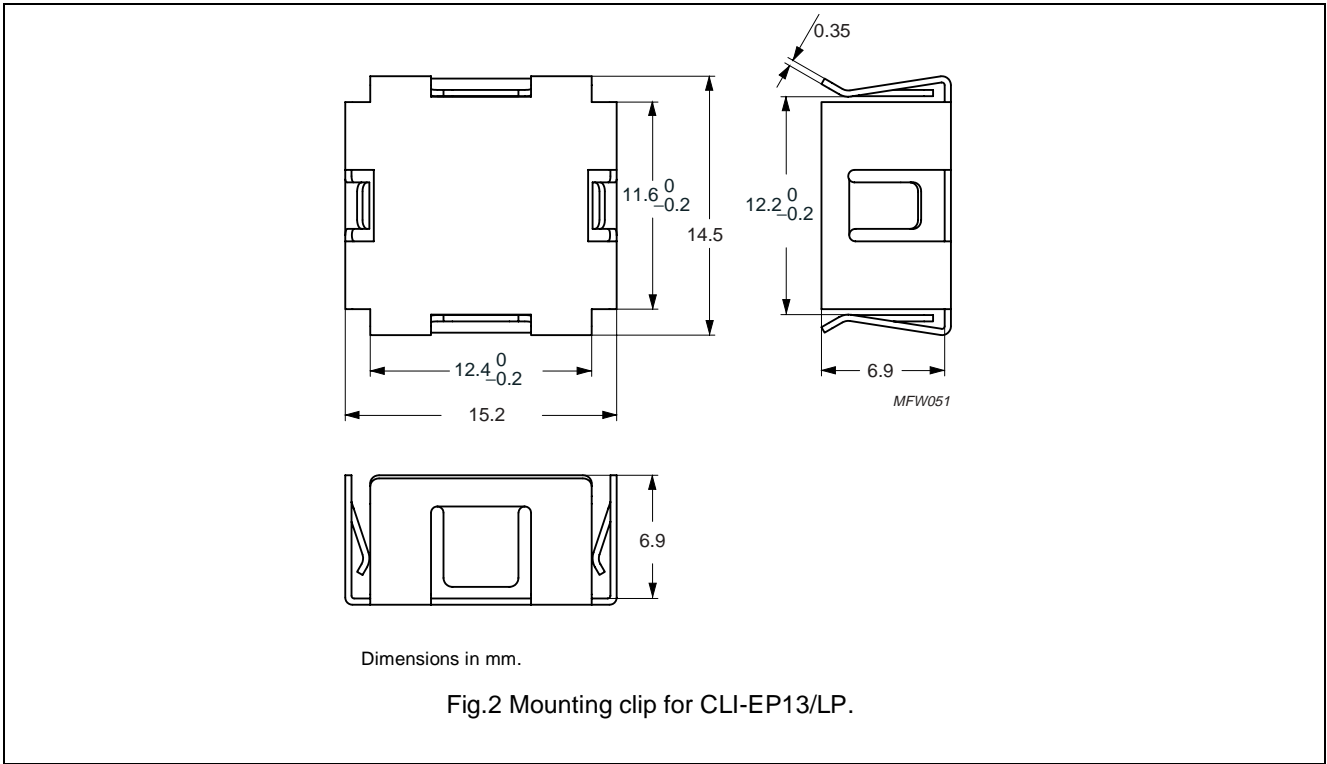
BOBBINS AND ACCESSORIES

For bobbins, winding data and other mounting parts, see data sheet, “EP13”.

MOUNTING PARTS

General data

ITEM	REMARKS	FIGURE	TYPE NUMBER
Clip	stainless steel (CrNi); clamping force ≈ 32 N	2	CLI-EP13/LP






DATA SHEET STATUS DEFINITIONS

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

STATUS	INDICATION	DEFINITION
Prototype		These are products that have been made as development samples for the purposes of technical evaluation only. The data for these types is provisional and is subject to change.
Design-in		These products are recommended for new designs.
Preferred		These products are recommended for use in current designs and are available via our sales channels.
Support		These products are not recommended for new designs and may not be available through all of our sales channels. Customers are advised to check for availability.