

# DATA SHEET

**EPX7**

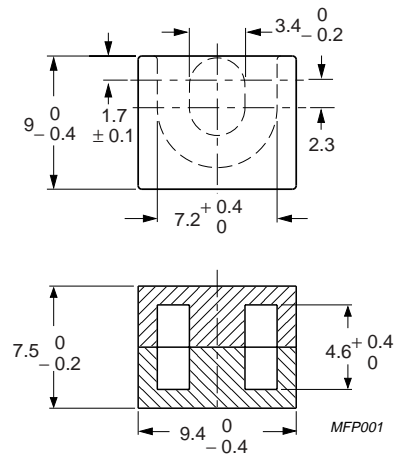
EPX cores and accessories

Supersedes data of February 2002

2004 Sep 01

**CORE SETS****Effective core parameters**



SYMBOL	PARAMETER	VALUE	UNIT
$\Sigma(l/A)$	core factor (C1)	0.931	mm <sup>-1</sup>
$V_e$	effective volume	255	mm <sup>3</sup>
$l_e$	effective length	15.4	mm
$A_e$	effective area	16.5	mm <sup>2</sup>
$A_{min}$	minimum area	14.5	mm <sup>2</sup>
m	mass of core set	≈ 2.1	g




Dimensions in mm.

Fig.1 EPX7 core set.

**Core sets for general purpose transformers and power applications**Clamping force for  $A_L$  measurements,  $30 \pm 10$  N.

GRADE	$A_L$ (nH)	$\mu_e$	AIR GAP ( $\mu\text{m}$ )	TYPE NUMBER
3C94	$1950 \pm 25 \%$	≈ 1440	≈ 0	EPX7-3C94
3C96 	$1750 \pm 25 \%$	≈ 1300	≈ 0	EPX7-3C96
3F35 	$1400 \pm 25 \%$	≈ 1040	≈ 0	EPX7-3F35

**Core sets for filter applications**Clamping force for  $A_L$  measurements,  $30 \pm 10$  N.

GRADE	$A_L$ (nH)	$\mu_e$	AIR GAP ( $\mu\text{m}$ )	TYPE NUMBER
3B46 	$2500 \pm 25 \%$	≈ 1850	≈ 0	EPX7-3B46

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**Core sets of high permeability grades**Clamping force for  $A_L$  measurements,  $30 \pm 10$  N.

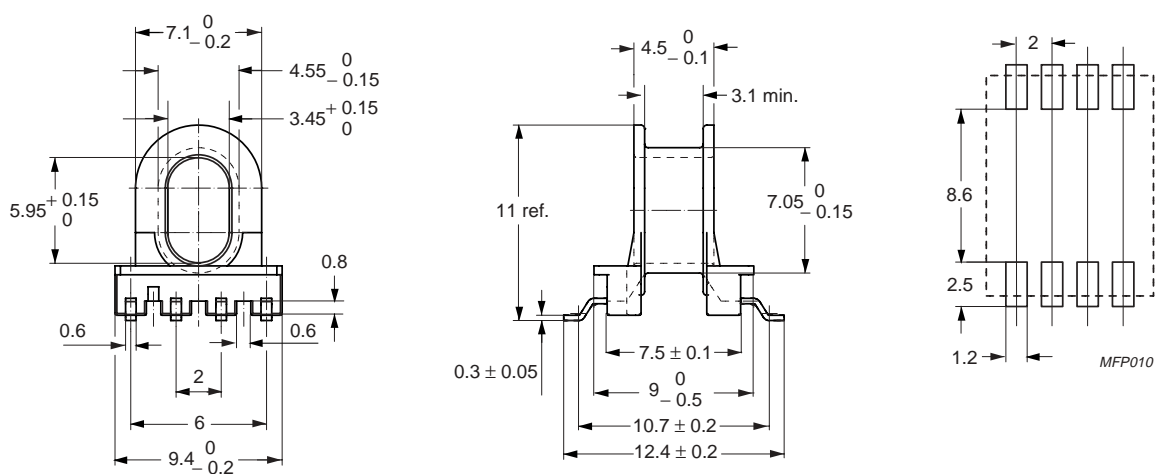
GRADE	$A_L$ (nH)	$\mu_e$	AIR GAP ( $\mu\text{m}$ )	TYPE NUMBER
3E55 <small>des</small>	$63 \pm 3 \%$	$\approx 47$	$\approx 450$	EPX7-3E55-A63
	$100 \pm 3 \%$	$\approx 74$	$\approx 250$	EPX7-3E55-A100
	$160 \pm 3 \%$	$\approx 119$	$\approx 150$	EPX7-3E55-A160
	$250 \pm 5 \%$	$\approx 185$	$\approx 90$	EPX7-3E55-A250
	$315 \pm 5 \%$	$\approx 233$	$\approx 70$	EPX7-3E55-A315
	$400 \pm 8 \%$	$\approx 296$	$\approx 50$	EPX7-3E55-A400
	$8400 + 40 / - 30 \%$	$\approx 6220$	$\approx 0$	EPX7-3E55
3E6	$9300 + 40 / - 30 \%$	$\approx 6890$	$\approx 0$	EPX7-3E6

**Properties 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	$\geq 320$	$\leq 0.02$	$\leq 0.13$	—	—
3C96	$\geq 340$	$\leq 0.015$	$\leq 0.1$	$\leq 0.08$	—
3F35	$\geq 300$	—	—	$\leq 0.03$	$\leq 0.25$

**COIL FORMERS****General data**

PARAMETER	SPECIFICATION
Coil former material	Sumikon PM9630 (PF), glass-reinforced, flame retardant in accordance with "UL 94V-0"; UL file number E41429(M)
Pin material	copper-tin alloy (CuSn), nickel flash, gold plated
Maximum operating temperature	180 °C, "IEC 60085", class H
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, 235 °C, 2 s



Dimensions in mm.

Fig.2 EPX7 coil former: 8-pads, 2 mm pad distance.

**Winding data for 8-pads EPX7 coil former**

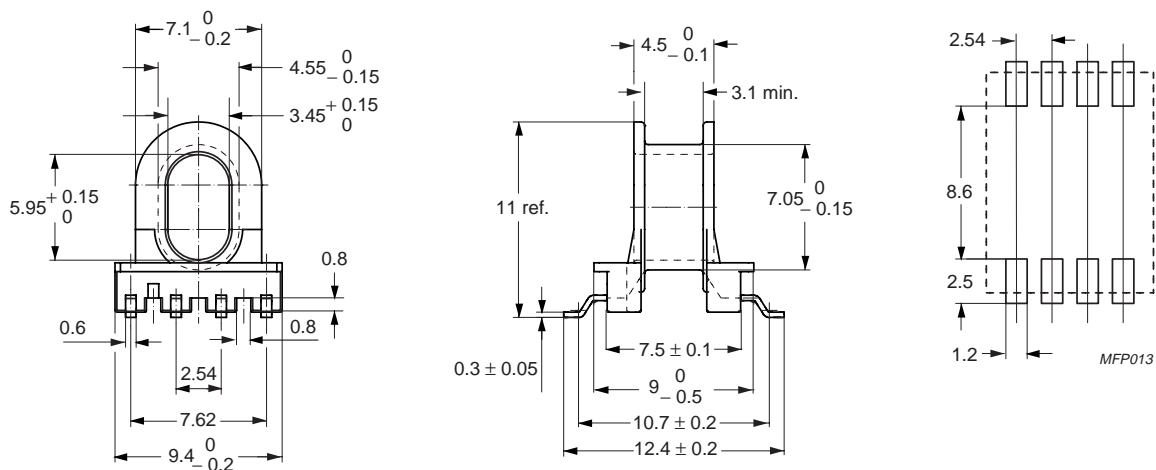
NUMBER OF SECTIONS	WINDING AREA (mm <sup>2</sup> )	NOMINAL WINDING WIDTH (mm)	AVERAGE LENGTH OF TURN (mm)	TYPE NUMBER
1	3.64	3.4	23.3	CSHS-EPX7-1S-8P-T

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## General data CSHS-EPX7-1S-8P

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Dimensions in mm.

Fig.3 EPX7 coil former: 8-pads, 2.54 mm pad distance.

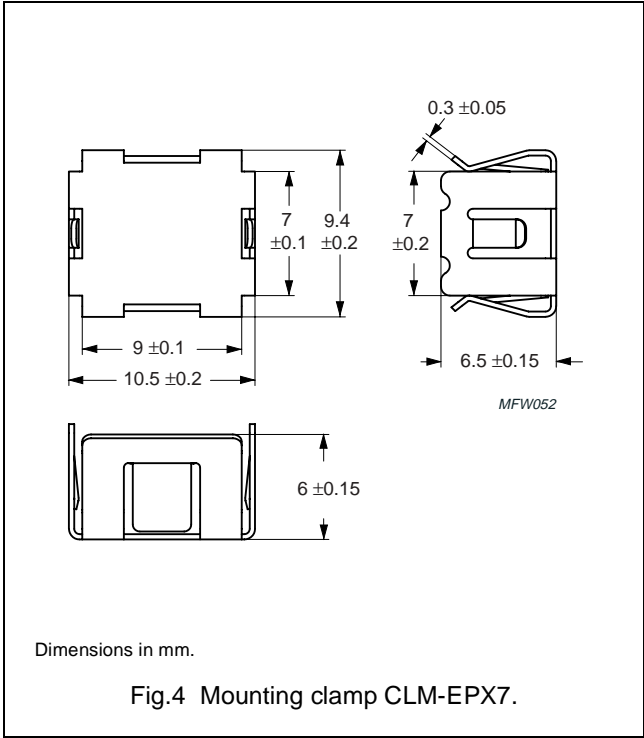
## Winding data for 8-pads EPX7 coil former

NUMBER OF SECTIONS	MINIMUM WINDING AREA (mm <sup>2</sup> )	NOMINAL WINDING WIDTH (mm)	AVERAGE LENGTH OF TURN (mm)	TYPE NUMBER
1	3.64	3.4	23.3	CSHS-EPX7-1S-8P

MOUNTING PARTS

General data

ITEM	REMARKS	FIGURE	TYPE NUMBER
Mounting clamp	stainless steel (CrNi); to be used in combination with CSHS-EPX7-1S-8P or CSHS-EPX7-1S-8P-T	4	CLM-EPX7



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## 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

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<b>Preferred</b>		These products are recommended for use in current designs and are available via our sales channels.
<b>Support</b>		These products are <b>not</b> recommended for new designs and may not be available through all of our sales channels. Customers are advised to check for availability.