

DATA SHEET

EPX10

EPX cores and accessories

Supersedes data of September 2004

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FERROXCUBE
A YAGEO COMPANY

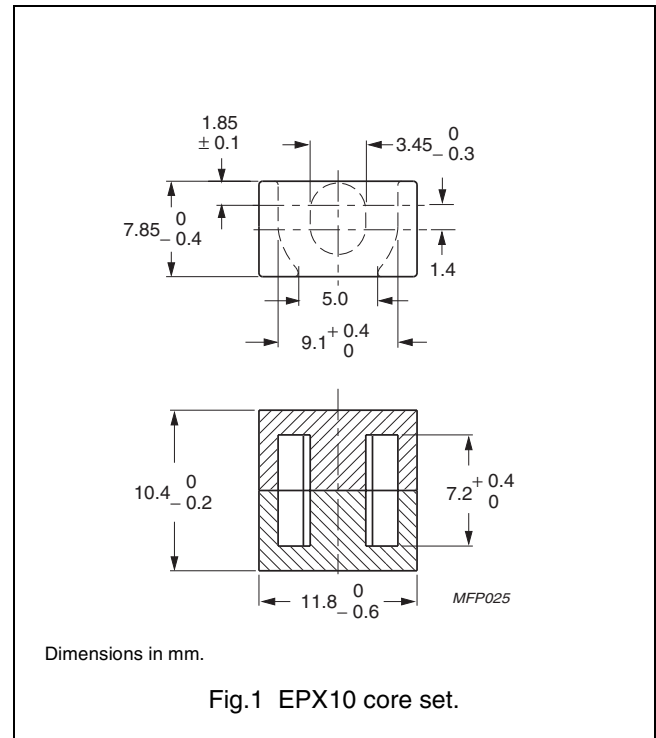
EPX cores and accessories

EPX10

CORE SETS

Effective core parameters

SYMBOL	PARAMETER	VALUE	UNIT
$\Sigma(l/A)$	core factor (C1)	1.45	mm ⁻¹
V_e	effective volume	325	mm ³
l_e	effective length	21.7	mm
A_e	effective area	15.0	mm ²
A_{min}	minimum area	12.5	mm ²
m	mass of core set	≈ 2.5	g



Core sets for general purpose transformers and power applications

Clamping force for A_L measurements, 30 ± 10 N.

GRADE	A_L (nH)	μ_e	AIR GAP (μ m)	TYPE NUMBER
3C94	$1400 \pm 25 \%$	≈ 1620	≈ 0	EPX10-3C94
3C96 des	$1250 \pm 25 \%$	≈ 1440	≈ 0	EPX10-3C96
3F35 des	$950 \pm 25 \%$	≈ 1100	≈ 0	EPX10-3F35

Core sets for filter applications

Clamping force for A_L measurements, 30 ± 10 N.

GRADE	A_L (nH)	μ_e	AIR GAP (μ m)	TYPE NUMBER
3B46 des	$1900 \pm 25 \%$	≈ 2200	≈ 0	EPX10-3B46

EPX cores and accessories

EPX10

Core sets of high permeability grades

Clamping force for A_L measurements, 30 ± 10 N.

GRADE	A_L (nH)	μ_e	AIR GAP (μm)	TYPE NUMBER
3E55 des	$63 \pm 3 \%$	≈ 73	≈ 410	EPX10-3E55-A63
	$100 \pm 3 \%$	≈ 115	≈ 230	EPX10-3E55-A100
	$160 \pm 3 \%$	≈ 185	≈ 135	EPX10-3E55-A160
	$250 \pm 5 \%$	≈ 288	≈ 80	EPX10-3E55-A250
	$315 \pm 5 \%$	≈ 363	≈ 60	EPX10-3E55-A315
	$400 \pm 8 \%$	≈ 462	≈ 50	EPX10-3E55-A400
	$6000 + 40 / - 30 \%$	≈ 6920	≈ 0	EPX10-3E55
3E6	$6600 + 40 / - 30 \%$	≈ 7620	≈ 0	EPX10-3E6

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	≤ 0.025	≤ 0.16	–	–
3C96	≥ 340	≤ 0.018	≤ 0.13	≤ 0.1	–
3F35	≥ 300	–	–	≤ 0.04	≤ 0.3

EPX cores and accessories

EPX10

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.