DATA SHEET

E31/13/9
E cores and accessories

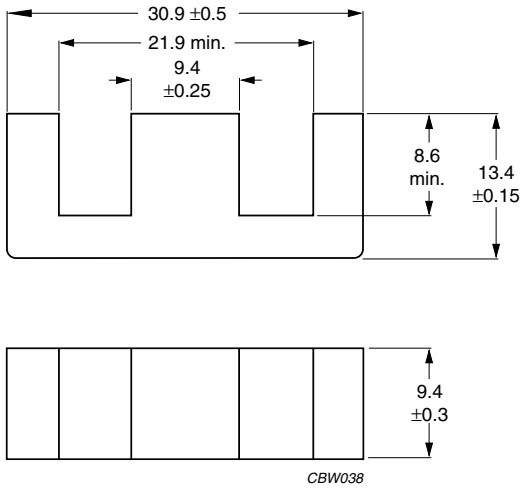
Supersedes data of September 2004 2008 Sep 01

FERROXCUBE
A YAGEO COMPANY

CORE SETS

Effective core parameters

SYMBOL	PARAMETER	VALUE	UNIT
$\Sigma(l/A)$	core factor (C1)	0.740	mm^{-1}
V_e	effective volume	5150	mm^3
l_e	effective length	61.9	mm
A_e	effective area	83.2	mm^2
A_{min}	minimum area	83.2	mm^2
m	mass of core half	≈ 13	g



Dimensions in mm.

Fig.1 E31/13/9 core half.

Core halves

A_L measured in combination with a non-gapped core half, clamping force for A_L measurements 40 ±20 N, unless stated otherwise.

GRADE	A_L (nH)	μ_e	TOTAL AIR GAP (μm)	TYPE NUMBER
3C90	100 ±5%(1)	≈ 59	≈ 1560	E31/13/9-3C90-E100
	160 ±5%(1)	≈ 95	≈ 840	E31/13/9-3C90-E160
	250 ±5%	≈ 148	≈ 480	E31/13/9-3C90-A250
	315 ±5%	≈ 186	≈ 360	E31/13/9-3C90-A315
	400 ±8%	≈ 237	≈ 270	E31/13/9-3C90-A400
	630 ±15%	≈ 373	≈ 150	E31/13/9-3C90-A630
	2970 ±25%	≈1760	≈ 0	E31/13/9-3C90

Note

1. Measured in combination with an equal gapped core half, clamping force for A_L measurements, 40 ±20 N.

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
3C90	≥320	≤ 0.52	≤ 0.58

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
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Support	sup	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.