# **FERROXCUBE**

# DATA SHEET

E8.8/4.1/2
E cores and accessories

Supersedes data of September 2004

2008 Sep 01



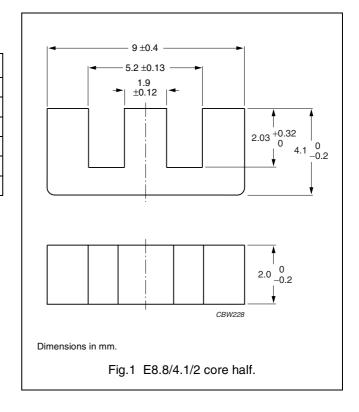
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# E cores and accessories

#### **CORE SETS**

## **Effective core parameters**

SYMBOL	PARAMETER VALU		UNIT
Σ(I/A)	core factor (C1)	3.13	mm <sup>-1</sup>
V <sub>e</sub>	effective volume 78 mi		mm <sup>3</sup>
l <sub>e</sub>	effective length	15.6	mm
A <sub>e</sub>	effective area	5.0	mm <sup>2</sup>
A <sub>min</sub>	minimum area	3.6	mm <sup>2</sup>
m	mass of core half	≈ 0.25	g



## **Core halves**

 $A_L$  measured in combination with a non-gapped core half, clamping force for  $A_L$  measurements, 5  $\pm 2$  N.

GRADE	A <sub>L</sub> (nH)	$\mu_{\mathbf{e}}$	AIR GAP (μm)	TYPE NUMBER
3C96 des	480 ±25%	≈ <b>1</b> 190	≈ 0	E8.8/4.1/2-3C96
3F3	460 ±25%	≈ 1 140	≈ 0	E8.8/4.1/2-3F3
3F35 des	380 ±25%	≈ 940	≈ 0	E8.8/4.1/2-3F35
3F4 des	280 ±25%	≈ 695	≈ 0	E8.8/4.1/2-3F4

## Properties of core sets under power conditions

	B (mT) at		CORE LOSS (W) at	
GRADE	H = 250 A/m; f = 25 kHz; T = 100 °C	f = 100 kHz; B = 100 mT; T = 100 °C	f = 100 kHz; B = 200 mT; T = 100 °C	f = 400 kHz; B = 50 mT; T = 100 °C
3C96	≥340	≤ 0.0055	≤ 0.032	≤ 0.014
3F3	≥300	≤ 0.01	_	≤ 0.014
3F35	≥300	_	_	≤ 0.007
3F4	≥250	_	_	_

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# Properties of core sets under power conditions (continued)

	B (mT) at	CORE LOSS (W) at			
GRADE	H = 250 A/m; f = 25 kHz; T = 100 °C	f = 500 kHz; B = 50 mT; T = 100 °C	f = 500 kHz; B = 100 mT; T = 100 °C	f = 1 MHz; B = 30 mT; T = 100 °C	f = 3 MHz; B = 10 mT; T = 100 °C
3C96	≥340	≤ 0.029	_	_	_
3F3	≥300	_	_	_	-
3F35	≥300	≤ 0.011	≤ 0.082	_	_
3F4	≥250	_	_	≤ 0.023	≤ 0.037

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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**

STATUS	INDICATION	DEFINITION
Prototype	prot	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	des	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	sup	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.

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