

# DATA SHEET

**E8.8/4.1/2**

**E cores and accessories**

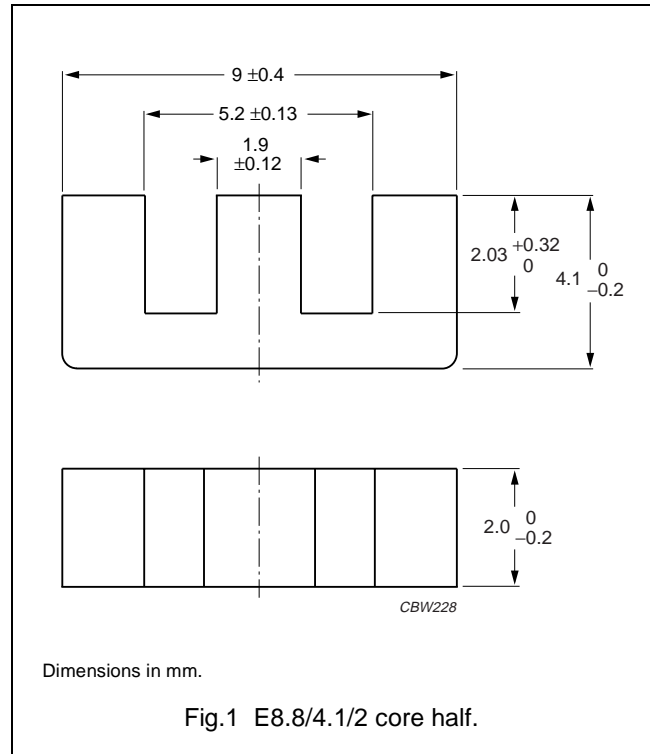
Supersedes data of February 2002

2004 Sep 01

**CORE SETS**

**Effective core parameters**

SYMBOL	PARAMETER	VALUE	UNIT
$\Sigma(l/A)$	core factor (C1)	3.13	mm <sup>-1</sup>
$V_e$	effective volume	78	mm <sup>3</sup>
$l_e$	effective length	15.6	mm
$A_e$	effective area	5.0	mm <sup>2</sup>
$A_{min}$	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 ± 2 N.

GRADE	$A_L$ (nH)	$\mu_e$	AIR GAP ( $\mu$ m)	TYPE NUMBER
3C92 <span style="background-color: black; color: white; padding: 2px;">des</span>	400 ±25%	≈ 1000	≈ 0	E8.8/4.1/2-3C92
3C94	530 ±25%	≈ 1310	≈ 0	E8.8/4.1/2-3C94
3C96 <span style="background-color: black; color: white; padding: 2px;">des</span>	480 ±25%	≈ 1190	≈ 0	E8.8/4.1/2-3C96
3F3	460 ±25%	≈ 1140	≈ 0	E8.8/4.1/2-3F3
3F35 <span style="background-color: black; color: white; padding: 2px;">prot</span>	380 ±25%	≈ 940	≈ 0	E8.8/4.1/2-3F35
3F4 <span style="background-color: black; color: white; padding: 2px;">des</span>	280 ±25%	≈ 695	≈ 0	E8.8/4.1/2-3F4

**Core halves of high permeability grades**

$A_L$  measured in combination with a non-gapped core half, clamping force for  $A_L$  measurements, 15 ± 5 N.

GRADE	$A_L$ (nH)	$\mu_e$	AIR GAP ( $\mu$ m)	TYPE NUMBER
3E6	2500 +40/-30%	≈ 6210	≈ 0	E8.8/4.1/2-3E6

## E cores and accessories

E8.8/4.1/2

## 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 = 100 kHz; $\hat{B}$ = 100 mT; T = 100 °C	f = 100 kHz; $\hat{B}$ = 200 mT; T = 100 °C	f = 400 kHz; $\hat{B}$ = 50 mT; T = 100 °C
3C92	≥370	≤ 0.007	≤ 0.04	–
3C94	≥320	≤ 0.007	≤ 0.04	–
3C96	≥340	≤ 0.0055	≤ 0.032	≤ 0.014
3F3	≥300	≤ 0.01	–	≤ 0.014
3F35	≥300	–	–	≤ 0.007
3F4	≥250	–	–	–

## Properties of core sets under power conditions (continued)

GRADE	B (mT) at	CORE LOSS (W) at			
	H = 250 A/m; f = 25 kHz; T = 100 °C	f = 500 kHz; $\hat{B}$ = 500 mT; T = 100 °C	f = 500 kHz; $\hat{B}$ = 100 mT; T = 100 °C	f = 1 MHz; $\hat{B}$ = 30 mT; T = 100 °C	f = 3 MHz; $\hat{B}$ = 10 mT; T = 100 °C
3C92	≥370	–	–	–	–
3C94	≥320	–	–	–	–
3C96	≥340	≤ 0.029	–	–	–
3F3	≥300	–	–	–	–
3F35	≥300	≤ 0.011	≤ 0.082	–	–
3F4	≥250	–	–	≤ 0.023	≤ 0.037




**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.

**DISCLAIMER**

**Life support applications** — These products are not designed for use in life support appliances, devices, or systems where malfunction of these products can reasonably be expected to result in personal injury. Ferroxcube customers using or selling these products for use in such applications do so at their own risk and agree to fully indemnify Ferroxcube for any damages resulting from such application.

**PRODUCT STATUS DEFINITIONS**

STATUS	INDICATION	DEFINITION
<b>Prototype</b>		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.
<b>Design-in</b>		These products are recommended for new designs.
<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.