

# DATA SHEET

**E25/13/11**

**E cores and accessories**

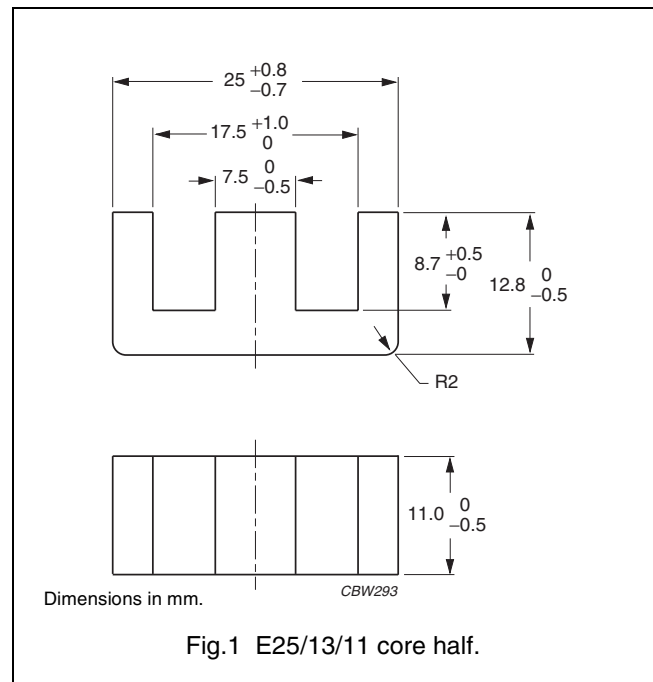
Supersedes data of September 2004

2008 Sep 01

**CORE SETS**

**Effective core parameters**

SYMBOL	PARAMETER	VALUE	UNIT
$\Sigma(l/A)$	core factor (C1)	0.733	mm <sup>-1</sup>
$V_e$	effective volume	4500	mm <sup>3</sup>
$l_e$	effective length	57.5	mm
$A_e$	effective area	78.4	mm <sup>2</sup>
$A_{min}$	minimum area	78.4	mm <sup>2</sup>
m	mass of core half	≈ 11	g



**Core halves**

Clamping force for  $A_L$  measurements  $20 \pm 10$  N.

GRADE	$A_L$ (nH)	$\mu_e$	TOTAL AIR GAP ( $\mu$ m)	TYPE NUMBER
3C90	$63 \pm 5\%^{(1)}$	≈ 37	≈ 2800	E25/13/11-3C90-E63
	$100 \pm 8\%^{(1)}$	≈ 58	≈ 1480	E25/13/11-3C90-E100
	$160 \pm 8\%$	≈ 93	≈ 790	E25/13/11-3C90-A160
	$250 \pm 15\%$	≈ 146	≈ 450	E25/13/11-3C90-A250
	$315 \pm 15\%$	≈ 184	≈ 340	E25/13/11-3C90-A315
	$2800 \pm 25\%$	≈ 1630	≈ 0	E25/13/11-3C90
3C92 <span style="background-color: black; color: white; padding: 0 2px;">des</span>	$2200 \pm 25\%$	≈ 1280	≈ 0	E25/13/11-3C92
3C94	$2800 \pm 25\%$	≈ 1630	≈ 0	E25/13/11-3C94
3C96 <span style="background-color: black; color: white; padding: 0 2px;">des</span>	$2700 \pm 25\%$	≈ 1580	≈ 0	E25/13/11-3C96
3F3	$63 \pm 5\%^{(1)}$	≈ 37	≈ 2800	E25/13/11-3F3-E63
	$100 \pm 8\%^{(1)}$	≈ 58	≈ 1480	E25/13/11-3F3-E100
	$160 \pm 8\%$	≈ 93	≈ 790	E25/13/11-3F3-A160
	$250 \pm 15\%$	≈ 146	≈ 450	E25/13/11-3F3-A250
	$315 \pm 15\%$	≈ 184	≈ 340	E25/13/11-3F3-A315
	$2700 \pm 25\%$	≈ 1580	≈ 0	E25/13/11-3F3
3F35 <span style="background-color: black; color: white; padding: 0 2px;">des</span>	$2000 \pm 25\%$	≈ 1170	≈ 0	E25/13/11-3F35

**Note**

1. Measured in combination with an equal gapped core half, clamping force for  $A_L$  measurements,  $20 \pm 10$  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	f = 100 kHz; $\hat{B}$ = 200 mT; T = 100 °C	f = 400 kHz; $\hat{B}$ = 50 mT; T = 100 °C
3C90	≥330	≤ 0.55	≤ 0.55	–	–
3C92	≥370	–	≤ 0.42	≤ 2.4	–
3C94	≥330	–	≤ 0.42	≤ 2.4	–
3C96	≥340	–	≤ 0.33	≤ 1.9	–
3F3	≥320	–	≤ 0.55	–	≤ 0.95
3F35	≥300	–	–	–	–

## 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; $\hat{B}$ = 50 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
3C90	≥330	–	–	–	–
3C92	≥370	–	–	–	–
3C94	≥330	–	–	–	–
3C96	≥340	≤ 1.7	–	–	–
3F3	≥320	–	–	–	–
3F35	≥300	≤ 0.6	≤ 4.7	–	–




**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>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.
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<b>Preferred</b>		These products are recommended for use in current designs and are available via our sales channels.
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