

DATA SHEET

E25/13/11

E cores and accessories

Supersedes data of September 2004

2008 Sep 01

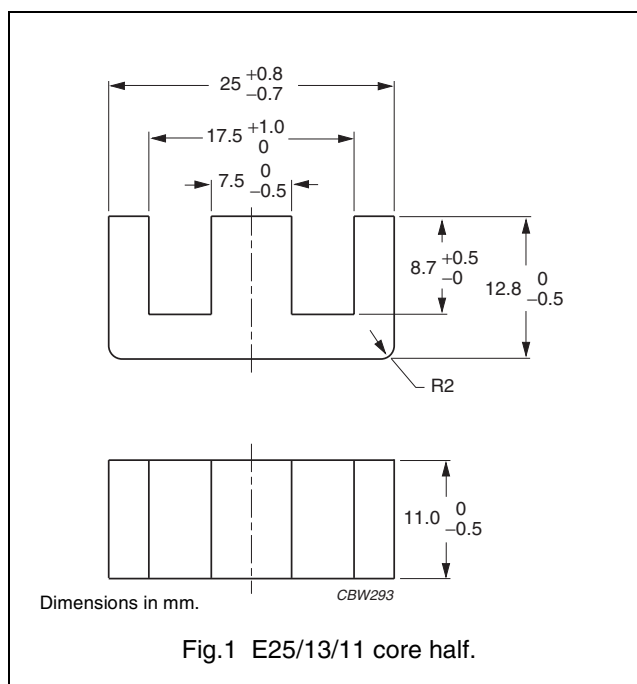
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CORE SETS

Effective core parameters

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



Core halves

Clamping force for A_L measurements 20 ± 10 N.

GRADE	A_L (nH)	μ_e	TOTAL AIR GAP (μm)	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 des	$2200 \pm 25\%$	≈ 1280	≈ 0	E25/13/11-3C92
3C94	$2800 \pm 25\%$	≈ 1630	≈ 0	E25/13/11-3C94
3C96 des	$2700 \pm 25\%$	≈ 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 des	$2000 \pm 25\%$	≈ 1170	≈ 0	E25/13/11-3F35

Note

1. Measured in combination with an equal gapped core half, clamping force for A_L measurements, 20 ± 10 N.

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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	–	–

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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		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.