DATA SHEET

E25/13/11
E cores and accessories

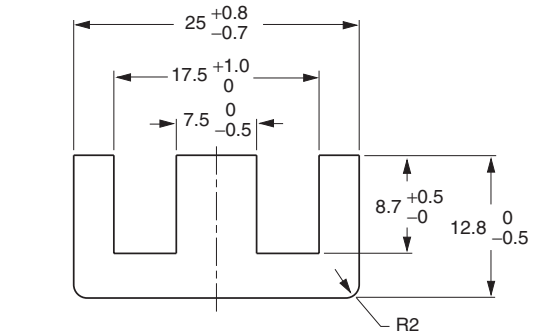
Supersedes data of September 2004 2008 Sep 01

FERROXCUBE
A YAGEO COMPANY

CORE SETS

Effective core parameters

SYMBOL	PARAMETER	VALUE	UNIT
Σ(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



Dimensions in mm.

Fig.1 E25/13/11 core half.

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 ±5%(1)	≈ 37	≈ 2800	E25/13/11-3C90-E63
	100 ±8%(1)	≈ 58	≈ 1480	E25/13/11-3C90-E100
	160 ±8%	≈ 93	≈ 790	E25/13/11-3C90-A160
	250 ±15%	≈ 146	≈ 450	E25/13/11-3C90-A250
	315 ±15%	≈ 184	≈ 340	E25/13/11-3C90-A315
	2800 ±25%	≈ 1630	≈ 0	E25/13/11-3C90
3C92 des	2200 ±25%	≈ 1280	≈ 0	E25/13/11-3C92
3C94	2800 ±25%	≈ 1630	≈ 0	E25/13/11-3C94
3C96 des	2700 ±25%	≈ 1580	≈ 0	E25/13/11-3C96
3F3	63 ±5%(1)	≈ 37	≈ 2800	E25/13/11-3F3-E63
	100 ±8%(1)	≈ 58	≈ 1480	E25/13/11-3F3-E100
	160 ±8%	≈ 93	≈ 790	E25/13/11-3F3-A160
	250 ±15%	≈ 146	≈ 450	E25/13/11-3F3-A250
	315 ±15%	≈ 184	≈ 340	E25/13/11-3F3-A315
	2700 ±25%	≈ 1580	≈ 0	E25/13/11-3F3
3F35 des	2000 ±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.

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

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.
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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.