

# DATA SHEET

**EQ25**

**EQ cores and accessories**

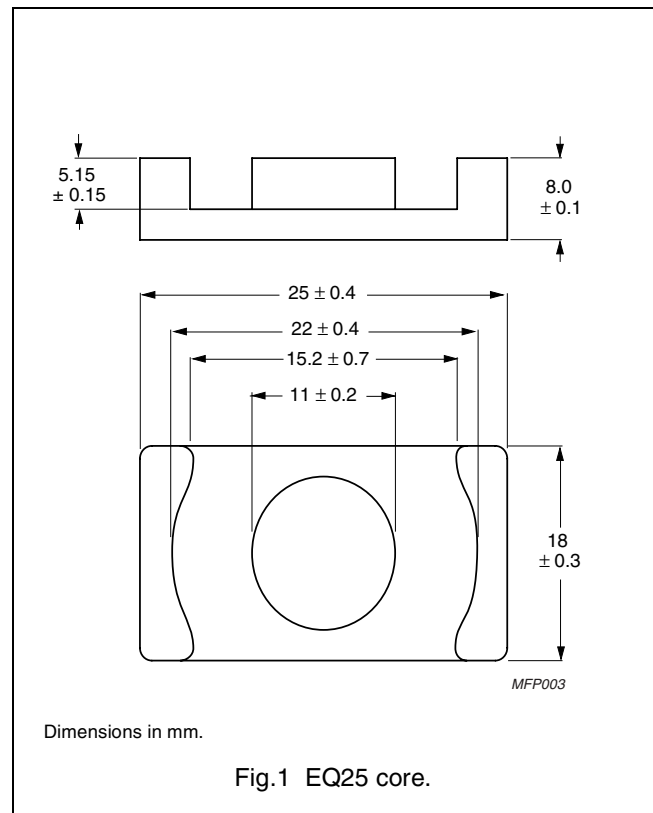
Supersedes data of September 2004

2008 Sep 01

**CORES**

**Effective core parameters of a set of EQ cores**

SYMBOL	PARAMETER	VALUE	UNIT
$\Sigma(l/A)$	core factor (C1)	0.414	mm <sup>-1</sup>
$V_e$	effective volume	4145	mm <sup>3</sup>
$l_e$	effective length	41.4	mm
$A_e$	effective area	100	mm <sup>2</sup>
$A_{min}$	minimum area	95.0	mm <sup>2</sup>
$m$	mass of core half	≈ 11	g



**Core halves for general purpose transformers and power applications**

Clamping force for  $A_L$  measurements,  $40 \pm 20$  N.

GRADE	$A_L$ (nH)	$\mu_e$	AIR GAP ( $\mu\text{m}$ )	TYPE NUMBER
3C94	$4800 \pm 25 \%$	≈ 1580	≈ 0	EQ25-3C94
3C95 <span style="border: 1px solid black; padding: 0 2px;">des</span>	$5710 \pm 25 \%$	≈ 1880	≈ 0	EQ25-3C95
3C96 <span style="border: 1px solid black; padding: 0 2px;">des</span>	$4400 \pm 25 \%$	≈ 1450	≈ 0	EQ25-3C96
3F35 <span style="border: 1px solid black; padding: 0 2px;">des</span>	$3350 \pm 25 \%$	≈ 1100	≈ 0	EQ25-3F35
3F4 <span style="border: 1px solid black; padding: 0 2px;">des</span>	$2300 \pm 25 \%$	≈ 758	≈ 0	EQ25-3F4
3F45 <span style="border: 1px solid black; padding: 0 2px;">prot</span>	$2300 \pm 25 \%$	≈ 758	≈ 0	EQ25-3F45

## Properties of core sets under power conditions

CORE COMBINATION	B (mT) at	CORE LOSS (W) at			
	H = 250 A/m; f = 10 kHz; T = 100 °C	f = 100 kHz; $\hat{B}$ = 100 mT; T = 100 °C	f = 100 kHz; $\hat{B}$ = 200 mT; T = 25 °C	f = 100 kHz; $\hat{B}$ = 200 mT; T = 100 °C	f = 500 kHz; $\hat{B}$ = 50 mT; T = 100 °C
EQ+EQ25-3C94	≥ 320	≤ 0.37	–	≤ 2.5	–
EQ+EQ25-3C95	≥ 320	–	≤ 2.45	≤ 2.32	–
EQ+EQ25-3C96	≥ 340	≤ 0.28	–	≤ 1.9	≤ 1.5
EQ+EQ25-3F35	≥ 300	–	–	–	≤ 0.56

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

CORE COMBINATION	B (mT) at	CORE LOSS (W) at			
	H = 250 A/m; f = 10 kHz; T = 100 °C	f = 500 kHz; $\hat{B}$ = 100 mT; T = 100 °C	f = 1 MHz; $\hat{B}$ = 30 mT; T = 100 °C	f = 1 MHz; $\hat{B}$ = 50 mT; T = 100 °C	f = 3 MHz; $\hat{B}$ = 10 mT; T = 100 °C
EQ+EQ25-3F35	≥ 300	≤ 4.3	–	–	–
EQ+EQ25-3F4	≥ 300	–	≤ 1.25	–	≤ 2.0
EQ+EQ25-3F45	≥ 300	–	≤ 0.95	≤ 3.5	≤ 1.6




**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
<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.