DATA SHEET

EQ25/LP
EQ cores and accessories

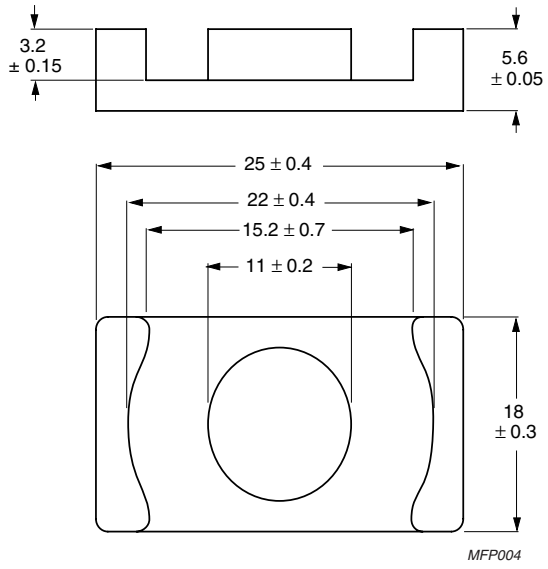
Supersedes data of September 2004 2008 Sep 01

FERROXCUBE
A YAGEO COMPANY

CORES

Effective core parameters of a EQ/LP/PLT combination

SYMBOL	PARAMETER	VALUE	UNIT
$\Sigma(l/A)$	core factor (C1)	0.294	mm^{-1}
V_e	effective volume	2370	mm^3
l_e	effective length	26.4	mm
A_e	effective area	89.7	mm^2
A_{min}	minimum area	82.8	mm^2
m	mass of core half	≈ 8.2	g
m	mass of plate	≈ 4.9	g

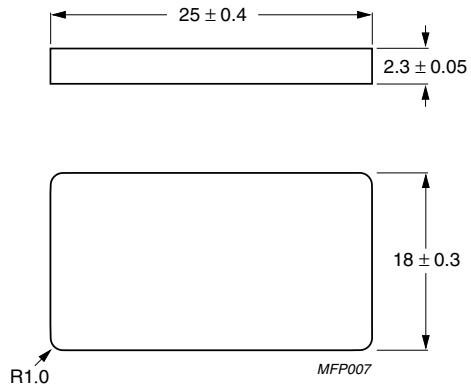


Dimensions in mm.

Fig.1 EQ25/LP core.

Ordering information for plates

GRADE	TYPE NUMBER
3C94	PLT25/18/2-3C94
3C95 des	PLT25/18/2-3C95
3C96 des	PLT25/18/2-3C96
3F35 des	PLT25/18/2-3F35
3F4 des	PLT25/18/2-3F4
3F45 prot	PLT25/18/2-3F45



Dimensions in mm.

Fig.2 PLT25/18/2.

Core halves for use in combination with a plate (PLT)

A_L measured in combination with a plate (PLT), clamping force for A_L measurements, 40 ±20 N.

GRADE	A_L (nH)	μ_e	AIR GAP (μm)	TYPE NUMBER
3C94	6100 ± 25 %	≈ 1430	≈ 0	EQ25/LP-3C94
3C95 des	7130 ± 25 %	≈ 1670	≈ 0	EQ25/LP-3C95
3C96 des	5600 ± 25 %	≈ 1310	≈ 0	EQ25/LP-3C96
3F35 des	4350 ± 25 %	≈ 1020	≈ 0	EQ25/LP-3F35
3F4 des	3100 ± 25 %	≈ 725	≈ 0	EQ25/LP-3F4
3F45 prot	3100 ± 25 %	≈ 725	≈ 0	EQ25/LP-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/LP+PLT25-3C94	≥ 320	≤ 0.21	–	≤ 1.4	–
EQ/LP+PLT25-3C95	≥ 320	–	≤ 1.4	≤ 1.33	–
EQ/LP+PLT25-3C96	≥ 340	≤ 0.16	–	≤ 1.1	≤ 0.89
EQ/LP+PLT25-3F35	≥ 300	–	–	–	≤ 0.32

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/LP+PLT25-3F35	≥ 300	≤ 2.5	–	–	–
EQ/LP+PLT25-3F4	≥ 300	–	≤ 0.71	–	≤ 1.14
EQ/LP+PLT25-3F45	≥ 300	–	≤ 0.54	≤ 2.0	≤ 0.95

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.
Design-in	des	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	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.