DATA SHEET

E35/18/10
E cores and accessories

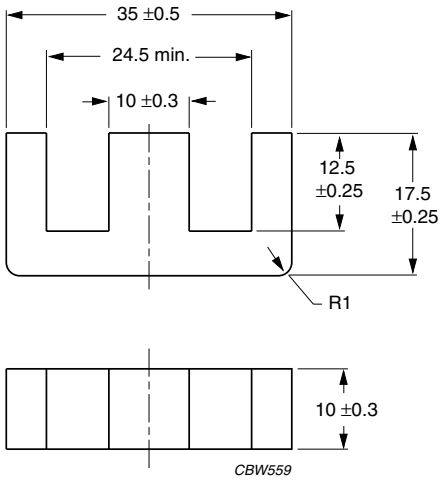
Supersedes data of September 2004 2008 Sep 01

FERROXCUBE
A YAGEO COMPANY

CORE SETS

Effective core parameters

SYMBOL	PARAMETER	VALUE	UNIT
$\Sigma(l/A)$	core factor (C1)	0.807	mm^{-1}
V_e	effective volume	8070	mm^3
l_e	effective length	80.7	mm
A_e	effective area	100	mm^2
A_{min}	minimum area	100	mm^2
m	mass of core half	≈ 20	g



Dimensions in mm.

Fig.1 E35/18/10 core half.

Core halves

A_L measured in combination with a non-gapped core half, clamping force for A_L measurements, 30 ±15 N, unless stated otherwise.

GRADE	A_L (nH)	μ_e	TOTAL AIR GAP (μm)	TYPE NUMBER
3C90	100 ±5%(1)	≈ 64	≈ 2000	E35/18/10-3C90-E100
	160 ±5%(1)	≈ 103	≈ 1060	E35/18/10-3C90-E160
	250 ±5%	≈ 161	≈ 590	E35/18/10-3C90-A250
	315 ±5%	≈ 202	≈ 440	E35/18/10-3C90-A315
	400 ±8%	≈ 257	≈ 330	E35/18/10-3C90-A400
	630 ±15%	≈ 405	≈ 180	E35/18/10-3C90-A630
	2500 ±25%	≈ 1610	≈ 0	E35/18/10-3C90
3C95 des	2980 ±25%	≈ 1915	≈ 0	E35/18/10-3C95

Note

1. Measured in combination with an equal gapped core half, clamping force for A_L measurements, 30 ±15 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 = 25 °C	f = 100 kHz; $\hat{B}$ = 200 mT; T = 100 °C
3C90	≥330	≤ 0.95	≤ 1.1	–	–
3C95	≥330	–	–	≤ 4.76	≤ 4.52

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.

DISCLAIMER

Life support applications — These products are not designed for use in life support appliances, devices, or systems where malfunction of these products can reasonably be expected to result in personal injury. Ferroxcube customers using or selling these products for use in such applications do so at their own risk and agree to fully indemnify Ferroxcube for any damages resulting from such application.

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.