

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

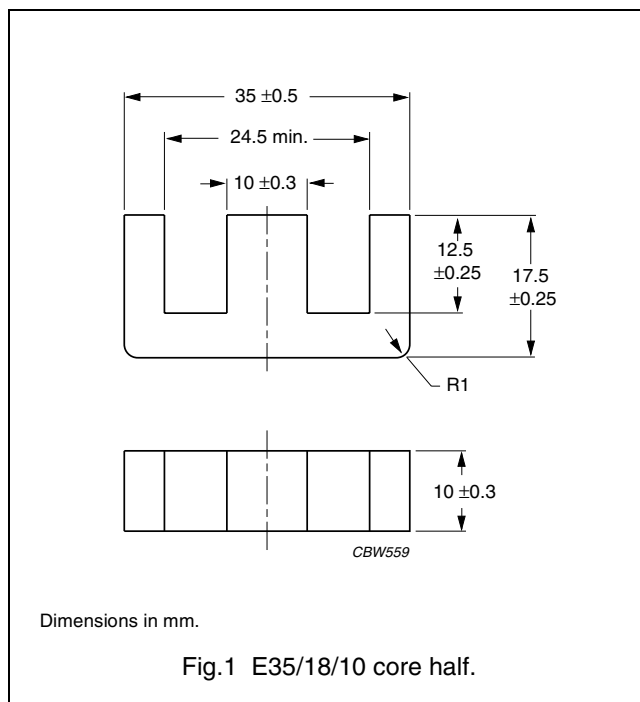


Fig.1 E35/18/10 core half.

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 <small>des</small>	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; B = 200 mT; T = 100 °C	f = 100 kHz; B = 100 mT; T = 100 °C	f = 100 kHz; B = 200 mT; T = 25 °C	f = 100 kHz; 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.

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PRODUCT STATUS DEFINITIONS

STATUS	INDICATION	DEFINITION
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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.