DATA SHEET

ER48/18/18
ER cores

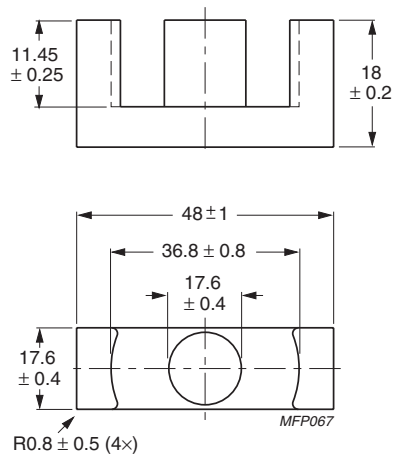
Supersedes data of September 2004 2008 Sep 01

FERROXCUBE
A YAGEO COMPANY

CORE SETS

Effective core parameters

SYMBOL	PARAMETER	VALUE	UNIT
$\Sigma(l/A)$	core factor (C1)	0.377	mm^{-1}
V_e	effective volume	20300	mm^3
l_e	effective length	87.0	mm
A_e	effective area	231	mm^2
A_{min}	minimum area	221	mm^2
m	mass of core half	≈ 51	g



Dimensions in mm.

Fig.1 ER48/18/18 core half.

Core halves

Clamping force for A_L measurements, 50 ± 20 N.

GRADE	A_L (nH)	μ_e	TOTAL AIR GAP (μm)	TYPE NUMBER
3C90	180 ± 5%	≈ 54	≈ 2500	ER48/18/18-3C90-E180
	265 ± 5%	≈ 77	≈ 1500	ER48/18/18-3C90-E265
	309 ± 5%	≈ 93	≈ 1250	ER48/18/18-3C90-E309
	370 ± 5%	≈ 111	≈ 1000	ER48/18/18-3C90-E370
	465 ± 5%	≈ 140	≈ 750	ER48/18/18-3C90-E465
	6400 ± 25%	≈ 1920	≈ 0	ER48/18/18-3C90
3C94	6400 ± 25%	≈ 1920	≈ 0	ER48/18/18-3C94

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	$\hat{f}$ = 25 kHz; $\hat{B}$ = 200 mT; T = 100 °C	$\hat{f}$ = 100 kHz; $\hat{B}$ = 100 mT; T = 100 °C	$\hat{f}$ = 100 kHz; $\hat{B}$ = 200 mT; T = 100 °C
3C90	≥330	≤ 2.4	≤ 2.5	–
3C94	≥330	–	≤ 2.1	≤ 12

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.