

DATA SHEET

ER51/10/38

Planar ER cores and accessories

New data

2008 Sep 01

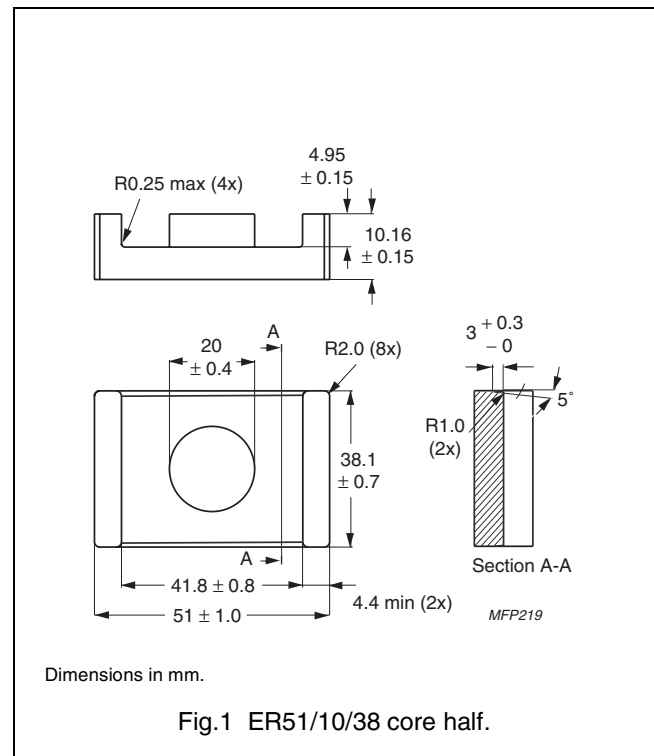
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CORE SETS

Effective core parameters

SYMBOL	PARAMETER	VALUE	UNIT
$\Sigma(l/A)$	core factor (C1)	0.209	mm ⁻¹
V_e	effective volume	25800	mm ³
l_e	effective length	73.5	mm
A_e	effective area	351	mm ²
A_{min}	minimum area	314	mm ²
m	mass of core half	≈ 74.7	g



Core halves for general purpose transformers and power applications

Clamping force for A_L measurements, 150 ± 25 N.

GRADE	A_L (nH)	μ_e	AIR GAP (μ m)	TYPE NUMBER
3C92 <small>des</small>	$8100 \pm 25 \%$	≈ 1350	≈ 0	ER51/10/38-3C92
3C93 <small>des</small>	$9400 \pm 25 \%$	≈ 1570	≈ 0	ER51/10/38-3C93
3C95 <small>des</small>	$14230 \pm 25 \%$	≈ 2370	≈ 0	ER51/10/38-3C95
3C96 <small>des</small>	$10200 \pm 25 \%$	≈ 1700	≈ 0	ER51/10/38-3C96
3F3	$10200 \pm 25 \%$	≈ 1700	≈ 0	ER51/10/38-3F3

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 = 100 kHz; B̂ = 100 mT; T = 100 °C	f = 100 kHz; B̂ = 200 mT; T = 25 °C	f = 100 kHz; B̂ = 200 mT; T = 100 °C	f = 400 kHz; B̂ = 50 mT; T = 100 °C	f = 500 kHz; B̂ = 50 mT; T = 100 °C
3C92	≥ 370	≤ 2.5	—	≤ 15.2	—	—
3C93	≥ 320	≤ 2.5 ⁽¹⁾	—	≤ 15.2 ⁽¹⁾	—	—
3C95	≥ 320	—	≤ 17.9	≤ 17	—	—
3C96	≥ 340	≤ 1.68	—	≤ 11.2	—	≤ 10.5
3F3	≥ 300	≤ 3.2	—	—	≤ 5.0	—

1. Measured at 140 °C.

MOUNTING INFORMATION

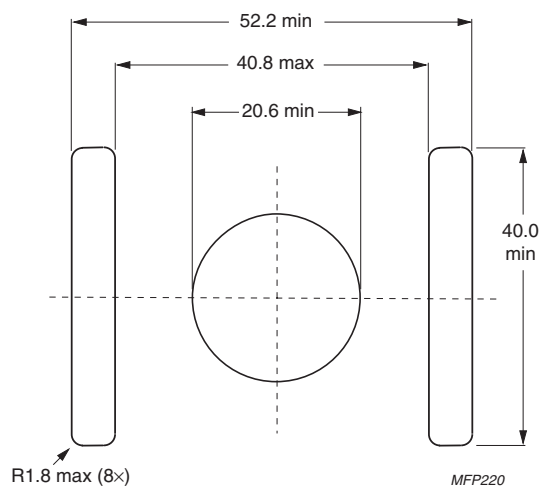


Fig.2 Recommended PCB cut-out for ER51/10/38 cores.

Winding data for ER51/10/38 planar core

WINDING AREA (mm ²)	AVERAGE TRACK LENGTH (mm)	FOOTPRINT AREA (mm ²)
108	97.1	1986

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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.
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