

DATA SHEET

TX39/20/13 Ferrite toroids

Supersedes data of September 2004

2008 Sep 01



FERROXCUBE
A YAGEO COMPANY

Ferrite toroids

TX39/20/13

RING CORES (TOROIDS)

Effective core parameters

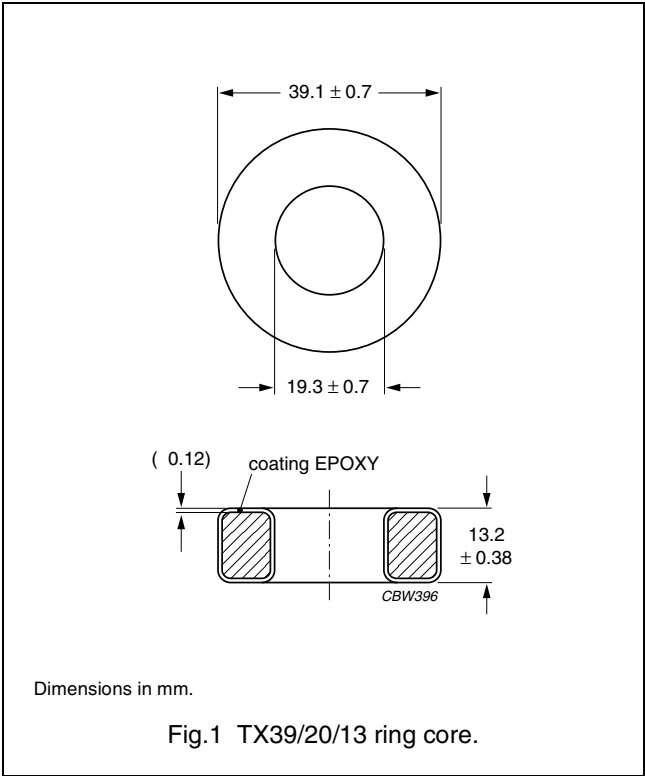
SYMBOL	PARAMETER	VALUE	UNIT
$\Sigma(l/A)$	core factor (C1)	0.76	mm^{-1}
V_e	effective volume	9513	mm^3
l_e	effective length	84.9	mm
A_e	effective area	112	mm^2
m	mass of core	≈ 45	g

Coating

The cores are coated with epoxy, flame retardant in accordance with “UL 94V-0”; UL file number E 228348. The colour is white. Maximum operating temperature is 200 °C.

Isolation voltage

DC isolation voltage: 2000 V. Contacts are applied on the edge of the ring core, which is also the critical point for the winding operation.



Ring core data

GRADE	A_L (nH)	μ_i	TYPE NUMBER
3F3	$3150 \pm 20\%$	≈ 1800	TX39/20/13-3F3
3C90	$3800 \pm 20\%$	≈ 2300	TX39/20/13-3C90
3C81	$4700 \pm 20\%$	≈ 2700	TX39/20/13-3C81
3E27	$8720 \pm 20\%$	≈ 5000	TX39/20/13-3E27
3E6 des	$16700 \pm 30\%$	≈ 9600	TX39/20/13-3E6

Properties of cores 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 = 400 kHz; B = 50 mT; T = 100 °C
3C81	≥ 320	≤ 1.9	—	—
3C90	≥ 320	≤ 1.1	≤ 1.1	—
3F3	≥ 320	—	≤ 1.1	≤ 1.8

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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.
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		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		These products are recommended for new designs.
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