

# DATA SHEET

## **TN23/14/7.5** **Gapped ferrite toroids**

Supersedes data of September 2004

2008 Sep 01

# Gapped ferrite toroids

TN23/14/7.5

## RING CORES (TOROIDS)

### Effective core parameters

SYMBOL	PARAMETER	VALUE	UNIT
$\Sigma(I/A)$	core factor (C1)	1.69	mm <sup>-1</sup>
$V_e$	effective volume	1845	mm <sup>3</sup>
$l_e$	effective length	55.8	mm
$A_e$	effective area	33.1	mm <sup>2</sup>
m	mass of core	≈ 9.0	g

### Coating

The cores are coated with polyamide 11 (PA11), flame retardant in accordance with "UL 94V-2"; UL file number E 45228 (M).

The colour is white.

Maximum operating temperature is 160 °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

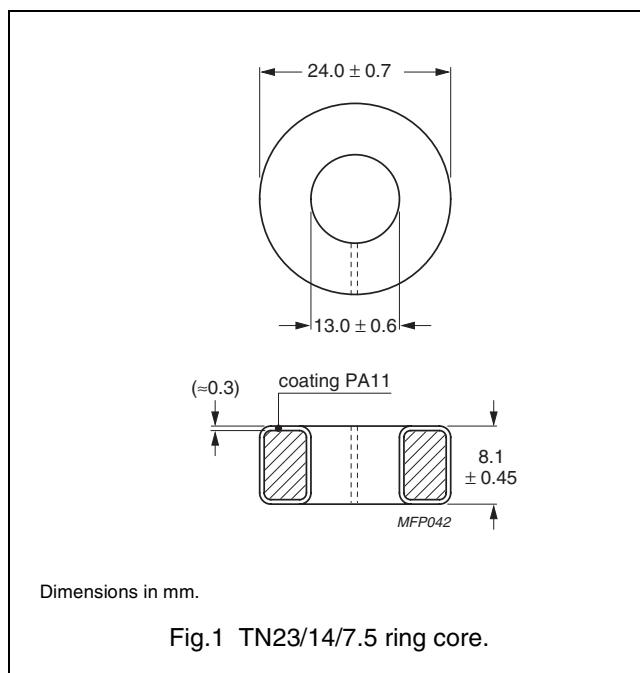
GRADE	$A_L^{(1)}$ (nH)	$\mu_e$	TYPE NUMBER
3C20	65 ± 15%	≈ 90	TN23/7.5-3C20-A65
	90 ± 15%	≈ 125	TN23/7.5-3C20-A90
	106 ± 15%	≈ 147	TN23/7.5-3C20-A106
	115 ± 15%	≈ 160	TN23/7.5-3C20-A115
	124 ± 15%	≈ 173	TN23/7.5-3C20-A124

### Note

1. Winding equally distributed over the circumference.

### Properties of cores under power conditions

GRADE	B (mT) at	CORE LOSS (W) at	
	H = 1200 A/m; f = 10 kHz; T = 100 °C	f = 100 kHz; $\hat{B}$ = 100 mT; T = 100 °C	f = 100 kHz; $\hat{B}$ = 200 mT; T = 100 °C
3C20	~ 400	≤ 0.16	≤ 1.1



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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

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<b>Support</b>		These products are <b>not</b> recommended for new designs and may not be available through all of our sales channels. Customers are advised to check for availability.