

DATA SHEET

TN13/7.5/5 **Gapped ferrite toroids**

Supersedes data of September 2004

2008 Sep 01

Gapped ferrite toroids

TN13/7.5/5

RING CORES (TOROIDS)

Effective core parameters

SYMBOL	PARAMETER	VALUE	UNIT
$\Sigma(I/A)$	core factor (C1)	2.46	mm ⁻¹
V_e	effective volume	368	mm ³
l_e	effective length	30.1	mm
A_e	effective area	12.2	mm ²
m	mass of core	≈ 1.8	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: 1500 V.

Contacts are applied on the edge of the ring core, which is also the critical point for the winding operation.

Ring core data

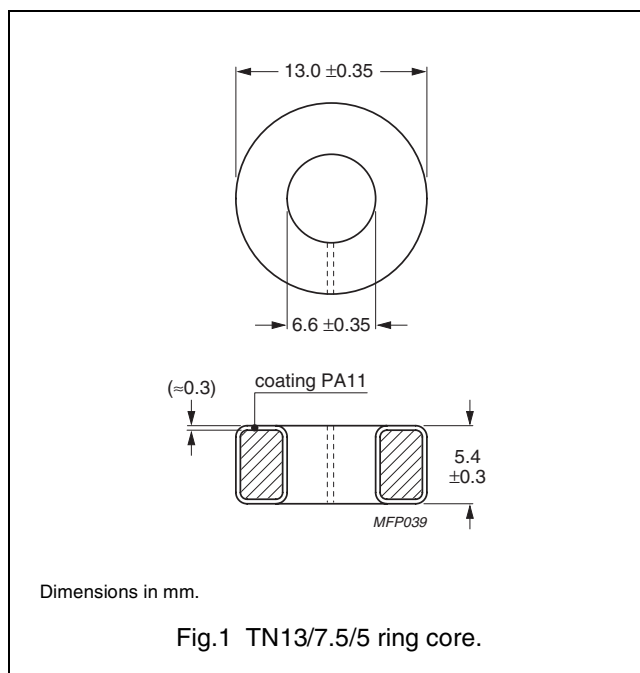
GRADE	$A_L^{(1)}$ (nH)	μ_e	TYPE NUMBER
3C20	40 ± 15%	≈ 90	TN13/5-3C20-A40
	56 ± 15%	≈ 125	TN13/5-3C20-A56
	67 ± 15%	≈ 147	TN13/5-3C20-A67
	72 ± 15%	≈ 160	TN13/5-3C20-A72
	79 ± 15%	≈ 173	TN13/5-3C20-A79

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; B̂ = 100 mT; T = 100 °C	f = 100 kHz; B̂ = 200 mT; T = 100 °C
3C20	~ 400	≤ 0.033	≤ 0.22



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DATA SHEET STATUS DEFINITIONS

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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.
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.