

# DATA SHEET

**TN32/19/13**  
Ferrite toroids

Supersedes data of September 2004

2008 Sep 01

**RING CORES (TOROIDS)**

**Effective core parameters**

SYMBOL	PARAMETER	VALUE	UNIT
$\Sigma(l/A)$	core factor (C1)	0.99	mm <sup>-1</sup>
$V_e$	effective volume	5820	mm <sup>3</sup>
$l_e$	effective length	76	mm
$A_e$	effective area	76.5	mm <sup>2</sup>
m	mass of core	≈29	g

**Coating**

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

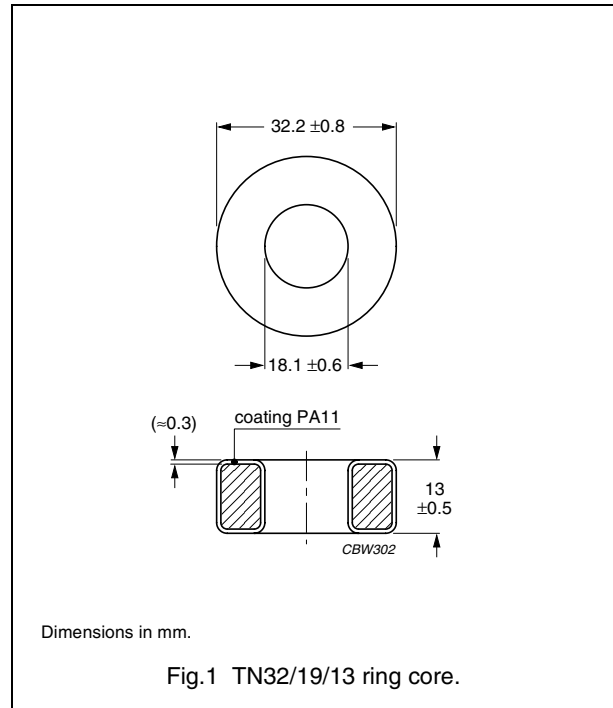
The colour is white.

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	$A_L$ (nH)	$\mu_i$	TYPE NUMBER
4A11	885 ± 25%	≈ 700 <sup>(1)</sup>	TN32/19/13-4A11
3F3	2270 ± 25%	≈ 1800	TN32/19/13-3F3
3C90	2910 ± 25%	≈ 2300	TN32/19/13-3C90
3C11	5450 ± 25%	≈ 4300	TN32/19/13-3C11
3E25	6950 ± 25%	≈ 5500	TN32/19/13-3E25

1. Old permeability specification maintained.

**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
3C90	≥320	≤ 0.65	≤ 0.65	–
3F3	≥320	–	≤ 0.64	≤ 1.1




**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
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