

# DATA SHEET

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

Supersedes data of February 2002

2004 Sep 01

## Gapped ferrite toroids

TN23/14/7.5

## RING CORES (TOROIDS)

## Effective core parameters

| SYMBOL        | PARAMETER        | VALUE | UNIT             |
|---------------|------------------|-------|------------------|
| $\Sigma(l/A)$ | 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

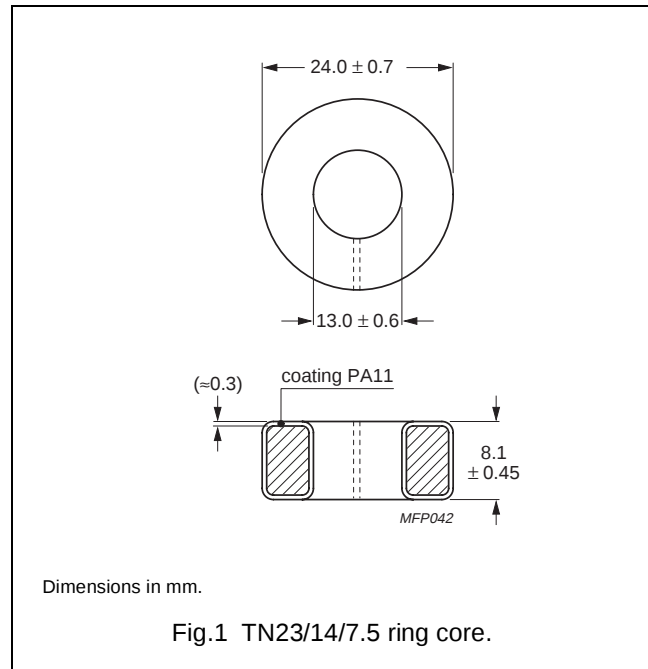
The cores are coated with polyamide 11 (PA11), flame retardant in accordance with "UL 94V-2"; UL file number E 45228 (M).

The colour is white.

## 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 | $A_L$<br>(nH)  | $\mu_i$ | TYPE NUMBER           |
|-------|----------------|---------|-----------------------|
| 3C20  | $65 \pm 15\%$  | ≈ 90    | TN23/14/7.5-3C20-A65  |
|       | $90 \pm 15\%$  | ≈ 125   | TN23/14/7.5-3C20-A90  |
|       | $106 \pm 15\%$ | ≈ 147   | TN23/14/7.5-3C20-A106 |
|       | $115 \pm 15\%$ | ≈ 160   | TN23/14/7.5-3C20-A115 |
|       | $124 \pm 15\%$ | ≈ 173   | TN23/14/7.5-3C20-A124 |

## Properties of cores under power conditions

| GRADE | B (mT) at                                  | CORE LOSS (W) at                          |                                           |
|-------|--------------------------------------------|-------------------------------------------|-------------------------------------------|
|       | H = 1200 A/m;<br>f = 10 kHz;<br>T = 100 °C | f = 100 kHz;<br>B = 100 mT;<br>T = 100 °C | f = 100 kHz;<br>B = 200 mT;<br>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.     |
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## PRODUCT STATUS DEFINITIONS

| STATUS    | INDICATION                                                                          | DEFINITION                                                                                                                                                                     |
|-----------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
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