

DATA SHEET

TX51/32/19
Ferrite toroids

Supersedes data of September 2004

2008 Sep 01

Ferrite toroids

TX51/32/19

RING CORES (TOROIDS)

Effective core parameters

| SYMBOL | PARAMETER | VALUE | UNIT |
|---------------|------------------|-------|------------------|
| $\Sigma(l/A)$ | core factor (C1) | 0.73 | mm ⁻¹ |
| V_e | effective volume | 21500 | mm ³ |
| l_e | effective length | 125 | mm |
| A_e | effective area | 172 | mm ² |
| m | mass of core | ≈ 100 | g |

Coating

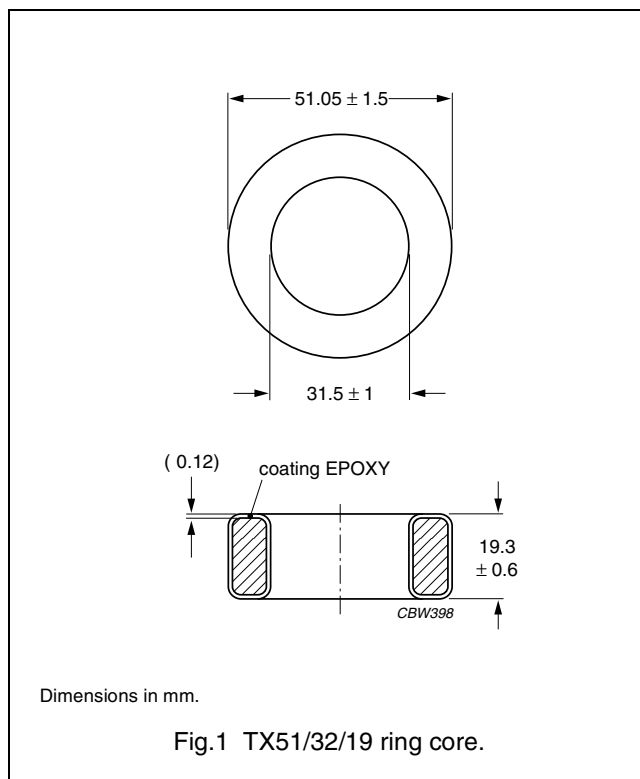
The cores are coated with epoxy, flame retardant in accordance with "UL 94V-0"; UL file number E 235873. The colour is white.

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 <small>des</small> | 3200 ± 20% | ≈ 1800 | TX51/32/19-3F3 |
| 3C90 | 3980 ± 20% | ≈ 2300 | TX51/32/19-3C90 |
| 3C81 | 4800 ± 20% | ≈ 2700 | TX51/32/19-3C81 |
| 3E25 | 8890 ± 20% | ≈ 5000 | TX51/32/19-3E25 |
| 3E27 <small>des</small> | 8890 ± 20% | ≈ 5000 | TX51/32/19-3E27 |
| 3E6 | 17300 ± 30% | ≈ 10000 | TX51/32/19-3E6 |

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 | ≤ 4.4 | – | – |
| 3C90 | ≥320 | ≤ 2.4 | ≤ 2.4 | – |
| 3F3 | ≥320 | – | ≤ 2.4 | ≤ 4.1 |




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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| Preferred | | These products are recommended for use in current designs and are available via our sales channels. |
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