

DATA SHEET

TX78/49/16

Powder material toroids

New data

2007 Jan 01

RING CORES (TOROIDS)

Effective core parameters

| SYMBOL | PARAMETER | VALUE | UNIT | |
|---------------|-----------------------------------|-----------|--------------------|---|
| $\Sigma(l/A)$ | core factor (C1) | 0.879 | mm ⁻¹ | |
| V_e | effective volume | 45300 | mm ³ | |
| l_e | effective length | 200 | mm | |
| A_e | effective area | 227 | mm ² | |
| m | mass of core (for μ_i 125) | MPP | 377 | g |
| | | Sendust | 262 ⁽¹⁾ | g |
| | | High-Flux | 356 | g |

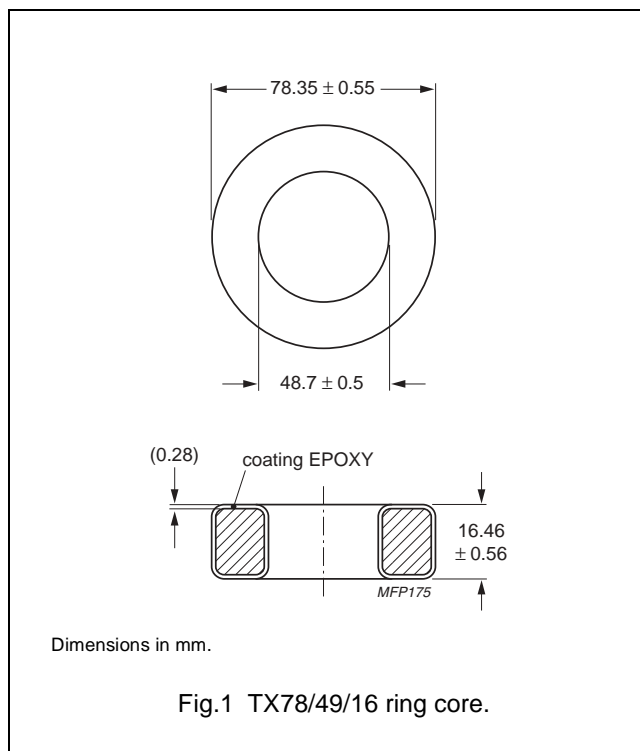
(1) for material permeability 60

Coating

The cores are coated with epoxy. The colour is cream (Sendust), grey (MPP) or khaki (High-Flux). Maximum operating temperature is 200 °C.

Isolation voltage

AC isolation voltage : 1000 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 |
|-----------|---------------|---------|-----------------|
| MPP | 20 ± 8 % | 14 | TX78/16-M2-A20 |
| | 37 ± 8 % | 26 | TX78/16-M2-A37 |
| | 85 ± 8 % | 60 | TX78/16-M2-A85 |
| | 178 ± 8 % | 125 | TX78/16-M2-A178 |
| Sendust | 37 ± 8 % | 26 | TX78/16-S7-A37 |
| | 85 ± 8 % | 60 | TX78/16-S7-A85 |
| High-Flux | 20 ± 8 % | 14 | TX78/16-H2-A20 |
| | 37 ± 8 % | 26 | TX78/16-H2-A37 |
| | 85 ± 8 % | 60 | TX78/16-H2-A85 |
| | 178 ± 8 % | 125 | TX78/16-H2-A178 |

Properties of cores under power conditions

| GRADE | μ_i | B (mT) at | CORE LOSS (W) at |
|-----------|---------|---|--|
| | | H = 100 kA/m; f = 10 kHz; T = 25 °C | f = 100 kHz; \hat{B} = 100 mT; T = 25 °C |
| MPP | 14 | ≥ 640 | 68.0 |
| | 26 | ≥ 700 | 54.4 |
| | 60 | ≥ 760 | 34.0 |
| | 125 | ≥ 800 | 34.0 |
| Sendust | 26 | ≥ 1000 | 72.5 |
| | 60 | ≥ 1030 | 38.7 |
| High-Flux | 14 | ≥ 890 | 113 |
| | 26 | ≥ 980 | 90.6 |
| | 60 | ≥ 1280 | 81.5 |
| | 125 | ≥ 1370 | 90.6 |

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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