

DATA SHEET

TX23/14/7.6

Powder material toroids

New data

2007 Jan 01

RING CORES (TOROIDS)

Effective core parameters

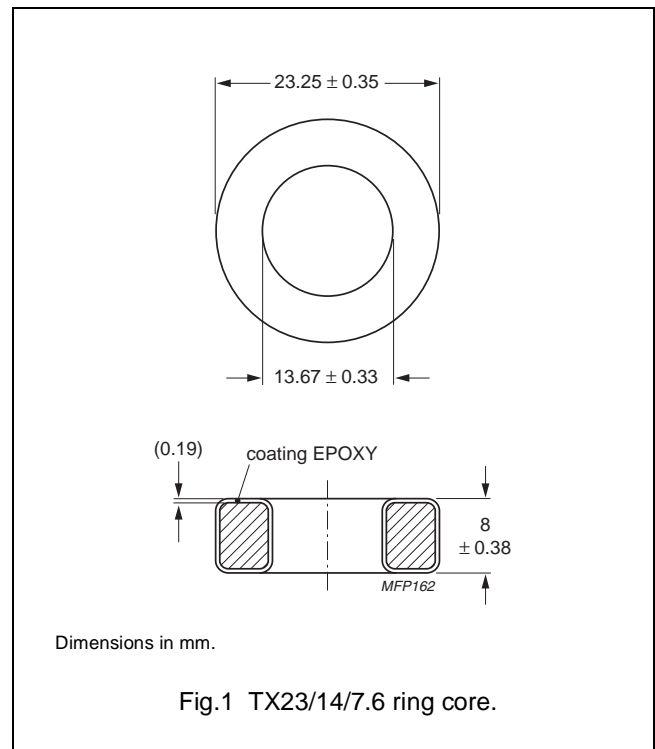
| SYMBOL | PARAMETER | VALUE | UNIT |
|---------------|-----------------------------------|-----------|------------------|
| $\Sigma(l/A)$ | core factor (C1) | 1.71 | mm ⁻¹ |
| V_e | effective volume | 1880 | mm ³ |
| l_e | effective length | 56.7 | mm |
| A_e | effective area | 33.1 | mm ² |
| m | mass of core (for μ_i 125) | MPP | 15.9 g |
| | | Sendust | 11.5 g |
| | | High-Flux | 15.0 g |

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 | 9.9 ± 8 % | 14 | TX23/7.6-M2-A9.9 |
| | 19 ± 8 % | 26 | TX23/7.6-M2-A19 |
| | 43 ± 8 % | 60 | TX23/7.6-M2-A43 |
| | 90 ± 8 % | 125 | TX23/7.6-M2-A90 |
| | 106 ± 8 % | 147 | TX23/7.6-M2-A106 |
| | 115 ± 8 % | 160 | TX23/7.6-M2-A115 |
| | 124 ± 8 % | 173 | TX23/7.6-M2-A124 |
| | 144 ± 8 % | 200 | TX23/7.6-M2-A144 |
| Sendust | 216 ± 8 % | 300 | TX23/7.6-M2-A216 |
| | 19 ± 8 % | 26 | TX23/7.6-S7-A19 |
| | 43 ± 8 % | 60 | TX23/7.6-S7-A43 |
| | 54 ± 8 % | 75 | TX23/7.6-S7-A54 |
| | 65 ± 8 % | 90 | TX23/7.6-S7-A65 |
| | 90 ± 8 % | 125 | TX23/7.6-S7-A90 |

Powder material toroids

TX23/14/7.6

| GRADE | A_L (nH) | μ_i | TYPE NUMBER |
|-----------|----------------|---------|------------------|
| High-Flux | $9.9 \pm 8 \%$ | 14 | TX23/7.6-H2-A9.9 |
| | $19 \pm 8 \%$ | 26 | TX23/7.6-H2-A19 |
| | $43 \pm 8 \%$ | 60 | TX23/7.6-H2-A43 |
| | $90 \pm 8 \%$ | 125 | TX23/7.6-H2-A90 |
| | $106 \pm 8 \%$ | 147 | TX23/7.6-H2-A106 |
| | $115 \pm 8 \%$ | 160 | TX23/7.6-H2-A115 |

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 | 2.82 |
| | 26 | ≥ 700 | 2.26 |
| | 60 | ≥ 760 | 1.41 |
| | 125 | ≥ 800 | 1.41 |
| | 147 | ≥ 800 | 1.50 |
| | 160 | ≥ 800 | 1.50 |
| | 173 | ≥ 800 | 1.50 |
| | 200 | ≥ 800 | 2.82 |
| | 300 | ≥ 800 | 2.82 |
| Sendust | 26 | ≥ 1000 | 3.01 |
| | 60 | ≥ 1030 | 1.61 |
| | 75 | ≥ 1040 | 1.61 |
| | 90 | ≥ 1050 | 1.61 |
| | 125 | ≥ 1060 | 1.61 |
| High-Flux | 14 | ≥ 890 | 4.70 |
| | 26 | ≥ 980 | 3.76 |
| | 60 | ≥ 1280 | 3.38 |
| | 125 | ≥ 1370 | 3.76 |
| | 147 | ≥ 1385 | 4.14 |
| | 160 | ≥ 1400 | 6.58 |

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 |
|------------------|---|--|
| 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. |