

# DATA SHEET

**TX7.9/4/3.2**  
Alloy powder toroids

New data

2008 Sep 01

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## RING CORES (TOROIDS)

### Effective core parameters

| SYMBOL        | PARAMETER                         | VALUE     | UNIT             |
|---------------|-----------------------------------|-----------|------------------|
| $\Sigma(I/A)$ | core factor (C1)                  | 2.91      | mm <sup>-1</sup> |
| $V_e$         | effective volume                  | 110       | mm <sup>3</sup>  |
| $l_e$         | effective length                  | 17.9      | mm               |
| $A_e$         | effective area                    | 6.15      | mm <sup>2</sup>  |
| m             | mass of core<br>(for $\mu_i$ 125) | MPP       | 0.92 g           |
|               |                                   | Sendust   | 0.68 g           |
|               |                                   | High-Flux | 0.87 g           |

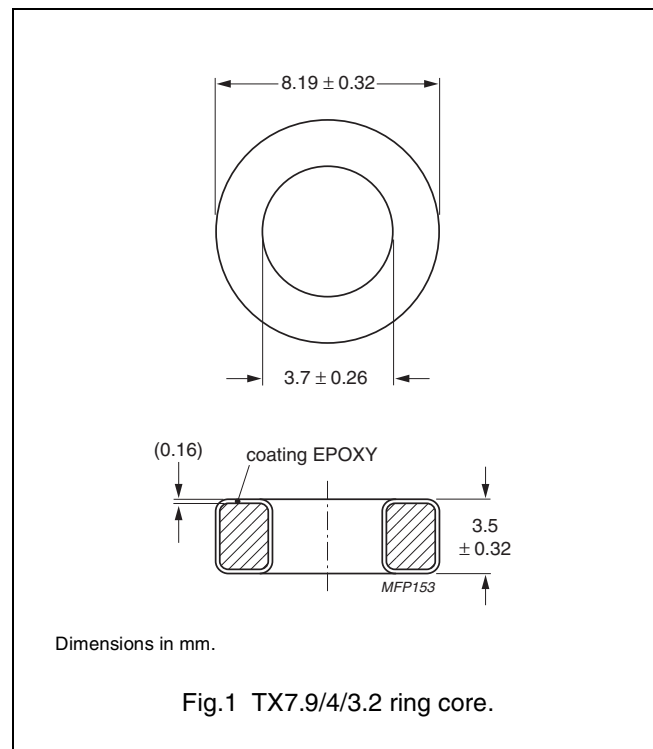
### Coating

The cores are coated with epoxy. The colour is black (Sendust), grey (MPP) or khaki (High-Flux). Maximum operating temperature is 200 °C. Parylene coating is also available (transparent, maximum operating temperature 130 °C).

### Isolation voltage

AC isolation voltage : 1000 V (Parylene : 750 V).  
Contacts are applied on the edge of the ring core, which is also the critical point for the winding operation.

**Ring core data - Note 1.** Mechanical dimensions : OD ≤ 8.51, ID ≥ 3.43, H ≤ 3.81



| GRADE                  | A <sub>L</sub><br>(nH) | $\mu_i$ | B (mT) at                              | CORE LOSS (W) at                              | TYPE NUMBER         |
|------------------------|------------------------|---------|--|---|---------------------|
|                        |                        |         | H = 100 kA/m;<br>f = 10 kHz; T = 25 °C | f = 100 kHz;<br>$\hat{B}$ = 100 mT; T = 25 °C |                     |
| MPP                    | 6 ± 8 %                | 14      | ≥ 640                                  | 0.165   | TX7.9/3.2-M2-A6     |
|                        | 11 ± 8 %               | 26      | ≥ 700                                  | 0.132   | TX7.9/3.2-M2-A11    |
|                        | 25 ± 8 %               | 60      | ≥ 760                                  | 0.082   | TX7.9/3.2-M2-A25    |
|                        | 52 ± 8 %               | 125     | ≥ 800                                  | 0.082   | TX7.9/3.2-M2-A52    |
|                        | 62 ± 8 %               | 147     | ≥ 800                                  | 0.088   | TX7.9/3.2-M2-A62    |
|                        | 66 ± 8 %               | 160     | ≥ 800                                  | 0.088   | TX7.9/3.2-M2-A66    |
|                        | 73 ± 8 %               | 173     | ≥ 800                                  | 0.088   | TX7.9/3.2-M2-A73    |
|                        | 83 ± 8 %               | 200     | ≥ 800                                  | 0.165   | TX7.9/3.2-M2-A83    |
| Sendust <sup>(1)</sup> | 124 ± 8 %              | 300     | ≥ 800                                  | 0.165   | TX7.9/3.2-M2-A124   |
|                        | 25 ± 12 %              | 60      | ≥ 1030                                 | 0.094   | TX7.9/3.2-S7-A25-MC |
|                        | 31 ± 12 %              | 75      | ≥ 1040                                 | 0.094   | TX7.9/3.2-S7-A31-MC |
|                        | 37 ± 12 %              | 90      | ≥ 1050                                 | 0.094   | TX7.9/3.2-S7-A37-MC |
| High-Flux              | 52 ± 12 %              | 125     | ≥ 1060                                 | 0.094   | TX7.9/3.2-S7-A52-MC |
|                        | 6 ± 8 %                | 14      | ≥ 890                                  | 0.275   | TX7.9/3.2-H2-A6     |
|                        | 11 ± 8 %               | 26      | ≥ 980                                  | 0.220   | TX7.9/3.2-H2-A11    |
|                        | 25 ± 8 %               | 60      | ≥ 1280                                 | 0.198   | TX7.9/3.2-H2-A25    |
|                        | 52 ± 8 %               | 125     | ≥ 1370                                 | 0.220   | TX7.9/3.2-H2-A52    |
|                        | 62 ± 8 %               | 147     | ≥ 1385                                 | 0.242   | TX7.9/3.2-H2-A62    |
|                        | 66 ± 8 %               | 160     | ≥ 1400                                 | 0.385   | TX7.9/3.2-H2-A66    |

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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.     |
| 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   |
|------------------|---|--|
| <b>Prototype</b> |  | 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. |
| <b>Design-in</b> |  | These products are recommended for new designs.  |
| <b>Preferred</b> |   | These products are recommended for use in current designs and are available via our sales channels.  |
| <b>Support</b>   |  | These products are <b>not</b> recommended for new designs and may not be available through all of our sales channels. Customers are advised to check for availability.         |