

# DATA SHEET

**TX6.9/4/5.1**  
Alloy powder toroids

New data

2008 Sep 01

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## RING CORES (TOROIDS)

### Effective core parameters

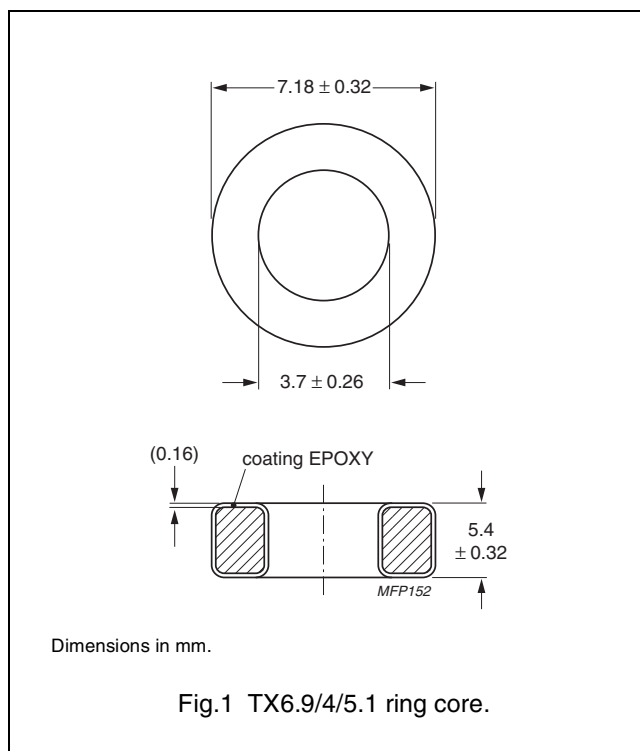
SYMBOL	PARAMETER	VALUE	UNIT
$\Sigma(I/A)$	core factor (C1)	2.28	mm <sup>-1</sup>
$V_e$	effective volume	120	mm <sup>3</sup>
$l_e$	effective length	16.5	mm
$A_e$	effective area	7.25	mm <sup>2</sup>
m	mass of core (for $\mu_i$ 125)	MPP	1.00 g
		Sendust	0.74 g
		High-Flux	0.94 g

### Coating

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



GRADE	$A_L$ (nH)	$\mu_i$	B (mT) at	CORE LOSS (W) at	TYPE NUMBER
			H = 100 kA/m; f = 10 kHz; T = 25 °C	f = 100 kHz; B = 100 mT; T = 25 °C	
MPP	8 ± 8 %	14	≥ 640	0.179	TX6.9/5.1-M2-A8
	14 ± 8 %	26	≥ 700	0.144	TX6.9/5.1-M2-A14
	33 ± 8 %	60	≥ 760	0.090	TX6.9/5.1-M2-A33
	70 ± 8 %	125	≥ 800	0.090	TX6.9/5.1-M2-A70
	81 ± 8 %	147	≥ 800	0.096	TX6.9/5.1-M2-A81
	89 ± 8 %	160	≥ 800	0.096	TX6.9/5.1-M2-A89
	95 ± 8 %	173	≥ 800	0.096	TX6.9/5.1-M2-A95
	112 ± 8 %	200	≥ 800	0.179	TX6.9/5.1-M2-A112
Sendust	166 ± 8 %	300	≥ 800	0.179	TX6.9/5.1-M2-A166
	33 ± 12 %	60	≥ 1030	0.102	TX6.9/5.1-S7-A33
	42 ± 12 %	75	≥ 1040	0.102	TX6.9/5.1-S7-A42
	50 ± 12 %	90	≥ 1050	0.102	TX6.9/5.1-S7-A50
High-Flux	70 ± 12 %	125	≥ 1060	0.102	TX6.9/5.1-S7-A70
	8 ± 8 %	14	≥ 890	0.299	TX6.9/5.1-H2-A8
	14 ± 8 %	26	≥ 980	0.239	TX6.9/5.1-H2-A14
	33 ± 8 %	60	≥ 1280	0.215	TX6.9/5.1-H2-A33
	70 ± 8 %	125	≥ 1370	0.239	TX6.9/5.1-H2-A70
	81 ± 8 %	147	≥ 1385	0.263	TX6.9/5.1-H2-A81
	89 ± 8 %	160	≥ 1400	0.419	TX6.9/5.1-H2-A89

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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.