

DATA SHEET

TX13/7.6/4.8
Powder material toroids

New data

2007 Jan 01

RING CORES (TOROIDS)

Effective core parameters

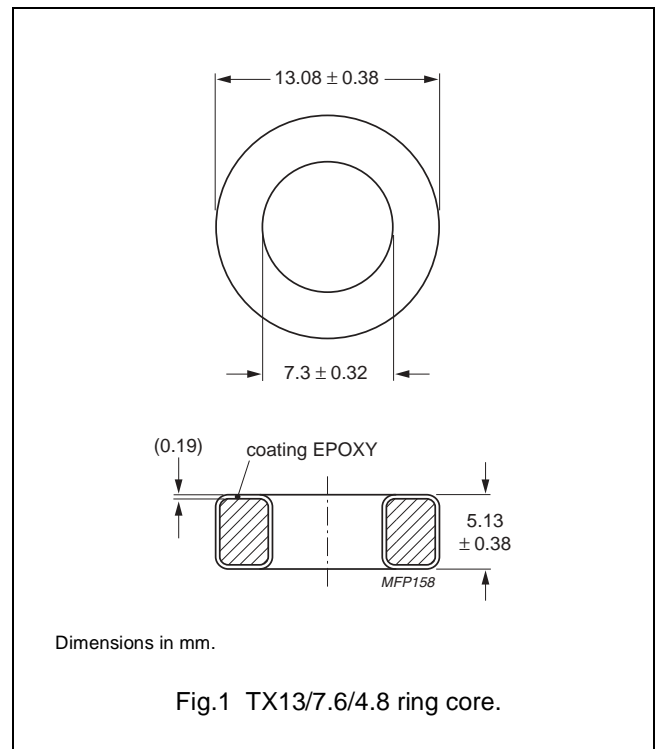
SYMBOL	PARAMETER	VALUE	UNIT
$\Sigma(l/A)$	core factor (C1)	2.74	mm ⁻¹
V_e	effective volume	356	mm ³
l_e	effective length	31.2	mm
A_e	effective area	11.4	mm ²
m	mass of core (for μ_i 125)	MPP	3.07 g
		Sendust	2.20 g
		High-Flux	2.90 g

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.



Ring core data

GRADE	A_L (nH)	μ_i	TYPE NUMBER
MPP	6.4 ± 8 %	14	TX13/4-M2-A6.4
	12 ± 8 %	26	TX13/4-M2-A12
	27 ± 8 %	60	TX13/4-M2-A27
	56 ± 8 %	125	TX13/4-M2-A56
	67 ± 8 %	147	TX13/4-M2-A67
	72 ± 8 %	160	TX13/4-M2-A72
	79 ± 8 %	173	TX13/4-M2-A79
	90 ± 8 %	200	TX13/4-M2-A90
Sendust	134 ± 8 %	300	TX13/4-M2-A134
	27 ± 8 %	60	TX13/4-S7-A27
	34 ± 8 %	75	TX13/4-S7-A34
	40 ± 8 %	90	TX13/4-S7-A40
	56 ± 8 %	125	TX13/4-S7-A56

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GRADE	A_L (nH)	μ_i	TYPE NUMBER
High-Flux	$6.4 \pm 8 \%$	14	TX13/4-H2-A6.4
	$12 \pm 8 \%$	26	TX13/4-H2-A12
	$27 \pm 8 \%$	60	TX13/4-H2-A27
	$56 \pm 8 \%$	125	TX13/4-H2-A56
	$67 \pm 8 \%$	147	TX13/4-H2-A67
	$72 \pm 8 \%$	160	TX13/4-H2-A72

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	0.534
	26	≥ 700	0.427
	60	≥ 760	0.267
	125	≥ 800	0.267
	147	≥ 800	0.285
	160	≥ 800	0.285
	173	≥ 800	0.285
	200	≥ 800	0.534
	300	≥ 800	0.534
Sendust	60	≥ 1030	0.304
	75	≥ 1040	0.304
	90	≥ 1050	0.304
	125	≥ 1060	0.304
High-Flux	14	≥ 890	0.890
	26	≥ 980	0.712
	60	≥ 1280	0.641
	125	≥ 1370	0.712
	147	≥ 1385	0.783
	160	≥ 1400	1.25

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.
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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.