

DATA SHEET

TX3.9/2.2/2.5

Powder material toroids

New data

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FERROXCUBE
A YAGEO COMPANY

RING CORES (TOROIDS)

Effective core parameters

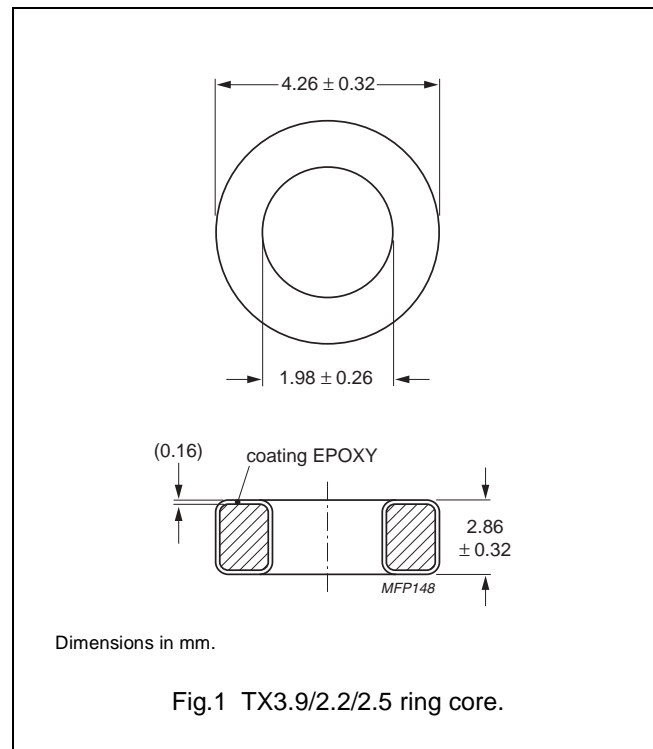
SYMBOL	PARAMETER	VALUE	UNIT	
$\Sigma(l/A)$	core factor (C1)	4.46	mm ⁻¹	
V_e	effective volume	19.9	mm ³	
l_e	effective length	9.42	mm	
A_e	effective area	2.11	mm ²	
m	mass of core (for μ_i 125)	MPP	0.17	g
		Sendust	0.12	g

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	35 ± 8 %	125	TX3.9/2.5-M2-A35
	41 ± 8 %	147	TX3.9/2.5-M2-A41
	45 ± 8 %	160	TX3.9/2.5-M2-A45
	48 ± 8 %	173	TX3.9/2.5-M2-A48
	56 ± 8 %	200	TX3.9/2.5-M2-A56
	84 ± 8 %	300	TX3.9/2.5-M2-A84
Sendust	17 ± 15 %	60	TX3.9/2.5-S7-A17
	21 ± 15 %	75	TX3.9/2.5-S7-A21
	25 ± 15 %	90	TX3.9/2.5-S7-A25
	35 ± 15 %	125	TX3.9/2.5-S7-A35

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	125	≥ 800	0.015
	147	≥ 800	0.016
	160	≥ 800	0.016
	173	≥ 800	0.016
	200	≥ 800	0.030
	300	≥ 800	0.030
Sendust	60	≥ 1030	0.017
	75	≥ 1040	0.017
	90	≥ 1050	0.017
	125	≥ 1060	0.017




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.