

Ferrite ring cores (toroids)

TN10/6/4

RING CORES (TOROIDS)

Effective core parameters

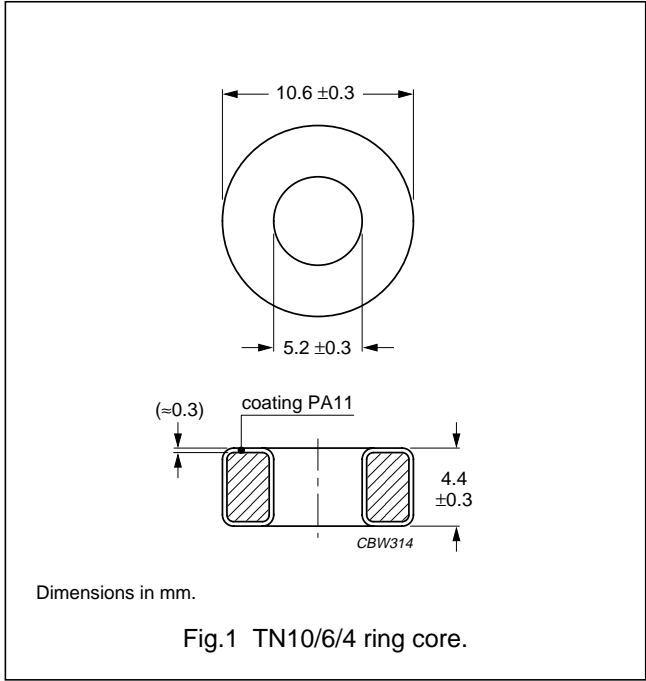
SYMBOL	PARAMETER	VALUE	UNIT
$\Sigma(l/A)$	core factor (C1)	3.07	mm^{-1}
V_e	effective volume	188	mm^3
l_e	effective length	24.1	mm
A_e	effective area	7.8	mm^2
m	mass of core	≈ 0.95	g

Coating

The cores are coated with polyamide 11 (PA11), flame retardant in accordance with “UL 94V-2”; UL file number E 45228 (M).

Isolation voltage

DC 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	COLOUR CODE	TYPE NUMBER
4C65 ^{sup}	$52 \pm 25\%$	≈ 125	violet	TN10/6/4-4C65
4A11	$286 \pm 25\%$	≈ 700	pink	TN10/6/4-4A11
3F3 ^{sup}	$740 \pm 25\%$	≈ 1800	blue	TN10/6/4-3F3
3C90 ^{sup}	$940 \pm 25\%$	≈ 2300	ultramarine	TN10/6/4-3C90
3C11	$1750 \pm 25\%$	≈ 4300	white	TN10/6/4-3C11
3E25 ^{sup}	$2250 \pm 30\%$	≈ 5500	orange	TN10/6/4-3E25
3E5	$3470 \pm 30\%$	≈ 8500	yellow/white	TL10/6/4-3E5 ⁽¹⁾
3E6 ^{des}	$4085 \pm 30\%$	≈ 10000	purple/white	TL10/6/4-3E6 ⁽¹⁾

Note

1. Ring cores in 3E5 and 3E6 are lacquered (polyurethane) and have different dimensions:
Outside diameter = 10.25 ± 0.4 mm; inside diameter = 5.75 ± 0.3 mm; height = 4.25 ± 0.3 mm; flame retardant in accordance with “UL 94V-2”; UL file number E 192048.

Properties of cores under power conditions

GRADE	B (mT) at	CORE LOSS (W) at		
	H = 250 A/m; f = 25 kHz; T = 100 °C	f = 25 kHz; Ḃ = 200 mT; T = 100 °C	f = 100 kHz; Ḃ = 100 mT; T = 100 °C	f = 400 kHz; Ḃ = 50 mT; T = 100 °C
3C90	≥ 320	≤ 0.021	≤ 0.021	—
3F3	≥ 320	—	≤ 0.03	≤ 0.04