

DATA SHEET

TN9/6/3
Ferrite toroids

Supersedes data of February 2002

2004 Sep 01

Ferrite toroids

TN9/6/3

RING CORES (TOROIDS)

Effective core parameters

SYMBOL	PARAMETER	VALUE	UNIT
$\Sigma(l/A)$	core factor (C1)	5.17	mm^{-1}
V_e	effective volume	102	mm^3
l_e	effective length	22.9	mm
A_e	effective area	4.44	mm^2
m	mass of core	≈ 0.5	g

Coating

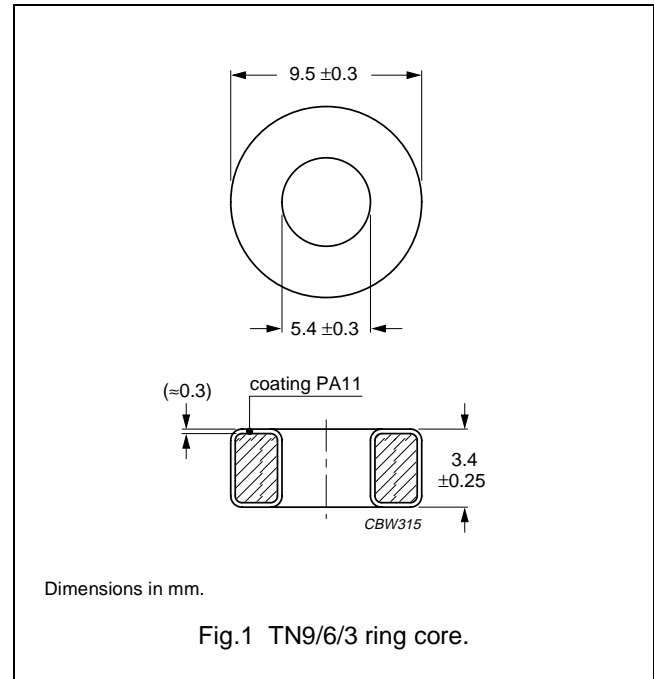
The cores are coated with polyamide 11 (PA11), flame retardant in accordance with "UL 94V-2"; UL file number E 45228 (M).

The colour is white.

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	TYPE NUMBER
4C65	$30 \pm 25\%$	≈ 125	TN9/6/3-4C65
4A11	$207 \pm 25\%$	$\approx 700^{(1)}$	TN9/6/3-4A11
3R1 ⁽²⁾	—	≈ 800	TN9/6/3-3R1
3F3	$440 \pm 25\%$	≈ 1800	TN9/6/3-3F3
3C90	$560 \pm 25\%$	≈ 2300	TN9/6/3-3C90
3E25	$1340 \pm 30\%$	≈ 5500	TN9/6/3-3E25

1. Old permeability specification maintained.
2. Due to the rectangular BH-loop of 3R1, inductance values strongly depend on the magnetic state of the ring core and measuring conditions. Therefore no A_L value is specified. For the application in magnetic amplifiers A_L is not a critical parameter.

WARNING

Do not use 3R1 cores close to their mechanical resonant frequency. For more information refer to "3R1" material specification in this data handbook.

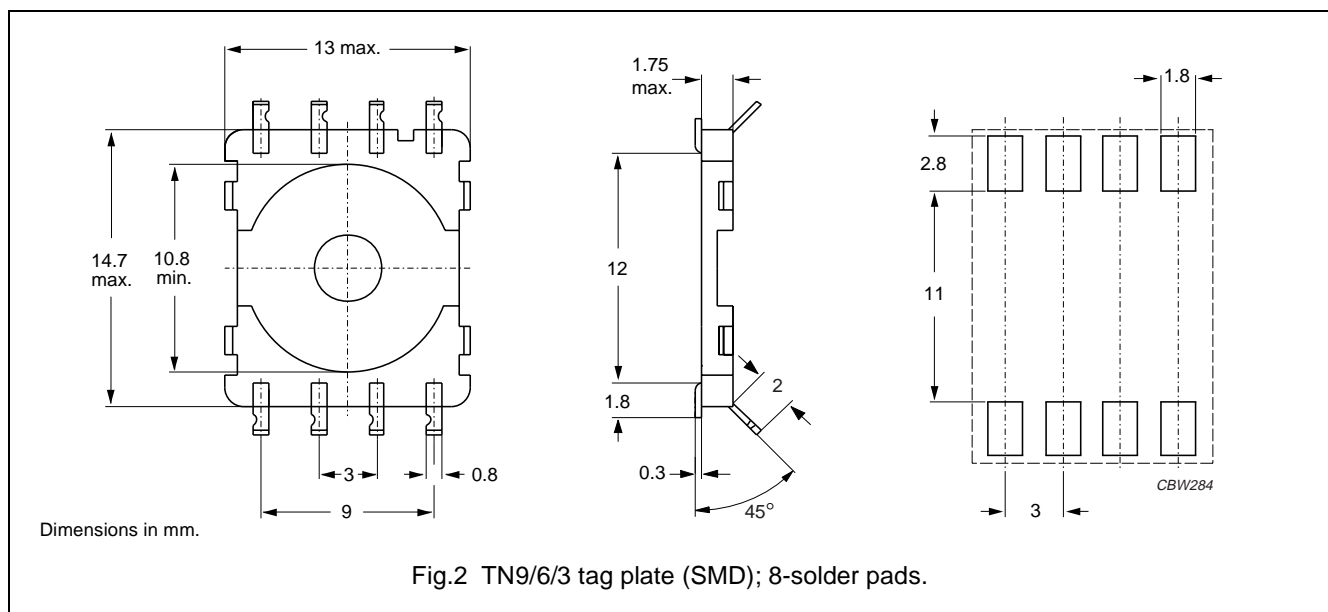
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Tag plate

General data

PARAMETER	SPECIFICATION
Tag plate material	liquid crystal polymer (LCP), glass reinforced, flame retardant in accordance with "UL 94V-0"; UL file number E83005 (M)
Solder pad material	copper-tin alloy (CuSn), tin (Sn) plated
Maximum operating temperature	155 °C, "IEC 60085", class F
Resistance to soldering heat	"IEC 60068-2-20", Part 2, Test Tb, method 1B: 350 °C, 3.5 s
Solderability	"IEC 60068-2-20", Part 2, Test Ta, method 1: 235 °C, 2 s

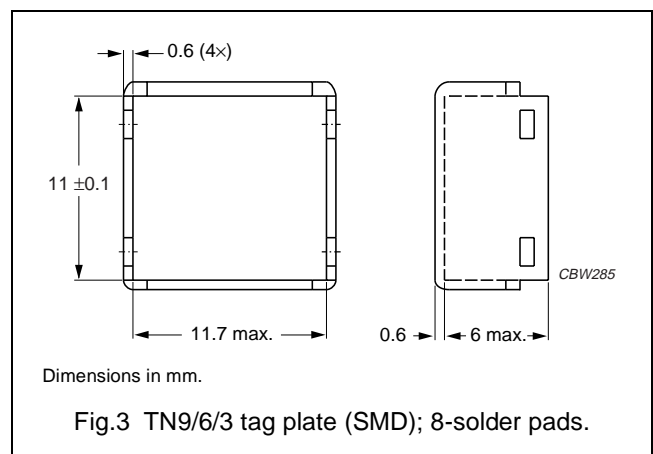


Type number information for TN9/6/3 tag plate (SMD) with 8 solder pads

NUMBER OF SOLDER PADS	TYPE NUMBER
8	TGPS-9-8P-Z

Cover data

PARAMETER	SPECIFICATION
Cover material	polyamide (PA4.6) glass reinforced, flame retardant in accordance with "UL 94V-0"
Maximum operating temperature	130 °C, "IEC 60085" class B
Type number	COV-9



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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
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.