

# DATA SHEET

**PT23/18**

**(2318TS)**

PT, PTS, PTS/I cores and  
accessories

Supersedes data of February 2002

2004 Sep 01

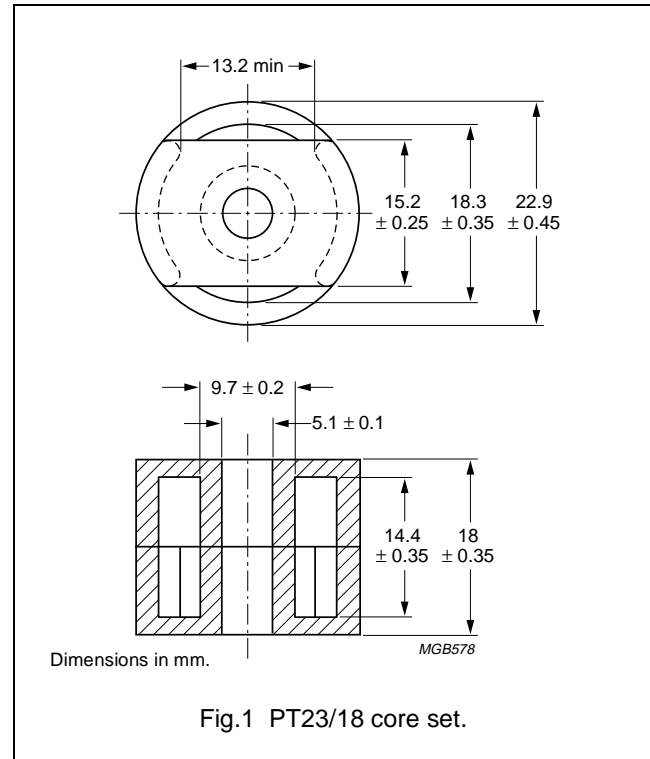
## PT, PTS, PTS/I cores and accessories

PT23/18  
(2318TS)

## CORE SETS

## Effective core parameters

SYMBOL	PARAMETER	VALUE	UNIT
$\Sigma(l/A)$	core factor (C1)	0.670	mm <sup>-1</sup>
$V_e$	effective volume	2590	mm <sup>3</sup>
$l_e$	effective length	41.6	mm
$A_e$	effective area	62.2	mm <sup>2</sup>
$A_{min}$	minimum area	53.6	mm <sup>2</sup>
m	mass of set	≈ 14	g



## Core sets for general purpose transformers and power applications

Clamping force for  $A_L$  measurements,  $30 \pm 10$  N.

GRADE	$A_L$ (nH)	$\mu_e$	AIR GAP ( $\mu$ m)	TYPE NUMBER
3C81 <sup>sup</sup>	160 ±3%	≈ 85	≈ 620	PT23/18-3C81-A160
	250 ±3%	≈ 133	≈ 360	PT23/18-3C81-A250
	315 ±3%	≈ 168	≈ 270	PT23/18-3C81-A315
	400 ±3%	≈ 213	≈ 200	PT23/18-3C81-A400
	630 ±5%	≈ 335	≈ 120	PT23/18-3C81-A630
	4100 ±25%	≈ 2180	≈ 0	PT23/18-3C81
3C91 <sup>sup</sup>	4100 ±25%	≈ 2180	≈ 0	PT23/18-3C91
3F3 <sup>sup</sup>	160 ±3%	≈ 85	≈ 620	PT23/18-3F3-A160
	250 ±3%	≈ 133	≈ 360	PT23/18-3F3-A250
	315 ±3%	≈ 168	≈ 270	PT23/18-3F3-A315
	400 ±3%	≈ 213	≈ 200	PT23/18-3F3-A400
	630 ±5%	≈ 335	≈ 120	PT23/18-3F3-A630
	2750 ±25%	≈ 1460	≈ 0	PT23/18-3F3

## PT, PTS, PTS/I cores and accessories

PT23/18  
(2318TS)

## Core sets of high permeability grades

Clamping force for  $A_L$  measurements,  $30 \pm 10$  N.

GRADE	$A_L$ (nH)	$\mu_e$	AIR GAP ( $\mu\text{m}$ )	TYPE NUMBER
3E27 <sup>sup</sup>	$6400 \pm 25\%$	$\approx 3410$	$\approx 0$	PT23/18-3E27

## Properties of core sets under power conditions

GRADE	B (mT) at	CORE LOSS (W) at			
	H = 250 A/m; f = 25 kHz; T = 100 °C	f = 25 kHz; B = 200 mT; T = 100 °C	f = 100 kHz; B = 100 mT; T = 100 °C	f = 100 kHz; B = 200 mT; T = 100 °C	f = 400 kHz; B = 50 mT; T = 100 °C
3C81	$\geq 320$	$\leq 0.6$	–	–	–
3C91	$\geq 320$	–	$\leq 0.13^{(1)}$	$\leq 1.0^{(1)}$	–
3F3	$\geq 315$	–	$\leq 0.29$	–	$\leq 0.49$

## Note

1. Measured at 60 °C.

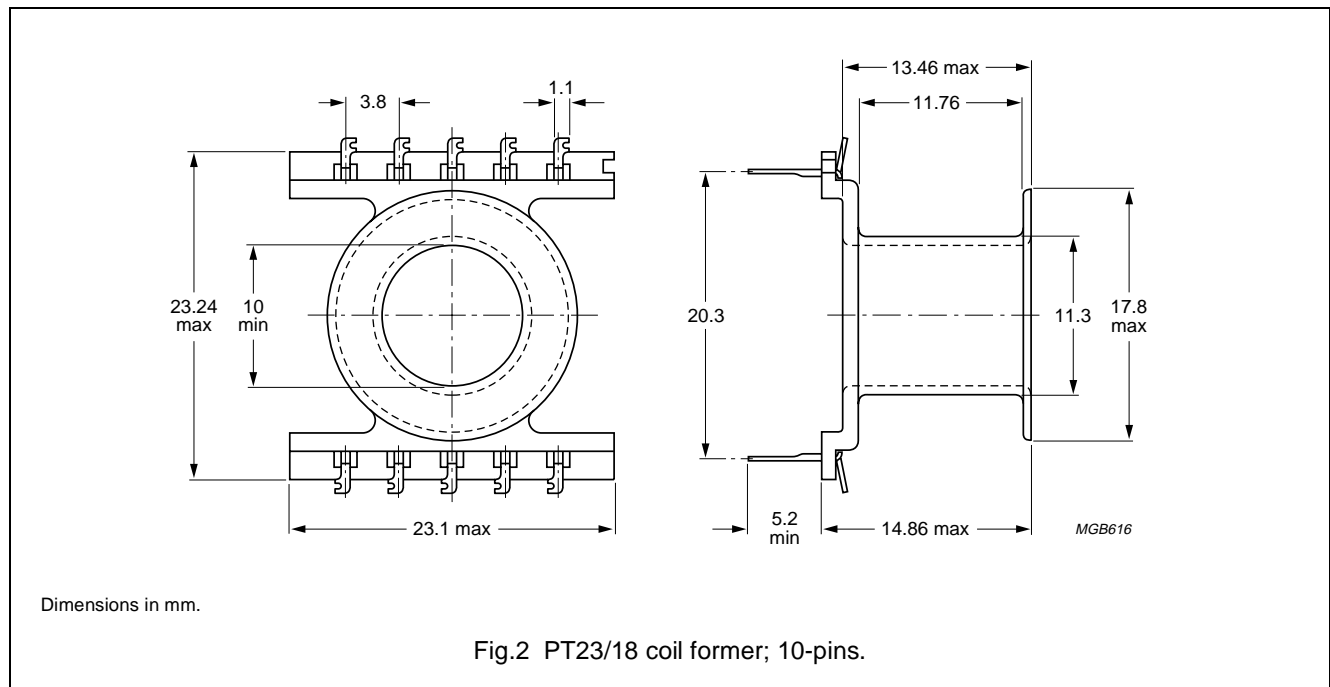
## PT, PTS, PTS/I cores and accessories

PT23/18  
(2318TS)

## COIL FORMER

## General data 10-pins PT23/18 coil former

PARAMETER	SPECIFICATION
Coil former material	polyamide (PA), glass-reinforced, flame retardant in accordance with "UL 94V-0"; UL file number E41938(M)
Pin material	copper-tin alloy (CuSn), tin-lead alloy (SnPb) plated, transition to lead-free (Sn) ongoing
Maximum operating temperature	130 °C, "IEC 60085", class B
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



## Winding data for 10-pins PT23/18 coil former

NUMBER OF SECTIONS	MINIMUM WINDING AREA (mm <sup>2</sup> )	NOMINAL WINDING WIDTH (mm)	AVERAGE LENGTH OF TURN (mm)	TYPE NUMBER
1	36.0	11.8	45.2	CPV-PT23/18-1S-10P

## PT, PTS, PTS/I cores and accessories

PT23/18  
(2318TS)




## 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.

## DISCLAIMER

**Life support applications** — These products are not designed for use in life support appliances, devices, or systems where malfunction of these products can reasonably be expected to result in personal injury. Ferroxcube customers using or selling these products for use in such applications do so at their own risk and agree to fully indemnify Ferroxcube for any damages resulting from such application.

## 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.