

# DATA SHEET

**PT18/11**

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

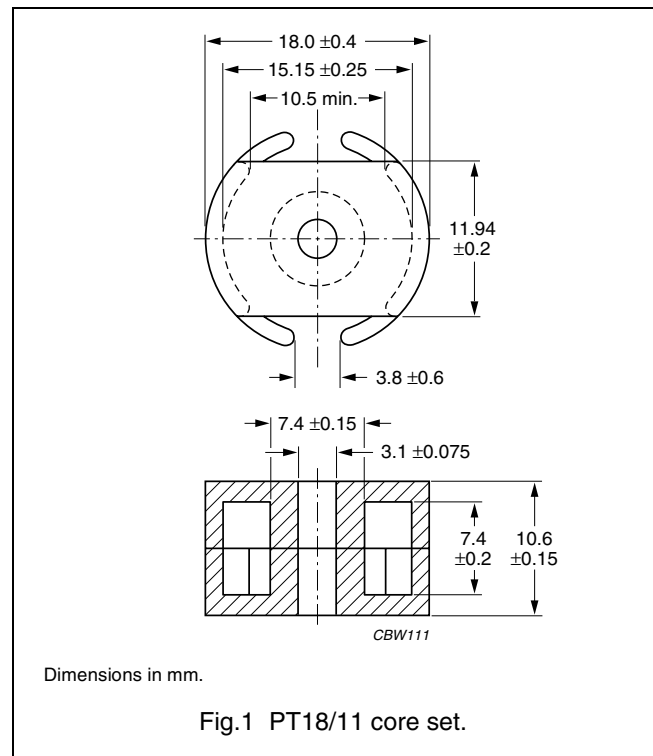
Supersedes data of September 2004

2008 Sep 01

**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	1110	mm <sup>3</sup>
$l_e$	effective length	27.2	mm
$A_e$	effective area	40.6	mm <sup>2</sup>
$A_{min}$	minimum area	32.9	mm <sup>2</sup>
m	mass of set	≈ 6.0	g



**Core sets for general purpose transformers and power applications**

Clamping force for  $A_L$  measurements,  $20 \pm 5$  N.

GRADE	$A_L$ (nH)	$\mu_e$	AIR GAP ( $\mu$ m)	TYPE NUMBER
3C81 <sup>sup</sup>	100 ± 3%	≈ 53	≈ 660	PT18/11-3C81-A100
	160 ± 3%	≈ 85	≈ 380	PT18/11-3C81-A160
	250 ± 3%	≈ 133	≈ 220	PT18/11-3C81-A250
	315 ± 3%	≈ 168	≈ 170	PT18/11-3C81-A315
	400 ± 5%	≈ 213	≈ 130	PT18/11-3C81-A400
	3130 ± 25%	≈ 1670	≈ 0	PT18/11-3C81
3C91 <sup>sup</sup>	3130 ± 25%	≈ 1670	≈ 0	PT18/11-3C91
3F3 <sup>sup</sup>	100 ± 3%	≈ 53	≈ 660	PT18/11-3F3-A100
	160 ± 3%	≈ 85	≈ 380	PT18/11-3F3-A160
	250 ± 3%	≈ 133	≈ 220	PT18/11-3F3-A250
	315 ± 3%	≈ 168	≈ 170	PT18/11-3F3-A315
	400 ± 5%	≈ 213	≈ 130	PT18/11-3F3-A400
	2500 ± 25%	≈ 1340	≈ 0	PT18/11-3F3

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

PT18/11  
(1811TS)

## Core sets of high permeability grades

Clamping force for  $A_L$  measurements,  $15 \pm 5$  N.

GRADE	$A_L$ (nH)	$\mu_e$	AIR GAP ( $\mu\text{m}$ )	TYPE NUMBER
3E27 <sup>sup</sup>	$5760 \pm 25\%$	$\approx 3075$	$\approx 0$	PT18/11-3E27

## 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	$\geq 320$	$\leq 0.23$	–	–	–
3C91	$\geq 320$	–	$\leq 0.06^{(1)}$	$\leq 0.5^{(1)}$	–
3F3	$\geq 315$	–	$\leq 0.12$	–	$\leq 0.21$

## Note

1. Measured at 60 °C.

## BOBBINS AND ACCESSORIES

Coil formers, winding data and mounting parts are equal to those of "P18/11", but "area product" is different.

## Winding data and area product (for PT18/11) for CP-P18/11 coil former

NUMBER OF SECTIONS	WINDING AREA (mm <sup>2</sup> )	MINIMUM WINDING WIDTH (mm)	AVERAGE LENGTH OF TURN (mm)	AREA PRODUCT $A_e \times A_w$ (mm <sup>4</sup> )	TYPE NUMBER
1	17.1	5.7	36.6	694	CP-P18/11-1S
2	$2 \times 7.95$	$2 \times 2.65$	36.6	$2 \times 323$	CP-P18/11-2S
3	$3 \times 4.95$	$3 \times 1.6$	36.6	$3 \times 201$	CP-P18/11-3S

## Winding data and area product (for PT18/11) for 6-pins P18/11 coil former for PCB mounting

NUMBER OF SECTIONS	MINIMUM WINDING AREA (mm <sup>2</sup> )	NOMINAL WINDING WIDTH (mm)	AVERAGE LENGTH OF TURN (mm)	LENGTH OF PINS (mm)	AREA PRODUCT $A_e \times A_w$ (mm <sup>4</sup> )	TYPE NUMBER
1	16.8	6.0	36.7	4.4	682	CPV-P18/11-1S-6PD
1	16.8	6.0	36.7	6.8	682	CPV-P18/11-1S-6PDL
2	$2 \times 7.61$	$2 \times 2.8$	36.7	4.4	$2 \times 309$	CPV-P18/11-2S-6PD
2	$2 \times 7.61$	$2 \times 2.8$	36.7	6.8	$2 \times 309$	CPV-P18/11-2S-6PDL
3	$3 \times 4.58$	$3 \times 1.7$	36.7	4.4	$3 \times 186$	CPV-P18/11-3S-6PD
3	$3 \times 4.58$	$3 \times 1.7$	36.7	6.8	$3 \times 186$	CPV-P18/11-3S-6PDL




**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
<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.