

# DATA SHEET

**PTS18/11**

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

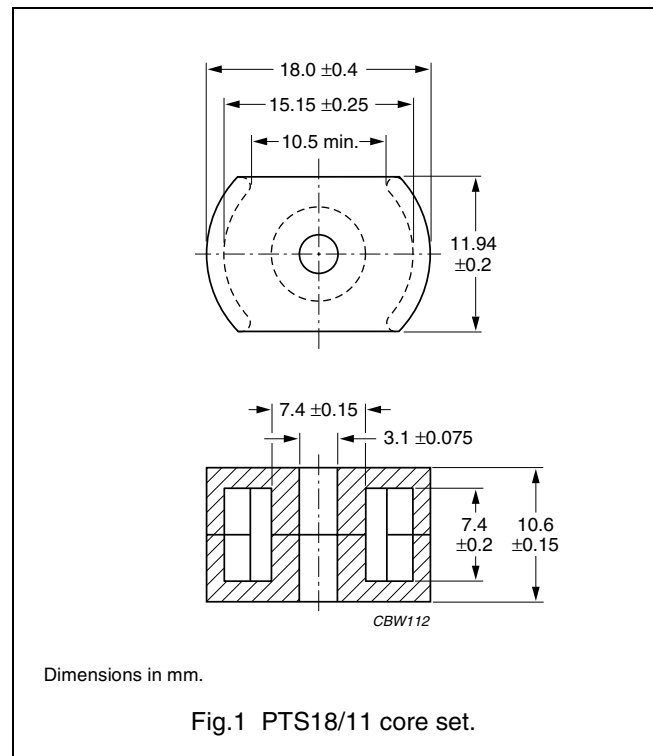
Supersedes data of September 2004

2008 Sep 01

**CORE SETS**

**Effective core parameters**

SYMBOL	PARAMETER	VALUE	UNIT
$\Sigma(l/A)$	core factor (C1)	0.770	mm <sup>-1</sup>
$V_e$	effective volume	1070	mm <sup>3</sup>
$l_e$	effective length	28,7	mm
$A_e$	effective area	37.2	mm <sup>2</sup>
$A_{min}$	minimum area	31.0	mm <sup>2</sup>
m	mass of set	≈ 5.0	g



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

Clamping force for  $A_L$  measurements, 20 ± 5 N.

GRADE	$A_L$ (nH)	$\mu_e$	AIR GAP ( $\mu\text{m}$ )	TYPE NUMBER
3C81	100 ± 3%	≈ 61	≈ 600	PTS18/11-3C81-A100
	160 ± 3%	≈ 98	≈ 340	PTS18/11-3C81-A160
	250 ± 3%	≈ 153	≈ 200	PTS18/11-3C81-A250
	315 ± 3%	≈ 193	≈ 150	PTS18/11-3C81-A315
	400 ± 5%	≈ 245	≈ 120	PTS18/11-3C81-A400
	3000 ± 25%	≈ 1830	≈ 0	PTS18/11-3C81
3C91 <small>des</small>	3000 ± 25%	≈ 1830	≈ 0	PTS18/11-3C91
3F3	100 ± 3%	≈ 61	≈ 600	PTS18/11-3F3-A100
	160 ± 3%	≈ 98	≈ 340	PTS18/11-3F3-A160
	250 ± 3%	≈ 153	≈ 200	PTS18/11-3F3-A250
	315 ± 3%	≈ 193	≈ 150	PTS18/11-3F3-A315
	400 ± 5%	≈ 245	≈ 120	PTS18/11-3F3-A400
	2225 ± 25%	≈ 1365	≈ 0	PTS18/11-3F3

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

PTS18/11  
(1811THS)**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	$5140 \pm 25\%$	$\approx 3150$	$\approx 0$	PTS18/11-3E27

**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	$\geq 320$	$\leq 0.22$	–	–	–
3C91	$\geq 320$	–	$\leq 0.055^{(1)}$	$\leq 0.4^{(1)}$	–
3F3	$\geq 315$	–	$\leq 0.12$	–	$\leq 0.2$

**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 PTS18/11) 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	636	CP-P18/11-1S
2	$2 \times 7.95$	$2 \times 2.65$	36.6	$2 \times 296$	CP-P18/11-2S
3	$3 \times 4.95$	$3 \times 1.6$	36.6	$3 \times 184$	CP-P18/11-3S

**Winding data and area product (for PTS18/11) 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	625	CPV-P18/11-1S-6PD
1	16.8	6.0	36.7	6.8	625	CPV-P18/11-1S-6PDL
2	$2 \times 7.61$	$2 \times 2.8$	36.7	4.4	$2 \times 283$	CPV-P18/11-2S-6PD
2	$2 \times 7.61$	$2 \times 2.8$	36.7	6.8	$2 \times 283$	CPV-P18/11-2S-6PDL
3	$3 \times 4.58$	$3 \times 1.7$	36.7	4.4	$3 \times 170$	CPV-P18/11-3S-6PD
3	$3 \times 4.58$	$3 \times 1.7$	36.7	6.8	$3 \times 170$	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.

**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.