

DATA SHEET

PTS18/11

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

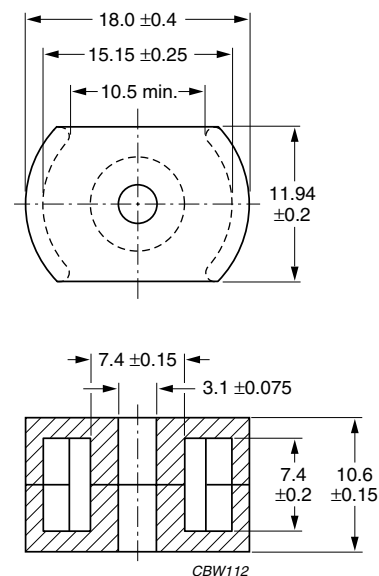
Supersedes data of September 2004

2008 Sep 01

CORE SETS

Effective core parameters

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



Dimensions in mm.

Fig.1 PTS18/11 core set.

Core sets for general purpose transformers and power applications

Clamping force for A_L measurements, 20 ± 5 N.

GRADE	A_L (nH)	μ_e	AIR GAP (μm)	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 des	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

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Core sets of high permeability grades

Clamping force for A_L measurements, 15 ± 5 N.

GRADE	A_L (nH)	μ_e	AIR GAP (μm)	TYPE NUMBER
3E27	$5140 \pm 25\%$	≈ 3150	≈ 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	≥ 320	≤ 0.22	–	–	–
3C91	≥ 320	–	$\leq 0.055^{(1)}$	$\leq 0.4^{(1)}$	–
3F3	≥ 315	–	≤ 0.12	–	≤ 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 ²)	MINIMUM WINDING WIDTH (mm)	AVERAGE LENGTH OF TURN (mm)	AREA PRODUCT $A_e \times A_w$ (mm ⁴)	TYPE NUMBER
1	17.1	5.7	36.6	636	CP-P18/11-1S
2	2×7.95	2×2.65	36.6	2×296	CP-P18/11-2S
3	3×4.95	3×1.6	36.6	3×184	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 ²)	NOMINAL WINDING WIDTH (mm)	AVERAGE LENGTH OF TURN (mm)	LENGTH OF PINS (mm)	AREA PRODUCT $A_e \times A_w$ (mm ⁴)	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	2×7.61	2×2.8	36.7	4.4	2×283	CPV-P18/11-2S-6PD
2	2×7.61	2×2.8	36.7	6.8	2×283	CPV-P18/11-2S-6PDL
3	3×4.58	3×1.7	36.7	4.4	3×170	CPV-P18/11-3S-6PD
3	3×4.58	3×1.7	36.7	6.8	3×170	CPV-P18/11-3S-6PDL

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DATA SHEET STATUS DEFINITIONS

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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.
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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.