

DATA SHEET

PTS14/8

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

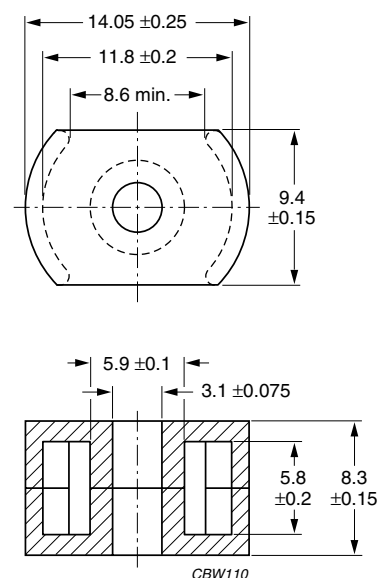
Supersedes data of September 2004

2008 Sep 01

CORE SETS

Effective core parameters

SYMBOL	PARAMETER	VALUE	UNIT
$\Sigma(l/A)$	core factor (C1)	1.02	mm^{-1}
V_e	effective volume	495	mm^3
l_e	effective length	22.5	mm
A_e	effective area	22.0	mm^2
$A_{\min}$	minimum area	19.9	mm^2
m	mass of set	≈ 2.5	g



Dimensions in mm.

Fig.1 PTS14/8 core set.

Core sets for general purpose transformers and power applications

Clamping force for A_L measurements, 15 ± 15 N.

GRADE	A_L (nH)	μ_e	AIR GAP (μm)	TYPE NUMBER
3C81	$63 \pm 3\%$	≈ 51	≈ 590	PTS14/8-3C81-A63
	$100 \pm 3\%$	≈ 81	≈ 340	PTS14/8-3C81-A100
	$160 \pm 3\%$	≈ 130	≈ 190	PTS14/8-3C81-A160
	$250 \pm 3\%$	≈ 204	≈ 110	PTS14/8-3C81-A250
	$315 \pm 5\%$	≈ 257	≈ 90	PTS14/8-3C81-A315
	$2330 \pm 25\%$	≈ 1900	≈ 0	PTS14/8-3C81
3C91 des	$2330 \pm 25\%$	≈ 1900	≈ 0	PTS14/8-3C91
3F3	$63 \pm 3\%$	≈ 51	≈ 590	PTS14/8-3F3-A63
	$100 \pm 3\%$	≈ 81	≈ 340	PTS14/8-3F3-A100
	$160 \pm 3\%$	≈ 130	≈ 190	PTS14/8-3F3-A160
	$250 \pm 3\%$	≈ 204	≈ 110	PTS14/8-3F3-A250
	$315 \pm 5\%$	≈ 257	≈ 90	PTS14/8-3F3-A315
	$1625 \pm 25\%$	≈ 1320	≈ 0	PTS14/8-3F3

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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	$4370 \pm 25\%$	≈ 3540	≈ 0	PTS14/8-3E27

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	≤ 0.1	–	–	–
3C91	≥ 320	–	$\leq 0.026^{(1)}$	$\leq 0.19^{(1)}$	–
3F3	≥ 315	–	≤ 0.054	–	≤ 0.94

Note

1. Measured at 60 °C.

BOBBINS AND ACCESSORIES

For coil formers, winding data and mounting parts, see data sheet, “P14/8” and “PT14/8”, but “area product” is different.

Winding data and area product (for PTS14/8) for 6-pins PT14/8 coil former

NUMBER OF SECTIONS	MINIMUM WINDING AREA (mm ²)	NOMINAL WINDING WIDTH (mm)	AVERAGE LENGTH OF TURN (mm)	AREA PRODUCT $A_e \times A_w$ (mm ⁴)	TYPE NUMBER
1	7.9	4.1	29.2	174	CPV-PT14/8-1S-6P

Winding data and area product (for PTS14/8) for CP-P14/8 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	8.8	4.1	28.9	194	CP-P14/8-1S
2	2×4.0	2×1.85	28.9	2×88.0	CP-P14/8-2S

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Winding data and area product (for PTS14/8) for CP-P14/8-A coil former

NUMBER OF SECTIONS	MINIMUM WINDING AREA (mm ²)	NOMINAL WINDING WIDTH (mm)	AVERAGE LENGTH OF TURN (mm)	AREA PRODUCT Ae x Aw (mm ⁴)	TYPE NUMBER
1	9.4	4.5	29.0	207	CP-P14/8-1S-A
2	2 x 4.32	2 x 2.0	29.0	2 x 95.0	CP-P14/8-2S-A
3	3 x 2.19	3 x 1.2	29.0	3 x 48.2	CP-P14/8-3S-A

Winding data and area product (for PTS14/8) for 4-pins P14/8 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 Ae x Aw (mm ⁴)	TYPE NUMBER
1	8.65	4.4	29.0	4.4	190	CPV-P14/8-1S-4SPD
1	8.65	4.4	29.0	6.8	190	CPV-P14/8-1S-4SPDL
2	2 x 3.87	2 x 2.0	29.0	4.4	2 x 85.1	CPV-P14/8-2S-4SPD
2	2 x 3.87	2 x 2.0	29.0	6.8	2 x 85.1	CPV-P14/8-2S-4SPDL

Winding data and area product (for PTS14/8) for 6-pins P14/8 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 Ae x Aw (mm ⁴)	TYPE NUMBER
1	8.65	4.4	29.0	4.4	190	CPV-P14/8-1S-6PD
1	8.65	4.4	29.0	6.8	190	CPV-P14/8-1S-6PDL
2	2 x 3.87	2 x 2.0	29.0	4.4	2 x 85.1	CPV-P14/8-2S-6PD
2	2 x 3.87	2 x 2.0	29.0	6.8	2 x 85.1	CPV-P14/8-2S-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.
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.