

DATA SHEET

PT14/8

(1408TS)

PT, PTS, PTS/I cores and
accessories

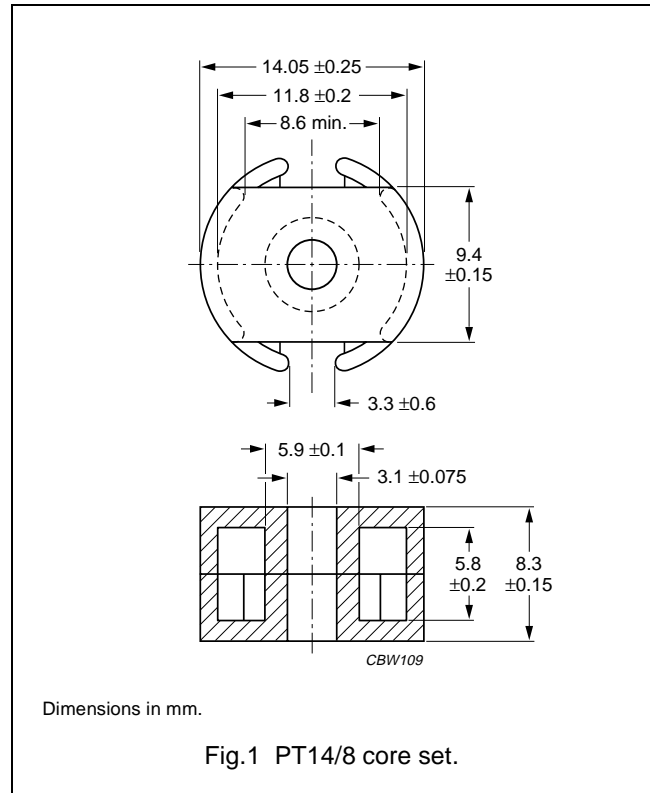
Supersedes data of February 2002

2004 Sep 01

CORE SETS

Effective core parameters

| SYMBOL | PARAMETER | VALUE | UNIT |
|---------------|------------------|-------|------------------|
| $\Sigma(l/A)$ | core factor (C1) | 0.910 | mm ⁻¹ |
| V_e | effective volume | 492 | mm ³ |
| l_e | effective length | 21.1 | mm |
| A_e | effective area | 23.3 | mm ² |
| A_{min} | minimum area | 19.9 | mm ² |
| m | mass of set | ≈ 2.8 | g |



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 ^{sup} | 63 ± 3% | ≈ 45 | ≈ 630 | PT14/8-3C81-A63 |
| | 100 ± 3% | ≈ 72 | ≈ 360 | PT14/8-3C81-A100 |
| | 160 ± 3% | ≈ 115 | ≈ 210 | PT14/8-3C81-A160 |
| | 250 ± 3% | ≈ 180 | ≈ 120 | PT14/8-3C81-A250 |
| | 315 ± 5% | ≈ 227 | ≈ 90 | PT14/8-3C81-A315 |
| | 2400 ± 25% | ≈ 1730 | ≈ 0 | PT14/8-3C81 |
| 3C91 ^{sup} | 2400 ± 25% | ≈ 1730 | ≈ 0 | PT14/8-3C91 |
| 3F3 ^{sup} | 63 ± 3% | ≈ 45 | ≈ 630 | PT14/8-3F3-A63 |
| | 100 ± 3% | ≈ 72 | ≈ 360 | PT14/8-3F3-A100 |
| | 160 ± 3% | ≈ 115 | ≈ 210 | PT14/8-3F3-A160 |
| | 250 ± 3% | ≈ 180 | ≈ 120 | PT14/8-3F3-A250 |
| | 315 ± 5% | ≈ 227 | ≈ 90 | PT14/8-3F3-A315 |
| | 1650 ± 25% | ≈ 1190 | ≈ 0 | PT14/8-3F3 |

PT, PTS, PTS/I cores and accessories

PT14/8
(1408TS)**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 ^{sup} | $4500 \pm 25\%$ | ≈ 3240 | ≈ 0 | PT14/8-3E27 |

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 | ≤ 0.11 | – | – | – |
| 3C91 | ≥ 320 | – | $\leq 0.03^{(1)}$ | $\leq 0.22^{(1)}$ | – |
| 3F3 | ≥ 315 | – | ≤ 0.06 | – | ≤ 0.1 |

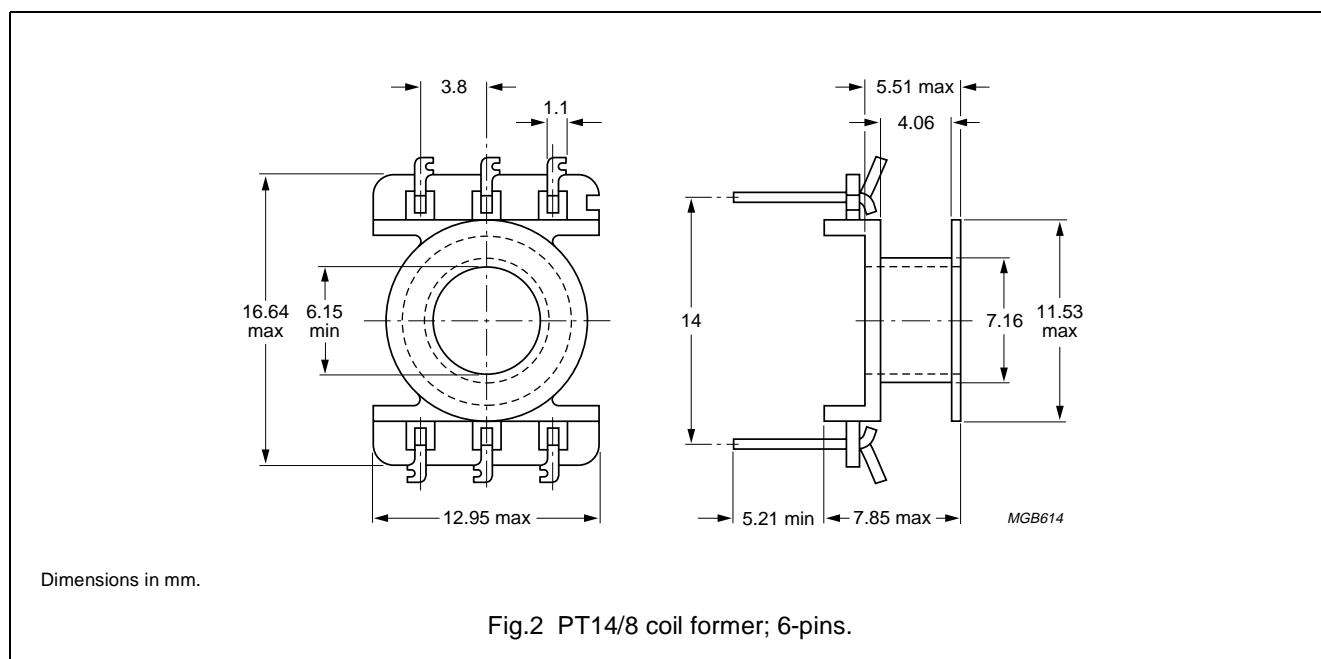
Note

1. Measured at 60 °C.

COIL FORMERS

General data 6-pins PT14/8 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 6-pins PT14/8 coil former

| NUMBER OF SECTIONS | MINIMUM WINDING AREA (mm ²) | NOMINAL WINDING WIDTH (mm) | AVERAGE LENGTH OF TURN (mm) | TYPE NUMBER |
|--------------------|---|----------------------------|-----------------------------|------------------|
| 1 | 7.9 | 4.1 | 29.2 | CPV-PT14/8-1S-6P |

Note

- For additional coil formers and mounting parts, see data sheet, "P14/8".

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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 |
|------------------|---|--|
| 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. |