

# DATA SHEET

**PTS23/11**

**(2311THS)**

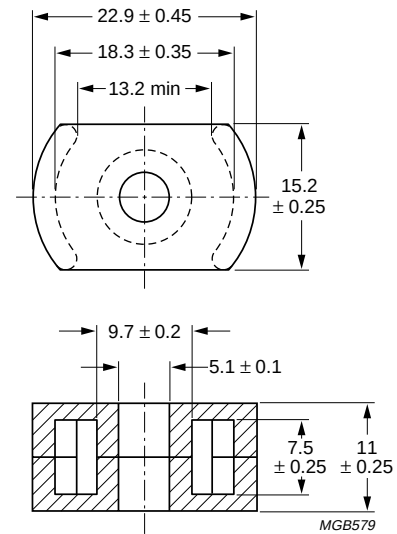
PT, PTS, PTS/I cores and  
accessories

Supersedes data of February 2002

2004 Sep 01

**CORE SETS****Effective core parameters**

| SYMBOL        | PARAMETER        | VALUE | UNIT             |
|---------------|------------------|-------|------------------|
| $\Sigma(l/A)$ | core factor (C1) | 0.550 | mm <sup>-1</sup> |
| $V_e$         | effective volume | 1810  | mm <sup>3</sup>  |
| $l_e$         | effective length | 31.6  | mm               |
| $A_e$         | effective area   | 57.2  | mm <sup>2</sup>  |
| $A_{min}$     | minimum area     | 53.6  | mm <sup>2</sup>  |
| m             | mass of set      | ≈ 9.0 | g                |



Dimensions in mm.

Fig.1 PTS23/11 core set.

**Core sets for general purpose transformers and power applications**Clamping force for  $A_L$  measurements,  $30 \pm 10$  N.

| GRADE                   | $A_L$<br>(nH)   | $\mu_e$ | AIR GAP<br>( $\mu$ m) | TYPE NUMBER        |
|-------------------------|-----------------|---------|-----------------------|--------------------|
| 3C81                    | $160 \pm 3\%$   | ≈ 70    | ≈ 540                 | PTS23/11-3C81-A160 |
|                         | $250 \pm 3\%$   | ≈ 110   | ≈ 320                 | PTS23/11-3C81-A250 |
|                         | $315 \pm 3\%$   | ≈ 138   | ≈ 250                 | PTS23/11-3C81-A315 |
|                         | $400 \pm 3\%$   | ≈ 175   | ≈ 190                 | PTS23/11-3C81-A400 |
|                         | $630 \pm 5\%$   | ≈ 276   | ≈ 110                 | PTS23/11-3C81-A630 |
|                         | $4890 \pm 25\%$ | ≈ 2150  | ≈ 0                   | PTS23/11-3C81      |
| 3C91 <small>des</small> | $4890 \pm 25\%$ | ≈ 2150  | ≈ 0                   | PTS23/11-3C91      |
| 3F3                     | $160 \pm 3\%$   | ≈ 70    | ≈ 540                 | PTS23/11-3F3-A160  |
|                         | $250 \pm 3\%$   | ≈ 110   | ≈ 320                 | PTS23/11-3F3-A250  |
|                         | $315 \pm 3\%$   | ≈ 138   | ≈ 250                 | PTS23/11-3F3-A315  |
|                         | $400 \pm 3\%$   | ≈ 175   | ≈ 190                 | PTS23/11-3F3-A400  |
|                         | $630 \pm 5\%$   | ≈ 276   | ≈ 110                 | PTS23/11-3F3-A630  |
|                         | $3280 \pm 25\%$ | ≈ 1510  | ≈ 0                   | PTS23/11-3F3       |

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

PTS23/11  
(2311THS)**Core sets of high permeability grades**Clamping force for  $A_L$  measurements,  $30 \pm 10$  N.

| GRADE | $A_L$<br>(nH)   | $\mu_e$        | AIR GAP<br>( $\mu\text{m}$ ) | TYPE NUMBER   |
|-------|-----------------|----------------|------------------------------|---------------|
| 3E27  | $7250 \pm 25\%$ | $\approx 3190$ | $\approx 0$                  | PTS23/11-3E27 |

**Properties of core sets under power conditions**

| GRADE | B (mT) at                                 | CORE LOSS (W) at                         |                                           |                                           |                                          |
|-------|-------------------------------------------|------------------------------------------|-------------------------------------------|-------------------------------------------|------------------------------------------|
|       | H = 250 A/m;<br>f = 25 kHz;<br>T = 100 °C | f = 25 kHz;<br>B = 200 mT;<br>T = 100 °C | f = 100 kHz;<br>B = 100 mT;<br>T = 100 °C | f = 100 kHz;<br>B = 200 mT;<br>T = 100 °C | f = 400 kHz;<br>B = 50 mT;<br>T = 100 °C |
| 3C81  | $\geq 320$                                | $\leq 0.37$                              | –                                         | –                                         | –                                        |
| 3C91  | $\geq 320$                                | –                                        | $\leq 0.09^{(1)}$                         | $\leq 0.7^{(1)}$                          | –                                        |
| 3F3   | $\geq 315$                                | –                                        | $\leq 0.2$                                | –                                         | $\leq 0.35$                              |

**Note**

1. Measured at 60 °C.

**BOBBINS AND ACCESSORIES**

For coil formers, winding data and mounting parts, see data sheet, "PT23/11".

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

PTS23/11  
(2311THS)

## 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.                                                                            |
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