

# DATA SHEET

**PT23/11**  
PT, PTS, PTS/I cores and  
accessories

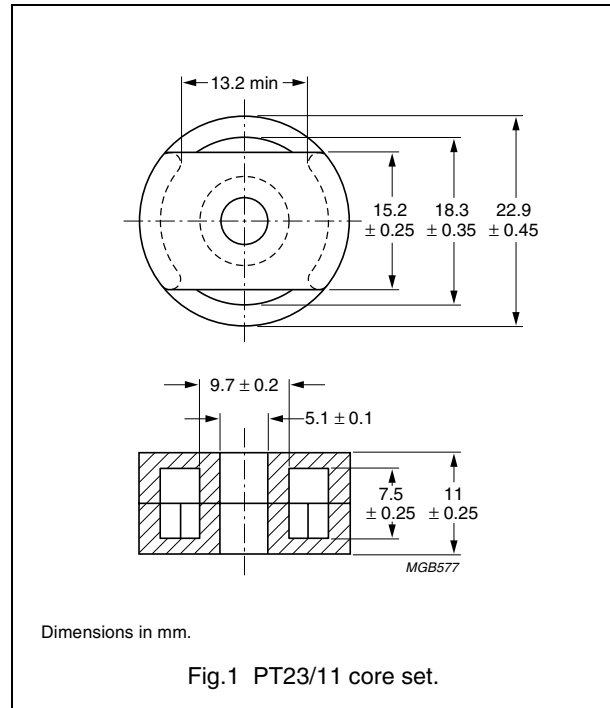
Supersedes data of September 2004

2008 Sep 01

**CORE SETS**

**Effective core parameters**

SYMBOL	PARAMETER	VALUE	UNIT
$\Sigma(l/A)$	core factor (C1)	0.470	mm <sup>-1</sup>
$V_e$	effective volume	1740	mm <sup>3</sup>
$l_e$	effective length	28.6	mm
$A_e$	effective area	61.0	mm <sup>2</sup>
$A_{min}$	minimum area	53.6	mm <sup>2</sup>
m	mass of set	≈ 10.5	g



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

Clamping force for  $A_L$  measurements, 30 ± 10 N.

GRADE	$A_L$ (nH)	$\mu_e$	AIR GAP ( $\mu\text{m}$ )	TYPE NUMBER
3C81 <sup>sup</sup>	160 ± 3%	≈ 60	≈ 580	PT23/11-3C81-A160
	250 ± 3%	≈ 93	≈ 350	PT23/11-3C81-A250
	315 ± 3%	≈ 118	≈ 270	PT23/11-3C81-A315
	400 ± 3%	≈ 149	≈ 200	PT23/11-3C81-A400
	630 ± 5%	≈ 235	≈ 120	PT23/11-3C81-A630
	5500 ± 25%	≈ 2050	≈ 0	PT23/11-3C81
3C91 <sup>sup</sup>	5500 ± 25%	≈ 2050	≈ 0	PT23/11-3C91
3F3 <sup>sup</sup>	160 ± 3%	≈ 60	≈ 580	PT23/11-3F3-A160
	250 ± 3%	≈ 93	≈ 350	PT23/11-3F3-A250
	315 ± 3%	≈ 118	≈ 270	PT23/11-3F3-A315
	400 ± 3%	≈ 149	≈ 200	PT23/11-3F3-A400
	630 ± 5%	≈ 235	≈ 120	PT23/11-3F3-A630
	3700 ± 25%	≈ 1380	≈ 0	PT23/11-3F3

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

PT23/11  
(2311TS)**Core sets of high permeability grades**Clamping force for  $A_L$  measurements,  $30 \pm 10$  N.

GRADE	$A_L$ (nH)	$\mu_e$	AIR GAP ( $\mu\text{m}$ )	TYPE NUMBER
3E27 <sup>sup</sup>	8400 $\pm 25\%$	$\approx 3130$	$\approx 0$	PT23/11-3E27

**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	$\geq 320$	$\leq 0.4$	–	–	–
3C91	$\geq 320$	–	$\leq 0.09^{(1)}$	$\leq 0.7^{(1)}$	–
3F3	$\geq 315$	–	$\leq 0.19$	–	$\leq 0.33$

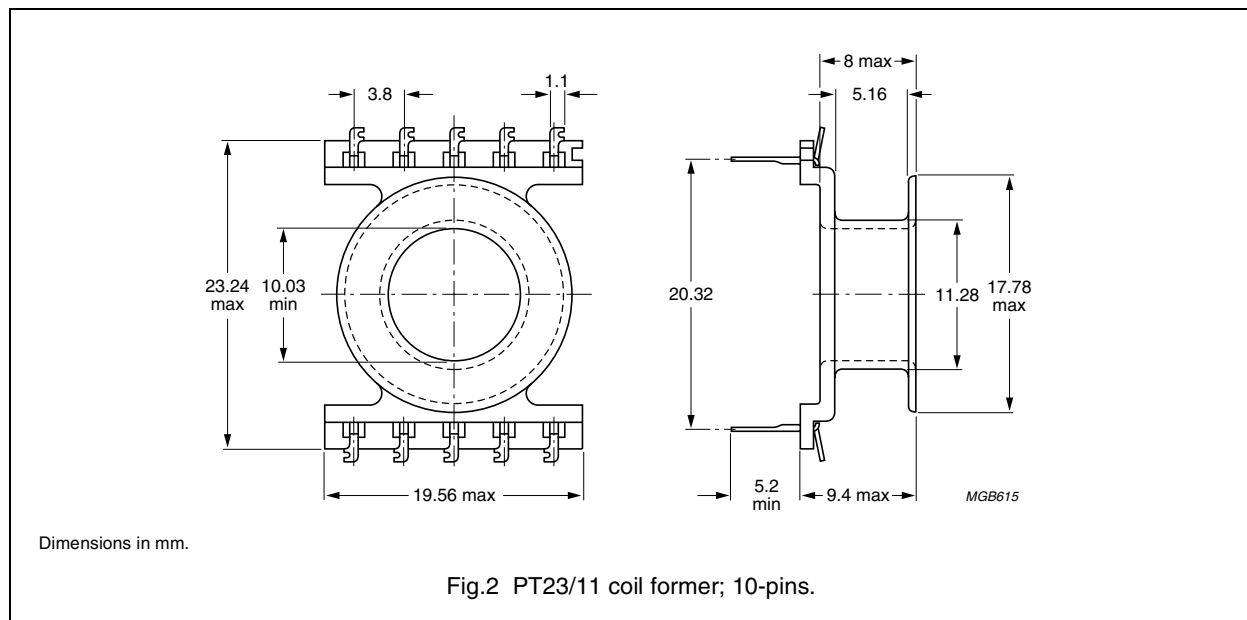
**Note**

1. Measured at 60 °C.

**COIL FORMERS**

**General data 10-pins PT23/11 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 (Sn) plated
Maximum operating temperature	130 °C, "IEC 60085" class B
Resistance to soldering heat	"IEC 68-2-20", Part 2, Test Tb, method 1B, 350 °C, 3.5 s
Solderability	"IEC 68-2-20", Part 2, Test Ta, method 1



**Winding data and area product for 10-pins PT23/11 coil former**

NUMBER OF SECTIONS	MINIMUM WINDING AREA (mm <sup>2</sup> )	NOMINAL WINDING WIDTH (mm)	AVERAGE LENGTH OF TURN (mm)	AREA PRODUCT Ae x Aw (mm <sup>4</sup> )	TYPE NUMBER
1	15.1	5.2	45.2	921	CPV-PT23/11-1S-10P




**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.
<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.