DATA SHEET

PT23/11 (2311TS)

PT, PTS, PTS/I cores and accessories

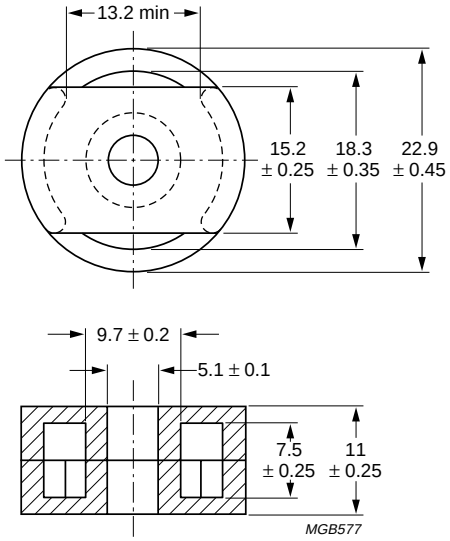
Supersedes data of February 2002 2004 Sep 01

FERROXCUBE
A YAGEO COMPANY

CORE SETS

Effective core parameters

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



Dimensions in mm.

Fig.1 PT23/11 core set.

Core sets for general purpose transformers and power applications

Clamping force for A_L measurements, 30 ±10 N.

GRADE	A_L (nH)	μ_e	AIR GAP (μm)	TYPE NUMBER
3C81 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	5500 ±25%	≈ 2050	≈ 0	PT23/11-3C91
3F3 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

Core sets of high permeability grades

Clamping force for A_L measurements, 30 ±10 N.

GRADE	A_L (nH)	μ_e	AIR GAP (μm)	TYPE NUMBER
3E27 sup	8400 ±25%	≈ 3130	≈ 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	$\hat{f}$ = 25 kHz; $\hat{B}$ = 200 mT; T = 100 °C	$\hat{f}$ = 100 kHz; $\hat{B}$ = 100 mT; T = 100 °C	$\hat{f}$ = 100 kHz; $\hat{B}$ = 200 mT; T = 100 °C	$\hat{f}$ = 400 kHz; $\hat{B}$ = 50 mT; T = 100 °C
3C81	≥320	≤ 0.4	–	–	–
3C91	≥320	–	≤ 0.09[1]	≤ 0.7[1]	–
3F3	≥315	–	≤ 0.19	–	≤ 0.33

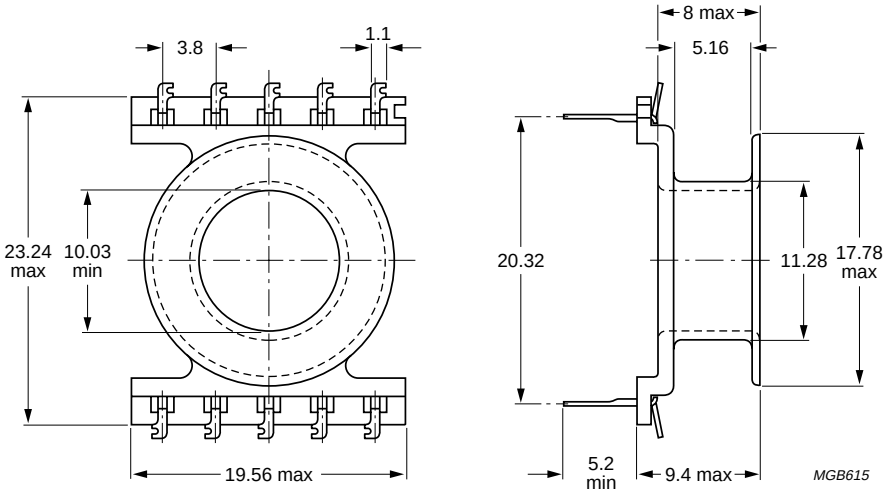
Note

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-lead alloy (SnPb) plated, transition to lead-free (Sn) ongoing
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



Dimensions in mm.

Fig.2 PT23/11 coil former; 10-pins.

Winding data for 10-pins PT23/11 coil former

NUMBER OF SECTIONS	MINIMUM WINDING AREA (mm^2)	NOMINAL WINDING WIDTH (mm)	AVERAGE LENGTH OF TURN (mm)	TYPE NUMBER
1	15.1	5.2	45.2	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
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Preferred		These products are recommended for use in current designs and are available via our sales channels.
Support	sup	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.