DATA SHEET

P9/5
P cores and accessories

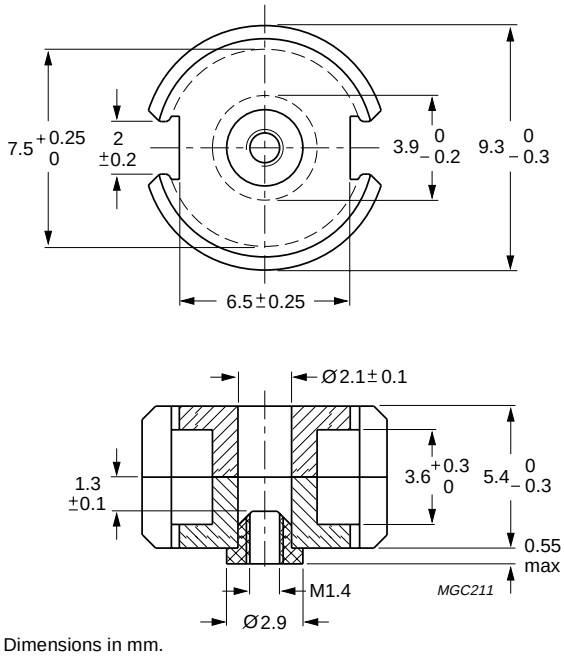
Supersedes data of February 2002 2004 Sep 01

FERROXCUBE
A YAGEO COMPANY

CORE SETS

Effective core parameters

SYMBOL	PARAMETER	VALUE	UNIT
$\Sigma(l/A)$	core factor (C1)	1.24	mm^{-1}
V_e	effective volume	126	mm^3
l_e	effective length	12.5	mm
A_e	effective area	10.1	mm^2
A_{min}	minimum area	7.9	mm^2
m	mass of set	≈ 0.8	g



Dimensions in mm.

Fig.1 P9/5 core set.

Core sets for filter applications

Clamping force for A_L measurements, 25 ±5 N.

GRADE	A_L (nH)	μ_e	AIR GAP (μm)	TYPE NUMBER (WITH NUT)	TYPE NUMBER (WITHOUT NUT)
3D3 sup	40 ±3%	≈ 39	≈ 410	P9/5-3D3-E40/N	P9/5-3D3-E40
	63 ±3%	≈ 62	≈ 230	P9/5-3D3-A63/N	P9/5-3D3-A63
	630 ±25%	≈ 620	≈ 0	–	P9/5-3D3
3H3 sup	40 ±3%	≈ 39	≈ 430	P9/5-3H3-E40/N	P9/5-3H3-E40
	63 ±3%	≈ 62	≈ 250	P9/5-3H3-A63/N	P9/5-3H3-A63
	1100 ±25%	≈ 1080	≈ 0	–	P9/5-3H3
3B46 des	1550 ±25%	≈ 1520	≈ 0	–	P9/5-3B46

Core sets for general purpose transformers and power applications

Clamping force for A_L measurements, 10 ±5 N.

GRADE	A_L (nH)	μ_e	AIR GAP (μm)	TYPE NUMBER
3C81	1350 ±25%	≈ 1200	≈ 0	P9/5-3C81
3C91 des	1350 ±25%	≈ 1200	≈ 0	P9/5-3C91
3F3	1100 ±25%	≈ 1080	≈ 0	P9/5-3F3

Core sets of high permeability grades

Clamping force for A_L measurements, 25 ±5 N.

GRADE	A_L (nH)	μ_e	AIR GAP (μm)	TYPE NUMBER
3E27	2300 ±25%	≈ 2020	≈ 0	P9/5-3E27

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; $\hat{B}$ = 200 mT; T = 100 °C	f = 100 kHz; $\hat{B}$ = 100 mT; T = 100 °C	f = 100 kHz; $\hat{B}$ = 200 mT; T = 100 °C	f = 400 kHz; $\hat{B}$ = 50 mT; T = 100 °C
3C81	≥320	≤ 0.035	–	–	–
3C91	≥315	–	≤ 0.008(1)	≤ 0.06(1)	–
3F3	≥315	–	≤ 0.015	–	≤ 0.03

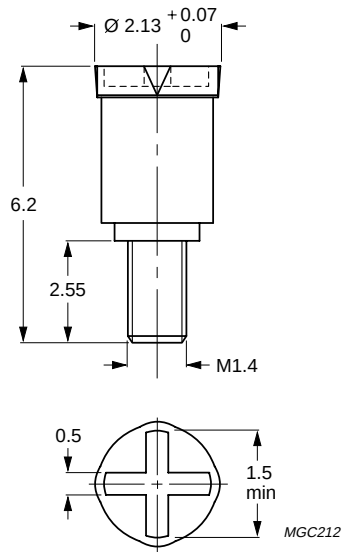
Note

1. Measured at 60 °C.

INDUCTANCE ADJUSTERS

General data

ITEM	SPECIFICATION
Material of head and thread	polypropylene (PP), glass fibre reinforced
Maximum operating temperature	125 °C



Dimensions in mm.

Fig.2 P9/5 inductance adjuster.

Inductance adjuster selection chart sup (applies to all types)

GRADE	A_L (nH)	TYPES FOR LOW ADJUSTMENT	$\Delta L/L^{(1)}$	TYPES FOR MEDIUM ADJUSTMENT	$\Delta L/L^{(1)}$	TYPES FOR HIGH ADJUSTMENT	$\Delta L/L^{(1)}$
3D3	40	–	–	ADJ-P9/P11-YELLOW	11	–	–
	63	–	–	–	18	ADJ-P9/P11-BROWN	31

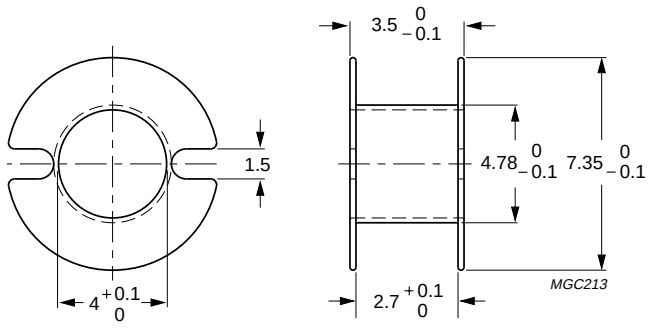
Note

1. Maximum adjustment range.

COIL FORMERS

General data for coil former CP-P9/5-1S

PARAMETER	SPECIFICATION
Coil former material	polybutyleneterephtalate (PBT), glass reinforced, flame retardant in accordance with *"UL 94V-0"*; UL file number E45329 (R)
Maximum operating temperature	155 °C, *"IEC 60085"*, class F



Dimensions in mm.

Fig.3 Coil former: CP-P9/5-1S.

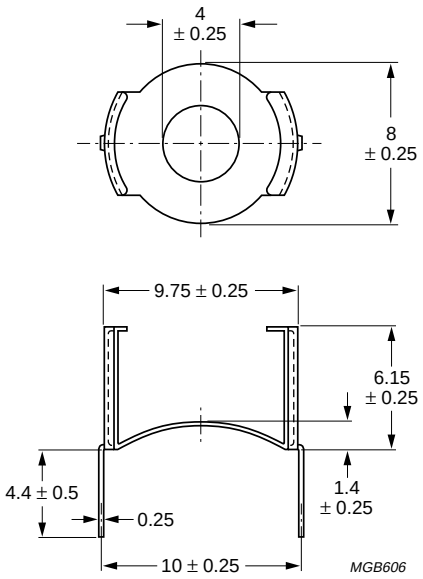
Winding data for coil former CP-P9/5-1S

NUMBER OF SECTIONS	WINDING AREA (mm^2)	MINIMUM WINDING WIDTH (mm)	AVERAGE LENGTH OF TURN (mm)	TYPE NUMBER
1	3.1	2.5	18.9	CP-P9/5-1S

MOUNTING PARTS

General data

ITEM	REMARKS	FIGURE	TYPE NUMBER
Clamp	spring steel, tin plated	4	CLM/TP-P9/5



Dimensions in mm.

Fig.4 Clamp: CLM/TP-P9/5.

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.