DATA SHEET

P26/16
P cores and accessories

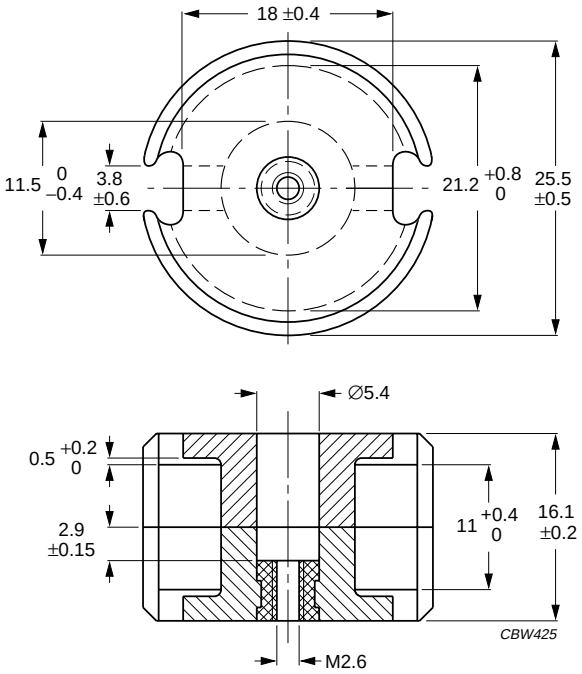
Supersedes data of February 2002 2004 Sep 01

FERROXCUBE
A YAGEO COMPANY

CORE SETS

Effective core parameters

SYMBOL	PARAMETER	VALUE	UNIT
$\Sigma(l/A)$	core factor (C1)	0.400	mm^{-1}
V_e	effective volume	3530	mm^3
l_e	effective length	37.6	mm
A_e	effective area	93.9	mm^2
A_{min}	minimum area	77.4	mm^2
m	mass of set	≈20	g



Dimensions in mm.

Fig.1 P26/16 core set.

Core sets for filter applications

Clamping force for A_L measurements, 200 ±50 N.

GRADE	A_L (nH)	μ_e	AIR GAP (μm)	TYPE NUMBER (WITH NUT)	TYPE NUMBER (WITHOUT NUT)
3D3 sup	100 ±3%	≈ 32	≈ 1630	P26/16-3D3-E100/N	P26/16-3D3-E100
	160 ±3%	≈ 51	≈ 890	P26/16-3D3-E160/N	P26/16-3D3-E160
	250 ±3%	≈ 80	≈ 510	P26/16-3D3-E250/N	P26/16-3D3-E250
	2150 ±25%	≈ 685	≈ 0	–	P26/16-3D3
3H3 sup	160 ±3%	≈ 51	≈ 940	P26/16-3H3-E160/N	P26/16-3H3-E160
	250 ±3%	≈ 80	≈ 550	P26/16-3H3-E250/N	P26/16-3H3-E250
	315 ±3%	≈ 100	≈ 420	P26/16-3H3-E315/N	P26/16-3H3-E315
	400 ±3%	≈ 127	≈ 310	P26/16-3H3-E400/N	P26/16-3H3-E400
	630 ±3%	≈ 201	≈ 180	P26/16-3H3-A630/N	P26/16-3H3-A630
	5000 ±25%	≈ 1590	≈ 0	–	P26/16-3H3

Core sets for general purpose transformers and power applications

Clamping force for A_L measurements, 200 ±50 N.

GRADE	A_L (nH)	μ_e	AIR GAP (μm)	TYPE NUMBER
3C81	160 ±3%	≈ 51	≈ 950	P26/16-3C81-E160
	250 ±3%	≈ 80	≈ 560	P26/16-3C81-A250
	315 ±3%	≈ 100	≈ 420	P26/16-3C81-A315
	400 ±3%	≈ 127	≈ 320	P26/16-3C81-A400
	630 ±3%	≈ 200	≈ 190	P26/16-3C81-A630
	6700 ±25%	≈ 2130	≈ 0	P26/16-3C81
3C91 des	6700 ±25%	≈ 2130	≈ 0	P26/16-3C91
3F3	160 ±3%	≈ 51	≈ 950	P26/16-3F3-E160
	250 ±3%	≈ 80	≈ 560	P26/16-3F3-A250
	315 ±3%	≈ 100	≈ 420	P26/16-3F3-A315
	400 ±3%	≈ 127	≈ 320	P26/16-3F3-A400
	630 ±3%	≈ 200	≈ 190	P26/16-3F3-A630
	4600 ±25%	≈ 1470	≈ 0	P26/16-3F3

Core sets of high permeability grades

Clamping force for A_L measurements, 200 ± 50 N.

GRADE	A_L (nH)	μ_e	AIR GAP (μm)	TYPE NUMBER
3E27	12000 ±25%	≈ 3820	≈ 0	P26/16-3E27

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	≤ 0.82	–	–	–
3C91	≥315	–	≤ 0.21(1)	≤ 1.6(1)	–
3F3	≥315	–	≤ 0.4	–	≤ 0.65

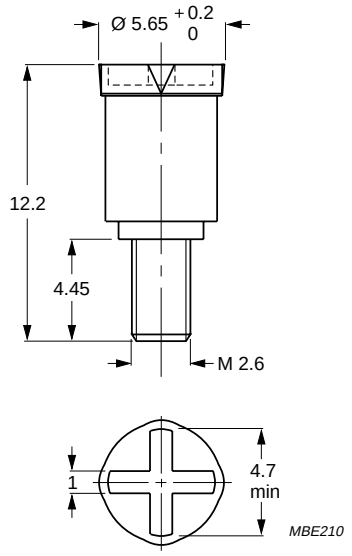
Note

1. Measured at 60 °C.

INDUCTANCE ADJUSTERS

General data

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



Dimensions in mm.

Fig.2 P26/16 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)
3H3	63	–	–	–	–	ADJ-P26-RED	25
	100	–	–	–	–	ADJ-P26-RED	22
	160	–	–	ADJ-P26-RED	15	–	–
	250	ADJ-P26-RED	10	–	–	ADJ-P26-BROWN	23
	315	ADJ-P26-RED	8	–	–	ADJ-P26-BROWN	18
	400	ADJ-P26-RED	6	ADJ-P26-BROWN	13	ADJ-P26-GREY	25
	630	ADJ-P26-BROWN	8	ADJ-P26-GREY	16	–	–
	1000	ADJ-P26-BROWN	5	ADJ-P26-GREY	9	–	–
	1600	–	–	ADJ-P26-GREY	5	–	–
3D3	100	–	–	–	–	ADJ-P26-RED	21
	160	–	–	ADJ-P26-RED	14	–	–
	250	ADJ-P26-RED	9	–	–	ADJ-P26-GREY	35
	400	–	8	ADJ-P26-GREY	17	–	–

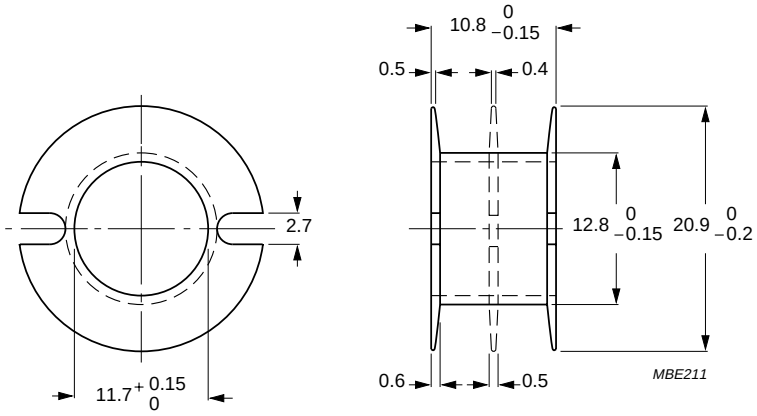
Note

1. Maximum adjustment range.

COIL FORMERS

General data for CP-P26/16 coil former

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.

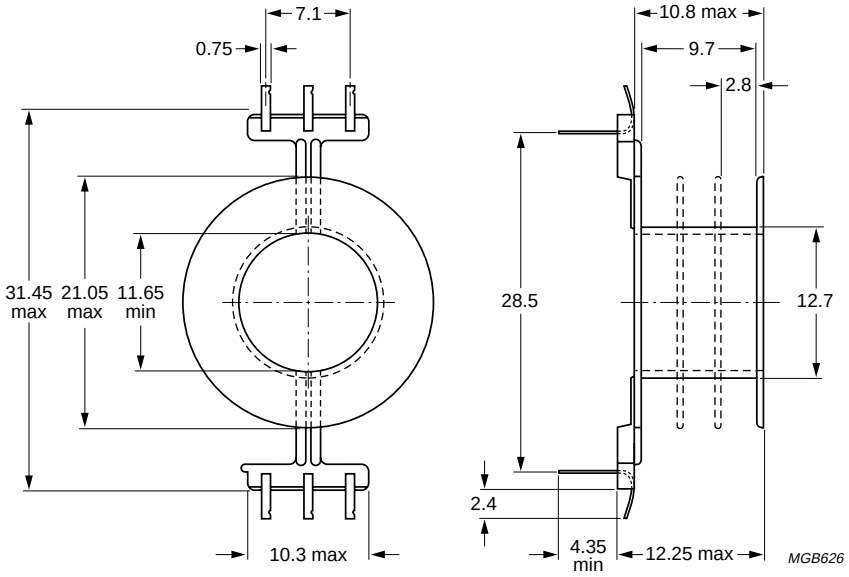
Fig.3 Coil former CP-P26/16.

Winding data for CP-P26/16 coil former

NUMBER OF SECTIONS	WINDING AREA (mm^2)	MINIMUM WINDING WIDTH (mm)	AVERAGE LENGTH OF TURN (mm)	TYPE NUMBER
1	37.1	9.3	52.6	CP-P26/16-1S
2	2×17.5	2×4.35	52.6	CP-P26/16-2S
3	3×11	3×2.7	52.6	CP-P26/16-3S

General data 6-pins P26/16 coil former for PCB mounting

PARAMETER	SPECIFICATION
Coil former material	polyamide (PA6.6), glass reinforced, flame retardant in accordance with *"UL 94V-0"*; UL file number E41938(M)
Maximum operating temperature	130 °C, *"IEC 60085"*, class B
Pin material	copper-zinc alloy (CuZn), tin-lead alloy (SnPb) plated, transition to lead-free (Sn) ongoing
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, 235 °C, 2 s



Dimensions in mm.

Fig.4 P26/16 coil former for PCB mounting; 6-pins.

Data for 6-pins P26/16 coil former for PCB mounting

NUMBER OF SECTIONS	MINIMUM WINDING AREA (mm^2)	NOMINAL WINDING WIDTH (mm)	AVERAGE LENGTH OF TURN (mm)	MINIMUM LENGTH OF PINS (mm)	TYPE NUMBER
1	36.7	9.7	52.7	4.4	CPV-P26/16-1S-6PD
1	36.7	9.7	52.7	6.8	CPV-P26/16-1S-6PDL
2	2×16.6	2×4.5	52.7	4.4	CPV-P26/16-2S-6PD
2	2×16.6	2×4.5	52.7	6.8	CPV-P26/16-2S-6PDL
3	3×10.3	3×2.8	52.7	4.4	CPV-P26/16-3S-6PD(1)
3	3×10.3	3×2.8	52.7	6.8	CPV-P26/16-3S-6PDL(1)

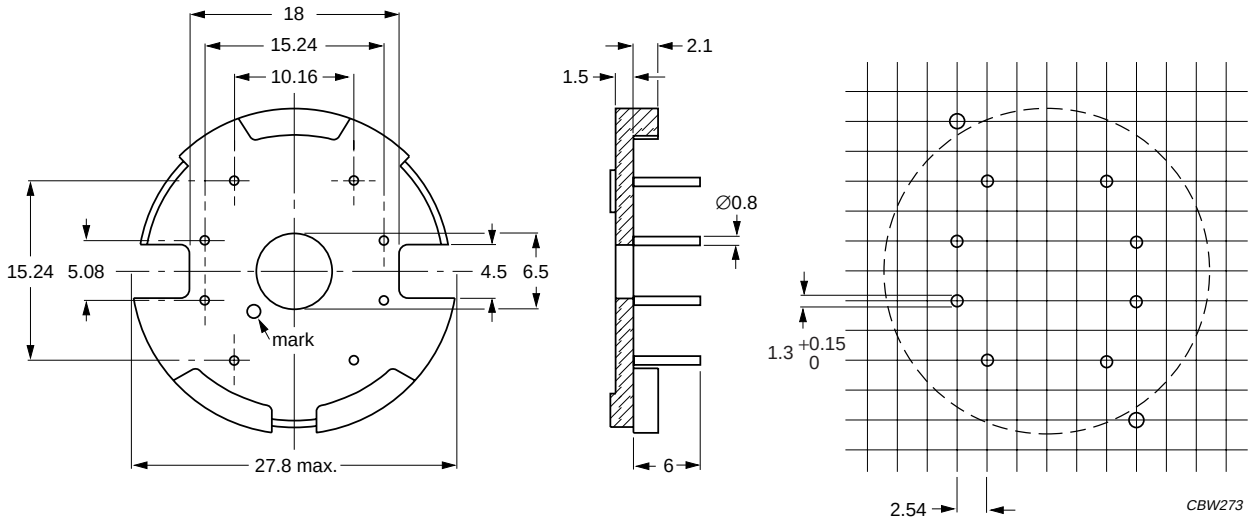
Note

1. In accordance with *"UL 94-HB"*.

MOUNTING PARTS

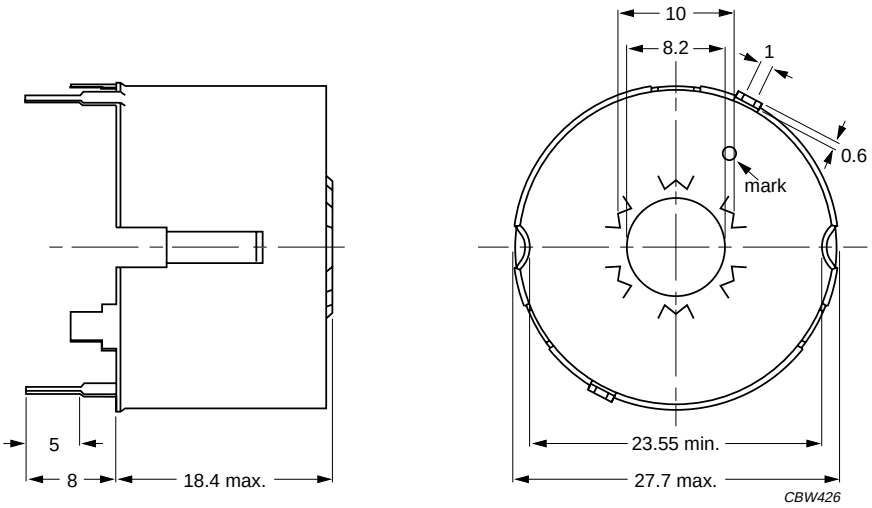
General data

ITEM	REMARKS	FIGURE	TYPE NUMBER
Tag plate	material: phenolformaldehyde (PF), glass reinforced	5	TGP-P26/16-8P
	flame retardant: in accordance with *"UL 94V-0"*; UL file number E167521(M)		
	maximum operating temperature: 180 °C, *"IEC 60085"*, class H		
	pins: copper-tin alloy (CuSn), tin-lead alloy (SnPb) plated		
	resistance to soldering heat in accordance with *"IEC 60068-2-20"*, Part 2, Test Tb, method 1B: 350 °C, 3.5 s		
	solderability in accordance with *"IEC 60068-2-20"*, Part 2, Test Ta, method 1: 235 °C, 2 s		
Container	copper-zinc alloy, SnPb-plated, transition to lead-free (Sn) ongoing	6	CON-P26/16
	earth pins: presoldered		
Spring	CrNi-steel	7	SPR-P26/16
	spring force: ≈200 N when mounted		
Nut	copper-zinc alloy, nickel-plated	8	NUT
Bush	copper-zinc alloy, nickel-plated	9	FIB
Clamp	spring steel, tin-plated	10	CLM/TP-P26/16



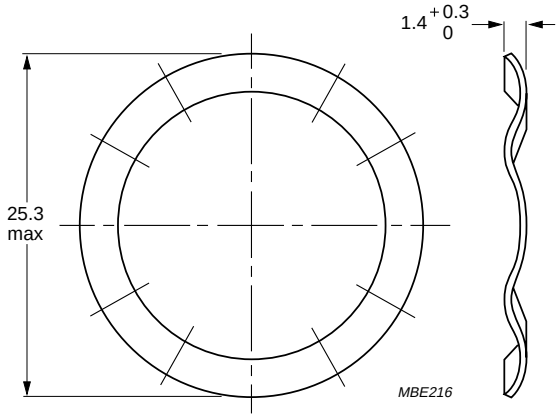
Dimensions in mm.

Fig.5 P26/16 tag plate.



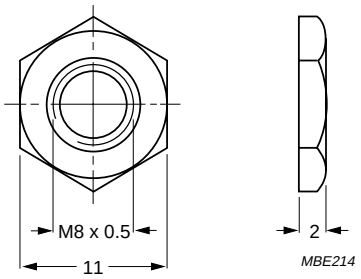
Dimensions in mm.

Fig.6 P26/16 container.



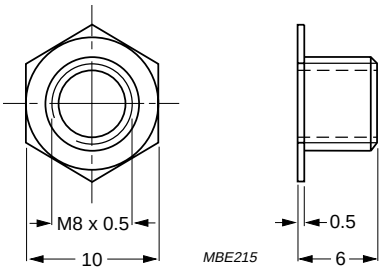
Dimensions in mm.

Fig.7 P26/16 spring.



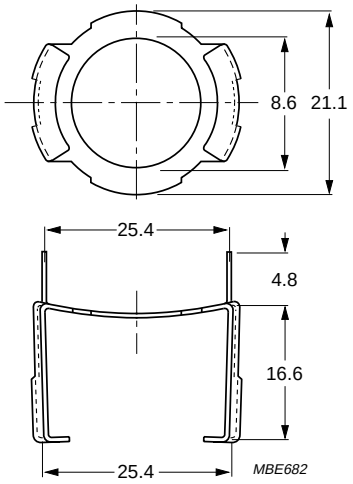
Dimensions in mm.

Fig.8 Fixing nut.



Dimensions in mm.

Fig.9 Fixing bush.



Dimensions in mm.

Fig.10 Clamp: CLM/TP-P26/16.

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	prot	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	des	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	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.