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DATA SHEET

ETD29/16/10
ETD cores and accessories

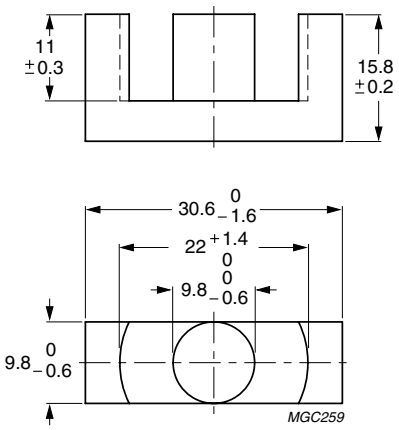
Supersedes data of September 2004 2008 Sep 01

FERROXCUBE
A YAGEO COMPANY

CORE SETS

Effective core parameters

SYMBOL	PARAMETER	VALUE	UNIT
$\Sigma(l/A)$	core factor (C1)	0.947	mm^{-1}
V_e	effective volume	5470	mm^3
l_e	effective length	72.0	mm
A_e	effective area	76.0	mm^2
A_{min}	minimum area	71.0	mm^2
m	mass of core half	≈ 14	g



Dimensions in mm.

Fig.1 ETD29/16/10 core half.

Core halves

Clamping force for A_L measurements, 40 ±20 N. Gapped cores are available on request.

GRADE	A_L (nH)	μ_e	AIR GAP (μm)	TYPE NUMBER
3C90	2350 ±25%	≈ 1770	≈ 0	ETD29/16/10-3C90
3C94	2350 ±25%	≈ 1770	≈ 0	ETD29/16/10-3C94
3C95 des	2860 ±25%	≈ 2160	≈ 0	ETD29/16/10-3C95
3C96 des	2200 ±25%	≈ 1660	≈ 0	ETD29/16/10-3C96
3F3	2200 ±25%	≈ 1660	≈ 0	ETD29/16/10-3F3
3F35 des	1600 ±25%	≈ 1210	≈ 0	ETD29/16/10-3F35

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 = 25 °C	f = 100 kHz; $\hat{B}$ = 200 mT; T = 100 °C	f = 400 kHz; $\hat{B}$ = 50 mT; T = 100 °C
3C90	≥330	≤ 0.66	≤ 0.69	–	–	–
3C94	≥330	–	≤ 0.5	–	≤ 3.0	–
3C95	≥330	–	–	≤ 3.23	≤ 3.06	–
3C96	≥340	–	≤ 0.37	–	≤ 2.4	–
3F3	≥320	–	≤ 0.65	–	–	≤ 1.1
3F35	≥300	–	–	–	–	–

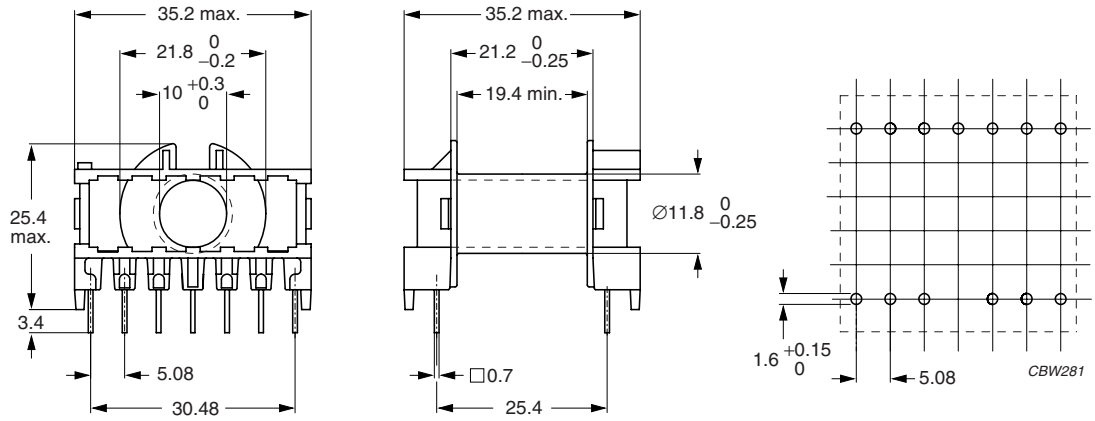
Properties of core sets under power conditions (continued)

GRADE	B (mT) at	CORE LOSS (W) at			
	H = 250 A/m; f = 25 kHz; T = 100 °C	f = 500 kHz; $\hat{B}$ = 50 mT; T = 100 °C	f = 500 kHz; $\hat{B}$ = 100 mT; T = 100 °C	f = 1 MHz; $\hat{B}$ = 30 mT; T = 100 °C	f = 3 MHz; $\hat{B}$ = 10 mT; T = 100 °C
3C90	≥330	–	–	–	–
3C94	≥330	–	–	–	–
3C95	≥330	–	–	–	–
3C96	≥340	≤ 2.0	–	–	–
3F3	≥320	–	–	–	–
3F35	≥300	≤ 0.74	≤ 5.7	–	–

COIL FORMER

General data 13-pins ETD29/16/10 coil former

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



Dimensions in mm.

Fig.2 ETD29/16/10 coil former; 13-pins.

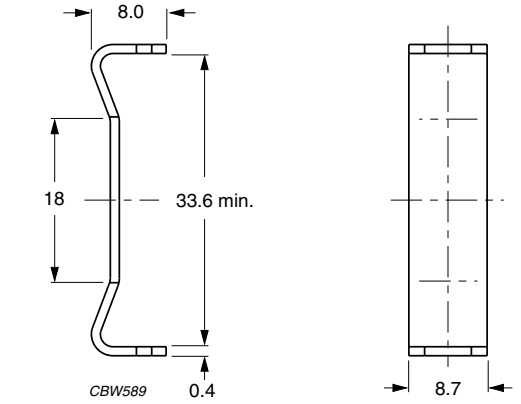
Winding data and area product for 13-pins ETD29/16/10 coil former

NUMBER OF SECTIONS	WINDING AREA (mm^2)	MINIMUM WINDING WIDTH (mm)	AVERAGE LENGTH OF TURN (mm)	AREA PRODUCT Ae x Aw (mm^4)	TYPE NUMBER
1	95	19.4	53	7220	CPH-ETD29-1S-13P

MOUNTING PARTS

General data

ITEM	REMARKS	FIGURE	TYPE NUMBER
Mounting clip	material: stainless steel	3	CLI-ETD29



Dimensions in mm.

Fig.3 Mounting clip for ETD29/16/10.

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.