

# DATA SHEET

**E14/3.5/5/R**

**Planar E cores and accessories**

Supersedes data of September 2004

2008 Sep 01



**FERROXCUBE**  
A YAGEO COMPANY

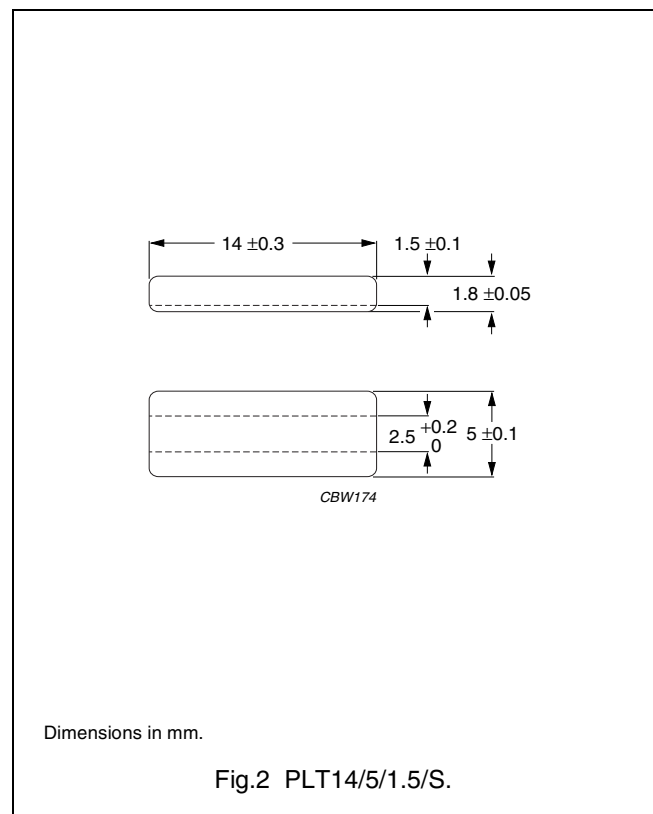
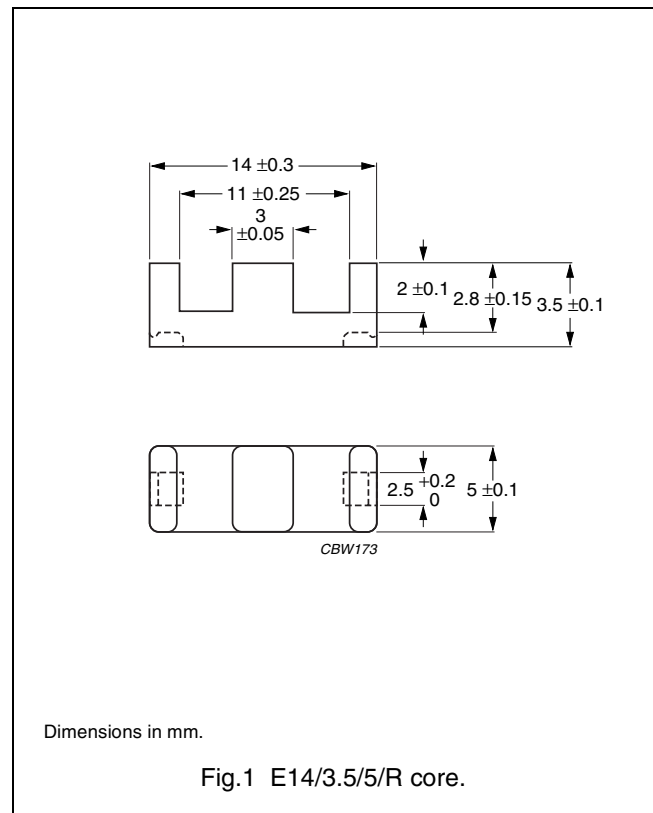
**CORES**

**Effective core parameters of an E/PLT combination**

SYMBOL	PARAMETER	VALUE	UNIT
$\Sigma(l/A)$	core factor (C1)	1.15	mm <sup>-1</sup>
$V_e$	effective volume	230	mm <sup>3</sup>
$l_e$	effective length	16.4	mm
$A_e$	effective area	14.2	mm <sup>2</sup>
$A_{min}$	minimum area	10.9	mm <sup>2</sup>
m	mass of E core half	≈ 0.6	g
m	mass of plate	≈ 0.5	g

**Ordering information for plates**

GRADE	TYPE NUMBER
3C90	PLT14/5/1.5/S-3C90
3C92 <small>des</small>	PLT14/5/1.5/S-3C92
3C93 <small>des</small>	PLT14/5/1.5/S-3C93
3C94	PLT14/5/1.5/S-3C94
3C95 <small>des</small>	PLT14/5/1.5/S-3C95
3C96 <small>des</small>	PLT14/5/1.5/S-3C96
3F3	PLT14/5/1.5/S-3F3
3F35 <small>des</small>	PLT14/5/1.5/S-3F35
3F4 <small>des</small>	PLT14/5/1.5/S-3F4
3F45 <small>prot</small>	PLT14/5/1.5/S-3F45
3E6	PLT14/5/1.5/S-3E6



## Planar E cores and accessories

E14/3.5/5/R

**Core halves for use in combination with a slotted plate (PLT/S)**

$A_L$  measured in combination with a slotted plate (PLT/S) clamping force for  $A_L$  measurements  $10 \pm 5$  N; measurement coil as for E14/3.5/5.

GRADE	$A_L$ (nH)	$\mu_e$	AIR GAP ( $\mu\text{m}$ )	TYPE NUMBER
3C90	63 $\pm 3\%$	$\approx 58$	$\approx 600$	E14/3.5/5/R-3C90-A63-P
	100 $\pm 5\%$	$\approx 92$	$\approx 300$	E14/3.5/5/R-3C90-A100-P
	160 $\pm 8\%$	$\approx 148$	$\approx 150$	E14/3.5/5/R-3C90-A160-P
	1500 $\pm 25\%$	$\approx 1380$	$\approx 0$	E14/3.5/5/R-3C90
3C92 <b>des</b>	1130 $\pm 25\%$	$\approx 1040$	$\approx 0$	E14/3.5/5/R-3C92
3C93 <b>des</b>	1300 $\pm 25\%$	$\approx 1200$	$\approx 0$	E14/3.5/5/R-3C93
3C94	63 $\pm 3\%$	$\approx 58$	$\approx 600$	E14/3.5/5/R-3C94-A63-P
	100 $\pm 5\%$	$\approx 92$	$\approx 300$	E14/3.5/5/R-3C94-A100-P
	160 $\pm 8\%$	$\approx 148$	$\approx 150$	E14/3.5/5/R-3C94-A160-P
	1500 $\pm 25\%$	$\approx 1380$	$\approx 0$	E14/3.5/5/R-3C94
3C95 <b>des</b>	1740 $\pm 25\%$	$\approx 1600$	$\approx 0$	E14/3.5/5/R-3C95
3C96 <b>des</b>	1350 $\pm 25\%$	$\approx 1240$	$\approx 0$	E14/3.5/5/R-3C96
3F3	63 $\pm 3\%$	$\approx 58$	$\approx 600$	E14/3.5/5/R-3F3-A63-P
	100 $\pm 5\%$	$\approx 92$	$\approx 300$	E14/3.5/5/R-3F3-A100-P
	160 $\pm 8\%$	$\approx 148$	$\approx 150$	E14/3.5/5/R-3F3-A160-P
	1300 $\pm 25\%$	$\approx 1200$	$\approx 0$	E14/3.5/5/R-3F3
3F35 <b>des</b>	1050 $\pm 25\%$	$\approx 970$	$\approx 0$	E14/3.5/5/R-3F35
3F4 <b>des</b>	63 $\pm 3\%$	$\approx 58$	$\approx 600$	E14/3.5/5/R-3F4-A63-P
	100 $\pm 5\%$	$\approx 92$	$\approx 300$	E14/3.5/5/R-3F4-A100-P
	160 $\pm 8\%$	$\approx 148$	$\approx 150$	E14/3.5/5/R-3F4-A160-P
	780 $\pm 25\%$	$\approx 710$	$\approx 0$	E14/3.5/5/R-3F4
3F45 <b>prot</b>	780 $\pm 25\%$	$\approx 710$	$\approx 0$	E14/3.5/5/R-3F45
3E6	6400 $+40/-30\%$	$\approx 5900$	$\approx 0$	E14/3.5/5/R-3E6

## Planar E cores and accessories

E14/3.5/5/R

## 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 = 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	f = 500 kHz; $\hat{B}$ = 50 mT; T = 100 °C
E14/R+PLT14/S-3C90	≥320	≤ 0.026	–	–	–	–
E14/R+PLT14/S-3C92	≥370	≤ 0.021	–	≤ 0.15	–	–
E14/R+PLT14/S-3C93	≥320	≤ 0.021 <sup>(1)</sup>	–	≤ 0.15 <sup>(1)</sup>	–	–
E14/R+PLT14/S-3C94	≥320	≤ 0.021	–	≤ 0.15	–	–
E14/R+PLT14/S-3C95	≥320	–	≤ 0.13	≤ 0.12	–	–
E14/R+PLT14/S-3C96	≥340	≤ 0.016	–	≤ 0.12	≤ 0.045	≤ 0.09
E14/R+PLT14/S-3F3	≥300	≤ 0.027	–	–	≤ 0.047	–
E14/R+PLT14/S-3F35	≥300	–	–	–	≤ 0.024	≤ 0.035
E14/R+PLT14/S-3F4	≥250	–	–	–	–	–
E14/R+PLT14/S-3F45	≥250	–	–	–	–	–

1. Measured at 140 °C.

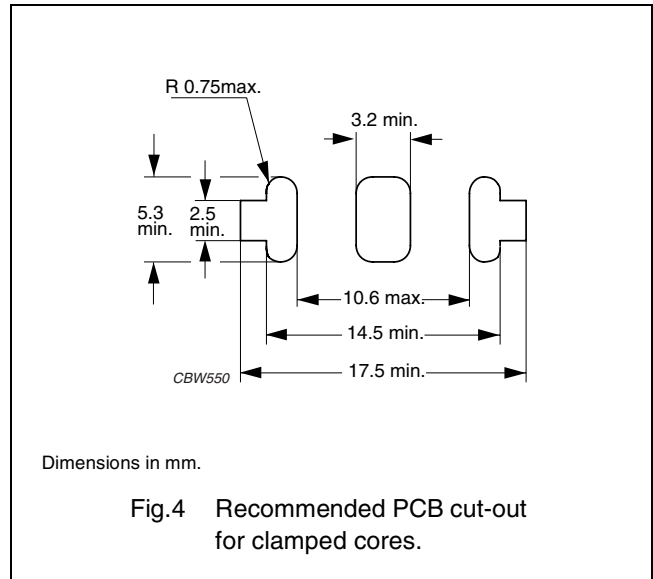
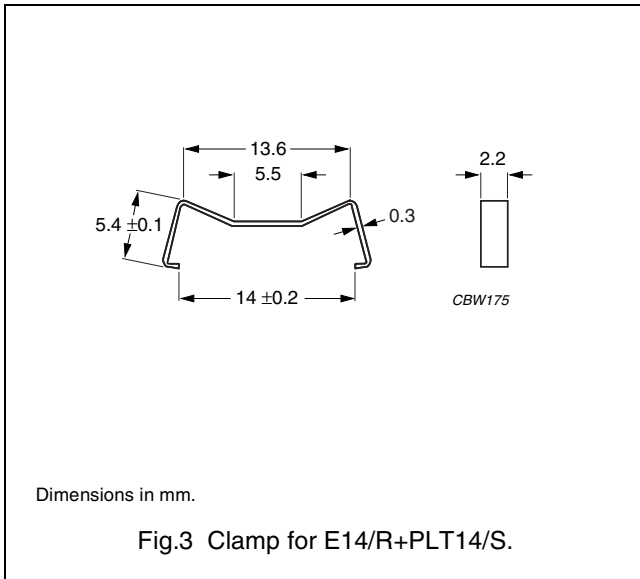
## Properties of core sets under power conditions (continued)

GRADE	B (mT) at	CORE LOSS (W) at			
	H = 250 A/m; f = 25 kHz; T = 100 °C	f = 500 kHz; $\hat{B}$ = 100 mT; T = 100 °C	f = 1 MHz; $\hat{B}$ = 30 mT; T = 100 °C	f = 1 MHz; $\hat{B}$ = 50 mT; T = 100 °C	f = 3 MHz; $\hat{B}$ = 10 mT; T = 100 °C
E14/R+PLT14/S-3C90	≥320	–	–	–	–
E14/R+PLT14/S-3C92	≥370	–	–	–	–
E14/R+PLT14/S-3C93	≥320	–	–	–	–
E14/R+PLT14/S-3C94	≥320	–	–	–	–
E14/R+PLT14/S-3C95	≥320	–	–	–	–
E14/R+PLT14/S-3C96	≥340	–	–	–	–
E14/R+PLT14/S-3F3	≥300	–	–	–	–
E14/R+PLT14/S-3F35	≥300	≤ 0.027	–	–	–
E14/R+PLT14/S-3F4	≥250	–	≤ 0.07	–	≤ 0.11
E14/R+PLT14/S-3F45	≥250	–	≤ 0.055	≤ 0.2	≤ 0.09

**MOUNTING PARTS**

**General data and ordering information**

ITEM	MATERIAL	FIGURE	TYPE NUMBER
Clamp	stainless steel (CrNi)	3	CLM-E14/PLT14



**BLISTER TAPE AND REEL**

For blister tape dimensions and construction and reel dimensions, see data sheet "E14/3.5/5".

## Planar E cores and accessories

E14/3.5/5/R




## 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.
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