

Planar E cores

E14/3.5/5/R

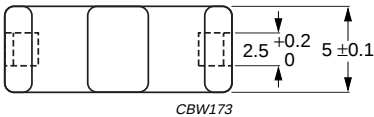
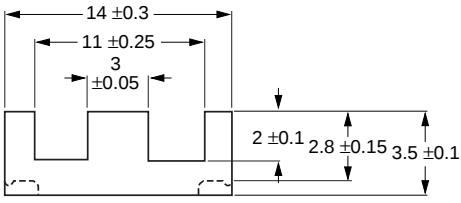
CORES

Effective core parameters of an E/PLT combination

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

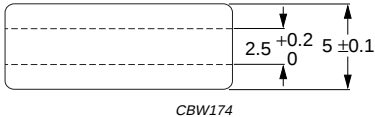
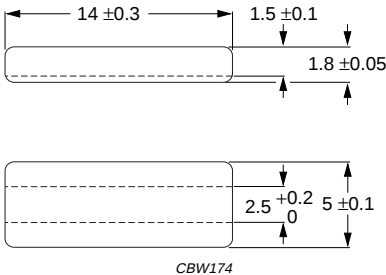
Ordering information for plates

GRADE	TYPE NUMBER
3F3 des	PLT14/5/1.5/S-3F3
3F4 des	PLT14/5/1.5/S-3F4
3E6 des	PLT14/5/1.5/S-3E6



Dimensions in mm.

Fig.1 E14/3.5/5/R core.



Dimensions in mm.

Fig.2 PLT 14/5/1.5/S.

Planar E cores

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 10 ± 5 N; measurement coil as for E14/3.5/5.

GRADE	A_L (nH)	μ_e	AIR GAP (μm)	TYPE NUMBER
3F3 des	$63 \pm 3\%$	≈ 58	≈ 600	E14/3.5/R-3F3-A63-P
	$100 \pm 5\%$	≈ 92	≈ 300	E14/3.5/R-3F3-A100-P
	$160 \pm 8\%$	≈ 148	≈ 150	E14/3.5/R-3F3-A160-P
	$1300 \pm 25\%$	≈ 1200	≈ 0	E14/3.5/5/R-3F3
3F4 des	$63 \pm 3\%$	≈ 58	≈ 600	E14/3.5/R-3F4-A63-P
	$100 \pm 5\%$	≈ 92	≈ 300	E14/3.5/R-3F4-A100-P
	$160 \pm 8\%$	≈ 148	≈ 150	E14/3.5/R-3F4-A160-P
	$780 \pm 25\%$	≈ 710	≈ 0	E14/3.5/5/R-3F4
3E6 des	$6400 +40/-30\%$	≈ 5900	≈ 0	E14/3.5/5/R-3E6

Properties of E/PLT combinations under power conditions

CORE COMBINATION	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 = 400 kHz; $\hat{B}$ = 50 mT; T = 100 °C	f = 1 MHz; $\hat{B}$ = 30 mT; T = 100 °C	f = 3 MHz; $\hat{B}$ = 10 mT; T = 100 °C
E14/R+PLT14/S-3F3	≥ 300	≤ 0.027	≤ 0.047	–	–
E14/R+PLT14/S-3F4	≥ 250	–	–	≤ 0.048	≤ 0.077

MOUNTING PARTS

General data and ordering information

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

