

DATA SHEET

E22/6/16/R

Planar E cores and accessories

Supersedes data of September 2004

2008 Sep 01

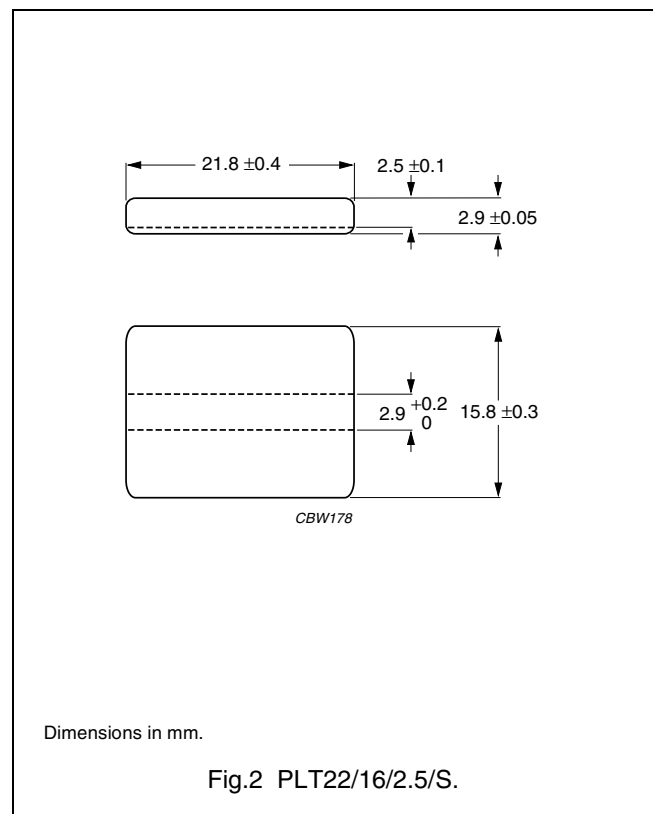
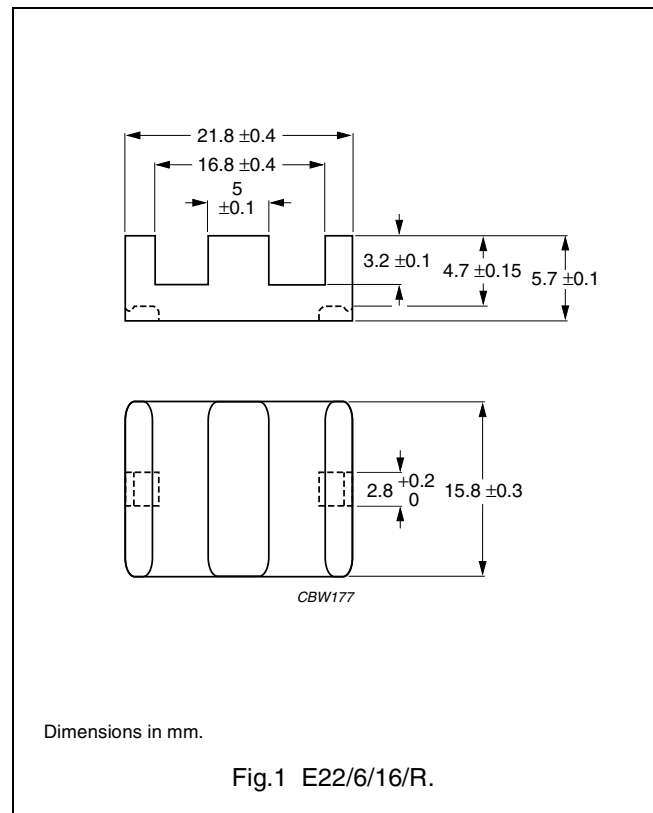
CORES

Effective core parameters of an E/PLT combination

SYMBOL	PARAMETER	VALUE	UNIT
$\Sigma(l/A)$	core factor (C1)	0.324	mm ⁻¹
V_e	effective volume	2100	mm ³
l_e	effective length	26.1	mm
A_e	effective area	78.5	mm ²
A_{min}	minimum area	72.6	mm ²
m	mass of E core half	≈ 6.5	g
m	mass of plate	≈ 4	g

Ordering information for plates

GRADE	TYPE NUMBER
3C90	PLT22/16/2.5/S-3C90
3C92 <small>des</small>	PLT22/16/2.5/S-3C92
3C93 <small>des</small>	PLT22/16/2.5/S-3C93
3C94	PLT22/16/2.5/S-3C94
3C95 <small>des</small>	PLT22/16/2.5/S-3C95
3C96 <small>des</small>	PLT22/16/2.5/S-3C96
3F3	PLT22/16/2.5/S-3F3
3F35 <small>des</small>	PLT22/16/2.5/S-3F35
3F4 <small>des</small>	PLT22/16/2.5/S-3F4
3F45 <small>prot</small>	PLT22/16/2.5/S-3F45
3E6	PLT22/16/2.5/S-3E6



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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, 20 ± 10 N; measurement coil as for E22/6/16.

GRADE	A_L (nH)	μ_e	AIR GAP (μm)	TYPE NUMBER
3C90	160 $\pm 3\%$	≈ 42	≈ 950	E22/6/16/R-3C90-A160-P
	250 $\pm 3\%$	≈ 66	≈ 550	E22/6/16/R-3C90-A250-P
	315 $\pm 3\%$	≈ 83	≈ 400	E22/6/16/R-3C90-A315-P
	400 $\pm 5\%$	≈ 106	≈ 280	E22/6/16/R-3C90-A400-P
	630 $\pm 8\%$	≈ 166	≈ 160	E22/6/16/R-3C90-A630-P
	6150 $\pm 25\%$	≈ 1620	≈ 0	E22/6/16/R-3C90
3C92 des	4410 $\pm 25\%$	≈ 1140	≈ 0	E22/6/16/R-3C92
3C93 des	5000 $\pm 25\%$	≈ 1290	≈ 0	E22/6/16/R-3C93
3C94	160 $\pm 3\%$	≈ 42	≈ 950	E22/6/16/R-3C94-A160-P
	250 $\pm 3\%$	≈ 66	≈ 550	E22/6/16/R-3C94-A250-P
	315 $\pm 3\%$	≈ 83	≈ 400	E22/6/16/R-3C94-A315-P
	400 $\pm 5\%$	≈ 106	≈ 280	E22/6/16/R-3C94-A400-P
	630 $\pm 8\%$	≈ 166	≈ 160	E22/6/16/R-3C94-A630-P
	6150 $\pm 25\%$	≈ 1620	≈ 0	E22/6/16/R-3C94
3C95 des	7360 $\pm 25\%$	≈ 1950	≈ 0	E22/6/16/R-3C95
3C96 des	5450 $\pm 25\%$	≈ 1440	≈ 0	E22/6/16/R-3C96
3F3	160 $\pm 3\%$	≈ 42	≈ 950	E22/6/16/R-3F3-A160-P
	250 $\pm 3\%$	≈ 66	≈ 550	E22/6/16/R-3F3-A250-P
	315 $\pm 3\%$	≈ 83	≈ 400	E22/6/16/R-3F3-A315-P
	400 $\pm 5\%$	≈ 106	≈ 280	E22/6/16/R-3F3-A400-P
	630 $\pm 8\%$	≈ 166	≈ 160	E22/6/16/R-3F3-A630-P
	5000 $\pm 25\%$	≈ 1320	≈ 0	E22/6/16/R-3F3
3F35 des	4100 $\pm 25\%$	≈ 1080	≈ 0	E22/6/16/R-3F35
3F4 des	160 $\pm 3\%$	≈ 42	≈ 950	E22/6/16/R-3F4-A160-P
	250 $\pm 3\%$	≈ 66	≈ 550	E22/6/16/R-3F4-A250-P
	315 $\pm 3\%$	≈ 83	≈ 400	E22/6/16/R-3F4-A315-P
	400 $\pm 5\%$	≈ 106	≈ 280	E22/6/16/R-3F4-A400-P
	630 $\pm 8\%$	≈ 166	≈ 160	E22/6/16/R-3F4-A630-P
	2900 $\pm 25\%$	≈ 770	≈ 0	E22/6/16/R-3F4
3F45 prot	2900 $\pm 25\%$	≈ 770	≈ 0	E22/6/16/R-3F45
3E6	26000 $+40/-30\%$	≈ 6900	≈ 0	E22/6/16/R-3E6

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Properties of core sets under power conditions

GRADE	B (mT) at	CORE LOSS (W) at				
	H = 250 A/m; f = 10 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
E22/R+PLT22/S-3C90	≥320	≤ 0.23	–	–	–	–
E22/R+PLT22/S-3C92	≥370	≤ 0.18	–	≤ 1.25	–	–
E22/R+PLT22/S-3C93	≥320	≤ 0.18 ⁽¹⁾	–	≤ 1.25 ⁽¹⁾	–	–
E22/R+PLT22/S-3C94	≥320	≤ 0.18	–	≤ 1.25	–	–
E22/R+PLT22/S-3C95	≥320	–	≤ 1.24	≤ 1.18	–	–
E22/R+PLT22/S-3C96	≥320	≤ 0.14	–	≤ 1.0	≤ 0.38	≤ 0.75
E22/R+PLT22/S-3F3	≥300	≤ 0.23	–	–	≤ 0.4	–
E22/R+PLT22/S-3F35	≥300	–	–	–	≤ 0.2	≤ 0.3
E22/R+PLT22/S-3F4	≥250	–	–	–	–	–
E22/R+PLT22/S-3F45	≥250	–	–	–	–	–

1. Measured at 140 °C.

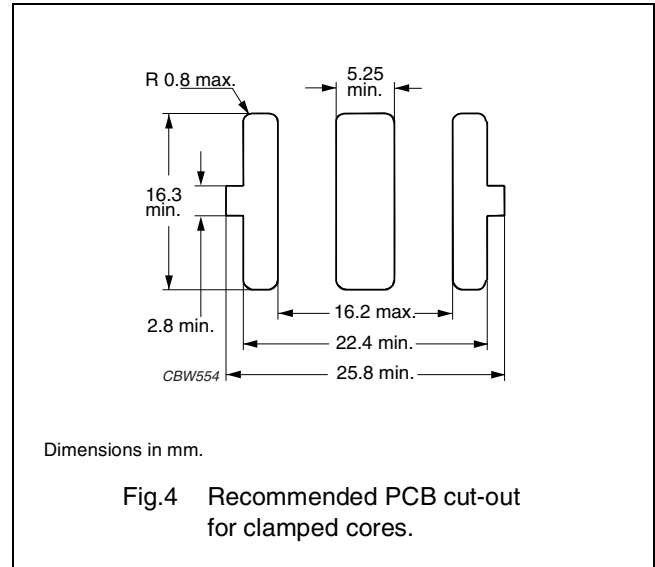
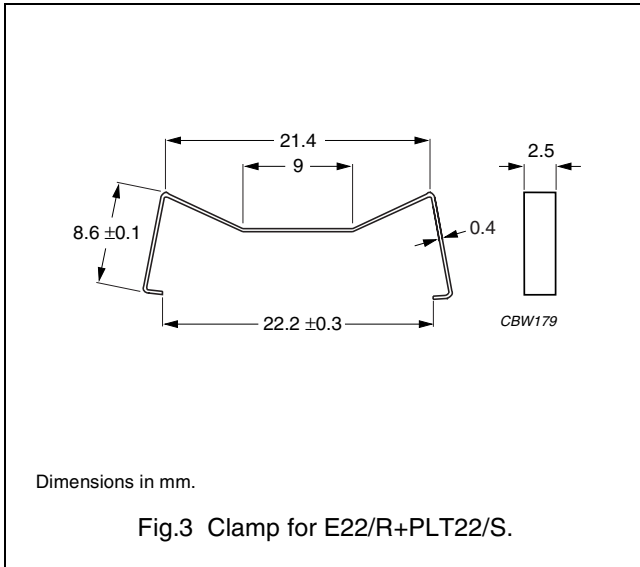
Properties of core sets under power conditions (continued)

GRADE	B (mT) at	CORE LOSS (W) at			
	H = 250 A/m; f = 10 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
E22/R+PLT22/S-3C90	≥320	–	–	–	–
E22/R+PLT22/S-3C92	≥370	–	–	–	–
E22/R+PLT22/S-3C93	≥320	–	–	–	–
E22/R+PLT22/S-3C94	≥320	–	–	–	–
E22/R+PLT22/S-3C95	≥320	–	–	–	–
E22/R+PLT22/S-3C96	≥320	–	–	–	–
E22/R+PLT22/S-3F3	≥300	–	–	–	–
E22/R+PLT22/S-3F35	≥300	≤ 2.2	–	–	–
E22/R+PLT22/S-3F4	≥250	–	≤ 0.62	–	≤ 1.0
E22/R+PLT22/S-3F45	≥250	–	≤ 0.45	≤ 1.7	≤ 0.8

MOUNTING PARTS

General data and ordering information

ITEM	MATERIAL	FIGURE	TYPE NUMBER
Clamp	stainless steel (CrNi)	3	CLM-E22/PLT22



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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		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		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		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.