

# DATA SHEET

**E32/6/20/R**

**Planar E cores and accessories**

Supersedes data of September 2004

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**FERROXCUBE**  
A YAGEO COMPANY

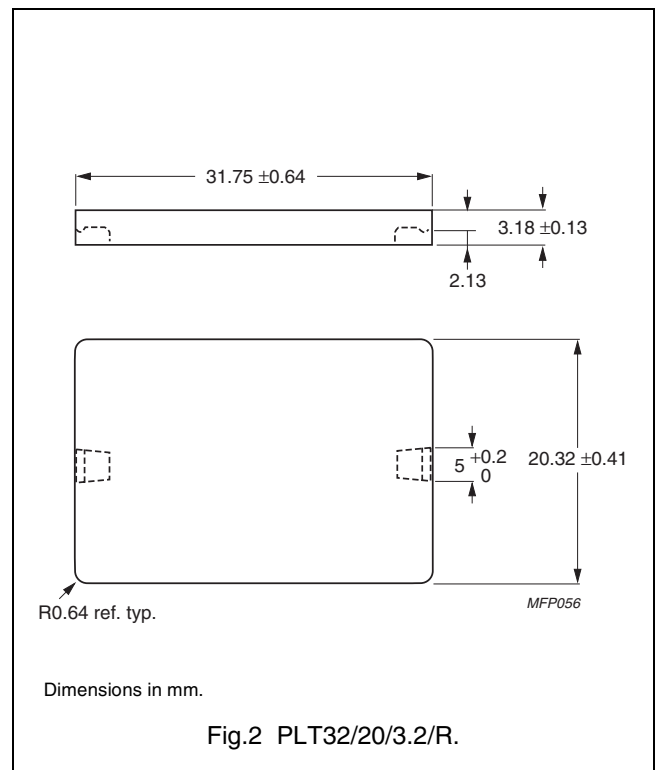
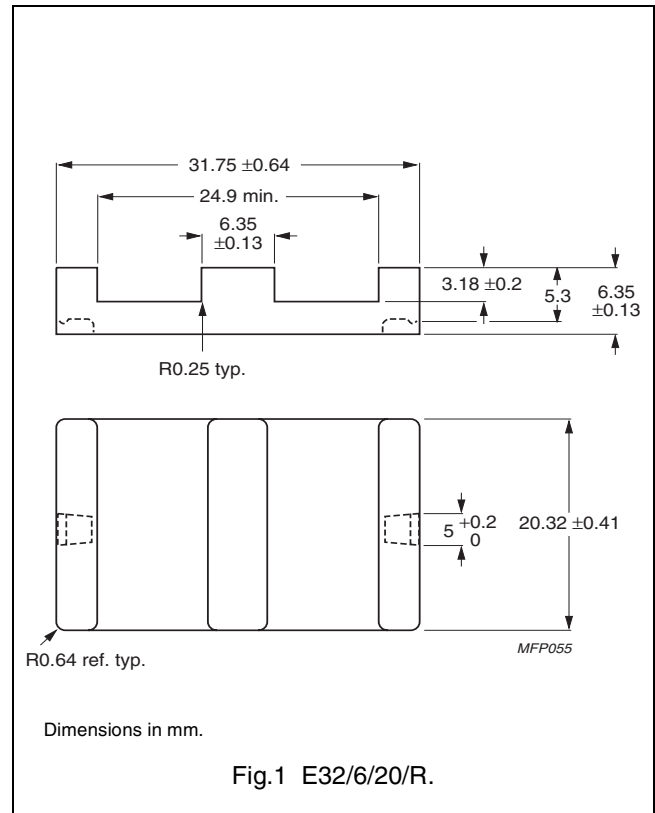
**CORES**

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

SYMBOL	PARAMETER	VALUE	UNIT
$\Sigma(l/A)$	core factor (C1)	0.278	mm <sup>-1</sup>
$V_e$	effective volume	4560	mm <sup>3</sup>
$l_e$	effective length	35.1	mm
$A_e$	effective area	130	mm <sup>2</sup>
$A_{min}$	minimum area	119	mm <sup>2</sup>
m	mass of core half	≈ 13	g
m	mass of plate	≈ 10	g

**Ordering information for plates**

GRADE	TYPE NUMBER
3C90	PLT32/20/3.2/R-3C90
3C92 <small>des</small>	PLT32/20/3.2/R-3C92
3C93 <small>des</small>	PLT32/20/3.2/R-3C93
3C94	PLT32/20/3.2/R-3C94
3C95 <small>des</small>	PLT32/20/3.2/R-3C95
3C96 <small>des</small>	PLT32/20/3.2/R-3C96
3F3	PLT32/20/3.2/R-3F3
3F4 <small>des</small>	PLT32/20/3.2/R-3F4



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E32/6/20/R

**Core halves for use in combination with a recessed plate (PLT/R)**A<sub>L</sub> measured in combination with a recessed plate (PLT/R), clamping force for A<sub>L</sub> measurements, 30 ±10 N.

GRADE	A <sub>L</sub> (nH)	μ <sub>e</sub>	AIR GAP (μm)	TYPE NUMBER
3C90	160 ±3%	≈ 35	≈ 1200	E32/6/20/R-3C90-A160-P
	250 ±3%	≈ 55	≈ 700	E32/6/20/R-3C90-A250-P
	315 ±3%	≈ 69	≈ 550	E32/6/20/R-3C90-A315-P
	400 ±5%	≈ 87	≈ 450	E32/6/20/R-3C90-A400-P
	630 ±8%	≈ 138	≈ 260	E32/6/20/R-3C90-A630-P
	7350 ±25%	≈ 1610	≈ 0	E32/6/20/R-3C90
3C92 <small>des</small>	5760 ±25%	≈ 1270	≈ 0	E32/6/20/R-3C92
3C93 <small>des</small>	6780 ±25%	≈ 1500	≈ 0	E32/6/20/R-3C93
3C94	160 ±3%	≈ 35	≈ 1200	E32/6/20/R-3C94-A160-P
	250 ±3%	≈ 55	≈ 700	E32/6/20/R-3C94-A250-P
	315 ±3%	≈ 69	≈ 550	E32/6/20/R-3C94-A315-P
	400 ±5%	≈ 87	≈ 450	E32/6/20/R-3C94-A400-P
	630 ±8%	≈ 138	≈ 260	E32/6/20/R-3C94-A630-P
	7350 ±25%	≈ 1610	≈ 0	E32/6/20/R-3C94
3C95 <small>des</small>	8750 ±25%	≈ 1880	≈ 0	E32/6/20/R-3C95
3C96 <small>des</small>	7350 ±25%	≈ 1610	≈ 0	E32/6/20/R-3C96
3F3	160 ±3%	≈ 35	≈ 1200	E32/6/20/R-3F3-A160-P
	250 ±3%	≈ 55	≈ 700	E32/6/20/R-3F3-A250-P
	315 ±3%	≈ 69	≈ 550	E32/6/20/R-3F3-A315-P
	400 ±5%	≈ 87	≈ 450	E32/6/20/R-3F3-A400-P
	630 ±8%	≈ 138	≈ 260	E32/6/20/R-3F3-A630-P
	6780 ±25%	≈ 1490	≈ 0	E32/6/20/R-3F3
3F4 <small>des</small>	160 ±3%	≈ 35	≈ 1200	E32/6/20/R-3F4-A160-P
	250 ±3%	≈ 55	≈ 700	E32/6/20/R-3F4-A250-P
	315 ±3%	≈ 69	≈ 550	E32/6/20/R-3F4-A315-P
	400 ±5%	≈ 87	≈ 450	E32/6/20/R-3F4-A400-P
	630 ±8%	≈ 138	≈ 260	E32/6/20/R-3F4-A630-P
	3700 ±25%	≈ 810	≈ 0	E32/6/20/R-3F4

## Planar E cores and accessories

E32/6/20/R

## 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
E32/R+PLT32/R-3C90	≥320	≤ 0.55	–	–	–
E32/R+PLT32/R-3C92	≥370	≤ 0.41	–	≤ 2.9	–
E32/R+PLT32/R-3C93	≥320	≤ 0.41 <sup>(1)</sup>	–	≤ 2.9 <sup>(1)</sup>	–
E32/R+PLT32/R-3C94	≥320	≤ 0.41	–	≤ 2.9	–
E32/R+PLT32/R-3C95	≥320	–	≤ 2.69	≤ 2.55	–
E32/R+PLT32/R-3C96	≥320	≤ 0.3	–	≤ 2.2	≤ 0.8
E32/R+PLT32/R-3F3	≥300	≤ 0.6	–	–	≤ 0.85
E32/R+PLT32/R-3F4	≥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; $\hat{B}$ = 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
E32/R+PLT32/R-3C90	≥320	–	–	–	–
E32/R+PLT32/R-3C92	≥370	–	–	–	–
E32/R+PLT32/R-3C93	≥320	–	–	–	–
E32/R+PLT32/R-3C94	≥320	–	–	–	–
E32/R+PLT32/R-3C95	≥320	–	–	–	–
E32/R+PLT32/R-3C96	≥320	≤ 1.7	–	–	–
E32/R+PLT32/R-3F3	≥300	–	–	–	–
E32/R+PLT32/R-3F4	≥250	–	–	≤ 1.36	≤ 2.2

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**DATA SHEET STATUS DEFINITIONS**

DATA SHEET STATUS	PRODUCT STATUS	DEFINITIONS
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