

# DATA SHEET

**EFD30**

**EFD cores and accessories**

Product specification  
File under Magnetic Products, MA01

1997 Nov 21

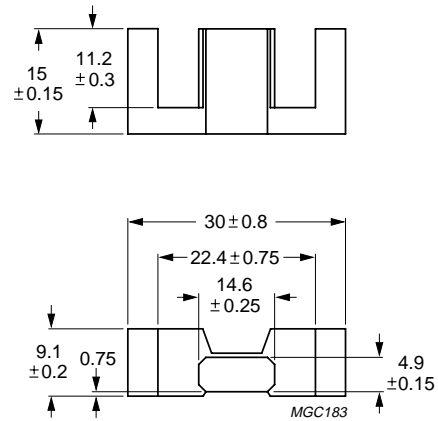
## EFD cores and accessories

## EFD30

## CORES

## Effective core parameters

SYMBOL	PARAMETER	VALUE	UNIT
$\Sigma(l/A)$	core factor (C1)	0.98	$\text{mm}^{-1}$
$V_e$	effective volume	4700	$\text{mm}^3$
$l_e$	effective length	68.0	mm
$A_e$	effective area	69.0	$\text{mm}^2$
$A_{\min}$	minimum area	66.0	$\text{mm}^2$
m	mass of core half	$\approx 12$	g



Dimensions in mm.

Fig.1 EFD30 core half.

## Core halves and sets

Clamping force  $70 \pm 20$  N.

GRADE	$A_L$ (nH)	$\mu_e$	AIR GAP ( $\mu\text{m}$ )	TYPE NUMBER
3C30 <small>des</small>	$1950 \pm 25\%$	$\approx 1550$	$\approx 0$	EFD30-3C30
3C85	$2100 \pm 25\%$	$\approx 1650$	$\approx 0$	EFD30-3C85
3C90 <small>des</small>	$2100 \pm 25\%$	$\approx 1650$	$\approx 0$	EFD30-3C90
3F3 <small>des</small>	$160 \pm 3\%$	$\approx 126$	$\approx 500$	EFD30-3F3-A160-S
	$250 \pm 3\%$	$\approx 195$	$\approx 350$	EFD30-3F3-A250-S
	$315 \pm 5\%$	$\approx 250$	$\approx 250$	EFD30-3F3-A315-S
	$400 \pm 5\%$	$\approx 315$	$\approx 200$	EFD30-3F3-A400-S
	$630 \pm 10\%$	$\approx 500$	$\approx 120$	EFD30-3F3-A630-S
	$1900 \pm 25\%$	$\approx 1500$	$\approx 0$	EFD30-3F3
3F4 <small>des</small>	$160 \pm 3\%$	$\approx 126$	$\approx 500$	EFD30-3F4-A160-S
	$250 \pm 3\%$	$\approx 195$	$\approx 350$	EFD30-3F4-A250-S
	$315 \pm 5\%$	$\approx 250$	$\approx 250$	EFD30-3F4-A315-S
	$400 \pm 5\%$	$\approx 315$	$\approx 200$	EFD30-3F4-A400-S
	$630 \pm 10\%$	$\approx 500$	$\approx 120$	EFD30-3F4-A630-S
	$1050 \pm 25\%$	$\approx 820$	$\approx 0$	EFD30-3F4

## EFD cores and accessories

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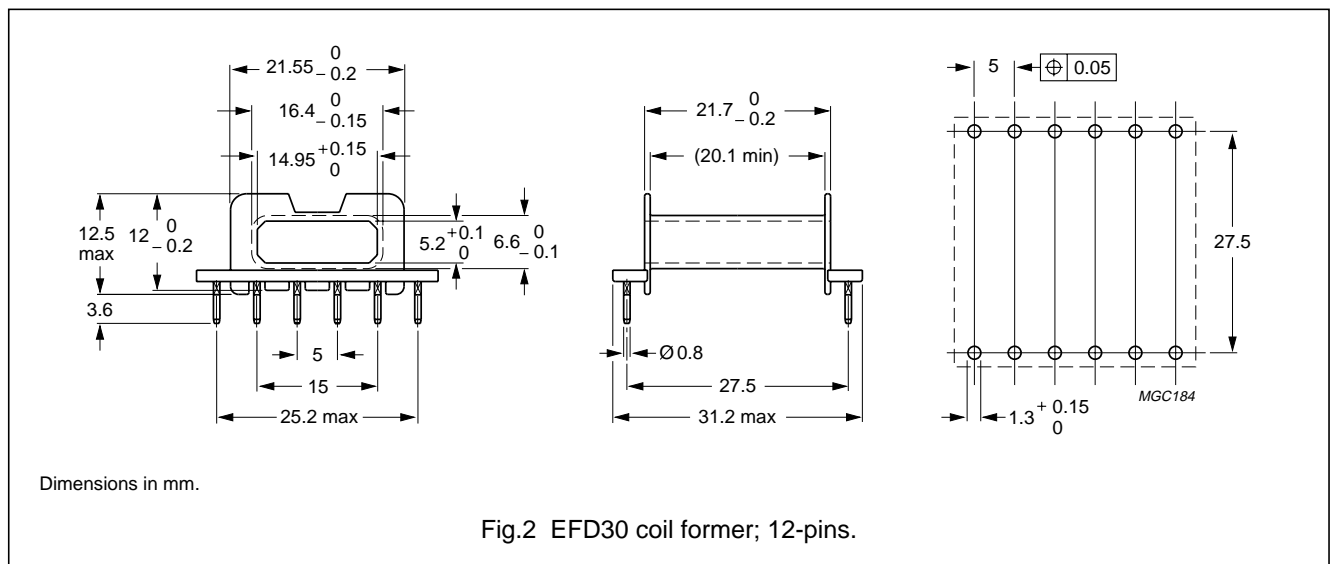
## Properties of core sets under power conditions

GRADE	B (mT) at	CORE LOSS (W) at				
	H = 250 A/m; f = 25 kHz; T = 100 °C	f = 25 kHz; B̂ = 200 mT; T = 100 °C	f = 100 kHz; B̂ = 100 mT; T = 100 °C	f = 400 kHz; B̂ = 50 mT; T = 100 °C	f = 1 Mz; B̂ = 30 mT; T = 100 °C	f = 3 MHz; B̂ = 10 mT; T = 100 °C
3C30	≥360	≤0.50	≤0.54	–	–	–
3C85	≥320	≤0.74	≤0.86	–	–	–
3C90	≥330	≤0.50	≤0.54	–	–	–
3F3	≥315	–	≤0.54	≤0.91	–	–
3F4	≥300	–	–	–	≤1.00	≤1.60

## COIL FORMERS

## General data

PARAMETER	SPECIFICATION
Coil former material	phenolformaldehyde (PF), glass-reinforced, flame retardant in accordance with "UL 94V-0"; UL file number E167521(M)
Pin material	copper-tin alloy (CuSn), tin-lead alloy (SnPb) plated
Maximum operating temperature	180 °C, "IEC 85" class H
Resistance to soldering heat	"IEC 68-2-20", Part 2, Test Tb, method 1B, 350 °C, 3.5 s
Solderability	"IEC 68-2-20", Part 2, Test Ta, method 1: 235 °C, 2 s



## Winding data for EFD30 coil former with 12-pins

NUMBER OF SECTIONS	WINDING AREA (mm <sup>2</sup> )	MINIMUM WINDING WIDTH (mm)	AVERAGE LENGTH OF TURN (mm)	TYPE NUMBER
1	52.3	20.1	52.9	CSH-EFD30-1S-12P

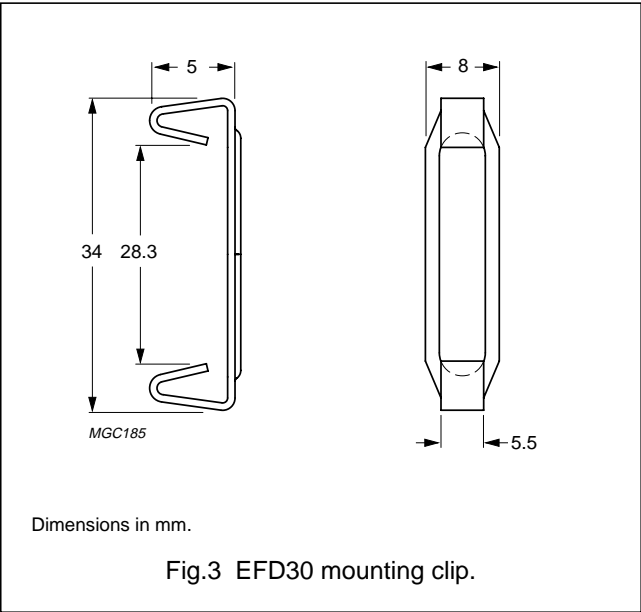
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MOUNTING PARTS

General data

ITEM	REMARKS	FIGURE	TYPE NUMBER
Clip	stainless steel (CrNi); clamping force $\approx 35$ N	3	CLI-EFD30



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## DEFINITIONS

Data sheet status	
Objective specification	This data sheet contains target or goal specifications for product development.
Preliminary specification	This data sheet contains preliminary data; supplementary data may be published later.
Product specification	This data sheet contains final product specifications.
Application information	
Where application information is given, it is advisory and does not form part of the specification.	

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STATUS	INDICATION	DEFINITION
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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.
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