

DATA SHEET

EFD30

EFD cores and accessories

Product specification
File under Magnetic Products, MA01

1997 Nov 21

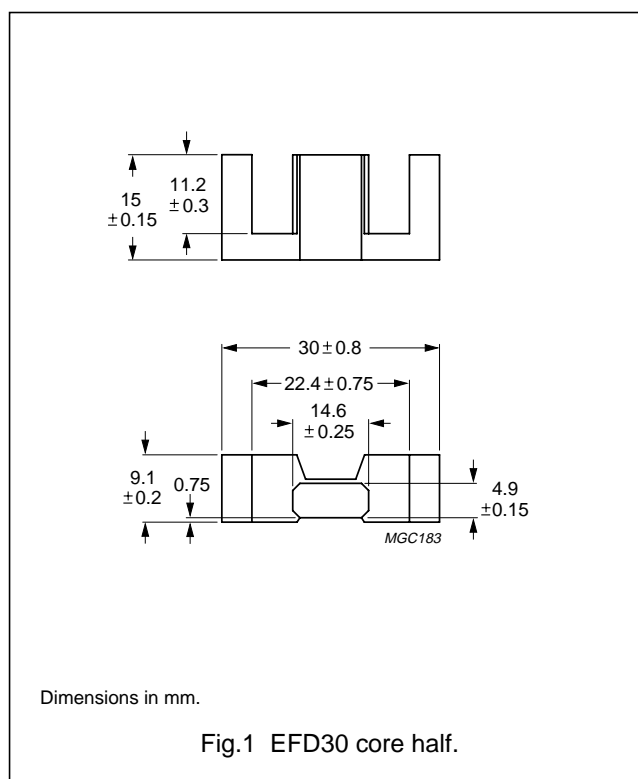
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CORES

Effective core parameters

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



Core halves and sets

Clamping force 70 ± 20 N.

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

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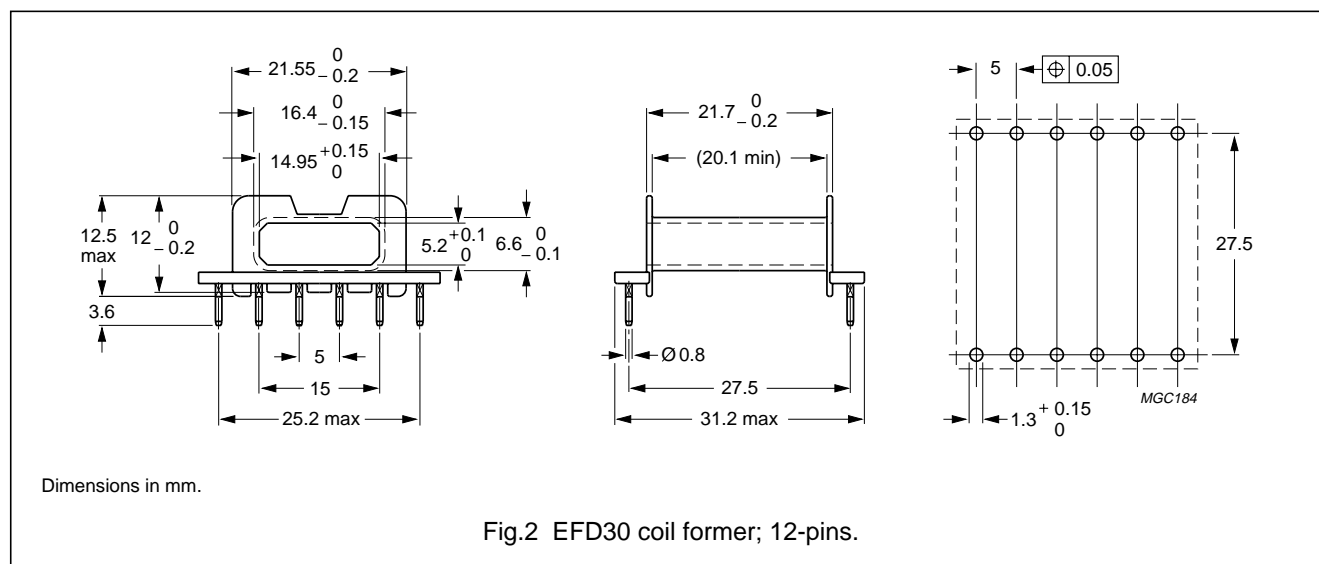
Properties of core sets under power conditions

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

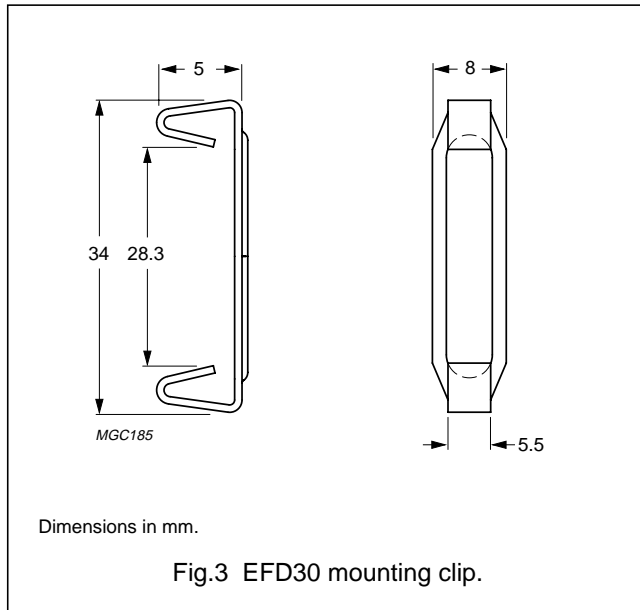
NUMBER OF SECTIONS	WINDING AREA (mm ²)	MINIMUM WINDING WIDTH (mm)	AVERAGE LENGTH OF TURN (mm)	TYPE NUMBER
1	52.3	20.1	52.9	CSH-EFD30-1S-12P

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MOUNTING PARTS**General data**

ITEM	REMARKS	FIGURE	TYPE NUMBER
Clip	stainless steel (CrNi); clamping force ≈ 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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