

# DATA SHEET

**EC35**

EC cores and accessories

Supersedes data of February 2002

2004 Sep 01

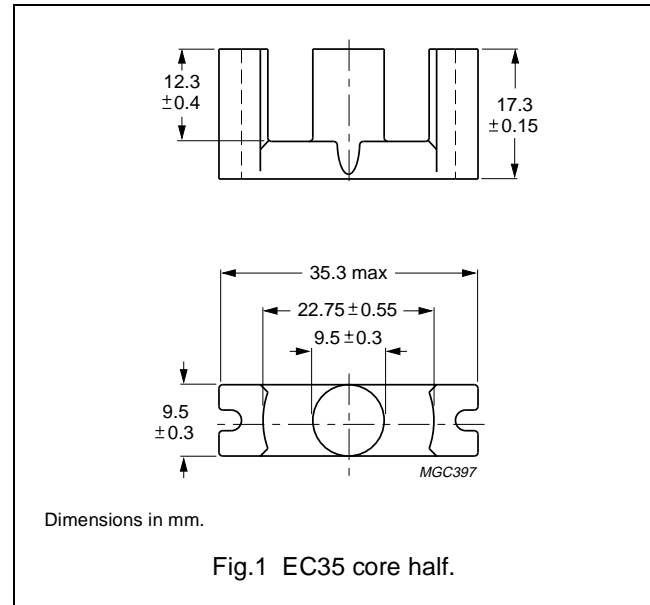
## EC cores and accessories

## EC35

## CORE SETS

## Effective core parameters

SYMBOL	PARAMETER	VALUE	UNIT
$\Sigma(l/A)$	core factor (C1)	0.918	mm <sup>-1</sup>
$V_e$	effective volume	6530	mm <sup>3</sup>
$l_e$	effective length	77.4	mm
$A_e$	effective area	84.3	mm <sup>2</sup>
$A_{min}$	minimum area	71	mm <sup>2</sup>
$m$	mass of core half	≈ 19	g



## Core halves

$A_L$  measured in combination with an non-gapped core half, unless stated otherwise.

GRADE	$A_L$ (nH)	$\mu_e$	AIR GAP ( $\mu$ m)	TYPE NUMBER
3C81 <sup>sup</sup>	100 ± 3% <sup>(1)</sup>	≈ 73	≈ 1470	EC35-3C81-E100
	160 ± 3% <sup>(1)</sup>	≈ 117	≈ 820	EC35-3C81-E160
	250 ± 3%	≈ 184	≈ 470	EC35-3C81-A250
	315 ± 5%	≈ 231	≈ 350	EC35-3C81-A315
	400 ± 10%	≈ 290	≈ 260	EC35-3C81-A400
	≥ 2250	≥ 1640	≈ 0	EC35-3C81
3C90 <sup>sup</sup>	100 ± 3% <sup>(1)</sup>	≈ 73	≈ 1470	EC35-3C90-E100
	160 ± 3% <sup>(1)</sup>	≈ 117	≈ 820	EC35-3C90-E160
	250 ± 3%	≈ 184	≈ 470	EC35-3C90-A250
	315 ± 5%	≈ 231	≈ 350	EC35-3C90-A315
	400 ± 10%	≈ 290	≈ 260	EC35-3C90-A400
	2100 ± 25%	≈ 1530	≈ 0	EC35-3C90

## Note

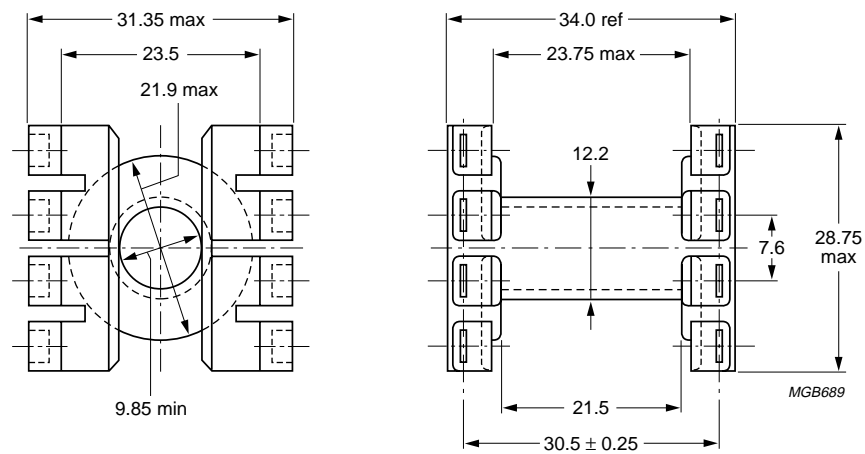
1. Measured in combination with an equal gapped core half (symmetrical air gap).

## 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
3C81	≥ 320	≤ 1.40	–
3C90	≥ 320	≤ 0.79	≤ 0.83

**COIL FORMERS****General data 8-slots EC35 coil former for insertable pins**

PARAMETER	SPECIFICATION
Coil former material	polyamide (PA6.6), glass-reinforced, flame retardant in accordance with "UL 94V-0"; UL file number E44716(M)
Maximum operating temperature	130 °C, "IEC 60085", class B



Dimensions in mm.

Fig.2 EC35 coil former; 8-slots.

**Winding data 8-slots EC35 coil former for insertable pins**

Coil formers with inserted pins are available on request.

NUMBER OF SECTIONS	MINIMUM WINDING AREA (mm <sup>2</sup> )	NOMINAL WINDING WIDTH (mm)	AVERAGE LENGTH OF TURN (mm)	TYPE NUMBER
1	97.1	21.5	53.1	CP-EC35-1S

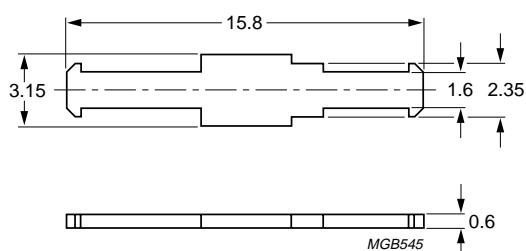
## EC cores and accessories

## EC35

## MOUNTING PARTS

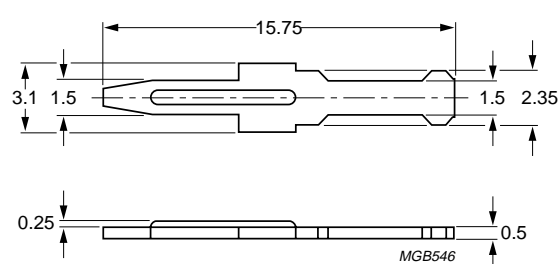
## General data and ordering information

ITEM	REMARKS	MOUNT	FIGURE	TYPE NUMBER
Insertable pins	solderability: "IEC 68-2-20", Part 2, Test Ta, method 1; material: copper-zinc alloy (CuZn), tin-lead alloy (SnPb) plated, transition to lead-free (Sn) ongoing.	general	3	PIN-EC
		horizontal	4	PIN/H-EC
Base plate 2 holes	aluminium		5	BPL2-EC35
Base plate 4 holes	aluminium		6	BPL4-EC35
Clamp	copper-zinc alloy (CuZn)		7	CLM/U-EC35



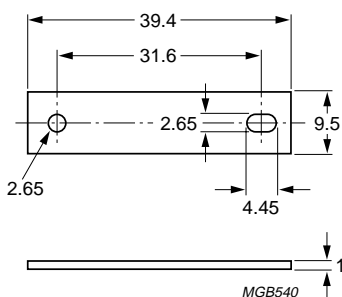
Dimensions in mm.

Fig.3 EC pin; general mount.



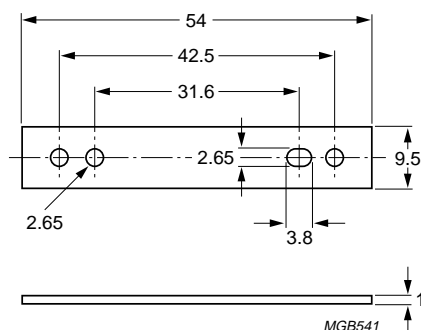
Dimensions in mm.

Fig.4 EC pin; horizontal mount.



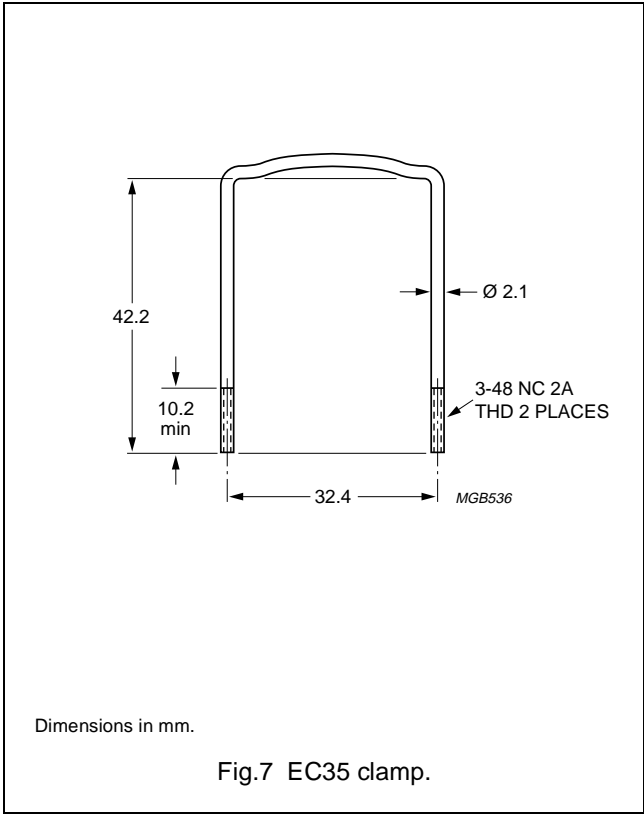
Dimensions in mm.

Fig.5 EC35 base plate; 2 holes.



Dimensions in mm.

Fig.6 EC35 base plate; 4 holes.



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EC35




## 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.
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Preferred		These products are recommended for use in current designs and are available via our sales channels.
Support		These products are <b>not</b> recommended for new designs and may not be available through all of our sales channels. Customers are advised to check for availability.