

DATA SHEET

U10/8/3

U, I cores and accessories

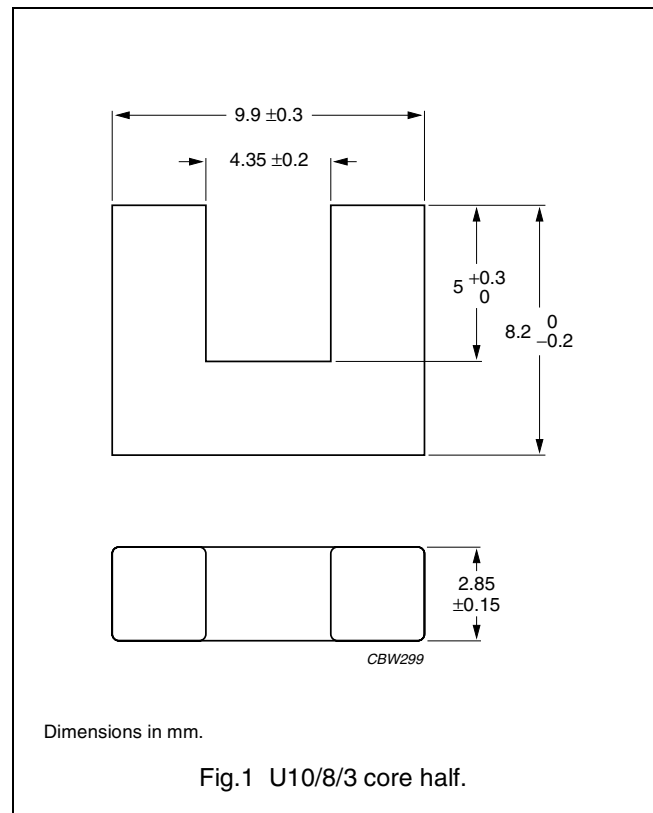
Supersedes data of September 2004

2008 Sep 01

CORE SETS

Effective core parameters

SYMBOL	PARAMETER	VALUE	UNIT
$\Sigma(l/A)$	core factor (C1)	4.74	mm ⁻¹
V_e	effective volume	309	mm ³
l_e	effective length	38.3	mm
A_e	effective area	8.07	mm ²
A_{min}	minimum area	7.91	mm ²
m	mass of core half	≈ 0.9	g



Core halves

A_L measured on a combination of 2 U cores.

GRADE	A_L (nH)	μ_e	TYPE NUMBER
3C90	420 ±25%	≈ 1590	U10/8/3-3C90
3C94	470 ±25%	≈ 1770	U10/8/3-3C94

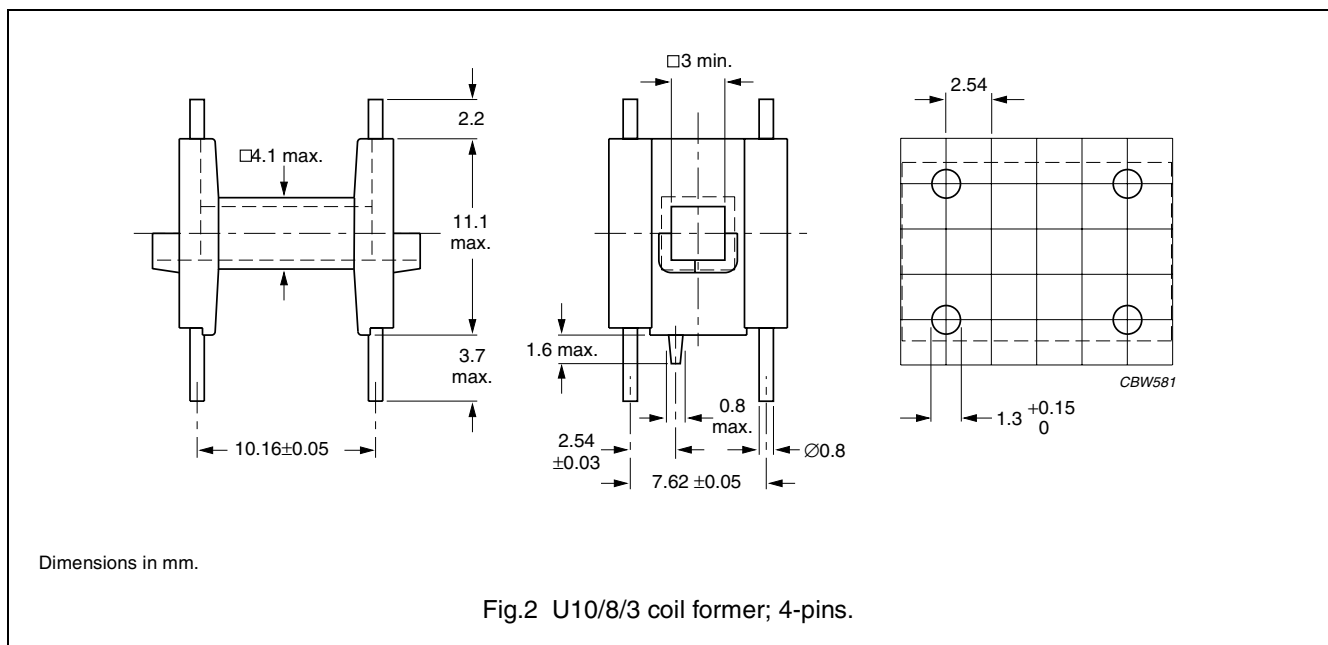
Properties of core sets under power conditions

GRADE	B (mT) at	CORE LOSS (W) at		
	H = 250 A/m; f = 25 kHz; T = 100 °C	f = 25 kHz; \hat{B} = 200 mT; T = 100 °C	f = 100 kHz; \hat{B} = 100 mT; T = 100 °C	f = 100 kHz; \hat{B} = 200 mT; T = 100 °C
3C90	≥320	≤ 0.04	≤ 0.04	–
3C94	≥320	–	≤ 0.03	≤ 0.18

COIL FORMERS

General data 4-pins U10/8/3 coil former

PARAMETER	SPECIFICATION
Coil former material	polybuteleneterephtalate (PBT), glass-reinforced, flame retardant in accordance with "UL 94V-0"; UL file number E69578(M)
Pin material	copper-tin alloy (CuSn), tin (Sn) plated
Maximum operating temperature	155 °C, "IEC 60085", class F
Resistance to soldering heat	"IEC 60068-2-20", Part 2, Test Tb, method 1B: 350 °C, 3.5 s
Solderability	"IEC 60068-2-20", Part 2, Test Ta, method 1: 235 °C, 2 s



Winding data and area product for 4-pins U10/8/3 coil former

NUMBER OF SECTIONS	WINDING AREA (mm ²)	MINIMUM WINDING WIDTH (mm)	AVERAGE LENGTH OF TURN (mm)	AREA PRODUCT Ae x Aw (mm ⁴)	TYPE NUMBER
1	28	8	30	226	CPH-U10/8/3-1S-4P

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.