

DATA SHEET

E80/38/20

E cores and accessories

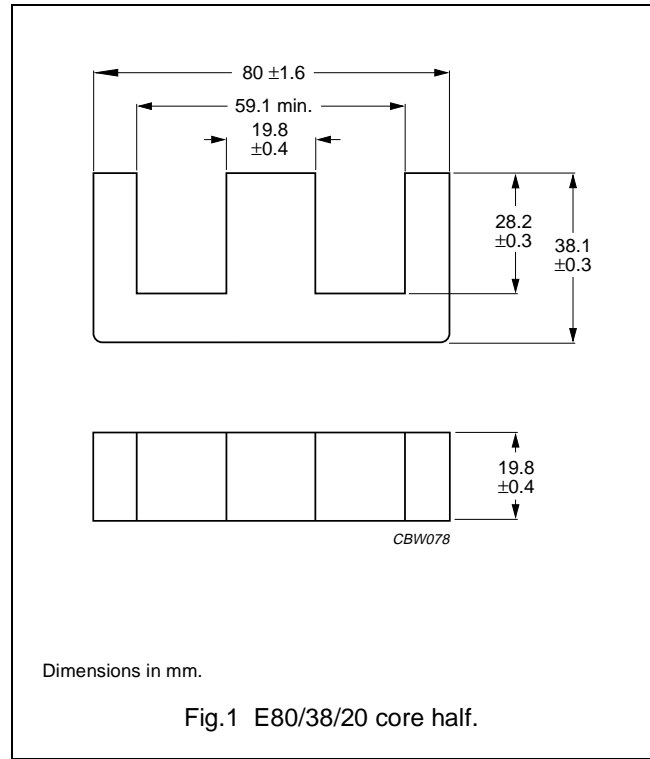
Supersedes data of February 2002

2004 Sep 01

CORE SETS

Effective core parameters

SYMBOL	PARAMETER	VALUE	UNIT
$\Sigma(l/A)$	core factor (C1)	0.470	mm ⁻¹
V_e	effective volume	72300	mm ³
l_e	effective length	184	mm
A_e	effective area	392	mm ²
A_{min}	minimum area	392	mm ²
m	mass of core half	≈ 180	g



Core halves

A_L measured in combination with a non-gapped core half, clamping force for A_L measurements 60 ± 20 N, unless stated otherwise.

GRADE	A_L (nH)	μ_e	AIR GAP (μm)	TYPE NUMBER
3C81	100 ± 5% ⁽¹⁾	≈ 37	≈ 5600	E80/38/20-3C81-E100
	160 ± 5% ⁽¹⁾	≈ 60	≈ 2770	E80/38/20-3C81-E160
	250 ± 5% ⁽¹⁾	≈ 93	≈ 1450	E80/38/20-3C81-E250
	315 ± 5% ⁽¹⁾	≈ 118	≈ 1060	E80/38/20-3C81-E315
	400 ± 8% ⁽¹⁾	≈ 149	≈ 770	E80/38/20-3C81-E400
	630 ± 10% ⁽¹⁾	≈ 235	≈ 430	E80/38/20-3C81-E630
	6730 ± 25%	≈ 2510	≈ 0	E80/38/20-3C81
3C90	100 ± 5% ⁽¹⁾	≈ 37	≈ 5600	E80/38/20-3C90-E100
	160 ± 5% ⁽¹⁾	≈ 60	≈ 2770	E80/38/20-3C90-E160
	250 ± 5% ⁽¹⁾	≈ 93	≈ 1450	E80/38/20-3C90-E250
	315 ± 5% ⁽¹⁾	≈ 118	≈ 1060	E80/38/20-3C90-E315
	400 ± 8% ⁽¹⁾	≈ 149	≈ 770	E80/38/20-3C90-E400
	630 ± 10% ⁽¹⁾	≈ 235	≈ 430	E80/38/20-3C90-E630
	5070 ± 25%	≈ 1890	≈ 0	E80/38/20-3C90
3C91 des	6730 ± 25%	≈ 2510	≈ 0	E80/38/20-3C91
3C92 des	3600 ± 25%	≈ 1350	≈ 0	E80/38/20-3C92
3C94	5070 ± 25%	≈ 1890	≈ 0	E80/38/20-3C94

E cores and accessories

E80/38/20

GRADE	A_L (nH)	μ_e	AIR GAP (μm)	TYPE NUMBER
3F3	$100 \pm 5\%^{(1)}$	≈ 37	≈ 5600	E80/38/20-3F3-E100
	$160 \pm 5\%^{(1)}$	≈ 60	≈ 2770	E80/38/20-3F3-E160
	$250 \pm 5\%^{(1)}$	≈ 93	≈ 1450	E80/38/20-3F3-E250
	$315 \pm 5\%^{(1)}$	≈ 118	≈ 1060	E80/38/20-3F3-E315
	$400 \pm 8\%^{(1)}$	≈ 149	≈ 770	E80/38/20-3F3-E400
	$630 \pm 10\%^{(1)}$	≈ 235	≈ 430	E80/38/20-3F3-E630
	$4590 \pm 25\%$	≈ 1710	≈ 0	E80/38/20-3F3

Note

1. Measured in combination with an equal gapped core half.

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	f = 400 kHz; \hat{B} = 50 mT; T = 100 °C
3C81	≥ 320	≤ 14.8	–	–	–
3C90	≥ 320	≤ 7.2	≤ 10	–	–
3C91	≥ 320	–	$\leq 6.0^{(1)}$	$\leq 32^{(1)}$	–
3C92	≥ 370	–	≤ 7.5	≤ 45	–
3C94	≥ 320	–	≤ 7.5	≤ 45	–

Note

1. Measured at 60 °C.




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
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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.