

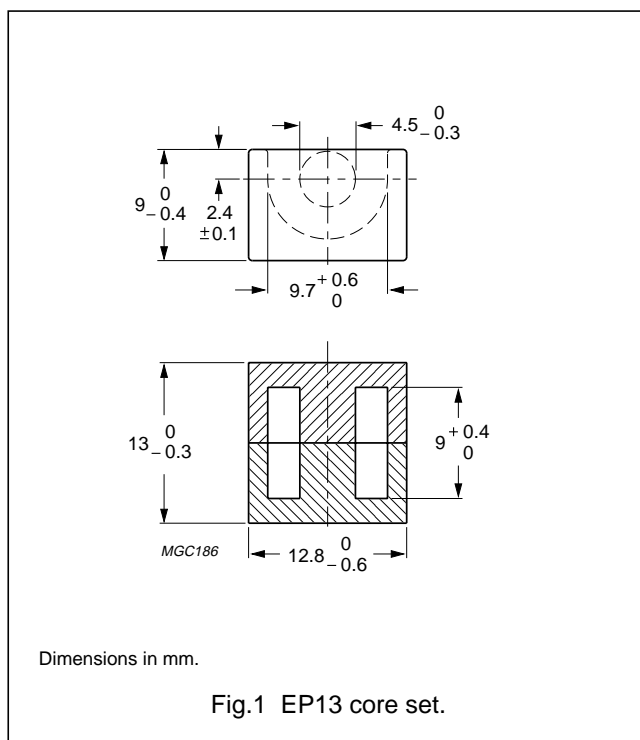
EP cores and accessories

EP13

CORE SETS

Effective core parameters

SYMBOL	PARAMETER	VALUE	UNIT
$\Sigma(I/A)$	core factor (C1)	1.24	mm ⁻¹
V_e	effective volume	472	mm ³
l_e	effective length	24.2	mm
A_e	effective area	19.5	mm ²
A_{min}	minimum area	14.9	mm ²
m	mass of core set	≈2.4	g



Core sets for general purpose transformers and power applications

Clamping force 30 ± 10 N.

GRADE	A_L (nH)	μ_e	AIR GAP (μ m)	TYPE NUMBER
3C81	40 \pm 3%	≈39	≈880	EP13-3C81-E40
	63 \pm 3%	≈62	≈500	EP13-3C81-A63
	100 \pm 3%	≈100	≈250	EP13-3C81-A100
	160 \pm 3%	≈160	≈150	EP13-3C81-A160
	250 \pm 5%	≈250	≈85	EP13-3C81-A250
	≥1250	≥1230	≈0	EP13-3C81
3C85	40 \pm 3%	≈39	≈880	EP13-3C85-E40
	63 \pm 3%	≈62	≈500	EP13-3C85-A63
	100 \pm 3%	≈100	≈230	EP13-3C85-A100
	160 \pm 3%	≈160	≈130	EP13-3C85-A160
	250 \pm 5%	≈250	≈75	EP13-3C85-A250
	1475 \pm 25%	≈1460	≈0	EP13-3C85
3F3	40 \pm 3%	≈39	≈880	EP13-3F3-E40
	63 \pm 3%	≈62	≈500	EP13-3F3-A63
	100 \pm 3%	≈160	≈250	EP13-3F3-A100
	160 \pm 3%	≈160	≈150	EP13-3F3-A160
	250 \pm 5%	≈250	≈85	EP13-3F3-A250
	1325 \pm 25%	≈1310	≈0	EP13-3F3

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GRADE	A_L (nH)	μ_e	AIR GAP (μm)	TYPE NUMBER
3F4 ^{des}	160 \pm 3%	\approx 160	\approx 150	EP13-3F4-A160
	250 \pm 5%	\approx 250	\approx 85	EP13-3F4-A250
	315 \pm 5%	\approx 315	\approx 50	EP13-3F4-A315
	680 \pm 25%	\approx 770	\approx 0	EP13-3F4

Core sets of high permeability grades

Clamping force 30 \pm 10N.

GRADE	A_L (nH)	μ_e	TYPE NUMBER
3E1	2600 \pm 25%	\approx 2560	EP13-3E1
3E25 ^{sup}	\geq 3400	\geq 3350	EP13-3E25
3E27	\geq 3400	\geq 3350	EP13-3E27
3E4	4400 \pm 25%	\approx 4300	EP13-3E4
3E5	7000 +40/-30%	\approx 6900	EP13-3E5
3E6	10000 +40/-30%	\approx 9900	EP13-3E6

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; \dot{B} = 200 mT; T = 100 °C	f = 100 kHz; \dot{B} = 100 mT; T = 100 °C	f = 400 kHz; \dot{B} = 50 mT; T = 100 °C	f = 1 MHz; \dot{B} = 30 mT; T = 100 °C	f = 3 MHz; \dot{B} = 10 mT; T = 100 °C
3C81	\geq 315	\leq 0.10	–	–	–	–
3C85	\geq 315	\leq 0.08	\leq 0.09	–	–	–
3F3	\geq 315	–	\leq 0.05	\leq 0.1	–	–
3F4	\geq 250	–	–	–	\leq 0.094	\leq 0.15

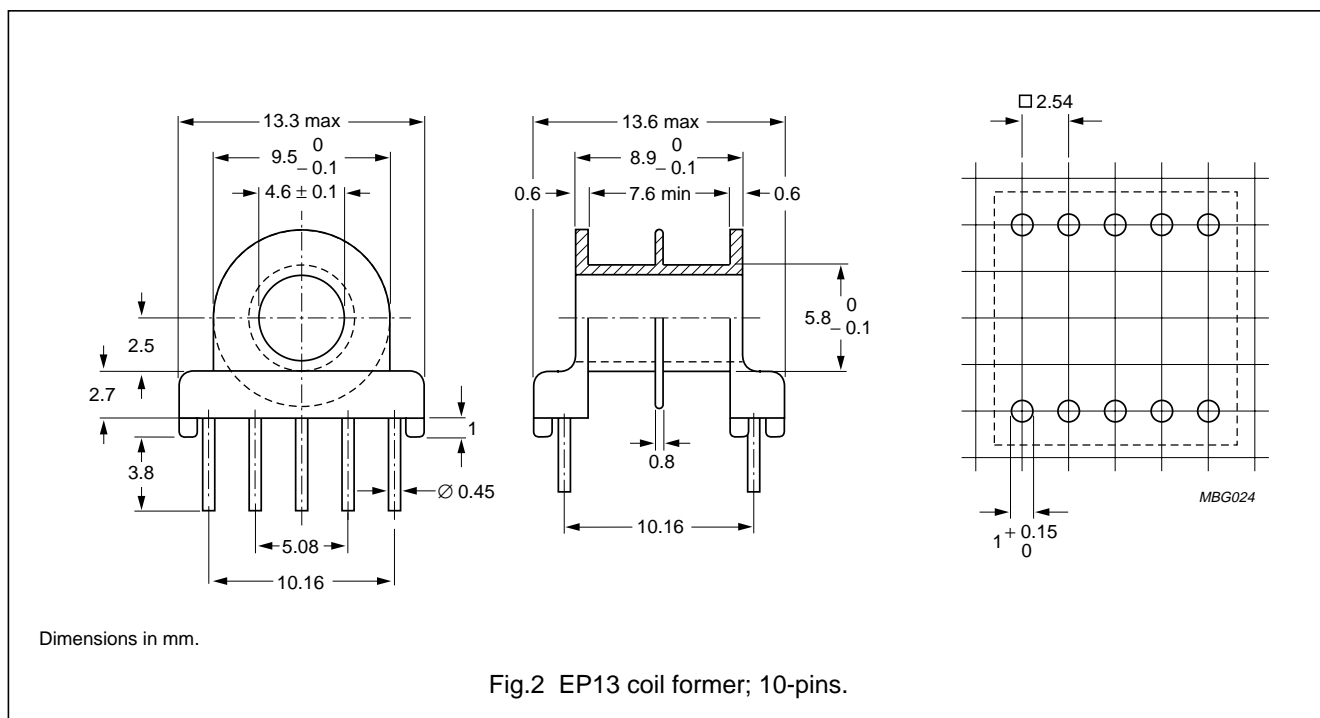
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COIL FORMERS

General data CSH-EP13-10P

PARAMETER	SPECIFICATION
Coil former material	phenolformaldehyde (PF), glass-reinforced, flame retardant in accordance with "UL 94V-0"; UL file number: E46770(M)
Pin material	copper clad steel 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 10-pins EP13 coil former

NUMBER OF SECTIONS	WINDING AREA (mm ²)	MINIMUM WINDING WIDTH (mm)	AVERAGE LENGTH OF TURN (mm)	TYPE NUMBER
1	13.6	7.6	23.8	CSH-EP13-1S-10P
2	2 × 6.1	2 × 3.4	23.8	CSH-EP13-2S-10P

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MOUNTING PARTS

General data

ITEM	REMARKS	FIGURE	TYPE NUMBER
Clasp	copper-nickel-zinc alloy (nickel silver)	3	CLA-EP13
Spring	copper-nickel-zinc alloy (nickel silver)	3	SPR-EP13
Clip	stainless steel (CrNi); clamping force ≈ 32 N	3	CLI-EP13

