

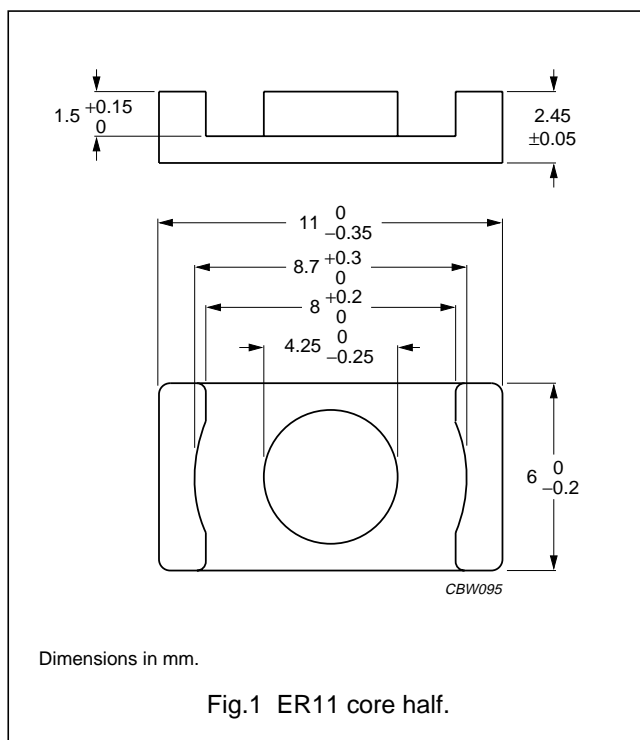
ER cores and accessories

ER11

CORE SETS

Effective core parameters

SYMBOL	PARAMETER	VALUE	UNIT
$\Sigma(I/A)$	core factor (C1)	1.23	mm ⁻¹
V_e	effective volume	174	mm ³
l_e	effective length	14.7	mm
A_e	effective area	11.9	mm ²
A_{min}	minimum area	10.3	mm ²
m	mass of core half	≈0.5	g



Core sets for general purpose transformers and power applications

A_L measured in combination with a non-gapped core half, clamping force 15 ± 5 N.

GRADE	A_L (nH)	μ_e	AIR GAP (μm)	TYPE NUMBER
3F3 <small>des</small>	$100 \pm 3\%$	≈98	≈200	ER11-3F3-A100-S
	$160 \pm 3\%$	≈155	≈100	ER11-3F3-A160-S
	$250 \pm 10\%$	≈245	≈60	ER11-3F3-A250-S
	$1200 \pm 25\%$	≈1170	≈0	ER11-3F3-S
3F4 <small>des</small>	$63 \pm 3\%$	≈61	≈300	ER11-3F4-A63-S
	$100 \pm 5\%$	≈98	≈200	ER11-3F4-A100-S
	$160 \pm 8\%$	≈155	≈100	ER11-3F4-A160-S
	$725 \pm 25\%$	≈710	≈0	ER11-3F4-S

Core sets of high permeability grades

A_L measured in combination with an non-gapped core half, clamping force 15 ± 5 N, flux density $\hat{B} \leq 0.1$ mT.

GRADE	A_L (nH)	μ_e	AIR GAP (μm)	TYPE NUMBER
3E5 <small>des</small>	$5000 +40/-30\%$	≈4890	≈0	ER11-3E5-S
3E6 <small>des</small>	$6700 +40/-30\%$	≈6560	≈0	ER11-3E6-S

ER cores and accessories

ER11

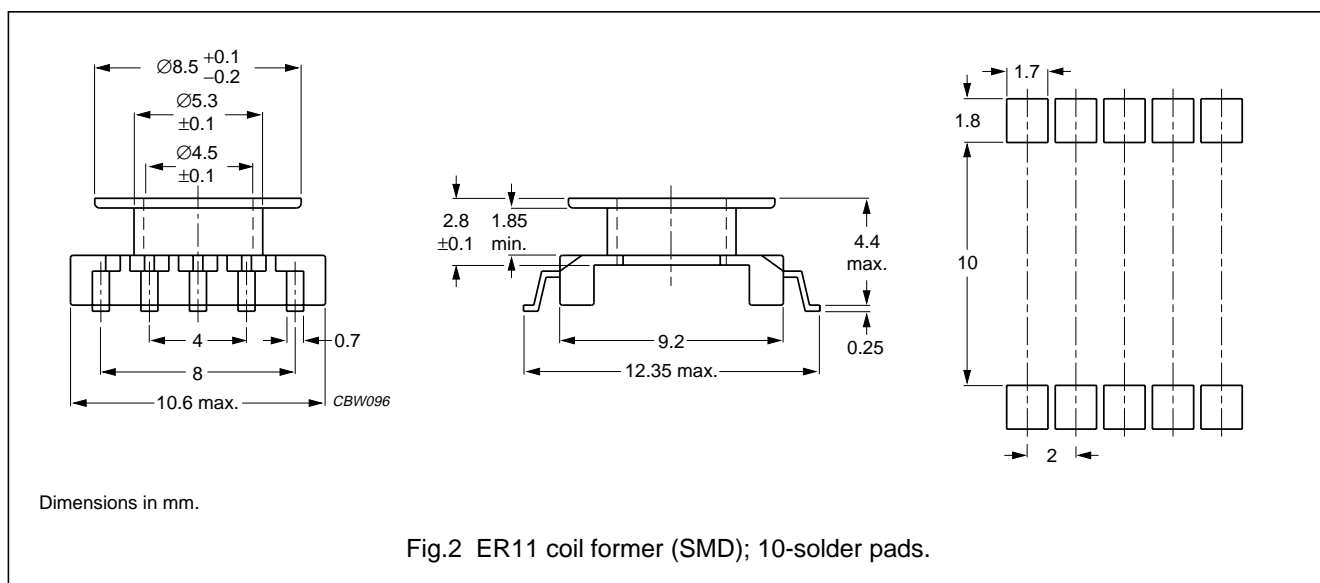
Properties of core sets under power conditions

GRADE	B (mT) at	CORE LOSS (W) at			
	H = 250 A/m; f = 25 kHz; T = 100 °C	f = 100 kHz; B̂ = 100 mT; T = 100 °C	f = 400 kHz; B̂ = 50 mT; T = 100 °C	f = 1 MHz; B̂ = 30 mT; T = 100 °C	f = 3 MHz; B̂ = 10 mT; T = 100 °C
3F3	≥300	≤0.025	≤0.040	–	–
3F4	≥250	–	–	≤0.035	≤0.056

COIL FORMERS

General data

PARAMETER	SPECIFICATION
Coil former material	liquid crystal polymer (LCP), glass reinforced, flame retardant in accordance with "UL 94V-0"; UL file number E54705(M)
Pin material	copper-tin alloy (CuSn), tin-lead alloy (SnPb) plated
Maximum operating temperature	155 °C, "IEC 85" class F
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 ER11 coil former (SMD) with 10 solder pads

NUMBER OF SECTIONS	WINDING AREA (mm ²)	MINIMUM WINDING WIDTH (mm)	AVERAGE LENGTH OF TURN (mm)	TYPE NUMBER
1	2.8	1.85	21.6	CPVS-ER11-1S-10P

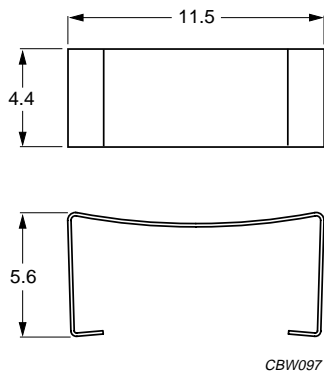
ER cores and accessories

ER11

MOUNTING PARTS

General data and ordering information

ITEM	REMARKS	FIGURE	TYPE NUMBER
Clamp	stainless steel (CrNi); clamping force ≈ 25 N	3	CLM-ER11



Dimensions in mm.

Fig.3 ER11 clamp.