

Ferrites and Accessories

PQ 50/50 Cores and coil former

Series/Type: B65981A, B65982E

Date: 2009-06-17

Version:

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PQ cores B65981A

PQ 50/50

Preliminary data

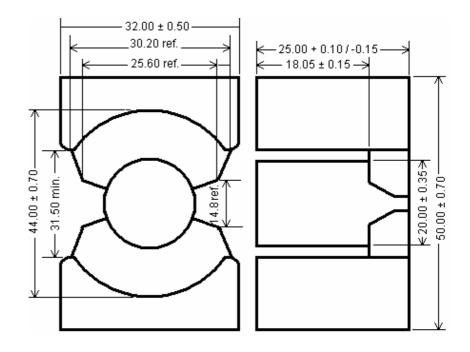
■ To IEC 62317-13

■ Delivery mode: sets

Magnetic characteristics (per set)

 $\begin{array}{lll} \Sigma I/A & = 0.342 & mm^{-1} \\ I_e & = 113.0 & mm \\ A_e & = 330.0 & mm^2 \\ A_{min} & = 290.0 & mm^2 \\ V_e & = 37270 & mm^3 \end{array}$

Approx. weight: 190 g/set



Dimensions in mm

Ungapped

Material	A _L value ¹⁾ nH	μ _e	P _V W/Set	Ordering code	
N87	6500 +30/-20%	1770	< 3.80 (100 kHz, 100 mT, 100 °C)	B65981A0000R087	
N97	6700 +30/-20%	1825	< 3.50 (100 kHz, 100 mT, 100 °C)	B65981A0000R097	
N95	8200 +30/-20%	2230	< 4.50 (100 kHz, 100 mT, 25 °C-100 °C)	B65981A0000R095	
			< 5.40 (100 kHz, 100 mT, 120 °C)		
N92	4700 +30/-20%	1170	< 6.5 (100 kHz, 100 mT, 100 °C)	B65981A0000R092	
N51	8200 +30/-20%	2230	< 6.10 (100 kHz, 100 mT, 25 °C)	B65981A0000R051	
	0200 +30/-20%	2230	< 6.50 (100 kHz, 100 mT, 100 °C)		

¹⁾ Measurement parameter: 10 kHz, 0.25 mT, 100 turns, room temperature. A_L value is measured acc. to IEC62044-2. An appropriate wringing of cores with polished surface is used to improve reproducibility of the measurement. (It is recommended to rub the mating surfaces themselves six times in a circular or elliptic arc that matches the core profile before measuring A_L value).



PQ coil former B65982E

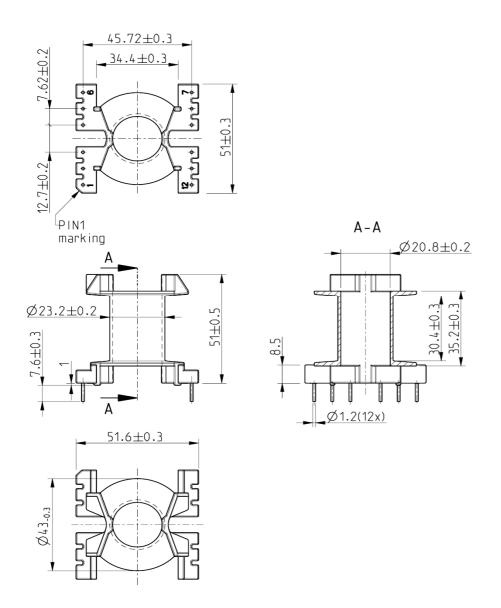
PQ 50/50

Coil former

Material: PMC thermosetting plastics (UL 94 V-0), color code black,

Phenolic T375J, CHANG CHUN PLASTICS CO LTD

Sections	A _N mm²	I _N mm	A_R value $\mu\Omega$	Terminals	Ordering code
_1	340	100.5	10.2	12	B65982E0012D001



Dimensions in mm

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Ferrites and accessories

Cautions and warnings

Mechanical stress and mounting

Ferrite cores have to meet mechanical requirements during assembling and for a growing number of applications. Since ferrites are ceramic materials one has to be aware of the special behavior under mechanical load.

As valid for any ceramic material, ferrite cores are brittle and sensitive to any shock, fast changing or tensile load. Especially high cooling rates under ultrasonic cleaning and high static or cyclic loads can cause cracks or failure of the ferrite cores.

For detailed information see Data Book 2007, chapter "General – Definitions, 8.1".

Effects of core combination on AL value

Stresses in the core affect not only the mechanical but also the magnetic properties. It is apparent that the initial permeability is dependent on the stress state of the core. The higher the stresses are in the core, the lower is the value for the initial permeability. Thus the embedding medium should have the greatest possible elasticity.

For detailed information see Data Book 2007, chapter "General – Definitions, 8.2".

Heating up

Ferrites can run hot during operation at higher flux densities and higher frequencies.

NiZn-materials

The magnetic properties of NiZn-materials can change irreversible in high magnetic fields.

Processing notes

- The start of the winding process should be soft. Else the flanges may be destroyed.
- To strong winding forces may blast the flanges or squeeze the tube that the cores can no more be mount.
- To long soldering time at high temperature (>300 °C) may effect coplanarity or pin arrangement.
- Not following the processing notes for soldering of the J-leg terminals may cause solderability problems at the transformer because of pollution with Sn oxide of the tin bath or burned insulation of the wire. For detailed information see Data Book 2007, chapter "Processing notes, 2.2".
- The dimensions of the hole arrangement have fixed values and should be understood as a recommendation for drilling the printed circuit board. For dimensioning the pins, the group of holes can only be seen under certain conditions, as they fit into the given hole arrangement. To avoid problems when mounting the transformer, the manufacturing tolerances for positioning the customers' drilling process must be considered by increasing the hole diameter.

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