Ferrites and accessories

P cores (pot cores)
General information

Date: September 2006

1 General information

P cores (**P**ot cores) are available in a wide range of sizes; 7 types in our product line comply with IEC 60133. We offer a choice of different SIFERRIT materials, which permits the cores to be used for a large variety of applications to over 100 MHz. Since the wound coil is completely enclosed by the ferrite core, P cores feature low magnetic leakage. They can be easily and precisely adjusted to the most manifold inductor requirements.

We naturally also supply the appropriate accessories for each core version. Most of the cores are available with threaded sleeves and screws for precision inductance adjustment. Adjustment curves are given for this purpose. These relate to the particular recommended combination of screw core/core material A_L value and must be understood as typical values. Notes on gluing the core halves may be found in chapter "Processing notes".

2 Applications

The cores are suitable for:

- High-quality resonant circuit inductors (filters) with high inductance stability (materials K1, M33, N48).
- Low-distortion broadband small-signal transformers in materials T38 and N30 with high A_L value
- Power applications. Here, pot cores without center hole made of material N87 are used as standard. As a result of their larger effective magnetic cross-sectional area, these types are characterized by a higher A_L value, better flux density distribution and, consequently, a reduced power loss.

3 Marking

The material and the A_L value are always stamped on P cores with a diameter > 5.8 mm, the material and “o. L.”(= without air gap) are stamped on ungapped cores. Only one core half of the two comprising a set carries the marking. With cores having an unsymmetrical air gap (the total air gap is ground into one half) the ground half carries the marking, with cores including a glued-in threaded sleeve the half without sleeve is marked.

4 Power loss

For each core type with power materials the maximum power loss is specified in W/set. The flux density has been calculated on the basis of a sinusoidal voltage and is referred to the minimum cross-sectional area A_{min}.