

CENTURACORES

Nanocrystalline Transformer Cores

<https://centuracores.com/products/ccnt-012-008-004p5-hfbk/>

Product datasheet: CCNT-012-008-004P5-HFBK

Product information

Nanocrystalline toroidal core 12x8x4.5 mm

Bare size: 12x8x4.5 mm

Finish: Black PBT Class B 130C

CCNT-012-008-004P5-HFBK is a 12x8x4.5 mm nanocrystalline toroidal core for small-signal EMI chokes, USB/phone charger filters, and low-power SMPS output chokes. Its nanocrystalline HF characteristic supports common-mode and EMI filter designs where impedance and winding window matter as much as size. Choose this size when the filter or choke needs this window and OD, not the next larger footprint.

Bare core dimensions

Outer diameter (OD): 12 mm

Inner diameter (ID): 8 mm

Height (H): 4.5 mm

Cased / finished dimensions

Outer diameter (OD): 14.3 mm

Inner diameter (ID): 6.6 mm

Height (H): 7 mm

Tolerance: 0.2mm

Size marking on the case is the bare core dimension, not the cased or finished size.

Magnetic properties

Effective area A_e : 0.07 cm²

Mean path length L_e : 3.1 cm

AL @ 10kHz, 2mT: 31 uH/T²

AL @ 100kHz, 2mT: 8 uH/T²

Saturation B_s : 1.25 Tesla

Initial permeability μ_i : 80000

Curie temperature: 560 C

Operating temperature: -40 deg C to +130 deg C

Net weight: 1.2 g

Applications

- small-signal EMI chokes
- USB/phone charger filters
- low-power SMPS output chokes
- pulse transformers
- sub-5W SMPS common-mode EMI filter chokes
- USB power adapter differential/common-mode filters
- small-signal pulse transformers
- low-power flyback auxiliary windings
- signal isolation transformers