Nanocrystalline Core Planar Transformer for Power Conversion

Product Design Reference | PMT-PR-2026-1112-01 | Rev A/0 | 2026-11-12

This reference reproduces published product information and its stated evidence status. Final project specifications require an approved drawing and sample acceptance record.

Published Parameters and Conditions

Parameter	Published value / interpretation
Permeability	Can support a high magnetizing-inductance target with fewer turns or a compact magnetic path, subject to the selected grade and geometry. | Available in established high-frequency transformer shapes and grades; the required turns and magnetizing inductance still come from the circuit.
Core loss	Evaluate the specific loss curve at the project frequency, flux swing, waveform and temperature. | Evaluate the specific ferrite grade at the same project conditions; ferrite may remain preferable for a particular high-frequency point.
DC component	Do not assume a generic advantage. Define imbalance, gap or magnetic-path control, then verify the L-I behavior. | The same topology and verification rule applies; saturation margin is grade-, gap- and geometry-dependent.
Mechanical integration	Review ribbon-core shape, insulation, clamping, winding window and planar interconnect together. | Review the available planar core shape, bobbin or PCB stack, insulation and leakage target together.

Application and Validation

PROMAGTECH can review a custom planar or flat-conductor transformer structure with a nanocrystalline core option for LLC, CLLC, phase-shifted full-bridge and other isolated DC-DC stages. This page describes a design-review capability, not a released catalog model. No fixed power, frequency, isolation or thermal rating is claimed until a project specification and approved sample record exist.

Design calculations, material data, simulation results and a single-sample test are separate evidence levels. PROMAGTECH reports the source and conditions for each result. Continuous-production performance is not inferred from a rendering, calculation or one sample; it requires the agreed inspection and validation records.

For a project review, the proposed sequence is: input check, material and geometry selection, loss and flux calculation, insulation and leakage review, sample build, and condition-stated electrical and thermal testing.

Existing ferrite planar-transformer product overview for LLC, CLLC and phase-shifted full-bridge review.

How transformer and resonant-inductor functions can be reviewed as one magnetic assembly.

Public process and test-capability evidence, with project values kept separate from general capability.

Project Review and Contact

Send voltage, topology, frequency, RMS and peak current, loaded inductance or turns ratio, thermal boundary, insulation and available mounting dimensions. Sample fees and delivery schedule are confirmed in the project quotation.

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Product page: https://www.promagtech.com/products/nanocrystalline-core-planar-transformer.html