Introducing our latest series of low-loss, flat coil surface mount planar transformers that deliver high efficiency power to applications with tight height constraints.

Our new planar series consists of the PH08xx and the PH09xx platforms (see switch mode transformers for more details), which are pin compatible with Pulse's legacy PA08xx and PA09xx series, but with lower DCR. This technology uses a copper fill factor that is twice that of a PCB so the direct current resistance (DCR) of the primary winding is reduced by 50% and the power rating is increased by 20% to deliver up to 500 watts of power capability. Replacing the traditional multilayer PCB winding with a flat coil winding reduces the price by approximately 20%.

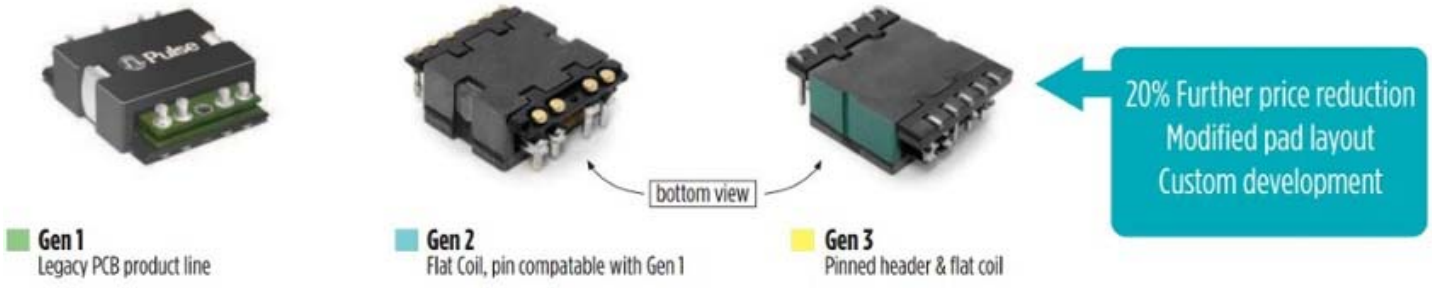
Regarding this latest launch, Gerard Healy, Product Manager for Pulse Electronics Power BU stated:

"Traditional multilayer PCB windings with up to 8 consecutive winding layers give rise to high leakage inductance, producing unacceptably high voltage spikes and snubber circuit losses. Replacing the multilayer PCB with a reduced number of flat coil winding layers connected in series provides immediate benefits by reducing the AC proximity effect on copper losses. In addition, more winding segments and selective coupling between simultaneously conducting windings can be implemented to reduce the leakage inductance. This improved interleaving capability has been demonstrated to increase the PSU efficiency on high power systems by 2%."

Key Features

Our new standard series of planar transformers measure 21.6 x 23.4 x 8.6mm up to 26.7 x 29.5 x 11.9mm and are a pin-compatible replacement to our existing multilayer PCB-based planar transformers. By eliminating the cost and time to fabricate PCBs for new winding arrangements, this transformer has the additional advantages of flexibility and speed to prototype for custom variations.

- **Gen 2 Planar:** Flat Coil Winding
- **Platforms:** 2 sizes, 23x22mm to 29x27mm
- **Height:** < 11.9mm profile
- 20% price reduction compared to PCB
- 50% lower DCR Power Rating - up to 300W
- SMD, 1500Vdc Isolation
- Custom design capability up to 1KW/4KV
- RoHS compliant & meet standard EIA481 requirements



Applications

- Low profile/high efficiency bus converters for distributed power architecture
- Datacom System Cards
- Industrial Control
- Robotics

Planar magnetics have been primarily implemented as a high power (>100W) low profile (< 12.5mm) solution for medium to low voltage conversions, such as the intermediate bus converter in a distributed power architecture. In recent years, the move to discrete DC/DC power modules with embedded designs has fueled strong growth in planar opportunities. “Pulse is delivering more cost-effective and higher performance solutions in response to this,” commented Healy.