BOURNS®

NEW PRODUCT RELEASE

MAGNETICS

Bourns Releases Custom Magnetics for 3-Phase Flying Capacitor Inverter Applications

Model MAG-3002584 and MAG-3002585

Riverside, California - May 28, 2026 – Bourns is pleased to announce the release of two custom magnetic components originally developed for Texas Instruments' TIDA-010957 high-power three-phase flying capacitor inverter reference design. Due to increased market demand, engineering samples of these components are now available for purchase through select distribution partners.

These magnetic components are optimized for high-voltage, high-frequency power conversion systems supporting compact designs, high power density, and high efficiency operation in next-generation energy infrastructure applications.

MAG-3002584 Inductor

The MAG-3002584 is an 87 µH high-power inductor developed for high-frequency PFC and inverter applications in high-voltage, three-phase power systems. Featuring a flat-wire winding construction, low DCR (10.1 mΩ max), and a 42 A saturation current, this inductor is well-suited for high-efficiency (>98.5%) and high-power-density operation.

Model	Inductance (µH) @ 0 ADC	DCR (mΩ) typ.	SRF (MHz) typ.	Isat (A) @ 30%	Irms (A)		Height (mm)	*Q-Factor
					20 °C Rise	54 °C Rise		
MAG-3002584	87 ±10 %	10.1	1.5	42	15	49	51	650

**Q-Factor: To calculate core flux density, Bp-p (gauss) = K x L(µH) x Δ I (peak-to-peak ripple current, A), determine core loss from Core Loss vs. Flux Density plot*

MAG-3002585 4-Phase Line Choke

The MAG-3002585 is a nanocrystalline four-phase line choke designed for high-power three-phase-plus-neutral inverter architectures. Featuring a 4-winding configuration with low DCR per winding (1.5 mΩ typ.), it provides effective differential-mode noise suppression in high-frequency, high-voltage power conversion systems.

Model	Inductance (mH) @ 0 ADC L1,L2,L3,L4	Tol (%)	DCR (mΩ) typ. L1,L2,L3,L4	Weight (g)	HI-POT 1 mA max. Line-Line
MAG-3002584	2.18	+50 / -35	1.5	160	2500 Vac, 1sec

Additional Information

DATA SHEET | DATA SHEET | REFERENCE DESIGN | TECHNICAL LIBRARY | INVENTORY | SAMPLES | CONTACT

IC26042

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Features

- Designed for the TIDA-010957 high-power three-phase flying capacitor inverter
- RoHS compliant*

MAG-3002584:

- Low rofile design
- High saturation current
- Flat wire winding
- Low ESR design

MAG-3002585:

- Four-winding design
- Low DCR per winding: 1.5 mΩ typ.

Applications

- Data centers
- Servers
- String inverters
- On-board chargers (OBC)
- Fast charging stations

These components were validated as part of a high-power Texas Instruments' reference design platform and are now available as engineering samples to support similar system architectures.

For additional details on Bourns® magnetic products, visit the Bourns website at https://www.bourns.com. If you have questions or need additional information, please feel free to contact Bourns Customer Service/Inside Sales.

Note: These components can be customized to meet specific application and performance requirements. Please refer to the official datasheets or contact Bourns for additional details.

** RoHS Directive 2015/863, Mar 31, 2015 and Annex.*