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Power Magnetics Component Roundup

by David G. Morrison, Editor, How2Power.com

Transformer product introductions tend to be fewer in number than those for power inductors, as reflected in this latest roundup. But there were several interesting transformer announcements in recent months addressing higher voltage requirements, suggesting some of the applications that are growing in the marketplace. For example, a new series of gate-drive transformers is pushing working voltages up to 1000 V dc for full-bridge inverter modules in e-mobility and industrial applications.

Meanwhile there are pulse transformers targeting the needs of battery management systems (BMSs) in electric vehicles (EVs), industrial battery storage, and portable power applications; and high isolation transformers for BMSs in energy storage systems, EVs and HVs, and renewable energy/smart grid systems. Another product of note is a high-isolation push-pull transformer targeting 1500-V dc battery energy storage systems (BESSs) and other applications.

Dropping down in voltage, we find that one vendor has introduced a series of space-grade 150-W planar transformers for 28-V input forward converters. While this planar represents a standard product for mil/aero applications, a blog post discussed in this feature suggests what's possible with custom planar magnetics in power supplies for AI data centers and cloud computing—markets that are currently hot topics throughout the electronics industry.

Moving to the newly announced inductors, many of these target automotive and consumer applications. High current and magnetic shielding capabilities, and low profile continue to be emphasized in inductor announcements with product descriptions highlighting the elements of inductor construction that contribute to these characteristics. In line with the industry focus on AI, two of the recent inductor announcements address the requirements for these components in VR designs for processors including a series of low-profile coupled inductors and a ferrite-core design that minimizes losses at switching frequencies up to 3 MHz.

Judging by the recent news, two vendors in particular (Bourns and Vishay) have been especially active in releasing new inductor models. One of these vendors said it had released "more than 2000 new SKUs across nearly 100 series [of] inductors and frequency control devices," while also noting increases in production capacity. As the vendor observed, this expansion of the portfolio and manufacturing is "supporting increased design-in activity across industrial, telecom, and consumer applications."

As is typical, many of the new power inductors and some of the new transformers are automotive grade, indicating the continued demands of automotive applications for magnetic components, as well as the possible preference for automotive-grade quality in non-automotive applications. This trend also holds true when reviewing the recent choke introductions as nearly all are AEC qualified. Some of these devices target consumer and industrial applications too.

Covering power magnetics news released over the second half of this year, this article represents a follow-up to the Power Magnetics Component Roundup published in the June 2025 issue and earlier magnetics articles published in How2Power Today.

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Power Inductors

Automotive Thin-Film Inductors Are Extended To Higher Currents

TDK has expanded its TFM201612BLEA series of 2.0- x 1.6- x 1.2-mm thin-film power inductors for automotive power circuits to higher currents up to 5.6 A. The two new components have a rated inductance of 0.33 µH and 0.47 µH, respectively. Mass production of this product series began in July 2025.

In recent years, demand for inductors for automotive power circuits has continued to increase as electric vehicles and ADAS for safe driving have become more widespread. Highly efficient power supply circuits are necessary to lower energy consumption, driving the development of low-loss, high-efficiency inductors. Inductors for power supply circuits must be compact, as they need to be installed within the limited space of ECUs. High reliability is also crucial, as they must operate in harsh, high-temperature environments.

Compared to the conventional TFM-ALMA series of the same size with an inductance of 0.47 µH, this product achieves a 16% higher rated current of 5.6 A and a 31% lower dc resistance of 22 mΩ, offering the highest standard of electrical performance according to the vendor. This helps to reduce loss and to improve efficiency for power supply circuits, enabling support for high-current applications within the same footprint as conventional models.

Additionally, the inductor ensures high reliability with an upper operating temperature range limit of +150°C, thanks to a product design assuming use in high-temperature environments in automotive applications.

With TDK's proprietary materials and structural designs adapted to the diverse needs of automotive power circuits, TDK will work to expand its comprehensive lineup, utilizing not only thin-film technology but also wire-winding and multilayer processing technologies, thereby contributing to the enhancement of the quality of automotive power circuits.

For more information, see the datasheet.

Semi-Shielded Inductors Offer Higher Max Inductance Values

Bourns' SRN2010/2510/3010/3015/4018BTA additions the SRN-BTA family offer higher maximum inductor values—with some models doubling previous limits—while delivering lower magnetic field radiation. This provides a cost-effective alternative to fully shielded ferrite-based inductors. The semi-shielded construction combines the advantages of both non-shielded and shielded inductor designs, providing a robust and reliable solution for demanding power applications.

The additions to the SRN-BTA family enhance product reliability with bottom-soldered lead-wires, providing increased mechanical strength and stability. These models are well-suited for applications in automotive systems, dc-dc converters, and power supplies across consumer, industrial and telecom electronics—particularly in applications requiring higher power inductors. These advancements deliver multiple benefits, including improved magnetic performance and greater efficiency.

The SRN2010/2510/3010/3015/4018BTA series inductors are available now through Bourns' authorized distribution partners. These models are AEC-Q200 compliant, automotive grades and manufactured within a Bourns' IATF-16949-certified facility. For more information, see the Power Inductors - SMD Semi-Shielded page or the SRN2010/2510/3010/3015/4018BTA datasheets.

Shielded Inductors With Carbonyl Powder Core Deliver High Saturation Current Capability

Bourns' SRP4020T series shielded power inductors feature an advanced carbonyl powder core that offers excellent thermal stability (a high heating current rating) and magnetic performance, making it suitable for demanding environments. Its shielded construction effectively suppresses magnetic interference and enhances electromagnetic compatibility (EMC).

Offered in a compact (4.45 x 4.0), low-profile (1.8 mm) package, the SRP4020T series supports operating temperatures up to +150°C, making it

well suited for space-constrained designs. The inductance range for this series is from 0.47 to 10 µH.

Compared to other similarly sized shielded inductors, it offers lower dc resistance (DCR), which helps reduce power losses and improve overall system efficiency. The SRP4020T series is well-suited for consumer electronics and various power supply applications. The series is available now through Bourns' authorized distribution partners, and is RoHS compliant. For more information, see the datasheet.

Shielded Inductor Features Benefit POL Converters And Data Centers

Bourns' SRP1024HMCT shielded power Inductor is manufactured using a hot press molding process with carbonyl powder and offers high heating current, high saturation current and low magnetic field radiation. This model is available in a space-saving low-profile package, features low buzz noise and it supports an operating temperature range from -40°C to +125°C.

The advanced design and features offered by the SRP1024HMCT provide performance, efficiency and safety benefits making it well suited for point-of-load (PoL) converters and data center environments.

The SRP1024HMCT is available now through Bourns' authorized distribution partners, and is RoHS compliant and halogen free. For more information, see the datasheet.

Automotive-Grade Inductors Offer Stable Inductance And Saturation To +180°C

Vishay Intertechnology's IHDM-1107BBEV-2A and IHDM-1107BBEV-3A are automotive-grade edge-wound, through-hole inductors in the 1107 case size with soft saturation current to 422 A. Featuring a powdered iron alloy core technology, the two inductors provide stable inductance and saturation over a demanding operating temperature range from -40°C to +180°C with low power losses and excellent heat dissipation.

The edge-wound coil of the devices provides low DCR down to 0.22 mΩ, which minimizes losses and improves rated current performance for increased efficiency. Compared to competing ferrite-based solutions, they offer 30% higher rated current and 30% higher saturation current levels at +125°C. The inductors' soft saturation provides a predictable inductance decrease with increasing current, independent of temperature.

With a high isolation voltage rating up to 350 V, the AEC-Q200-qualified devices are well suited for high-current, high-temperature power applications, including dc-dc converters, inverters, on-board chargers (OBCs), domain control units (DCUs), and filters for motor and switching noise suppression in internal combustion (ICE), hybrid (HEV), and full-electric (EV) vehicles. The inductors are available with a selection of two core materials for optimized performance depending on the application.

Standard terminals for the IHDM-1107BBEV-2A and IHDM-1107BBEV-3A are stripped and tinned for through-hole mounting. Vishay can customize the devices' performance including inductance, DCR, rated current, and voltage rating, upon request. Customizable mounting options include bare copper, surface-mount, and press fit.

To reduce the risk of whisker growth, the inductors feature a hot-dipped tin plating. The devices are RoHS-compliant, halogen-free, and "Vishay Green".

Table. Device specification table.

Part number	IHDM-1107BBEV-2A	IHDM-1107BBEV-3A
Inductance (µH)	0.47 to 7.5	0.68 to 12.0
DCR typ. (mΩ)	0.22 to 2.11	
DCR max. (mΩ)	0.27 to 2.20	

Heat rating current typ. (A)(¹)	31 to 128	35 to 125
Saturation current typ. (A)	96 to 343(²) / 118 to 422(³)	49 to 202(²) / 61 to 248(³)
SRF typ. (MHz)	29 to 217	21 to 181

(¹) Dc current (A) that will cause an approximate ΔT of 40°C.
(²) Dc current (A) that will cause L_0 to drop approximately 20%.
(³) Dc current (A) that will cause L_0 to drop approximately 30%.

Samples and production quantities of the IHDM-1107BBEV-2A and IHDM-1107BBEV-3A are available now, with lead times of 14 weeks. Production pricing for U.S. delivery starts at $2.50 per piece in 100,000-piece quantities. For more information, see the IHDM-1107BB-xA page.

Semi-Shielded Inductors With Polarity Control For Optimized EMI Suppression

Bourns' SRN5040TA-P series inductors feature polarity control that optimizes EMI protection for a wide range of automotive systems. These automotive-grade, AEC-Q200 compliant semi-shielded power inductors provide excellent power management performance and thermal stability, meeting the demanding temperature and reliability requirements of advanced systems, including dc-dc converters, power supplies, driver assistance, infotainment and lighting systems.

The SRN5040TA-P inductors feature a specialized construction that minimizes magnetic field radiation while delivering high heating current and saturation current capabilities. In addition, the series supports a wide operating temperature range of -55°C to +125°C, making it well suited for space-constrained automotive applications. The semi-shielded design utilizes a magnetic-epoxy coating around the winding perimeter, providing effective EMI suppression and lower magnetic field radiation compared to non-shielded inductors.

The SRN5040TA-P series is available now through Bourns' authorized distribution partners. It is RoHS compliant and halogen free. For more information, see the datasheet.

Metal Alloy-Based, Multilayer Inductors Offer High-Current Capability

Bourns' CVH160808H series multilayer power chip inductors are built with advanced multilayer technology to achieve a low-profile, superior current capability solution that supports the higher current and space-constrained requirements of today's consumer and communications applications.

The CVH160808H series features a metal alloy-based core and monolithic construction offering high reliability, low dc resistance and high current capability in a compact form factor with a maximum profile of 0.8 mm. The series has a rated current range of 1300 to 4000 mA, a dc resistance of 0.02 to 0.237 Ω and an operating temperature range of -40°C to 125°C. These features make the inductors well suited for use in power conversion solutions for mobile devices, wearables, tablets, laptops and various communication devices.

The CVH160808H are available now and are RoHS compliant and halogen free. For more information, see the datasheet.

Unshielded PIN Inductor With Ferrite Drum Core

Sumida's YRCH114/DS unshielded PIN power inductor features a magnetically unshielded structure, which is made of a ferrite drum core. It measures 10.5 x 10.5 x 14.4 mm max. and operates over a temperature range -40°C to 105°C including the coil's temperature rise. Nearly 50 models are offered in inductance values ranging from 6.3 µH to 39 mH with DCR values ranging from 26 mΩ to 5.8 Ω max. Products are specified to moisture sensitivity level 1.

Applications include the dc-dc converters in printers, LCD TVs, DVDs, copy machines, and the main board of computing machines. Units are in production. For more information, see the product page.

Low-Profile Inductors Are Shielded And Rugged

Sumida's YCD322517MB/DS and YCD453229MB/DS are additions to the YCD****MB/DS series of surface-mount power inductors with resin-filled coils. The inductors measure 3.5 x 2.8 x 1.75 mm max and 4.8 x 3.5 x 2.9 mm max. respectively.

By filling the winding wire with resin containing magnetic material, the magnetic shield effect and the mechanical impact strength are significant. These low-profile components feature ferrite core construction and operate over a temperature range of -40°C to 125°C including the coil's temperature rise.

For the YCD322517MB/DS, models are available in inductances ranging from 0.47 µH to 47 µH with DCR from 36 mΩ max to 2.4 Ω max. For the YCD453229MB/DS, models offer inductances from 1 µH to 220 µH with DCR from 37 mΩ max to 4.28 Ω max. Applications include dc-dc converters, notebook computers, digital video cameras, TVs, LCD displays, HDDs, and other uses.

Both series are in production. For more information, see the YCD322517MB/DS and YCD453229MB/DS product pages.

Low-Profile Coupled Inductors Are Optimized For VR Designs

YAGEO Group's PGL727XHLT coupled inductors are purpose-built for powering processors, memory, FPGAs, and ASICs in servers, datacenters, and storage systems. Optimized for Vcore power, they feature an ultra-low profile of 4-mm max height, 25-nH inductance per phase, and 73-A saturation current at 105°C. They are available in two-, three-, and four-phase parts.

By sharing windings on a single core, coupled inductors reduce per-phase ripple without sacrificing transient performance. The result: lower losses, improved efficiency, and more headroom in demanding VR applications. For datasheets and more information, see the PGL727 search results page.

Ferrite Core Inductors Are Expanded To Power AI, Servers, and High-Efficiency Applications

YAGEO Group's TPI series of SMD ferrite core inductors has been expanded to meet the growing power demands of next-generation computing platforms. With new sizes, values, and design profiles, the TPI series inductors offer both dc and ac optimization for high-efficiency topologies, including hard-switching and resonant converters. Applications include voltage regulators and dc-dc converters for high-performance CPUs and GPUs, AI acceleration boards, server and storage VRMs, 48-V and 12-V power architectures and decentralized dc power distribution.

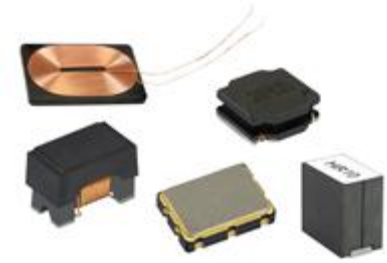
As AI acceleration, server workloads, and decentralized architectures increase current demands and thermal pressure, the TPI series offers several features to address the application requirements. These include low DCR and low core loss—a one-turn Mn-Zn ferrite-core design minimizes heat and energy loss even at switching frequencies up to 3 MHz.

Rated for –40°C to +125°C operation, including self-temperature rise, these inductors support continuous performance in dense, high-power environments. Members of this series also offer high current capabilities with ratings up to 66 A and inductance values from 47 to 230 nH, making them well suited for dc-dc converters and point-of-load regulators. Sizes range from 7 × 6.7 mm to 12 × 8 mm with vertical, horizontal, and low-height options to suit tight board layouts and proximity to CPUs or GPUs.

For hard-switching topologies, such as multi-phase buck converters, the TPI series offers reduced DCR and minimized copper loss—useful for reducing line losses and improving system efficiency. For soft-switching architectures like switched tank converters (STCs), the ferrite core and carefully designed air gap structure reduce ac losses caused by eddy currents and fringing flux. For more information, see the datasheet.

Inductor Portfolio Expansion Yields More Than 2000 SKUs

In October 2025, Vishay Intertechnology announced that it has successfully delivered on the expansion of its inductor and frequency control device (FCD) product lines announced in September 2024, significantly increasing the breadth and availability of components now in the field. The company has released more than 2000 new SKUs across nearly 100 series across inductors and frequency control devices, with continued rollouts underway in 2025.



The expanded offering simplifies sourcing for Vishay customers and supports more applications through broader inductance and voltage ranges, improved noise suppression, and additional size variations to fit even the smallest PCB footprints. Recent launches include new wireless charging inductors, common-mode chokes, high current ferrite impedance beads, and TLVR inductors, as well as nearly 15 new FCD products.

To support this growth, Vishay continues to invest in global production capacity, including expansions in Asia, Mexico and the Dominican Republic. In response to the industry's increasing demand for diversified manufacturing locations—and part of Vishay's strategy of vertically integrated, resilient manufacturing—flagship Vishay-produced IHLP power inductors are now shipping from the company's La Laguna plant in Gómez Palacio, Durango.

The momentum continues in 2025, with more product series set to launch in the months following this October 2025 announcement. In total, the company expects to exceed 3000 new SKUs across inductors and frequency control devices from its overall expansion effort, supporting increased design-in activity across industrial, telecom, and consumer applications. For more information, contact the company.

Transformers

SMT Gate-Drive Transformers Extend DC Working Voltage To 1000 V

TDK has significantly extended its EPCOS InsuGate series of SMT gate-drive transformers, introducing variants rated for a dc working voltage of up to 1000 V (ordering code: B78541A25). These components meet the IEC 61558-1/2-16 standard for basic insulation and enable more compact gate driver designs for full-bridge inverter modules, particularly in demanding e-mobility and industrial environments.

The triple-insulated winding structure, combined with a MnZn ferrite core and optimized coil architecture, allows for robust isolation in high-switching-frequency applications without compromising board space or reliability. With a footprint of just 13.85 x 10.5 x 9.2 mm, the 1-kV-rated components reduce PCB floor space requirements by approximately 30% compared to traditional single gate-drive transformer designs supporting equivalent insulation, says the vendor.

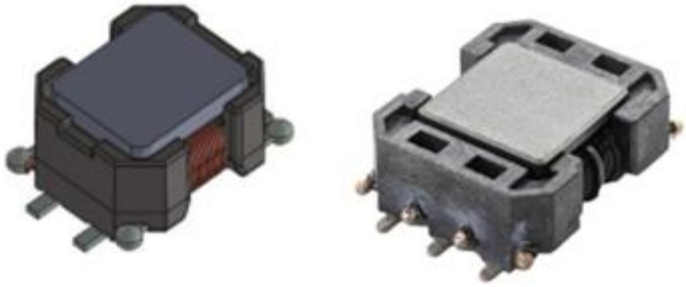
They offer a flat inductance profile up to +150°C, with a nominal inductance of 75 µH and a coupling capacitance of only 4 pF, making them a good choice for fast-switching IGBT and SiC devices. SPICE models are available upon request.

The series is qualified to AEC-Q200 Rev. E and has undergone extended mechanical vibration testing in line with AQG 324 requirements based on standard Eurocard PCB, proving its resilience in powertrain-mounted modules. With a partial discharge extinction voltage of ≥1.2 kV (Vpeak), reinforced insulation voltage capability of 300 Vac, and high voltage test performance at 3 kVac for 60 seconds, these transformers offer a reliable solution for galvanic isolation in next-generation power electronics.

Main applications include switch-mode power supplies, gate driver circuits, isolated dc-dc converters and galvanically isolated single-channel IGBT/SiC driver ICs. For more information, see the Transformers for IGBT/FET page.

Pulse Transformers for Advanced BMSs In EVs, Industrial And Portable Applications

Sumida's CIUH10D46 and CIUH10D47 pulse transformers represent the start of a new series of automotive-grade, low-profile surface-mount transformers designed specifically for use in battery management systems (BMSs) in electric vehicles (EVs), industrial battery storage, and portable power applications.



Battery management systems play a critical role in ensuring the safety, efficiency, and longevity of high-voltage Li-ion battery packs. The CIUH10D series provides robust galvanic isolation and EMI suppression, both essential for the integrity of serial communication lines within daisy-chained BMS architectures.

"With battery safety and system reliability at the forefront of electrified applications, the CIUH10D series delivers both the electrical performance and mechanical robustness BMS engineers require," said Carl G. LeJambre III, vice president of sales. "These components support next-gen EV platforms and are equally suited for marine, aviation, and industrial power systems."

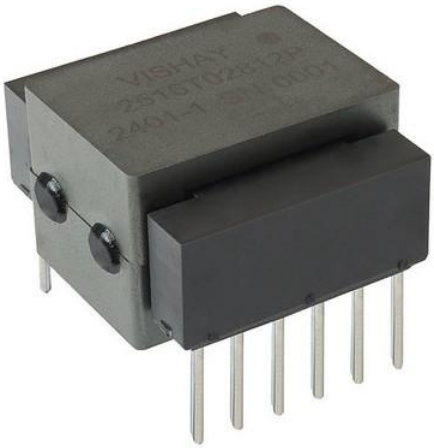
The pulse transformers feature a low-profile 5-mm SMD package, a high isolation rating of 3,800 V dc (60 seconds), a working voltage up to 1,000 V (CIUH10D47) or 600 V (CIUH10D46), an interwinding capacitance (as low as 1.46 pF) to reduce noise coupling, a DCR as low as 0.38 Ω for improved efficiency, and inductance ranges from 45 µH to 593 µH across variants. Operating temperature ranges from -40°C to +125°C.

Another interesting feature of these transformers is flexible coil configuration as the CIUH10D47 has dual primary/secondary windings for multiple topology options. The transformers in these series also offer excellent coplanarity (≦0.1 mm) and robust metal terminal construction for high mechanical reliability. In addition, devices are AEC-Q200 qualified and RoHS compliant.

For more information, see the CIUH10D46 and CIUH10D47 datasheets.

Space-Grade 150-W Planar Transformers For 28-V Input Forward Converters

Vishay Intertechnology's Vishay Custom Magnetics SGTPL-28 series 150-W low-profile, space-grade planar transformers with multiple output secondaries are described as the industry's first such devices optimized for 28-V input forward converters in avionics, military, and space (AMS) applications. According to the vendor, these components offer a lower cost, smaller size, and higher density than traditional planar transformers. These transformers also meet the requirements of MIL-PRF-27 level T, INST-EEE-002, and MIL-STD-981.



In addition to 28-V forward converters, the devices target high-reliability switch mode power supplies and active-clamp or dual-switch forward converters. In these applications, multiple secondary windings with a center tap can power up to two 12-V channels or four 5-V channels.

Designed for the harshest of environments, the transformers combine their MIL-PRF-27 and MIL-STD-981 qualifications with a rugged package featuring overmolded windings and high temperature operation to +130°C. SGTPL-28 series devices withstand numerous thermal shock cycles and high levels of mechanical shock and vibration.

The transformers provide up to 40% greater winding fill than traditional planar devices, resulting in a smaller package size to save PCB space and improve efficiency and power density. Their unique winding technology and internal construction enable easy customization to meet design-specific requirements, while the devices' materials and production techniques allow for lower costs. In addition, strategic inventory management results in short lead times, typically without non-recurring engineering (NRE) charges for customization.

SGTPL-28 series transformers are available with six screening options: P level screening for design validation testing; L level screening for low Earth orbit (LEO) applications; INST-EEE-002 level 2 and level 3; MIL-STD-981 Table VI class B; and MIL-STD-981 Table VI and VII class S. The devices offer an input voltage range from 18 V to 36 V, a dielectric withstand voltage of 1250 Vdc, and leakage inductance of 0.5 µH.

Samples and production quantities of the SGTPL-28 series are available now, with lead times of eight weeks for P level screening; 12 weeks for L level screening; 16 weeks for B level screening; and 26 weeks for S level screening. Pricing for U.S. delivery only starts at $95 per piece in five-piece quantities for P-level-screened devices. For more information see the SGTPL-28 product page.

BMS Isolation Transformers Meet IEC61558 And IEC62368

YAGEO Group's HM216xNL series high-isolation transformer for battery management system (BMSs) is designed to meet the safety requirements in accordance with IEC61558 and IEC62368. It also follows the latest requirements for functional and basic insulation up to 1000 V peak working voltage and 4300 Vdc isolation. Applications include energy storage systems, EVs and HVs, and renewable energy/smart grid systems.

The series offers various options, with or without chokes and center-tapped windings and models are matched to leading BMS cell and stack monitoring silicon ICs. Other features include a low profile of <6-mm package for automotive applications, and improved quality and reliability through manufacture on a fully automated production line.

In addition, units exceed IEC/UL 10-mm creepage distance requirements for 1000-Vdc working voltage in compact footprint, and are qualified to AEC-Q200, in compliance with IATF16949. The HM216xNL operate over a temperature range of -40°C to +125°C. Additional specifications are shown in the table.

PART No.	Channel	Isolation Class	CMC	Working Voltage	HI-POT Isolation	Centre Tap	Package Size (mm) (L x W x H)	Operation Range	BMS IC
HM2162NL	DUAL	Functional	Yes	1600Vdc	4300Vdc	Yes	16.15 x 14.80 x 6.00	-40 ~125°C	NXP, AD, INF, TEXAS
HM2166NL	SINGLE	Basic	No	1000Vdc	4300Vdc	No	18.34 x 9.50 x 6.00	-40 ~125°C	NXP, AD, INF, TEXAS
HM2167NL	SINGLE	Basic	No	1000Vdc	3700Vrms	Yes	18.34 x 9.50 x 6.00	-40 ~125°C	NXP, AD, INF, TEXAS
HM2168NL	DUAL	Functional	No	1500Vdc	4300Vdc	Yes	16.15 x 14.80 x 6.00	-40 ~125°C	NXP, AD, INF, TEXAS
HM2169NL	SINGLE	Basic	Yes	1000Vdc	4300Vdc	Yes	18.34 x 9.50 x 6.00	-40 ~125°C	NXP, AD, INF, TEXAS

High-volume capacity product is supplied in tape and reel–drop-ins for HM2106NL and HM2108NL. For more information, see the HM216xNL datasheet. For lead times, pricing, samples, or additional information, contact the company.

High-Isolation Transformer For 1500-Vdc BESSs And Other Applications

YAGEO Group's PGT6541NLT high-isolation SMT push-pull transformer is highly versatile and well-suited for various industrial and automotive power supply applications. The transformer provides high isolation voltage with over 2 W of power in a compact and economically efficient industrial design. The maximum working voltage is 1500 Vdc, making it well suited for high-voltage products, especially for 1500-V battery energy storage systems.

"YAGEO Group's isolation transformer stands out due to the customized platform, which features significant separation between the core and pin, allowing for compact footprint and high-isolation components," said Damon Huang, product marketing, specialized power PBU.

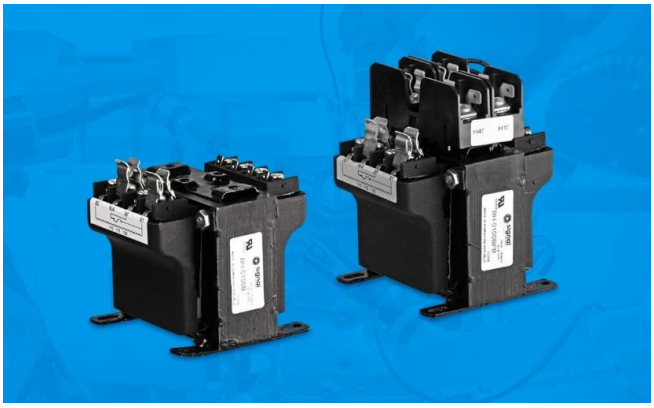
This part was initially designed for 1500-V PV products that require high isolation and compact size, offering 4.4k Vrms of electrical isolation and a maximum power of 6 W. However, it can be widely used for 1000-V+ power products, meeting strict safety requirements with a larger creepage distance (22 mm) and using smaller size/SMD technology. Units also offer reinforced insulation for isolated power supply drivers, IEC/UL 62368-1 approval, and RoHS compliance.

Applications include PV products; battery energy storage systems; low-voltage (3.3 to 24 V) isolated dc-dc power supplies with 3+ W; low-noise RS-485, RS-422, and RS-232 isolated serial communications data interfaces; and half-bridge, full-bridge, and push-pull low voltage isolated dc-dc power supplies.

For more information, see the PGT6541NLT product page. Or to view, compare and download datasheets for the company's push-pull transformer series, utilize the Product Finder and simply enter the prefix of the part number. To inquire about lead times, competitive pricing, samples and more, contact the company.

Control Transformers For High-Reliability Industrial Applications

Signal Transformer's BH series industrial control transformers are engineered for reliability in demanding industrial environments. Designed to deliver stable output voltages even during high inrush conditions, these compact transformers are suited for powering machine tool controls and other critical equipment.



The BH series ensures electrical isolation for grounded or ungrounded circuits, providing safer operation independent of nearby power or lighting sources. With epoxy-encapsulated coils, these transformers offer enhanced protection against moisture and contaminants. Additionally, their advanced thermal design improves heat dissipation, helping maintain optimal performance even in tough conditions.

The BH-0100B and BH-0100BFB models both deliver 100 VA of single-phase power in a chassis-mount form factor and support universal input configurations. The BH-0100BFB variant includes a factory-installed two-pole fuse block for enhanced circuit protection.

These transformers meet or exceed requirements of UL 506/5085-2, ANSI/NEMA ST-1, and RoHS, ensuring dependable performance for industrial applications such as motor starters, machine tool control devices, and control panels with relays, timers, and solenoids.

Lead time is 16 weeks, made-to-order. For more information, see the BH Series search results page. Or visit the website or call 201-432-0463.

Chokes And Filters

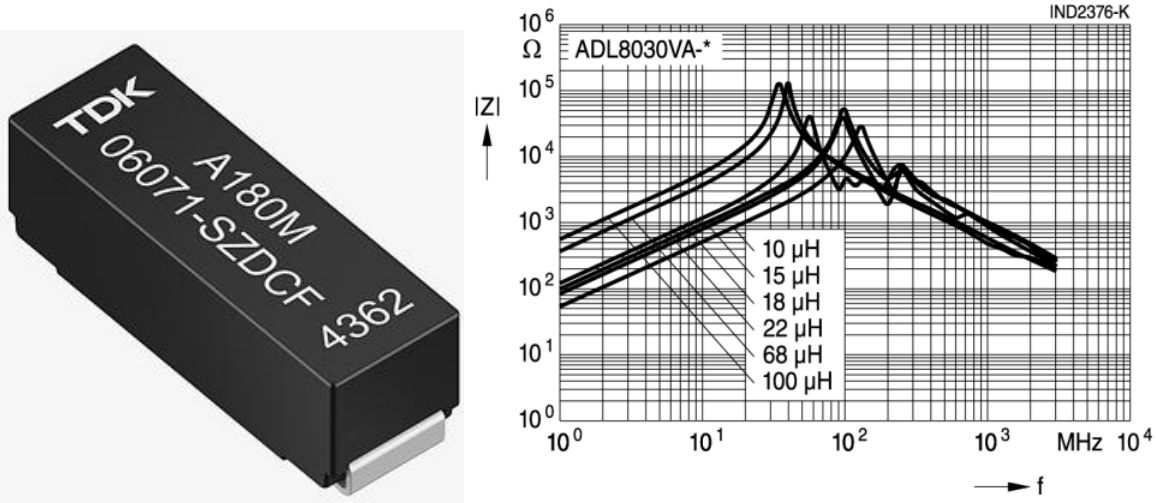
Automotive Power-Over-Coax Inductor For Filters Offer Simplicity And Efficiency

TDK's ADL8030VA is a high-performance inductor designed specifically for power-over-coaxial (PoC) applications. Due to its high impedance over a wide frequency range, this component streamlines the PoC filter design by requiring only a single component instead of the conventional approach with two or more inductors. This significantly reduces complexity and cost in advanced driver-assistance systems (ADASs) and other automotive electronics, where space efficiency and reliability are critical. With the ADL8030VA, TDK is once again driving mobility transformation toward a more connected and safe future.

In standard configurations, ADAS sensors like automotive cameras require two separate lines: one power line connected to the battery and a signal line connected to the electronic control unit (ECU). However, with PoC technology, a single coaxial cable can simultaneously carry both power and data, simplifying and reducing the wire harness.

The 7.8- x 2.7- x 2.7-mm (L x W x H) ADL8030VA series offers inductance values from 10 µH to 100 µH with a rated current range of up to 0.82 A, ensuring robust performance from -55°C to +155°C across a wide frequency spectrum. Its low dc resistance of less than 0.5 Ω for the types with 22 µH or less minimizes power losses, enhancing overall energy efficiency.

Its compact design is engineered with a ferrite core, enamel copper wire welded to the terminals, and flame-retardant molding. It offers high mechanical stability and meets AEC-Q200 qualification standards, ensuring durability under harsh automotive conditions. In addition, it is suitable for AOI (automatic optical inspection).



A power injection choke, the ADL8030VA measures 7.8- x 2.7- x 2.7-mm and features high impedance over frequency.

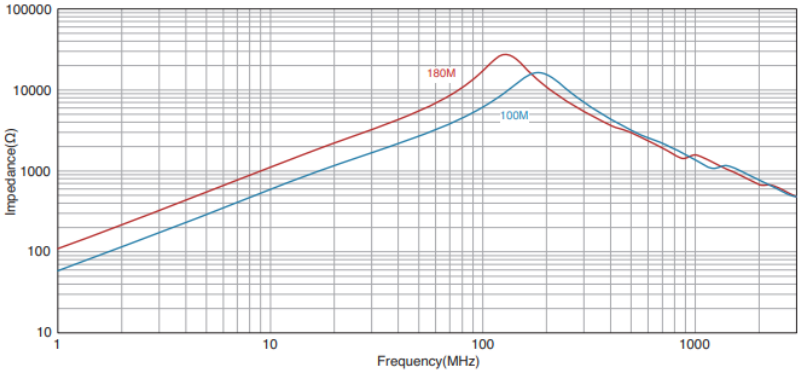
For more information, see the SMT Inductors page or see the datasheet.

Wide-Frequency Range Wire-Wound Inductors For Automotive Power-Over-Coax

TDK's ADL4524VL series 4.5- x 2.4- x 2.6-mm wire-wound inductors are also for automotive power-over-coax (PoC). Mass production of these components began in July 2025.

The PoC system requires a filter incorporating multiple inductors to separate power from the data signal before processing effectively. This product enables high impedance at a wide frequency range from 10 MHz to 1 GHz with its proprietary materials and structural design innovation. This reduces the number of inductors used to save space.

By covering a wide frequency range, this product can handle applications with fewer inductors. For example, where conventional solutions might require three inductors, this solution requires only one. The inductor ensures high reliability with an upper operating temperature range limit of +155°C.



Type	Inductance [µH] @100 kHz	DC resistance [Ω] (max.)	Isat [mA] (typ.) +25 °C	Itemp [mA] (typ.) +105°C	Itemp [mA] (typ.) +125 °C
ADL4524VL-100M-TL000	10 ± 20%	0.60	660	600	510
ADL4524VL-180M-TL000	18 ± 20%	0.80	510	520	440

Isat: Current value based on inductance variation (30% lower than the initial inductance value)
Itemp +105 °C: Current value based on temperature increase (temperature increase of 40 K by self-heating)
Itemp +125 °C: Current value based on temperature increase (temperature increase of 30 K by self-heating)

For more information, see the datasheet.

Common-Mode Data Lines Chokes Are Rated To 10 A

Würth Elektronik's WE-CMDC series family of common-mode data lines chokes now includes 7060, 9070, 1513, and 1211 packages, which enable effective noise suppression at a rated current up to 10 A. This makes the compact filter components well suited for modern high-current applications.

The common-mode data line filters feature an especially flat profile and high impedance up to 2,500 Ω. They have been specifically developed for dc power supplies, dc-dc converters, as well as for data and signal lines, and are qualified to AEC-Q200 Grade 1. Their compact design and height between 3.5 and 6 mm make the WE-CMDC chokes well suited for space-sensitive designs without compromising on performance.

Applications in industrial electronics include power supplies, automation, and control systems. Manufacturers of telecommunications equipment such as routers, gateways, and PoE systems, as well as providers of household appliances, IoT products, wearables, and smart home solutions, also benefit from the enhanced electromagnetic interference suppression options.

The inductors are now available from stock without a minimum order quantity. Developers can receive free samples. For more information, see the WE-CMDC product page.

Common-Mode Chokes Have Current Capability, Enhanced Dielectric Strength

Bourns' SRF7038A series AEC-Q200 compliant, automotive-grade common-mode chokes feature an extended current capability up to 15 A and a broad impedance range of 70 to 3000 Ω. These features make the SRF7038A an excellent power line EMI suppression solution for use in consumer, industrial and automotive systems.

Part Number	Z (Ω) @ 100 MHz		L (μH) @ 100 kHz / 0.1 V	DCR (mΩ) Max.	Rated Current (A) Max.	Rated Voltage (VDC) Max.	Insulation Resistance (MΩ) Min.
	Min.	Typ.					
SRF7038A-700Y	40	70	0.83	5	15	80	10
SRF7038A-101Y	65	100	0.83	5	14	80	10
SRF7038A-141Y	100	140	1.3	10	9	80	10
SRF7038A-301Y	225	300	2.5	10	5	80	10
SRF7038A-501Y	400	500	2.9	10	5	80	10
SRF7038A-701Y	500	700	4.6	15	4	80	10
SRF7038A-102Y	800	1020	6.3	17	3	80	10
SRF7038A-132Y	910	1300	6.7	20	3	80	10
SRF7038A-302Y	2500	3000	18.2	50	1.5	80	10

Furthermore, the SRF7038A series helps resist electrical breakdown due to high voltage stress with its sector-wound configuration that enhances dielectric strength between windings. Plus, the series' ferrite core construction with a closed-loop magnet path provides greater magnetic shielding for low radiation that supports improved noise suppression. These high-current chokes also have an operating temperature range from -40°C to +125°C.

The SRF7038A series chokes are available now through Bourns' authorized distribution partners, and are RoHS compliant and halogen free. For more information, see the datasheet.

SMD Inductors Feature High Operating Temperature And Saturation Current

Bourns' SDE0403AT series SMD power inductors handle high currents without saturation and temperatures up to 150°C helping to ensure stable and reliable operation in high-temperature environments. These automotive-grade, AEC-Q200-compliant SMD power inductors deliver high current density in a low-profile form factor, making them well suited for automotive designs requiring exceptional power efficiency and design flexibility.

The features designed into Bourns latest power inductors are optimized for use in a broad variety of advanced automotive applications including noise filters and dc power lines. In addition, the SDE0403AT series features a uniquely designed drum ferrite structure in a compact, low form factor, giving designers greater layout flexibility and ease of system integration.

The series supports a wide operating temperature range from -55°C to +150 °C and delivers a high saturation current up to 4.8 A.

The SDE0403AT series is available now through Bourns' authorized distribution partners, and is RoHS compliant and halogen free. For more information, see the datasheet.

Common-Mode Choke Employs Ferrite Toroid Core For Low Radiation

Bourns' SRF1709 common-mode choke features a ferrite toroid core for low radiation making it an effective power line noise attenuation solution. This choke provides high inductance of 3.5 mH with a current rating of 2.5 A and an operating temperature range from –40°C to +85°C. Its advanced features are designed to provide effective EMI suppression from both incoming and outgoing paths within the system, making this high inductance choke well suited for consumer, industrial and other electronic application designs.

The SRF1709 common-mode choke is available now through Bourns' authorized distribution partners, and is RoHS compliant and halogen free. For more information, see the datasheet.

Literature

Article Explores Benefits Of Planar Magnetics in AI Data Centers And Cloud Computing

Payton Planar's blog post, "High-Density Power for AI & Cloud: Planar Magnetics in Data Centers" discusses how growth in AI and cloud computing are driving up power consumption, and the demands these trends place on servers and data center infrastructure, including power architectures and power supplies. These demands in turn are spurring use of planar power magnetics in these applications.

While the electrical and thermal benefits of planar magnetics may be familiar to many power supply designers, this article puts those benefits in the specific context of the rapidly evolving data center power requirements. It also discusses the expertise and experience that Payton brings to the development and manufacturing of planar magnetic components for these applications. This blog includes forecasts of power consumption trends at the rack, data center, U.S. and global levels, which suggests not only the need for the power performance benefits of planars, but also their ability to be manufactured with high unit-to-unit consistency in high-volume production. See the blog.