

## Power Magnetics News Sponsored by Magnetics

This file lists magnetic component news stories published in <u>How2Power Today</u>. The products featured here mainly include inductors and transformers used in the design of dc-dc converters and ac-dc power supplies, but also related devices such as wireless charging coils, current-sensing transformers and other transformers used to measure power supply-related parameters.

## December 2024:

## **Power Magnetics Component Roundup**

- SMT Inductor Handles High Current, Sumida's CDMT60D60 power inductor with a magnetically shielded structure
- Inductors Deliver Low Core And Winding Losses For DC-DC Converters, Würth Elektronik's WE-MXGI series power inductors
- Inductors Feature High Saturation Currents, Sumida's CD\*\*\*\*ME/DS series inductors with alloy powder cores
- Low-Profile Automotive Inductors Minimize Thermal Aging, Würth Elektronik's WE-LHCA inductor family
- Shielded Ferrite Inductors Are Offered In More Case Sizes, Vishay Intertechnology's shielded IFDC and semi-shielded IFSC series of wirewound, surface-mount inductors
- Shielded Metal Inductors Balance Saturation And Thermal Characteristics, Sumida's CYxxxxAT150/DS series AEC-Q200-qualified SMD inductors
- Low-Profile Dual-Winding Inductors Benefit SEPIC Converters, Bourns' Model SRF3015 shielded inductor series
- Shielded Flat Wire Inductors Offer Heights As Low As 0.7 mm, Bourns' Model SRP-F series inductors with low DCR
- Resin-Shielded Ferrite Inductors Are Alternative To Drum-Ring Types, Sumida's CYRSxxxxT150/DS series AEC-Q200-qualified SMD inductors
- Metal Inductors Provide Low Inductance Values And High Current Ratings, Sumida's WMT0530T150/DS AEC-Q200-qualified SMD inductor series
- Metal Inductors Deliver Up to 100 μH, Sumida's WMCxxxxBT150/DS series of AEC-Q200-qualified SMD inductors
- Two-In-One Metal Inductors For Class D Amplifiers And Other Automotive Circuits, Sumida's W2MCxxxx/DS series AEC-Q200-qualified inductors



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- Automotive-Qualified SMD Alloy Powder Chokes Are Rated Up To 48 A, TDK's ERU27M series of high-current flat-wire inductors
- Thin-Film Power Inductors Measure 0.80 x 0.45 x 0.65 mm, TDK's PLE856C series of inductors for wearable devices

#### Transformers

- Low-Profile, High-Creepage Isolation Transformer For Gate Drives and BMSs, Bourns' AEC-Q200-compliant HVMA03F4A-LP8S series flyback transformers
- Custom Planar Transformers Span 5 W To 20 kW, Payton Planar's custom transformers
- Prototype Laboratory Opens For Customized Transformers, Wurth Electronics Midcom's laboratory in Munich-Freiham for the production of transformer prototypes

#### **Chokes And Filters**

- Common-Mode Chokes Deliver Smaller Size For High-Power Industrial Applications, Schaffner's RT8121, RT8131, RT8521 and RT8531 chokes
- Wire-Wound Ferrites Support Filtering, Würth Elektronik's WE-RFI inductors in 0402 and 0603 case sizes
- Tube Magazines Facilitate Pick And Place Of Ring Core Chokes, TDK's tube magazines for several ring core chokes series
- Compact Chokes Feature Current Ratings To 120 A, TDK's ERU33M chokes using a new alloy powder core material with a softer saturation characteristic
- Choke Targets Electric Power Steering, Sumida's DEP2517ME/T150 THT shielded metal inductor, a metal-core, normal-mode choke
- Multilayer Inductors For Automotive Power-Over-Coax, TDK's MLJ1005-G series of multilayer inductors

## Wireless Charging Coils

• Wireless Charging Coils Provide Moisture Resistance Up to 90% RH In A Reduced Footprint, Vishay Intertechnology's Vishay Dale



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*IWAS3222CZEB190JR1, IWTX4646DCEB240JR1, IWTX47R0DAEB6R3JR1, and IWTX47R0EBEB240JR1 transmitter and receiver coils* 

#### Cores

- Sizes Added For Power Core Shapes, Magnetics' 5241 block and 6034 rounded block sizes
- Updated Curve Fit Equation Tool For Powder Cores, Magnetics' new version of its Curve Fit Equation tool with updates to the core loss equation

#### **Other Magnetics News**

- Supplier Announces Expansion of its Magnetic Component Portfolio, Signal Transformer has introduced more than 1,200 new products over the past three years.
- Expanded Inductor Line Includes More Sizes, Higher Inductances And Voltages, Vishay Intertechnology has expanded its inductor product lines.

For more details ...

## June 2024:

#### Power Magnetics Component Roundup

- Shielded Inductor Complements Battery Charger ICs, Bourns' Model SRP3212-1R0MR21 low-profile high-current inductor
- Inductors Feature Ferrite Core And Ferrite Shield For Low Magnetic Field Radiation, Bourns' Model SRR5228A and SRR5828A series power inductors
- *Magnetically Shielded Inductors Feature Flat-Wire Windings, Sumida's* DPQ3535/T150 and DPQ5050/T150 series AEC-Q200-qualified inductors
- Low-Profile Edge-Wound Inductor Delivers Saturation Current to 230 A, Vishay Intertechnology's IHDF-1300AE-1A through-hole inductor



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• Shielded Flat-Wire Inductors Are Well Suited For Onboard Chargers, Sumida America's CDPQ\*\*\*\*/T150 series high-current inductors

#### **Transformers**

- Planar Signal BMS Transformer Benefits EV And Energy Storage Systems, Bourns' Model SM91806 battery management system transformer
- BMS Transformers For EVs Offer Functional, Basic And Reinforced Insulation, iNRCORE's RA1058NL, RA1059NL, RA1060NL, RA1061NL, RA1062NL, RA1063NL and RA2055NL transformers
- Signal Transformer Is Optimized For Higher Energy Storage Battery Management Systems, Bourns' Model SM91801AL single-channel basic insulation transformer
- Compact SMT Transformers For Gate-Driver Applications, TDK's B78541A EPCOS InsuGate series transformers
- Space-Grade Planar Transformers Offer Lower Cost And Smaller Size Than Traditional Planars, Vishay Intertechnology's SGTPL-2516 transformers

#### **Current Sensors**

- Current Transducer With Large Aperture For EV Test Benches And Battery Testing, Danisense's DN1000ID current transducer
- Current Transducer Offers Extra-Large Bandwidth For High-Frequency Applications, Danisense's DW series of closed-loop compensated zero-flux current transducers



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## **Chokes And Filters**

- Single-Phase EMI Filters For DIN Rail And DC Applications, TDK's B84742A\*R725 series single-phase EMC filters
- Common-Mode Chokes Shrink Device Size For Space And Other High-Rel Applications, Vanguard Electronics' CMN4, CMN6, CMN7, CMN9, SCMN4, SCMN6, SCMN7 and SCMN9 choke inductors
- Automotive-Grade Common-Mode Chip Inductors Withstand Up To 4 A In A Compact Size, Bourns' Model SRF4532TA chip inductor series

#### Cores

• *High-Permeability Nanocrystalline Cores Come In C Shape, Magnetics' wide variety of high-permeability nanocrystalline cut cores for power transformers* 

For more details ...

Online Custom Magnetics Design House Launches Speedy Production Service, Frenetic Electronics' Frenetic Factory magnetics production service For more details...

## December 2023:

## Power Magnetics Component Roundup

- Semi-Shielded Inductors Offer High-Temperature Operation And Cost Savings, Bourns' Model SRN8040HA series AEC-Q200-compliant inductors
- Shielded Inductors Specify High Saturation Currents, Würth Elektronik's WE-HEPC inductor series NiZn-ferrite-based self-shielded inductors
- Toroidal PFC Inductors Use Flat-Wire Windings For Lower Losses, Würth Elektronik's WE-TORPFC inductor series has added 17 parts



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- Semi-Shielded Power Inductors Have Enhanced Mechanical Strength, Bourns' automotive-grade inductor models SRN2010BTA, SRN2510BTA, SRN3010BTA, SRN3012BTA and SRN3015BTA
- Automotive-Grade Two-In-One Inductor For Class D Amplifier, Sumida's D2EP21D15 pin-type two-in-one inductor
- Shielded Metal Inductors Offer Wide Inductance Range, Sumida's CDSM70D52/T150 and CDSM12D63/T150 magnetically shielded inductors
- Coupled Inductors Enable High Efficiency, TDK's B82559S EPCOS ERUC23 flat-wire coupled inductor series
- Metal Compound Molding Inductors Deliver Low DCR In Low Profile, Sumida's CDMT series molding type inductors
- Shielded High-Power Inductor Has Pin-Type Structure, Sumida's DPQ5050/T150 flat-wire-wound, ferrite-core-based inductor
- Inductors Stand Just 0.55-mm Tall, TDK's PLEA85 series high-efficiency inductors for battery-powered wearables
- Composite-Core Inductors Come in Additional Case Sizes, Pulse's PA/PM2241 and PA/PM2242/43/44 series inductors in 8080 and 10xx case sizes
- Shielded Ferrite Inductors Offer Wide Inductance Range, Sumida's CDRH5D28RB/T125 1- to 330-µH inductors

## Transformers

- 2-W LLC Transformer For SiC And GaN Drive Applications, Pulse's PMT6709NL LLC transformer
- Automotive-Grade Drive Transformer For IGBT-Based Inverters, Pulse's PMG3045NL forward gate-drive transformer
- Miniature, Automotive-Grade Push-Pull Transformer Offers Reinforced Insulation, Pulse's PMT9085 transformer series with innovative core and



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bobbin assembly

- Transformers Lower Interwinding Capacitance For Driving SiC MOSFETs, Würth Elektronik's WE-AGDT auxiliary gate-drive transformer series
- Three-Phase Isolation Transformers For Industrial And Medical Applications, Bel Fuse's 3PH series of three-phase dry type transformers

## **Chokes And Filters**

- Unshielded Radial Drum Chokes Feature High Impedance And Inductance, Signal Transformer's DRC line of unshielded radial drum chokes including the 0406, 0608/0707/0807, 0810/1010, and 1018/1213 series
- Inductors And All-Mode Filters Now Operate Up To 5 GHz, SMP's inductive components and filter systems
- CM Chokes Mitigate EMI In Robotics And Motor Drives, Schaffner's RT common-mode choke series
- Multilayer Metal Power Inductors Shrink Size For Smart Phone Power Supplies, Taiyo Yuden's LSCND1412HKTR24ME, LSCND1412HKTR33MF and LSCND2012HKTR24MF inductors for choke coil applications in power supplies
- Sample Kit For Compact High-Current Chokes, TDK's sample kit for the B82559A\*A033 series of shielded EPCOS ERU 33 high-current chokes

## Current Sensors

• Rogowski Coils Bring Benefits Of Non-Ferromagnetic Core To Smart Metering, Pulse's RC series Rogowski coils

For more details ...

June 2023:



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#### Power Magnetics Component Roundup

- Automotive-Qualified Metal Inductor Offers Wide Range Of Inductance Values, Sumida's CY0650AT125/DS SMD metal inductor
- Compact Inductor Offers Shielding, Mechanical Strength, Sumida's CD40D16MB surface-mount ferrite-core inductor
- Inductors Target DC-DC Converters In Mil/Aerospace Applications, Vanguard Electronics' HCPI040, HCPI050, HPCI060, HPCI100, and HCPI120 series COTS+ high-current inductors
- Inductors Are Tailored For DC-DC Converters In Portable Applications, Sumida's CRDH10D48RMN surface-mount inductors made with Mn-Zn and Ni-Zn cores
- Flat-Wire Inductors For High-Power Buck-Boost Converters And PFC In EVs, Sumida's CDPQ\*\*\*\*/T150 series ferrite-core-based inductors
- *Pin-Type Shielded Inductors Withstand 500 Vdc, Sumida's DPQ3535/T150 flat-wire-wound, ferrite core-based high-power inductor*
- Dual-Winding TLVR Inductors Offer 100-nH To 200-nH Values, Pulse's PGL6380.XXXHLT TLVR inductors in a 12-mm x 6-mm x 11.15-mm package
- Inductor With L-Shaped Termination Benefits Wearable Devices, Pulse's BDCC and ADCC series of mini-molded inductors
- Dual-Winding TLVR Inductors Feature Saturation Current Ratings To 117 A, Pulse's PAL6373.XXXHLT series TLVR inductors for server Vcore power
- Flat-Wire Inductors Handle High-Current Transient Peaks, Würth Elektronik's WE-XHMA series AEC-Q200-certified surface-mount inductors



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## Transformers

- Forward Converter Transformers Provide Planar Benefits, Bourns' Model PLN0xx-ED21 series planar transformers
- Auto Transformer Rectifier Units Save Space And Weight, Vanguard Electronics' 2-kW to 10-kW ATRU series including the TRU-12-2, TRU-12-5, TRU-18-5, TRU-18-10, TRU-30-5, and TRU-30-10 models
- Custom Planar Transformers Span 5 W To 20 kW, Payton Planar's custom planar transformer designs

#### Wireless Power Coils

• Wireless Charging Coils Come In Circular Or Rectangular Formats, Signal Transformer's WRSR and WRSC series coils

## **Chokes And Filters**

- High-Current Common-Mode Chokes Feature Low Profile Planar Construction, Pulse's PM9407 series automotive-grade IATF catalogue chokes
- Inductors Serve As Choke Coils And Filters In Automotive Powertrains, TAIYO YUDEN's AEC-Q200-qualified LAXH series of ferrite power inductors
- High-Current Multilayer Chip Bead For Automotive Power Supply Lines, TDK's MPZ2520SPH series 12-A rated multilayer chip bead
- Small Common-Mode Chokes Operate From -55°C To 200°C, Vanguard Electronics' XTCMN5 series common-mode choke inductors
- High-Value Inductors Block Low-Frequency Noise, Sumida's CDR\*\*/T150 series of unshielded, 470- to 10,000-µH AEC-Q200-qualified inductors
- Common-Mode Chokes Now Come In IATF Versions, Pulse's IATF versions of its SLIC and Shasta chokes



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High-Current Chokes For Automotive And Industrial Applications, TDK's
 B82559A\*A033 series shielded, EPCOS ERU33 through-hole-mounted chokes

#### Cores

- Custom Powder Core Blends Address Unique Requirements, Magnetics' custom powder core blends
- Nanocrystalline Cores For Current Transformers, Magnetics' nanocrystalline cores

For more details...

## March 2023:

**Open-Source Magnetics Design Platform Is Launched,** Open Magnetics, an open-source platform

For more details...

## December 2022:

## **Power Magnetics Component Roundup**

- Two-In-One Inductor For Class D Audio Amps, Sumida's C2DEPI60D70 2-in-1, magnetically shielded LPF inductor
- High-Frequency Litz Wire Inductor Is Designed For QR Converters, Pulse's PH9499.xxxCNL high-frequency inductor series
- Metal Inductors Come In Range Of Footprints, Sumida's CY\*\*\*\*T125/DS series of automotive-grade SMD metal inductors
- Edge-Wound Inductors Deliver Stable Inductance To 180°C, Vishay Intertechnology's IHDM-1107BBEV-20 and IHDM-1107BBEV-30 through-hole inductors in the 1107 case



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- Compact Inductors For ADAS/AD Power Management, TDK's CLT32 series power inductors
- Inductor Delivers Current Ratings Up To 155 A In 6767 Case Size, Vishay Intertechnology's IHSR-6767GZ-5A AEC-Q200 qualified high-temperature inductor
- Trans-Inductors For Multi-Phase Voltage Regulators, Pulse's PAL6374.XXXHL series inductors for trans-inductor voltage regulator (TLVR) topology
- Ferrite-Core Inductors Suit PSiP Power Supplies, Pulse's PGL6477 and PGL6478 series high-current, low-DCR inductors
- Inductors For Server VCORE Power, Pulse's PG2290.XXXHLT, PGL6395.XXXHLT and PA5615.XXXHLT series of high-current, low DCR inductors
- Inductors Feature High Magnetic Shielding, TDK's VLS5030EX-D type power inductor for automotive power circuits
- Shielded Power Bead Inductors Target Multiphase Applications, Bourns' Model SPB0705, SPB1005, SPB1007, SPB1012 and SPB1308 power bead inductor series
- Flat-Wire Inductors For Multiphase Power Supplies, Sumida's CDEPH7212 magnetically shielded power inductor
- Bottom-Termination Powder Inductors Lower DCR For POLs, Pulse's BDQQ series of miniature molded inductors

## Transformers

- 350-kW Planar Transformer Is 99.62% Efficient, Payton Planar's 350-kW planar transformer measures 390 mm x 370 mm x 75 mm
- Low-Profile Isolation Transformers For BMS Chipsets, Pulse's 3.45-mm-high BMS transformers



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- Compact SMT Transformers With High Dielectric Strength For DC-DC Converters, TDK's EPCOS E13EMHV series of SMT transformers, also referred to as the B78308\*A003 series
- Integrated Resonant Transformer-Inductor Saves Space In LLC Converters, Vishay Intertechnology's 5.5-kW MRTI5R5EZ resonant transformer
- Single-Channel BMS Transformers For EVs Are Robust, iNRCORE's RA1055NL battery management system transformers
- High-Isolation Current-Sense Transformer For Automotive Applications, Pulse's PMS9505 IATF-certified current-sense transformer
- Gate-Drive Transformer With High Isolation Voltage, Pulse's PG1895NL EFD20 flyback transformer

## Wireless Power Coils

• Wireless Charging Coil Is Just 0.76-mm Thick, Supports Large Charging Area, TDK's WCT38466-N0E0SST101 Qi-compliant wireless charging coil

## **Chokes And Filters**

- Metal Power Inductors Feature High Saturation Current And Low DCR, Taiyo Yuden's MCOIL LCEN series of AEC-Q200-qualified, wire-wound inductors
- *Multilayer Metal Power Inductor Combines Small Size With High Current, Low DCR, Taiyo Yuden's seven new models in two sizes in the LCCN series*
- Multilayer Inductors Meet Evolving Automotive PoC Demands, TDK's MLJ1608WG series multilayer inductors
- EMI-RFI Three-Phase Filter Is Volumetrically Efficient, KEMET's GTX series of metal box three-phase filters

## Cores

• Powder Cores Are Available In Multiple Geometries, Magnetics' Kool Mµ MAX and Kool Mµ Hf core materials in multiple geometries including E, EQ, LP,



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and blocks

• Alloy Powder Cores With Better Bias Come In E Shape And Blocks, Magnetics' Edge powder core materials in E shape and blocks

For more details ...

## November 2022:

**Vendor's Tool Automates Planar Magnetics Design For Power Supply Designs Using Its Offline Switcher ICs,** Power Integrations' PI Magnetics-Designer

For more details ...

## June 2022:

## Power Magnetics Component Roundup

- High-Current Inductors For Server Vcore Power, Pulse's PG2289.XXXHLT, PG2292.XXXHLT, PGL6076.XXXAHLT and PGL6189.XXXHLT families of highcurrent, low-DCR inductors
- Low-Profile Inductors Enable High-Frequency Operation, Sumida's 0603CDWLF/DS and 0805CDWLF/DS inductors
- Rugged Chip Inductors For Power And RF Applications, Gowanda Electronics' SMP0603 ceramic core chip inductor series
- Shielded Inductors Withstand 30-G Peak Vibrations, Bourns' Model SRP1038WA and SRP1265WA automotive-grade power inductors
- Semi-Shielded Inductors Feature High Operating Temperatures, Bourns' Model SRN3030HA, SRN4030HA, and SRN5030HA AEC-200-compliant power inductors
- Integrated E-Field Shield Inductors Come In 2020 Cases, Vishay Intertechnology's Vishay Dale IHLE-2020CD-51 and IHLE-2020CD-5A low-



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profile inductors

- Inductors Offer Saturation Currents Up To 80 A, TDK's PCM120T series of shielded SMT power inductors
- Metal Inductors Offer Improved I<sub>sat</sub> And DCR, Murata's DFE32CAH\_R0 series metal power inductors
- Shielded Inductors Leverage Metal Alloy Powder Core Process, Bourns' SRP2010TMA, SRP2012TMA, SRP2510TMA, SRP2512TMA and SRP3212A series inductors
- Compact Inductors Enhanced For Smartphone Power Circuits, TDK's TFM201208BLE series inductors

### Chokes

- Automotive Common-Mode Chokes Offer High Current Ratings In Small Size, Pulse's PMC9539 series common-mode chokes
- Automotive Bar Core Choke Features Excellent Saturation Behavior, Würth Elektroniks' WE-CHSA magnetically shielded bar core choke
- Common-Mode Chokes Deliver Higher Current Density With EP13 Core Shape, Pulse's PAC6034 series common-mode chokes
- Automotive Wirewound Ferrite Inductors Offer Wide Selection, Optical Inspection, Taiyo Yuden's LCXH series inductors
- CM Choke Provides Low Profile, High Shock And Vibration Resistance, Vishay Intertechnology's Vishay Custom Magnetics IHCM-2321AA-10 common-mode choke

## **Transformers**

• Power Transformers Tout High Isolation In Compact Footprint, Pulse's PGT646xNL series of EFD15 power transformers



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- Automotive-Grade Flyback Transformer For SiC Device Switching, Pulse's PM9595NL IATF flyback transformer
- Transformer For Battery Management Provides 4300-Vdc Isolation, Würth Elektronik's WE-BMS transformer for battery management systems

#### **Current Sensors**

- Smaller Current Transducers Feature Up To 2-MHz Bandwidth And 200 A-Primary Current, Danisense's DT series current transducers
- 50-A Current Sense Transformer Suits Kilowatt-Plus Power Supplies, Pulse's PAS6322 series current-sense transformers

#### Wirleless Power Coils

• Wireless Power Coils Support High Power Levels and High Data Rates, Würth Elektronik's WE-WPCC WPT/NFC wireless power coils with an integrated NFC antenna

For more details ...

## December 2021:

## Power Magnetics Component Roundup

- Inductors Support Trans-Inductor Voltage Regulator Topology, Pulse's PGL6215.XXXHLT trans-inductor and PGL6312.XXXHLT compensation inductor
- High-Current, Low-Inductance Power Inductors For ADAS, TDK's HPL505032F1 power inductors
- Small Coupled Inductors Feature High Saturation Currents, TDK's EPCOS series B82472D6 coupled inductors
- Automotive-Grade Metal Inductors Feature Low DCR, Sumida's CDMCxxDxx/L150 automotive-grade SMD metal power inductor series



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- Inductor Offers Operation to +155°C in 7575 Case Size, Vishay Intertechnology's Vishay Dale IHLP-7575GZ-51 low-profile, high-current inductor
- Compact, Thin-Film Inductors For Automotive Power Circuits, TDK's TFM201210ALMA series of thin-film metal power inductors
- Inductors Balance Shielding And Cost Requirements, Bourns' automotivegrade Model SRN6045HA series power inductors
- Inductor In 2020 Case Size Operates To +180°C, Vishay Intertechnology's Vishay Dale IHLP-2020CZ-8A automotive-grade high-current inductor
- Vertical-Mount Inductor In 4025 Case Saves Space, Increases Efficiency, Vishay Intertechnology's Vishay Dale IHVR-4025JZ-3Z vertical-mount inductor
- Inductor Delivers Ultra Low DCR for Multi-Phase Power Supplies, Vishay Intertechnology's Vishay Dale IHSR-2525CZ-51 commercial IHSR hightemperature inductor
- Inductors For 5G Improve I<sub>SAT</sub> And DCR, Murata's DFE21CCN\_EL series of power inductors for 5G smartphones

## Transformers

- Push-Pull Transformers Offer More Options For Low-Power Isolated Power Supplies, Würth Elektronik's 750317828, 750317829, 750317830, and 75031733 MID-PPTI tiny push-pull transformer series
- Current Transformers For Charging Infrastructure Are Versatile, Vacuumschmelze's current transformer module for EV charging stations
- Reinforced Power Transformers Are Rated Up To 24 W And 3000 Vrms, Pulse Electronics' EP13R power transformer series
- Transformers Provide Isolated Power For Serial Communications, Bourns' Model PAD00x-T764 isolation transformer series



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#### Cores

- Cores Feature High Efficiency And Better DC Bias, Magnetics' High DC Bias Edge cores
- Cores Combine High Saturation And High DC Bias, Magnetics' High DC Bias XFlux cores

For more details...

## June 2021:

## **Power Magnetics Component Roundup**

- Automotive-Grade Shielded Power Inductors Offer Low DCR, High Current Ratings, Bourns' Model SRP7028AA, SRP7050AA and SRP1038AA series inductors
- AEC-Q200 Compliant High-Current Shielded Power Inductors, Bourns' Model SRP1580CA, SRP1510CA and SRP1513CA inductor series
- Composite Inductors Offer High Energy Storage Density, Pulse Electronics' PA/PM5430/5432/5433 series inductors
- Molded Powder Inductors Offer Wide Range of Values, Multiple Cross References, Pulse Electronics' commercial-grade PA540x and PA544x and automotive-grade PM540x and PM544x inductor series
- *High-Current Inductors For VR13.5 And VR14 Voltage Regulators, Pulse Electronics' PA5034.XXXHLT, PA5189.XXXHLT, PA5190.XXXHLT, PA5300.XXXHLT and PG2110.XXXHLT inductor families*
- Power Inductors Are Optimized For True Wireless Stereo Devices, TDK's PLEA67 series of inductors



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- Inductor Delivers 420-A Saturation Current In 1500 Case Size, Vishay Intertechnology's Vishay Dale IHXL-1500VZ-5A automotive-grade inductor
- High Current Inductors In The 1012, 4030 and 5030 Packages, Würth Elektronik's new members of the WE-HCM series of surface-mount highcurrent inductors
- Inductors Offer High Saturation Currents In 2010 Case Size, Würth Elektronik's WE-HCF-2010 high-current inductor

#### Transformers

- 350-kW Planar Transformer In Full-Bridge Topology, Payton Planar Magnetics' high-power planar transformer design
- Automotive-Grade Push-Pull Transformers Offer Several Levels of Isolation, Pulse Electronics' PM2180, PM2185, PM2155, and PM2190 transformer series
- Pulse Transformer Provides High Withstand Voltage And Coupling, Sumida's CIUH7D46 surface-mount pulse transformer
- Compact Transformers For DC-DC Converters Meet IEC 60664-1 Creepage And Clearance, TDK's EPCOS E10 EM series of insulated SMT transformers

#### **Chokes And Ferrite Beads**

- *Miniaturized Inductors Optimized For In-Vehicle PoC Systems, Murata's* LQW21FT\_0H series wire-wound ferrite inductors for power lines
- Round-Wire-Coil Common-Mode Chokes Increase Current Density, Pulse Electronics' PAC6006 series of common-mode chokes
- Compact SMT High-Current Chokes Offer 1.0 μH To 30 μH, TDK's ERU19, ERU24 and ERU27 (B82559\*) series EPCOS ERU-SMT power inductors
- Compact, Current-Compensated Ring-Core Chokes Handle 10 A To 17 A, TDK's series of EPCOS double-ring core chokes



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- CM Chokes Offer DM Suppression, High Current Capability, Würth Elektronik's WE-FCLP powerline choke and WE-CMDC data line choke
- Compact, Low-noise, Low-loss Chokes For MRI And CT Applications, SMP's chokes for medical technology applications
- Chip Ferrite Beads For Automotive Applications Up To 175°C, Murata's BLM18KN\_EH series chip ferrite beads

For more details...

## December 2020:

## Power Magnetics Component Roundup

- Power Inductor Design Benefits Power Management In ADAS And AD Systems, TDK's CLT32 series power inductors
- Automotive Power Inductors Deliver 47 μH In Small Package, TDK's BCL322515RT AEC-Q200-qualified power inductors
- Ultra-low DCR Power Bead Inductors For Computing And Storage Applications, Pulse Electronics' PA4059, PA5041, PA4990, PG1712, PA4987 and PA5187 power bead inductors
- SMD Power Inductors Handle High Temperatures And High Currents, Sumida's CDEP13D\*\*/T150 line of AEC-Q200 qualified SMD inductors
- Automotive-Grade Dual Inductor Reduces Space Requirements In Class D Amplifiers, Vishay Intertechnology's Vishay Dale IHLD-2525GG-5A dual inductor
- High Current Inductor In 4024 Case Delivers Improved Saturation And Temperature Stability, Vishay Intertechnology's Vishay Dale IHVR-4024KE-51 high-current inductor
- Shielded Flat-Wire Coil Delivers High Rated Current And High Saturation Performance, Würth Elektronik's WE-HCFA high-current inductor
- Rugged High-Current Inductors With Soft Saturation Behavior, Würth Elektronik's WE-HCIT robust THT inductors for vibration-sensitive applications



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• Power Inductors Feature Low AC Winding Losses And Other Benefits, Würth Elektronik's WE-MAPI coiled metal-alloy power inductors in 5020, 5030 and 4020HT sizes

#### **Transformers**

- DC-DC Transformers Double The Power Density, Pulse Electronics' EP7+ series (PA5099.XXXNL and PA5100.XXXNL) and EP10+ series (PA5130.XXXNL and PA5131.XXXNL) dc-dc transformers
- Transformers Offer Wide Array of Power And Platform Designs For PoE Applications, Signal Transformer's SPoE series surface-mount transformers

#### Wireless Charging Coils

• Wireless Charging Coils Come In Single And Multiple Windings, Signal Transformer's wireless charging transmission coils (WCC)

## **Chokes And Ferrite Beads**

- Dual-Choke Filter Inductors Deliver Superior Suppression In Signal And Power Line Applications, Bourns' Model DR334A line filter series
- Low-Profile Chokes Deliver CM And DM Filtering For DC Power Line Applications, Bourns' SRF1206A and SRF9045A series high-current commonmode chokes
- High-Current Toroidal Choke Design Kit Features 15 Popular Part Numbers, Signal Transformer's high-current toroidal choke (HCTC) design kit
- EMI Suppression Ferrite Beads Come In More Case Sizes, Würth Elektronik's WE-CBA Ferrite Bead families in 0402, 0603, 0805, 1206, 1806 and 1812 packages

#### Cores

- LP And EER Shape Cores Come In New Sizes, Magnetics' LP shape powder cores in size 36 x 24 mm, and EER shape powder cores in 25.5 mm and 40 mm
- Nanocrystalline Cores Shrink Common-Mode Chokes, Magnetics' nanocrystalline cores in toroids or split cores from 5 mm to 145 mm

For more details...



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## June 2020:

## **Power Magnetics Component Roundup**

#### **Power Inductors**

- High-Current Shielded Inductors For Consumer And High-Temperature Applications, Bourns' SRP series power inductors
- Shielded Inductors Feature Low Resistance, High Saturation Current, Bourns' Model SRP0xxx series shielded power inductors
- Molded Inductors Offer Ratings To 120 V And Low Losses, Coilcraft's XEL401xV, XEL4020V and XEL4030V molded power inductors
- Inductors Reduce DC Resistance By Up To 40%, Coilcraft's XGL4030 series of high-performance, molded power inductors
- Expanded Line Of High-Temperature Shielded Drum And Ring Core Inductors, Sumida's CDRH50D28B/T150 series of high-temperature shielded drum and ring core inductors
- Compact Dual Inductors With High Saturation Current, TDK's EPCOS series B82477D6 dual inductors
- Automotive-Grade Inductor Offers Stable Inductance Up To +180°C and 150 A, Vishay Intertechnology's Vishay Custom Magnetics IHDM-1008BC-3A edge-wound, through-hole inductor
- Integrated E-Shield Inductors Save Space, Vishay Intertechnology's Vishay Dale IHLE-5050FH-51 and IHLE-5050FH-5A low-profile, high-current inductors
- Low-Profile, Edge-Wound Inductor Handles Saturation Current To 230 A, Vishay Intertechnology's Vishay Dale IHDF-1300AE-10 edge-wound, throughhole inductor

## Transformers

• Flyback Transformer Enhances DC-DC Efficiency In Isolated Mode, Bourns' SM13117EL transformer for PoE powered device and PWM controller applications



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- Environmentally Resilient Transformers For Low-Voltage Lighting, Signal Transformer's Lighting Transformer series
- Current-Sense Transformers Support Overload Detection And Load Shedding, TDK's B82801A1 series EPCOS SMT current-sense transformers

## **Chokes And Beads**

- Common-Mode Toroidal Chokes Provide Vertical PCB Mounting And High Current Capacity, Signal Transformer's HCTC series toroidal chokes
- Surface-Mount High-Voltage Double Chokes Offer Lower Losses, Würth Elektronik eiSos' WE-TDC HV series double chokes
- Storage Choke For Filtering In Class D Amplifiers, Würth Elektronik's WE-LHMD surface-mount storage choke
- Ferrite Chip Beads Deliver Small Size For Automotive Power Supplies, Murata's BLM18SP\_SH1 series ferrite beads

#### Wireless Power Coils

- Wireless Charging Coils Are Direct Replacements For EOL Devices, Vishay Intertechnology's IWAS3222CZEB190JF1, IWAS3827ABEB110JF1, IWAS3827ABEB100JF1, IWAS4832ABEB110JF1, IWAS4832ADEB150JF1, IWAS4832AAEB220JF1, IWTX4646DCEB240JF1, IWTX47R0DAEB6R3JF1 and IWTX47R0EBEB240JF1 WPC-compliant wireless charging coils
- Wireless Power Coil Combines Charging Function and NFC, Würth Elektronik's WE-WPCC WPT/NFC coil and the high-power WE-WPCC 760308101311, WE-WPCC 760308101411 and 760308101410 wireless power transfer coils

#### **Design Tool And Magnetics Literature**

- Tool Calculates Application Parameters For Latest Ferrite Materials And Core Shapes, TDK's Magnetic Design Tool
- White Paper Explores Quality Issues And Strategies In Magnetics Manufacturing, Triad Magnetics' Why Is Quality Important? Quality Control and Quality Assurance in Magnetics white paper

For more details...



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## December 2019:

## **Power Magnetics Component Roundup**

#### **Power Inductors**

- Inductors Are Optimized For 48-V Automotive Systems, Coilcraft's AGM2222 power inductors
- Shielded Inductors Deliver High Inductance, Coilcraft's XAL7050 hightemperature power inductors
- Robust, Automotive-Grade Inductors Provide Added Reliability, Eaton's automotive-grade HCM1AV2 high-current power inductors
- SMT Inductors Enable More Efficient, Compact DC-DC Converters, Kemet's METCOM series metal-composite power inductors
- Surface-Mount Inductors Target Industrial And Telecom Applications, TT Electronics' HM66M and HM78M series shielded power inductors
- Surface-Mount Power Inductor Suits Class D Amplifiers, Sumida's C2DEPIH99 shielded power inductor
- Metal Core Inductors Are Designed For Automotive LED Headlights, TDK's SPM-VT metal-core power inductors
- Thin-Film Inductors Lower DCR For Mobile Devices, TDK's TFM201208ALD miniaturized thin-film power inductor
- Inductors Offer High-Temperature Operation For Computer And Telecom Applications, Vishay Intertechnology's Vishay Dale IHLP-1212AZ-51, IHLP-1212AB-51, and IHLP-1212BZ-51 low-profile, high-current inductors
- Small Automotive-Grade Inductors For Under-Hood Applications, Vishay Intertechnology's Vishay Dale IHLP-1212AZ-A1, IHLP-1212AB-A1, and IHLP-1212AB-5A low-profile, high-current inductors
- Rugged Surface-Mount Inductors Are Designed To Mil Specs, API Delevan, API Delevan's HRSPD125 shielded, surface-mount power inductors

## **Inductor Cores**

• Powder Cores Are Designed For Cutting Edge Performance, Magnetics' Edge powder alloy cores



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### **Magnetics Literature**

• Free E-Book Explains UL Class 2 Power Transformers, Triad Magnetics' Understanding UL Class 2 Power Transformers e-book

For more details...

## August 2019:

Planar Transformers For Active-Clamp Forward Topology And Wide Input Range, Champs Technologies' P26R6-AC offline series of planar transformers For more details...

## May 2019:

## Power Magnetics Component Roundup

- Power Inductor Is Magnetically Shielded, SUMIDA's CDB80D62 high-current inductor
- AEC-Q200 Inductors Use Latest Composite Molded Core Materials, TT Electronics' HA72L series molded inductors
- Inductors Bring High Performance To Automotive And Industrial Applications, Pulse Electronics Power BU's PM220X series surface-mount inductors
- Thin-Film Metal Inductors Address Space Constraints In ADAS Applications, TDK's TFM252012ALVA thin-film metal power inductors
- Molded Power Inductors Mimimize Losses, Coilcraft's XGL4020 series power inductors
- 2-in-1 High-Temperature Inductor Targets LED Headlights, Other Uses, SUMIDA's CDRCH12D78BT150 high-temperature inductor
- SMD Power Inductor Has Low DCR, SUMIDA's CDPH79D72 is a high-current power inductor
- Inductor Operates To +180°C For Under Hood Applications, Vishay Intertechnology's IHLP-6767GZ-8A high-current inductor



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• Inductor In 5050 Case Operates To +155°C, Vishay Intertechnology's Vishay Dale IHLP-5050EZ-5A high-current inductor

## **Transformers**

- Gate-Drive Transformers For Demanding Battery Management Systems, TT Electronics' HA42A and HA86A series gate-drive transformers
- High-Frequency Wire-Wound Transformers For CCM Flybacks, Pulse Electronics Power BU's PA4470.XXXNL wire-wound transformers
- Flyback Transformer Is Tailored To High-Voltage Reference Design, SUMIDA's CEFD2010 and CEP1311E surface-mount flyback transformers
- Extended Rail Flyback Transformers Meet Isolation Specs Without Flying Leads, Würth Elektronik's MID-OLRM flyback transformers
- Planar Transformers Are Optimized For 200- to 700-kHz Switching, Premier Magnetics' PTxxx series of frequency-optimized planar transformers

#### Chokes

• Small Form Factor Common Mode Chokes Handle Up To 9 A, Pulse Electronics Power BU's PA4339.XXXNLT common-mode choke series

For more details...

## December 2018:

## Power Magnetics Roundup: EMI Filters

- EMI Filters Offer Wide Temperature Range, Many Options, XP Power's chassis mount and IEC inlet EMI filters
- Three-Phase Book Style EMC Filters Are Compact, Schaffner's FN 3287 and FN 3288 series EMC filters
- Three-Phase Mains Filters Target Industrial Machines, Schurter's FMAC NEO single-stage filter family
- Compact Power Entry Module Integrates Filter, Schurter's DD12 power entry module series
- DIN Rail Mounted EMI Filter Series Eases Installation, API Technologies' API's 62-STB series EMI filters for medical to metrology grade applications



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- High-Performance Three-Line EMC Filters Meet EN 61800–3:2004+A1:2011, TDK's B84243 series of EPCOS 3-line EMC filters
- EMC Filters With High Frequency Stability Are Compact And Quiet, SMP Sintermetalle Prometheus' EMC filters for power electronic applications
- Filtered Power Entry Modules Meet IEC IEC62368-1, Schaffner's FN 9280 and FN 9290 families of filtered, IEC power entry modules
- Common-Mode Line Filters Replace Discontinued Components, Premier Magnetics' PMCU series of common-mode line filters for switching power supply applications

For more details ...

*Current Sense Transformers Feature Built-In Sense Winding Capability, Triad Magnetics's CST25 series current-sense transformers* 

For more details...

## September 2018:

**Double Choke With Molding Technology Suits DC-DC Converters,** Würth Elektronik eiSos' WE-MCRI double choke

For more details ...

## August 2018

#### Power Magnetics Component Roundup

- Automotive-Grade Molded Inductors Handle High Transient Current Spikes, Pulse Electronics Power BU's automotive-grade PA434X.XXXANLT series and PA4346/PA4349 series molded inductors
- Low-Profile Power Inductors For Advanced Driver Assist Systems, TDK's MLD2012 multilayer inductor for automotive power circuits
- Inductors Are Qualified To MIL-STD-981 Class S for Space-Grade Applications, Vishay Intertechnology's SGIHLP series low-profile, high-current IHLP inductors



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- High-Current Inductors Are Highly Customizable, MPS Industry's HEW highcurrent inductors
- Low-loss Power Inductors For High-frequency Applications, Coilcraft's XEL50xx series high-performance, molded power inductors
- Coupled Inductors Provide 1500-V Isolation In Small Package, Coilcraft's LPD8035V series miniature, high-voltage 1:1 coupled inductors
- AEC-Q200 Certified Power Inductors Are Small And Low Profile, TT Electronics' HA66 series SMD power inductors
- Surface-Mount Coupled Inductor For SEPIC Converters, Sumida's CDRH127B 2-in-1 type space-saving SEPIC inductor
- Low-Profile SMT Inductors Deliver High Energy Storage Density, Pulse Electronics Power's PA5001, PA5002, PA5003, PA5004, PA5005, PA5006, and PA5007 high-current, low-profile SMT inductors
- High Temp Inductor Enhances Current Density For Multi-Phase Converters, Vishay Intertechnology's Vishay Dale IHSR-4040DZ-51 high-temperature commercial inductor

## Chokes

- Common-Mode Chokes Suppress Noise, Maintain High Efficiency In EPS Applications, TT Electronics' HA19 series of common-mode chokes for electronic power steering
- High-Current Planar Choke Inductor Delivers Wirewound Performance In Smaller Size, Vishay Intertechnology's IPLA 32 high-current planar choke inductor
- Dual-Mode Chokes Suppress CM And DM Noise, Save Space, Triad Magnetics's CMF Series Dual Mode Chokes

## Transfomers

• Isolation Transformers And Common-Mode Chokes Target EVs And Energy Storage Systems, Pulse Electronics' Networking Battery Management System



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components now include a wide range of isolation transformers and commonmode chokes for use in electric vehicles and energy storage systems

- Transformers Deliver 60 W For PoE++, TDK's B82806D0060A series EPCOS transformers
- *Planar-Packaged Gate-Drive Transformers Save Space, Vishay Intertechnology's MGDT series miniaturized gate-drive transformers for highpower military, aerospace, industrial, and medical applications*
- Line-Frequency Power Transformers Feature Updated Functionality And Appearance, Signal Transformer's EcoTrans Standard series transformers
- CCFL Transformers Are Still In Demand, MPS Industries continues to offer its standard and custom CCFL transformers even as others discontinue theirs.
- Transformers Are Pre-approved for Push-Pull drivers, Murata Power Solutions' 782100 series of transformers for use with Peregrine (pSemi) PE22100 pushpull dc-dc converter driver ICs
- Compact Current-Sense Transformers Sense Up To 40 A, Wurth Electronics Midcom's 40-A MID-SNS current-sense transformers
- Current-Sense Transformers Accommodate SMPSs, Triad Magnetics' CST25 series current-sense transformers for high-frequency applications

For more details ...

## December 2017

## **Power Magnetics Component Roundup**

## **Power Inductors**

• Molded Power Inductors Feature Specialized Terminations, Coilcraft's XTL7030 and XAR7030 series of molded power inductors



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- Automotive-grade Power Inductors Offer Superior Performance In Compact Package, Coilcraft's SRT8045 series of magnetically shielded power inductors
- Inductors Enhance Automotive Reliability In Lighting, Powertrain, Infotainment and Telematics, Eaton's HCM1A product line of high-current power inductors
- *High-Current Inductors Shorten Lead Times, MPS Industries' HWI57A2 and H1300 series high-power inductors*
- 6-mm<sup>2</sup> and 10-mm<sup>2</sup> High-Rel Inductors Withstand 150°C, Murata Manufacturing's MDH6045C/MDH10060C series of winding power inductors for automotive electronic equipment
- 22-µH Inductor Features 0.6-mm Profile For Wearable Devices, Murata Manufacturing's LQH2HPN\_DR series of 2.5-mm x 2.0-mm winding power inductors
- 15-µH inductor Comes In 0402 Size, Murata Manufacturing's LQW15DN series inductor for smartphones
- Metal Alloy Inductors Shrink Into 0603 Case Size, Murata Manufacturing's DFE18SA series of metal alloy type inductors
- Shielded Metal-Hybrid Inductors Offer Higher Inductances In Small Footprint, Sumida's CDMT40 series of metal hybrid inductors
- Thin-film Metal Inductors Deliver Low DCR For Power Supply Circuits, TDK's TFM160808ALC thin-film inductor
- Robust SMT Inductors For High Efficiency, Automotive DC-DC Converters, TT Electronics' HM73E-10 series of SMT miniature power inductors
- Coupled Inductors Target Specific DC-DC Topologies For Automotive Applications, TT Electronics' HA78D series of coupled inductors
- AEC-Q200 Qualified Inductor Boasts 125-A Continuous Current Rating, Vishay Intertechnology's Vishay Dale IHXL-2000VZ-5A inductor
- E-Shield Inductor Reduces Electric Fields 20 dB At 1 cm, Vishay Intertechnology's Vishay Dale IHLE-2525CD-51, IHLE-3232DD-51, and IHLE-4040DD-51 series of low-profile, high-current inductors



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- Inductor Offers High Temperature Performance for Extreme Environments, Vishay Intertechnology's Vishay Dale IHLP-1616BZ-51 low-profile, highcurrent inductor
- High-Frequency Inductors Boost DC-DC Efficiency, Vishay Intertechnology's IHLP-1616BZ-0H extended-frequency inductor
- E-Shield Inductors Lower Costs and Save Space In Automotive Designs, Vishay Intertechnology's Vishay Dale IHLE-2525CD-5A, IHLE-3232DD-5A, and IHLE-4040DD-5A low-profile, high-current inductors
- Low-Profile Inductors Save Space in Portable Electronics, Vishay Intertechnology's Vishay Dale IFL and IFLS series of low-profile power inductors
- Space-Saving Inductors Operate To +155°C For Under-Hood Automotive Applications, Vishay Intertechnology's Vishay Dale IHLP1616BZ-5A lowprofile, high-current inductors

## **Chokes And Ferrite Beads**

- Common-Mode Inductors Suit Aerospace And Other High-Rel Applications, Exxelia's TCM series common-mode inductors
- 0402 Ferrite Bead Suppresses Noise Over Wide Frequency Range, Murata Manufacturing's BLM15EG\_SH1 series chip ferrite bead
- Ferrite Bead Extends Impedance To 1000 Ω In 0603 Case Size, Murata Manufacturing's BLM18KG series of high-current, 0603 size ferrite beads
- Power Line Inductors Support High-Speed PoC interface In Automotive Applications, Murata Manufacturing's LQW32FT series inductors for automotive PoC circuits
- Common-Mode Chokes Suppress Noise In Powertrain And Safety System ECUs, Murata Manufacturing's DLW5ATH/DLW5BTH series of common-mode choke coils
- Soft Termination Protects Beads And Inductors Against Board Flexure And Solder Cracks, TDK's KMZ1608 and KPZ1608 series multilayer chip beads and the KLZ1608 and KLZ2012 series multilayer inductors



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 Chokes For Automotive Power Over Coax, TDK's ADL3225V choke for automotive power over coax (PoC) applications

#### **Transformers**

- Flyback Transformer Delivers High Isolation For Motor Control And Inverter Applications, TT Electronics' HM210-05K060LFTR flyback transformer for use with Avago's ACPL-32JT/302J IGBT chipset
- Planar Transformers For Mil/Aerospace Target Popular Power Supply Topologies, Pulse Electronics Military & Aerospace's PL102XX (140 W) and PL103XX (250 W) planar transformer families
- Offline Transformers For LLC Resonant Half-Bridge Converters Up To 400 W, Wurth Electronics Midcom's MID-LLCEPC series of offline transformers
- Custom Capabilities Catalog Includes Three New Toroidal Packages, Wurth Electronics Midcom's newest Capabilities Catalog
- Transformers Sense Current Up To 40 A, Coilcraft's CST2020 series current sense transformers
- 1000Base-T PoE Parts Support 140 W Power Delivery, Pulse Electronics' HX6098NL Ethernet transformer/choke, JK0-0229NL connector module and J0B-3563NL connector module

For more details...

## December 2016

#### **Power Magnetics Component Update**

- Inductors Are Optimized for High-Frequency VRM10.0 Applications, Vishay Intertechnology's, Vishay Dale IFLR series of low-profile, high-current inductors.
- Power Inductors Minimize Losses At 2 To 5 MHz And Beyond, Coilcraft's XEL60xx family of high-current inductors
- High-Current Inductors Come In Low-Profile Surface-Mount Package, MPS Industries' HWIA2918S series surface-mount inductors



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- Flat Helical Winding Yields Low-Profile for High-Current Inductors, TDK's EPCOS ERU16 choke series
- Company Adds Metal Alloy And Other Power Inductors, Murata Group's Toko metal alloy inductors
- Broad Line Of High-Power Toroidal Inductors Offer In-Stock Availability, Abracon Holdings' ATCA-XX line of toroidal inductors
- *High-Temperature Inductors Suit LED Headlights and ADAS Applications, Sumida's CDRH80D65B/T150 high temperature-resistant inductor series*
- *Miniature Inductors & CM Chokes Are Cost Optimized, Beta Transformer Technology's BPI series high-reliability power inductors and BCM series common-mode chokes*
- Nanocrystalline Chokes Deliver Higher Impedance For EMI Filters, Pulse Electronics' PA441xNL series of common-mode chokes
- Flybuck Transformer Powers PLC Module, Wurth Electronics Midcom's 750315856 flybuck transformer for TI's TIDA-00550 PLC Analog Input Module
- Hybrid Planar Transformers Offer Lower Cost, Smaller Packages, Vishay Intertechnology's TPL-2516 series hybrid planar transformers
- AEC-Q200 Certified Flyback Transformer Targets High-Temperature Applications, TT Electronics' HA00-10043ALFTR flyback transformer
- Transformers For Iso-Buck Converter, Wurth Electronics Midcom's series of isolated buck transformers for Maxim Integrated's MAX17681 Iso-Buck dc-dc converter

For more details...

## July 2016

## **Power Magnetics Component Update**

• Surface-Mount Power Inductors Target Automotive Applications, TT Electronics, TT Electronics' HA78 series of power inductors



Power Magnetics News Sponsored by Magnetics

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- High-Current Inductors For High-Frequency Applications, Coilcraft's SLR family of shielded power inductors
- Automotive-Grade Wound Inductors Come In 1212 Case Size, Murata Manufacturing's LQH3NPN\_ME and LQH3NPZ\_ME series of wound-type power inductors
- Surface-Mount Inductor Suits PV Inverters And UPSs, Sumida's CDPQ2419 series of high-current power inductors
- *High-Current Inductors For LED Headlights, Sumida's CDEP15D90/T150 lowprofile power inductors*
- Metal Hybrid Inductor Offers Low Loss, Reduced Electrical Noise, Sumida's CDMT40D20 series of high-current inductors
- Thin-Film Metal Inductor Suits Demanding Automotive Designs, TDK's TFM201610ALMA thin-film metal power inductor
- Inductors In 1212 Case Size Feature Profiles Down to 0.8 mm, Vishay Intertechnology's IHHP series of high-current power inductors
- Power Inductors Fill Gap Between 1812 And 3013 Case Sizes, Gowanda Electronics' SMP2512 series of wirewound, molded power inductors
- Surface-Mount Gate-Drive Transformers Deliver 5000-Vrms Isolation, Pulse Electronics' PH9400 series of gate-drive transformers
- Stepdown Power Transformers Are Now Certified to UL 506/UL5085-2, Signal Transformer's SLT series of stepdown power transformers
- Web Tool Aids Selection Of Common-Mode Chokes, Coilcraft's Common-Mode Choke Finder
- AC Common-Mode Choke Also Prevents Normal-Mode Noise, Sumida's LF2420B ac common-mode choke coil
- Output And Storage Chokes Are Compact, TDK's ERU19 series of chokes
- Tx Coil Saves Space in Qi-Compatible Wireless Charging Pads, Vishay Intertechnology's Vishay Dale IWTX-47R0BE-11 6.3 μH wireless charging transmitter coil

For more details...

March 2016:



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## APEC 2016 Exhibition Offers Vast Showcase of Magnetic Components

- *Planar Tranformers From Watts To 100+ kW (Payton Planar)*
- Standard And Custom Magnetics And Current Sensors (Ice Components)
- Single-Turn Inductors for VRM 10.0 (Vishay Intertechnology)
- Metal Hybrid SMD Power Inductors (Sumida America Components)
- Metal Alloy Power Inductors, Chip Bead Ferrites And Design Tools (Wurth Electronics Midcom)
- Distributed Air Gap Cores, Assembled U Cores And Large Toroids (Magnetics)
- Laser Direct Structuring Bobbins And 3D Printing (Norwe)
- Broadband Conical Inductors For Bias Tees (Gowanda Electronics)

For more details...

## November 2015:

## **Power Magnetics Component Update**

This article reports on just over a dozen power magnetic components introduced over the past six months. Among the parts profiled here are transformers intended for switched-mode power supply applications, various isolation transformers, and several small, low-profile inductors for dc-dc converters in automotive and other applications. This article represents a follow-up to the Power Magnetics Component Update published in the June 2015 issue and other magnetics articles published in HOW2POWER TODAY.

## Transformers For Switched-Mode Power Supplies

- 120-W Planar Transformers For Active-Clamp Forward Topology (Coilcraft)
- Compact SMD Push-Pull Transformers Provide A Choice Of Turns Ratios
  (TDK)

## **Isolation Transformers**

- Power Transformers Deliver 5-kV Isolation In Low-Profile SMT Package (Pulse Electronics)
- Power Isolation Transformers Are Certified To UL, CSA, VDE And IEC Safety Standards (Signal Transformer)
- Medical-Grade Power Transformers Offer 4-kV Isolation, Low-Voltage Stepdown (Triad Magnetics)



Power Magnetics News Sponsored by Magnetics

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### **Power Inductors**

- Power Inductors For Automotive Come In 1210 And 1812 Case Sizes (Murata)
- Shielded, SMT Power Inductors Offer Ultra-Low Profile (Pulse Electronics)
- Small SMD Power Inductors Perform Like Larger Types (Sumida)
- Automotive-Grade High-Current Inductors Operate To +180°C (Vishay Intertechnology)
- Dual Inductors Save Space In Class D Amplifiers (Vishay Intertechnology)

#### Chokes

- Mini Powerline Common-Mode Chokes Stand Up To Harsh Automotive Environments (Murata)
- Chokes and LC Filters Offer Expanded Performance Range (SMP Sintermetalle Prometheus)
- Vertical Design Shrinks Footprint Of Powerline Chokes (TDK)

Read the full story...

## June 2015:

## **Power Magnetics Component Update**

This article reports on 20+ power magnetic components introduced over the past six months. Among the parts profiled here are numerous power inductors targeting dc-dc converters, including several AEC-Q200-compliant inductors for automotive applications. Among the power inductors, low-profile components are also prominent. Two of the high-current inductors featured here employ flat windings for improved performance. In addition, there are planar transformers offering high power, gate-drive transformers with special certifications and chokes for high-temperature applications. This article represents a follow-up to previous magnetics articles published in HOW2POWER TODAY.

- Flat-Wire High-Current Inductors Offer Many Mounting Configurations (MPS Industries)
- AEC-Q200-tested Inductors Enhance Reliability Of Automotive Systems (Eaton)
- Automotive-Grade Inductors Offer Wide Range Of Values (Bourns)
- Inductor offers Low-Profile, Semi-Shielded Benefits (Bourns)
- Low-Profile Inductors Feature High Saturation Currents (Vishay Intertechnology)
- Inductors in 2020 Case Operate To 155°C (Vishay Intertechnology)



Power Magnetics News Sponsored by Magnetics

This file lists magnetic component news stories published in <u>How2Power Today</u>. The products featured here mainly include inductors and transformers used in the design of dc-dc converters and ac-dc power supplies, but also related devices such as wireless charging coils, current-sensing transformers and other transformers used to measure power supply-related parameters.

- Automotive-Grade 4040-size Inductors Operate to 180°C (Vishay Intertechnology)
- Shielded Inductors Provide High Current Handling And Low DCR (Coilcraft)
- High-Inductance Inductors Target Electric Vehicles (Coilcraft)
- Automotive-Grade Inductors Feature High Heat Resistance, Mechanical Strength (TDK)
- SMD Inductor Targets Portable Devices (Sumida)
- Multilayer Chip Inductors Stand Less than 1 mm Tall (Murata)
- Through-Hole Inductors Are Low-Cost Options (Coilcraft)
- Inductors Fill Gap Between 1812 And 3013 Case Sizes (Gowanda Electronics)

#### Transformers

- Planar Transformers Offer Small Size For 500-W To 2-kW Applications (Standex-Meder Electronics)
- Transformers Deliver 5000-V Isolation In SMT Package (Pulse Electronics)
- Gate-Drive Transformers Feature Reinforced Isolation Per IEC61558 And IEC60601 (Pulse Electronics)
- Gate-Drive Transformers Receive VDE Certification (VAC)
- Isolation Transformers Meet An Array Of Safety Standards (Signal Transformer)

#### Chokes

- 2020-Size CM Chokes Guarantee Operation To 150°C (Murata Manufacturing)
- Common-Mode Chokes Suit Automotive Applications (Sumida)

Read the full story ...

## December 2014:

## **Power Magnetics Component Roundup**

This article presents a roundup of nearly two dozen power magnetic components and related products introduced over the past 12 months. The components profiled here include numerous power inductors targeting dc-dc converters, particularly those used in space-sensitive applications. Among the other products featured are chokes, planar transformers, gate-drive transformers, coils for wireless charging and magnetic component models. This article represents a follow-up to the Power Magnetics Update published in the April 2014 issue and other magnetics articles published in How2Power Today.



Power Magnetics News Sponsored by Magnetics

This file lists magnetic component news stories published in <u>How2Power Today</u>. The products featured here mainly include inductors and transformers used in the design of dc-dc converters and ac-dc power supplies, but also related devices such as wireless charging coils, current-sensing transformers and other transformers used to measure power supply-related parameters.

## **Power Inductors**

- Low-Profile Inductors Target Mobile Electronics (Bourns)
- Inductors Offer Shielding Benefits At Reduced Size And Cost (Bourns)
- 1212-Sized Wirewound Inductors Are Ready For Automotive Applications (Murata)
- 2020-Size Wirewound Inductors Handle High Currents (Murata)
- Inductors Feature Improved Shielding, Higher Inductance In Small Packages (Total Frequency Control)
- Low-Profile Inductors Come In Wide Range of Inductances (Total Frequency Control)
- *High-Current Wirewounds Are Just 1-mm Tall (Abracon)*
- Flat-Wire Inductor Modules For Inverter Systems (MPS Industries)
- Flat-Wire Inductors Handle High Current Levels (MPS Industries)
- Metal-Composite Inductors Suit Various Automotive Applications (Sumida)
- Shielded Inductors Offer Choice Of High Inductance Or High I<sub>SAT</sub> (Coilcraft)
- Tiny Shielded Inductors Handle Up To 3.75 A (Coilcraft)

#### Chokes

- Components Combine Common- and Differential-Mode Chokes (Pulse Electronics)
- Chokes Target Buck-Boost Converters In 48-V Automotive Power Systems
  (TDK)

## Transformers

- Gate-Drive Transformers Deliver 2700-V HIPOT In Small Footprint (Pulse Electronics)
- Planar Transformers Promise Short Lead Times, Lower Costs (MPS Industries)
- Flyback Transformers Meet Requirements Of 30-W POE Plus (Coilcraft)
- High-Voltage Transformers Meet Demands of High-Rel Applications (Innovative Power)

## **Coils for Wireless Charging**

- Ferrite Disk Selected For Wireless Power Reference Design (TDK)
- Wireless Charging Rx Coil Delivers High Efficiency for 10-W Applications (Vishay Intertechnology)
- WPC-Compliant Wireless Power Transmit Coils For 12 V (Würth Elektronik)



Power Magnetics News Sponsored by Magnetics

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#### Models and Design Tools

• Models Available For Custom Magnetics (Wurth Electronics Midcom)

Read the full story ....

## September 2014:

## LLC Transformers And PFC inductors Are Optimized For GaN-Based Power Converters

Designed for optimum performance at high switching frequencies, Precision's GaN-ready LLC transformers and PFC inductors leverage the company's expertise in core material selection and parasitic management as well as its extensive selection of Litz wire. These components are available directly from the company as well as through GaN switch providers such as Transphorm and International Rectifier.

More details...

## June 2014:

## *Innovative Current Sensors, Planar Components, And Cores Take The Stage At PCIM Europe*

#### by Cliff Keys, Contributor, How2Power.com

PCIM has become the European showcase for power electronics. This show, which is presented each spring in Nuremberg, Germany brings together a variety of exhibitors to present the latest offerings from the power electronics industry. Among the products on display in the PCIM exhibition are numerous magnetic components including inductors, chokes, transformers, and sensors as well as the cores and coil formers used in the construction of those types of components. At the recently concluded PCIM Europe 2014, which ran from May 20-22, the author met with a number of the magnetics vendors who showed some of their latest magnetics developments for power electronics applications. Among the noteworthy products were improved current sensors and planar transformers featuring innovative design and construction techniques and high-performance core materials.

Read the full story ...

## April 2014:

#### **Power Magnetics Update**



## Power Magnetics News Sponsored by Magnetics

This file lists magnetic component news stories published in <u>How2Power Today</u>. The products featured here mainly include inductors and transformers used in the design of dc-dc converters and ac-dc power supplies, but also related devices such as wireless charging coils, current-sensing transformers and other transformers used to measure power supply-related parameters.

#### by David G. Morrison, Editor, How2Power.com

This article presents an update on recently introduced power magnetic components. The products profiled here include transformers optimized for power over Ethernet (PoE) and smart metering, power inductors with higher saturation current ratings, coupled inductors for use in SEPIC converters, and transformers designed to work with a series of LED driver/controller ICs. This article represents a follow-up to the Power Magnetics Update published in the November 2013 issue of HOW2POWERTODAY.

- Planar Transformers Target PoE And 48-V Network Power Applications (Coilcraft)
- Homogeneous Pressed Iron Cores Enable Higher Saturation Ratings (AVX)
- Flyback Transformers Reduce Footprint 30% Vs. Those Using Horizontal E-Cores (Wurth Electronics Midcom)
- Coupled Inductors Are Crafted For SEPIC And Common-Mode Applications (Vishay Intertechnology)
- Transformers Are Optimized For LED Driver ICs (Premier Magnetics)

Read the full story ...

## November 2013:

## Power Magnetics Update

#### by David G. Morrison, Editor, How2Power.com

This article presents an update on recently introduced power magnetic components. The products profiled here include coils for low-power wireless charging, inductors and transformers for dc-dc applications, and current transformers. Two of the products discussed here are small dc-dc converter modules employing embedded inductors, which highlight the ongoing trend of co-packaging magnetics in point-of-load converters. This article represents a follow-up to the Power Magnetics Update published in the August 2013 issue of How2Power Today.

The following products are described in this article:

- Wireless Charging Receiving Coil Works With Or Without Alignment Magnet (Vishay Intertechnology)
- Micro DC-DC Converters Feature Embedded Inductor With Proprietary Substrate (Murata Americas)
- Miniature Step-up Transformers Suit Energy Harvesting Applications (Coilcraft)
- Split-Core Current Transformers Offer 5-A Output (Accuenergy)



Power Magnetics News Sponsored by Magnetics

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- *High-Power Surface-Mount Inductors Are Tailored To Extreme Environments* (*TT electronics*)
- Tiny 10-A DC-DC Module With Built-In Inductor Achieves High Efficiency (Texas Instruments)

Read the full story ...

## August 2013:

## Power Magnetics Update

#### by David G. Morrison, Editor, How2Power.com

This article presents news about recently introduced power magnetic components. Products profiled here include planar transformers, high-frequency inductors, flyback transformers, and wireless charging coils. There is also news about a magnetics-related Android app. This article represents a follow-up to the more-extensive Power Magnetics Component Roundup published in the June issue of How2Power Today.

The following products are described in this article:

- Planar Magnetics Specialist Updates Website, Adds Android App (Payton Planar Magnetics)
- Flat-Coil Planar Transformers Deliver 500 W For Low-Profile Applications (Pulse Electronics)
- Small Inductors Target High-Frequency, High-Current Applications (XFMRS)
- Low-Cost Miniature Transformers Offer 1500-Vdc Isolation (Coilcraft)
- Qi-Compliant Wireless Charging Coil Modules Improve Efficiency, Lower EMI (Laird)

Read the full story ...

## June 2013:

## Power Magnetics Component Roundup

by David G. Morrison, Editor, How2Power.com

This article highlights more than a dozen new inductors, transformers, and cores targeting a range of power supply applications. These products, which were introduced over the past 12 months or are about to be introduced, boast performance improvements such as greater current handling ability,



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lower losses, higher-temperature or higher-frequency operation, higher dc bias, and smaller size (especially lower package height).

The following components are described in this feature:

- Coupled Inductor Comes In Composite Constructed Case (Vishay Dale)
- Transformers Are Optimized For Popular Offline Switcher ICs (Premier Magnetics)
- Moulded Inductors Provide High Performance, Wide Temperature Range (TT electronics)
- Low-Profile Inductors Support Noise Reduction in High-Frequency Switching Applications (Murata)
- High-Current, Shielded Power Inductors Feature Small Size, Low DCR (Bourns)
- LLC Transformer Provides High Efficiency, Board Space Savings (Precision)
- SMT Power Inductors Expand To Higher Inductance And Current Ratings (Pulse Electronics)
- Low-Profile Inductor Is Rated To 180 A And 155°C (Vishay Dale)
- Semi-Shielded Inductors Are Smaller Than Conventional Shielded Ferrites (Bourns)
- Amorphous Powder Core Delivers Low Core Loss And High DC Bias (Magnetics)
- Large E Core Brings Material Advantages To High-Current Inductors (Magnetics)
- 1.2-mm Tall Power Inductor Boasts High DC Bias Characteristic (Taiyo Yuden)
- *PFC Inductors Feature High-Flux Materials (MPS Industries)*
- Wireless Charging Rx Coil Offers High Permeability Shielding, High Efficiency (Vishay Dale)
- Miniature Power Inductors Handle Currents Up To 32 A (Cooper Bussman)

Read the full story ...

## March 2013:

# Award-Winning Alloy Set The Stage For Wafer-Level Magnetics And PowerSoCs

by David G. Morrison, Editor, How2Power.com



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Enpirion\* received an award at the recent embedded world conference recognizing the company's development of a new magnetic alloy called FCA. This alloy was the cornerstone in Enpirion's development of wafer level magnetics (WLM), a technology that enables this chipmaker to cost effectively build micro-inductors on silicon as they have done in the tiny EL711 dc-dc converter, which operates at a very high 18 MHz. While the development of WLM and the converter IC are impressive, these advances are also viewed as major milestones on a focused technology roadmap that is expected to yield fully monolithic dc-dc converters just a few years from now. This article discusses development of Enpirion's WLM technology, and how it takes the company a step closer to its vision of building a MEMS inductor directly on top of a power converter die.

Read the full story...

\*Now part of Altera.

## November 2012:

## Novel Construction Cuts Power Loss, Size Of High-Current Inductors

- To cut power losses and size, high-current inductors from Precision incorporate novel flatwire and ferrite-core construction.
- The four standard high-current inductor series include bow-tie three pad, bow-tie two pad, bow-tie vertical through-hole, and three-pad inductors.
- Key benefits and performance specifications for the inductors.

More details ...

## June 2012:

## Embedded Inductor Enables Tiny Size, Low EMI For Buck Converters

- The 600-mA LXDC2UR and 1-A LXDC3EP micro dc-dc converters from Murata Americas embed the power inductor within their substrates and mount the I/O capacitors on their substrates, shrinking converter footprints.
- Embedding the power inductor within the converter's ferrite substrate, leads to a reduction in the exposed interconnect path and lowers radiated EMI.
- A comparison of the LXDC2UR dc-dc converter with existing solutions illustrates the size reduction achieved by the new converter.

More details...

## May 2012:

## Planar Transformer Boasts 90-kW Rating



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Weighing under 30 pounds with dimensions of 9 in. x 9 in. x 5 in., Payton's new planar transformer will deliver 90 kW when mounted on a 50°C cool plate.

More details...

## April 2012:

# *Shielded, Wirewound Inductors Offer Greater Current Handling In Small Footprint*

- Measuring 4.9 x 3.4 x 1.4 mm, Coilcraft's PFL4514 shielded, wirewound power inductors offer Isat ratings equal to or better than those of inductors that are two or three times their size.
- Comparing current ratings and sizes of the PFL4514 power inductors with existing inductor models.

More details...

## **August 2011:**

#### High-Temperature Components For Power Design

This Power Product Roundup highlights high-temperature-rated components that may be applicable in power conversion. The components described here have been introduced in recent months. Although not strictly focused on magnetics, this article includes an article titled "Surface-Mount Flat Coil Inductors Target High-Current Applications."

Read the full story...

#### April 2011:

• Payton Planar Magnetics' new line of PFC boost inductors employ Metglass (amorphous) or nanocrystalline core material to achieve high-power, compact designs. An example device measures 70 mm (L) x 55 m (W) x 40 mm (H) and is designed for use in a 5000-W system.

More details...

## October 2010:

## *Resonant Transformer With Extended Ferrite Offers Improved Cooling Under 8 mm*

• Payton Planar Magnetics's 200-W resonant planar transformer measures just 55 mm x 40 mm x 8 mm, enabling it to meet the low-profile requirement in flat screen TVs.



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More details...

## **August 2010:**

## Low-Profile Inductor Enables 1-cm High Power Supplies for LED Televisions More details...

## April 2010:

## Composite Inductors Save Space In DC-DC Converters

- A space-saving alternative to larger toroid, drum core and rod core inductors, the IHLP-6767DZ-01 from Vishay Intertechnology is a series of 0.22- $\mu$ H to 10.0- $\mu$ H composite inductors in the 6767 case size.
- Comparing specifications for IHLP inductors in the 6767 case size with those of IHLP inductors in the next-largest case size, the 5050, reveals that inductors produced in the larger footprint offer lower DCR and higher current ratings.

More details...

## March 2010:

## HOW2POWER's APEC 2010 Product Showcase

This special advertising section highlights products and services from various companies in the power electronics field. Many of these products were on display at the Applied Power Electronics Conference and Exposition (APEC 2010), which was held February 21-25 in Palm Springs, California. Although not strictly focused on magnetics, this article includes:

- Paper Thin Planar Inductors (Payton Planar Magnetics)
- SMP1210S Surface Mount Power Inductor (Gowanda Electronics)
- High Isolation High Creepage Welding Transformers (Payton Planar Magnetics)
- B-WIT 100 Universal Injection Transformer (OMICRON Lab)
- High Performance Planar Transformers and Inductors (Payton Planar Magnetics).

More details...



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## Magnetics Product Roundup

This feature highlights recently introduced transformers, inductors, chokes, cores, and magnetics design software suitable for power electronics applications.

- Shielded SMT Inductors Feature High Current, Small Size (Gowanda Electronics)
- Amorphous And Nanocrystalline Cores Come Standard Or Custom (Payton Group International)
- Small SMT Inductors Deliver High Efficiency (TT electronics BI Technologies)
- Cost-Effective Inductors Target High-Rel Applications (RAF Tabtronics)
- Inductors Handle High Currents (West Coast Magnetics)
- Video Demos Performance of Low-Profile Inductors (Vishay Intertechnology)
- Cores Optimize Chokes For Solar Power Inverters (SMP Sintermetalle Prometheus)
- Inductors Shrink Footprints for Class D Audio (ICE Components)
- Toroidal Cores Come in Large Sizes (Magnetics)
- Flat Wire Inductor Offers High Saturation-Current Ratings (Wurth Elektronik)
- Magnetics Design Software Solves Laminated Cores (Ansoft)
- 5- x 5-mm Inductors Boast High DC Bias Ratings (Taiyo Yuden)
- Stepup/Flyback Transformers Suit Energy Harvesting (Coilcraft)
- Power Inductors Receive MIL-PRF-27 Qualification (Gowanda Electronics)
- Chokes Deliver High Attenuation in Small Size (West Coast Magnetics)
- Gate And Signal Transformer Permits Pick and Place (ICE Components)

More details...

## **January 2010:**

## Planar Transformer Enables Size Reduction for Welding

• Payton America's planar transformers for welding exhibit lower ac losses than conventional transformers, while also permitting use of a heatsink for improved cooling. Because of those two advantages, these planar transformers may be one third to one half the size of standard welding transformers.

More details...

## Wirewound Inductors Save Space In DC-DC Converters



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- Measuring just 8 mm x 8 mm, the LQH88P\_38 shielded, wirewound power inductors from Murata Electronics North America offer performance rivaling larger, more costly components.
- These inductors tolerate high levels of dc bias current.
- Key specifications. Inductance ranges from 1  $\mu H$  to 100  $\mu H$  and current rating ranges from 1 A to 8 A.

More details...

## November 2009:

## Vertical Mount: Not a Tall Order for Planar Magnetics

• Vertical-mount planar components provide the high efficiency of planar magnetics for applications with insufficient board space for a horizontally mounted planar.

#### More details...

## Wide-bandwidth Injection Transformer Replaces Multiple Devices

- The B WIT 100 universal injection transformer combines a very wide frequency range (1 Hz to 10 MHz) with a 600-V CAT II compliant output.
- The wide frequency range of the B WIT 100 makes its suitable for analysis of low- or highbandwidth control loops.

More details...

## October 2009:

## A User-Configurable Planar Transformer

- Vishay's PLAC 100 220-W planar transformer can be adapted to a variety of SMPS designs.
- The transformer contains 12 individual windings that users may connect in various configurations.
- A design kit provides transformer configuration software and the different transformer models.

More details...

## September 2009:

## Round-Wire Inductors Outperform Flat-Coil Inductors

• Pulse's round-wire coil surface-mount power inductors exhibit lower core loss and allow higher operating temperatures than flat-coil inductors with iron powder cores.



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- A dc-dc converter design example illustrates the reduced losses offered by ferrite-core round-wire inductors.
- Inductor specifications.

More details...