

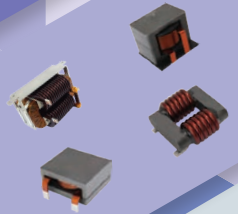


Custom Magnetics

**Power
Transformers**



**Power / Filter
Inductors**



**Power Pulse
Transformers**



Antenna Coils



**Audio and
RF Transformers,
Specialty Magnetics**





CUSTOM MAGNETICS

Focus Products

Custom Magnetics	
Type	Description
 <p>Power Transformers</p>	Switch mode power topologies: flyback, forward converter, push / pull, full bridge, half bridge, LLC resonant, isolated buck <ul style="list-style-type: none"> • Frequencies to 1 MHz • Power levels to 10 kVA
	Gate-drive transformers <ul style="list-style-type: none"> • Frequencies to 500 kHz • MOSFET / IGBT voltages to 1200 V
	Current-sense transformers <ul style="list-style-type: none"> • Frequencies from 50 Hz / 60 Hz to > 10 kHz • Currents to 5000 A
	Linear single-phase and three-phase power transformers <ul style="list-style-type: none"> • Frequencies to 50 Hz / 60 Hz, 400 Hz • Power levels to 10 kVA
 <p>Power / Filter Inductors</p>	Power inductors: drum cores, toroids, rod cores, E cores, U cores, pressed powder <ul style="list-style-type: none"> • Frequencies < 5 MHz • Currents to 1000 A
	Common mode chokes: toroidal, E cores, U cores <ul style="list-style-type: none"> • Frequencies to 30 MHz • Currents to 50 A
	Differential mode chokes: E cores, U cores, rod cores, toroidal cores <ul style="list-style-type: none"> • Frequencies to 30 MHz • Currents to 300 A
	Line reactors: flat wire winding construction <ul style="list-style-type: none"> • Currents to 1000 A
 <p>Power Pulse Transformers</p>	High voltage pulse transformers <ul style="list-style-type: none"> • Frequencies to 1 MHz • Voltages to 10 000 V
 <p>Antenna Coils</p>	Telemetry coils <ul style="list-style-type: none"> • Miniature coil sizes available
	Recharge coils <ul style="list-style-type: none"> • Miniature coil sizes available
 <p>Audio and RF Transformers, Specialty Magnetics</p>	Audio-coupling transformers <ul style="list-style-type: none"> • Frequencies up to 20 kHz
	RF transformers, RF inductors, directional couplers <ul style="list-style-type: none"> • Frequencies up to 1 GHz

Contact us at custommags@vishay.com to talk about your needs for custom magnetics.



Custom Magnetics Capabilities

- Operating temperature range: -55 °C to +220 °C
- Designed to meet UL, CSA, VDE, and IEC safety requirements
- Ruggedized packages for extreme environments
- AEC-Q200 qualified
- Space-grade compliant to MIL-STD-981, Class B or S
- Multi-site manufacturing (US-4 sites, Dominican Republic, China)

Material / Process Capabilities

- Conductor geometries: litz wire, foil, round magnet wire, rectangular magnet wire, square magnet wire, planar, stamped windings
- Conductor materials: copper, aluminum
- Core materials: ferrite, powdered iron alloys, MPP, high flux, Kool Mu[®], amorphous, tape wound, laminated
- Terminations: through-hole, SMD, press fit, flying lead
- Potted and vacuum varnish impregnated
- Lead (Pb)-free capability
- Automated winding, soldering, assembly, data collection, test capabilities, and reporting
- SOLIDWORKS[®] and AutoCAD 3D design software
- Ansys[®] Finite Element design software
- Madmix core loss testing
- Coordinate measurement system

Market Segments

View our Custom Magnetics Capabilities brochures by market segment.

- **Avionics:** power management magnetics for system controls, interior / exterior lighting, and entertainment systems
- **Military:** transformers and inductors for guidance systems, pilot interfaces, heads-up displays, and shipboard power supplies
- **Medical:** transformers, inductors, and coils for products ranging from implantable and neurostimulation devices, CT, and NMR scanners, hearing devices, surgical instrument guidance, and monitoring and diagnostic equipment
- **Industrial controls:** transformer and inductor solutions for power management and filtering that optimize quality, cost, and performance
- **Automotive:** power magnetics such as resonant inductors, full bridge transformers, output inductors, and common mode chokes for onboard chargers, 48 V / 12 V, DC/DC converters, motor noise suppression, and electro-mechanical coils for haptic feedback; available in current levels to 1000 A and power levels to 8 kW
- **Test and instrumentation:** transformers and inductors for the specialized test equipment needs of electronics manufacturers in high performance production testing, process monitoring, and product development
- **Space:** transformers and inductors for spaceborne subsystems to meet or exceed stringent requirements like MIL-STD-981, Class B or S
- **Alternative energy:** power transformers and inductors for inverters and switch mode power supplies where excellent thermal efficiency and long life are critical; we specialize in solutions rated at 30 kW and higher

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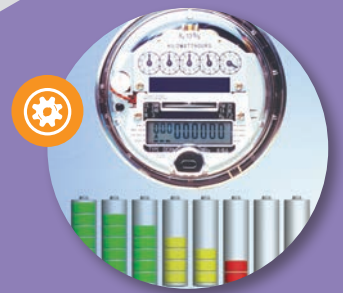
Custom Magnetics Can Quickly Step You Through **Your Design** Process Towards an **Unique Solution**

Advantages of Vishay Custom Magnetics

- Optimized solutions for quality, cost, and system performance
- Knowledgeable dedicated support team
- Breadth of capability
- Global manufacturing sites

For the Following **Applications**

- Switch mode power supplies and inverters
- Power filters and circuit noise reduction
- Signal transmission



We develop magnetics for high current applications incorporating specialized cooling requirements for improved thermal and load management



We can speed you through your custom magnetics development process with our knowledgeable engineering staff

Useful Links

Custom Magnetics

- For design assistance, please contact: custommags@vishay.com
- Please use our request forms to start a conversation:
 - Transformers: www.vishay.com/landingpage/custom-magnetics/transformerform.html
 - Inductors: www.vishay.com/landingpage/custom-magnetics/inductorform.html

**AEC-Q200
QUALIFIED**