



The DNA of tech.™

IHLP® Power Inductors

Discover How Vishay's IHLP Power Inductors Enhance Automotive Applications



ADVANTAGE



Vishay's IHLP® family provides the very highest efficiency surface-mount power inductor solutions, due to their low direct current resistance (DCR) and core losses over a wide range of operating frequencies.



AUTOMOTIVE APPLICATIONS

- Engine and transmission control units
- Diesel injection drivers
- DC/DC converters for entertainment / navigation systems
- Noise suppression for motors: windshield wipers / power seats / power mirrors / heating and ventilation blowers / HID lighting
- LED drivers
- ADAS, lidar, camera, and sensor power supplies
- High current filtering for EV OBC applications

KEY PRODUCT FEATURES

- ✓ Operation up to 155 °C and 180 °C (depending on material choice)
- ✓ Excellent shock and vibration resistance up to 50 g
- ✓ High frequency operation up to 5 MHz
- ✓ Five material grades for optimum performance in any ICE or EV application



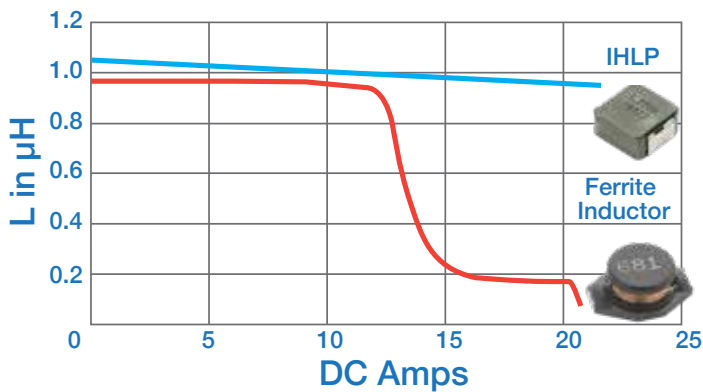
RESOURCES



ADDITIONAL BENEFITS

Vishay's invention of the composite inductor created a fundamental component that designers rely on to drive innovation in electronics. Continuous product advancements have brought the benefits of Vishay's shielded inductors to nearly every application for automotive electronics.

SATURATION – IHLP VS. FERRITE INDUCTOR



In the saturation graph supplied by Vishay for power inductors, the blue line represents the saturation current of an IHLP inductor. The IHLP series has an almost linear, “soft” saturation curve. The red line represents a typical saturation curve for a ferrite drum core power inductor. Note how the inductor reaches a current where the inductance drops sharply. This is called the saturation “knee” and is an example of “hard” saturation. Operating an inductor beyond the saturation knee is dangerous because the inductive impedance drops significantly and an uncontrolled rise in current can occur. With the soft saturation characteristics of the IHLP inductors, a saturation knee does not exist and reactive impedance is provided well beyond the rated current.

10 FOOTPRINTS AVAILABLE WITH A VARIETY OF HEIGHT OPTIONS

Size	Current rating for 1 µH (A)	Foot-print (mm)	Profile	Profile height (mm)
1212	4.5	3 x 3	AZ, AB, BZ	AZ = 1.0 AB = 1.2
1616	4.5	4 x 4	AB, BZ	AH = 1.8 BZ = 2.0
2020	9.2	5 x 5	AB, BZ, CZ	BD = 2.4 CZ = 3.0
2525	13.0	6 x 6	AH, BD, CZ, EZ	CE = 3.5 DZ = 4.0
3232	18.0	8 x 8	CZ, DZ	EZ = 5.0
4040	20.0	10 x 10	DZ	FD = 6.4
5050	32.0	13 x 13	CE, EZ, FD	GZ = 7.0
6767	48.0	17 x 17	DZ, GZ	MZ = 13.0
7575	55.0	19 x 19	GZ	
8787	69.0	22 x 22	MZ	