

Offered at Lower Cost Than Existing Solutions, New Automotive Grade and Commercial IHXL Series Inductors Offer Rated Current up to 209 A and 20 % Improved Core Losses, While Delivering Enhanced EMC and Higher Inductance Up to 10 μ H

Product Benefits:

- High temperature operation to +155 °C
- Excellent electromagnetic compatibility (EMC)
- Thick internal copper conductor supports a wide range of loads from 55 A to 209 A
- Available in the 1500 (38.1 mm x 38.1 mm x 21.89 mm) and 2000 (50.8 mm x 50.8 mm x 21.7 mm) case sizes
- High inductance up to 10 μ H
- Flat top surface simplifies mounting of external heatsinks
- High resistance to thermal shock, moisture, and mechanical shock
- Available with custom termination styles, inductance values, current, temperature, and voltage ratings
- RoHS-compliant, halogen-free, and [Vishay Green](#)



Market Applications:

- High current input filters, DC/DC converters, and DC-Link filters in battery charging systems, brushless DC motors (BLDC), and differential mode and boost power factor correction (PFC) chokes in automotive, industrial, and solar and wind power applications

The News:

Vishay Intertechnology expands its IHXL series of radial through-hole inductors with four new devices designed to deliver enhanced performance at a lower cost. Featuring a new iron alloy core material that improves core losses by 20 % over previous-generation devices – while reducing temperature rise – the Automotive Grade IHXL1500VZ-3A and IHXL2000VZ-3A and commercial IHXL1500VZ-31 and IHXL2000VZ-31 provide high temperature operation to +155 °C and excellent EMC for filtering applications up to 209 A.

- Offered at a lower price point than previous-generation IHXL series devices, the inductors combine their improved core losses with higher inductance, enabling increased impedance for better filtering and enhanced ripple current control in switching converters
- The devices feature a magnetically shielded construction with a pressed powdered iron body that contains stray flux, minimizing coupling to surrounding components and maximizing EMC compared to traditional wirewound devices with exposed internal coils. This pressed powdered iron construction also offers low internal thermal resistance, reducing hotspots and enhancing performance with active cooling
- The inductors' soft saturation core material ensures stable inductance across a wide range of load conditions – including during high transient current spikes – by avoiding hard saturation



The Key Specifications:

Part number	IHXL1500VZ-3A	IHXL1500VZ-31	IHXL2000VZ-3A	IHXL2000VZ-31
Inductance (μH)	0.68 to 10		1.2 to 10	
DCR typ. ($\text{m}\Omega$)	0.12 to 1.10		0.14 to 0.82	
DCR max. ($\text{m}\Omega$)	0.13 to 1.16		0.15 to 0.86	
Heat rating current typ. (A) ⁽¹⁾	55 to 180 / 88 to 280		83 to 209 / 118 to 315	
Saturation current typ. (A) ⁽²⁾	49 to 235 / 72 to 335		83 to 243 / 123 to 349	
SRF typ. (MHz)	7.6 to 37.8		5.1 to 19.1	
AEC-Q200	Yes	No	Yes	No
Case size	1500		2000	
Dimensions (mm)	38.1 x 38.1 x 21.89		50.8 x 50.8 x 21.7	

⁽¹⁾ DC current (A) that will cause an approximate ΔT of 40 °C and 80 °C, respectively

⁽²⁾ DC current (A) that will cause L_0 to drop approximately 20 % and 30 %, respectively

Availability:

The new IHXL series inductors are available now, with lead times of 14 weeks.

To access the product datasheets on the Vishay Website, go to

<http://www.vishay.com/ppg?34677> (IHXL1500VZ-3A)

<http://www.vishay.com/ppg?34678> (IHXL1500VZ-31)

<http://www.vishay.com/ppg?34681> (IHXL2000VZ-3A)

<http://www.vishay.com/ppg?34684> (IHXL2000VZ-31)

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