New Space-Saving Commercial and Automotive Grade Power Inductors in the 1008 Case Size Offer High Temperature Operation to +165 °C and Wide Range of Inductance Values Up to 4.7 µH

Product Benefits:

- Offered in the compact 1008 case size
- High operating temperatures to +165 °C
- Wide range of inductance values from 0.15 µH to 4.7 µH
- Low typical DCR down to 12.0 mΩ
- AEC-Q200 qualified (IHLP-1008ABEZ-5A)
- Packaged in a 100 % lead (Pb)-free shielded, composite construction that reduces buzz to ultra low levels
- Offer high resistance to thermal shock, moisture, and mechanical shock
- Handle high transient current spikes without saturation
- RoHS-compliant, halogen-free, and Vishay Green

Market Applications:

- DC/DC converters, noise suppression, and filtering
- Automotive infotainment, navigation, and braking systems; ADAS, LiDAR, and sensors; and engine control units
- CPUs, SSD modules, and data networking and storage systems; industrial and home automation systems; TVs, soundbars, and audio and gaming systems; battery-powered consumer healthcare devices; medical implantable devices; telecom equipment; and precision instrumentation

The News:

Vishay Intertechnology introduces two new power inductors in the 2.5 mm by 2.0 mm by 1.2 mm 1008 case size. The commercial IHLL-1008AB-1Z and Automotive Grade IHLP-1008ABEZ-5A achieve the same performance as the next-smallest IHLP® inductor in a 55 % smaller footprint, while offering higher operating temperatures to +165 °C, a wider range of inductance values, and lower DCR.

- The IHLL-1008AB-1Z's terminals are plated on the bottom only, enabling a smaller land pattern for more compact board spacing
- The IHLP-1008ABEZ-5A's terminals are plated on the bottom and sides, allowing for the formation of a solder fillet that adds mounting strength against high mechanical shock, while simplifying solder joint inspection
- The IHLP-1008ABEZ-5A offers a 10 °C higher operating temperature than the closest competing composite inductor, while its typical DCR is 15 % lower
- Offering improved performance over ferrite-based technologies, both devices feature a robust powdered iron body that completely encapsulates their windings — eliminating air gaps and magnetically shielding against crosstalk to nearby components — while their soft saturation curve provides stability across the entire operating temperature range
- The inductors' low DCR and high current handling are results of their flat wire coil, which directly terminates and forms the leads of the inductor, eliminating the need for a lead frame

- Precision laser stripping, followed by an electrode plating process at the leads, ensures ease of solderability and the ability to withstand repeated thermal cycling for maximum reliability

The Key Specifications:

Series	IHLL-1008AB-1Z	IHLP-1008ABEZ-5A
Inductance @ 100 kHz (µH)	0.33 to 4.7	0.15 to 2.2
DCR typ. @ 25 °C (mΩ)	14.0 to 160.0	12.0 to 70.0
DCR max. @ 25 °C (mΩ)	19.0 to 190.0	15.0 to 84.0
Heat rating current typ. (A)[1]	1.8 to 6.0	2.6 to 6.5
Saturation current typ. (A)[2]	1.8 to 7.3	2.8 to 8.5
Saturation current typ. (A)[3]	2.4 to 8.5	3.5 to 10.2
Case size	1008	1008
Temperature range (°C)	-55 to +125	-55 to +165
AEC-Q200	No	Yes

(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 %

Availability:
Samples and production quantities of the IHLL-1008AB-1Z and IHLP-1008ABEZ-5A series inductors are available now, with lead times of 10 weeks.

To access the product datasheets on the Vishay Website, go to
http://www.vishay.com/ppg?34610 (IHLL-1008AB-1Z)
http://www.vishay.com/ppg?34609 (IHLP-1008ABEZ-5A)

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