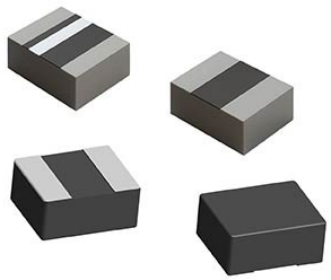
Space-Saving Commercial and Automotive Grade Power Inductors in the Compact 0806 and 1210 Case Sizes Offer High Temperature Operation to +165 °C, Increase Efficiency With Inductance Values Up to 4.70 µH and DCR Down to 6.6 mΩ

Product Benefits:



- Offered in compact 0806 and 1210 case sizes
- Inductance values from 0.22 µH to 4.70 µH
- Typical DCR down to 6.6 mΩ
- AEC-Q200 qualified (IHLP-0806AB-5A and IHLP-1210ABEZ-5A)
- High temperature performance up to +165 °C
- Packaged in a 100 % lead (Pb)-free shielded, composite construction that reduces buzz to ultra low levels
- 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 devices; and telecom equipment; and precision instrumentation

The News:

Vishay Intertechnology introduces four new power inductors in the 2.0 mm by 1.6 mm by 1.2 mm 0806 and 3.2 mm by 2.5 mm by 1.2 mm 1210 case sizes. The commercial IHLL-0806AZ-1Z and IHLL-1210AB-1Z and Automotive Grade IHLP-0806AB-5A and IHLP-1210ABEZ-5A achieve the same performance as the next-smallest competing inductor in 11 % (1210) and 64 % (0806) smaller footprints, while offering higher operating temperatures, wider range of inductance values, and lower DCR for increased efficiency.

- The terminals of the IHLL-0806AZ-1Z and IHLL-1210AB-1Z are plated on the bottom only, enabling a smaller land pattern for more compact board spacing. The terminals of the IHLP-0806AB-5A and IHLP-1210ABEZ-5A 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 operating temperature of the IHLP-0806AB-5A and IHLP-1210ABEZ-5A is 10 °C higher than the closest competing composite inductor
- Delivering improved performance over ferrite-based technologies, all four 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 and rated current ranges

The Key Specifications:

Series	IHLL-0806AZ-1Z	IHLP-0806AB-5A	IHLL-1210AB-1Z	IHLP-1210ABEZ-5A
Inductance @ 100 kHz (µH)	0.24 to 4.70	0.22 to 0.47	0.24 to 4.70	0.47 to 4.70
DCR typ. @ 25 °C (mΩ)	16.0 to 240.0	15.0 to 21.0	6.6 to 115.0	18.0 to 150.0
DCR max. @ 25 °C (mΩ)	20.0 to 288.0	18.0 to 25.0	10.0 to 135.0	22.0 to 180.0
Heat rating current typ. (A)[1]	1.3 to 6.3	4.6 to 5.8	2.3 to 9.2	1.8 to 5.1
Saturation current typ. (A)[2]	1.5 to 6.5	4.5 to 5.1	2.5 to 9.0	2.0 to 6.5
Saturation current typ. (A)[3]	1.8 to 7.2	5.4 to 7.5	2.9 to 11.5	2.5 to 8.2
Case size	0806	0806	1210	1210
Temperature range (°C)	-55 to +125	-55 to +165	-55 to +125	-55 to +165
AEC-Q200	No	Yes	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 of the IHLL-0806AZ-1Z, IHLL-1210AB-1Z, IHLP-0806AB-5A, and IHLP-1210ABEZ-5A series inductors are available now. Production quantities are available with lead times of 10 weeks.

To access the product datasheets on the Vishay Website, go to
http://www.vishay.com/ppg?34649 (IHLL-0806AZ-1Z)
http://www.vishay.com/ppg?34613 (IHLL1210AB-1Z)
http://www.vishay.com/ppg?34618 (IHLP-0806AB-5A)
http://www.vishay.com/ppg?34614 (IHLP1210ABEZ-5A)

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