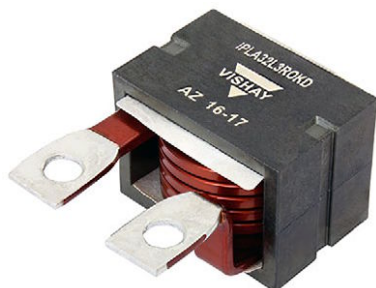


High Current Planar Choke Inductor



In addition to catalogue product presented here, many custom products have been engineered see on following page few examples.

QUICK REFERENCE DATA

Type	Inductor
Size (L x W x H)	31 mm x 43 mm x 22.2 mm
Terminals	Leadframe or wires
Inductance range ⁽¹⁾	1 μ H to 4 μ H ⁽²⁾
Frequency range	100 kHz to 400 kHz

Notes

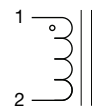
⁽¹⁾ Other values on request

⁽²⁾ Please refer to "part number examples" table on the next page

FEATURES

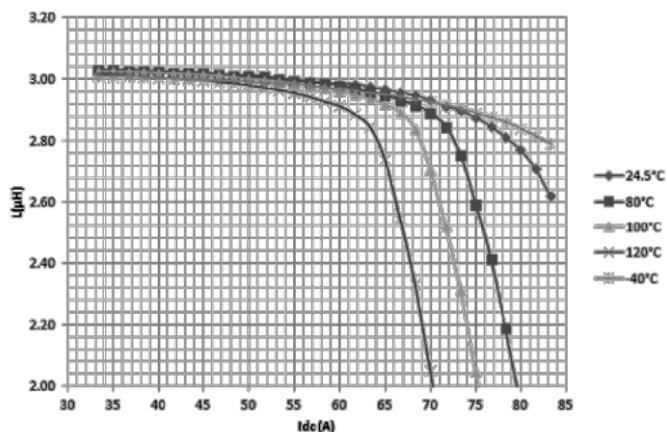
- For high power density DC/DC converter application
- High current capabilities
- Very stable performances versus temperature
- Very compact design (low profile and weight)
- Low EMI, magnetically shielded
- High self-resonance frequency
- Recommended frequency range (100 kHz; 800 kHz)
- Operating temperature range:
-55 °C; 125 °C with heatsink dissipation
- Flexible pin out design (tapped output terminals, layout, ...)
- Material temperature grade: 180 °C
- Custom design on request

CLASSICAL FRAMEWORKS - Other topologies on request

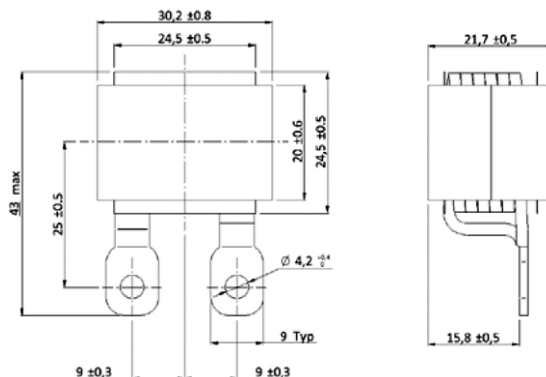
L(1-2) 100 kHz / 0.1 V	WINDING R _{DC} (1-2)	INSULATION: WINDING / CORE 500 V _{DC}	POWER LOSSES ASSESSMENT UNDER 70 A _{DC} AND WINDING AT 120 °C	ELECTRICAL SCHEME
3 μ H $\pm$ 10 %	0.62 m Ω	R _i > 10 M Ω	3 W ⁽¹⁾	

Note

⁽¹⁾ **Caution:** power losses draining shall be managed by customer device

ELECTRICAL SCHEMES

TYPICAL THERMAL RESISTANCE

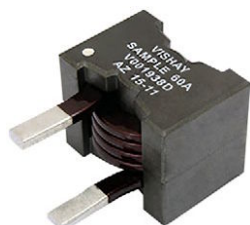
NATURAL CONVECTION	HEATSINK 1 FACE	HEATSINK 2 FACES
10.5 W/mK	4 W/mK	2 W/mK

MECHANICAL DIMENSIONS FOR IPLA32L

PART NUMBER EXAMPLES

PART NUMBER	L (μH)	I (A)	ΔI (A)	LOSS (W)	$\Delta T^{(1)}$ (°C)
IPLA32L1R0KD	1	110	22	7	75
IPLA32L2R0KD	2	100	20	5.8	60
IPLA32L3R0KD	3	70	14	2.8	30
IPLA32L4R0KD	4	50	10	1.5	15

Note

⁽¹⁾ ΔT °C assessed with natural convection. When ΔT °C > 40 °C it's advised to use a fitted thermal device to keep core temperature ≤ 125 °C

EXAMPLES OF CUSTOM DESIGNS ALREADY ENGINEERED


3 µH / 45 A



3 µH / 70 A



3 µH / 140 A

SAP PART NUMBERING

MODEL	SIZE	STYLE	VALUE	RATIO	SPECIAL
4 digits IPLA	2 digits 32 = EC 32	1 digit W = Wire L = Leadframe N = Leadframe with threaded nuts	3 digits 3R0 = 3 µH 101 = 100 µH 300 = 30 µH	1 digit M = ± 20 % A = ± 15 % K = ± 10 %	6 digits



Disclaimer

ALL PRODUCT, PRODUCT SPECIFICATIONS AND DATA ARE SUBJECT TO CHANGE WITHOUT NOTICE TO IMPROVE RELIABILITY, FUNCTION OR DESIGN OR OTHERWISE.

Vishay Intertechnology, Inc., its affiliates, agents, and employees, and all persons acting on its or their behalf (collectively, "Vishay"), disclaim any and all liability for any errors, inaccuracies or incompleteness contained in any datasheet or in any other disclosure relating to any product.

Vishay makes no warranty, representation or guarantee regarding the suitability of the products for any particular purpose or the continuing production of any product. To the maximum extent permitted by applicable law, Vishay disclaims (i) any and all liability arising out of the application or use of any product, (ii) any and all liability, including without limitation special, consequential or incidental damages, and (iii) any and all implied warranties, including warranties of fitness for particular purpose, non-infringement and merchantability.

Statements regarding the suitability of products for certain types of applications are based on Vishay's knowledge of typical requirements that are often placed on Vishay products in generic applications. Such statements are not binding statements about the suitability of products for a particular application. It is the customer's responsibility to validate that a particular product with the properties described in the product specification is suitable for use in a particular application. Parameters provided in datasheets and / or specifications may vary in different applications and performance may vary over time. All operating parameters, including typical parameters, must be validated for each customer application by the customer's technical experts. Product specifications do not expand or otherwise modify Vishay's terms and conditions of purchase, including but not limited to the warranty expressed therein.

Except as expressly indicated in writing, Vishay products are not designed for use in medical, life-saving, or life-sustaining applications or for any other application in which the failure of the Vishay product could result in personal injury or death. Customers using or selling Vishay products not expressly indicated for use in such applications do so at their own risk. Please contact authorized Vishay personnel to obtain written terms and conditions regarding products designed for such applications.

No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document or by any conduct of Vishay. Product names and markings noted herein may be trademarks of their respective owners.