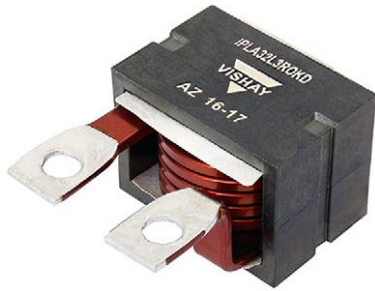


## High Current Planar Choke Inductor



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

**DESIGN SUPPORT TOOLS** click logo to get started



### 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

### 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 <sup>(1)</sup>	1 $\mu$ H to 4 $\mu$ H <sup>(2)</sup>
Frequency range	100 kHz to 800 kHz

### Notes

<sup>(1)</sup> Other values on request

<sup>(2)</sup> Please refer to “part number examples” table on the next page

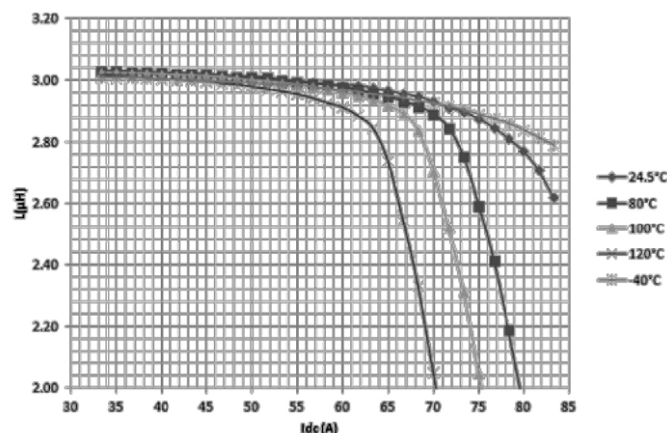
### CLASSICAL FRAMEWORKS - Other topologies on request

L(1-2) 100 kH / 0.1 V	WINDING $R_{DC}$ (1-2)	INSULATION: WINDING / CORE 500 V <sub>DC</sub>	POWER LOSSES ASSESSMENT UNDER 70 A <sub>DC</sub> AND WINDING AT 120 °C	ELECTRICAL SCHEME
3 $\mu$ H $\pm$ 10 %	0.62 m $\Omega$	$R_i > 10$ M $\Omega$	3 W <sup>(1)</sup>	

### Note

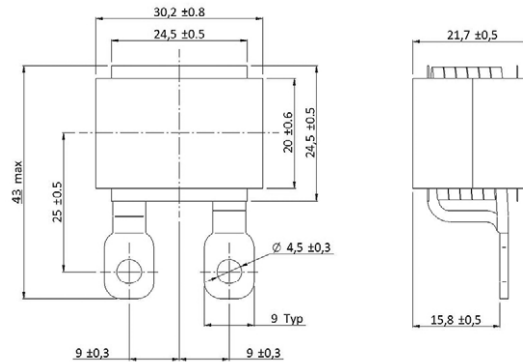
<sup>(1)</sup> **Caution:** power losses draining shall be managed by customer device

### 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 (lead frames with smooth holes)**

**Note**

- Standard model: lead frame with holes (not threaded)

**PART NUMBER EXAMPLES**

PART NUMBER	L ( $\mu\text{H}$ )	I (A)	$\Delta I$ (A)	LOSS (W)	$\Delta T$ (1) ( $^{\circ}\text{C}$ )
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)  $\Delta T$   $^{\circ}\text{C}$  assessed with natural convection. When  $\Delta T$   $^{\circ}\text{C}$  > 40  $^{\circ}\text{C}$  it's advised to use a fitted thermal device to keep core temperature  $\leq$  125  $^{\circ}\text{C}$

**EXAMPLES OF CUSTOM DESIGNS ALREADY ENGINEERED**

Custom IPLA 32L (no holes in lead frame)	Custom IPLA 32L (special lead frame shapes)	IPLA 32N (threaded holes in lead frames)
		
3 $\mu\text{H}$ / 45 A	3 $\mu\text{H}$ / 70 A	3 $\mu\text{H}$ / 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 $\mu\text{H}$ 101 = 100 $\mu\text{H}$ 300 = 30 $\mu\text{H}$	1 digit M = $\pm$ 20 % A = $\pm$ 15 % K = $\pm$ 10 %	6 digits



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