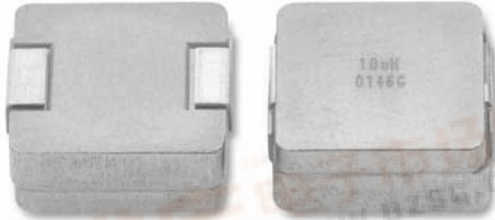




# IHLP-5050EZ-01

Vishay Dale

## Low Profile, High Current Inductor



Manufactured under one or more of the following:  
**US Patents; 6,198,375 / 6,204,744 / 6,449,829 / 6,460,244.**  
 Several foreign patents, and other patents pending.

STANDARD ELECTRICAL SPECIFICATIONS				
Lo INDUCTANCE $\mu\text{H} \pm 20\%$ @100KHz, .25V, 0A	DCR $m\Omega$ TYPICAL 25°C	DCR $m\Omega$ MAX 25°C	HEAT RATING CURRENT DC AMPS <sup>3</sup> TYPICAL	SATURATION CURRENT DC AMPS <sup>4</sup> TYPICAL
0.10	0.53	0.60	55	118
0.22	0.64	0.80	51	110
0.33	0.85	1.1	42	80
0.47	1.1	1.3	38	65
0.56	1.3	1.5	36	55
0.68	1.5	1.7	34	54
0.82	2.0	2.3	31	53
1.0	2.1	2.5	29	50
1.5	3.4	4.1	23	48
2.2	4.6	5.5	20	32
3.3	7.7	9.2	15	32
4.7	12.8	15.0	12	27
5.6	14.0	16.5	11.5	22
6.8	15.4	18.5	11	21
7.8	17.2	20.5	10	18
8.2	18.9	22.5	9.5	18
10	21.4	25.5	9.0	16

**NOTES:**

1. All test data is referenced to 25°C ambient.
2. Operating Temperature Range - 55°C to + 125°C
3. DC current (A) that will cause an approximate  $\Delta T$  of 40°C.
4. DC current (A) that will cause Lo to drop approximately 20%
5. The part temperature (ambient + temp rise) should not exceed 125°C under worst case operating conditions. Circuit design, component placement, PWB trace size and thickness, airflow and other cooling provisions all affect the part temperature. Part temperature should be verified in the end application.

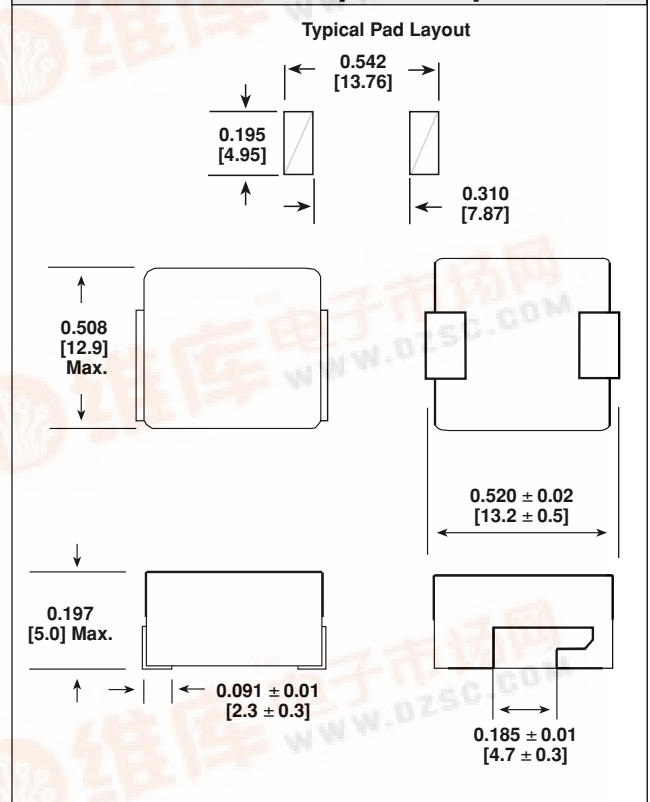
**FEATURES**

- Shielded construction.
- Frequency range up to 5.0MHz.
- Lowest DCR/ $\mu\text{H}$ , in this package size.
- Handles high transient current spikes without saturation.
- Ultra low buzz noise, due to composite construction.
- 100% Lead (Pb)-free and RoHS compliant.

**APPLICATIONS**

- Notebook/Desktop/Server applications.
- High current POL converters.
- Low profile, high current power supplies.
- Battery powered devices.
- DC/DC converters in distributed power systems.
- DC/DC converter for Field Programmable Gate Array (FPGA).

**DIMENSIONS** in inches [millimeters]



DESCRIPTION				
MODEL	INDUCTANCE VALUE	INDUCTANCE TOLERANCE	PACKAGE CODE	JDEC LEAD FREE STANDARD
IHLP-5050EZ-01	1.0 $\mu\text{H}$	$\pm 20\%$	ER	e3
GLOBAL PART NUMBER				
I	H	L	P	5
5	0	5	0	E
Z	E	R	1	R
0	M	0	1	
MODEL	SIZE	PACKAGE CODE	INDUCTANCE VALUE	INDUCTANCE TOLERANCE

# IHLP-5050EZ-01

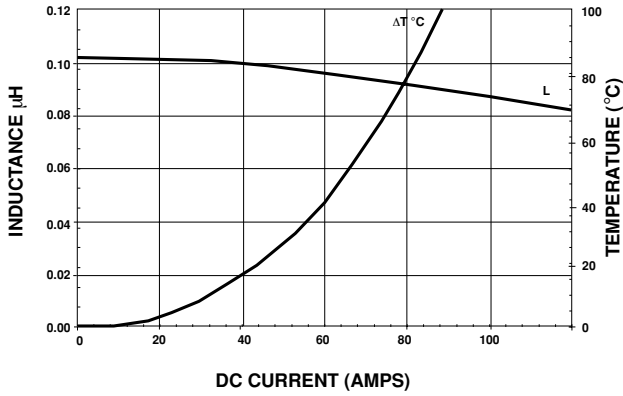
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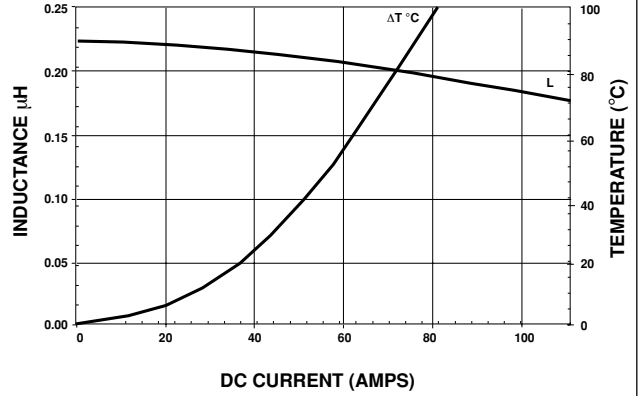


## PERFORMANCE GRAPHS

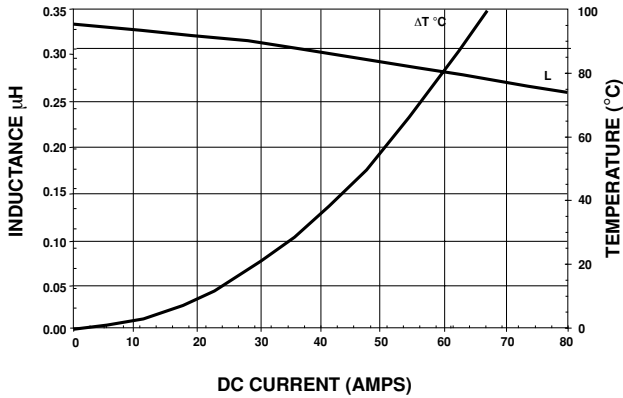
IHLP-5050EZ-01 0.10 $\mu$ H



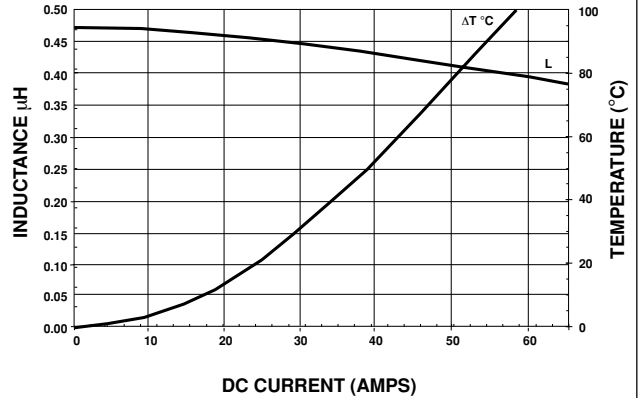
IHLP-5050EZ-01 0.22 $\mu$ H



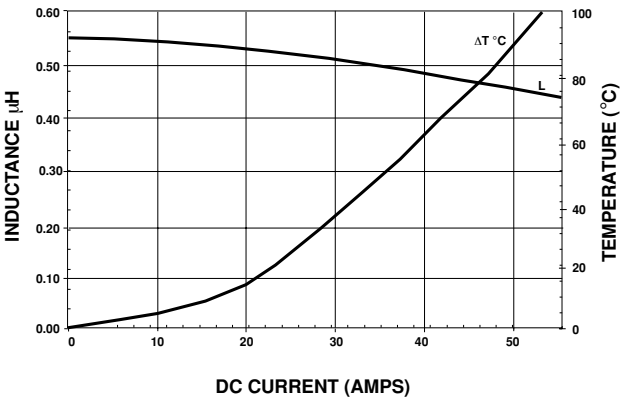
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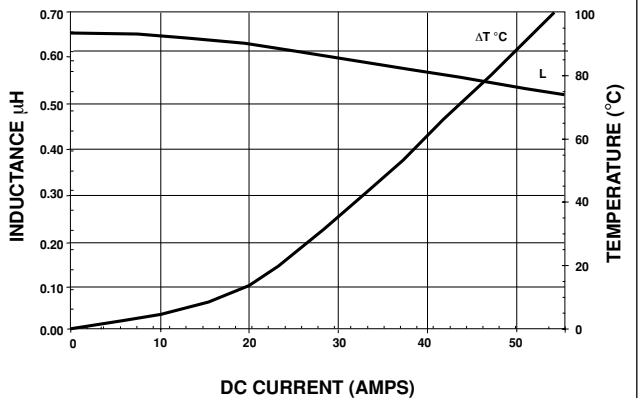
IHLP-5050EZ-01 0.47 $\mu$ H



IHLP-5050EZ-01 0.56 $\mu$ H



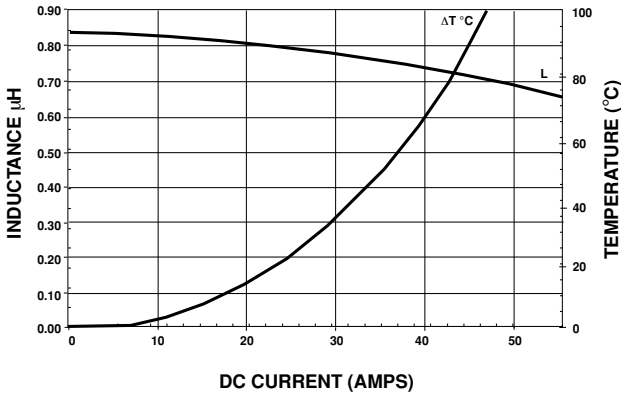
IHLP-5050EZ-01 0.68 $\mu$ H



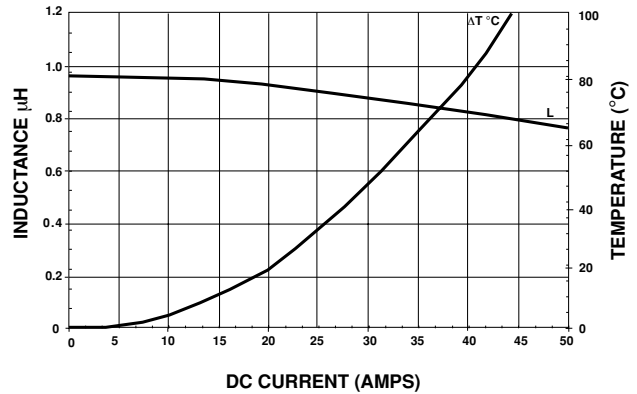


PERFORMANCE GRAPHS

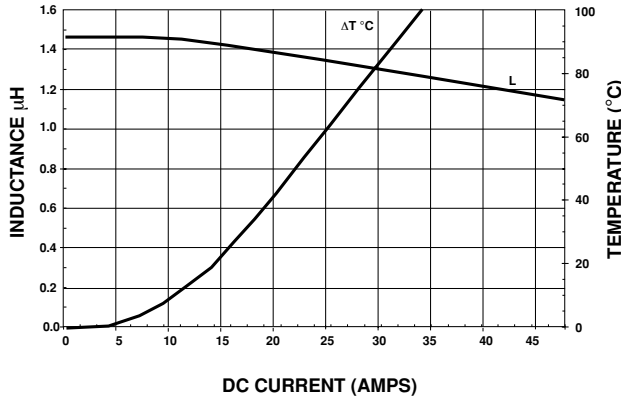
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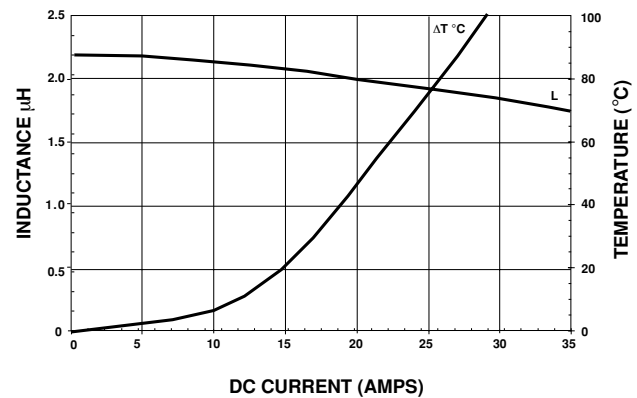
IHLP-5050EZ-01 1.0 $\mu$ H



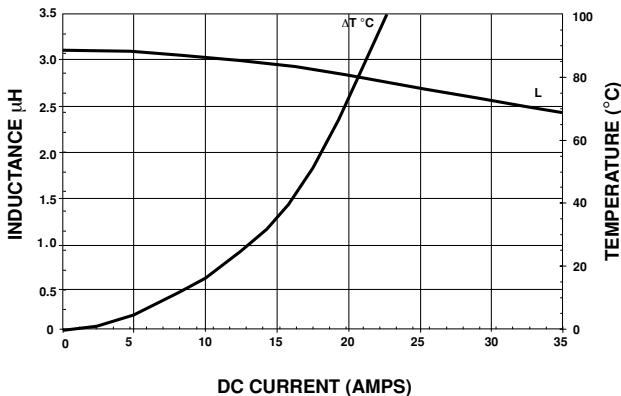
IHLP-5050EZ-01 1.5 $\mu$ H



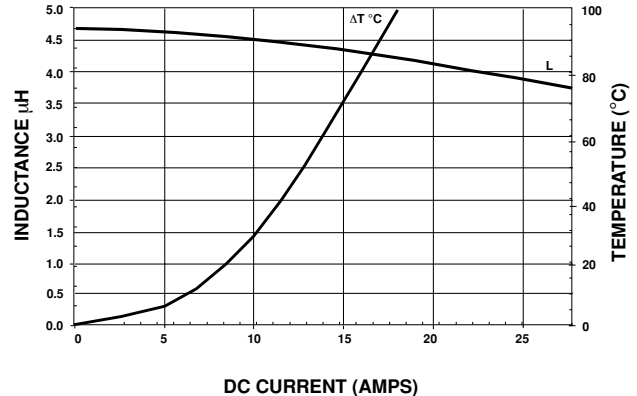
IHLP-5050EZ-01 2.2 $\mu$ H



IHLP-5050EZ-01 3.3 $\mu$ H



IHLP-5050EZ-01 4.7 $\mu$ H



# IHLP-5050EZ-01

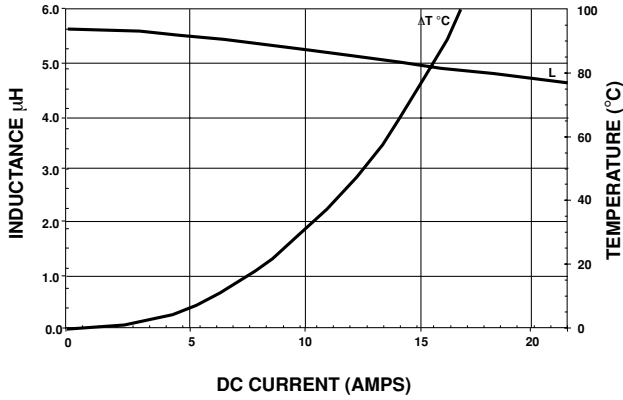
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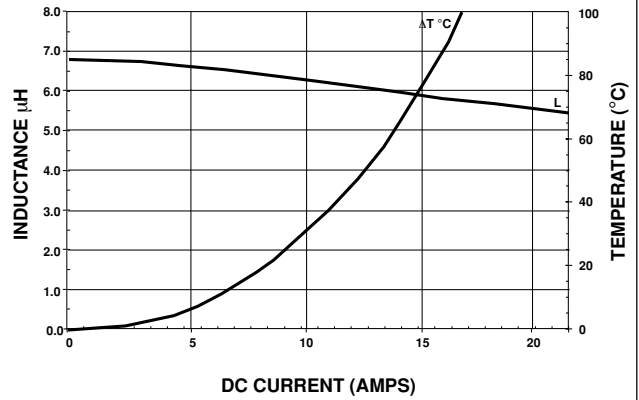


## PERFORMANCE GRAPHS

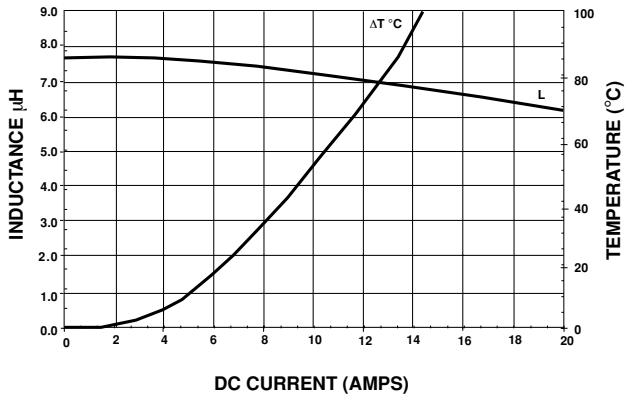
IHLP-5050EZ-01 5.6 $\mu$ H



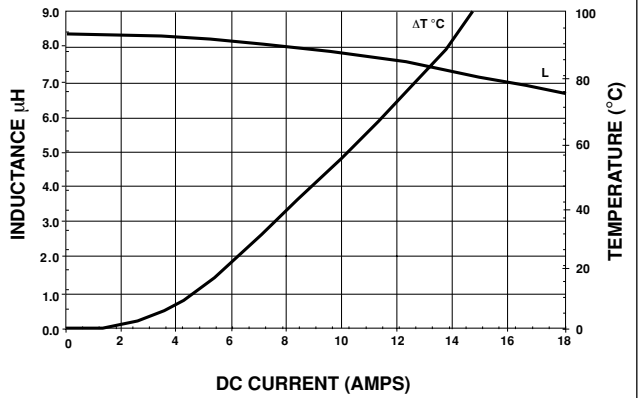
IHLP-5050EZ-01 6.8 $\mu$ H



IHLP-5050EZ-01 7.8 $\mu$ H



IHLP-5050EZ-01 8.2 $\mu$ H



IHLP-5050EZ-01 10 $\mu$ H

