



# Low Profile, High Current Inductor



**US PATENTED** 6,204,744, several foreign patents, and other patents pending

### FEATURES

- Lowest height (3.5mm) in this package footprint.
- Shielded construction.
- Frequency range up to 5.0MHz.
- Lowest DCR/ $\mu$ H, in this package size.
- Handles high transient current spikes without saturation.
- Ultra low buzz noise, due to composite construction.
- 100% lead (Pb) free.

### APPLICATIONS

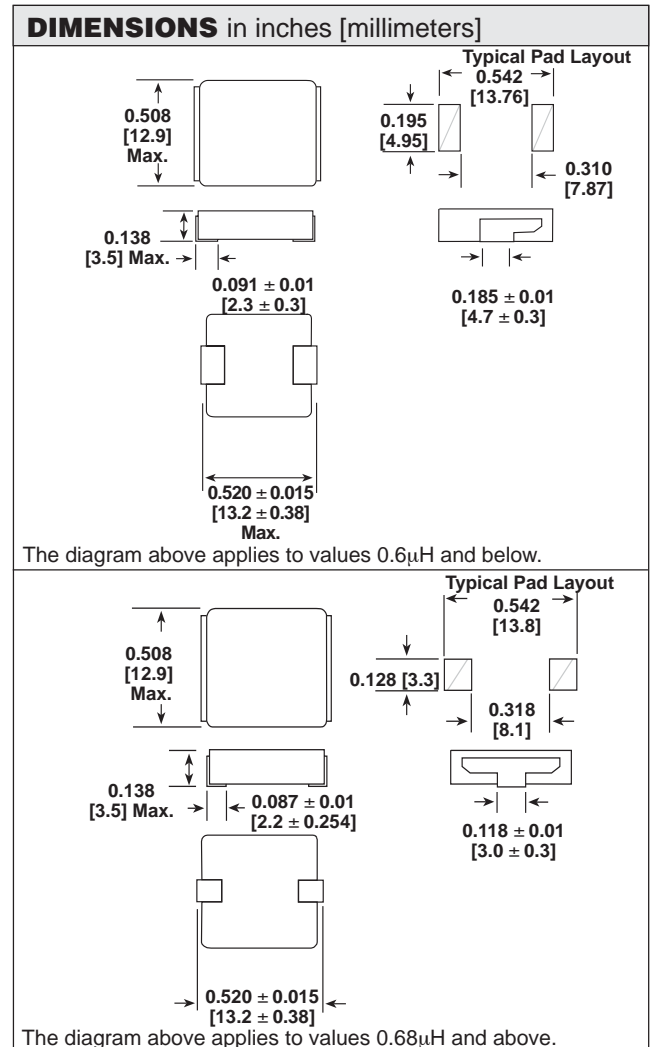
- PDA/Notebook/Desktop/Server applications.
- High current POL converters.
- Low profile, high current power supplies.
- Battery powered devices.
- DC/DC converters in distributed power systems.
- DC/DC converter for Field Programmable Gate Array (FPGA).

STANDARD ELECTRICAL SPECIFICATIONS				
Lo INDUCTANCE $\mu$ 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	0.8	0.96	43	84
0.15	1	1.2	41	75
0.22	1.1	1.3	38.5	65
0.33	1.3	1.5	36.5	62
0.47	1.6	2	32	55
0.60	1.8	2.2	29	51
0.68	2.3	2.5	28	49
0.82	2.6	3	25	44
1.0	3.3	3.5	24	40
1.5	5.1	5.5	19	35
1.8	6.5	7	16.5	30
2.2	7.2	8	16	29
3.3	11	12	12	27
4.7	14.3	15	10	24
5.6	17.1	18	9.5	19
6.8	19.8	22	9	18
8.2	24.8	28	8.5	16
10	30.4	34	7	14

### 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.

DESCRIPTION		
IHLP-5050CE-01	1.0 $\mu$ H	$\pm$ 20%
MODEL	INDUCTANCE VALUE	INDUCTANCE TOLERANCE



### SAP PART NUMBERING GUIDELINES (INTERNAL)

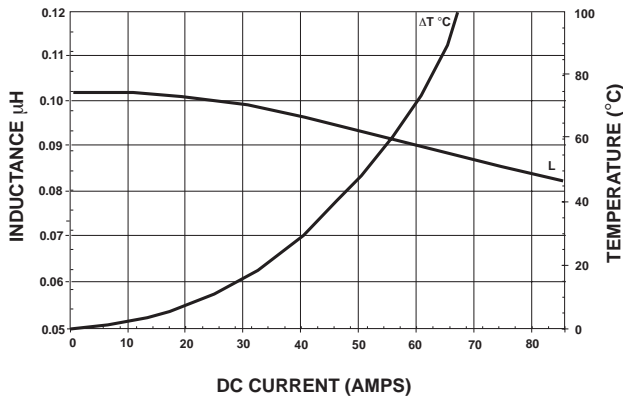
I	H	L	P	5	0	5	0	C	E	R	Z	1	R	0	M	0	1
PRODUCT FAMILY				SIZE				PACKAGE CODE		INDUCTANCE VALUE			TOL.	SERIES			

See the end of this data book for conversion tables

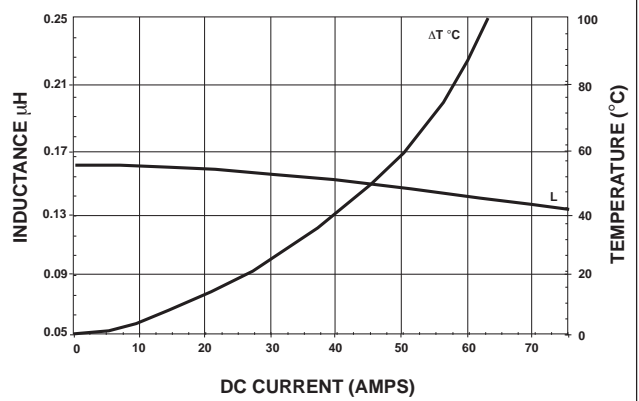


## PERFORMANCE GRAPHS

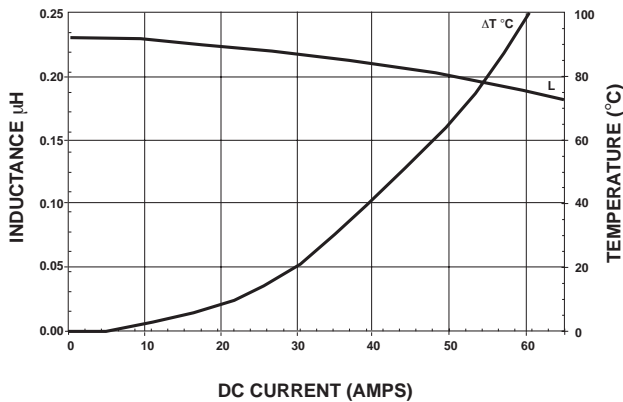
IHLP-5050CE-01 0.10 $\mu$ H



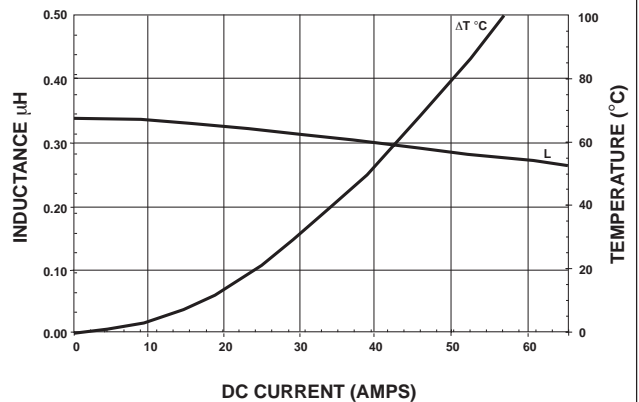
IHLP-5050CE-01 0.15 $\mu$ H



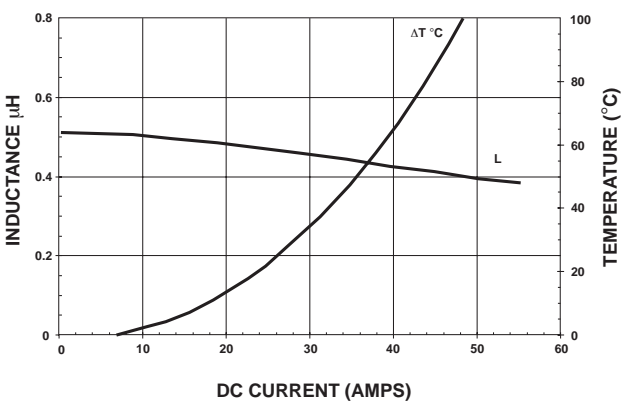
IHLP-5050CE-01 0.22 $\mu$ H



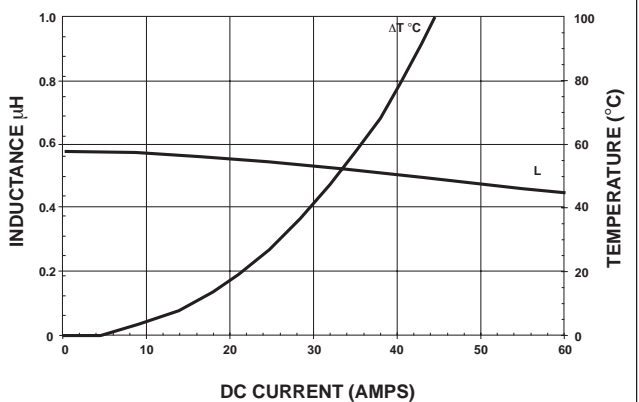
IHLP-5050CE-01 0.33 $\mu$ H



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



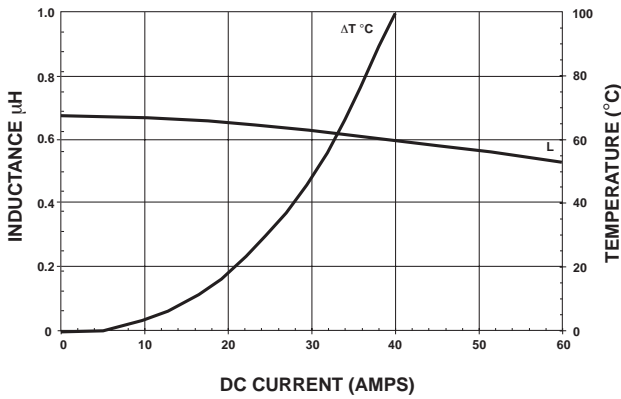
IHLP-5050CE-01 0.60 $\mu$ H



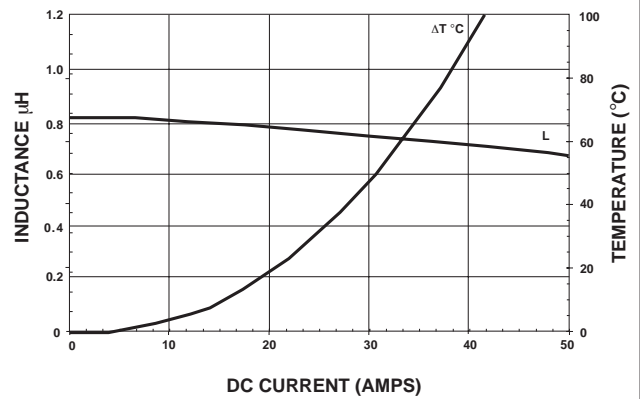


PERFORMANCE GRAPHS

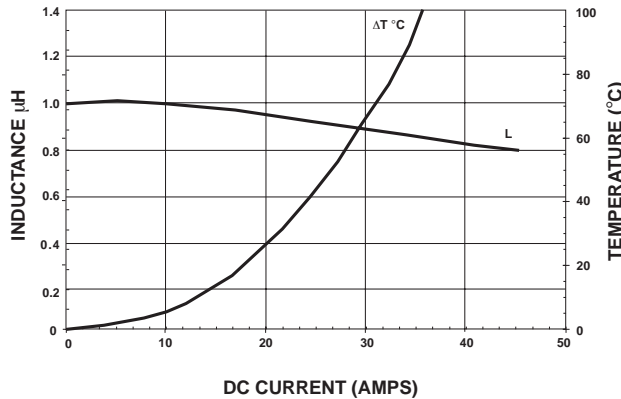
IHLP-5050CE-01 0.68 $\mu$ H



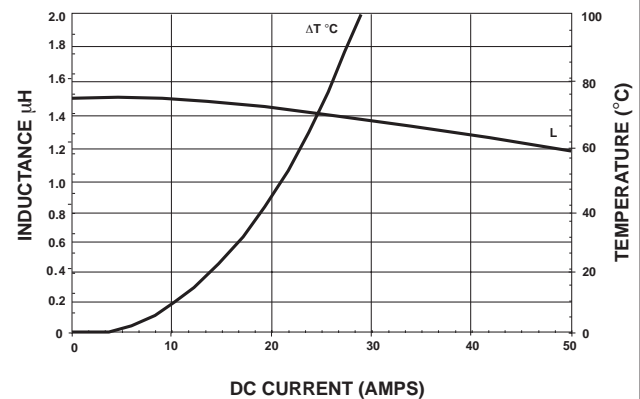
IHLP-5050CE-01 0.82 $\mu$ H



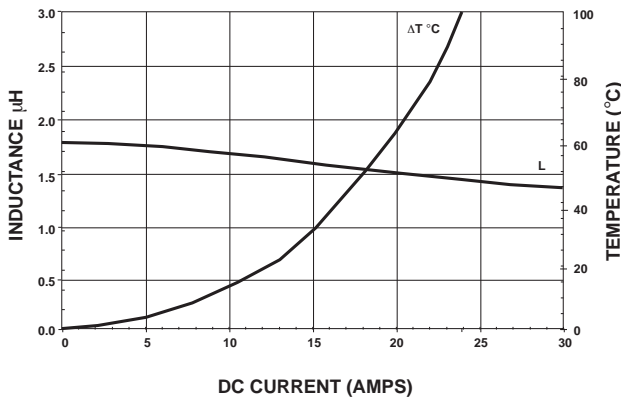
IHLP-5050CE-01 1.0 $\mu$ H



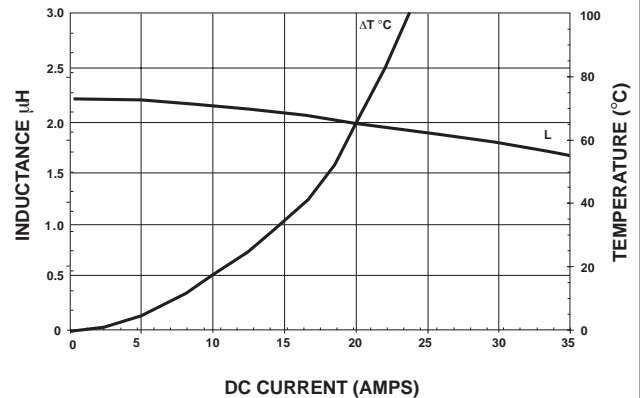
IHLP-5050CE-01 1.5 $\mu$ H



IHLP-5050CE-01 1.8 $\mu$ H



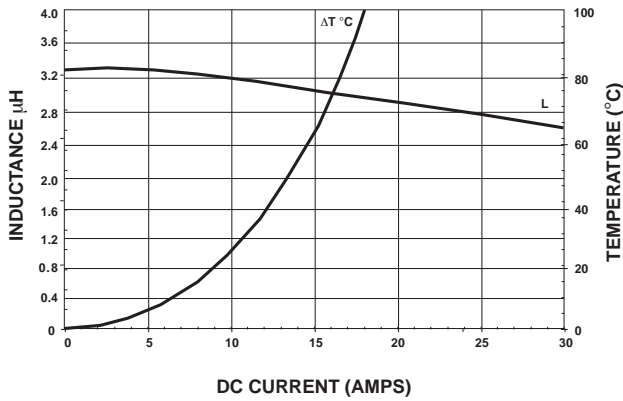
IHLP-5050CE-01 2.2 $\mu$ H



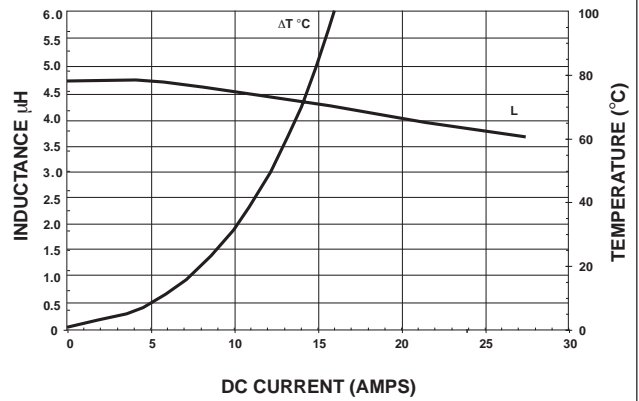


## PERFORMANCE GRAPHS

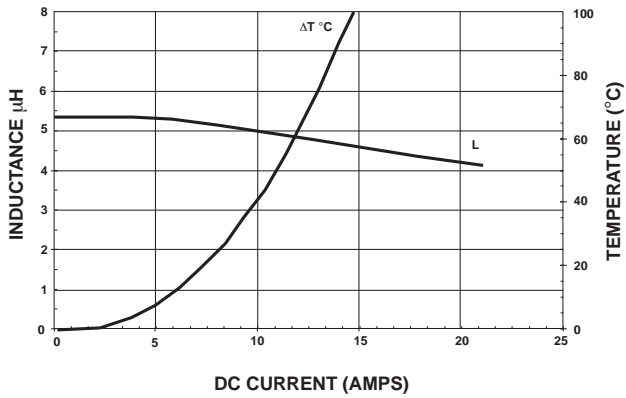
IHLP-5050CE-01 3.3 $\mu$ H



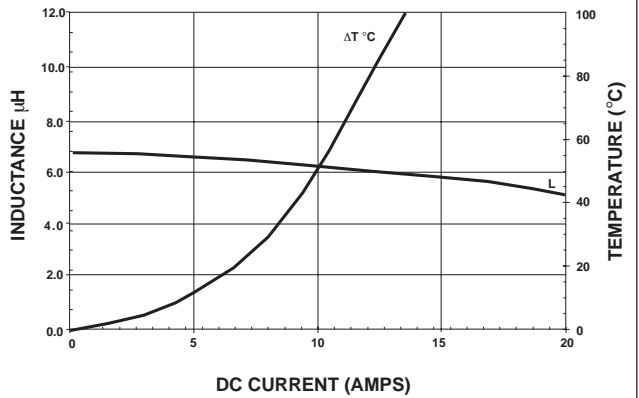
IHLP-5050CE-01 4.7 $\mu$ H



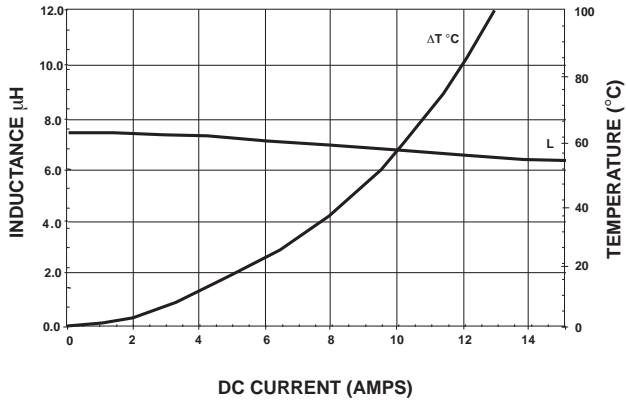
IHLP-5050CE-01 5.6 $\mu$ H



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



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



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

