

## Low Profile, High Current IHLP® Inductors



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				
$L_0$ INDUCTANCE ± 20 % AT 100 kHz, 0.25 V, 0 A ( $\mu\text{H}$ )	DCR TYP. 25 °C (m $\Omega$ )	DCR MAX. 25 °C (m $\Omega$ )	HEAT RATING CURRENT DC TYP. (A) <sup>(3)</sup>	SATURATION CURRENT DC TYP. (A) <sup>(4)</sup>
0.47	1.55	1.66	30.0	28.5
1.0	2.87	3.07	23.5	24.0
3.3	11.0	11.81	11.0	12.0
4.7	14.3	15.32	9.8	9.2
5.6	16.5	17.60	9.3	9.0
6.8	20.9	22.36	9.1	9.0
10	30.9	33.06	6.5	8.5
15	47.0	50.29	5.1	7.7
22	70.5	75.44	4.1	6.4
33	110	117.70	3.7	4.2

**Notes**

- (1) All test data is referenced to 25 °C ambient
- (2) Operating temperature range - 55 °C to + 155 °C
- (3) DC current (A) that will cause an approximate  $\Delta T$  of 40 °C
- (4) DC current (A) that will cause  $L_0$  to drop approximately 20 %
- (5) The part temperature (ambient + temp. rise) should not exceed 155 °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.

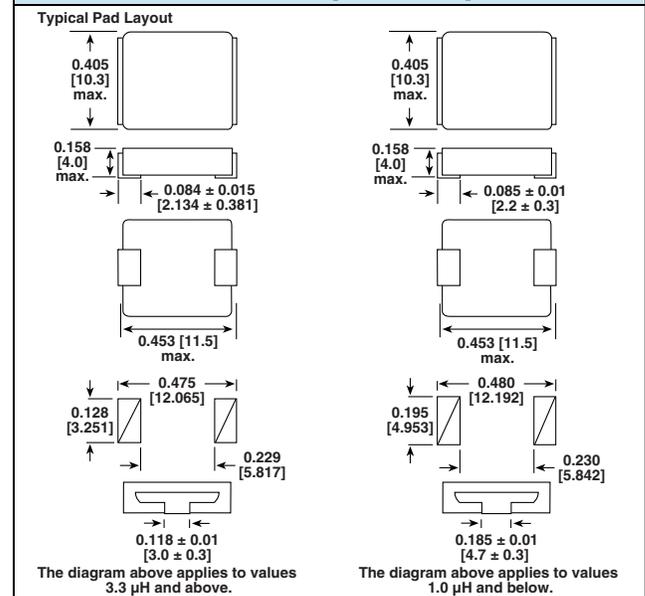
**FEATURES**

- High temperature, up to 155 °C
- Shielded construction
- Frequency range up to 1 MHz
- Lowest DCR/ $\mu\text{H}$ , in this package size
- Handles high transient current spikes without saturation
- Ultra low buzz noise, due to composite construction
- AEC-Q200 qualified
- Compliant to RoHS Directive 2002/95/EC
- Halogen-free according to IEC 61249-2-21 definition

 AUTOMOTIVE  
 GRADE

**RoHS**  
 COMPLIANT  
 HALOGEN  
**FREE**
**APPLICATIONS**

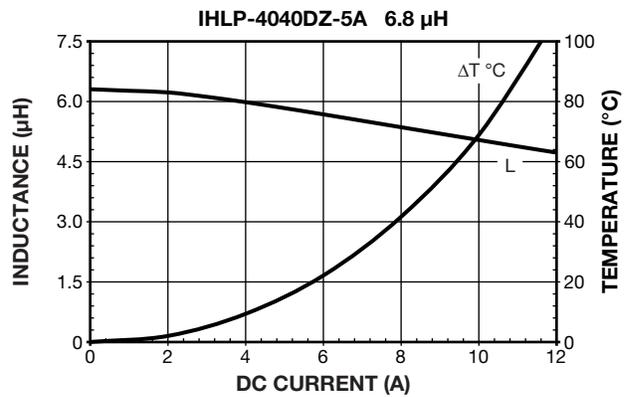
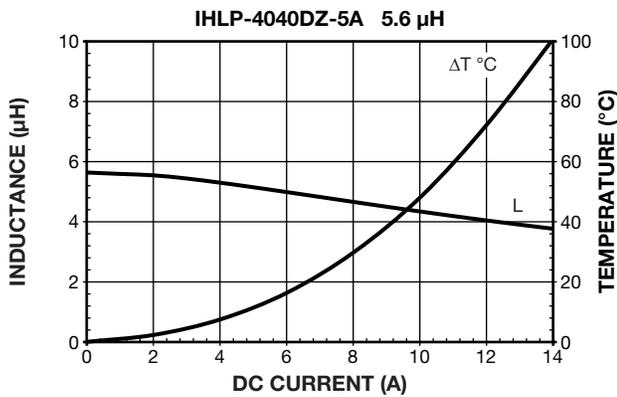
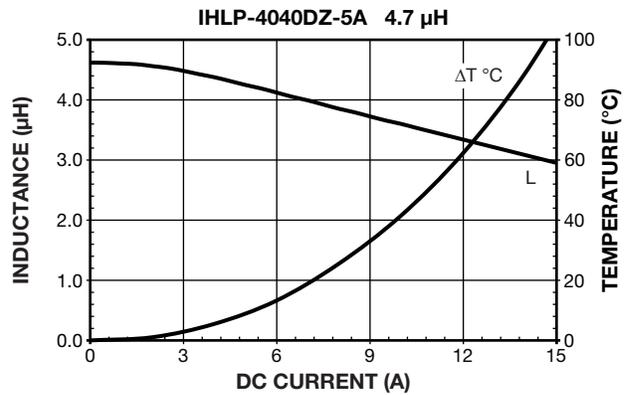
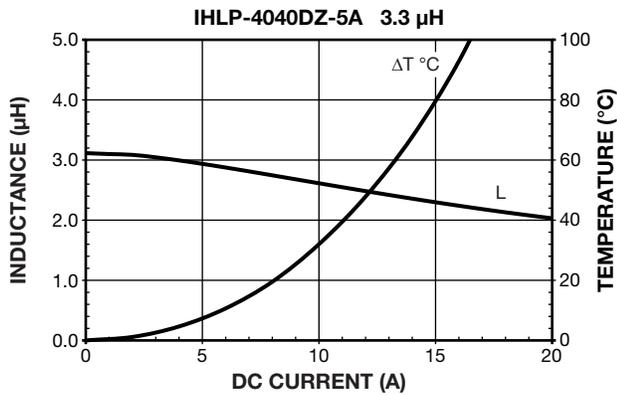
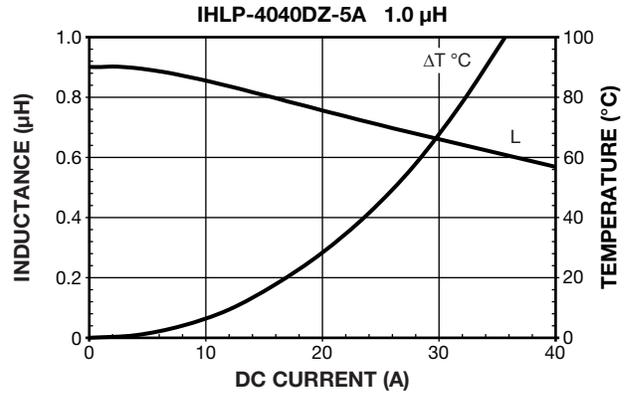
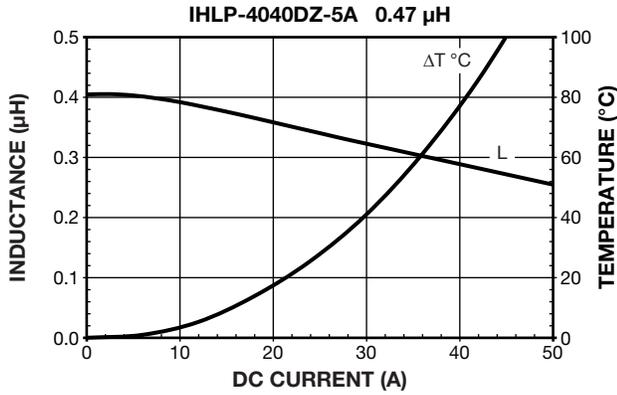
- Engine and transmission control units
- Diesel injection drivers
- DC/DC converters for entertainment/navigation systems
- Noise suppression for motors
  - Windshield wipers
  - Power seats
  - Power mirrors
  - Heating and ventilation blowers
  - HID lighting
- LED drivers

**DIMENSIONS** in inches [millimeters]


DESCRIPTION				
MODEL	INDUCTANCE VALUE	INDUCTANCE TOLERANCE	PACKAGE CODE	JEDEC LEAD (Pb)-FREE STANDARD
IHLP-4040DZ-5A	4.7 $\mu\text{H}$	± 20 %	ER	e3

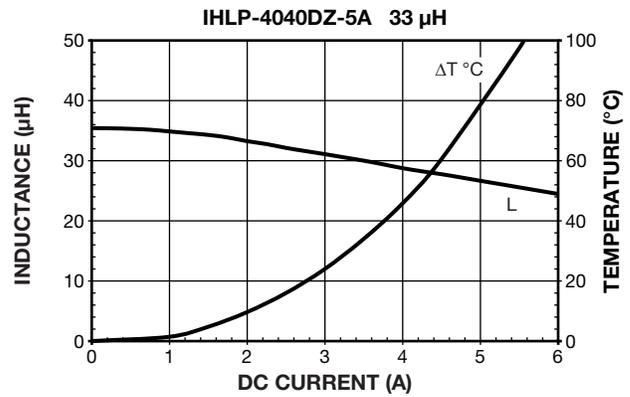
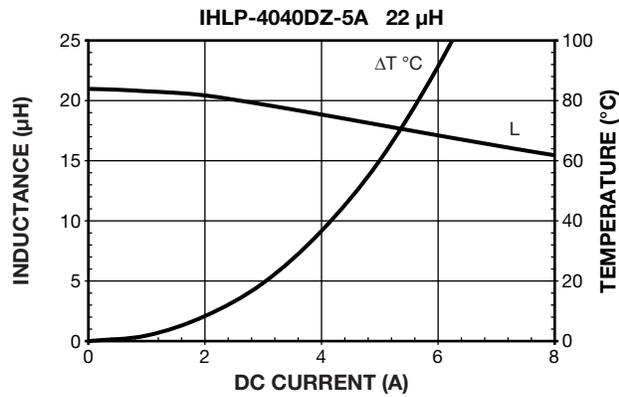
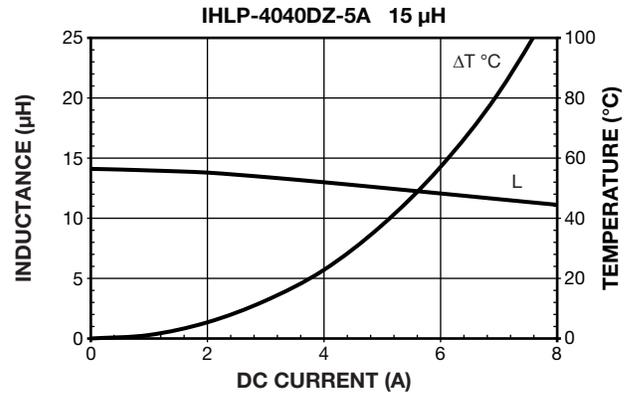
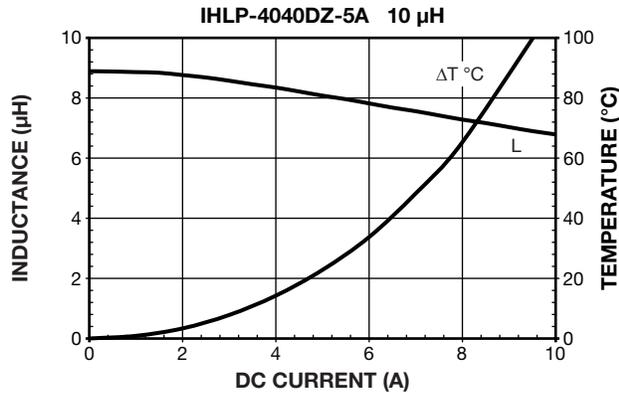
GLOBAL PART NUMBER																	
I	H	L	P	4	0	4	0	D	Z	E	R	4	R	7	M	5	A
PRODUCT FAMILY				SIZE				PACKAGE CODE		INDUCTANCE VALUE			TOL.		SERIES		

## PERFORMANCE GRAPHS

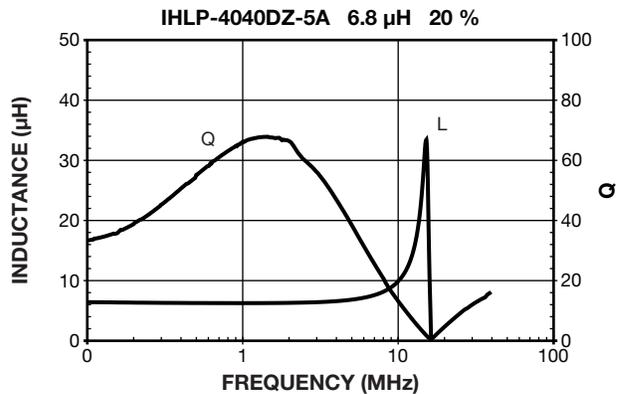
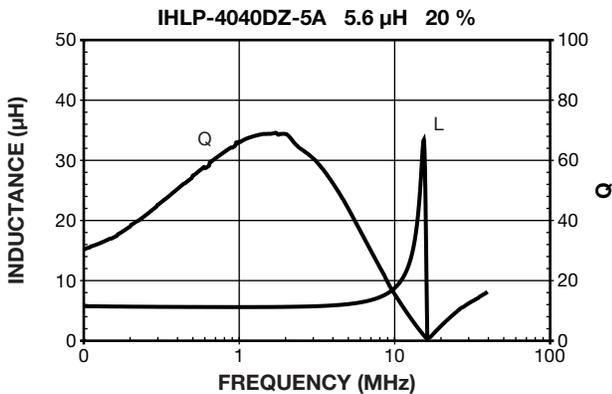
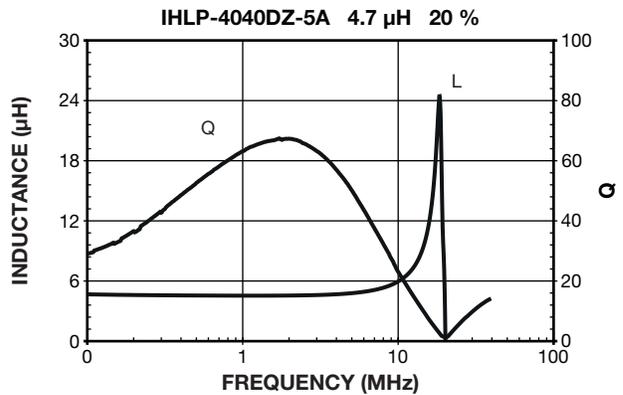
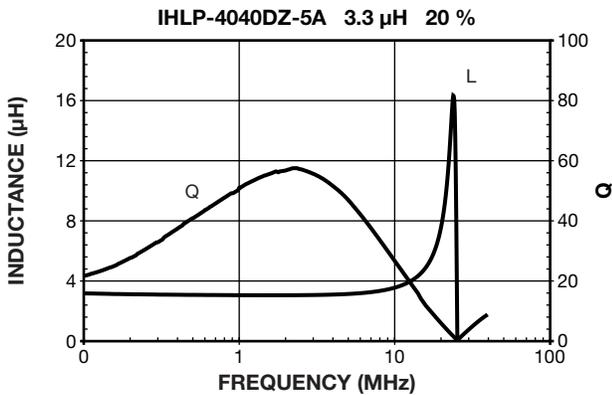
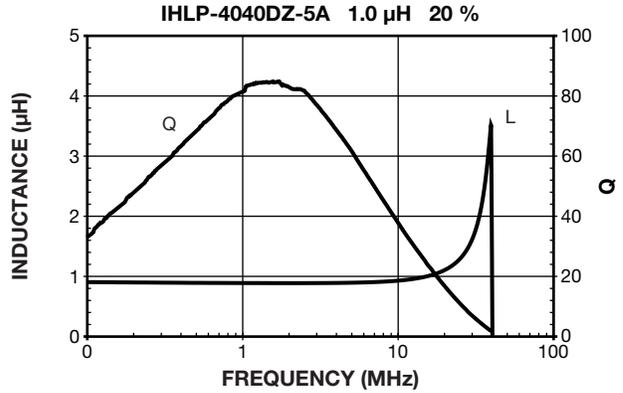
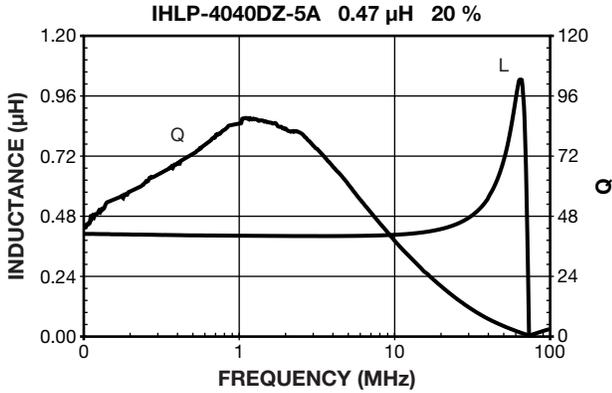




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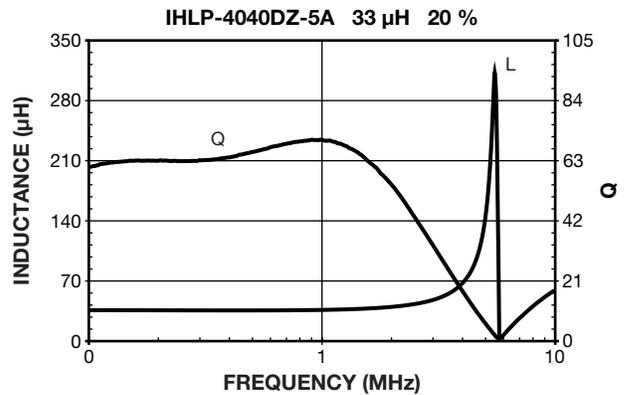
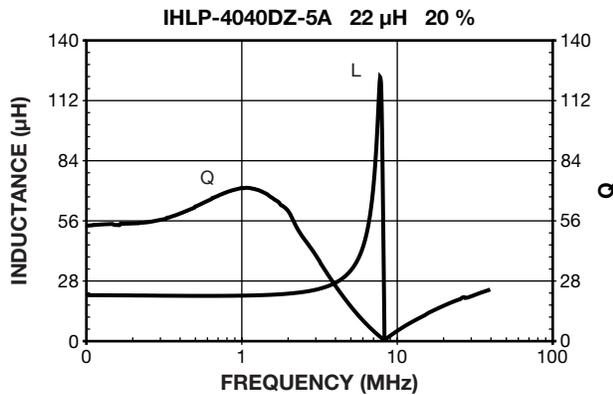
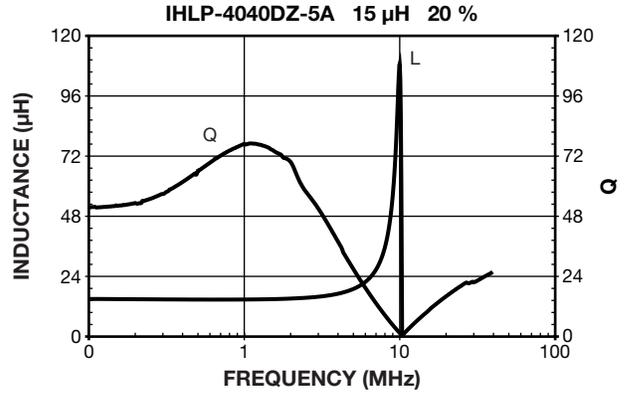
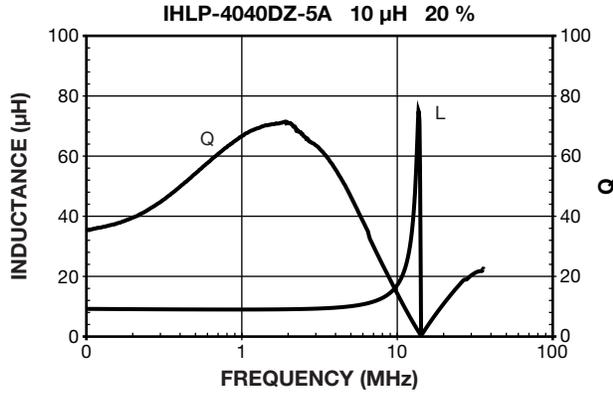


**PERFORMANCE GRAPHS: INDUCTANCE AND Q VS. FREQUENCY**





PERFORMANCE GRAPHS: INDUCTANCE AND Q VS. FREQUENCY





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