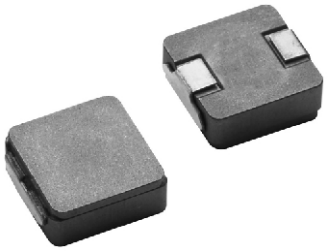
Low Profile, High Current IHLP® Inductors



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.

FEATURES

- High temperature, up to 155 °C
- Shielded construction
- Frequency range up to 1 MHz
- Lowest DCR/µH, in this package size
- Handles high transient current spikes without saturation
- Ultra low buzz noise, due to composite construction
- AEC-Q200 qualified
- Material categorization: For definitions of compliance please see www.vishay.com/doc?99912

AUTOMOTIVE GRADE

Pb-free

RoHS COMPLIANT

GREEN (5-2008)

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

STANDARD ELECTRICAL SPECIFICATIONS

L_0 INDUCTANCE ± 20 % AT 100 kHz, 0.25 V, 0 A (µH)	DCR TYP. 25 °C (mΩ)	DCR MAX. 25 °C (mΩ)	HEAT RATING CURRENT DC TYP. (A) (3)	SATURATION CURRENT DC TYP. (A) (4)
0.47	1.55	1.66	30.0	28.5
1.0	2.87	3.07	23.5	24.0
2.2 (6)	8.7	9.1	12.5	12.5
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
47	167	178	2.5	4.5

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 ΔT of 40 °C

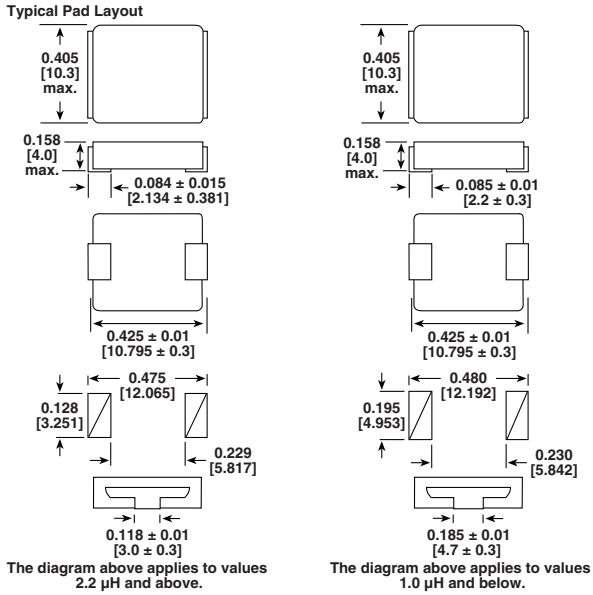
(4) DC current (A) that will cause L_0 to drop approximately 20 %

(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.

(6) Maximum recommended operating voltage (across inductor) = 200 V

(7) Preliminary values.

DIMENSIONS in inches [millimeters]



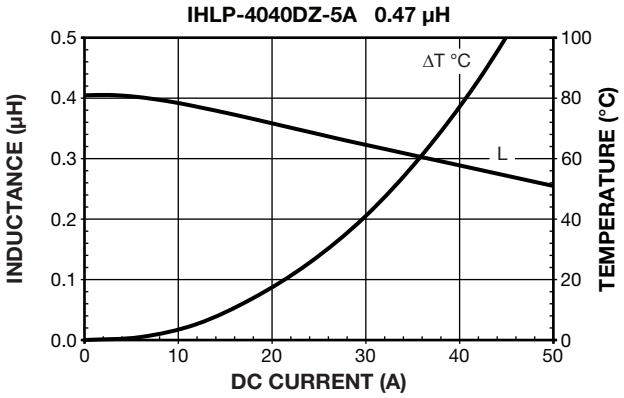
DESCRIPTION

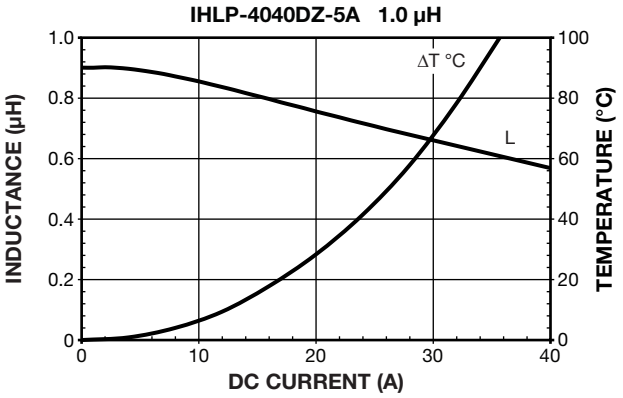
IHLP-4040DZ-5A	4.7 µH	± 20 %	ER	e3
MODEL	INDUCTANCE VALUE	INDUCTANCE TOLERANCE	PACKAGE CODE	JEDEC LEAD (Pb)-FREE STANDARD

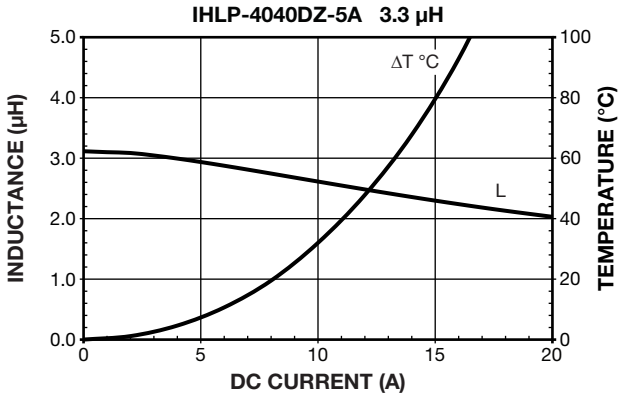
GLOBAL PART NUMBER

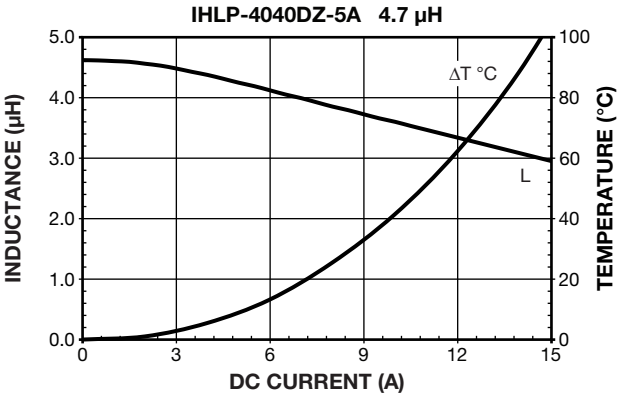
I	H	L	P	4	0	4	0	D	Z	E	R	4	R	7	M	5	A
PRODUCT FAMILY				SIZE						PACKAGE CODE		INDUCTANCE VALUE			TOL.	SERIES	

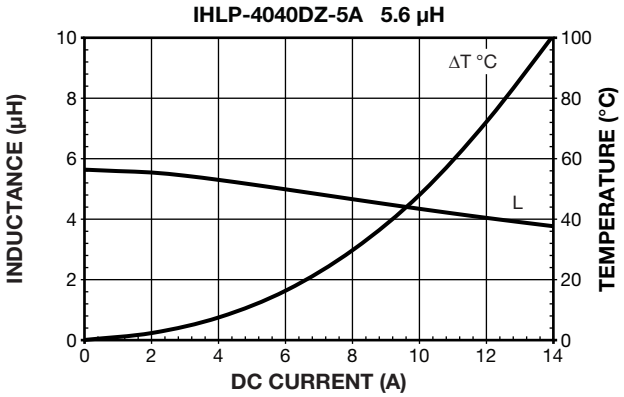
PERFORMANCE GRAPHS

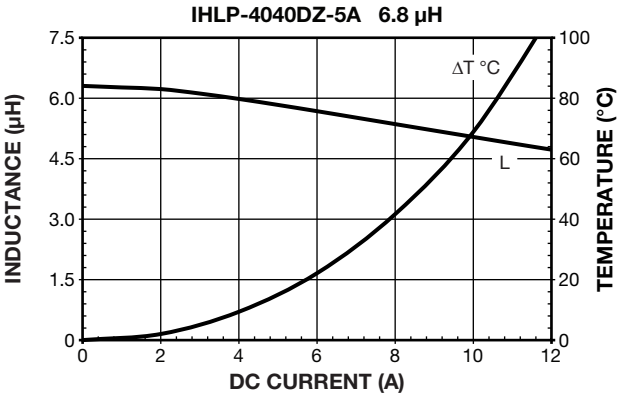












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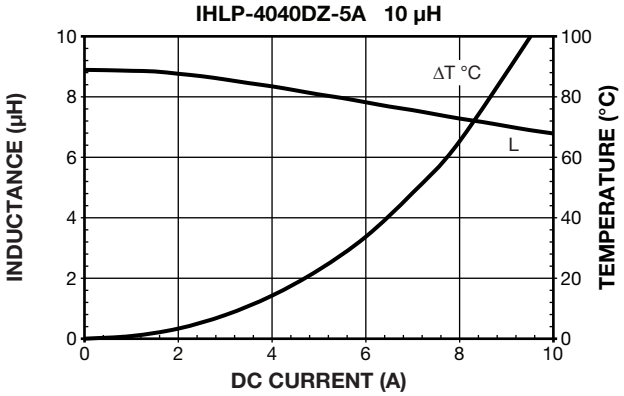
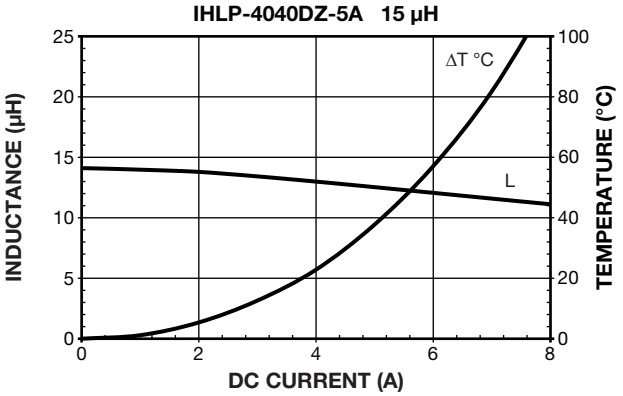
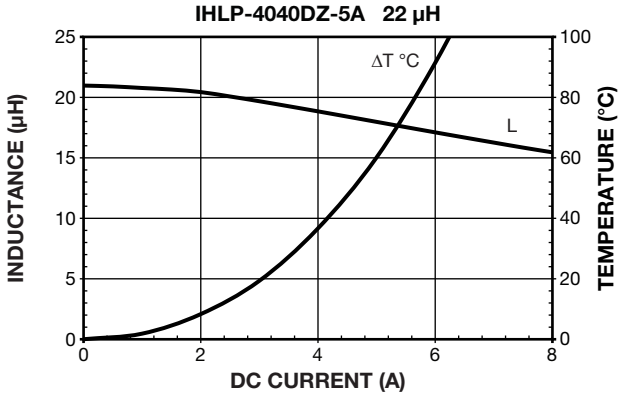
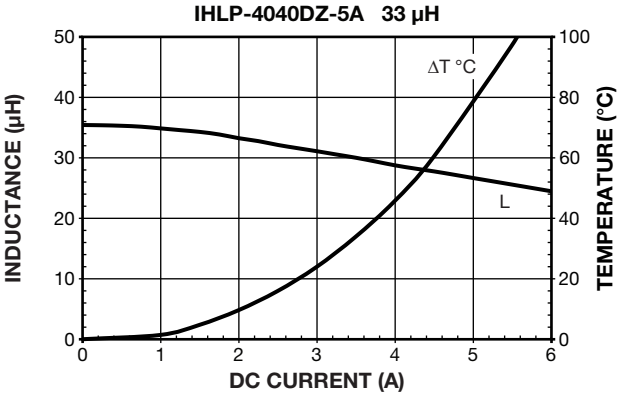
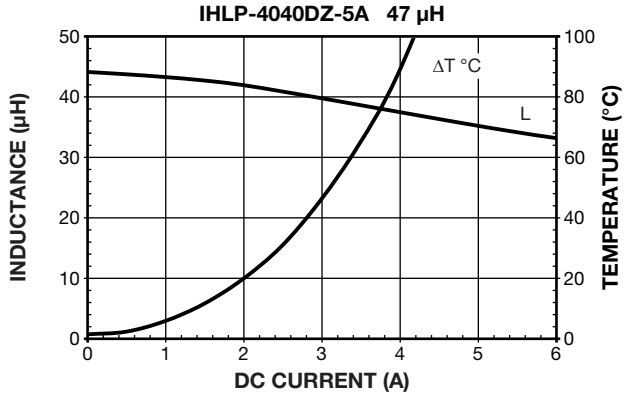


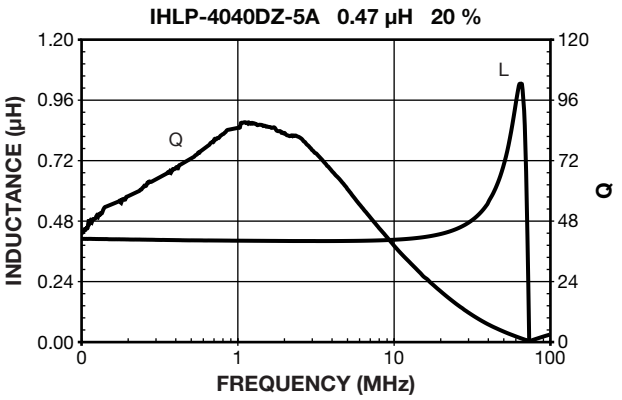


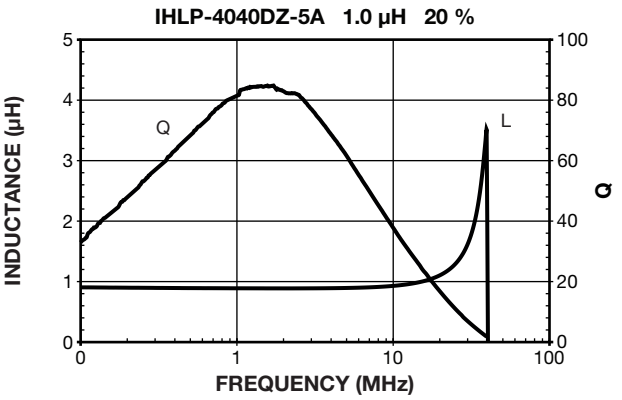


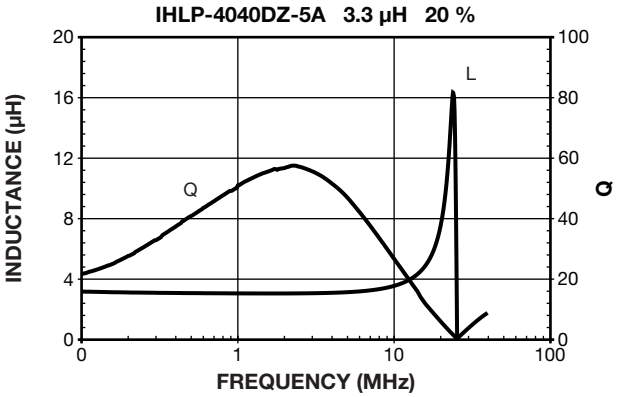


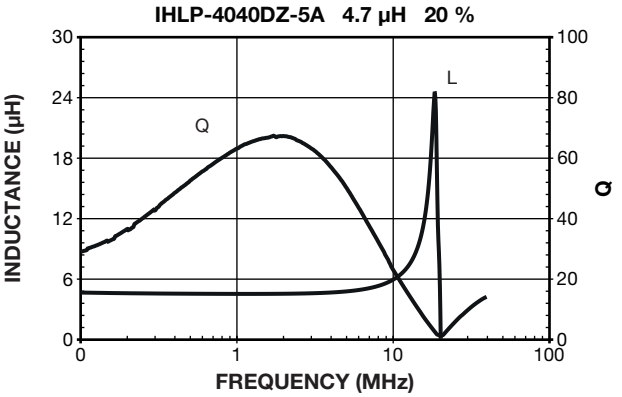


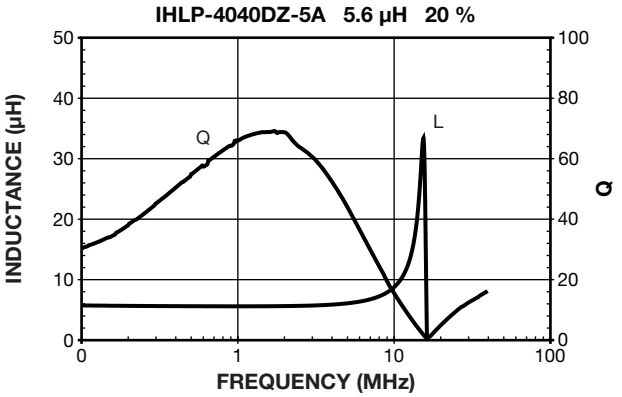
PERFORMANCE GRAPHS: INDUCTANCE AND Q VS. FREQUENCY

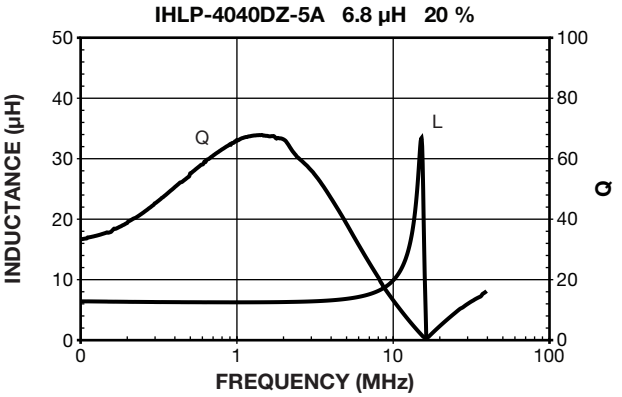












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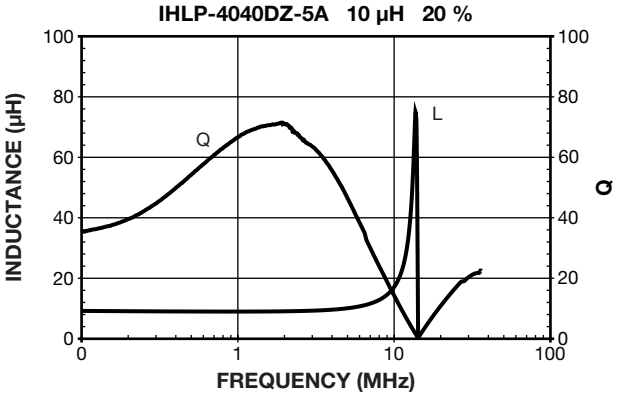

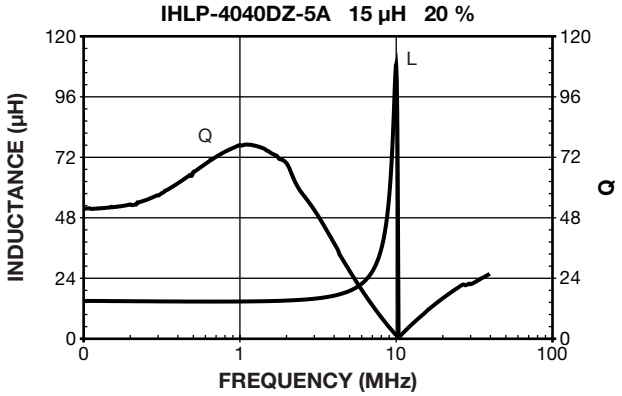

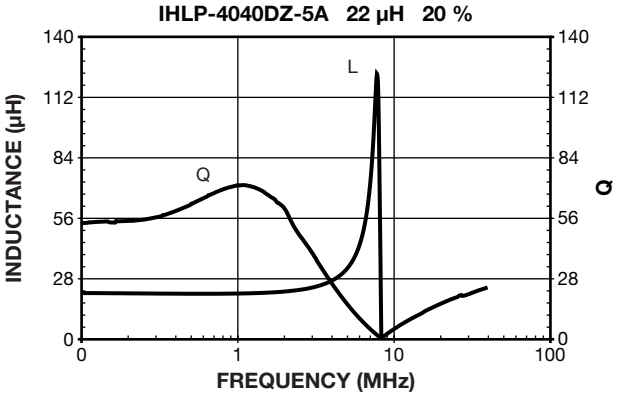

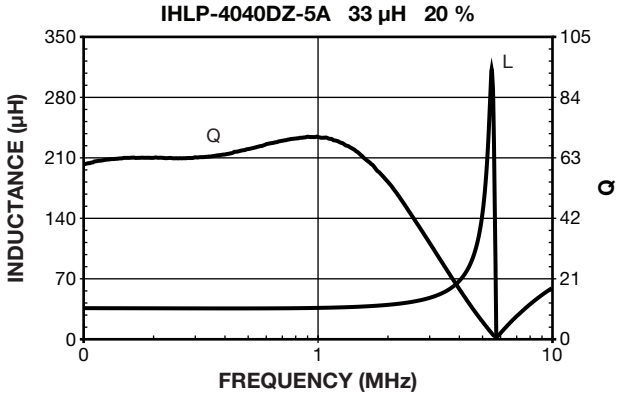

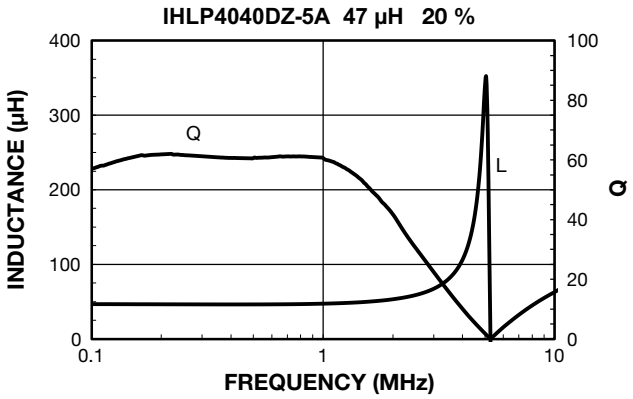

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