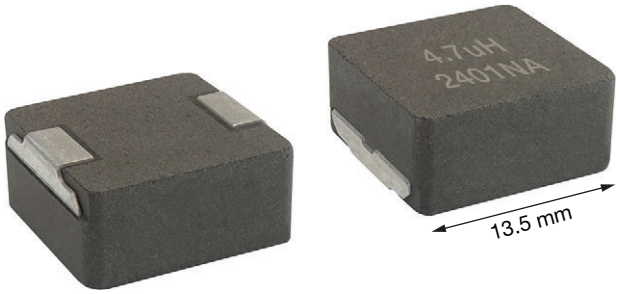
IHLP® Automotive Inductors, Low AC Loss, High Temperature (155 °C) Series



FEATURES

- 13.5 mm x 12.9 mm x 6.4 mm SMD package
- Up to 60 % lower AC losses than traditional core materials gives excellent performance in high ripple conditions and minimizes need for cooling
- Magnetically shielded composite construction
- AEC-Q200 qualified
- IHLP design;
  PATENT(S): www.vishay.com/patents
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912

AUTOMOTIVE GRADE

Pb-free

RoHS COMPLIANT

HALOGEN FREE

GREEN (5-2008)

LINKS TO ADDITIONAL RESOURCES

3D Models

Design Tools

APPLICATIONS

- ADAS, ECU, LiDAR, braking systems
- 5G telecom
- DC/DC conversion and filtering
- Drivers for LED lighting and audio

STANDARD ELECTRICAL SPECIFICATIONS

PART NUMBER	INDUCTANCE ± 20 % AT 0 A (µH)	DCR TYP. 25 °C (mΩ)	DCR MAX. 25 °C (mΩ)	HEAT RATING CURRENT DC TYP. (A) (1)	SATURATION CURRENT DC TYP. (A) (2)		SRF TYP. (MHz)
					20 % DROP	30 % DROP	
IHLP5050FDER1R0MAP	1.0	1.5	1.6	37.9	36.5	49.0	41.0
IHLP5050FDER2R2MAP	2.2	2.7	2.9	26.9	30.3	41.0	27.4
IHLP5050FDER3R3MAP	3.3	5.7	6.1	21.0	27.1	36.6	21.3
IHLP5050FDER4R7MAP	4.7	9.0	9.6	16.3	21.9	30.0	15.4
IHLP5050FDER100MAP	10	16.1	17.2	12.2	16.1	21.6	10.9

Notes

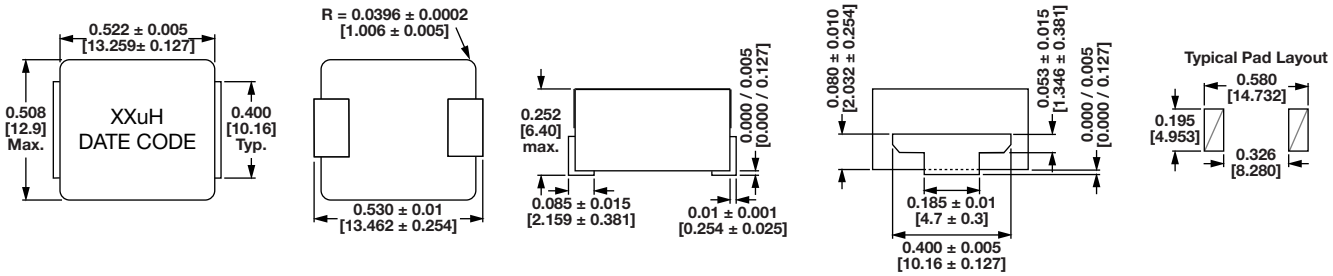
- All test data is referenced to 25 °C ambient
- Test condition: 100kHz, 0.25V
- Operating temperature range -55 °C to +155 °C
- The part temperature (ambient + temp. rise) should not exceed 155 °C under worst case operating conditions. Circuit design, component placement, PCB trace size and thickness, airflow and other cooling provisions all affect the part temperature. Part temperature should be verified in the end application.
- Rated operating voltage (across inductor) = 75 V

(1) DC current (A) that will cause an approximate ΔT of 40 °C

(2) DC current (A) that will cause L_0 to drop approximately 20 % and 30 %

PATENT(S): www.vishay.com/patents
This Vishay product is protected by one or more United States and international patents.

DIMENSIONS in inches [millimeters]



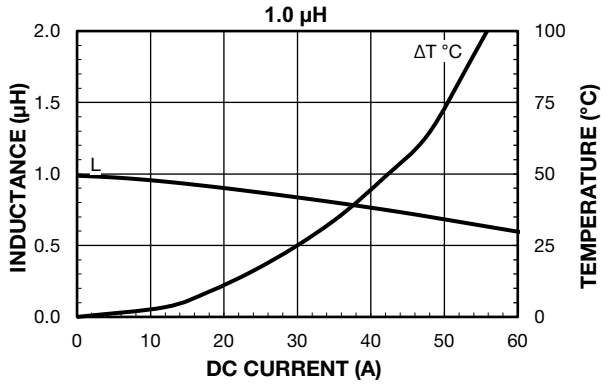
DESCRIPTION

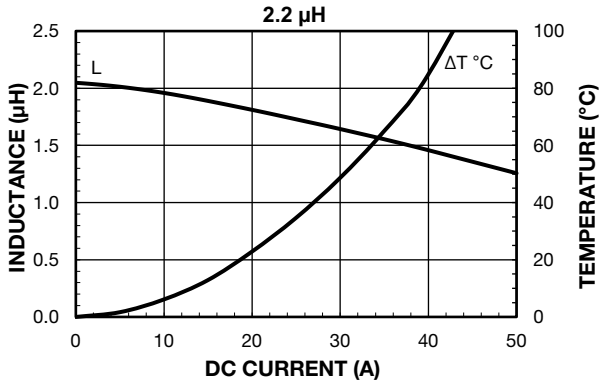
IHLP-5050FD-AP	4.7 µH	± 20 %	ER	e3
MODEL	INDUCTANCE VALUE	INDUCTANCE TOLERANCE	PACKAGE CODE	JEDEC® LEAD (Pb)-FREE STANDARD

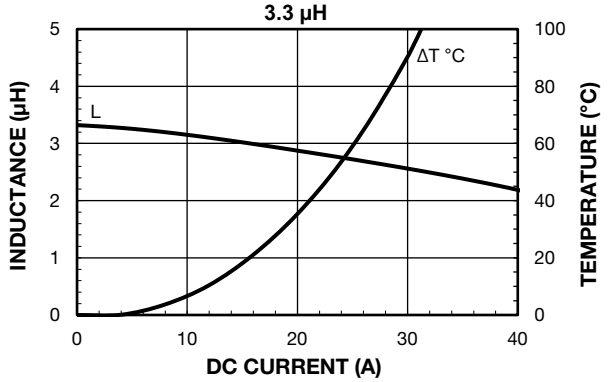
GLOBAL PART NUMBER

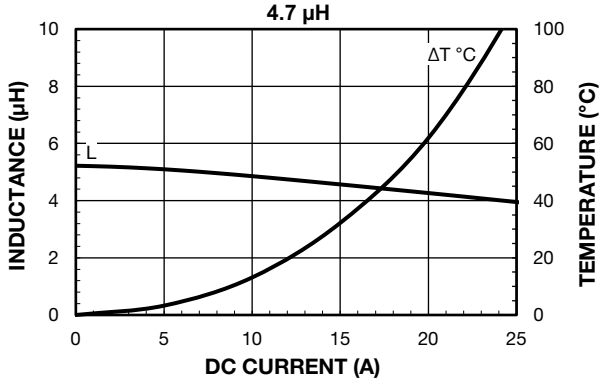
I H L P	5 0 5 0 F D	E R	4 R 7	M	A P
PRODUCT FAMILY	SIZE	PACKAGE CODE	FORCE COEFFICIENT	INDUCTANCE TOLERANCE	SERIES
		ER = tape and reel	**4R7** = 4.7 µH	**M** = ± 20 %	

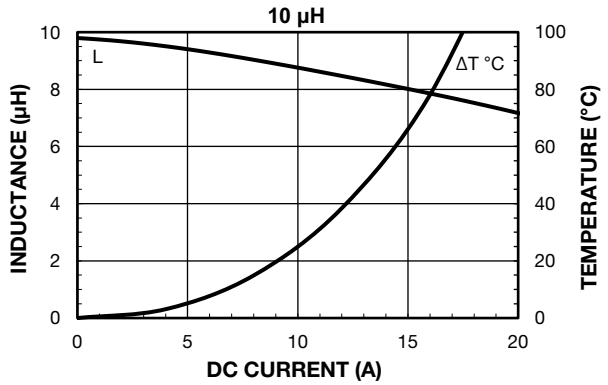
PERFORMANCE GRAPHS



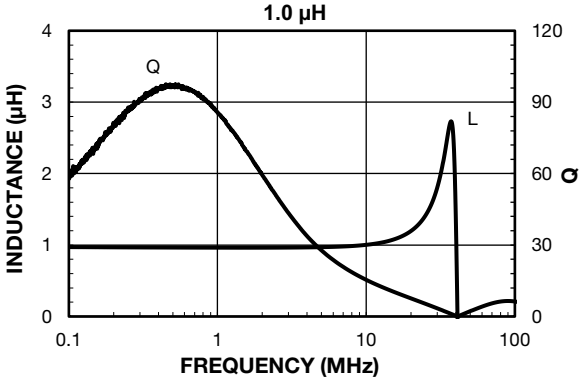


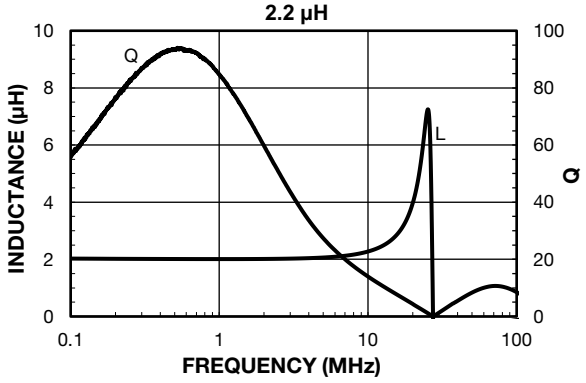


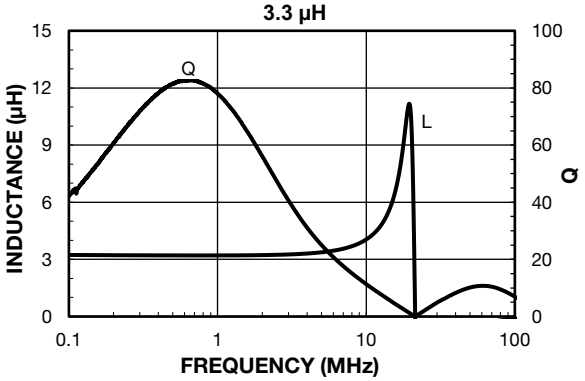


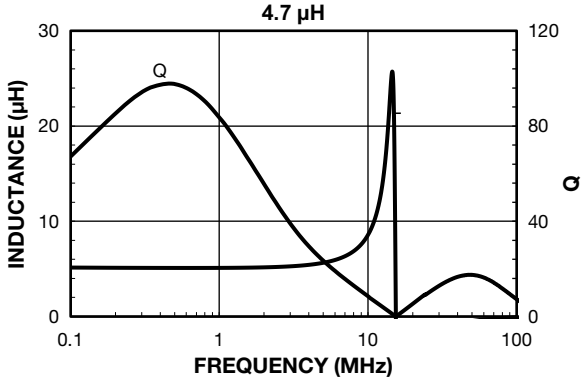


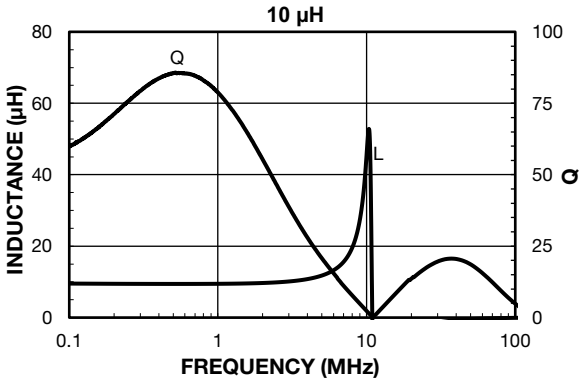
PERFORMANCE GRAPHS: INDUCTANCE AND Q VS. FREQUENCY











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