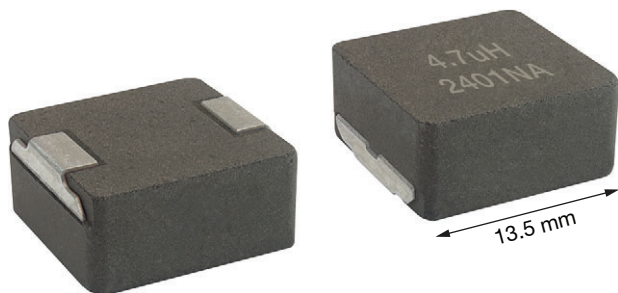


IHLP® Automotive Inductors, Low AC Loss, High Temperature (155 °C) Series



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
- Material categorization:
for definitions of compliance please see www.vishay.com/doc?99912

AUTOMOTIVE
GRADE

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

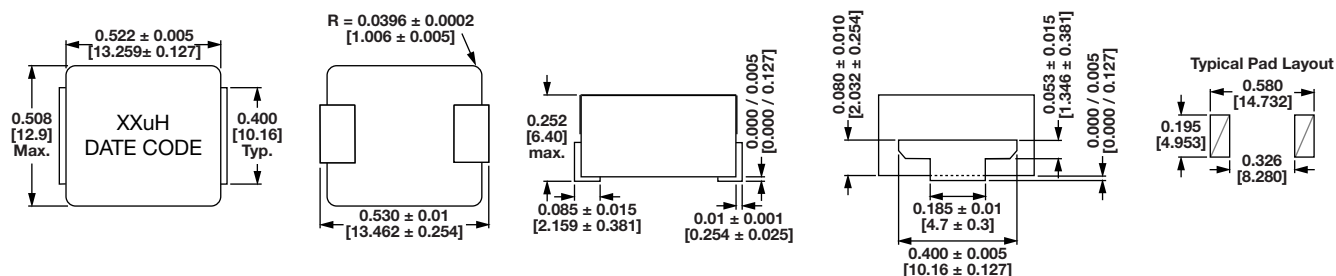
PART NUMBER	INDUCTANCE ± 20 % AT 0 A (μH)	DCR TYP. 25 °C (mΩ)	DCR MAX. 25 °C (mΩ)	HEAT RATING CURRENT DC TYP. (A) ⁽¹⁾	SATURATION CURRENT DC TYP. (A) ⁽²⁾		SRF TYP. (MHz)
					20 % DROP	30 % DROP	
IHLP5050FDE_1R0MAP	1.0	1.5	1.6	37.9	36.5	49.0	41.0
IHLP5050FDE_2R2MAP	2.2	2.7	2.9	26.9	30.3	41.0	27.4
IHLP5050FDE_3R3MAP	3.3	5.7	6.1	21.0	27.1	36.6	21.3
IHLP5050FDE_4R7MAP	4.7	9.0	9.6	16.3	21.9	30.0	15.4
IHLP5050FDE_100MAP	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 L₀ to drop approximately 20 % and 30 %



DIMENSIONS in inches [millimeters]



DESCRIPTION

IHLP-5050FD-AP	4.7 μH	± 20 %	EK	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 K	4 R 7	M	A P
PRODUCT FAMILY	SIZE	PACKAGE CODE	INDUCTANCE	INDUCTANCE TOLERANCE	SERIES
EK = tape and reel			4R7 = 4.7 μ H	M = ± 20 %	

PACKAGE CODE OPTIONS

EK = tape and reel packaging (500 pcs on 13-inch reel)

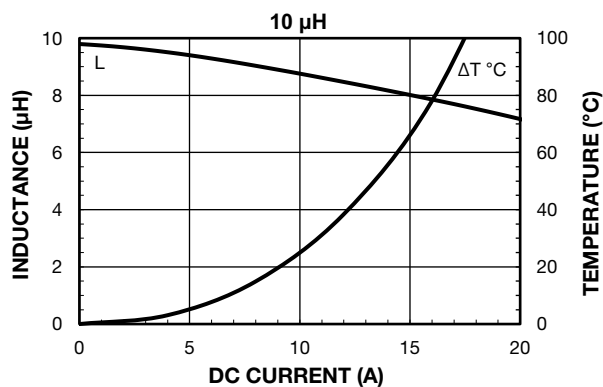
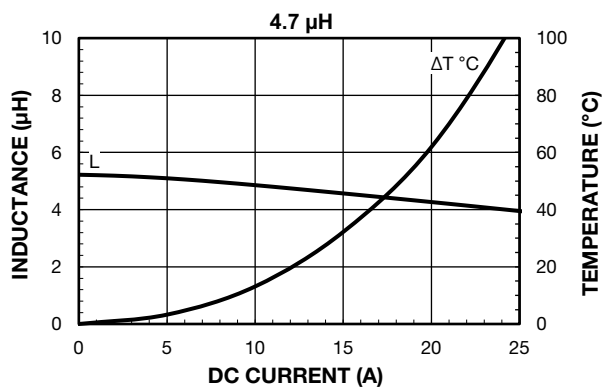
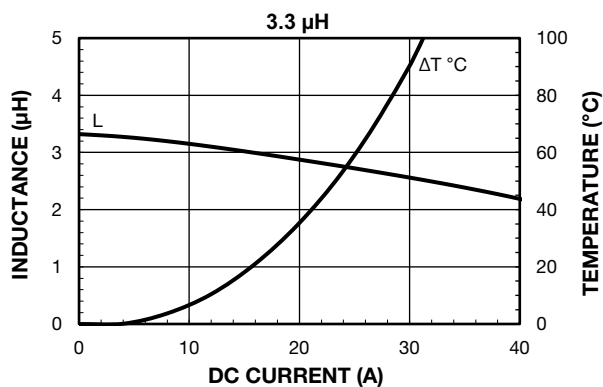
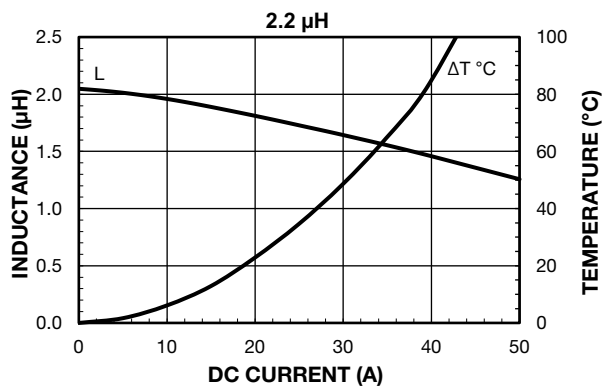
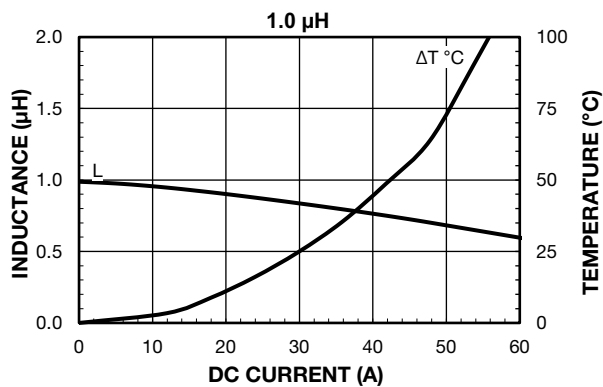
ER = tape and reel packaging (250 pcs on 13-inch reel)

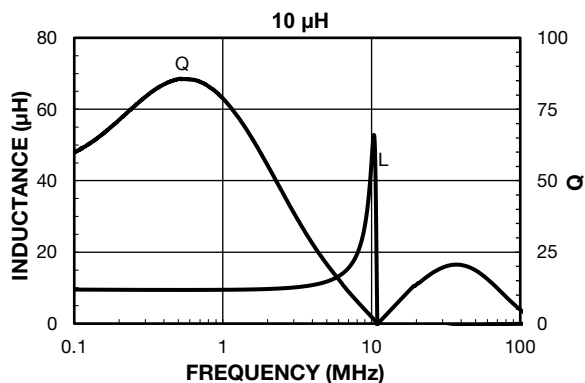
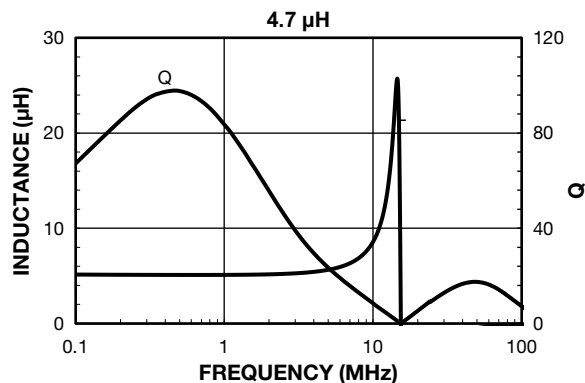
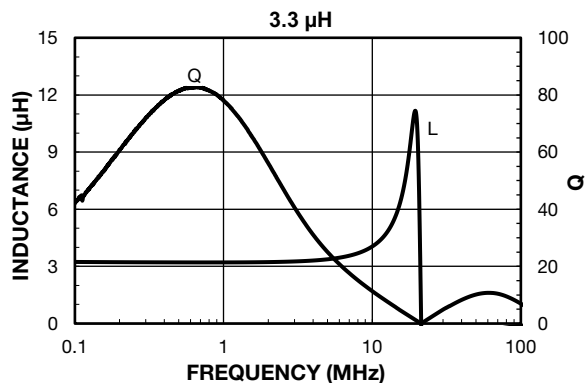
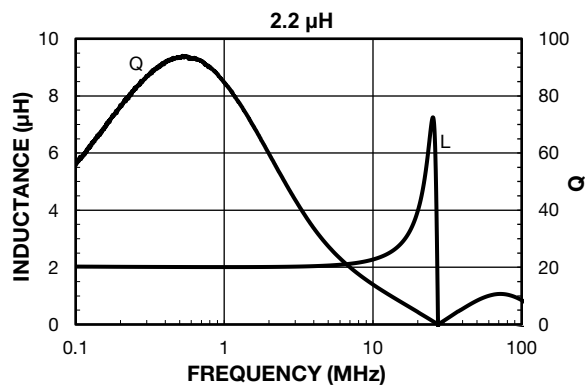
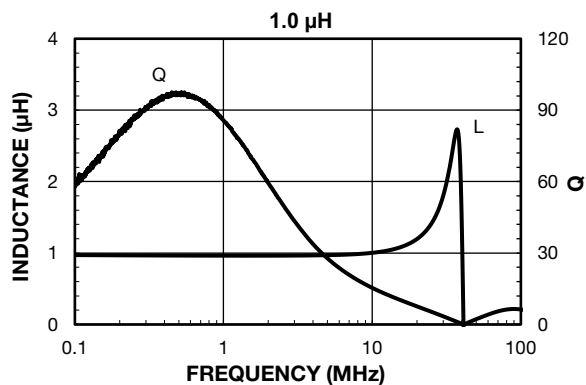
Note

- For additional packaging details see [“Packaging Methods”](#)



PERFORMANCE GRAPHS



PERFORMANCE GRAPHS: INDUCTANCE AND Q VS. FREQUENCY




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