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IHLP[®] Commercial Inductors, High Saturation Series



LINKS TO ADDITIONAL RESOURCES



30	N
Models	Design

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) ⁽¹⁾	SATURATION CURRENT DC TYP. (A) ⁽²⁾	
0.19	0.875	0.95	40.0	90.0	
0.36	1.30	1.40	31.5	60.0	
0.56	1.80	1.95	27.5	49.0	
1.0	3.70	4.10	17.5	36.0	
1.5	5.30	5.80	15.0	27.5	
2.2	8.20	9.00	12.0	25.6	
3.3	13.70	14.40	10.0	18.6	
4.7	15.00	16.50	9.5	17.0	
5.6	17.60	19.30	8.5	16.0	
6.8	21.20	23.30	8.0	13.5	
10	33.20	36.50	6.8	12.0	
22	74.3	79.90	4.6	10.0	

Notes

- All test data is referenced to 25 °C ambient
- Operating temperature range -55 °C to +125 °C
- 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
- 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 %

FEATURES

- Shielded construction
- Frequency range up to 5.0 MHz
- Lowest DCR/µH, in this package size
- · Handles high transient current spikes without saturation



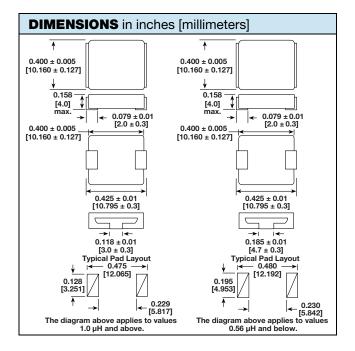
COMPLIANT

HALOGEN

- FREE GREEN • Ultra low buzz noise, due to composite (5-2008) construction
- Polarity marking available for EMI sensitive applications (see "EP" package code below for more information)
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912

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)



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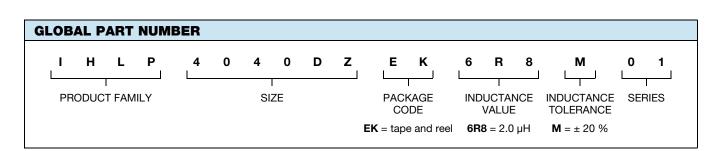
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IHLP-4040DZ-01

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DESCRIPTION

IHLP-4040DZ-01	6.8 µH	± 20 %	EK	e3
MODEL	INDUCTANCE VALUE	INDUCTANCE TOLERANCE	PACKAGE CODE	JEDEC [®] LEAD (Pb)-FREE STANDARD



PACKAGE CODE OPTIONS EK = tape and reel packaging (1000 pieces on 13-inch reel) EE = tape and reel packaging (900 pieces on 13-inch reel) ER = tape and reel packaging (500 pieces on 13-inch reel) EP = tape and reel packaging (1000 pieces on 13-inch reel), includes polarity part marking

Notes

- 1000 piece reels for IHLP4040DZ models contains tape pitch change
- For additional packaging details see "<u>Packaging Methods</u>"

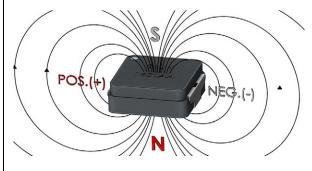
IHLP-4040DZ-01



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MAGNETIC FIELD

CONFIGURATION OF THE "B" (FLUX) FIELD FOR THE IHLP WITH POLARITY MARKING



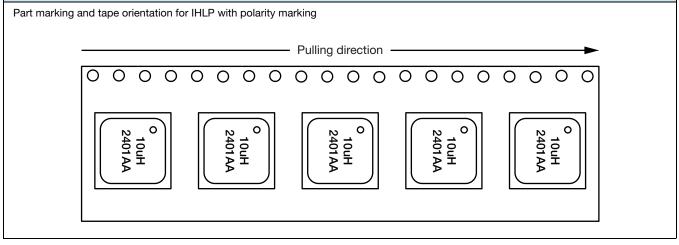
When a positive (+) voltage is placed on the terminal marked with the polarity dot and the opposite terminal is negative (-), the resulting current flow will create a magnetic south pole on the top side of the IHLP.

For the IHLP-4040DZ-01 series, the polarity mark also indicates the "start" or "inside" lead of the winding.

Observing the polarity orientation when mounting the inductor will ensure the most consistent EMI reduction performance.

Drawing is for illustrative purposes only. The flux leakage from the inductor is minimal.

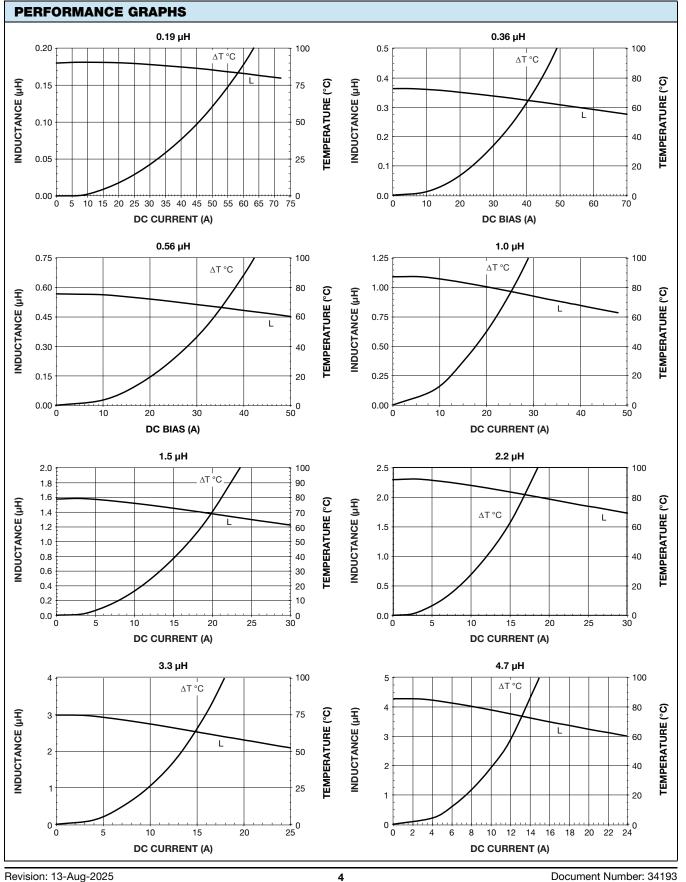
PART MARKING / POCKET TAPE ORIENTATION



IHLP-4040DZ-01



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For technical questions, contact: magnetics@vishay.com

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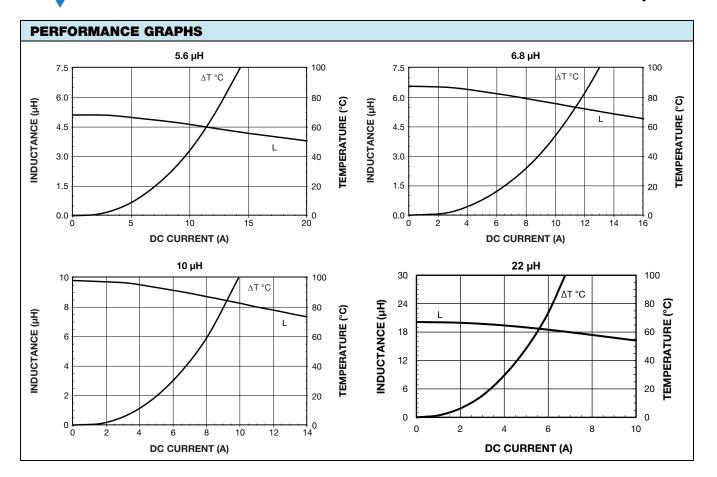
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