



# SMD POWER INDUCTOR

IHLE-4040DC-5A

## Low-Profile, High-Current Inductor



### KEY BENEFITS

- Integrated e-field shield eliminates the need for separate shielding
- Up to 20 dB e-field reduction at 1 cm when the integrated shield is connected to ground
- Co-planarity of the 4 terminals  $\leq 100 \mu\text{m}$

### APPLICATIONS

- Energy storage DC/DC converters
- High-current filtering

### RESOURCES

- Datasheets: IHLE-4040DC-5A - [www.vishay.com/doc?34380](http://www.vishay.com/doc?34380)
- For technical questions, contact [magnetics@vishay.com](mailto:magnetics@vishay.com)
- Material categorization: for definitions, please see [www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)



**RoHS**  
COMPLIANT





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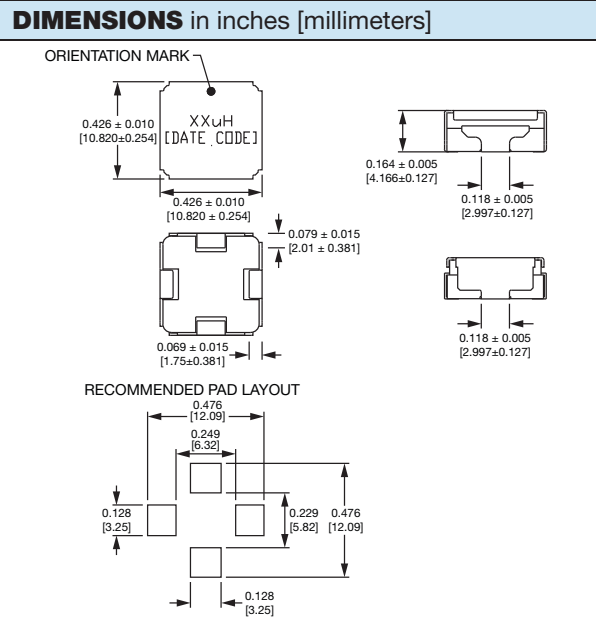
STANDARD ELECTRICAL SPECIFICATIONS				
L <sub>0</sub> INDUCTANCE ± 20 % AT 100 kHz, 0.25 V, 0 A (μH)	DCR TYP. 25 °C (mΩ)	DCR MAX. 25 °C (mΩ)	HEAT RATING CURRENT DC TYP. (A) <sup>(3)</sup>	SATURATION CURRENT DC TYP. (A) <sup>(4)</sup>
0.47	1.55	1.66	30.0	28.5
1.0	2.87	3.07	23.5	24.0
2.2	8.15	8.76	15.0	12.0
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
47	167	178.00	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<sub>0</sub> 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.

**APPLICATIONS**

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



DESCRIPTION					
IHLE-4040DC-5A	33 μH	± 20 %	ER	e3	
MODEL	INDUCTANCE VALUE	INDUCTANCE TOLERANCE	PACKAGE CODE	JEDEC® LEAD (Pb)-FREE STANDARD	

GLOBAL PART NUMBER																	
I	H	L	E	4	0	4	0	D	C	E	R	3	3	0	M	5	A
PRODUCT FAMILY				SIZE				PACKAGE CODE		INDUCTANCE VALUE			TOL.	SERIES			

Revision 17-Oct-14