

## Low Profile, High Current Dual Inductors



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### STANDARD ELECTRICAL SPECIFICATIONS

| $L_0$<br>INDUCTANCE<br>$\pm 20\%$<br>AT 100 kHz,<br>0.25 V, 0 A<br>( $\mu\text{H}$ ) | DCR<br>TYP.<br>25 °C<br>(m $\Omega$ ) | DCR<br>MAX.<br>25 °C<br>(m $\Omega$ ) | HEAT<br>RATING<br>CURRENT<br>DC TYP.<br>(A) <sup>(1)</sup> | SATURATION<br>CURRENT<br>DC TYP.<br>(A) <sup>(2)</sup> | SRF<br>TYP.<br>(MHz) |
|--------------------------------------------------------------------------------------|---------------------------------------|---------------------------------------|------------------------------------------------------------|--------------------------------------------------------|----------------------|
| 5                                                                                    | 27.3                                  | 29.2                                  | 6.0                                                        | 8.5                                                    | 18.0                 |
| 10                                                                                   | 50.0                                  | 53.50                                 | 5.0                                                        | 5.2                                                    | 13.0                 |
| 15                                                                                   | 62.0                                  | 66.34                                 | 4.2                                                        | 3.5                                                    | 10.0                 |
| 22                                                                                   | 103.0                                 | 110.21                                | 3.3                                                        | 2.9                                                    | 9.0                  |
| 33                                                                                   | 149.0                                 | 159.43                                | 2.4                                                        | 2.9                                                    | 6.1                  |

#### Notes

- All test data is referenced to 25 °C ambient
- 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, 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) = 50 V
- (1) DC current (A) that will cause an approximate  $\Delta T$  of 40 °C
- (2) DC current (A) that will cause  $L_0$  to drop approximately 20 %

### FEATURES

- Two inductors in one package
- High temperature, up to 155 °C
- Shielded construction
- Optimal design realizes high quality sound and low distortion
- Low coupling for minimal cross-talk between inductors
- Frequency range up to 1 MHz
- Lowest DCR/ $\mu\text{H}$ , in this package size
- Handles high transient current spikes without saturation
- Ultra-low buzz noise, due to composite construction
- AEC-Q200 qualified
- IHLP design. PATENT(S): [www.vishay.com/patents](http://www.vishay.com/patents)
- Material categorization: for definitions of compliance please see [www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)

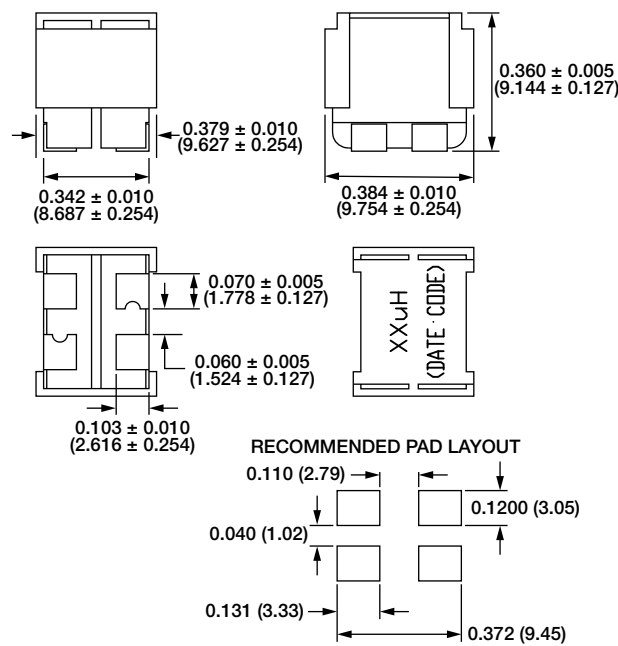


**RoHS**  
COMPLIANT

### APPLICATIONS

- Class D audio amplifiers

### DIMENSIONS in inches [millimeters]



### DESCRIPTION

|                       |                                    |                              |              |                                |
|-----------------------|------------------------------------|------------------------------|--------------|--------------------------------|
| <b>IHLD-3232HB-5A</b> | <b>10 <math>\mu\text{H}</math></b> | <b><math>\pm 20\%</math></b> | <b>ER</b>    | <b>e3</b>                      |
| MODEL                 | INDUCTANCE VALUE                   | INDUCTANCE TOLERANCE         | PACKAGE CODE | JEDEC® LEAD (Pb)-FREE STANDARD |

### GLOBAL PART NUMBER

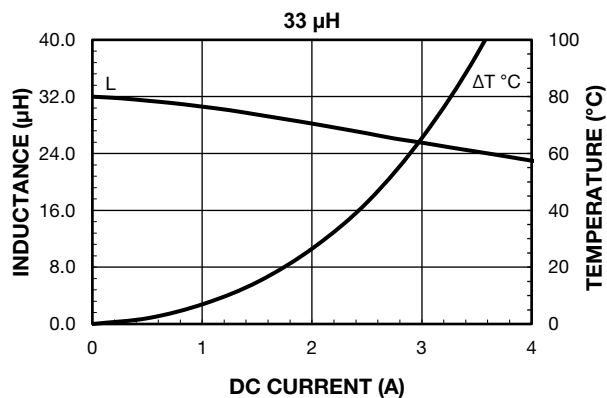
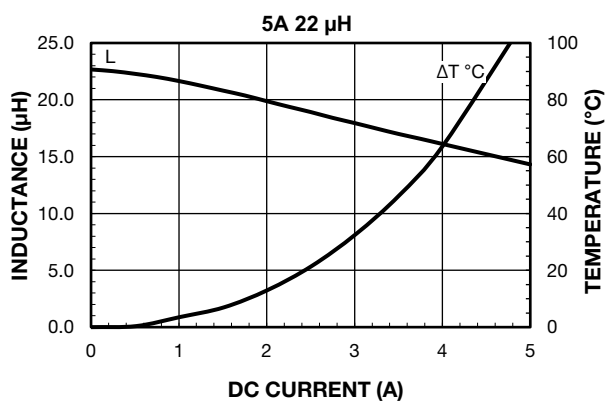
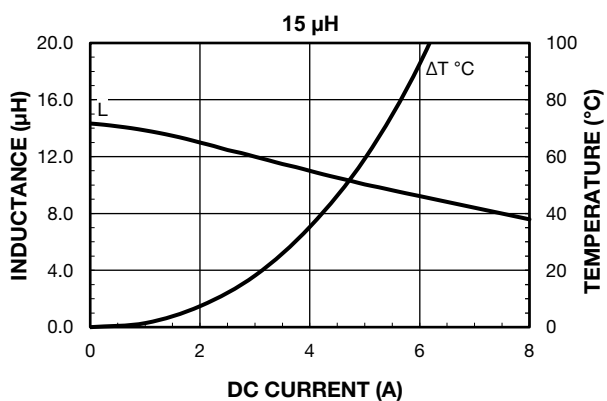
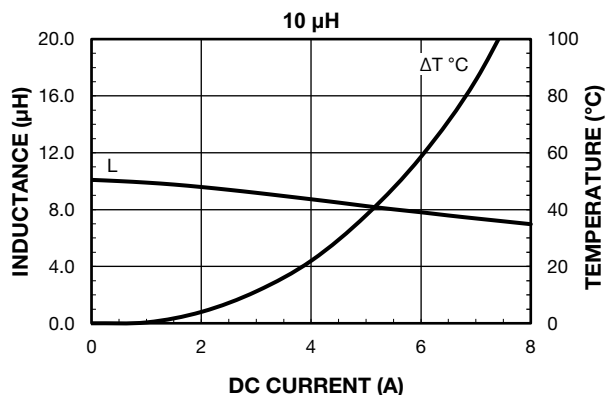
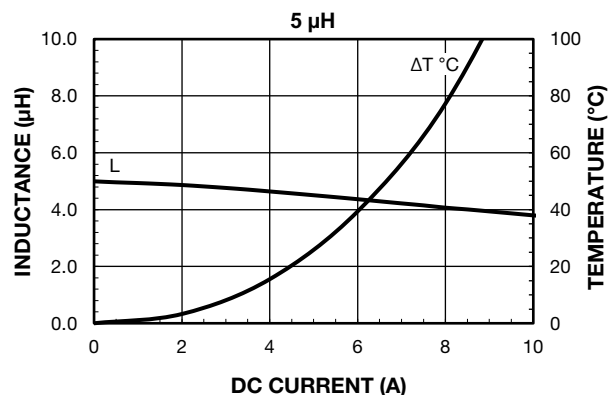
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|----------------|---|---|---|------|---|---|---|---|---|--------------|---|------------------|---|---|------|--------|---|
| I              | H | L | D | 3    | 2 | 3 | 2 | H | B | E            | R | 1                | 0 | 0 | M    | 5      | A |
| PRODUCT FAMILY |   |   |   | SIZE |   |   |   |   |   | PACKAGE CODE |   | INDUCTANCE VALUE |   |   | TOL. | SERIES |   |

**PATENT(S):** [www.vishay.com/patents](http://www.vishay.com/patents)

This Vishay product is protected by one or more United States and international patents.

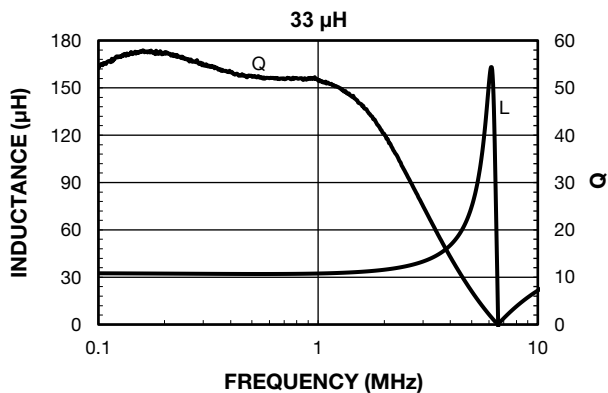
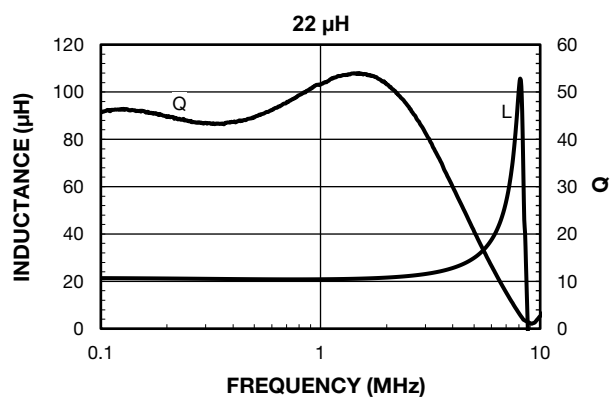
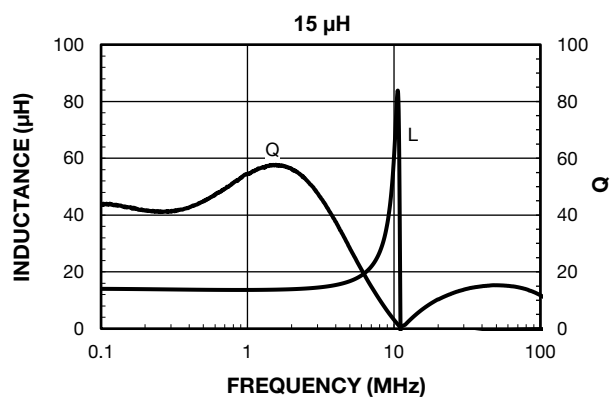
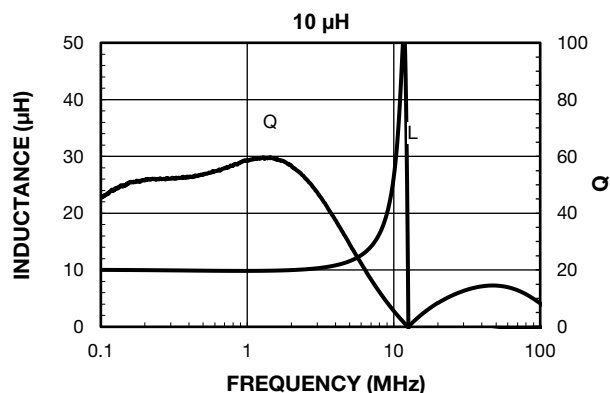
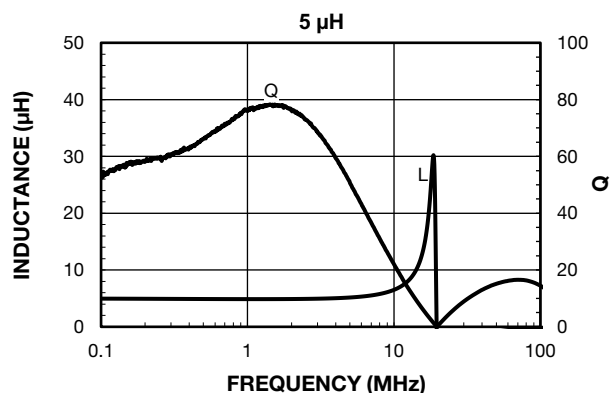


PERFORMANCE GRAPHS





PERFORMANCE GRAPHS: INDUCTANCE AND Q VS. FREQUENCY





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