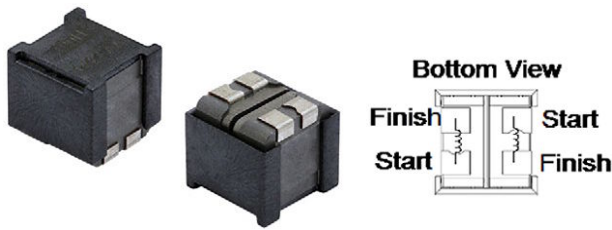


## Low Profile, High Current Dual Inductors



Manufactured under one or more of the following:  
**US Patents; 6,198,375/6,204,744/6,449,829/6,460,244.**  
 Several foreign patents, and other patents pending.

| STANDARD ELECTRICAL SPECIFICATIONS  |                                       |                                       |  |  |                      |
|---|---------------------------------------|---------------------------------------|--|--|----------------------|
| $L_0$<br>INDUCTANCE<br>± 20 % AT<br>100 kHz,<br>0.25 V, 0 A<br>( $\mu$ 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>(3)</sup> | SATURATION<br>CURRENT<br>DC TYP.<br>(A) <sup>(4)</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
- DC current (A) that will cause an approximate  $\Delta T$  of 40 °C
- DC current (A) that will cause  $L_0$  to drop approximately 20 %
- 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.

### 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/ $\mu$ H, in this package size
- Handles high transient current spikes without saturation
- Ultra-low buzz noise, due to composite construction
- AEC-Q200 qualified
- Material categorization: for definitions of compliance please see [www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)

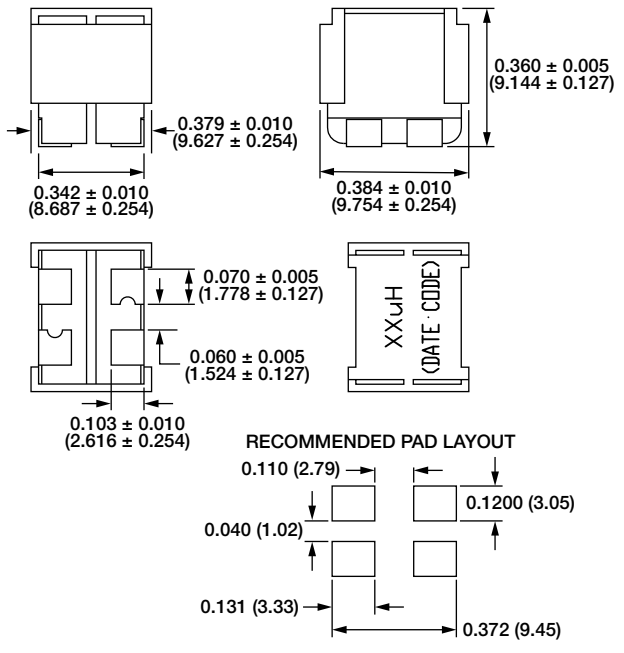
 AUTOMOTIVE  
GRADE

**RoHS**  
COMPLIANT

### APPLICATIONS

- Class D audio amplifiers

### DIMENSIONS in inches [millimeters]



### DESCRIPTION

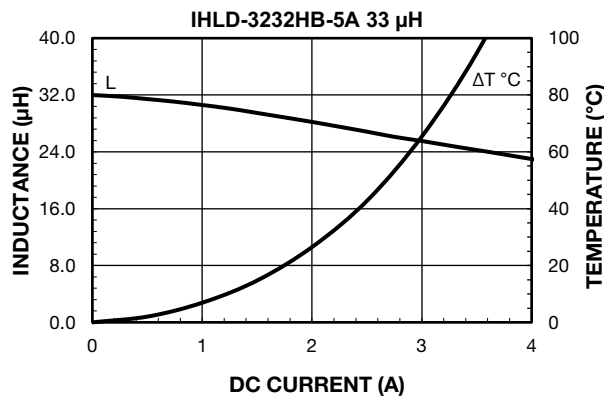
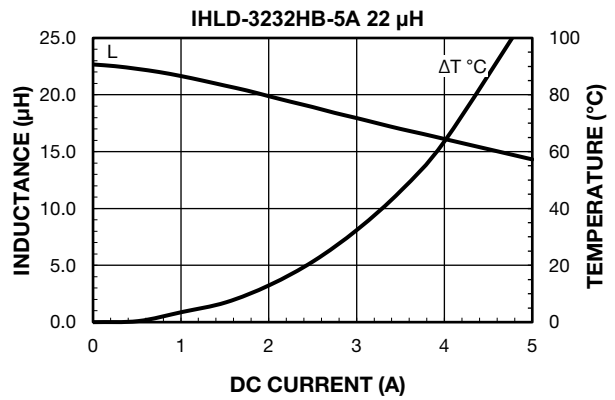
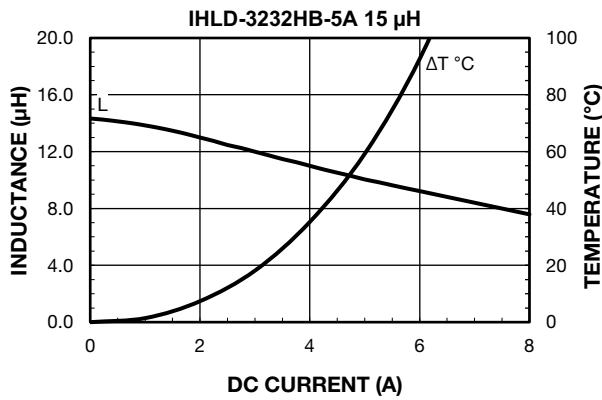
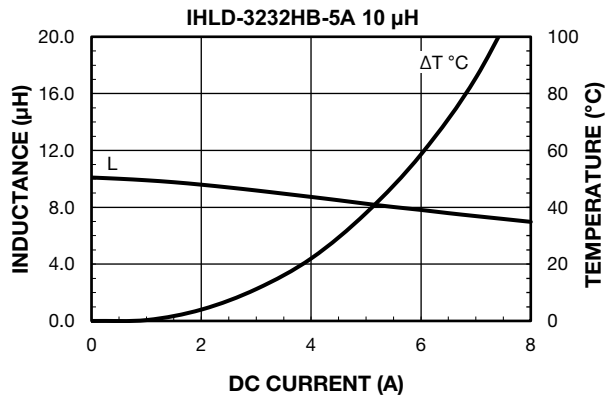
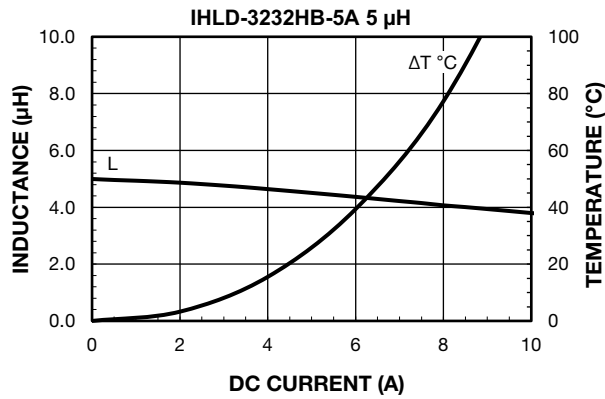
|                       |                             |                      |              |                                |
|-----------------------|-----------------------------|----------------------|--------------|--------------------------------|
| <b>IHLD-3232HB-5A</b> | <b>10 <math>\mu</math>H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

### GLOBAL PART NUMBER

|                |   |   |   |      |   |   |   |   |              |   |                  |   |   |      |        |   |   |
|----------------|---|---|---|------|---|---|---|---|--------------|---|------------------|---|---|------|--------|---|---|
| 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 |   |   |

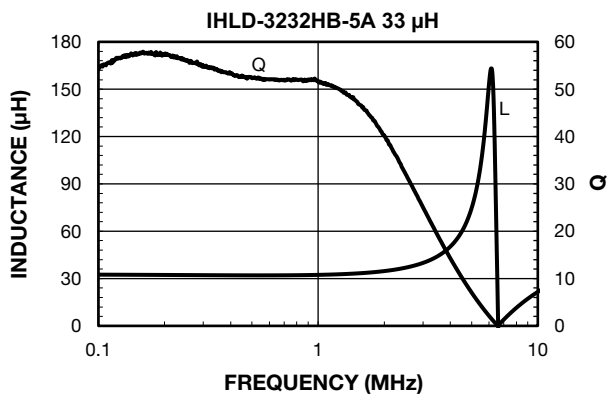
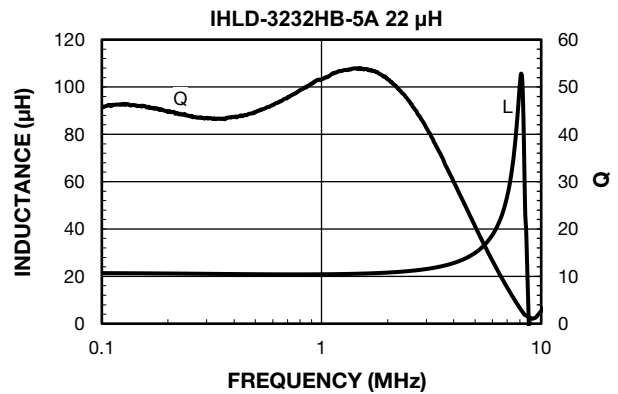
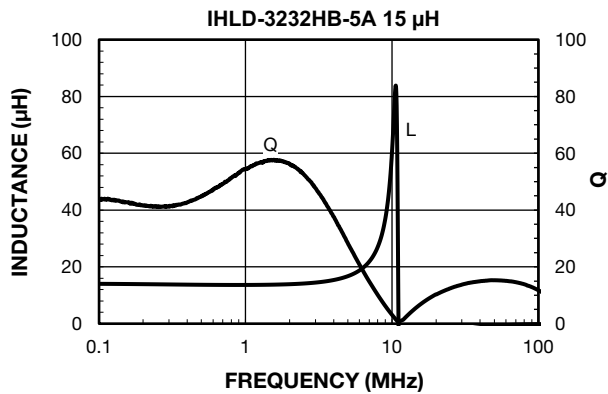
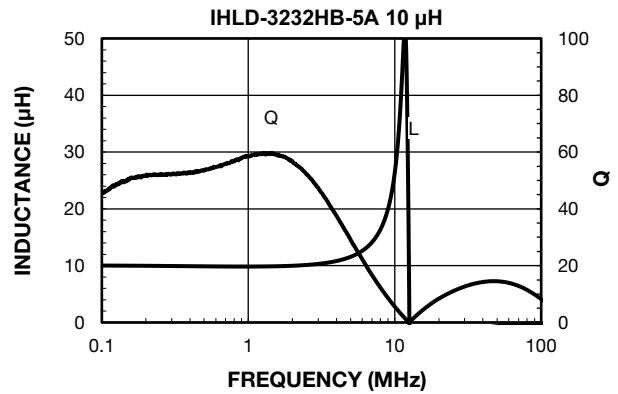
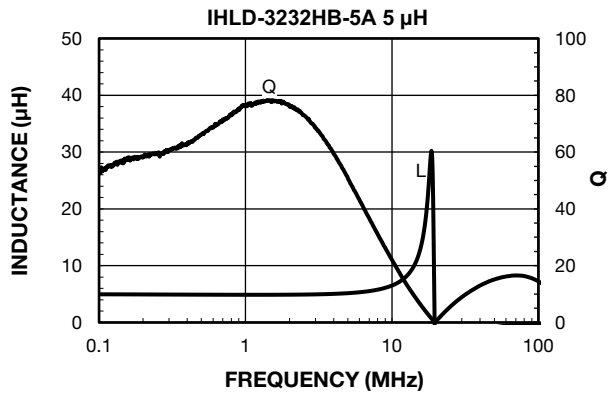


PERFORMANCE GRAPHS





PERFORMANCE GRAPHS: INDUCTANCE AND Q VS. FREQUENCY





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