



IHLP® Commercial Inductors, High Temperature (155 °C) Series



FEATURES

- High temperature rating, up to 155 °C
- Shielded construction
- Excellent DC/DC energy storage up to 1 MHz to 2 MHz. Filter inductor applications up the SRF (see Standard Electrical Specifications table).
- Lowest DCR/μH, in this package size
- Handles high transient current spikes without saturation
- Ultra low buzz noise, due to composite construction
- IHLP design. PATENT(S): www.vishay.com/patents
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912



RoHS
COMPLIANT
HALOGEN
FREE
GREEN
(5-2008)

ADDITIONAL RESOURCES



| 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⁾ | SRF TYP. (MHz) |
| 0.47 | 0.56 | 0.67 | 80.0 | 100.0 | 47.5 |
| 1.0 | 0.82 | 0.89 | 69.0 | 71.0 | 25.7 |
| 2.2 | 1.15 | 1.25 | 58.0 | 48.0 | 17.5 |
| 3.3 | 1.63 | 1.77 | 49.0 | 41.0 | 12.8 |
| 4.7 | 1.69 | 1.84 | 47.0 | 37.0 | 10.2 |
| 6.8 | 2.84 | 3.09 | 36.0 | 36.0 | 8.03 |
| 10 | 4.04 | 4.14 | 28.0 | 28.0 | 6.04 |
| 15 | 5.62 | 6.11 | 23.5 | 24.0 | 4.71 |
| 22 | 10.60 | 10.80 | 17.5 | 16.0 | 3.88 |
| 33 | 15.10 | 15.40 | 15.5 | 10.5 | 3.01 |
| 47 | 17.30 | 17.70 | 13.5 | 10.0 | 2.99 |
| 75 | 29.76 | 32.35 | 12.0 | 12.0 | 2.01 |
| 82 | 31.46 | 34.20 | 10.2 | 9.0 | 2.07 |
| 100 | 36.25 | 39.40 | 9.1 | 7.0 | 2.01 |

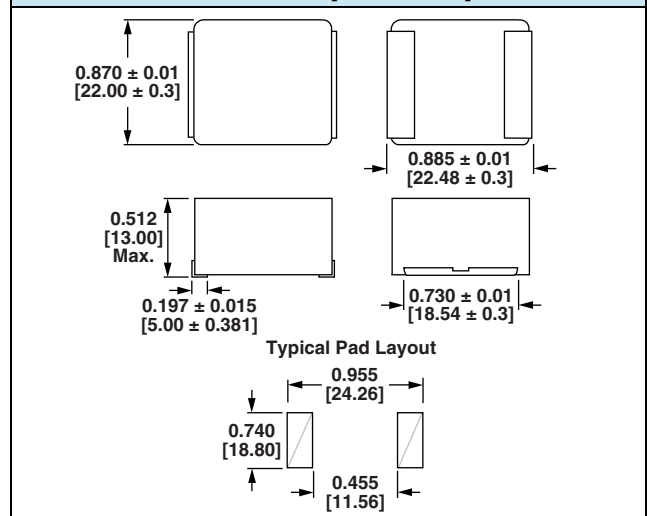
Notes

- 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) = 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 %

APPLICATIONS

- Low profile, high current power supplies
- High current POL converters
- DC/DC converters in distributed power systems
- Servers
- Solar inverters
- Industrial lighting
- Industrial power supplies

DIMENSIONS in inches [millimeters]



| DESCRIPTION | | | | | |
|----------------|------------------|----------------------|--------------|--------------------------------|--|
| IHLP-8787MZ-51 | 100 μH | ± 20 % | ER | e3 | |
| MODEL | INDUCTANCE VALUE | INDUCTANCE TOLERANCE | PACKAGE CODE | JEDEC® LEAD (Pb)-FREE STANDARD | |

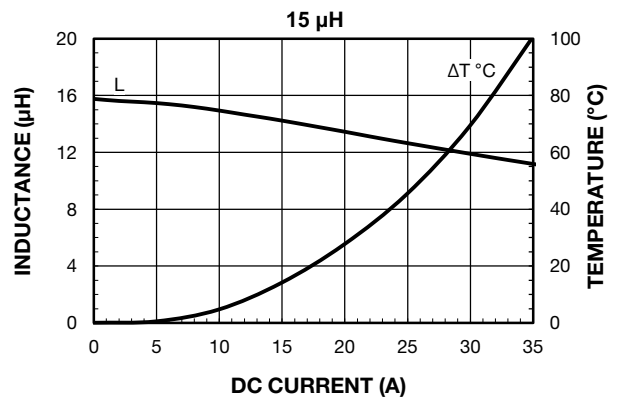
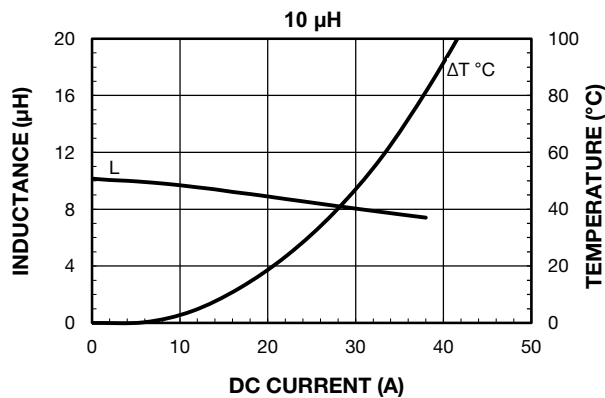
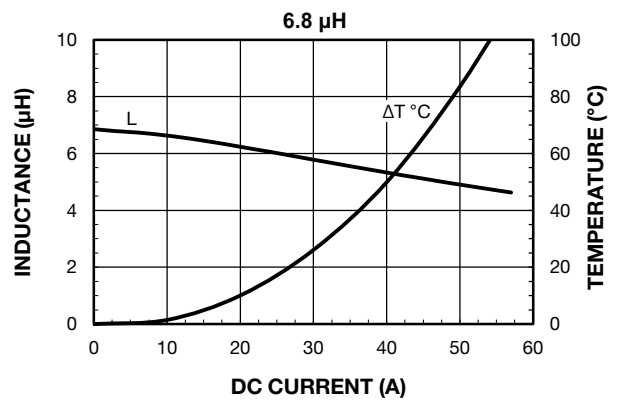
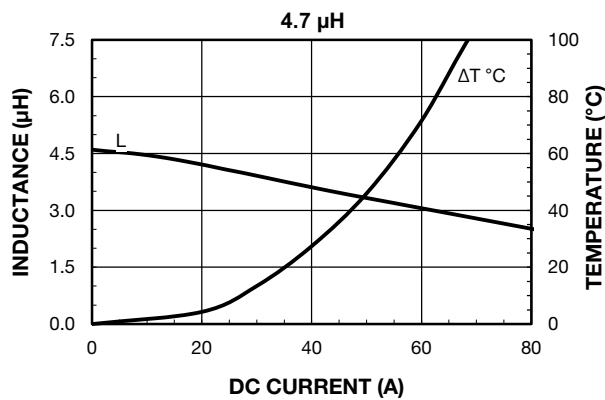
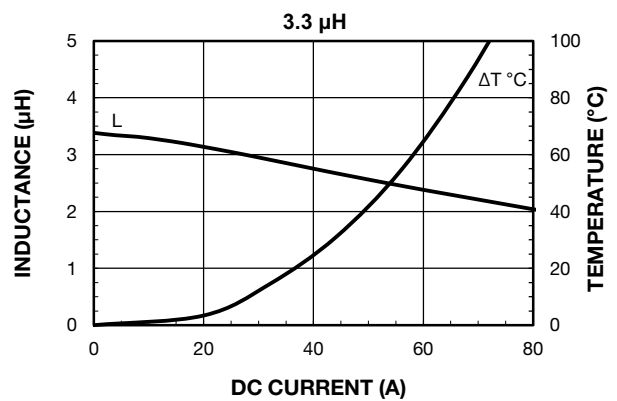
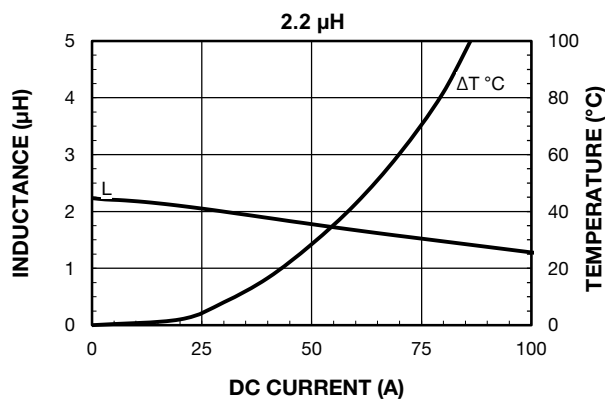
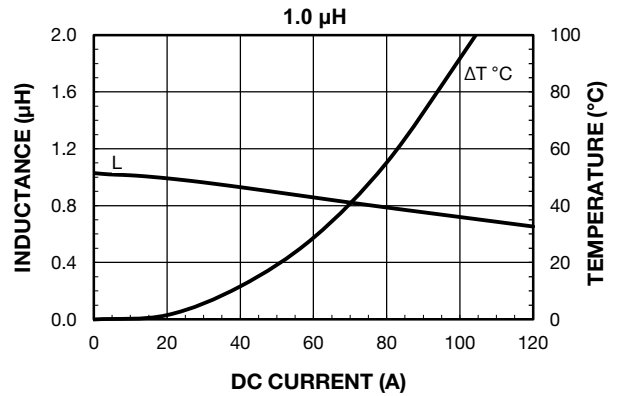
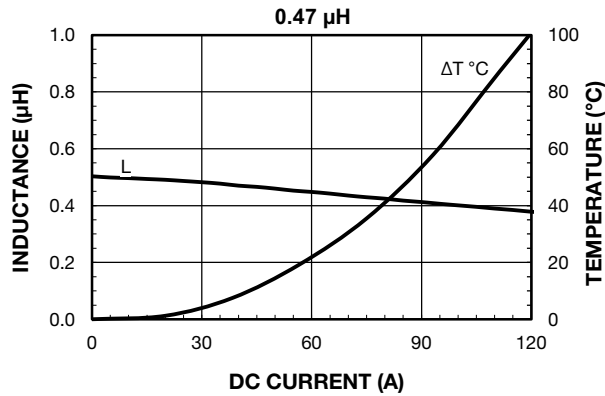
| GLOBAL PART NUMBER | | | | | | | | | | | | | | | | | |
|--------------------|---|---|---|------|---|---|---|--------------|---|------------------|---|---|------|--------|---|---|---|
| I | H | L | P | 8 | 7 | 8 | 7 | M | Z | E | R | 1 | 0 | 1 | M | 5 | 1 |
| PRODUCT FAMILY | | | | SIZE | | | | PACKAGE CODE | | INDUCTANCE VALUE | | | TOL. | SERIES | | | |

PATENT(S): www.vishay.com/patents

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

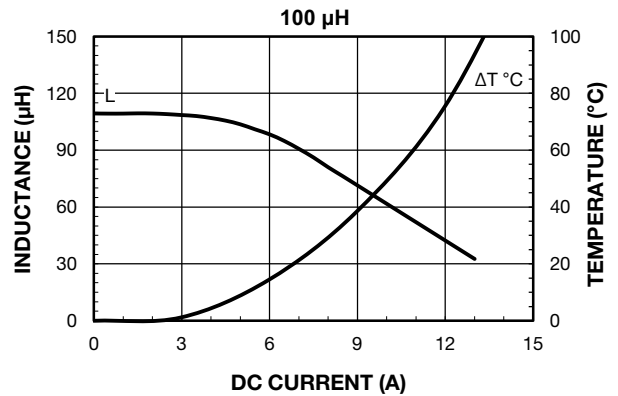
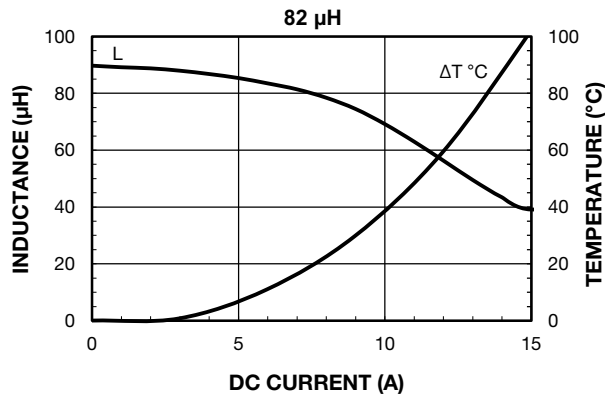
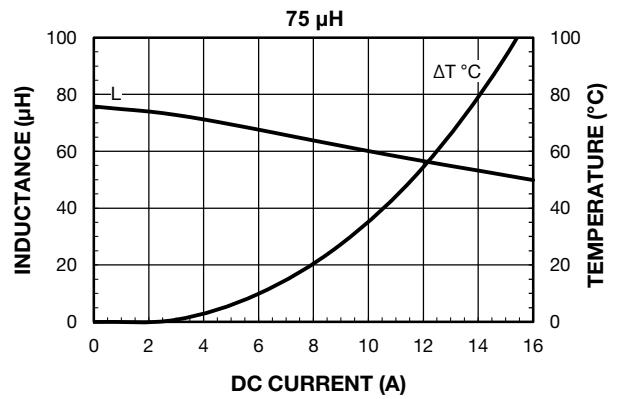
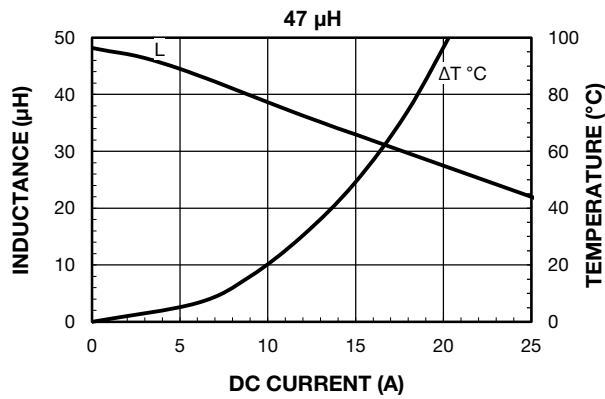
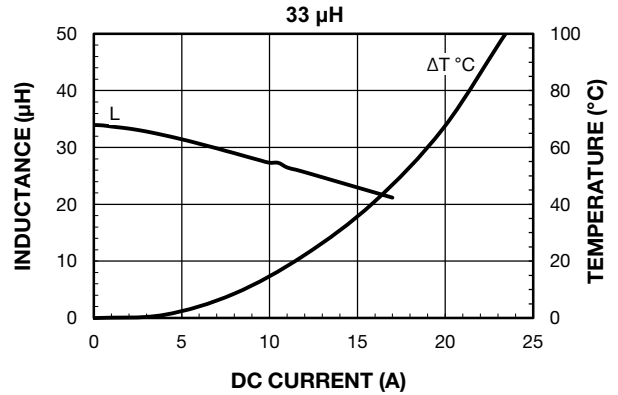
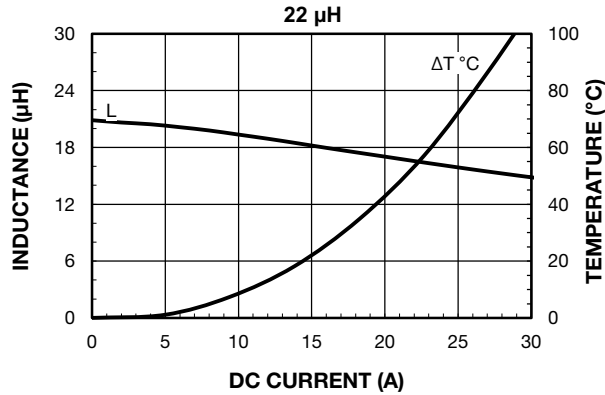


PERFORMANCE GRAPHS

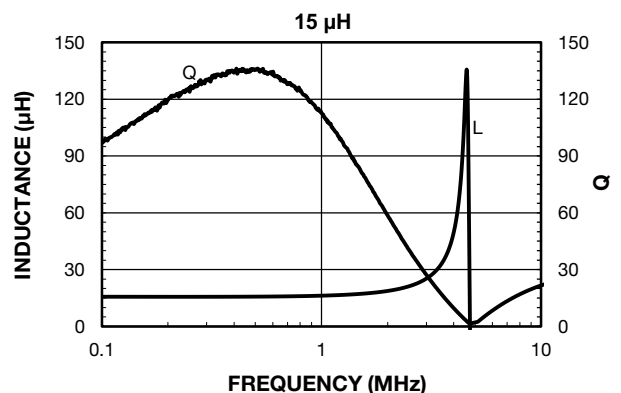
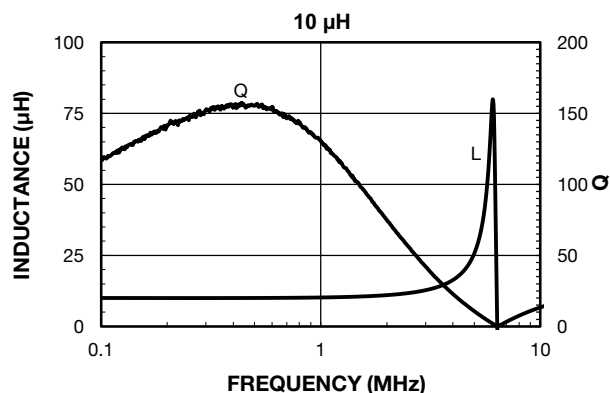
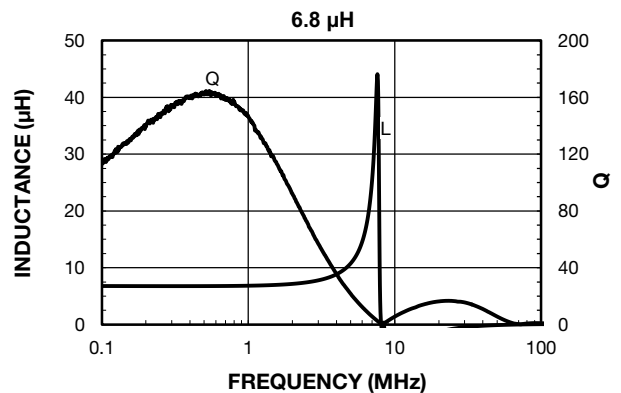
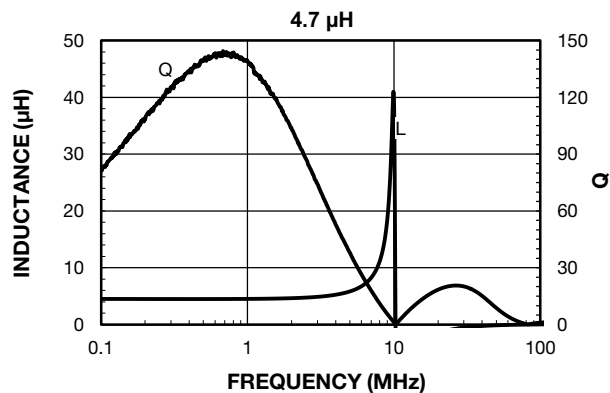
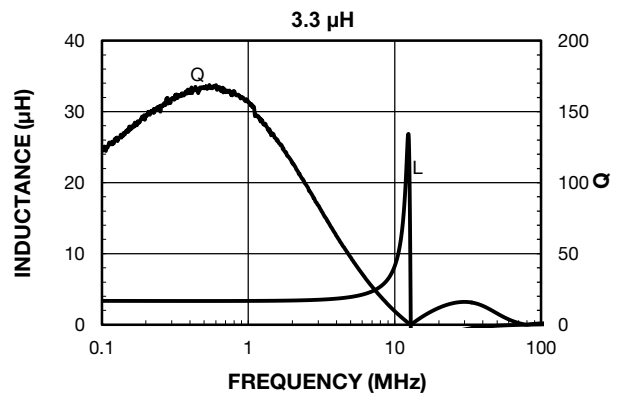
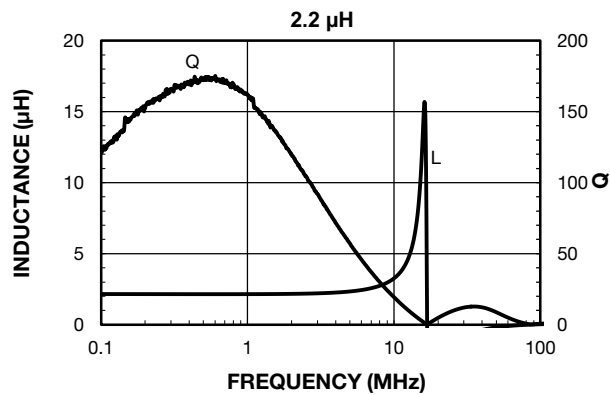
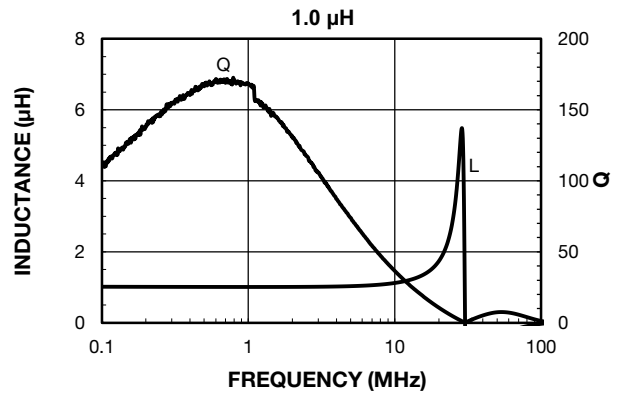
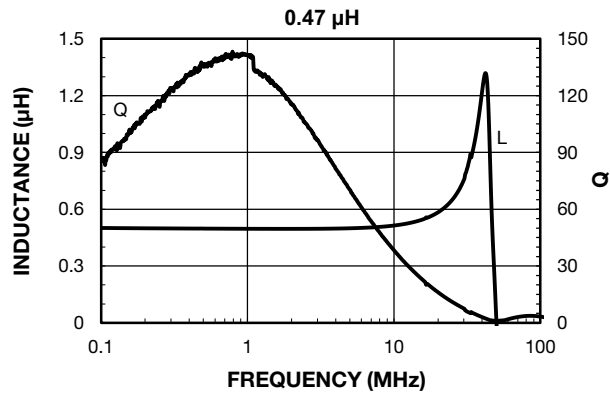




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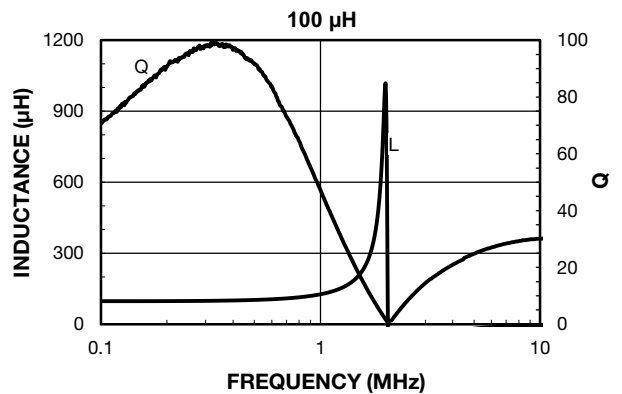
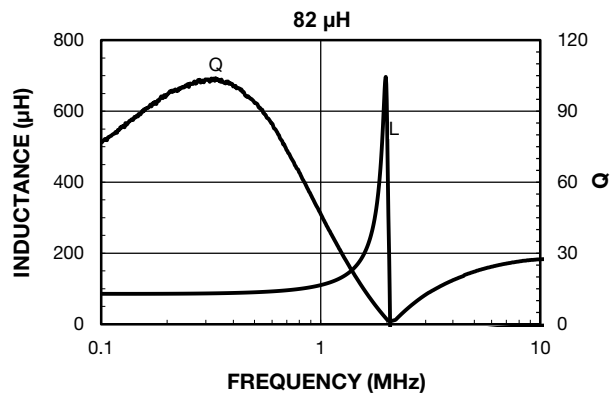
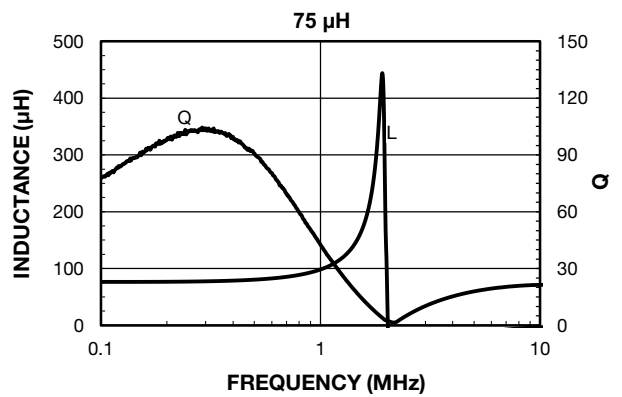
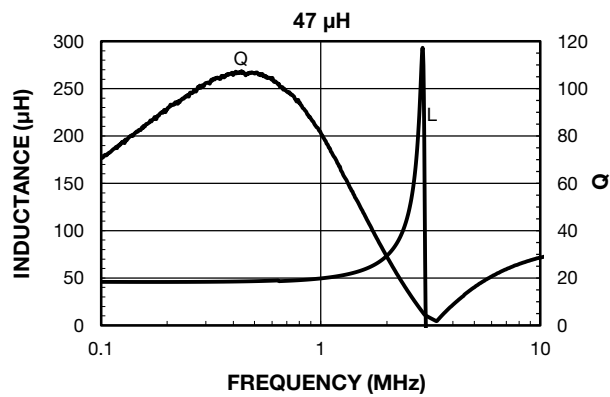
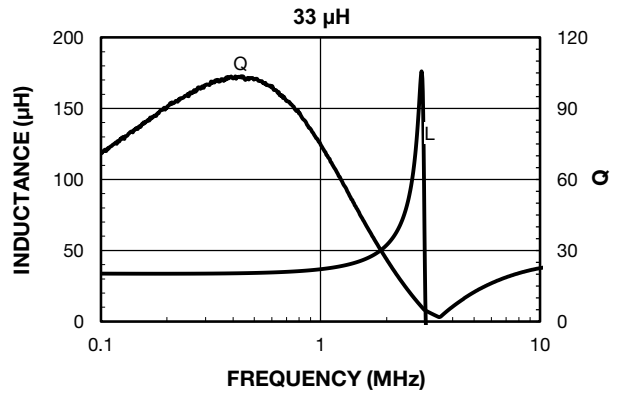
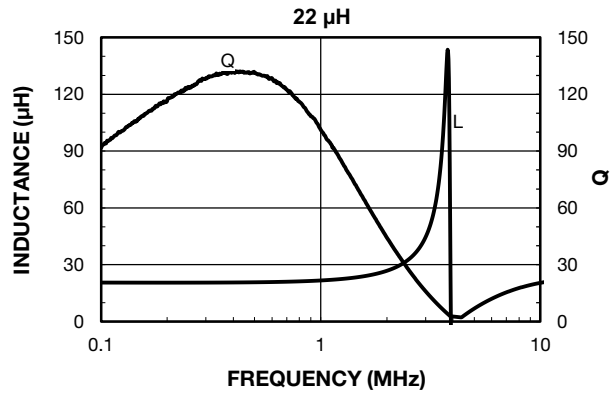


PERFORMANCE GRAPHS: INDUCTANCE AND Q VS. FREQUENCY





PERFORMANCE GRAPHS: INDUCTANCE AND Q VS. FREQUENCY





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