

High Current, Through-Hole Inductor, Edge-Wound Series



APPLICATIONS

- High current and high temperature applications
- DC/DC converters
- High current differential mode chokes
- Inverters

FEATURES

- High temperature operation, up to 180 °C continuous with no aging
- Low DCR to minimize losses and reduce temperature rise
- Powdered iron alloy core technology provides stable inductance and saturation over operating temperature with satisfactory core losses
- Soft saturation gives predictable inductance decrease with increasing DC current independent of temperature
- Series includes multiple powdered iron core materials for optimized performance in circuit application
- Standard terminal is stripped and tinned for through-hole mounting but other terminal configurations such as bare copper, SMD, and press fit pin are available upon request
- Hot dipped Sn plating provides low risk of whisker growth
- Custom options for inductance, current rating, DCR, mounting style and voltage rating are available
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912



RoHS
COMPLIANT
HALOGEN
FREE
GREEN
(5-2008)

STANDARD ELECTRICAL SPECIFICATIONS

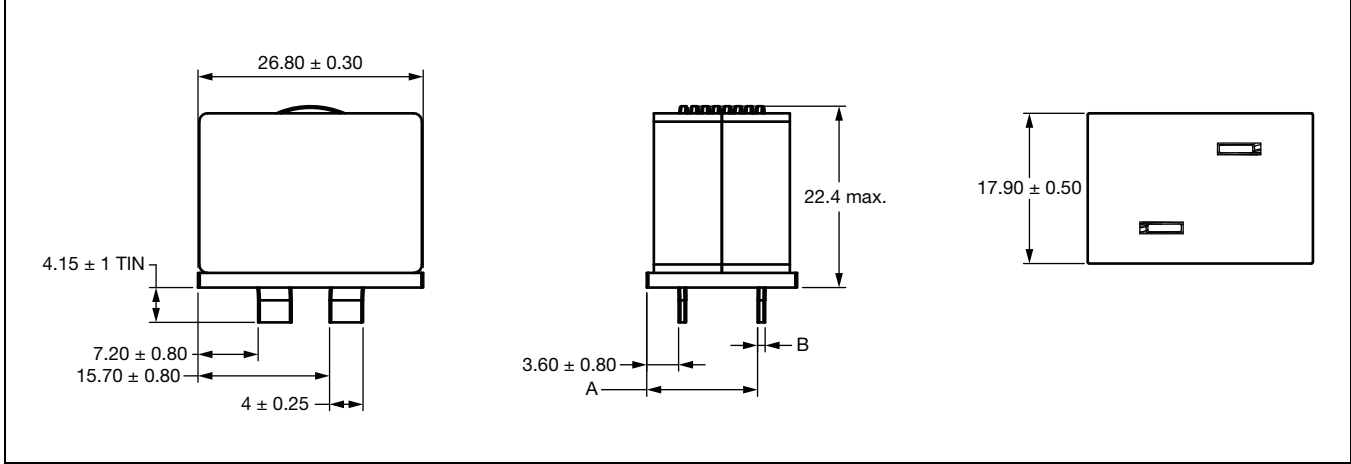
| PART NUMBER | L ₀ INDUCTANCE ± 20 % AT 100 kHz, 0.25 V, 0 A (µH) | DCR AT 25 °C TYP. (mΩ) | DCR AT 25 °C MAX. (mΩ) | HEAT RATING CURRENT DC TYP. ⁽¹⁾ (A) | SATURATION CURRENT DC | | SRF TYP. (MHZ) | DIMENSION | |
|---|--|---------------------------------|---------------------------------|---|----------------------------|----------------------------|----------------------|-----------------|-----------------|
| | | | | | TYP. ⁽²⁾ (A) | TYP. ⁽³⁾ (A) | | A ± 0.8 [mm] | B ± 0.3 [mm] |
| BEST BALANCE OF CORE LOSS AND SATURATION | | | | | | | | | |
| IHDM1107BBEVR47M20 | 0.47 | 0.25 | 0.30 | 128 | 343 | 422 | 217 | 11.50 | 2.60 |
| IHDM1107BBEV1R1M20 | 1.1 | 0.34 | 0.41 | 93 | 245 | 301 | 100 | 11.50 | 2.60 |
| IHDM1107BBEV2R0M20 | 2.0 | 0.54 | 0.65 | 75 | 191 | 234 | 82 | 12.10 | 2.00 |
| IHDM1107BBEV3R0M20 | 3.0 | 0.81 | 0.97 | 50 | 156 | 192 | 53 | 12.50 | 1.60 |
| IHDM1107BBEV4R3M20 | 4.3 | 1.08 | 1.30 | 48 | 133 | 164 | 33 | 13.00 | 1.40 |
| IHDM1107BBEV5R6M20 | 5.6 | 1.44 | 1.73 | 37 | 115 | 142 | 30 | 12.90 | 1.20 |
| IHDM1107BBEV7R5M20 | 7.5 | 2.17 | 2.60 | 31 | 96 | 118 | 29 | 13.20 | 0.90 |
| LOWEST CORE LOSS | | | | | | | | | |
| IHDM1107BBEVR68M30 | 0.68 | 0.25 | 0.30 | 125 | 202 | 248 | 181 | 11.50 | 2.60 |
| IHDM1107BBEV1R5M30 | 1.5 | 0.34 | 0.41 | 91 | 134 | 165 | 80 | 11.50 | 2.60 |
| IHDM1107BBEV2R7M30 | 2.7 | 0.54 | 0.65 | 72 | 103 | 127 | 62 | 12.10 | 2.00 |
| IHDM1107BBEV4R3M30 | 4.3 | 0.81 | 0.97 | 64 | 85 | 105 | 44 | 12.50 | 1.60 |
| IHDM1107BBEV6R2M30 | 6.2 | 1.08 | 1.30 | 56 | 74 | 91 | 25 | 13.00 | 1.40 |
| IHDM1107BBEV8R2M30 | 8.2 | 1.44 | 1.73 | 39 | 59 | 73 | 22 | 12.90 | 1.20 |
| IHDM1107BBEV120M30 | 12.0 | 2.17 | 2.60 | 35 | 49 | 61 | 21 | 13.20 | 0.90 |

Notes

- The -20 series provides a good balance between core losses, saturation current, and high frequency stability up to 800 kHz
 - The -30 series provides lower core losses with slightly lower saturation current
 - All test data is referenced to 25 °C ambient
 - Operating temperature range -55 °C to +180 °C
 - The part temperature (ambient + temp. rise) should not exceed 180 °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
 - Isolation voltage, coil to core: 350 V_{DC}, 60 s, 5 mA max.
- (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 %
 (3) DC current (A) that will cause L₀ to drop approximately 30 %



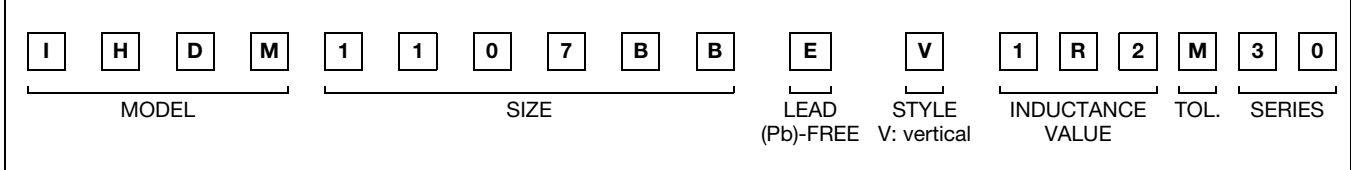
DIMENSIONS in millimeters



DESCRIPTION

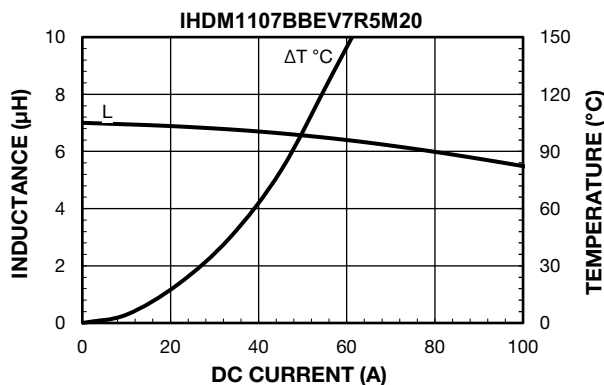
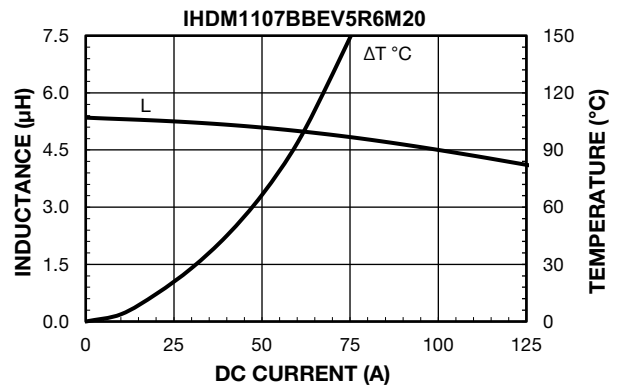
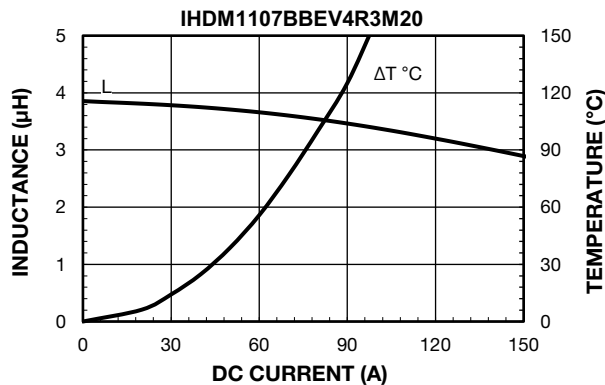
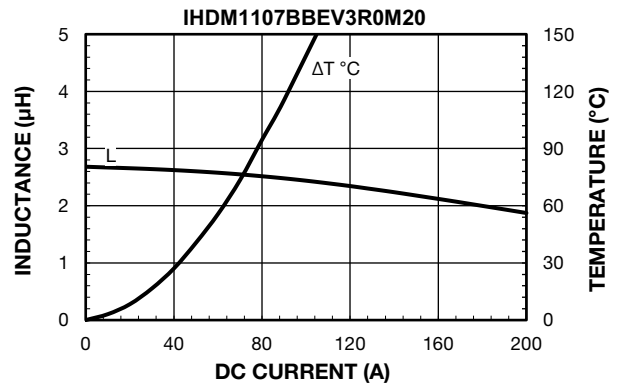
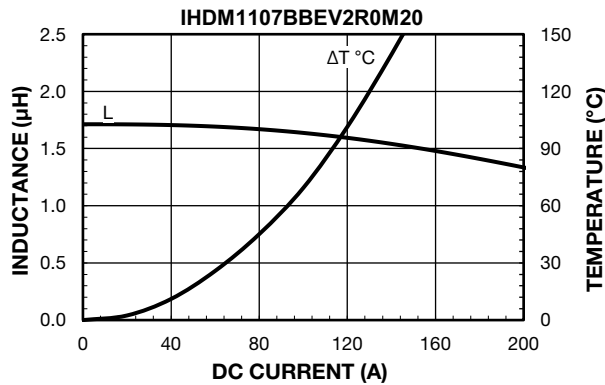
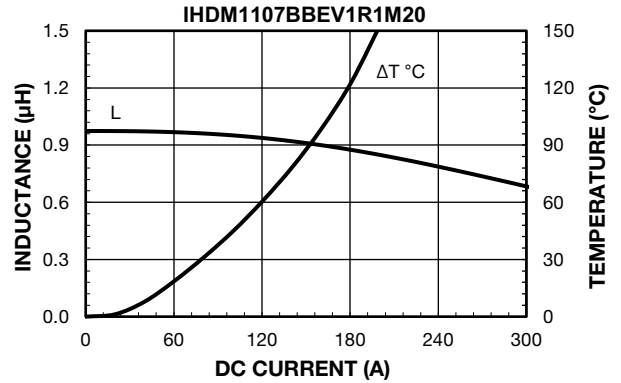
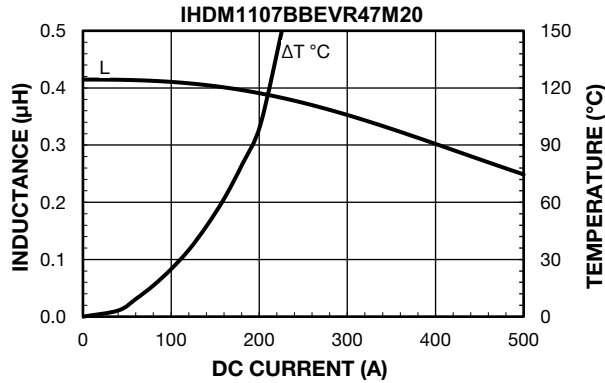
| | | | | |
|-----------------------|------------------------------|------------------------------|-----------|--------------------------------|
| IHDM-1107BB-30 | 1.2 μH | ± 20 % | EV | e3 |
| MODEL | INDUCTANCE | INDUCTANCE TOLERANCE | PACKAGE | JEDEC® LEAD (Pb)-FREE STANDARD |

GLOBAL PART NUMBER



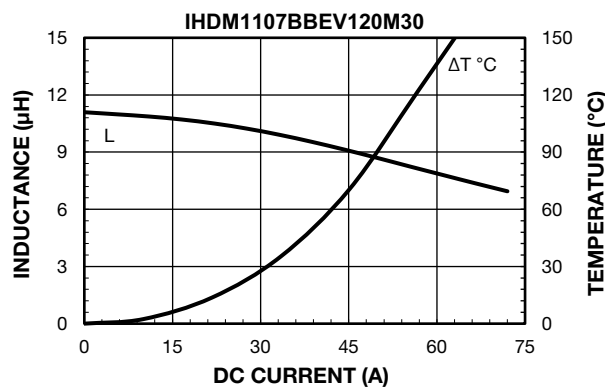
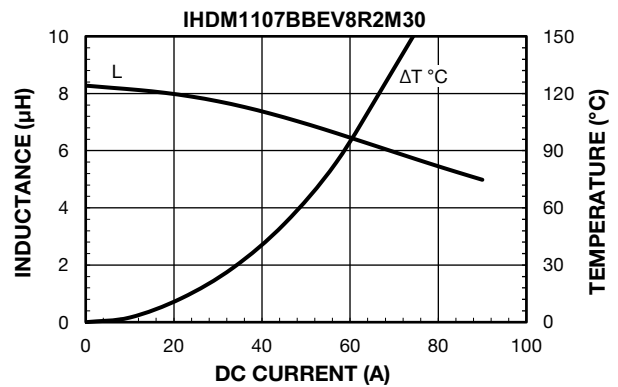
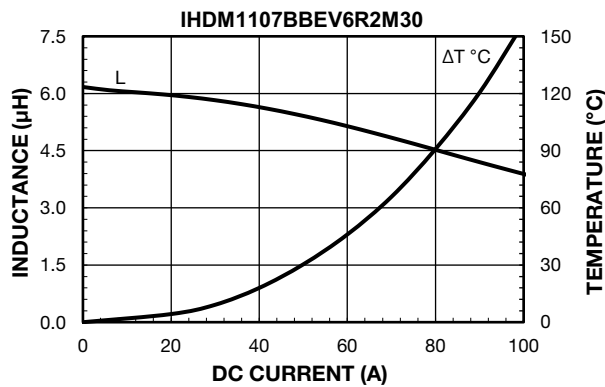
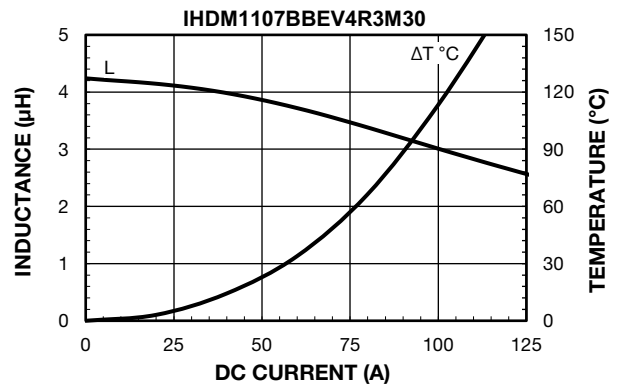
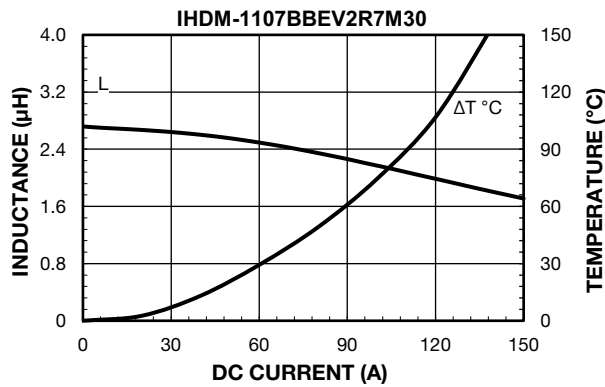
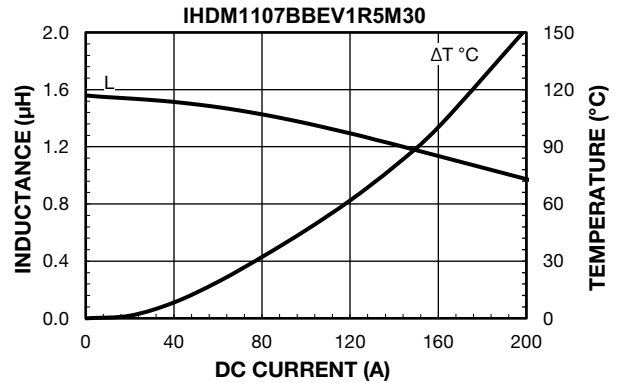
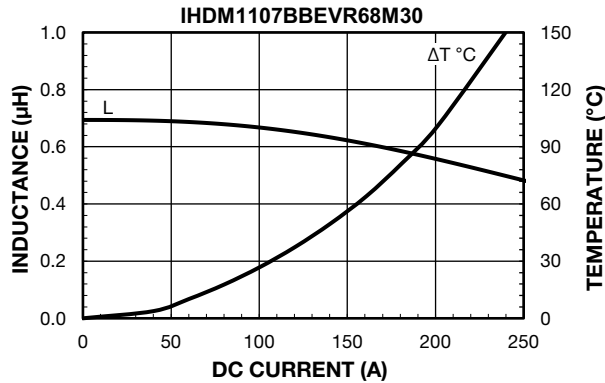


PERFORMANCE GRAPHS



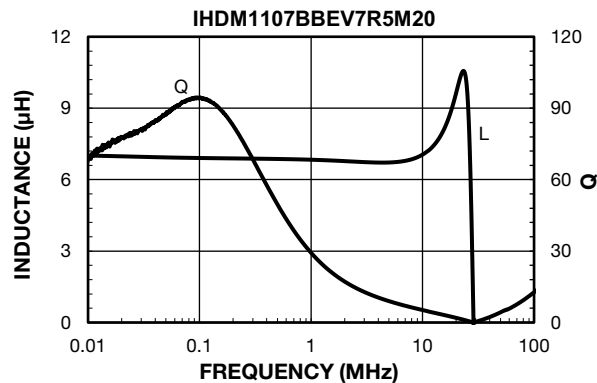
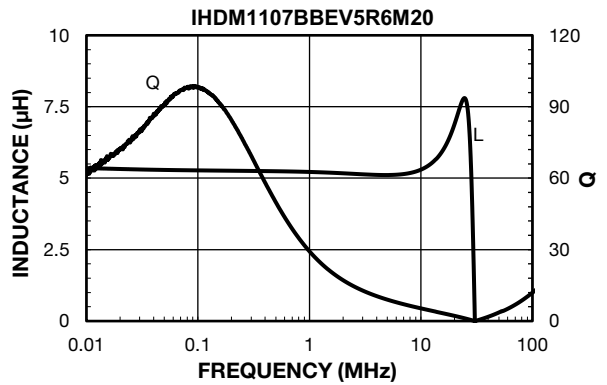
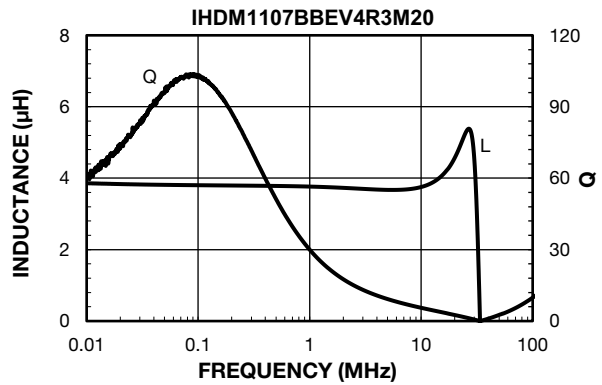
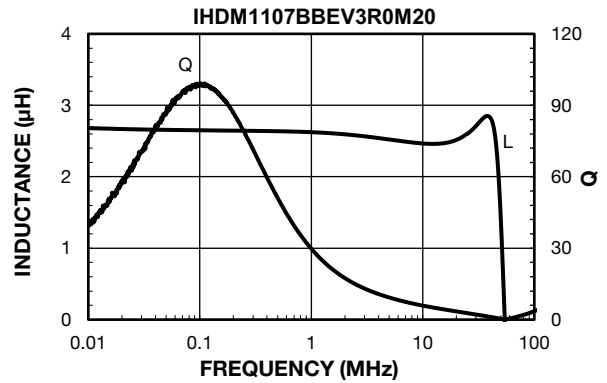
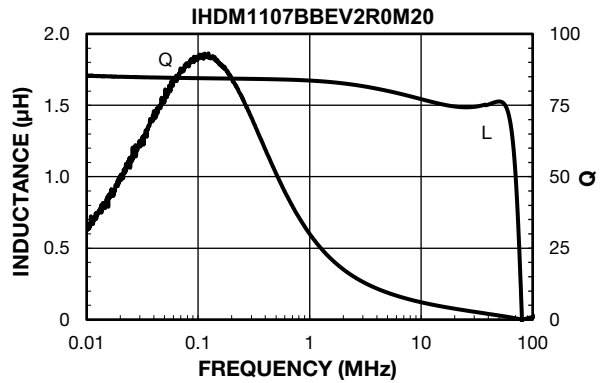
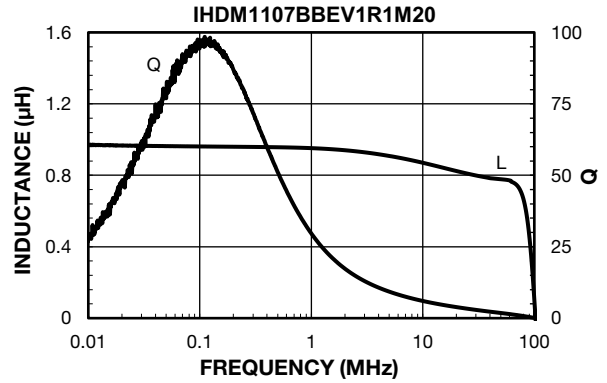
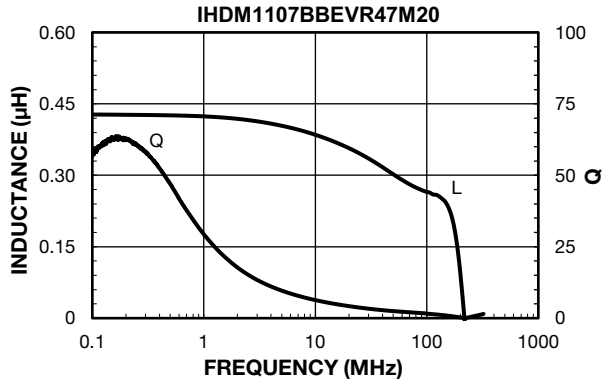


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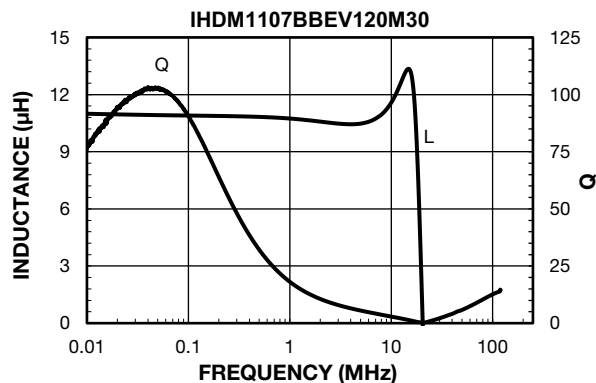
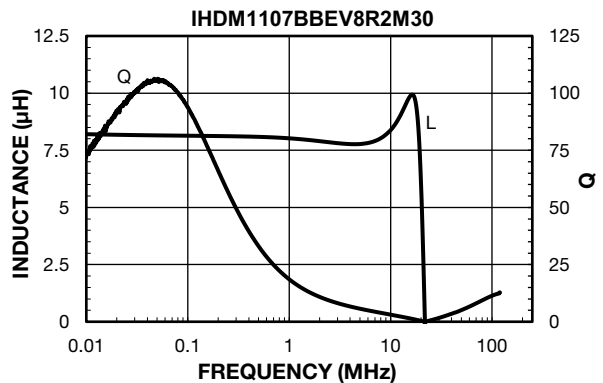
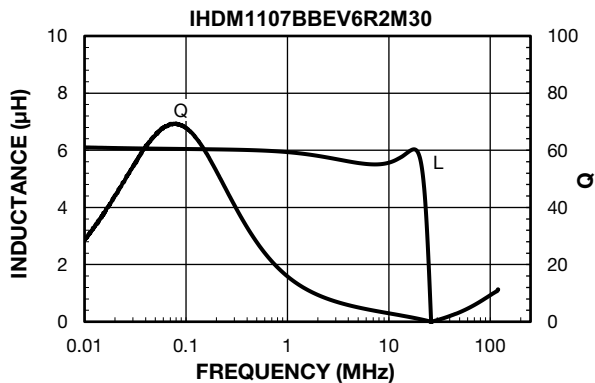
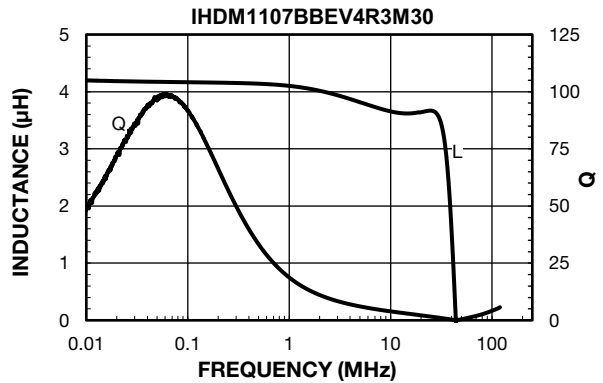
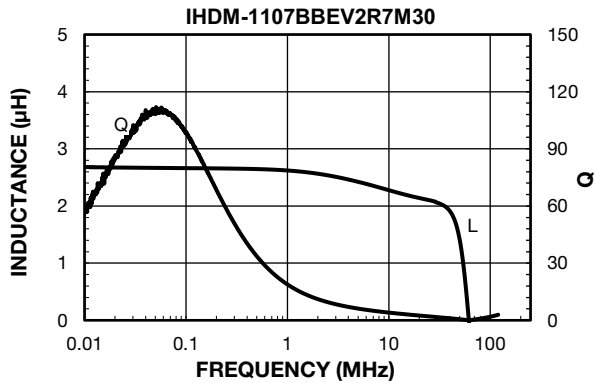
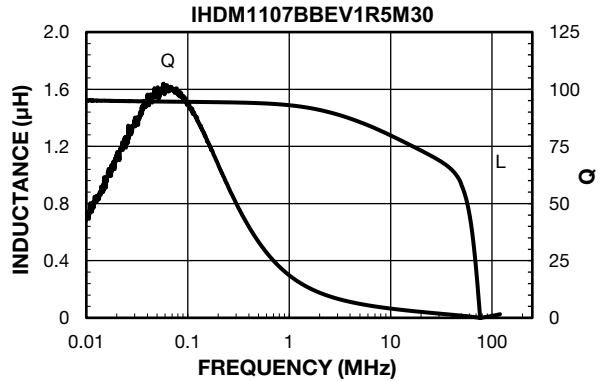
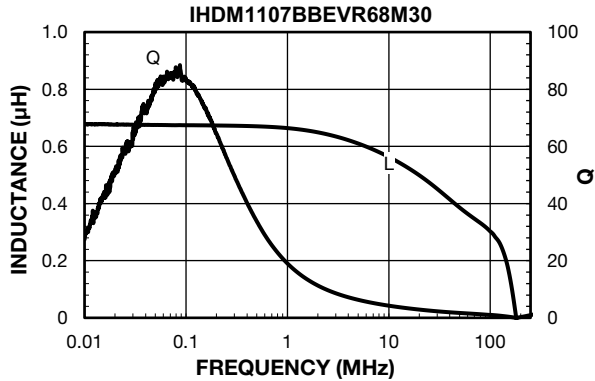


PERFORMANCE GRAPHS: INDUCTANCE AND Q VS. FREQUENCY





PERFORMANCE GRAPHS: INDUCTANCE AND Q VS. FREQUENCY





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