

Filter Inductors, High Current, Axial Leded



ELECTRICAL SPECIFICATIONS

Inductance: Measured at 1.0 V with zero DC current

Incremental Current: The typical current at which the inductance will be decreased by 5 % from its initial zero DC value

Dielectric Rating: 2500 V_{RMS} between winding and outer circumference to within 0.250" [6.35 mm] of the insulating sleeve edge

Operating Temperature: - 55 °C to + 125 °C (no load),
- 55 °C to + 85 °C (at full rated current)

Current Rating: Maximum continuous operating current (DC or RMS) based on a 40 °C temperature rise

FEATURES

- Printed circuit mounting (axial leads)
- Protected by polyolefin tubing
- High saturation bobbin used allowing high inductance with low DC resistance
- Pre-tinned leads
- High resistivity core offers very high parallel resistance, resulting in maximum coil performance
- 20 sleeveless models available at reduced cost
- Compliant to RoHS Directive 2002/95/EC



RoHS
COMPLIANT

MECHANICAL SPECIFICATIONS

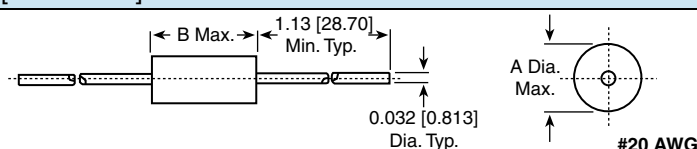
Wire: Solid soft copper

Terminals: 20 AWG tinned copper leads

Core Material: Ferrite

Coating: Polyolefin tubing - flame retardant UL type VW-1 per MIL-I-23053/5, class 3 requirements

DIMENSIONS in inches [millimeters]



| MODEL | A (MAX.) | B (MAX.) |
|-------|---------------|---------------|
| IHD-1 | 0.270 [6.85] | 0.700 [17.78] |
| IHD-3 | 0.460 [11.68] | 0.900 [22.86] |

STANDARD ELECTRICAL SPECIFICATIONS

| MODEL | IND. AT 1 kHz (μH) | TOL. (%) | DCR MAX. (Ω) | RATED DC CURRENT MAX. (A) | INCREMENTAL CURRENT APPROX. (A) |
|-------|--------------------|----------|--------------|---------------------------|---------------------------------|
| IHD-1 | 1 | ± 15 % | 0.009 | 5.3 | 7.00 |
| IHD-1 | 1.2 | ± 15 % | 0.010 | 5.0 | 6.40 |
| IHD-1 | 1.5 | ± 15 % | 0.011 | 4.8 | 5.70 |
| IHD-1 | 1.8 | ± 15 % | 0.012 | 4.6 | 5.20 |
| IHD-1 | 2.2 | ± 15 % | 0.013 | 4.4 | 4.70 |
| IHD-1 | 2.7 | ± 15 % | 0.014 | 4.2 | 4.30 |
| IHD-1 | 3.3 | ± 15 % | 0.016 | 4.0 | 3.90 |
| IHD-1 | 3.9 | ± 15 % | 0.017 | 3.8 | 3.60 |
| IHD-1 | 4.7 | ± 15 % | 0.022 | 3.4 | 3.30 |
| IHD-1 | 5.6 | ± 15 % | 0.024 | 3.2 | 3.00 |
| IHD-1 | 6.8 | ± 15 % | 0.026 | 3.1 | 2.70 |
| IHD-1 | 8.2 | ± 15 % | 0.028 | 3.0 | 2.50 |
| IHD-1 | 10 | ± 15 % | 0.033 | 2.8 | 2.30 |
| IHD-1 | 12 | ± 15 % | 0.037 | 2.6 | 2.10 |
| IHD-1 | 15 | ± 15 % | 0.040 | 2.5 | 1.90 |
| IHD-1 | 18 | ± 15 % | 0.044 | 2.4 | 1.70 |
| IHD-1 | 22 | ± 15 % | 0.050 | 2.2 | 1.50 |
| IHD-1 | 27 | ± 15 % | 0.070 | 1.9 | 1.40 |
| IHD-1 | 33 | ± 15 % | 0.075 | 1.8 | 1.30 |
| IHD-1 | 39 | ± 15 % | 0.084 | 1.7 | 1.20 |
| IHD-1 | 47 | ± 15 % | 0.104 | 1.6 | 1.10 |
| IHD-1 | 56 | ± 15 % | 0.130 | 1.4 | 0.97 |
| IHD-1 | 68 | ± 15 % | 0.145 | 1.3 | 0.88 |
| IHD-1 | 82 | ± 15 % | 0.152 | 1.3 | 0.80 |
| IHD-1 | 100 | ± 15 % | 0.208 | 1.1 | 0.73 |
| IHD-1 | 120 | ± 15 % | 0.283 | 0.94 | 0.66 |
| IHD-1 | 150 | ± 15 % | 0.330 | 0.87 | 0.60 |
| IHD-1 | 180 | ± 15 % | 0.362 | 0.83 | 0.54 |
| IHD-1 | 220 | ± 15 % | 0.505 | 0.70 | 0.49 |
| IHD-1 | 270 | ± 15 % | 0.557 | 0.67 | 0.45 |
| IHD-1 | 330 | ± 15 % | 0.650 | 0.62 | 0.40 |
| IHD-1 | 390 | ± 15 % | 0.770 | 0.57 | 0.37 |
| IHD-1 | 470 | ± 15 % | 1.030 | 0.49 | 0.34 |
| IHD-1 | 560 | ± 15 % | 1.140 | 0.47 | 0.31 |

STANDARD ELECTRICAL SPECIFICATIONS

| MODEL | IND. AT 1 kHz (μ H) | TOL. (%) | DCR MAX. (Ω) | RATED DC CURRENT MAX. (A) | INCREMENTAL CURRENT APPROX. (A) |
|-------|-----------------------------|-------------|--------------------------|------------------------------|------------------------------------|
| IHD-1 | 680 | $\pm 15\%$ | 1.500 | 0.41 | 0.28 |
| IHD-1 | 820 | $\pm 15\%$ | 1.980 | 0.36 | 0.26 |
| IHD-1 | 1000 | $\pm 15\%$ | 2.300 | 0.33 | 0.23 |
| IHD-1 | 1200 | $\pm 15\%$ | 2.550 | 0.31 | 0.21 |
| IHD-1 | 1500 | $\pm 15\%$ | 3.000 | 0.29 | 0.19 |
| IHD-1 | 1800 | $\pm 15\%$ | 4.000 | 0.25 | 0.18 |
| IHD-1 | 2200 | $\pm 15\%$ | 4.400 | 0.24 | 0.16 |
| IHD-1 | 2700 | $\pm 15\%$ | 5.800 | 0.21 | 0.14 |
| IHD-1 | 3300 | $\pm 15\%$ | 6.560 | 0.20 | 0.13 |
| IHD-1 | 3900 | $\pm 15\%$ | 8.630 | 0.17 | 0.12 |
| IHD-1 | 4700 | $\pm 15\%$ | 10.100 | 0.16 | 0.11 |
| IHD-1 | 5600 | $\pm 15\%$ | 11.200 | 0.15 | 0.10 |
| IHD-1 | 6800 | $\pm 15\%$ | 15.000 | 0.13 | 0.09 |
| IHD-1 | 8200 | $\pm 15\%$ | 20.800 | 0.11 | 0.08 |
| IHD-1 | 10 000 | $\pm 15\%$ | 23.400 | 0.10 | 0.08 |
| IHD-1 | 12 000 | $\pm 15\%$ | 26.000 | 0.10 | 0.07 |
| IHD-1 | 15 000 | $\pm 15\%$ | 36.000 | 0.08 | 0.06 |
| IHD-1 | 18 000 | $\pm 15\%$ | 40.000 | 0.08 | 0.06 |
| IHD-3 | 3.9 | $\pm 15\%$ | 0.007 | 4.0 | 8.20 |
| IHD-3 | 4.7 | $\pm 15\%$ | 0.008 | 4.0 | 7.50 |
| IHD-3 | 5.6 | $\pm 15\%$ | 0.011 | 4.0 | 6.90 |
| IHD-3 | 6.8 | $\pm 15\%$ | 0.011 | 4.0 | 6.30 |
| IHD-3 | 8.2 | $\pm 15\%$ | 0.013 | 4.0 | 5.70 |
| IHD-3 | 10 | $\pm 15\%$ | 0.016 | 4.0 | 5.20 |
| IHD-3 | 12 | $\pm 15\%$ | 0.018 | 4.0 | 4.70 |
| IHD-3 | 15 | $\pm 15\%$ | 0.020 | 4.0 | 4.30 |
| IHD-3 | 18 | $\pm 15\%$ | 0.022 | 4.0 | 3.90 |
| IHD-3 | 22 | $\pm 15\%$ | 0.024 | 4.0 | 3.50 |
| IHD-3 | 27 | $\pm 15\%$ | 0.025 | 4.0 | 3.20 |
| IHD-3 | 33 | $\pm 15\%$ | 0.028 | 4.0 | 2.90 |
| IHD-3 | 39 | $\pm 15\%$ | 0.031 | 4.0 | 2.70 |
| IHD-3 | 47 | $\pm 15\%$ | 0.034 | 4.0 | 2.50 |
| IHD-3 | 56 | $\pm 15\%$ | 0.043 | 3.2 | 2.30 |
| IHD-3 | 68 | $\pm 15\%$ | 0.059 | 2.5 | 2.10 |
| IHD-3 | 82 | $\pm 15\%$ | 0.066 | 2.0 | 1.90 |
| IHD-3 | 100 | $\pm 15\%$ | 0.084 | 1.6 | 1.70 |
| IHD-3 | 120 | $\pm 15\%$ | 0.113 | 1.6 | 1.60 |
| IHD-3 | 150 | $\pm 15\%$ | 0.129 | 1.6 | 1.40 |
| IHD-3 | 180 | $\pm 15\%$ | 0.150 | 1.6 | 1.30 |
| IHD-3 | 220 | $\pm 15\%$ | 0.162 | 1.6 | 1.20 |
| IHD-3 | 270 | $\pm 15\%$ | 0.226 | 1.6 | 1.10 |
| IHD-3 | 330 | $\pm 15\%$ | 0.257 | 1.6 | 0.95 |
| IHD-3 | 390 | $\pm 15\%$ | 0.288 | 1.6 | 0.88 |
| IHD-3 | 470 | $\pm 15\%$ | 0.393 | 1.2 | 0.80 |
| IHD-3 | 560 | $\pm 15\%$ | 0.504 | 1.0 | 0.74 |
| IHD-3 | 680 | $\pm 15\%$ | 0.570 | 1.0 | 0.67 |
| IHD-3 | 820 | $\pm 15\%$ | 0.643 | 0.8 | 0.61 |
| IHD-3 | 1000 | $\pm 15\%$ | 0.844 | 0.8 | 0.56 |
| IHD-3 | 1200 | $\pm 15\%$ | 0.977 | 0.6 | 0.51 |
| IHD-3 | 1500 | $\pm 15\%$ | 1.180 | 0.6 | 0.46 |
| IHD-3 | 1800 | $\pm 15\%$ | 1.500 | 0.6 | 0.42 |
| IHD-3 | 2200 | $\pm 15\%$ | 1.760 | 0.5 | 0.38 |
| IHD-3 | 2700 | $\pm 15\%$ | 2.130 | 0.4 | 0.34 |
| IHD-3 | 3300 | $\pm 15\%$ | 2.530 | 0.4 | 0.31 |
| IHD-3 | 3900 | $\pm 15\%$ | 2.840 | 0.4 | 0.29 |
| IHD-3 | 4700 | $\pm 15\%$ | 3.790 | 0.4 | 0.26 |
| IHD-3 | 5600 | $\pm 15\%$ | 4.240 | 0.32 | 0.24 |
| IHD-3 | 6800 | $\pm 15\%$ | 5.750 | 0.25 | 0.22 |
| IHD-3 | 8200 | $\pm 15\%$ | 6.440 | 0.25 | 0.20 |
| IHD-3 | 10 000 | $\pm 15\%$ | 7.300 | 0.25 | 0.18 |
| IHD-3 | 12 000 | $\pm 15\%$ | 9.340 | 0.20 | 0.17 |
| IHD-3 | 15 000 | $\pm 15\%$ | 10.700 | 0.20 | 0.15 |
| IHD-3 | 18 000 | $\pm 15\%$ | 14.800 | 0.16 | 0.14 |
| IHD-3 | 22 000 | $\pm 15\%$ | 18.000 | 0.13 | 0.12 |
| IHD-3 | 27 000 | $\pm 15\%$ | 22.700 | 0.13 | 0.11 |
| IHD-3 | 33 000 | $\pm 15\%$ | 25.700 | 0.13 | 0.10 |
| IHD-3 | 39 000 | $\pm 15\%$ | 29.700 | 0.10 | 0.09 |
| IHD-3 | 47 000 | $\pm 15\%$ | 33.700 | 0.10 | 0.09 |
| IHD-3 | 56 000 | $\pm 15\%$ | 38.000 | 0.10 | 0.08 |
| IHD-3 | 68 000 | $\pm 15\%$ | 52.800 | 0.08 | 0.07 |
| IHD-3 | 82 000 | $\pm 15\%$ | 67.300 | 0.07 | 0.07 |
| IHD-3 | 100 000 | $\pm 15\%$ | 76.000 | 0.07 | 0.06 |



MARKING

- Vishay Dale
- Model
- Inductance value
- Date code

ORDERING INFORMATION

| | | | | |
|-------|------------------|----------------------|--------------|-------------------------------|
| IHD-1 | 3.9 μ H | $\pm 15\%$ | ER | e2 |
| MODEL | INDUCTANCE VALUE | INDUCTANCE TOLERANCE | PACKAGE CODE | JEDEC LEAD (Pb)-FREE STANDARD |

GLOBAL PART NUMBER

Diagram illustrating the breakdown of a 4-digit resistor color code into its components:

- MODEL:** The first three digits (I, H, D, 1).
- PACKAGE CODE:** The next two digits (E, R).
- INDUCTANCE VALUE:** The next three digits (3, R, 9).
- INDUCTANCE TOLERANCE:** The final digit (L).



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