

MODEL HM73 SERIES

Shielded

Low Profile

Surface Mount Inductors

NEW PRODUCT



FEATURES AND BENEFITS

- Magnetic shielded construction for high density board assembly
- High performance, excellent DC current characteristics
- Large energy storage capacity
- Up to 40 amps continuous
- Compatible with vapor phase and infrared reflow soldering
- Custom designs available

APPLICATIONS

- Laptop and notebook computers and PDAs
- DC/DC converters in distributed power systems and handheld equipment
- Inductor for general purpose use

ELECTRICAL / ENVIRONMENTAL

| | |
|------------------------------|-----------------|
| Operating Temperature Range | -40°C to +125°C |
| Storage Temperature Range | -40°C to +85°C |
| Ambient Temperature, Maximum | 80°C |
| Temperature Rise, Maximum | 50°C |
| Insulation System | Class F, 155°C |

Specifications subject to change without notice.

SPECIFICATIONS

| Part Number | Inductance | | Rated ⁽¹⁾ DC Current Amps | I _{SAT} ⁽³⁾ DC Current Amps | DC Resistance ⁽²⁾ | | Height Inch/mm Max. | Figure |
|--------------|-------------------------------|-------------------------|--|---|------------------------------|------------|---------------------------|--------|
| | 100 kHz Zero DC μH ±20% | 0.1V with DC Typ. | | | mΩ Typ. | mΩ Max. | | |
| HM73-10R10 | 0.10 | 0.10 | 15.0 | 38.0 | 0.90 | 1.10 | .138/3.50 | 2 |
| HM73-101R10L | 0.10 | 0.10 | 15.0 | 38.0 | 1.16 | 1.40 | .118/3.0 | 1 |
| HM73-10R20 | 0.22 | 0.20 | 15.0 | 23.0 | 1.80 | 2.10 | .138/3.50 | 2 |
| HM73-10R20L | 0.22 | 0.20 | 15.0 | 23.0 | 1.80 | 2.10 | .118/3.0 | 1 |
| HM73-10R47 | 0.47 | 0.42 | 15.0 | 23.0 | 3.14 | 23.10 | .169/4.30 | 1 |
| HM73-15R20 | 0.20 | 0.19 | 21.0 | | 0.53 | 0.80 | .158/4.0 | 1 |
| HM53-15R50 | 0.50 | 0.45 | 17.0 | | 1.11 | 1.40 | .158/4.0 | 1 |
| HM73-201R0 | 1.00 | 0.91 | 16.0 | 32.0 | 2.80 | 3.30 | .177/4.50 | 1 |
| HM73-201R5 | 1.50 | 1.43 | 13.0 | 22.0 | 3.70 | 4.40 | .177/4.50 | 1 |
| HM73-30R60 | 0.60 | 0.54 | 27.0 | 40.0 | 1.05 | 1.25 | .216/5.50 | 1 |
| HM73-301R0 | 1.00 | 0.89 | 23.0 | 34.0 | 1.48 | 1.70 | .216/5.50 | 1 |
| HM73-301R5 | 1.50 | 1.25 | 18.0 | 30.0 | 1.90 | 2.30 | .216/5.50 | 1 |
| HM73-302R2 | 2.20 | 2.00 | 12.0 | 24.0 | 4.40 | 5.10 | .216/5.50 | 1 |
| HM73-303R9 | 3.90 | 3.30 | 10.0 | 18.0 | 6.20 | 7.20 | .216/5.50 | 1 |
| HM73-304R6 | 4.60 | 4.10 | 9.0 | 14.0 | 7.20 | 8.30 | .216/5.50 | 1 |
| HM73-316R4 | 6.40 | 5.12 | 6.5 | 16.0 | 18.20 | 25.00 | .197/5.0 | 2 |
| HM73-318R2 | 8.20 | 7.72 | 5.6 | 16.0 | 23.50 | 26.00 | .197/5.0 | 2 |
| HM73-31100 | 10.0 | 8.00 | 6.0 | 10.0 | 23.10 | 26.00 | .197/5.0 | 2 |
| HM73-40R15 | 0.15 | 0.13 | 42.0 | 80.0 | 0.45 | 0.55 | .256/6.50 | 1 |
| HM73-40R30 | 0.30 | 0.27 | 40.0 | 73.0 | 0.53 | 0.65 | .256/6.50 | 1 |
| HM73-40R50 | 0.50 | 0.46 | 40.0 | 49.0 | 0.78 | 1.00 | .256/6.50 | 1 |
| HM73-40R90 | 0.90 | 0.80 | 25.0 | 40.0 | 1.15 | 1.40 | .256/6.50 | 1 |
| HM73-402R2 | 2.20 | 1.90 | 15.0 | 27.0 | 2.30 | 2.60 | .256/6.50 | 1 |

Notes: (1) Rated DC Current is the approximate current at which inductance will be decreased by 15% from its initial (zero DC) value.

(2) DC Resistance measured at 20°C.

(3) I_{SAT} is the saturation current at which inductance rolls off approximately 30% from its initial value.

(4) Board layout, proximity of other components, trace size and airflow will affect temperature rise and must be considered when selecting an inductor.

PACKAGING

Standard: Embossed Tape & Reel

| | | | |
|-------|-----------|--------------|---------------|
| Reel: | Diameter | = | 13" (330.2mm) |
| | Capacity: | Case size 10 | = 1,000 Units |
| | | Case size 15 | = 400 Units |
| | | Case size 20 | = 400 Units |
| | | Case size 30 | = 400 Units |
| | | Case size 40 | = 400 Units |

OUTLINE DIMENSIONS (Inch/mm)

Figure 1

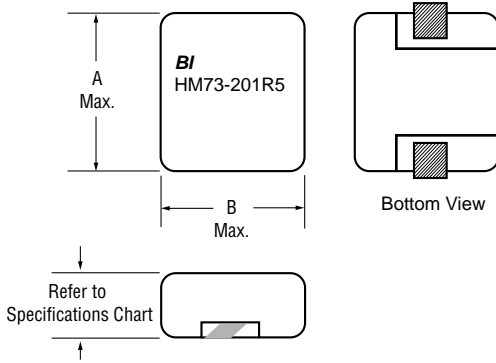
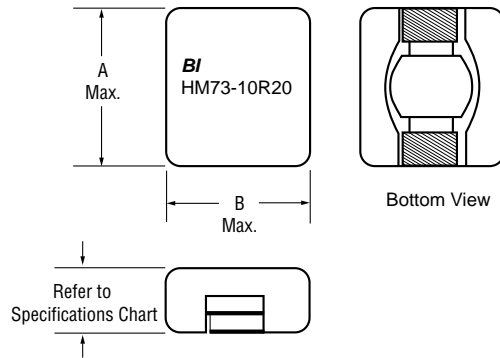
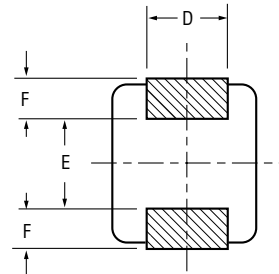


Figure 2

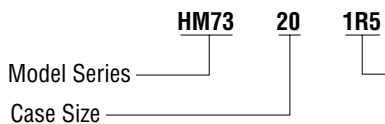


| Case Size | Fig. | A | B | D | E | F |
|-----------|------|-------|-------|------|------|------|
| 10 | 2 | .315 | .276 | .138 | .138 | .098 |
| | | 8.00 | 7.00 | 3.50 | 3.50 | 2.50 |
| 10L | 1 | .460 | .402 | .157 | .177 | .110 |
| | | 11.70 | 10.20 | 4.00 | 4.50 | 2.80 |
| 15 | 1 | .285 | .265 | .138 | .138 | .138 |
| | | 7.23 | 6.73 | 3.50 | 3.50 | 3.50 |
| 20 | 1 | .590 | .512 | .295 | .236 | .177 |
| | | 15.0 | 13.0 | 7.50 | 6.00 | 4.50 |
| 30 | 2 | .590 | .512 | .295 | .236 | .177 |
| | | 15.0 | 13.0 | 7.50 | 6.00 | 4.50 |
| 31 | 1 | .590 | .512 | .295 | .236 | .177 |
| | | 15.0 | 13.0 | 7.50 | 6.00 | 4.50 |

Recommended Solder Pad Layout



ORDERING INFORMATION



Inductance Code:
1st two digits are significant.
Last digit denotes number of
trailing zeros. Values below
10 μ H "R" denotes decimal point.