

UNSHIELDED SMD POWER INDUCTOR

AISC-1812H

RoHS
Compliant



4.5 x 3.2 x 2.6mm

FEATURES:

- Excellent solderability and resistance
- Suitable for flow and reflow soldering
- Packed in embossed carrier tape and can be used by automatic mounting machines

STANDARD SPECIFICATIONS:

PARAMETERS

| | |
|------------------------|------------------------------|
| ABRACON P/N: | AISC-1812H-xxx Series |
| Operating temperature: | -25°C to + 85°C |
| Storage temperature: | -25°C to + 85°C, 70% RH max. |

| Part Number | Test Condition (V/Hz) | L (μH) | DC Resistance (Ω) Max. | SRF (MHz) Min | I _r (A) Max |
|-----------------|-----------------------|--------|------------------------|---------------|------------------------|
| AISC-1812H-1R0N | 1.0 / 1.0M | 1.0 | 0.08 | 120 | 1.08 |
| AISC-1812H-1R5N | 1.0 / 1.0M | 1.5 | 0.09 | 85 | 1.00 |
| AISC-1812H-1R8N | 1.0 / 1.0M | 1.8 | 0.10 | 75 | 0.96 |
| AISC-1812H-2R2N | 1.0 / 1.0M | 2.2 | 0.11 | 62 | 0.90 |
| AISC-1812H-2R7N | 1.0 / 1.0M | 2.7 | 0.12 | 53 | 0.87 |
| AISC-1812H-3R3N | 1.0 / 1.0M | 3.3 | 0.13 | 47 | 0.80 |
| AISC-1812H-3R9N | 1.0 / 1.0M | 3.9 | 0.15 | 41 | 0.78 |
| AISC-1812H-4R7N | 1.0 / 1.0M | 4.7 | 0.20 | 38 | 0.75 |
| AISC-1812H-5R6N | 1.0 / 1.0M | 5.6 | 0.23 | 33 | 0.73 |
| AISC-1812H-6R8N | 1.0 / 1.0M | 6.8 | 0.25 | 31 | 0.72 |
| AISC-1812H-8R2N | 1.0 / 1.0M | 8.2 | 0.27 | 27 | 0.68 |
| AISC-1812H-100K | 1.0 / 1.0M | 10 | 0.35 | 23 | 0.65 |
| AISC-1812H-120K | 1.0 / 1.0M | 12 | 0.47 | 21 | 0.62 |
| AISC-1812H-150K | 1.0 / 1.0M | 15 | 0.54 | 19 | 0.57 |
| AISC-1812H-180K | 1.0 / 1.0M | 18 | 0.56 | 17 | 0.48 |
| AISC-1812H-220K | 1.0 / 1.0M | 22 | 0.64 | 15 | 0.42 |
| AISC-1812H-270K | 1.0 / 100K | 27 | 0.75 | 14 | 0.37 |
| AISC-1812H-330K | 1.0 / 100K | 33 | 0.86 | 12 | 0.31 |
| AISC-1812H-390K | 1.0 / 100K | 39 | 1.18 | 11 | 0.30 |
| AISC-1812H-470K | 1.0 / 100K | 47 | 1.37 | 10 | 0.28 |
| AISC-1812H-560K | 1.0 / 100K | 56 | 1.56 | 9.3 | 0.25 |
| AISC-1812H-680K | 1.0 / 100K | 68 | 1.92 | 8.4 | 0.22 |
| AISC-1812H-820K | 1.0 / 100K | 82 | 2.08 | 7.5 | 0.20 |
| AISC-1812H-101K | 1.0 / 100K | 100 | 2.96 | 6.8 | 0.19 |
| AISC-1812H-121K | 1.0 / 100K | 120 | 3.20 | 6.2 | 0.17 |
| AISC-1812H-151K | 1.0 / 100K | 150 | 3.72 | 5.5 | 0.13 |
| AISC-1812H-181K | 1.0 / 100K | 180 | 5.16 | 5 | 0.12 |
| AISC-1812H-221K | 1.0 / 100K | 220 | 5.90 | 4.5 | 0.11 |
| AISC-1812H-271K | 1.0 / 100K | 270 | 6.55 | 4 | 0.105 |
| AISC-1812H-331K | 1.0 / 100K | 330 | 7.75 | 3.6 | 0.100 |
| AISC-1812H-391K | 1.0 / 100K | 390 | 8.06 | 3.3 | 0.095 |
| AISC-1812H-471K | 1.0 / 1.0K | 470 | 12.50 | 3 | 0.090 |
| AISC-1812H-561K | 1.0 / 1.0K | 560 | 13.00 | 2.7 | 0.070 |
| AISC-1812H-681K | 1.0 / 1.0K | 680 | 14.60 | 2.5 | 0.065 |
| AISC-1812H-821K | 1.0 / 1.0K | 820 | 16.80 | 2.2 | 0.060 |
| AISC-1812H-102K | 1.0 / 1.0K | 1000 | 26.40 | 2 | 0.050 |
| AISC-1812H-122K | 1.0 / 1.0K | 1200 | 48.00 | 1.8 | 0.045 |
| AISC-1812H-152K | 1.0 / 1.0K | 1500 | 52.20 | 1.6 | 0.040 |
| AISC-1812H-182K | 1.0 / 1.0K | 1800 | 58.80 | 1.5 | 0.035 |
| AISC-1812H-222K | 1.0 / 1.0K | 2200 | 65.00 | 1.3 | 0.030 |

Inductance tolerance: N: ±30%; K: ±10%

APPLICATIONS:

- Excellent for power line DC/DC conversion application
- Used in hard disk, notebook computer and other electronic equipment

OPTIONS & PART IDENTIFICATION:

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AISC - 1812H - □□□ - □ - □

Inductance Code

Please refer to the Table

Tolerance Code

Please refer to the Table

Packaging

T

Tape & Reel

Test Equipment and Conditions:

I_r: Rated current that will cause initial inductance value approximately 10% rolloff or coil temperature rise by 40°C without core loss, which ever is smaller. (Reference ambient temperature 2 °C).

L: measured with CH-1061 with 1320

SRF: measured with HP-8714C RF network analyzer

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AISC-1812H

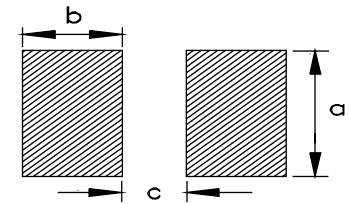
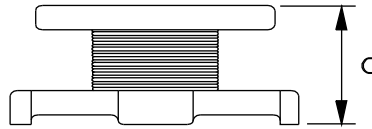
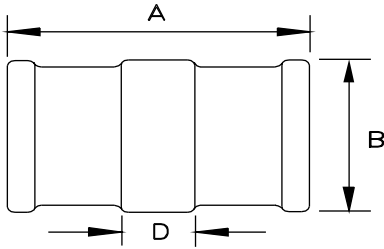


RoHS
Compliant



4.5 x 3.2 x 2.6mm

OUTLINE DRAWING:



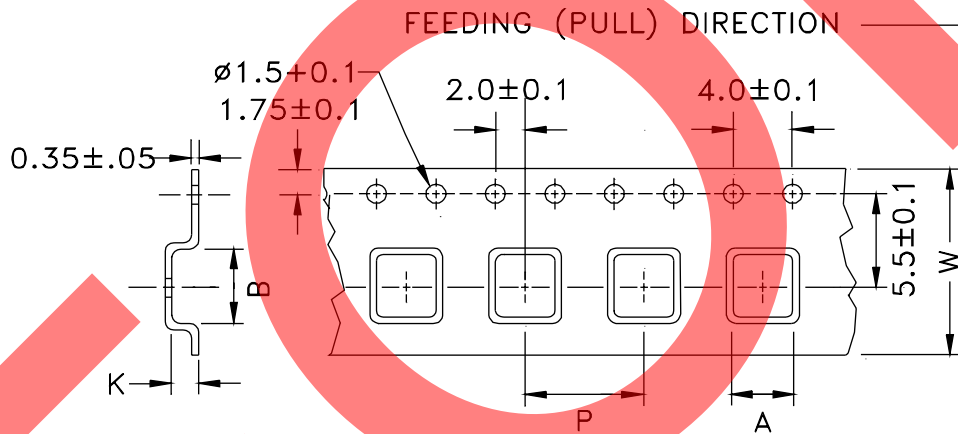
Recommended Land Pattern

| Series | A | B | C | D(ref) | a(ref) | b(ref) | c(ref) |
|------------|---------------------------|---------------------------|---------------------------|---------------|---------------|----------------|----------------|
| AISC-1812H | 0.177±0.012 (4.5 ±0.3) | 0.126±0.008 (3.2 ±0.2) | 0.102±0.008 (2.6 ±0.2) | 0.06 (1.5) | 0.15 (3.8) | 0.071 (1.8) | 0.059 (1.5) |

Dimensions: Inches (mm)

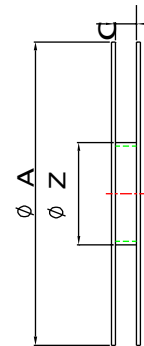
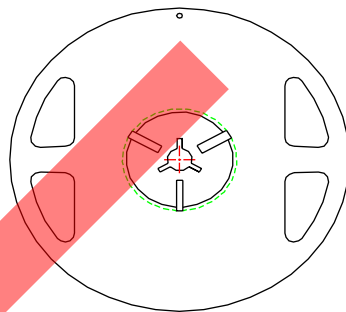
TAPE & REEL: Tape and reel 500 pcs/reel

Dimensions of Tape



| ABRACON P/N | A (mm) | B (mm) | K (mm) | P (mm) | W (mm) |
|-------------|------------|------------|-----------|-----------|------------|
| AISC-1812H | 3.65 ± 0.1 | 5.05 ± 0.1 | 3.1 ± 0.1 | 8.0 ± 0.1 | 12.0 ± 0.3 |

Dimensions of Reel



| Series | A | C | Z |
|------------|-----|------------|--------|
| ASPI-1812H | 330 | 12.0 ± 0.5 | 60±0.5 |

Dimensions: mm

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