

UNSHIELDED SMD POWER INDUCTOR

AISC-1210H



3.2 x 2.5 x 2.0mm

FEATURES:

- Low DC resistance permits high current flow
- Exhibit low voltage drops and inductance variations with respect to temperature rise and DC current level
- Excellent solder heat resistance allows both flow and reflow soldering methods
- Excellent mechanical reliability suitable for automotive, safety application

APPLICATIONS:

- Excellent for power line DC/DC conversion applications
- Used in video, communications, notebook computer and other electronic equipment

STANDARD SPECIFICATIONS:

| PARAMETERS | |
|------------------------|------------------------------|
| ABRACON P/N: | AISC-1210H-xxx Series |
| Operating temperature: | -25°C to + 85°C |
| Storage temperature: | -25°C to + 85°C, 70% RH max. |

OPTIONS & PART IDENTIFICATION:

(Left blank if standard)

AISC - 1210H - □□□□ - □

| Inductance Code | Tolerance Code | Packaging |
|---------------------------|---------------------------|--------------------|
| Please refer to the Table | Please refer to the Table | T Tape & Reel |

| Abrakon Part Number | Inductance L (μH) | Test Frequency | SRF (MHz) Min | Rdc(mΩ) Max | Rated DC Current (A) |
|---------------------|-------------------|----------------|---------------|-------------|----------------------|
| AISC-1210H-R15N | 0.15 | 1.0 MHz | 400 | 21 | 4.40 |
| AISC-1210H-R27N | 0.27 | 1.0 MHz | 250 | 22 | 4.00 |
| AISC-1210H-R39N | 0.39 | 1.0 MHz | 200 | 33 | 3.10 |
| AISC-1210H-R56N | 0.56 | 1.0 MHz | 180 | 50 | 2.90 |
| AISC-1210H-R82N | 0.82 | 1.0 MHz | 150 | 53 | 2.60 |
| AISC-1210H-1R0N | 1.0 | 1.0 MHz | 100 | 63 | 2.30 |
| AISC-1210H-1R2N | 1.2 | 1.0 MHz | 90 | 92 | 2.10 |
| AISC-1210H-1R5N | 1.5 | 1.0 MHz | 80 | 100 | 1.70 |
| AISC-1210H-1R8N | 1.8 | 1.0 MHz | 72 | 110 | 1.50 |
| AISC-1210H-2R2N | 2.2 | 1.0 MHz | 64 | 124 | 1.30 |
| AISC-1210H-2R4N | 2.4 | 1.0 MHz | 62 | 130 | 1.30 |
| AISC-1210H-2R7N | 2.7 | 1.0 MHz | 60 | 132 | 1.20 |
| AISC-1210H-3R3N | 3.3 | 1.0 MHz | 53 | 167 | 1.15 |
| AISC-1210H-3R9N | 3.9 | 1.0 MHz | 45 | 222 | 1.00 |
| AISC-1210H-4R7N | 4.7 | 1.0 MHz | 43 | 247 | 0.90 |
| AISC-1210H-5R6N | 5.6 | 1.0 MHz | 38 | 359 | 0.78 |
| AISC-1210H-6R8N | 6.8 | 1.0 MHz | 32 | 392 | 0.75 |
| AISC-1210H-8R2N | 8.2 | 1.0 MHz | 30 | 450 | 0.70 |
| AISC-1210H-100K | 10.0 | 1.0 MHz | 26 | 509 | 0.65 |
| AISC-1210H-120K | 12.0 | 1.0 MHz | 26 | 674 | 0.61 |
| AISC-1210H-150K | 15.0 | 1.0 MHz | 26 | 760 | 0.55 |
| AISC-1210H-180K | 18.0 | 1.0 MHz | 20 | 978 | 0.45 |
| AISC-1210H-220K | 22.0 | 100 KHz | 19 | 1000 | 0.43 |
| AISC-1210H-270K | 27.0 | 100 KHz | 18 | 1240 | 0.38 |
| AISC-1210H-330K | 33.0 | 100 KHz | 17 | 1940 | 0.35 |
| AISC-1210H-390K | 39.0 | 100 KHz | 16 | 2000 | 0.33 |
| AISC-1210H-470K | 47.0 | 100 KHz | 15 | 3200 | 0.30 |
| AISC-1210H-560K | 56.0 | 100 KHz | 13 | 3640 | 0.25 |
| AISC-1210H-680K | 68.0 | 100 KHz | 12 | 4060 | 0.21 |
| AISC-1210H-820K | 82.0 | 100 KHz | 12 | 4580 | 0.20 |
| AISC-1210H-101K | 100.0 | 100 KHz | 10 | 6880 | 0.18 |
| AISC-1210H-121K | 120.0 | 100 KHz | 8 | 7470 | 0.16 |
| AISC-1210H-151K | 150.0 | 100 KHz | 7 | 8320 | 0.14 |
| AISC-1210H-181K | 180.0 | 100 KHz | 7 | 13160 | 0.12 |
| AISC-1210H-221K | 220.0 | 100 KHz | 6.8 | 14400 | 0.10 |
| AISC-1210H-271K | 270.0 | 100 KHz | 6 | 15000 | 0.08 |
| AISC-1210H-331K | 330.0 | 100 KHz | 5.6 | 18900 | 0.06 |
| AISC-1210H-391K | 390.0 | 1 KHz | 5 | 20400 | 0.06 |
| AISC-1210H-471K | 470.0 | 1 KHz | 4 | 27500 | 0.06 |
| AISC-1210H-561K | 560.0 | 1 KHz | 4 | 29800 | 0.05 |
| AISC-1210H-681K | 680.0 | 1 KHz | 3.2 | 40000 | 0.04 |

Inductance tolerance: N: ±30%; K: ±20%

Ir: 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 20°C).

L: measured with CH-1061 with 1320

SRF: measured with HP-8714C RF network analyzer

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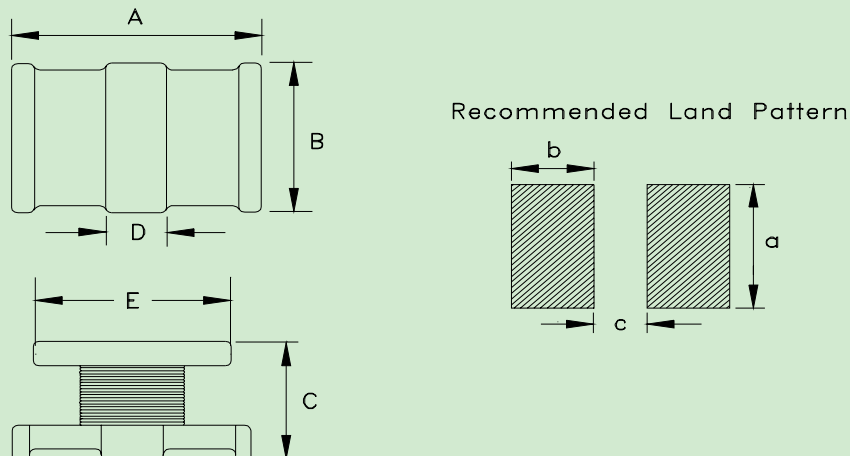


RoHS
Compliant



3.2 x 2.5 x 2.0mm

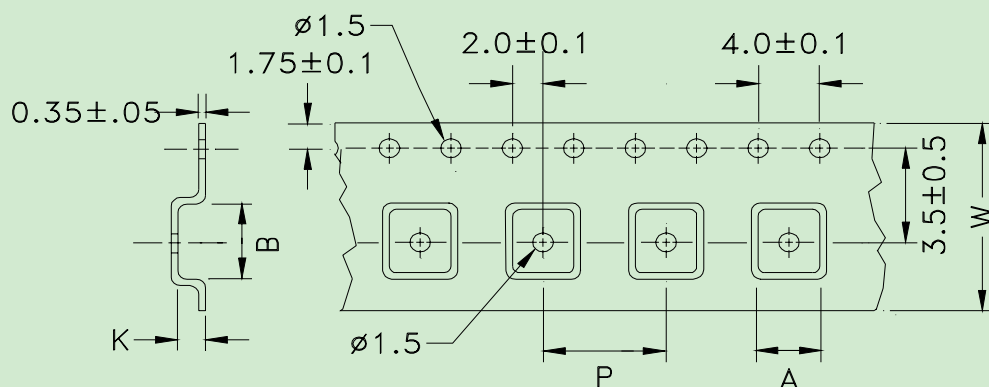
OUTLINE DRAWING:



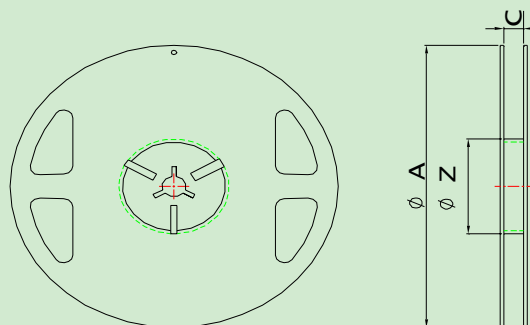
| Series | A | B | C | D(ref) | E | a(ref) | b(ref) | c(ref) |
|------------|---------------------------|---------------------------|---------------------------|----------------|---------------------------|----------------|----------------|----------------|
| AISC-1210H | 0.126±0.012 (3.2 ±0.3) | 0.098±0.008 (2.5 ±0.2) | 0.079±0.012 (2.0 ±0.3) | 0.039 (1.0) | 0.098±0.008 (2.5 ±0.2) | 0.118 (3.0) | 0.051 (1.3) | 0.039 (1.0) |

Dimensions: inch
(mm)

TAPE & REEL: Tape and reel 4,000pcs/reel



| ABRACON P/N | A (mm) | B (mm) | K (mm) | P (mm) | W (mm) | PCS/REEL |
|-------------|------------|------------|------------|-----------|-----------|----------|
| AISC-1210H | 2.84 ± 0.1 | 3.71 ± 0.1 | 2.57 ± 0.1 | 4.0 ± 0.1 | 8.0 ± 0.3 | 1500 |



| Series | A | C | Z |
|------------|---------|---------|---------|
| AISC-1210H | 330-0.5 | 8.4+1.5 | 100±1.0 |

Dimensions: mm

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