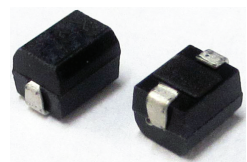


# SMD MOLDED WOUND CHIP INDUCTOR

AIMS-1812



**RoHS**  
Compliant



4.8 x 3.5 x 3.5mm

## FEATURES:

- Low DCR
- Best suited for power supply lines

## APPLICATIONS:

- VCRs & Video Cameras
- Computer products & Peripherals
- Automobile Audio Systems

## STANDARD SPECIFICATIONS:

### PARAMETERS

|                        |                                  |
|------------------------|----------------------------------|
| ABRACON P/N:           | AIMS-1812-xxx Series             |
| Operating temperature: | - 40°C to + 85°C                 |
| Storage temperature:   | +22°C to +28°C, Humidity < 80%RH |

| Part No.<br>ASPI-1812-Inductance Code | L(μH) | Tolerance | Q     | Test Freq. | SRF(MHz) | DCR(Ω) | Idc(mA) |
|---------------------------------------|-------|-----------|-------|------------|----------|--------|---------|
|                                       |       | (%)       | (min) | (MHz)      | (min)    | (max)  | (max)   |
| AIMS-1812-R10                         | 0.10  | M         | 35    | 25.2       | 300      | 0.20   | 800     |
| AIMS-1812-R12                         | 0.12  | M         | 35    | 25.2       | 280      | 0.20   | 770     |
| AIMS-1812-R15                         | 0.15  | M         | 35    | 25.2       | 250      | 0.20   | 730     |
| AIMS-1812-R18                         | 0.18  | M         | 35    | 25.2       | 220      | 0.24   | 700     |
| AIMS-1812-R22                         | 0.22  | M         | 40    | 25.2       | 200      | 0.30   | 665     |
| AIMS-1812-R27                         | 0.27  | M         | 40    | 25.2       | 180      | 0.30   | 635     |
| AIMS-1812-R33                         | 0.33  | M         | 40    | 25.2       | 165      | 0.30   | 605     |
| AIMS-1812-R39                         | 0.39  | M         | 40    | 25.2       | 150      | 0.30   | 575     |
| AIMS-1812-R47                         | 0.47  | M         | 40    | 25.2       | 145      | 0.32   | 545     |
| AIMS-1812-R56                         | 0.56  | M         | 40    | 25.2       | 140      | 0.40   | 520     |
| AIMS-1812-R68                         | 0.68  | M         | 40    | 25.2       | 135      | 0.40   | 500     |
| AIMS-1812-R82                         | 0.82  | M         | 40    | 25.2       | 130      | 0.50   | 475     |
| AIMS-1812-1R0                         | 1.0   | K         | 50    | 7.96       | 100      | 0.50   | 450     |
| AIMS-1812-1R2                         | 1.2   | K         | 50    | 7.96       | 80       | 0.60   | 430     |
| AIMS-1812-1R5                         | 1.5   | K         | 50    | 7.96       | 70       | 0.60   | 410     |
| AIMS-1812-1R8                         | 1.8   | K         | 50    | 7.96       | 60       | 0.70   | 390     |
| AIMS-1812-2R2                         | 2.2   | K         | 50    | 7.96       | 55       | 0.70   | 380     |
| AIMS-1812-2R7                         | 2.7   | K         | 50    | 7.96       | 50       | 0.80   | 370     |
| AIMS-1812-3R3                         | 3.3   | K         | 50    | 7.96       | 45       | 0.80   | 355     |
| AIMS-1812-3R9                         | 3.9   | K         | 50    | 7.96       | 40       | 0.90   | 330     |
| AIMS-1812-4R7                         | 4.7   | K         | 50    | 7.96       | 35       | 1.0    | 315     |
| AIMS-1812-5R6                         | 5.6   | K         | 50    | 7.96       | 33       | 1.1    | 300     |
| AIMS-1812-6R8                         | 6.8   | K         | 50    | 7.96       | 27       | 1.2    | 285     |
| AIMS-1812-8R2                         | 8.2   | K         | 50    | 7.96       | 25       | 1.4    | 270     |
| AIMS-1812-100                         | 10    | K         | 50    | 2.52       | 20       | 1.6    | 250     |
| AIMS-1812-120                         | 12    | K         | 50    | 2.52       | 18       | 2.0    | 225     |
| AIMS-1812-150                         | 15    | K         | 50    | 2.52       | 17       | 2.5    | 200     |
| AIMS-1812-180                         | 18    | K         | 50    | 2.52       | 15       | 2.8    | 190     |
| AIMS-1812-220                         | 22    | K         | 50    | 2.52       | 13       | 3.2    | 180     |
| AIMS-1812-270                         | 27    | K         | 50    | 2.52       | 12       | 3.6    | 170     |
| AIMS-1812-330                         | 33    | K         | 50    | 2.52       | 11       | 4.0    | 160     |
| AIMS-1812-390                         | 39    | K         | 50    | 2.52       | 10       | 4.5    | 150     |
| AIMS-1812-470                         | 47    | K         | 50    | 2.52       | 10       | 5.0    | 140     |
| AIMS-1812-560                         | 56    | K         | 50    | 2.52       | 9.0      | 5.5    | 135     |
| AIMS-1812-680                         | 68    | K         | 50    | 2.52       | 9.0      | 6.0    | 130     |
| AIMS-1812-820                         | 82    | K         | 50    | 2.52       | 8.0      | 7.0    | 120     |
| AIMS-1812-101                         | 100   | K         | 40    | 0.796      | 8.0      | 8.0    | 110     |
| AIMS-1812-121                         | 120   | K         | 40    | 0.796      | 6.0      | 8.0    | 110     |
| AIMS-1812-151                         | 150   | K         | 40    | 0.796      | 5.0      | 9.0    | 105     |

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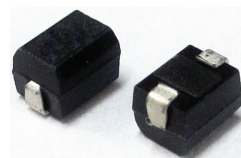
Revised: 04.17.12

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AIMS-1812



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Compliant



4.8 x 3.5 x 3.5mm

## Key Electrical Specifications (Con'd)

| Part No.<br>AIMS-1812-Inductance Code | L( $\mu$ H) | Tolerance | Q     | Test Freq. | SRF(MHz) | DCR( $\Omega$ ) | Idc(mA) |
|---------------------------------------|-------------|-----------|-------|------------|----------|-----------------|---------|
|                                       |             | (%)       | (min) | (MHz)      | (min)    | (max)           | (max)   |
| AIMS-1812-181                         | 180         | K         | 40    | 0.796      | 5.0      | 9.5             | 102     |
| AIMS-1812-221                         | 220         | K         | 40    | 0.796      | 4.0      | 10.0            | 100     |
| AIMS-1812-271                         | 270         | K         | 40    | 0.796      | 4.0      | 15.0            | 92      |
| AIMS-1812-331                         | 330         | K         | 40    | 0.796      | 3.5      | 15.0            | 85      |
| AIMS-1812-391                         | 390         | K         | 40    | 0.796      | 3.0      | 18.0            | 80      |
| AIMS-1812-471                         | 470         | K         | 40    | 0.796      | 3.0      | 26.0            | 62      |
| AIMS-1812-561                         | 560         | K         | 30    | 0.796      | 3.0      | 30.0            | 50      |
| AIMS-1812-681                         | 680         | K         | 30    | 0.796      | 3.0      | 30.0            | 50      |
| AIMS-1812-821                         | 820         | K         | 30    | 0.796      | 2.5      | 43.0            | 30      |

## Test Conditions

Isat:  $\Delta L/L$  (initial)  $\geq -10\%$

## OPTIONS AND PART IDENTIFICATION:

(Left blank if standard)

AIMS-1812--

### Inductance Code

Please refer to the table above

### Tolerance %

M:  $\pm 20\%^*$

K:  $\pm 10\%^*$

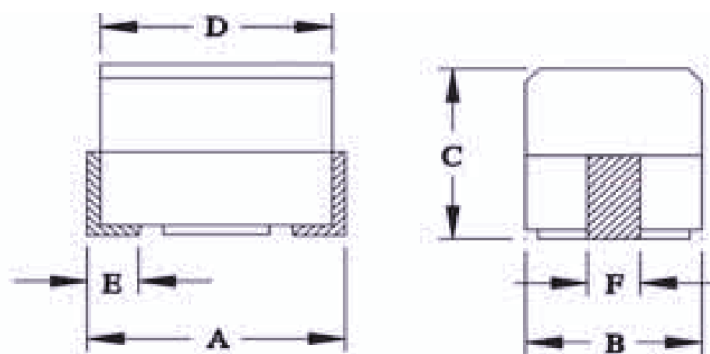
### Packaging

T: Tape and Reel (500pcs / reel)

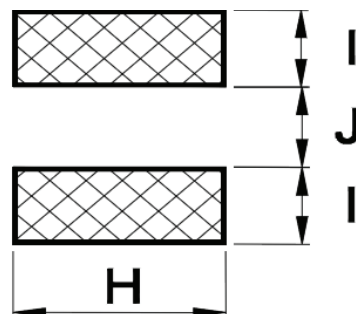
\*M for L = 0.1 ~ 0.82 $\mu$ H

\*K for L = 1.0 ~ 820 $\mu$ H

## OUTLINE DIMENSIONS:



## Recommended Land Pattern



| A max. | B max. | C max. | D ref.        | E ref. | F ref.     | I    | J    | H    |
|--------|--------|--------|---------------|--------|------------|------|------|------|
| 4.8    | 3.5    | 3.5    | 4.2 $\pm$ 0.2 | 1.1    | 1.2 or 1.8 | 1.50 | 3.00 | 2.80 |

Dimension: mm

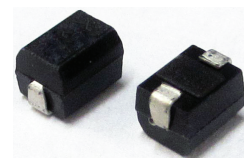


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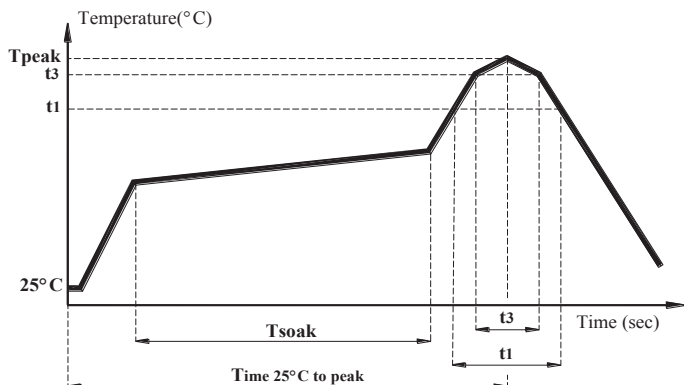


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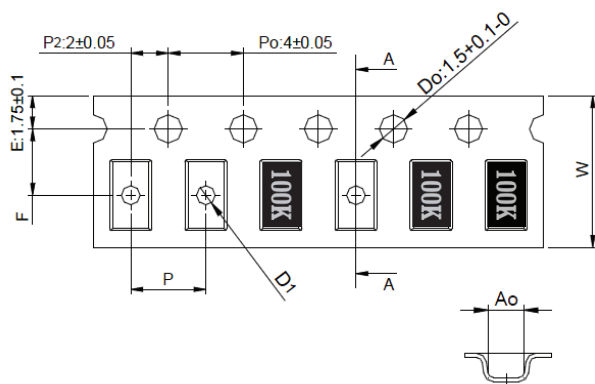
## REFLOW PROFILE:



| Item                                      | mark  |                   |
|-------------------------------------------|-------|-------------------|
| Temperature rise gradient                 |       | 3%/sec (max)      |
| Heating time                              | Tsoak | 50s ~ 150s        |
| Heating temperature                       |       | 120% ~ 180%       |
| Time over 217%                            | t1    | 70 sec            |
| Time within 5% of actual peak temperature | t3    | 10~30 sec         |
| Peak temperature                          | Tpeak | 250 ( +0 / -5 % ) |
| Time 25% to peak Temperature              |       | 6 minutes max.    |

## TAPE & REEL:

T: 500pcs / reel



SECTION A-A

| A0        | B0        | K0        | P       | F         | W        | t          | A          | B        | C          | D         |
|-----------|-----------|-----------|---------|-----------|----------|------------|------------|----------|------------|-----------|
| 3.5 ± 0.1 | 4.9 ± 0.1 | 3.4 ± 0.1 | 8 ± 0.1 | 5.5 ± 0.1 | 12 ± 0.2 | 0.3 ± 0.05 | 13.5 ± 0.5 | 60 ± 2.0 | 13.5 ± 0.5 | 178 ± 2.0 |

Dimension: mm

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