

# SMD Molded Wound Chip inductor

AIMS-1008



RoHS  
Compliant



2.5 x 2.0 x 1.8mm

## FEATURES:

- Highly reliable in sudden temperature and humidity change
- Resistant to mechanical shocks and high temperature
- Accurate dimensions for automatically surface mounted
- Low DCR and High current, suitable for power line application
- Wide range of inductance value

## APPLICATIONS:

- xDSL, mobile base stations
- TVs, VCRs, digital cameras
- Automobile audio systems, ECU systems
- HDDs, ODDs

## ELECTRICAL SPECIFICATIONS:

### PARAMETERS

ABRACON P/N: AIMS-1008-XXX

Operating Temperature: -40°C to + 105°C (Including self-temperature rise)

Storage Temperature: -40°C to + 105°C

Self Temperature Arising: <20°C

Rating Current: When the rating current flows, inductance should not drop more than 10%

| Part No.       | L<br>(μH) | Tolerance<br>(%) | Q<br>typ. | L, Q<br>(MHz) | SRF<br>(MHz)min. | DCR<br>(Ω) max. | Idc*<br>(mA)max. |
|----------------|-----------|------------------|-----------|---------------|------------------|-----------------|------------------|
| AIMS-1008-R01  | 0.01      | J                | 15        | 100           | 2150             | 0.26            | 530              |
| AIMS-1008-R012 | 0.012     | J                | 15        | 100           | 2050             | 0.27            | 500              |
| AIMS-1008-R015 | 0.015     | J                | 15        | 100           | 2000             | 0.29            | 480              |
| AIMS-1008-R018 | 0.018     | J                | 15        | 100           | 1850             | 0.31            | 450              |
| AIMS-1008-R022 | 0.022     | J                | 15        | 100           | 1650             | 0.37            | 420              |
| AIMS-1008-R027 | 0.027     | J                | 20        | 100           | 1550             | 0.40            | 410              |
| AIMS-1008-R033 | 0.033     | J                | 20        | 100           | 1450             | 0.42            | 400              |
| AIMS-1008-R039 | 0.039     | J                | 20        | 100           | 1350             | 0.45            | 380              |
| AIMS-1008-R047 | 0.047     | J                | 20        | 100           | 1200             | 0.50            | 360              |
| AIMS-1008-R056 | 0.056     | J                | 20        | 100           | 1100             | 0.60            | 340              |
| AIMS-1008-R068 | 0.068     | J                | 20        | 100           | 1050             | 0.65            | 320              |
| AIMS-1008-R082 | 0.082     | J                | 20        | 100           | 900              | 0.75            | 300              |
| AIMS-1008-R10  | 0.1       | J                | 20        | 100           | 800              | 0.80            | 280              |
| AIMS-1008-R12  | 0.12      | J                | 30        | 25.2          | 700              | 0.30            | 550              |
| AIMS-1008-R15  | 0.15      | J                | 30        | 25.2          | 550              | 0.35            | 500              |
| AIMS-1008-R18  | 0.18      | J                | 30        | 25.2          | 500              | 0.40            | 475              |
| AIMS-1008-R22  | 0.22      | J                | 30        | 25.2          | 450              | 0.50            | 450              |
| AIMS-1008-R27  | 0.27      | J                | 30        | 25.2          | 425              | 0.55            | 425              |
| AIMS-1008-R33  | 0.33      | J                | 30        | 25.2          | 400              | 0.60            | 400              |
| AIMS-1008-R39  | 0.39      | J                | 30        | 25.2          | 375              | 0.65            | 375              |
| AIMS-1008-R47  | 0.47      | J                | 30        | 25.2          | 350              | 0.68            | 350              |
| AIMS-1008-R56  | 0.56      | J                | 30        | 25.2          | 325              | 0.75            | 325              |
| AIMS-1008-R68  | 0.68      | J                | 30        | 25.2          | 300              | 0.85            | 300              |
| AIMS-1008-R82  | 0.82      | J                | 30        | 25.2          | 260              | 1.00            | 260              |
| AIMS-1008-1R0  | 1.0       | J                | 30        | 7.96          | 245              | 1.10            | 245              |
| AIMS-1008-1R2  | 1.2       | J                | 30        | 7.96          | 230              | 1.20            | 230              |



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2.5 x 2.0 x 1.8mm

| Part No.      | L<br>(μH) | Tolerance<br>(%) | Q<br>typ. | Test Freq.<br>L, Q<br>(MHz) | SRF<br>(MHz)min. | DCR<br>(Ω) max. | Idc*<br>(mA)max. |
|---------------|-----------|------------------|-----------|-----------------------------|------------------|-----------------|------------------|
| AIMS-1008-1R5 | 1.5       | J                | 30        | 7.96                        | 182              | 1.30            | 220              |
| AIMS-1008-1R8 | 1.8       | J                | 30        | 7.96                        | 135              | 1.45            | 210              |
| AIMS-1008-2R2 | 2.2       | J                | 30        | 7.96                        | 105              | 1.55            | 200              |
| AIMS-1008-2R7 | 2.7       | J                | 30        | 7.96                        | 70               | 1.70            | 195              |
| AIMS-1008-3R3 | 3.3       | J                | 30        | 7.96                        | 55               | 1.90            | 185              |
| AIMS-1008-3R9 | 3.9       | J                | 30        | 7.96                        | 48               | 2.1             | 180              |
| AIMS-1008-4R7 | 4.7       | J                | 30        | 7.96                        | 43               | 2.3             | 175              |
| AIMS-1008-5R6 | 5.6       | J                | 25        | 7.96                        | 42               | 2.5             | 170              |
| AIMS-1008-6R8 | 6.8       | J                | 25        | 7.96                        | 39               | 2.7             | 165              |
| AIMS-1008-8R2 | 8.2       | J                | 25        | 7.96                        | 36               | 3.05            | 160              |
| AIMS-1008-100 | 10        | J                | 25        | 2.52                        | 33               | 3.5             | 155              |
| AIMS-1008-120 | 12        | J                | 25        | 2.52                        | 30               | 3.8             | 150              |
| AIMS-1008-150 | 15        | J                | 25        | 2.52                        | 26               | 4.4             | 140              |
| AIMS-1008-180 | 18        | J                | 25        | 2.52                        | 24               | 4.8             | 130              |
| AIMS-1008-220 | 22        | J                | 25        | 2.52                        | 22               | 5.5             | 125              |
| AIMS-1008-270 | 27        | J                | 25        | 2.52                        | 21               | 6.3             | 115              |
| AIMS-1008-330 | 33        | J                | 25        | 2.52                        | 20               | 7.1             | 110              |
| AIMS-1008-390 | 39        | J                | 20        | 2.52                        | 18               | 9.5             | 90               |
| AIMS-1008-470 | 47        | J                | 20        | 2.52                        | 17               | 11.1            | 80               |
| AIMS-1008-560 | 56        | J                | 20        | 2.52                        | 16               | 12.1            | 75               |
| AIMS-1008-680 | 68        | J                | 20        | 2.52                        | 15               | 16.6            | 70               |
| AIMS-1008-820 | 82        | J                | 20        | 2.52                        | 13               | 19.0            | 66               |
| AIMS-1008-101 | 100       | J                | 15        | 0.796                       | 12               | 21.0            | 60               |

## Note:

Tolerance : J=±5%;

\* Rated current: Value obtained when current flows and the temperature has risen to 20°C or when DC current flows and the initial value of inductance has fallen by 10%, whichever is smaller.

## ➤ OPTIONS AND PART IDENTIFICATION

AIMS -1008 - □□□J - □

| Inductance                            |
|---------------------------------------|
| Please refer to the tables on page 2. |

| Packaging |               |
|-----------|---------------|
| T         | Tape and Reel |

# SMD Molded Wound Chip inductor

AIMS-1008



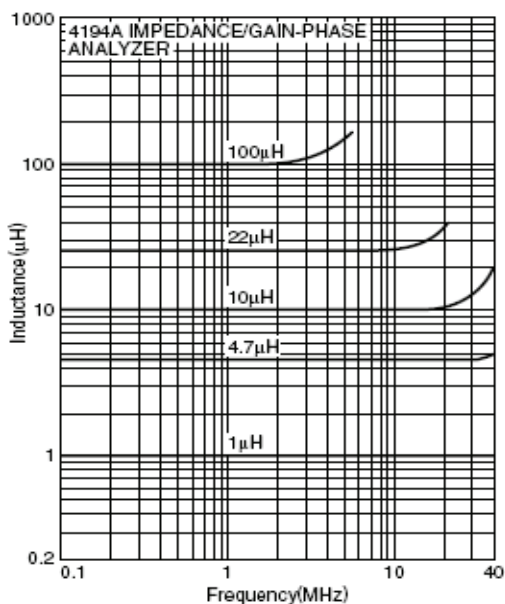
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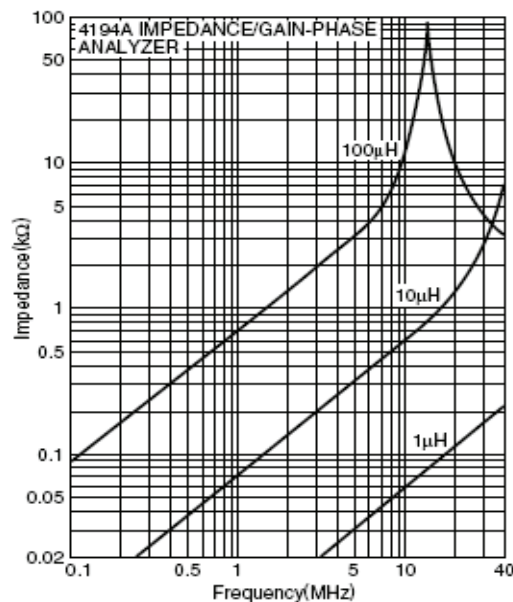
2.5 x 2.0 x 1.8mm

## TEST PLOTS:

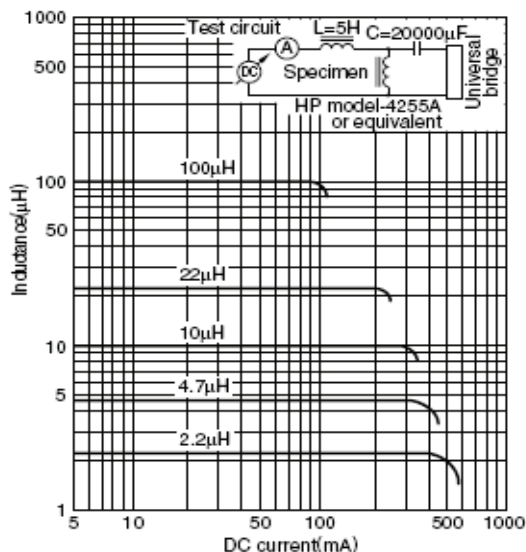
INDUCTANCE vs. FREQUENCY CHARACTERISTICS



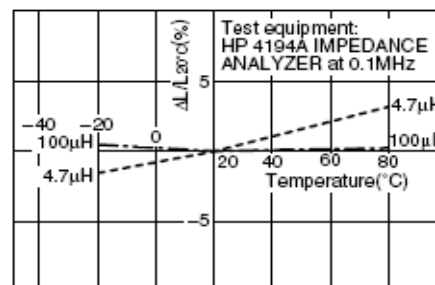
IMPEDANCE vs. FREQUENCY CHARACTERISTICS



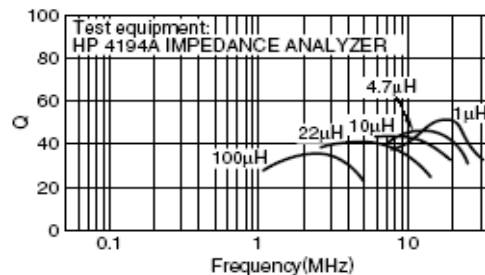
INDUCTANCE CHANGE vs. DC SUPERPOSITION CHARACTERISTICS



INDUCTANCE CHANGE vs. TEMPERATURE CHARACTERISTICS



Q vs. FREQUENCY CHARACTERISTICS



# SMD Molded Wound Chip inductor

AIMS-1008

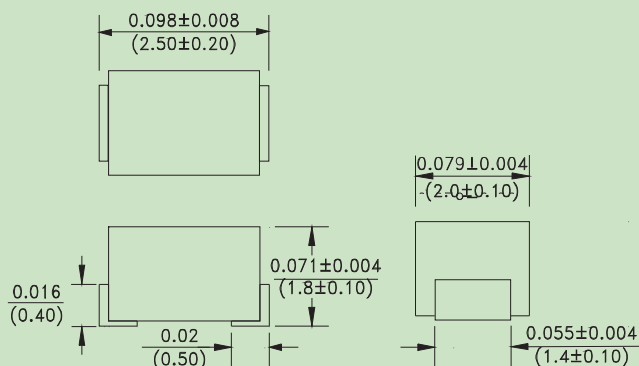


RoHS  
Compliant



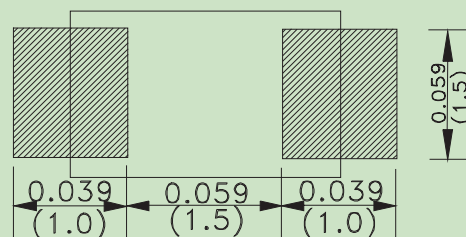
2.5 x 2.0 x 1.8mm

## OUTLINE DRAWING:

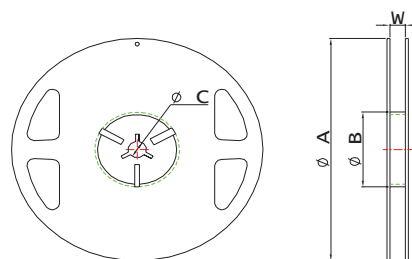
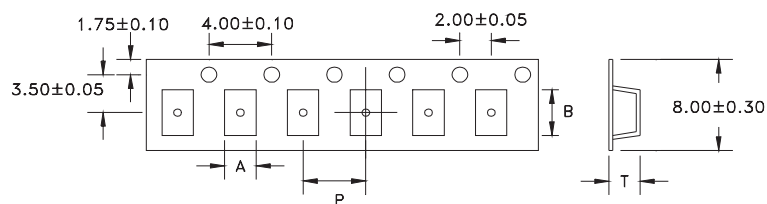


Dimension : Inches/mm

## RECOMMENDED LAND PATTERN



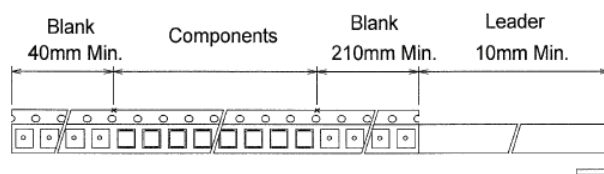
## TAPE & REEL:



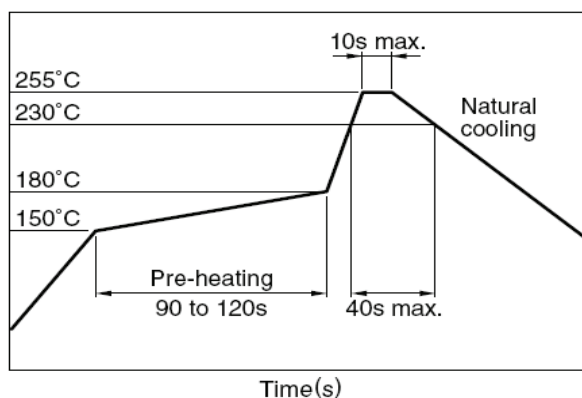
| Series    | A (mm)   | B (mm)   | T (mm)   | P (mm)    | PCS/REEL |
|-----------|----------|----------|----------|-----------|----------|
| AIMS-1008 | 2.3 ref. | 2.7 ref. | 2.0 ref. | 4.0 ± 0.1 | 2000     |

| Series    | $\phi A$ (mm) | $\phi B$ (mm) | $\phi C$ (mm) | W (mm)  |
|-----------|---------------|---------------|---------------|---------|
| AIMS-1008 | 180+0/-0.3    | 60+1/-0       | 13.0±0.2      | 9.0±0.3 |

Dimension: mm



## REFLOW PROFILE:



**NOTE:** Abracon manufactured products are intended for general commercial and industrial use. For applications requiring high reliability and/or presenting extreme operating environment, written consent & authorization from Abracon is required.