**MULTILAYER CERAMIC CHIP INDUCTORS**

**AIMC-0402**

**STANDARD SPECIFICATIONS:**

**APPLICATIONS:**
- Bluetooth
- Mobile phones such as GSM, CDMA, PDC
- High frequency telecommunication circuits
- Other high frequency circuit general use

**FEATURES:**
- High self-resonant frequency
- Multilayer monolithic construction yields high reliability
- Excellent solderability & heat resistance for reflow soldering

**PARAMETERS**

<table>
<thead>
<tr>
<th>Part No.</th>
<th>L(nH)</th>
<th>Tolerance</th>
<th>L, Q Test Freq. (MHz)</th>
<th>Q (MIN)</th>
<th>SRF (MHz) (min)</th>
<th>DCR (Ω) (max)</th>
<th>Ir (mA) (max)</th>
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<tbody>
<tr>
<td>AIMC-0402-1N0</td>
<td>1.0 C, S</td>
<td>100</td>
<td>9</td>
<td>10000</td>
<td>0.08</td>
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<td>150</td>
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<td>AIMC-0402-10R</td>
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<td>100</td>
<td>9</td>
<td>600</td>
<td>2.80</td>
<td>150</td>
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</table>

**OPTIONS AND PART IDENTIFICATION:**

(Left blank if standard)

**Inductance Code**

Please refer to the Electrical Spec Table

**Tolerance**

- C: ±0.2nH*
- S: ±0.3nH*
- J: ±5%*

**Packaging**

- T: Tape and Reel (10kpcs / reel)

* C, S for L = 1.0–8.2nH
  J for L = 10–120nH

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**ABRACON IS ISO 9001:2008 CERTIFIED**

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**ABRACON IS RoHS Compliant**

1.0 x 0.5 x 0.5mm

Test Conditions and equipments
- L, Q: HP4291 Impedance Analyzer, 100MHz, 50mV
- DCR: HP4263A LCR meter
- SRF: HP4291 Impedance analyzer, HP8753 Network analyzer
- Ir: DC Power Supplier, Current Meter, Thermometer, ΔL/ΔL (initial) ≥ -5% or ΔT ≤ 20˚C

Unless otherwise specified
- Temperature: Ordinary Temperature (5 to 35˚C)
- Humidity: Ordinary Humidity (25 to 85% RH)
- Atmospheric Pressure: 86 to 106 kPa

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- Humidity: Ordinary Humidity (25 to 85% RH)
- Atmospheric Pressure: 86 to 106 kPa
## OUTLINE DRAWING:

**Dimensions:** mm [inch]

```
L
W
T
a1, a2
```

<table>
<thead>
<tr>
<th>Series</th>
<th>L</th>
<th>W</th>
<th>T</th>
<th>a1, a2</th>
</tr>
</thead>
<tbody>
<tr>
<td>AIMC-0402</td>
<td>1.00±0.15</td>
<td>0.50±0.15</td>
<td>0.50±0.15</td>
<td>0.25±0.10</td>
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<tr>
<td></td>
<td>0.04±0.006</td>
<td>0.02±0.006</td>
<td>0.02±0.006</td>
<td>0.01±0.004</td>
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</table>

## REFLOW PROFILE:

Profile Feature:  
- Average Ramp-Up Rate (Tmax to Tp)  
- Preheat  
  - Temperature Min (Tmin)  
  - Temperature Max (Tmax)  
  - Time (Tmin to Tmax)  
  - Time (Tmax to Tp)
- Time maintained above:  
  - Temperature (TL)  
  - Time (T<sub>L</sub>)
- Peak Classification Temperature (Tp)  
- Time within 5 °C of actual Peak Temperature (tp)  
- Ramp-Down Rate  
- Time 25 °C to Peak Temperature

Lead-Free Assembly:  
- 3 °C / second max.
- 150 °C
- 200 °C
- 60-180 seconds
- 217 °C
- 90-150 seconds
- 260 °C
- 3-4 seconds
- 20-40 seconds
- 6 °C / second max.
- 8 minutes max.
**TAPE & REEL:**

T = Tape and reel 10,000pcs/reel

**Dimension: mm**

<table>
<thead>
<tr>
<th>Codes</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
<th>H</th>
<th>ΦJ</th>
<th>t(max)</th>
</tr>
</thead>
<tbody>
<tr>
<td>AIMC-0402</td>
<td>0.65±0.10</td>
<td>1.15±0.10</td>
<td>8.0±0.3</td>
<td>3.5±0.05</td>
<td>1.75±0.1</td>
<td>2.0±0.05</td>
<td>2.0±0.05</td>
<td>4.0±0.1</td>
<td>1.5±0.1/-0</td>
<td>0.8±0.05</td>
</tr>
</tbody>
</table>

**Test condition:**
1) peel angle: 165°~180° vs. carrier tape.
2) peel speed: 300 mm/min±10%.

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