**SMD Multilayer Chip Inductor for Choke**

**ASMCI-0603**

**FEATURES:**
- Monolithic structure designed for high reliability
- Excellent solderability and heat resistance
- Magnetic shield designed to eliminate cross coupling
- High DC current and low DCR

**APPLICATIONS:**
Choke circuits in DC power line for PC, mobile phones, digital cameras, camcorder, and music players.

**ELECTRICAL SPECIFICATIONS:**

**Operating Temperature:** -40°C to +85°C

**Storage Temperature:** -10°C to +40°C, 70% RH max

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Inductance Code</th>
<th>Inductance</th>
<th>Tolerance</th>
<th>DCR</th>
<th>SRF Min.</th>
<th>Max. Rated Current</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASMCI-0603-R10</td>
<td>0.1</td>
<td>M, N</td>
<td>±20%</td>
<td>0.14</td>
<td>240</td>
<td>700</td>
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<td>ASMCI-0603-R22</td>
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<td>M, N</td>
<td>±20%</td>
<td>0.27</td>
<td>150</td>
<td>550</td>
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<tr>
<td>ASMCI-0603-R47</td>
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<td>M, N</td>
<td>±30%</td>
<td>0.42</td>
<td>105</td>
<td>400</td>
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<td>ASMCI-0603-1R0</td>
<td>1.0</td>
<td>M, N</td>
<td>±20%</td>
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<td>75</td>
<td>190</td>
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<td>ASMCI-0603-2R2</td>
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<td>M, N</td>
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<td>50</td>
<td>140</td>
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<td>ASMCI-0603-4R7</td>
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<td>M, N</td>
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<td>0.60</td>
<td>35</td>
<td>100</td>
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<tr>
<td>ASMCI-0603-100</td>
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<td>M, N</td>
<td>±30%</td>
<td>0.90</td>
<td>20</td>
<td>50</td>
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</tbody>
</table>

**Test Conditions**

a. Ambient Temperature: 20± 15°C
b. Relative Humidity: 65%±20%
c. Air Pressure: 86KPa to 106KPa

**Inductance (L):** High Accuracy RF Impedance/Material Analyzer-HP4291B+HP16192A or Equivalent, 1MHz, -20dBm or 50mV.

**Direct Current Resistance (DCR):** High Accuracy Milliohmeter-HP4338B or Equivalent

**Self-Resonant Frequency (SRF):** High Accuracy RF Impedance/Material Analyzer HP4291B+HP16192A or Equivalent, -20dBm or 50mV.

**Rated current (Ir):** HP6632B system DC power supply, HP4291B+HP16192A+HP16200A or equivalent.

**Definition of Rated Current (Ir):** Ir is the value of DC current as inductance L (μH) decreased just 50% against initial value.
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**PART IDENTIFICATIONS:**

**ASMCI-0603**

Inductance Code
Please refer to the table above

Tolerance
M: ±20%
N: ±30%

Packaging
T: Tape and Reel (4kpcs / reel)

**OUTLINE DRAWING:**

**Recommended Land Pattern**

**MATERIALS:**

**Side View**

**Top View**

**Table:**

<table>
<thead>
<tr>
<th>Part Name</th>
<th>Material</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Base Material</td>
<td>Ferrite</td>
</tr>
<tr>
<td>2 Internal Conductor</td>
<td>Ag</td>
</tr>
<tr>
<td>3 Pull out Electrode</td>
<td>Ag</td>
</tr>
<tr>
<td>4 Terminal Electrode</td>
<td>Ag (Inner layer) Ni-Sn (Outer layer)</td>
</tr>
</tbody>
</table>
REFLOW PROFILE:

- Preheat condition: 150~200°C / 60~120 sec.
- Allowed time above 217°C: 60~90 sec.
- Max temp: 260°C
- Max time at max temp: 10 sec.
- Solder paste: Sn/3.0Ag/0.5Cu
- Allowed Reflow time: 2x max

TAPE & REEL:

Packing
T: 4,000 pcs / reel

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>P</th>
<th>T(max)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0±0.2</td>
<td>1.8±0.2</td>
<td>4.0±0.1</td>
<td>1.1</td>
</tr>
</tbody>
</table>

Dimension: mm

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