High Current Power Inductor
- CSCG1056 Series

Outline:
- Magnetic shielding structure, excellent resistance to electromagnetic interference.
- Assemblage design, sturdy structure.
- Small volume, high current, low magnetic loss, low ESR, small parasitic capacitance.
- Temperature rise current and saturation current is less influenced by environment.

1 Appearance and dimensions (mm)

2 Marking

3 Reference land pattern (mm)

4 Schematic

10.5 Max
9.0 Max
5.6 Max
1.8±0.2
2.6±0.5
1.8
1.8
5.6 Max
1.8

1 N/C
2 N/C
3 N/C

深圳市科达嘉电子有限公司
SHENZHEN CODACA ELECTRONIC CO., LTD
Tel: +86 755 89585372    Fax: +86 755 89585280
E-mail: codaca@codaca.com.cn
### 5 Electrical characteristics

**High Current Power Inductor - CSCG1056 Series**

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Inductance (μH)</th>
<th>D.C.R. (mΩ)</th>
<th>Saturation current (A)</th>
<th>Temperature rise current (A)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>±20% Typical</td>
<td>Max</td>
<td>Typical</td>
<td>Typical</td>
</tr>
<tr>
<td>CSCG1056-R60M</td>
<td>0.60</td>
<td>1.32</td>
<td>1.60</td>
<td>45.0</td>
</tr>
<tr>
<td>CSCG1056-R68M</td>
<td>0.68</td>
<td>1.32</td>
<td>1.60</td>
<td>38.0</td>
</tr>
<tr>
<td>CSCG1056-1R0M</td>
<td>1.00</td>
<td>2.50</td>
<td>2.80</td>
<td>30.0</td>
</tr>
<tr>
<td>CSCG1056-1R3M</td>
<td>1.30</td>
<td>2.50</td>
<td>2.80</td>
<td>19.0</td>
</tr>
<tr>
<td>CSCG1056-4R7M</td>
<td>4.70</td>
<td>9.20</td>
<td>11.0</td>
<td>10.0</td>
</tr>
<tr>
<td>CSCG1056-8R2M</td>
<td>8.20</td>
<td>17.0</td>
<td>19.0</td>
<td>8.00</td>
</tr>
</tbody>
</table>

- All data is tested based on 25°C ambient temperature.
- Inductance measure condition at 100kHz, 0.1V.
- D.C.R. measure condition at 100kHz, 0.1V.
- Saturation current: the actual value of DC current when the inductance decrease 20% of its initial value.
- Temperature rise current: the actual value of DC current when the temperature rise is ΔT40°C(Ta=25°C).

**Special reminder:**
- Circuit design, component placement, PWB size and thickness, cooling system and etc. all will affect the product temperature. Please verify the product temperature in the final application.
- Please verify the product temperature in the final application.
- The product temperature in the final application will be different.
- All data is tested based on 25°C ambient temperature.
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High Current Power Inductor - CSCG1056 Series

6 Saturation current VS temperature rise current curve
饱和电流 VS 温升电流曲线

CSCG1056-R60M
CSCG1056-6R8M
CSCG1056-1R0M
CSCG1056-1R3M
CSCG1056-4R7M
CSCG1056-8R2M

Tel: +86 755 89585372  Fax: +86 755 89585280
E-mail: codaca@codaca.com.cn  http://www.codaca.com
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High Current Power Inductor - CSCG1056 Series

7 Packing specification

7.1 Carrier tape dimensions (mm)

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Tolerances</th>
</tr>
</thead>
<tbody>
<tr>
<td>Width (A-A)</td>
<td>6.0±0.2</td>
</tr>
<tr>
<td>Height (A-A)</td>
<td>10.7±0.2</td>
</tr>
<tr>
<td>Thickness (B-B)</td>
<td>0.4±0.05</td>
</tr>
<tr>
<td>Diameter (Φ1.5)</td>
<td>1.75±0.1</td>
</tr>
</tbody>
</table>

※ Packing is referred to the international standard IEC 60286-3.

7.2 Tape direction

7.3 Cover tape peel off condition

- Cover tape peel force shall be 0.1 to 1.3N.
- Reference peel speed 300±10mm/min.
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- CSCG1056 Series

7.4 Reel dimensions (mm) 
卷盘尺寸

![Reel Diagram]

7.5 Carton dimensions and packing quantity 
包装箱尺寸和包装数量

<table>
<thead>
<tr>
<th>Product Series</th>
<th>Quantity / Reel</th>
<th>Inner Carton Quantity</th>
<th>Out Carton Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSCG1056</td>
<td>500pcs</td>
<td>(500×2) = 1000pcs</td>
<td>(1000×3) = 3000pcs</td>
</tr>
</tbody>
</table>

7.6 Label making 
标签标识

The following items will be marked on the reel of product label and shipping label.
以下项目将明确标识于产品卷盘标签以及运输标签上。

<table>
<thead>
<tr>
<th>Production Label</th>
<th>Shipping Label</th>
</tr>
</thead>
<tbody>
<tr>
<td>产品标签</td>
<td>运输标签</td>
</tr>
<tr>
<td>■ Part No.</td>
<td>■ Customer Name</td>
</tr>
<tr>
<td>产品型号</td>
<td>客户名称</td>
</tr>
<tr>
<td>■ Electrical Information</td>
<td>■ Customer Part No.</td>
</tr>
<tr>
<td>产品电性信息</td>
<td>客户型号</td>
</tr>
<tr>
<td>■ Quantity</td>
<td>■ Supplier Part No.</td>
</tr>
<tr>
<td>数量</td>
<td>供应商型号</td>
</tr>
<tr>
<td>■ Packing No.</td>
<td>■ Supplier Name</td>
</tr>
<tr>
<td>包装流水号</td>
<td>供应商名称</td>
</tr>
<tr>
<td>■ Country of origin</td>
<td>■ Country of origin</td>
</tr>
<tr>
<td>产品产地</td>
<td>产品产地</td>
</tr>
</tbody>
</table>

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8 Soldering specification
焊接规格

8.1 Reflow profile for SMT components
SMT 回流焊温度曲线

8.2 Classification of peak package body temperature (T_p)
封装体峰值温度(T_p)分类

<table>
<thead>
<tr>
<th>Package Thickness (封装厚度)</th>
<th>Package Volume (封装体积)</th>
<th>T_p Max. (200℃)</th>
<th>T_p Min. (150℃)</th>
<th>Preheat Area (60~150s)</th>
<th>Time (t)</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;1.6mm</td>
<td>&lt;350 mm³</td>
<td>260℃</td>
<td>150℃</td>
<td>60~120s</td>
<td>480s Max.</td>
</tr>
<tr>
<td>1.6~2.5mm</td>
<td>350~2000 mm³</td>
<td>260℃</td>
<td>150℃</td>
<td>60~150s</td>
<td>480s Max.</td>
</tr>
<tr>
<td>≥2.5mm</td>
<td>&gt;2000 mm³</td>
<td>250℃</td>
<td>150℃</td>
<td>60~150s</td>
<td>480s Max.</td>
</tr>
</tbody>
</table>

※ Reflow is referred to standard IPC/JEDEC J-STD-020D.
回流焊参照标准 IPC/JEDEC J-STD-020D。