High Current Power Inductor
- CSB1240 Series

Outline:
产品概要
- Magnetic shielded structure: excellent resistance to electro magnetic interference(EMI)
磁屏蔽结构：抗电磁干扰(EMI)性能强
- Flat wire winding, achieve a low D.C. Resistance.
扁平线绕组，实现极低的直流电阻。
- Low loss, high efficiency, wide application frequency and application scope.
低损耗，高效率，应用频率宽，适用范围广。
- Lightweight design, save space, suitable for high density SMT.
轻薄型设计，节省空间，适合高密度贴装。
- Operating temperature: -40°C ~ +125°C (Including coil’s temperature rise)
工作温度：-40°C ~ +125°C (包含线圈发热)

1 Appearance and dimensions (mm)
外形尺寸

2 Marking
印字标识

3 Reference land pattern (mm)
参考基板尺寸

4 Schematic
原理图
5 Electrical characteristics

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Inductance (μH) ±20%</th>
<th>D.C.R. (mΩ)</th>
<th>Saturation current (A) Typical</th>
<th>Temperature rise current (A) Typical</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSB1240-R47M</td>
<td>0.47</td>
<td>1.03</td>
<td>50.0</td>
<td>25.0</td>
</tr>
<tr>
<td>CSB1240-2R2M</td>
<td>2.20</td>
<td>5.20</td>
<td>18.0</td>
<td>14.5</td>
</tr>
<tr>
<td>CSB1240-3R3M</td>
<td>3.30</td>
<td>8.20</td>
<td>14.0</td>
<td>12.0</td>
</tr>
<tr>
<td>CSB1240-4R7M</td>
<td>4.70</td>
<td>9.20</td>
<td>12.0</td>
<td>10.0</td>
</tr>
</tbody>
</table>

All data is tested based on 25°C ambient temperature.

1. Inductance measure condition at 100kHz, 0.1V.
2. Saturation current: the actual value of DC current when the inductance decrease 30% of its initial value.
3. Temperature rise current: the actual value of DC current when the temperature rise is ΔT50°C(Ta=25°C).

Special remind: 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.

6 Saturation current VS temperature rise current curve

饱和电流 VS 温升电流曲线
7 Packing specification

7.1 Carrier tape dimensions (mm)

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.

包装参照国际标准 IEC 60286-3.
7.4 Reel dimensions (mm)
卷盘尺寸

7.5 Carton dimensions and packing quantity

<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>CSB1240</td>
<td>400pcs</td>
<td>(400×2) = 800pcs</td>
<td>(800×3) = 2400pcs</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.
以下项目将在产品标签和运输标签上标示。
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</th>
<th>Package Volume</th>
<th>T_p (°C)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>&lt;350 mm³</td>
<td>350~2000 mm³</td>
</tr>
<tr>
<td>PB-Free Assembly</td>
<td>260°C</td>
<td>260°C</td>
</tr>
<tr>
<td>&lt;1.6mm</td>
<td>260°C</td>
<td>250°C</td>
</tr>
<tr>
<td>1.6~2.5mm</td>
<td>250°C</td>
<td>245°C</td>
</tr>
<tr>
<td>≥2.5mm</td>
<td>250°C</td>
<td>245°C</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。