SERIES: CP30 | DESCRIPTION: 3.0 A PELTIER MODULE

FEATURES
• solid state device
• small and lightweight
• precise temperature control
• quiet operation

RoHS

MODEL

<table>
<thead>
<tr>
<th>MODEL</th>
<th>input voltage max (V)</th>
<th>input current max (A)</th>
<th>output Qmax(^1) (T_h=27^\circ C) (W)</th>
<th>output (\Delta T_{\text{max}}) (T_h=50^\circ C) (°C)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CP30138</td>
<td>3.8</td>
<td>3</td>
<td>6.5</td>
<td>7.2</td>
</tr>
<tr>
<td>CP30238</td>
<td>8.6</td>
<td>3</td>
<td>15</td>
<td>16.7</td>
</tr>
<tr>
<td>CP30338</td>
<td>15.4</td>
<td>3</td>
<td>27</td>
<td>30.1</td>
</tr>
</tbody>
</table>

Notes: 1. maximum cooling capacity at \(I_{\text{max}}, V_{\text{max}}, \text{and } \Delta T=0^\circ C\)
2. maximum temperature difference at \(I_{\text{max}}, V_{\text{max}}, \text{and } Q=0\text{W}\) (maximum parameters are measured in a vacuum)

PART NUMBER KEY

BASE NUMBER

PART NUMBER KEY

LENGTH/WIDTH:
1 = 15 x 15 mm
2 = 20 x 20 mm
3 = 30 x 30 mm

GENERAL

<table>
<thead>
<tr>
<th>parameter</th>
<th>conditions/description</th>
<th>min</th>
<th>typ</th>
<th>max</th>
<th>units</th>
</tr>
</thead>
<tbody>
<tr>
<td>internal resistance(^3)</td>
<td>CP30138</td>
<td>0.9</td>
<td>1.0</td>
<td>1.1</td>
<td>Ω</td>
</tr>
<tr>
<td></td>
<td>CP30238</td>
<td>2.07</td>
<td>2.3</td>
<td>2.53</td>
<td>Ω</td>
</tr>
<tr>
<td></td>
<td>CP30338</td>
<td>3.6</td>
<td>4.0</td>
<td>4.4</td>
<td>Ω</td>
</tr>
<tr>
<td>solder melting temperature</td>
<td>connection between termoelectric pairs</td>
<td>138</td>
<td>°C</td>
<td></td>
<td></td>
</tr>
<tr>
<td>assembly compression</td>
<td>98.07</td>
<td>N/cm(^2)</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>hot side plate</td>
<td>80</td>
<td>°C</td>
<td></td>
<td></td>
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<tr>
<td>MTBF</td>
<td>200,000</td>
<td>hours</td>
<td></td>
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</tbody>
</table>

Notes: 3. measured by AC 4-terminal method at 25°C

For further information and product selection refer to peltier application notes.pdf
**CP30138 PERFORMANCE (Th=27°C)**

![Graph showing CP30138 performance at Th=27°C.](image)

**CP30138 PERFORMANCE (Th=50°C)**

![Graph showing CP30138 performance at Th=50°C.](image)
CP30238 PERFORMANCE (Th=27°C)

Heat Pumped (W) vs. Input Voltage (V) for different current values:
- 3.0 A
- 2.4 A
- 1.8 A
- 1.2 A
- 0.6 A

ΔT = T_h - T_c (°C)

CP30238 PERFORMANCE (Th=50°C)

Heat Pumped (W) vs. Input Voltage (V) for different current values:
- 3.0 A
- 2.4 A
- 1.8 A
- 1.2 A
- 0.6 A

ΔT = T_h - T_c (°C)
CP30338 PERFORMANCE (Th=27°C)

CP30338 PERFORMANCE (Th=50°C)
MECHANICAL DRAWING

units: mm

0.80 (TYP)
3.8 ±0.01

Cold Side

MATERIAL
PLATING

ceramic plate  Al₂O₃ (Alumina)
sealer  silicon rubber RTV
lead wire  UL1430 (22AWG)  tin
joint cover  silicon rubber RTV

REVISION HISTORY

<table>
<thead>
<tr>
<th>rev.</th>
<th>description</th>
<th>date</th>
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<tr>
<td>1.0</td>
<td>initial release</td>
<td>09/03/2009</td>
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<tr>
<td>1.01</td>
<td>applied new template</td>
<td>05/07/2012</td>
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The revision history provided is for informational purposes only and is believed to be accurate.

CUI Inc | SERIES: CP30 | DESCRIPTION: 3.0 A PELTIER MODULE | date 05/07/2012 | page 5 of 5

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