SERIES: CP100  |  DESCRIPTION: PELTIER MODULE

FEATURES
- arcTEC™ structure on select models
- enhanced reliability for high thermal cycling
- superior thermal performance
- silicon sealed
- wide ΔT max
- precise temperature control
- solid state construction

MODEL

<table>
<thead>
<tr>
<th>MODEL</th>
<th>input voltage(^{1}) max (Vdc)</th>
<th>input current(^{2}) max (A)</th>
<th>internal resistance(^{3}) typ (Ω±10%)</th>
<th>output Q(^{4})max(^{5})</th>
<th>output (\Delta T)max(^{6})</th>
</tr>
</thead>
<tbody>
<tr>
<td>CP10205033</td>
<td>9.6</td>
<td>10</td>
<td>0.71</td>
<td>56.2</td>
<td>68</td>
</tr>
<tr>
<td>CP103033(^{6})</td>
<td>11.8</td>
<td>10</td>
<td>0.88</td>
<td>69</td>
<td>75</td>
</tr>
<tr>
<td>CP10304033(^{6})</td>
<td>15</td>
<td>10</td>
<td>1.13</td>
<td>89</td>
<td>97</td>
</tr>
<tr>
<td>CP10415273(^{6})</td>
<td>4.9</td>
<td>10</td>
<td>0.37</td>
<td>28</td>
<td>70</td>
</tr>
<tr>
<td>CP105559415(^{6})</td>
<td>24.6</td>
<td>10</td>
<td>1.82</td>
<td>140</td>
<td>70</td>
</tr>
</tbody>
</table>

Notes:
1. Maximum voltage at ΔT max and \(T_h=27°C\)
2. Maximum current to achieve ΔT max
3. Measured by AC 4-terminal method at 25°C
4. Maximum heat absorbed at cold side occurs at \(I_{\text{max}}, V_{\text{out}}\), and \(\Delta T=0°C\)
5. Maximum temperature difference occurs at \(I_{\text{max}}, V_{\text{out}}\), and \(Q=0W\) (ΔT max measured in a vacuum at 1.3 Pa)
6. Designed with arcTEC™ structure.
SPECFICATIONS

<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>Solder melting temperature</td>
<td>Connection between thermoelectric pairs</td>
<td>235</td>
<td></td>
<td></td>
<td>°C</td>
</tr>
<tr>
<td>Assembly compression</td>
<td></td>
<td>1</td>
<td></td>
<td>10</td>
<td>MPa</td>
</tr>
<tr>
<td>RoHS</td>
<td></td>
<td>Yes</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

MECHANICAL DRAWING

<table>
<thead>
<tr>
<th>MATERIAL</th>
<th>PLATING</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ceramic plate</td>
<td>96% Al₂O₃</td>
</tr>
<tr>
<td>Wire leads (CP10415273)</td>
<td>18 AWG  tin</td>
</tr>
<tr>
<td>Wire leads (all other models)</td>
<td>20 AWG  tin</td>
</tr>
<tr>
<td>Sealer</td>
<td>Silicon rubber 703 RTV (between cold and hot side plates)</td>
</tr>
<tr>
<td>Joint cover</td>
<td>Silicon rubber 703 RTV</td>
</tr>
<tr>
<td>Marking</td>
<td>P/N &amp; S/N printed on cold side surface</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MODEL NO.</th>
<th>HOT SIDE LENGTH (mm)</th>
<th>COLD SIDE LENGTH (mm)</th>
<th>WIDTH (mm)</th>
<th>THICKNESS (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CP10205033</td>
<td>20 ±0.3</td>
<td>20 ±0.3</td>
<td>50 ±0.3</td>
<td>3.3 ±0.1</td>
</tr>
<tr>
<td>CP103033</td>
<td>30 ±0.3</td>
<td>30 ±0.3</td>
<td>30 ±0.3</td>
<td>3.3 ±0.1</td>
</tr>
<tr>
<td>CP10304033</td>
<td>30 ±0.3</td>
<td>30 ±0.3</td>
<td>40 ±0.3</td>
<td>3.3 ±0.1</td>
</tr>
<tr>
<td>CP10415273</td>
<td>57 ±0.3</td>
<td>52 ±0.3</td>
<td>41 ±0.3</td>
<td>7.3 ±0.1</td>
</tr>
<tr>
<td>CP105559415</td>
<td>59 ±0.3</td>
<td>55 ±0.3</td>
<td>55 ±0.3</td>
<td>4.15 ±0.1</td>
</tr>
</tbody>
</table>
CP10205033 PERFORMANCE (\(Th=27^\circ C\))

\[
\begin{array}{|c|c|c|c|c|c|c|}
\hline
\text{Input Voltage (V)} & \text{2 A} & \text{4 A} & \text{6 A} & \text{8 A} & \text{10 A} \\
\text{Heat Pumped, } Q (W) & & & & & \\
\hline
\end{array}
\]

\[
\Delta T=Th-Tc (^\circ C)
\]

CP10205033 PERFORMANCE (\(Th=50^\circ C\))

\[
\begin{array}{|c|c|c|c|c|c|c|}
\hline
\text{Input Voltage (V)} & \text{2 A} & \text{4 A} & \text{6 A} & \text{8 A} & \text{10 A} \\
\text{Heat Pumped, } Q (W) & & & & & \\
\hline
\end{array}
\]

\[
\Delta T=Th-Tc (^\circ C)
\]
CP103033 PERFORMANCE (Th=27°C)

\[
\begin{array}{ccccccc}
\text{Input Voltage (V)} & 12 & 9 & 6 & 3 & 0 & 0 \\
\text{Heat Pumped, Q (W)} & 80 & 60 & 40 & 20 & 0 & 0 \\
\Delta T=\text{Th}-\text{Tc (°C)} & 80 & 60 & 40 & 30 & 20 & 10 & 0 \\
\end{array}
\]

CP103033 PERFORMANCE (Th=50°C)

\[
\begin{array}{ccccccc}
\text{Input Voltage (V)} & 12 & 9 & 6 & 3 & 0 & 0 \\
\text{Heat Pumped, Q (W)} & 80 & 60 & 40 & 20 & 0 & 0 \\
\Delta T=\text{Th}-\text{Tc (°C)} & 80 & 60 & 40 & 30 & 20 & 10 & 0 \\
\end{array}
\]
CP10304033 PERFORMANCE (Th=27°C)

CP10304033 PERFORMANCE (Th=50°C)
CP10415273 PERFORMANCE (Th=27°C)

![Graph showing the performance of CP10415273 at Th=27°C.]

CP10415273 PERFORMANCE (Th=50°C)

![Graph showing the performance of CP10415273 at Th=50°C.]

Additional Resources:  
Product Page  |  3D Model
CUI Devices | SERIES: CP100 | DESCRIPTION: PELTIER MODULE

**CP105559415 PERFORMANCE (Th=27°C)**

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

**CP105559415 PERFORMANCE (Th=50°C)**

![Graph showing performance at Th=50°C](image)

Additional Resources:  [Product Page] | [3D Model]
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