SERIES: CP39H | DESCRIPTION: PELTIER MODULE

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

MODEL

<table>
<thead>
<tr>
<th>MODEL</th>
<th>input voltage max (Vdc)</th>
<th>input current max (A)</th>
<th>internal resistance typ (Ω±10%)</th>
<th>output Qmax Th=27°C (W)</th>
<th>Th=50°C (W)</th>
<th>output ΔTmax Th=27°C (°C)</th>
<th>Th=50°C (°C)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CP39136H</td>
<td>3.8</td>
<td>3.9</td>
<td>0.85</td>
<td>8.6</td>
<td>9.5</td>
<td>70</td>
<td>77</td>
</tr>
<tr>
<td>CP39236H</td>
<td>8.8</td>
<td>3.9</td>
<td>1.95</td>
<td>18.7</td>
<td>20.9</td>
<td>70</td>
<td>77</td>
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<tr>
<td>CP39234030H</td>
<td>14.9</td>
<td>3.9</td>
<td>3.38</td>
<td>31.0</td>
<td>35.9</td>
<td>68</td>
<td>75</td>
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<td>CP39301536H</td>
<td>7.6</td>
<td>3.9</td>
<td>1.73</td>
<td>16.5</td>
<td>18.1</td>
<td>70</td>
<td>77</td>
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<tr>
<td>CP393365H#</td>
<td>15.7</td>
<td>3.9</td>
<td>3.50</td>
<td>35.2</td>
<td>39.0</td>
<td>70</td>
<td>77</td>
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<tr>
<td>CP394044365#</td>
<td>32.5</td>
<td>3.9</td>
<td>6.95±5%</td>
<td>71.8</td>
<td>80.0</td>
<td>70</td>
<td>77</td>
</tr>
</tbody>
</table>

Notes:
1. Maximum voltage at ΔT max and T,=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,=max, V,=max, and ΔT=0°C
5. Maximum temperature difference occurs at I,=max, V,=max, and Q=0W (ΔT max measured in a vacuum at 1.3 Pa)
6. Designed with arcTEC™ structure.
**SPECIFICATIONS**

<table>
<thead>
<tr>
<th>parameter</th>
<th>conditions/description</th>
<th>min</th>
<th>typ</th>
<th>max</th>
<th>units</th>
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</thead>
<tbody>
<tr>
<td>solder melting temperature</td>
<td>connection between thermoelectric pairs</td>
<td>235</td>
<td></td>
<td></td>
<td>°C</td>
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<td>assembly compression</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td>MPa</td>
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<td>RoHS</td>
<td></td>
<td>yes</td>
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</tr>
</tbody>
</table>

**MECHANICAL DRAWING**

**MATERIAL**

- Ceramic plate: 96% Al₂O₃
- Wire leads: 22 AWG tin
- Sealer: silicon rubber 703 RTV (between cold and hot side plates)
- Joint cover: silicon rubber 703 RTV
- Marking: P/N & S/N printed on cold side surface

**MECHANICAL DRAWING**

**MODEL NO.**

<table>
<thead>
<tr>
<th>MODEL NO.</th>
<th>LENGTH (mm)</th>
<th>WIDTH (mm)</th>
<th>THICKNESS (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CP39136H</td>
<td>15 ±0.3</td>
<td>15 ±0.3</td>
<td>3.6 ±0.025</td>
</tr>
<tr>
<td>CP39236H</td>
<td>20 ±0.3</td>
<td>20 ±0.3</td>
<td>3.6 ±0.025</td>
</tr>
<tr>
<td>CP39234030H</td>
<td>23 ±0.3</td>
<td>40 ±0.3</td>
<td>3.0 ±0.05</td>
</tr>
<tr>
<td>CP39301536H</td>
<td>30 ±0.3</td>
<td>15 ±0.3</td>
<td>3.6 ±0.025</td>
</tr>
<tr>
<td>CP393365H</td>
<td>30 ±0.3</td>
<td>30 ±0.3</td>
<td>3.65 ±0.025</td>
</tr>
<tr>
<td>CP394044365</td>
<td>44 ±0.3</td>
<td>40.5 ±0.3</td>
<td>3.65 ±0.1</td>
</tr>
</tbody>
</table>
CP39136H PERFORMANCE (Th=27°C)

CP39136H PERFORMANCE (Th=50°C)
CP39236H PERFORMANCE (Th=27°C)

CP39236H PERFORMANCE (Th=50°C)
CP39234030H PERFORMANCE (Th=27°C)

ΔT=Th-Tc (°C)

Input Voltage (V)

Heat Pumped, Q (W)

CP39234030H PERFORMANCE (Th=50°C)

ΔT=Th-Tc (°C)

Input Voltage (V)
CP39301536H PERFORMANCE (Th=27°C)

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

CP39301536H PERFORMANCE (Th=50°C)

![Graph showing performance at Th=50°C]
CP393365H PERFORMANCE (Th=27°C)

CP393365H PERFORMANCE (Th=50°C)
CP394044365 PERFORMANCE (Th=27°C)

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

CP394044365 PERFORMANCE (Th=50°C)

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