SERIES: CP39H-2 | DESCRIPTION: PELTIER MODULE

FEATURES
- arcTEC™ structure
- solid state device
- 2-stage cooler
- precise temperature control
- silent operation

MODEL

<table>
<thead>
<tr>
<th>MODEL</th>
<th>input voltage(^1) max (Vdc)</th>
<th>input current(^2) max (A)</th>
<th>internal resistance(^2) typ (Ω±10%)</th>
<th>output Q(^\text{max}) (\Delta T = 27^\circ\text{C}) (W)</th>
<th>output Q(^\text{max}) (\Delta T = 50^\circ\text{C}) (W)</th>
<th>output (\Delta T \text{max})(^5) (\Delta T = 27^\circ\text{C}) (°C)</th>
<th>output (\Delta T \text{max})(^5) (\Delta T = 50^\circ\text{C}) (°C)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CP39255074H-2</td>
<td>12.8</td>
<td>3.9</td>
<td>3.07</td>
<td>18</td>
<td>19.8</td>
<td>82</td>
<td>92</td>
</tr>
</tbody>
</table>

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

<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></td>
<td>1</td>
<td>1</td>
<td>MPa</td>
</tr>
<tr>
<td>hot side plate</td>
<td></td>
<td></td>
<td>100</td>
<td>100</td>
<td>°C</td>
</tr>
<tr>
<td>RoHS</td>
<td></td>
<td></td>
<td>yes</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**MECHANICAL DRAWING**

units: mm

---

**MATERIAL**

- ceramic plate: 96% Al₂O₃
- wire leads: 20 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

---

---

---
PERFORMANCE (Th=27°C)

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

PERFORMANCE (Th=50°C)

![Graph showing performance at Th=50°C](image)
CUI DEVICES | SERIES: CP39H-2 | DESCRIPTION: PELTIER MODULE

CUI Devices offers a one (1) year limited warranty. Complete warranty information is listed on our website.

CUI Devices reserves the right to make changes to the product at any time without notice. Information provided by CUI Devices is believed to be accurate and reliable. However, no responsibility is assumed by CUI Devices for its use, nor for any infringements of patents or other rights of third parties which may result from its use.

CUI Devices products are not authorized or warranted for use as critical components in equipment that requires an extremely high level of reliability. A critical component is any component of a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.

cuidevices.com

REVISION HISTORY

<table>
<thead>
<tr>
<th>rev.</th>
<th>description</th>
<th>date</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0</td>
<td>initial release</td>
<td>05/21/2018</td>
</tr>
<tr>
<td>1.01</td>
<td>brand update</td>
<td>10/29/2019</td>
</tr>
<tr>
<td>1.02</td>
<td>logo, datasheet style update</td>
<td>08/05/2022</td>
</tr>
</tbody>
</table>

The revision history provided is for informational purposes only and is believed to be accurate.