FEATURES

- arcTEC™ structure
- solid state device
- precise temperature control
- silent operation

**MODEL**

<table>
<thead>
<tr>
<th>MODEL</th>
<th>input voltage(^\text{max}) (Vdc)</th>
<th>input current(^\text{max}) (A)</th>
<th>internal resistance(^\text{typ}) (Ω ±10%)</th>
<th>output (Q_{\text{max}}) (T_h=27°C) (W)</th>
<th>output (\Delta T_{\text{max}}) (T_h=50°C) (°C)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CP105433H</td>
<td>15.4</td>
<td>10.5</td>
<td>1.15</td>
<td>93</td>
<td>68</td>
</tr>
<tr>
<td>CP1054033H</td>
<td>24.1</td>
<td>10.5</td>
<td>1.83</td>
<td>148</td>
<td>75</td>
</tr>
</tbody>
</table>

Notes:
1. Maximum voltage at \(\Delta T_{\text{max}}\) and \(T_h=27°C\)
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 \(\Delta T=0°C\)
5. Maximum temperature difference occurs at \(I_{\text{max}}, V_{\text{max}}\) and 0+0W (\(\Delta T_{\text{max}}\) 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>
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<tr>
<td>assembly compression</td>
<td></td>
<td>1</td>
<td>MPa</td>
<td></td>
<td></td>
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<tr>
<td>hot side plate</td>
<td></td>
<td>100</td>
<td>°C</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RoHS</td>
<td></td>
<td>yes</td>
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</tbody>
</table>

**MECHANICAL DRAWING**

- **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

- **MODEL NO.**
  - CP105433H: LENGTH [mm] - 40 ±0.3, WIDTH [mm] - 40 ±0.3, THICKNESS [mm] - 3.3 ±0.1
  - CP1054033H: LENGTH [mm] - 40 ±0.3, WIDTH [mm] - 40 ±0.3, THICKNESS [mm] - 3.3 ±0.1

- **Units**: mm
CP105433H PERFORMANCE (Th=27°C)

**Input Voltage (V) vs Heat Pumped, Q (W)**

ΔT=Th-Tc (°C)

CP105433H PERFORMANCE (Th=50°C)

**Input Voltage (V) vs Heat Pumped, Q (W)**

ΔT=Th-Tc (°C)
CP1054033H PERFORMANCE (Th=27°C)

Input Voltage (V) vs. Heat Pumped, Q (W) for different current values (A) and temperature differences (°C).

CP1054033H PERFORMANCE (Th=50°C)

Similar graph as above, indicating performance characteristics for a higher temperature setting.
**CUI DEVICES | SERIES: CP105H | DESCRIPTION: PELTIER MODULE**

### REVISION HISTORY

<table>
<thead>
<tr>
<th>rev.</th>
<th>description</th>
<th>date</th>
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</thead>
<tbody>
<tr>
<td>1.0</td>
<td>initial release</td>
<td>05/21/2018</td>
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<tr>
<td>1.01</td>
<td>brand update</td>
<td>10/28/2019</td>
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<tr>
<td>1.02</td>
<td>added model CP1054033H</td>
<td>11/09/2020</td>
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<tr>
<td>1.03</td>
<td>logo, datasheet style update</td>
<td>08/05/2022</td>
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The revision history provided is for informational purposes only and is believed to be accurate.

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