SERIES: CP60H | 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

RoHS

MODEL | input voltage\(^1\) | input current\(^2\) | internal resistance\(^3\) | output Qmax\(^4\) | output ΔTmax\(^5\)
|---|---|---|---|---|---
| CP60131H | 3.8 (Vdc) | 6.0 (A) | 0.45 (Ω±10%) | 13 (W) | 14.3 (W) | 70 (°C) | 77 (°C)
| CP60139H | 2.1 (Vdc) | 6.0 (A) | 0.30 (Ω±10%) | 7.4 (W) | 8.2 (W) | 70 (°C) | 77 (°C)
| CP60231H | 8.8 (Vdc) | 6.0 (A) | 1.05 | 29.7 (W) | 32.7 (W) | 70 (°C) | 77 (°C)
| CP60239H | 3.8 (Vdc) | 6.0 (A) | 0.55 (Ω±10%) | 13.6 (W) | 14.9 (W) | 70 (°C) | 77 (°C)
| CP602040395H\(^6\) | 7.6 (Vdc) | 6.0 (A) | 1.09 | 27.5 (W) | 30.2 (W) | 70 (°C) | 77 (°C)
| CP60301233H | 5.6 (Vdc) | 6.0 (A) | 0.76 | 19.7 (W) | 21.7 (W) | 70 (°C) | 77 (°C)
| CP60301531H | 7.6 (Vdc) | 6.0 (A) | 0.93 | 26.3 (W) | 28.9 (W) | 70 (°C) | 77 (°C)
| CP603315H\(^6\) | 15.7 (Vdc) | 6.0 (A) | 1.90 | 53.1 (W) | 59.1 (W) | 70 (°C) | 77 (°C)
| CP6030395\(^6\) | 11.8 (Vdc) | 6.0 (A) | 1.65 | 41.5 (W) | 45.6 (W) | 70 (°C) | 77 (°C)
| CP603395H\(^6\) | 8.8 (Vdc) | 6.0 (A) | 1.25 | 31.1 (W) | 34.2 (W) | 70 (°C) | 77 (°C)
| CP604020395H\(^6\) | 7.6 (Vdc) | 6.0 (A) | 1.09 | 27.5 (W) | 30.2 (W) | 70 (°C) | 77 (°C)
| CP60433H\(^6\) | 19.5 (Vdc) | 6.0 (A) | 2.54 | 67.6 (W) | 74.3 (W) | 68 (°C) | 77 (°C)
| CP604395H\(^6\) | 15.7 (Vdc) | 6.0 (A) | 2.2 | 55.6 (W) | 61.0 (W) | 70 (°C) | 77 (°C)
| CP604040\(^6\) | 24.1 (Vdc) | 6.0 (A) | 3.21 | 83.5 (W) | 91.9 (W) | 68 (°C) | 75 (°C)
| CP60546241\(^6\) | 41.3 (Vdc) | 6.0 (A) | 5.78 | 147 (W) | 161 (W) | 70 (°C) | 77 (°C)
| CP6055354\(^6\) | 35.4 (Vdc) | 6.0 (A) | 4.95 | 126 (W) | 138 (W) | 70 (°C) | 77 (°C)
| CP60555542\(^6\) | 29.8 (Vdc) | 6.0 (A) | 4.15 | 106 (W) | 116 (W) | 70 (°C) | 77 (°C)
| CP604060395\(^6\) | 23.6 (Vdc) | 6.0 (A) | 3.3 | 80.2 (W) | 88.2 (W) | 70 (°C) | 77 (°C)

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\(_{max}\), 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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<tbody>
<tr>
<td>Solder melting temperature</td>
<td>Connection between thermoelectric pairs</td>
<td>235</td>
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<td>Assembly compression</td>
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</table>

MECHANICAL DRAWING

![Mechanical Drawing](image)

**MATERIAL**
- Ceramic plate: 96% Al₂O₃
- Wire leads (CP60131H, CP60231H, CP60301233H, CP60301531H, CP603315H): 22 AWG tin
- Wire leads (all other models): 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.**

<table>
<thead>
<tr>
<th>Model No.</th>
<th>Length (mm)</th>
<th>Width (mm)</th>
<th>Thickness (mm)</th>
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</thead>
<tbody>
<tr>
<td>CP60131H</td>
<td>15 ±0.3</td>
<td>15 ±0.3</td>
<td>3.1 ±0.025</td>
</tr>
<tr>
<td>CP60139H</td>
<td>15 ±0.3</td>
<td>15 ±0.3</td>
<td>3.9 ±0.025</td>
</tr>
<tr>
<td>CP60231H</td>
<td>20 ±0.3</td>
<td>20 ±0.3</td>
<td>3.1 ±0.025</td>
</tr>
<tr>
<td>CP60239H</td>
<td>20 ±0.3</td>
<td>20 ±0.3</td>
<td>3.9 ±0.025</td>
</tr>
<tr>
<td>CP602040395H</td>
<td>20 ±0.3</td>
<td>40 ±0.3</td>
<td>3.95 ±0.025</td>
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<tr>
<td>CP60301233H</td>
<td>30 ±0.1</td>
<td>12 ±0.1</td>
<td>3.3 ±0.1</td>
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<tr>
<td>CP60301531H</td>
<td>30 ±0.3</td>
<td>15 ±0.3</td>
<td>3.1 ±0.025</td>
</tr>
<tr>
<td>CP603315H</td>
<td>30 ±0.3</td>
<td>30 ±0.3</td>
<td>3.15 ±0.025</td>
</tr>
<tr>
<td>CP603395</td>
<td>30 ±0.3</td>
<td>30 ±0.3</td>
<td>3.95 ±0.025</td>
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<tr>
<td>CP60355542</td>
<td>55 ±0.3</td>
<td>55 ±0.3</td>
<td>4.2 ±0.1</td>
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<tr>
<td>CP604060395</td>
<td>40 ±0.3</td>
<td>60 ±0.3</td>
<td>3.95 ±0.025</td>
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</table>
CP60131H PERFORMANCE (Th=27°C)

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

CP60131H PERFORMANCE (Th=50°C)

![Graph showing performance at Th=50°C]
CP60139H PERFORMANCE (Th=27°C)

Input Voltage (V) vs. Heat Pumped, Q (W) for various currents and input voltages.

CP60139H PERFORMANCE (Th=50°C)

Input Voltage (V) vs. Heat Pumped, Q (W) for various currents and input voltages.
CP60231H PERFORMANCE (Th=27°C)

CP60231H PERFORMANCE (Th=50°C)
CP60239H PERFORMANCE (Th=27°C)

![Graph showing performance data for CP60239H at Th=27°C.](image)

CP60239H PERFORMANCE (Th=50°C)

![Graph showing performance data for CP60239H at Th=50°C.](image)
**CP602040395H PERFORMANCE (Th=27°C)**

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

**CP602040395H PERFORMANCE (Th=50°C)**

![Graph showing performance at Th=50°C](image)
CP60301233H PERFORMANCE (Th=27°C)

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

CP60301233H PERFORMANCE (Th=50°C)

Input Voltage (V) vs. Heat Pumped, Q (W)
CP60301531H PERFORMANCE (Th=27°C)

CP60301531H PERFORMANCE (Th=50°C)
CP603315H PERFORMANCE (Th=27°C)

CP603315H PERFORMANCE (Th=50°C)
CP6030395 PERFORMANCE (Th=27°C)

CP6030395 PERFORMANCE (Th=50°C)
CP603395H PERFORMANCE (Th=27°C)

Additional Resources:  
- Product Page  
- 3D Model
**CP604020395H PERFORMANCE (Th=27°C)**

![Graph for CP604020395H at Th=27°C]

**CP604020395H PERFORMANCE (Th=50°C)**

![Graph for CP604020395H at Th=50°C]
CP60433H PERFORMANCE (Th=27°C)

CP60433H PERFORMANCE (Th=50°C)
CP604395H PERFORMANCE (Th=27°C)

CP604395H PERFORMANCE (Th=50°C)
CP604040 PERFORMANCE (Th=27°C)

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

CP604040 PERFORMANCE (Th=50°C)

![Graph showing performance at Th=50°C]
CP60546241 PERFORMANCE (Th=27°C)

CP60546241 PERFORMANCE (Th=50°C)
CP6055354 PERFORMANCE (Th=27°C)

CP6055354 PERFORMANCE (Th=50°C)
CP60555542 PERFORMANCE (Th=27°C)

CP60555542 PERFORMANCE (Th=50°C)
CP604060395 PERFORMANCE (Th=27°C)

CP604060395 PERFORMANCE (Th=50°C)
## REVISION HISTORY

<table>
<thead>
<tr>
<th>rev.</th>
<th>description</th>
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<tbody>
<tr>
<td>1.0</td>
<td>initial release</td>
<td>09/08/2016</td>
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<tr>
<td>1.01</td>
<td>updated datasheet</td>
<td>09/25/2017</td>
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<td>1.02</td>
<td>added new models</td>
<td>05/21/2018</td>
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<td>1.03</td>
<td>added models CP604060395, CP60555542, CP6030395, CP604040, CP6055354, CP60546241, brand update</td>
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The revision history provided is for informational purposes only and is believed to be accurate.