Peltier Cooler - 150W

Feature
Transducer Function: Thermoelectric modules

Specifications

<table>
<thead>
<tr>
<th>Parameters</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internal resistance</td>
<td>0.85Ω ± 10% Note-1</td>
</tr>
<tr>
<td>Imax.</td>
<td>15.4A Note-2</td>
</tr>
<tr>
<td>Vmax.</td>
<td>15.7V Note-3</td>
</tr>
<tr>
<td>- Th=25°C</td>
<td>- Note-4</td>
</tr>
<tr>
<td>Qc max.</td>
<td>150W Note-4</td>
</tr>
<tr>
<td>ΔTmax.</td>
<td>68°C Note-5</td>
</tr>
<tr>
<td>Solder Melting Point</td>
<td>138°C Note-6</td>
</tr>
<tr>
<td>Max. Compress</td>
<td>1MPa Note-7</td>
</tr>
<tr>
<td>Operating Temperature</td>
<td>-90°C to +110°C</td>
</tr>
<tr>
<td>External Depth</td>
<td>3.8mm</td>
</tr>
<tr>
<td>External Length / Height</td>
<td>30mm</td>
</tr>
</tbody>
</table>

Note-1 Measured by AC 4-terminal method at 25°C
Note-2 Max. current at ΔTmax
Note-3 Max. voltage at ΔTmax
Note-4 Max. cooling capacity at Imax., Vmax. and ΔT=0°C
Note-5 Max. temperature difference at Imax., Vmax. and Q=0W
(Maximum parameters are measured in a vacuum 1.3P)
Note-6 The solder melting point of thermoelectric module
Note-7 Recommended Max. compression (not destruction limit)

Recommendations

- High cooling capacity from a small surface and long lifetime in power cycling applications with change of current polarity
- Operation temperature up to 90°C for long lifetime; up to 110°C for short periods
- With operation current close to 0.5 I max. extremely high COP (coefficient of performance possible)
- Preferable application; high cooling capacity at high temperatures / cycling
- Epoxy sealed for moisture protection
Peltier Cooler - 150W

Outline Drawing

Dimensions: Millimetres

Hot Side
Cold Side

Black (-)  Red (+)

100 ±5
40
40
3.8 ±0.1
7 ±3

Dimensions: Millimetres
Peltier Cooler - 150W

2-3 Performance Graph (298K)

- $T_h (K) = 298.0$
- $I_{max.} (\text{A}) = 15.4$
- $dT_{max.} (^\circ\text{C}) = 68$
- $U_{max.} (\text{V}) = 15.8$
- $P_{c,max.} (\text{W}) = 149.0$
- $dT = T_h - T_c$

$T_h = 25^\circ\text{C}$
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Part Number Table

<table>
<thead>
<tr>
<th>Description</th>
<th>Part Number</th>
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</thead>
<tbody>
<tr>
<td>Peltier Cooler, 150W</td>
<td>MCHPE-127-14-06-E</td>
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