

## Feature

Transducer Function: Thermoelectric modules

## Specifications

| Parameters               |                      | Remarks |
|--------------------------|----------------------|---------|
| Internal resistance      | $2.4\Omega \pm 10\%$ | Note-1  |
| I <sub>max.</sub>        | 8.5A                 | Note-2  |
| V <sub>max.</sub>        | 24.6V                | Note-3  |
|                          | Th=27°C              |         |
| Q <sub>max.</sub>        | 121W                 | Note-4  |
| ΔT <sub>max.</sub>       | 71°C                 | Note-5  |
| Solder Melting Point     | 138°C                | Note-6  |
| Max. Compress            | 1MPa                 | Note-7  |
| Operating Temperature    | -90°C to +100°C      |         |
| External Depth           | 3.8mm                |         |
| External Length / Height | 40mm                 |         |

**Note-1** Measured by AC 4-terminal method at 25°C

**Note-2** Max. current at ΔT<sub>max</sub>

**Note-3** Max. voltage at ΔT<sub>max</sub>

**Note-4** Max. cooling capacity at I<sub>max.</sub>, V<sub>max.</sub> and ΔT=0°C

**Note-5** Max. temperature difference at I<sub>max.</sub>, V<sub>max.</sub> and Q=0W  
(Max. parameters are measured in a vacuum 1.3P)

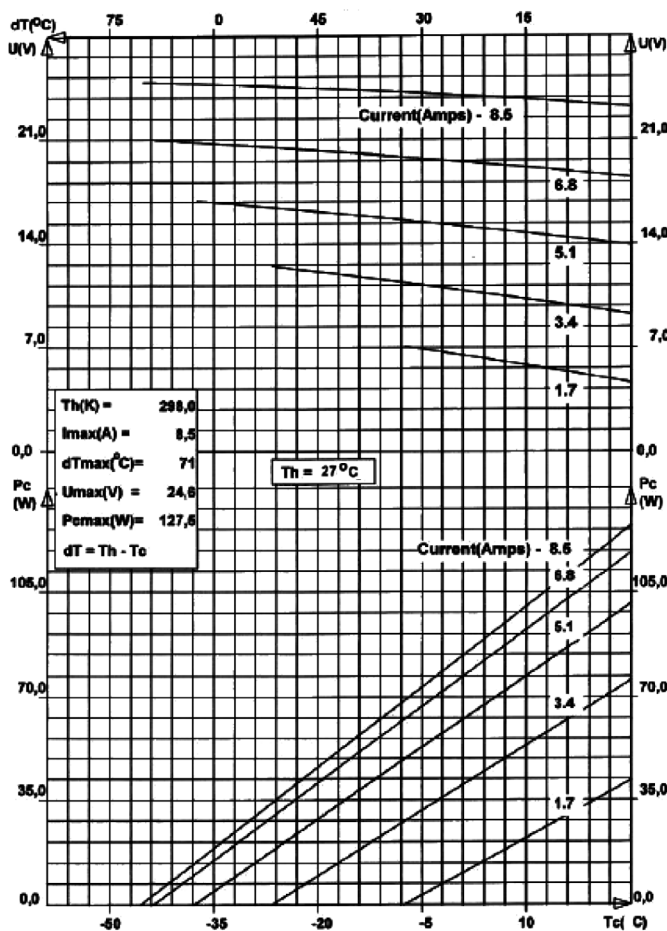
**Note-6** The solder melting point of thermoelectric module

**Note-7** Recommended Max. compression (not destruction limit)

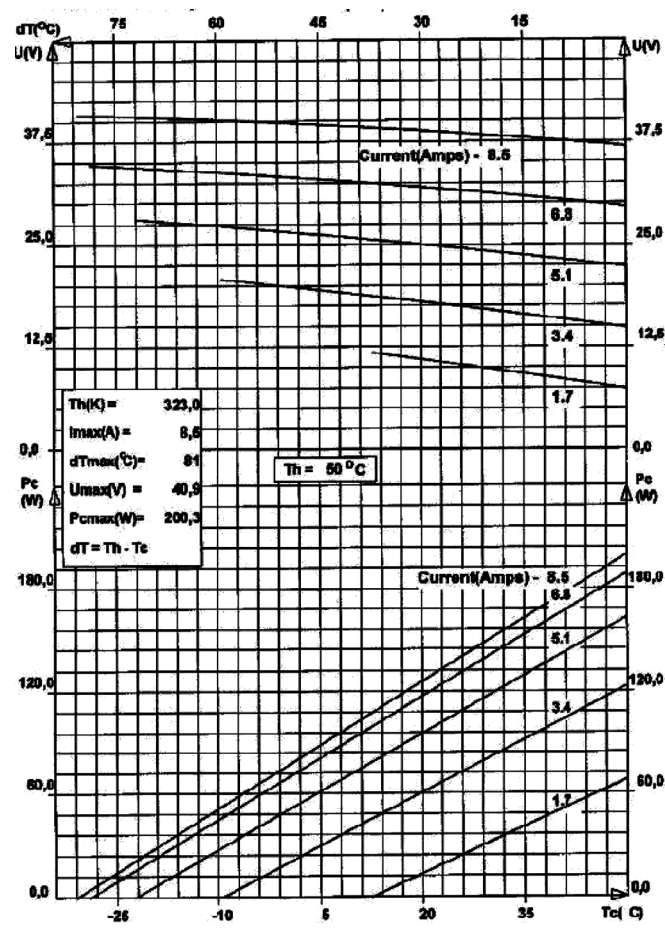
## Recommendations

- High cooling capacity from a small surface and long lifetime in power cycling applications with change of current polarity
- With operation current close to 0.5 I<sub>max</sub> extremely high COP (coefficient of performance possible)
- Preferable application; high cooling capacity at high temperatures / cycling

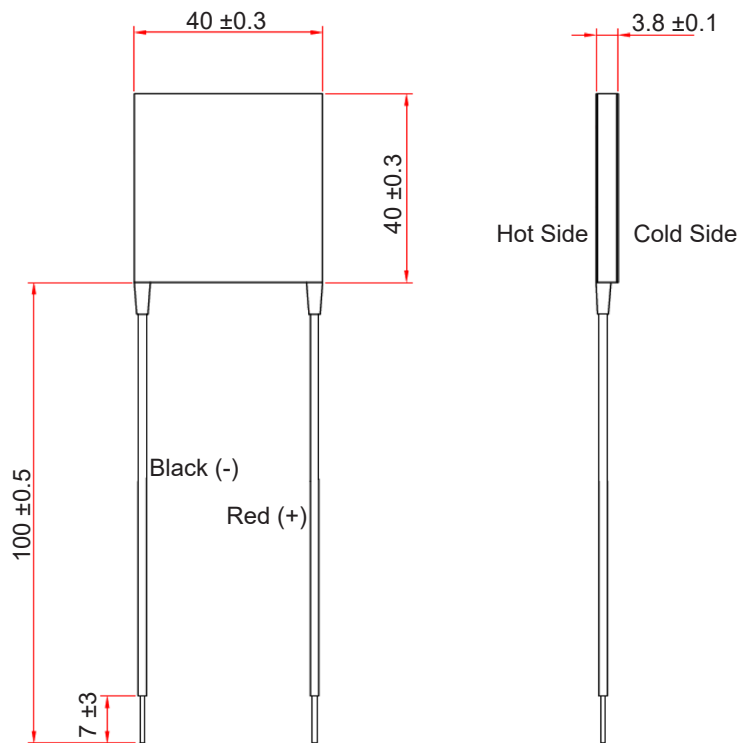
Performance Graph (298K)



Performance Graph (323K)



## Outline Drawing



Dimensions : Millimetres

## Part Number Table

| Description          | Part Number       |
|----------------------|-------------------|
| Peltier Cooler, 121W | MCHPE-200-14-11-E |

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