

# SPECIFICATION

Product : Thermoelectric module

Part Number : PE-031-10-13

## 1 . Scope

- 1—1 This specification is applied to Multicomp thermoelectric modules
- 1—2 Revision of these specifications is carried out after consent.

## 2 . Specification

### 2 - 1 Parameters

| Parameters                 |                         | Remarks |
|----------------------------|-------------------------|---------|
| Internal resistance        | 0.95 $\Omega$ $\pm$ 10% | Note-1  |
| I <sub>max.</sub>          | 3.9 A                   | Note-2  |
| V <sub>max.</sub>          | 3.8 V                   | Note-3  |
|                            | Th=25°C                 |         |
| Q <sub>max.</sub>          | 8.5 W                   | Note-4  |
| $\Delta$ T <sub>max.</sub> | 72°C                    | Note-5  |
| solder melting point       | 138 °C                  | Note-6  |
| Maximum. compress.         | 1MPa                    | Note-7  |

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

Note-2 Maximum current at  $\Delta$ T<sub>max.</sub>

Note-3 Maximum voltage at  $\Delta$ T<sub>max.</sub>

Note-4 Maximum cooling capacity at I<sub>max.</sub>,V<sub>max.</sub> and  $\Delta$ T = 0°C.

Note-5 Maximum temperature difference at I<sub>max.</sub>,V<sub>max.</sub> and Q = 0W.

( Maximum parameters are measured in a vacuum 1.3P )

Note-6 The solder melting point of thermoelectric module

Note-7 Recommended maximum compression (not destruction limit)

## 2 -2 Recommendations:

- maximum temperature for short time: 110 °C
- operation temperature up to 90°C for long lifetime;
- good reliability in ON-OFF mode
- recommended operation current not higher than 0.7 of  $I_{max}$

## 2 - 3 Performance Graph

