# **SPECIFICATION**

Product: Thermoelectric module

Part Number: HPE-288-10-05

#### 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  | $3.10~\Omega~\pm~10\%$ |  | Note-1  |
| Imax.                | 9.0 A                  |  | Note-2  |
| Vmax.                | 35.9 V                 |  | Note-3  |
|                      | Th=25°C                |  |         |
| Qmax.                | 196.0 W                |  | Note-4  |
| ⊿Tmax.               | 68°C                   |  | Note-5  |
| solder melting point | 138 ℃                  |  | Note-6  |
| Maximum. compress.   | 1MPa                   |  | Note-7  |

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

Note-2 Maximum current at ⊿Tmax.

Note-3 Maximum voltage at ⊿Tmax.

Note-4 Maximum cooling capacity at Imax., Vmax. and  $\Delta T = 0^{\circ}C$ .

Note-5 Maximum 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

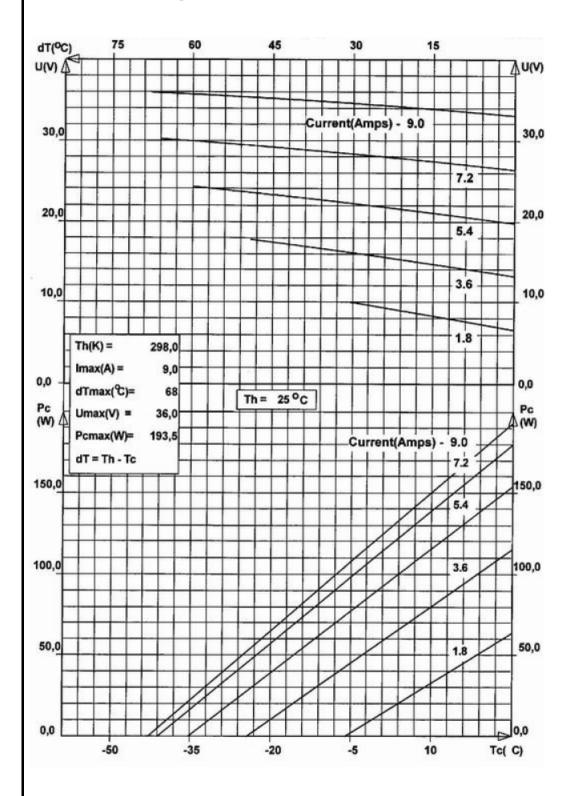
Note-7 Recommended maximum compression (not destruction limit)



#### 2 -2 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 degC for short periods
- with operation current close to 0.5 Imax extremely high COP (coefficient of performance possible)
- preferable application; high cooling capacity at high temperatures / cycling

## 2 - 3 Performance Graph (298K)



### 2 - 4 Performance Graph (323K)

