

# SPECIFICATION

Product : Thermoelectric module

Part Number : HPE-128-10-05

## 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	1.40 $\Omega$ $\pm$ 10%	Note-1
I <sub>max.</sub>	9.0 A	Note-2
V <sub>max.</sub>	15.8 V	Note-3
	Th=25°C	
Q <sub>max.</sub>	88.0 W	Note-4
$\Delta$ T <sub>max.</sub>	68°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 )

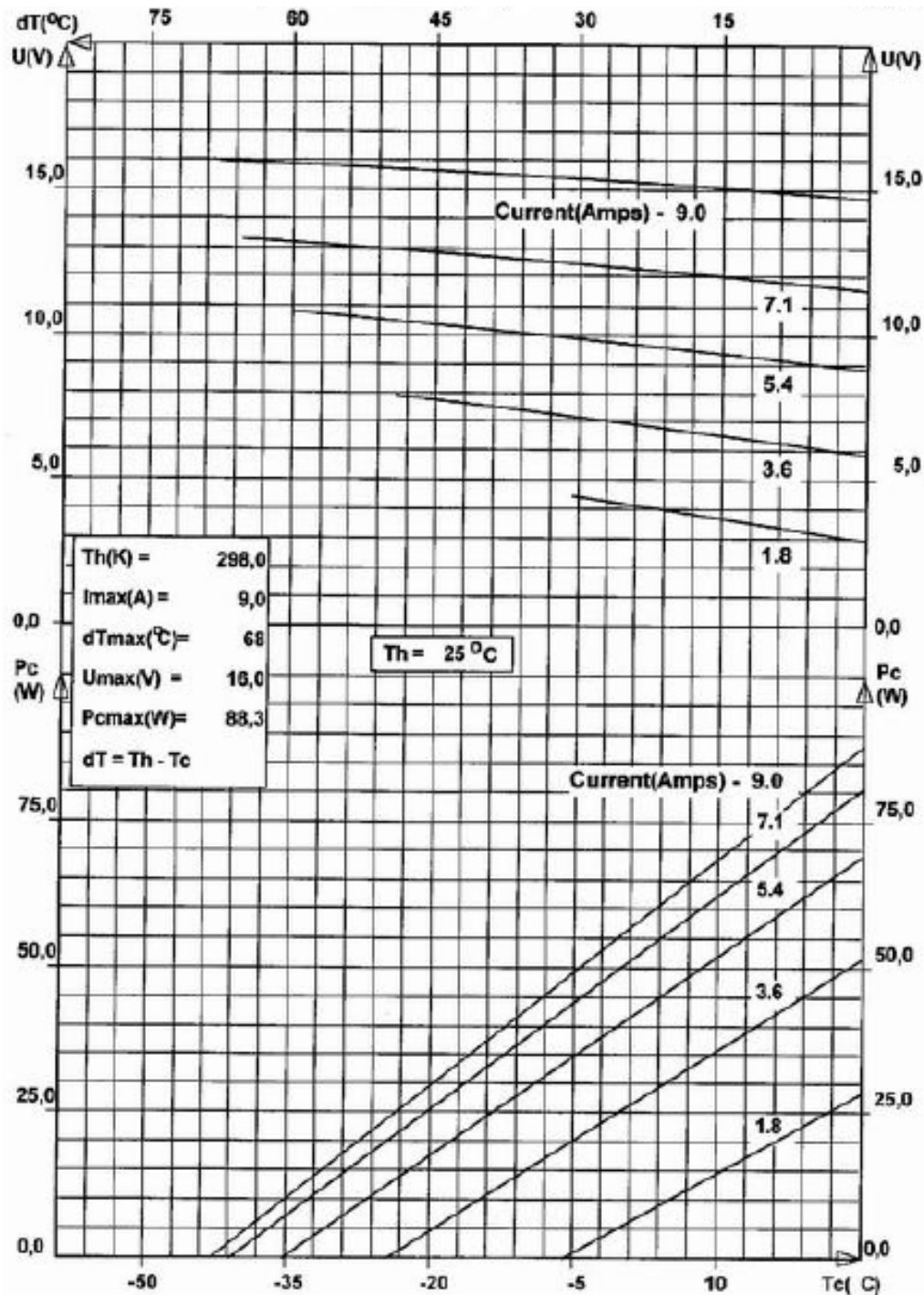
Note-6 The solder melting point of thermoelectric module

Note-7 Recommended maximum compression (not destruction limit)

2 -2 Recommendations:

- 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 I<sub>max</sub> 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)

