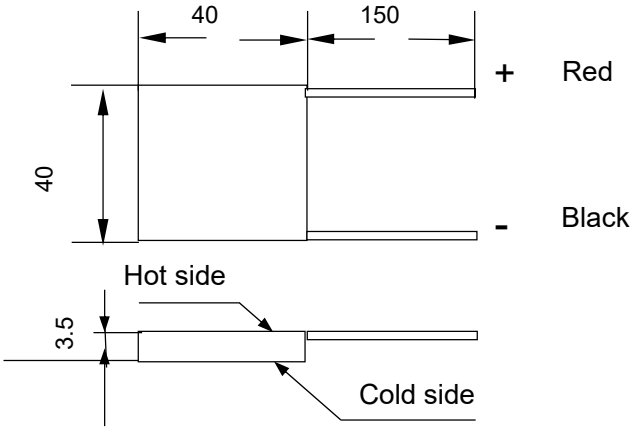
# TEC1-12708 Technical Specifications for Semiconductor Refrigeration Chips

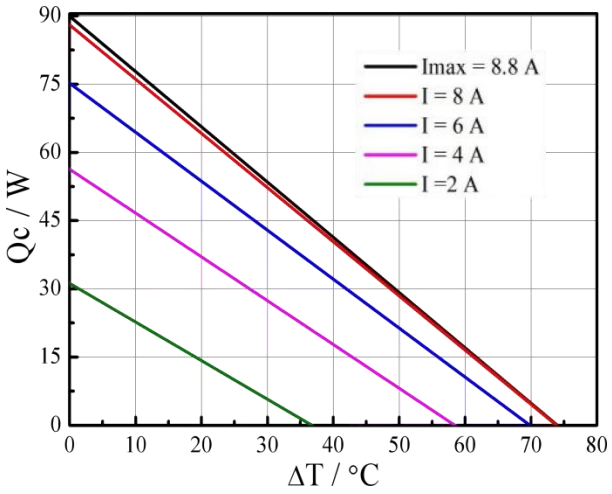
## 1. Overall dimensions



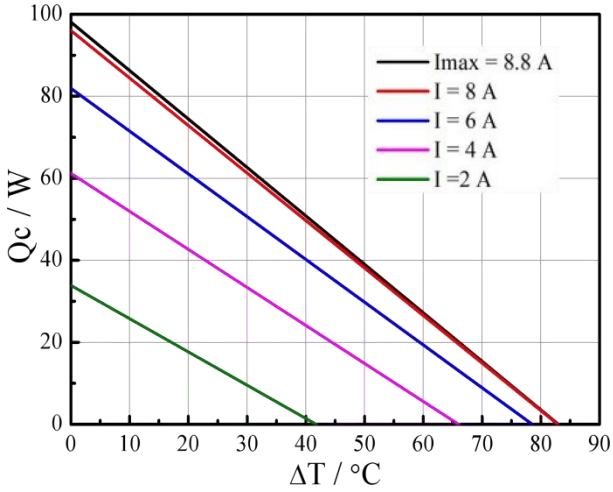

## 2. Basic electrical performance indicators

| Project | Characteristic value | | Condition |
|---|---|---|---|
| Maximum current | Imax | 8.0A | Th=25°C |
| Maximum voltage | Vmax | 15.4V | Th=25°C |
| Maximum temperature difference | ΔTmax | ≥66°C | Qc=0, Th=25°C |
| Maximum cooling power | Qcmax | 71.2W | ΔT=0°C, Th=25°C |
| Temperature range | TR | -50~150°C | |
| Product internal resistance | R | 1.4±0.1Ω | ΔT=0°C, Th=25°C |
| Power cord | 20AWG silicone soft wire, length 150mm;<br>or as per customer requirements | | |
| Solder specifications | 227°C Tin | | |
| Sealing requirements | White silicone sealant 704 | | |
| Packaging requirements | Foam box shockproof + corrugated box | | |
| Printing requirements | Cold printing | | |

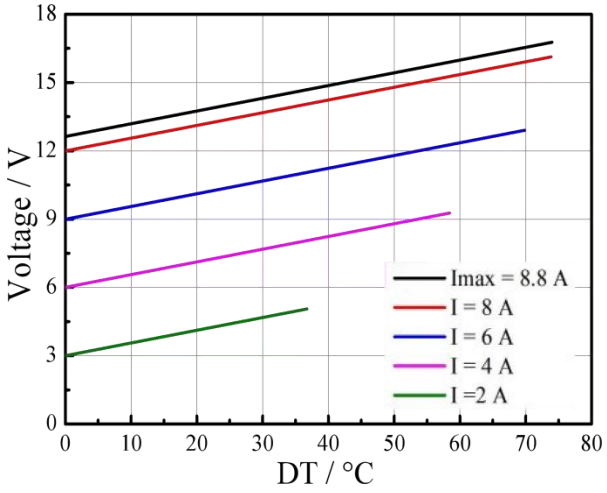
**Performance curve at hot surface temperature Th=27°C**

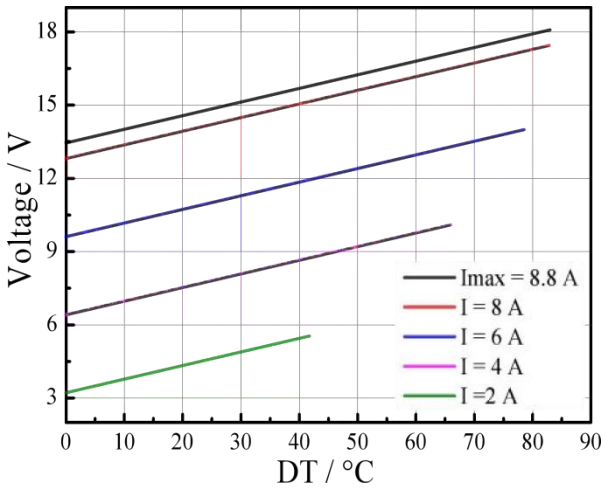



**Performance curve at hot surface temperature Th=50°C**

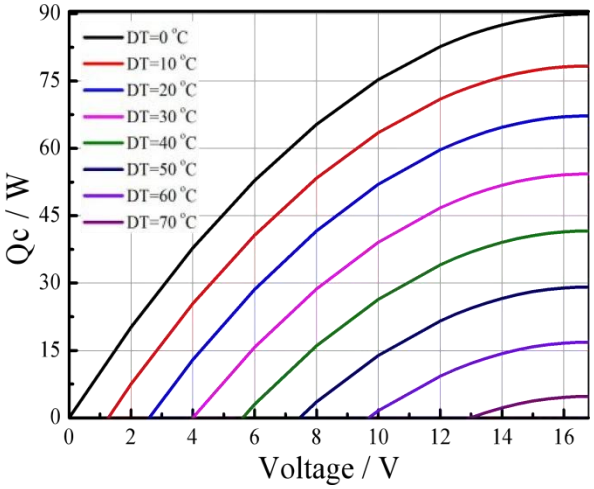


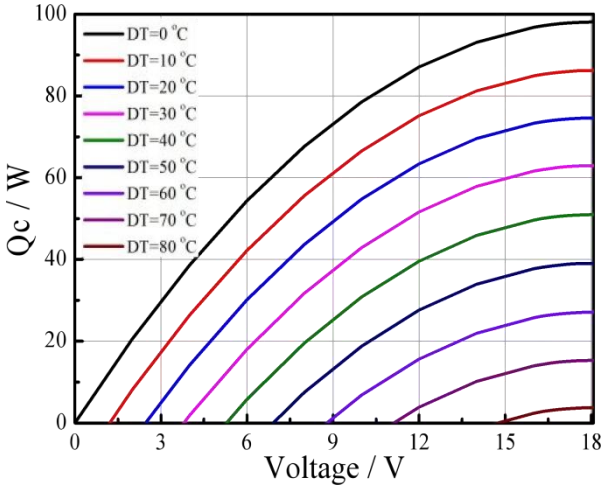

Performance diagram of cooling power changes with temperature difference under different currents Qc=f(DT)




Performance diagram of voltage changing with temperature difference under different currents V=f(DT)

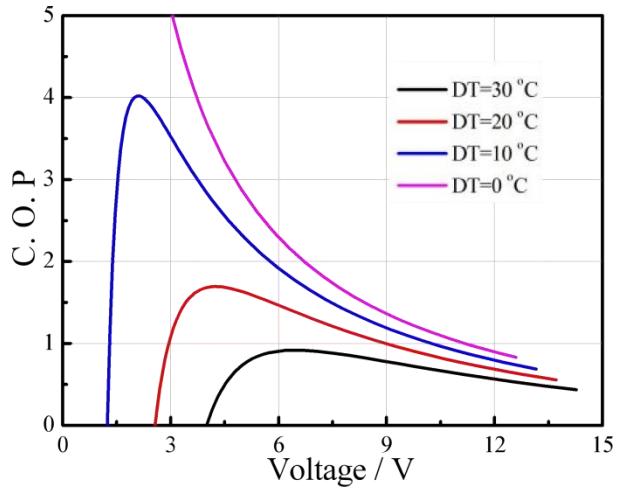


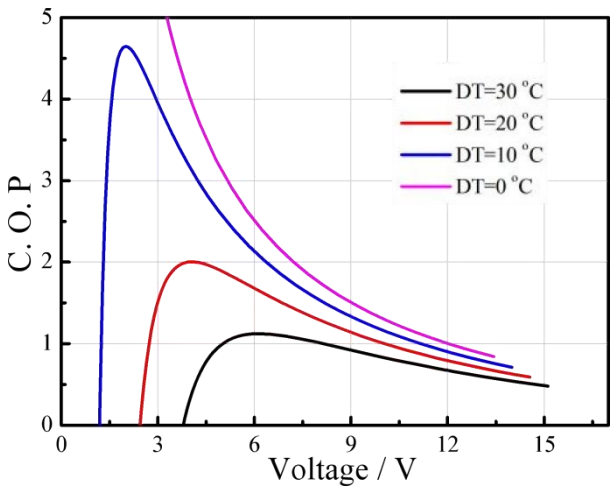

Performance diagram of cooling capacity changes with voltage under different temperature differences Qc=f(V)

## TEC1-12708 Refrigeration Device Relationship Curve

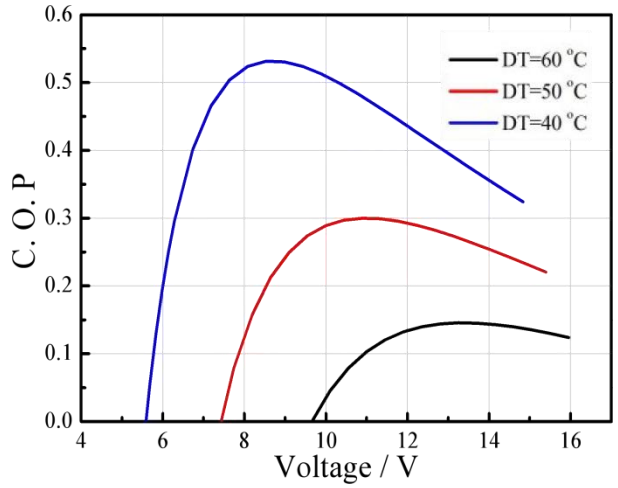
**Performance curve at hot surface temperature Th=27°C**

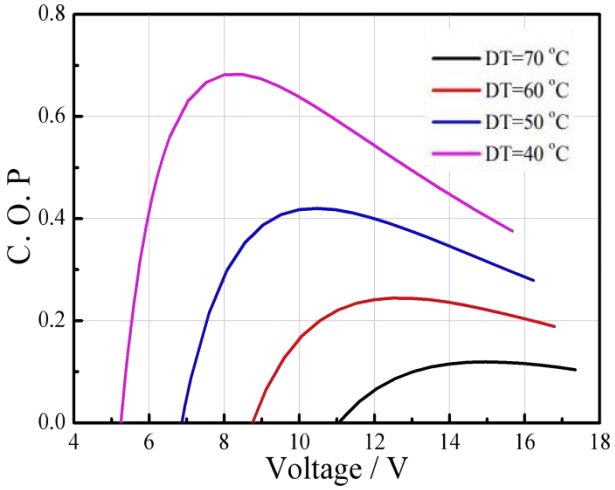



**Performance curve at hot surface temperature Th=50°C**




Performance diagram of temperature difference range 0~30°C. Cooling coefficient changes with voltage COP=f(V)




Performance diagram of temperature difference range 40~60/70°C. Cooling coefficient changes with voltage COP=f(V)