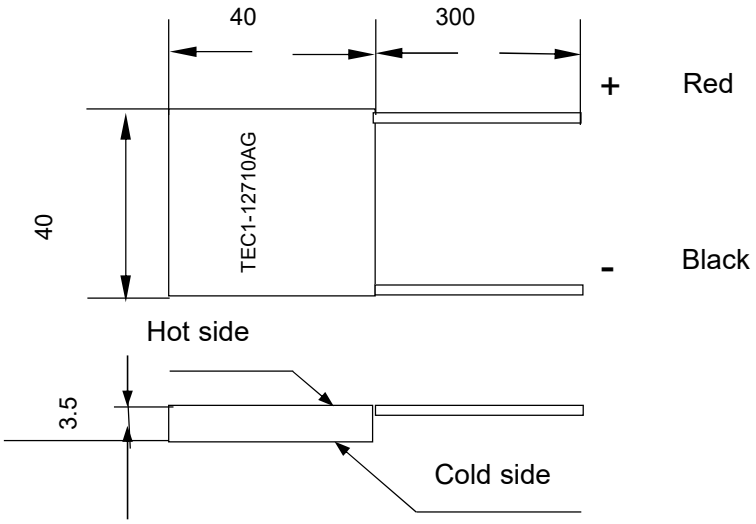
THC1-12710Technical Specifications for Semiconductor Refrigeration Chips

1. Dimensions

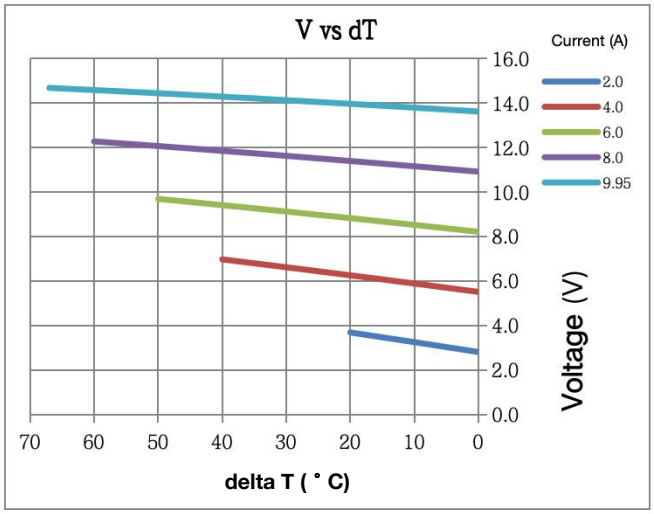


2. Basic electrical performance index

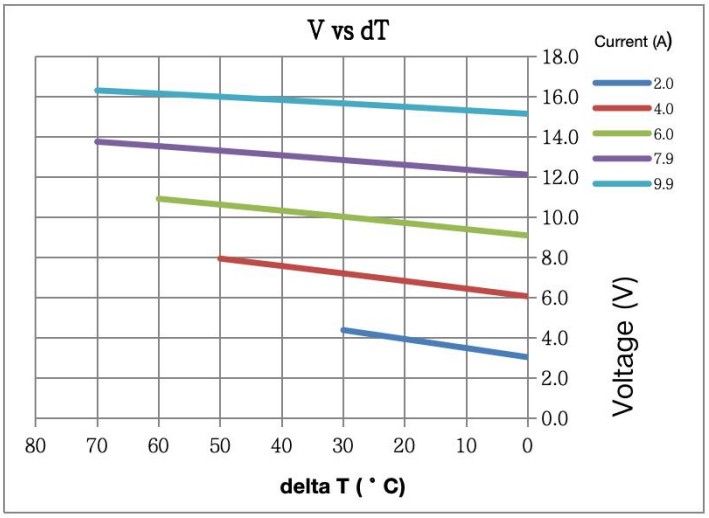
Ambient Temperature (°C)	27	Lead wire	20AWG，L=300mm，Or ordered by customer
Maximum cooling power (Watts)	88.9	Thickness (mm)	3.5±0.1
△T-max (°C)	≥66	Flatness & Parallelis (mm)	≤0.05
Imax (Amps)	10	Melting point of Solder (°C)	138
V-max (Volts)	15.4	Ceramic Material	Alumina （Al2O3）
AC resistance (Ohms)	1.15~1.3	Mark	TEC1-12710AG
Seal	silica gel 704	Package	500PCS per carton

TEC1-127-10 Refrigeration Device Relationship Curve

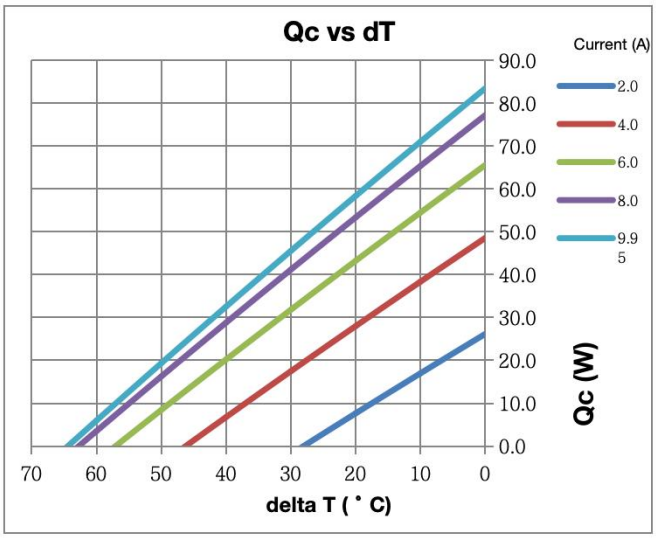
Performance curve when hot surface temperature Th=27°C

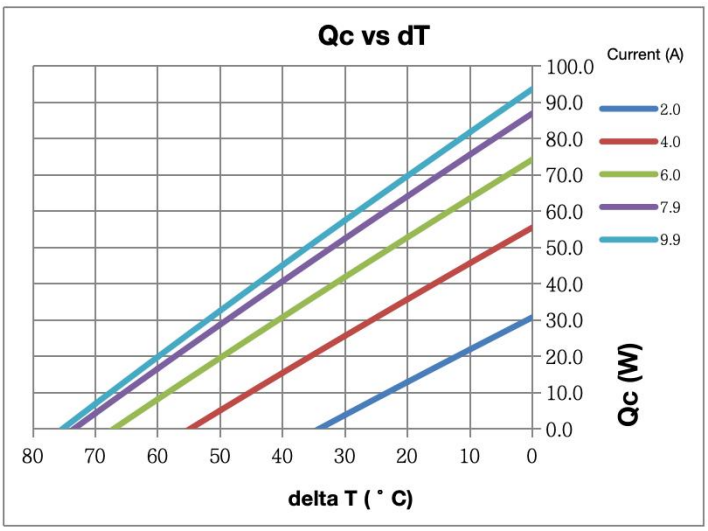


Performance curve when hot surface temperature Th=50°C

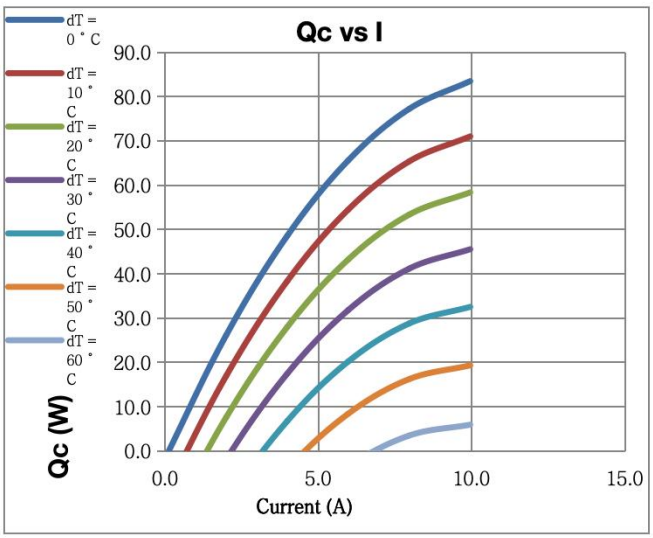


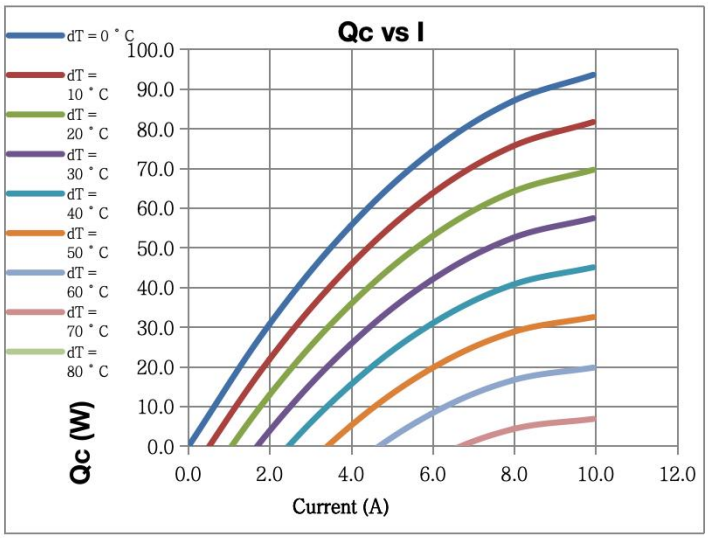
Performance diagram of voltage changing with temperature difference under different currents V=f(DT)





Performance diagram of cooling with different currents (Qd)

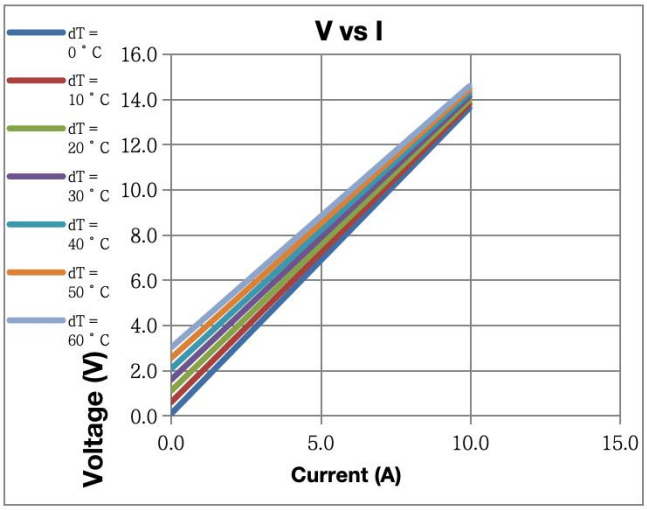




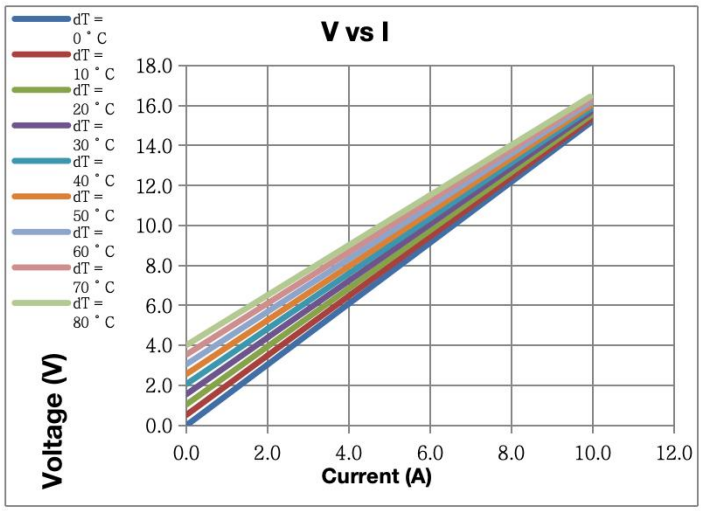
Performance diagram of cooling capacity changes with voltage under different temperature differences Qc=f(I)

TEC1-127-10 Refrigeration Device Relationship Curve

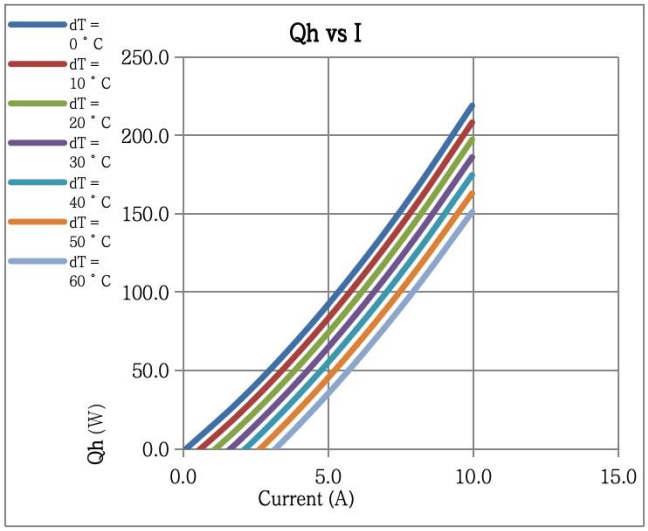
Performance curve when hot surface temperature Th=27°C

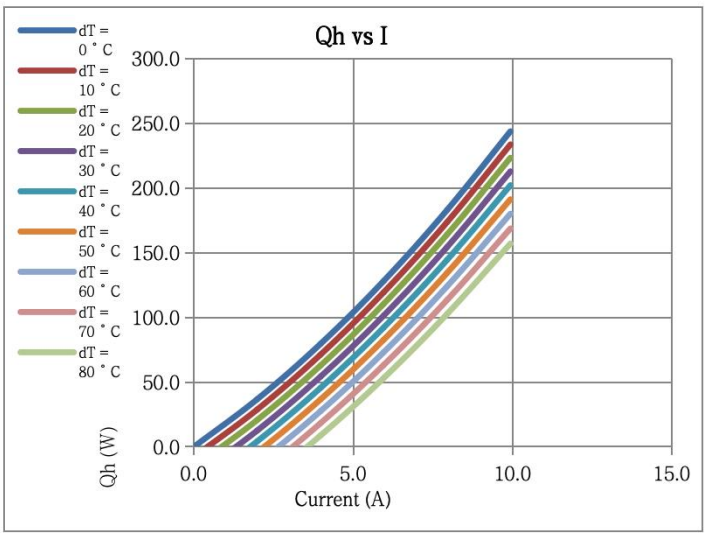


Performance curve when hot surface temperature Th=50°C

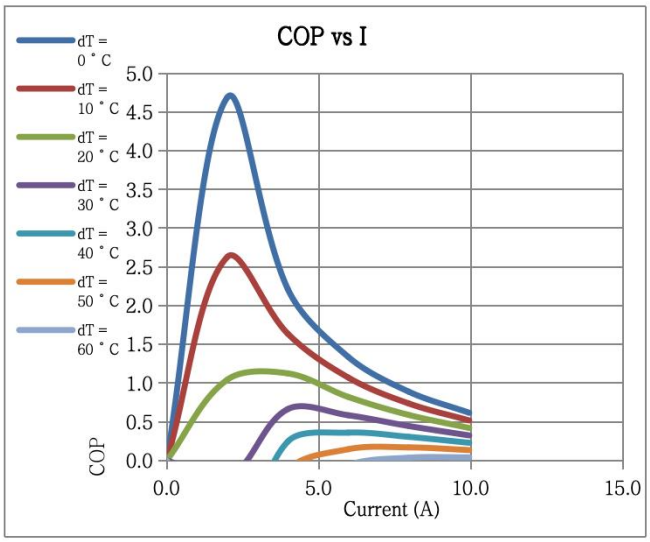


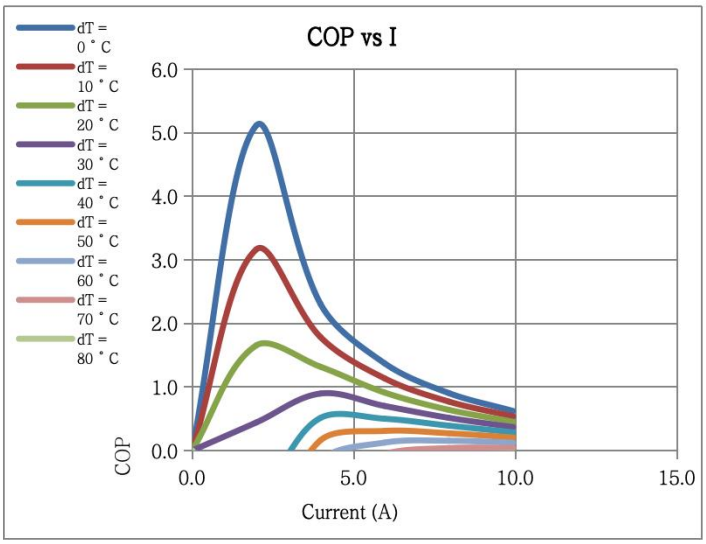
Performance diagram of voltage changing with current under different temperature differences V= f(I)





Performance diagram of total heat changes with current under different temperature differences Qh= f(I)





Performance diagram of energy efficiency ratio changes with current under different temperature differences COP= f(I)