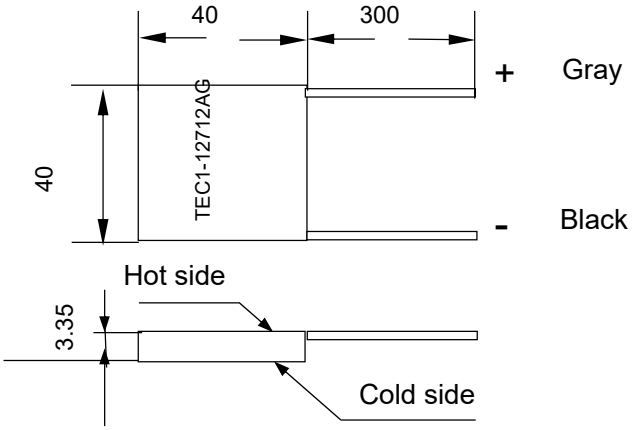
TEC1-12712 Technical Specifications for Semiconductor Refrigeration Chips

1. Overall dimensions

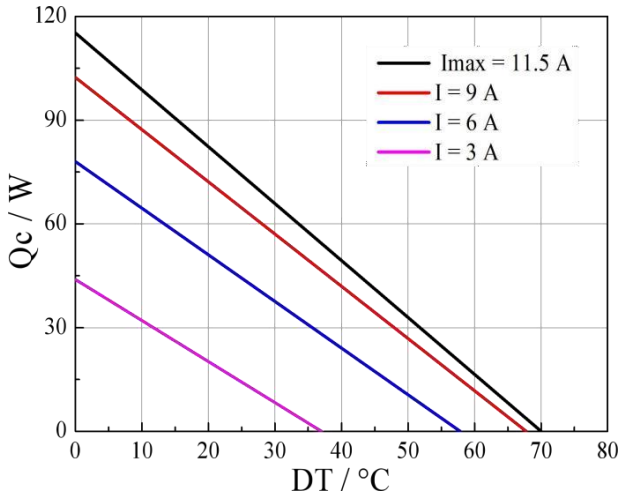


2. Basic electrical performance indicators

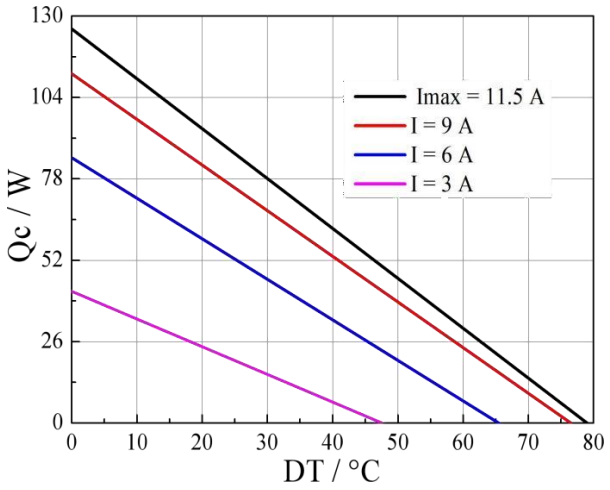
Project	Characteristic value		Condition
Maximum current	I_{max}	12A	T_h=25°C
Maximum voltage	V_{max}	15.4V	T_h=25°C
Maximum temperature difference	ΔT_{max}	≥68°C	Q_c=0, T_h=25°C
Maximum cooling power	Q_{cmax}	110.5W	ΔT=0°C , T_h=25°C
Temperature range	TR	-50~150°C	
Product internal resistance	R	0.9Ω~1.15Ω	ΔT=0°C , T_h=25°C
Power cord	Silicon soft wire, length 300mm.		
Solder specifications	227°C Tin		
Sealing requirements	White silicone sealant 704		
Packaging requirements	Foam box shockproof + corrugated box		
Printing requirements	TEC1-12712AG or specified by customer		

TEC1-12712 Refrigerator Relationship Curve

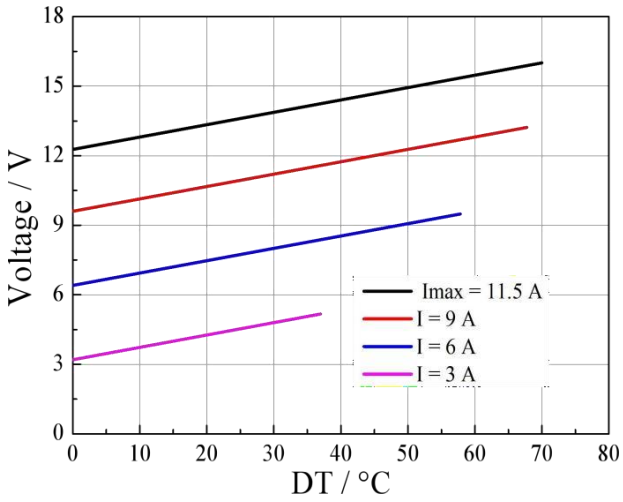
Performance curve at hot surface temperature Th=27°C

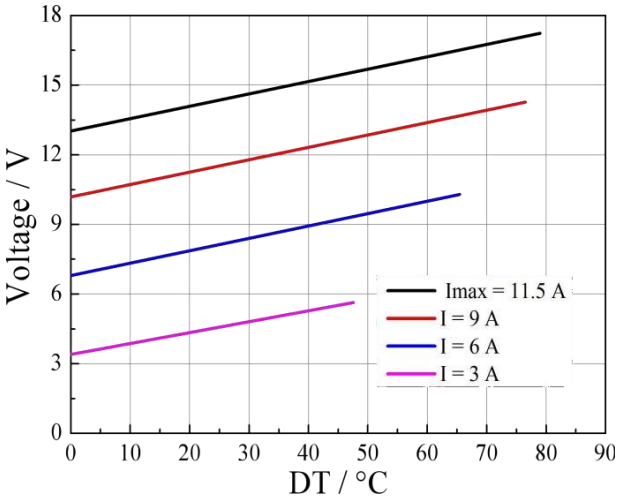


Performance curve at hot surface temperature Th=50°C

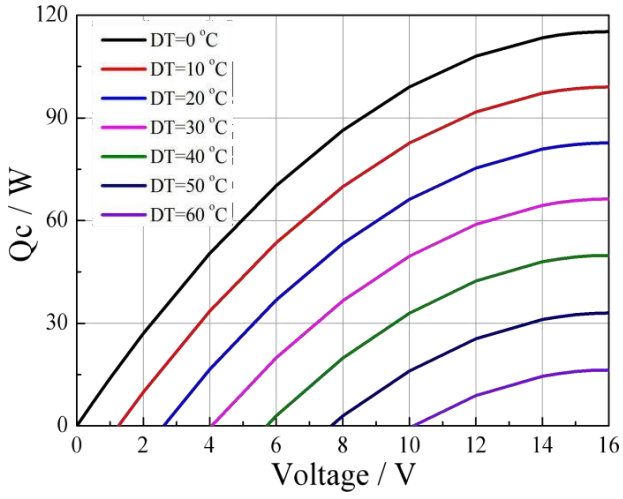


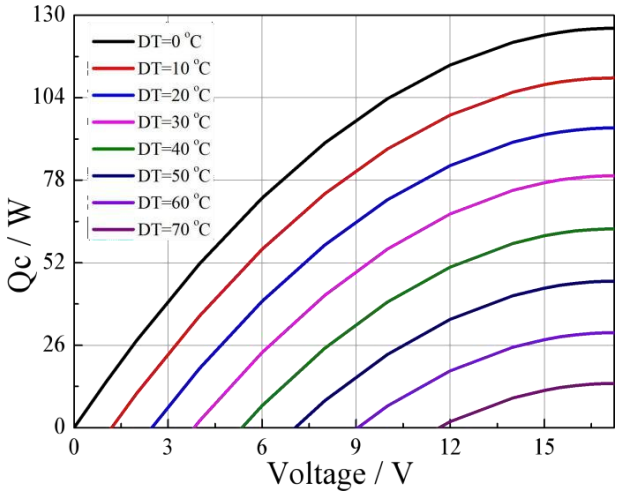
Performance diagram of cooling power changes with temperature difference under different currents Qc=f(DT)





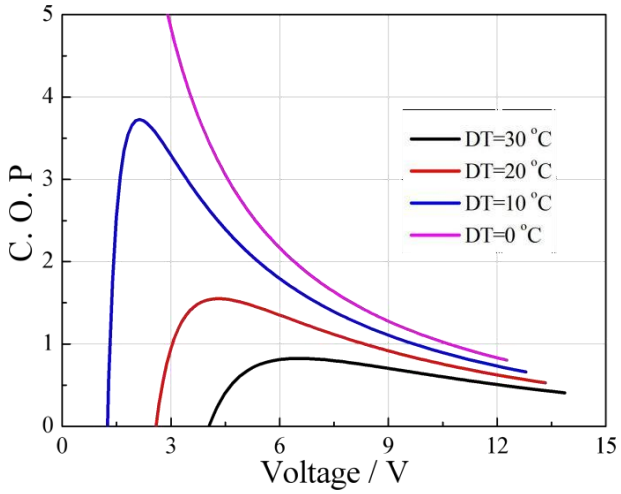
Performance diagram of voltage changing with temperature difference under different currents V=f(DT)



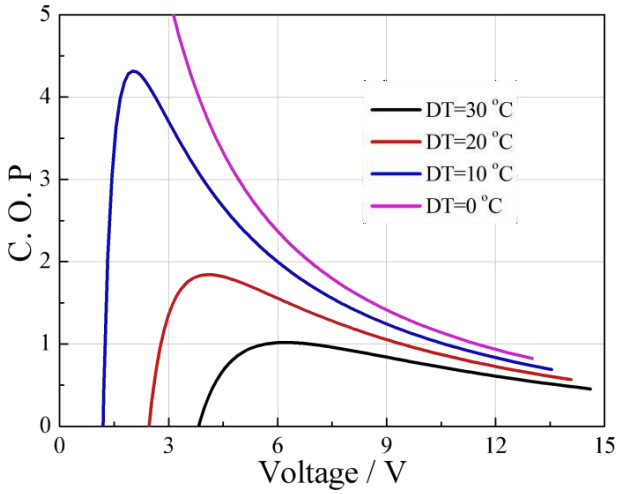


Performance diagram of cooling capacity changes with voltage under different temperature differences Qc=f(V)

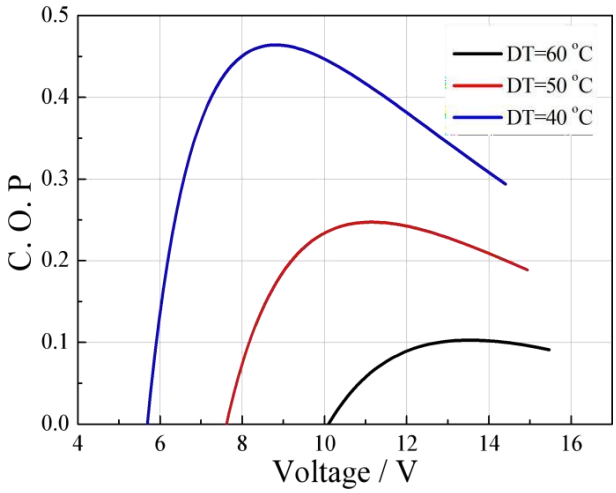
Performance curve at hot surface temperature Th=27°C

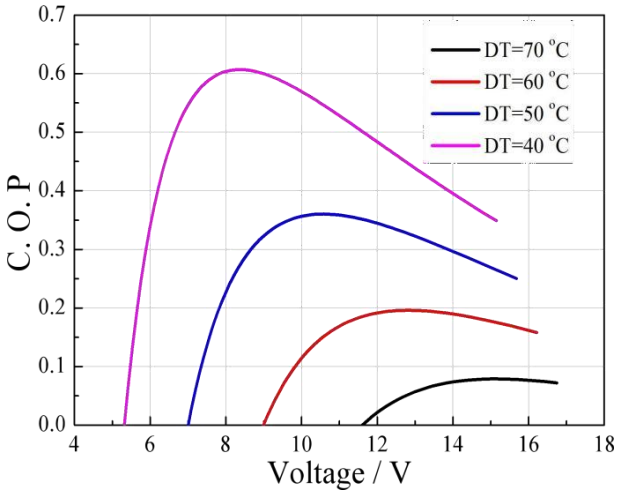


Performance curve at hot surface temperature Th=50°C



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)