



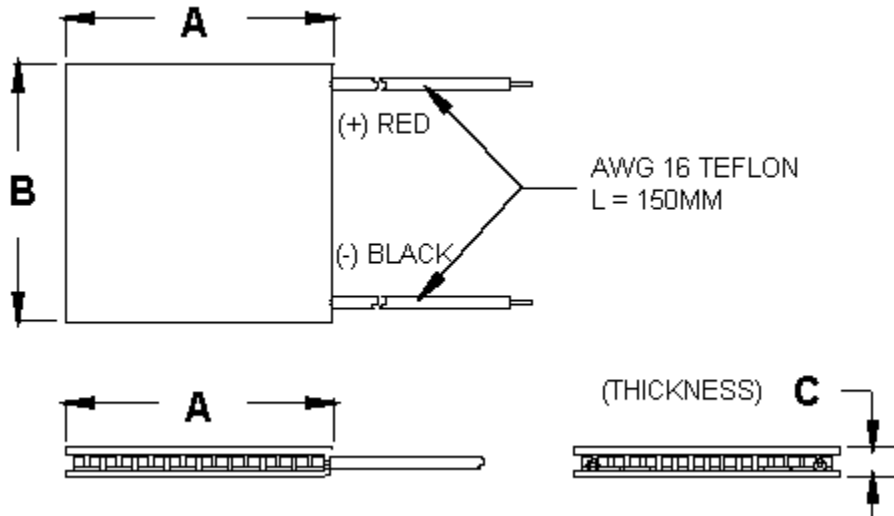
TES1-12704S

Performance Specifications

Hot Side Temperature (°C)	25° C	50° C
Qmax (Watts)	34	37
Delta Tmax (°C)	65	74
I <sub>max</sub> (Amps)	3.3	3.3
V <sub>max</sub> (Volts)	14.0	16.1
Module Resistance (Ohms)	3.1	3.6



Performance curves on page 2



Ceramic Material: Alumina ( $Al_2O_3$ )  
 Solder Construction: 138°C, Bismuth Tin (BiSn)

**Size table:**

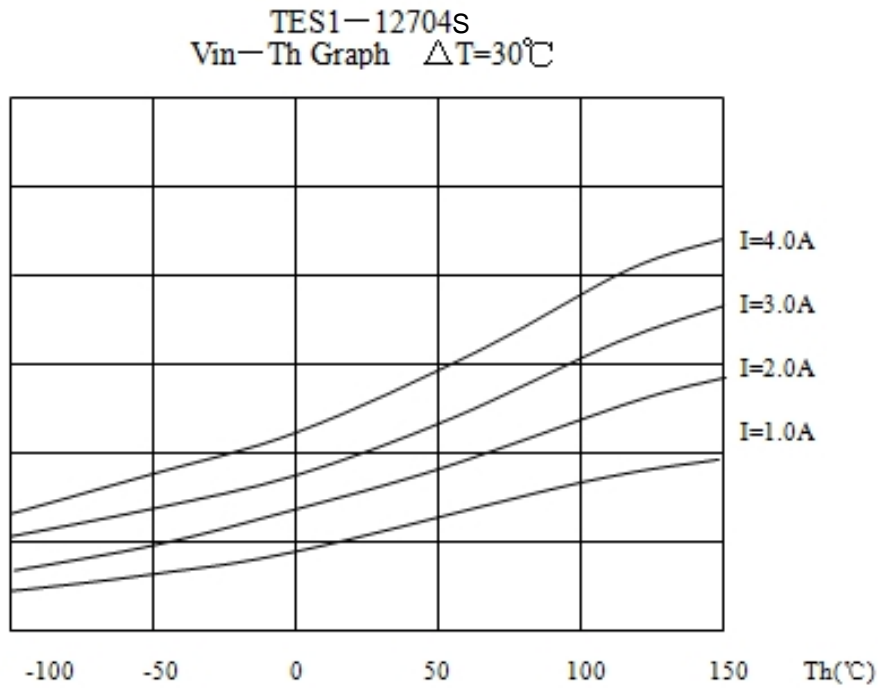
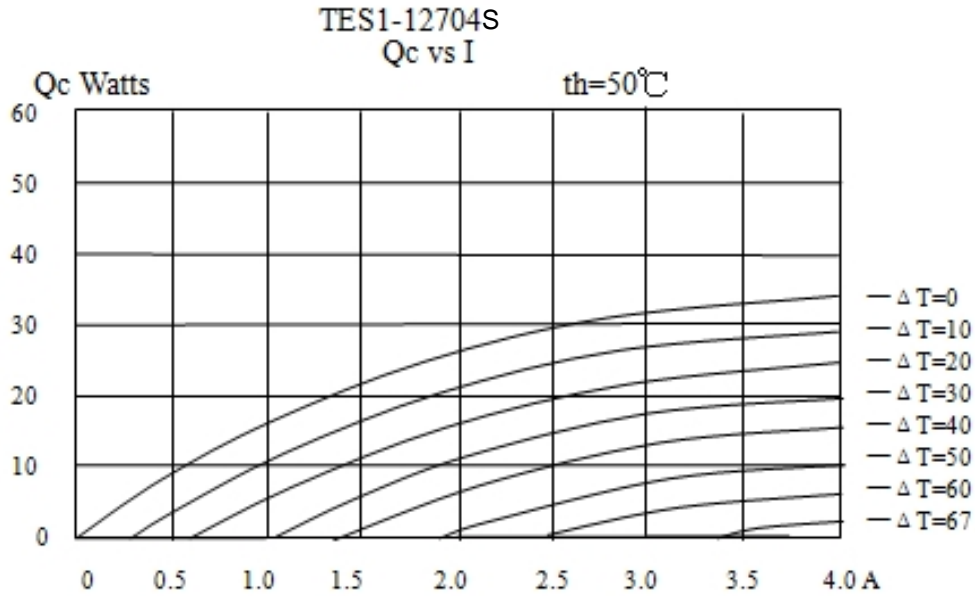
A	B	C			
30	30	3.3			

**Operating Tips**

- Max. Operating Temperature: 138°C
- Do not exceed  $I_{max}$  or  $V_{max}$  when operating module.
- Life expectancy: 200,000 hours
- Please consult HB for moisture protection options (sealing).
- Failure rate based on long time testings: 0.2%.



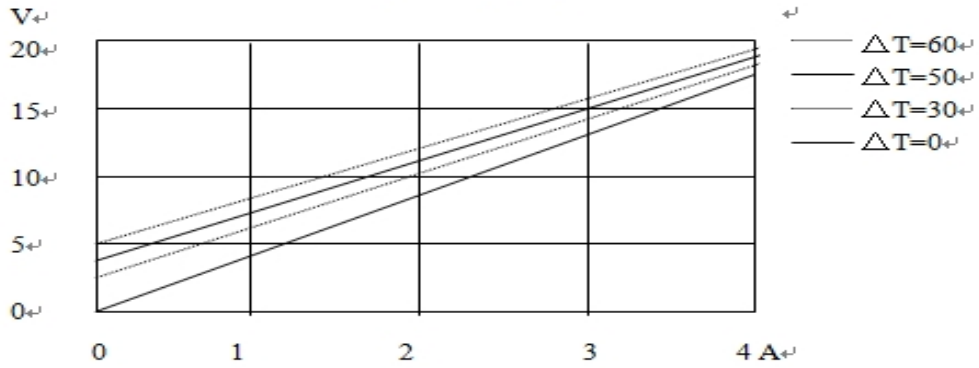
TES1-12704S





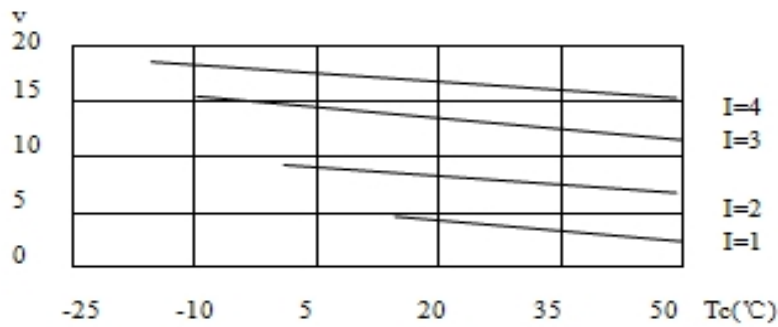
TES1—12704S

I—Vin Graph Th=50°C



TES1—12704S

Vin—I—TC Graph Th=50°C



TES1—12704S

Qc—I—DT Graph Th=50°C

