

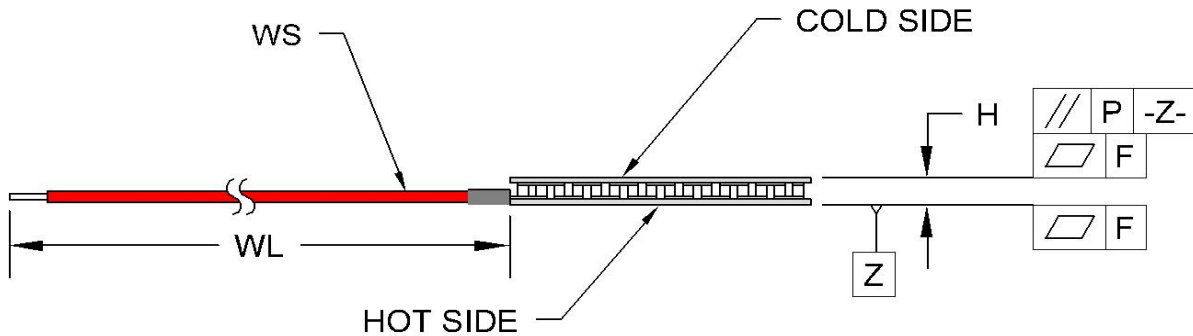
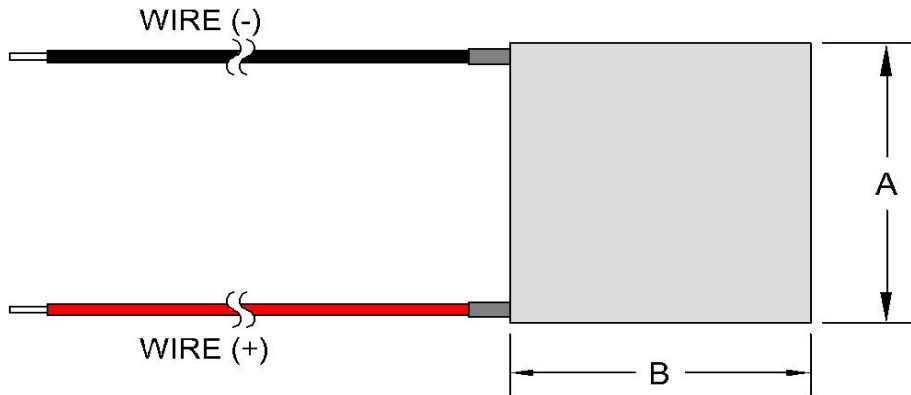
**VT-31-1.0-1.3  
Thermoelectric Module  
(Peltier Module)  
Specifications**

	Material Specifications (27 °C hot side temperature)	Material Specifications (50 °C hot side temperature)
Vmax (V)	3.8	4.2
I <sub>max</sub> (A)	3.6	3.6
Q <sub>max</sub> (W)	8.4	9.2
DT <sub>max</sub> (°C)	69	78
Operation/storage temperature	-40 °C to +200 °C	

Module *material* specifications are nominal values based on the hot-side temperature indicated. Thermoelectric material parameter tolerance is +/-10%.

In no case should the module temperature be allowed to exceed its maximum operation/storage temperature.

Please review all product and technical information, *Thermoelectric Module Mounting Procedure*, parameter definitions, FAQ's, and ordering information posted on our website before purchasing or using this product.



Width, A (mm)	14.8 +0.5/-0.2
Width, B (mm)	14.8 +0.5/-0.2
Height, H (mm)	3.6 ±0.05
Flatness, F (mm)	0.02
Parallelism, P (mm)	0.03
Wire Size, WS (mm <sup>2</sup> )	0.2
Wire Length, WL (mm)	120

**Optional Features and Notes:**

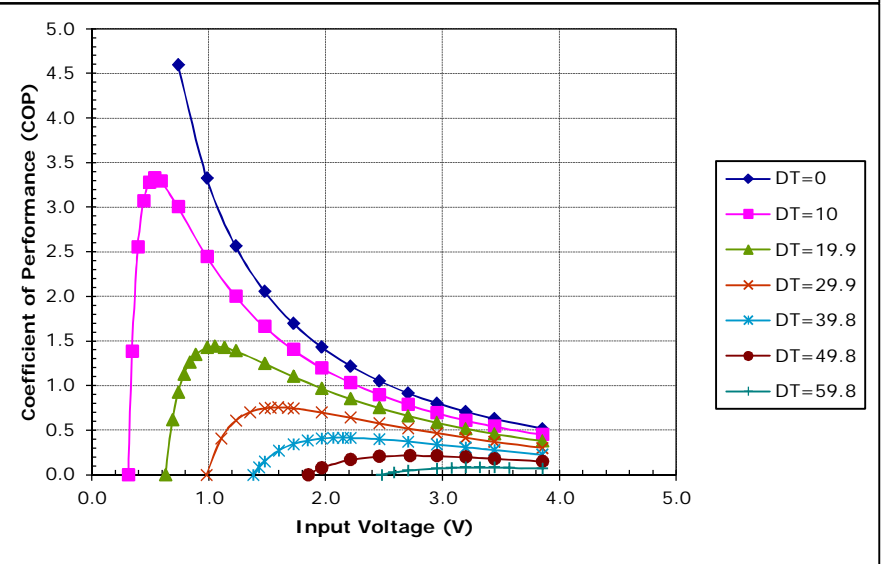
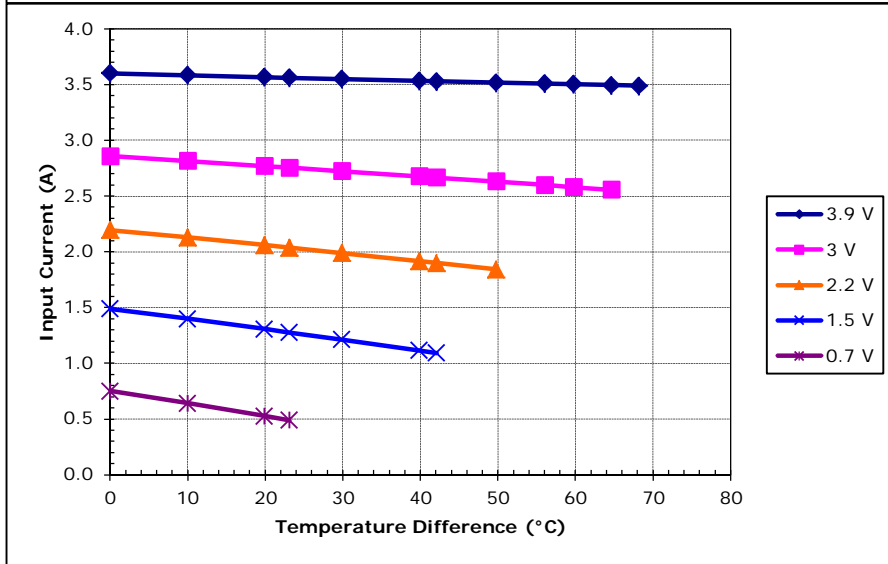
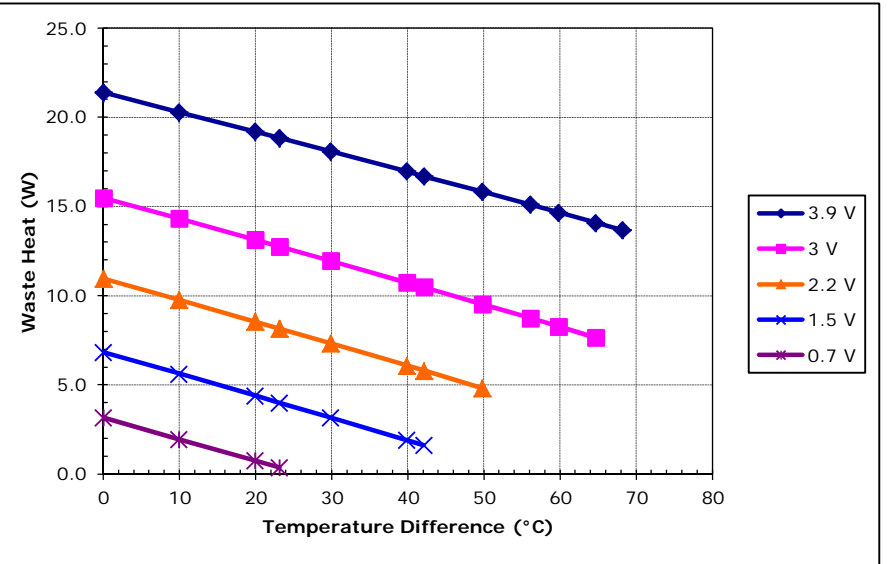
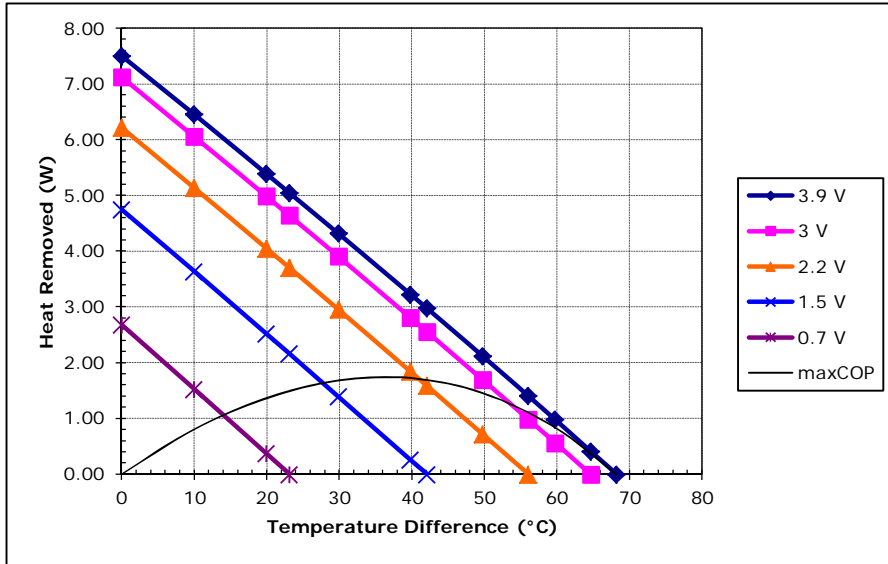
Add "P" to part number for sealing module with epoxy potting.  
Maximum operating/storage temperature with potting is 150 °C

Performance graphs include thermal resistance of substrates.

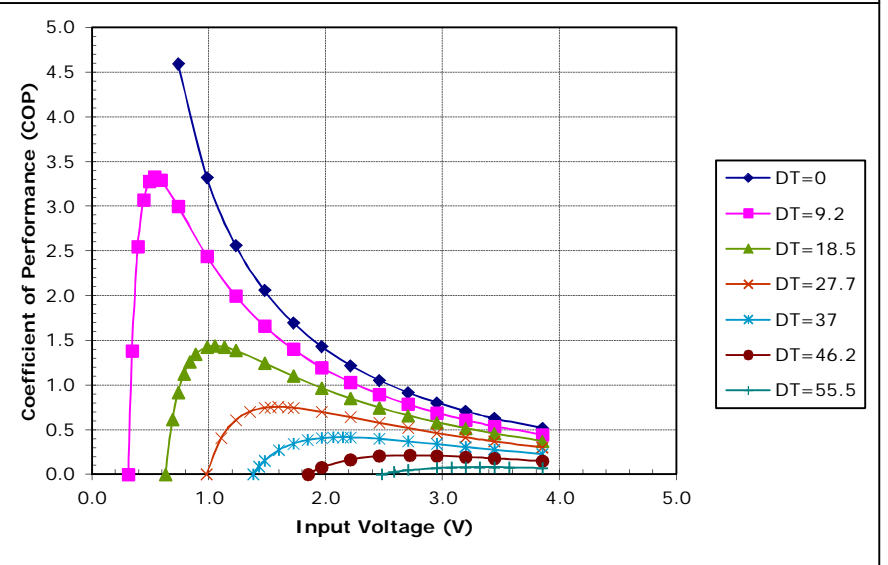
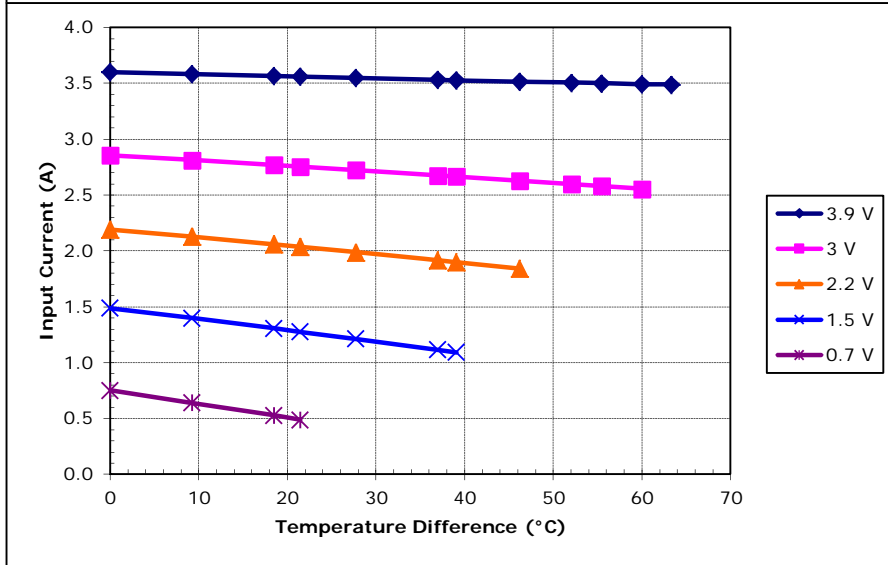
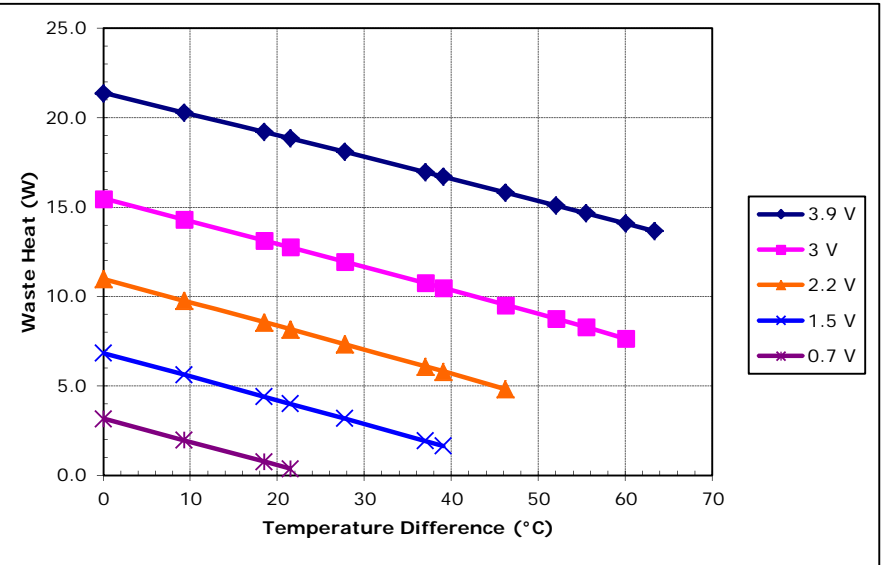
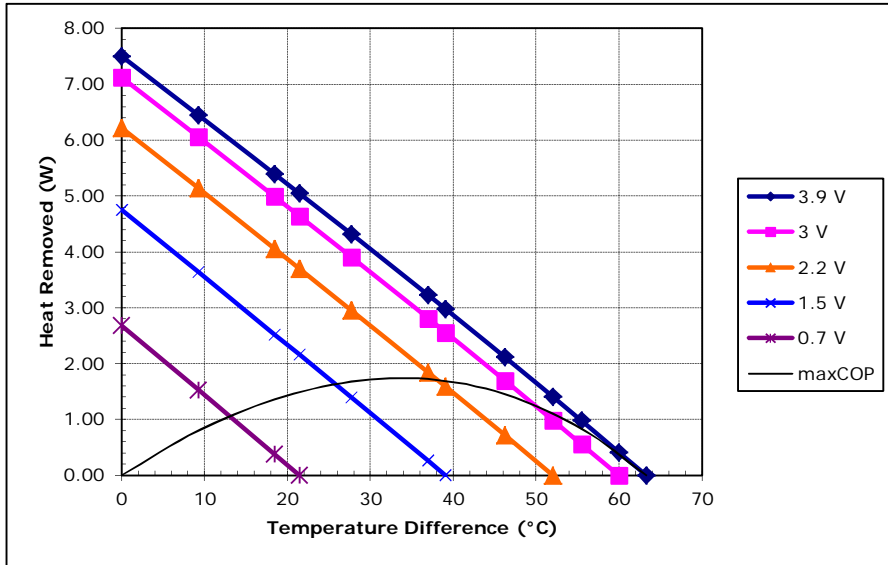
**RoHS Compliant**  
Directive 202/95/EC



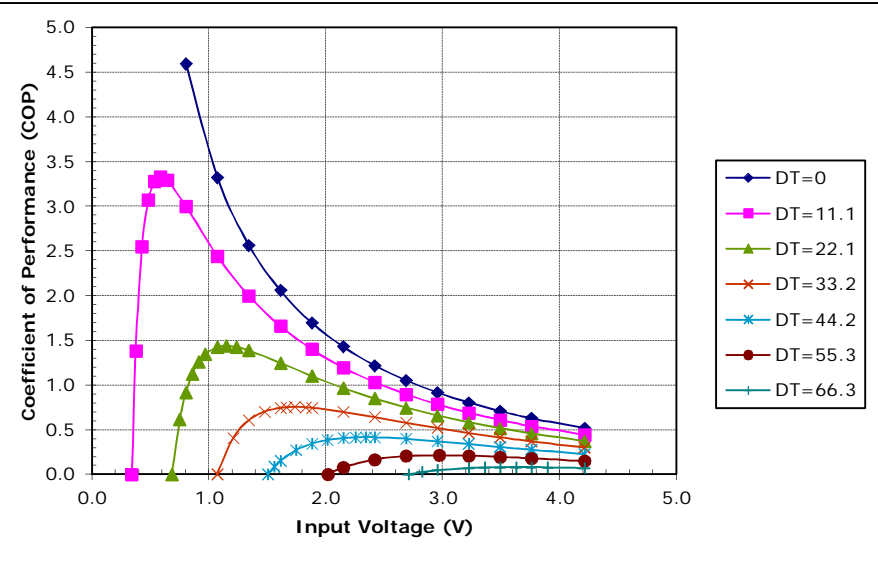
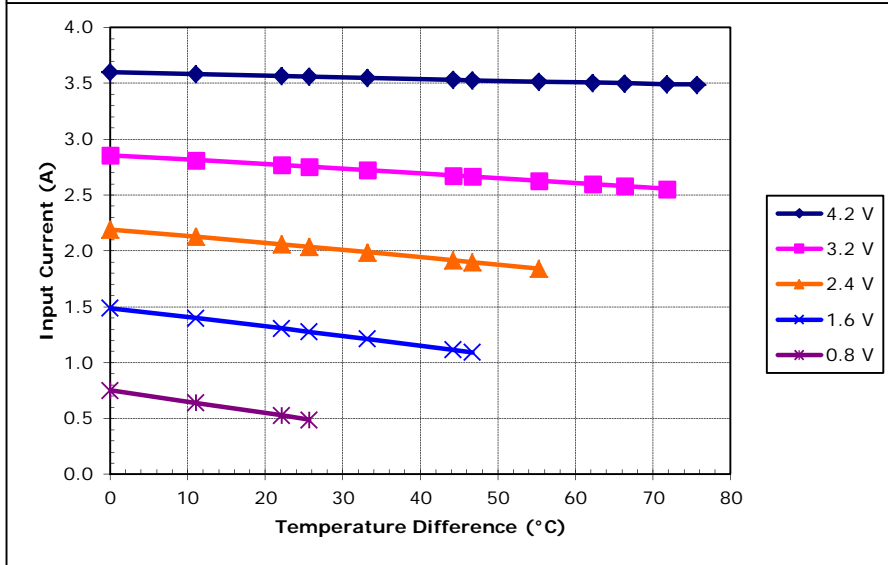
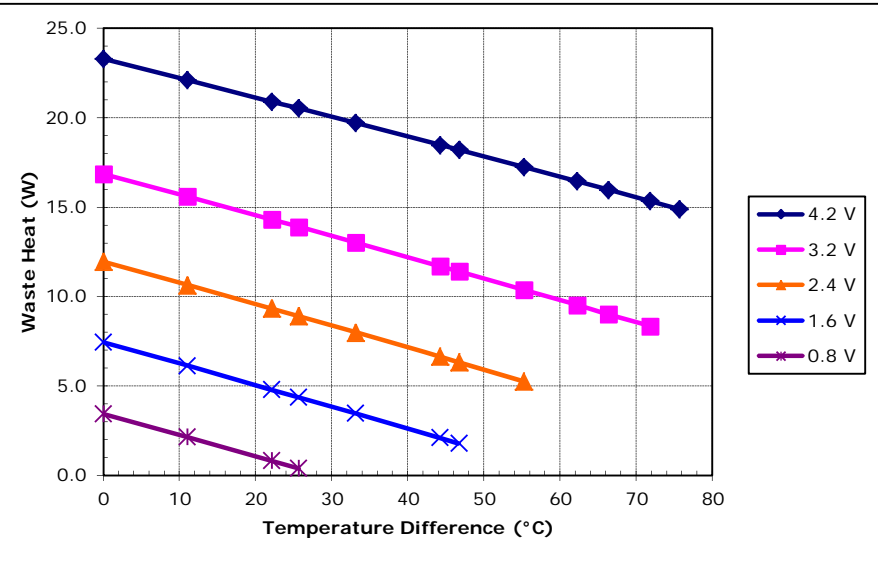
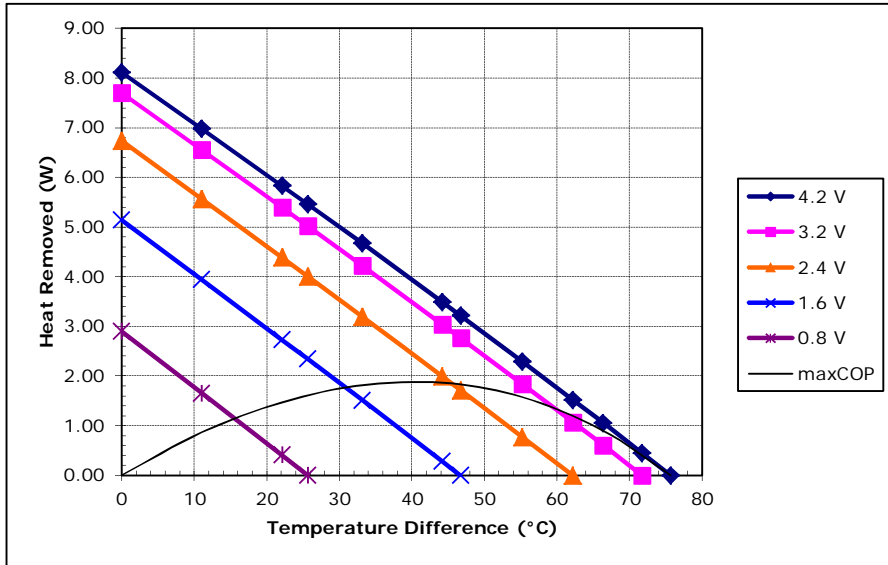
1590 Keane Drive, Traverse City, MI, 49696-8257 USA  
PH: 231-929-3966 FAX: 231-929-4163 email: cool@totech.com



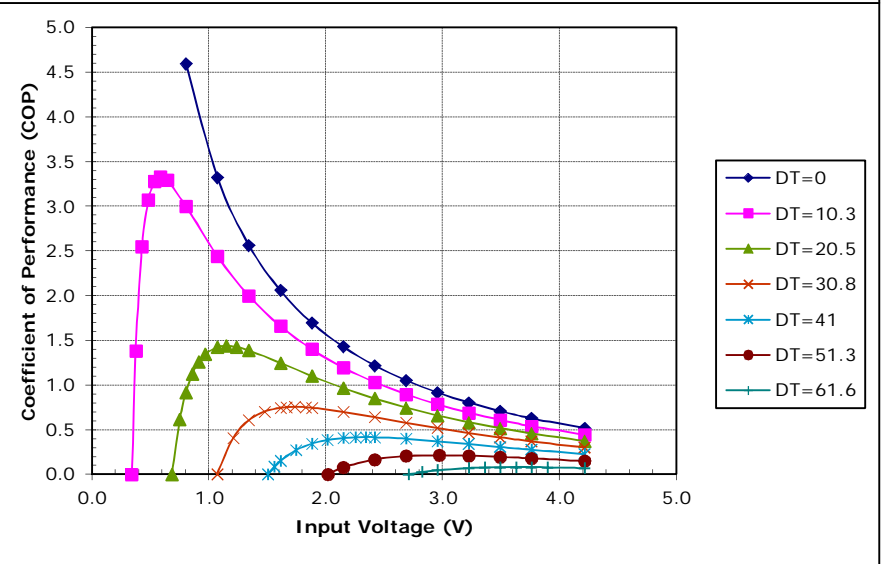
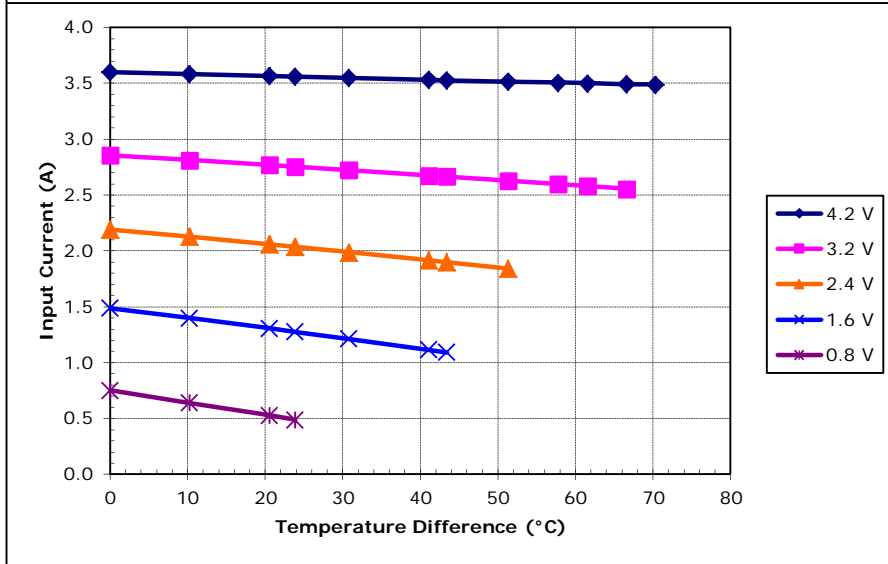
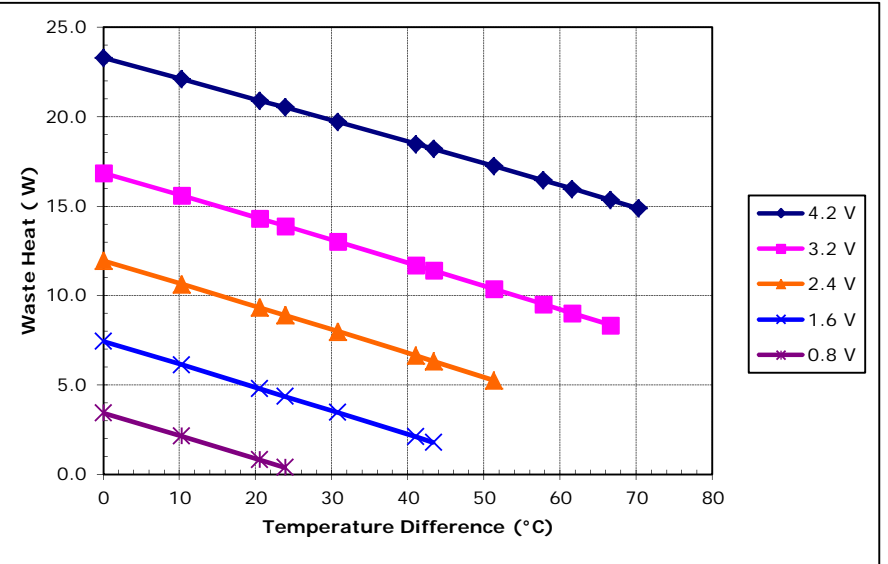
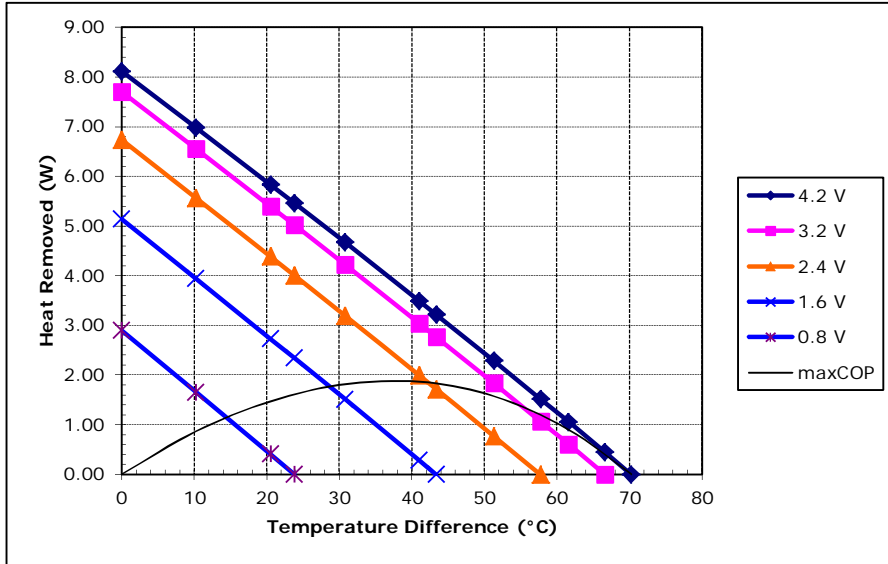
Unpotted VT-31-1.0-1.3 at a hot-side temperature of 30 °C



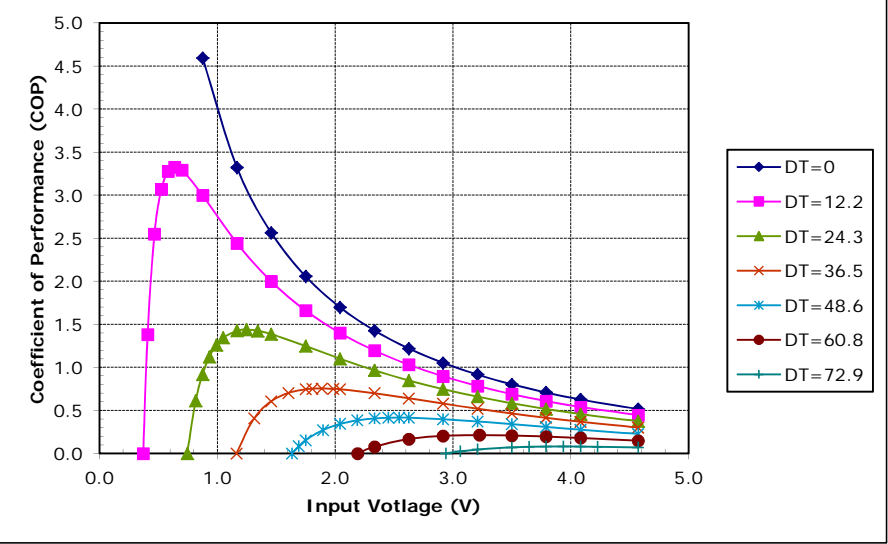
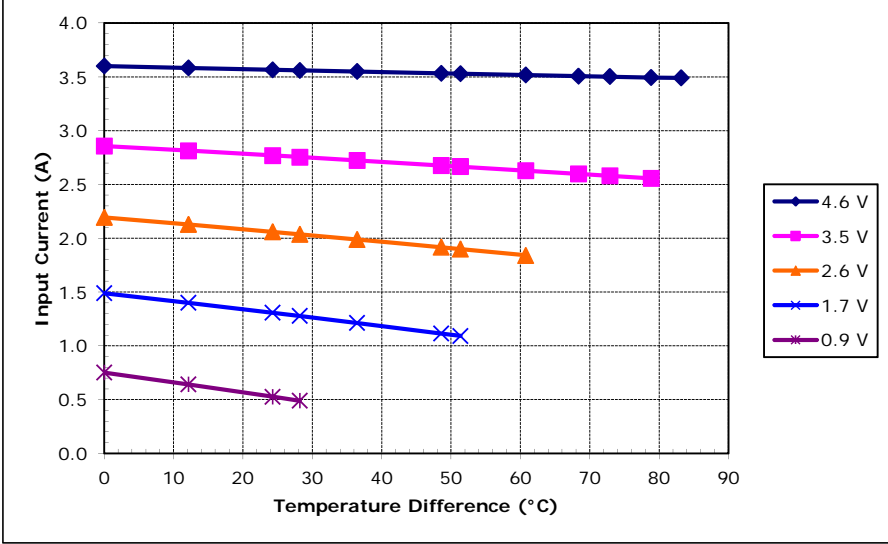
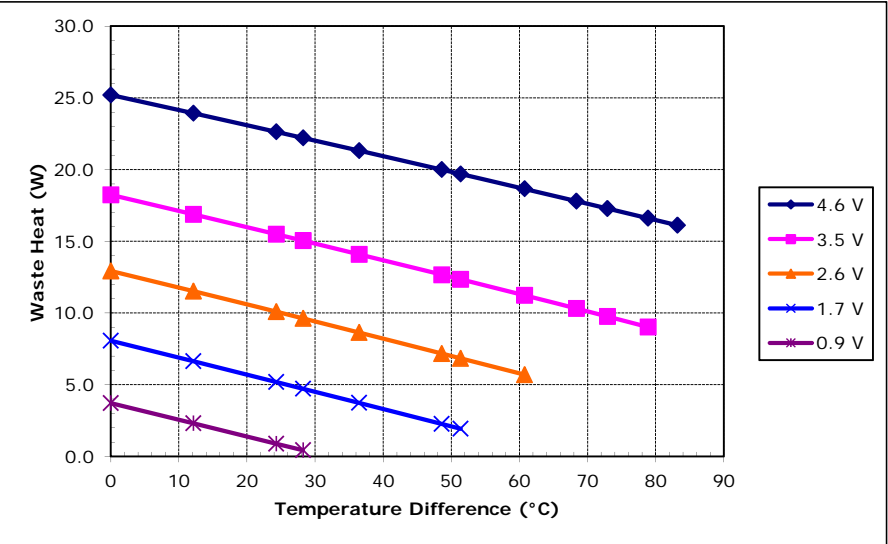
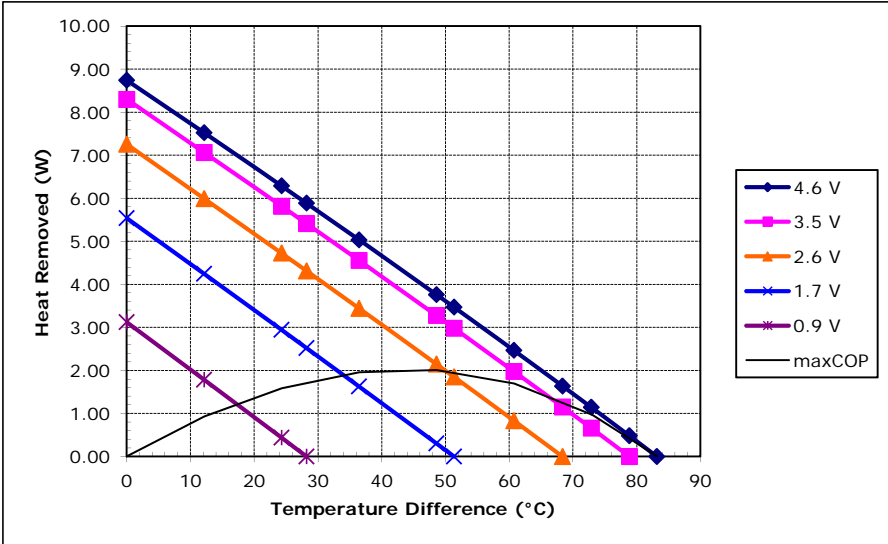
Potted VT-31-1.0-1.3 at a hot-side temperature of 30 °C



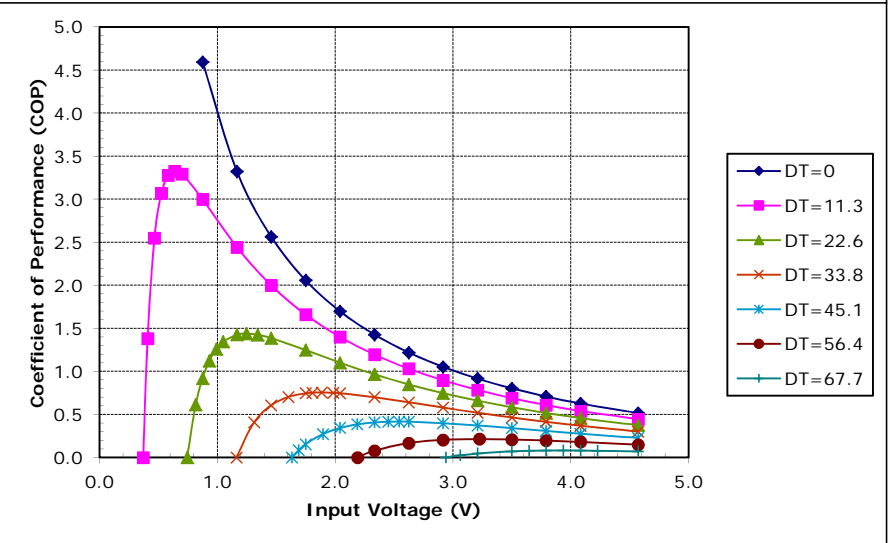
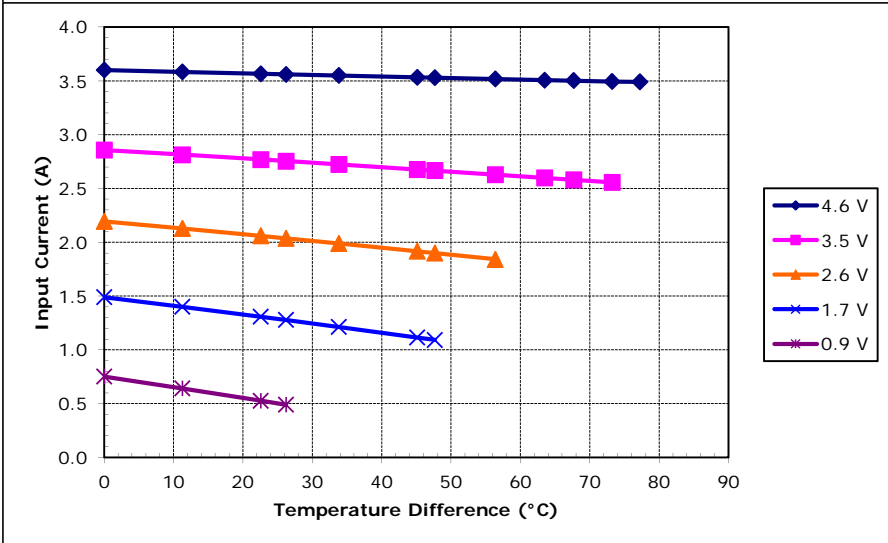
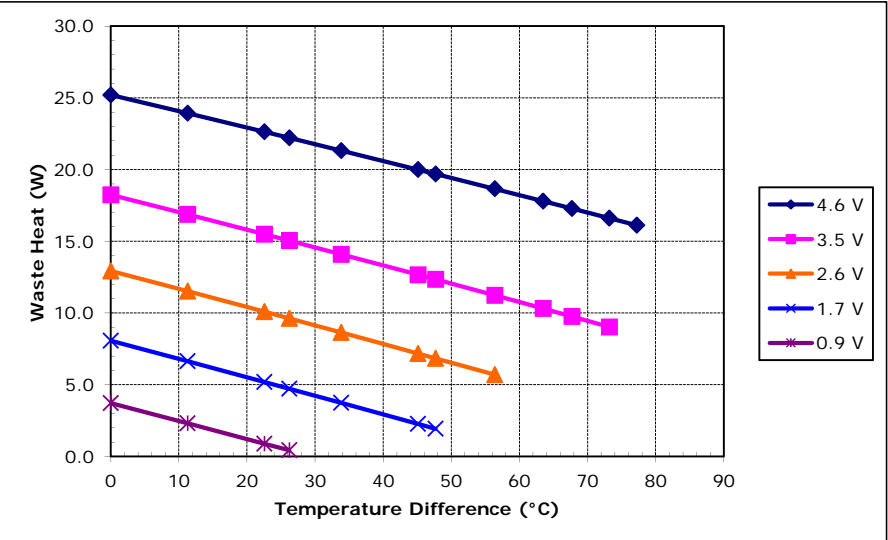
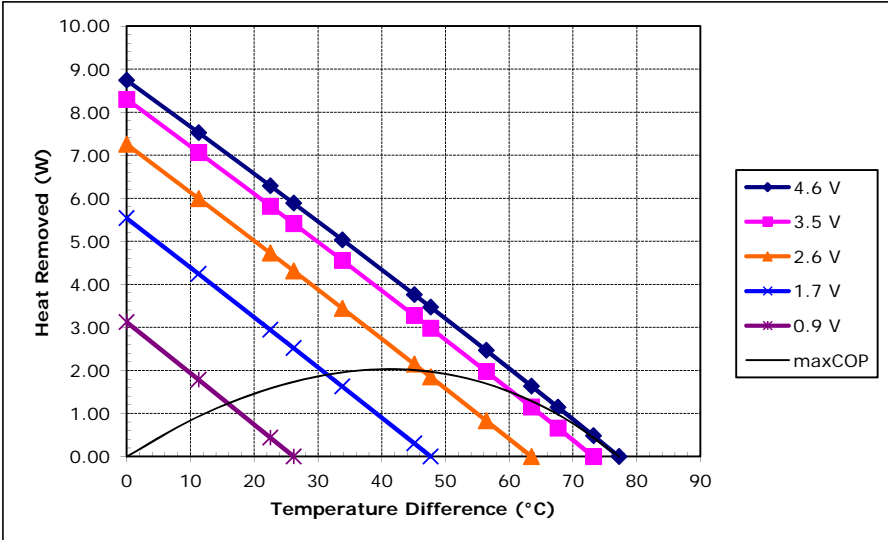
Unpotted VT-31-1.0-1.3 at a hot-side temperature of 50 °C



Potted VT-31-1.0-1.3 at a hot-side temperature of 50 °C



Unpotted VT-31-1.0-1.3 at a hot-side temperature of 70 °C



Potted VT-31-1.0-1.3 at a hot-side temperature of 70 °C