

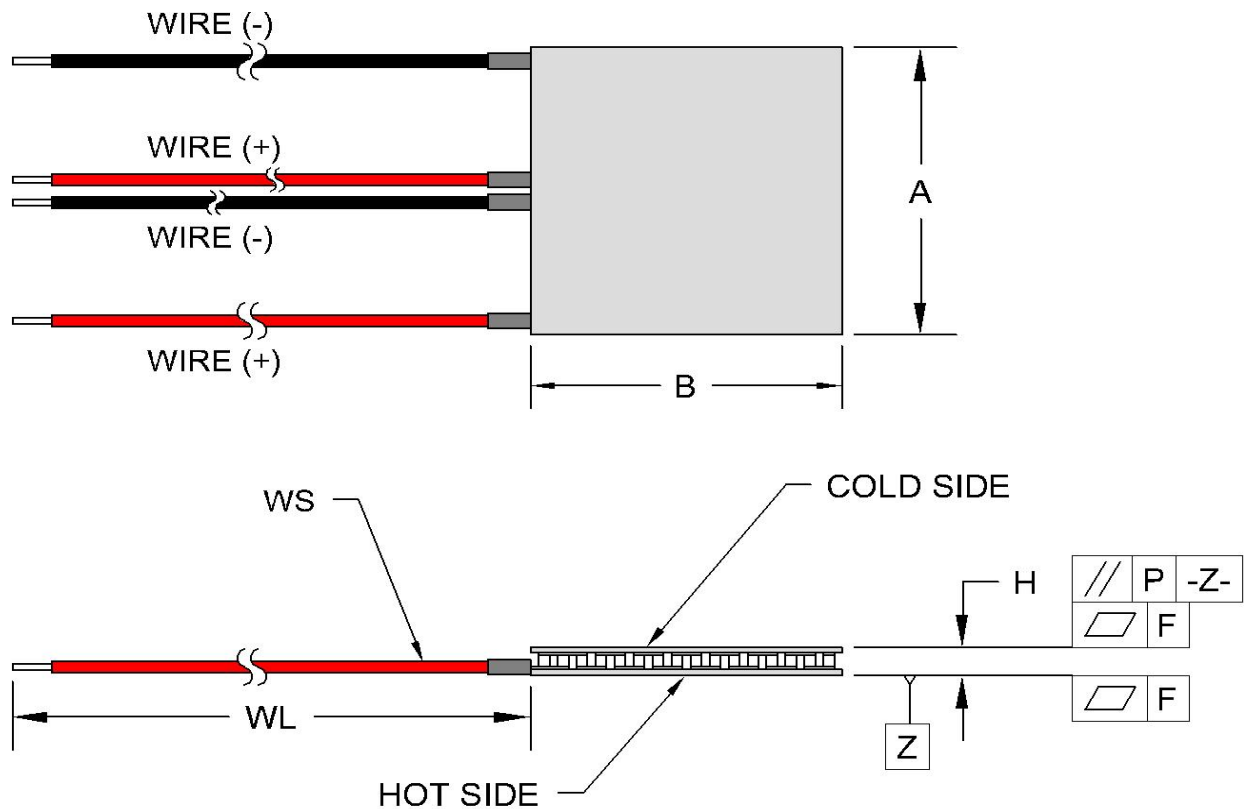
**SP-254-1.0-2.5 (Series)  
Thermoelectric Module  
(Peltier Module)  
Specifications**

|                                  | Material<br>Specifications<br>(27 °C hot side<br>temperature) | Material<br>Specifications<br>(50 °C hot side<br>temperature) |
|----------------------------------|---------------------------------------------------------------|---------------------------------------------------------------|
| Vmax (V)                         | 31.8                                                          | 35.3                                                          |
| I <sub>max</sub> (A)             | 1.9                                                           | 1.9                                                           |
| Q <sub>max</sub> (W)             | 36.6                                                          | 40.2                                                          |
| DT <sub>max</sub> (°C)           | 70                                                            | 79                                                            |
| Operation/storage<br>temperature | -40 °C to +80 °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)                    | 40 +0.5/-0.2 |
| Width, B (mm)                    | 40 +0.5/-0.2 |
| Height, H (mm)                   | 4.8 ±0.05    |
| Flatness, F (mm)                 | 0.02         |
| Parallelism, P (mm)              | 0.03         |
| Wire Size, WS (mm <sup>2</sup> ) | 0.34         |
| Wire Length, WL (mm)             | 120          |

**Optional Features and Notes:**

Add "P" to part number for sealing module with epoxy potting.

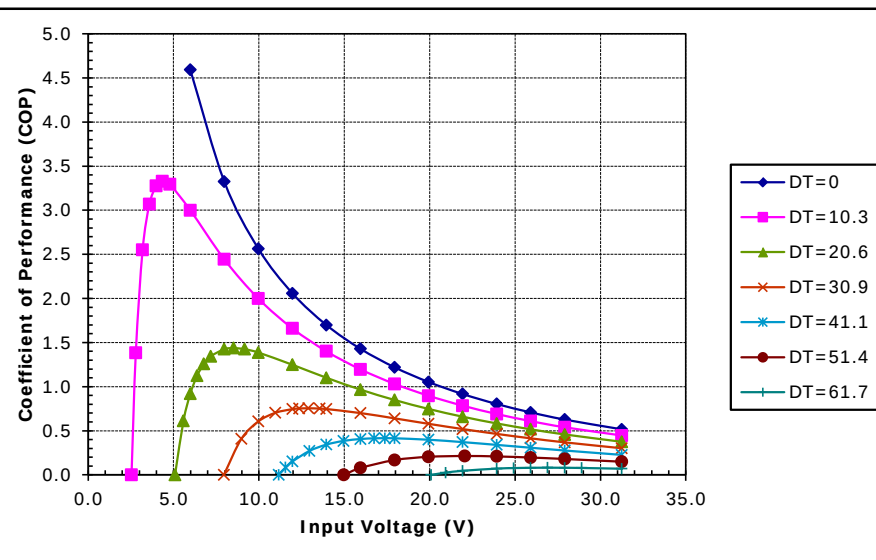
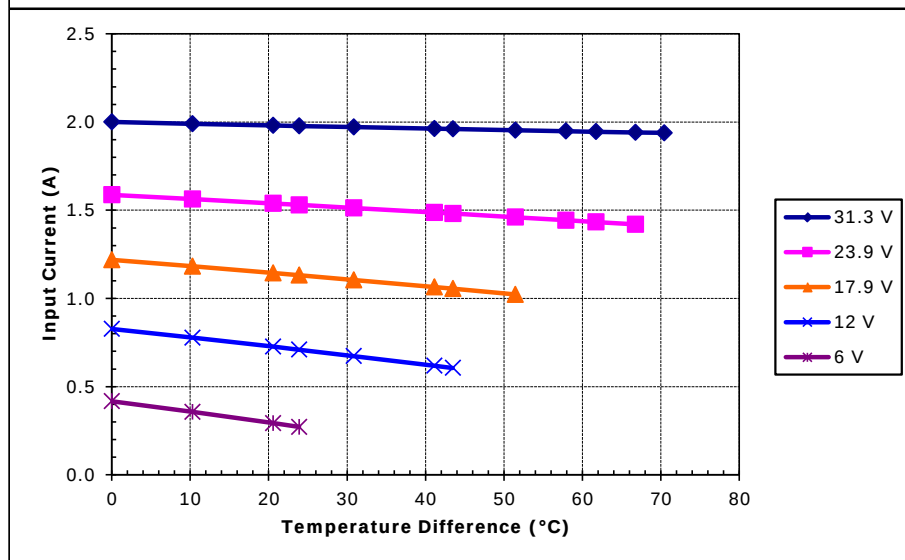
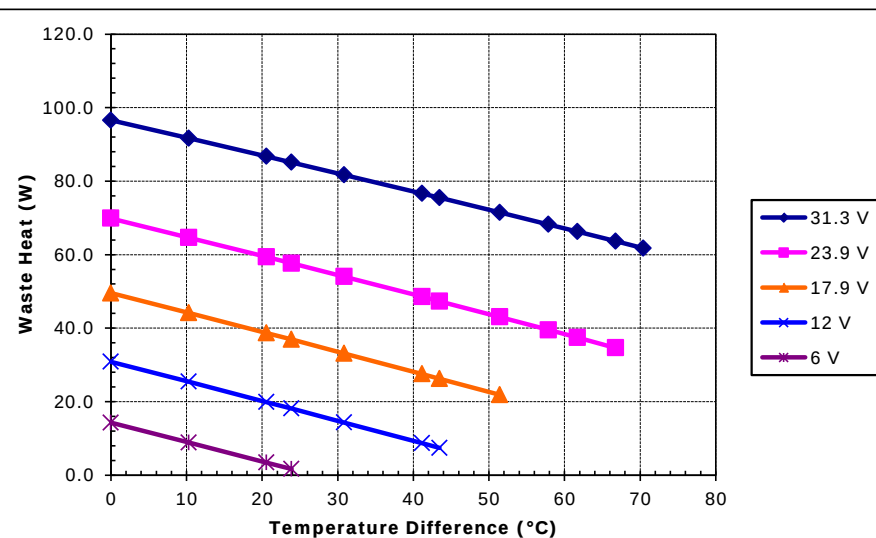
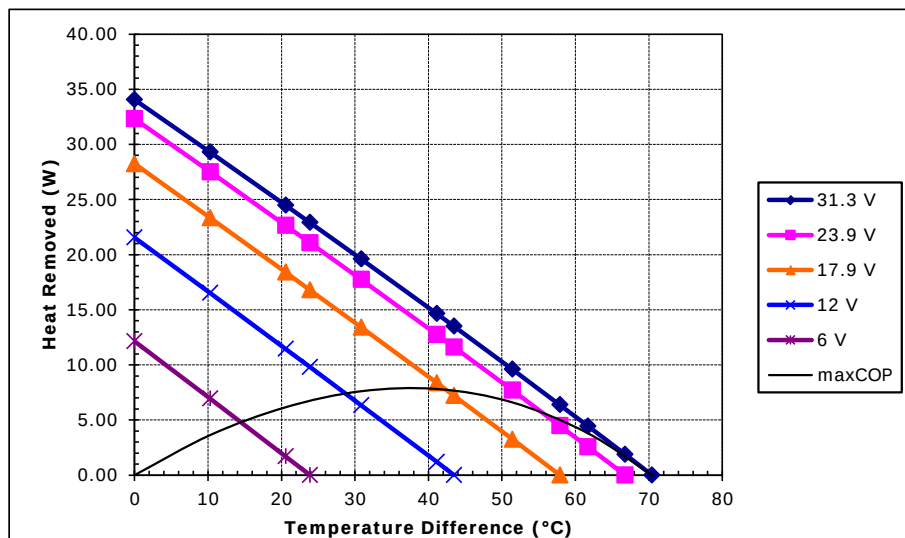
Module can be configured in parallel mode as well.

Performance graphs include thermal resistance of substrates.

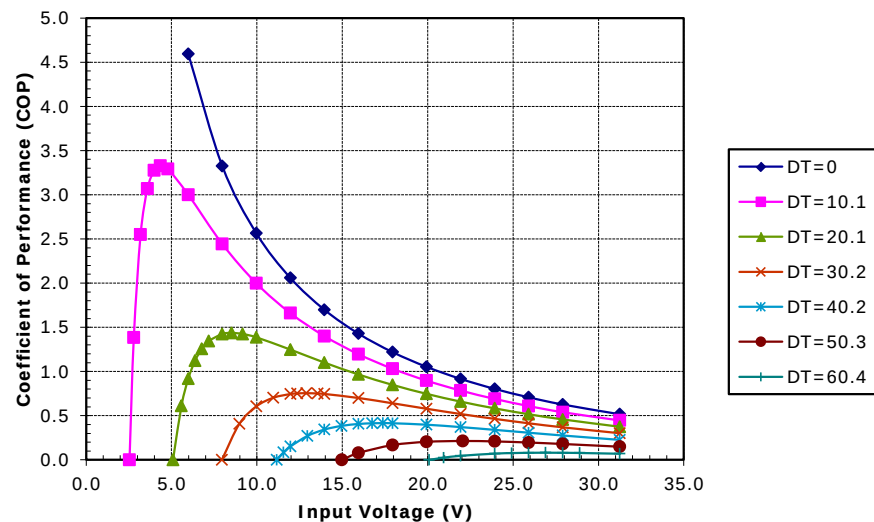
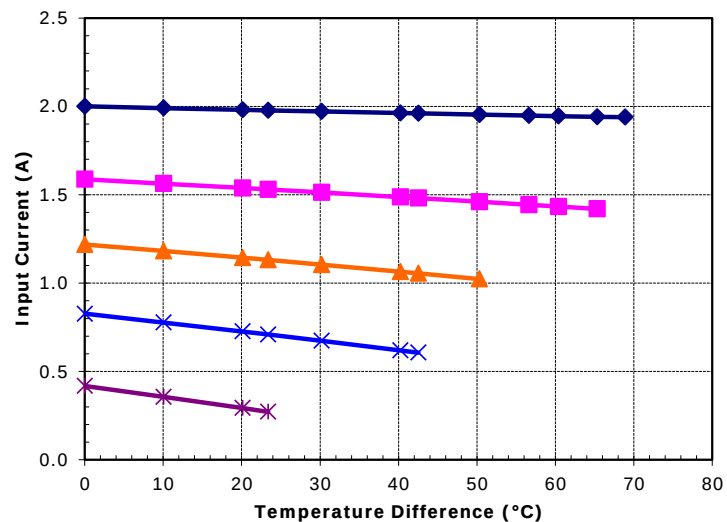
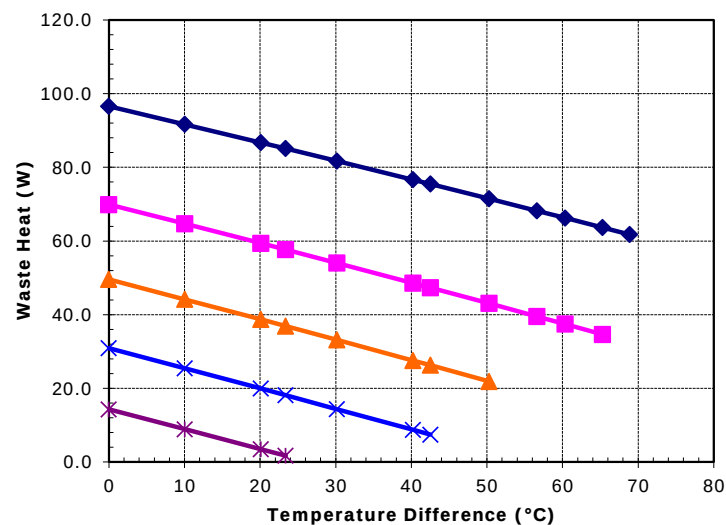
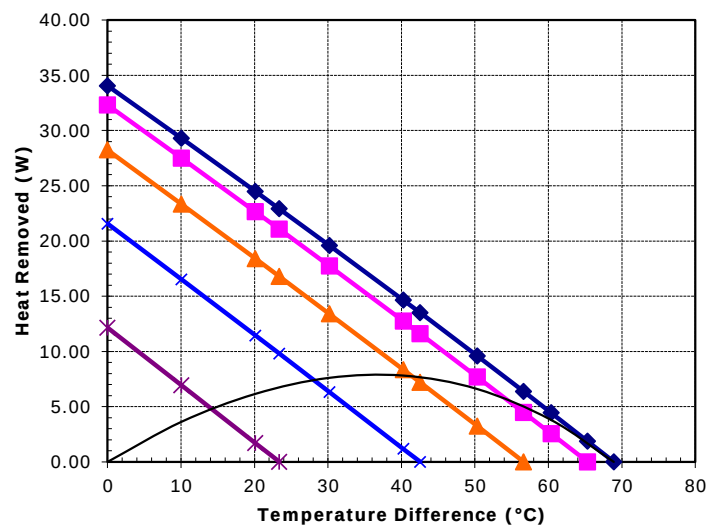
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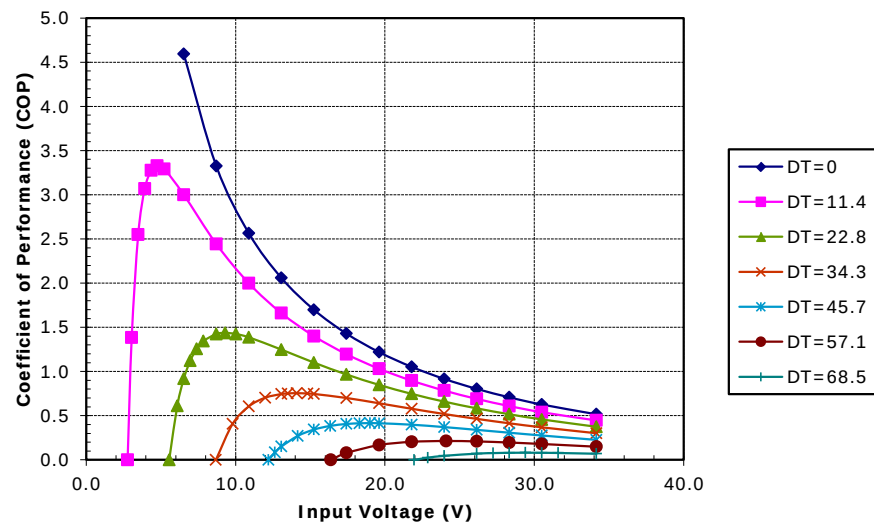
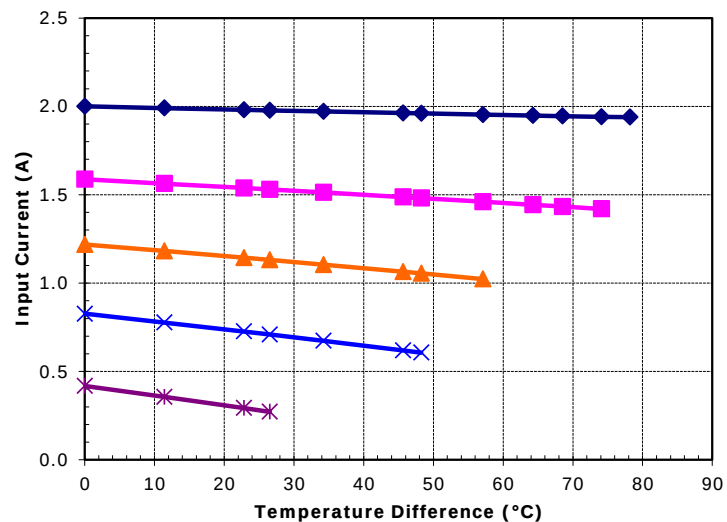
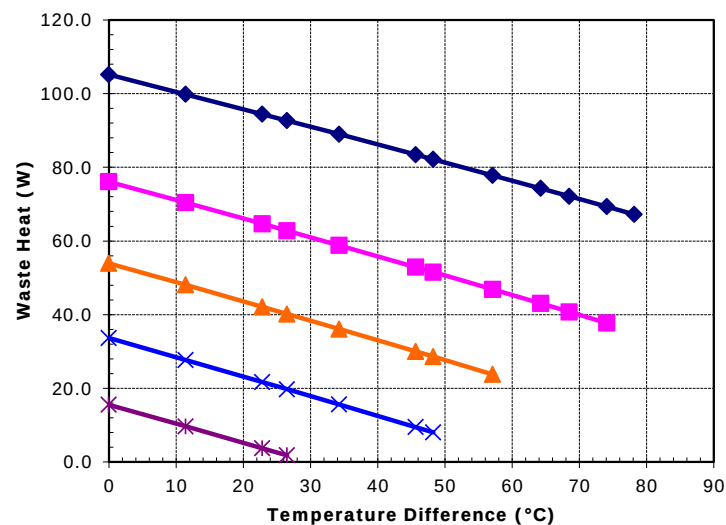
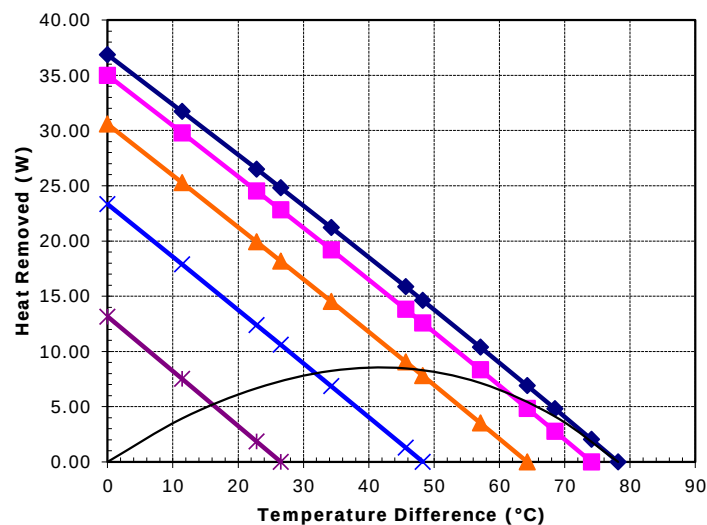
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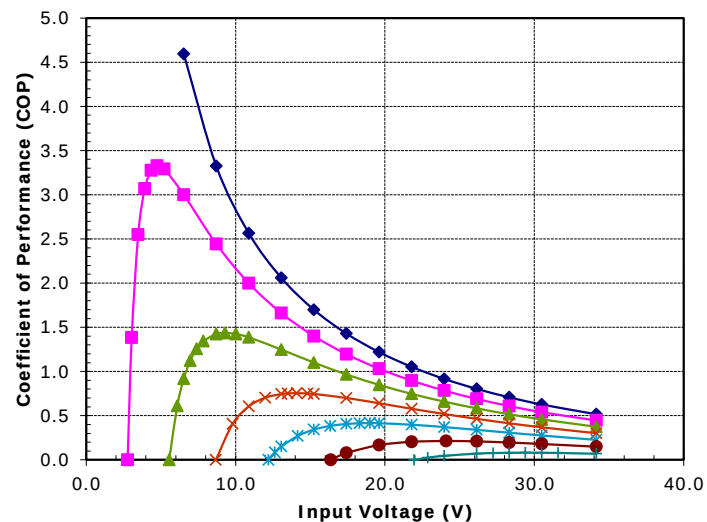
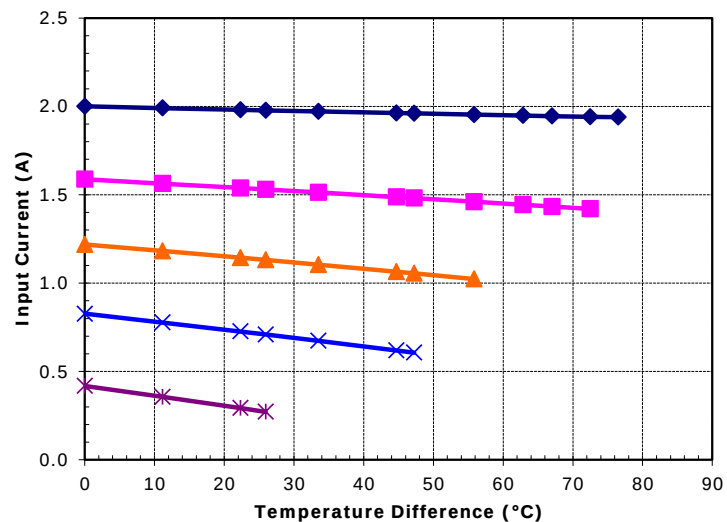
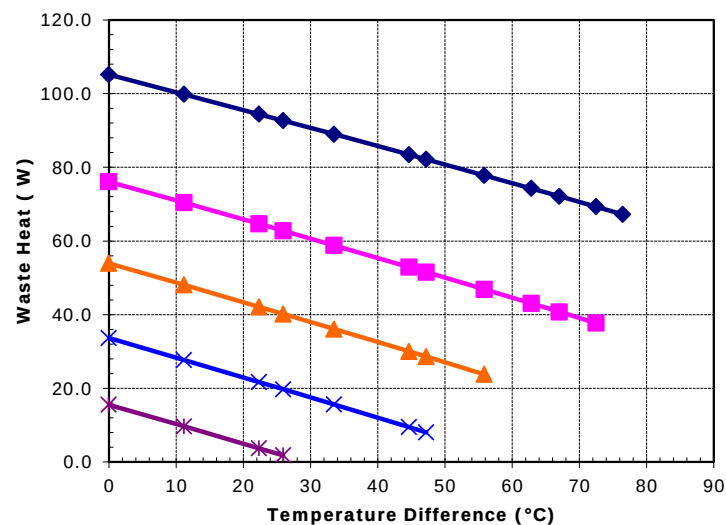
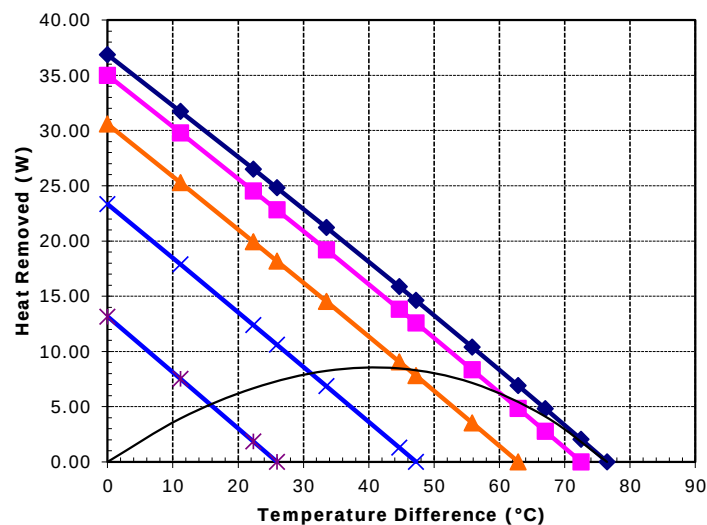
Unpotted SP-254-1.0-2.5 (Series) at a hot-side temperature of 30 °C



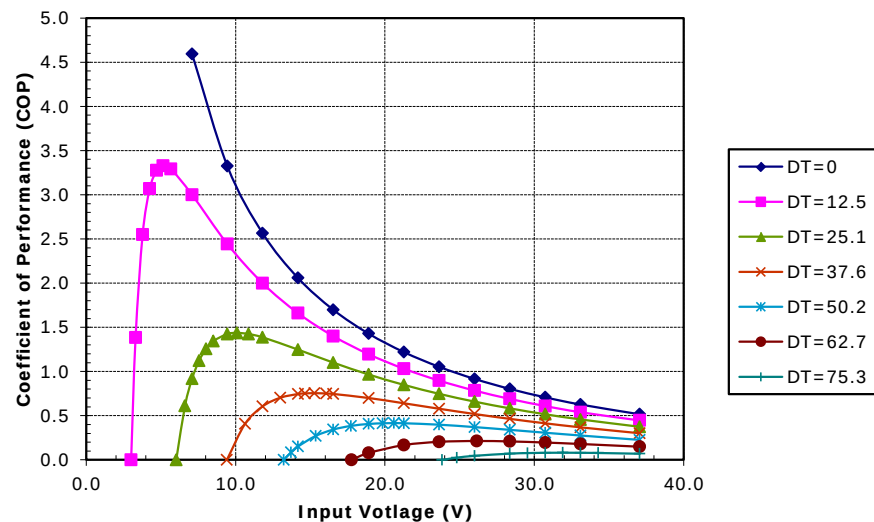
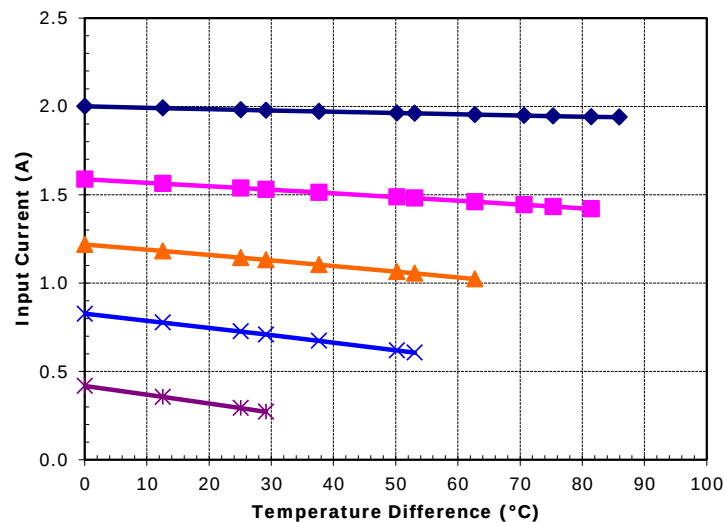
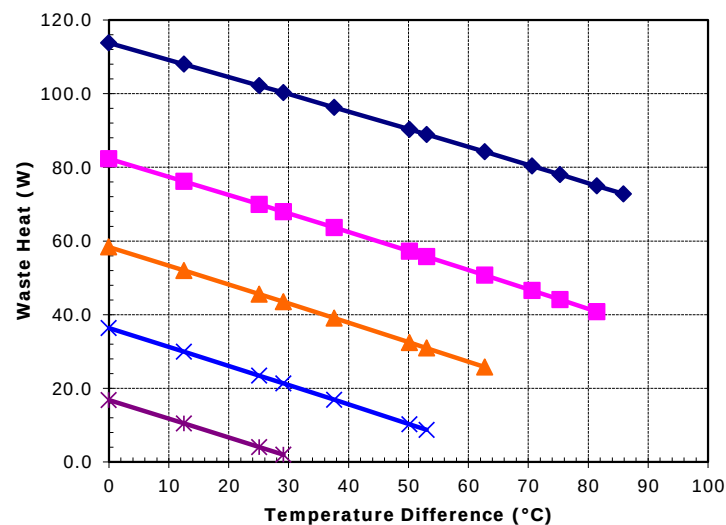
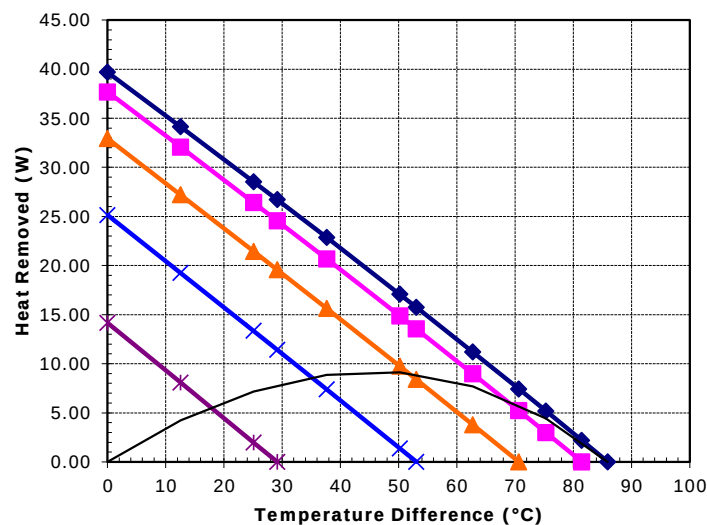
Potted SP-254-1.0-2.5 (Series) at a hot-side temperature of 30 °C



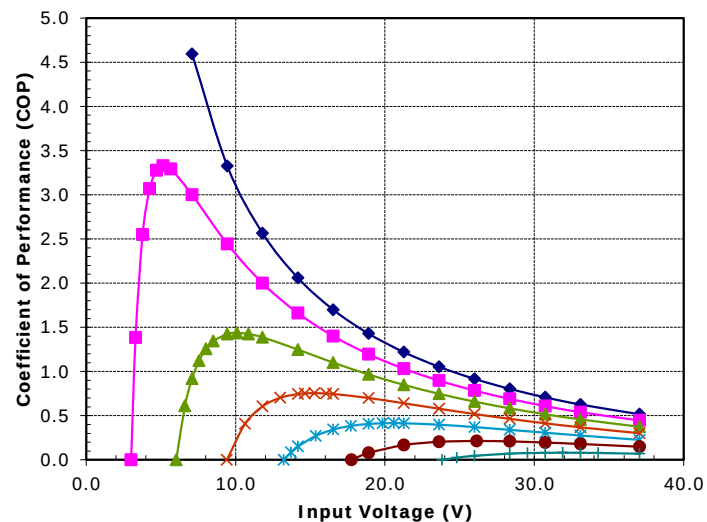
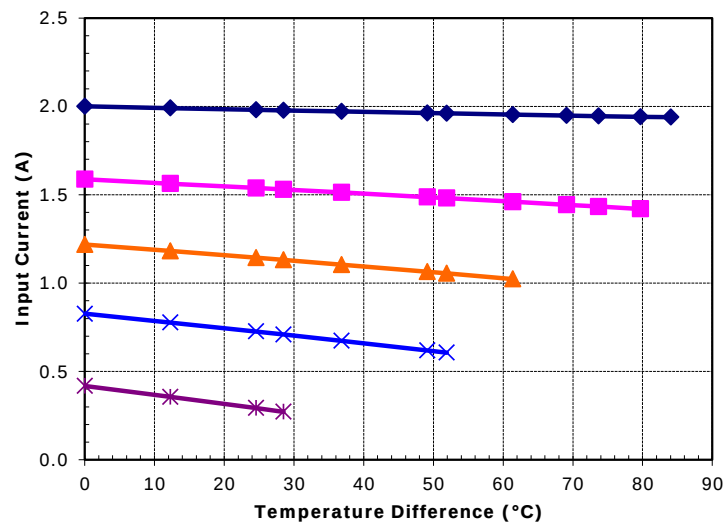
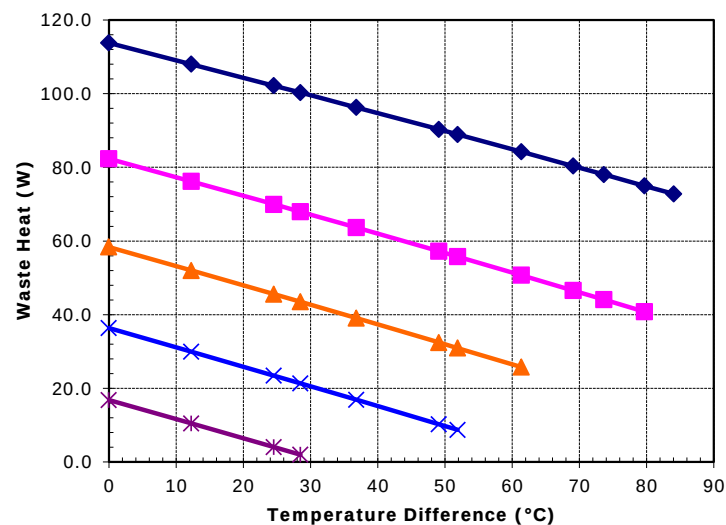
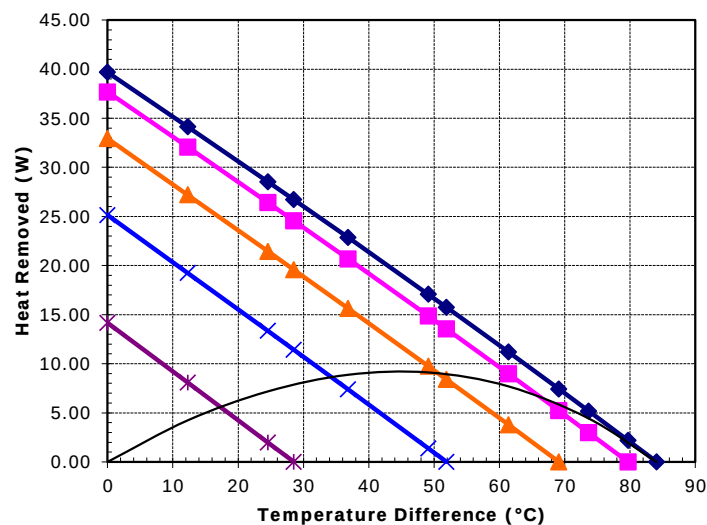
Unpotted SP-254-1.0-2.5 (Series) at a hot-side temperature of 50 °C



Potted SP-254-1.0-2.5 (Series) at a hot-side temperature of 50 °C



Unpotted SP-254-1.0-2.5 (Series) at a hot-side temperature of 70 °C



Potted SP-254-1.0-2.5 (Series) at a hot-side temperature of 70 °C

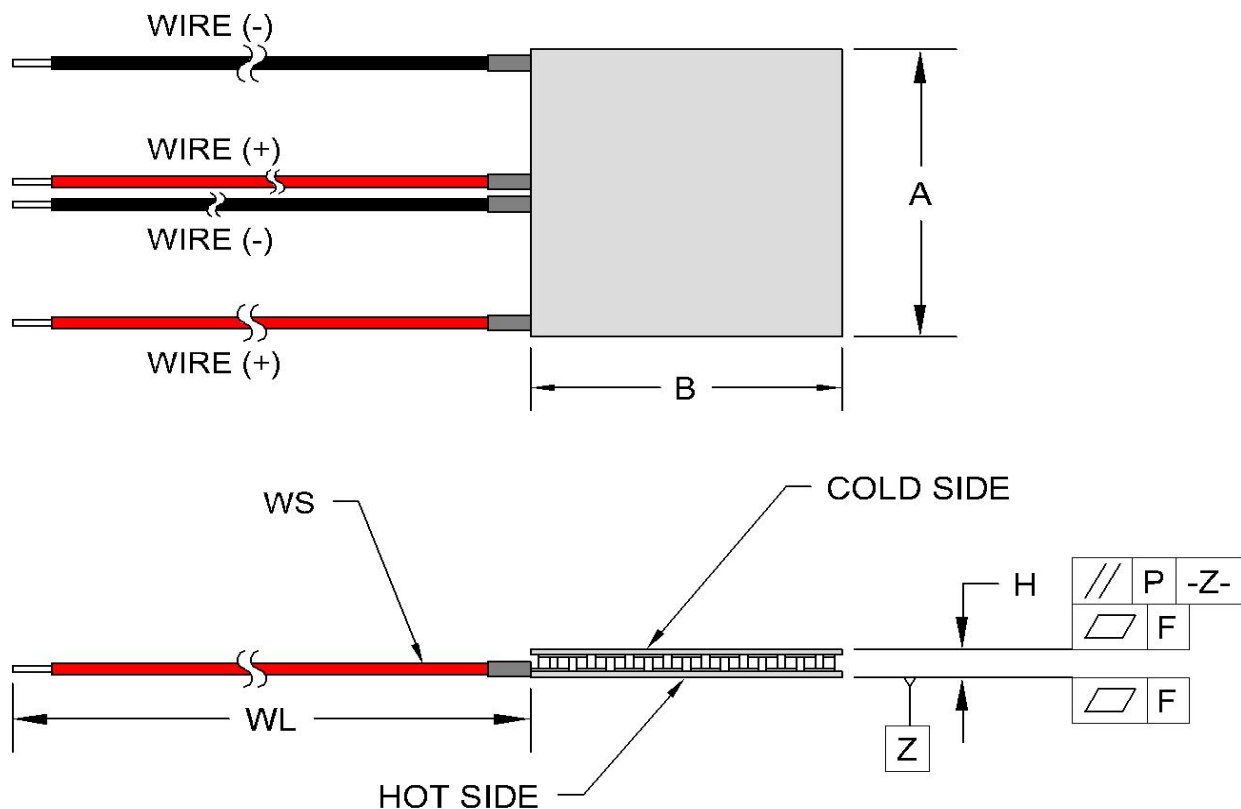
**SP-254-1.0-2.5 (Parallel)  
Thermoelectric Module  
(Peltier Module)  
Specifications**

|                                  | Material<br>Specifications<br>(27 °C hot side<br>temperature) | Material<br>Specifications<br>(50 °C hot side<br>temperature) |
|----------------------------------|---------------------------------------------------------------|---------------------------------------------------------------|
| Vmax (V)                         | 15.9                                                          | 17.6                                                          |
| I <sub>max</sub> (A)             | 3.7                                                           | 3.7                                                           |
| Q <sub>max</sub> (W)             | 36.6                                                          | 40.2                                                          |
| DT <sub>max</sub> (°C)           | 70                                                            | 79                                                            |
| Operation/storage<br>temperature | -40 °C to +80 °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.

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|                                  |              |
|----------------------------------|--------------|
| Width, A (mm)                    | 40 +0.5/-0.2 |
| Width, B (mm)                    | 40 +0.5/-0.2 |
| Height, H (mm)                   | 4.8 ±0.05    |
| Flatness, F (mm)                 | 0.02         |
| Parallelism, P (mm)              | 0.03         |
| Wire Size, WS (mm <sup>2</sup> ) | 0.34         |
| Wire Length, WL (mm)             | 120          |

**Optional Features and Notes:**

Add "P" to part number for sealing module with epoxy potting.

Module can be configured in series mode as well.

Performance graphs include thermal resistance of substrates.

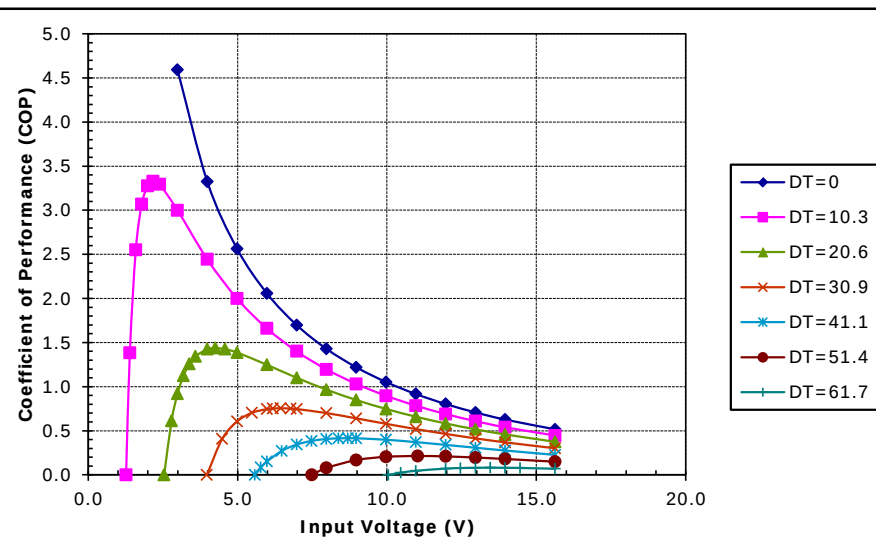
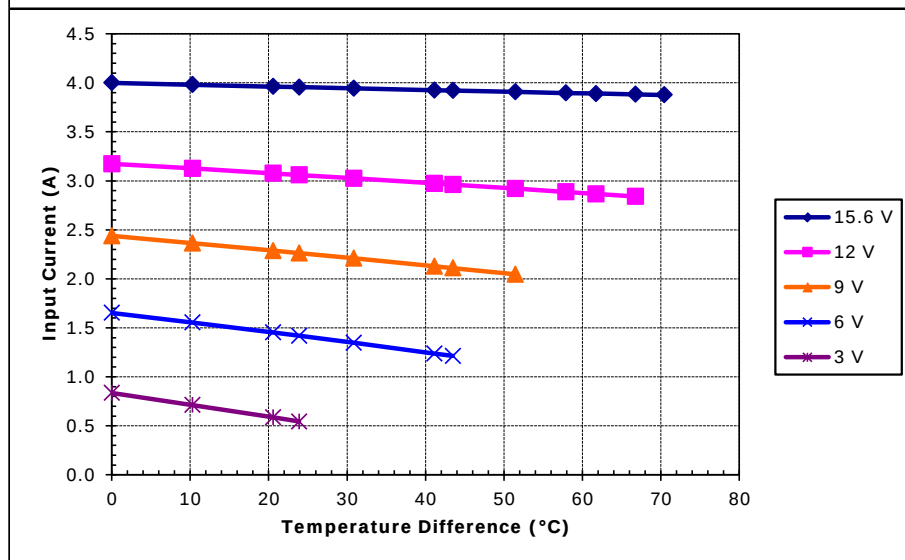
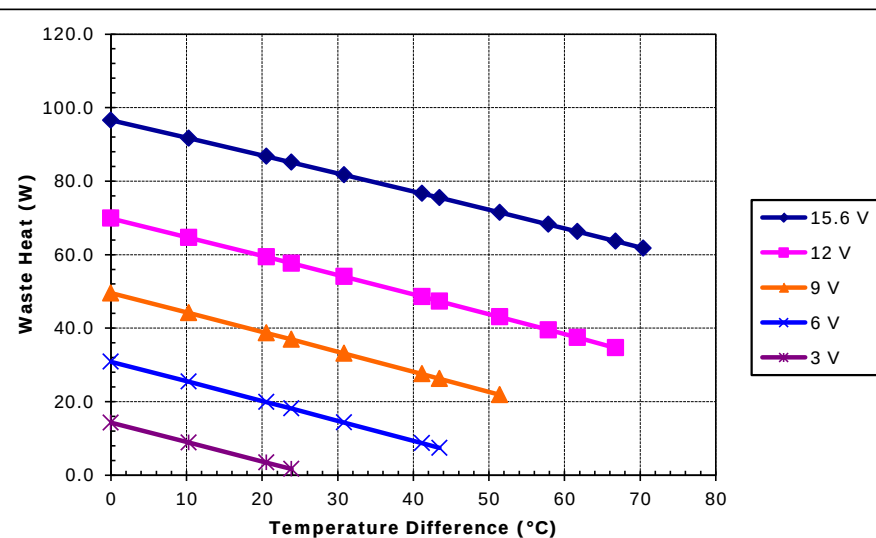
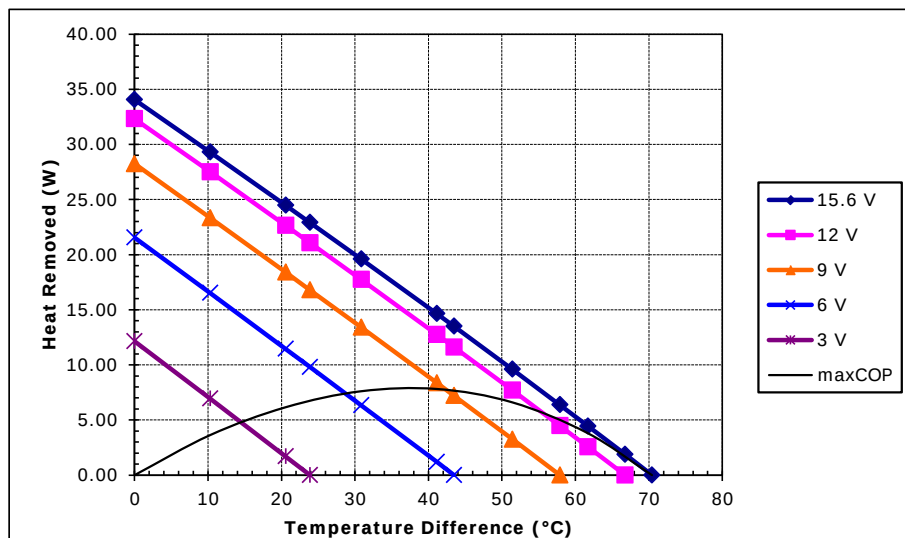
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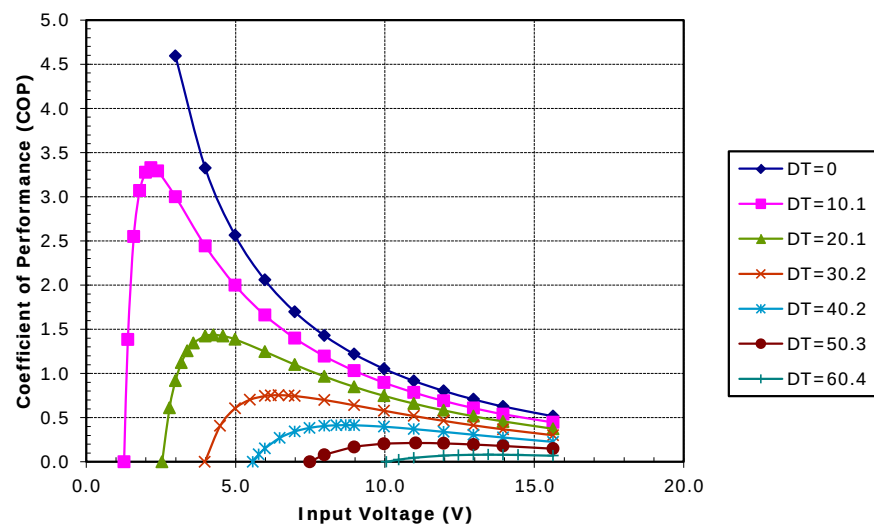
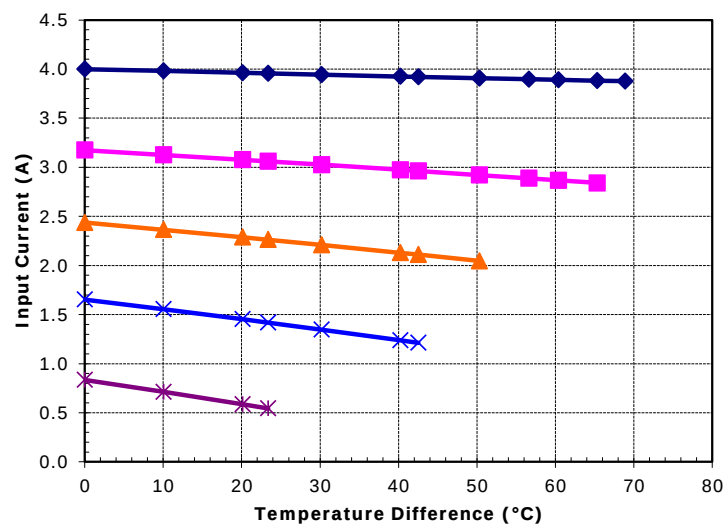
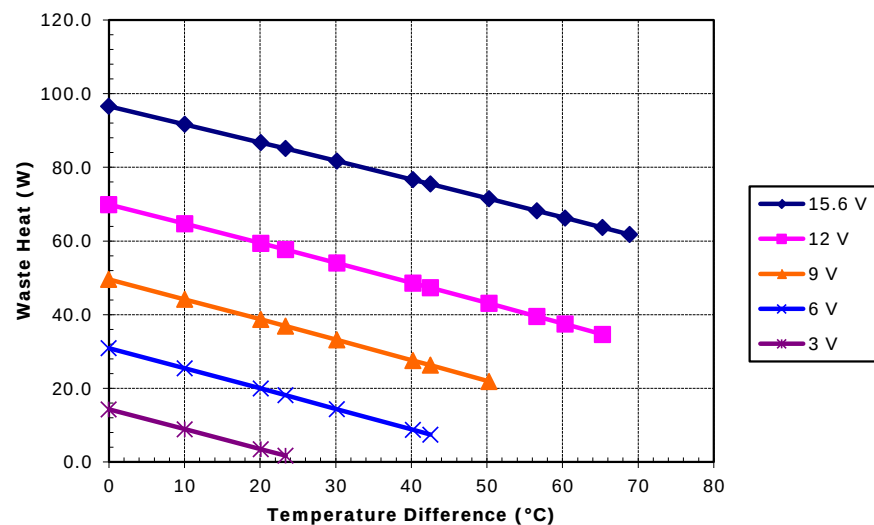
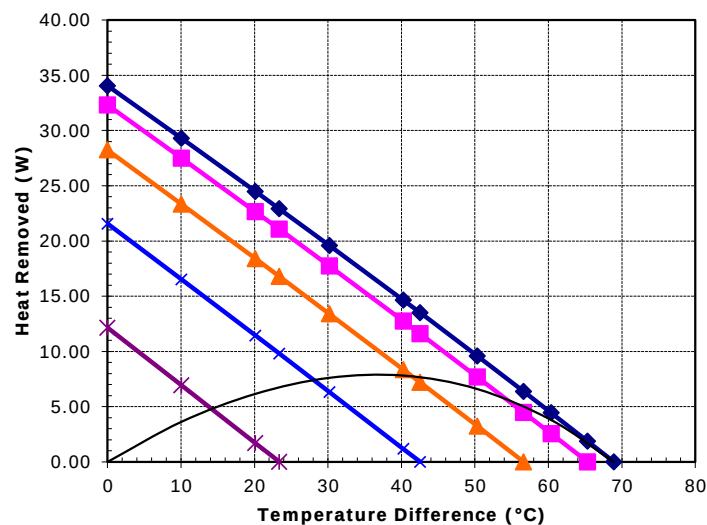
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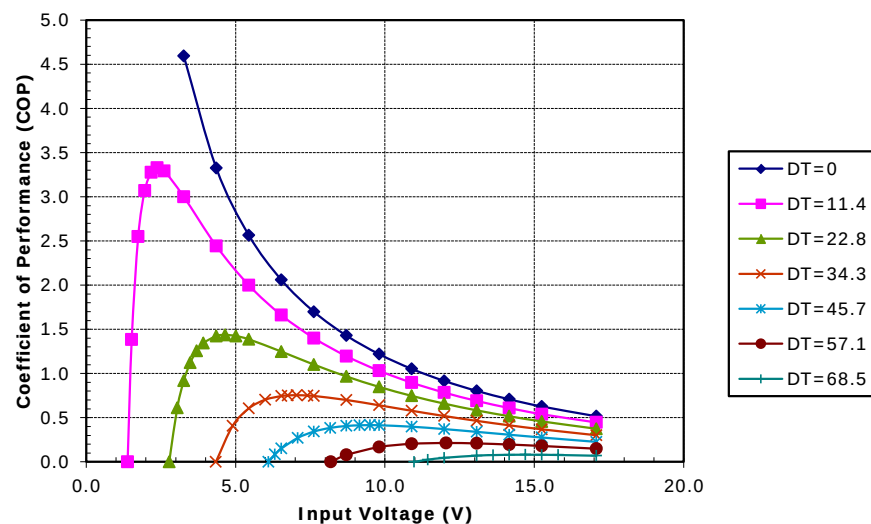
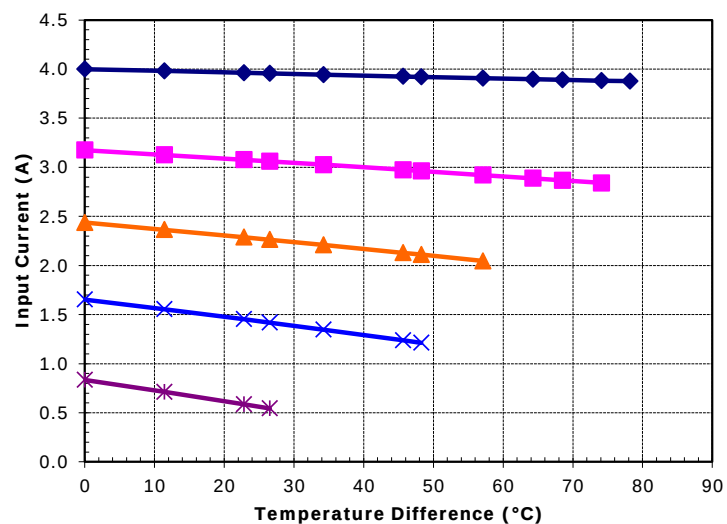
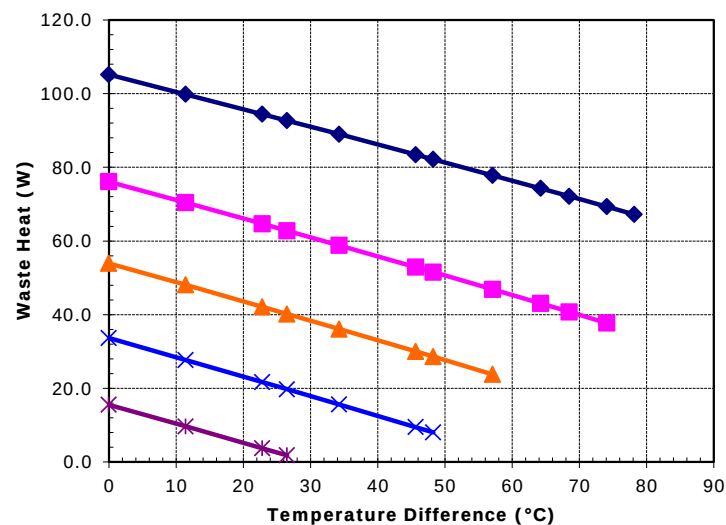
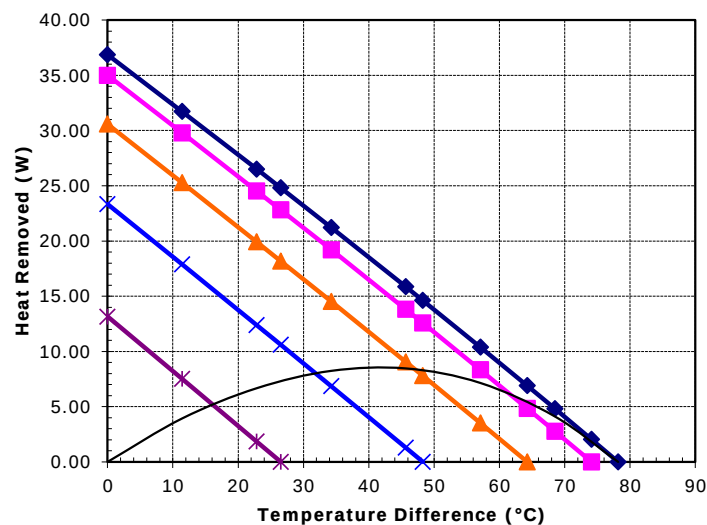




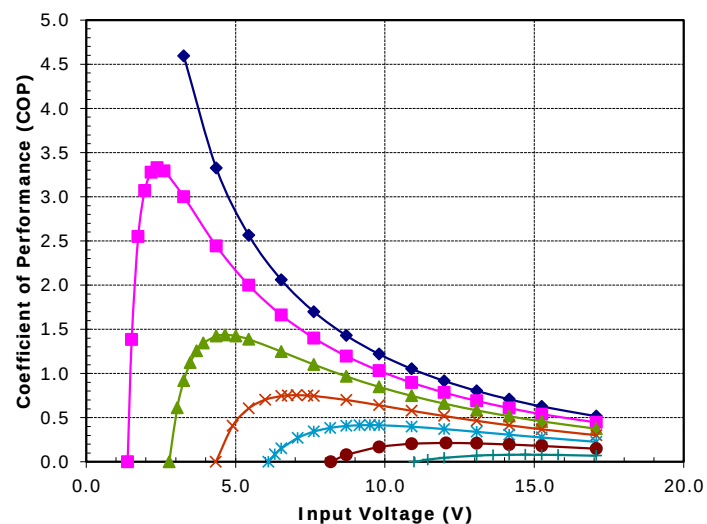
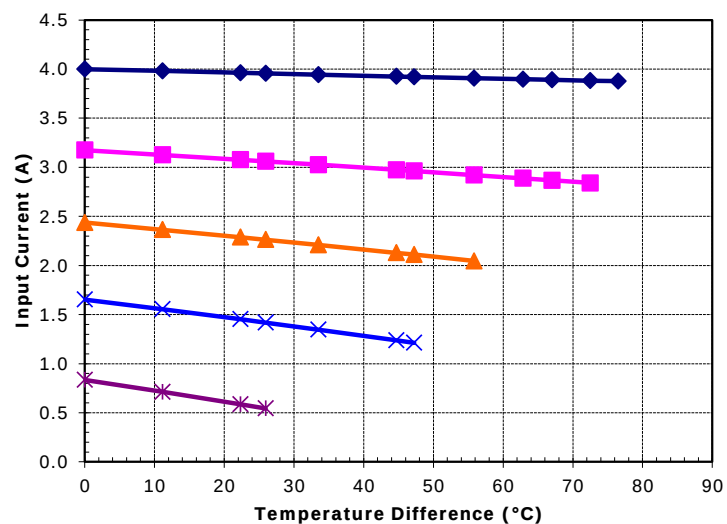
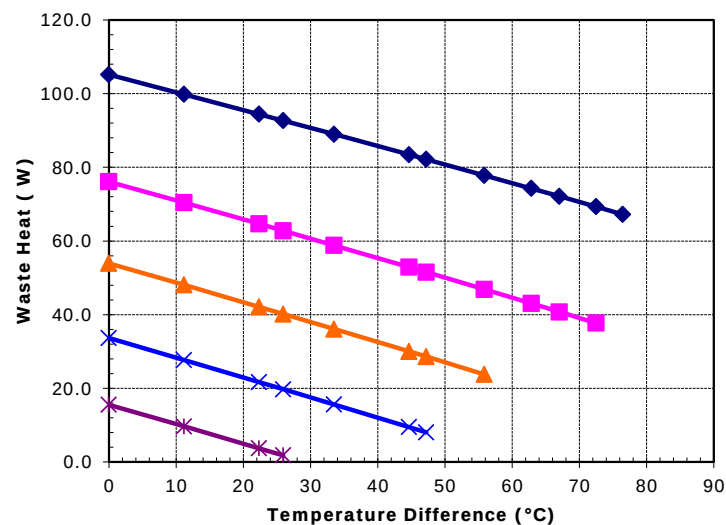
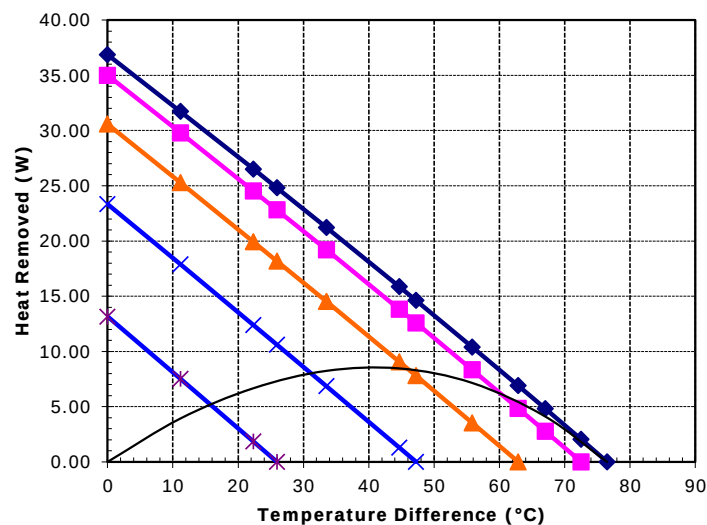
Unpotted SP-254-1.0-2.5 (Parallel) at a hot-side temperature of 30 °C



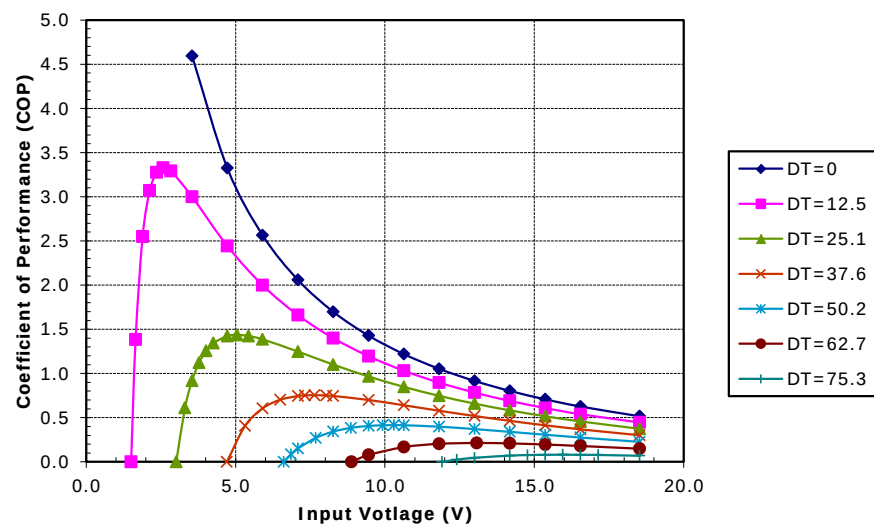
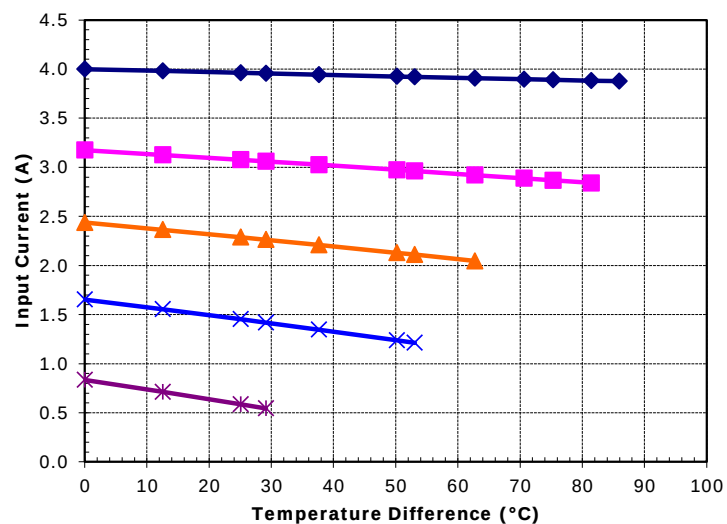
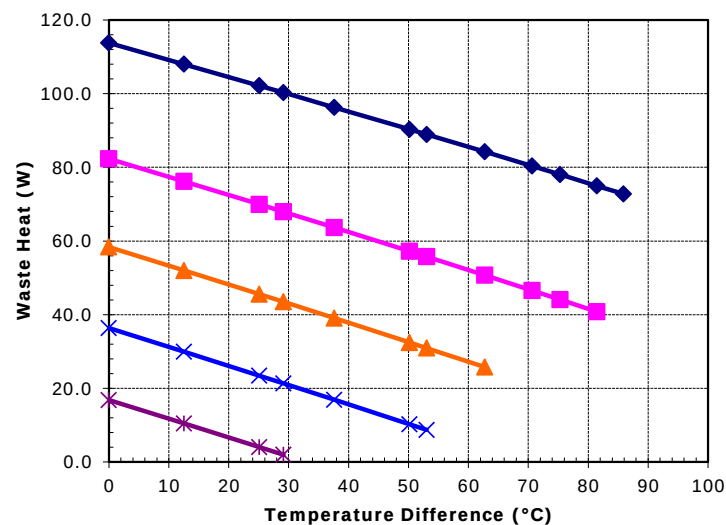
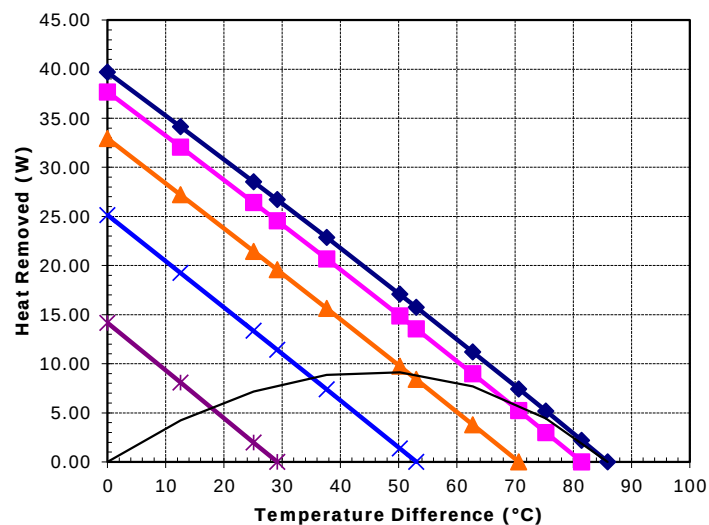
Potted SP-254-1.0-2.5 (Parallel) at a hot-side temperature of 30 °C



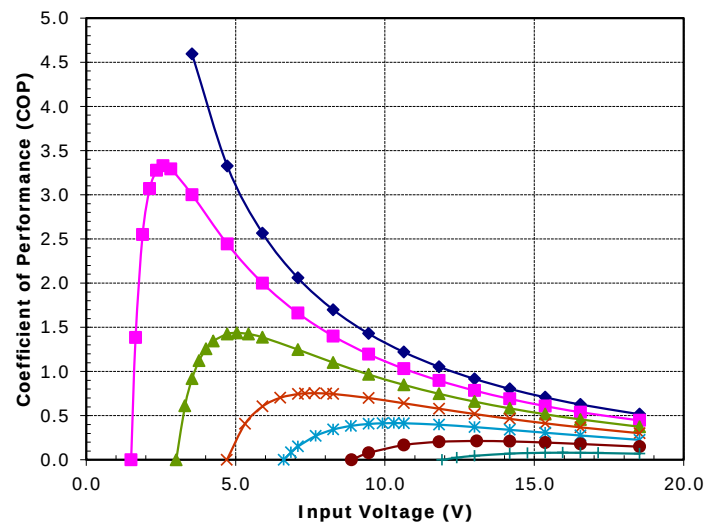
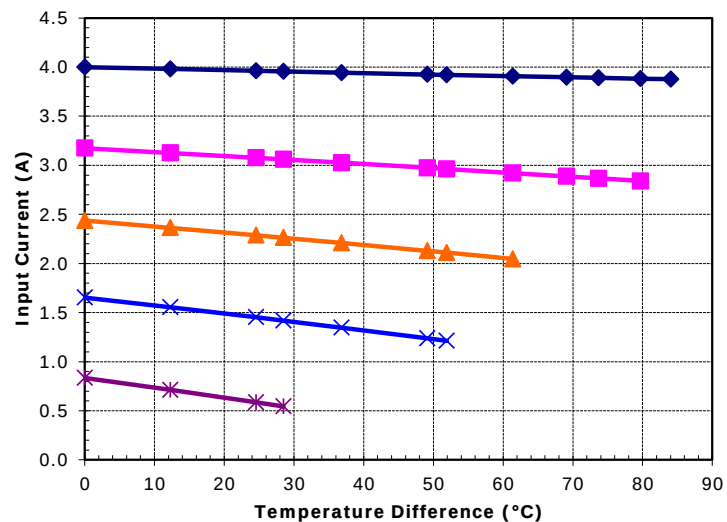
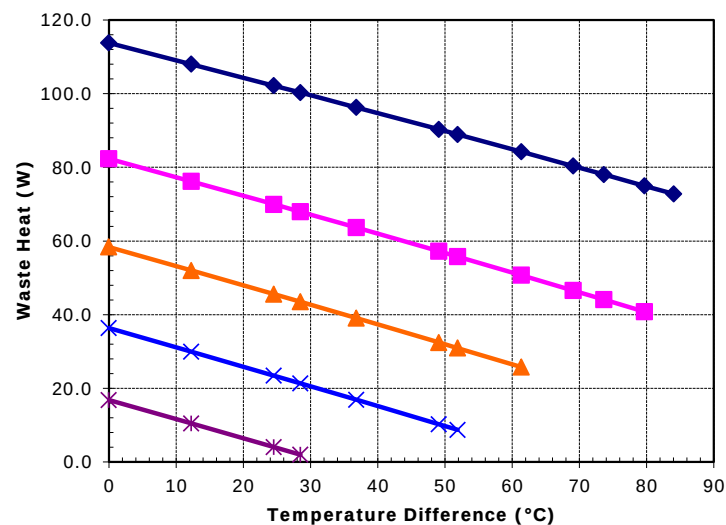
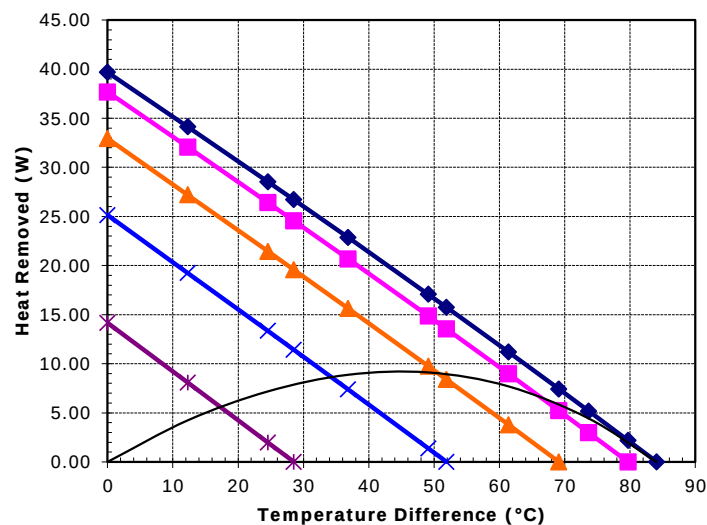
Unpotted SP-254-1.0-2.5 (Parallel) at a hot-side temperature of 50 °C



Potted SP-254-1.0-2.5 (Parallel) at a hot-side temperature of 50 °C



Unpotted SP-254-1.0-2.5 (Parallel) at a hot-side temperature of 70 °C



Potted SP-254-1.0-2.5 (Parallel) at a hot-side temperature of 70 °C