

SERIES: CP50 | **DESCRIPTION:** PELTIER MODULE

FEATURES

- solid state device
- precise temperature control
- quiet operation

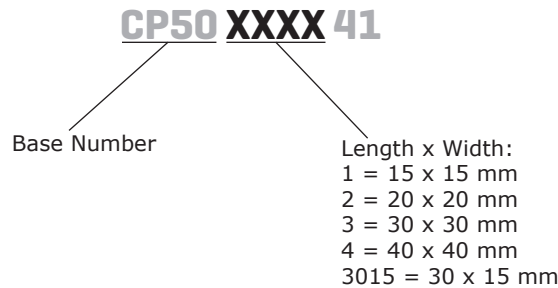


MODEL

| MODEL | input voltage ¹ max (Vdc) | input current ² max (A) | output Qmax ³ | | output ΔTmax ⁴ | |
|------------|--|--|-----------------------------|-----------------------------|------------------------------|------------------------------|
| | | | T _n =27°C (W) | T _n =50°C (W) | T _n =27°C (°C) | T _n =50°C (°C) |
| CP50141 | 2.1 | 5.0 | 5.5 | 6.1 | 68 | 75 |
| CP50241 | 3.8 | 5.0 | 10.0 | 11.1 | 68 | 75 |
| CP50301541 | 4.2 | 5.0 | 11 | 12.3 | 68 | 75 |
| CP50341 | 8.6 | 5.0 | 23.0 | 25.7 | 68 | 75 |
| CP50441 | 15.4 | 5.0 | 41.0 | 45.8 | 68 | 75 |

- Notes:
1. Maximum voltage at ΔT max and T_n=27°C
 2. Maximum current to achieve ΔT max
 3. Maximum heat absorbed at cold side occurs at I_{max}, V_{max}, and ΔT=0°C
 4. Maximum temperature difference occurs at I_{max}, V_{max}, and Q=0W (ΔT max measured in a vacuum at 1.3 Pa)

PART NUMBER KEY



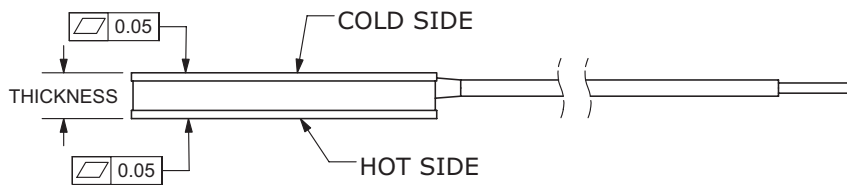
SPECIFICATIONS

| parameter | conditions/description | min | typ | max | units |
|----------------------------------|---|-------|------|-------|-------|
| internal resistance ¹ | CP50141 | 0.279 | 0.31 | 0.341 | Ω |
| | CP50241 | 0.504 | 0.56 | 0.616 | Ω |
| | CP50301541 | 0.567 | 0.63 | 0.693 | Ω |
| | CP50341 | 1.161 | 1.29 | 1.419 | Ω |
| | CP50441 | 2.07 | 2.3 | 2.53 | Ω |
| solder melting temperature | connection between thermoelectric pairs | 138 | | | °C |
| assembly compression | | | | 1 | MPa |
| hot side plate | | | | 80 | °C |
| RoHS | 2011/65/EU | | | | |

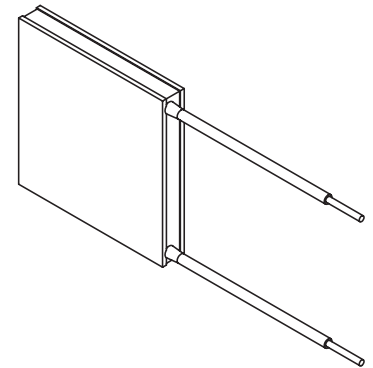
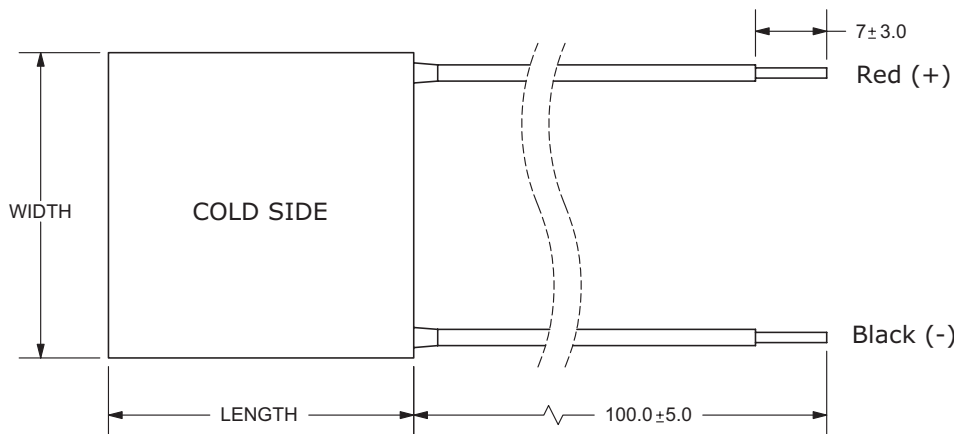
Note: 1. Measured by AC 4-terminal method at 25°C

MECHANICAL DRAWING

units: mm

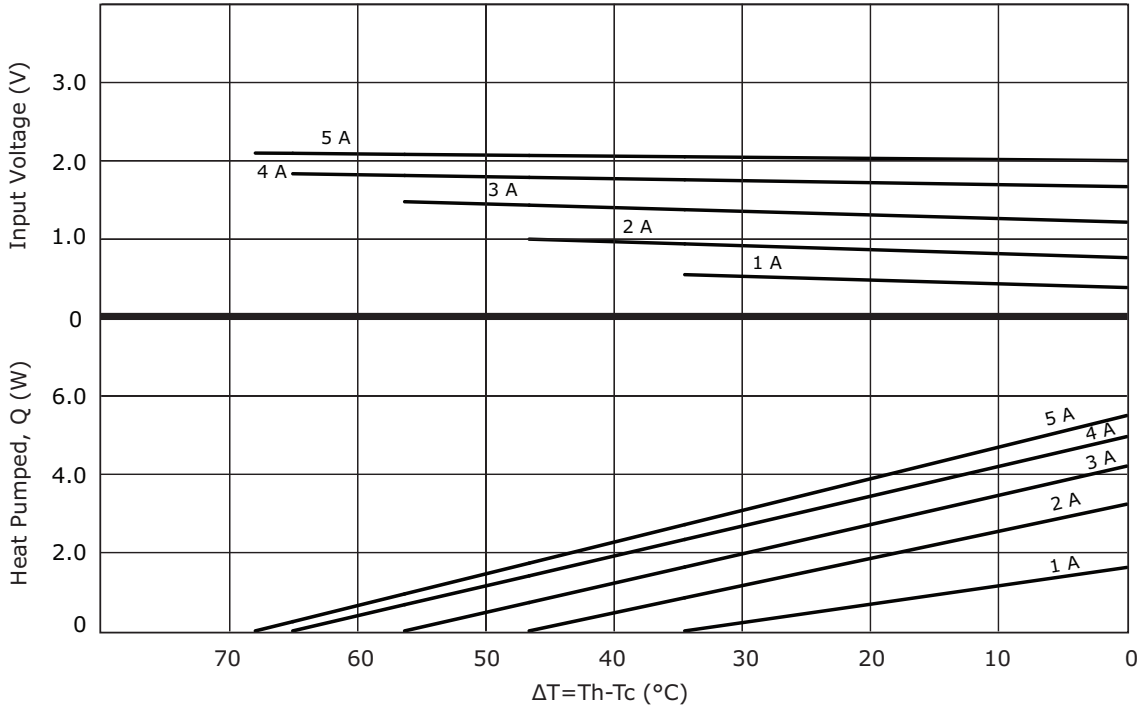


| | MATERIAL | PLATING |
|---------------|---|---------|
| ceramic plate | 96% AL ₂ O ₃ | |
| wire leads | 20 AWG | tin |
| sealer | silicon rubber 703 RTV (between cold and hot side plates) | |
| joint cover | silicon rubber 703 RTV | |
| marking | P/N & S/N printed on cold side surface | |

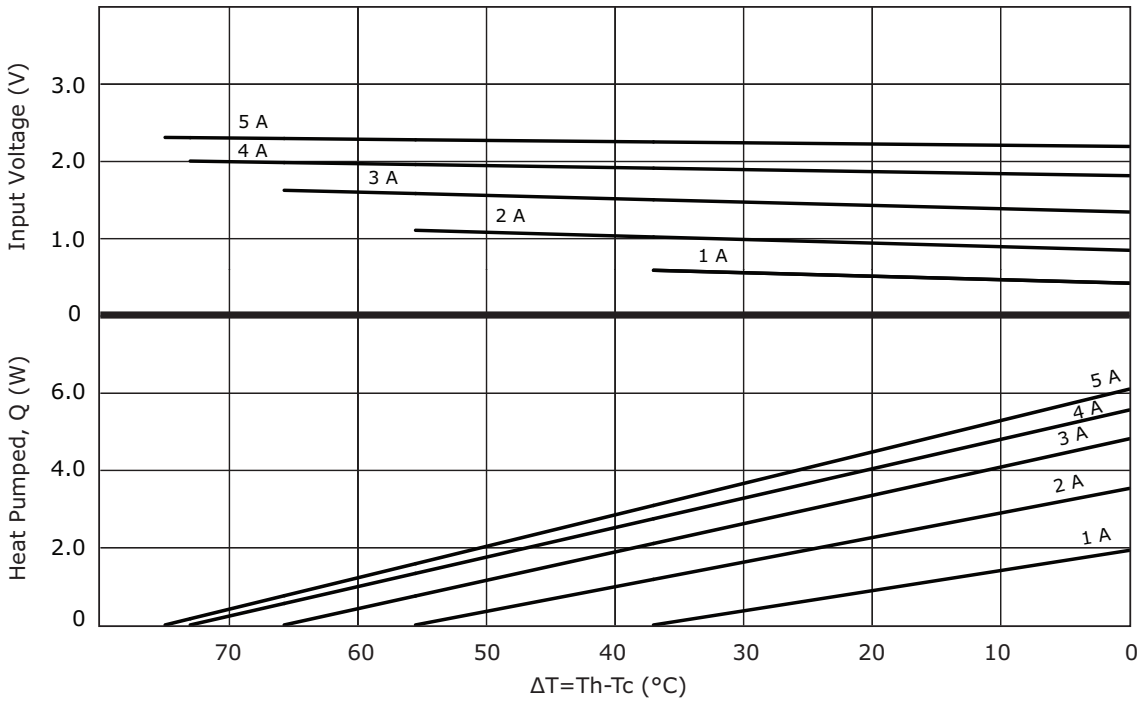


| MODEL NO. | LENGTH (mm) | WIDTH (mm) | THICKNESS (mm) |
|------------|-------------|------------|----------------|
| CP50141 | 15 ±0.3 | 15 ±0.3 | 4.05 ±0.1 |
| CP50241 | 20 ±0.3 | 20 ±0.3 | 4.05 ±0.1 |
| CP50301541 | 30 ±0.3 | 15 ±0.3 | 4.05 ±0.1 |
| CP50341 | 30 ±0.3 | 30 ±0.3 | 4.05 ±0.1 |
| CP50441 | 40 ±0.3 | 40 ±0.3 | 4.05 ±0.1 |

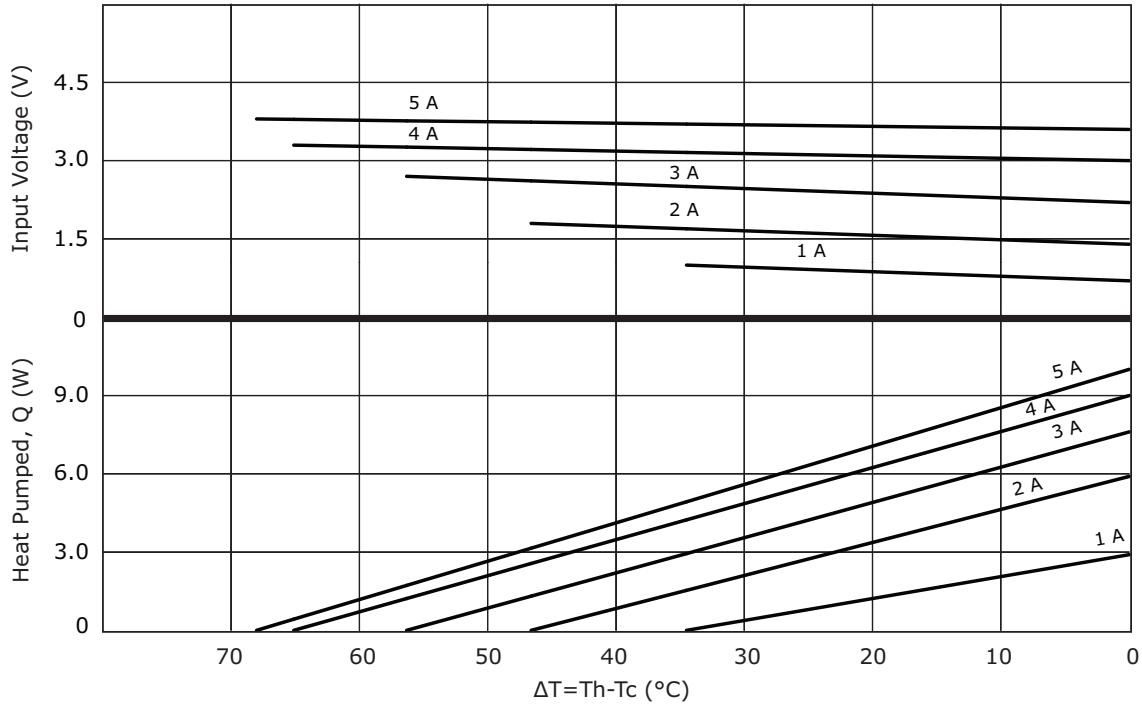
CP50141 PERFORMANCE (Th=27°C)



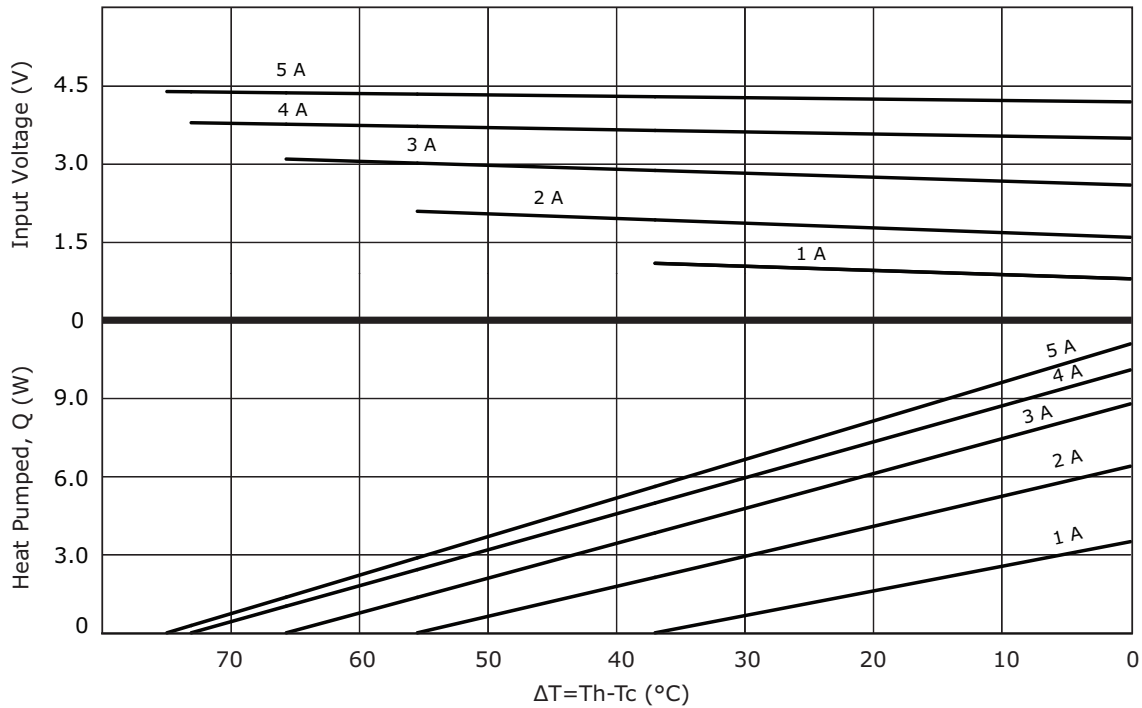
CP50141 PERFORMANCE (Th=50°C)



CP50241 PERFORMANCE (Th=27°C)



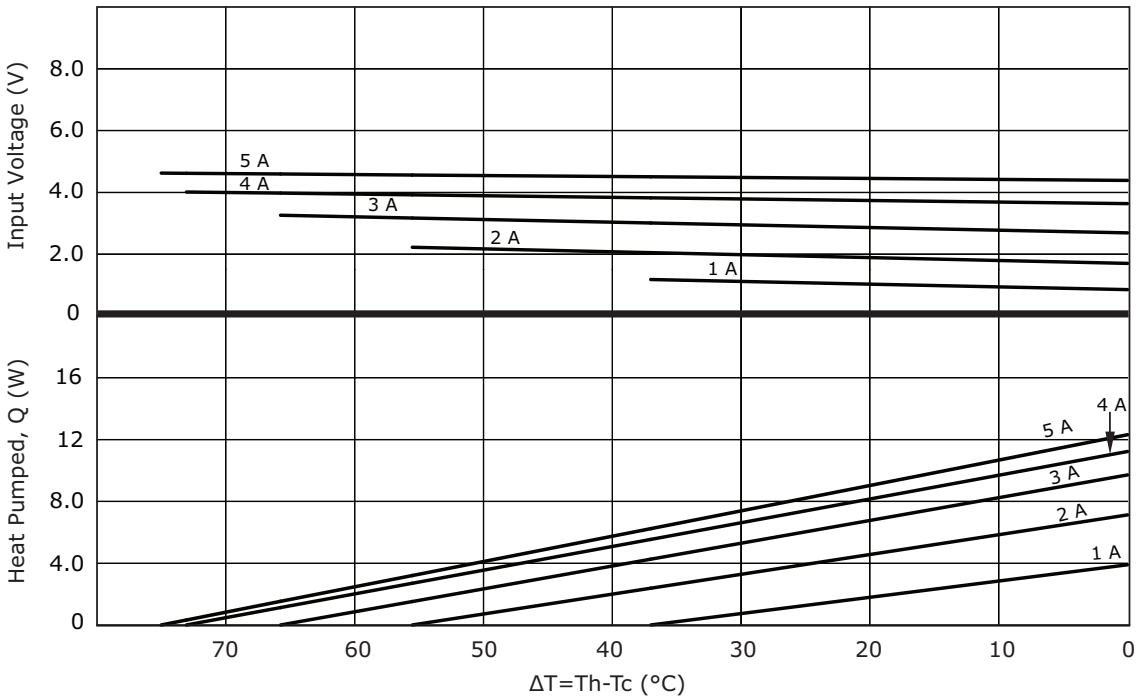
CP50241 PERFORMANCE (Th=50°C)



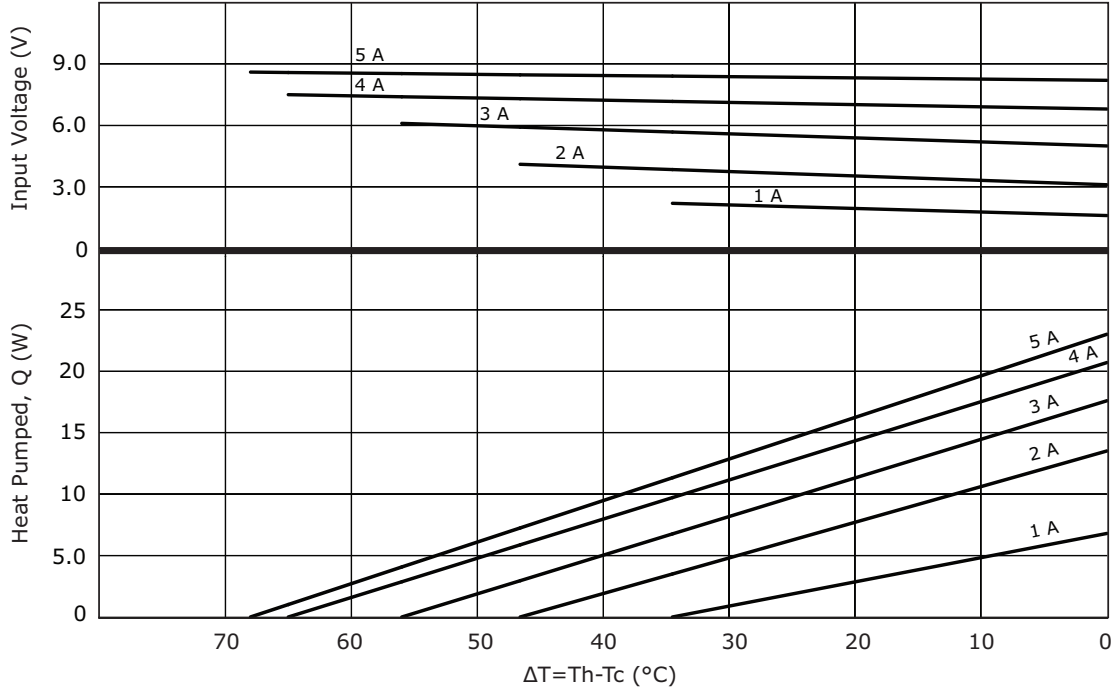
CP50301541 PERFORMANCE (Th=27°C)



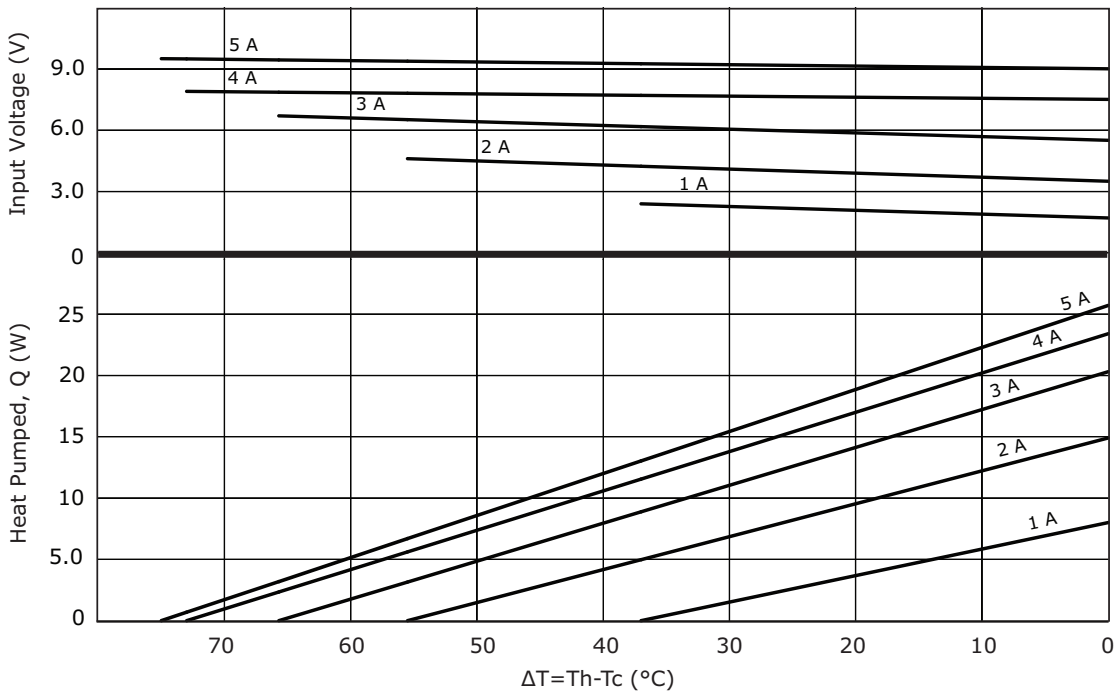
CP50301541 PERFORMANCE (Th=50°C)



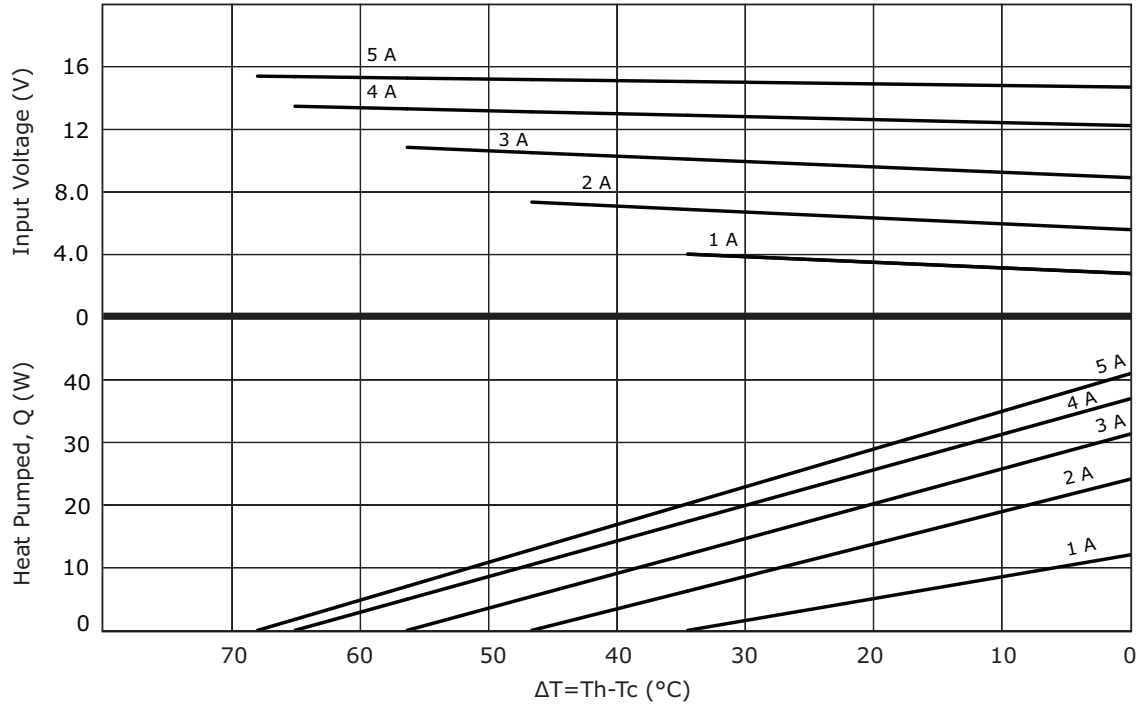
CP50341 PERFORMANCE (Th=27°C)



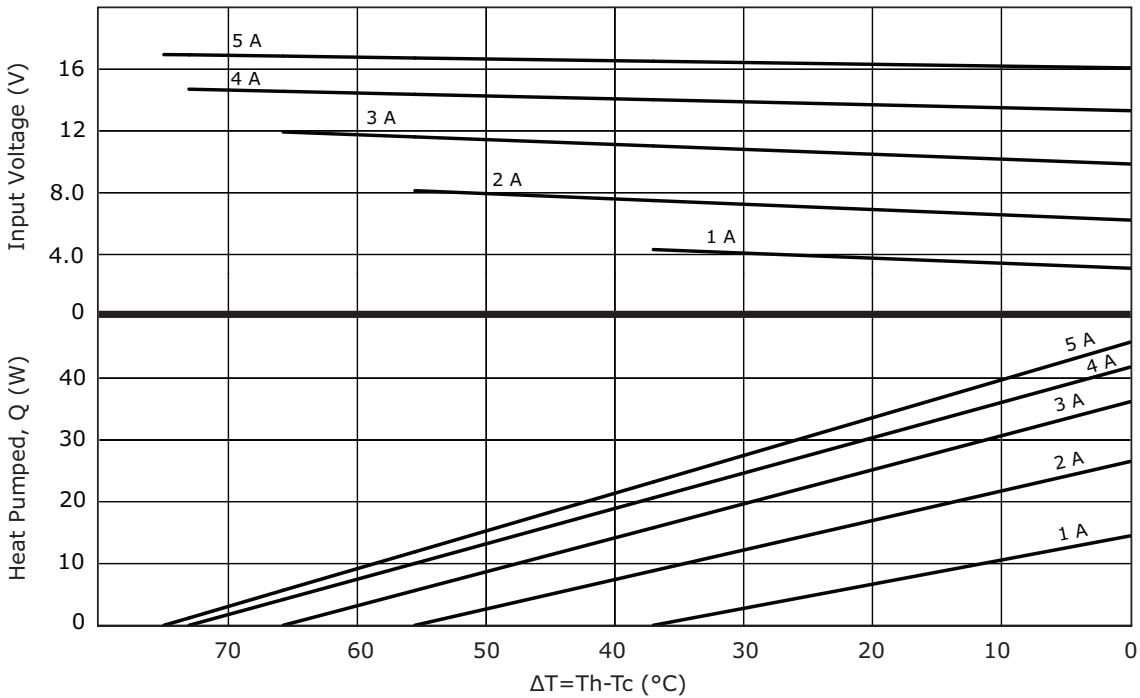
CP50341 PERFORMANCE (Th=50°C)



CP50441 PERFORMANCE (Th=27°C)



CP50441 PERFORMANCE (Th=50°C)



REVISION HISTORY

| rev. | description | date |
|------|-----------------|------------|
| 1.0 | initial release | 09/06/2016 |

The revision history provided is for informational purposes only and is believed to be accurate.



Headquarters
20050 SW 112th Ave.
Tualatin, OR 97062
800.275.4899

Fax 503.612.2383
cui.com
techsupport@cui.com

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