

**SERIES: CP60H | DESCRIPTION: PELTIER MODULE**
**FEATURES**

- arcTEC™ structure on select models
- enhanced reliability for high thermal cycling
- superior thermal performance
- silicon sealed
- wide  $\Delta T$  max
- low profile
- precise temperature control
- solid state construction


**MODEL**

|                           | input voltage <sup>1</sup> | input current <sup>2</sup> | internal resistance <sup>3</sup> | output Qmax <sup>4</sup> |                          | output $\Delta T$ max <sup>5</sup> |                           |
|---------------------------|----------------------------|----------------------------|----------------------------------|--------------------------|--------------------------|------------------------------------|---------------------------|
|                           | max [Vdc]                  | max [A]                    | typ [ $\Omega \pm 10\%$ ]        | T <sub>h</sub> =27°C [W] | T <sub>h</sub> =50°C [W] | T <sub>h</sub> =27°C [°C]          | T <sub>h</sub> =50°C [°C] |
| CP60131H                  | 3.8                        | 6.0                        | 0.45                             | 13                       | 14.3                     | 70                                 | 77                        |
| CP60139H                  | 2.1                        | 6.0                        | 0.30                             | 7.4                      | 8.2                      | 70                                 | 77                        |
| CP60231H                  | 8.8                        | 6.0                        | 1.05                             | 29.7                     | 32.7                     | 70                                 | 77                        |
| CP60239H                  | 3.8                        | 6.0                        | 0.55                             | 13.6                     | 14.9                     | 70                                 | 77                        |
| CP602040395H <sup>6</sup> | 7.6                        | 6.0                        | 1.09                             | 27.5                     | 30.2                     | 70                                 | 77                        |
| CP60301233H               | 5.6                        | 6.0                        | 0.76                             | 19.7                     | 21.7                     | 70                                 | 77                        |
| CP60301531H               | 7.6                        | 6.0                        | 0.93                             | 26.3                     | 28.9                     | 70                                 | 77                        |
| CP60302031H               | 13.0                       | 6.0                        | 1.51                             | 49.5                     | 54.5                     | 68                                 | 75                        |
| CP603315H <sup>6</sup>    | 15.7                       | 6.0                        | 1.90                             | 53.1                     | 59.1                     | 70                                 | 77                        |
| CP6030395 <sup>6</sup>    | 11.8                       | 6.0                        | 1.65                             | 41.5                     | 45.6                     | 70                                 | 77                        |
| CP603395H <sup>6</sup>    | 8.8                        | 6.0                        | 1.25                             | 31.1                     | 34.2                     | 70                                 | 77                        |
| CP604020395H <sup>6</sup> | 7.6                        | 6.0                        | 1.09                             | 27.5                     | 30.2                     | 70                                 | 77                        |
| CP60433H <sup>6</sup>     | 19.5                       | 6.0                        | 2.54                             | 67.6                     | 74.3                     | 68                                 | 75                        |
| CP604395H <sup>6</sup>    | 15.7                       | 6.0                        | 2.2                              | 55.6                     | 61.0                     | 70                                 | 77                        |
| CP604040 <sup>6</sup>     | 24.1                       | 6.0                        | 3.21                             | 83.5                     | 91.9                     | 68                                 | 75                        |
| CP60546241 <sup>6</sup>   | 41.3                       | 6.0                        | 5.78                             | 147                      | 161                      | 70                                 | 77                        |
| CP6055354 <sup>6</sup>    | 35.4                       | 6.0                        | 4.95                             | 126                      | 138                      | 70                                 | 77                        |
| CP60555542 <sup>6</sup>   | 29.8                       | 6.0                        | 4.15                             | 106                      | 116                      | 70                                 | 77                        |
| CP604060395 <sup>6</sup>  | 23.6                       | 6.0                        | 3.3                              | 80.2                     | 88.2                     | 70                                 | 77                        |

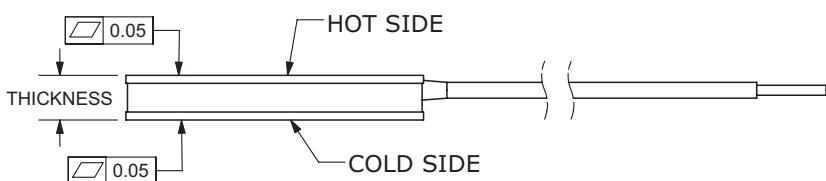
Notes: 1. Maximum voltage at  $\Delta T$  max and T<sub>h</sub>=27°C  
2. Maximum current to achieve  $\Delta T$  max  
3. Measured by AC 4-terminal method at 25°C  
4. Maximum heat absorbed at cold side occurs at I<sub>max</sub>, V<sub>max</sub>, and  $\Delta T=0^\circ\text{C}$   
5. Maximum temperature difference occurs at I<sub>max</sub>, V<sub>max</sub>, and Q=0W ( $\Delta T$  max measured in a vacuum at 1.3 Pa)  
6. Designed with arcTEC™ structure.

## SPECIFICATIONS

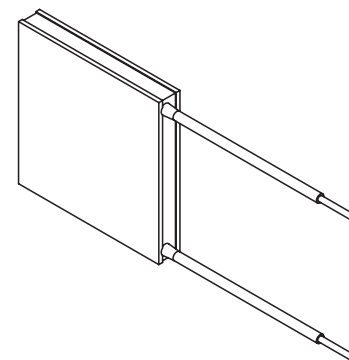
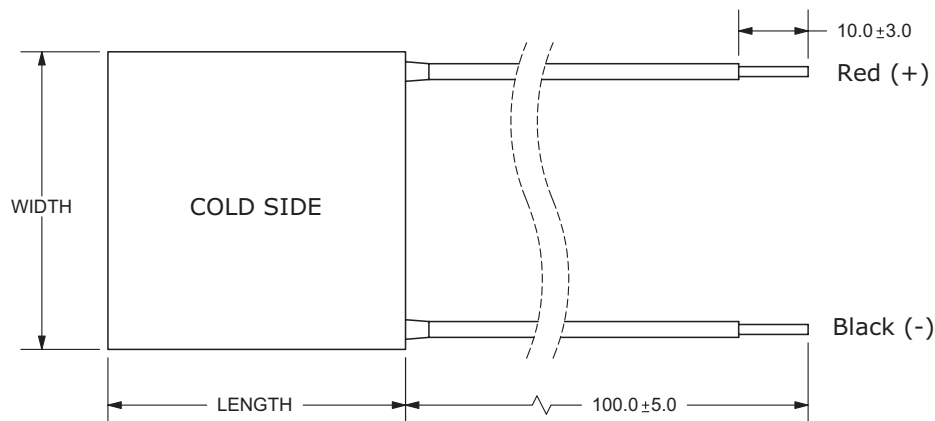
| parameter                  | conditions/description                  | min | typ | max | units |
|----------------------------|---|-----|-----|-----|-------|
| solder melting temperature | connection between thermoelectric pairs | 235 |     |     | °C    |
| assembly compression       |   |     |     | 1   | MPa   |
| RoHS                       | yes                                     |     |     |     |       |

## MECHANICAL DRAWING

units: mm

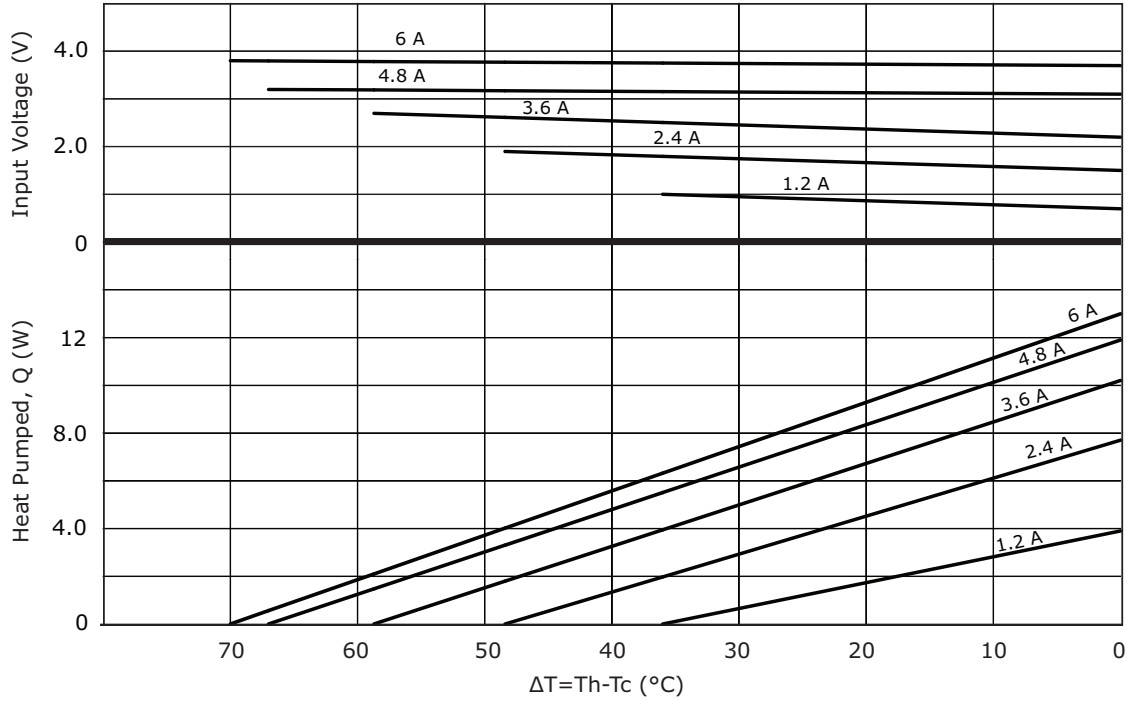


|   | MATERIAL  | PLATING |
|---|---|---------|
| ceramic plate   | 96% AL <sub>2</sub> O <sub>3</sub>                        |         |
| wire leads<br>(CP60131H,<br>CP60231H,<br>CP60302031H,<br>CP60301233H,<br>CP60301531H,<br>CP603315H) | 22 AWG  | tin     |
| wire leads (all other models)   | 20 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                    |         |

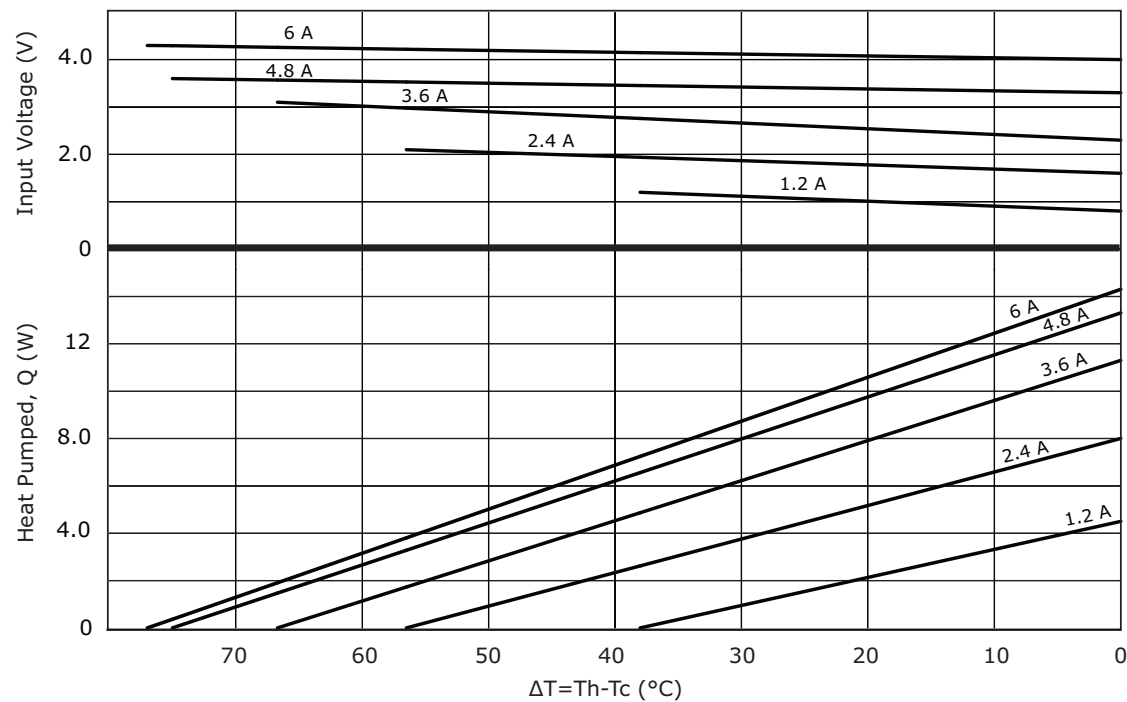


| MODEL NO.    | LENGTH [mm] | WIDTH [mm] | THICKNESS [mm] | MODEL NO.    | LENGTH [mm] | WIDTH [mm] | THICKNESS [mm] |
|--------------|-------------|------------|----------------|--------------|-------------|------------|----------------|
| CP60131H     | 15 ± 0.3    | 15 ± 0.3   | 3.1 ± 0.025    | CP603395H    | 30 ± 0.3    | 30 ± 0.3   | 3.95 ± 0.025   |
| CP60139H     | 15 ± 0.3    | 15 ± 0.3   | 3.9 ± 0.025    | CP604020395H | 40 ± 0.3    | 20 ± 0.3   | 3.95 ± 0.025   |
| CP60231H     | 20 ± 0.3    | 20 ± 0.3   | 3.1 ± 0.025    | CP60433H     | 40 ± 0.3    | 40 ± 0.3   | 3.3 ± 0.03     |
| CP60239H     | 20 ± 0.3    | 20 ± 0.3   | 3.9 ± 0.025    | CP604395H    | 40 ± 0.3    | 40 ± 0.3   | 3.95 ± 0.025   |
| CP602040395H | 20 ± 0.3    | 40 ± 0.3   | 3.95 ± 0.025   | CP604040     | 40 ± 0.3    | 40 ± 0.3   | 4.0 ± 0.1      |
| CP60301233H  | 30 ± 0.1    | 12 ± 0.1   | 3.3 ± 0.1      | CP60546241   | 62.5 ± 0.3  | 54 ± 0.3   | 4.1 ± 0.1      |
| CP60301531H  | 30 ± 0.3    | 15 ± 0.3   | 3.1 ± 0.025    | CP6055354    | 55 ± 0.3    | 55 ± 0.3   | 4.1 ± 0.1      |
| CP60302031H  | 30 ± 0.3    | 20 ± 0.3   | 3.1 ± 0.1      | CP6055542    | 55 ± 0.3    | 55 ± 0.3   | 4.2 ± 0.1      |
| CP603315H    | 30 ± 0.3    | 30 ± 0.3   | 3.15 ± 0.025   | CP604060395  | 40 ± 0.3    | 60 ± 0.3   | 3.95 ± 0.025   |
| CP6030395    | 30 ± 0.3    | 30 ± 0.3   | 3.95 ± 0.025   |              |             |            |                |

## CP60131H PERFORMANCE (Th=27°C)



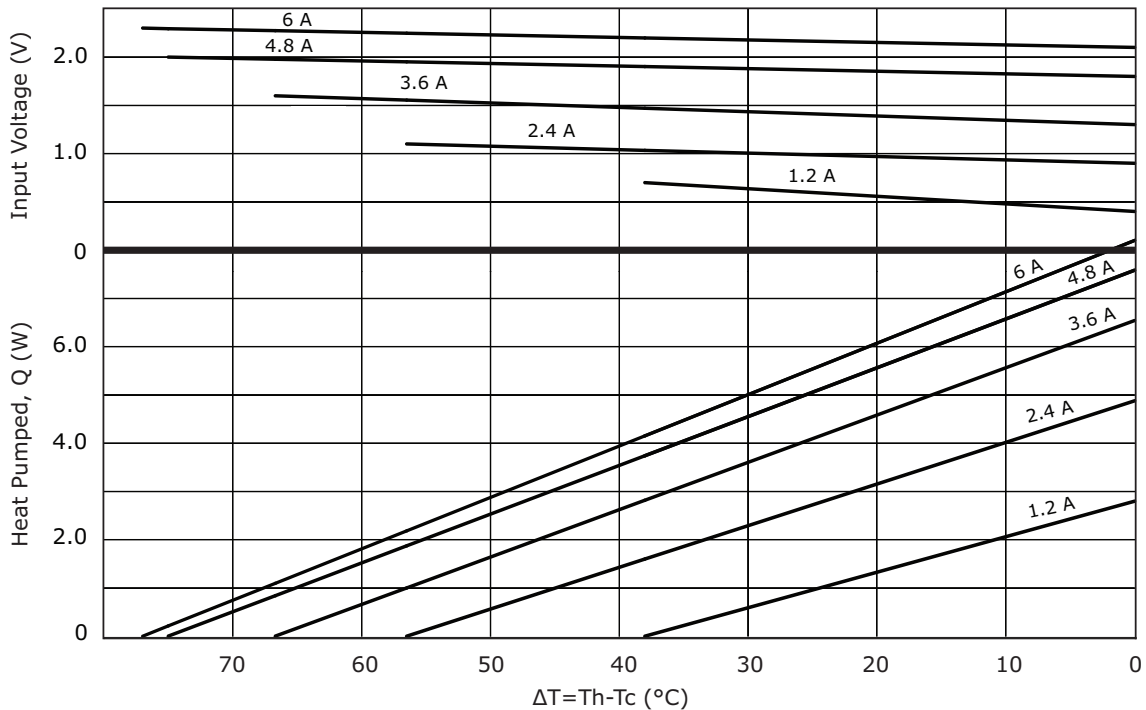
## CP60131H PERFORMANCE (Th=50°C)



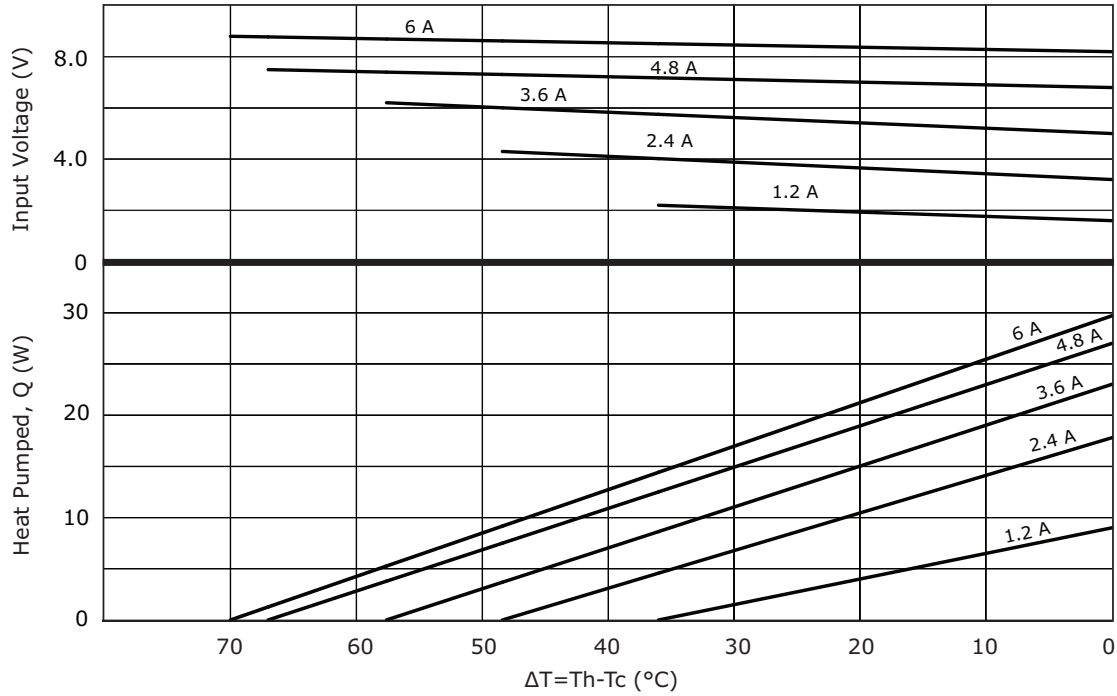
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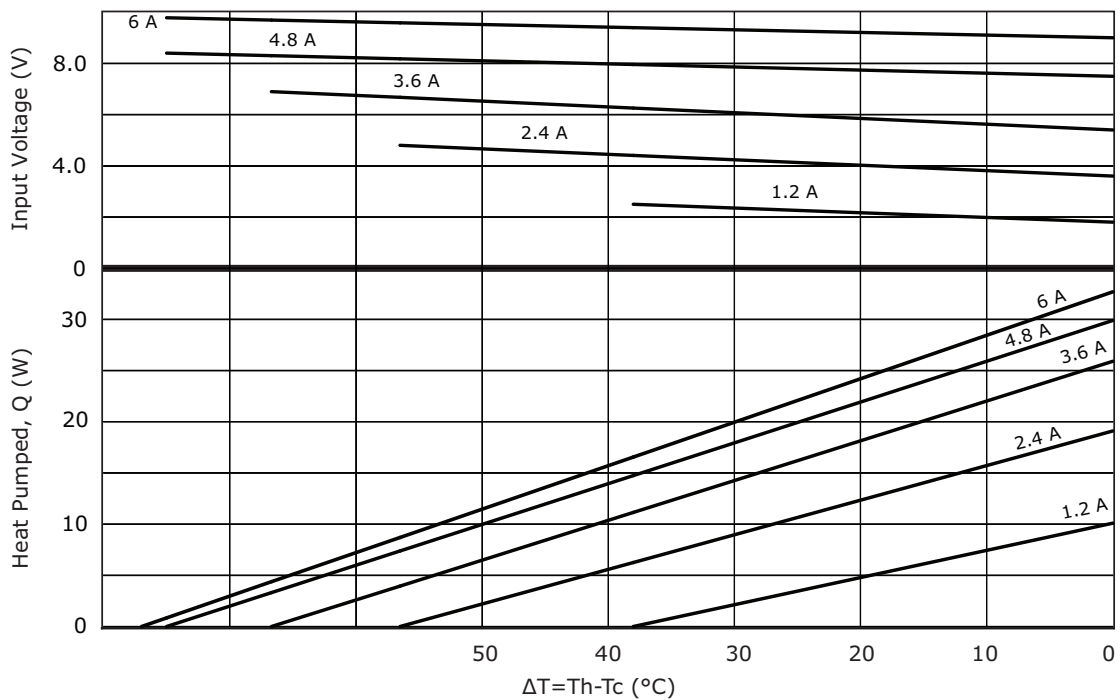
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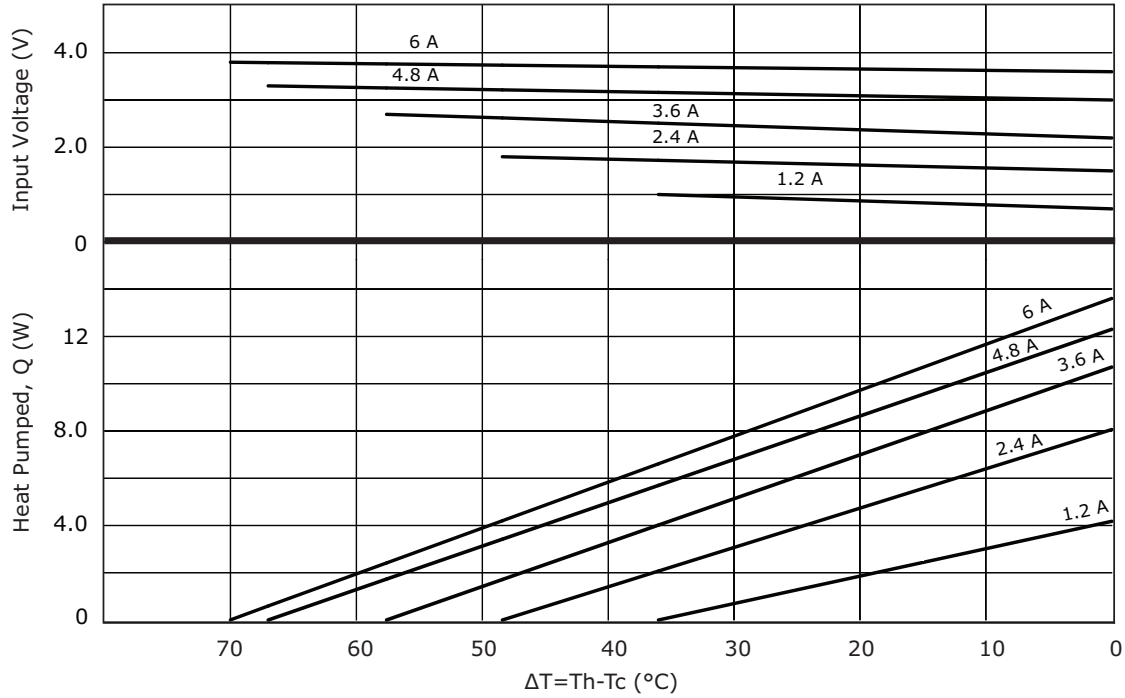
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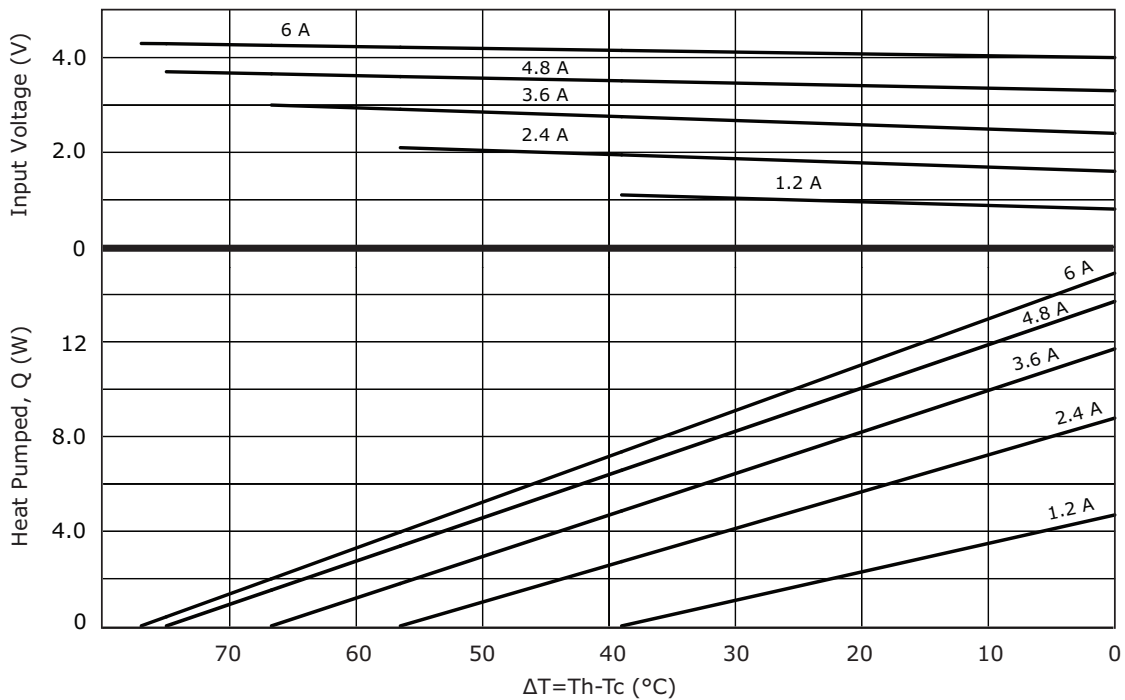
## CP60231H PERFORMANCE (Th=50°C)



## CP60239H PERFORMANCE (Th=27°C)



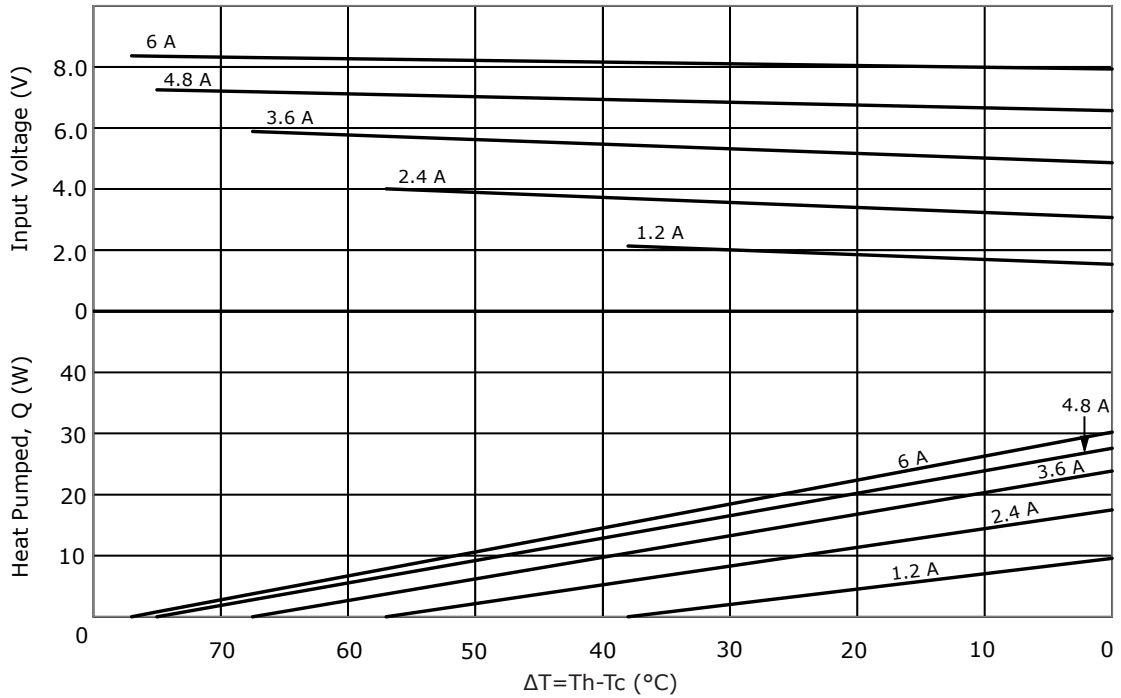
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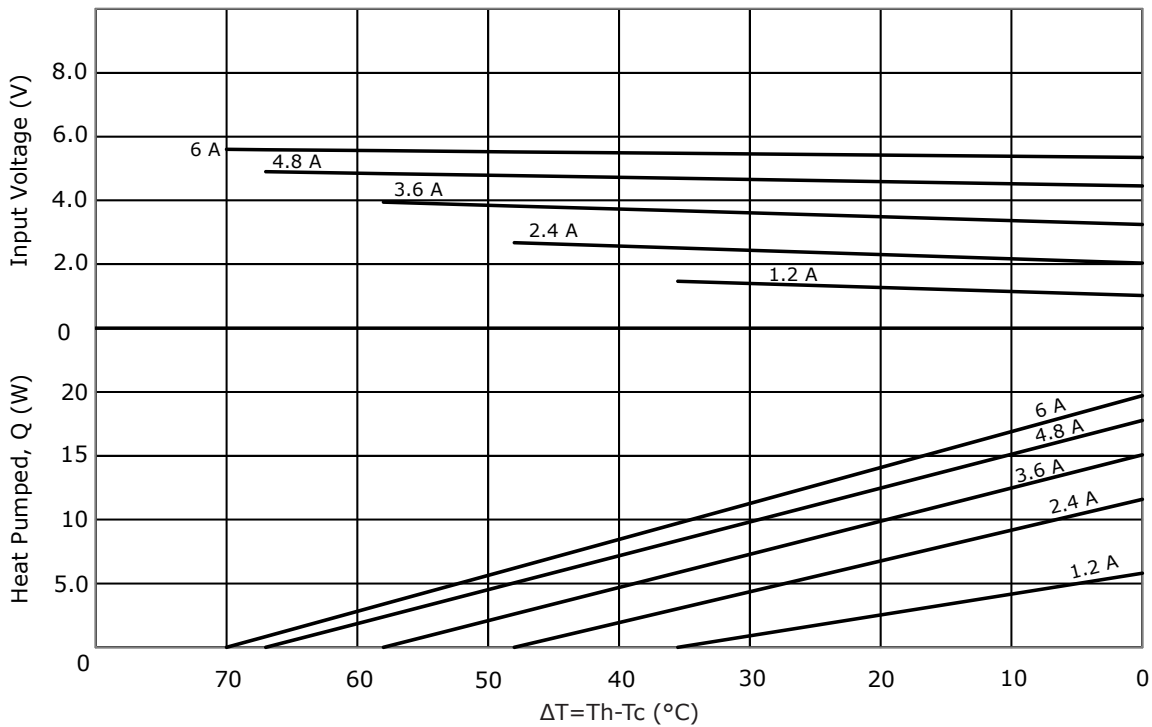
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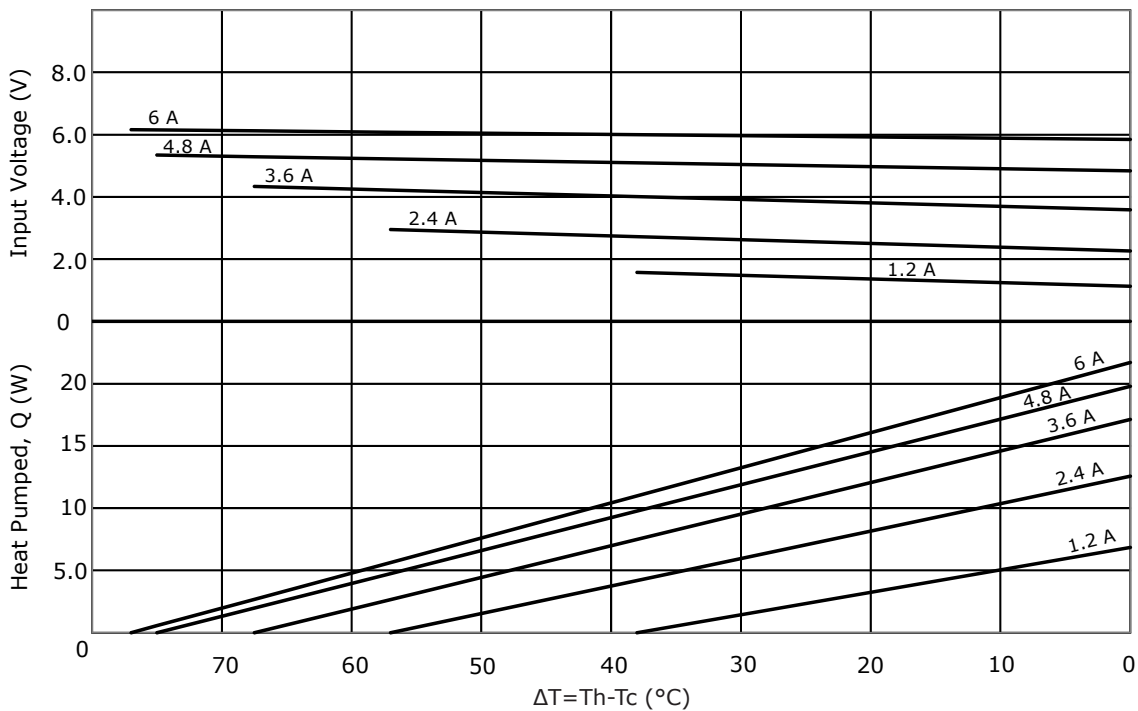
### CP602040395H PERFORMANCE (Th=50°C)



### CP60301233H PERFORMANCE (Th=27°C)

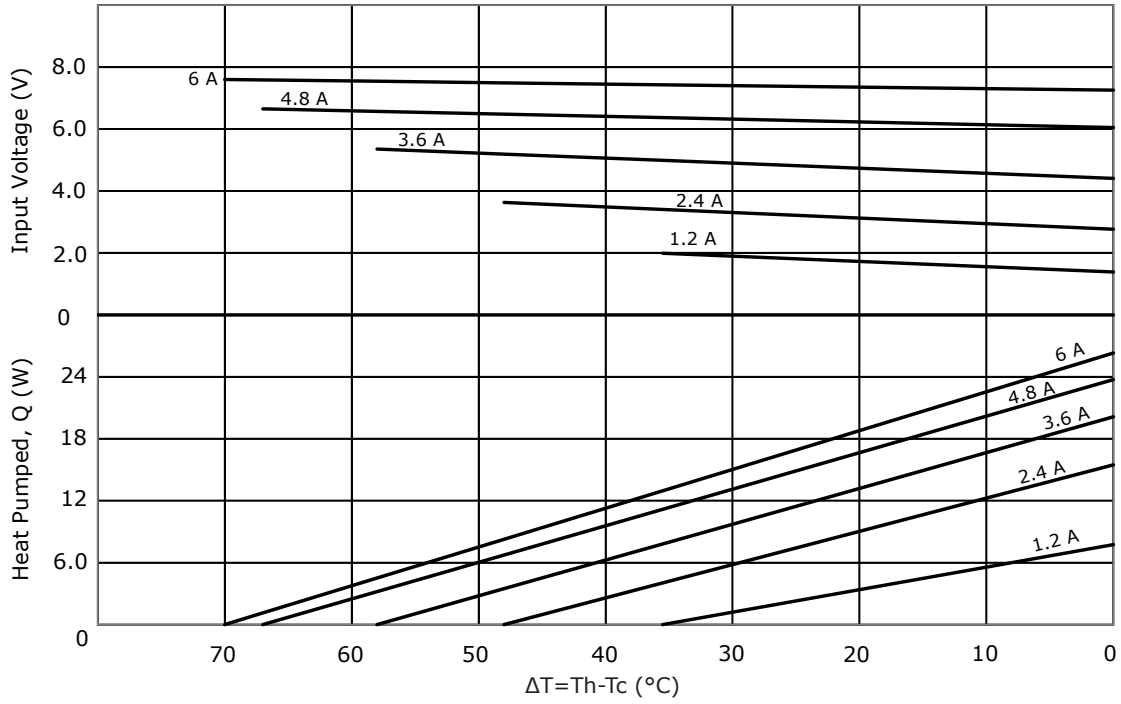


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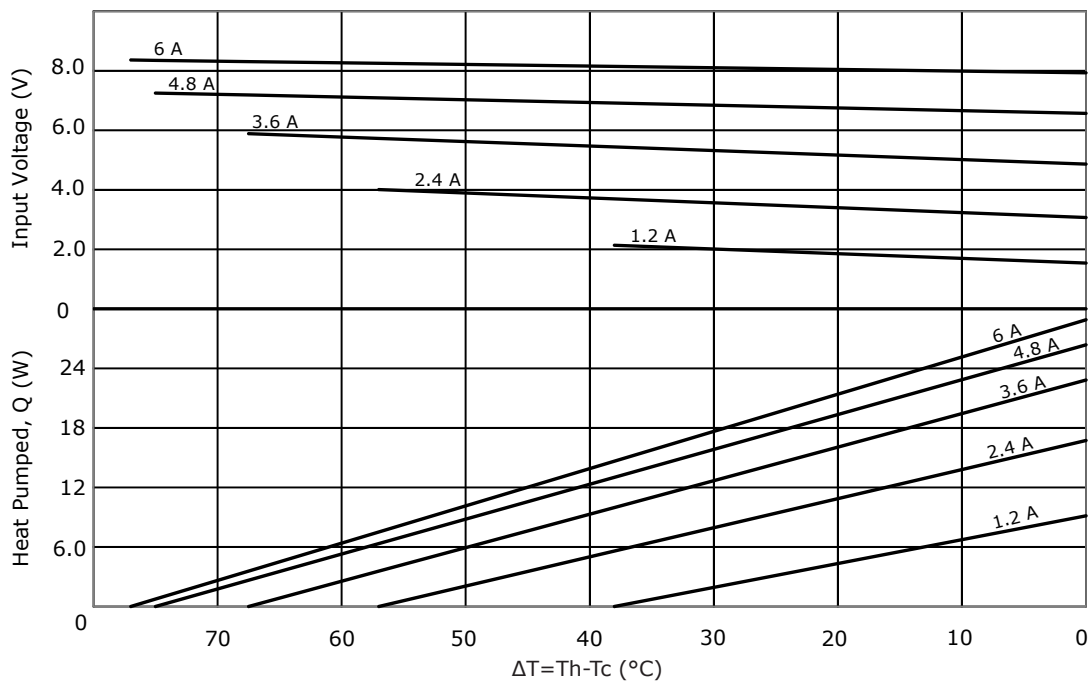




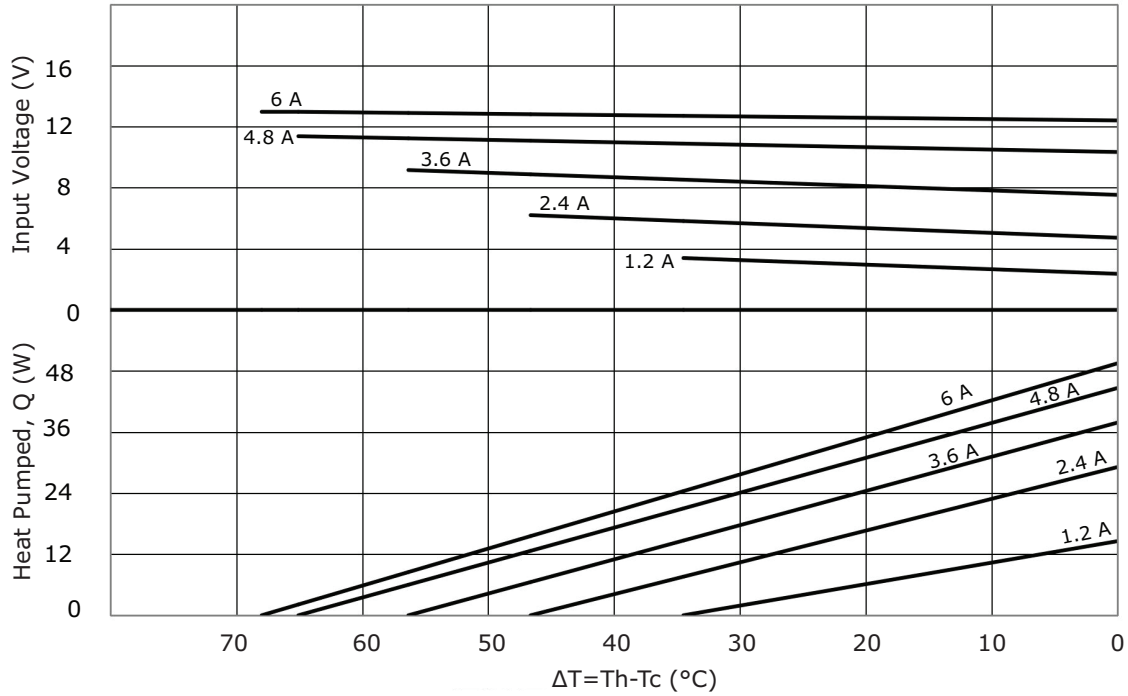
### CP60301531H PERFORMANCE (Th=27°C)



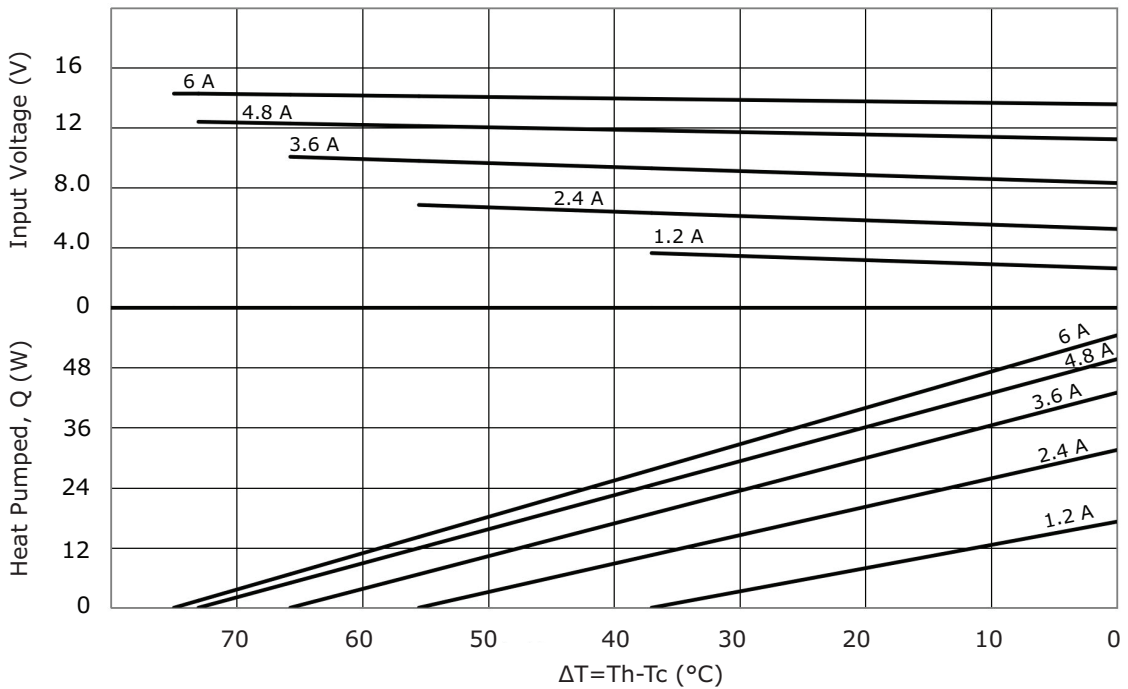
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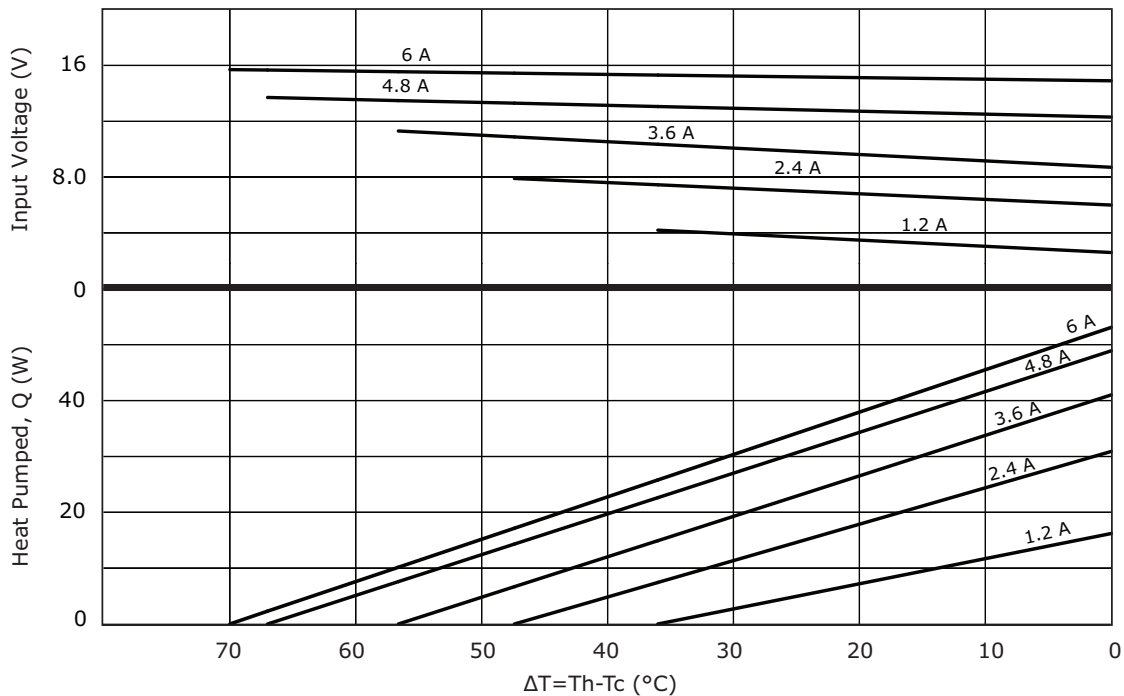
### CP60302031H PERFORMANCE (Th=27°C)



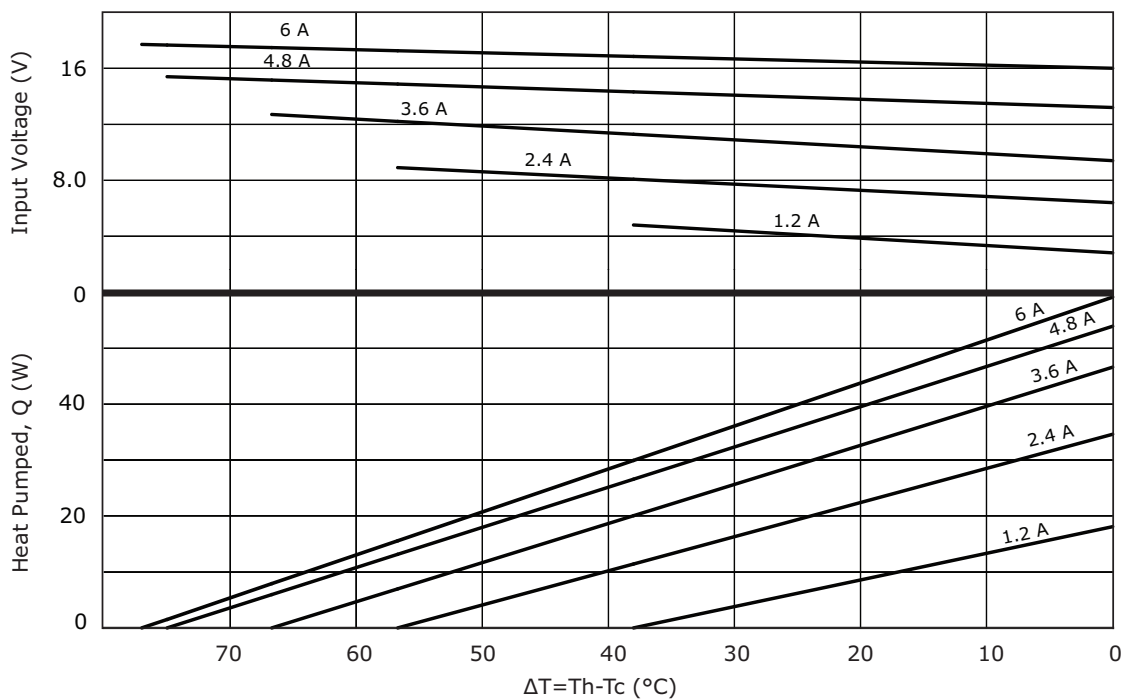
### CP60302031H PERFORMANCE (Th=50°C)



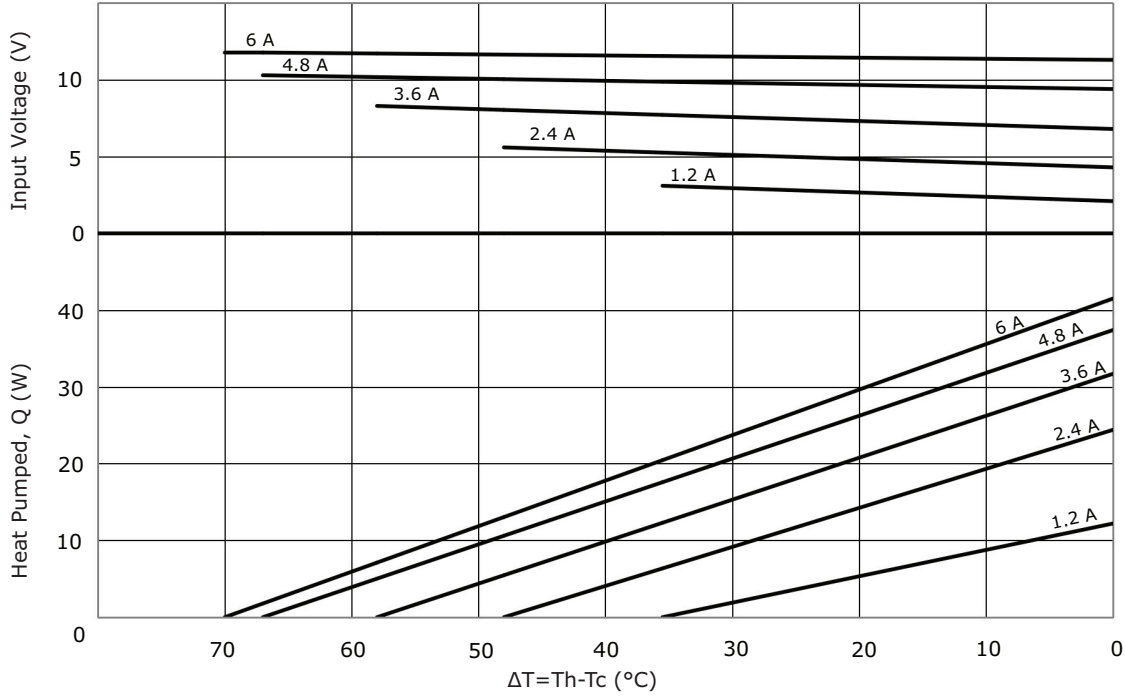
### CP603315H PERFORMANCE (Th=27°C)



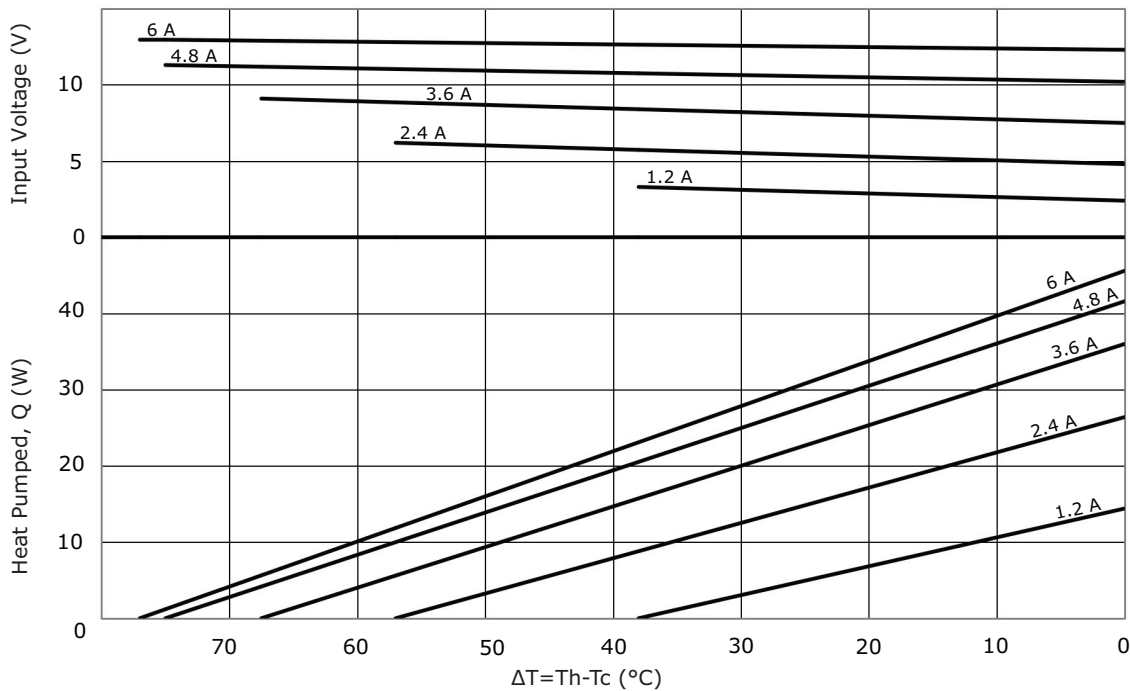
### CP603315H PERFORMANCE (Th=50°C)



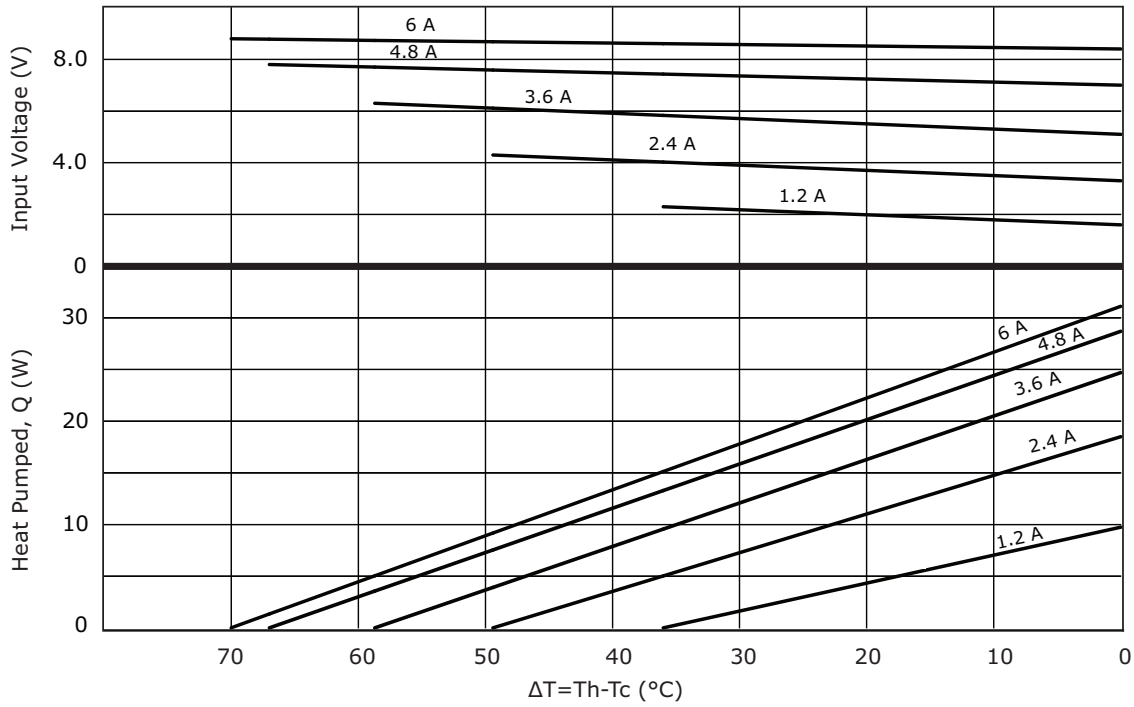
### CP6030395 PERFORMANCE (Th=27°C)



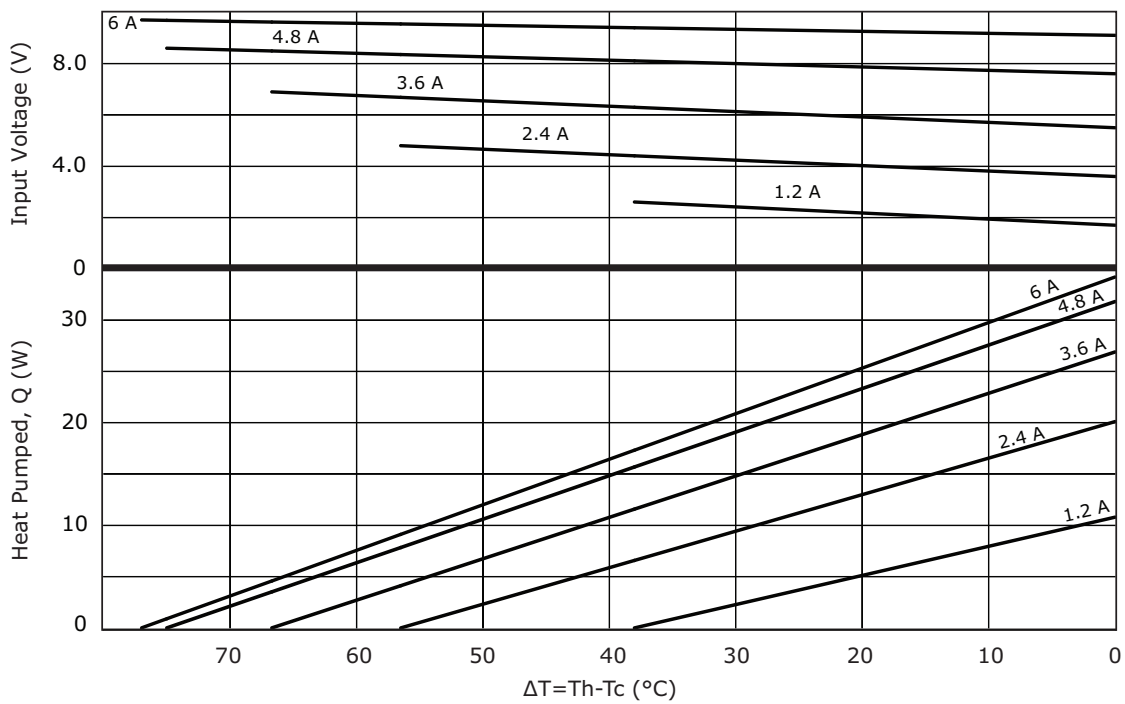
### CP6030395 PERFORMANCE (Th=50°C)



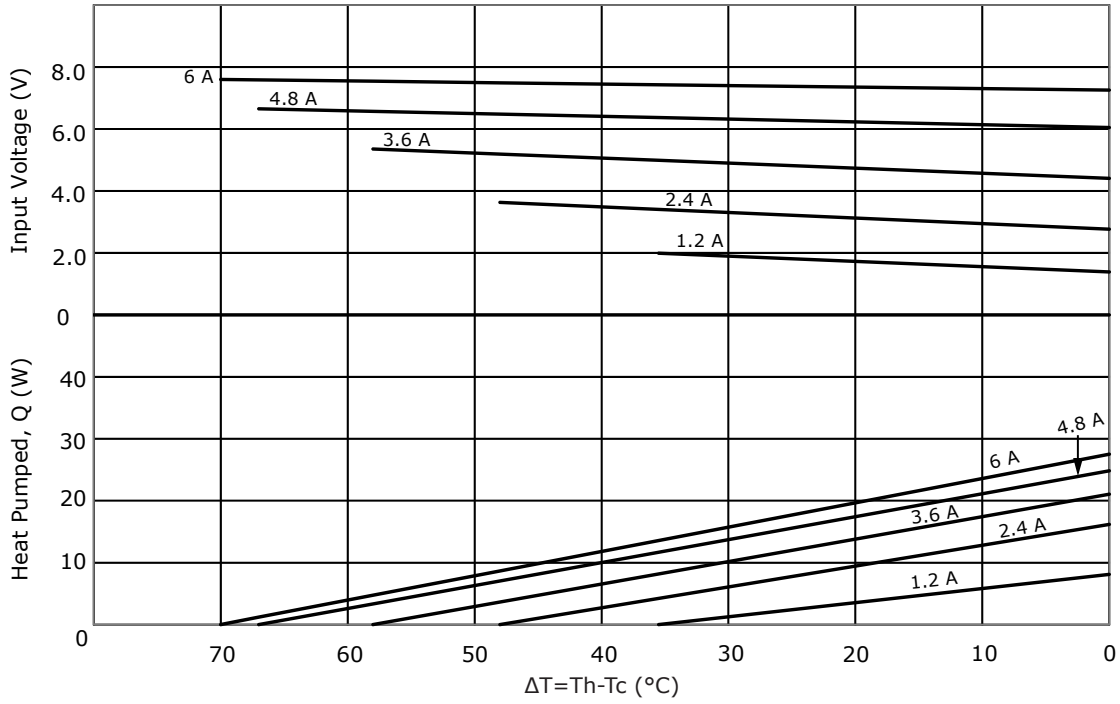
## CP603395H PERFORMANCE (Th=27°C)



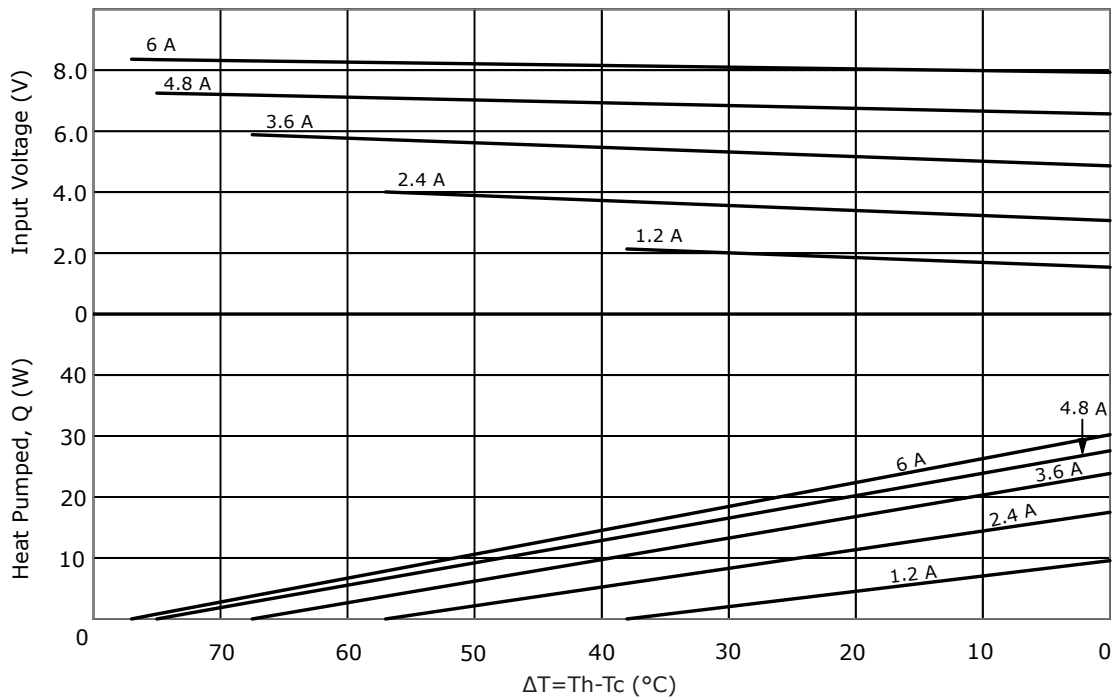
## CP603395H PERFORMANCE (Th=50°C)



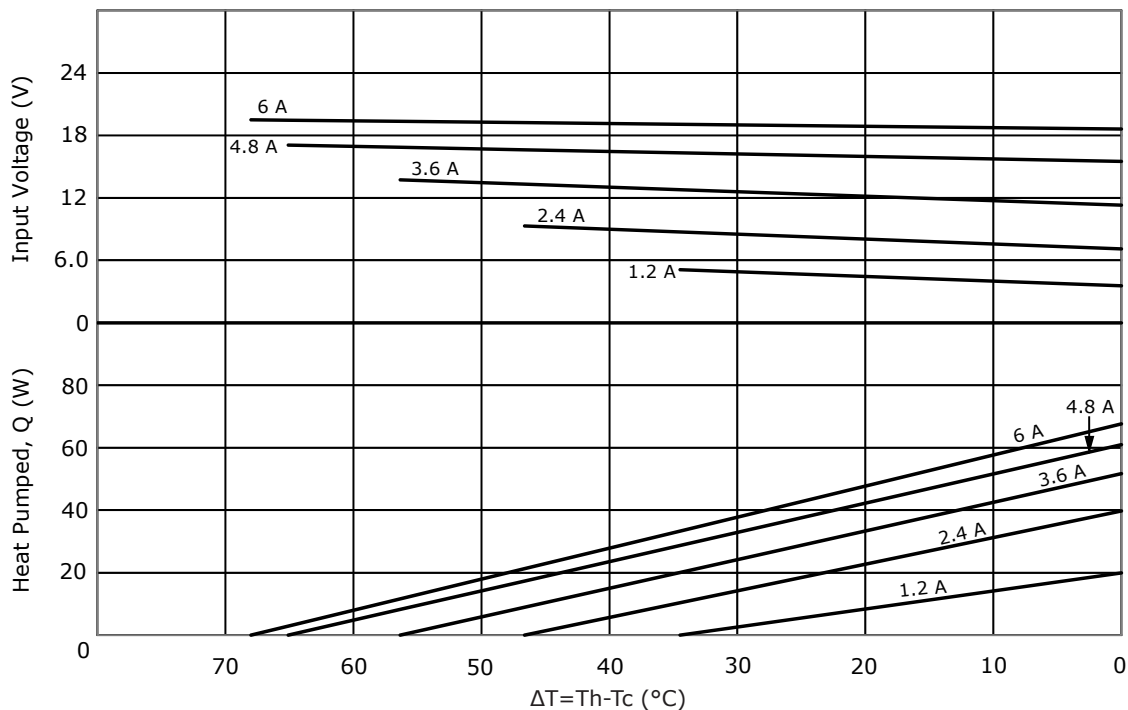
### CP604020395H PERFORMANCE (Th=27°C)



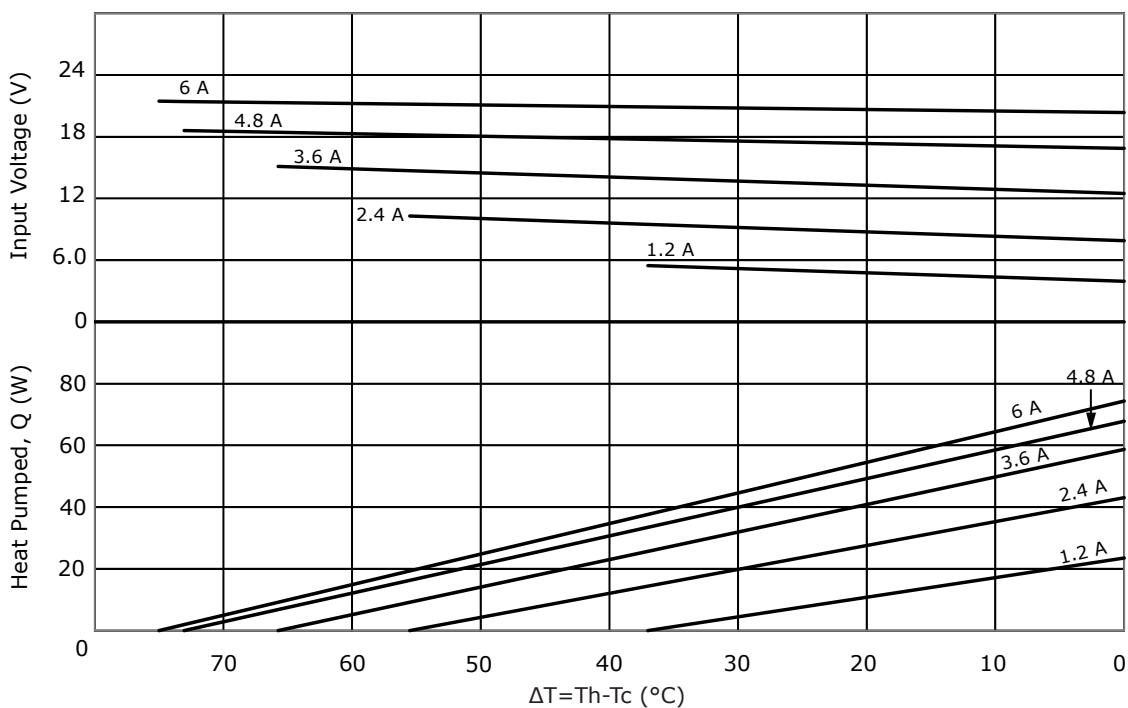
### CP604020395H PERFORMANCE (Th=50°C)



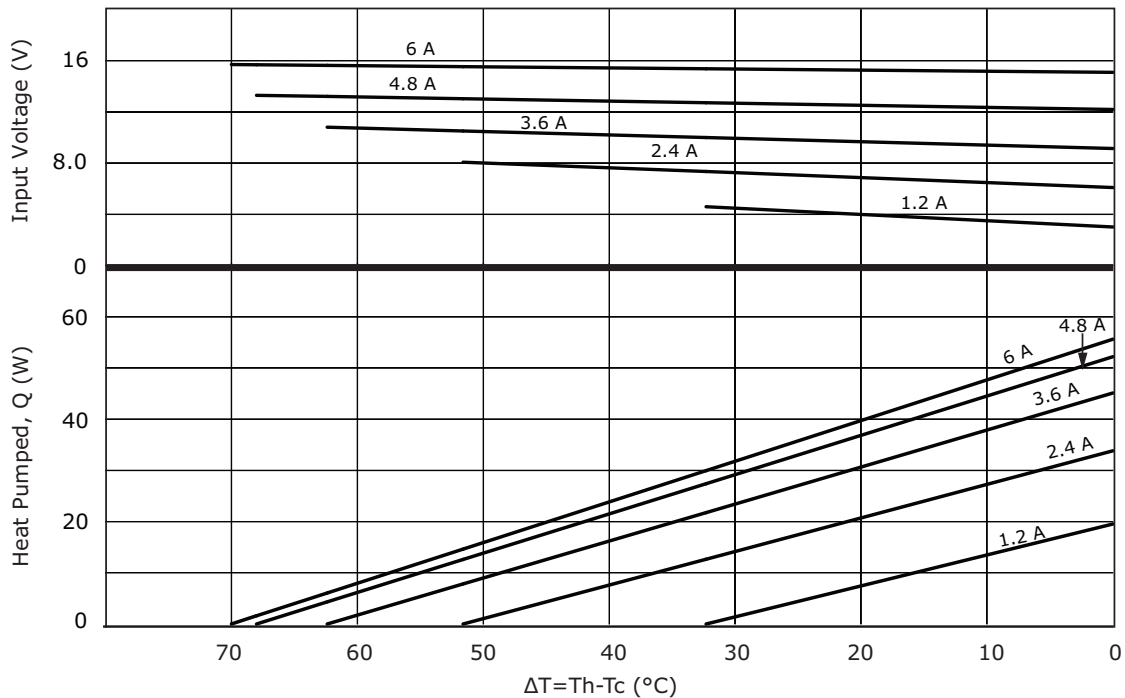
### CP60433H PERFORMANCE (Th=27°C)



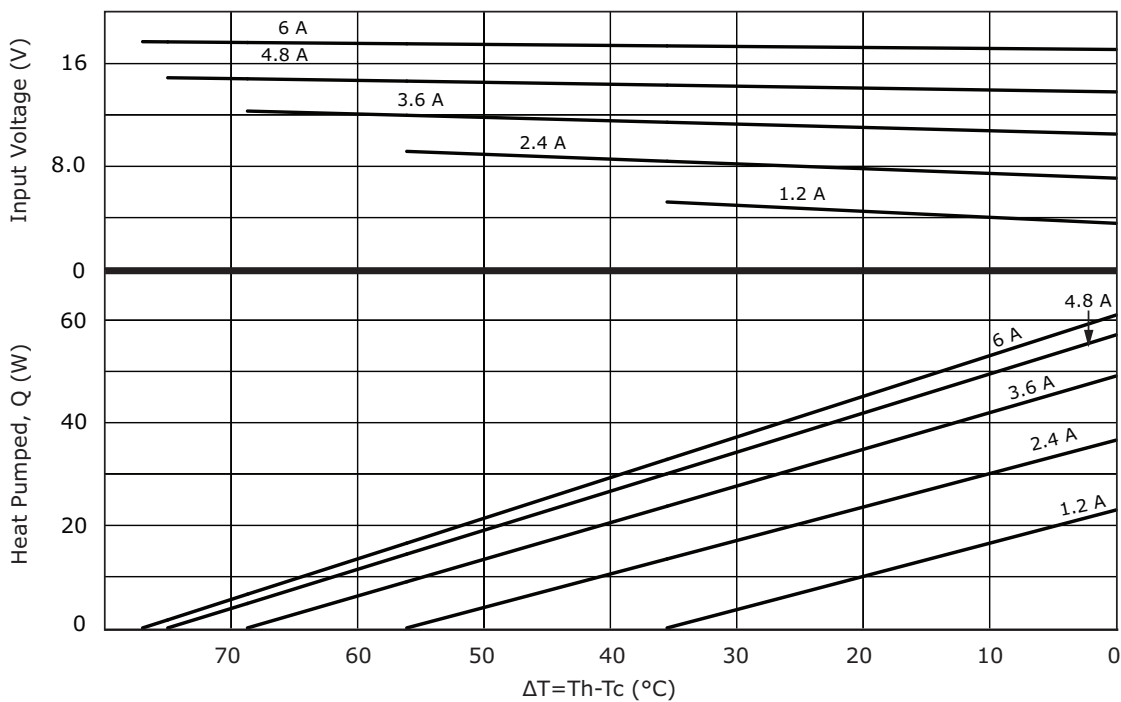
### CP60433H PERFORMANCE (Th=50°C)



### CP604395H PERFORMANCE (Th=27°C)

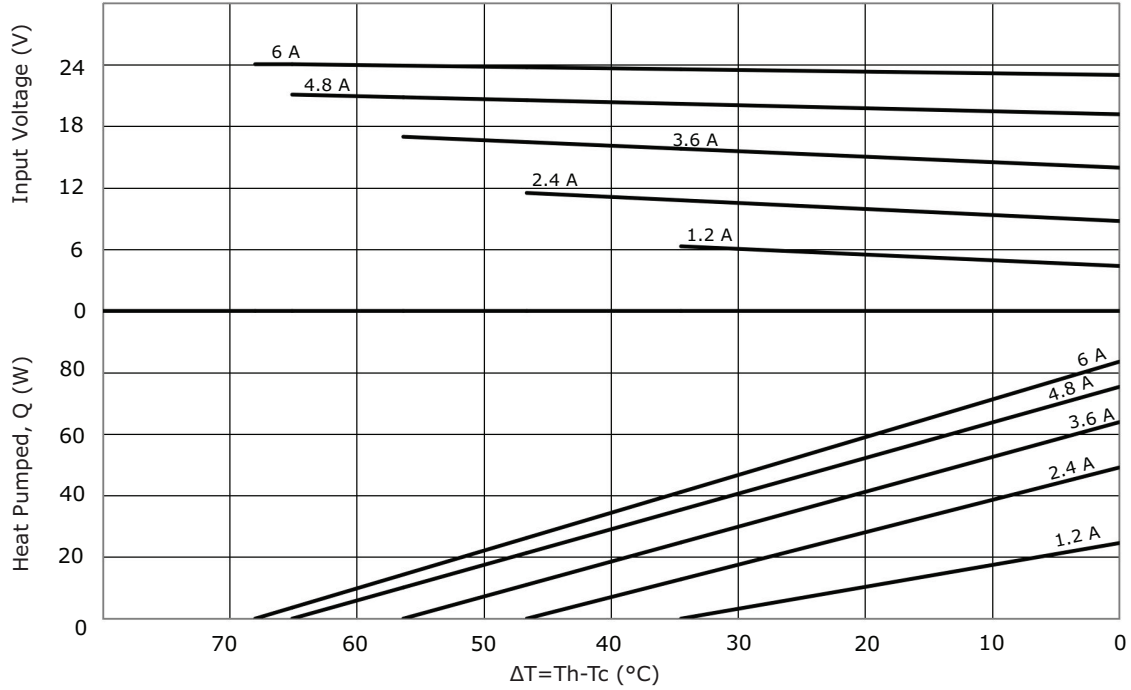


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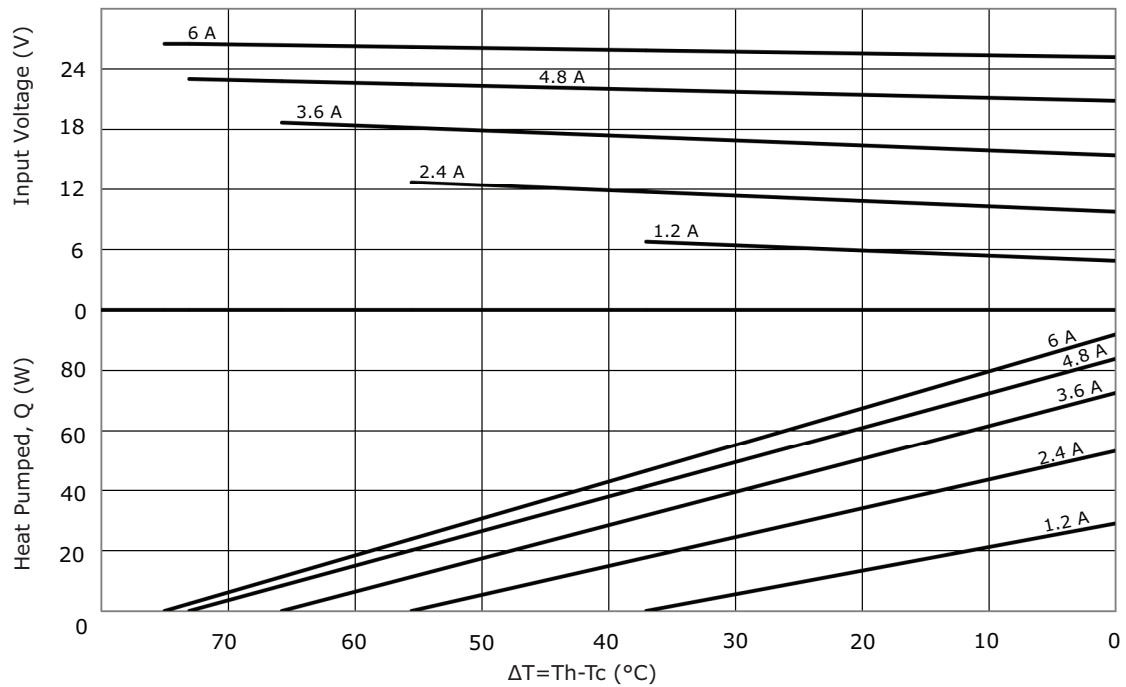




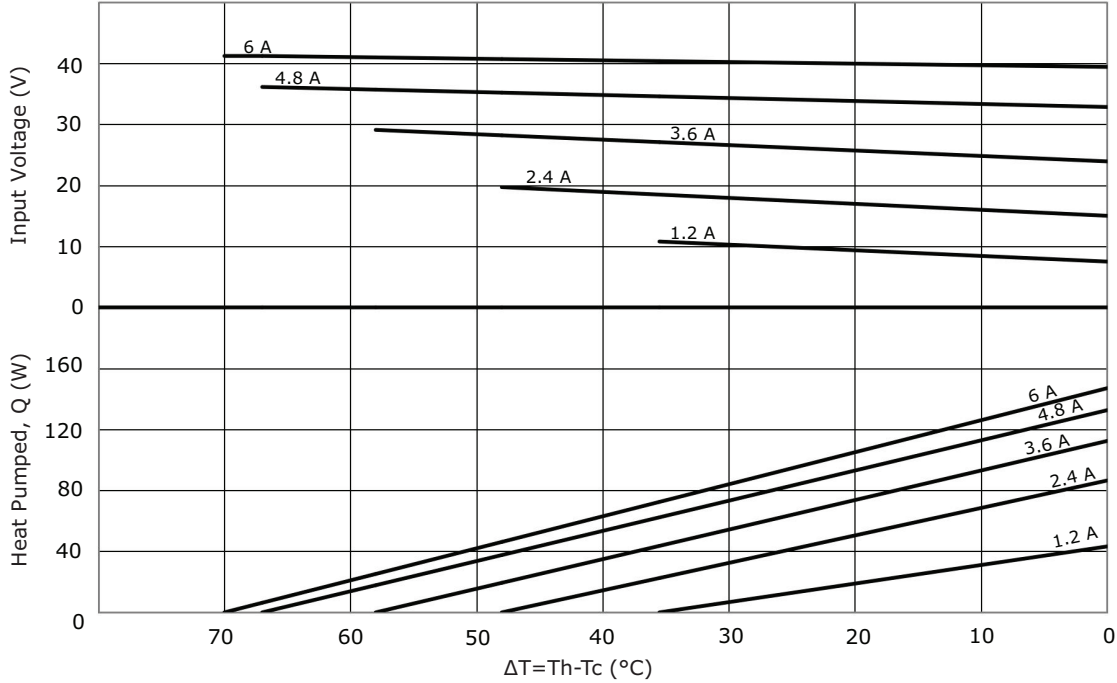
## CP604040 PERFORMANCE (Th=27°C)



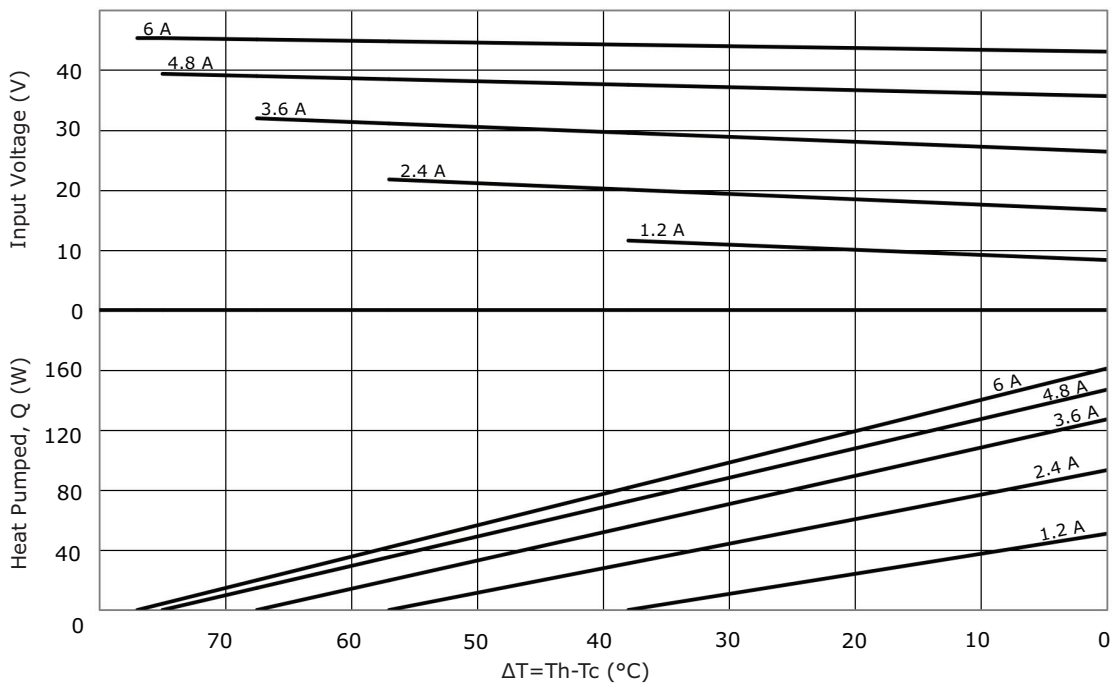
## CP604040 PERFORMANCE (Th=50°C)



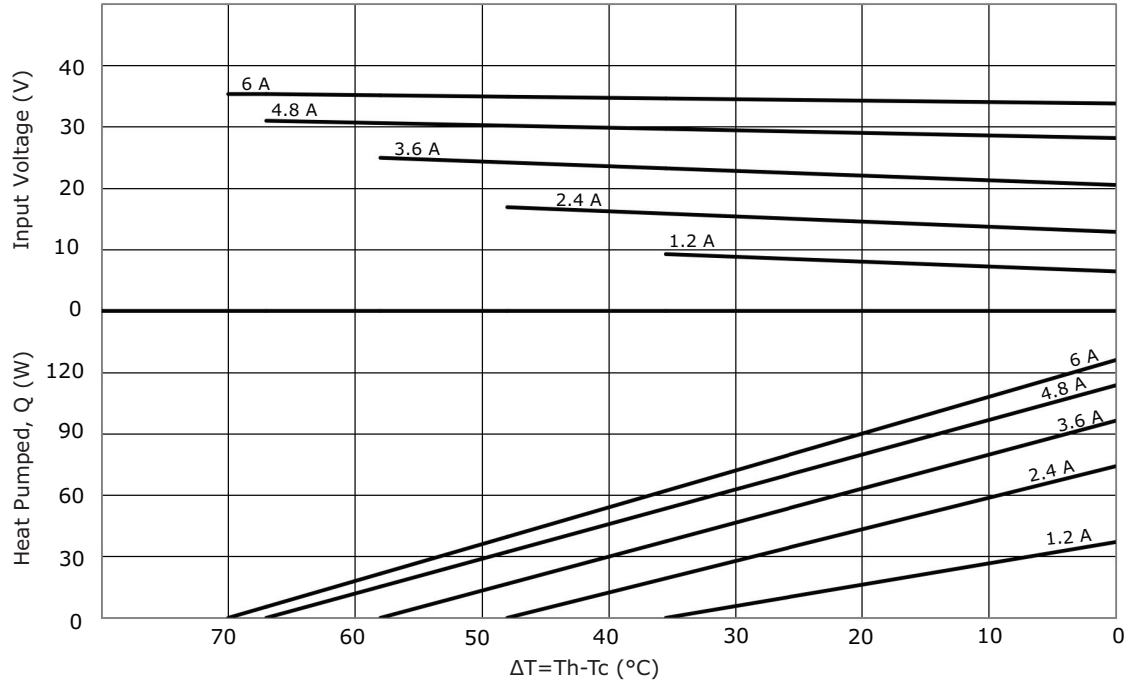
## CP60546241 PERFORMANCE (Th=27°C)



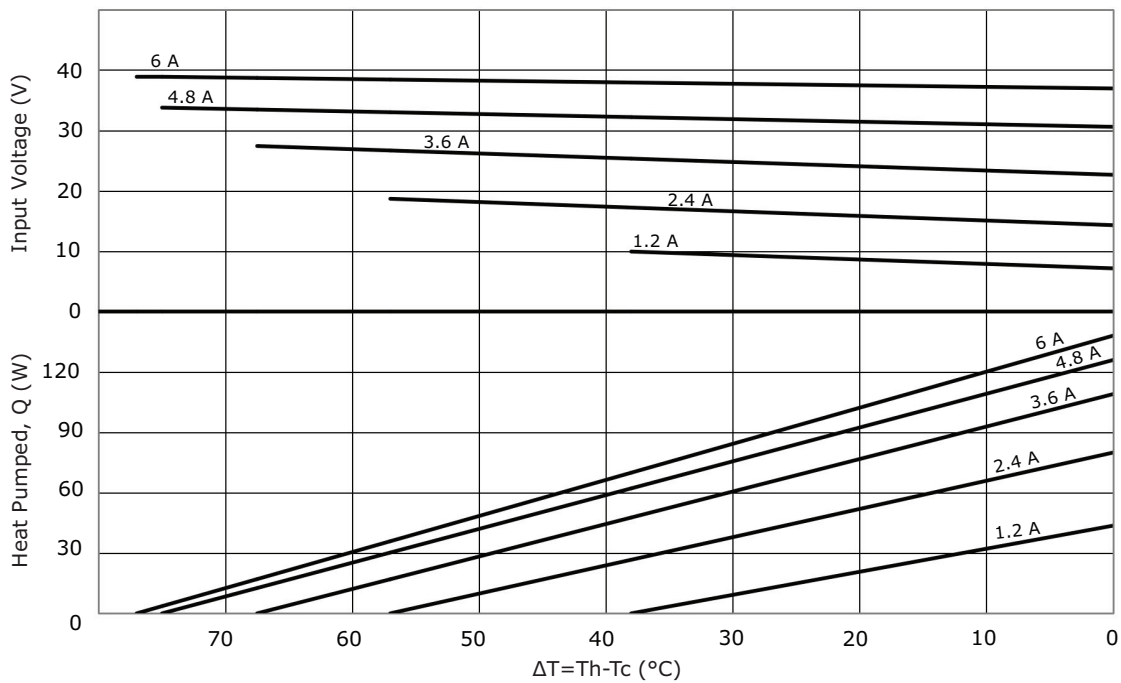
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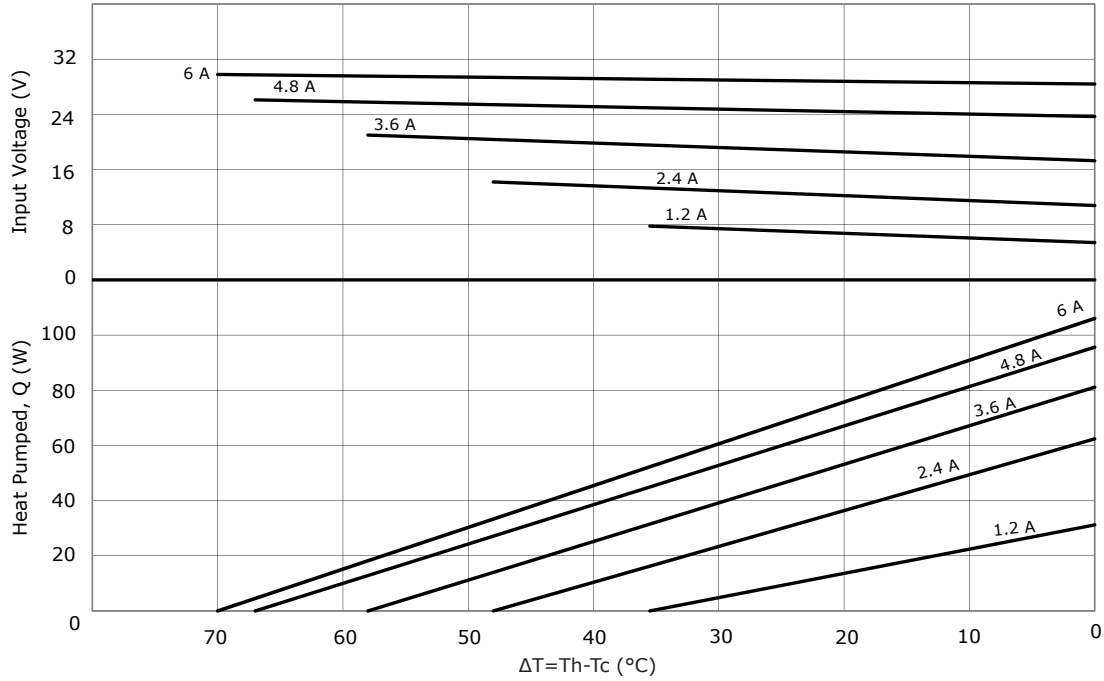
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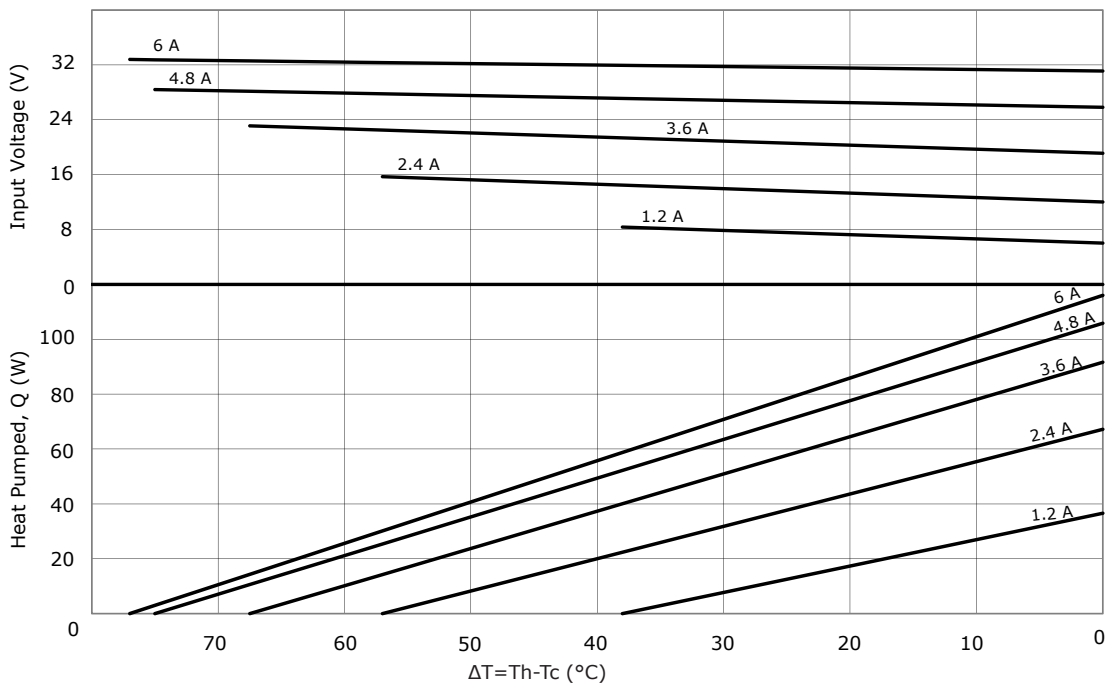
## CP605354 PERFORMANCE (Th=50°C)



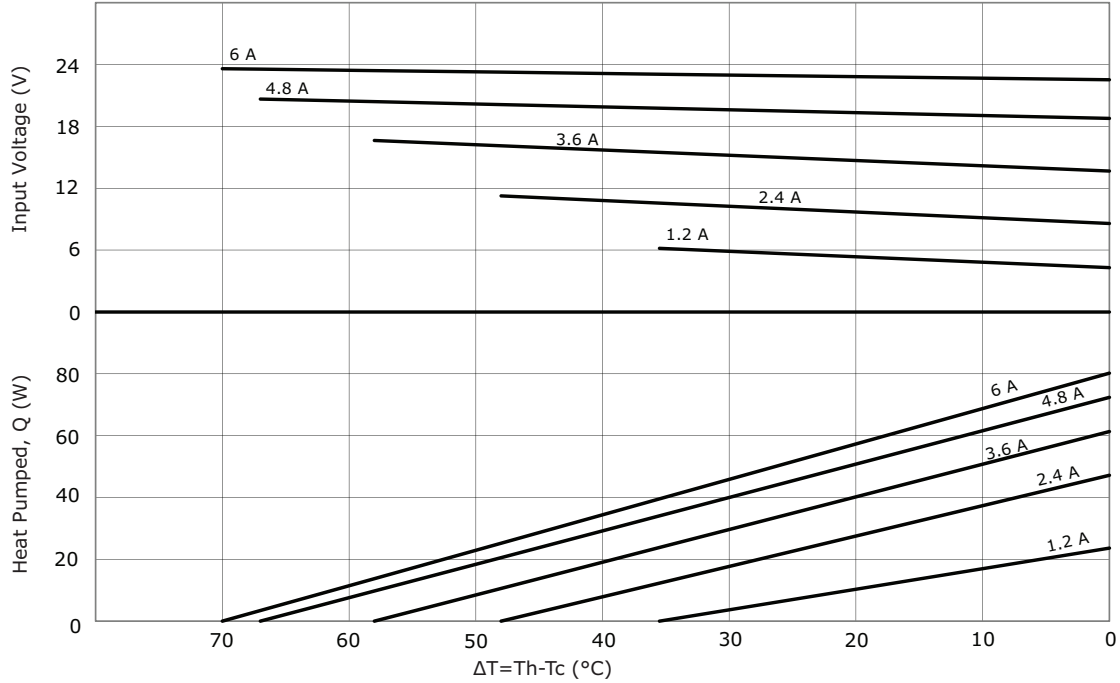
## CP6055542 PERFORMANCE (Th=27°C)



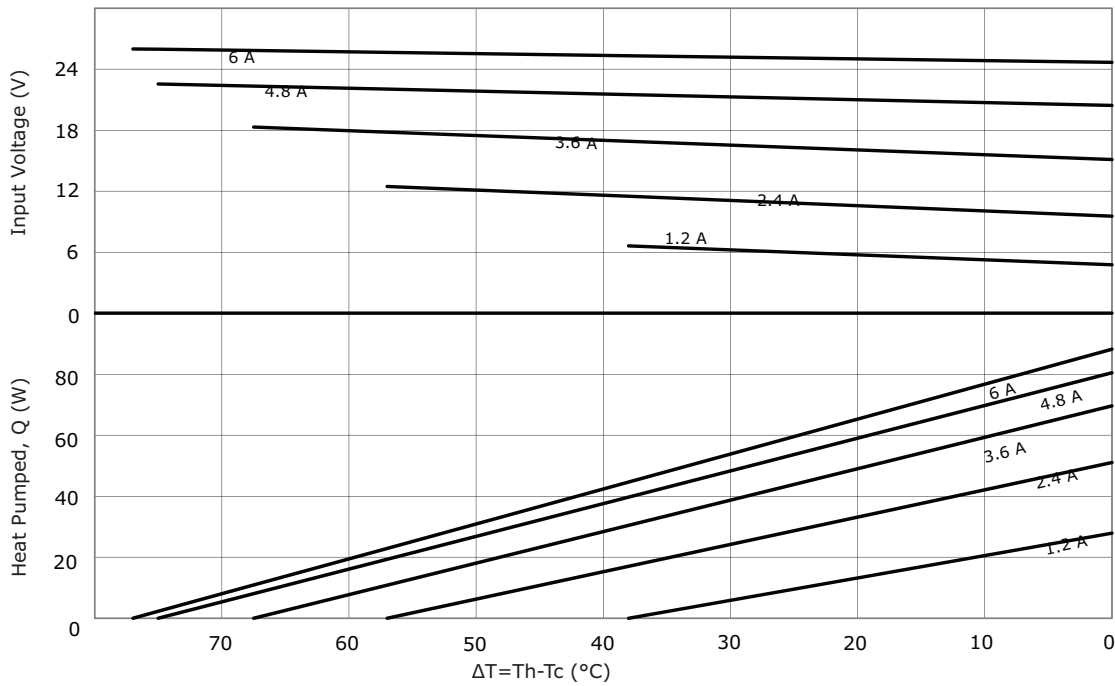
## CP6055542 PERFORMANCE (Th=50°C)



## CP604060395 PERFORMANCE (Th=27°C)



## CP604060395 PERFORMANCE (Th=50°C)



## REVISION HISTORY

| rev. | description  | date       |
|------|--|------------|
| 1.0  | initial release  | 09/08/2016 |
| 1.01 | updated datasheet  | 09/25/2017 |
| 1.02 | added new models   | 05/21/2018 |
| 1.03 | added models CP604060395, CP60555542, CP6030395, CP604040, CP6055354, CP60546241, brand update | 10/22/2019 |
| 1.04 | added model CP60302031H  | 11/12/2020 |
| 1.05 | logo, datasheet style update   | 08/05/2022 |

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



CUI Devices offers a one (1) year limited warranty. Complete warranty information is listed on our website.

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