



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<br>voltage <sup>1</sup><br>max<br>[Vdc] | input<br>current <sup>2</sup><br>max<br>[A] | internal<br>resistance <sup>3</sup><br>typ<br>[ $\Omega \pm 10\%$ ] | output<br>Qmax <sup>4</sup> |                             |                              |                                                                         |
|---------------------------|-----------------------------------------------|---------------------------------------------|---------------------------------------------------------------------|-----------------------------|-----------------------------|------------------------------|-------------------------------------------------------------------------|
|                           |                                               |                                             |                                                                     | T <sub>h</sub> =27°C<br>[W] | T <sub>h</sub> =50°C<br>[W] | T <sub>h</sub> =27°C<br>[°C] | output<br>$\Delta T_{max}$ <sup>5</sup><br>T <sub>h</sub> =50°C<br>[°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                                                                      |

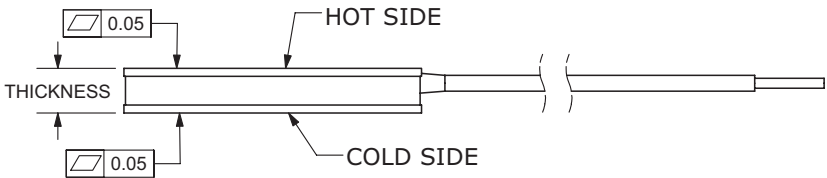
Notes: 1. Maximum voltage at  $\Delta T_{max}$  and T<sub>h</sub>=27°C  
2. Maximum current to achieve  $\Delta T_{max}$   
3. Measured by AC 4-terminal method at 25°C  
4. Maximum heat absorbed at cold side occurs at I<sub>max</sub>, V<sub>max</sub>, and  $\Delta T=0^\circ\text{C}$   
5. Maximum temperature 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

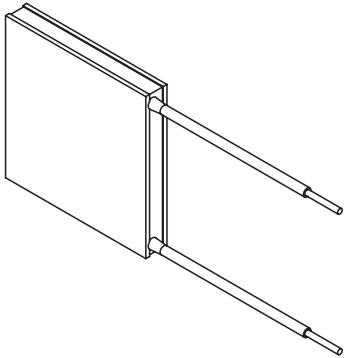
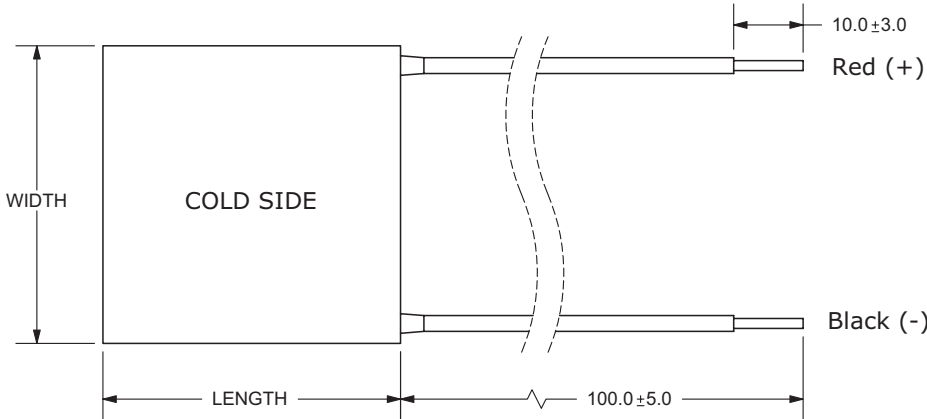
| parameter                  | conditions/description                  | min | typ | max | units |
|----------------------------|-----------------------------------------|-----|-----|-----|-------|
| solder melting temperature | connection between thermoelectric pairs | 235 |     |     | °C    |
| assembly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

MECHANICAL DRAWING

units: mm

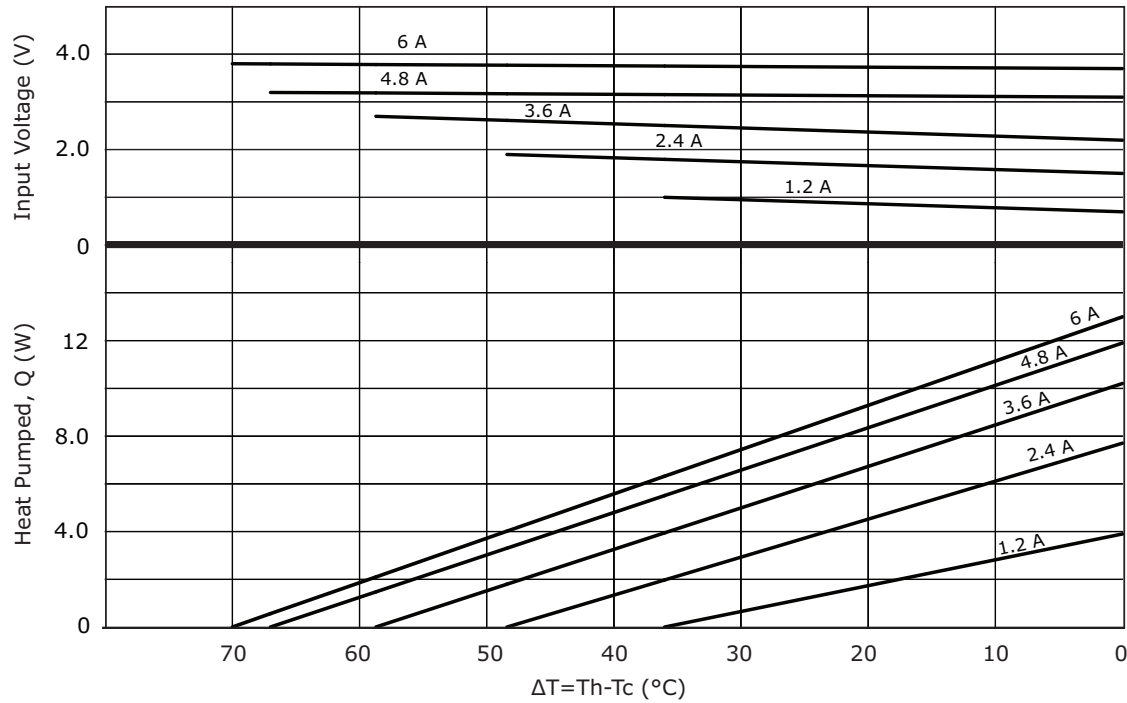


|                                                                                                    | MATERIAL                                                     | PLATING |
|----------------------------------------------------------------------------------------------------|--------------------------------------------------------------|---------|
| 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<br>models]                                                                   | 20 AWG                                                       | tin     |
| sealer                                                                                             | silicon rubber 703 RTV (between cold and<br>hot side plates) |         |
| joint cover                                                                                        | silicon rubber 703 RTV                                       |         |
| marking                                                                                            | P/N & S/N printed on cold side surface                       |         |

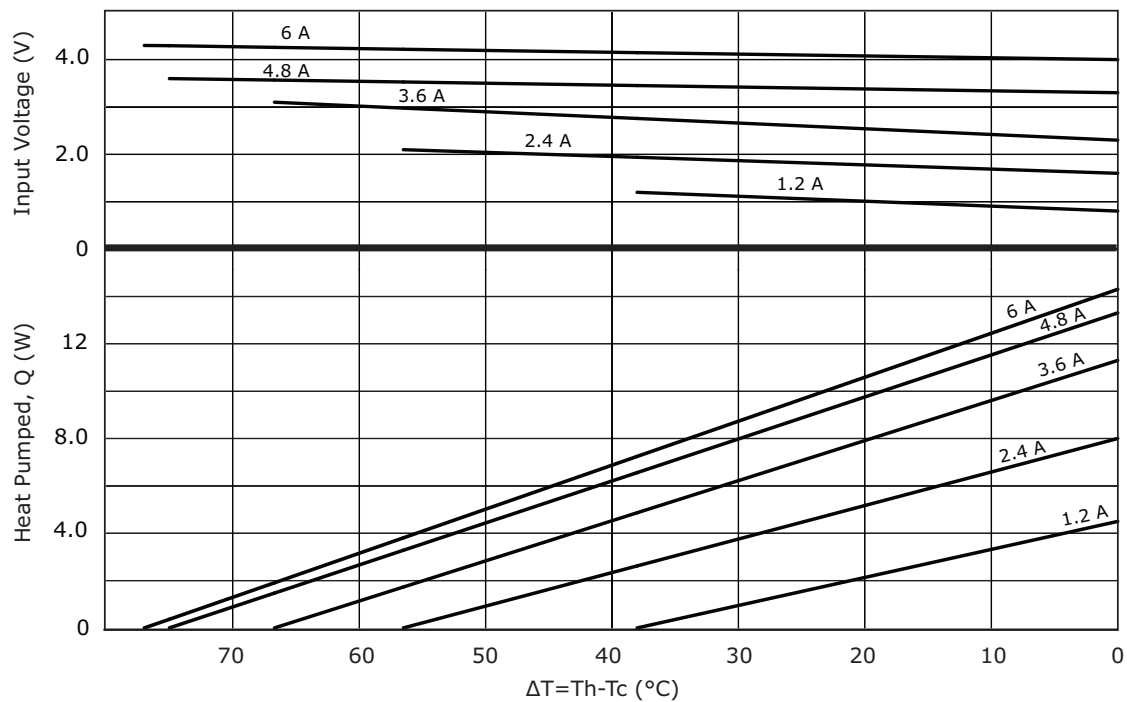


| MODEL NO.    | LENGTH<br>[mm] | WIDTH<br>[mm] | THICKNESS<br>[mm] | MODEL NO.    | LENGTH<br>[mm] | WIDTH<br>[mm] | THICKNESS<br>[mm] |
|--------------|----------------|---------------|-------------------|--------------|----------------|---------------|-------------------|
| CP60131H     | 15 ±0.3        | 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          | CP60555542   | 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       |              |                |               |                   |

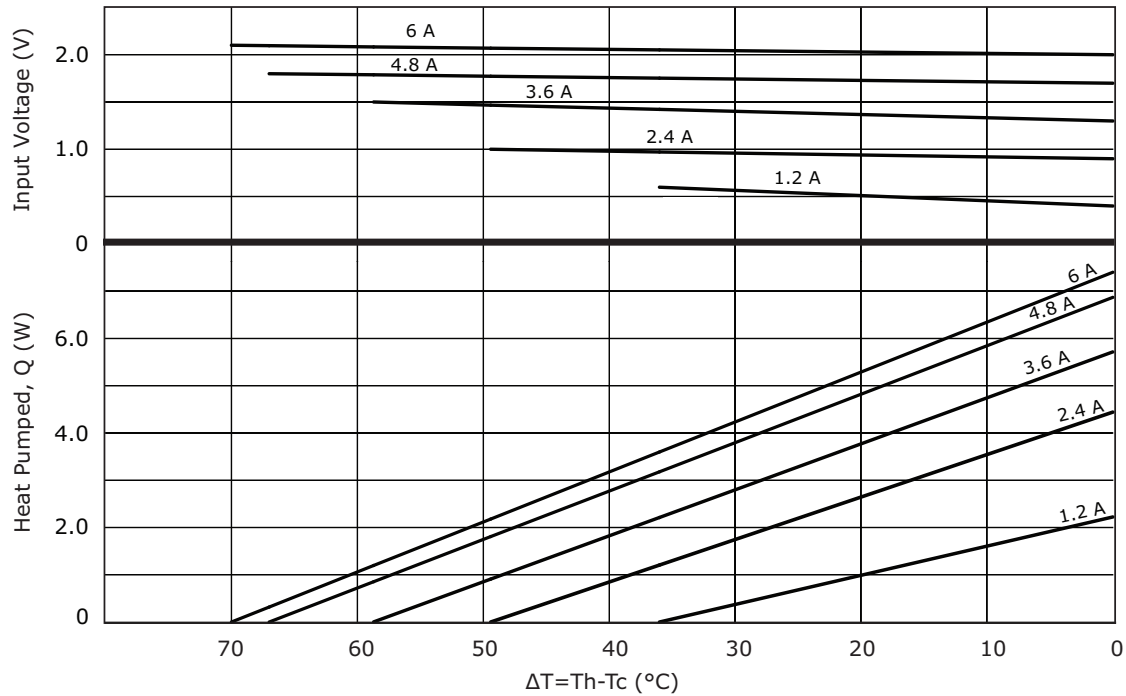
## CP60131H PERFORMANCE (Th=27°C)



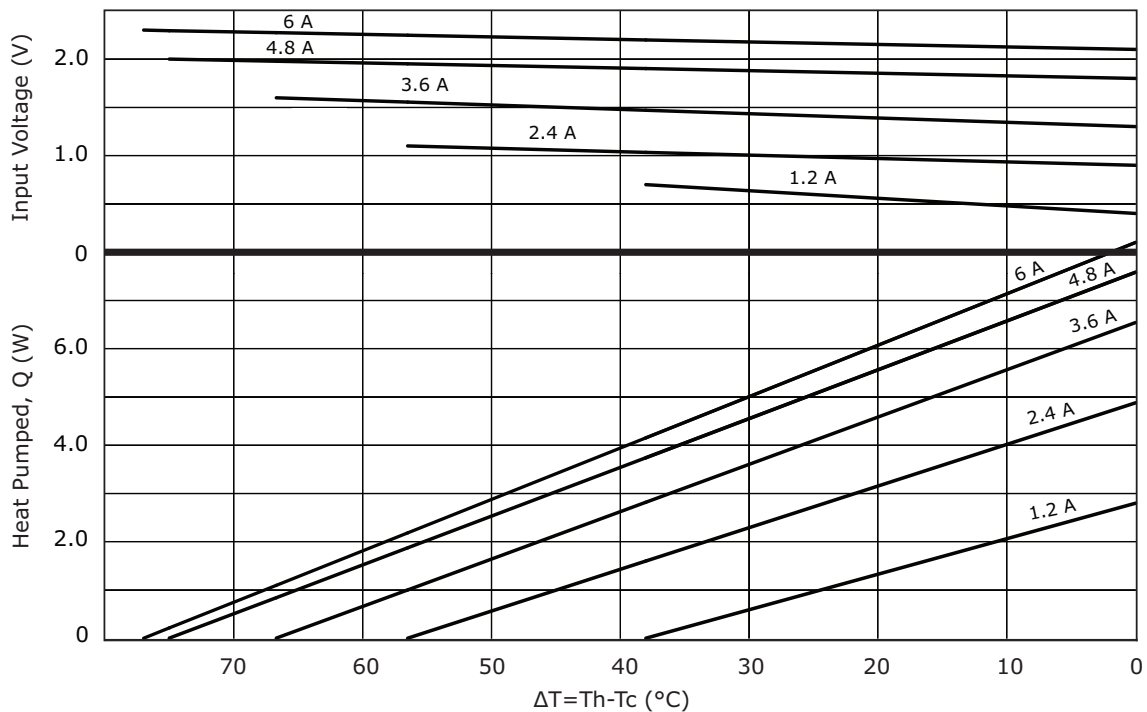
## CP60131H PERFORMANCE (Th=50°C)



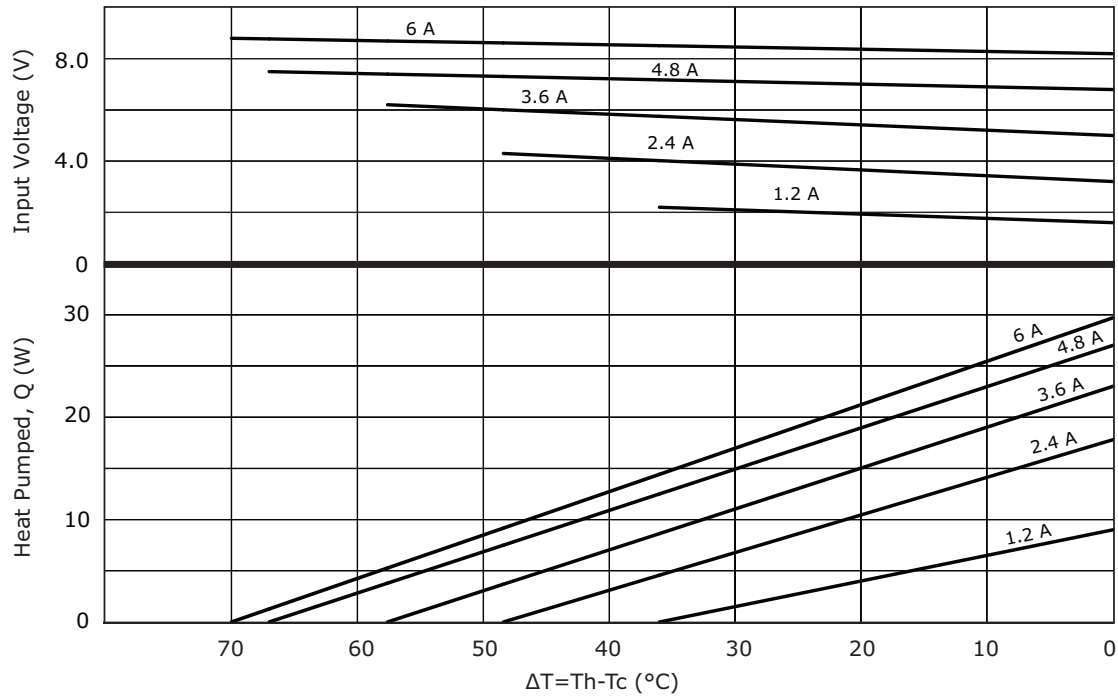
## CP60139H PERFORMANCE (Th=27°C)



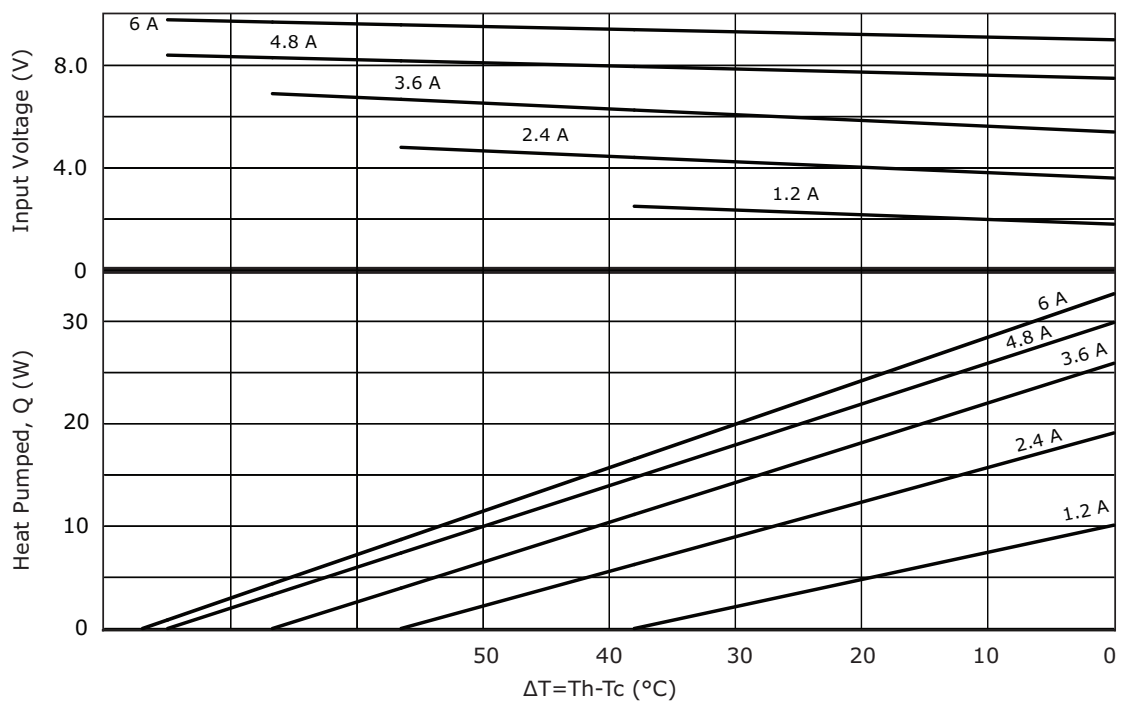
## CP60139H PERFORMANCE (Th=50°C)



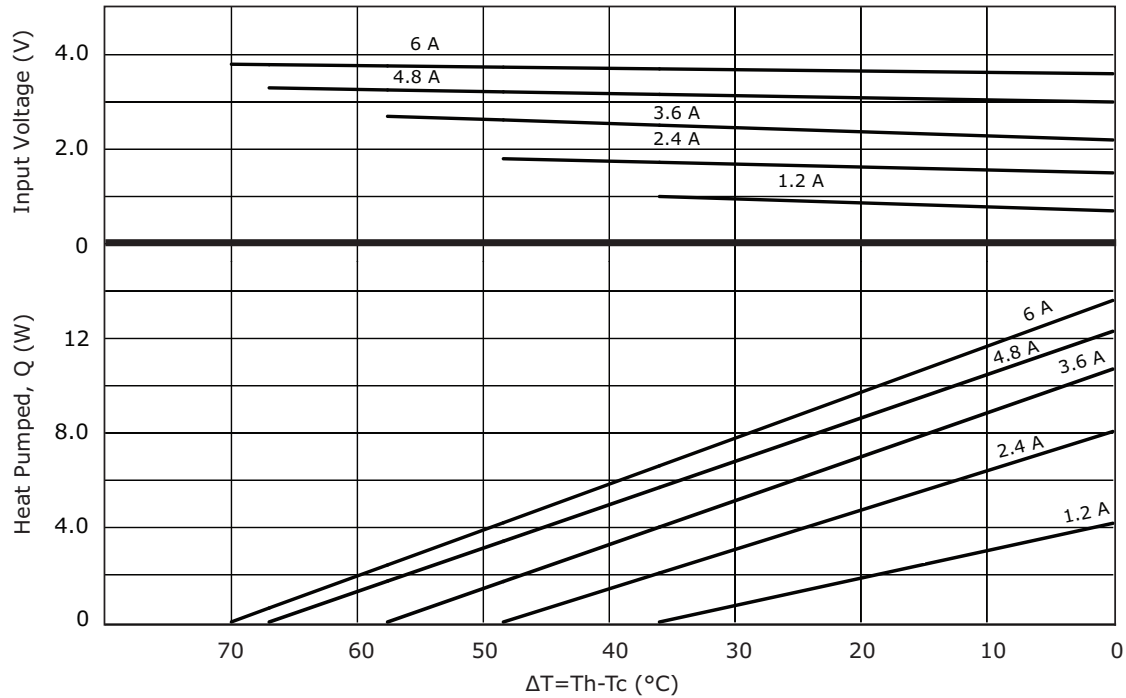
## CP60231H PERFORMANCE (Th=27°C)



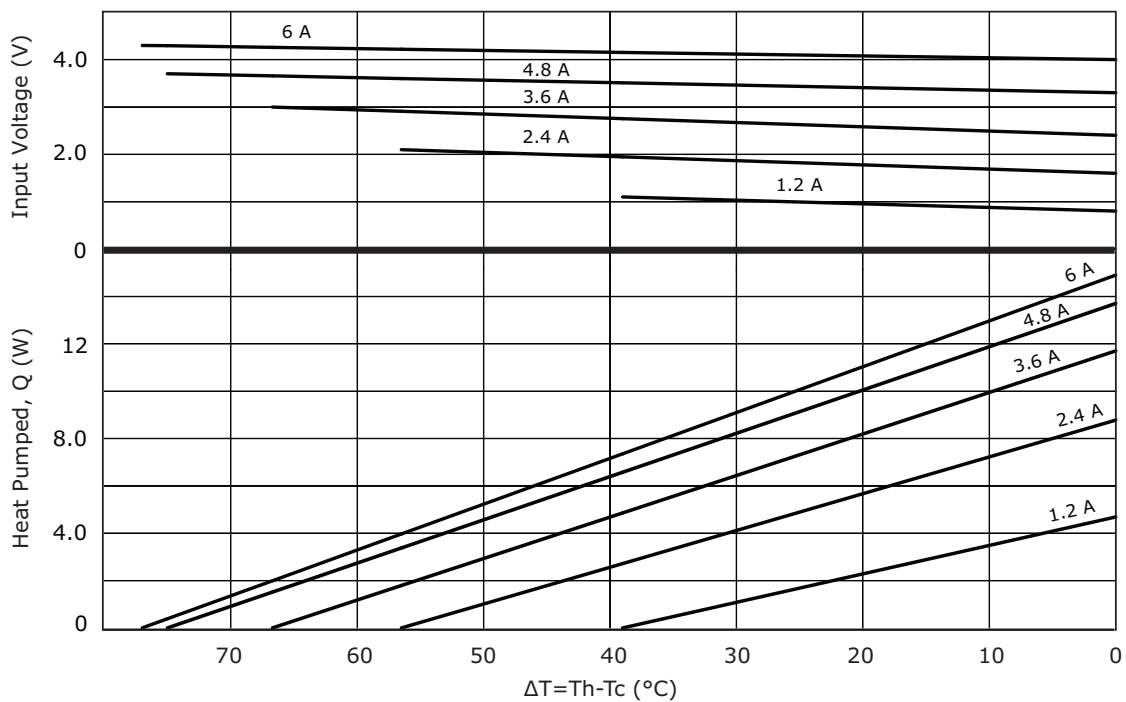
## CP60231H PERFORMANCE (Th=50°C)



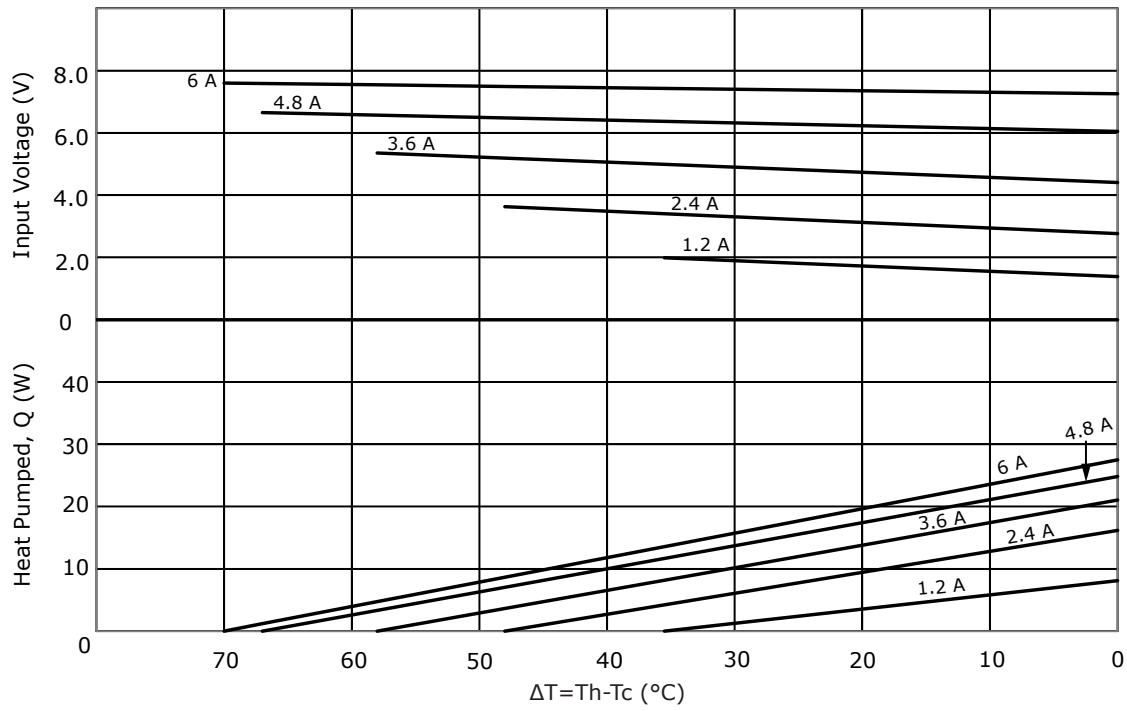
## CP60239H PERFORMANCE (Th=27°C)



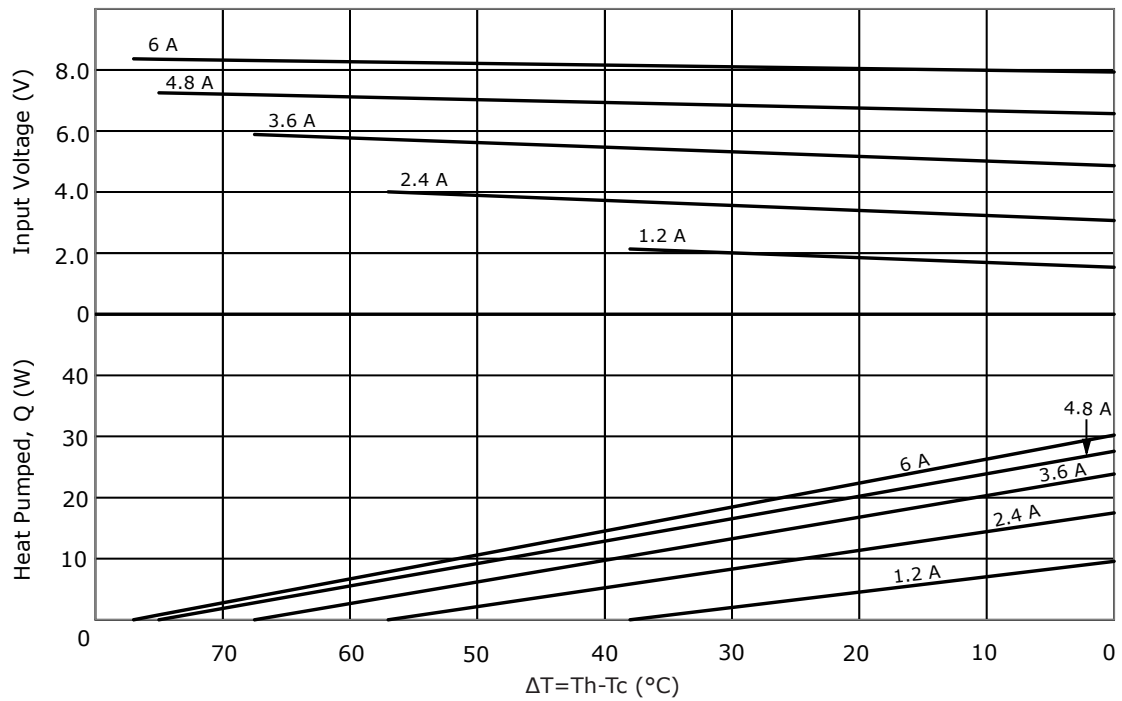
## CP60239H PERFORMANCE (Th=50°C)



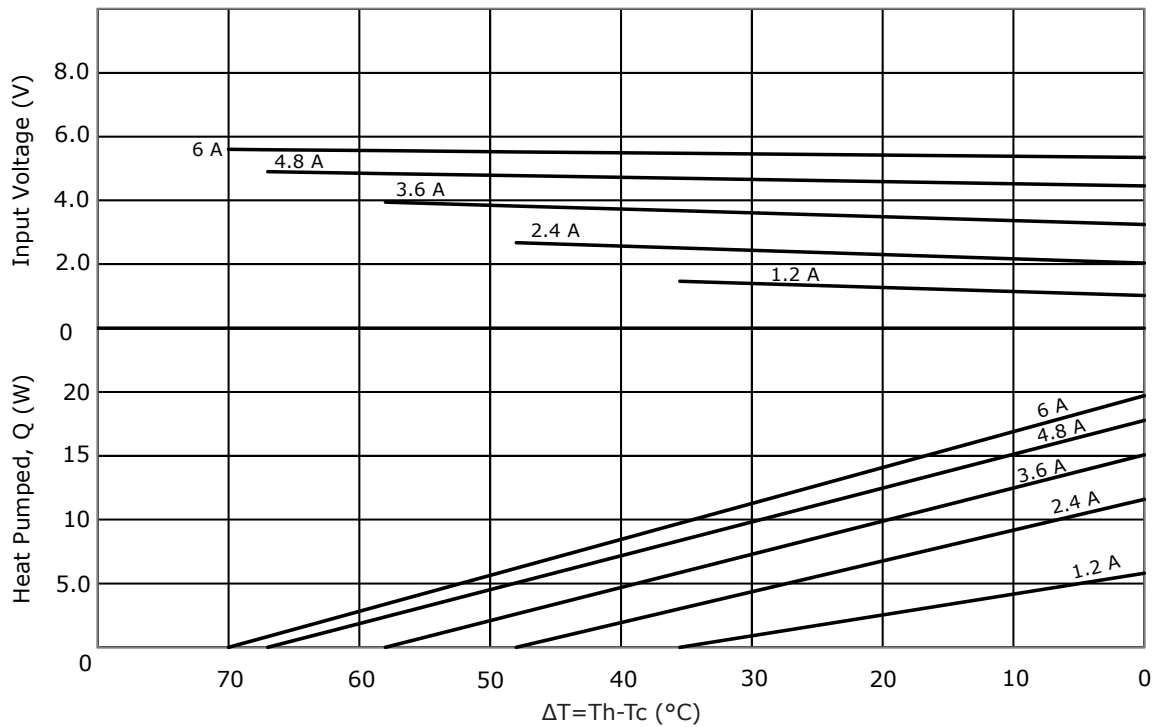
## CP602040395H PERFORMANCE (Th=27°C)



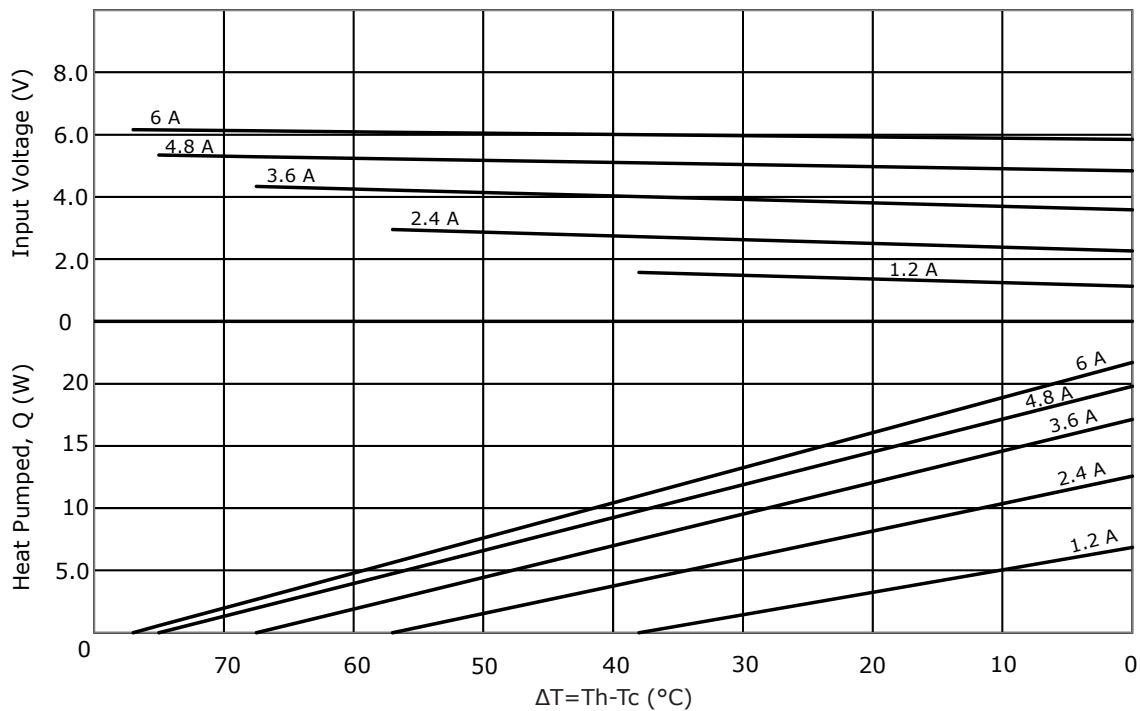
## CP602040395H PERFORMANCE (Th=50°C)



## CP60301233H PERFORMANCE (Th=27°C)

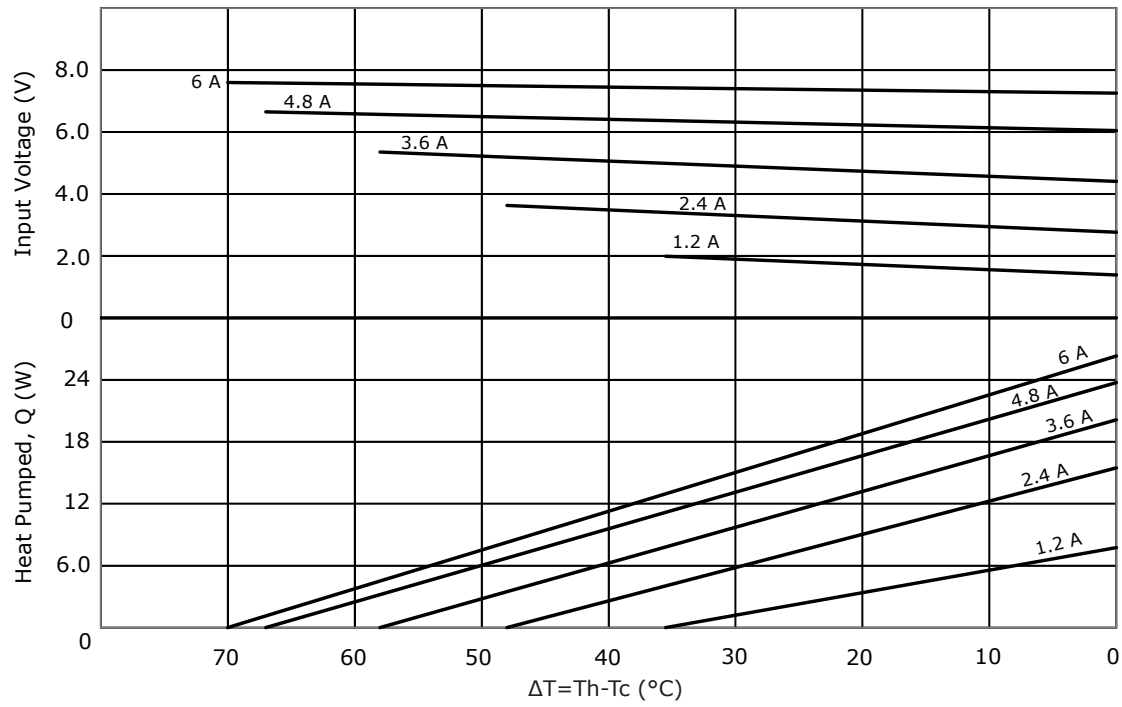


## CP60301233H PERFORMANCE (Th=50°C)

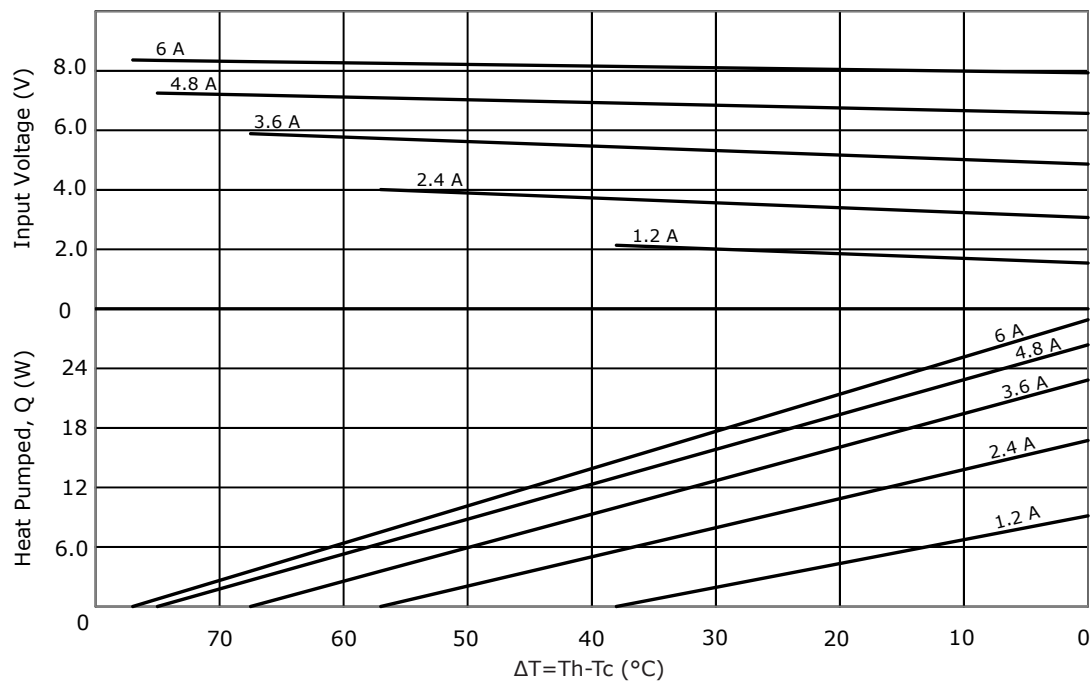




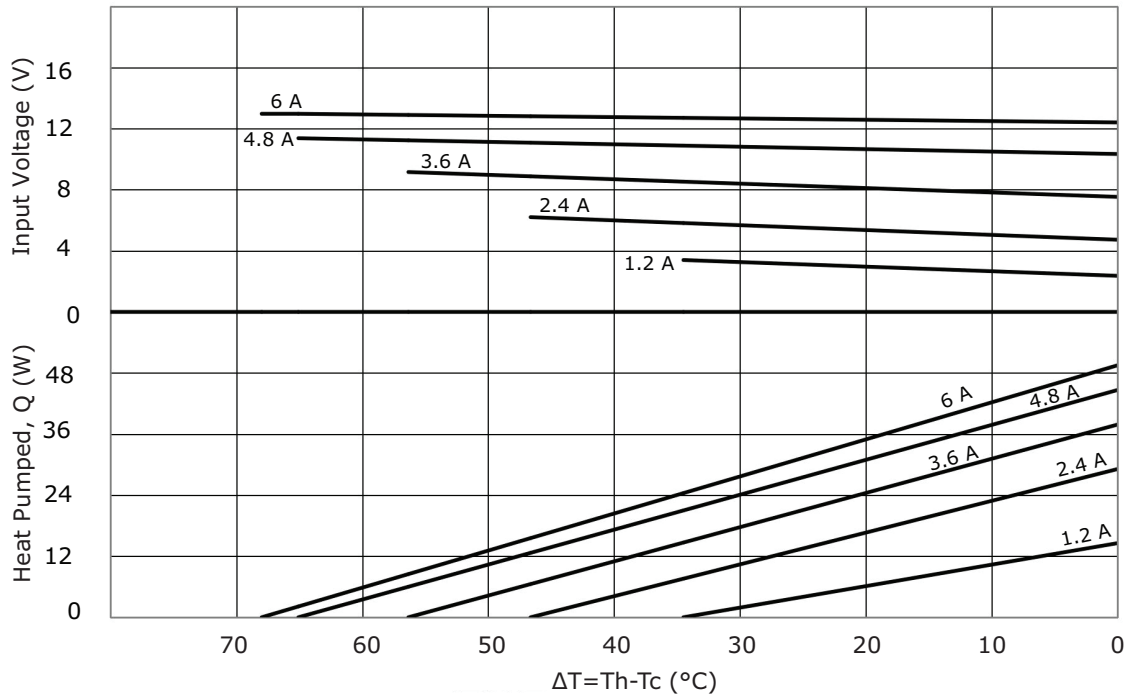
## CP60301531H PERFORMANCE (Th=27°C)



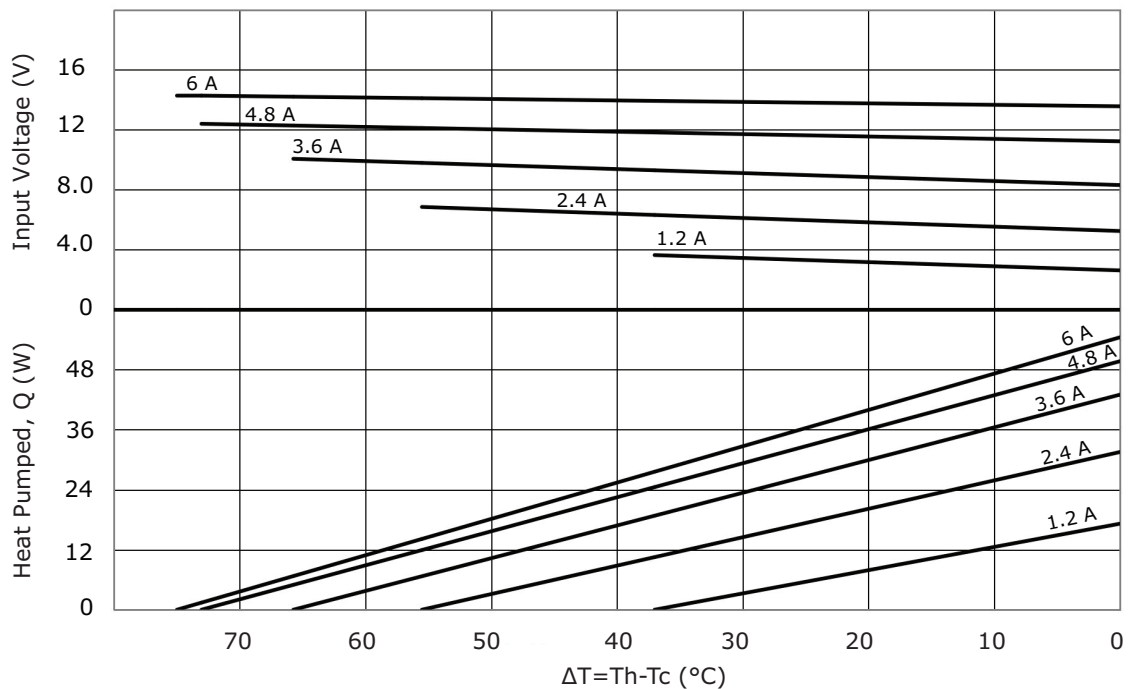
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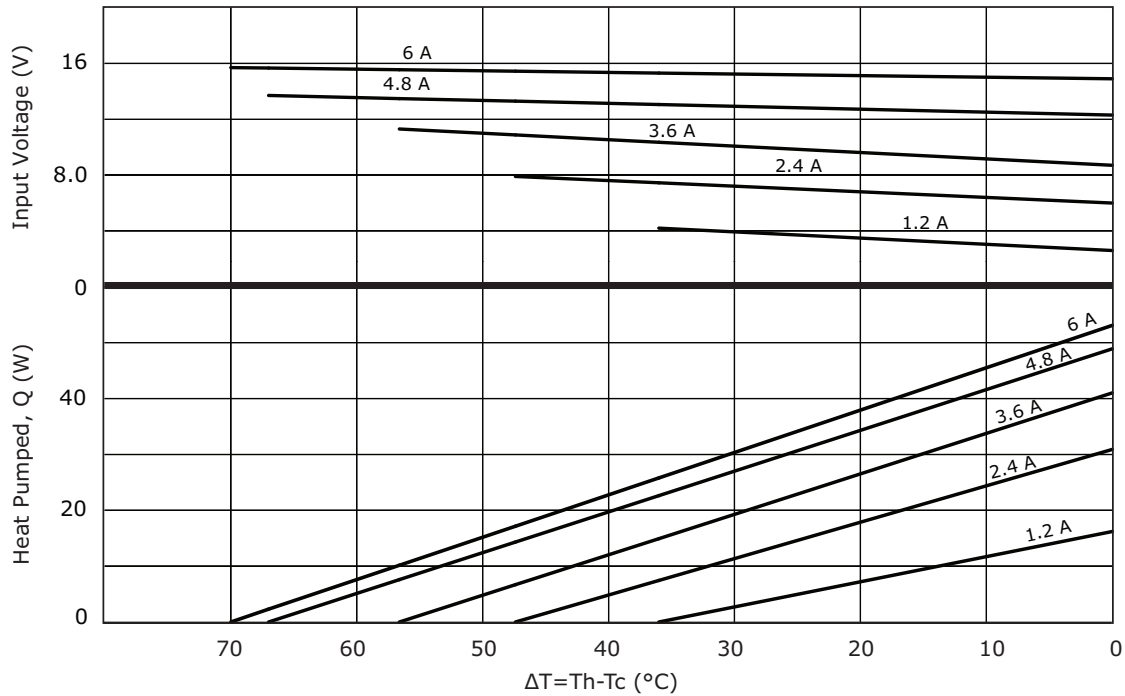
## CP60302031H PERFORMANCE (Th=27°C)



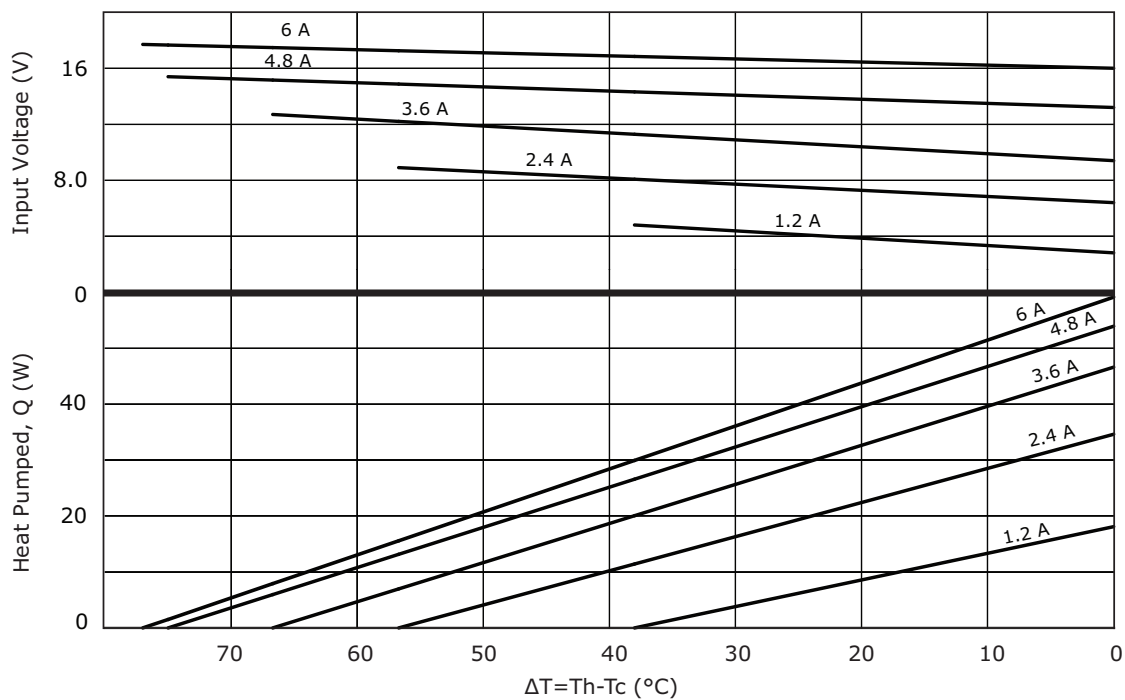
## CP60302031H PERFORMANCE (Th=50°C)



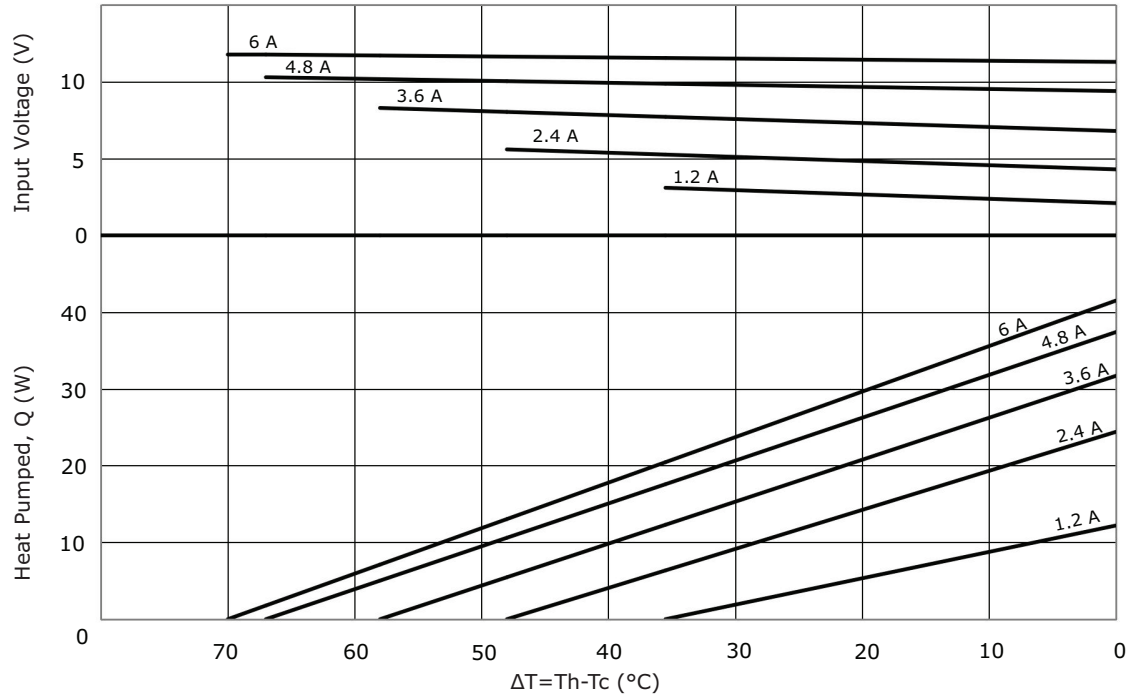
## CP603315H PERFORMANCE (Th=27°C)



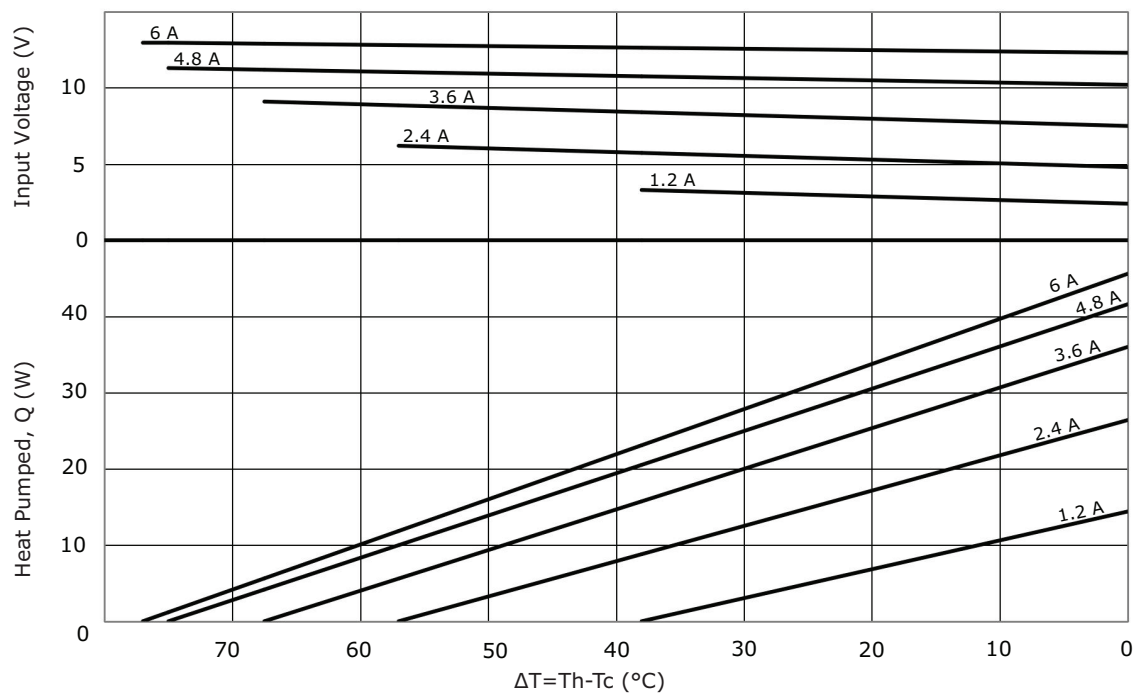
## CP603315H PERFORMANCE (Th=50°C)



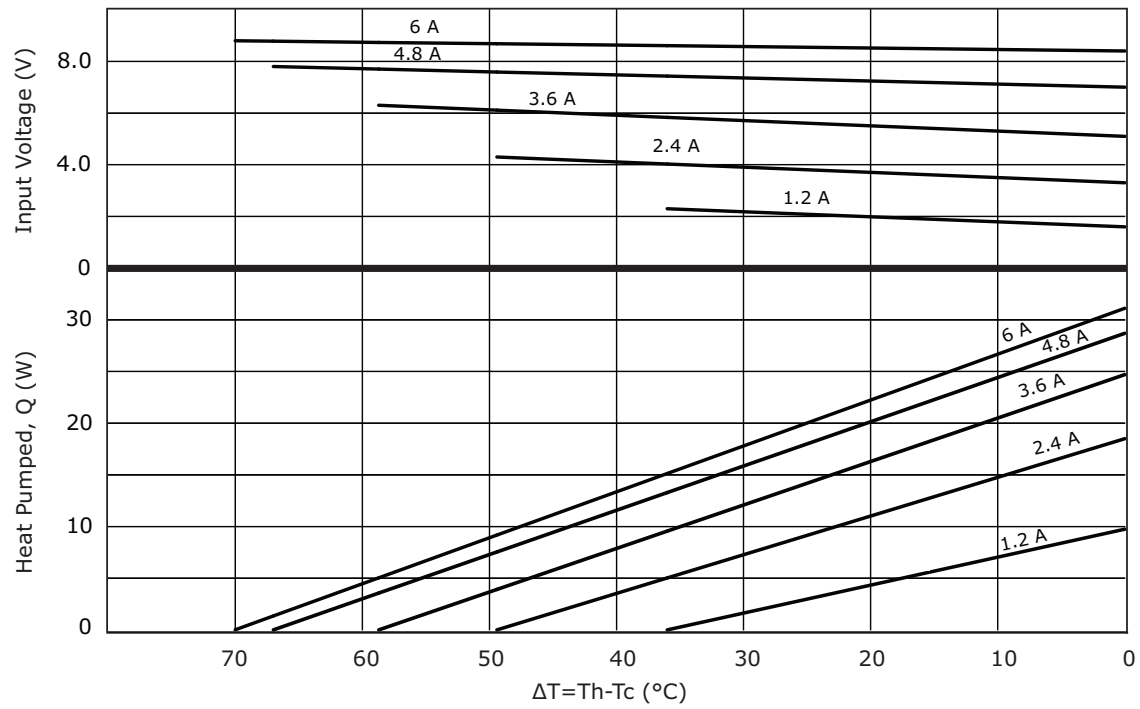
## CP6030395 PERFORMANCE (Th=27°C)



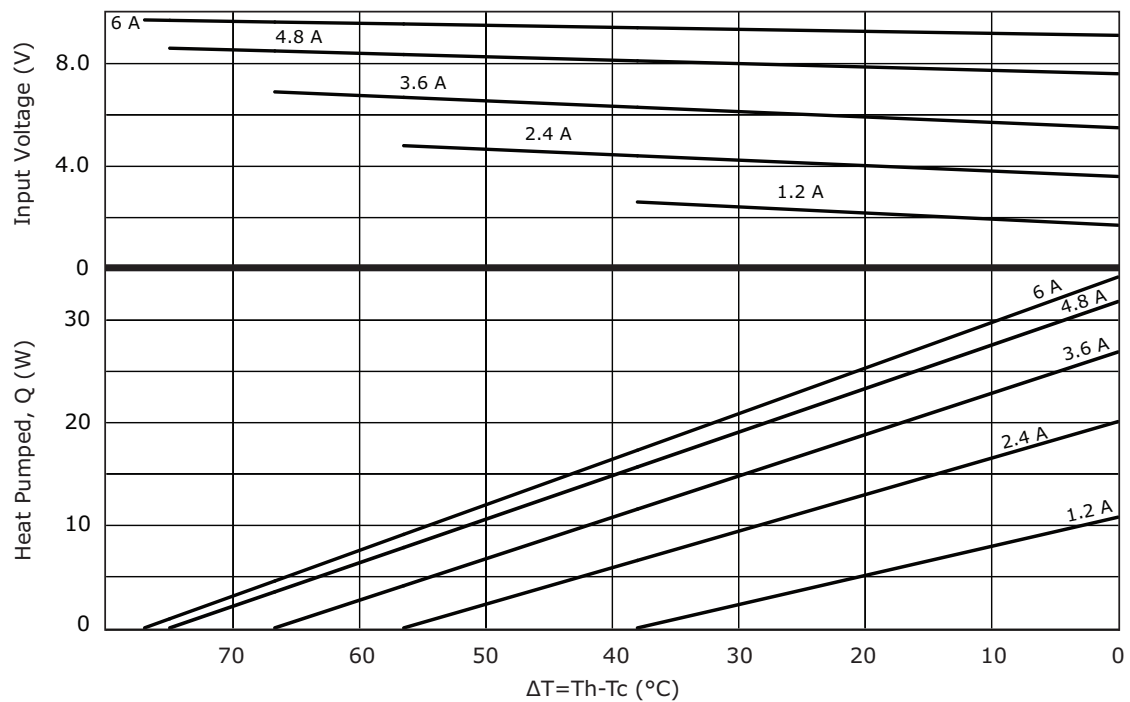
## CP6030395 PERFORMANCE (Th=50°C)



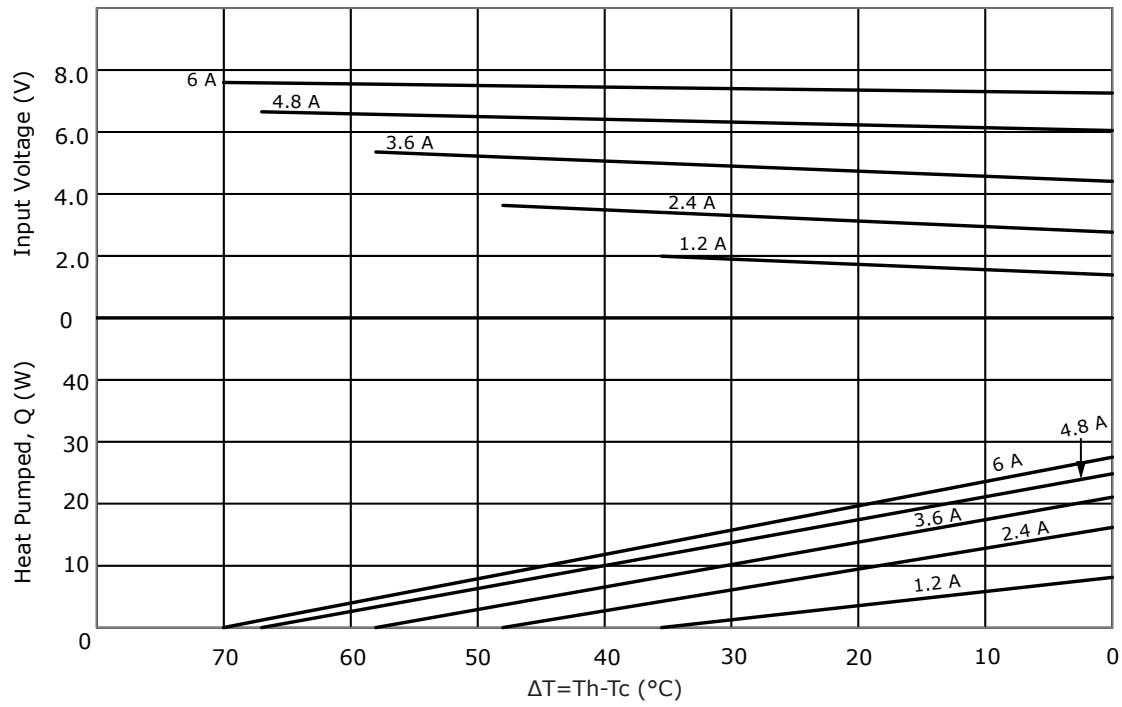
## CP603395H PERFORMANCE (Th=27°C)



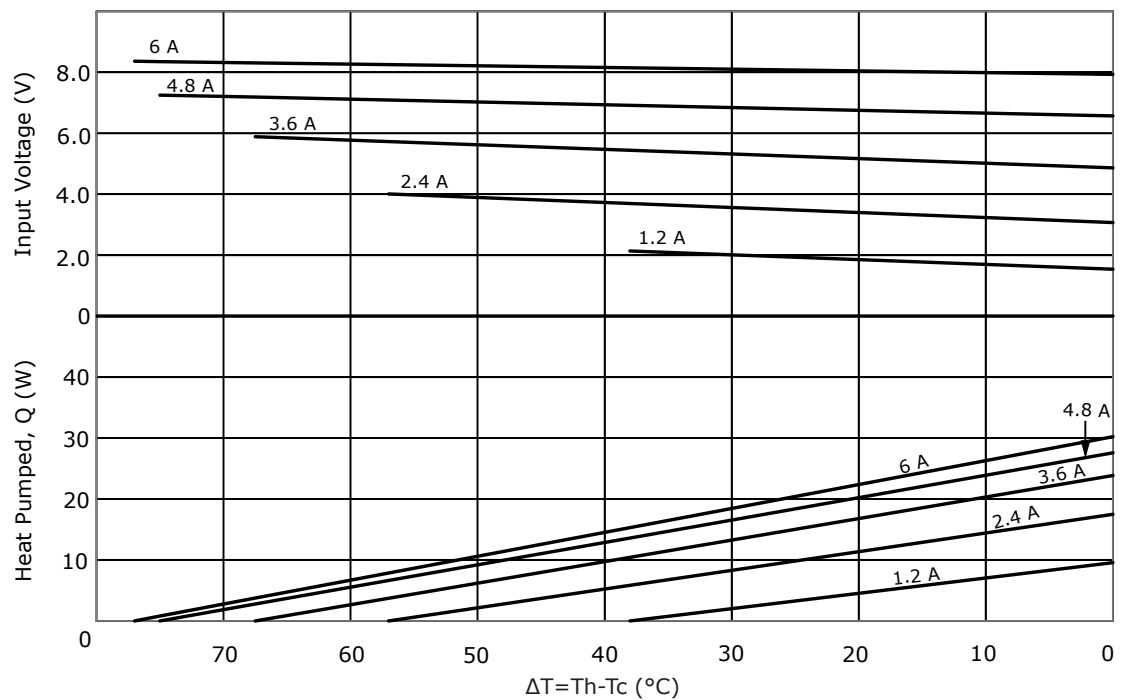
## CP603395H PERFORMANCE (Th=50°C)



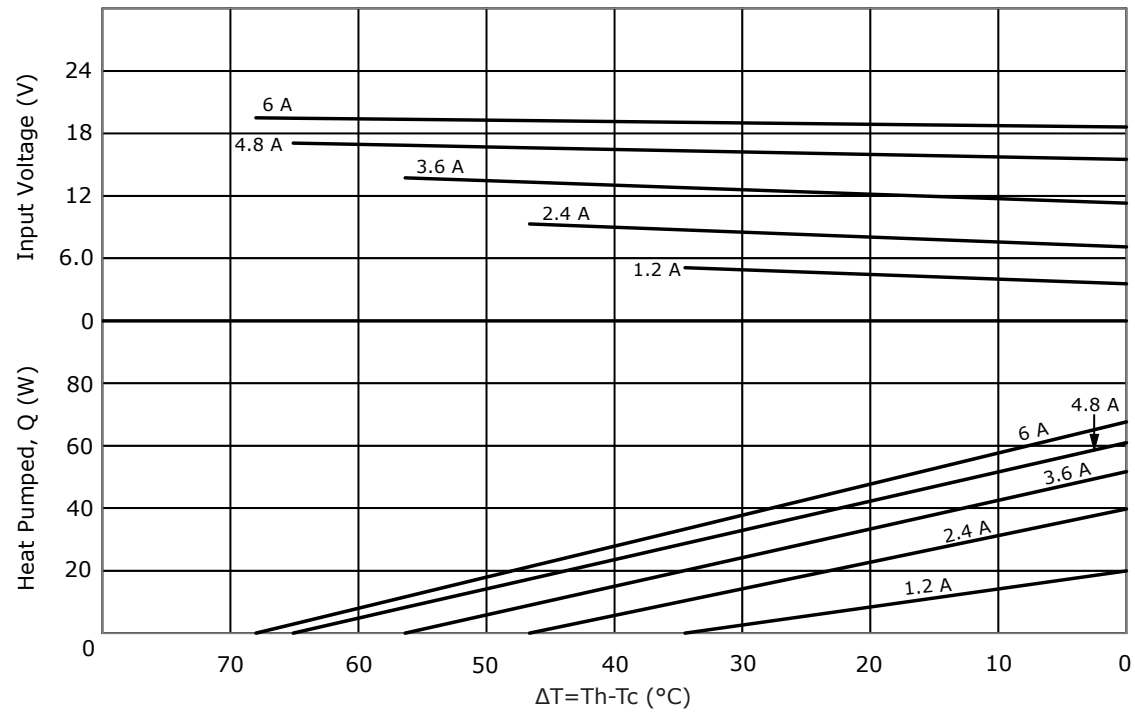
## CP604020395H PERFORMANCE (Th=27°C)



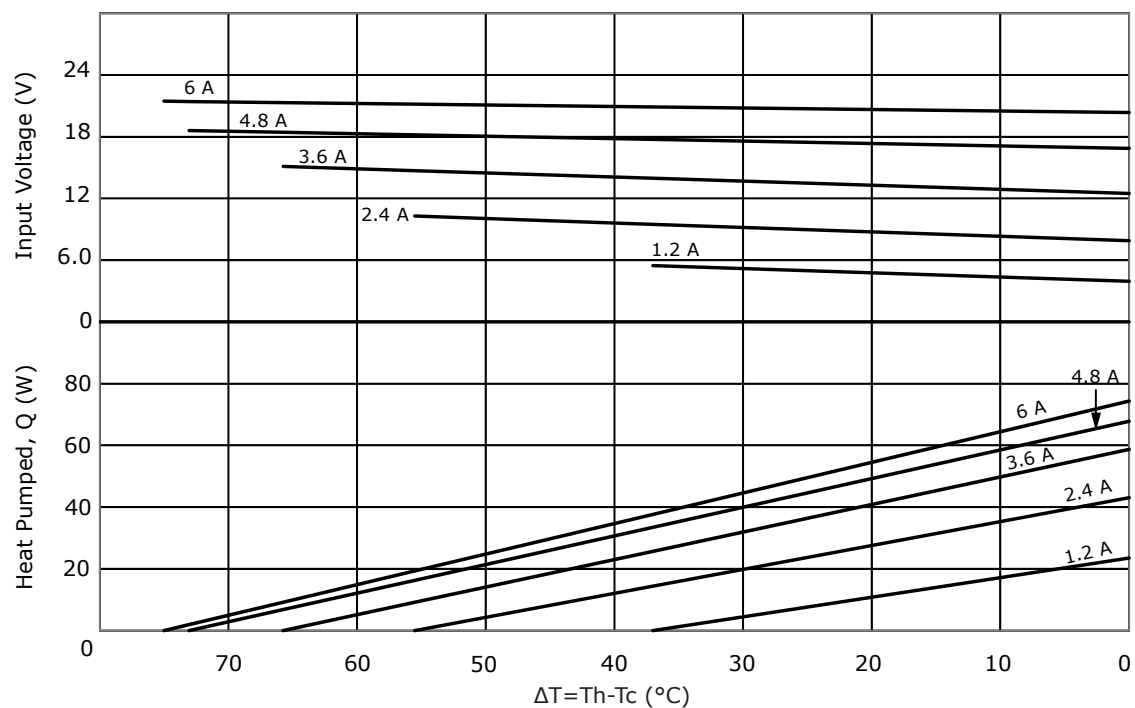
## CP604020395H PERFORMANCE (Th=50°C)



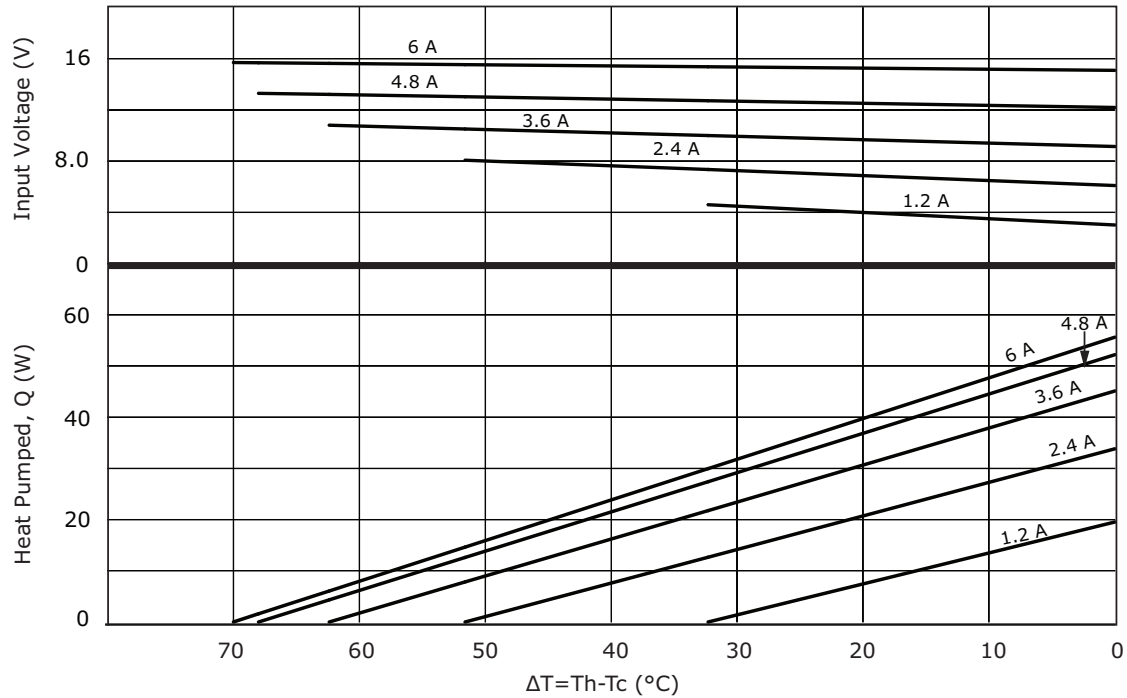
## CP60433H PERFORMANCE (Th=27°C)



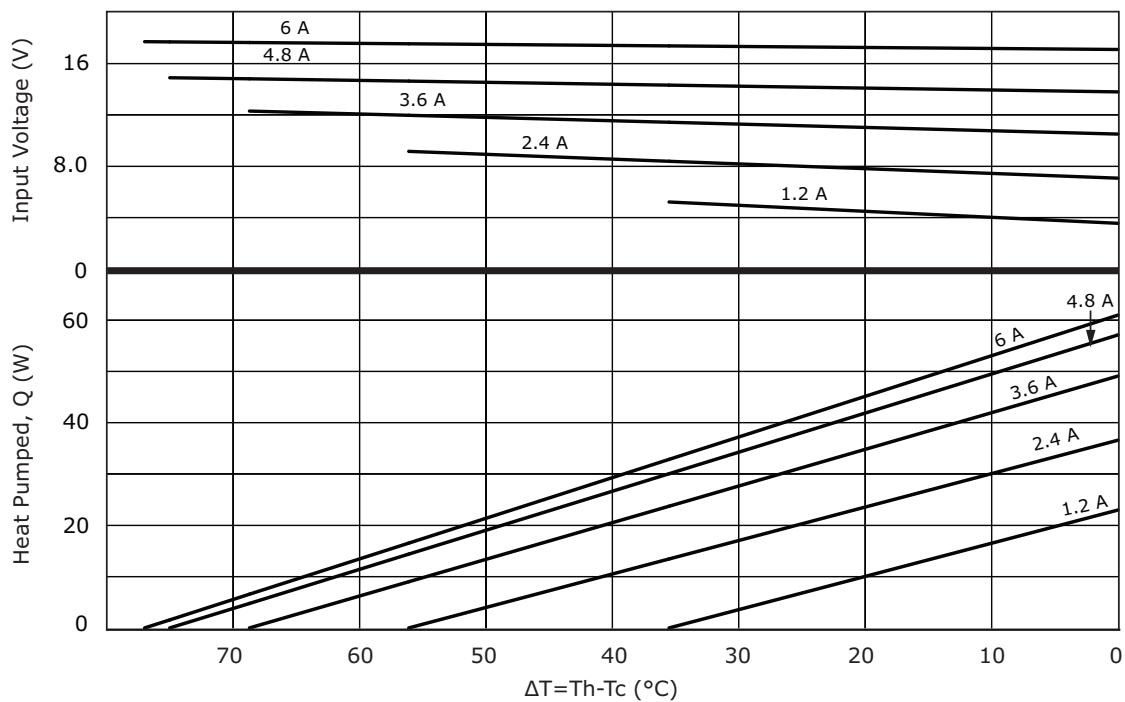
## CP60433H PERFORMANCE (Th=50°C)



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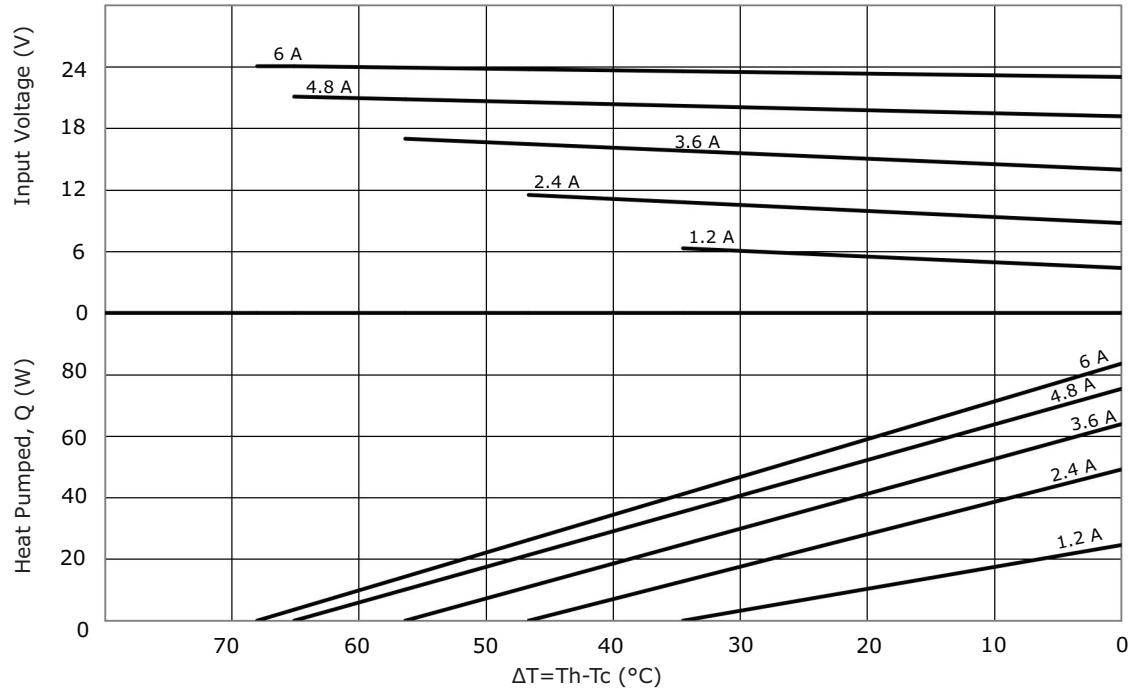


## CP604395H PERFORMANCE (Th=50°C)

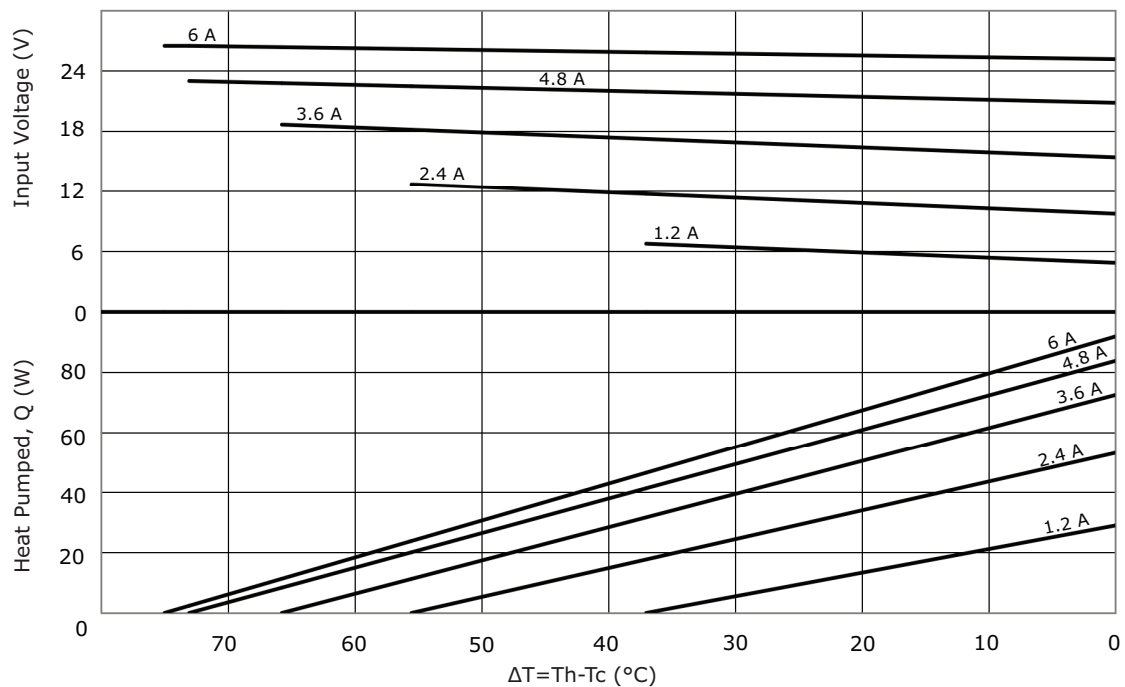




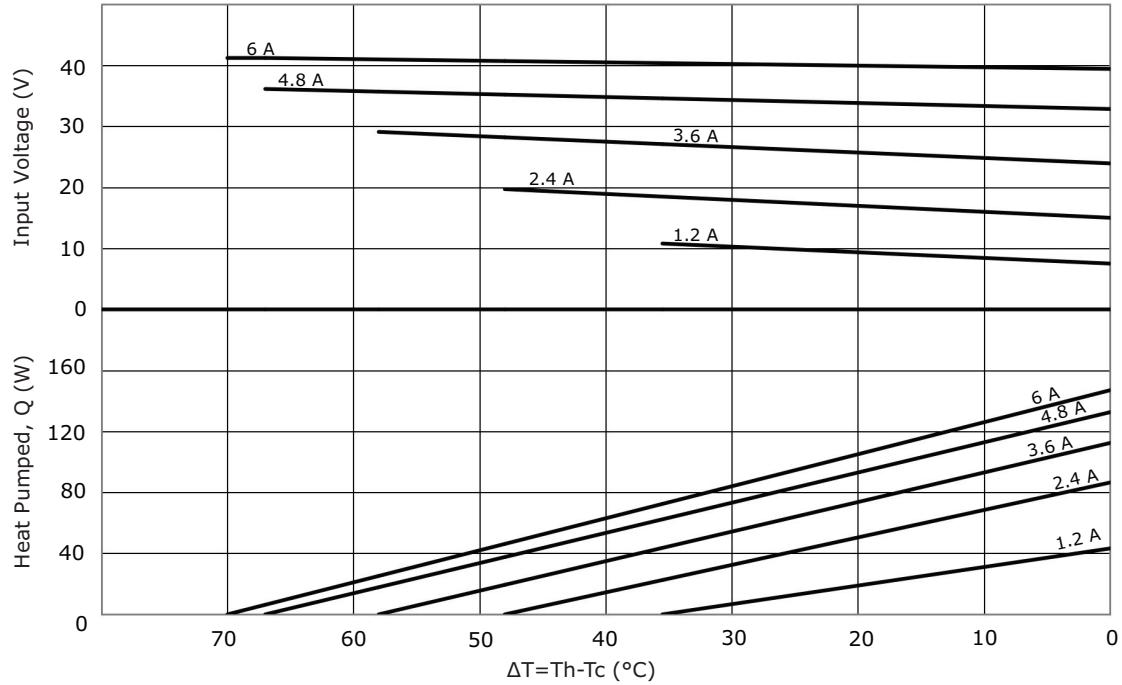
## CP604040 PERFORMANCE (Th=27°C)



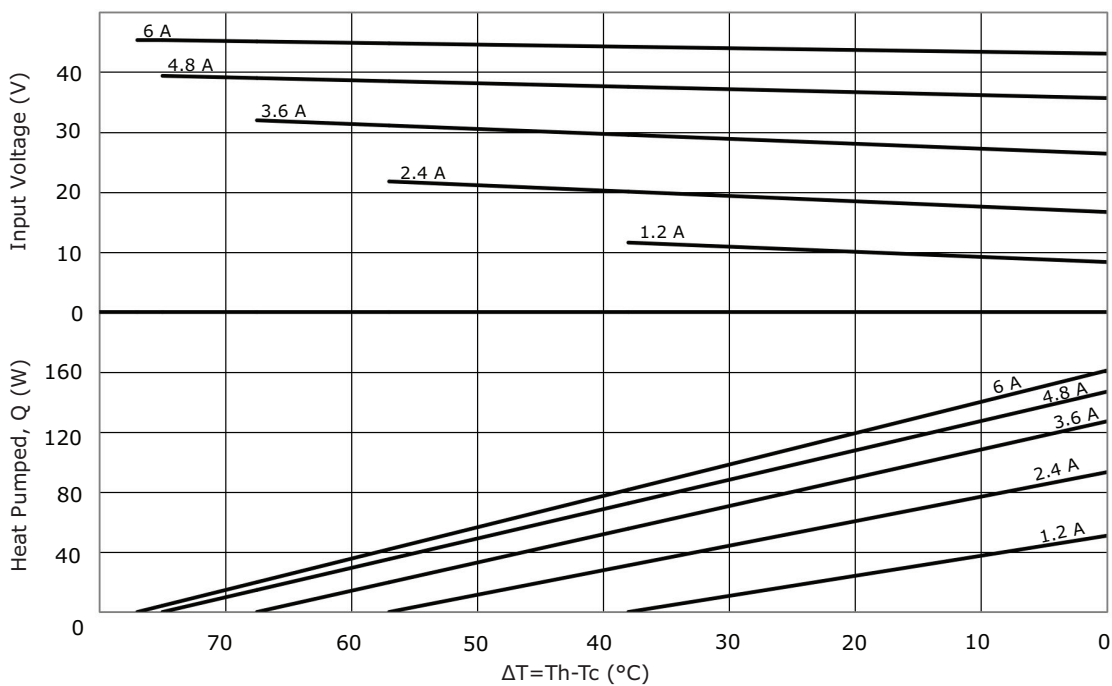
## CP604040 PERFORMANCE (Th=50°C)



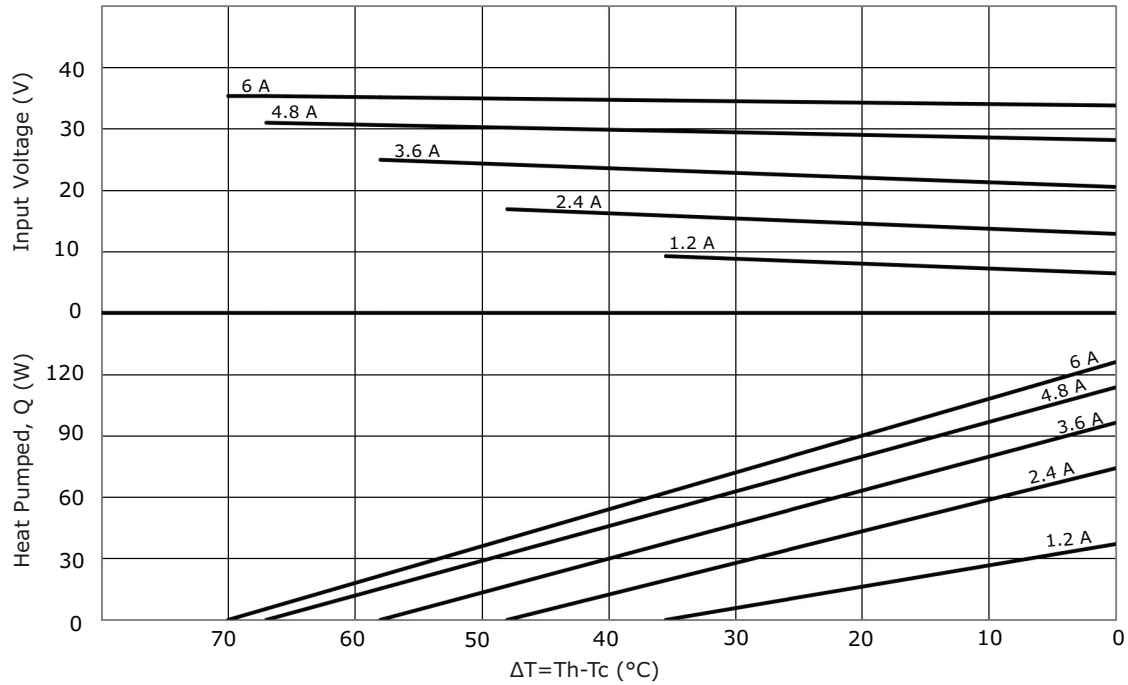
## CP60546241 PERFORMANCE (Th=27°C)



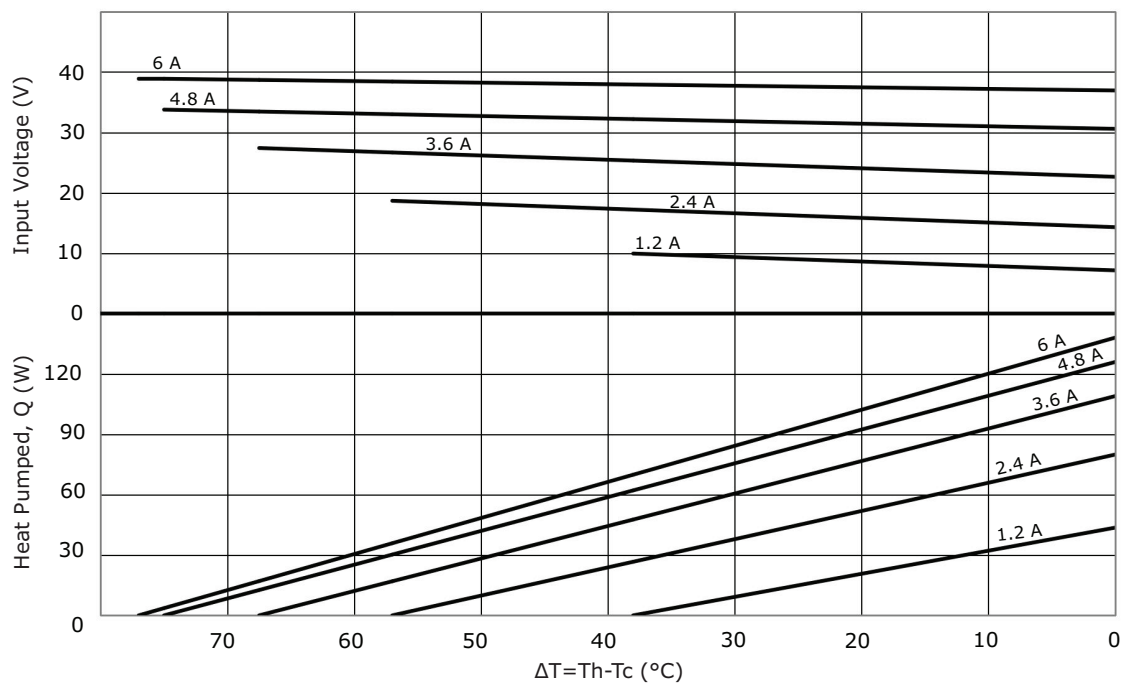
## CP60546241 PERFORMANCE (Th=50°C)



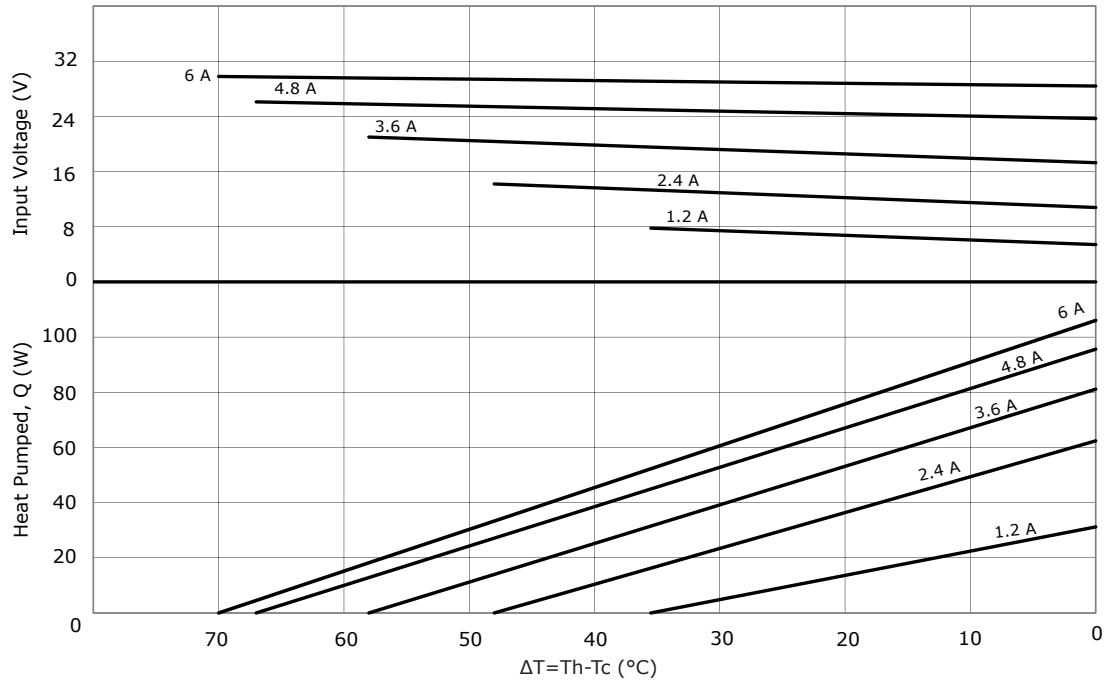
## CP6055354 PERFORMANCE (Th=27°C)



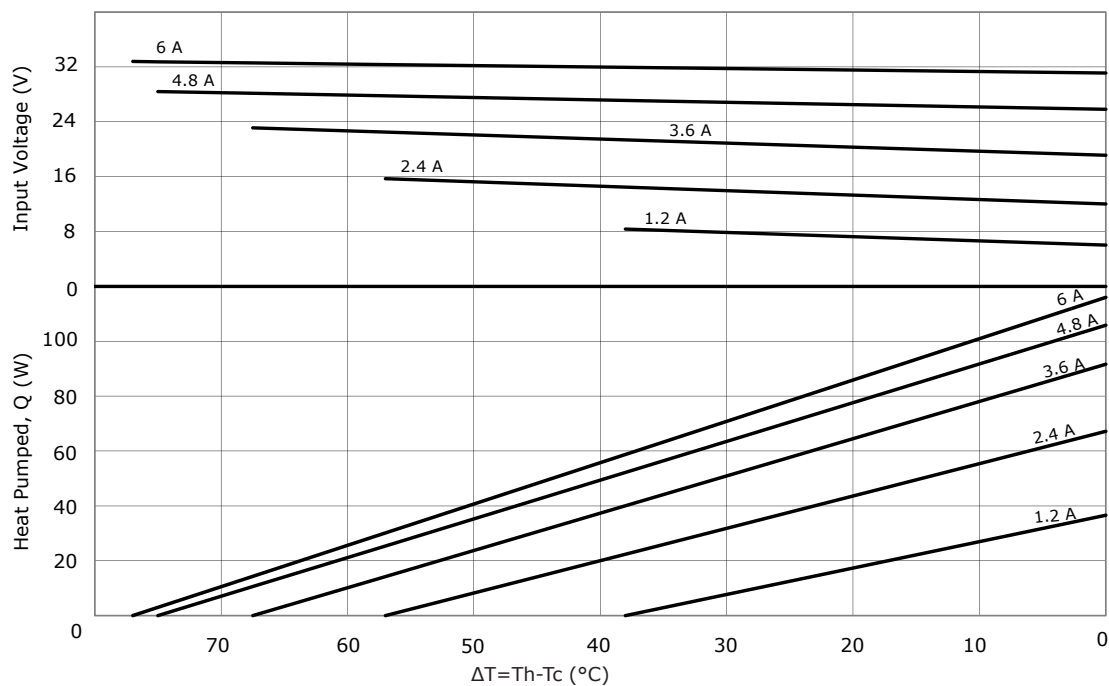
## CP6055354 PERFORMANCE (Th=50°C)



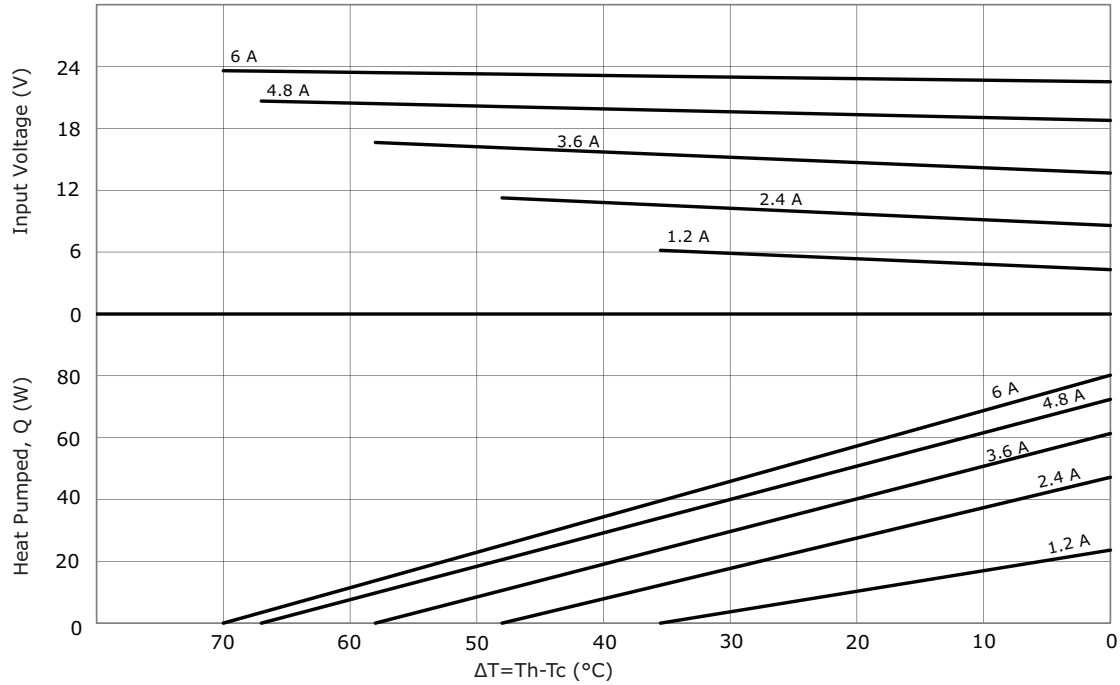
## CP6055542 PERFORMANCE (Th=27°C)



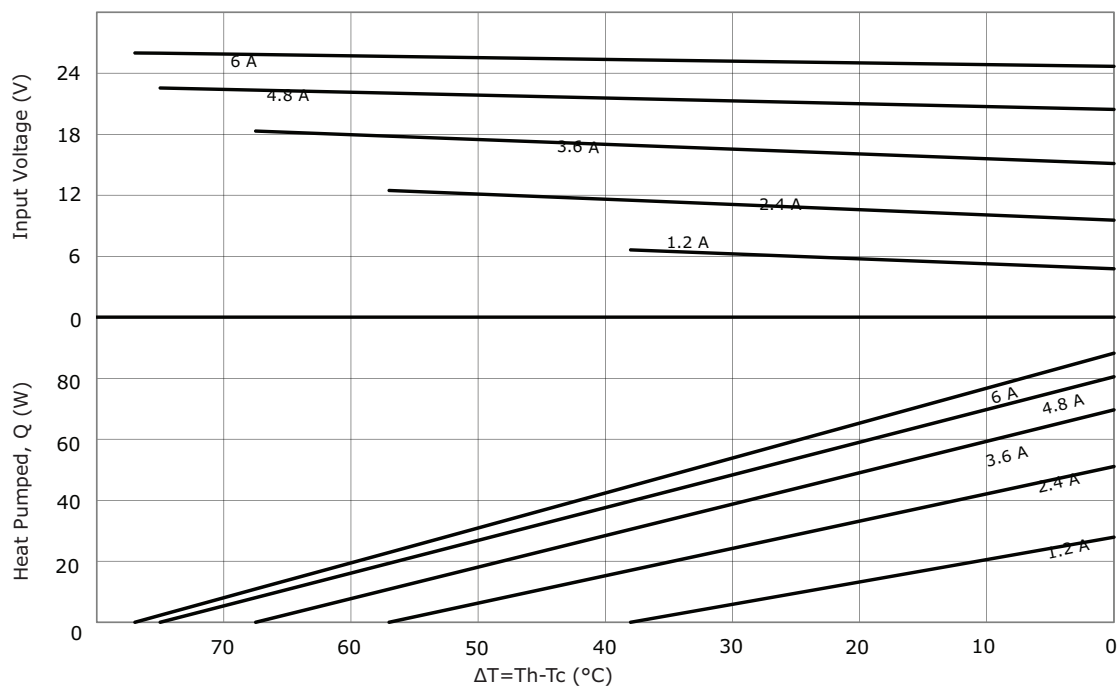
## CP6055542 PERFORMANCE (Th=50°C)



## 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 |
| 1.06 | CUI Devices rebranded to Same Sky                                                              | 09/12/2024 |

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



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

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