

**SERIES:** HSE-18X | **DESCRIPTION:** HEAT SINK**FEATURES**

- TO-218 package
- placement pins for secure PCB attachment
- round hole for component attachment
- multiple available cut lengths

**MODEL**

|                  | length<br>[mm] | thermal resistance <sup>1</sup> |                              |                             |                             | power<br>dissipation <sup>1</sup><br>@ 75°C ΔT, nat<br>conv [W] |
|------------------|----------------|---------------------------------|------------------------------|-----------------------------|-----------------------------|-----------------------------------------------------------------|
|                  |                | @ 75°C ΔT, nat<br>conv [°C/W]   | @ 1 W,<br>nat conv<br>[°C/W] | @ 1 W,<br>200 LFM<br>[°C/W] | @ 1 W,<br>400 LFM<br>[°C/W] |                                                                 |
| HSE-B18254-0396H | 25.4           | 9.15                            | 11.15                        | 2.29                        | 2.07                        | 8.20                                                            |
| HSE-B18318-0396H | 31.8           | 8.24                            | 9.93                         | 2.57                        | 1.80                        | 9.10                                                            |
| HSE-B18381-0396H | 38.1           | 6.94                            | 8.71                         | 2.29                        | 1.80                        | 10.80                                                           |
| HSE-B18508-0396H | 50.8           | 5.86                            | 7.62                         | 2.45                        | 1.79                        | 12.80                                                           |
| HSE-B18635-0396H | 63.5           | 5.47                            | 7.36                         | 2.78                        | 1.55                        | 13.70                                                           |

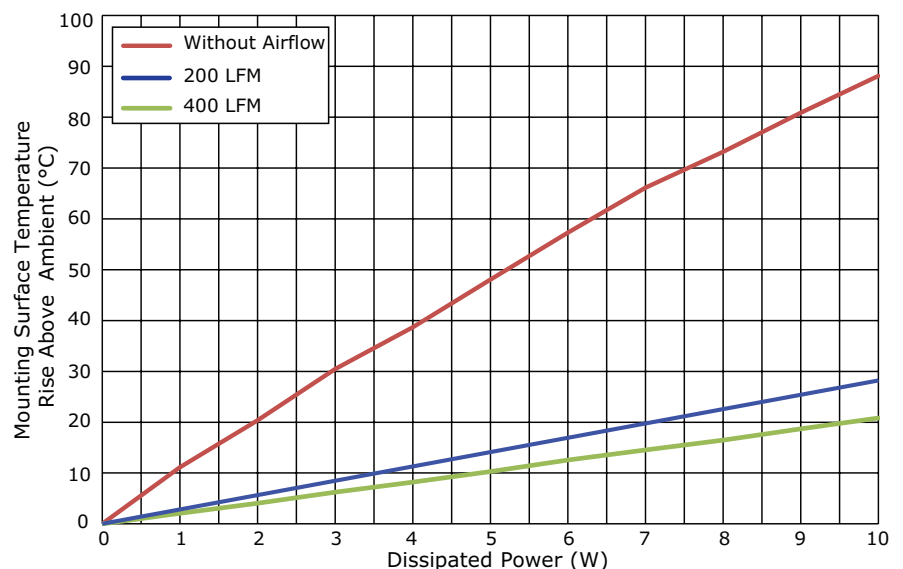
Note:

1. See performance curves for full thermal resistance details.

2. Custom cut to length options available. Thermal data not available on custom lengths.

**PERFORMANCE CURVES****HSE-B18254-0396H**

| Heatsink Temperature Rise Above Ambient (ΔT = T <sub>hs</sub> - T <sub>a</sub> ) [°C] |               |         |         |
|---------------------------------------------------------------------------------------|---------------|---------|---------|
| Power [W]                                                                             | Natural Conv. | 200 LFM | 400 LFM |
| 0                                                                                     | 0             | 0       | 0       |
| 1                                                                                     | 11.15         | 2.29    | 2.07    |
| 2                                                                                     | 20.39         | 4.95    | 4.07    |
| 3                                                                                     | 30.47         | 7.76    | 6.21    |
| 4                                                                                     | 38.70         | 11.00   | 8.23    |
| 5                                                                                     | 48.05         | 13.96   | 10.29   |
| 6                                                                                     | 57.30         | 16.92   | 12.55   |
| 7                                                                                     | 66.12         | 19.68   | 14.54   |
| 8                                                                                     | 73.21         | 22.63   | 16.48   |
| 9                                                                                     | 80.86         | 25.48   | 18.68   |
| 10                                                                                    | 88.12         | 28.22   | 20.84   |

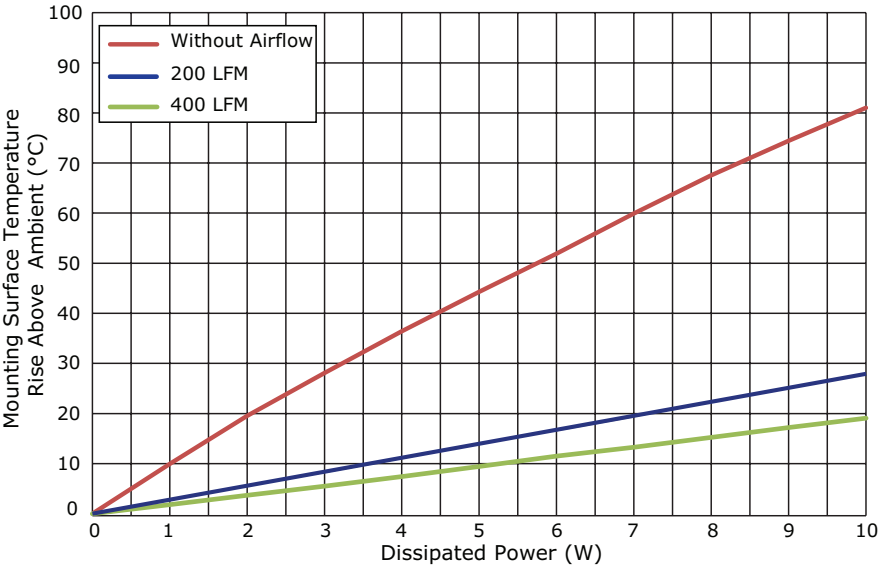
T<sub>hs</sub>: "hot spot" temperature measured on the heatsink  
T<sub>a</sub>: ambient temperature

PERFORMANCE CURVES (CONTINUED)

HSE-B18318-0396H

| Heatsink Temperature Rise Above Ambient ( $\Delta T = T_{hs} - T_a$ ) [°C] |               |         |         |
|----------------------------------------------------------------------------|---------------|---------|---------|
| Power [W]                                                                  | Natural Conv. | 200 LFM | 400 LFM |
| 0                                                                          | 0             | 0       | 0       |
| 1                                                                          | 9.93          | 2.57    | 1.80    |
| 2                                                                          | 19.55         | 5.41    | 3.67    |
| 3                                                                          | 28.10         | 8.10    | 5.47    |
| 4                                                                          | 36.39         | 10.89   | 7.40    |
| 5                                                                          | 44.29         | 13.77   | 9.45    |
| 6                                                                          | 51.91         | 16.50   | 11.49   |
| 7                                                                          | 59.92         | 19.29   | 13.27   |
| 8                                                                          | 67.55         | 22.14   | 15.22   |
| 9                                                                          | 74.45         | 24.97   | 17.22   |
| 10                                                                         | 81.01         | 27.92   | 19.08   |

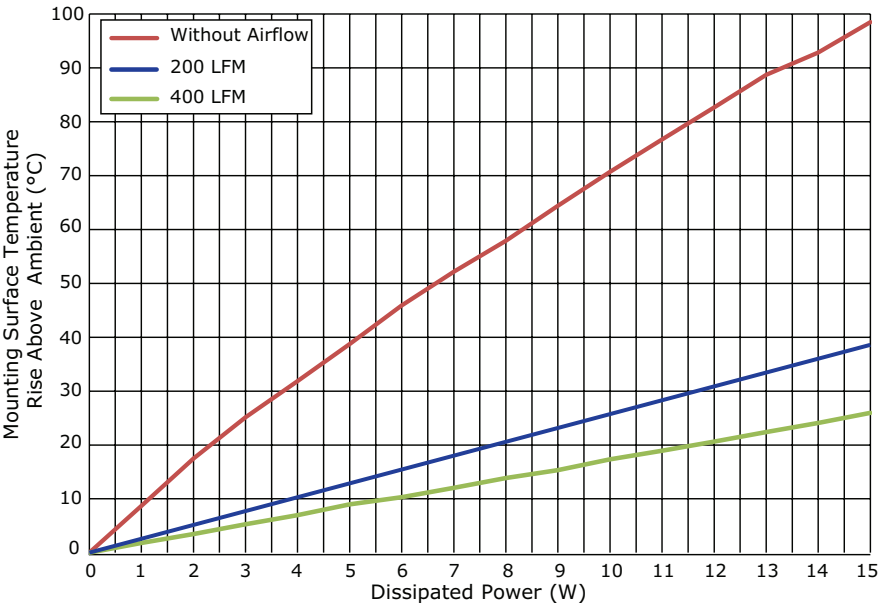
T<sub>hs</sub>: "hot spot" temperature measured on the heatsink  
T<sub>a</sub>: ambient temperature



HSE-B18381-0396H

| Heatsink Temperature Rise Above Ambient ( $\Delta T = T_{hs} - T_a$ ) [°C] |               |         |         |
|----------------------------------------------------------------------------|---------------|---------|---------|
| Power [W]                                                                  | Natural Conv. | 200 LFM | 400 LFM |
| 0                                                                          | 0             | 0       | 0       |
| 1                                                                          | 8.71          | 2.29    | 1.80    |
| 2                                                                          | 17.51         | 4.67    | 3.45    |
| 3                                                                          | 25.16         | 6.92    | 5.27    |
| 4                                                                          | 31.88         | 9.51    | 6.96    |
| 5                                                                          | 38.73         | 11.93   | 9.00    |
| 6                                                                          | 45.88         | 14.31   | 10.31   |
| 7                                                                          | 52.16         | 16.91   | 12.03   |
| 8                                                                          | 57.90         | 19.57   | 13.87   |
| 9                                                                          | 64.39         | 22.26   | 15.35   |
| 10                                                                         | 70.70         | 24.56   | 17.34   |
| 11                                                                         | 76.71         | 27.23   | 18.94   |
| 12                                                                         | 82.68         | 30.24   | 20.62   |
| 13                                                                         | 88.72         | 32.89   | 22.43   |
| 14                                                                         | 92.86         | 35.95   | 24.08   |
| 15                                                                         | 98.52         | 38.57   | 25.96   |

T<sub>hs</sub>: "hot spot" temperature measured on the heatsink  
T<sub>a</sub>: ambient temperature

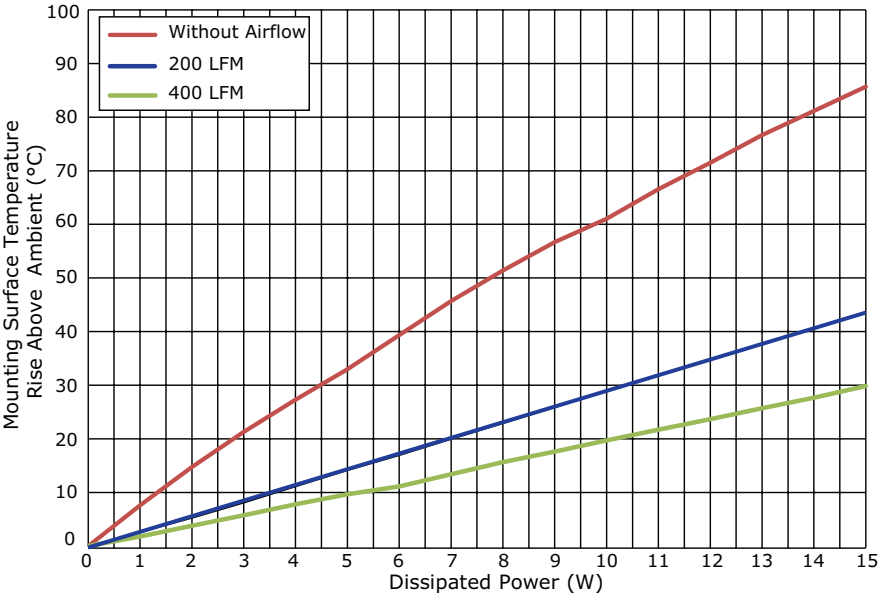


PERFORMANCE CURVES (CONTINUED)

HSE-B18508-0396H

| Power<br>[W] | Heatsink Temperature Rise Above<br>Ambient ( $\Delta T = T_{hs} - T_a$ ) [°C] |         |         |
|--------------|-------------------------------------------------------------------------------|---------|---------|
|              | Natural<br>Conv.                                                              | 200 LFM | 400 LFM |
| 0            | 0                                                                             | 0       | 0       |
| 1            | 7.62                                                                          | 2.45    | 1.79    |
| 2            | 14.75                                                                         | 5.07    | 3.78    |
| 3            | 21.30                                                                         | 7.93    | 5.77    |
| 4            | 27.29                                                                         | 10.95   | 7.77    |
| 5            | 33.00                                                                         | 13.97   | 9.65    |
| 6            | 39.34                                                                         | 16.78   | 11.13   |
| 7            | 45.69                                                                         | 19.80   | 13.41   |
| 8            | 51.39                                                                         | 22.76   | 15.66   |
| 9            | 56.70                                                                         | 25.71   | 17.63   |
| 10           | 61.04                                                                         | 28.78   | 19.70   |
| 11           | 66.55                                                                         | 31.89   | 21.71   |
| 12           | 71.51                                                                         | 34.70   | 23.68   |
| 13           | 76.66                                                                         | 37.87   | 25.70   |
| 14           | 81.16                                                                         | 40.44   | 27.66   |
| 15           | 85.69                                                                         | 43.56   | 29.84   |

T<sub>hs</sub>: "hot spot" temperature measured on the heatsink  
T<sub>a</sub>: ambient temperature

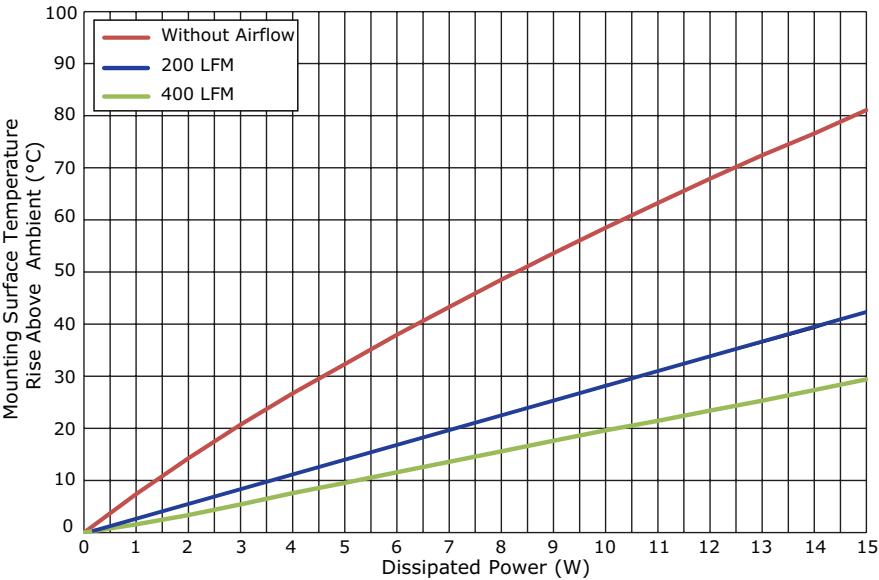


PERFORMANCE CURVES (CONTINUED)

HSE-B18635-0396H

| Power<br>[W] | Heatsink Temperature Rise Above<br>Ambient ( $\Delta T = T_{hs} - T_a$ ) [°C] |         |         |
|--------------|-------------------------------------------------------------------------------|---------|---------|
|              | Natural<br>Conv.                                                              | 200 LFM | 400 LFM |
| 0            | 0                                                                             | 0       | 0       |
| 1            | 7.36                                                                          | 2.78    | 1.55    |
| 2            | 14.26                                                                         | 5.51    | 3.34    |
| 3            | 20.72                                                                         | 8.49    | 5.38    |
| 4            | 26.71                                                                         | 11.30   | 7.58    |
| 5            | 32.32                                                                         | 13.90   | 9.50    |
| 6            | 37.95                                                                         | 17.05   | 11.58   |
| 7            | 43.27                                                                         | 19.88   | 13.58   |
| 8            | 48.53                                                                         | 22.56   | 15.55   |
| 9            | 53.62                                                                         | 25.41   | 17.59   |
| 10           | 58.48                                                                         | 28.50   | 19.59   |
| 11           | 63.26                                                                         | 30.79   | 21.43   |
| 12           | 67.93                                                                         | 33.63   | 23.37   |
| 13           | 72.42                                                                         | 36.30   | 25.31   |
| 14           | 76.58                                                                         | 39.06   | 27.34   |
| 15           | 81.06                                                                         | 42.34   | 29.38   |

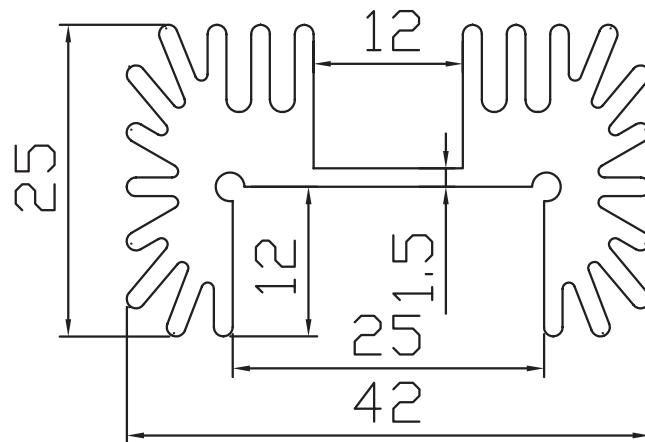
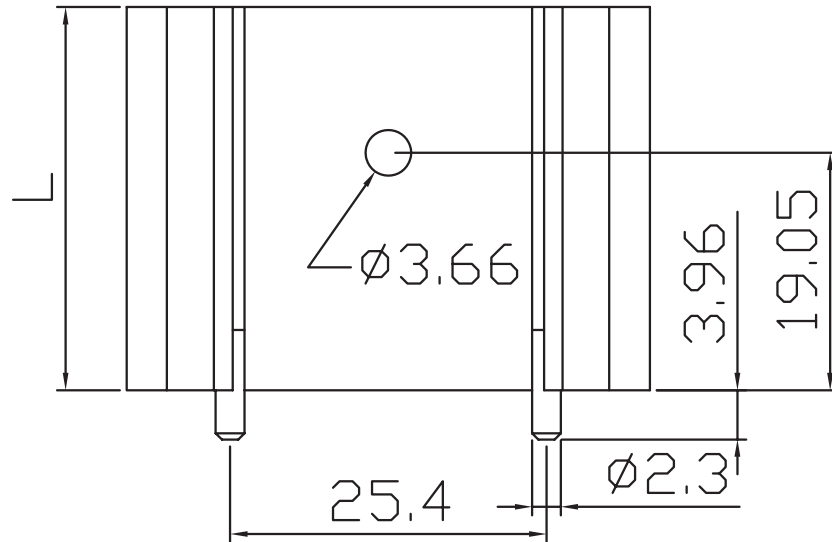
T<sub>hs</sub>: "hot spot" temperature measured on the heatsink  
T<sub>a</sub>: ambient temperature



## MECHANICAL DRAWING

units: mm  
tolerance:  $\pm 0.5$  mm

|              |                |
|--------------|----------------|
| MATERIAL     | AL 6063-T5     |
| FINISH       | black anodized |
| PIN MATERIAL | steel          |
| PIN PLATING  | tin            |



| MODEL NO.        | LENGTH, L<br>[mm] | WEIGHT<br>[g] |
|------------------|-------------------|---------------|
| HSE-B18254-0396H | 25.4              | 30            |
| HSE-B18318-0396H | 31.8              | 43            |
| HSE-B18381-0396H | 38.1              | 44            |
| HSE-B18508-0396H | 50.8              | 57            |
| HSE-B18635-0396H | 63.5              | 69            |

REVISION HISTORY

| rev. | description                       | date       |
|------|-----------------------------------|------------|
| 1.0  | initial release                   | 05/11/2017 |
| 1.01 | brand update                      | 02/10/2020 |
| 1.02 | logo, datasheet style update      | 08/05/2022 |
| 1.03 | 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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