



SERIES: HSE-B20X-01 | **DESCRIPTION:** HEAT SINK

FEATURES

- TO-220 package
- placement pins for secure PCB attachment
- slide in style
- multiple available cut lengths



MODEL

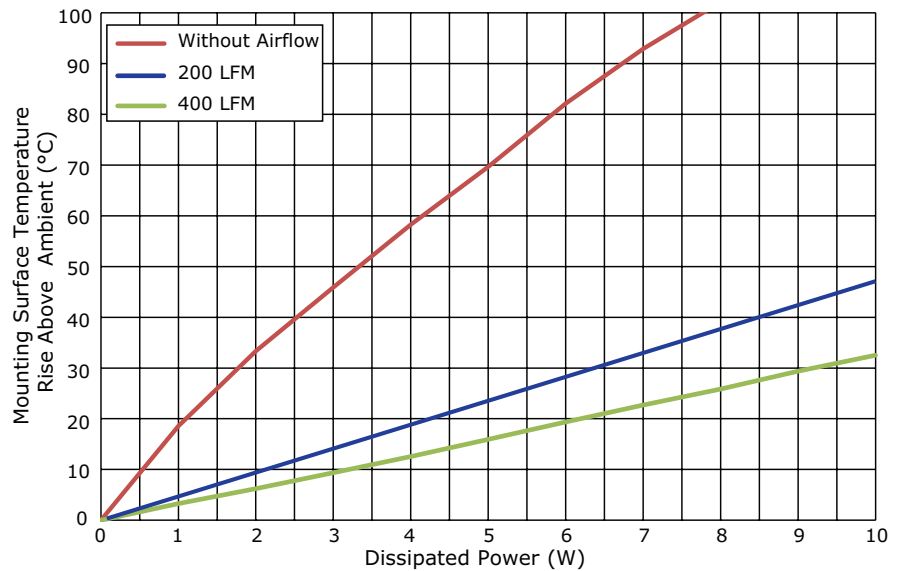
| | length [mm] | thermal resistance ¹ | | | | power dissipation ¹ @ 75°C ΔT, nat conv [W] |
|--------------------|----------------|---------------------------------|------------------------------|-----------------------------|-----------------------------|---|
| | | @ 75°C ΔT, nat conv [°C/W] | @ 1 W, nat conv [°C/W] | @ 1 W, 200 LFM [°C/W] | @ 1 W, 400 LFM [°C/W] | |
| HSE-B20250-040H-01 | 25 | 13.64 | 18.58 | 4.44 | 3.30 | 5.50 |
| HSE-B20380-040H-01 | 38 | 10.27 | 13.31 | 5.77 | 3.68 | 7.30 |
| HSE-B20500-040H-01 | 50 | 8.43 | 11.67 | 2.85 | 1.91 | 8.90 |
| HSE-B20630-040H-01 | 63 | 8.24 | 11.01 | 4.46 | 2.97 | 9.10 |

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-B20250-040H-01

| Power [W] | Heatsink Temperature Rise Above Ambient (ΔT = T _{hs} - T _a) [°C] | | |
|-----------|---|---------|---------|
| | Natural Conv. | 200 LFM | 400 LFM |
| 0 | 0 | 0 | 0 |
| 1 | 18.58 | 4.44 | 3.30 |
| 2 | 33.32 | 9.59 | 6.21 |
| 3 | 45.87 | 14.21 | 9.38 |
| 4 | 58.26 | 18.79 | 12.55 |
| 5 | 69.68 | 23.71 | 15.95 |
| 6 | 82.14 | 28.49 | 19.39 |
| 7 | 92.93 | 32.90 | 22.71 |
| 8 | 102.15 | 37.44 | 25.85 |
| 9 | 110.43 | 42.50 | 29.39 |
| 10 | 117.47 | 47.13 | 32.50 |



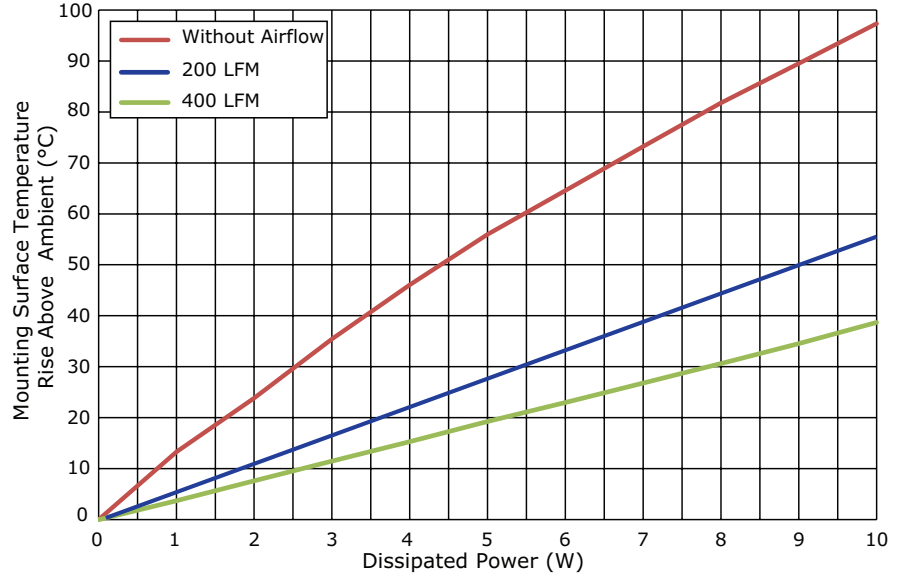
T_{hs}: "hot spot" temperature measured on the heatsink
T_a: ambient temperature

PERFORMANCE CURVES (CONTINUED)

HSE-B20380-040H-01

| Power [W] | Heatsink Temperature Rise Above Ambient ($\Delta T = T_{hs} - T_a$) [°C] | | |
|-----------|--|---------|---------|
| | Natural Conv. | 200 LFM | 400 LFM |
| 0 | 0 | 0 | 0 |
| 1 | 13.31 | 5.77 | 3.68 |
| 2 | 23.81 | 11.53 | 7.60 |
| 3 | 35.45 | 17.15 | 11.49 |
| 4 | 46.08 | 22.72 | 15.29 |
| 5 | 55.96 | 28.33 | 19.24 |
| 6 | 64.57 | 33.55 | 22.98 |
| 7 | 73.20 | 38.93 | 26.79 |
| 8 | 81.80 | 44.23 | 30.63 |
| 9 | 89.50 | 50.00 | 34.54 |
| 10 | 97.33 | 55.53 | 38.67 |

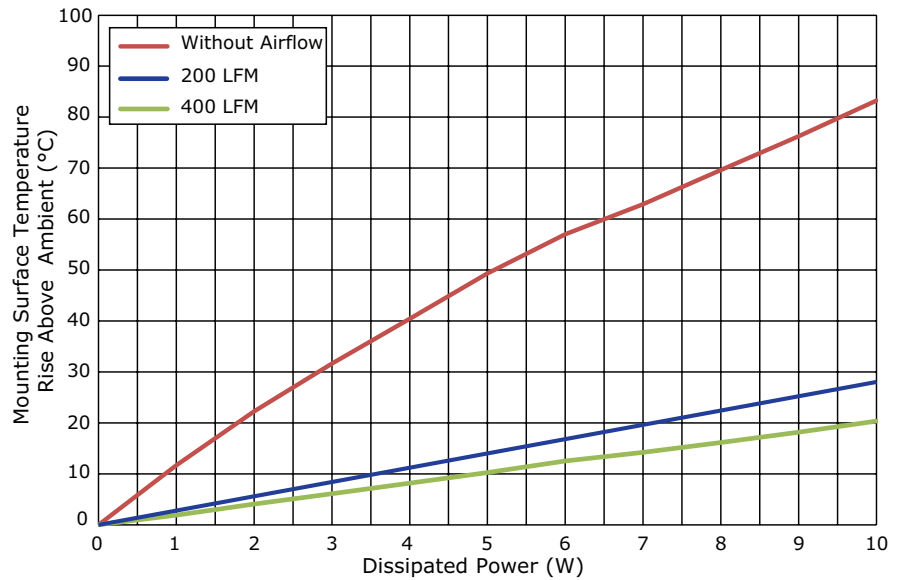
T_{hs}: "hot spot" temperature measured on the heatsink
T_a: ambient temperature



HSE-B20500-040H-01

| Power [W] | Heatsink Temperature Rise Above Ambient ($\Delta T = T_{hs} - T_a$) [°C] | | |
|-----------|--|---------|---------|
| | Natural Conv. | 200 LFM | 400 LFM |
| 0 | 0 | 0 | 0 |
| 1 | 11.67 | 2.85 | 1.91 |
| 2 | 22.26 | 5.68 | 4.07 |
| 3 | 31.61 | 8.58 | 6.11 |
| 4 | 40.44 | 11.07 | 8.18 |
| 5 | 49.31 | 14.07 | 10.26 |
| 6 | 57.03 | 16.67 | 12.51 |
| 7 | 62.88 | 19.49 | 14.23 |
| 8 | 69.61 | 22.33 | 16.13 |
| 9 | 76.25 | 25.14 | 18.16 |
| 10 | 83.27 | 28.02 | 20.35 |

T_{hs}: "hot spot" temperature measured on the heatsink
T_a: ambient temperature

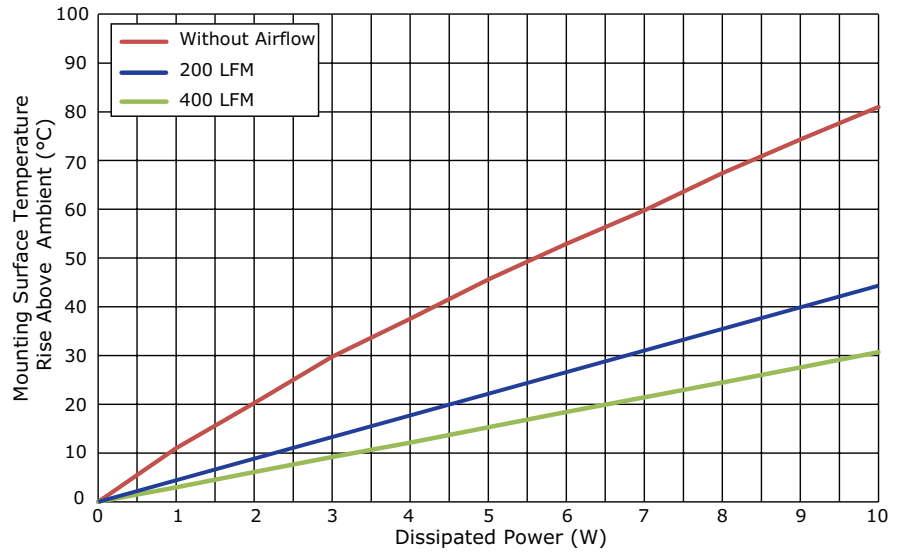


PERFORMANCE CURVES (CONTINUED)

HSE-B20630-040H-01

| Power [W] | Heatsink Temperature Rise Above Ambient ($\Delta T = T_{hs} - T_a$) [°C] | | |
|-----------|--|---------|---------|
| | Natural Conv. | 200 LFM | 400 LFM |
| 0 | 0 | 0 | 0 |
| 1 | 11.01 | 4.46 | 2.97 |
| 2 | 20.23 | 8.99 | 6.12 |
| 3 | 29.76 | 13.50 | 9.20 |
| 4 | 37.54 | 18.04 | 12.16 |
| 5 | 45.62 | 22.74 | 15.31 |
| 6 | 52.89 | 27.33 | 18.44 |
| 7 | 59.78 | 31.53 | 21.42 |
| 8 | 67.39 | 35.77 | 24.49 |
| 9 | 74.31 | 40.18 | 27.56 |
| 10 | 80.97 | 44.35 | 30.69 |

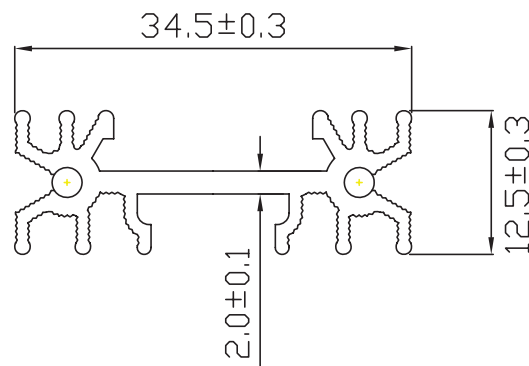
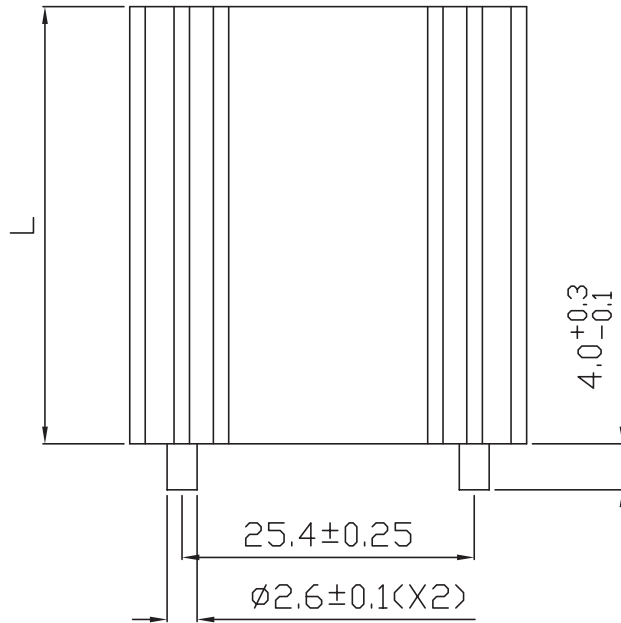
T_{hs}: "hot spot" temperature measured on the heatsink
 T_a: ambient temperature



MECHANICAL DRAWING

units: mm
tolerance: ± 0.5 mm

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



| MODEL NO. | LENGTH, L [mm] | WEIGHT [g] |
|--------------------|----------------|------------|
| HSE-B20250-040H-01 | 25 | 11.33 |
| HSE-B20380-040H-01 | 38 | 16.67 |
| HSE-B20500-040H-01 | 50 | 19.45 |
| HSE-B20630-040H-01 | 63 | 24.16 |

REVISION HISTORY

| rev. | description | date |
|------|-----------------------------------|------------|
| 1.0 | initial release | 05/02/2017 |
| 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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