

**SERIES:** HSE-BX-056H | **DESCRIPTION:** HEAT SINK**FEATURES**

- TO-220 package
- placement pins for secure PCB attachment
- round hole for component attachment
- multiple available cut lengths

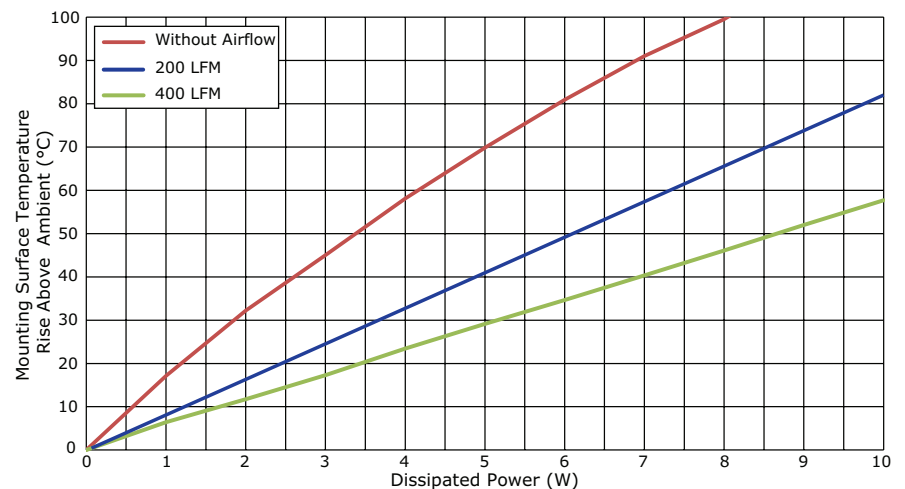
**MODEL**

|                 | length<br>(mm) | thermal resistance <sup>1</sup>  |                              |                             |                             | power<br>dissipation <sup>1</sup><br>@ 75°C ΔT,<br>nat conv<br>(W) |
|-----------------|----------------|----------------------------------|------------------------------|-----------------------------|-----------------------------|--------------------------------------------------------------------|
|                 |                | @ 75°C ΔT,<br>nat conv<br>(°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-B20254-056H | 25.4           | 13.64                            | 17.13                        | 8.36                        | 6.41                        | 5.50                                                               |
| HSE-B20381-056H | 38.1           | 11.19                            | 15.00                        | 3.53                        | 2.56                        | 6.70                                                               |

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-B20254-056H**

| Power<br>(W) | Heatsink Temperature Rise Above<br>Ambient (ΔT = T <sub>hs</sub> - T <sub>a</sub> ) (°C) |         |         |
|--------------|------------------------------------------------------------------------------------------|---------|---------|
|              | Natural<br>Conv.                                                                         | 200 LFM | 400 LFM |
| 0            | 0                                                                                        | 0       | 0       |
| 1            | 17.13                                                                                    | 8.36    | 6.41    |
| 2            | 32.20                                                                                    | 17.46   | 11.75   |
| 3            | 45.00                                                                                    | 24.87   | 17.28   |
| 4            | 58.12                                                                                    | 32.88   | 23.43   |
| 5            | 69.84                                                                                    | 40.99   | 29.16   |
| 6            | 80.93                                                                                    | 48.89   | 34.64   |
| 7            | 91.01                                                                                    | 56.79   | 40.37   |
| 8            | 99.56                                                                                    | 65.43   | 46.09   |
| 9            | 110.81                                                                                   | 72.66   | 52.01   |
| 10           | 118.44                                                                                   | 82.03   | 57.73   |



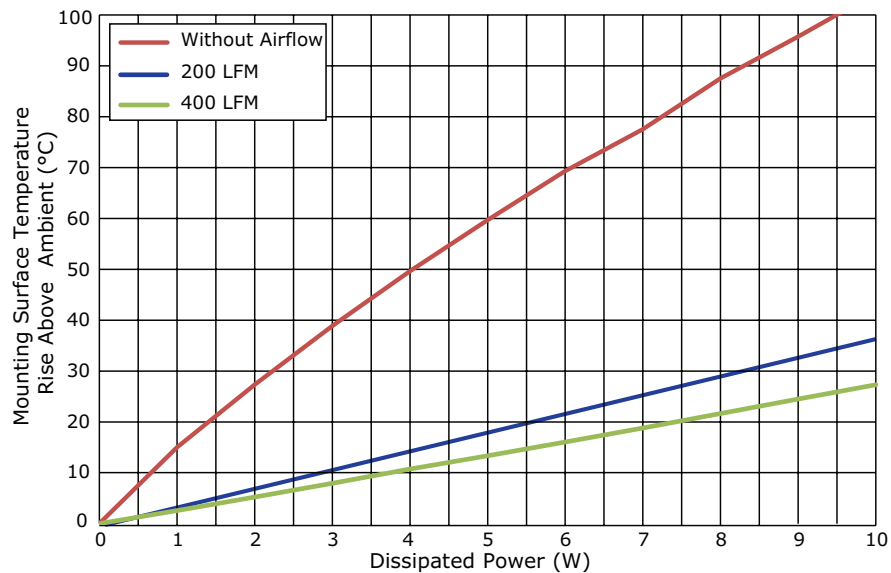
T<sub>hs</sub>: "hot spot" temperature measured on the heatsink  
T<sub>a</sub>: ambient temperature

## PERFORMANCE CURVES (CONTINUED)

### HSE-B20381-056H

| 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         | 15.00                                                                      | 3.53    | 2.56    |
| 2         | 27.32                                                                      | 7.15    | 5.23    |
| 3         | 38.89                                                                      | 10.82   | 7.90    |
| 4         | 49.63                                                                      | 14.38   | 10.72   |
| 5         | 59.72                                                                      | 17.90   | 13.32   |
| 6         | 69.31                                                                      | 21.80   | 16.03   |
| 7         | 77.53                                                                      | 25.42   | 18.80   |
| 8         | 87.53                                                                      | 28.89   | 21.65   |
| 9         | 95.75                                                                      | 32.68   | 24.48   |
| 10        | 104.38                                                                     | 36.30   | 27.29   |

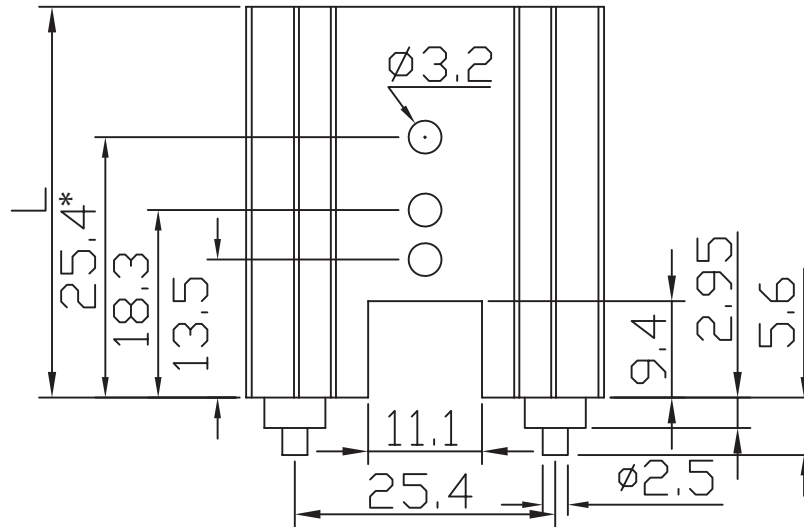
$T_{hs}$ : "hot spot" temperature measured on the heatsink  
 $T_a$ : ambient temperature



## 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 (mm) | WEIGHT (g) |
|------------------|----------------|------------|
| HSE-B20254-056H* | 25.4           | 11.33      |
| HSE-B20381-056H  | 38.1           | 16.67      |

Note: \* Mounting hole not present on 25.4 mm length model.

## REVISION HISTORY

| rev. | description       | date       |
|------|-------------------|------------|
| 1.0  | initial release   | 05/05/2017 |
| 1.01 | updated datasheet | 09/07/2017 |
| 1.02 | brand update      | 02/11/2020 |

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

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