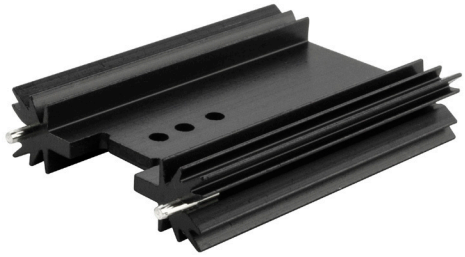
CUDEVICES

SERIES: HSE-BX-045H | **DESCRIPTION:** HEAT SINK

FEATURES

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



RoHS

MODEL

	length (mm)	thermal resistance[1] @ 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)	power dissipation[1] @ 75°C ΔT, nat conv (W)
HSE-B254-045H	25.4	11.72	16.12	3.86	2.52	6.40
HSE-B381-045H	38.1	7.58	8.52	2.63	1.82	9.90
HSE-B508-045H	50.8	8.06	10.52	4.38	2.89	9.30
HSE-B635-045H	63.5	6.41	7.99	3.53	2.49	11.70

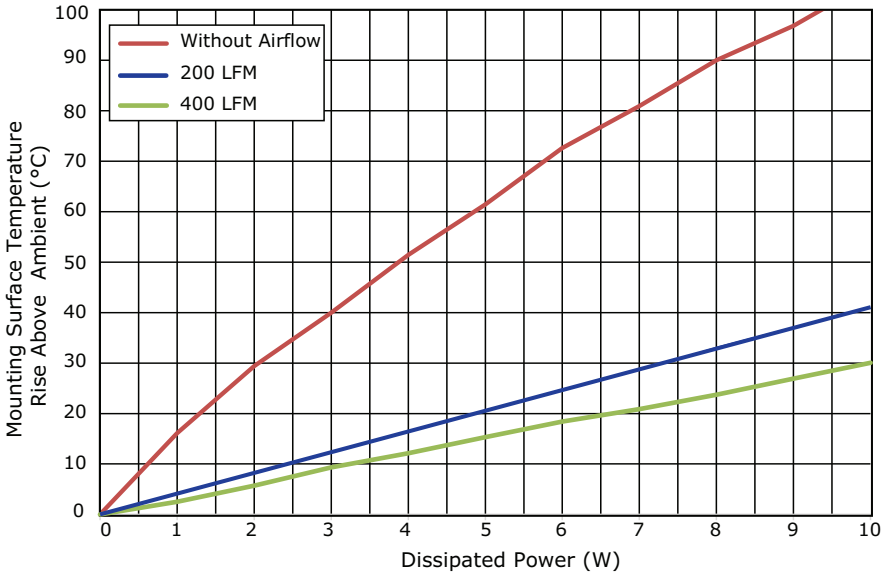
Note:
1. See performance curves for full thermal resistance details.
2. Custom cut to length options available. Thermal data not available on custom lengths.

PERFORMANCE CURVES

HSE-B254-045H

	Heatsink Temperature Rise Above Ambient (ΔT = Ths - Ta) (°C)		
Power (W)	Natural Conv.	200 LFM	400 LFM
0	0	0	0
1	16.12	3.86	2.52
2	29.41	8.30	5.68
3	40.00	12.22	9.31
4	51.44	16.39	12.14
5	61.45	20.66	15.34
6	72.61	24.92	18.41
7	80.92	28.68	20.86
8	90.03	33.22	23.73
9	96.81	37.23	26.92
10	105.60	41.07	30.04

Ths: "hot spot" temperature measured on the heatsink
Ta: ambient temperature

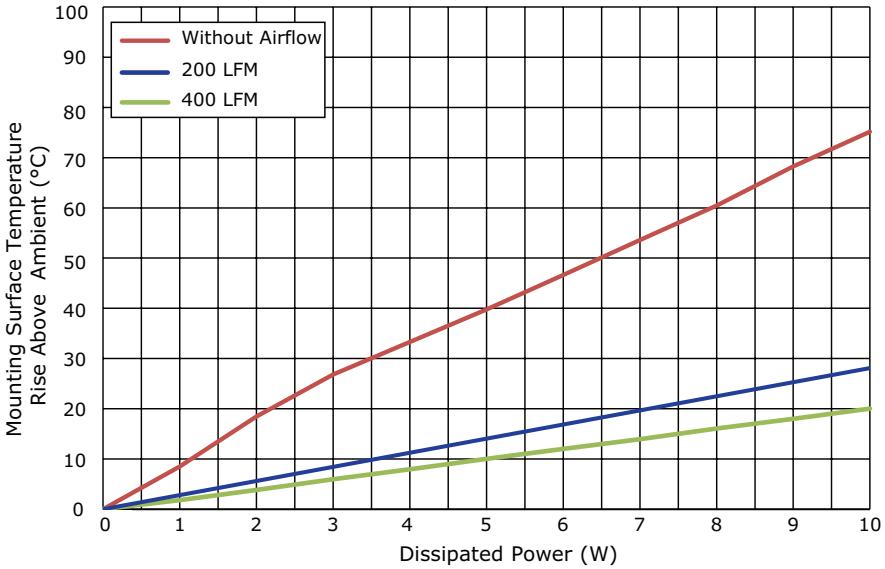


PERFORMANCE CURVES (CONTINUED)

HSE-B381-045H

	Heatsink Temperature Rise Above Ambient (ΔT = Ths - Ta) (°C)		
Power (W)	Natural Conv.	200 LFM	400 LFM
0	0	0	0
1	8.52	2.63	1.82
2	18.47	5.51	3.87
3	26.83	8.39	5.96
4	33.30	11.14	7.95
5	39.77	13.92	10.01
6	46.62	16.71	12.03
7	53.59	19.45	13.95
8	60.45	22.41	16.05
9	68.22	25.10	17.98
10	75.13	28.11	20.06

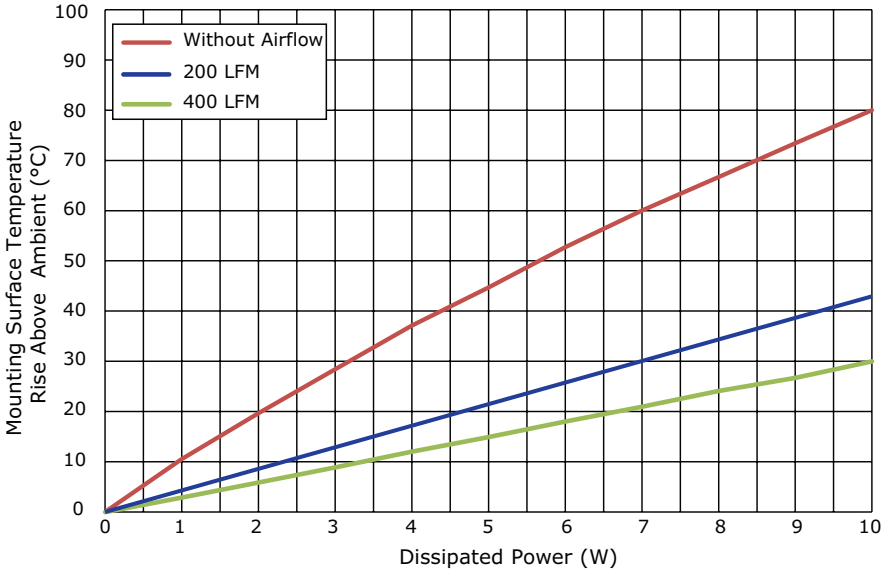
Ths: "hot spot" temperature measured on the heatsink
Ta: ambient temperature



HSE-B508-045H

	Heatsink Temperature Rise Above Ambient (ΔT = Ths - Ta) (°C)		
Power (W)	Natural Conv.	200 LFM	400 LFM
0	0	0	0
1	10.52	4.38	2.89
2	19.69	8.39	5.86
3	28.40	12.74	8.86
4	37.10	16.93	12.02
5	44.72	21.55	14.92
6	52.72	25.52	18.01
7	60.03	30.14	20.94
8	66.70	34.56	24.08
9	73.41	38.67	26.72
10	79.99	42.96	29.99

Ths: "hot spot" temperature measured on the heatsink
Ta: ambient temperature

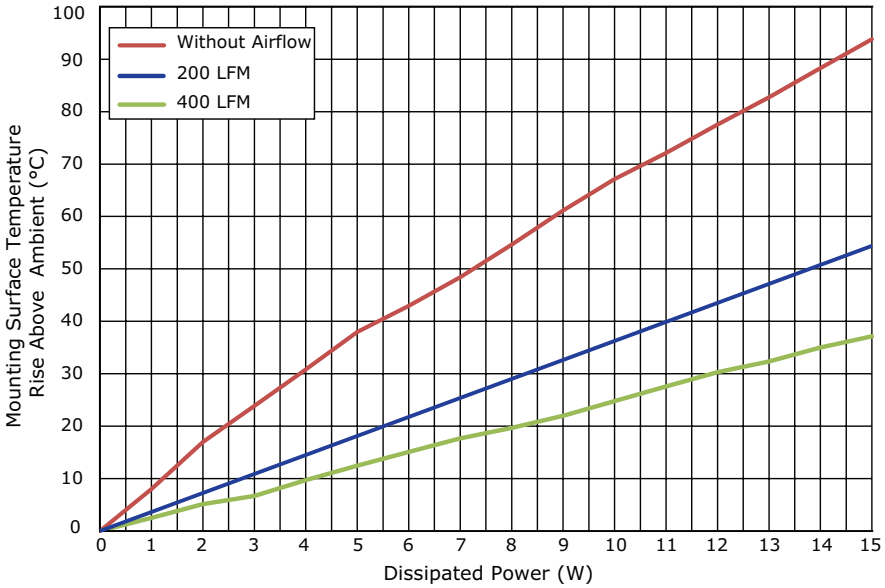


PERFORMANCE CURVES (CONTINUED)

HSE-B635-045H

	Heatsink Temperature Rise Above Ambient (ΔT = Ths - Ta) (°C)		
Power (W)	Natural Conv.	200 LFM	400 LFM
0	0	0	0
1	7.99	3.53	2.49
2	17.00	6.57	5.14
3	23.87	9.99	6.67
4	30.80	13.68	9.70
5	37.97	17.18	12.47
6	42.95	21.04	15.09
7	48.42	24.72	17.68
8	54.64	28.07	19.65
9	61.12	31.89	21.97
10	67.12	35.72	24.79
11	72.12	39.54	27.58
12	77.53	43.26	30.28
13	82.73	46.96	32.35
14	88.28	50.47	34.99
15	93.81	54.37	37.14

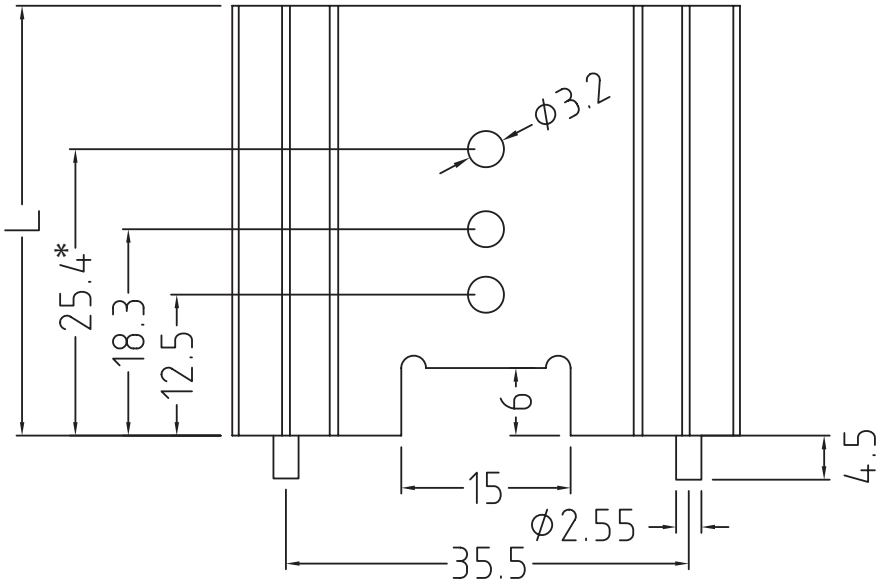
Ths: "hot spot" temperature measured on the heatsink
Ta: ambient temperature

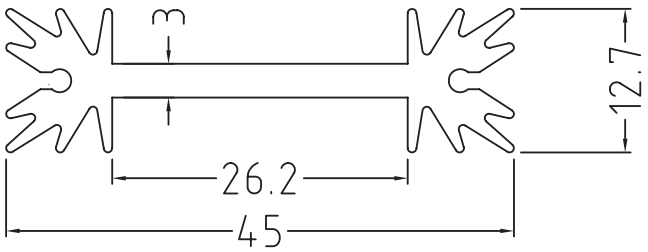


MECHANICAL DRAWING

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-B254-045H*	25.4	13.4
HSE-B381-045H	38.1	22.0
HSE-B508-045H	50.8	31.9
HSE-B635-045H	63.5	42.2

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

REVISION HISTORY

rev.	description	date
1.0	initial release	04/25/2017
1.01	updated datasheet	09/07/2017
1.02	brand update	02/11/2020
1.03	logo, datasheet style update	08/05/2022

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

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