



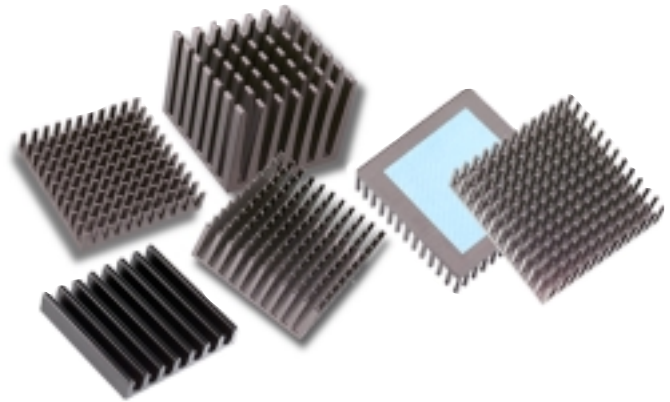
Aavid's heat sinks cool BGA, Super BGA, QFP, PLCC, and PBGA packaged devices. Typical applications include set-top boxes, cable modems, sound and video cards, automotive global positioning systems(GPS), high resolution printers, and high-speed network routers.

Aavid's BGA heat sinks come with a number of mounting options and in many popular sizes to fit most applications.

FEATURES:

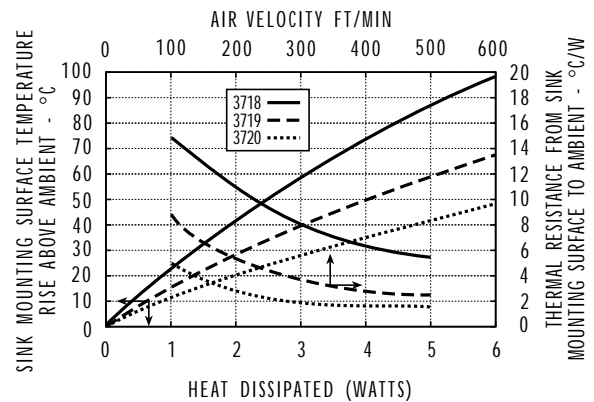
- The first OptiPin heat sink, the 40 x 40 mm, cools Intel's i960® RP/RD embedded micro-processors
- Micro-thin fins provide 20% more cooling performance than conventional cross-cut heat sinks, making these the optimum cooling solution for most applications
- The 35 x 35 mm footprint is available in three different heights: 7.0 mm, 14.0 mm, and 27.9 mm (see below for part number information).
- All OptiPins come with a standard anodized finish, and are available with double-sided thermal interface tape particular to metal, ceramic, or plastic packages, or without tape for epoxy attachment

NOTE: 1070 tape attaches the OptiPin to ceramic and metal packages and T410 attaches to plastic packages.



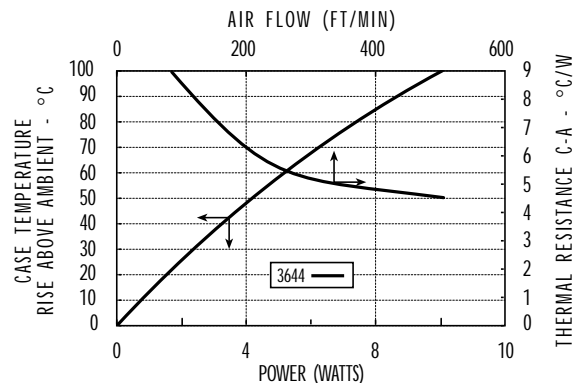
35 x 35 mm OptiPin

THERMAL PERFORMANCE



40 x 40 mm OptiPin

THERMAL PERFORMANCE



ORDERING INFORMATION

SIZE L x W (mm)	HEIGHT (mm)	FOR EPOXY ATTACHMENT	1070* TWO-SIDED, PRE-APPLIED THERMAL TAPE	T410* TWO-SIDED, PRE-APPLIED THERMAL TAPE
35 X 35	7.0	371824B00000	371824B00032	371824B00034
35 X 35	14.0	371924B00000	371924B00032	371924B00034
35 X 35	27.9	372024B00000	372024B00032	372024B00034
40 X 40	11.4	364424B00000	364424B00032	364424B00034

NOTE: 1070 tape is for attachment to ceramic or metal packages; and T410 is for attachment to plastic packages.

STANDARD HEAT SINKS FOR BALL GRID ARRAY APPLICATIONS

ORDERING INFORMATION FOR OTHER POPULAR BGA HEAT SINKS:

Aavid Part Number	W	L	H	$\theta_{sa}@ 200$ °C/W LFM	Fig. #	Added Features*
335114B00000	24.1	24.1	23.7	8.8	1	
335124B00032	24.1	24.1	23.7	7.9	2	1070 tape pre-installed
335214B00000	25.0	25.0	10.0	18.0	1	
335214B00032	25.0	25.0	10.0	18.0	1	1070 tape pre-installed
335224B00032	25.0	25.0	10.0	16.5	2	1070 tape pre-installed
335314B00000	27.0	27.0	11.4	9.0	1	
335314B00032	27.0	27.0	11.4	9.0	1	1070 tape pre-installed
373024B00000	27.9	27.9	8.9	12.1	2	
335514B00000	28.4	28.4	15.2	7.9	1	
335714B00000	30.1	30.1	7.0	15.0	1	
335714B00032	30.1	30.1	7.0	15.0	1	1070 tape pre-installed
335724B00000	30.1	30.1	7.0	13.6	2	
335724B00032	30.1	30.1	7.0	13.6	2	1070 tape pre-installed
335814B00000	30.1	30.1	9.4	10.5	1	
335814B00032	30.1	30.1	9.4	10.5	1	1070 tape pre-installed
335824B00032	30.1	30.1	9.4	9.0	2	1070 tape pre-installed
373114B00032	33.0	33.0	12.7	8.1	1	1070 tape pre-installed
336314B00000	36.1	36.1	17.0	7.3	1	
336314B00032	36.1	36.1	17.0	7.3	1	1070 tape pre-installed
336614B00000	38.1	38.1	16.0	5.1	1	
336614B00032	38.1	38.1	16.0	5.1	1	1070 tape pre-installed
336714B00000	40.0	40.0	19.1	7.6	1	
362914B00000	49.8	49.8	25.4	2.6	1	
363014B00000	49.8	49.8	30.5	2.4	1	

All part numbers shown specify anodized finish. All dimensions are nominal and shown in millimeters.

*1070 tape recommended for ceramic or metal packages. Use epoxy or T410 for plastic packages.

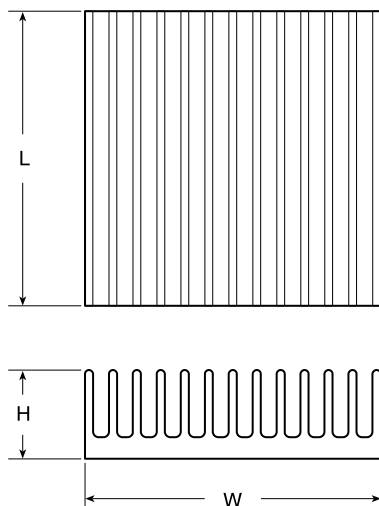


Figure 1: Straight-Fin Heat Sink

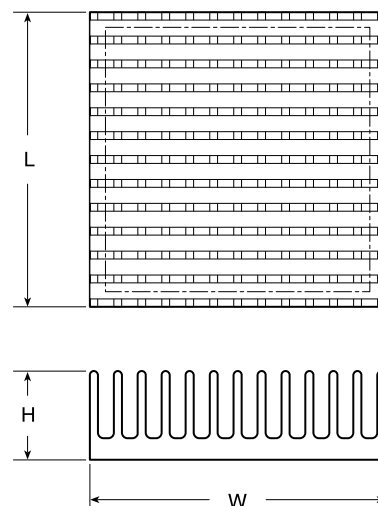


Figure 2: Cross-Cut Heat Sink

INSTALLATION PROCEDURE FOR THER-A-GRIP 1070:

Step 1: Make sure the chip surface is clean and free from any possible contaminants.

Wipe surface with industrial solvent, e.g., isopropyl alcohol, acetone.

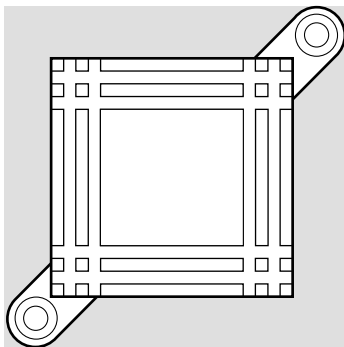
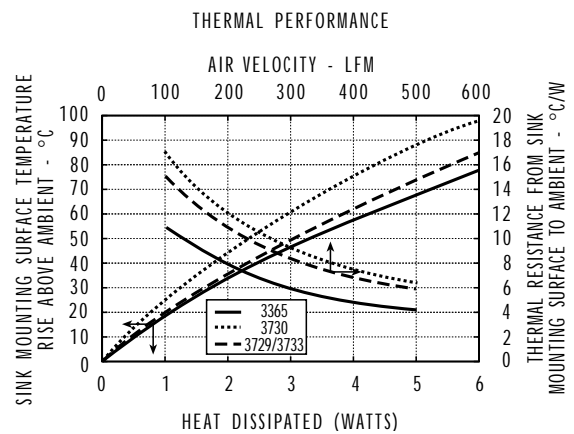
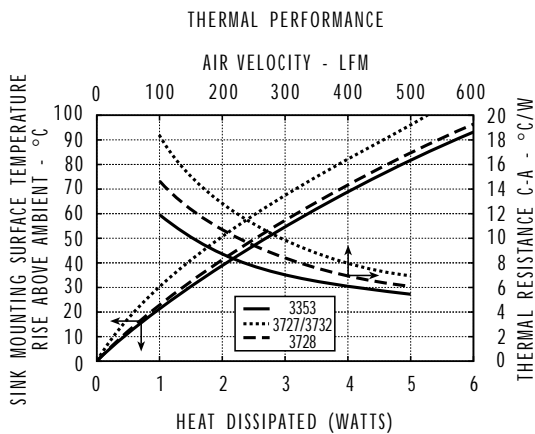
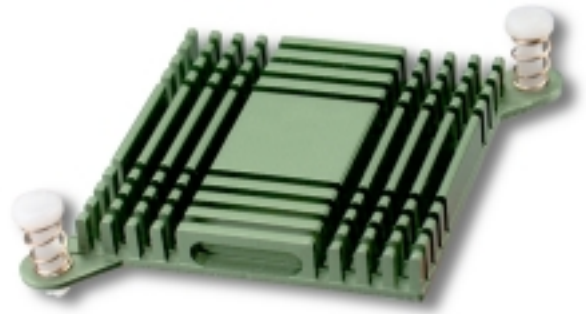
Step 2: Peel off the blue mylar embossed liner from the tape. Center the heat sink on the chip and apply one of the following recommended temperature/pressure options:

Assembly Time		
Pressure	Temperature	
	22°C	50°C
10 psi	15 sec	5 sec
30 psi	5 sec	3 sec

TWO-PIN HEAT SINKS FOR BALL GRID ARRAY APPLICATIONS

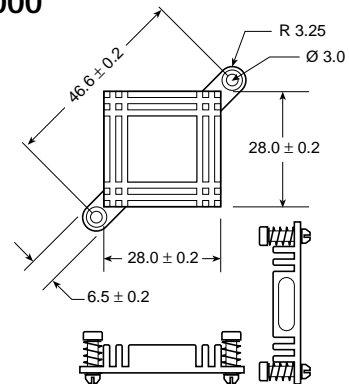
Aavid's two-pin heat sink is designed for IC's in Ball Grid Array packages, and incorporates two captive spring-loaded pins. Two-pin heat sinks are ideal for applications that require robust attachment for vertical-mounted boards, such as in telecommunications, automotive, and computer systems,

Aavid's design breakthrough saves approximately 40% of the board space compared to four-pin versions. The two-pin heat sinks fit standard motherboard hole pattern for the AGP and PCI chip sets.



Two-pin BGA heat sinks use approximately 40% less space (white area) than comparable four-pin heat sinks (gray area).

TWO-PIN BGA HEAT SINK P/N 372724M02000



Theta @200LFM:13.30° C/W

Dimensions in mm

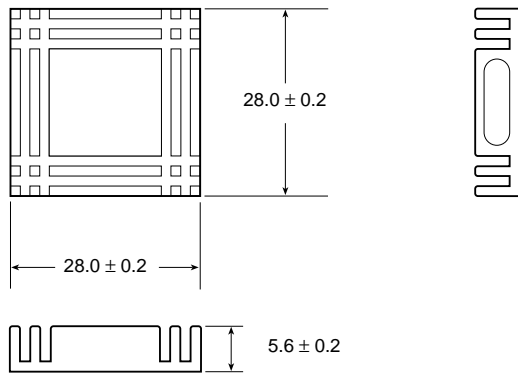
ORDERING INFORMATION

AAVID PART NUMBER	THETA @ 200 LFM	FIG. #	DESCRIPTION
372724M02000	13.3° C/W	1	Two-Pin BGA Heat Sink
373224M00000	13.3° C/W	2	BGA Heat Sink
372824M00000	10.7° C/W	3	BGA Heat Sink
372924M02000	11.0° C/W	4	Two-Pin BGA Heat Sink
373324M00000	11.0° C/W	5	BGA Heat Sink

NOTE: All dimensions are nominal and shown in millimeters.

TWO-PIN HEAT SINKS FOR BALL GRID ARRAY APPLICATIONS

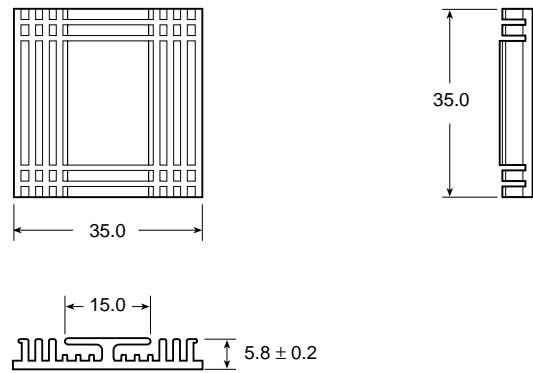
BGA HEAT SINK P/N 373224M00000



Theta @200LFM:13.3° C/W

Dimensions in mm

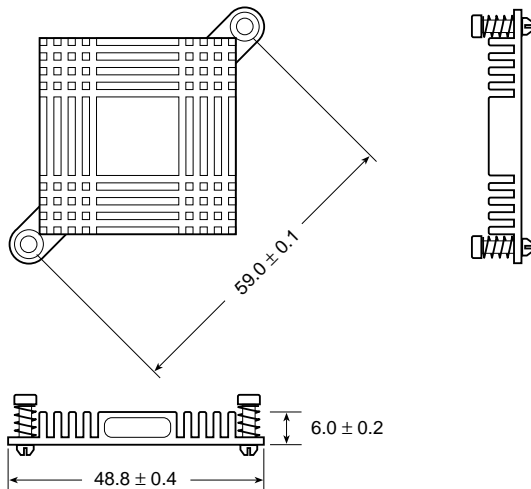
BGA HEAT SINK P/N 372824M00000



Theta @200LFM:10.7° C/W

Dimensions in mm

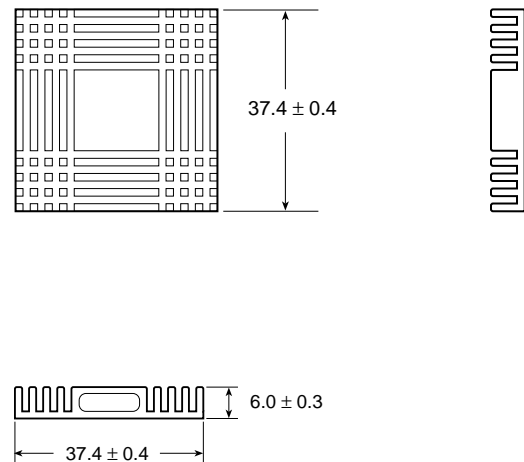
TWO-PIN BGA HEAT SINK P/N 372924M02000



Theta @200LFM:11.0° C/W

Dimensions in mm

BGA HEAT SINK P/N 373324M00000



Theta @200LFM:11.0° C/W

Dimensions in mm



This data sheet represents only one of a broad range of products we make to cool electronics. Our representatives can help you configure a complete cooling solution for your individual applications. For assistance, contact any one of them from our web site or at the locations below.

Aavid Thermalloy, along with Fluent Inc.'s Icepak thermal design software and Applied Thermal Technologies, Inc. thermal design and validation services, make up The Total Integrated Solution for Cooling Electronics™. For more information on how to put our strengths to work for you, visit our web site at: <http://www.aavidthermalloy.com>; TEL: (603) 224-9988, or contact Fluent at: <http://www.icepak.com>; TEL: (603) 643-2600, or Applied at: <http://www.thermalcooling.com>; TEL: (603) 225-6523.

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