

INF Series

Active BGA Heatsinks

Removable Fan Sinks for BGA Chipsets

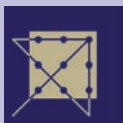


The INF Series of Aluminum Cross Cut Fin Fin BGA Heatsinks with Fans are high efficiency cooling products designed for BGA Chipsets .

These devices mount with EZ Snap™ Mounting Clips to provide optimum cooling for various package sizes. These off-the-shelf, high efficiency solutions are easy to install and require no special board modifications or complex assemblies.

Features:

- * High efficiency aluminum cross-cut fin design provides low pressure-drop characteristics
- * Constructed of Extruded Aluminium AL6063 for optimum heat transfer
- * DC Fan for improved heat dissipation
- * Designed specifically for BGAs and other surface mount packages
- * EZ-Snap™ Mounting Clip is constructed of UL94-V0 Rated Nylon
- * Use Clip Tool HS8063 to attach (or remove) heatsink directly to BGA Chip
- * Finished with black anodize plating
- * Clip & Thermal Pad Options are pre-assembled at the factory



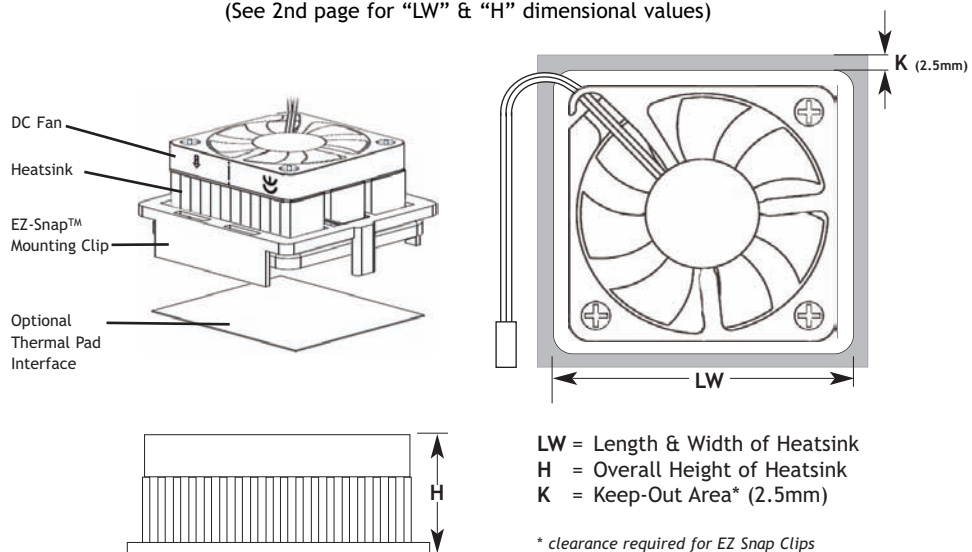
Radian Heatsinks

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www.radianheatsinks.com

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Mechanical Outline Drawing

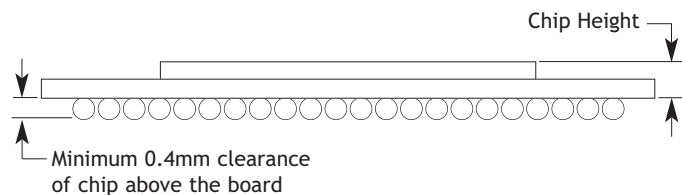
(See 2nd page for "LW" & "H" dimensional values)



EZ Snap™ Mounting Clip

CLIPS DIRECTLY TO BGA CHIP WITH HS8063 CLIP TOOL

See page 2 for fitting chip heights. Consult Factory for unique Chip Height Requirements.



- Note 1: Chip Height Measurements exclude ball dimensions (0.4mm)
 Note 2: Chip must have 0.4mm clearance above the board for clip to adhere properly
 Note 3: Maintain Keep-Out Clearance of 2.5mm around chip for clip to adhere properly

INF-27001-18

27.0 x 27.0 x 18.0mm BGA Fan-Sink

BGA Fan-Sink Details:		Fan Specifications:		Harness Specification:	
Dimm LW:	27.0mm	Input:	5VDC	Length:	300mm (+/-20)
Dimm H:	18.0mm	Bearing:	1-Ball / 1-Sleeve	Connector:	Molex 22-01-3027
Dimm K:	2.5mm	Airflow:	1.00 CFM	Ground:	Pin 1 / Black Wire
Weight:	13.0g	Noise:	26.5 DBA	+5 VDC:	Pin 2 / Red Wire
R-theta:	3.62C/W	Speed:	12,000 RPM		
EZ-Snap Clip:	Fits Chip Heights of 1.35-1.95mm *	Size:	20 x 10mm		
		MTBF:	65k hours		
		Power:	0.6 Watts		

INF-35001-16

35.0 x 35.0 x 16.0mm BGA Fan-Sink

BGA Fan-Sink Details:		Fan Specifications:		Harness Specification:	
Dimm LW:	35.0mm	Input:	5VDC	Length:	300mm (+/-20)
Dimm H:	16.0mm	Bearing:	Vapo	Connector:	Molex 22-01-3037
Dimm K:	2.5mm	Airflow:	4.90 CFM	Ground:	Pin 1 / Black Wire
Weight:	18.0g	Noise:	25.0 DBA	+5 VDC:	Pin 2 / Red Wire
R-theta:	2.32C/W	Speed:	9,500 RPM	Tachometer:	Pin 3 / Yellow
EZ-Snap Clip:	Fits Chip Heights of 1.25-1.85mm *	Size:	30 x 6mm		
		MTBF:	65k hours		
		Power:	0.9 Watts		

INF-40001-16

40.0 x 40.0 x 16.0mm BGA Fan-Sink

BGA Fan-Sink Details:		Fan Specifications:		Harness Specification:	
Dimm LW:	40.0mm	Input:	5VDC	Length:	300mm (+/-20)
Dimm H:	16.0mm	Bearing:	Vapo	Connector:	Molex 22-01-3037
Dimm K:	2.5mm	Airflow:	4.90 CFM	Ground:	Pin 1 / Black Wire
Weight:	24.0g	Noise:	25.0 DBA	+5 VDC:	Pin 2 / Red Wire
R-theta:	1.95C/W	Speed:	9,500 RPM	Tachometer:	Pin 3 / Yellow
EZ-Snap Clip:	Fits Chip Heights of 1.25-1.85mm *	Size:	30 x 6mm		
		MTBF:	65k hours		
		Power:	0.9 Watts		

INF-42.5001-20

42.5 x 42.5 x 20.0mm BGA Fan-Sink

BGA Fan-Sink Details:		Fan Specifications:		Harness Specification:	
Dimm LW:	42.5mm	Input:	12VDC	Length:	300mm (+/-20)
Dimm H:	20.0mm	Bearing:	2-Ball	Connector:	Molex 22-01-3037
Dimm K:	2.5mm	Airflow:	6.40 CFM	Ground:	Pin 1 / Black Wire
Weight:	30.0g	Noise:	25.0 DBA	+12 VDC:	Pin 2 / Red Wire
R-theta:	1.50C/W	Speed:	6,000 RPM	Alarm:	Pin 3 / Yellow
EZ-Snap Clip:	Fits Chip Heights of 2.65-3.25mm *	Size:	40 x 10mm		
		MTBF:	65k hours		
		Power:	1.1 Watts		

INF-45001-20

45.0 x 45.0 x 20.0mm BGA Fan-Sink

BGA Fan-Sink Details:		Fan Specifications:		Harness Specification:	
Dimm LW:	45.0mm	Input:	12VDC	Length:	300mm (+/-20)
Dimm H:	20.0mm	Bearing:	2-Ball	Connector:	Molex 22-01-3037
Dimm K:	2.5mm	Airflow:	6.40 CFM	Ground:	Pin 1 / Black Wire
Weight:	30.0g	Noise:	25.0 DBA	+12 VDC:	Pin 2 / Red Wire
R-theta:	1.50C/W	Speed:	6,000 RPM	Alarm:	Pin 3 / Yellow
EZ-Snap Clip:	Fits Chip Heights of 1.35-1.95mm *	Size:	40 x 10mm		
		MTBF:	65k hours		
		Power:	1.1 Watts		

- Notes:**
- 1) Add suffix "+T710" to designate Thermally Conductive Phase Change Pad (Chomerics Part # T710).
 - 2) Mounting Clips are constructed of UL94-VO rated nylon material and black in color.
 - 3) Thermal Data provided is for reference only. Actual Cooling Performance may vary by application.
 - 4) Specifications are subject to change without notice.

* Contact Radian to discuss unique Heatsink, Clip and Interface requirements.

Passive BGA Cooler Products:

HS1800 Series:
21-45mm Plate Fin (Aluminum)
Ideal for Linear Air Flow

HS2000-060 Series:
21-45mm Round Pin (Aluminum)
Ideal for Omni Directional Air Flow

HS2000-080 Series:
21-45mm Round Pin (Aluminum)
Ideal for Omni Directional Air Flow

INM-PCU Series:
19-42.5mm Round Pin (Copper)
Ideal for Omni Directional Air Flow

INM-W Series:
19-45mm Elliptical Fin (Aluminum)
Ideal for Linear Airflow and where Multiple Heatsinks are utilized

INM-P Series:
27-42.5mm Round Pin (Aluminum)
Ideal for Omni-Directional Airflow

INE Series:
21-45mm Cross Cut Fin (Aluminum)
Ideal for Linear Airflow

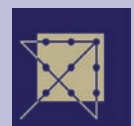
Custom Design and Manufacturing Services:

Our experienced engineers and production specialists are dedicated to the design and manufacture of cooling solutions to match our customers specific thermal issues, quickly and cost-effectively.

Features of our services include:

- * Free Engineering Consultation
- * Complimentary Thermal Analysis (Computational Fluid Dynamics and Design Simulation/Modeling)
- * Wide range of technologies including: Investment Casting; Die Casting; Precision Forging; Skived Fin; Extrusions; Stamped Fin; and Custom Machining
- * Rapid Prototyping Services to deliver concept models in as little as 2-5 business days and working prototypes in 1-3 weeks

Contact Radian Heatsinks to discuss your specific requirement today.



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