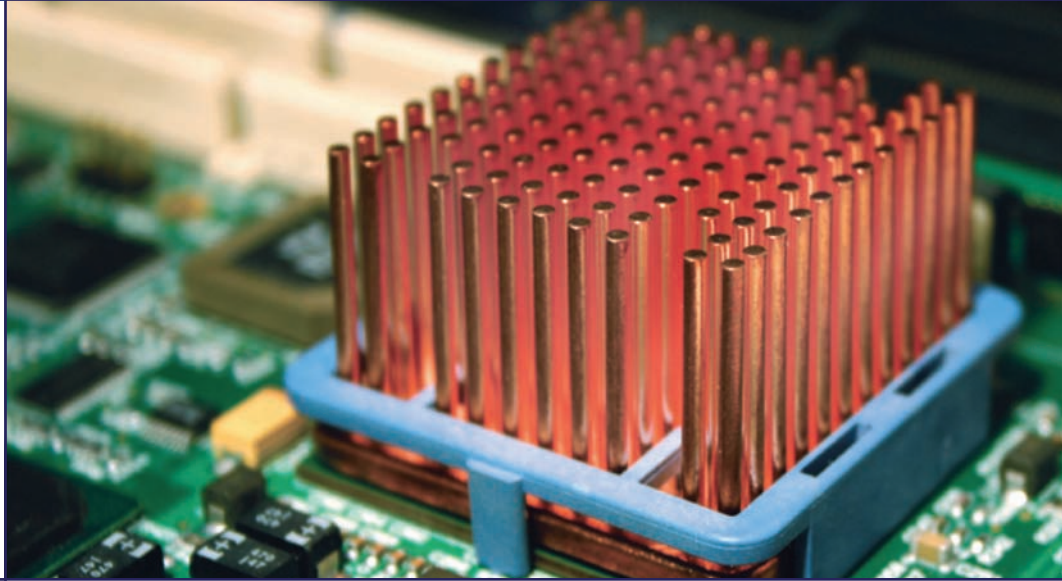
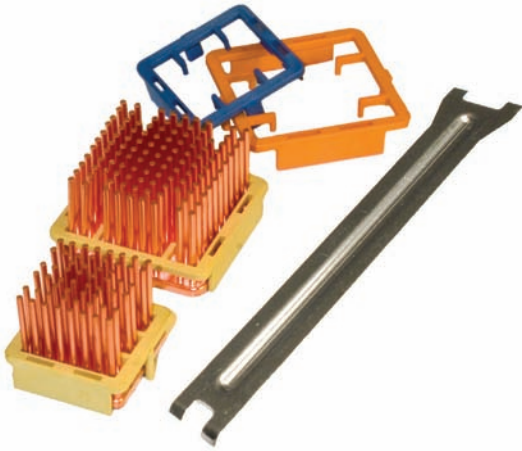


INM-PCU Series

Round Pin Copper BGA Heatsink



Removable Heatsinks for BGA Chipsets



The INM-PCU Series of copper round pin BGA heatsinks are high efficiency cooling products which are ideal for omni-directional air flow

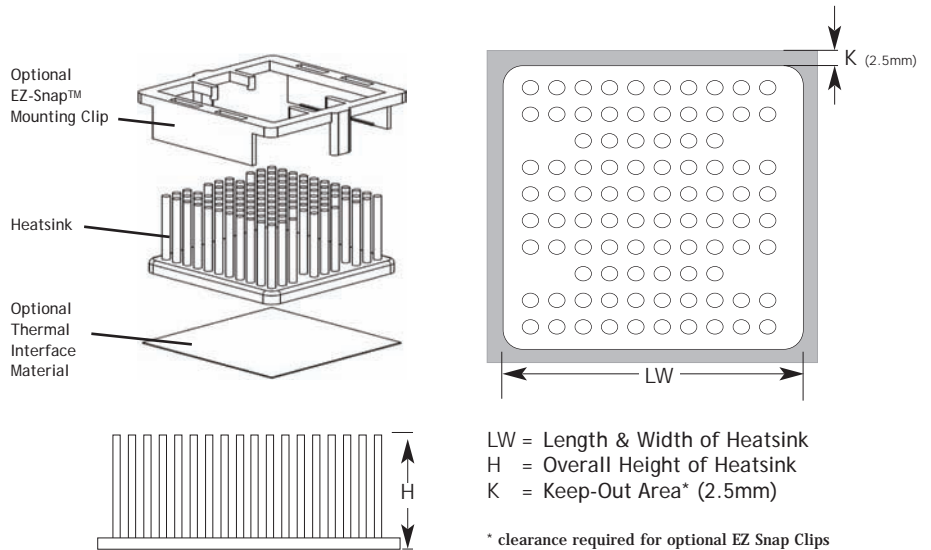
These devices mount with EZ Snap™ mounting clips and / or thermal tape to provide optimum cooling for various package sizes and airflow. These off-the-shelf, high efficiency solutions are easy to install and require no special board modifications or complex assemblies.

Features:

- * High efficiency copper round pin design provides low pressure-drop characteristics
- * Constructed of forged CU1100 oxygen-free copper for optimum heat transfer
- * Ideal for omni-directional air flow
- * Designed specifically for BGAs and other surface mount packages
- * Optional EZ-Snap™ mounting clip is constructed of UL94-V0 rated nylon
- * Use clip tool HS8063 to attach or remove heatsink assembly directly to BGA chip
- * Finished with clear anti-oxidation finish
- * Selected clip & thermal pad options are pre-assembled at the factory

Mechanical Outline Drawing

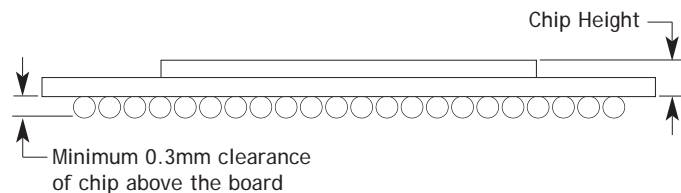
(See 2nd page for "LW" & "H" dimensional values)



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 (0.3mm)
 Note 2: Chip must have 0.3mm 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



Radian Heatsinks

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INM-PCU Series Round Pin Copper BGA Heatsink

Length & Width of Heatsink (mm)	Part Number ⁽¹⁾				Heatsink Height (mm)	Weight (g)	Thermal Resistance Theta_SA (C/W)			
	Heatsink Part Number	Optional Mounting Clip		Optional Thermal Tape/Pad Part # ⁽²⁾			100 LFM	200 LFM	400 LFM	600 LFM
		Part Number ⁽³⁾	Fits Chip Heights (mm)							
19	INM19002-12PCU/2.6	O	0.6-1.2*	+3M8815	11.6	10	9.0	6.4	4.8	4.0
	INM19002-15PCU/2.6	-or- BU	-or- 1.4-2.0*	-or-	14.6	13	8.6	6.0	4.3	3.5
	INM19002-20PCU/2.6	-or- Y	-or- 3.0-3.6*	+T710	19.6	15	6.0	4.2	3.1	2.6
	INM19002-25PCU/2.6				24.6	15	5.5	3.9	2.9	2.4
27	INM27002-12PCU/2.6	O	0.6-1.2*	+3M8815	11.6	25	6.8	4.6	3.3	2.7
	INM27002-15PCU/2.6	-or- BU	-or- 1.4-2.0*	-or-	14.6	25	6.0	4.0	2.9	2.4
	INM27002-20PCU/2.6	-or- K32	-or- 2.3-2.9	+T710	19.6	28	4.2	2.8	2.1	1.7
	INM27002-25PCU/2.6	-or- Y	-or- 3.0-3.6*		24.6	28	3.8	2.6	1.9	1.6
29	INM29002-12PCU/2.6	O	0.6-1.2*	+3M8815	11.6	25	6.1	4.0	2.8	2.3
	INM29002-15PCU/2.6	-or- BU	-or- 1.4-2.0*	-or-	14.6	25	5.4	3.6	2.4	2.0
	INM29002-20PCU/2.6	-or- Y	-or- 3.0-3.6*	+T710	19.6	28	3.8	2.4	1.8	1.5
	INM29002-25PCU/2.6				24.6	30	3.4	2.2	1.6	1.4
33	INM33002-12PCU/2.6	O	0.6-1.2*	+3M8815	11.6	45	5.0	3.0	2.0	1.5
	INM33002-15PCU/2.6	-or- BU	-or- 1.4-2.0*	-or-	14.6	50	4.4	2.7	1.7	1.2
	INM33002-20PCU/2.6	-or- K33	-or- 2.3-2.9	+T710	19.6	55	2.9	1.8	1.1	0.9
	INM33002-25PCU/2.6	-or- Y	-or- 3.0-3.6*		24.6	60	2.7	1.6	1.0	0.8
35	INM35002-12PCU/2.6	O	0.6-1.2*	+3M8815	11.6	45	4.6	3.0	2.1	1.7
	INM35002-15PCU/2.6	-or- BU	-or- 1.4-2.0*	-or-	14.6	55	4.0	2.6	1.8	1.5
	INM35002-20PCU/2.6	-or- K29	-or- 2.3-2.9	+T710	19.6	58	2.8	1.8	1.3	1.0
	INM35002-25PCU/2.6	-or- Y	-or- 3.0-3.6*		24.6	63	2.6	1.7	1.2	0.9
37.5	INM37.5002-12PCU/2.6	O	0.6-1.2*	+3M8815	11.6	86	4.3	2.8	2.0	1.7
	INM37.5002-15PCU/2.6	-or- BU	-or- 1.4-2.0*	-or-	14.6	89	3.8	2.4	1.8	1.5
	INM37.5002-20PCU/2.6	-or- Y	-or- 3.0-3.6*	+T710	19.6	93	2.7	1.8	1.2	1.0
	INM37.5002-25PCU/2.6				24.6	100	2.4	1.6	1.1	0.9
40	INM40002-12PCU/2.6	O	0.6-1.2*	+3M8815	11.6	79	3.7	2.4	1.6	1.3
	INM40002-15PCU/2.6	-or- BU	-or- 1.4-2.0*	-or-	14.6	86	3.4	2.1	1.4	1.2
	INM40002-20PCU/2.6	-or- K30	-or- 2.3-2.9	+T710	19.6	89	2.3	1.5	1.0	0.8
	INM40002-25PCU/2.6	-or- Y	-or- 3.0-3.6*		24.6	104	2.1	1.4	0.9	0.7
42.5	INM42.5002-12PCU/2.6	O	0.6-1.2*	+3M8815	11.6	107	3.5	2.1	1.5	1.2
	INM42.5002-15PCU/2.6	-or- BU	-or- 1.4-2.0*	-or-	14.6	121	3.0	1.9	1.2	1.0
	INM42.5002-20PCU/2.6	-or- Y	-or- 3.0-3.6*	+T710	19.6	125	2.1	1.3	0.9	0.8
	INM42.5002-25PCU/2.6				24.6	128	1.9	1.2	0.8	0.7

Passive BGA Cooler Products:

HS1800 Series:
21-45mm plate fin (aluminum) Ideal for linear air flow

INL Series:
27-37.5mm plate fin (aluminum) ideal for linear air flow

INM-W Series
19-45mm elliptical fin (aluminum) ideal for linear air flow and where multiple heatsinks are utilized

HS2000-60 Series:
21-45mm round pin (aluminum) ideal for omni directional air flow

HS2000-80 Series:
21-45mm round pin (aluminum) Ideal for omni directional air flow

INM-P Series:
27-42.5mm round pin (aluminum) Ideal for omni directional air flow

Small Round Pin:
12.7-25.4mm round pin (aluminum) Ideal for omni directional air flow

37.5004 Series:
37.5mm round pin (aluminum or copper) ideal for omni directional air flow

Pushpin Heatsinks:
Pushpin heatsinks (aluminum) ideal for linear air flow

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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Notes:

- Example Part Numbers:
INM27002-15PCU/2.6 27 x 14.6mm Heatsink only
INM35002-20PCU/2.6O 35 x 19.6mm Heatsink with "O" (orange) mounting clip (0.6-1.2mm chip height)
INM40002-15PCU/2.6+3M8815 40 x 14.6mm Heatsink with 3M8815 thermal tape
INM42.5002-25PCU/2.6BU+T710 42.5 x 24.6mm Heatsink with "BU" (blue) mounting clip for 1.4-2.0mm chip heights and T710 thermal pad
 - Optional thermal interface materials are defined as follows:
T710 - Thermally conductive phase change pad for use with mounting clip (Chomerics Part # T710)
3M8815 - Thermally conductive adhesive tape
 - Mounting clips are constructed of UL94-VO rated nylon material.
 - Thermal data provided are for reference only. Actual cooling performance may vary by application.
 - Contact Radian to discuss unique heatsink, clip and interface requirements.
 - Specifications are subject to change without notice.
- *Contact Radian for mounting clips to fit chip heights not displayed above.