

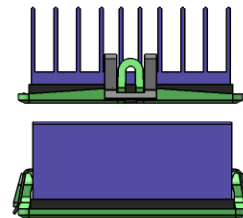
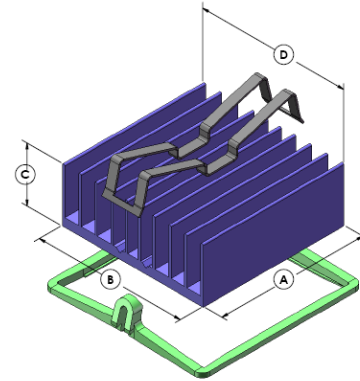


# High Performance BGA Cooling Solutions with superGRIP™ Attachment

**ATS PART # ATS-X53190P-C1-R0**

## Features & Benefits

- » Designed for 19 x 19 mm BGA components
- » superGRIP™ super strong, uniform attachment force helps achieve maximum performance from phase-changing TIM and does not require holes in the PCB
- » Allows the heat sink to be detached and reattached without damaging the component and/or the PCB, an important feature in the event a PCB may need to be reworked
- » Meets Telcordia GR-63-Core Office Vibration, ETSI 300 019 Transportation Vibration, and MIL-STD-810 Shock Testing and Unpackaged Drop Testing standards
- » Requires minimal space around the component's perimeter; ideal for densely populated PCBs
- » "Keep-Out" Requirements: An "Un-Populated" boarder zone of 3 mm around the component is necessary to facilitate the Installation/Removal of the superGRIP™. Please refer to the superGRIP™ Keep-Out Guidelines and superGRIP™ Installation/Removal Instructions for further details



*\*Image above is for illustration purposes only.*

## Thermal Performance

AIR VELOCITY		THERMAL RESISTANCE	
FT/MIN	M/S	°C/W (UNDUCTED FLOW)	°C/W (DUCTED FLOW)
200	1.0	8.4	5.3
300	1.5	6.8	
400	2.0	5.9	
500	2.5	5.3	
600	3.0	4.9	
700	3.5	4.5	
800	4.0	4.3	

## Product Details

DIMENSION A	DIMENSION B	DIMENSION C	DIMENSION D	INTERFACE MATERIAL	FINISH
19 mm	19 mm	17.5 mm	19 mm	CHOMERICS T-766	BLUE ANODIZED

### NOTES:

- 1) DIMENSIONS ARE MEASURED IN MILLIMETERS
- 2) DIMENSIONS A & B REFER TO COMPONENT SIZE
- 3) DIMENSION C = THE HEIGHT OF THE HEAT SINK SHOWN ABOVE AND DOES NOT INCLUDE THE HEIGHT OF THE ATTACHMENT METHOD
- 4) ATS RESERVES THE RIGHT TO UPDATE OR CHANGE ITS PRODUCTS WITHOUT NOTICE
- 5) CONTACT ATS TO LEARN ABOUT CUSTOM OPTIONS AVAILABLE



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