

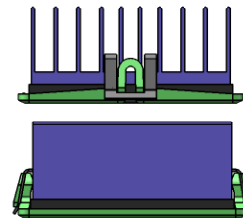
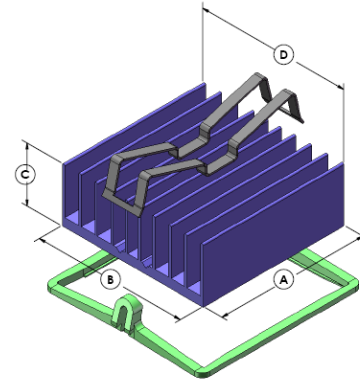


# High Performance BGA Cooling Solutions with superGRIP™ Attachment

**ATS PART # ATS-X53210G-C1-R0**

## Features & Benefits

- » Designed for 21 x 21 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 | 11.1                 | 7.1                |
| 300          | 1.5 | 9.0                  |                    |
| 400          | 2.0 | 7.8                  |                    |
| 500          | 2.5 | 7.0                  |                    |
| 600          | 3.0 | 6.4                  |                    |
| 700          | 3.5 | 6.0                  |                    |
| 800          | 4.0 | 5.6                  |                    |

## Product Details

| DIMENSION A | DIMENSION B | DIMENSION C | DIMENSION D | INTERFACE MATERIAL | FINISH        |
|-------------|-------------|-------------|-------------|--------------------|---------------|
| 21 mm       | 21 mm       | 12.5 mm     | 21 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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