# High Performance BGA Cooling Solutions with superGRIP™ Attachment

RoHS COMPLIANT

## ATS PART # ATS-X53450P-C1-R0

### Features & Benefits

- Designed for 45 x 45 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
- Eliminates the need to drill mounting holes in the PCB
- "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

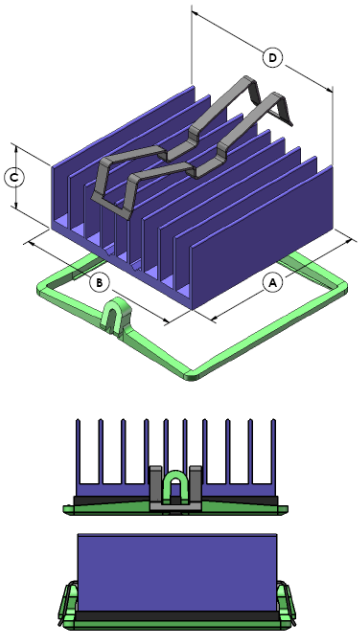



*Image above is for illustration purposes only.*

### Thermal Performance

| AIR VELOCITY | | THERMAL RESISTANCE | |
|---|---|---|---|
| FT/MIN | M/S | °C/W (UNDUCTED FLOW) | °C/W (DUCTED FLOW) |
| 200 | 1.0 | 2.8 | 1.6 |
| 300 | 1.5 | 2.1 | |
| 400 | 2.0 | 1.8 | |
| 500 | 2.5 | 1.6 | |
| 600 | 3.0 | 1.4 | |
| 700 | 3.5 | 1.3 | |
| 800 | 4.0 | 1.3 | |

### Product Details

| DIMENSION A | DIMENSION B | DIMENSION C | DIMENSION D | INTERFACE MATERIAL | FINISH |
|---|---|---|---|---|---|
| 45 mm | 45 mm | 17.5 mm | 45 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 IT PRODUCTS WITHOUT NOTICE
5) CONTACT ATS TO LEARN ABOUT CUSTOM OPTIONS AVAILABLE

ATS ADVANCED THERMAL SOLUTIONS, INC.
Innovations in Thermal Management®

**For more information, to find a distributor or to place an order, visit www.qats.com or call: 781.769.2800 (North America); +31 (0) 3569 84715 (Europe).**