



High Performance BGA Cooling Solutions with superGRIP™ Attachment

ATS PART # ATS-X53190G-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 | 12.0 | 7.4 |
| 300 | 1.5 | 9.6 | |
| 400 | 2.0 | 8.4 | |
| 500 | 2.5 | 7.5 | |
| 600 | 3.0 | 6.9 | |
| 700 | 3.5 | 6.4 | |
| 800 | 4.0 | 6.0 | |

Product Details

| DIMENSION A | DIMENSION B | DIMENSION C | DIMENSION D | INTERFACE MATERIAL | FINISH |
|-------------|-------------|-------------|-------------|--------------------|---------------|
| 19 mm | 19 mm | 12.5 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 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).

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