

# BGA Heat Sink - High Performance maxiFLOW/superGRIP-Low-Profile



\*Image above is for illustration purpose only.

|                         |   |
|-------------------------|---|
| ATS Part#:              | <b>ATS-X51170D-C1-R0</b>  |
| Description:            | 17.00 x 17.00 x 9.50 mm BGA Heat Sink - High Performance maxiFLOW/superGRIP-Low-Profile |
| Heat Sink Type:         | maxiFLOW  |
| Heat Sink Attachment:   | superGRIP   |
| Equivalent Part Number: | N/A   |

## Features & Benefits

- Requires minimal space around the component's perimeter; ideal for densely populated PCBs
- Allows the heat sink to be detached and reattached without damaging the component or the PCB, an important feature in the event a PCB may need to be reworked
- Strong, uniform attachment force helps achieve maximum performance from phase-change TIMs
- Eliminates the need to drill mounting holes in the PCB
- Assembly comes standard with a high performance maxiFLOW™ heat sink, which maximizes convection (air) cooling. Please refer to the superGRIP™ Keep-Out Guidelines and superGRIP™ Installation/Removal Guide for further details
- Comes standard with clean break, reworkable, Chomerics T-766 phase change material
- Designed for standard height components, from 1.5 to 2.9 mm

## Thermal Performance

| AIR VELOCITY       |               | @200 LFM<br>1.0 M/S | @300 LFM<br>1.5 M/S | @400 LFM<br>2.0 M/S | @500 LFM<br>2.5 M/S | @600 LFM<br>3.0 M/S | @700 LFM<br>3.5 M/S | @800 LFM<br>4.0 M/S |
|--------------------|---------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| THERMAL RESISTANCE | Unducted Flow | 18.5 °C/W           | 15.1 °C/W           | 13.1 °C/W           | 11.7 °C/W           | 10.7 °C/W           | 9.9 °C/W            | 9.3 °C/W            |
|                    | Ducted Flow   | 12.6                | N/A                 | N/A                 | N/A                 | N/A                 | N/A                 | N/A                 |

## Product Detail

| Schematic Image  | Dimension A | Dimension B | Dimension C | Dimension D | TIM  | Finish         |
|--|-------------|-------------|-------------|-------------|------|----------------|
| <p>*Image above is for illustration purpose only.</p>  | 17.00 mm    | 17.00 mm    | 9.50 mm     | 28.44 mm    | T766 | Black Anodized |
| <p><b>Notes:</b></p> <ul style="list-style-type: none"> <li>• Dimension <b>A</b> and <b>B</b> refer to component size.</li> <li>• Dimension <b>C</b> is the heat sink height from the bottom of the base to the top of the fin field.</li> <li>• Thermal performance data are provided for reference only. Actual performance may vary by application.</li> <li>• ATS reserves the right to update or change its products without notice to improve the design or performance.</li> <li>• ATS certifies that this heat sink assembly is RoHS-6 and REACH compliant.</li> <li>• Contact ATS to learn about custom options available.</li> </ul> |             |             |             |             |      |                |

For more information, to find a distributor or to place an order, please contact us at 781-769-2800 (North America), [sales@qats.com](mailto:sales@qats.com) or [www.qats.com](http://www.qats.com).

© 2013 Advanced Thermal Solutions, Inc. | 89-27 Access Road | Norwood MA | 02062 | USA



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