

# Ultra High Performance BGA Cooling Solutions w/ maxiGRIP™ Attachment



|                         |                                                           |
|-------------------------|-----------------------------------------------------------|
| ATS Part#:              | <b>ATS-50190P-C1-R0</b>                                   |
| Description:            | maxiFLOW™ maxiGRIP™ HS Assembly- STD, T766, BLUE-ANODIZED |
| Heat Sink Type:         | maxiFLOW                                                  |
| Heat Sink Attachment:   | maxiGRIP                                                  |
| Equivalent Part Number: | ATS-50190P-C2-R0 <b>Discontinued</b>                      |

\*Image above is for illustration purpose only.

## Features & Benefits

- **maxiFLOW™** design features a low profile, spread fin array that maximizes surface area for more effective convection (air) cooling
- **maxiGRIP™** attachment applies steady, even pressure to the component and does not require holes in the PCB
- Meets Telcordia GR-63-Core Office Vibration; ETSI 300 019 Transportation Vibration; and MIL-STD-810 Shock and Unpackaged Drop Testing standards
- Comes pre-assembled with high performance, phase changing, thermal interface material
- Designed for standard height components from 3 to 4.5mm
- "Keep-Out" Requirements: An "Un-Populated" border zone of 5mm around the component is necessary to facilitate the Installation/Removal of the **maxiGRIP™**. Please refer to the **maxiGRIP™** Keep-Out Guidelines and **maxiGRIP™** Installation/Removal Instructions for further details.

## 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 | 7.68 °C/W           | 6.35 °C/W           | 5.55 °C/W           | 5.01 °C/W           | 4.61 °C/W           | 4.30 °C/W           | 4.04 °C/W           |
|                    | Ducted Flow   | 6.38                | 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>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 19.0 mm     | 19.0 mm     | 17.5 mm     | 34.7 mm     | T766 | BLUE-ANODIZED |
| <b>Notes:</b> <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>• ATS-50190P-C2-R0 is the exact heat sink assembly with an equivalent thermal interface material (Saint Gobain C1100F). NOTE: Saint Gobain C1100F is discontinued effective 12/31/10.</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>• Optional <b>maxiGRIP™</b> Installation/Removal Tool Set P/N: <b>MGT190</b></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).

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