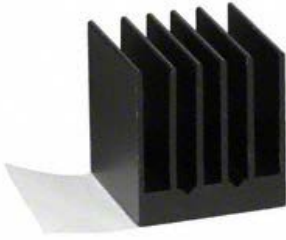


# High Performance BGA Cooling Solutions w/ Thermal Tape Attachment



ATS Part#: **ATS-54190R-C1-R0**  
 Description: High Performance Extrusion, T412, BLACK-ANODIZED

Heat Sink Type: **Straight Fin**  
 Heat Sink Attachment: **THERMAL TAPE**  
 Equivalent Part Number: **ATS-54190R-C2-R0**

*\*Image above is for illustration purpose only.*

## Features & Benefits

- High aspect ratio, straight fin heat sinks that are ideal for compact PCB environments
- Designed specifically for BGAs and other surface mount packages
- Comes pre-assembled with high performance thermal interface material

## Thermal Performance

AIR VELOCITY		@200 LFM 1.0 M/S	@300 LFM 1.5 M/S	@400 LFM 2.0 M/S	@500 LFM 2.5 M/S	@600 LFM 3.0 M/S	@700 LFM 3.5 M/S	@800 LFM 4.0 M/S
THERMAL RESISTANCE	Unducted Flow	8.42 °C/W	6.76 °C/W	5.87 °C/W	5.29 °C/W	4.86 °C/W	4.53 °C/W	4.26 °C/W
	Ducted Flow	5.35	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><i>*Image above is for illustration purpose only.</i></p>	19.0 mm	19.0 mm	19.5 mm	mm	T412	BLACK-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-54190R-C2-R0 is the exact heat sink assembly with an equivalent thermal interface material (Saint Gobain C675).</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).

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