



maxiGRIP™

THE ULTIMATE HEAT SINK ATTACHMENT SYSTEM

- Provides tight, secure heat sink attachment in shock and vibration environments
- maxiGRIP™ assemblies available for low profile (1.5-2.99 mm) and standard height components (3-4.5 mm)
- Allows the heat sink to be detached and reattached without damaging the component or the PCB
- Steady, even attachment force helps achieve maximum performance from phase-changing TIMs

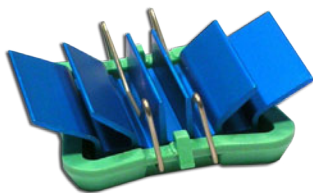


ATS' patented maxiGRIP™ Heat Sink Attachment System

About maxiGRIP™

ATS' maxiGRIP™ is a two-component, attachment system which quickly and securely mounts heat sinks to a wide range of hot running Ball Grid Array (BGA) components, while using a minimal amount of space on the PCB and eliminating the need to drill holes.

The two-part maxiGRIP™ system features a plastic frame clip that fastens securely around the perimeter of a component and a metal spring clip which slips through the heat sink's fin field and locks securely to both ends to the plastic frame. The resulting maxiGRIP™ assembly applies steady, even pressure to the component throughout the product lifecycle, improving thermal performance and long-term reliability.



ATS offers two tiers of heat sink clip attachment: maxiGRIP™, for general purpose and high performance applications; and superGRIP™, for high performance applications with densely populated PCBs and little space around the component for mechanical attachment.

ATS' maxiGRIP™ heat sink attachment system permits the use of high performance phase changing thermal interface materials that improve heat transfer by as much as 20 times more than typical double-sided adhesive thermal tapes. It also allows for the heat sink to be detached and reattached without damaging the component or the PCB, an important feature for applications where PCB rework and ease of assembly and disassembly are important.

The maxiGRIP™ system is available with ATS' maxiFLOW™ family of heat sinks, which feature a low profile, spread fin architecture to maximize surface area for more effective convection (air) cooling. Testing at an air flow rate of just 0.5 m/s (100 ft/m) shows that device junction temperatures (T_j) can be reduced by more than 20 percent below the temperatures achieved using heat sinks with traditional fin styles.

It is also available with ATS' straight fin and cross cut heat sinks, as well as additional sizes and configurations, as custom options.

For further technical information, please contact Advanced Thermal Solutions, Inc. at 1-781-769-2800 or www.qats.com

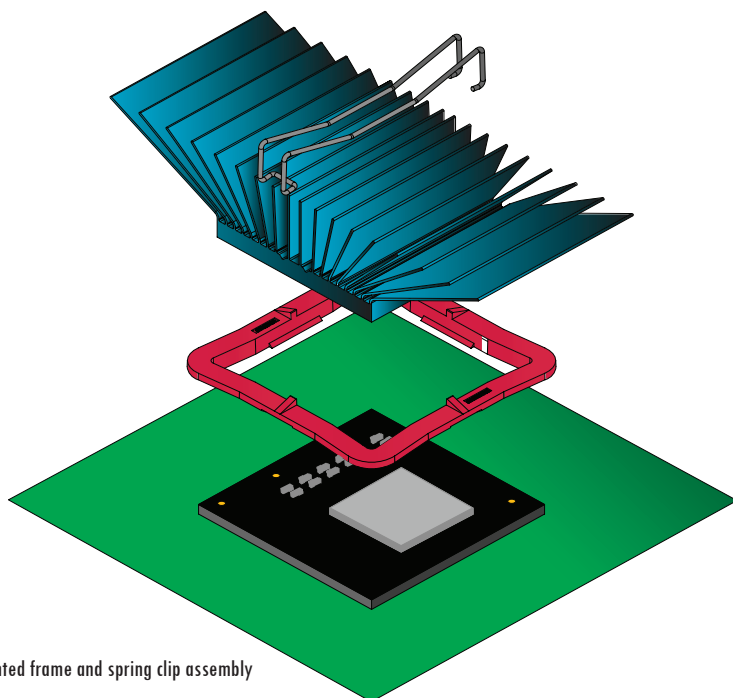
maxiGRIP™ FEATURES:

- » **Least Flow Resistance**
maxiGRIP's low profile frame clip and minimal cross-sectional area of the spring clip permits maximum air flow through the heat sink
- » **Improves Performance**
maxiGRIP's steady, even attachment force helps achieve maximum performance from phase-changing thermal interface materials
- » **Easy Installation and Removal**
Allows heat sink to be detached and reattached without damaging the PCB.
- » **Thermal Interface Material**
Comes standard with clean-break, reworkable, Chomerics T-766 phase change material
- » **Frame Clip**
Plastic clip meets UL-94V-0 fire rating and exceptional thermal stability
- » **Spring Clip**
Double "M" configuration provides even force distribution
- » **No Special Tools Needed**
Frame and spring clips can both be installed by hand or with the maxiGRIP™ Installation Tool for greater ease & efficiency
- » **maxiFLOW™ Heat Sink**
Available with maxiFLOW™ heat sinks which maximize surface area for more effective convection (air) cooling
- » **Custom Options**
Clips and heat sink can be customized in different sizes



maxiGRIP™

THE ULTIMATE HEAT SINK ATTACHMENT SOLUTION



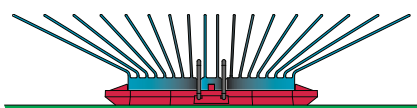
ATS' maxiGRIP™ patented frame and spring clip assembly

AVAILABLE COMPONENT SIZES (L X W)

- 15 mm x 15 mm
- 17 mm x 17 mm
- 19 mm x 19 mm
- 21 mm x 21 mm
- 23 mm x 23 mm
- 25 mm x 25 mm
- 27 mm x 27 mm
- 29 mm x 29 mm
- 30 mm x 30 mm
- 31 mm x 31 mm
- 32.5 mm x 32.5 mm
- 33 mm x 33 mm
- 35 mm x 35 mm
- 37.5 mm x 37.5 mm
- 40 mm x 40 mm
- 42.5 mm x 42.5 mm
- 45 mm x 45 mm

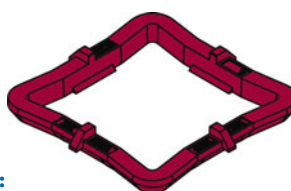
AVAILABLE HEAT SINK HEIGHTS

- 7.5 mm
- 12.5 mm
- 17.5 mm
- (Custom sizes available)



maxiGRIP™ FEATURES:

- Provides tight, secure heat sink attachment in shock and vibration environments
- maxiGRIP's steady, even attachment force helps achieve maximum performance from high performance phase-changing thermal interface materials
- 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
- Comes standard with clean break, reworkable, Chomerics T-766 phase change material



FRAME CLIP:

- High-strength, high-performance plastic meets stringent UL-94V-0 fire rating which has exceptional thermal stability
- Frame geometry has been optimized for strength and minimal space requirements
- Tapered wall provides clearance for adjacent components
- Hour glass shape provides additional room for metal spring clip
- Uniformity in design allows for omnidirectional frame clip orientation



SPRING CLIP:

- Metal spring clip, placed through the heat sink's fin field, locks securely to both ends to the plastic frame
- Double "M" shape provides steady, even pressure to the component, improving thermal performance and long-term reliability
- Spring clip is quickly installed with the maxiGRIP™ Installation Tool
- Specifically designed for different component heights.
- Imposes minimal restriction to air flow
- Accommodates varied fin-to-fin spacing