

TECHNICAL BULLETIN

THERM-A-GAP[®] G174

*Cost Effective Gap Filler
Offers Clean-Break Reworkability*

DESCRIPTION

THERM-A-GAP elastomers are used to fill air gaps between PC boards or other components and heat sinks, metal enclosures, and chassis. The exceptional conformability of these advanced materials enables them to blanket highly uneven surfaces, transferring heat away from individual components or entire boards, and allowing chassis parts to be used as heat spreaders where space is restricted. The 174 thermal interface pads provide moderate thermal performance.

G174 material consists of a soft silicone elastomer loaded with aluminum oxide particles, coated onto a fiberglass carrier. The “G” designates the fiberglass carrier that is on one side of the material. This reinforces the pad and makes one side of the pad non-tacky. The non-tacky side can be easily removed for component repairs. The flexible, elastic nature allows the material to blanket highly uneven surfaces, drawing away and transferring heat from components such as microprocessors, video chips, and power devices. These fiberglass-reinforced pads consist of an electrically non-conductive, aluminum oxide filled silicone elastomer with a thermal conductivity of 1.0 W/m-K. These pads are best suited for applications where a gap of approximately 0.020 to 0.200 inch needs to be filled under pressures of 5 to 50 psi. A full range of THERM-A-GAP products is available for optimum solutions to different application needs.

APPLICATION

G174 is inherently self-adhering on the side opposite from the fiberglass carrier for ease of pad application. Remove the liner and place pad on the desired heat pipe or a microprocessor heat sink. The pads can be removed from the fiberglass side (non-tacky side) for rework. **NOTE:** Alternate application processes are available, please contact Chomerics Applications Engineering at 781-935-4850 for assistance.

Typical Properties	G174	Test Method
Color	Light Purple	Visual
Carrier	Fiberglass	---
Thickness, inch (mm)	0.020 (0.51) to 0.200 (5.1)	ASTM D374
Thermal Impedance, @ 50°C, 10 psi, °C-in ² /W	1.2 @ 0.030 inch	ASTM D5470
Thermal Conductivity, @ 10 psi, W/m-K	1.0	ASTM D5470
Specific Gravity	2.3	ASTM D792
Hardness (Shore A) @ Room Temperature	15	ASTM D2240

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