



Graphene

Graphene Modified Thermal Conductive Pads Product manual



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Graphene modified thermal conductive pads

【Introduction】

Graphene modified thermal conductive pads are soft and resilient, and can fill gaps between the heating source part and the heat dissipation component well. These pads can help on heat spread quickly, improve work efficiency of the device, and play as shock insulation.

【Main Components】 Silicon Oil and graphene

【Product Models】 TGK-SIGB-15、GMP-L2G—9304-55A/B

【Technical Parameters】

Table 1: Product Technical Data Sheet

Product property	Units	Product technical data			Test method
		TGK-SIGB-15	GMP-L2G—9304-55A	GMP-L2G—9304-55B	
Color	—	Gray			Visual
Thickness	mm	1.0	2.0	0.5	ASTM D374
Base material	—	Solid silicone rubber	Liquid silicone rubber		ZOND METHOD
Density	g/cc	<2.0	≥3.0		ASTM D792
Hardness		40-60 (Shore A)	50-70 (Shore 00)		ASTM D2240
Tensile strength	PSI	>100	≥10		ASTM D412
Sustainable working temperature	°C	-45—200			ZOND METHOD
Breakdown voltage	KV/mm	≥10	≥3		ASTM D149
Volume resistivity	Ω.cm	≥1.0x10 ¹³	≥1.0x10 ¹³		ASTM D257
Thermal conductivity	W/m·K	≥5.0	≥5.5		ASTM D5470

【Applications】

This product is for heat management technology, which is suitable for bottom or frame of radiators hard drives, RDRAM memory modules, miniature heat pipe radiators, automobile engine control devices, portable electronic devices, microwave transmitting base stations, automatic semiconductor test equipment, power modules, and central processors.

【Directions and Safety】

1. Please read the safety data sheet of the products (MSDS) and hazardous materials identification system (HMIS), before using of this product.
2. Keep surfaces of the thermal conduction pad clean. Any accumulating of dirt onto the surface will cause pad's viscosity and thermal conductivity decreased.
3. When pick up the pad, please pick the central part of the pad if it is a large one. For a small pad, there is no recommendation for how pick it up. Handle the pad with extremely caution and make sure it is laid on the place evenly. Any change of the form or evenness of the pad will cause deformation, affect subsequent operation and even damage to the pad, especially for a large pad.
4. Hold the pad with one hand and tear off one side of the protective film with the other hand. Do not tear both sides' protective film off at the same time before place it onto the surface. It is to keep the cleanness of the pad, reduce the chance and area of contacting the pad, and keep the viscosity and thermal conductivity of the pad from being damaged.
5. Tear off one side's protective film, keep that side toward the radiator, first align the pad with the radiator, then put it down slowly and evenly. Take extra caution to avoid any bubbles underneath.
6. If bubbles are generated during operation, the above steps can be repeated by pulled up any end of the pad and redo it, or use tools to gently remove the bubbles out. When using tools, the force should be light and gentle, to avoid any damage to the pad.
7. Gently tear off another side's protective film. Avoid pulling up or damaging the pad.
8. After the thermal conductive pad is fasten on place, it is recommended that a certain amount of pressure should be applied to it and then keep it stored for a period of time before use, to ensure that the thermal conductive silicon film is hold tightly on place.

【Other Instructions on safety, health, and environmental protection】

1. Caution must be taken during the transportation and loading/unloading. Do not put too much weight on it or stretch the product.
2. Placed keep it away from children.
3. For disposal, please follow all relevant laws, rules, and regulations.

【HMIS(Hazardous Material Identification System)】

HEALTH	1
FLAMMABILITY	0
REACTIVITY	0
PERSONAL PROTECTION	B

Rank classification:

- 0= None
- 1= Mild
- 2=Moderate
- 3=High
- 4=Extreme

Personal protective equipment:

A= Glasses; B= Glasses + Gloves

【MSDS(Material Security Data Sheet)】

See appendix for details.

【Appendix】

All data reported in this description was obtained in laboratories. The actual measured data from different lab may be slightly different due to individual equipment and changes of the environment. If the above data are changed, the latest instructions are subject to the company's latest instructions.

(TGK-SIGB-15)



(GMP-L2G-9304-55A)



(GMP-L2G-9304-55B)

