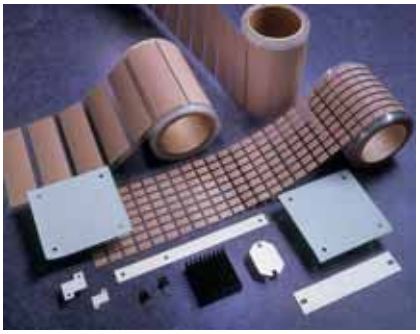
Sil-Pad® A2000

Higher Performance, High Reliability Insulator

Features and Benefits

- Thermal impedance: 0.32°C-in²/W (@50 psi)
- Optimal heat transfer
- High thermal conductivity: 3.0 W/m-K



Sil-Pad A2000 is a conformable elastomer with very high thermal conductivity that acts as a thermal interface between electrical components and heat sinks. Sil-Pad A2000 is for applications where optimal heat transfer is a requirement.

This thermally conductive silicone elastomer is formulated to maximize the thermal and dielectric performance of the filler/binder matrix. The result is a grease-free, conformable material capable of meeting or exceeding the thermal and electrical requirements of high reliability electronic packaging applications.

TYPICAL PROPERTIES OF SIL-PAD A2000

PROPERTY	IMPERIAL VALUE	METRIC VALUE	TEST METHOD
Color	White	White	Visual
Reinforcement Carrier	Fiberglass	Fiberglass	—
Thickness (inch) / (mm)	0.015 to 0.020	0.381 to 0.508	ASTM D374
Hardness (Shore A)	90	90	ASTM D2240
Heat Capacity (J/g-K)	1.0	1.0	ASTM E1269
Continuous Use Temp (°F) / (°C)	-76 to 392	-60 to 200	—
ELECTRICAL			
Dielectric Breakdown Voltage (Vac)	4000	4000	ASTM D149
Dielectric Constant (1000 Hz)	7.0	7.0	ASTM D150
Volume Resistivity (Ohm-meter)	10^{11}	10^{11}	ASTM D257
Flame Rating	V-O	V-O	U.L.94
THERMAL			
Thermal Conductivity (W/m-K)	3.0	3.0	ASTM D5470

THERMAL PERFORMANCE vs PRESSURE					
Pressure (psi)	10	25	50	100	200
TO-220 Thermal Performance (°C/W) 0.015"	2.05	1.94	1.86	1.79	1.72
Thermal Impedance (°C-in²/W) 0.015" (1)	0.53	0.40	0.32	0.28	0.26

1) The ASTM D5470 test fixture was used. The recorded value includes interfacial thermal resistance. These values are provided for reference only. Actual application performance is directly related to the surface roughness, flatness and pressure applied.

Typical Applications Include:

- Motor drive controls
- Avionics
- High-voltage power supplies
- Power transistor / heat sink interface

Configurations Available:

- Sheet form, die-cut parts and roll form
- With or without pressure sensitive adhesive

Building a Part Number

SPA2000 – 0.015 – 00 – 1012 – NA

- Section A: SPA2000 = Sil-Pad A2000 Material
- Section B: 0.015 = Standard thicknesses available: 0.015", 0.020"
- Section C: 00 = No adhesive; AC = Adhesive, one side
- Section D: 1012 = 10" x 12" sheets, 10/250 = 10" x 250' rolls, or 00 = custom configuration
- Section E: NA = Selected standard option. If not selecting a standard option, insert company name, drawing number, and revision level.

Standard Options

example

Note: To build a part number, visit our website at www.bergquistcompany.com.

Sil-Pad®: U.S. Patents 4,574,879; 4,602,125; 4,602,678; 4,685,987; 4,842,911 and others

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