Technical Data Sheet

BERGQUIST SIL PAD TSP A3000

Known as BERGQUIST SIL-PAD A2000
November 2018

PRODUCT DESCRIPTION

Higher Performance, High Reliability Insulator.

Technology	Silicone
Appearance	White
Reinforcement Carrier	Fiberglass
Total Thickness , ASTM D374	0.381 to 0.508mm
Application	Thermal management, Thermally conductive adhesive
Operating Temperature Range	-60 to 200ºC

FEATURES AND BENEFITS

- Thermal impedance: 0.32ºC-in²/W @ 50 psi
- Optimal heat transfer
- High Thermal Conductivity: 3.0 W/m-K

TYPICAL APPLICATIONS

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

BERGQUIST SIL PAD TSP A3000 is a conformable elastomer with very high thermal conductivity that acts as a thermal interface between electrical components and heat sinks. BERGQUIST SIL PAD TSP A3000 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

Physical Properties

Hardness, Shore A, ASTM D2240	90
Heat Capacity, ASTM E1269, J/g-K	1.0
Flammability Rating, UL 94	V-0

Electrical Properties

Dielectric Breakdown Voltage , ASTM D149, Vac	4,000
Dielectric Constant, ASTM D150 @ 1,000 Hz	7.0
Volume Resistivity, ASTM D257, ohm-meter	1×10^{11}

Thermal Properties

Thermal Conductivity , ASTM D5470, W/(m-K)	3.0

Thermal Performance vs. Pressure

TO-220 Thermal Performance, ºC/W	
@ 0.015"	
@ 10 psi	2.05
@ 25 psi	1.94
@ 50 psi	1.86
@ 100 psi	1.79
@ 200 psi	1.72

Thermal Impedance, ASTM D5470, ºC-in²/W (1)	
@ 0.015"	
@ 10 psi	0.53
@ 25 psi	0.4
@ 50 psi	0.32
@ 100 psi	0.28
@ 200 psi	0.26

I) 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.

GENERAL INFORMATION

For safe handling information on this product, consult the Safety Data Sheet, (SDS).

Not for product specifications

The technical data contained herein are intended as reference only. Please contact your local quality department for assistance and recommendations on specifications for this product.

CONFIGURATIONS AVAILABLE

BERGQUIST SIL PAD TSP A3000 are supplied in:

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

Conversions

(°C x 1.8) + 32 = °F
kV/mm x 25.4 = V/mil
mm / 25.4 = inches
N x 0.225 = lb
N/mm x 5.71 = lb/in
psi x 145 = N/mm²
MPa = N/mm²
N·m x 8.851 = lb·in
N·m x 0.738 = lb·ft
N·mm x 0.142 = oz·in
mPa·s = cP

Disclaimer

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Reference 1