Technical Data Sheet

BERGQUIST SIL PAD TSP 1500

Known as BERGQUIST SIL-PAD 1500
November 2018

PRODUCT DESCRIPTION

Electrically Insulating, Thermally Conductive Elastomeric Material.

Technology	Silicone
Appearance	Green
Reinforcement Carrier	Fiberglass
Total Thickness , ASTM D374	0.254mm
Application	Thermal management, Thermally conductive adhesive
Operating Temperature Range	-60 to 200ºC

FEATURES AND BENEFITS

- Thermal impedance: 0.46ºC-in²/W @ 50 psi
- Silicone elastomer
- Conformable material

TYPICAL APPLICATIONS

- Power supplies
- Automotive electronics
- Motor controls
- Power semiconductors

BERGQUIST SIL PAD TSP 1500 is a silicone elastomer 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	80
Breaking Strength, ASTM D1458, KN/m	12
Elongation , 45º to warp and fill, ASTM D412,%	20
Tensile Strength, ASTM D412, MPa	7
Flammability Rating, UL 94	V-0

Electrical Properties

Dielectric Breakdown Voltage , ASTM D149, VAC	4,000
Dielectric Constant, ASTM D150 @ 1,000 Hz	4.0
Volume Resistivity, ASTM D257, ohm-meter	1×10^{11}

Thermal Properties

Thermal Conductivity , ASTM D5470, W/(m-K)	2.0

Thermal Performance vs. Pressure

TO-220 Thermal Performance, ºC/W	
@ 10 psi	3.54
@ 25 psi	3.18
@ 50 psi	2.68
@ 100 psi	2.4
@ 200 psi	2.22
Thermal Impedance, ASTM D5470, ºC-in²/W (1)	
@ 10 psi	0.72
@ 25 psi	0.57
@ 50 psi	0.46
@ 100 psi	0.38
@ 200 psi	0.32

1) The ASTM D5470 (Bergquist modified) 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 1500 is supplied in:

- Sheet form
- Die-Cut parts
- Roll form
- 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

Note:

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