Technical Data Sheet

BERGQUIST SIL PAD TSP Q2000

Known as BERGQUIST Q-PAD 3
November 2018

PRODUCT DESCRIPTION

Glass-Reinforced Grease Replacement Thermal Interface.

Technology	Silicone
Appearance	Black
Reinforcement Carrier	Fiberglass
Total Thickness , ASTM D374	0.127mm
Application	Thermal management, Thermally conductive adhesive
Operating Temperature Range	-60 to 180ºC

FEATURES AND BENEFITS

- Thermal impedance: 0.35ºC-in²/W @ 50 psi
- Eliminates processing constraints typically associated with grease
- Conforms to surface textures
- Easy handling
- May be installed prior to soldering and cleaning without worry

TYPICAL APPLICATIONS

- Between a transistor and a heat sink
- Between two large surfaces such as an L-bracket and the chassis of an assembly
- Between a heat sink and a chassis
- Under electrically isolated power modules or devices such as resistors, transformers and solid state relays

BERGQUIST SIL PAD TSP Q2000 eliminates problems associated with thermal grease such as contamination of electronic assemblies and reflow solder baths. BERGQUIST SIL PAD TSP Q2000 may be installed prior to soldering and cleaning without worry.

When clamped between two surfaces, the elastomer conforms to surface textures thereby creating an air-free interface between heat-generating components and heat sinks. Fiberglass reinforcement enables BERGQUIST SIL PAD TSP Q2000 to withstand processing stresses without losing physical integrity. It also provides ease of handling during application.

TYPICAL PROPERTIES

Physical Properties

Hardness, Shore A, ASTM D2240	86
Flammability Rating, UL 94	V-0

Electrical Properties

Dielectric Breakdown Voltage , ASTM D149, Vac	Non-Insulating
Dielectric Constant, ASTM D150 @ 1,000 Hz	NA
Volume Resistivity, ASTM D257, ohm-meter	1×10^{2}

Thermal Properties

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

Thermal Performance vs. Pressure

TO-220 Thermal Performance, ºC/W	
@ 10 psi	2.26
@ 25 psi	1.99
@ 50 psi	1.76
@ 100 psi	1.53
@ 200 psi	1.3
Thermal Impedance, ASTM D5470, ºC-in²/W (1)	
@ 10 psi	0.65
@ 25 psi	0.48
@ 50 psi	0.35
@ 100 psi	0.24
@ 200 psi	0.16

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 Q2000 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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