

Sil-Pad® Tubes

Silicone-Based, Thermally Conductive Tubes

Features and Benefits

- Thermal conductivity:
SPT 400 – 0.9 W/m-K
SPT 1000 – 1.2 W/m-K
- For clip-mounted plastic power packages



SPT 400 and SPT 1000 (Sil-Pad Tubes) provide thermally conductive insulation for clip-mounted plastic power packages. Sil-Pad Tubes are made of silicone rubber with high thermal conductivity.

Sil-Pad Tube 1000 is best suited for higher thermal performance. Sil-Pad Tube 400 is ideal for applications requiring average thermal conductivity and economy.

Sil-Pad Tube 400 and Sil-Pad Tube 1000 are designed to meet VDE, U.L. and TUV agency requirements.

Typical Applications Include:

- Clip-mounted power semiconductors
- TO-220, TO-218, TO-247 and TO-3P

Configurations Available:

- TO-220, TO-218, TO-247 and TO-3P

Special thickness and diameters can also be ordered. Please contact Bergquist Sales.

TYPICAL PROPERTIES OF SIL-PAD TUBE 400

PROPERTY	IMPERIAL VALUE	METRIC VALUE	TEST METHOD
Color	Gray/Green	Gray/Green	Visual
Thickness / Wall (inch) / (mm)	0.012	0.305	ASTM D374
Hardness (Shore A)	80	80	ASTM D2240
Breaking Strength (lbs/inch) / (kN/m)	6	1	ASTM D1458
Continuous Use Temp (°F) / (°C)	-76 to 356	-60 to 180	—
ELECTRICAL			
Dielectric Breakdown Voltage (Vac)	5000	5000	ASTM D149
Dielectric Constant (1000 Hz)	5.5	5.5	ASTM D150
Volume Resistivity (Ohm-meter)	10^{11}	10^{11}	ASTM D257
Flame Rating	V-O	V-O	UL94
THERMAL			
Thermal Conductivity (W/m-K)	0.9	0.9	ASTM D5470
Thermal Impedance (°C-in ² /W) (I)	0.6	0.6	ASTM D5470

TYPICAL PROPERTIES OF SIL-PAD TUBE 1000

PROPERTY	IMPERIAL VALUE	METRIC VALUE	TEST METHOD
Color	Brown	Brown	Visual
Thickness / Wall (inch) / (mm)	0.012	0.030	ASTM D374
Hardness (Shore A)	80	80	ASTM D2240
Breaking Strength (lbs/inch) / (kN/m)	6	1	ASTM D1458
Continuous Use Temp (°F) / (°C)	-76 to 356	-60 to 180	—
ELECTRICAL			
Dielectric Breakdown Voltage (Vac)	5000	5000	ASTM D149
Dielectric Constant (1000 Hz)	4.5	4.5	ASTM D150
Volume Resistivity (Ohm-meter)	10^{11}	10^{11}	ASTM D257
Flame Rating	V-O	V-O	UL94
THERMAL			
Thermal Conductivity (W/m-K)	1.2	1.2	ASTM D5470
Thermal Impedance (°C-in ² /W) (I)	0.4	0.4	ASTM D5470

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.

Standard Dimensions

A = Wall Thickness: .30 mm (.012") + .10 mm / -0.0 mm (+.004" / -0.0")

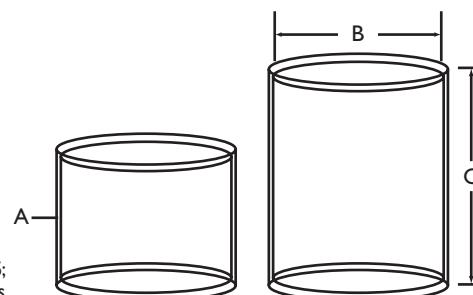
B = Inner Diameter: 11 mm (.433") or 13.5 mm (.532") ± 1.0 mm (± .039")

C = Length: 25 mm (.985") or 30 mm (1.18") +3.18 mm / -0.0 mm (+ .125" / - 0.0")

Special lengths are available. For more information, contact a Bergquist Sales Representative.

Ordering Procedure:

Sample: SPT 400 — - — -
"A" - "B" - "C"



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



www.bergquistcompany.com

The Bergquist Company -
North American Headquarters
18930 West 78th Street
Chanhassen, MN 55317
Phone: 800-347-4572
Fax: 952-835-0430

The Bergquist Company - Europe
Brambergen 9a, 3755 BT Eemnes
Netherlands
Phone: 31-35-5380684
Fax: 31-35-5380295

The Bergquist Company - China
Rm. 7C, Aihua Mansion
No. 629 Ling Ling Road
Shanghai, China 200030
Ph: 86-21-6464-2206
Fax: 86-21-6464-2209

All statements, technical information and recommendations herein are based on tests we believe to be reliable, and THE FOLLOWING IS MADE IN LIEU OF ALL WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING THE IMPLIED WARRANTIES OF MARKETABILITY AND FITNESS FOR PURPOSE. Sellers' and manufacturers' only obligation shall be to replace such quantity of the product proved to be defective. Before using, user shall determine the suitability of the product for its intended use, and the user assumes all risks and liability whatsoever in connection therewith. NEITHER SELLER NOR MANUFACTURER SHALL BE LIABLE EITHER IN TORT OR IN CONTRACT FOR ANY LOSS OR DAMAGE, DIRECT, INCIDENTAL, OR CONSEQUENTIAL, INCLUDING LOSS OF PROFITS OR REVENUE ARISING OUT OF THE USE OR THE INABILITY TO USE A PRODUCT. No statement, purchase order or recommendations by seller or purchaser not contained herein shall have any force or effect unless in an agreement signed by the officers of the seller and manufacturer.

PDS_SP_TUBES_0305