BERGQUIST

Technical Data Sheet

Sil-Pad® 1500ST

January 2015

PRODUCT DESCRIPTION

Electrically Insulating, Thermally Conductive, Soft Tack Elastomeric Material

FEATURES AND BENEFITS

- Thermal impedance: 0.23°C-in²/W (@50 psi)
- Naturally tacky on both sides
- Pad is repositionable
- Excellent thermal performance
- Auto-placement and dispensable

Sil-Pad® 1500ST (Soft Tack) is a fiberglass reinforced thermal interface material that is naturally tacky on both sides. Sil-Pad® 1500ST exhibits superior thermal performance when compared to the competitors' thermal interface materials. Sil-Pad® 1500ST is supplied in sheet or roll form for exceptional auto-dispensing and auto-placement in high volume assemblies. Sil-Pad® 1500ST is intended for placement between an electronic power device and its heat sink.

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

TYPICAL PROPERTIES OF SIL-PAD 1500ST

PROPERTY	IMPERIAL VALUE	METRIC VALUE	TEST METHOD
Color	Blue	Blue	Visual
Reinforcement Carrier	Fiberglass	Fiberglass	—
Thickness (inch) / (mm)	0.008	0.203	ASTM D374
Hardness (Shore 00)	75	75	ASTM D2240
Breaking Strength (lbs/inch) / (kN/m)	1.9	0.34	ASTM D1458
Elongation (% at 45° to Warp and Fill)	22	22	ASTM D412
Tensile Strength (psi) / (MPa)	238	1.6	ASTM D412
Continuous Use Temp (°F) / (°C)	-76 to 356	-60 to 180	—
ELECTRICAL			
Dielectric Breakdown Voltage (Vac)	3000	3000	ASTM D149
Dielectric Constant (1000 Hz)	6.1	6.1	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)	1.8	1.8	ASTM D5470

THERMAL PERFORMANCE vs PRESSURE

Pressure (psi)	10	25	50	100	200
TO-220 Thermal Performance (°C/W)	1.54	1.52	1.51	1.49	1.46
Thermal Impedance (°C-in²/W) (1)	0.37	0.28	0.23	0.21	0.20

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

- Power supplies
- Automotive electronics
- Motor controls

CONFIGURATIONS AVAILABLE

- Sheet form, die-cut parts and slit-to-width roll form

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