BERGQUIST

Technical Data Sheet

Gap Pad® VO Ultra Soft-B

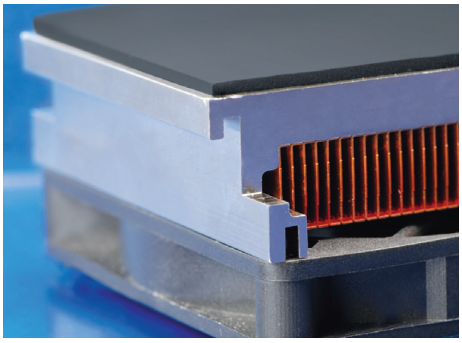
June 2013

PRODUCT DESCRIPTION

Ultra Conformable,Thermally Conductive Material for Filling Air Gaps

FEATURES AND BENEFITS

- Thermal conductivity: 1.0 W/m-K
- Highly conformable, low hardness
- Gel-like modulus
- Decreased strain
- Puncture, shear and tear resistant
- Electrically isolating



Gap Pad® VO Ultra Soft-B is recommended for applications that require a minimum amount of pressure on components.The viscoelastic nature of the material also gives excellent low-stress vibration dampening and shock absorbing characteristics. Gap Pad® VO Ultra Soft-B is an electrically isolating material, which allows its use in applications requiring isolation between heat sinks and high-voltage, bare-leaded devices.

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

TYPICAL PROPERTIES OF GAP PAD VO ULTRA SOFT-B

PROPERTY	IMPERIAL VALUE	METRIC VALUE	TEST METHOD
Color	Black/Black	Black/Black	Visual
Reinforcement Carrier	Fiberglass	Fiberglass	—
Thickness (inch) / (mm)	0.020 to 0.125	0.508 to 3.175	ASTM D374
Inherent Surface Tack (1 sided)	1	1	—
Density (Bulk Rubber) (g/cc)	1.6	1.6	ASTM D792
Heat Capacity (J/g-K)	1.0	1.0	ASTM E1269
Hardness (Bulk Rubber) (Shore 00) (1)	5	5	ASTM D2240
Young's Modulus (psi) / (kPa) (2)	8	55	ASTM D575
Continuous Use Temp (°F) / (°C)	-76 to 392	-60 to 200	—
ELECTRICAL			
Dielectric Breakdown Voltage (Vac)	6000	6000	ASTM D149
Dielectric Constant (1 Mhz)	5.5	5.5	ASTM D150
Volume Resistivity (Ohm-meter)	10^{11}	10^{11}	ASTM D257
Flame Rating	V-0	V-0	U.L. 94
THERMAL			
Thermal Conductivity (W/m-K)	1.0	1.0	ASTM D5470
THERMAL PERFORMANCE vs. STRAIN			

Deflection (% strain)	10	20	30
Thermal Impedance (°C-in²/W) 0.040" (3)	1.97	1.87	1.68
Thermal Impedance (°C-cm²/W) 1.016mm (3)	12.7	12.1	10.8

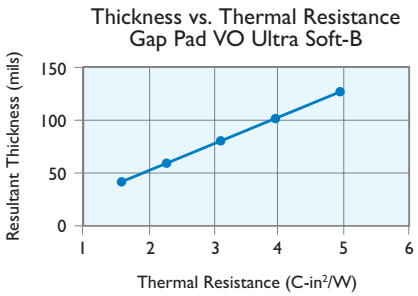
1) Thirty second delay value Shore 00 hardness scale. 2) Young's Modulus, calculated using 0.01 in/min. step rate of strain with a sample size of 0.79 inch². 3) The ASTM D5470 test fixture was used. The recorded value includes interfacial thermal resistance. These values are provided for reference only. Actual application performance is directly related to the surface roughness, flatness and pressure applied.

TYPICAL APPLICATIONS INCLUDE

- Various IC packages
- Telecommunications
- Between any heat-generating semiconductor and a heat sink
- Automotive
- LED lighting packages
- Computers and peripherals

CONFIGURATIONS AVAILABLE

- Sheet form and die-cut parts



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Note:

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