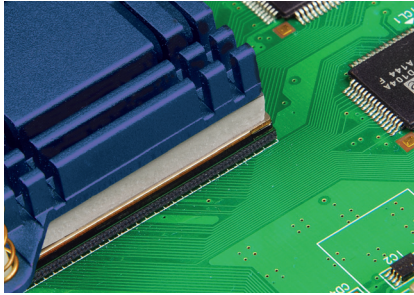


Gap Pad® VO Ultimate

Ultra Conformability, Robust, Improved Thermal Conductivity, Gap Filling Material

Features and Benefits

- Thermal conductivity: 1.3 W/m-K
- Ultra conformability
- Gel-like modulus
- Excellent rebound
- Decreased strain
- Remarkable handling
- Electrically isolating

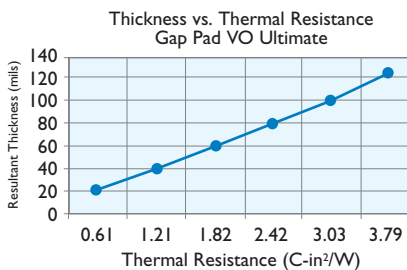


Gap Pad® VO Ultimate is a robust, highly compliant product that is ideal for both small and large gap designs. The fiberglass carrier on one side of the material allows ease of rework, excellent handling characteristics and puncture resistance. Additionally the fiberglass carrier has a slight inherent tack, minimizing any shifting during assembly.

The conformable and elastic nature of Gap Pad® VO Ultimate allows excellent interfacing and wet-out characteristics, even to surfaces with a high degree of roughness or uneven topography.

The construction of Gap Pad® VO Ultimate; one side has high inherent tack, while the other side has minimal tack. This combination is useful for manual and automated processes.

Note: Resultant thickness is defined as the final gap thickness of the application.



TYPICAL PROPERTIES OF GAP PAD VO ULTIMATE

PROPERTY	IMPERIAL VALUE	METRIC VALUE	TEST METHOD	
Color	Gray/Black	Gray/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 side)	I	I	—	
Density (Bulk Rubber) (g/cc)	1.8	1.8	ASTM D792	
Heat Capacity (J/g-K)	1.0	1.0	ASTM E1269	
Hardness (Bulk Rubber) (Shore 00) (1)	30	30	ASTM D2240	
Young's Modulus (psi) / (kPa) (2)	13	90	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)	5.0	5.0	ASTM D150	
Volume Resistivity (Ohm-meter)	10 ⁹	10 ⁹	ASTM D257	
Flame Rating	V-0	V-0	U.L. 94	
THERMAL				
Thermal Conductivity (W/m-K)	1.3	1.3	ASTM D5470	
THERMAL PERFORMANCE vs. STRAIN				
	Deflection (% strain)	10	20	30
	Thermal Impedance (°C-in ² /W) 0.040" (3)	1.60	1.55	1.46
	Thermal Impedance (°C-cm ² /W) 1.016mm (3)	10.3	10.0	9.4

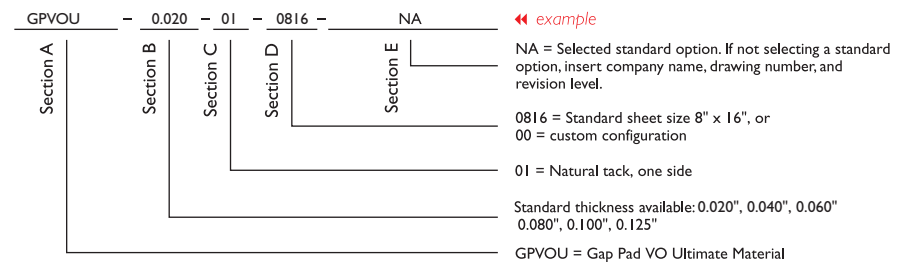
1) Thirty second delay value Shore 00 hardness scale. 2)Young's Modulus, calculated using 0.01 in/min. step rate of strain with a sample size of 0.79 in². 3) The ASTM D5470 test fixture was used. The recorded value includes interfacial thermal resistance. These values are provided for reference only. Actual application performance is directly related to the surface roughness, flatness and pressure applied.

Typical Applications:

- Various IC packages
- Thermally enhanced BGA packages
- Between any heat-generating semiconductor and a heat sink
- Computers and peripherals
- Telecommunications
- Power conversion
- Automotive
- LED lighting packages

Configurations Available:

- Sheet form and die-cut parts



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

Gap Pad®: U.S. Patent 5,679,457 and others



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