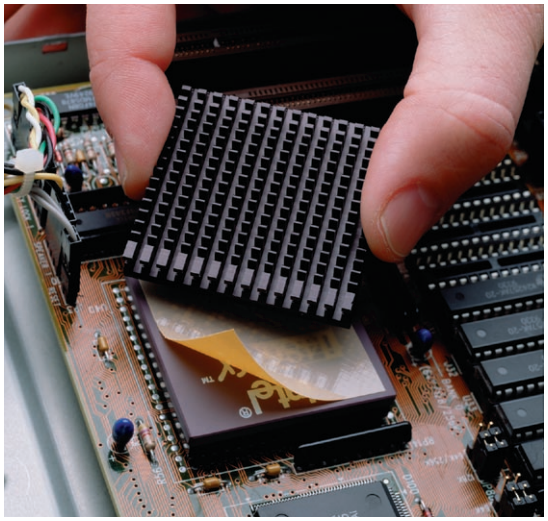
CPU PAD™

Thermally Conductive Material for Cooling Central Processing Units



Bergquist CPU Pad is a thermally conductive, electrically insulating, double coated tape. The tape consists of a high performance acrylic, pressure sensitive adhesive, on both sides of a film. This product can be used in applications that currently require clips. CPU Pad is typically used to mount a heat sink on top of a central processing unit on the circuit board.

Application Force for CPU Pad

CPU Pad is a high performance, acrylic, pressure sensitive adhesive. Being pressure sensitive, the adhesive makes a strong bond to surfaces with little or no pressure. Parts can simply be assembled and placed on the CPU Pad. Immediately after placement, the parts are securely bonded together. No long clamping times or high pressures are required.

Mounting Procedure

1. Insure cleanliness of central processing unit and heat sink.
2. Remove the clear liner from one side of the CPU Pad.
3. Roll the pad onto the substrate.
4. Remove the white liner.
5. With moderate pressure (less than 10 psi), press the part in place.

TYPICAL PROPERTIES OF CPU Pad

PROPERTY	TYPICAL VALUE	METRIC VALUE/ 5 MIL	TYPICAL VALUE 9 MIL	TEST METHOD
Color	Tan	Tan	Tan	Visual
Thickness	.005 ±.001	.127 mm	.009 ± .001	ASTM D 374
Tensile Strength	5000 psi	35 MPa		ASTM D 412
Elongation	40 %	40 %		ASTM D 412
Glass Transition	-70 °C	-70 °C	-70 °C	TMA
Adhesion				
Adhesion to Aluminum	4 lbs./in	7 N/cm	2700 grams per in.	ASTM D 1876
Adhesion to Liner	16 g/inch	6 N/m	50 gr. grams per in.	ASTM D 1876
Tensile Shear	120 psi	.84 MPa	140 psi	ASTM D 1002
Thermal Properties				
Thermal Conductivity	0.6 W/m-K	0.6 W/m-K	0.4 W/m-K	ASTM D5470
Thermal Resistance	0.3 C-in²/W	1.9 °Cmm²/w	.42 °C-in²/W	ASTM D5470
Thermal Coefficient of expansion	450 ppm	450 ppm		TMA

Thermal Cycling 1 Hour at -50°C and 1 Hour at 150°C

Time	Peel Adhesion	Voltage Breakdown	Visual
Cycles	PLI (N/cm)		
0	3.6 (6.4)	6000	Pass
100	3.8 (6.8)	6000	Pass
200	4.5 (8.1)	6000	Pass
300	4.7 (8.4)	6000	Pass