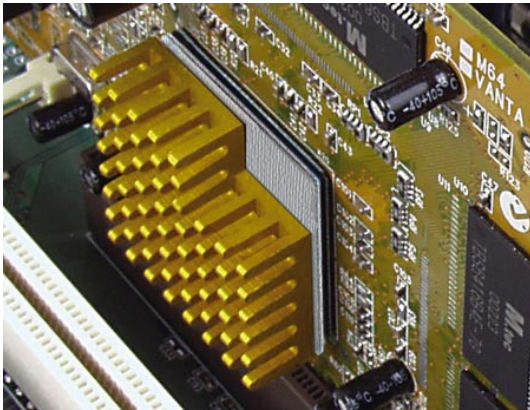


## Thermally Conductive, Pressure Sensitive Adhesive Tape

### Features and Benefits

- Thermal impedance  
0.86°C-in<sup>2</sup>/W (@100 psi)
- High bond strength to a variety of surfaces
- Double sided pressure sensitive adhesive tape
- High performance, thermally conductive acrylic adhesive
- Can be used instead of heat cure adhesive, screw mounting or clip mounting.



### Typical Applications Include

- Mount heat sink onto BGA graphic processor or drive processor
- Mount heat spreader onto power converter PCB or onto motor control PCB

### Configurations

Available:

- Sheet form or roll form
- Die-Cut parts
- Standard sheet size is 10" by 10"
- Standard roll size is 10" by 300'
- Die-Cut parts can be supplied on rolls or as individual parts
- Standard thickness of 0.005", 0.008" and 0.011"

In the case that these thickness will not work for your application, Bergquist will coat custom thickness of 0.004" to 0.012"

### Typical Properties of Bond-Ply 100

Property	Imperial Value	Metric Value	Test Method			
Color	White	White	Visual			
Reinforcement Carrier	Fiberglass	Fiberglass	***			
Thickness, (inch) / (mm)	0.005, 0.008, 0.011	0.127, 0.203, 0.279	ASTM D374			
Temp Resistance, 30sec, (°F) / (°C)	392	200	***			
Elongation, (%45° to Warp & Fill)	70	70	ASTM D412			
Tensile Strength, (psi) / (MPa)	900	6	ASTM D412			
CTE, (ppm)	325	325	TMA			
Glass Transition, (°F) / (°C)	-22	-30	DSC			
Continuous Use Temp., (°F) / (°C)	-22 to 248	-30 to 120	***			
Adhesion	Imperial Value	Metric Value	Test Method			
Lap Shear @ RT, (psi) / (MPa)	100	0.7	ASTM D1002			
Lap Shear after 5hr @ 100°C	200	1.4	ASTM D1002			
Lap Shear after 2min @ 200°C	200	1.4	ASTM D1002			
Static Dead Weight Shear, (°F) / (°C)	302	150	PSTC#7			
Electrical	Imperial Value	Metric Value	Test Method			
Dielectric Breakdown Voltage, 0.005"	3000 VAC	3000 VAC	ASTM D149			
Dielectric Breakdown Voltage, 0.008"	6500 VAC	6500 VAC	ASTM D149			
Dielectric Breakdown Voltage, 0.011"	8500 VAC	8500 VAC	ASTM D149			
Thermal	Imperial Value	Metric Value	Test Method			
Thermal Conductivity, (W/m-K)	0.8	0.8	ASTM D5470			
Thermal Impedance vs. Pressure						
	Pressure (psi)	10	25	50	100	200
TO-220 Thermal Performance, (°C/W)	0.005"	4.39	4.02	3.48	3.15	3.05
TO-220 Thermal Performance, (°C/W)	0.008"	5.11	4.69	4.53	4.45	4.38
TO-220 Thermal Performance, (°C/W)	0.011"	6.26	5.92	5.73	5.63	5.53
Thermal Impedance, (°C-in <sup>2</sup> /W) (I)	0.005"	0.78	0.61	0.58	0.55	0.54
Thermal Impedance, (°C-in <sup>2</sup> /W) (I)	0.008"	1.28	0.94	0.90	0.86	0.84
Thermal Impedance, (°C-in <sup>2</sup> /W) (I)	0.011"	2.47	1.22	1.19	1.14	1.11
1) Single layer test that includes interfacial resistance.						

**Shelf Life:** The double-sided pressure sensitive adhesive (PSA) inherent with Bond Ply products require the use of dual liners to protect the surfaces from environmental contamination and accidental contact. The adhesive bond strength between the PSA and the protective liner will typically increase while in storage conditions. Thus, the worst-case shelf life for Bond Ply products is limited not by the material characteristics of Bond Ply, but by the adhesion of the Bond Ply PSA to the protective liner. Bergquist recommends a 6 month shelf life at a maximum continuous storage temperature of 35°C, or 3 month shelf life at a maximum continuous storage temperature of 45°C, for maintenance of controlled adhesion to the liner. The shelf life of the Bond Ply material, without consideration of liner adhesion (which is often not critical for manual assembly processing), is recommended at 12 months from date of manufacture at a maximum continuous storage temperature of 60°C.

Bond-Ply®: U.S. Patent 5,090,484 and others.

Product Data Sheet / PDS-0602-001-01; Rev 01