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Bergquist
B660B-0.0055-00-1112-NA

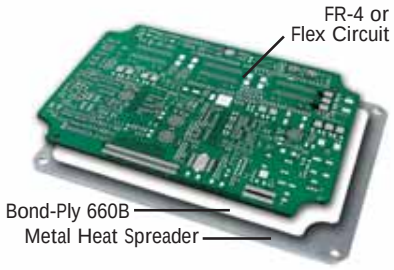
For any questions, you can email us directly:
sales@integrated-circuit.com

Bond-Ply® 660B

Silicone-Free Formulation, High Performance Thermally Conductive Material

Features and Benefits

- Designed to replace mechanical fasteners or screws
- For applications that require electrical isolation
- Double-sided pressure sensitive adhesive tape



Bond-Ply 660B is a thermally conductive, electrically insulating, double-sided pressure sensitive adhesive tape. The tape consists of a high performance, thermally conductive acrylic adhesive coated on both sides of a PEN film. Use Bond-Ply 660B in applications to replace mechanical fasteners or screws.

Typical Applications Include:

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

Configurations Available:

- Roll form and die-cut parts

The material as delivered will include a continuous base liner with differential release properties to allow simplicity in roll packaging and application assembly.

TYPICAL PROPERTIES OF BOND-PLY 660B

PROPERTY	IMPERIAL VALUE	METRIC VALUE	TEST METHOD
Color	White	White	Visual
Reinforcement Carrier	PEN Film	PEN Film	—
Thickness (inch) / (mm)	0.0055	0.14	ASTM D374
Temp. Resistance, 30 sec. (°F) / (°C)	392	200	—
Elongation (%)	40	40	ASTM D412
Tensile Strength (psi) / (MPa)	30000	210	ASTM D412
CTE (ppm)	250	250	ASTM D3386
Glass Transition (°F) / (°C)	-22	-30	ASTM E1356
Continuous Use Temp (°F) / (°C)	-22 to 248	-30 to 120	—
ADHESION			
Lap Shear @ RT (psi) / (MPa)	100	0.7	ASTM D1002
Lap Shear after 5 hr @ 100°C	200	1.4	ASTM D1002
Lap Shear after 2 min @ 200°C	200	1.4	ASTM D1002
Static Dead Weight Shear (°F) / (°C)	302	150	PSTC#7
ELECTRICAL			
Dielectric Breakdown Voltage (Vac)	6000	6000	ASTM D149
Flame Rating	V-O	V-O	U.L.94
THERMAL			
Thermal Conductivity (W/m-K)	0.4	0.4	ASTM D5470

THERMAL PERFORMANCE vs PRESSURE					
Initial Assembly Pressure (psi for 5 seconds)	10	25	50	100	200
TO-220 Thermal Performance (°C/W)	5.28	5.10	4.95	4.80	4.51
Thermal Impedance (°C-in²/W) (1)	0.59	0.59	0.58	0.58	0.58

1) The ASTM D5470 (Bergquist modified) 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.

Shelf Life: The double-sided pressure sensitive adhesive used in Bond-Ply products requires the use of dual liners to protect the surfaces from contaminants. 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.

Building a Part Number

BP660B – 0.0055 – 00 – 1112 – NA

- Section A: BP660B = Bond-Ply 660B Material
- Section B: Standard thicknesses available: 0.0055"
- Section C: 00 = No adhesive
- Section D: 1112 = 11" x 12" sheets, 11/250 = 11" x 250' rolls, or 00 = custom configuration
- Section E: NA = Selected standard option. If not selecting a standard option, insert company name, drawing number, and revision level.

Standard Options

example

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

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

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