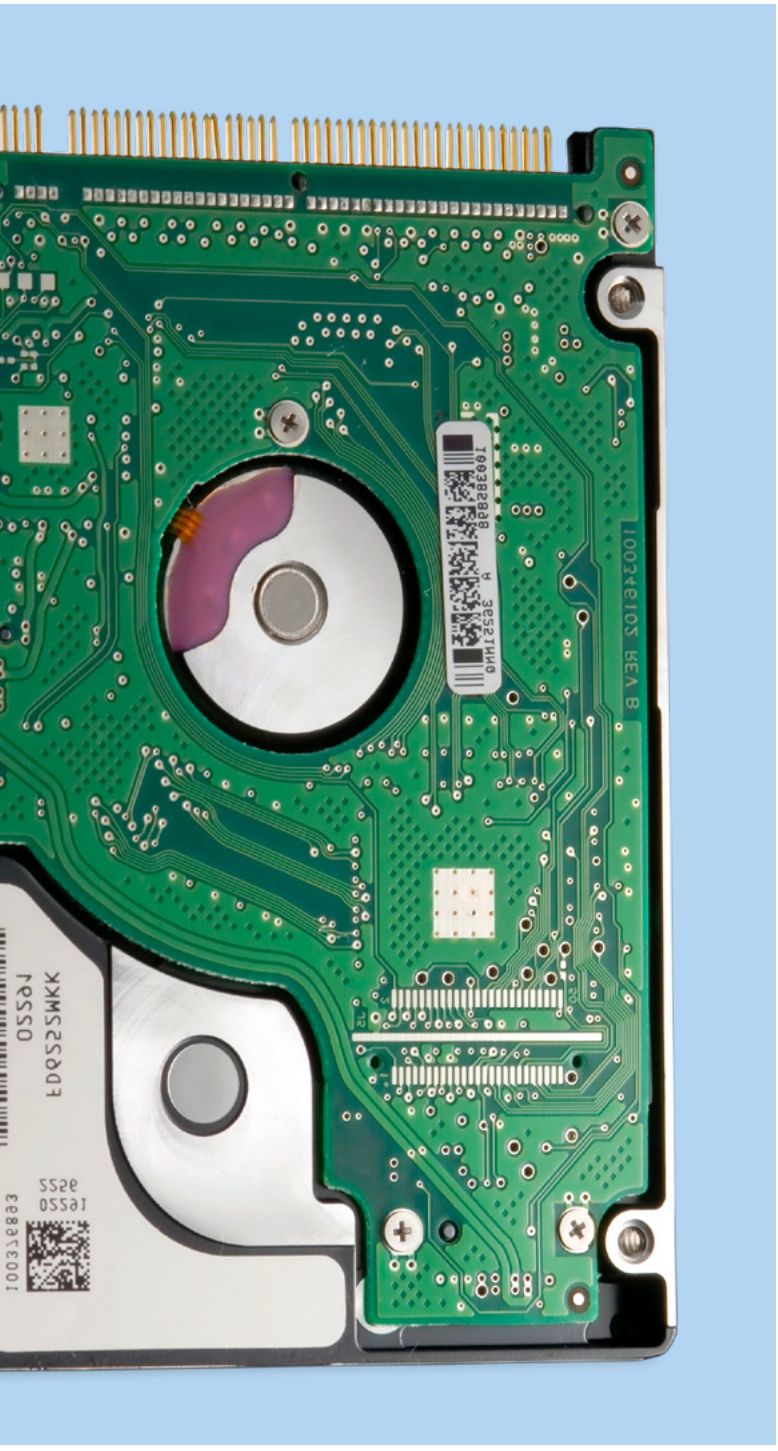
Polyimide labels for Printed Circuit Boards

Product overview



Printed Circuit Boards (PCBs) are used to hold and connect electronic components and are found inside every electronic device. They are assembled in an automated process, where they are exposed to extreme heat and chemicals. During assembly, traceability of the PCB is vital – and this requires the use of identification and tracking labels.

Avery Dennison's polyimide label constructions are specially designed to ensure reliable PCB tracking during manufacturing.
They maintain their physical integrity, and excellent heat-resistant topcoats ensure that tags remain legible when exposed to extreme temperatures and chemicals.

Finding a good match between label performance and application is crucial for minimizing costs, and Avery Dennison offers a complete product range that allows you to make the right choice for specific requirements.

Identification and tracking labels are integral parts of the PCBs used in computers, telecommunications equipment, consumer electronic goods, industrial equipment, medical instruments, automotive systems, military systems and aerospace engineering.

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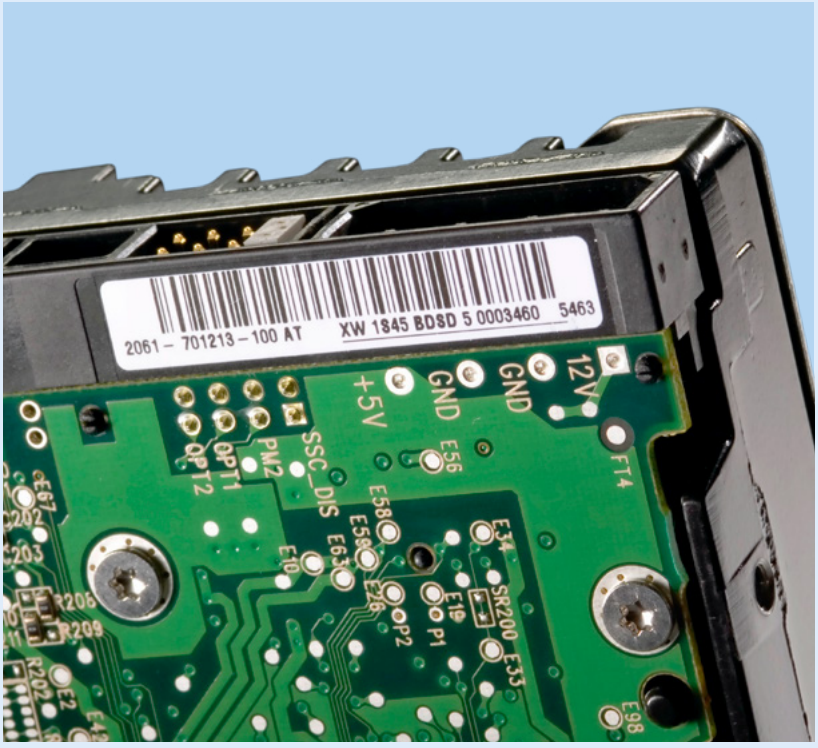
PCB labels are engineered to withstand heat and aggressive chemicals

The Avery Dennison portfolio of polyimide labelling materials delivers value and flexibility throughout the PCB supply chain.

- Our new economy Polyimide products with the topcoats TC13 and TC14 perform exceptionally well at the very high temperatures used in today's lead-free soldering (up to +260°C, continuously for 5 minutes). After soldering and PCB cleaning with common aggressive cleaning agents, these printed labels remain clearly readable.
- Our well-established Polyimide I&II Matt White grades suit the most demanding PCB labelling applications where labels are exposed to extreme peak temperatures of up to +280°C. These grades offer superior resistance to highly corrosive solvents, and also allow for high resolution, fine feature print.

Maximum temperatures specified for many PCB soldering processes are between +240°C and +260°C, and peak temperatures of up to 280°C are not uncommon.
Process temperatures are end-product and end-application specific, and the Avery Dennison polyimide portfolio fully addresses the entire range of PCB labelling requirements.



Facestocks

Avery Dennison polyimide facestocks and topcoats are engineered components, matched to deliver high performance in demanding applications. All polyimide label materials are optimized for thermal transfer printing, and printed labels offer good resistance against the harsh chemicals used in the production and cleaning of PCBs.

- Polyimide I GL WH TC13 - based on a 25µm polyimide with a thick glossy topcoat. The total caliper of the facestock is 40µm. This material can be printed with a variety of thermal transfer ribbons and features good chemical resistance.
  To achieve a good print performance, an increased temperature setting for the thermal transfer printer may be required.

- Polyimide I WH TC14 - based on a 25µm polyimide with a thick semi-matt white topcoat. The total caliper of the facestock is 46µm.
  This material can be printed with a variety of thermal transfer ribbons and features good chemical resistance. To achieve a good print performance, an increased temperature setting for the thermal transfer printer may be required.

- Polyimide II WH TC14 - based on a 50µm polyimide with a thick semi-matt white topcoat. The total caliper of the facestock is 71µm.
  This material can be printed with a variety of thermal transfer ribbons and features good chemical resistance.
  To achieve a good print performance an increased temperature setting of the thermal transfer printer may be required.

The following materials are optimized for thermal transfer printing of high density barcodes with superior chemical and scratch resistance.

- Polyimide I Matt White - based on a 25µm polyimide with a premium thick matt white topcoat.
  The total caliper of the facestock is 43µm.
- Polyimide II Matt White - based on a 50µm polyimide with a premium thick matt white topcoat.
  With the high caliper of this facestock (68µm) automatic dispensing of labels is improved.

Adhesive

S8088 adhesive is a solvent acrylic adhesive specially formulated to withstand extremely high temperatures, corrosive solvents and high UV radiation.

Service

These products are stocked in Europe and are available with small minimum order quantities. See table for more details on service options.

Product information

Product Code	Facestock	Caliper PI film	Total caliper facestock	Appearance	Adhesive	Liner	Peak service temp/time	Suitable for reflow process	Suitable for wave solder process	Chemical resistance	TT printability	Automatic dispensing	Ready Width	Master Roll, any slit width ≥100mm	UL recognized
BC668	POLYIMIDE I GL WH TC13	25 µm	40 µm	glossy	S8088	BG50WH	260 °C, 5 min	•••	••	••	••	••	250 mm x 500 lm	1000 mm, roll length: > 100 lm	y
BB810	POLYIMIDE I WH TC14	25 µm	46 µm	semi-matt	S8088	BG50WH	260 °C, 5 min	•••	••	••	••	••	100 mm x 500 lm 125 mm x 500 lm 250 mm x 500 lm	1000 mm, roll length: > 100 lm	y
BC133	POLYIMIDE II WH TC14	50 µm	71 µm	semi-matt	S8088	BG50WH	260 °C, 5 min	•••	••	••	••	••*	250 mm x 500 lm	1000 mm, roll length: > 100 lm	y
AI300	POLYIMIDE I Matt White	25 µm	43 µm	matt	S8088	50#SCK	280 °C, 5 min	•••	••*	•••	•••	••	150 mm x 420 lm	600 mm x 450 lm	y
AH415	POLYIMIDE II Matt White	50 µm	68 µm	matt	S8088	50#SCK	280 °C, 5 min	•••	••*	•••	•••	•••	150 mm x 420 lm 300 mm x 420 lm	600 mm x 450 lm	y

- \- not recommended
- •• Good
- ••• Excellent
- * Test recommended

For more information about polyimide labelling solutions please contact your Avery Dennison Representative.

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