ID LABEL

WHITE PAPER

5 WAYS ANTISTATIC LABELS ARE ESSENTIAL FOR ELECTRONICS MANUFACTURERS

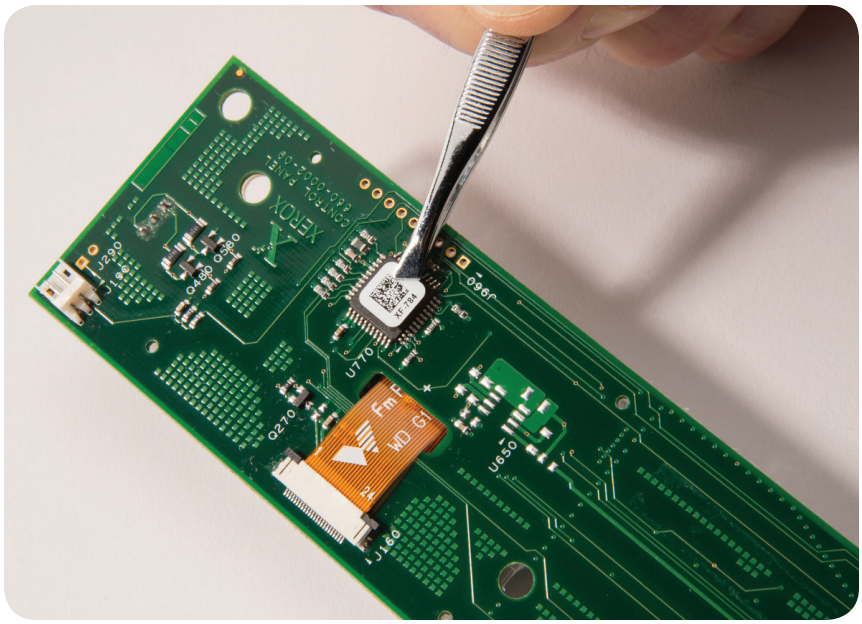
Learn How ESD-Safe Labels Can Help Maximize Your ROI

Most electronic components feature barcode labels that provide manufacturers with a wealth of product and tracking information essential over the lifecycle of a product.

Today's labels are highly sophisticated, produced with specialized materials that actually help to reduce the occurrence of electrostatic discharge (ESD) in sensitive devices.

ESD-safe labels help manufacturers maximize cost, yield, reliability and useful life.

In this white paper, we take a closer look at the essential role that antistatic barcode labels play in the manufacture of today's electronic devices.



Polyimide barcode labels help to reduce the occurrence of electrostatic discharge in sensitive electronic components.

Electronic components are the lifeblood of thousands of consumer and business products we use each day. Yet many of these components, such as microchips on printed circuit boards (PCB), can be significantly damaged by electrostatic discharges that can occur during the manufacturing process and throughout a device's useful life.

What is ESD?

An electrostatic discharge (ESD) is a sudden transfer of electricity that can occur when, for example, a static charge is released into a sensitive electronic component.

ESD damage can be seen immediately during assembly when a circuit stops functioning or later during the life of a device. This latent failure adds to the true cost of ESD in repairs, returned products, and end-user disappointment.

Estimates of product losses due to electrostatic discharge can be up to seven percent of the manufacturing cost.

Preventing Electrostatic Discharge

Understandably, the prevention of electrostatic discharge in manufacturing is critical. There are numerous processes and materials device manufacturers employ.

These include ESD-protected work areas that feature proper humidity control, grounding of materials and gear, antistatic mats, and specialized conducting wrist and foot straps for workers' garments.

The challenge for manufacturers is to design a printed circuit board that will meet its intended use, but with a design that will operate flawlessly under adverse conditions – including being tolerant to ESD – for the life of the device.

Barcode Labels and ESD Prevention

Most electronic components use barcode labels that provide a wealth of product and tracking information essential over the lifecycle of a product.

Today's labels – including those manufactured by ID Label and the Barcodes West Division – are highly sophisticated and produced with specialized materials that actually help to reduce the occurrence of electrostatic discharge in ESD-sensitive devices.

ESD-safe labels comply with the latest federal and international requirements and are quality-manufactured specifically with the needs of the electronics/PCB industry in mind.

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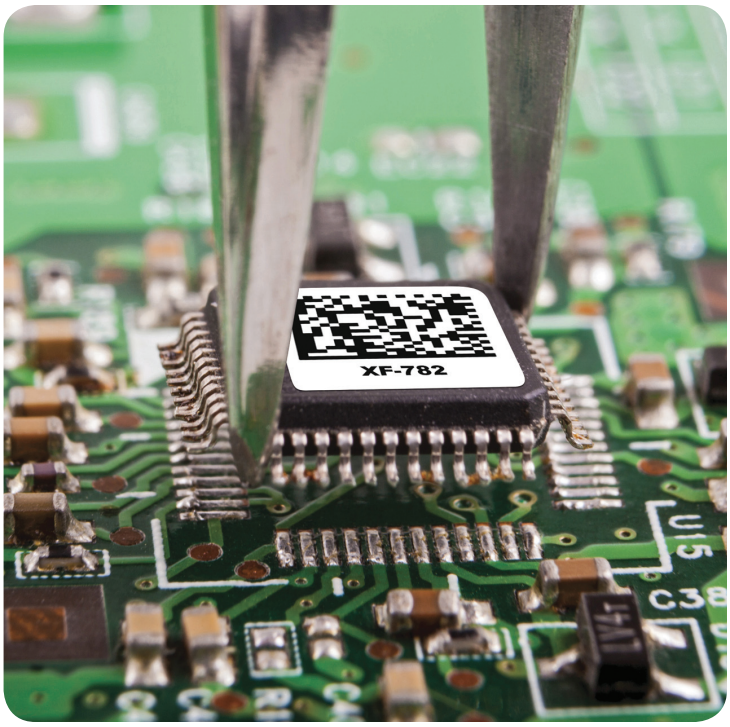


Sensitive electronic components can be significantly damaged by electrostatic discharges that can occur during the manufacturing process and throughout a device's useful life.

Ultimately, they help manufacturers maximize costs, product yields, product reliability, and product life. The primary uses for antistatic barcode labels include:

- Identifying static-sensitive PCBs
- Tracking static-sensitive electronic components
- Static-sensitive ESD packaging
- Static-sensitive warranty labeling

7% ***Analysts estimate that product losses due to electrostatic discharge can be up to seven percent of the manufacturing cost of a device.***

ID LABEL

Key Benefits of Using ESD-Safe Labels

The following are some of the primary ways that manufacturers benefit from using ESD-safe Barcode labels.

1. **Reduces Occurrence of ESD During Application –** Properly manufactured barcode labels reduce the charge generated when the label is removed from its liner, which could otherwise discharge and destroy sensitive components during application.

2. **Minimizes Charge Build-Up on Label Surface –** After the label has been applied and during its life, these materials are designed to prevent significant charge build-up on the label surface that can result in a static discharge.

3. **Withstands Harsh Manufacturing Conditions –** ESD-safe labels are made to withstand harsh solders, fluxes, and extremely high temperatures common during the manufacture of electronic devices.

4. **Compliant with Stringent Industry Standards –** Be sure to use labels that comply with the S20.20, 61340 and JESD625B federal and international standards for charged insulators used in the proximity of ESD-safe devices.

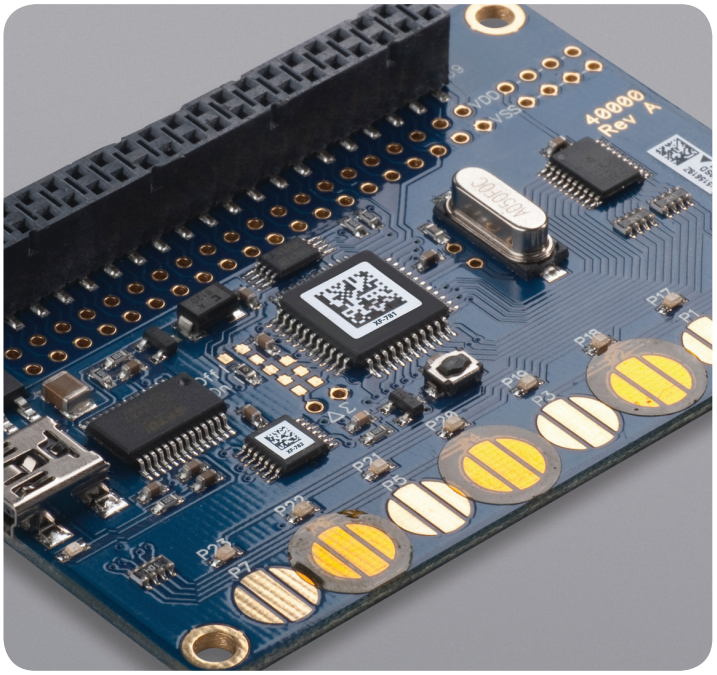
5. **Use of Low-Charging Materials –** Your label manufacturer should use low-charging adhesive systems, static dissipative label faces, and low-charging release liners (surface resistances greater than 104 and less than 1011 Ohms).

ID Label's unique label construction is designed to resist surface-mount board processes on the top or bottom of the board. Labels are backed with high-temperature-resistant adhesives that perform well under harsh conditions.

Product features:

- IS0 9001:2008 registered
- Halogen-free label products
- Meets REACH and RoHS standards
- MIL-STD 202F and MIL-STD-883E compliant
- Fully customizable with glassine or clear PET film liners

Interested in learning more?
Contact us today for a free consultation.



ESD-safe labels help manufacturers maximize product cost, yield, reliability and useful life.

Interested in learning more? Contact us for details and free samples.

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