Counterfeit Component Detection

Use the Power of Inspection to Ensure Security

Now more than ever, counterfeit parts are difficult to identify.

With technology innovation, the world of counterfeit parts has expanded and matured. Artificial parts are easier to disguise and harder to spot during visual inspection.

Letting a counterfeit component slip into your supply chain poses many risks for you and your partners. If a fake part fails, the user can be injured, or that part may cause a piece of equipment to malfunction, short-circuit or even cause a fire. Although the potential hazards do not stop there, it is a top priority to provide services and trust your partners can rely on. By relying on proven and experienced inspection processes, you can avoid counterfeit component headaches and help your partners receive components they can count on.

Identifying Counterfeit Electronic Components With Proven, Helpful Tips

Counterfeit products are nothing new to the electronics industry.

As the global pandemic stretches the supply chain to its max, new doors for counterfeit parts continue to open. It is more important than ever to feel confident about inspecting components and equipping yourself to identify these counterfeit components. Though there is no one-size-fits-all for weeding out the fakes, the following are elements to inspect to help detect counterfeit parts.

Logos

From misspelled words to odd spacing, looking at the logo is a great way to search for signs of authenticity. At times, components are altered from their original design. As you check the logo, you can also check for signs of blacktopping. Blacktopping is when parts resurface and markings are covered in an attempt to pass it off as something else.

Part Number

Manufacturers have high expectations for their parts, which include the location and appearance of the part number. Analyzing the part number is a way to confirm the validity of a part. Depending on the part, the part number should be placed in a specific location and should not be crooked or misaligned. Numbers that are out of place or 'hanging off' the part are a red flag.

Font

The font wording and positioning on a part should be identical to the font and placement that the manufacturer uses. This also includes the spacing between each word as well as the color of the wording. Any font variation should pose as an alert you are dealing with a counterfeit.

Sizing

If you notice a difference between the length, height, and/or width of a part you're inspecting to what's listed by the manufacturer, this is a sign the part may be counterfeit. Along with sizing, you can also look at any texture present on the component. It is a red flag if a part is supposed to be directly from a mold but has marks of a directional pattern. Often in counterfeit parts, the top or bottom markings are sanded off. The marks left by this process are a sign that the part has been blacktopped.

Date Code

A date code is formatted as a four-digit number, where the first two numbers represent the calendar year's last two digits, and the last two numbers represent the week of the year. Date codes allow for component traceability, recalls, etc. There are a few ways a date code can tip you off to a fraudulent part. First, check that the date code is possible. If a date code is set in the future or uses a date that isn't possible, this is your sign of a fake part. Second, verify the date code on the part is the same as the code on the label. If either of these items is amiss with the date code, the component may be labeled counterfeit.

Depending on the component, the indications of a counterfeit component may vary. At Velocity Electronics, we are dedicated to protecting the security of our components and overall supply chain. For more tips and industry insights, follow along on Instagram, Facebook, and Linked In!