Adapting to New Terrain

Chief operating officer and general counsel of the ECIA, Robin B Gray Jr, explains how the counterfeiting landscape is changing in this recent article for Electronics Sourcing North America.

In recent years, anticounterfeiting efforts by the ECIA, industry, government and customers have forced counterfeiters and unauthorized sellers to grow ever more sophisticated in production and marketing. Clones, blanks and remanufacturing are some of the new tools of forgers. “Counterfeiting is no longer the province of small-time operators that pry parts off boards and remark them as new or upgraded,” reports chief operating officer and general counsel, Robin B. Gray, Jr.

When electronic component counterfeiting first emerged, the ECIA, the Semiconductor Industry Association and other industry trade bodies responded with efforts to alert customers and government to the emerging dangers of fake parts. This effort eventually resulted in legislation, regulation and industry standards and guidelines. As the industry and customers changed, however, so did the counterfeiters. Counterfeiters evolved into sophisticated businesses using new techniques and manufacturing processes to circumvent laws and standards.

Blanks and clones

One of these techniques is the manufacturing of blanks. Blanks imitate genuine product in appearance and alleged functionality but have no identifying marks such as company trademarks or logos on the parts and packing material. Trademarks and logos are added after the part enters the country, thereby avoiding customs and the first line of defense.

A second emerging technique is the manufacture of clones. Counterfeiters with enough resources can often make components that may appear to be genuine upon visual inspection and may even pass basic laboratory testing. Only very sophisticated testing can spot clones. Such testing may be beyond the means of buyers and even testing labs. The problem is further compounded by counterfeit semiconductor components that may be tainted with malware.

Remanufacturing

There is also growing concern about the remanufacturing of genuine parts. In this instance, counterfeiters take a used part and remanufacture, restore or refurbish it. If this remanufacturing of a used component is disclosed to the buyer, then there is no problem from a legal perspective. However, if such disclosure is not made, the act of selling becomes fraud and not strictly counterfeiting. An interesting twist is that remanufacturers usually remove the original component manufacturers’ marks and logos and replace with their own and, in some instances, even create their own distribution network. The used part is usually sold as a replacement for a part made by the original component manufacturer, with the claim that it meets the OCM’s specifications.

The big unknowns with these parts, whether legitimately made or not, are quality and performance. These are used parts, so it may be difficult or impossible to determine how much a component has been degraded by prior use. Or, in the case of semiconductor components, what programming may still be embedded.

Remanufacturing should not be confused with authorized aftermarket manufacturing. Authorized aftermarket manufacturers are companies that have been authorized by the OCM to make their components. These legitimate manufacturers often acquire the OCM’s excess inventory, manufacturing processes and equipment, product specifications, quality testing techniques and even intellectual property rights. They will either have the right to use the OCM’s marks or make the parts under their own company names.

Component testing

When sourcing from unauthorized sellers, customers may rely on testing labs to determine component authenticity. The cost of testing, particularly detailed and sophisticated testing, is expensive. It drives up the cost of the purchasing process and is not a guarantee that all counterfeits will be detected. Thus, the level and frequency of testing is often dictated by the level of risk associated with the component and its use in the final product.

To reduce the risk, customers should not rely on in-house testing by unauthorized sellers, but rather select their own testing laboratories, which are independent of the seller. One other factor to consider, is that labs, even the best of these facilities, are unlikely to have an OCM's product specifications with which to make comparisons.

Block chain

There is growing discussion that block chain may be another tool in avoiding counterfeit components. The potential upside is that block chain may provide a secure chain of traceability back to the OCM. The downside is that this process may increase the credibility of unauthorized sellers if they can demonstrate the genuineness of the part. While block chain may solve the traceability problem, it does not show how the product was packaged, stored or handled or whether it has been tampered with in any way.

Block chain may also close the huge loophole in the Department of Defense's regulation that permits contractors to purchase from unauthorized sources that buy exclusively from authorized sources. This loophole enables anyone to buy from an authorized source and resell to the DoD or a DoD contractor and be treated for purposes of the law on the same level as the OCM and authorized distributors. ECIA has been opposed to this 'exclusively buy from' provision and continues to work for its elimination from the law.

Finally, ECIA continues its ongoing efforts to advocate for the authorized channel as the best source for avoiding the acquisition of counterfeit product. The problem of counterfeits remains ongoing, with even greater risks for customers buying from unauthorized sources. The ECIAauthorized.com website was created by the ECIA, in collaboration with its members, to provide purchasers with access to aggregated price and availability data for genuine parts. ECIA works extensively and continuously to verify that the price and availability data displayed relates only to products for which the distributors listed are authorized or franchised. All distributors that participate on the site are required to be members of the ECIA. www.ecianow.org