

Protecting Yourself from Counterfeit and Gray Market Components

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As a manufacturer of switches, quality is one of the most crucial elements of our brand. It is also one of the elements that we can control. If the switch doesn't meet quality standards and tests that we expect from our manufacturing processes, it is discarded and destroyed. This focus on quality is what all manufacturers strive for. However, like all manufacturers, counterfeit parts can be a danger to quality control and end users.

We lose control of our quality initiatives when a switch is a counterfeit or gray market product purporting to be one of our high quality switches. It seems that every day we hear or see common counterfeit products – from auto parts to watches – that people are willing to purchase regardless of quality just to save some money.

While there are safety issues in using counterfeit switches and other counterfeit products, most of these issues won't result in death or injury. However, the potential is still there and every counterfeit switch failure has the potential for unfortunate consequences that can lead to larger issues.

NKK Switches is lucky in that we don't have to deal with counterfeit parts very often due to our supply chain and inventory processes and management. Many years ago we put processes in place to ensure gray market parts – parts that didn't pass our quality standards – are discarded and destroyed. As a result, they are virtually non-existent. In fact, it has probably been more than a decade since we last had to deal with counterfeit switches that have the same look and functions as ours but were manufactured by others with lower quality controls.



The problem is that not every manufacturer is as lucky as we are, or has not put in place the same best practices. The sale of counterfeit parts is a multi-billion dollar industry. A [recent article](#) states that the semiconductor industry loses more than \$75 billion annually to counterfeit parts. The automotive industry loses a much less amount: \$3 billion – money that nearly any company would like to have.

Regardless of whether you manufacture parts or purchase parts, there are some basic best practices that should be implemented to help organizations protect themselves.

Focus on the Supply Chain

Both buyers and manufacturers should take a hard look at the supply chain they are purchasing components from.

From a buyer perspective, always purchase switches or other parts from a trusted distributor. Verify and confirm with the manufacturer that the distributor is authorized. This can usually be done in less than a minute by visiting the manufacturer's website.

If you are concerned that components you purchased are not legitimate, reach out to the vendor or distributor for support and service. Support personnel should be able to ensure the quality of a switch, and will definitely know if the part is counterfeit.



Don't always look to buy the lowest-priced item that is advertised in some dark corner of the web. Prices for most markets only incur a change when the price of raw materials drastically shifts, which is less often than one would think.

Manufacturers may also look at their supply chain and evaluate supply chain security. They should be able to corroborate that discarded parts are destroyed properly and be able to trace the part from manufacturing through the various distributors until it is sold. In addition to helping with customer service, making support engineers available to distributors and customers to detect counterfeit components is crucial. Manufacturers can also verify that their distributors are authorized by organizations like the National Electronic Distributors Association. This ensures that the distributor is reputable and trusted.

Confirm with the Vendor

Purchasers should check with the vendor before buying. For example, switches come with various ratings that describe their expected lifetime including the minimum number of guaranteed actuations before the switch is less likely to function properly. This information can be found on vendor websites and compared against information provided by the distributor.

If it doesn't match up, more than likely it is a counterfeit component.



Just as engineers should ask their peers for advice before specifying, purchasers should also ask around to their peers before buying. Asking industry peers personally or in forums about their experiences with particular manufacturers or distributors is an effective means of discovery. Word of mouth is an essential way to find out the integrity and quality of others.

Train Employees and Distributors

Not only should engineers and purchasers be trained on the process of proper specification and purchasing, but manufacturers should train their employees to prevent counterfeit parts. This should occur with those who have access to product, those on the manufacturing line, the warehouse, shipping, and support engineers. They should also train their distribution partners.

Employees should be educated about the liability they can incur personally, and for the company, through improper handling of manufactured items, and how they can identify counterfeit and gray market components.

Distribution partners should know how to handle verification requests. They should provide proper documentation with parts they ship. They should also be familiar with the specification of any component they work with. Training is essential.

Be Relentless and Absolute in Enforcement

If counterfeit or gray market parts are identified, the company should take a zero-tolerance stance in enforcing company policies, regulations and laws. Because they have their reputation at stake, no cost is too high to fight against imitation parts. Every course of action available should be taken, including lawsuits, termination of employment or contracts, and the procurement and tracing of counterfeit parts should all be considered. Holding the supply chain even more accountable may be necessary.

While counterfeit electromechanical switches or other components may find their way onto the market at some point, by following these best practices, manufacturers, design engineers and purchasers can help protect themselves from purchasing and using counterfeit or gray market components – and, in turn, protect others from disastrous results.