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MILITARY PRECISION SLASHES LEAD-TIMES

Sourcing parts by their mil-spec number can reduce lead time and unit costs, explains Charcroft

Sourcing military specification parts has some unique benefits. Not least, it has the advantage of simplifying the process of finding second-source components in order to reduce lead-times and cost and ensures a clear audit trail of approvals throughout the supply chain.

This means that, while bills of materials for high-reliability components often include the name of the component manufacturer, parts which are specified by the mil-spec number rather than the manufacturer's part number, can easily be second-sourced from any other fully qualified parts list (QPL) approved component manufacturer.

Take inductors for example. Sourcing an 0805-cased mil-prf-83446 inductor from the most widely known manufacturer can typically mean a lead-time of around six to eight weeks, however an identical QPL-approved inductor, manufactured by Gowanda, can cut lead-times to as low as two to four weeks and may also reduce the unit cost.

Improve availability

Another advantage to mil-spec or QPL standards is that they improve the availability of products, since the manufacturer produces parts to a consistent specification. This ensures each delivery of product will be identical. Furthermore, users can eliminate their own auditing or surveillance programmes and instead rely on the approving agency to monitor the

manufacturers' compliance with the mil-spec. This means that less time and cost is used in sourcing and monitoring product performance.

One word of warning though: when second-sourcing inductors, or any other QPL-approved components, it is vitally important to ensure that the supplier or distributor is given the full specification, including the required level of testing.

Specify testing

For some specifications, such as the mil-prf-83446, there is only one approval level so it is sufficient to provide just the slash sheet and dash number for the second-sourced parts, for example: mil-prf-83446/37-08A. Others, such as mil-prf-27 inductors, have two testing levels, M or T, with level T being the highest level of testing.

Stringent tests are used to identify different failure rate levels. Each level T production lot of mil-prf-27 inductors is subjected, by the manufacturer, to 100 per cent thermal shock, burn-in and radiographic inspection in addition to electrical and mechanical testing. While inductors rated to failure rate level M are only sample tested for electrical and mechanical failure.

When looking at the Charcroft portfolio, for example,

Gowanda's MLP1812-T, MLP5025-T and MLP8527-T series are claimed to be the first mil-prf-27/367, /368 and /370 inductors to be approved to T level testing.



Charcroft's Ian Ford holds a Gowanda inductor

Gowanda 0805 and 0603 mil-prf-83446 inductors can cut lead-times down to two to four weeks

www.charcroft.com/gowanda