



An ECIA Knowledge Document

Managing Date Code Restrictions on Orders for Electronic Components

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Electronic Components Industry Association

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Managing Date Code Restrictions on Orders for Electronic Components

Introduction:

ECIA members, electronic component manufacturers and distributors recommend electronic component customers avoid the specification of general date code restrictions when ordering electronic components from electronic component manufacturers and their authorized distributors. The following knowledge document has been prepared as the result of a cooperative effort between electronic component manufacturers and their authorized distributors.

Background:

Historically, some electronic component customers have expressed concerns that after a period of time, electronic components are no longer “fresh” and appropriate for use in electronic products. Forty years ago, there may have been some truth to this perception. However, the last four decades of process improvements by electronic component manufacturers have all but eliminated the causes of failure mechanisms related to component age concerns. For example, prior to 1995 the military specification MIL-PRF38535 (section 3.10) required a military part be re-tested if not used within three years of the marked date code and after extensive study, this military specification was revised to remove date code restrictions altogether. The revised version simply states that product must be “solderable upon delivery”. MIL-PRF-19500P now prohibits date code restrictions on military component orders (section 6.2.i). The origin of many customer date code specifications may be attributed to this now revised military standard and have no factual or empirical basis.

General date code restrictions unnecessarily delay the order entry process and delay the order fulfillment process, resulting in delayed service to the customer. General date code restrictions result in further aging inventory in the supply chain by disrupting normal FIFO (First-In First-Out) consumption. Unnecessary date code restrictions also add non-value added costs to every step of the supply chain - for component manufacturers, distributors and for end customers.

Electrical Characteristic Changes/Solderability Degradation:

Due to the advances made in the engineering, design, manufacturing technology, handling, and storage, general date code restrictions are not justified. Component age does not adversely affect component performance to the manufacturers specification. The product inventoried by component manufacturers and their authorized distributors using manufacturer and ECIA guidelines for packaging and handling will meet the component manufacturers electrical and solderability specifications. Manufacturers have supporting data available and component warranties are not affected by the age of components at the time of sale.

Managing Exceptions:

Reasonable exceptions may include:

1. Application sensitivity to specific date codes where the customer's product design has been found to be intolerant of lot specific electrical characteristic variations of parts which are still operating within the manufacturer's specifications.
2. Suspected component variation issues which have been identified by a customer but not yet confirmed by the manufacturer. Customers may ask the distributor to select other date codes to support test of immediate production requirements.
3. Specific technical requirements.

Customers who request specific date code restrictions should have a technical basis for the restriction to help manufacturers and distributors make informed decisions on inventory management.

Electronic component manufacturers and distributors are willing to help customers manage these types of exceptions on an individual basis. However, establishing broader date code restrictions to accommodate specific technical issues truly becomes counter productive.

Customers may also encounter associated costs and shipment delays.

Recommendations:

1. The ECIA member component manufacturers and their authorized distributors recommend that general date code restrictions be eliminated from purchase order requirements for electronic components.
2. ECIA members also recommend that customers purchase electronic components from electronic component manufacturers and authorized distributors who will assure that:
 - a. Packaging, packaging shelf life, and storage requirements are understood and complied with.
 - b. Product warranties will be supported.
 - c. Product change notices are distributed and complied with – including product recalls, quality alerts, and packaging changes.
 - d. Reports of specific component issues by customers will be reported to manufacturers and suspect stock will be appropriately quarantined.
 - e. Order management processes will provide for appropriate review, quoting and conformance to customer specified date code restrictions.