



Power Your Critical Mission Today

July 22, 2020

SUBJECT: Major Changes to Element Evaluation in MIL-PRF-38534, Revision L

TO: VPT, Inc. Customers

On December 3rd, 2019, the United States of America Department of Defense released revision L of performance specification MIL-PRF-38534 (General Specification for Hybrid Microcircuits). MIL-PRF-38534 QML (Qualified Manufacturer's List) certified manufacturers were required to implement the document and process conversion measures necessary to comply with this revision by June 3rd, 2020. While changes were made to various requirements of MIL-PRF-38534, a major and potentially disruptive change was the complete update of and multiple requirements added to the element (internal component) evaluation specifications in Appendix C, specifically section C.3 and respective tables. To comply with these new requirements, VPT has made necessary changes to the way certain hybrid microcircuit products are manufactured, marked, and sold.

The updated requirements include a clause (Note in Section C.3.1) that permits elements used in compliant hybrid microcircuits with element evaluation successfully completed prior to the implementation date of Revision L to follow the element evaluation requirements in MIL-PRF-38534 at the time element evaluation was initiated. This translates to the following scenarios:

1. To manufacture, sell, and mark qualified hybrids with Class K or H, MIL-PRF-38534 certification marks, and SMD (Standard Microcircuit Drawing) numbers manufactured before June 3rd, 2020, the products would use internal components element evaluated to the requirements of MIL-PRF-38534 revision K and previous revisions.
2. To manufacture, sell, and mark qualified hybrids with Class K or H, MIL-PRF-38534 certification marks, and SMD (Standard Microcircuit Drawing) numbers manufactured after June 3rd, 2020, products may:
 - a. Either use all internal components element evaluated to the requirements of MIL-PRF-38534 revision K and previous revisions with element evaluation that was initiated prior to June 3rd, 2020 (residual elements).
 - b. Or use all internal components element evaluated to the requirements of MIL-PRF-38534 revision L (enhanced elements).

Since VPT has complete traceability to the product serial number of every element and material used in the product down to the supplier manufacturing lot number (wafer number for active components), VPT can definitively specify which products contain either residual or enhanced element evaluated components. The complexity comes in marking compliant products. Products where the elements meet MIL-PRF-38534 element evaluation requirements at the time element evaluation was initiated, are marked as Class K, Class H, etc. Customers concerned with the pedigree of the element evaluation to either Revision L (enhanced) or previous revisions (residual) will need to clearly specify their requirements to VPT when an RFQ (Request for Quote) is issued, understanding that a major increase of cost and lead time are expected for enhanced element evaluation product. Because of a limited supply of material element evaluated prior to the revision L implementation date, VPT will offer products that use all internal components element evaluated to the requirements of MIL-PRF-38534 revision K and previous revisions (residual elements) but marked as qualified hybrids with Class K or H, MIL-PRF-38534 certification marks, and SMD (Standard Microcircuit Drawing) numbers in certain products where that pedigree of material is available until August 31, 2020.

VPT understands that many customers and programs do not wish to bear the burden of increased cost and lead time, and would rather continue to receive products built with elements evaluated to the requirements of MIL-PRF-38534 revision K and previous revisions. Products manufactured with this level of component are either at a reliability level acceptable for - or previously qualified into - their program or mission. To meet this customer need VPT has created a new Class K product level which will allow pricing and lead time consistent with legacy Class K products and requirements. This product is marked with a screening code -KL1 in place of -K. These products are identical in every way with Class K products in compliance with MIL-PRF-38534 revision L except:

1. Contain elements evaluated to the requirements of MIL-PRF-38534 revision K and previous revisions.
2. Not marked with an SMD number or MIL-PRF-38534 certification mark.
3. Marked with -KL1 screening code in place of -K.

If you would like to procure any product levels highlighted herein, or if you have any questions or need more information, please contact the VPT Sales and Marketing department at vptsales@vptpower.com.

Best Regards,



Shawn D. Graham, Executive Product Assurance Manager