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## Process Change Notification

# KEMET Lead-Free Ceramic Through-Hole Capacitors

<b>Date:</b>	December 16, 2004	<b>ID Number (MMDDYY):</b> PCN-121604B-MCB
<b>Affected Products</b>	<b>Commercial</b> KEMET Aximax Conformally Coated Axial (C4xx series) and Golden Max Conformally Coated Radial (C3xx series). Note that Established Reliability and MIL equivalents are expressly omitted from this change notification and will remain unchanged.	
<b>Change</b>	<b>Commercial Ceramic Aximax C4xx and Golden Max C3xx Capacitors</b> KEMET standard manufacturing for these products will include lead-free terminations. The lead-free termination of choice provides a 100% matte tin finish consistent with other KEMET lead-free products lines and the overall component industry direction.	
<b>Justification and Benefits</b>	<p>The primary justification is concern for the environment and the opportunity to make these products available in RoHS compliant format. Additionally, KEMET has qualified a design of these products that also eliminates the use of lead-bearing solder to make the internal termination connection and a halogen free epoxy. The epoxy does not contain Bromine, Chlorine, Tributyltin Oxide (TBTO), or Phosphorous. Combined with our BME conversions, this pro-active initiative positions KEMET to deliver fully RoHS compliant products to the marketplace well ahead of obsolescence of the the exemptions provided by Annex I of Directive 2002/95/EC (RoHS). The exemptions which, in addition to other areas, exempt internal lead (Pb) content, must be reviewed for removal consideration no later than February 2005. KEMET's initiative provides the customer base with an added level of security regarding continued supply as existing global environmental legislation is revised or new legislation becomes law [reference draft of Chinese RoHS policy which has no exemptions for lead (Pb) content].</p> <p>This move supports the overall KEMET strategy of total lead (Pb) elimination from all KEMET product lines. For more information regarding KEMET's remaining green initiatives, refer to the Green Product Roadmap at <a href="http://www.kemet.com">www.kemet.com</a>.</p>	
<b>Identification and Effective Dates</b>	<p>These changes are being incorporated into our standard manufacturing for commercial devices. As pre-existing inventory is depleted, customers receive the lead-free version by ordering with the standard catalog part number. Consistent with our tantalum SMD conversion, to guarantee lead-free supply in the interim, order by substituting a 'T' in the 13<sup>th</sup> position of the part number, e.g., C320C102M1R5TA.</p> <p>Product containing lead-free terminations will be identified as such at the KEMET reel level.</p> <p>For more information regarding conversion timetables of all KEMET product lines, refer to the Green Product Roadmap at <a href="http://www.kemet.com">www.kemet.com</a>.</p>	
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