News Release

For Immediate Release
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Chip Recovery ChiPR™

Solving Integrated Circuit Obsolescence Issues

Leander, TX - Increased usage of commercial integrated circuits (ICs) in long lifetime military systems (with 20-30 year life cycles), coupled with the steady decrease of commercial IC life cycles (typically 2-3 years), has caused component obsolescence to become an increasingly difficult aspect of managing production logistics and procurement for military systems. In many cases, due to component obsolescence, the required device packaging configuration (e.g., DIP, TSOP, SOIC, PLCC,PQFP, etc.), or bare die cannot be located, even though the product may be readily available in an alternate package footprint from the manufacturer or through distribution.

XTREME Semiconductor now offers a reliable, cost-effective, high or low volume ***Chip Recovery*** service to remove silicon die from any plastic or ceramic package while maintaining full die functionality. These die are then available to be used in bare die form or they can be re-assembled into any available alternate plastic or hermetic package that meets the form, fit and function of the desired obsolete semiconductor product. ***Chip Recovery*** also provides a low-cost, quick-turn source for die required for hybrid development projects where small quantities of die are required and purchasing a full wafer or multiple wafers is not cost-effective.

Chip Recovery provides a cost-effective alternative to other higher-cost solutions such as redesign or re-fabrication of the microcircuit chip to resolve Diminishing Manufacturing Sources and Material Shortage (DMSMS) issues. "Our ***Chip Recovery*** process uses chemical and mechanical processes that are no more aggressive than those used when the original die was manufactured", explains XTREME Semiconductor senior partner, Paul Hilfer.

Once the die has been successfully recovered from the package, the original gold or aluminum wires are mechanically removed just above the original gold ball or aluminum wedge bond, leaving the surface metallization of the original die, clean and undisturbed, ready for new high adhesion bonding. "The subsequent wire-bond process for the die is made to the top of the existing bond surface, rather than to the original aluminum pad interface. With proper process control, the new bond on the existing gold ball or aluminum bond adheres as well as the original bond", adds Marty Lanning, XTREME Semiconductor's other senior partner.

Die shear and bond pull results have shown that this production process is extremely robust and is statistically identical for pre and post ***Chip Recovery*** assembly processing. The ***Chip Recovery*** process provides additional assurance in knowing that only fully inspected, authentic Original Component Manufacturer (OCM) die are re-assembled into the finished product significantly reducing the risks associated with receiving counterfeit devices. "***Chip Recovery*** opens up another option in which we can assist our customers with finding reliable and cost effective solutions to solve their product obsolescence issues" adds Marty Lanning.

XTREME Semiconductor has the capability to provide high or low volume ***Chip Recovery*** with capacity exceeding 15,000 units per month allowing this process to provide reliable and cost effective solutions for solving product obsolescence issues.

XTREME Semiconductor specializes in providing solutions for customers who are experiencing problems with the procurement of hard-to-find (DMSMS), obsolete and end-of-life (EOL) semiconductor components.

For more information on XTREME Semiconductor, visit their web site: www.xtremesemi.com