

News Release

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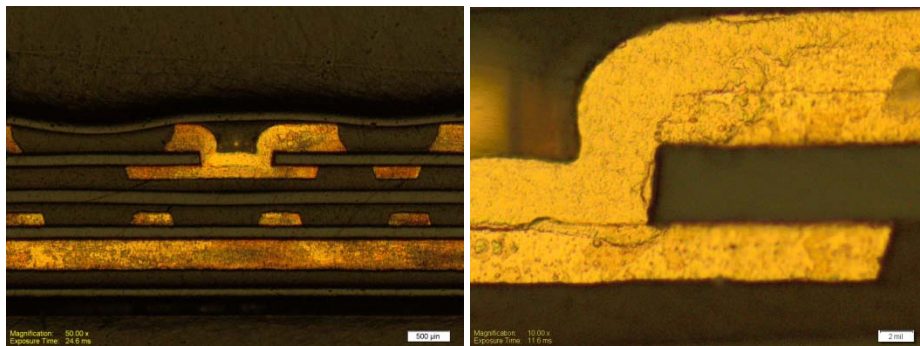
A Closer Look at Circuits, LLC

Circuits' releases microvia process to production

FOR IMMEDIATE RELEASE

Murrysville, February 15, 2010. As finished products become smaller and lighter weight along with new component packages shrinking in size, circuit density is steadily increasing. Microvia technology simply helps designers fit more connections in less space. In keeping up with the ever-shrinking real estate on flexible and rigid flex PCB designs, Circuits, LLC announced today the release of microvia processes from engineering development to production.

Flex boards lend themselves particularly well to high density interconnect technology since microvias, typically connecting one layer of the PCB to the next, can be manufactured with reasonably high yields thanks to thin dielectrics and glass-free materials. Circuits, LLC employs controlled depth laser drilling in combination with finely tuned plasma etchback and plating parameters to achieve the most reliable finished holes. The cross-section published today shows a 4.5 mil diameter hole with .9 mils of plated copper, meeting the specifications for both IPC and MIL standards.



Microvia cross-section under 100 and 500X magnification

According to Don Anderson, Circuits' Quality Assurance Manager "Quality is something we build into our products as a result of our upfront design for manufacturability review, our firm process controls and the strength of our Quality Management System (QMS)". Circuits builds boards using IPC-6013 as the default performance specification, and uses a QMS designed to meet the requirements of MIL-PRF-31032 and ISO9001:2008. Anderson added that "through-hole interconnect integrity and plating thicknesses are verified through daily cross-sectioning at Circuits".

About Circuits, LLC

Circuits, LLC is a quality-driven, customer-focused manufacturer of highly reliable built-to-spec flexible printed circuit boards serving the defense, industrial, and medical markets with consistent quality and on-time delivery unsurpassed by competitors.

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