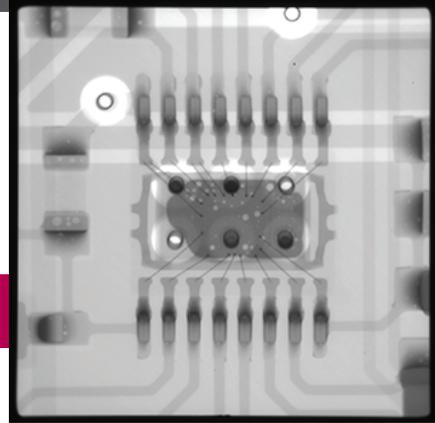


Sample destruction no longer an obstruction for CircuitWorks Australia

Providing micro and nano fabrication facilities for Australia's researchers, students and industry



The need for non-destructive analysis of miniaturized electronic components has connected South Australian manufacturer, CircuitWorks Australia, with X-ray tomography available at the Australian National Fabrication Facility - SA node.

A global distributor of high quality and reliable electrical components, CircuitWorks Australia director, Bevan Illman, made contact with ANFF – SA seeking to inspect without destroying the internal circuitry of a micro-sized printed wire assembly (PWA).

Microelectronic components can be as small as a speck of dust with intricate details embedded so Bevan was unable to simply "take a look under the hood" of the PWA.

Through his intimate knowledge in the design and manufacturing processes of these miniaturised devices Bevan knew he required a specialised X-ray machine and an experienced tomographer.

Using ANFF-SA's state-of-the-art high resolution 3D Micro-XCT equipment, a thorough investigation and analysis of the PWA was undertaken, without the need to

perform a destructive cross-section analysis. The resulting 3D images of the PWA revealed unique and valuable 'inside information' to Bevan and his manufacturing team.

"The 3D x-rays provided by ANFF-SA proved an extremely reliable method to perform a detailed evaluation of the PWAs," confirmed Bevan. "Based on ANFF-SA's comprehensive reports and imaging, our client began extensive electrical simulation and testing of the PWA," said Bevan.

"As a result, our client modified the printed circuit board in the PWA and manufacturing proceeded. Everyone is happy!"

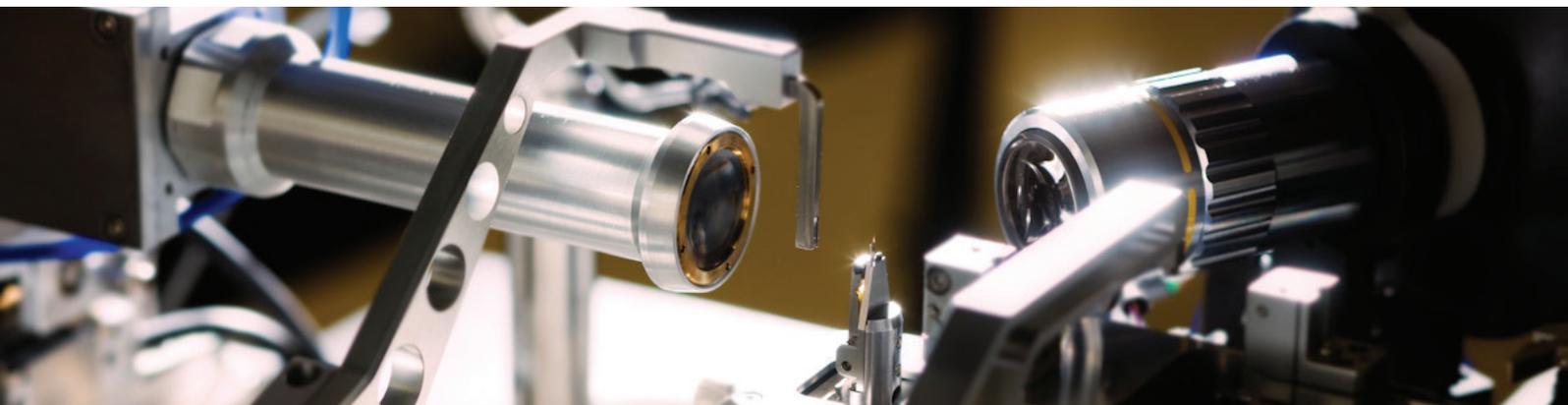
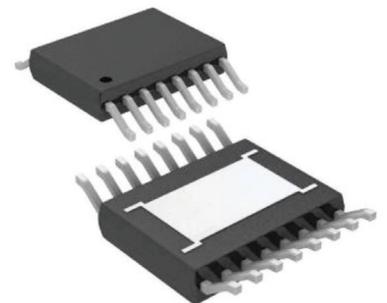
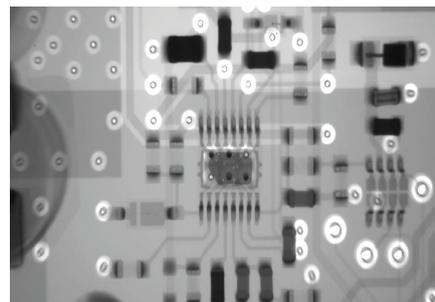
ANFF-SA Director, A/Prof Craig Priest is pleased to see a well-respected local manufacturer benefit from ANFF-SA's unique capabilities.

"Our 3D Micro-XCT offers high resolution imaging of microstructures inside tiny components." said A/Prof Priest. "It's one of many ways ANFF-SA is supporting advanced manufacturing innovation in Australia."

“ The 3D x-rays provided by ANFF-SA proved an extremely reliable method to perform a detailed evaluation of the PWAs.

**Bevan Illman,
Director** ”

- Jobs for the future  ✓
- Innovation  ✓
- Helping business  ✓
- Research & collaboration  ✓
- Incentives for investors  ✓



South Australian Node of the Australian National Fabrication Facility

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