

APPLICATION NOTES

IMPACT Solutions for Electronics Industry

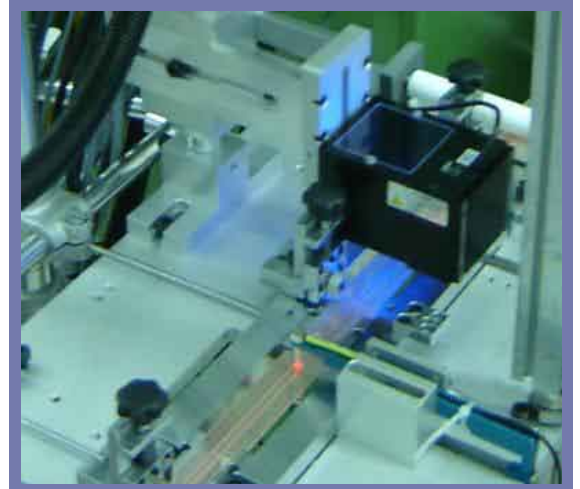
Multiple Cameras Inspecting Lead Frames

Application Description

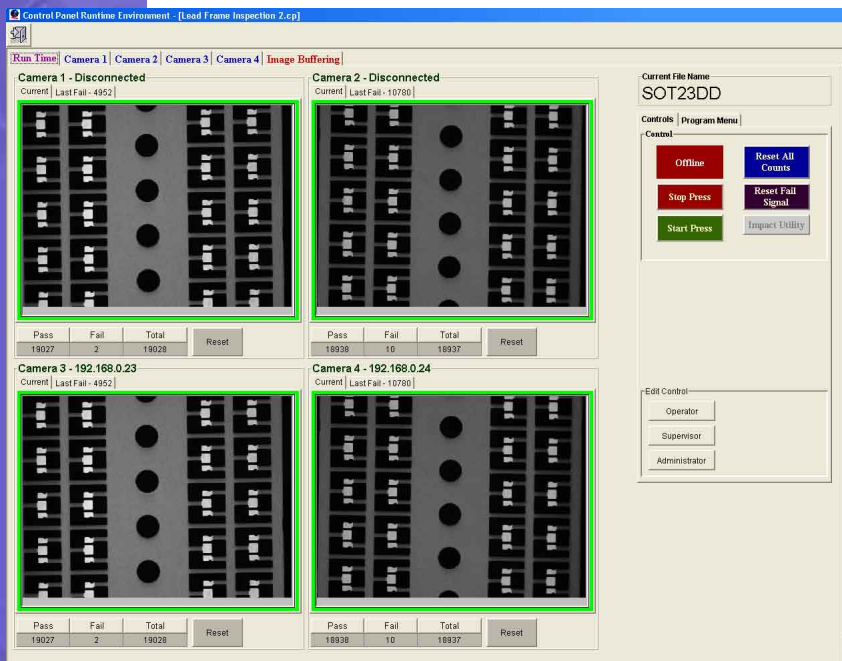
This application solution provides 100% quality inspection for plated lead frames used to make SOT devices. The solution covers a range of lead frames with widths ranging from 12 mm to 30 mm, moving at a speed of 12 metres per minute. Four IMPACT cameras are mounted on the coiler which winds up the 4 strands of the finished products into a spool. The cameras are triggered by sensors placed at the pilot hole of the lead frame. With a resolution of 23 microns per pixel, the vision system can pick up defect size as small as 80 microns. Detectable defects include missing plating, offset plating, plating contamination and lead shift. The system is designed to allow four cameras to be displayed in the control panel and also to keep the last failing image for operator verification.

Each IMPACT is configured to pass or fail the individual strand of lead frames based on criteria configured by the operators. Buzzers and light towers are wired to the fail signal to alert the operator on which strand is failing. The Cutting press is also stopped immediately if a reject is found. Inspection results are stored in a text file located in the hard disk of the vision PC for production history.

Four PPT 5200 Cameras Checking for Plating Defects



Inspection Results From All Cameras are Displayed on the Same Control Panel



Application Highlights

- Missing plating, offset plating, plating contamination and lead shift
- Covers a range of products in different widths
- Multiple camera views displayed on one control panel
- Inspection criteria for each strand of lead frame can be configured independently by operators
- Integrated buzzers, light towers and real time cutting press control provide effective failing part management
- Production history data is stored in a text file located on the vision PC