

Ultrasonic Wire Bonding Inspection System

App Note 3000

Reduction of Rework and Return Charges

100% In-Line Process Monitoring

Defect-Free Wire Bonds

High Production Rates

AC Sensor Technology

Current Sensor Technology

DC Sensor Technology

Temperature Sensor Technology

Ultrasonic Sensor Technology

Additional Applications Notes Available

Situation

One of the world's leading manufacturer of wire bonding equipment needed to assure that 100% of the gold wires bonded to gold pads for hybrid chips were free from defects.

Solution

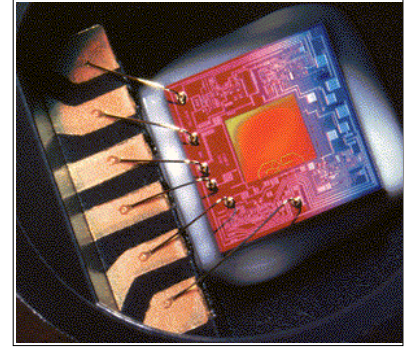
Automation Innovation designed an inspection system that interfaced with the customer's existing hardware that utilized Automation Innovation's proprietary Signature Analysis based Process Monitoring System.

The inspection system extracted analog signatures from various customer proprietary sensory systems. These signatures were obtained during the actual ultrasonic welding process for each gold wire.

The signatures were processed by the signature analysis controller to determine the quality of each weld. Defective welds were flagged for rework while good weld data was logged for service reports.

Ten (10) wire bonds were inspected each second for a cycle time of 0.10 seconds or 600 bonds per minute.

The number of customer returns based upon wire bonds were



virtually eliminated. The client realized a net return on investment in less than seven (7) months.

Other Products

- Process Monitoring
- Thread Inspection
- Press Monitoring
- Gauging Systems
- OEM Heat Treat Monitors
- Assembly/Verification Systems
- Packaging Systems
- Robotic Automation
- Engineering Services

Providing Process Monitoring Automation to Achieve Zero-Defects

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