electroglas

Pathfinder

HANDLER FOR KNOWN GOOD DIE, THIN WAFER, AND PACKAGE TEST

Put test where you need it

- **Catch defects after dicing and prevent escapes.** For the first time ever, you can accurately test known good die, wafer-level packages, and Micro Electro-Mechanical Systems (MEMS) after dicing. Advanced software algorithms correct for die placement inaccuracies resulting from singulation. The Pathfinder even allows multi-die testing scenarios.
- **Test ultra-thin wafers.** An innovative chuck design and wafer profiler allows you to safely probe wafers with a thickness of less than 85 µm on film. Typical applications include wireless communication front ends and smart cards.
- **Test packages in strip form.** Pathfinder allows you to test multiple, singulated and non-singulated package strips, saving valuable test time. Typical applications include Ball Grid Array (BGA), Micro Ball Grid Array (MBGA), and Chip Scale Packages (CSP).
- **Safely transport and test wafers and packages.** A fast, reliable film frame material-handling system allows wafers and packages to be safely transported and tested while mounted on film.
- **Increase process flexibility and reduce cost of test.** Pathfinder brings a new level of automation to the die and package test arena and multi-device parallel test capability.
- **Maximize efficiency, yield, and profitability.** Pathfinder is fully compatible with Electroglas' latest generation of process management software, which facilitates real-time data acquisition and improved process analysis and control.

Pathfinder is an advanced, fully automatic wafer, die, and package test-handling system designed to accommodate a wide variety of devices, including singulated and ultra-thin wafers, and strips mounted on film in industry-standard film frames. Offering greater performance and more flexible probing and handling, the Pathfinder is the ideal test-handling system for today's new test processes for wafer level package, known good die, ultra-thin wafers, package strips and MEMS.

Rapidly Changing Semiconductor Industry Demands Flexible Probing and Testing Platforms that Enable New Test Processes

To stay competitive and meet evolving technology requirements, semiconductor manufacturers must test after dicing, test thinner wafers, and test newly emerging technologies such as MEMS. These new manufacturing trends are creating the need for higher-performance and more flexible probing and handling equipment.

Ability to Handle and Test a Variety of Devices

Finding defects before chips are completed saves time and money. Yet traditional wafer probers can't safely handle silicon wafers thinner than 150 µm. Wafer breakage, microcracks, and chipping are major concerns. As package sizes decrease, matrix technologies, in strip form, are emerging. Traditional package handlers cannot safely and reliably handle singulated strip devices, and do not allow massive parallel test.

A New Handler Optimized for Testing on Film

Pathfinder is optimized for probing thin wafers and testing singulated devices. They are protected by being mounted on film and placed on industry-standard film frames for test, minimizing the risk of damage. The chuck surface must have a very fine finish to ensure that die are absolutely flat during test. If the wafer, or strip, has been sawn, Pathfinder's sophisticated non-linear alignment software compensates for the minor spreading of the die. When testing is finished, the frame with the wafer, or strip, attached is returned to its cassette and a wafer/strip map with defective die/devices flagged is ready to forward downstream.

Pathfinder's many automation features also simplify testing and reduce testing costs. These features include the Bottom Access Probe Card Changer (BAPCC), Automatic Probe-to-Pad Alignment (APTPA), menu-driven, downloadable product files, and streamlined setup and changeover. Customers who choose to incorporate Electroglas' networking tools on the test floor can achieve an unprecedented level of automation in any wafer and package sort environment.

The Next, Easy Step

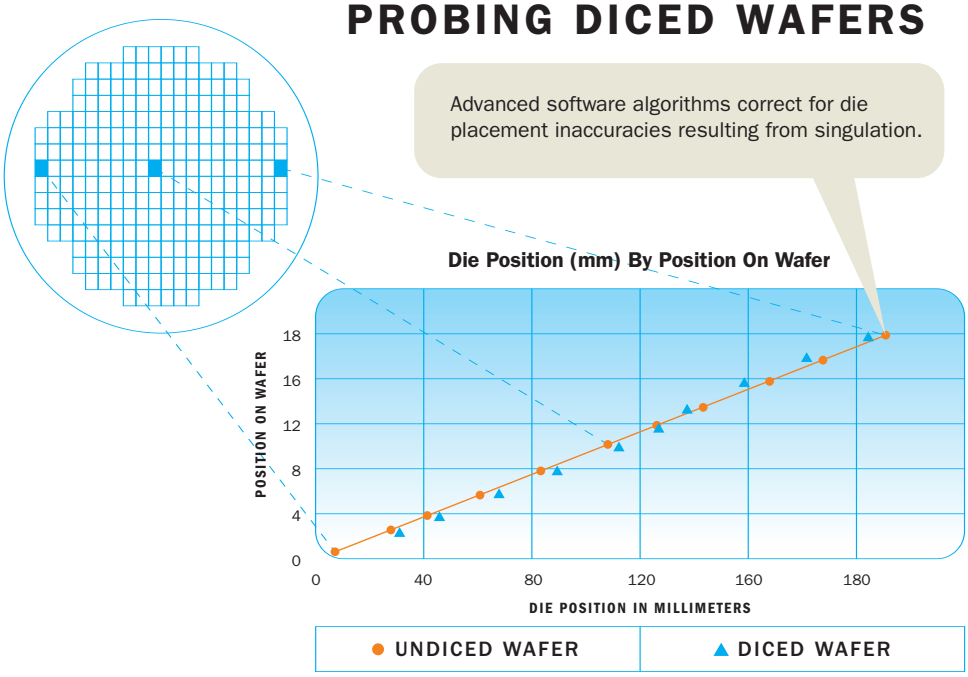
For more information on how Pathfinder can improve your test floor flexibility and productivity, contact your local Electroglas sales representative at (800) 538-3951 or visit *www.electroglas.com*.

SYSTEM INFORMATION

Flexible System Architecture

- Pentium® processor
- Microsoft Windows NT® operating system
  - Provides inherent network compatibility
- Electroglas-designed EGCommander® software
  - Modular, object-oriented system designed for balance of test environment flexibility and operational ease of use
  - Comprehensive interface and networking capabilities
- Tester interface packages for all major ATE manufacturers support RS232C, TTL (Parallel I/O), GPIB (IEEE-488), EG Enhanced, RDP
- IEEE 802.3-compliant Ethernet networking (10/100 Mbps)
- Advanced user interface offers flat-panel, 15-inch active-matrix display with touch screen as standard features

PROBING DICED WAFERS



electroglas

5729 Fontanoso Way, San Jose CA 95138
TEL: (408) 528-3000 FAX: (408) 528-3562
(800) 538-5124 www.electroglas.com

ELECTROGLAS, INNOVATIVE TOOLS FOR TEST

Electroglas is Focused on Advancing Innovative Technologies to Meet Evolving Challenges in Semiconductor Test.
Test is all about ensuring device quality and manufacturing performance. In the high-volume manufacturing environment of our customers, our innovative products provide substantial value and help lower the overall cost of test.

Electroglas delivers high-speed tools for wafer probing and package test that are reliable, accurate and production proven. Today, we are focused on overcoming our customers' evolving test challenges, partnering with them to develop solid solutions for wafer probing, prober-based test handling, and test management that will drive greater efficiencies in their wafer and device testing processes. Our customers have rapid, direct access to our worldwide team of experts for service and advice.

Wafer Probers for Any Test Environment; With Shipments of Over 15,000 Systems
Electroglas' probers have been meeting a variety of probing needs for more than 40 years. These automated systems consistently deliver accurate, reliable wafer probing for high volume, low cost manufacturing, as well as leading edge, multi-die, bumped wafer, in-line parametric test and fine-pitch probing applications.

Prober-Based Test Handlers for Today's Latest Packaging Technologies
Electroglas' test handlers are built upon proven prober technology to give chip-makers a fast, flexible handling solution for today's final test challenges. Strip test handlers deliver unprecedented throughput for testing a wide variety of popular package types in panel or leadframe format. Filmframe handlers have unique capabilities for testing Wafer Level Packages (WLP), Known Good Die (KGD) on diced wafers, Microelectro-mechanical Systems (MEMS), and ultra-thin wafers.

Test Floor Management Software for Web-Based Process Analysis and Control
Electroglas test floor management software provides a unique, networked solution to connect wafer probers and test handlers to the broader testing infrastructure, allowing the chipmaker to better manage overall test effectiveness with accurate and efficient tools for monitoring, analyzing and improving important processes.

All Products Backed by Global Service for Fastest Response
Electroglas' customer service centers are located worldwide for rapid-response field service and local spare parts support. Electroglas demonstrates its commitment to total customer satisfaction through service excellence backed by factory-based technical support, applications development and training.

5/06