

SURFACESCAN® QC-100

Sequential Electrochemical Reduction Analysis (SERA) Analyzer



For Solderability and Wire-Bondability Quality Control

The potential to solder and wire bond is a crucial factor during the manufacture of reliable semiconductor packaging components and PCBs. Every miss-bonded component falls on the reject pile, either at the manufacturers' plants or at their customers' facilities.

Conventional methods, such as ESCA/Auger, SEM, Dip and Look, XRF, etc., tend to be costly, subjective, time intensive and are generally unreliable. Using the patented method, called Sequential Electrochemical Reduction Analysis (SERA), the SURFACESCAN® QC-100 from ECI Technology quantifies the adhesion properties of the surface. Users can check if they are ready for bonding and if not, they will know why.

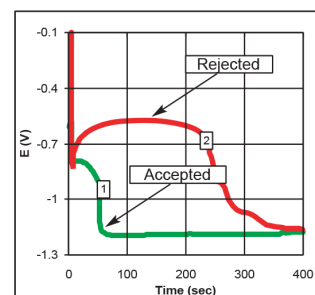
The SURFACESCAN QC-100 is a quick and low cost process and quality control tool that reveals the four significant reasons for rejects.



Key Benefits

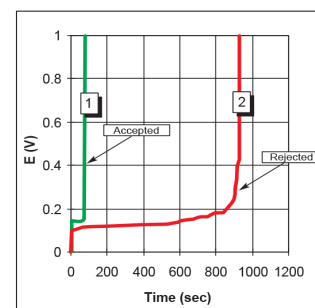
Coating Contamination

- Detects possible issues on surface mount pads (SMT), plated through holes (PTH), lead frames and components
- Non-destructive method eliminates sample preparation



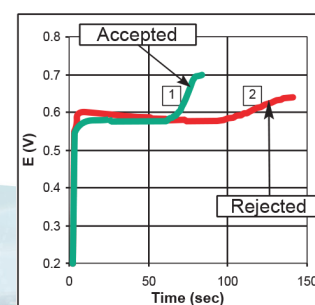
Coating Uniformity

- Exhibits coating thickness down to approximately 15Å
- Detects and helps avoid oxidation to the underlying substrate
- Immersion gold, copper oxide, tin, silver, nickel, or organic solderability preservative (OSP) coating porosity



Sn-Cu Intermetallic

- The Tin Copper intermetallics are naturally brittle, causing a fracture in the solder. The QC-100 can identify and quantify the thicknesses of both Cu_6Sn_5 and Cu_3Sn



Fast, accurate and easy to operate

Key Features

- Can analyze Ag, Cu, Co, Ni, Au, In, Sn, Bi, Pb and Sb
- Includes a corrosion-resistant test stand
- Excellent for gold, copper, immersion tin and solder
- Examines boards up to 380 mm x 609 mm (15" x 24"), bigger sizes are optional
- Maintenance is low
- A sealed reservoir is available for test solutions
- Beam alignment for SMT or PHT pad positioning on the stand
- Pre-programmed applications for numerous alternative surface finishes
- Live surface fingerprint data-driven decision assists tools for review and troubleshooting of any abnormalities

Technical Specifications

Dimensions	1330 mm (13") W x 445 (18") H x 419 mm (17") D
Data communication	Multiple communication protocols: Serial, TCP/IP, RS-232, SECS/GEM
Conforming standards	CE, NFPA

Characterization of Semiconductor Wafer Coatings

The SERA technique is an excellent and proven method for characterizing multilayered coatings used in semiconductor manufacturing, such as gold, palladium, and nickel. It is important to control the thickness of gold to provide the best adhesion with good solderability characteristics. The QC-100 can measure gold thickness, as well as detecting any coating irregularities or porosity.



Backed by ECI Technology's Global Support

Contact us for more details. Call or visit us online:

Headquarters (USA)

ECI Technology
60 Gordon Drive, Totowa
New Jersey, 07512
T: +1 (973) 890-1114
E: info@ecitechnology.com

www.ecitechnology.com

Global Offices

Japan
T: +81 45 620 4661
E: info-japan@ecitechnology.com

Korea
T: +82 31 262 8503
E: info-korea@ecitechnology.com

Taiwan
T: +886 03 573 5899
E: info-taiwan@ecitechnology.com

Distribution Partners

Cerma Precision, Inc. – Japan
T: +03 3643 2921
E: info-@cerma.co.jp

ISI – Israel
T: +972 3 9232202
E: isi@isil.co.il

TELTEC North – Germany
T: +49 7 903 91 44 0
E: info-de@teltec.com

TELTEC South – France
T: +33 467 22 40 00
E: info-fr@teltec.com

TransTechnology India Pvt. Ltd. – India

T: +91 9810449898
E: trans-tec.sg@trans-tec.com

WESI Technology – China

T: +86 21 5058 0051
E: info@wesitechnology.com

WKK DISTRIBUTION LTD.

Hong Kong
T: +852 2357 8888
E: wkk_hongkong@wkk.com.hk

WKK SINGAPORE

T: +65 6741 7322
DDI: +65 6469 6506
E: hk_yip@wks.com.sg



We Keep Your Chemistry Right™

