

## ISTFA '99: proceedings of the 25th international symposium for testing and failure analysis, 14-18 November 1999, Westin Hotel Santa Clara, California

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### Abstrak

#### Contents :

- Terahertz Imaging: A New Technique for Inspection of Dielectric Materials
- Detecting Power Shorts from Front and Backside of IC Packages Using Scanning SQUID Microscopy
- Waveform Acquisition from the Backside of Silicon Using Electro-Optic Probing
- Optical Probing of VLSI IC's from the Silicon Backside
- Picosecond Imaging Circuit Analysis of the IBM G6 Microprocessor Cache
- Electrical Probing and Surface Imaging of Deep Sub-Micron Integrated Circuits
- Comparative TDR Analysis as a Packaging FA Tool
- Light Emission Spectral Analysis: The Connection Between the Electric Field and the Spectrum
- Temperature Profile Measurement and Failure Characterization of ESD Protection Devices Using Spectroscopic Photon Emission Microscopy and Raman Spectroscopy
- Infrared Emission Spectroscopy as a Reliability Tool
- Quantitative E-beam Probe for Valid High-Speed Measurements
- Short High Voltage Stress for Design-to-Process Characterization
- Automatic TEM Sample Preparation
- Failure Analysis of Sub-Micron Semiconductor Integrated Circuit Using Backside Photon Emission Microscopy
- Sample Preparation for Backside Failure Analysis Using Infrared Photoemission Microscopy
- In-situ Use of an Optical Microscope for FIB Microsurgery of Planarized Devices
- Investigation on the Corrosion of Cu Metallization in the Focused Ion Beam System Due to a low I2 Background
- Tin Corrosion Induced by Corrosive De-Ionized (DI) Water
- Latch-Up Induced Slit Voiding in Aluminum Metal Lines
- Failure Analysis of Discolored Bondpads in Wafer Fabrication
- Optimizing Contact Resistance at a Resistor/Conductor Interface via Thin Film Microanalysis and Process Design of Experiments
- Failure Analysis of Plastic Packaged GaAs and AlGaAs/GaAs LEDs
- A Technique for Measuring Device Temperature with High Accuracy in Accelerated Operational Life Tests
- Temperature Measurement on Micromachined IR Bolometers Using an Infrared

## Microscope

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- FMECA Modeling-A New Approach
- Selective Au-Etching on Aged GaAs-Based Devices
- Nondestructive Detection of Cracks in Ceramics Using Vicinal Illumination
- Evacuated FM08 Fuses Carry a Sustained Arc in a Bus over 75 VDC
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- Reliability Test Results for Pt FIB Interconnect Structures
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- FIB Micromachining and Nano-Structure Fabrication
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- Analysis Of Ohmic Contact Metal Deposition Using FIB/SEM For A GaAs MESFET Clock Buffer IC Device
- Identification of Subtle Isb Failure Mechanisms
- Investigation of High Frequency Failures on a 0.35 μm CMOS IC
- BGA and Advanced Package Wire to Wire Bonding for Backside Emission Microscopy
- Current-Signature-Based Analysis of Complex Test Fails
- New Techniques for Logic Fault Diagnosis with a Case Study on the 440 BX Chipset
- Electromigration and Electrochemical Reaction Mixed Failure Mechanism in Gold Interconnection System
- Identification of Yield-Limiting Defects in a 0.5 Micron, Shallow Trench Isolation Technology
- Visualization of Local Gate Depletion in PMOSFETs Using Unique Backside Etching and Selective Etching Technique
- Residual Photoresist Identified as Cause for Frequency-Dependent Signal-to-Noise Failure After Autoclave Stress Testing
- From IDDQ Fault Detection to Defect Localization in Logic CMOS Integrated

## Circuits: Key Issues

- Recent Advances in Broad Ion Beam Techniques/Instrumentation for SEM
- Specimen Preparation of Semiconductors
- A New Focused-Ion-Beam Microsampling Technique for TEM Observation of Site-specific Area's
- A Combined Infrared/Visible Photoemission Microscope
- Correlation of Electronic and Thermal Properties of
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