

Real World Failure Analysis Practices

26th - 28th June 2001 Novotel Heathrow Hotel London, England

ADVANCE PROGRAMME AND REGISTRATION

FACTS

Failure Analysis and Component Test Symposium

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Scope

Failure analysis involves much more than complex IC's and expensive lab equipment. Ordinary components fail more often than complex IC's. Each integrated circuit on the circuit board is supported and protected by a complex array of diodes, transistors, capacitors, resistors and other components. In recent years, because of surface mount, shrinkage of component footprints, and thermal densities these components are beginning to fail more often and in most circuits there can be no sacrificial elements. A failed chip resistor, capacitor, diode, relay or printed circuit board is just as important to system operation as a failed mega-IC. Analysts need to know what to look for, how to look, and how to get into the protective packaging without destroying the vital evidence.

The Symposium includes a Tutorial on Real World Failure Analysis and of technical papers on failure analysis results and case studies.

This Symposium is for both the technician and engineer in the lab and their manager so they have some idea of what can be done and the basic skills and equipment that will get them started in doing real world failure analysis.

Tutorial

The Tutorial on Real World Failure Analysis covers basic techniques, instrumentation and failure mechanisms encountered in a general purpose failure analysis laboratory. This tutorial includes proven and efficient practices

for finding the failed component to using various analysis techniques to identify the failure cause. The renowned and highly experienced instructors will share their knowledge on performing complete successful failure analyses.

Case Studies

Technical papers include a wide range of topics, failure analysis results and case studies ranging from ICs, capacitors, PEM and connectors. These sessions provide excellent information on analysis results and case studies.

Registration

Advance registration is strongly recommended. The Advance Registration fee is £430 plus VAT and must be received by 7 June. The fee includes the Symposium Notes, 2 lunches, and refreshment breaks. **After 7 June** the fee is £500.

Hotel

Special rates have been arranged with the Novotel Heathrow Hotel for FACTS Delegates. The all inclusive rate for bed and breakfast for single or double occupancy is £120 per night. The bedrooms have en-suite bathroom, colour television, trouser press, hair dryer, tea and coffee making facility and direct dial telephones with voice mail. Non-smoking rooms are available. The Hotel is situated on the North side of M4 at Junction 4.

Transportation

Public transport is available from Heathrow Terminals to the Hotel. Details will be provided with the Registration Confirmation. Non-resident delegates' parking is £7.00 per day.

Organised by:

Electronic Components Institute Internationale Ltd.

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Sponsored by:

DERA - Defence Evaluation & Research Agency

FEI - Federation of the Electronics Industries



Real World Failure Analysis Practices

The Symposium is designed to train new engineers and technicians and refresh experienced personnel in current analysis practices and present some dynamic case studies of electronic failures. Subjects of the tutorial include:

Tuesday 26th June

Registration Tutorial	Starts @ 07:30 08:30 - 17:00				
Introduction Lab Equipment for General Purpose Failure Analysis Diagnostics - The Curve Tracer Resistance Measurements - Indicators for Semiconductor Failure Mechanisms Optical Microscopy Radiography - Including Stereo X-Rays! Delidding and Depotting Lunch Liquid Crystal Mapping - Primary Tool for ESD Site Location On Semiconductors Passive Devices Failure Mechanisms Mechanical & Chemical Disassembly	John Devaney Mark Gores John Devaney Michelle Harvey Mark Gores Michelle Harvey 12:30 - 13:30 Mark Gores Per Olaf Fägerholt				
Metallography of Passives and Semiconductors - Details of Materials Needed	John Devaney				
Wednesday 27th June					
Tutorial Continues	08:30 - 17:00				
ESD and EOS - There is a Difference Digital Image Capture and Reporting - Converting a Lab from Polaroid Film SEM for FA - No Sample Prep Required - Voltage Contrast - EBIC & Backscatter - EDS Wet Etches Lunch Dendrites - A Sleeping Alligator De-Processing for FA - Plasma Etching Failure Analysis: Identifying Radiation Caused Failures RGA (residual gas analysis) as Used in Failure Analysis FA for Yield Improvement of PWBs	Mark Gores John Devaney Tom Lee 12:00 - 13:00 John Devaney Mark Gores Tom Lee John Devaney				
Thursday 28th June					
Failure Analysis Case Studies	08:30 - 12:00				
FA for Yield Improvement of PWBs La Papilotte - The Best Way to Open PEMs Analysis of BGA Failures - Decapping Techniques Analysis of Ceramic Capacitors and Feed-Thru Filters Detection and Cleaning of Flux residue in Connectors Automated Sample Preparation for SEM and TEM Manufacturing Process Change on a Power FET Induced Susceptibility to ESD	Jean E. La Cave Tom Lee Mark Gores Guy Perez Oran Collins				

SPEAKERS

Oran Collins - SELA John Devaney - Hi Rel Labs Per-Olof Fägerholt - CLR Konsult Mark Gores - Hi Rel Labs Michelle Harvey - IGG Component Technology Jean La Cave - Serma Technologies Tom Lee - Varian Inc. Guy Perez - CNES

Advance Registration Form - FACTS 2001 Forename _____ Title/Position/Function _____ Company/Organisation _____ VAT Reg. No. _____ Exp. Date _____ Signature _____ Tel _____ Fax _____ E-mail _____ Add VAT to the registration fee After 7th June £430.00 f500.00 **FACTS** Handbook on Passive Components (£100) 72.25 VAT (17.5%) 87.50 Total I enclose a cheque/purchase order []: Please debit my Visa []: Mastercard []: Amex [] for £ _____ • Cheques must be drawn on a UK clearing bank and made payable to "ECII Ltd." • Bank transfers (£'s only) should be made to Natwest Bank. Sort Code: 60 21 40 Account No. 4038 6937 • There is a 10% processing fee (maximum £40) for purchase orders not accompanied by payment. ECII Ltd. reserves the right to change the program without notice. ECII Ltd., 11 Leverton Gate, Swindon, Wiltshire SN3 1ND, England or fax to: +44-1793-434123, Tel: +44-1793-434004 jim@ecii-ltd.com

Novotel London Hotel FACTS

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Name			Book Rooms Before 11 June
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Signature			Reservation Date In Out
			Cancellation Required by 18:00 day of arrival

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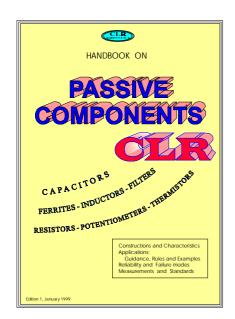
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