

FACTS

Failure Analysis and Component Test Symposium

Real World Failure Analysis Practices

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

ADVANCE PROGRAMME AND REGISTRATION

FACTS

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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.

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DERA - Defence Evaluation & Research Agency

FEI - Federation of the Electronics Industries

FACTS

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

Starts @ 07:30

Tutorial

08:30 - 17:00

Introduction

Lab Equipment for General Purpose Failure Analysis John Devaney

Diagnostics - The Curve Tracer Mark Gores

Resistance Measurements - Indicators for Semiconductor Failure Mechanisms John Devaney

Optical Microscopy Michelle Harvey

Radiography - Including Stereo X-Rays! Mark Gores

Delidding and Depotting Michelle Harvey

Lunch 12:30 - 13:30

Liquid Crystal Mapping - Primary Tool for ESD Site Location On Semiconductors Mark Gores

Passive Devices Failure Mechanisms Per Olaf Fägerholt

Mechanical & Chemical Disassembly Tom Lee

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 Tom Lee

Digital Image Capture and Reporting - Converting a Lab from Polaroid Film Mark Gores

SEM for FA - No Sample Prep Required - Voltage Contrast - EBIC & Backscatter - EDS John Devaney

Wet Etches Tom Lee

Lunch 12:00 - 13:00

Dendrites - A Sleeping Alligator John Devaney

De-Processing for FA - Plasma Etching Mark Gores

Failure Analysis: Identifying Radiation Caused Failures Tom Lee

RGA (residual gas analysis) as Used in Failure Analysis John Devaney

FA for Yield Improvement of PWBs Tom Lee

Thursday 28th June

Failure Analysis Case Studies

08:30 - 12:00

FA for Yield Improvement of PWBs Tom Lee

La Papirotte - The Best Way to Open PEMs Jean E. La Cave

Analysis of BGA Failures - Decapping Techniques Tom Lee

Analysis of Ceramic Capacitors and Feed-Thru Filters Mark Gores

Detection and Cleaning of Flux residue in Connectors Guy Perez

Automated Sample Preparation for SEM and TEM Oran Collins

Manufacturing Process Change on a Power FET Induced Susceptibility to ESD John Devaney

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

Last Name _____ Forename _____

Title/Position/Function _____

Company/Organisation _____

Address _____

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Add VAT to the registration fee

After 7th June

FACTS	£430.00	£500.00
Handbook on Passive Components (£100)	_____	_____
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Novotel London Hotel

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B & B prices inclusive of VAT

Reservation Date In _____ Out _____

Cancellation Required by 18:00 day of arrival

CARTS-EUROPE 2001

15th Annual Passive Electronic Components
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15th - 19th October 2001

Radisson SAS Scandinavia Hotel, Copenhagen, Denmark

This is the premier forum for passive components

For details and registration contact:

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COMMERCIALISATION OF MILITARY AND SPACE ELECTRONICS CONFERENCE and EXHIBITION

17th - 20th September 2001
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