

PCB Design for RF Applications

Tuesday May 4, 2010

At Macquarie Graduate School of Management,
North Ryde, Sydney

The Workshop:

This one day workshop is organised by the Surface Mount & Circuit Board Association (SMCBA) and will present a practical guide to the many issues facing the modern printed wiring board designer, at a level suitable for the competent board designer facing RF design challenges.

The instructor, Andy Kowalewski, will cover some of the basic RF concepts of wavelength, frequency spectrum, modulation, power measurement and capacitance, inductance, resonance and impedance.

Typical components likely to be encountered in RF design will be reviewed, with some discussion as to their characteristics and the special care needed in their use.

The circuit board has become a critical element in the design of RF circuits and has its own special characteristics which dramatically affect the way a design will function. Issues of laminate selection, stackup planning and impedance control will be covered in depth to achieve an understanding of the problems and their solutions.

Placement and routing strategies will be discussed in detail, with reference to practical circuits and their special needs when designing for RF applications.

What You Will Learn:

- Basic RF concepts
- RF Components
- Printed Circuit Board elements
- Special problems with RF PCB design
- Solutions to RF PCB design problems

Who Should Attend: Any board designer who wants a basic understanding of some of the special issues involved in printed circuit board design for Radio Frequency (RF) applications. Please note: This course is NOT designed for experienced RF engineers or designers.

About the Instructor:

Andy Kowalewski has been a board designer for over 25 years. He has a technical background in avionics, covering HF, VHF and UHF air-ground-air and radio link communications, radar and navigational aids. His career started with tubes and currently involves state of the art miniature RF and baseband module design.

Andy was one of the first designers to be certified as a CID through the certification program of the IPC Designers Council in 1995, and is also certified as an Advanced Interconnect Designer (CID+). He is a past President of the North Texas Chapter and Past Chairman of the Designers Council Executive Board, remains a member and is a member of the Education Committee. He is a Master Instructor for the IPC qualified to teach and certify other instructors for the CID and CID+ programs, and is active in teaching the Basic and Advanced Certification workshops. He is a past member of the Editorial Review Board of Printed Circuit Design magazine and has written a number of advanced design articles for that magazine. His training workshops include PCB Design Training, RF Design, Designing with BGA Packages, Routing and Placement and he has presented at conferences in the US and Australia.



Fees:

For SMCBA Members: \$250 plus gst if registered before April 16
 \$300 plus gst if registered after April 16

Non Members: \$400 plus gst before April 16, \$450 plus gst after April 16

Multiple Registration Discount: 5% discount on registration for 2 people and 10% discount on registration for 3 or more

Registration:

Please complete the form below and return to the SMCBA by email to pollocka@smcba.asn.au or by fax to Fax Number 03 9568 0622. You will then receive an invoice for the fees.

Registrations Close: Monday April 26, 2010 (to reserve place/s please email Andrew Pollock at pollocka@smcba.asn.au)

**REGISTRATION FORM FOR: PCB DESIGN FOR RF APPLICATIONS
SYDNEY – TUESDAY MAY 4, 2010**

Name: _____

Position: _____

Company: _____

Address: _____

_____ Postcode: _____

Phone: _____ Fax: _____

Email: _____

Return by email to

pollocka@smcba.asn.au

*OR Fax Registrations to the
SMCBA:*

Fax: 03 9568 0622

Int'l: 61 3 9568 0622

Enquiries: 03 9568 0599

Date: Tuesday May 4, 2010

Time: 8.00 am for 8.30 am start to 5.30 pm

Venue: Macquarie Graduate School of Management (Woolworths Auditorium)
 99 Talavera Road, North Ryde, Sydney

Parking: Off street parking is available at the venue.

What to bring: Writing material only. All catering including lunch will be provided.

Email your registration to pollocka@smcba.asn.au
or Fax your registration to (03) 9568 0622

**UPON RECEIPT OF YOUR REGISTRATION YOU WILL BE FAXED A TAX
INVOICE REQUIRING PAYMENT WITHIN 14 DAYS.**

**IF YOUR COMPANY REQUIRES A PURCHASE ORDER NUMBER TO ACCEPT
AN INVOICE PLEASE INDICATE THIS HERE:**

YOUR ORDER NUMBER: _____

PAYMENT CAN BE MADE BY CHEQUE, EFT OR CREDIT CARD PAYMENT BY VISA,
MASTERCARD OR AMEX. DETAILS WILL BE ON THE TAX INVOICE.