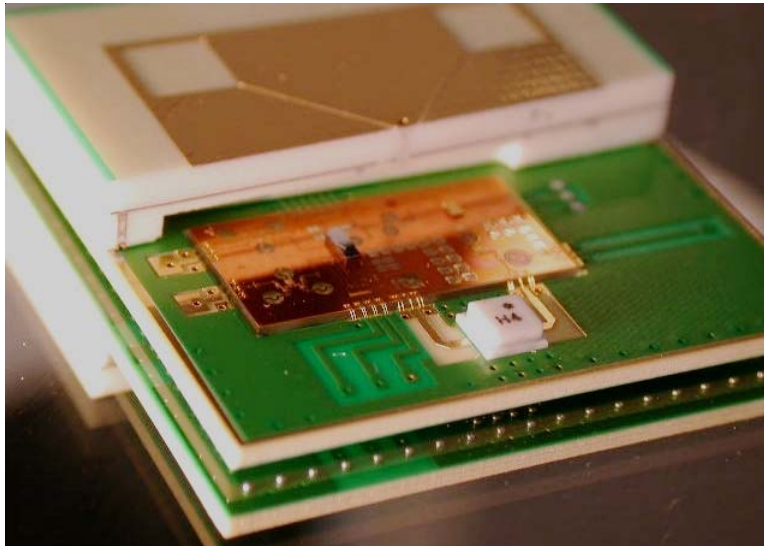


ADVANCE PROGRAM AND REGISTRATION ON-LINE: WWW.IMAPS.ORG/PASSIVES

IMAPS Advanced Technology Workshop on **Integrated/Embedded Passives**

**SAN JOSE CONVENTION CENTER/FAIRMONT HOTEL
SAN JOSE, CALIFORNIA - USA
NOVEMBER 15 - 16, 2007**

RF Section of a WLAN Receiver - 5.2 GHz



Courtesy of 

General Chair:

Dr. Timothy Lenihan
TechSearch International
P: 303-772-8416
tgl2000phd@aol.com

Technical Program Chair:

Dr. Eric Beyne
IMEC
P: +32-16-28-1261
beyne@imec.be



Sponsored by:

The International Microelectronics And Packaging Society (IMAPS)
"Everything in electronics between the chip and the system"

Early Registration and Hotel Deadline: October 10, 2007

Workshop Overview

The Advanced Technology Workshop (ATW) on Passive Integration features the latest papers on integrating resistors, capacitors, and inductors into leading edge applications. Topics will be presented from industry leaders like AVX, DuPont, NXP Semiconductors, Oak Mitsui, Omega Technologies, Samsung and leading research institutions like Georgia Tech, Fraunhofer Institute, IMEC, University of Arkansas and others. This workshop will focus on all aspects of passive integration from basic materials to design to manufacturing to applications like SiP. In addition, passive integration technology and market trends will be covered.

Passive technologies are essential for implementing smaller, cheaper and faster products. This workshop is an opportunity for passive integration developers to interact with industry leaders who are bringing these technologies to the marketplace.

Thursday, November 15

Thursday's session will be at the San Jose Convention Center.

Registration: 11:00 am - 6:00 pm

Opening Remarks: 12:45 pm
Workshop Chairs

SESSION I: MATERIALS

1:00 pm - 6:00 pm

Chair: Daniel Amey, DuPont Electronic Technologies

Embedded Discrete High K Capacitor Characterization in LTCC
Timothy P. Mobley, Mark F. McCombs, Michael A. Skurski, K. M. Nair,
DuPont Microcircuit Materials

Filtering Capacitor with Bi-Zn-Oxide Dielectric Embedded in a
LTCC Substrate
Jean-Pierre Ganne, Michel Pate, Richard Lebourgeois, Thales Research &
Technology France; Jean-Pierre Bertinet, Eddie Leleux, Thales Microelec-
tronics; Edda Mueller, Franz Bechtold, Via-Electronic

Multilayered Composite Dielectric Thin Films on Flexible Copper
Foil for Advanced Packaging Applications
Taeyun Kim, Daniel J. Lichtenwalner, Angus I. Kingon, North Carolina State
University

Sintering LTCC with Dissimilar Dielectric Materials
Yong-Bin Sun, Eui-Jung Choi, Jun-Yong Park, Kyonggi University

Development of an Improved Process for Integrated Passive
Capacitors
Susan Jacob, Leonard W. Schaper, University of Arkansas

Break: 3:30 pm - 4:00 pm

A Low Temperature Process to Integrate High K-Low Loss
Pyrochlore Films in Organic Substrates for Thin Film RF Capacitors
P. Markondeya Raj, Kent Coulter, Jin-Hyun Hwang, Isaac Robin Abothu, Steve
Wellinghoff, Mahadevan Iyer, Rao Tummala, Georgia Institute of Technology

Low Temperature Sintering of Printed Nano-Particulate Materials for
Fabrication of Passive Electronics
James W. Sears, Michael Carter, South Dakota School of Mines & Technol-
ogy

Performance Improvements Through the Use of Embedded
Capacitors in Flip-Chip IC Packages
Daniel I. Amey, Karl Dietz, William Borland, DuPont Electronic Technolo-
gies

Antiferroelectric Thin Films for High-Energy-Density Capacitors
Do-Kyun Kwon, Beihai Ma, Manoj Narayanan, Uhtamalingam Balachandran,
Argonne National Laboratory

Friday, November 16

Friday's sessions will be at the Fairmont Hotel.

Registration: 7:00 am - 6:00 pm

Continental Breakfast: 7:00 am - 8:00 am

SESSION 2: PROCESSING

8:00 am - 10:00 am

Chair: Timothy Lenihan, TechSearch International

Embedded Thin-Film NiP Resistor Technology for PWB's Recent
Developments in Lead-Free and Microwave Applications
Bruce P. Mahler, Ohmega Technologies, Inc.

Copper Electroplating Process for Passive Si-Based System in
Package Applications
Laetitia Hamelin, Sophie Ladain, Catherine Bunel, NXP Semiconductors;
Elisabeth Dufour-Gergam, Institut d'Electronique Fondamentale, Universit 
Paris

Dielectric Properties of Liquid Crystalline Polymers and CaTiO₃-
LaAlO₃ Composites for Embedded Matching Capacitors
Jin Cheol Kim, Samsung Electro-Mechanics

PCB Screen Printing Process for Embedded Capacitors and Resistors
in RF Application
Chang-Sheng Chen, Chang-Lin Wei, Wei-Ting Chen, Cheng-Hua Tsai, In-
dustrial Technology Research Institute; Yo-Shen Lin, National Central Uni-
versity

Break: 10:00 am - 10:30 am

SESSION 3: APPLICATIONS

10:30 am - 12:30 pm

Chair: Jean-Marc Yannou, NXP Semiconductors

Embedding Technologies for Active and Passive Components
Thomas Loeher, Dionysios Manassis, Alexander Neumann, Andreas Ostmann,
Herbert Reichl, Technische Universit t Berlin

The Use of Embedded Planar Capacitors for I/O Decoupling
Daniel I. Amey, Sounak Banerji, Karl Dietz, DuPont Electronic Technologies

Resistance Behavior & Reliability of Embedded Resistor According to Temperature and Humidity

Hyung Mo Hwang, Hyunseok Choi, Yonghyun Kim, Dongchun Lee, Sidon Choi, Samsung Electronics

Use of Embedded Passives for Enhanced Performance and Integration: Case Studies

John Andresakis, Oak-Mitsui Technologies, LLC; Jun Fan, Norm Smith, NCR-Teradata; Mark Harvey, Sanmina-SCI; Yoshi Fukawa, TechDream; Dan Brandler, Bruce Mahler, Dong Nong, Ohmega Technologies

Lunch: 12:30 pm - 1:30 pm

SESSION 4: DESIGN

1:30 pm - 5:00 pm

Chair: Leonard W. Schaper, University of Arkansas

Embedded Magnetics Construction: Materials, Design and Process
Jim Quilici, Radial Electronics Inc.; Milica Markovic, Cal State University

A Design Approach for the Miniaturization of Embedded RF Filters for System-in-Package (SiP) Applications

Mohamadou Baba, Herbert Reichl, Stephan Guttowski, Fraunhofer Institute for Reliability and Microintegration (FhG-IZM)

LTCC Integration of High Valued High Q Passive Components

Eric E. Hoppenjans, William J. Chappell, Phil Fisher, Purdue University

Inter-Wafer Inductors with 3D Hyper-Integration for Power Delivery Applications

Guoyan Zhang, Jian Sun, Jian-Qiang Lu, Rensselaer Polytechnic Institute

Break: 3:30 pm - 4:00 pm

Microstrip Thin-Film MCM-D Technology as Enabling Platform for the Integration of High-Performance SiP Modules

Guillermo Posada Quijano, G. Carchon, P. Soussan, N. Pham, B. Majeed, D. Sabuncoglu, W. Ruythooren, B. Nauwelaers, W. De Raedt, E. Beyne, IMEC

Effective EMC Management of Large Size Digital Circuits and Memories Thanks to High Capacitance Density Integrated Passive Devices (IPDs)

Jean-Marc Yannou, Bill Price, Guillaume Boguszewski, Sophie Ledain, NXP Semiconductors

SESSION 5: MARKET TRENDS

5:00 pm - 6:00 pm

Chair: Eric Beyne, IMEC

Integrated Passive Components for Filter Applications

George Korony, AVX Corporation

Integrated Passives: Trends in IC Packages

E. Jan Vardaman, Timothy G. Lenihan, TechSearch International, Inc.

Wrap-up: 6:00 pm

Thursday's session will be at the San Jose Convention Center.

Friday's sessions will be at the Fairmont Hotel.

IMAPS 2007 is just around the corner...

**40th International Symposium on
Microelectronics**

San Jose Convention Center

November 11 - 15, 2007

www.imaps40th.org

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Thermal Management

San Jose, CA

September 24 - 27, 2007

www.imaps.org/thermal

Global Business Council Spring 2008

Scottsdale, AZ

March 16 - 17, 2008

www.imaps.org/gbc

Device Packaging Conference

Scottsdale, AZ

March 17 - 20, 2008

www.imaps.org/devicepackaging

Ceramic Interconnect and Ceramic Microsystems Technologies Conference

Munich, Germany

April 21 - 24, 2008

www.cicmt.org

High Temperature Electronics (HiTEC 2008)

Albuquerque, NM

May 12 - 15, 2008

www.imaps.org/hitec

REGISTRATION FORM

REGISTER ON-LINE AT WWW.IMAPS.ORG/PASSIVES

INTEGRATED/EMBEDDED PASSIVES ATW - NOVEMBER 15 - 16, 2007

Dr. Mr. Ms. Member ID# _____
First Name _____ M.I. _____ Last Name _____
Company/Affiliation _____ Job Position _____
Address _____
City _____ State _____ Zip _____ Country _____
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REGISTRATION FEES: EARLY REGISTRATION ENDS 10/10/07

WORKSHOP FEES

(On or before 10/10) (After 10/10)

Member (IMAPS) \$495 \$595
 Non-member* \$595 \$695

*Includes one-year individual membership in IMAPS

Speaker Chair Chapter Officer \$300 \$400
 Student \$175 \$275

Workshop Fees include an Abstract Book and a CD of Presentations.

CD of Presentations will be mailed 3 weeks after the event.

ADDITIONAL PURCHASES

Guest/Family Member (meals only) \$150 \$150
 CD of Presentations (Member Rate) \$200 \$200
 CD of Presentations (Non-Member Rate) \$300 \$300
 Add to Ship in the US \$7 \$7
 Add to Ship Overseas \$25 \$25

HOUSING INFORMATION: Reserve your hotel room today!
IMAPS is working with housing bureau EXPOVISION to help you reserve your hotel room fast and with ease. Make your reservation as early as possible. The IMAPS room block will sell out quickly!

Hotel Deadline to reserve your room is: October 10, 2007.
IMAPS cannot guarantee room availability or pricing after the October 10th deadline.

Room Rate: \$178 plus applicable taxes.

Book On-line: <http://hotel.imaps.org>

Book by Phone, Email or Fax:

If you prefer, you may also contact the housing bureau directly with hotel questions or to make reservations:

IMAPS 2007 Housing Office; c/o EXPOVISION

3141 Fairview Park Drive, Suite 550, Falls Church, VA 22042

PHONE: 1-866-766-0910 or 1-703-770-3919

FAX: 1-703-205-0235

E-Mail: imaps07housing@expovision.com

Host Hotel Location:

Fairmont San Jose

170 S. Market St., San Jose, CA 95113

The Fairmont Hotel will not accept direct reservations and any correspondence sent to the hotel or IMAPS directly may result in substantial delays in processing your request. All reservations are assigned on a first-come, first-served basis.

PAYMENT

Workshop Fee: \$ _____

Additional Purchases: \$ _____

Total Payment Due: \$ _____

A \$25 fee must be added to all Wire Transfers.

Enclosed is a check payable in US funds to IMAPS

Charge my fees to:

Visa MasterCard Discover Amex Diners Club

Card# _____ Exp. _____

Signature _____

Card billing address, if different from above: (required)

Mail this form with payment to: IMAPS * 611 2nd Street, NE * Washington, DC 20002-4909. For credit card transactions, register on-line: www.imaps.org; or register by phone with your credit card by calling 202-548-4001; Fax: 202-548-6115. Additional information? E-mail: IMAPS@imaps.org, or visit our web site: <http://www.imaps.org>. Cancellations will be refunded (less a \$50 processing fee) only if written notice is postmarked on or before **October 29, 2007**. No refunds will be issued after that date.

IMAPS Registration

611 2nd Street, NE

Washington, DC 20002-4909

"Return Service Requested"