Registration (Fax Reply)

To: ECPE e.V.
Att.: Ingrid Bollens

Fax: +49 (0)911 / 81 02 88 – 28

Register before **30 April 2010**

Participation fee:

- ☐ **€350.00*** for industry
- ☐ **€260.00*** for university members
  The fee includes dinner, lunch, coffee/soft drinks and a CD with the workshop presentations. A printed version of the workshop handout is available on request (€42.00).
- ☐ **€80.00*** for students (shortened seminar package)

With the confirmation of seminar registration you will receive the invoice (* plus 19% VAT).
In case of cancellation after 30 April 2010 or non-attendance 50 % of the participation fee are payable.

Three participants from each ECPE member company free of charge. Allocation in sequence of registration.

Sender:

____
title, given name, name

____
company, department

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full address

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phone, fax

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e-mail

____
date, signature

Organisational information

Organiser: ECPE e.V.
90443 Nuremberg, Germany
www.ecpe.org

Chairmen: Prof. Eckhard Wolfgang, ECPE eV
Dave Saums, DS&A LLC

Organisation: Ingrid Bollens, ECPE e.V.
+49 (0)911 / 81 02 88 – 10
ingrid.bollens@ecpe.org

Place of workshop Hotel “Arvena Park”,
Görlitzer Strasse 51,
90473 Nuremberg
Germany

Further information (hotel list and maps) will be provided after registration.

Draft Programme

ECPE European Center for Power Electronics e.V.

ECPE Workshop

Thermal Interface Materials

6 (evening) – 7 May 2010
Hotel Arvena Park
Nuremberg, Germany

Introduction

ECPE Workshop
Thermal Interface Material

6 (evening) – 7 May 2010
Nuremberg, Germany

Thermal Interface Materials (TIM) play an important role in power electronic systems. The main function of TIMs is to provide a thermal path without air gaps.
As there are many different Thermal Interface Materials in use, the workshop will start with a classification of materials and related processes. The thermal conductivity given in data sheets may be different in the real system because of the surfaces and CTEs of the adjacent materials, the clamping forces and the uniformity of thickness.
The next presentation is addressing the issue of characterization and testing of thermal interfaces.
The second day starts with **Case Studies** presented by different users. Experiences and lessons learned will be discussed.
The session **Thermal Interface Materials** shall give an idea about the technology front and an outlook what we can expect in future.
Next **TIM Reliability** will be discussed based on the physics of failure. Reliability test procedures are proposed and discussed.
In a panel discussion the attendees are invited to make comments and ask questions to the experts in the panel.
The slides shown are available on CD, and in printed form on request.

The workshop is organized by Prof. Eckhard Wolfgang (ECPE e.V.), Dave Saums DS&A LLC, Dr. Jelena Popovic, TU Delft/ECPE e.V., and Thomas Harder (ECPE e.V.). All presentations and discussions will be in English.

Programme

Thursday, 6 May 2010

17:00 **Start of Registration**
Hotel Arvena Park, Görlitzer Strasse 7, 90473 Nuremberg, Germany

17:30 **Opening, Welcome Address,**
E. Wolfgang, T. Harder, ECPE eV (D)

17:50 **Overview on Thermal Interface Materials**
D. Saums, DS&A LLC (US)

18:40 **Characterization and Testing of TIMs**
C. Lasance (NL)

19:30 **Dinner**
Hotel Arvena Park

Friday, 7 May 2010

8:30 **Opening 2nd Day**
E. Wolfgang, T. Harder, ECPE eV (D)

Case Studies

8:35 **Experiences at Schneider Electric**
P. Grbovic, Schneider Toshiba Inverter (F)

8:55 **Processing of Thermal Greases**
M. Bayer, ABB Switzerland (CH)

9:15 **Assessment TIM materials**
M. Schulz, Infineon Technologies (D)

9 :35 **Experience with TIMs in Qualification and Field Applications**
U. Scheuermann, Semikron Elektronik (D)

9 :55 **TBD**
N.N.

10:15 **Coffee break**

Programme

Thermal Interface Materials

10:45 **New Developments for a No Pump-Out High Performance Thermal Greases**
P. Hough, Lord Corp. (D)

11:15 **Printable Phase Change Compounds for Pre-Applied Substrate Designs**
W. Pohl, HALA Contec (D)

11:45 **New Developments for Dry-to-the-Touch Thermal Compounds**
V. D. Papanu, J. Ziemski, AOS Thermal Compounds (US)

12:15 **Lunch**

13:15 **Advances in Thermally Conductive Silicones for Power Electronics**
S. Teixeira, Dow Corning Electronics (B)

13:45 **TBD**
N.N.

TIM Reliability

14:15 **Reliability of High Performance Thermal Interface Materials in Electronic Assemblies**
J. Timmermann, The Bergquist Company (US)

14:55 **Short Coffee break**

15:15 **Panel discussion with workshop speakers**

16:00 **End of Workshop**