

8.30 – 9.15 Key-Note Paper for all Participants**Packaging , Integration, Thermal Management -
From the State of the Art to Future Trends**

Dr. J.A. Ferreira, Electrical Power Processing Group, ITS Faculty, TUDelft,
THE NETHERLANDS
(see introduction page 32)

9.20 – 12.40 Session PE 13 – parallel running to Session 14 and Session 15**Advanced Product Design - Part II**

Chairman: Eric Carroll, ABB Semiconductors, SWITZERLAND

**PE 13-1 MiniSKiiP II - Setting the New Benchmark for PIM in the Power Range
of 0.37 kW to 55 kW**

C. Daucher, A. Wahi, Semikron International, C. Göbl, Semikron Elektronik, GERMANY

**PE 13-2 A New Half-Bridge High Voltage Monolithic Gate Driver with Full Protection of
Power Transistors and Diagnostic Feedback**

G. Galli, International Rectifier, USA, M. Giandalia, A. Merello, International Rectifier, ITALY

**PE 13-3 The Latest High Performance and High Reliability IGBT - Technology in New
Packages with Conventional Pin Layout**

J. Yamada, Y. Kashiba, M. Nakamura, Mitsubishi Electric, JAPAN, M. Kawaguchi,
T. Shimizu, Fukuryo Semicon Engineering, JAPAN, E. Thal, Mitsubishi Electric, GERMANY

10.50 – 11.10 Coffee Break

PE 13-4 A Monolithic Electronic Ballast for Fluorescent Tubes

N. Aiello, G. Di Stefano, S. Messina, STMicroelectronics, ITALY

PE 13-5 A New IGBT Inverter Module for Very Low Power Drive Applications

M.-K. Kim, J.-B. Lee, D.-W. Chung, B.-S. Suh, Fairchild Semiconductor, KOREA

PE 13-6 Toshiba's Newest 1200V IGBT equipped with UTPT Chip Technology

S. Kurushima, T. Tsunoda, S. Umekawa, M. Tanaka, M. Kitagawa, N. Kimura, M. Oomichi,
S. Kawabata, Toshiba, JAPAN, G. Tchouangue, Toshiba Electronics, GERMANY

9.20 – 12.40 Session PE 14 – parallel running to Session 13 and Session 15**High Power Transistors - Part II**

Chairman: Franck Sarrus, Ferraz Shawmut, FRANCE

PE 14-1 Reliability Test Bench for PWM VSI Based on 600V-50V IGBT Modules

J. Vallon, F. Richardeau, Y. Cheron, LEEI Toulouse, F. Forest, J.-J. Huselstein, C. Joubert,
University Montpellier, FRANCE

**PE 14-2 Toshiba's Newest 3,3kV 1,2kA Standard IEGT Module and Remarkable
Improvements in 4,5kV IEGT Performance**

N. Yamano, N. Tsukamoto, H. Matsumura, Toshiba, JAPAN, G. Tchouangue, Toshiba
Electronics, GERMANY

PE 14-3 The Reverse Blocking IGBT for Matrix Converter

T. Naito, M. Takei, Y. Shiraishi, K. Ueno, Fuji Electric, JAPAN

10.50 – 11.10 Coffee Break

**PE 14-4 Maximising Current Rating and Transient Surge Performance on the New
Generation Product Range of Dynex Semiconductor Phase Controlled Thyristors**

A. T. Plumpton, Dynex Semiconductor, UK

PE 14-5 Repetitive Short Circuit Behaviour of Trench-/Field-Stop-IGBTs

B. Gutsmann, P. Kanschä, M. Münzer, eupec, M. Pfaffenlehner, T. Laska, Infineon
Technologies, GERMANY

PE 14-6 **The Status of Turn-Off Devices rated over 8 kV**
M. Rahimo, E. Carroll, P. Streit, U. Schlapbach, A. Kopta, ABB Semiconductor,
SWITZERLAND

9.20 – 12.10 **Session PE 15 – parallel running to Session 13 and Session 14**

Power Factor Correction

Chairman: Bruce Carsten, Bruce Carsten Associates, USA

PE 15-1 **High Efficient PFC-Stage without Input Rectification**
M. Reddig, University of Applied Sciences, M. Schlenk, NMB-Minebea, GERMANY

PE 15-2 **A Robust Digital PFC Control Method Suitable for Low-Cost Microcontroller**
A. Hofmann, M. März, T. Gerhardt, Fraunhofer Institute, A. Baumüller, Baumüller Nürnberg,
E. Schimaneck, Consulting Engineers, GERMANY

PE 15-3 **Design and Implementation of a DSP Controlled Average Current Mode PFC Converter with Input Voltage Feed-Forward**
S. Choudhury, D. Figoli, Texas Instruments, USA

10.50 – 11.10 Coffee Break

PE 15-4 **Fixed-Point Micro-Controller Fuzzy Logic Control Unit Power Factor Rectifier**
G. Garcia Soto, H. Jorquera, GE Medical Systems, FRANCE

PE 15-5 **Transformer Optimization using Thermal Contour Plotting**
S. Schmidt, Magnetics, USA

12.40 – 1.40 Lunch, Restaurant CCN West 1st floor

1.40 – 2.40 **Poster/Dialogue Sessions PE D-3, CCN West 2nd floor**

Chairman: Jaques Laeuffer, PSA Peugeot Citroen, FRANCE

PE D3-1 **Methods to Facilitate the Design and Implementation of Distributed Power Supply Systems**
T. Suntio, University of Oulu, T. Tepsa, Rovaniemi Polytechnics, K. Kostov, J. Kyyrä, Helsinki
University of Technology, FINLAND

PE D3-2 **High Performance DC-DC Switcher IC with 200 V MOSFET Shrinks Converter Size and Simplifies Design**
T. Pastore, Power Integrations, GERMANY

PE D3-3 **DALI Implementation in High-Frequency Tube Lamp Ballasts with a Dedicated 8 Bit Microcontroller**
S. Ernoux, STMicroelectronics, GERMANY

PE D3-4 **Innovative MOSFET Technology Achieves Optimized Power Conversion for Notebook Converter Applications with Minimized Semiconductor Content**
J. Ejury, Infineon Technologies, GERMANY

PE D3-5 **Novel Power Controller for Electronic Ballast for HID Lamps**
S.-H. Lee, RIST, C.-H. Lee, Uiduk University, KOREA

PE D3-6 **The Light Dimmer and the Domestic Lamp. What Mode of Control could you use ?**
M. Rajabo, D. Magnon, STMicroelectronics, FRANCE

PE D3-7 **Volume Optimisation of Static Converters under Electromagnetic Compatibility, Loss and Temperature Constraints: Application to a Flyback Structure and to a 42V - 14V DC-DC Converter for the Automotive Domain**
C. Larouci, J.P. Didier, E. Grunn, ESTACA, FRANCE

- PE D3-8 **New Type Thyristors - Soft Recovery Thyristors**
E.M. Geyfman, V.V. Chibirkin, V.V. Eliseev, D.V. Pyatkin, JSC Electrovypryamitel, RUSSIA, A.Y. Baru, Y.L. Shindnes, Scientific and Production Enterprise, UKRAINE
- PE D3-9 **Suppression EMI by Using Aperiodic Control in DC-DC Converters**
B. Wang, K. El Khamlichi Drissi, Blaise Pascal University, FRANCE
- PE D3-10 **Resonant Converter suitable for a High Pressure Sodium Lamp Ballast Application**
S. Stefanescu, Technical University of Cluj-Napoca, ROMANIA
- PE D3-11 **Current Synchronized Control of Resonant Inverters: Application to X-Ray High Voltage Generator for Medical Imaging**
W. Melhem, General Electric Medical Systems, FRANCE
- PE D3-12 **Low Harmonic Three-Phase Thyristor Rectifier that Applies Controlled Current Injection**
P. Bozovic, Pupin Telecom, P. Pejovic, Faculty of Electrical Engineering, YUGOSLAVIA
- PE D3-13 **A Method of Analysis and Synthesis of the Switching Voltage Edge Aimed to reduce IPS's EMC Disturbances**
A. Longhitano, STMicroelectronics, ITALY
- PE D3-14 **MOSFET Design based on Target Application**
A. Elbanhawy, Fairchild Semiconductor, USA
- PE D3-15 **Innovative 6kV Voltage Transducer**
C. Gudel, F. Marquet, LEM, SWITZERLAND

2.40 – 5.00 **Visiting PCIM Exhibition**