

ETG-Fachbericht

81

CIPS 2000

International Conference on Integrated Power Systems

June 20-21, 2000, Bremen, Germany

The Conference is supported by:

Infineon Technologies AG

Microsystem Center Bremen (MCB)

Power Electronics Europe (PEE)

University Bremen

VDE/VDI Society Microelectronics,
Micro- and Precision Engineering (GMM)

Table of Contents

Session	Page
Session 1: SMART POWER AND HV-INTEGRATION 1	
"Single Chip Power Integration - High Voltage SOI and Low Voltage CD".....	8
<i>Akio Nakagawa, Toshiba, Japan</i>	
"Monolithic High-Voltage Integration Combining Information Technology and Power Electronics"	16
<i>Yutaka Kobayashi, Hitachi, Japan</i>	
"Smart Power Integration on SOI: Thin and Thick Film (Local) SOI Processes and Devices"	20
<i>U. Paschen, J. Weyers¹, R. van Bentum², B. Steck, F. Vogt, H. Vogt, FhG IMS Duisburg, ¹ELMOS Semiconductor, Dortmund, ²AMD Saxony Manufacturing Dresden, Germany</i>	
"Ldmos Safe Operating Area - System and Application Needs".....	30
<i>Phil Hower, Texas Instruments, USA</i>	
Session 2: SMART POWER AND HV-INTEGRATION 2	
"Smart IGBT for Automotive Ignition Systems".....	36
<i>Tatsuhiko Fujihira, Fuji Hitachi, Japan</i>	
"High Temperature Electronics for Automotive Applications".....	46
<i>R. Constapel, J. Freytag, P. Hille, V. Lauer, W. Wondrak, DaimlerChrysler, Germany</i>	
"A Smart Connector for Vehicle Mechatronics based on a Multi Chip Power Package".....	53
<i>M. Strecker, R. E. Rutter, R. Khemis, SPS, AMP/Motorola, Germany R. Nuiten, R. Golembiewski, M. Paul, AMP, AMO/Motorola, Germany</i>	
"Opportunities for power integrated circuits in induction motor drives".....	63
<i>Richard McMahon, N. P. van der Duijn Schouten, Cambridge University, United Kingdom</i>	
"Power Conversion Processor™ Architecture and HVIC technology for AC Motor Drive".....	73
<i>Toshio Takahashi, International Rectifier, USA</i>	
Session 3: AUTOMOBILE ELECTRONICS	
"Past and Present of Automotive Power Electronics".....	82
<i>E. Schmid, D. Eimers-Klose, R. Topp, Robert Bosch, Germany</i>	
"Power Devices and Systems in Automobile".....	87
<i>Hiroshi Tadano, Toyota, Japan</i>	
"Integrated customer solutions in automotive electronics".....	93
<i>J. Massoner, Infineon Technologies, Germany</i>	

"Demands on New High Power Modules for Automotive Applications".....	101
<i>E. Schmid, D. Eimers-Klose, R. Topp, Robert Bosch, Germany</i>	
"System Integration for Automotive Electronics with Smart Power Technologies".....	107
<i>Herbert Sax, Petr Hrassky, STMicroelectronics, Germany</i>	

Session 4: POWER MODULES AND INDUSTRIAL ELECTRONICS

"Power-Electronic in "white goods" - range of application and general requirements".....	113
<i>J. Avenwedde, Miele AG, Germany</i>	
"Framework for Business Optimization in Power Electronics System Integration".....	117
<i>John B. Jacobsen, Helle Kidmose, Grundfos, Denmark</i>	
"Securing the Reliability of Power Electronics Packaging".....	125
<i>G. Lefranc, T. Licht*, G. Mitic, E. Wolfgang, Siemens AG, Germany, *eupec, Warstein, Germany</i>	
"Visions of power modules".....	134
<i>R. Sittig, TU Braunschweig, Germany</i>	
<i>T. Steiner, Siemens AG, Germany</i>	
"Requirements and System Concepts for Industrial Converters in the lower Power Range".....	140
<i>Edwin Kiel, Lenze, Germany</i>	

Session 5: MECHATRONIC-INTEGRATION OF DRIVES AND POWER ELECTRONICS

"1200V HVIC controlled ASIPIM for Low-Power Inverters".....	145
<i>S. Hatae¹, K. H. Hussein², M. Iwasaki¹, M. Honsberg³, S. Mori¹, Mitsubishi, Japan¹, Fukuryo, Japan², Mitsubishi B. V.³</i>	
"Comparison of Motor Types with Respect to System Integration".....	151
<i>Andreas Binder, TU Darmstadt, Germany</i>	
"Low Cost Brushless Drives Using Switched Reluctance and Flux Switching Motor Technology".....	161
<i>Charles Pollock, Leicester University, United Kingdom</i>	
"The New Built-In Servo-Drive "POSMO SI" - an alternative approach to Mechatronics".....	171
<i>Sebastian Raith, Siemens AG, Germany</i>	
"Line-fed motor drive based system integration - a technology on the verge of break through".....	182
<i>Ulrik Jäger, Danfoss, Denmark</i>	