

PUBLIKATIONSLISTE

Prof. Dr.-Ing. Marco Denk

2013

M. Denk; M-M. Bakran: Comparison of Counting Algorithms and Empiric Lifetime Models to Analyze the Load-Profile of an IGBT Power Module in a Hybrid Car, In: Proceedings of the 3rd International Electric Drives Production Conference (EDPC), S. 462-467, Nuremberg, 2013

2014

M. Denk; M-M. Bakran: Efficient online-algorithm for the temperature-cycle recording of an IGBT power module in a hybrid car during inverter operation, In: Proceedings of the 8th Conference on Integrated Power Systems (CIPS), S. 428-433, VDE-Verlag, Nuremberg, 2014,

M. Denk; M-M. Bakran: An IGBT Driver Concept with Integrated Real-Time Junction Temperature Measurement, In: Proceedings of the International Conference for Power Electronics (PCIM), VDE-Verlag, Nuremberg, 2014

2015

M. Denk; M-M. Bakran: Comparison of UCE- and RGi-based Junction Temperature Measurement of Multichip IGBT Power Modules, In: Proceedings of the 17th European Conference on Power Electronics and Applications (EPE), IEEE-Verlag, Genf, 2015

M. Denk; M-M. Bakran: Online Junction Temperature Cycle Recording of an IGBT Power Module in a Hybrid Car, Journal Article: Advances in Power Electronics, Article-ID: 652389, Hindawi Publishing Corporation, 16. Januar 2015

M. Denk; M-M. Bakran: Junction Temperature Measurement during Inverter Operation using a TJ-IGBT-Driver, In: Proceedings of the International Conference for Power Electronics (PCIM), VDE-Verlag, Nuremberg, 2015

2016

M. Denk; M-M. Bakran: Investigation of the Characteristic Thermal Properties of IGBT Power Modules for Robust In-situ Health Monitoring, In: Proceedings of the 18th European Conference on Power Electronics and Applications (EPE), Karlsruhe, 2016

M. Denk; M-M. Bakran: Case Sensitive Condition Monitoring of an IGBT Inverter in a Hybrid Car, In: Proceedings of the 9th Conference on Integrated Power Systems (CIPS), Nuremberg, 2016

M. Denk; M-M. Bakran: Health-Monitoring of IGBT power modules using repetitive half-sinusoidal power losses, In: Proceedings of the International Conference for Power Electronics (PCIM), Nuremberg, 2016

M. Denk; M-M. Bakran: Condition Monitoring of IGBT Power Modules by Real-Time Measurement of the IGBT Junction Temperature, In: Automotive Transmissions, HEV and EV Drives, 15th CTI Symposium, Berlin, 2016

M. Denk: In-Situ-Zustandsüberwachung von IGBT Leistungshalbleitern mittels Echtzeit-Sperrschichttemperaturmessung, Verlag Dr. Hut, ISBN 978-3-8439-2625-6, Bayreuth, 2016

2017

M. Denk; M-M. Bakran: Accuracy Analysis of *UCE*(on)-based Measurement of the Inverter Output Current at Higher Motor Speeds EPE, In: Proceedings of the 19th European Conference on Power Electronics and Applications (EPE), Warsaw, 2017

M. Denk; M-M. Bakran: IGBT Gate Driver with Accurate Measurement of Junction Temperature and Inverter Output Current, In: Proceedings of the International Conference for Power Electronics (PCIM), Nuremberg, 2017

M. Denk; M-M. Bakran: High Bandwidth and Minimal Invasive Current Measurement for Semiconductor Characterization, In: Current Measurement for Power Electronics Applications in Lab Scale, ECPE Workshop, Hamburg, 17-18 October 2017

M. Denk; M-M. Bakran: Gate Driver with Integrated Measurement of Junction Temperature and Inverter Output Current, In: Current Measurement for Power Electronics Applications in Lab Scale, ECPE Workshop, Hamburg, 17-18 October 2017

2018

M. Denk; M-M. Bakran: Partial Discharge Measurement in a Motor Winding fed by a SiC Inverter – How critical is high dV/dt really?, In: Proceedings of the International Conference for Power Electronics (PCIM), Nuremberg, 2018

M. Denk: Monitoring of Power Modules in EV/HEV, In: International Conference on Advanced Power Electronics for EV/HEV, 5.-7. September 2018, Munich, Germany

M. Denk; M. Lochner: New Process - Real-time Temperature Measurement on Semiconductors, ATZ elektronik worldwide 03|2018, Cover Story, Springer Vieweg, ISSN 1862-1791 70934

J. Winterhagen; M. Denk: Wie bringt man das Elektroauto auf Trab, Interview mit Dr.-Ing. Marco Denk, Frankfurter Allgemeine Sonntagszeitung, November 05, 2018, Germany

2019

S. Hain; M. Meiler; M. Denk: Evaluation of 800V Traction Inverter with SiC-MOSFET versus Si-IGBT Power Semiconductor Technology, In: Proceedings of the International Conference for Power Electronics (PCIM), Nuremberg, 2019

T. Bertelshofer; M. Denk; M-M. Bakran: Design Study and Prototype of 150 kW Inverter with Discrete SiC MOSFETs, In: Proceedings of the International Conference for Power Electronics (PCIM), Nuremberg, 2019

2021

M. Kolletzki; M. Denk; D. Anderson; L. Reißerweber; A. Stadler: Inverter Design for a Battery Cooling Compressor for 800V Electric Vehicles with Focus on Efficiency and Inverter Volume, International Conference for Power Electronics (PCIM), Nuremberg, May 2021

M. Denk; M. Kolletzki: Leistungselektronik für 800V Kältemittelverdichter – SiC-2-Level vs. Si 3-Level, ECPE Cluster Online Seminar 800V Automobil-Umrichter, Januar 2021

2022

M. Kolletzki; F. Ohl; M. Denk: Knowledge-based Engineering for System Optimization of Power Electronics including the Electric Motor Design, International Conference for Power Electronics (PCIM), Nuremberg, May 2022