





Special Issue Reprint

Thermal and Electro-thermal System Simulation

www.mdpi.com/books/reprint/1797

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ISBN 978-3-03921-736-6 (Softback) ISBN 978-3-03921-737-3 (PDF)



With increasing power levels and power densities in electronics systems, thermal issues are becoming more and more critical. The elevated temperatures result in changing electrical system parameters, changing the operation of devices, and sometimes even the destruction of devices. To prevent this, the thermal behavior has to be considered in the design phase. This can be done with thermal end electro-thermal design and simulation tools. This Special Issue of Energies, edited by two well-known experts of the field, Prof. Marta Rencz, Budapest University of Technology and Economics, and by Prof. Lorenzo Codecasa, Politecnico di Milano, collects twelve papers carefully selected for the representation of the latest results in thermal and electro-thermal system simulation. These contributions present a good survey of the latest results in one of the most topical areas in the field of electronics: The thermal and electro-thermal simulation of electronic components and systems. Several papers of this issue are extended versions of papers presented at the THERMINIC 2018 Workshop, held in Stockholm in the fall of 2018. The papers presented here deal with modeling and simulation of state-of-the-art applications that are highly critical from the thermal point of view, and around which there is great research activity in both industry and academia. Contributions covered the thermal simulation of electronic packages, electro-thermal advanced modeling in power electronics, multi-physics modeling and simulation of LEDs, and the characterization of interface materials, among other subjects.





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