1. Record Nr. UNINA9910557401503321 Autore Górecki Krzysztof Titolo Latest Advances in Electrothermal Models Pubbl/distr/stampa Basel, Switzerland, : MDPI - Multidisciplinary Digital Publishing Institute, 2021 1 electronic resource (140 p.) Descrizione fisica Soggetti History of engineering & technology Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia This book is devoted to the latest advances in the area of Sommario/riassunto electrothermal modelling of electronic components and networks. It contains eight sections by different teams of authors. These sections contain the results of: (a) electro-thermal simulations of SiC power MOSFETs using a SPICE-like simulation program; (b) modelling thermal properties of inductors taking into account the influence of the core volume on the efficiency of heat removal; (c) investigations into the problem of inserting a temperature sensor in the neighbourhood of a chip to monitor its junction temperature; (d) computations of the internal temperature of power LEDs situated in modules containing multiple-power LEDs, taking into account both self-heating in each power LED and mutual thermal couplings between each diode; (e) analyses of DC-DC converters using the electrothermal averaged model of the diode-transistor switch, including an IGBT and a rapid-switching diode; (f) electrothermal modelling of SiC power BJTs; (g) analysis of the

efficiency of selected algorithms used for solving heat transfer

test structure dedicated to heat-diffusion investigation at the

nanoscale.

problems at nanoscale; (h) analysis related to thermal simulation of the