SUSTAINABLE MATERIALS, PROCESSES AND SYSTEMS FOR ENERGY TRANSITION

MUR DM 117/VISHAY - Design criteria for Silicon and SiC power module based converters

Funded By	VISHAY SEMICONDUCTOR ITALIANA SPA [P.iva/CF:00475790010] MINISTERO DELL'UNIVERSITA' E DELLA RICERCA [P.iva/CF:97429780584] Politecnico di TORINO [P.iva/CF:00518460019]
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Context of the research activity	Evaluation of the influence on system level performance indexes of different Si and SiC based power module design choices. Parameters like power density, efficiency and value of Si and SiC power modules based converters will be measured and simulated combining different die sizes, different insulation substrates & other design choices. Major target applications are OBC, DCDC, inverters and converters feeding new energy applications. Progetto finanziato nell'ambito del PNRR – DM 117/2023 - CUP: E14D23002050004
Objectives	Progetto finanziato nell'ambito del PNRR – DM 117/2023 - CUP: E14D23002050004 Scientific Responsible: Radu Bojoi, Politecnico di Torino, radu.bojoi@polito.it Main seat to carry out the research: Politecnico di Torino/Vishay Semiconductor Italiana S.p.A., Borgaro Torinese/Vishay ALPS Laboratory, Torino
Skills and competencies for the development of the activity	Preferably, 5Y+ Technical University Degree in Electronic or Electrical Engineering, or close related areas (i.e. Mechatronics) Power Electronics converters and devices strong background Experience in design of hardware and power electronics Electronic measurement skills and electronic lab activity experience Good communication capability, spoken and written Project and Program management capability Data collection, management and analysis capabilities, including SW Fluency in English is mandatory; Italian is highly regarded