

1. Record Nr.	UNINA9910583390903321
Titolo	Wide bandgap power semiconductor packaging : materials, components, and reliability // edited by Katsuaki Suganuma
Pubbl/distr/stampa	Duxford, United Kingdom : , : Woodhead Publishing is an imprint of Elsevier, , [2018] ©2018
ISBN	0-08-102095-3 0-08-102094-5
Descrizione fisica	1 online resource (242 pages)
Collana	Woodhead Publishing Series in Electronic and Optical Materials
Disciplina	621.38152
Soggetti	Wide gap semiconductors Microelectronic packaging
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Sommario/riassunto	"Wide Bandgap Power Semiconductor Packaging: Materials, Components, and Reliability addresses the key challenges that WBG power semiconductors face during integration, including heat resistance, heat dissipation and thermal stress, noise reduction at high frequency and discrete components, and challenges in interfacing, metallization, plating, bonding and wiring. Experts on the topic present the latest research on materials, components and methods of reliability and evaluation for WBG power semiconductors and suggest solutions to pave the way for integration. As wide bandgap (WBG) power semiconductors, SiC and GaN, are the latest promising electric conversion devices because of their excellent features, such as high breakdown voltage, high frequency capability, and high heat-resistance beyond 200 C, this book is a timely resource on the topic. Examines the key challenges of wide bandgap power semiconductor packaging at various levels, including materials, components and device performance Provides the latest research on potential solutions, with an eye towards the end goal of system integration Discusses key problems, such as thermal management, noise reduction, challenges in

interconnects and substrates"--
