

1. Record Nr.	UNINA9910366583503321
Autore	Wittmann Jürgen
Titolo	Integrated High-Vin Multi-MHz Converters / / by Jürgen Wittmann
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2020
ISBN	3-030-25257-4
Edizione	[1st ed. 2020.]
Descrizione fisica	1 online resource (XX, 171 p. 93 illus., 87 illus. in color.)
Disciplina	621.3815 621.3815322
Soggetti	Electronic circuits Electronics Microelectronics Circuits and Systems Electronics and Microelectronics, Instrumentation Electronic Circuits and Devices
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Chapter 1. Introduction -- Chapter 2. Motivation for High-Vin Converters and Fundamentals -- Chapter 3. Fast-Switching High-Vin Buck Converters -- Chapter 4. Design of Fast-Switching Circuit Blocks -- Chapter 5. Efficiency and Loss Modeling of High-Vin Multi-MHz Converters -- Chapter 6. Dead Time Control -- Chapter 7. Resonant Converters -- Chapter 8. Conclusion and Outlook.
Sommario/riassunto	This book provides readers with guidelines for designing integrated multi-MHz-switching converters for input voltages/system supplies up to 50V or higher. Coverage includes converter theory, converter architectures, circuit design, efficiency, sizing of passives, technology aspects, etc. The author discusses new circuit designs, new architectures and new switching concepts, including dead-time control and soft-switching techniques that overcome current limitations of these converters. The discussion includes technology related issues and helps readers to choose the right technology for fast-switching converters. This book discusses benefits and drawbacks in terms of integration, size and cost, efficiency and complexity, and enables

readers to make trade-offs in design, given different converter parameters. Describes a study for increasing switching frequencies up to 30 MHz at input voltages up to 50V or higher in the scaling of the size of switching converter passives; Analyzes various buck converter implementations and shows that a preference due to higher efficiency depends on the operating point, on the available switch technologies, and on the implementation of the high-side supply generation; Describes an efficiency model based on a four-phase model, which enables separation of loss causes and loss locations.

2. Record Nr.	UNINA9910583330803321
Titolo	Coulson & Richardson's chemical engineering . Vol. 1B Heat and mass transfer : fundamentals and applications // Raj Chhabra, V. Shankar
Pubbl/distr/stampa	Oxford : , : Butterworth-Heinemann, , 2018
ISBN	0-08-102551-3 0-08-102550-5 9780081025505
Edizione	[7th edition.]
Descrizione fisica	1 online resource (631 pages) : illustrations
Collana	Coulson & Richardson's chemical engineering series
Altri autori (Persone)	Coulson J. M (John Metcalfe)
Disciplina	660
Soggetti	Chemical engineering Heat - Transmission Mass transfer
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references at the end of each chapters and index.
Nota di contenuto	Part 1: Heat Transfer -- Chapter 1 - Heat Transfer -- Part 2: Mass Transfer -- Chapter 2 - Mass Transfer -- Part 3: Momentum, Heat and Mass Transfer -- Chapter 3 - The Boundary Layer -- Chapter 4 - Quantitative Relations Between Transfer Processes -- Chapter 5 - Applications in Humidification and Water Cooling -- Chapter 6 - Transport Processes in Microfluidic Applications -- Appendix -- Problems -- Index.

Coulson and Richardson's Chemical Engineering has been fully revised and updated to provide practitioners with an overview of chemical engineering. Each reference book provides clear explanations of theory and thorough coverage of practical applications, supported by case studies. A worldwide team of editors and contributors have pooled their experience in adding new content and revising the old. The authoritative style of the original volumes 1 to 3 has been retained, but the content has been brought up to date and altered to be more useful to practicing engineers. This complete reference to chemical engineering will support you throughout your career, as it covers every key chemical engineering topic. Coulson and Richardson's Chemical Engineering: Volume 1B: Heat and Mass Transfer: Fundamentals and Applications, Seventh Edition, covers two of the main transport processes of interest to chemical engineers: heat transfer and mass transfer, and the relationships among them. - Covers two of the three main transport processes of interest to chemical engineers: heat transfer and mass transfer, and the relationships between them - Includes reference material converted from textbooks - Explores topics, from foundational through technical - Includes emerging applications, numerical methods, and computational tools
