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Edizione	[Second edition.]
Descrizione fisica	1 online resource (830 pages) : illustrations
Collana	Power Electronics and Applications Series
Altri autori (Persone)	YeHong
Disciplina	621.31/32
Soggetti	DC-to-DC converters
Lingua di pubblicazione	Inglese
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Livello bibliografico	Monografia
Note generali	2.3.2.5 Discontinuous Conduction Mode.
Nota di bibliografia	Includes bibliographical references at the end of each chapters and index.
Nota di contenuto	1. Introduction -- 2. Voltage-lift converters -- 3. Positive-output super-lift Luo-converters -- 4. Negative-output super-lift Luo-converters -- 5. Positive-output cascaded boost converters -- 6. Negative-output cascaded boost converters -- 7. Ultra-lift Luo-converter -- 8. Hybrid split capacitors and split inductors applied to positive-output super-lift Luo-converters -- 9. Mathematical modeling of power DC/DC converters -- 10. Multiple-quadrant operating Luo-converters -- 11. Switched-component converters -- 12. Positive-output multiple-lift push-pull switched-capacitor Luo-converters -- 13. Negative-output multiple-lift push-pull switched-capacitor Luo-converters -- 14. Multiple-quadrant soft-switching converters -- 15. Synchronous rectifier DC/DC converters -- 16. Multiple-energy-storage-element resonant power converters -- 17. II-CLL current source resonant inverter -- 18. Cascade double T-CL current source resonant inverter -- 19. Cascade reverse double T-LC resonant power converter -- 20. DC energy sources for DC/DC converters -- 20. Control circuit :EMI and application examples of DC/DC converters.
Sommario/riassunto	DC/DC conversion techniques have undergone rapid development in recent decades. With the pioneering work of authors Fang Lin Luo and Hong Ye, DC/DC converters have now been sorted into their six generations, and by a rough count, over 800 different topologies currently exist, with more being developed each year. Advanced DC/DC

Converters, Second Edition offers a concise, practical presentation of DC/DC converters, summarizes the spectrum of conversion technologies, and presents new ideas and more than 200 new topologies. Beginning with background material on DC/DC conversion, the book later discusses both voltage lift and super-lift converters. It then proceeds through each generation, including the groundbreaking sixth generation--converters developed by the authors that can be cascaded for high voltage transfer gain. This new edition updates every chapter and offers three new chapters. The introduction of the super-lift technique is an outstanding achievement in DC/DC conversion technology, and the ultra-lift technique and hybrid split-capacitor/inductor applied in Super-Lift Luo-Converters are introduced in Chapters 7 and 8. In Chapter 9, the authors have theoretically defined a new concept, Energy Factor (EF), researched the relations between EF and the mathematical modelling for power DC/DC converters, and demonstrated the modeling method for two converters. More than 320 figures, 60 tables, and 500 formulae allow the reader to more easily grasp the overall structure of advanced DC/DC converters, provide fast access to precise data, and help them to quickly determine the values of their own circuit components.
