

1. Record Nr.	UNINA9910958336903321
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Titolo	Transformer and inductor design handbook
Pubbl/distr/stampa	Boca Raton, FL : , : CRC Press, , 2017
ISBN	1-351-83355-3 1-315-21766-X 1-62870-579-5 1-4398-3688-4
Edizione	[Fourth edition.]
Descrizione fisica	1 online resource (678 p.)
Disciplina	621.31/7
Soggetti	Electronic transformers - Design and construction Electric inductors - Design and construction
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di contenuto	Front Cover; Contents; Foreword; Preface; Acknowledgements; About The Author; Symbols; Chapter 1. Fundamentals of Magnetics; Chapter 2. Magnetic Materials and Their Characteristics; Chapter 3. Magnetic Cores; Chapter 4. Window Utilization, Magnet Wire and Insulation; Chapter 5. Transformer Design Trade-Offs; Chapter 6. Transformer-Inductor Efficiency, Regulation, and Temperature Rise; Chapter 7. Power Transformer Design; Chapter 8. DC Inductor Design, Using Gapped Cores; Chapter 9. DC Inductor Design, Using Powder Cores; Chapter 10. AC Inductor Design Chapter 11. Constant Voltage Transformer (CVT)Chapter 12. Three-Phase Transformer Design; Chapter 13. Flyback Converters, Transformer Design; Chapter 14. Forward Converter, Transformer Design, and Output Inductor Design; Chapter 15. Input Filter Design; Chapter 16. Current Transformer Design; Chapter 17. Winding Capacitance and Leakage Inductance; Chapter 18. Quiet Converter Design; Chapter 19. Rotary Transformer Design; Chapter 20. Planar Transformers and Inductors; Chapter 21. Derivations for the Design Equations; Chapter 22. Autotransformer Design; Chapter 23. Common-Mode Inductor Design Chapter 24. Series Saturable Reactor DesignChapter 25. Self-

Sommario/riassunto

"With its practical approach to design, Transformer and Inductor Design Handbook, Fourth Edition distinguishes itself from other books by presenting information and guidance that is shaped primarily by the user's needs and point of view. Expanded and revised to address recent industry developments, the fourth edition of this classic reference is re-organized and improved, again serving as a constant aid for anyone seeking to apply the state of the art in transformer and inductor design. Carefully considering key factors such as overall system weight, power conversion efficiency, and cost, the author introduces his own new equation for the power handling ability of the core, intended to give engineers faster and tighter design control. The book begins by providing the basic fundamentals of magnetics, followed by an explanation of design using the Kg or Ap techniques. It also covers subjects such as laminations, tape cores, powder cores and ferrites, and iron alloys. In addition, new topics include: Autotransformer design, Common-mode inductor design, Series saturable reactor design, Self-saturating magnetic amplifier, Designing inductors for a given resistance. With the goal of making inductors that are lighter and smaller but still meet requirements, this book helps users avoid many antiquated rules of thumb, to achieve a better, more economical design. Presenting transformer design examples with step-by-step directions and numerous tables and graphics for comparison, it remains a trusted guide for the engineers, technicians, and other professionals who design and evaluate transformers and inductors. It also serves as an ideal primer for students, illustrating the field for them from the ground up."--Provided by publisher.