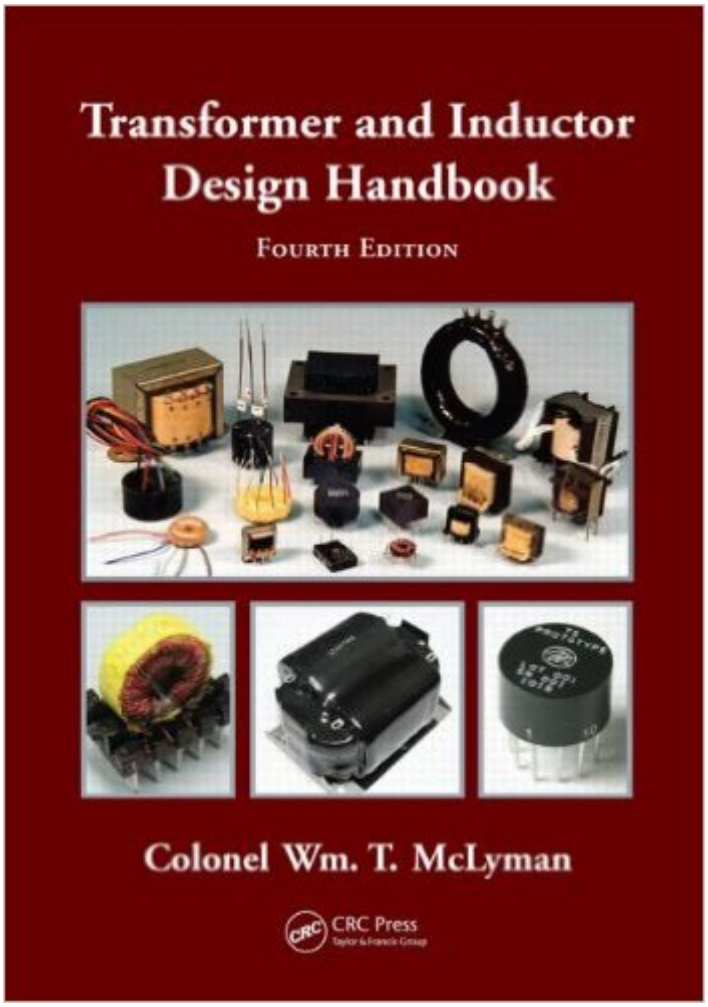
Transformer And Inductor Design Handbook, Fourth Edition (Electrical And Computer Engineering)



Synopsis

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 userâ ™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.

Book Information

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Transportation > Engineering > Electrical & Electronics > Circuits > Design

Customer Reviews

Reviewed by Dennis Feucht on April 23, 2015Format: HardcoverThis book covers topics in transformer and inductor design and how they relate to various converter circuits.Included are magnetics fundamentals, magnetic materials, catalog material on cores, various aspects oftransformer and inductor design (including three-phase transformers), transductors for flyback and forwardconverters, input filter design, current, rotary, planar, autotransformer and saturable (magnetic amplifier)transformer design, winding capacitance, leakage inductance, and a chapter titled Ã¢Â ÂœDerivations for the Design Equations.Ã¢Â Â•The book contains much practical information as a handbook but seems to belong in the 1970s. It has little to offer to a reader seeking a deeper understanding of the essential insights into magnetics and their use in converter circuits. There are brief descriptions of some useful techniquesÃ¢Â Â”for instance, how to best wind transformers in configuring the layers. It is definitely in the category of a handbook - a reference source - and not a textbook on magnetics theory.For a more details, please see my complete review in How2Power Today on the How2Power website in the .com domain.

This is a great book which summarizes all the needed knowledge to make a great inductor or transformer for the industry.

This is a great reference book for magnetic circuit design, and it looks good for beginners too. Lots of good ideas and suggestions.

I bought this for my husband. He said it is a good reference book. Since he seldom says much of anything, that is all I can tell you about it.

My son is an alternative energy engineer and he had asked for this book as a birthday gift to aid in the design of a new product.

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