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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.