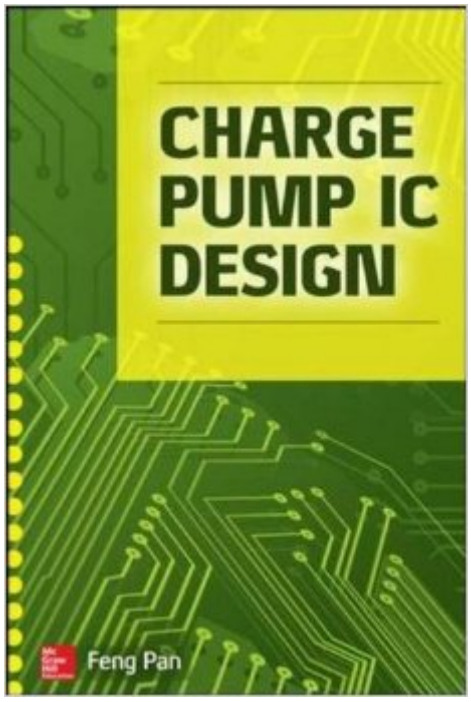
Charge Pump IC Design



Synopsis

Design state-of-the-art charge pumps Charge Pump IC Design delivers an advanced systematic approach to charge pump circuit designâ •from building blocks to final pump. The book describes how to achieve high power efficiency and low supply noise. Negative feedback control, compensation, and stability are discussed and real-world design examples with schematics are included. The proven techniques presented in this practical, cutting-edge guide will help you to provide the efficient power conversion needed for todayâ ™s portable electronic devices. Comprehensive coverage includes: Regulators and power converters Charge pump design specifications and design metrics Single stage charge pump Multi-stage charge pump Charge pump clock driver Charge pump stability analysis Charge pump design, regulation, and control by examples Charge pump applications

Book Information

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Average Customer Review: 5.0 out of 5 starsÂ Â See all reviewsÂ (2 customer reviews)

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Customer Reviews

I am extremely glad to see the second edition of the book. The first edition introduces the readers to the world of charge-pump design for high-voltage generation. Aside from an introduction, it presented new ideas such as Vt-cancellation pump and Hybrid (Analog+Digital) charge pump. This second edition provides further advancements with the merging of oversampling techniques in charge-pump design for current detection. Next, this idea is developed into a "Sigma-delta charge pump" which combines widely prevalent oversampling and noise-shaping techniques to

charge-pump design. I strongly recommend this book to students and expert designers in the Analog/Mixed-signal IC design field.

Charge pump IC design is an excellent book which not only covers all the aspects of the on-chip charge pump design, but also illustrates how to approach circuit design. The Vt cancellation through parallel structure demonstrates the need-based design approach: simple is better. And the sigma delta charge pump ADC is a great example of thinking-outside-the-box approach: digitally-assisted analog design.