Título: Integrated Power Electronic Converters And Digital Control

Autor: Emadi, Ali

Precio: $2560.00

Editorial:

Año: 2009

Tema:

Edición: 1ª

Sinopsis

ISBN: 9781439800690

Because of the demand for higher efficiencies, smaller output ripple, and smaller converter size for modern power electronic systems, integrated power electronic converters could soon replace conventional switched-mode power supplies. Synthesized integrated converters and related digital control techniques address problems related to cost, space, flexibility, energy efficiency, and voltage regulation_the key factors in digital power management and implementation.

Meeting the needs of professionals working in power electronics, as well as advanced engineering students, Integrated Power Electronic Converters and Digital Control explores the many benefits associated with integrated converters. This informative text details boost type, buck type, and buck-boost type integrated topologies, as well as other integrated structures. It discusses concepts behind their operation as well specific applications.

Topics discussed include:

Isolated DC-DC converters such as flyback, forward, push-pull, full-bridge, and half-bridge

Power factor correction and its application

Definition of the integrated switched-mode power supplies

Steady-state analysis of the boost integrated flyback rectifier energy storage converter

Dynamic analysis of the buck integrated forward converter

Digital control based on the use of digital signal processors (DSPs)

With innovations in digital control becoming ever more pervasive, system designers continue to introduce products that integrate digital power management and control integrated circuit

solutions, both hybrid and pure digital. This detailed assessment of the latest advances in the field will help anyone working in power electronics and related industries stay ahead of the curve.