



Analog Electronic Filters [Theory, Design and Synthesis /

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Springer Netherlands :

Imprint: Springer,

2012

Monografía

Filters are essential subsystems in a huge variety of electronic systems. Filter applications are innumerable; they are used for noise reduction, demodulation, signal detection, multiplexing, sampling, sound and speech processing, transmission line equalization and image processing, to name just a few. In practice, no electronic system can exist without filters. They can be found in everything from power supplies to mobile phones and hard disk drives and from loudspeakers and MP3 players to home cinema systems and broadband Internet connections. This textbook introduces basic concepts and methods and the associated mathematical and computational tools employed in electronic filter theory, synthesis and design. This book can be used as an integral part of undergraduate courses on analog electronic filters. Includes numerous, solved examples, applied examples and exercises for each chapter. Includes detailed coverage of active and passive filters in an independent but correlated manner. Emphasizes real filter design from the outset. Uses a rigorous but simplified approach to theoretical concepts and reinforces understanding through real design examples. Presents necessary theoretical background and mathematical formulations for the design of passive and active filters in a natural manner that makes the use of standard tables and nomographs unnecessary and superfluous even in the most mystifying case of elliptic filters. Uses a step-by-step presentation for all filter design procedures and demonstrates these in numerous example applications.

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Título: Analog Electronic Filters Recurso electrónico-En línea] Theory, Design and Synthesis by Hercules G. Dimopoulos

Editorial: Dordrecht Springer Netherlands Imprint: Springer 2012

Descripción física: XIII, 498p. 493 illus. digital

Tipo Audiovisual: Engineering Systems engineering Engineering Circuits and Systems Solid State Physics Spectroscopy and Microscopy

Mención de serie: Analog Circuits and Signal Processing

Documento fuente: Springer eBooks

Nota general: Engineering (Springer-11647)

Contenido: Introduction to Filter Concepts -- All-pole Approximations -- Rational Approximations -- The Elliptic (Cauer) Approximation -- Frequency Transformations -- Passive Filters: Basic Theory and Concepts -- Synthesis and Design of Passive Filters -- Active Simulation of Passive Ladder Filters -- Operational Amplifiers -- Second Order Functions and Circuits -- Some Filter Design Mathematics -- Synthesis of RLCM One-port Circuits

Restricciones de acceso: Accesible sólo para usuarios de la UPV

Tipo recurso electrónico: Recurso a texto completo

Detalles del sistema: Forma de acceso: Web

ISBN: 9789400721906

Entidades: SpringerLink (Servicio en línea)

Enlace a formato físico adicional: Printed edition 9789400721890

Punto acceso adicional serie-Título: Analog Circuits and Signal Processing

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