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Autore	Winder Steve
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Nota di contenuto	Cover; Copyright Page; Contents; Preface; Chapter 1. Introduction; Fundamentals; Analog Filters; The Path to Analog Filter Design; Digital Filters; Digital Filter Types; The Path to Digital Filter Design; Exercises; Chapter 2. Time and Frequency Response; Filter Requirements; The Time Domain; Analog Filter Normalization; Normalized Lowpass Responses; Bessel Response; Bessel Normalized Lowpass Filter Component Values; Butterworth Response; Butterworth Normalized Lowpass Component Values; Normalized Component Values for RL RS or RL RS Normalized Component Values for Source and Load Impedances within a Factor of TenChebyshev Response; Normalized Component Values; Equal Load Normalized Component Value Tables; Normalized Element Values for Filters with RS = 0 or RS = infinite; Inverse Chebyshev Response; Component Values Normalized for 1 Rad/s Stopband; Normalized 3dB Cutoff Frequencies and Passive Component Values; Cauer Response; Passive Cauer Filters; Normalized Cauer Component Values; The Cutoff Frequency; References; Exercises; Chapter 3. Poles and Zeroes; Frequency and Time Domain Relationship; The S-Plane Frequency Dependent Negative Resistance (FDNR) FiltersDenormalization of FDNR Filters; References; Exercises; Chapter 5. Highpass Filters; Passive Filters; Formulae for Passive Highpass Filter

Denormalization; Highpass Filters with Transmission Zeroes; Active Highpass Filters; First-Order Filter Section; Sallen and Key Highpass Filter; Using Lowpass Pole to Find Component Values; Using Highpass Poles to Find Component Values; Operational Amplifier Requirements; Denormalizing Sallen and Key or First-Order Designs; State Variable Highpass Filters; Cauer and Inverse Chebyshev Active Filters
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Cauer and Inverse Chebyshev Active Filters

Sommario/riassunto

Unlike most books on filters, Analog and Digital Filter Design does not start from a position of mathematical complexity. It is written to show readers how to design effective and working electronic filters. The background information and equations from the first edition have been moved into an appendix to allow easier flow of the text while still providing the information for those who are interested. The addition of questions at the end of each chapter as well as electronic simulation tools has allowed for a more practical, user-friendly text.*Provides a practical design guid