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3.2.2 I-V characteristics for passive elements; 3.2.3 Phasor analysis; 3.2.4 The generalised impedance; 3.2.5 Maximum power transfer; 3.3 Generalised frequency domain analysis; 3.3.1 The Fourier series; 3.3.2 Fourier coefficients, phasors and line spectra; 3.3.3 Electrical signal and circuit bandwidths; 3.3.4 Linear distortion; 3.3.5 Bode plots; 3.3.6 The Fourier transform; 3.3.7 Transfer function and impulse response; 3.3.8 The convolution operation; 3.4 Bibliography; 3.5 Problems

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5 Electrical two-port network analysis 5.1 Introduction; 5.2 Electrical representations; 5.2.1 Electrical impedance representation; 5.2.2 Electrical admittance representation; 5.2.3 Electrical chain representation; 5.2.4 Conversion between electrical representations; 5.2.5 Miller's theorem; 5.3 Computer-aided electrical analysis; 5.4 Bibliography; 5.5 Problems; 6 Basic electronic amplifier building blocks; 6.1 Introduction; 6.2 Modelling the amplification process; 6.3 Operational amplifiers; 6.3.1 Open-loop and feedback concepts; 6.3.2 Other examples and applications; 6.4 Active devices 6.4.1 The junction or p-n diode

Sommario/riassunto

Luis Moura and Izzat Darwazeh introduce linear circuit modelling and analysis applied to both electrical and electronic circuits, starting with DC and progressing up to RF, considering noise analysis along the way. Avoiding the tendency of current textbooks to focus either on the basic electrical circuit analysis theory (DC and low frequency AC frequency range), on RF circuit analysis theory, or on noise analysis, the authors combine these subjects into the one volume to provide a comprehensive set of the main techniques for the analysis of electric circuits in these areas.
