

1. Record Nr.	UNINA9910647383803321
Autore	Litovski Vanco B.
Titolo	Lecture Notes in Analog Electronics : Discrete and Integrated Large Signal Amplifiers // by Vano B. Litovski
Pubbl/distr/stampa	Singapore : , : Springer Nature Singapore : , : Imprint : Springer, , 2023
ISBN	9789811965289 9789811965272
Edizione	[1st ed. 2023.]
Descrizione fisica	1 online resource (374 pages)
Collana	Lecture Notes in Electrical Engineering, , 1876-1119 ; ; 958
Disciplina	621.38412
Soggetti	Power electronics Signal processing Solid state physics Power Electronics Digital and Analog Signal Processing Electronic Devices
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Introduction -- Power electronic devices -- Basic theory of large signal amplification -- Discrete and integrated audio power amplifier circuits -- Operational and transconductance amplifiers -- Analogue computation.
Sommario/riassunto	This book discusses larger signal amplifiers (denoted as PA). Large signal amplifiers are dealing with signals whose magnitude is such that the operation of the active element can no longer be considered linear. They are usually designed to get as much power gain and efficiency as possible. That is why they are often called power amplifiers. In this book, two implementations of PA are considered. First, it is of interest to obtain large signals (current or voltage) at the output of a cascade of direct coupled amplifiers. In this case, linearity, frequency response, and speed are the most important requirements. Second are real power amplifiers where the power delivered to the load is of primary interest. Of course, efficiency, linearity, and high frequency response are of interest, too. A very special attention is paid to modern power electronic components such as Power BJT, VDMOS, IGBT, SiC MOS, and

GaN HEMT. DC and switching properties of all these devices are studied in much detail. This book also includes a set of appendices which cover: solved problems, SPICE simulation results for selected set of circuits, and a short review of microelectronic technology process .

---