Fundamentals of Electronics Book 2: (Amplifiers: Analysis and Design)
Thomas Schubert & Ernest Kim

About the Book
This book, Amplifiers: Analysis and Design, is the second of four books of a larger work, Fundamentals of Electronics. It is comprised of four chapters that describe the fundamentals of amplifier performance. Beginning with a review of two-port analysis, the first chapter introduces the modeling of the response of transistors to AC signals. Basic one-transistor amplifiers are extensively discussed. The next chapter expands the discussion to multiple transistor amplifiers. The coverage of simple amplifiers is concluded with a chapter that examines power amplifiers. This discussion defines the limits of small-signal analysis and explores the realm where these simplifying assumptions are no longer valid and distortion becomes present. The final chapter concludes the book with the first of two chapters in Fundamentals of Electronics on the significant topic of feedback amplifiers.

Fundamentals of Electronics has been designed primarily for use in an upper division course in electronics for electrical engineering students. Typically such a course spans a full academic years consisting of two semesters or three quarters. As such, Amplifiers: Analysis and Design, and two other books, Electronic Devices and Circuit Applications, and Active Filters and Amplifier Frequency Response, form an appropriate body of material for such a course. Secondary applications include the use with Electronic Devices and Circuit Applications in a one-semester electronics course for engineers or as a reference for practicing engineers.

Salient Features
Offers a comprehensive yet practical exploration of basic electrical and electronic concepts, hands-on applications, and troubleshooting. Has enough equations to explain the concepts, plenty of diagrams, and lucid verbal explanations. Contains a fairly large number of solved problems and practice exercises. Written in a clear and accessible narration, focuses on fundamental principles and their applications to solving real circuit analysis problems.

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Multiple-Transistor Amplifiers
Power Amplifiers and Output Stages
Feedback Amplifier Principles

About the Author
Thomas Schubert: received BS, MS, and PhD degrees in Electrical Engineering from the University of California at Irvine (UCI). He was a member of the first engineering graduating class and the first triple-degree recipient in engineering at UCI. His doctoral work discussed the propagation of polarized light in anisotropic media. Dr. Schubert arrived at the University of San Diego in August, 1987 as one of the two founding faculty of its new Engineering Program. From 1997-2003, he led the Department as Chairman, a position that became Director of Engineering Programs during his leadership tenure. Prior to coming to USD, he was at the Space and Communications Division of Hughes Aircraft Company, the University of Portland, and Portland State University. He is a Registered Professional Engineer in the State of Oregon. In 2012, Dr. Schubert was awarded the Robert G. Quinn Award by the American Society of Engineering Education "in recognition of outstanding contributions in providing and promoting excellence in engineering experimentation and laboratory instruction."
Ernest Kim - received his B.S.E.E. from the University of Hawaii at Manoa in Honolulu, Hawaii in 1977, an M.S.E.E. in 1980 and Ph.D. in Electrical Engineering in 1987 from New Mexico State University in Las Cruces, New Mexico. His dissertation was on precision near-field exit radiation measurements from optical fibers. Dr. Kim worked as an Electrical Engineer for the University of Hawaii at the Naval Ocean Systems Center, Hawaii Labs at Kaneohe Marine Corps Air Station after graduating with his B.S.E.E. Upon completing his M.S.E.E., he was an electrical engineer with the National Bureau of Standards in Boulder, Colorado designing hardware for precision fiber optic measurements. He then entered the commercial sector as a staff engineer with Burroughs Corporation in San Diego, California developing fiber optic LAN systems. He left Burroughs for Tacan/IPITEK Corporation as Manager of Electro-Optic Systems developing fiber optic CATV hardware and systems. In 1990 he joined the faculty of the University of San Diego. He remains an active consultant in radio frequency and analog circuit design, and teaches review courses for the engineering Fundamentals Examination. Dr. Kim is a member of the IEEE, ASEE, and CSPE. He is a Licensed Professional Electrical Engineer in California.