



INTEGRATED CIRCUITS APPLICATIONS HANDBOOK

EDITED BY
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PREFACE

The *IC applications handbook* is designed for electronic technicians, technologists, engineers, scientists, and students. Theory is minimized, applications are emphasized, and the math used is essentially limited to arithmetic and elementary algebra.

Because the IC field has mushroomed into many specialties, no single individual can be an expert on all the different types of integrated circuitry available today and their applications. A distinctive feature of this handbook is that each chapter is written by an expert. The contributors are affiliated with such organizations as Motorola, Fairchild, RCA, Signetics, and Texas Instruments.

Another distinctive feature of the work is its practical orientation. Over 200 worked-out examples, accompanied by step-by-step solution procedures and numerous reference tables, are provided. For example, this approach enables the reader to calculate the fan out of a T²L gate or the output of a summing amplifier, to select a suitable IC for an FM IF strip, or to design an active low pass filter.

The first section of the handbook deals with digital ICs. Topics covered include T²L, I²L, ECL, MOS/CMOS logic families, charge coupled devices, semiconductor and bubble memories, and the microprocessor.

Linear ICs are the concern in the second section of the book. Topics considered are op amps, active filters, waveform generators, analog-to-digital and digital-to-analog converters, communications ICs, voltage regulators, interfacing circuits, and phase locked loops.

The concluding section treats thin film, thick film, and IC fabrication technologies.

I gratefully acknowledge the fine efforts and cooperation of the various contributors who helped to make this handbook a reality. Thanks also to the reviewers whose suggestions helped improve the presentation of material. Because of the broad coverage of the book, it is inevitable that some errors went undetected. I will be appreciative if any remaining errors are called to my attention.

It has been a pleasure working with a splendid staff at Wiley. Two individuals in the Engineering Technology Group deserve special acknowledgment. I am grateful to Alan Lesure, Executive Editor, for his faith and support in

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launching a series of handbooks in electrical and electronics technology, of which this is the first published volume. The assistance, cooperation, and wisdom furnished by my editor, Judy Green, helped to make the editing of this book bearable and, at times, even fun.

Arthur H. Seidman

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