

JACOB MILLMAN

**micro-
electronics**

Digital and Analog Circuits and Systems

MICROELECTRONICS

Digital and Analog
Circuits and Systems

Preface

Prologue: A Brief History of Microelectronics

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Part I Semiconductor Device Characteristics

Semiconductors

Charged Particles

Field Intensity, Potential, Energy

Free-Electron Energy

Electrons and Conductivity

The Semiconducting Properties of Silicon, Germanium, and Gallium Arsenide

Microelectronic Devices: Diodes and Transistors

Microelectronic Devices: Integrated Circuits

Microelectronic Devices: Optoelectronics

Microelectronic Devices: Sensors

Microelectronic Devices: Power Sources

Microelectronic Devices: Components

Microelectronic Devices: Applications

Microelectronic Devices: Future Developments

Microelectronic Devices: Summary



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