TEXAS INSTRUMENTS

Linear Circuits

Amplifiers, Comparators, and Special Functions

Data Book

Volume 1

1989

Linear Products

Linear Products Data Book Guide

Data Book	Contents	Document No.
● Linear Circuits Vol 1 Amplifiers, Comparators, and Special Functions	Operational Amplifiers Voltage Comparators Video Amplifiers Hall-Effect Devices Timers and Current Mirrors Magnetic-Memory Interface Frequency-to-Voltage Converters Sonar Ranging Circuits/Modules Sound Generators	SLYD003 1989
● Linear Circuits Vol 2 Data Acquisition and Conversion	A/D and D/A Converters DSP Analog Interface Analog Switches and Multiplexers Switched-Capacitor Filters	SLYD004 1989
● Linear Circuits Vol 3 Voltage Regulators and Supervisors	Supervisor Functions Series-Pass Voltage Regulators Shunt Regulators Voltage References DC-to-DC Converters PWM Controllers	SLYD005 1989
● Telecommunications Circuits	Equipment Line Interfaces Subscriber Line Interfaces Modems and Receivers/Transmitters Ringers, Detectors, Tone Encoders PCM Interface Transient Suppressors	SCTD001A 1988/89
● Optoelectronics and Image Sensors	Optocouplers CCD Image Sensors and Support Phototransistors IR-Emitting Diodes Hybrid Displays	SOYD002A 1990
● Interface Circuits	High-Voltage (Display) Drivers High-Power (Peripheral/Motor) Drivers Line Drivers, Receivers, Transceivers EIA RS-232, RS-422, RS-423, RS-485 IBM 360/370, IEEE 802.3, CCITT Military Memory Interface	SLYD002 1987
● Speech System Manuals	TSP50C4X Family	SPSS010 1990

November 1989

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Information contained in this data book supersedes all data for this technology published by TI in the United States of America before January 1989.

INTRODUCTION

Texas Instruments offers an extensive line of industry-standard integrated circuits designed for applications to sense, amplify, and condition analog or digital signals.

The technologies represented by the amplifiers, comparators, and many special functions in this book include traditional bipolar through BIDFET, BIFET, IMPACT™, LinCMOS™, and Advanced LinCMOS™ processes. The IMPACT™ oxide-isolated technology provides the linear families with improved speed and power characteristics. LinCMOS™ and Advanced LinCMOS™ technologies feature a step-function improvement in impedance, speed, power requirements, and threshold stability.

This data book (Volume 1 of 3) provides information on the following types of products:

- Operational Amplifiers
- Video Amplifiers
- Voltage Comparators
- Timers
- Disk Drive Circuits for Control, Reading, or Writing
- Hall-Effect Circuits
- Current Mirrors
- Sonar Functions
- Sound Generators

These products cover the dynamic development of Linear circuits from the classical voltage converter to low-noise quad operational amplifiers. New surface-mount packages (8 to 28 leads) include both ceramic and plastic chip-carriers, and the small-outline (D) plastic packages that optimize board density with minimum impact on power-dissipation capability. Test equipment with handlers and automated assembly strengthen the production capabilities to provide an improved-cost-performance ratio. TI continues to enhance the quality and reliability of integrated circuits by improving materials, processes, test methods, and test equipment. In addition, specifications and programs are continuously updated. Quality and performance are monitored throughout all phases of manufacturing.

The alphanumeric listing in this data book includes all devices in Volumes 1, 2, and 3. Products in this data book are shown in **bold** type. The alphanumeric index provides a method of quickly locating the correct device type in this data book. The selection guide includes a functional description of each device that provides key parameter information and packaging types. Ordering information and mechanical data are in the last section of the data-book.

While this volume offers design and specification data for linear circuit components only, complete technical data for any TI semiconductor product is available from your nearest TI Field Sales Office, local authorized TI distributor, or by writing directly to:

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We sincerely feel that the new 1989 Amplifiers and Comparators data book will be a significant addition to your library of technical literature from Texas Instruments.