



TEXAS  
INSTRUMENTS

# ***Linear Circuits***

***Voltage Regulators and Supervisors***

***Data Book***  
Volume 3

**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

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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 to provide highly-reliable power supply controllers and regulators, voltage references, and voltage converters for system operations.

TI voltage regulators and supervisory circuits represent processes from standard bipolar through BIFET<sup>†</sup> and Schottky technologies.

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

- Supervisory circuits
- Switched-capacitance voltage converters
- Shunt voltage regulators and voltage references
- Adjustable series-pass voltage regulators
- Switching power supply and pulse-width-modulated (PWM) controllers and regulators
- Fixed output series-pass voltage regulators (positive and negative)

These products provide critical functions for power conversion in analog and digital systems that:

- Utilize a wide range of voltages
- Require a constant output voltage regardless of changes in input voltage, output current, and ambient temperature
- Demand high input-output isolation where analog circuitry must be connected independent of digital ground
- Need low-voltage (battery) regulation.

New surface-mount packages (8 to 20 leads) include 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 bonders strengthens the production capabilities to provide a lower cost-to-performance ratio. TI continues to enhance 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. The selection guide includes a functional description of each device providing 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 only for voltage regulators and supervisory circuit components, 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:

Texas Instruments Incorporated  
LITERATURE RESPONSE CENTER  
P.O. Box 809066  
Dallas, Texas 75380-9066

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

<sup>†</sup>BIFET-Bipolar, double-diffused, N-channel and P-channel MOS transistors on the same chip — Patented Process