HARRIS

HI-7159

PRELIMINARY

May 1991

Microprocessor Compatible 5½ Digit A/D Converter

Features

- ±200,000 Count A/D Converter
- 2V Full Scale Reading With 10μV Resolution
- 15 Conversions Per Second in 5½ Digit Mode
- 60 Conversions Per Second in 4½ Digit Mode
- Serial or Parallel Interface Modes
- Four Selectable Baud Rates
- Differential Analog Input
- Differential Reference Input
- Digital Autozero

Applications

- Weigh Scales
- Part Counting Scales
- Laboratory Instruments
- Process Control/Monitoring
- Energy Management
- Seismic Monitoring

Description

The Harris HI-7159 is a monolithic A/D converter that uses a unique dual slope technique which allows it to resolve input changes as small as 1 part in 200,000 (10μV) without the use of critical external components. Its digital autozeroing feature virtually eliminates zero drift over temperature. The device is fabricated in Harris' proprietary low noise BiMOS process, resulting in exceptional linearity and noise performance.

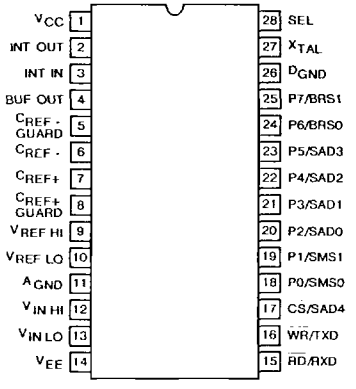
The HI-7159's resolution can be switched between a high resolution 200,000 count (5½ digit) mode, and a high speed 20,000 count (4½ digit) mode without any hardware modifications. In the 4½ digit uncompensated mode, speeds of 60 conversions per second can be achieved. The HI-7159 is designed to be easily interfaced with most microprocessors through either of its two serial and one parallel interface modes. In the serial modes, any one of four common Baud rates is available.

Ordering Information

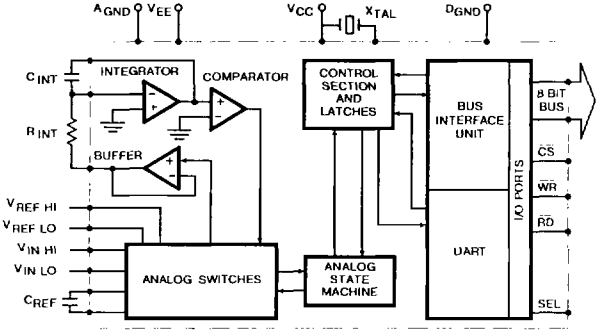
PART NUMBER	TEMPERATURE RANGE	PACKAGE
HI3-7159-5	0°C to +75°C	28 Pin Plastic DIP

Pinout

28 LEAD PLASTIC DIP
TOP VIEW



Functional Block Diagram



CAUTION: These devices are sensitive to electrostatic discharge. Proper I.C. handling procedures should be followed
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