HARRIS SEMICONDUCTOR

ICL7109

Complete Data Sheet available via web, Harris' home page: http://www.semi.harris.com or via Harris AnswerFAX, see Section 17

August 1997

12-Bit, Microprocessor-Compatible A/D Converter

Features

- **12-Bit Binary (Plus Polarity and Over-Range) Dual Slope Integrating Analog-to-Digital Converter**
- **Byte-Organized, TTL Compatible Three-State Outputs and UART Handshake Mode for Simple Parallel or Serial Interfacing to Microprocessor Systems**
- **RUN/$\overline{\text{HOLD}}$ Input and STATUS Output Can Be Used to Monitor and Control Conversion Timing**
- **True Differential Input and Differential Reference**
- **Low Noise (Typ) ..... $15\mu V_{P-P}$**
- **Input Current (Typ) 1pA**
- **Operates At Up to 30 Conversions/s**
- **On-Chip Oscillator Operates with Inexpensive 3.58MHz TV Crystal Giving 7.5 Conversions/s for 60Hz Rejection. May Also Be Used with An RC Network Oscillator for Other Clock Frequencies**

Ordering Information

PART NUMBER	TEMP. RANGE (^{o}C)	PACKAGE	PKG. NO.
ICL7109MDL	-55 to 125	40 Ld SBDIP	D40.6
ICL7109IDL	-25 to 85	40 Ld SBDIP	D40.6
ICL7109IJL	-25 to 85	40 Ld CERDIP	F40.6
ICL7109CPL	0 to 70	40 Ld PDIP	E40.6
ICL7109MDL/883B	-55 to 125	40 Ld SBDIP	D40.6
ICL7109IPL	-25 to 85	40 Ld PDIP	E40.6

Description

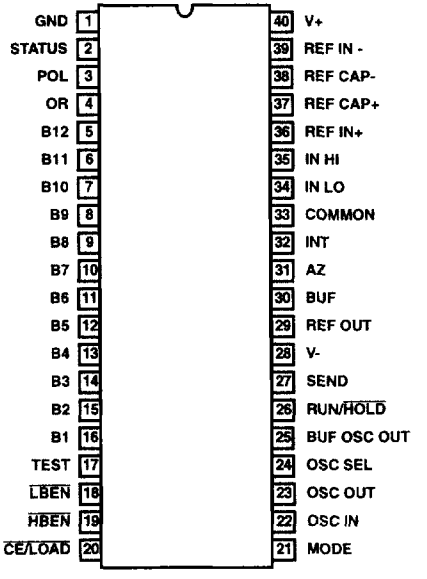
The ICL7109 is a high performance, CMOS, low power integrating A/D converter designed to easily interface with microprocessors.

The output data (12 bits, polarity and over-range) may be directly accessed under control of two byte enable inputs and a chip select input for a single parallel bus interface. A UART handshake mode is provided to allow the ICL7109 to work with industry-standard UARTs in providing serial data transmission. The RUN/$\overline{\text{HOLD}}$ input and STATUS output allow monitoring and control of conversion timing.

The ICL7109 provides the user with the high accuracy, low noise, low drift versatility and economy of the dual-slope integrating A/D converter. Features like true differential input and reference, drift of less than $1\mu V/^{o}C$, maximum input bias current of 10pA, and typical power consumption of 20mW make the ICL7109 an attractive per-channel alternative to analog multiplexing for many data acquisition applications.

Pinout

ICL7109
(CERDIP, PDIP, SBDIP)
TOP VIEW



CAUTION: These devices are sensitive to electrostatic discharge. Users should follow proper IC Handling Procedures.

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