

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

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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/HOLD Input and STATUS Output Can Be Used to Monitor and Control Conversion Timing
- True Differential Input and Differential Reference
- Low Noise (Typ) 15 μ 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

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/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 μ V/ $^{\circ}$ 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.

Ordering Information

PART NUMBER	TEMP. RANGE ($^{\circ}$ C)	PACKAGE	PKG. NO.
ICL7109MDL	-55 to 125	40 Ld SBDIP	D40.6
ICL7109IDL	-25 to 85	40 Ld SBDIP	D40.6
ICL7109JL	-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

Pinout

