



CONCORSO PUBBLICO PER TITOLI ED ESAMI PER DUE POSTI CON IL PROFILO PROFESSIONALE DI COLLABORATORE TECNICO E. R. DI VI LIVELLO PROFESSIONALE CON CONTRATTO DI LAVORO A TEMPO DETERMINATO PRESSO LA SEZIONE INFN DI PISA - BANDO PI/C6/22681

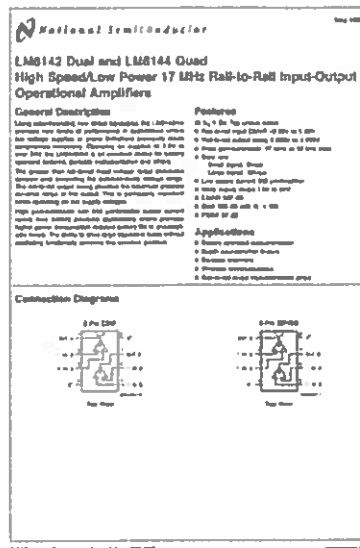
ELENCO QUESITI DELLA PROVA ORALE

1° MARZO 2022

A

- Che cosa è un ADC e pregi e difetti delle diverse configurazioni
- Descrivere un possibile sistema di misura di temperature
- Quale è un applicativo software per lo sbroglio di schede elettroniche
- Leggere e tradurre il testo (Datasheet operativo)

A



LM8142 Dual and LM8144 Quad High Speed/Low Power 17 MHz Rail-to-Rail Input-Output Operational Amplifiers

Handwritten signatures and initials:

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B

- Che cosa è un microprocessore e un possibile esempio di applicazione
- Descrivere possibili strategie per ottimizzare il rapporto segnale-rumore nell'acquisizione di un segnale in tensione
- Quale è un applicativo software per la simulazione del comportamento di un segnale in un circuito elettronico
- Leggere e tradurre (Datasheet ADC)

B

12-0000 Rev. 1.0

MAXIM
CMOS High Speed 8-Bit A/D Converter
with Track/Hold Function

General Description

The ADC0820 is a high speed, microprocessor compatible, 8 bit analog-to-digital converter which uses a half-flash technique to achieve a conversion time of 1.4 μ s. The converter has a 0V to +5V analog input range and uses a single +5V supply.

A built-in track-and-hold function is included, eliminating the need for an external track-and-hold for input slew rates up to 100MHz.

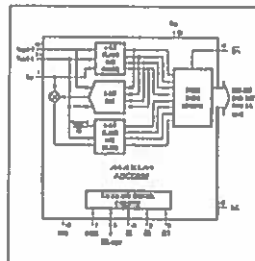
The A/D easily interfaces with microprocessors by appearing as a memory location or I/O port without the need for external interfacing logic. Data outputs are latched, three-state buffer circuitry is also direct connected to a microprocessor data bus or system I/O port. An over-flow output is also provided for cascading devices to achieve higher resolution.

MAXIM's ADC0820 is pin-compatible with National Semiconductor's ADC0820 and provides improved specifications. It is packaged in 20 pin Small Outline, DIP and CLMDIP packages.

Applications

- Digital Signal Processing
- High Speed Data Acquisition
- Telecommunications
- High Speed Servo Loops
- Audio Systems

Functional Block Diagram



Features

- Fast Conversion Time: 1.4 μ s Max.
- Built-in Track-and-Hold Function
- No Latching Codes
- No User Adjustments Required
- Single +5V Supply
- No External Clock
- Easy Interface To Microprocessors

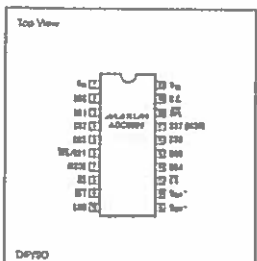
ADC0820

Ordering Information

PART	TEMP. RANGE	PIN-PACKAGE	QPL (6,88)
ADC0820D	0°C to +70°C	20 Pin DIP	1/2
ADC0820C	0°C to +70°C	20 Pin DIP	1/2
ADC0820D	0°C to +70°C	CLMDIP	1/2
ADC0820M	0°C to +70°C	20 SO	1/2
ADC0820M	0°C to +70°C	20 SO	1/2
ADC0820J	-40°C to +85°C	20 CLMDIP	1/2
ADC0820L	-40°C to +85°C	20 CLMDIP	1/2
ADC0820U	-40°C to +125°C	20 CLMDIP	1/2
ADC0820Z	-40°C to +125°C	20 CLMDIP	1/2

*Data not specified at $T_a = +75^\circ\text{C}$
*Default factory

Pin Configuration



MAXIM Maxim Integrated Products
For pricing, delivery, and ordering information, please contact Maxim/Dallas Direct at 1-800-833-4542, or visit Maxim's website at www.maxim-ic.com.

M.M. U.
[Signature]



C

- Descrivere una tipica catena d'elettronica per acquisizione di segnali da rivelatori a stato solido
- Descrivere come si può utilizzare un oscilloscopio digitale
- Quale è un applicativo software per la progettazione di un circuito elettronico
- Leggere e tradurre (Datasheet regolatore lineare)

C

19-1182 Rev. 0 1/02

MAXIM

200mA, Negative-Output, Low-Dropout Linear Regulator in SOT23

General Description

The MAX1735 negative-output, low-dropout linear regulator operates from a -2.5V to -6.5V input and delivers a guaranteed 200mA with a low 50mV dropout. The high-sourcing (±1%) output voltage is preset or can be adjusted from -1.25V to -6.5V with an external resistive voltage divider.

An internal N-channel MOSFET allows for a low 65µA quiescent current, virtually independent of the load, making this device ideal for battery-powered portable equipment, such as PDAs, mobile phones, cordless phones, and wireless data modems.

The device is available in several preset output voltage versions: -5.0V, -3.0V, and -2.5V. All versions offer a 1mA low-power shutdown mode, short-circuit protection, and thermal overload protection. The device is offered in a tiny 5-pin SOT23 package.

Applications

- Disk Drives
- Modems
- Instrumentation Amplifiers
- Laptop Computers
- Mobile and Cordless Telephones
- PCMCIA Cards
- Cellular/Fax
- Mobile Wireless Data Modems
- PDAs and PDA/PC Computers

Features

- Guaranteed 200mA Output Current
- Low 50mV Dropout Voltage at 200mA
- Low 65µA Quiescent Supply Current
- Low 1mA Current Shutdown Mode
- Stable with 1µF Cout
- PSRR >80dB at 100Hz
- Thermal Overload Protection
- Short-Circuit Protection
- 5.0V, -3.0V, or -2.5V Output Voltage or Adjustable (-1.25V to -6.5V)
- Tiny SOT23-5 Package

MAX1735

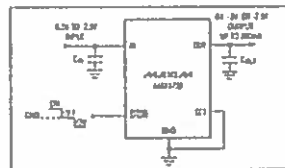
Ordering Information

PART	TEMP RANGE	PN PACKAGE
MAX1735ELK30-T	-40°C to +85°C	S SOT23-5
MAX1735ELK30-T	-40°C to +85°C	S SOT23-5
MAX1735ELK25-T	-40°C to +85°C	S SOT23-5

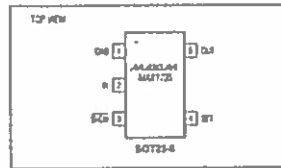
Output-Voltage Selector Guide

PART	PRESET OUTPUT VOLTAGE	SOT TYP MARK
MAX1735ELK30-T	-5.0V or -6.5V	AD02
MAX1735ELK30-T	-3.0V or -6.5V	AD0Y
MAX1735ELK25-T	-2.5V or -6.5V	AD0R

Typical Operating Circuit



Pin Configuration



MAXIM

Maxim Integrated Products 1

For pricing, delivery, and ordering information, please contact Maxim/Dallas Direct at 1-800-629-4642, or visit Maxim's website at www.maxim-ic.com.

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