

LMC6762 Dual/LMC6764 Quad MicroPower, Rail-To-Rail Input and Output CMOS Comparator

General Description

The LMC6762/4 is an ultra low power dual/quad comparator with a maximum supply current of 10 μA /comparator. It is designed to operate over a wide range of supply voltages, from 2.7V to 15V. The LMC6762/4 has guaranteed specs at 2.7V to meet the demands of 3V digital systems.

The LMC6762/4 has an input common-mode voltage range which exceeds both supplies. This is a significant advantage in low-voltage applications. The LMC6762/4 also features a push-pull output that allows direct connections to logic devices without a pull-up resistor.

A quiescent power consumption of 50 μW /amplifier (@ $V^+ = 5\text{V}$) makes the LMC6762/4 ideal for applications in portable phones and hand-held electronics. The ultra-low supply current is also independent of power supply voltage. Guaranteed operation at 2.7V and a rail-to-rail performance makes this device ideal for battery-powered applications.

Refer to the LMC6772/4 datasheet for an open-drain version of this device.

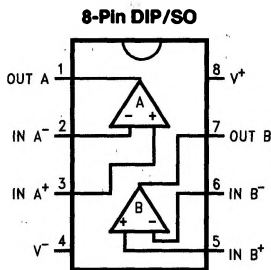
Features (Typical unless otherwise noted)

- Low power consumption (Guaranteed) $I_S = 10 \mu\text{A}/\text{comp}$
- Wide range of supply voltages 2.7V to 15V
- Rail-to-rail input common mode voltage range
- Rail-to-rail output swing (Within 100 mV of the supplies, @ $V^+ = 2.7\text{V}$, and $I_{\text{LOAD}} = 2.5 \text{ mA}$)
- Short circuit protection 40 mA
- Propagation delay (@ $V^+ = 5\text{V}$, 100 mV overdrive) 4 μs

Applications

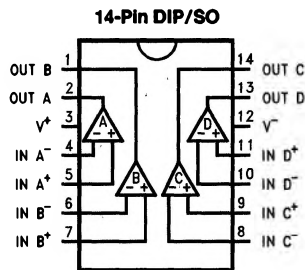
- Laptop computers
- Mobile phones
- Metering systems
- Hand-held electronics
- RC timers
- Alarm and monitoring circuits
- Window comparators, multivibrators

Connection Diagrams



Top View

TL/H/12320-1



Top View

TL/H/12320-2

Ordering Information

| Package | Temperature Range -40°C to +85°C | NSC Drawing | Transport Media |
|----------------------|--|--------------|------------------------|
| 8-Pin Molded DIP | LMC6762AIN, LMC6762BIN | N08E | Rails |
| 8-Pin Small Outline | LMC6762AIM, LMC6762BIM LMC6762AIMX, LMC6762BIMX | M08A M08A | Rails Tape and Reel |
| 14-Pin Molded DIP | LMC6764AIN, LMC6764BIN | N08E | Rails |
| 14-Pin Small Outline | LMC6764AIM, LMC6764BIM LMC6764AIMX, LMC6764BIMX | M14A M14A | Rails Tape and Reel |