

## ADVANCE INFORMATION

All information in this data sheet is preliminary and subject to change.

6/95

**EVALUATION KIT WILL BE AVAILABLE**

# MAXIM

## 325MHz High-Speed Op Amp

MAX476

### General Description

The MAX476 is a wide bandwidth, fast settling, unity-gain-stable op amp featuring low noise, low differential gain and phase errors, high slew rate, high precision, and high output current. The device architecture uses a standard voltage-feedback topology that can be configured into any desired gain setting, as with other general-purpose op amps.

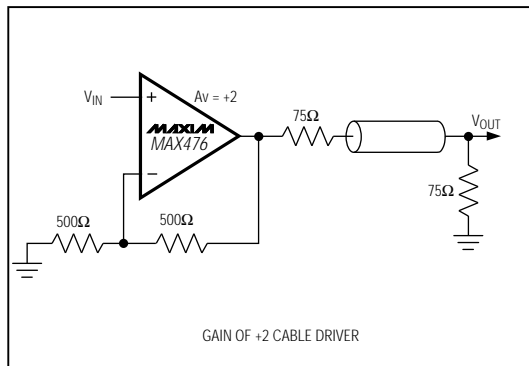
Unlike high-speed amplifiers using current-mode feedback architectures, the MAX476 has a unique input stage that combines the benefits of the voltage-feedback design (flexibility in choice of feedback resistor, two high-impedance inputs) with those of the current-feedback design. It also has the precision of voltage-feedback amplifiers, characterized by low input-offset voltage and bias current, low noise, and high common-mode and power-supply rejection.

The MAX476 is ideally suited for driving 50Ω or 75Ω loads. In addition, the device incorporates a high-speed shutdown mode to disable the output in multiplexed applications and to conserve power. Packages include 8-pin DIP, SO, and μMAX.

### Applications

Broadcast and High-Definition TV Systems  
Video Switching and Routing  
Communications  
Medical Imaging  
Precision DAC/ADC Buffer

### Typical Operating Circuit



### Features

- ♦ **High Speed:**
  - 325MHz Small-Signal Bandwidth ( $A_V = 1$ )
  - 150MHz Full-Power Bandwidth ( $A_V = 1$ ,  $V_O = 2V_{p-p}$ )
  - 1800V/μs Slew Rate
  - 100MHz 0.1dB Gain Flatness
- ♦ **Low Differential Phase/Gain Error 0.01°/0.01%**
- ♦ **8mA Quiescent Current (400μA in shutdown)**
- ♦ **High-Impedance Output in Shutdown Mode**
- ♦ **Low Input-Referred Voltage Noise:  $5nV/\sqrt{Hz}$**
- ♦ **Low Input-Offset Voltage: 0.5mV**
- ♦ **2μA Input Bias Current (either input)**
- ♦ **Voltage-Feedback Topology for Simple Design Configurations**

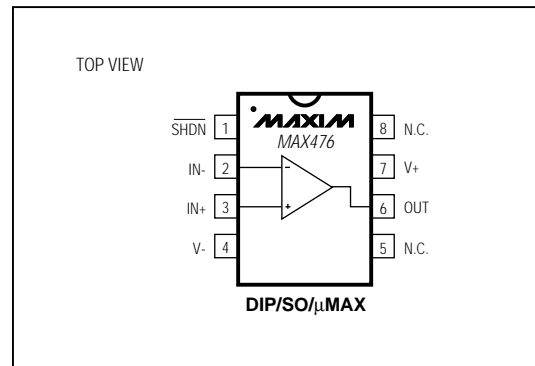
### Ordering Information

PART	TEMP. RANGE	PIN-PACKAGE
MAX476CPA	0°C to +70°C	8 Plastic DIP
MAX476CSA	0°C to +70°C	8 SO
MAX476CUA	0°C to +70°C	8 μMAX
MAX476C/D	0°C to +70°C	Dice*
MAX476EPA	-40°C to +85°C	8 Plastic DIP
MAX476ESA	-40°C to +85°C	8 SO
MAX476EUA	-40°C to +85°C	8 μMAX
MAX476MJA	-55°C to +125°C	8 CERDIP**

\* Dice are specified at  $T_A = +25^\circ\text{C}$ , DC parameters only.

\*\* Contact factory for availability.

### Pin Configuration



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Call toll free 1-800-998-8800 for free samples or literature.