


Op Amp Single High Speed Amplifier $\pm 6V/12V$ 8-Pin SOIC Tube

Manufacturer:	Texas Instruments, Inc
Package/Case:	SOP-8
Product Type:	Amplifier ICs
RoHS:	RoHS Compliant/Lead free 
Lifecycle:	Active



Images are for reference only

[Inquiry](#)

General Description

The OPA846 combines very high gain bandwidth and large signal performance with very low input voltage noise, while dissipating a low 12.6mA supply current. The classical differential input stage, along with two stages of forward gain and a high power output stage, combine to make the OPA846 an exceptionally low distortion amplifier with excellent DC accuracy and output drive. The voltage-feedback architecture allows all standard op amp applications to be implemented with very high performance.

The combination of low input voltage and current noise, along with a 1.75GHz gain bandwidth product, make the OPA846 an ideal amplifier for wideband transimpedance stages. As a voltage gain stage, the OPA846 is optimized for a flat response at a gain of +10 and is stable down to a gain of +7.

A new external compensation technique can be used to give a very flat frequency response below the minimum stable gain for the OPA846, further improving its already exceptional distortion performance. Using this compensation makes the OPA846 one of the premier 12- to 16-bit Analog-to-Digital (A/D) converter input drivers. The supply current for the OPA846 is precisely trimmed to 12.6mA at +25°C. This, along with carefully defined supply current tempco in the input and output stages, combine to provide exceptional performance over the full specified temperature range.

Key Features

HIGH BANDWIDTH: 400MHz (G = +10)

LOW INPUT VOLTAGE NOISE: 1.2nV/ $\sqrt{\text{Hz}}$

VERY LOW DISTORTION: -100dBc (5MHz)

HIGH SLEW RATE: 625V/ μs

HIGH DC ACCURACY: $\text{VIO} \pm 150\mu\text{V}$

LOW SUPPLY CURRENT: 12.6mA

HIGH GAIN BANDWIDTH PRODUCT: 1750MHz

STABLE FOR GAINS ≥ 7

APPLICATIONS

HIGH DYNAMIC RANGE ADC PREAMPS

LOW-NOISE, WIDEBAND, TRANSIMPEDANCE AMPLIFIERS

WIDEBAND, HIGH GAIN AMPLIFIERS

LOW-NOISE DIFFERENTIAL RECEIVERS

VDSL LINE RECEIVERS

ULTRASOUND CHANNEL AMPLIFIERS

SECURITY SENSOR FRONT ENDS

UPGRADE FOR THE OPA686, CLC425, AND LMH6624

Recommended For You

OPA445BM

Texas Instruments, Inc

CAN

OPA1611AIDR

Texas Instruments, Inc

SOP8

OPA388QDBVRQ1

Texas Instruments, Inc

SOT23-5

OPA2365AQDRQ1

Texas Instruments, Inc

SOP8

OPA334AIDBVR

Texas Instruments, Inc

SOT23-6

OPA2835IDCSR

Texas Instruments, Inc

MSOP10

OPA656U

Texas Instruments, Inc

SOP8

OPA360AIDCKR

Texas Instruments, Inc

SC70-6

LMI11H/NOPB

Texas Instruments, Inc

CAN8

OPA353UA

Texas Instruments, Inc

SOP8

LMI3700MX/NOPB

Texas Instruments, Inc

SOP16

OPA633KP

Texas Instruments, Inc

DIP8

OPA453FAKTWT

Texas Instruments, Inc

TO263-7

OPA4251UA

Texas Instruments, Inc

SOP14

LMV321M5X/NOPB

Texas Instruments, Inc

SOT23-5