



## Wideband, Low-Power, Current-Feedback Operational Amplifier

### FEATURES

- UNITY-GAIN STABLE BANDWIDTH: 900MHz
- LOW POWER: 50mW
- LOW DIFFERENTIAL GAIN/PHASE ERRORS:  
0.025%/0.02°
- HIGH SLEW RATE: 1700V/μs
- GAIN FLATNESS: 0.1dB to 135MHz
- HIGH OUTPUT CURRENT (80mA)

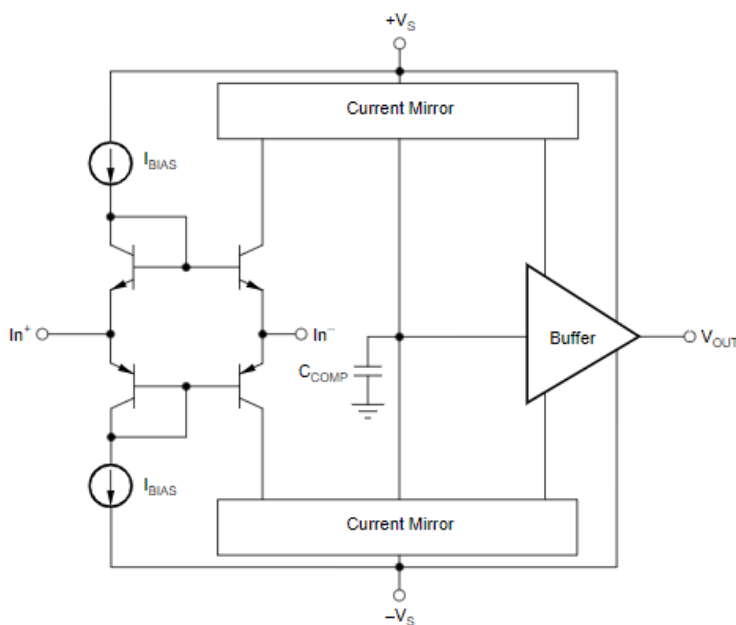
### APPLICATIONS

- MEDICAL IMAGING
- HIGH-RESOLUTION VIDEO
- HIGH-SPEED SIGNAL PROCESSING
- COMMUNICATIONS
- PULSE AMPLIFIERS
- ADC/DAC GAIN AMPLIFIER
- MONITOR PREAMPLIFIER
- CCD IMAGING AMPLIFIER

### DESCRIPTION

The OPA658 is an ultra-wideband, low power current feedback video operational amplifier featuring high slew rate and low differential gain/phase error. The current feedback design allows for superior large signal bandwidth, even at high gains. The low differential gain/phase errors, wide bandwidth and low quiescent current make the OPA658 a perfect choice for numerous video, imaging and communications applications.

The OPA658 is optimized for low gain operation and is also available in dual (OPA2658) configurations.



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PRODUCTION DATA information is current as of publication date. Products conform to specifications per the terms of Texas Instruments standard warranty. Production processing does not necessarily include testing of all parameters.

## ABSOLUTE MAXIMUM RATINGS<sup>(1)</sup>

Supply .....	±5.5V
Internal Power Dissipation .....	See Thermal Characteristics
Differential Input Voltage .....	±1.2V
Input Voltage Range .....	±V <sub>S</sub>
Storage Temperature Range: P, U, UB, N .....	-40°C to +125°C
Lead Temperature (soldering, 10s) .....	+300°C
(soldering, SO 3s) .....	+260°C
Junction Temperature (T <sub>J</sub> ) .....	+150°C

NOTE: (1) Stresses above those listed under "Absolute Maximum Ratings" may cause permanent damage to the device. Exposure to absolute maximum conditions for extended periods may affect device reliability.



## ELECTROSTATIC DISCHARGE SENSITIVITY

This integrated circuit can be damaged by ESD. Texas Instruments recommends that all integrated circuits be handled with appropriate precautions. Failure to observe proper handling and installation procedures can cause damage.

ESD damage can range from subtle performance degradation to complete device failure. Precision integrated circuits may be more susceptible to damage because very small parametric changes could cause the device not to meet its published specifications.

## PACKAGE/ORDERING INFORMATION

PRODUCT	PACKAGE-LEAD	PACKAGE DESIGNATOR <sup>(1)</sup>	SPECIFIED TEMPERATURE RANGE	PACKAGE MARKING	ORDERING NUMBER	TRANSPORT MEDIA, QUANTITY
OPA658	SO-8 Surface-Mount	D	-40°C to +85°C	OPA658U	OPA658U	Rails, 100
"	"	"	"	"	OPA658U/2K5	Tape and Reel, 2500
OPA658	SO-8 Surface-Mount	D	-40°C to +85°C	OPA658UB	OPA658UB	Rails, 100
"	"	"	"	"	OPA658UB/2K5	Tape and Reel, 2500
OPA658	SOT23-5	DBV	-40°C to +85°C	A58	OPA658N/250	Tape and Reel, 250
"	"	"	"	"	OPA658N/3K	Tape and Reel, 3000
OPA658	DIP-8	P	-40°C to +85°C	OPA658P	OPA658P	Rails, 50

NOTE: (1) For the most current specifications and package information, refer to our web site at [www.ti.com](http://www.ti.com).

## PIN CONFIGURATION

