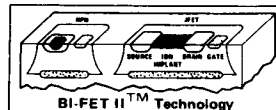




## ADVANCED INFORMATION



# LF455/LF456/LF457 Series Monolithic JFET Input Operational Amplifiers

## General Description

The LF455/LF456/LF457 family of high-performance Bi-FET™ operational amplifiers features extremely low offset voltage, high gain, low noise, wide bandwidth, and high slew rate. External offset adjustments will not degrade common-mode rejection or offset drift. A non-current-limited output is provided, and may be used alone or with the normal output to increase the current limit to more than 100 mA. Either output is capable of driving large capacitive loads of up to 10,000 pF.

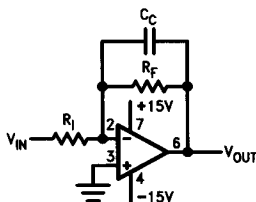
## Applications

- DAC output amplifiers
- Precision Buffers
- Fast Integrators
- Precision, high speed instrumentation
- Precision sample and holds

## Features

- Low input offset voltage 250  $\mu$ V
- Low offset voltage drift 3  $\mu$ V/°C
- Low input bias current 50 pA
- Low input offset current 10 pA
- High common-mode rejection ratio 100 dB
- High DC voltage gain 106 dB
- High slew rate: LF455 5V/ $\mu$ s
- LF456 12V/ $\mu$ s
- LF457 50V/ $\mu$ s
- Wide bandwidth: LF455 3 MHz
- LF456 5 MHz
- LF457 20 MHz
- Low input noise voltage: LF455 12nV/√Hz @ 1kHz
- LF456, LF457 10nV/√Hz @ 1kHz
- Large capacitive load capability 10,000 pF
- Fast settling to 0.01% 1.5  $\mu$ s

## Typical Connection

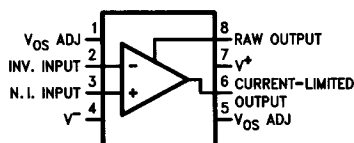


TL/H/9225-1

$\frac{R_f}{R_i}$  must be greater than 4 for the LF457.  
LF455 and LF456 are unity gain stable.

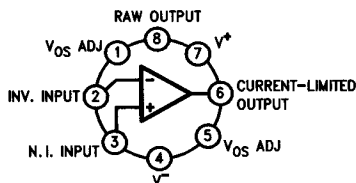
## Connection Diagram

### Dual-In-Line Package (N)



TL/H/9225-2

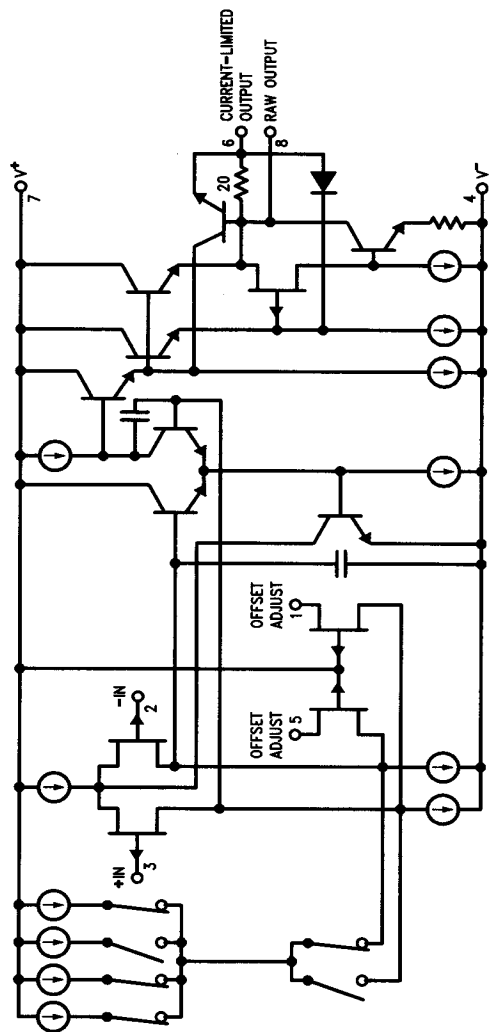
### Metal Can Package (H)



TL/H/9225-3

**Order Number LF455/LF456/LF457**  
**See NS Package H08A or N08E**

# Simplified Schematic



TL/H/9225-4