

Low Noise, High Frequency, 8th Order Linear Phase Lowpass Filter

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FEATURES

- 8th Order Filter in a 14-Pin Package
- 100kHz Maximum Corner Frequency
- No External Components
- 75:1 and 150:1 Clock to Cutoff Frequency Ratio
- $80\mu\text{VRMS}$ Total Wideband Noise
- 0.005% THD or Better
- Operates from $\pm 2.37\text{V}$ to $\pm 8\text{V}$ Power Supplies
- Low Total Output DC Offset

APPLICATIONS

- Antialiasing Filters
- Smoothing Filters
- Tracking High Frequency Lowpass Filters

DESCRIPTION

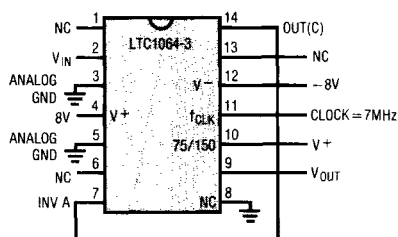
The LTC1064-3 is a monolithic 8th order lowpass Bessel filter, which provides a linear phase response over its entire passband. An external TTL or CMOS clock programs the filter's cutoff frequency. The clock to cutoff frequency ratio is 75:1 (pin 10 at V^+) or 150:1 (pin 10 at V^-). The maximum cutoff frequency is 100kHz. No external components are needed.

The LTC1064-3 features low wideband noise and low harmonic distortion even for input voltages up to 3VRMS . In fact the LTC1064-3 overall performance competes with equivalent multi-op amp RC active realizations. The LTC1064-3 is available in a 14-pin DIP or 16-pin surface mounted SOL package. The LTC1064-3 is fabricated using LTC's enhanced analog CMOS Si-gate process.

The LTC1064-3 is pin compatible with the LTC1064-1, -2, and -4.

TYPICAL APPLICATION

8th Order Clock Sweepable
Lowpass Bessel Filter



NOTE: THE POWER SUPPLIES SHOULD BE BYPASSED BY A $0.1\mu\text{F}$ OR BETTER CAPACITOR CLOSE TO THE PACKAGE. THE CONNECTION BETWEEN PINS 7 AND 14 SHOULD BE MADE UNDER THE I.C. PACKAGE.

Measured Frequency Response

