Digitally Configurable Universal Filter

Features

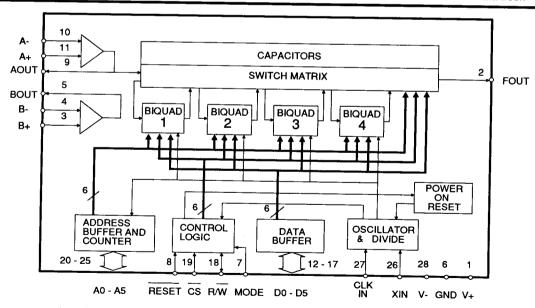- Implements Even-Order Filters:
    - To 50 kHz
    - To 8th Order

- Same output pin for all filter types

- Digitally Programmable:
    - Self Loading Mode
    - μP bus Mode

- Filter can be changed in 30 μs for adaptive applications

- Two Uncommitted Op Amps for Input Antialiasing and Output Smoothing

- Supported by CRYSTAL-ICE Filter Development System CDS7000

- Readback capability

General Description

The CS7008 is fabricated in standard 3 micron digital CMOS. It achieves high levels of performance through Crystal's SMART Analog™ design techniques. The CS7008 is a digitally configurable switched capacitor filter capable of implementing virtually any even-order filter response of eighth order or below to 50 kHz. A microprocessor interface permits in-system reconfiguration of the filter resonse. Access to two op amps is also provided for use as input antialialsing and output smoothing filters if desired.

System design is greatly simplified by using the Crystal-ICE Filter Development System, CDS7000. The development system provides menu-driven software that aids in the design and optimization of filters and provides hardware to download the filter parameter to a CS7008 (for in-circuit verification of performance) or to an EPROM programmer or DOS Files. The development system consists of hardware and software for use with an IBM PC and provides in-circuit emulation of the CS7008.

ORDERING INFORMATION: See ADC Data Book