

CMOS single-chip 8-bit microcontroller**80C31BH/80C51BH/
80C31BH-16/80C51BH-16****DESCRIPTION**

The Signetics 80C31BH/-16/80C51BH-16 is a high-performance microcontroller fabricated with Signetics high-density CMOS technology. This CMOS device is functionally compatible with the NMOS 8031/8051 microcontroller. The Signetics CMOS technology combines the high speed and density characteristics of HMOS with the low power attributes of CMOS. Signetics epitaxial substrate minimizes latch-up sensitivity.

This device contains a 4K × 8 ROM; a 128 × 8 RAM; 32 I/O lines; two 16-bit counter/timers; a five-source, two-priority level nested interrupt structure; a serial I/O

port for either multiprocessor communications, I/O expansion, or full duplex UART; an on-chip oscillator and clock circuits. In addition, the device has two software selectable modes of reduction; idle mode and power-down mode.

The idle mode freezes the CPU while allowing the RAM, timer, serial port, and interrupt system to continue functioning. The power-down mode saves the RAM contents but freezes the oscillator, causing all other chip function to be inoperative.

FEATURES

- 80C31BH/-16 microcontroller without ROM
- 80C51BH/-16 control-oriented microcontroller
- 8031/8051 compatible
 - 4K × 8 ROM
 - 128 × 8 RAM
 - Two 16-bit counter/timers
 - Boolean processor
 - Full duplex serial channel
- Memory addressing capability
 - 64K ROM and 64K RAM
- Power control modes:
 - Idle mode
 - Power-down mode
- CMOS and TTL compatible

ORDERING INFORMATION

DESCRIPTION	INTERNAL ROM	EXTERNAL ROM
44-Pin LLCC	80C51BH/BUA* 80C51BH-16/BUA*	80C31BH/BUA 80C31BH-16/BUA
40-Pin Dual In-Line	80C51BH/BQA 80C51BH-16/BQA*	80C31BH/BQA 80C31BH-16/BQA
52-Pin Flat Pack	80C51BH/BYA 80C51BH-16/BQA*	80C31BH/BYA 80C31BH-16/BQA

* Factory will assign unique CVXXXX part number

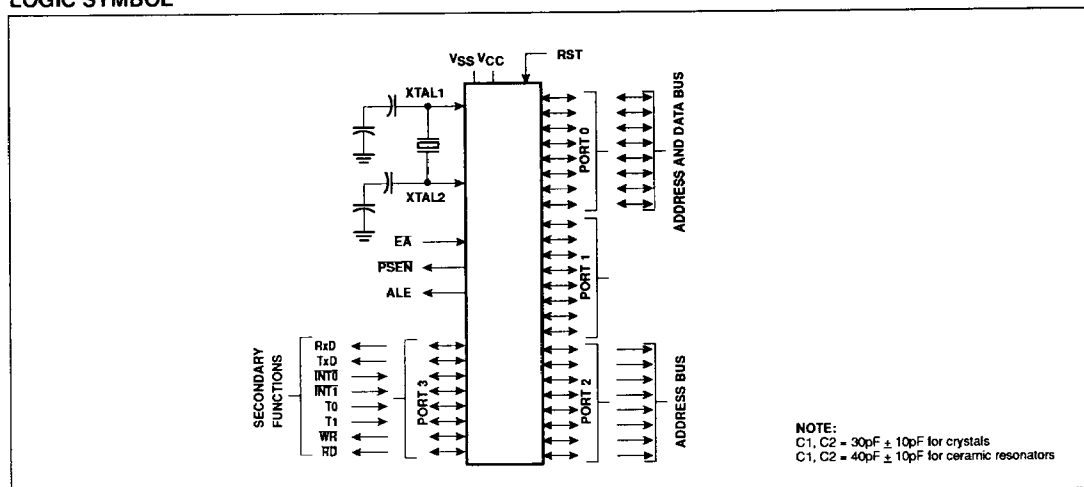
ELECTRICAL PERFORMANCE CHARACTERISTICS AND TEST REQUIREMENTS

For Absolute Maximum Ratings, Recommended Operating Conditions, and Electrical Test Requirements, refer to the following documents: Military Drawing 8506401, 8506402, 8506403 or 8506404

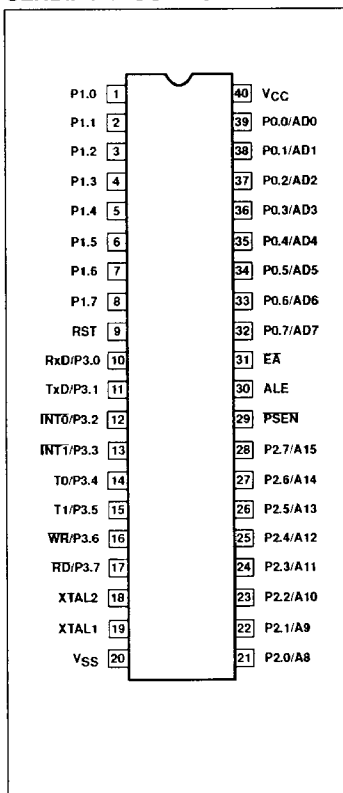
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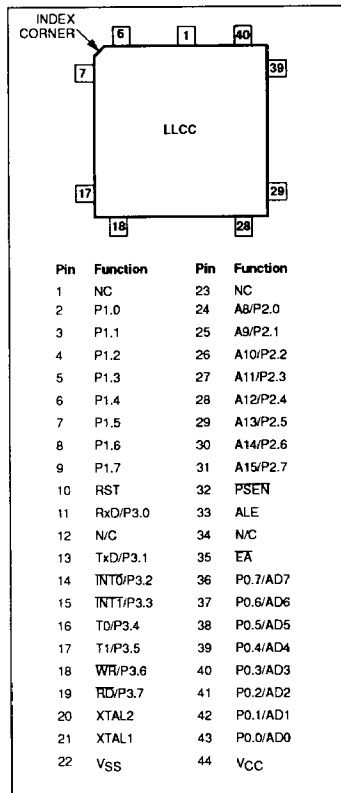
LOGIC SYMBOL



CERDIP PIN CONFIGURATION



LLCC PIN CONFIGURATION



FLAT PACK PIN CONFIGURATION

