ADVANCE INFORMATION

T-49-12-05

80C287A
CHMOS III MATH COPROCESSOR

- High Performance 80-Bit Internal Architecture
- Implements ANSI/IEEE Standard 754-1985 for Binary Floating-Point Arithmetic
- Implements Extended 80387 Instruction Set
- Two to Three Times 8087/80287 Performance at Equivalent Clock Speed
- Low Power Consumption
- Upward Object-Code Compatible from 8087 and 80287
- Interfaces with 80286 and 80C286 CPUs
- Expands CPU's Data Types to Include 32-, 64-, 80-Bit Floating Point, 32-, 64-Bit Integers and 18-Digit BCD Operands
- Directly Extends CPU's Instruction Set to Trigonometric, Logarithmic, Exponential, and Arithmetic Instructions for All Data Types
- Full-Range 387™ DC Compatible Transcendental Operations for SINE, COSINE, TANGENT, ARCTANGENT, and LOGARITHM.
- Built-In Exception Handling
- Operates in Both Real and Protected Mode Systems
- Eight 80-Bit Numeric Registers, Usable as Individually Addressable General Registers or as a Register Stack
- Available in 40-pin DIP and 44-pin PLCC Package

(See Packaging Outlines and Dimensions, order #231369)

The Intel 80C287A CMOS Math CoProcessor is an extension to the Intel 80286 microprocessor architecture. It is functionally equivalent to the NMOS 80287, and provides higher speeds and low power consumption for battery powered or no-fan applications. When combined with an 80286 microprocessor the 80C287A dramatically increases the processing speed of computer application software which utilize mathematical operations. This makes an ideal computer workstation platform for applications such as financial modeling and spreadsheets, CAD/CAM, or graphics.

The 80C287A Math CoProcessor adds over seventy mnemonics to the 80286 microprocessor instruction set. Specific 80C287A math operations include logarithmic, arithmetic, exponentional, and triginometric functions. The 80C287A supports integer, extended integer, floating point and BCD data formats, and fully conforms to the ANSI/IEEE floating point standard.

The 80C287A is object code compatible with the 80287 and 8087. The 80C287A is fabricated with CHMOS III technology and available in a 40-pin DIP and 44-pin PLCC packages.

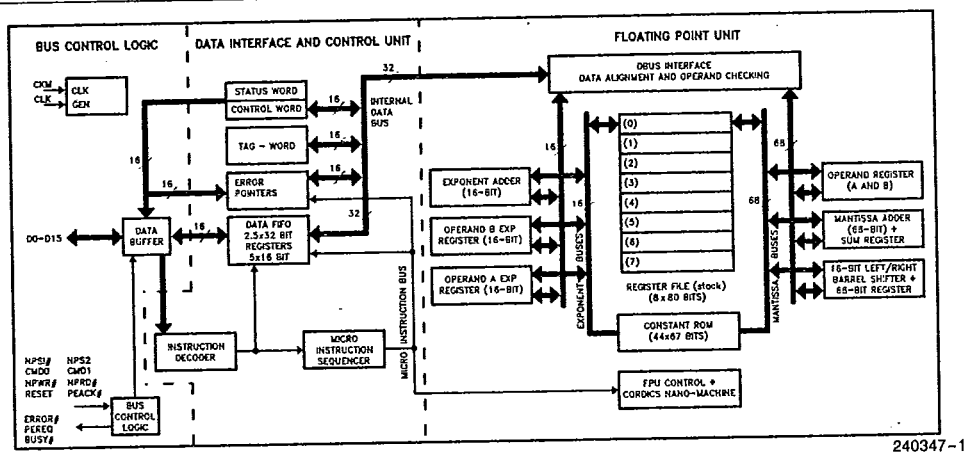

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Figure 0.1. 80C287A Block Diagram

For the complete data sheet on this device, contact Intel's Literature Distribution Dept., (800) 548-4725.

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