8192-Bit (2048 x 4) Bipolar Registered PROM with SSR™ Diagnostics Capability

#### DISTINCTIVE CHARACTERISTICS

- On-chip diagnostic shift register for serial observability and controllability of the output register
- User-programmable synchronous and asynchronous Enables
- User-programmable for synchronous or asynchronous Initialize
- Slim, 24-pin, 300-mil lateral center package permits a reduction in board space over standard discrete PROM and registers.
- Consumes approximately 1/2 the power of separate PROM/register combination for improved system reliability.
- Platinum-Silicide fuses guarantee high reliability, fast programming and exceptionally high programming yields (typ. > 98%).
- Increased drive capability, 24 mA IOL

#### GENERAL DESCRIPTION

This device contains a 4-bit parallel data register in the array-to-output path intended for normal registered data operations. In parallel with the output data registers is another 4-bit register with shifting capability, called a shadow register. As the name implies, the shadow register is intended to operate in the background of the normal output data register. This shadow register can be used in a systematic way to control and observe the output data register to exercise desired system functions during a diagnostic test mode.

To offer the system designer maximum flexibility, this device contains user programmable architecture for Enable and Initialize. The unprogrammed state of these pins operates as Asynchronous inputs ( $\overline{G}$ ) and ( $\overline{I}$ ) respectively. An architecture word permits the programming of the functionality of these pins to Synchronous Enable ( $\overline{GS}$ ) and Synchronous Initialize ( $\overline{IS}$ ).

Issue Date: May 1986

## **BLOCK DIAGRAM** A10 C ٩e ØF 64 64 X 128 ROW PROGRAMMABLE A7 ARRAY A<sub>6</sub> DECODER 1 of 32 1 ØF 32 А3 MULTIPLEXERS COLUMN A2 DECODER A<sub>1</sub> DIAGNOSTIC MUX 4-BIT EDGE-TRIGGERED 4-BIT EDGE-TRIGGERED SHIFT REGISTER REGISTER PROGRAMMABLE $DQ_1$ $DO_2$ BD005840 <u>Amendment</u> Publication

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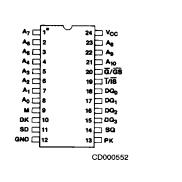
SSR is a trademark of Advanced Micro Devices, Inc.

### PRODUCT SELECTOR GUIDE

Part Number	27\$75A	27\$75	27S75A	27\$75
Address Set up Time	25 ns	30 ns	30 ns	35 ns
Clock-to-Output Delay	12 ns	15 ns	17 ns	20 ns
Operating Range	С	С	М	М

### **CONNECTION DIAGRAMS**

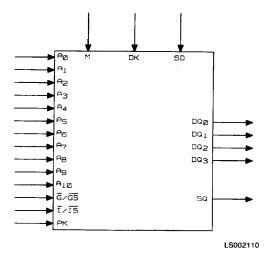
### **Top View**



CD004903

Note: Pin 1 is marked for orientation.

# LOGIC SYMBOL



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