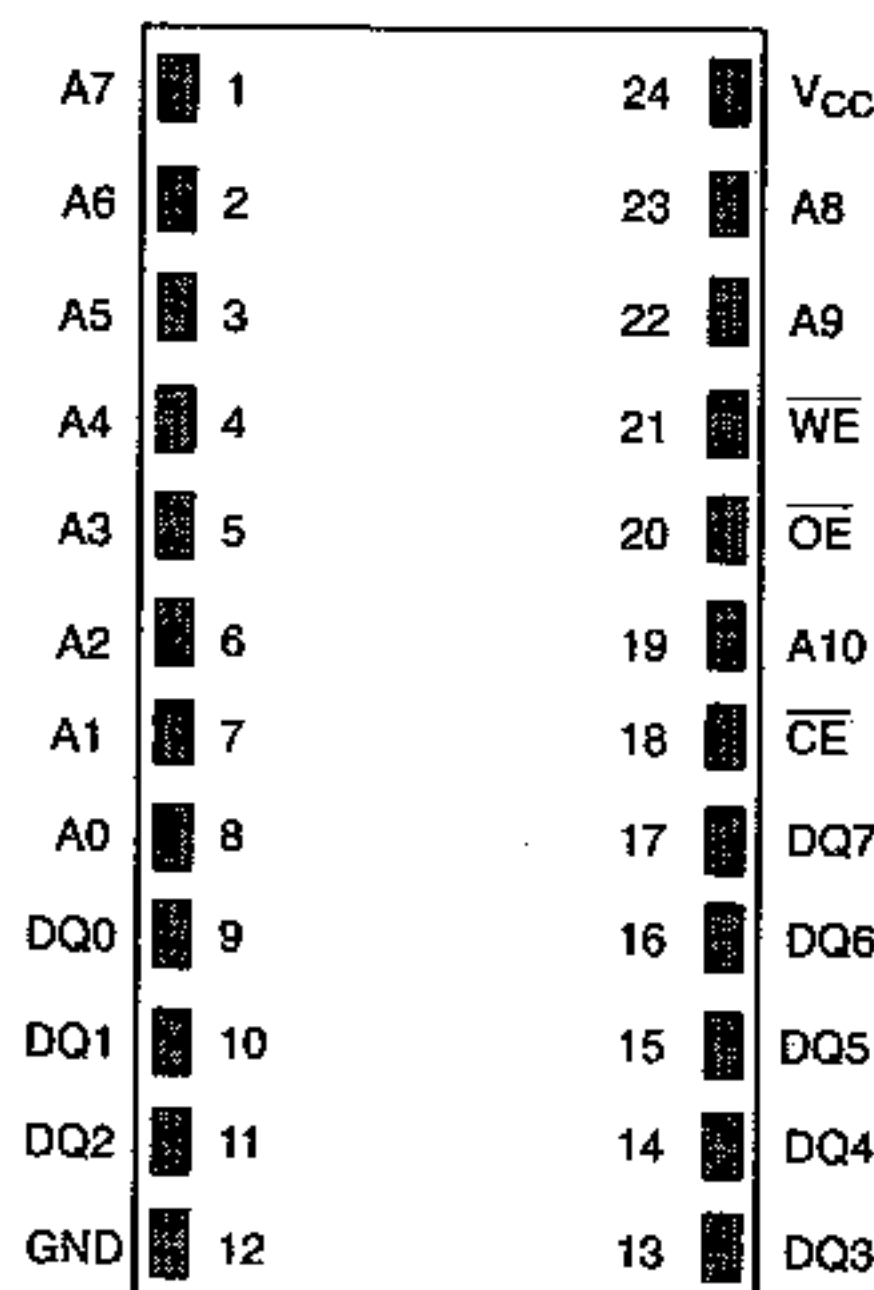


FEATURES

- 10 years minimum data retention in the absence of external power
- Data is automatically protected during power loss
- Directly replaces 2K x 8 volatile static RAM or EEPROM
- Unlimited write cycles
- Low-power CMOS
- JEDEC standard 24-pin DIP package
- Read and write access times as fast as 100 ns
- Full $\pm 10\%$ operating range
- Optional industrial temperature range of -40°C to $+85^{\circ}\text{C}$, designated IND

PIN ASSIGNMENT



24-PIN ENCAPSULATED PACKAGE
720 MIL EXTENDED

PIN DESCRIPTION

A ₀ -A ₁₀	- Address Inputs
DQ ₀ -DQ ₇	- Data In/Data Out
$\overline{\text{CE}}$	- Chip Enable
$\overline{\text{WE}}$	- Write Enable
$\overline{\text{OE}}$	- Output Enable
V _{CC}	- Power (+5V)
GND	- Ground

DESCRIPTION

The DS1220Y 16K Nonvolatile SRAM is a 16,384-bit, fully static, nonvolatile RAM organized as 2048 words by 8 bits. Each NV SRAM has a self-contained lithium energy source and control circuitry which constantly monitors V_{CC} for an out-of-tolerance condition. When such a condition occurs, the lithium energy source is automatically switched on and write protection is unconditionally enabled to prevent data corruption. The NV SRAM can be used in place of existing 2K x 8 SRAMs

directly conforming to the popular byte-wide 24-pin DIP standard. The DS1220Y also matches the pinout of the 2716 EPROM or the 2816 EEPROM, allowing direct substitution while enhancing performance. There is no limit on the number of write cycles that can be executed and no additional support circuitry is required for micro-processor interfacing.