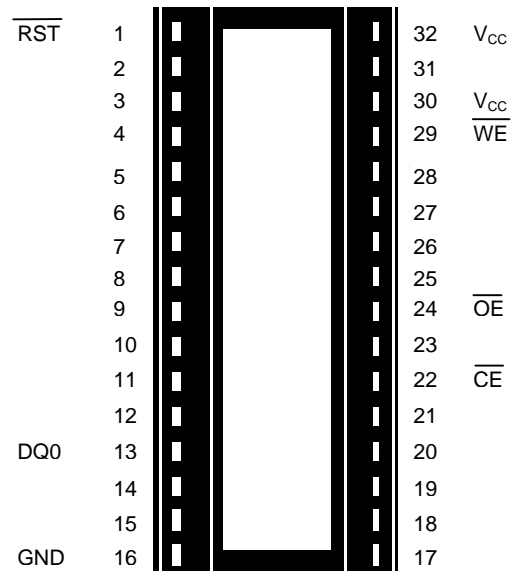


FEATURES

- Converts standard 8K x 8, 32K x 8, and 512K x 8 CMOS static RAMs into nonvolatile memory
- Embedded lithium energy cell maintains watch information and retains RAM data
- Watch function is transparent to memory operation
- Keeps track of hundredths of seconds, seconds, minutes, hours, days, date of the month, months, and years
- Month and year determine the number of days in each month; leap year compensation valid up to 2100
- Lithium energy source is electrically disconnected to retain freshness until power is applied for the first time
- Proven gas-tight socket contacts
- Full $\pm 10\%$ operating range
- Operating temperature range 0°C to 70°C
- Accuracy is better than ± 1 minute/month @ 25°C

PIN ASSIGNMENT



32-Pin Intelligent Socket

PIN DESCRIPTION

All pins pass through except 22, 30 and 32.

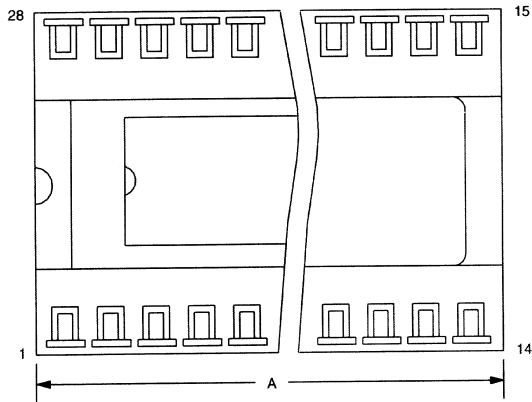
- Pin 1 $\overline{\text{RST}}$ - RESET
- Pin 13 DQ0 - Data Input/Output 0
- Pin 16 GND - Ground
- Pin 22 $\overline{\text{CE}}$ - Conditioned Chip Enable
- Pin 24 $\overline{\text{OE}}$ - Output Enable
- Pin 29 $\overline{\text{WE}}$ - Write Enable
- Pin 30 V_{CC} - Switched VCC for 28-pin RAM
- Pin 32 V_{CC} - Switched VCC for 32-pin RAM

DESCRIPTION

The DS1216D SmartWatch/RAM 256K/1M is a 32-pin, 600-mil wide DIP socket with a built-in CMOS watch function, a nonvolatile RAM controller circuit, and an embedded lithium energy source. It accepts either an 8K x 8, 32K x 8, 128K x 8, or 512K x 8 JEDEC byte-wide CMOS static RAM. When the socket is mated with a CMOS SRAM, it provides a complete solution to problems associated with memory volatility and uses a common energy source to maintain time and date. A key feature of the SmartWatch is that the watch function remains transparent to the RAM.

See the DS1216B SmartWatch/RAM 16/64K data sheet for technical details.

DS1216D SMARTWATCH



PKG	28-PIN		32-PIN	
DIM	MIN	MAX	MIN	MAX
A IN.	1.390	1.420	1.580	1.620
MM	35.31	36.07	40.13	41.14
B IN.	0.690	0.720	0.690	0.720
MM	17.53	18.29	17.53	18.29
C IN.	0.420	0.470	0.400	0.470
MM	10.67	11.94	10.16	11.94
D IN.	0.035	0.065	0.035	0.065
MM	0.89	1.65	0.89	1.65
E IN.	0.055	0.075	0.055	0.075
MM	1.39	1.90	1.39	1.90
F IN.	0.120	0.160	0.120	0.160
MM	3.04	4.06	3.04	4.06
G IN.	0.090	0.110	0.090	0.110
MM	2.29	2.79	2.29	2.79
H IN.	0.590	0.630	0.590	0.630
MM	14.99	16.00	14.99	16.00
J IN.	0.008	0.012	0.008	0.012
MM	0.20	0.30	0.20	0.30
K IN.	0.015	0.021	0.015	0.021
MM	0.38	0.53	0.38	0.53
L IN.	0.380	0.420	0.380	0.420
MM	9.65	10.67	9.65	10.67

