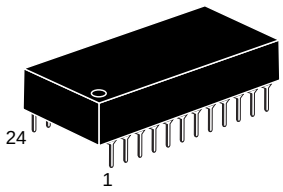
SGS-THOMSON MICROELECTRONICS

M48Z02
M48Z12

16Kb (2K x 8) ZEROPOWER® SRAM

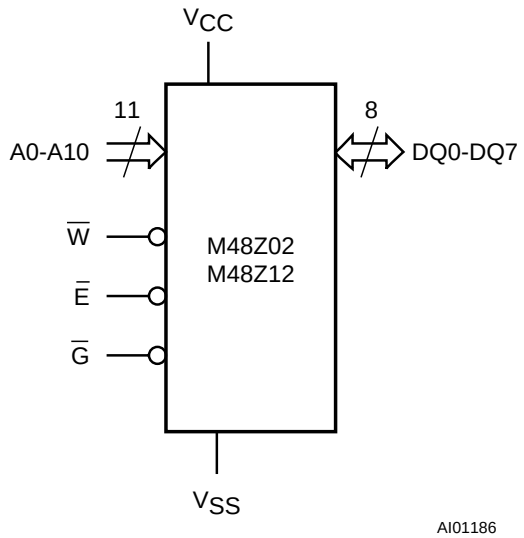
DATA BRIEFING

- INTEGRATED ULTRA LOW POWER SRAM, POWER-FAIL CONTROL CIRCUIT and BATTERY
- UNLIMITED WRITE CYCLES
- READ CYCLE TIME EQUALS WRITE CYCLE TIME
- AUTOMATIC POWER-FAIL CHIP DESELECT and WRITE PROTECTION
- WRITE PROTECT VOLTAGES (V_{PFD} = Power-fail Deselect Voltage):
  - M48Z02: 4.50V ≤ V_{PFD} ≤ 4.75V
  - M48Z12: 4.20V ≤ V_{PFD} ≤ 4.50V
- SELF-CONTAINED BATTERY in the CAPHAT DIP PACKAGE
- PIN and FUNCTION COMPATIBLE with JEDEC STANDARD 2K x 8 SRAMs



PCDIP24 (PC)
Battery CAPHAT

Logic Diagram



DESCRIPTION

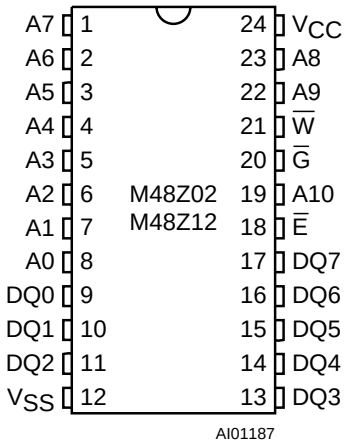
The M48Z02/12 ZEROPOWER® RAM is a 2K x 8 non-volatile static RAM which is pin and functional compatible with the DS1220.

A special 24 pin 600mil DIP CAPHAT™ package houses the M48Z02/12 silicon with a long life lithium button cell to form a highly integrated battery backed-up memory solution.

The M48Z02/12 button cell has sufficient capacity and storage life to maintain data and clock functionality for an accumulated time period of at least 10 years in the absence of power over the operating temperature range.

The M48Z02/12 is a non-volatile pin and function equivalent to any JEDEC standard 2K x 8 SRAM. It also easily fits into many ROM, EPROM, and EEPROM sockets, providing the non-volatility of PROMs without any requirement for special write timing or limitations on the number of writes that can be performed.

DIP Pin Connections



Signal Names

A0-A10	Address Inputs
DQ0-DQ7	Data Inputs / Outputs
$\overline{E}$	Chip Enable
$\overline{G}$	Output Enable
$\overline{W}$	Write Enable
V_{CC}	Supply Voltage
V_{SS}	Ground

Ordering Information Scheme

For a list of available options or for further information on any aspect of this device, please contact the SGS-THOMSON Sales Office nearest to you.

Example: M48Z02 -70 PC 1

Supply Voltage and Write Protect Voltage

02 V_{CC} = 4.75V to 5.5V, V_{PFD} = 4.5V to 4.75V

12 V_{CC} = 4.75V to 5.5V, V_{PFD} = 4.2V to 4.5V

Speed

-70 70ns

-150 150ns

-200 200ns

Package

PC PCDIP24

Temperature Range

1 0 to 70 °C

6 –40 to 85 °C