

64Kb (8K x 8) ZEROPOWER[®] SRAM

DATA BRIEFING

- INTEGRATED ULTRA LOW POWER SRAM, POWER-FAIL CONTROL CIRCUIT and BATTERY
- READ CYCLE TIME EQUALS WRITE CYCLE TIME
- AUTOMATIC POWER-FAIL CHIP DESELECT and WRITE PROTECTION
- WRITE PROTECT VOLTAGES (V_{PFD} = Power-fail Deselect Voltage):
 - M48Z58: $4.50V \leq V_{PFD} \leq 4.75V$
 - M48Z58Y: $4.20V \leq V_{PFD} \leq 4.50V$
- SELF-CONTAINED BATTERY in the CAPHAT DIP PACKAGE
- PACKAGING INCLUDES a 28-LEAD SOIC and SNAPHAT[®] TOP (to be Ordered Separately)
- SOIC PACKAGE PROVIDES DIRECT CONNECTION for a SNAPHAT TOP which CONTAINS the BATTERY and CRYSTAL
- PIN and FUNCTION COMPATIBLE with JEDEC STANDARD 8K x 8 SRAMs

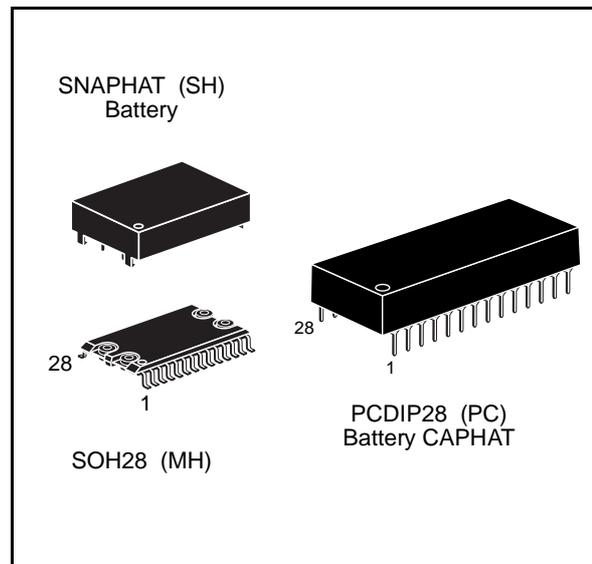
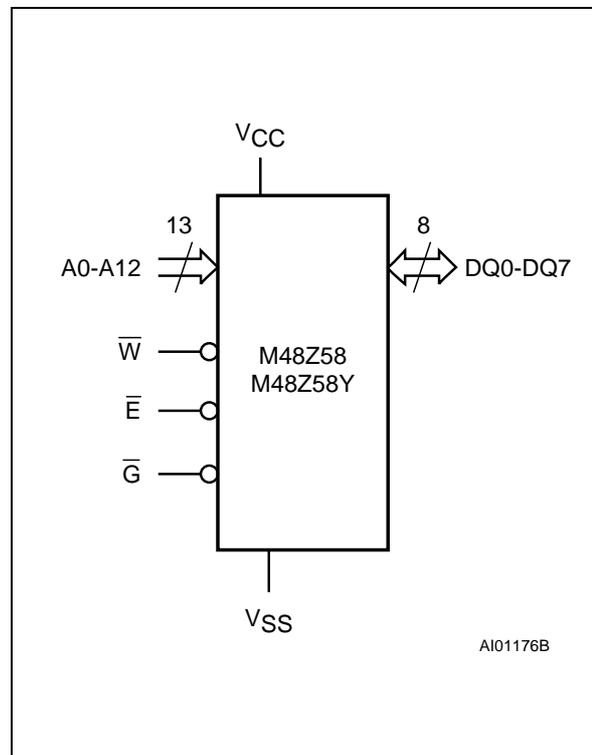


Figure 1. Logic Diagram



DESCRIPTION

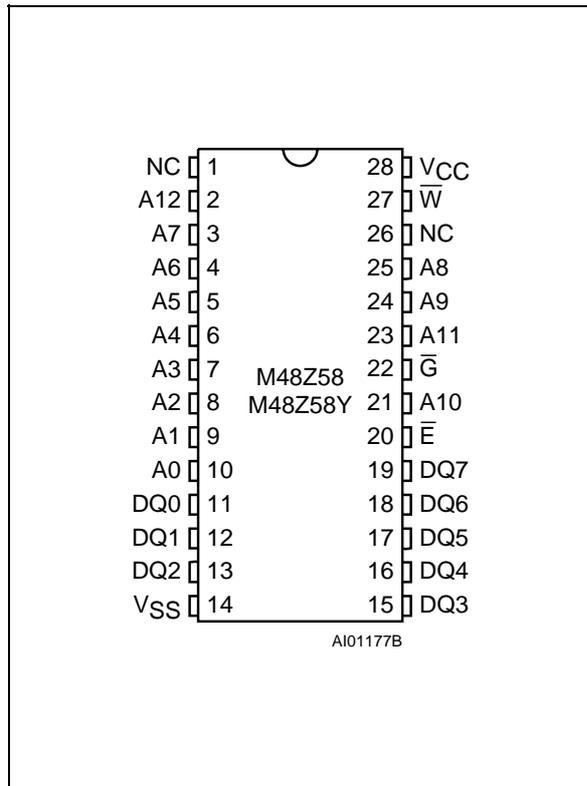
The M48Z58/58Y ZEROPOWER[®] RAM is an 8K x 8 non-volatile static RAM that integrates power-fail deselect circuitry and battery control logic on a single die. The monolithic chip is available in two special packages to provide a highly integrated battery backed-up memory solution.

The M48Z58/58Y is a non-volatile pin and function equivalent to any JEDEC standard 8K 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.

The 28 pin 600mil DIP CAPHAT[™] houses the M48Z58/58Y silicon with a long life lithium button cell in a single package. The 28 pin 330mil SOIC provides sockets with gold plated contacts at both ends for direct connection to a separate SNAPHAT housing containing the battery.

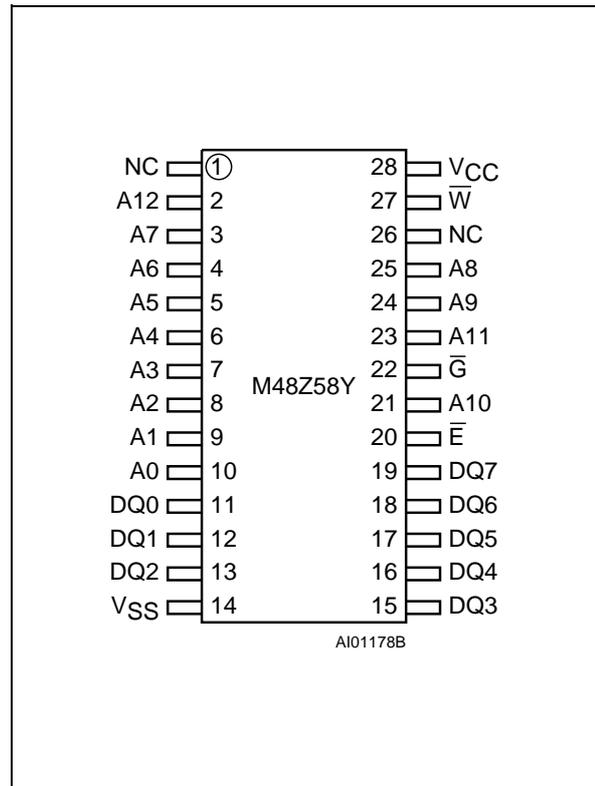
M48Z58, M48Z58Y

DIP Pin Connections



Warning: NC = Not Connected.

SOIC Pin Connections

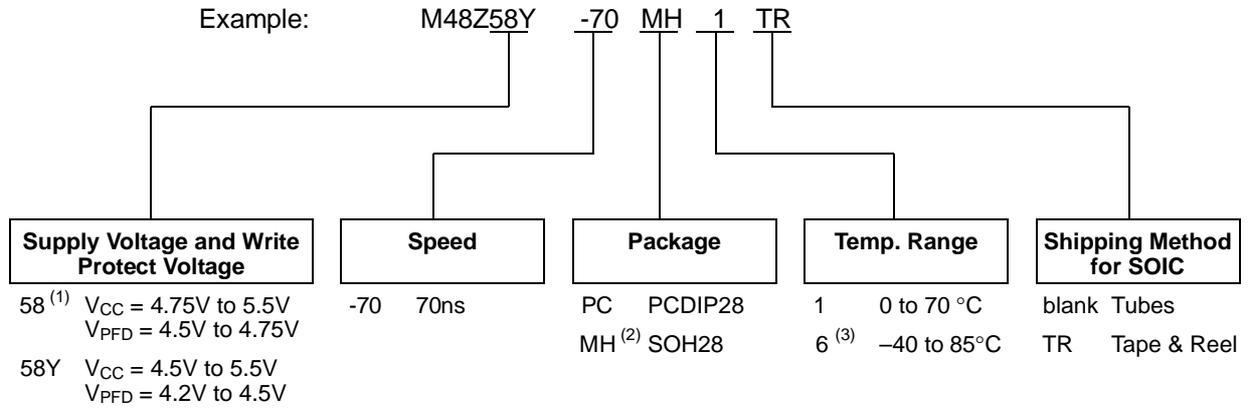


Warning: NC = Not Connected.

Signal Names

| | |
|-----------------|-----------------------|
| A0-A12 | Address Inputs |
| DQ0-DQ7 | Data Inputs / Outputs |
| \bar{E} | Chip Enable |
| \bar{G} | Output Enable |
| \bar{W} | Write Enable |
| V _{CC} | Supply Voltage |
| V _{SS} | Ground |

ORDERING INFORMATION SCHEME



- Notes:**
1. The M48Z58 part is offered with the PCDIP28 (i.e. CAPHAT) package only.
 2. The SOIC package (SOH28) requires the battery package (SNAPHAT) which is ordered separately under the part number "M4Z28-BR00SH1" in plastic tube or "M4Z28-BR00SH1TR" in Tape & Reel form.
 3. Industrial temperature grade available in SOIC package (SOH28) only.

Caution: Do not place the SNAPHAT battery package "M4Z28-BR00SH1" in conductive foam since this will drain the lithium button-cell battery.

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