

64Kb (8K x 8) ZEROPOWER® SRAM

DATA BRIEFING

- INTEGRATED ULTRA LOW POWER SRAM, POWER-FAIL CONTROL CIRCUIT and BATTERY
- MICROPROCESSOR POWER-ON RESET (Valid even during battery back-up mode)
- AUTOMATIC POWER-FAIL CHIP DESELECT and WRITE PROTECTION
- WRITE PROTECT VOLTAGES (V_{PFD} = Power-fail Deselect Voltage):
 - M48Z59: $4.50V \leq V_{PFD} \leq 4.75V$
 - M48Z59Y: $4.20V \leq V_{PFD} \leq 4.50V$
- 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

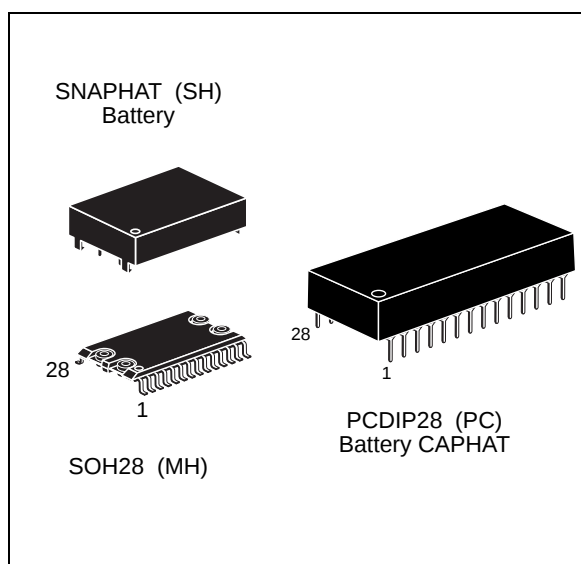


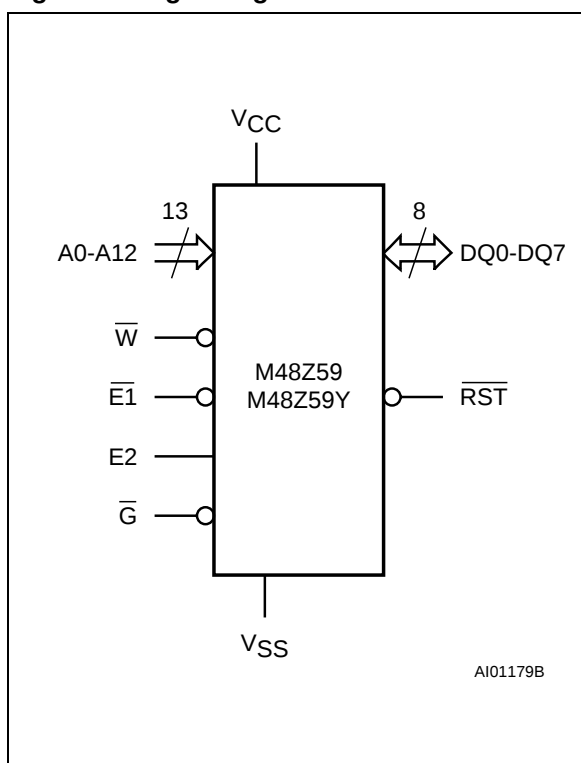
Figure 1. Logic Diagram

DESCRIPTION

The M48Z59/59Y 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.

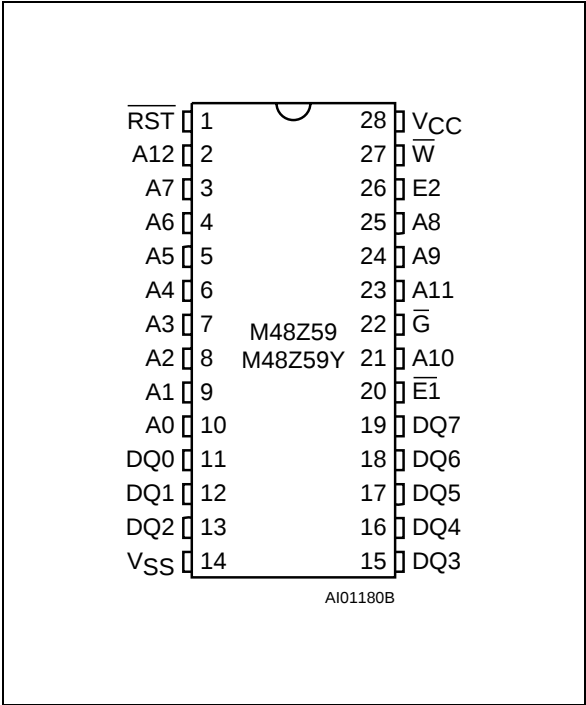
The M48Z59/59Y is a non-volatile pin and function equivalent to any JEDEC standard 8K x 8 SRAM. It also easily fits into many ROM, EPROM, and EEPROM sockets, providing the non-volatility of PROMs without any requirement for special write timing or limitations on the number of writes that can be performed.

The 28 pin 600mil DIP CAPHAT™ houses the M48Z59/59Y 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.

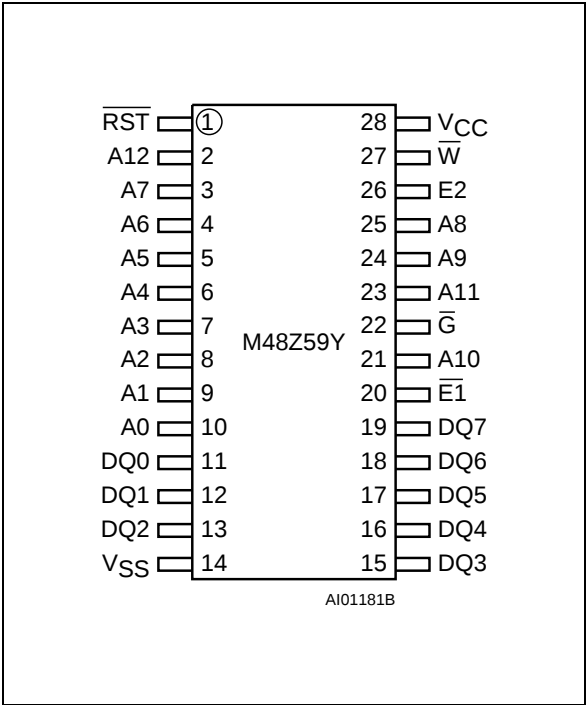


M48Z59, M48Z59Y

DIP Pin Connections



SOIC Pin Connections



Signal Names

A0-A12	Address Inputs
DQ0-DQ7	Data Inputs / Outputs
RST	Power Fail Reset Output (Open Drain)
E1	Chip Enable 1
E2	Chip Enable 2
G	Output Enable
W	Write Enable
Vcc	Supply Voltage
Vss	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: M48Z59Y -70 MH 1 TR

Supply Voltage and Write Protect Voltage	
59 ⁽¹⁾	V _{CC} = 4.75V to 5.5V V _{PFD} = 4.5V to 4.75V
59Y	V _{CC} = 4.5V to 5.5V V _{PFD} = 4.2V to 4.5V
Speed	
-70	70 ns
Package	
PC	PCDIP28
MH ⁽²⁾	SOH28
Temperature Range	
1	0 to 70 °C
Shipping Method for SOIC	
blank	Tubes
TR	Tape & Reel

Notes: 1. The M48Z59 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.

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