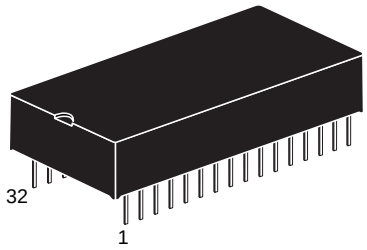
SGS-THOMSON MICROELECTRONICS

M48Z129Y
M48Z129V

1Mb (128K x 8) ZEROPOWER® SRAM

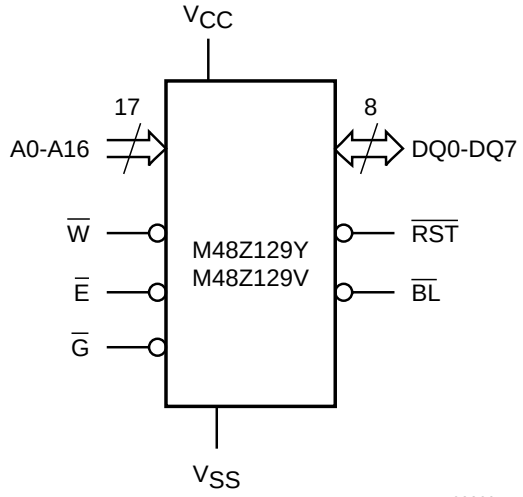
PRELIMINARY DATA

- INTEGRATED LOW POWER SRAM, POWER-FAIL CONTROL CIRCUIT and BATTERY
- CONVENTIONAL SRAM OPERATION; UNLIMITED WRITE CYCLES
- 10 YEARS of DATA RETENTION in the ABSENCE of POWER
- MICROPROCESSOR POWER-ON RESET (Valid even during battery back-up mode)
- BATTERY LOW PIN PROVIDES EARLY WARNING of BATTERY END-OF-LIFE
- AUTOMATIC POWER-FAIL CHIP DESELECT and WRITE PROTECTION
- WRITE PROTECT VOLTAGE (V_{PFD} = Power-fail Deselect Voltage):
  - M48Z129Y: 4.20V ≤ V_{PFD} ≤ 4.50V
  - M48Z129V: 2.70V ≤ V_{PFD} ≤ 3.00V
- BATTERY INTERNALLY ISOLATED UNTIL POWER IS APPLIED
- COMPATIBLE with STANDARD 128Kx8 SRAMs



PMDIP32 (PM)
Module

Figure 1. Logic Diagram

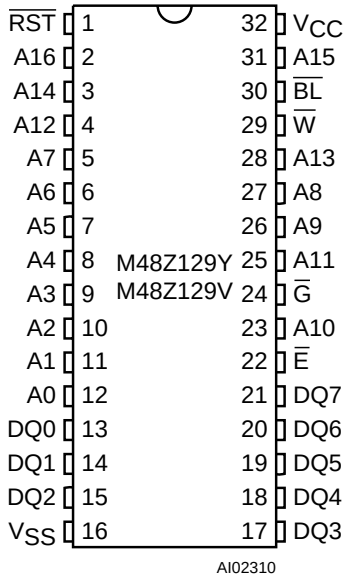


DESCRIPTION

The M48Z129Y/129V ZEROPOWER® RAM is a non-volatile 1,048,576 bit Static RAM organized as 131,072 words by 8 bits. The devices combines an internal lithium battery, a CMOS SRAM and a control circuit in a plastic 32 pin DIP Module.

A Battery Low ($\overline{BL}$) pin warns the user of battery end-of-life, providing true data non-volatility. The open-drain Reset ($\overline{RST}$) output pin is used to provide a reset pulse, insuring proper system operation. Due to the ultra-low power required by the M48Z129Y/129V, nominal battery life exceeds 10 years, thus outlasting the useful lifetime of most end-user equipment.

DIP Pin Connections



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: M48Z129Y -70 PM 1

Supply Voltage and Write Protect Voltage

129Y V_{CC} = 4.5V to 5.5V
V_{PFD} = 4.2V to 4.5V

129V V_{CC} = 3.0V to 3.6V
V_{PFD} = 2.7V to 3.0V

Speed

-70 70ns

Package

PM PMDIP32

Temperature Range

1 0 to 70 °C

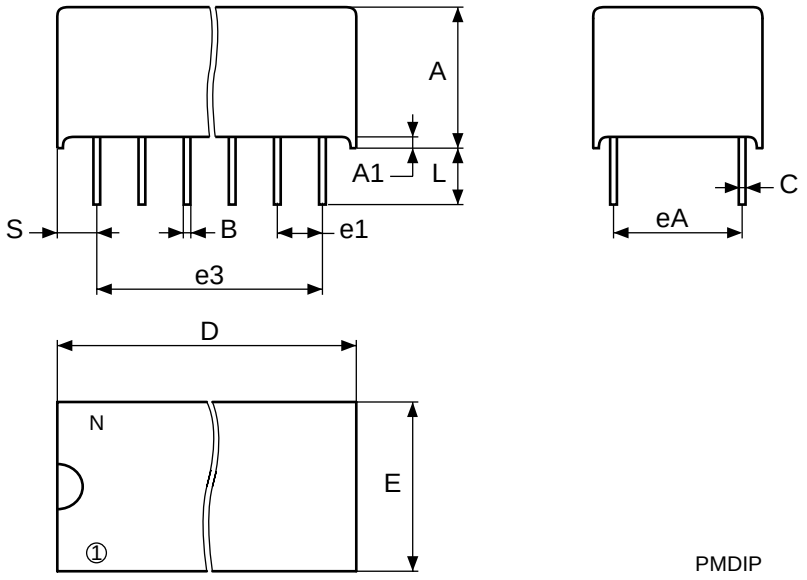
Signal Names

A0-A16	Address Inputs
DQ0-DQ7	Data Inputs / Outputs
$\overline{E}$	Chip Enable
$\overline{G}$	Output Enable
$\overline{W}$	Write Enable
$\overline{RST}$	Reset Output (Open Drain)
$\overline{BL}$	Battery Low Output
V_{CC}	Supply Voltage
V_{SS}	Ground

PMDIP32 - 32 pin Plastic DIP Module

Symb	mm			inches		
	Typ	Min	Max	Typ	Min	Max
A		9.27	9.52		0.365	0.375
A1		0.38	–		0.015	–
B		0.43	0.59		0.017	0.023
C		0.20	0.33		0.008	0.013
D		42.42	43.18		1.670	1.700
E		18.03	18.80		0.710	0.740
e1		2.29	2.79		0.090	0.110
e3		34.29	41.91		1.350	1.650
eA		14.99	16.00		0.590	0.630
L		3.05	3.81		0.120	0.150
S		1.91	2.79		0.075	0.110
N	32			32		

PMDIP32



PMDIP

Drawing is not to scale.