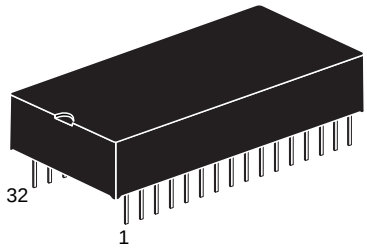
SGS-THOMSON MICROELECTRONICS

M48T39Y

256Kb (32K x 8) TIMEKEEPER® SRAM

PRELIMINARY DATA

- INTEGRATED ULTRA LOW POWER SRAM, REAL TIME CLOCK, POWER-FAIL CONTROL CIRCUIT, BATTERY and CRYSTAL
- BCD CODED YEAR, MONTH, DAY, DATE, HOURS, MINUTES and SECONDS
- AUTOMATIC POWER-FAIL CHIP DESELECT and WRITE PROTECTION
- WRITE PROTECT VOLTAGE (V_{PFD} = Power-fail Deselect Voltage):
  - M48T39Y: $4.20V \leq V_{PFD} \leq 4.50V$
- PROGRAMMABLE INTERRUPTS and SQUARE WAVE OUTPUT
- WATCHDOG TIMER RESTARTS on OUT-OF-CONTROL PROCESSOR
- CLOCK ACCURACY IS BETTER THAN ± 1 MINUTE per MONTH at 25 °C
- 10 YEARS of DATA RETENTION and CLOCK OPERATION in the ABSENCE of POWER
- SELF-CONTAINED BATTERY and CRYSTAL in DIP PACKAGE
- PROGRAMMABLE ALARM OUTPUT ACTIVE in the BATTERY BACK-UP MODE
- PIN and FUNCTION COMPATIBLE with DS1386

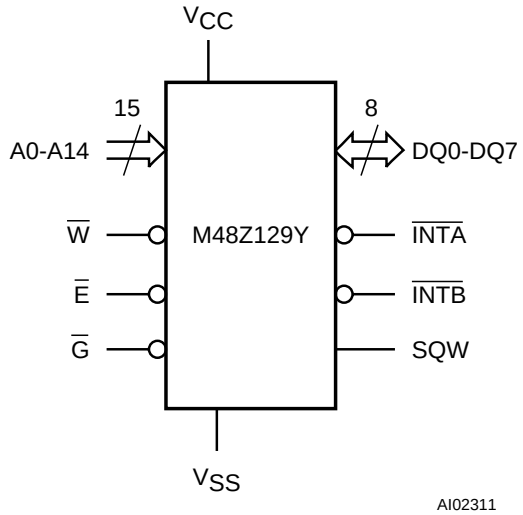


PMDIP32 (PM)
Module

DESCRIPTION

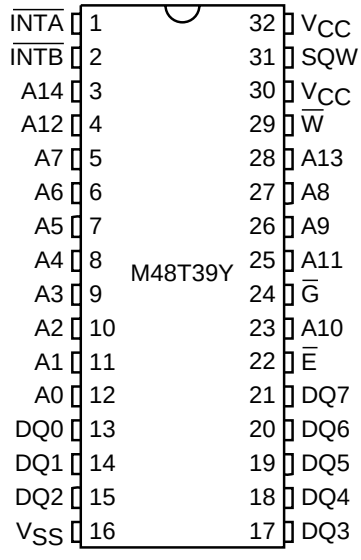
The M48T39Y TIMEKEEPER® RAM is a non-volatile 262,144 bit static RAM and real time clock organized as 32,768 words by 8 bits. System integration features include Programmable Alarms, Watchdog Timer and Interval Timer. The special 32-pin DIP package provides a highly integrated battery back-up memory and real time clock solution.

Logic Diagram



This is preliminary information on a new product now in development or undergoing evaluation. Details are subject to change without notice.

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: M48T39Y -100 PM 1

Supply Voltage and Write Protect Voltage

39Y V_{CC} = 4.50V to 5.50V
V_{PFD} = 4.20V to 4.50V

Speed

-100 100ns
-150 150ns

Package

PM PMDIP32

Temperature Range

1 0 to 70 °C

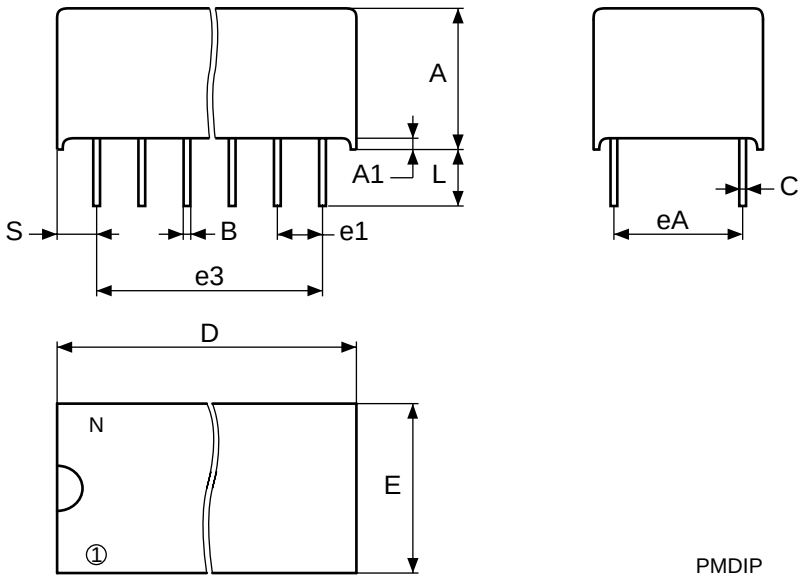
Signal Names

A0-A14	Address Inputs
DQ0-DQ7	Data Inputs / Outputs
$\overline{E}$	Chip Enable Input
$\overline{G}$	Output Enable Input
$\overline{W}$	Write Enable Input
$\overline{INTA}$	Interrupt Output A (Open Drain)
$\overline{INTB}$	Interrupt Output B (Open Drain)
SQW	Square Wave 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		2.30	2.81		0.090	0.110
e3		34.43	42.08		1.355	1.656
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.

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