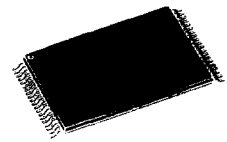
SGS-THOMSON MICROELECTRONICS

M29R008T
M29R008B, M29R008D

8 Mb (x8, Block Erase)
LOW VOLTAGE SINGLE SUPPLY FLASH MEMORY

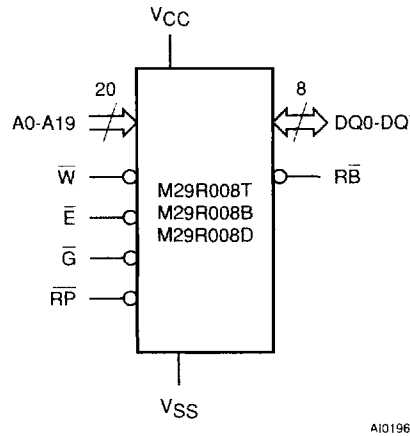
DATA BRIEFING

- SUPPLY VOLTAGE
  - 1.8V to 3.6V for READ OPERATION
  - 2.7V to 3.6V for PROGRAM and ERASE OPERATIONS
- FAST ACCESS TIME: 100ns
- FAST PROGRAMMING TIME: 10µs typical
- PROGRAM/ERASE CONTROLLER (P/E.C.)
  - Program Byte-by-Byte
  - Status Register bits and Ready/Busy Output
- MEMORY BLOCKS
  - Boot Blocks (Top, Bottom or Dual locations)
  - Parameter and Main Blocks
- BLOCK, MULTI-BLOCK and CHIP ERASE
- *MULTI BLOCK PROTECTION/TEMPORARY* UNPROTECTION
- ERASE SUSPEND and RESUME MODES
  - Read and Program another Block during Erase Suspend
- SECURITY PROTECTION MEMORY AREA
- LOW POWER CONSUMPTION
  - Stand-by and Automatic Stand-by
- 100,000 PROGRAM/ERASE CYCLES per BLOCK
- ELECTRONIC SIGNATURE
  - Manufacturer Code: 20h
  - Device Code, Top Boot Block: DAh
  - Device Code, Bottom Boot Block: DBh
  - Device Code, Dual Boot Block: DEh



TSOP40 (N)
10 x 20 mm

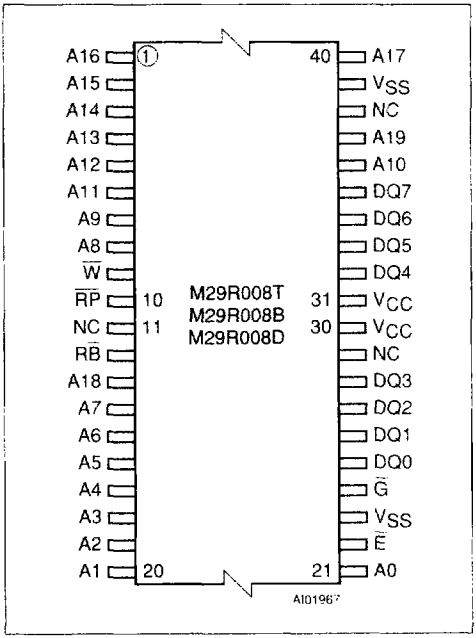
Logic Diagram



DESCRIPTION

The M29R008 is a non-volatile memory that may be erased electrically at the block level and programmed in system on a Byte-by-Byte basis using only the 3.0V V_{CC} supply. The device can also be programmed in standard programmers. The array matrix allows each block to be erased and reprogrammed without affecting the other blocks. The memory features single voltage operations from 2.7V to 3.6V for Read. Program and Erase, and read capability down to 1.8V.

TSOP Pin Connections



Warning: NC = Not Connected.

Signal Names

A0-A19	Address Inputs
DQ0-DQ7	Data Input/Output, Command Inputs
$\overline{E}$	Chip Enable
$\overline{G}$	Output Enable
$\overline{W}$	Write Enable
$\overline{RP}$	Reset / Block Temporary Unprotect
$\overline{RB}$	Ready/Busy Output
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: M29R008T -100 N 1 TR

Operating Voltage

R [1] 1.8V to 3.6V

Array Matrix

T Top Boot
B Bottom Boot
D Dual Boot

Speed

-100 [2] 100ns
-120 120ns
-150 150ns
-200 200ns

Package

N TSOP40
10 x 20mm

Temp. Range

1 0 to 70 °C
5 –20 to 85 °C
6 –40 to 85 °C

Option

TR Tape & Reel Packing

Notes: 1. This supply voltage range is offered for a speed of 200ns only.
2. This speed is obtained with load capacitance at 30pF.

Devices are shipped from the factory with the memory content erased (to FFh).