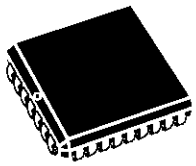
SGS-THOMSON MICROELECTRONICS

M29V040

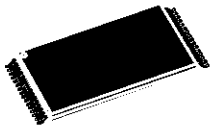
LOW VOLTAGE SINGLE SUPPLY 4 Megabit (512K x 8, Sector Erase) FLASH MEMORY

DATA BRIEFING

- FAST ACCESS TIME: 120ns
- 3.3V ± 0.3V SUPPLY VOLTAGE for PROGRAM and ERASE OPERATIONS
- 3.3V ± 0.3V SUPPLY VOLTAGE in READ OPERATIONS
- BYTE PROGRAMMING TIME: 15µs typical
- ERASE TIME
  - Sector: 1.0 sec typical
  - Bulk: 2.5 sec typical
- PROGRAM/ERASE CONTROLLER (P/E.C.)
  - Program Byte-by-Byte
  - Data Polling and Toggle Protocol for P/E.C. Status
- MEMORY ERASE in SECTORS
  - 8 Sectors of 64K Bytes each
  - Sector Protection
  - Multisector Erase
- ERASE SUSPEND and RESUME MODES
- 100,000 PROGRAM/ERASE CYCLES per SECTOR
- LOW POWER CONSUMPTION
  - 25µA typical current in Standby
  - 5mA typical current for Read
  - Automatic CMOS Standby Mode

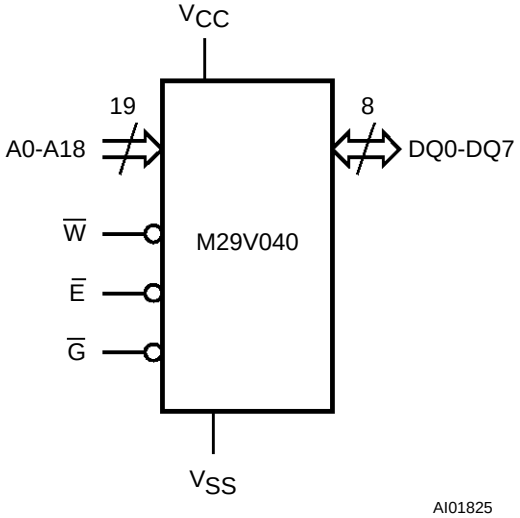


PLCC32 (K)



TSOP32 (N)
8 x 20 mm

Logic Diagram

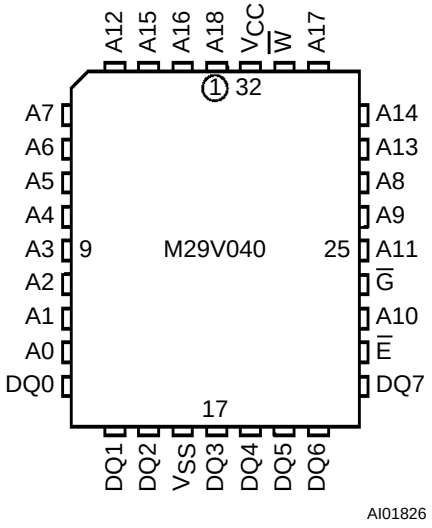


DESCRIPTION

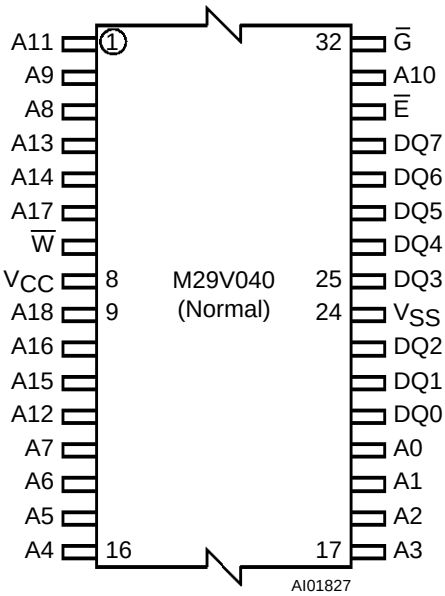
The M29V040 is a non-volatile memory that may be erased electrically at the sector level, and programmed Byte-by-Byte.

The interface is directly compatible with most microprocessors. PLCC32 and TSOP32 (8 x 20mm) packages are available. Reverse pin out is available for the TSOP package upon request.

LCC Pin Connections



TSOP Pin Connections



Signal Names

A0-A18	Address Inputs
DQ0-DQ7	Data Input / Outputs
$\overline{E}$	Chip Enable
$\overline{G}$	Output Enable
$\overline{W}$	Write Enable
V_{CC}	Supply Voltage
V_{SS}	Ground

Ordering Information Scheme

For a list of available options refer to the current Memory Shortform catalogue.
For further information on any aspect of this device, please contact the SGS-THOMSON Sales Office nearest to you.

Example: M29V040 -120 N 1 TR

Operating Voltage

V 3.3V ± 0.3V

Speed

-120 120ns
-150 150ns
-200 200ns

Package

K PLCC32
N TSOP32 8 x 20mm

Temp. Range

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

Option

R Reverse Pinout
TR Tape & Reel Packing