



M29W040

4 Mbit (512Kb x8, Uniform Block) Low Voltage Single Supply Flash Memory

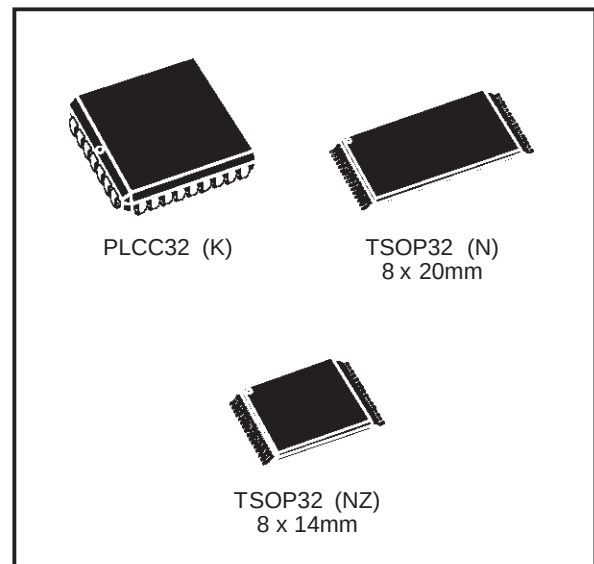
DATA BRIEFING

- 2.7V to 3.6V SUPPLY VOLTAGE for PROGRAM, ERASE and READ OPERATIONS
- FAST ACCESS TIME: 100ns
- BYTE PROGRAMMING TIME: 12µs typical
- ERASE TIME
 - Block: 1.5 sec typical
 - Chip: 2.5 sec typical
- PROGRAM/ERASE CONTROLLER (P/E.C.)
 - Program Byte-by-Byte
 - Data Polling and Toggle bits Protocol for P/E.C. Status
- MEMORY ERASE in BLOCKS
 - 8 Uniform Blocks of 64 KBytes each
 - Block Protection
 - Multiblock Erase
- ERASE SUSPEND and RESUME MODES
- LOW POWER CONSUMPTION
 - Read mode: 8mA typical (at 12MHz)
 - Stand-by mode: 20µA typical
 - Automatic Stand-by mode
- POWER DOWN SOFTWARE COMMAND
 - Power-down mode: 1µA typical
- 100,000 PROGRAM/ERASE CYCLES per BLOCK
- 20 YEARS DATA RETENTION
 - Defectivity below 1ppm/year
- ELECTRONIC SIGNATURE
 - Manufacturer Code: 20h
 - Device Code: E3h

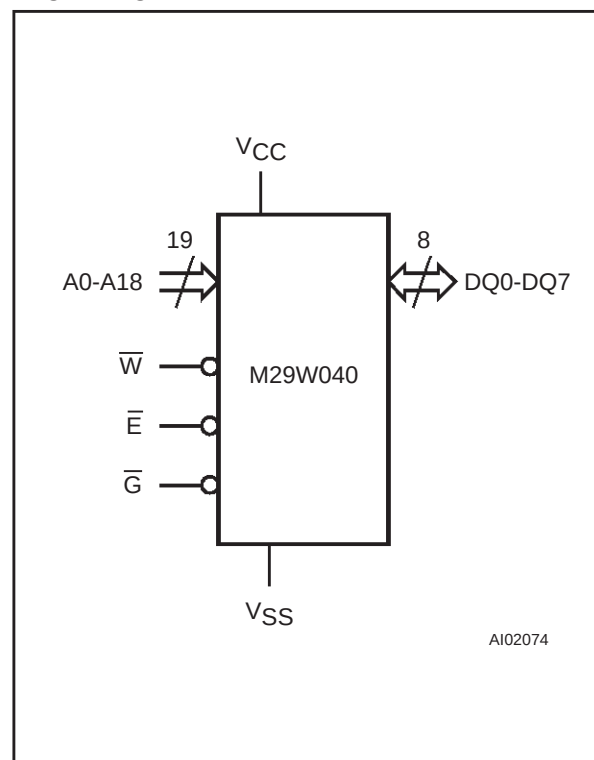
DESCRIPTION

The M29W040 is a non-volatile memory that may be erased electrically at the block level, and programmed Byte-by-Byte.

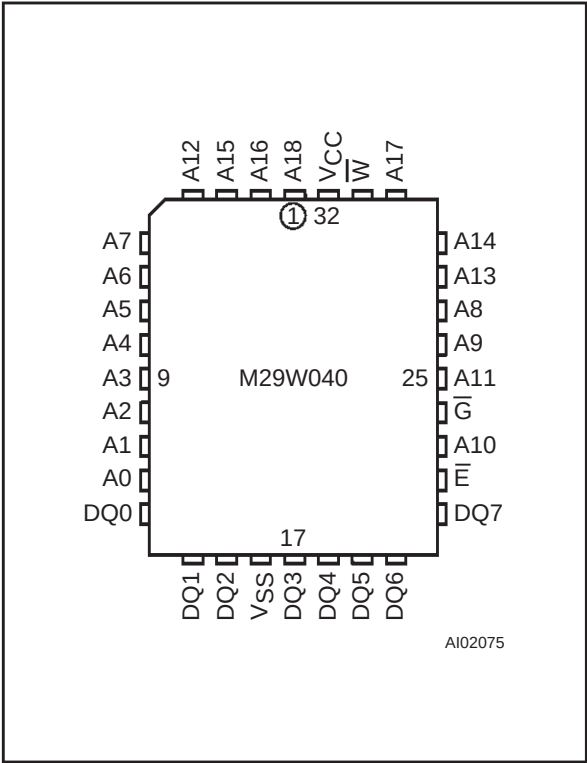
The interface is directly compatible with most microprocessors. PLCC32, TSOP32 (8 x 20mm) and TSOP32 (8 x 14mm) packages are available. Both normal and reverse pin outs are available for the TSOP32 (8 x 20mm) package.



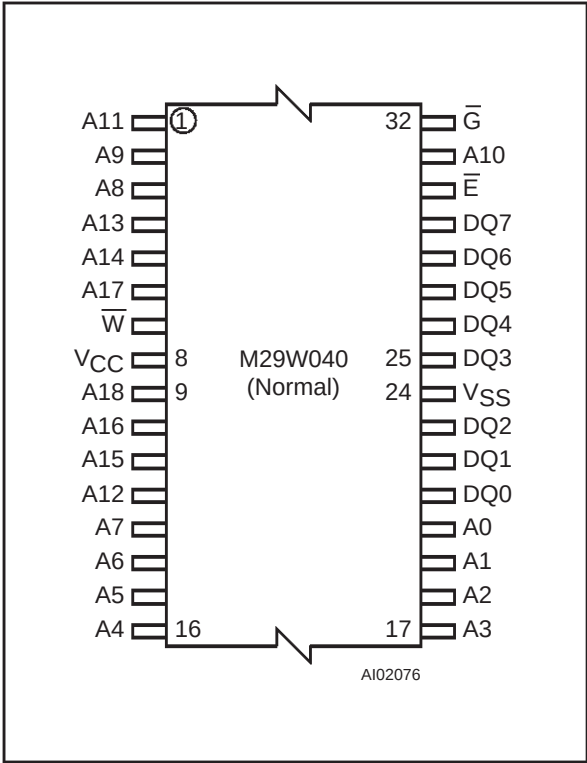
Logic Diagram



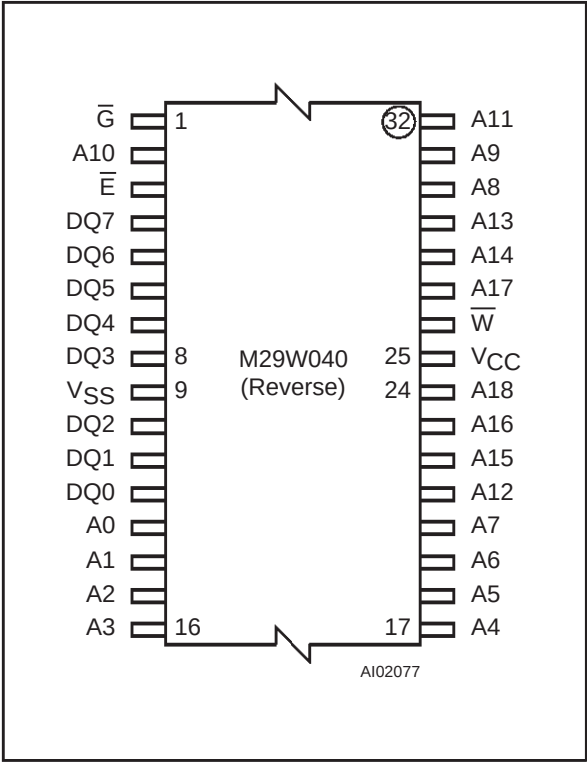
LCC Pin Connections



TSOP Pin Connections



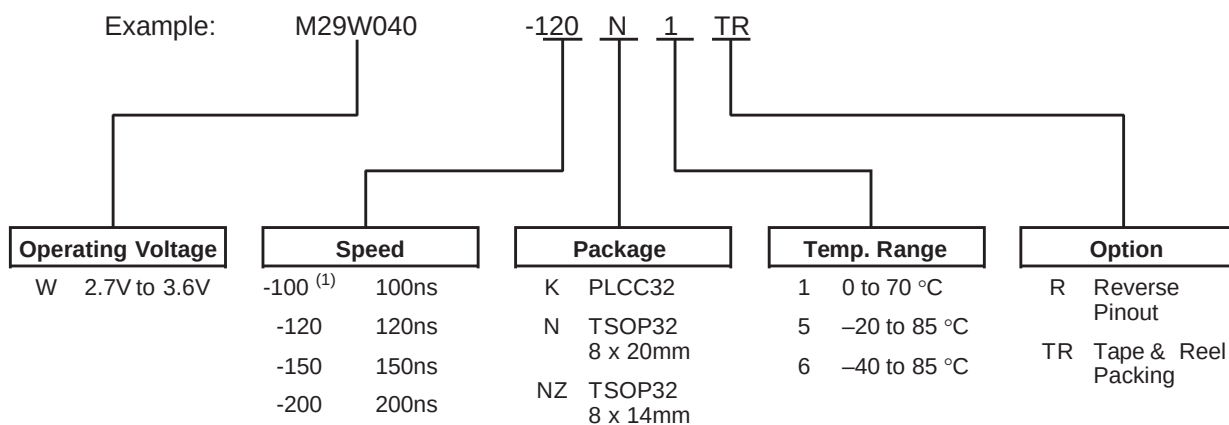
TSOP Reverse Pin Connections



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



Note: 1. This speed is obtained with a supply voltage range of $V_{CC} = 3.3V \pm 0.3V$ and a load capacitance at 30pF.

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

For a list of available options (Speed, Package, etc...) or for further information on any aspect of this device, please contact the STMicroelectronics Sales Office nearest to you.