M29W017B

16 Mbit (2Mb x8, Uniform Block)
Low Voltage Single Supply Flash Memory
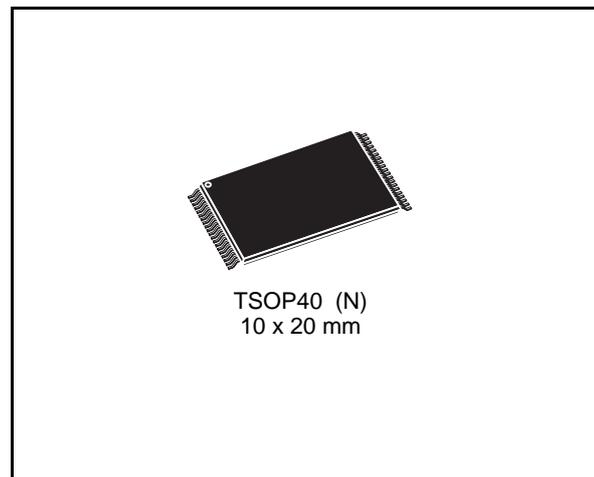
- 2.7V to 3.6V SUPPLY VOLTAGE for PROGRAM, ERASE and READ OPERATIONS
- FAST ACCESS TIME: 80ns
- FAST PROGRAMMING TIME: 13µs typical
- PROGRAM/ERASE CONTROLLER (P/E.C.)
  - Program Byte-by-Byte
  - Status Register bits and Ready/Busy Output
- MEMORY BLOCK for SECURITY CODE
- MEMORY BLOCKS
  - 32 Uniform Blocks of 64 Kbyte
- BLOCK, MULTI-BLOCK and CHIP ERASE
- MULTI BLOCK PROTECTION/TEMPORARY UNPROTECTION MODES
- BLOCK PROTECTION ACCESS COMMAND
- ERASE SUSPEND and RESUME MODES
  - Read and Program another Block during Erase Suspend
- BYPASS MODE
  - Faster Programming Sequence
- LOW POWER CONSUMPTION
  - Stand-by and Automatic Stand-by
- 100,000 PROGRAM/ERASE CYCLES per BLOCK
- 20 YEARS DATA RETENTION
  - Defectivity below 1ppm/year
- ELECTRONIC SIGNATURE
  - Manufacturer Code: 20h
  - Device Code, M29W017B: C8h

TSOP40 (N)
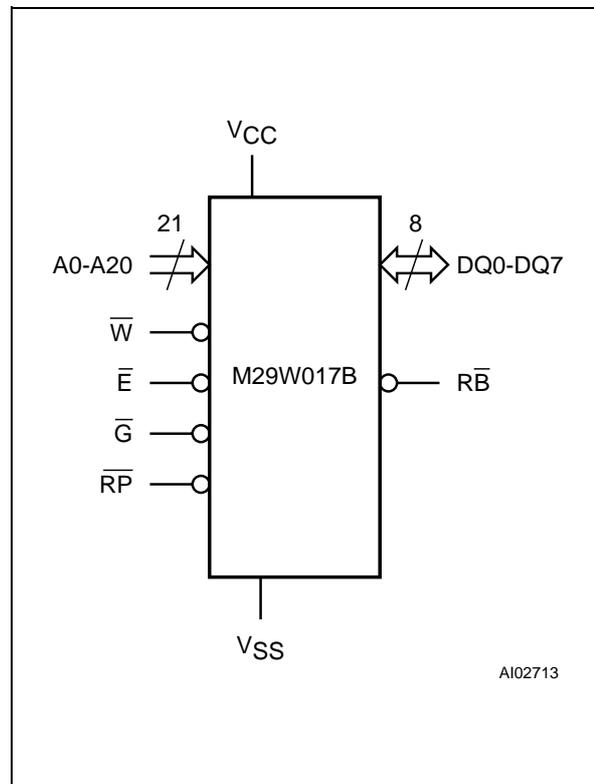10 x 20 mm

Logic Diagram

AI02713

DESCRIPTION

The M29W017B is a non-volatile memory that may be erased electrically at the block or chip level and programmed in-system on a Byte-by-Byte basis using only a single 2.7V to 3.6V V_{CC} supply. For Program and Erase operations the necessary high voltages are generated internally. The device can also be programmed in standard programmers.

The array matrix organisation allows each block to be erased and reprogrammed without affecting other blocks.
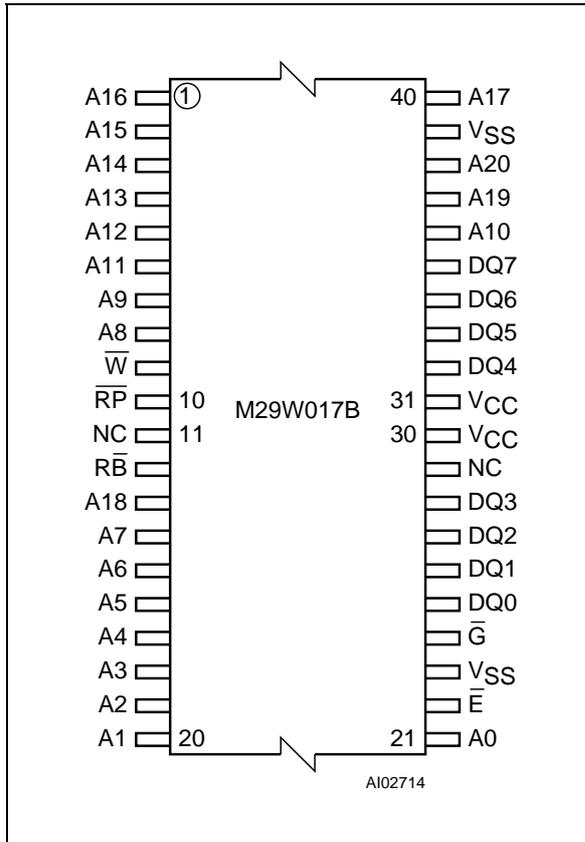
TSOP Pin Connections

Warning: NC = Not Connected.

Ordering Information Scheme

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

Example: M29W017B   90   N   1   T

Operating Voltage
W   2.7V to 3.6V

Speed
80[1]   80ns
90   90ns
120   120ns
150   150ns

Package
N   TSOP40 10 x 20mm

Temp. Range
1   0 to 70 °C
5   −20 to 85 °C
6   −40 to 85 °C

Option
T   Tape & Reel Packing

Note: 1. This speed is obtained with V_{CC} = 3.0V to 3.6V and a load capacitor of 30pF.

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

Signal Names

A0-A20	Address Inputs
DQ0-DQ7	Data Input/Outputs, Command Inputs
E	Chip Enable
G	Output Enable
W	Write Enable
RP	Reset / Block Temporary Unprotect
RB̄	Ready/Busy Output
V_{CC}	Supply Voltage
V_{SS}	Ground