



M29F002T, M29F002NT M29F002B

2 Mbit (256Kb x8, Boot Block) Single Supply Flash Memory

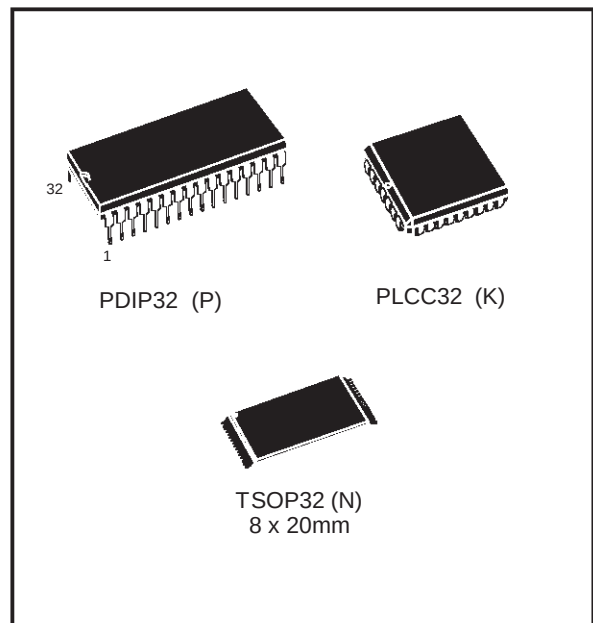
DATA BRIEFING

- 5V $\pm$ 10% SUPPLY VOLTAGE for PROGRAM, ERASE and READ OPERATIONS
- FAST ACCESS TIME: 70ns
- FAST PROGRAMMING TIME: 10 μ s typical
- PROGRAM/ERASE CONTROLLER (P/E.C.)
 - Program Byte-by-Byte
 - Status Register bits
- MEMORY BLOCKS
 - Boot Block (Top or Bottom location)
 - Parameter and Main blocks
- BLOCK, MULTI-BLOCK and CHIP ERASE
- MULTI-BLOCK PROTECTION/TEMPORARY UNPROTECTION MODES
- ERASE SUSPEND and RESUME MODES
 - Read and Program another Block during Erase Suspend
- 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, M29F002T: B0h
 - Device Code, M29F002NT: B0h
 - Device Code, M29F002B: 34h

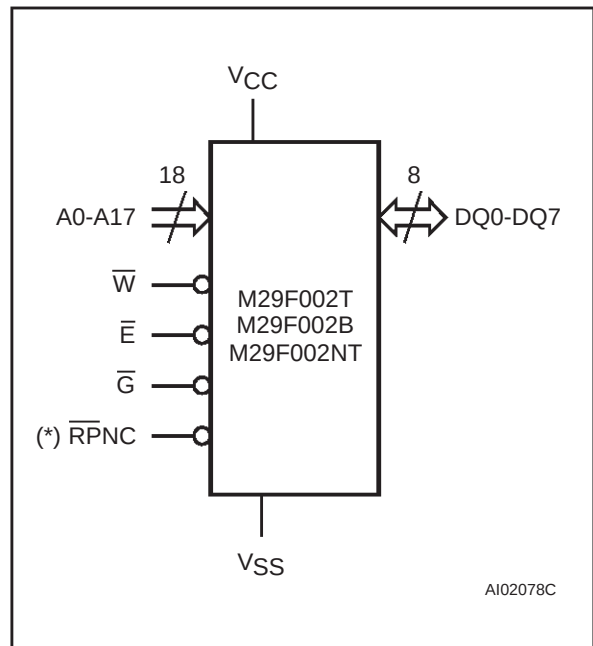
DESCRIPTION

The M29F002 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 5V 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. Blocks can be protected against programming and erase on programming equipment, and temporarily unprotected to make changes in the application. Each block can be programmed and erased over 100,000 cycles.



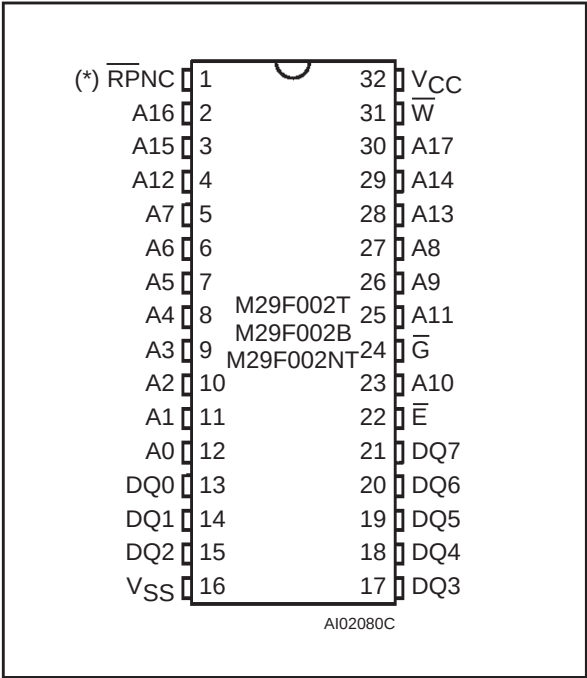
Logic Diagram



Note: * $\overline{RPNC}$ function is not available for the M29F002NT

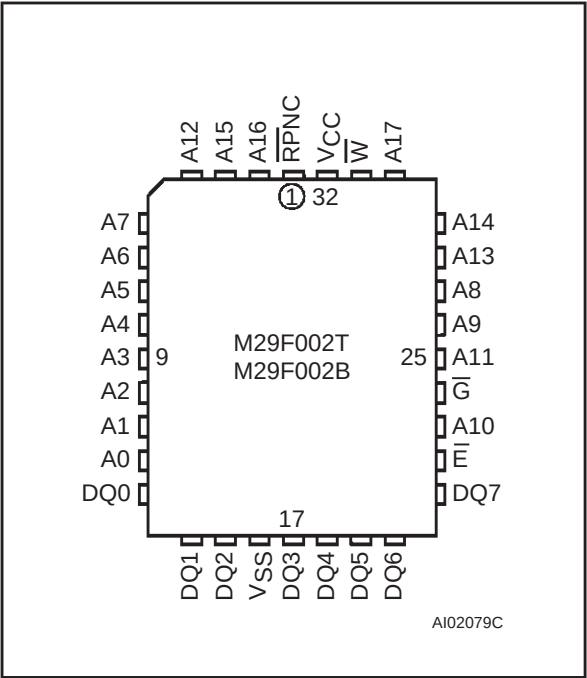
M29F002T, M29F002NT, M29F002B

DIP Pin Connections

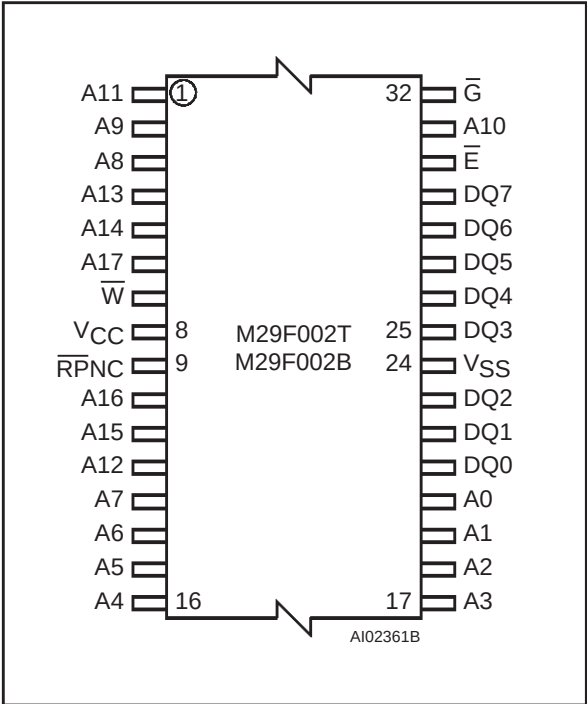


Note: Pin 1 is not connected for the M29F002NT

LCC Pin Connections



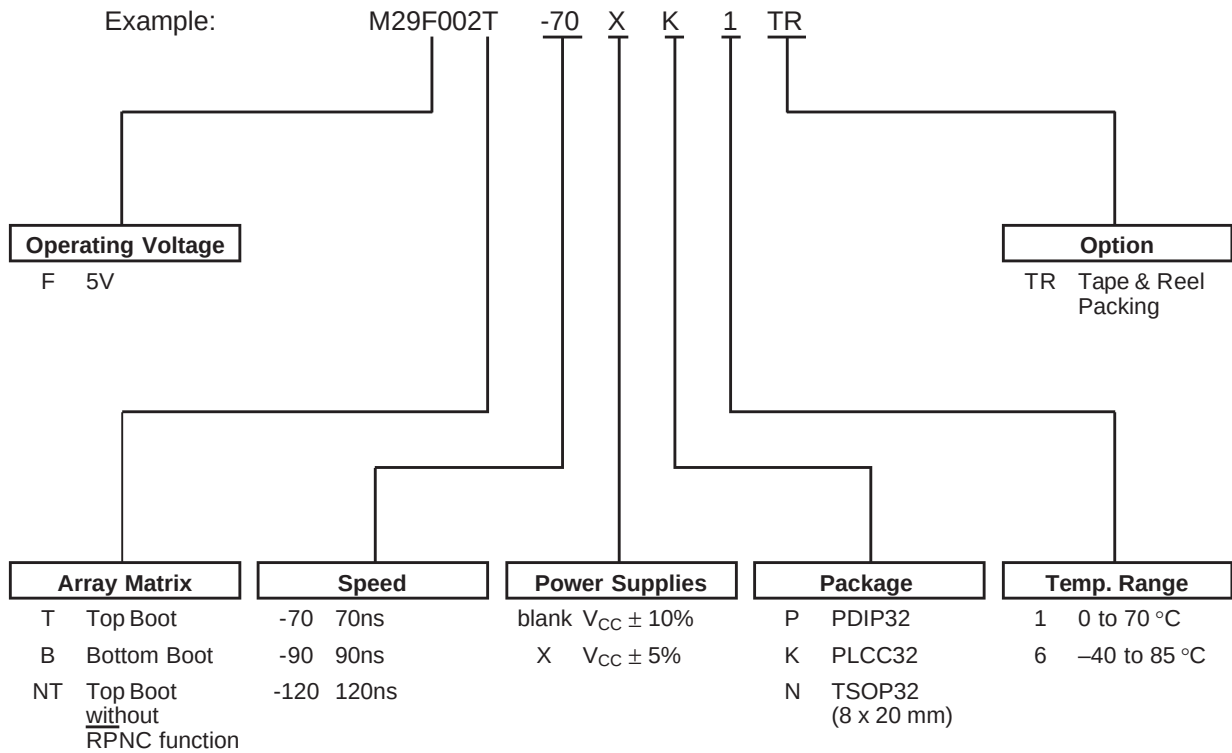
TSOP Pin Connections



Signal Names

A0-A17	Address Inputs
DQ0-DQ7	Data Input/Outputs, Command Inputs
$\overline{\text{E}}$	Chip Enable
$\overline{\text{G}}$	Output Enable
$\overline{\text{W}}$	Write Enable
$\overline{\text{RPNC}}$ (*)	Reset / Block Temporary Unprotect
V_{CC}	Supply Voltage
V_{SS}	Ground

ORDERING INFORMATION SCHEME



Devices 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.