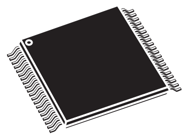
M29F105B

1 Mbit (64Kb x16, Block Erase) Single Supply Flash Memory

DATA BRIEFING

- 5V±10% SUPPLY VOLTAGE for PROGRAM, ERASE and READ OPERATIONS
- FAST ACCESS TIME: 55ns
- FAST PROGRAMMING TIME: 10µs typical
- PROGRAM/ERASE CONTROLLER (P/E.C.)
  - Program Word-by-Word
  - Status Register bits
- MEMORY BLOCKS
  - Boot Block (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
- ELECTRONIC SIGNATURE
  - Manufacturer Code: 0020h
  - Device Code: 0087h



TSOP40 (N)
10 x 14mm

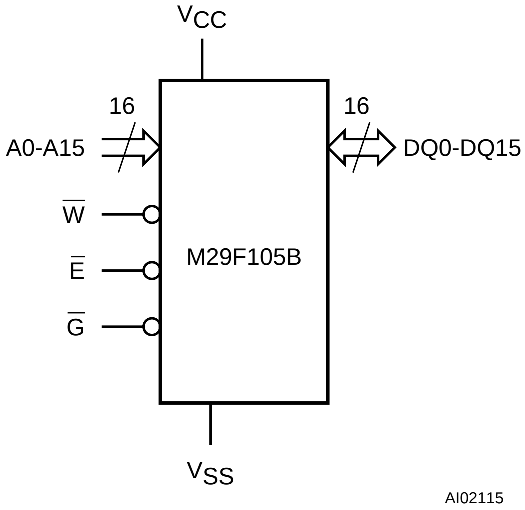
DESCRIPTION

The M29F105B is a non-volatile memory that may be erased electrically at the block or chip level and programmed in-system on a Word-by-Word basis using only a single 5V V_{CC} supply. Word programming takes typically 20µs. For Program and Erase operations the necessary high voltages are generated internally. The device can also be programmed in standard programmers.

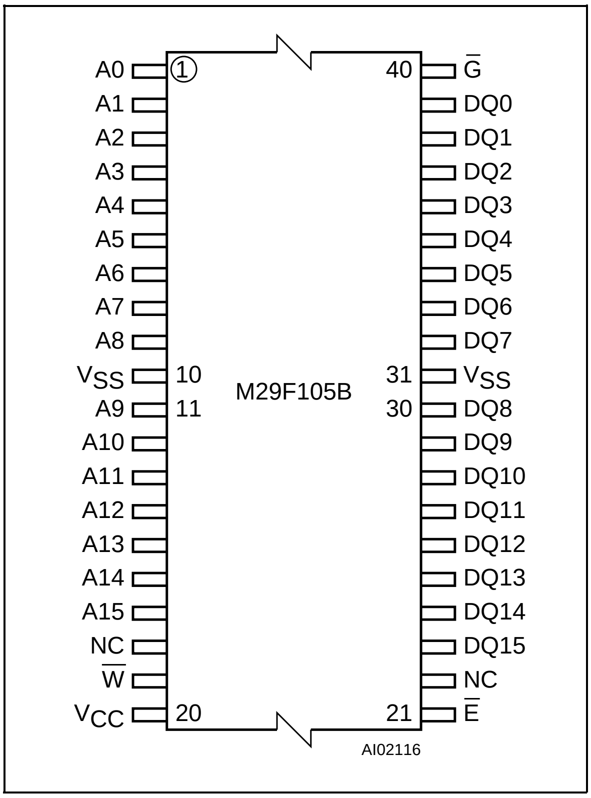
The array matrix organisation allows each block to be erased and reprogrammed without affecting other blocks. Blocks can be protected against programing and erase on programming equipment, and temporarily unprotected to make changes in the application. Each block can be programmed and erased over 100,000 cycles.

Block erase is performed in typically 1.0 second for the main blocks.

Logic Diagram



TSOP Pin Connections



Warning: NC = Not Connected.

Signal Names

A0-A15	Address Inputs
DQ0-DQ7	Data Input/Outputs, Command Inputs
DQ8-DQ15	Data Input/Outputs
$\overline{E}$	Chip Enable
$\overline{G}$	Output Enable
$\overline{W}$	Write Enable
$\overline{RP}$NC	Reset / Block Temporary Unprotect
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 STMicroelectronics Sales Office nearest to you.

Example: M29F105B -70 X N 1 TR

Operating Voltage

F	5V

Array Matrix

B	Bottom Block

Speed

-55	55ns
-70	70ns
-90	90ns

Power Supplies

blank	V_{CC} ± 10%
X	V_{CC} ± 5%

Package

N	TSOP40 10 x 14mm

Temp. Range

1	0 to 70 °C
6	–40 to 85 °C

Option

TR	Tape & Reel Packing

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