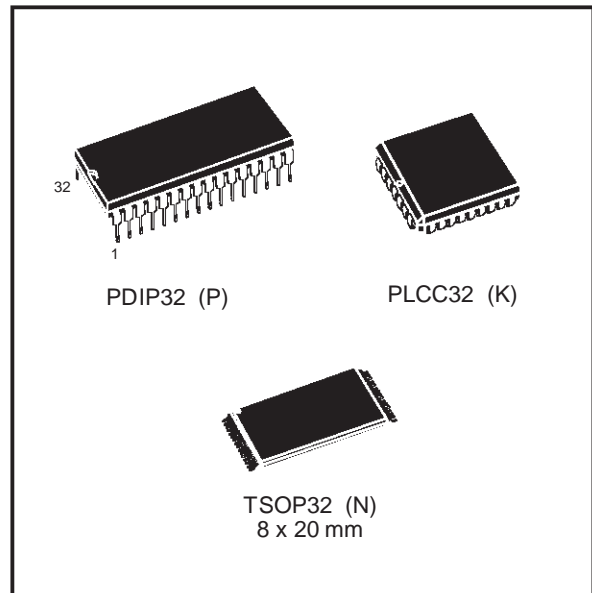




1 Mbit (128Kb x8, Bulk) Flash Memory

DATA BRIEFING

- 5V ±10% SUPPLY VOLTAGE
- 12V PROGRAMMING VOLTAGE
- FAST ACCESS TIME: 70ns
- BYTE PROGRAMING TIME: 10µs typical
- ELECTRICAL CHIP ERASE in 1s RANGE
- LOW POWER CONSUMPTION
 - Stand-by Current: 5µA typical
- 10,000 ERASE/PROGRAM CYCLES
- INTEGRATED ERASE/PROGRAM-STOP TIMER
- OTP COMPATIBLE PACKAGES and PINOUTS
- 20 YEARS DATA RETENTION
 - Defectivity below 1ppm/year
- ELECTRONIC SIGNATURE
 - Manufacturer Code: 20h
 - Device Code: 07h



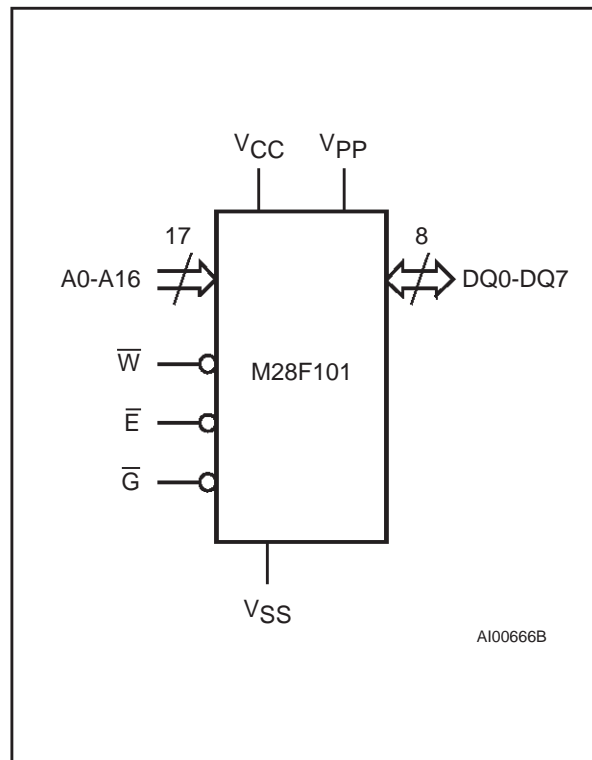
DESCRIPTION

The M28F101 Flash memory is a non-volatile memory that may be erased electrically at the chip level and programmed by byte. It is organised as 128 Kbytes of 8 bits. It uses a command register architecture to select the operating modes and thus provides a simple microprocessor interface. The device is offered in PDIP32, PLCC32 and TSOP32 (8 x 20mm) packages. Both normal and reverse pinouts are available for the TSOP32 package.

Signal Names

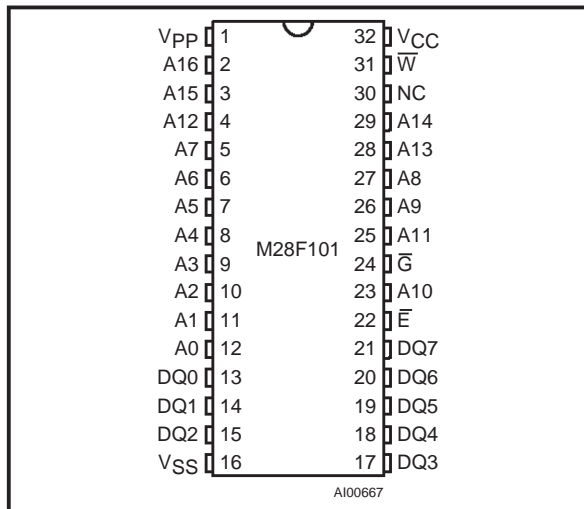
A0-A16	Address Inputs
DQ0-DQ7	Data Inputs / Outputs
\bar{E}	Chip Enable
\bar{G}	Output Enable
\bar{W}	Write Enable
V _{PP}	Program Supply
V _{CC}	Supply Voltage
V _{SS}	Ground

Logic Diagram



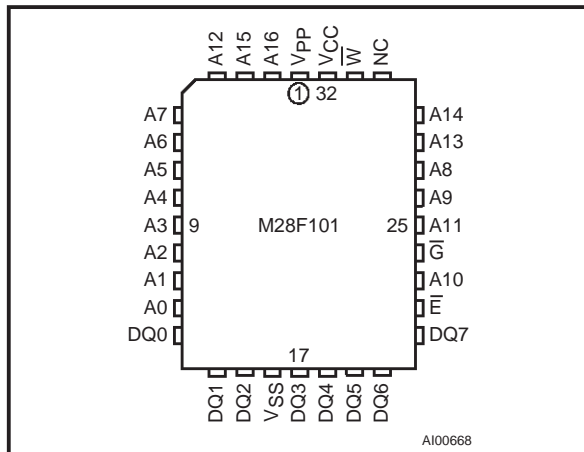
M28F101

DIP Pin Connections



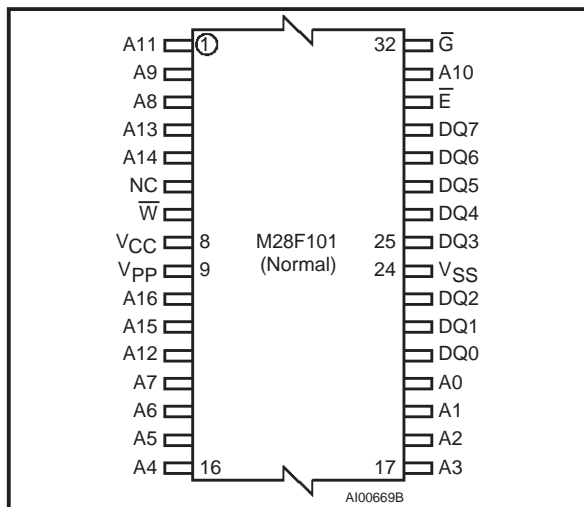
Warning: NC = Not Connected.

LCC Pin Connections



Warning: NC = Not Connected.

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: M28F101 -70 X N 1 TR

Operating Voltage

F 5V

Speed

- 70 70ns
- 90 90ns
- 100 100ns
- 120 120ns
- 150 150ns
- 200 200ns

Power Supplies

- blank V_{CC} ± 10%
- X V_{CC} ± 5%

Package

- P PDIP32
- K PLCC32
- N TSOP32
8 x 20mm

Temp. Range

- 1 0 to 70 °C
- 6 -40 to 85 °C
- 3 -40 to 125 °C

Option

- R Reverse Pinout
- TR Tape & Reel Packing

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