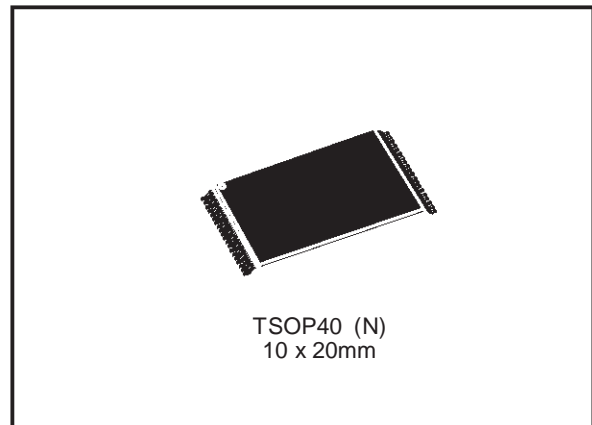




2 Mbit (256Kb x8, Boot Block) Low Voltage Flash Memory

DATA BRIEFING

- 2.7V to 3.6V SUPPLY VOLTAGE
- 12V \pm 5% PROGRAMMING VOLTAGE
- FAST ACCESS TIME: 100ns
- PROGRAM/ERASE CONTROLLER (P/E.C.)
- AUTOMATIC STATIC MODE
- MEMORY ERASE in BLOCKS
 - Boot Block (Top location) with hardware write and erase protection
 - Parameter and Main Blocks
- 100,000 PROGRAM/ERASE CYCLES
- LOW POWER CONSUMPTION
- 20 YEARS DATA RETENTION
 - Defectivity below 1ppm/year
- ELECTRONIC SIGNATURE
 - Manufacturer Code: 20h
 - Device Code: E5h



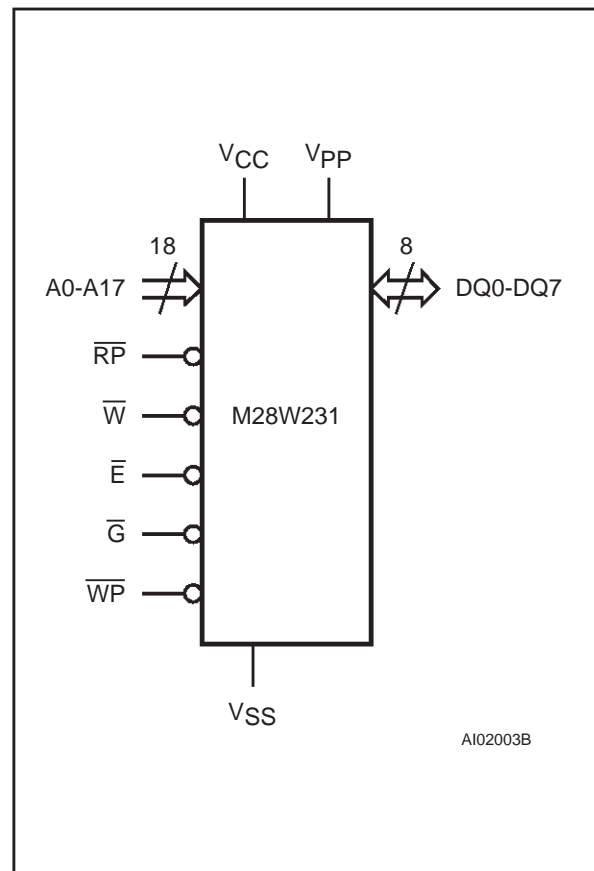
DESCRIPTION

The M28W231 Flash memory is a non-volatile memory that may be erased electrically at the block level and programmed by byte. The interface is directly compatible with most microprocessors. TSOP40 (10 x 20mm) package is used.

Signal Names

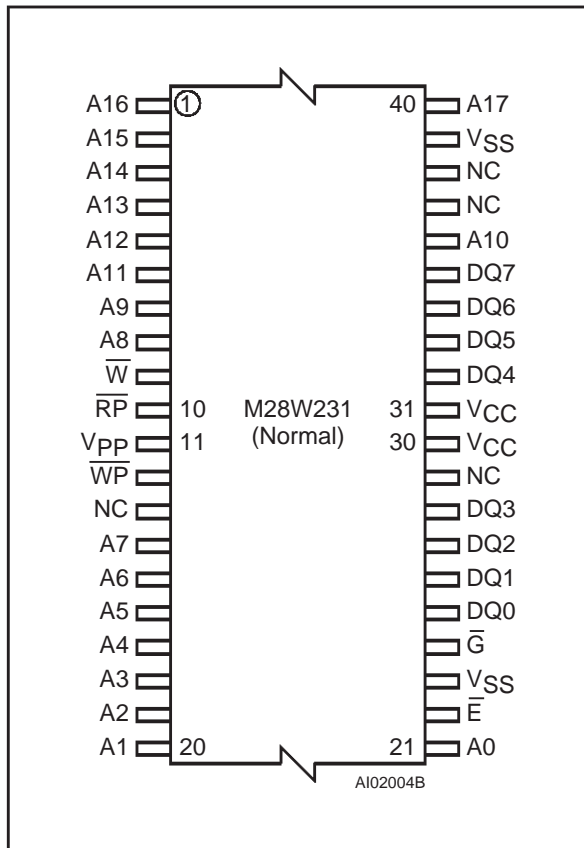
A0-A17	Address Inputs
DQ0-DQ7	Data Input / Outputs
\bar{E}	Chip Enable
\bar{G}	Output Enable
\bar{W}	Write Enable
\bar{WP}	Write Protect
\bar{RP}	Reset/Power Down/Boot Block Unlock
V _{PP}	Program & Erase Supply Voltage
V _{CC}	Supply Voltage
V _{SS}	Ground

Logic Diagram



M28W231

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: M28W231 -100 N 1 TR

Operating Voltage

W 2.7V to 3.6V

Array Matrix

3 Top Boot

Speed

-90 ⁽¹⁾ 90ns
 -120 120ns
 -150 150ns
 -180 180ns

Package

N TSOP40
 10 x 20mm

Temp. Range

1 0 to 70°C
 5 -20 to 85°C
 6 -40 to 85°C

Option

TR Tape & Reel
 Packing

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

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