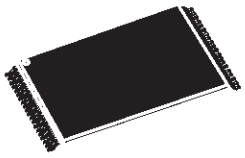
M28W431

4 Mbit (512Kb x8, Boot Block) Low Voltage Flash Memory

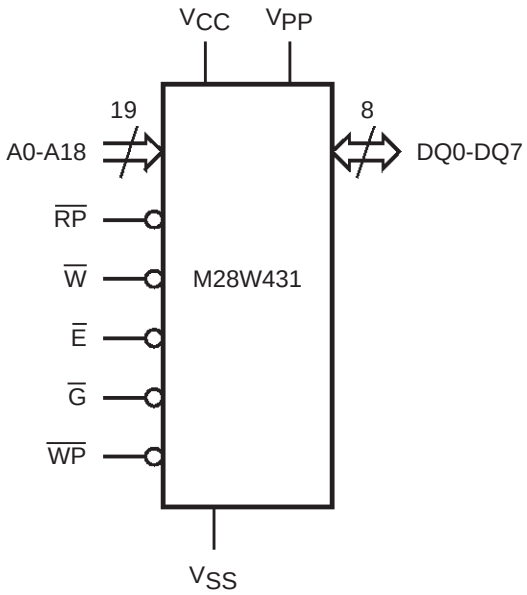
DATA BRIEFING

- 2.7V to 3.6V SUPPLY VOLTAGE
- 12V ± 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: F7h



TSOP40 (N)
10 x 20mm

Logic Diagram



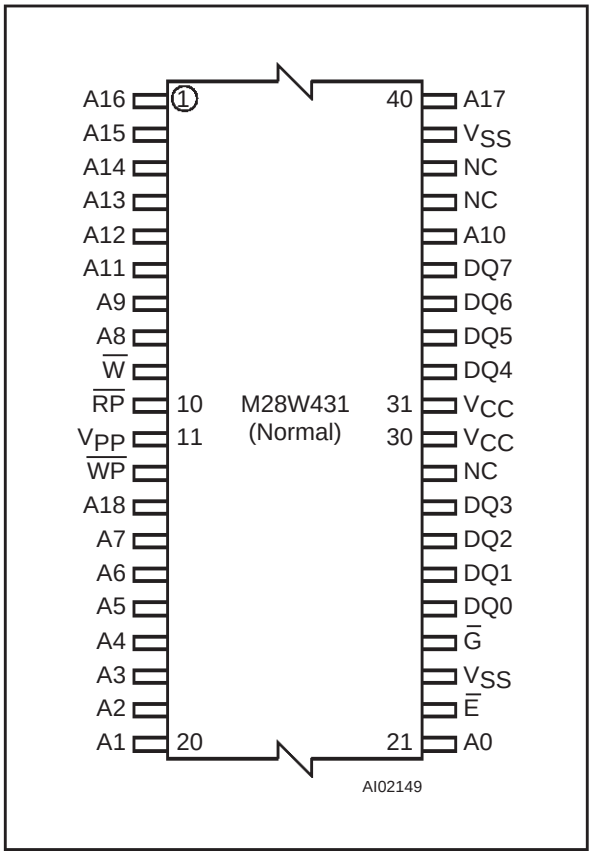
DESCRIPTION

The M28W431 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. The device is offered in TSOP40 (10 x 20mm) package.

Signal Names

A0-A18	Address Inputs
DQ0-DQ7	Data Input / Outputs
$\overline{E}$	Chip Enable
$\overline{G}$	Output Enable
$\overline{W}$	Write Enable
$\overline{WP}$	Write Protect
$\overline{RP}$	Reset/Power Down/Boot Block Unlock
V_{PP}	Program & Erase Supply Voltage
V_{CC}	Supply Voltage
V_{SS}	Ground

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 ST Microelectronics Sales Office nearest to you.

Example: M28W431 -100 N 1 TR

Operating Voltage

W 2.7V to 3.6V

Array Matrix

3 Top Boot

Speed

-100 (1) 100ns
-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 ± 0.3V and a load capacitance at 30pF.

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