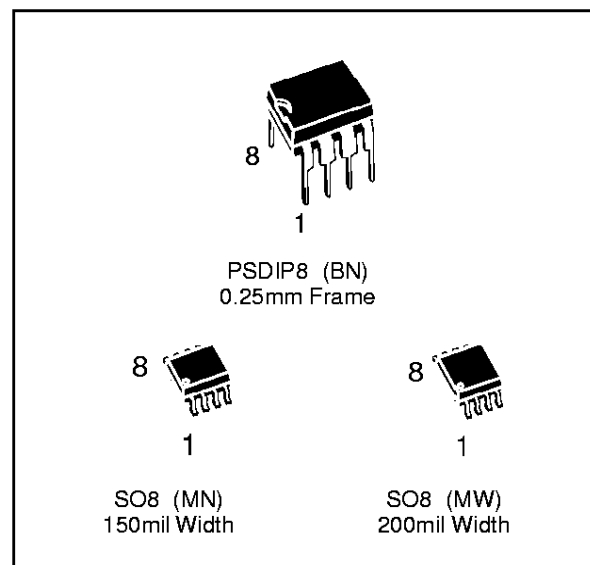


256K/128K SERIAL I²C BUS EEPROM

DATA BRIEFING

- COMPATIBLE with I²C EXTENDED ADDRESSING
- TWO WIRE I²C SERIAL INTERFACE, SUPPORTS 400kHz PROTOCOL
- 100,000 ERASE/WRITE CYCLES
- 40 YEARS DATA RETENTION
- SINGLE SUPPLY VOLTAGE
 - 4.5V to 5.5V for M24256 and M24128
 - 2.5V to 5.5V for M24256-W and M24128-W
 - 1.8V to 5.5V for M24256-R and M24128-R
- HARDWARE WRITE CONTROL
- BYTE and PAGE WRITE (up to 64 BYTES)
- BYTE, RANDOM and SEQUENTIAL READ MODES
- SELF TIMED PROGRAMING CYCLE
- AUTOMATIC ADDRESS INCREMENTING
- ENHANCED ESD/LATCH-UP PERFORMANCES

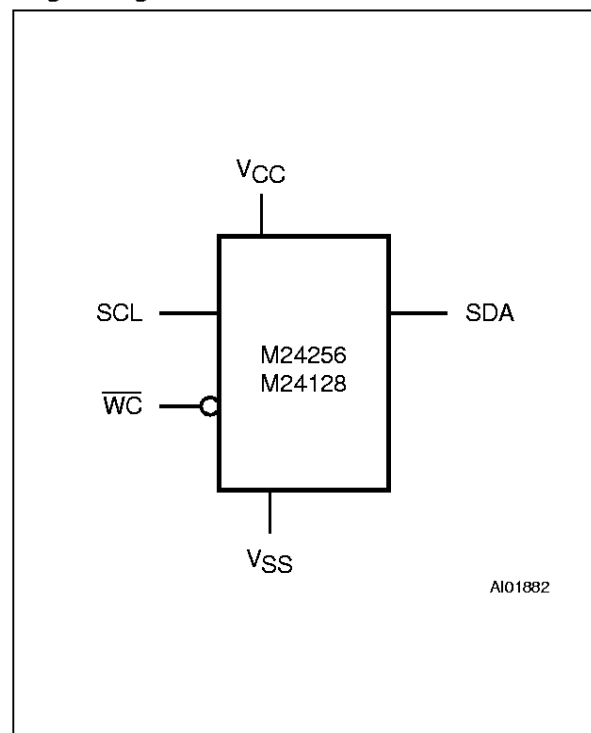


DESCRIPTION

The M24256 and the M24128 are a 256K bit and a 128K bit electrically erasable programmable memories (EEPROM), organized as 32,768 x 8 and as 16,384 x 8 bits respectively. The -W versions operate with a power supply value as low as 2.5V and the -R versions operate down to 1.8V. Both Plastic Dual-in-Line and Plastic Small Outline packages are available.

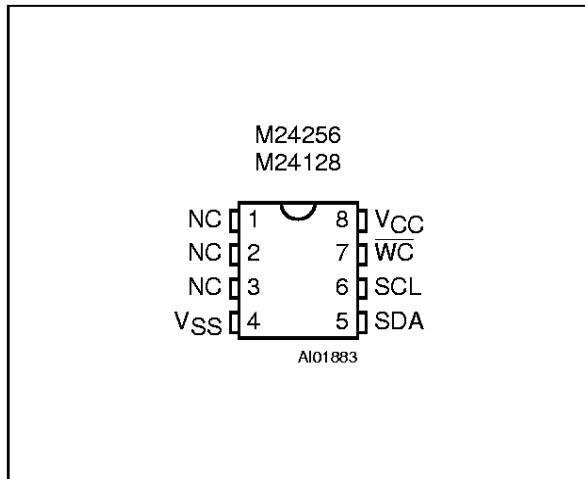
Each memory is compatible with the I²C extended addressing standard, two wire serial interface which uses a bi-directional data bus and serial clock. The Memory carries a built-in 4 bit, unique device identification code (1010) corresponding to the I²C bus definition. The Memory behaves as a slave device in the I²C protocol with all memory operations synchronized by the serial clock. Read and write operations are initiated by a START condition generated by the bus master. The START condition is followed by a stream of 4 bits (identification code 1010), then 3 bits (at 000) to form a 7 bit Device Select, plus one read/write bit and terminated by an acknowledge bit.

Logic Diagram



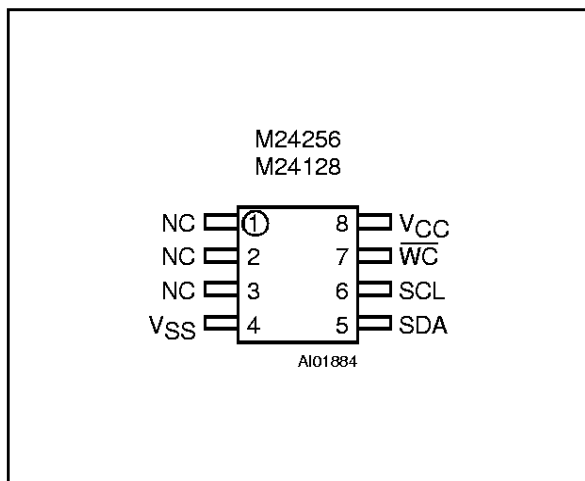
M24256, M24128

DIP Pin Connections



Warning: NC = Not Connected

SO Pin Connections



Warning: NC = Not Connected

Signal Names

SDA	Serial Data Address Input/Output
SCL	Serial Clock
\overline{WC}	Write Control
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 SGS-THOMSON Sales Office nearest to you.

Example: M24256 – R MW 1 T

Density

256 256K (32 x 8)

128 128K (16 x 8)

Operating Voltage

blank 4.5V to 5.5V

W 2.5V to 5.5V

R 1.8V to 5.5V

Package

BN PSDIP8
0.25mm Frame

MN⁽¹⁾ SO8
150mil Width

MW SO8
200mil Width

Temp. Range

1 0 to 70 °C

6 –40 to 85 °C

3⁽²⁾ –40 to 125 °C

Option

T Tape & Reel
Packing

Notes: 1. SO8, 150mil Width, package is available for M24128 series only.

2. Temperature Range on request only.

Devices are shipped from the factory with the memory content set at all "1's" FFh).