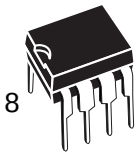
SGS-THOMSON MICROELECTRONICS

M34W02

2Kbit Serial EEPROM with Software Data Protection

DATA BRIEFING

- TWO WIRE I^2C SERIAL INTERFACE SUPPORTS 400kHz PROTOCOL
- 1 MILLION ERASE/WRITE CYCLES
- 40 YEARS DATA RETENTION
- SINGLE SUPPLY VOLTAGE:
  - 4.5V to 5.5V for M34W02
  - 2.5V to 5.5V for M34W02-W
  - 1.8V to 5.5V for M34W02-R
- SOFTWARE DATA PROTECTION
- BYTE and PAGE WRITE (up to 16 BYTES)
- BYTE, RANDOM and SEQUENTIAL READ MODES
- SELF TIMED PROGRAMMING CYCLE
- AUTOMATIC ADDRESS INCREMENTING
- ENHANCED ESD and LATCH-UP PERFORMANCES



PSDIP8 (BN)
0.25mm Frame

SO8 (MN)
150mil Width

TSSOP8 (DW)
169mil Width

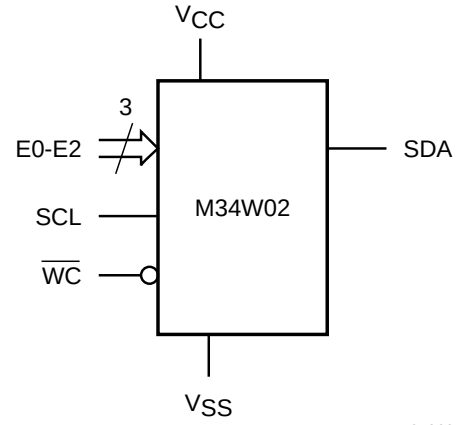
DESCRIPTION

The M34W02 is a 2K bit electrically erasable programmable memory (EEPROM), organized as 256 x 8-bits which includes a Software Data Protection feature. This allows Write Protection of a block of memory with a selectable size and location. By sending the device a specific sequence, it is possible to protect the top or the bottom locations of the memory area. The protection is activated when the $\overline{WC}$ pin is held high.

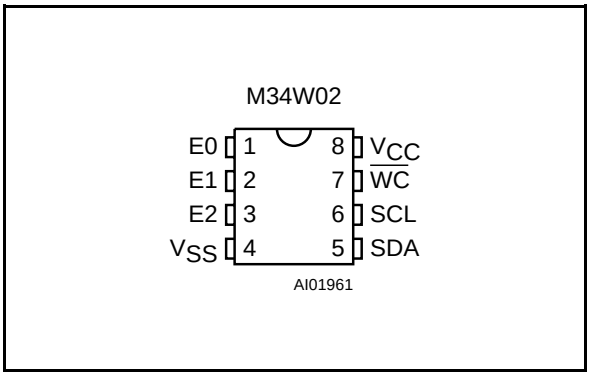
The M34W02 is manufactured in SGS-THOMSON's Hi-Endurance Advanced CMOS technology. The memories operate with a power supply value as low as 1.8V for the M34W02-R.

Plastic Dual In-line, Plastic Small Outline and Thin Shrink Small Outline packages are available.

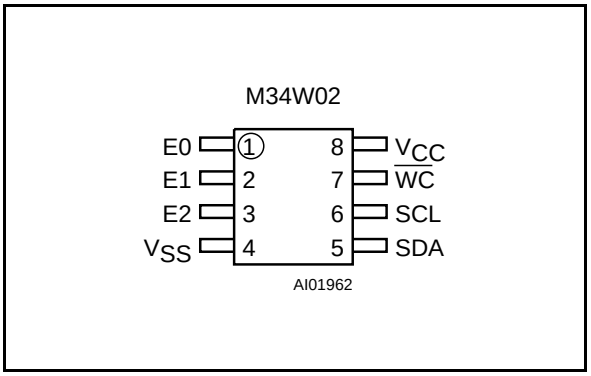
Logic Diagram



DIP Pin Connections



SO and TSSOP Pin Connections



Signal Names

E0-E2	Chip Enable Inputs
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: M34W02 – R MN 6 T

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 SO8 150mil Width
- DW TSSOP8 169mil Width

Temp. Range

- 1 0 to 70 °C
- 6 –40 to 85 °C

Option

- T Tape & Reel Packing

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