M34C02

2 Kbit Serial EEPROM for DIMM Serial Presence Detect
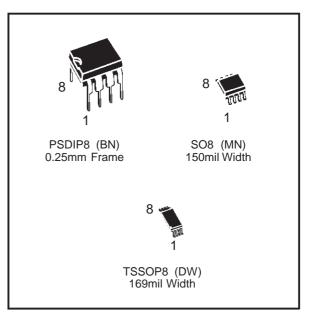
- TWO WIRE I^{2}C SERIAL INTERFACE, SUPPORTS 400kHz PROTOCOL
- 1 MILLION ERASE/WRITE CYCLES
- 40 YEARS DATA RETENTION
- SINGLE SUPPLY VOLTAGE:
  – 4.5V to 5.5V for M34C02
  – 2.5V to 5.5V for M34C02-W
  – 1.8V to 3.6V for M34C02-R
- SOFTWARE WRITE PROTECTION FOR LOWER 128 BYTES
- HARDWARE WRITE PROTECTION FOR ENTIRE ARRAY
- BYTE and PAGE WRITE (up to 16 BYTES)
- BYTE, RANDOM and SEQUENTIAL READ MODES
- SELF TIMED PROGRAMMING CYCLE
- AUTOMATIC ADDRESS INCREMENTING
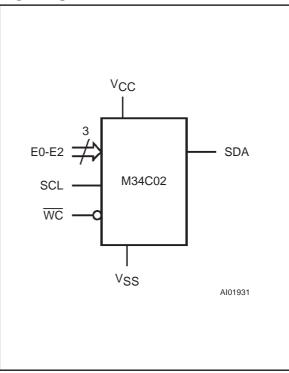- ENHANCED ESD and LATCH-UP PERFORMANCES

PSDIP8 (BN)
0.25mm Frame

SO8 (MN)
150mil Width

TSSOP8 (DW)
169mil Width

DESCRIPTION

The M34C02 is a 2 Kbit electrically erasable programmable memory (EEPROM), organized as 256 x8 bits, designed for use as the Serial Presence Detect Memory for new DRAM DIMM modules.
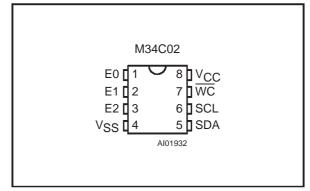
The M34C02 includes a software write protection feature for the bottom half of the memory area. By sending the device a specific sequence, the first 128 bytes of the memory can be permanently write protected. Care must be taken when using this sequence as it cannot be reversed. The M34C02 include also a $\overline{WC}$ input which, when tied to V$_{CC}$, allows the entire memory area to be write protected.
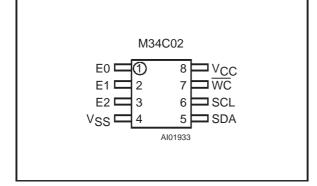
Logic Diagram

AI01931

Complete data available on *DATA-on-DISC CD-ROM* or at *www.st.com*

DIP Pin Connections

M34C02

E0	1	8	V_{CC}
E1	2	7	$\overline{WC}$
E2	3	6	SCL
V_{SS}	4	5	SDA

AI01932

SO and TSSOP Pin Connections

M34C02

E0	1	8	V_{CC}
E1	2	7	$\overline{WC}$
E2	3	6	SCL
V_{SS}	4	5	SDA

AI01933

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 STMicroelectronics Sales Office nearest to you.

Example: M34C02 – R MN 5 T

Operating Voltage

blank 4.5V to 5.5V

W   2.5V to 5.5V

R [2] 1.8V to 3.6V

Package

BN   PSDIP8
0.25mm Frame

MN   SO8
150mil Width

DW   TSSOP8
169mil Width

Temp. Range

1 [1] 0 to 70 °C

5   −20 to 85 °C

6   −40 to 85 °C

Option

T   Tape & Reel
Packing

Note: 1. Temperature range on request only.
2. -R version (1.8V to 3.6V) are only available in temperature ranges 5 or 1.

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