

## SERIAL 4K (512 x 8) EEPROM

### DATA BRIEFING

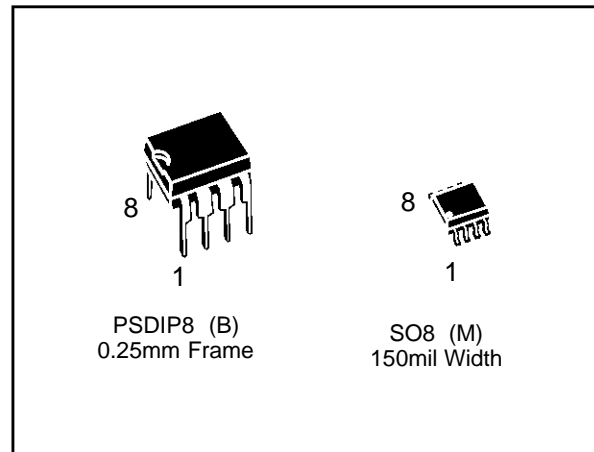
- 1 MILLION ERASE/WRITE CYCLES with 40 YEARS DATA RETENTION
- SINGLE SUPPLY VOLTAGE:
  - 3V to 5.5V for ST24x04 versions
  - 2.5V to 5.5V for ST25x04 versions
  - 1.8V to 5.5V for ST24C04R version only
- HARDWARE WRITE CONTROL VERSIONS: ST24W04 and ST25W04
- PROGRAMMABLE WRITE PROTECTION
- TWO WIRE SERIAL INTERFACE, FULLY I<sup>2</sup>C BUS COMPATIBLE
- BYTE and MULTIBYTE WRITE (up to 4 BYTES)
- PAGE WRITE (up to 8 BYTES)
- BYTE, RANDOM and SEQUENTIAL READ MODES
- SELF TIMED PROGRAMMING CYCLE
- AUTOMATIC ADDRESS INCREMENTING
- ENHANCED ESD/LATCH UP PERFORMANCES

### DESCRIPTION

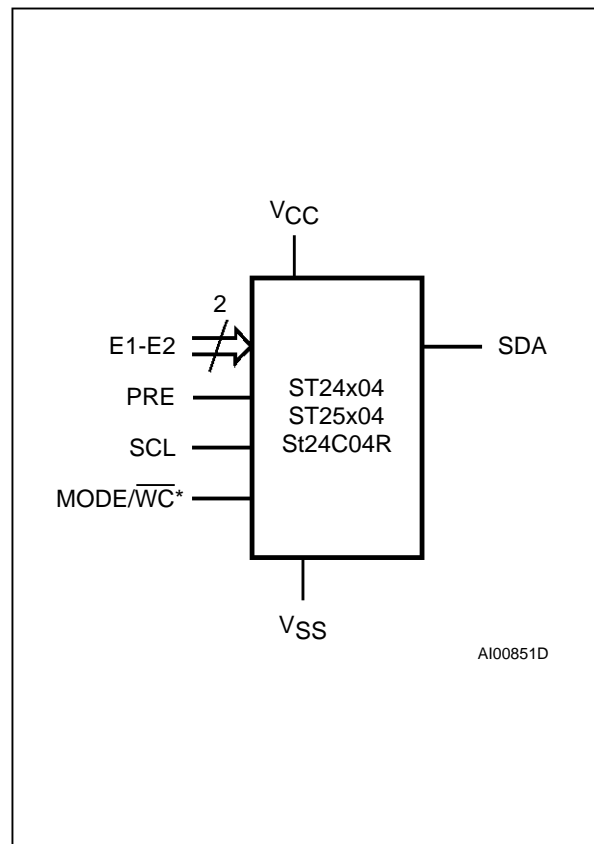
This specification covers a range of 4K bits I<sup>2</sup>C bus EEPROM products, the ST24/25C04, the ST24C04R and the ST24/25W04. In the text, products are referred to as ST24/25x04, where "x" is: "C" for Standard version and "W" for hardware Write Control version.

The ST24/25x04 are 4K bit electrically erasable programmable memories (EEPROM), organized as 2 blocks of 256 x 8 bits. They are manufactured in SGS-THOMSON's Hi-Endurance Advanced CMOS technology which guarantees an endurance of one million erase/write cycles with a data retention of 40 years. The memories operate with a power supply value as low as 1.8V for the ST24C04R only.

Both Plastic Dual-in-Line and Plastic Small Outline packages are available.

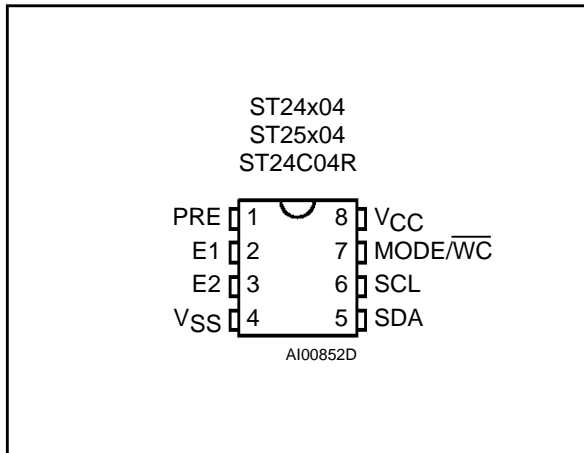


### Logic Diagram



Note: WC signal is only available for ST24/25W04 products.

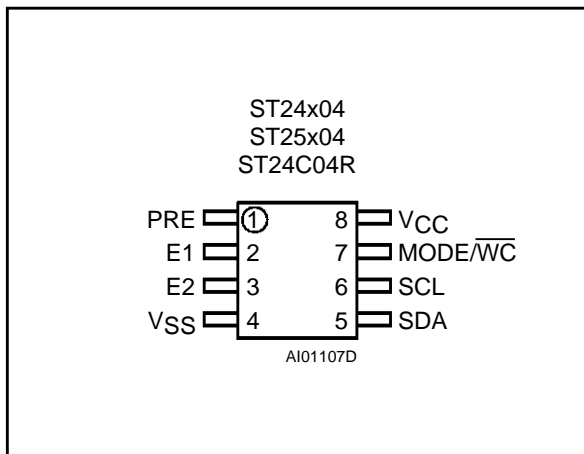
DIP Pin Connections



Signal Names

PRE	Write Protect Enable
E1-E2	Chip Enable Inputs
SDA	Serial Data Address Input/Output
SCL	Serial Clock
MODE	Multibyte/Page Write Mode (C version)
WC	Write Control (W version)
V <sub>CC</sub>	Supply Voltage
V <sub>SS</sub>	Ground

SO Pin Connections



Ordering Information Scheme

For a list of available options refer to the current Memory Shortform catalogue.

For further information on any aspect of this device, please contact the SGS-THOMSON Sales Office nearest to you.

Example: ST24C04 M 1 TR

Operating Voltage	Range
24C04 3V to 5.5V	Standard
24W04 3V to 5.5V	HW Write Control
25C04 2.5V to 5.5V	Standard
25W04 2.5V to 5.5V	HW Write Control
24C04R 1.8V to 5.5V	Standard

Package
B PSDIP8 0.25mm Frame
M SO8 150mil Width

Temp. Range
1 0 to 70 °C
5 -20 to 85 °C
6 -40 to 85 °C
3 -40 to 125 °C

Option
TR Tape & Reel Packing