

# ST24C04, ST25C04 ST24W04, ST25W04

# SERIAL 4K (512 x 8) EEPROM

**DATA BRIEFING** 

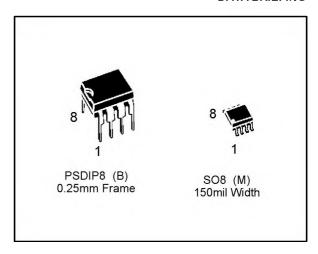
- 1 MILLION ERASE/WRITE CYCLES with 40 YEARS DATA RETENTION
- SINGLE SUPPLY VOLTAGE:
  - 3V to 5.5V for ST24x04 versions
  - 2.5V to 5.5V for ST25x04 versions
  - 1.8V to 5.5V for ST24C04R version only
- HARDWARE WRITE CONTROL VERSIONS: ST24W04 and ST25W04
- PROGRAMMABLE WRITE PROTECTION
- TWO WIRE SERIAL 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**

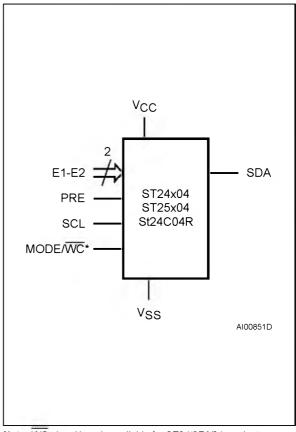
This specification covers a range of 4K bits I<sup>2</sup>C bus EEPROM products, the ST24/25C04, the ST24C04R and the ST24/25W04. In the text, products are referred to as ST24/25x04, where "x" is: "C" for Standard version and "W" for hardware Write Control version.

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.



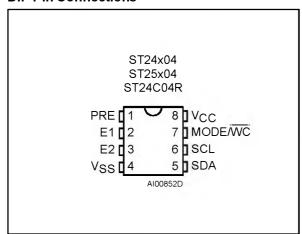
### Logic Diagram



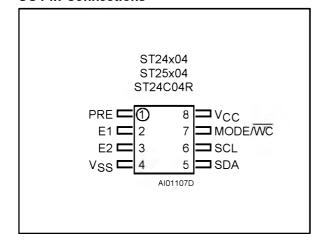
Note: WC signal is only available for ST24/25W04 products.

B24C04/607 1/2

#### **DIP Pin Connections**



### **SO Pin Connections**



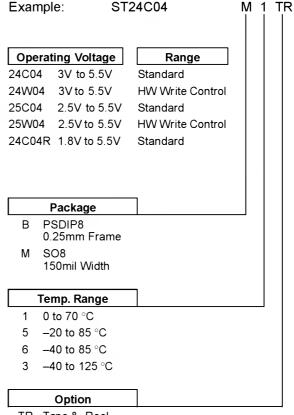
## **Signal Names**

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

**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.



TR Tape & Reel Packing