

# ST24C08, ST25C08 ST24W08, ST25W08

## SERIAL 8K (1K x 8) EEPROM

#### DATA BRIEFING

- 1 MILLION ERASE/WRITE CYCLES with 40 YEARS DATA RETENTION
- SINGLE SUPPLY VOLTAGE:
  - 3V to 5.5V for ST24x08 versions
  - 2.5V to 5.5V for ST25x08 versions
  - 1.8V to 5.5V for ST24C08R version only
- HARDWARE WRITE CONTROL VERSIONS: ST24W08 and ST25W08
- PROGRAMMABLE WRITE PROTECTION
- TWO WIRE SERIAL INTERFACE, FULLY I<sup>2</sup>C BUS COMPATIBLE
- BYTE and MULTIBYTE WRITE (up to 8 BYTES)
- PAGE WRITE (up to 16 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 8K bits  $l^2C$  bus EEPROM products, the ST24/25C08, the ST24C08R and the ST24/25W08. In the text, products are referred to as ST24/25x08, where "x" is: "C" for Standard version and "W" for Hardware Write Control version.

The ST24/25x08 are 8K bit electrically erasable programmable memories (EEPROM), organized as 4 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 ST24C08R only.

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



## Logic Diagram



Note: WC signal is only available for ST24/25W08 products.

## **DIP Pin Connections**



#### **Signal Names**

PRE	Write Protect Enable	
E	Chip Enable Input	
SDA	Serial Data Address Input/Output	
SCL	Serial Clock	
MODE	Multibyte/Page Write Mode (C version)	
WC	Write Control (W version)	
Vcc	Supply Voltage	
Vss	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.





Example: S	ST24C08	M 1 TR 
Operating Voltage   24C08 3V to 5.5V   24W08 3V to 5.5V   25C08 2.5V to 5.5°   25W08 2.5V to 5.5°   24C08R 1.8V to 5.5V	Standard HW Write Control V Standard V HW Write Control	
Package		
B PSDIP8 0.25mm Fram	e	
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		

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Packing