SGS-THOMSON MICROELECTRONICS
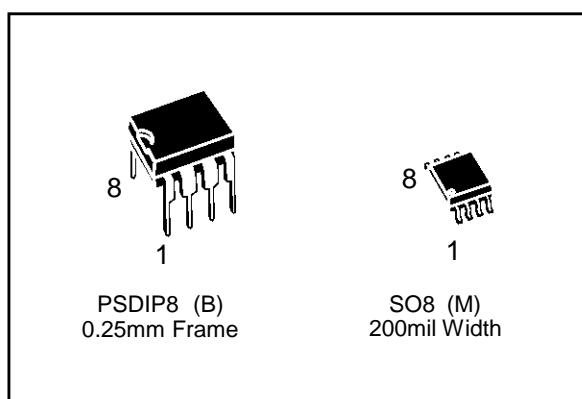
**ST24E256
ST25E256**

SERIAL EXTENDED ADDRESSING COMPATIBLE WITH I^2C BUS 256K (32K x 8) EEPROM
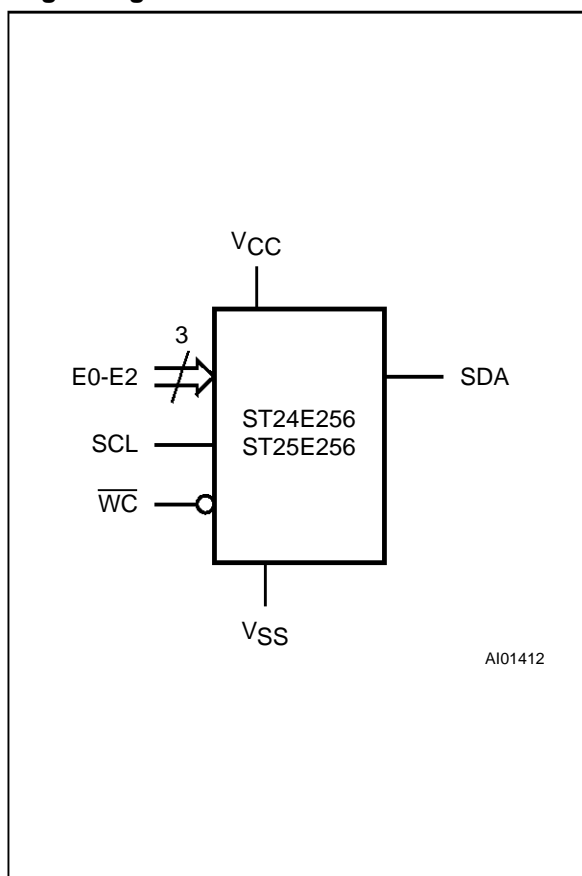
DATA BRIEFING

- COMPATIBLE with I^2C EXTENDED ADDRESSING
- TWO WIRE SERIAL INTERFACE, SUPPORTS 400kHz PROTOCOL
- 100,000 ERASE/WRITE CYCLES, OVER the FULL SUPPLY VOLTAGE RANGE
- 40 YEARS DATA RETENTION
- SINGLE SUPPLY VOLTAGE
  - 4.5V to 5.5V for ST24E256 version
  - 2.5V to 5.5V for ST25E256 version
- WRITE CONTROL FEATURE
- BYTE and PAGE WRITE (up to 64 BYTES)
- BYTE, RANDOM and SEQUENTIAL READ MODES
- SELF TIMED PROGRAMING CYCLE
- AUTOMATIC ADDRESS INCREMENTING
- ENHANCED ESD/LATCH UP PERFORMANCES

PSDIP8 (B)
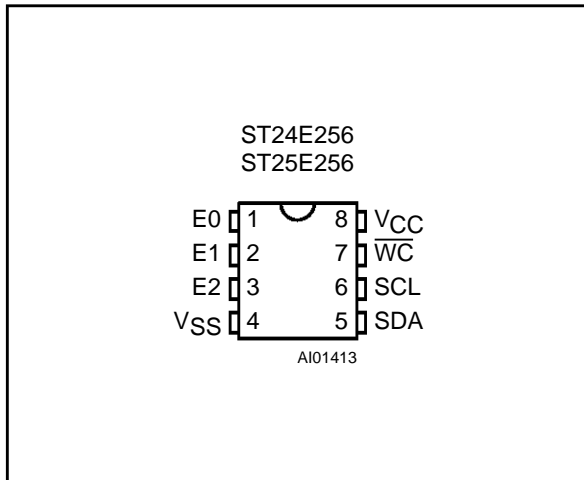0.25mm Frame

SO8 (M)
200mil Width

DESCRIPTION

The ST24E256 and ST25E256 are 256K bit electrically erasable programmable memories (EEPROM), organized as 32,768 x 8 bits. The ST25E256 operates with a power supply value as low as 2.5V. Both Plastic Dual-in-Line and Plastic Small Outline packages are available.

Logic Diagram

V_{CC}

E0-E2 — 3

ST24E256
ST25E256

SDA

SCL

$\overline{WC}$

V_{SS}

AI01412

DIP Pin Connections

```
        ST24E256
        ST25E256

   E0 ⊏ 1      8 ⊐ V_CC
   E1 ⊏ 2      7 ⊐ WC
   E2 ⊏ 3      6 ⊐ SCL
  V_SS ⊏ 4     5 ⊐ SDA
          AI01413
```

SO Pin Connections

```
        ST24E256
        ST25E256

   E0 ⊏ ①      8 ⊐ V_CC
   E1 ⊏ 2      7 ⊐ WC
   E2 ⊏ 3      6 ⊐ SCL
  V_SS ⊏ 4     5 ⊐ SDA
          AI01414
```

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 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.
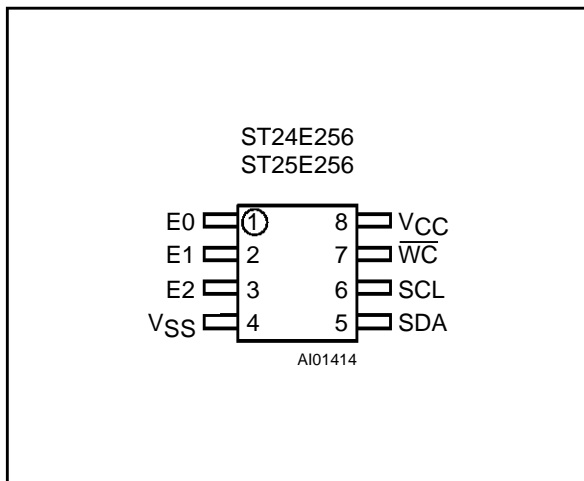
Example: ST24E256   M   1   TR

Operating Voltage	
24	4.5V to 5.5V
25	2.5V to 5.5V

Range	
E	Extended Addressing

Package	
B	PSDIP8 0.25mm Frame
M	SO8 200mil Width

Temp. Range	
1	0 to 70 °C
6	–40 to 85 °C
3	–40 to 125 °C

Option	
TR	Tape & Reel Packing