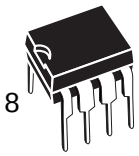
SGS-THOMSON MICROELECTRONICS

M95640, M95320
M95160, M95080

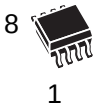
64K/32K/16K/8K SERIAL SPI EEPROM with POSITIVE CLOCK STROBE

DATA BRIEFING

- 100,000 ERASE/WRITE CYCLES
- 40 YEARS DATA RETENTION
- SINGLE SUPPLY VOLTAGE
  - 4.5V to 5.5V for M95xxx
  - 2.5V to 5.5V for M95xxx-W
  - 1.8V to 3.6V for M95xxx-R
- SPI BUS COMPATIBLE SERIAL INTERFACE
- 5 MHz CLOCK RATE MAX
- STATUS REGISTER
- HARDWARE PROTECTION of the STATUS REGISTER
- 32 BYTE PAGE MODE
- SIZEABLE READ ONLY EEPROM AREA
- SELF-TIMED PROGRAMMING CYCLE
- E.S.D.PROTECTION GREATER than 4000V
- SUPPORTS POSITIVE CLOCK SPI MODES

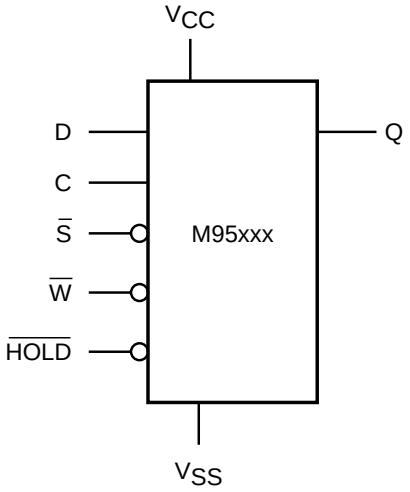


PSDIP8 (BN)
0.25mm Frame



SO8 (MN)
150 mil Width

Logic Diagram



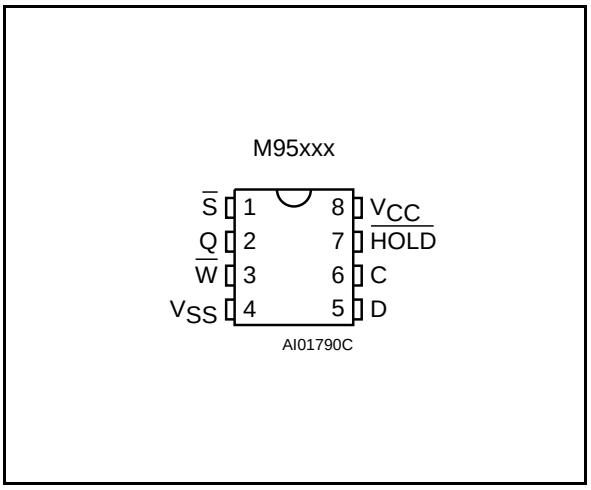
DESCRIPTION

The M95xxx is a family of electrically erasable programmable memories (EEPROM) fabricated with SGS-THOMSON's High Endurance Double Polysilicon CMOS technology. Each memory is accessed by a simple SPI bus compatible serial interface. The bus signals are a serial clock input (C), a serial data input (D) and a serial data output (Q).

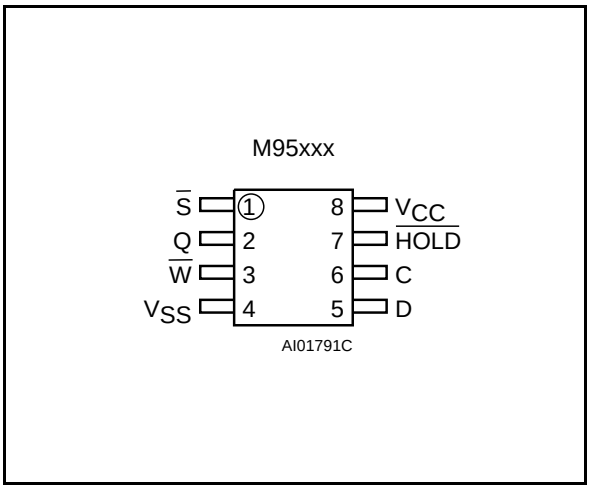
The device connected to the bus is selected when the chip select input ($\overline{S}$) goes low. Communications with the chip can be interrupted with a hold input ($\overline{HOLD}$).

Data is clocked in during the low to high transition of clock C, data is clocked out during the high to low transition of clock C.

DIP Pin Connections



SO Pin Connections



Signal Names

C	Serial Clock
D	Serial Data Input
Q	Serial Data Output
$\overline{S}$	Chip Select
$\overline{W}$	Write Protect
$\overline{HOLD}$	Hold
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 SGS-THOMSON Sales Office nearest to you.

Example: M95xx0 – R MN 5 T

Density
- 64 64K (8K x 8)
- 32 32K (4K x 8)
- 16 16K (2K x 8)
- 08 08K (1K x 8)

Data Strobe
- 0 Note 1

Operating Voltage
- blank 4.5V to 5.5V
- W 2.5V to 5.5V
- R (4) 1.8V to 3.6V

Package
- BN PSDIP8 0.25mm Frame
- MN SO8 150mil Width

Temp. Range
- 1 (2) 0 to 70 °C
- 5 –20 to 85 °C
- 6 –40 to 85 °C
- 3 (3) –40 to 125 °C

Option
- T Tape & Reel Packing

Notes: 1. Data In is strobed on rising edge of the clock (C) and Data Out is synchronized from the falling edge of the clock.
2. Temperature range on request only,
3. Produced with High Reliability Certified Flow (HRCF), in V_{CC} range 4.5V to 5.5V only.
4. -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).