



M93S66, M93S56, M93S46

4K/2K/1K (x16) SERIAL MICROWIRE BUS EEPROM with BLOCK PROTECTION

DATA BRIEFING

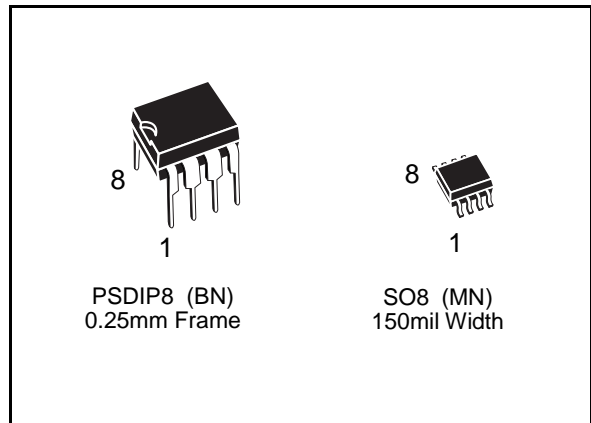
- INDUSTRY STANDARD MICROWIRE BUS
- 1 MILLION ERASE/WRITE CYCLES, with 40 YEARS DATA RETENTION
- SINGLE ORGANIZATION by WORD (x16)
- WORD and ENTIRE MEMORY PROGRAMMING INSTRUCTIONS
- SELF-TIMED PROGRAMMING CYCLE with AUTO-ERASE
- READY/BUSY SIGNAL DURING PROGRAMMING
- SINGLE SUPPLY VOLTAGE:
 - 4.5V to 5.5V for M93Sx6 version
 - 2.5V to 5.5V for M93Sx6-W version
 - 1.8V to 5.5V for M93Sx6-R version
- USER DEFINED WRITE PROTECTED AREA
- PAGE WRITE MODE (4 words)
- SEQUENTIAL READ OPERATION
- 5ms TYPICAL PROGRAMMING TIME
- ENHANCED ESD and LATCH-UP PERFORMANCES

DESCRIPTION

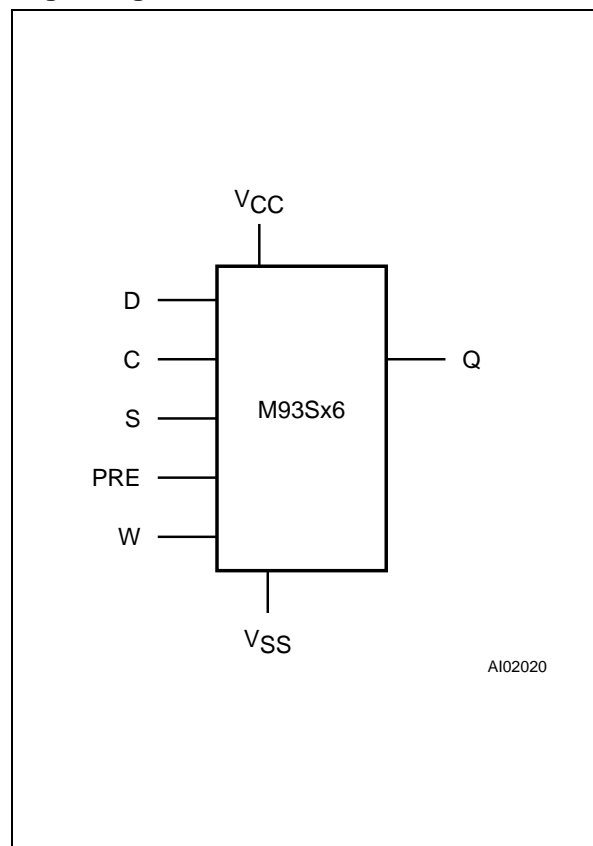
This M93S66/S56/S46 specification covers a range of 4K/2K/1K bit serial EEPROM products respectively. In this text, products are referred to as M93Sx6. The M93Sx6 is an Electrically Erasable Programmable Memory (EEPROM) fabricated with STMicroelectronics' High Endurance Single Polysilicon CMOS technology.

The M93Sx6 memory is accessed through a serial input (D) and output (Q) using the MICROWIRE bus protocol. The M93Sx6 is specified at 5V \pm 10%, the M93Sx6-W specified at 2.5V to 5.5V and the M93Sx6-R specified at 1.8V to 5.5V.

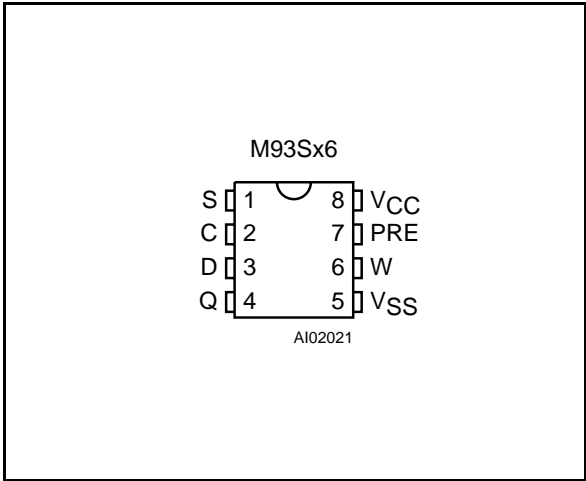
The M93S66/S56/S46 memory is divided into 256/128/64 x16 bit words respectively. These memory devices are available in both PSDIP8 and SO8 package.



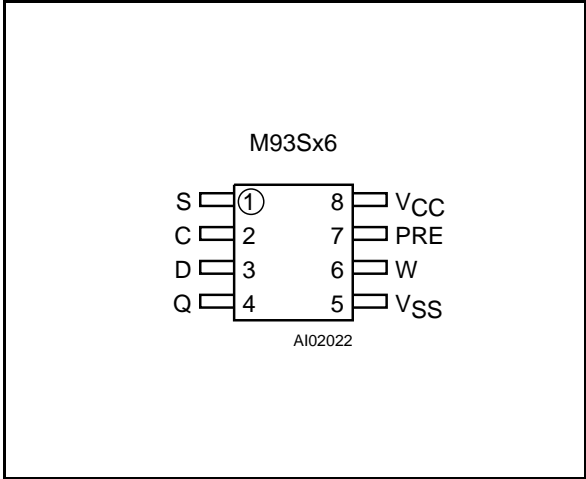
Logic Diagram



DIP Pin Connections



SO Pin Connections



Signal Names

S	Chip Select Input
D	Serial Data Input
Q	Serial Data Output
C	Serial Clock
PRE	Protect Enable
W	Write Enable
VCC	Supply Voltage
VSS	Ground

Ordering Information Scheme

For a list of available options or for further information on any aspect of this device, please contact the STMicroelectronics Sales Office nearest to you.

Example: M93S56 – W MN 6 T

Memory Density	
66	4 Kbit
56	2 Kbit
46	1 Kbit
Operating Voltage	
blank	4.5V to 5.5V
W	2.5V to 5.5V
R	1.8V to 5.5V
Package	
BN	PSDIP8 0.25mm Frame
MN	SO8 150mil Width
Temp. Range	
1 ⁽¹⁾	0 to 70 °C
6	–40 to 85 °C
3 ⁽²⁾	–40 to 125 °C
Option	
T	Tape & Reel Packing

Notes: 1. Temperature range on request only.
2. Produced with High Reliability Certified Flow (HRCF), in VCC range 4.5V to 5.5V at 1MHz only.

Devices are shipped from the factory with the memory content set at all "1's" (FFFFh).