



M39432

Single Chip 4 Mbit Flash and 256 Kbit Parallel EEPROM Memory

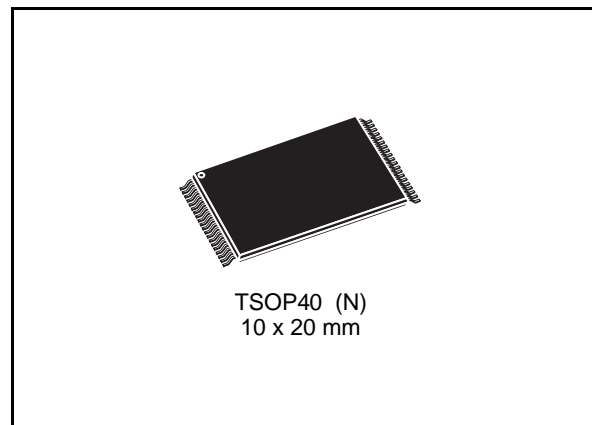
DATA BRIEFING

- 3.3V±10% SUPPLY VOLTAGE for PROGRAM, ERASE and READ OPERATIONS
- 120ns ACCESS TIME (Flash and EEPROM blocks)
- WRITE, PROGRAM and ERASE STATUS BITS
- CONCURRENT MODE (Read Flash while writing to EEPROM)
- 100,000 ERASE/WRITE CYCLES
- 10 YEARS DATA RETENTION
- LOW POWER CONSUMPTION
 - Stand-by mode: 40µA
 - Automatic Stand-by mode
 - Deep Power Down mode
- 64 bytes ONE TIME PROGRAMMABLE MEMORY
- STANDARD EPROM/OTP MEMORY PACKAGE
- EXTENDED TEMPERATURE RANGES

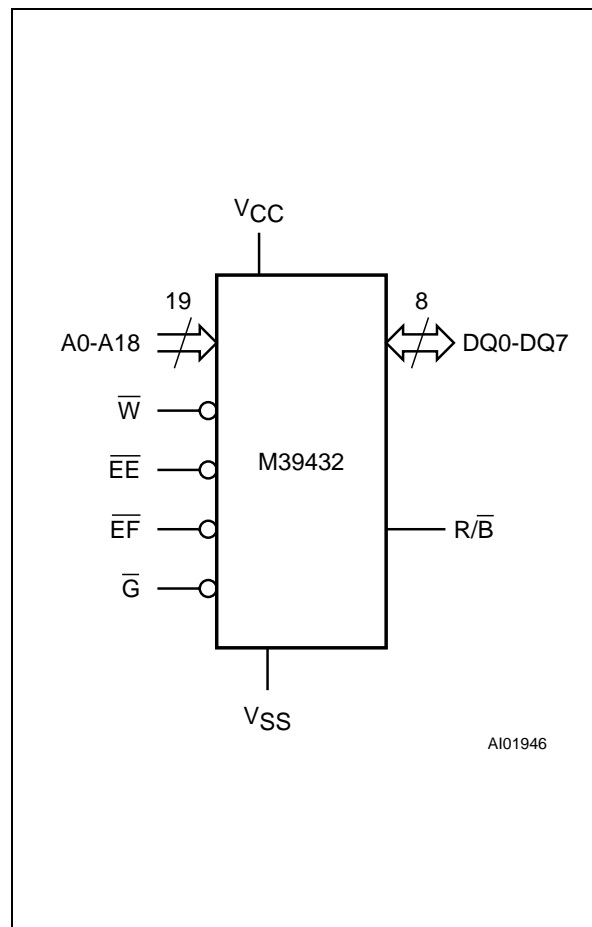
DESCRIPTION

The M39432 is a memory device combining Flash and EEPROM into a single chip and using single supply voltage. The memory is mapped in two blocks: 4 Mbit of Flash memory and 256 Kbit of EEPROM memory. Each space is independent for writing, in concurrent mode the Flash Memory can be read while the EEPROM is being written. An additional 64 bytes of EPROM are One Time Programmable. The M39432 EEPROM memory block may be written by byte or by page of 64 bytes and the integrity of the data can be secured with the help of the Software Data Protection (SDP).

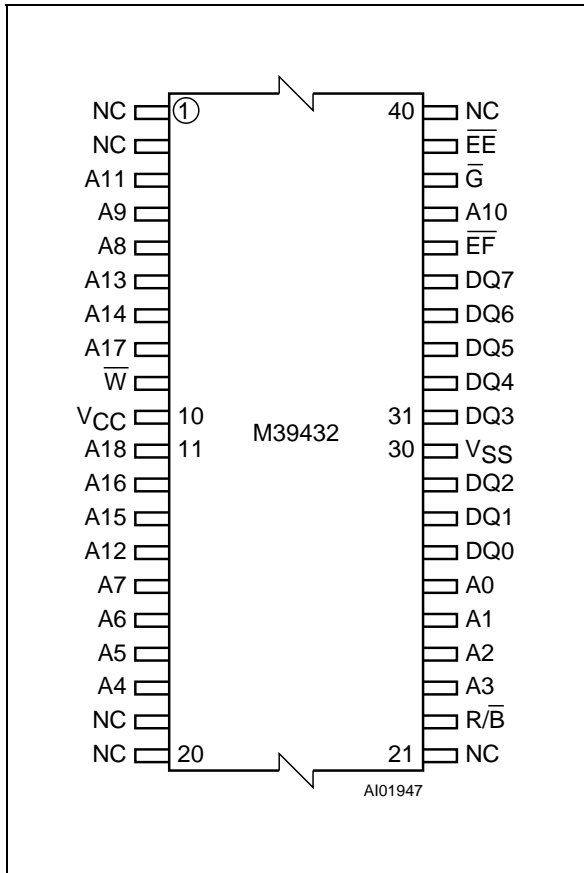
The M39432 Flash Memory block offers 8 sectors of 64 Kbytes, each sector may be erased individually, and programmed Byte-by-Byte. Each sector can be separately protected and unprotected against program and erase. Sector erasure may be suspended, while data is read from other sectors of the Flash memory block (or EEPROM memory block), and then resumed. The Flash memory block is functionally compatible with the M29W040 4Mbit Single Voltage Flash Memory. During a Program or Erase cycle in the Flash memory block or during a Write in the EEPROM memory block, the status of the M39432 internal logic can be read on the Data Outputs DQ7, DQ6, DQ5 and DQ3.



Logic Diagram



TSOP Pin Connections



Warning: NC = Not Connected.

Signal Names

A0-A18	Address Inputs
DQ0-DQ7	Data Input / Outputs
EE-bar	EEPROM Block Enable
EF-bar	Flash Block Enable
G-bar	Output Enable
W-bar	Write Enable
R/B-bar	Ready/Busy Output
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 STMicroelectronics Sales Office nearest to you.

Example: M39432 -15 V NC 1 T

Speed	
-12	120ns
-15	150ns
-20	200ns
-25	250ns
Operating Voltage	
V	3.0V to 3.6V
Package	
NC	TSOP40 10 x 20 mm
Temp. Range	
1	0 to 70 °C
5	-20 to 85 °C
6	-40 to 85 °C
Option	
T	Tape & Reel Packing

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