

FLASH MEMORY

2 MEG x 8

SMARTVOLTAGE (SVT-II), SECTORED
ERASE

FEATURES

- Thirty-two 64KB erase blocks
- Programmable sector protect
- Deep Power-Down Mode: 10 μ A MAX
- Second Generation SmartVoltage[®] Technology (SVT-II):
3.3V $\pm$ 0.3V or 5V $\pm$ 10% V_{CC}
3.3V $\pm$ 0.3V or 5V $\pm$ 10% V_{PP}
- Address access times:
70ns, 90ns, 120ns at 5V V_{CC}
80ns, 100ns, 150ns at 3.3V V_{CC}
- Industry-standard pinouts
- Inputs and outputs are fully TTL-compatible
- Automated write and erase algorithm

OPTIONS

- Timing (5V V_{CC}/3.3V V_{CC})
70ns/80ns access
90ns/100ns access
120ns/150ns access

MARKING

-7
-9
-12

Voltage

- 3.3V or 5V V_{CC}

None

Packages

- Plastic 40L TSOP Type 1 (10 x 20mm) VG
- Plastic SOP (600 mil) SG

- Part Number Example: MT28F016S2VG-7

GENERAL DESCRIPTION

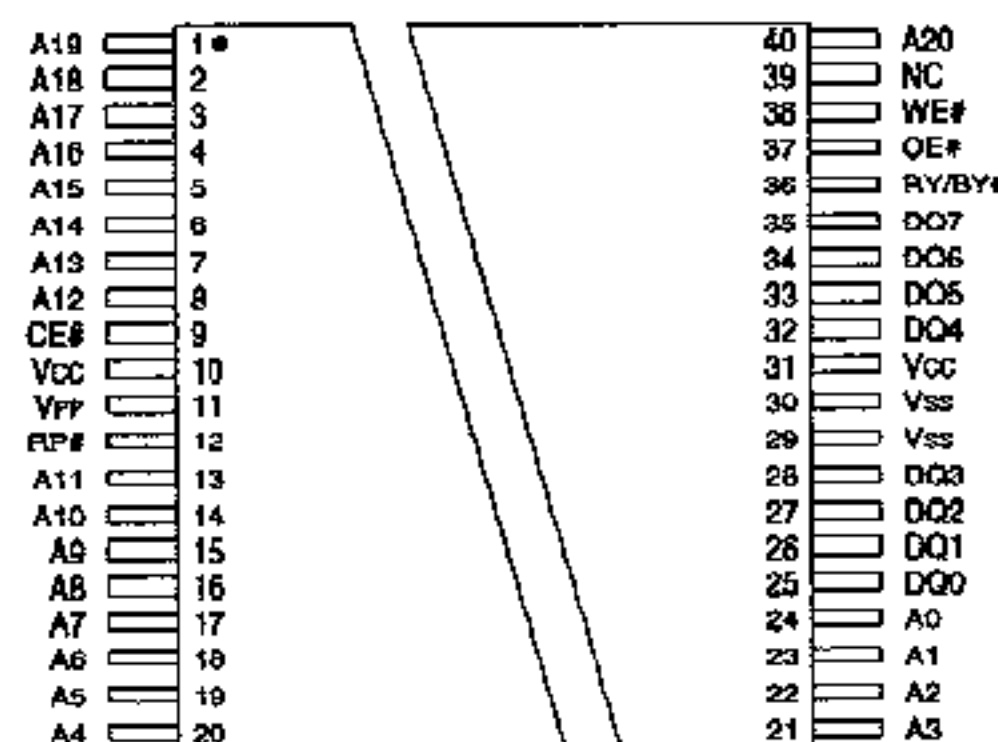
The MT28F016S2 is a nonvolatile, electrically block-erasable (Flash), programmable read-only memory containing 16,777,216 bits. Second Generation SmartVoltage Technology (SVT-II) provides industry-standard, multi- or single-voltage, dual-supply operation. Writing or erasing the device is done with either a 3.3V or 5V V_{PP} voltage, while all operations are performed with a 3.3V or 5V V_{CC} (V_{PP} $\geq$ V_{CC}). It is fabricated with Micron's advanced CMOS floating-gate process.

The MT28F016S2 is organized into 32 separately erasable blocks. To ensure that critical data is protected from accidental erasure or overwrite, each of these blocks is independently hardware-protectable. Writing or erasing a protected block requires driving RP# to a super-voltage in addition to executing the normal write or erase sequences. Any unprotected block is written and erased with no additional security measures.

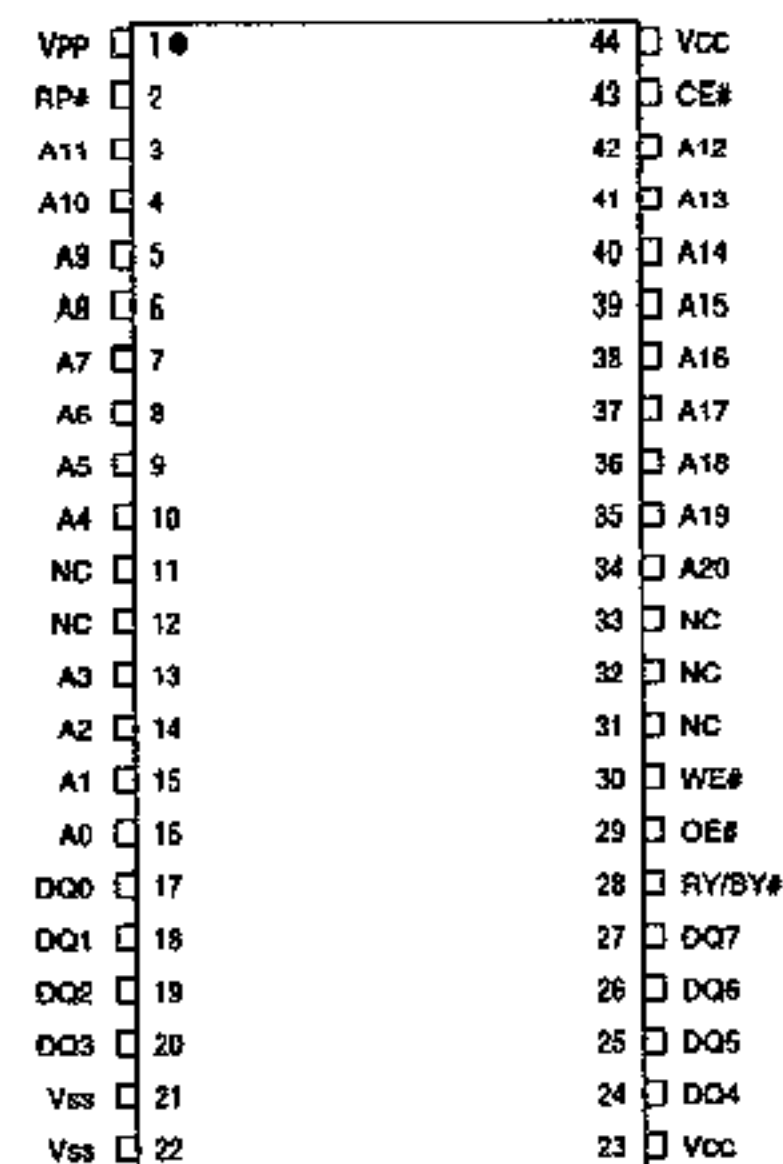
Writes and erases may be interrupted to allow other operations by issuing the write/erase suspend command.

PIN ASSIGNMENT (Top View)

40-Pin TSOP Type I (FB-1)



44-Pin SOP (FA-1)



After this command is issued, read operations may be executed. Suspending an erase also allows write operations to be done.

In addition to status register polling, the MT28F016S2 provides a READY/BUSY# (RY/BY#) output to indicate write and erase completion. Operations are executed by issuing commands from an industry-standard command set.