PRODUCT BRIEF
MX29L811

8M-BIT [1M x 8/512K x 16] CMOS
SINGLE VOLTAGE PAGEMODE FLASH EEPROM

FEATURES

- 3.3V±10% write, erase and read
- Endurance: 10,000 cycles
- Fast random access time: 100/120ns
- Fast pagemode access time: 30/50ns
- Page access depth: 16 bytes/8 words, page address A0, A1, A2
- Sector erase architecture
  - 16 equal sectors of 64k bytes each
  - Sector erase time: 200ms typical
- Auto Erase and Auto Program Algorithms
  - Automatically erases any one of the sectors or the whole chip with Erase Suspend capability
  - Automatically programs and verifies data at specified addresses
- Status Register feature for detection of program or erase cycle completion
- Low VCC write inhibit no larger then 1.8V
- Software and hardware data protection
- Page program operation
  - Internal address and data latches for 128 bytes/64 words per page
  - Page programming time: 5ms typical
- Low power dissipation
  - 50mA active current
  - 20uA standby current
- Two independently Protected sectors
- Industry standard surface mount packaging
  - 44 lead SOP, 48 TSOP(I)

GENERAL DESCRIPTION

The MX29L811 is a 8-mega bit pagemode Flash memory organized as either 512K wordx16 or 1M bytex8. The MX29L811 includes 16 sectors of 64KB(65,536 Bytes or 32,768 words). MXIC's Flash memories offer the most cost-effective and reliable read/write non-volatile random access memory and fast page mode access. The MX29L811 is packaged 44-pin SOP and 48-TSOP(I). It is designed to be reprogrammed and erased in-system or in-standard EPROM programmers.

The standard MX29L811 offers access times as fast as 100ns,allowing operation of high-speed microprocessors without wait. To eliminate bus contention, the MX29L1611 has separate chip enable CE, output enable (OE), and write enable (WE) controls. MXIC's Flash memories augment EPROM functionality with in-circuit electrical erasure and programming. The MX29L811 uses a command register to manage this functionality.

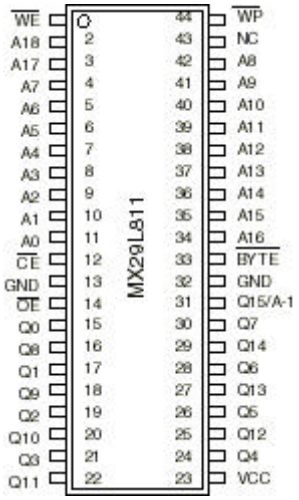
To allow for simple in-system reprogrammability, the MX29L811 does not require high input voltages for programming. Three-volt-only commands determine the operation of the device. Reading data out of the device is similar to reading from an EPROM.

MXIC Flash technology reliably stores memory contents even after 10,000 cycles. The MXIC's cell is designed to optimize the erase and programming mechanisms. In addition, the combination of advanced tunnel oxide processing and low internal electric fields for erase and programming operations produces reliable cycling. The MX29L811 uses a 3.3V±10% VCC supply to perform the Auto Erase and Auto Program algorithms.

The highest degree of latch-up protection is achieved with MXIC's proprietary non-epi process. Latch-up protection is proved for stresses up to 100 milliamps on address and data pin from -1V to VCC +1V.

PIN CONFIGURATIONS

44 SOP(500mil)



PIN DESCRIPTION

SYMBOL	PIN NAME
A0 - A18	Address Input
Q0 - Q14	Data Input/Output
Q15/A-1	Q15(Word mode)/LSB addr.(Byte mode)
CE	Chip Enable Input
OE	Output Enable Input
WE	Write Enable Input
WP*	Sector Write Protect Input
BYTE	Word/Byte Selection Input
VCC	Power Supply
GND	Ground Pin

***Only for 44 SOP**

48 TSOP(NORMAL TYPE)

48 TSOP (REVERSE TYPE)