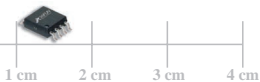


Saifun's SA24C Family of IIC Serial EEPROM Memory Devices

Take your designs to a higher level with the power of Saifun NROM™ memory



Real Size:



Saifun's SA24C family of IIC devices provides small-sized, cost-effective, low-power and high-performance Serial EEPROM memory chips for today's market needs. Using the patented Saifun NROM™ technology, the SA24C devices ensure minimal die size and maximal growth within the same package with increasing densities.

Ease of Use

Saifun's EEPROM devices are easy to use:

- All data is handled internally, with no need for any external RAM
- No need for a Sector Erase followed by a Page Write when in Rewrite mode

Fastest Access Times

The SA24C family sets the industry speed record for serial non-volatile memories:

- The devices run at 100/400/1700/3400 KHz (as compared to the industry standard of 400KHz)

Minimal System Cost

System cost is affected by both footprint and package cost. Saifun's 512Kb and 1Mb IIC Serial EEPROM devices have the same small footprint as the industry standard's 8-pin SOIC packages, and leadless MLF packages.

The devices' small footprint saves board space and reduces system overhead cost. This enables new features and capabilities to be added to your products simply and easily, without costly, time-consuming redesigns. In addition, EEPROM usage eliminates the need for data management by the system.

Easy Migration

The Saifun 512Kb and 1Mb IIC Serial EEPROM devices have 128-byte Page Write. This Page feature, taken together with Saifun NROM technology and the devices' small footprint, gives a clear migration path from low-density IIC EEPROMs (128Kb and 256Kb) to the 512 Kb and 1Mb SA24C family.

Reduced Power Consumption

Saifun NROM technology uses far less power in system standby mode than any other IIC device on the market, which makes the SA24C family ideal for portable applications.

Greater Reliability

Saifun NROM technology has high immunity to point defects, and enables more than 100,000 cycles of endurance and over 20 years of retention. In traditional EEPROM/Flash technologies, insulator point defects may increase over time as a result of repeated program/erase cycles. This may eventually lead to leakage pass-through that causes the cell's entire charge to drain out. With NROM technology, however, as charge is stored in localized states, a defect that causes one charge to leak does not imply leakage of any other charges in its vicinity.

Added Value for All Applications

The SA24C family of devices addresses various target markets:

Communications

- Cordless phones, Fax, Modems and Answering Machines
- Telephone line, Security cards/keys, Routers and Network interface cards

Computers

- Graphic and SCSI cards
- Network cards and Hard-Disk drives

Consumer Applications

- Digital TVs, Set-top boxes and Remote Controls
- Cameras, DVD players, Audio MP3 players and Video games



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Key Features

Small Footprint

- 8-pin SOIC package and low-profile MLF leadless package

Operating Voltage

- Full voltage range, from 2.7 to 3.6 V

Serial Interface Architecture

- IIC 2 wire Protocol

Program

- Page Program (up to 128 bytes) in 8ms (typ)

Low Standby Current

- 2 μ A (maximum)

Endurance

- Greater than 100,000 erase/program cycles per sector

Retention

- More than 20 years

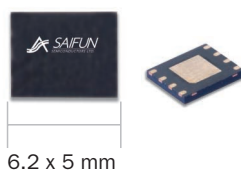
Memory Protection

- Hardware and software write protection for entire or partial array

The SA24C Family of Products

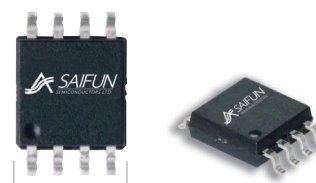
Device	Density	Clock Frequency	Packages
SA24C512	512 Kb, 64K x 8-bit memory	100/400/1700/3400 KHz	MW (SOIC 8 200"), MLF, PDIP8
SA24C1024	1 Mb, 128K x 8-bit memory	100/400/1700/3400 KHz	MW (SOIC 8 200"), MLF, PDIP8

MLF



6.2 x 5 mm

MW



8 x 5.23 mm

MLF	mm
Body Width	6.2
Body Length	5.0
Body Thickness	0.85
Pitch	1.27

MW (soic8 200")	mm
Body Width	5.23
Body Length	5.23
Body Thickness	2.03
Pitch	1.27

FOR ADDITIONAL INFORMATION, VISIT OUR WEB SITE AT WWW.SAIFUN.COM, AND GET ON THE FAST MIGRATION PATH TO HIGHER DENSITIES WITH IIC SERIAL EEPROM!

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