

FM24C64

64Kb FRAM[®] Serial Memory



Features

64K bit Ferroelectric Nonvolatile RAM

- Organized as 8,192 x 8 bits
- High endurance 10 Billion (10^{10}) read/writes
- 10 year data retention at 55° C
- No write delay
- Advanced high-reliability ferroelectric process

Fast Two-wire Serial Interface

- Up to 1 MHz maximum bus frequency
- Direct hardware replacement for EEPROM
- Supports legacy timing for 100 kHz & 400 kHz

Low Power Operation

- True 5V operation
- 150 μ A Active current (100 kHz)
- 10 μ A standby current

Industry Standard Configuration

- Industrial temperature -40° C to +85° C
- 8-pin SOP or DIP

Description

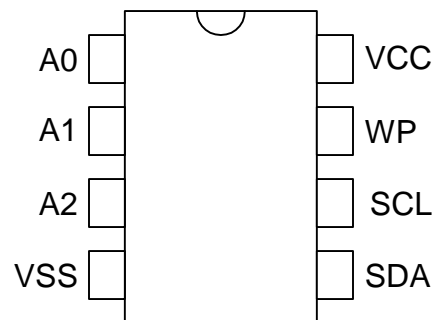
The FM24C64 is a 64-kilobit nonvolatile memory employing an advanced ferroelectric process. A ferroelectric random access memory or FRAM is nonvolatile but operates in other respects as a RAM. It provides reliable data retention for 10 years while eliminating the complexities, overhead, and system level reliability problems caused by EEPROM and other nonvolatile memories.

The FM24C64 performs write operations at bus speed. No write delays are incurred. Data is written to the memory array mere hundreds of nanoseconds after it has been successfully transferred to the device. The next bus cycle may commence immediately. In addition, the product offers substantial write endurance compared with other nonvolatile memories. The FM24C64 is capable of supporting up to $1E10$ -read/write cycles -- far more than most systems will require from a serial memory.

These capabilities make the FM24C64 ideal for nonvolatile memory applications requiring frequent or rapid writes. Examples range from data collection where the number of write cycles may be critical, to demanding industrial controls where the long write time of EEPROM can cause data loss. The combination of features allows more frequent data writing with less overhead for the system.

The FM24C64 provides substantial benefits to users of serial EEPROM, yet these benefits are available in a hardware drop-in replacement. The FM24C64 is provided in industry standard 8-pin packages using a familiar two-wire protocol. They are guaranteed over an industrial temperature range of -40°C to +85°C.

Pin Configuration



Pin Names	Function
A0-A2	Device Select Address
SDA	Serial Data/address
SCL	Serial Clock
WP	Write Protect
VSS	Ground
VCC	Supply Voltage 5V

Ordering Information

FM24C64-P	8-pin plastic DIP
FM24C64-S	8-pin SOP

This data sheet contains design specifications for product development. This product is still under development, these specifications may change in any manner without notice

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