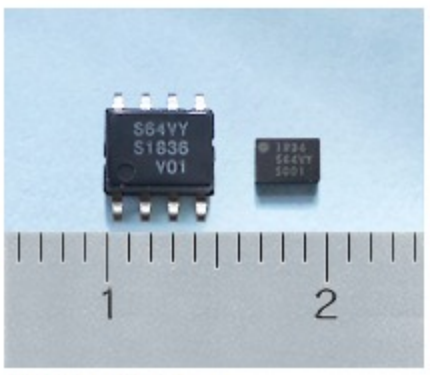
Fujitsu has launched a 64Kbit FRAM with a 5V power supply and a guaranteed operation up to 125℃

Optimal for automobiles and industrial machinery with built-in temperature sensors operating at 5V

Yokohama, Japan, October 30, 2018 – Fujitsu Semiconductor Limited today announced a new 64Kbit FRAM guaranteed to operate up to 125℃, MB85RS64VY. This product has a wide power supply voltage range from 2.7V to 5.5V and an EEPROM compatible serial peripheral interface (SPI). Mass-production is currently available.

FRAM is a non-volatile memory product- which features high read/write endurance, high-speed write operation and low power consumption. FRAM has been adopted by customers who are not satisfied with the specifications of conventional EEPROMs.
This new FRAM product is optimal for high temperature applications like automotive and industrial machinery with built-in 5V-operating electronics components, such as temperature sensors.

Since 2017, Fujitsu has been mass producing 128Kbit and 256Kbit automotive grade FRAM products that operate up to 125℃ operating on 3.3V power supply. Our customers have been requesting for FRAM that can operate at 5V and up to 125℃, especially for applications that includes 5V devices like temperature sensors. Fujitsu Semiconductor is pleased to be able to fulfill this requirement with our new MB85RS64VY. This new 64Kbit FRAM is able to simply design as it can be connected directly to other 5V peripheral electronics components without the need of additional voltage shifting circuits.



MB85RS64VY Package

For instance, the MB85RS64VY can effectively record monitoring data from temperature sensors running on 5V power supplies. In many automobiles, industrial machinery, and robot arms, temperature sensors are used to monitor the temperature operating inside which often reach high temperatures due to the amount of heat they generate usually by the motor inside. Many such temperature sensors operate at 5V and Fujitsu's new FRAM product has the ability to connect effectively to these sensors.

Applications suited for MB85RS64VY

In addition, the MB85RS64VY guarantees 10 trillion read/write cycle times, while similar non-volatile memory EEPROM guarantees a few million times that. As such, for applications that require recording real-time logging data in high speed memory - such as is needed with temperature sensors - the practically unlimited endurance of FRAM is proven to be indispensable over EEPROM with limited read/write cycle.

This FRAM product is housed in an industry-standard 8-pin SOP package, making it easy to replace existing EEPROM that have similar footprint. In addition, 8-pin SON (Small Outline Non-lead) packages with the very small dimensions of 2.00 x 3.00 x 0.75mm are also available for space constrained applications. The mounted surface area for SON is only 30% of the SOP, while the mounting volume is only 13%.

For around 20 years, Fujitsu Semiconductor has mass-produced reliable FRAM non-volatile memory products featuring high read/write endurance, high-speed write operation, and low power consumption. "Big data" has been a key concept of recent times, and gathering fast and accurate data to support the big data analysis is of great importance. As applications that record real time data from sensors to memory products are on the increase, our FRAM products that feature high read/write cycles of 10 trillion come highly valued.
Fujitsu will continue to develop memory products and solutions in order to satisfy future needs and requirements.

Key Specifications

- Part Number: MB85RS64VY
- Density(configuration): 64Kbit (8K x 8bit)
- Interface: SPI (Serial Peripheral Interface)
- Operating frequency: 33MHz maximum
- Operating voltage: 2.7V to 5.5V
- Operating temperature range: -40°C to +125°C
- Read/Write endurance: 10 trillion times (10^{13} times)
- Package: 8-pin SOP, 8-pin SON

Related Links

- Fujitsu Semiconductor Top page
- FRAM Top page
- MB85RS64VY datasheet (for automotive) (1.95 MB)
- MB85RS64VY datasheet (for industrial applications) (2.21 MB)