Fujitsu Semiconductor Releases New 1 Mbit and 2 Mbit FRAM Products
Enabling enhanced equipment power efficiency and miniaturization, optimized for smart meters, industrial machinery and medical devices

Yokohama, Japan, March 18, 2013 - Fujitsu Semiconductor Limited today announced the development of two new FRAM products, MB85RS1MT and MB85RS2MT, which feature 1 Mbit and 2 Mbit of memory, respectively, making them the largest density serial-interface FRAM products offered by Fujitsu Semiconductor. The new products will be made available in sample quantities starting end of March 2013.

The two new FRAM products guarantee 10 trillion read-write cycles, roughly ten times more than existing chips, making them optimal for use in applications such as smart meters, industrial machinery and medical devices. Compared to identical density EEPROM, MB85RS1MT and MB85RS2MT consume 92% less power during writing. In addition, because the new FRAM products can incorporate all the technology required for system memory components—which have typically consisted of EEPROM, SRAM and a battery for data retention—into a single chip, it is possible to substantially reduce component costs, mounted area, and power consumption. This, in turn, will also greatly contribute to the development of smaller, power-efficient equipment for which maintenance can be easily performed, since backup battery is not necessary.
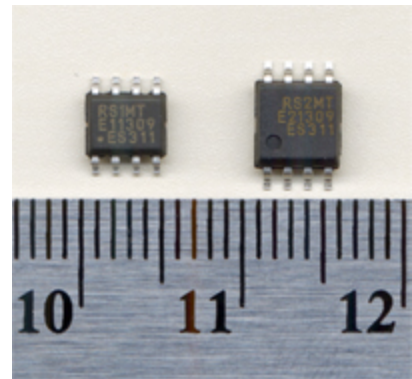

Figure 1. MB85RS1MT/MB85RS2MT

FRAM is a type of memory that features both non-volatility, which allows data to be retained even when the power is switched off, and random access, which enables fast data writing. Because FRAM can safely store data that is being written even during sudden power source failures and power outages, it is possible to ensure the protection of equipment information and data recorded immediately preceding a power source outage. Based on this capability, since launching volume production in 1999 FRAM products from Fujitsu Semiconductor have been widely employed for use primarily in factory automation equipment, measurement devices, banking terminals, and medical devices.

As an update to its lineup of FRAM products, Fujitsu Semiconductor has recently developed MB85RS1MT (1 Mbit) and MB85RS2MT (2 Mbit), which represent the company's largest density FRAM products to date to feature an SPI serial interface. Both products feature an improved guaranteed read-write cycle count of 10 trillion cycles, which is ten times more than Fujitsu's existing FRAM products, providing even better support for real-time, continuous data recording.

For applications including smart meters and other measurement devices, as well as industrial machinery and medical devices such as hearing aids—all of which to date have required 1-2 Mbit non-volatile memory with a serial interface—it is now possible to replace conventional EEPROM with Fujitsu Semiconductor's new FRAM products. The resulting improvements in fast writing can lead to greater performance, while also minimizing the risk of data loss from sudden voltage drops or power outages. In terms of power consumed during writing, as well, the new products consume 92% less power than EEPROM, thereby helping to extend battery life.

Moreover, for industrial machinery that employs SRAM for data recording and EEPROM for storing parameters and programs, the new FRAM products can incorporate these capabilities into a single chip, allowing for a reduction in the number of memory components required and obviating the need for batteries for data retention. The memory itself can also be shrunk into a smaller package size, making it possible to reduce the mounted area required for memory components by over 90%. As a result, the new FRAM products help to reduce the size of end products, eliminate the need for battery replacement maintenance, and cut power consumption, in addition to contributing to lower component costs.

Going forward, Fujitsu Semiconductor will continue to deliver solutions that assist customers in improving the performance of end products, in facilitating maintenance on live equipment, and in minimizing risk.
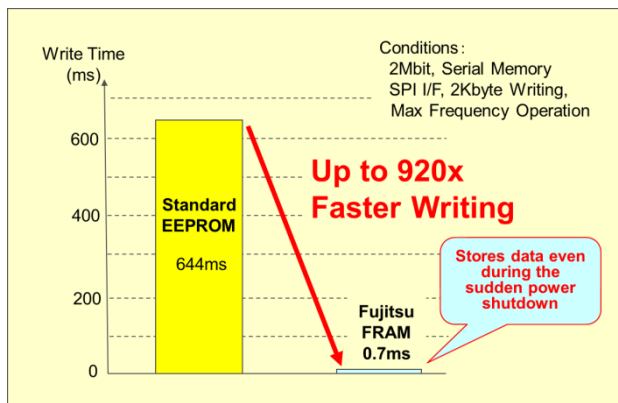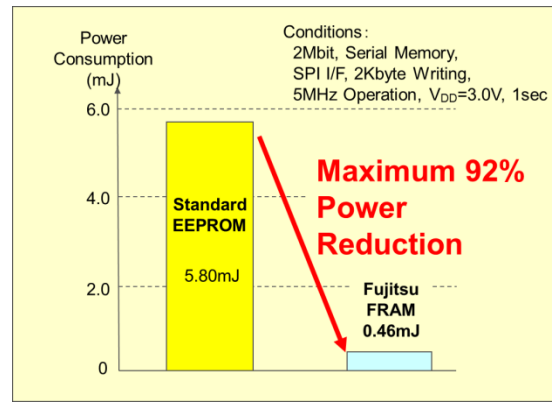
Figure 2. Read-Write Cycle Comparison

Figure 3.Power Consumption Comparison
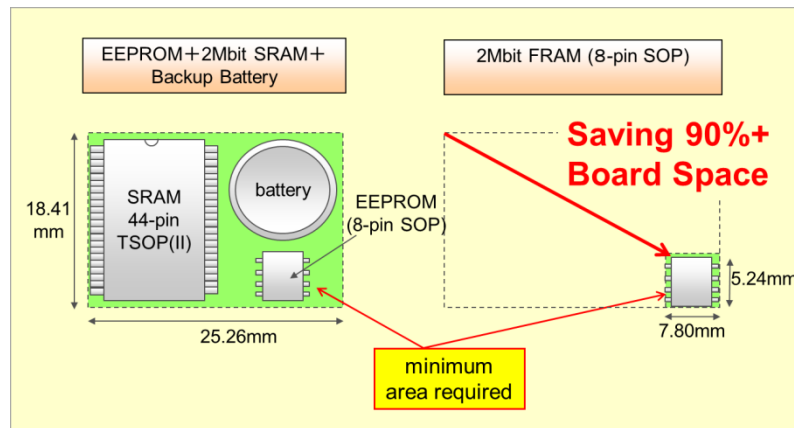
Figure 4. Mounted Area Comparison

Sample Release schedule

Product Name	Availability
MB85RS1MT	End of March 2013
MB85RS2MT	End of March 2013

Please contact your sales representatives for sample price.

For More Information
http://jp.fujitsu.com/group/fsl/en/ (Fujitsu Semiconductor)
http://www.fujitsu.com/global/services/microelectronics/product/memory/fram/ (FRAM Top Page)
http://www.fujitsu.com/global/products/devices/semiconductor/memory/fram/application/
(Target Application)
http://www.fujitsu.com/global/products/devices/semiconductor/memory/fram/standalone/1m-2m-spi.html (1Mbit and 2Mbit new product)

About Fujitsu Semiconductor
Fujitsu Semiconductor Limited designs, manufactures, and sells semiconductors, providing highly reliable, optimal solutions and support to meet the varying needs of its customers. Products and services include microcontrollers, ASICs, ASSPs, and power management ICs, with wide-ranging expertise focusing on mobile, ecological, automotive, imaging, security, and high-performance applications. Fujitsu Semiconductor also drives power efficiency and environmental initiatives. Headquartered in Yokohama, Fujitsu Semiconductor Limited (formerly named Fujitsu Microelectronics Limited) was established as a subsidiary of Fujitsu Limited on March 21, 2008. Through its global sales and development network, with sites in Japan and throughout Asia, Europe, and the Americas, Fujitsu Semiconductor offers semiconductor solutions to the global marketplace.
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