Products

FRAM memory device achieves AEC-Q100 standard for automotive apps

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Colorado Springs, Co. — Ramtron International Corp.'s FM25C160, a 16Kb, 5V, SPI FRAM memory device has been qualified to AEC-Q100 (Automotive Electronic Council's Stress Test Qualification for Integrated Circuits) standards.

The FM25C160 is the third FRAM device to be AEC-Q100-qualified as part of an aggressive automotive qualification program. Ramtron is also currently developing various FRAM configurations specified for the Grade 1 (-40 degrees to 125 degrees C) operating range.

FRAM in Intelligent Airbags

Today's smart airbags are designed to increase or decrease deployment force based on accident event parameters such as the severity of the crash, the weight of the occupant and the interaction with other safety systems in the car. The parametric data sent to the car's electronic control unit (ECU) is generated by sensors throughout the cabin, enabling the airbag to deploy "intelligently." As more sensors are designed into the car, more data needs to be collected. FRAM NoDelay writes facilitates the collection of more data at higher frequencies, allowing automotive safety systems to act on the timeliest information available.

The FM25C160 is a 16-kilobit nonvolatile RAM with an industry-standard SPI that leverages the high-speed write capability of FRAM technology. A direct hardware replacement for equivalent EEPROMs, yet far superior, the FM25C160 reads and writes at bus speeds up to 20MHz with virtually unlimited endurance (1 trillion writes), 45-year data retention and low power. It operates at 5 volts over the industrial temperature range (-40 to +85 degrees C) and is available in a "green" 8-pin SOIC package.

In 1994, the Automotive Electronics Council (AEC) established the AEC-Q100 qualification standard, which is recognized worldwide as a benchmark for automotive systems. Electronic components that meet AEC-Q100 standards are deemed reliable, high-quality components suitable for use in the harsh automotive environment without additional component-level qualification testing. For more details, visit www.aecouncil.com.

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