Ramtron Expands F-RAM V-Family with New Automotive-Grade Serial 128-kilobit Devices

Ramtron International Corporation has added two new serial F-RAM devices to its V-Family product line that meet stringent AEC-Q100 Grade 3 automotive qualification standards. The FM24V01-G and FM25V01-G are 128-kilobit (Kb) high-performance nonvolatile F-RAM memories that operate over a wide operating voltage range of 2.0 to 3.6-volts. The rigorous automotive-grade qualification—established by the Automotive Electronic Council's Stress Test Qualification for Integrated Circuits—serves the demanding requirements of the automotive market, ensuring reliable device operation over the automotive temperature range of -40°C to +85°C.

Featuring wide-voltage operation of 2.0 to 3.6-volts, the FM24V01-G and FM25V01-G are the newest members of Ramtron's broad line of V-Family nonvolatile F-RAM memory products. The FM24V01, with a serial I2C interface, has an active current of 90µA (typical at 100kHz). The FM25V01 performs at full bus speed of 40MHz with an active current of 2.5mA over a standard Serial Peripheral Interface (SPI).

F-RAM memory features NoDelay™ writes, virtually unlimited read/write cycles (10E14), and low power consumption. The devices are hardware drop-in replacements for 128Kb serial EEPROM memories in automotive, industrial controls, metering, medical, military, gaming, and computing applications, among others. The FM24V01-G and FM25V01-G are offered in an industry standard 8-pin SOIC package.

The V-Family product line offers a device ID feature that reads out manufacturer and part number identification. The devices also offer an optional unique, read-only serial number that helps thwart counterfeiting by identifying a board or system.

Ramtron's V-Family of F-RAM products is a line of serial I2C, serial SPI, and parallel memories with densities ranging from 128Kb to 1-megabit (Mb). In addition to high-performance nonvolatile F-RAM memory, serial V-Family products offer an optional unique 64-bit serial number. The serial number is comprised of a 16-bit unique customer ID (upon request), a 40-bit manufacturing serial number, and an 8-bit cyclic redundancy check for systems that require unique electronic numbering for added security.

Samples of the FM24V01-G and FM25V01-G are available now in a RoHS-compliant, 8-pin SOIC package.

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