

# FM25V01 Replaces Two FM25CL64s

Upgrade Your Board with new F-RAM Device



## DESCRIPTION

The new FM25V01 is a new 128Kbit SPI F-RAM memory which extends the V-family to a lower density. This technical brief highlights the differences between the FM25V01 and FM25CL64 (64Kbit) devices, aside from the obvious density differences.

## UPWARD COMPATIBLE

For systems that use a single FM25CL64 device, the transition to the new 128Kb chip could be as straightforward as changing your firmware to support twice the memory space. For most designs, the FM25V01 device can be considered a superset of the FM25CL64. The two devices are identical in terms of pinout, package dimensions, and read/write functionality.

From a software point of view, the two devices are compatible. Aside from the additional address bit to access twice the memory, the two devices are read/write compatible. Both devices use the same two-byte address. Remember that 128Kb device address wraps at 0x4000 while the 64Kb wraps at 0x2000. The block protect boundaries are spaced at 2 times the address, compared to the 64Kb device. From a hardware point of view, the key differences between the two devices are the added features that the FM25V01 implements. The FM25V01 adds these features: operates to down to 2.0V, Device ID feature, and unique S/N for the FM25VN01. In terms of speed, both operate up to 20MHz but the FM25V01 extends the speed to 40MHz.

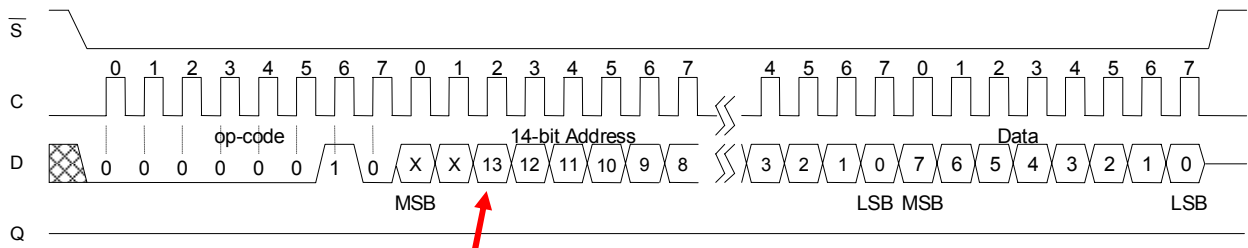


Figure 1. FM25V01 Write Cycle (WREN not shown)

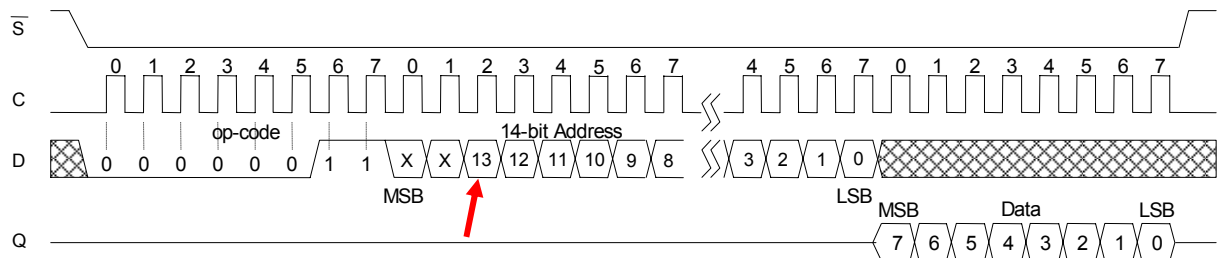


Figure 2. FM25V01 Read Cycle

Shown above are the read and write diagrams for the FM25V01 device. Note the addition of address bit A13 in the serial address stream. This is the MSB for the 128Kb device.