

# 0.18 $\mu$ m Synchronous Low Leakage High Density Single Port Static Memory Compiler – FSA0L\_A\_SH

## Key Features

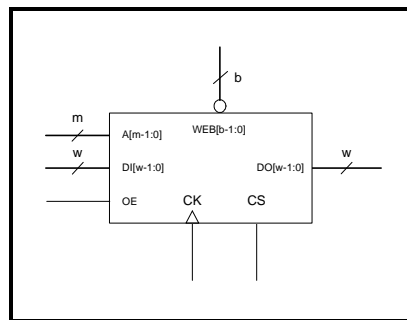
- Operating voltage range: 1.62V ~ 1.98V
- Operating junction temp. range: -40°C ~ 125°C
- Recommended operating ambient temp. range: 0°C ~ 85°C
- Minimum metal requirement: 4 metal layers
- Synchronous read and write operations
- Fully customized layout density per customer configuration
- Automatic power down mechanism to eliminate DC current
- Clocked address inputs and CS to RAM with CK rising edge
- Clocked WEB input pin to RAM with CK rising edge
- Clocked DI input pins to RAM with CK rising edge
- Byte write and word write operations available
- Memory compiler preview UI (memaker)
- BIST circuitry supported
- Multi-block options for the best aspect ratio

## General Description

The FSA0L\_A\_SH is a low leakage, high density, synchronous single port SRAM. It is implemented according to UMC's 0.18 $\mu$ m Low Leakage Logic Process. Different combinations of words, bits, and aspect ratios can be used to generate the most desirable configurations.

By requesting for desired size and timing constraints, the FSA0L\_A\_SH compiler is capable of providing suitable synchronous SRAM layout instances in minutes. It also automatically generates data sheets, Verilog behavioral simulation models, SCS or Viewlogic symbols, place & route models and test patterns for use in ASIC designs. The duty cycle length can be neglected as long as the setup / hold time, minimum high / low pulse width are satisfied. This allows a flexible clock falling edge during each operation. Both word write and byte write operations are supported.

## Symbol



## Quick Reference

|                          |                |
|--------------------------|----------------|
| Maximum Capacity         | 512K bits      |
| Maximum Words            | 64K            |
| Minimum Words            | 64             |
| Maximum Bits             | 128            |
| Minimum Bits             | 1              |
| Bit Increment            | 1              |
| Aspect Ratio (Block Mux) | 1, 2, 4, 8, 16 |

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