

**LC3514,3514L**

c-mos LSI

CIRCUIT DRAWING  
No.4002**1024 WORDS x 4 BITS HIGH-SPEED  
CMOS STATIC RAM**

3007A

**General Description**

The LC3514/LC3514L are nonclocked CMOS static RAM's organized as 1024 words x 4 bits. They are compatible with worldwide standard N-channel 2114-type 4K SRAM's and have a complete CMOS circuit configuration.

With the current dissipation being low at the data hold mode or standby mode and the access time being so short as 200ns (max.), they are especially suited for use in memory systems which require a high speed and low power dissipation and battery-powered portable systems. For the LC3514L, a standby current of 1uA max. is guaranteed at 60°C.

**Features**

- Fast speed: Address access time ( $t_{AA}$ )=200ns(max)
- Low standby current
  - 1uA(max) at  $T_a=60^\circ\text{C}$  : LC3514L
  - 50uA(max) : LC3514
- Low data hold current.
  - 0.8uA(max) at  $T_a=60^\circ\text{C}$  : LC3514L
  - 10uA(max) : LC3514
- Single 5V supply : 5V±10%
- Data hold supply voltage :  $V_{CCBB}=2.0$  to 5.5V
- No clock required (Complete static memory)
- Directly TTL compatible : All inputs and outputs.
- Common data input and output using 3-state outputs.
- The output data has the same polarity as the input data.
- High-density 18-pin package.
- Pin-out compatible with 2114 NMOS RAM

**LC3514D,3514E**

c-mos LSI

CIRCUIT DRAWING  
No.4002**1024 WORDS x 4 BITS CMOS STATIC RAM**

3007A

**General Description**

The LC3514D/LC3514E are nonclocked CMOS static RAM's organized as 1024 words x 4 bits. They are compatible with worldwide standard N-channel 2114-type 4K SRAM's and have a complete CMOS circuit configuration.

With the current dissipation being low at the data hold mode or standby mode and the operating voltage range being wide, they are especially suited for use in CMOS microcomputers, battery-powered portable systems using a CMOS logic IC, and nonvolatile memories at the battery backup mode. For the LC3514D, an operating voltage of 3.0V min. and a standby current of 1uA max. are guaranteed at 45°C.

**Features**

- Wide operating voltage range.
  - $V_{CC}=3.0$  to 6.0V : LC3514D
  - $V_{CC}=3.6$  to 6.0V : LC3514E
- Low standby current.
  - 1uA(max) at  $T_a=45^\circ\text{C}$  : LC3514D
  - 10uA(max) at  $T_a=45^\circ\text{C}$  : LC3514E
- Low data hold current.
  - 1uA(max) at  $T_a=45^\circ\text{C}$  : LC3514D
  - 5uA(max) at  $T_a=45^\circ\text{C}$  : LC3514E
- Data hold supply voltage. :  $V_{CCBB}=2.0$  to 6.0V
- No clock required (Complete static memory).
- Directly TTL compatible : All inputs and outputs.
- Common data input and output using 3-state outputs.
- The output data has the same polarity as the input data.
- High-density 18-pin package.