



ACE34LE04

4-Kbit serial EEPROM

Description

The ACE34LE04 is a 512-byte EEPROM device designed to operate the SMBus bus in the 1.7V-3.6V voltage range, with a maximum of 1MHz. The ACE34LE04 includes a 4-Kbit serial EEPROM organized as two banks of 256 bytes each, or 512 bytes of total memory. Each bank is composed of two 128-byte blocks. The device is able to selectively lock the data in any or all of the four 128-byte blocks. Designed specifically for use in DRAM DIMMs (Dual Inline Memory Modules) with Serial Presence Detect, all the information concerning the DRAM module configuration (such as its access speed, its size, its organization) can be kept write-protected in one or more memory blocks. Individually locking a 128-byte block may be accomplished using a software write protection mechanism in conjunction with a high input voltage VHV on input A0. By sending the device a specific SMBus sequence, each block may be protected from writes until the write protection is electrically reversed using a separate SMBus sequence which also requires VHV on input A0. The write protection for all four blocks is cleared simultaneously.

Features

- 512-byte Serial Presence Detect EEPROM compatible with JEDEC EE1004 specification
- Compatible with SMBus serial interface: up to 1 MHz transfer rate
- Memory array:
 - 4 Kbits organized as two banks of 256 bytes each
 - Each page is composed of two 128-byte blocks
- Software data protection for each 128-byte block
- Hardware write protection
- Write:
 - Byte Write within 3 ms
 - 16 bytes Page Write within 3 ms
- Schmitt Trigger, Filtered Inputs for Noise Suppression
- Single supply voltage: 1.7V to 3.6V
- High-reliability
 - Endurance: 1 Million Write Cycles
 - Data Retention: 100 Years
- Enhanced ESD/latch-up protection HBM 6000V



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Absolute Maximum Ratings

DC Supply Voltage	-0.5V to 6.5V
Input / Output Voltage	GND-0.3V to VCC+0.3V
Voltage on Pin A0	-0.5V to 10V
Operating Ambient Temperature	-40°C to 95°C
Storage Temperature	-65°C to 150°C
Electrostatic pulse (Human Body model)	6000V

Stresses above those listed under "Absolute Maximum Ratings" may cause permanent damage to this device. These are stress ratings only. Functional operation of this device at these or any other conditions above those indicated in the operational sections of this specification is not implied or intended. Exposure to the absolute maximum rating conditions for extended periods may affect device reliability.

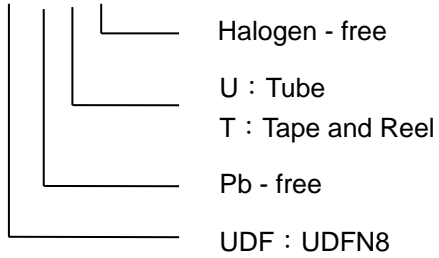


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Ordering Information

ACE34LE04 XX + X H





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Notes

ACE does not assume any responsibility for use as critical components in life support devices or systems without the express written approval of the president and general counsel of ACE Technology Co., LTD. As used herein:

1. Life support devices or systems are devices or systems which, (a) are intended for surgical implant into the body, or (b) support or sustain life, and whose failure to perform when properly used in accordance with instructions for use provided in the labeling, can be reasonably expected to result in a significant injury to the user.
2. A critical component is any component of a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.

ACE Technology Co., LTD.
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