



ACE24LA512AR

Two-wire Serial EEPROM

Description

The ACE24LA512AR is a 512-Kbit serial EEPROM Automotive grade device operating up to 125°C. The ACE24LA512AR provides 524288 bits of serial electrically erasable and programmable read-only memory (EEPROM), organized as 65536 words of 8 bits each. The device is optimized for use in many industrial and commercial applications where low-power and low-voltage operation are essential. The ACE24LA512AR offers an additional page, named the Identification Page (128 bytes). The Identification Page can be used to store sensitive application parameters which can be (later) permanently locked in Read-only mode.

Features

- Compatible with all I²C bidirectional data transfer protocol
- Memory array:
 - 512 Kbits (64 Kbytes) of EEPROM
 - Page size: 128 bytes
 - Additional Write lockable page
- Extended temperature: -40°C to 125°C
- Single supply voltage and high speed:
 - 2.5V~5.5V/1MHz
- Random and sequential Read modes
- Write:
 - Byte Write within 3 ms
 - Page Write within 3 ms
 - Partial Page Writes Allowed
- Write Protect Pin for Hardware Data Protection
- Schmitt Trigger, Filtered Inputs for Noise Suppression
- High-reliability
 - Endurance: 4 Million Write Cycles
 - Data Retention: 200 Years
- Enhanced ESD/Latch-up protection
 - HBM 8000V
- SOP-8/ TSSOP-8/ UDFN8/ SOT-23-5 packages



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Absolute Maximum Ratings

Items	Value
DC Supply Voltage	-0.3V to 6.5V
Input / Output Voltage	GND-0.3V to $V_{CC}+0.3V$
Storage Temperature	-65°C to 150°C
Electrostatic Pulse (Human Body Model)	8000V
Junction Temperature (Tj max)	150°C

Notice:

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.

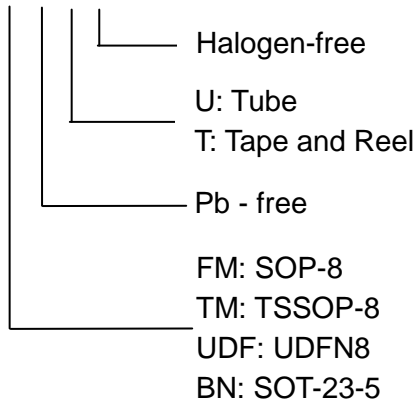


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Ordering Information

ACE24LA512AR 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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