



ACE93C56B/66B

Three-wire Serial EEPROM

Description

The ACE93C56B/66B series are 2048/4096 bits of serial Electrical Erasable and Programmable Read Only Memory, commonly known as EEPROM. They are organized as 128/256 words of 16 bits each when the ORG pin is connected to VCC (or unconnected) and 256/512 words of 8 bits (1 byte) each when the ORG pin is tied to ground. The devices are fabricated with proprietary advanced CMOS process for low power and low voltage applications. These devices are available in standard 8-lead SOP package, 8-lead TSSOP, 8-lead DIP and 8-lead UDFN packages. Our extended V_{CC} range (1.7V to 5.5V) devices enables wide spectrum of applications.

The ACE93C56B/66B is enabled through the Chip Select pin (CS), and accessed via a 3-wire serial interface consisting of Data Input (DI), Data Output (DO), and Serial Clock (SCL). Upon receiving a READ instruction at DI, the address is decoded and the data is clocked out serially on the data output pin DO. The WRITE cycle is completely self-timed and no separate ERASE cycle is required before WRITE. The WRITE cycle is only enabled when the part is in the ERASE/WRITE ENABLE state. Once a device begins its self-timed program procedure, the data out pin (DO) can indicate the READY/BUSY status by rising chip select (CS).

Features

- Standard Voltage and Low Voltage Operation:
ACE93C56B/66B: $V_{CC} = 1.7V$ to $5.5V$
- User Selectable Internal Organization:
ACE93C56B: 256 x 8 or 128 x 16
ACE93C66B: 512 x 8 or 256 x 16
- 2 MHz Clock Rate (5V) Compatibility.
- Industry Standard 3-wire Serial Interface.
- Self-Timed ERASE/WRITE Cycles (5ms max including auto-erase).
- Automatic ERAL before WRAL.
- Sequential READ Function.
- High Reliability: Typical 1 Million Erase/Write Cycle Endurance.
- 100 Years Data Retention.
- Industrial Temperature Range ($-40^{\circ}C$ to $85^{\circ}C$).
- Standard 8-pin SOP/TSSOP/DIP/UDFN Pb-free Packages.



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Absolute Maximum Ratings

| | |
|---|------------------------|
| Industrial Operating Temperature | -40°C to 85°C |
| Storage Temperature | -50°C to 125°C |
| Input Voltage on Any Pin Relative to Ground | -0.3V to $V_{CC}+0.3V$ |
| Maximum Voltage | 8V |

Note: Stresses exceed those listed under “Absolute Maximum Rating” may cause permanent damage to the device. Functional operation of the device at conditions beyond those listed in the specification is not guaranteed. Prolonged exposure to extreme conditions may affect device reliability or functionality.

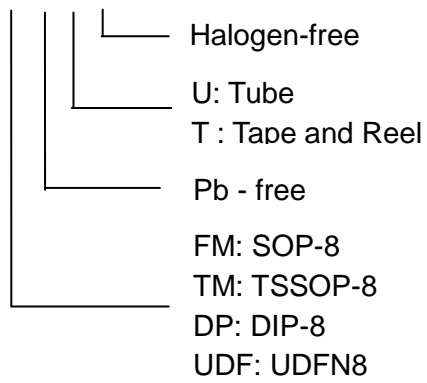


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Ordering information

ACE93C56B/66B 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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