ACE25GD512

SPI 512K Bits Serial EEPROM

Description

The ACE25GD512 devices are Electrically Erasable Programmable Memory (EEPROM) organized as 131072 x 8 bits, accessed through the SPI bus.

The ACE25GD512 can operate with a supply range from 2.8V to 5.5V. These devices are guaranteed over the -40 °C~85 °C temperature range.

The ACE25GD512 offers an additional page, named the Identification Page (256 bytes). The Identification Page can be used to store sensitive application parameters which can be (later) permanently locked in Read-only mode.

Features

- Serial Peripheral Interface (SPI) data transfer protocol
- Memory array:
  1M bits (128 Kbytes) of EEPROM
  Page size: 256 bytes
  Additional Write lockable page
- Single supply voltage and high speed:
  ACE25GD512 2MHz （2.8V - 5.5V）
- Random and sequential Read modes
- Write:
  Byte Write within 6 ms
  Page Write within 6 ms
  Partial Page Writes Allowed
- Write Protect: quarter, half or whole memory array
- Operating temperature range: from -40℃ to 85℃
- High-reliability
  Endurance: 1 Million Write Cycles
  Data Retention: 100 Years
- Enhanced ESD/Latch-up protection
  HBM 8000V
  8-lead SOP and CSP8 packages

Absolute Maximum Ratings

Parameters	Ratings	Units
Operating Temperature	–40 to 85	°C
Storage Temperature	–65 to 150	°C
Voltage on any Pin with Respect to Ground (Note)	–0.5 to 6.5	V
VESD（HBM）	8000	V

Note:

The DC input voltage on any pin should not be lower than −0.5 V or higher than VCC + 0.5 V. During transitions, the voltage on any pin may undershot to no less than −1.5 V or overshoot to no more than VCC+ 1.5 V, for periods of less than 20 ns.

Comments: Stresses exceeding those listed in the Maximum Ratings table may damage the device. If any of these limits are exceeded, device functionality should not be assumed, damage may occur and reliability may be affected.

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 sued 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 shoes 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.