ACE25AF256B
256M bits 3.3V Quad I/O Serial Flash Memory

Description

The ACE25AF256B (256M-bit) Serial flash supports standard Serial Peripheral Interface (SPI), Dual/Quad SPI: Serial Clock, Chip Select, Serial Data I/O0 (SI), I/O1 (SO), I/O2 (WP#), I/O3 (HOLD#/RESET#).

Features

- 256M -bit Serial Flash

    32,768K-bytes

    256 bytes per programmable page

- Standard, Dual, Quad SPI, DTR

    Standard SPI: SCLK, CS#, SI, SO, WP#, HOLD#, RESET#

    Dual SPI: SCLK, CS#, IO0, IO1, WP#, HOLD#, RESET#

    Quad SPI: SCLK, CS#, IO0, IO1, IO2, IO3, RE- SET#

    QPI: SCLK, CS#, IO0, IO1, IO2, IO3, RESET#

    SPI/QPI DTR (Double Transfer Rate) Read

- Flexible Architecture

    Sector of 4K-bytes

    Block of 32/64k-bytes

- Advanced security Features

    2*1024-Bytes Security Registers with OTP Lock

- Support 128 bits Unique ID

- Software/Hardware Write Protection

    Write protect all/portion of memory via software

    Enable/Disable protection with WP# Pin

    Top or Bottom, Sector or Block selection

    Advanced Sector Protection

- 3 or 4-Byte Addressing Mode

- Continuous Read With 8/16/32/64-byte Wrap

- Erase/Program Suspend/Resume

- Package Options

    See Available Ordering OPN

    All Pb-free packages are compliant RoHS, Halogen-Free and REACH.

- Temperature Range & Moisture Sensitivity Level

    Industrial Level Temperature (-40°C to 85°C), MSL3

- Power Consumption

    6mA typical active read current

    0.5uA typical Deep Power-Down current

- Single Power Supply Voltage
  2.70~3.60V
- Endurance and Data Retention
  Typical 100,000 Program/Erase Cycle
  20-year Data Retention typical
- High Speed Clock Frequency
  120MHz for fast read with 30pF load
  Dual I/O Data transfer up to 208Mbit/s
  Quad I/O Data transfer up to 416Mbit/s
  QPI Mode Data transfer up to 320Mbit/s
  DTR Quad I/O Data transfer up to 400Mbit/s
- Program/Erase Speed
  Page Program time: 0.25ms typical
  Sector Erase time: 40ms typical
  Block Erase time: 0.15/0.22s typical
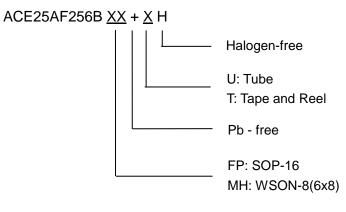 Chip Erase time: 70s typical

Absolute Maximum Ratings

Parameter	Value	Unit
Ambient Operating Temperature	-40 to 85	℃
Storage Temperature	-65 to 150	℃
Output Short Circuit Current	200	mA
Applied Input/ Output Voltage	-0.5 to 4.0	V
VCC	-0.5 to 4.0	V

Ordering information

ACE25AF256B <u>XX</u> + <u>X</u> H

Halogen-free

U: Tube
T: Tape and Reel

Pb - free

FP: SOP-16
MH: WSON-8(6x8)

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.