ACE25QC400G

4M BIT SPI NOR FLASH

Description

The ACE25QC400G is 4M-bit Serial Peripheral Interface (SPI) Flash memory, designed for using in a wide variety of high-volume consumer-based applications in which program code is shadowed from Flash memory into embedded or external RAM for execution. The flexible erase architecture of the device, with its page erase granularity it is ideal for data storage as well, eliminating the need for additional data storage devices. The erase block sizes of the device have been optimized to meet the needs of today's code and data storage applications. By optimizing the size of the erase blocks, the memory space can be used much more efficiently. Because certain code modules and data storage segments must reside by themselves in their own erase regions, the wasted and unused memory space that occurs with large sectored and large block erase Flash memory devices can be greatly reduced. This increased memory space efficiency allows additional code routines and data storage segments to be added while still maintaining the same overall device density. The device uses a single low voltage power supply, ranging from 1.65 Volt to 3.6 Volt, and supports JEDEC standard manufacturer and device ID, a 128-bit Unique Serial Number and three 512-bytes Security Registers.

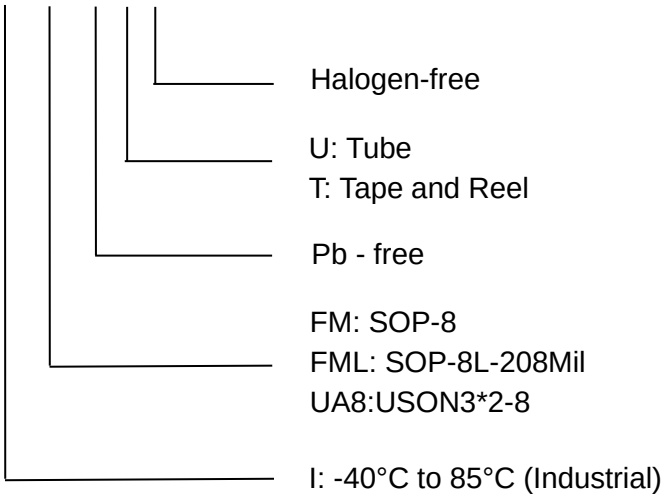
Features

- Serial Peripheral Interface (SPI)
  - Standard SPI: SCLK, /CS, SI, SO, /WP, /HOLD
  - Dual SPI: SCLK, /CS, IO0, IO1, /WP, /HOLD
  - Quad SPI: SCLK, /CS, IO0, IO1, IO2, IO3
  - Software Reset
- Program
  - Serial-input Page Program up to 256bytes
  - Dual-input Page Program up to 256bytes
  - Quad-input Page Program up to 256bytes
  - Program Suspend and Resume
- Read
  - Normal Read Data: 50MHz clock rate
  - Others Read Data: 80MHz clock rate
- Erase
  - Page erase (256-byte)
  - Block erase (64/32 KB)
  - Sector erase (4 KB)
  - Chip erase
  - Erase Suspend and Resume

- Program/Erase Speed
  Page Program time: 2ms typical
  Page Erase time: 8ms typical
  Sector/Block Erase time: 8ms typical
  Chip Erase time: 8ms typical
- Flexible Architecture
  Sector of 4K-byte
  Block of 32/64K-byte
- Low Power Consumption
  3mA maximum active current
  0.6uA maximum power down current
- Software/Hardware Write Protection
  3x512-Byte Security Registers with OTP Lock
  Enable/Disable protection with WP Pin
  Write protect all/portion of memory via software protect
  Top or Bottom, Sector or Block selection
- Single Supply Voltage
  Full voltage range: 1.65V~3.6V
- Temperature Range
  Industrial (-40°C to 85°C)
- Cycling Endurance/Data Retention
  Typical 100k Program-Erase cycles on any sector
  Typical 20-year data retention

Ordering information

ACE25QC400G X XXX + X H



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.