

16K I²C™ Serial EEPROM

Device Selection Table

Part Number	Vcc Range	Max. Clock Frequency	Temp. Ranges
24AA16	1.7-5.5	400 kHz ⁽¹⁾	I, E
24LC16B	2.5-5.5	400 kHz	I, E

Note 1: 100 kHz for Vcc < 2.5V.

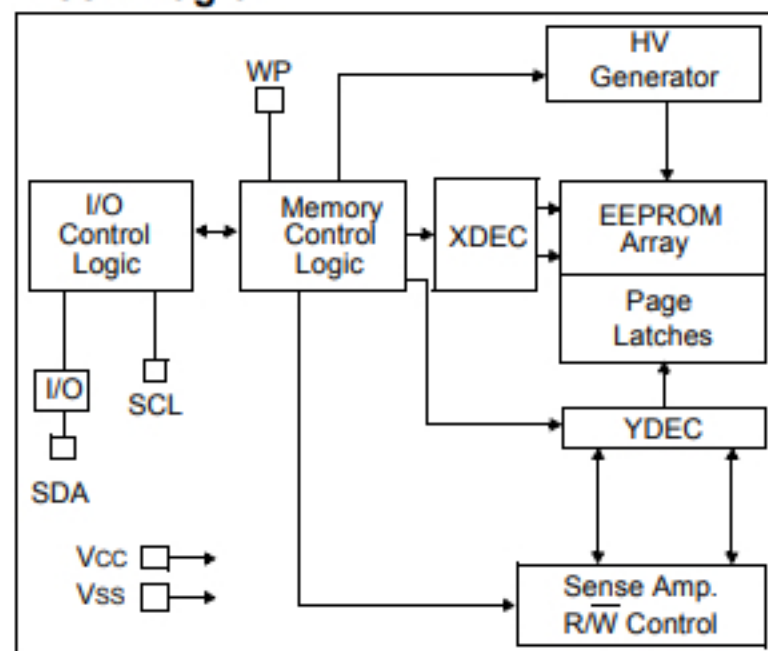
Features:

- Single Supply with Operation down to 1.7V for 24AA16 Devices, 2.5V for 24LC16B Devices
- Low-Power CMOS Technology:
 - Active current 1 mA, typical
 - Standby current, 1 μ A, typical
- 2-Wire Serial Interface, I²C™ Compatible
- Schmitt Trigger inputs for Noise Suppression
- Output Slope Control to eliminate Ground Bounce
- 100 kHz and 400 kHz Clock Compatibility
- Page Write Time 5 ms Max.
- Self-Timed Erase/Write Cycle
- 16-Byte Page Write Buffer
- Hardware Write-Protect
- ESD Protection > 4,000V
- More than 1 Million Erase/Write Cycles
- Data Retention > 200 Years
- Factory Programming Available
- Packages include 8-lead PDIP, SOIC, TSSOP, MSOP, DFN, TDFN, 5-lead SOT-23 and Chip Scale
- Pb-Free and RoHS Compliant
- Temperature Ranges:
 - Industrial (I): -40°C to +85°C
 - Automotive (E): -40°C to +125°C

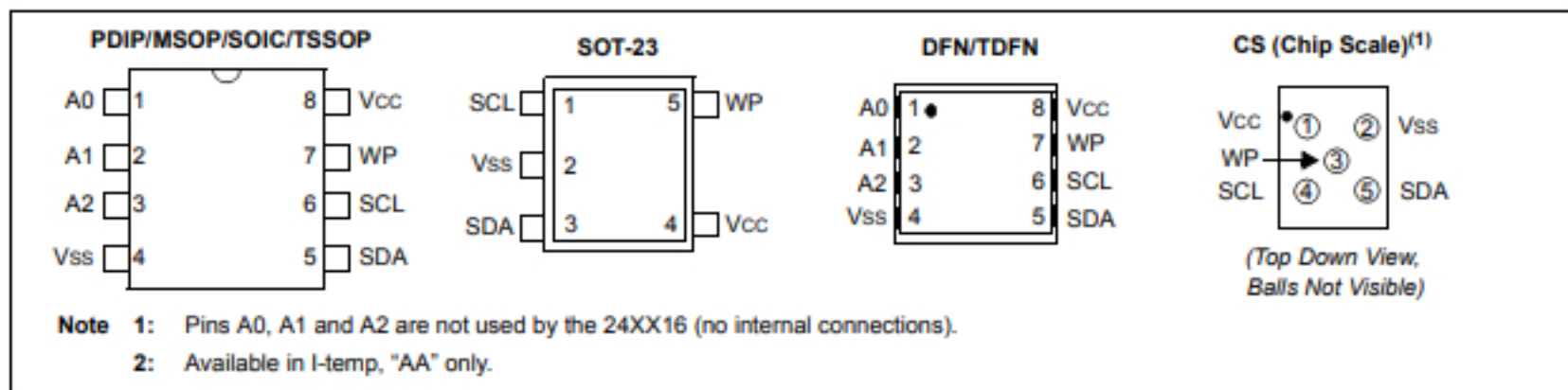
Description:

The Microchip Technology Inc. 24AA16/24LC16B (24XX16*) is a 16 Kbit Electrically Erasable PROM. The device is organized as eight blocks of 256 x 8-bit memory with a 2-wire serial interface. Low-voltage design permits operation down to 1.7V with standby and active currents of only 1 μ A and 1 mA, respectively. The 24XX16 also has a page write capability for up to 16 bytes of data. The 24XX16 is available in the standard 8-pin PDIP, surface mount SOIC, TSSOP, 2x3 DFN, 2x3 TDFN and MSOP packages, and is also available in the 5-lead SOT-23, and Chip Scale packages.

Block Diagram



勝特力材料 886-3-5753170
 勝特力电子(上海) 86-21-34970699
 勝特力电子(深圳) 86-755-83298787
[Http://www.100y.com.tw](http://www.100y.com.tw)



*24XX16 is used in this document as a generic part number for the 24AA16/24LC16B devices.

PRODUCT IDENTIFICATION SYSTEM (AUTOMOTIVE)

To order or obtain information, e.g., on pricing or delivery, refer to the factory or the listed sales office.

<u>PART NO.</u>	<u>IXI</u> ⁽¹⁾	<u>X</u>	<u>XX</u>	<u>XXX</u> ^(2,3)	Examples:
Device	Tape and Reel Option	Temperature Range	Package	Variant	
Device: 24AA16: = 1.7V, 16-Kbit I ² C Serial EEPROM 24LC16B: = 2.5V, 16-Kbit I ² C Serial EEPROM 24FC16: = 1.7V, High-Speed, 16-Kbit I ² C Serial EEPROM	Tape and Reel Option: Blank = Standard packaging (tube or tray) T = Tape and Reel ⁽¹⁾	Temperature Range: I = -40°C to +85°C (AEC-Q100 Grade 3) E = -40°C to +125°C (AEC-Q100 Grade 1)	Package: MNY = Plastic Dual Flat, No Lead Package – 2x3x0.8mm Body, 8-Lead (TDFN) MS = Plastic Micro Small Outline Package, 8-Lead (MSOP) OT = Plastic Small Outline Transistor, 5-Lead (SOT-23) (Tape and Reel Only) SN = Plastic Small Outline – Narrow, 3.90 mm Body, 8-Lead (SOIC) ST = Plastic Thin Shrink Small Outline – 4.4mm, 8-Lead (TSSOP) Q6B = Plastic Dual Flat, No Lead Wettable Flanks Package - 2x3x0.55 mm Body, 8-Lead (UDFN)	Variant^(2,3): 15KVAO = Standard Automotive, 15K Process ⁽⁴⁾ 15KVXX = Customer-Specific Automotive, 15K Process ⁽⁴⁾ 16KVAO = Standard Automotive, 16K Process ⁽⁴⁾ 16KVXX = Customer-Specific Automotive, 16K Process ⁽⁴⁾ 36KVAO = Standard Automotive, 36K Process 36KVXX = Customer-Specific Automotive, 36K Process	a) 24AA16T-I/OT16KVAO: Tape and Reel, Automotive Grade 3, 1.7V, SOT-23 Package. b) 24AA16T-E/MNY16KVAO: Tape and Reel, Automotive Grade 1, 1.7V, TDFN Package. c) 24LC16BT-I/SN16KVAO: Tape and Reel, Automotive Grade 3, 2.5V, SOIC Package. d) 24LC16BT-E/MNY16KVAO: Tape and Reel, Automotive Grade 1, 2.5V TDFN Package. e) 24FC16T-E/SN36KVAO: Tape and Reel, Automotive Grade 1, 1.7V SOIC Package. f) 24FC16T-E/ST36KVAO: Tape and Reel, Automotive Grade 1, 1.7V TSSOP Package. g) 24FC16T-E/OT36KVAO: Tape and Reel, Automotive Grade 1, 1.7V SOT-23 Package. h) 24FC16T-E/Q6B36KVAO: Tape and Reel, Automotive Grade 1, 1.7V UDFN Package.
					Note 1: Tape and Reel identifier only appears in the catalog part number description. This identifier is used for ordering purposes and is not printed on the device package. Check with your Microchip Sales Office for package availability with the Tape and Reel option. 2: The VAO/VXX automotive variants have been designed, manufactured, tested and qualified in accordance with AEC-Q100 requirements for automotive applications. 3: For customers requesting a PPAP, a customer-specific part number will be generated and provided. A PPAP is not provided for VAO part numbers. 4: Not recommended for new designs.

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