

## 2K ELECTRICALLY ERASABLE PROGRAMMABLE ROM

### FEATURES :

- Power Supply Voltage  
Single Vcc for Read and Programming  
(Vcc = 2.7 V to 5.5 V)
- Low Power (I<sub>sb</sub> = 2µa @ 5.5 V)
- I<sup>2</sup>C Bus, 2-Wire Serial Interface
- Support Byte Write and Page Write (8 Bytes)
- Automatic Page write Operation (maximum 10 ms)  
Internal Control Timer  
Internal Data Latches for 8 Bytes
- High Reliability CMOS Technology with EEPROM Cell  
Endurance : 1,000,000 Cycles  
Data Retention : 100 Years

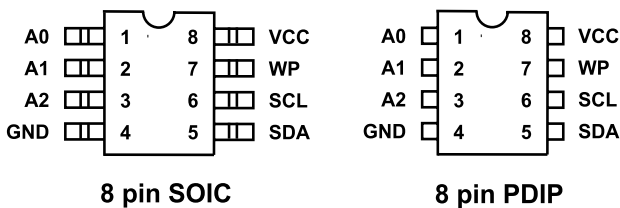
### DESCRIPTION:

The Turbo IC 24C02 is a serial 2K EEPROM fabricated with Turbo's proprietary, high reliability, high performance CMOS technology. It's 2K of memory is organized as 256x8 bits. The memory is configured as 32 pages with each page containing 8 bytes. This device offers significant advantages in low power applications.

The Turbo IC 24C02 uses the I<sup>2</sup>C addressing protocol and 2-wire serial interface which includes a bidirectional serial data bus synchronized by a clock. It offers a flexible byte write and a faster 8-byte page write.

The Turbo IC 24C02 is assembled in either a 8-pin PDIP or 8-pin SOIC package. Pin #1 is the A0 device address input for the device. Pin #2 is the A1 device address input for the device. Pin #3 is the A2 device address input for the device, such that a total of eight 24C02 devices can be connected on a single bus. Pin #4 is the ground (V<sub>ss</sub>). Pin #5 is the serial data (SDA) pin used for bidirectional transfer of data. Pin #6 is the serial clock (SCL) input pin. Pin #7 is the write protect (WP) pin used to protect hardware data. Pin #8 is the power supply (V<sub>cc</sub>) pin.

### PIN DESCRIPTION



### PIN DESCRIPTION

#### DEVICE ADDRESS (A0 & A1 & A2)

A0, A1, and A2 are device address inputs that enables a total of eight 24C02 devices to connect on a single bus. If the address input pin is left unconnected, it is interpreted as zero.

#### WRITE PROTECT (WP)

When the write protect input is connected to V<sub>cc</sub>, the entire memory array is protected against write operations. For normal write operations, the write protect pin should be grounded. When the pin is left unconnected, WP is interpreted as zero.

#### SERIAL DATA (SDA)

SDA is a bidirectional pin used to transfer data in and out of the Turbo IC 24C02. The pin is an open-drain output. A pullup resistor must be connected from SDA to V<sub>cc</sub>.

#### SERIAL CLOCK (SCL)

The SCL input synchronizes the data on the SDA bus. It is used in conjunction with SDA to define the start and stop conditions. It is also used in conjunction with SDA to transfer data to and from the Turbo IC 24C02.