

Description

The μPD27C256 is a 262,144-bit ultraviolet erasable and electrically programmable read-only memory utilizing CMOS double-polysilicon technology. The device is organized as 32K words by 8 bits and operates from a single +5V ± 10% power supply. All inputs and outputs are TTL-compatible. The μPD27C256 has single location programming, three-state outputs and is pin-compatible with the 27256 EPROM. It is available as a 28-pin DIP.

The μPD27C256 is available in a cerdip package with a quartz window as an ultraviolet (UV), erasable EPROM, or in a plastic package as a one-time-programmable (OTP), non-erasable EPROM.

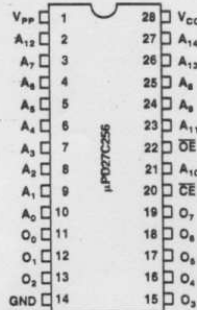
Features

- 32K-word by 8-bit organization
- Ultraviolet erasable and electrically programmable
- Single location programming
- Programmable with single pulse
- Low power dissipation: 158 mW/MHz (active)
1.05μW (standby)
- Input/output TTL-compatible for reading and programming
- Single +5V ± 10% power supply
- Three-state outputs
- Pin-compatible with μPD27256 EPROM
- CMOS double-polysilicon technology
- 28-pin DIP
- 3 performance ranges:

| Device | Access Time | Power Supply | |
|---------------------------|-------------|--------------|---------|
| | | Active | Standby |
| μPD27C256-20 | 200ns | 30mA | 100μA |
| μPD27C256-25 ^① | 250ns | 30mA | 100μA |
| μPD27C256-30 | 300ns | 30mA | 100μA |

Note: ^① Available as either UV or OTP. OTP version is preliminary.

Pin Configuration



Pin Identification

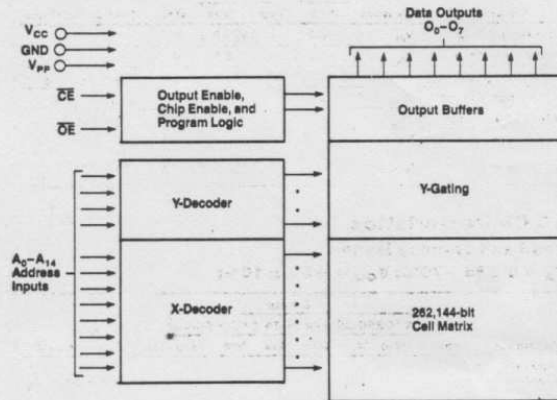
| Pin | | Description |
|-----------------|---------------------------------|------------------------|
| No. | Symbol | |
| 1 | V _{PP} | Program Voltage |
| 2-10, 21, 23-27 | A ₀ -A ₁₄ | Address Inputs |
| 11-13, 15-19 | O ₀ -O ₇ | Data Outputs |
| 14 | GND | Ground |
| 20 | CE | Chip Enable |
| 22 | OE | Output Enable |
| 28 | V _{CC} | +5V ± 10% Power Supply |

Mode Selection

| Mode | Pins | CE (20) | OE (22) | V _{PP} (1) | V _{CC} (28) | Outputs (11-13, 15-19) |
|-----------------|------|-----------------|-----------------|---------------------|----------------------|------------------------|
| Read | | V _{IL} | V _{IL} | V _{CC} | V _{CC} | D _{OUT} |
| Standby | | V _{IH} | X | V _{CC} | V _{CC} | High-Z |
| Program | | V _{IL} | V _{IH} | V _{PP} | V _{CC} | D _{IN} |
| Program Verify | | V _{IL} | V _{IL} | V _{PP} | V _{CC} | D _{OUT} |
| Program Inhibit | | V _{IH} | X | V _{PP} | V _{CC} | High-Z |

Note: X can be either V_{IL} or V_{IH}.

Block Diagram



Absolute Maximum Ratings*

| | |
|---|---------------------------------|
| Operating Temperature, T _{OPR} | -10°C to +80°C |
| Storage Temperature, T _{STG} | -65°C to +125°C |
| Output Voltage, V _{OH} | -0.6V to V _{CC} + 0.6V |
| Input Voltage, V _{IH} | -0.6V to V _{CC} + 0.6V |
| Supply Voltage, V _{CC} | -0.6V to +7V |
| Program Voltage, V _{PP} | -0.6V to +22V |

*COMMENT: Exposing the device to stresses above those listed in Absolute Maximum Ratings could cause permanent damage. The device is not meant to be operated under conditions outside the limits described in the operational sections of this specification. Exposure to absolute maximum rating conditions for extended periods may affect device reliability.



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Scan

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"2 wrongs do not make a right, but 3 rights make a left turn"