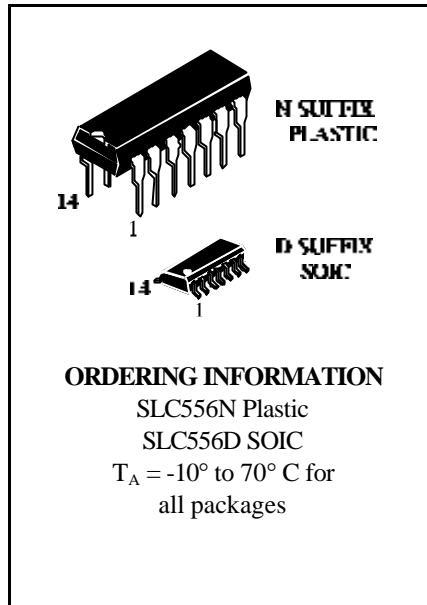


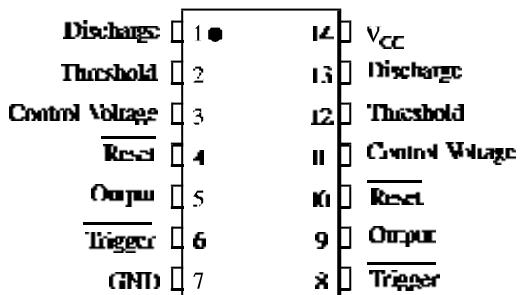
# Timing Circuit

The SLC556 monolithic timing circuit is a highly stable controller capable of producing accurate time delays, or oscillation.

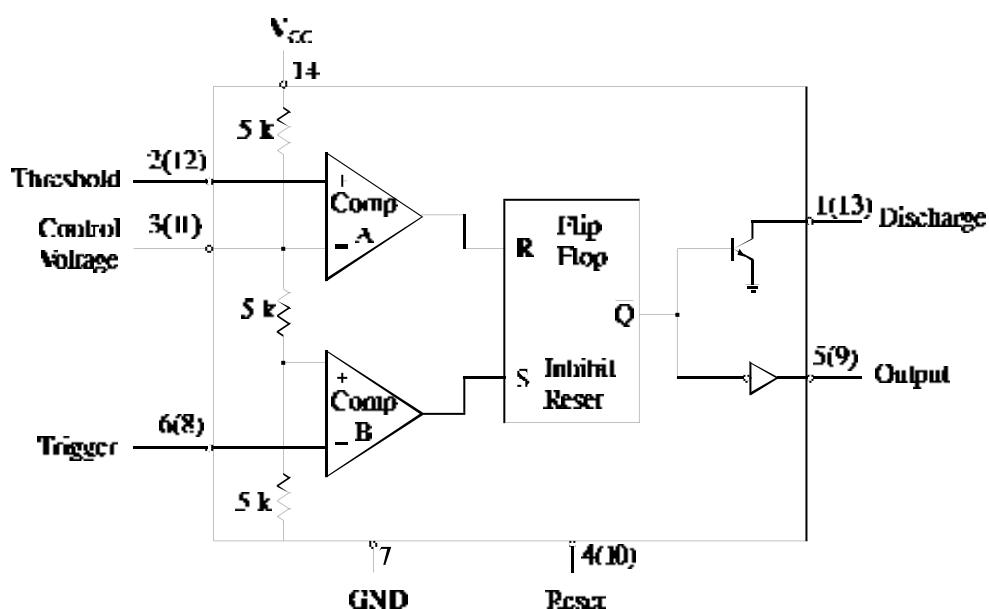
- Timing From Microseconds Through Hours
- Operates in Both Astable and Monostable Modes
- High Current Output Can Source or Sink 200 mA



## PIN ASSIGNMENT



## LOGIC DIAGRAM



# SLC556

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## MAXIMUM RATINGS\*

| Symbol           | Parameter           | Value      | Unit |
|------------------|---------------------|------------|------|
| V <sub>CC</sub>  | Supply Voltage      | 18         | V    |
| T <sub>stg</sub> | Storage Temperature | -60 to +85 | °C   |

## RECOMMENDED OPERATING CONDITIONS

| Symbol          | Parameter                                | Min | Max | Unit |
|-----------------|--|-----|-----|------|
| V <sub>CC</sub> | Supply Voltage                           | 4.5 | 16  | V    |
| T <sub>A</sub>  | Operating Temperature, All Package Types | -10 | +70 | °C   |

## ELECTRICAL CHARACTERISTICS(T<sub>A</sub> =+25°C)

| Symbol           | Parameter                  | Test Conditions  | Guaranteed Limits   |                             | Unit |
|------------------|----------------------------|--|---------------------|-----------------------------|------|
|                  |                            |  | Min                 | Max                         |      |
| I <sub>CC</sub>  | Supply Current             | V <sub>CC</sub> =5.0 V, R <sub>L</sub> =∞<br>V <sub>CC</sub> =15 V, R <sub>L</sub> =∞  |                     | 12<br>30                    | mA   |
|                  | Timing Error               | R=1.0 kΩ to 100 kΩ<br>Initial Accuracy C = 0.1 μF<br>V <sub>CC</sub> =5.0 V and V <sub>CC</sub> =15 V  |                     | 4                           | %    |
| V <sub>th</sub>  | Threshold Voltage          | V <sub>CC</sub> =5.0 V<br>V <sub>CC</sub> =15 V  | 2.6<br>9            | 4.0<br>11                   | V    |
| V <sub>T</sub>   | Trigger Voltage            | V <sub>CC</sub> =5.0 V<br>V <sub>CC</sub> =15 V  | 1.1<br>4.5          | 2.2<br>5.6                  | V    |
| I <sub>T</sub>   | Trigger Current            | V <sub>06,08</sub> =0 V, V <sub>CC</sub> =15 V   |                     | -2                          | μA   |
| V <sub>R</sub>   | Reset Voltage              | V <sub>CC</sub> =15 V  | 0.4                 | 1.0                         | V    |
| I <sub>R</sub>   | Reset Current              | V <sub>04,10</sub> =0 V, V <sub>CC</sub> =15 V   |                     | -0.6                        | mA   |
| I <sub>th</sub>  | Threshold Current (Note 1) | V <sub>02,12</sub> =10 V, V <sub>CC</sub> =15 V  |                     | 0.25                        | μA   |
| I <sub>dis</sub> | Discharge Leakage Current  | V <sub>CC</sub> =15 V, V <sub>01,13</sub> =15 V  |                     | 100                         | nA   |
| V <sub>REF</sub> | Control Voltage Level      | V <sub>CC</sub> =15 V<br>V <sub>CC</sub> =5.0 V  | 9.0<br>2.6          | 11<br>4.0                   | V    |
| V <sub>OL</sub>  | Output Voltage Low         | (V <sub>CC</sub> =15 V)<br>I <sub>sink</sub> =10 mA,<br>I <sub>sink</sub> =50 mA,<br>I <sub>sink</sub> =100 mA,<br>V <sub>CC</sub> =5.0 V, I <sub>sink</sub> =5.0 mA |                     | 0.25<br>0.75<br>2.3<br>0.35 | V    |
| V <sub>OH</sub>  | Output Voltage High        | I <sub>source</sub> =200 mA, V <sub>CC</sub> =15 V<br>I <sub>source</sub> =100 mA, V <sub>CC</sub> =15 V<br>I <sub>source</sub> =100 mA, V <sub>CC</sub> =5.0 V      | 12<br>12.75<br>2.75 |                             | V    |
| t <sub>OLH</sub> | Rise Time of Output        | V <sub>CC</sub> =15 V  |                     | 300                         | ns   |
| t <sub>OHL</sub> | Fall Time of Output        | V <sub>CC</sub> =15 V  |                     | 300                         | ns   |

Note 1. This will determine the maximum value of R<sub>A</sub> + R<sub>B</sub> for 15 V operation.

The maximum total R=20 MΩ.